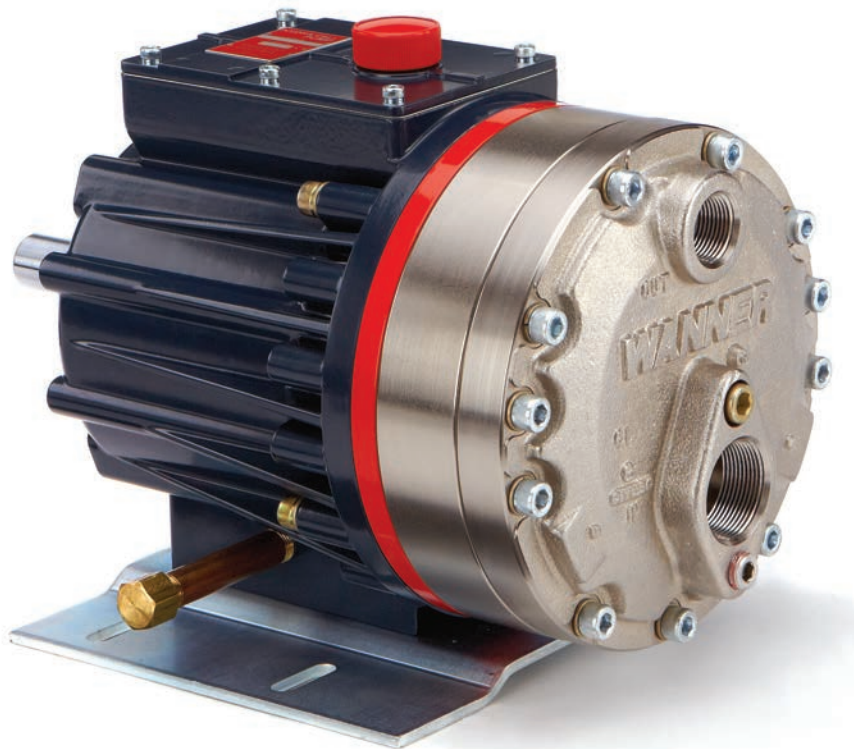


# Hydra-Cell<sup>®</sup>

## Seal-less Pumps

**Versatile, Reliable Pumps for a Wide Range of Applications**



### G25 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.

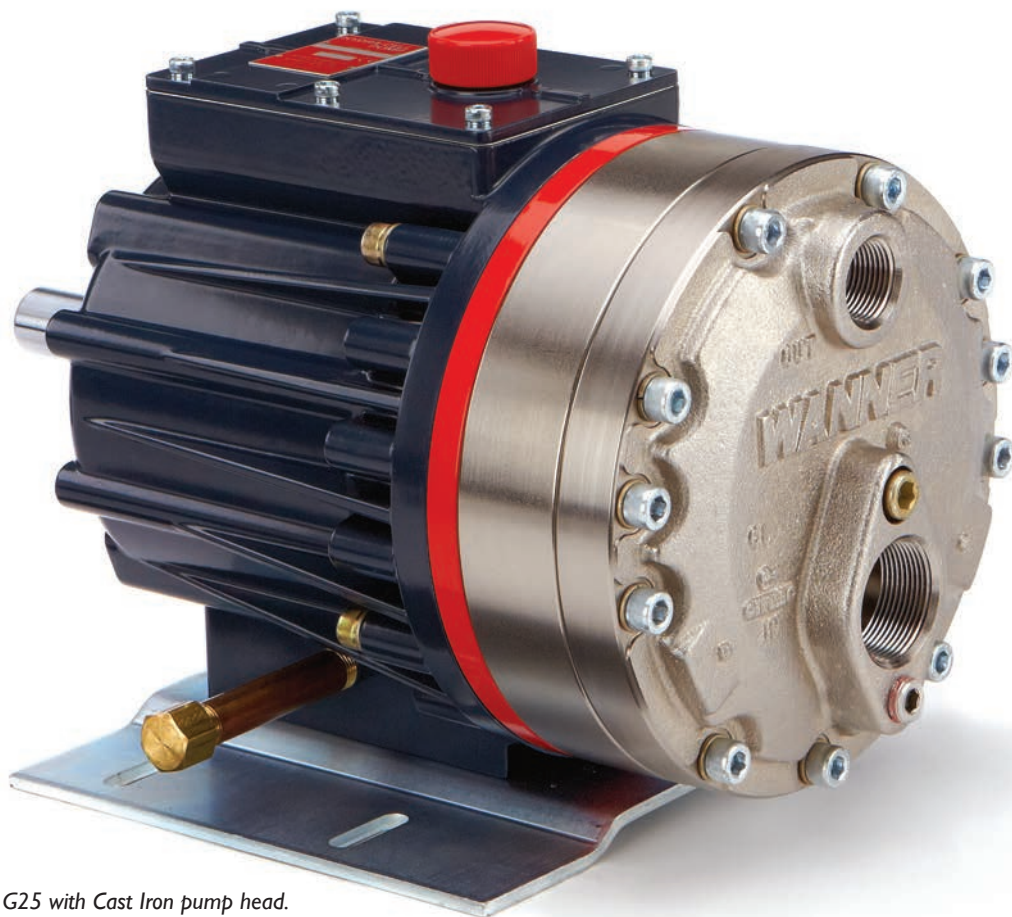
## G25 Series

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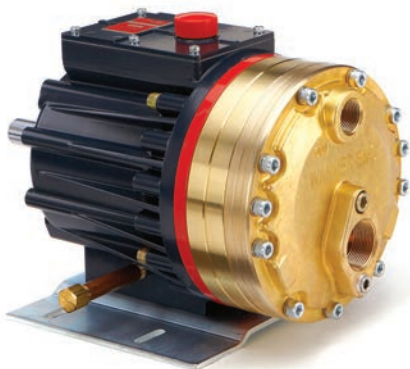
Maximum Flow Rate: 20.0 gpm (75.9 l/min)

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

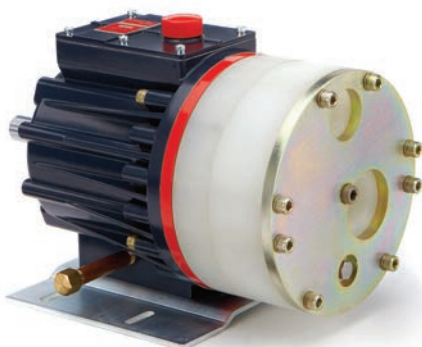
350 psi (24 bar) for Non-metallic Pump Heads



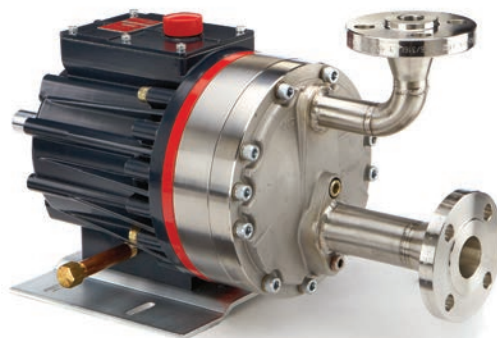
*G25 with Cast Iron pump head.*



*G25 with Brass pump head.*



*G25 with Polypropylene pump head.*



*G25 with 316L Stainless Steel pump head and ANSI flanges.*

# G25 Series Performance

## Capacities

### Flow

Model	Max. Input rpm	Max. Flow @ 1000 psi (69 bar)	
		gpm	l/min
G25-X	1050	20.0	75.7
G25-E	1150	20.0	75.9
G25-S	1150	16.2	61.5
G25-I	1150	11.8	44.7

### Pressure

**Maximum Inlet Pressure**  
250 psi (17 bar)

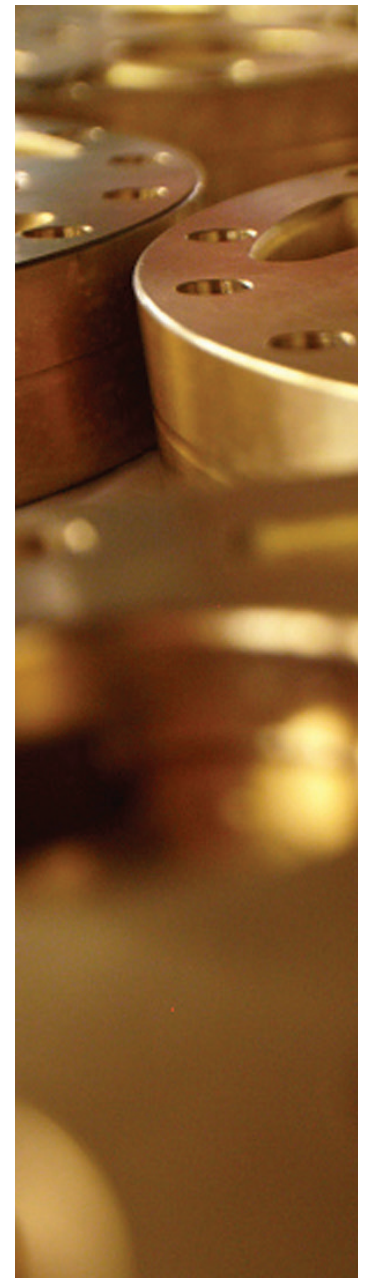
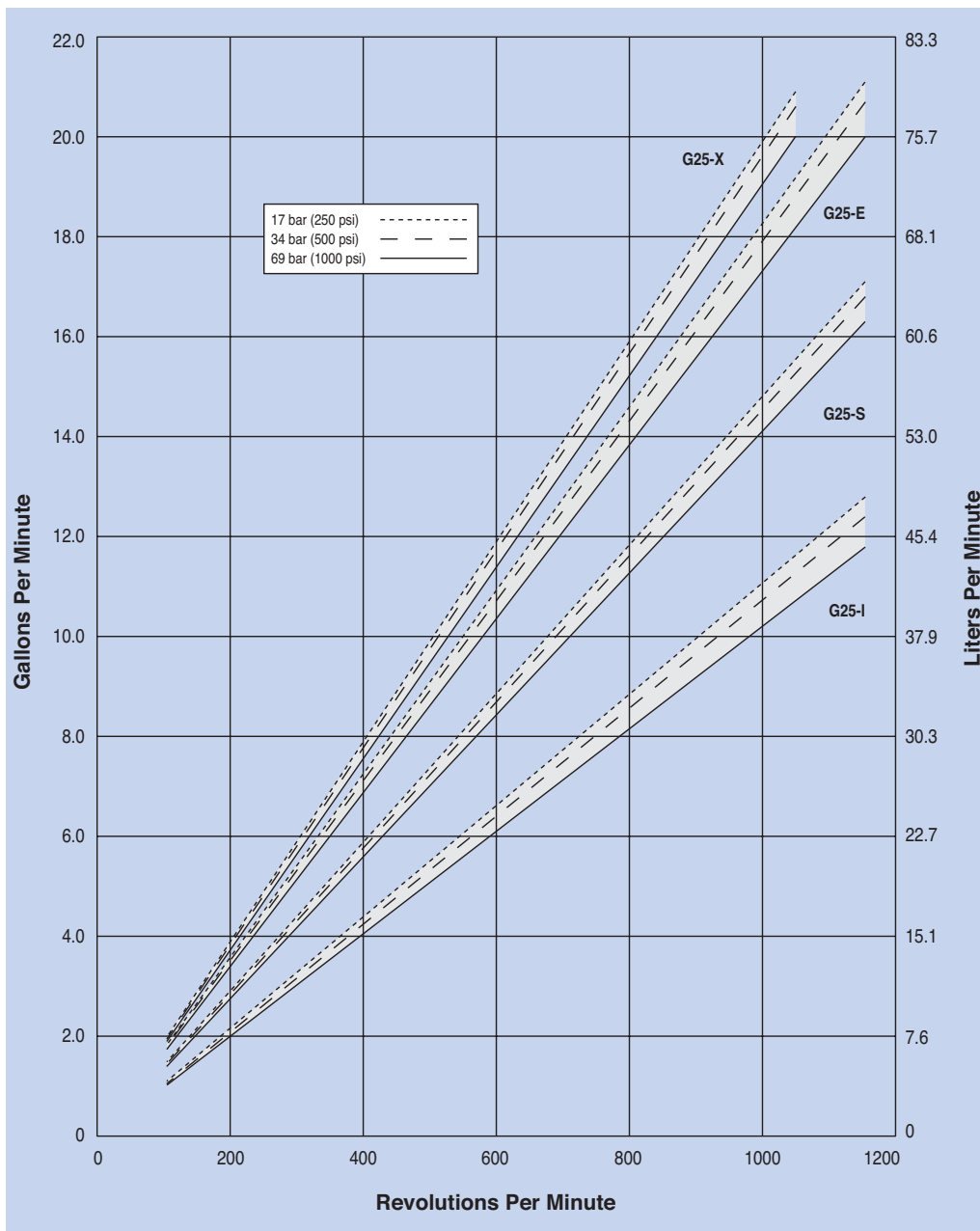
**Maximum Discharge Pressure**

Metallic Pump Heads:  
1000 psi (69 bar)

Non-metallic Pump Heads:  
250 psi (17 bar) Polypropylene  
350 psi (24 bar) PVDF

Performance and specification ratings apply to G25 configurations unless specifically noted otherwise.

## Maximum Flow at Designated Pressure



# G25 Series Specifications

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

Model	rpm	gpm	l/min
G25-X	960	18.2	69.0
G25-E	960	16.6	63.0
G25-S	960	13.2	50.0
G25-I	960	9.5	36.0

## Flow Capacities @ 69 bar (1000 psi) 8-pole Motor @ 50 Hz

Model	rpm	gpm	l/min
G25-X	730	13.9	52.8
G25-E	730	12.9	48.8
G25-S	730	10.3	39.1
G25-I	730	7.9	29.9

## Delivery @ 69 bar (1000 psi)

Model	gal/rev	liters/rev
G25-X	0.0190	0.0721
G25-E	0.0174	0.0660
G25-S	0.0141	0.0535
G25-I	0.0103	0.0389

## Maximum Discharge Pressure

Metallic Heads:	69 bar (1000 psi)
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).
Non-metallic Heads:	60 °C (140 °F)

## Maximum Solids Size 800 microns

Inlet Port	1-1/2 inch BSPT
	1-1/2 inch NPT
	150lb ANSI RF flange

Discharge Port	1 inch BSPT
	1 inch NPT
	600lb ANSI RF flange

## Shaft Diameter 28.6 mm (1-1/8 inch)

## Shaft Rotation Reverse (bi-directional)

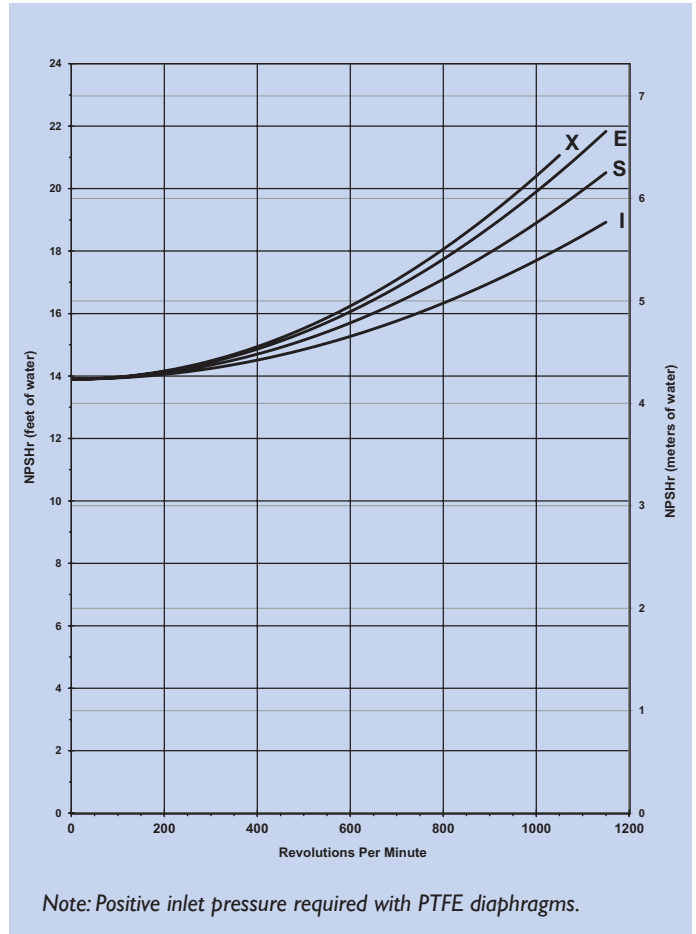
## Bearings Tapered roller bearings

## Oil Capacity 3.1 liters (3.3 US quarts)

## Weight

Metallic Heads:	56.8 kg (125 lbs.)
Non-metallic Heads:	40.9 kg (90 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

$$\frac{50 \times \text{rpm}}{63,000} + \frac{\text{gpm} \times \text{psi}}{1,460} = \text{electric motor hp}$$

$$\frac{50 \times \text{rpm}}{84,428} + \frac{\text{l/min} \times \text{bar}}{511} = \text{electric motor kW}$$

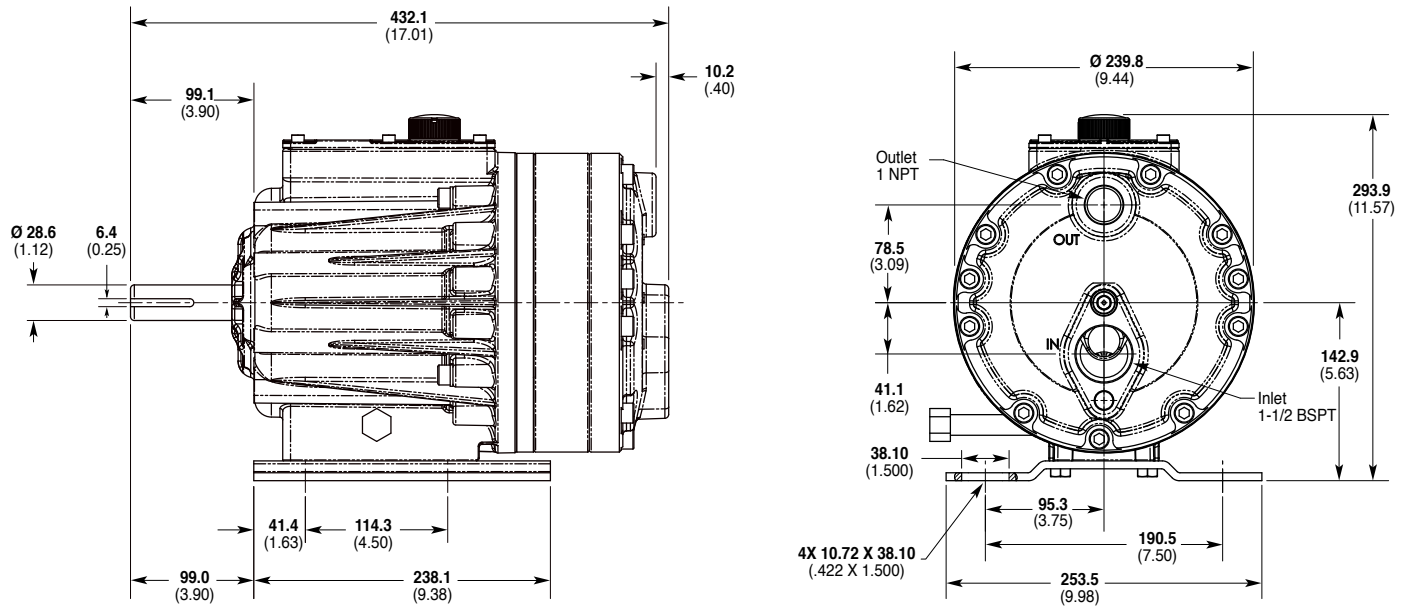
When using a variable frequency drive (VFD) controller calculate the hp or kW at minimum and maximum pump speed to ensure the correct hp or kW motor is selected. Note that motor manufacturers typically de-rate the service factor to 1.0 when operating with a VFD.

## Calculating Pulley Size

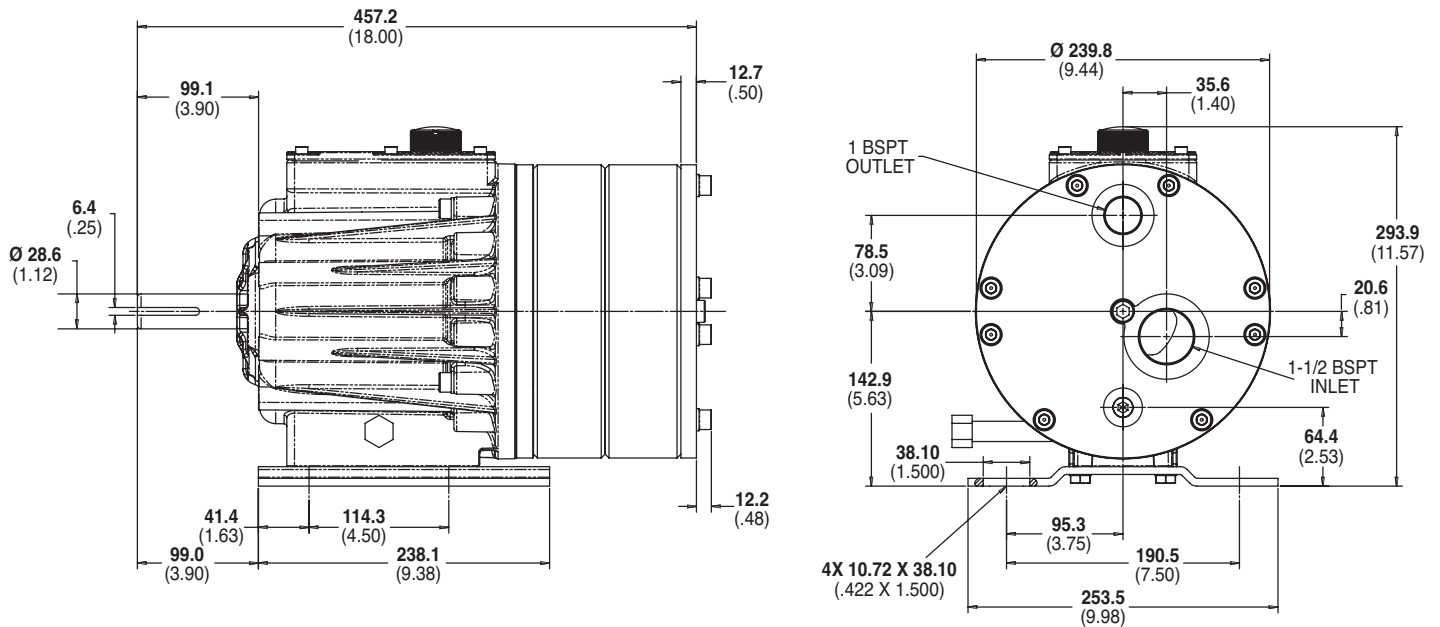
$$\frac{\text{motor pulley OD}}{\text{pump rpm}} = \frac{\text{pump pulley OD}}{\text{motor rpm}}$$

# G25 Series Representative Drawings

## G25 Models with Metallic Pump Head mm (Inches)



## G25 Models with Non-metallic Pump Head mm (Inches)



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

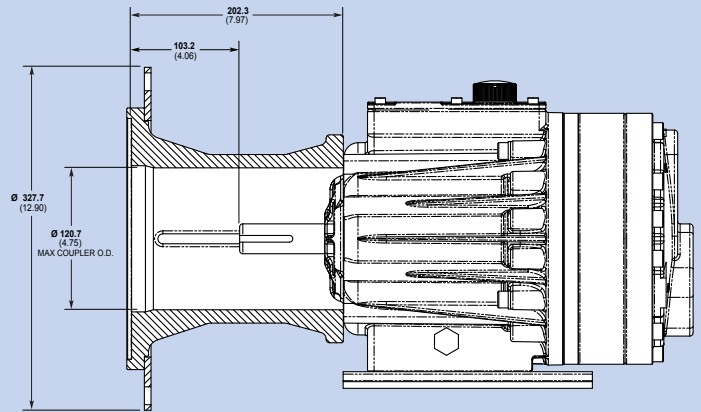
# G25 Series Adapters/Valves

## Pump/Motor Adapter mm (Inches)

### Part Number: A04-041-1201

Must be ordered separately for G25 models for use with IEC 132 frame motors, B5 flange.

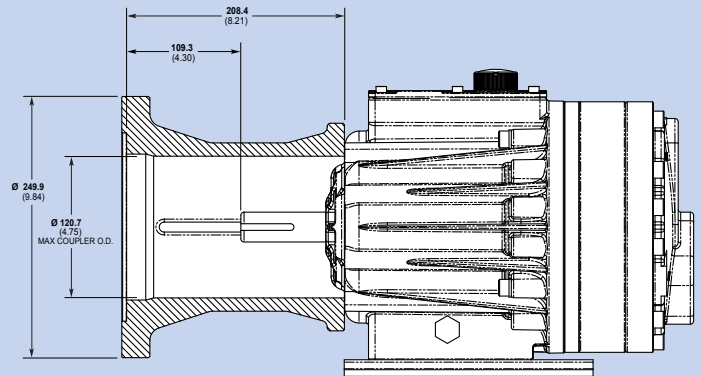
*NEMA adapter available - consult factory.*



### Part Number: A04-041-1203

Must be ordered separately for G25 models for use with IEC 160 frame motors, B14 flange.

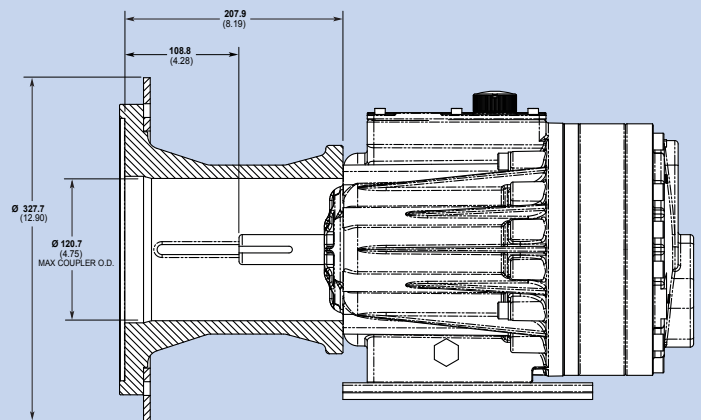
*NEMA adapter available - consult factory.*



### Part Number: A04-041-1205

Must be ordered separately for G25 models for use with IEC 160 - 180 frame motors, B5 flange.

*NEMA adapter available - consult factory.*



## Valve Selection

A seal-less C63 Pressure Regulating Valve is recommended for Hydra-Cell G25 pumping systems, especially for high-pressure requirements or when handling dirty fluids.



A C23 Pressure Regulating Valve provides a capable, lower-cost alternative to C63 valves for Hydra-Cell G25 pumping systems.



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

# G25 Series **How to Order**

## Ordering Information



A complete G25 Series Model Number contains 12 digits including 9 customer-specified design and materials options, for example: G25XKCGNNECA.

Digit	Order Code	Description
<b>1-3</b>	<b>G25</b>	<b>Pump Configuration</b> Shaft-driven (BSPT Ports or ANSI Flanges)* *Pump/motor adapters ordered separately. See previous page.
<b>4</b>	<b>X</b>	<b>Hydraulic End Cam</b> Max 69.0 l/min (18.2 gpm) @ 960 rpm
	<b>E</b>	Max 63.0 l/min (16.6 gpm) @ 960 rpm
	<b>S</b>	Max 50.0 l/min (13.2 gpm) @ 960 rpm
	<b>I</b>	Max 36.0 l/min (9.5 gpm) @ 960 rpm
<b>5</b>		<b>Pump Head Version</b>
	<b>K</b>	Kel-Cell BSPT Ports
	<b>M</b>	Machined housing to accept C-face adapter/gearbox
<b>6</b>		<b>Pump Head Material</b>
	<b>B</b>	Brass
	<b>C</b>	Cast Iron (Nickel-plated)
	<b>G</b>	Duplex Alloy 2205 Stainless Steel (with Hastelloy C followers & follower screws)
	<b>M</b>	PVDF (with Hastelloy C followers & follower screws)
	<b>N</b>	Polypropylene (with Hastelloy C followers & follower screws)
	<b>P</b>	Polypropylene (with 316L Stainless Steel followers & follower screws)
	<b>R</b>	316L Stainless Steel ANSI flange class 150 x 600
	<b>S</b>	316L Stainless Steel
	<b>T</b>	Hastelloy CW12MW
<b>7</b>		<b>Diaphragm &amp; O-ring Material</b>
	<b>A</b>	Atlas diaphragm / PTFE o-ring
	<b>E</b>	EPDM (requires EPDM-compatible oil - Digit 12 oil code C)
	<b>G</b>	FKM
	<b>J</b>	PTFE (available with E and S cams only; 1050 rpm max.)
	<b>P</b>	Neoprene
	<b>T</b>	Buna-N
<b>8</b>		<b>Valve Seat Material</b>
	<b>C</b>	Ceramic
	<b>D</b>	Tungsten Carbide
	<b>H</b>	17-7 Stainless Steel
	<b>N</b>	Nitronic 50
	<b>T</b>	Hastelloy C

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

**G25 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

### Wanner Engineering, Inc.

#### World Headquarters & Manufacturing

Wanner Engineering, Inc.  
1204 Chestnut Avenue  
Minneapolis, MN 55403 USA  
Phone: 612-332-5681 • Fax: 612-332-6937  
Toll-Free Fax (USA): 800-332-6812  
Email: [sales@wannereng.com](mailto:sales@wannereng.com)  
[www.Hydra-Cell.com](http://www.Hydra-Cell.com)

#### Regional Office

207 US Highway 281  
Wichita Falls, TX 76310 USA  
Phone: 940-322-7111  
Toll-Free: 800-234-1384  
Email: [sales@wannereng.com](mailto:sales@wannereng.com)  
[www.Hydra-Cell.com](http://www.Hydra-Cell.com)

#### Latin American Office

Avenida Senador Vergueiro 608 – Centro  
São Bernardo do Campo/São Paulo, Brazil  
CEP 09750-000  
Phone: +55 (11) 99582-1969  
Email: [mmagoni@wannereng.com](mailto:mmagoni@wannereng.com)  
[www.Hydra-Cell-Pumps.com.br](http://www.Hydra-Cell-Pumps.com.br)

### Wanner International Ltd.

Wanner International, Ltd.  
Hampshire - United Kingdom  
Phone: +44 (0) 1252 816847  
Email: [sales@wannerint.com](mailto:sales@wannerint.com)  
[www.Hydra-Cell.co.uk](http://www.Hydra-Cell.co.uk)

### Wanner Pumps Ltd.

Wanner Pumps, Ltd.  
Kowloon - Hong Kong  
Phone: +852 3428 6534  
Email: [sales@wannerpumps.com](mailto:sales@wannerpumps.com)  
[www.WannerPumps.com](http://www.WannerPumps.com)

Shanghai - China  
Phone: +86-21-6876 3700  
Email: [sales@wannerpumps.com](mailto:sales@wannerpumps.com)  
[www.WannerPumps.com](http://www.WannerPumps.com)

