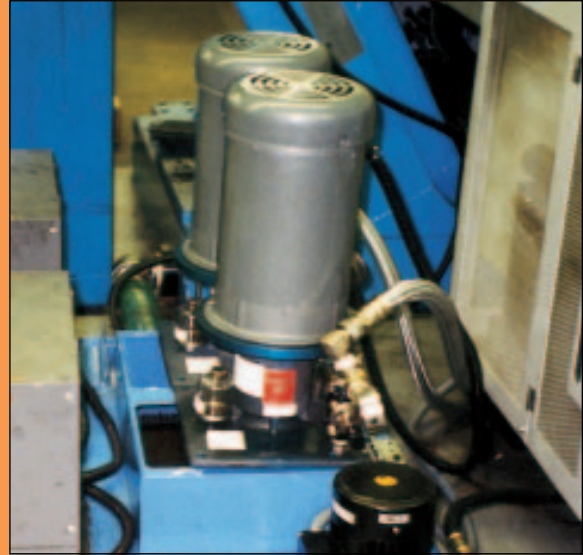


D-12 Series

Up to 8 gpm (32 l/min)

D-12 Vertical Applications

The D-12 is specifically designed for vertical pumping installations such as machine tool cooling applications.



D-12 equipped with
Valve/Tube Accessories
(motor ordered separately)

Hydra-Cell[®]
SIMPLY BUILT TO LAST

D-12 Series Performance

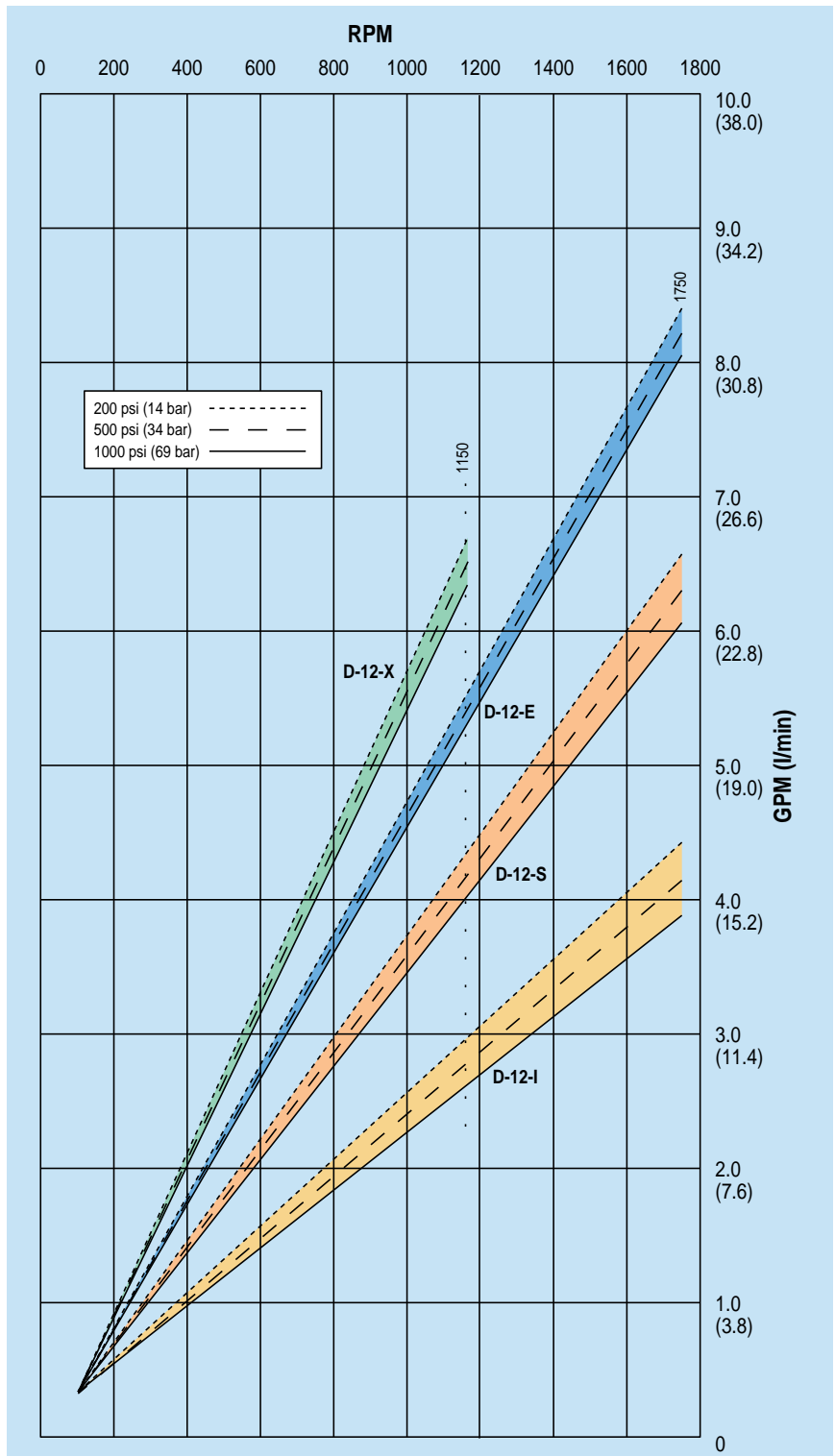
flow

model	max flow		max input
	gpm	l/min	rpm
D-12-X	6.2	23.5	1150
D-12-E	8	30.3	1750
D-12-S	6	22.7	1750
D-12-I	4	15.1	1750
D-12-E	5.4	20.4	1150
D-12-S	4.1	15.5	1150
D-12-I	2.8	10.6	1150

pressure

Maximum Inlet Pressure:
250 psi (17.3 bar)

Pressure Variable To:
Metallic Heads: 1000 psi (69 bar)
Non-Metallic Heads: 250 psi (17.3 bar)



D-12 Series Specifications

Maximum Capacity

	rpm	gpm	l/min
D-12-X	1150	6.2	23.5
D-12-E	1750	8	30.3
D-12-S	1750	6	22.7
D-12-I	1750	4	15.1

Delivery @ max pressure

	revs/gal	revs/liter
D-12-X	185	49
D-12-E	219	58
D-12-S	292	78
D-12-I	437	115

Max Inlet Pressure 250 psi (17.3 bar)

Pressure Variable to 1000 psi (69 bar)

Max Temperature 180°F (refer to engineering section, page 94 for temperatures above 160°F)

Inlet Port 1 inch NPT

Discharge Port 3/4 inch NPT

Shaft Diameter 7/8 inch

Shaft Rotation Bi-directional

Bearings Tapered roller bearings

Oil Capacity 1.5 US quarts (1.4 liters), see page 88 for oil selection and specification.

Weight

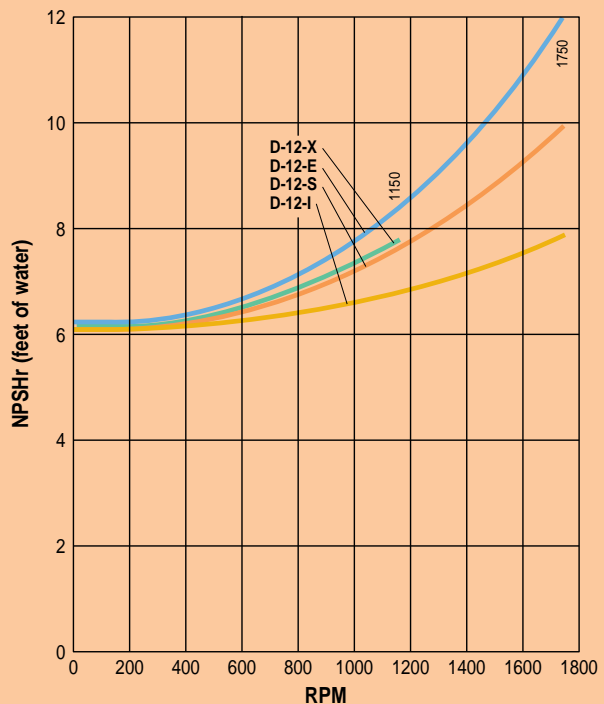
Metallic Heads: 63 lbs (28.6 kg)

Calculating Required Horsepower

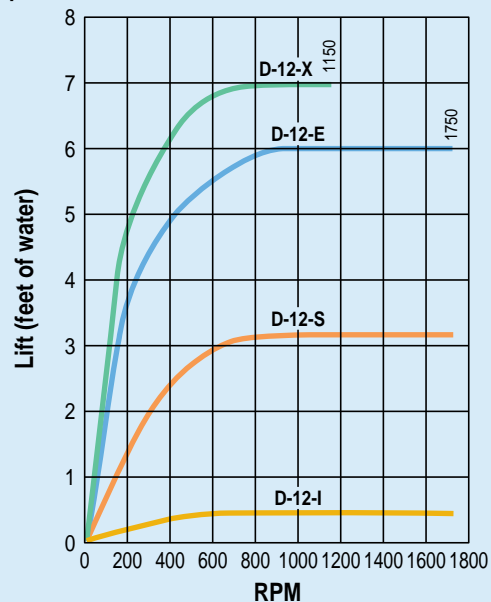
$$\frac{15 \times \text{rpm}}{63,000} + \frac{\text{gpm} \times \text{psi}}{1,460} = \text{electric motor HP}$$

For installation guidelines and other pump selection design considerations, refer to pages 92-95.

Net Positive Suction Head (NPSHr)

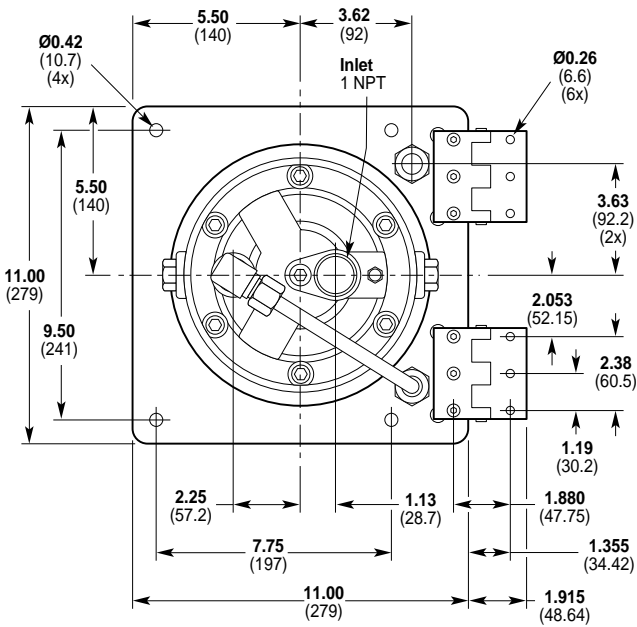
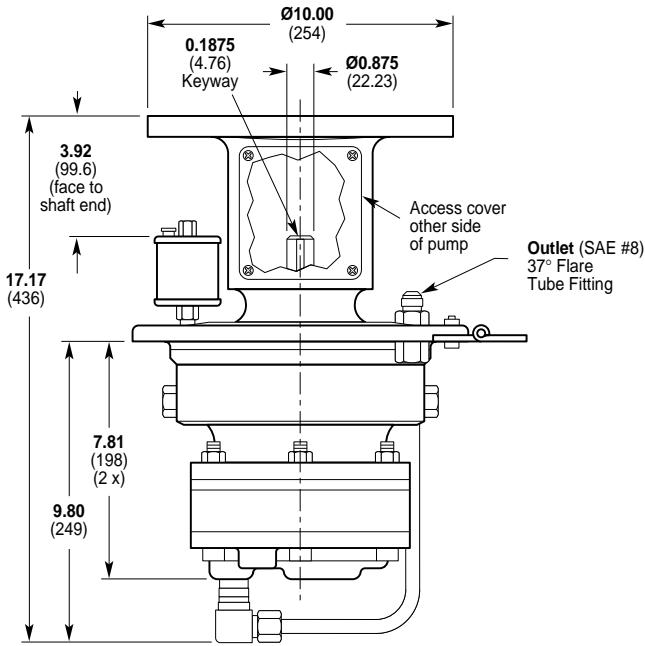


Dry Lift

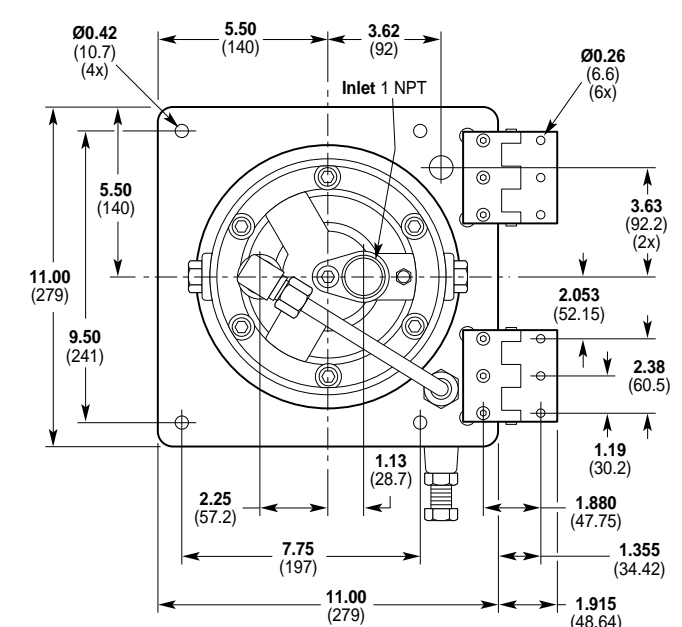
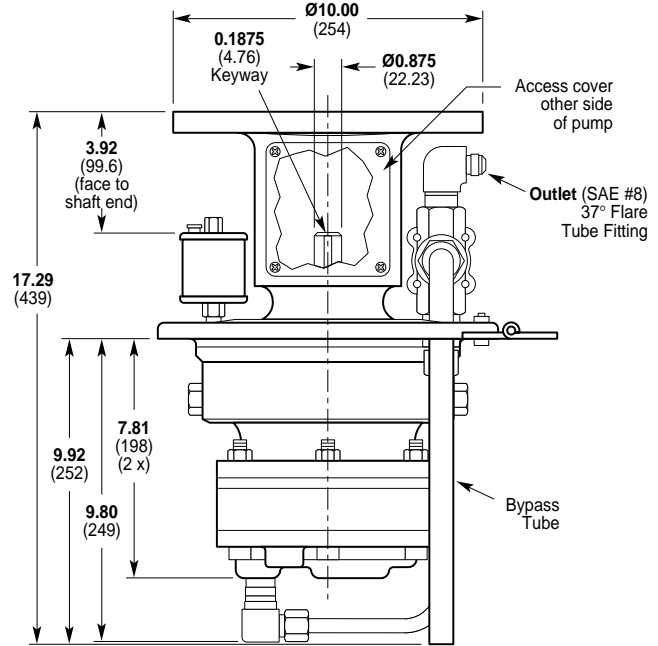


D-12 Series Dimensions

D-12 with Tube Accessory

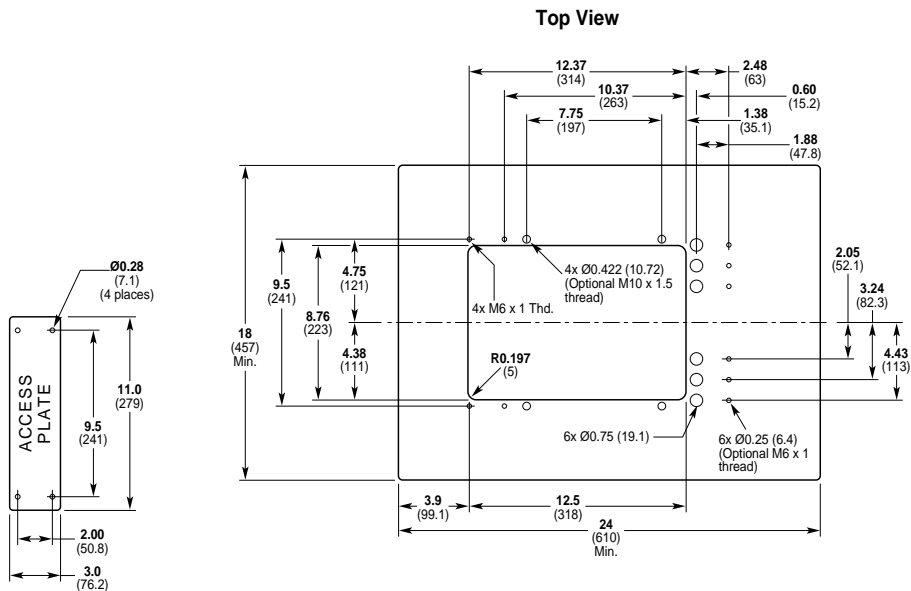


D-12 with Valve/Tube Accessory

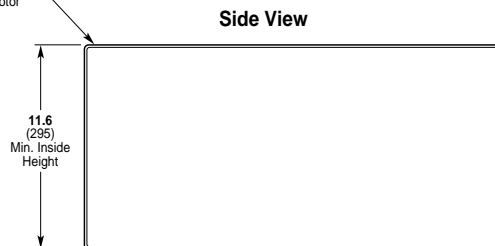


D-12 Series Dimensions

D-12 Models Minimum Tank Size and Critical Installation Dimensions



Top of tank must support weight of 200 pounds for pump/motor



D-12 Series Options

Materials of Construction

D-12 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 Remelt, CMW12D)
 Polypropylene



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



Diaphragms & O-rings
 Buna-N
 Buna-N-XS
 EPDM
 Neoprene
 Teflon®
 Viton®
 Viton®-XT



Valve Springs
 17-7 PH Stainless Steel
 Elgiloy®
 Hastelloy® C



Valve Seats
 17-4 PH Stainless Steel
 316 Stainless Steel
 Ceramic
 Hastelloy®



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

D-12 Series Accessories

Options, Accessories and Custom Designs

- Valves, page 78
- Hydra-Oil, page 88
- Couplers, page 86
- Hose Connectors, page 86
- Tool Kits, page 90



Valve/Tube Accessories

The D-12 Hydra-Cell Tube and Valve/Tube Accessories provide a pre-fabricated plumbing package for simplified installation. (See page 56 for dimensions.)

Ordering Information

Tube Accessory **A04-007-1200**

Valve/Tube Accessory **A04-008-1200**

(Note: C-22 valve ordered separately, see page 76 for specifications and ordering information.)



D-12 Series How To Order

Ordering Information

A complete D-12 Series Model Number contains 12 digits including 8 customer-specified design options: for example D12XLBNHFCEA.

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

4 Hydraulic End Cam

- X** Max 6.2 gpm (23.5 lpm) @ 1150 rpm
- E** Max 8 gpm (30.3 lpm) @ 1750 rpm
- S** Max 6 gpm (22.7 lpm) @ 1750 rpm
- I** Max 4 gpm (15.1 lpm) @ 1750 rpm

6 Pumping 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)
- S** 316 Stainless Steel
- T** Nickel Alloy (Hastelloy Remelt, CMW12D)

7 Diaphragm & O-ring Material

- E** EPDM (requires order code C or D-30 or 40 wt EPDM-compatible oil)
- G** Viton®-XT
- J** Teflon® (available with E and S cams only; 1200 rpm max; cannot be used with non-metallic heads)
- N** Buna-N
- P** Neoprene
- T** Buna-N-XS
- V** Viton®

8 Valve Seat Material

- C** Ceramic
- H** 17-4 PH Stainless Steel
- S** 316 Stainless Steel
- T** Hastelloy® C

9 Valve Material

- C** Ceramic
- F** 17-4 PH Stainless Steel (machined)
- H** 17-7 PH Stainless Steel (stamped)
- N** Nitronic 50
- T** Hastelloy® C

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 Hydraulic-End Oil

- A** 10W30 (standard)
- B** 40-wt for continuous-duty (use with 316 SST or Hastelloy pump head (standard))
- 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