Hydra-Cell® Seal-less Pumps

Versatile, Reliable Pumps for a Wide Range of Applications

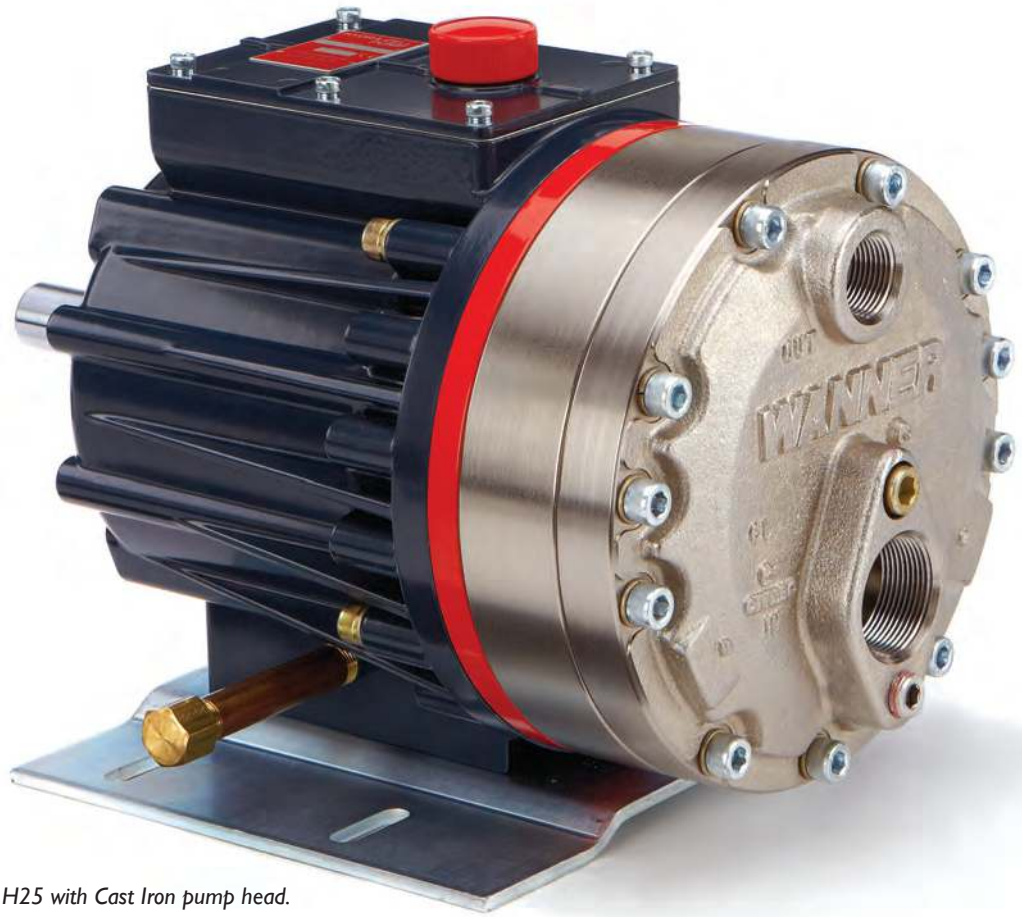
H25 Series

- 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 mechanical or dynamic seals, packing, or cups to leak, wear, or replace.

Wanner Engineering, Inc.

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 316L 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

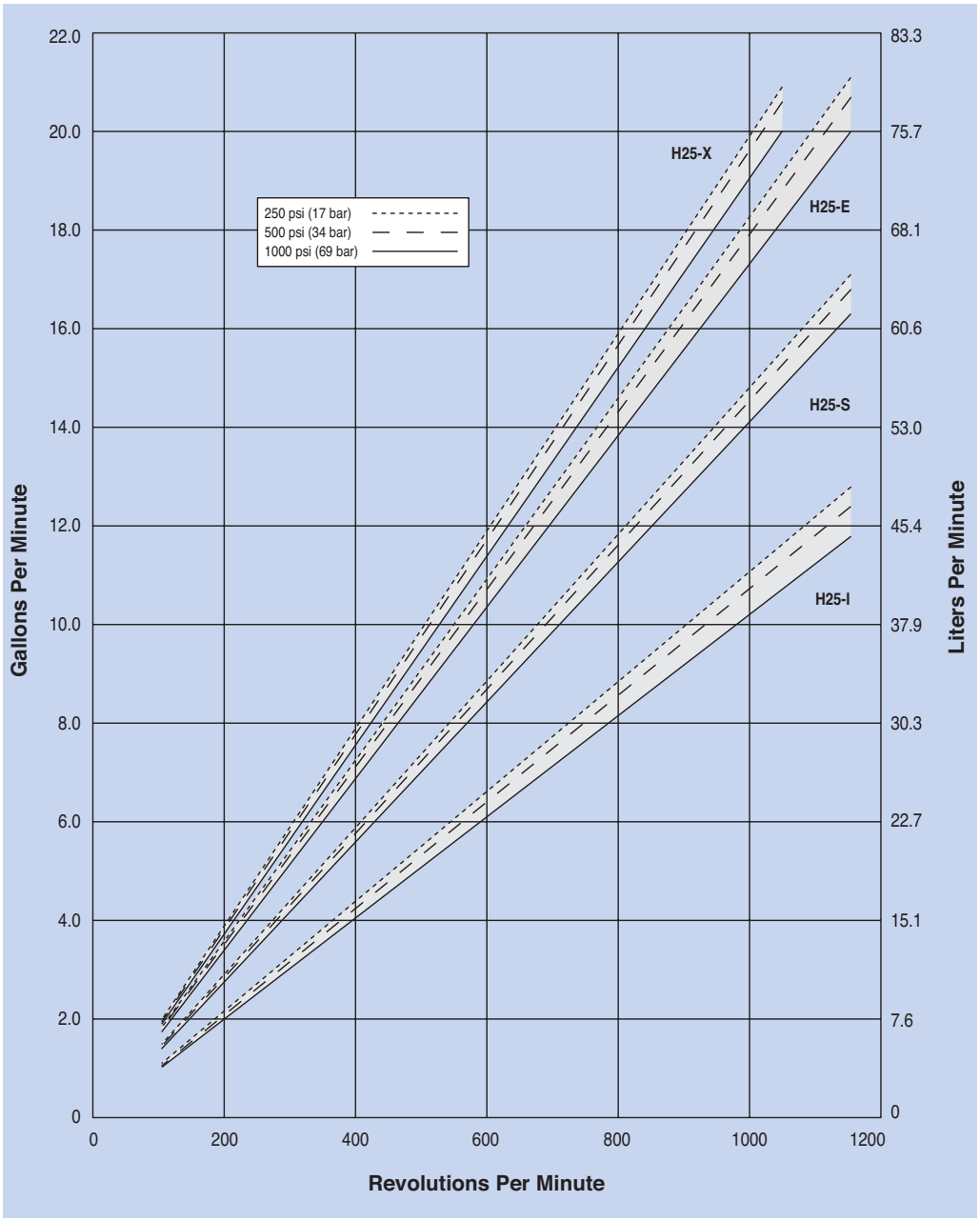
Pressure

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)

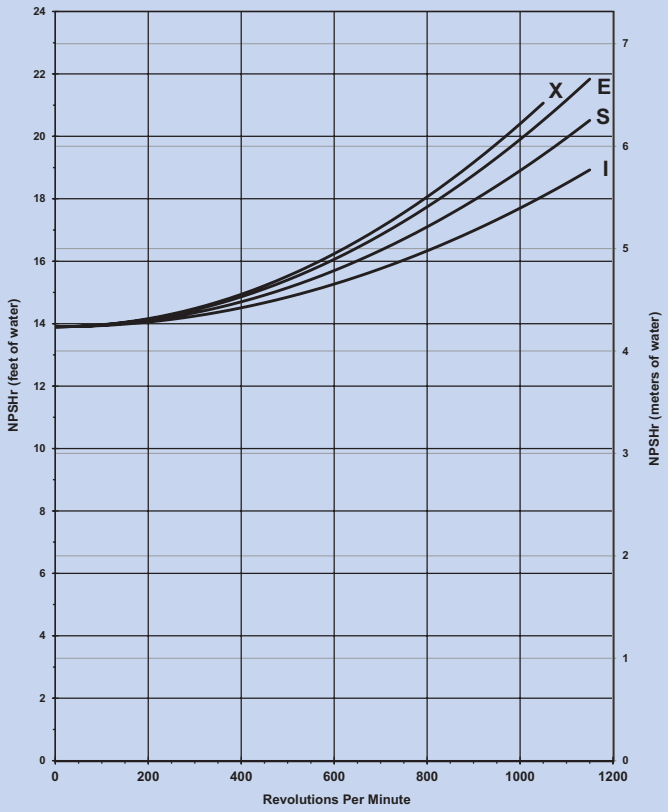
Model	rpm	gpm	l/min
H25-X	1050	20.0	75.7
H25-E	1150	20.0	75.9
H25-S	1150	16.2	61.5
H25-I	1150	11.8	44.7

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 150lb ANSI RF flange
Discharge Port	1 inch NPT 600lb ANSI RF flange
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)



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.

Calculating Required Power

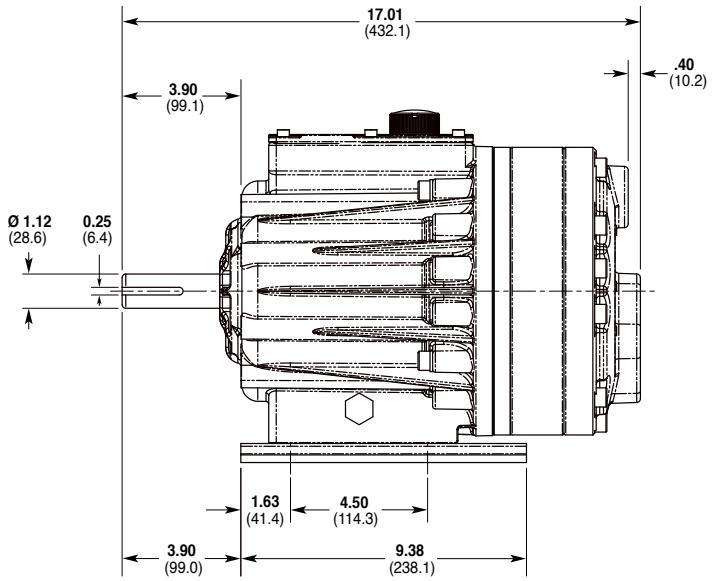
$$\frac{50 \times \text{rpm}}{63{,}000} + \frac{\text{gpm} \times \text{psi}}{1{,}460} = \text{electric motor hp}$$

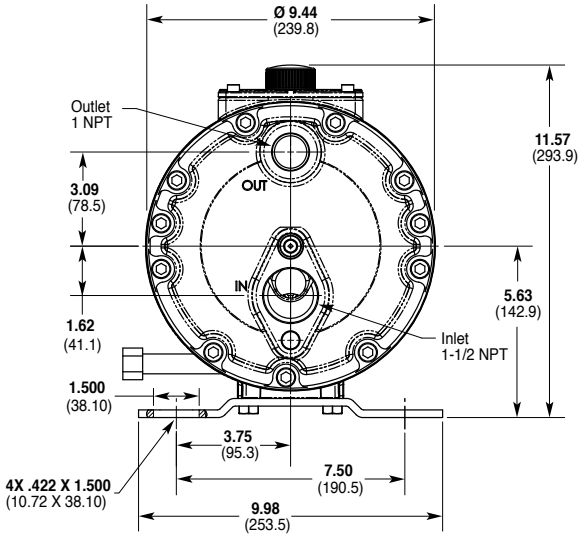
$$\frac{50 \times \text{rpm}}{84{,}428} + \frac{\text{l/min} \times \text{bar}}{511} = \text{electric motor kW}$$

When using a variable frequency drive (VFD) controller, 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.

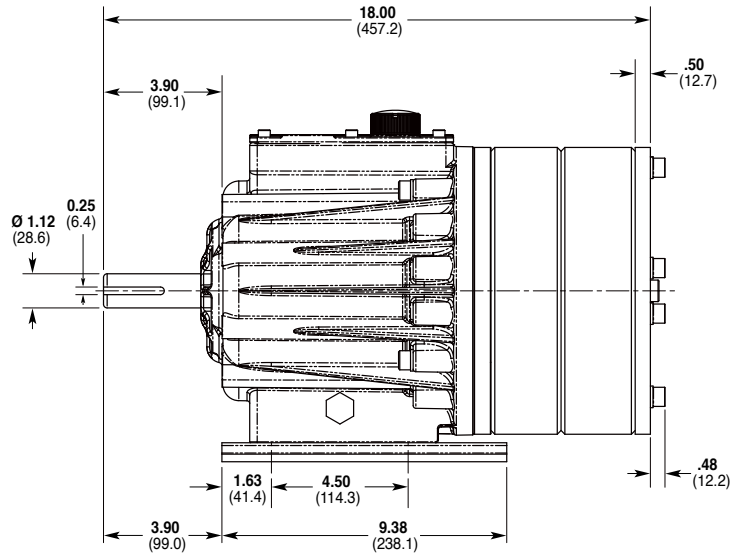
H25 Series Representative Drawings

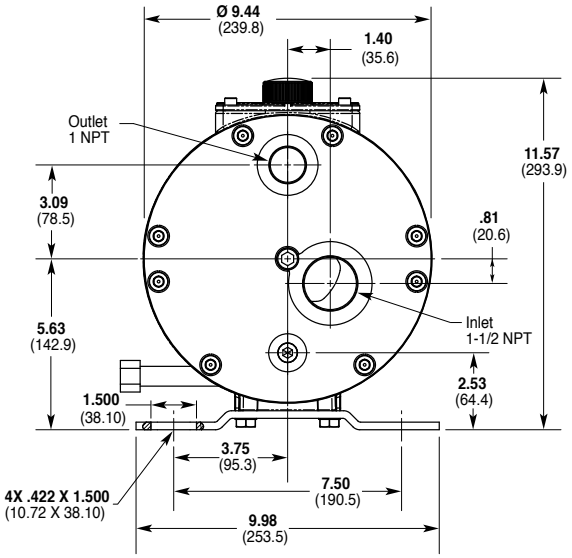
H25 Models with Metallic Pump Head Inches (mm)





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





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

H25 Series Adapters/Valves

Pump/Motor Adapter Inches (mm)

Part Number: A04-041-1200

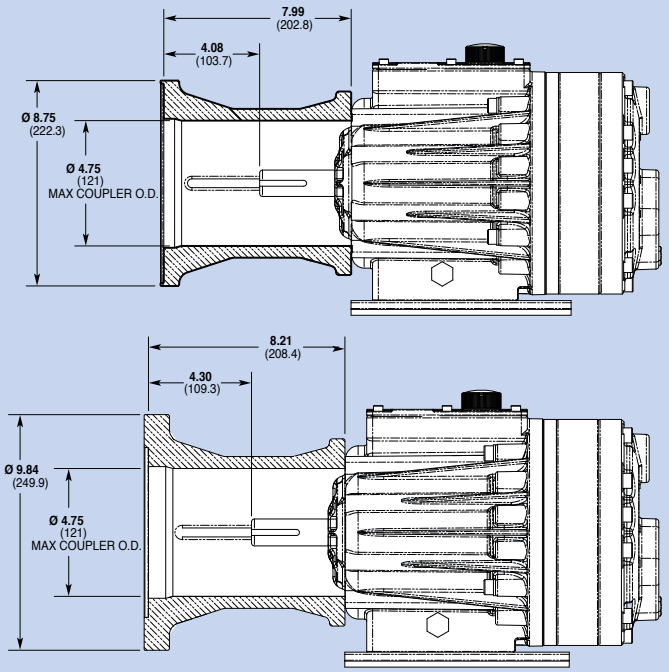
For: 182TC, 184TC, 213, 215TC, 254 and 256TC frame motors.

Metric adapter available - consult factory.

Part Number: A04-042-1200

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.

Skid-mounted H25 with 15hp, 3-phase motor.

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

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)*
		*Pump/motor adapters ordered separately. See previous page.
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 class 150 x 600
	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 (used with metallic heads only)
	M	PVDF
	P	Polypropylene
	T	Hastelloy C (used with metallic heads only)
	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.

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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