

# G04 Series

Maximum Flow Rate: 11.2 l/min (2.9 gpm)

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



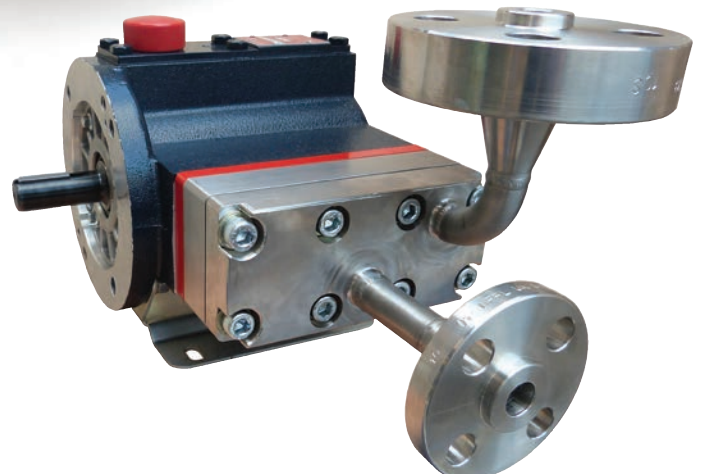
**WANNER**  
*Hydra-Cell*<sup>®</sup>  
Seal-less Pump Technology



G04 with Stainless Steel pump head



G04 with Brass pump head



G04 with Stainless Steel pump head and ANSI RF flanges.

# G04 Series Performance

## Capacities

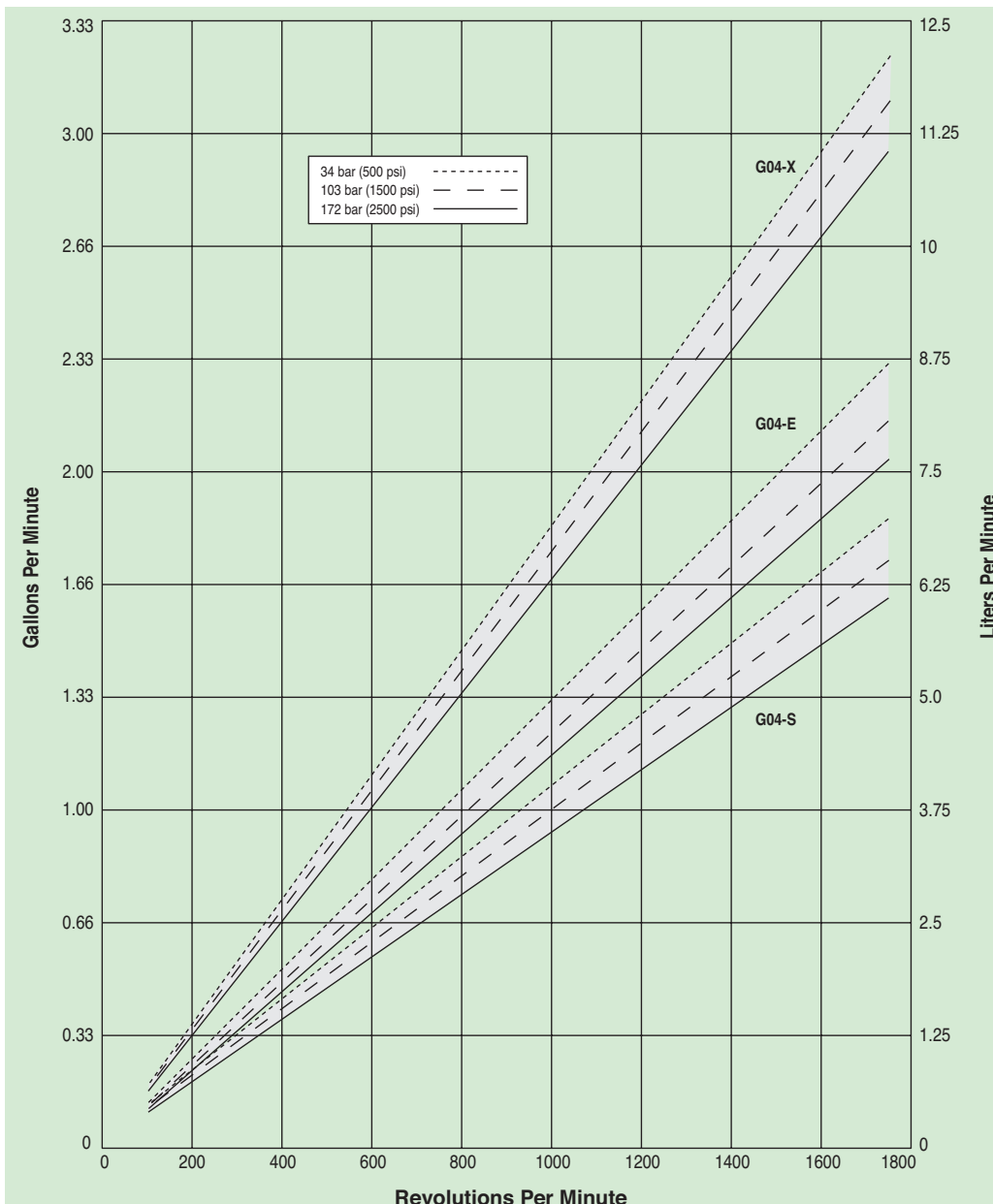
Flow				Pressure	
Model	Max. Input rpm	Max. Flow @ 172 bar (2500 psi)		Maximum Inlet Pressure	
		gpm	l/min	34 bar (500 psi)	
G04-X	1750	2.9	11.2	Maximum Discharge Pressure	
G04-E	1750	2.0	7.7	172 bar (2500 psi)	
G04-S	1750	1.6	6.2		

*Performance and specification ratings apply to G04 configurations unless specifically noted otherwise.*

## Metering & Dosing

API 675 Performance Characteristics of Steady State Accuracy  $\pm 1\%$ , Linearity  $\pm 3\%$  and Repeatability  $\pm 3\%$  can be achieved at speeds up to 1440 rpm and pressures up to 172 bar (metallic pump heads) for X-cam pumps only.

## Maximum Flow at Designated Pressure



# G04 Series Specifications

## Flow Capacities @ 172 bar (2500 psi) 4-pole Motor @ 50 Hz

Model	rpm	gpm	l/min
G04-X	1450	2.40	9.1
G04-E	1450	1.74	6.6
G04-S	1450	1.35	5.1

## Flow Capacities @ 172 bar (2500 psi) 6-pole Motor @ 50 Hz

Model	rpm	gpm	l/min
G04-X	960	1.58	6.0
G04-E	960	1.16	4.4
G04-S	960	0.87	3.3

## Delivery

Model	gal/rev		
	@34 bar (500 psi)	@103 bar (1500 psi)	@172 bar (2500 psi)
G04-X	0.0019	0.0018	0.0017
G04-E	0.0013	0.0012	0.0012
G04-S	0.0011	0.0010	0.0009

Model	liters/rev		
	@34 bar (500 psi)	@103 bar (1500 psi)	@172 bar (2500 psi)
G04-X	0.0070	0.0067	0.0064
G04-E	0.0050	0.0047	0.0044
G04-S	0.0041	0.0039	0.0035

## Maximum Discharge Pressure

Metallic Heads: 172 bar (2500 psi)

## Maximum Inlet Pressure 34 bar (500 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).

## Maximum Solids Size 200 microns

**Inlet Port**  
1/2 inch BSPT  
1/2 inch NPT  
600lb ANSI RF Flange

**Discharge Port**  
1/2 inch BSPT  
1/2 inch NPT  
2500lb ANSI RF Flange

**Shaft Diameter** 22.2 mm (7/8 inch)

**Shaft Rotation** Reverse (bi-directional)

**Bearings** Precision ball bearings

**Oil Capacity** 1.05 litres (1.1 US quarts)

**Weight** 37 lbs. (16.8 kg)

## Calculating Required Power

$$\frac{6 \times \text{rpm}}{63,000} + \frac{\text{gpm} \times \text{psi}}{1,460} = \text{electric motor hp}$$

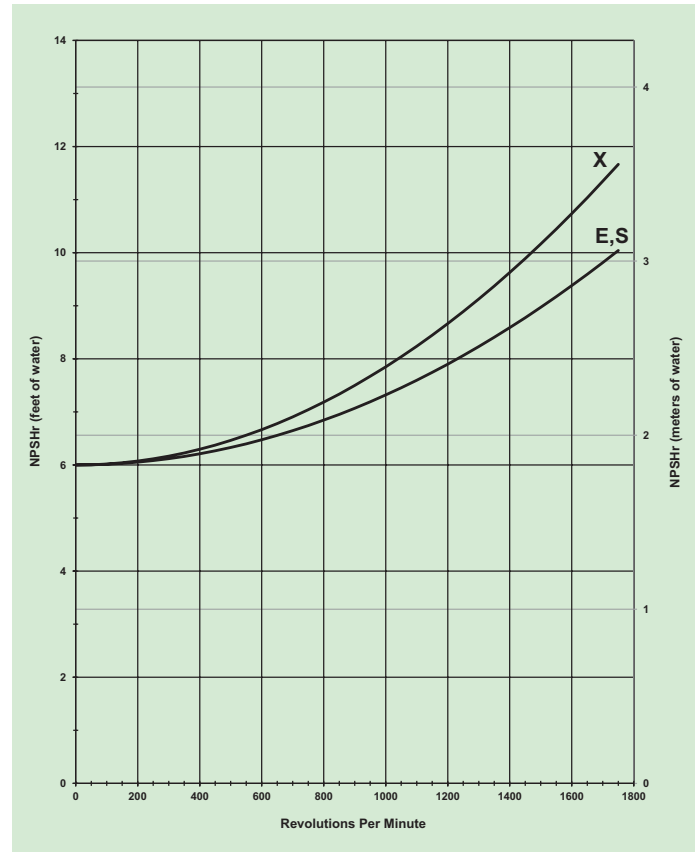
$$\frac{6 \times \text{rpm}}{84,428} + \frac{\text{l/min} \times \text{bar}}{511} = \text{electric motor kW}$$

## Calculating Pulley Size

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

When using a variable frequency controller (VFD) 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.

## Net Positive Suction Head (NPSHr)

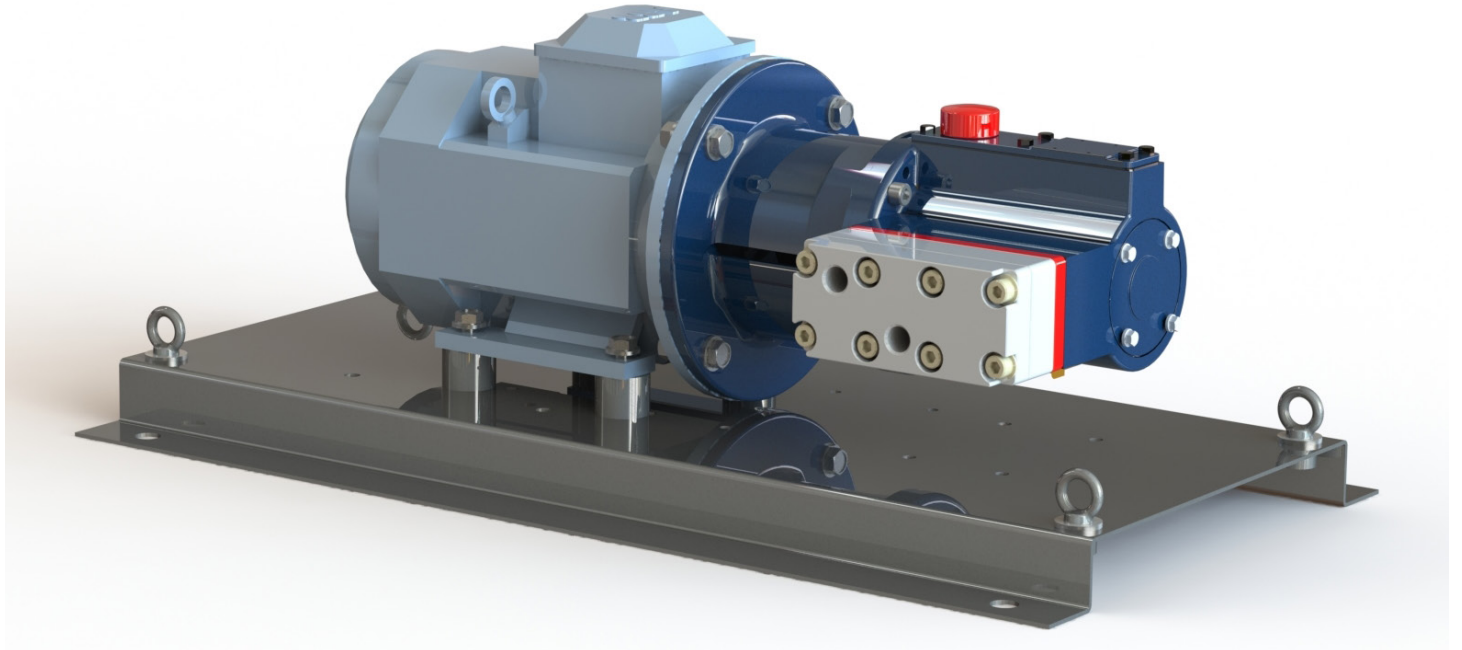


## Self-priming:

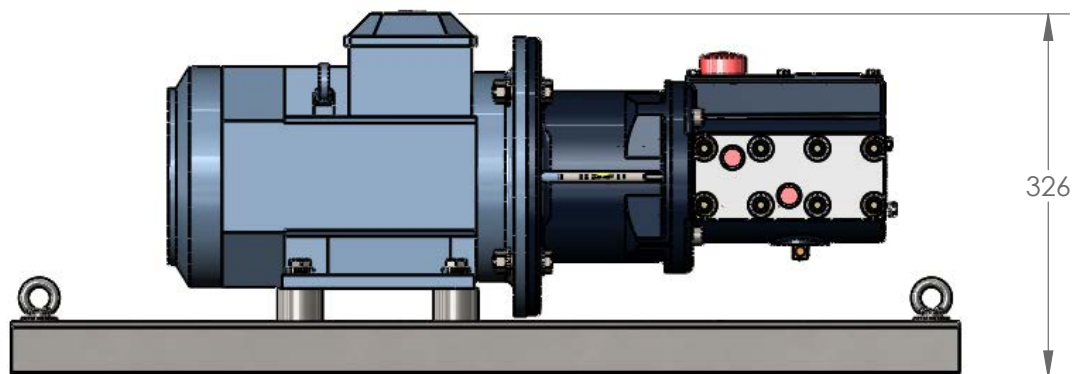
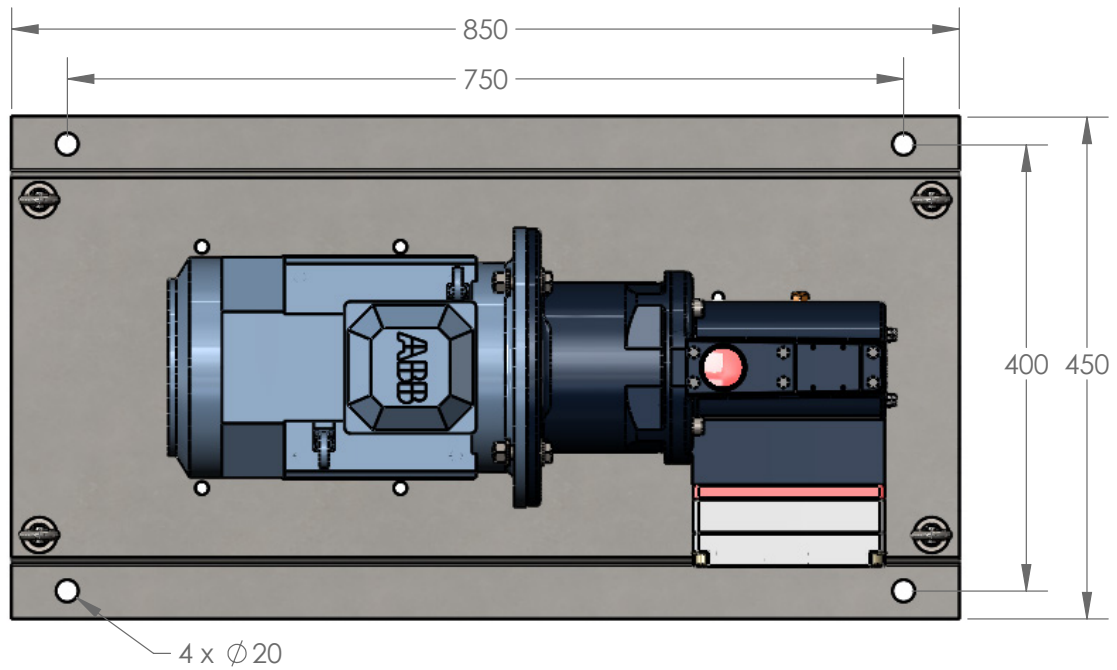
Each Hydra-Cell pump has different lift capability depending on model size, cam angle, speed, and fluid characteristics. To ensure that your specific lift characteristics are met, refer to the inlet calculations regarding friction, and acceleration head losses in your Hydra-Cell Installation & Service Manual. Compare those calculations to the NPSHr curves above.

# G04 Series General Assemblies

## Baseplate Assembly with Motor Adaptor for IEC 100 Motor Frame

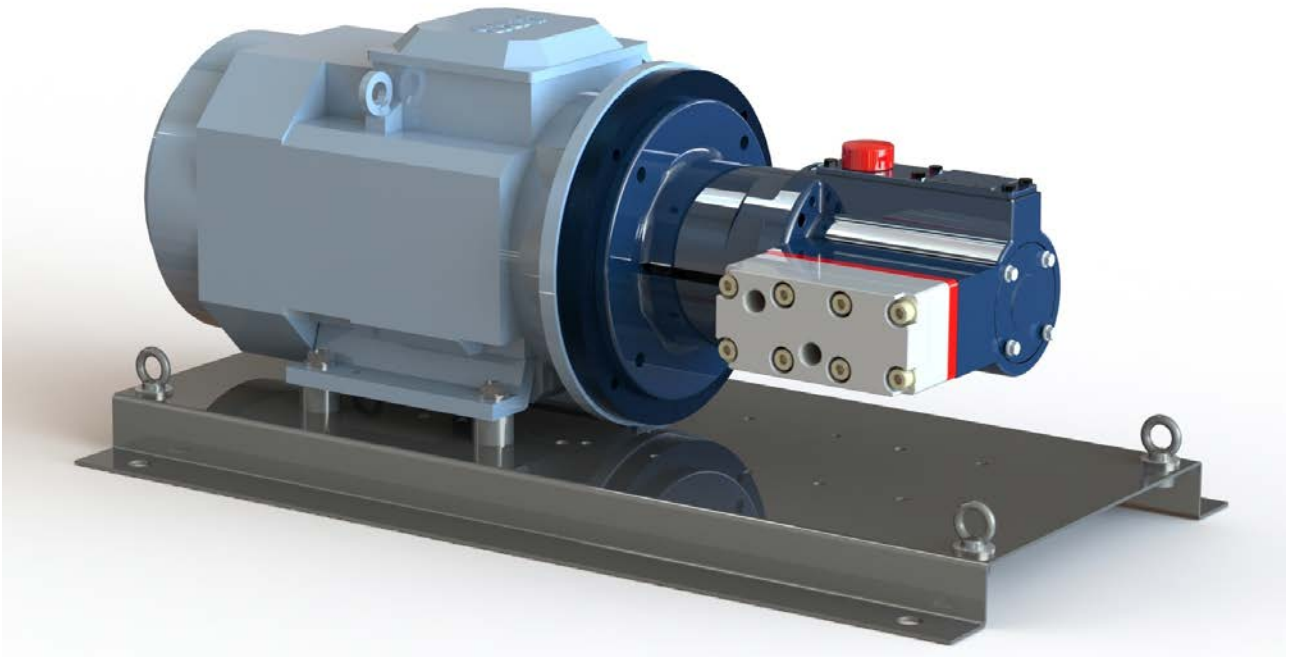


Dimensions in mm

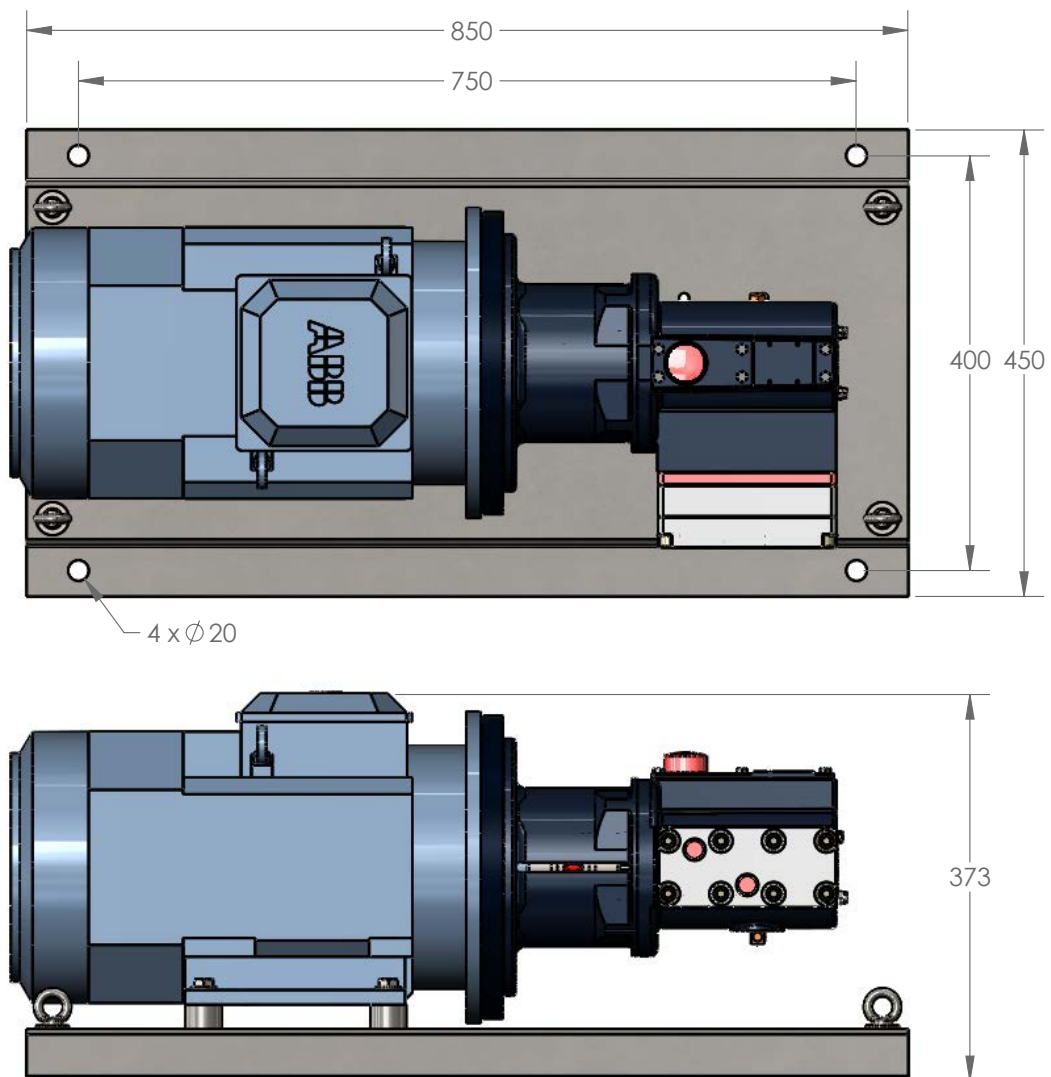


# G04 Series General Assemblies

## Baseplate Assembly with Motor Adaptor for IEC I32 Motor Frame

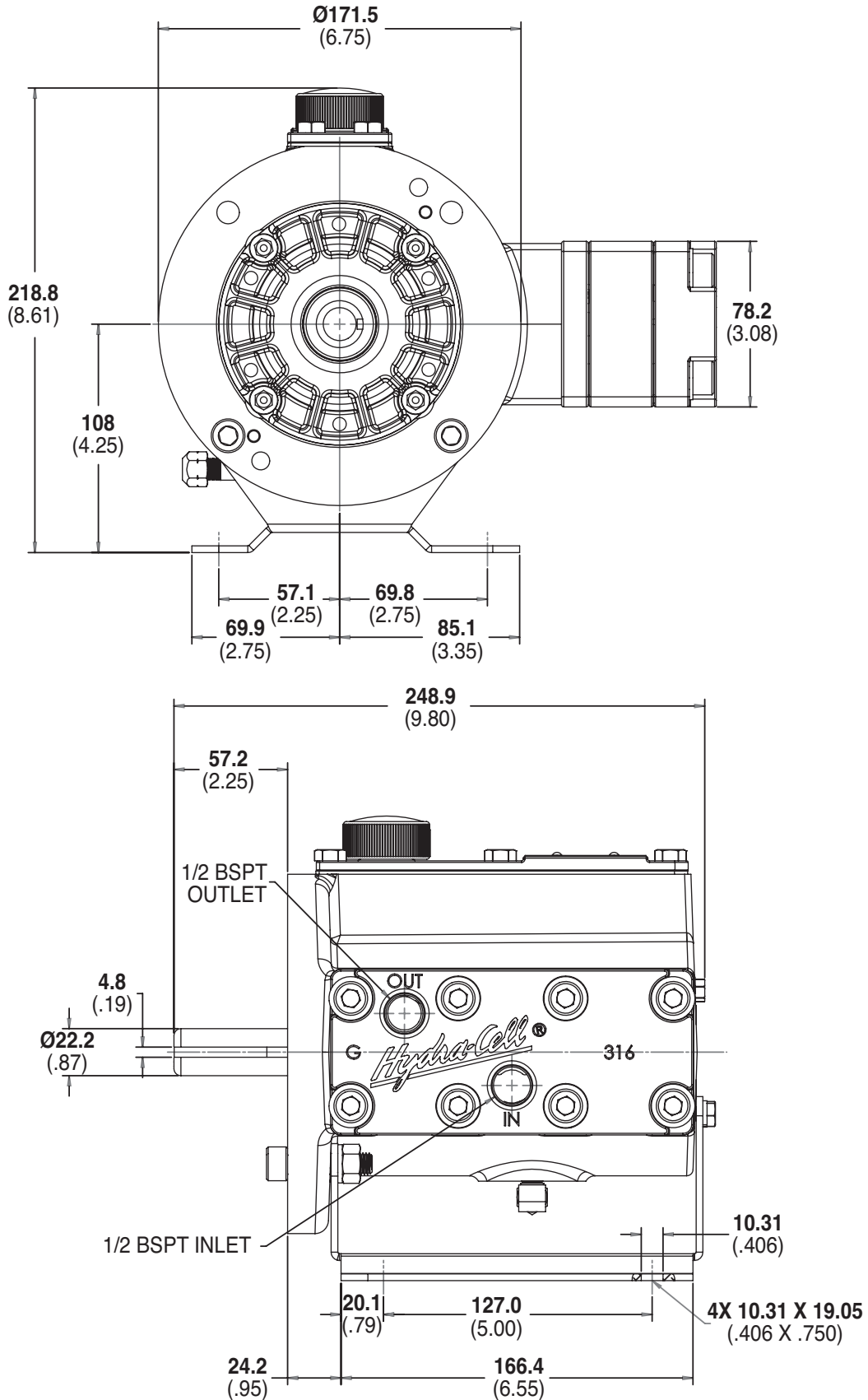


Dimensions in mm



# G04 Series Representative Drawings

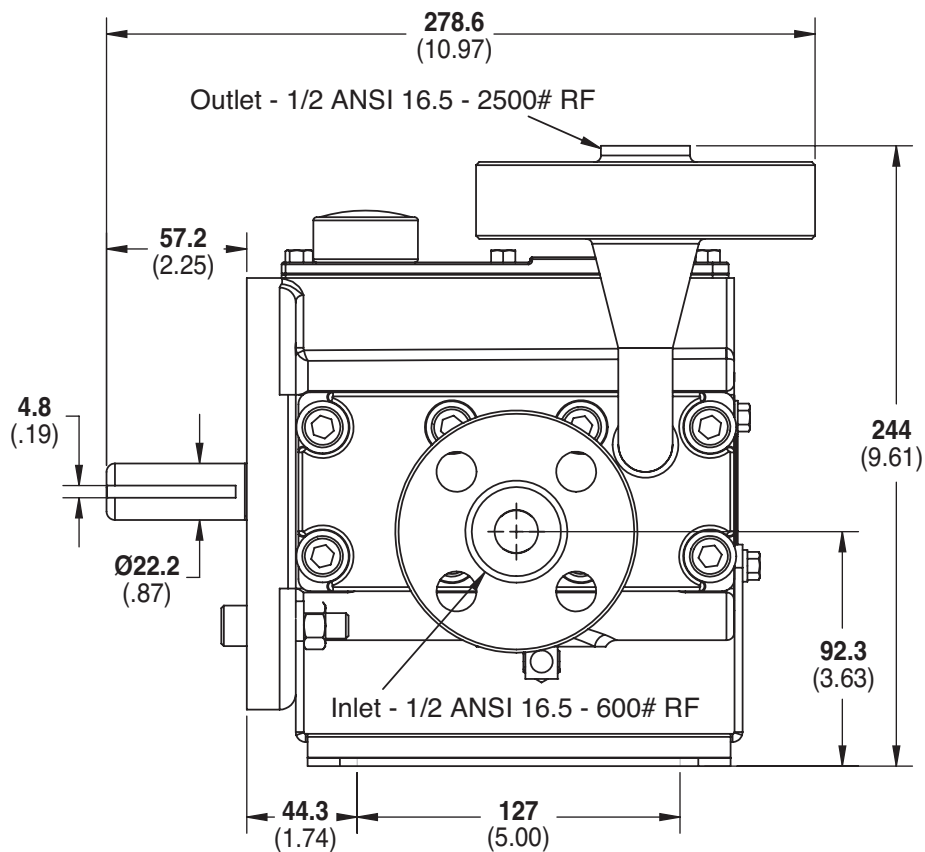
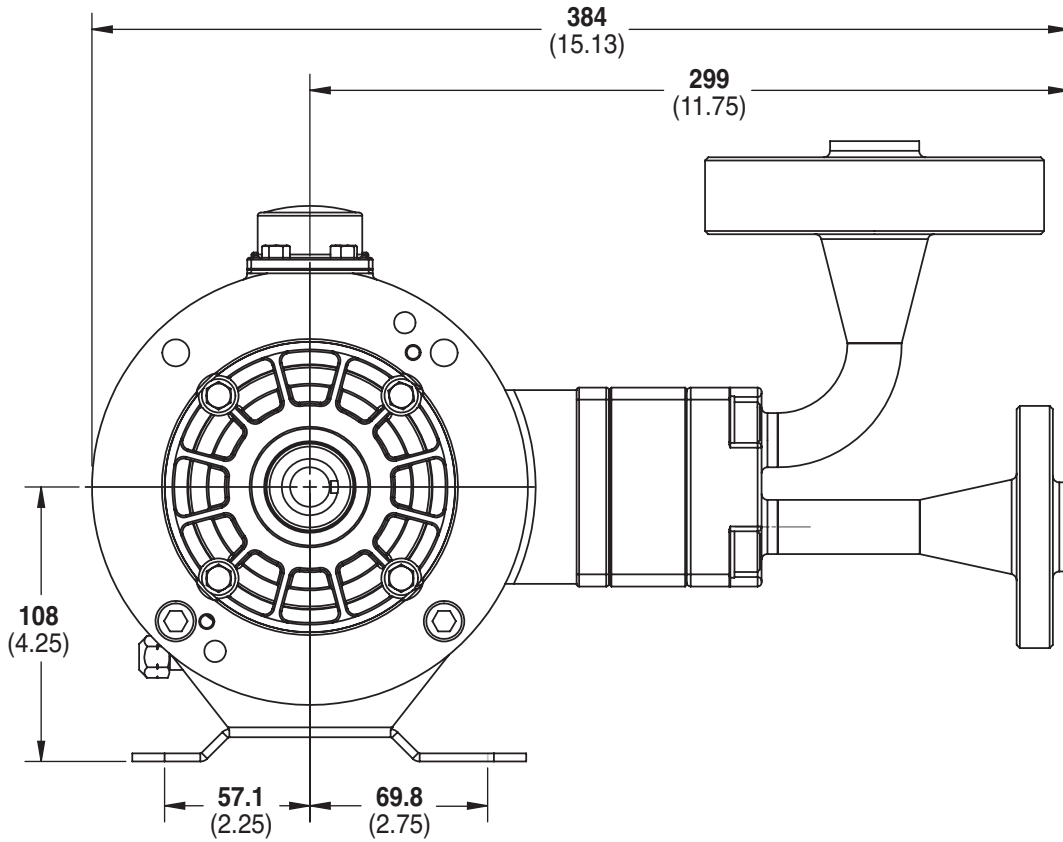
## G04 Models with Metallic Pump Head mm (Inches)



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

# G04 Series Representative Drawings

## G04 Models with ANSI RF Flanges mm (Inches)



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

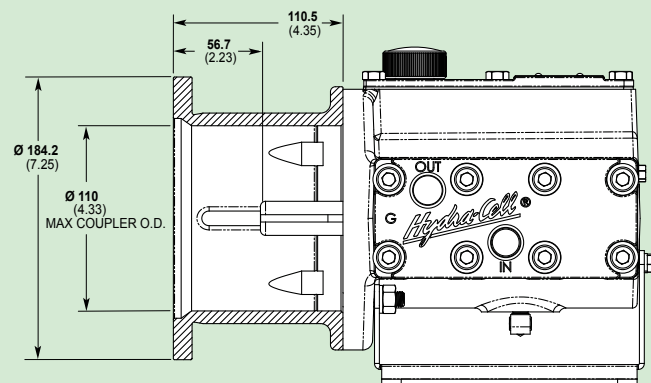
# G04 Series Motor Adaptors / Valves

## Pump/Motor Adaptor mm (Inches)

### Part Number: A04-003-I202

Must be ordered separately for G04 models for use with IEC 80 - 90 frame motors, B5 flange.

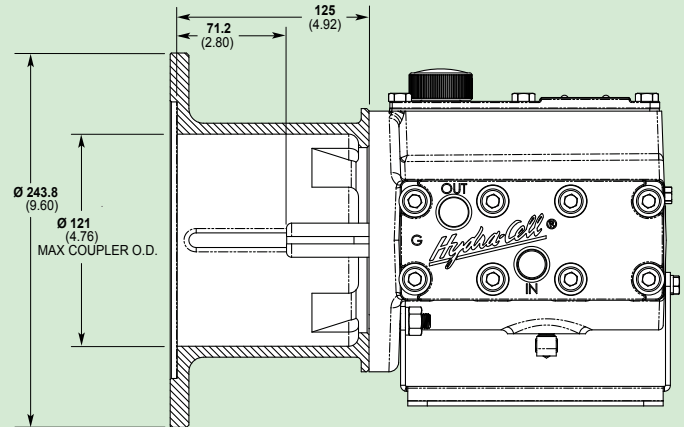
NEMA adaptor available - consult factory.



### Part Number: A04-004-I202

Must be ordered separately for G04 models for use with IEC 100 - 112 frame motors, B5 flange.

NEMA adaptor available - consult factory.



## Valve Selection

A seal-less C62 Pressure Regulating Valve is recommended for Hydra-Cell G04 pumping systems, especially for high-pressure requirements or when handling dirty fluids.





# G04 Series **How to Order**

## Ordering Information

1	2	3	4	5	6	7	8	9	10	11	12
G	0	4									

A complete G04 Series Model Number contains 12 digits including 9 customer-specified design and materials options, for example: G04SABTHFECG.

Digit	Order Code	Description
1-3	<b>G04</b>	<b>Pump Configuration</b> Shaft-driven (BSPT Ports or ANSI Flanges)* *Pump/motor adaptors ordered separately. See previous page.
4	<b>X</b> <b>E</b> <b>S</b>	<b>Hydraulic End Cam</b> Max 9.1 l/min (2.4 gpm) @ 1450 rpm Max 6.6 l/min (1.7 gpm) @ 1450 rpm Max 5.1 l/min (1.3 gpm) @ 1450 rpm
5	<b>D</b> - - -	<b>Pump Head Version</b> BSPT Ports ATEX 2014/34/EU Certified, Category 2, Zone 1, Hazardous Liquids ATEX 2014/34/EU Certified, Category 2, Zone 1, Non-Hazardous Liquids ATEX 2014/34/EU Certified, Category 3, Zone 2 <i>Note: All options include Certificate, Oil Level Monitor or Sight Glass, Earth Stud &amp; Secondary ATEX Label.</i>
6	<b>B</b> <b>R</b> <b>S</b> - <b>T</b>	<b>Pump Head Material</b> Brass 304 Stainless Steel 316L Stainless Steel 316L Stainless Steel with ANSI RF Flanges, Class 600lb x 2500lb♦ Hastelloy CW12MW ♦Selecting this option will result in a Wanner International generated Pump Code, stamped onto the pump.
7	<b>E</b> <b>G</b> <b>J</b> <b>P</b> <b>T</b>	<b>Diaphragm &amp; O-ring Material</b> EPDM (requires EPDM-compatible oil - Digit 12 oil code J) FKM PTFE Neoprene Buna-N
8	<b>D</b> <b>H</b> <b>N</b> <b>T</b>	<b>Valve Seat Material</b> Tungsten Carbide 17-4 Stainless Steel Nitronic 50 Hastelloy C
9	<b>D</b> <b>F</b> <b>N</b> <b>T</b>	<b>Valve Material</b> Tungsten Carbide 17-4 Stainless Steel Nitronic 50 Hastelloy C

Digit	Order Code	Description
10	<b>E</b> <b>S</b> <b>T</b>	<b>Valve Springs</b> Elgiloy 316L Stainless Steel Hastelloy C
11	<b>C</b> <b>H</b> <b>M</b> <b>P</b> <b>T</b> <b>Y</b>	<b>Valve Spring Retainers</b> Celcon 17-7 Stainless Steel PVDF Polypropylene Hastelloy C Nylon
12	<b>G</b> <b>J</b> <b>K</b>	<b>Hydra-Oil</b> 5W30 cold-temp severe-duty synthetic oil 20-wt EPDM-compatible oil Food-contact oil





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