

ROTATING RIGHT

D/G-10 HYDRA-CELL DIAPHRAGM PUMP

D/G-10 Series

Up to 8 gpm (30.3 l/min)



The D/G-10 Hydra-Cell is available with a pump/motor adaptor for use with NEMA and IEC motors. See page 52.

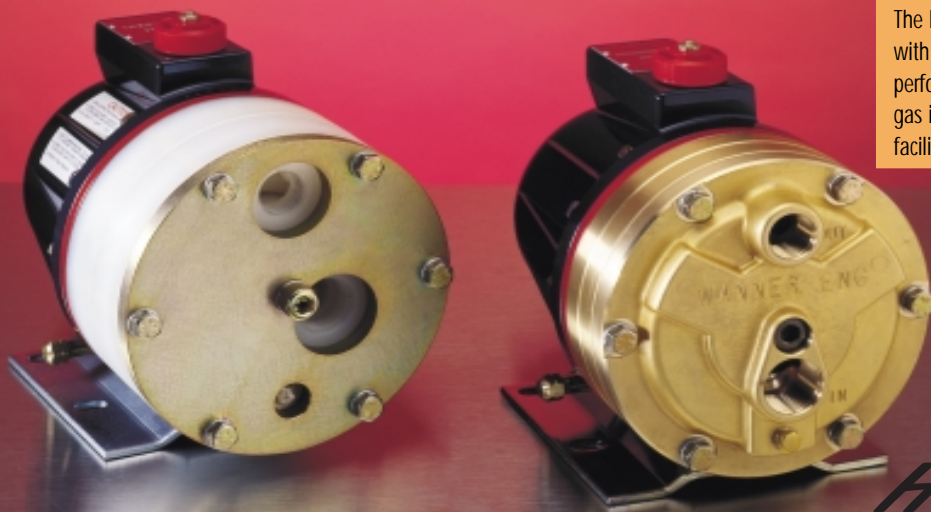
D/G-10 Specialized Designs



Hydra-Cell Slurry Duty pumps are specifically designed for abrasive slurry applications. See page 80 for complete specifications.



The D-10 Hydra-Cell can be equipped with ANSI flange pump heads for critical performance applications such as oil/gas installations and chemical process facilities. See page 52.



Hydra-Cell®
SIMPLY BUILT TO LAST

D/G-10 Series Performance

flow

model	max flow gpm	max flow l/min	max input rpm
D/G-10-X	7.8	29.0	1450
D/G-10-E	8.0	30.3	1750
D/G-10-S	6.0	22.7	1750
D/G-10-I	3.9	14.9	1750

pressure

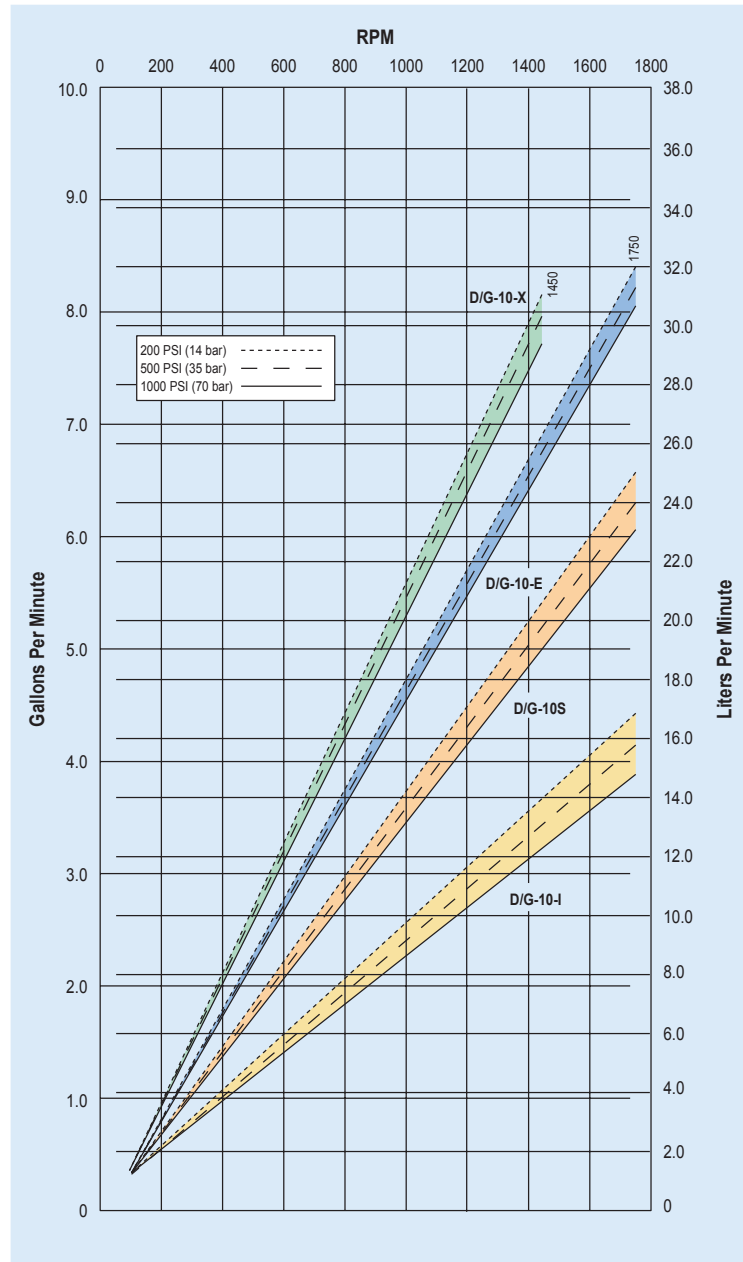
Maximum Inlet Pressure:

250 psi (17 bar)

Pressure Variable To:

Metallic Heads: 1000 psi (70 bar)

Non-Metallic Heads: 250 psi (17 bar)



Calculating Required Horsepower (kW)**

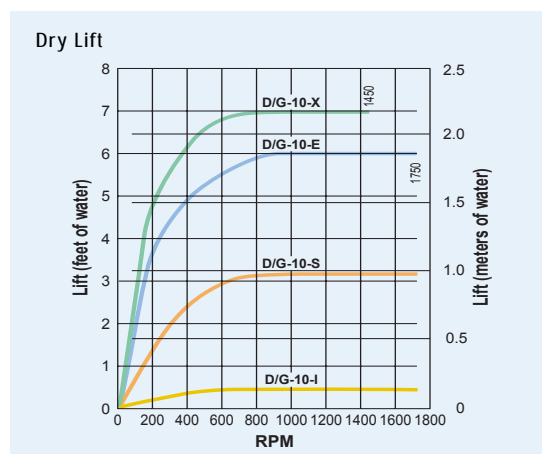
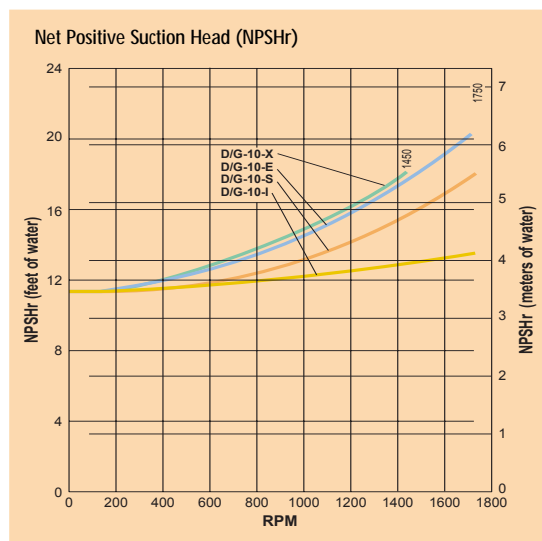
$$\frac{15 \times \text{rpm}}{63,000} + \frac{\text{gpm} \times \text{psi}}{1,460} = \text{electric motor HP}$$

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

**rpm equals pump shaft rpm. HP/kW is required application power. Use caution when sizing motors with variable speed drives.

D/G-10 Series Specifications

Max Pressure	Metallic Head: 1000 psi (70 bar) Non-Metallic Head: 250 psi (17 bar)		
Capacity @ Max Pressure	rpm	gpm	l/min
D/G-10-X	1450	7.8	29.0
D/G-10-E	1750	8.0	30.3
D/G-10-S	1750	6.0	22.7
D/G-10-I	1750	3.9	14.9
Delivery @ Max Pressure	revs/gal	revs/liter	
D-10-X	185	50	
D-10-E	219	58	
D-10-S	292	77	
D-10-I	448	117	
Max Inlet Pressure	250 psi (17.3 bar)		
Max Temperature	250°F (121°C) – Consult factory for correct component selection for temperatures above 160°F (71°C)		
Metallic Heads:	140°F (60°C)		
Non-Metallic Heads:			
Inlet Port	D-10: 1 inch NPT; G-10: 1 inch BSPT		
Discharge Port	D-10: 3/4 inch NPT; G-10: 3/4 inch BSPT		
Shaft Diameter	7/8 inch		
Shaft Rotation	Bi-directional		
Bearings	Tapered roller bearings		
Oil Capacity	1.1 US quart (1.05 liters), see Accessories Section for oil selection and specification.		
Weight			
Metallic Heads:	48 lbs (22 kg)		
Non-Metallic Heads:	35 lbs (16 kg)		

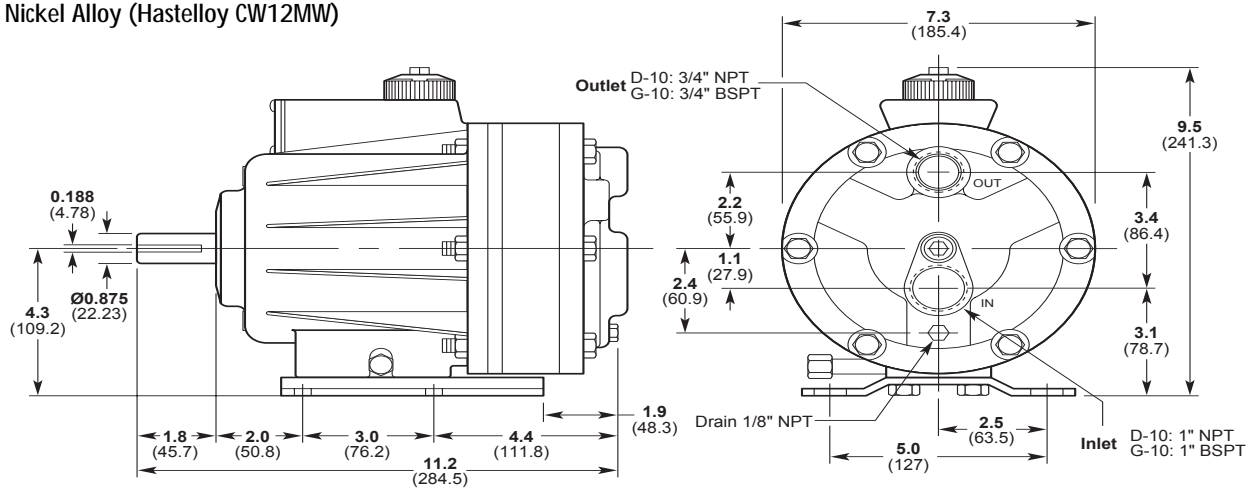


Refer to installation guidelines and design considerations section for additional information.

D/G-10 Series Dimensions

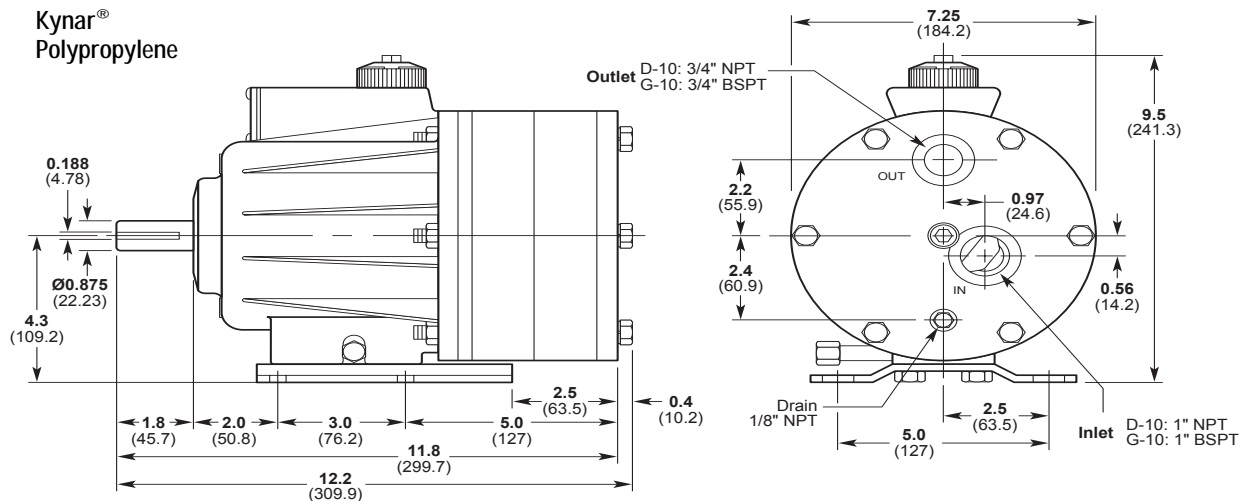
D/G-10 Models with Metallic Pumping Head

Brass
Cast Iron
316 Stainless Steel
Nickel Alloy (Hastelloy CW12MW)



D/G-10 Models with Non-metallic Pump Head

Kynar®
Polypropylene



D/G-10 Series Options

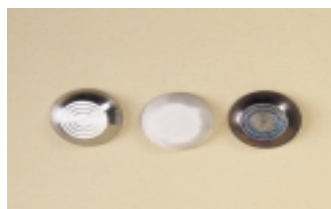
Materials of Construction

Hydra-Cell pumps are manufactured in a variety of heavy-duty materials to meet specific pumping needs. Refer to the design section for more information on appropriate material selection and chemical compatibility. Other customized materials are available by special order. Contact factory application engineering department for further information.



Pumping Head

316 Stainless Steel
Brass
Cast Iron
Kynar®
Nickel Alloy (Hastelloy
CW12MW)
Polypropylene



Valves

17-4 PH Stainless Steel
17-7 PH Stainless Steel
Ceramic
Hastelloy® C
Nitronic 50
Tungsten Carbide



Diaphragms & O-rings

Buna-N-XS
EPDM
Neoprene
Teflon®
Viton®-XT



Valve Springs

17-7 PH Stainless Steel
Elgiloy®
Hastelloy® C



Valve Seats

17-4 PH Stainless Steel
316 Stainless Steel
Ceramic
Hastelloy®
Tungsten Carbide



Valve Spring Retainers

17-7 PH Stainless Steel
Celcon®
Hastelloy® C
Kynar®
Nylon (Zytel®)
Polypropylene

D/G-10 Series Accessories

Options and Accessories

See the Accessories Section for complete information on these other products:

- Valves
- Baseplates
- Guards
- Couplings
- Hose Connectors
- Hydra-Oil
- Oil Cooler and Filtering System
- Oil Reservoir
- Tool Kits
- Pump/Motor Adapters

ANSI Flange Pump Heads

The D-10 Hydra-Cell can be equipped with ANSI flange pump heads for critical performance applications such as oil/gas installations and chemical process facilities.

Design Features

- 316 stainless steel flanges
- Optional ductile iron pump housing
- 1"x 150# ANSI pipe flange inlet; 3/4" x 600# ANSI pipe flange outlet

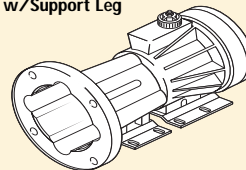
Ordering Information

Contact factory for complete specifications and ordering information.

Pump/Motor Adapters (Coupling ordered separately)

(Ordered Separately)

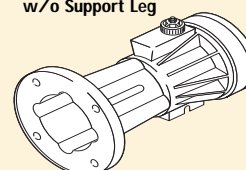
Pump/Motor Adapter w/Support Leg



Part Number: A04-001-1200
For D-10 for use with NEMA 56C, 143/145TC C-Face motors.

Part Number: A04-003-1200
For G-10 for use with IEC 80-90 B5 Flange motors.

Pump/Motor Adapter w/o Support Leg



Part Number: A04-002-1200
For D-10 for use with NEMA 182/184TC, 213/215TC C-Face motors.

Part Number: A04-004-1200
For G-10 for use with IEC 100-112 B5 Flange motors.

See the Accessories Section for dimensions.

D/G-10 Series **How To Order**

Ordering Information

A complete model number contains 12 digits of customer-specified design options: for example D10XKBTHFECA.

1	2	3	4	5	6	7	8	9	10	11	12
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Digit	Order Code	Description
1-3		Pump Configuration
	D10	Shaft-driven (NPT ports)
	G10	Shaft-driven (BSPT ports)
4		Hydraulic End Cam
	X	Max 7.8 gpm (29.0 lpm) @ 1450 rpm
	E	Max 8.0 gpm (30.3 lpm) @ 1750 rpm
	S	Max 6.0 gpm (22.7 lpm) @ 1750 rpm
	I	Max 3.9 gpm (14.9 lpm) @ 1750 rpm
5		Pump Head Version
	K	Kel-Cell Version Pump Head
6		Pump Head Material
	B	Brass
	C	Cast Iron (nickel plated)
	M	Kynar® (with Hastelloy® C followers & follower screws)
	N	Polypropylene (with Hastelloy® C followers & follower screws)
	P	Polypropylene (with 316 stainless steel followers & follower screws)
	R	316 Stainless Steel ANSI flange weldment
	S	316 Stainless Steel
	T	Nickel Alloy (Hastelloy® CW12MW)
7		Diaphragm & O-ring Material
	E	EPDM (requires EPDM-compatible oil – Digit 12 oil code C or D)
	G	Viton®-XT
	J*	Teflon® (available with E and S cams only; 1200 rpm max; cannot be used with non-metallic heads)
	P	Neoprene
	T	Buna-N-XS
8		Valve Seat Material
	C	Ceramic
	D	Tungsten Carbide
	H	17-4 PH Stainless Steel
	S	316 Stainless Steel
	T	Hastelloy® C
9		Valve Material
	C	Ceramic
	D	Tungsten Carbide
	F	17-4 PH Stainless Steel – Machined
	H	17-7 PH Stainless Steel – Stamped
	N	Nitronic 50
	T	Hastelloy® C

Digit	Order Code	Description
10		Valve Springs
	E	Elgiloy®
	H	17-7 PH Stainless Steel
	T	Hastelloy® C
11		Valve Spring Retainers
	C	Celcon
	H	17-7 PH Stainless Steel
	M	Kynar®
	P	Polypropylene
	T	Hastelloy® C
	Y	Nylon (Zytel)
12		Hydra-Oil
	A	10W30 standard duty oil
	B	40-wt for continuous duty (use with 316 SST or Hastelloy® pump head)
	C	30-wt EPDM-compatible oil
	D	40-wt high-temp EPDM-compatible oil
	E	30-wt food-contact oil
	F	40-wt high-temp food-contact oil
	G	5W30 cold-temp severe duty oil
	H	15W50 high-temp severe duty synthetic oil

Replacement Hydraulic End Assembly

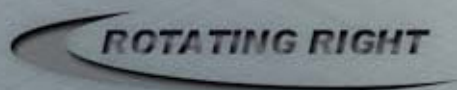
Complete D/G-10 Hydraulic End Assemblies are available as replacement items. The Hydraulic End contains all drive end components from the drive shaft up to and including the diaphragms. All Hydraulic Ends are factory tested and shipped with oil. To order a Replacement Hydraulic End, specify the desired Cam (Digit 4), the Diaphragm and O-ring Material (Digit 7), and the Hydra-Oil (Digit 12).

Part Number*

D10 4* **XX** 7* **XXXX** 12* **G10** 4* **XX** 7* **XXXX** 12*

* Order Code Digits 4, 7 and 12 must be filled in when ordering.

* May require pressurized inlet.



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