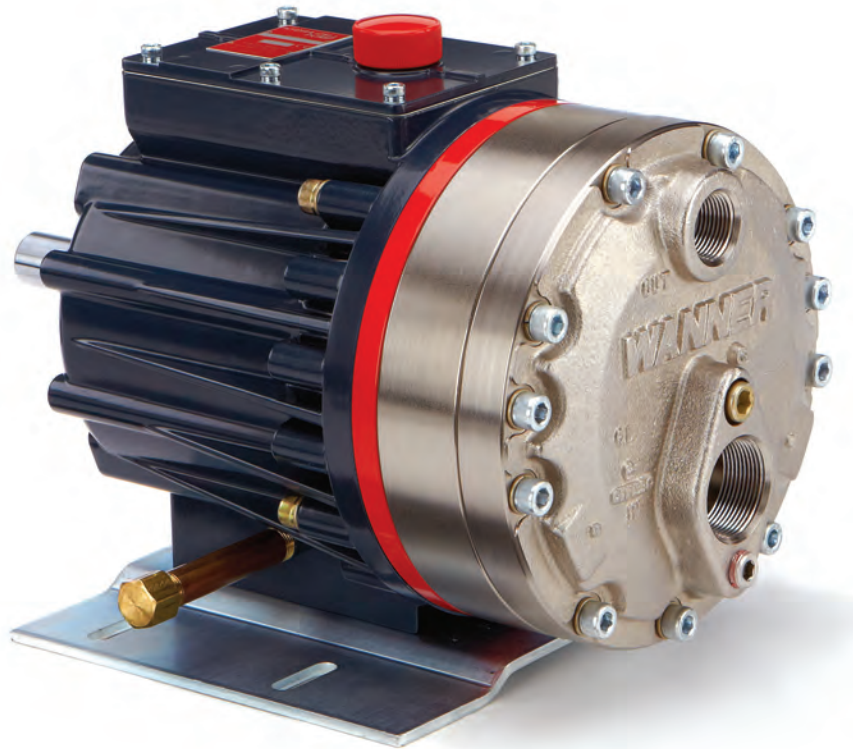


# Hydra-Cell<sup>®</sup>

## Seal-less Pumps

**Versatile, Reliable Pumps for a Wide Range of Applications**



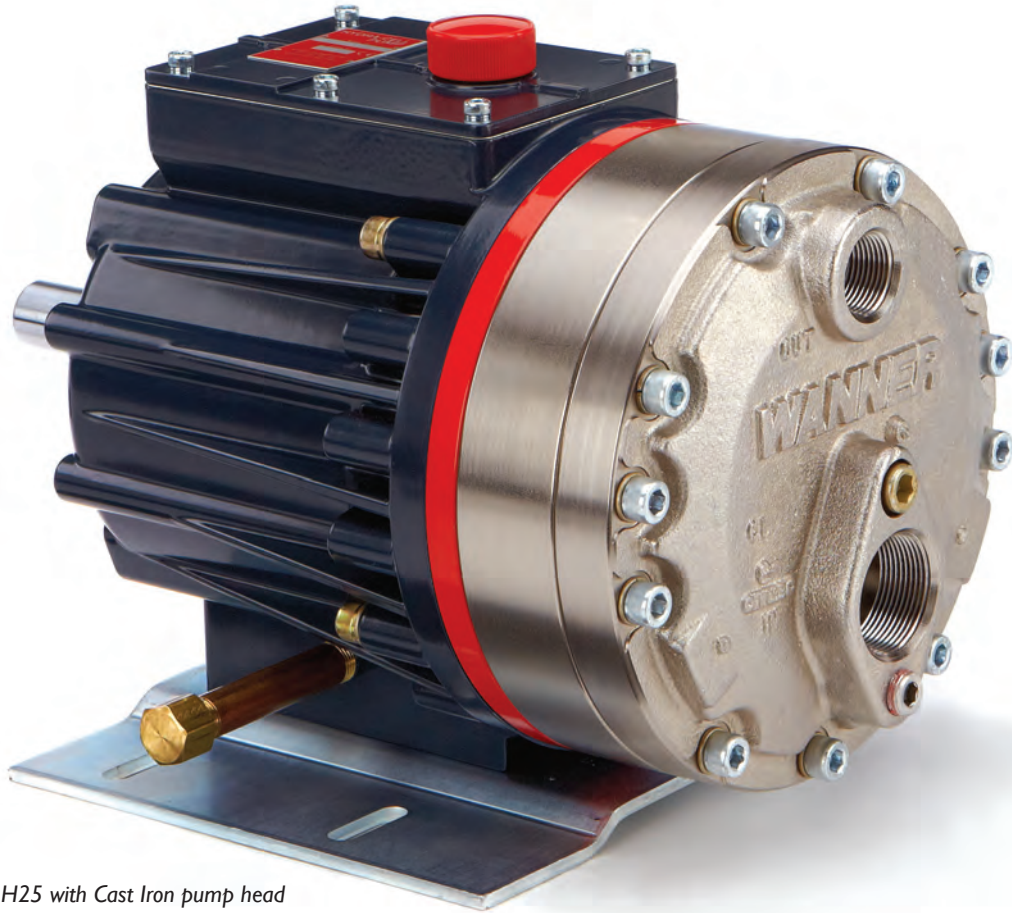
### **H25 Series**

- Pumps the full spectrum of low-to-high viscosity fluids.
- Features a seal-less design and horizontal disk check valves that enable the pump to handle abrasives and particulates that might damage or destroy other types of pumps.
- Simple, compact design reduces initial investment and lowers maintenance costs.
- Operational efficiencies reduce energy costs.
- Able to run dry without damage (or additional maintenance) to the pump in case of accident or operator error.
- Tolerates non-ideal operating conditions.
- Minimizes maintenance and downtime because there are no seals, packing or cups to leak or replace.

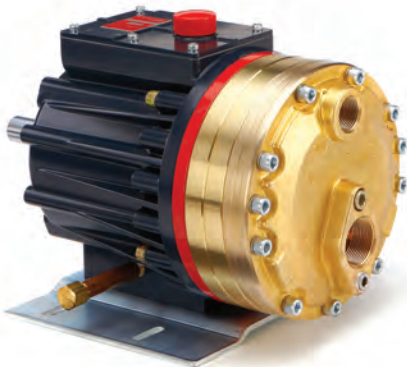
# H25 Series

Maximum Flow Rate: 20.0 gpm (75.9 l/min)

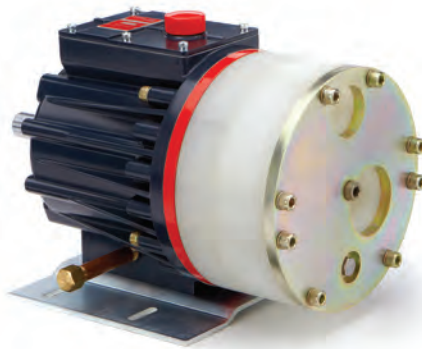
Maximum Pressure: 1000 psi (69 bar) for Metallic Pump Heads  
350 psi (24 bar) for Non-metallic Pump Heads



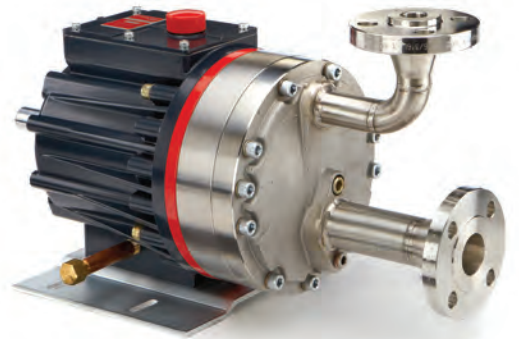
*H25 with Cast Iron pump head*



*H25 with Brass pump head*



*H25 with Polypropylene pump head*



*H25 with Stainless Steel pump head and ANSI flanges*

# H25 Series Performance

## Capacities

### Flow

Model	Max. Input rpm	Max. Flow @ 1000 psi (69 bar)	
		gpm	l/min
H25-X	1050	20.0	75.7
H25-E	1150	20.0	75.9
H25-S	1150	16.2	61.5
H25-I	1150	11.8	44.7

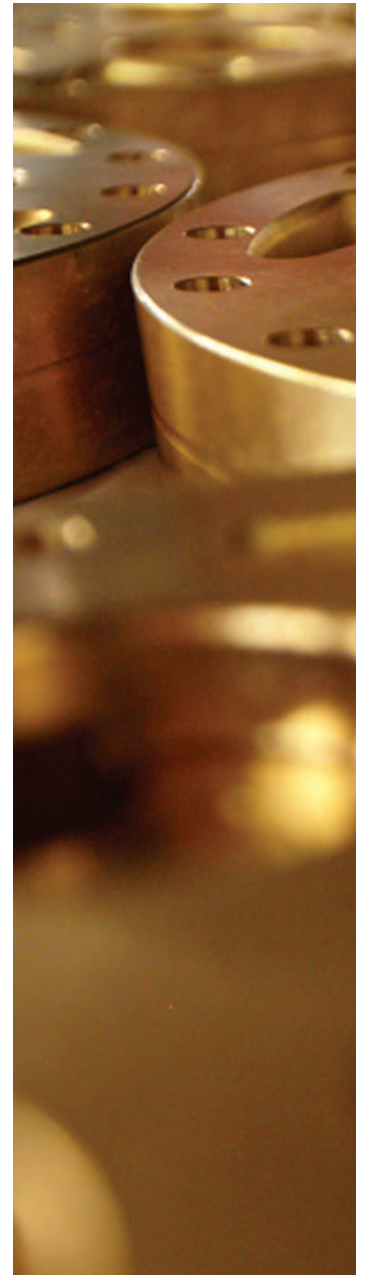
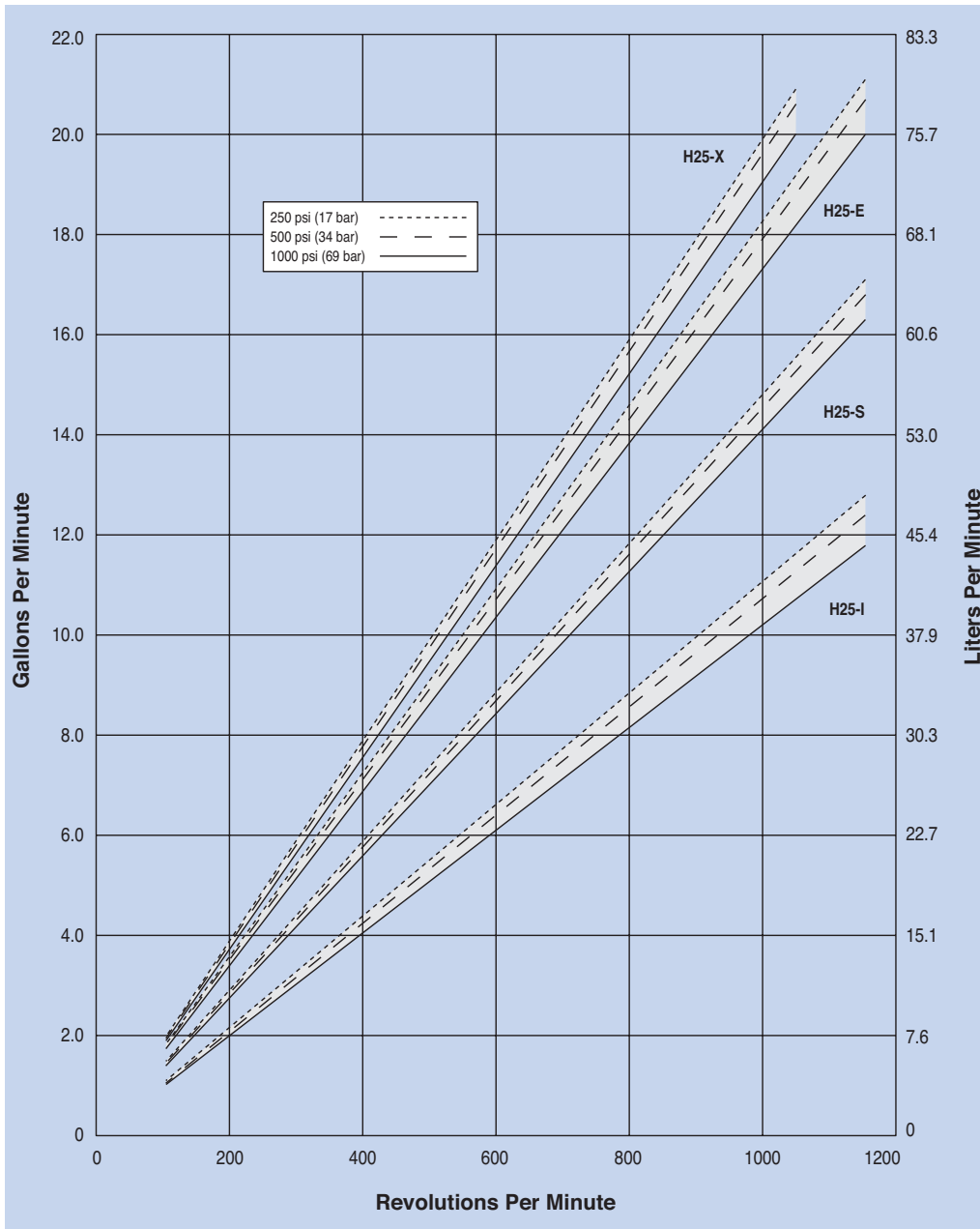
### Pressure

**Maximum Inlet Pressure**  
250 psi (17 bar)

**Maximum Discharge Pressure**  
Metallic Pump Heads:  
1000 psi (69 bar)  
Non-metallic Pump Heads:  
250 psi (17 bar) Polypropylene  
350 psi (24 bar) PVDF

Performance and specification ratings apply to H25 configurations unless specifically noted otherwise.

## Maximum Flow at Designated Pressure



# H25 Series Specifications

## Flow Capacities @1000 psi (69 bar)

Model	rpm	gpm	l/min
H25-X	1050	20.0	75.7
H25-E	1150	20.0	75.9
H25-S	1150	16.2	61.5
H25-I	1150	11.8	44.7

## Delivery @1000 psi (69 bar)

Model	gal/rev	liters/rev
H25-X	0.0190	0.0721
H25-E	0.0174	0.0660
H25-S	0.0141	0.0535
H25-I	0.0103	0.0389

## Maximum Discharge Pressure

Metallic Heads:	1000 psi (69 bar)
Non-metallic Heads:	250 psi (17 bar) Polypropylene 350 psi (24 bar) PVDF

## Maximum Inlet Pressure 250 psi (17 bar)

## Maximum Operating Temperature

Metallic Heads:	250 °F (121 °C) - Consult factory for correct component selection for temperatures from 160 °F (71 °C) to 250 °F (121 °C).
Non-metallic Heads:	140 °F (60 °C)

## Maximum Solids Size 800 microns

## Inlet Port 1-1/2 inch NPT

## Discharge Port 1 inch NPT

## Shaft Diameter 1-1/8 inch (28.6 mm)

## Shaft Rotation Reverse (bi-directional)

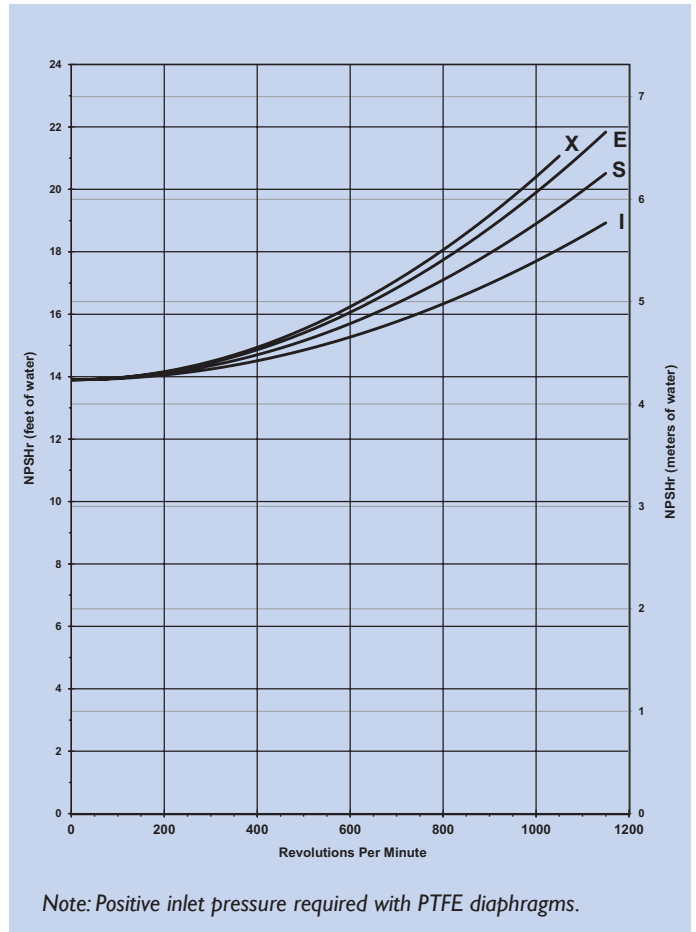
## Bearings Tapered roller bearings

## Oil Capacity 3.3 US quarts (3.1 liters)

## Weight

Metallic Heads:	125 lbs. (56.8 kg)
Non-metallic Heads:	90 lbs. (40.9 kg)

## Net Positive Suction Head (NPSHr)



## Self-priming:

Each Hydra-Cell pump has different lift capability depending on model size, cam angle, speed, and fluid characteristics. To ensure that your specific lift characteristics are met, refer to the inlet calculations regarding friction, and acceleration head losses in your Hydra-Cell Installation & Service Manual. Compare those calculations to the NPSHr curves above.

## Calculating Required Power

$$\frac{50 \times \text{rpm}}{63,000} + \frac{\text{gpm} \times \text{psi}}{1,460} = \text{electric motor hp}$$

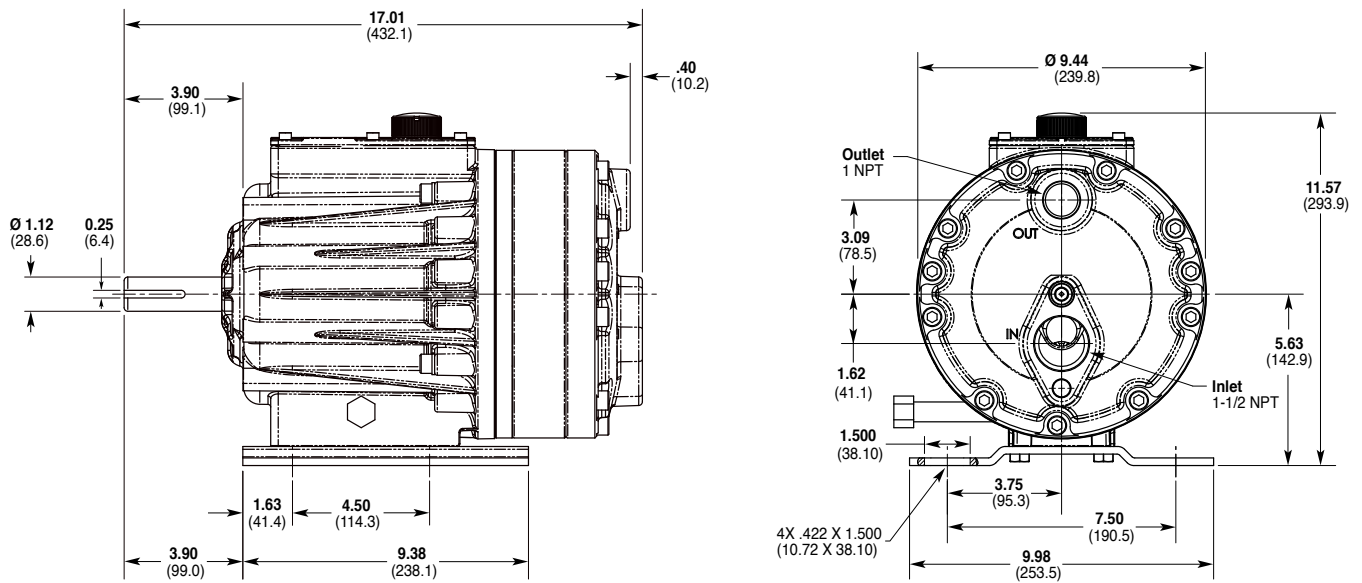
$$\frac{50 \times \text{rpm}}{84,428} + \frac{\text{l/min} \times \text{bar}}{511} = \text{electric motor kW}$$

When using a variable frequency controller (VFD) calculate the hp or kW at minimum and maximum pump speed to ensure the correct hp or kW motor is selected. Note that motor manufacturers typically de-rate the service factor to 1.0 when operating with a VFD.

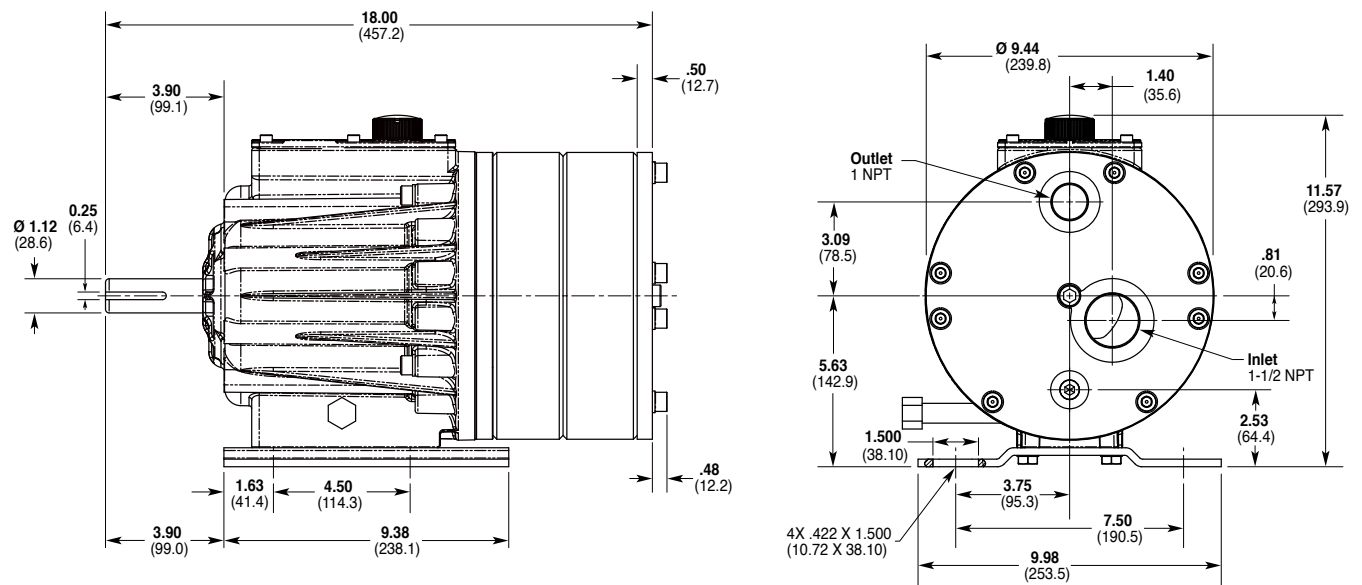


# H25 Series Representative Drawings

## H25 Models with Metallic Pump Head Inches (mm)



## H25 Models with Non-metallic Pump Head Inches (mm)



**Note:** Contact factory for additional drawings of specific models and configurations.

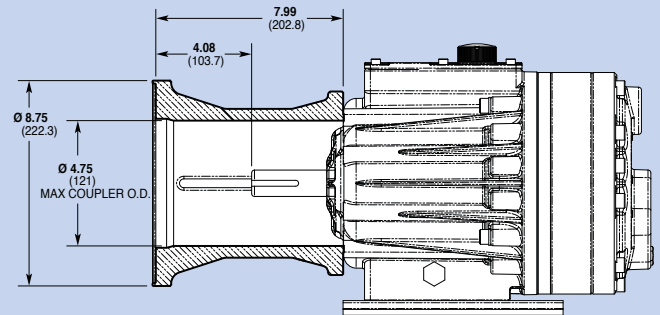
# H25 Series Representative Drawings

## Pump/Motor Adapter Inches (mm)

### Part Number: A04-041-I200

For: 182TC, 184TC, 213, 215TC, 254 and 256TC frame motors.

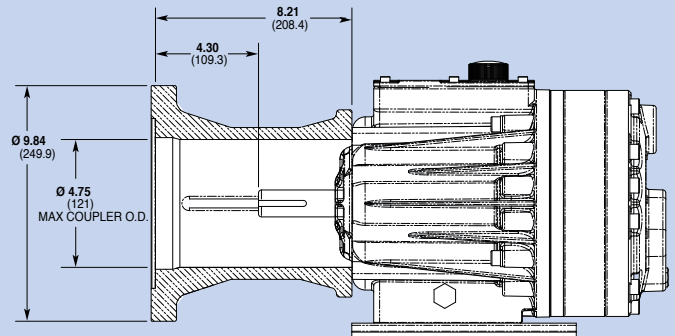
*Metric adapter available - consult factory.*



### Part Number: A04-042-I200

For: 284TC and 286TC frame motors.

*Metric adapter available - consult factory.*



## Valve Selection

A seal-less C63 Pressure Regulating Valve is recommended for Hydra-Cell H25 pumping systems, especially for high-pressure requirements or when handling dirty fluids.



A C23 Pressure Regulating Valve provides a capable, lower-cost alternative to C63 valves for Hydra-Cell H25 pumping systems.



*For complete specifications and ordering information, consult the Hydra-Cell Master Catalog.*

# H25 Series **How to Order**

## Ordering Information

1	2	3	4	5	6	7	8	9	10	11	12
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A complete H25 Series Model Number contains 12 digits including 9 customer-specified design and materials options, for example: H25XKCGNNECA.

Digit	Order Code	Description
<b>1-3</b>	<b>H25</b>	<b>Pump Configuration</b> Shaft-driven (NPT Ports or ANSI Flanges)
<b>4</b>	<b>X</b>	<b>Hydraulic End Cam</b> Max 20.0 gpm (75.7 l/min) @ 1050 rpm
	<b>E</b>	Max 20.0 gpm (75.9 l/min) @ 1150 rpm
	<b>S</b>	Max 16.2 gpm (61.5 l/min) @ 1150 rpm
	<b>I</b>	Max 11.8 gpm (44.7 l/min) @ 1150 rpm
<b>5</b>	<b>K</b>	<b>Pump Head Version</b> Kel-Cell NPT Ports
	<b>M</b>	Machined housing to accept C-face adapter/gearbox
<b>6</b>	<b>B</b>	<b>Pump Head Material</b> Brass
	<b>C</b>	Cast Iron (Nickel-plated)
	<b>G</b>	Duplex Alloy 2205 (with Hastelloy C followers & follower screws)
	<b>M</b>	PVDF (with Hastelloy C followers & follower screws)
	<b>N</b>	Polypropylene (with Hastelloy C followers & follower screws)
	<b>P</b>	Polypropylene (with 316L Stainless Steel followers & follower screws)
	<b>R</b>	316L Stainless Steel ANSI flange class 150 x 600
	<b>S</b>	316L Stainless Steel
	<b>T</b>	Hastelloy CW12MW
<b>7</b>	<b>A</b>	<b>Diaphragm &amp; O-ring Material</b> Aflas diaphragm / PTFE o-ring
	<b>E</b>	EPDM (requires EPDM-compatible oil - Digit 12 oil code C)
	<b>G</b>	FKM
	<b>J</b>	PTFE (available with E and S cams only; 1050 rpm max.)
	<b>P</b>	Neoprene
	<b>T</b>	Buna-N
<b>8</b>	<b>C</b>	<b>Valve Seat Material</b> Ceramic
	<b>D</b>	Tungsten Carbide
	<b>H</b>	17-4 Stainless Steel
	<b>N</b>	Nitronic 50
	<b>T</b>	Hastelloy C

Digit	Order Code	Description
<b>9</b>	<b>C</b>	<b>Valve Material</b> Ceramic
	<b>D</b>	Tungsten Carbide
	<b>F</b>	17-4 Stainless Steel
	<b>N</b>	Nitronic 50
	<b>T</b>	Hastelloy C
<b>10</b>	<b>E</b>	<b>Valve Springs</b> Elgiloy
	<b>H</b>	17-7 Stainless Steel
	<b>T</b>	Hastelloy C
<b>11</b>	<b>C</b>	<b>Valve Spring Retainers</b> Celcon
	<b>H</b>	17-7 Stainless Steel
	<b>M</b>	PVDF
	<b>P</b>	Polypropylene
	<b>T</b>	Hastelloy C
	<b>Y</b>	Nylon (Zytel)
<b>12</b>	<b>A</b>	<b>Hydra-Oil</b> 10W30 standard-duty oil
	<b>B</b>	40-wt for continuous-duty oil (use with 316L SST or Hastelloy CW12MW pump head - standard)
	<b>C</b>	EPDM-compatible oil
	<b>E</b>	Food-contact oil
	<b>G</b>	5W30 cold-temp severe-duty synthetic oil
	<b>H</b>	15W50 high-temp severe-duty synthetic oil

H25 Pump Housing is standard as Cast Aluminum.  
Upgrade to Ductile Iron available.

### Consult the Hydra-Cell Master Catalog for:

- Motors, bases, couplings and other pump accessories
- Hydra-Oil selection and specification information
- Design considerations, installation guidelines, and other technical assistance in pump selection

# Hydra-Cell®

## Seal-less Pumps



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