

DuraQuench® Pro Pump Skid

The DuraQuench Pro Pump Skid is the primary control center for Fike's DuraQuench Pro water mist system, providing the necessary flow and pressure to the water mist nozzles. The skid is designed to meet the requirements of NFPA 750 Standard on Water Mist Fire Protection System, NFPA 20 Standard for the Installation of Stationary Pumps for Fire Protection, and FM Datasheet 3-7 Fire Protection Pumps.

The skid is factory-assembled, pre-wired, pre-piped, and functionally tested before shipment from the factory. The skid design provides easy installation, requiring only a connection to an adequate water supply, distribution piping, reliable power supply, and a connection to a Fire Alarm control panel for pump activation and monitoring.

APPROVALS

The DuraQuench Pro skid is FM Approved as a component of the FM Approved DuraQuench Pro system when configured as a Deluge, Wet Pipe, or Preaction system arrangement. Refer to the following table for the manuals describing each system arrangement.



FM Approved Application	Fike Manual
Deluge system for the protection of machinery and combustion turbines in enclosures	P14340-1
Wet Pipe systems for the protection of non-storage occupancies rated Hazard Category 1 (HC-1)	P14340-2
Wet Pipe or Preaction systems for the protection of Data Processing Equipment Rooms/Halls above and below-raised floors	P14340-3

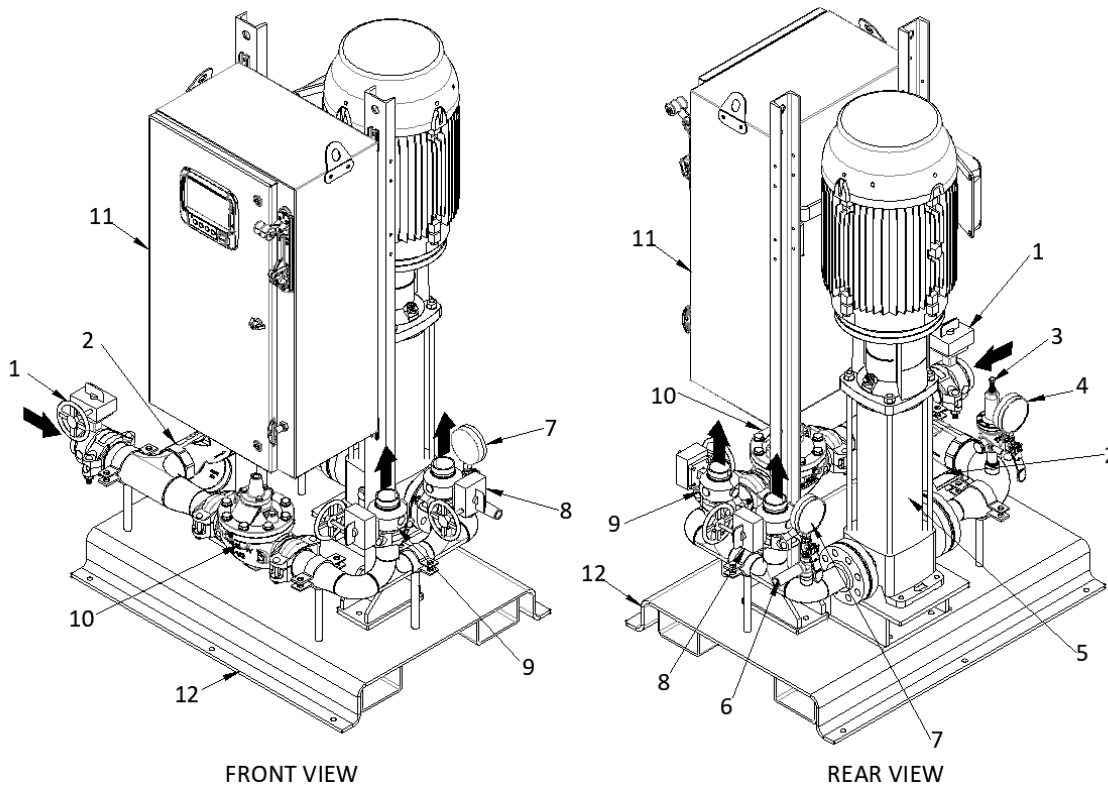
SKID COMPONENTS

The components used on the pump skid are commercial, off-the-shelf, FM Approved components that meet the requirements of NFPA 70 and NFPA 20. The components are factory installed on a compact steel frame primed and then finished with a two-part red epoxy paint. Stainless steel pipe is used to connect the system components. Forklift pockets allow the skid to be easily moved using a standard forklift with adjustable forks. Lifting holes enable the skid to be raised with a crane or hoist. Mounting holes in the skid base facilitates securing the skid to the mounting surface.

For installations requiring a jockey (pressure maintenance) pump, the pump and jockey pump controller must be ordered separately. Contact Fike for ordering information. The jockey pump and controller must be mounted off the pump skid.

P22319, August, 2023

TYPICAL PUMP SKID CONFIGURATION



Typical Pump Skid Configuration

Item	Component Description	Item	Component Description
1	Supply Isolation Valve ^[1]	7	Discharge Pressure Gauge
2	Suction Wye-Strainer	8	Test Header Isolation Valve ^[5]
3	Circulation Relief Valve ^[2]	9	Discharge Isolation Valve ^[6]
4	Suction Pressure Gauge	10	Pressure Control Valve
5	Centrifugal Pump and Motor ^[3]	11	FM Approved Fire pump controller ^[7]
6	Thermal Relief Valve ^[4]	12	Mounting Base

^[1] 3-inch, Victaulic grooved connection; normally open, monitored valve

^[2] 3/4" NPT connection; normally closed, opens at 150 psi (10 bar)

^[3] See Motor and Pump Specifications for details

^[4] 1/2" NPT connection; normally closed, opens at 140°F (60°C)

^[5] 2-inch, Victaulic grooved connection; normally closed, monitored valve

^[6] 2-inch, Victaulic grooved connection; normally open, monitored valve

^[7] See Pump Controller Specifications for details

MOTOR AND PUMP SPECIFICATIONS

Refer to the manufacturer's data sheet for motor and pump specifications.

SKID P/N	F0292141-XXX-XX	F0292142-XXX-XX	F0292143-XXX-XX	F0292144-XXX-XX
3-Phase AC Standard Motors				
Manufacturer	Grundfos	WEG	Grundfos	WEG
Model	ML160BA	284TSC	ML160BC	286TSC
Product Number	85U07534	99883249	85U07538	99882384
Rated Power	15 HP	25 HP	25 HP	30 HP
Frequency	50 Hz	60 Hz	50 Hz	60 Hz
RPM	3520-3550	3545	3520 - 3560	3540
Voltage	3 x 220-277/380-480 V	3 x 208/230/460 V	3 x 220-240/380-415 V	3 x 208/230/460 V
Current	36.0-30.0/20.8-17.2 A	63.0/57.6/28.8 A	59.5-56.5/34.5-32.5 A	76.7/68.4/34.2 A
Motor Code	G	G	G	G
Grundfos Pumps				
Model	CRN15-12-E-FGJ-GJ-G-V-HQQV	CRN20-10E-FGJ-A-E-HQQE-PX2	CRN32-10E-F-A-HQQV-PX1	CRN32-8-2E-G-A-E-HQQE-QX2
Frequency	50 Hz	60 Hz	50 Hz	60 Hz
Rated Flow	75 gpm (17 m ³ /hr)	111 gpm (25 m ³ /hr)	133 gpm (30 m ³ /hr)	159 gpm (36 m ³ /hr)
Pump Speed (RPM)	2924	3521	2934	3541
Rated Head	445 ft (136 m)	561 ft (171 m)	502 ft (153 m)	558 ft (170 m)
Maximum Head	555 ft (169 m)	699 ft (213 m)	639 ft (195 m)	705 ft (215 m)
Rotation	CCW	CCW	CCW	CCW

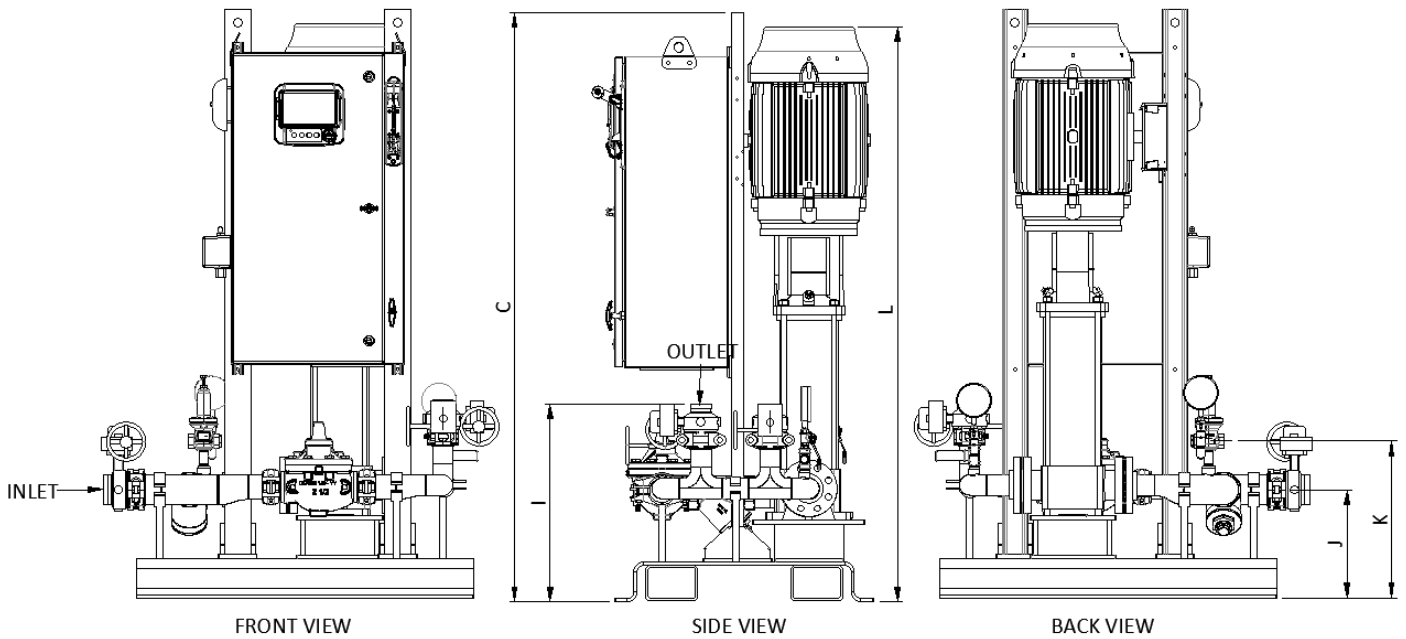
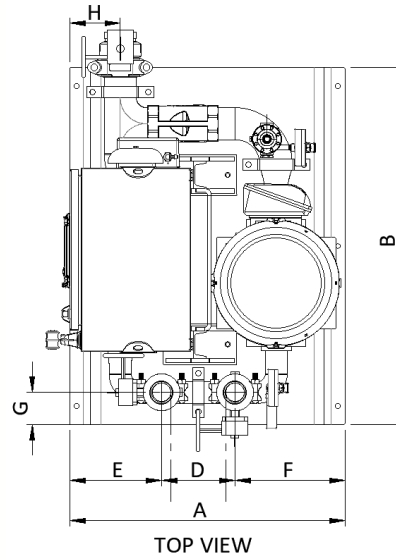
PUMP CONTROLLER SPECIFICATIONS

Refer to the manufacturer's data sheet for detailed controller specifications.

SKID P/N	F029214X-XXX-1	F029214X-XXX-1S	F029214X-XXX-2	F029214X-XXX-2S
Manufacturer	Tornatech			
Model	GPA	GPA + GPU	GPS	GPS + GPU
Motor Start	Across the line	Soft start	Across the line + ATS	Soft start + ATS
Voltage	200V – 208V; 220V – 240V; 380V – 416V; 440V – 480V; 575V – 600V			
Enclosure	NEMA 2, IP31 (standard), other protection ratings available			
Enclosure Finish	Textured, red RAL 3002 (standard)			

PUMP SKID DIMENSIONS

Refer to the following table for skid dimensions.



SKID DIMENSIONS - CONTINUED

Dimension	75 GPM (50 Hz)				111 GPM (60 Hz)				133 GPM (50 Hz)				155 GPM (60 Hz)			
	F0292141-XXX-1	F0292141-XXX-1S	F0292141-XXX-2	F0292141-XXX-2S	F0292142-XXX-1	F0292142-XXX-1S	F0292142-XXX-2	F0292142-XXX-2S	F0292143-XXX-1	F0292143-XXX-1S	F0292143-XXX-2	F0292143-XXX-2S	F0292144-XXX-1	F0292144-XXX-1S	F0292144-XXX-2	F0292144-XXX-2S
A	30" (762)															
B	39" (990.6)	54" (1371.60)	39" (990.6)	54" (1371.60)	39" (990.6)	54" (1371.60)	39" (990.6)	54" (1371.60)	39" (990.6)	54" (1371.60)	39" (990.6)	54" (1371.60)	39" (990.6)	54" (1371.60)	39" (990.6)	54" (1371.60)
C	68" (1727.20)															
D	8" (208.20)												6" (152.40)			
E	10" (254.00)												11" (279.40)			
F	12" (304.80)												13" (330.20)			
G	3.5" (88.90)															
H	5.5" (139.70)															
I	22.84" (580.33)															
J	12.5" (317.50)															
K	18.125" (460.38)															
L	68.5" (1739.90)				66" (1676.40)				81.25" (2063.75)				75.5" (1917.70)			

All dimensions are in inches (mm)

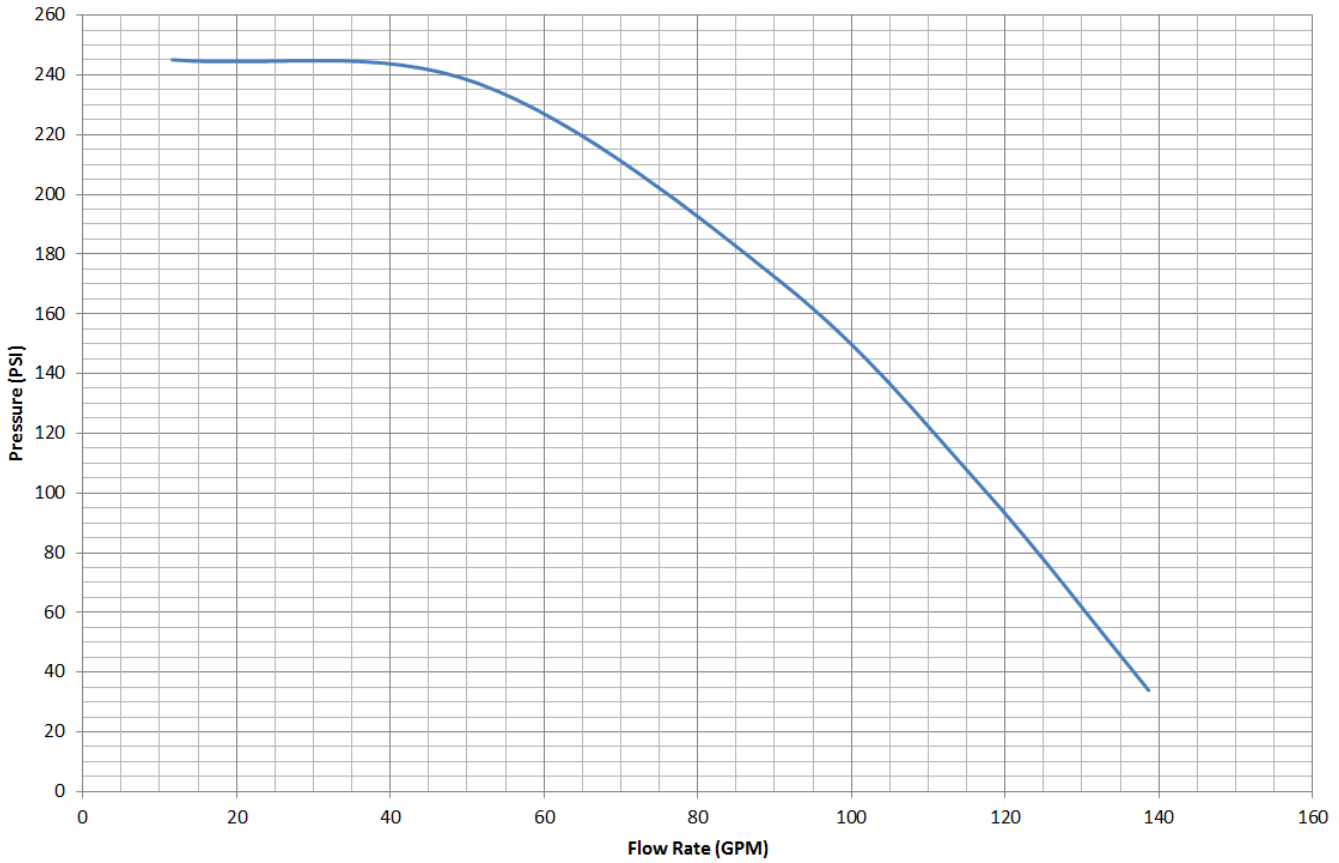
PUMP SKID ORDERING

The skid is available in multiple configurations, including alternate pump capacities and pump controller configurations. Refer to the following table for skid ordering options.

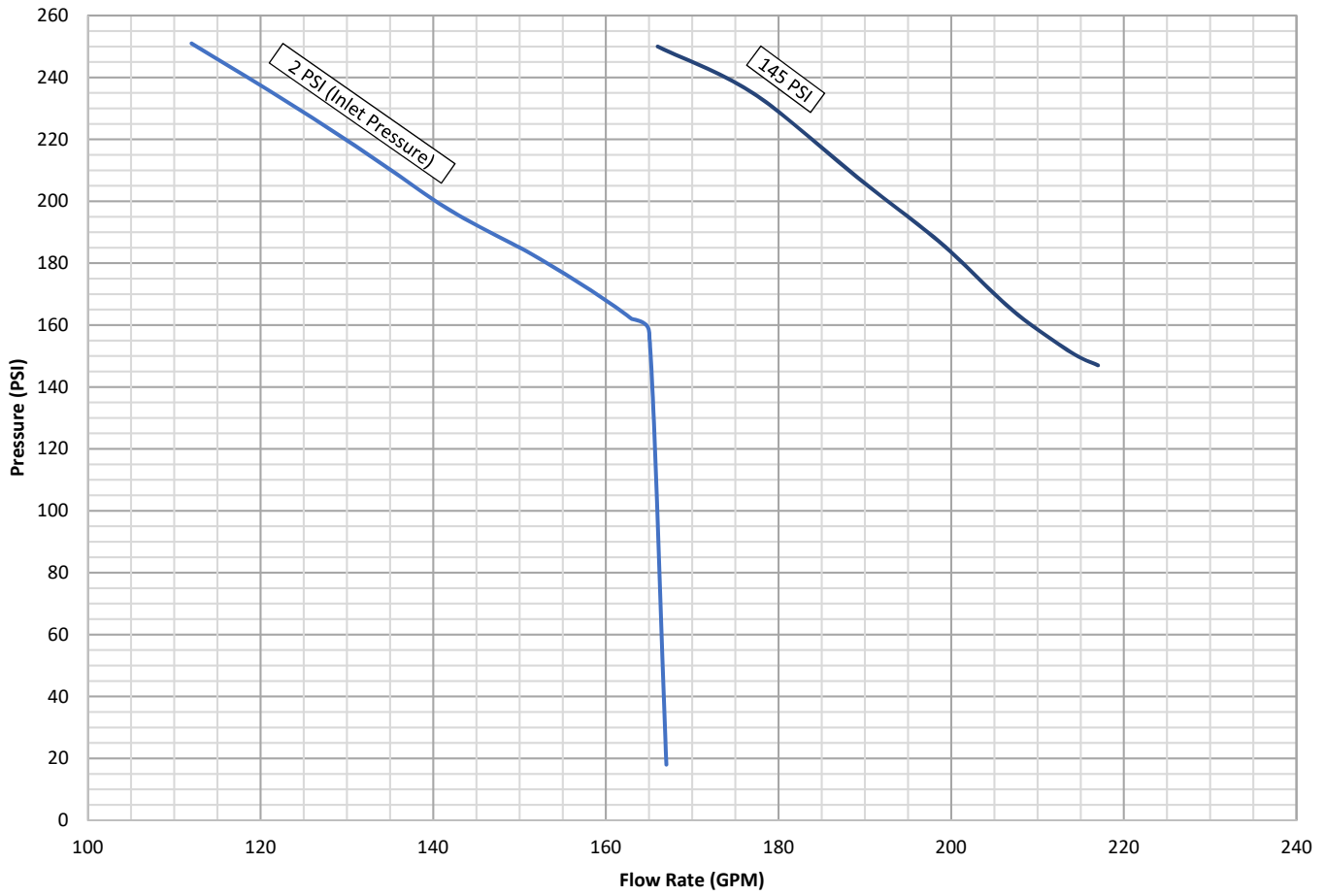
	Base part number	Voltage code	Pump Controller Option codes	Full part number
75 GPM (50Hz)	F0292141	380	1 – Across-The-Line (GPA)	F0292141-380-1
			1S - Soft Start (GPS)	F0292141-380-1S
			2 - Across-The-Line (GPA) + Transfer Switch (GPU)	F0292141-380-2
			2S - Soft Start (GPS) + Transfer Switch (GPU)	F0292141-380-2S
		400	1 – Across-The-Line (GPA)	F0292141-400-1
			1S - Soft Start (GPS)	F0292141-400-1S
			2 - Across-The-Line (GPA) + Transfer Switch (GPU)	F0292141-400-2
			2S - Soft Start (GPS) + Transfer Switch (GPU)	F0292141-400-2S
		415	1 – Across-The-Line (GPA)	F0292141-415-1
			1S - Soft Start (GPS)	F0292141-415-1S
			2 - Across-The-Line (GPA) + Transfer Switch (GPU)	F0292141-415-2
			2S - Soft Start (GPS) + Transfer Switch (GPU)	F0292141-415-2S
111 GPM (60Hz)	F0292142	208	1 – Across-The-Line (GPA)	F0292142-208-1
			1S - Soft Start (GPS)	F0292142-208-1S
			2 - Across-The-Line (GPA) + Transfer Switch (GPU)	F0292142-208-2
			2S - Soft Start (GPS) + Transfer Switch (GPU)	F0292142-208-2S
		230	1 – Across-The-Line (GPA)	F0292142-230-1
			1S - Soft Start (GPS)	F0292142-230-1S
			2 - Across-The-Line (GPA) + Transfer Switch (GPU)	F0292142-230-2
			2S - Soft Start (GPS) + Transfer Switch (GPU)	F0292142-230-2S
		460	1 – Across-The-Line (GPA)	F0292142-460-1
			1S - Soft Start (GPS)	F0292142-460-1S
			2 - Across-The-Line (GPA) + Transfer Switch (GPU)	F0292142-460-2
			2S - Soft Start (GPS) + Transfer Switch (GPU)	F0292142-460-2S
133 GPM (50Hz)	F0292143	380	1 – Across-The-Line (GPA)	F0292143-380-1
			1S - Soft Start (GPS)	F0292143-380-1S
			2 - Across-The-Line (GPA) + Transfer Switch (GPU)	F0292143-380-2
			2S - Soft Start (GPS) + Transfer Switch (GPU)	F0292143-380-2S
		400	1 – Across-The-Line (GPA)	F0292143-400-1
			1S - Soft Start (GPS)	F0292143-400-1S
			2 - Across-The-Line (GPA) + Transfer Switch (GPU)	F0292143-400-2
			2S - Soft Start (GPS) + Transfer Switch (GPU)	F0292143-400-2S
		415	1 – Across-The-Line (GPA)	F0292143-415-1
			1S - Soft Start (GPS)	F0292143-415-1S
			2 - Across-The-Line (GPA) + Transfer Switch (GPU)	F0292143-415-2
			2S - Soft Start (GPS) + Transfer Switch (GPU)	F0292143-415-2S
155 GPM (60Hz)	F0292144	208	1 – Across-The-Line (GPA)	F0292144-208-1
			1S - Soft Start (GPS)	F0292144-208-1S
			2 - Across-The-Line (GPA) + Transfer Switch (GPU)	F0292144-208-2
			2S - Soft Start (GPS) + Transfer Switch (GPU)	F0292144-208-2S
		230	1 – Across-The-Line (GPA)	F0292144-230-1
			1S - Soft Start (GPS)	F0292144-230-1S
			2 - Across-The-Line (GPA) + Transfer Switch (GPU)	F0292144-230-2
			2S - Soft Start (GPS) + Transfer Switch (GPU)	F0292144-230-2S
		460	1 – Across-The-Line (GPA)	F0292144-460-1
			1S - Soft Start (GPS)	F0292144-460-1S
			2 - Across-The-Line (GPA) + Transfer Switch (GPU)	F0292144-460-2
			2S - Soft Start (GPS) + Transfer Switch (GPU)	F0292144-460-2S

PUMP CURVES

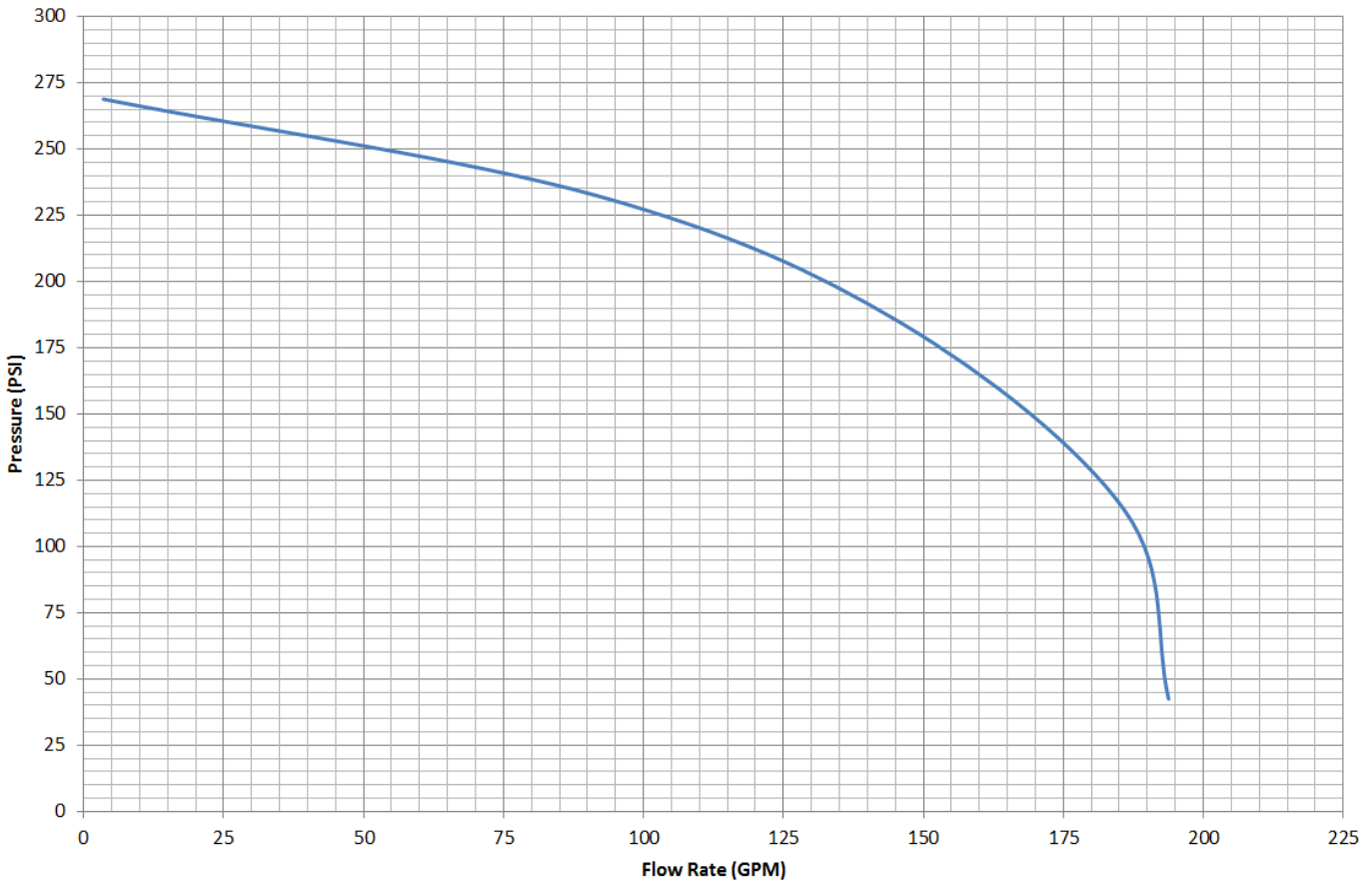
F0292141-XXX-XX, 75 GPM / 50 Hz Fire Pump



F0292142-XXX-XX, 111 GPM / 60 Hz Fire Pump



F0292143-XXX-XX, 133 GPM / 50 Hz Fire Pump



F0292144-XXX-XX, 155 GPM / 60 Hz Fire Pump

