D66 Series

Maximum Flow Rate: 65.7 gpm (248.7 l/min)
Maximum Pressure: 700 psi (48 bar) for Metallic Pump Heads
250 psi (17 bar) for Non-metallic Pump Heads

D66 with Cast Iron pump head

D66 with Polyurethane pump head

D66 Series Performance

Capacities

Flow

Model	Max. Input rpm	Max. Flow @ 700 psi (48 bar) gpm	l/min
D66-X	1000	65.7	248.7

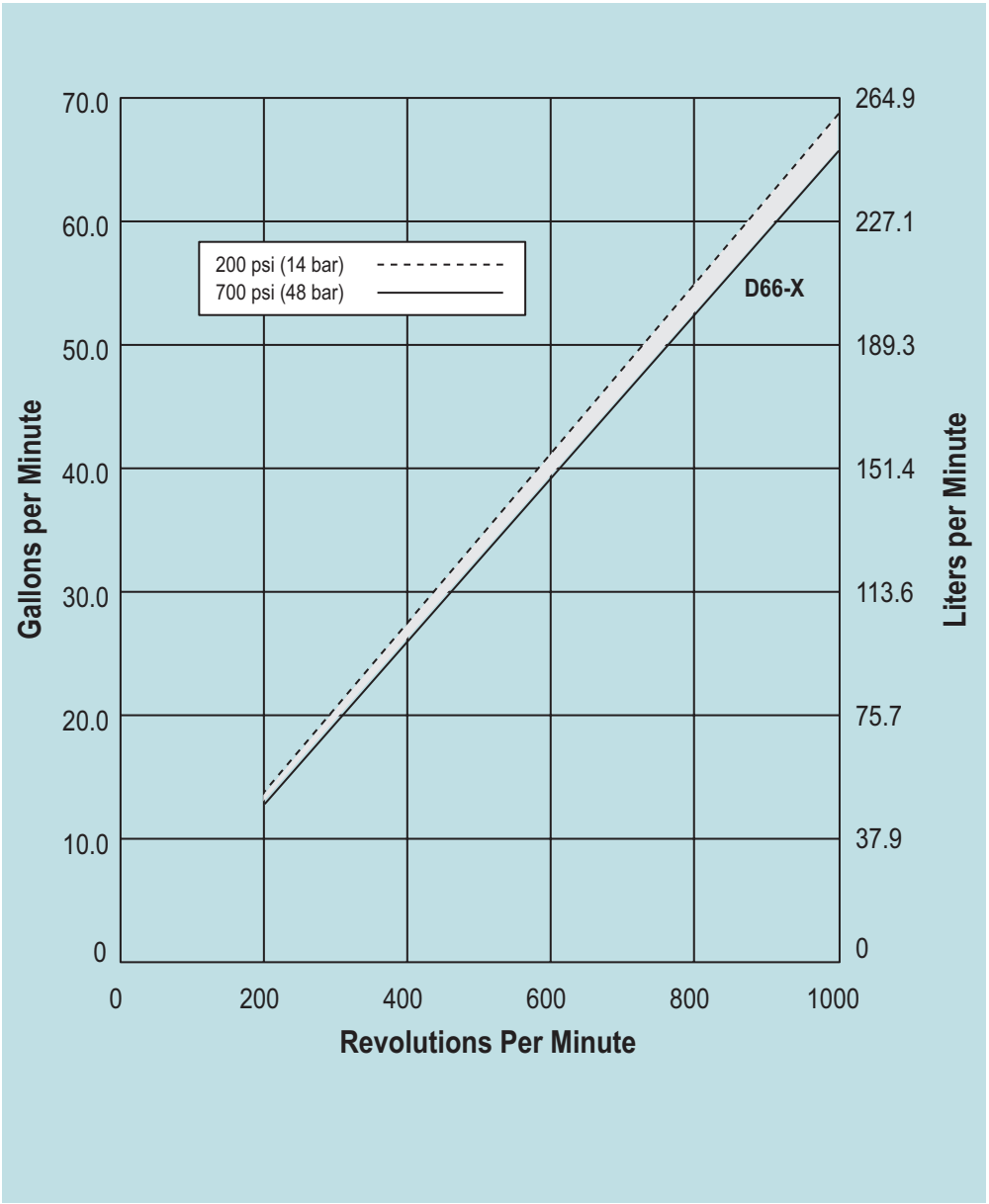
Pressure

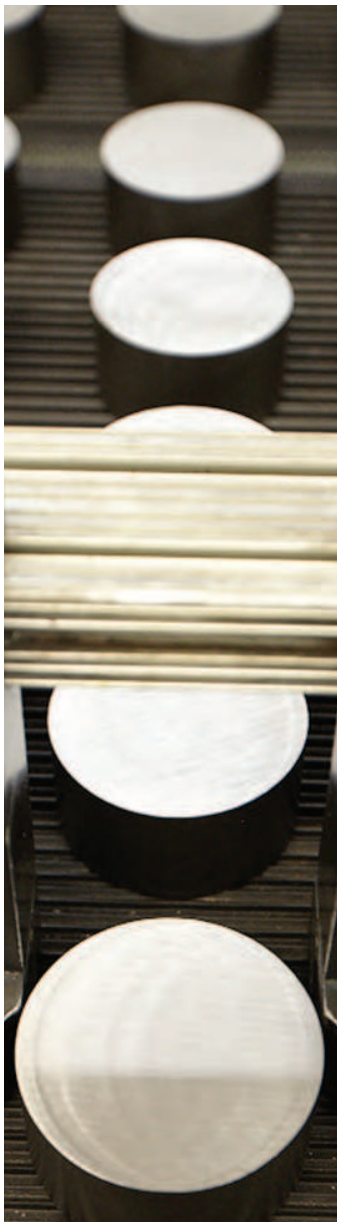
Maximum Inlet Pressure
Metallic Pump Heads: 250 psi (17 bar)
Non-metallic Pump Heads: 50 psi (3.5 bar)

Maximum Discharge Pressure
Metallic Pump Heads:
700 psi (48 bar)
Non-metallic Pump Heads:
250 psi (17 bar) Polypropylene

Performance and specification ratings apply to D66 configurations unless specifically noted otherwise.

Maximum Flow at Designated Pressure





D66 Series Specifications

Flow Capacities @ 200 psi (14 bar)			
Model	**rpm**	**gpm**	**l/min**
D66-X (Metallic)	1000	67.8	256
Flow Capacities @ 250 psi (17 bar)			
Model	**rpm**	**gpm**	**l/min**
D66-X (Non-metallic)	1000	67.5	255
Flow Capacities @ 700 psi (48 bar)			
Model	**rpm**	**gpm**	**l/min**
D66-X (Metallic)	1000	65.7	248
Delivery @ 200 psi (14 bar)			
Model	**gal/rev**	**liters/rev**	
D66-X (Metallic)	0.0678	0.256	
Delivery @ 250 psi (17 bar)			
Model	**gal/rev**	**liters/rev**	
D66-X (Non-metallic)	0.675	0.255	
Delivery @ 700 psi (48 bar)			
Model	**gal/rev**	**liters/rev**	
D66-X (Metallic)	0.657	0.248	
Maximum Discharge Pressure			
Metallic Heads:	700 psi (48 bar) @1000 rpm		
Non-metallic Heads:	250 psi (17 bar) Polypropylene		
Maximum Inlet Pressure	Metallic Heads:	250 psi (17 bar)	
	Non-metallic Heads:	50 psi (3.5 bar)	
Maximum Operating Temperature			
Metallic Heads:	250 °F (121 °C) - Consult factory for correct component selection for temperatures from 160 °F (71 °C) to 250 °F (121 °C).		
Non-metallic Heads:	120 °F (49 °C) - Consult factory for temperatures above 120 °F (49 °C).		
Maximum Solids Size	800 microns		
Inlet Port	3 inch NPT 2-1/2 inch SAE J518 Flange (Non-metallic) 3 inch SAE J518 Flange (Metallic)		
Discharge Port	1-1/2 inch NPT 1-1/2 inch SAE		
Shaft Diameter	2 inch (50.8 mm)		
Shaft Rotation	Reverse (bi-directional)		
Bearings	Tapered roller bearings		
Oil Capacity	8 US quarts (7.5 liters) - See pages 104 and 105 for oil selection and specification.		
Weight			
Metallic Heads:	500 lbs. (226 kg)		
Non-metallic Heads:	295 lbs. (133 kg)		

For technical assistance in pump selection, see Frequently Asked Questions on page 166, Design Considerations on page 167, and Installation Guidelines on pages 168-169.

Calculating Required Power

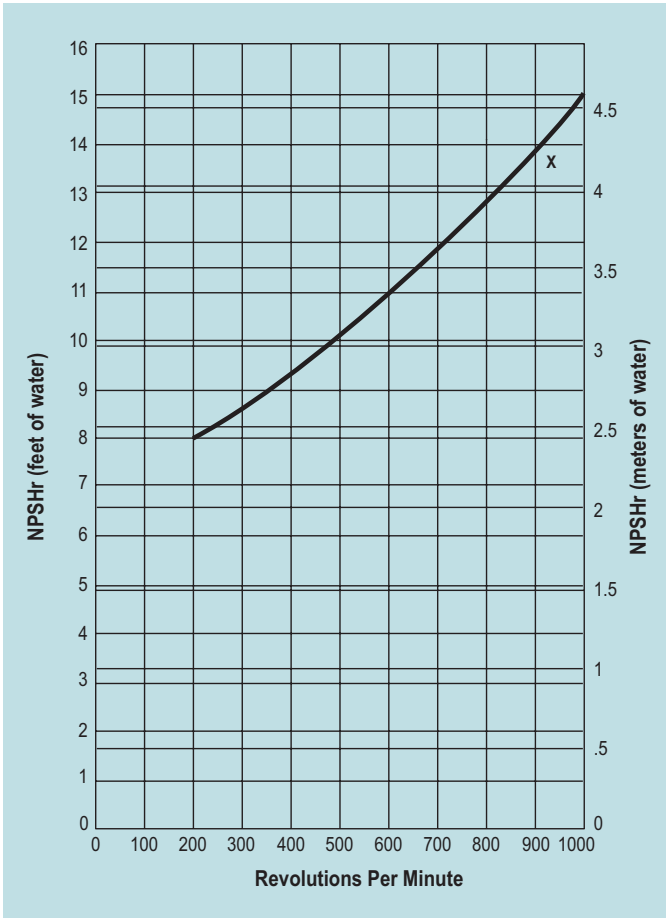
$$\frac{100 \times \text{rpm}}{63{,}000} + \frac{\text{gpm} \times \text{psi}}{1{,}460} = \text{electric motor hp}$$

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

See page 168 for calculating pulley size.

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)

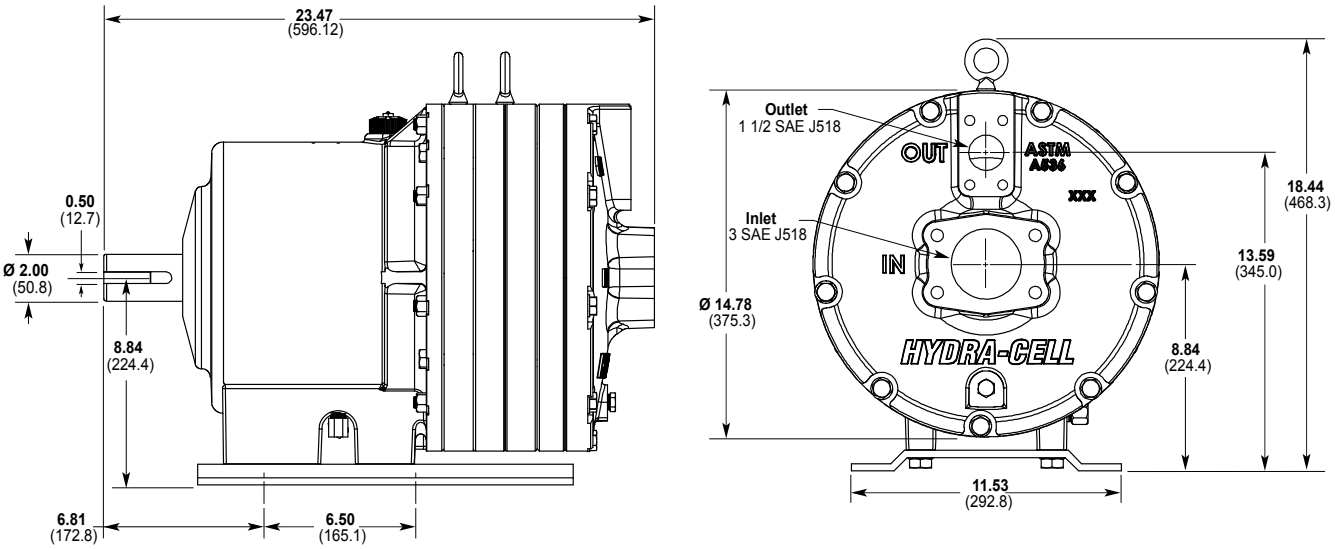


Self-priming:

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.

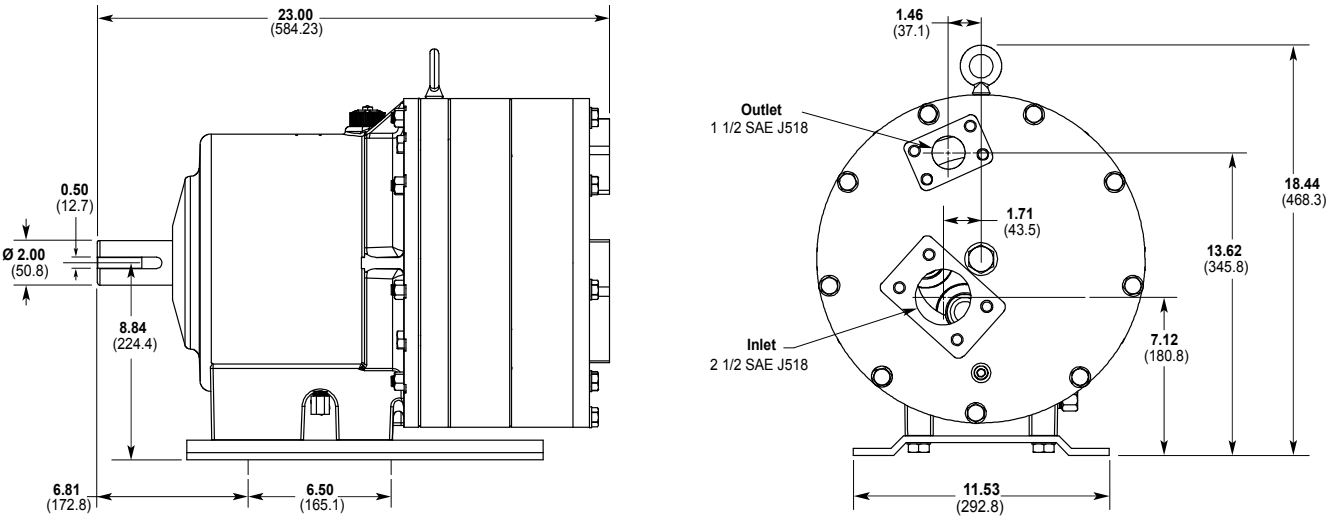
D66 Series Representative Drawings

D66 Models with SAE Flange Inlet/Outlet Ports Inches (mm)



Metallic pump head models shown.

D66 Models with SAE Flange Inlet/Outlet Ports Inches (mm)

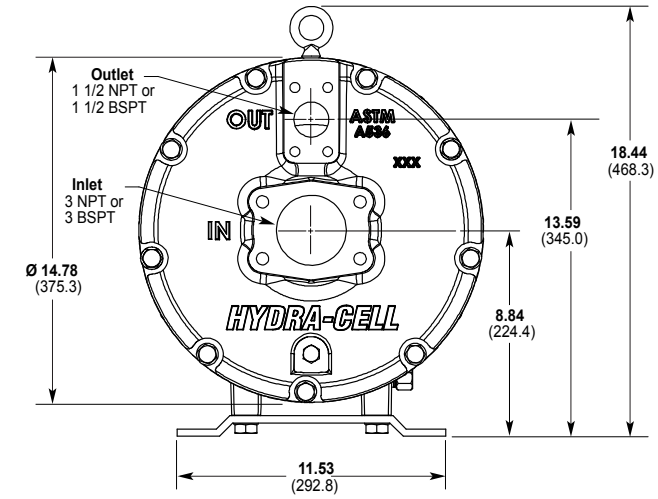


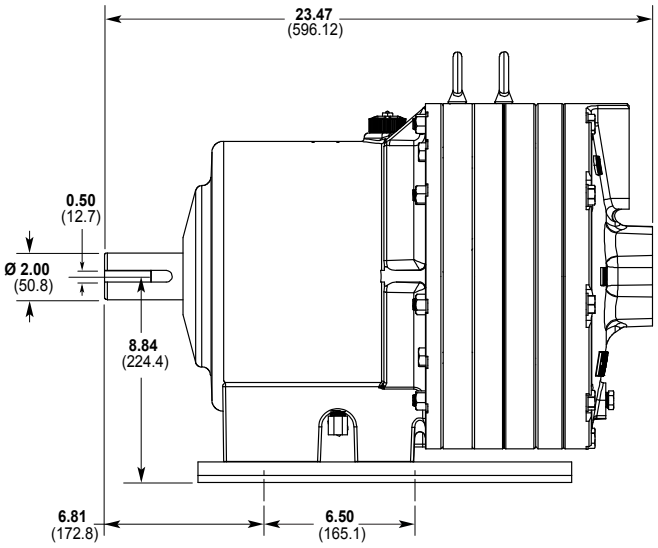
Non-metallic pump head models shown.

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

D66 Series Representative Drawings

D66 Models with NPT Inlet/Outlet Ports Inches (mm)





Metallic pump head models shown.

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

D66 Series How to Order

Ordering Information

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

A complete D66 Series Model Number contains 12 digits including 9 customer-specified design and materials options, for example: D66XKDGHFEPA.

Digit	Order Code	Description
1-3		**Pump Configuration**
	D66	Shaft-driven
4		**Hydraulic End Cam**
	X	Max 65.7 gpm (248.7 l/min) @ 1000 rpm
5		**Pump Head Version**
	K	Kel-Cell NPT Ports or SAE Flanges
6		**Pump Head Material**
	B	Brass
	D	Ductile Iron
	N	Polypropylene (with Hastelloy C followers and follower screws)
	P	Polypropylene (with 316 SST followers and follower screws)
	S	Stainless Steel
7		**Diaphragm & O-ring Material**
	G	FKM
	T	Buna-N
8		**Valve Seat Material**
	H	17-4 Stainless Steel
	N	Nitronic 50
	T	Hastelloy C
9		**Valve Material**
	F	17-4 Stainless Steel
	N	Nitronic 50
	T	Hastelloy C
10		**Valve Springs**
	E	Elgiloy
	H	17-7 Stainless Steel
11		**Valve Spring Retainers**
	C	Celcon
	M	PVDF
	P	Polypropylene
12		**Hydra-Oil**
	A	10W30 standard-duty oil
	H	15W50 high-temp severe-duty synthetic oil

Note: *For motors, bases, couplings and other pump accessories, refer to the Accessories section beginning on page 92.*