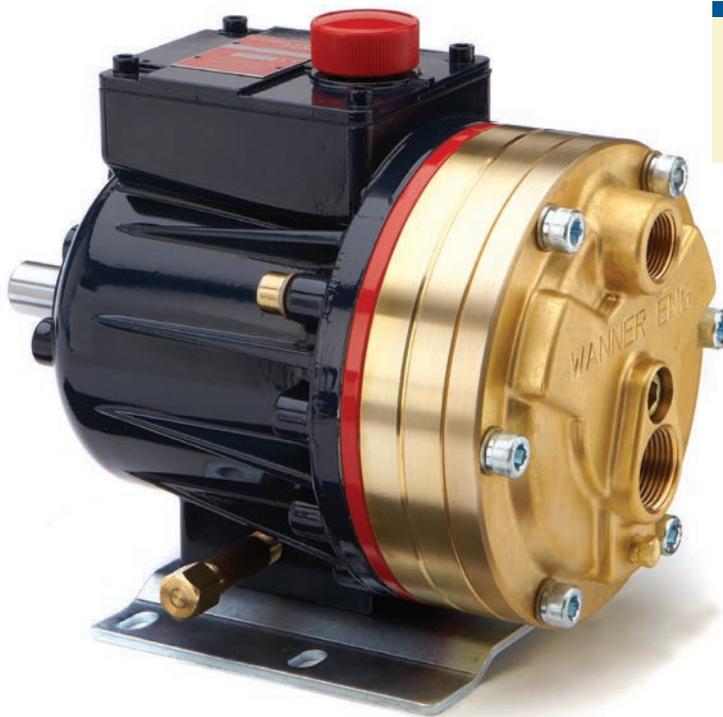


Hydra-Cell®

Seal-less Pumps

Versatile, Reliable Pumps for a Wide Range of Applications



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

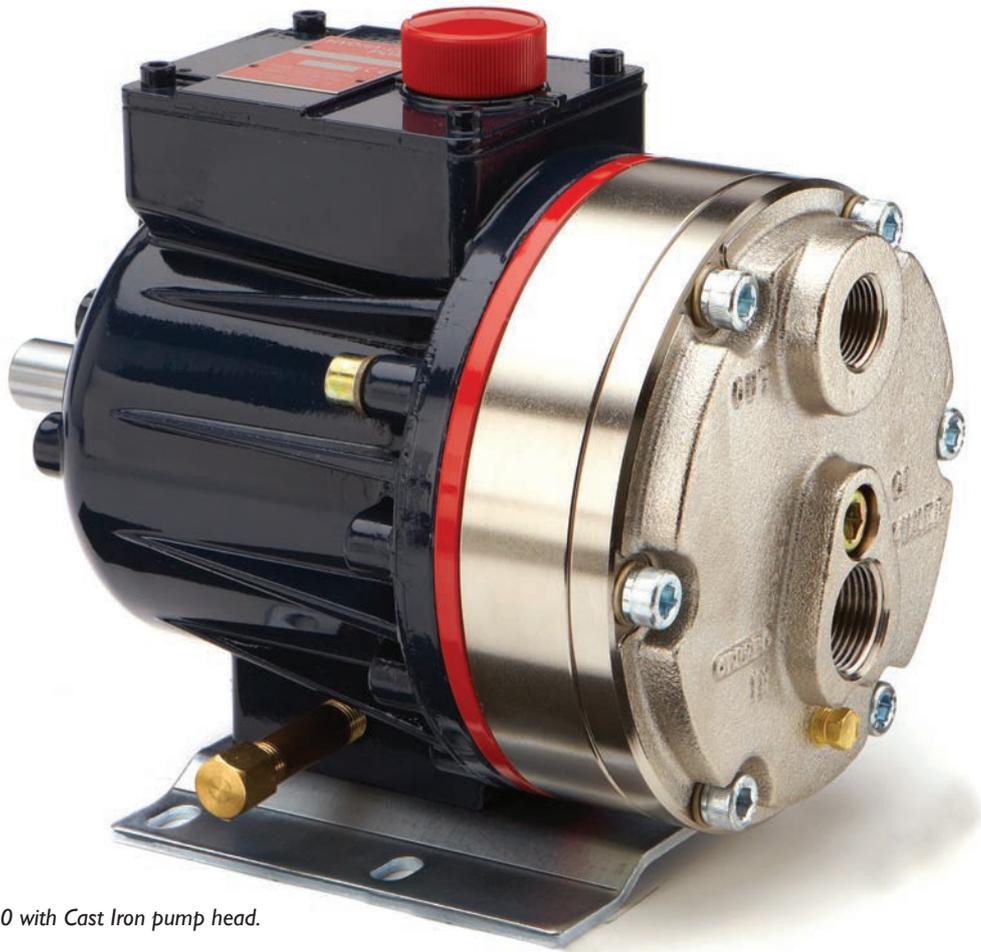
G10 Series

- 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.

G10 Series

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

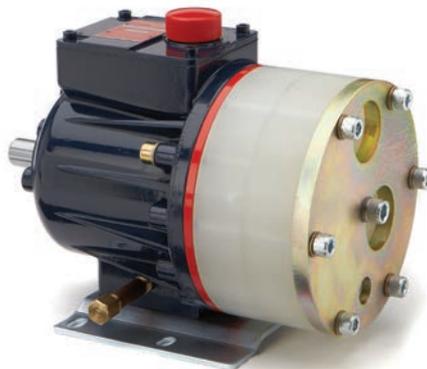
Maximum Pressure: 1500 psi (103 bar) for Metallic Pump Heads
350 psi (24 bar) for Non-metallic Pump Heads



G10 with Cast Iron pump head.



G10 with Brass pump head.



G10 with Polypropylene pump head.



G10 with 316L Stainless Steel pump head and ANSI flanges.

G10 Series Performance

Capacities

Flow

Model	Max. Input rpm	Max. Flow	
		@ 1000 psi (69 bar) gpm	@ 1000 psi (69 bar) l/min
G10-X	1450	8.1	30.6
G10-E	1750	8.8	33.4
G10-S	1750	6.0	22.7
G10-I	1750	4.0	15.0
@ 1500 psi (103 bar)			
G10-X	790	4.26	15.1
G10-E	790	3.87	14.7

Pressure

Maximum Inlet Pressure
250 psi (17 bar)

Maximum Discharge Pressure

Metallic Pump Heads:

G10-X, E, S, I to 1000 psi (69 bar)

G10-X to 1500 psi (103 bar) @ 790 rpm max.

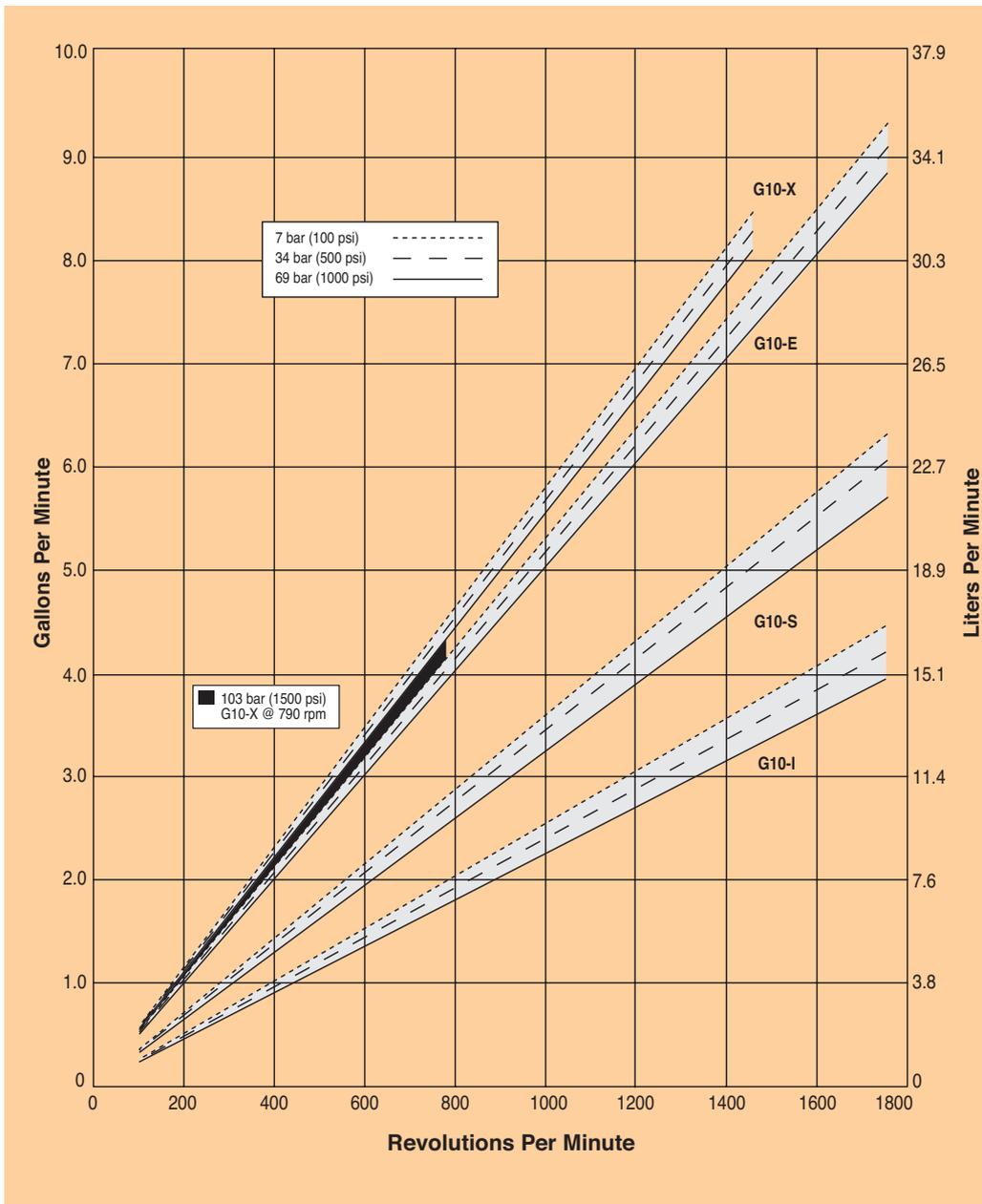
Non-metallic Pump Heads:

250 psi (17 bar) Polypropylene

350 psi (24 bar) PVDF

Performance and specification ratings apply to G10 configurations unless specifically noted otherwise.

Maximum Flow at Designated Pressure



G10 Series Specifications

Flow Capacities @ 69 bar (1000 psi) 4-pole Motor @ 50 Hz

Model	rpm	gpm	l/min
G10-X	1450	8.10	30.6
G10-E	1450	6.63	25.1
G10-S	1450	4.96	18.8
G10-I	1450	3.30	12.5

Flow Capacities @ 69 bar (1000 psi) 6-pole Motor @ 50 Hz

Model	rpm	gpm	l/min
G10-X	960	5.19	19.6
G10-E	960	4.39	16.6
G10-S	960	3.28	12.4
G10-I	960	2.19	8.3

Delivery @ 103 bar (1500 psi)

Model	gal/rev	liters/rev
G10-X	0.0054	0.0205
G10-E	0.0049	0.0186

Delivery @ 69 bar (1000 psi)

Model	gal/rev	liters/rev
G10-X	0.0056	0.0211
G10-E	0.0051	0.0191
G10-S	0.0034	0.0130
G10-I	0.0023	0.0086

Maximum Discharge Pressure

Metallic Heads:	69 bar (1000 psi) @1450 rpm (G10-X)
	69 bar (1000 psi) @1750 rpm (G10-E, S, I)
	103 bar (1500 psi) @790 rpm (G10-X)
Non-metallic Heads:	17 bar (250 psi) Polypropylene
	24 bar (350 psi) PVDF

Maximum Inlet Pressure 17 bar (250 psi)

Maximum Operating Temperature

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

Maximum Solids Size 500 microns

Inlet Port	1 inch BSPT
	1 inch NPT
	150lb ANSI RF flange

Discharge Port	3/4 inch BSPT
	3/4 inch NPT
	600lb ANSI RF flange

Shaft Diameter 22.2 mm (7/8 inch)

Shaft Rotation Reverse (bi-directional)

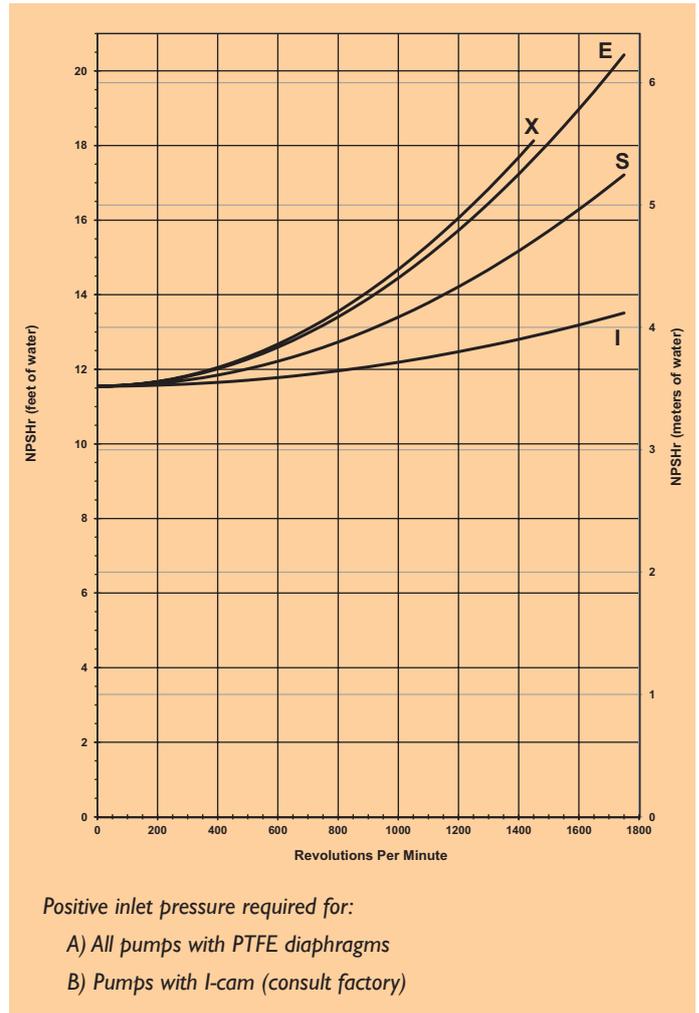
Bearings Tapered roller bearings

Oil Capacity 1.05 liters (1.1 US quarts)

Weight

Metallic Heads:	21.8 kg (48 lbs.)
Non-metallic Heads:	15.9 kg (35 lbs.)

Net Positive Suction Head (NPSHr)



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 Installation & Service Manual. Compare those calculations to the NPSHr curves above.

Calculating Required Power

$$\frac{15 \times \text{rpm}}{63,000} + \frac{\text{gpm} \times \text{psi}}{1,460} = \text{electric motor hp}$$

$$\frac{15 \times \text{rpm}}{84,428} + \frac{\text{l/min} \times \text{bar}}{511} = \text{electric motor kW}$$

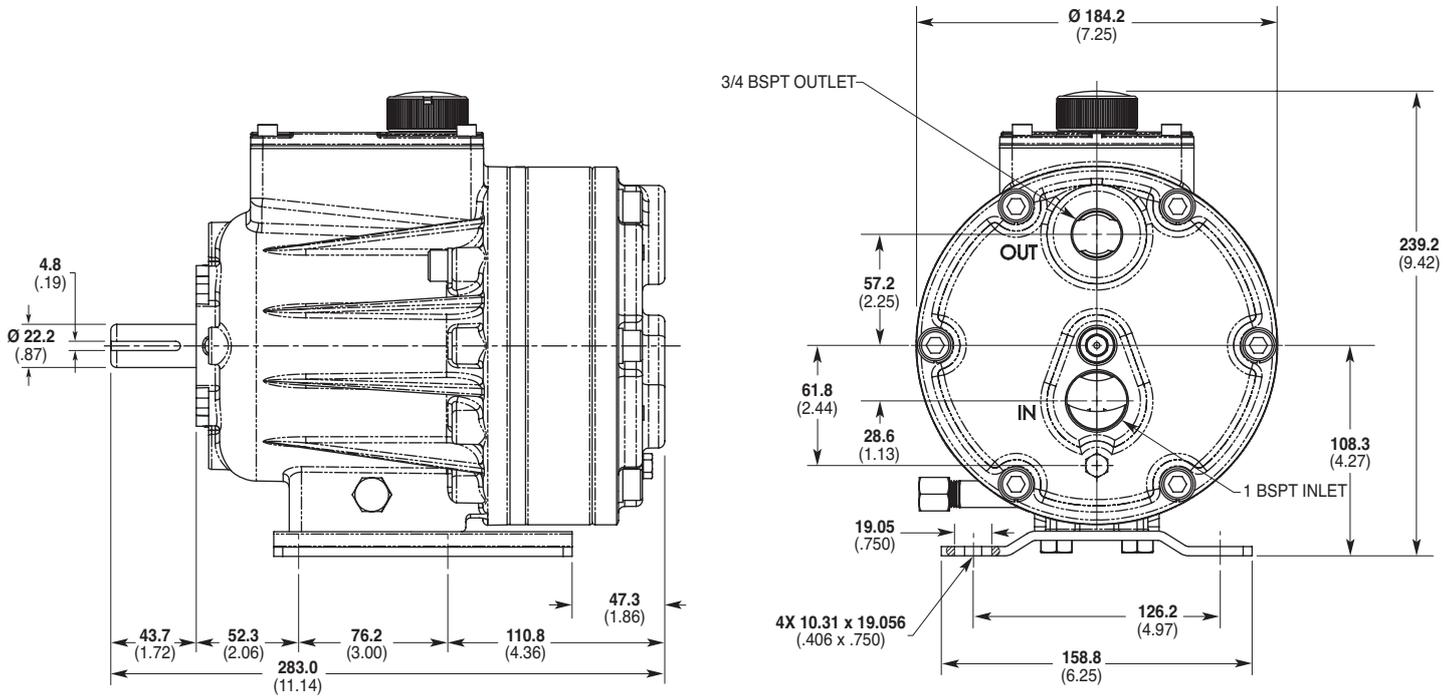
When using a variable frequency drive (VFD) controller calculate the hp or kW at minimum and maximum pump speed to ensure the correct hp or kW motor is selected. Note that motor manufacturers typically de-rate the service factor to 1.0 when operating with a VFD.

Calculating Pulley Size

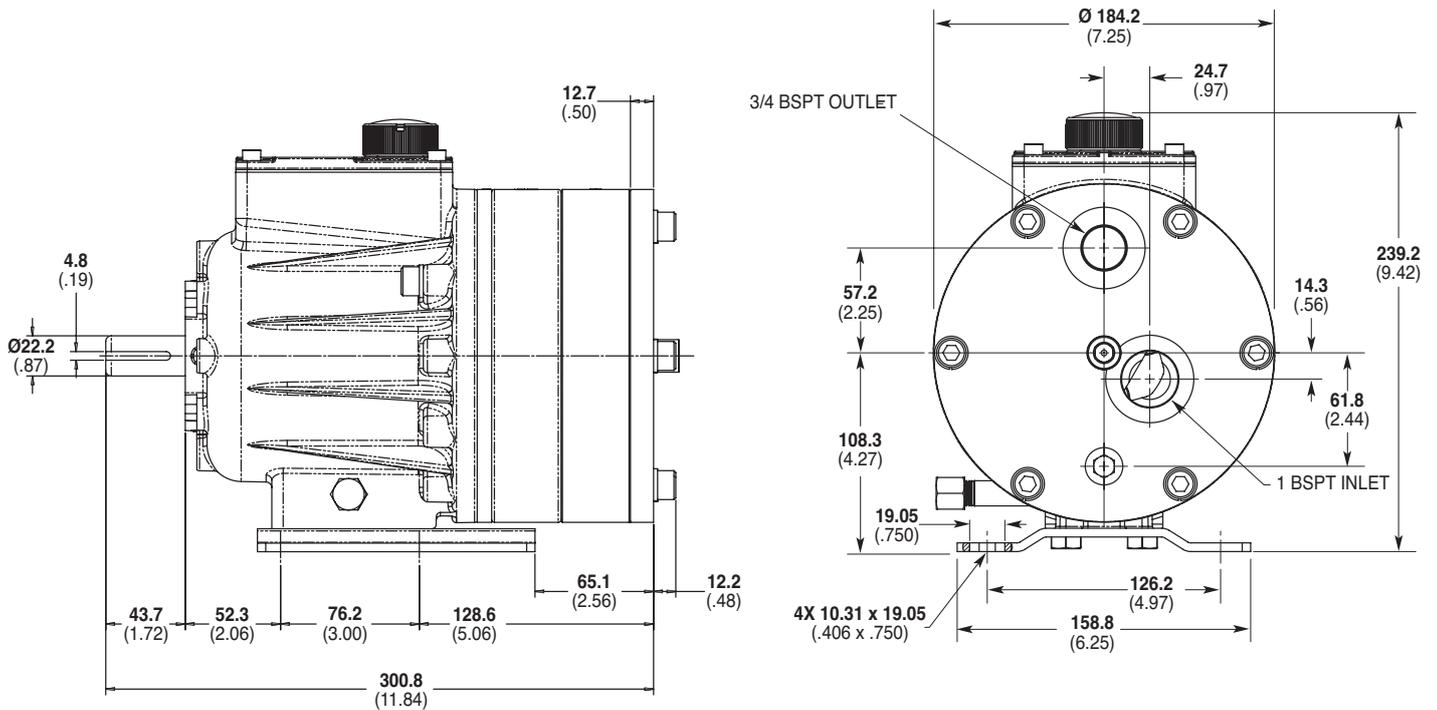
$$\frac{\text{motor pulley OD}}{\text{pump rpm}} = \frac{\text{pump pulley OD}}{\text{motor rpm}}$$

G10 Series Representative Drawings

G10 Models with Metallic Pump Head mm (Inches)



G10 Models with Non-metallic Pump Head mm (Inches)



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

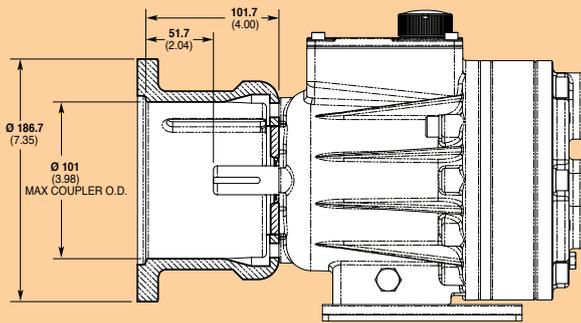
G10 Series **Adapters/Valves/Skids**

Pump/Motor Adapter mm (Inches)

Part Number: A04-003-I200

Must be ordered separately for G10 models for use with IEC 80 - 90 frame motors, B5 flange.

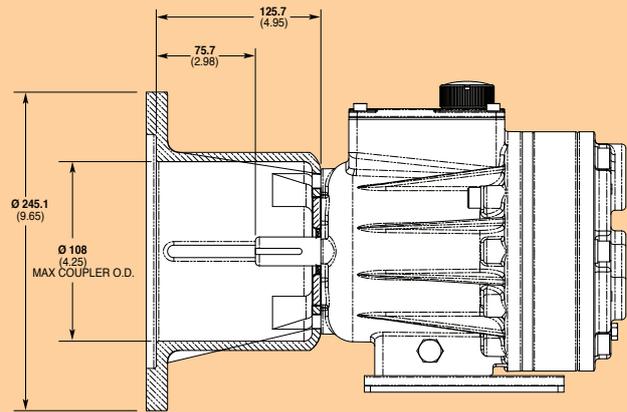
NEMA adapter available - consult factory.



Part Number: A04-004-I200

Must be ordered separately for G10 models for use with IEC 100 - 112 frame motors, B5 flange.

NEMA adapter available - consult factory.



Valve Selection

A seal-less C62 Pressure Regulating Valve is recommended for Hydra-Cell G10 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 G10 pumping systems.



Skid-mounted G10 with 3hp, 3-phase motor.

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

G10 Series **How to Order**

Ordering Information



A complete G10 Series Model Number contains 12 digits including 9 customer-specified design and materials options, for example: G10XKBTHFECA.

Digit	Order Code	Description
1-3	G10	Pump Configuration Shaft-driven (BSPT Ports or ANSI Flanges)* *Pump/motor adapters ordered separately. See previous page.
4	X E S I	Hydraulic End Cam Max 30.6 l/min (8.1 gpm) @ 1450 rpm Max 25.1 l/min (6.6 gpm) @ 1450 rpm Max 18.8 l/min (5.0 gpm) @ 1450 rpm Max 12.5 l/min (3.3 gpm) @ 1450 rpm
5	K R	Pump Head Version Kel-Cell BSPT Ports Kel-Cell BSPT Ports with Optimized Valve Pocket
6	B C G M N P R S T	Pump Head Material Brass Cast Iron (Nickel-plated) Duplex Alloy 2205 Stainless Steel (with Hastelloy C followers & follower screws) PVDF (with Hastelloy C followers & follower screws) Polypropylene (with Hastelloy C followers & follower screws) Polypropylene (with 316L Stainless Steel followers & follower screws) 316L Stainless Steel ANSI flange class 150 x 600 316L Stainless Steel Hastelloy CW12MW
7	A E G J P T	Diaphragm & O-ring Material Aflas diaphragm / PTFE o-ring EPDM (requires EPDM-compatible oil - Digit 12 oil code C) FKM PTFE (available with E and S cams only; 1200 rpm max.) Neoprene Buna-N
8	C D H S T	Valve Seat Material Ceramic Tungsten Carbide 17-4 Stainless Steel 316L Stainless Steel Hastelloy C

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

G10 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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