

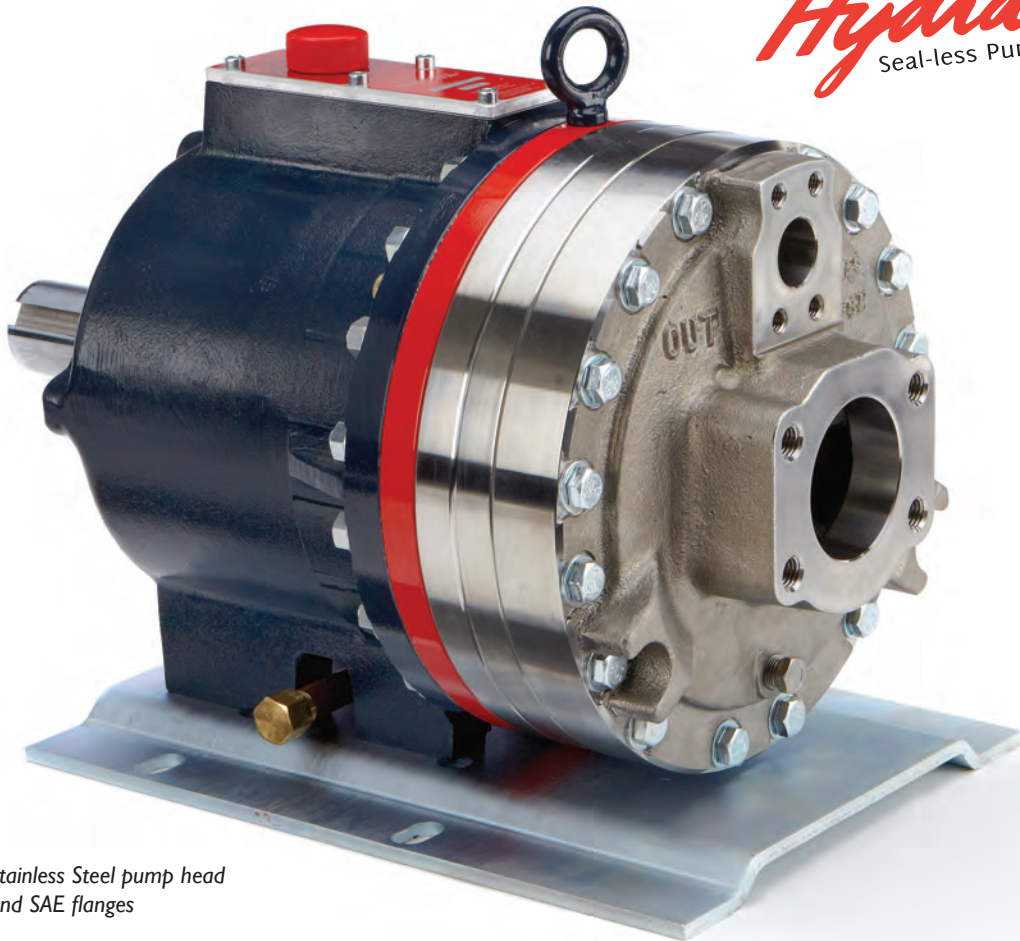
# G35 Series

Maximum Flow Rate: 138 l/min (36.5 gpm)  
Maximum Pressure: 103 bar (1500 psi) for Metallic Pump Heads

API 674



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



G35 with Stainless Steel pump head  
and SAE flanges



G35 with Brass pump head



G35 with Cast Iron pump head



G35 with Stainless Steel pump head and  
ANSI RF flanges

# G35 Series Performance

## Capacities

### Flow

Model	Max. Input rpm	Max. Flow	
		@ 83 bar (1200 psi) gpm	l/min
G35-X	1050	36.5	138
G35-E	1150	34.0	129

@ 103 bar (1500 psi)			
G35-X	700	17.5	66.1
G35-E	700	15.1	57.3

### Pressure

#### Maximum Inlet Pressure

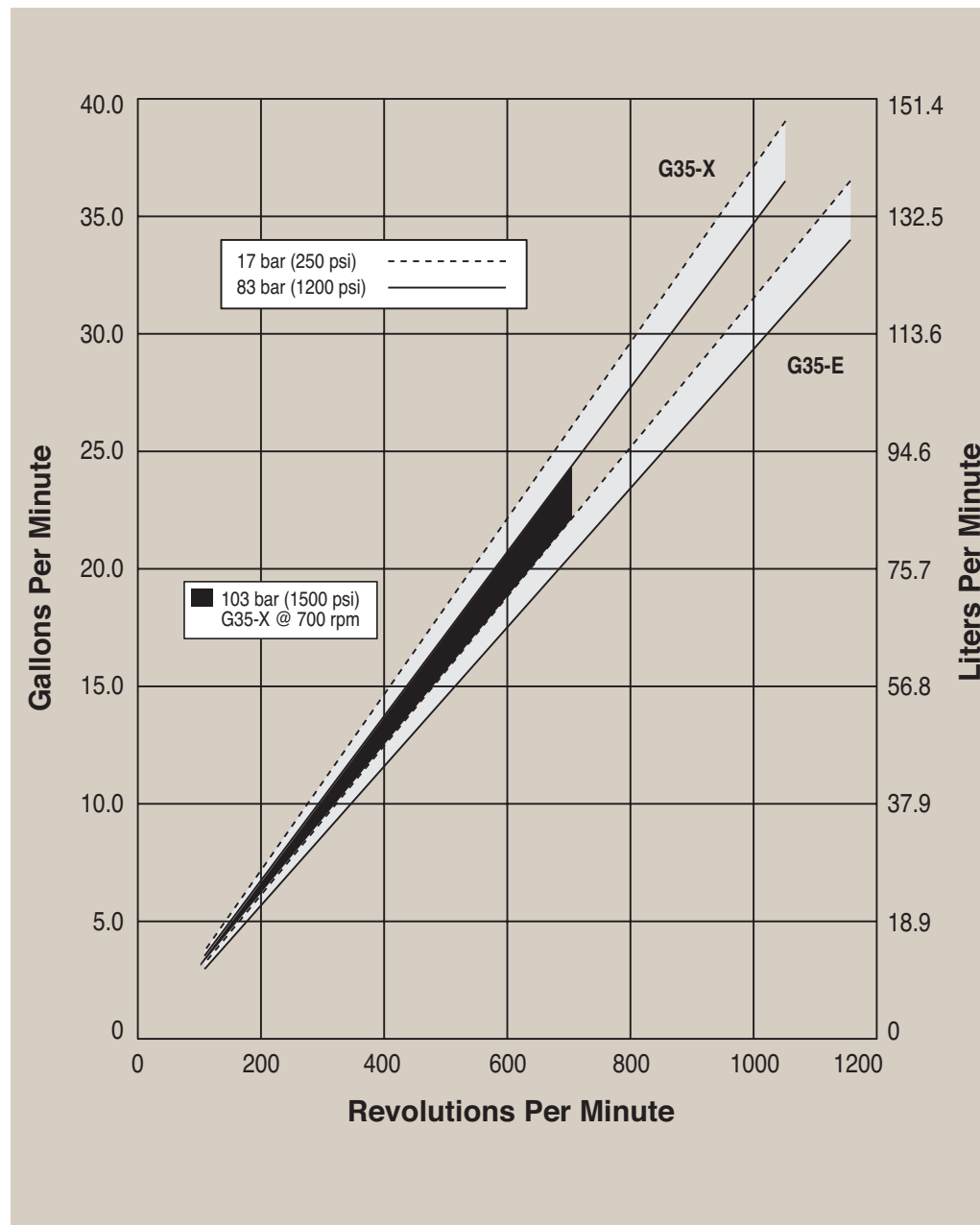
17 bar (250 psi) with 103 bar (1500 psi) maximum discharge pressure  
 34 bar (500 psi) with 83 bar (1200 psi) maximum discharge pressure

#### Maximum Discharge Pressure

83 bar (1200 psi) @ 1150 rpm max.  
 103 bar (1500 psi) @ 500 rpm max.

Performance and specification ratings apply to G35 configurations unless specifically noted otherwise.

## Maximum Flow at Designated Pressure



# G35 Series API 674 Performance

## Capacities

### Flow

Model	Max. Input rpm	Max. Flow @ 83 bar (1200 psi)	
		gpm	l/min
G35-X	1050	36.5	138
G35-E	1150	34.0	129

### Pressure

#### Maximum Inlet Pressure

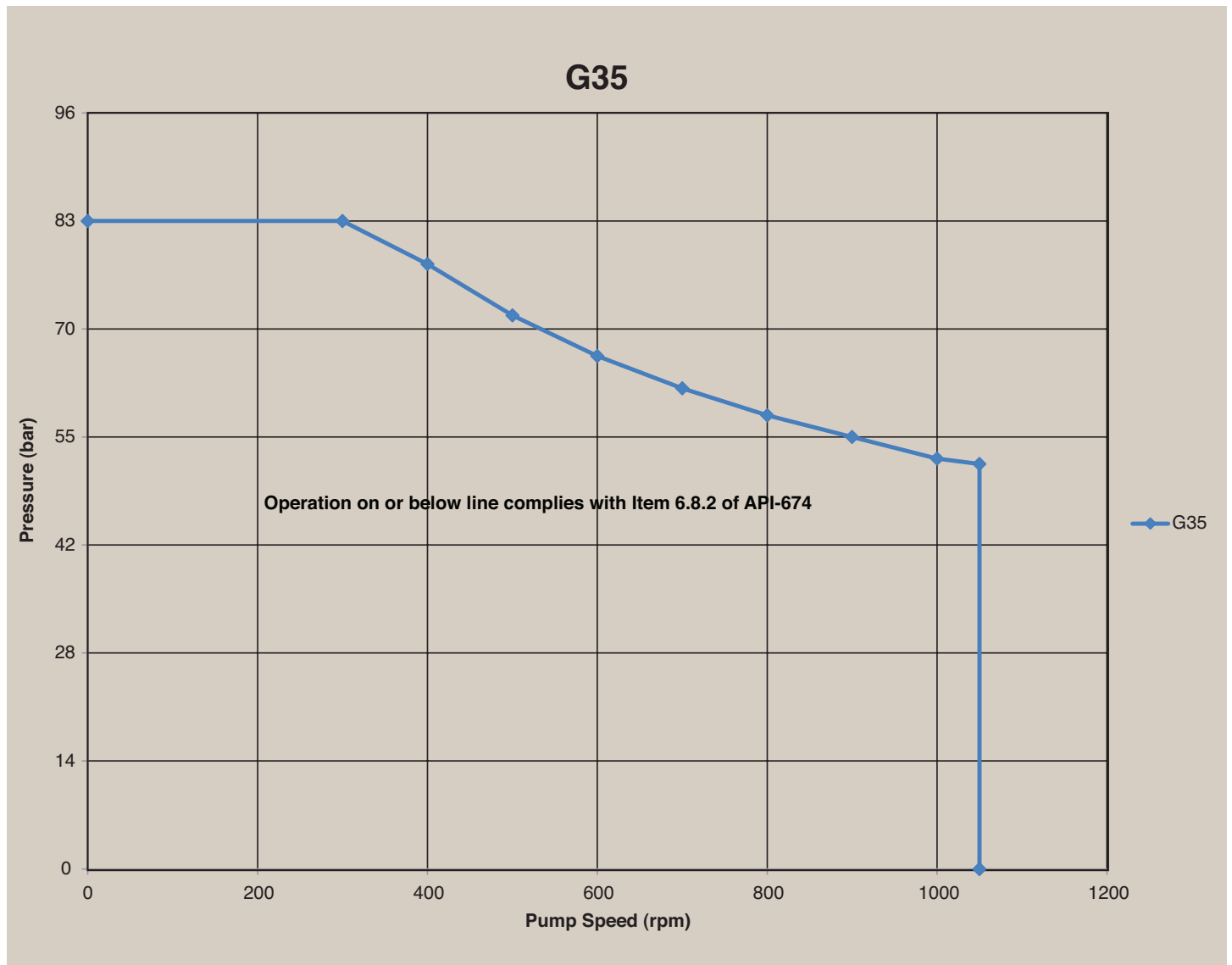
34 bar (500 psi) with 83 bar (1200 psi) maximum discharge pressure

#### Maximum Discharge Pressure

83 bar (1200 psi) @ 300 rpm max.

Performance and specification ratings apply to G35 configurations unless specifically noted otherwise.

## Maximum RPM at Designated Pressure



# G35 Series Specifications

## Flow Capacities @ 83 bar (1200 psi) 6-pole Motor @ 50 Hz

Model	rpm	gpm	l/min
G35-X	960	33.50	127.00
G35-E	960	29.00	110.00

## Flow Capacities @ 83 bar (1200 psi) 8-pole Motor @ 50 Hz

Model	rpm	gpm	l/min
G35-X	730	25.50	96.60
G35-E	730	22.10	83.60

## Delivery @ 83 bar (1200 psi)

Model	gal/rev	liters/rev
G35-X	0.0347	0.1314
G35-E	0.0296	0.1120

## Delivery @ 103 bar 1500 psi

Model	gal/rev	liters/rev
G35-X	0.0330	0.1250

## Maximum Discharge Pressure

Metallic Heads: 103 bar (1500 psi) @ 700 rpm

**Maximum Inlet Pressure** 17 bar (250 psi) with 103 bar (1500 psi) maximum discharge pressure  
34 bar (500 psi) with 83 bar (1200 psi) maximum discharge pressure

## 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** 800 microns

**Inlet Port** 2-1/2 inch BSPT  
2-1/2 inch NPT  
150lb or 600lb ANSI RF  
3 inch SAE

**Discharge Port** 1-1/4 inch BSPT  
1-1/4 inch NPT  
600lb or 1500lb ANSI RF  
1-1/4 inch SAE

**Shaft Diameter** 50.8 mm (2 inch)

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

**Bearings** Tapered roller bearings

**Oil Capacity** 4.7 liters (5.0 US quarts)

**Weight**  
Metallic Heads: 240 lbs. (109 kg)

## Calculating Required Power

$$\frac{100 \times \text{rpm}}{63,000} + \frac{\text{gpm} \times \text{psi}}{1,460} = \text{electric motor hp}$$

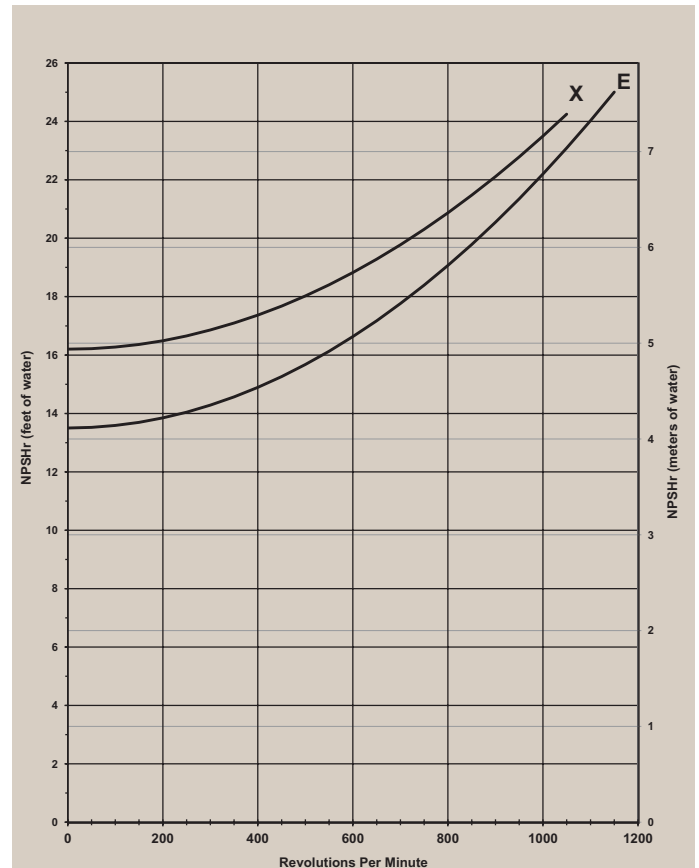
$$\frac{100 \times \text{rpm}}{84,428} + \frac{\text{l/min} \times \text{bar}}{511} = \text{electric motor kW}$$

## 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)



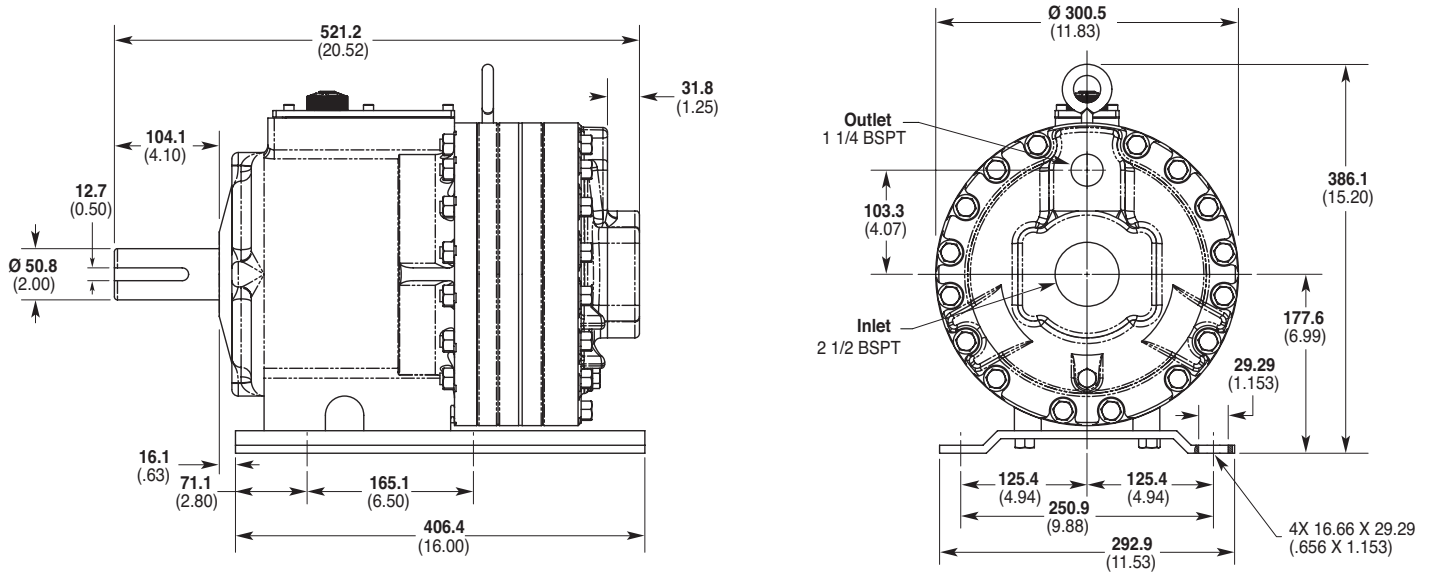
Note: Positive inlet pressure required with PTFE diaphragms.

## Self-priming:

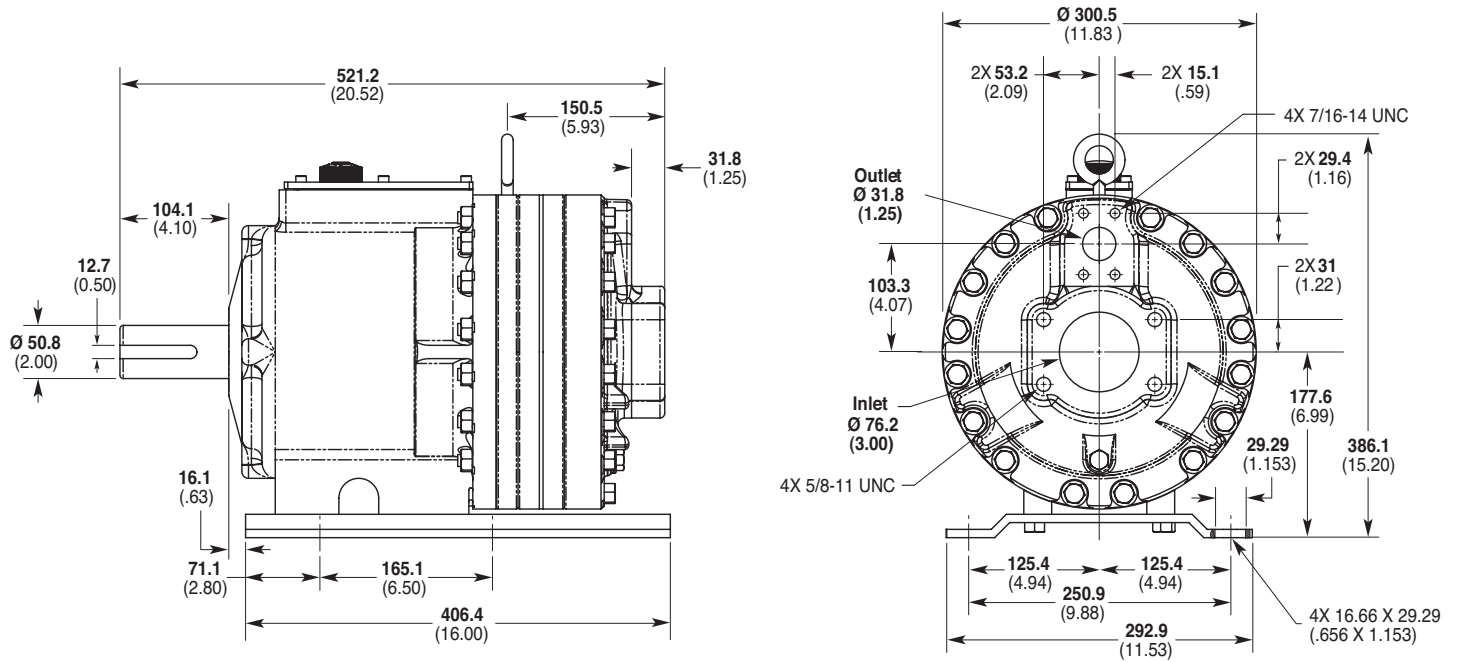
Each Hydra-Cell pump has different lift capability depending on model size, cam angle, speed, and fluid characteristics. To ensure that your specific lift characteristics are met, refer to the inlet calculations regarding friction, and acceleration head losses in your Hydra-Cell Installation & Service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

# G35 Series Representative Drawings

## G35 Models with BSPT Inlet/Outlet Ports mm (Inches)



## G35 Models with SAE Flange Inlet/Outlet Ports mm (Inches)

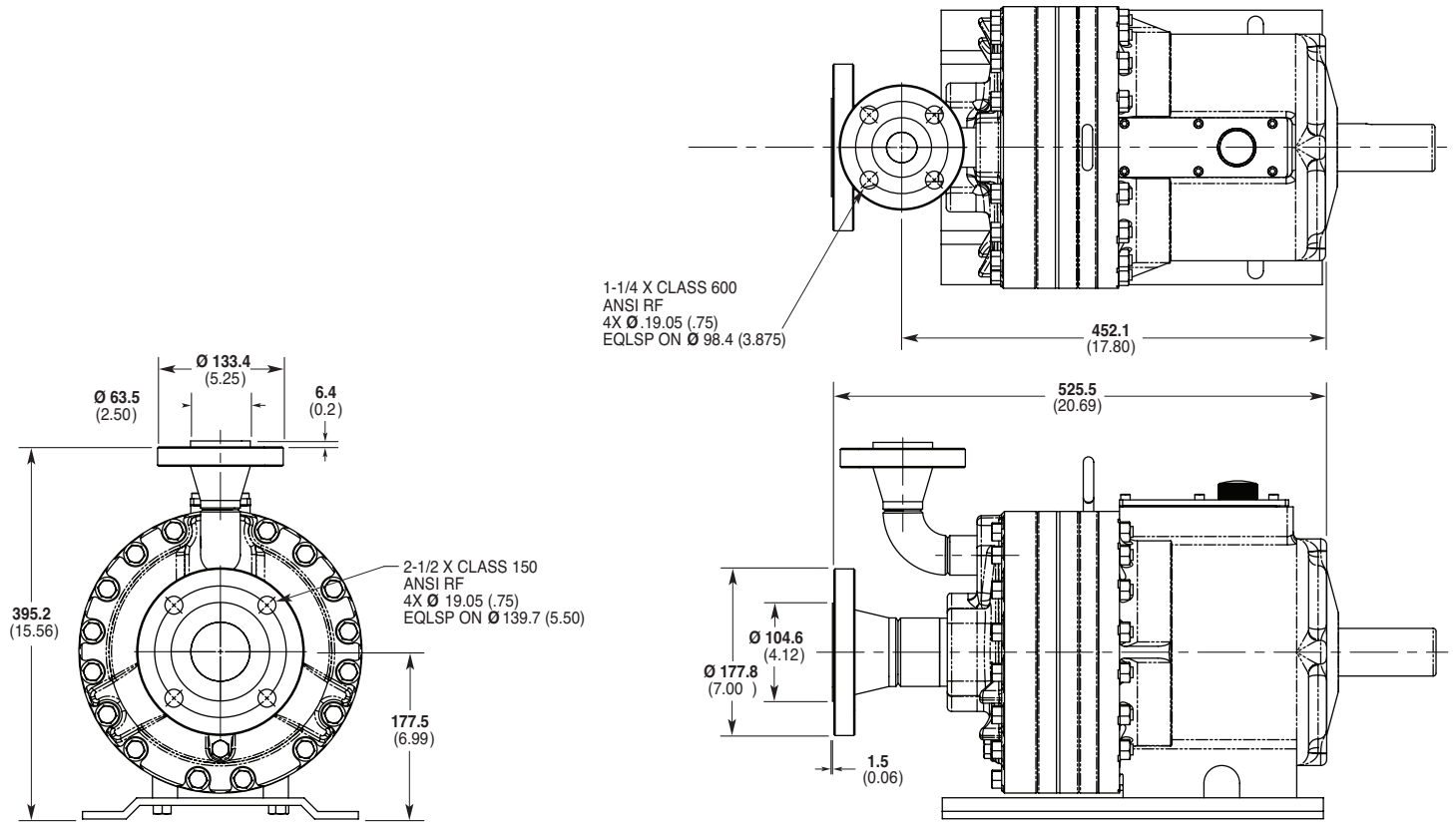


**Note:** Contact factory for additional drawings of specific models and configurations.

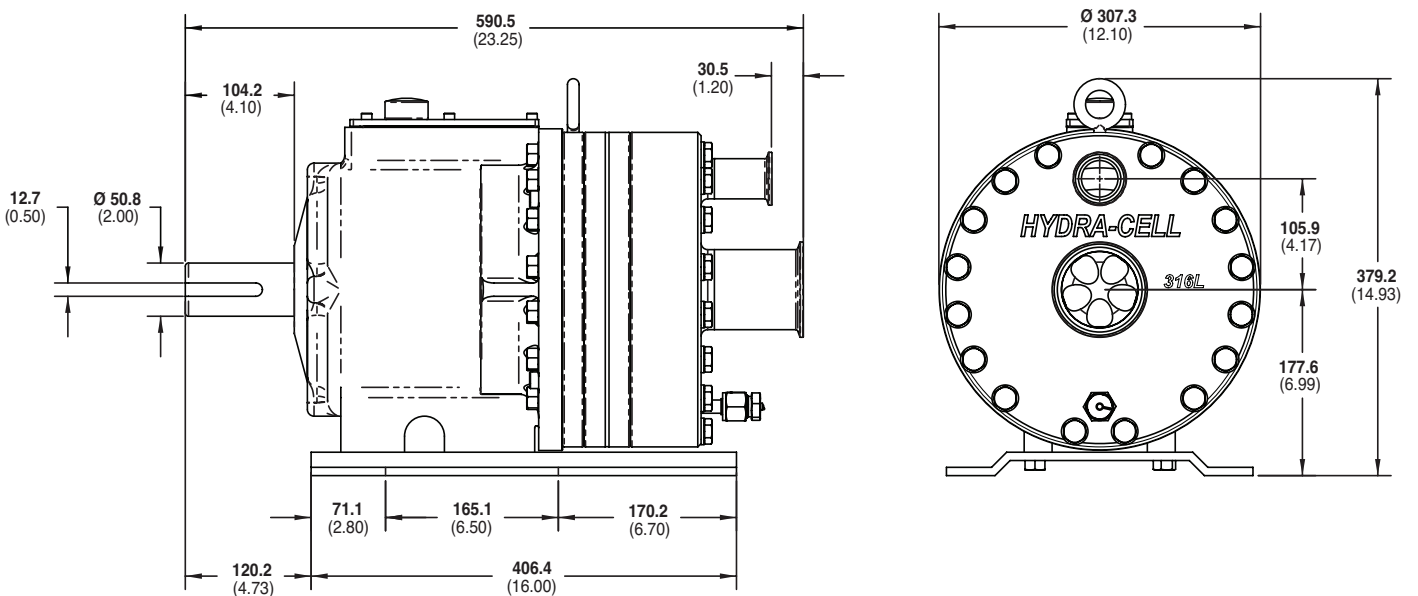


# G35 Series Representative Drawings

## G35 Models with ANSI RF Flange Inlet/Outlet Ports mm (Inches)



## G35 Models with Tri-clamp Flanges mm (Inches) Maximum Discharge Pressure: 80 bar



# G35 Series Valves and Baseplates

## Valve Selection

A seal-less C64 Pressure Regulating Valve is recommended for Hydra-Cell G35 pumping systems, especially for high-pressure requirements or when handling dirty fluids.



A C24 Pressure Regulating Valve provides a capable, lower-cost alternative to C63 valves for Hydra-Cell G35 pumping systems.



## IEC Baseplates

Complete assembly (excluding pump and motor) for **IEC 160, 180, 200 and 225** frame motors in 304 Stainless Steel.



# G35 Series How to Order

## Ordering Information

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

A complete G35 Series Model Number contains 12 digits including 9 customer-specified design and materials options, for example: G35XKBTHFECA.

Digit	Order Code	Description
<b>1-3</b>	<b>G35</b>	<b>Pump Configuration</b> Shaft-driven (BSPT Ports or SAE or ANSI Flanges)
<b>4</b>	<b>X</b> <b>E</b>	<b>Hydraulic End Cam</b> Max 127.0 l/min (33.5 gpm) @ 960 rpm Max 110.0 l/min (29.1 gpm) @ 960 rpm
<b>5</b>	<b>K</b> <b>E</b> -	<b>Pump Head Version</b> Kel-Cell BSPT Ports or ANSI Flanges Kel-Cell SAE Flanges ATEX <i>(Note: ATEX 94/9/EC Certified, Category 2, Zone 1. Includes certificate and oil level monitor.)</i>
<b>6</b>	<b>B</b> <b>C</b> <b>G</b> <b>Q</b> <b>R</b> <b>S</b> <b>T</b> - -	<b>Pump Head Material</b> Brass Cast Iron (Nickel-plated) Duplex Alloy 2205 (with Hastelloy C followers & follower screws) 316L Stainless Steel ANSI RF flange class 600lb x 1500lb 316L Stainless Steel ANSI RF flange class 150lb x 600lb 316L Stainless Steel - threaded or SAE ports Hastelloy CW12MW 316L Stainless Steel with Tri-clamp (3" Inlet & 1-1/2" Discharge) flanges polished to 0.8 Ra <i>(Includes polishing of Pump Head, Valve Plate, Valves, Valve Seats, Springs &amp; Retainers to 0.8 Ra, Sanitary Drain along with TSE, Passivation, Surface Finish and Weld Procedure Certificates)</i> 316L Stainless Steel with Tri-clamp (3" Inlet & 1-1/2" Discharge) flanges polished to 0.4 Ra <i>(Includes polishing of Pump Head, Valve Plate, Valves, Valve Seats, Springs &amp; Retainers to 0.4 Ra, Sanitary Drain along with TSE, Passivation, Surface Finish and Weld Procedure Certificates)</i>
<b>7</b>	<b>A</b> <b>E</b> <b>G</b> <b>J</b> <b>P</b> <b>T</b>	<b>Diaphragm &amp; O-ring Material</b> Aflas diaphragm / PTFE O-ring EPDM (requires EPDM-compatible oil - Digit 12 oil code D) FKM PTFE (available with E cam only; 1050 rpm max.) Neoprene Buna-N
<b>8</b>	<b>C</b> <b>D</b> <b>H</b> <b>N</b> <b>T</b>	<b>Valve Seat Material</b> Ceramic Tungsten Carbide 17-4 Stainless Steel Nitronic 50 Hastelloy C

Digit	Order Code	Description
<b>9</b>	<b>C</b> <b>D</b> <b>F</b> <b>N</b> <b>T</b>	<b>Valve Material</b> Ceramic Tungsten Carbide 17-4 Stainless Steel Nitronic 50 Hastelloy C
<b>10</b>	<b>E</b> <b>T</b>	<b>Valve Springs</b> Elgiloy (Exceeds SST grade 316) Hastelloy C
<b>11</b>	<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 (Zytel)
<b>12</b>	<b>A</b> <b>B</b> <b>D</b> <b>F</b> <b>G</b> <b>H</b>	<b>Hydra-Oil</b> 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

G35 Pump Housing is standard as Cast Aluminum. Upgrade to Ductile Iron available.







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