

**HALE**® ***Class 1***®



**Vehicle Mounted Pumps**

# Pump Drive Configuration Chart

# Pump Drive Configuration Chart



Front Mount



Intra-Cab Mount



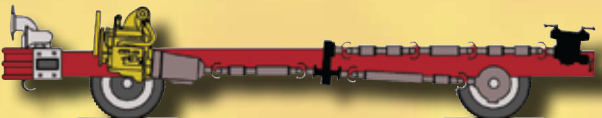
Midship Split Shaft



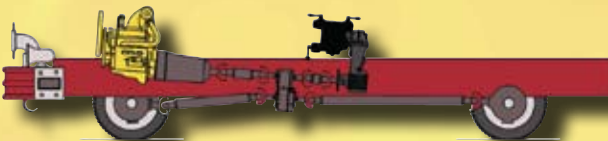
Midship PTO



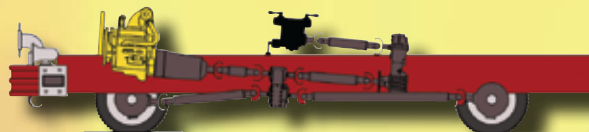
Rear Mount PTO



Rear Mount Split Shaft



Midship with 4 x 4 Transfer Case PTO



Midship with LGA & 4 x 4 Transfer Case PTO

	Pump Models	GPM Range
Front Mount	CSD	750-1250
	HFM	750-1250
Intra-Cab Mount	CSD	750-1250
Midship Split Shaft	QPAK-G	500-1000
	QFLO PLUS	750-1250
	QMID	1000-1250
	QMAX	1000-2250
	QTWO	1000-2000
	SMM-X	1000-1500
	APMG	500
	MG	500-1000
	DSD	750-1500
	8FGR	1500-3000
	8FGF	2500-3000*
SMD-X	1000-1500	
Midship PTO	2CBP	High Pressure
	CBP	250
	AP/APS	250-500
	MBP	750-1000
	MG	500-1000
	PSD/RSD	750-1500
	QPAK-J	500-1000
	QPAK-A	500-1000
Rear Mount PTO	CBP	250
	AP/APS	250-500
	MBP	750-1000
	PSD/RSD	750-1500
	QPAKA	500-1000
Rear Mount Split Shaft	PSD/RSD	750-1500
	QMAX-U	1000-2250
	QTWO-U	1000-2000
	RMB	500-1000
	RMC	1000-1500
	RME	1500-3000
	SMD-A	1000-1500
	SMR-U	1000-1500
	SMR-A	1000-1500
Split Shaft PTO	RGA	Split Shaft PTO Gearbox
	MGA	Split Shaft PTO Gearbox
Midship with 4 x 4 Transfer Case PTO	QPAK-G	500-1000
	QFLO PLUS	750-1250
	QMID	1000-1250
	QMAX	1000-2250
	QTWO	1000-2000
	SMM-X	1000-1500
	APMG	500
	MG	500-1000
	DSD	750-1500
	Midship with LGA & 4 x 4 Transfer Case PTO	QMAX-U
QTWO-U		1000-2000
LGA		PTO Drive Gearbox



**Qmax 1000, 1250, 1750, 2000, 2250 GPM**



## The most popular pump in North America

### Max Flows

NFPA ratings to 2250 US GPM; Maximum flows to over 2600 US GPM

### Max Efficiency

1750 NFPA rating from an appropriate 330 HP engine. Computer designed and tested for maximum performance.

### Max Reliability

Tough single piece body, 600 PSI hydrostatic tests, simple, durable construction

**Step up to a Qmax pump for maximum flow to knock down fires fast. When you need big water, you need Hale's Qmax pump.**

## Description

The industry standard — made to exceed 2600 GPM from a sufficient positive pressure water source and an appropriate engine. Extraordinary reliability and high performance you can count on. Designed specifically to increase the efficiency of water flow with large diameter hose.

NFPA 1901 — 1000, 1250, 1500, 1750, 2000 or 2250 GPM ratings

Single Stage

Midship Split Drive Line Pump

## Applications

Pumper — Aerial — Tanker

Rescue Pumper

Pumper Tanker

## Specifications

**Discharge:** Up to (14) 3" Ports and up to (5) 4" Ports

**Suction:** (8) 3" Ports, Optional (3) 6" Ports and (2) 5" or 6" NH inlets, Tank to Pump 3" or 4"

(Optional second Tank to Pump)

**Pump:** Alloy cast iron body and heads, bronze impeller and wear rings, 17-4PH stainless pump shaft, packing with split gland for easy servicing

**Transmission:** 16,000 lb-ft bottom drive through rating, high strength heat treated gears with sliding gear shift system

**Ratios:** R, L, & S Box: 1.58, 1.71, 1.86, 2.05 or 2.28

**Ratios:** X Box: 1.96, 2.13, 2.32 or 2.55

**Options:** Air shift, manual shift override, Q Series Relief Valve, TPM, Anodes, TRV, ESP, SPV, MIV, Mechanical seal. Available with CAFSPro Compressed Air CAFS system.

*Full body midship pumps can be equipped with universal valve extensions to mount popular Hale and Akron valves*

## QFlo-Plus 750, 1000, 1250 GPM



### Description

Compact design for a shorter pump box and increased compartment room for water tanks or personnel.

NFPA 1901 — 750, 1000 or 1250 GPM ratings

Single Stage

Midship Split Drive Line Pump

### Applications

Pumper — Aerial — Tower

Rescue Pumper

Pumper Tanker

### Specifications

**Discharge:** Up to (14) 3" Ports and up to (4) 4" Ports

**Suction:** (8) 3" Ports, (2) 4" Ports and (2) 4-1/2", 5" or 6" NH inlets; optional tank to pump 3" or 4"

**Pump:** Alloy cast iron body and heads, bronze impeller and wear rings, 17-4PH stainless pump shaft, mechanical seal

**Transmission:** 16,000 lb-ft bottom drive through rating, 3 heat treated gears with sliding gear shift system

**Ratios:** L Box: 1.58, 1.71, 1.86, 2.05 or 2.28

**Ratios:** X Box: 1.96, 2.13, 2.32 or 2.55

**Options:** Air shift, manual shift override, Q Series Relief Valve, TPM, Anodes, TRV, ESP, SPV, MIV. Available with CAFSPRO.

*Full body midship pumps can be equipped with universal valve extensions to mount popular Hale and Akron valves*

## Qpak 500, 750, 1000 GPM



### Description

The most compact of our midship pumps, the Qpak fits into a pump box size as small as 24" depending on the plumbing configurations. Compact design results in shorter pump box and increased room for water tanks, equipment or personnel.

NFPA 1901 — 500, 750, or 1000 GPM ratings

Single Stage

Midship Split Drive Line Pump

### Applications

Pumper Rescue Pumper

Tankers/Tender

Rural/Urban Interface

Pumper Tanker

### Specifications

**Discharge:** Up to (11) 3" Ports and (1) 4" Port

**Suction:** (4) 3" Ports, (2) 4" Ports and (2) 4-1/2", 5" or 6" NH inlets, Tank to Pump 3" or 4"

**Pump:** Alloy cast iron body and heads, bronze impeller and wear rings, 17-4PH stainless pump shaft, mechanical seal

**Transmission:** 16,000 lb-ft bottom drive through rating, 3 heat treated gears with sliding gear shift system

**Ratios:** L Box: 1.58, 1.71, 1.86, 2.05 or 2.28

**Ratios:** X Box: 1.96, 2.13, 2.32 or 2.55

**Options:** Air shift, manual shift override, Q Series Relief Valve, TPM, Anodes, TRV, ESP, SPV and MIV

## Qmid 1000, 1250 GPM



### Description

Optional maintenance free mechanical seal and one-piece pump body minimizes routine maintenance.  
NFA 1901 — 1000 or 1250 GPM ratings  
Single Stage  
Midship Split Drive Line Pump

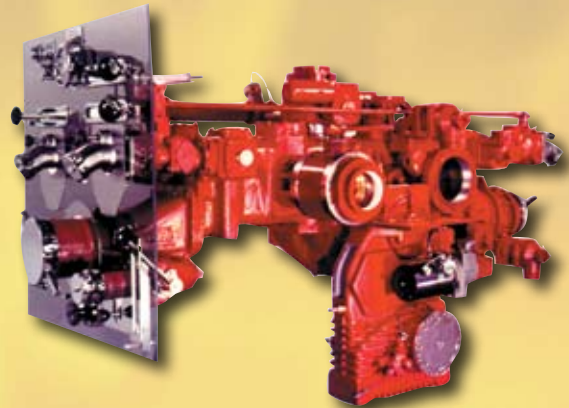
### Applications

Pumper — Aerial — Tanker  
Rescue Pumper  
Pumper Tanker

### Specifications

**Discharge:** Up to (14) 3" Ports and up to (5) 4" Ports  
**Suction:** (8) 3" Ports, Optional (3) 6" Ports and (2) 5" or 6" NH inlets, Tank to Pump 3" or 4" (Optional second Tank to Pump)  
**Pump:** Alloy cast iron body and heads, bronze impeller and wear rings, 17-4PH stainless pump shaft, packing  
**Transmission:** 16,000 lb-ft bottom drive through rating, 3 heat treated gears with sliding gear shift system  
**Ratios:** L, R, & S Box: 1.58, 1.71, 1.86, 2.05 or 2.28  
**Ratios:** X Box: 1.96, 2.13, 2.32 or 2.55  
**Options:** Air shift, manual shift override, Q Series Relief Valve, TPM, Anodes, TRV, ESP, SPV, MIV, Mechanical seal

## Qtwo 1000, 1250, 1500, 1750, 2000 GPM



### Description

Powerful two stage pump can exceed 2000 GPM NFA 1901 rating and may exceed up to 2600 GPM from a sufficient water source or in relay mode.  
NFA 1901 — 1000, 1250, 1500, 1750, or 2000 GPM ratings  
Two Stage  
Midship Split Drive Line Pump

### Applications

Pumper — Aerial — Tanker  
Rescue Pumper  
Pumper Tanker

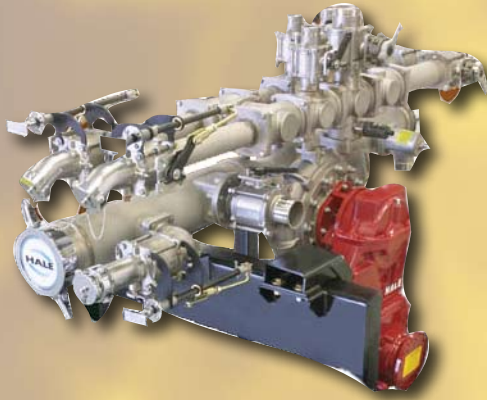
### Specifications

**Discharge:** Up to (14) 3" Ports and up to (5) 4" Ports  
**Suction:** (8) 3" Ports, Optional (3) 6" Ports and (2) 5" or 6" NH inlets, Tank to Pump 3" or 4" (Optional second Tank to Pump)  
**Pump:** Alloy cast iron body and heads, bronze impeller and wear rings, 17-4PH stainless pump shaft, mechanical seal or packing  
**Transmission:** 16,000 lb-ft bottom drive through rating, 3 heat treated gears with sliding gear shift system  
**Ratios:** L, R, & S Box: 1.58, 1.71, 1.86, 2.05 or 2.28  
**Ratios:** X Box: 1.96, 2.13, 2.32 or 2.55  
**Options:** Air shift, manual shift override, Q Series Relief Valve, TPM, Anodes, TRV, ESP, SPV and MIV, Mechanical seal or packing available. Available with CAFSPro Compressed Air Foam System.

Full body midship pumps can be equipped with universal valve extensions to mount popular Hale and Akron valves



**SMM-X 1000, 1250, 1500 GPM**



**Description**

Revolutionary fire pump constructed of high strength stainless steel resulting in reduced maintenance and extraordinary performance.  
 NFPA 1901 — 1000, 1250, or 1500 GPM ratings  
 Single Stage  
 Midship Split Drive Line Pump

**Applications**

Pumper — Aerial — Tanker  
 Rescue Pumper  
 Pumper Tanker

**Specifications**

**Discharge:** Up to (13) 3" Ports and up to (4) 4" Ports  
**Suction:** Up to (6) 3" Ports, Optional 5" Port and (2) 6" NH inlets, Tank to Pump 3" or 4"  
**Pump:** 300 Stainless steel body and heads, stainless impeller, 17-4PH stainless pump shaft, mechanical seal  
**Transmission:** 16,000 lb-ft bottom drive through rating, 3 heat treated gears with sliding gear shift system  
**Ratios:** X Box: 1.96, 2.13, or 2.32  
**Options:** Air shift, manual shift override, Anodes, TRV, ESP, SPVR and MIV

**APMG 500 GPM**



**Description**

Compact design with seven pump ratios for optimum performance. Ideal for smaller truck chassis  
 NFPA 1901 — 500 GPM ratings  
 Single Stage  
 Midship Split Drive Line Pump

**Applications**

Rescue Pumper  
 Pumper Tanker  
 Rural/Urban Interface  
 Initial Attack

**Specifications**

**Discharge:** 3" Flange  
**Suction:** 5" Victaulic®  
**Pump:** Alloy cast iron body and heads (bronze optional), bronze impeller and wear rings, 17-4PH stainless pump shaft, mechanical seal  
**Transmission:** 16,000 lb-ft bottom drive through rating, 3 heat treated gears with sliding gear shift system  
**Ratios:** 1.00, 1.27, 1.71, 1.92, 2.18, 2.67, or 3.00  
**Options:** Air shift, manual shift override, P Relief Valve, TPM/P35, Anodes, TRV, ESP, SPVR, MIV

## MG 500, 750, 1000 GPM



### Description

Compact design with seven pump ratios for optimum performance. Pump weight is less than 300 pounds. NFPA 1901 — 500, 750, or 1000 GPM ratings  
Single Stage  
Midship Split Drive Line Pump

### Applications

Rescue Pumper  
Pumper Tanker  
Rural/Urban Interface  
Initial Attack

### Specifications

**Discharge:** 4" Flange

**Suction:** 6" Victaulic®

**Pump:** Alloy cast iron body and heads, bronze impeller and wear rings, 17-4PH stainless pump shaft, mechanical seal

**Transmission:** 16,000 lb-ft bottom drive through rating, 3 heat treated gears with sliding gear shift system

**Ratios:** 1.00, 1.27, 1.71, 1.92, 2.18, 2.67, or 3.00

**Options:** Air shift, manual shift override, P Relief Valve, TPM/P35, Anodes, TRV, ESP, SPVR, MIV

## SMD-X 1000, 1250, 1500 GPM



### Description

Compact Stainless Max® pump constructed of high strength stainless steel for reduced maintenance. NFPA 1901 — 1000, 1250 or 1500 GPM ratings  
Single Stage  
Midship Split Drive Line Pump

### Applications

Pumper — Aerial — Tower  
Rescue Pumper  
Tankers/Tenders  
Pumper Tanker

### Specifications

**Discharge:** 3-<sup>3</sup>/<sub>4</sub>" Port Flange

**Suction:** 6" Port Flange

**Pump:** 300 series stainless steel volute and heads; stainless steel impeller, 17-4PH stainless pump shaft, mechanical seal

**Transmission:** 16,000 lb-ft bottom drive through rating, 3 heat treated gears with sliding gear shift system

**Ratios:** X Box 1.96, 2.13, or 2.32

**Options:** Air shift, manual shift override, P Series Relief Valve, TPM, Anodes, TRV, ESP, SPVR, MIV, Stainless Steel Intake Manifold. Available with optional Ram's Horn Intake Manifold, 6" Victaulic® or Hale 2417 flange connection.

**DSD 750, 1000, 1250, 1500 GPM**



**Description**

Compact midship pump designed for easy maintenance.  
NFPA 1901 — 750, 1000, 1250, or 1500\* GPM ratings  
Single Stage  
Midship Split Drive Line Pump

**Applications**

Pumper — Aerial — Tower  
Rescue Pumper  
Tankers/Tenders  
Pumper Tanker

**Specifications**

**Discharge:** 4" Flange  
**Suction:** 6" Victaulic®  
**Pump:** Alloy cast iron volute and head (bronze optional); bronze impeller and wear rings, 17-4PH stainless pump shaft, mechanical seal  
**Transmission:** 16,000 lb-ft bottom drive through rating, 3 heat treated gears with sliding gear shift system  
**Ratios:** L & R Series Gearbox — 1.58, 1.71, 1.86, 2.05, or 2.28  
**Options:** Air shift, manual shift override, P Series Relief Valve, TPM, Anodes, TRV, ESP, SPVR, MIV

*\*NOTE: Also available as a reverse (rear facing) pump up to 1250 GPM.*

**8FGF 2500, 2750, 3000 GPM**



**Description**

Highest flows available in a production mobile fire service pump. Tuned for flows in excess of 3000 GPM in industrial applications  
NFPA 1901 — 2500, 2750, or 3000 GPM ratings  
Single Stage  
Midship Split Drive Line Pump

**Applications**

Industrial Apparatus

**Specifications**

**Discharge:** 6" Flange  
**Suction:** 8" Flange  
**Pump:** Alloy cast iron volute and heads (bronze optional), bronze impeller and wear rings, 17-4PH stainless pump shaft, mechanical seal  
**Transmission:** 16,000 lb-ft bottom drive through rating, 3 heat treated gears with sliding gear shift system  
**Ratios:** X Series Gearbox — 1.96, 2.13 or 2.32  
**Options:** Air shift, manual shift override, TPM, Anodes, TRV, ESP, SPVR and MIV  
Optional L Series Gearbox with 1.58, 1.71, 1.86, 2.05 or 2.28 gear ratio



**8FGR 1500, 1750, 2000, 2500,  
2750, 3000 GPM**



### **Description**

Highest flows available in a production mobile fire service pump.

NFPA 1901 — 1500, 1750, 2000, 2250, 2500, 2750, or 3000 GPM ratings

Single Stage

Midship Split Drive Line Pump

### **Applications**

Pumper — Aerial — Tower

Pumper Tanker

Industrial Apparatus

### **Specifications**

**Discharge:** 6" Flange

**Suction:** 8" Flange

**Pump:** Alloy cast iron volute and heads (bronze optional), bronze impeller and wear rings, 17-4PH stainless pump shaft, mechanical seal

**Transmission:** 16,000 lb-ft bottom drive through rating, 3 heat treated gears with sliding gear shift system

**Ratios:** X Series Gearbox 1.96, 2.13 or 2.32

**Options:** Air shift, manual shift override, P Series Relief Valve, TPM, Anodes, TRV, ESP, SPVR and MIV, Optional L Series Gearbox with 1.58, 1.71, 1.86, 2.05 or 2.28 gear ratio

**CSD 500, 1000, 1250 GPM**



### **Description**

Front mount compact pump for pump and roll capability with full NFPA 1901 compliance.

NFPA 1901 — 500, 1000, or 1250 GPM ratings  
Single Stage

Front Engine PTO Pump

### **Applications**

Pumper

Tanker/Tender

Rural/Urban Interface

Pumper Tanker

Water Supply Apparatus

### **Specifications**

**Discharge:** 4" Flange

**Suction:** 6" Victaulic®

**Pump:** Alloy cast iron volute and heads (bronze optional), bronze impeller and wear rings, 17-4PH stainless pump shaft, mechanical seal

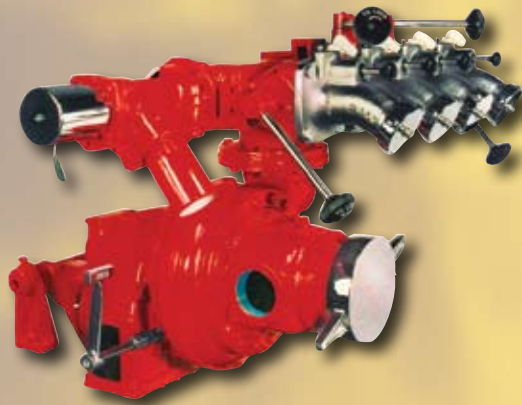
**Transmission:** Heat treated helical gear design with a 2-stage spline clutch shift system

**Ratios:** 1.40, 1.39, 1.81, 1.97, 2.16, or 2.37

**Options:** Air shift, P Series Pressure Relief Valve, TPM, Anodes, TRV, ESP, SPVR

Non-Manifolded Midship Split Drive Line / Front Mount

## HFM 750, 1000, 1250 GPM



### Description

Front mount manifolded pump with single stage design for ease of operation.

NFPA 1901 — 750, 1000, or 1250 GPM ratings

Single Stage

Front Engine PTO Pump

### Applications

Pumper

Tanker/Tender

Rural/Urban Interface

Pumper Tanker

Water Supply Apparatus

### Specifications

**Discharge:** (1) 3" Port

**Suction:** (2) 3" port, (1) 4" port, (1) 4-1/2", 5" or 6" NH inlet

**Pump:** Alloy cast iron volute and heads (bronze optional), bronze impeller and wear rings, 17-4PH stainless pump shaft, mechanical seal

**Transmission:** Heat treated helical gear design with a 2-stage spline clutch shift system

**Ratios:** 1.40, 1.39, 1.81, 1.97, 2.16, or 2.37

**Options:** Air shift, P Series Pressure Relief Valve, TPM, Anodes, TRV, ESP, SPVR

## APS/AP 250, 350, 450, 500 GPM



### Description

Compact high volume attack pumps, AP/APS pumps can handle most fires before the big pumper arrives.

Available with optional suction and discharge manifolding to minimize piping requirements.

APS Silent Series has new improved heavy-duty helical gearbox.

NFPA 1901 - 250, 350, 450, or 500 GPM rating

Single Stage

PTO Driven Pump

Engine or opposite engine rotation

### Applications

Tanker/Tender

Rural/Urban Interface

Initial Attack

### Specifications

**Discharge:** 3" Flange

**Suction:** 5" Victaulic®

**Pump:** Alloy cast iron volute and heads (bronze optional), bronze impeller and wear rings, 17-4PH stainless pump shaft, mechanical seal

**Transmission AP:** 2 heat treated gear design

**Transmission APS:** 2 heat treated helical gear design

**Ratios AP:** 2.00, 2.30, 2.55, or 2.85

**Ratios APS:** 2.33, 2.60, 2.91, or 3.74

**Options:** P Series Relief Valve, Anodes, TRV, ESP, SPVR

## 2CBP 50, 100 GPM



### Description

High on performance and low on power and maintenance requirements. Driven by the truck transmission power take-off, the 2CBP is designed to save wear on your midship pump when high pressure at low flow is required. Can be used as a stand alone high pressure pump. Pressures to 1000 PSI on two or more booster lines simultaneously.

Two Stage  
High Pressure  
PTO Driven Pump  
Engine or opposite engine rotation

### Applications

Pump and Roll  
Auxiliary pump on pumper  
Hose Reel Applications  
Initial Attack and Wildland Apparatus

### Specifications

**Discharge:** 1.5" NPT

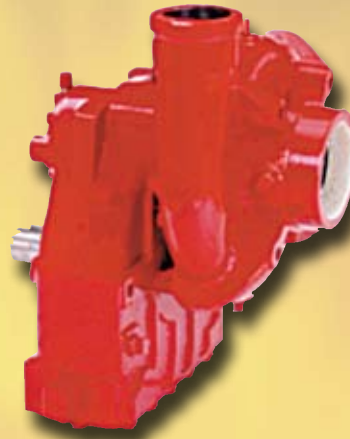
**Suction:** 2" NPT

**Pump:** Alloy cast iron volute and heads (bronze optional), bronze impeller and wear rings, 17-4PH stainless pump shaft, mechanical seal

**Transmission:** 2 heat treated gear design

**Ratios:** 2.00, 2.83, 3.94, or 4.93

## CBP 250 GPM



### Description

Heavy duty performance in a lightweight package. Driven by your truck transmission power take off, it can save wear and tear on your midship pumps. Can also perform as a pump in a light truck chassis  
NFA 1901 - 250 GPM rating.

Single Stage  
PTO Driven Pump  
Engine or opposite engine rotation

### Applications

Tanker/Tender  
Rural/Urban Interface  
Initial Attack

### Specifications

**Discharge:** 2" NPT

**Suction:** 3" NPT

**Pump:** Alloy cast iron volute and heads (bronze optional), bronze impeller and wear rings, 17-4PH stainless pump shaft, mechanical seal

**Transmission:** 2 heat treated gear design

**Ratios:** 2.00, 2.83, 3.94, or 4.93

**Options:** P Series Relief Valve, Anodes, TRV, ESP, SPVR



## MBP 750, 1000 GPM



### Description

High volume attack pump with heavy-duty quiet gear box in a compact lightweight package. Designed for Allison 10 bolt PTO drive systems. Choice of three pump ratios for optimum pump performance.

NFPA 1901 - 750 or 1000 GPM rating  
 Single Stage  
 PTO Driven Pump  
 Engine or opposite engine rotation

### Applications

Pumper  
 Tanker/Tender  
 Rural/Urban Interface  
 Initial Attack  
 Rescue Pumper

### Specifications

**Discharge:** 4" Flange  
**Suction:** 6" Victaulic®  
**Pump:** Alloy cast iron volute and heads, bronze impeller and wear rings, 17-4PH stainless pump shaft, mechanical seal  
**Transmission:** 2 heat treated helical gear design  
**Ratios:** 2.33, 2.60, or 2.91  
**Options:** P Series Relief Valve, TPM, Anodes, TRV, ESP, SPVR

## RSD/PSD 750, 1000, 1250, 1500 GPM



### Description

Compact single stage design, the RSD or PSD can be used as a PTO or rear mount pump. The RSD and PSD are compatible with Allison World Transmission PTOs and can be driven by a 4 x 4 Transfer case PTO or by a Hale RGA or MGA split drive PTO box.

NFPA 1901 - 750, 1000, 1250, or 1500\* GPM rating  
 Single Stage  
 PTO Driven Pump  
 Engine or opposite engine rotation

### Applications

Pumper  
 Tanker/Tender  
 Pumper Tanker

### Specifications

**Discharge:** 4" Flange  
**Suction:** 6" Victaulic®  
**Pump:** Alloy cast iron volute and heads (bronze optional), bronze impeller and wear rings, 17-4PH stainless pump shaft, mechanical seal  
**Transmission:** 2 heat treated helical gear design  
**Ratios:** 1.40, 1.59, 1.81, 1.98, 2.16, or 2.37  
**Options:** P Series Relief Valve, TPM, Anodes, TRV, ESP, SPVR  
 RSD has a variety of intake options including NST, suction manifolds, and flanges

*\*NOTE: RSD 1500 GPM pump available in engine rotation only*

**RMB 500, 750, 1000 GPM**  
**RMC 1000, 1250, 1500 GPM**

**RME 1500, 1750, 2000, 2250,**  
**2500, 2750, 3000 GPM**

### **RMB**



#### **Description**

Efficient direct drive rear mount pump with a big diameter impeller for slow drive line speed.

NFPA 1901 - 500, 750, or 1000 GPM rating

Single Stage

PTO Driven Rear Mount Pump

#### **Applications**

Pumper Tanker; Rescue Pumper

**Discharge:** 4" Flange

**Suction:** 5" Flange

#### **Specifications**

**Pump:** Alloy cast iron volute and heads (bronze optional), bronze impeller and wear rings, 17-4PH stainless pump shaft, mechanical seal

**Options:** P Series Relief Valve, TPM, Anodes, TRV, ESP, SPVR. Cast discharge manifolds and valves are also available.

### **RMC**



#### **Description**

Efficient direct drive rear mount pump with large diameter impeller for slow drive line speed and heavy duty pedestal base.

NFPA 1901 - 1000, 1250, or 1500 GPM rating

Single Stage

PTO Driven Rear Mount Pump

#### **Applications**

Pumper Tanker; Rescue Pumper

#### **Specifications**

**Discharge:** 4" Flange

**Suction:** 6" Flange

**Pump:** Alloy cast iron volute and heads (bronze optional), bronze impeller and wear rings, 17-4PH stainless pump shaft, mechanical seal

**Options:** P Series Relief Valve, TPM, Anodes, TRV, ESP, SPVR

### **RME**



#### **Description**

Highest volume rear mount pump with up to 3000 GPM rating, the RME is a very efficient direct drive rear mount pump.

NFPA 1901 1500, 1750, 2000, 2250, 2500, 2750, or 3000 GPM rating

Single Stage

PTO Driven Rear Mount Pump

#### **Applications**

Industrial Apparatus; Pumper Tanker; Rescue Pumper

#### **Specifications**

**Discharge:** 6" Flange

**Suction:** 8" Flange

**Pump:** Alloy cast iron volute and heads (bronze optional), bronze impeller and wear rings, 17-4PH stainless pump shaft, mechanical seal

**Options:** P Series Relief Valve, TPM, Anodes, TRV, ESP, SPVR

**SMD-A 1000, 1250, 1500 GPM**



**Description**

Stainless Max<sup>®</sup> rear mount or PTO pump with high strength stainless steel construction for reduced maintenance. Equipped with heavy duty quiet gear-box.

NFPA 1901 1000, 1250, or 1500 GPM rating

Single Stage

PTO Driven Rear Mount Pump

**Applications**

Pumper Tanker

Rescue Pumper

**Specifications**

**Discharge:** 3-3/4" Port Flange

**Suction:** 6" Port Flange

**Pump:** 300 series stainless steel volute and heads stainless steel impeller, 17-4PH stainless pump shaft, mechanical seal

**Transmission:** 2 heat treated helical gear design

**Ratio:** 1.40, 1.59, 1.81, 1.98, 2.16 or 2.57

**Options:** MIV, Anodes, TRV, ESP, SPVR, Inlet connection using Hale 2417 flange, optional 6" Victaulic<sup>®</sup>, 6" NH, 6" Ram's Horn dual inlet

**SMR-U/SMR-A 1000, 1250, 1500 GPM**



**Description**

High strength Stainless Max<sup>®</sup> rear mount pump constructed of stainless steel for reduced maintenance.

Available in both manifolded and non-manifolded configurations. Heavy duty pedestal supports pump.

NFPA 1901 1000, 1250, or 1500 GPM rating

Single Stage

PTO Driven Rear Mount Pump

**Applications**

Pumper Tanker

Rescue Pumper

**Specifications**

**Discharge:** Up to (14) 3" ports, up to (2) 4" ports

**Suction:** (2) 3" ports, (1) 6" NH inlet, (1) tank for pump 3" or 4", (1) 6" Victaulic<sup>®</sup>

**Pump:** 300 series stainless steel volute and heads stainless steel impeller, 17-4PH stainless pump shaft, mechanical seal

**Transmission A:** 2 heat treated helical gear design

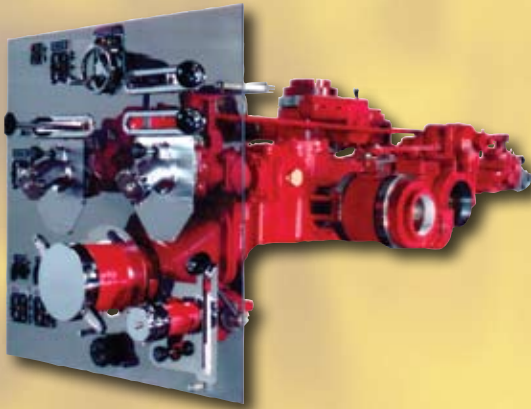
**Transmission U:** Direct Drive

**Ratio A:** 1.40, 1.59, 1.81, 1.98, 2.16, 2.57

**Options:** MIV, Anodes, TRV, ESP, SPVR, Vibration mount kit with subframe.



**Qmax-U 1000,1250, 1500,  
1750, 2000, 2250 GPM**



**Description**

Low maintenance components such as stainless steel shaft, high strength bronze impeller, renewable bronze clearance rings and self-lubricated, self-adjusting mechanical seal.  
NFPA 1901 1000, 1250, 1500, 1750, 2000, or 2250 GPM rating  
Single Stage  
Midship PTO Driven Pump

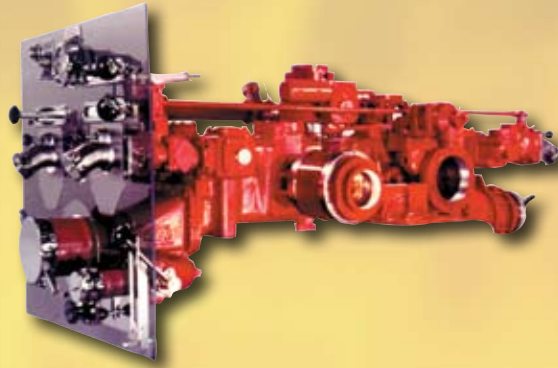
**Applications**

Pumper Tanker  
Rescue Pumper

**Specifications**

**Discharge:** Up to (14) 3" ports and up to (5) 4" ports  
**Suction:** (8) 3" ports, up to (3) 6" ports and (2) 5" or 6" NH inlets, tank to pump port 3" or 4" (Optional second Tank to Pump)  
**Pump:** Alloy cast iron volute and heads, bronze impeller and wear rings, 17-4PH stainless pump shaft, mechanical seal  
**Options:** Q Series Relief Valve, TPM, Anodes, TRV, ESP, SPVR, and MIV

**Qtwo-U 1000,1250, 1500,  
1750, 2000 GPM**



**Description**

Low maintenance components such as stainless steel shaft, high strength bronze impeller, renewable bronze clearance rings and self-lubricated, self-adjusting mechanical seal.  
NFPA 1901 1000, 1250, 1500, 1750, or 2000 GPM rating  
Single Stage  
Midship PTO Driven Pump

**Applications**

Pumper Tanker  
Rescue Pumper

**Specifications**

**Discharge:** Up to (14) 3" ports and up to (5) 4" ports  
**Suction:** 3" ports, up to (3) 6" ports and (2) 5" or 6" NH inlets, tank to pump port 3" or 4" (Optional second Tank to Pump)  
**Pump:** Alloy cast iron volute and heads, bronze impeller and wear rings, 17-4PH stainless pump shaft, mechanical seal  
**Options:** Q Series Relief Valve, TPM, Anodes, TRV, ESP, SPVR, and MIV

**Qpak J 500, 750, 1000 GPM**



**Description**

Short overall length front to rear allows for shorter wheelbase and smaller pump box.  
 NFPA 1901 500, 750, or 1000 GPM rating  
 Single Stage  
 Midship PTO Driven Pump

**Applications**

Pumper  
 Rescue Pumper  
 Tanker/Tender  
 Rural/Urban Interface  
 Initial Attack

**Specifications**

**Discharge:** Up to (11) 3" ports and (1) 4" port  
**Suction:** (4) 3" ports, (2) 4" ports and (2) 4-1/2" NH inlets, tank to pump port 3" or 4"  
**Pump:** Alloy cast iron volute and heads, bronze impeller and wear rings, 17-4PH stainless pump shaft, mechanical seal  
**Transmission:** 3 heat treated helical gear design  
**Ratios:** 1.80, 2.08, or 2.35  
**Options:** Q Series Relief Valve, TPM, Anodes, TRV, ESP, SPVR, and MIV

**Qpak A 500, 750, 1000 GPM**



**Description**

Short overall length front to rear allows for shorter wheelbase and smaller pump box  
 NFPA 1901 500, 750, or 1000 GPM rating  
 Single Stage  
 Midship PTO Driven Pump

**Applications**

Pumper  
 Rescue Pumper  
 Pumper Tanker

**Specifications**

**Discharge:** Up to (11) 3" ports and (1) 4" port  
**Suction:** (4) 3" ports, (2) 4" ports and (2) 4-1/2" NH inlets, tank to pump port 3" or 4"  
**Pump:** Alloy cast iron volute and heads, bronze impeller and wear rings, 17-4PH stainless pump shaft, mechanical seal  
**Transmission:** 2 heat treated helical gear design  
**Ratios:** 1.40, 1.59, 1.81, 1.97, 2.16, or 2.37  
**Options:** Q Series Relief Valve, TPM, Anodes, TRV, ESP, SPVR, and MIV

## Hale Pump Kits and Modules

Hale/Class 1 kits and modules are designed to provide an integrated system of configuring, ordering and installing Hale/Class 1 pumps and components.

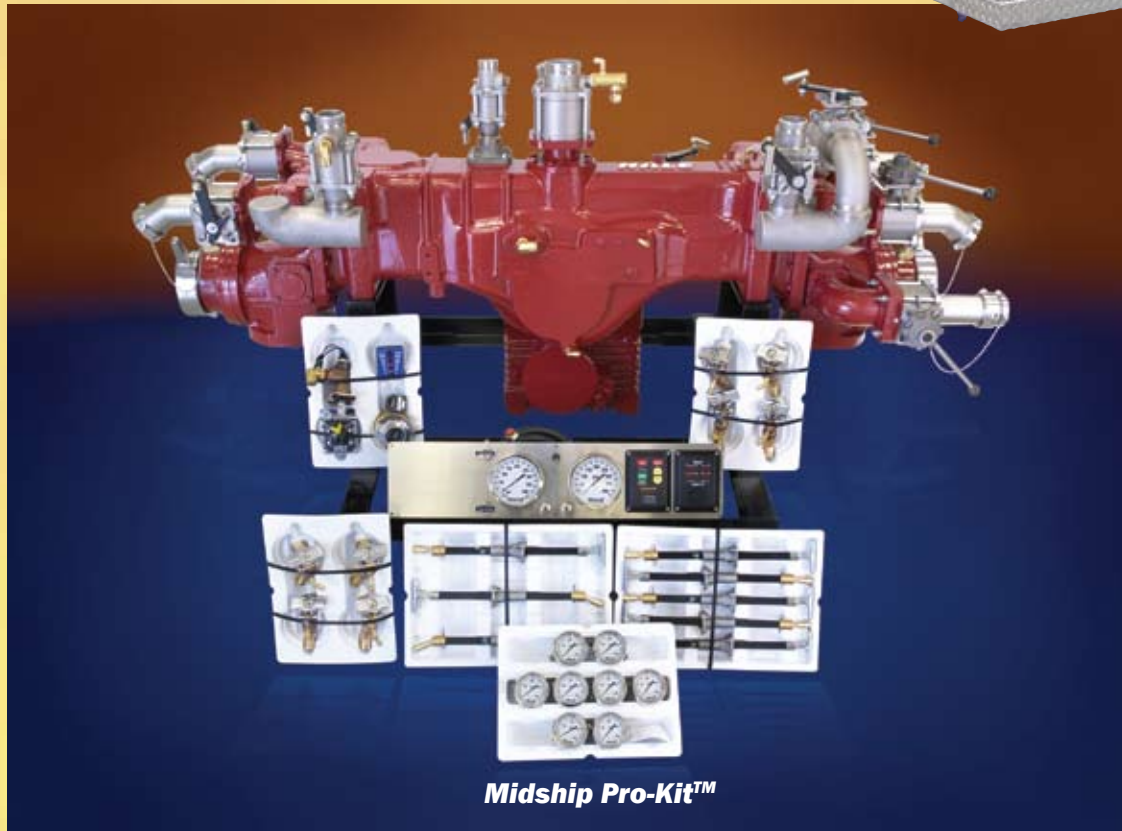
Hale's Pro-Kit™ program system is pre-engineered utilizing Hale/Class 1's state-of-the-art CAD system which allows for a simple, clean, cost effective and repeatable design. Major components are pre-assembled, pre-plumbed and pre-wired. The entire system provides the customer with Hale/Class 1's premium components which include durable high efficiency pumps, Torrent® SVS Stainless Steel valves, Class 1 controls and stainless steel plumbing.

Hale's Pump Module Assembly is pre-engineered utilizing Hale/Class 1's state-of-the-art CAD system. Major components are pre-assembled, pre-plumbed and pre-wired and provided to the OEM in a self-contained, tested unit with full pump enclosure. The entire system provides the customer with Hale/Class 1's premium components which include quality, high efficiency pumps, Class 1 electronics, Torrent® SVS Stainless Steel valves and stainless steel plumbing.

In addition to our quality Hale pumps and accessories and Class 1 electronics, a full module assembly includes a pump panel and complete pump enclosure.



**Pump Module**

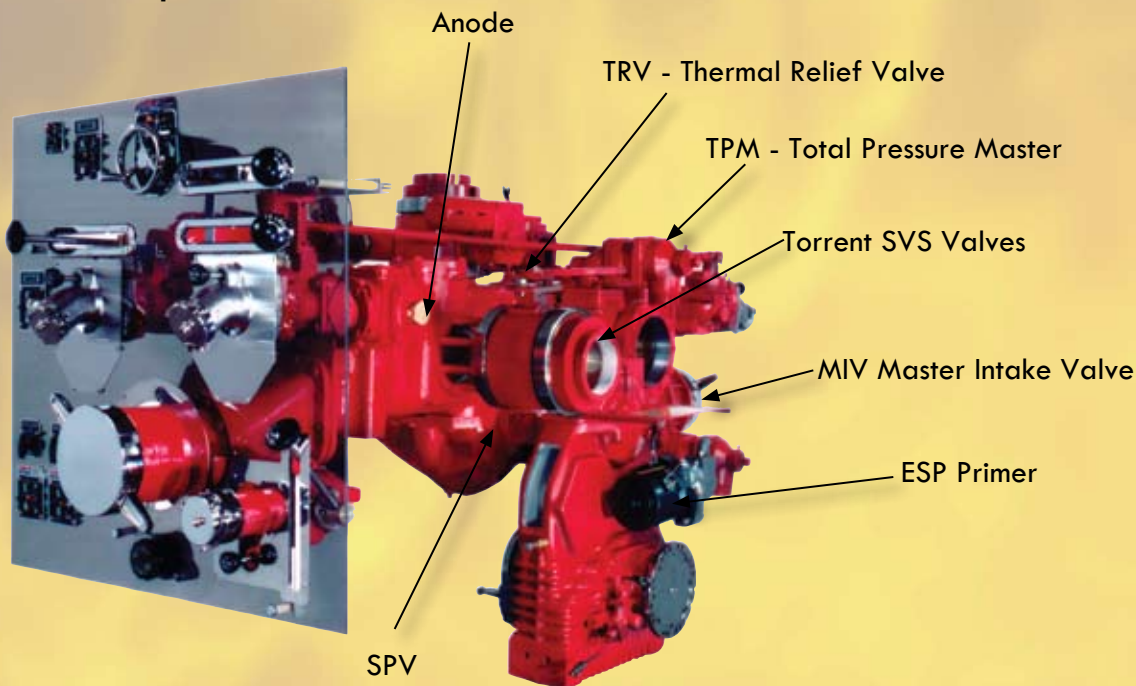


**Midship Pro-Kit™**



## Pump Options and Accessories

When installing a new Hale midship pump maximize performance with these exclusive Hale options



**Torrent® SVS Stainless Steel Valves**

### **Hale Torrent SVS Stainless Steel Valves**

Hale's Torrent SVS Valve line has been designed to maximize valve life and to exceed NFPA requirements. With a new eight bolt design and a patented locking mechanism that does not drift, Hale offers a wide variety of valves to meet the needs of the fire service. All valve bodies and balls are made of stainless steel for true corrosion and wear resistance. The patented duplex seal design offers unparalleled performance. Hale offers a 10 year warranty on stainless steel parts against manufacturer's defects and a 2 year warranty on seats, seals and "O" rings.



**Total Pressure Master Relief Valve**

### **TPM Total Pressure Master Relief Valve**

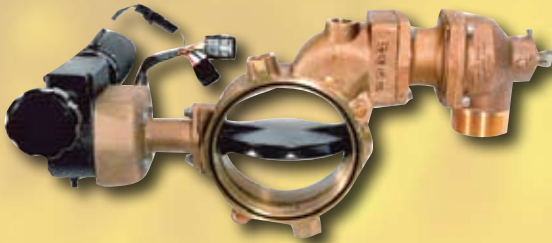
- Monitors and responds to pressure variations on both the suction (inlet) and discharge sides of the pump from a single simple control
- Pump is protected from overpressure
- Meets or exceeds NFPA 1901 specifications 75 to 600 psi operating rating
- Total protection throughout the pump and hose lines utilizing automatic mechanical sensing devices
- Will not interfere with priming. The dump valve is mounted on the discharge, not the suction.
- Excess pressure is dumped to the atmosphere from the discharge side or when required
- Ideal for series pumping and water supply/rating situations.



**Thermal Relief Valve**

**TRV and TRV-L 120 Thermal Relief Valve**

- Helps protect pump by systematically monitoring pump water temperature
- Easily adapted to pump discharge openings
- Automatically relieves water from pump when water temperature of the pump water exceeds temperature setting of the valve
- Mechanical dependability — no electronics
- TRV-L has panel warning indicator lamp
- Compatible with foam concentrates



**Master Intake Valve**

**MIV Master Intake Valve**

- Located behind the operator panel
- No unsightly, bulky valve hanging outside the running boards
- Full flow bore and butterfly design
- Oversized 6.4" diameter bore
- Designed for water flows at draft up to 1500 gpm with a single 6" suction hose
- Cycles from full closed to full open position in more than 3 seconds.



**Environmentally Safe Priming System**

**ESP Environmentally Safe Priming System**

- Needs no lubricant
- No oil to check, no oil expelled to ground
- Environmentally safe
- Totally enclosed motor to prevent dust, dirt and water from entering
- Electric rotary vane type positive displacement primer available with 12 volt or 24 volt DC motor



**Semi-Automatic Priming Valve**

**SPV Semi-Automatic Priming Valve**

- Push-button priming valve activated
- Direct mounted on midship pumps
- Easy installation — replaces standard priming valve
- Saves space on the pump panel
- Tested to 600 psi pressure and 29" HG vacuum



**Anode System**

**Anode System**

Helps prevent damage from galvanic corrosion within the pump. Hale's anodes fit on any Hale truck mounted pump. Easy to install, they can be mounted in any position. Available in standard zinc or optional magnesium materials.



## Class 1 Pump Options and Accessories



**TPG Total Pressure Governor**



**Engine Status Center**



**"Intelli-Tank"™ Level Gauges**



**Caps and Plugs**

### **TPG Total Pressure Governor**

Class 1's new Total Pressure Governor is compact and ergonomically designed with improved features and capabilities.

#### **Features**

- Audible alarm output
- Easy set-up and configuration
- Large, easy-to-read alpha-numeric display
- Improved ergonomic tactile feedback buttons
- Totally integrated instruments including battery voltage, temperature, oil pressure, and RPM
- Controls engine speed directly over the J1939 CAN bus for improved resolution and response
- Integrated engine information reduces required pump panel space
- Programmable presets

### **Engine Status Center and ENFO IV**

Easy access to engine information. Provides a single display that puts critical engine information in an easy-to-read unit. Eliminates individual engine gauges. Visual and audible alarms can alert operators when monitored functions are at critical levels. Pump hours, engine hours and user defined hours are easily retrieved through menu selections (not available on ENFO IV). Alarm set-points can be preset for custom installation.

### **Intelli-Tank™ Level Gauges**

Intelli-Tank displays feature wide angle viewing and ultra-bright LED's for high visibility even in direct sunlight. An affordable design uses Class 1's proven pressure transducer approach to provide nine accurate levels of indication.

- Low tank level visual and audible indicators
- Calibrates to any size/shape tanks
- Uses industrial pressure transducer instead of probes
- Built-in self-diagnostics
- Compact rocker switch cab display (requires remote driver module)
- One wire data link allows for unlimited displays
- Remote light tank-level driver module
- Programmable night dimming feature
- Water and foam models available

### **Caps and Plugs**

- Designed to meet NFPA 1901 and 1663 standards
- 3" and smaller caps and plugs come complete with 12" chain
- 6" long handle cap is designed for custom center inserts with contrasting border colors in your choice of red, blue or black
- Patent-pending vent feature





**Analog Gauges**

**Fire Service Gauges**

Interlube-filled pressure gauges with patented Sub-Z freeze-proof isolators are a must for all fire apparatus. The stem and Bourdon tube are filled and sealed with a special low-temperature material which prevents water from entering the tube and freezing.

- All Class 1 gauges meet or exceed ANSI and NFPA standards
- Class 1's internal breathing diaphragm eliminates the need for a large air bubble in the mid-range of the gauge which can distort readings
- All fire gauges feature "internal breathing" diaphragms to compensate the case for changes in internal case pressure
- Customized dials are available
- Back lit dry gauges are available



**Flowminders**

**Flowminders**

See what you are flowing and how much pressure is at the pump. Pump and aerial apparatus operators can read the flow (GPM) on each line to ensure that just the right amount of water is being discharged. Compact design frees up pump panel space. Large and easy-to-read information. Easy to calibrate. Class 1 Flowminders come in a variety of configurations.



**ES-Key Management System**

**ES-Key® Management System**

Es-Key configurable electrical system allows electrical components to communicate more efficiently. The ES-Key system uses microprocessors to communicate between each other and selected circuits, eliminating multitudes of copper wires between switches, relays and components. Information is carried on a twisted pair network circuit.

- Reliable electrical system
- Unmatched real-time on board diagnostic capabilities
- Fewer light duty mechanical parts
- Easily re-configurable
- Elimination of wires results in vehicle weight reduction
- Reduced downtime
- Quick accurate information is returned to the operator
- Multiple Smart Programmable Switch panels
- Multiple power distribution modules
- Program using wireless PDS or ES-Key Professional software



**FoamLogix®**



**FoamLogix 2.1A**



**CAFSPRO®**

Add Compressed Air Foam or Foam Proportioning capability to your apparatus for increased firefighting ability. Hale offers push-button CAFS and foam proportioning for the ultimate in ease of use and flexibility.

### **FoamLogix® 3.3 and 5.0**

The FoamLogix® series of foam proportioners provide firefighting flexibility engineered into a easy-to-use, push-button control system. FoamLogix is designed to use both Class A and most Class B concentrates. FoamLogix provides accurate and reliable Class A foam injection for ordinary combustibles such as structure and brush fires and alcohol resistant AFFF (AR-AFFF) injection for gasoline spills and fires that contain MTBE or alcohol additives.

### **FoamLogix® 2.1A**

FoamLogix® 2.1A is a cost-effective, electronic discharge side proportioning package. FoamLogix 2.1A handles Class A foams and features a full function digital control display.

### **CAFSPRO®**

The Hale CAFSPRO® Midship System takes the pump operator guesswork out of delivering compressed air foam. Operation is as simple as operating a standard "plain water" pumper. Engage the pump and the system is immediately available to make compressed air foam. Foam consistency changes can be made at the push of a button.

CAFSPRO offers consistent foam delivery with push button operation. A delivery and operation program is included.

## Pro-Tech Extended Warranty

Fighting fires is your business — Looking out for your pump is ours

Few things in life are more reliable than your new Hale midship pump. Quality engineered and manufactured, our pumps are constructed of high strength, long lasting castings.

### High-5 Performance Warranty

At "NO CHARGE" Hale offers a STANDARD HIGH-5 PERFORMANCE WARRANTY\* covering a period of five (5) years from the date the product is first placed into service or five and one-half (5-1/2) years from date of shipment by Hale (whichever period shall be first to expire). As part of Hale's standard High-5 Performance Warranty, Hale covers PARTS AND LABOR for the first two (2) years and PARTS ONLY for years three (3) through five (5).



### Pro-Tech Program "Buy More, Pay Less"

If you want additional coverage, Hale's ProTech

Extended Warranty Program offers an exceptional value in additional long-term protection and peace of mind on Hale major pumps beyond the standard 5 year warranty period. The ProTech Extended Warranty covers LABOR for one to three additional years. You choose the level you need.

1 Year Extended Warranty.....	\$250
Covers labor for year three in the standard warranty	
2 Year Extended Warranty.....	\$750
Covers labor for years three and four in the standard warranty	
3 Year Extended Warranty .....	\$1500
Covers labor for years three, four, and five in the standard warranty	

With the Pro Tech Extended Warranty, you get coverage beyond Hale's standard 5 Year Warranty. The Pro-Tech Warranty offers LABOR coverage for years three to five in the Hale 5 Year Standard Warranty. Hale exclusively offers extended Labor warranties. Whichever term you choose, you'll get extra warranty coverage — and lots more time to make the most of it.

### There's a Sixty Day Deadline

Strong as the Pro-Tech Warranty is, it's only as good as your commitment to maintaining and caring for your new Hale pump. So we must ask you to begin the process by committing to an extended warranty within sixty days of placing your new pump in service. If you have any questions, please feel free to call us at 610/825-6300 and ask for our Customer Service Department.

*\*(Fire Service Applications Only)*





Hale also offers a complete line of engine driven pumps from portable pumps to 3000 GPM custom trailers.

Class 1 offers an extensive line of plumbing products to build reliable and cost effective fire apparatus.



Hale Products Inc. • A Unit of IDEX Corporation  
700 Spring Mill Avenue • Conshohocken, PA 19428  
Phone: 610/825-6300 • Fax: 610/825-6440 • 800-220-4253  
[www.haleproducts.com](http://www.haleproducts.com)



Class 1® • A Unit of Hale Products  
607 NW 27th Avenue • Ocala, FL 34475  
Phone: 352/629-5020 • Fax: 352/629-2902 • 800-533-3569  
[www.class1.com](http://www.class1.com)

Rev 1, 7/2008

# Vehicle Mounted Pumps