

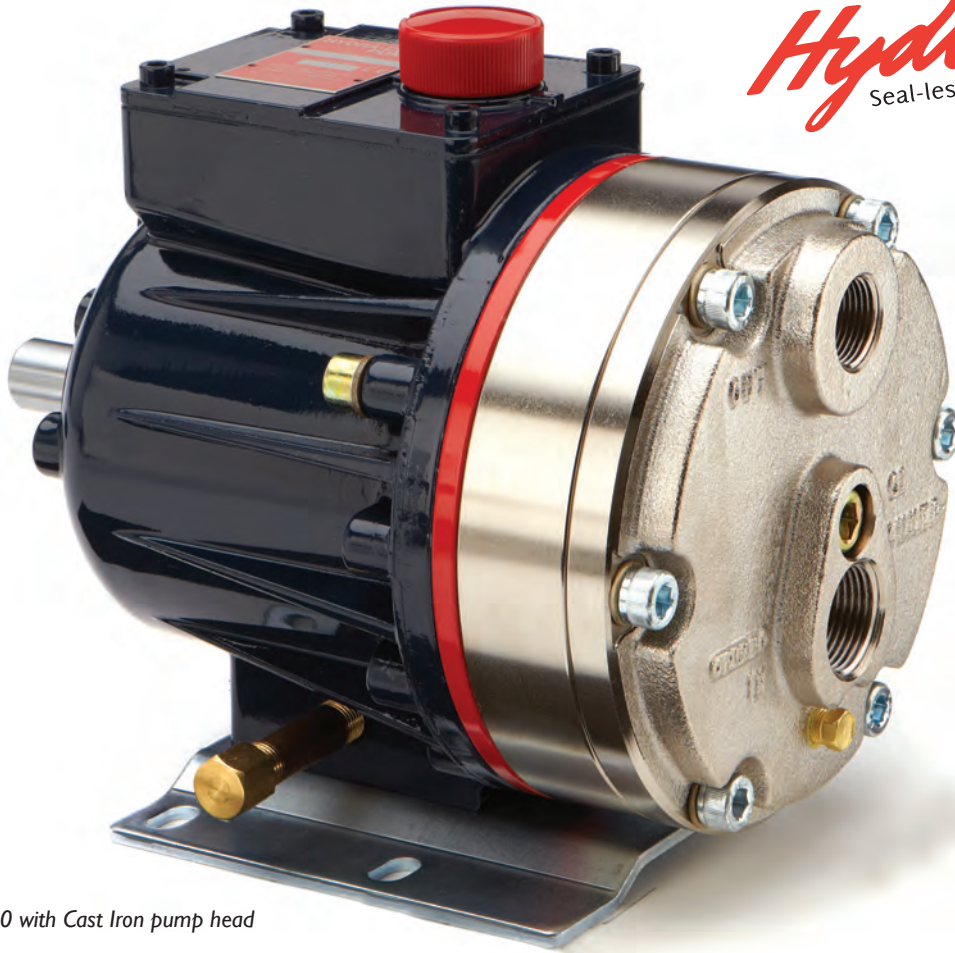
G10 Series

Maximum Flow Rate: 33.4 l/min (8.8 gpm)
Maximum Pressure: 103 bar (1500 psi) for Metallic Pump Heads
24 bar (350 psi) for Non-metallic Pump Heads

API 674



WANNER
Hydra-Cell[®]
Seal-less Pump Technology



G10 with Cast Iron pump head



G10 with Stainless Steel pump head and Tri-clamp flanges



G10 with Polypropylene pump head



G10 with Stainless Steel pump head and ANSI RF flanges

G10 Series Performance

Capacities

Flow

| Model | Max. Input rpm | Max. Flow | |
|-----------------------------|----------------|-------------------------|-------|
| | | @ 69 bar (1000 psi) gpm | 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 |
| @ 103 bar (1500 psi) | | | |
| G10-X | 790 | 4.26 | 15.1 |
| G10-E | 790 | 3.87 | 14.7 |

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

Pressure

Maximum Inlet Pressure
17 bar (250 psi)

Maximum Discharge Pressure

Metallic Pump Heads:

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

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

Non-metallic Pump Heads:

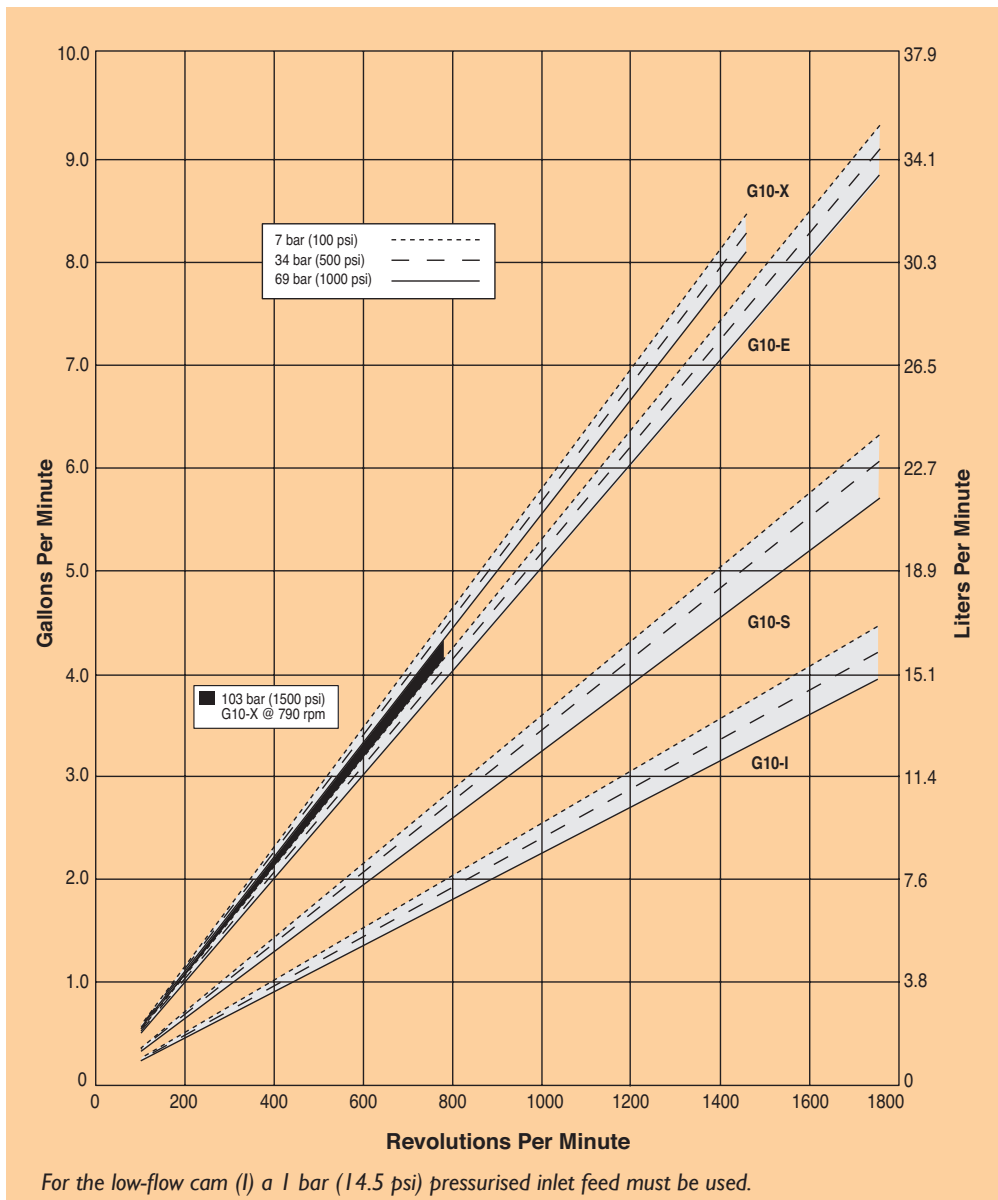
17 bar (250 psi) Polypropylene

24 bar (350 psi) PVDF

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 790 rpm and pressures up to 103 bar (metallic pump heads) or speeds up to 1440 rpm and pressures up to 24 bar (non-metallic pump heads) or up to 69 bar (metallic pump heads) for X-cam pumps only.

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). |
| | |
| Non-metallic Heads: | 60 °C (140 °F) |

Maximum Solids Size 500 microns

| | |
|------------|----------------------|
| Inlet Port | 1 inch BSPT |
| | 1 inch NPT |
| | 150lb ANSI RF Flange |
| | 1-1/2 inch Tri-clamp |

| | |
|----------------|----------------------|
| Discharge Port | 3/4 inch BSPT |
| | 3/4 inch NPT |
| | 600lb ANSI RF Flange |
| | 1 inch Tri-clamp |

| | |
|----------------|--------------------|
| Shaft Diameter | 22.2 mm (7/8 inch) |
|----------------|--------------------|

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

| | |
|----------|-------------------------|
| Bearings | Tapered roller bearings |
|----------|-------------------------|

| | |
|--------------|-----------------------------|
| Oil Capacity | 1.05 litres (1.1 US quarts) |
|--------------|-----------------------------|

Weight

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

Calculating Required Power

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

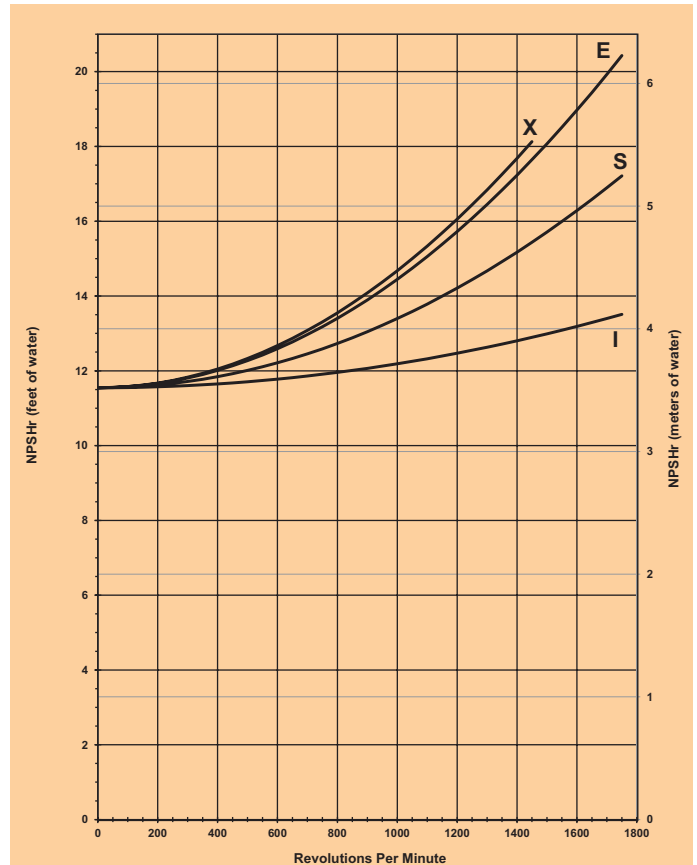
$$\frac{15 \times \text{rpm}}{84,428} + \frac{\text{l/min} \times \text{bar}}{511} = \text{electric motor kW}$$

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)



Positive inlet pressure required for:

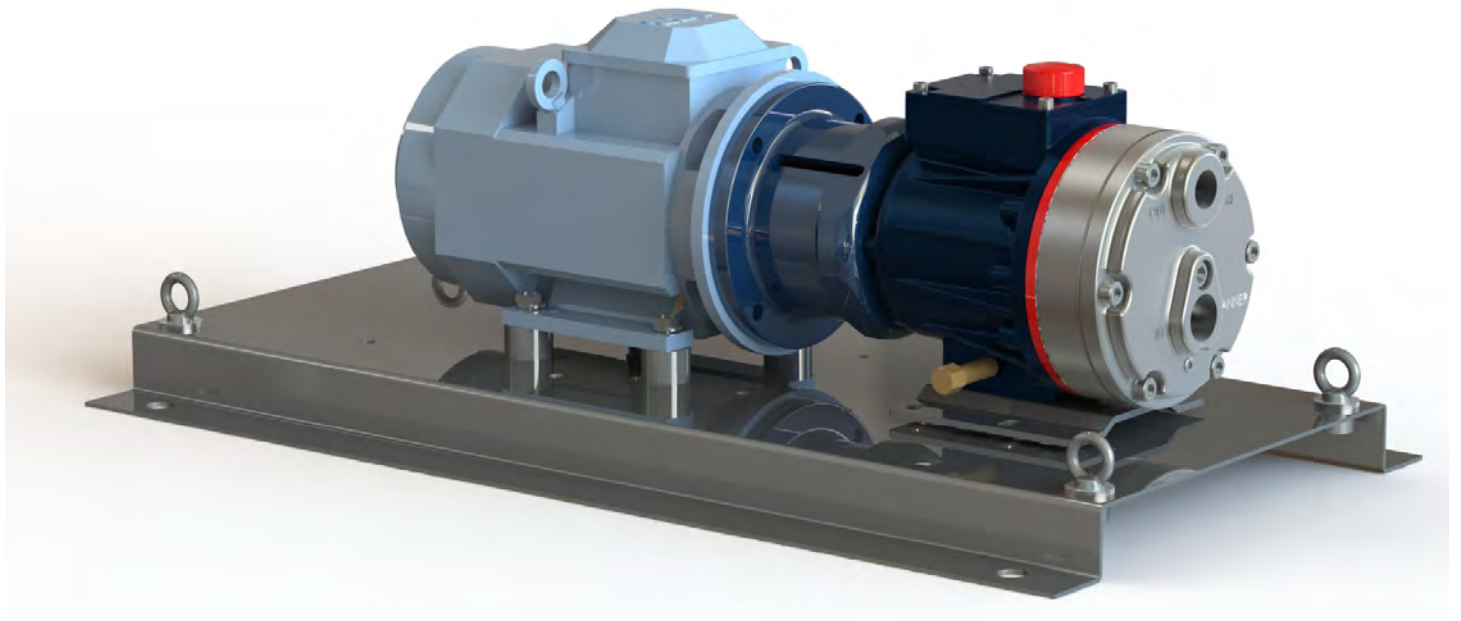
- A) All pumps with PTFE diaphragms
- B) Pumps with I-cam (consult factory)

Self-priming:

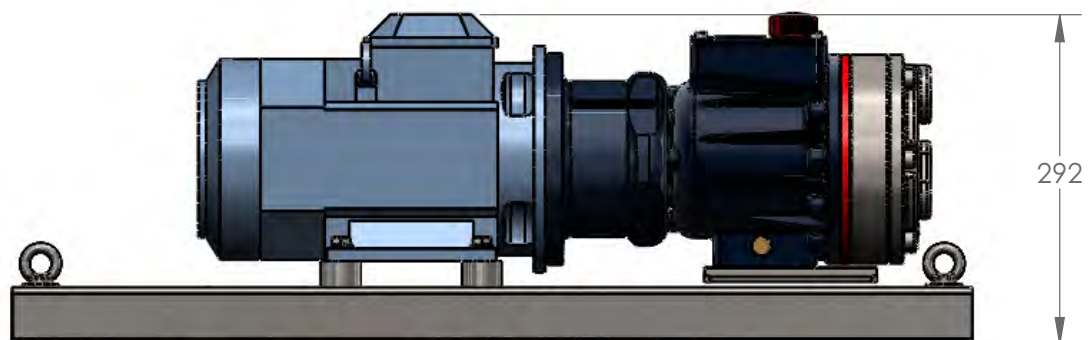
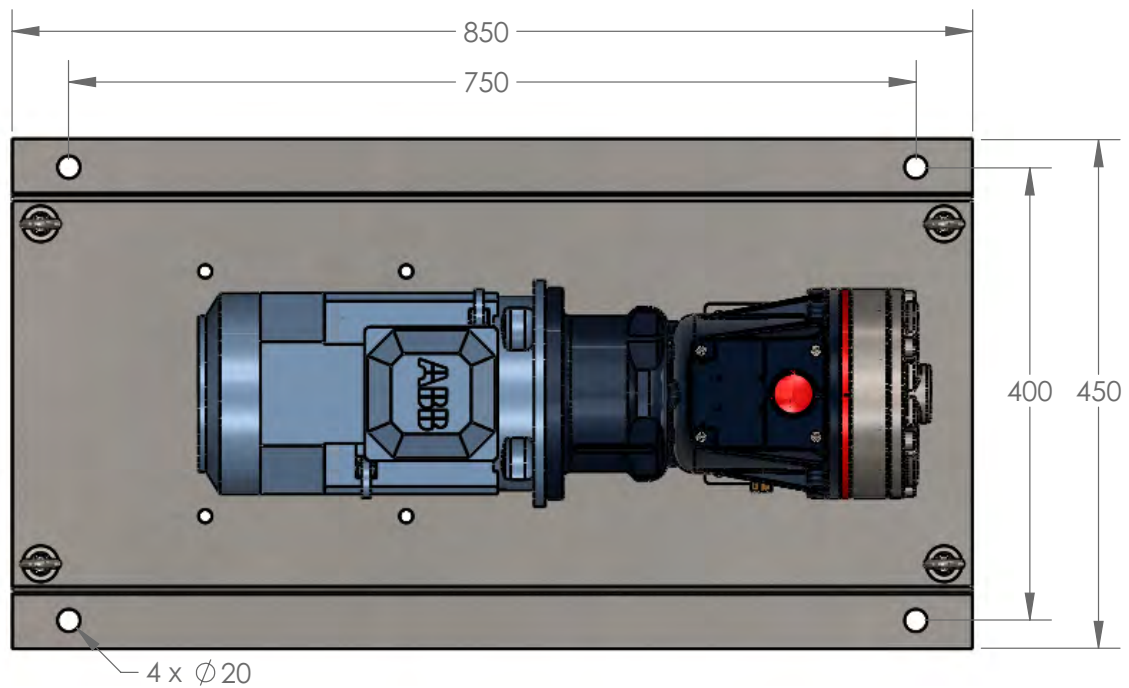
Each Hydra-Cell pump has different lift capability depending on model size, cam angle, speed, and fluid characteristics. To ensure that your specific lift characteristics are met, refer to the inlet calculations regarding friction, and acceleration head losses in your Hydra-Cell Installation & Service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

G10 Series **General Assemblies**

Baseplate Assembly with Motor Adaptor for IEC 90 Motor Frame

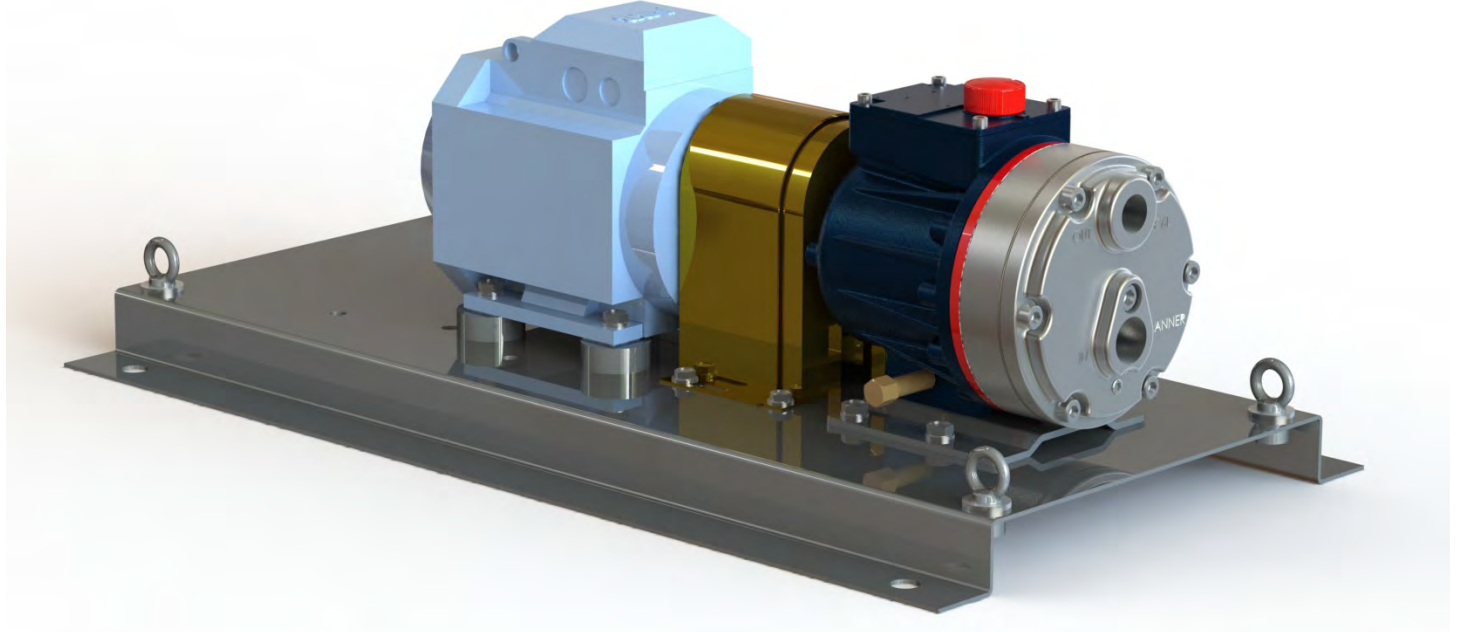


Dimensions in mm

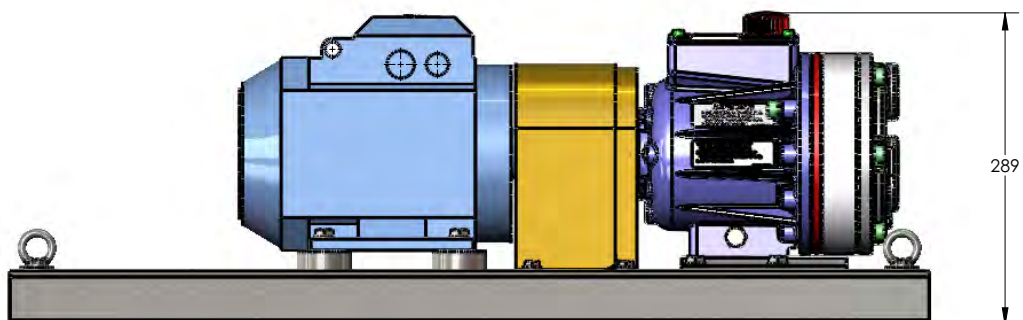
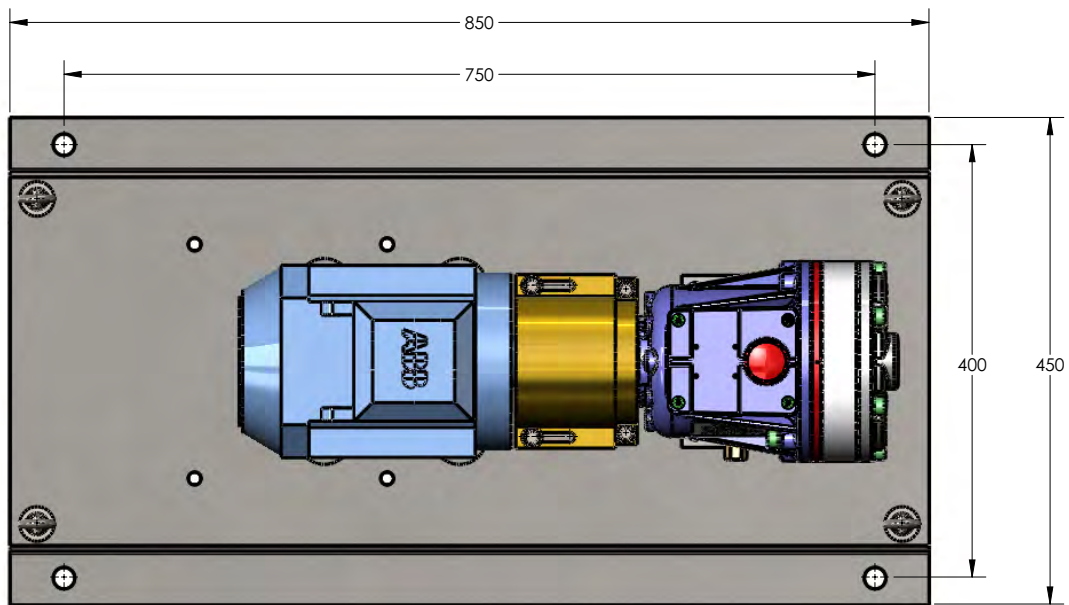


G10 Series **General Assemblies**

Baseplate Assembly Long-coupled for IEC 90 Motor Frame

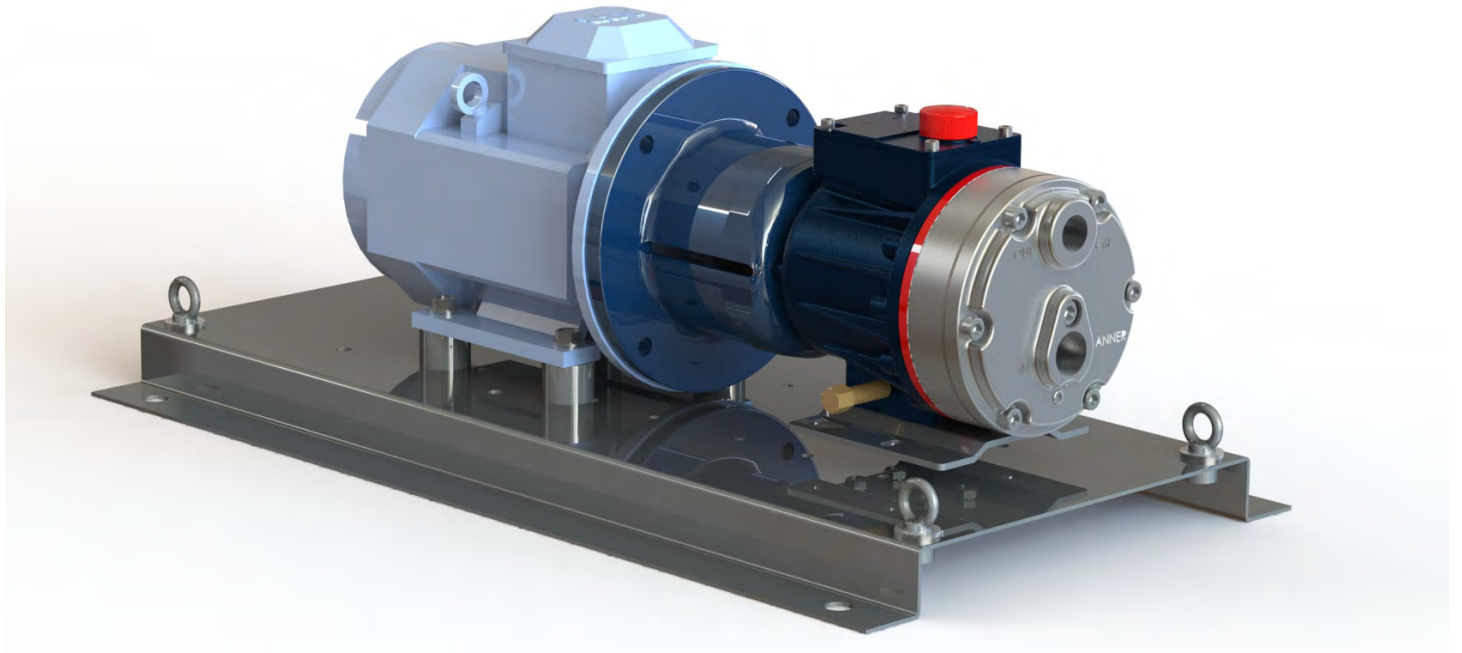


Dimensions in mm

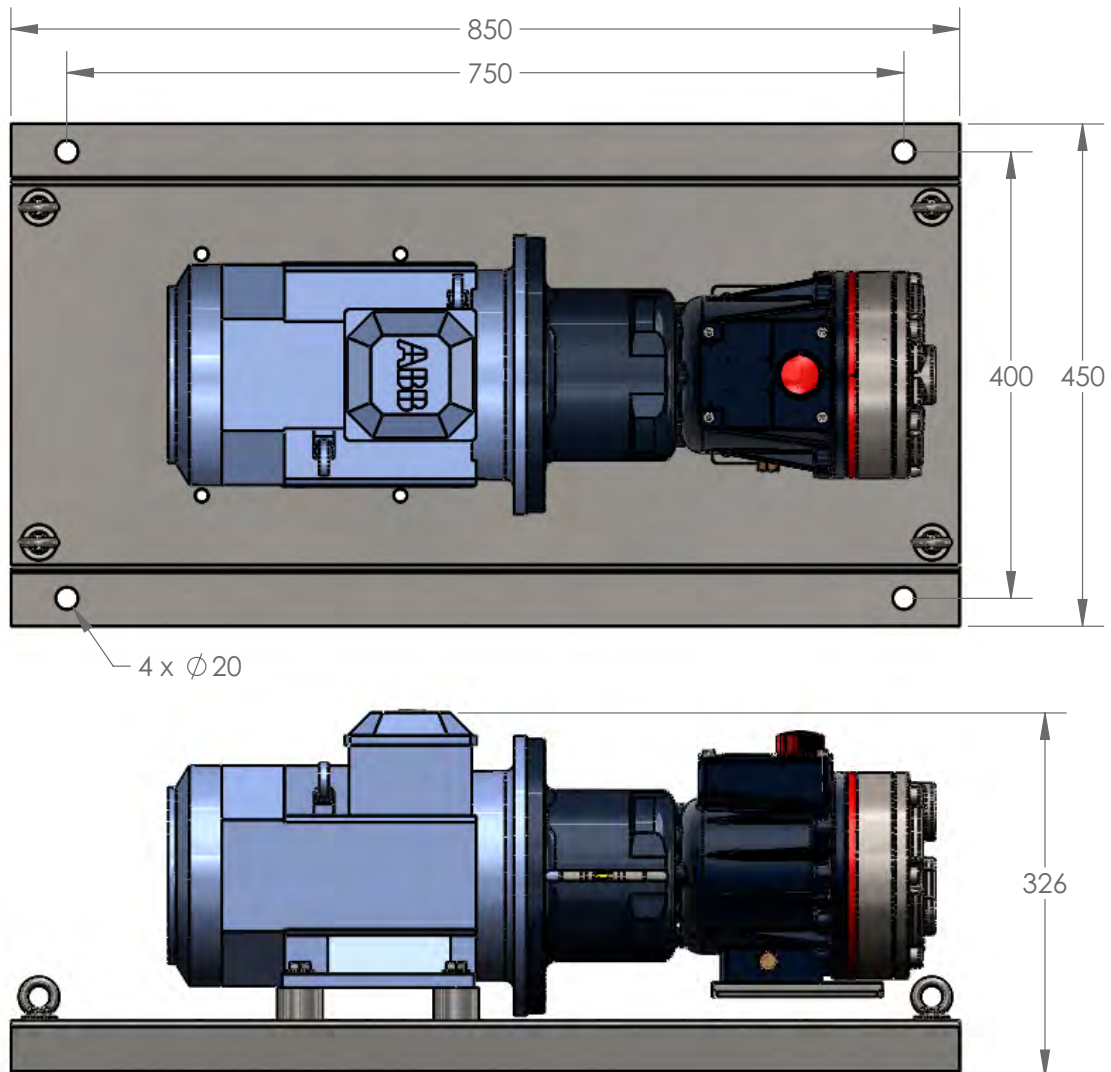


G10 Series **General Assemblies**

Baseplate Assembly with Motor Adaptor for IEC 100 Motor Frame

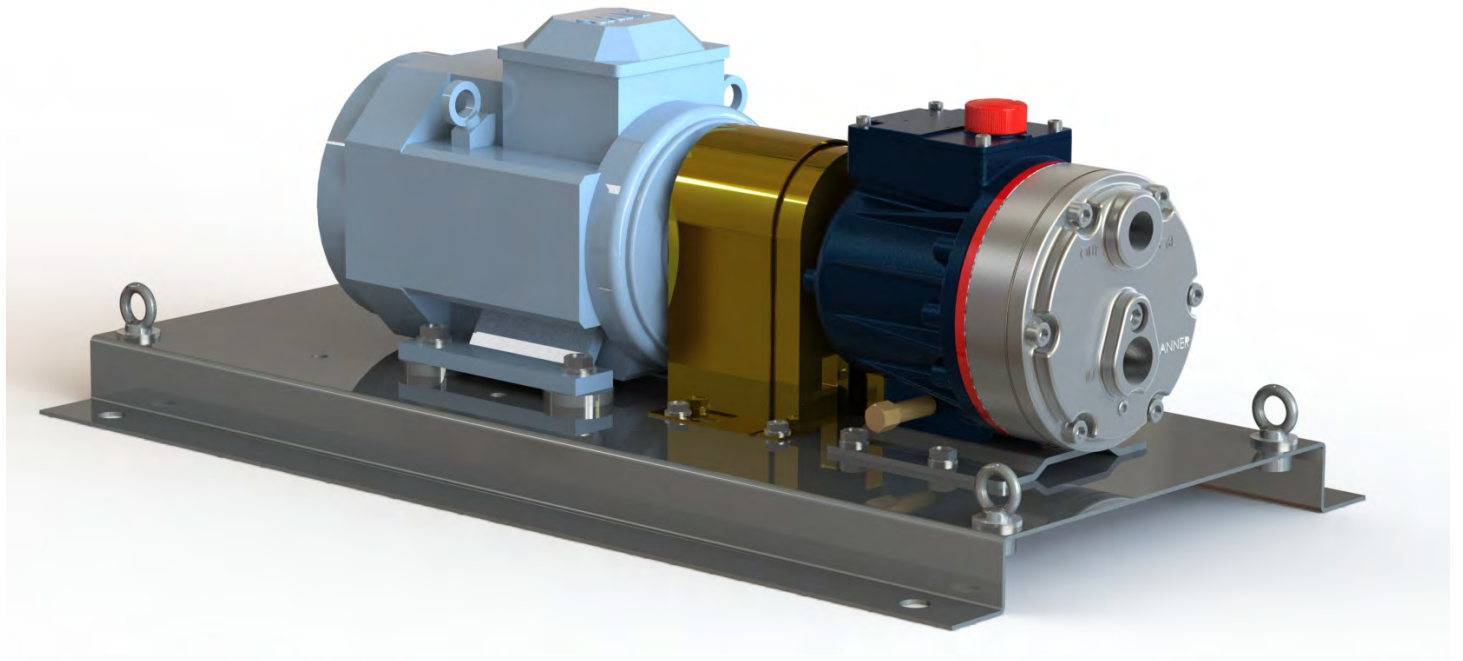


Dimensions in mm

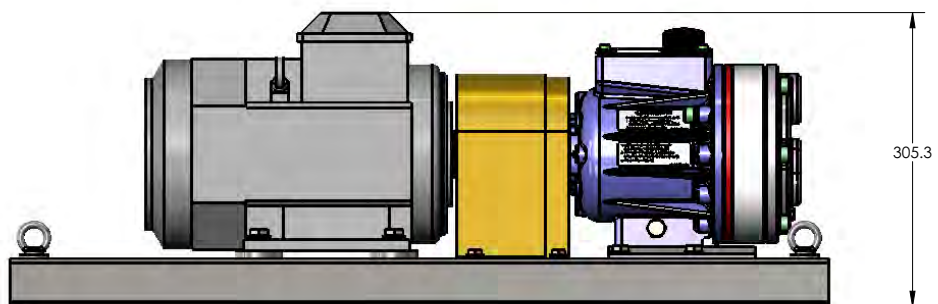
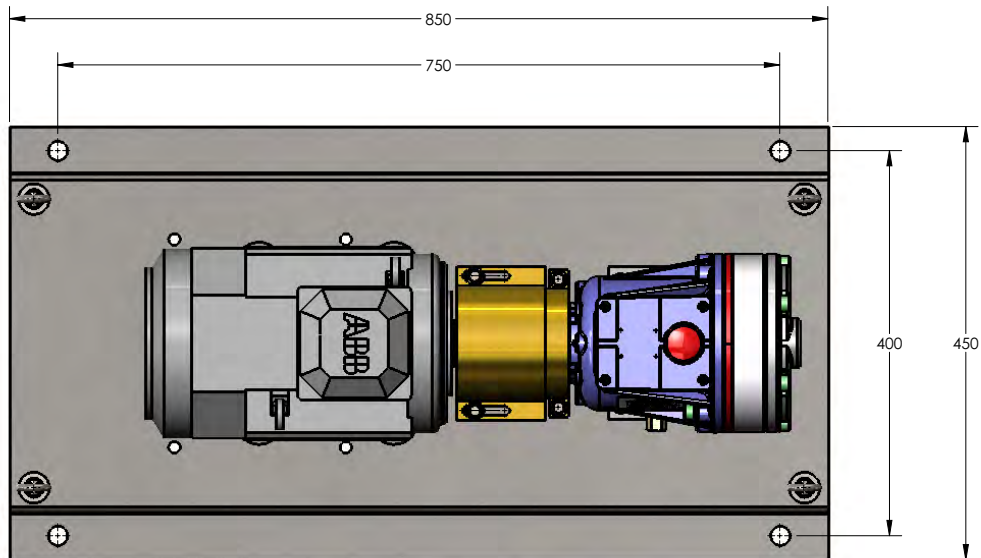


G10 Series **General Assemblies**

Baseplate Assembly Long-coupled for IEC 100 Motor Frame

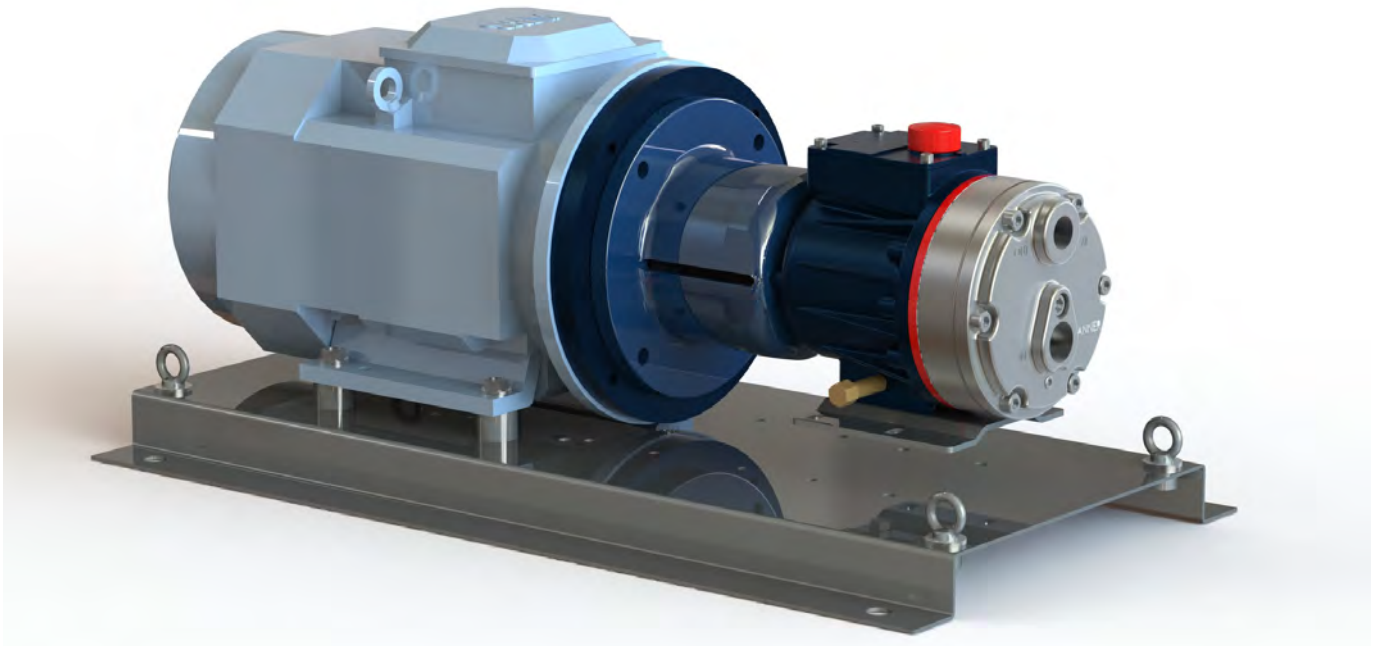


Dimensions in mm

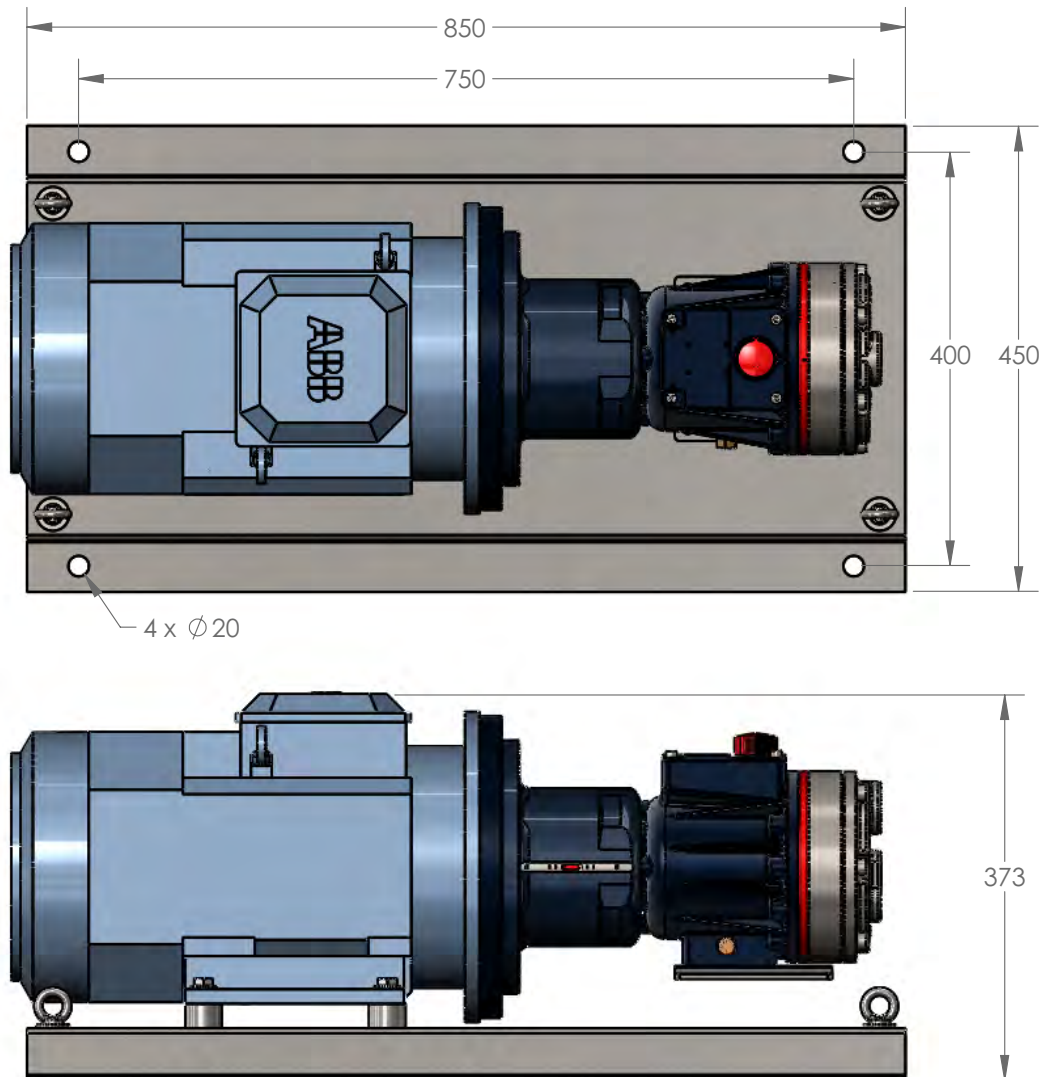


G10 Series **General Assemblies**

Baseplate Assembly with Motor Adaptor for IEC I32 Motor Frame

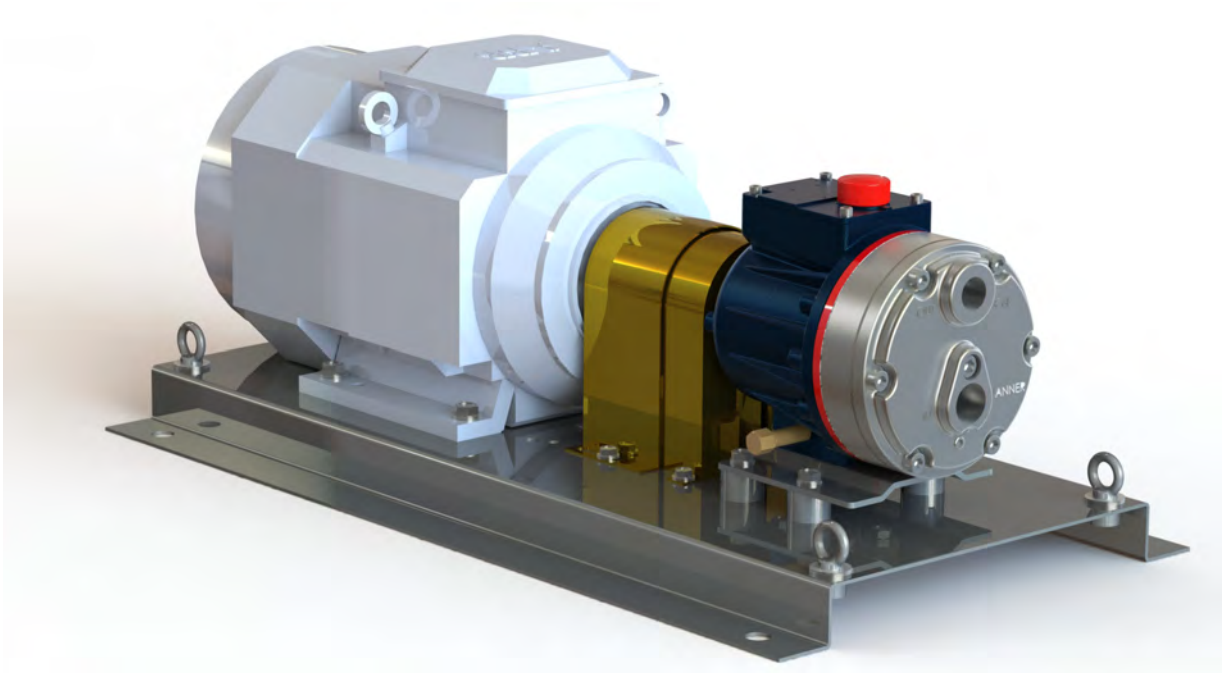


Dimensions in mm

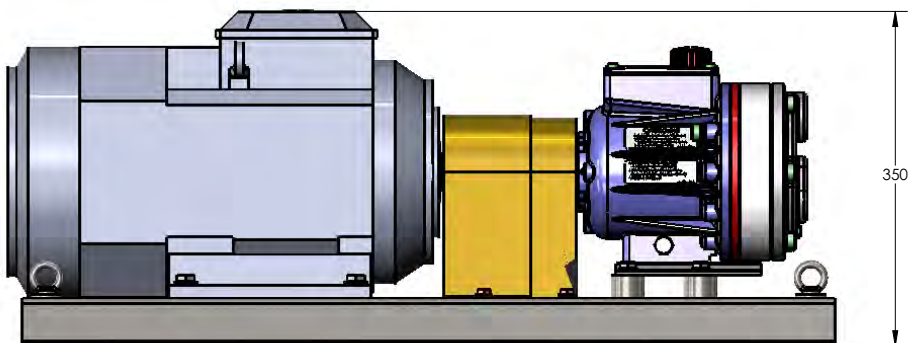
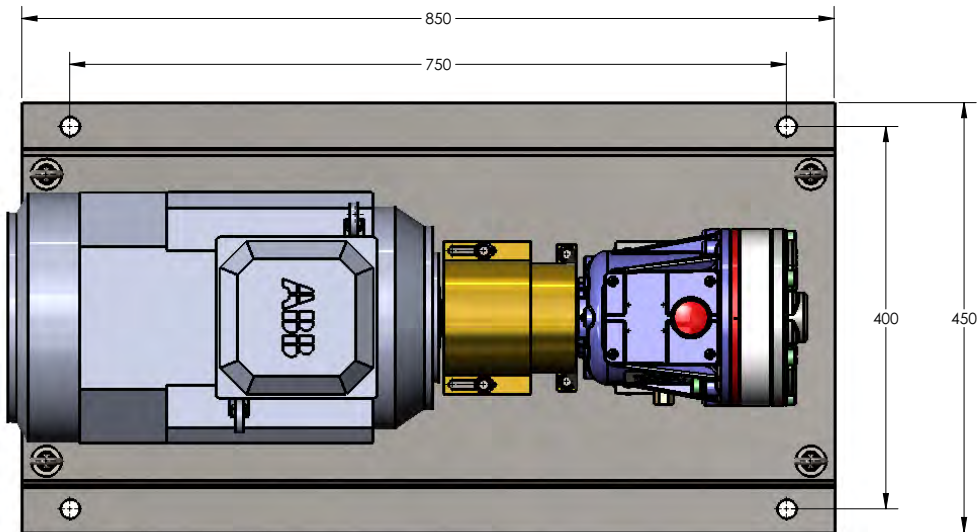


G10 Series **General Assemblies**

Baseplate Assembly Long-coupled for IEC 132 Motor Frame

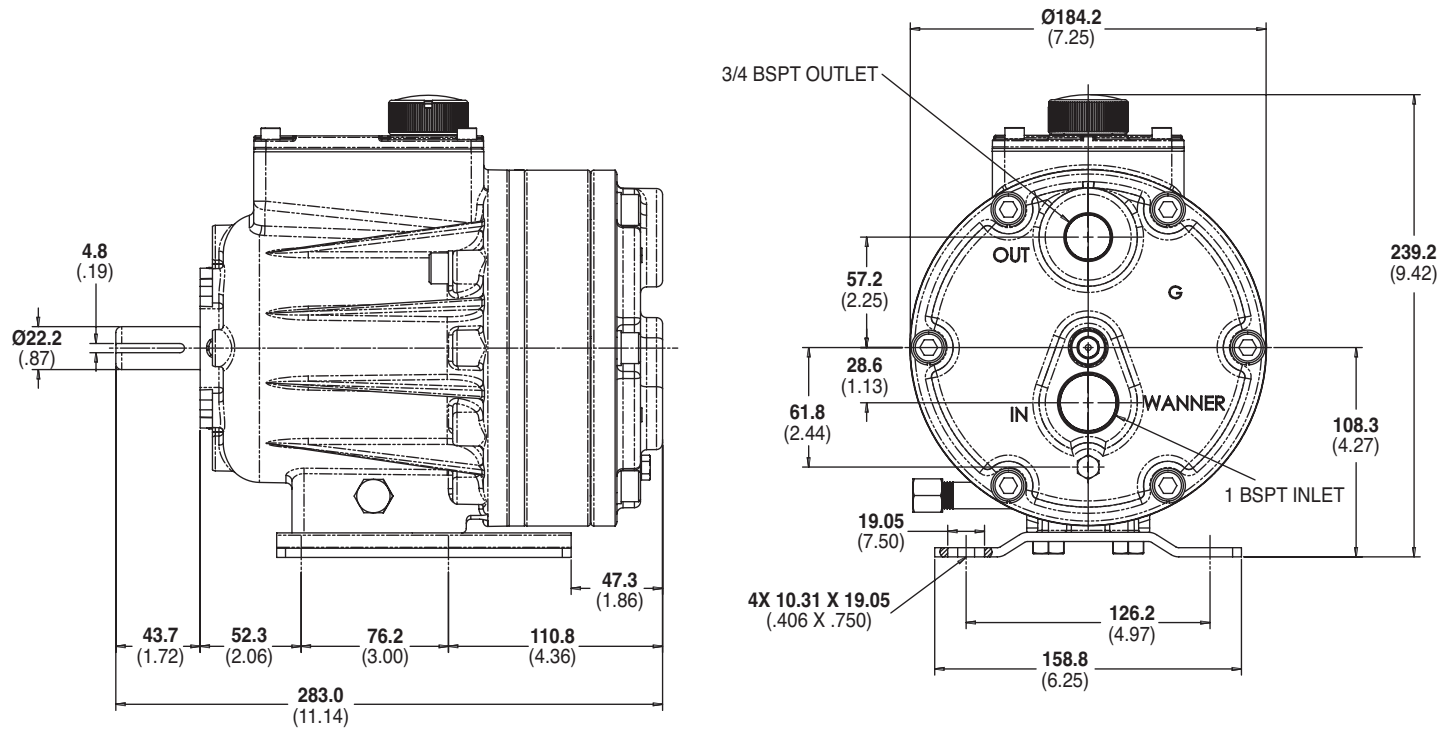


Dimensions in mm

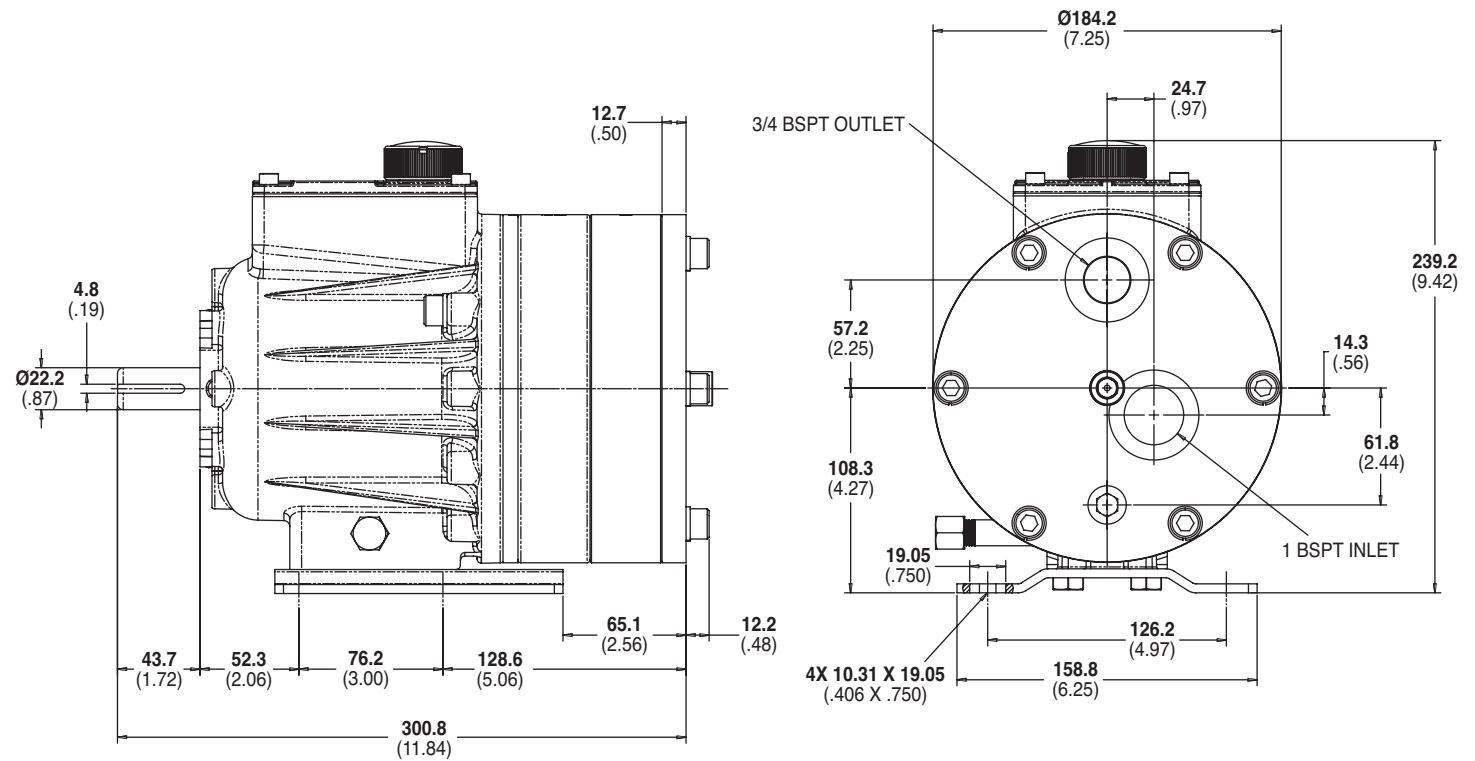


G10 Series Representative Drawings

G10 Models with Metallic Pump Head mm (Inches)



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

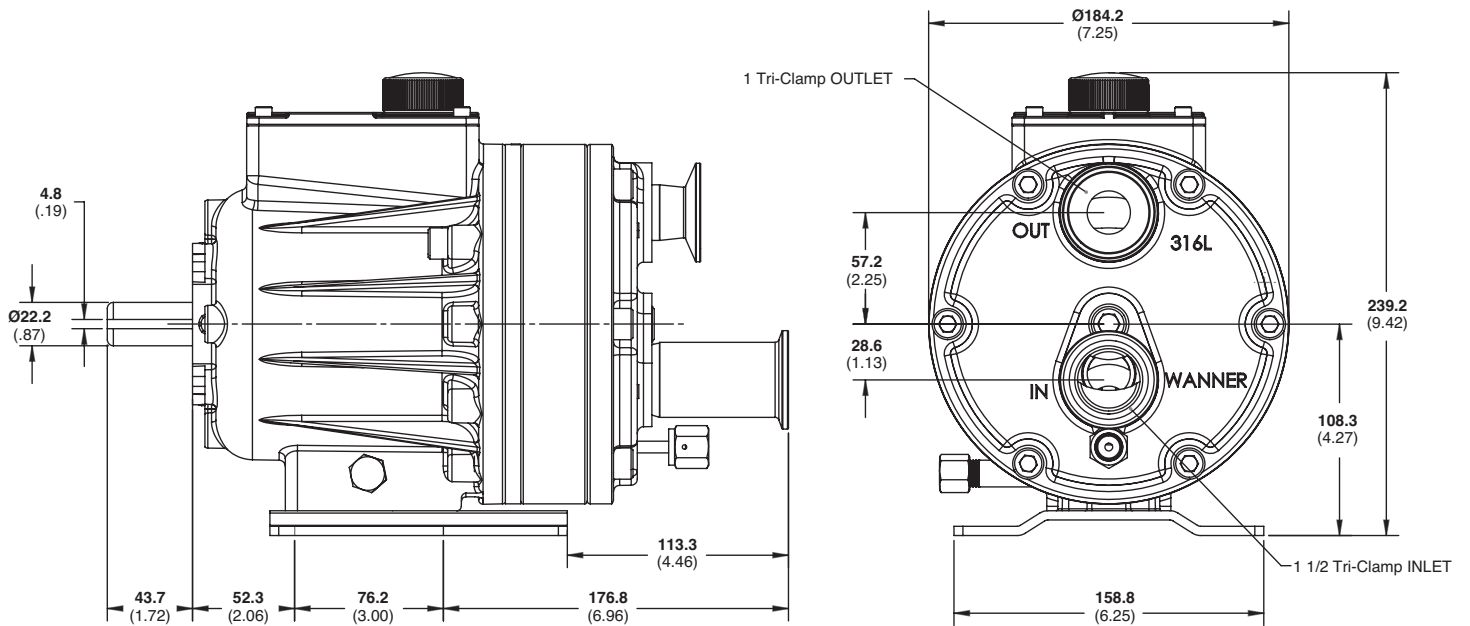


Note: Contact factory for additional drawings of specific models and configurations.

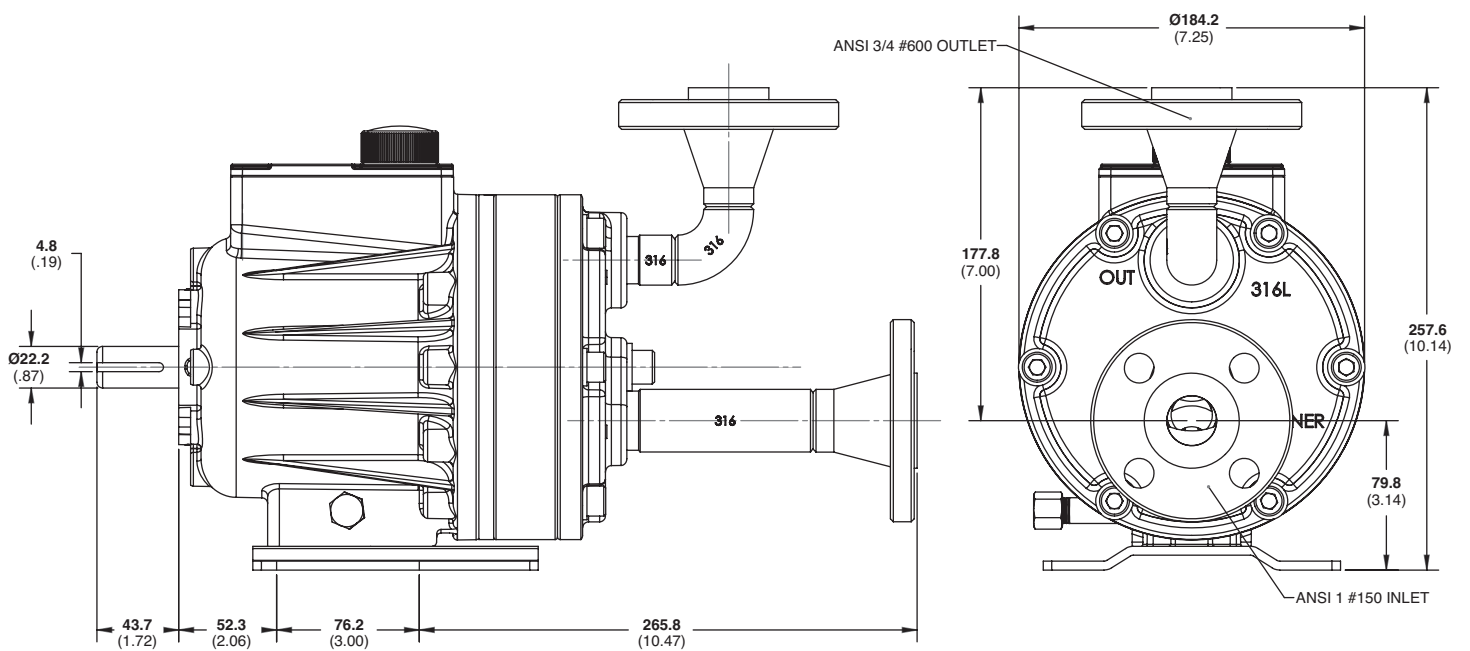
G10 Series Representative Drawings

G10 Models with Tri-clamp Flanges mm (Inches)

Maximum Discharge Pressure: 80 bar



G10 Models with ANSI RF Flanges mm (Inches)



G10 Series Motor Adaptors / Valves

Pump/Motor Adaptor mm (Inches)

Part Number: A04-003-I200

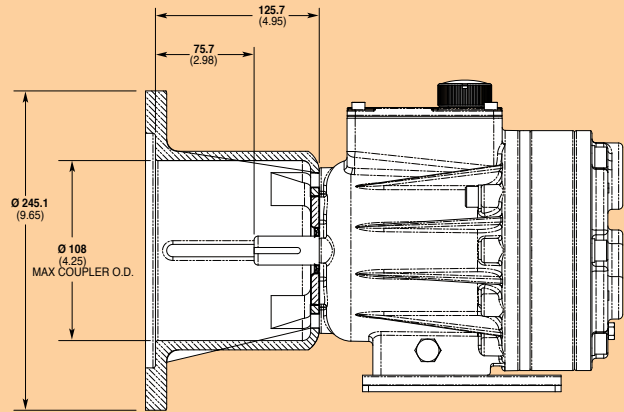
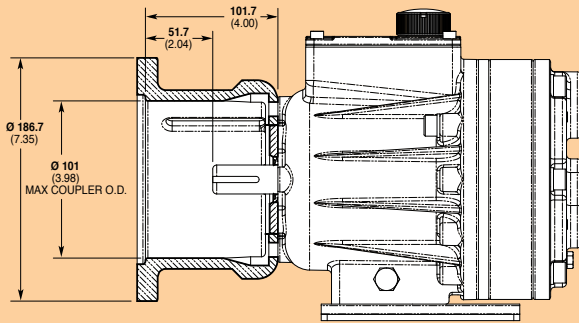
Must be ordered separately for G10 models for use with IEC 80 - 90 frame motors, B5 flange.

NEMA adaptor 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 adaptor 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.



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 adaptors 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, optimised Valve Plate (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 & Secondary ATEX Label.</i> |
| 6 | B C G M N P R S - - T | Pump Head Material Brass Cast Iron (Nickel-plated) Duplex Alloy 2205 (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 with ANSI RF Flanges, Class 150lb x 600lb 316L Stainless Steel 316L Stainless Steel with Tri-clamp (1-1/2" Inlet & 1" Discharge) Flanges polished to 0.8 Ra♦ 316L Stainless Steel with Tri-clamp (1-1/2" Inlet & 1" Discharge) Flanges polished to 0.4 Ra♦ <i>Tri-clamp options include polishing of Pump Head, Valve Plate, Valves, Valve Seats, Springs & Retainers to 0.8 Ra or 0.4 Ra per above, Sanitary Drain along with TSE, Passivation, Surface Finish & Weld Procedure Certificates</i> Hastelloy CW12MW ♦Selecting this option will result in a Wanner International generated Pump Code, stamped onto the pump. |

| Digit | Order Code | Description |
|-----------|--|---|
| 7 | A E G J K P T | Diaphragm & O-ring Material Atlas 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.) FFKM diaphragm / PTFE o-ring Neoprene Buna-N |
| 8 | C D H S T | Valve Seat Material Ceramic Tungsten Carbide 17-4 Stainless Steel 316L Stainless Steel Hastelloy C |
| 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 PVDF Polypropylene Hastelloy C 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.

G10 (Plastic Heads Only) available with 316 Support Faceplate Kit.



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