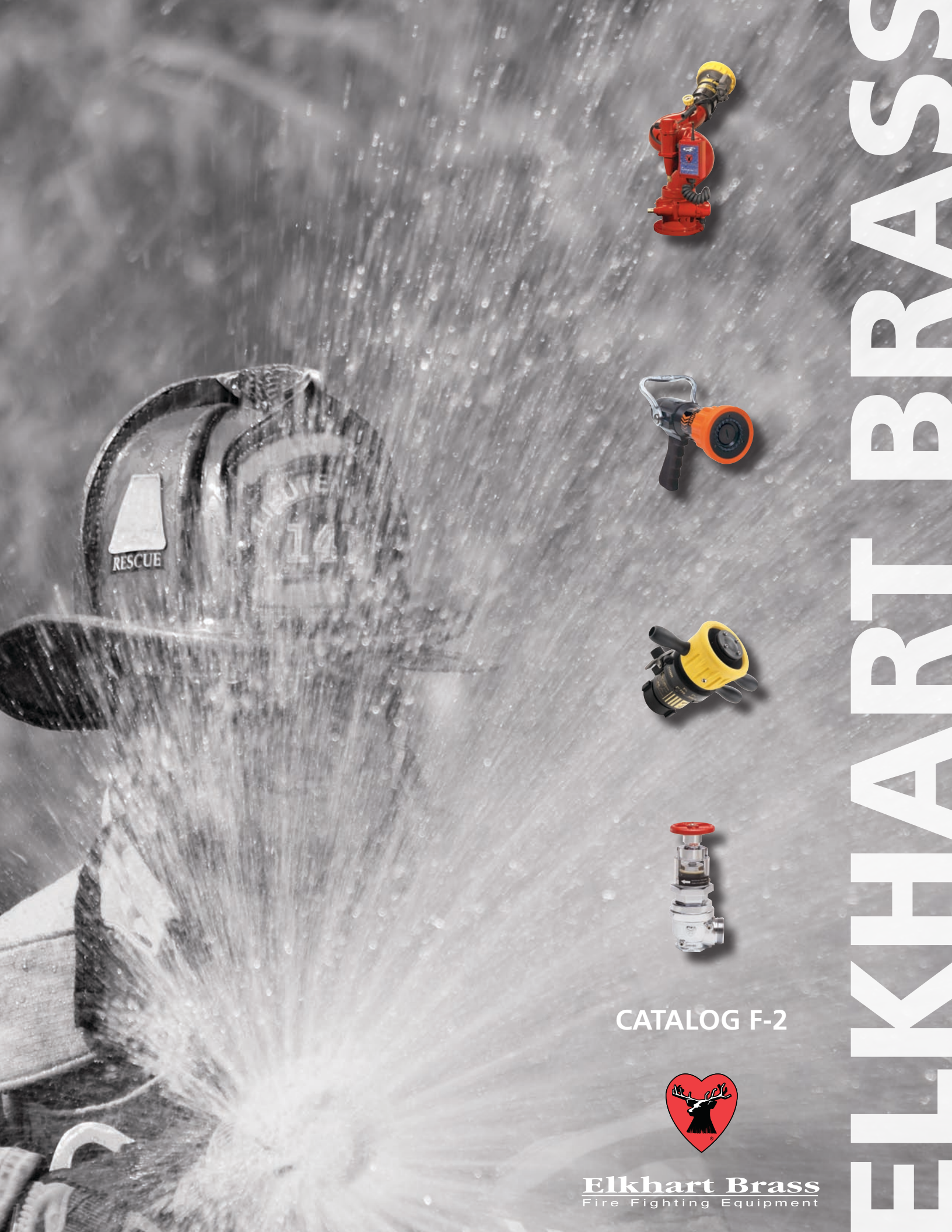


ELKHART BRASS

CATALOG F-2

Elkhart Brass
Fire Fighting Equipment

OUR COMPANY

Elkhart Brass is a 100+ year "young" company with a strong tradition of close association with fire professionals.

As a market innovator, we are continually expanding our product line and pushing the technological envelope to meet the challenges of the fire industry. We invite you to visit our **new web site**, www.elkhartbrass.com to learn about our latest products and view detailed product information such as parts drawings and product certifications. The current catalog, **Catalog F**, contains our complete product line at the time of printing, updates may be found at our website, www.elkhartbrass.com .

At Elkhart, we pride ourselves on being a company which delivers tailored engineering solutions utilizing the flexibility of our on-site capabilities. From our corporate headquarters in Elkhart, Indiana we provide a full-service operation: customer service, sales, engineering, foundry, specialized manufacturing, machining, assembly and product testing. If you have a special need, please call us to discuss how we can help.

CERTIFICATIONS AND QUALITY

Elkhart is committed to quality, as demonstrated by our ISO-9001 Registered Quality System. We strive for ways to streamline our processes while maintaining the quality craftsmanship our customers expect.

Our on-site foundry assures that we can document the quality of our materials, and our on-site testing facilities allow us to test each and every product before shipment. We know firefighting is dangerous; our commitment to you is that we will do everything in our power to make sure when you use Elkhart Brass products, you have the highest quality, safest equipment available on the market.

As part of Elkhart's commitment to quality, we are continually evaluating our products and upgrading our certification credentials. Please let us know if you have a question about a specific certification.

HISTORY

Since the company's founding in 1902, Elkhart has been owned and operated by the same family. Currently we are in the fourth generation of management, and our commitment to excellence and innovation has never been stronger.

We thank you for your past patronage. As we move into the 21st century, we look forward to serving the needs of fire professionals everywhere. We promise to continue to put your needs first in our design process and product innovations. Please visit our website, www.elkhartbrass.com, to see for yourself how Elkhart can exceed your expectations.

AFSA

FEMA | the life safety group
Saving Lives, Protecting Property MEMBER

Member of FEMSA
Fire and Emergency Manufacturers and Services Association

NFPA MEMBER 05-06

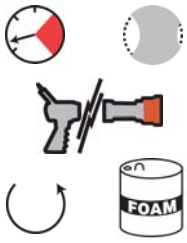
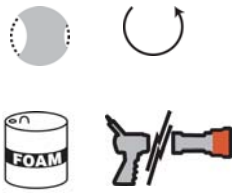
NATIONAL FIRE SPRINKLER ASSOCIATION, INC.

- All data is provided for the standard configuration. Option changes may impact the weight, height or other specifications. Please inquire with our sales staff.
- Elkhart has trademarked the Elk-O-Lite® name for our proprietary aluminum alloy (cast alloy #356-A).

Elkhart Brass is the most experienced manufacturer of fire fighting equipment. Trust Elkhart to keep what is important safe.

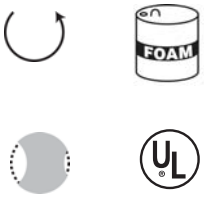
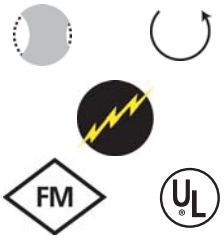
ELKHART BRASS MFG. CO., INC. • 800.346.0250 • 1.574.295.8330 • FAX: 574.293.9914 • www.elkhartbrass.com

SELECTOR GUIDE

		AVAILABLE BASE	PRODUCT	DESCRIPTION	MATERIAL		"QUICK-KEY"
		1.0 / 1.5 / 2.5			Brass	Elk-O-Lite®	
AUTOMATIC	SELECT-O-MATIC®	• • •	 Page 1-8	• Simplifies fireground hydraulics • Maintains effective flow and stream • Automatic flow		•	
		Available GPM (LPM)					
		10-325 (38-1230)					
FIXED	CHIEF™	1.0 / 1.5 / 2.5			Brass	Elk-O-Lite®	
		• • •	 Page 1-4	• Wide selection of flow and pressure • Simple to use and train with • Fixed flow		•	
		Available GPM (LPM)					
		15-350 (57-1325)					
FIXED	SELECT-O-STREAM®	1.0 / 1.5 / 2.5			Brass	Elk-O-Lite®	
		• • •	 Page 1-17	• Convenient detents for stream selection • Rugged all brass construction with chrome finish • Fixed flow	•		
		Available GPM (LPM)					
		12-250 (45-946)					
SELECTABLE	FLEX ATTACK™	1.0 / 1.5 / 2.5			Brass	Elk-O-Lite®	
		•	 Page 1-3	• Quickly switches between wet foam, dry foam, and water without shutting down • Unobstructed variable orifice waterway won't strip CAF bubbles		•	
		Available GPM (LPM)					
		184 (697)					
SELECTABLE	PHANTOM®	1.0 / 1.5 / 2.5			Brass	Elk-O-Lite®	
		• •	 Page 1-11	• Firefighter chooses flow and stream • Rugged and easy to use • Wide flow range/constant flow		•	
		Available GPM (LPM)					
		15-200 (57-757)					
SELECTABLE	SELECT-O-FLOW®	1.0 / 1.5 / 2.5			Brass	Elk-O-Lite®	
		• •	 Page 1-13	• Firefighter chooses flow and stream • High flow range/constant flow • Rugged all brass versions	•	•	
		Available GPM (LPM)					
		40-250 (151-946)					

KEY:

- *Low Pressure Available*
- *Ball Shut-off Available*
- *Twist Shut-off Available*
- *Rebuild/Retro Available*
- *Electrical*
- *Foam Compatible*
- *Break-apart Available*
- *U.S.Coast Guard/Navy Approved*
- *Factory Mutual*
- *Underwriters Laboratories*

		AVAILABLE BASE			PRODUCT	DESCRIPTION	MATERIAL		"QUICK-KEY"
		1.0	1.5	2.5			Brass	Elk-O-Lite®	
VARIABLE	MYSTERY®		•	•	 *Page 1-15*	• Original fog nozzle • Popular for high-rise packs • Variable stream		•	
		Available GPM (LPM)							
		60-250 (227-946)							
VARIABLE	INDUSTRIAL FOG	1.0	1.5	2.5	 *Page 1-19*	• Durable and simple to use • Designed for corrosive conditions			
		•	•	•			•		
		Available GPM (LPM)							
		60-250 (227-946)							
FIXED/VARIABLE	ELECTRICAL FOG	1.0	1.5	2.5	 *Page 1-19*	• For use on Class "C" fires • Narrow to wide fog only			
			•	•			•		
		Available GPM (LPM)							
		12-250 (45-946)							
FIXED	MARINE	1.0	1.5	2.5	 *Page 1-21*	• 85-5-5-5 Brass construction • Designed for corrosive conditions • Accepted US Navy and Coast Guard Specifications			
			•	•			•		
		Available GPM (LPM)							
		95-250 (360-946)							
SELECTABLE	SOLID STRIKE™	1.0	1.5	2.5	 *Page 1-23*	• Vary effective tip size as needed from 3/4", 7/8", to 1" • Creates a perfect solid stream of water			
			•					•	
		Available GPM (LPM)							
		118-209 (447-791)							
	BALL SHUT-OFFS, & PLAYPIPES	1.0	1.5	2.5	 *Page 1-24*	• Wide range of flows • Smooth bore optional • Design your own break-apart • Playpipes for easy handling			
		•	•	•			•	•	
		Available GPM (LPM)							

KEY:


Low Pressure Available


Ball Shut-off Available


Twist Shut-off Available


Rebuild/Retro Available


Electrical

Foam Compatible


Break-apart Available

U.S.Coast Guard/Navy Approved

Factory Mutual

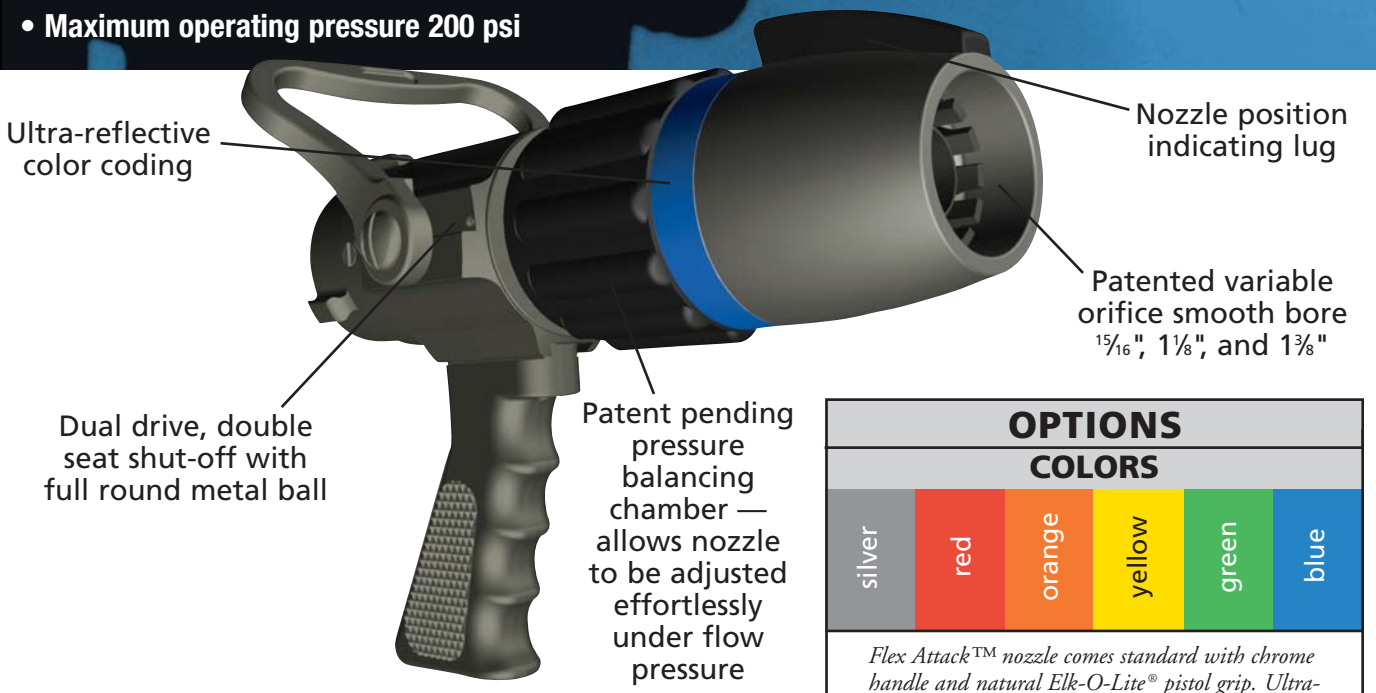
Underwriters Laboratories

Flex Attack™

A nozzle that lets you go from CAF to H_2O with a click of the tip. From the wet CAF attack setting, click left for a big open waterway and dry foam or click right for a tight 15/16" water only smooth bore. The patented, unobstructed variable orifice waterway won't strip CAF bubbles.

Features include:

- **Free swivel inlet**
- **Hard anodized, Teflon® impregnated aluminum alloy body and pistol grip**
- **Aluminum/bronze shut-off handle**
- **Zytel® ST801 polyamide center barrel**
- **Ultra high molecular weight polyethylene shut-off seats**
- **70A urethane compressible bore**
- **184 GPM at 50 psi in water setting**
- **Maximum operating pressure 200 psi**



BASE SIZE	FLOW RATE*	PRESSURE*	GRIP	HANDLE		MODEL
	GPM (LPM)	PSI (BAR)	Pistol Grip	Tab	Horseshoe	
1.5"	184 (697)	50 (3.45)	•	o	s	FLX-20G

* In water setting

OPTIONS

COLORS

silver | red | orange | yellow | green | blue

Flex Attack™ nozzle comes standard with chrome handle and natural Elk-O-Lite® pistol grip. Ultra-reflective, durable vinyl color coding bands are supplied with each nozzle. See above for colors.

HANDLES

TAB

HORSESHOE

THREADS

All nozzles are NHT unless otherwise specified. See index T-12 for optional base threads, including British instantaneous.

Chief™

Fixed flow Chief™ nozzles efficiently deliver a constant gallonage from straight stream to full fog. The simple rugged design makes the Chief™ easy to use, train with and reliable in tough situations. Superior hydraulics due to a fully machined waterway result in excellent stream quality and reach. The Chief™ is also available in true low pressure versions with specifically engineered, calibrated and labeled stems down to 50 psi. With more than 300 available variations the Chief™ is easily customized to meet your specific needs.

1964 NFPA COMPLIANT

CHIEF™

BASE SIZE	PSI (BAR)	AVAILABLE STANDARD FLOW RATE GPM (LPM) 15 (57)	30 (114)	45 (170)	60 (227)	75 (284)	95 (360)	125 (473)	150 (568)	175 (662)	185 (700)	200 (757)	250 (946)	275 (1041)	300 (1136)	325 (1230)	350 (1325)	TYPE	BREAK-APART COMPONENTS Tip	Shut-off*	Smooth Bore**	GRIP Pistol Grip	Playpipe	Ladderhook	BASE TYPE Rigid	Swivel	Free Swivel	LENGTH Long	Short	SHUT-OFF Twist	Ball	HANDLE Tab	Horseshoe	TEETH Spinning Plastic	Molded Urethane	Cut Metal	MODEL	FIGURE
1"	50 (3.45)																	NOZZLE							s						•	s	o	s			4000-01	1
	75 (5.17)																																				
	100 (6.89)	•	•	•	•																																
	50 (3.45)																	NOZZLE								s					•	s	o	s			4000-02	1
	75 (5.17)																																				
	100 (6.89)	•	•	•	•																																
	50 (3.45)																	NOZZLE				•				s					•	s	o	s			4000-03	1
	75 (5.17)																																				
	100 (6.89)	•	•	•	•																																
	50 (3.45)																	TIP								s								s			4000-04	2
	75 (5.17)																																				
	100 (6.89)	•	•	•	•																																
1.5"	50 (3.45)																	NOZZLE								s					•	o	s	s	o		4000-10	1
	75 (5.17)							•																													
	100 (6.89)				•	•	•	•	•																												
	50 (3.45)																	NOZZLE							s						•	o	s	s	o		4000-11	1
	75 (5.17)							•																													
	100 (6.89)				•	•	•	•	•																												
	50 (3.45)																	NOZZLE								s					•	o	s	s	o		4000-12	1
	75 (5.17)							•																													
	100 (6.89)				•	•	•	•	•																												
	50 (3.45)																	NOZZLE				•				s					•	o	s	s	o		4000-13	1
	75 (5.17)							•																													
	100 (6.89)				•	•	•	•	•																												
	50 (3.45)								•									TIP							o	s								s	o		4000-14	2
	75 (5.17)							•	•	•																											
	100 (6.89)				•	•	•	•	•																												
	50 (3.45)									•								TIP																	s		4000-14HR	2
	75 (5.17)											•													s									s				
	100 (6.89)																																				
	50 (3.45)								•									BREAK-APART	4000-14	B-275A					o	s	o				•	o	s	s	o		4000-15	3
	75 (5.17)							•	•	•																											
	100 (6.89)				•	•	•	•	•																												
	50 (3.45)								•									NOZZLE								s					•	o	s	s	o		4000-16	1
	75 (5.17)							•	•	•																											
	100 (6.89)				•		•	•	•																												
	50 (3.45)								•									NOZZLE				•				s					•	o	s	s	o		4000-17	1
	75 (5.17)							•	•	•																											
	100 (6.89)				•		•	•	•																												
	50 (3.45)								•									BREAK-APART	4000-14	B-275GA		•			o	o	s				•	o	s	s	o		4000-18	3
	75 (5.17)							•	•	•																											
	100 (6.89)				•	•	•	•	•																												
	50 (3.45)																	TIP							o	s				•				s	o		4000-19	2
	75 (5.17)							•	•																												
	100 (6.89)				•	•	•	•	•																												
	50 (3.45)											•	•					NOZZLE								s	o					o	s	s	o		4000-20	1
	75 (5.17)									•		•	•	•	•																						
	100 (6.89)									•		•	•			•	•																				
	50 (3.45)											•	•					BREAK-APART	4000-24	B-275GA					o	o	s				•	o	s	s	o		4000-21	3
	75 (5.17)									•		•	•	•	•																						
	100 (6.89)									•		•	•			•	•																				
	50 (3.45)											•	•					TIP							o	s				•				s	o		4000-22	2
	75 (5.17)									•		•	•	•	•																						
	100 (6.89)									•		•	•			•	•																				
	50 (3.45)											•	•					NOZZLE				•				o	s				•				s	o		4000-23	1
	75 (5.17)									•		•	•	•	•																						
	100 (6.89)									•		•	•			•	•																				
	50 (3.45)											•	•					TIP							o	s								s	o		4000-24	2
	75 (5.17)											•	•	•	•																						
	100 (6.89)									•		•	•			•	•																				
	50 (3.45)											•	•					BREAK-APART	4000-24	B-275A					o	s	o				•	o	s	s	o		4000-25	3
	75 (5.17)											•	•	•	•																						
	100 (6.89)									•		•	•			•	•																				
	50 (3.45)											•	•					BREAK-APART	4000-22	B-375GAT	•	•				o	s				•	•	o	s	s	o		4000-31*	4
	75 (5.17)											•	•	•	•																						
	100 (6.89)									•		•	•			•	•																				
	50 (3.45)											•	•					BREAK-APART	4000-22	B-375AT	•					o	s				•	•	o	s	s	o		4000-35*	4
	75 (5.17)											•	•	•	•																						
	100 (6.89)									•		•	•			•	•																				

See opposite page for Notes.

BASE SIZE	PSI (BAR)	AVAILABLE STANDARD FLOW RATE GPM (LPM)																	TYPE	BREAK-APART COMPONENTS		Smooth Bore**	GRIP			BASE TYPE			BASE LENGTH		SHUT-OFF		HANDLE		TEETH			MODEL	FIGURE
		15 (57)	30 (114)	45 (170)	60 (227)	75 (284)	95 (360)	125 (473)	150 (568)	175 (662)	185 (700)	200 (757)	250 (946)	275 (1041)	300 (1136)	325 (1230)	350 (1325)			Tip	Shut-off*		Pistol Grip	Playpipe	Ladderhook	Rigid	Swivel	Free Swivel	Long	Short	Twist	Ball	Tab	Horseshoe	Spinning Plastic	Molded Urethane	Cut Metal		
2.5"	50 (3.45)											•	•					TIP								s				•				s	o		4000-22	2
	75 (5.17)										•	•	•	•	•																						
	100 (6.89)									•		•	•			•	•																					
	50 (3.45)											•	•					TIP								s								s	o		4000-24	2
	75 (5.17)										•	•	•	•	•																						
	100 (6.89)									•		•	•			•	•																					
	50 (3.45)											•	•					NOZZLE								s	o	s	o		•	o	s	s	o		4000-26	1
	75 (5.17)										•	•	•	•	•																						
	100 (6.89)									•		•	•			•	•																					
	50 (3.45)											•	•					BREAK-APART	4000-24	B-278L			•	•			s				•		o	s	s	o		4000-27	6
	75 (5.17)										•	•	•	•	•																						
	100 (6.89)									•		•	•			•	•																					
	50 (3.45)											•	•					NOZZLE					•				o	s	s	o		•	o	s	s	o		4000-28	1
	75 (5.17)										•	•	•	•	•																						
	100 (6.89)									•		•	•			•	•																					
	50 (3.45)											•	•					BREAK-APART	4000-20	279LA				•	•			s								s	o		4000-29	5
	75 (5.17)										•	•	•	•	•																						
	100 (6.89)									•		•	•			•	•																					
	50 (3.45)											•	•					BREAK-APART	4000-22	DB-375GAT	•	•						s	s	o	•	•	o	s	s	o		4000-34*	4
	75 (5.17)										•	•	•	•	•																						
	100 (6.89)									•		•	•			•	•																					

Key s = standard o = option

* Break-apart nozzles list standard configuration for shut-offs.

** Listed flow rate for break-apart nozzle with integral smooth bore is for Chief nozzle tip only.

Smooth bore discharge size may restrict flow of Chief tip. 15/16" discharge standard on 1.5" base; 7/8", 1", 1 1/8", 1 1/4" available. 1 1/4" discharge standard on 2.5" base; 7/8", 15/16", 1", 1 1/8" available.

CHIEF™ CONFIGURATIONS

Figure 1

STANDARD
(Shown with optional pistol grip)

Fig. 1

Figure 2

TIP ONLY

Fig. 2

Figure 3

BREAK-APART
(Shown with optional pistol grip)

Fig. 3

Figure 4

BREAK-APART WITH INTEGRAL SMOOTH BORE
(Shown with optional pistol grip)

Fig. 4

Figure 5

PLAYPIPE WITH NOZZLE

Fig. 5

Figure 6

PLAYPIPE WITH TIP

Fig. 6

Figures depict general product types only and are not intended to be inclusive of all product features.

OPTIONS

HANDLES

BASES

THREADS

All nozzles are NHT unless otherwise specified. See index T-12 for optional base threads, including British instantaneous.

BREAK-APART COMPONENTS

Ball shut-offs and/or playpipes referenced here may be found on page 1-24.

MOLDED URETHANE TEETH

COLORS

Color options available for pistol grip, bumper, and handle. Glow available for bumper only. Retrofit kit available for Glow bumper. ***White bumper not available.***

Chief™ nozzle comes standard with an orange bumper, chrome handle, and natural Elk-O-Lite® pistol grip.

ADDITIONAL INFORMATION

Select-O-Matic®

Pressure-regulating Select-O-Matic® nozzles automatically adjust to fluctuating water flow to maintain effective pressure and a consistent fire stream in all flow ranges. Our patented, completely unobstructed waterway allows more gpm at lower pressures than any competitive brand. All models flush easily without shutting down and provide constant flow on either fog or straight stream, making them ideal for the application of AFFF foam. Corrosion resistant; no lubrication required.

1964 NFPA COMPLIANT

HANDLINE NOZZLES

SELECT-O-MATIC®

Base Size	FLOW RANGES GPM (LPM)	PRESSURE PSI (BAR)	TYPE	BREAK-APART COMPONENTS Tip	BREAK-APART COMPONENTS Shut-Off*	Smooth Bore **	GRIP Pistol Grip	GRIP Playpipe	GRIP Ladderhook	BASE TYPE Rigid	BASE TYPE Swivel	BASE TYPE Free Swivel	BASE LENGTH Long	BASE LENGTH Short	HANDLE Tab	HANDLE Horseshoe	TEETH Spinning	TEETH Molded	MODEL	FIGURE
1"	10-75 (38-284)	100 (6.89)	NOZZLE							o		s			s	o	s		SM-3F	1
			NOZZLE				•			o		s			s	o	s		SM-3FG	1
			TIP								s						s		TSM-3F	2
1.5"	60-125 (227-475)	100 (6.89)	NOZZLE							o	s	o			o	s	s	o	SM-10F	1
			NOZZLE				•			o	o	s			o	s	s	o	SM-10FG	1
			NOZZLE							o	s	o			o	s	s	o	SM-10FB (All Brass)	1
			TIP							o	s						s	o	TSM-10F	2
			BREAK-APART	TSM-10F	LB-275A					o	s	o			o	s	s	o	STSM-10F	3
	60-200 (227-757)	75 (5.17)	NOZZLE							o	s	o			o	s	s		SM-20FLP	1
			NOZZLE				•			o	o	s			o	s	s		SM-20FGLP	1
			TIP							o	s						s		TSM-20FLP	2
			BREAK-APART	TSM-20FLP	B-375AT	•					o	s			o	s	s		STSM-20FATLP	4
			BREAK-APART	TSM-20FLP	B-375GAT	•	•				o	s			o	s	s		STSM-20FGATLP	4
		100 (6.89)	NOZZLE							o	s	o			o	s	s	o	SM-20F	1
			NOZZLE				•			o	o	s			o	s	s	o	SM-20FG	1
			TIP							o	s						s	o	TSM-20F	2
			BREAK-APART	TSM-20F	B-275A					o	s	o			o	s	s	o	STSM-20F	3
			BREAK-APART	TSM-20F	B-275GA		•			o	o	s			o	s	s	o	STSM-20FG	3
			BREAK-APART	TSM-20F	B-375AT	•					o	s			o	s	s	o	STSM-20FAT	4
			BREAK-APART	TSM-20F	B-375GAT	•	•				o	s			o	s	s	o	STSM-20FGAT	4
	75-325 (284-1230)	75 (5.17)	NOZZLE							o	s	o			o	s	s	o	SM-30FLP	1
			NOZZLE				•			o	o	s			o	s	s	o	SM-30FGLP	1
			TIP							o	s						s	o	TSM-30FLP	2
			BREAK-APART	TSM-30FLP	B-375AT	•					o	s			o	s	s	o	STSM-30FATLP	4
			BREAK-APART	TSM-30FLP	B-375GAT	•	•				o	s			o	s	s	o	STSM-30FGATLP	4
		100 (6.89)	NOZZLE							o	s	o			o	s	s	o	SM-30F	1
			NOZZLE				•			o	o	s			o	s	s	o	SM-30FG	1
			TIP							o	s						s	o	TSM-30F	2
			BREAK-APART	TSM-30F	B-275A					o	s	o			o	s	s	o	STSM-30F	3
			BREAK-APART	TSM-30F	B-275GA		•			o	o	s			o	s	s	o	STSM-30FG	3
			BREAK-APART	TSM-30F	B-375AT	•					o	s			o	s	s	o	STSM-30FAT	4
			BREAK-APART	TSM-30F	B-375GAT	•	•				o	s			o	s	s	o	STSM-30FGAT	4
2.5"	75-325 (284-1230)	75 (5.17)	NOZZLE								s	o	s	o	o	s	s	o	DSM-30FLP	1
			NOZZLE				•				o	s	s	o	o	s	s	o	DSM-30FGLP	1
			BREAK-APART	TSM-30FLP	B-278L			•	•			s				s	s	o	STSM-30BPALP	6
			BREAK-APART	TSM-30FLP	DB-375GAT	•	•					s	s	o	o	s	s	o	STDSM-30FGATLP	4
		100 (6.89)	TIP								s						s	o	DTSM-30F	2
			NOZZLE				•				o	s	s	o	o	s	s	o	DSM-30FG	1
			BREAK-APART	SM-30F	279LA			•	•			s			o	s	s	o	SM-30PL	5
			BREAK-APART	TSM-30F	B-278L			•	•			s			o	s	s	o	STSM-30BPA	6
			NOZZLE								s	o	s	o	o	s	s	o	DSM-30F	1
			BREAK-APART	TSM-30F	DB-275A						s	o	s	o	o	s	s	o	STDSM-30F	3
			BREAK-APART	TSM-30F	DB-275GA		•				o	s	s	o	o	s	s	o	STDSM-30FG	3
			BREAK-APART	TSM-30F	B-275A + 279LA			•	•			s	s		o	s	s	o	STSM-30PL	6
			BREAK-APART	TSM-30F	DB-375AT	•						s	s	o	o	s	s	o	STDSM-30FAT	4
			BREAK-APART	TSM-30F	DB-375GAT	•	•					s	s	o	o	s	s	o	STDSM-30FGAT	4

Key s = standard o = option

* Break-apart nozzles list standard configuration for shut-offs.

** Listed flow rate for break-apart nozzle with integral smooth bore is for Select-O-Matic® nozzle tip only.

Smooth bore discharge size may restrict flow of Select-O-Matic® tip.15/16" discharge standard on 1.5" base; 7/8", 1", 1 1/8", 1 1/4" available. 1 1/4" discharge standard on 2.5" base; 7/8", 15/16", 1", 1 1/8" available.

SELECT-O-MATIC® CONFIGURATIONS

Figure 1

NOZZLE
(Shown with optional pistol grip)

Fig. 1

Figure 2

TIP ONLY

Fig. 2

Figure 3

BREAK-APART
(Shown with optional pistol grip)

Fig. 3

Figure 4

BREAK-APART WITH INTEGRAL SMOOTH BORE
(Shown with optional pistol grip)

Fig. 4

Figure 5

PLAYPIPE WITH NOZZLE

Fig. 5

Figure 6

PLAYPIPE WITH TIP

Fig. 6

Figures depict general product types only and are not intended to be inclusive of all product features.

OPTIONS

HANDLES

TAB

HORSESHOE

BASES

THREADS

All nozzles are NHT unless otherwise specified. See index T-12 for optional base threads, including British instantaneous.

BREAK-APART COMPONENTS

Ball shut-offs and/or playpipes referenced here may be found on page 1-24.

MOLDED URETHANE TEETH

COLORS

Color options available for pistol grip, bumper, and handle. Glow available for bumper only. Retrofit kit available for Glow bumper. ***White bumper not available.***

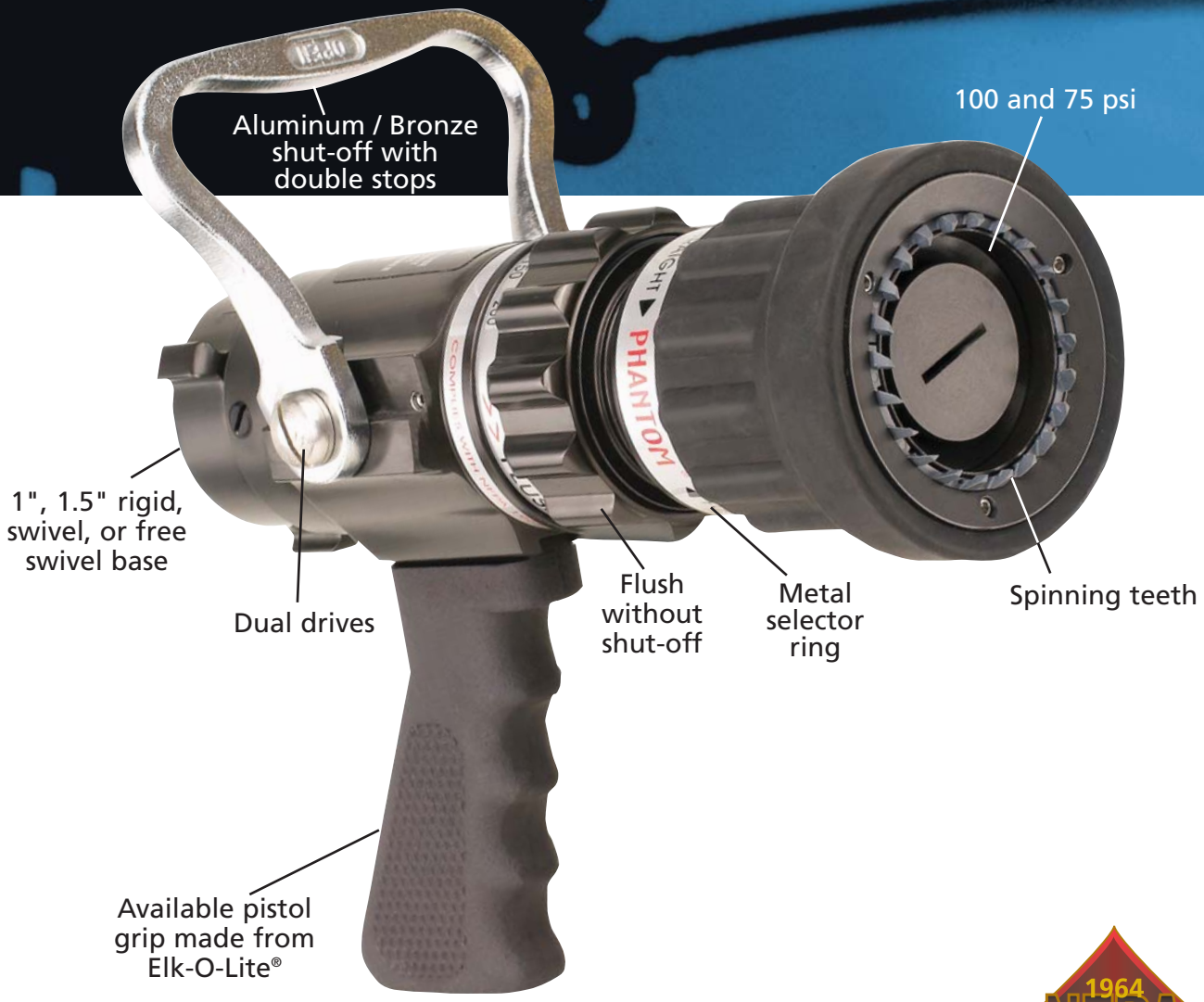
Select-O-Matic® nozzle comes standard with a yellow bumper, chrome handle, and natural Elk-O-Lite® pistol grip.

ADDITIONAL INFORMATION

PHANTOM®

Phantom®

The selectable gallonage Phantom® lets the firefighter select the appropriate flow. The wide selection range standard with the Phantom® makes it one nozzle for every use from brush to interior attack. The Phantom® is designed for reliable performance with rugged metal selector ring and dual drive metal ball shut-off. Available standard in 100 psi and true 75 psi models.



1964 NFPA COMPLIANT

Base Size	FLOW RATE GPM (LPM)	PRESSURE PSI (BAR)	TYPE	BREAK-APART COMPONENTS: Tip	BREAK-APART COMPONENTS: Shut-Off*	GRIP: Pistol Grip	BASE: Rigid	BASE: Swivel	BASE: Free Swivel	SHUT-OFF: Twist	SHUT-OFF: Ball	HANDLE: Tab	HANDLE: Horseshoe	TEETH: Spinning	MODEL	FIGURE
1"	15/30/45/60 (57/114/170/227)	100 (6.89)	NOZZLE						s		•	s		s	PSFS-HP	1
			NOZZLE			•			s		•	s		s	PSFS-HPG	1
			TIP				s							s	TPSFS-HP	2
			TIP				s			•				s	TPSFS-HPT	2
1.5"	30/95/125/150/200 (114/360/473/568/757)	100 (6.89)	NOZZLE					s	o		•	o	s	s	SFM-HP	1
			NOZZLE			•		o	s		•	o	s	s	SFM-HPG	1
			TIP					s						s	TSFM-HP	2
			TIP					s		•				s	TSFM-HPT	2
			NOZZLE					s	o		•	o	s	s	SFM-LP	1
		75 (5.17)	NOZZLE			•		o	s		•	o	s	s	SFM-LPG	1
			BREAK-APART	TSFM-LP	B-275-A		o	s	o		•	o		s	STSFM-LP	
			TIP					s						s	TSFM-LP	2
			TIP					s		•				s	TSFM-LPT	2

Key s = standard o = option
*Break-apart nozzles list standard configuration for shut-off.

PHANTOM® CONFIGURATIONS

Figure 1

STANDARD
(Shown with optional pistol grip)

Fig . 1

Figure 2

TIP ONLY

Fig. 2

Figures depict general product types only and are not intended to be inclusive of all product features.

OPTIONS

COLORS

black | red | orange | yellow | green | blue | white

*Color options available for pistol grip, bumper, and handle. **White bumper not available**. Phantom® nozzle standards are a black bumper, rough chrome handle, and natural Elk-O-Lite® pistol grip.*

HANDLES

TAB

HORSESHOE

THREADS

All nozzles are NHT unless otherwise specified. See index T-12 for optional base threads, including British instantaneous.

METRIC

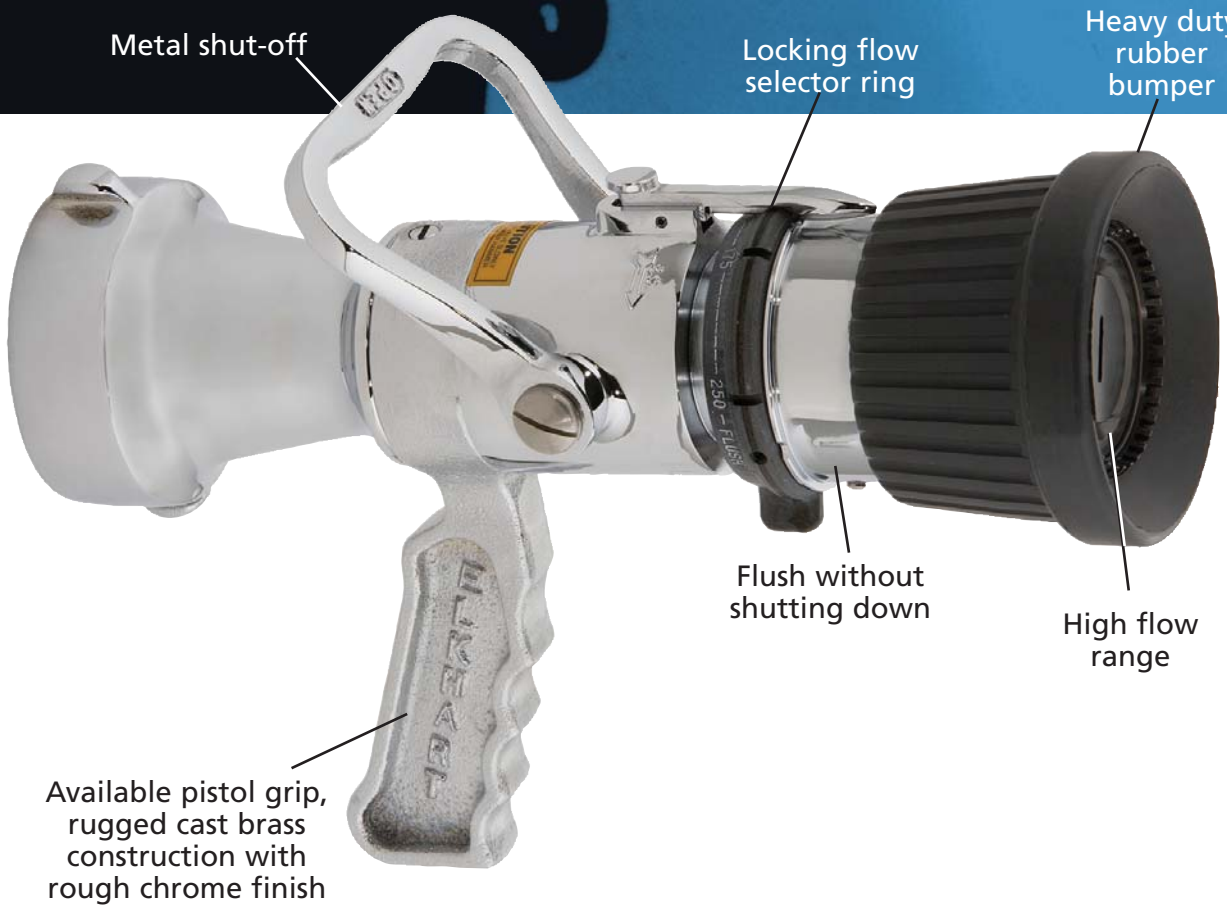
When ordering the metric version of a 1" Phantom nozzle, the flow rate will be set and labeled at 60/120/180/240 LPM (15/32/47/64 gpm).

BREAK-APART COMPONENTS

Ball shut-offs and/or playpipes referenced here may be found on page 1-24.

Select-O-Flow®

Select-O-Flow®, the original selectable gallonage nozzle, is similar in function to the Phantom® — allowing the firefighter to select the appropriate flow. The Select-O-Flow® range goes as high as 250 gpm.



1964 NFPA COMPLIANT

Base Size	FLOW RATE GPM (LPM) / PSI (BAR) 100 (6.89)	BREAK-APART COMPONENTS Tip	BREAK-APART COMPONENTS Shut-Off*	GRIP Pistol Grip	GRIP Playpipe	GRIP Ladderhook	SHUT-OFF Twist	SHUT-OFF Ball	HANDLE Tab	HANDLE Horseshoe	BASE Rigid	BASE Swivel	BASE Free Swivel	TEETH Molded Urethane	TEETH Spinning	TEETH Rigid Metal	DIMENSIONS Length (Inches)	DIMENSIONS Weight (Lbs.)	MODEL	FIGURE
1.5"	40/60/95/125 (151/227/360/473)							•	o	s		s	o	o	s		7.625	7.75	**SFL-B** (Brass)	4
				•				•	o	s			s	o	s		8.375	9.625	**SFL-BG** (Brass)	1
								•		s	o	s	o			s	7.00	3.75	**SFL-O**	4
				•				•		s	o	o	s			s	10.00	4.875	**SFL-OG**	1
							•					s				s	6.50	2.75	**TSFL-O** (Tip Only)	2
	125/175/250 (473/662/946)						•					s				s	7.00	5.50	**TSF** (Tip Only)	2
								•		s	o	s	o			s	8.00	8.00	**SF**	4
				•				•		s	o	o	s			s	11.25	8.875	**SF-G**	1
2.5"	125/175/250 (473/662/946)							•		s	o	s	o			s	10.75	10.00	**DSF**	4
				•				•		s	o	o	s			s	13.875	10.875	**DSF-G**	1
		TSF	DB-275A					•		s	o	s	o			s	13.00	11.125	**STDSF**	
		SF	279-L		•	•		•		s	o	o	s			s	18.75	20.75	**SF-800**	3
		TSF	B-278-L		•	•		•		s	o	o	s			s	17.25	11.50	**STSFB-800A**	3

Key s = standard o = option
*Break-apart nozzles list standard configurations for shut-offs.

SELECT-O-FLOW® CONFIGURATIONS

Figure 1 — PISTOL GRIP

Fig. 1

Figure 2 — TIP ONLY

Fig. 2

Figure 3 — PLAYPIPE

Fig. 3

Figure 4 — NOZZLE

Fig. 4

Figures depict general product types only and are not intended to be inclusive of all product features.

OPTIONS

HANDLES

TAB

HORSESHOE

- *SFL-B, SFL-BG, SFL-O, SFL-OG all feature aluminum/bronze shut-off handles*
- *DSF, DSFG, SF, SF-G, STDSF, SF-800 all feature mangenese/bronze shut-off handles*

MOLDED URETHANE TEETH

THREADS

All nozzles are NHT unless otherwise specified. See index T-12 for optional base threads, including British instantaneous.

BREAK-APART COMPONENTS

Ball shut-offs and/or playpipes referenced here may be found on page 1-24.

Mystery®

The Mystery® Nozzle incorporates a twist-type shut-off, opening in straight stream and producing a flow from straight stream to wide fog. In combination with a B-375A ball shut-off, the Mystery® Nozzle promotes an extremely convenient method of advancing hoselines. Simply close the ball shut-off, remove the Mystery® tip, attach additional hose, and then reattach the tip at the end of the line. The tip's built-in shut-off allow for the line to be advanced rapidly without bringing in an additional nozzle.

Base Size	AVAILABLE STANDARD FLOW RATE GPM (LPM)								BREAK-APART COMPONENTS		Smooth Bore**	GRIP	SHUT-OFF		HANDLE		BASE			TEETH	DIMENSIONS		MODEL	FIGURE
	60 (227)	95 (360)	125 (473)	170 (644)	200 (757)		250 (946)																	
	PSI (BAR)																							
	100 (6.89)	100 (6.89)	75 (5.17)	100 (6.89)	100 (6.89)	50 (3.45)	75 (5.17)	100 (6.89)	Tip	Shut-Off*		Pistol Grip	Twist	Ball	Tab	Horseshoe	Rigid	Swivel	Free Swivel	Cut Metal	Length (Inches)	Weight (Lbs.)		
1.5"	•	•	•	•									•				s			s	4.625	1.375	**L-205-BA** (Tip Only)	1
	•	•	•	•					L-205-BA	LB-275A			•	•	o	s	o	s	o	s	8.50	3.50	**LB-275-AF**	2
			•		•	•	•	•					•				s	o		s	7.125	3.25	**205-BA** (Tip Only)	1
			•		•	•	•	•	205-BA	B-375AT	•		•	•	o	s	o	s	o	s	12.875	6.25	**B-375-ATF**	3
			•		•	•	•	•	205-BA	B-375GAT	•	•	•	•	o	s		o	s	s	13.25	6.75	**B-375-GATF**	3
2.5"			•		•	•	•	•					•				s			s	7.50	3.50	**D-205-BA** (Tip Only)	1
			•		•	•	•	•	D-205BA	JB-275A			•	•		s			s	s	13.625	7.50	**JB-275-LAFD**	4

Key s = standard o = option

* Break-apart nozzles list standard configuration for shut-offs.

** Listed flow rate for break-apart nozzle with integral smooth bore is for Mystery® nozzle tip only.

Smooth bore discharge size may restrict flow of Mystery® tip. 15/16" discharge standard on 1.5" base; 7/8", 1", 1 1/8", 1 1/4" available. 1 1/4" discharge standard on 2.5" base; 7/8", 15/16", 1", 1 1/8" available.

MYSTERY® CONFIGURATIONS

Figure 1

TIP ONLY

Fig. 1

Figure 2

BREAK-APART

Fig. 2

Figure 3

BREAK-APART WITH INTEGRAL SMOOTH BORE

(Shown with optional pistol grip)

Fig. 3

Figure 4

LAFD NOZZLE

Fig. 4

OPTIONS

HANDLES

TAB HORSESHOE

THREADS

All nozzles are NHT unless otherwise specified. See index T-12 for optional base threads, including British instantaneous.

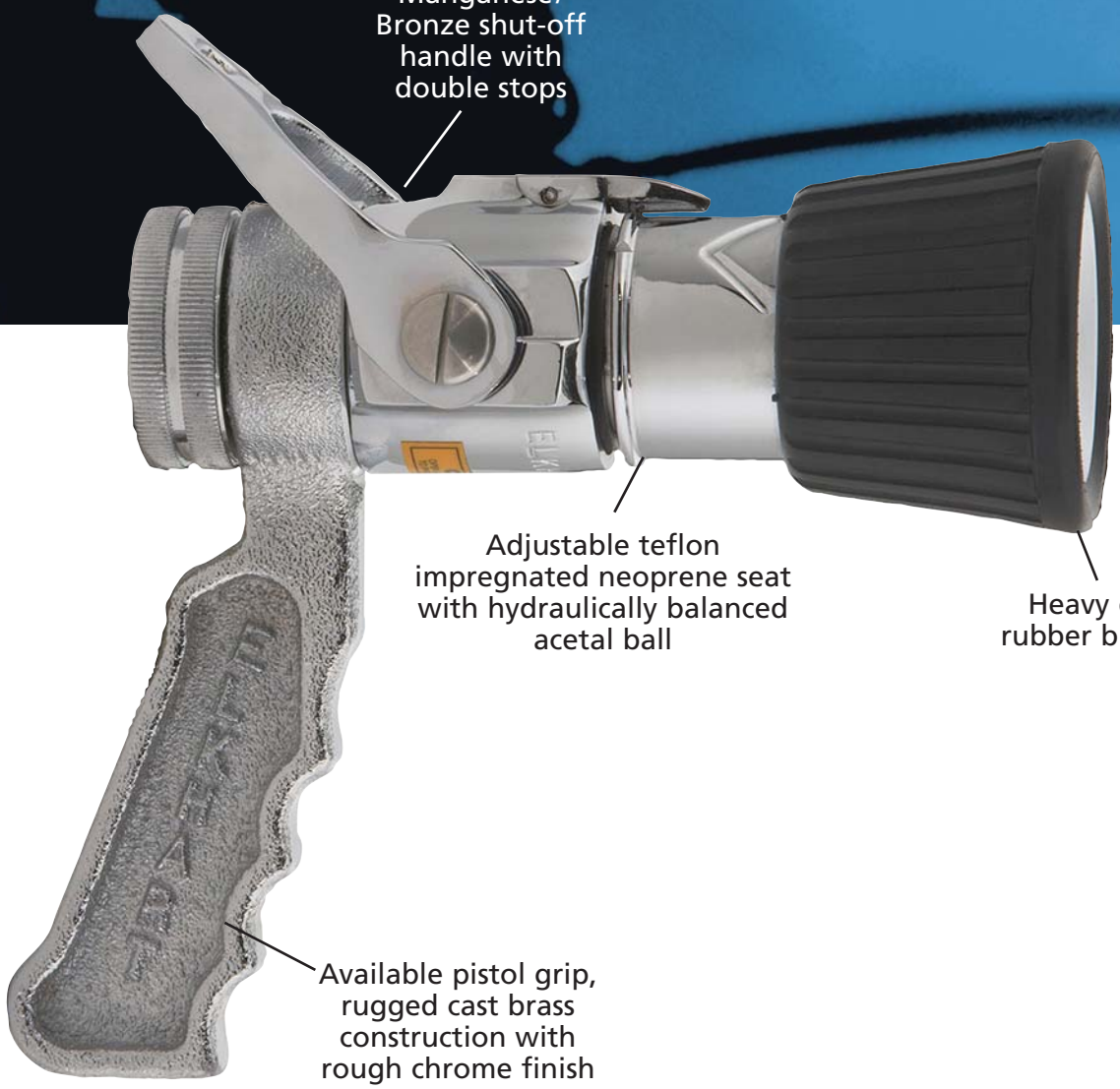
BREAK-APART COMPONENTS

Ball shut-offs and/or playpipes referenced here may be found on page 1-24.

Figures depict general product types only and are not intended to be inclusive of all product features.

Select-O-Stream®

An industry standard for over 40 years, the Select-O-Stream® delivers constant gallonage at every pattern level, from straight stream to full fog. The rugged all brass construction with chrome finish has a proven record of standing up to corrosive conditions. The variety of available gpm options with the Select-O-Stream® allows for customized choices to match the needs of fire professionals.



Base Size	AVAILABLE STANDARD FLOW RATES GPM (LPM) PSI (BAR) 100 (6.89) 12 (45)	23 (87)	60 (227)	95 (360)	125 (473)	170 (644)	250 (946)	BREAK-APART COMPONENTS Tip	Shut-Off*	GRIP Pistol Grip	Playpipe	FINISH Satin Brass	Chrome-Plated	HANDLE Tab	Horseshoe	BASE Rigid	Swivel	Free Swivel	TEETH Cut Metal	DIMENSIONS Length (Inches)	Weight (Lbs.)	MODEL	FIGURE
1"	•	•											s	s	o	o		s	s	6.75	5.375	S-O	1
	•	•								•			s	s	o			s	s	7.50	6.25	S-OG	2
1.5"			•	•	•							s	o	o	s	o	s	o	s	7.00	5.50	L-O	1
			•	•	•					•		s	o	o	s			s	s	7.75	6.375	L-OG	2
						•	•					s	o		s	o	s	o	s	8.00	8.00	SOS	1
2.5"						•	•					s	o		s	o	s	o	s	10.625	10.375	D	1
						•	•	SOS	279-L		•	s	o		s	s			s	18.25	18.00	800-SOS	3

Key s = standard o = option
* Break-apart nozzles list standard configuration for shut-off.

SELECT-O-STREAM® CONFIGURATIONS

Figure 1

STANDARD

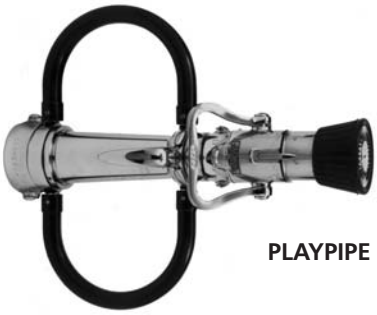
Fig. 1

Figure 2

PISTOL GRIP

Fig. 2

Figure 3



PLAYPIPE COMBINATION

Fig. 3

Figures depict general product types only and are not intended to be inclusive of all product features.

OPTIONS

HANDLES

TAB

HORSESHOE

THREADS

All nozzles are NHT unless otherwise specified. See index T-12 for optional base threads, including British instantaneous.

BREAK-APART COMPONENTS

Ball shut-offs and/or playpipes referenced here may be found on page 1-24.

Industrial & Electrical Fog

Our industrial fog nozzles were created to handle the rigors of industrial needs in refineries, chemical plants, office complexes and other on-site situations. Several different materials are available to suit every need, and most nozzles are U.L. listed.

The fog nozzles with the electrical specification in the chart are designed to be used on class "C" hazards and utilize only fog capabilities in combating blazes at 10' or more from live electrical equipment and/or circuits with voltage up to 250,000. All other industrial fog nozzles can be used in either straight stream or fog combinations.

Base Size	AVAILABLE STANDARD FLOW RATES GPM (LPM)								FLOW TYPE		SHUT-OFF			CERT.	BASE			MATERIAL / FINISH				DIMENSIONS			
	12 (45)	23 (87)	60 (227)	75 (284)	95 (360)	125 (473)	170 (644)	250 (946)	Fixed Flow	Variable Flow	Twist	Ball	Electrical	U.L. Listed	Rigid	Swivel	Free Swivel	Brass: Satin	Brass: Chrome	Polycarbonate	Elk-O-Lite®	Length (Inches)	Weight (Lbs.)	MODEL	FIGURE
	PSI (BAR) 100 (6.89)																								
1"	•	•							•		•			•	s			s	o			4.50	2.50	S-205-B	1
1.5"			•		•	•			•		•			•	s			s	o			5.00	2.875	L-205-B	3
			•		•	•			•		•				s			s	o			4.75	4.125	L-200	2
				•						•	•				s					s		4.875	0.375	1575	4
							•	•	•		•			•	s			s	o			7.063	5.625	205-B	6
			•		•	•			•		•		•	•	s			s	o			5.00	2.875	L-205-EB	3
			•		•				•		•			•	s			s	o			3.00	1.50	L-206-T	
				•						•	•		•		s					s		4.875	0.375	1575-E	4
			•		•	•			•			•	•		o	s	o	s	o			7.00	5.50	L-OE	
					•				•			•	•	•		s						s	7.375	2.875	NSL	5
							•	•	•		•		•		s			s	o			7.063	5.625	205-EB	3
2.5"							•	•	•		•			•	s			s	o			8.313	7.375	D-205-B	6
							•	•	•		•				s			s	o			11.563	8.75	D-200	2
							•	•		•		•	•		o	s	o	s	o			7.75	6.375	D-E	
							•	•	•		•		•		s			s	o			8.313	7.375	D-205-EB	6

Key s = standard o = option

FOG NOZZLE CONFIGURATIONS

Figure 1

Fig. 1

Figure 2

Fig. 2

Figure 3

Fig. 3

Figure 4

Fig. 4

Figure 5

Fig. 5

Figure 6

Fig. 6

Figures depict general product types only and are not intended to be inclusive of all product features.

OPTIONS

THREADS

All nozzles are NHT unless otherwise specified. See index T-12 for optional base threads, including British instantaneous.

HANDLES

L-OE/NSL feature aluminum/bronze shut-off handles.

Marine

These handline nozzles are specifically designed and manufactured for the unique firefighting challenges of a marine environment. They utilize military spec, corrosion resistant cast brass construction and are ideal for the application of AFFF. The constant flow technology, combined with their durable construction, make them optimal for use in the shipping industry, in refineries and for off-shore drilling or production rigs, as well as within chemical complexes.

Most models meet the stringent performance requirements of either the U.S. Navy or the U.S. Coast Guard.

MiL

Base Size	AVAILABLE FLOW RATE GPM (LPM) PSI (BAR) 100 (6.89) 95 (360)	125 (473)	250 (946)	GRIP Pistol Grip	SHUT-OFF Twist	Ball	BASE Rigid	Swivel	Free Swivel	TEETH Cut Metal	RATING Complies with MIL*	Complies with USCG**	DIMENSIONS Length (Inches)	Weight (Lbs.)	MODEL	FIGURE
1.5"	•	•				•			s	s			7.375	6.50	SFL-N	1
	•			•		•			s	s	•		7.375	7.625	SFL-GN-95	2
		•		•		•			s	s	•		7.375	7.625	SFL-GN-125	2
	•			•		•			s	s			7.375	7.625	SFL-GCG-95	2
	•					•			s	s		•	7.375	7.625	SFL-CG	1
2.5"			•			•			s	s	•		12.50	12.80	DSF-N	3

Key s = standard o = option
* Complies with MIL-N-24408E Type 1
** Complies with USCG Approval Number: 162.027/12/0-IAW CFR46 162.027

MARINE CONFIGURATIONS

Figure 1

STANDARD

Fig. 1

Figure 2

PISTOL GRIP

Fig. 2

Figure 3

DSF-N

Fig. 3

Figures depict general product types only and are not intended to be inclusive of all product features.

OPTIONS

THREADS

All nozzles are NHT unless otherwise specified. See index T-12 for optional base threads, including British instantaneous.

HANDLES

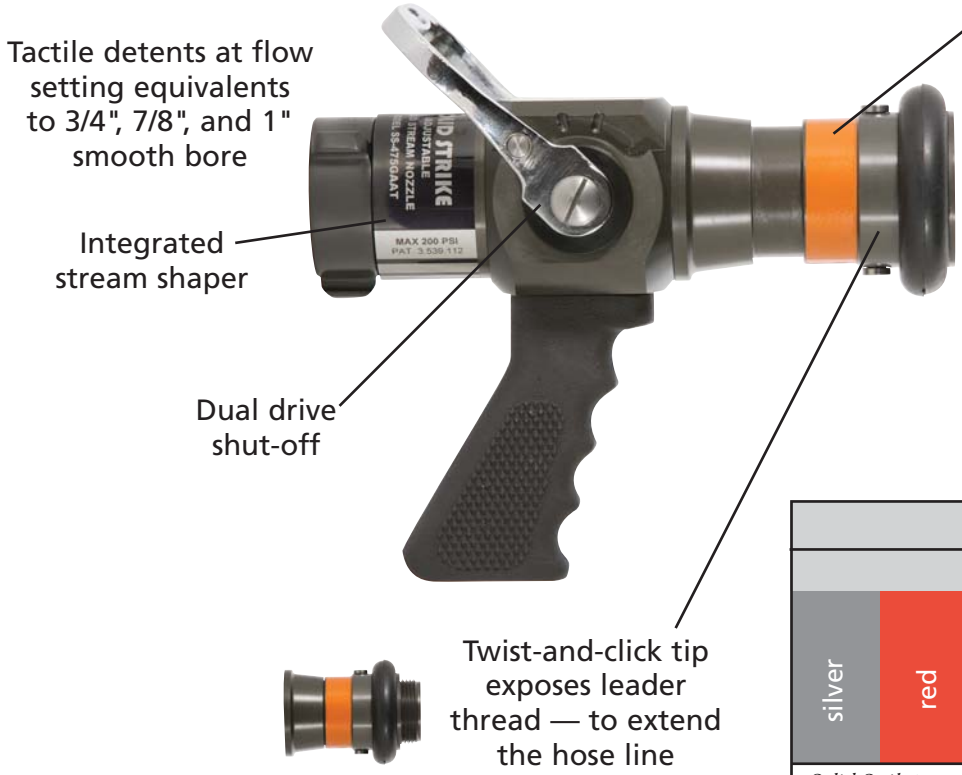
- *SFL-GCG-95, SFL-CG and SFL-N feature manganese/bronze shut-off handles*
- *SFL-GN series and DSF-N feature silicon/bronze shut-off handles*

Solid Strike™

The Solid Strike™ offers unsurpassed flow performance with flexibility that allows the nozzleman to vary GPM or reach without shutting down to change tip size. Unlike a traditional smooth bore tip, the Solid Strike™ utilizes the hydraulic forces of the water flow itself to converge and project a perfect solid stream of water at near identical exit velocity — maximizing the stable range of the stream. The Solid Strike™ operates like any traditional smooth bore tip on a shut-off, except that the nozzleman has the ability to vary the effective tip size under flow.

Features include:

- **Dual construction free swivel/swivel for superior inlet movement and rotation**
- **Hard anodized, Teflon® impregnated aluminum alloy body and pistol grip**
- **Aluminum/bronze shut-off handle**
- **Delrin® adjustable hydrofoil**
- **Maximum operating pressure 200 psi**



INLET SIZE	OUTLET SIZE	FLOW RATES*	HANDLE	MODEL
		GPM (LPM)	Horseshoe	
1.5"	1.5"	118/159/209 (447/602/791)	S	SS-475-GAAT

* Flow rate for each detent (3/4", 7/8", and 1") setting @ 50 psi (3.45 bar)

OPTIONS

COLORS

silver | red | orange | yellow | green | blue

Solid Strike® nozzle comes standard with chrome handle and natural Elk-O-Lite® pistol grip. Ultra-reflective, durable vinyl color coding bands are supplied with each nozzle. See above for colors.

THREADS

All nozzles are NHT unless otherwise specified. See index T-12 for optional base threads, including British instantaneous.

Ball Shut-offs & Playpipes

Elkhart Brass Ball Shut-offs and Playpipes are designed and constructed for rugged use and reliable performance as well as an excellent foundation for your break-apart nozzle needs using either smooth bore or fog nozzles. Elkhart Brass Ball Shut-offs and Playpipes are available with a variety of options, including built-in smooth bores which can be used with a fog nozzle tip for maximum versatility.

BALL SHUT-OFFS & PLAYPIPES

Inlet Size	Outlet Size	WATERWAY SIZE				AVAILABLE INTEGRAL SMOOTH BORE DISCHARGE SIZE						BALL TYPES			SEAT		DRIVE		GRIP			BASE					HANDLE		MATERIAL		MODEL	FIGURE
																						TYPE			LENGTH							
		1"	1⅜"	1½"	1¾"	½"	⅞"	15/16"	1"	1⅛"	1¼"	Single Cutaway	Double Cutaway	Full Round	Single Adjustable	Double Non-Adjustable	Single	Double	Pistol Grip	Playpipe	Ladderhook	Rigid	Swivel	Free Swivel	Long	Short	Tab	Horseshoe	Brass	Elk-O-Lite®		
1"	1"	•											s		•		•					s		o			s	o	•		SB-275	2
		•											s		•		•					o		s			s	o		•	SB-275-A	2
		•				•							s		•		•					o		s			s	o		•	SB-275-AT	1
		•											s		•		•		•			o		s			s	o	•		SB-275-G	2
		•											s		•		•		•			o		s			s	o		•	SB-275-GA	2
		•				•							s		•		•		•			o		s			s	o		•	SB-275-GAT	1
1.5"	1.5"	•											s		•		•					o	s	o			o	s	•		LB-275	2
		•											s		•		•					o	s	o			o	s		•	LB-275-A	2
		•											s		•		•		•			o	o	s			o	s		•	LB-275-GA	2
			•										s		•		•					o	s	o			o	s	•		B-275	2
			•										s		•		•					o	s	o			o	s		•	B-275-A	2
			•										s		•		•		•			o	o	s			o	s		•	B-275-GA	2
			•									s	o	o		•		•					o	s				o	s		•	B-375-A	2
			•				•	•	•	•	•	s	o	o		•		•					o	s				o	s		•	B-375-AT	1
			•									s	o	o		•		•	•				o	s				o	s		•	B-375-GA	2
			•				•	•	•	•	•	s	o	o		•		•	•				o	s				o	s		•	B-375-GAT	1
2.5"	1.5"		•										s		•		•					o	s	o			o	s	•		DB-275	
			•										s		•		•					o	s	o	s	o	o	s		•	DB-275-A	
			•										s		•		•		•			o	o	s	s	o	o	s		•	DB-275-GA	
			•									s	o	o		•		•						s	s	o	o	s		•	DB-375-A	
			•									s	o	o		•		•	•					s	s	o	o	s		•	DB-375-GA	
			•				•	•	•	•	•	s	o	o		•		•						s	s	o	o	s		•	DB-375-AT	
			•				•	•	•	•	•	s	o	o		•		•	•					s	s	o	o	s		•	DB-375-GAT	
			•										s		•		•			•				s						•	B-278	4
			•							•	•		s		•		•			•				s						•	B-278-AT	4
			•										s		•		•			•	•			s						•	B-278-L	4
			•										s		•		•			•				s						•	B-877-A*	
				•									s		•		•			•	•	s							•		279-L	3
				•																•	•			s						•	279-LA	3
										•										•		s							•		211T	
2.5"	2.5"				•							s			•		•					s						s	•		JB-275	
					•								s		•		•							s						•	JB-275-A	
					•								s		•		•		•					s						•	JB-275-GA	

Key s = standard o = option

*B-278 (without ladderhook) + ST-190-BA (Triple Stack Tip)

BALL SHUT-OFFS AND PLAYPIPES CONFIGURATIONS

Figure 1

INTEGRAL SMOOTH BORE
(Shown with optional pistol grip)

Fig. 1

Figure 2

TYPICAL BALL SHUT-OFF
(Shown with optional pistol grip)

Fig. 2

Figure 3

PLAYPIPE WITHOUT SHUT-OFF

Fig. 3

Figure 4

PLAYPIPE WITH SHUT-OFF

Fig. 4

Figures depict general product types only and are not intended to be inclusive of all product features.

DOUBLE CUT-AWAY

Ball is hydraulically balanced for a smooth transition from closed to open and open to closed.

FULL ROUND

Ball has a solid bore for optimal flow ?characteristics and stream quality — ?particularly for smooth bores and shut-offs with built-in smooth bores.

SINGLE CUT-AWAY

Combines the features of smooth operation and excellent stream quality.

OPTIONS

COLORS

Color options available for pistol grip and handle. Ball shut-offs standards are a rough chrome handle and natural Elk-O-Lite® pistol grip.

HANDLES

TAB

HORSESHOE

BASES

THREADS

All nozzles are NHT unless otherwise specified. See index T-12 for optional base threads, including British instantaneous.

Stream Shapers

Used to straighten a water flow, Elkhart Brass has stream shapers available in a variety of sizes and several materials to suit a variety of situations. Our new mini stream shapers reduce bulk while still providing excellent stream. All Elkhart stream shapers feature replaceable vanes for easy repair.

STREAM SHAPERS CONFIGURATIONS

Figure 1

Fig. 1

Figure 2

Fig. 2

Figure 3

Fig. 3

Figure 4

Fig. 4

Figure 5

Fig. 5

Figures depict general product types only and are not intended to be inclusive of all product features.

Inlet Size	Outlet Size	MATERIAL/FINISH			DIMENSIONS		MODEL	FIGURE
		BRASS						
		Satin	Chrome	Elk-O-Lite®	Length (Inches)	Weight (Lbs.)		
1.5"	1.5"			s	2.5	0.5	281A	1
				s	1.5	0.2	281A-Mini	5
2.5"	2.5"	s	o		4.5	3.3	282B	2
				s	4.5	1.5	282A	1
				s	2.3	0.5	282A-Mini	5
3.5"	2.5"	s	o		5.8	3.5	283B	3
				s	5.8	1.5	283A	3
3.5"	3.5"	s	o		3.5	3.5	284B	4
				s	3.5	1.5	284A	4

Key s = standard o = option

OPTIONS

THREADS

All shapers are NHT unless otherwise specified. See index T-12 for optional base threads.

Smooth Bore & DelugeTips

For maximum reach, smooth bore tips create concentrated waterflow for use with either handlines or monitors while using lower pressures of 50 or 80 psi. Elkhart offers a wide variety of discharge sizes to suit any need. Additionally, Elkhart's stacked tips allow you to customize the smooth bore to meet your needs in the field.

SMOOTH BORE & DELUGE TIPS

SMOOTH BORE SINGLE TIP

Base Size	AVAILABLE DISCHARGE DIAMETER																							FINISH					DIMENSIONS			
	⅛"	¼"	5/16"	⅜"	½"	5/8"	11/16"	¾"	7/8"	15/16"	1"	1 1/16"	1⅛"	1¼"	1⅜"	1½"	1⅝"	1¾"	1⅞"	2"	2¼"	2½"	3"	Brass	Chrome	Elk-O-Lite®	Slug	w/bumper	Length (Inches)	Weight (Lbs.)	MODEL	FIGURE
	GPM @ 50 PSI														GPM @ 80 PSI																		
	3	13	21	29	52	81	99	118	159	184	209	237	265	326	500	596	700	813	935	1063	1347	1665	2400									
1"	•	•	•	•	•																			s	o			•	4.50	1.0	S-185-B	
1.5"									•	•	•		•	•												s		•	4.75	1.0	185-A	2
									•		•		•	•										s	o			•	4.50	1.50	185-B	3
									•	•	•		•													s	•		2.625	0.75	186-A	1
					•	•	•	•	•	•	•		•	•												s			4.50	0.563	187-A	4
									•	•	•	•	•	•												s		•	7.00	0.875	188-A	5
															•											s			10.0	0.68	187-CAF	6
2.5"											•		•	•	•	•	•	•	•	•	•			s	o				9.0	3.625	181	7
															•	•		•								s			9.0	1.625	181-A	
3.5"																				•	•	•		s	o				9.0	7.125	181-3	
																							•			s			12.0	4.0	181-3A	8

Key s = standard o = option

SMOOTH BORE STACKED TIP

Base Size	AVAILABLE 1ST DISCHARGE								AVAILABLE 2ND DISCHARGE							AVAILABLE 3RD DISCHARGE						AVAIL. 4TH DIS-CHARGE	FINISH				DIMENSIONS			
	15/16"	1"	1⅛"	1¼"	1½"	1¾"	2"	2½"	½"	1"	1⅛"	1¼"	1½"	1¾"	2¼"	¾"	1"	1⅛"	1⅜"	1½"	2"	1⅜"	Brass	Chrome	Elk-O-Lite®	Leader Threading*	Length (Inches)	Weight (Lbs.)	Model	Figure
	GPM 50 PSI				GPM 80 PSI				GPM 50 PSI			GPM 80 PSI				GPM 50 PSI			GPM 80 PSI			GPM 80 PSI									
	184	209	265	326	596	813	1063	1665	52	209	265	413	596	813	1347	118	209	265	500	596	1063	500								
1.5"	•		•						•																s		6.625	0.688	ST-185-A	9
				•														•							s	•	7.625	0.875	ST-185A-IFD	
			•	•						•	•					•	•						s				9.0	4.375	ST-190-B	
				•							•						•								s	•	9.0	1.125	ST-190-BA	
2.5"							•							•						•			s	o			14.0	7.25	ST-191	
						•							•						•				s	o			10.75	4.0	ST-191-1	
							•							•						•					s		10.50	2.0	ST-191-A	
					•							•					•								s		9.625	1.675	ST-197-A	12
							•							•						•		•			s		12.875	2.125	ST-194	10
3.5"								•							•						•				s		16.75	4.0	ST-195	11

* 1.5 male for line extension

OPTIONS

THREADS	PRESSURE
All base threads are NHT unless otherwise specified. See index T-12 for optional base threads.	*All pressure specified for smooth bores at pitot pressure.*

SLUG

Figure 1

186-A
- Leader threading

Fig. 1

SINGLE SMOOTH BORE TIPS – HANDLINE

Figure 2

185-A
- Leader threading
- Bumper

Fig. 2

Figure 3

185-B
- Bumper

Fig. 3

Figure 4

187-A
- More compact than other tips

Fig. 4

Figure 5

188-A
- Longer tip for improved stream quality
- Bumper

Fig. 5

SINGLE SMOOTH BORE TIPS – HANDLINE/DELUGE

Figure 6

187-CAF
- For applying CAF

Fig. 6

SINGLE SMOOTH BORE TIPS – DELUGE

Figure 7

181
- Classic deluge tip

Fig. 7

Figure 8

181-3A
- Built-in stream shaper

Fig. 8

STACKED SMOOTH BORE TIPS – HANDLINE

Figure 9

ST-185-A

Fig. 9

STACKED SMOOTH BORE TIPS – MASTER STREAM

Figure 10

ST-194
- Leader threading

Fig. 10

Figure 11

ST-195
- Leader threading

Fig. 11

Figure 12

ST-197-A
- Leader threading

Fig. 12

S-205-BAF

- For forestry use
- 1.0" rigid base in NHT or NPSH; 0.75" GHT available
- Available in 12 or 23 gpm (45 or 87 lpm)
- Twist shut-off
- For use with pressure of up to 600 psi (41.37 bar)
- Straight stream to fog
- Elk-O-Lite® construction

L-205-BAF

- For forestry use
- 1.5" rigid base
- Dual flows: 20 and 70 gpm (76 and 265 lpm) @ 100 psi (6.89 bar)
- Straight stream to fog
- Twist shut-off
- Elk-O-Lite® construction

S-205-BAD

- For decontamination use
- Connects to 0.75" GHT or 1" NHT
- Available in 12 or 23 gpm (45 or 87 lpm)
- For use with pressure of up to 600 psi (41.37 bar)
- Twist shut-off
- Straight stream to fog
- Elk-O-Lite® construction
- Optional kit includes: NFPA 1961 compliant 1" hose with adapters (0.75" garden hose, 1" NHT, and 2.5" NHT) plus a heavy-duty nylon bag

SFL-O-DI

- For de-icing use
- 1.5" swivel base (optional rigid and free swivel bases)
- Selectable flow rates of 40, 60, 95 or 125 gpm (151, 227, 360 or 473 lpm)
- Aluminum/bronze handle construction; tab handle (standard), horseshoe handle (optional)
- Combined chrome-plate brass and Elk-O-Lite® construction
- Usable with de-icing and anti-icing fluids in Type I systems
- Pistol grip available (SFL-OG-DI)

SFS-O-DI

- For de-icing use
- 1.0" NPSH free swivel base (optional rigid base)
- Selectable flow rates of 10, 20 or 30 gpm (38, 78 or 114 lpm) @ 100 psi (6.89 bar)
- Aluminum/bronze handle construction; tab handle (standard), horseshoe handle (optional)
- Combined chrome-plated brass and Elk-O-Lite® construction
- Usable with de-icing and anti-icing fluids in Type I systems
- Pistol grip available (SFS-OG-DI)

222-1.5

- Wat-R-Wall
- 1.5" free swivel inlet, no outlet
- 100 gpm (380 lpm) @ 100 psi (6.89 bar)
- Brass construction with chrome plating
- Length: 8"
- Width: 10"
- Height: 7.25"
- Weight: 8 lbs.

222-2.5

- Wat-R-Wall
- 2.5" free swivel inlet, 2.5" outlet with cap and chain
- 100 gpm (380 lpm) @ 100 psi (6.89 bar)
- Brass construction with chrome plating
- Length: 8.25"
- Width: 10"
- Height: 8.25"
- Weight: 11.5 lbs.

199

- For sewer use
- 2.5" free swivel base
- 275 gpm (1041 lpm) @ 100 psi (6.89 bar)
- Brass construction
- Includes a replaceable steel cutting blade tool

184

- For street cleaning/flushing use
- 2.5" NPSH base
- 300 gpm (1136 lpm) @ 100 psi (6.89 bar)
- Brass construction
- Available in right, left or center mounting *(specify)*

CELLAR / DISTRIBUTOR

CELLAR NOZZLE

SPECIFICATIONS	MODELS	
	LR	R
Base	1.5" F	2.5" F
GPM @100 PSI (6.89 BAR)	160 GPM (606 LPM)	350 GPM (1325 LPM)
Spray Diameter (fog pattern)	20 feet	55 feet
Materials/Finish	Brass with chrome-plated finish	

BRESNAN DISTRIBUTOR NOZZLE 193-6

BRESNAN DISTRIBUTOR NOZZLE 193-9

SPECIFICATIONS	MODELS		
	193-6	193-6	193-9
Base	1.5" F	2.5" F	2.5" F
GPM @ 100 PSI (6.89 BAR)	140 GPM (530 LPM)	395 GPM (1495 LPM)	495 GPM (1874 LPM)
Spray Diameter (straight pattern)	20 feet	45 feet	36 feet
Materials/Finish	Brass with chrome-plated finish		

1.5" APPLICATOR FOR CELLAR/BRESNAN NOZZLE

SPECIFICATIONS	MODELS	
	A-1.5	A-2.5
Inlet	1.5" Free Swivel	2.5" Swivel
Outlet	1.5"	2.5"
Shut-off	Yes	No
Material/Finish	Brass with chrome-plated finish	Elk-O-Lite® red urethane enamel and anodized trim

PISTOL GRIP ADAPTER

- For use with 1.5", 1.75" or 2" handline nozzles
- Elk-O-Lite® construction with hard anodized finish
- PG-S (1" free swivel inlet and waterway with 1" male outlet)
- PG (1.5" free swivel inlet and waterway with 1.5" female outlet)

PIEZOMETER GAUGE

- Liquid-filled 0-300 psi gauge
- Elk-O-Lite® construction with hard anodized finish
- 227A – 1.5" (1.5" swivel inlet, 1.5" outlet, and 4.8" length)
- 227A – 2.5" (2.5" swivel inlet, 2.5" outlet, and 5.5" length)
- 227A – 3.5" (3.5" swivel inlet, 3.5" outlet, and 6.9" length)

LINE GAUGE

- Fully guarded, liquid-filled luminescent gauge
- Hard anodized Elk-O-Lite® body
- 228A – 1.5" 0-200 gauge with 1.5" free swivel inlet, 1.5" outlet, and 6" length
- 228A – 2.5" 0-200 gauge with 2.5" free swivel inlet, 2.5" outlet, color-coded zones, and 6.9" length

632 HOSE AND LADDER STRAP

- Flexible woven nylon with brass ends
- Fits ladder rungs up to 1⅝"
- Strap width 1"
- Length: 42"
- Less than 2 lbs.

EB-500 PORTABLE FLOWMETER

- Digital 0-500 gpm read-out display
- Flowmeter and flowtube-mounted paddlewheel flow sensor
- Low and high flow warnings
- Weather-tight PVC Pelican case includes: flowmeter, power switch, low battery indicator, rechargeable battery, AC charger/power supply, cable connections and cord storage space
- Weight: 17 lbs.
- Finish is hard anodized
- 2.5" flow tube (NST threads)

285 HOSE CLAMP

- For use with 1.5" – 3" hose, including double jacket 3"
- Unique jaw design allows for safer release of clamped hose
- Spring-loaded safety lock for closed position
- Detachable carrying handle
- ZA-27 aluminum construction
- Weight: 19 lbs.
- Length: 15"
- 285-MB – optional Elk-O-Lite® mounting bracket can be positioned vertically or horizontally

DIRECT CONNECT ADAPTER

- 2.5" inlet
- 1.5" outlet
- Rigid base
- D-327 (Brass construction)
- D-327A (Elk-O-Lite® construction)

Foam Expansion Tubes

When greater expansion rates of foam solution are needed, a foam aeration tube can be quickly attached to many of Elkhart Brass combination fog nozzles. All tubes are Elk-O-Lite® cast finish with a nylon cord wrap.

Compatible Nozzle Model	FOAM EXPANSION TUBE MODELS				
	246S	247S	244	246	247
SM-10F/G	•			•	
TSM-10F	•			•	
SM-20F/G	•			•	
TSM-20F	•			•	
4000-10 thru 4000-19	•			•	
4000-20 thru 4000-26		•			•
4000-31/34/35		•			•
SFL-B/G	•			•	
SFL-G/CGC/GN/N			•		
SFM/G	•			•	
TSFM	•			•	
DSM-30F/G		•			•
SM-30F/G		•			•
TSM-30F		•			•
SFM-HP/G	•			•	
TSFM-HP/T	•			•	
SFM-LP/G	•			•	
TSFM-LP/T	•			•	
Foam Expansion Tube Details					
Length	15.87"	15.87"	40.50"	30.25"	30.25"
Weight (Lbs.)	3.80	3.80	4.50	4.75	4.75
Built-In Hydroverter	•	•			
Figure	*1*	*1*	*3*	*2*	*2*

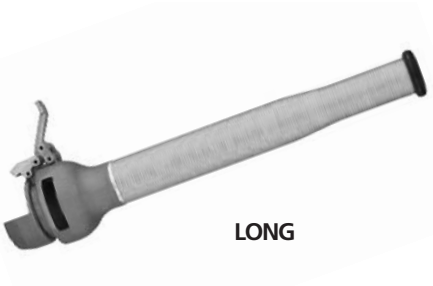
TUBE CONFIGURATIONS

Figure 1

SHORT

Fig. 1

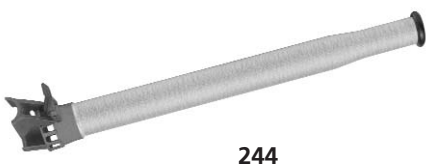
Figure 2



LONG

Fig. 2

Figure 3



244

Fig. 3

71251000 – SEAT WRENCH

- For seat adjustment and/or removal
- 1" or 1.5" nozzle/ball shut-off
- 1" waterway compatible

71252000 – SEAT WRENCH

- For seat adjustment and/or removal
- 1.75", 2" or 2.5" nozzle/ball shut-off
- 1.375" waterway compatible

SEAT WRENCH

- Specially designed to be used for seat removal/installation on 9786 or 9787 PIV
- 4.5" outlet compatible (01501001)
- 5" or 6" outlet compatible (01502001)

80642001 – WYE SEAT WRENCH

- For seat adjustment and/or removal on 1.5" ball valved wyes
- Hex end fits old style B-100, B-100L and BG-104
- Blade end fits old style B-100A, B-100-LA and BG-104A

80269001 – STEM WEB WRENCH

- Designed to hold the stem web (base) while removing and/or installing Master Stream heads
- Slotted end fits Select-O-Stream®, Select-O-Flow®, and Mystery® stem bases

80313001 – STEM WEB WRENCH

- Designed to hold stem web (base) while removing and/or installing handline nozzle stem heads
- Slotted end fits most of Elkhart's handline nozzle bases (except Select-O-Matics®)

71258000 – OPEN FACE 2" SPANNER WRENCH

- Seat adjustments and/or removal on 800 series and 2800 series apparatus valves
- Seat adjustments and/or removal on Elkhart's wyes, Siamese and water thiefs (2.5 seat only)
- Removal and/or installation of stem heads on all Select-O-Matic® handline nozzles

80291001 – STEM HEAD WRENCH

- Designed to assist in removing and/or installing slotted stem heads
- Blade end fits slotted handline nozzle stems (except Select-O-Matics®)

71303001 – OPEN FACE 4" SPANNER WRENCH

- Removal and/or installation of stem heads on Master Stream nozzles (except X-Stream® series)
- Larger version of P/N 71258000

603 – TOOL KIT

- Seat wrenches (71251000 and 71252000)
- Open faced spanner wrench (71258000)
- Stem head wrenches (80291001 and 80313001)
- Wye seat wrench (80642001)

F-464 – FOLDING SPANNER

- One end is a spanner, the other is a window jimmy
- Fits up to a 3.5" rocker/lug pin coupling
- Clip ring
- Length: 10.4" (open) or 5.9" (folded)
- F-464A – Elk-O-Lite® construction (weight: 0.4 lbs.)
- F-464B – Brass construction (weight: 1.1 lbs.)

T-464 – UNIVERSAL SPANNER

- Hammer head, window jimmy, gas cock slot, and hanger loop
- Fits up to a 3.5" rocker/lug pin coupling
- Elk-O-Lite® construction
- Length: 11.5"
- Weight: 0.5 lbs.

454 – ADJUSTABLE HYDRANT WRENCH

- Cast manganese bronze head with stainless steel handle
- Adjustable – fits up to 1.75" pentagon nut or 1.5" square nut
- Can be used as a spanner on 2.5" pin lug couplings
- Knurled handle
- Length: 18.0"
- Weight: 3.8 lbs.

S-454 – ADJUSTABLE HYDRANT WRENCH

- Cast manganese bronze head with stainless steel handle
- Adjustable – fits up to 1.75" pentagon nut or 1.5" square nut
- Can be used as a spanner on 2.5" pin lug couplings or rocker lug couplings from 2.5" to 5.0"
- Knurled handle
- Length: 16.8"
- Weight: 4.6 lbs.

S-454-S – ADJUSTABLE HYDRANT WRENCH

- Cast manganese bronze head with stainless steel handle
- Adjustable – fits up to 1.75" pentagon nut or 1.5" square nut
- Can be used as a spanner on 4.0" or 5.0" Storz couplings or rocker lug couplings from 2.5" to 5.0"
- Knurled handle
- Length: 17.3"
- Weight: 4.9 lbs.

469 – SPANNER WRENCH HOLDER

- Mounts vertically or horizontally on apparatus
- Holds two T-464 universal spanners
- Snap action release
- Elk-O-Lite® construction
- Length: 7.4"
- Weight: 1 lbs.
- Optional with wrenches

470 – HYDRANT AND SPANNER WRENCH HOLDER

- Mounts vertically or horizontally on apparatus
- Holds two T-464 universal spanners plus one hydrant wrench (454, S-454, or S-454-S)
- Snap action release
- Elk-O-Lite® construction
- Length: 10.0"
- Weight: 1.5 lbs.
- Optional with wrenches

Elkhart Brass History

1902
- Company founded by Albert E. Hansen

1920s
- Offered first ball-type shut-off nozzle in the U.S.

1930s
- Mystery® nozzle, America's first peripheral jet fog nozzle
- Developed a line of truck-mount deck guns

1940s
- Began making portable monitors
- Added the integral ball shut-off to the Mystery® nozzle in the Select-O-Stream® line

1950
- Developed Select-O-Flow® nozzles, the industry's first constant flow, selectable gallonage nozzles

1970s
- Introduced Select-O-Matic® automatic nozzles, the first nozzles to operate on the availability of water rather than on pressure (still the company's best selling product)
- Opened an additional manufacturing site in Shreve, Ohio

1980s
- Introduced Chief® nozzles — a lightweight, simplified version of the Select-O-Flow® line
- Created a complete line of fireground appliances used with LDH
- Developed Stinger® monitors — the first product with quick disconnect to move from truck mount to ground mount (prior to Stinger, two separate pieces of equipment were needed)

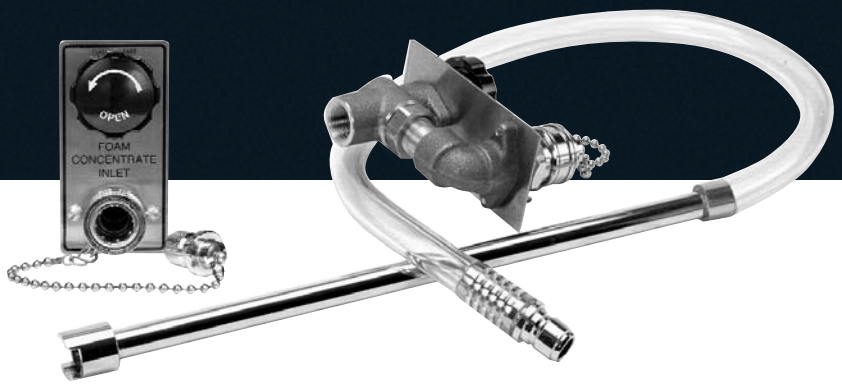
1990s
- Developed a new generation of easier-to-operate Select-O-Matic® nozzles with more gallonage choices
- Introduced X-Stream® SM-2000 Select-O-Matic® nozzle with gallonages from 500-2000 GPM

2000s
- Changed the face of firefighting again with W.E.T.™ (Wireless Electronic Technology) that allows remote controlled operation of monitors from up to 1/4 mile away
- Introduced Extender® which automatically raises Elkhart Brass compact monitors 18" above apparatus deck
- Introduced the Vulcan® monitor, the industry's most compact, lightest master stream device with flows up to 1250 GPM
- Developed low pressure handline nozzles, including break-apart options, all offering outstanding stream performance at 75 psi (and in some cases, 50 psi) in the Chief™, Phantom®, and Select-O-Matic® lines
- Introduced RA.M.® — Rapid Attack Monitor — for quick deployment and easy one-man operation
- Put on the market the Unibody Valve line, featuring a cross-compatible apparatus ball valve and a butterfly valve with a robust, heavy-duty motor
- Developed the Glow Bumper for handline nozzles to better enhance firefighter safety

Foam Supply Kits

Elkhart offers two supply kits. Both kits include:

- **One .75" quarter-turn, inlet valve assembly with elbow**
- **Quick-connect female coupling**
- **Quick-connect plug with chain**
- **Brushed stainless steel escutcheon plate**
- **Foam pick-up hose assembly with quick-connect male coupling**



KIT 1

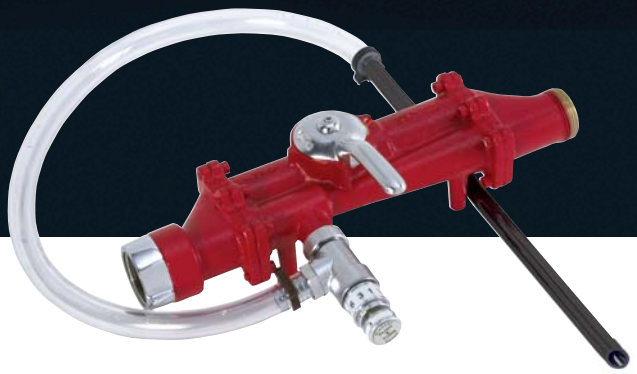
KIT 2

(P/N 81231001) Kit 1 is a built in by-pass foam eductor to utilize an off-board foam concentrate supply — either when the on-board supply has been depleted or to allow use of another type of foam concentrate.
(P/N 81232001) Kit 2 allows the use of an on-board foam concentrate tank with a separate portable foam eductor (such as Elkhart's 240 and 241 series) attached to a pump side discharge; permits easy switching from alternative supply to the on-board supply tank and back as necessary.

Portable

Elkhart offers an eductor for all handlines (1" through 2½") and the eductors are compatible with most foam concentrates. All Elkhart's eductors:

- **Are easy hook-up / easy set-up**
- **Feature red urethane enamel finish**
- **Can be deployed in any position**
- **Offer a removable pick-up screen and removable metering valve**
- **Come with a clear PVC pick-up hose**



BRASS BY-PASS INLINE EDUCTOR

Fig. 1

BRASS INLINE EDUCTOR

Fig. 2

COMPOSITE INLINE EDUCTOR

Fig. 3

TYPE	INLET SIZE			OUTLET SIZE			FLOW RATES GPM (LPM)						METERING				MATERIAL / TRIM				Length (Inches)	Weight (Lbs.)	MODEL	FIGURE
													Fixed		Selectable		Brass			Com-posite				
	1"	1.5"	2.5"	1"	1.5"	2.5"	30 (114)	60 (227)	95 (360)	125 (473)	150 (568)	250 (946)	3%	6%	Positive: 0% / ½% / 1% / 3% / 6%	Infinite: 0%-6%	Chrome	Rough	Satin					
By-pass		•	•		•			•							•		s				17.25	20.5	240-60	1
		•	•		•				•						•		s				17.25	20.5	240-95	1
		•	•		•					•					•		s				17.25	20.5	240-125	1
Inline	•	•		•			•									•	s				8.375	4.5	241-30	2
		•			•				•				•					s			10.00	5.8	241-N3*	2
		•			•				•					•				s			10.00	5.8	241-N6*	2
		•			•				•				•		**					s	4.625	0.5	242-95**	3
		•	•		•			•							•		o		s		11.75	9.5	241-60	2
		•	•		•				•						•		o		s		11.75	9.5	241-95	2
		•	•		•					•					•		o		s		11.75	9.5	241-125	2
		•	•		•						•				•		o		s		11.75	9.5	241-150	2
			•			•						•			•		o		s		16.0	16.8	241-250	2

KEY s = standard o = option
* Inlet and outlet threads are NPSH; ID is ¾"; ribbed hose length is 54"
** Supplied with fixed metering valves at ½%, 1%, and 3% and an adjustable metering valve with ½% / 1% / 3% settings.

GPM (LPM) NOTE

Eductor and nozzle must have matching flow rates (gpm/lpm) for the foam concentrate to "pick-up." See page T-1 for Eductor Performance Chart.

Operating Pressures of Eductors

These eductors are designed to achieve rated flow with an inlet pressure of 200 psi. They will operate at lower inlet pressures, but the flow rate and percentage rate will be affected.

Checklist if eductor fails to pick up foam

Ball check stuck	By-pass valve open
Clogged nozzle	Hose lay too long
Kink in hose	Metering valve clogged
Metering valve closed	Metering valve set improperly
Mismatched nozzle	Nozzle elevated too high
Partially closed nozzle	Plugged pick-up screen

ADDITIONAL INFORMATION

VALVES

INFINITE SETTING VALVE

POSITIVE SETTING VALVE

HOSE LENGTHS

- 240 models and most 241 models are 36"
- 241-N models are 54"
- 241-250 model is 72"

PICK-UP TUBE

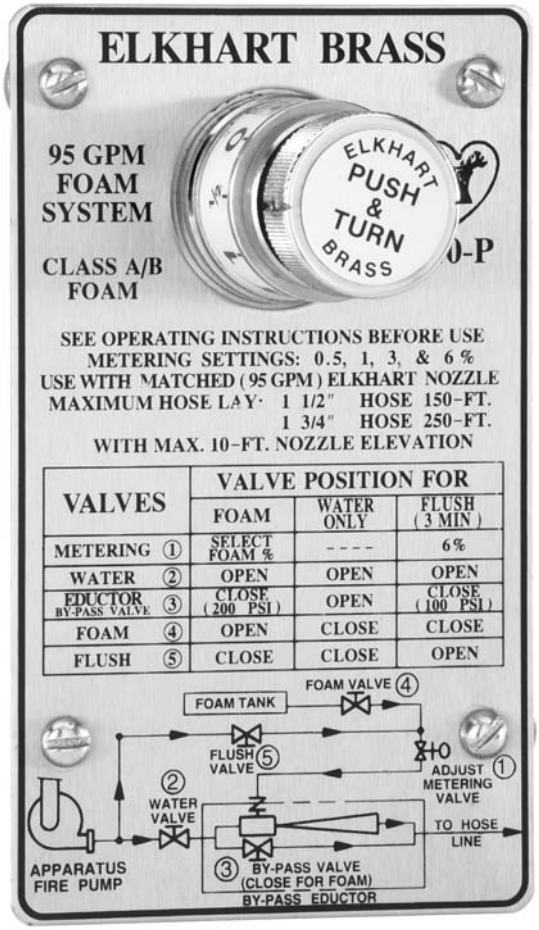
- Composite black tube standard
- Chrome plated tube, with strainer, optional

Built-In

Elkhart offers built-in foam eductors for all handlines (pipe sizes of 1.5" and 2"), and the eductors are compatible with most foam concentrates. The built-in eductors come furnished with valves, fittings and accessories for installing permanently behind the panel in pump compartment.

Package includes:

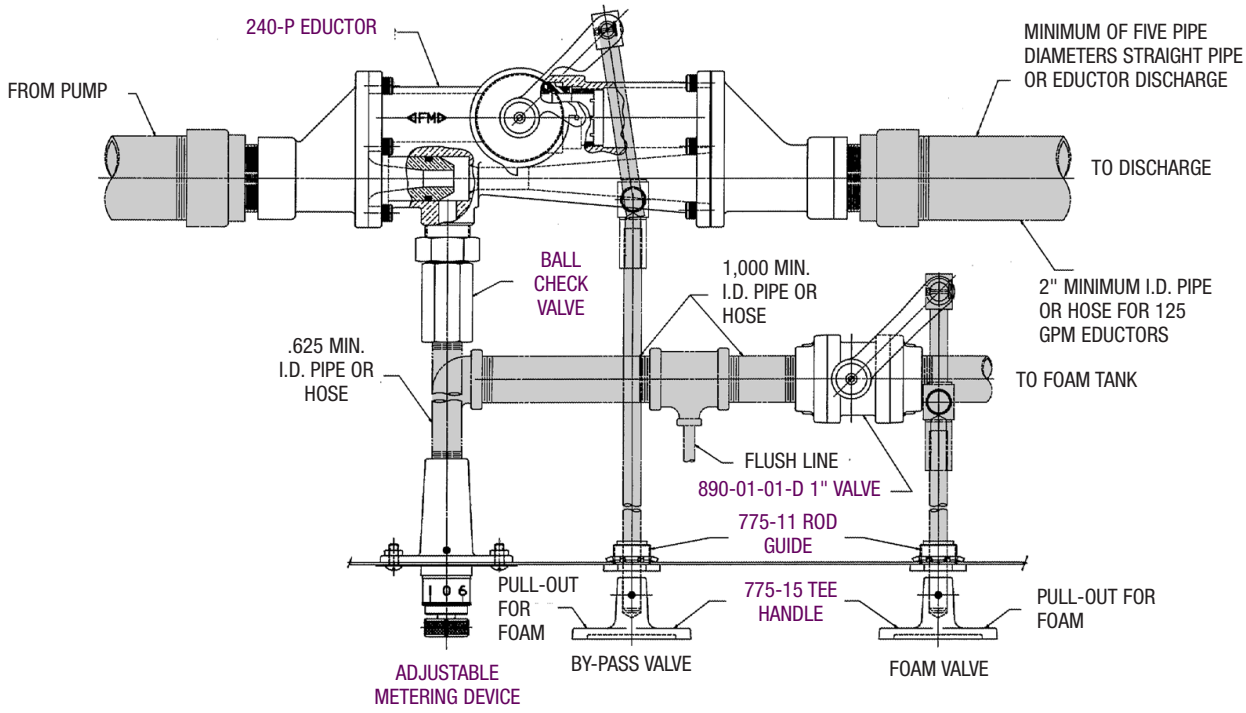
- One (1) 240 by-pass eductor
- One (1) 890-01-01-D 1.00" inline valve
- Two (2) 775-15 tee handles
- Two (2) 775-11 rod guides
- One (1) "thru the panel" metering valve with 5 settings (0%, ½%, 1%, 3%, and 6%)
- One (1) ball check valve
- One (1) brushed stainless steel instruction plate (with hardware)



NPT INLET / OUTLET*	FLOW RATES GPM (LPM)			LENGTH (Inches)	PACKAGE WEIGHT (Lbs.)	MODEL NUMBER
2.0"	60 (227)	95 (360)	125 (473)			
s	•			17.25	32.9	**240-60P**
s		•		17.25	32.9	**240-95P**
s			•	17.25	32.9	**240-125P**

KEY s = standard o = option
* Victaulic available

Typical Installation



NOTE: Items listed in purple type are included in package.

Operating Pressures of Eductors
These eductors are designed to achieve rated flow with an inlet pressure of 200 psi. They will operate at lower inlet pressures, but the flow rate and percentage rate will be effected.

Checklist if eductor fails to pick up foam	
Ball check stuck	Clogged nozzle
Eductor handle not pulled out	Elbow plumbed too close to inlet/outlet
Excessive friction loss between eductor and discharge outlet	Foam handle not pulled out
	Foam tank not vented
Foam tank empty	Kink in hose
Hose lay too long	Metering valve set improperly
Metering valve clogged with dry foam	Partially closed nozzle
Mismatched nozzle	Too much nozzle elevation

Water Thiefs

A Water Thief allows the fire professional to extend attack lines from a main supply line. Elkhart's selection of Water Thief options includes Storz connectors which, when combined with our unique free swiveling inlets and/or outlets, help prevent accidental uncoupling of larger diameter hose for increased safety.

INLET			FLOW THROUGH OUTLETS			THIEF OUTLETS			RELIEF VALVE	MATERIAL /TRIM			DIMENSIONS		MODEL	FIGURE
	Storz** (Swivel)		Twist-Lock	Gear Driven Storz**		Quarter Turn	Self-Locking Quarter Turn	Gated		Brass		Elk-O-Lite®	Length (Inches)	Weight (Lbs.)		
2.5"F*	4.0"	5.0"	2.5"M	4.0"	5.0"	1.5"M (X2)	2.5"M (X2)	2.5"M (X2)		Satin Brass	Chrome	Hard Anodized				
s			s			•						•	10.5	10.8	BG-104A*	1
s			s			•				•	•		10.5	23.5	BG-104	1
	s	o		s	o		•		•			•	16.0	48.9	9743	2
	s	o		s	o			•	•			•	16.0	46.9	9843	3

KEY s = standard o = option
* Optional pressure gauges available
** Free swivel

FIGURE 1

BG-104 / BG-104A

- Flow through outlet (2.5") has acetal ball with adjustable neoprene seat and metal twist-lock handles
- Thief outlets (1.5") have self-adjusting UHMWPE seats and flexible urethane handles
- Leather carrying handles
- Optional pressure gauge

Fig. 1

FIGURE 2

9743

- Flow through Storz outlet has a gear actuated quarter turn 4" ball valve with aluminum ball and UHMWPE seat
- Thief outlets are 2.5" full flow, self-locking, Hydro-Loc®, quarter turn, acetal ball valves with neoprene seats
- Adjustable relief valve (75-250 psi)

Fig. 2

FIGURE 3

9843

- Flow through Storz outlet is a gear actuated quarter turn 4" ball valve with aluminum ball and UHMWPE seat
- Thief outlets are 2.5" gate valved outlets
- Adjustable relief valve (75-250 psi)

Fig. 3

OPTIONS

HANDLES

BG-104A comes standard with:

LONG
(ELK-O-LITE®)

BG-104A options include:

SHORT
(ELK-O-LITE®)

MOLDED URETHANE

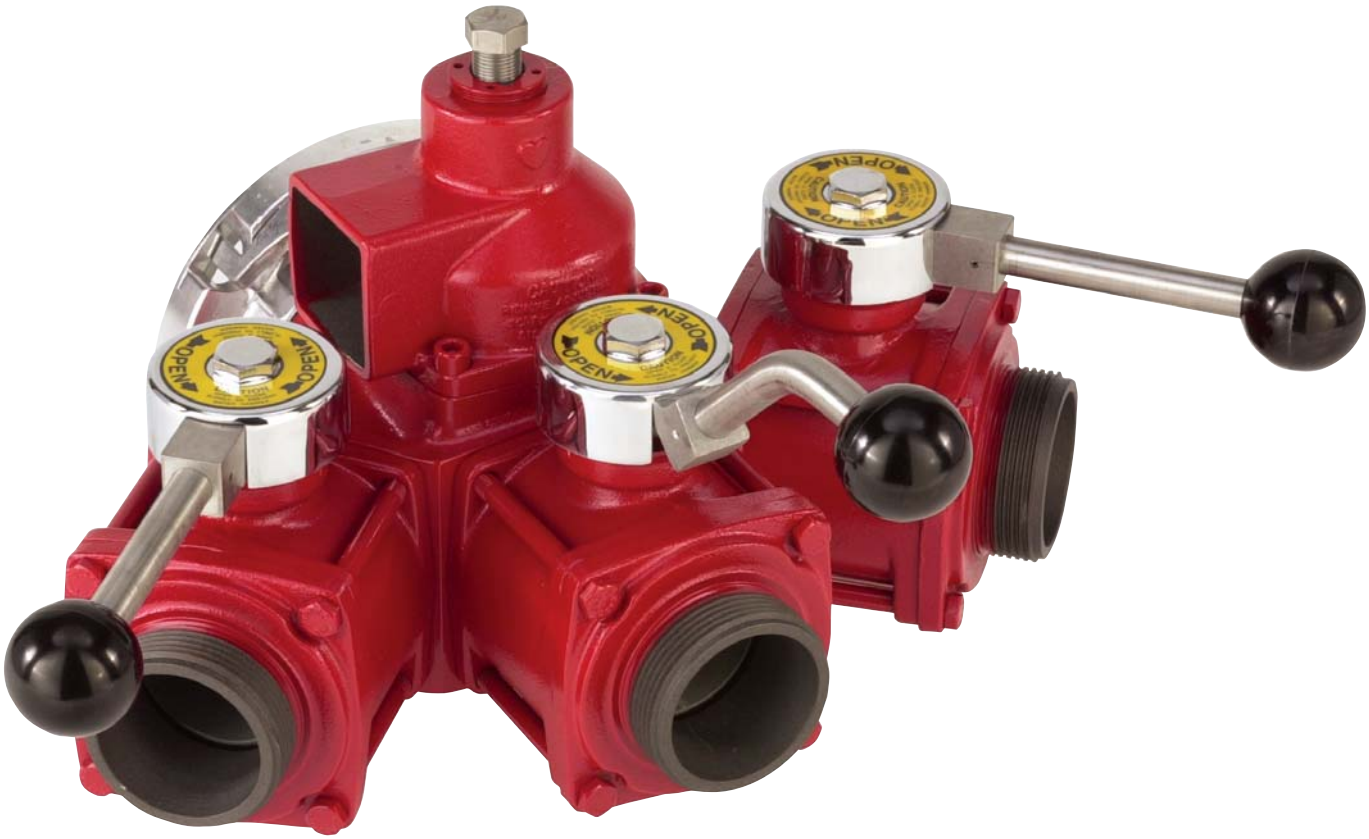
THREADS

All fireground connections are NHT T-12 for optional base threads.

Gated Manifolds

Gated manifolds allow fire professionals to extend attack lines when pre-connects do not reach. All of Elkhart's gated manifolds feature:

- **Free swiveling, locking Storz connectors to prevent accidental uncoupling of larger diameter hose for increased safety**
- **Adjustable relief valve (75-250 psi) with stainless steel mechanism and urethane seat for safe LDH operations**
- **Easy operation — even at high flows**
- **Working pressure up to 200 psi (13.79 bar)**
- **Minimal friction loss**
- **Modular design**
- **Elk-O-Lite® construction with red urethane trim**
- **Easy field service**



LDH INLET SIZE		LDH OUTLET SIZE		2.5" M OUTLETS					BLEEDER VALVE 0.75"	DIMENSIONS		MODEL	FIGURE
Storz		Storz		Quantity			Valve Type			Length (Inches)	Weight (Lbs.)		
4.0"	5.0"	4.0"	5.0"	2	3	4	Ball	Gated					
s	o			•			•		o	11.8	24.0	**9712**	1
s	o				•		•		o	14.5	28.4	**9713**	1
o	s	o	s			•	•			18.6	56.3	**9715**	3
s	o			•				•	o	11.3	22.0	**9812**	2
s	o				•			•	o	13.5	26.4	**9813**	2
o	s	o	s			•		•		18.6	52.3	**9815**	4

KEY s = standard o = option

FIGURE 1

9712 / 9713

- Full-flow, self-locking Hydro-Loc®, quarter turn, 2.5" acetal ball valves with neoprene seats

Fig. 1

FIGURE 2

9812 / 9813

- X-86A gate valved outlets (2.5")

Fig. 2

FIGURE 3

9715

- Functions as a portable hydrant
- Single Storz outlet has a gear actuated quarter turn 4" ball valve with acetal ball and neoprene seat
- Four outlets are 2.5" full flow, self-locking, Hydro-Loc®, quarter turn, acetal ball valves with neoprene seats
- Liquid-filled pressure gauge (0-300)

Fig. 3

FIGURE 4

9815

- Functions as a portable hydrant
- Single Storz outlet has a gear actuated quarter turn 4" ball valve with acetal ball and neoprene seat
- Four X-86A gate valved outlets (2.5")
- Liquid-filled pressure gauge (0-300)

Fig. 4

OPTIONS

THREADS

All fireground connections are NHT unless otherwise specified. See index T-12 for optional base threads.

Plain & Clappered Siamese

Used to combine several hoselines into one — usually in situations where seconds count — a Siamese must be both reliable and intuitive to use. Clappers allow additional lines to be added without interrupting flow. As with all Elkhart products, years of dependable service are to be expected from an Elkhart Siamese. While all the Siamese are finished in red urethane enamel, the Elk-O-Lite® versions feature hard anodized trim and the brass versions offer satin brass trim.

INLET SIZE	AVAILABLE OUTLET SIZE						TYPE			DRAIN VALVE .75"	ADJUSTABLE RELIEF VALVE	MATERIAL		DIMENSIONS		MODEL	FIGURE
Female*	Male				Storz**			Clappered									
	1.5"	2.5"	3.0"	4.0"	4.0"	5.0"	Plain	Single Swinging	Independent Spring Loaded			Brass	Elk-O-Lite®	Length (Inches)	Weight (Lbs.)		
1.5" (X2)	•	•					•					•		7.3	9.8	2	1
2.5" (X2)		•	•	•			•					•		7.3	9.8	2	1
		•	•	•			•						•	7.3	4.5	2A	1
		•	•		•	•		•		s			•	8.8	8.6	4A	2
		•	•					•		s		•		7.1	12.0	4	2
					•	•			•	s	s		•	11.0	16.5	9702	3
2.5" (X3)					•	•			•	s	s		•	13.5	19.0	9703	4

KEY s = standard o = option
* Swivel
** Free swivel

FIGURE 1

2/2A

- Apparatus mountable

Fig. 1

FIGURE 2

4/4A

- Apparatus mountable
- Leather carrying handle

Fig. 2

FIGURE 3

9702

- Adjustable relief valve (75-250 psi)
- Locking Storz

Fig. 3

FIGURE 4

9703

- Adjustable relief valve (75-250 psi)
- Locking Storz

Fig. 4

OPTIONS

THREADS

All fireground connections are NHT unless otherwise specified. See index T-12 for optional base threads.

ADDITIONAL INFORMATION

- *Chrome trim available on some brass models. Please inquire with our sales staff.*
- *More Siamese options available. See page 4-7.*

Valved Siamese

Used to combine several hoselines into one — usually at the fire scene — a Siamese must be both reliable and intuitive to use. All the Siamese are finished in red urethane enamel; the Elk-O-Lite® versions feature hard anodized trim and the brass versions offer chrome trim. As with all Elkhart products, years of dependable service are to be expected from an Elkhart Siamese.

Valve type determines available handle style from 3 options

INLETS	AVAILABLE OUTLETS		TYPE		HANDLE STYLE			VALVES		MATERIAL		DIMENSIONS		MODEL	FIGURE
	Type	Size	1/4 Turn Ball Valve	X-86A Gate Valve	Crank	Self-Locking	Twist-Lock	Bleeder Valve .75"	Adjustable Relief Valve	Brass	Elk-O-Lite®	Length (Inches)	Weight (Lbs.)		
2.5" F (X2)	Female (Swivel)	2.5"	•				•	o			•	9.0	12.0	B-98A	1
			•				•	o		•		9.0	30.5	B-98	1
		3"	•				•	o			•	9.0	12.2	B-98A	1
			•				•	o		•		9.0	31.1	B-98	1
		3.5"	•				•	o			•	9.0	12.4	B-98A	1
			•				•	o		•		9.0	31.7	B-98	1
		4"	•				•	o			•	9.0	12.5	B-98A	1
			•				•	o		•		9.0	32.4	B-98	1
		4.5"	•				•	o			•	9.0	13.0	B-98A	1
			•				•	o		•		9.0	34.1	B-98	1
		5"	•				•	o			•	9.0	13.6	B-98A	1
			•				•	o		•		9.0	36.0	B-98	1
		6"	•				•	o			•	9.0	14.5	B-98A	1
			•				•	o		•		9.0	38.2	B-98	1
	Male (Rigid)	2.5"	•				•	o		•		9.0	26.2	B-98	1
			•				•	o			•	9.0	10.8	B-98A	1
		3"	•				•	o		•		9.0	26.7	B-98	1
			•				•	o			•	9.0	11.1	B-98A	1
		3.5"	•				•	o		•		9.0	27.2	B-98	1
			•				•	o			•	9.0	11.4	B-98A	1
		4"	•				•	o		•		9.0	27.7	B-98	1
		4.5"	•				•	o		•		9.0	28.2	B-98	1
			•				•	o			•	9.0	12.0	B-98A	1
	Storz (Free Swivel)	4"	•			•			s		•	13.3	26.3	9722	3
				•	•			o	s		•	12.8	24.3	9822	
		5"	•				•	o			•	10.5	15.1	B-98A	1
			•			•			s		•	13.3	26.3	9722	3
				•	•			o	s		•	12.8	24.3	9822	
2.5" F (X3)	Female (Swivel)	2.5"	•				•	o			•	10.5	18.2	B-99A	2
			•				•	o		•		10.5	45.5	B-99	2
		3"	•				•	o			•	10.5	18.3	B-99A	2
			•				•	o		•		10.5	46.1	B-99	2
		3.5"	•				•	o			•	10.5	18.5	B-99A	2
			•				•	o		•		10.5	46.7	B-99	2
		4"	•				•	o			•	10.5	18.6	B-99A	2
			•				•	o		•		10.5	47.4	B-99	2
		4.5"	•				•	o			•	10.5	19.2	B-99A	2
			•				•	o		•		10.5	49.1	B-99	2
		5"	•				•	o			•	10.5	19.7	B-99A	2
			•				•	o		•		10.5	51.0	B-99	2
		6"	•				•	o			•	10.5	20.7	B-99A	2
			•				•	o		•		10.5	53.2	B-99	2
	Male (Rigid)	2.5"	•				•	o			•	10.5	17.0	B-99A	2
			•				•	o		•		10.5	41.2	B-99	2
		3"	•				•	o			•	10.5	17.3	B-99A	2
			•				•	o		•		10.5	41.7	B-99	2
		3.5"	•				•	o			•	10.5	17.6	B-99A	2
			•				•	o		•		10.5	42.2	B-99	2
		4"	•				•	o		•		10.5	42.7	B-99	2
		4.5"	•				•	o			•	10.5	18.2	B-99A	2
			•				•	o		•		10.5	43.2	B-99	2
	Storz (Free Swivel)	4"	•			•			s		•	16.0	30.6	9723	4
				•	•			o	s		•	15.0	27.7	9823	5
		5"	•				•	o			•	10.5	21.2	B-99A	2
			•			•			s		•	16.0	30.6	9723	4
				•	•			o	s		•	15.0	27.7	9823	5

KEY s = standard o = option

VALVED SIAMESE

FIGURE 1

B-98/B-98A

- Apparatus mountable
- Built-in strainer
- Adjustable neoprene seats

Fig. 1

FIGURE 2

B-99/B-99A

- Apparatus mountable
- Built-in strainer
- Adjustable neoprene seats

Fig. 2

FIGURE 3

9722

- Full, flow Hydro-Loc® valves
- Adjustable relief valve (75-250 psi)

Fig. 3

FIGURE 4

9723

- Full, flow Hydro-Loc® valves
- Adjustable relief valve (75-250 psi)

Fig. 4

FIGURE 5

9823

- Adjustable relief valve (75-250 psi)

Fig. 5

OPTIONS

THREADS

All fireground connections are NHT unless otherwise specified. See index T-12 for optional base threads.

ADDITIONAL INFORMATION

- *All twist-locks feature metal knurled knobs.*
- *More Siamese options available. See page 4-5.*

Wyes

Used to divide a single flow, usually at a fireground scene, wyes must be both reliable and intuitive to use. Elkhart offers several customizable handle options. All Elkhart wyes give years of dependable service. When necessary, they are easy to field service and re-buildable for continued long-term use.

Both 2-way and 3-way wye options available.

WYES

INLET SIZE	OUTLET SIZE (MALE)					TYPE		HANDLE STYLE					MATERIAL/ TRIM		DIMENSIONS		MODEL	FIGURE
	0.75" (x2)	1" (x2)	1.5" (x2)	2.5" (x2)	2.5" (x3)	Plain	Ball Valved	Knob	Short Elk-O-Lite®	Long Elk-O-Lite®	Molded Urethane	Positive Twist Lock	Brass / Chrome	Elk-O-Lite® / Hard Anodized	Length (Inches)	Weight (Lbs.)		
1.0 (f) NHT		•					•	o	o	s	o			•	5.5	1.8	B-100-SA	3
1.5" (F) NHT	•	•					•	o	o	s	o			•	5.5	1.8	B-100-SA	3
			•				•	o			s		•		5.5	8.5	B-100-L	3
			•				•	o	o	s	o			•	5.5	3.9	B-100-LA	3
			•			•								•	4.8	1.0	1A	4
			•			•							•		4.8	2.3	1	4
2.5" (F) NHT			•				•	o	o	s	o			•	5.5	4.5	B-100-A*	3
			•				•	o			s		•		5.5	9.0	B-100	3
			•			•								•	4.8	1.2	1A	4
			•			•							•		4.8	4.0	1	4
				•			•					s		•	9.0	14.5	B-97A	2
				•			•					s	•		9.0	31.0	B-97	2
				•		•								•	7.6	2.6	1A	4
				•		•							•		7.6	8.6	1	4
					•		•					s		•	10.5	21.5	B-95A	1
					•		•					s	•		10.5	46.0	B-95	1
3.0" (f) NHT				•		•							•		7.9	3.8	1	4
				•		•								•	8.8	12.5	1A	4
3.5" (F) NHT				•			•					s		•	9.0	14.5	B-97A	2
				•			•					s	•		9.0	31.0	B-97	2
					•		•					s		•	10.5	21.5	B-95A	1
					•		•					s	•		10.5	46.0	B-95	1
4.0" (F) NHT				•		•								•	7.9	4.4	1A	4
				•		•							•		8.8	14.5	1	4
				•			•					s		•	9.0	14.5	B-97A	2
				•			•					s	•		9.0	31.0	B-97	2
					•		•					s		•	10.5	21.5	B-95A	1
					•		•					s	•		10.5	46.0	B-95	1
4.5" (F) NHT				•		•								•	7.9	4.8	1A	4
				•		•							•		8.8	15.8	1	4
				•			•					s		•	9.0	14.5	B-97A	2
				•			•					s	•		9.0	31.0	B-97	2
					•		•					s		•	10.5	21.5	B-95A	1
					•		•					s	•		10.5	46.0	B-95	1
5.0" STORZ				•			•					s		•	10.5	16.0	B-97A	1
					•		•					s		•	12.0	23.0	B-95A	1
5.0" (F) NHT				•			•					s		•	9.0	14.5	B-97A	2
				•			•					s	•		9.0	31.0	B-97	2
					•		•					s		•	10.5	21.5	B-95A	1
					•		•					s	•		10.5	46.0	B-95	1
6.0" (F) NHT				•			•					s		•	9.0	14.5	B-97A	2
				•			•					s	•		9.0	31.0	B-97	2
					•		•					s		•	10.5	21.5	B-95A	1
					•		•					s	•		10.5	46.0	B-95	1

KEY s = standard o = option
* Optional pressure gauge available

FIGURE 1

B95/B95A (3-WAY) – POSITIVE TWIST LOCK *Fig. 1*

FIGURE 2

B97/B97A (2-WAY) – POSITIVE TWIST LOCK *Fig. 2*

FIGURE 3

B-100/B-100A *Fig. 3*

FIGURE 4

1/1A *Fig. 4*

Figures depict general product types only and are not intended to be inclusive of all product features.

OPTIONS

HANDLES

KNOB | SHORT (ELK-O-LITE®) | LONG (ELK-O-LITE®) | MOLDED URETHANE | POSITIVE TWIST LOCK

- *Not all handles available on all models.*
- *All twist-locks feature metal knurled knobs.*

PRESSURE GAUGE

THREADS

All fireground connections are NHT unless otherwise specified. See index T-12 for optional base threads.

PSI RATING

While all Elkhart wyes are rated to at least 200 psi (13.79 bar), the products specified below are rated to 300 psi (20.69 bar):

- *B-100-A (2.5" F inlet)*
- *B-100-LA (1.5" F inlet)*
- *B-100-SA (1.0" F or 1.5" F inlet)*

Piston Intake

Elkhart offers piston intake valves in your choice of materials. All piston valves include a variety of features to make your job easier: folding hand-wheel spinner, durable urethane seat, 4½" waterway, ¾" bleeder valve, adjustable relief/dump valve (75 to 250 psi) and a red urethane enamel finish.

HOSE CONNECTION (Inches)											TRUCK CONNECTION (Inches)			MATERIAL / TRIM		DIMENSIONS		MODEL	FIGURE
Female**				Male					Storz**		Female*			Brass	Elk-O-Lite®	Length	Weight		
3½	4	4½	5	3½	4	4½	5	6	4	5	4½	5	6	Chrome-plated	Hard Anodized	(Inches)	(Lbs.)		
o	o	o	o	o	o	o	o	o	o	o	o	o	s		•	11.4	22.5	**9786**	1
o	o	o	o	o	o	o	o	o	o	o	o	o	s	•		11.4	63.5	**9787**	2

KEY s = standard o = option
* Swivel
** Free swivel

Figure 1

Fig. 1

Figure 2

Fig. 2

ADDITIONAL INFORMATION

• While many piston intake valves have the common issue of corrosion, resulting in minor leaks to complete failure — depending on service conditions and water supply; Elkhart's 9786 piston intake valve offers a solution. The replaceable anode electrolytically decomposes, while inhibiting the metal breakdown of the piston intake valve.

THREADS

All fireground connections are NHT unless otherwise specified. See index T-12 for optional base threads.

MONITORS

INTRODUCTION

Elkhart Brass has made fire suppression monitors for over 50 years. When you select an Elkhart monitor, you can be assured that each and every component was designed, matched and tested for fireground use. Additionally, Elkhart strives for continuous improvements in our monitors to meet the challenges of the fireground, wherever it may be.

Elkhart's range of monitors span from manual, to electric and even radio frequency monitors — Elkhart has a monitor to suit every fireground need from lightweight portable through apparatus use to complete industrial systems. Be assured that as the established leader in monitors, all of Elkhart's more recent monitor designs optimize current technology, are computer designed, and include features such as tapered cast-in vanes for high flow efficiency with minimized flow turbulence.

Elkhart is an innovator in the most advanced firefighting techniques and leads the charge in **radio frequency (RF)** monitor controls that utilize Wireless Electronic Technology (W.E.T.®). As the leader in RF monitor technology, Elkhart has expanded our initial RF offerings and maintains the most extensive RF monitor line with integrated controls plus the widest range of standard options and features. W.E.T.® offers a variety of benefits:

- W.E.T.® monitors from Elkhart Brass promote firefighter safety and increase fireground effectiveness.
- Wireless control allows operator to be removed from the apparatus and see the stream for positioning — from up to 1/4 mile away with hand-held transmitter
- NFPA 1901 recommends the use of remotely operated monitors "without the need for a person to climb to the top of the apparatus."

At Elkhart Brass, we understand that when you choose our monitors, you are placing your trust in us. We value that trust and honor your choice with our commitment to innovation and dependability in Elkhart's monitors — and every Elkhart product.

Whatever your need may be, Elkhart has a monitor/master stream nozzle combination designed for fireground use that will maximize real world performance and reliability.

ADDITIONAL INFORMATION

- *Elkhart has trademarked the Elk-O-Lite® name for our proprietary aluminum alloy (cast alloy #356-A).*

SYMBOLS

- *In this section, you will note a symbol on each page; the number specified in the symbol is the maximum gallonage for that monitor.*
- *Additional symbols denote any certifications.*

THREADS

- *Throughout the monitor section, all threads – unless otherwise specified – are NHT. Additional thread information may be found on page T-12.*

Max. GPM (LPM)	CONTROL OPTIONS						MOUNTING OPTIONS						DEGREES OF TRAVEL		CERTIFICATIONS				MATERIAL OPTIONS			MONITOR SERIES	PAGE
	Manual						Mobile			Stationary													
	Dual Hand-wheel	Single Hand-wheel	Tiller	Hydraulic	Electric	Wireless (RF)	Portable	Wheeled Cart	Apparatus	Fixed Installation	Elevated	Integral Ball Valve	Vertical	Horizontal	CE	Class 1, Div 1	Class 1, Div 2	FM Approved	Brass	Elk-O-Lite®	Stainless Steel		
500 (1893)							•						43°	40°	•					•		R.A.M.®	5-12
					•				•				135°	334°	•					•		Sidewinder® Electric	5-7
			•						•				135°	360°						•		Sidewinder®	5-10
						•			•	•			135°	360°						•		Sidewinder® RF	5-4
1000 (3785)		•	•					•					70°	90°					•			Portable Carts	5-61
	•		•							•	•		150°	360°					•		•	Manual Elevated	5-65
1100 (4164)	•	•	•							•	•		150°	360°	•			•	•	•		Traditional	5-58
1250 (4732)	•						•						100°	360°						•		8287	5-37
						•			•	•			215°	360°	•					•		Vulcan® RF	5-30
			•							•			135°	360°	•			•	•			Python®	5-39
						•	•						105°	540°	•					•		Stinger® RF	5-16
	•		•						•	•		•	135°	360°	•			•	•			Copperhead	5-26
	•		•						•	•			135°	360°	•					•		Vulcan®	5-34
		•					•		•				95°	360°						•		Stinger® 2.0	5-20
		•							•	•		•	130°	360°	•			•	•			Stingray®	5-23
		•	•							•			150°	360°	•			•	•			Hydrant Mount	5-63
2000 (7571)						•			•	•			215°	347°	•				•	•		Scorpion® RF	5-46
					•				•	•			135°	347°	•				•	•		Scorpion® Electric	5-52
	•		•						•	•			135°	360°	•					•		Scorpion®	5-49
	•		•						•	•			135°	360°	•				•			Spit-Fire	5-42
2500 (9464)										•			150°	360°	•			•			•	Giant Python®	5-55
Vari-able	•	•	•	•	•	•		•	•	•	•	•	Variable		•	•	•	•	•	•	•	Industrial Systems*	5-69

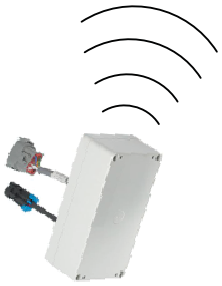
DIMENSIONAL ABBREVATIONS KEY:
D.L. = Discharge Length
H.H. = Handle Height
H.S.R. = Handle Swing Radius
M.H. = Monitor Height
O.H. = Overall Height
O.L. = Overall Length
P.H. = Pivot Height
P.R. = Pivot Radius
W. = Width

UNDERSTANDING ELKHART BRASS WIRELESS ELECTRONIC TECHNOLOGY RF MONITOR CONTROL CONFIGURATION

Elkhart radio frequency (RF) Monitors utilize wireless electronic technology. Motor controls and relays are integrated with the radio frequency receiver box and mounted directly on the monitor (except for Sidewinder RF). The RF monitor requires only a 2-wire 12vdc connection. An auxiliary third wire is incorporated into most monitors for signaling — such as providing an output signal voltage when the monitor has been stowed.

W.E.T®

The Panel Mount Controller is an operator panel that is designed to be permanently mounted to the apparatus. The panel mount controller actually communicates wirelessly to the monitor – in this way all normally required wiring is eliminated. The panel requires only a 2 wire 12-24vdc connection.



W.E.T®

The **OEM Transmitter** allows the apparatus manufacturer to provide control switches of their own design. The output of these mechanical switches is connected to the OEM Transmitter and converted to a wireless signal that the monitor can read. Other than wiring to the OEM's switches, the panel requires only a 2 wire 12-24vdc connection.

Even if you intend to operate your monitor from the wireless handheld transmitter, NFPA recommends that a control station be permanently affixed to the apparatus. NFPA further suggests that, when there is more than one point of control (of any type), one of the fixed control stations must be designated as a "primary" – with the ability to override all others.

W.E.T®

The **Wireless Hand Held Controller** is just that, allowing the operator to control the monitor from up to 1/4 mile away.

Sidewinder® RF

- Wireless RF increases effective use of personnel while reducing the potential risk of injury — monitor can be remotely operated from up to 1/4 mile away with hand-held transmitter
- Wireless RF means no control cables between joystick and monitor — dramatically reducing installation costs
- In cab joystick requires only 2-wire 12V connection
- Fully connectorized receiver box includes all monitor and valve controls
- Two joystick transmitter styles available
- Patented, easy on-scene programming of oscillation for exposure protection or hazardous material suppression
- Left/right stops can be independently programmed from 0 up to 180° from either side of center
- Exclusive dual speed left/right drive allows precision stream placement
- Unlimited number of monitors may be operated interference free
- Several ISM bands available for license free use around the world

2-wire installation (ground and power wires only)

2" Fully-vaned waterway

Motors and control system components sealed to NEMA 4 rating

Double ball races with stainless steel bearings

Available high-speed water valve (not shown)

Fully enclosed stainless steel worm gears

500 GPM

MONITORS

SIDEWINDER® RF

SPECIFICATIONS

Max. GPM (LPM)	500 (1893)	
	Size	Type
Inlet	2"	NPT (F)
Outlet Size	1.5" NHT	
Controls	Wireless (W.E.T.®)	
Material/Finish	Elk-O-Lite® with red urethane enamel	
Friction Loss	26 psi at 500 gpm	
	13 psi at 350 gpm	
	4 psi at 200 gpm	
Travel	V -45° to +90° (135°)	
	H 360°	
Weight	16 Lbs.	
Max. Power Requirements	7 Amps at 12V DC, includes optional water valve (24V opt)	
Ratings and Certifications		

KEY CONFIGURATIONS (ACCESSORIES)

SINGLE JOYSTICK (3)

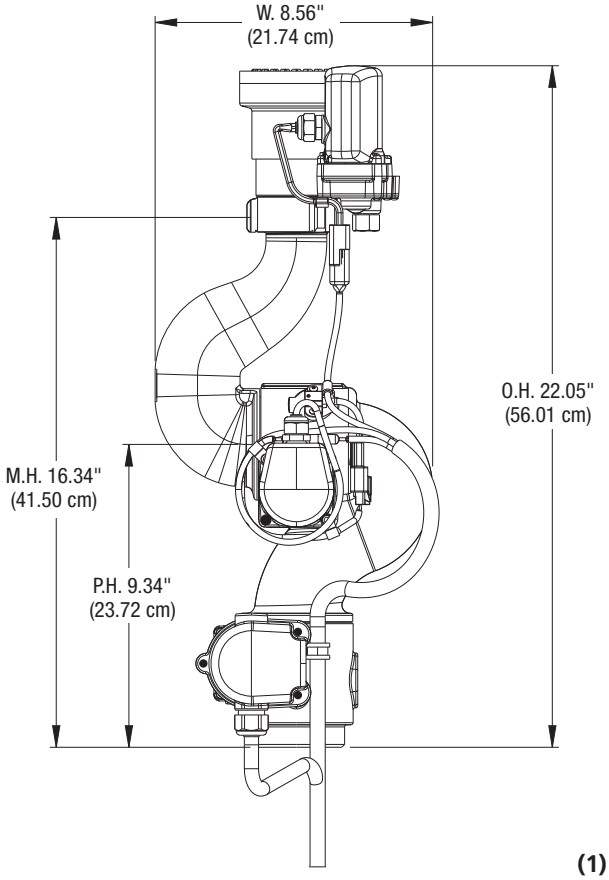
DUAL JOYSTICK (4)

VALVE (6)

HAND HELD CONTROL (5)

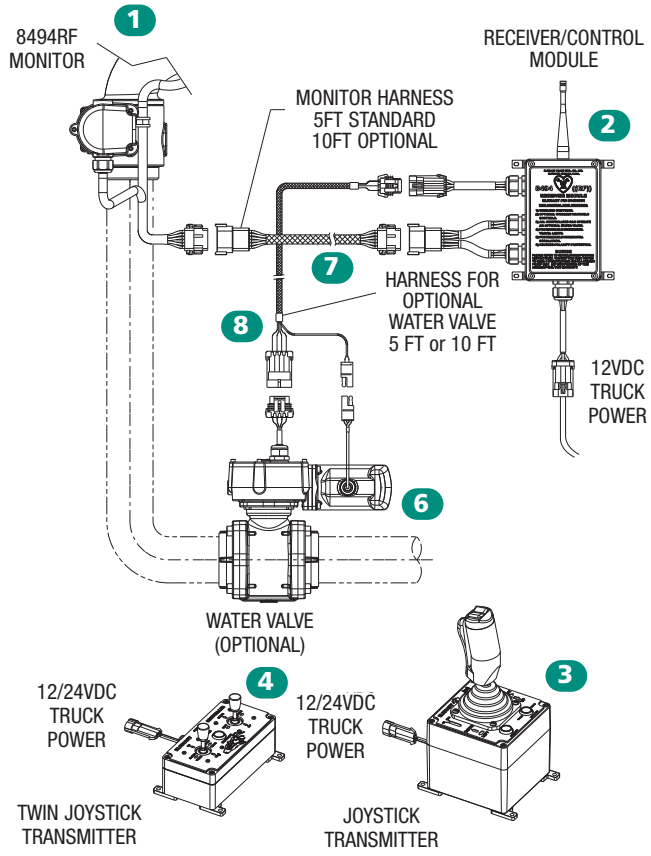
QUICK CONNECT (9)

DIMENSIONS & LAYOUT



(1)

CONTROL COMPONENTS CONFIGURATION



ADDITIONAL INFORMATION

- *Horizontal travel is programmed at the factory (90° left and 90° right). The horizontal travel can be reprogrammed to a max. of 180° left/right.*
- *Technical Data on monitor performance may be found on page T-10.*

Sidewinder® RF Selector Guide

INLET SIZE / TYPE	OUTLET SIZE	AVAILABLE RF FREQUENCIES			VOLTAGE	PRIMARY CONTROLLER*		BASES		MODEL
2.0" NPT	1.5" NHT	868 MHz	915 MHz	920 MHz	12V DC	SINGLE JOYSTICK	DUAL JOYSTICK	2" NPT	2" NPT Quick Connect (Elk-O-Lite®)	
•	•	o	s	o	•	s	o	s	o	8494RF
						3	*4*		*9*	*Illustration*

*Requires OEM provided switches or switch box
KEY s = standard o = option

Components & Options Chart

COMPONENTS & OPTIONS			ILLUSTRATION	MODEL
Controllers Up to 15 additional hand-held controllers may be added.		Hand Held Remote – wireless remote control. Requires 2 AA batteries	5	
		Single (Trigger) Joystick – hand held control features a water trigger on the joystick	3	
		Dual (Mini) Joystick – hand held control box allows for two-handed operation	4	
Electric Nozzles	Fixed Gallonage	15, 30, 45 GPM *(specify)*		**5000-04**
		60, 95, 125, 150 GPM *(specify)*	10	**5000-14**
		175, 200, 250, 350, 400, 475 GPM *(specify)*		**5000-24**
	Automatic	20 -120 GPM	11	**SM-10FE**
Monitor Receiver Module	Operating Voltage	12V DC	2	
	Monitor to Monitor Receiver Module Harness	5' or 10' length *(specify)*	7	
Valve Kit	2" Valve	High speed 2920E 2" valve	6	
	Valve End Caps	Available inlet and outlet options are those offered on the 2920E series of valves, please see page 7-19. (FNPT end caps are standard)		**10101**
	Valve to Monitor Receiver Module Harness	5' or 10' length *(specify)*	8	
24V Power Module		24V to 12V – required		
Dust Cover for Quick Connect Bases		Aluminum 3" x 3" push plug with stainless steel chain and safety tether. Used with either the Quick Connect (to keep contaminants out of the waterway and seal) or the harness connector (to keep contaminants out of the plug assembly).		

Recommended Products

5000-14 – ELECTRIC NOZZLE	SM-10FE – DE-ICING NOZZLE	281-A STREAM SHAPER	187CAF – SMOOTH BORE
(10)  *Page 6-4*	(11)  *Page 6-4*	 *Page 1-27*	 *Page 1-29*

Product Highlights

- ***The Sidewinder® RF is designed to be installed with a minimum of necessary wiring. A simple 2-wire connection (ground and power) – for both the receiver/controller and the joystick dramatically reduces installation costs.***

SAFETY FEATURES

- **W.E.T.® monitors from Elkhart Brass promote firefighter safety and increase fireground effectiveness.**
- **Programmable features allow the firefighter to direct the stream with pinpoint accuracy while maintaining ease of use**
- **Fireground personnel can tend monitor without being located at the apparatus.**

Sidewinder® Electric

- Allows for more effective use of personnel while reducing the potential risk of injury — controls can be mounted inside vehicle
- Designed for wildland firefighting, de-icing, and dust abatement operations
- Weather-tight connectorized harness
- Epoxy encapsulated control module
- Available in 12V or 24V for DC operation
- Available with either a low-cost toggle box controller or full-sized joystick with integrated water valve trigger
- Double ball races with stainless steel bearings
- Available high speed water valve kit operates from joystick trigger

500 GPM

CE

SPECIFICATIONS

Max. GPM (LPM)	500 (1893)	
Inlet	Size	Type
	2"	NPT (F)
Outlet	1.5" NHT	
Controls	Electric	
Material/Finish	Elk-O-Lite® with red urethane enamel	
Friction Loss	26 psi at 500 gpm	
	13 psi at 350 gpm	
	3.9 psi at 200 gpm	
Travel	V -45° to +90° (135°)	
	H 180° or 334°	
Weight	16.5 Lbs.	
Max. Power Requirement	3.0 Amps at 12V DC (24V opt)	
Ratings and Certifications	CE	

KEY CONFIGURATIONS (ACCESSORIES)

TOGGLE CONTROL BOX (9)

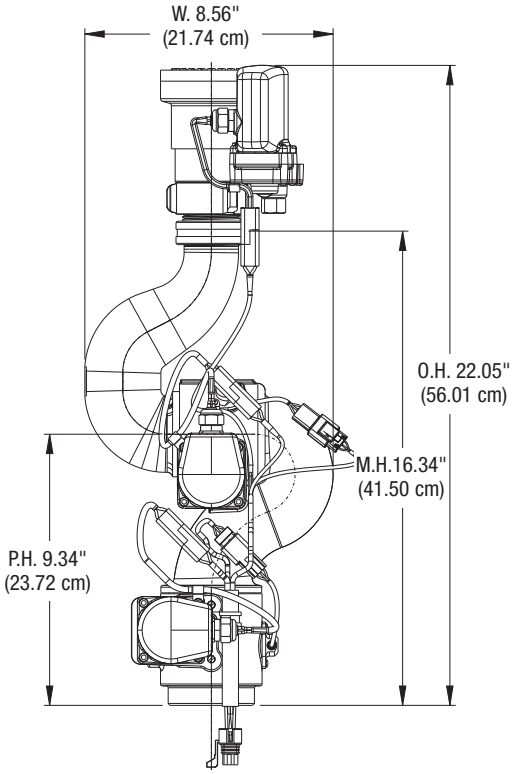
JOYSTICK CONTROL BOX (8)

VALVE (4)

QUICK CONNECT (10)

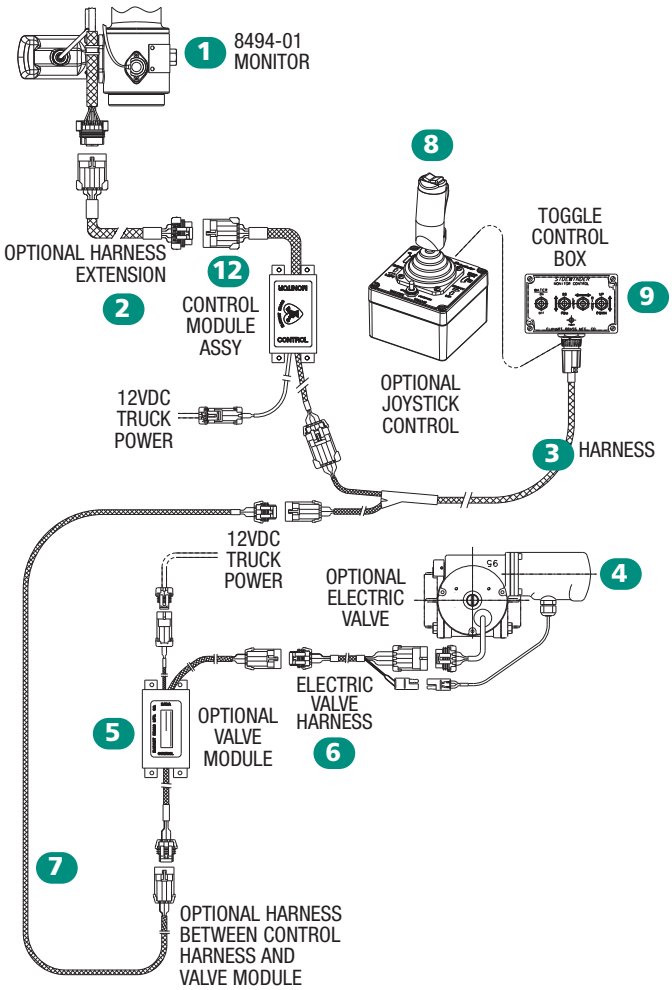
CONTROL MODULE (12)

DIMENSIONS & LAYOUT



(1)

CONTROL COMPONENTS CONFIGURATION



ADDITIONAL INFORMATION

Technical Data on monitor performance may be found on page T-10.

MONITORS

SIDEWINDER® ELECTRIC

Sidewinder® Electric Selector Guide

INLET SIZE / TYPE	OUTLET SIZE	HORIZONTAL TRAVEL		HORIZONTAL SPEED		VERTICAL SPEED		CONTROL MODULE VOLTAGE		BASES		CERTIFICATION	MODEL
2.0" NPT	1.5"	180°	334°	Fast	Slow	Fast	Slow	12V DC	24V DC	2.0" NPT	2" NPT Quick Connect (Elk-O-Lite®)	CE	
•	•	s	o	o	s	o	s	s	o	s	o	•	**8494-01**
											10		*Illustration*

KEY s = standard o = option

Components & Options Chart

COMPONENTS & OPTIONS			ILLUSTRATION	MODEL
Electric Nozzles	Fixed Gallonage	15, 30, 45 GPM *(specify)*		**5000-04**
		60, 95, 125, 150 GPM *(specify)*	11	**5000-14**
		175, 200, 250, 350, 400, 475 GPM *(specify)*		**5000-24**
	Automatic	20 - 120 GPM	12	**SM-10FE**
Operator Controls	Toggle Box	With valve on/off control	9	
	Joystick	With toggle for water on/off plus integrated water valve trigger	8	
Monitor Control Module Assembly	Control Module	With 6" power harness. Specify operating voltage (12V or 24 V)	12	
	Monitor to Control Module Harness	1', 5' or 30' length *(specify)* Note: These harnesses may be combined for intermediate length - i.e., 5+5+1=11' length	2	
	Operator (Joystick or Toggle) box to Control Module Harness	12' or 50' length *(specify)*	3	
Valve Kit	2" Valve	High speed 2920E 2" valve	4	
	Valve End Caps	Available inlet and outlet options are the same as those offered on the 2920E series of valves, please see page 7-19 (FNPT end caps are standard)		**10101**
	Valve Control Module	With 6" power harness. Specify operating voltage (12V or 24 V)	5	
	Valve Control Module to Valve Harness	5', 10', 20', 30', or 40' length *(specify)* Note: These harnesses may be combined for intermediate length – i.e., 5+10=15' length	6	
	Valve Control Module to Operator (Joystick or Toggle) Harness	Optional. 1', 3', 5', 10' or 25' length *(specify)*	7	
Dust Cover for Quick Connect Bases		Aluminum 3" x 3" push plug with stainless steel chain and safety tether. Used with either the Quick Connect (to keep contaminants out of the waterway and seal) or the harness connector (to keep contaminants out of the plug assembly).		

Recommended Products

5000-14 – ELECTRIC NOZZLE	SM-10FE – DE-ICING NOZZLE	281-A – STREAM SHAPER	187CAF – SMOOTH BORE
			
(11) *Page 6-4*	**(12)** *Page 6-4*	*Page 1-27*	*Page 1-29*

Product Highlights

- ***With the complete Sidewinder® package – monitor, nozzle, water valve kit and joystick controller with integrated water valve trigger – you have complete control at your fingertips.***
  - ***– Joystick allows one-handed operation of monitor, nozzle and water valve for pump and roll capability.***
- ***Elkhart Brass specifically designed the valve control to work in tandem with the Sidewinder® monitor.***
  - ***– Fast-acting water valve maximizes efficiency by allowing pinpoint application of nozzle stream, thus minimizing waste of available water supply.***

Sidewinder®

- Compact — under 9" wide and requiring just 16" of clearance; perfect for wildland, dust abatement or small apparatus use — anywhere space is at a premium
- Designed specifically for the rigors of wildland and construction use
- 2" fully-vaned waterway
- Customizable — gpm and pressure can be customized through nozzle selection
- Fast-action tiller control
- Double-ball races with stainless steel bearings

Available in your choice of two materials – Brass or Elk-O-Lite®

360° continuous horizontal rotation

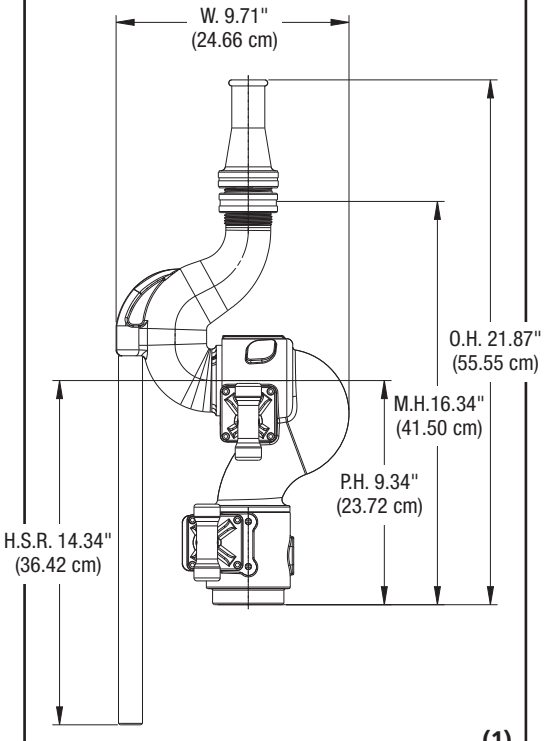
Fully-vaned 2" waterway

500 GPM

SIDEWINDER®

SPECIFICATIONS		
Max. GPM (LPM)	500 (1893)	
Inlet	Size	Type
	2"	NPT (F)
Outlet	1.5" NHT	
Control	Tiller	
Materials/Finishes	Brass or Elk-O-Lite® with red urethane enamel	
Friction Loss	26 psi at 500 gpm	
	14 psi at 350 gpm	
	4 psi at 200 gpm	
Travel	V -45° to +90° (135°)	
	H 360° (continuous)	
Weight	Variable (see chart for specifics)	
Ratings and Certifications		

DIMENSIONS & LAYOUT



(1)

ADDITIONAL INFORMATION

Technical Data on monitor performance may be found on page T-10.

KEY CONFIGURATIONS (ACCESSORIES)

QUICK CONNECT (2)

Sidewinder® Selector Guide

INLET SIZE/ TYPE	OUTLET SIZE	MATERIALS		BASES			Weight (Lbs.)	MODEL
2.0" NPT	1.5"	Brass	Elk-O-Lite®	2" NPT	2" NPT Quick Connect (Brass)	2" NPT Quick Connect (Elk-O-Lite®)		
•	•		•	s		o	16	8492
•	•	•		s	o		48	8392
					2	*2*		*Illustration*

KEY s = standard o = option

Components & Options Chart

COMPONENTS & OPTIONS		ILLUSTRATION	MODEL
Dust Cover for Quick Connect Bases	Aluminum 3" x 3" push plug with stainless steel chain and safety tether. Used with either the Quick Connect (to keep contaminants out of the waterway and seal) or the harness connector (to keep contaminants out of the plug assembly).		

Recommended Products

TSFM-HP – PHANTOM®

Page 1-12

TSM-30F – SELECT-O-MATIC®

Page 1-9

4000-24 – CHIEF™

Page 1-6

185-B – SMOOTH BORE

Page 1-29

281-A – STREAM SHAPER

Page 1-27

R.A.M.®

- Easily deployed and operated by a single firefighter
- Patent pending hydraulic stability system harnesses reaction force to stabilize the monitor
- Four fold-out forged aluminum legs with carbide-tipped ground spikes extend to the largest footprint in its class for exceptional stability
- Rear ground spikes are angled to help carbide tips grip the surface
- Lock pin holds valve in a closed position to prevent accidental opening, allowing the R.A.M. to be carried attached to a charged line
- Patent pending design lowers friction loss and produces consistent stream quality in all ranges of motion
- Can be stored pre-connected
- Ergonomic U-shaped valve handle
- Attached safety strap includes storage pouch

500 GPM

CE

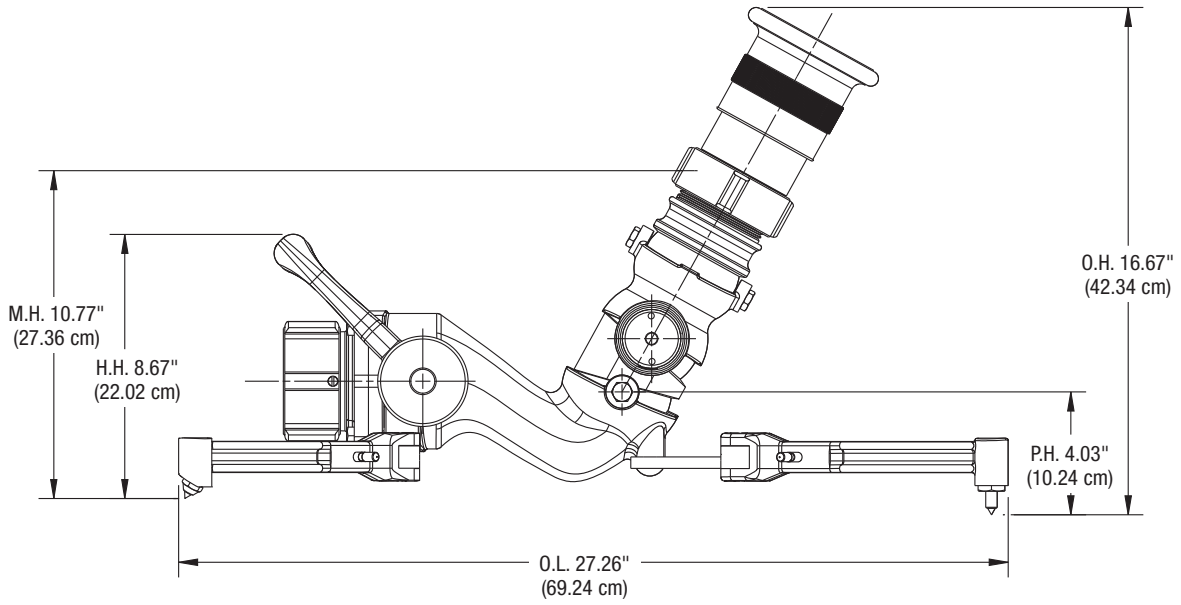
RAPID ATTACK MONITOR – R.A.M.®

SPECIFICATIONS		
Max. GPM (LPM)	500 (1893)	
Inlet	Size	Type
	2.5"	NHT (F)
Outlet Size	2.5" NHT	
Controls	Manual	
Material/Finish	Elk-O-Lite® with red urethane enamel	
Friction Loss	9.5 psi at 500 gpm	
	5.8 psi at 400 gpm	
Travel	V +20° to +63° (43° – manned)	
	V +35° to +63° (28° – unmanned)	
	H 20° in both directions (40°)	
Weight	17 (Lbs.)	
Ratings and Certifications	CE	

KEY CONFIGURATIONS (ACCESSORIES)

TRUCK STORAGE MOUNT (2)

DIMENSIONS & LAYOUT



(1)

ADDITIONAL INFORMATION

- *Technical Data on monitor performance may be found on page T-10.*
- *Please inquire with our sales staff for additional thread options.*

R.A.M.® Selector Guide

INLET SIZE	OUTLET SIZE	CERTIFICATIONS	MODEL
2.5" NHT	2.5" NHT	CE	
•	•	•	8296
			Illustration

Components & Options Chart

COMPONENTS & OPTIONS		ILLUSTRATION	MODEL
Truck Storage Mount	Truck storage mounting bracket for R.A.M.®	2	8296-MB
R.A.N.®	Rapid Attack Nozzle with built-in stream shaper (specifically designed for use with the R.A.M.®)	3	3896
Deluge tip	Smooth bore nozzle for use with the R.A.M.® (1 3/8" discharge)	5	181-A
Stack Tip	Outlet sizes of 1", 1 1/4", and 1 1/2"	4	000638001
	Outlet sizes of 1 1/4", 1 3/8", and 1 1/2"	4	000639001
Mini-Stream Shaper	For use with the R.A.N.® stacked tip	6	282-A Mini

Recommended Products

3896 – R.A.N.™	ST-197A STACKED TIP	282-A – MINI STREAM SHAPER	181-A – DELUGE TIP	HF-500A – HYDRO FOAM	CSW-C-HF – SELF-EDUCTING
(3) 	(4) 	(6) 	(5) 		
Page 6-5	*Page 1-29*	*Page 1-27*	*Page 1-29*	*Page 6-14*	*Page 6-14*

Product Highlights

ACTIVE SAFETY SYSTEM

- Should a firefighter stumble, slip or otherwise lose his grip on the R.A.M.®, the monitor automatically raises – increasing the down force for additional stability – to prevent the monitor from moving.

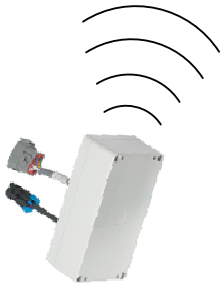
RF MONITOR CONTROLLER DEFINITIONS

UNDERSTANDING ELKHART BRASS WIRELESS ELECTRONIC TECHNOLOGY RF MONITOR CONTROL CONFIGURATION

Elkhart radio frequency (RF) Monitors utilize wireless electronic technology. Motor controls and relays are integrated with the radio frequency receiver box and mounted directly on the monitor (except for Sidewinder RF). The RF monitor requires only a 2-wire 12vdc connection. An auxiliary third wire is incorporated into most monitors for signaling — such as providing an output signal voltage when the monitor has been stowed.

W.E.T®

The Panel Mount Controller is an operator panel that is designed to be permanently mounted to the apparatus. The panel mount controller actually communicates wirelessly to the monitor – in this way all normally required wiring is eliminated. The panel requires only a 2 wire 12-24vdc connection.



W.E.T®

The **OEM Transmitter** allows the apparatus manufacturer to provide control switches of their own design. The output of these mechanical switches is connected to the OEM Transmitter and converted to a wireless signal that the monitor can read. Other than wiring to the OEM's switches, the panel requires only a 2 wire 12-24vdc connection.

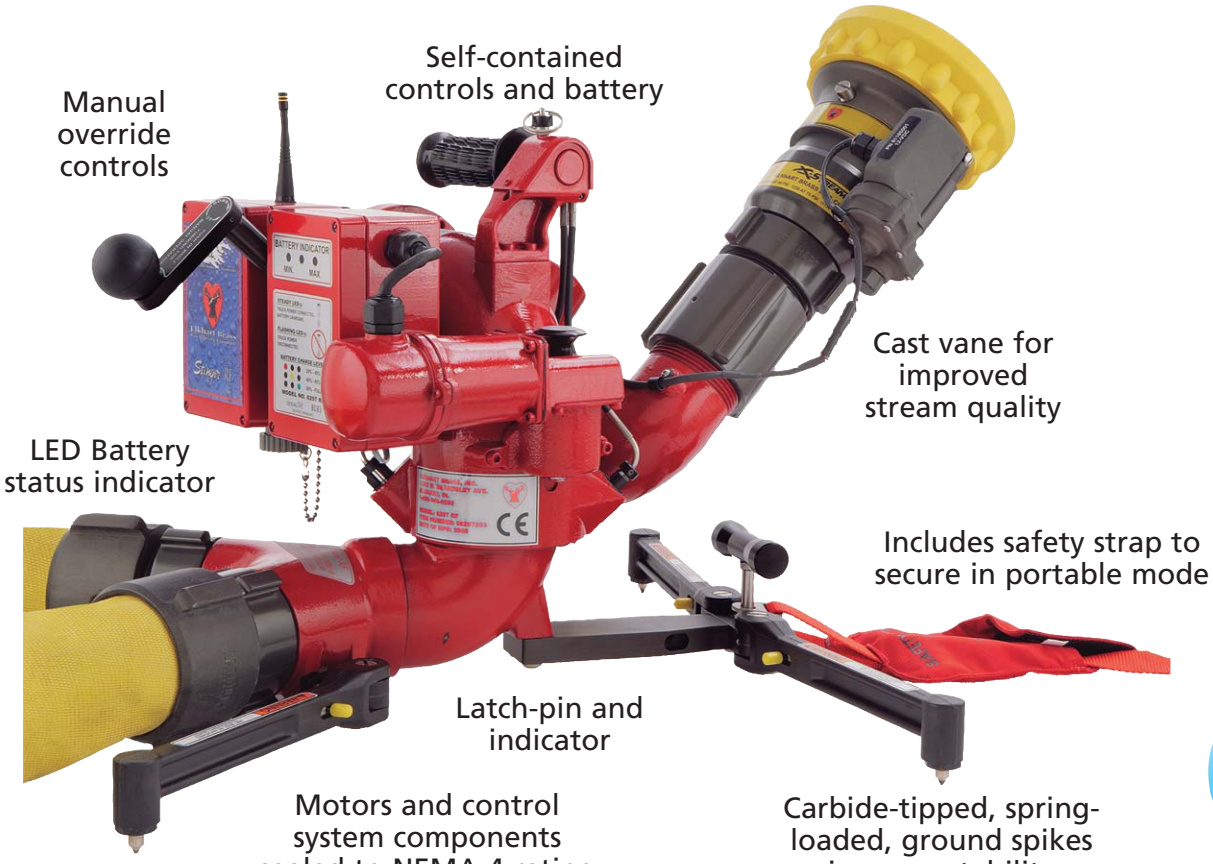
Even if you intend to operate your monitor from the wireless handheld transmitter, NFPA recommends that a control station be permanently affixed to the apparatus. NFPA further suggests that, when there is more than one point of control (of any type), one of the fixed control stations must be designated as a "primary" – with the ability to override all others.

W.E.T®

The **Wireless Hand Held Controller** is just that, allowing the operator to control the monitor from up to 1/4 mile away.

The Stinger® RF

- Stinger® RF is a dual purpose break-apart monitor for use as a deck gun or portable monitor
- Wireless RF increases effective use of personnel while reducing the potential risk of injury
- Monitor can be remotely operated from up to 1/4 mile away — in either deck gun or portable mode — with hand-held transmitter
- When used in deck gun mode, the Stinger® RF requires only 12V power connector — dramatically reducing installation costs with an easy 2-wire connection
- When used in portable mode, the Stinger® RF is battery powered and completely self contained
- Battery will operate for up to 4 hours of normal use per charge
- The Stinger® RF automatically recharges its battery when returned to the apparatus
- Patent pending easy on-scene programming of oscillation for exposure protection or hazardous material suppression
- Exclusive dual speed left/right drive feature allow precision stream placement
- Unlimited number of monitors may be operated interference free
- Several ISM bands available for license free use around the world



1250 GPM

CE

STINGER® RF

SPECIFICATIONS

	Portable			Deck Mount		
Max. GPM (LPM)	1250 (4732)			1250 (4732)		
Inlets	**Sizes**	**Types**		**Sizes**	**Types**	
	2 x 2.5"	NHT (F)	(1000 GPM)	3"	NPT (F)	(1250 GPM)
	1 x 4.5"	NHT (F)	(1250 GPM)	3"	150# ANSI Flange	(1250 GPM)
	1 x 4.0"	NHT (F)	(1250 GPM)			
	1 x 3.5"	NHT (F)	(1250 GPM)			
	1 x 5.0"	Storz	(1250 GPM)			
	1 x 4.0"	Storz	(1250 GPM)			
Outlet Size	2.5"	NHT		2.5"	NHT	
Controls	Wireless (W.E.T.®)			Wireless (W.E.T.®)		
Material/Finish	Elk-O-Lite® with red urethane enamel			Elk-O-Lite® with red urethane enamel		
Friction Loss	27 psi at 1250 gpm			25 psi at 1250 gpm		
	16 psi at 1000 gpm			16 psi at 1000 gpm		
Travel	V +35° to +85 (50°)			V -20° to +85 (105°)		
	H L45° to R45° (90°)			H L270° to R270° (540°)		
Weight	44 Lbs. (with 2 x 2.5" inlets)			37 Lbs.		
Max. Power Requirement	3.0 Amps at 12V DC (24V opt)			3.0 Amps at 12V DC (24V opt)		
Ratings and Certifications	CE			CE		

KEY CONFIGURATIONS (ACCESSORIES)

PANEL MOUNT CONTROL (2)

HAND HELD TRANSMITTER (3)

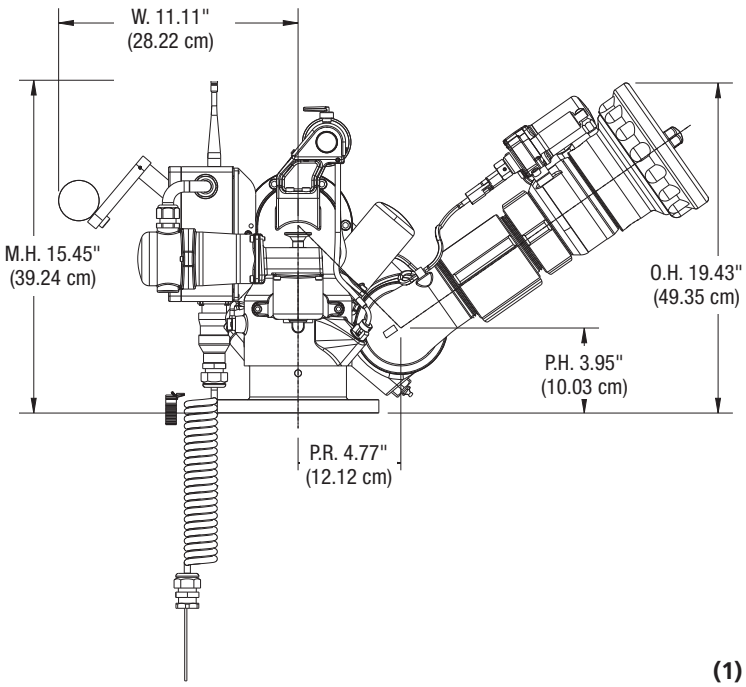
AERIAL SWITCH BOX (4)

MOUNTING BRACKET (6)

ANSI FLANGE TOP MOUNT (7)

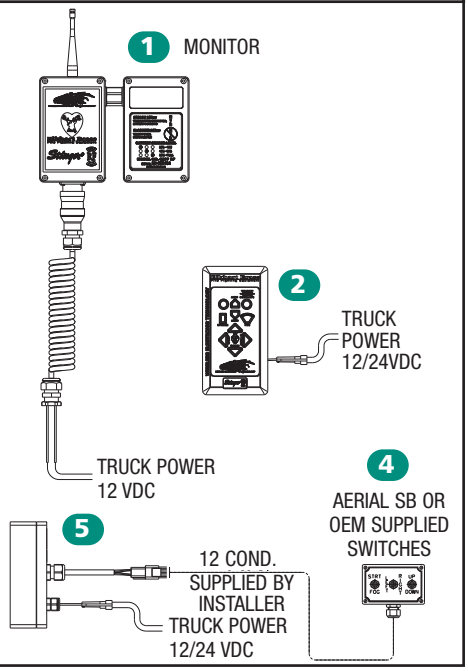
PROTECTIVE COVER (8)

DIMENSIONS & LAYOUT



(1)

CONTROL COMPONENTS CONFIGURATION



Stinger® RF Selector Guide

PORTABLE INLETS SIZES / TYPES						OUTLET SIZE	AVAILABLE RF FREQUENCIES			VOLTAGE	PRIMARY CONTROLLER			CE CERTIFICATION	MODEL
SINGLE					DUAL		868 MHz	915 MHz	920 MHz	12V DC	PANEL MOUNT	OEM TRANS-MITTER	NONE*		
3.5" NHT	4" NHT	4.5" NHT	4.0" STORZ	5.0" STORZ	2.5" NHT	2.5" NHT									
o	o	o	o	o	s	•	o	s	o	•	s	o	o	•	**8297RF**
											2	*5*			*Illustration*

KEY s = standard o = option

* When ordered as portable monitor only, hand held is supplied. Upper and lower units are provided separately.

Components & Options Chart

COMPONENTS & OPTIONS			ILLUSTRATION	MODEL
Controllers System requires either a panel mount or OEM transmitter. Up to 15 additional controllers of any type may be added.	Panel Mount – Operator control (accepts 12-24V DC) typically utilized as an apparatus mounted primary controller as required by NFPA. Additional panel mount controllers may be added to any system for secondary control.		2	
	OEM Transmitter – Operator control interface (accepts 12-24V DC) to OEM supplied switches or aerial switch box (below). May be assigned as the NFPA required primary controller or as a secondary controller.		5	
	Hand Held Remote – Wireless remote control. May not be used as a primary controller. Requires 2 AA batteries.		3	
Aerial Switchbox	Surface mount toggle switch box – operation requires OEM Transmitter		4	
Truck Mount Adapters	3" Female NPT (without Flange)	270° – (standard)		**8298 P RF**
	3" Female NPT (without Flange)	360° – (optional)		
	3" – 150# ANSI Flange	270° – (standard)		**8298 F RF**
	3" – 150# ANSI Flange	360° – (optional)	7	
Mounting Bracket	Truck mount bracket for portable base storage		6	**8297 MB RF**
24V Power Module	24V to 12V – required for monitor only			
Anchor Kit	For portable monitors – spike and hammer in a nylon bag			**81460001**
Companion Flange Kits	3" 150# ANSI steel flange with bolts and gaskets			**81315001**
Protective Cover	A shaped polymer covering for deck-mounted or portable mounted bases, designed to protect the swivel bearing and/or ring gear. Attached tether for securing the cover.		8	

ADDITIONAL INFORMATION

- *Optional charging cable comes with portable base.*
- *Please inquire with our sales staff for additional thread options.*
- *Technical Data on monitor performance may be found on page T-10.*

STINGER® RF

Recommended Products

SM-1250E – X-STREAM®	ST-194 – QUAD STACKED TIPS	282A – STREAM SHAPER	EXTENDER
			
Page 6-7	*Page 1-29*	*Page 1-27*	*Page 5-76*

Product Highlights

- *The Stinger® RF adds excellent value with its "break-apart" capability which makes it two monitors in one – a deck mount and a portable, both with RF capability.*
- *When installed as a deck gun, the Stinger® RF is designed to be installed with a minimum of necessary wiring. A simple 2-wire connection – ground and power wires only – dramatically reduces installation costs.*

Safety Preparedness

Since 9/11, many U.S. response teams have a new appreciation of the value of preparedness. The Stinger® RF is one of the best ways for any fire response team to be prepared because the Stinger® RF is both a deck gun and a portable unit.

While in the portable mode, the monitor can be used in places where apparatus won't fit.

- *Once in place, the Stinger® RF can be operated at a safe distance – up to ¼ mile away – using built-in wireless technology.*
- *The programmable capabilities include programmable oscillation – allowing the operator to maintain a safe distance.*

Safety Aspects


Unlatched


Latched

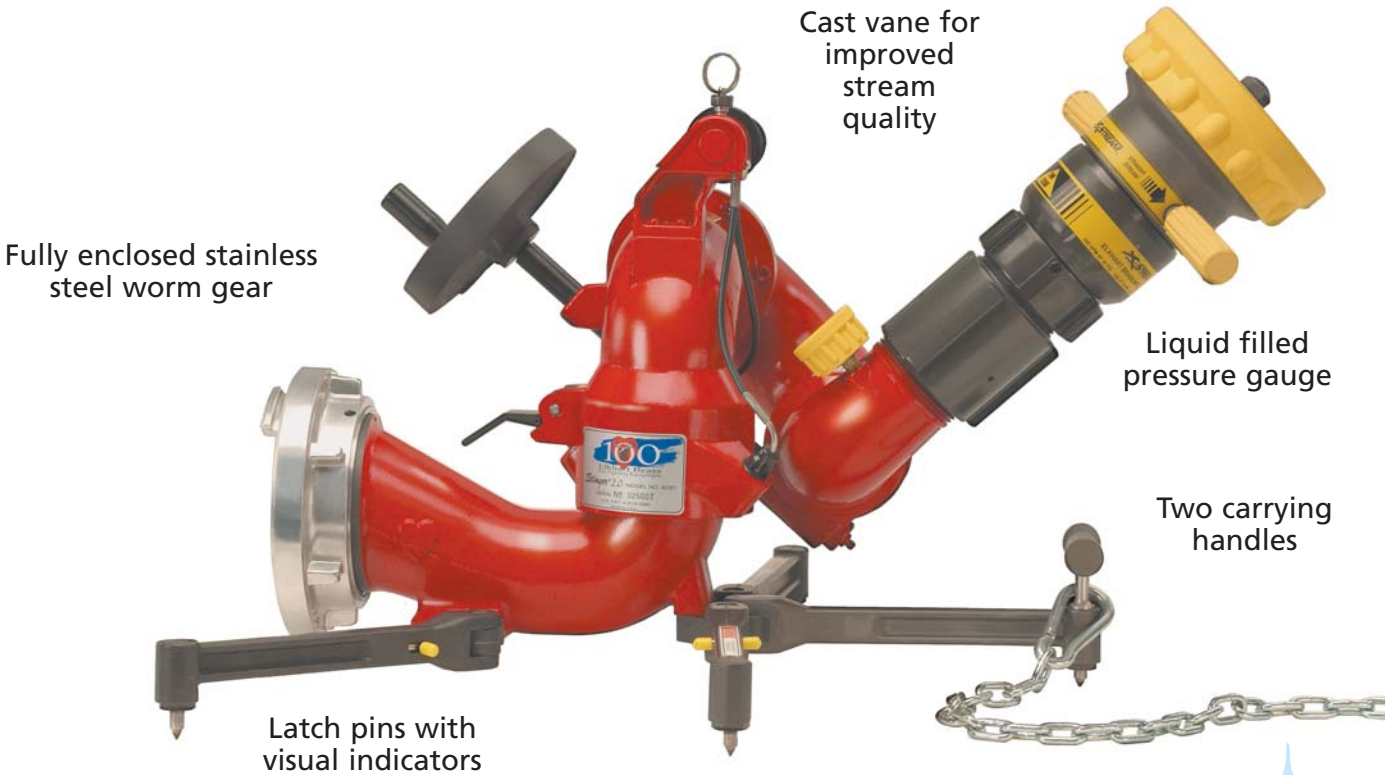
- *Latch pin includes a visual position indicator which provides confirmation, at a glance, that the pins are in the latched position.*
- *The Up/Down manual control handle automatically disengages from the up/down motor drive, eliminating the potential for finger or hand injuries.*
- *A safety switch allows motor operation only when the monitor is properly installed on a base. This feature prevents possible finger and hand injuries due to entanglement in left/right pinion gear.*
- *A lightweight, compact anchor strap with storage pouch is permanently attached to the portable base.*
- *An optional deck mount base is available for use with top mount control panels. The optional base has a ring gear that allows only 270° left/right travel, thus preventing the stream from being directed to the operator's position.*

SAFETY FEATURES

- **W.E.T.® monitors from Elkhart Brass promote firefighter safety and increase fireground effectiveness.**
- **Fireground personnel can tend monitor without being located at the apparatus, per NFPA 1901 recommendation on the use of remotely operated monitors.**

Stinger® 2.0

- Dual purpose break-apart monitor for use as a deck gun or portable monitor
- Numerous truck adapter and portable base options available to suit every need
- In portable mode, five forged aluminum legs with self-adjusting carbide-tipped ground spikes increase stability
- Rotation lock mechanism provides positive left-right lock with visual position indication
- By-passable safety stop at 35° above horizontal
- Safety chain for additional stability
- Lightweight for its class
- Most flow efficient in its class with a friction loss reducing 3⅜" vaned waterway
- Patented monitor to base latching mechanism is user-friendly and provides visual indication of status
- Fully enclosed stainless steel worm gear
- Liquid filled pressure gauge
- Two carrying handles



STINGER® 2.0

SPECIFICATIONS

	Portable			Deck Mount		
Max. GPM (LPM)	1250 (4732)			1250 (4732)		
Inlets	**Sizes**	**Types**		**Sizes**	**Types**	
	2 x 2.5"	NHT	(1000 GPM)	1 x 3"	NPT	(1250 GPM)
	1 x 4.5"	NHT	(1250 GPM)	1 x 3"	150# ANSI Flange	(1250 GPM)
	1 x 4"	NHT	(1250 GPM)	2 x 2.5"	NHT	(1000 GPM)
	1 x 3.5"	NHT	(1250 GPM)			
	1 x 5.0"	Storz	(1250 GPM)			
	1 x 4.0"	Storz	(1250 GPM)			
Outlet Sizes	2.5"	NHT		2.5"	NHT	
Control	Single hand-wheel			Single hand-wheel		
Material/Finish	Elk-O-Lite® with red urethane enamel			Elk-O-Lite® with red urethane enamel		
Friction Loss	27 psi at 1250 gpm			25 psi at 1250 gpm		
	16 psi at 1000 gpm			16 psi at 1000 gpm		
Travel	V +35° to +75° (40°)			V -15° to +75° (95°)		
	H L45° to R45° (90°)			H 360° (continuous)		
Weight	29 Lbs. (with 2 x 2.5" inlets)			22 Lbs.		
Ratings and Certifications						

KEY CONFIGURATIONS (ACCESSORIES)

STORAGE BRACKET (3)

ANSI FLANGE TOP MOUNT (4)

LDH INLET BASE (6)

THE PIPE™ 2.0 (9)

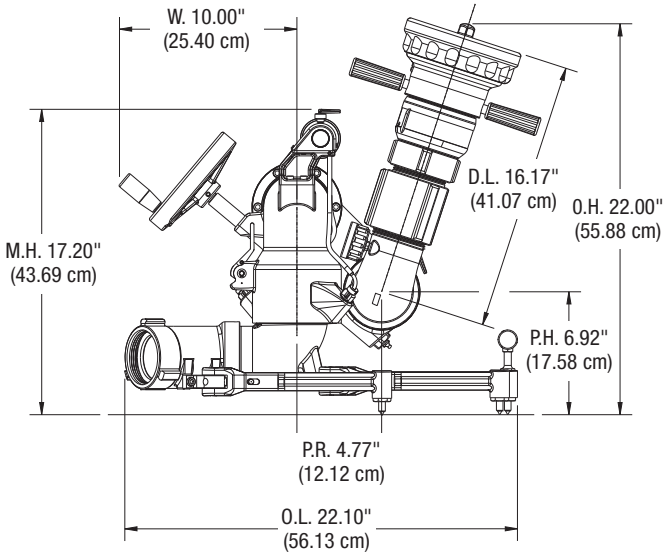
DECK MOUNT ADAPTER (8)

PROTECTIVE COVER (10)

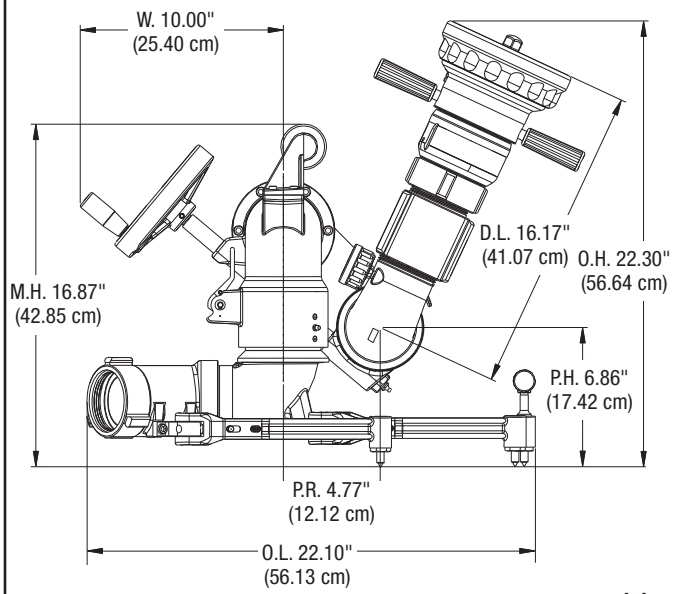
NPT TOP MOUNT (5)

SIAMESE INLET BASE (7)

DIMENSIONS & LAYOUT



(1)



(2)

Stinger® 2.0 Selector Guide

INLET SIZES / TYPES						OUTLET SIZE	ILLUSTRATION	MODEL
SINGLE					DUAL			
3.5" NHT	4.0" NHT	4.5" NHT	4.0" STORZ	5.0" STORZ	2.5" NHT	2.5"		
o	o	o	o	o	s	•	1	**8297-2.0***
o	o	o	o	o	s	•	2	**8397-2.0**
				6	7			*Illustration*

KEY s = standard o = option
* For the Break-a-Part version, the upper and lower unit may be purchased separately.

Components & Options Chart

COMPONENTS & OPTIONS		ILLUSTRATION	MODEL
Truck Mount Adapters (8297-2.0)	1 x 3" NPT Female (without Flange)	5	**8298 P 2.0**
	1 x 3" - 150# ANSI	4	**8298 F 2.0**
	2 x 2.5" Deck Mount	8	**8299**
Storage Bracket	Truck storage mounting bracket for portable base or complete monitor	3	**8297 MB**
The PIPE™ (8297-2.0)	Increases the height of a deck mounted Stinger® 2.0 by 18 inches – constructed of Elk-O-Lite® (approximately 10 Lbs.)	9	**8298 EX 2.0**
Storage Bracket	Mounting bracket for storing the PIPE™ 2.0		**8298 EX MB 2.0**
Caution Light	For use with the PIPE™ – visual confirmation that The PIPE™ is attached		**81258001**
Anchor Kit	For portable monitors		**81204001**
Companion Flange Kit	3" 150# ANSI steel flange with bolts and gasket		**81315001**
Protective Cover	A shaped polymer covering for deck-mounted or portable mounted bases, designed to protect the swivel bearing and/or ring gear. Attached tether for securing the cover.	10	

Recommended Products

SM-1000HF – SELF-EDUCTING	SM-1250 – X-STREAM®	282-A – STREAM SHAPER	ST-194 – QUAD STACKED TIPS
			
Page 6-14	*Page 6-7*	*Page 1-27*	*Page 1-29*

Product Highlights

The Stinger® (8297 2.0) adds excellent value as the "break-apart" capability makes it two monitors in one – both a deck mount and a portable unit.

Safety Aspects

Latch pin includes a visual position indicator which allows you to confirm, at a glance, that the pins are in the latched position.


Unlatched


Latched

ADDITIONAL INFORMATION

- *Technical Data on monitor performance may be found on page T-10.*
- *Please inquire with our sales staff for additional thread options.*

Stingray®

- Flow efficient 3" waterway allows for flows up to 1250 gpm
- All construction features designed to minimize maintenance needs
  - Choice of corrosion resistant brass or lightweight Elk-O-Lite® construction
  - Fully enclosed gearcase with stainless steel worm
  - Bronze balls in all swivel joints
  - Grease zerks for easy lubrication
- Flexible installation options include numerous base options and a hydrant mounting choice
- Compact size — 16" high or 21" high — is extremely versatile, allowing the monitor to serve a variety of real-world needs
- Built-in shut-off capabilities (with the Stingray® IV) from a full flow 3" ball valve

Stingray® IV

1250 GPM

FM

CE

SPECIFICATIONS

Max. GPM (LPM)	1250 (4732)		
Inlets	**Sizes**	**Types**	
	4"	150# ANSI Flange	
	3"	150# ANSI Flange	NPT (F)
Outlet Size	2.5" NHT		
Control	Single hand-wheel		
Material/Finish	Brass or Elk-O-Lite® with red urethane enamel		
Friction Loss	27 psi at 1250 gpm		
	17 psi at 1000 gpm		
	9 psi at 750 gpm		
Travel	V -60° to +90° (150°)		
	H 360° (continuous)		
Weight	Varies (See specification chart)		
Ratings and Certifications	CE and FM Approved		

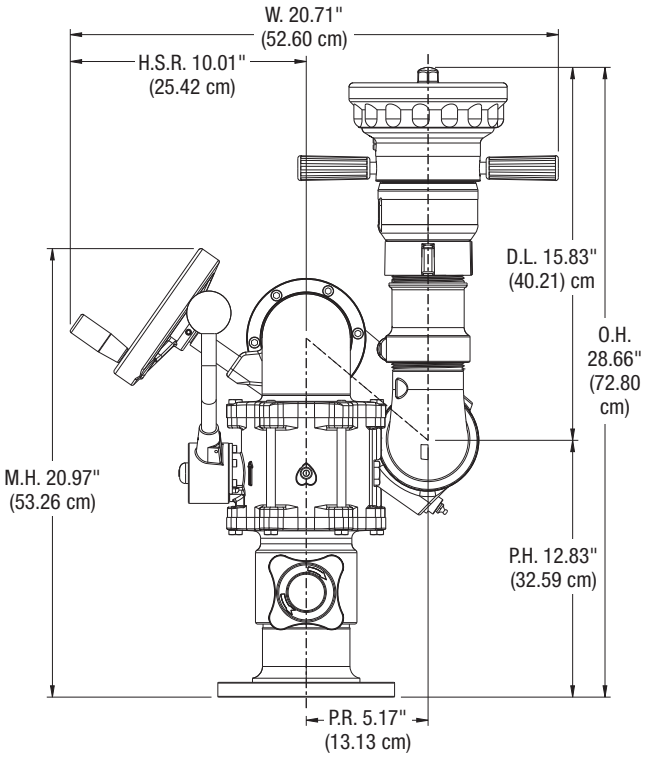
KEY CONFIGURATIONS (ACCESSORIES)

STINGRAY® (2)

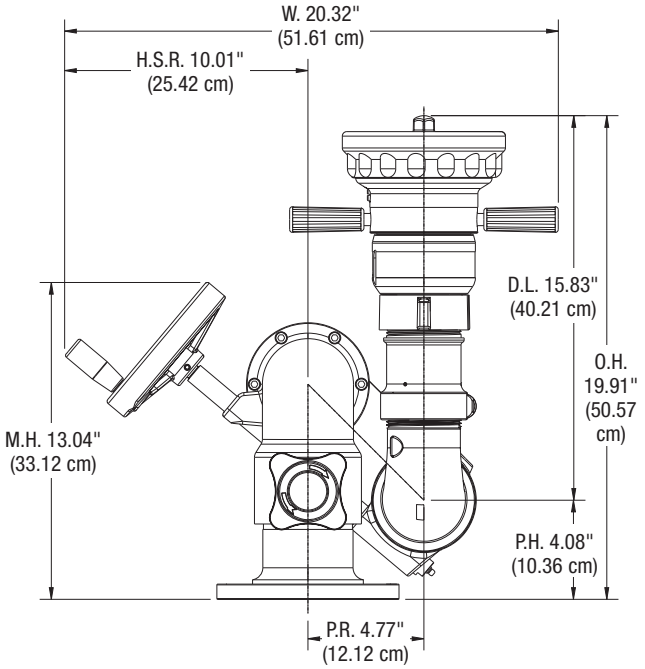
PRESSURE GAUGE (3)

BALL VALVE (4)

DIMENSIONS & LAYOUT



(1)



(2)

ADDITIONAL INFORMATION

- *All flanges specified with the monitor are flat. Raised flanges are available with some inlet sizes. Please inquire with our sales staff.*
- *Marine Brass (85-5-5-5) construction is available on some models. Please inquire with our sales staff.*
- *Technical Data on monitor performance may be found on page T-10.*
- *The Stingray® is also available in a portable cart version. Please see page 5-61 for details.*
- *The Stingray® is also available in a hydrant mount version. Please see page 5-63 for details.*

Stingray® Selector Guide

INLET SIZES/ TYPES			OUTLET SIZE	VERTICAL TRAVEL		INTEGRAL COMPONENTS		MATERIALS		CERTIFICATIONS		DIMENSIONS				ILLUSTRATION	MODEL
NPT	150 # ANSI Flange		2.5"	-60 TO +70°	-60 TO +90°	Ball Valve	Pressure Gauge	Brass	Elk-O-Lite®	CE	FM Approved	Width (In.)	Depth (In.)	Height (In.)	Weight (Lbs.)		
3"	3"	4"	NHT	(130°)	(150°)	3"											
o	o	s	•	o	s	s	o	•		•		14.75	15.75	20.375	68.25	1	**8393IV**
o	o	s	•	s	o		o	•		•	•	14.75	15.75	15.75	47.5	2	**8393**
o	o	s	•	s	o		o		•	•		14.75	15.75	15.75	16.0	2	**8393-A**
						4	*3*										*Illustration*

KEY s = standard o = option

Components & Options Chart

COMPONENTS & OPTIONS		ILLUSTRATION	MODEL
Companion Flange Kits	3" 150# ANSI steel flange with bolts and gaskets		**81315001**
	4" 150# ANSI steel flange with bolts and gaskets		**81317001**

Recommended Products

SM-1000HF – SELF-EDUCTING	CSW-C-HF SELF-EDUCTING	IMS-500 SELECT-O-STREAM®	J-MYSTERY®	282B STREAM SHAPER	181-SMOOTH BORE	SM-1250B X-STREAM®
						
Page 6-14	*Page 6-14*	*Page 6-10*	*Page 6-12*	*Page 1-27*	*Page 1-29*	*Page 6-7*

Product Highlights

Our Stingray® IV features a 3" integral quarter-turn full flow ball valve. The integrated valve eliminates the need for a separate valve; it is both easier to install and more reliable than a separate wafer valve. The benefits of the integrated valve include:

1) Better total monitor efficiency as the friction loss between the traditional separate monitor and valve is reduced

2) A turn-key package created by integrating the valve into the monitor

Highlights of the Stingray® IV valve include:

- ***Hydraulically balanced acetal ball***
- ***Teflon impregnated seats***
- ***Full flow ball valve***

Copperhead

- Rugged, corrosion resistant brass construction is ideal for use in refineries, chemical plants, off shore installations and for shipboard use
- Specific industrial reliability/maintenance-free features of the Copperhead IV include:
  - Sealed grease bearings with a built-in, one way, pressure release
  - Enclosed, stainless steel locking mechanism
  - Environmentally-sealed valve actuator
- Efficient design creates the most cost effective brass monitor in its flow class
- Low friction loss due to 3⅜" patented vaned elliptical waterway
- Small footprint — less than 15" wide and requires just 16" of clearance — makes it ideal for tight spaces

All surfaces sealed against moisture, sand, and particle penetration

Utilizes Unibody Valve technology with a stainless steel, quarter-turn, full-flow ball

Single bolt change-out rotates valve handle position in 45° increments

Continuous 360° ratation

Copperhead IV

1250 GPM

FM

CE

COPPERHEAD

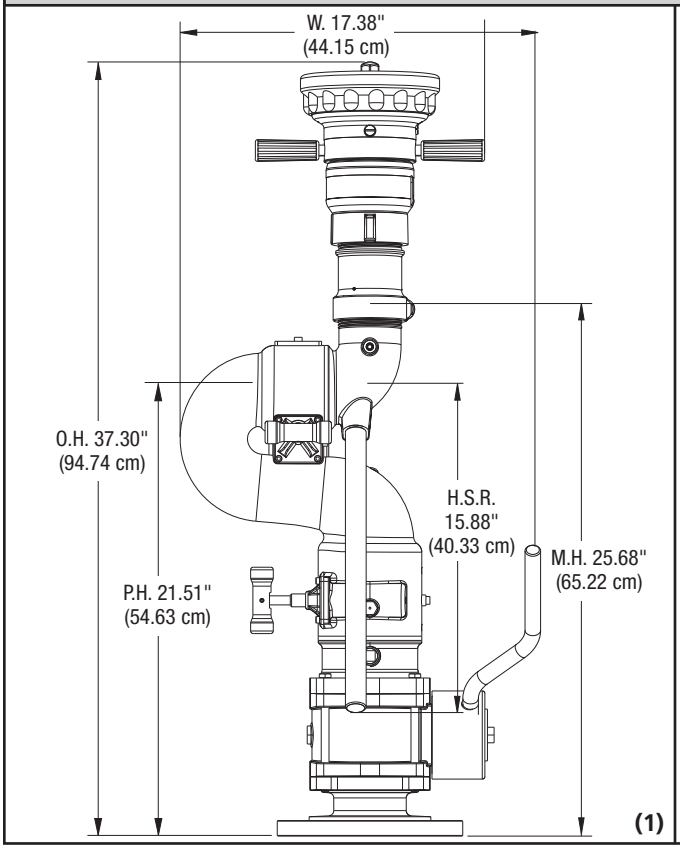
SPECIFICATIONS			
Max. GPM (LPM)	1250 (4732)		
	Sizes	Types	
Inlets	4"	150# ANSI Flange	
	3"	150# ANSI Flange	NPT (F)
Outlet	2.5" NHT		
Controls	Tiller		
	Dual hand-wheel – rotating base		
	Dual hand-wheel – fixed base		
Material/Finish	Brass with red urethane enamel		
Friction Loss Copperhead	16 psi at 1250 gpm		
	12 psi at 1000 gpm		
Friction Loss Copperhead IV	21 psi at 1250 gpm		
	16 psi at 1000 gpm		
Travel	V -45° to +90° (135°)		
	V -49° to +86° (135°)		
	H 360° (continuous)		
Weight	Variable (see chart for specifics)		
Ratings and Certifications	CE, FM Approved		

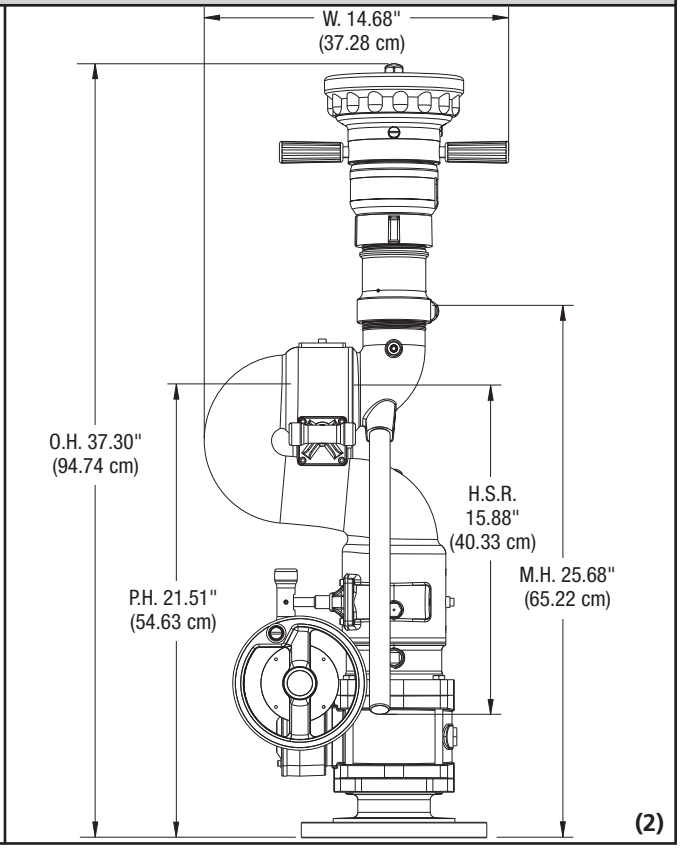
KEY CONFIGURATIONS (ACCESSORIES)

COPPERHEAD (3)

TILLER (BAR) (4) STYLE

DIMENSIONS & LAYOUT

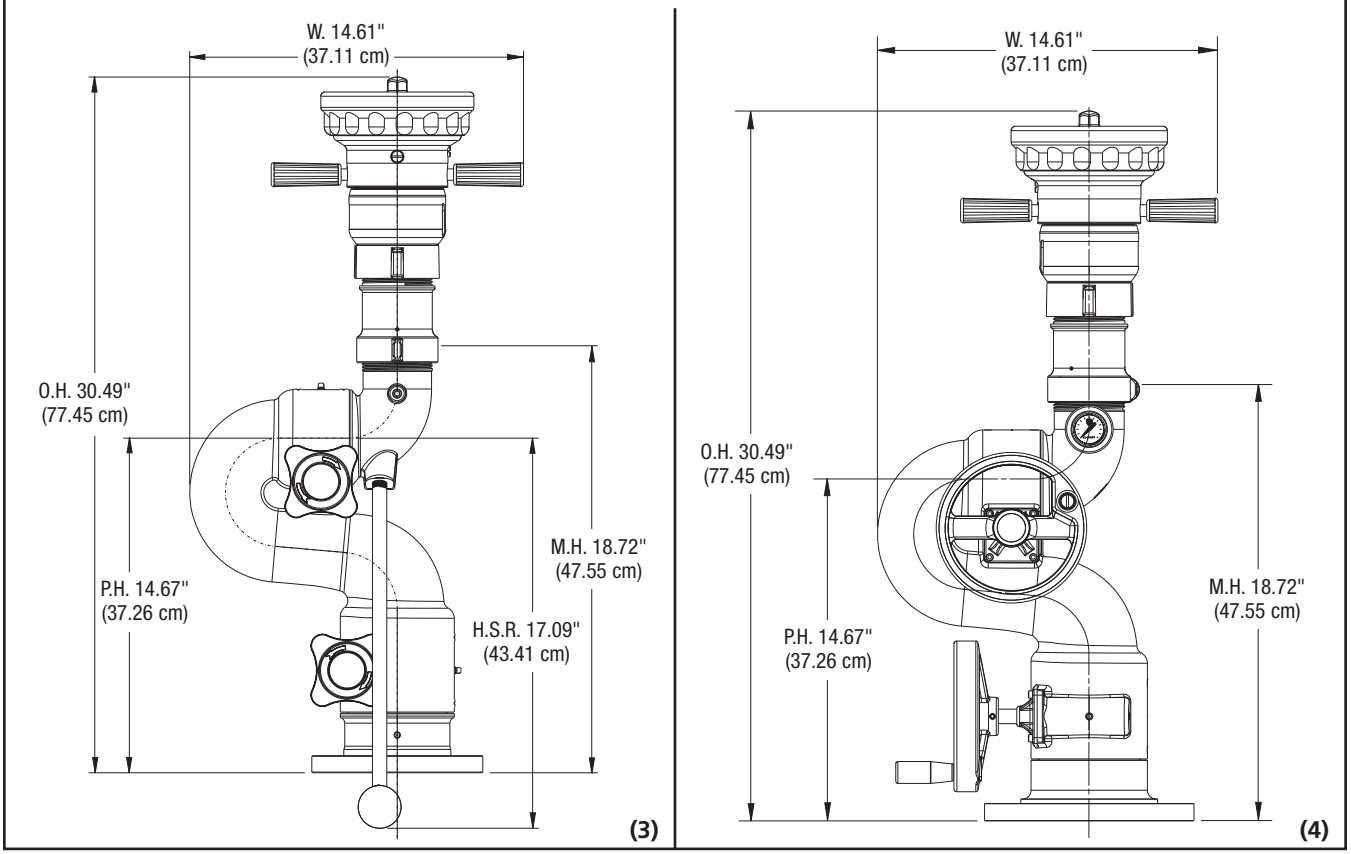




ADDITIONAL INFORMATION

- *Weights are approximate and will vary by selected inlet.*
- *Marine Brass (85-5-5-5) construction is available on the Copperhead. Please inquire with our sales staff.*
- *Technical Data on monitor performance may be found on page T-10.*
- *LA style handles available on the Copperhead. Please inquire with our sales staff.*

DIMENSIONS & LAYOUT



Copperhead Selector Guide

INLET SIZES / TYPES			OUTLET SIZE	CONTROLS				VERTICAL TRAVEL		INTEGRAL COMPONENTS			CERTIFICATION		Illustration	MODEL
NPT	150# ANSI Flange			Hand-wheels		Tillers		-45 to +90°	-49 to +86°	3" Ball Valve		Pressure Gauge	CE	FM Approved		
3"	3"	4"	2.5" NHT	Fixed Base (68 Lbs.)	Rotating Base (68 Lbs.)	Copperhead Bar (58 Lbs.)	Copperhead IV Bar (87 Lbs.)	(135°)	(135°)	Hand-wheel	Tiller					
o	s	o	•			s	o	•				o	•	•	3,4	**8593-02**
o	s	o	•		s			•				o	•	•	3,5	**8593-03/ 294-11rev.06**
o	s	o	•	s				•				o	•	•	3,6	**8593-03X/ 294-11rev.06x**
		s	•				s		•	o	s	o			1,2	**8593IV**
				3,6	*3,5*	*4*	*1*			*2*	*1*					*Illustration*

KEY s = standard o = option

Components & Options Chart

COMPONENTS & OPTIONS		ILLUSTRATION	MODEL
Companion Flange Kits	3" 150# ANSI steel flange with bolts and gaskets		**81315001**
	4" 150# ANSI steel flange with bolts and gaskets		**81317001**

COPPERHEAD

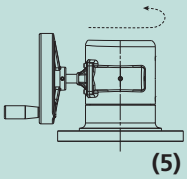
Recommended Products

SM-1000HF – SELF-EDUCTING	SM-1250B – X-STREAM®	CSW-LB – SELECT-O-FLOW®	181 – DELUGE TIP
			
Page 6-14	*Page 6-7*	*Page 6-11*	*Page 1-29*

282B – STREAM SHAPER	84 – BUTTERFLY WAFER VALVE	296 – HYDRANT BASE	CJB – SELECT-O-STREAM®	IMS – SELECT-O-STREAM®
				
Page 1-27	*Page 5-75*	*Page 5-75*	*Page 6-10*	*Page 6-10*

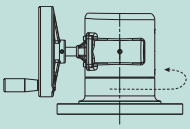
PRODUCT HIGHLIGHTS

In addition to offering the only brass dual hand-wheel monitor of this size on the market, Elkhart's Copperhead monitor boasts a choice of base configurations:



(5)

- ***The fixed base dual hand-wheel control allows the operator to remain in a stationary position while manipulating the horizontal movement of the monitor. The fixed nature of the horizontal control can be especially beneficial when operating space is limited.***



(6)

- ***When using the rotating base dual hand-wheel control, the operator moves in tandem with the monitor while managing the monitor's horizontal travel. The rotating base allows the operator to maintain visual contact with the monitor's stream direction.***

In most industrial settings where the traditional- 294-11 is currently used, the Copperhead would be an appropriate replacement. The Copperhead offers a choice of control styles as well as higher flow capacity.

Vulcan® RF

- Wireless RF Electronic Technology (W.E.T.®) eliminates the need to operate a monitor from atop an apparatus, as recommended by NFPA 1901
- No control wiring — requires only 2-wire power connection
- Wireless control allows operator to move away from the apparatus (up to 1/4 mile) for a better view of the water stream
- Dual speed horizontal drive allows fast and precise targeting of stream
- Patented rotating connector allows unlimited 360° rotation
- Patented easy on-scene programming of oscillation for exposure protection or hazardous material suppression
- Unlimited number of monitors may be operated interference free
- Several ISM bands available for license free use around the world
- Smallest device in its class on the market — requires just 16" of clearance — makes it ideal for tight spaces

VULCAN® RF

SPECIFICATIONS

Max. GPM (LPM)	1250 (4732)		
Inlets	Sizes	Types	
	4"	150# ANSI Flange	
	3"	150# ANSI Flange	NPT (F)
Outlet	2.5" NHT		
Controls	Wireless (W.E.T.®)		
Material/Finish	Elk-O-Lite® with red urethane enamel		
Friction Loss	16 psi at 1250 gpm		
	12 psi at 1000 gpm		
Travel	V -45° to +90° (135°)		
	V -45° to +170° (215°)		
	H 180° or 360° (unlimited)		
Weight	25 Lbs.		
Max. Power Requirement	3.0 Amps at 12V DC (24V opt)		
Ratings and Certifications	CE		

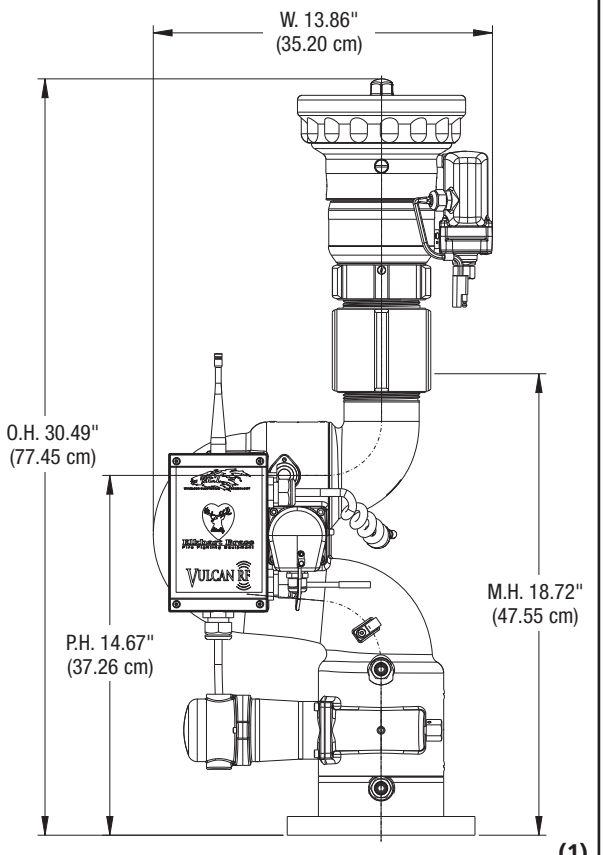
KEY CONFIGURATIONS (ACCESSORIES)

PANEL MOUNT CONTROL (2)

HAND HELD TRANSMITTER (3)

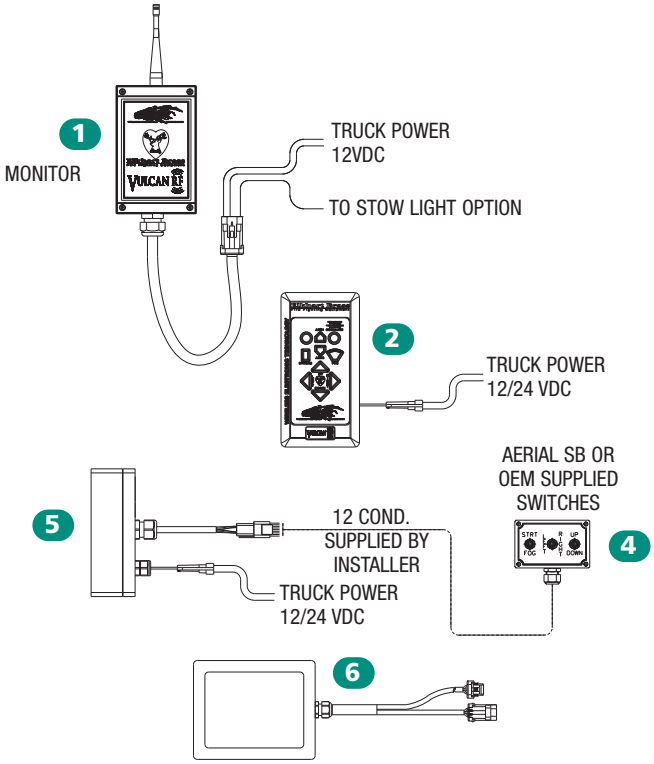
AERIAL SWITCH BOX (4)

DIMENSIONS & LAYOUT



(1)

CONTROL COMPONENTS CONFIGURATION



ADDITIONAL INFORMATION

Technical Data on monitor performance may be found on page T-10.

Vulcan® RF Selector Guide

INLET SIZES / TYPES			OUTLET SIZE	VERTICAL TRAVEL		HORIZONTAL TRAVEL		AVAILABLE RF FREQUENCIES			VOLTAGE	PRIMARY CONTROLLER		CERTIFI-CATION	MODEL
3"		4"													
NPT	150# ANSI Flange	150# ANSI Flange		135°	215°	180°	360°	868 MHz	915 MHz	920 MHz	12V DC	Panel Mount	OEM Transmitter*	CE	
o	s	o	•	•			•	o	s	o	•	s	o	•	8500-01
o	s	o	•		•	•		o	s	o	•	s	o	•	8500-01 EXT
												2	*5*		*Illustration*

KEY s = standard o = option
* Requires OEM provided switches or switch box.

Components & Options Chart

COMPONENTS & OPTIONS		ILLUSTRATION	MODEL
Controllers – System requires either a panel mount or OEM transmitter. Up to 15 additional controllers of any type may be added.	Panel Mount – Operator control (accepts 12-24V DC) typically utilized as an apparatus mounted primary controller as required by NFPA. Additional panel mount controllers may be added to any system for secondary control.	2	
	OEM Transmitter – Operator control interface (accepts 12-24V DC) to OEM supplied switches or aerial switch box (below). May be assigned as the NFPA required primary controller or as a secondary controller.	5	
	Hand Held Remote – Wireless remote control. May not be used as a primary controller. Requires 2 AA batteries.	3	
Aerial Switchbox	Surface-mount toggle switch box – operation requires OEM transmitter	4	
24V Power Module	24V to 12V – required for monitor only		
Auxiliary Battery Pack	Back up to truck power (12V)	6	
Companion Flange Kits	3" 150# ANSI steel flange with bolts and gaskets		**81315001**
	4" 150# ANSI steel flange with bolts and gaskets		**81317001**

Recommended Products

SM-1000E – X-STREAM®	SM-1250E – X-STREAM®	ST-194 – QUAD STACKED TIPS	282-A – STREAM SHAPER	EXTENDER
				
Page 6-7	*Page 6-7*	*Page 1-29*	*Page 1-27*	*Page 5-76*

VULCAN® RF

SAFETY FEATURES

- W.E.T.® monitors from Elkhart Brass promote firefighter safety and increase fireground effectiveness.
- NFPA 1901 recommends the use of remotely operated monitors "without the need for a person to climb to the top of the apparatus."
- Fireground personnel can tend monitor without being located at the apparatus.

Product Highlights

- *Infinite horizontal rotation means that the Vulcan® RF will continue to rotate beyond 360° without stopping or having to re-set the rotation. The rotation stops when the operator chooses; this monitor does not have the mechanical limitations common to other monitors.*
- *A version of the Vulcan® RF with 215° vertical travel is now available for aerial ladders with either standard or pinned waterways. Vertical travel to 215° allows extreme versatility in stream position regardless of ladder elevation – even when the ladder is positioned below the horizontal. Advanced electronics also limit vertical travel when the waterway is retracted from the ladder tip (pinned waterway).*
- *The Vulcan® RF is designed to be installed with a minimum of necessary wiring. A simple 2-wire connection – ground and power wires only – dramatically reduces installation costs.*

Vulcan®

- Efficient design creates the most cost effective monitor in its flow class
- Low friction loss due to 3 ⅜" patented elliptical waterway with vaned interior
- Small footprint — less than 15" wide and requiring just 16" of clearance — makes it ideal for tight spaces
- Lightweight Elk-O-Lite® construction is compatible with aerial platform applications or any other use where a lightweight, highly flow-efficient monitor is needed
- Several control options are available, allowing customization for your needs:
  - Tiller control option allows for faster controls
  - Dual hand-wheel control features fully enclosed stainless steel worm gears and are available with either fixed or rotating base hand-wheel controls
- Liquid filled pressure gauge with bumper guard

Patented waterway

Pressure gauge with bumper guard

Choice of control type, including fixed and rotating base on the dual hand-wheel

360° continuous rotation

1250 GPM

CE

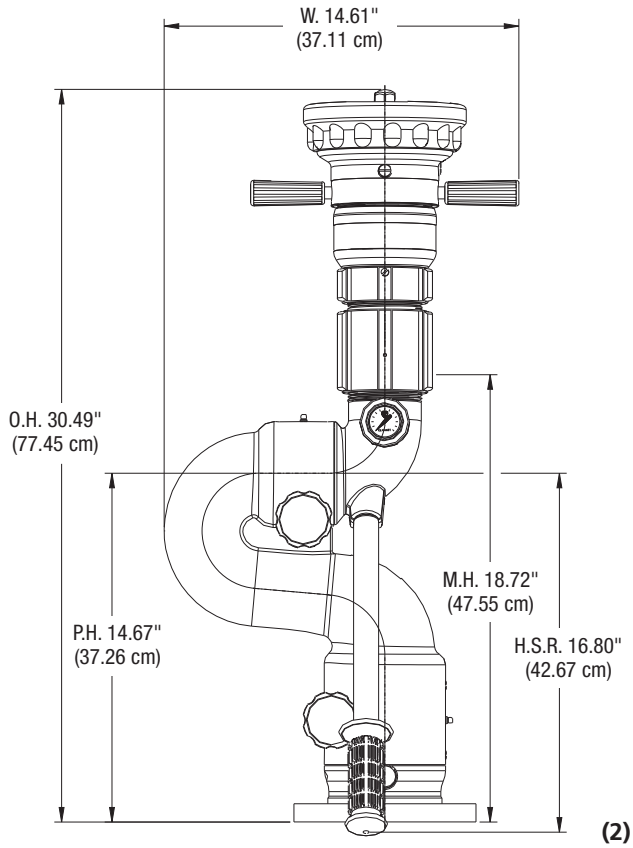
VULCAN®

SPECIFICATIONS			
Max. GPM (LPM)	1250 (4732)		
Inlets	Sizes	Types	
	4"	150# ANSI Flange	
	3"	150# ANSI Flange	NPT (F)
Outlet	2.5" NHT		
Controls	Tiller		
	Dual hand-wheel – rotating base		
	Dual hand-wheel – fixed base		
Material/Finish	Elk-O-Lite® with red urethane enamel		
Friction Loss	16 psi at 1250 gpm		
	12 psi at 1000 gpm		
Travel	V -45° to +90° (135°)		
	H 360° (continuous)		
Weight	Variable (see chart for specifics)		
Ratings and Certifications	CE		

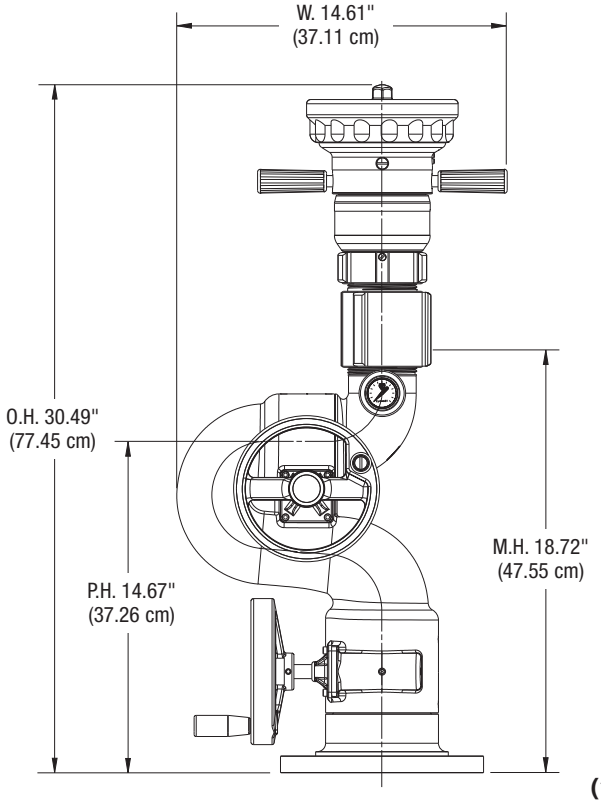
KEY CONFIGURATIONS (ACCESSORIES)

TILLER (BAR) (2) STYLE

DIMENSIONS & LAYOUT



(2)



(1)

ADDITIONAL INFORMATION

- *Weights are approximate and will vary by selected inlet.*
- *Technical Data on monitor performance may be found on page T-10.*

Vulcan® Selector Guide

INLET SIZES / TYPES			OUTLET SIZE	CONTROLS			CERTIFICATION		MODEL
NPT	150# ANSI Flange			Hand-wheels		Tillers	CE	Weight (Lbs.)	
3"	3"	4"	2.5" NHT	Fixed Base	Rotating Base	Bar			
o	s	o	•			s	•	18	**8500-02**
o	s	o	•		s			22	**8500-03**
o	s	o	•	s				22	**8500-03X**
				3	*1,4*	*2*			*Illustration*

KEY s = standard o = option

Components & Options Chart

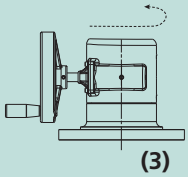
COMPONENTS & OPTIONS		ILLUSTRATION	MODEL
Companion Flange Kits	3" 150# ANSI steel flange with bolts and gaskets		**81315001**
	4" 150# ANSI steel flange with bolts and gaskets		**81317001**

Recommended Products

SM-1000HF – SELF-EDUCTING	SM-1250 – X-STREAM®	ST-194 – QUAD STACKED TIPS	282-A – STREAM SHAPER	84 – BUTTERFLY WAFER VALVE
				
Page 6-14	*Page 6-7*	*Page 1-29*	*Page 1-27*	*Page 5-75*

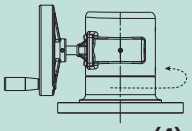
Product Highlights

The Vulcan® offers a several control options including the dual hand-wheel which features a choice of two base configurations – fixed base or a rotating base.



(3)

- ***The fixed base dual hand-wheel control allows the operator to remain in a stationary position while manipulating the horizontal movement of the monitor. The fixed nature of the horizontal control can be especially beneficial when operating space is limited.***



(4)

- ***When using the rotating base dual hand-wheel control, the operator moves in tandem with the monitor while managing the monitor's horizontal travel. The rotating base allows the operator to maintain visual contact with the monitor's water direction.***

8287

- Lightweight Elk-O-Lite® design flows up to 1250 gpm (4732 lpm)
- Three 2½" clappered inlets lead to a 3" dual waterway
- 100° vertical travel (with a by-passable safety stop at 25° above horizontal)
- Continuous 360° horizontal travel plus positive left-right lock with visual position indication
- Construction increases stability through design:
  - Three solid steel, chrome-plated legs with adjustable ground spikes
  - Two rear angled ground spikes attached to the monitor body
- 10' tie-down chain for additional safety
- Two carrying handles

Liquid-filled pressure gauge

Solid steel, chrome-plated legs with adjustable ground spikes

Clappered inlets

1250 GPM

8287 Selector Guide

SPECIFICATIONS		
Max. GPM (LPM)	1250 (4732)	
Inlet	Size	Type
	2.5" (x3)	NHT (F)
Outlet Size	3.5" NHT	
Control	Dual hand-wheel	
Material/Finish	Elk-O-Lite® with red urethane enamel	
Friction Loss	11 psi at 1250 gpm	
	8 psi at 1000 gpm	
Travel	V -15° to +85° (100°)	
	H 360° (continuous)	
Weight	48 Lbs.	

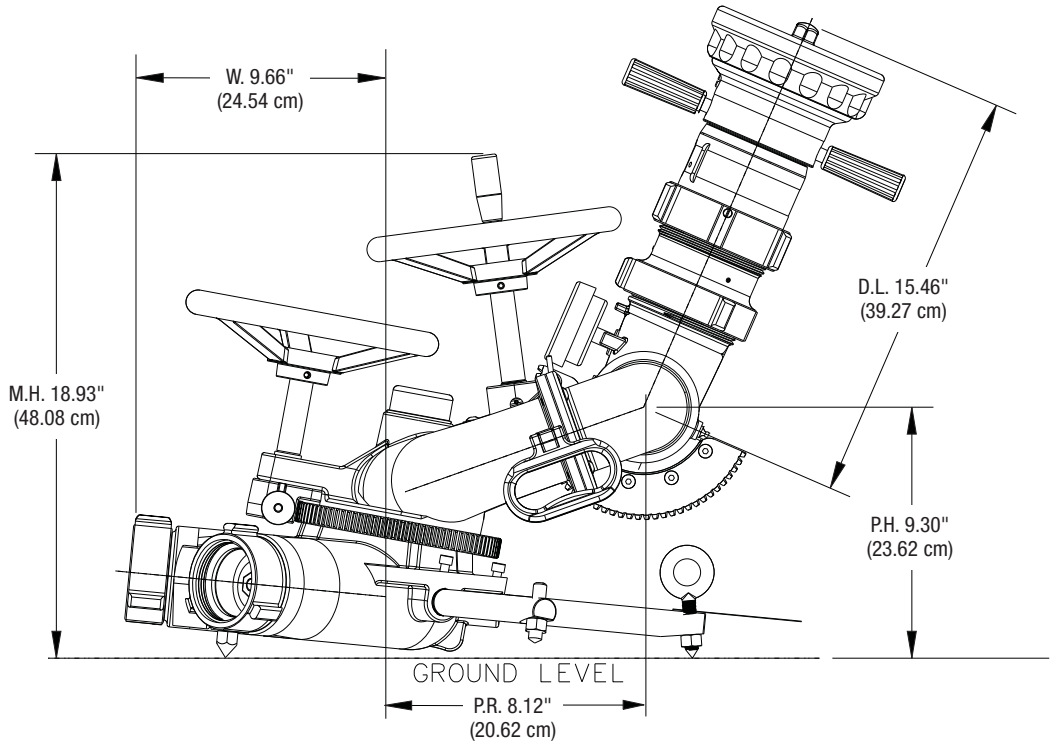
INLET SIZE / TYPE	OUTLET SIZE	PRESSURE GAUGE	TIE-DOWN STRAP	MODEL
2.5" NHT	3.5" NHT			
•	•	s	•	**8287**
				Illustration

KEY s = standard o = option

Components & Options Chart

COMPONENTS & OPTIONS		ILLUSTRATION	MODEL
Anchor Kit	For portable monitors		**81204001**
Top Mount Fixture			**8290**

DIMENSIONS & LAYOUT



(1)

Recommended Products

284A – STREAM SHAPER	SM-1250 – X-STREAM®	283A – STREAM SHAPER	ST-194 – QUAD STACKED TIPS
			
Page 1-27	*Page 6-7*	*Page 1-27*	*Page 1-29*

ADDITIONAL INFORMATION

Technical Data on monitor performance may be found on page T-10.

Python®

- Seamless brass 2.5" waterway for flows up to 1250 gpm
- Flexible installation options
  - Extensive base options
  - Two choices in manual controls — tiller or steering wheel
  - Hydrant mounting option
- All construction features designed to minimize maintenance needs
  - Corrosion resistant brass construction
  - Cast brass swivel joints
  - Bronze balls in all swivel joints
  - Stainless steel handles
  - Grease zerks for easy lubrication
- Positive twist locks for both vertical and horizontal movement

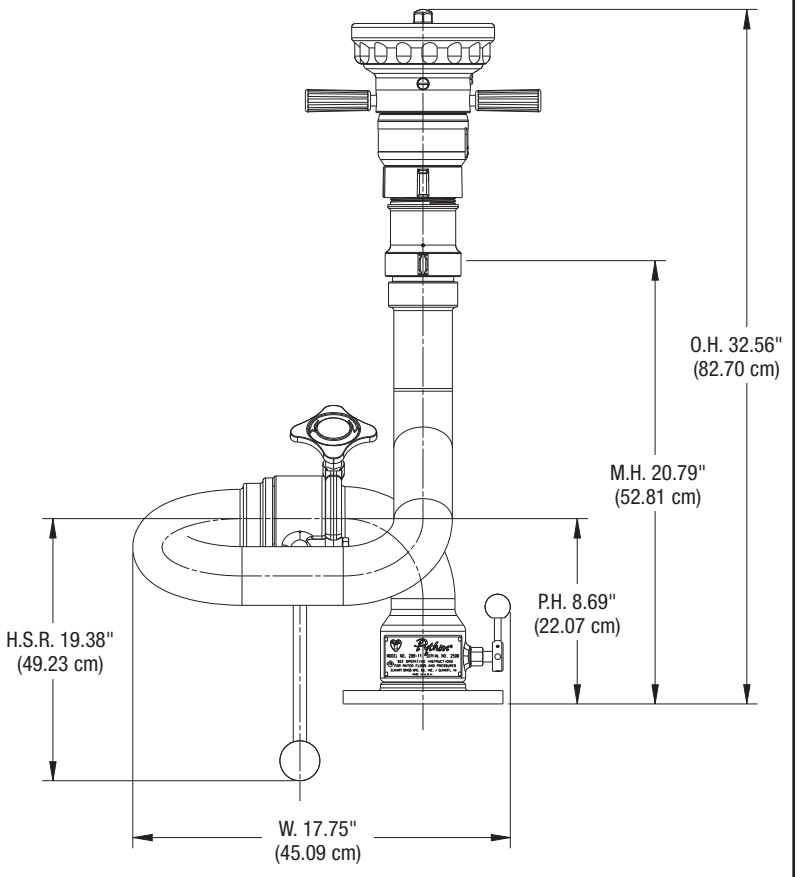
1250 GPM

FM

CE

SPECIFICATIONS				
Max. GPM (LPM)	1250 (4732)			
Inlets	**Sizes**	**Types**		
	6"	150# ANSI Flange		
	4"	150# ANSI Flange	300# ANSI Flange	NPT (F)
	3"	150# ANSI Flange	300# ANSI Flange	NPT (F)
	2.5"	150# ANSI Flange	300# ANSI Flange	NPT (F)
Outlet Size	2.5" NHT			
Controls	Steering wheel			
	Tiller			
Material/Finish	Brass with red urethane enamel or chrome-plated			
Friction Loss	24 psi at 1250 gpm			
	18 psi at 1000 gpm			
	11 psi at 750 gpm			
Travel	V -45° to +90° (135°)			
	H 360° (continuous)			
Weight	45.00 Lbs. (See specification chart)			
Ratings and Certifications	FM Approved, CE			

DIMENSIONS & LAYOUT



(1)

KEY CONFIGURATIONS (ACCESSORIES)

STEERING WHEEL HANDLE (2)

PRESSURE GAUGE (3)

ADDITIONAL INFORMATION

- *All flanges specified with the monitor are flat faced. Raised face flanges are available with some inlet sizes. Please inquire with our sales staff.*
- *Technical Data on monitor performance may be found on page T-10.*
- *The Python® is also available in a portable cart version. Please see page 5-61 for details.*
- *The Python® is also available in a hydrant mount version. Please see page 5-63 for details.*

PYTHON®

Python® Selector Guide

INLETS										OUTLET SIZE	MAX. GPM (LPM)		Pressure Gauge	CONTROLS		CERT.		DIMENSIONS				FINISHES		MODEL
SIZES / TYPES (INCHES)										SIZE / TYPE (IN.)	1250 (4732)	750 (2839)		Steering Wheel	Tiller Bar	CE	FM Approved	Width (In.)	Depth (In.)	Height (In.)	Weight (Lbs.)	Red Urethane	Chrome-plated	
NPT			150# ANSI FLANGE				300# ANSI FLANGE			NHT														
2.5	3	4	2.5	3	4	6	2.5	3	4	2.5														
o	o	o	o	o	s	o	o	o	o	•	•		o	o	s	•	•	18.0	31.5	17.5	45.0	•		**299-11**
o	o	o	o	o	s	o	o	o	o	•	•		o	o	s		•	18.0	31.5	17.5	45.0		•	**299-11P**
													4	*3*	*1*									*Illustration*

KEY s = standard o = option
* Swivel

Components & Options Chart

COMPONENTS & OPTIONS		ILLUSTRATION	MODEL
Companion Flange Kits	3" 150# ANSI steel flange includes bolts and gaskets		**81315001**
	4" 150# ANSI steel flange includes bolts and gaskets		**81317001**
Drain Valve	Automatic ball drip drain valve.		**702**

Recommended Products

CSW-C-HF – SELF-EDUCTING

Page 6-14

SM-1250B – X-STREAM®

Page 6-7

CJN-B – SELECT-O-STREAM®

Page 6-10

SM-1000HF – SELF-EDUCTING

Page 6-14

84 – BUTTERFLY WAFER VALVE

Page 5-75

296 – HYDRANT BASE

Page 5-75

181 – DELUGE TIP

Page 1-29

282B – STREAM SHAPER

Page 1-27

Spit-Fire

- Efficient at high flows – 4" fully vaned waterway
- Choice of manual controls
  - Dual hand-wheel style delivers:
    - Full 360° horizontal rotation while allowing the lower hand-wheel to remain stationary
    - 10 vertical and 7 horizontal adjustable stop positions
  - Tiller, in the "Big Stick®" style, allows vertical and horizontal travel to be conveniently controlled with one handle
- Corrosion resistant brass construction
- Low maintenance
  - Fully enclosed gearcase
  - Steel worm gears
  - #316 stainless steel balls in all swivel joints with grease fittings
- Liquid-filled pressure gauge

2000 GPM

CE

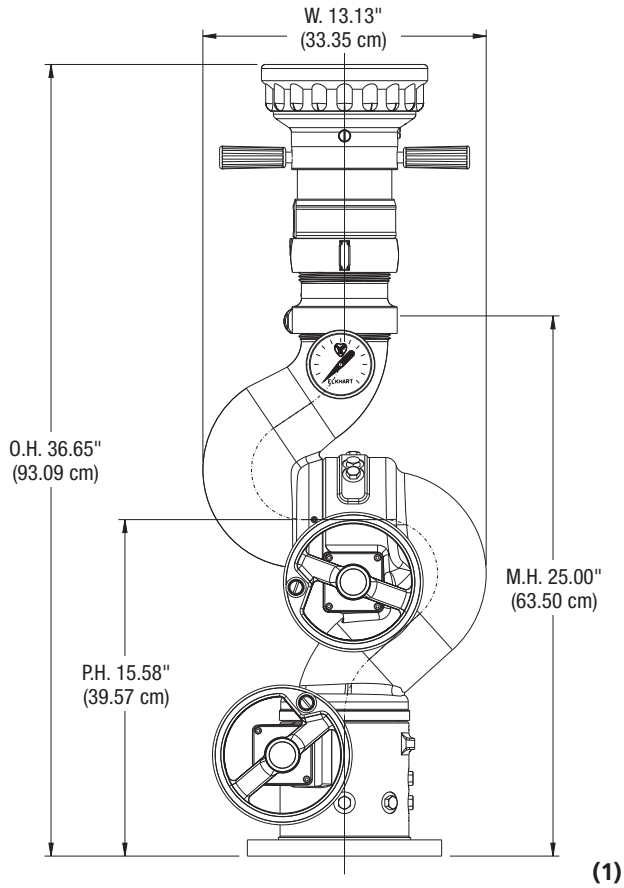
SPIT-FIRE

SPECIFICATIONS			
Max. GPM (LPM)	2000 (7570)		
	Size	Types	
Inlets	4"	150# ANSI Flange	NPT
Outlet Size	3.5" NHT		
Controls	Dual hand-wheel		
	"Big Stick®" Tiller		
Material/Finish	Brass with red urethane enamel		
Friction Loss	39 psi at 2000 gpm		
	15 psi at 1250 gpm		
Travel	V -45° to +90° (135°)		
	H 360°		
Weight	126 Lbs.		
Ratings and Certifications	CE		

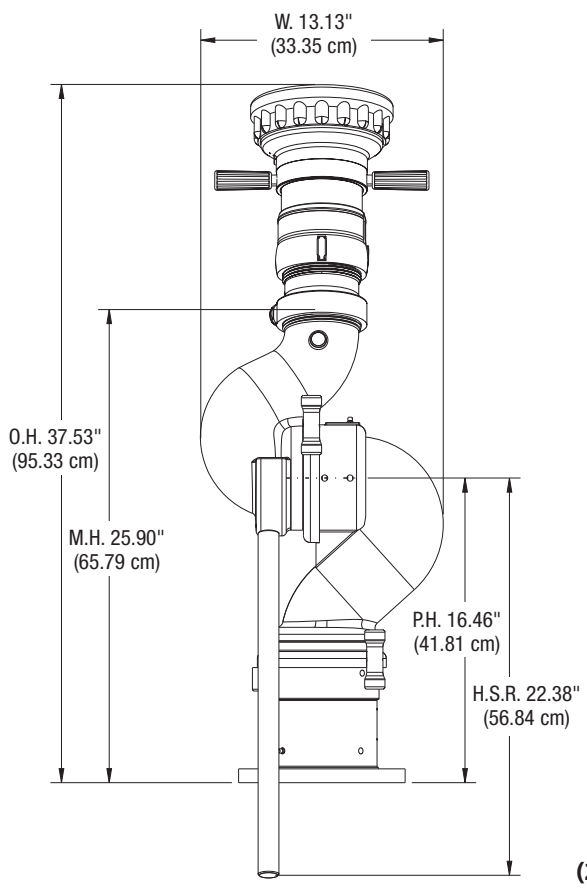
KEY CONFIGURATIONS (ACCESSORIES)

(TILLER) "BIG STICK®" (2) STYLE

DIMENSIONS & LAYOUT



(1)



(2)

ADDITIONAL INFORMATION

- *Technical Data on monitor performance may be found on page T-10.*
- *Marine Brass (85-5-5-5) construction is available. Please inquire with our sales staff.*

Spit-Fire Selector Guide

INLET SIZES/TYPES		OUTLET SIZE	CONTROLS		CERTIFICATION	MODEL
4" NPT	4" 150# ANSI Flange	3.5"	Dual Hand-wheel	Tiller (Big Stick®)	CE	
o	s	•	•		•	**8394-021**
o	s	•		•	•	**8394-121**
			1	*2*		*Illustration*

KEY s = standard o = option

Components & Options Chart

COMPONENTS & OPTIONS		ILLUSTRATION	MODEL
Companion Flange Kits	4" 150# ANSI steel flange with bolts and gaskets		**81317001**

Recommended Products

SM-2000HF – SELF-EDUCTING

Page 6-14

SM-2000B – SELECT-O-MATIC®

Page 6-7

CSW-LB– SELECT-O-FLOW®

Page 6-11

284-A – STREAM SHAPER

Page 1-27

181-3 – DELUGE TIP

Page 1-29

84 – BUTTERFLY WAFER VALVE

Page 5-75

296- HYDRANT BASE

Page 5-75

Product Highlights

All construction features designed to minimize maintenance needs for increased industrial reliability:

- ***Corrosion resistant brass construction (85-5-5-5 "Marine Brass" available)***
- ***Fully enclosed gearcase***
- ***Cast brass swivel joints***
- ***#316 stainless steel balls in all swivel joints***
- ***Grease zerks for easy lubrication***

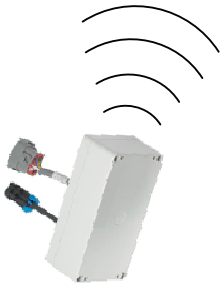
RF MONITOR CONTROLLER DEFINITIONS

UNDERSTANDING ELKHART BRASS WIRELESS ELECTRONIC TECHNOLOGY RF MONITOR CONTROL CONFIGURATION

Elkhart radio frequency (RF) Monitors utilize wireless electronic technology. Motor controls and relays are integrated with the radio frequency receiver box and mounted directly on the monitor (except for Sidewinder RF). The RF monitor requires only a 2-wire 12vdc connection. An auxiliary third wire is incorporated into most monitors for signaling — such as providing an output signal voltage when the monitor has been stowed.

W.E.T®

The Panel Mount Controller is an operator panel that is designed to be permanently mounted to the apparatus. The panel mount controller actually communicates wirelessly to the monitor – in this way all normally required wiring is eliminated. The panel requires only a 2 wire 12-24vdc connection.



W.E.T®

The **OEM Transmitter** allows the apparatus manufacturer to provide control switches of their own design. The output of these mechanical switches is connected to the OEM Transmitter and converted to a wireless signal that the monitor can read. Other than wiring to the OEM's switches, the panel requires only a 2 wire 12-24vdc connection.

Even if you intend to operate your monitor from the wireless handheld transmitter, NFPA recommends that a control station be permanently affixed to the apparatus. NFPA further suggests that, when there is more than one point of control (of any type), one of the fixed control stations must be designated as a "primary" – with the ability to override all others.

W.E.T®

The **Wireless Hand Held Controller** is just that, allowing the operator to control the monitor from up to 1/4 mile away.

Scorpion® RF

- Wireless electronic technology (W.E.T.®) eliminates the need to operate a monitor from atop an apparatus, as recommended by NFPA 1901
- No control wiring — requires only 2-wire power connection
- Self-contained relay box is permanently mounted on the monitor — eliminating the need to mount external boxes
- Wireless control allows operator to be removed from the apparatus and see the stream for positioning — from up to 1/4 mile away with hand-held transmitter
- Patent pending easy on-scene programming of oscillation for exposure protection or hazardous material suppression
- Unlimited number of monitors may be operated interference free
- Several ISM bands available for license free use around the world
- Efficient at high flows — 4" fully-vaned waterway

Liquid-filled pressure gauge

Fully-vaned waterway for low friction loss and optimum stream quality

Choice of corrosion resistant brass or lightweight Elk-O-Lite® construction

Receiver controls are integral to the monitor

2-wire installation (ground and power wires only)

Motors and control system components sealed to NEMA 4 rating

Fully-enclosed steel worm gears

2000 GPM

CE

SCORPION® RF

SPECIFICATIONS

Max. GPM (LPM)	2000 (7570)		
Inlet	Size	Type	
	4"	150# ANSI Flange	NPT (F)
Outlet Size	3.5" NHT		
Control	Wireless (W.E.T.®)		
Materials/Finish	Brass or Elk-O-Lite® with red urethane enamel		
Friction Loss	39 psi at 2000 gpm		
	15 psi at 1250 gpm		
Travel	V -45° to +90° (135°)		
	V -45° to +170° (215°)		
	H 180° or 347°		
Weight	Variable (see chart for specifics)		
Max. Power Requirement	4.0 Amps at 12V DC (24V opt)		
Ratings and Certifications	CE		

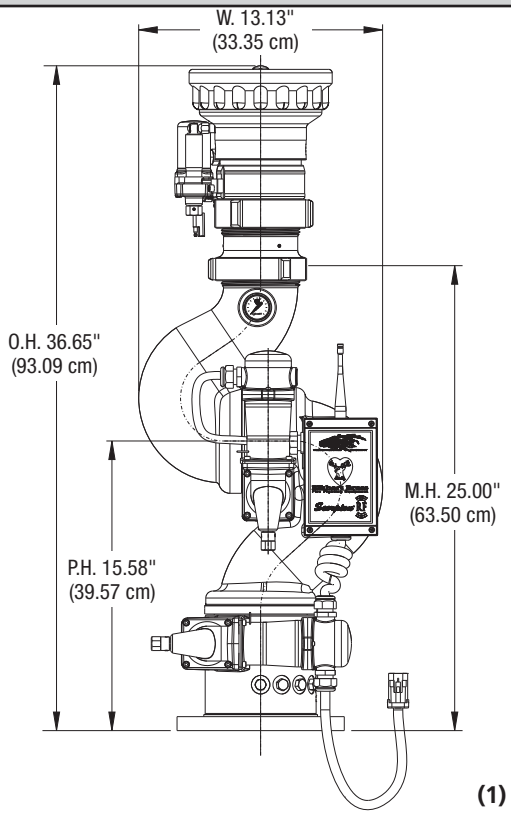
KEY CONFIGURATIONS (ACCESSORIES)

PANEL MOUNT CONTROL (2)

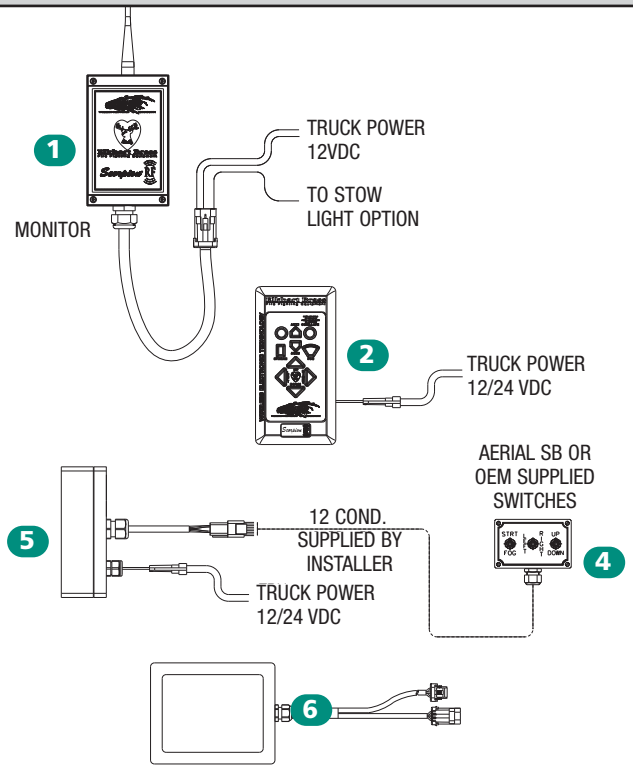
HAND HELD TRANSMITTER (3)

AERIAL SWITCH BOX (4)

DIMENSIONS & LAYOUT



CONTROL COMPONENTS CONFIGURATION



ADDITIONAL INFORMATION

- *Marine Brass (85-5-5-5) construction is available. Please inquire with our sales staff.*
- *Technical Data on monitor performance may be found on page T-10.*

Scorpion® RF Selector Guide

INLET SIZES/ TYPES		OUTLET SIZE	VERTICAL TRAVEL		HORIZONTAL TRAVEL		AVAILABLE RF FREQUENCIES			VOLTAGE	PRIMARY CONTROLLER		MATERIAL		CERTIFI-CATION		
4" NPT	4" 150# ANSI Flange	3.5" NHT	135°	215°	180°	347°	868 MHz	915 MHz	920 MHz	12V DC	Panel Mount	OEM Transmitter	Brass	Elk-O-Lite®	CE	Weight (Lbs.)	MODEL
o	s	•	•			•	o	s	o	•	s	o		•	•	43	**8294-06**
o	s	•		•	•		o	s	o	•	s	o		•	•	43	**8294-06EXT**
o	s	•	•			•	o	s	o	•	s	o	•		•	126	**8394-07**
											2	*5*	*1*	*1*			*Illustration*

KEY s = standard o = option

Components & Options Chart

COMPONENTS & OPTIONS		ILLUSTRATION	MODEL
Controllers System requires either a panel mount or OEM transmitter. Up to 15 additional controllers of any type may be added.	Panel Mount – Operator control (accepts 12-24V DC) typically utilized as an apparatus mounted primary controller as required by NFPA. Additional panel mount controllers may be added to any system for secondary control.	2	
	OEM Transmitter – Operator control interface (accepts 12-24V DC) to OEM supplied switches or aerial switch box (below). May be assigned as the NFPA required primary controller or as a secondary controller.	5	
	Hand Held Remote – Wireless remote control. May not be used as a primary controller. Requires 2 AA batteries.	3	
Aerial Switchbox	Surface-mount toggle switch box – operation requires OEM transmitter.	4	
24V Power Module	24V to 12V – required for monitor only		
Auxiliary Battery Pack	Back up to truck power (12V)	6	
Companion Flange Kits	4" 150# ANSI steel flange with bolts and gaskets		**81317001**

Recommended Products

SM-1250E – X-STREAM®	SM-2000BE – X-STREAM®	284A/B – STREAM SHAPER	181-3 – DELUGE TIP	ST-195 – STACKED TIP	84 – BUTTERFLY WAFER VALVE
					
Page 6-7	*Page 6-7*	*Page 1-27*	*Page 1-29*	*Page 1-29*	*Page 5-75*

SAFETY FEATURES

- **W.E.T.® monitors from Elkhart Brass promote firefighter safety and increase fireground effectiveness.**
- **NFPA 1901 recommends the use of remotely operated monitors "without the need for a person to climb to the top of the apparatus."**
- **Fireground personnel can tend monitor without being located at the apparatus.**

Product Highlights

- ***A version of the Scorpion® RF with 215° vertical travel is now available for aerial ladders with either standard or pinned waterways. Vertical travel to 215° allows extreme versatility in stream position regardless of ladder elevation – even when the ladder is positioned below the horizontal. Advanced electronics also limit vertical travel when the waterway is retracted from the ladder tip (pinned waterway).***
- ***The Scorpion® RF is designed to be installed with a minimum of necessary wiring. A simple 2-wire connection – ground and power wires only – dramatically reduces installation costs.***

Scorpion®

- Lightweight Elk-O-Lite® construction makes this monitor perfect for aerial applications
- Efficient at high flows – 4" fully vaned waterway
- Choice of manual controls
  - Dual hand-wheel style delivers:
    - Full 360° horizontal rotation while allowing the lower hand-wheel to remain stationary
    - 10 vertical and 39 horizontal adjustable stop positions
  - Tiller, in the "Big Stick®" style, allows vertical and horizontal travel to be conveniently controlled with one handle
- Low maintenance
  - Fully enclosed gearcase
  - Steel worm gears
  - Stainless steel balls in all swivel joints with grease fittings
- Liquid-filled pressure gauge

2000 GPM

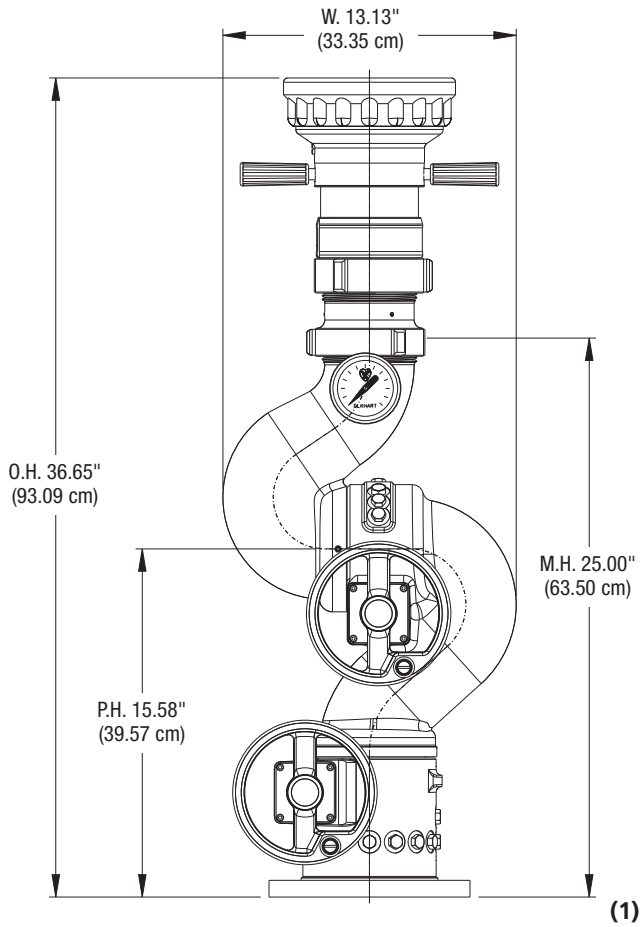
CE

SPECIFICATIONS		
Max. GPM (LPM)	2000 (7570)	
Inlet	Size	Type
	4"	150# ANSI Flange
Outlet	3.5" NHT	
Controls	Dual hand-wheel	
	"Big Stick®"	
Material/Finish	Elk-O-Lite® with red urethane enamel	
Friction Loss	39 psi at 2000 gpm	
	15 psi at 1250 gpm	
Travel	V -45° to +90° (135°)	
	H 360°	
Weight	38 Lbs.	
Ratings and Certifications	CE	

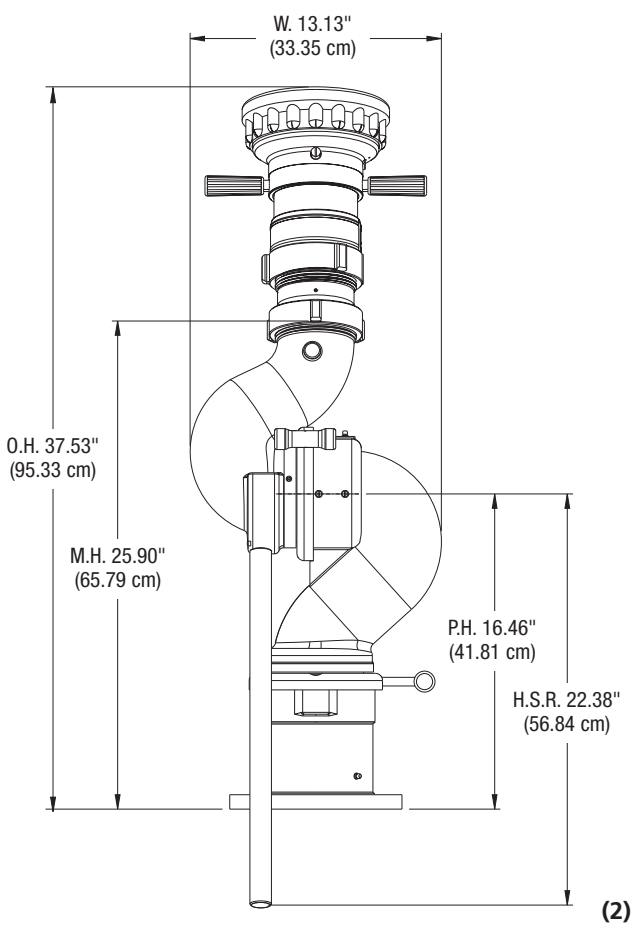
KEY CONFIGURATIONS (ACCESSORIES)

(TILLER)
"BIG STICK®" (2)
STYLE

DIMENSIONS & LAYOUT



(1)



(2)

ADDITIONAL INFORMATION

Technical Data on monitor performance may be found on page T-10.

SCORPION®

Scorpion® Selector Guide

INLET SIZE/ TYPE	OUTLET SIZE	CONTROLS		CERTIFICATION	MODEL
4" 150# ANSI Flange	3.5" NHT	Dual Hand-wheel	Big Stick® (Tiller)	CE	
s	•	•		•	8294-021
s	•		•	•	8294-131
		1	*2*		*Illustration*

KEY s = standard o = option

Components & Options Chart

COMPONENTS & OPTIONS		ILLUSTRATION	MODEL
Companion Flange Kits	4" 150# ANSI steel flange with bolts and gaskets		81317001

Recommended Products

SM-2000HF – SELF-EDUCTING	SM-1250 – X-STREAM®	CSW-L – SELECT-O-FLOW®	284-A – STREAM SHAPER	181-3A – DELUGE TIP	84 – BUTTERFLY WAFER VALVE
					
Page 6-14	*Page 6-7*	*Page 6-11*	*Page 1-27*	*Page 1-29*	*Page 5-75*

Scorpion® Electric

- Allows for more effective use of personnel while reducing the potential risk of injury
- Efficient at high flows — 4" fully -vaned waterway
- Extremely reliable system with built-in safety features:
  - Motors and control system components sealed to NEMA 4 rating
  - 10 vertical and 39 horizontal adjustable stop positions in the aluminum construction, while brass construction features 10 vertical and 7 horizontal adjustable stop positions
  - Electronic controls with manual override
- Easy installation — monitor comes with:
  - NEMA 4 rated connectors
  - NEMA 4 rated controller
- One-button automatic stow with choice of stow position (up or down) and output signal type (pulse or continuous)
- Liquid-filled pressure gauge

Fully-vaned waterway for low friction loss and optimum stream quality

Choice of corrosion resistant Brass or lightweight Elk-O-Lite® construction

2000 GPM

CE

MONITORS

SCORPION® ELECTRIC

SPECIFICATIONS		
Max. GPM (LPM)	2000 (7570)	
Inlet	Size	Type
	4"	150# ANSI Flange
Outlet	3.5" NHT	
Controls	Electric	
Material/Finish	Brass or Elk-O-Lite® with red urethane enamel	
Friction Loss	39 psi at 2000 gpm	
	15 psi at 1250 gpm	
Travel	V -45° to +90° (135°)	
	H 347°	
Weight	Variable (see chart for specifics)	
Ratings and Certifications	CE	

KEY CONFIGURATIONS (ACCESSORIES)

AERIAL CONTROL BOX (2)

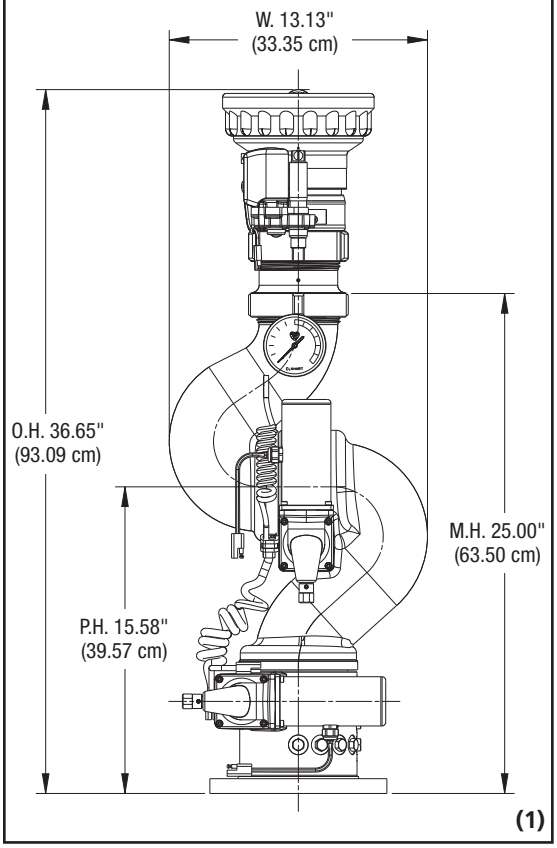
JOYSTICK CONTROL BOX (4)

PANEL MOUNT CONTROL (3)

HAND HELD CONTROL (6)

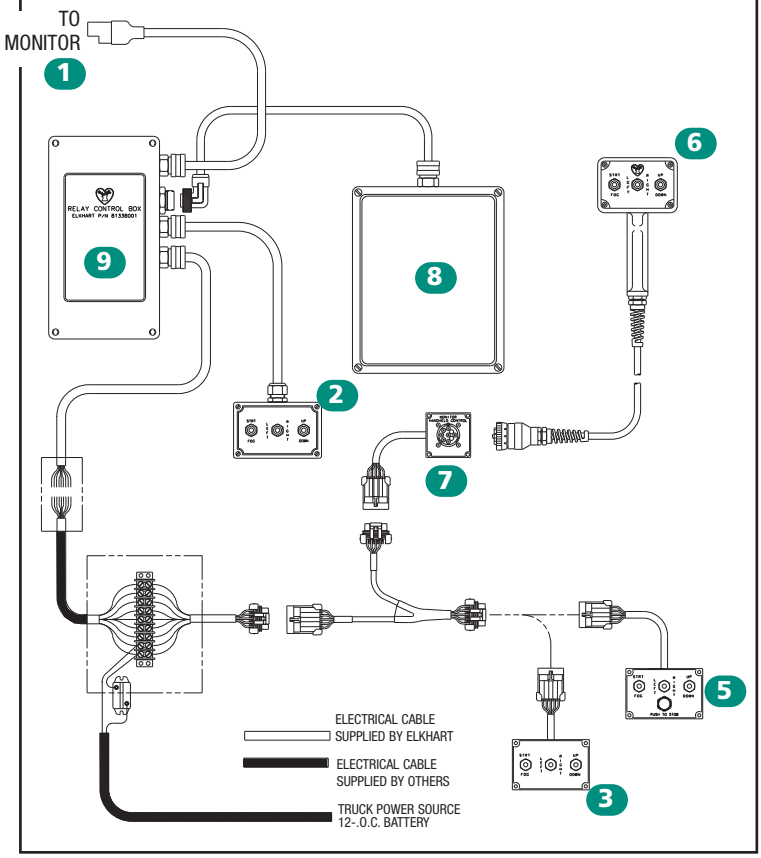
HAND HELD RECEPTACLE (7)

DIMENSIONS & LAYOUT



(1)

CONTROL COMPONENTS CONFIGURATION



ADDITIONAL INFORMATION

- *Marine Brass (85-5-5-5) construction is available. Please inquire with our sales staff.*
- *Technical Data on monitor performance may be found on page T-10.*

Scorpion® Electric Selector Guide

INLET SIZE/ TYPE	OUTLET SIZE	CONTROL MODULE VOLTAGE	MATERIALS		CERTIFICATION	WEIGHT (Lbs.)	MODEL
4" 150# ANSI Flange	3.5" NHT	12V DC	Brass	Elk-O-Lite®	CE		
s	•	•		•	•	43	**8294-04**
s	•	•	•			126	**8394-04**
			1	*1*			*Illustration*

KEY s = standard o = option

Components & Options Chart

COMPONENTS & OPTIONS		ILLUSTRATION	MODEL
Operator Controls	Panel Mount Controller	3	**81339001**
	Panel Mount Controller with Stow – adds stow button	5	**81421001**
	Aerial Switch Box Controller	2	**81340001**
	Joy Stick Controller – operator control	4	
	Hand-held remote control (includes receptacle)	6	**81309001**
Relay Control Box	Allows the monitor to interact with the operator control	9	**81480001**
Optional Control	Hand held control receptacle	7	
24V Converter	24V to 12V		**81093001**
Auxiliary Battery Pack	Back-up to truck power (12V)	8	**81466001**
Companion Flange Kit	4" 150# ANSI steel flange with bolts and gaskets		**81317001**

Recommended Products

SM-2000E – X-STREAM®	SM-2000BE – X-STREAM®	ST-195 – STACKED TIP	181-3 – DELUGE TIP	284A/B – STREAM SHAPER	84 – BUTTERFLY WAFER VALVE
					
Page 6-7	*Page 6-7*	*Page 1-29*	*Page 1-29*	*Page 1-27*	*Page 5-75*

Product Highlights

The Scorpion® Electric provides two user selectable settings – stow position and stow signal output.

- ***The programmable options for the stow position are: 1) discharge up and 2) discharge down.***
- ***The programmable options for stow signal output are: 1) no output until sequence is complete (for use as aerial interlock) and 2) flashing on/off signal during travel with steady signal when complete (for in-cab notification).***

Giant Python®

- 2500 gpm flow capacity — 3.5" waterway with seamless tube construction
- Double hand-wheel control for ease of operation and positive lock in any position
- All construction features designed to minimize maintenance needs
  - #304 stainless steel construction
  - Cast stainless swivel joints
  - Stainless steel balls in all swivel joints
  - Hand-wheel driven worm gears
- Liquid-filled pressure gauge

Red urethane finish

3.5" flow-efficient waterway

Hand-wheel rotates with monitor for continuous 360° horizontal travel

2500 GPM

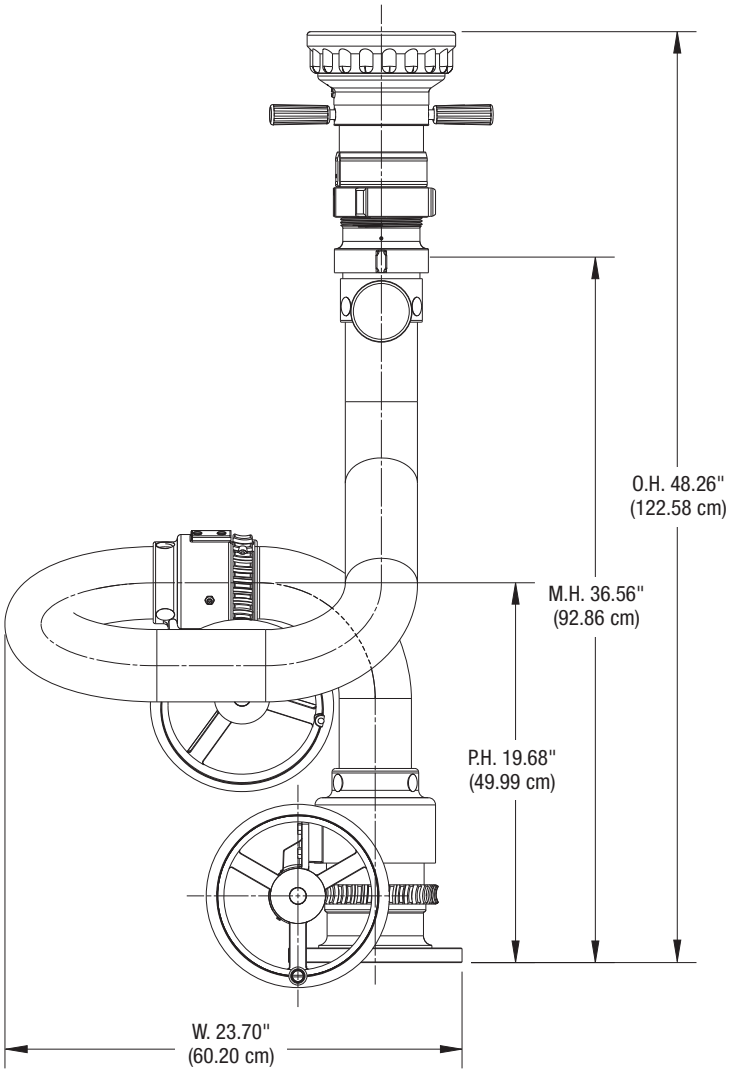
FM

CE

ELKHART BRASS MFG. CO., INC. • 800.346.0250 • 1.574.295.8330 • FAX: 574.293.9914 • www.elkhartbrass.com

SPECIFICATIONS				
Max. GPM (LPM)	2500 (9463)			
Inlets	**Sizes**	**Types**		
	6"	150# ANSI Flange	300# ANSI Flange	
	4"	150# ANSI Flange	300# ANSI Flange	NPT (F)
	3"	150# ANSI Flange	300# ANSI Flange	NPT (F)
Outlet Size	3.5" NHT			
Controls	Dual hand-wheel			
Material/Finish	Stainless steel with red urethane enamel and brass trim			
Friction Loss	18 psi at 2500 gpm			
	6 psi at 1250 gpm			
Travel	V -60° to +90° (150°)			
	H 360° (continuous)			
Weight	126.00 Lbs.			
Ratings and Certifications	FM Approved, CE			

DIMENSIONS & LAYOUT



(1)

ADDITIONAL INFORMATION

- *All flanges specified with the monitor are flat faced. Raised face flanges are available with some inlet sizes. Please inquire with our sales staff.*
- *Technical Data on monitor performance may be found on page T-10.*

GIANT PYTHON®

Giant Python® Selector Guide

INLET SIZES / TYPES								OUTLET SIZE	CERTIFICATIONS		MODEL
NPT		150# ANSI Flange			300# ANSI Flange			3.5"	CE	FM Approved	
3"	4"	3"	4"	6"	3"	4"	6"				
o	o	o	s	o	o	o	o	•	•	•	299-20
			1								*Illustration*

KEY s = standard o = option

Components & Options Chart

COMPONENTS & OPTIONS		ILLUSTRATION	MODEL
Companion Flange Kits	3" 150# ANSI steel flange with bolts and gaskets		**81315001**
	4" 150# ANSI steel flange with bolts and gaskets		**81317001**

Recommended Products

CJK – MYSTERY®	SM-2000B – X-STREAM®	SM-2000HF – SELF-EDUCTING	181-3 – DELUGE TIP	284B – STREAM SHAPER	84 – BUTTERFLY WAFER VALVE
					
Page 6-12	*Page 6-7*	*Page 6-14*	*Page 1-29*	*Page 1-27*	*Page 5-75*

Traditional

- Elkhart's oldest line of monitors, trusted for decades
- Flexible installation options
  - Extensive base choices
  - Control options
    - Tiller control with continuous 360° rotation and positive twist-lock mechanism
    - Single hand-wheel control with continuous 360° rotation and positive twist-lock mechanism
    - Dual hand-wheel control with continuous 360° rotation
- Wide vertical travel range, including some models with a full 150° range
- All models are solidly constructed of rugged, corrosion-resistant cast brass with some models available in Elk-O-Lite®

Chrome-plated trim

Dual hand-wheel control features rotating base

Cast Brass construction (Elk-O-Lite® optional on some models)

1100 GPM

360° rotation

FM

CE

TRADITIONAL

SPECIFICATIONS					
Max. GPM (LPM)	**1100 (4165)**		**(See table for specifics)**		
Inlets	**Sizes**	**Types**			
	6"	150# ANSI Flange			
	4"	150# ANSI Flange	300# ANSI Flange	NPT (F)	
	3"	150# ANSI Flange	300# ANSI Flange	NPT (F)	
	2.5"	150# ANSI Flange	300# ANSI Flange	NPT (F)	
Outlet	2.5"				NHT
Controls	Tiller				
	Single hand-wheel				
	Dual hand-wheel				
Materials / Finish	Brass or Elk-O-Lite® with red urethane enamel and chrome-plated trim				
Friction Loss – 292-6/293-6	32 psi at 750 gpm				
	14 psi at 500 gpm				
Friction Loss – 294-11	11 psi at 750 gpm				
	21 psi at 1100 gpm				
Travel	Variable (see table for specifics)				
Weight	Variable (see table for specifics)				
Ratings and Certifications	FM Approved, CE				

KEY CONFIGURATIONS (ACCESSORIES)

292-6 **(1)**

294-11 **(2)**

ADDITIONAL INFORMATION

- *Marine Brass (85-5-5-5) construction is available on some models. Please inquire with our sales staff.*
- *All flanges specified with the monitor are flat faced. Raised face flanges are available with some inlet sizes. Please inquire with our sales staff.*
- *Other threads may be available. See index T-12 for optional threads.*
- *Hydrant mount options available on select models. Please see page 5-63 for details.*

Traditional Selector Guide

INLET SIZES (Inches)											OUT-LET	MAX GPM		CONTROLS			CERTIFI-CATIONS		MATERIALS		TRAVEL		DIMENSIONS			ILLUSTRATION	MODEL
NPT			150# ANSI Flange				300# ANSI Flange				NHT	1100 (4164)	750 (2839)	Dual Hand-wheel	Single Hand-wheel	Tiller Bar	CE	FM Approved	Brass	Elk-O-Lite®	Vertical	Horizontal	Height (In.)	Width (In.)	Weight (Lbs.)		
2.5	3	4	2.5	3	4	6	2.5	3	4	6	2.5"																
o	o	o	o	o	s	o	o	o	o		•		•			•	•	•	•		130°	360°	18.50	13.75	46	*1*	**292-6**
o	o	o	o	o	s	o	o	o	o		•		•		•		•	•	•		150°	360°	18.50	13.75	53		**293-6**
o	o	o	o	o	s	o	o	o	o		•		•		•		•			•	150°	360°	18.50	13.75	53		**293-6A**
	o	o	o	o	s	o	o	o	o	o	•	•		•			•	•	•		150°	360°	26.25	16.75	105	*2*	**294-11**

KEY s = standard o = option

Components & Options Chart

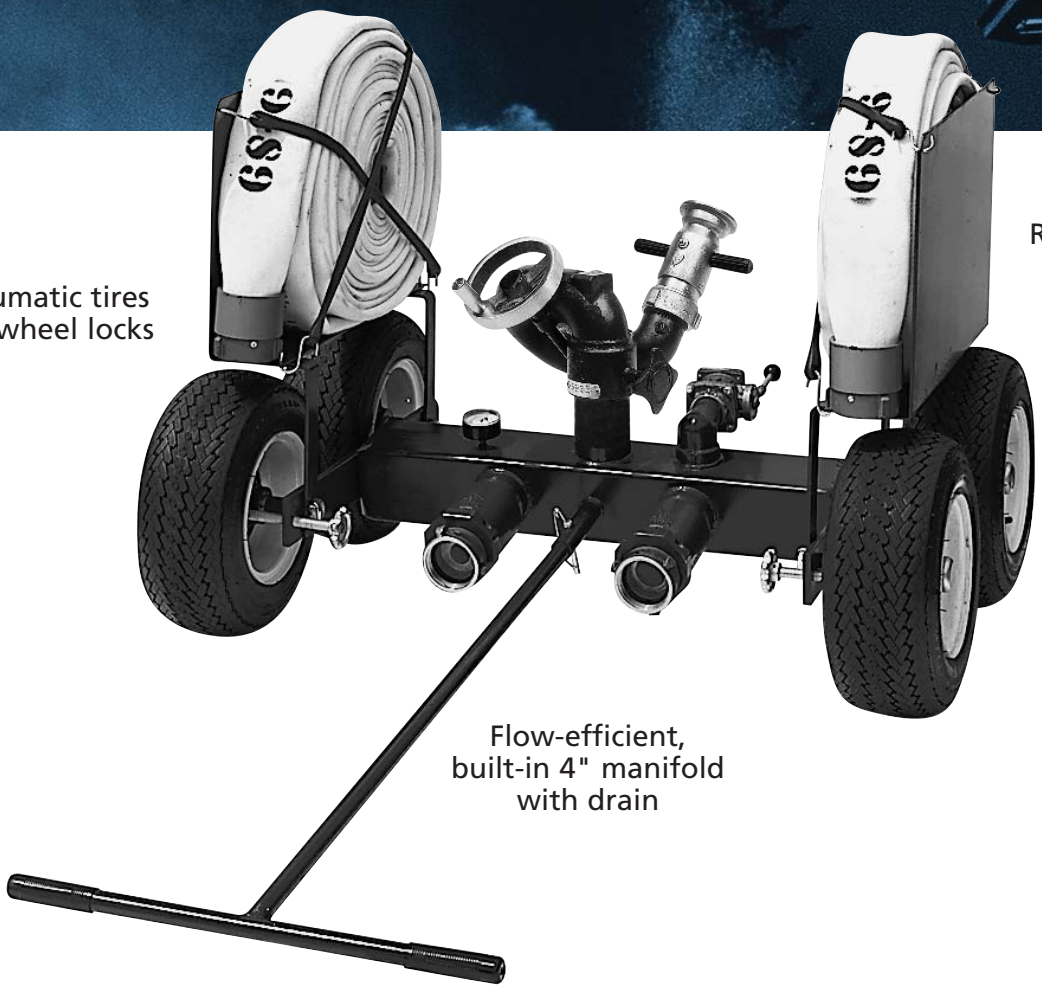
COMPONENTS & OPTIONS		ILLUSTRATION	MODEL
Companion Flange Kits	3" 150# ANSI steel flange with bolts and gasket		**81315001**
	4" 150# ANSI steel flange with bolts and gaskets		**81317001**
Drain Valve	Automatic ball drip drain valve		**702**

Recommended Products

HF-500 – HYDRO-FOAM	CJN-B – SELECT-O-STREAM®	J – MYSTERY®	181 – DELUGE TIP	282B – STREAM SHAPER	296 – HYDRANT BASE	84 – BUTTERFLY WAFER VALVE
						
Page 6-14	*Page 6-10*	*Page 6-12*	*Page 1-29*	*Page 1-27*	*Page 5-75*	*Page 5-75*

Portable Carts

- Portable wheeled carts come furnished with a flow-efficient, built-in 4" manifold
- Wheels feature pneumatic tires and wheel locks
- The monitors have stop positions at 45° on either side of center and 25° above horizontal
- Cart specific highlights include:
  - The two wheel cart attaches with a 1⅞" or 2" coupler ***(please specify)***; to the vehicle for extra stability during flow; two hose beds each capable of holding 100' of 2½" or 3" hose
  - The four wheel cart has a detachable "tee" handle, optional hose racks above the wheels — each capable of holding a 50' "donut roll" of 2½" hose, and an optional 1½" gated outlet
- Liquid-filled pressure gauge



1000 GPM

ELKHART BRASS MFG. CO., INC. • 800.346.0250 • 1.574.295.8330 • FAX: 574.293.9914 • www.elkhartbrass.com

SPECIFICATIONS			
Max. GPM (LPM)	1000 (3785) (See table for specifics)		
Inlet Sizes/Types	2 x 2.5" NHT (F)		
	Optional Additional Cart Inlets		
	1 x 5" Storz		
	1 x 4" Storz		
	2 x 2.5" NHT (F) (Swivel)		
Outlet Size	2.5" NHT		
Controls	Single hand-wheel		
	Tiller		
Material/Finish	Brass with red urethane enamel		
Friction Loss	GPM	Stingray® Carts (8393)	Python® Carts (299-11)
	1000	56 psi	35 psi
	750	34 psi	20 psi
	500	12 psi	9 psi
Travel	V Variable (see chart for specifics)		
	H L45° to R45° (90°)		
Weight	See selection chart for specifics		
Ratings and Certifications			

KEY CONFIGURATIONS (ACCESSORIES)

8393TW (1)

8393FW (2)

299-11FW (3)

ADDITIONAL INFORMATION

- *These monitor types are also available in monitor only and hydrant versions.*
- *Please see page 5-23 for Stingray® (8393 series) details or page 5-39 for Python® (299-11 series) versions.*
- *When flowing 1000 gpm, the cart must be attached to vehicle for safety.*

Portable Cart Selector Guide

Cart Type/ GPM (LPM)	Monitor	INLET OPTIONS				OUT-LET	CART FEATURES							VERTICAL TRAVEL		CONTROLS			DIMENSIONS (Inches)			Weight (Lbs.)	ILLUSTRATION	MODEL
		2 x 2.5" NHT*	2 x 2.5" NHT* +4" Storz	2 x 2.5" NHT* +5" Storz	4 x 2.5" NHT*	2.5" NHT	T Handle	1.875" Hitch	2" Hitch	1.5" NHT Manifold Outlet	Pressure Gauge	Hose Beds	Hose Racks**	+20° to 70° (50°)	+20° to 90° (70°)	Single Hand-wheel	Steering Wheel	Tiller Bar	Width	Depth	Height			
2-Wheel/ 1000 (3875)	Stingray® 8393	s	o	o	o	•		s	o	o	s	s		•		s			67.00	72.00	34.00	310.0	*1*	**8393TW**
	Python® 299-11	s	o	o	o	•		s	o	o	o	s			•		o	s	44.00	68.00	23.75	307.5		**299-11TW**
4-Wheel/ 750 (2839)	Stingray® 8393	s	o	o	o	•	s			o	s		o	•		s			67.00	72.00	34.00	230.0	*2*	**8393FW**
	Python® 299-11	s	o	o	o	•	s			o	o		o		•		o	s	44.00	68.00	23.75	227.5	*3*	**299-11FW**
												1	*2*											*Illustration*

KEY s = standard o = option
* Clappered female swivel inlets.
** This feature will change the height of the end product.

Recommended Products

SM-1000HF – SELF-EDUCTING	CSW-C-HF – SELF-EDUCTING	IMS-500 – SELECT-O-STREAM®	J – MYSTERY®	181 – DELUGE TIP	282B – STREAM SHAPER
					
Page 6-14	*Page 6-14*	*Page 6-10*	*Page 6-12*	*Page 1-29*	*Page 1-27*

Hydrant Mount

- Several available size and flow options
- All construction features designed to minimize maintenance needs
  - Corrosion resistant brass construction
  - Bronze balls in all swivel joints
  - Grease zerks for easy lubrication
- Two choices in manual controls — tiller or hand-wheel

ELKHART BRASS MFG. CO., INC. • 800.346.0250 • 1.574.295.8330 • FAX: 574.293.9914 • www.elkhartbrass.com

SPECIFICATIONS			
	8393H	299-11H	292-6H/293-6H
Max. GPM (LPM)	1250 (4732)	750 (2839)	750 (2839)
Inlets	2.5" NHT (F)	2.5" NHT (F)	2.5" NHT (F)
Outlet Size	2.5" NHT	2.5" NHT	2.5" NHT
Controls	Single hand-wheel		Single hand-wheel
		Tiller	Tiller
Material/Finish	Brass with red urethane enamel	Brass with red urethane enamel	Brass with red urethane enamel
Friction Loss	27 psi at 1250 gpm	11 psi at 750 gpm	32 psi at 750 gpm
	17 psi at 1000 gpm		14 psi at 500 gpm
	9 psi at 750 gpm		
Travel	V -60° to +70° (130°)	V -60° to +70° (130°)	Varies, see chart for specifics
	H 360° (continuous)	H 360° (continuous)	
Weight Varies	85 lbs.	61 lbs	(See chart for specifics)
Ratings and Certifications	CE and FM Approved	CE and FM Approved	CE and FM Approved

KEY CONFIGURATIONS (ACCESSORIES)

STINGRAY® (2)

PYTHON (3)

PRESSURE GAUGE (4)

Hydrant Mount Selector Guide

INLET	OUTLET	MAX. GPM (LPM)		VERTICAL TRAVEL		CONTROLS		CONNECTION TYPE			CERTIFICATIONS		DIMENSIONS			ILLUSTRATION	MODEL
NHT 2.5"	NHT 2.5"	1250 (4732)	750 (2839)	-60 TO +70° (130)	-60 TO +90° (150)	Hand wheel	Tiller Bar	Nipple	Swivel	Pressure Gauge	CE	FM Approved	Width (In.)	Height (In.)	Weight (Lb.)		
s	•	•		s		•			•	o	•	•	14.75	37.5	85.0	2	**8393H**
s	•		•	s			•	•		o	•	•	17.75	25.5	61	3	**299-11H**
s	•		•	s			•		•		•	•	18.5	13.75	64		**292-6H**
s	•		•		s	•			•		•	•	18.5	13.75	85		**293-6H**
										3							*Illustration*

Recommended Products

HF-500 – HYDRO-FOAM	CJN-B – SELECT-O-STREAM®	J – MYSTERY®	181 – DELUGE TIP	282B – STREAM SHAPER
				
Page 6-14	*Page 6-10*	*Page 6-12*	*Page 1-29*	*Page 1-27*

ADDITIONAL INFORMATION

- *For 8593H, the hydrant connection fits up to a 10.875" hydrant barrel and includes U-bolts, with nuts, in 10" and 8" sizes*
- *On all other hydrant mount monitors, the hydrant swivel connection attached to 2.5" hydrant nipple (includes elbow assembly and support rods)*

Manual Elevated

- Free standing or riser mounted
- Designed to have the horizontal and vertical movement controlled at ground level
- Control options:
  - Lever/tiller
  - Chainwheel
  - Gear Driven

Available free standing up to 40'

1000 GPM

ELKHART BRASS MFG. CO., INC. • 800.346.0250 • 1.574.295.8330 • FAX: 574.293.9914 • www.elkhartbrass.com

SPECIFICATIONS								
	294-11CW			299-11EL*			8394-02RC	
Max. GPM (LPM)	1000			750			1000	
Inlets	Size / Type			Sizes / Types			Size / Type	
				6"	150# ANSI Flange			
	4"	150# ANSI Flange	NPT (F)	4"	150# ANSI Flange		4"	150# ANSI Flange
Outlet	2.5" NHT			2.5" NHT			3.5" NHT	
Controls	Dual chainwheel			Tiller with locks			Dual hand-wheel	
Material/Finish	Brass with red urethane enamel			Brass and steel with red urethane enamel			Brass with red urethane enamel	
Friction Loss (excludes head loss)	17 psi at 1000 gpm			13 psi at 750 gpm			10 psi at 1000 gpm	
	11 psi at 750 gpm			8 psi at 500 gpm			6 psi at 750 gpm	
Travel	V -60° to +90° (150°)			V -37° to +45° (78°)			V -45° to +90° (135°)	
	H 360° (continuous)			H 360° (continuous)			H 360° (continuous)	
Elevation Height	Per client Installation			Min. 10'			Min. 0'	
				Max. 40'			Max. 34'	
Weight	139 Lbs.			300 Lbs.			140 Lbs.	
Ratings and Certifications								

*All data supplied for 299-11EL assumes 10' riser pipe. Other lengths will change the data.

294-11CW

(2)

- For mounting on customer supplied riser
- 360° continuous rotation
- Non-sparking, aluminum chainwheels and rollers
- Swivel joints furnished with grease zerks
- Chrome-plated worm gears
- Standard style aluminum chain not included

MANUAL ELEVATED

299-11EL

(1)

- Completely free standing
- Tiller handle operation for quick, easy stream directing
- Tubular steel horizontal drive sleeve for continuous 360° rotation
- Horizontal and vertical travel locks
- Available in standard heights from 10' to 40'

ADDITIONAL INFORMATION

- *Marine Brass (85-5-5-5) construction is available on some models. Please inquire with our sales staff.*
- *Other bases may be available on some models. Please inquire with our sales staff.*
- *Technical Data on monitor performance may be found on page T-10.*
- *Nozzle Reaction Force x Height (in feet) of monitor = torque (Foot Pounds) at base of monitor.*

8394-02RC

(3)

- Base and upper that can be fabricated to any height (up to 34') with customer supplied intermediate pipe
- Lower base unit features chrome-plated brass worm gear and drive shaft
- Upper monitor unit features hardened steel worm gear, fully enclosed gear housing and stainless steel worm shaft
- Free standing to
  - 10' at 1000 gpm
  - 15' at 750 gpm
  - 20' at 500 gpm
- Up to 34' and/or higher flow requires use of support bearing
- 9" chrome hand-wheels
- Grease zerks furnished at swivel joints for easy lubrication
- Intermediate pipe attaches to upper monitor and base sections via NPT threads
- Intermediate pipe (4" schedule 40) and vertical drive rod (5/8") not included

Elevated Monitor Selector Guide

INLET SIZES			OUTLET SIZES		CONTROLS					ELEVATION HEIGHT				
NPT	150# ANSI*		NHT		Dual Hand-wheel	Dual Chainwheel	Tiller Handle	Galvanized Waterway	Riser Supplies	Min.	Max.	Max Flow Limit @ Max Height	ILLUSTRATION	MODEL
4"	4"	6"	2.5"	3.5"								GPM		
	s	o	•				•	o	o	10'	40'	750	*1*	**299-11EL***
o	s		•			•				*	*	750	*2*	**294-11CW**
	s			•	•					0'	34'	500	*3*	**8394-02RC**

KEY s = standard o = option
Specify length when ordering.
* Per client installation

Components & Options Chart

COMPONENTS & OPTIONS			ILLUSTRATION	MODEL
Support Bearing	8394-02RC	For monitor support when overall height exceeds monitor limits (for use with 500 GPM flowed at 20'; 750 GPM flowed at 15'; or 1000 GPM flowed at 10')	4	**295**
Companion Flange		4" 150# ANSI Steel flange with bolts and gaskets		**81317001**
External Supply Items				
Riser Pipe	8394-02RC	4" intermediate riser pipe		
Drive Rod	8394-02RC	0.625" brass or stainless steel drive rod for linking the vertical drive unit to the monitor		
Operating Chain	294-11CW	0.25" non-magnetic aluminum chain for chainwheel (suggest McMaster-Carr part #3620T21)		

Recommended Products

CJ-B-RC – SELECT-O-STREAM®	283B – STREAM SHAPER	181 – DELUGE TIP
		
Page 6-10	*Page 1-27*	*Page 1-29*

OPTIONS

295 SUPPORT BEARING

(4)

- Designed so that 4" waterway and vertical control rod can rotate inside of bearing. 3" NPT female for attaching to adjacent support
- Finish: red urethane enamel
- Weight: 31.5 lbs.

COMPANION FLANGE

- 150# ANSI cast steel flanges, supplied with bolts and gasket. Specify:
- 3" (P/N 81315001)
- 4" (P/N 81317001)

Industrial Systems

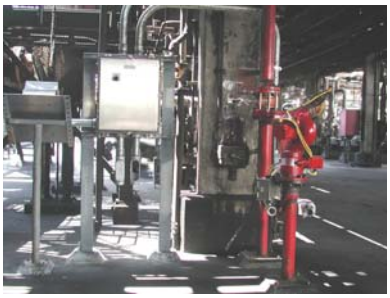
Like sentries, Elkhart's industrial systems are designed to stand guard over industrial complexes, refineries, chemical plants, loading docks, tanker berthings, railroad yards, offshore platforms, etc.

A complete Elkhart Brass industrial fire suppression system is composed of hardware (monitor, nozzle, valve, etc.), electrical capabilities (control system, wiring, etc.), programming and integration of the equipment within the facility. Utilizing over 20 years of experience in remote control systems, Elkhart Brass customizes all aspects of our approach to deliver a system suited to your needs. Having Elkhart Brass handle all aspects of your industrial system means your project goes in on schedule, on budget and performs as expected.

- **Design**
- **Manufacturing**
- **Commissioning**
- **After-sales Support**

- **Programming**
- **Certification**
- **Testing**

GENERAL SPECIFICATION INFORMATION	
Available Flow (per monitor)	300-2000 GPM (1325- 7571 LPM)
Number of Monitors in System	1 to unlimited
Types of Environmental Conditions System Addresses	Class 1, Division 1 or Division 2
	Marine (Saltwater)
	Caustic Gas Environments
Material Options	Brass – ASTM B-62/ 85-5-5-5 (Marine spec) or ASTM 584/81-3-7-9 (standard)
	Aluminum – (cast alloy #356-A)
	Stainless steel
Types of Operator Controls	Toggle Switch (Electrical)
	Joystick (Electrical)
	Touch screen/digital panel (M-Link™)
	Plant Interface
Actuation Options	Electric
	Hydraulic
Communication Options	Electric (discrete cable)
	Electronic (digital network)
	Wireless (digital network)
Voltage Options	Support for all AC/DC voltages
Communication Protocols	Device Net
	Canbus
	Profibus
	Modbus
	IP/TPC
Common Elective Features	System status and warning notification
	Panic button discharge and oscillation
	Integrated valve
	Automatic power back-up
	Plant supervisory control integration
	Redundant control
Ratings and Certifications	CE (including ATEX), FM Approved, U.L. Listed



ADDITIONAL INFORMATION

The above noted options are only a sample of the available options. *As the system will be customized to meet your needs, a wider selection of each option shown is available.*

The products designated below are common elements of a complete industrial system. Elkhart Brass has a broad range of components to meet your system needs. Your entire system will be configured, tailored, and programmed to suit your individual requirements. Complete documentation, certification, and installation conformity information is provided with all systems.

HARDWARE

Elkhart Brass' ability to manufacture components on-site allows us to control the manufacturing process. This gives Elkhart Brass accountability for the design as well as total quality control assurance for error-free hardware.

ELECTRIC MONITORS

- Designed for use in Class 1, Div 2 applications
- Electronic drive allows exceptional integration with modern electronic controls
- Low maintenance

HYDRAULIC MONITORS

- Meets Class 1, Div 1 needs
- Modular, self-contained pump units with corrosion resistant actuators

VALVES

- Heavy-duty actuators
- Butterfly, ball, deluge

NOZZLES

- Complete range of nozzles designed for industrial and hazardous applications
- Nozzles are detailed on pages 6-1 and 6-2

CONTROLS

Modern control systems are designed to increase the efficiency of response, while minimizing overall project expense. The control system itself is individually designed to meet client needs.

OPERATOR CONTROLS

- Flexible control options which can be specified for your application
- Suitable for hazardous classified environments
- Continuous oscillation and/or event-response programming available

MOTOR CONTROLS

- Suitable for hazardous classified locations
- Modular designs can be scaled for your needs
- CE certified, including ATEX

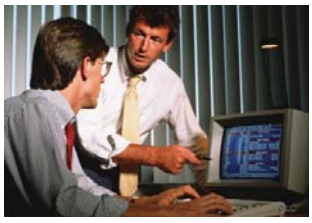
M-LINK™ – MASTER

- Combines a master control with a graphic user interface
- Convenient interface to plant SCADA
- Merges multiple data streams into one visual format
- Scalable and expandable as needs change

COMMUNICATION INTERFACE

- Reduces complexity and installation cost
- Allows two-way communication of status information
- Hardwire, discrete, network or wireless protocols

PROJECT SUPPORT



- Programming
- Installation
- Commissioning
- Testing / Certification
- Controls Integration
- After Sales Support

NECESSARY INFORMATION FOR AN INDUSTRIAL SYSTEM CONSULTATION:

- Relevant project information (see chart below)
- Functional requirements
- Timeline
- Scope
- Partners
- Budgeting
- All systems are “Price on Application” (POA)

REMOTE CONTROLLED MONITOR PLANNING AND INQUIRY FORM

	Label/identifier	Qty.	Flow	Water only	Water/foam	Elevated	Control style (see chart)	Valve (& size)	Location Classification		
									Monitor	Local Control	Valve
Ex.	*storage transfer*	*2*	*2000gpm*	*x*		*25'*	*1C*	*none*	*cl1 div 2*	*unclass*	*N/A*
A											
B											
C											
D											
E											
F											
G											
H											
I											

Foam system type (central, local, self-educting nozzle, foam type, etc):

Valve location (base of monitor, base of riser, central, etc):

Master control console environment (indoor, outdoor, hazardous, etc):

Approximate distance – master control to monitors:

Environmental

General air temperature range:

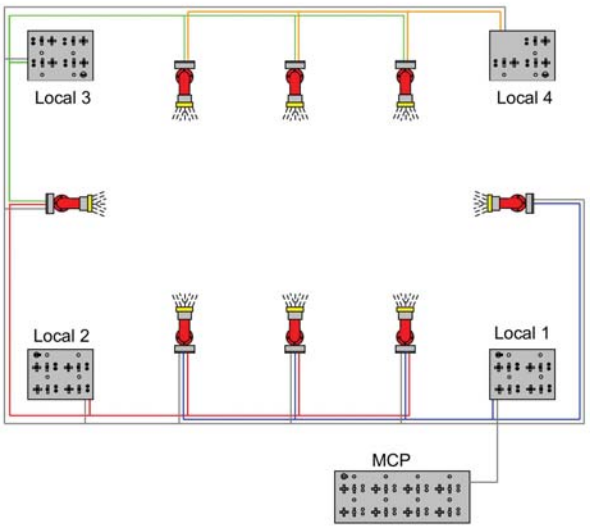
Water supply (fresh, seawater, etc):

Available power:

Other environmental concerns:

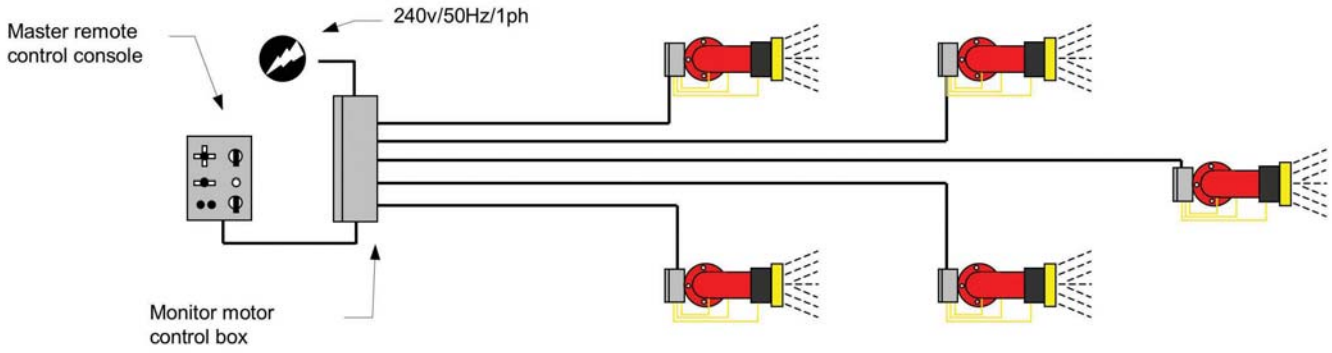
Below are two examples of custom-designed system/site lay-outs. Each system lay-out carefully assesses various factors — application function, site constraints, and risk for optimal design.

EXAMPLE 1



- Single network with redundant control locations
- Challenges: covers multiple areas and functions as a standby for firefighter use
- Ultra high risk location

EXAMPLE 2



- Hardwire with single control location
- Challenges: continuous use and power supply limitations
- No risk location

BENEFITS OF ELKHART BRASS

Leveraging Elkhart Brass' know-how in the industrial system arena gives you a hassle-free experience. Elkhart Brass brings all project aspects from design to manufacturing through programming and support "under one roof" — assuring your project will:

- Maintain project integrity through consistent management
- Achieve more focused cost control
- Realize on-time delivery and installation

Elkhart Brass utilizes proven modular components — including products certified by CE, U.L. listed, and/or FM approved — to build systems tailored to your specific requirements. The Elkhart Brass solution guarantees you receive:

- Maximum performance
- Maximum reliability
- Minimized costs

With Elkhart Brass systems, the instant the system is needed for fire protection or actual firefighting, the "hardware" (monitors, nozzles, valves, etc.) can be activated from a remote location where the operator can: turn on the water supply, direct monitors vertically or horizontally, and change the stream pattern of the nozzle — all from a safe distance. Some standard safety options include:

- An option that allows the monitor to oscillate automatically, freeing the operator to tend other duties
- An option for one or more pre-set automatic oscillation arcs for coverage of highest risk areas
- The option of a secondary control station at another remote location (several monitors can be operated from one control station)

BENEFITS OF ELECTRIC MONITORS

Electronic monitors offer more control options while maintaining a similar price point to hydraulic monitors. Additionally, with electronic monitors, the controls themselves are fully integrated into the system. Some of the highlights of an electric monitor system include:

- Less costly to install than hydraulic or water-powered monitors
- Less maintenance than hydraulic or water-powered monitors through the use of industrial hardened electronics
  - IP68 industrial, over-molded, quick-connect motor cables are fast, error-free, and rugged
- Less complicated interface to modern operator controls

BENEFITS OF NETWORK COMMUNICATIONS

Network communications are adaptable to changing needs while being cost-effective.

- Due to the cable type/size/conduit, cost savings in the installation phase
- Allows advanced two-way communications
- As needs change, the system easily accommodates expansion
- Easier to build-in safety redundancy and reliability through back-up communications

296 HYDRANT BASE

- Inlet: 6" 150# ANSI flange
- Outlet: 4" 150# ANSI flange
- Hydrant outlets: Four 2.5" male outlets with caps and chains (standard) or three 2.5" and one 4.5" male outlet with caps and chains (optional)
- Cast iron construction
- U.L. Listed (only four 2.5" outlet version)
- Finish: red urethane enamel
- Weight: 71 lbs.
- X-86 or B-94 valves may be ordered for any of the 2.5" outlets

702 AUTOMATIC BALL DRIP DRAIN VALVE

- Drains at a rate of 2/3 gpm for up to 20' head of water when pressure drops below 10 psi
- 0.75" male inlet and outlet
- Mounts horizontally
- Cast brass construction
- Length: 3"
- Weight: 0.778 lbs.

84 BUTTERFLY WAFER VALVE

- 84
  - – Cast iron body with #316 stainless steel upper and lower stems
  - – Pressure rated at 250 psi
  - – Seat/seal is EPDM
  - – Standard handle features 10 locking positions
  - – Optional handle is gear operated
  - – Size: 3" (11.3 lbs.) or 4" (14.3 lbs.) – (*specify*)
  - – Thickness: 2"
- 84 H
  - – Designed for use with 8393-H (page 5-63)
  - – Same general specifications as above
  - – Size 3"

ANCHOR KITS

- Portable monitor (P/N 81204001)
  - – Heavy duty spike
  - – 10' steel chain
  - – Mallet
  - – Self-contained portable bag.
- R.A.M.®/Stinger® RF (P/N 81460001)
  - – Heavy duty spike
  - – Mallet
  - – Self-contained portable bag

Extender for Vulcan® Series

For use with the Elkhart Vulcan® Series of monitors and a range of other compact monitors, the Extender is designed to provide better clearance for the monitor which allows for a wider coverage range and addresses firefighter safety concerns. It is compatible with monitor and nozzle flow ratings of 1250 gpm (max) with 100 psi nozzle pressure (max inlet pressure rating of 200 psi).

The Extender deploys in 10 seconds and extends a full 18 inches. The Extender is designed to flow in both the full up and full down positions.

Safety features of the Extender include:

- An in-cab warning light to alert the driver to incomplete retraction
- Pressure switch to limit the movement when internal pressure exceeds 10 psi
- Automatic drain system on the vertical piping to drain all water from the monitor and piping upon closing the water valve

The Extender is electrically actuated through a pump panel push-button control pad with actuator rated for a static load of up to 2500 pounds. The chassis electrical system provides power for the Extender.

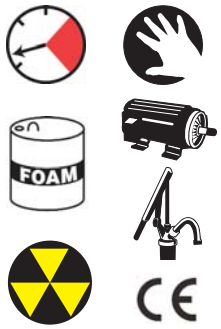
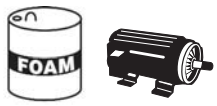
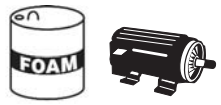
The Extender is compliant with applicable 2003 NFPA #1901 standards.

All mounting and wiring materials are included in the Extender package.

8598 Chart

INCLUDED COMPONENTS		MODEL
Controller	with position indicator	**81385001**
Harnesses	for primary/secondary controller	**36824000**
	for caution lamp	**36838000**
	to chassis (power)	**36792000**
Power Sensor Harness (select one)	5 ft *(specify)*	**36793300**
	10 ft *(specify)*	**36793500**
	20 ft *(specify)*	**36793600**
	30 ft *(specify)*	**36793700**
	40 ft *(specify)*	**36793800**

SELECTOR GUIDE

		AVAILABLE BASE	PRODUCT	DESCRIPTION	MATERIAL	"QUICK-KEY"
AUTOMATIC	X-STREAM®	1.5: ; 2.5: • ; 3.5: • ; Available GPM (LPM): 300-2000 (1136-7571)	 Page 6-6	• Simplifies fireground hydraulics • Maintains effective flow stream	Brass: • ; Composite: ; Elk-O-Lite®: •	
AUTOMATIC	SM-10FE	1.5: • ; 2.5: ; 3.5: ; Available GPM (LPM): 20-120 (76-454)	 Page 6-3	• Simplifies fireground hydraulics • Maintains effective flow stream • Motor enclosed and sealed	Brass: ; Composite: ; Elk-O-Lite®: •	
FIXED	5000E	1.5: • ; 2.5: ; 3.5: ; Available GPM (LPM): 15-475 (57-1798)	 Page 6-3	• Combination nozzle • Enclosed and sealed motor	Brass: ; Composite: ; Elk-O-Lite®: •	
FIXED/ SELECTABLE	R.A.N.™	1.5: ; 2.5: • ; 3.5: ; Available GPM (LPM): 250-500 (946-1893)	 Page 6-5	• Designed for use with R.A.M. • Integral stream shaper	Brass: ; Composite: ; Elk-O-Lite®: •	

KEY:


Electrical Operation


Manual Operation


Remote Control Operation


Hydraulic Operation


Hazardous Location

Self-Educting Foam

Foam Compatible

Underwriters Laboratories


Twist Shut-off Available


Low Pressure Available

Conformity European

Factory Mutual

		AVAILABLE BASE			PRODUCT	DESCRIPTION	MATERIAL			"QUICK-KEY"
		1.5	2.5	3.5			Brass	Composite	Elk-O-Lite®	
FIXED	SELECT-O-STREAM®		•		 *Page 6-9*	• Fully machined waterway for excellent stream quality • Large handles for easy stream pattern management	•		•	
		Available GPM (LPM)								
		350-1000 (1325-3785)								
FIXED	MYSTERY®	1.5	2.5	3.5	 *Page 6-12*	• Original Master Stream fog nozzle • Large handles for easy stream pattern management • Low maintenance	•			
			•	•						
		Available GPM (LPM)								
		350-2000 (1325-7571)								
AUTOMATIC/FIXED /SELECTABLE	SELF-EDUCTING	1.5	2.5	3.5	 *Page 6-13*	• Self-educting Class A and B foam • ½%, 1%, 3%, or 6% proportioning • Field-adjustable foam proportioning	•	•	•	
			•	•						
		Available GPM (LPM)								
		350-2000 (1325-7571)								
SELECTABLE	SELECT-O-FLOW®	1.5	2.5	3.5	 *Page 6-11*	• Large handles for easy stream pattern management • Firefighter chooses flow and stream	•		•	
			•							
		Available GPM (LPM)								
		300-1250 (1136-4732)								
SELECTABLE	6000	1.5	2.5	3.5		• Ultra wide flow range • Quick-turn locking flow selector ring		•		
			•							
		Available GPM (LPM)								
		15-700								

KEY:

Electrical Operation · *Manual Operation* · *Remote Control Operation* · *Hydraulic Operation* · *Hazardous Location* · *Self-Educting Foam* · *Foam Compatible* · *Underwriters Laboratories* · *Twist Shut-off Available* · *Low Pressure Available* · *Conformity European* · *Factory Mutual*

5000E & SM-10FE

- Created for the specific challenges, such as water flow limitations and protection needs, of wildland firefighting, dust abatement, de-icing, etc.
- Used in conjunction with smaller monitors such as the Sidewinder®
- Constant flow — straight stream, narrow fog (30°), or wide fog (90°) — with spinning teeth
- Either automatic or fixed flow nozzle type available
- Motor (12V or 24V DC available) totally enclosed and sealed
- Manual override standard
- Lightweight Elk-O-Lite® construction with hard anodized finish
- AFFF compatible

Base Size	AVAILABLE STANDARD FLOW RATES (Fixed) GPM (LPM)														STANDARD FLOW RANGE (Automatic) GPM (LPM)	TEETH		Effective Reach at Highest Flow (Ft.)	Weight (Lbs.)	MODEL	FIGURE
	15 (57)	30 (114)	45 (170)	60 (227)	75 (284)	95 (360)	125 (473)	150 (568)	175 (662)	200 (757)	250 (946)	350 (1325)	400 (1514)	475 (1798)	20 - 120 (76 - 454)	Spinning	None				
	PSI (BAR) 100 (6.89)																				
1.5"	•	•	•													•		85	3.1	5000-04	2
				•	•	•	•	•								•		124	3.1	5000-14	2
									•	•	•	•	•	•		•		150	3.1	5000-24	2
															•		•	115	4.9	SM-10FE*	1

* Suitable for de-icing / anti-icing use

5000E & SM10FE CONFIGURATIONS

Figure 1

Fig. 1

Figure 2

Fig. 2

Figures depict general product types only and are not intended to be inclusive of all product features.

OPTIONS

THREADS

All nozzles are NHT unless otherwise specified. See index T-12 for optional base threads.

R.A.N.™ – RAPID ATTACK NOZZLE

R.A.N.™

- A family of nozzles, each designed to operate in conjunction with the R.A.M.
  - Two designed for high flows with lower pressure, rated for 500 gpm at 75 psi
  - One designed to oscillate by harnessing the power of water
- Integral stream shaper reduces weight and bulk
- Several available flow types
  - Fixed (constant flow)
  - Selectable
- Quick-turn from straight stream, to narrow fog (30°), to wide fog (90°) on the entire nozzle family
- All are compatible with foam concentrate

NEW

Base Size	AVAILABLE STANDARD FLOW RATES GPM (LPM)	PRESSURE PSI (BAR)	FLOW TYPE Fixed	FLOW TYPE Selectable	Effective Reach (Feet) @ 500 GPM	Weight (Lbs.)	MODEL	FIGURE
2.5"	500 (1893)	75 (5.17)	•		180	3.2	**3896**	1
	500 (1893)	100 (6.89)	•		180	12.0	**3890**	2
	250/350/500 (946/1325/1893)	75 (5.17)		•	180	3.6	**3895**	1

6000 CONFIGURATIONS

Figure 1

Fig. 1

Figure 2

Fig. 2

OPTIONS

THREADS

All nozzles are NHT unless otherwise specified. See index T-12 for optional base threads.

INTEGRAL STREAM SHAPER

3890 FEATURES

The waterpowered 3890 has an adjustable sweet range plus a quick disengage mechanism for manual control.

The 3890 comes complete with retrofit bracket kit for installation on any new or existing R.A.M.

MASTER STREAM

NEW

6000

- Designed specifically for use with the all-new Sidewinder EXM
- Features electric actuators for precise pattern control from straight stream to wide fog
- Offers ultra-wide flow range with quick-turn, locking, flow selector ring
- Constructed of durable, light-weight Elk-O-Lite
- Compatible with foam concentrate

BASE Size	FLOW RATES GPM (LPM)	PRESSURE PSI (BAR)	Effective Reach (Feet) @ Highest Flow	Weight (Lbs.)	MODEL
2.5"	15/30/45/60/95/125/150/200/FLUSH (60/120/170/250/360/500/550/750/FLUSH)	100 (6.89)	124	4.7	6000-200E
	250/350/500/700/FLUSH (1000/1350/2000/2700/FLUSH)		190	5.8	6000-700E

OPTIONS

THREADS

All nozzles are NHT unless otherwise specified. See index T-12 for optional base threads.

X-Stream®

- Automatically adjusts to maintain effective stream and maximum reach at variable or reduced flows
- Calibrated at lower pressures — 75 and 80 psi — for better suitability to real world conditions
- Constant flow — straight stream, narrow fog (30°), or wide fog (90°) — with hydrodynamic vanes and hub for increased flow efficiency
- All X-Stream® nozzles — brass and aluminum, manual and electric — now feature patented, permanently lubricated seals
- Excellent with AFFF or Class A foam applications
- Models available for use in hazardous locations and for gas mitigation
- Gas mitigation nozzle features wider (120°) fog pattern and smooth face tip (no teeth) for optimized water flow characteristics
- Electric motors and connectors are completely sealed, with manual overrides while manual models have large handles for easy stream pattern management
- Corrosion-resistant brass nozzles, for industrial applications, have satin brass finish while Elk-O-Lite® nozzles have a hard anodized finish

* Not available on gas mitigation model

Base Size	FLOW RANGES GPM (LPM)	PRESSURE PSI (BAR)	PATTERN CONTROL						MATERIAL		Effective Reach (Ft.)	Weight (Lbs.)	MODEL	FIGURE
				ELECTRIC				HYDRAULIC						
				STANDARD UNCLASSIFIED		CLASS 1 DIV 2								
			Manual	12V DC	24V DC	Hazardous Location 120V AC	Gas Mitigation 120V AC	Class 1 Div 1	Brass	Elk-O-Lite®				
2.5"	300-1000 (1136-3785)	75 (5.17)	•							•	255	7.5	SM-1000	1
				•	•					•	255	9.2	SM-1000E	2
								•		•	255	8.3	SM-1000H	3
	300-1250 (1136-4732)	75 (5.17)	•							•	271	7.5	SM-1250	1
			•						•		271	20.6	SM-1250B	1
				•	•				•		271	22.5	SM-1250BE	2
				•	•					•	271	9.2	SM-1250E	2
								•		•	271	8.3	SM-1250H	3
								•	•		271	19.8	SM-1250HB	3
3.5"	300-1000 (1136-3785)	80 (5.51)	•							•	241	7.5	SM-1000	1
				•	•					•	241	9.2	SM-1000E	2
								•		•	241	8.3	SM-1000H	3
						•			•		241	27.6	SM-1000BE-HL	4
	300-1250 (1136-4732)	75 (5.17)	•							•	229	7.5	SM-1250	1
			•						•		229	20.6	SM-1250B	1
				•	•				•		229	22.5	SM-1250BE	2
						•			•		229	27.6	SM-1250BE-HL	4
				•	•					•	229	9.2	SM-1250E	2
								•		•	229	8.3	SM-1250H	3
								•	•		229	19.8	SM-1250HB	3
	500-1500 (1893-5678)			•						•	240	10.5	SM-1500E	2
	500-2000 (1893-7571)	80 (5.51)	•							•	300	9.2	SM-2000	1
			•						•		300	24.7	SM-2000B	1
				•	•				•		300	26.6	SM-2000BE	2
						•			•		300	32.0	SM-2000BE-HL	4
						•	•		•		300	32.0	SM-2000BE-HLGM	5
				•	•					•	300	10.5	SM-2000E	2
								•		•	300	10.0	SM-2000H	3
								•	•		300	24.8	SM-2000HB	3

X-STREAM® CONFIGURATIONS

Figure 1

MANUAL

Fig. 1

Figure 2

ELECTRIC

Fig. 2

Figure 3

HYDRAULIC

Fig. 3

Figure 4

HAZARDOUS LOCATION

Fig. 4

Figures depict general product types only and are not intended to be inclusive of all product features.

PRODUCT HIGHLIGHTS

- Gas Mitigation nozzles are designed for use in Class 1, Division 2 fire suppression and protection applications — the nozzles have a specially designed face and wide fog pattern to support the containment of gas vapors. Most commonly, the nozzles are used in areas with hydrofluoric acid vapors.
- The smooth face of the nozzle has been specifically designed to create an unbroken fog pattern.
- The fog pattern has been enhanced to a full 120° to allow for better coverage.

Figure 5

GAS MITIGATION

Fig. 5

OPTIONS

THREADS

All nozzles are NHT unless otherwise specified. See index T-12 for optional base threads.

Select-O-Stream®

- Constant flow nozzle — straight stream, narrow fog (30°), or wide fog (90°)
- Flow efficient with a fully machined waterway for excellent stream quality
- Elk-O-Lite® nozzles are hard anodized with chrome-plated trim
- Corrosion resistant brass nozzles have a satin brass finish
- Large handles allow for easy stream pattern management
- Grease zerk for easy lubrication of tip threads
- Heavy-duty protective rubber bumper
- AFFF compatible
- Available FM rated

FM

Base Size	AVAILABLE STANDARD FLOW RATES GPM (LPM)				PATTERN CONTROL		TEETH	MATERIAL		CERT.	EFFECTIVE REACH (Ft.)		Weight (Lbs.)	MODEL	FIGURE
	350 (1325)	500 (1893)	750 (2839)	1000 (3785)	Direct Manual	Remote Control	Cut Metal	Brass	Elk-O-Lite®	FM Approved	At Lowest Flow	At Highest Flow			
	PSI (BAR) 100 (6.89)														
2.5"	•	•			•		•		•		150	173	5.5	CJ	1
	•	•			•		•	•		•	150	173	12.4	CJ-B	1
	•	•				•	•		•		150	173	7.3	CJ-RC	2
	•	•				•	•	•		•	150	173	14.5	CJ-B-RC	2
			•	•	•		•		•		238	263	6.5	CJN	1
			•	•	•		•	•			238	263	15.6	CJN-B	1
			•	•		•	•		•		238	263	8.5	CJN-RC	2
			•	•		•	•	•			238	263	17.8	CJN-B-RC	2
	•				•			•				150	8.8	IMS-350*	3
		•			•			•				173	8.8	IMS-500*	3
			•		•			•				238	12.5	IMS-750	3

* Wide Fog is 140°

SELECT-O-STREAM® CONFIGURATIONS

Figure 1	Figure 2	Figure 3
		
MANUAL	REMOTE	IMS
Fig. 1	*Fig. 2*	*Fig. 3*

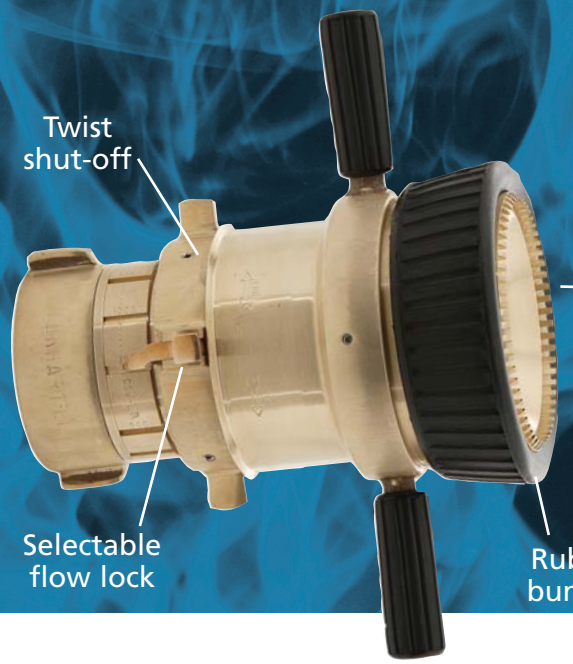
Figures depict general product types only and are not intended to be inclusive of all product features.

OPTIONS

THREADS

All nozzles are NHT unless otherwise specified. See index T-12 for optional base threads.

Select-O-Flow®



- Selectable flow rate, changeable even during flowing conditions
- Constant flow nozzle — straight stream, narrow fog (30°), or wide fog (90°)
- Flow efficient with a fully machined waterway for excellent stream quality
- Construction:
  - Elk-O-Lite® nozzles are hard anodized with chrome-plated trim and rubber bumper
  - Corrosion resistant brass nozzles have a heavy-duty protective rubber bumper
- Low maintenance components
- AFFF compatible

Base Size	FLOW RATES	PRESSURE	MATERIAL		Effective Reach (Feet) @ Highest Flow	Weight (Lbs.)	MODEL	FIGURE
	GPM (LPM)	PSI (BAR)	Brass	Elk-O-Lite®				
2.5"	300/550/750 (1136/2082/2839)	100 (6.89)		•	221	7.6	CSW	1
	350/500/750/1000/1250 (1325/1893/2839/3785/4732)			•	350	10.0	CSW-L	1
			•		350	21.4	CSW-LB	2

SELECT-O-FLOW® CONFIGURATIONS

Figure 1	Figure 2
 *Fig. 1*	 *Fig. 2*

OPTIONS

THREADS

All nozzles are NHT unless otherwise specified. See index T-12 for optional base threads.

Mystery®

- Original Master Stream fog nozzle, created for industrial applications
- Combination nozzle — straight stream, narrow fog (30°), or wide fog (90°)
  - The J and JN nozzles feature variable flow from shut-off to wide fog
  - The CJK nozzle is a constant flow nozzle
- Low maintenance components and convenient grease zerks

Base Size	AVAILABLE STANDARD FLOW RATES GPM (LPM) 350 (1325)	500 (1893)	1000 (3785)	1250 (4732)	1500 (5678)	1750 (6624)	2000 (7571)	Twist Shut-off	Effective Reach (Ft.)	Weight (Lbs.)	MODEL	FIG.
	PSI (BAR) 100 (6.89)											
2.5"	•	•						•	135	8.5	J	2
			•					•	170	9.3	JN	2
3.5"				•	•	•	•		325	22.3	CJK	1

MYSTERY® CONFIGURATIONS

Figure 1	Figure 2
 *Fig. 1*	 *Fig. 2*

Figures depict general product types only and are not intended to be inclusive of all product features.

OPTIONS

THREADS

All nozzles are NHT unless otherwise specified. See index T-12 for optional base threads.

Self-Educting

Self-Educting master stream nozzles turn any monitor into a foam station without the use of additional equipment and have been part of Elkhart's fire suppression arsenal for over 20 years. Elkhart is proud to have been one of the pioneers in the development of the Hydro-Foam® line of self-educting nozzles.

Some of the features of self-educting nozzles include:

- **Designed specifically for use with Class A and B foam, including AFFF and fluoroprotein**
- **Field-adjustable foam proportioning with pre-set options**
- **Combination nozzle — includes straight stream, narrow fog (30°), or wide fog (90°)**

Since introduction, Elkhart has expanded the self-educting Master Stream nozzle line to include:

- **Easy to use, original Hydro-Foam® nozzles of brass or Elk-O-Lite® construction**
- **X-Stream® nozzles that combine self-educting ability with the convenience of automatic metering**
- **A selectable flow rate self-educting nozzle — the CSW-C-HF, which has the additional benefit of being constructed of a lightweight non-corrosive material**

	NOZZLE FAMILY		
	X-Stream®	Hydro-Foam®	CSW-C-HF
Flow Type	Automatic	Fixed	Selectable
Description	High flow automatic nozzle	Original self-educting nozzle	Composite construction nozzle
Benefit	Optimizes use of concentrate and produces effective foam under a variety of conditions	Simple to use and flows well. Elk-O-Lite® version is lightweight and excellent for portable monitor use.	Lightweight non-corrosive construction
Foam Proportioning	Dual range, field selectable (SM-1000-HF and SM-1000E-HF) or fixed metering (SM-2000-HF and SM-2000E-HF)	Fixed metering via orifice insert	Dual range, field selectable

Base Size	FAMILY / FLOW RATE					FOAM PROPORTIONING						Electric	Certifications	MATERIAL / FINISH				Effective Reach (Ft.)	Weight (Lbs.)	MODEL	FIGURE
	X-STREAM®/ AUTOMATIC		HYDRO-FOAM®/FIXED		CSW-C-HF/ SELECTABLE	CONFIGURABLE				SELECTABLE			UL Listed	BRASS							
	GPM (LPM)					½%	1%	3%	6%	½% / 1%	1% / 3%			Brass (Satin)	Chrome	Composite	Elk-O-Lite®				
	350-1000 (1325-3785)	750-2000 (2839-7571)	350 (1325)	500 (1893)	350/500/750 (1325/1893/2839)																
	PSI (BAR) 100 (6.89)																				
2.5"					•						s					s		195	6.6	CSW-C-HF*	3
			•			•	•	•	•				•	s	o			145	13.2	HF-350	1
			•			•	•	•	•								s	145	4.2	HF-350-A	1
				•		•	•	•					•	s	o			162	13.2	HF-500	1
				•		•	•	•									s	162	4.2	HF-500-A	1
	•										s						s	250	20.7	SM-1000-HF	2
	•										s	•					s	250	20.7	SM-1000E-HF	4
3.5"		•					•										s	295	21.6	SM-2000-HF	2
		•					•					•					s	295	21.6	SM-2000E-HF	4

KEY s = standard o = option
*Fog pattern is 80˚

SELF-EDUCTING FOAM CONFIGURATIONS

Figure 1

Fig. 1

Figure 3

Fig. 3

Figure 2

Fig. 2

Figure 4

Fig. 4

Figures depict general product types only and are not intended to be inclusive of all product features.

OPTIONS

- *SM-1000E-HF features an 8' pick-up tube*
- *SM-2000E-HF features a 10' pick-up tube*

THREADS

All nozzles are NHT unless otherwise specified. See index T-12 for optional base threads.

QUICK-CONNECT COUPLING

- The brass Quick-Connect Coupling is a convenient way of attaching/detaching pick-up hose
- Specify brass or chrome finish
- Length: 3.4"
- Weight: 1.2 lbs.

SHUT-OFF VALVE

- Quarter turn ball valve for positive shut-off of foam supply
- Attaches to foam inlet of nozzle
- Specify chrome or brass finish

METERING VALVE

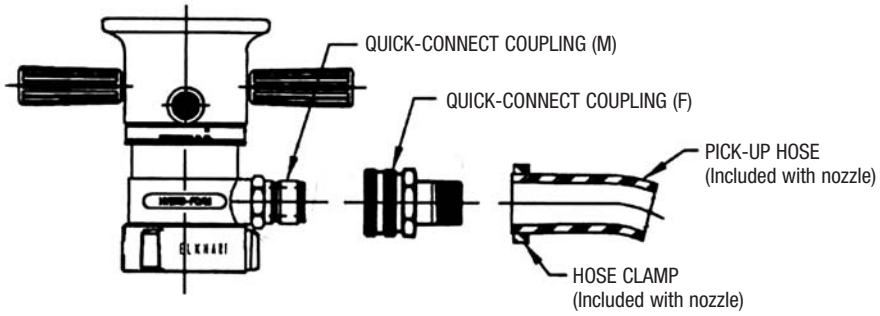
- The quarter turn ball valve for instant proportioning change
- Available in 1% / 3% or 3% / 6% configurations
- Attached to foam inlet of nozzle
- Specify chrome or brass finish
- Length: 3"
- Weight: 1.3 lbs.

DRUM PICK-UP KIT

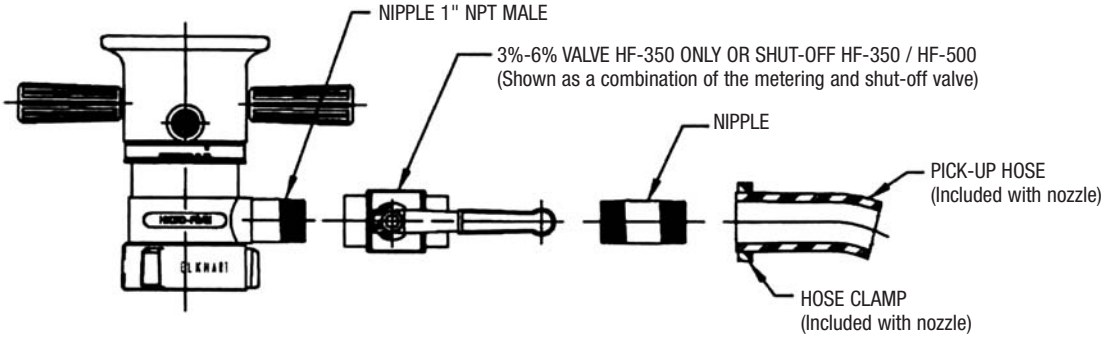
- Allows foam inlet of nozzle to be pre-connected to a 55 gallon drum of concentrate
- Kit includes PVC pick-up tube with shut-off valve, brass vacuum breaker, and clear reinforced vinyl pick-up hose (Kits 1 & 3, 8 feet; Kit 4, 10 feet)
- Select Kit 1, Kit 3, or Kit 4

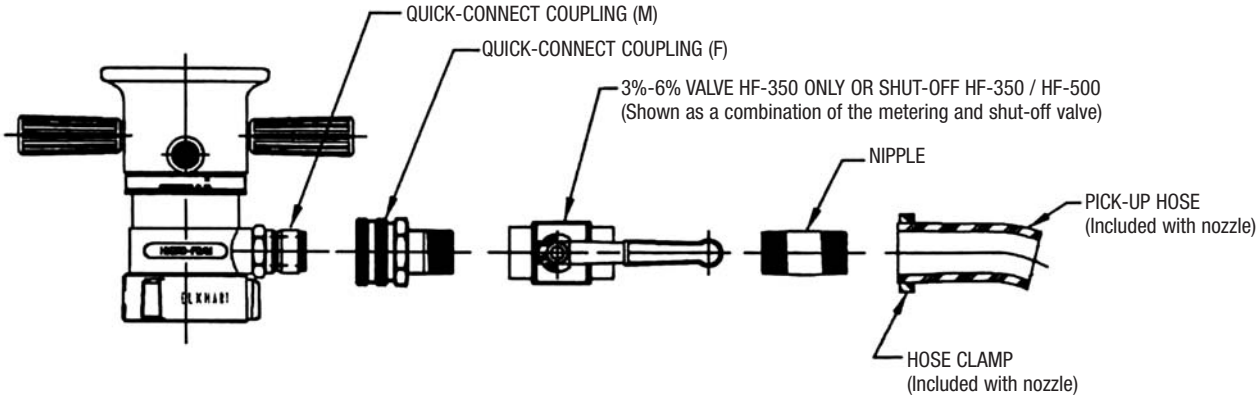
COMPATIBLE ACCESSORIES					
ITEM	FOAM NOZZLE				
	X-Stream®		Hydro-Foam®		CSW-C-HF
	SM-1000 HF	SM-2000 HF	350/A	500/A	
Quick-connect			•	•	•
Shut-off Value with Quick-connect			•	•	
1% / 3% Metering Valve with Quick-connect			•	•	
3% / 6% Metering Valve with Quick-connect			•		
Shut-off Valve			•	•	
1% / 3% Metering Valve			•	•	
3% / 6% Metering Valve			•		
Drum Pick-up Kit 1			•	•	•
Drum Pick-up Kit 3	•				
Drum Pick-up Kit 4		•			

OPTIONAL HARDWARE FOR FOAM INLET LINE



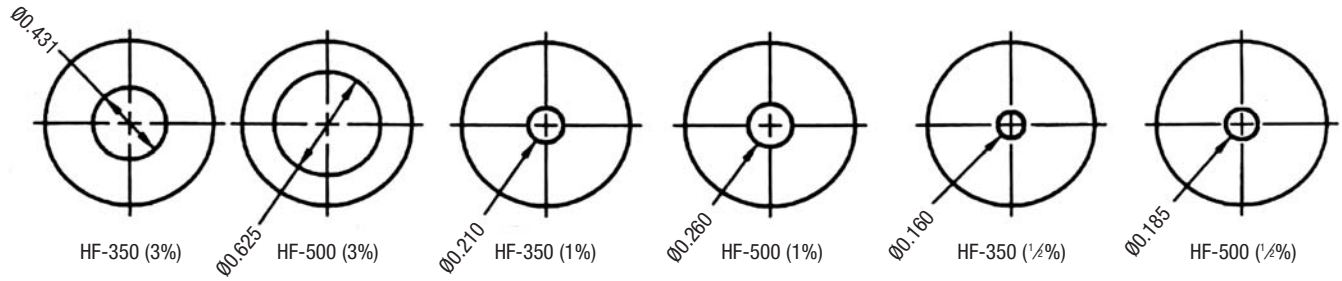
NOTE: These illustrations show typical combinations of valves and fittings. Other combinations can be provided to satisfy customer needs.





FOAM METERING WASHER GUIDE

(Included with Hydro-Foam® Nozzles)



Fixed System

Designed for use in fixed system applications. Adjustable nozzles can be pre-set at the factory or set in the field at time of installation. The fog pattern, which can be set up to 120°, can easily be set or adjusted at the job site.

Base Size	ADJUSTABLE FLOW RATES GPM (LPM)			STANDARD FLOW RATES GPM (LPM)			INLET OPTIONS		MATERIAL		MODEL	FIGURE
	5-40 (20-150)	40-100 (150-380)	100-250 (380-850)	350 (1325)	500 (1890)	1000 (3780)	Male	Female	Brass	Elk-o-Lite®		
	PSI (BAR) 100 (6.89)											
0.75"	•						s	o	•		NTS-C	1
1.0"		•					s	o	•		NTL-C	2
1.5"			•				s		•		NT-C	2
2.5"				•				s		•	NT-350-C	3
					•			s		•	NT-500-C	3
						•		s		•	NT-1000-C	3

KEY s = standard o = option
NOTE: Fog pattern can be set up to 120°

FIXED SYSTEM CONFIGURATIONS

Figure 1

Fig. 1

Figure 2

Fig. 2

Figure 3

Fig. 3

Figures depict general product types only and are not intended to be inclusive of all product features.

OPTIONS

THREADS

All nozzles are rigid NPT connections unless otherwise specified. See index T-12 for optional base threads.

Foam Expansion Tubes

Lightweight composite foam tubes are corrosion resistant and easy to handle with bases that snap securely onto the nozzle in seconds. The foam tubes are specifically designed to require no alteration of the nozzle itself for use. The base of the tube includes large air intakes; expansion rates are easily varied with nozzle pattern.

	FOAM TUBE MODELS			
Compatible Nozzle Model	**251-6**	**252-8**	**253-9**	**254-6**
R.A.N.™	•			
HF – 350/350A/500/500A	•			
IMS – 350/500	•			
6000*	•			
CJ – B/RC/B-RC	•			
SM – 1000/E/H		•		
SM – 1250/E/B/BE/H/HB		•		
SM – 2000/E/B/BE/H/HB			•	
SM – 1000-HF / E-HF			•	
SM – 2000-HF / E-HF			•	
CSW-C-HF				•
Foam Tube Details				
Length (Inches)	14.75	16.688	16.136	16.938
Weight (Lbs.)	3.0	6.3	7.15	4.87
Tube Base	Composite	Metal	Metal	Metal

*6000-200 comes with adapter for the foam expansion tube

TYPES			SIZES (Inches)		STYLES		PRIMARY APPLICATION			ACTUATORS		CERT.		VALVE SERIES	PAGE
Ball	Butterfly	Other	Minimum	Maximum	Angle	Inline	Fire Apparatus	Pressure Reducing / Restricting	Commercial / Industrial Installations	Manual	Electric	FM Approved	UL Listed		
•	•		1½	6		•	•			•	•			Unibody	7-6
		•	3½	6			•			•				Piston Intake Valves	4-13
		•	¾	¾	•		•			•				Push/Pull Drain	7-27
		•	¾	¾	•		•			•				Quarter-Turn Drain	7-27
		•	2½	3	•		•							Relief	7-28
	•		4½	6		•	•			•				Suction Intakes	7-2
		•	2½	2½		•	•							Tank-Fill Check	7-28
		•	¾	¾	•		•			•				Twist Drain	7-27
•			1	3		•	•			•				800 Series	7-19
•			1½	3		•	•			•				2800 Series	7-19
•			1½	4		•	•			•	•			2900 Series	7-19
	•		2	6		•	•			•	•			2950 Series	7-19
•			2½	3		•	•			•				2925A	7-19
•			3	3		•	•			•				W-893	7-19
		•	1½	5		•	•					•		Hydrant	7-4
		•	2½	2½	•	•		•					•	Field Adjustable Pressure Reducing (URFA)	9-1
		•	1½	2½	•	•		•					•	Pressure Reducing (Pressure-Matic)	9-3
		•	1½	2½	•			•				•	•	Pressure Restricting	9-5
		•	1½	2½		•		•					•	Pressure Restricting (34)	9-9
		•	1½	2½	•				•			•	•	Angle	9-7
		•	1½	2½	•				•					Hydrolator	9-9
		•	3	4	•				•					Heavy Duty Hydrant	9-10
	•		3	4		•			•					84	5-75

Suction Intake

Elkhart Brass offers a special cast iron, butterfly valve with Elk-O-Lite® end caps for use as a suction intake in apparatus applications. The valve features:

- **Aluminum/bronze disc**
- **Re-inforced EPDM seat (bi-directional)**
- **Two piece stainless steel stem**
- **Rated to 200 psi**
- **Finished in red urethane enamel with polished chrome hand-wheel and hard anodized end caps**
- **Gear operated version complies with NFPA 1901**

Gearbox can be rotated to assist with positioning without interference

MODELS			2850	2860
Waterway Size (Inches)			5"	6"
Operation Style		Gear	s	s
		Lever/Trigger	o	o
Weight (Lbs.)*			35.8	42.4
Available Adapters/End Caps	Type	Size		
	Rigid NPT Female	5"	•	
		6"	•	•
	Rigid NHT Female	4.5"	•	
		5"	•	
		6"		•
	Storz F/S	4"	•	
		5"	•	
	NHT Swivel Female	4"	•	
		4.5"	•	
		5"	•	•
		6"	•	•
	NHT Male	4"	•	
		4.5"	•	
		5"	•	•
		6"		•

KEY s = standard o = option
* Intakes only, excludes adapter options

HOW TO ORDER

- *Select suction intake model (2850 or 2860).*
- *Select intake adapter from available options.*
- *Select discharge adapter from available options.*
- *Specify operation style (gear or lever/trigger).*

ADDITIONAL INFORMATION

OPTIONS

- *NHT swivel female adapters available with long handle or rocker lug.*
- *Optional strainer available on male adapters.*
- *Optional air bleeder valve on male adapters.*

THREADS

Valve information is NHT unless otherwise specified. See index T-12 for alternative thread options.

Hydrant

Available in sizes ranging from 1½" to LDH for portable use (in either aluminum or brass) or permanent mount utilizing the NPT inlet.

INLET SIZES					OUTLET SIZES									VALVE TYPE		HANDLE STYLE			MATERIAL/TRIM				DIMENSIONS			
Female (NPT)		Female (NHT)			Female (NHT)			Male (NHT)				Storz							Brass							
1.5"	2.5"	2.5"	4.5"	5.0"	3.5"	4.0"	4.5"	1.5"	2.5"	3.5"	4.0"	4.5"	4.0"	5.0"	Ball	Gated	Crank	Hand-wheel	Twist-Lock	Cast	Satin	Chrome (cast)	Elk-O-Lite®	Length (Inches)	Weight (Lbs.)	MODEL	FIGURE
		s							s							•	•						s	12.5	5.5	X-86A	3
		s							s						•				•				s	6.25	6.4	B-96A	5
			s	o	o	o	o			o	o	o	s	o	•			•					s	12.75	27.5	2940GA	6
s								s								•		•		s		o		7.625	4.5	88-1.5	1
	s								s							•		•		s		o		11.625	9.1	88-2.5	1
		s							s							•	•				s	o		12.5	13.75	X-86	2
		s							s						•				•	s		o		8.0	19.75	B-94	4

Figure 1

88

- Non-rising stem design
- Metal to metal seat
- Pressure rated to 300 psi (20.68 bar)

Fig. 1

Figure 2

X-86

- Non-rising stem design
- Metal to metal seat
- Pressure rated at 175 psi (12.07 bar)
- Red urethane finish with satin brass or chrome trim *(specify)*

Fig. 2

Figure 3

X-86A

- Non-rising stem
- Metal to metal seat
- Pressure rated to 175 psi (12.07 bar)

Fig. 3

Figure 4

B-94

- Adjustable, teflon impregnated, neoprene seat
- Pressure rated to 250 psi (17.2 bar)
- Red urethane finish with satin brass or chrome trim *(specify)*

Fig. 4

Figure 5

B-96A

- Adjustable, teflon impregnated, neoprene seat
- Pressure rated to 200 psi (13.79 bar)

Fig. 5

Figure 6

2940GA

- Acetal ball with UHMWPE seat
- Pressure rated to 200 psi (13.79 bar)

Fig. 6

ADDITIONAL INFORMATION

OTHER PRODUCTS

Cap and chain are Elkhart model #310 and may be found on page 10-1.

THREADS

Valve information is NHT unless otherwise specified. See index T-12 for alternative thread options.

Unibody Apparatus

The answer to all your apparatus valve needs — the Unibody Apparatus Valve. The Unibody ball valve has been designed to be dimensionally identical to the Akron Brass heavy-duty apparatus valves for cross compatibility. Additionally, Elkhart's Unibody ball valve has a single body design to simplify both configuration and installation.

A unique aspect of the Unibody valve actuator is the ability to be easily interchanged among the various Unibody ball valve sizes by simply switching actuators. Just remove 4 bolts, and you can change the actuator on any Unibody ball valve, without breaking the waterway or internal plumbing.

- All valve materials are designed for endurance. (See chart on page 7-8 for specifics)
- Ball valves have dual self-adjusting seats, which provide bi-directional sealing and do not require O-rings that might cut and tear during servicing
- Ball valves feature swing-out construction, which allows for easy access to internal waterway without removing the valve from the truck plumbing
- Butterfly valves are bi-directional
- Adapters (end caps) and pump flanges are constructed of either brass or stainless steel
- Actuators are interchangeable — a valve may be easily converted to different actuation type without the need to break the waterway
- Durable handles and handle stops ensure dependability
- Manual handles may be easily changed to different positions by removing a single bolt
- The electric valve utilizes a three-inch extreme duty motor and gearbox for ultimate reliability
- Pressure rated to at least 250 psi
- Pressure tested to 600 psi (EB15-EB35); 500 psi (EB40)
- The Unibody valves meet or exceed NFPA 1901 standards

Model Number Key

EB ☐☐-☐☐☐☐☐-☐☐☐☐☐-☐☐☐

Valve body

Page 7–8		
1.5" Ball valve body	1	5
2.0" Ball valve body	2	0
2.5" Ball valve body	2	5
3.0" Ball valve body	3	0
3.5" Ball valve body	3	5
4.0" Flat ball valve body	4	0
3.0" Butterfly valve body	3	B
4.0" Butterfly valve body	4	B
4.0" High performance butterfly valve body	4	J
5.0" Butterfly valve body	5	B
5.0" High performance butterfly valve body	5	J
6.0" Butterfly valve body	6	B
6.0" High performance butterfly valve body	6	J
6.0" High performance butterfly valve body (SS)	6	S
6.0" High efficiency butterfly valve body	6	D
8.0" Butterfly valve body	8	B
8.0" High performance butterfly valve body	8	J
8.0" High performance butterfly valve body (SS)	8	S

Adapters (endcaps)

Inlet

No inlet endcap		0 0 0 0 0
Page 7–14		
Hose thread	*EB15 -EB40*	H
Pipe thread (NPT)		N
Victaulic		V
Flex hose		F
Pump flange		P
Solder		S
Weld (SS)		W
Page 7–10		
Female	*EB15 -EB40*	F
Male		M
Non-gender adapter		A
4 bolt (pump flange)		4
8 bolt (pump flange)		8
Two digit listing	*EB15 -EB40*	X X
Page 7–12		
Blank – no taps	*EB15 -EB40*	B
Integrated check valve		C
Drain & pressure tap		D
Flow sensor port		F

Outlet

Repeat Inlet Steps

No outlet endcap		0 0 0 0
Same options as available for inlet end cap	*EB15 -EB40*	

Valve actuator

(remote push/pull rods and assemblies, handwheels, and electric controllers are ordered separately on page 7-16)

Page 7–8			
No actuator		0	0
Direct handle (long)	*EB15 - EB35*	D	1
Direct handle with chrome cover (long)		D	2
Direct handle (short)		D	3
Direct handle with chrome cover (short)		D	4
Electric	*All (except EB6D)*	E	1
Electric	*EB6D*	E	2
Electric	*All (except EB6D)*	E	3
Electric	*All (except EB6D)*	E	4
Gear	*All (except EB6D)*	G	1
Remote short handle (self-locking)	*EB15 - EB35*	R	1
Remote long handle (self-locking)		R	2
Remote short handle (non-locking)		R	3
Remote long handle (non-locking)		R	4
Rack & sector		S	1
Twist-lock handle		T	1
Slow close	*(D1, D3, R1, R2, R3, R4 & S1 only)*		S
Free close			F

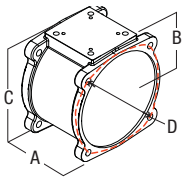
Example

EB 2 5 - P 4 2 9 B - H M 1 0 D - R 1 F

This is a complete model number for a 2.5" ball valve with: a simple 4 bolt pump flange inlet adapter, a male hose thread outlet adapter with drain tap, a remote push/pull style actuator handle without an additional mechanical slow close device.

BODIES

BALL VALVE BODY

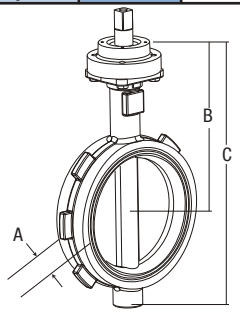


MODEL AND DIMENSION KEY

Size	DIMENSIONS A	B	C	D*	MATERIALS Body	Ball	Seat	BALL TYPE	PRESSURE RATED (psi)	C_v VALUE	ELKHART MODEL	Akron Model
1½"	3"	2 3/16"	4 5/16"	4½"	Brass Alloy 844	316 Stainless Steel	Hytrel	Round	600	139	EB15	7615/7815
2"	3"	2 3/16"	4 5/16"	4½"	Brass Alloy 844	316 Stainless Steel	Hytrel	Round	600	139	EB20	8620/8820
2½"	3½"	2⅝"	5 1/16"	5⅜"	Brass Alloy 844	316 Stainless Steel	Hytrel	Round	600	277	EB25	8625/8825
3"	4"	3"	5⅞"	6⅛"	Brass Alloy 844	316 Stainless Steel	Hytrel	Round	600	510	EB30	8630/8830
3½"	4"	3"	5⅞"	6⅛"	Brass Alloy 844	316 Stainless Steel	Hytrel	Round	600	510	EB35	8635/8835
4"	4"	4 1/16"	8⅝"	7⅛"	Brass Alloy 844	316 Stainless Steel	Hytrel	Flat	500	694	EB40	8840

* Bolt center diameter

BUTTERFLY VALVE



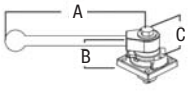
Butterfly Valve fits between 150# ANSI flanges. Butterfly Valves do not utilize adapters.

Size	DIMENSIONS A	B	C	MATERIALS Body	Wafer	Shaft	Seat	PRESSURE RATED (psi)	C_v VALUE	ELKHART MODEL	Akron Model
3"	1 3/16"	7 23/32"	11⅛"	Cast Iron	Aluminum/Bronze	416 Stainless Steel	EPDM	250	340	EB3B	7940
4"	2 1/16"	8 13/32"	12 15/32"	Cast Iron	Aluminum/Bronze	416 Stainless Steel	EPDM	250	660	EB4B	7940/7945
	2⅛"	8 7/16"	13⅜"	Carbon Steel	316 Stainless Steel	17-4 PH Stainless Steel	PTFE	285	400	EB4J	
5"	2 3/16"	8 31/32"	13 23/32"	Cast Iron	Aluminum/Bronze	416 Stainless Steel	EPDM	250	1080	EB5B	7950
	2½"	6 17/32"	13 7/32"	Carbon Steel	316 Stainless Steel	17-4 PH Stainless Steel	PTFE	285	650	EB5J	
6"	2 3/16"	9 19/32"	14 19/32"	Cast Iron	Aluminum/Bronze	416 Stainless Steel	EPDM	250	1613	EB6B	7960
	2¼"	9 13/32"	11 13/32"	Ductile Iron	Aluminum/Bronze	416 Stainless Steel	EPDM	250	1950	EB6D	
	2¼"	9 3/16"	15 1/16"	Carbon Steel	316 Stainless Steel	17-4 PH Stainless Steel	PTFE	285	1050	EB6J	
	2¼"	9 3/16"	15 1/16"	316 Stainless Steel	316 Stainless Steel	17-4 PH Stainless Steel	PTFE	275	1050	EB6S	
8"	2⅜"	10 27/32"	17 11/32"	Cast Iron	Aluminum/Bronze	416 Stainless Steel	EPDM	250	3759	EB8B	
	2½"	10 9/16"	18 3/16"	Carbon Steel	316 Stainless Steel	17-4 PH Stainless Steel	PTFE	285	2200	EB8J	
	2½"	10 9/16"	18 3/16"	316 Stainless Steel	316 Stainless Steel	17-4 PH Stainless Steel	PTFE	275	2200	EB8S	

ACTUATORS (See page 7-7 for description of Valve/Actuator compatability.)

DIRECT HANDLE

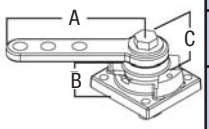
DIMENSIONS	INCHES
Handle Length A (short)	5"
Handle Length A (long)	9 5/16"
Handle Height B ℄	1⅞"
Overall Height C	2¼"
Overall Height C (with slow close)	3⅝"



DESCRIPTION	ELKHART MODEL	Akron Model
Short	D3F	TS
Long	D1F	
Short with slow close	D3S	
Long with slow close	D1S	
Short with chrome cover	D4F	BC
Long with chrome cover	D2F	

REMOTE HANDLE

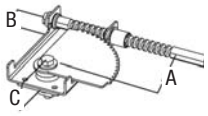
DIMENSIONS	INCHES
Handle Length A (short)	4½"
Handle Length A (long)	7"
Handle Height B ℄	1⅝"
Overall Height C	2¼"
Overall Height C (with slow close)	3⁵⁄₁₆"



DESCRIPTION	ELKHART MODEL Self-Locking	ELKHART MODEL Non-Locking	Akron Model
Short	R1F	R3F	R-1
Long	R2F	R4F	R-2
Short with slow close	R1S	R3S	R-1
Long with slow close	R2S	R4S	R-2

RACK & SECTOR

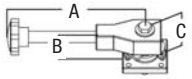
DIMENSIONS	INCHES
Handle Offset A	4⅞"
Handle Height B ℄	1⅛"
Overall Height C	1⅞"
Overall Height C (with slow close)	3⁵⁄₁₆"



DESCRIPTION	ELKHART MODEL	Akron Model
Standard	S1F	R/S
Standard with slow close	S1S	R/S

TWIST LOCK

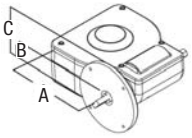
DIMENSIONS	INCHES
Handle Length A	8¹⁵⁄₁₆"
Handle Height B ℄	1⅞"
Overall Height C	3"



DESCRIPTION	ELKHART MODEL	Akron Model
Standard	T1F	SZ

GEAR

DIMENSIONS	INCHES
Handle Offset A	2⁹⁄₁₆"
Handle Height B ℄	1⁹⁄₁₆"
Overall Height C	3⁷⁄₁₆"

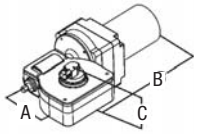


DESCRIPTION	ELKHART MODEL	Akron Model
Standard	G1F	G

Hand-wheels are ordered separately

ELECTRIC

DIMENSIONS	INCHES
Manual Offset A	2⁹⁄₁₆"
Motor Length B	10¼"
Overall Height C (E1F & E2F)	3¾"
Overall Height C (E3F & E4F)	5"

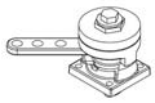


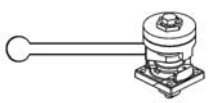
DESCRIPTION	ELKHART MODEL	Akron Model
Standard	E1F	E
High Efficiency	E2F*	
Integrated	E3F	
	E4F	

Controllers are ordered separately

* For use on the EB6D only.

SLOW CLOSE

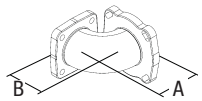




Slow close may be bolted to remote, direct, and rack & sector actuators.

ADAPTER DIMENSION KEY

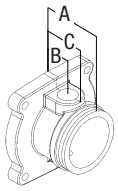
PUMP ELBOW ADAPTERS



A = Valve Flange to Centerline of Elbow

B = Pump Flange to Centerline of Elbow

DISCHARGE & INTAKE ADAPTERS



A = Overall Length

B = Length to Centerline of Drain Hole

C = Length to Edge of Drain Boss

ADAPTERS																								
			Bolt Center Diameter (Inches)																			MODEL	
Style		Valve Size	4 3/8	4 19/32	5 1/2	5 3/4	6 5/8	7 1/16	7 25/32	Drain (3/4")	Flow Port	4 Degree	26 Degree	90 Degree	94 Degree	Offset	Dimension A	Dimension B	Dimension C	Note	Elkhart #	Akron #
4 BOLT PUMP FLANGE (HALE)		2.5"	4 3/8									4					2 5/8	—	—		P427B	
		3.0"	4 3/8									4					2 7/8	—	—		P427B	
		3.5"	4 3/8									4					2 7/8	—	—		P427B	
		2.5"	4 3/8													5d20m	6 1/4	—	—		P401B	HD1-S
		2.5"	4 3/8													3d45m	8 1/4	—	—		P402B	HD2-S
		2.5"	4 3/8													5d20m	6 5/8	—	—		P403B	HD3-S
		2.5"	4 3/8													14d5m	5 1/4	—	—		P404B	HD4-S
		2.5"	4 3/8									4					10 1/4	—	—		P405B	HD5-S
		3.0"	4 3/8													7d	5 3/4	—	—		P401B	HD1-S
		3.0"	4 3/8													4d	7 3/4	—	—		P402B	HD2-S
		3.5"	4 3/8													7d	5 3/4	—	—		P401B	HD1-S
		3.5"	4 3/8													4d	7 3/4	—	—		P402B	HD2-S
		2.5"	4 3/8								F					5d20m	6 1/4	3 1/8	—		P409F	HD21-SF
		2.5"	4 3/8											90			3 1/4	5 1/4	—		P411B	SE1-S
		2.5"	4 3/8											90			5 1/4	5 1/4	—		P412B	SE2-S
		3.0"	4 3/8											90			3 1/4	6	—		P411B	SE1-S
		3.0"	4 3/8											90			4 3/4	6	—		P412B	SE2-S
		3.5"	4 3/8											90			3 1/4	6	—		P411B	SE1-S
		3.5"	4 3/8											90			4 3/4	6	—		P412B	SE2-S
		2.5"	4 3/8											90			2 1/2	7 3/4	—		P413B	SE3-S
8 BOLT PUMP FLANGE (HALE)		3.0"				5 3/4											2 7/8	—	—		P851B	B1-SE
		3.0"				5 3/4							26				2 7/8	—	—	Eccentric Flange Face	P852B	B2-SE
		3.0"				5 3/4						4					2 7/8	—	—		P853B	B3-SE
		3.5"				5 3/4											2 7/8	—	—		P851B	B1-SE
		3.5"				5 3/4							26				2 7/8	—	—	Eccentric Flange Face	P852B	B2-SE
		3.5"				5 3/4						4					2 7/8	—	—		P853B	B3-SE
		4.0"				5 3/4						4					4	—	—		P853B	B3-SE
		4.0"				5 3/4											4	—	—	Octagonal Flange	P858B	B8-SH
		3.0"				5 3/4						4					6 7/8	—	—		P856B	B6-SE
		3.5"				5 3/4						4					6 7/8	—	—		P856B	B6-SE
		4.0"				5 3/4					F						5 7/16	2 11/16	—		P850F	B20-SHF
		3.0"				5 3/4								90			4 3/16	4 5/16	—		P861B	HDE1-S
		3.5"				5 3/4								90			4 3/16	4 5/16	—		P861B	HDE1-S
		4.0"				5 3/4								90			9 1/2	5	—		P861B	HDE1-S
		4.0"				5 3/4									94		9 1/2	5	—		P869B	HDE94-S

ADAPTERS

Style	Valve Size	Bolt Center Diameter (Inches) 4⅜	4¹⁹⁄₃₂	5½	5¾	6⅝	7¹⁄₁₆	7²⁵⁄₃₂	Drain (¾")	Flow Port	4 Degree	26 Degree	90 Degree	94 Degree	Offset	Dimension A	Dimension B	Dimension C	Note	MODEL Elkhart #	Akron #
4 BOLT PUMP FLANGE (WATEROUS)	1.5"	4⅜														2⅝	—	—	slots	P429B	B1-SX
	2.0"	4⅜														2⅝	—	—	slots	P429B	B1-SX
	2.5"	4⅜														2⅝	—	—	slots	P429B	B1-SX
	3.0"	4⅜														2⅞	—	—	slots	P429B	B1-SX
	3.5"	4⅜														2⅞	—	—	slots	P429B	B1-SX
	3.0"	4⅜														4½	—	—	slots	P425B	B5-S
	3.5"	4⅜														4 ½	—	—	slots	P425B	B5-S
	2.5"	4⅜														2⅝	—	—		P423B	B3-S
	2.5"	4⅜														¹¹⁄₁₆	—	—		P418B	B2-SH
	3.0"							7²⁵⁄₃₂			4					1⅜	—	—		P493B	B3-SH
	3.5"							7²⁵⁄₃₂			4					1⅜	—	—		P493B	B3-SH
	4.0"							7²⁵⁄₃₂			4					2	—	—	2 piece	P473B	B3-SH
	2.5"	4⅜														1⅞	—	—	clamp	P419B	B1-SW
	3.0"	4⅜														1⅞	—	—	clamp	P419B	B1-SW
	3.5"	4⅜														1⅞	—	—	clamp	P419B	B1-SW
	2.5"	4⅜								F						3½	1¹³⁄₁₆	—		P410F	B10-SF
	3.0"	4⅜								F						3⁵⁄₁₆	1⅜	—		P410F	B10-SF
	3.5"	4⅜								F						3⁵⁄₁₆	1⅜	—		P410F	B10-SF
8 BOLT PUMP FLANGE (WATEROUS)	2.5"	4⅜														2⅝	—	—		P814B	B4-S
	2.5"	4⅜														4½	—	—	4 holes & 4 slots	P815B	B5-S
	2.5"	4⅜														6	—	—		P816B	B6-S
	3.0"	4⅜														2⅞	—	—		P814B	B4-S
	3.5"	4⅜														2⅞	—	—		P814B	B4-S
	2.5"					6⅝					4					⅞	—	—		P871B	B1-SH
	3.0"					6⅝					4					1³⁄₁₆	—	—		P871B	B1-SH
	3.5"					6⅝					4					1³⁄₁₆	—	—		P871B	B1-SH
	4.0"					6⅝					4					2	—	—	2 piece	P871B	B1-SH
	3.0"			5½								26				2⅞	—	—		P842B	B2-SW
	3.0"			5½							4					3⅛	—	—		P843B	B3-SW
	3.0"			5½							4					5	—	—		P844B	B4-SW
	3.0"			5½												2⅞	—	—	slots	P841B	B1-SEW
	3.5"			5½								26				2⅞	—	—		P842B	B2-SW
	3.5"			5½							4					3⅛	—	—		P843B	B3-SW
	3.5"			5½							4					5	—	—		P844B	B4-SW
	3.5"			5½												2⅞	—	—	slots	P841B	B1-SEW
	4.0"			5½												4	—	—		P848B	B8-SW
	4.0"			5½						F						5⁷⁄₁₆	2¹¹⁄₁₆	—		P840F	B20-SFW
	3.0"			5½									90			4⁹⁄₁₆	4⁵⁄₁₆	—		P845B	WDE1-S
	3.5"			5½									90			4⁹⁄₁₆	4⁵⁄₁₆	—		P845B	WDE1-S
	4.0"			5½									90			9½	5	—		P845B	WDE1-S
	4.0"			5½										94		9 ½	5	—		P849B	WDE94-S
GENERAL	4.0"						7¹⁄₁₆									2	—	—		P880B	B10-SP
	1.5"	4⅜											90			3¾	4¹³⁄₁₆	—		P817B	DE1-S
	1.5"	4⅜											90			3¾	5½	—		P818B	DE2-S
	2.0"	4⅜											90			3¾	4¹³⁄₁₆	—		P817B	DE1-S
	2.0"	4⅜											90			3¾	5½	—		P818B	DE2-S
4 BOLT PUMP FLANGE (DARLEY)	2.5"		4¹⁹⁄₃₂													2⅝	—	—		P432B	B2-S
	3.0"		4¹⁹⁄₃₂													2⅞	—	—		P432B	B2-S
	3.5"		4¹⁹⁄₃₂													2⅞	—	—		P432B	B2-S
	2.5"		4¹⁹⁄₃₂												6d	6¼	—	—		P431B	DD1-S
	3.0"		4¹⁹⁄₃₂												6d	5¾	—	—		P431B	DD1-S
	3.5"		4¹⁹⁄₃₂												6d	5¾	—	—		P431B	DD1-S

UNIBODY APPARATUS

ADAPTERS

	Style	Valve Size	Pipe Size (Inches) 1	1½	2	2½	3	3½	4	5	Drain (¾")	Pressure Tap (¼")	Flow Port	Check Valve	4 Degree Offset	30 Degree Droop	90 Degree Droop	Strainer	Dimension A	Dimension B	Dimension C	Note	MODEL Elkhart #	Akron #
RIGID NPT MALE		1.5"		1½															1⅛	—	—		NM01B	M1-S
		2.0"			2														1⅛	—	—		NM01B	M1-S
		2.5"				2½													2	—	—		NM01B	M1-S
		3.0"					3												2 1/16	—	—		NM01B	M1-S
		3.5"						3½											2 1/16	—	—		NM01B	M1-S
		4.0"							4										2 11/16	—	—		NM01B	M1-S
		2.5"				2½					D	P							3 5/16	1⅜	1⅛		NM03D	M3-S
		3.0"					3				D	P							3 5/16	1⅜	2⅛		NM03D	M3-S
		4.0"							4		D	P							4¼	1⅞	2⅝		NM03D	M3-S
		2.0"				2½													1 15/16	—	—		NM12B	M12-S
		3.0"							4										3¾	—	—		NM12B	M12-S
RIGID NPT FEMALE		1.5"		1½															1¼	—	—		NF01B	P1-S
		2.0"			2														1¼	—	—		NF01B	P1-S
		2.5"				2½													1⅞	—	—		NF01B	P1-S
		3.0"					3												1⅞	—	—		NF01B	P1-S
		3.5"						3½											2	—	—		NF01B	P1-S
		4.0"							4										2	—	—		NF01B	P1-S
		1.5"		1½							D	P							3¼	1⅜	2⅛		NF02D	P2-S
		2.0"			2						D	P							3¼	1 ⅜	2⅛		NF02D	P2-S
		2.5"				2½					D	P							3⅜	1⅜	2⅛		NF02D	P2-S
		2.5"				2½					D	P							4 3/16	1¾	2½		NF22D	P2-SE
		3.0"					3				D	P							3 3/16	1⅜	2⅛		NF02D	P2-S
		3.5"						3½			D	P							4	1⅜	2⅛		NF02D	P2-S
		4.0"							4		D	P							4 13/16	1 13/16	2 3/16		NF02D	P2-S
		1.5"			2														2 1/16	—	—		NF10B	P10-S
		2.0"				2½													2 1/16	—	—		NF10B	P10-S
		2.5"					3												3 5/16	—	—		NF10B	P10-S
		3.0"							4		D	P							3¾	1⅜	2⅛		NF12D	P12-S
		2.0"			2	2½							F						4 5/16	—	—	2" F NPT & 2.5" Vic	NF20F	P20-SF
		2.5"				2½	3						F						4 5/16	—	—	2.5" F NPT & 3" Vic	NF20F	P20-SF
		3.0"					3						F						4⅜	—	—		NF20F	P20-SF
		4.0"							4				F						4 9/16	—	—		NF20F	P20-SF
		1.5"		1½	2						D			C					6	3⅞	4¾	1.5" F NPT & 2" Vic	NF30C	P30-SCV
		2.0"			2						D			C					5⅞	3⅞	4⅝		NF30C	P30-SCV
		2.5"				2½					D			C					6½	4 5/16	5 1/16		NF30C	P30-SCV
		3.0"					3				D			C					7½	4 15/16	5 11/16		NF30C	P30-SCV
		3.0"					3		4					C					6 1/16	—	—	3" F NPT & 4" Vic	NF40C	P40-SCV
		3.0"					3		4										2 3/16	—	—	3" F NPT & 4" Vic	NF71B	VT1-S
		3.0"					3		4		D	P							3 1/16	—	—	3" F NPT & 4" Vic	NF72D	VT3-S
		4.0"							4	5									2⅜	—	—	4" F NPT & 5" Vic	NF71B	VT1-S

ADAPTERS

Style	Valve Size	Pipe Size (Inches) 1	1½	2	2½	3	3½	4	5	Drain (¾")	Pressure Tap (¼")	Flow Port	Check Valve	4 Degree Offset	30 Degree Droop	90 Degree Droop	Strainer	Dimension A	Dimension B	Dimension C	Note	MODEL Elkhart #	MODEL Akron #
MALE DISCHARGE (HOSE THREAD)	1.5"		1½															1⅝	—	—		HM01B	M1-S
	2.0"			2														1⅝	—	—		HM01B	M1-S
	2.0"				2½													1 15/16	—	—		HM02B	M2-S
	2.5"				2½													2	—	—		HM01B	M1-S
	3.0"					3												2 1/16	—	—		HM01B	M1-S
	3.5"						3½											2¼	—	—		HM01B	M1-S
	4.0"							4										2 11/16	—	—		HM01B	M1-S
	2.0"				2½					D	P							3¼	1⅜	2⅛		HM10D	M10-S
	2.5"				2½					D	P							3 3/16	1⅜	2⅛		HM03D	M3-S
	3.0"					3				D	P							3 5/16	1⅜	2⅛		HM03D	M3-S
	4.0"							4		D	P							4	1⅞	2⅝		HM03D	M3-S
	2.5"				2½					D	P							5	1⅜	1⅛		HM04D	M4-S
	3.0"					3				D	P							5	1⅜	1⅛		HM04D	M4-S
	4.0"							4		D	P							8¾	1 13/16	2½		HM04D	M4-S
	2.5"				2½					D	P							6½	1⅜	2⅛		HM07D	M7-S
	2.5"				2½					D	P							10	1⅜	2⅛		HM06D	M6-S
	2.5"				2½					D	P				30			6⅞	1⅜	2⅛		HM21D	ME1-S
	3.0"					3				D	P				30			7	1⅜	2⅛		HM21D	ME1-S
	3.5"						3½			D	P				30			7 3/16	1⅜	2⅛		HM21D	ME1-S
	4.0"							4		D	P				30			9¾	1⅝	2 5/16		HM21D	ME1-S
	3.5"						3½			D					30			5⅛	1⅜	2⅛	2 x ¾" drain	HM22D	ME2-S
	2.5"				2½					D	P				30			10 5/16	1⅜	2⅛		HM23D	ME3-S
	2.5"				2½					D	P				30			12 5/16	1⅜	2⅛		HM24D	ME4-S
	3.0"					3				D	P				30			10⅜	1⅜	2⅛		HM23D	ME3-S
	3.0"				2½					D	P				30			6⅞	1⅜	2⅛		HM25D	ME5-S
	1.5"		1½													90		3¼	—	—	swivel	HM31B	MES1-S
	2.0"			2												90		3¼	—	—	swivel	HM31B	MES1-S
	2.5"				2½											90		4⅞	—	—	swivel	HM31B	MES1-S
FEMALE SWIVEL INTAKE (HOSE THREAD)	1.5"		1½															1¾	—	—		HF51B	F1-S
	2.5"				2½													2 15/16	—	—		HF51B	F1-S
	3.0"					3												2 15/16	—	—		HF51B	F1-S
	3.5"						3½											2⅝	—	—		HF51B	F1-S
	4.0"							4										3⅜	—	—		HF51B	F1-S
	2.5"				2½					D	P							3½	1⅜	2⅛		HF52D	F2-S
	2.5"				2½					D	P							5½	1⅜	2⅛		HF53D	F3-S
	3.0"					3				D	P							3¾	1⅜	2⅛		HF52D	F2-S
	3.0"					3				D	P							5½	1⅜	2⅛		HF53D	F3-S
	3.5"						3½			D	P							4½	1⅜	2⅛		HF52D	F2-S
	3.5"						3½			D	P							5½	1⅜	2⅛		HF53D	F3-S
	4.0"							4		D	P							5½	1 13/16	2 9/16		HF52D	F2-S
	1.5"		1½														S	1¾	—	—		HF01B	F1-SS
	2.5"				2½												S	2 15/16	—	—		HF01B	F1-SS
	3.0"					3											S	2 15/16	—	—		HF01B	F1-SS
	3.5"						3½										S	2⅝	—	—		HF01B	F1-SS
	4.0"							4									S	3⅜	—	—		HF01B	F1-SS

UNIBODY APPARATUS

ADAPTERS

Style	Valve Size	Pipe Size (Inches) 1	1½	2	2½	3	3½	4	5	Drain (¾")	Pressure Tap (¼")	Flow Port	Check Valve	4 Degree Offset	30 Degree Droop	90 Degree Droop	Strainer	Dimension A	Dimension B	Dimension C	Note	MODEL Elkhart #	Akron #
FEMALE SWIVEL INTAKE (HOSE THREAD)	2.0"				2½					D							S	4⅝	1⅜	2⅛		HF12D	F12-SS
	2.5"				2½					D	P						S	3½	1⅜	2⅛		HF02D	F2-SS
	2.5"				2½					D	P						S	5½	1⅜	2⅛		HF03D	F3-SS
	3.0"				2½					D	P						S	3 13/16	1⅜	2⅛		HF04D	F4-SS
	3.0"				2½					D	P						S	5½	1⅜	2⅛		HF05D	F5-SS
	3.0"					3				D	P						S	3¾	1⅜	2⅛		HF02D	F2-SS
	3.0"					3				D	P						S	5½	1⅜	2⅛		HF03D	F3-SS
	3.0"							4		D							S	4	1⅜	2⅛		HF06D	F6-SS
	3.5"						3½			D	P						S	4½	1⅜	2⅛		HF02D	F2-SS
	3.5"						3½			D	P						S	5½	1⅜	2⅛		HF03D	F3-SS
	4.0"							4		D	P						S	5½	1 13/16	2 9/16		HF02D	F2-SS
	3.5"						3½			D					30		S	6¾	1⅜	2⅛	2 x ¾" drain	HF22D	FE2-SS
	2.5"				2½					D	P				30		S	7⅛	1⅜	2⅛		HF23D	FE3-SS
	3.0"					3				D	P				30		S	7¾	1⅜	2⅛		HF23D	FE3-SS
	3.5"						3½			D	P				30		S	7⅞	1⅜	2⅛		HF23D	FE3-SS
	2.5"				2½					D						90	S	10¾	1⅜	2¼	2 x ¾" drain	HF26D	FE6-SS
FLEX HOSE	2.5"				2½													1⅞	—	—		FM01B	P1-SH
	3.0"					3												1 15/16	—	—		FM01B	P1-SH
	3.0"					3												2¼	—	—		FM51B	PA-SH
	3.0"					3								4				2¼	—	—		FM61B	PO-SH
	3.0"							4										1 15/16	—	—		FM12B	P12-SH
	4.0"							4										2 5/16	—	—		FM01B	P1-SH
SOLDER	1.5"		1½															1¼	—	—		SF03B	P3-S
	2.0"			2														1¼	—	—		SF03B	P3-S
	2.5"				2½													1⅞	—	—		SF03B	P3-S
	3.0"					3												1⅞	—	—		SF03B	P3-S
	3.5"						3½											2¼	—	—		SF03B	P3-S
	4.0"							4										2⅜	—	—		SF03B	P3-S

ADAPTERS

	Style	Valve Size	Pipe Size (Inches) 1	1½	2	2½	3	3½	4	5	Drain (¾")	Pressure Tap (¼")	Flow Port	Check Valve	4 Degree Offset	30 Degree Droop	90 Degree Droop	Strainer	Dimension A	Dimension B	Dimension C	Note	MODEL Elkhart #	Akron #
VICTAULIC		1.5"		1½															1 15/16	—	—		VA01B	V1-S
		2.0"			2														1 15/16	—	—		VA01B	V1-S
		2.5"				2½													1 15/16	—	—		VA01B	V1-S
		3.0"					3												2⅛	—	—		VA01B	V1-S
		3.5"						3½											2 3/16	—	—		VA01B	V1-S
		4.0"							4										2¼	—	—		VA01B	V1-S
		1.5"		1½							D	P							3¼	1⅜	2⅛		VA03D	V3-S
		2.0"			2						D	P							3¼	1⅜	2⅛		VA03D	V3-S
		2.5"				2½					D	P							3 3/16	1⅜	2⅛		VA03D	V3-S
		2.5"					3				D	P							3½	1⅜	2⅛		VA04D	V4-S
		3.0"					3				D	P							3 3/16	1⅜	2⅛		VA03D	V3-S
		4.0"							4		D	P							4	1 15/16	2 11/16		VA03D	V3-S
		2.0"			2	2½							F						4 5/16	—	—	2" F NPT & 2.5" Vic	NF20F	P20-SF
		2.5"				2½	3						F						4 5/16	—	—	2.5" F NPT & 3" Vic	NF20F	P20-SF
		1.5"		1½	2						D			C					6	3⅞	4¾	1.5" F NPT & 2" Vic	NF30C	P30-SCV
		3.0"					3		4					C					6 1/16	—	—	3" F NPT & 4" Vic	NF40C	P40-SCV
		3.0"					3		4										2 3/16	—	—	3" F NPT & 4" Vic	NF71B	VT1-S
		3.0"					3		4		D	P							3 7/16	—	—	3" F NPT & 4" Vic	NF72D	VT3-S
		4.0"							4	5									2⅜	—	—	4" F NPT & 5" Vic	NF71B	VT1-S
		1.5"		1½							D						90		3¾	3	—		VA21D	VE1-S
		2.0"			2						D	P					90		3¾	3	—		VA21D	VE1-S
		2.0"			2						D	P					90		5¾	3	—		VA22D	VE2-S
		2.0"			2								F						4½	1¼	—		VA20F	V20-SF
		2.5"				2½							F						4½	1¼	—		VA20F	V20-SF
		3.0"					3						F						4⅜	1⅝	—		VA20F	V20-SF
		2.0"			2						D			C					5⅞	3⅞	4⅝		VA30C	V30-SCV
		2.5"				2½					D			C					6¼	4 5/16	5 1/16		VA30C	V30-SCV
		3.0"					3				D			C					7½	4 15/16	5 11/16	3 x ¾" drain	VA30C	V30-SCV
		2.0"			2														3⅜	3¼	—		VA41B	
		2.5"				2½													5⅜	4⅞			VA41B	
WELD (STAINLESS STEEL)		2.0"			2														2¼	—	—		WA01B	
		2.5"				2½													2¼	—	—		WA01B	
		3.0"					3												2¼	—	—		WA01B	
		3.5"						3½											2¼	—	—		WA01B	
		4.0"							4										2¼	—	—		WA01B	
		2.0"			2						D	P							4⅝	1⅜	2 3/16		WA03D	
		2.5"				2½					D	P							4⅝	1⅜	2 3/16		WA03D	
		3.0"					3				D	P							4⅝	1⅜	2 3/16		WA03D	
		3.5"						3½			D	P							4⅝	1⅜	2 3/16		WA03D	
		4.0 "							4		D	P							4⅝	1⅜	2 3/16		WA03D	

UNIBODY ELECTRIC CONTROLLER

All Elkhart controllers feature a 10 LED ultra-bright display which indicates closed to fully opened status in 10% increments.

- **Suitable for operation with any supply voltage between `12 and 24V DC and require no more than 10 amps**
- **Aluminum housing sealed to NEMA 4 rating**
- **A preset button is programmable for any position**
- **Ultra-bright LED display is visible in sunlight and automatically dims at night**

CAF controller displays CAF options and controls CAF modes. Features include:

- **Multiple programmable presets for several CAF options**
- **Controls both water flow and air (on/off) infusion**

Valve position

UBEC1

Pressure

UBEC2

Flow

UBEC3

CAF

UICS2

Controller Selector Chart

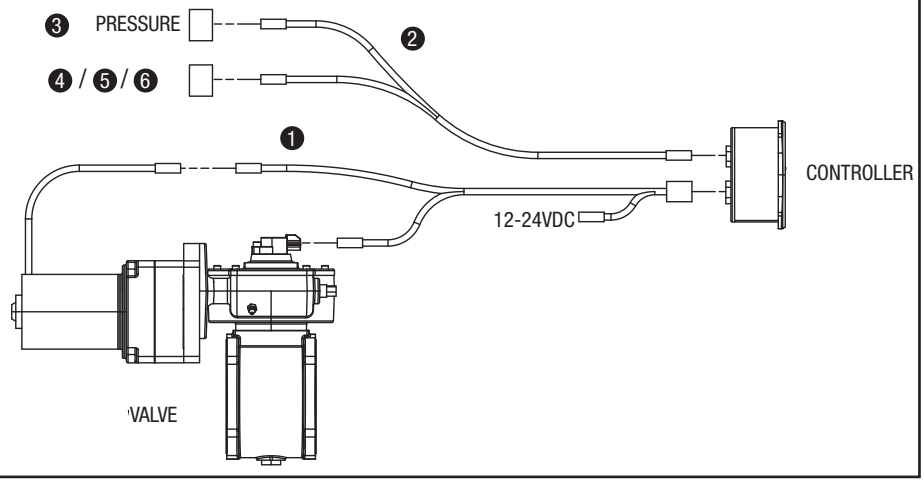
DISPLAYS				MATERIAL	MODEL
Open/Close	Pressure	Flow	CAF Mode	Aluminum	
•				s	UBEC1
•	•			s	UBEC2
•	•	•		s	UBEC3
•	•		•	s	UICS2

Controllers may be networked for primary-secondary operations with remote display

Components & Options Chart

OPTIONS & COMPONENTS			ILLUSTRATION	MODEL
Electrical Harnesses	Valve to controller (Required for all controllers)	Specify: 10', 20' or 40'	1	
	Pressure sensor to controller harness (Required for UBEC2)	Specify: 10', 20' or 40'	2	
	Pressure and flow sensors to controller harness (Required for UBEC3)	Specify: 10', 20' or 40'	2	
	Pressure sensor and solenoid valve to controller harness (Required for UICS2)	Specify: 10', 20' or 40'	2	
Pressure Sensor	0-600 PSI, 0.25" NPT (Required for UBEC2, UBEC3, or UISC2)		3	65106000
Flow Sensor	Installs in Unibody Valve adapter equipped with a sensor port		4	65107000
	Provided with saddle clamp	2" pipe	5	65108020
		2.5" pipe	5	65108025
		3" pipe	5	65108030
		3.5" pipe	5	65108035
		4" pipe	5	65108040
CAF Air Solenoid	(Required for UISC2)		6	Supplied by others

CONTROLLER WIRING

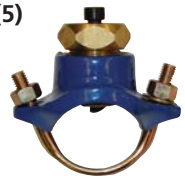


SENSORS

(3)

(4)

(5)



ADDITIONAL INFORMATION

- *Controller has manual override capability.*
- *Unibody Valve information may be found on page 7-6.*

Traditional Apparatus

Elkhart Brass apparatus valves are designed for use as inline, suction, or discharge valves and feature the ability to be field serviced utilizing drop-out or swing-out. All valves offer full flow waterways; adjustable, hydraulically balanced acetal balls; a selection of handle types and positions (for manual valves); and a variety of end cap options customized to your needs. Every Elkhart valve is tested to meet NFPA 1901 standards.

In addition to manual and gear actuated valves, Elkhart offers a variety of electronically actuated valves, such as Elkhart's 2900 series, which allow the pump operator to easily and efficiently control the flow of the fire pump from a position at the pump control panel.

800 SERIES

- Brass construction
- Adjustable, teflon impregnated neoprene seat
- Pressure rated to 250 psi (17.2 bar)
- Available with remote and direct manual handle actuators

2800 SERIES – HYDRO-LOC®

- Brass construction
- Self-locking mechanism
- Adjustable, teflon impregnated neoprene seat
- Pressure rated to 250 psi (17.2 bar)
- Available with remote and direct manual handle actuators

2900 SERIES

- Brass construction
- UHMWPE valve seat(s)
- Pressure rated to 250 psi (17.2 bar)
- Available with gear or electric actuators

2950 SERIES

- Cast iron construction
- Aluminum/bronze disc with reinforced bi-directional EPDM seat
- Pressure rated to 250 psi (17.2 bar)
- Available with gear or electric actuators
- No end caps — fits between 150# ANSI flanges

2925A

- Lightweight Elk-O-Lite® construction
- Self-locking mechanism
- Dual neoprene seats with acetal ball
- Pressure rated to 250 psi (17.2 bar)
- End cap options include: #01, #10, #30, and #38
- Furnished with #80 handle for direct operation

W-893

- 3" waterway with brass construction
- Flanged, 8-bolt end mounts directly to suction side of Waterous pump
- Adjustable, teflon impregnated neoprene seat
- Pressure rated to 250 psi (17.2 bar)
- Furnished with #60 end cap
- Optional check valve seat disk available

TRADITIONAL APPARATUS

Waterway Size (Inches)	TYPE		AVAILABLE ACTUATORS							MATERIAL			Weight (Lbs.)	MODEL
			Handles				Gear Hand-wheel Options							
	Butterfly*	Ball	D	E	F	Electric	Hand-wheel & Bushing	Hand-wheel, Bushing and Valve Position Indicator Kit	Hand-wheel mounted to Valve	Brass	Cast Iron	Elk-O-Lite®		
1		•	•							•			3.6	890-xx-xx-D
		•		•						•			3.6	890-xx-xx-E
1.5		•	•							•			6.6	2891-xx-xx-D
		•			•					•			6.6	2891-xx-xx-F
		•	•							•			6.6	891-xx-xx-D
		•		•						•			6.6	891-xx-xx-E
		•				•				•			15.3	2915E-xx-xx-91
2		•	•							•			9.5	2892-xx-xx-D
		•			•					•			9.5	2892-xx-xx-F
		•	•							•			9.5	892-xx-xx-D
		•		•						•			9.5	892-xx-xx-E
		•				•				•			18.9	2920E-xx-xx-91
		•					•			•			17.5	2920G-xx-xx-90
		•						•		•			17.5	2920G-xx-xx-92
		•							•	•			17.5	2920G-xx-xx-94
2.5		•	•							•			17.4	2896-xx-xx-D
		•			•					•			17.4	2896-xx-xx-F
		•	•							•			17.4	896-xx-xx-D
		•		•						•			17.4	896-xx-xx-E
		•			•					•			17.4	896-xx-xx-F
		•		•								•	6.4	2925A-xx-xx-80
		•				•				•			22.3	2925E-xx-xx-91
		•					•			•			24.9	2925G-xx-xx-90
		•						•		•			24.9	2925G-xx-xx-92
		•							•	•			24.9	2925G-xx-xx-94
3		•	•							•			22.3	2893-xx-xx-D
		•			•					•			22.3	2893-xx-xx-F
		•	•							•			22.3	893-xx-xx-D
		•		•						•			22.3	893-xx-xx-E
		•			•					•			22.3	893-xx-xx-F
		•	•							•			20.8	W-893-xx-xx-D
		•				•				•			28.1	2930E-xx-xx-91
	•					•					•		18.75	2953E-xx-xx-91
		•					•			•			28.8	2930G-xx-xx-90
		•						•		•			28.8	2930G-xx-xx-92
		•							•	•			28.8	2930G-xx-xx-94
4		•				•				•			36.9	2940E-xx-xx-91
		•				•				•			15.3	W2940E-xx-xx-91
	•					•					•		23.6	2954E-xx-xx-91
		•					•			•			37.6	2940G-xx-xx-90
		•						•		•			37.6	2940G-xx-xx-92
		•							•	•			37.6	2940G-xx-xx-94
	•						•				•		22.5	2954G-xx-xx-90
	•							•			•		22.5	2954G-xx-xx-92
	•								•		•		22.5	2954G-xx-xx-94
5	•					•					•		27.1	2955E-xx-xx-91
	•						•				•		26.3	2955G-xx-xx-90
	•							•			•		26.3	2955G-xx-xx-92
	•								•		•		26.3	2955G-xx-xx-94
6	•					•					•		33.8	2956E-xx-xx-91
	•						•				•		32.9	2956G-xx-xx-90
	•							•			•		32.9	2956G-xx-xx-92
	•								•		•		32.9	2956G-xx-xx-94

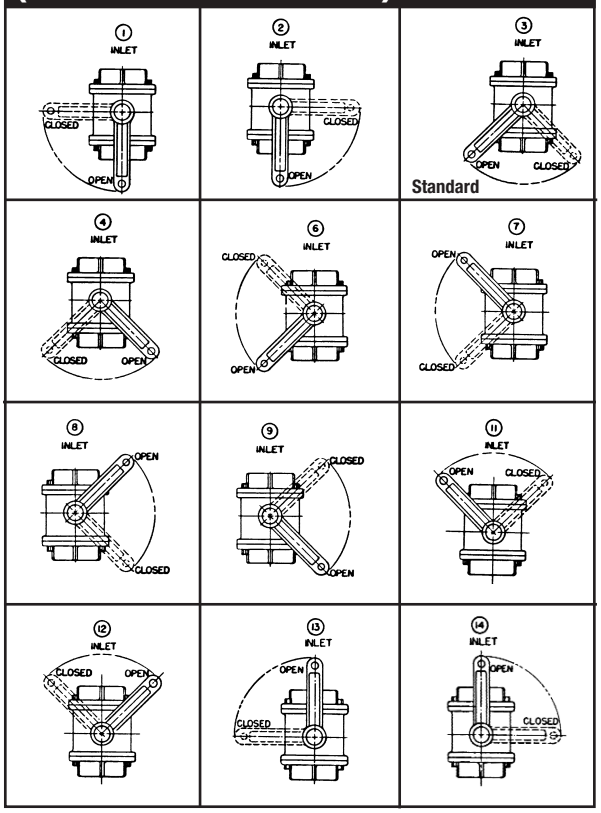
*Fits between 150# ANSI flanges and aluminum/bronze disc with re-inforced EPDM seat. Butterfly valves do not utilize end caps.

HOW TO ORDER A VALVE

Please follow the steps outlined below to order a valve

- Select base valve type model (ex: 892)
- Select inlet end cap (ex:-03)
- Select outlet end cap (ex:-03)
- Select handle or actuator (ex: -F)
- Select optional harness (for electric gear valves as applicable)
- Ex: 892-03-03-F

OPTIONAL HANDLE POSITIONS (800 AND 2800 SERIES)



ADDITIONAL INFORMATION

HANDLE POSITION

Please indicate your preferred handle or gear position when ordering if other than standard.

OTHER PRODUCTS

End cap options are based on valve size. End caps may be found beginning on page 7-22.

VALVE CONTROLLER

Elkhart Brass' new line of valve controllers and valve position indicators is completely self-contained in a box that is more than 50% smaller than competitive units.

These new products:

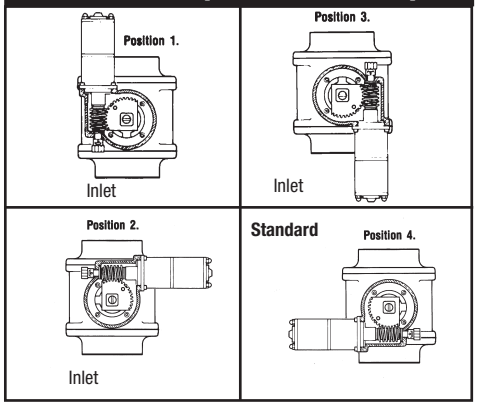
- Require minimal pump panel space
- Are easy to install
- Need no maintenance
- Feature 100,000 hour LEDs mounted within an optical filter to maximize visibility in bright sunlight
- Has durable push buttons that maintain NEMA 4 sealing

ELECTRIC VALVE KIT

Includes:

- Valve controller (featuring a chrome bezel)
- One (1) harness to valve length (5', 10', 20' — standard, 30' or 40' — please *specify*)
- One (1) harness to power source length (6")
- In the case of a primary/secondary situation, two complete electric valve kits would be sent, as well as: a controller to valve harness (5', 10', 20' — standard, 30' or 40' — please *specify*) and a communication harness (5', 10', 20' — standard, 30' or 40' — please *specify*)

OPTIONAL GEAR / MOTOR POSITIONS (2900 SERIES)



END CAP (ADAPTER) OPTIONS

The 800, 2800 and 2900 series valves can be utilized as inline, suction, or discharge valves with virtually any fire pump. Choose any of these end cap options, based on valve size, to make up the valve combination that best fits your individual needs.

All dimensions shown in charts, unless otherwise noted, are the length (L) of the end cap. (Fig. 1)

All end caps for the 1.0", 1.5", 2.0" 2.5", and 4.0" valves have 4 bolts. (Fig. 2)

End caps for the 3.0" valves have 6 bolts. (Fig. 3)

Figure 1

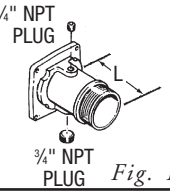


Fig. 1

Figure 2

4 BOLT

Fig. 2

Figure 3

6 BOLT

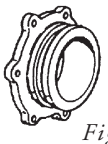
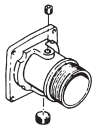
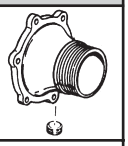
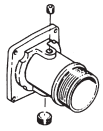
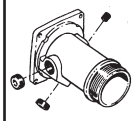
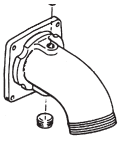
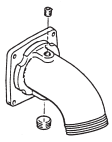


Fig. 3

MALE HOSE THREAD END CAPS

End Cap No.	30	31	32	33	34
Valve Size					
1.5"	1.187" L +			2.000" L +●	
2.0"	1.375" L +	1.562" L (2.5" Thd) ++			3.000"L (2.5"Thd) ++
2.5"	1.750" L +	1.812" L (3.0" Thd) ++	2.750" L +	4.000" L +	
3.0"	1.937" L +	2.625" L (3.5" Thd) ++		4.125" L +♥	4.125" L (3.5" Thd) ++♥

MALE HOSE THREAD END CAPS

End Cap No.	35	36	37	37.1	96
Valve Size					
2.5"	5.000" L +	6.187" L +♥	7.016" L (45°) +	12.312" L +	1.750" L +
3.0"			6.724" L (2.5" Thd) +++●		
4.0"			8.922" L +		

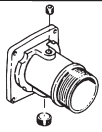
\+ Thread size same as valve size.
++ Thread size larger than valve size.
+++ Thread size smaller than valve size.
♥ Has two .750" NPT drain taps.
● No plugs in this end cap.

ADDITIONAL INFORMATION

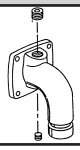
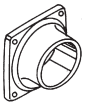
THREADS

All hose threads are NHT unless otherwise specified. See index T-12 for alternative thread options.

MALE NPT END CAPS

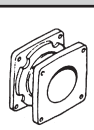
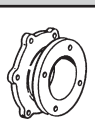
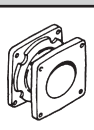
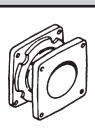
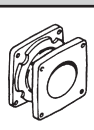
End Cap No.	40	41	42	43	44
Valve Size					
1"	1.375" L +				
1.5"	1.375" L +				
2.0"	1.625" L +	1.937" L (2.5" Thd) ++		2.000" L + •	3.000"L +
2.5"	1.937" L +	2.078" L (3.0" Thd) ++			5.000" L +
3.0"	2.625" L +	2.625" L (3.5" Thd) ++	2.625" L (4.0" Thd) ++		
4.0"	2.687" L +				

VICTAULIC, SOLDER & FLEXHOSE END CAPS

End Cap No.	50	51	52	55	09	60
Valve Size						
1"					0.938" L (SOLDER)	
1.5"	1.625" L (1.5" VIC)			A=3.375" B=3.187"	1.125" L (SOLDER)	
2.0"	1.625" L (2.0" VIC)		3.000" L (2.0" VIC)	A=3.687" B=4.750"	1.062" L (SOLDER)	
2.5"	1.750" L (2.5" VIC)	1.937" L (3.0" VIC)	2.750" L (2.5" VIC)		1.750" L (SOLDER)	
3.0"	1.937" L (3.0" VIC)	1.750" L (4.0" VIC)	3.531" L (3.0" VIC)♥		1.625" L (SOLDER)	1.963" L (3.5" O.D.) (4° PITCH)
4.0"	2.063" L (4.0" VIC)		3.563" L (4.0" VIC)			

\+ Thread size same as valve size.
++ Thread size larger than valve size.
+++ Thread size smaller than valve size.
♥ Has two .750" NPT drain taps.
● No plugs in this end cap.

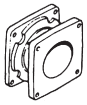
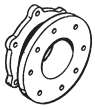
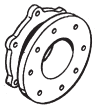
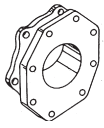
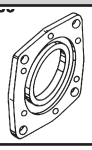
FLANGE END CAPS

End Cap No.	20	20	20.1	20.2	21
Valve Size					
1.5"	1.750" L ★★★				
2.0"	2.750" L W or H ++++				
2.5"	2.750" L W or H ++++		6.670" L W or H ++++	4.850" L W or H ++++	2.125" L W or H ++++
3.0"		2.312" L H ++++	2.312" L ★★★★		2.312" L H ++++

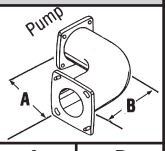
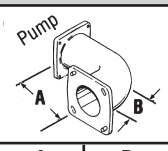
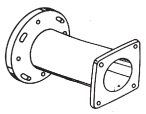
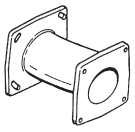
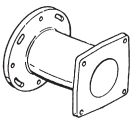
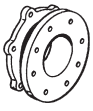
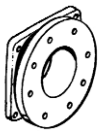
Designations for pump flanges:

D = Darley Pump
H = Hale Pump
W = Waterous Pump

FLANGE END CAPS

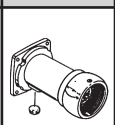
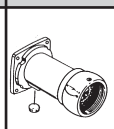
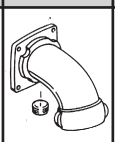
End Cap No.	22	22	22.1	23	94	53	54
Valve Size							
2.5"	2.125" L D +				2.563" L 2.5" - 150# (ANSI)		
3.0"		2.312" L H ++	2.312" L D +	2.500" L W ★		.750" L W ★★	2.675" L W (4° Pitch) +++
4.0"					3.000" L 4.0" – 150# (ANSI)		

FLANGE END CAPS

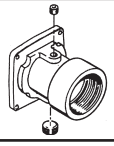
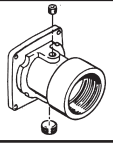
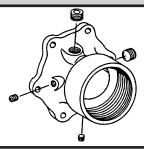
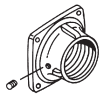
End Cap No.	24	25	26	27	28	29	29.1
Valve Size							
	A | B	A | B					
2.0"	3.750" | 5.500" W or H ++++				6.000" L W or H ++++•		
2.5"	6.000" | 5.500" W or H ++++	6.000" | 3.500" W or H ++++	8.093" L W or H ++++•	6.093" L W or H ++++•	6.093" L W or H ++++•		
3.0"	6.000" | 4.438" W or H ++++	6.000" | 2.438" W or H ++++			5.500" L W or H ++++•	2.312" L W +++	
4.0"	5.500 | 9.500" W, H ++, +++♥					2.687" L W +++	2.687" L H ++

+	Flange has 4.594" bolt circle.	★	Flange has 6.625" bolt circle.	•	Offset .547" (10.8")
++	Flange has 5.750" bolt circle.	★★	Flange has 7.778" bolt circle.	♥	Elbow 94°
+++	Flange has 5.500" bolt circle.	★★★	Flange has 3.000" bolt circle.		
++++	Flange has 4.375" bolt circle.	★★★★	Flange has 4.250" bolt circle.		

FEMALE HOSE THREAD SWIVEL END CAPS

End Cap No.	10	11	19	12	13	14	17	15	16	18	98
Valve Size											
1.5"	1.766" L +										
2.0"		2.297" L (2.5" Thd) ++									
2.5"	2.297" L +	2.437" L (3.0" Thd) ++		3.203" L +	4.922" L +	5.062" L (3.0" Thd) ++		7.297" L +	7.437" L (3.0" Thd) ++	7.933" L (45°) +	
3.0"	2.578" L +		2.859" L (2.5" Thd) +++		4.562" L +♥	5.172" L (3.5" Thd) ++♥	4.422" L (2.5" Thd) +++♥				6.219" L +♥
4.0"							4.611" L (3.5" Thd) +++				

FEMALE NPT END CAPS

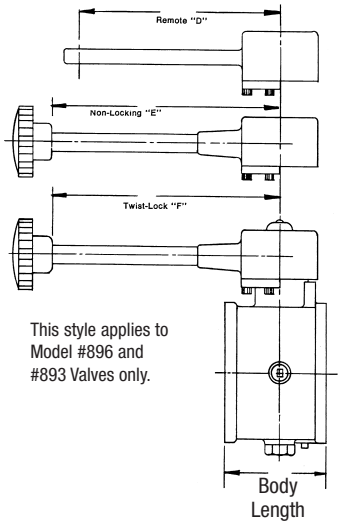
End Cap No.	01	02	03	04	05	95	97
Valve Size							
1"	.813" L +						
1.5"	.969" L +	1.469" L (2.0" Thd) ++	2.000" L +•				
2.0"	1.062" L +	1.625" L (2.5" Thd) ++	3.000" L +				
2.5"	1.937" L +	2.078" L (3.0" Thd) ++	4.000" L +	4.000" L (3.0" Thd) ++		1.937" L +•	1.250" L +
3.0"	1.625" L +	2.625" L (3.5" Thd) ++	4.125" L +♥	4.125" L (3.5" Thd) ++♥■	4.500" L (4.0" Thd) ++♥		
4.0"	2.050" L +		3.291" L +■				

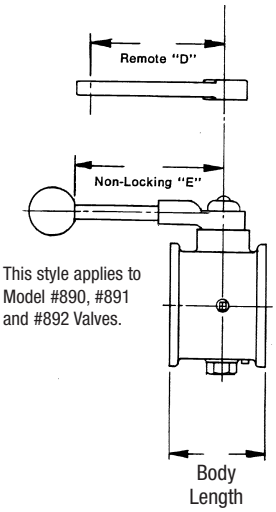
\+ Thread size same as valve size.
++ Thread size larger than valve size.
+++ Thread size smaller than valve size.

♥ Has two .750" NPT Drain Taps.
• .125" NPT plug and no .750" plug.
■ .750" NPT plug and no .250" plug.

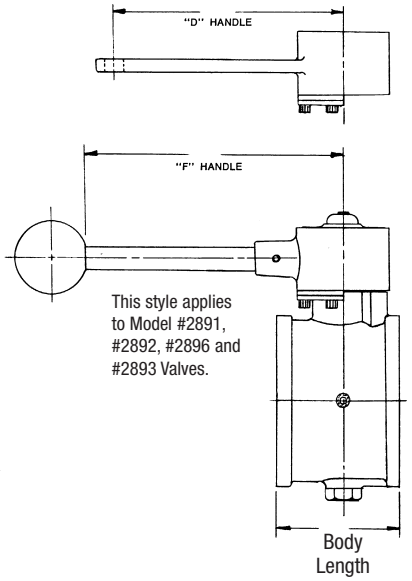
HANDLE OPTIONS

800 SERIES VALVES



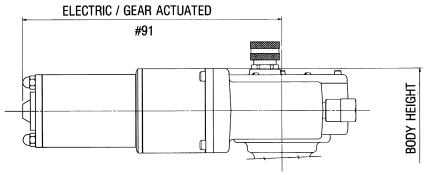


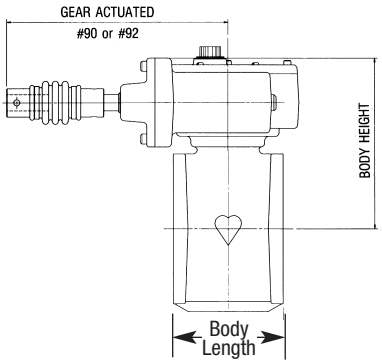
2800 SERIES VALVES



	BODY		HANDLES		
Size	Model	Length	"D"	"E"	"F"
1.0"	890	1.781"	3.5"	3.875"	—
	—	—	—	—	—
1.5"	891	2.5"	3.5"	3.875"	—
	2891	2.5"	3.5"	—	4.312"
2.0"	892	3"	3.5"	3.875"	—
	2892	3"	3.5"	—	4.312"
2.5"	896	3.375"	6.75"	8"	8"
	2896	3.375"	6.75"	—	8"
3.0"	893	4.234"	6.75"	8"	8"
	2893	4.234"	6.75"	—	8"

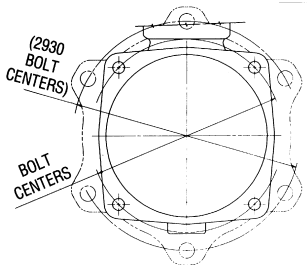
2900 SERIES VALVES





	BODY		ACTUATOR LENGTH			
Model	Size	Length	Height	#90	#91	#92
2915	1.5"	2.5"	4.63"	N/A	6.38"	N/A
2920	2"	3"	4.88"	N/A	6.38"	N/A
2925	2.5"	3.39"	5.16"	—	6.38"	—
2930	3"	4.23"	6"	6.83"	8.5"	6.82"
2940	4"	4.77"	6.31"	6.82"	8.5"	6.82"

BOLT CENTERS



SIZE	END CAP BOLT CENTERS	END CAP BOLT PATTERN
1"	2.719"	4 Bolt
1.5"	3.5"	4 Bolt
2"	4.19"	4 Bolt
2.5"	5.06"	4 Bolt
3"	6"	6 Bolt
4"	7.25"	4 Bolt

PUSH/PULL DRAIN VALVE

110

115

	MODELS	
Product Information	**110**	**115**
Mounting	Direct	Panel
Inlet	0.75" NPT Female	
Outlet	.75" NPT Female	Male shank outlet for .75" ID drain hose
Handle length	2.25"	
Optional handle lengths	4.375", 3.0", or 1.5" *(specify)*	
Material	Cast brass valve body with stainless steel handle rod	
Additional features		Body pre-drilled for mounting

TWIST DRAIN VALVE

114

	MODELS	
Product Information	**114A**	**114B**
Mounting	Direct	Panel
Inlet	0.75" NPT Male	
Handle detail	Knurled	
Material	Elk-O-Lite® body with hard anodized finish	Cast brass body; finish — cast brass or chrome plating *(specify)*

116 QUARTER TURN DRAIN VALVE

- Panel mounted
- Body pre-drilled for mounting to pump panel
- Material: Cast brass valve body with stainless steel handle rod
- Inlet: 0.75" NPT
- Outlet: 0.75" NPT
- Machined brass ball
- Optional adapter with .125" NPT tap for gauge

INLET SIZES							2.5" OUTLET OPTIONS				MATERIAL		DIMENSIONS			
Female	Male		2.5" Flange				NPT		Vic-taulic	NHT	Cast Brass	Elk-O Lite®	Length (Inches)	Weight (Lbs.)	MODEL	FIGURE
2.5"	2.5"	3"	Ameri-can	Darley	Hale	Water-ous	M	F								
•							s				•		6.3	11.1	40-10	1
			•		•	•	s		o	o	•		6.8	11.2	40-20	1
				•			s		o		•		6.1	11.1	40-22	1
	♥						s				•		6.8	10.9	40-32	2
	•						s		o		•		6.5	10.6	40-40	2
		•					s		o		•		6.1	10.9	40-41	2
•								s				•	6.3	3.5	40A	

KEY s = standard o = option
♥ NHT

40 RELIEF VALVE

- For use on the suction side of the pump or on a designated LDH discharge outlet
- Complies with NFPA 1901
- Material: Choice of cast brass or Elk-O-Lite® with stainless steel mechanism
- Rubber seat to ensure positive vacuum seal
- Adjustable psi of 75-250 (pre-set to 125 psi)

Figure 1

Fig. 1

Figure 2

Fig. 2

Figures depict general product types only and are not intended to be inclusive of all product features.

728 TANK FILL CHECK VALVE

- Eliminates the need for a quarter-turn ball valve
- Clapper retracts completely to produce a 3" waterway
- Seals quickly to prevent backflow
- Available in brass or Elk-O-Lite® *(specify)*
- Elk-O-Lite® version features NHT threads

THREADS

Inlet information is NHT and outlet information is NPT unless otherwise specified. See index T-12 for alternative thread options.

FEMALE INLET SIZE / TYPE				MALE OUTLET			MOUNT OPTIONS		MOUNTING SPACE (Inches)		TWIST LOCK	BUILT-IN STRAINER	BALL RACE		MATERIAL		Weight (Lbs.)	MODEL	FIGURE
(Inches)	FREE SWIVEL			(Inches)			Stud	Flange	A	B			Single	Double	Brass	Elk-O-Lite®			
	NPT	NPSH	NHT	NHT	NPSH	NPT													
1.5	•			1.5					2.5	3.8			•		•		2.9	348	1
	•					1.5			2.5	3.8			•	•	•		2.9	348	1
	•			1.5					4.0	3.8			•		•		3.5	348L	2
		•		1.5					4.0	3.8			•		•		3.5	348L	
2.0	•			1.5					2.5	4.0			•		•		3.0	348	1
	•			1.5					4.0	4.0			•		•		3.7	348L	2
	•				1.5				4.0	4.0			•		•		3.7	348L	2
	•			1.5			•		2.5	4.0			•		•		3.3	348M	
	•			1.5			•		4.0	4.0			•		•		3.4	348ML	4
	•				1.5		•		4.0	4.0			•		•		3.4	348ML	4
2.5	•			2.5					5.0	6.2				•	•		11.8	348	1
	•			2.5			•	•	5.0	6.3				•	•		11.8	348M	3
4.0	•					4.0			6.0	8.0	s			•	•		30.3	348	5
5.0	•			5.0					6.8	9.5	s	s		•	•		45.0	348	5
	•			6.0					6.4	9.5	s	s		•	•		48.5	348	5
6.0			•	6.0					8.8	6.4		s		•		•	14.3	348A*	6
6.0			•	6.0					16.3	12.3				•		•	20.0	348-2A	7

KEY s = standard o = option
* 5" waterway. Product also includes long handles.

ELBOW CONFIGURATIONS

Figure 1 — **348**

Fig. 1

Figure 2 — **348-L**

Fig. 2

Figure 3 — **348-M**

Fig. 3

Figure 4 — **348-ML**

Fig. 4

Figure 5 — **348 (4" or 5")**

Fig. 5

Figure 6 — **348-A**

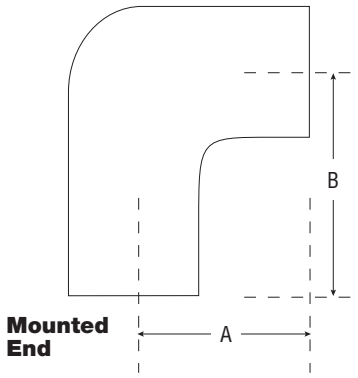
Fig. 6

Figure 7 — **348-2A**

Fig. 7

Figures depict general product types only and are not intended to be inclusive of all product features.

MOUNTING SPACE DIAGRAM



OPTIONS

Polished and rough chrome finish are available on some brass models. Please inquire with our sales staff.

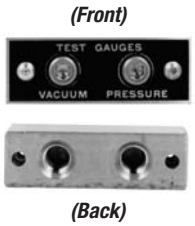
THREADS

All hose threads are NHT unless otherwise specified. See index T-12 for optional base threads.

MOUNT OPTIONS

SIDE

FLANGE



471 – UNDERWRITERS TEST PLUG ADAPTER

- For testing pressure and vacuum on pumpers
- Aluminum body with black face and aluminum lettering
- Length: 4"
- Weight: 0.3 lbs.

S-320 – RUNNING BOARD HOLDER

- For mounting nozzles and accessories on running board or in compartment
- Available in sizes from 1" to 6"
- Male hose thread only
- Material: Cast brass with chrome-plated finish
- Weight: varies by size

653 – TRI-LOC NOZZLE HOLDER

- For mounting nozzles and accessories on running board or in compartment
- Positive grip
- One hand release
- Fits 2.5" hose thread (except NPSH)
- Material: Brass with chrome-plated finish
- Diameter: 5"
- Height: 1.25"
- Weight: 1.5 lbs.

L653 – TRI-LOC NOZZLE HOLDER

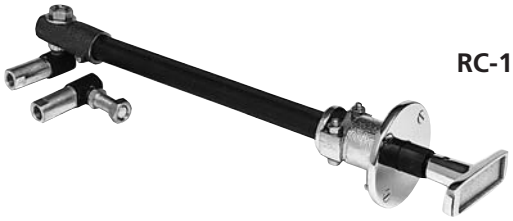
- For mounting nozzles and accessories on running board or in compartment
- Positive grip
- One hand release
- Fits 1.5" hose thread (except NPSH)
- Material: Brass with chrome-plated finish
- Diameter: 5"
- Height: 1.25"
- Weight: 1.5 lbs.

315 – BARREL SUCTION STRAINER

- Complies with NFPA 1901
- Conforms to MIL-S-12165B, Type 1
- Rocker lugs or pin lugs *(Specify)*
- Available bases: 2.5" thru 6" female base, 2.5" or 3" male base *(Specify)*
- Material: Brass with chrome-plated finish
- Dimensions vary by base selection

315FN – BARREL STRAINER WITH FOOT VALVE

- Foot valve for holding water in suction hose during pump priming
- 3" female base
- Material: Cast brass
- Length: 14.5"
- Weight: 16 lbs.

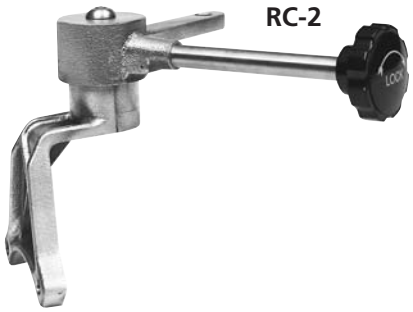


RC-1

TEE HANDLE REMOTE CONTROL UNITS

Push-pull control for the operation of in-line, quarter turn ball valves or built-in eductors. Handle configuration allows identification/location label to be inserted.

PRODUCT INFORMATION	MODELS	
	RC-1	RC-7
Handle	Locking	Non-locking
Installation Diameter	1.9" (Pump panel)	1" (Pump panel)
Furnished with	2 ball joint swivel connectors	
Travel	9.75"	7.3", 9.8" or 11.3" *(specify)*
Material	Chrome-plated cast brass handle with anodized aluminum extrusion rod	
Weight	4 lbs.	1.5 lbs.

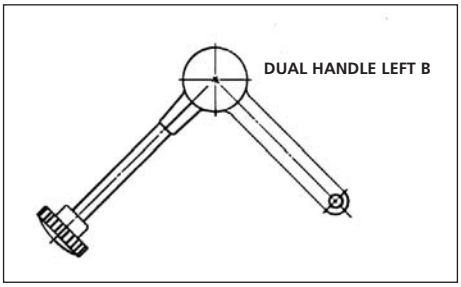


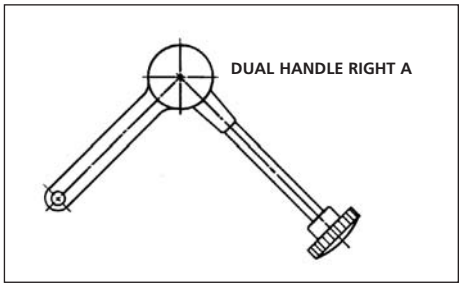
RC-2

PIGGY-BACK REMOTE CONTROL UNITS

Designed for operating discharge valves on the opposite side of apparatus from pump control panel.

PRODUCT INFORMATION	MODELS			
	RC-2	RC-2U	RC-3	RC-3U
Valve Compatibility (For use with)	Elkhart's 896 series valves	Unibody EB25 with D1F or D1S	Elkhart's 2896 series valves	Unibody EB25 with T1F
Handle	Twist-lock		Non-locking	
Orientation *(Specify)*	Dual handle right (A) or left (B)		Dual handle right (A) or left (B)	
Material	Cast brass with stainless steel handle rod			
Length	8"		8"	
Weight	6 lbs.		6 lbs.	





TOP-MOUNT REMOTE CONTROL UNITS

Designed for operating valves from top-mounted operators panel. Both units feature twist-lock handles.

RC-6

PRODUCT INFORMATION	MODELS	
	RC-4	RC-6
Control handle position	90°	135°
Additional pre-drilled	135°	90° or 180°
Remote Arm Length *(specify)*	3.5" or 5"	3.5" or 5"
Mounting Pad (Holes)	3	3
Material	Cast brass with stainless steel handle rod	
Length	11.5"	11.5"
Weight	5.5 lbs.	5.5 lbs.

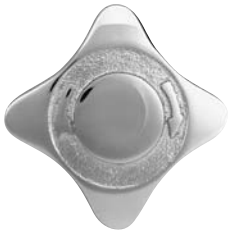
RC-10 – SLOW CLOSING VALVE CONTROL

- Remote actuation of any ball valve
- Linear output screw-type actuator compliant with NFPA 1901 (as it pertains to slow-closing valves)
- Actuator and push-rod constructed of extruded aluminum alloys
- Precision needle thrust bearing and hardened thrust washers
- 5" cast alloy hand-wheel with collet-type connection allows for easy compact thru-panel installation (either new or retro-fit)
- Furnished with threaded ball swivel joint at end of drive rod
- Installation diameter: 1.03" (pump panel)
- Length: 16.4" (retracted) and 21.4" (extended)
- Weight: 3.2 lbs.
- Valve Status Indicator (optional)

VALVE STATUS INDICATOR

- Requires minimal pump panel space
- Tri-color indicators: red (closed), yellow (gated) and green (open)
- Feature 100,000 hour ultra bright LEDs mounted within an optical filter to maximize visibility in bright sunlight
- NEMA 4 rated

RC Accessories



775-5 – HANDLE

- For remote control screw type gate valve or gear driven valve
- Bored for .375" rod
- Material: Cast brass with chrome-plated finish
- Diameter: 4"
- Weight: 1.0 lbs.

775-11 – ROD GUIDE

- For centering and guiding remote control rod
- Nylon sleeve for 0.5" rod
- Material: Cast brass with chrome-plated finish
- Diameter: 1.5"
- Weight: 0.2 lbs.

775-15 – TEE HANDLE

- For use with push-pull rods to remotely operate in-line, quarter turn ball valves or built-in eductors
- Bored for 0.5" rod
- Can be threaded to .500" — 13 or .500" — 20 *(specify)*
- Handle configuration allows identification/location label to be inserted
- Material: Cast brass with chrome-plated finish
- Height: 1.1"
- Weight: 0.5 lbs.

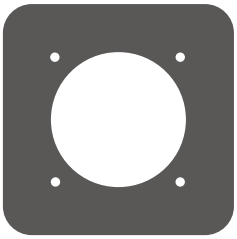
UNIBODY HAND-WHEEL

HAND-WHEEL

PRODUCT INFORMATION	MODELS	
	GWP-4	GWP-6.3
Hand-wheel diameter	4"	6.3"
Material	Aluminum	
Finish *(specify)*	Black or Chrome	
Installation diameter	1.125"	
Furnished with	Panel bushing and two universal swivel joints with protective rubber boots	
Weight	4.0 lbs.	4.5 lbs.

PT SERIES

Color-Coded intake and discharge identification labels. The flexible, waterproof, die-cut labels can be trimmed to custom-fit your apparatus.



Available colors:

Field Adjustable Pressure Reducing (URFA)

Elkhart's URFA valve is a true pressure reducing valve, operated automatically by inner hydraulic controls. While the valves are preset at the factory, they are field adjustable — allowing you to tailor the pressure to your needs. They feature manual valve open and close, as well as pressure adjustment — all of which require extremely low torque to change due to the patent pending design. Inlet pressure up to 400 psi (27.58 bar) is controlled under all flow and no-flow conditions.

Valve size and weight permit installation in significantly tighter areas and smaller hose cabinets (those used for 1½" or 2½" valves) — allowing savings of both space and money. The URFA also functions as a floor control valve in automatic sprinkler systems as well as a standpipe valve or hose valve for Class I and Class III systems.

INLET SIZE	OUTLET SIZES		TYPE		CERT.	DIMENSIONS (INCHES)								Integral Superv. Switch	FINISH			Wt. (Lbs.)	MODEL	FIGURE
2½" F NPT*	2½"		Angled	Straight	UL Listed	Closed		Open		C	D	E	F		Brass		Chrome			
	F (NPT)*	M(NHT)				A	B	A	B						Cast	Pol	Pol			
•	•		•		•	13⅜	11⅜	14¼	12¼	2⅜	3¼	5	4¼	o	s	o	o	18½	URFA-20-2.5	1
•		•	•		•	13⅜	11⅜	14¼	12¼	2⅜	3⅜	5	4¼	o	s	o	o	18½	URFA-25-2.5	2
•	•			•	•	14½	11 29/32	15⅛	12¼	3½	4	5	4¼	o	s	o	o	26½	URFA-20S-2.5	3

KEY s = standard o = option

* Grooved connection available for inlet or outlet use — add 1.44" per connection.

Figure 1

URFA-20-2.5

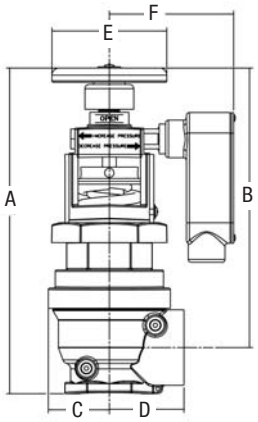


Fig. 1

Figure 2

URFA-25-2.5

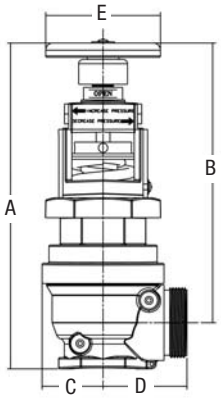


Fig. 2

Figure 3

URFA-20S-2.5

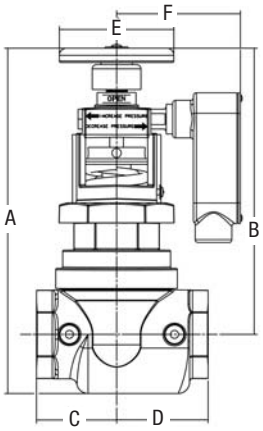


Fig. 3

PRODUCT HIGHLIGHTS

URFA features include:

- Manual open-close requires less than 15 lbs. of torque
- Pressure rated up to 400 psi (27.58 bar)
- Flow rated up to 500 gpm (1893 lpm)
- Open-Close indication from 2 view directions
- Color-coded pressure reduction label
- Tapped for pressure gauge on both inlet and outlet side of valve
- Tamper-resistant protection
- UL Listed as a check valve for use in dual riser systems
- Optional integral supervisory switch (alarm) mounts directly to valve with no bracket required
- Optional integral supervisory switch (alarm) is available either "OPEN TO SIGNAL" or "CLOSED TO SIGNAL"
  - With the valve in the open position, to close an electrical circuit and send the signal is defined as "CLOSED TO SIGNAL"
  - With the valve in the closed position, to close an electrical circuit and send a signal is defined as "OPEN TO SIGNAL"

ADDITIONAL INFORMATION

Includes adjustment rod.

THREADS

- *Valve inlet information is NPT unless otherwise specified. Special threads available through adapter use.*
- *See index T-12 for alternative outlet thread options.*

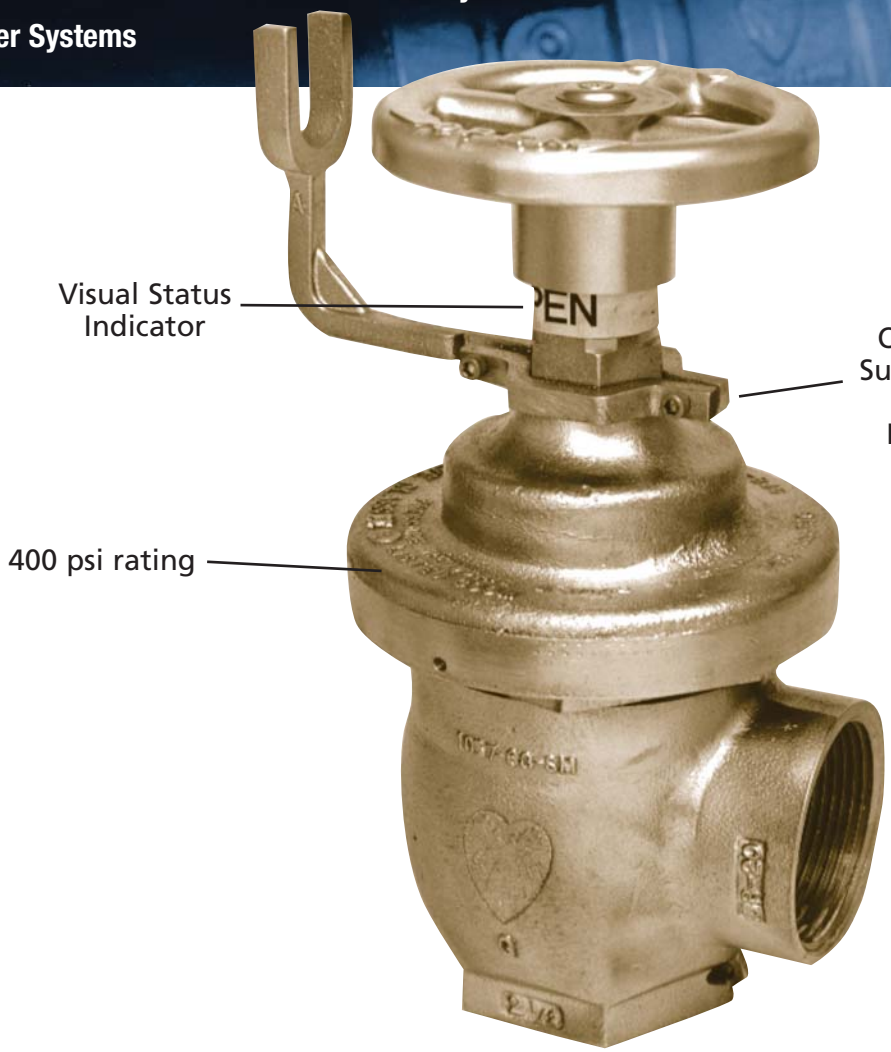
Pressure Reducing (Pressure-Matic)

Elkhart's Pressure-Matic is a true pressure reducing valve, operated automatically by inner hydraulic controls. No diaphragms, springs or outside controls are involved with the unit, the action being completely dependent upon conditions at the nozzle or sprinkler system.

Elkhart Brass offers 18 different valve pressure types/ranges for building systems. Inlet pressure up to 400 psi (27.58 bar) is controlled under all flow and no-flow conditions.

The UR valve series may be used as a standard shut-off. The valves are completely tamper-proof. They fit all existing cabinets where 1½" or 2½" valves are currently in use. Pressure-Matic valves can be used for/in:

- **Floor Control Valve**
- **Standpipe System**
- **Automatic Sprinkler Systems**
- **UL Listed as a check valve for use in dual riser systems**



INLET SIZES		OUTLET SIZES				TYPE		CERT.	DIMENSIONS (Inches)							BRASS FINISH			Weight (Lbs.)	MODEL	FIGURE
Female (NPT)		Female (NPT)		Male (NHT)					A												
1½"	2½"	1½"	2½"	1½"	2½"	Ang	Str	UL Listed	Min	Max	B	C	D	E	F	Cast	Polished*	Chrome*			
•		•				•		•	7¾	8¼	4	2½	3½	2 3/16	1⅞	s	o	o	7½	UR-20-1.5	1
•				•		•		•	7¾	8¼	4	2 7/16	3½	2 3/16	1⅞	s	o	o	7½	UR-25-1.5	2
	•		•			•		•	11	11⅝	5	2⅝	5⅞	3¼	2 13/16	s	o	o	18½	UR-20-2.5	1
	•				•	•		•	10 9/16	11⅜	5	2⅝	5⅞	3⅜	2 13/16	s	o	o	18½	UR-25-2.5	2
	•		•				•	•	12 3/16	12 13/16	5	10 to 10½	5⅞	4	7½	s	o	o	26½	UR-20S-2.5	3

KEY s = standard o = option *Partial polished

Figure 1

UR-20

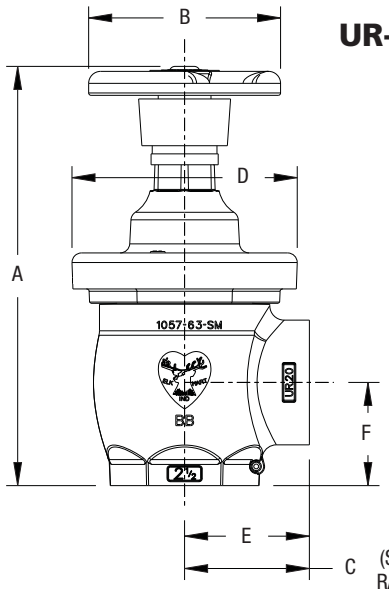


Fig. 1

Figure 2

UR-25

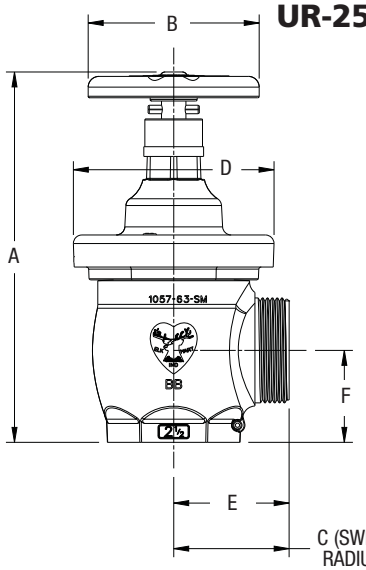


Fig. 2

Figure 3

UR-20S

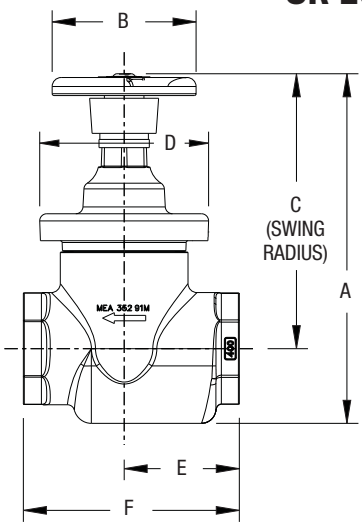
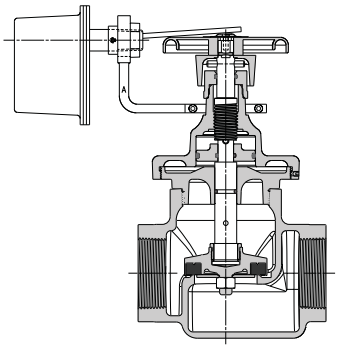


Fig. 3

DIAGRAM

UR20/25



ADDITIONAL INFORMATION

- *Customer must fill out valve data sheet on page G-7, factory setting required.*
- *Calculator for determining valve pressure range is available from Elkhart Brass. Please inquire with our sales staff or see our website.*

THREADS

Valve inlet information is NPT unless otherwise specified. See index T-12 for alternative outlet thread options.

Pressure Restricting

Elkhart's pressure restricting valves all feature rugged cast brass construction in your choice of finishes. The pressure restricting valves feature rubber seats and are rated for use at 175 psi (12.15 bar). Although factory setting is recommended, all the pressure restricting valves are field-settable.

Pressure restricting valves:

- **Reduce pressure under flowing conditions**
- **Allow fire departments to override settings in emergency conditions**

INLET SIZES		OUTLET SIZES				CERTIFI-CATIONS	BRASS FINISH			DIMENSIONS (Inches)					Weight (Lbs.)	MODEL	FIGURE
Female		Female		Male		UL Listed	Cast	Polished	Chrome Polished	Swing Radius	A	B	Height				
1½"	2½"	1½"	2½"	1½"	2½"								Open	Closed			
•		•				•	s	o	o	2 1/2	2 3/16	4	7 7/8	6 7/8	6	UP-20-1.5	1
	•		•			•	s	o	o	3 5/8	3 1/4	5	11	9 3/8	11 3/4	UP-20-2.5	1
•				•		•	s	o	o	2 1/2	2 1/8	4	7 7/8	6 7/8	6	UP-25-1.5	2
	•				•	•	s	o	o	3 5/8	3 1/4	5	11	9 3/8	11 3/4	UP-25-2.5	2

KEY s = standard o = option

Figure 1

UP-20

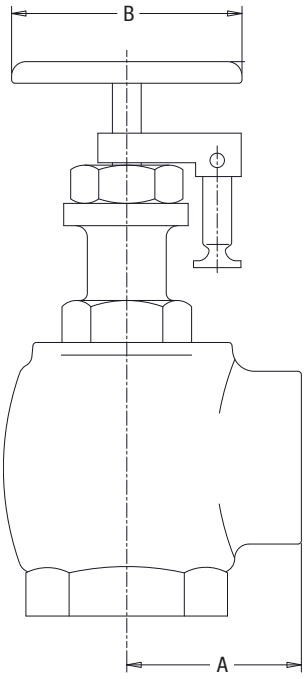
Fig. 1

Figure 2

UP-25

Fig. 2

DIAGRAM



ADDITIONAL INFORMATION

All valves are factory set. To order any of the valves listed here, customer must provide static and residual inlet pressure as well as desired and residual outlet pressure plus flow rate. Please see ordering form on page G-7.

OTHER PRODUCTS

For valves that reduce pressure in no-flow situations please see our Pressure-Matic (page 9-3) or URFA (page 9-1) valves.

THREADS

Valve inlet information is in NPT unless otherwise specified. See index T-12 for alternative outlet thread options.

Angle

Elkhart's angle valves all feature rugged cast brass construction in your choice of finishes. Additionally, all feature rubber seats and are rated at 300 psi (20.68 bar).

INLET SIZES		OUTLET SIZES				CERTIFI-CATIONS		BRASS FINISH			DIMENSIONS (Inches)					Weight (Lbs.)	MODEL	FIGURE
Female		Female		Male										Height				
1½"	2½"	1½"	2½"	1½"	2½"	FM App'd	UL Listed	Cast	Pol-ished	Chrome Pol-ished	Swing Radius	A	B	Open	Closed			
•		•				•	•	s	o	o	2½	2 3/16	4	7⅞	6⅞	6	U-20-1.5	1
	•		•			•	•	s	o	o	3⅝	3¼	5	11	9⅜	11¾	U-20-2.5	1
•				•		•	•	s	o	o	2½	2 3/16	4	7⅞	6⅞	6	U-25-1.5	2
	•				•	•	•	s	o	o	3⅝	3¼	5	11	9⅜	11¾	U-25-2.5	2

KEY s = standard o = option

Figure 1

U-20

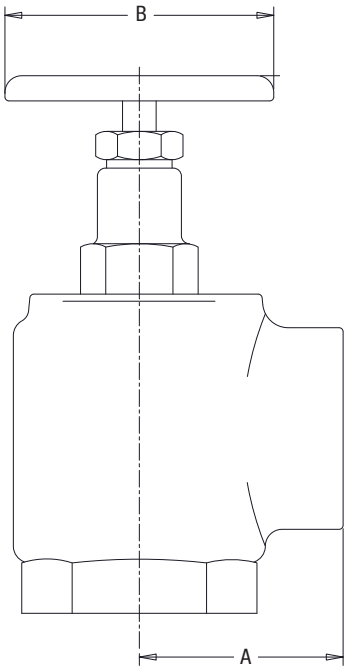
Fig. 1

Figure 2

U-25

Fig. 2

DIAGRAM



ADDITIONAL INFORMATION

THREADS

Valve inlet information is in NPT unless otherwise specified. See index T-12 for alternative outlet thread options.

24 HYDROLATOR VALVE

- For venting and draining valves
- 1½"
- Finish: cast brass
- Optional finishes: polished brass, cast chrome or polished chrome
- NST threads

34 PRESSURE RESTRICTING VALVE

- Body and swivel: cast brass
- Breakable segment control: aluminum alloy
- Sizes: 1½" or 2½" *(specify)*
- Finish: cast brass
- Optional finishes: polished brass, cast chrome or polished chrome
- U.L. Listed (2½" only)

ADDITIONAL INFORMATION

Model 34 is factory set. To order, customer must provide static and residual inlet pressure as well as desired and residual outlet pressure plus flow rate. Please see ordering form on page G-7.

THREADS

Valve inlet/outlet information is in NHT unless otherwise specified. See index T-12 for alternative outlet thread options.

Heavy Duty Hydrant

The Elkhart Brass heavy duty hydrant valve is specifically designed for wet hydrants in industrial facilities. All components, especially the reinforced bonnet and special alloy machined stem, stand up to continuous use/abuse and harsh environments. Maximum operating pressure of 300 psi.

INLET		OUTLET		MODEL
NPT (Inches)		NST (Inches)		
3	4	2.5	4.5	
•		•		H28-3
	•		•	H28-4

ADDITIONAL INFORMATION

OTHER PRODUCTS

- *Cast brass cap with chain available on page 10-1.*
- *Cast aluminum universal hand-wheel (P/N 71571000) available separately.*

THREADS

Valve inlet information is NPT and outlet information is NHT, unless otherwise specified. See index T-12 for alternative outlet thread options.

CAPS & PLUGS

Cap/Plug	Size (Inches)	TYPE: Long Handle	TYPE: Pin	TYPE: Rocker	TYPE: Storz	MATERIAL/FINISH: Brass: Cast brass	MATERIAL/FINISH: Brass: Chrome-plated	MATERIAL/FINISH: Elk-O-Lite®: Hard Anodized	CHAIN: 9"	CHAIN: 16"	DIMENSION: Length (Inches)	DIMENSION: Weight (Lbs.)	MODEL	FIGURE
Cap	.75			•		s	o		s	o	1.125	0.2	310	1
	1.0			•		s	o		s	o	1.125	0.4	310	1
	1.5			•				s	s	o	1.125	0.2	310A	1
			•			s	o		s		1.125	0.7	310	1
				•		s	o		s	o	1.125	0.5	310	1
	2.5			•				s	s	o	1.5	0.4	310A	1
		•				s	o				1.5	2.5	310LH	3
			•			s	o		s		1.5	1.8	310	1
				•		s	o		s	o	1.5	1.3	310	1
	3.0			•		s	o		s	o	1.625	1.8	310	1
	3.5			•		s	o		s	o	1.75	3.3	310	1
	4.0				•			s	*		2.75	2.4	310 Storz	2
				•		s	o		s	o	1.875	4.1	310	1
		•				s	o				1.75	4.5	310LH	3
	4.5			•		s	o		s	o	2.125	5.5	310	1
		•				s	o				2.125	8.0	310LH	3
	5.0				•			s	*		2.625	3.5	310 Storz	2
		•				s	o				1.5	6.8	310LH	3
	6.0	•				s	o				1.625	7.5	310LH	3
	1.5		•			s	o				1.75	1.1	311	4
Plug	2.5			•		s	o				1.75	1.1	311	4
				•		s	o				2.0	1.1	311	4
			•			s	o				2.125	2.2	311	4
				•				s			2.25	0.8	311A	4
			•					s			0.875	0.3	313	5
	3.0			•		s	o				2.125	2.5	311	4
			•					s			0.875	0.4	313	5

KEY s = standard o = option
* Storz option comes with an 18" coated chain.

Figure 1

CAP

- Available with 9" or 16" chain

Fig. 1

Figure 2

STORZ LOCKING CAP

- 18" coated chain

Fig. 2

Figure 3

LONG HANDLE CAP

- Conforms to NFPA 1901 for 500 psi service
- No chain

Fig. 3

Figure 4

PLUG

- Available with 9" chain

Fig. 4

Figure 5

SPANNER LUG PLUG

- "Easy-off" swivel cap
- No chain
- U.L. Listed

Fig. 5

Figures depict general product types only and are not intended to be inclusive of all product features.

OPTIONS

THREADS

Where noted as hose thread, NHT is standard. See index T-12 for optional base threads.

Adapters

In the over 100 years Elkhart has been a fire service manufacturer, we have created a wide assortment of standardized adapters to meet the varied needs of the fire industry. This extensive selection includes thread adapters to suit any need — whether for a male to female; a suction adapter with built-in strainer, NHT, NPT or custom order; or even for a universal adapter — you can find the perfect fit here.

A selection of rocker lug and pin lug options

Several material options — lightweight Elk-O-Lite® or durable cast brass (including some with chrome-plated finish)

HOSE TO HOSE ADAPTERS

What kind of adapter do you need?																							
Step 1: Select Material	Step 2: Choose Connection Type (Inlet to Outlet)	Step 3: Determine Gender (Inlet to Outlet)	Step 4: Select from available options																		Step 5: Pick Model	Figure
			Size (Inches)											Construc-tion		Type						
			Inlet	Outlet Options										Solid	Swivel	Hex	Internal Lug	Long Handle	Pin	Rocker	Model	
				1	1.5	2	2.5	3	3.5	4	4.5	5	6									
Brass	Hose Thread to Hose Thread	NHT (M) to NHT (F)	1		•									•						s	A-327	9
			1.5				•							•						s	D-327	8
			1.5		•		•							•						s	A-327*	9
			1.5				•								•		s			s	S-327	11
			2				•							•						s	A-327	9
			2.5		•		•	•						•						s		
			2.5				•	•							•		s			s	S-327	11
			2.5						•	•	•			•					s		318	12
			2.5				•	•							•					s	105	13
			3				•	•						•						s	A-327	9
			3				•								•		s			s	S-327	11
			3				•	•							•					s	105	13
			3.5						•						•					s		
			4								•		•	•					s		318	12
			4.5										•	•					s			
			5										•	•					s			
			6										•	•					s			
		NHT (F) to NHT (M)	1.5	•	•		•							•						s	A-327	9
			2.5		•									•						s	D-327	8
			2.5		•	•	•	•						•						s	A-327*	9
			2.5		•		•	•							•		s			s	S-327	11
			2.5				•	•							•					s	105	13
			3				•	•						•						s	A-327	9
			3				•								•		s			s	S-327	11
			3				•	•							•					s	105	13
			3.5				•							•					s		318	12
			3.5						•						•					s	105	13
			4				•							•					s			
			4.5				•				•			•					s		318	12
			6							•	•	•	•	•					s			
		NHT (M) to NHT (M)	1.5		•									•						s	M-327	6
			2.5				•							•						s		
		NHT (F) to NHT (F)	1.5		•										•					s	F-327	1
			2.5				•								•					s		
			2.5								•	•	•		•			s			S-319	3
			3					•							•					s	F-327	1
			4.5								•	•	•		•			s			S-319	3
Aluminum	Hose Thread to Hose Thread	NHT (M) to NHT (F)	1.5				•							•						s	D-327A	7
			1.5		•		•							•						s	A-327A	10
			2.5				•							•						s		
		NHT (F) to NHT (M)	1.5		•									•						s	A-327A	10
			2.5		•		•							•						s		
			2.5		•									•						s	D-327A	7
		NHT (M) to NHT (M)	1.5		•									•						s	M-327A	4
			2.5				•							•						s		
			2.5				•							•							M-327ABI	5
		NHT (F) to NHT (F)	1.5		•										•					s	F-327A	2
			2.5				•								•					s		

Key s = standard o = option

* A327 has optional pin lug and chrome finish in the 2.5F by 1.5M/1.5M by 2.5F size.

OPTIONS

THREADS

NHT can also be called NST. See T-12 for optional threads.

MEASUREMENTS

Length measurements shown on page T-13.

UNIVERSAL ADAPTER

- Cast brass construction with chrome-plated finish
- Adapts any 2.5" hose thread to 2.5" NHT
- Positive ratchet lock with thumb release
- Weight: 6.42 lbs.

FEMALE/FEMALE

Figure 1

F-327
- Double swivel female
- Cast brass finish (chrome optional)

Fig. 1

Figure 2

F-327A
- Double swivel female

Fig. 2

Figure 3

S-319
- Double swivel female
- Chrome finish (cast brass optional)

Fig. 3

MALE/MALE

Figure 4

M-327A
- Double male

Fig. 4

Figure 5

M-327ABI
- Double male British Instantaneous

Fig. 5

Figure 6

M-327
- Double male
- Cast brass finish (chrome optional)

Fig. 6

MIXED

Figure 7

D-327A
- Direct connect adapter

Fig. 7

Figure 8

D-327
- Direct connect adapter
- Chrome finish (cast brass optional)

Fig. 8

Figure 9

A-327
- Female rocker lug

Fig. 9

Figure 10

A-327A
- Female rocker lug

Fig. 10

Figure 11

S-327
- Internal lug body
- External female rocker lug
- Cast brass finish (chrome optional)

Fig. 11

Figure 12

318
- Female pin lug
- Chrome finish (cast brass optional)

Fig. 12

Figure 13

105
- 45º discharge elbow
- Female rocker lug
- Chrome finish

Fig. 13

ADDITIONAL INFORMATION

When ordering, specify: model number; inlet size, gender, and thread; outlet size, gender, and thread; as well as any optional type or finish information.

HOSE TO PIPE / PIPE TO HOSE ADAPTERS

What kind of adapter do you need?																								
Step 1: Select Material	Step 2: Choose Connection Type (Inlet to Outlet)	Step 3: Determine Gender (Inlet to Outlet)	Step 4: Select from available options — Size (Inches) — Inlet	Outlet Options — 1	1.5	2	2.5	3	3.5	4	4.5	5	6	Construction — Solid	Swivel	Type — Hex	Internal Lug	Long Handle	Pin	Rocker	Step 5: Pick Model	Figure
Brass	Hose Thread to Pipe Thread	NHT (M) to NPT (M)	1	•										•		s					306	17
			1.5		•									•		s						
			2.5				•	•						•		s						
			4.5								•			•		s						
		NHT (M) to NPT (F)	1.5		•		•							•		s					307	18
			1.5			•								•			s				418-S	21
			2.5			•	•	•						•		s					307	18
			2.5					•						•			s				418	19
			2.5				•							•			s				418-L	20
			2.5				•							•			s				418-S	21
			3					•						•			s				418	19
			3.5						•					•			s					
			4							•		•		•			s					
			4.5							•		•		•			s					
			5							•		•	•	•			s					
			6							•		•	•	•			s					
		NHT (F) to NPT (M)	1.5		•									•		s					307	18
			2.5		•	•	•	•						•		s						
			3				•							•		s						
		NHT (F) to NPT (F)	1.5		•									•		s					3060	15
			2.5				•							•		s						
			2.5				•	•							•	s			s		160	14
			2.5				•	•							•		s			s	419	16
			3				•	•							•	s			s		160	14
			3					•							•		s			s	419	16
	Pipe Thread to Hose Thread	NPT (M) to NHT (M)	1	•										•		s					306	17
			1.5		•									•		s						
			2.5				•							•		s						
			3				•							•		s						
			4.5								•			•		s						
		NPT (M) to NHT (F)	1.5		•		•							•		s					307	18
			2			•								•		s						
			2.5				•	•						•		s						
			3				•							•		s						
		NPT (F) to NHT (M)	1.5		•									•		s					307	18
			2				•							•		s						
			2		•									•			s				418-S	21
			2.5		•		•							•		s					307	18
			2.5				•							•			s				418-L	20
			2.5				•							•			s				418-S	21
			3				•							•		s					307	18
			3				•	•						•			s				418	19
			3.5						•					•			s					
			4							•	•	•	•	•			s					
			5							•	•	•	•	•			s					
			6									•	•	•			s					
		NPT (F) to NHT (F)	1.5		•									•		s					3060	15
			2.5				•							•		s						
			2.5				•	•							•	s			s		160	14
			2.5				•								•		s			s	419	16
			3				•	•							•	s			s		160	14
			3				•	•							•		s			s	419	16
Aluminum	Hose Thread to Pipe Thread	NHT (M) to NPT (F)	2.5				•							•						s	418-SA	22
	Pipe Thread to Hose Thread	NPT (F) to NHT (M)	2.5				•							•						s	418-SA	22

Key s = standard o = option

OPTIONS

THREADS

NHT can also be called NST . See T-12 for optional threads.

MEASUREMENTS

Length measurements shown on page T-13.

UNIVERSAL ADAPTER

435

- Cast brass construction with chrome-plated finish
- Adapts any 2.5" hose thread to 2.5" NHT
- Positive ratchet lock with thumb release
- Weight: 6.42 lbs.

FEMALE/FEMALE

Figure 14

160
- Swivel female to female
- Cast brass finish (chrome optional)

Fig. 14

Figure 15

3060
- Double female
- Cast brass finish (chrome optional)

Fig. 15

Figure 16

419
- Swivel female to female suction adapter
- Built-in strainer
- Chrome finish

Fig. 16

MALE/MALE

Figure 17

306
- Double male
- Cast brass finish (chrome optional)

Fig. 17

MIXED

Figure 18

307
- Cast brass finish (chrome optional)

Fig. 18

Figure 19

418
- Suction adapter
- Removable strainer
- Chrome finish

Fig. 19

Figure 20

418-L
- Long discharge adapter
- Chrome finish

Fig. 20

Figure 21

418-S
- Short discharge adapter
- Chrome finish

Fig. 21

Figure 22

418-SA
- Short discharge adapter
- Female rocker lug

Fig. 22

ADDITIONAL INFORMATION

When ordering, specify: model number; inlet size, gender and thread; outlet size, gender and thread; as well as any optional type or finish information.

Hose Racks

Semi Automatic 1½" hose rack with one piece connection. Patented automatic release mechanism allows valve to be opened without release of water until last fold of hose is removed from the rack. Rack is constructed of 16 gauge steel, rack pins are steel cadium plated. Red enamel finish is standard, chrome is optional.

For lined or unlined standpipe hose or single-jacket synthetic-lined hose, use model S-41. For single-jacket rubber-lined hose, use model S-41-R. All hose specified is single-jacket.

MOUNTING TYPE		HOSE TYPE		HOSE CAPACITY OF RACK	Mount-ing Diameter	STANDARD LENGTH RACK (Inches)			# OF PINS USED	HOSE LOOP LAY (Inches)	RACK WIDTH (Inches)	VALVE* WIDTH (Inches)	FINISH		MODEL	FIG.
Nipple	Wall	Rubber-lined	Synthetic-lined	(Ft.)		A	AN	AW		B	C	D	Red enamel	Chrome-plated		
•			•	50'	2½	17⅜	20 1⁄16		15	17¾	4⅛	4⅞	s	o	S-41, #1, 2.5 (50')	1
•			•	75'	2½	17⅜	20 1⁄16		20	20½	4⅛	4⅞	s	o	S-41, #1, 2.5 (75')	1
•			•	100'	2½	17⅜	20 1⁄16		25	22⅛	4⅛	4⅞	s	o	S-41, #1, 2.5 (100')	1
•			•	125'	2½	17⅜	20 1⁄16		25	28¼	4⅛	4⅞	s	o	S-41, #2, 2.5 (125')	1
•			•	125'	2½	20⅜	23 1⁄16		29	24½	4⅛	4⅞	s	o	S-41, #2, 2.5L (125')	1
•			•	150'	2½	17⅜	20 1⁄16		25	33⅜	4⅛	4⅞	s	o	S-41, #2, 2.5 (150')	1
•			•	150'	2½	20⅜	23 1⁄16		29	29	4⅛	4⅞	s	o	S-41, #2, 2.5L (150')	1
•		•		50'	2½	17⅜	20 1⁄16		10	25	4⅛	4⅞	s	o	S-41-R, #1, 2.5 (50')	1
•		•		75'	2½	20⅜	23 1⁄16		15	26	4⅛	4⅞	s	o	S-41-R, #1, 2.5 (75')	1
•		•		100'	2½	20⅜	23 1⁄16		15	36	4⅛	4⅞	s	o	S-41-R, #1, 2.5 (100')	1
•		•		125'	2½	20⅜	23 1⁄16		15	46	4⅛	4⅞	s	o	S-41-R, #2, 2.5 (125')	1
	•		•	50'	1½	17⅞	19¾	20	15	17¾	4⅛	3¾	s	o	S-41, #1, 1.5 (50')	2
	•		•	75'	1½	17⅞	19¾	20	20	20½	4⅛	3¾	s	o	S-41, #1, 1.5 (75')	2
	•		•	100'	1½	17⅞	19¾	20	25	22⅛	4⅛	3¾	s	o	S-41, #1, 1.5 (100')	2
	•		•	125'	1½	17⅞	19¾	20	25	28¼	4⅛	3¾	s	o	S-41, #2, 1.5 (125')	2
	•		•	125'	1½	20⅞	22¾	23	29	24½	4⅛	3¾	s	o	S-41, #2, 1.5L (125')	2
	•		•	150'	1½	17⅞	19¾	20	25	33⅜	4⅛	3¾	s	o	S-41, #2, 1.5 (150')	2
	•		•	150'	1½	20⅞	22¾	23	29	29	4⅛	3¾	s	o	S-41, #2, 1.5L (150')	2
	•	•		50'	1½	17⅞	19¾	20	10	25	4⅛	3¾	s	o	S-41-R, #1, 1.5 (50')	2
	•	•		75'	1½	20⅞	22¾	23	15	26	4⅛	3¾	s	o	S-41-R, #1, 1.5 (75')	2
	•	•		100'	1½	20⅞	22¾	23	15	36	4⅛	3¾	s	o	S-41-R, #1, 1.5 (100')	2
	•	•		125'	1½	20⅞	22¾	23	15	46	4⅛	3¾	s	o	S-41-R, #2, 1.5 (125')	2

Key s = standard o = option
* Dimension refers to Elkhart Brass UR-20 series valve.

Figure 1

STYLE N (NIPPLE CONNECTION)

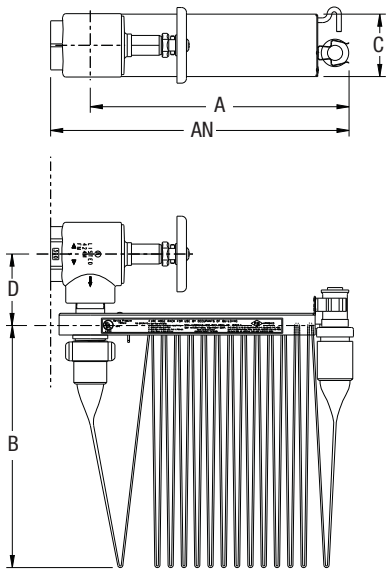


Fig. 1

Figure 2

STYLE W (WALL CONNECTION)

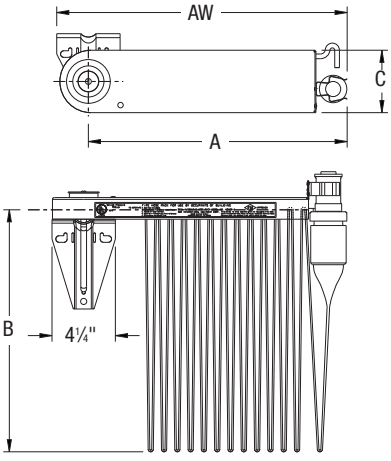


Fig. 2

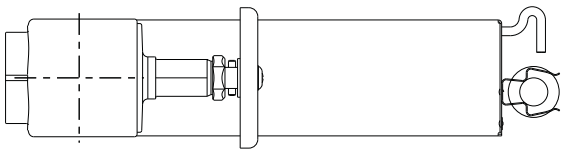
ADDITIONAL INFORMATION

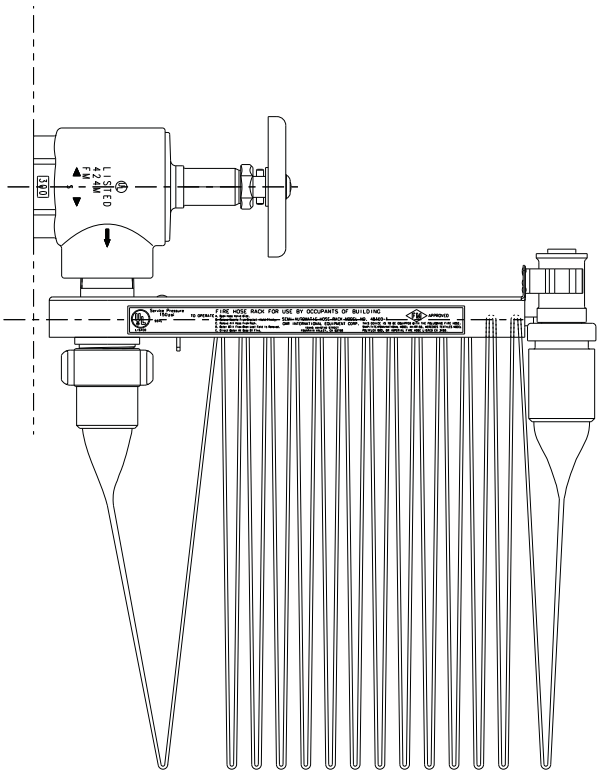
- *Unless otherwise specified, all measurements are in inches.*
- *Complete hose racks which include: hose, valve, escutcheon, nozzle, coupling, adapter and nipple. See page 11-3.*
- *See page 11-7 for accessories and hose.*
- *An overview of FEMA training on hose racks may be viewed free at www.rackhosetraining.com.*

Hose Rack Units

Rack units fit 50', 75', 100', 125' hose lengths and are furnished as complete units with size matched components. Specific items in each unit include:

- **Valve — cast brass, female outlet (U-20)**
- **Cadium plated steel escutcheon (589)**
- **Male NPT to Male NHT rack nipple (46-B)**
- **Cast brass pin lug hose coupling (328)**
- **1½" cast brass adjustable fog nozzle (L-206-T)**
- **1½" Elk-Lite II single-jacket synthetic-lined hose, with S-41 unit *(specify length)***
- **2½" Female NHT to 1½" Male NHT cast brass adapter for 2½" size (A-327) for 2½" units**





Size (Inches)	RACK TYPE		VALVE		Escutch-eon	Rack Nipple	Adapter	Coupling	Fog Nozzle	STEEL RACK		ACCESSORIES FINISH		MODEL
	S-41	S-41-R	Brass	Polished Chrome						Red enamel	Chrome-plated	Brass	Chrome-plated	
1½	s	o	•		•	•		•	•	•		•		RSSF
1½	s	o		•	•	•		•	•	•			•	RSCF
1½	s	o		•	•	•		•	•		•		•	CSCF
2½	s	o	•		•	•	•	•	•	•		•		RSSF
2½	s	o		•	•	•	•	•	•	•			•	RSCF
2½	s	o		•	•	•	•	•	•		•		•	CSCF

KEY s = standard o = option
Available hose lengths: 50', 75', 100' (std), or 125' *(please specify)*

ADDITIONAL INFORMATION

- *An overview of FEMA training on hose racks. may be viewed free at www.rackhosetraining.com.*
- *Components may be purchased separately.*
- *See page 11-7, for accessories and hose.*

THREADS

All hose threads are NHT unless otherwise specified. See index T-12 for optional threads.

Hose Reels

Elkhart Brass offers several wall-mountable swinging hose reel options for immediate and continuous flow of water during deployment. All options are steel weld construction with cast aluminum center hub, rough chrome spokes and red hoops and mounting arm. Our Semi-Automatic reels meet OSHA regulation 1910.58 for one-man operation of fire hose.

Hose Size (Inches)	REEL TYPE		TOP CAPACITY BY HOSE TYPE (Feet)			MEASUREMENTS (Inches)		Mounting Brackets (included)	MODEL	FIGURE
	Manual	Semi-automatic	Single-jacket synthetic-lined	Single-jacket rubber-lined	Stand pipe	Outside width of reel	Diameter of sides			
1½	•		150	100		7⅜	26¾		**30-1**	1
1½	•		300	200		10⅛	26¾		**30-7**	1
1½		•		100		7⅜	26¾	•	**37-R**	2
1½		•			100	7⅜	26¾	•	**37-L**	2
2½	•		150	50		8⅞	26¾		**30-3**	1
2½	•		300	100		14⅞	26¾		**30-9**	1

Figure 1

30

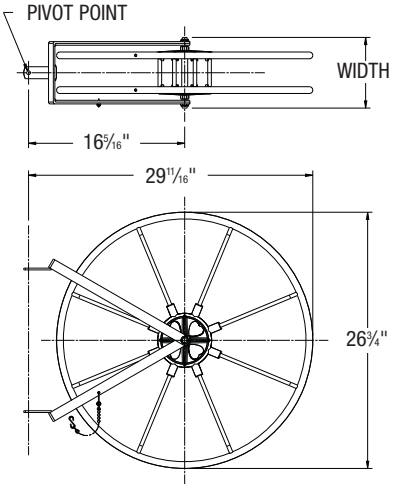


Fig. 1

Figure 2

37-R/L

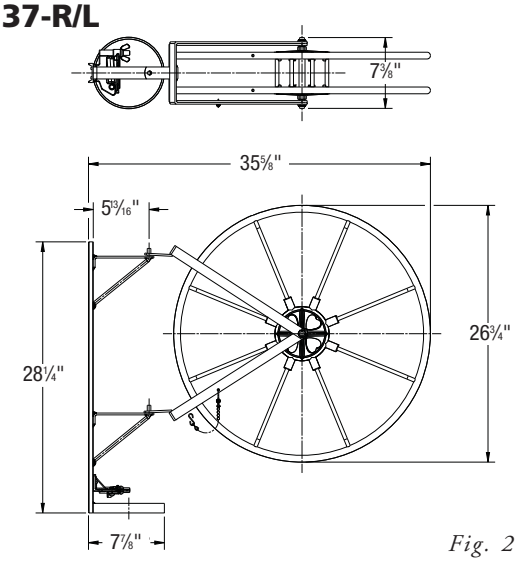


Fig. 2

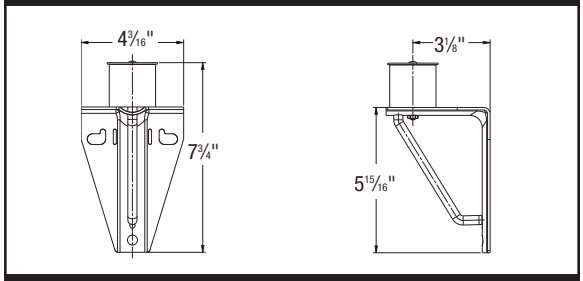
ADDITIONAL INFORMATION

REELS

- *Double-jacket rubber-lined hose requires the next larger reel size than the single-jacket hose.*
- *Specify hose size for optional brackets and pipe clamps (models 36 and 48A found on page 11-7).*
- *See page 11-7, for accessories, hose and mounting brackets.*

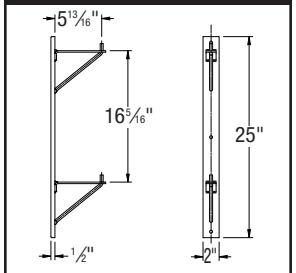
WALL BRACKETS

44

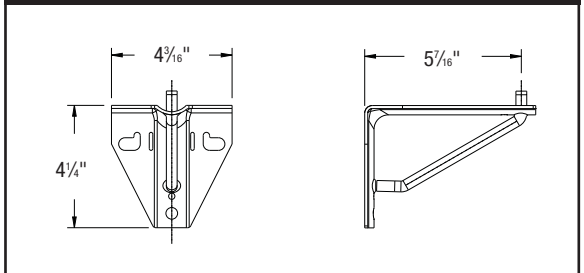


USE	COMPATIBLE PRODUCT					Color	Weight (Lbs.)	MODEL
	Racks	Reels						
	1½"	30-1	30-3	30-7	30-9			
Rack support - replaces rack nipple	•					red	3¾	44
Single wall bracket		•	•	•		red	2¼	48-A
Double wall bracket		•	•	•		red	2½	36
Double wall bracket					•	red	3	36-A

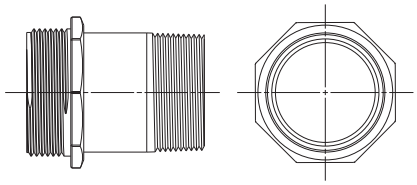
36/36A



48A



46-B RACK NIPPLE



Sizes (Inches)	DIMENSIONS (INCHES)			CONSTRUCTION/FINISH		
	Total Length	Body Length	Width	Brass		
				Cast	Polished	Chrome-plated
1½ NPT x 1½ M NHT	4¼	2⅞	3⅜	s	o	o
2½ NPT x 2½ M NHT	3 9/16	2⅝	2 5/16	s	o	o

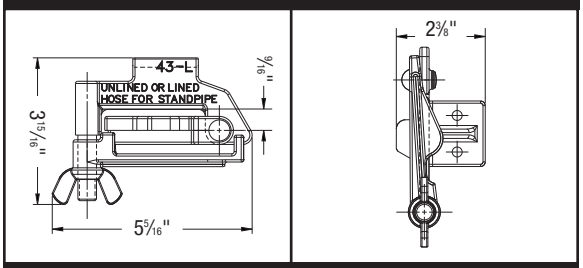
KEY s = standard o = option

Covers

Type	MODELS	
	47	49
	Rack	Reel
Compatibility *(specify)*	S-41-1, S-41-2, S-41-R-1, S-41-R-2	30-1, 30-3, 30-7, 37-R, 37-L
Material	Red vinyl, "FIRE HOSE" printed on both sides in white letters	

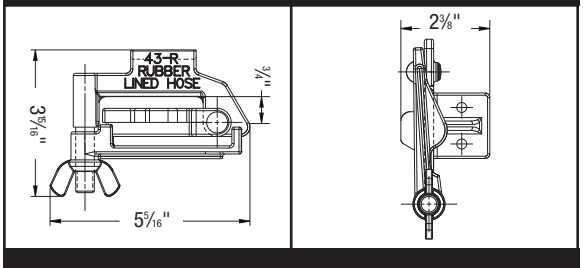
Hose Clamps

43L

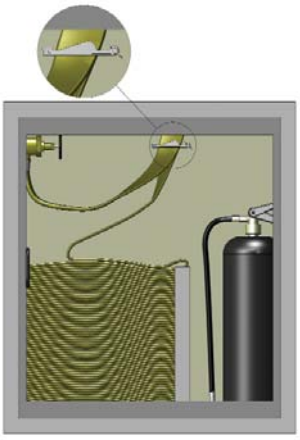


Front | Side

43R



Front | Side



Sample cabinet is illustrated for correct use of Elkhart's hose clamps.

- Semi-automatic Hose Clamp for use in semi-automatic hose cabinets
- 43L for use with 1½" lined standpipe hose
- 43R for use with 1½" single-jacket, rubber-lined hose

ELK-LITE II

- 1½" hose for indoor use with pin racks *(specify 328 pin lug coupling when ordering)* and swinging reel
- Single-jacket, 100% synthetic-lined firehose
- UL listed at 250 psi service pressure, 500 psi test pressure
- FM approved
- Specify: 25' (3 lbs.), 50' (6 lbs.), 75' (9 lbs.), 100' (12 lbs.), or 125' (16 lbs.)

---

328 – PIN LUG EXPANSION COUPLING

- For use with Elk-Lite II hose
- Cast brass construction
- Size: 1½" NHT inlet by 1 11/16" NHT hose bowl or 1½" NHT inlet by 1 13/16" NHT hose bowl *(specify)*
- Finish: cast brass, polished brass, or rough chrome *(specify)*

633 – Playpipe Holder

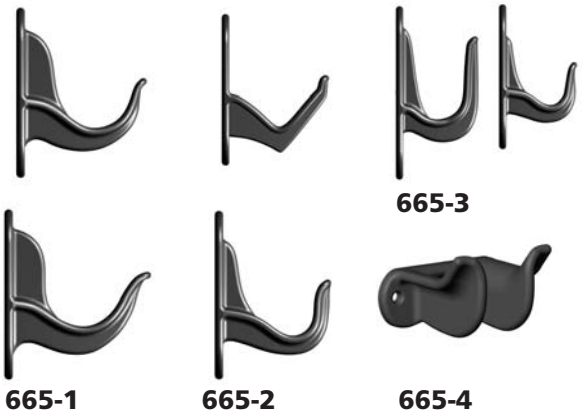
- Designed for one person to safely hold the 211-T playpipe.
- Constructed of steel and finished in black paint
- Length: 49"
- Weight: 8 lbs.
- See page 1-25 for the 211-T

627 – Pick Head Axe

- Constructed of drop forged steel
- Finished with polished blade and wooden handle painted red
- Length: 34.75"
- Weight: 6 lbs.

630 – Crowbar

- Constructed of steel and finished with red paint
- Length: Ranges from 47.5" to 49.25" *(please call for specifics at the time of purchase)*
- Weight: 12 1/8 lbs.



665 – Underwriters' Brackets

- Cast aluminum construction
- 665-1 – 2 brackets for playpipe (weight: 1/2 lbs.)
- 665-2 – 2 brackets for crowbar (weight: 1/4 lbs.)
- 665-3 – 2 brackets for fire axe (weight: 3/8 lbs.)
- 665-4 – 1 bracket for spanner. Fits Elkhart models: S-454, T-454, and 454 (weight: 1/8 lbs.)

ADDITIONAL INFORMATION

Hydrant and spanner wrenches may be found on page 2-2 and 2-3.

Free Standing

Elkhart's 90° free standing inlet connections are cast brass construction, as are the sleeves and escutcheons, and come furnished with plugs, chains and an 18" polished brass or chrome sleeve for standpipe cover.

Elkhart's 90° free standing hydrants and pump test connections are cast brass construction, as are the sleeves and eschutcheons, and come furnished with caps and chains.

FM

UL

FREE STANDING INLET

NPT OUTLET SIZE (Inches)	NUMBER OF 2.5" F NHT INLETS			CLAPPER TYPE		CERTI-FICATIONS		MEASUREMENTS (Inches)						AVAILABLE ESCUTCHEONS			FINISH		Weight (Lbs.)	MODEL	FIGURE
	2	3	4	Body (Drop)	Snoot	FM Approved	U.L. Listed	A	B	C	D	E	F	Auto-Spkr	Standpipe	Standpipe and Auto -Spkr	Polished Brass	Polished Chrome			
4.0	•			•		•	•	9 1/4	8 7/16	1/2	18 1/4	23 11/16	23 11/16	•	•	•	s	o	30	15-2W 4"*	1
6.0	•			•		•		11 5/8	9 3/4	1/2	18 1/4	23 11/16	23 11/16	•	•	•	s	o	36 1/4	15-2W 6"*	1
		•		•				11 5/8	9 1/4	1/2	18 1/4	23 9/16	23 9/16	•	•	•	s	o	39 3/4	15-3W	2
			•		•			11 13/16	12 1/8	1/2	18 1/4		34 9/16	•	•	•	s	o	134	15-4W**	3

Key s = standard o = option
* Can order parts (sleeve or body with clapper) separately.
** Bodies of the 4-way products are rough brass or rough chrome with balance of parts polished.

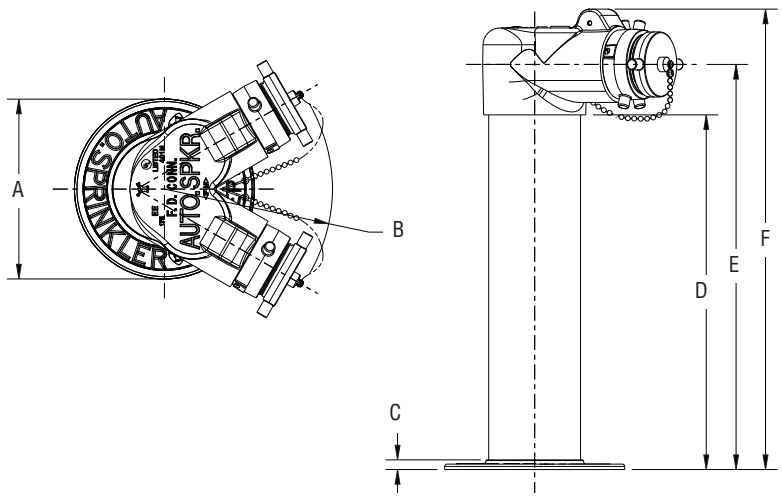
ADDITIONAL INFORMATION

- *Each 2½" NHT inlet has a rated flow of 250 gpm (946 lpm).*
- *Elkhart's sidewalk bodies are rated for 175 psi (12.1 bar).*
- *Supplied with plugs (#311) and chains.*

THREADS

Unless otherwise noted, all hose threads are NHT. See index T-12 for available optional threads.

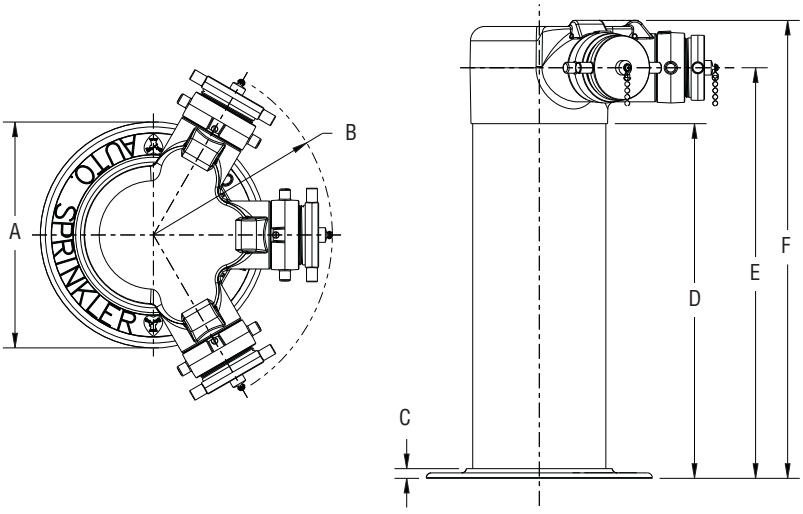
FIGURE 1



15-2W

Fig. 1

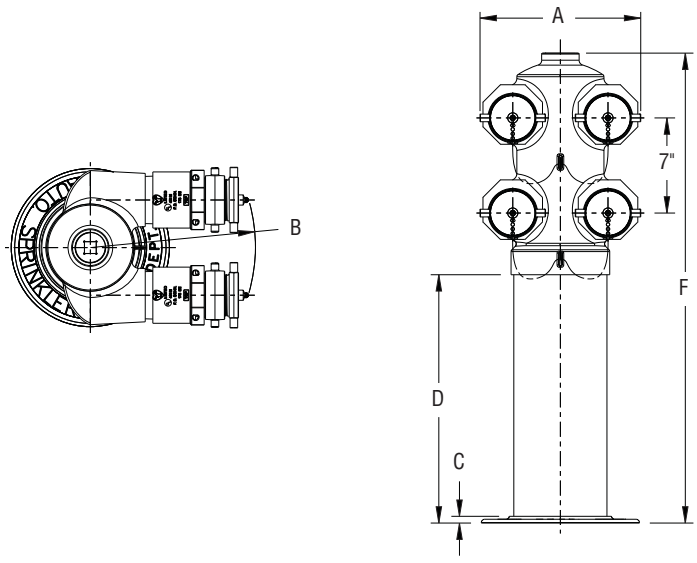
FIGURE 2



15-3W

Fig. 2

FIGURE 3



15-4W

Fig. 3

FREE STANDING OUTLET

Type	NPT INLET SIZE (Inches)	NUMBER OF 2.5" M NHT OUTLETS			CERTIFICATION	MEASUREMENTS (Inches)						AVAILABLE ESCUTCHEONS		FINISH		Weight (Lbs.)	MODEL	FIGURE
		2	3	4	FM Approved	A	B	C	D	E	F	Hydrant	Pump Test Conn.	Polished Brass	Polished Chrome			
Hydrants	4.0	•			•	9 1/4	8 5/16	1/2	18 1/4	20 7/8	23 2/3	•		s	o	30	16-2W 4"*	1
	6.0	•			•	11 5/8	10 1/16	1/2	18 1/4	21	23 13/16	•		s	o	36 1/4	16-2W 6"*	1
			•			11 5/8	8 7/8	1/2	18 1/4	21 1/8	23 9/16	•		s	o	39 3/4	16-3W	2
				•		11 11/16	8 1/2	1/2	18 1/4		34 9/16	•		s	o	134	16-4W**	3
Pump Test Connections	4.0	•				9 1/4	8 5/16	1/2	18 1/4	20 7/8	23 2/4		•	s	o	30	16-P 2W 4"	1
	6.0	•				11 5/8	10 1/16	1/2	18 1/4	21	23 13/16		•	s	o	36 1/4	16-P 2W 6"	1
			•			11 5/8	8 7/8	1/2	18 1/4	21 1/8	23 9/16		•	s	o	39 3/4	16-P 3W	2
				•		11 11/16	8 1/2	1/2	18 1/4		34 9/16		•	s	o	134	16-P 4W**	3

Key s = standard o = option
* Can order parts (sleeve or body) separately.
** Bodies of the 4-way products are rough brass or rough chrome with balance of parts polished.

ADDITIONAL INFORMATION

- *Each outlet has a rated flow of 250 gpm (946 lpm).*
- *Elkhart's sidewalk bodies are rated for 175 psi (12.1 bar).*
- *Supplied with caps (#310) and chains.*

THREADS

Unless otherwise noted, all hose threads are NHT. See index T-12 for available optional threads.

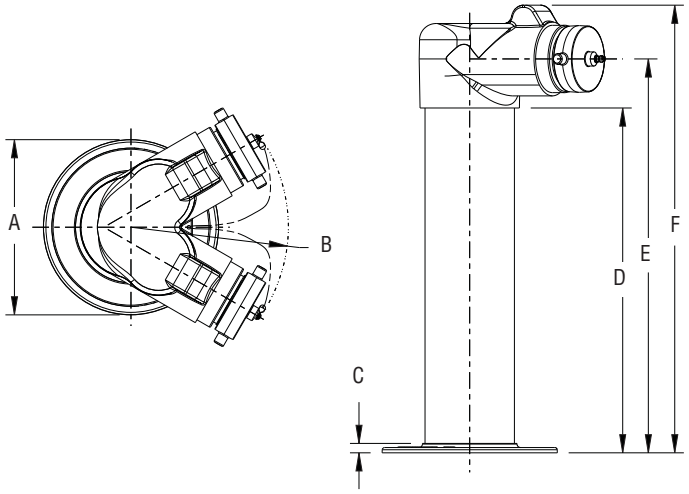
OTHER PRODUCTS

154-S – A cast brass valve control for actuating underground mounted valve, used with Elkhart's model #16 (a sidewalk type hydrant), is available. The 154-S comes with a 7/8" square steel extension rod that is 24" long and has a special coupling for attaching to stem of gate valve. Additionally, a cap, chain and sleeve are included. Please specify polished brass or polished chrome-plated sleeve.

- *Note: a 2 1/2" hole is required in the concrete slab, as well as a 1 1/2" nipple and locknut which are not included.*
- *This product is similar, in function, to the 164 seen on page 12-18.*

- *Use of a X-86 gate valve is suggested on Pump Test Connections. Gate valve may be found on page 7-4.*

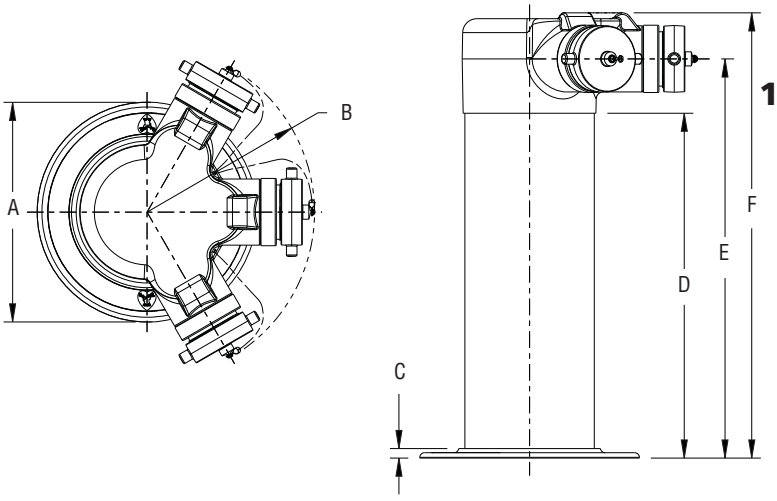
FIGURE 1



16-2W/16-P-2W

Fig. 1

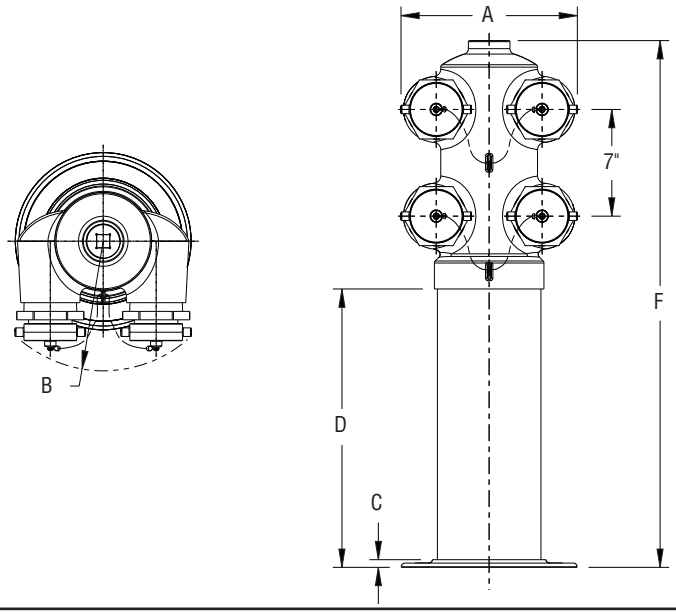
FIGURE 2



16-3W/16-P-3W

Fig. 2

FIGURE 3



16-4W/16-P-4W

Fig. 3

TERMINOLOGY

FREE STANDING

To better serve our customers, for this edition and future editions of the catalog, Elkhart Brass has adopted industry standard terminology for our products. In previous versions of our catalog, you may have found the items now listed as “free standing” under “sidewalk siamese” or “sidewalk hydrants”.

The industry standard terminology is more inclusive of different connection options.

EXPOSED

To better serve our customers, for this edition and future editions of the catalog, Elkhart Brass has adopted industry standard terminology for our products. In previous versions of our catalog, you may have found the items now listed as “exposed” under “exposed siamese” or “exposed wall hydrants”.

The industry standard terminology is more inclusive of different connection options.

FLUSH

To better serve our customers, for this edition and future editions of the catalog, Elkhart Brass has adopted industry standard terminology for our products. In previous versions of our catalog, you may have found the items now listed as “flush” under “flush siamese” or “flush wall hydrants” or “flush pump test”.

The industry standard terminology is more inclusive of different connection options.

Exposed

Elkhart offers a variety of exposed fire department connection options, including standpipe and 90° for post or wall mounting. All Elkhart's exposed fire department connections are cast brass construction; all inlets swivel and feature female threads.

FM

UL

EXPOSED INLET

NPT OUTLET SIZE (Inches)	NUMBER OF 2.5" F NHT INLETS		CLAPPER		MEASUREMENTS (Inches)					AVAILABLE LETTERING			CERTI-FICATIONS		FINISH			Weight (Lbs.)	MODEL	FIGURE
	2	3	Individual Drop	Swinging	A	B	C	D	Swing Radius	Auto-Spkr	Standpipe	Standpipe and Auto-Spkr	FM Approved	U.L. Listed	Cast Brass	Polished Brass	Polished Chrome			
4.0	•			•	5 15/16	9 1/8	5 1/16	4		s			•	•	s			9	11	1
	•		•		8 3/4	13 15/16	5 1/4	4							s	o		20 1/2	18 4"*	2
	•		•		7 9/16	11 5/16	5 1/4			s	o		•	•	s	o	o	16	12 4"	3
	•		•		8 3/4	12 3/4	5 1/2	11 1/16		s	o	o	•	•		s	o	24 1/2	156 4"	6
	•		•		9 3/16	11 3/4	5 1/4	5 7/16	7 3/8	s	o		•	•	s	o	o	20 1/2	10 4"	4
6.0		•	•		8 7/8	13 15/16	7 1/4	4							s	o	o	25 1/2	18 6"*	2
	•		•		10	11 1/2	7 1/2			s	o		•		s	o	o	25	12 6"	3
	•		•		10 15/16	12 3/4	7 1/2	11 1/16		s	o	o	•			s	o	33 3/4	156 6"	6
	•		•		11 9/16	11 3/16	7 1/2	5 9/16	8 5/16	s	o		•		s	o	o	23 1/4	10 6"	4
		•	•		11 1/8	11 7/8	7 1/8		7 13/16						s	o	o	25	29	5

Key s = standard o = option
* Escutcheons available separately.

ADDITIONAL INFORMATION

- *Elkhart's intake connections bodies are rated for 175 psi (12.1 bar).*
- *Each 2½" NHT inlet has a rated flow of 250 gpm (946 lpm).*
- *Model 156 supplied with plug (#311) and chains.*

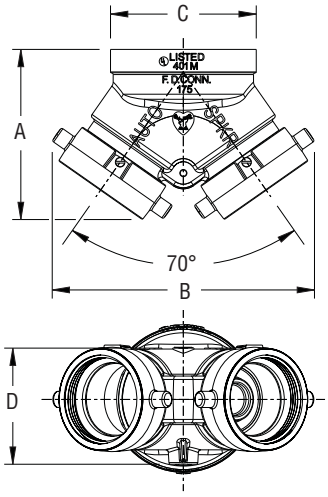
THREADS

Unless otherwise noted, all hose threads are NHT. See index T-12 for available optional threads.

OTHER PRODUCTS

See page 10-1 for available chains and plugs.

FIGURE 1

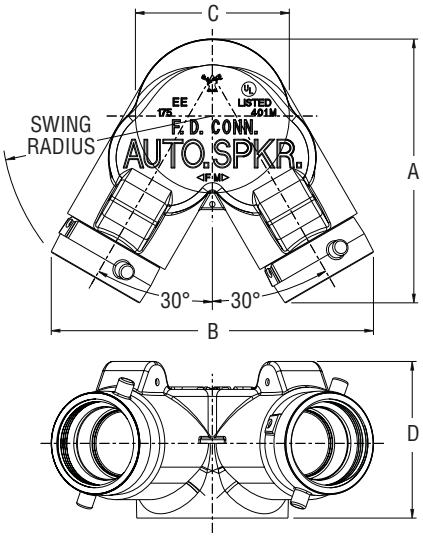


11

- Single clapper

Fig. 1

FIGURE 4

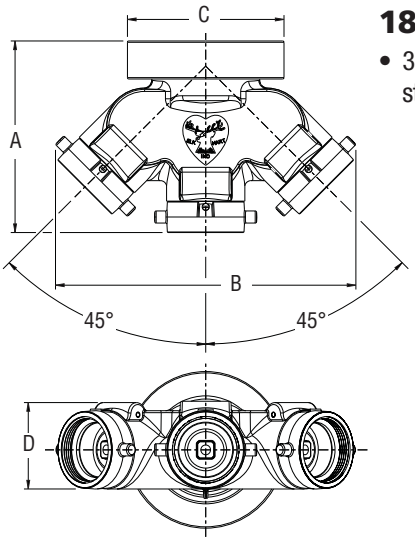


10

- 90° 2-way

Fig. 4

FIGURE 2

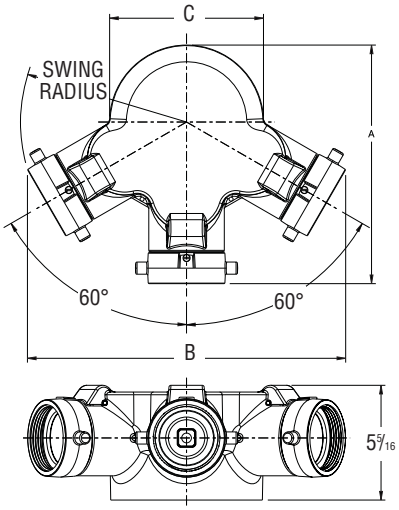


18

- 3-way standpipe

Fig. 2

FIGURE 5

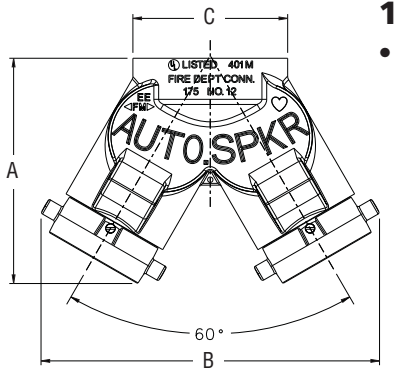


29

- 90° 3-way

Fig. 5

FIGURE 3

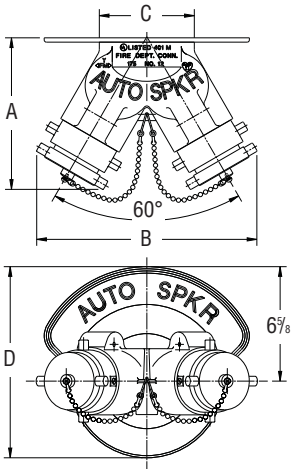


12

- 2-way standpipe

Fig. 3

FIGURE 6



156

- Furnished with escutcheon, plugs and chains

Fig. 6

EXPOSED OUTLET

NPT INLET SIZE (Inches)	OUTLET SIZE	MEASUREMENTS (Inches)					AVAILABLE ESCUTCHEON LETTERING	FINISH			Weight (Lbs.)	MODEL	FIGURE
		A	B	C	D	H	Wall Hydrant	Cast Brass	Polished Brass	Polished Chrome			
4	2 1/2	10 3/16	8 1/2	5 1/16	6 1/16	10 3/16	s	s			13	**143***	1
6	2 1/2	11 7/8	12 5/8	7 1/2	11 13/16	11 1/16	s		s	o	24	**153**	2

Key s = standard o = option
* Can order body separately.

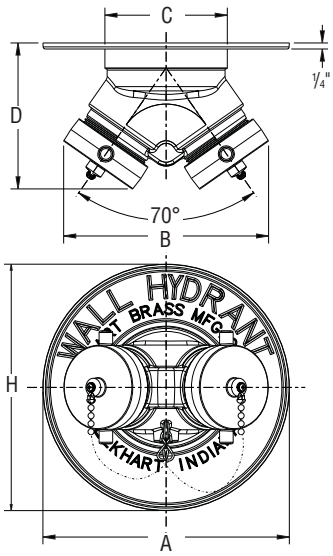
ADDITIONAL INFORMATION

- *Bodies rated for 175 psi (12.1 bar).*
- *Each 2½" M NHT outlet has a rated flow of 250 gpm (946 lpm).*
- *Supplied with caps (#310) and chains.*

THREADS

Unless otherwise noted, all hose threads are NHT. See index T-12 for available optional threads.

FIGURE 1

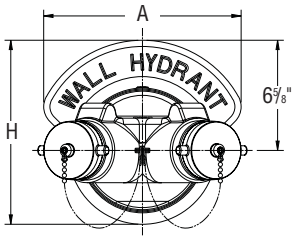


143

- Furnished with aluminum escutcheon with red painted letters

Fig. 1

FIGURE 2



153

- Furnished with flat escutcheon (10½" by 7" high)

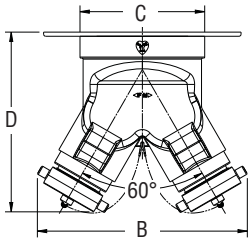


Fig. 2

TERMINOLOGY

FREE STANDING

To better serve our customers, for this edition and future editions of the catalog, Elkhart Brass has adopted industry standard terminology for our products. In previous versions of our catalog, you may have found the items now listed as “free standing” under “sidewalk siamese” or “sidewalk hydrants”.

The industry standard terminology is more inclusive of different connection options.

EXPOSED

To better serve our customers, for this edition and future editions of the catalog, Elkhart Brass has adopted industry standard terminology for our products. In previous versions of our catalog, you may have found the items now listed as “exposed” under “exposed siamese” or “exposed wall hydrants”.

The industry standard terminology is more inclusive of different connection options.

FLUSH

To better serve our customers, for this edition and future editions of the catalog, Elkhart Brass has adopted industry standard terminology for our products. In previous versions of our catalog, you may have found the items now listed as “flush” under “flush siamese” or “flush wall hydrants” or “flush pump test”.

The industry standard terminology is more inclusive of different connection options.

Flush

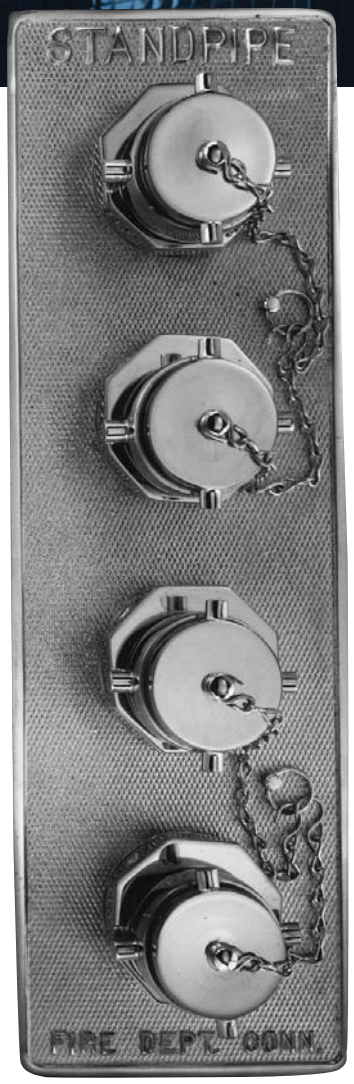
Elkhart offers a wide array of flush and 4-way connections. All connections are cast brass construction.

Wall-mounted options include:

- Inlet models furnished with plugs, chains and an escutcheon.
- Outlet models furnished with caps, chains and an escutcheon.

Four-way connections feature a 6" NPT connection, and come furnished with escutcheons.

- All 4-way inlet connection models feature snoots on each of the four 2½" outlets and are furnished with plug and chain assemblies.
- All 4-way outlet connection models have cap and chain assemblies plus a hex adapter.



FLUSH INLET

NPT OUTLET SIZE (Inches)	INLETS: NHT (F) 1.5" 1	NHT (F) 2.5" 1	NHT (F) 2.5" 2	NHT (F) 2.5" 3	STORZ 4" 1	STORZ 5" 1	BODY TYPE: Straight	Inverted 90°	90°	Individual Drop Clapper	MEASUREMENTS (Inches) A	B	C	D	E	F	G	H	J	CERT: FM Approved	U.L. Listed	AVAILABLE ESCUTCHEON LETTERING: Auto-Spkr	Standpipe	Standpipe and Auto-Spkr	MATERIAL/FINISH: BRASS Polished Brass	Polished Chrome	Elk-O-Lite®	Weight (Lbs.)	MODEL	FIGURE
1½	•						*							3 17/32					4 3/8			s					s	1 1/4	141	1
2½		•					*							4 3/8					7 1/2			o	s		s	o		8 3/8	151-2.5	1
		•					*							4 3/8				7	10 1/2			s	o		s	o		11	161-2.5	2
3		•					*							4 1/2					7 1/2			o	s		s	o		8 3/8	151-3	1
		•					*							4 1/2				7	10 1/2			s	o		s	o		11 1/4	161-3	2
4					•		*							6					12			s	o				s	6 3/8	171	1
						•	*						5 29/32						12			s	o				s	10 7/8	171	1
			•				•			•	11	7 1/2	5	6 7/16	3 25/32	3 7/32			13 3/16	•	•	s	o	o	s	o		23	166-4-ST**	3
			•					•		•	11 1/2	7 1/2	5	6 7/16	3 19/32	3 3/8	3 1/16	5 3/8	13 3/16	•	•	s	o	o	s	o		26 1/4	166-4-90**	4
			•						•	•	11 11/16	7 1/2	5	6 1/4	3 3/4	3 3/8	4 7/16	7 1/16	13 3/16	•	•	s	o	o	s	o		31	166-4-INV**	5
				•			•			•	17 9/16	6 3/8	5 5/16	6 11/16	3 3/8	4 1/16		4 5/16				s			s	o		70	167-W-ST***	8
6					•		*							6 1/4					12			s	o				s	7 3/4	171	1
						•	*							6 1/4					12			s	o				s	10 1/4	171	1
			•				•			•	11 1/2	7 1/2	7 1/2	8	3 3/4	3 5/8			13 3/16	•	•	s	o	o	s	o		30 3/4	166-6-ST**	3
			•						•	•	12	7 5/8	7 1/2	7 3/4	4	4 3/32	3 7/16	6 15/32	13 3/16	•	•	s	o	o	s	o		34 3/8	166-6-90**	4
				•			•			•	17 9/16	6 5/8	7 3/8	6 11/16	3 3/8	4 1/16		4 5/16					s		s	o		68	167-W-ST***	8
				•						•	17 1/4	6 3/8	7 1/8	8 3/16	4 15/32	4	3 15/16	5 15/16	20 1/4				s		s	o		68	167-W-90***	6
				•				•		•	17 1/4	6 3/8	7 1/8	8 3/16	4 15/32	4	3 15/16	5 15/16	20 1/4				s		s	o		68	167-W-INV***	7

Key s = standard o = option
* Straight connection adapter.
** Can order body separately.
*** Can order parts (with or without clappers) separately.

ADDITIONAL INFORMATION

- *Bodies rated for 175 psi (12.1 bar).*
- *Each 2½" NHT inlet has a rated flow of 250 gpm (946 lpm).*
- *Supplied with plug(s) and chain(s).*

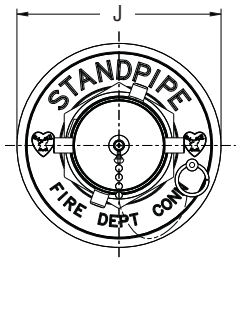
THREADS

Unless otherwise noted, all hose threads are NHT. See index T-12 for available optional threads.

OTHER PRODUCTS

- *See page 12-16 for Flush 4-Way Inlet Connections.*
- *2½" nipple required for all 166 and 167-W models. Elkhart Brass does not supply.*
- *On the 166, the body is roughed in during construction; escutcheon and nipple assemblies are installed after construction. Elkhart Brass personnel can help with construction installation information.*

FIGURE 1

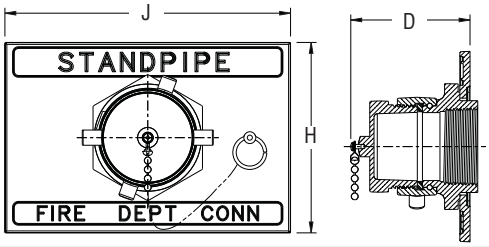


141/151/171

- Furnished with round escutcheon

Fig. 1

FIGURE 2

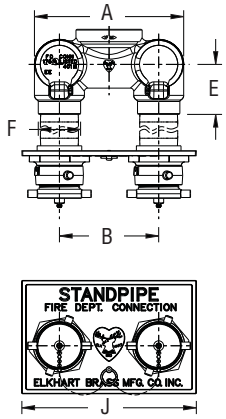


161

- Furnished with flat escutcheon (10½" by 7" high)

Fig. 2

FIGURE 3



166 – STRAIGHT SIAMESE

- Furnished with flat escutcheon

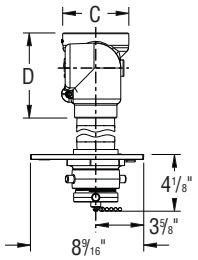
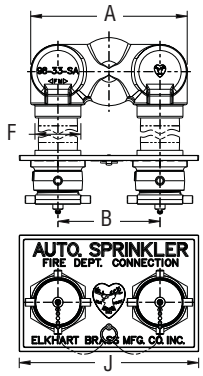


Fig. 3

FIGURE 4



166 – 90° SIAMESE

- Furnished with flat escutcheon

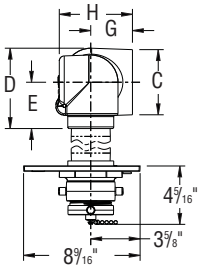


Fig. 4

FIGURE 5

166 – 90° INVERTED SIAMESE

- Furnished with flat escutcheon

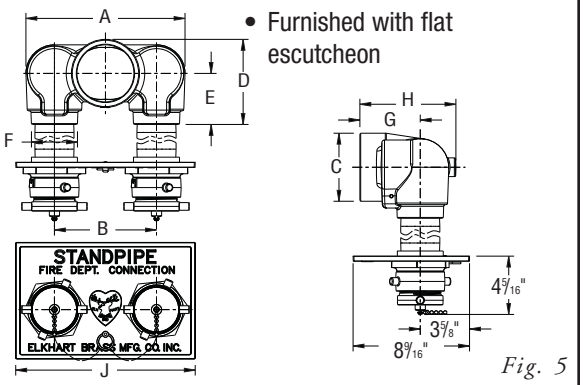


Fig. 5

FIGURE 6

167-W – 90° SIAMESE

- Furnished with flat escutcheon

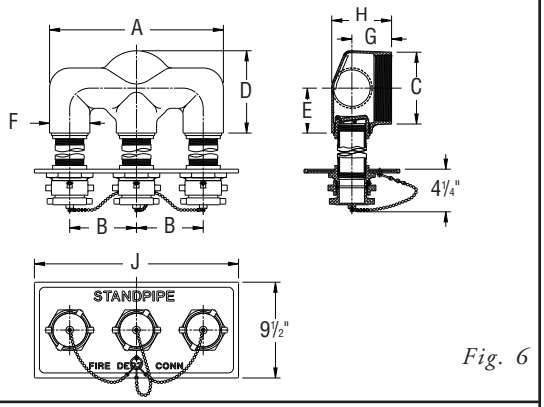


Fig. 6

FIGURE 7

167-W – 90° INVERTED SIAMESE

- Furnished with flat escutcheon

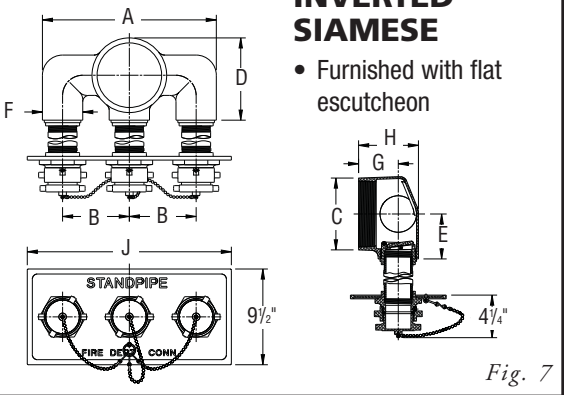


Fig. 7

FIGURE 8

167-W

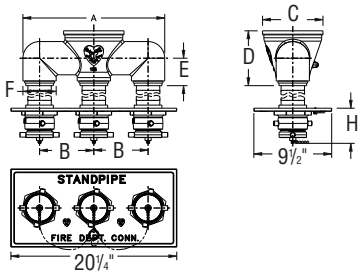


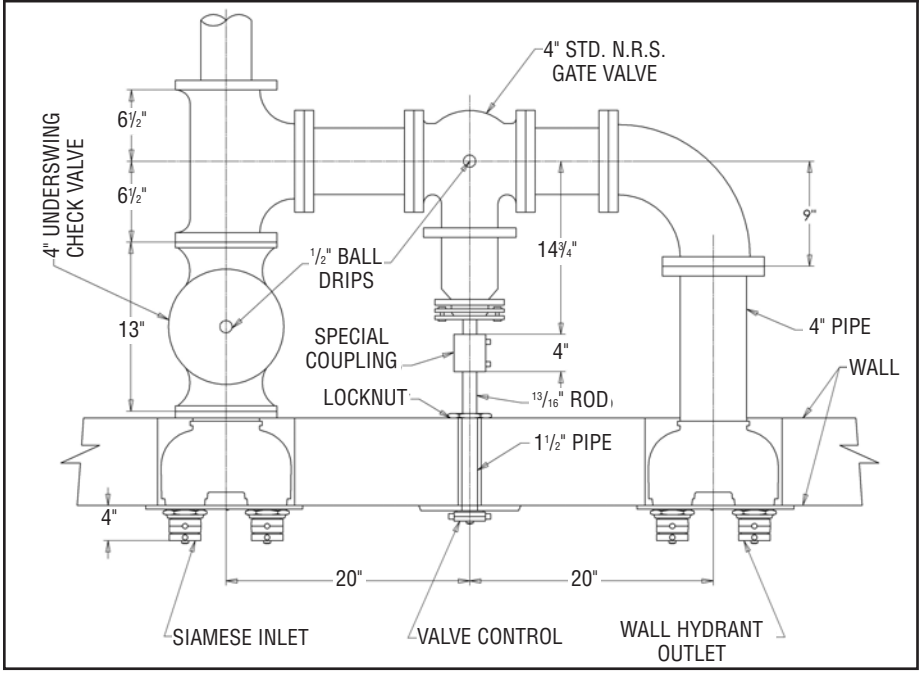
Fig. 8

FLUSH 4-WAY INLET

INSTALLATION DIRECTION			BODY TYPE		SNOOT TYPE		MEASUREMENTS (Inches)		PSI (BAR)		CERTIFI-CATION	AVAILABLE ESCUTCHEON LETTERING				FINISH		Weight (Lbs.)	MODEL	FIGURE
Vertical	Horizontal	Square	Straight	90°	Clapper	Spring Check	A	B	175 (12.1)	400 (27.6)	U.L. Listed	Auto-Spkr	Dry Standpipe	Standpipe	Standpipe and Auto-Spkr	Polished Brass	Polished Chrome			
•				•	•		8	3 13/16	•		•	o	o	s	o	s	o	96	780	2
	•			•	•		8	3 13/16	•		•	o	o	s	o	s	o	96	781	3
•			•		•		5 5/8	3 13/16	•		•	o	o	s	o	s	o	96	782	4
	•		•		•		5 5/8	3 13/16	•		•	o	o	s	o	s	o	96	783	5
		•		•		•		3 3/4	•			o	o	s	o	s	o	10 7/8	739*	1

Key s = standard o = option
* Can order body separately.

FLUSH TYPE INSTALLATION



ADDITIONAL INFORMATION

- *Each 2½" F NHT inlet has a rated flow of 250 gpm (946 lpm).*
- *6" outlet connection.*
- *Supplied with plugs and chains.*

THREADS

Unless otherwise noted, all hose threads are NHT. See index T-12 for available optional threads.

OTHER PRODUCTS

- *See page 12-14 for Flush Inlet Connections.*
- *For 780 and 788 sub-components specifications, see page 12-22.*
- *3" NPT nipples required. Elkhart Brass does not supply.*

FIGURE 1

739

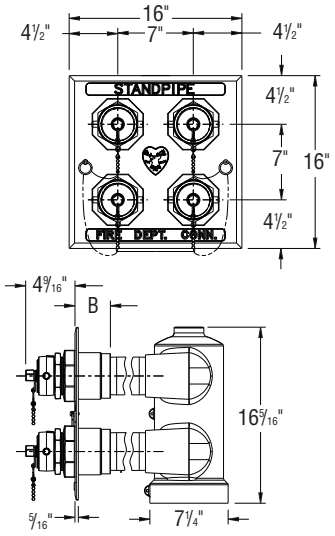


Fig. 1

FIGURE 2

780

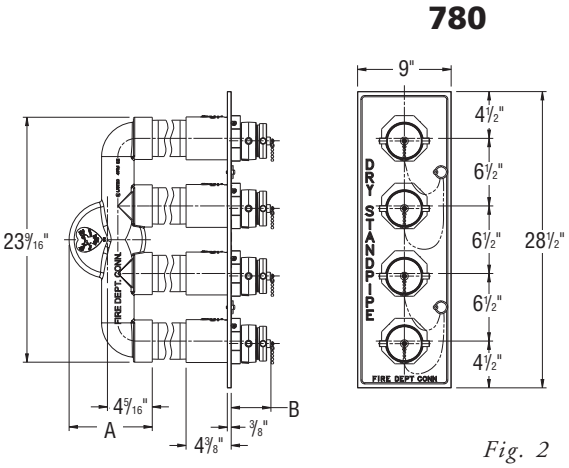


Fig. 2

FIGURE 3

781

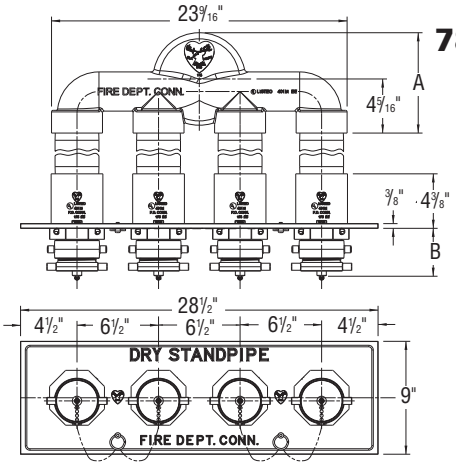


Fig. 3

FIGURE 4

782

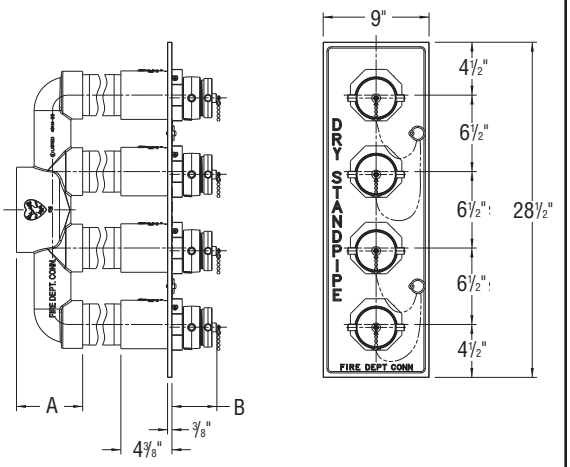


Fig. 4

FIGURE 5

783

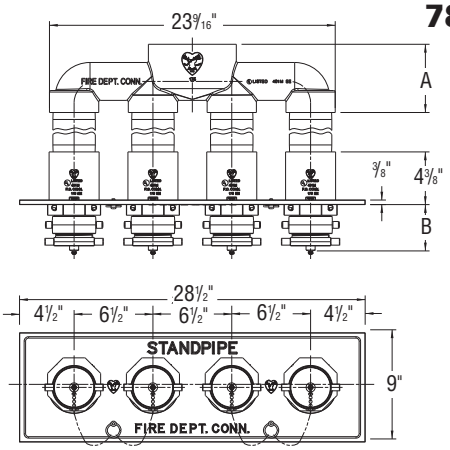


Fig. 5

FLUSH OUTLET

Type	NPT INLET SIZE (Inches)	OUTLETS: Number of 2.5" M NHT Outlets 1	2	3	BODY TYPE: Straight	90°	MEASUREMENTS (Inches) A	B	C	D	E	F	G	H	J	AVAILABLE ESCUTCHEON LETTERING: Pump Test	Wall Hydrant	FINISH: Polished Brass	Polished Chrome	Weight (Lbs.)	MODEL	FIGURE
Hydrant	2½	•					7½			3¼							s	s	o	6¾	152 2.5"	1
		•					10½			3¼				7			s	s	o	9⅜	162 2.5"	2
	3	•					7½			3 7/16							s	s	o	5¾	152 3"	1
		•					10½			3 7/16				7			s	s	o	8¾	162 3"	2
	4		•		s		13 3/16	7½				5	6 7/16	8 9/16	11¼		s	s	o	31	163 4" ST*	3
			•			o	13 3/16	7½	3⅜	3 1/16	6 13/16	5	6 5/16	5⅜	11½		s	s	o	28¾	163 4" 90*	4
	6		•		s		13 3/16	7½				7½	8	8 9/16	11½		s	s	o	35¼	163 6" ST*	3
			•			s	13 3/16	7½	4 3/32	3 7/16	4	7½	7¾	6 15/32			s	s	o	32¾	163 6" 90*	4
Pump Test Connections	4		•		s		13 3/16	7½				5	6 7/16	8 9/16	11¼	s		s	o	31	163P 4" ST	3
			•			s	13 3/16	7½	3⅜	3 1/16	6 13/16	5	6 5/16	5⅜	11½	s		s	o	28¾	163P 4" 90	4
	6		•		s		13 3/16	7½				7½	8	8 9/16	11½	s		s	o	35¼	163P 6" ST	3
			•			s	13 3/16	7½	4 3/32	3 7/16	4	7½	7¾	5/32	12	s		s	o	32¾	163P 6" 90	4
				•	s		20⅛	6 5/8				7⅜	6⅛	9½	17 5/16	s		s	o	68	167-WP	5
				•		s	20¼	6 5/8				7⅛	8 3/16	9½	17¼	s		s	o	70½	167-WP 90	6

Key s = standard o = option
* Can order body separately.

ADDITIONAL INFORMATION

- *Bodies rated for 175 psi (12.1 bar).*
- *Each 2½" NHT outlet has a rated flow of 250 gpm (946 lpm).*
- *Supplied with cap(s) (#310) and chain(s).*

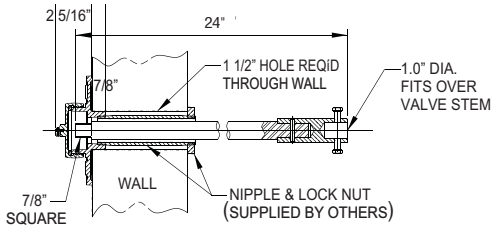
THREADS

Unless otherwise noted, all hose threads are NHT. See index T-12 for available optional threads.

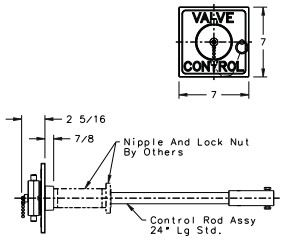
OTHER PRODUCTS

- *See page 12-20 for Flush 4-Way Outlet Connections.*
- *2½" NPT nipple required for all 163, 163P and 167 WP models. Elkhart Brass does not supply.*
- *On the 163 and 163P, the body is roughed in during construction; escutcheon and nipple assemblies are installed after construction. Elkhart Brass personnel can help with construction installation information.*

OPTIONS



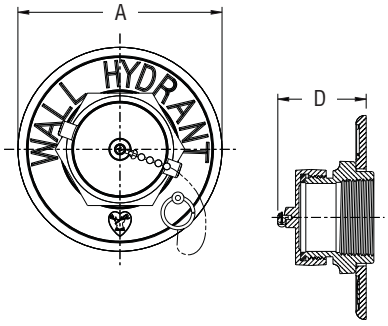
164



480

- *164 – A cast brass valve control for use with Elkhart's model 163 is available. The 164 comes with a 7/8" square steel extension rod that is 24" long and has a special coupling for attaching to stem of gate valve. Additionally, a cap, chain and 7" square escutcheon are included. Please specify polished brass or polished chrome-plated. (Note: a 2½" hole is required in the installation wall.)*
- *480 – Tee handle used with 164 control valve.*

FIGURE 1

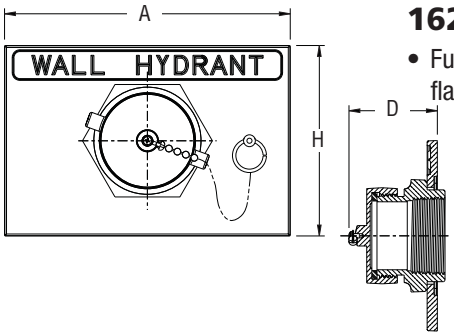


152

- Furnished with 7½" round escutcheon

Fig. 1

FIGURE 2



162

- Furnished with flat escutcheon (10½" by 7" high)

Fig. 2

FIGURE 3

163/163P STRAIGHT

- Furnished with flat escutcheon

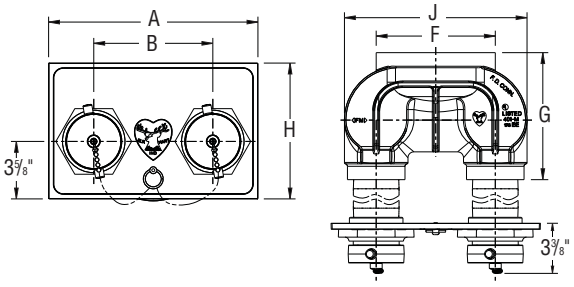


Fig. 3

FIGURE 4

163/163P 90°

- Furnished with flat escutcheon

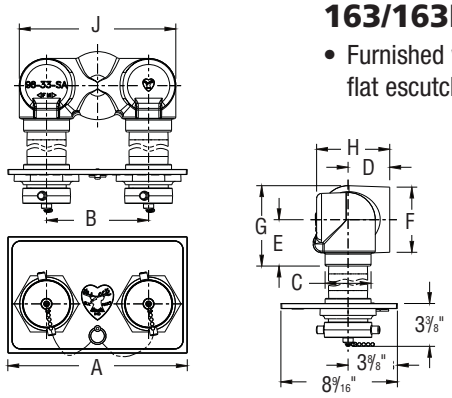


Fig. 4

FIGURE 5

167 WP STRAIGHT

- Furnished with flat escutcheon

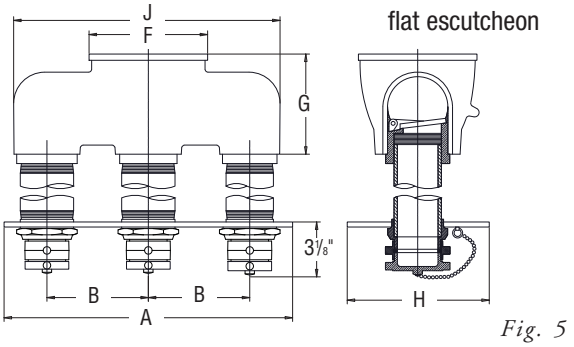


Fig. 5

FIGURE 6

167-WP 90

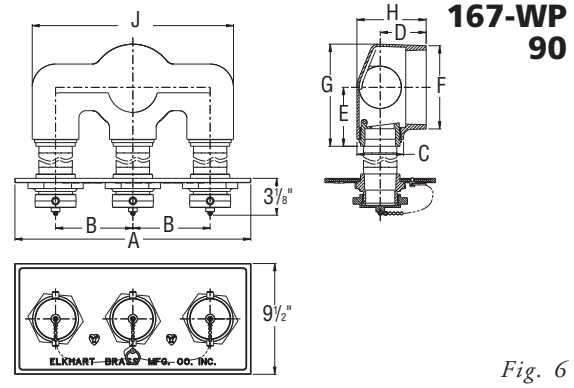


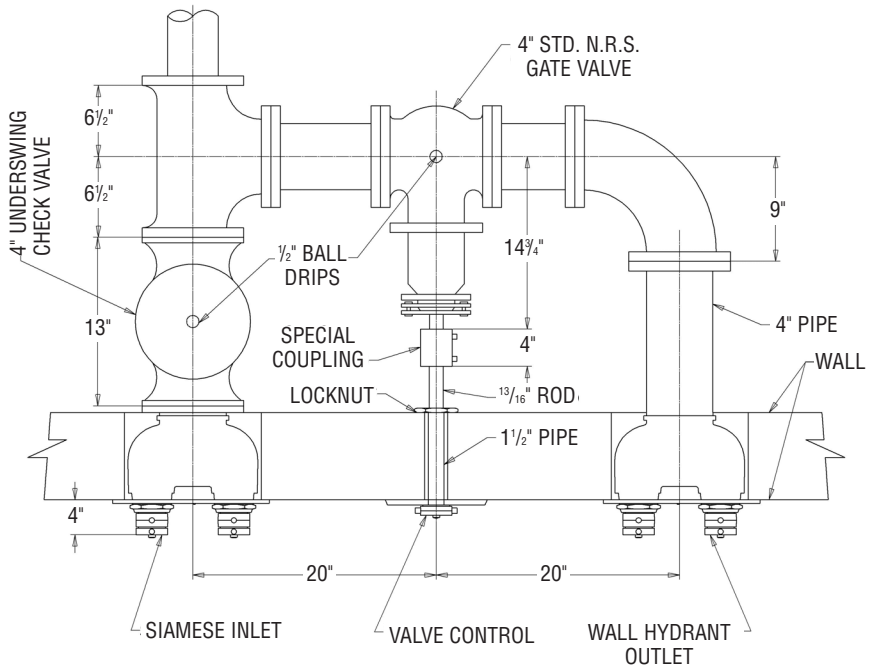
Fig. 6

FLUSH 4-WAY OUTLET

INSTALLATION DIRECTION			BODY TYPE		AVAILABLE ESCUTCHEON LETTERING		FINISH		Weight (Lbs.)	MODEL	FIGURE
Vertical	Horizontal	Square	Straight	90°	Hydrant	Pump Test Conn.	Polished Brass	Polished Chrome			
•			•		s		s	o	92	**784**	2
	•		•		s		s	o	92	**785**	3
•				•	s		s	o	92	**786**	4
	•			•	s		s	o	92	**787**	5
		•		•	s		s	o	109¼	**743**	1
•			•			s	s	o	92	**784-P**	2
	•		•			s	s	o	92	**785-P**	3

Key s = standard o = option

FLUSH TYPE INSTALLATION



ADDITIONAL INFORMATION

- *Each 2½" M NHT outlet has a rated flow of 250 gpm (946 lpm).*
- *Inlet connection is a 6" NPT.*
- *Supplied with caps (#310) and chains.*
- *Bodies rated for 175 psi (12.1 bar).*

THREADS

Unless otherwise noted, all hose threads are NHT. See index T-12 for available optional threads.

OTHER PRODUCTS

- *See page 12-18 for Flush Outlet Connections.*
- *3" NPT nipple required. Elkhart Brass does not supply.*

FIGURE 1

743

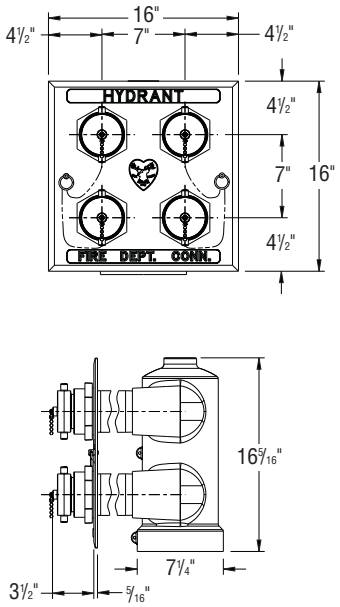
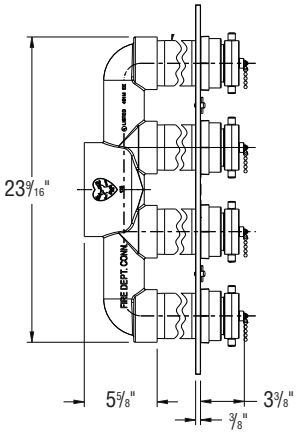


Fig. 1

FIGURE 2

784/784-P



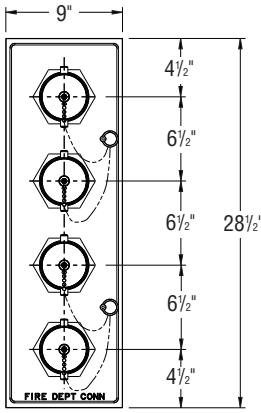


Fig. 2

FIGURE 3

785/785-P

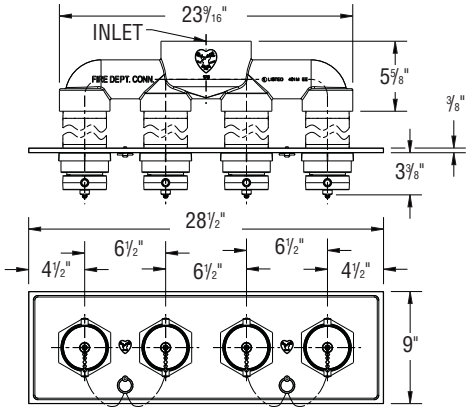


Fig. 3

FIGURE 4

786

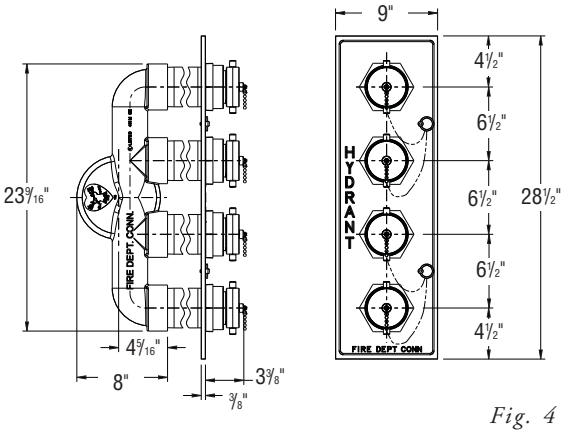


Fig. 4

FIGURE 5

787

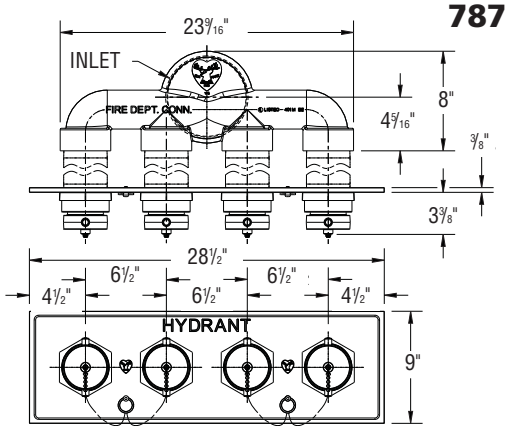
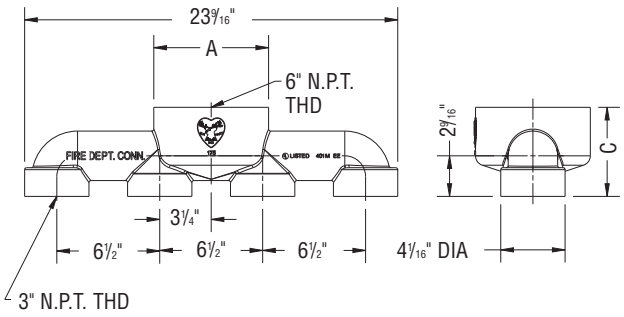


Fig. 5

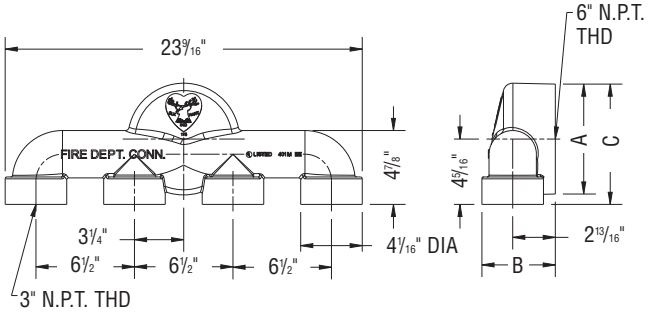
4-WAY STRAIGHT MANIFOLD



710

PRODUCT INFORMATION	MODEL
	710
Size (Inches)	6" x (4) 3"
Escutcheon opening size (Inches)	4 1/4
Dimension A (Inches)	7 1/4
Dimension C (Inches)	5 5/8
Material	Cast brass
Elkhart products used in	782, 783, 784, 785
Additional uses	With Elkhart's 720 Clapper Snoot (without nipples) as an exposed inlet connection
Weight (Lbs.)	28 1/2
PSI (BAR)	175 (12.1)
Certifications	U.L. Listed

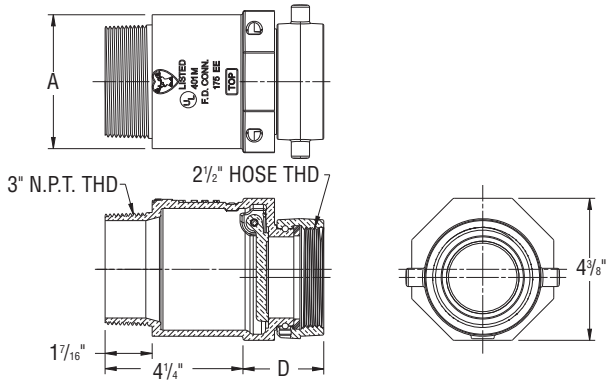
4-WAY 90° MANIFOLD



711

PRODUCT INFORMATION	MODEL
	711
Size (Inches)	6" x (4) 3"
Escutcheon opening size (Inches)	4 1/4
Dimension A (Inches)	7 1/4
Dimension B (Inches)	4 13/16
Dimension C (Inches)	7 15/16
Material	Cast brass
Elkhart products used in	780, 781, 786, 787
Additional uses	With Elkhart's 720 Clapper Snoot (without nipples) as either a side walk intake connection or an exposed dry standpipe inlet connection
Weight (Lbs.)	28
PSI (BAR)	175 (12.1)
Certifications	U.L. Listed

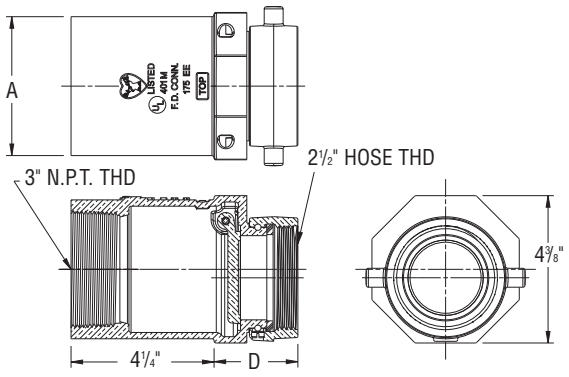
MALE CLAPPER SNOOT



720

PRODUCT INFORMATION	MODEL
	720
Openings (Inches)	3" M x 2.5" F
Dimension A (Inches)	4 1/8
Dimension D (Inches)	2 1/2
Material/Finish	Cast brass with polished brass exposed parts (optional chrome plating available)
Additional uses	Single fire department connection (plug and chain available separately)
Weight (Lbs.)	9 1/2
PSI (BAR)	175 (12.1)
Certifications	U.L. Listed

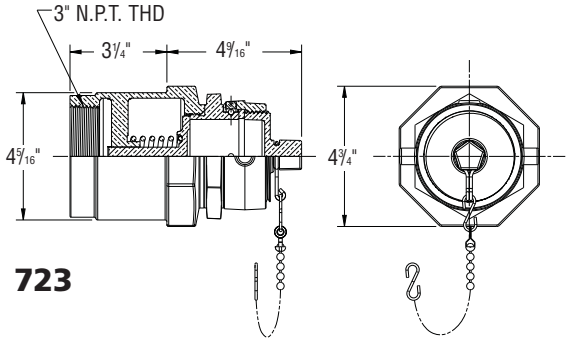
FEMALE CLAPPER SNOOT



721

PRODUCT INFORMATION	MODEL
	721
Size (Inches)	3" F x 2.5" F
Dimension A (Inches)	4⅛
Dimension D (Inches)	2½
Material/Finish	Cast brass with polished brass exposed parts (optional chrome plating available)
Elkhart products used in	780, 781, 782, 783
Additional uses	Single fire department connection (plug and chain available separately)
Weight (Lbs.)	9½
PSI (BAR)	175 (12.1)
Certifications	U.L. Listed

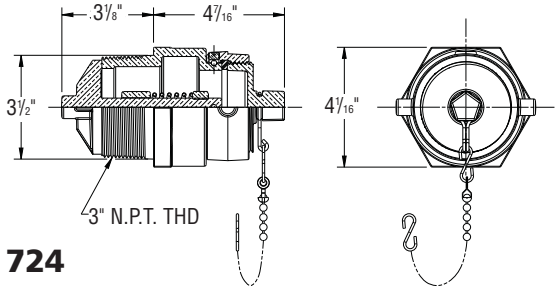
FEMALE SPRING CHECK SNOOT



723

PRODUCT INFORMATION	MODEL
	723
Sizes (Inches)	3"F x 2½" or 3"F x 3"
Material/Finish	Cast brass with polished brass exposed parts (optional chrome plating available)
Available with	Plug
Spring check action	Open @ 10 psi (0.69 bar) Flows 250 GPM (946 lpm) @ 12 psi (0.83 bar) Flows 500 GPM (1893 lpm) @ 24 psi (1.65 bar)
Weight (Lbs.)	12¼ or 11⅗

MALE SPRING CHECK SNOOT



724

PRODUCT INFORMATION	MODEL
	724
Sizes (Inches)	3"M x 2½" or 3"M x 3"
Material/Finish	Cast brass with polished brass exposed parts (optional chrome plating available)
Available with	Plug
Spring check action	Open @ 10 psi (0.69 bar) Flows 250 GPM (946 lpm) @ 12 psi (0.83 bar) Flows 500 GPM (1893 lpm) @ 24 psi (1.65 bar)
Weight (Lbs.)	12¼ or 8⁷⁄₁₀

ADDITIONAL INFORMATION

Components rated for 175 psi (12.1 bar), unless otherwise specified.

THREADS

- *710, 711, 712 and 713 are NPT on all connections.*
- *720, 720-HP, 721, 721-HP, 723 and 724 feature NPT Inlets, while the outlets are hose thread (NHT). See index T-12 for available optional hose threads.*

OTHER PRODUCTS

- *Flush Siamese (utilizing the components) are available on page 12-16.*
- *Caps and plugs are available on page 10-1.*
- *Escutcheons available on page 12-28.*

TERMINOLOGY

FREE STANDING

To better serve our customers, for this edition and future editions of the catalog, Elkhart Brass has adopted industry standard terminology for our products. In previous versions of our catalog, you may have found the items now listed as “free standing” under “sidewalk siamese” or “sidewalk hydrants”.

The industry standard terminology is more inclusive of different connection options.

EXPOSED

To better serve our customers, for this edition and future editions of the catalog, Elkhart Brass has adopted industry standard terminology for our products. In previous versions of our catalog, you may have found the items now listed as “exposed” under “exposed siamese” or “exposed wall hydrants”.

The industry standard terminology is more inclusive of different connection options.

FLUSH

To better serve our customers, for this edition and future editions of the catalog, Elkhart Brass has adopted industry standard terminology for our products. In previous versions of our catalog, you may have found the items now listed as “flush” under “flush siamese” or “flush wall hydrants” or “flush pump test”.

The industry standard terminology is more inclusive of different connection options.

Roof Manifolds & Connections

Elkhart provides several choices in roof manifolds and connections. Roof manifolds provide water control (on mounted building or adjacent buildings) when used with angle hose valves while the roof connections can be used to disperse water to adjacent buildings. All options offer cast brass construction and 2½" outlets rated at 250 gpm (946 lpm) per outlet.

ROOF MANIFOLDS & CONNECTIONS

INLET SIZE (Inches)	OUTLET				CERT.	MEASUREMENTS (Inches)						Weight (Lbs.)	MODEL	FIGURE
	NUMBER		STYLE		U.L. LISTED	A	B	C	D	E	F			
	2	3	MALE	FEMALE										
4	•		•		•	5 5/8	3 11/16	4 3/8	2 3/8	5 1/8	4 15/16	8	168	1
	•			•	•	5	7 1/2	11	6 7/16			26 1/4	158	3
	•			•	•	5	6 5/8	12 3/8	5 7/8			16 1/4	159	4
	•		•		•	5 1/16	5 7/16	7 7/8	5 5/8			9 3/4	751	6
		•	•		•	4 1/5	5 1/4	4 13/16	2 1/2		4 3/8	10 1/4	168	2
		•		•	•	5 1/4	6 5/8	17 1/2	6 1/8			26	158	3
6	•		•		•	5 5/8	4 11/16	4 15/16	2 5/8	7 1/4	5 11/16	14 1/4	168	1
	•			•		7 1/2	7 1/2	11 1/2	8			26 1/4	158	3
	•		•		•	7 1/2	9 1/2	10 11/16	8			20 1/4	755	7
		•	•		•	5 1/4	7 1/4	4 15/16	2 11/16		5 3/8	15 1/4	168	2
		•		•	•	7 3/8	6 5/8	17 1/4	6 1/8			24 3/8	158	3
		•		•	•	7 1/4	6 5/8	19	7 15/16			42 3/4	159	4
		•	•		•	7 1/2	4 3/4	10 11/16	10 1/2			20 3/8	761	5

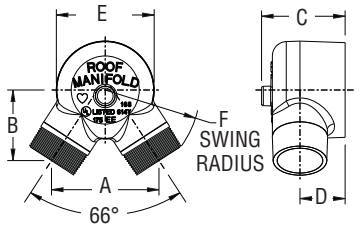
ADDITIONAL INFORMATION

- *When ordering, specify model number, inlet size and number of outlets.*
- *Each outlet has a rated flow of 250 gpm (946 lpm).*
- *Roof manifolds can be used in alternate applications and/or to test fire pump systems.*

THREADS

All threads are NPT unless otherwise specified.

FIGURE 1

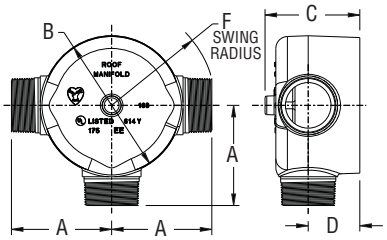


168

- 2-way

Fig. 1

FIGURE 2

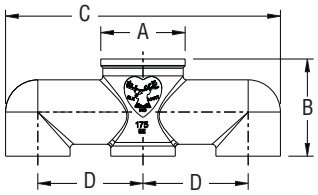


168

- 3-way

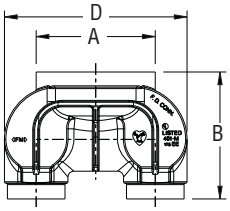
Fig.2

FIGURE 3



158

- 3-way

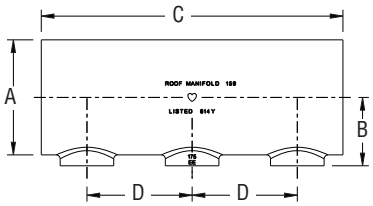


158

- 2-way

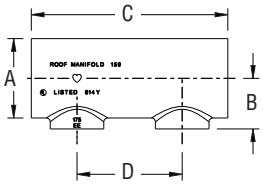
Fig. 3

FIGURE 4



159

- 3-way

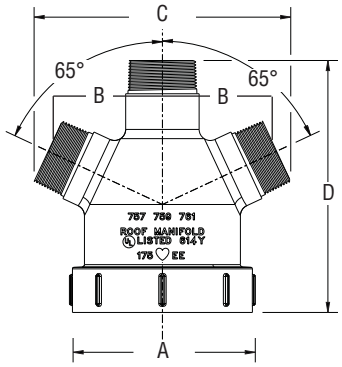


159

- 2-way

Fig. 4

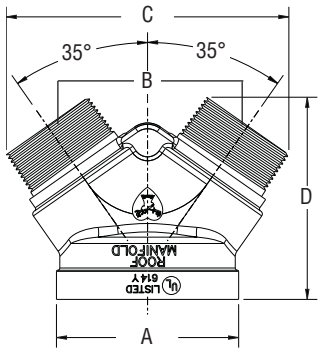
FIGURE 5



761

Fig. 5

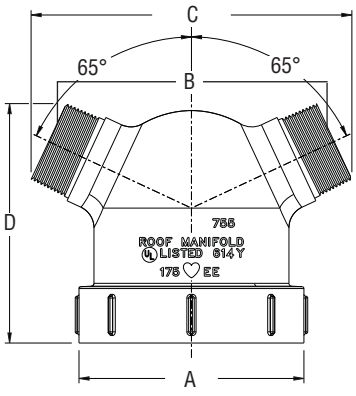
FIGURE 6



751

Fig. 6

FIGURE 7



755

Fig. 7

ROUND ESCUTCHEON PLATE

MEASUREMENTS				AVAILABLE LETTERING OPTIONS							MATERIAL/FINISH					Weight (Lbs.)	MODEL
											Brass				Aluminum		
Pipe size (Inches)	Inside diameter	Outside diameter	Thickness	Automatic Sprinkler	Dry Standpipe	Hydrant	Pump Test Conn.	Standpipe	Standpipe & Automatic Sprinkler	Wall Hydrants	Polished	Rough	Satin	Chrome -plated	Red urethane		
1 1/2	1 15/16	3	15/32											s		1/8	589-1.5
2 1/2	2 59/64	4 13/32	3/16											s		5/16	589-2.5
4	4 9/16	10 3/16	1/4	•	•	•	•	•	•	•					s	1	590-4-A
	4 9/16	10 3/16	1/4	•	•	•	•	•	•	•	o		s	o		3 1/8	590-4-B
6	6 11/16	12	3/8	•	•	•	•	•	•	•					s	2 1/8	590-6-A
	6 11/16	12	3/8	•	•	•	•	•	•	•	o		s	o		6 7/8	590-6-B

Key s = standard o = option

RECTANGULAR ESCUTCHEON PLATE

MEASUREMENTS (Inches)		AVAILABLE LETTERING OPTIONS							MATERIAL				Weight (Lbs.)	MODEL
Length	Width	Auto-Sprinkler	Auto-Sprk/Stdp	Dry Standpipe	Pump Test	Sprinkler	Standpipe	Wall Hydrant	Cast Aluminum	Cast Brass	Polished Brass	Polished Chrome		
11 1/2	4 1/2						•		s				3/4	591-A
11 1/2	4 1/2						•			s			2 5/8	591-B
11 1/2	4 1/2					•			s				3/4	592-A
11 1/2	4 1/2					•				s			2 5/8	592-B

Key s = standard o = option

ADDITIONAL INFORMATION

Caps and plugs are available on page 10-1.

LARSEN'S CABINETS

Larsen's Cabinets

Larsen's offers cabinets for fire protection equipment utilized in distinguished projects world-wide. Elkhart Brass is proud to be the distributor of Larsen's Cabinets outside the USA.

Larsen's Cabinets come in a variety of sizes and styles, suitable for use in all interior applications:

- **Fire Extinguishers**
- **Fire Hose and Valve**
- **Fire Blanket**

Exclusive options for extinguisher, hose and valve cabinets include:

- **Flame-Shield®**
- **Vigilante Alarm**
- **Thermal Die Cut Lettering**
- **"Fire" Handle**
- **Recessed Handle**

Call Elkhart Brass today for information on ordering your Larsen's Cabinet!

NOZZLE REPAIR KITS

P/N 80800001 Field Service Kit

For all 1.0" and 1.5" nozzles and ball shut-offs (1.0" ID Ball) • Kit contains the following parts:

- 1 Adjustable Seat
- 1 O-Ring for Adjustable Seat
- 1 Actuator Shaft O/S
- 1 Drive Pin for O/S Actuator Shaft
- 1 Actuator Shaft N/S
- 1 O-Ring for Actuator Shaft
- 1 Actuator Shaft Screw
- 1 Handle Pivot Screw
- 1 O-Ring for Pivot Screw
- 1 O-Ring for Body Base
- 1 Repair Instructions

This kit can be used on the following nozzles and ball shut-offs:

L-O (N/S)	SFL-BG	SM-10FG (O/S)	4000-01 (O/S)
L-O (O/S)	SFL-OG (N/S)	SM-10FB (N/S)	4000-02 (N/S)
L-OE (N/S)	SFL-OG (O/S)	SM-10FB (O/S)	4000-02 (O/S)
L-OE (O/S)	SFS-O (N/S)	LB-275 (N/S)	4000-03 (N/S)
L-OG (N/S)	SFS-O (O/S)	LB-275 (O/S)	4000-03 (O/S)
L-OG (O/S)	SFS-OG (N/S)	LB-275A (N/S)	4000-10 (N/S)
NSL	SFS-OG (O/S)	LB-275A (O/S)	4000-10 (O/S)
S-O (N/S)	SM-3F (N/S)	LB-275GA (N/S)	4000-11 (N/S)
S-O (O/S)	SM-3F (O/S)	LB-275GA (O/S)	4000-11 (O/S)
S-OE (N/S)	SM-3FG (N/S)	SB-275 (N/S)	4000-12 (N/S)
S-OE (O/S)	SM-3FG (O/S)	SB-275 (O/S)	4000-12 (O/S)
SFL-O (N/S)	SM-10F (N/S)	SB-275A (N/S)	4000-13 (N/S)
SFL-O (O/S)	SM-10F (O/S)	SB-275A (O/S)	4000-13 (O/S)
SFL-B	SM10FG (N/S)	4000-01 (N/S)	

(Optional ball is P/N 15076000)

P/N 81464001 Field Service Kit

For 1.5" SFM HP/LP • Kit contains the following parts:

- 2 O-Rings for Adjustable Seat
- 2 O-Rings for Actuator
- 2 O-Rings for Body Adapters
- 2 Self-Adjusting Seats (UHMWPE)
- 2 Actuator Shaft Square Drive
- 1 Repair Instructions

(Optional ball is P/N 17328001)

P/N 81165001 Field Service Kit

For SFL-O-DI (De-icing) • Kit contains the following parts:

- 1 O-Ring for Adjustable Seat
- 1 Drive Pin for Handle
- 1 O-Ring for Actuator
- 1 O-Ring for Pivot Screw
- 2 O-Rings for Center Barrel
- 1 O-Ring for Base Adapter
- 1 Actuator Shaft Screws
- 1 Adjustable Seal
- 1 Actuator Shaft
- 1 Handle Pivot Screw
- 1 Actuator Shaft Square Drive
- 1 Repair Instructions

(Optional ball is P/N 15076)

P/N 81463001 Field Service Kit

For PSFS-HP, PSFS-HPG • Kit contains the following parts:

- 2 O-Rings for Adjustable Seat
- 2 O-Rings for Actuator
- 2 O-Rings for Body Adapters
- 2 Seats
- 2 Actuator Shaft Square Drive
- 1 Repair Instructions

(Optional ball is P/N 17333001)

P/N 80902001 Field Service Kit

For all 1.75", 2.0", and 2.5" nozzles and ball shut-offs (1.375" ID Ball) • Kit contains the following parts:

- 1 Adjustable Seat
- 1 O-Ring for Adjustable Seat
- 1 Actuator Shaft O/S
- 1 Drive Pin for O/S Actuator Shaft
- 1 Actuator Shaft N/S
- 1 O-Ring for Actuator Shaft
- 1 Actuator Shaft Screw
- 1 Handle Pivot Screw
- 1 O-Ring for Pivot Screw
- 1 O-Ring for Body Base
- 1 Repair Instructions

This kit can be used on the following nozzles and ball shut-offs:

A	SM-20FG (O/S)	DB-275 (N/S)
D (N/S)	SM-30F (N/S)	DB-275 (O/S)
D (O/S)	SM-30F (O/S)	DB-275A (N/S)
DSF (N/S)	SM-30FLP	DB-275A (O/S)
DSF (O/S)	SM-30FG (N/S)	DB-275AT
DSM-30F (N/S)	SM-30FG (O/S)	DB-275-GAT
DSM-30F (O/S)	SM-30FGLP	B-278
DSM-30FLP	SOS	B-278L
DSF-30FG	B-275 (N/S)	4000-16
DSM-30FGLP	B-275 (O/S)	4000-17
SF	B-275A (N/S)	4000-20 (N/S)
SFM	B-275A (O/S)	4000-20 (O/S)
SFM-G	B-275AT	4000-23 (N/S)
SM-20F (N/S)	B-275-GA (N/S)	4000-23 (O/S)
SM-20F (O/S)	B-275-GA (O/S)	4000-26 (N/S)
SM-20FG (N/S)	B-275-GAT	4000-26 (O/S)

(Optional ball is P/N 17304000)

P/N 81277001 Field Service Kit

This 1 3/8" double drive kit can be used on the following nozzle types: B-375-A, B-375-AT, B-375-GA, B-375-GAT, DB-375-A, DB-375-AT, DB-375-GA, DB-375-GAT

• Kit contains the following parts:

- 2 O-Rings for Adjustable Seat
- 2 O-Rings for Actuator Shafts
- 3 O-Rings for Body Adapters
- 2 Self-Adjusting Seats (UHMWPE)
- 1 O-Ring for F/S Base
- 2 Actuator Shaft Square Drives
- 1 Repair Instructions

(Optional 1.375" single cut-away ball is P/N 17326001)
(Optional 1.375" double cut-away ball is P/N 17323000)
(Optional 1.375" full round ball is P/N 17328001)

P/N 81151001 Field Service Kit

For SFL-GN (MIL-N-24408B Rev. D or MIL-N-24408B Rev. E)

• Kit contains the following parts:

- 2 Pins
- 2 O-Rings for Actuator Shafts
- 2 Actuator Shaft Screws
- 1 O-Ring for F/S Base
- 2 Self-Adjusting Seats (UHMWPE)
- 1 O-Ring for inside Center Barrel
- 1 O-Ring for outside Center Barrel
- 1 O-Ring for Pistol Grip to Body
- 2 O-Rings for Upstream Seat
- 1 O-Ring for Downstream Seat
- 2 Actuator Shafts
- 1 Repair Instructions

VALVE REPAIR KITS

Field Service Kits for 800 and 2800 Series Apparatus Valves

For all 800 and 2800 series apparatus valves • Kit contains the following parts:

1 Seat
1 O-Ring for Seat
1 Seat Retainer
1 O-Ring for Seat Retainer
1 O-Ring for Actuator Shaft
1 O-Ring for Pivot Bolt
3 O-Rings for Body

Kits available for:

890 1.0" Valve.....Kit P/N 80426001
891 1.5" Valve.....Kit P/N 80427001
892 2.0" Valve.....Kit P/N 80428001
893 3.0" Valve.....Kit P/N 80421001
896 2.5" Valve.....Kit P/N 80326001
2891 1.5" Valve .....Kit P/N 80427001
2892 2.0" Valve .....Kit P/N 80428001
2893 3.0" Valve .....Kit P/N 80421001
2896 2.5" Valve .....Kit P/N 80326001
B-94 2.5" Valve.....Kit P/N 80326001

Balls available for: 800 and 2900 Series Apparatus Valves

1".....P/N 15076000
1.5" .....P/N 15077000
2".....P/N 17305000
2.5" .....P/N 15079000
3".....P/N 15080000

P/N 11736001 .....zinc anode for a 9786 valve

Field Service Kit for Copperhead IV

P/N 65490000.....Seal Kit with Ball
P/N 65491000.....Seal Kit

Field Service Kits for 2900 Series Apparatus Valves

For all 2900 series apparatus valves • All kits (except for 2940) contain the following parts:

1 Valve Ball*
2 Seats*
3 O-Rings for Seat*
3 O-Rings for Body
3 O-Rings for Seat Retainer

Kits available for:

2915 1.5" Valve .....Kit P/N 81105001
2920 2.0" Valve .....Kit P/N 81106001
2925 2.5" Valve .....Kit P/N 81107001
2930 3.0" Valve .....Kit P/N 81108001
2940 4.0" Valve (O/S).....Kit P/N 81109001*
2940 4.0" Valve (N/S).....Kit P/N 81140001*

*Kits for 2940 valve (P/N 81109001 and 81140001) have only 1 seat, 1 O-Ring seat, and no valve ball. (Optional ball is P/N 17317001)

Note: New style (N/S) 2940 has 95 or 96 embossed on body casting above or below the heart.

Universal Seal Kits for use with the Elkhart Brass Unibody line or Akron Brass Apparatus Valves.

Kits contain the following parts:

1.5" – 3.5" valves
2 Valve Seats
1 Trunnion O-ring
3 Actuator Shaft O-rings

4" Valves
1 Valve Seat
1 Gear Case Adapter O-ring
2 Actuator Shaft O-rings
2 Seat Retainer O-rings
2 Face Seals

	Seal Kit	Seal Kit with Ball
EB15/EB20	P/N 65476000	P/N 65479000
EB25	P/N 65478000	P/N 65479000
EB30/EB35	P/N 65480000	P/N 65481000
EB40	P/N 65482000	

APPLIANCE REPAIR KITS

P/N 80671001 Field Service Kit for B-90 Series

One Kit required for each 2.5" Inlet/Outlet on a:

B-95
B-95A
B-96
B-96A
B-97
B-97A
B-98
B-98A
B-99
B-99A

Kits contains the following parts:

1 Seat
1 O-Ring for Seat
1 O-Ring for Actuator Shaft
1 O-Ring for Pivot Bolt
1 Swivel Gasket (2.5")

(Optional ball is P/N 17303000)

P/N 80632001 Field Service Kit for B-100 (O/S)

For B-100 gated wye • Kit contains the following parts:

2 Adjustable Seats
2 O-Rings for Adjustable Seat
2 O-Rings for Outlet Adapter
2 O-Rings for Actuator Shaft
2 O-Rings for Pivot Screw

(Optional ball is P/N 17304000)

P/N 80633001 Field Service Kit for B-100A (O/S) (Pre '93)

For B-100A (O/S) (not B-90 series) gated wye • Kit contains the following parts:

2 Adjustable Seats (Elk-O-Lite)
2 O-Rings for Adjustable Seat
2 O-Rings for Outlet Adapter
2 O-Rings for Actuator Shaft
2 O-Rings for Pivot Screw

(Optional ball is P/N 17304000)
O/S has two notches on the aluminum seats

P/N 80947001 Field Service Kit for B-100 or B-100A (N/S)

For B-100A (N/S) gated wye • Kit contains the following parts:

2 Self-Adjusting Seats (UHMWPE)
2 O-Rings for Self-Adjusting Seat
2 O-Rings for Outlet Adapter
2 O-Rings for Actuator Shaft
2 O-Rings for Pivot Screw

(Optional ball is P/N 17304000)
N/S has smooth plastic seats

Available B100B/B100A handles: P/N 80121004 (knob), P/N 36313001 (molded urethane), P/N 36313100 (forged aluminum), and P/N 36319001 (short tab).

*Changing from one handle style to another may require additional parts.

EDUCTOR/NOZZLE FLOW

This chart is designed to help you better understand the performance of portable foam eductors at various operating pressures. It will also assist you in selecting a nozzle that will be compatible with your new eductor.
As you can see, all of these eductors achieve their rated flow with an inlet pressure of 200 psi. At lower pressures the water flow is less, but the flow of foam concentrate will remain the same. Consequently, the foam solution will be a richer mixture than the metering valve indicates.
You will also note that at lower pressures (flows) the effective reach of the nozzles decreases. Take this into consideration when making your initial attack.

Eductor Model	Recommended Nozzles For Use With Eductor	Hose Size	Inlet Pressure	Flow Rate ♥ GPM	Flow Rate ♥ L/Min.	Maximum Hose Lay*	Nozzle Pressure	Effective Reach**
241-30	SFS-O or SFS-OG (Set @ 30), 4000-02 (30) PSFS-HP, PSFS-HPG & TPSFS-HP (Set @ 30)	1.0"	200 PSI	30	114	100'	100 PSI	74'
			150 PSI	26	98	100'	75 PSI	63'
			100 PSI	21	79	100'	49 PSI	57'
	SM-3F, SM-3FG	1.0"	200 PSI	30	114	100'	95PSI	65'
			—	—	—	—	—	—
			—	—	—	—	—	—
241-60 or 240-60	SFL-O or SFL-OG (Set @ 60), 4000-10 (60), 4000-13 (60)	1.5"	200 PSI	60	227	300'	100 PSI	87'
			150 PSI	52	197	300'	75 PSI	77'
			100 PSI	42	159	300'	49 PSI	65'
	SM-10F, SM-10FG, SM-10FB	1.5"	200 PSI	60	227	300'	92 PSI	82'
			—	—	—	—	—	—
			—	—	—	—	—	—
241-95 or 240-95	SFL-O or SFL-OG (Set @ 95), SFL-B or SFL-BG (Set @ 95), SFL-N (95), SFL-GN (95), SFM-HP or SFM-HPG (Set @ 95) SFM-LP or SFM-LPG (Set @ 95) 4000-10 (95), 4000-13 (95)	1.5"	200 PSI	95	360	150'	100 PSI	99'
			150 PSI	82	310	150'	75 PSI	92'
			100 PSI	67	254	150'	50 PSI	77'
		1.75"	200 PSI	95	360	250'	100 PSI	99'
			150 PSI	82	310	250'	75 PSI	92'
			100 PSI	67	254	250'	50 PSI	77'
	SM-10F, SM-10FG, SM-10FB	1.5"	200 PSI	95	360	150'	99 PSI	86'
			—	—	—	—	—	—
			—	—	—	—	—	—
		1.75"	200 PSI	95	360	250'	99 PSI	86'
			—	—	—	—	—	—
			—	—	—	—	—	—
	SM-20F, SM-20FG ◆	1.5"	200 PSI	95	360	200'	81 PSI	97'
			—	—	—	—	—	—
			—	—	—	—	—	—
		1.75"	200 PSI	95	360	400'	81 PSI	97'
			—	—	—	—	—	—
			—	—	—	—	—	—
241-125 or 240-125	SFL-O or SFL-OG (Set @ 125), SFL-B or SFL-BG (Set @ 125), SFL-N (125), SFL-GN (125), SFM-HP or SFM-HPG (Set @ 125) SFM-LP or SFM-LPG (Set @ 125) 4000-10 (125), 4000-13 (125)	1.75"	200 PSI	125	473	150'	100 PSI	101'
			150 PSI	108	409	150'	75 PSI	92'
			100 PSI	88	333	150'	50 PSI	76'
		2.0"	200 PSI	125	473	300'	100 PSI	101'
			150 PSI	108	409	300'	75 PSI	92'
			100 PSI	88	333	300'	50 PSI	76'
	SM-20F, SM-20FG ◆	1.75"	200 PSI	125	473	200'	87 PSI	96'
			—	—	—	—	—	—
			—	—	—	—	—	—
		2.0"	200 PSI	125	473	400'	87 PSI	96'
			—	—	—	—	—	—
			—	—	—	—	—	—
241-150	4000-14, 4000-16, 4000-17 } (150@75) SFM-LP or SFM-LPG (Set @ 150)	1.75"	200 PSI	150	568	150'	75 PSI	110'
			150 PSI	130	492	150'	56 PSI	92'
			100 PSI	106	401	150'	37 PSI	76'
		2.0"	200 PSI	150	568	300'	75 PSI	110'
			150 PSI	130	492	300'	56 PSI	92'
			100 PSI	106	401	300'	37 PSI	76'
	SM-20-FLP SM-20-FGLP ◆	1.75"	200 PSI	150	568	150'	75 PSI	110'
			—	—	—	—	—	—
			—	—	—	—	—	—
		2.0"	200 PSI	150	568	300'	75 PSI	110'
			—	—	—	—	—	—
			—	—	—	—	—	—
241-250	Any SF Series (Set @ 250) or any 4000-20 Series (250)	2.5"	200 PSI	250	946	200'	100 PSI	120'
			150 PSI	217	821	200'	75 PSI	105'
			100 PSI	177	670	150'	50 PSI	83'
	Any SM-30 Series	2.5"	200 PSI	250	946	200'	91 PSI	124'
			—	—	—	—	—	—
			—	—	—	—	—	—

* Maximum hose lay from eductor discharge to nozzle. We recommend that you test your hose to see if this is applicable.
** These figures are with foam solution flowing (rather than plain water) and the nozzle set on straight stream.
♥ Total flow when picking-up 6% foam concentrate through metering valve.
◆ SM-30F and SM-30FG can also be utilized with these eductors. Flow and reach data will differ.

The flow and effective reach data found on the following pages is compiled and updated by our engineering staff in the testing area of our assembly department. The flow is determined by an electronic flowmeter while a piezometer gauge at the base/inlet of the nozzle establishes the "nozzle pressure."

The effective reach is determined by elevating the nozzle to 32 degrees above horizontal and at a height of 4' above ground level. The reach of Straight Stream, Narrow Fog (30 degrees) and Wide Fog (90 degrees) are then established by measuring where the last water droplets are falling at ground level. These tests are conducted in "still air" conditions, so the actual results will vary depending upon conditions.

CHIEF®

Catalog No.	GPM	Stream Setting	Discharge in U.S. GPM — Nozzle Pressure PSI								Effective Reach in Feet — Nozzle Pressure PSI							
			40	50	75	100	125	150	175	200	40	50	75	100	125	150	175	200
4000-01	15	SS	9	11	12	15	17	18	20	22	—	48	56	58	61	63	65	66
		Narrow Fog									—	20	22	24	26	28	31	32
		Wide Fog									—	11	14	15	17	19	21	22
4000-02 4000-03 4000-04	30	SS	20	22	26	30	34	37	39	41	—	65	70	81	85	90	91	92
		Narrow Fog									—	30	35	41	44	47	48	49
		Wide Fog									—	15	16	19	21	23	25	26
	45	SS	32	35	40	45	49	52	56	58	—	69	75	85	91	96	98	101
		Narrow Fog									—	32	37	44	46	48	50	51
		Wide Fog									—	17	18	21	23	25	26	28
4000-10 4000-11 4000-12	60	SS	38	43	51	60	68	76	—	—	69	76	89	96	104	110	115	124
		Narrow Fog									38	41	44	49	55	61	66	71
		Wide Fog									31	33	35	41	43	47	51	58
	75	SS	53	58	65	75	84	92	—	—	73	81	94	103	111	118	—	—
		Narrow Fog									39	41	45	52	57	62	—	—
		Wide Fog									29	30	31	33	37	40	—	—
4000-13 4000-14 4000-15	95	SS	63	68	83	95	107	115	—	—	77	86	101	111	118	126	130	138
		Narrow Fog									40	41	46	55	59	64	67	70
		Wide Fog									29	30	33	36	40	44	47	51
4000-18 4000-19	125	SS	82	91	110	125	140	153	—	—	78	86	103	113	121	128	138	146
		Narrow Fog									44	48	55	62	67	71	77	84
		Wide Fog									32	36	39	44	49	52	56	59
	150	SS	97	107	132	150	169	182	—	—	80	89	108	124	138	148	156	162
		Narrow Fog									46	51	53	56	58	60	62	64
		Wide Fog									34	37	43	46	48	51	52	55
4014-HR	175 @ 50	SS	157	175	214	247	277	—			91	101	117	132	148	—	—	—
		Narrow Fog									51	54	61	73	78	—	—	—
		Wide Fog									34	36	40	44	48	—	—	—
4000-20 4000-21	175	SS	111	124	150	175	192	210	—	—	88	98	114	126	141	152	—	—
		Narrow Fog									47	51	59	69	76	81	—	—
		Wide Fog									32	34	36	39	44	48	—	—
4000-22 4000-23 4000-24	200	SS	127	141	173	200	224	245	—	—	88	91	101	117	132	148	—	—
		Narrow Fog									49	51	54	61	73	78	—	—
		Wide Fog									33	34	36	40	44	48	—	—
4000-25 4000-26 4000-27	250	SS	172	192	230	256	290	320	—	—	91	102	118	136	152	164	—	—
		Narrow Fog									53	56	62	70	79	83	—	—
		Wide Fog									35	40	43	47	51	54	—	—
4000-28 4000-29 4000-31 4000-35	325	SS	220	240	289	325	362	398	—	—	97	108	126	142	160	173	—	—
		Narrow Fog									57	61	67	75	86	89	—	—
		Wide Fog									39	43	47	52	55	59	—	—
	350	SS	221	247	303	350	391	—	—	—	97	108	126	142	154	—	—	—
		Narrow Fog									57	61	67	77	84	—	—	—
		Wide Fog									39	43	47	52	56	—	—	—
4000-14 4000-16 4000-17 4000-18 4000-19*	*125 @ 75 PSI	SS	91	102	125	144	161	176	—	—	79	88	106	122	135	145	—	—
		Narrow Fog									45	50	52	55	57	59	—	—
		Wide Fog									34	37	43	46	48	51	—	—
	*150 @ 75 PSI	SS	110	122	150	173	194	212	—	—	82	91	110	126	140	150	—	—
		Narrow Fog									47	52	54	57	59	61	—	—
		Wide Fog									34	37	43	46	48	51	—	—
	175 @ 75 PSI	SS	128	143	175	202	—	—	—	—	85	94	113	130	—	—	—	—
		Narrow Fog									49	54	56	59	—	—	—	—
		Wide Fog									35	38	44	47	—	—	—	—
	150 @ 50 PSI	SS	134	150	184	212	—	—	—	—	87	96	115	133	—	—	—	—
		Narrow Fog									50	55	57	60	—	—	—	—
		Wide Fog									35	38	44	47	—	—	—	—

NOZZLE FLOW

CHIEF®

Catalog No.	GPM	Stream Setting	Discharge in U.S. GPM — Nozzle Pressure PSI								Effective Reach in Feet — Nozzle Pressure PSI							
			40	50	75	100	125	150	175	200	40	50	75	100	125	150	175	200
4000-20 4000-21 4000-22 4000-23 4000-24 4000-25 4000-26 4000-27 4000-28 4000-29 4000-31 4000-35	185 @ 75 PSI	SS	135	151	185	214	239	262	—	—	89	100	115	130	145	155	—	—
		Narrow Fog									50	53	60	72	77	82	—	—
		Wide Fog									33	35	39	43	47	51	—	—
	200 @ 75 PSI	SS	146	163	200	231	258	283	—	—	91	101	117	132	148	159	—	—
		Narrow Fog									51	54	61	73	78	83	—	—
		Wide Fog									34	36	40	44	48	52	—	—
	250 @ 75 PSI	SS	183	204	250	289	323	353	—	—	93	103	118	137	154	165	—	—
		Narrow Fog									54	57	64	75	80	84	—	—
		Wide Fog									36	40	44	47	52	55	—	—
	275 @ 75 PSI	SS	201	225	275	318	355	—	—	—	95	105	122	139	156	—	—	—
		Narrow Fog									55	58	64	76	82	—	—	—
		Wide Fog									33	36	44	49	53	—	—	—
	300 @ 75 PSI	SS	219	245	300	346	—	—	—	—	97	108	126	142	—	—	—	—
		Narrow Fog									57	61	67	77	—	—	—	—
		Wide Fog									39	43	47	52	—	—	—	—
	200 @ 50 PSI	SS	179	200	245	283	316	346	—	—	91	102	118	142	160	173	—	—
		Narrow Fog									53	56	62	70	86	89	—	—
		Wide Fog									35	40	43	52	55	59	—	—
	250 @ 50 PSI	SS	224	250	306	353	—	—	—	—	98	109	127	144	—	—	—	—
		Narrow Fog									57	61	67	77	—	—	—	—
		Wide Fog									3	43	47	52	—	—	—	—

SELECT-O-MATIC®

Catalog No.	Stream Setting	Discharge in U.S. GPM — Nozzle Pressure PSI											Effective Reach in Feet — Nozzle Pressure PSI									
		50	60	70	75	80	85	90	95	100	105	110	50	60	70	75	80	85	90	95	100	105	110
SM-3F Series	SS	5	7	9	11	14	17	22	30	35	47	56	—	—	—	52	53	55	64	72	77	94	98
	Narrow Fog												—	—	—	22	25	27	33	36	39	46	48
	Wide Fog												—	—	—	12	13	14	18	20	24	36	37
SM-10-FE	SS	20	22	24	25	26	27	28	32	51	81	120	60	62	64	66	68	70	74	79	85	93	110
	Narrow Fog												30	31	32	33	34	35	36	38	44	50	60
	Wide Fog												15	15	16	16	17	17	18	18	21	24	30
SM-10F Series	SS	40	43	46	48	50	52	57	65	100	130	148	—	—	—	78	80	82	84	88	98	104	112
	Narrow Fog												—	—	—	42	43	46	48	52	65	69	72
	Wide Fog												—	—	—	28	29	31	32	34	39	41	43
SM-20F Series	SS	50	55	64	73	87	105	130	170	212	234	245	—	—	—	88	96	103	114	120	124	126	—
	Narrow Fog												—	—	—	50	52	55	58	60	62	63	—
	Wide Fog												—	—	—	22	23	25	28	29	30	31	—
SM-20-FLP SERIES TSM-20FLP	SS	50	67	156	204	—	—	—	—	—	—	—	69	75	108	115	—	—	—	—	—	—	—
	Narrow Fog												38	40	55	60	—	—	—	—	—	—	—
	Wide Fog												31	33	36	36	—	—	—	—	—	—	—
SM-30F Series	SS	50	69	88	112	150	190	226	264	300	324	342	—	—	—	105	120	133	137	141	145	148	—
	Narrow Fog												—	—	—	69	75	75	75	76	76	76	—
	Wide Fog												—	—	—	38	40	41	43	45	46	45	—
SM-30-FLP Series (Low Pressure)	SS	—	87	175	220	260	300	—	—	—	—	—	—	—	—	135	140	145	—	—	—	—	—
	Narrow Fog												—	—	—	70	75	75	—	—	—	—	—
	Wide Fog												—	—	—	42	44	46	—	—	—	—	—

PHANTOM®

Catalog No.	GPM	Stream Setting	Discharge in U.S. GPM — Nozzle Pressure PSI								Effective Reach in Feet — Nozzle Pressure PSI							
			40	50	75	100	125	150	175	200	40	50	75	100	125	150	175	200
PSFS-HP PSFS-HPG TPSFS-HP	15	SS	9	11	12	15	17	18	20	22	45	48	56	58	61	63	65	66
		Narrow Fog									19	20	22	24	26	28	31	32
		Wide Fog									10	11	14	15	17	19	21	22
	30	SS	20	22	26	30	34	37	39	41	63	65	70	81	85	90	91	92
		Narrow Fog									28	30	35	41	44	47	48	49
		Wide Fog									14	15	16	19	21	23	25	26
	45	SS	32	35	40	45	49	52	56	58	67	69	75	85	91	96	98	101
		Narrow Fog									30	32	37	44	46	48	50	51
		Wide Fog									16	17	18	21	23	25	26	28
	60	SS	39	43	52	60	66	72	78	84	69	74	85	94	100	104	109	113
		Narrow Fog									37	39	41	45	50	54	58	62
		Wide Fog									27	28	30	36	40	42	47	55
SFM-LP SFM-LPG TSFM-LP TSFM-LPT	30	SS	22	24	30	35	39	NA	—	—	60	62	67	78	82	—	—	—
		Narrow Fog									26	28	33	39	42	—	—	—
		Wide Fog									14	15	16	19	21	—	—	—
	95	SS	69	78	95	110	123	NA	—	—	75	84	99	109	116	—	—	—
		Narrow Fog									39	40	45	54	58	—	—	—
		Wide Fog									29	30	33	36	40	—	—	—
	125	SS	91	102	125	144	161	NA	—	—	79	88	106	122	135	—	—	—
		Narrow Fog									45	50	52	55	59	—	—	—
		Wide Fog									34	37	43	46	48	—	—	—
	150	SS	110	122	150	173	194	NA	—	—	82	91	110	126	140	—	—	—
		Narrow Fog									47	52	54	57	61	—	—	—
		Wide Fog									35	38	44	47	49	—	—	—
	200	SS	146	163	200	231	258	NA	—	—	91	101	117	132	148	—	—	—
		Narrow Fog									51	54	61	73	78	—	—	—
		Wide Fog									36	39	45	48	50	—	—	—

	Catalog No.	GPM	Stream Setting	Discharge in U.S. GPM — Nozzle Pressure PSI 40	50	75	100	125	150	175	200	Effective Reach in Feet — Nozzle Pressure PSI 40	50	75	100	125	150	175	200
PHANTOM®	SFM-HP, SFM-HPG, TSFM-HP, TSFM-HPT	30	SS	20	22	26	30	34	37	—	—	63	65	70	81	85	90	—	—
			Narrow Fog									28	30	35	41	44	47	—	—
			Wide Fog									14	15	16	19	21	23	—	—
		95	SS	63	68	83	95	107	115	—	—	76	85	101	110	118	126	—	—
			Narrow Fog									40	41	46	55	59	64	—	—
			Wide Fog									29	30	33	38	40	44	—	—
		125	SS	82	91	110	125	140	153	—	—	78	87	103	114	122	130	—	—
			Narrow Fog									43	45	51	60	66	70	—	—
			Wide Fog									31	33	36	41	43	47	—	—
		150	SS	97	107	132	150	169	182	—	—	80	89	107	120	125	140	—	—
			Narrow Fog									46	49	55	64	70	74	—	—
			Wide Fog									33	35	38	43	45	49	—	—
		200	SS	126	141	173	200	224	245	—	—	88	97	115	130	135	150	—	—
			Narrow Fog									52	54	63	72	78	82	—	—
			Wide Fog									36	39	42	47	49	53	—	—
MYSTERY®	L-205-BA	40	SS	26	28	35	41	47	51	55	58	53	60	73	61	85	86	86.5	87
			Narrow Fog									37	40	42	43	44	45	48	50
			Wide Fog									26	28	30	31	32	33	34	35
		60	SS	39	43	41	60	68	75	81	86	68	75	92	103	110	115	120	123
			Narrow Fog									36	38	45	50	55	60	70	75
			Wide Fog									27	28	32	35	38	42	48	54
		95	SS	65	73	88	101	112	122	130	136	76	83	100	107	115	120	125	130
			Narrow Fog									41	45	55	65	70	75	85	95
			Wide Fog									28	30	36	43	49	55	60	65
		125	SS	81	89	111	126	141	157	172	187	91	100	118	130	140	150	155	157
			Narrow Fog									46	50	60	68	75	83	90	95
			Wide Fog									28	30	35	40	45	50	55	60
		125 @ 75 PSI	SS	91	102	125	144	161	176	—	—	92	101	119	130	141	150	—	—
			Narrow Fog									47	51	61	69	76	84	—	—
			Wide Fog									29	31	36	41	46	51	—	—
	205-BA	170	SS	115	126	148	170	190	—	—	—	84	92	95	96	102	105	108	115
			Narrow Fog									49	55	59	63	66	68	70	75
			Wide Fog									31	32	34	35	38	42	44	47
		250	SS	165	188	222	245	286	—	—	—	87	94	99	103	107	110	112	120
			Narrow Fog									56	60	64	68	71	73	75	80
			Wide Fog									33	35	37	39	41	43	45	50
		125 @ 75	SS	91	102	125	144	161	176	—	—	81	89	92	95	99	104	—	—
			Narrow Fog									43	50	54	57	61	63	—	—
			Wide Fog									29	30	32	34	36	38	—	—
		200 @ 75	SS	146	163	200	231	258	283	—	—	85	93	96	98	104	108	—	—
			Narrow Fog									52	56	62	65	69	71	—	—
			Wide Fog									32	34	35	37	40	43	—	—
		200 @ 50	SS	179	200	245	245	316	—	—	—	89	96	102	106	110	—	—	—
			Narrow Fog									58	61	65	70	73	—	—	—
			Wide Fog									35	37	39	40	42	—	—	—

	Catalog No.	GPM	Stream Setting	Discharge in U.S. GPM — Nozzle Pressure PSI 50	75	100	150	200	300	400	500	Effective Reach in Feet — Nozzle Pressure PSI 50	75	100	150	200	300	400	500
SELECT-O-FLOW®	SFS-O Series	10	SS	5	7	10	11	12	15	18	20	45	50	53	57	60	61	62	63
			Narrow Fog									20	21	23	28	31	33	35	37
			Wide Fog									11	12	13	15	16	17	19	21
		20	SS	15	18	20	24	28	35	41	46	50	62	64	68	70	73	75	77
			Narrow Fog									22	24	26	28	32	36	45	51
			Wide Fog									15	17	19	23	25	27	30	33
		30	SS	21	27	30	36	40	50	58	64	65	70	62	90	92	105	110	115
			Narrow Fog									30	35	40	46	48	50	55	59
			Wide Fog									15	16	18	22	25	30	35	40

	Catalog No.	GPM	Stream Setting	Discharge in U.S. GPM — Nozzle Pressure PSI 40	50	75	100	125	150	175	200	Effective Reach in Feet — Nozzle Pressure PSI 40	50	75	100	125	150	175	200
SELECT-O-FLOW®	SFL-O Series, SFL-B, SFL-N, TSFL-O	40	SS	25	29	34	40	44	48	52	56	59	65	77	83	86	90	93	96
			Narrow Fog									35	38	41	44	47	50	53	56
			Wide Fog									29	34	36	37	39	40	41	43
		60	SS	39	44	54	60	70	77	85	92	69	75	90	97	103	110	116	123
			Narrow Fog									38	40	45	50	55	60	65	70
			Wide Fog									31	32	35	40	44	48	52	57
		95	SS	59	67	82	95	105	114	123	132	77	85	102	110	117	124	131	183
			Narrow Fog									39	41	47	54	60	63	66	69
			Wide Fog									28	30	34	38	41	45	49	52
		125	SS	79	88	105	125	140	154	168	182	77	85	102	112	120	129	138	146
			Narrow Fog									45	48	55	61	66	72	78	83
			Wide Fog									33	35	40	45	48	52	56	59

NOZZLE FLOW

SELECT-O-FLOW®

Catalog No.	GPM	Stream Setting	Discharge in U.S. GPM — Nozzle Pressure PSI 40	50	75	100	125	150	175	200	Effective Reach in Feet — Nozzle Pressure PSI 40	50	75	100	125	150	175	200
SF TSF DSF STSF STDSF SF-800 STSF-800 STSFB-800A	125	SS	83	90	110	125	141	153	167	179	70	80	103	122	136	—	—	—
		Narrow Fog									33	35	40	45	50	—	—	—
		Wide Fog									18	20	25	30	35	—	—	—
	175	SS	108	120	139	175	194	211	227	244	86	98	113	127	140	—	—	—
		Narrow Fog									46	50	60	70	75	—	—	—
		Wide Fog									31	32	35	40	45	—	—	—
	250	SS	160	180	218	250	280	304	327	351	81	92	116	133	149	—	—	—
		Narrow Fog									43	46	54	61	68	—	—	—
		Wide Fog									28	30	36	40	45	—	—	—

SELECT-O-STREAM®

Catalog No.	GPM	Stream Setting	Discharge in U.S. GPM — Nozzle Pressure PSI 50	75	100	150	200	300	400	500	Effective Reach in Feet — Nozzle Pressure PSI 50	75	100	150	200	300	400	500
S-O Series	12	SS	11	13	14	17	18	23	25	29	46	55	59	64	68	73	77	80
		Narrow Fog									25	32	34	36	38	42	46	49
		Wide Fog									15	18	20	23	25	29	33	35
	23	SS	20	25	27	32	37	45	52	58	53	65	75	81	83	84	86	87
		Narrow Fog									40	43	45	55	60	65	70	75
		Wide Fog									24	26	30	37	39	41	45	48

SELECT-O-STREAM®

Catalog No.	GPM	Stream Setting	Discharge in U.S. GPM — Nozzle Pressure PSI 40	50	75	100	125	150	175	200	Effective Reach in Feet — Nozzle Pressure PSI 40	50	75	100	125	150	175	200
L-O Series	40	SS	26	28	35	41	47	51	55	58	53	60	73	61	85	86	86.5	87
		Narrow Fog									37	40	42	43	44	45	48	50
		Wide Fog									26	28	30	31	32	33	34	35
	60	SS	39	43	41	60	68	75	81	86	68	75	92	103	110	115	120	123
		Narrow Fog									36	38	45	50	55	60	70	75
		Wide Fog									27	28	32	35	38	42	48	54
	95	SS	65	73	88	101	112	122	130	136	76	83	100	107	115	120	125	130
		Narrow Fog									41	45	55	65	70	75	85	95
		Wide Fog									28	30	36	43	49	55	60	65
	125	SS	81	89	111	126	141	157	172	187	91	100	118	130	140	150	155	157
		Narrow Fog									46	50	60	68	75	83	90	95
		Wide Fog									28	30	35	40	45	50	55	60
SOS D 800-SOS S	170	SS	85	100	122	142	163	—	—	—	84	92	100	108	115	—	—	—
		Narrow Fog	103	114	139	162	178	—	—	—	49	55	65	70	75	—	—	—
		Wide Fog	139	154	185	213	234	—	—	—	31	32	37	44	47	—	—	—
	250	SS	98	108	127	145	160	—	—	—	87	94	105	112	120	—	—	—
		Narrow Fog	156	173	210	245	278	—	—	—	56	60	70	75	80	—	—	—
		Wide Fog	203	225	278	323	368	—	—	—	33	35	40	45	50	—	—	—

SPECIAL USE NOZZLES

Catalog No.	GPM	Stream Setting	Discharge in U.S. GPM — Nozzle Pressure PSI 50	75	100	150	200	300	400	500	Effective Reach in Feet — Nozzle Pressure PSI 50	75	100	150	200	300	400	500
S-205-BAF	12	SS	11	12	14	17	18	23	25	29	46	55	59	64	68	73	77	80
		Narrow Fog									25	32	34	36	38	42	46	49
		Wide Fog									15	18	20	23	25	29	33	35
	23	SS	20	25	27	32	37	45	52	58	53	65	75	81	83	84	86	87
		Narrow Fog									40	43	45	55	60	65	70	75
		Wide Fog									24	26	30	37	39	41	45	48

SPECIAL USE NOZZLES

Catalog No.	GPM	Stream Setting	Discharge in U.S. GPM — Nozzle Pressure PSI 40	50	75	100	125	150	175	200	Effective Reach in Feet — Nozzle Pressure PSI 40	50	75	100	125	150	175	200
SFL-O-DI	40	SS	25	29	34	40	44	48	52	56	59	65	77	83	86	90	93	96
		Narrow Fog									35	38	41	44	47	50	53	56
		Wide Fog									29	34	36	37	39	40	41	43
	60	SS	39	44	54	60	70	77	85	92	69	75	90	97	103	110	116	123
		Narrow Fog									38	40	45	50	55	60	65	70
		Wide Fog									31	32	35	40	44	48	52	57
	95	SS	59	67	82	95	105	114	123	132	77	85	102	110	117	124	131	183
		Narrow Fog									39	41	47	54	60	63	66	69
		Wide Fog									28	30	34	38	41	45	49	52
	125	SS	79	88	105	125	140	154	168	182	77	85	102	112	120	129	138	146
		Narrow Fog									45	48	55	61	66	72	78	83
		Wide Fog									33	35	40	45	48	52	56	59
L-205-BAF	20	SS	15	17	21	24	27	30	33	36	45	50	60	70	75	80	85	90
		Narrow Fog	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		Wide Fog	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	70	SS	45	50	62	72	80	88	93	99	78	80	85	90	95	100	105	110
		Narrow Fog	46	52	64	74	81	89	94	100	28	30	33	37	40	45	50	55
		Wide Fog	63	70	86	99	111	120	130	140	14	15	16	18	20	22	24	26

	Catalog No.	GPM	Stream Setting	Discharge in U.S. GPM — Nozzle Pressure PSI 40	50	60	70	80	90	100	125	Effective Reach in Feet — Nozzle Pressure PSI 40	50	60	70	80	90	100	125
CELLAR/BRESNAN	LR	—	—	99	114	124	133	144	154	160	179	—	—	—	—	—	—	—	—
	R	—	—	227	253	276	296	317	335	353	395	—	—	—	—	—	—	—	—
	193-6 (1.5)	—	—	91	101	110	117	125	133	140	157	—	—	—	—	—	—	—	—
	193-6 (2.5)	—	—	262	287	312	335	356	375	394	441	—	—	—	—	—	—	—	—
	193-9 (2.5)	—	—	325	360	390	419	446	471	495	553	—	—	—	—	—	—	—	—

	Catalog No.	GPM	Stream Setting	Discharge in U.S. GPM — Nozzle Pressure PSI 40	50	75	100	125	150	175	200	Effective Reach in Feet — Nozzle Pressure PSI 40	50	75	100	125	150	175	200
5000E	5000-04E	15	SS	9	11	12	15	17	18	20	22	—	48	56	58	61	63	65	66
			Narrow Fog									—	20	22	24	26	28	31	32
			Wide Fog									—	11	14	15	17	19	21	22
		30	SS	20	22	26	30	34	37	39	41	—	65	70	81	85	90	91	92
			Narrow Fog									—	30	35	41	44	47	48	49
			Wide Fog									—	15	16	19	21	23	25	26
		45	SS	32	35	40	45	49	52	56	58	—	69	75	85	91	96	98	101
			Narrow Fog									—	32	37	44	46	48	50	51
			Wide Fog									—	17	18	21	23	25	26	28
	5000-14E	60	SS	38	43	51	60	68	76	—	—	69	76	89	96	104	110	115	124
			Narrow Fog									38	41	44	49	55	61	66	71
			Wide Fog									31	33	35	41	43	47	51	58
		75	SS	53	58	65	75	84	92	—	—	73	81	94	103	111	118	—	—
			Narrow Fog									39	41	45	52	57	62	—	—
			Wide Fog									29	30	31	33	37	40	—	—
		95	SS	63	68	83	95	107	115	—	—	77	86	101	111	118	126	130	138
			Narrow Fog									40	41	46	55	59	64	67	70
			Wide Fog									29	30	33	36	40	44	47	51
		125	SS	82	91	110	125	140	153	—	—	78	86	103	113	121	128	138	146
			Narrow Fog									44	48	55	62	67	71	77	84
			Wide Fog									32	36	39	44	49	52	56	59
		150	SS	97	107	132	150	169	182	—	—	80	89	108	124	138	148	156	162
			Narrow Fog									46	51	53	56	58	60	62	64
			Wide Fog									34	37	43	46	48	51	52	55
	5000-24E	175	SS	111	124	150	175	192	210	—	—	88	98	114	126	141	152	—	—
			Narrow Fog									47	51	59	69	76	81	—	—
			Wide Fog									32	34	36	39	44	48	—	—
		200	SS	127	141	173	200	224	245	—	—	88	91	101	117	132	148	—	—
			Narrow Fog									49	51	54	61	73	78	—	—
			Wide Fog									33	34	36	40	44	48	—	—
		250	SS	172	192	230	256	290	320	—	—	91	102	118	136	152	164	—	—
			Narrow Fog									53	56	62	70	79	83	—	—
			Wide Fog									35	40	43	47	51	54	—	—
		350	SS	221	247	303	350	391	—	—	—	97	108	126	142	154	—	—	—
			Narrow Fog									57	61	67	77	84	—	—	—
			Wide Fog									39	43	47	52	56	—	—	—

	Catalog No.	GPM	Stream Setting	Discharge in U.S. GPM — Nozzle Pressure PSI 40	50	60	70	80	90	100	125	Effective Reach in Feet — Nozzle Pressure PSI 40	50	60	70	80	90	100	125
R.A.N™	3896 R.A.N.®	500	SS	358	400	443	477	509	540	570	—	135	149	162	172	181	188	194	—
			Narrow Fog									92	101	109	117	125	133	140	—
			Wide Fog									48	52	56	60	63	67	71	—

	Catalog No.	Inlet Size	Stream Setting	Discharge in U.S. GPM — Nozzle Pressure PSI 50	60	65	70	75	80	Effective Reach in Feet — Nozzle Pressure PSI 50	60	65	70	75	80
X-STREAM®	SM-1000 Series	2.5	SS	113	244	350	500	1000	—	108	134	165	198	255	—
			Narrow Fog							89	94	98	107	124	—
			Wide Fog							47	61	65	68	81	—
		3.5	SS	130	297	405	530	675	1000	123	142	176	210	221	241
			Narrow Fog							88	90	93	100	115	125
			Wide Fog							55	66	77	90	97	103
	SM-1250 Series	2.5	SS	315	525	630	925	1250	—	139	182	220	257	271	—
			Narrow Fog							105	110	116	119	130	—
			Wide Fog							57	62	69	77	92	—
		3.5	SS	385	655	875	1100	1250	—	110	140	172	220	229	—
			Narrow Fog							100	129	132	136	140	—
			Wide Fog							56	62	68	72	82	—

NOZZLE FLOW

	Catalog No.	Stream Setting	Discharge in U.S. GPM — Nozzle Pressure PSI											Effective Reach in Feet — Nozzle Pressure PSI										
			50	60	70	75	80	85	90	95	100	105	110	50	60	70	75	80	85	90	95	100	105	110
X-STREAM®	SM-1500 Series SM-2000 Series	SS	500	850	1250	1500	2000	—	—	—	—	—	—	—	—	—	240	300	—	—	—	—	—	—
		Narrow Fog												—	—	—	125	148	—	—	—	—	—	—
		Wide Fog												—	—	—	90	100	—	—	—	—	—	—

	Catalog No.	GPM	Stream Setting	Discharge in U.S. GPM — Nozzle Pressure PSI								Effective Reach in Feet — Nozzle Pressure PSI							
				40	50	60	70	80	90	100	125	40	50	60	70	80	90	100	125
SELECT-O-STREAM® MASTER STREAM	CJ Series IMS IMS-N	350	SS	222	250	270	290	310	330	350	390	109	125	131	137	142	146	150	155
			Narrow Fog									61	65	69	73	77	82	87	100
			Wide Fog									41	45	49	53	56	58	60	65
		500	SS	322	360	396	432	464	490	516	580	119	134	142	150	158	165	173	190
			Narrow Fog									68	72	77	82	87	92	97	110
			Wide Fog									36	40	44	48	52	56	60	70
	CJN CJN-BN CJN-RC CJN-B CJN-B-RC	750	SS	496	550	596	640	680	716	750	840	148	170	184	198	212	226	238	236
			Narrow Fog									80	89	98	107	117	126	135	159
			Wide Fog									58	65	71	77	83	89	95	105
		1000	SS	676	725	800	853	945	962	1000	1153	159	180	204	225	242	252	263	289
			Narrow Fog									104	115	125	135	144	152	160	180
			Wide Fog									59	66	72	80	88	98	100	118
SELECT-O-FLOW® MASTER STREAM	CSW	300	SS	190	210	230	250	270	285	300	330	107	121	130	137	142	147	150	159
			Narrow Fog									76	87	97	104	110	115	120	128
			Wide Fog									49	54	58	62	65	68	71	78
		550	SS	350	390	425	460	490	520	550	615	135	149	162	172	181	188	194	208
			Narrow Fog									92	101	109	117	125	133	140	154
			Wide Fog									48	52	56	60	63	67	71	81
		750	SS	480	535	580	625	670	715	750	830	140	165	180	191	202	213	221	252
			Narrow Fog									94	104	114	124	133	143	152	172
			Wide Fog									46	49	52	54	56	58	60	65
	CSW-L CSW-LB	500	SS	322	360	396	432	464	490	516	580	119	134	142	150	158	165	173	190
			Narrow Fog									68	72	77	82	87	92	97	110
			Wide Fog									36	40	44	48	52	56	60	70
		750	SS	490	540	595	640	680	720	750	845	150	178	191	202	211	222	235	264
			Narrow Fog									91	105	117	129	140	150	158	175
			Wide Fog									60	64	71	82	90	101	107	112
		1000	SS	645	725	785	845	900	955	1000	—	168	192	215	236	251	266	278	291
			Narrow Fog									84	96	108	115	125	136	146	163
			Wide Fog									61	69	77	84	91	102	115	119
		1250	SS	790	880	960	1035	1100	1160	1250	—	180	200	220	240	260	280	350	—
			Narrow Fog									104	120	135	145	155	165	175	—
			Wide Fog									71	84	98	112	123	132	140	—
MYSTERY® MASTER STREAM	J	350	SS	226	251	275	295	314	333	350	390	81	95	105	114	122	129	135	150
			Narrow Fog	330	366	400	433	463	488	515	574	38	40	42	44	46	48	50	55
			Wide Fog	396	442	481	515	550	585	615	688	28	30	32	34	36	38	40	45
		500	SS	316	360	398	426	454	480	502	558	106	118	124	129	133	137	141	150
			Narrow Fog	422	471	516	557	591	625	656	730	69	75	80	83	86	88	90	95
			Wide Fog	552	614	671	720	765	811	854	956	50	54	57	61	64	68	71	80
	JN	1000	SS	448	498	550	590	630	663	696	—	120	134	142	152	160	165	170	—
			Narrow Fog	585	652	714	764	813	863	910	—	78	92	100	110	120	128	135	—
			Wide Fog	740	824	900	971	1039	—	—	—	40	45	55	60	65	—	—	—
	CJK CJK-HP	1250	SS									130	150	172	191	209	230	266	292
			Narrow Fog	791	884	968	1046	1118	1186	1250	1398	63	72	83	92	100	110	128	140
			Wide Fog									49	57	65	73	79	87	101	111
		1500	SS									140	166	190	212	233	255	276	320
			Narrow Fog	949	1061	1162	1255	1342	1423	1500	1677	67	80	91	102	112	122	132	154
			Wide Fog									53	63	72	81	89	97	105	122
		1750	SS									150	176	200	224	248	272	296	354
			Narrow Fog	1107	1237	1356	1464	1565	1660	1750	1957	72	84	96	107	119	131	142	170
			Wide Fog									57	67	76	85	94	103	112	135
		2000	SS									174	200	224	248	273	298	325	375
			Narrow Fog	1265	1414	1549	1673	1789	1897	2000	2236	84	96	107	119	131	143	156	180
			Wide Fog									66	76	85	94	103	113	124	143

Catalog No.	GPM	Stream Setting	Discharge in U.S. GPM — Nozzle Pressure PSI								Effective Reach in Feet — Nozzle Pressure PSI							
			40	50	60	70	80	90	100	125	40	50	60	70	80	90	100	125
HF-350* HF-350-A	350	SS	230	245	260	276	293	309	325	365	80	95	110	124	134	140	145	155
		30°-Fog									42	47	52	57	62	68	73	80
		90°-Fog									13	14	15	16	17	18	20	23
HF-500* HF-500-A	500	SS	345	370	390	410	432	455	475	530	97	110	123	136	145	155	162	175
		30°-Fog									52	57	61	66	71	76	80	92
		90°-Fog									18	20	22	23	25	27	29	31

*These flow figures computed with water only. Add 1, 3, 6% for total foam flow.

NOZZLE REACTION FORMULA

STRAIGHT BORE NOZZLES

NR = 1.5 d²NP
Where NR = Reaction (Pounds)
d = Nozzle Diameter (Inches)
NP = Nozzle Pressure (psi)
1.5 is a constant

COMBINATION FOG NOZZLES

NR = 0.0505 Q√P
Where NR = Reaction (Pounds)
Q = Flow (GPM)
P = Nozzle Pressure (psi at base of nozzle)
0.0505 is a constant
This formula is with nozzle set on straight stream.
Reaction will decrease as pattern is widened to fog.

DISCHARGE OF SMOOTH BORE NOZZLES/TIPS

Nozzle Pressure in psi*	Nozzle Diameter in Inches																				
	1/4"	3/8"	7/16"	1/2"	5/8"	3/4"	7/8"	15/16"	1.0"	1 1/8"	1 1/4"	1 3/8"	1 1/2"	1 5/8"	1 3/4"	1 7/8"	2.0"	2 1/4"	2 1/2"	3.0"
	Gallons Per Minute																			
20	8	18	25	33	51	75	101	115	132	167	206	250	298	350	407	468	532	674	832	1200
22	8	19	26	34	54	79	105	122	139	175	216	263	313	367	427	490	557	707	872	1255
24	8	20	27	36	56	82	110	127	145	183	226	275	327	384	446	512	582	739	910	1311
26	9	21	29	37	59	85	115	133	151	191	235	286	340	400	464	533	606	769	949	1366
28	9	21	30	39	61	89	119	138	157	198	244	297	353	415	481	554	629	799	985	1418
30	10	22	31	40	63	92	123	142	162	205	253	307	365	429	498	572	651	826	1017	1470
32	10	23	32	41	65	95	127	147	167	212	261	317	377	443	514	591	673	854	1050	1515
34	11	23	33	43	67	98	131	152	172	218	269	327	389	457	530	610	693	880	1082	1561
36	11	24	34	44	69	100	135	156	177	224	277	336	400	470	546	627	713	905	1114	1610
38	11	25	35	45	71	103	138	160	182	231	285	345	411	483	561	645	733	930	1144	1650
40	11	26	35	46	73	106	142	165	187	237	292	354	422	496	575	661	752	954	1174	1692
42	11	26	36	47	74	109	146	169	192	243	299	363	432	508	589	678	770	978	1203	1737
44	12	27	37	49	76	111	149	173	196	248	306	372	442	520	603	694	788	1000	1231	1776
46	12	28	38	50	78	114	152	176	200	254	313	380	452	531	617	710	806	1021	1259	1816
48	12	28	39	51	80	116	156	180	205	259	320	388	462	543	630	725	824	1043	1286	1854
50	13	29	40	52	81	118	159	184	209	265	326	396	472	554	643	740	841	1065	1313	1895
52	13	29	40	53	82	121	162	188	213	270	333	404	481	565	656	754	857	1087	1339	1930
54	13	30	41	54	84	123	165	191	217	275	339	412	490	576	668	769	873	1108	1364	1968
56	13	30	42	55	86	125	168	195	221	280	345	419	499	586	680	782	889	1129	1389	2000
58	13	31	43	56	87	128	171	198	225	285	351	426	508	596	692	796	905	1149	1417	2020
60	14	31	43	57	89	130	174	201	229	290	357	434	517	607	704	810	920	1167	1438	2075
62	14	32	44	58	90	132	177	205	233	295	363	441	525	617	716	823	936	1187	1463	2108
64	14	32	45	59	92	134	180	208	237	299	369	448	533	627	727	836	951	1206	1490	2140
66	14	33	46	60	93	136	182	211	240	304	375	455	542	636	738	850	965	1224	1510	2175
68	14	33	46	60	95	138	185	214	244	308	381	462	550	646	750	862	980	1242	1532	2205
70	15	34	47	61	96	140	188	218	247	313	386	469	558	655	761	875	994	1260	1558	2240
72	15	34	48	62	97	142	191	221	251	318	391	475	566	665	771	887	1008	1278	1579	2275
74	15	35	48	63	99	144	193	224	254	322	397	482	574	674	782	900	1023	1296	1600	2300
76	15	35	49	64	100	146	196	227	258	326	402	488	582	683	792	911	1036	1313	1620	2340
78	15	36	50	65	101	148	198	230	261	330	407	494	589	692	803	924	1050	1330	1640	2370
80	16	36	50	66	103	150	201	233	265	335	413	500	596	700	813	935	1063	1347	1665	2400
82	16	37	51	66	104	152	204	235	268	339	418	507	604	709	823	946	1076	1364	1685	2425
84	16	37	51	67	105	154	206	238	271	343	423	513	611	718	833	959	1089	1380	1707	2460
86	16	37	52	68	107	155	208	241	274	347	428	519	618	726	843	970	1102	1396	1723	2485
88	16	38	53	69	108	157	211	244	277	351	433	525	626	735	853	981	1115	1412	1745	2515
90	17	39	53	70	109	159	213	248	280	355	438	531	633	743	862	992	1128	1429	1762	2540
92	17	39	54	70	110	161	215	249	283	359	443	537	640	751	872	1002	1140	1445	1785	2565
94	17	39	54	71	111	162	218	252	286	363	447	543	647	759	881	1012	1152	1460	1802	2600
96	17	40	55	72	113	164	220	255	289	367	452	549	654	767	890	1022	1164	1476	1822	2625
98	17	40	55	73	114	166	223	257	292	370	456	554	660	775	900	1032	1176	1491	1840	2650
100	18	41	56	73	115	168	225	260	295	374	461	560	667	783	909	1043	1189	1506	1860	2680
105	18	42	57	75	118	172	230	266	303	383	473	574	683	803	932	1070	1218	1542	1908	2745
110	19	43	59	77	121	176	236	273	310	392	484	588	699	822	954	1095	1247	1579	1950	2810
115	19	43	60	79	123	180	241	279	317	401	495	600	715	840	975	1120	1275	1615	1995	2875
120	19	44	61	80	126	183	246	285	324	410	505	613	730	858	996	1144	1303	1649	2020	2940
125	20	45	63	82	129	187	251	291	331	418	516	626	745	876	1016	1168	1329	1683	2080	3000
130	20	46	64	84	131	191	256	295	337	427	526	638	760	893	1036	1191	1356	1717	2120	3055
135	21	47	65	85	134	195	262	302	343	435	536	650	775	910	1056	1213	1382	1750	2160	3110
140	21	48	66	87	136	198	266	308	350	443	546	662	789	927	1076	1235	1407	1780	2200	3170
145	21	49	68	88	139	202	271	313	356	450	556	674	803	944	1095	1257	1432	1812	2240	3225
150	22	50	69	90	141	205	275	318	362	458	565	686	817	960	1114	1279	1456	1843	2260	3280
175	24	55	74	97	152	218	298	344	390	494	610	740	883	1030	1200	1380	1572	1985	2460	3540
200	26	59	79	104	162	234	318	368	418	527	653	790	944	1103	1283	1472	1680	2123	2635	3785

* Nozzle pressure measured by pitot tube and gauge.

FORMULA FOR DISCHARGE OF SMOOTH BORE NOZZLES:

$$GPM = 29.71\ d^2\ \sqrt{NP}$$

GPM = Gallons per minute
29.71 = Constant
d = Diameter of nozzle orifice (inches)
NP = Nozzle pressure (psi) measured by pitot tube and gauge

FRICTION LOSS IN RUBBER OR VINYL LINED FIRE HOSE

Flow In U.S. GPM	Pressure Loss in PSI per 100' Hose											Equal Length Siamesed Lines		
	.75"	1.0"	1.5"	1.75"	2.0"	2.5"	3.0"	3.5"	4.0"	5.0"	6.0"	2-2.5"	3-2.5"	2-3.0"
10	13.5	3.5												
20	50	12.5												
30	105	26												
40		44	4.5	3	1									
60		92	10	5	2.5									
95			22	11	5									
100			25	12	6	3	1							
125			37	21	10	4	1							
150			54	26	13.5	6	2							
175				34	18	8	3							
200				45	24	10	4	2						
225				57	30	12	4.5	2						
250				70	37.5	15	6	2.5						
275				82	45	17.5	7	3						
300				95	54	21	8	3.5	2			6	3	2
325					65	24.5	9.5	4	2.5			6.5	3	2.5
350					78	28	11	5	2.5			8	3.5	3
400					96	36	14	6	3	1		10	4.5	4
450						45	17.5	8	4	1.5		12.5	6	5
500						55	21	9.5	5	2		15.5	7	6
550							25.5	11.5	6	2		18.5	8.5	7
600							30	13.5	7	2.5		23	10	8.5
650							35	15.5	8.5	3		25.5	12	10
700							40.5	18	9.5	3.5	1	29.5	13.5	11.5
750							46	20	11.5	4	1	33.5	15.5	13
800							53	23	12.5	4.5	1.5	38	17.5	14.5
850								25.5	14.5	5	1.5	43	20	16.5
900								28	16	5.5	2	48	22.5	18.5
950								31	17.5	6	2		25	20.5
1000								34	19	6.5	2.5		28	22.5
1100								41	23	8	3		33	27
1200								49	27.5	9.5	4		39	32
1300								57	32.5	11	4.5		45	38
1400								66.5	38	13	5		52	44
1500								76.5	43	15	6		60	50
1750									59	20	8			
2000									77	26.5	10.5			
2500										41.5	16.5			

NOTE: These friction loss figures will vary accordingly with age and manufacturer of hose.

PRESSURE DROP (PV) DUE TO CHANGE IN VELOCITY OF WATER FLOWING THROUGH CONDUIT WITH REDUCED AREA

	Inlet Dia (in) =>	2.0	2.5	3.0	4.0	4.0	4.5	6.0	6.0	2 x 2.5	3 x 2.5
	Outlet Dia (in) =>	1.5	1.5	2.5	2.5	3.5	2.5	2.5	3.5	2.5	3.5
Flow (GPM) = >	100	1.5	1.9	0.1	0.2	0.0	0.3	0.3	0.1	0.2	0.0
	200	6.1	7.8	0.6	1.0	0.1	1.0	1.1	0.3	0.9	0.2
	300	13.7	17.5	1.3	2.2	0.3	2.4	2.5	0.6	2.0	0.4
	400	24.4	31.1	2.4	3.9	0.5	4.2	4.5	1.1	3.5	0.7
	500	38.1	48.6	3.7	6.1	0.8	6.5	7.0	1.7	5.4	1.1
	600			5.4	8.8	1.1	9.4	10.1	2.4	7.8	1.6
	700			7.3	12.0	1.5	12.8	13.7	3.3	10.6	2.1
	800			9.6	15.7	2.0	16.8	18.0	4.3	13.9	2.8
	900			12.1	19.9	2.5	21.2	22.7	5.4	17.6	3.5
	1000			15.0	24.5	3.1	26.2	28.1	6.7	21.7	4.3
	1100			18.1	29.7	3.8	31.7	33.9	8.1	26.3	5.2
	1200			21.6	35.3	4.5	37.7	40.4	9.6	31.3	6.2
	1300			25.3	41.4	5.3	44.2	47.4	11.3	36.7	7.3
	1400			29.4	48.0	6.1	51.3	55.0	13.1	42.6	8.5
	1500			33.7	55.2	7.0	58.9	63.1	15.0	48.9	9.7
	1600					8.0		71.8	17.0		
	1700					9.0		81.1	19.2		
	1800					10.1		90.9	21.6		
	1900					11.2		101.3	24.0		
	2000					12.5		112.2	26.6		

Bernoulli's Equation = > Total Static Pressure Drop (TSPD) = Pressure Drop due to change in water velocity (Pv) + Friction Loss (F.L.)

When the Total Static Pressure Drop of a system is known (line pressure at inlet less line pressure at outlet), the associated Friction Loss of the system can be calculated by substracting the appropriate value in the table above from the measured Total Static Pressure Drop.

NOTE: For all systems which have an outlet area smaller than the inlet area, the reported Friction Loss will always be less than the measured total static pressure drop due to the effect of the change in velocity related pressure drop.

F.L. = TSPD - Pv

HYDRANT DISCHARGE FORMULA

To obtain the flow from hydrant outlets use the same formula as given for smooth bore nozzles but use the factor "C" equal to 0.90. Every Fire Department should check the flow from their hydrants. This can be done simply and easily using only a cap with a pressure gauge attached. Merely place the gauge on one outlet, open the hydrant and read the gauge. Remove another cap, open the hydrant and read the gauge again and obtain the gallons per minute using the above method or from the discharge table for hydrant outlets. Obtain the maximum amount of water available from the discharge table for hydrant outlets. Then to obtain the maximum amount of water available from the hydrant in gallons per minute with a residual of 10 lbs. (which is the lowest you should draw down the pressure on the hydrant) use the following formula.

$$A = \frac{Bx\sqrt{P1-10}}{\sqrt{P1-P2}}$$

Where A = Gallons per minute available at 10 lbs. residual.

B = Gallons per minute obtained.

P1 = Static pressure on hydrant with no water flowing.

P2 = Residual pressure on hydrant with water flowing.

DISCHARGE TABLE FOR HYDRANT OUTLETS

Outlet Pressure (lbs.)	Outlet Diameter (inches)				Outlet Pressure (lbs.)	Outlet Diameter (inches)			
	2.5	3	4	4.5		2.5	3	4	4.5
	U.S. Gallons per Minute					U.S. Gallons per Minute			
1	170	240	430	540	16	670	970	1720	2180
2	240	340	610	770	17	690	1000	1770	2240
3	290	420	740	940	18	710	1030	1820	2310
4	340	480	860	1090	19	730	1050	1870	2370
5	380	540	960	1220	20	750	1080	1920	2430
6	410	590	1050	1340	22	790	1130	2020	2550
7	440	640	1140	1440	24	820	1180	2110	2660
8	480	680	1220	1540	26	860	1230	2190	2770
9	500	730	1290	1640	28	890	1280	2280	2880
10	530	760	1360	1730	30	920	1320	2350	2980
11	560	800	1430	1810	32	950	1370	2430	3080
12	580	840	1490	1890	34	980	1410	2510	3170
13	610	870	1550	1960	36	1010	1450	2580	3260
14	630	900	1610	2040	38	1040	1490	2650	3350
15	650	940	1660	2110	40	1060	1530	2720	3440

DEFINITIONS

Static Pressure – The word "static" means at rest or without motion. Pressure on water may be produced by an elevated water supply, by atmospheric pressure, or by a force pump. If the water is not moving, the pressure exerted is static. In water distribution systems there is always some flow in the pipes because of normal domestic or industrial needs. A true static pressure is, therefore, seldom found in municipal water systems. From a practical viewpoint, however, the pressure normally found in a water system before water flows from a hydrant, is considered to be static pressure. A water flow definition of static pressure could be as follows: "Static pressure is stored potential energy that is available to force water through pipe, fittings, fire hose, and adapters."

Residual Pressure – The word "residual" means a remainder, or that which is left. As an example, during a fire flow test, the term residual represents the pressure which is left in a distribution system within the vicinity of one or more flowing hydrants. Residual pressure in a water distribution system will vary depending upon the amount of water that may be flowing from one or more hydrants and upon water consumption demands. One point that must be remembered is that residual pressure must be identified at the location where the reading is taken. A water flow definition of residual pressure could be as follows: "Residual pressure is that part of the total available pressure that is not used to overcome friction or gravity while forcing water through pipe, fittings, fire hose, and adapters."

Flow Pressure – The rate of flow or velocity of the water coming from a discharge opening produces a force which is called flow pressure or velocity pressure. Since a stream of water emerging from a discharge opening is not encased within a tube, it exerts pressure in a forward direction but does not exert a sidewise pressure. The forward velocity or flow pressure can be measured by using a Pitot tube and gauge. If the size of opening is known, the flow pressure can be used to calculate the quantity of water flowing in gallons per minute (gpm). A water definition of flow pressure can be as follows: "Flow pressure is the forward velocity pressure at a discharge opening while water is flowing." An example of flow pressure is one in which the forward velocity of a water stream exerts a pressure that can be read on a gauge.

Normal Operating Pressure – Normal operating pressure is that pressure which flowing water exerts against the wall of a conduit; i.e. pipe, fire hose, appliances, valves, fittings, etc. The difference between static and normal operating pressure is the friction loss caused by the water flowing through these conduits. As soon as water starts to flow, static pressure no longer exists. The demands for water sometimes change during fireground operations, so therefore, normal operating pressures will change also. A piezometer gauge is used to determine this type of pressure. A water flow definition of it would be as follows: "Normal operating pressure is that pressure which flowing water exerts against the wall of the conduit through which it flows in a distribution system."

Friction Loss – If an opening is made in a closed system of piping or fire hose, a difference in pressure will exist between the internal pressure and the atmospheric pressure outside the pipe or hose. This difference in pressure causes the water to flow toward the lesser pressure. Water flowing through pipe or fire hose meets certain resistances or friction which must be overcome by pressure. This loss of pressure is usually called friction loss or loss because of friction. The only pressure available to overcome this resistance is the total pressure. A fire stream definition of friction loss could be as follows: "Friction loss is that part of total pressure that is lost while forcing water through pipe, fittings, fire hose, and appliances." The differences in pressure on a hose line between a nozzle and a pumper is a good example of friction loss.

STANDARD FIRE HOSE THREADS

Size	ODM	TPI
Nat'l. Hose Thread (NHT)		
.75	1.3750	8
1	1.3750	8
1.25	1.6718	9
1.5	1.9900	9
2	2.5156	8
2.5	3.0686	7.5
.3	3.6239	6
3.5	4.2439	6
4	5.000	4
4.5	5.7609	4
5	6.260	4
6	7.025	4
Nat'l. Pipe Straight Hose Thread (NPSH)		
.75	1.0353	14
1	1.2951	11.5
1.25	1.6399	11.5
1.5	1.8788	11.5
2	2.3528	11.5
2.5	2.843	8
3	3.4700	8
3.5	3.9700	8
4	4.4700	8
4.5	4.9700	8

Size	ODM	TPI
Eastern Hose Thread		
.75	1.0781	11
1	1.4219	11
1.25	1.6875	11.5
1.5	2.1250	11
2	2.6719	7.5
2.5	3.0000	8
Pacific Coast Thread		
.75	1.0625	11
1	1.3125	11.5
1.25	1.8600	11
1.5	2.1000	11
2	2.5500	10
2.5	3.0350	7.5
NYFD Thread		
1	1.660	8
1.5	2.100	8
2	2.530	8
2.5	3.030	8
3	3.630	8
3.5	4.070	8
4	4.610	8
4.5	5.800	4
Underwriter Tip Thread		
1.5	2.1875	12

Size	ODM	TPI
NY Corp. Thread		
1.5	2.093	11
2	2.547	11
2.5	3.000	8
Chicago FD Thread		
1	1.375	8
1.5	1.933	11.5
2.5	2.990	7.5
3.5	4.052	8
4	5.000	4
4.5	5.7609	4
5	6.260	4
Chicago Hose Thread		
.75	1.0810	11.5
1	1.2951	11.5
1.25	1.7050	11.5
1.5	1.9460	11.5
2	2.5220	8
2.5	3.0430	7
Standard Chemical Thread		
.75	1.375	8
Canadian Standard Assoc. Thread (CSA)		
1.5	1.8788	11.5
2.5	3.1250	5

Size	ODM	TPI
Quebec Standard Thread (QST)		
2.5	3.031	7
Alberta Mutual Aid Thread (AMA)		
2.5	2.990	8
British Columbia (BCT)		
2.5	3.000	8
Western Canada Fire Underwriters Thread		
2.5	3.250	6
Buffalo, NY Thread		
2.5	3.065	8
Cincinnati, OH Thread		
2.5	3.058	6
Cleveland, OH & Omaha, NE Thread		
2.5	3.0781	8
Detroit, MI Thread		
2.5	3.125	7.5
Pittsburgh, PA Thread		
2.5	3.0625	6
Toledo, OH Thread		
2.5	3.000	8

SUCTION HOSE THREADS

Size	ODM	TPI
American LaFrance Thread		
4.0	5.085	4
4.5	5.750	4
5	6.150	4
6	7.000	4
Mack Thread		
4.0	4.999	4
4.5	5.7609	4
5	6.230	4
6	6.955	4
Maxim Thread		
4.0	5.000	4
4.5	5.750	4
5	6.250	4
6	7.000	4
Pirsch Thread		
4.0	5.000	4
4.5	5.750	4
5	6.250	4
6	7.000	4

Size	ODM	TPI
Seagrave Thread		
4.0	5.000	4
4.5	5.750	4
5	6.250	4
6	7.000	4
Hale Fire Pump Thread		
4.0	5.000	4
4.5	5.7609	4
5	6.250	4
6	7.250	4
Ward LaFrance Thread		
4.0	5.000	4
4.5	5.750	4
5	6.250	4
6	7.000	4
Waterous Fire Pump Thread		
4.0	5.0109	4
4.5	5.7609	4
5	6.260	4
6	7.261	4

ABBREVIATION DEFINITIONS

- *ODM – outside diameter of male*
- *TPI – threads per inch*

THREAD DESIGNATIONS

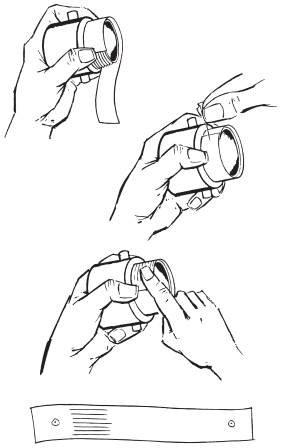
- *National Hose – NH or NHT; also called National Standard Thread (NST)*
- *National Pipe Straight Hose – NPSH; also called Straight Iron Pipe Thread (SIPT)*
- *National Pipe Thread – NPT; also called Tapered Iron Pipe Thread (TIPT)*
- *British Standard Parallel Pipe – BSPP*
- *British Standard Pipe Taper – BSP*

Please inquire with our sales staff as to availability of a specific thread on your product.

FLANGE SPECIFICATIONS

ANSI Flange Size	2.5"-150#	3.0"-150#	3.0"-300#	4.0"-150#	4.00"-300#	6.0"-150#	6.0"-300#
Diam. of flange	7.00"	7.50"	8.25"	9.00"	10.00"	11.00"	12.50"
Bolt circle diam.	5.50"	6.00"	6.625"	7.50"	7.875"	9.50"	10.625"
Bolt hole diam.	.750"	.750"	.875"	.750"	.875"	.875"	.875"
No. bolt holes	4	4	8	8	8	8	12
Bolt diameter	.625"	.625"	.750"	.625"	.750"	.750"	.750"

METHODS FOR DETERMINING THREAD DIMENSIONS



If Leaf Thread Gauge and Thread Caliper are not available; or sample cannot be sent, the following method may be used to obtain the needed information about threads.

1. Cut a strip of paper about 1" wide and long enough to completely encircle the male thread.
2. Wrap this paper snugly around the male thread making sure it is against the shoulder all the way around.
3. Pierce the paper with a pin at some point where the paper overlaps.
4. Press firmly against the threads with finger. This impression in the paper is used to determine the threads per inch.
5. Remove strip and circle pin holes with pencil.
6. The distance between the pin holes divided by 3.1416 equals the ODM (outside diameter of the male).

Both the ODM and the threads per inch are needed for ordering purposes. Sharp "V" thread form supplied unless otherwise specified.

ADAPTER DATA

Model	Size	Size	Length
318	2.5" F	4.0" M	3
	3.0" F	3.5" M	2 7/16
	3.0" F	4.0" M	3
	3.0" F	5.0" M	4
	3.5" F	2.5" M	2 5/16
	3.5" F	3.0" M	2 7/16
	3.5" F	3.5" M	2 7/16
	3.5" F	4.0" M	2 7/8
	4.0" F	1.5" M	3 3/4
	4.0" F	2.5" M	2 7/8
	4.0" F	3.0" M	3 3/4
	4.0" F	3.5" F	2 9/16
	4.0" F	4.0" M	2 7/8
	4.0" F	4.5" M	2 7/8
	4.0" F	4.5" M	2 7/8
	4.0" F	5.0" M	2 3/4
	4.0" F	6.0" M	3
	4.5" F	2.5" M	3 9/16
	4.5" F	4.0" M	2 23/32
	4.5" F	4.5" M	2 11/16
	5.0" F	2.5" M	4 13/16
	5.0" F	4.0" M	2 13/16
	5.0" F	6.0" M	3
	6.0" F	2.5" M	3 13/16
	6.0" F	3.5" M	4
	6.0" F	4.0" M	3 7/8
	6.0" F	4.5" M	3 7/8
	6.0" F	5.0" M	3 11/16
	6.0" F	6.0" M	6 11/16
S-319	3.0" F	3.0" F	4 7/8
	3.5" F	2.5" F	4 5/16
	4.0" F	4.0" F	4 9/16
	4.5" F	2.5" F	4 1/2
	4.5" F	3.0" F	5 7/16
	4.5" F	3.5" F	5 5/16
	4.5" F	4.0" F	5 1/2
	4.5" F	4.5" F	4 3/4
	5.0" F	2.5" F	5 7/16
	5.0" F	3.0" F	5 9/16
	5.0" F	3.5" F	5 1/2
	5.0" F	4.0" F	5 5/8
	5.0" F	4.5" F	5 9/16
	6.0" F	2.5" F	4 1/2
	6.0" F	4.5" F	4 9/16

Model	Size	Size	Length
A-327A	1.5" F	1.5" M	1 1/5
	2.5" F	1.5" M	1 7/8
	2.5" F	2.5" M	2 3/16
A-327	1.5" F	1.0" M	1 3/8
	1.5" F	1.5" M	1 5/8
	1.5" F	2.5" M	1 11/16
	2.0" F	1.5" M	1 5/8
	2.0" F	2.0" M	1 21/32
	2.0" F	2.5" M	2 3/16
	2.5" F	3/4 G.H.	1 3/4
	2.5" F	1.5" M	1 7/8
	2.5" F	2.0" M	1 15/16
	2.5" F	2.5" M	2 3/16
	2.5" F	3.0" M	2 5/16
	3.0" F	2.0" M	2 5/16
	3.0" F	2.5" M	2 5/16
	3.0" F	3.0" M	2 3/8
F-327A	1.5" F	1.5" F	2 5/16
	1.5" F	2.5" F	2 7/8
	1.5" F	2.5" M	2 1/4
	2.5" F	2.5" F	3 3/16
	3.0" F	2.5" F	3 3/8
F-327	1.5" F	1.5" F	2 5/16
	2.5" F	2.5" F	3 3/16
	3.0" F	3.0" F	3 7/16
M-327A	1.5" M	1.5" M	2 3/8
	2.5" M	2.5" M	2 7/8
M-327ABI	2.5" M	2.5" M	2 7/8
M-327	1.5" M	1.5" M	2 3/8
	2.5" M	2.5" M	2 7/8
S-327	1.5" F	1.5" M	2 1/2
	2.0" F	2.0" F	2 7/8
	2.5" F	1.5" M	2 13/16
	2.5" F	2.0" M	2 15/16
	2.5" F	2.5" M	3
	2.5" F	3.0" M	3 9/16
	3.0" F	2.5" M	3 5/16
	4.0" F	4.0" M	3 7/8
435	2.5" Hose Thd	2.5" NHT	2 1/4

LIQUID VOLUME

To Convert	Into	Multiply by
Ounces (oz)	Milliliters (ml)	29.57
Pints (pt)	Liters (l)	.4732
Quarts (qt)	Liters (l)	.9464
Gallons (gal)	Liters (l)	3.785
Milliliters (ml)	Ounces (oz)	.0338
Liters (l)	Pints (pt)	2.113
Liters (l)	Quarts (qt)	1.057
Liters (l)	Gallons (gal)	.2642

PRESSURE

To Convert	Into	Multiply by
Pounds per square inch (psi)	Kilopascals (kPa)	6.895
Pounds per square inch (psi)	bar	.06895
Kilopascals (kPa)	Lbs per square inch (psi)	.145
Kilopascals (kPa)	bar	.01
bar	Lbs per square inch (psi)	14.503
bar	Kilopascals (kPa)	100.00

LENGTH

To Convert	Into	Multiply by
Inches (in)	Millimeters (mm)	25.4
Inches (in)	Centimeters (cm)	2.54
Feet (ft)	Centimeters (cm)	30.48
Feet (ft)	Meters (m)	.3048
Yards (yd)	Meters (m)	.914
Miles (mi)	Kilometers (km)	1.609
Millimeters (mm)	Inches (in)	.039
Centimeters (cm)	Inches (in)	.394
Meters (m)	Feet (ft)	3.282
Kilometers (km)	Miles (mi)	.6214

AREA

To Convert	Into	Multiply by
Square Inches (in^2)	Square Centimeters (cm^2)	6.452
Square Feet (ft^2)	Square Meters (m^2)	.093
Square Yards (yds^2)	Square Meters (m^2)	.836
Square Miles (mi^2)	Square Kilometers (km^2)	2.59
Square Centimeters (cm^2)	Square Inches (in^2)	.155
Square Meters (m^2)	Square Yards (yds^2)	1.196
Square Kilometers (km^2)	Square Miles (mi^2)	.386

HOSE SIZES

1" Hose	=	25.4 mm	4" Storz	=	100.00 mm
1½" Hose	=	38.1 mm	4" Hose	=	101.60 mm
1¾" Hose	=	44.5 mm	4½" Hose	=	114.30 mm
2" Hose	=	50.8 mm	5" Storz	=	125.00 mm
2½" Hose	=	63.5 mm	5" Hose	=	127.00 mm
3" Hose	=	76.2 mm	6" Hose	=	152.40 mm
3½" Hose	=	88.9 mm			

TIP SIZES

¾" Tip	=	19.1 mm	1 ½" Tip	=	38.1 mm
⅞" Tip	=	22.2 mm	1 ¾" Tip	=	44.5 mm
1" Tip	=	25.4 mm	2" Tip	=	50.8 mm
1⅛" Tip	=	28.6 mm	2 ¼" Tip	=	57.2 mm
1¼" Tip	=	31.8 mm	2 ½" Tip	=	63.5 mm
1⅜" Tip	=	34.9 mm	3" Tip	=	76.2 mm

SOLID VOLUME

To Convert	Into	Multiply by
Ounces (oz)	Grams (g)	28.3495
Pounds (lb)	Kilograms (kg)	.4536
Grams (g)	Ounces (oz)	.035
Kilograms (kg)	Pounds (lb)	2.205

PRESSURES GUIDELINES*

50 psi	=	345 kPa	=	3.45 bar
60 psi	=	414 kPa	=	4.14 bar
70 psi	=	488 kPa	=	4.88 bar
75 psi	=	517 kPa	=	5.17 bar
80 psi	=	552 kPa	=	5.52 bar
90 psi	=	621 kPa	=	6.21 bar
100 psi	=	690 kPa	=	6.89 bar
150 psi	=	1034 kPa	=	10.34 bar
200 psi	=	1379 kPa	=	13.79 bar
250 psi	=	1723 kPa	=	17.23 bar
300 psi	=	2069 kPa	=	20.69 bar
350 psi	=	2413 kPa	=	24.13 bar
580 psi	=	3999 kPa	=	39.99 bar
700 psi	=	4827 kPa	=	48.27 bar

FLOW

FLOW RATE		EXACT LPM
12 gpm	=	45.42 lpm
13 gpm	=	49.20 lpm
15 gpm	=	56.78 lpm
20 gpm	=	75.70 lpm
23 gpm	=	87.06 lpm
25 gpm	=	94.62 lpm
30 gpm	=	113.55 lpm
40 gpm	=	151.40 lpm
50 gpm	=	189.25 lpm
60 gpm	=	227.10 lpm
70 gpm	=	264.95 lpm
75 gpm	=	283.88 lpm
85 gpm	=	321.73 lpm
95 gpm	=	359.58 lpm
100 gpm	=	378.50 lpm
120 gpm	=	454.20 lpm
125 gpm	=	473.13 lpm
150 gpm	=	567.75 lpm
175 gpm	=	662.38 lpm
200 gpm	=	757.00 lpm
250 gpm	=	946.25 lpm
300 gpm	=	1135.50 lpm
350 gpm	=	1324.75 lpm
375 gpm	=	1419.38 lpm
400 gpm	=	1514.00 lpm
450 gpm	=	1703.25 lpm
500 gpm	=	1892.50 lpm
550 gpm	=	2081.75 lpm
700 gpm	=	2649.50 lpm
750 gpm	=	2838.75 lpm
800 gpm	=	3028.00 lpm
1000 gpm	=	3785.00 lpm
1200 gpm	=	4542.00 lpm
1250 gpm	=	4731.25 lpm
1500 gpm	=	5677.50 lpm
2000 gpm	=	7570.00 lpm

* The above are general guidelines. Elkhart Brass provides more precise figures as applicable.

HANDLINE NOZZLES

SELECT-O-MATIC® HANDLINE NOZZLES (SM SERIES AND TSM SERIES)

Nozzle shall be constructed of durable, hard anodized, lightweight Elk-O-Lite®; shall have heat-tempered, stainless steel spring mechanism shall have an outside unobstructed waterway, which reacts automatically to water flow and delivers that water flow efficiently throughout the flow range; shall have infinite pattern selection from straight stream to full fog; shall be capable of flushing without shutting down; shall have replaceable spinning teeth; shall have highly visible, protective, urethane bumper; shall have ball with adjustable neoprene seat; shall have rugged aluminum bronze shut-of handle with double stops; and shall have a flow range of 75 to 325 gpm (SM -30F series), 60 to 200 gpm (SM-20F series), 60 to 125 gpm (SM-10F series) or 10 to 75 (SM-3F series); shall comply with NFPA 1964.

CHIEF™ HANDLINE NOZZLES (4000 SERIES – INCLUDING TIPS)

Nozzle shall be constructed of durable, hard anodized, lightweight Elk-O-Lite®; shall be single gallonage and constant flow; shall have infinite pattern selection from straight stream to full fog; shall be capable of flushing without shutting down; shall have replaceable spinning teeth; shall have highly visible, protective urethane bumper shall have hydraulically balanced acetal ball with adjustable neoprene seat; shall have rugged, aluminum bronze shut-off handle with double stops; shall flow _____ gpm at _____psi and have rated flow stamped on stem head; shall comply with NFPA 1964

CHIEF™ HANDLINE NOZZLE TIP (4000-14HR)

Handline nozzle tip shall be constructed of durable, hard anodized, light-weight Elk-O-Lite®; tip shall be single gallonage with a constant flow of 175 gpm operating at 50 psi, with the gallonage shown on the stem head; shall have an infinite pattern selection from straight stream to a full fog with rigid metal fog teeth; nozzle tip shall have no twist shut-off and shall be capable of flushing without shutting down; shall have a luminescent "glow" bumper as standard and 1.5" NHT rigid base.

CHIEF™ HANDLINE NOZZLE (4000-31)

Handline Nozzle shall be constructed of durable, hard anodized, light-weight Elk-O-Lite®. The 1.5" break-apart nozzle (4000-22) shall have a ball shut-off (B-275 GAT) with a pistol grip, a built-in smooth bore tip, and horseshoe-shaped shut-off handle. The nozzle shall have an infinite pattern selection from straight stream to a full fog with the replaceable spinning teeth; and shall be capable of flushing without shutting down the nozzle. The nozzle shall be single gallonage with a constant flow of 250 gpm operating at 100 psi, with the gallonage stamped on the stem head. The unit will have a 1.375" waterway for greater flows, and a 1.5" NHT free swivel base. (Please specify size of smooth bore: ⅞" – ¹⁵⁄₁₆" – 1" – 1⅛" – 1¼").

PHANTOM® HANDLINE NOZZLES (PSFS-HP)

1" Select-O-Flow® nozzle shall be constructed of durable, hard anodized, lightweight Elk-O-Lite®; shall have a constant flow in each of the four detented gallonage positions of 15, 30, 45, and 60 gpm while operating at 100 psi. The nozzle will have a discharge pattern selection from a straight stream to a wide fog pattern and will be capable of flushing without shutting down. The nozzle shall be equipped with an unbreakable, double stop, metal tab handled shut-off with a double actuator driven aluminum ball and double self-adjusting UHMWPE seats. The unit shall have a 1" NHT free swivel base with 1" waterway through the shut-off.

PHANTOM® MID-RANGE NOZZLE (SFM SERIES)

Shall be constructed of durable, hard anodized, lightweight Elk-O-Lite®; shall have internal, ball detent gallonage selector; shall have infinite patter selection from straight stream to full fog; shall be constant flow; shall be capable of flushing without shutting down; shall have replaceable teeth; shall have heavy-duty urethane protective bumper; shall have rugged aluminum bronze shut-off handle with double stops; shall have adjustable gallonage settings of 30-95-125-150 gpm; shall operate at 75 psi (LP) or 100 psi (HP); shall comply with NFPA 1964.

1.5" FOAM NOZZLE – COAST GUARD APPROVED (SFL-CG AND SFL-GCG)

Nozzle shall be constructed of rugged, corrosion resistant brass and bronze alloys; shall have adjustable stream from straight stream to full wide fog with slotted, locking pattern selector; shall be constant flow; shall be capable of flushing without shutting down; shall have molded urethane protective bumper; shall have hydraulically balanced acetal ball with self-adjusting UHMWPE seat; shall have heavy-duty manganese/bronze shut-off handle with single stop; shall flow 95 gpm at 100 psi; shall have 1.5" NHT free swivel base; shall have durable, cast pistol grip (SFL-GCG only); for SFL-CG, shall have USCG approval number 162.027/14/0, CFR46-162.027/14; for SFL-GCG shall have USCG approval number 162.027/12/0, CFR46-162.02; and shall have cast finish.

ELK-O-LITE® MYSTERY® NOZZLE TIP (L-205-BA)

Handline nozzle tip shall be constructed of durable, hard anodized, lightweight Elk-O-Lite®; shall have fixed tooth design with heavy-duty, protective, urethane bumper; shall be fully adjustable from wide fog to straight stream to shut-off; shall flow____gpm at ____psi; shall be single gallonage design with rated flow stamped on stem head; shall have two-piece, floating stem; and shall have 1.5" female threaded base.

ELK-O-LITE® MYSTERY® NOZZLE TIP (205-BA AND D-205-BA)

Handline nozzle tip shall be constructed of durable, hard anodized, lightweight Elk-O-Lite®; shall have fixed tooth design with heavy-duty, protective, urethane bumper; shall be fully adjustable from wide fog to straight stream to shut-off; shall flow____gpm at ____psi; shall be single gallonage design with rated flow stamped on stem head; shall have two-piece, floating stem; and shall have 1.5" female threaded base (205-B) or 2.5" female threaded base (D-205-BA).

BALL SHUT-OFFS

ELK-O-LITE® BALL SHUT-OFF (LB-275A, LB-275-GA, B-275A AND B-275-GA)

Quarter-turn, ball-valved, handline shut-off with 1" waterway (LB-275A or LB-275 GA only) or 1.375" waterway (B-275A or B-275-GA only); shall be constructed of durable, hard anodized, lightweight Elk-O-Lite®; shall have rugged aluminum/bronze horseshoe handle with double stops; shall have hydraulically balanced acetal valve ball with an adjustable neoprene/nylon seat; shall have Elk-O-Lite® pistol grip mounted to bottom of shut-off body (LB-275-GA or B-275-GA only); and shall have a 1.5" female threaded swivel inlet and a 1.5" male threaded outlet.

ELK-O-LITE® BALL SHUT-OFF (DB-275-A)
Quarter-turn, ball-valved, handline shut-off with 1.375" waterway; shall be constructed of durable, hard anodized, lightweight Elk-O-Lite®; shall have rugged aluminum/bronze horseshoe handle with double stops; shall have hydraulically balanced acetal valve ball with an adjustable neoprene/nylon seat; shall have ____" integral smooth bore tip machined into outlet of shut-off body; shall have pistol grip handle mounted to bottom of shut-off body; and shall have a 2.5" threaded swivel inlet and a 1.5" threaded male outlet.

ELK-O-LITE® BALL SHUT-OFF (B-375A)
1.5" double drive ball shut-off with 1.375" waterway; shall be constructed of durable, hard anodized, lightweight, Elk-O-Lite®; shall have a horseshoe-shaped handle with double stops, non-adjustable dual seats with a single cut metal ball. The shut-off shall have a 1.5" NHT female swivel base with a 1.5" NHT male outlet.

ELK-O-LITE® BALL SHUT-OFF (B-375-AT, B-375-GAT, DB-375-A)
Double drive ball shut-off with 1.375" waterway; shall be constructed of durable, hard anodized, lightweight Elk-O-Lite®; shall have a horseshoe-shaped handle with double stops that shall control a dual-drive, single cut, metal ball and an UHMWPE seat; shall have Elk-O-Lite® pistol grip mounted to bottom of shut-off body (B-375-GAT only). The shut-off shall have a 15/16" integral smooth bore tip machined into the outlet of the body. The shut-off shall have a 1.5" NHT female swivel base (B-375-AT or B-375-GAT) or 2.5" NHT swivel base (DB-375-A) with a 1.5" NHT male outlet.

ELK-O-LITE® BALL SHUT-OFF (DB-375-A)
2.5" double drive ball shut-off with a 1.375" waterway; shall be constructed of durable, hard anodized, lightweight Elk-O-Lite®; shall have a horseshoe-shaped handle with double non-adjustable seats, and a single cut, metal ball. The shut-off shall have a 2.5" NHT swivel base with a 1.5" NHT male outlet.

ELK-O-LITE® BALL SHUT-OFF (DB-375-AT AND DB-375-GAT)
2.5" ball shut-off with 1.375" waterway; shall be constructed of durable, hard anodized, lightweight Elk-O-Lite®; shall have a horseshoe-shaped handle with double stops that shall control a dual-drive, single cut, metal ball and an UHMWPE seat; shall have Elk-O-Lite® pistol grip mounted to bottom of shut-off body (DB-375-GAT only). The shut-off shall have a 1.25" integral smooth bore tip machined into the outlet of the body. The shut-off shall have a 2.5" NHT female swivel base with a 1.5" NHT male outlet.

MASTER STREAM NOZZLES

SELECT-O-MATIC® X-STREAM® NOZZLE (SM-1000, SM-1250, SM-1000B, AND SM-1250B)
Nozzle shall be constructed of durable, hard anodized, lightweight Elk-O-Lite® (SM-1000 and SM-1250) or rugged corrosion resistant brass alloys (SM-1000B and SM-1250B); shall have heat-treated, stainless steel spring mechanism, outside unobstructed waterway which reacts automatically to water flow and delivers that flow efficiently throughout the specified flow range; shall have large control handles to easily change pattern; shall be constant flow with infinite pattern selection from straight stream to full fog; shall have highly visible, protective urethane bumper; shall have a flow range of 300 to 1000 gpm (SM-1000 or SM-1000B), 300 to 1250 gpm (SM-1250 or SM-1250B). (Please specify 2.5" or 3.5" swivel base.)

SELECT-O-MATIC® X-STREAM® NOZZLE (SM-2000 AND SM-2000B)
Nozzle shall be constructed of durable, hard anodized, lightweight Elk-O-Lite® (SM-2000) or rugged corrosion resistant brass alloys (SM-2000B); shall have heat-treated, stainless steel spring mechanism, outside unobstructed waterway which reacts automatically to water flow and delivers that flow efficiently throughout the specified flow range; shall have large control handles to easily change pattern; shall be constant flow with infinite pattern selection from straight stream to full fog; shall have highly visible, protective urethane bumper; shall have a flow range of 500 to 2000 gpm at 50 to 80 psi; shall have a 3.5" swivel base.

SELECT-O-MATIC® X-STREAM® NOZZLE (SM-1000E, SM-1000BE, SM-1250E, SM-1250BE, SM-2000E)
Same specification as SM-1000/SM-1000B, SM-1250/SM-1250B or SM-2000 except: shall have encased 12 volt DC electric motor with manual override to change stream pattern.

SELECT-O-MATIC® X-STREAM® NOZZLE (SM-1000H,SM-1000HB, SM-1250H, SM-1000HB, SM-2000H)
Same specifications as SM-1000/SM-1000B, SM-1250/SM-1250B, or SM-2000 except: shall have hydraulic piston with built-in flow control to change stream pattern; and brass versions shall have no twist shut-off capabilities.

SELECT-O-MATIC® X-STREAM® NOZZLE (SM-2000BE)
Same specification as SM-2000B except: shall operate at a lower pressure of 80 psi and shall be encased 12 volt DC electric motor with manual override to change stream pattern.

SELECT-O-MATIC® X-STREAM® NOZZLE (SM-2000HB)
Same specifications as SM-2000B except: shall operate at a lower pressure of 80 psi; shall have hydraulic piston with built-in flow control to change stream pattern; shall have no twist shut-off capabilities.

HYDRO-FOAM MASTER STREAM NOZZLE (HF-350 AND HF-500)
Nozzle shall be constructed of rugged, corrosion resistant brass alloys; shall be single gallonage (350 or 500 gpm) and constant flow; shall have infinite pattern positioning from straight stream to full fog; shall have built-in foam eductor which will proportions at 1/2%, 1%, 3% or 6% rate (HF-350 only for 6%); shall be U.L. listed; shall be able to accept optional 1/3% or 3/6% valve (HF-350 only), shut-off valve, and/or quick-connect coupling; shall have grease fitting for easy lubrication of tip cam; and shall have 2.5" swivel base. (Please specify chrome-plated or cast brass finish).

FOAM MASTER STREAM NOZZLE (CSW-C-HF)
Composite nozzle shall have selectable gallonages of 350/500/750 with a built-in foam eductor that shall be capable of 1% or 3% proportioning capacity, but achieves this rate only when the nozzle is flowed at the specific gpm selections listed; shall be provided with an 8' pick-up hose and shall have a 2.5" NHT female swivel inlet.

FOAM MASTER STREAM NOZZLE (SM-1000-HF AND SM-2000-HF)
Composite automatic nozzle shall flow from 250 to 1000 gpm (SM-1000-HF) or 500 to 2000 gpm (SM-2000-HF) ; shall have a selectable automatic foam metering; nozzle can be selected to educt at 1% or 3% proportioning capacity (SM-1000-HF) or 1% proportioning capacity (SM-2000-HF) , and will achieve close to this rate across a broad flow range; shall be provided with an 8' pick-up hose; and shall have a 2.5" NHT female swivel inlet (SM-1000-HF) or a 3.5" NHT female swivel inlet (SM-2000-HF).

SELECT-O-FLOW® MASTER STREAM NOZZLE (CSW AND CSW-L)
Nozzle shall be constructed of durable, hard anodized, lightweight Elk-O-Lite®; shall have multiple gallonage settings (CSW, 300-550-750 gpm; CSW-L, 500-750-1000-1250 gpm); shall be constant flow; shall have infinite pattern setting from straight stream to wide fog; shall be capable of shutting off; shall be capable of changing gallonage settings while flowing under normal operating pressure; shall have protective rubber bumper; shall have a 2.5" swivel base.

SELECT-O-FLOW® MASTER STREAM NOZZLE (CSW-LB)
Nozzle shall be constructed of rugged, corrosion-resistant brass allows; shall have multiple gallonage settings of 500-750-1000-1250 gpm; shall be constant flow; shall have infinite pattern setting from straight stream to wide fog; shall be capable of shutting off completely; shall be capable of changing gallonage settings while flowing under normal operating pressure; shall have protective rubber bumper; shall have a 2.5" swivel base.

SELECT-O-STREAM® MASTER STREAM NOZZLE (CJ, CJN, CJB AND CJN-B)
2.5" nozzle shall be constructed of durable, hard anodized, lightweight Elk-O-Lite® (CJ and CJN) or rugged brass alloys (CJB and CJN-B); shall be single gallonage and constant flow of 500 gpm (1000 gpm for the CJN and CJN-B) while operating at a pressure of 100 psi; shall have an easily adjustable stream pattern (with the large control handles) from straight stream to a wide, full fog pattern; shall have a 2.5" NHT swivel base, with chrome-plated trim (CJ and CJN) or satin brass trim (CJB and CJN-B); and shall have no twist shut-off capabilities.

SELECT-O-STREAM® MASTER STREAM NOZZLE (CJ-RC, CJN-RC, CJB-RC AND CJN-B-RC)
2.5" nozzle shall be constructed of durable, hard anodized, lightweight Elk-O-Lite® (CJ-RC and CJN-RC) or rugged brass alloys (CJB_RC and CJN-B-RC) ; shall be single gallonage and constant flow of 500 gpm (1000 gpm for the CJN-RC and CJN-B-RC) while operating at a pressure of 100 psi; shall have an easily adjustable stream pattern (using cables for remote operation) from straight stream to a wide, full fog pattern; shall have a 2.5" NHT swivel base, with chrome-plated trim (CJ_RC and CJN-RC) or satin brass trim (CJB-RC and CJN-B-RC); and shall have no twist shut-off capabilities.

RAPID ATTACK NOZZLE (R.A.N.®)
Constant gallonage nozzle shall have a flow rate of 500 gpm while operating at 75 psi nozzle pressure and 400 gpm while operating at 50 psi; durable, lightweight Elk-O-Lite® alloy nozzle with hard anodized finish shall have a built- in stream shaper and adjustable stream patterns from straight stream to a full fog pattern; and shall be used in conjunction with an Elkhart R.A.M.® (Rapid Attack Monitor).

MONITORS

PORTABLE ATTACK MONITOR (R.A.M.®)
Lightweight Elk-O-Lite® Rapid Attack Monitor shall have a 2.5" vaned waterway for flows up to 500 gpm; monitor shall be equipped with a U-shaped handle that shall serve as a carrying handle and control the ball shut-off valve; valve control handle shall have a locking pin with pull to release function designed to hold the valve in the closed position during deployment with a charged hose line; monitor shall have a unique safety system incorporated into its design that harnesses nozzle reaction force to stabilize the monitor, automatically activates when the reaction force becomes substantial (approximately 350 gpm) and is independent of system operation without the ability be overridden; monitor shall have a double ball joint configuration at the outlet for controlled positioning of the nozzle; unit shall have counterbalance mechanisms capable of maintaining desired nozzle position unless overridden by the safety system; shall have an integral portable base that includes four (4) forged aluminum fold out legs that when deployed provide a wide footprint for stability; rear legs shall have 35° rearward angled spikes for maximum stability; attached retention strap with storage bag shall be provided; shall have a red urethane enamel finish with Elk-O-Lite® hard anodized trim and reflective instruction labels; dimensions for the monitor shall not exceed 16.5" long, 8.5" wide and 8.75" high when in the folded position; total weight shall not exceed 19 pounds; monitor shall have one (1) 2.5" NHT female swivel inlet and one (1) 2.5" NHT male outlet; and a storage bracket designed for horizontal or vertical mounting and that allows for rapid deployment shall be provided.

STINGER® PORTABLE MONITOR (8297 2.0 SERIES)
Monitor shall be constructed of durable, lightweight Elk-O-Lite®; shall have two (2) 2.5" clappered inlets (one [1] 3.5", 4.0" or 4.5" swivel inlet or one [1] 4.0" or 5.0" Storz inlet); shall have a 3.0" waterway; shall have folding legs on a portable base; shall be easily detached from portable base; shall have hand-wheel driven worm gear (fully enclosed) for vertical movement; shall have vertical safety stop at 35 ° above horizontal; shall have positive twist-lock mechanism for horizontal travel; shall have convenient carrying handle; shall be capable of flowing up to 1000 gpm with (2) 2.5" base (1250 gpm with [1] 3.5", 4.0", 4.5" swivel or 4.0" and 5.0" Storz base); shall have 200 psi liquid-filled gauge; shall have 10' safety chain; shall have red urethane enamel finish; shall not exceed 17" in height; shall not exceed 31 lbs., excluding stream shaper and tips.

STINGER® DECK GUN (8297-98 AND 8297-99)
Monitor shall be constructed of durable, lightweight Elk-O-Lite®; shall have a 3.0" waterway; shall be easily detached from (top mount adapter, 8297-98) (topmount fixture, 8297-99); shall have hand-wheel driven worm gear (fully enclosed) for vertical movement from 80 ° above to 30 ° below horizontal; shall have full 360° horizontal movement with positive twist-lock mechanism; shall be capable of flowing up to 1250 gpm; shall have 200 psi liquid-filled gauge; shall have (3" – 150# ANSi flange base, 8297-98) (2-2.5"clappered swivel inlet base, 8297-99); shall have red urethane enamel finish; shall not exceed (19.5", 8297-98) (22.5", 8297-99) in height; shall not exceed 14 lbs., excluding stream shaper, tips and top mount adapter/fixture.

STINGER® RF MONITOR 8297RF
Monitor shall be constructed from lightweight cast aluminum with a fully vaned 3.25" waterway; shall have a flow rating of 1250 gpm and be a dual purpose convertible deck gun/portable monitor system; shall be electrically controlled by wireless RF signal at a distance of up to 1000 feet and shall not require the operator to gain access to the location of the monitor to initiate and change the functions

of the monitor; shall have two (2) heavy duty permanent magnet gear motors that allow for simultaneous vertical and horizontal adjustment of stream direction; one motor shall control the left-right rotation while the other motor shall control the elevation of the nozzle; electronic circuitry shall provide protection for the motors in the event an obstruction is encountered during movement; horizontal motor shall have a dual speed feature to allow for precise positioning of the water stream; vertical monitor positions shall have stop locations at 80° above and 30° below the horizontal plane while in deck gun mode, and 80° above to 30° above the horizontal plane while in portable mode; left-right and up-down motors shall have manual override devices for use in the event of power failure; when engaged, the vertical override control shall automatically disengage the motor in order to eliminate safety hazards; left-right motion between the upper monitor and the base (deck gun and/or portable) shall be accomplished by the use of unique (patent pending) self-aligning spur gears; self-aligning feature shall allow quick, reliable installation of the upper monitor onto the base while minimizing the chance of a butt tooth condition between the drive pinion and the ring gear; deck gun base ring gear shall allow full 360° rotation of the monitor, with an optional 270° ring gear available for top control panel pumper installations in order to prevent inadvertent directing of the deck gun stream toward the pump operator; portable base ring gears shall allow left-right stream rotation of 45° to either side of the straight ahead position; deck gun base options shall include 3" ANSI 150 lb. flange or 3" NPT female pipe thread connection; portable bases shall be available with two 2.5" female hose thread swivel connections, or single female hose thread swivel connections in 3.5", 4", or 4.5" size, or single inlet free swivel Storz hose connection in 4" or 5" size; portable bases shall be supported by four (4) heavy-duty forged aluminum legs with spring-loaded carbide ground spikes; support legs shall fold for compact storage, and a quick-release bracket, with single lever release action, shall be available for safe, secure storage of the portable base assembly; and monitor shall meet all of the applicable NFPA #1901 (2003 edition) standards, both required and annex, for apparatus mounted monitors.

POWER SYSTEM FOR STINGER® RF

Upper monitor assembly shall include a 12 volt, 5 amp/hr sealed lead-acid battery to serve as the power source for portable operation; battery shall be housed in a cast aluminum enclosure, sealed to NEMA 4 requirements; retractable power cable assembly shall be provided for connection to the monitor control box while monitor is installed on the deck gun base on the fire apparatus; cable assembly shall have a circular coaxial type connector for attachment to and quick detachment from the monitor control box; opposite end of the power cable assembly shall include a strain relief fitting to allow the cable to be secured to the apparatus with wire conductors connected un-switched to the vehicle battery system; while connected to the monitor control box, this cable shall allow the monitor to operate under vehicle power in the deck gun mode, as well as provide a power source for charge maintenance of the 5 amp/hr lead-acid battery; power cord design shall allow the monitor control system to sense the presence of the cord connector within the control box receptacle and signal the controller to allow the "deck gun mode" Up-Down travel range; when power cord is unplugged, the controller shall allow Up-Down travel only within the "portable mode" range; LED power status indicator shall be included in the cover of the battery enclosure; indicator shall consist of three (3) high intensity LEDs, one each of red, yellow and green; one (1) LED shall be illuminated at any time, with LED color used to indicate battery charge level: green shall signify a full or high level of charge, while red shall signify a low charge level; a steady burning LED shall signify that the vehicle power cable is connected to the monitor control box, and a flashing LED shall signal that the monitor is operating from battery power.

ELECTRONIC CONTROLS FOR STINGER® RF

The electrical system and components on the monitor shall have a NEMA 4 rating with reverse polarity and circuit board moisture protection; control circuitry shall use programmable integrated circuit technology for monitor up/down, left/right rotation and nozzle control functions; system shall utilize only encoded radio frequency links to assure multiple frequency availability in the event multiple monitors are utilized at the same incident; horizontal motor circuitry shall have programmable limits of any angle combination, which permit the user to set limits directly from the remote transmitter to allow for automatic oscillation of the monitor; monitor shall be supplied with a pump panel (main) control module powered by the chassis 12 volt electrical system and a wireless (secondary) handheld control; both controls shall have NEMA 4 ratings and designed with similar positioning of the controls for operator familiarization consistency; handheld control shall have a 1000 foot range to permit operation of the monitor in a safe area, away from the collapse zone; handheld control shall be powered by two (2) readily available AA batteries with a life cycle of 20 hours of continuous operation; automatic power down feature shall be incorporated to place the handheld remote into "sleep mode" after five minutes of inactivity; On/Off button shall also be provided to manually control the power usage of the remote; low battery LED indicator light shall illuminate two hours prior to depletion of the batteries; panel mounted control shall override function of the handheld device if used simultaneously; wireless devices shall be FCC Part 15 compliant and not require a license; and system electrical components shall be completely shock, vibration, drop and environmentally tested and certified to meet all requirements of the fire service.

SCORPION® DECK GUN (8294-02)

Deck gun shall be constructed of durable, lightweight Elk-O-Lite®; shall have 4.0" vaned waterway; shall be capable of flowing up to 2000 gpm; shall have hand-wheel driven worm gear (fully enclosed) for vertical travel of 90° above to 45° below horizontal with optional stop at 45 above horizontal; shall have hand-wheel driven worm gear (fully enclosed) for 360° horizontal travel; shall have grease fittings for easy lubrication of gears and ball races; shall have 300 psi liquid-filled gauge; shall have 4.0" – 150# ANSI flange base; shall have red urethane enamel finish.

SCORPION® ELECTRIC REMOTE CONTROLLED DECK GUN (8294-04)

Deck gun shall be constructed of durable, lightweight Elk-O-Lite®; shall have 4.0" vaned waterway; shall have fully enclosed motor driven worm gear for vertical travel of 90° above to 45° below horizontal with optional stop at 45° above horizontal; shall have motor driven worm gear for 347° horizontal travel with 37 safety stop positions to comply with NFPA 1901; shall have totally sealed planetary gear type 12V DC electric motors with manual override; shall include 12V DC control package of one (1) relay box with solid state circuitry, one (1) primary control box with function switches and override capability, and one (1) secondary control box with function switches and override capability; shall have grease fittings for easy lubrication of gears and ball races; shall have 300 psi liquid-filled gauge; shall have 4.0" – 150# ANSI flange base; shall have red urethane enamel finish.

OPTIONAL FOR 8294-04:

- Shall have hand-held remote control box with 50' of cable
- Shall have 12V DC battery housed in weatherproof case
- Shall include electrically controlled (with manual override), automatic, combination fog nozzle capable of flowing from 500 to 2000 gpm (SM-2000E)

SCORPION® RF MONITOR (8294)

Monitor shall be constructed from lightweight cast aluminum with a fully vaned 4" waterway producing a friction loss factor of less than 27 psi; shall have a flow rating of up to 2000 gpm; shall be configured with a 4" 150# ANSI companion flange inlet and a 3-.5" NHT male outlet; shall be electrically controlled without the use of a tethered remote at a distance of 1300 feet and shall not require the operator to gain access to the location of the monitor to initiate and change the functions of the monitor; shall have two (2) heavy-duty permanent magnet gear motors that allow for simultaneous vertical and horizontal adjustment, one motor shall control the continuous 349° rotation while the other motor shall control the elevation of the nozzle; electrical connection for the monitor base shall permit unlimited rotation in either direction without dead zones; electronic circuitry shall provide protection for the motor in the event an obstruction is encountered during movement; horizontal motor shall allow for precise positioning of the water stream with user defined stop positions; vertical monitor positions shall have stop locations at 90° above and 45° below the horizontal plane with 10 other user defined stop positions; control circuitry shall have an automatic storage function (return to minimum dimensions) to allow the monitor to return to its stowed position area on top of the apparatus; horizontal and vertical motors shall have a manual override device for use in the event of power failure; electrical controls shall be compatible with 12 volt electrical systems; a wiring connection for a (customer supplied) "monitor nested" light shall be supplied; and monitor shall meet all of the applicable NFPA #1901 (2003 edition) standards, both required and annex, for apparatus mounted monitors.

ELECTRONIC CONTROLS FOR SCORPION® RF

The electrical system and components on the monitor shall have a NEMA 4 rating with reverse polarity and circuit board moisture protection; control circuitry shall use programmable integrated circuit technology for monitor up/down, left/right rotation and nozzle control functions; system shall utilize only encoded radio frequency links to assure multiple frequency availability in the event multiple monitors are utilized at the same incident; horizontal motor circuitry shall have programmable limits of any angle combination, which permit the user to set limits directly from the remote transmitter to allow for automatic oscillation of the monitor without operator intervention; monitor shall be supplied with a pump panel (main) control module powered by the chassis 12 volt electrical system and a wireless (secondary) control panel; both controls shall have NEMA 4 ratings and shall be designed with similar positioning of the controls for operator familiarization consistency; the handheld control shall have a 1300 foot range to permit operation of the monitor in a safe area, away from the collapse zone; handheld control shall be powered by two (2) readily available AA batteries with a life cycle of 20 hours of continuous operation; automatic power down feature shall be incorporated to place the remote into "sleep mode" after five minutes of inactivity; On/Off button shall also be provided to manually control the power usage of the remote; low battery LED indicator light shall illuminate two hours prior to depletion of the batteries; priority panel mounted control shall override the secondary devices if used simultaneously; wireless devices shall be FCC Part 15 compliant and not require a license; and system electrical components shall be completely shock, vibration, drop and environmentally tested and certified to meet all requirements of the fire service.

VULCAN® RF MONITOR

Monitor shall be constructed from lightweight cast aluminum with a fully vaned 3.5" waterway producing a friction loss factor of less than 27 psi; monitor shall have a flow rating of 1250 gpm; monitor shall be configured with a 3" 150# ANSI flange inlet and a 2.5" NHT male outlet; monitor shall be electrically controlled without the use of a tethered remote at a distance of 1000 feet and shall not require the operator to gain access to the location of the monitor to initiate and change the functions of the monitor; when in the stowed position (monitor and nozzle) the monitor shall have maximum dimensions of 16" high, 12" wide and 22" deep; monitor shall have two (2) heavy duty permanent magnet gear motors that allow for simultaneous vertical and horizontal adjustment; one motor shall control the continuous 360° rotation while the other motor shall control the elevation of the nozzle; electrical connection for the monitor base shall permit unlimited rotation in either direction without dead zones; electronic circuitry shall provide protection for the motor in the event an obstruction is encountered during movement; horizontal motor shall have a dual speed feature to allow for precise positioning of the water stream; vertical monitor positions shall have stop locations at 90° above and 45° below the horizontal plane; the control circuitry shall have an automatic storage function (return to minimum dimensions) to allow the monitor to return to its stowed position area on top of the apparatus; the horizontal and vertical motors shall have a manual override device for use in the event of power failure; electrical controls shall be compatible with 12 volt electrical systems; and monitor shall meet all of the applicable NFPA #1901 (2003 edition) standards, both required and annex, for apparatus mounted monitors.

ELECTRONIC CONTROLS FOR VULCAN® RF

The electrical system and components on the monitor shall have a NEMA 4 rating with reverse polarity and circuit board moisture protection; control circuitry shall use programmable integrated circuit technology for monitor up/down, left/right rotation and nozzle control functions; system shall utilize only encoded radio frequency links to assure multiple frequency availability in the event multiple monitors are utilized at the same incident; horizontal motor circuitry shall have programmable limits of any angle combination, which permit the user to set limits directly from the remote transmitter to allow for automatic oscillation of the monitor without operator intervention; monitor shall be supplied with a pump panel (main) control module powered by the chassis 12 volt electrical system and a wireless (secondary) control panel; both controls shall have NEMA 4 ratings and designed with similar positioning of the controls for operator familiarization consistency; handheld control shall have a 1000 foot range to permit operation of the monitor in a safe area, away from the collapse zone; handheld control shall be powered by two (2) readily available AA batteries with a life cycle of 20 hours of continuous operation; automatic power down feature shall be incorporated to place the handheld remote into "sleep mode" after five minutes of inactivity; On/Off button shall also be provided to manually control the power usage of the remote; a low battery LED indicator light shall illuminate two hours prior to depletion of the batteries; panel mounted control shall override function of the wireless devices if used simultaneously; wireless devices shall be FCC Part 15 compliant and not require a license; system electrical components shall be completely shock, vibration, drop and environmentally tested and certified to meet all requirements of the fire service.

STINGRAY® INDUSTRIAL MONITOR (8393 OR 8393P)

Monitor shall be constructed of rugged, corrosion resistant brass alloys; shall have full 3.0" single waterway; shall have hand-wheel driven worm gear (fully enclosed) for vertical travel of 90° above to 60° below horizontal; shall have full 360° horizontal travel with positive twist-lock mechanism; shall be capable of flowing up to 1250 gpm; shall have grease fittings for easy lubrication of gear and ball races; shall have 200 psi liquid-filled gauge (8393P only); shall be furnished with 3" 150# ANSI flange base (3.0" NPT and 4.0" 150# ANSI flange bases optional); shall be FM approved and CE certified; shall have red urethane enamel finish.

STINGRAY® IV (8393IV [2.0])
Monitor shall be constructed of rugged, corrosion resistant brass alloys; monitor shall have a single waterway with a 3" interior diameter brass tubing; full waterway shall allow for constant flows up to 1250 gpm; monitor shall have a hand-wheel driven worm gear that shall be fully enclosed; stainless steel worm gear shall control the full 360° rotation with 140° of vertical travel with 70° above to 70° below the horizontal plane that shall hold position wherever it is stopped; shall be equipped with a positive twist-lock mechanism when full rotation is used; shall be equipped with an integral 3" quarter-turn, full flow ball valve with an "F" handle (Elkhart model #2893); monitor shall have four ball races with bronze balls and greased zerks for easy lubrication; shall be equipped with 3" 150# ANSI mounting flange and a 2.5" NH male outlet; and shall have a red urethane enamel finish.

COPPERHEAD (8593)
Monitor shall be constructed of rugged, corrosion resistant brass alloys; shall have a 3" waterway with cast-in vane that shall allow for constant flows up to 1250 gpm; shall have a 24" stainless steel rod to control the full 360° rotation; vertical movement shall be 90° above to 45° below the horizontal plane that shall hold position wherever it is stopped; shall be equipped with stainless steel lock hardware for positioning; shall have brass balls in all swivel joints with greased fittings for easy lubrication; shall be equipped with a 3" 150# ANSI mounting flange and a 2.5" NHT male outlet; and shall be painted red urethane enamel. (Optional — pressure gauge, part number 39130000, available. The pressure gauge shall be liquid- filled with calibration readings from 0 to 200 psi.)

PYTHON® INDUSTRIAL MONITOR (299-11)
Monitor of single waterway design shall be constructed of rugged, corrosion resistant brass; shall have waterway of 2.5" I.D. brass tubing; shall have cast swivel brass joints with bronze balls and grease zerks for easy lubrication; shall have full 360° rotation with brass and stainless steel twist-lock mechanism; shall have 150° vertical travel (90° above to 60° below horizontal) controlled with stainless steel handle rod and brass and stainless steel twist-lock mechanism; shall be capable of flowing up to 1250 gpm with minimal friction loss; shall be FM approved; and shall have red urethane enamel finish.

GIANT PYTHON® INDUSTRIAL MONITOR (299-20)
Monitor of single waterway design shall be constructed of rugged, corrosion resistant stainless steel, shall have waterway of 3.5" I.D. stainless steel tubing; shall have cast stainless steel swivel joints with stainless steel balls and grease zerkes for easy lubrication; shall have full 360° rotation controlled by hand-wheel driven worm gear; shall have 150° vertical travel controlled by hand-wheel driven worm gear; shall have worms and gears of chrome-plated brass; shall have built in 300lb pressure gauge; shall be capable of flowing up to 2500 gpm with minimal friction loss; shall be FM approved; and shall be red urethane enamel finish.

MONITOR ACCESSORY (EXTENDER FOR VULCAN® SERIES [8598])
Extender is designed to provide better clearance for the monitor to allow for a wider coverage range and address firefighter safety concerns; 18" Extender shall be compatible with the Elkhart Vulcan® Series of monitor's and a range of other compact monitors; shall be designed for use with monitor and nozzle flow ratings of 1250 gpm maximum with 100 psi nozzle pressure with a maximum inlet pressure rating of 200 psi; shall be electrically actuated through a pump panel pushbutton control pad and designed for a static load of up to 2500 pounds in any position; shall allow deployment of the monitor in 10 seconds; installation kit shall have an in-cab warning light that shall alert the driver when unit is not retracted; pressure switch shall be provided to limit movement when internal pressure exceeds 10 psi to avoid injury to personnel and damage to equipment; automatic drain system shall be provided on the vertical piping to drain all water from the monitor and piping upon closing of the water valve; shall have a 3" Victaulic base by a 3" Flange outlet for attachment to apparatus piping; Extender package shall include all items required for installation; wiring harnesses shall be available in lengths from 5 to 40 feet; and system shall be powered from the chassis electrical system and shall be in compliance with applicable 2003 NFPA #1901 standards.

VALVES

FIELD ADJUSTABLE PRESSURE REDUCING VALVE (URFA-20, URFA-20S, AND URFA-25)
2.5" right angle field adjustable pressure reducing valve (URFA-20) or 2.5" in-line field adjustable pressure reducing valve (URFA-20S) or 2.5" right angle field adjustable pressure reducing hose valve (URFA-25) shall have a nested spring design utilizing two custom springs allowing a low torque field adjustment of the pressure reducing functions; shall have a 5" hand-wheel requiring less than 15.5 ft-lbs. of torque to open or close the valve; shall utilize a hydraulic piston and cylinder assembly within the lower bonnet to self-throttle in response to pressure change on the downstream side of the valve; shall self-close to maintain a reduced pressure under no-flow conditions; shall self throttle maintaining reduced pressure conditions when flowing and have a built in check valve; shall have five (5) field adjustable valve settings (A-E) on a color coded indication label; pin in hex security screws shall be installed to secure the hand-wheel and a high impact plastic shield covering the pressure reducing adjustment mechanism; one (1) pin in hex bit shall be supplied with each valve; pressure adjustment mechanism shall be utilized using an aluminum adjustment rod provided with each valve and actuated by rotating in either a clockwise or a counter clockwise direction; pressure gauge taps shall be provided on the inlet and the discharge side of the valve; two (2) capped threaded taps on each side of the upper bonnet shall be provided for the installation of an optional tamper proof supervisory switch; and shall be UL and NY City MEA approved.

OPTIONAL SUPERVISORY SWITCH FOR USE WITH URFA VALVES
UL Approved integral tamper resistant supervisory alarm switch contained within a UL approved enclosure with pin in hex security screws providing enhanced security for installation on either side of the valve by threading it into the upper bonnet

UNIBODY VALVE FOR APPARATUS (EB15, EB20, EB25, EB30, AND EB35)
Valve shall be constructed of an all brass body, stainless steel ball with dual polymer seats; shall be capable of accepting any actuator without breaking the waterway; shall be capable of bi-directional flow and incorporating a self-locking ball; shall be capable of swinging out of the waterway for maintenance; shall not require lubrication of seats or any other internal waterway components; shall be manufactured and assembled in the United States and carry a 10 year manufacturer's warranty.

UNIBODY VALVE FOR APPARATUS (EB40)
Valve shall be constructed of an all brass body with a 4" full flow waterway; shall utilize a bronze flat ball design with a single urethane seat; shall not require lubrication of seats or any other internal waterway components; shall be capable of swinging out of the waterway for maintenance; shall be manufactured and assembled in the United States and carry a 10 year manufacturer's warranty.

ELKHART BRASS MFG. CO., INC
PRESSURE-MATIC
VALVE SIZING DATA SHEET

PAGE____ OF ____

DATE _____

PROJECT NAME:_____

CUSTOMER NAME:_____

CUSTOMER P.O. #:_____ ELKHART ORDER # _____

PRV APPLICATION: _____ AUTOMATIC SPRINKLER _____ STANDPIPE

ELKHART VALVE MODEL & SIZE: _____ TOTAL VALVE QUANTITY: _____

RISER DESIGNATION: _____

CUSTOMER INFO IN COLUMNS LABELED "CUST" ONLY_____. PLEASE LEAVE COLUMNS LABELED "ELK" BLANK

VALVE LOCATION (FLOOR)	PRV INLET PRESSURE (PSI)		PRV RESIDUAL OUTLET PRESSURE (PSI)		STATIC OUTLET PRESSURE (PSI)		DESIGN FLOW RATE THROUGH VALVE (GPM)	VALVE TYPE	QTY
	STATIC	RESIDUAL	DESIRED MIN / MAX	ACTUAL	MAX ALLOWED	ACTUAL			
CUST	CUST	CUST	CUST	ELK	CUST	ELK	CUST	ELK	CUST

NATIONAL STOCK #	MODEL #	PAGE
	NOZZLES	
4210-00-200-0346	279-L CP	1-25
4210-00-289-1032	4000-02	1-6
4210-01-212-9408	4000-03	1-6
4210-01-464-6883	4000-13	1-6
4210-01-518-2585	B-278-L	1-25
4210-01-475-9715	CJ-B - 350	6-10
4210-01-200-5801	DSF	1-14
4210-00-465-1904	DSF-N	1-14
4210-01-200-1612	DSM-30F	1-9
4210-01-323-3207	HF-500	6-14
4210-00-004-8316	L-205-B - NST	1-20
4820-01-236-7153	LB-275	1-25
4210-01-320-9513	L-OG	1-18
4210-00-269-8970	NTL-C	6-18
4210-01-484-7004	NTS-C FEM	6-18
4210-01-314-2189	SB-275	1-25
4210-01-199-6832	SF-800	
4210-01-202-2155	SFL-OG	1-14
4210-01-108-2717	SFL-OG MOD.	1-14
4210-01-408-6992	SFL-GN	1-22
4210-00-601-0986	SFL-GN-125	1-22
4210-00-465-1906	SFL-GN-95	1-22
4210-01-042-0408	SFL-GN-95	1-22
4210-01-199-6829	SFL-O	1-14
4210-01-199-6830	SFL-OG	1-14
4210-00-465	SFS-GN	
4210-01-490-1822	SFS-GN 3/4"	1-22
4210-01-199-6828	SFS-O	1-22
4210-01-199-6827	SFS-OG	1-22
4210-01-394-3951	SFS-OG	1-22
4210-01-315-1092	SM-10F	1-9
4210-01-212-8329	SM-10FG	1-9
4210-01-199-6844	SM-30PL	1-9
4210-01-441-9798	ST-190BA	1-29
4210-01-202-2160	STDSF	1-9
4210-01-201-1377	STDSM-30F	1-9
4210-01-199-6834	STSF-800	
4210-01-204-1710	STSFB-800-A	1-14
4210-01-199-6833	STSFL	1-9
4210-01-202-2159	STSFL-O	1-9
4210-01-200-3247	STSM-10F	1-9
4210-01-230-1447	STSM-30BPA	
4210-01-200-3248	STSM-30F	1-9
4210-01-202-2164	TSF	1-14
4210-01-199-6838	TSF	1-14
4210-01-199-6837	TSFL	
4210-01-202-2163	TSFL-O	
4210-01-199-6845	TSM-10F	1-9
4210-01-199-6835	TSM-30F	1-9
	MONITORS	
4210-00-289-1031	8287	5-38
4210-01-327-7775	8294-021	5-51
4210-01-287-1070	8297-98 (w/282A & SM-1000)	5-22

	FOAM EDUCTORS	
4210-01-197-9106	240-95	3-3
4210-01-198-3903	241-125	3-3
4210-00-466-5430	241-60	3-3
4210-01-197-9108	241-60	3-3
4210-01-197-9109	241-95	3-3
4210-01-197-9110	241-95	3-3
4320-01-530-5448	241-N3	3-3
4210-01-112-3081	241-N6	3-3
	WYES AND WATER THIEFS	
4730-00-322-9636	1	4-11
4210-01-198-7817	1	4-11
4210-01-198-7818	1	4-11
4210-01-263-0920	1	4-11
4210-00-096-9468	B-100	4-11
4210-00-288-7861	B-100	4-11
4210-00-959-3233	B-100	4-11
4210-01-125-9822	B-100	4-11
4210-00-255-0235	B-97	4-11
4810-01-261-7936	B-97-A	4-11
4210-01-196-4579	B-95-A	4-11
4210-01-196-4580	B-95-A	4-11
4210-01-196-4581	B-95-A	4-11
4210-01-196-4564	B-97	4-11
4210-01-196-4576	B-97-A	4-11
4210-01-196-4577	B-97-A	4-11
4210-01-196-4578	B-97-A	4-11
4210-01-198-9813	B-97-A	4-11
4210-01-198-9814	B-97-A	4-11
4210-01-198-9815	B-97-A	4-11
4210-01-198-8347	1A	4-11
4210-01-198-8348	1A	4-11
4210-01-198-8349	1A	4-11
4210-01-198-6049	B-100	4-11
4210-01-233-2405	B-100-A	4-11
4210-01-198-6048	B-100-L	4-11
4210-00-255-0234	B-100N	4-11
4210-01-196-6267	BG-104	4-2
4210-01-196-4582	BG-104-A	4-2
4210-01-038-6001	BG-104N	4-2
4210-01-038-6001	BG-104N	4-2
	SIAMESE	
4210-01-196-0085	2	4-6
4210-01-196-4557	2	4-6
4210-01-196-4559	4	4-6
4210-01-196-4560	4	4-6
4210-00-274-8614	4	4-6
4210-01-196-4571	4A	4-6
4210-01-196-4572	4A	4-6
4210-01-196-4564	B-98	4-8
4210-01-196-4565	B-98	4-8
4210-01-196-4566	B-98	4-8
4210-01-196-4576	B-98A	4-8
4210-01-196-4577	B-98A	4-8
4210-01-196-4578	B-98A	4-8
4210-01-196-4579	B-99A	4-8
4210-01-196-4580	B-99A	4-8
4210-01-196-4581	B-99A	4-8

NATIONAL STOCK NUMBER LISTING

NATIONAL STOCK #	MODEL #	PAGE
APPARATUS VALVES		
4820-01-371-8330	9786	4-14
4820-01-270-6422	2891-01-01-D	7-19
4820-00-764-7866	2892-01-01-F	7-19
4820-01-267-8604	2896-01-01-D	7-19
4820-01-270-6421	2896-01-35-D	7-19
4820-01-270-9565	2896-01-35-F	7-19
4820-01-266-8145	2896-13-01-F	7-19
4820-01-131-3231	2896-10-01-F	7-19
4820-01-266-7851	890-01-01-D	7-19
4820-00-166-9587	890-01-01-D-3	7-19
4820-00-166-9598	890-01-01-D-4	7-19
4810-01-443-1189	890-43-01-D	7-19
4820-00-166-9837	891-01-01-D-12	7-19
4820-00-166-9836	891-01-01-D-7	7-19
4820-01-213-4318	891-01-01-E-8	7-19
4820-01-300-2752	891-01-03-D	7-19
4210-01-205-3991	891-10-40-E	7-19
4820-01-329-1222	891-40-01-D	7-19
4820-01-329-1223	891-43-01-D	7-19
4820-01-246-1077	891-50-50-D	7-19
4820-00-990-9008	891-01-01-D	7-19
4820-00-432-9588	892-01-01-D	7-19
4820-01-286-1971	892-11-01-D-13	7-19
4820-01-198-2754	892-50-50-D	7-19
4820-01-465-5095	893-50-50-D	7-19
4820-00-096-9326	896-01-01-D	7-19
4820-01-247-0791	896-01-01-D	7-19
4820-01-225-8671	896-01-01-D-7	7-19
4820-01-323-1184	896-01-01-E	7-19
4810-01-247-0792	896-01-37-D	7-19
4820-01-318-9191	896-20-33-F	7-19
4820-01-206-3522	896-50-37-F	7-19
4820-01-329-4965	896-51-21-D	7-19
4820-01-465-5285	896-95-95-D	7-19
4820-01-216-2871	X-86-A	7-5
REPAIR KITS		
4820-01-089-2031		14-2
4820-01-033-5103		14-2
4820-01-130-3384		14-2
4820-01-130-4390		14-2
ADAPTERS		
4210-00-277-3377	306	10-8
4210-00-277-3378	306	10-8
4210-00-288-8811	306	10-8
4730-00-277-6845	306	10-8
4210-00-174-6863	307	10-4
4210-00-827-8765	307	10-4
4210-00-864-4168	307	10-4
4210-00-952-6036	307	10-4
4730-01-286-3201	307	10-4
4730-01-245-0258	419	10-8
4730-01-247-0796	419	10-8
4210-01-208-4851	435	10-3
4730-00-618-8592	318 SPL	10-4
4210-01-268-0206	418	10-6
4730-01-247-0761	418	10-6
4210-01-247-0763	418-S	10-6
4210-00-143-4353	A-327	10-4
4210-00-202-7466	A-327	10-4
4210-00-209-5023	A-327	10-4
4210-01-131-8245	A-327	10-4
4730-00-090-9228	A-327	10-4
4210-00-288-8816	F-327	10-4
4210-00-307-4699	F-327	10-4
4210-00-377-6521	F-327	10-4
4210-01-160-8043	F-327	10-4
4210-00-488-8402	F-327-A	10-4
4210-00-262-9211	M-327	10-4
4210-00-277-3374	M-327	10-4
4210-00-277-3375	M-327	10-4
4210-00-288-8827	M-327	10-4
4210-00-289-1305	M-327	10-4
4210-00-288-8815	S-319	10-4
4210-01-160-5634	S-319	10-4
4210-01-037-6265	S-327	10-4
4730-00-541-6551	S-327	10-4
CAPS & PLUGS		
4730-00-240-5540	310	10-1
4820-01-247-0762	310	10-1
5342-01-245-0264	311	10-1
4210-01-247-0762	310 6"	10-1
2930-00-318-0939	310 2" NPSH	10-1
2590-01-465-5807	310 3"	10-1
4210-00-355-4862	419 SPL & 311	10-8
5342-01-322-1475	310	10-1
VALVES		
4820-01-518-2434	UR-20 ZZA	9-4
ACCESSORIES		
4210-00-288-7864	105	10-4
4820-00-281-2679	110	7-26
4820-01-363-7342	115	7-26
4210-00-409-6565	181	1-29
4210-00-240-5530	315	8-2
4210-01-363-2171	105-2.5	10-4
4210-01-327-7776	283-A	1-27
4820-00-540-2381	315-FN	8-2
4820-01-465-4777	40-41	7-27
4210-01-130-8595	S-320 1.5"	8-2
4210-01-127-6167	S-320 2.5"	8-2
4210-01-213-4454	S-320 4.5"	8-1
5120-00-018-1519	S-454	2-2
4210-01-327-7777	ST-191-A	1-29
5120-01-382-8041	T-464	2-2

INDEX

LIMITED WARRANTY

Elkhart Brass Manufacturing Company, Inc., 1302 West Beardsley Avenue, Elkhart, Indiana 46514 ("Warrantor"), warrants to the original purchaser of the new fire protection equipment manufactured by Warrantor and to any person to whom such equipment is transferred, that such equipment shall be free from defects in materials and workmanship during the five (5) year period (electrical components two [2] years) commencing upon the receipt of such equipment by the original purchaser thereof ("warranty period").

Warrantor's obligation under this warranty is specifically limited to replacing or repairing its fire protection equipment or parts thereof which are shown by Warrantor's examination to be in a defective condition attributable hereunder to Warrantor. To qualify for this warranty, alleged defective equipment MUST be returned to Warrantor at its above address, transportation charges prepaid, within a reasonable time after discovery of an alleged defect, and in no event later than thirty (30) days beyond the expiration of the warranty period. If, as a result of Warrantor's examination of the returned equipment, Warrantor concludes that a product defect attributable hereunder to Warrantor exists, Warrantor shall cure such defect within a reasonable time, not to exceed forty-five (45) days after such examination. All expenses in curing such defect except for transportation charges and shipping expenses incurred in delivering such equipment to Warrantor shall be paid by Warrantor.

In the event that a defect in such equipment is found to be attributable hereunder to Warrantor and Warrantor is unable to provide replacement and repair is not commercially practicable or cannot be timely made, Warrantor may elect to refund to claimant the purchase price of such equipment actually received by warrantor, less reasonable depreciation, in complete discharge of its obligations hereunder. If Warrantor elects to comply with this warranty by means of such refund, as a condition precedent to such compliance, the claimant shall return such equipment to Warrantor free and clear of liens and other encumbrances.

> THE ORIGINAL PURCHASER OF SUCH EQUIPMENT, ANY PERSON TO WHOM SUCH EQUIPMENT IS TRANSFERRED, AND ANY PERSON WHO IS AN INTENDED OR UNINTENDED BENEFICIARY OF SUCH EQUIPMENT, SHALL NOT BE ENTITLED TO RECOVER FROM WARRANTOR ANY CONSEQUENTIAL OR INCIDENTAL DAMAGES FOR INJURY TO PERSON AND/OR PROPERTY RESULTING FROM ANY DEFECTIVE EQUIPMENT MANUFACTURED BY WARRANTOR.

Misuse or neglect (including failure to provide reasonable maintenance) of, or accident or unauthorized repairs or alterations to, such equipment, shall release and discharge Warrantor from any obligation under this warranty or otherwise.

> WARRANTOR EXPRESSLY LIMITS WITH RESPECT TO SUCH EQUIPMENT ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND ALL IMPLIED WARRANTIES OF FITNESS FOR A PARTICULAR PURPOSE TO THE WARRANTY PERIOD. AFTER EXPIRATION OF THE WARRANTY PERIOD, WARRANTOR EXPRESSLY DISCLAIMS WITH RESPECT TO SUCH EQUIPMENT ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND ALL IMPLIED WARRANTIES OF FITNESS FOR A PARTICULAR PURPOSE. THERE IS NO WARRANTY OF ANY NATURE MADE BY WARRANTOR BEYOND THAT WHICH IS CONTAINED HEREIN.

Should Warrantor fail to meet its obligations under this warranty, a claimant may sue Warrantor to secure its compliance with this warranty. No action to enforce this warranty or to otherwise secure recovery from Warrantor for any damages arising out of the fire protection equipment manufactured by Warrantor shall be commenced later than six (6) years (electrical components three [3] years) from and after the date of the receipt of such equipment by the original purchaser thereof.

NO PERSON HAS AUTHORITY TO ENLARGE, AMEND, OR MODIFY THIS WARRANTY.

Warrantor reserves the right to change the parts or design of its products from time to time without notice,and with no obligation to maintain spare parts or to make corresponding changes in the products previously manufactured.

nqa. ISO 9001 Registered — ANAB ACCREDITED

Elkhart Brass is proud to be ISO 9001:2008 registered with internationally recognized NQR Certification. Our registration refers to certificate #20006 which is on file in our office. This certification is just one way of showing our commitment to excellence.

ISO 9001 REGISTERED

Elkhart Brass
Fire Fighting Equipment

The Most Experienced Manufacturer of Fire Fighting Equipment

Elkhart Brass Mfg. Co., Inc.
1302 W. Beardsley Avenue
Elkhart, Indiana 46514
1-574-295-8330 | 1-800-346-0250
www.elkhartbrass.com

CAT. F-2, 4/10