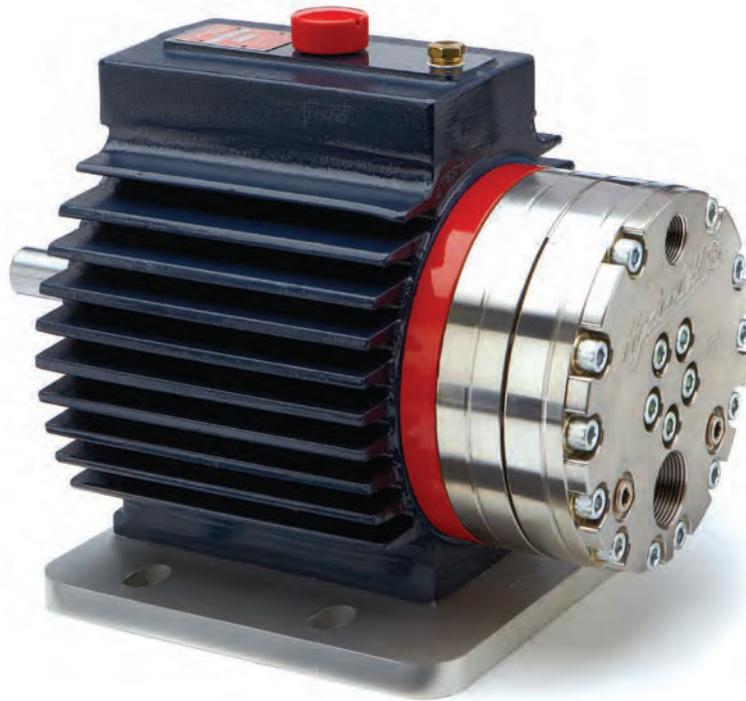


Hydra-Cell[®]

Seal-less Pumps

Versatile, Reliable Pumps for a Wide Range of Applications



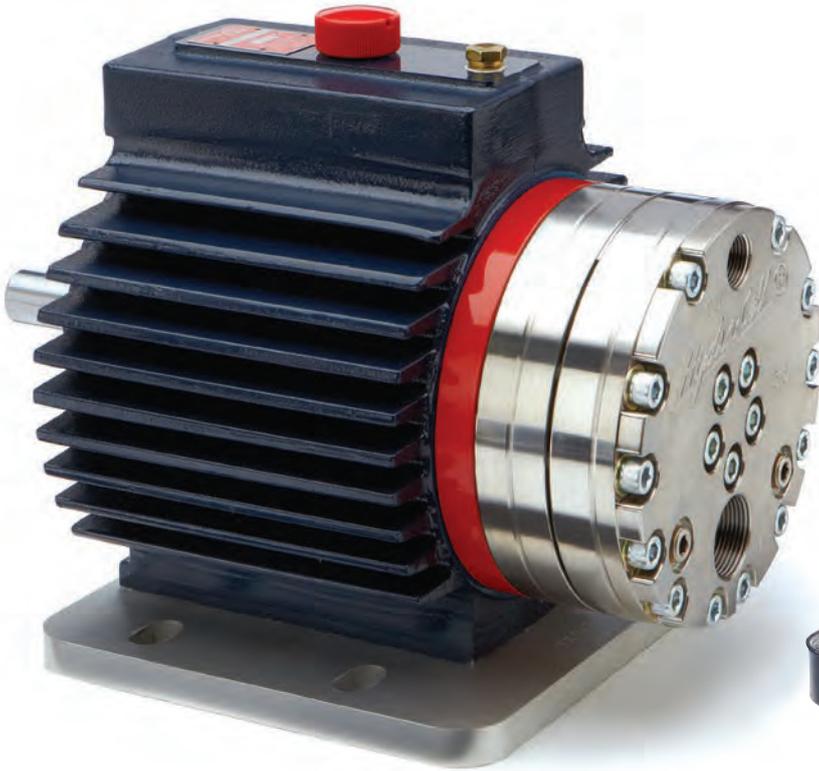
GI5/GI7 Series

- 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.

G15/G17 Series

Maximum Flow Rate: 15.5 gpm (58.7 l/min)

Maximum Pressure: 2500 psi (172 bar) for Metallic Pump Heads



G15 for horizontal installations shown with 316L Stainless Steel pump head.



G17 for vertical mounting (including motor adapter, base plate and oil reservoir) shown with Brass pump head.

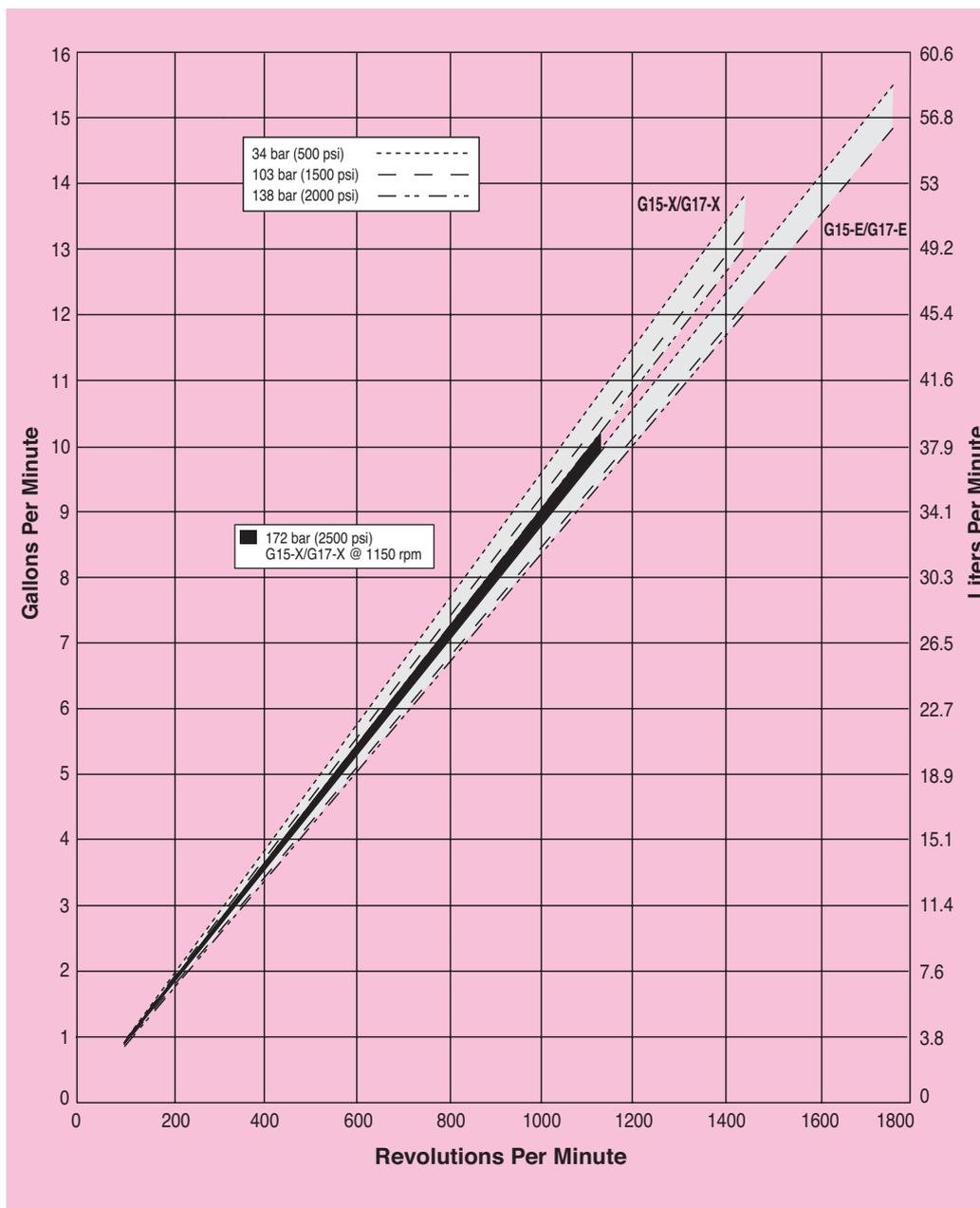
G15/G17 Series Performance

Capacities

Model	Max. Input rpm	Max. Flow		Max. Pressure	
		gpm	l/min	Inlet Pressure	Discharge Pressure
G15-X/G17-X	1450	13.8	52.3	500 psi (34 bar)	500 psi (34 bar)
	1450	13.3	50.2	500 psi (34 bar)	1500 psi (103 bar)
	1450	13.0	49.2	500 psi (34 bar)	2000 psi (138 bar)
	1150	10.1	38.1	500 psi (34 bar)	2500 psi (172 bar)
G15-E/G17-E	1750	15.5	58.7	500 psi (34 bar)	500 psi (34 bar)
	1750	14.8	56.2	500 psi (34 bar)	1500 psi (103 bar)
	1450	12.0	45.5	500 psi (34 bar)	2000 psi (138 bar)

Performance and specification ratings apply to G15/G17 configurations unless specifically noted otherwise.

Maximum Flow at Designated Pressure



G15/G17 Series Specifications

Flow Capacities (4-pole Motor @ 50 Hz)

Model	@ max rpm	psi	bar	gpm	l/min
G15-X/G17-X	1450	500	34	13.8	52.3
	1450	1500	103	13.3	50.2
	1450	2000	138	13.0	49.2
	1150	2500	172	10.1	38.1
G15-E/G17-E	1750	500	34	15.5	58.7
	1750	1500	103	14.8	56.2
	1450	2000	138	12.0	45.5

Delivery

Model	psi	bar	gal/rev	liters/rev
G15-X/G17-X	500	34	0.0095	0.0360
	1500	103	0.0092	0.0346
	2000	138	0.0090	0.0339
	2500	172	0.0088	0.0331
G15-E/G17-E	500	34	0.0089	0.0335
	1500	103	0.0085	0.0321
	2000	138	0.0083	0.0314

Maximum Discharge Pressure

Metallic Heads: 103 bar (1500 psi) @1750 rpm
(G15-E & G17-E only)
138 bar (2000 psi) @1450 rpm
172 bar (2500 psi) @1150 rpm

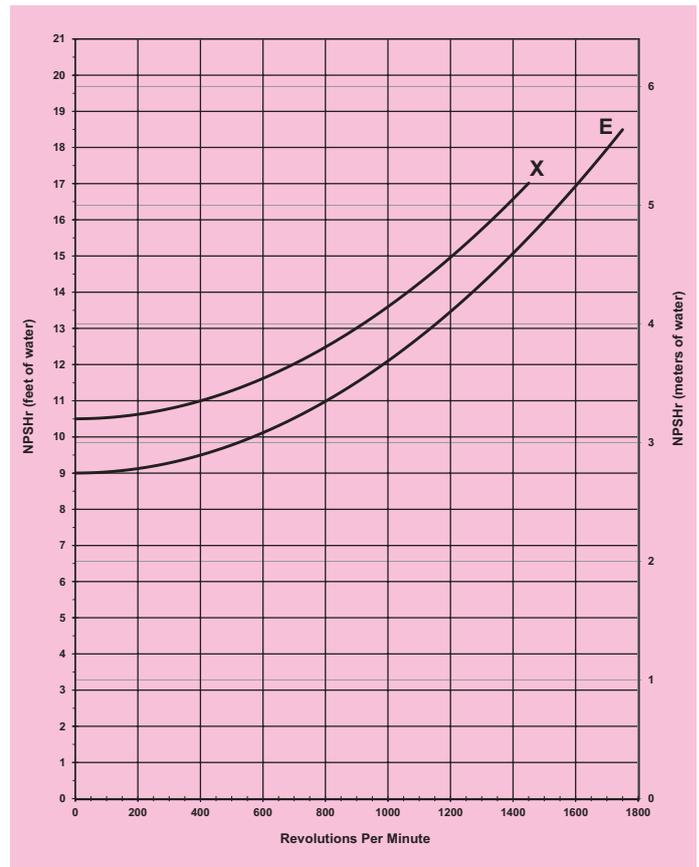
Maximum Inlet Pressure 500 psi (34 bar)

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).

Maximum Solids Size	500 microns
Inlet Port	1-1/4 inch BSPT 1-1/4 inch NPT
Discharge Port	3/4 inch BSPT 3/4 inch NPT
Shaft Diameter	28.6 mm (1-1/8 inch)
Shaft Rotation	Reverse (bi-directional)
Bearings	Tapered roller bearings
Oil Capacity	2.1 liters (2.2 US quarts)
Weight	
Metallic Heads:	66 kg (145 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

$$\frac{80 \times \text{rpm}}{63,000} + \frac{\text{gpm} \times \text{psi}}{1,460 - \left(\frac{\text{psi} - 500}{20}\right)} = \text{electric motor hp}$$

$$\frac{80 \times \text{rpm}}{84,428} + \frac{\text{l/min} \times \text{bar}}{511 - \left(\frac{\text{bar} - 35}{4}\right)} = \text{electric motor kW}$$

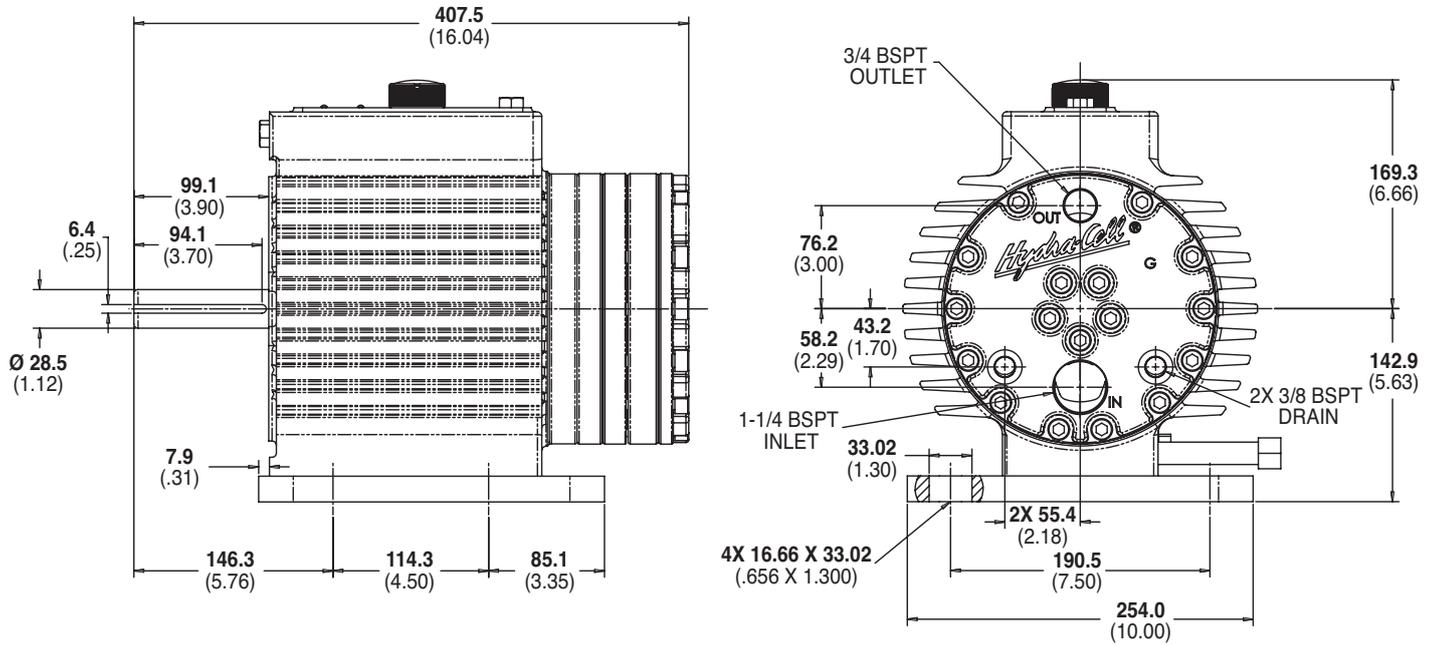
When using a variable frequency drive (VFD) controller calculate the hp or kW at minimum and maximum pump speed to ensure the correct hp or kW motor is selected. Note that motor manufacturers typically de-rate the service factor to 1.0 when operating with a VFD.

Calculating Pulley Size

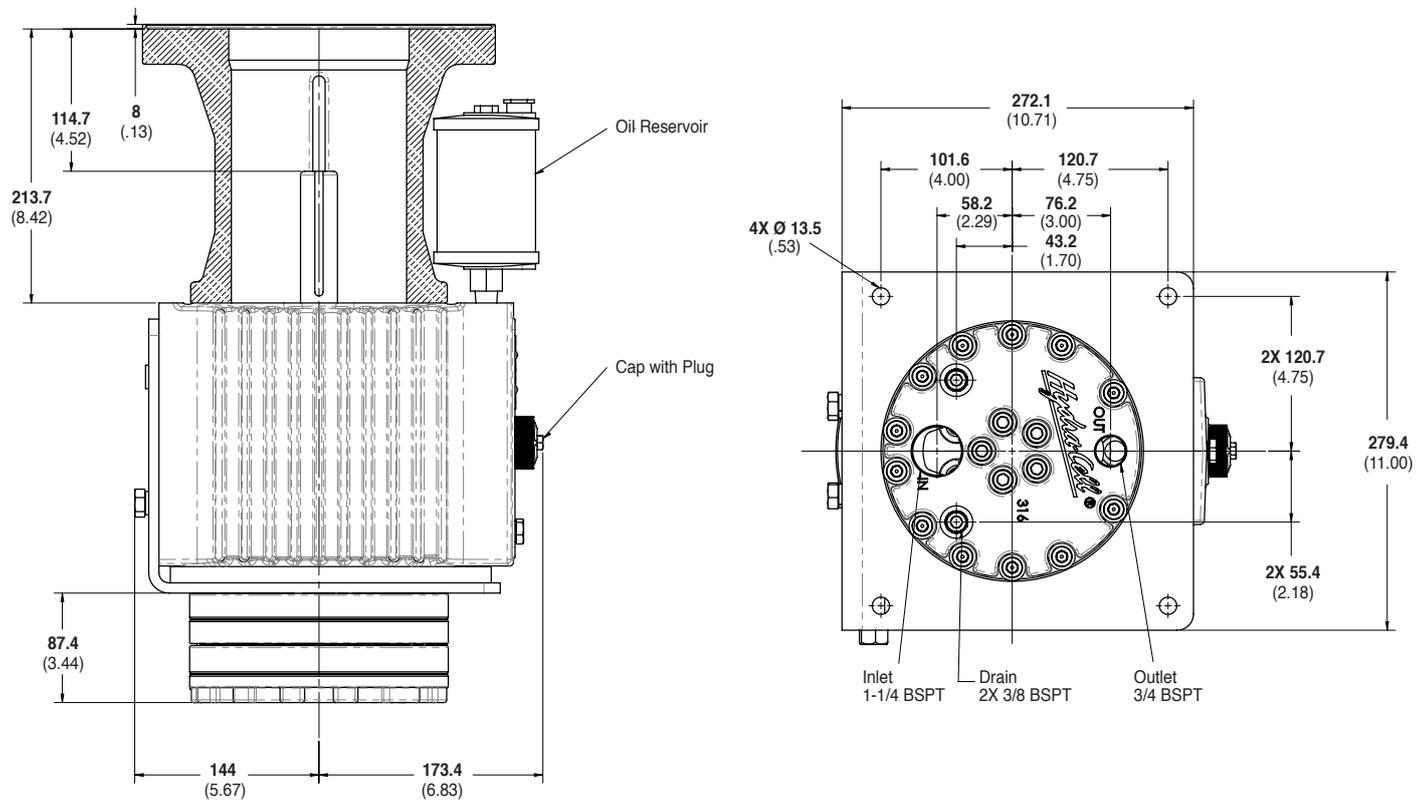
$$\frac{\text{motor pulley OD}}{\text{pump rpm}} = \frac{\text{pump pulley OD}}{\text{motor rpm}}$$

GI5/GI7 Series Representative Drawings

GI5 Models for Horizontal Mounting (Metallic Pump Heads) mm (Inches)



GI7 Models for Vertical Mounting (Metallic Pump Heads) mm (Inches)

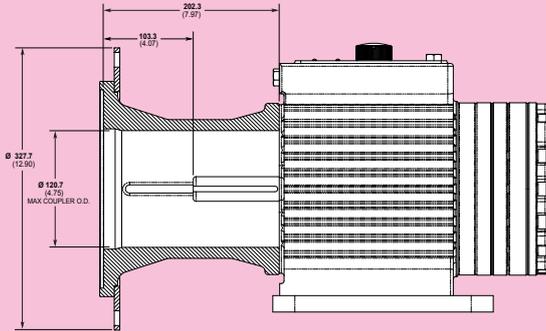


Note: Dimensions are for reference only. Contact factory for certified drawings.

GI5/GI7 Series Adapters/Valves

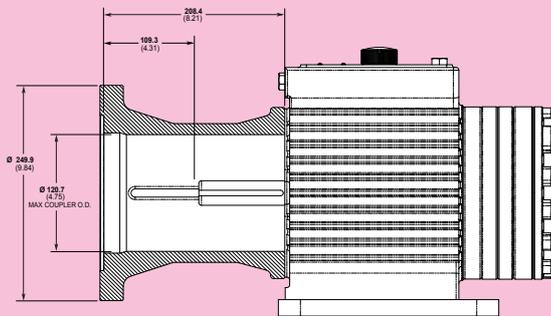
Pump/Motor Adapter mm (Inches)

GI5 (Horizontal) Models



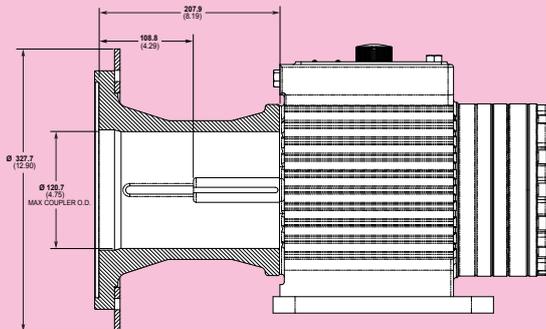
Part Number: A04-041-1201

Must be ordered separately for use with IEC 132 frame motors, B5 flange.



Part Number: A04-041-1203

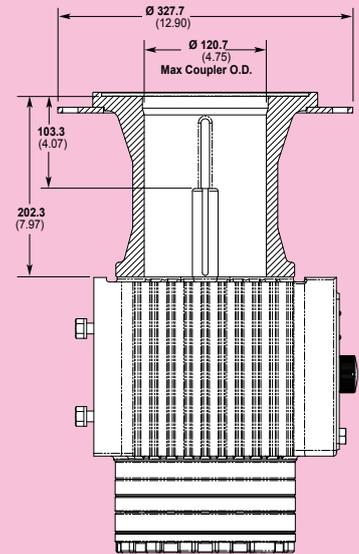
Must be ordered separately for use with IEC 160 frame motors, B14 flange.



Part Number: A04-041-1205

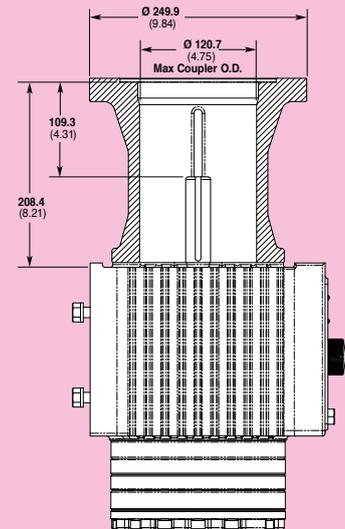
Must be ordered separately for use with IEC 160 - 180 frame motors, B5 flange.

GI7 (Vertical) Models



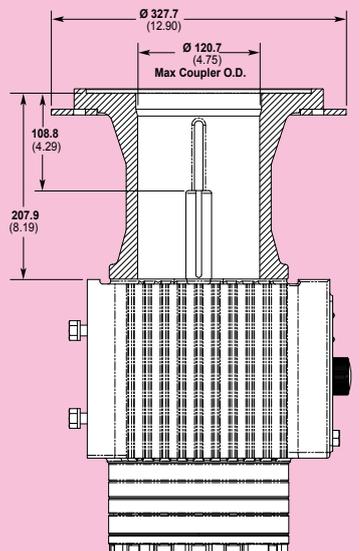
Part Number: A04-041-1201

Must be ordered separately for use with IEC 132 frame motors, B5 flange.



Part Number: A04-041-1203

Must be ordered separately for use with IEC 160 frame motors, B14 flange.



Part Number: A04-041-1205

Must be ordered separately for use with IEC 160 - 180 frame motors, B5 flange.

Valve Selection

A Hydra-Cell GI5/GI7 Series pumping system uses a seal-less C62 Pressure Regulating Valve.



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

NEMA adapters available - consult factory.

G15/G17 Series **How to Order**

Ordering Information



A complete G15/G17 Series Model Number contains 12 digits including 10 customer-specified design and materials options, for example: G15XKBTHFECG.

Digit	Order Code	Description
1-3		Pump Configuration
	G15	Horizontal shaft-driven (BSPT Ports)*
	G17	Vertical shaft-driven (BSPT Ports)* *Pump/motor adapters ordered separately. See previous page.
4		Hydraulic End Cam
	X	Max. 52.3 l/min (13.8 gpm) @ 1450 rpm
	E	Max 43.5 l/min (11.5 gpm) @ 1450 rpm
5		Pump Head Version
	K	Advanced Diaphragm Position Control (ADPC)
6		Pump Head Material
	B	Brass
	S	316L Stainless Steel
	T	Hastelloy C
7		Diaphragm & O-ring Material
	A	Aflas diaphragm/PTFE o-ring
	G	FKM
	P	Neoprene
	T	Buna-N
8		Valve Seat Material
	D	Tungsten Carbide
	H	17-4 Stainless Steel
	N	Nitronic 50
	T	Hastelloy C
9		Valve Material
	D	Tungsten Carbide
	F	17-4 Stainless Steel
	N	Nitronic 50
	T	Hastelloy C
10		Valve Springs
	E	Elgiloy
	H	17-7 Stainless Steel (high-viscosity option - requires 3.4 bar/50 psi suction pressure)
	T	Hastelloy C
11		Valve Spring Retainers
	C	Celcon
	H	17-7 Stainless Steel
	M	PVDF
	P	Polypropylene
	T	Hastelloy C
	Y	Nylon (Zytel)

Digit	Order Code	Description
12		Hydra-Oil
	A	10W30 standard-duty oil
	B	40-wt for continuous-duty (use with 316L SST pump head - standard)
	E	Food-contact oil
	G	5W30 cold-temp severe-duty synthetic oil
	H	15W50 high-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

Hydra-Cell[®]

Seal-less Pumps

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