

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



UK
CA CE

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

A higher standard of pump performance and efficiency.

- Integrates **Wanner Hydra-Cell® Pro** seal-less pump technologies for the highest levels of volumetric and energy efficiencies across a full rpm range.
- Seal-less design API 674 pumps that also exceed API 675 standards for accuracy, linearity and repeatability.
- True positive displacement pumping action achieves overall efficiency of >90%, targeting improvements at lower speeds and higher pressures.
- No mechanical dynamic seals, packing, or cups to leak, wear or replace – reduces maintenance, costs and downtime.
- Pumped liquid is 100% contained – prevents degradation, contamination and environmental risks.
- Patented ADPC (Advanced Diaphragm Position Control) and hydraulic oil management system protects diaphragms under closed or restricted inlet conditions.
- Can run dry indefinitely without damage to the pump.
- Reliably handles a wide range of viscosities and shear sensitivities, corrosive liquids, abrasives, slurries and particulates.
- Reduced ownership costs in acquisition, operation, service, maintenance, and energy use.

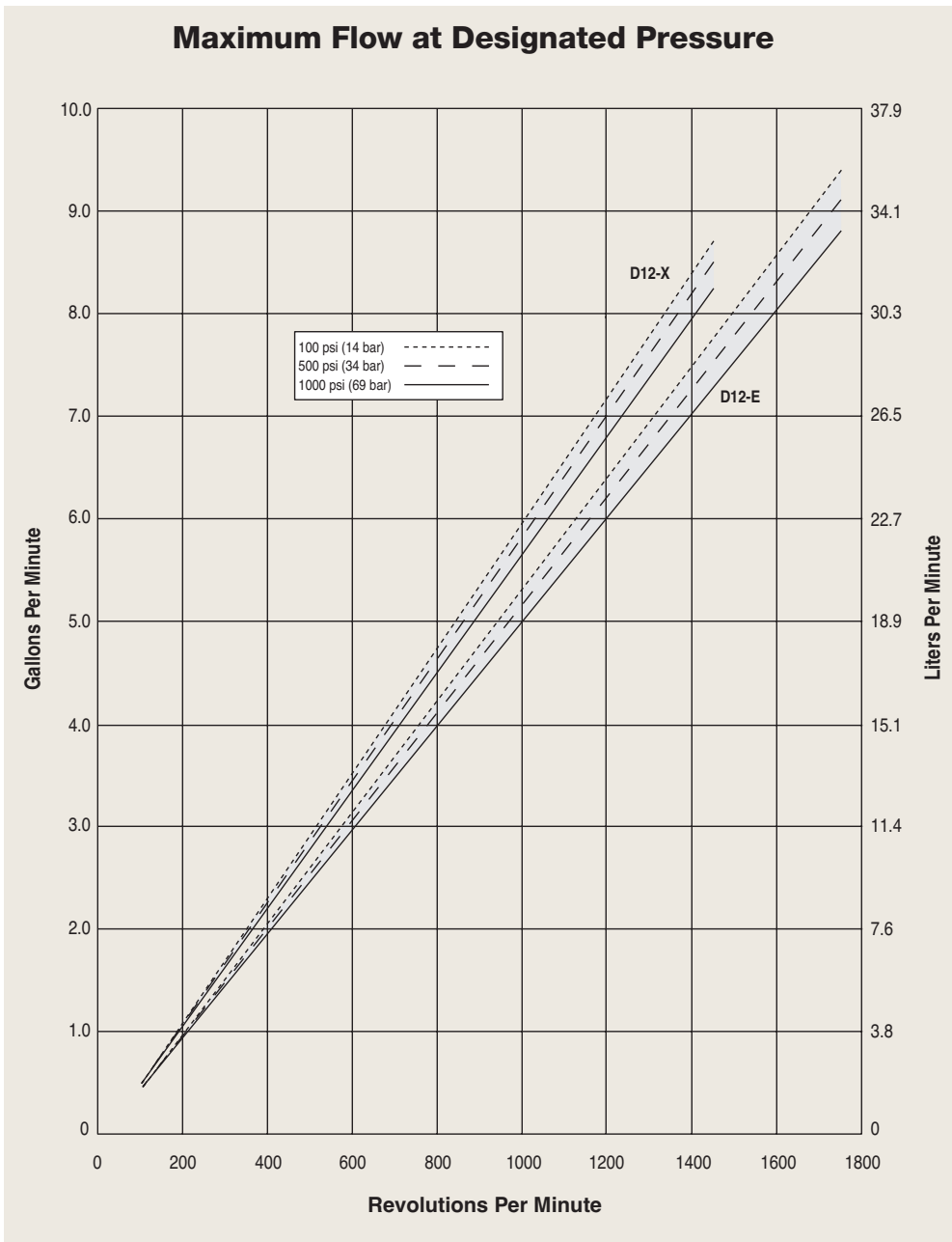

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D12 Pro Series | Performance

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

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 @1000 psi (69 bar)

Model	rpm	gpm	l/min
D12-X	1450	8.10	30.6
D12-E	1750	8.83	33.4

Delivery @ 1000 psi (69 bar)

Model	gal/rev	liters/rev
D12-X	0.0056	0.0211
D12-E	0.0051	0.0191

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

Inlet Port 1 inch NPT

Discharge Port 3/4 inch NPT

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.

Shaft Diameter 7/8 inch (22.2 mm)

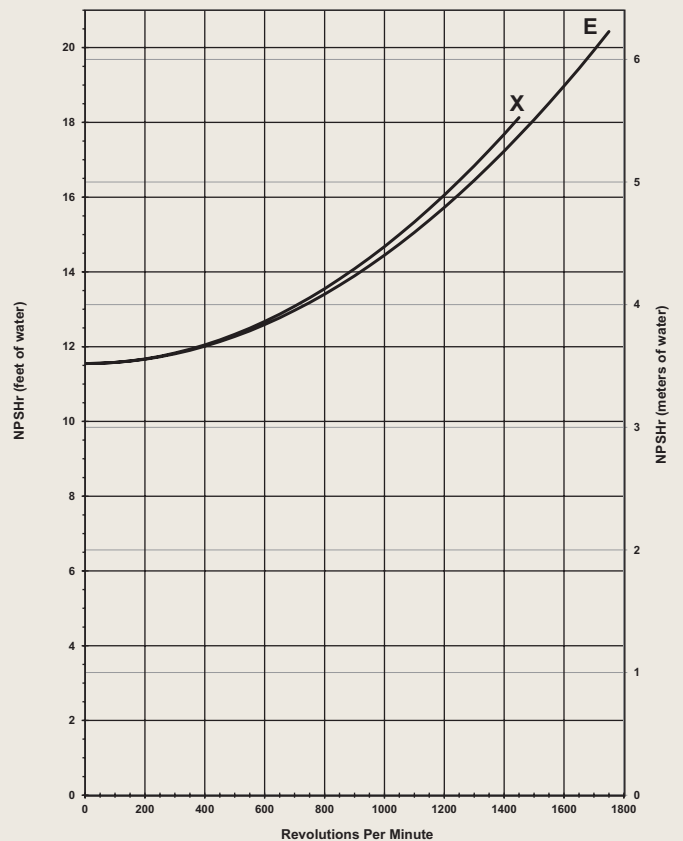
Shaft Rotation Reverse (bi-directional)

Bearings Tapered roller bearings

Oil Capacity 1.5 US quarts (1.4 liters)

Weight 63 lbs. (28.6 kg)

Net Positive Suction Head (NPSHr)



Positive inlet pressure required for all pumps with PTFE diaphragms

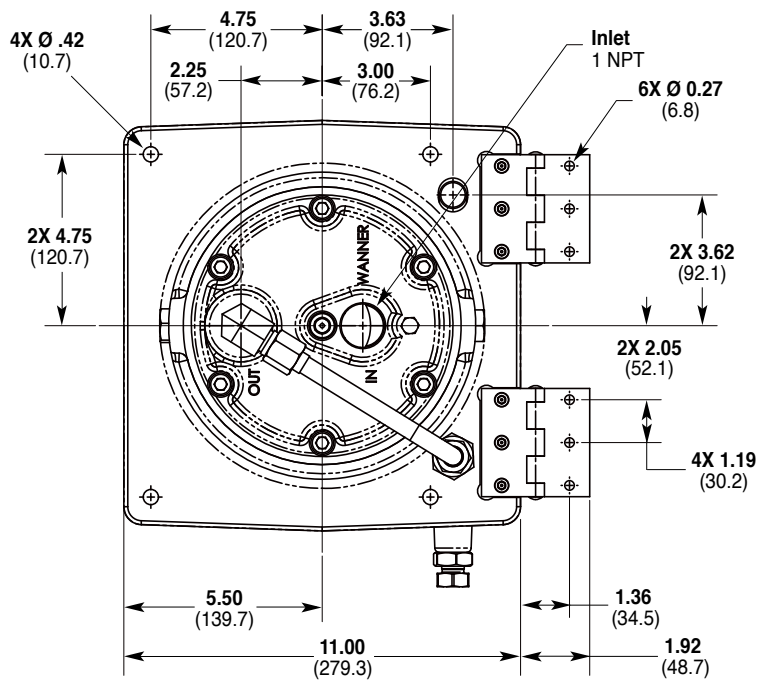
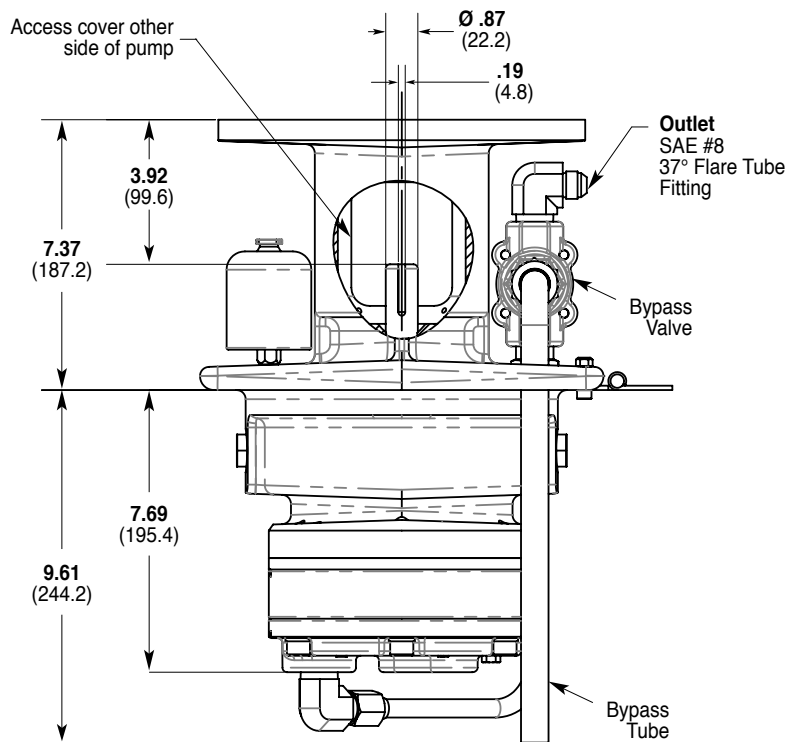
Suction Lift

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.

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D12 Pro Series | Representative Drawings

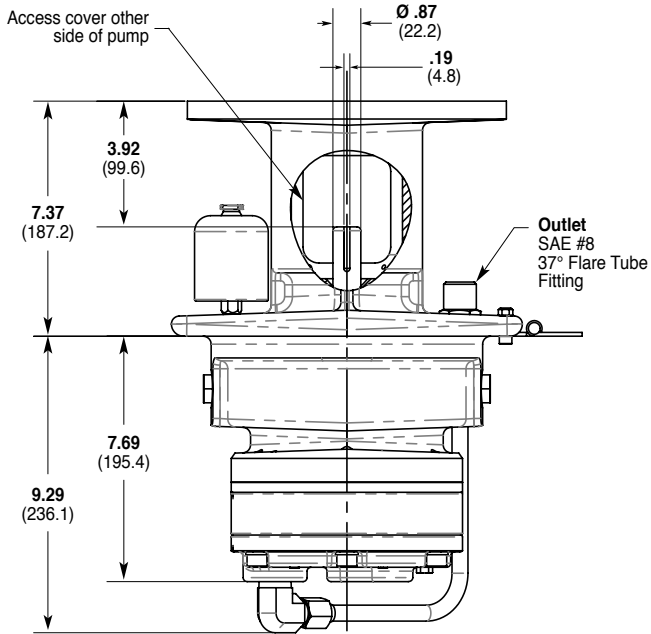
D12 Standard Configuration (Metallic Pump Head) Inches (mm)



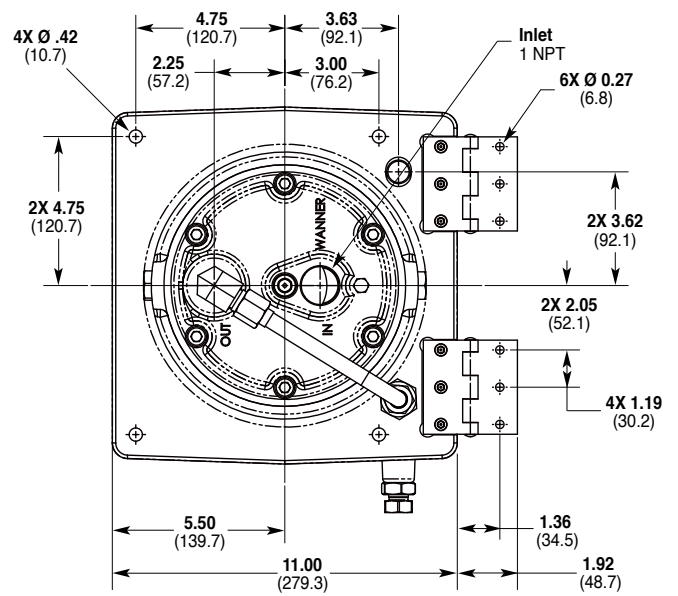
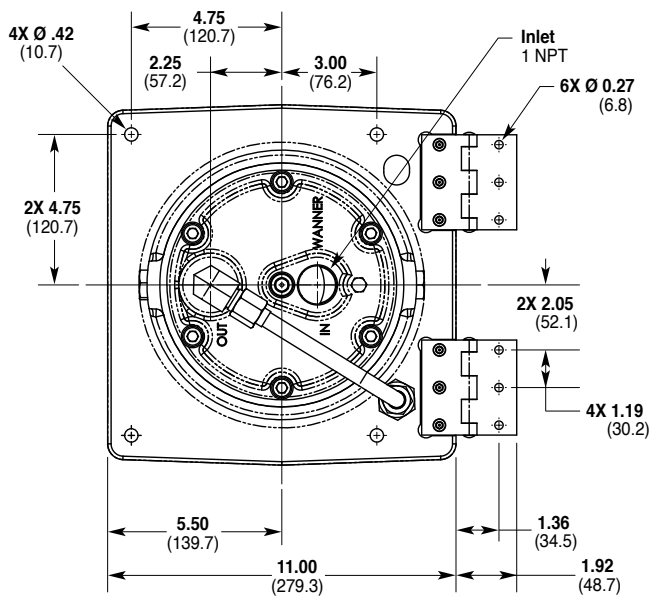
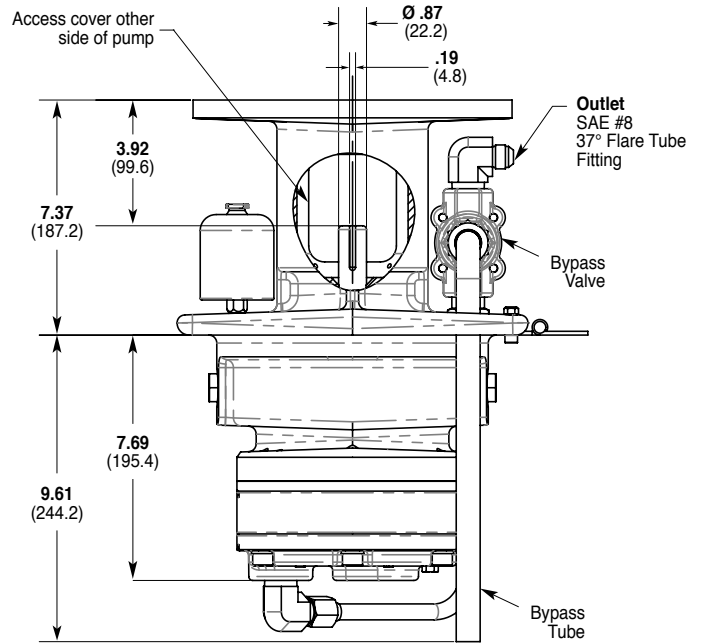
Note: Dimensions are for reference only. Contact factory for certified drawings.

D12 Pro Series | Representative Drawings

D12 with Tube Accessory Inches (mm)



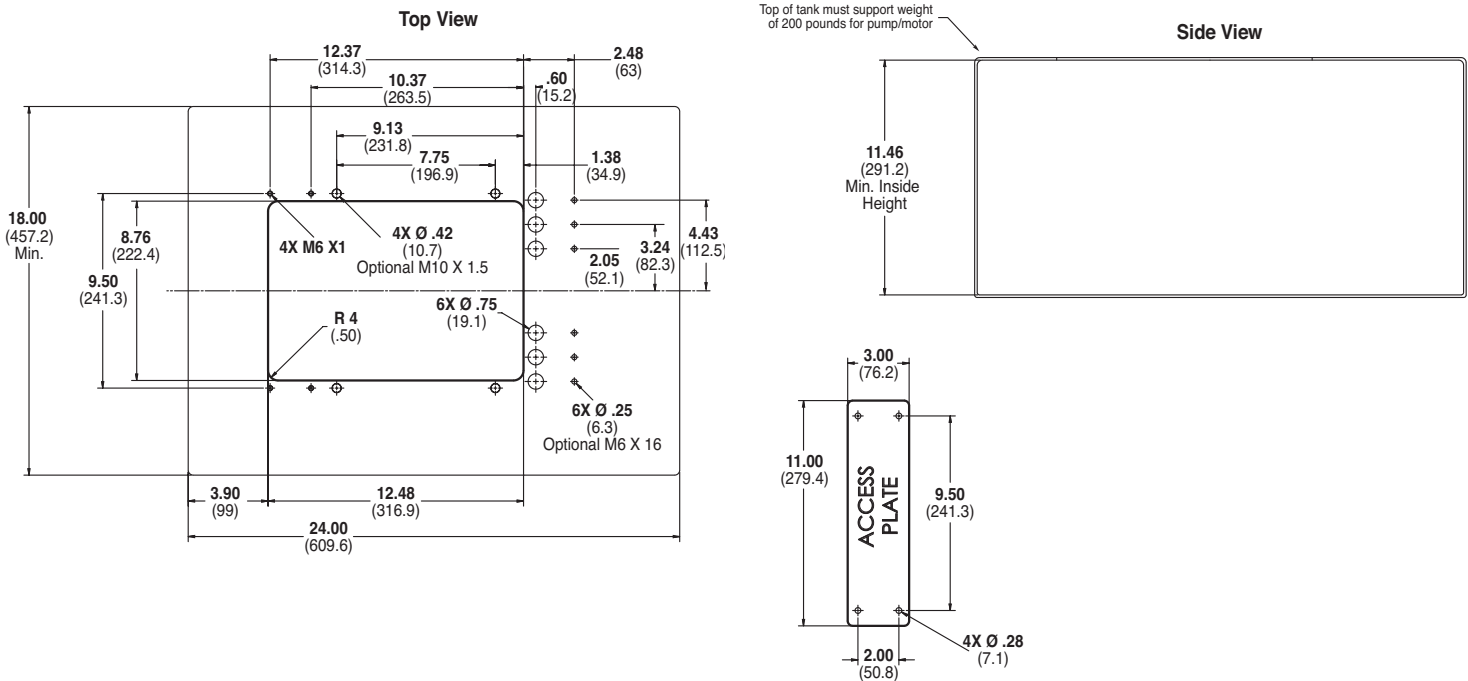
D12 with Valve / Tube Accessory Inches (mm)



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

D12 Pro Series | Drawings / Accessories

D12 Models with Minimum Tank Size and Critical Installation Dimensions Inches (mm)



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

Valve / Tube Accessories



The **Hydra-Cell D12 Tube and Valve/Tube Accessories** provide a pre-fabricated plumbing package for simplified installation. (See page 5 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.



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

D12 Pro Series | How to Order

Ordering Information

A complete D12 Series Model Number contains 12 digits including 7 customer-specified design and materials options, for example: D12XPCTHFECA.

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

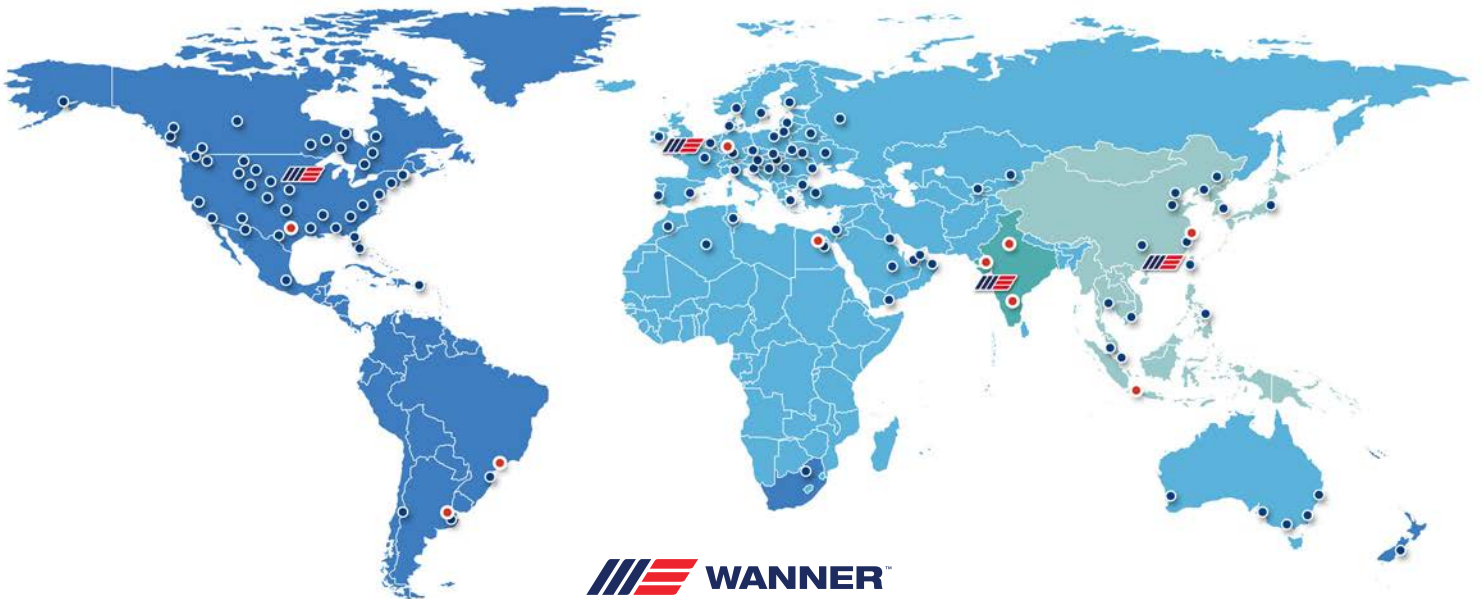
Digit	Order Code	Description
1-3	D12	Pump Configuration Flanged for NEMA 182/184TC, 213/215TC (NPT Ports)* *Tube Accessory Kits ordered separately. See previous page.
4	X E	Hydraulic End Cam Max 8.1 gpm (30.6 l/min) @ 1450 rpm Max 8.8 gpm (33.4 l/min) @ 1750 rpm
5	P	Pump Head Version Hydra-Cell Pro
6	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 cam 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) 30-wt 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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