

D12 PRO SERIES

Maximum Flow Rate: 8.8 gpm (33.4 l/min)

Maximum Pressure: 1000 psi (69 bar) for Metallic Pump Head

WANNER™ HYDRA-CELL® PRO
SEAL-LESS PUMP TECHNOLOGIES



Now Featuring Optimized Valve Plate for Improved Performance, Pump Safety & Reliability.

UK
CA CE

D12 equipped with Model C62 Pressure Regulating Valve and Valve/Tube Accessory, shown with Cast Iron pump head.

Versatile, reliable pumps for a wide range of applications.

- 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.

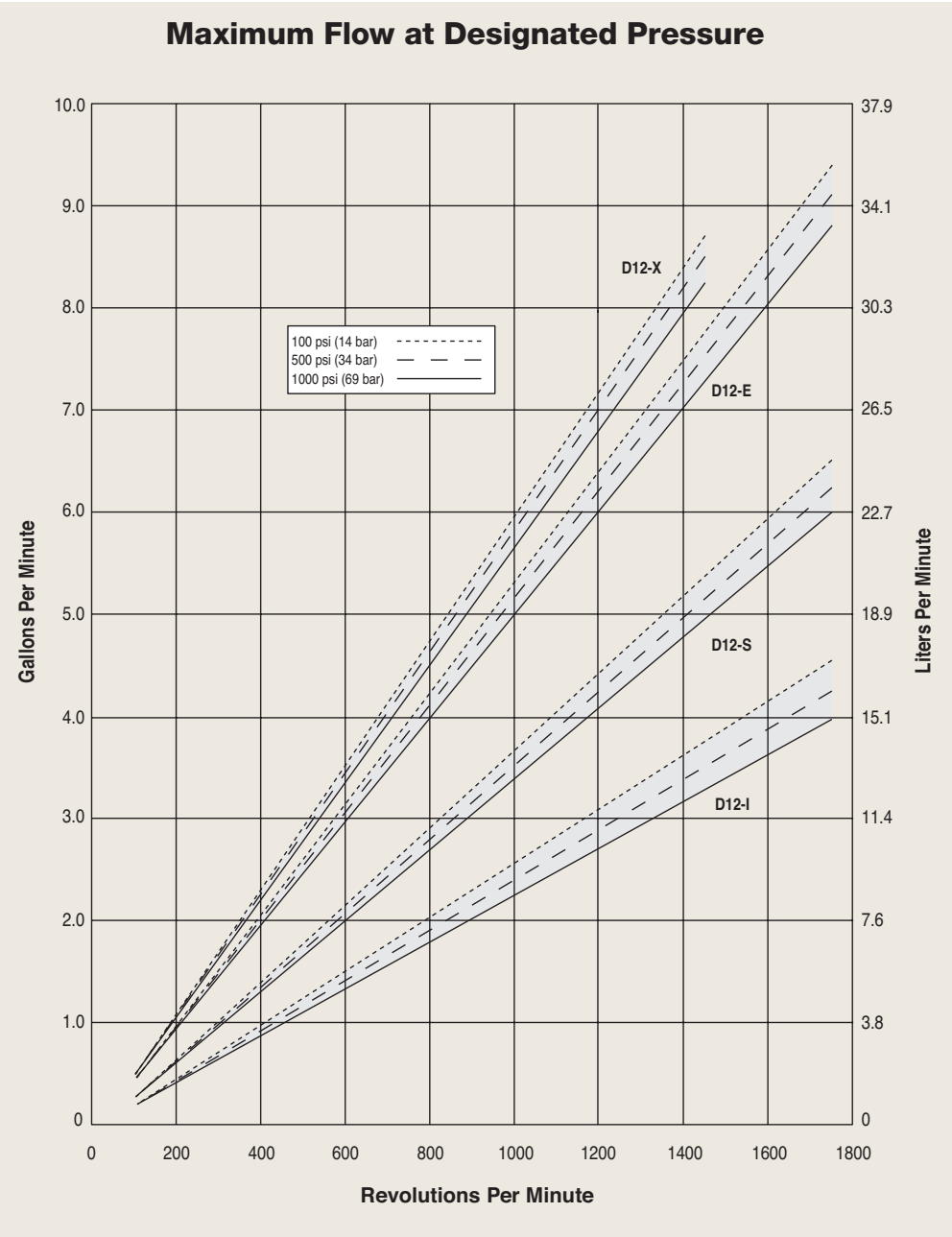


D12 Pro Series | Performance

Capacities

Model	Max. Input rpm	Max. Flow Capacities @1000 psi (69 bar)		Max. Inlet Pressure		Max. Discharge Pressure Metallic Heads	
		gpm	l/min	psi	bar	psi	bar
D12-X	1450	8.1	30.6	250	17	1000	69
D12-E	1750	8.8	33.4	250	17	1000	69
D12-S	1750	6.0	22.7	250	17	1000	69
D12-I	1750	4.0	15.0	250	17	1000	69

Performance and specification ratings apply to D12 configurations unless specifically noted otherwise.



Due to the Wanner Engineering Continuous Improvement Program, specifications and other data are subject to change.

D12 Pro Series | Specifications

Flow Capacities @2500 psi (172 bar)			
Model	rpm	gpm	l/min
D12-X	1450	8.10	30.6
D12-E	1750	8.83	33.4
D12-S	1750	6.00	22.7
D12-I	1750	3.96	15.0

Delivery @ 1000 psi (69 bar)		
Model	gal/rev	liters/rev
D12-X	0.0056	0.0211
D12-E	0.0051	0.0191
D12-S	0.0034	0.0130
D12-I	0.0023	0.0086

Maximum Discharge Pressure	
Metallic Heads:	1000 psi (69 bar)

Maximum Inlet Pressure	
Metallic Heads:	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).

Maximum Solids Size	500 microns
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Inlet Port	1 inch NPT
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Discharge Port	3/4 inch NPT
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Calculating Required Power

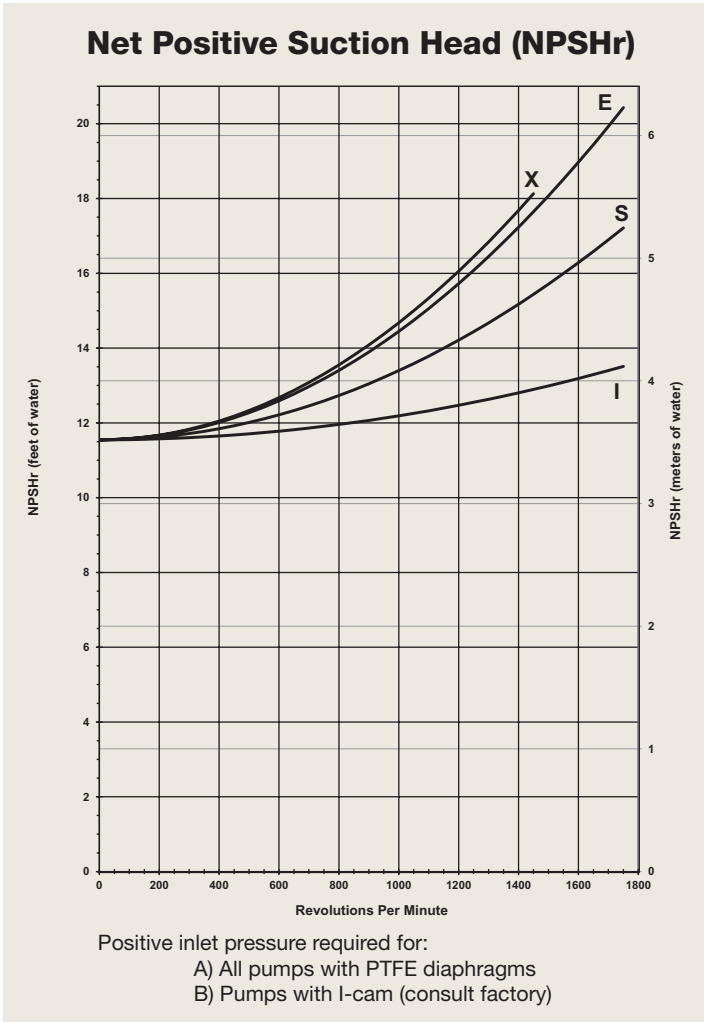
$$\frac{15 \times \text{rpm}}{63,000} + \frac{\text{gpm} \times \text{psi}}{1,460} = \text{electric motor hp}$$
$$\frac{15 \times \text{rpm}}{84,428} + \frac{\text{l/min} \times \text{bar}}{511} = \text{electric motor kW}$$

Attention!
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.

Calculating Pulley Size

$$\frac{\text{motor pulley OD}}{\text{pump rpm}} = \frac{\text{pump pulley OD}}{\text{motor rpm}}$$

Shaft Diameter	7/8 inch (22.2 mm)
Shaft Rotation	Reverse (bi-directional)
Bearings	Tapered roller bearings
Oil Capacity	1.5 US quarts (1.4 liters)
Weight	63 lbs. (28.6 kg)

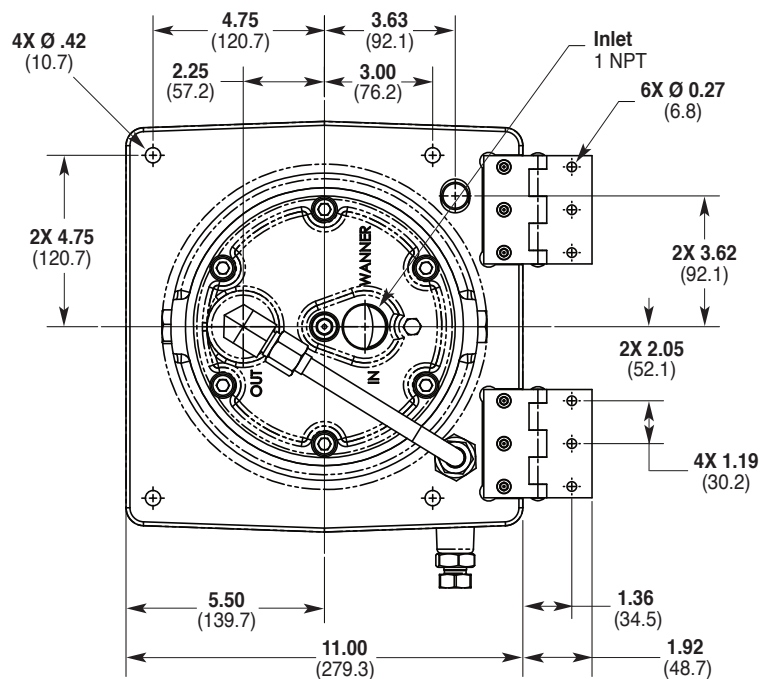
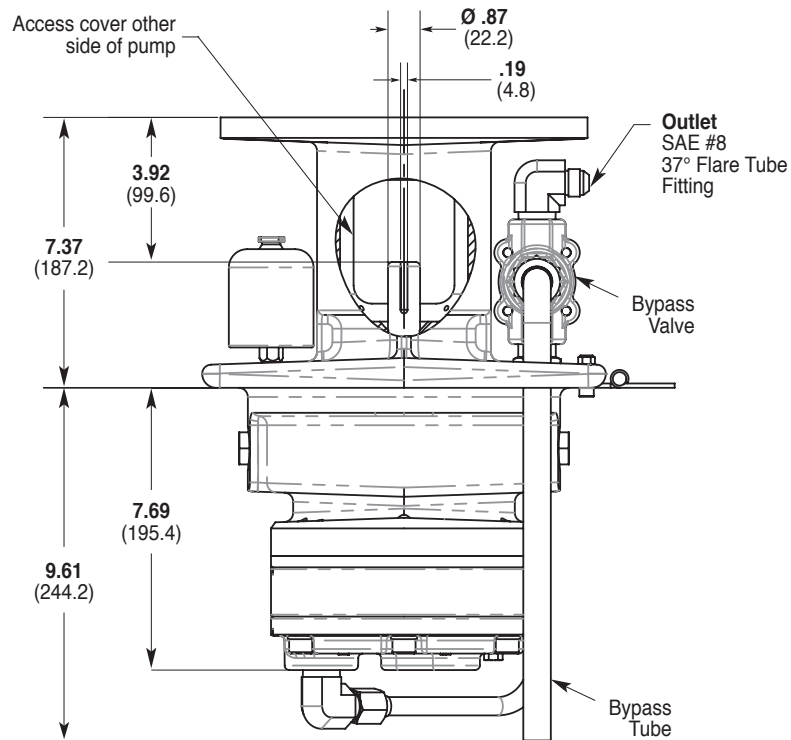


Suction Lift

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 Product Manual. Compare those calculations to the NPSHr curves above.

D12 Pro Series | Representative Drawings

D12 Standard Configuration (Metallic Pump Head) Inches (mm)

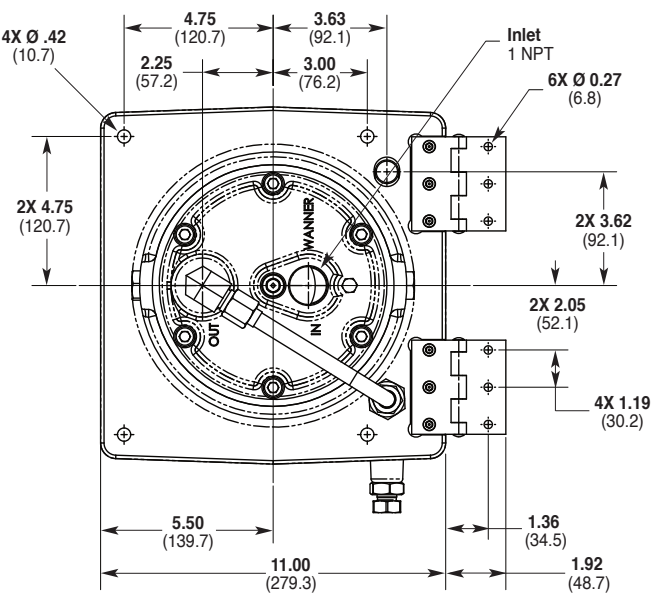
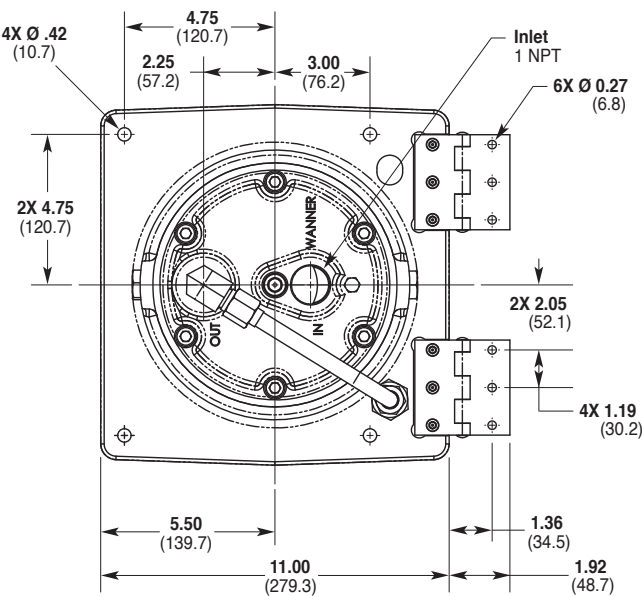
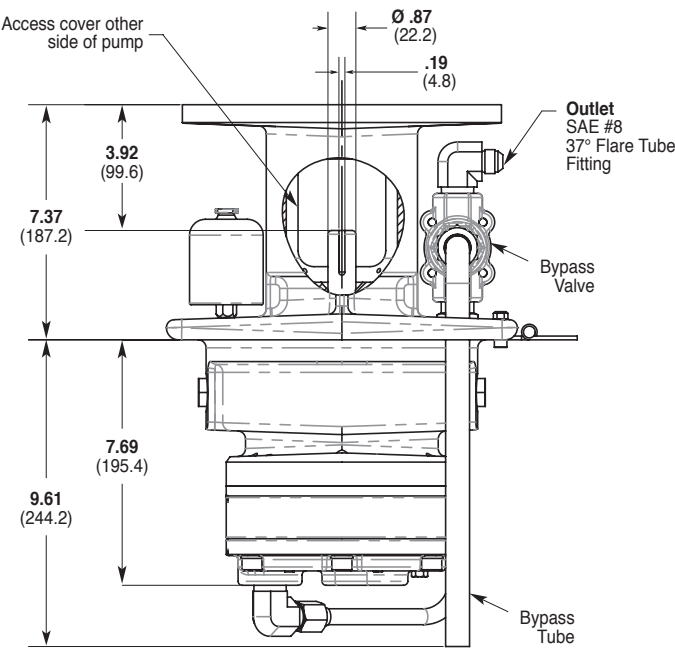
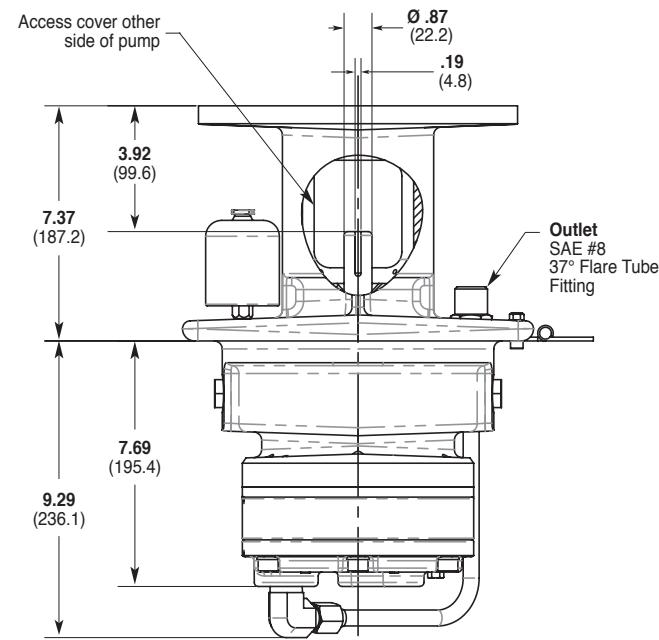


Note: Dimensions are for reference only. Contact factory for certified drawings.

D12 Pro Series | Representative Drawings

D12 with Tube Accessory Inches (mm)

D12 with Valve / Tube Accessory Inches (mm)

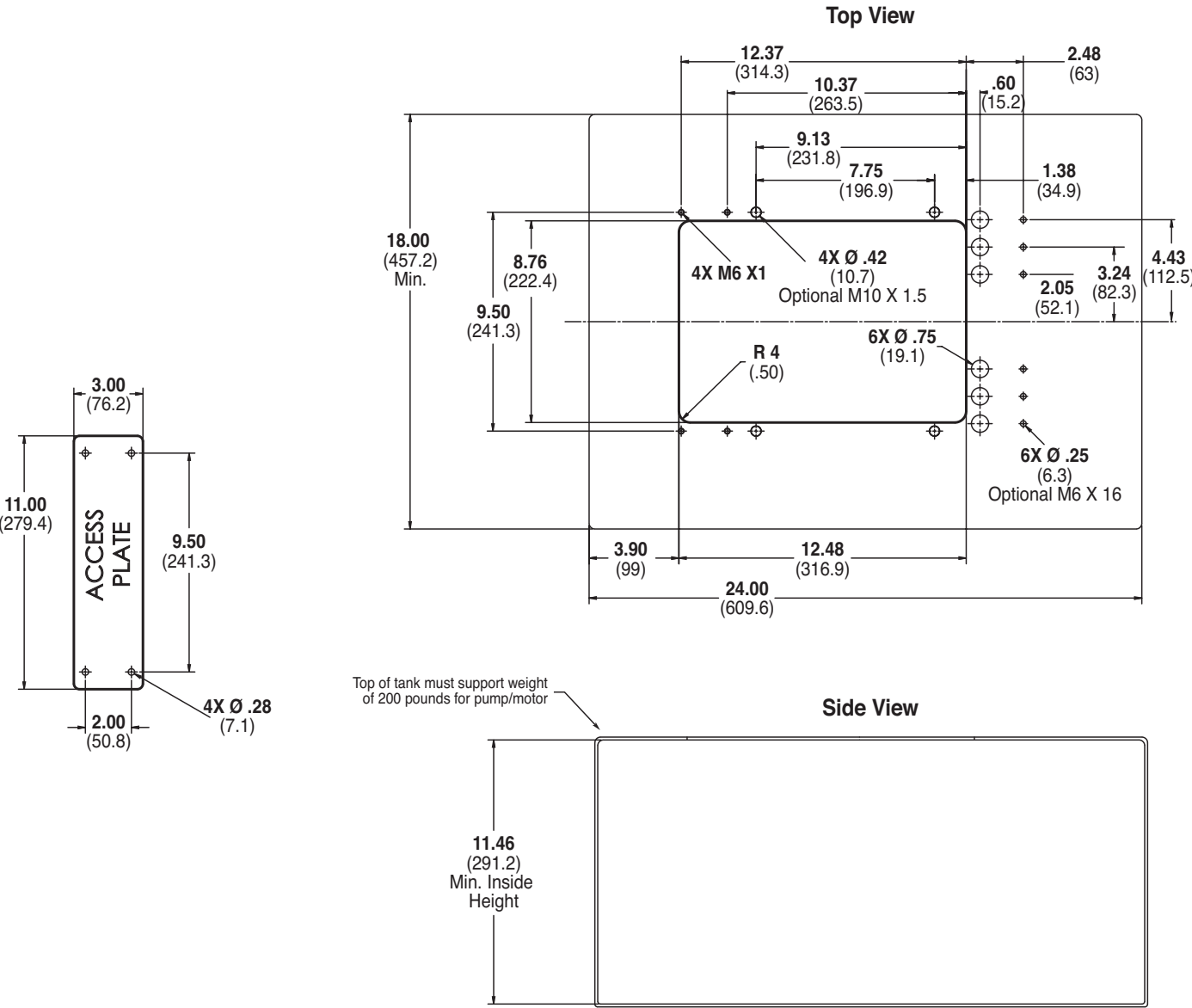


Note: Dimensions are for reference only. Contact factory for certified drawings.

D12 Pro Series | Representative Drawings

D12 Models with Minimum Tank Size and Critical Installation Dimensions

Inches (mm)



Note: Dimensions are for reference only. Contact factory for certified drawings.

D12 Pro Series | Valve / Tube Accessories

The **Hydra-Cell D12 Tube and Valve/Tube Accessories** provide a pre-fabricated plumbing package for simplified installation.

(See page 6 for dimensions.)

Ordering Information

Tube Accessory Part Number: **A04-007-1200**

Valve/Tube Accessory Part Number: **A04-008-1200**



Valve Selection

A seal-less **C62 Pressure Regulating Valve** is recommended for Hydra-Cell Pro D12 pumping systems, especially for high-pressure requirements or when handling dirty fluids.



A **C22 Pressure Regulating Valve** provides a capable, lower-cost alternative to C62 valves for Hydra-Cell D12 Pro pumping systems.



D12 Pro Series | How to Order

Ordering Information

A complete D12 Series Model Number contains 12 digits including 8 customer-specified design and materials options, for example: D12XKCGHFECA.

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

Digit	Order Code	Description
1-3	D12	Pump Configuration Flanged for NEMA 182/184TC, 213/215TC (NPT Ports)* *Tube Accessory Kits ordered separately. See previous page.
4	X E S I	Hydraulic End Cam Max 8.1 gpm (30.6 l/min) @ 1450 rpm Max 8.8 gpm (33.4 l/min) @ 1750 rpm Max 6.0 gpm (22.7 l/min) @ 1750 rpm Max 4.0 gpm (15.0 l/min) @ 1750 rpm
5	K R	Pump Head Version Kel-Cell NPT Ports Kel-Cell NPT Ports with Optimized Valve Pocket
6	B C S	Pump Head Material Brass Cast Iron (Nickel-plated) 316L Stainless Steel
7	E G J P T	Diaphragm & O-ring Material EPDM (requires EPDM-compatible oil – Digit 12 oil code J) FKM PTFE (available with E and S cams only; 1200 rpm max.) Neoprene Buna-N
8	C D H S	Valve Seat Material Ceramic Tungsten Carbide 17-4 Stainless Steel 316L Stainless Steel
9	C D F N	Valve Material Ceramic Tungsten Carbide 17-4 Stainless Steel Nitronic 50

Digit	Order Code	Description
10	E	Valve Springs Elgiloy
11	C H M P Y	Valve Spring Retainers Celcon 17-7 Stainless Steel PVDF Polypropylene Nylon (Zytel)
12	A B C E G	Hydra-Oil 10W30 standard-duty oil 40-wt for continuous-duty (use with 316L SST pump head – standard) EPDM-compatible oil Food-contact oil 5W30 cold-temp severe-duty synthetic oil

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

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CLICK HERE
OR CALL (908) 362-9981