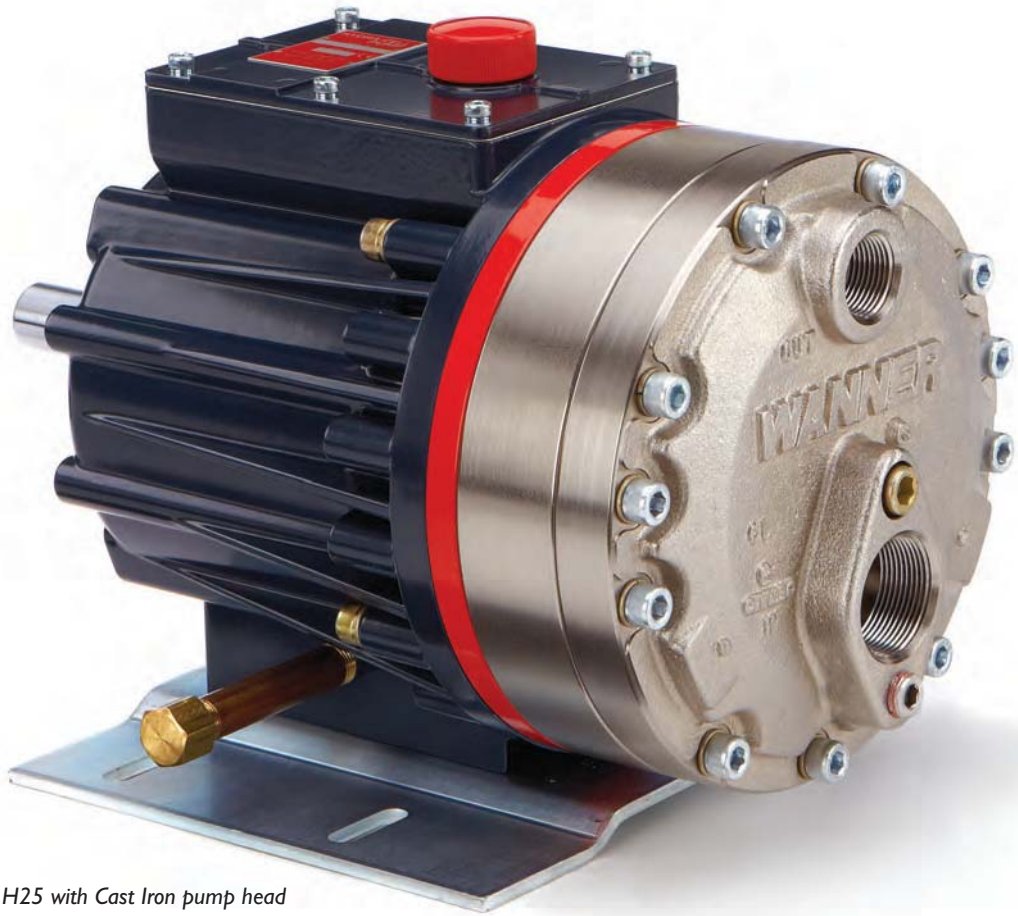
H25 Series

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

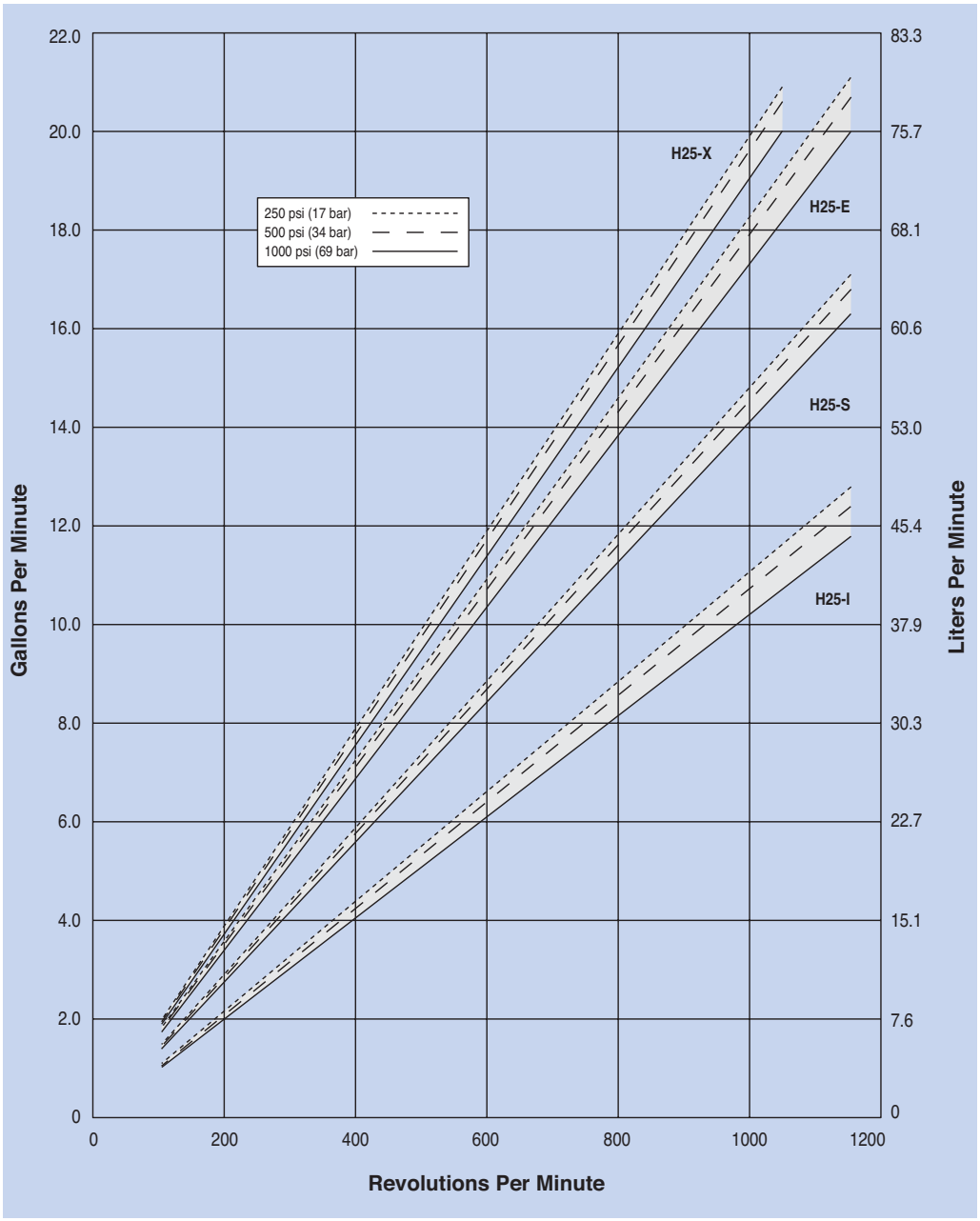
Pressure

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	2.5 US quarts (2.4 liters) - See pages 94 and 95 for oil selection and specification.
Weight	
Metallic Heads:	125 lbs. (56.8 kg)
Non-metallic Heads:	90 lbs. (40.9 kg)

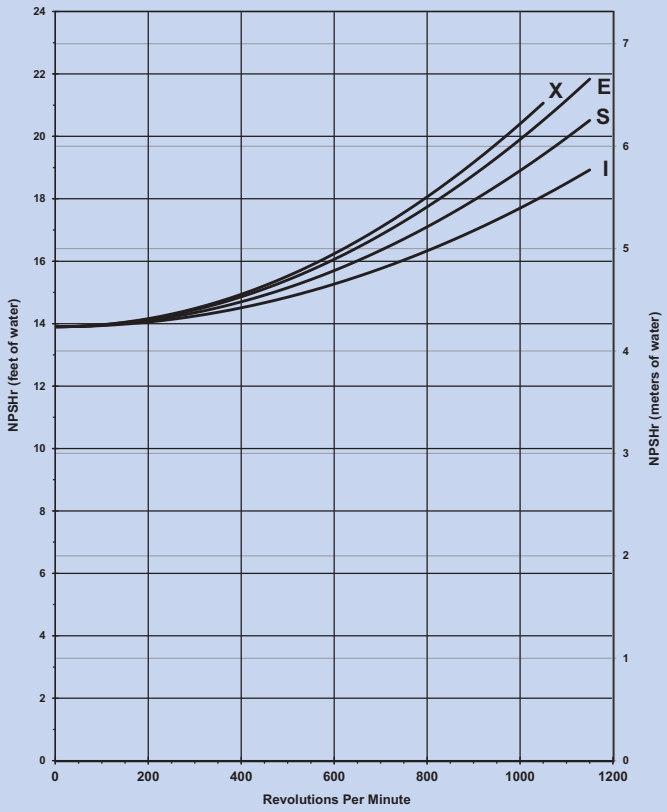
Calculating Required Power

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

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

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.

Net Positive Suction Head (NPSHr)



Note: Positive inlet pressure required with PTFE diaphragms.

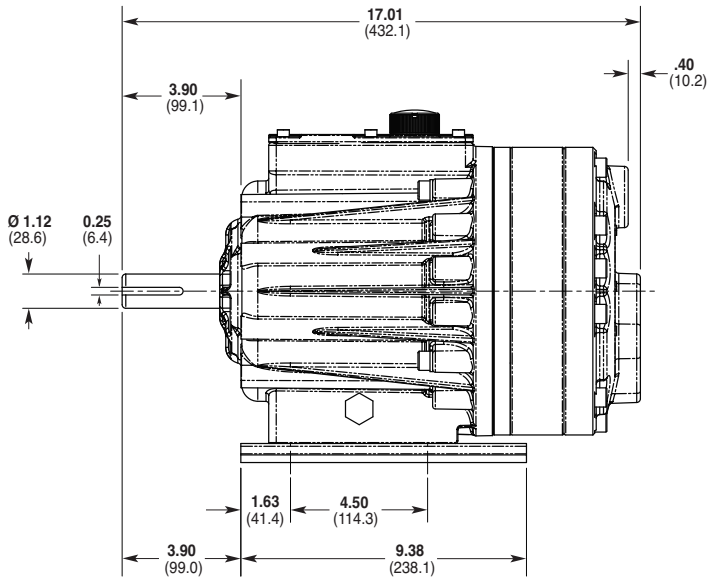
Self-priming:

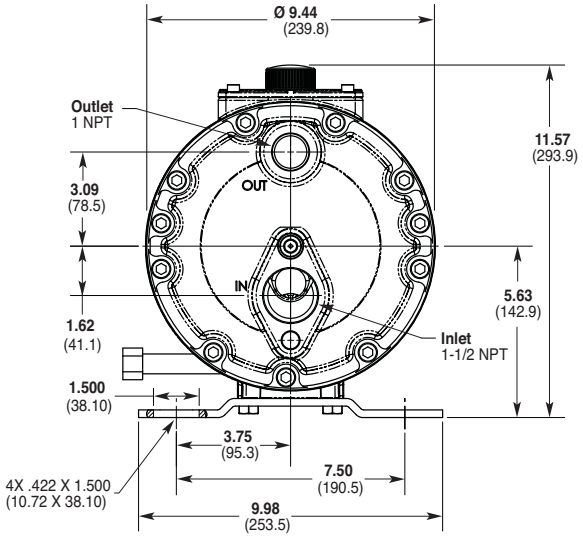
Each Hydra-Cell pump has different lift capability depending on model size, cam angle, speed, and fluid characteristics. To ensure that your specific lift characteristics are met, refer to the inlet calculations regarding friction, and acceleration head losses in your Hydra-Cell Installation & Service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

For technical assistance in pump selection, see Frequently Asked Questions on page 142, Design Considerations on page 143, and Installation Guidelines on pages 144-145.

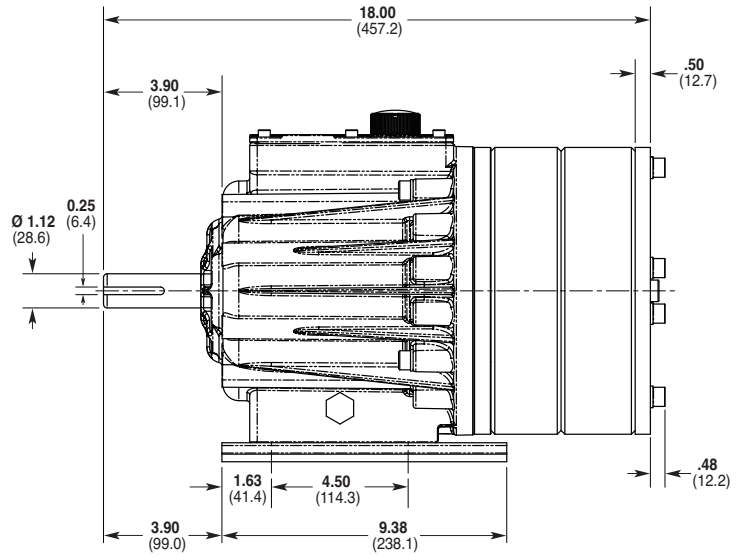
H25 Series Representative Drawings

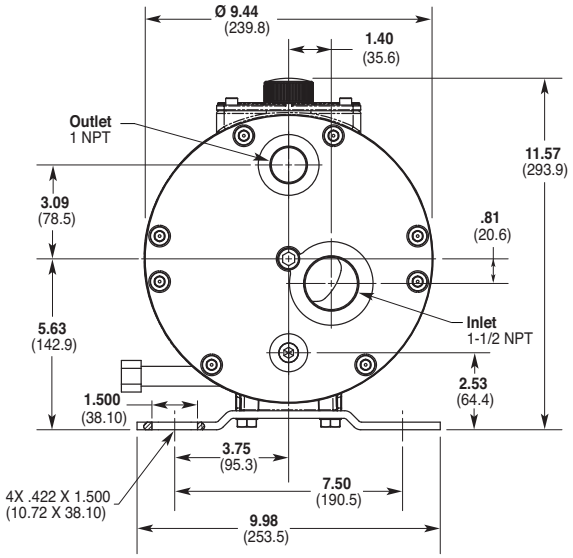
H25 Models with Metallic Pump Head Inches (mm)





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: A04-041-1200

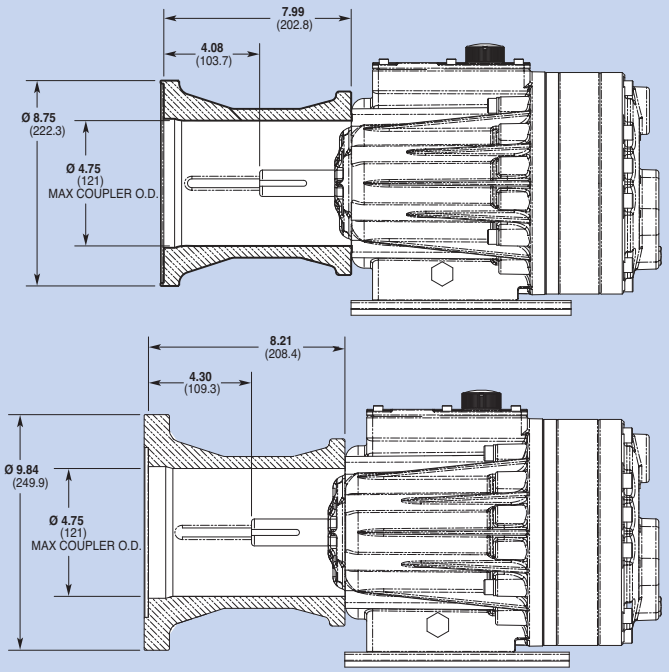
For: 182TC–184TC, 213–215TC & 254–256TC frame motors.

Metric adapter available - consult factory.

Part Number: A04-042-1200

For: 284TC–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. See page 82 for more information.

A C23 Pressure Regulating Valve provides a capable, lower-cost alternative to C63 valves for Hydra-Cell H25 pumping systems. See page 78 for more information.

H25 Series How to Order

Ordering Information

1	2	3	4	5	6	7	8	9	10	11	12

A complete H25 Series Model Number contains 12 digits including 9 customer-specified design and materials options, for example: H25XKCGNNECA.

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

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

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

Note: *For motors, bases, couplings and other pump accessories, refer to the Accessories section beginning on page 86.*