

CUSTOMER ORDER SPECIFICATION FOR HALE QMAX CAFSPro

Customer Name: _____ Customer P.O. NO.: _____
 Order Prepared By: _____ Hale Customer NO.: _____ Date: _____
 Fire Dept. Name: _____ City: _____ State: _____
 Fire Department Contact Information (For Delivery Program): _____
 Requested Delivery Date: _____ Max. Elevation for Pump Test: _____ FT
 Reference Specifications: _____
 Engine: Mfr: _____ Model: _____ Horsepower: _____ @ _____ RPM
 Full Load Governed RPM: _____ Peak Torque: _____ LB/FT @ _____ RPM
 Application confirmed with:(for applications not on list) _____

**1. Pump Model (Circle Price of Model Desired):
Schedule B Discount**

FLOW (GPM)	1000	1250	1500	1750	2000	2250*
PUMP MODEL	100	125	150	175	200	225
Qmax	20,690	20,690	20,690	20,690	20,690	20,690

* Rating based on (3) 6-inch suction hoses per NFPA

Pump Configuration includes:

- Thermal Relief Valve 120L (Port B)
- (3) Zinc Anodes (2 suction, 1 discharge) (Ports UT, VT, D)
- TPM Relief Valve
- 4" Air Operated tank valve (includes tank to pump check valve)
- Openings at D, E, F & G Machined
- Tachometer Drive - no cable or panel adapter
- VPS Shift with Control

**2. Pump Body Configuration
(Check Applicable Box(es)): Schedule B Discount**

	Opening		
	O	P	T*
CAST SOLID			STD
3 INCH (4 BOLT)	STD	STD	
4 INCH (8 BOLT)	317	317	279
6-3/8 INCH (12 BOLT)			566
*Port "T" w/6-3/8 Inch Opening Required on 2250 GPM			

Port T is standard with 2250 @ no charge

3. Drive Unit: Schedule B Discount

Drive Unit w/Mechanical Seal		
LC	Verify Ratio with Factory	9520
XC		10087

**4. Drive Line Connection (Check One Box):
Schedule B Discount**

- Companion Flange Style N/C
 Spline Drive Connection \$1597

Note: Certain options found in this price list are not available in Class 1 built pump modules

5. Drive Unit Shift and Tach Cable (VPS with control included in pump configuration) Schedule B Discount

- Pump Adapter Only \$ 123
 Cable & Panel Adapter \$ 230

B. MANUAL SHIFT OVERRIDE OPTION:

- Manual Shift Override, 72" cable \$1300
 Manual Shift Override, 55" cable \$1300
 Manual Shift Override, Turn Rod \$1300

**6. Priming System (Circle Price of Model Desired):
Schedule B Discount**

PRIMER MODEL	ESP-12
PRIMING VALVE	PVG
SHIPPED LOOSE	1253

7. Relief valve Schedule B Discount

- Dual TPM with PMD control (req'd 2250 GPM) (Rating based on three 6 inch suction hoses per NFPA) \$4,900

**8. Suction Extension and Tube (One for Each Side)
(Circle Price of Items desired): Schedule B Discount**

8A: SUCTION EXTENSION		
LEFT		RIGHT
523	(178-0063-00-0)	523
641	w BOTTOM (178-0063-01-0)	641
35	OMIT	35

8B: SUCTION TUBE		
LEFT	NST x LENGTH	RIGHT
399	4-1/2 X 6	399
336	5 X 6	336
399	5 X 9	399
344	6 X 4	344
310	6 X 6	310
321	6 X 7	321
347	6 X 9	347
178	1" SPACER	178
35	OMIT	35
1704	Fill thief**	1704

* 1 inch spacer required on either side if MIV selected

***NOTE: Fill Thief fitting is exposed and requires a notched pump panel.

***NOTE: Fill thief requires an MIV

NOTE: Hale reserves the right to make improvements in design and materials and changes in price without notice
 ALL PRICES ARE LIST IN U.S. DOLLARS F.O.B. SHIPPING POINT

Bulletin QMAX CAFS, Sheet 1 of 10 © 2008, Hale Products Inc, Printed in USA
 NOTE: CERTAIN OPTIONS FOUND IN THIS PRICE LIST ARE NOT AVAILALBE IN CLASS 1 BUILT PUMP MODULES

**9. Master Intake Valve (Circle Price of Models Desired):
Schedule B Discount**

NOTE: MIV Bottom mount valves require a 6 NPT, 5 Victaulic or 6 Victaulic flange to attach piping. Refer to SUCTION FLANGES Selection.

***NOTE:** When bottom MIV is ordered on right side, the heat exchanger moves to Port N and PG 30 is mounted at Port F

9A: LEFT	MIV Relief Valve	9A: RIGHT
2590	MIV-M (Side Mount)	2590
3674	MIV-E (Side Mount)	3674
130	ABV(Air Bleeder Valve)	130
146	EXTENSION HARNESS	146
3700	MIV-E (Bottom Mount Front Operator)	3700
3700	MIV-E (Bottom Mount Rear Operator)	3700
130	ABV (Air Bleeder Valve)	130
140	Extension Harness	140

9B: LEFT	MIV Relief Valve	9B: RIGHT
Standard	Stainless Steel 2-1/2" NPT	Standard
N/C	Stainless Steel 2-1/2" NST	N/C
N/C	Stainless Steel 2-1/2" VIC	N/C

11. SUCTION FLANGES (Schedule B discount)							
	LEFT			RIGHT			
	U	UT	BOTTOM	V	VT	XT	BOTTOM
OPEN/BLANK	12	12		12	12	12	
2-1/2	60	60		60	60	60	
2-1/2 Angled	67	67		67	67	67	
3	94	94		94	94	94	
3" Angled	100	100		100	100	100	
Mag. anode	176	176		176	176	176	
Zinc Anode	115			115		115	
6 NPT			305				305
5 Victaulic			195				195
5 Victaulic Angled			188				188
6 Victaulic			595				595
6 Victaulic Angled			830				830

13. DISCHARGE FLANGES

NOTE: If a flange IS NOT selected for an opening, Hale will add BLANK flanges to the order.

	STANDARD OPENINGS															SPECIAL OPENINGS			
	A	B	C	D	E	F	G	H	K	L	M	N	O	P	Q	R	C	O	P
			3"										3"	3"			4"	4"	4"

FLANGES (115 OR 2433 BOLT PATTERN UNLESS OTHERWISE INDICATED)																			
BLANK/OPEN	29	12	12	12	12	12	12	29	12	12	12	12	12	12	12	12	29	29	29
1-1/4 INCH NPT (115)		60	60	60	60	60	60		60	60	60	60	60	60	60	60			
2 INCH NPT (115)		60	60	60	60	60	60		60	60	60	60	60	60	60	60			
2-1/2 INCH NPT	119	60	60	60	60	60	60	119	60	60	60	60	60	60	60	60	119	119	119
2-1/2 INCH NPT 4° ANGLE	140	67	67	67	67	67	67	140	67	67	67	67	67	67	67	67	140	140	140
3 INCH NPT	120	94	94	94	94	94	94	120	94	94	94	94	94	94	94	94	120	120	120
3 INCH NPT 4° ANGLE	142	100	100	100	100	100	100	142	100	100	100	100	100	100	100	100	142	142	142
4 INCH NPT (2433)	142							142									142	142	142
4 INCH NPT 4° ANGLE (2433)	194							194									194	194	194
TRV WITH 115 FLANGE		428	428	428	428	428	428		428	428	428	428	428	428	428	428			
TRV-L WITH 115 FLANGE			740	740	740	740	740		740	740	740	740	740	740	740	740			
MAGNESIUM ANODE W/FLANGE		176	176	176	176	176	176		176	176	176	176							
ZINC ANODE W/FLANGE		115	115	115	115	115	115		115	115	115	115							
DIRECT MOUNT FOR VALVE	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C

**Ports "K", "L", "M" blocked when 750 GPM CAFSPro manifold selected. port "A" blocked when 1000 GPM manifold selected

10. TANK SUCTION: (Standard CAFSPro Opening S: 4" SVS with 4 NPT/5 Victaulic Connector, 8-bolt 3.5° Pump Mount Adapter (741-4006-06-0), Corrosion Resistant Check Valve)

	RIGHT T* (8-BOLT)	RIGHT T** (12-BOLT)
OPEN (PLUG)	34	34
FLANGES		
BLANK	87	
2-1/2 INCH NPT	119	
3 INCH NPT	120	
3 INCH NPT 4° ANGLE	142	
4 INCH NPT	142	
4 INCH NPT 4° ANGLE	194	
6 NPT**		305
5 VICTAULIC**		195
5 VICTAULIC ANGLED**		188
6 VICTAULIC**		595
6 VICTAULIC ANGLED**		830
CHECK VALVE ONLY	113	
CHECK VALVE w/PLATE (Required w/4 Inch NPT Flange)	197	
MIV-E**		3775
MIV ABV (AIR BLEEDER VALVE)		130
MIV EXTENSION HARNESS		140
MIV Requires 6 NPT, 5 Victaulic, 5 Victaulic Angle, 6 Victaulic or 6 Victaulic Angle Flange. Make selection Above.		
* 4 INCH (8 BOLT) SPECIAL MACHINING REQUIRED		
** 6-3/8 INCH (12 BOLT) MACHINING REQUIRED		

12. Pro Tech Warranty (Pump Only) (NET PRICE, NO DISCOUNTS)

- Standard 5 Year Warranty (Parts and Labor for the first two years, parts only years 3-5) N/C**
- Pro Tech Extended Warranty - 1 Additional Year of Labor \$250
- Pro Tech Extended Warranty - 2 Additional Years of Labor \$750
- Pro Tech Extended Warranty - 3 Additional Years of Labor \$1500

PUMP MODEL, CAPACITY, RATIO, DRIVE UNIT: _____

PRIMER: _____

SUCTION

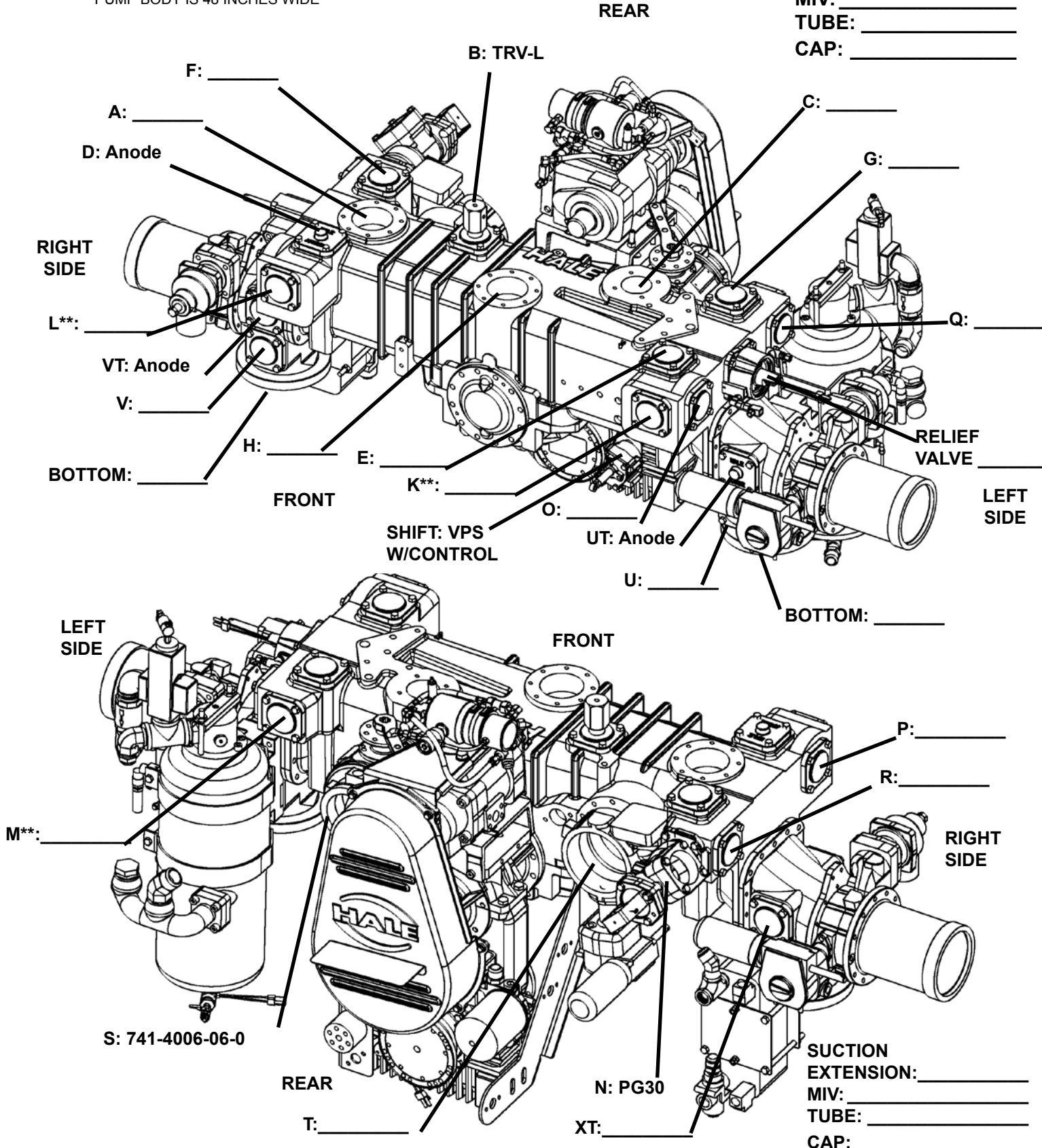
EXTENSION: _____

MIV: _____

TUBE: _____

CAP: _____

PUMP BODY IS 48 INCHES WIDE



NOTE ON DISCHARGE CONFIGURATION:

1. PG30 normally mounted at Port "N" and Heat Exchanger is mounted at Port "X" on right suction extension. If a bottom MIV is selected on the right side, the Heat Exchanger is mounted at Port "N" and the PG30 is mounted at Port "F".
2. Selection of Ports "K", "L", and "M" only required if 1000 GPM manifold option is selected.

CAFSPRO System

Please Note: All CAFSPRO and foam system component pricing is subject to schedule E discount.

Operator panel (For valve orientation): Top Side

Pump compartment width (from inside operator panel to inside officer side panel): _____ Inches

CAFSPRO Manifold Selection

NOTE: Manifold flow rating refers to rated capacity for all manifold discharges combined during water operations. When water flows of greater than 750 GPM through the deck gun is specified then the 750 GPM manifold with deck gun bypass piping or the 1000 GPM manifold should be ordered.

NOTE: Manifolds are built standard with Hale valve flanges. See Manifold configuration sheets for valve configuration or other flange options.

- | | | |
|--------------------------|--|----------|
| <input type="checkbox"/> | 750 GPM manifold with Hale valve flange connections (up to 5 CAFS discharges) P/N 546-2540-10-0 | \$41,263 |
| <input type="checkbox"/> | 750 GPM manifold with Hale valve flange connections and deck gun bypass piping (up to 5 CAFS discharges) P/N 546-2540-12-0 | \$44,870 |
| Includes: | | |
| | 830-0000-32-0 Deck Gun CAFS Valve with Controller and Analog Gauge | |
| | 830-0608-27-0 Deck Gun Water Valve Mounted at Port H | |
| <input type="checkbox"/> | 1000 GPM manifold with Hale valve flange connections (Up to 6 CAFS discharges) P/N 546-2540-11-0 | \$44,758 |
| <input type="checkbox"/> | Custom Manifolds - Upcharge - | \$ 5,000 |

Standard CAFSPRO system includes the following:

- 210 CFM rotary screw air compressor mounted and driven by the pump gearbox
 - o Air pressure regulator assembly integrated into compressor
- Oil reservoir/separator tank mounted to pump and plumbed
- Water to oil heat exchanger mounted to pump and plumbed
- Programmable delayed start air compressor clutch
- Stainless steel manifold assembly mounted on pump and tested
 - o 2 stainless steel water/foam solution check valves
 - o Up to 5 CAFS discharge choices
 - o Up to 2 foam solution discharge choices
 - o Water flow sensors and pressure transducers
 - o Foam and air injection check valves installed
 - o 4 Hale X mixer flanges installed
 - o ARC valve and operating cylinder
 - o Complete CAFSPRO wiring harness (mounted, plumbed and tested)
 - o FoamLogix flowsensor cable
- (2) Air operated 6-port drain valves
 - o (1) Automatically drains CAFSPRO manifold
 - o (1) Pump drain
- Operating cylinder for tank to pump valve (Mounted, adjusted and tested)

The following components are shipped loose with the Hale CAFSPRO system:

- CAFSPRO digital display
- FoamLogix digital display
- 4-1/2 inch duplex master pressure gauge sub-assembly
- 2 Operation manuals
- 2 Installation manuals
- 4 Hale X mixers with seals for deck gun piping. (Installed in manifold when deck gun bypass is ordered)
- Hale CAFSPRO delivery and operation program at end user facility (One day (6 hours) training within continental US)

ALL CAFSPRO AND FOAMLOGIX OPTIONS ARE SUBJECT TO SCHEDULE "E" DISCOUNTS.

FOAMLOGIX MINIMUM REQUIRED STANDARD CONFIGURATION

The FoamLogix foam system required with the CAFSPro system is configured for a single foam tank system with the NO FLUSH option.

Required with the standard CAFSPro system are:

FoamLogix Model 5.0 (12 VDC)	\$7,214
No Flush/Single Tank System	\$ 157
Power filter kit	\$ 198
In-line strainer/valve assembly	\$ 213
Side mount low tank sensor	\$ 89

OPTIONAL FOAMLOGIX CONFIGURATION

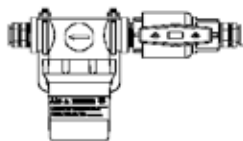
If a dual foam tank system is specified or other type of strainer or low tank sensor are desired circle price of selection(s) below.

NOTE: A strainer and low tank level sensor are required.

NOTE: The CAFSPro system is a 12 VDC system. If a 24 VDC system is required, consult factory for pricing and availability

CONTROL CABLE		
6 PIN EXTENSION	QTY	PRICE EACH
6.6 FEET		85
16.4 FEET		117

STRAINERS	
FOAM CONCENTRATE STRAINER	
	TANK A (CLASS A)
FS15 STRAINER	573
FS25 STRAINER	783
FOAM CONCENTRATE STRAINER	
	TANK B (CLASS B)
IN-LINE STRAINER/ VALVE ASSEMBLY	213
FS25 STRAINER	783



In-Line Strainer/Valve Assembly


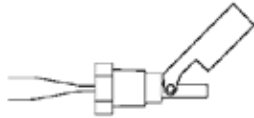



Panel Mount FS15 Strainer



Panel Mount FS25 Strainer

TANK SYSTEMS					
SINGLE TANK SYSTEM			HARNESS EXTENSION		
SELECTOR	INSTRUCTION PLACARD	QTY	PRICE EACH	QTY	PRICE EACH
MST	876	159			31
DUAL TANK SYSTEM			COLOR CODED AIR HARNESS		WIRING HARNESS EXTENSION
SELECTOR	INSTRUCTION PLACARD	QTY	PRICE EACH	QTY	PRICE EACH
ADT (12 VDC)	2237	INCLUDED	78		42
MDT II	1373	159			42

TANK SENSORS		
TANK SENSOR		
	TANK B	
TOP MOUNT SENSOR	358	
SIDE MOUNT SENSOR	89	
BOTTOM MOUNT SENSOR	126	
TANK SENSOR		
	TANK A (CLASS A)	
TOP MOUNT SENSOR	358	
BOTTOM MOUNT SENSOR	126	
		
Top Mount Sensor	Side Mount Sensor	Bottom Mount Sensor

ADDITIONAL CAFSPro ACCESSORIES SHIPPED LOOSE

PART NUMBER	ITEM DESCRIPTION	WEIGHT LBS (KG)	LIST PRICE
108-0650-00-0	Air to Oil Auxillary Cooler Standby cooler is recommended for high ambient temperature environments where water temperatures are high. Auxillary cooler prevents pump or compressor over-heat during standby conditions when no water is flowing. Ships loose for OEM mounting	35(16)	2,199
115-1301-50-0	X-Mixer Kit X-Mixer kit consists of (4) patented Hale X-Mixers and seals for use on portable deluge guns and other short hose line discharges.	8 (3.6)	238
546-2730-10-0	Auto Tank fill system 2-1/2" : victaulic x Vicatulic (826-0808-31-3 Valve) Shipped loose (Includes panel controls, Class 1 master tank level gauge, Pressure Transducers, Installation Harnesses)		6,100
546-2730-20-0	Auto Tank fill system 3" : victaulic x Vicatulic (831-0808-31-3 Valve) Shipped loose (Includes panel controls, Class 1 master tank level gauge, Pressure Transducers, Installation Harnesses)		6,300
546-2770-00-0	Tank to pump air override (Installed) (Required if manual tank valve operator linkage not provided)		903
726-0808-31-0	Manual Direct Tank Fill Valve - 2.5 inch Vicatulic x Victaulic. Shipped loose. Includes electric valve operator and panel mount electric valve control		1,814
546-2730-30-0	Auto Tank Fill System for use with Fill Thief - 2.5 inch (826-1008-31-9 Valve)		6,100
	Additional consecutive days (6hours) of Delivery & Operation training (same location)		1500/day net
	Customized CAFSPro Training Programs (i.e. Operation, Maintenance, etc.)	Call 610-715-7903	

* A **minimum** of a manual direct booster tank fill valve is required with CAFSPro. Autofill is recommended.

**NOTE: Fill Thief fitting is exposed and requires a notched pump panel

CAFSPro Class 1 Stainless Steel Manifold Configuration

The Class 1 stainless steel manifold assembly includes stainless steel check valves and stainless steel motionless mixers in addition to Class 1 flow sensors and connections for air and foam injection.

Standard CAFSPro manifold outlets are identified as follows:

Up to 4 CAFS outlets: 01, 02, 03, 04

Up to 2 foam solution outlets: 11, 12

CAFSPro manifolds are supplied with Hale SVS valve connection flanges on the outlets. Using current SVS Valve price list and configuration guide select valve configurations for designated outlets. Provide configured valve part number in blank provided next to outlet. CAFSPro manifold valves will be added to sales order as separate line items subject to schedule E discount.

NOTE ABOUT HALE SVS VALVE CONFIGURATION FOR CAFSPRO MANIFOLD MOUNTING - The inlet side adapter for the valve is included as part of the manifold. To configure the valves for the manifold, the inlet section "XX" will show in the valve part number as "00", i.e. "825-0009-06-0.

The part number shown is a 2-1/2" valve mounted on CAFSPro manifold with 45° Victaulic swivel outlet and long remote control lever actuator. Actuator position is dependent on whether application is top or side operation panel.

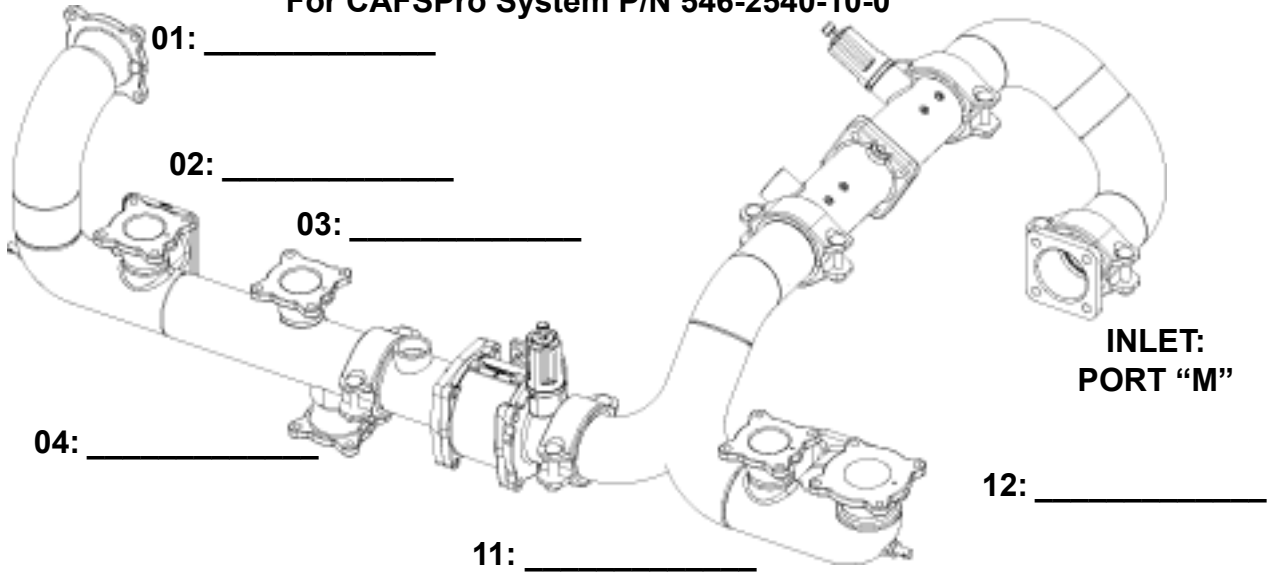
The Hale SVS valve flanges can be replaced on the manifold at designated locations according to the following schedule:

1. Replace with Hale 115 flange \$75.00 each opening
2. Replace with Victaulic grooved pipe \$50.00 each opening
3. Change Hale valve flange size \$75.00 each change
4. Change Victaulic pipe size \$125.00 each change
5. For other valve flange options consult factory

On those manifold outlets where a Hale SVS valve or alternate connection is not indicated will be left blank

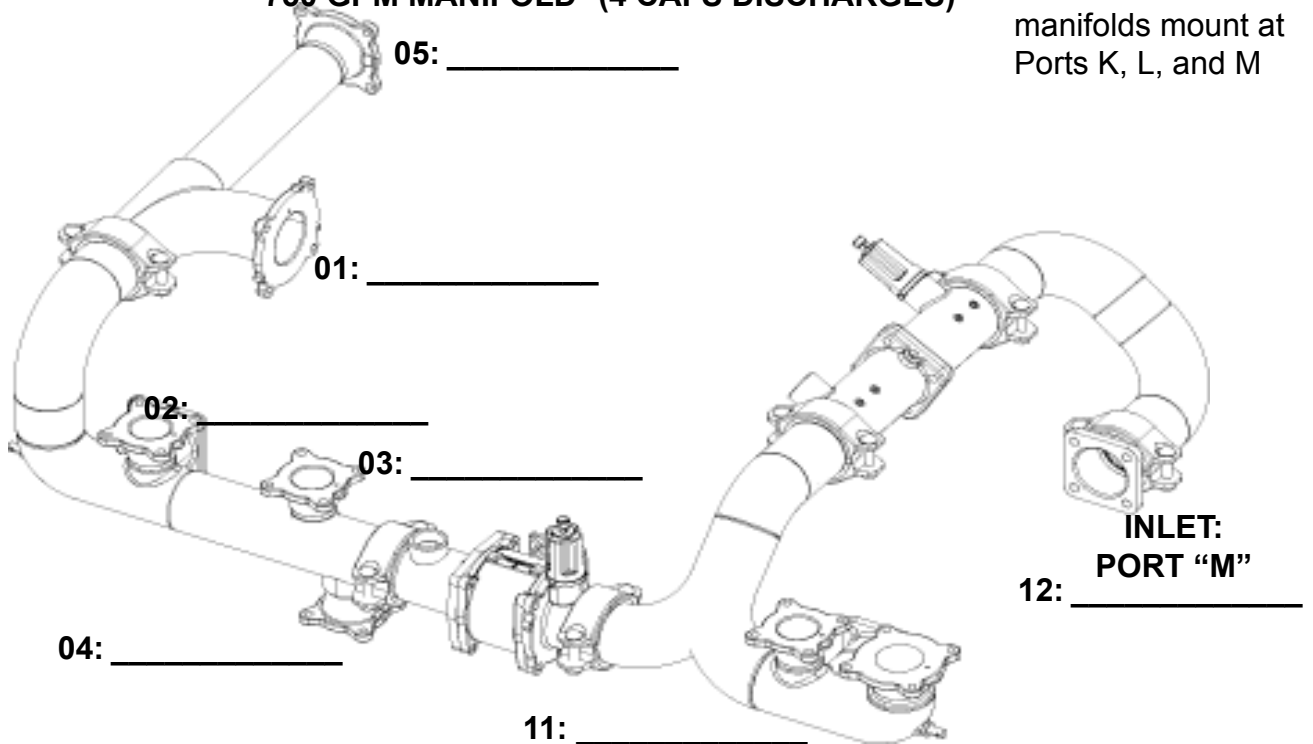
CONFIGURE CAFSPRO MANIFOLD USING ILLUSTRATIONS ON FOLLOWING PAGES.

For CAFSPro System P/N 546-2540-10-0



750 GPM MANIFOLD* (4 CAFS DISCHARGES)

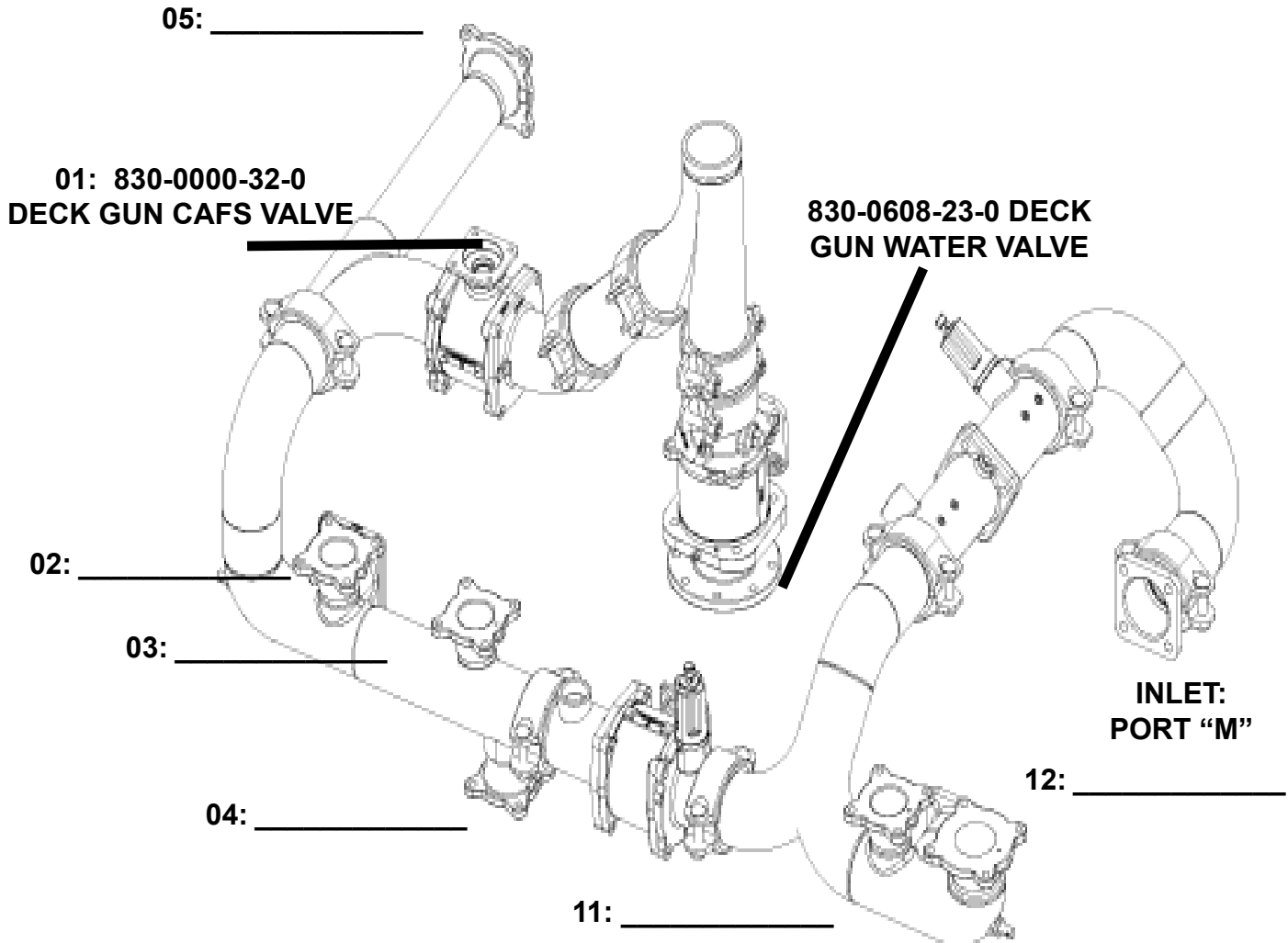
*All 750 GPM manifolds mount at Ports K, L, and M



750 GPM MANIFOLD* (5 CAFS DISCHARGES)

OPT#	CONNECTION	SIZE	PORT						
			CAFS 1 (01)	CAFS 2 (02)	CAFS 3 (03)	CAFS 4 (04)	CAFS 5 (05)	FOAM SOLUTION (11)	FOAM SOLUTION (12)
01	HALE SVS	3" (30)	STD	NA	NA	NA	75	NA	75
01	HALE SVS	2-1/2" (25)	75	75	NC	STD	STD	75	STD
01	HALE SVS	2" (20)	75	STD	STD	NC	75	STD	75
02	115 FLANGE	3" (30)	75	NA	NA	NA	75	NA	150
02	115 FLANGE	2-1/2" (25)	150	150	75	75	75	150	75
02	115 FLANGE	2" (20)	150	75	75	75	75	75	150
03	VICTAULIC	3" (30)	50	NA	NA	NA	50	NA	125
03	VICTAULIC	2-1/2" (25)	125	125	50	50	50	125	50
03	VICTAULIC	2" (20)	125	50	50	50	50	50	125
00	BLANK	(00)	NC	NC	NC	NC	NC	NC	NC
04	AKRON		CONSULT FACTORY						
05	ELKHART		CONSULT FACTORY						

Selection of options other than standard, raises cost of manifold by value shown.

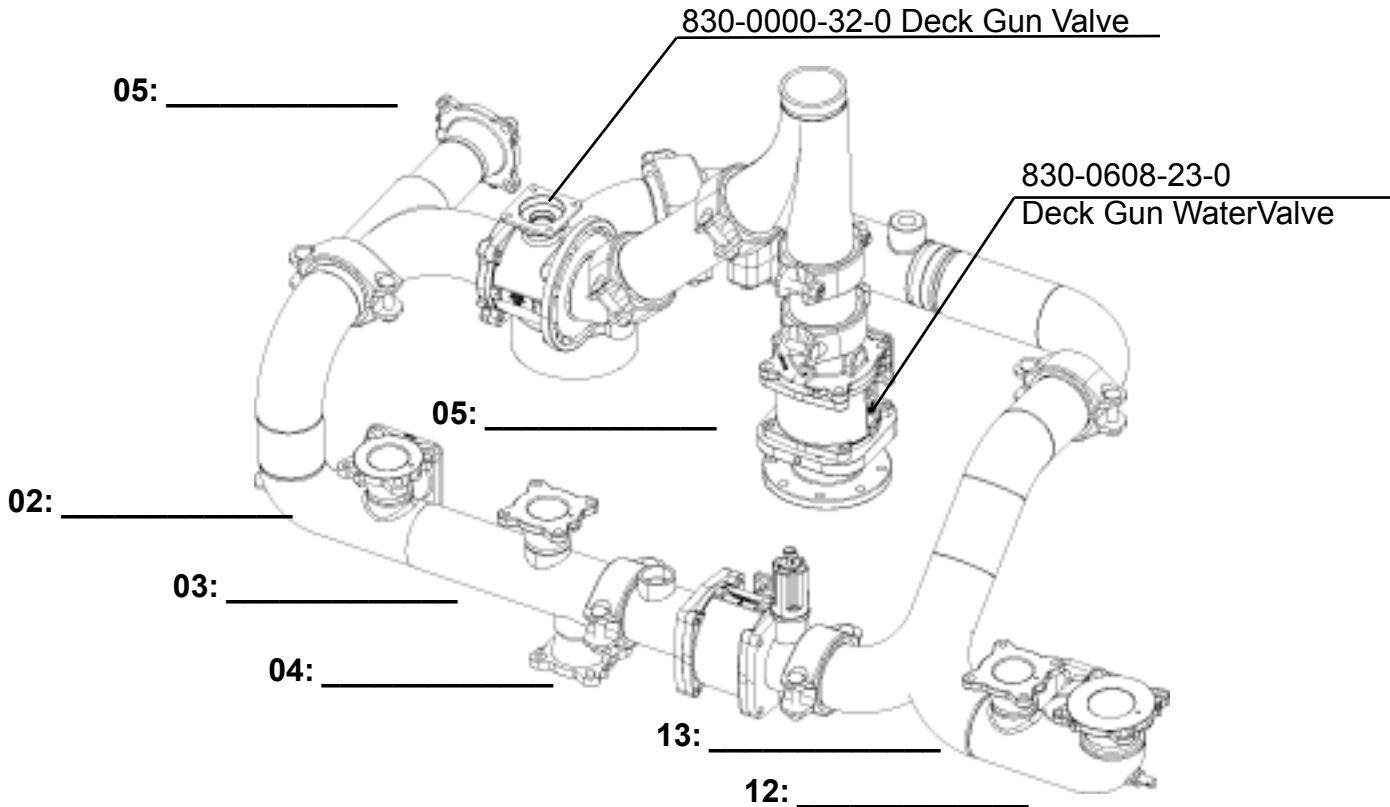
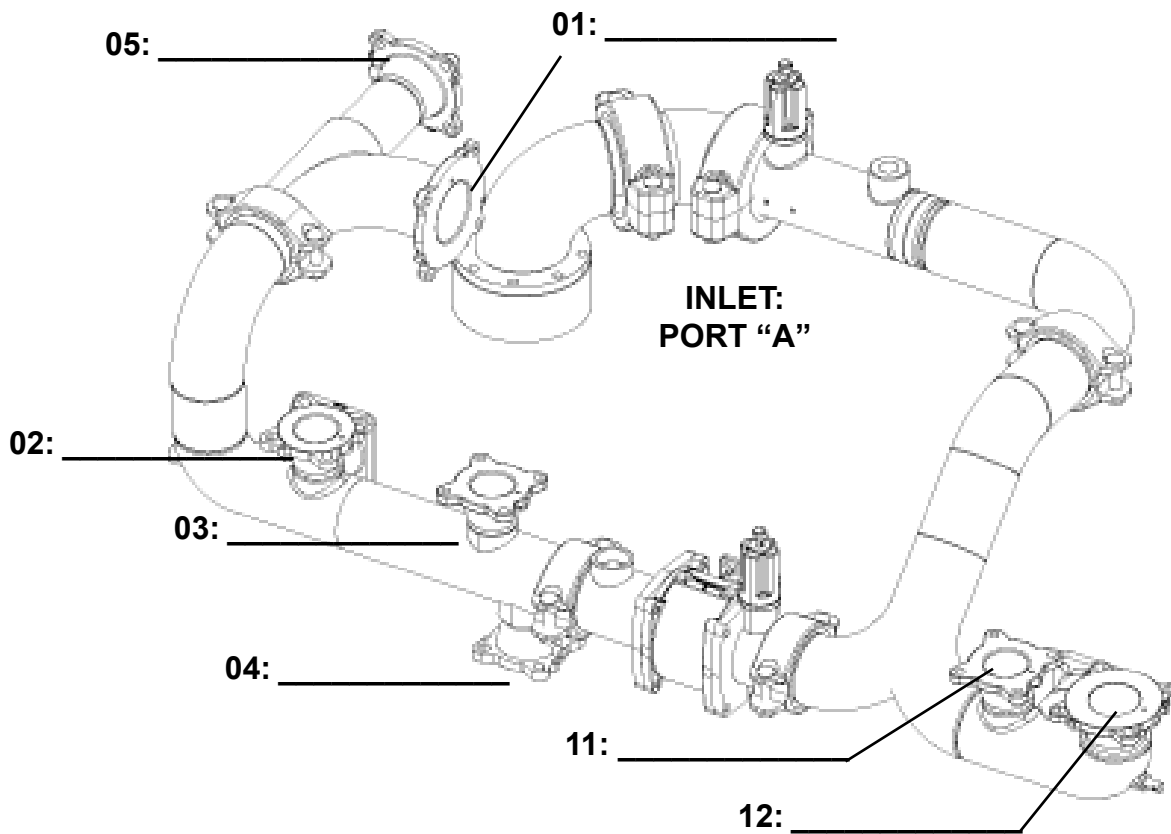


750 GPM MANIFOLD WITH DECK GUN BYPASS

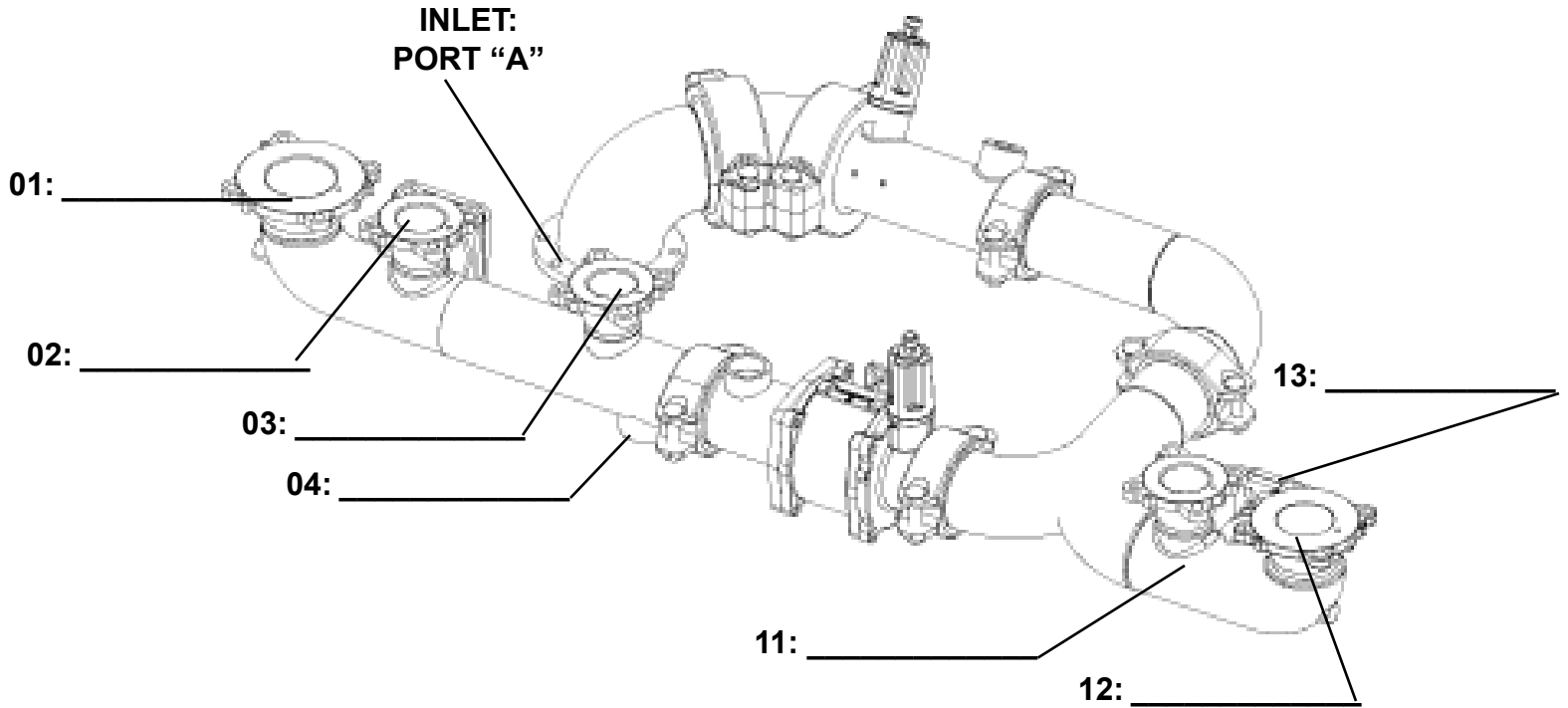
OPT#	CONNECTION	SIZE	PORT						
			CAFS 1 (01)	CAFS 2 (02)	CAFS 3 (03)	CAFS 4 (04)	CAFS 5 (05)	FOAM SOLUTION (11)	FOAM SOLUTION (12)
01	HALE SVS	3" (30)	STD	NA	NA	NA	75	NA	75
01	HALE SVS	2-1/2" (25)	75	75	NC	STD	STD	75	STD
01	HALE SVS	2" (20)	NA	STD	STD	NC	75	STD	75
02	115 FLANGE	3" (30)	NA	NA	NA	NA	75	NA	150
02	115 FLANGE	2-1/2" (25)	NA	150	75	75	75	150	75
02	115 FLANGE	2" (20)	NA	75	75	75	75	75	150
03	VICTAULIC	3" (30)	NA	NA	NA	NA	50	NA	125
03	VICTAULIC	2-1/2" (25)	NA	125	50	50	50	125	50
03	VICTAULIC	2" (20)	NA	50	50	50	50	50	125
00	BLANK	(00)	NA	NC	NC	NC	NC	NC	NC
04	AKRON	CONSULT FACTORY							
05	ELKHART								

Selection of options other than standard, raises cost of manifold by value shown.

For CAFSPro System P/N 546-2540-11-0



P/N 546-2540-13-0
1000 GPM MANIFOLD (5 CAFS DISCHARGES)
1000 GPM Manifolds mount on A, K, and L Ports



1000 GPM Manifold (5 CAFS Discharge) Mounts at ports A, D, E

OPT#	CONNECTION	SIZE	PORT							
			CAFS 1 (01)	CAFS 2 (02)	CAFS 3 (03)	CAFS 4 (04)	CAFS 5 (05)	FOAM SOLUTION (11)	FOAM SOLUTION (12)	FOAM SOLUTION (13)
01	HALE SVS	3" (30)	STD	NA	NA	NA	NA	NA	75	75
01	HALE SVS	2-1/2" (25)	75	75	NC	STD	STD	75	STD	STD
01	HALE SVS	2" (20)	75	STD	STD	NC	NA	STD	75	75
02	115 FLANGE	3" (30)	75	NA	NA	NA	NA	NA	150	150
02	115 FLANGE	2-1/2" (25)	150	150	75	75	75	150	75	75
02	115 FLANGE	2" (20)	150	75	75	75	NA	75	150	150
03	VICTAULIC	3" (30)	50	NA	NA	NA	NA	NA	125	125
03	VICTAULIC	2-1/2" (25)	125	125	50	50	50	125	50	50
03	VICTAULIC	2" (20)	125	50	50	50	NA	50	125	125
00	BLANK	(00)	NC	NC	NC	NC	NC	NC	NC	NC
04	AKRON	CONSULT FACTORY								
05	ELKHART									

Selection of options other than standard, raises cost of manifold by value shown.

FOR ADDITIONAL OR LOOSE ACCESSORIES, VALVES, FLANGES, SEE SEPARATE ACCESSORY PAGE PRICE LIST AND ATTACH TO PUMP ORDER



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 TEL: 610/825-6300 1-800/220-HALE FAX: 610/825-9615 www.haleproducts.com

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 Tel: 352-629-5020 800-533-3569 Fax: 352-629-2902 www.class1.com