



1. DESCRIPTION

The Viking FoamPak foam pump system incorporates a UL Listed and FM Approved positive displacement bronze/stainless steel rotary gear foam pump capable of dry operation. The balance valve, pressure relief valve, and piping products are all bronze or copper as standard materials. A UL Listed/FM Approved listed foam pump controller, mounted and wired, is included.

The Viking FoamPak, is a complete foam pumping system, equipped with supply and discharge piping (excluding the foam supply piping and foam return piping to the foam tank), auxiliary flushing connections, concentrate discharge check valve, pressure sustaining valve, pump casing relief valve, concentrate supply strainer, foam pump and pump controller.

The rotary gear pump is of all bronze construction (recommended), (optional ductile iron casing with bronze interior parts or all stainless steel available), to withstand the corrosive atmosphere that exists with AFFF and AR-AFFF concentrates. The unique lip seal construction of the pump allows it to run dry without damage to the pump.

The Viking FoamPak is to be used anywhere a foam system that utilizes positive pressure proportioning (Viking LFF ILBP) is desired or necessary. The Viking FoamPak can supply single or multiple foam systems with balanced pressure proportioning.

A. Application

The Viking FoamPak foam pumping systems are foam concentrate delivery devices. Viking FoamPak foam systems are a critical part of a low expansion foam system which includes the following applications: aircraft hangars, petro-chemical facilities, flammable and combustible liquid warehouses, tank farms, facilities for bulk storage of flammable or combustible liquids, offshore FPSO and shipboard applications and military installations. The FoamPak systems can supply foam concentrate to concentrate injection piping run above or below ground.

B. Selection

The Viking FoamPak system is available in five basic sizes, available with four standard foam discharge pressure ratings, 100, 150, 200, 250 psi, (6.9, 10.3, 13.8, 17.2 bar). The FoamPak assembly flow rate capacity is selected based on the required flow rate per minute of foam concentrate and percentage of foam injection required for the most demanding hazard. The standard method of sizing the FoamPak capacity is by multiplying the area of the hazard by the required density, multiply that sum by the concentration of foam concentrate (1%, 3%, 6%), multiply that sum by a 1.15% safety factor for hydraulic over discharge and hydraulic balancing of the system piping. If the hazard required flow rate is known, meaning the hydraulic calculations for the hazard have been performed, multiply the total water flow in minutes by the % of foam to be used.

The FoamPak assembly's pressure rating is selected after considering the pressure differential requirements of the ILBP, (The Viking LLF, ILBP requires a minimum pressure differential of 15 psi (1 Bar), added to the static water pressure available at the riser. The pressure rating of the FoamPak should be determined by adding in the pressure drop of the concentrate discharge piping attributed to the length of the concentrate piping from the FoamPak discharge flange to the most remote ILBP. The typical pressure rating of the system may exceed the static water pressure to the most remote riser by 20 to 30 psi (1.5 to 2 Bar). Select the next highest pressure rating pump.

C. Foam Pump Controller

The foam controllers are designed specifically for foam service and have the following alarms and functions as standard:

1. Phase failure / phase reversal alarm
2. Running period timer, factory set for 10 minutes
3. Manual shut down only, emergency start pushbutton
4. Remote start terminal connection
5. Deluge system starting contact
6. Remote pump operating contact
7. Remote power failure contact
8. Start delay timer for a 2 pump operation system, primary/standby foam pumps
9. Spare contacts for field wiring of additional pumps alarms
10. Configured for an optional pressure proof switch, either supplied by the contractor or upon special order from Viking
11. Visible alarm – low concentrate level

Typical alarm options that may be added to the above at an additional cost are:

1. Anti condensation space heaters for 120 volt or 240 volt, both single phase
2. Foam pressure switch for loss of pressure automatic starting
3. Automatic transfer switches to transfer to another power source
4. Audible and visible pump on remote alarm contact / local light



D. FoamPak electrical details:

1. All of the foam pump controllers are UL Listed and FM Approved.
2. All controllers are manufactured specifically for foam pump service.
3. All controllers are initially figured for a start signal or deluge signal starting method. If a pressure loss start method is desired, a foam pressure proofing switch must be provided to initiate a "start signal" from loss of pressure.
4. All controllers are priced for 220/230, 380/415, 460/480 volt service in either 50 Hz or 60 Hz service. If voltages other than the ones shown above are required, please contact Viking for a specific quotation.
5. All electric motor enclosures are IP-54 or open drip proof type. Many other motor enclosures are available such as IP-55 (TEFC) and EEXD. Please contact Viking with the specific motor enclosure required if other than ODP IP-54.
6. All foam pump controllers offered are NEMA 2 enclosure for protected area installations. Other enclosure ratings are available such as NEMA 3R / 4 / 4x. Consult Viking for price addition. UL Listed and FM Approved controllers are not available in explosion proof enclosures.
7. Standard controller starting method is: Cross the line or full voltage. Other reduced voltage options such as Y-delta or solid-state are available. Please contact Viking for a specific quote.
8. All connecting wiring from the controller to the electric motor is complete and to NEMA standards.
9. Motor service factors are sometimes used on certain FoamPak pressures and flow rates. Typically the electric motors have a 15% service factor. 10% or less of the motor service factor is used on some flow/pressure combinations.

E. FoamPaks with Diesel Engines

Sometimes electrical service is not available or unreliable. If the hazard site has questionable electrical conditions, a UL Listed and FM Approved low horsepower diesel engine pump driver is available. UL Listed and FM Approved diesel engine manufacturers are EMI-John Deere or EMI Isuzu.

Diesel powered FoamPak's are complete assemblies similar to the electrical operated units. Diesel engine packages are completely self contained except for the battery charger power requirement of single phase, 110/220 volt, 50/60 Hz.

F. Foam Tanks

Foam tanks should be sized to supply the FoamPak with enough foam concentrate to provide foam for at least 10 minutes or longer, depending on the location, AHJ and/or hazard and design requirements.

2. LISTINGS AND APPROVALS

Controller and Pump

UL Listed Category GKWT

FM Approved Category Pump, Foam Concentrate and Water or High Pressure Water Spray

3. TECHNICAL DATA

Foam Pump and Controller by:
Edward's Manufacturing Inc. Milwaukie, Oregon

Specifications:

Maximum Pump Speed: 1800 RPM 60 Hz/1500 RPM 50 HZ

Maximum viscosity of liquid to be transferred: 3500 cps per UL/FM (5500 cps-non listed pumps)

Connections:

FoamPak 5S - 1 ½" (38mm) Supply and Discharge 150 lb. Flanged connections

FoamPak 13S - 1 ½" (38mm) Supply and Discharge 150 lb. Flanged connections

FoamPak 26S - 2" (50mm) Supply and Discharge 150 lb. Flanged connections

FoamPak 50S - 3" (85mm) Supply and Discharge 150 lb. Flanged connections

FoamPak 59S - 4" (100mm) Supply and Discharge 150 lb. Flanged connections

Controller standard NEMA rating: NEMA 2 (IEC IP31), (other NEMA enclosures for motor and controller are available at additional cost.)

Controller and pump motor voltage: Low Voltage (3 phase/50, 60 Hz/200-208 volt), voltages of 220/230, 380/415, or 460/480 at 50 or 60 Hz are available at no additional cost but must be specified when ordering.

Viking Technical Data may be found on The Viking Corporation's Web site at <http://www.vikingcorp.com>. The Web site may include a more recent edition of this Technical Data Page.

**Material Standards:**

See individual FoamPak charts for material standards.

All Piping is Standard Copper or Brass. Optional Stainless Steel is available.

Ordering Information:

For options and part numbers for ordering see Figure Tables 1 or 2.

4. INSTALLATION

The Viking FoamPak assembly is supplied by an atmospheric storage tank (supplied by contractor) connected to the supply flange of the skid assembly. The discharge flange is connected to the concentrate piping supplying the proportioning devices (ILBP's), (concentrate piping and ILBP's installed by contractor).

The foam pump controller and foam pump motor are pre-wired on the skid. A power supply to the controller is required. The proper voltage, hertz, and phase are critical factors that must be available as they were specified upon ordering. Refer to Controller information on this data page.

The Viking FoamPak should be installed in accordance with NFPA standards and local requirements governing the installation of foam systems.

5. OPERATION

The Viking FoamPak pump assembly is supplied with a pump controller that starts the pump via a remote start signal when foam concentrate is required to be pumped to the hazard area(s). There are many methods of starting the foam pump, the most common is through a water pressure switch at the system riser. When the water pressure switch is activated, the foam pump controller will receive a signal to start operation.

Other methods include pressure drop, which requires a maintenance (jockey) foam concentrate pump that maintains a desired pressure in the foam concentrate piping. When the pressure drops in the concentrate piping to a point that the maintenance (jockey) foam concentrate pump cannot maintain the desired pressure, the main pump foam pressure switch sends a signal and starts the main foam pump.

Maintenance (jockey) foam concentrate pumps are not standard with the Viking FoamPak, but can be ordered as a separate option.

The foam concentrate is supplied to the Viking FoamPak assembly through a customer or contractor supplied pipe, connected to an atmospheric storage tank. The atmospheric storage tank can be a horizontal or vertical vessel. Most atmospheric foam storage tanks are of a fiberglass or poly construction. The foam concentrate storage tank is not pressurized, the foam concentrate is only under atmospheric pressure to the supply side of the Viking FoamPak.

When the Viking FoamPak is not equipped with a maintenance (jockey) foam concentrate pump, the discharge piping from the pump skid assembly to the In-Line Balanced Proportioner (ILBP), is full of foam concentrate, but not under pressure. When the pump controller receives a signal to start, the electric motor is energized, driving the rotary gear pump. The pump draws foam concentrate from the atmospheric tank and discharges the concentrate through the foam concentrate discharge piping network (installed by contractor) to the ILBP(s). The Viking FoamPak assembly is equipped with a pressure sustaining valve that is connected to a return line that is piped to a return connection located on the atmospheric storage tank. The return line connection should be located below the liquid level of the storage tank to minimize any foaming action caused by the agitation of the foam concentrate. The pressure sustaining valve is utilized to ensure the foam discharge pressure is balanced with the water pressure, regardless of the foam usage requirement. Often the pump output exceeds the demand, thus using the pressure sustaining valve to maintain the "balance".

The FoamPak is equipped with a pump relief valve that is piped to the concentrate return line past the pressure sustaining valve. The pump relief valve is in place to ensure that a flow of foam concentrate is maintained through the foam pump even in a pump churn condition (no concentrate demand) or sustaining valve failure. The pump relief valve will open at a pre-set pressure and direct foam concentrate back to the atmospheric storage tank. The pump relief valve eliminates overheating and over-pressurization of the foam pump and piping in a dead head (no flow) or churn pressure condition.

The Viking FoamPak is equipped with primary and secondary supply and discharge connections. The primary supply connection is utilized to take a supply from the atmospheric storage tank, the secondary supply connection is utilized to supply the pump with an auxiliary source of foam concentrate if needed or to supply the foam pump, valves and piping with clean water if flushing is required.

	<h1 style="margin: 0;">TECHNICAL DATA</h1>	<h2 style="margin: 0;">FOAMPAK</h2> <p style="margin: 0;">A FOAM PUMP/PRESSURE BALANCE AND RELIEF VALVE/PUMP CONTROLLER</p>
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The primary discharge connection is utilized to supply the concentrate piping to the ILBP piping network. The secondary discharge connection is utilized to supply auxiliary foam concentrate users or as a discharge outlet for flushing. The secondary supply and discharge connections are supplied with quarter turn stainless steel or all bronze ball valves, (normally closed) to isolate these connections from normal operating conditions.

The supply connection is equipped with a "Y" strainer to ensure that the foam concentrate or flushing supply entering the foam pump is clean.

6. TESTING AND MAINTENANCE

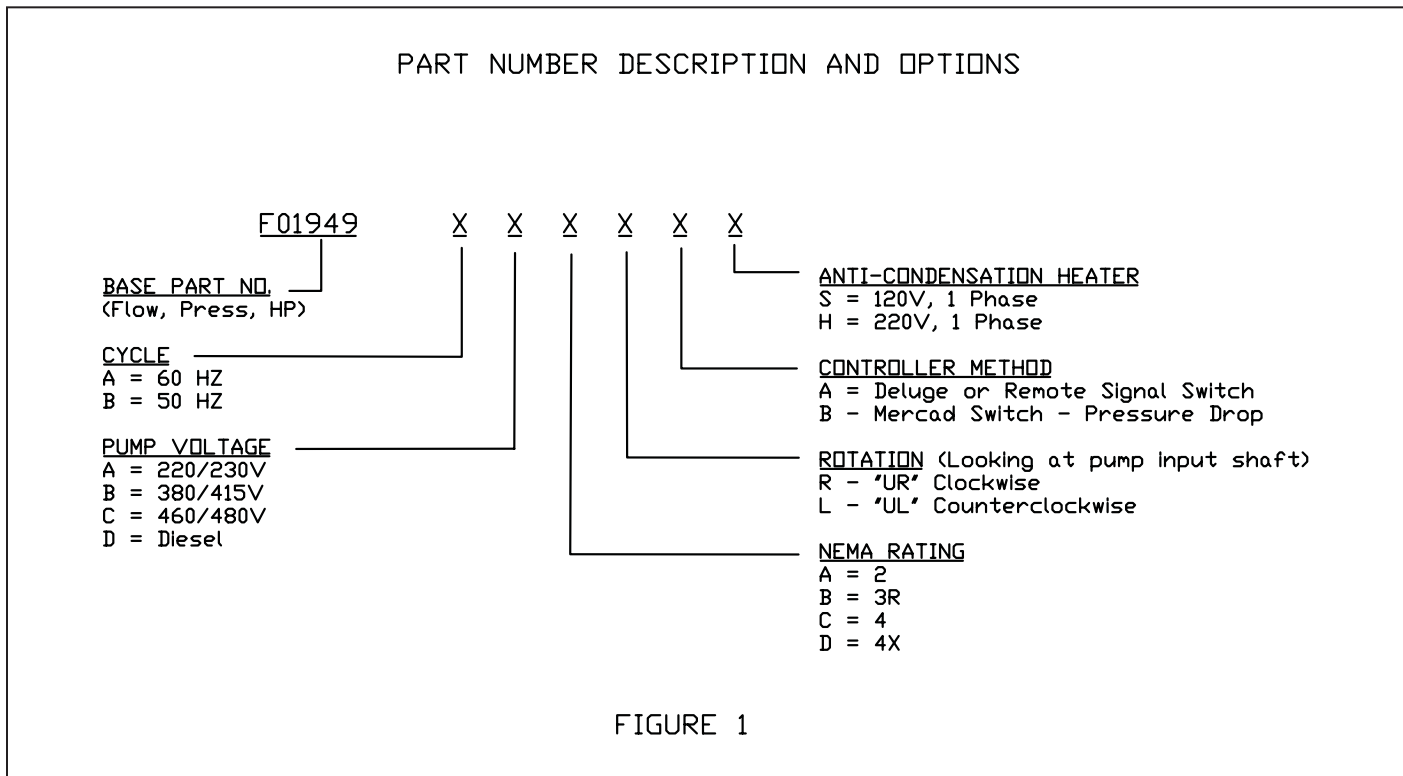
It is imperative that the Viking FoamPak is inspected and tested per the requirements of NFPA 20 and NFPA 25. This is the owner's responsibility. The concentrate piping is to be hydrostatically tested as prescribed with NFPA. The pump skid assembly is to be flushed in accordance with manufacturer's recommendations. The supply "Y" strainer screen should be examined and cleaned in accordance with NFPA 25, before each test.

7. AVAILABILITY AND SERVICE

The Viking FoamPak foam pumping systems are available through a network of domestic, Canadian, and international distributors. See The Viking Web site for closest distributor or contact The Viking Corporation.

8. GUARANTEES

For details of warranty, refer to Viking's current list price schedule or contact The Viking Corporation directly.





TECHNICAL DATA

FOAMPAK
A FOAM PUMP/PRESSURE
BALANCE AND RELIEF
VALVE/PUMP CONTROLLER

60 Hz PUMP SELECTION CHART

CONCENTRATE FLOW	DISCHARGE PRESSURE	HORSEPOWER REQUIRED	VIKING PART NUMBER
10 GPM (38 L/min) (See FoamPak 5S)	100 PSIG (7 bar)	5	F01935A
	150 PSIG (10 bar)	5	F01936A
	200 PSIG (14 bar)	7.5	F01937A
	250 PSIG (17 bar)	7.5	F01938A
25 GPM 95 L/min) (See FoamPak 5S)	100 PSIG (7 bar)	7.5	F01939A
	150 PSIG (10 bar)	10	F01940A
	200 PSIG (14 bar)	10	F01941A
	250 PSIG (17 bar)	15	F01942A
50 GPM (190 L/min) (See FoamPak 13S)	100 PSIG (7 bar)	15	F019423A
	150 PSIG (10 bar)	15	F01944A
	200 PSIG (14 bar)	20	F01945A
	250 PSIG (17 bar)	20	F01946A
75 GPM (284 L/min) (See FoamPak 26S)	100 PSIG (7 bar)	20	F01947A
	150 PSIG (10 bar)	25	F01948A
	200 PSIG (14 bar)	30	F01949A
	250 PSIG (17 bar)	40	F01950A
100 GPM (378 L/min) (See FoamPak 26S)	100 PSIG (7 bar)	20	F01951A
	150 PSIG (10 bar)	25	F01952A
	200 PSIG (14 bar)	30	F01953A
	250 PSIG (17 bar)	40	F01954A
150 GPM (568 L/min) (See FoamPak 26S)	100 PSIG (7 bar)	30	F01955A
	150 PSIG (10 bar)	40	F01956A
	200 PSIG (14 bar)	50	F01957A
	250 PSIG (17 bar)	60	F01958A
200 GPM (757 L/min) (See FoamPak 50S)	100 PSIG (7 bar)	40	F01959A
	150 PSIG (10 bar)	50	F01960A
	200 PSIG (14 bar)	60	F01961A
	250 PSIG (17 bar)	75	F01962A
250 GPM (946 L/min) (See FoamPak 50S)	100 PSIG (7 bar)	50	F01963A
	150 PSIG (10 bar)	60	F01964A
	200 PSIG (14 bar)	75	F01965A
	250 PSIG (17 bar)	100	F01966A
300 GPM (1135 L/min) (See FoamPak 50S)	100 PSIG (7 bar)	60	F01967A
	150 PSIG (10 bar)	75	F01968A
	200 PSIG (14 bar)	100	F01969A
	250 PSIG (17 bar)	100	F01970A
350 GPM (1325 L/min) (See FoamPak 59S)	100 PSIG (7 bar)	75	F01971A
	150 PSIG (10 bar)	100	F01972A
	200 PSIG (14 bar)	100	F01973A
	250 PSIG (17 bar)	125	F01974A
400 GPM (1514 L/min) (See FoamPak 59S)	100 PSIG (7 bar)	100	F01975A
	150 PSIG (10 bar)	100	F01976A
	200 PSIG (14 bar)	125	F01977A
	250 PSIG (17 bar)	125	F01978A

Table 1

	TECHNICAL DATA	FOAMPAK A FOAM PUMP/PRESSURE BALANCE AND RELIEF VALVE/PUMP CONTROLLER
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50 Hz PUMP SELECTION CHART

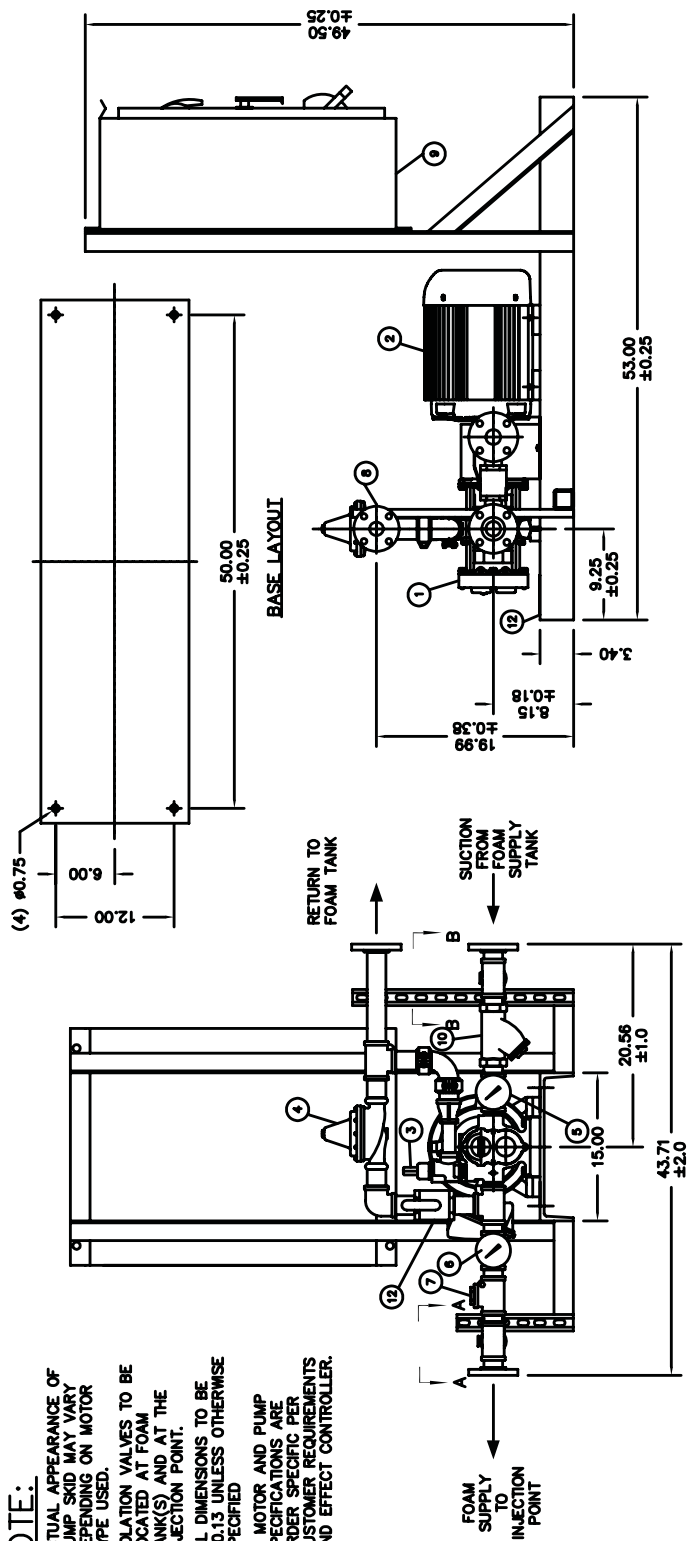
CONCENTRATE FLOW	DISCHARGE PRESSURE	HORSEPOWER REQUIRED	VIKING PART NUMBER
10 GPM (38 L/min) (See FoamPak 5S)	100 PSIG (7 bar)	5	F01935B
	150 PSIG (10 bar)	5	F01936B
	200 PSIG (14 bar)	5	F01937B
	250 PSIG (17 bar)	7.5	F01938B
25 GPM 95 L/min) (See FoamPak 5S)	100 PSIG (7 bar)	7.5	F01939B
	150 PSIG (10 bar)	7.5	F01940B
50 GPM (190 L/min) (See FoamPak 13S)	100 PSIG (7 bar)	10	F01943B
	150 PSIG (10 bar)	15	F01944B
	200 PSIG (14 bar)	15	F01945B
	250 PSIG (17 bar)	20	F01946B
75 GPM (284 L/min) (See FoamPak 26S)	100 PSIG (7 bar)	15	F01947B
	150 PSIG (10 bar)	20	F01948B
	200 PSIG (14 bar)	25	F01949B
	250 PSIG (17 bar)	30	F01950B
100 GPM (378 L/min) (See FoamPak 26S)	100 PSIG (7 bar)	20	F01951B
	150 PSIG (10 bar)	25	F01952B
	200 PSIG (14 bar)	40	F01953B
	250 PSIG (17 bar)	40	F01954B
200 GPM (757 L/min) (See FoamPak 50S)	100 PSIG (7 bar)	40	F01959B
	150 PSIG (10 bar)	40	F01960B
	200 PSIG (14 bar)	50	F01961B
	250 PSIG (17 bar)	60	F01962B
250 GPM (946 L/min) (See FoamPak 50S)	100 PSIG (7 bar)	50	F01963B
	150 PSIG (10 bar)	60	F01964B
	200 PSIG (14 bar)	75	F01965B
	250 PSIG (17 bar)	75	F01966B
350 GPM (1325 L/min) (See FoamPak 59S)	100 PSIG (7 bar)	60	F01971B
	150 PSIG (10 bar)	100	F01972B
	200 PSIG (14 bar)	100	F01973B
	250 PSIG (17 bar)	100	F01974B
400 GPM (1514 L/min) (See FoamPak 59S)	100 PSIG (7 bar)	100	F01975B
	150 PSIG (10 bar)	100	F01976B
	200 PSIG (14 bar)	125	F01977B

Table 2

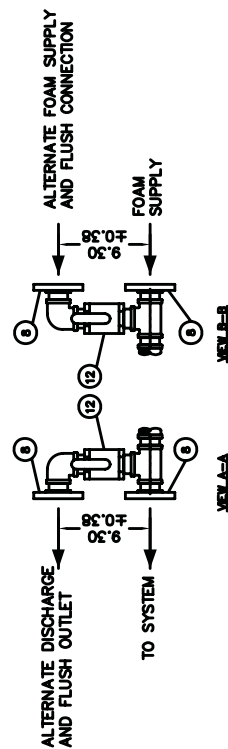


TECHNICAL DATA

FOAMPAK
 A FOAM PUMP/PRESSURE
 BALANCE AND RELIEF
 VALVE/PUMP CONTROLLER



- NOTE:**
1. ACTUAL APPEARANCE OF PUMP SHD MAY VARY DEPENDING ON MOTOR TYPE USED.
 2. ISOLATION VALVES TO BE LOCATED AT FOAM TANK(S) AND AT THE INJECTION POINT.
 3. ALL DIMENSIONS TO BE ±0.13 UNLESS OTHERWISE SPECIFIED
 4. * MOTOR AND PUMP SPECIFICATIONS ARE ORDER SPECIFIC PER CUSTOMER REQUIREMENTS AND EFFECT CONTROLLER.



FOAMPAK 5S
 Concentrate Flow
 10 and 25 GPM



TECHNICAL DATA

FOAMPAK
A FOAM PUMP/PRESSURE
BALANCE AND RELIEF
VALVE/PUMP CONTROLLER

FOAMPAK 5S

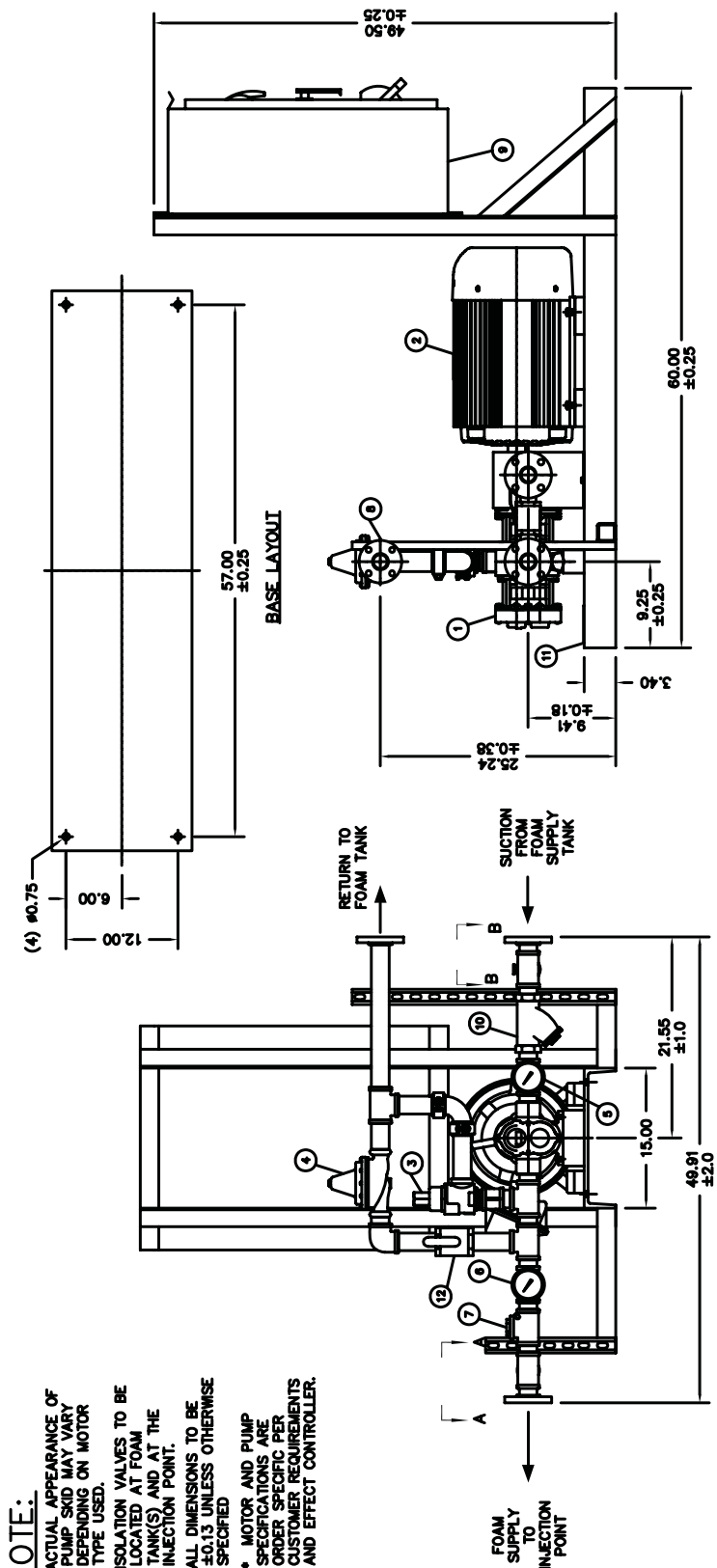
ITEM	DISCHARGE PRESSURE PSI	CONCENTRATE FLOW	PART NO. 50 HZ	PART NO. 60 HZ	DESCRIPTION	QTY	MATERIAL
1	100	10 GPM	F02315	F02315	EDWARDS MODEL 20-420 PUMP	1	BRONZE
	150	10 GPM	F02315	F02315			
	200	10 GPM	F02316	F02315			
	250	10 GPM	F02331	F02330			
	100	25 GPM	F02318	F02317			
	150	25 GPM	F02318	F02318			
	200	25 GPM	F02325	F02318			
	250	25 GPM	F02340	F02332			
2	100	10 GPM	F02371	F02370	MOTOR, 10 HP, 1800 RPM	1	--
	150	10 GPM	F02371	F02373			
	200	10 GPM	F02371	F02373			
	250	10 GPM	F02372	F02373			
	100	25 GPM	F02374	F02373			
	150	25 GPM	F02374	F02375			
	200	25 GPM	F02376	F02375			
	250	25 GPM	F02378	F02377			
3	--	--	--	--	1" PRESSURE RELIEF VALVE (0260004)	1	BRONZE
4	--	--	--	--	1-1/4" CLAVAL VALVE	1	BRONZE
5	--	--	F02342	F02342	COMPOUND GAUGE, 3-1/2", 0 TO 30 Hg.	1	STAINLESS STEEL
6	--	--			PRESSURE GAUGE, 3-1/2", 0 TO 300 PSI	1	STAINLESS STEEL
7	--	--	--	--	1-1/2" SWING CHECK VALVE	1	BRONZE
8	--	--	--	--	1-1/2" 150# SCREW ON FLANGE	4	BRONZE
9	100	10 GPM	F02355	F02354	MASTER MCA CONTROL PANEL	1	--
	150	10 GPM	F02355	F02356			
	200	10 GPM	F02355	F02356			
	250	10 GPM	F02357	F02356			
	100	25 GPM	F02357	F02356			
	150	25 GPM	F02357	F02358			
	200	25 GPM	F02359	F02358			
	250	25 GPM	F02361	F02360			
10	--	--	--	--	1-1/2" SUCTION "Y" STRAINER	1	BRONZE
11	--	--	--	--	NAMEPLATE	1	MILD STEEL
12	--	--	--	--	1-1/2" BALL VALVE	2	BRONZE

-- Indicates replacement part not available



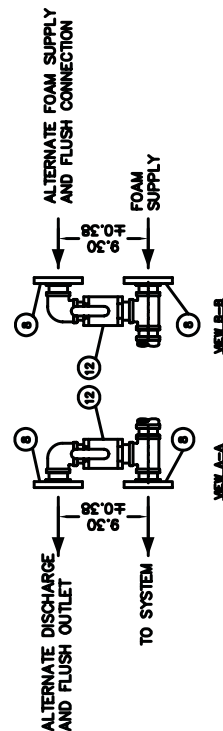
TECHNICAL DATA

FOAMPAK
 A FOAM PUMP/PRESSURE
 BALANCE AND RELIEF
 VALVE/PUMP CONTROLLER



NOTE:

1. ACTUAL APPEARANCE OF PUMP SKID MAY VARY DEPENDING ON MOTOR TYPE USED.
2. ISOLATION VALVES TO BE LOCATED AT FOAM TANK(S) AND AT THE INJECTION POINT.
3. ALL DIMENSIONS TO BE ±0.13 UNLESS OTHERWISE SPECIFIED
4. * MOTOR AND PUMP SPECIFICATIONS ARE ORDER SPECIFIC PER CUSTOMER REQUIREMENTS AND EFFECT CONTROLLER.



FOAMPAK 13S
 Concentrate Flow
 50 GPM

	TECHNICAL DATA	FOAMPAK A FOAM PUMP/PRESSURE BALANCE AND RELIEF VALVE/PUMP CONTROLLER
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FOAMPAK 13S

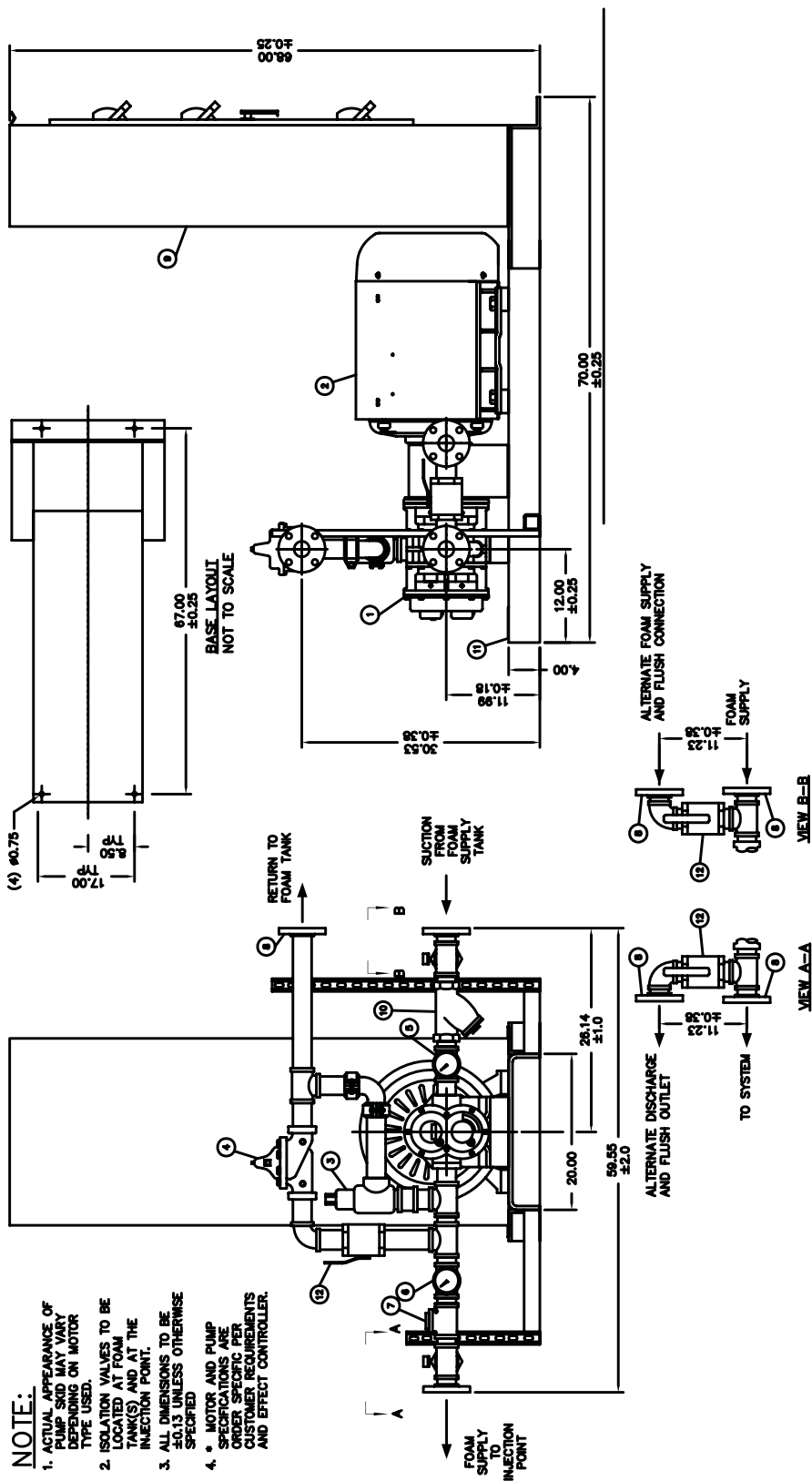
ITEM	DISCHARGE PRESSURE PSI	CONCENTRATE FLOW	PART NO. 50 HZ	PART NO. 60 HZ	DESCRIPTION	QTY	MATERIAL
1	100	50 GPM	F02327	F02326	EDWARDS MODEL 80-440 PUMP	1	BRONZE
	150	50 GPM	F02327	F02326			
	200	50 GPM	F02327	F02326			
	250	50 GPM	F02341	F02341			
2	100	50 GPM	F02378	F02375	MOTOR, 20 HP, 1800 RPM	1	--
	150	50 GPM	F02378	F02377			
	200	50 GPM	F02380	F02377			
	250	50 GPM	F02380	F02381			
3	--	--	--	--	1-1/2" PRESSURE RELIEF VALVE	1	BRONZE
4	--	--	--	--	1-1/4" CLAVAL VALVE	1	BRONZE
5	--	--	F02342	F02342	VAC. GAUGE, 3-1/2", 0 TO 30 Hg.	1	STAINLESS STEEL
6	--	--			PRESSURE GAUGE, 3-1/2", 0 TO 300 PSI	1	STAINLESS STEEL
7	--	--	--	--	1-1/2" SWING CHECK VALVE	1	BRONZE
8	--	--	--	--	1-1/2" 150# SCREWED FLANGE	5	BRONZE
9	100	50 GPM	F02361	F02358	MASTER MCA CONTROL PANEL	1	--
	150	50 GPM	F02361	F02360			
	200	50 GPM	F02363	F02360			
	250	50 GPM	F02363	F02364			
10	--	--	--	--	SUCTION "Y" STRAINER	1	BRONZE
11	--	--	--	--	NAMEPLATE	1	BRONZE
12	--	--	--	--	1-1/2" BALL VALVE	3	STAINLESS STEEL

-Indicates replacement part not available



TECHNICAL DATA

FOAMPAK
 A FOAM PUMP/PRESSURE
 BALANCE AND RELIEF
 VALVE/PUMP CONTROLLER



FOAMPAK 26S
 Concentrate Flow
 75, 100 and 150 GPM



TECHNICAL DATA

FOAMPAK
A FOAM PUMP/PRESSURE
BALANCE AND RELIEF
VALVE/PUMP CONTROLLER

FOAMPAK 26S

ITEM	DISCHARGE PRESSURE PSI	CONCENTRATE FLOW	PART NO. 50 HZ	PART NO. 60 HZ.	DESCRIPTION	QTY	MATERIAL
1	100	75 GPM	F02311	F02310	EDWARDS MODEL 150-348 PUMP	1	BRONZE
	150	75 GPM	F02311	F02310			
	200	75 GPM	F02311	F02310			
	250	75 GPM	F02328	F02328			
	100	100 GPM	F02312	F02310			
	150	100 GPM	F2312	F02310			
	200	100 GPM	F02312	F02310			
	250	100 GPM	F02328	F02328			
	100	150 GPM	F02319	F02313			
	150	150 GPM	F02319	F02313			
	200	150 GPM	F02319	F02314			
2	250	150 GPM	F02333	F02329	MOTOR, 20 HP, 1800 RPM	1	--
	100	75 GPM	F02380	F02379			
	150	75 GPM	F02380	F02381			
	200	75 GPM	F02382	F02383			
	250	75 GPM	F02384	F02387			
	100	100 GPM	2380	F02379			
	150	100 GPM	F02382	F02381			
	200	100 GPM	F02384	F02383			
	250	100 GPM	F02384	F02387			
	100	150 GPM	F02382	F02383			
	150	150 GPM	F02386	F02385			
200	150 GPM	F02388	F02387				
250	150 GPM	F02388	F02387				
3	--	--	--	--	2" PRESSURE RELIEF VALVE	1	BRONZE
4	--	--	--	--	2" CLAVAL VALVE	1	BRONZE
5	--	--	F02342	F02342	VAC. GAUGE, 3-1/2", 0 TO 30 Hg.	1	STAINLESS STEEL
6	--	--			PRESSURE GAUGE, 3-1/2", 0 TO 300 PSI	1	STAINLESS STEEL
7	--	--	--	--	SWING CHECK VALVE	1	BRONZE
8	--	--	--	--	2" 150# SCREWED FLANGE	5	BRONZE
9	100	75 GPM	F02363	F02362	MASTER MCA CONTROL PANEL	1	--
	150	75 GPM	F02363	F02364			
	200	75 GPM	F02365	F02366			
	250	75 GPM	F02367	F02353			
	100	100 GPM	F02363	F02362			
	150	100 GPM	F02365	F02364			
	200	100 GPM	F02367	F02353			
	250	100 GPM	F02367	F02353			
	100	150 GPM	F02365	F02366			
	150	150 GPM	F02369	F02368			
	200	150 GPM	F02346	F02345			
250	150 GPM	F02346	F02345				
10	--	--	--	--	SUCTION "Y" STRAINER	1	BRONZE
11	--	--	--	--	NAMEPLATE	1	BRONZE
12	--	--	--	--	2" BALL VALVE	3	STAINLESS STEEL

-Indicates replacement part not available

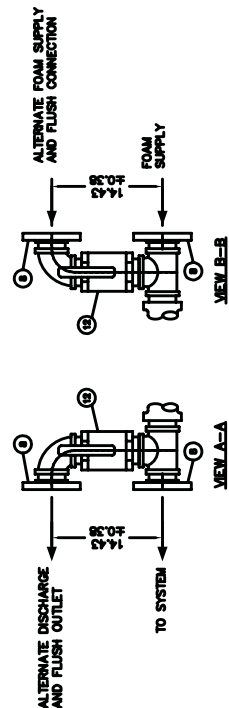
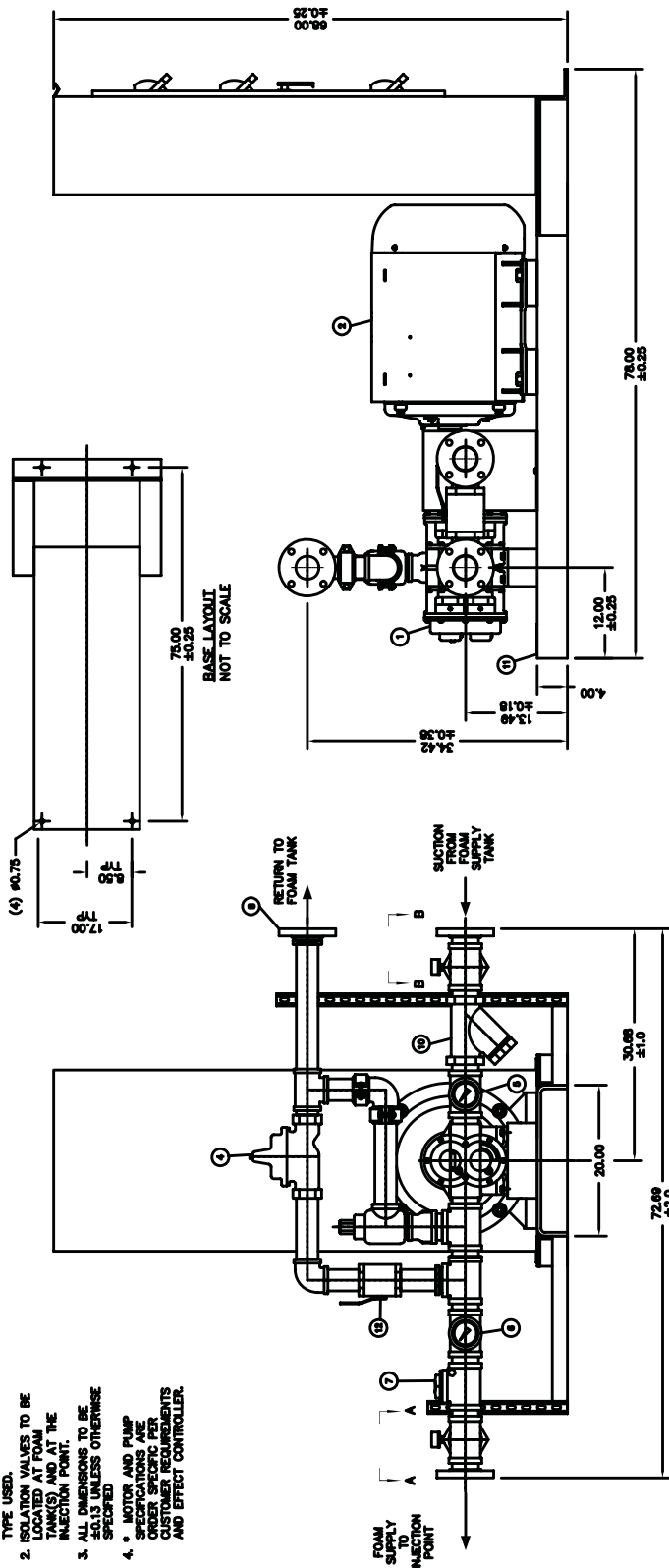


TECHNICAL DATA

FOAMPAK A FOAM PUMP/PRESSURE BALANCE AND RELIEF VALVE/PUMP CONTROLLER

NOTE:

1. ACTUAL APPEARANCE OF EQUIPMENT MAY VARY DEPENDING ON MOTOR TYPE USED.
2. ISOLATION VALVES TO BE LOCATED AT FOAM TANK(S) AND AT THE INJECTION POINT.
3. ALL DIMENSIONS TO BE 50.13 UNLESS OTHERWISE SPECIFIED
4. * MOTOR AND PUMP SPECIFICATIONS ARE SUBJECT TO CUSTOMER REQUIREMENTS AND EFFECT CONTROLLER.



FOAMPAK 50S
Concentrate Flow
200, 250 and 300 GPM



TECHNICAL DATA

FOAMPAK
A FOAM PUMP/PRESSURE
BALANCE AND RELIEF
VALVE/PUMP CONTROLLER

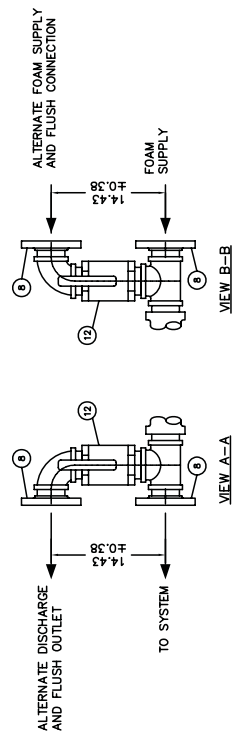
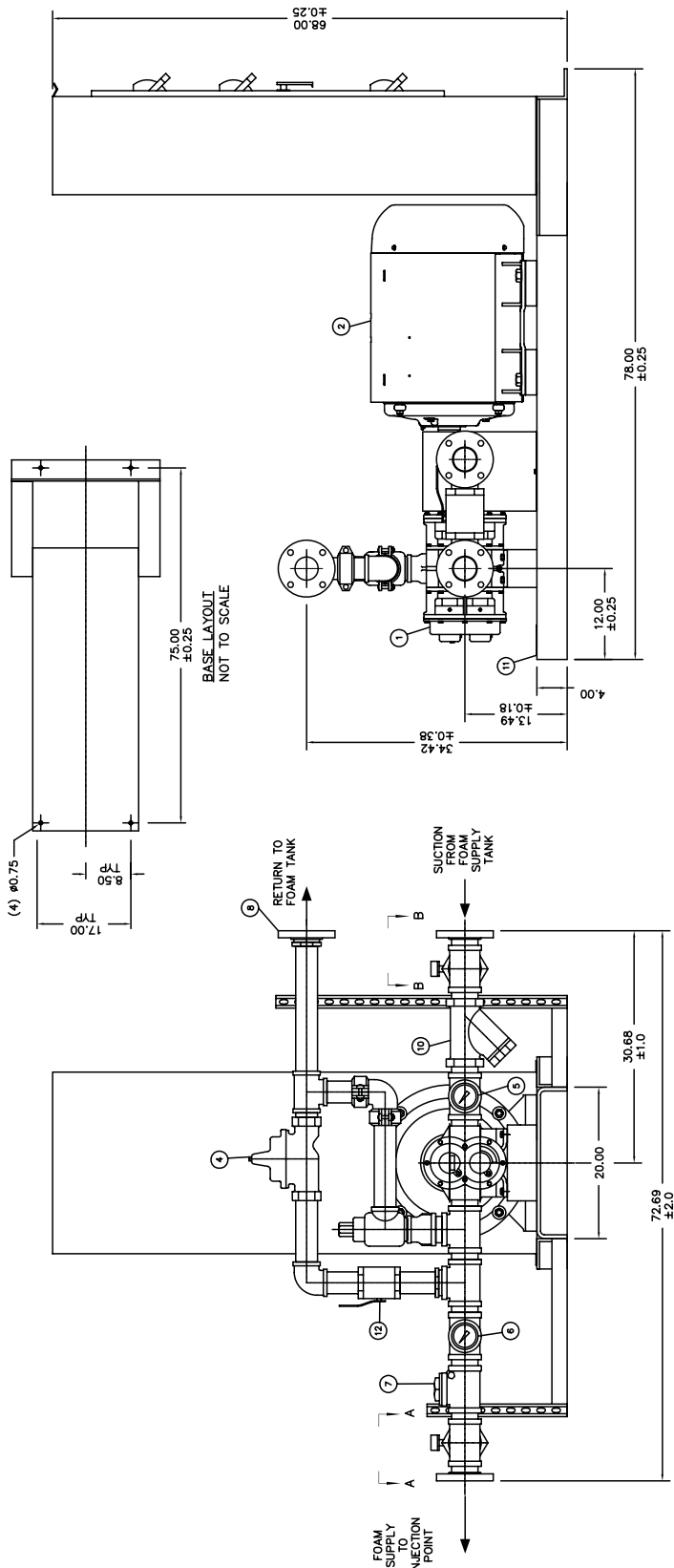
FOAMPAK 50S

ITEM	DISCHARGE PRESSURE PSI	CONCENTRATE FLOW	PART NO. 50 HZ.	PART NO. 60 HZ.	DESCRIPTION	QTY	MATERIAL
1	100	200 GPM	F02319	F02319	EDWARDS MODEL 300-368 PUMP	1	BRONZE
	150	200 GPM	F02319	F02319			
	200	200 GPM	F02319	F02319			
	250	200 GPM	F02334	F02333			
	100	250 GPM	F02321	F02320			
	150	250 GPM	F02321	F02320			
	200	250 GPM	F02321	F052320			
	250	250 GPM	F02336	F02335			
	100	300 GPM	0F2321	F02321			
	150	300 GPM	F02321	F02321			
	200	300 GPM	F02321	F02321			
	250	300 GPM	F02336	F02336			
2	100	200 GPM	F02384	F02385	MOTOR, 100 HP, 1800 RPM	1	--
	150	200 GPM	F02388	F02387			
	200	200 GPM	F02388	F02389			
	250	200 GPM	F02390	F02391			
	100	250 GPM	F02388	F02387			
	150	250 GPM	F02390	F02389			
	200	250 GPM	F02390	F02389			
	250	250 GPM	F02392	F02393			
	100	300 GPM	F02388	F02389			
	150	300 GPM	F02390	F02391			
	200	300 GPM	F02392	F02393			
	250	300 GPM	F02394	F02393			
3	--	--	--	--	2-1/2" PRESSURE RELIEF VALVE	1	BRONZE
4	--	--	--	--	2-1/2" CLAVAL VALVE	1	BRONZE
5	--	--			VAC. GAUGE, 3-1/2", 0 TO 30 Hg.	1	STAINLESS STEEL
6	--	--	F02342	F02342	PRESSURE GAUGE, 3-1/2", 0 TO 300 PSI	1	STAINLESS STEEL
7	--	--	--	--	SWING CHECK VALVE	1	BRONZE
8	--	--	--	--	3" 150# SCREWED FLANGE	5	BRONZE
9	100	200 GPM	F02367	F02368	EMI FTA-750 CONTROL PANEL	1	--
	150	200 GPM	F02346	F02345			
	200	200 GPM	F02346	F02347			
	250	200 GPM	F02348	F02349			
	100	250 GPM	F02346	F02345			
	150	250 GPM	F02348	F02347			
	200	250 GPM	F02348	F02347			
	250	250 GPM	F02350	F02351			
	100	300 GPM	F02346	F02347			
	150	300 GPM	F02348	F02349			
	200	300 GPM	F02350	F02351			
	250	300 GPM	F02352	F02349			
10	--	--	--	--	3" SUCTION "Y" STRAINER	1	BRONZE
11	--	--	--	--	NAMEPLATE	1	BRONZE
12	--	--	--	--	3" BALL VALVE	3	STAINLESS STEEL



TECHNICAL DATA

FOAMPAK A FOAM PUMP/PRESSURE BALANCE AND RELIEF VALVE/PUMP CONTROLLER



FOAMPAK 59S Concentrate Flow 350 and 400 GPM

	TECHNICAL DATA	FOAMPAK A FOAM PUMP/PRESSURE BALANCE AND RELIEF VALVE/PUMP CONTROLLER
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FOAMPAK 59S

ITEM	DISCHARGE PRESSURE PSI	CONCENTRATE FLOW GPM	PART NO. 50 HZ.	PART NO. 60 HZ.	DESCRIPTION	QTY	MATERIAL
1	100	350 GPM	F02323	F02322	EDWARDS MODEL 400-4112 PUMP	1	BRONZE
	150	350 GPM	F02323	F02323			
	200	350 GPM	F02338	F02337			
	250	350 GPM	F02338	F02337			
	100	400 GPM	F02324	F02323			
	150	400 GPM	F02324	F02323			
	200	400 GPM	F02339	F02338			
	250	400 GPM	N/A	F02338			
2	100	350 GPM	F02392	F02391	MOTOR, 75 HP, 1800 RPM	1	--
	150	350 GPM	F02392	F02393			
	200	350 GPM	F02394	F02395			
	250	350 GPM	F02396	F02395			
	100	400 GPM	F02396	F02393			
	150	400 GPM	F02396	F02395			
	200	400 GPM	F02396	F02395			
	250	400 GPM	N/A	F02395			
3	--	--	--	--	3" PRESSURE RELIEF VALVE	1	BRONZE
4	--	--	--	--	3" CLAVAL VALVE	1	BRONZE
5	--	--	F02343	F02343	VAC. GAUGE, 3-1/2", 0 TO 30 Hg.	1	STAINLESS STEEL
6	--	--			PRESSURE GAUGE, 3-1/2", 0 TO 300 PSI	1	STAINLESS STEEL
7	--	--	--	--			
8	--	--	--	--	4" _____# SCREWED FLANGE	7	BRONZE
9	100	350 GPM	F02350	F02349	EMI FTA-1000 CONTROL PANEL	1	--
	150	350 GPM	F02350	F02349			
	200	350 GPM	F02352	F02343			
	250	350 GPM	F02344	F02343			
	100	400 GPM	F02344	F02351			
	150	400 GPM	F02344	F02343			
	200	400 GPM	F02344	F02343			
	250	400 GPM	N/A	F02343			
10	--	--	--	--	4" SUCTION "Y" STRAINER	1	BRONZE
11	--	--	--	--	NAMEPLATE	1	BRONZE
12	--	--	--	--	4" BALL VALVE	2	STAINLESS STEEL

-Indicates replacement part not available