

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 Stainless Steel pump head.



D66 with Brass pump head.



D66 with Polypropylene 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

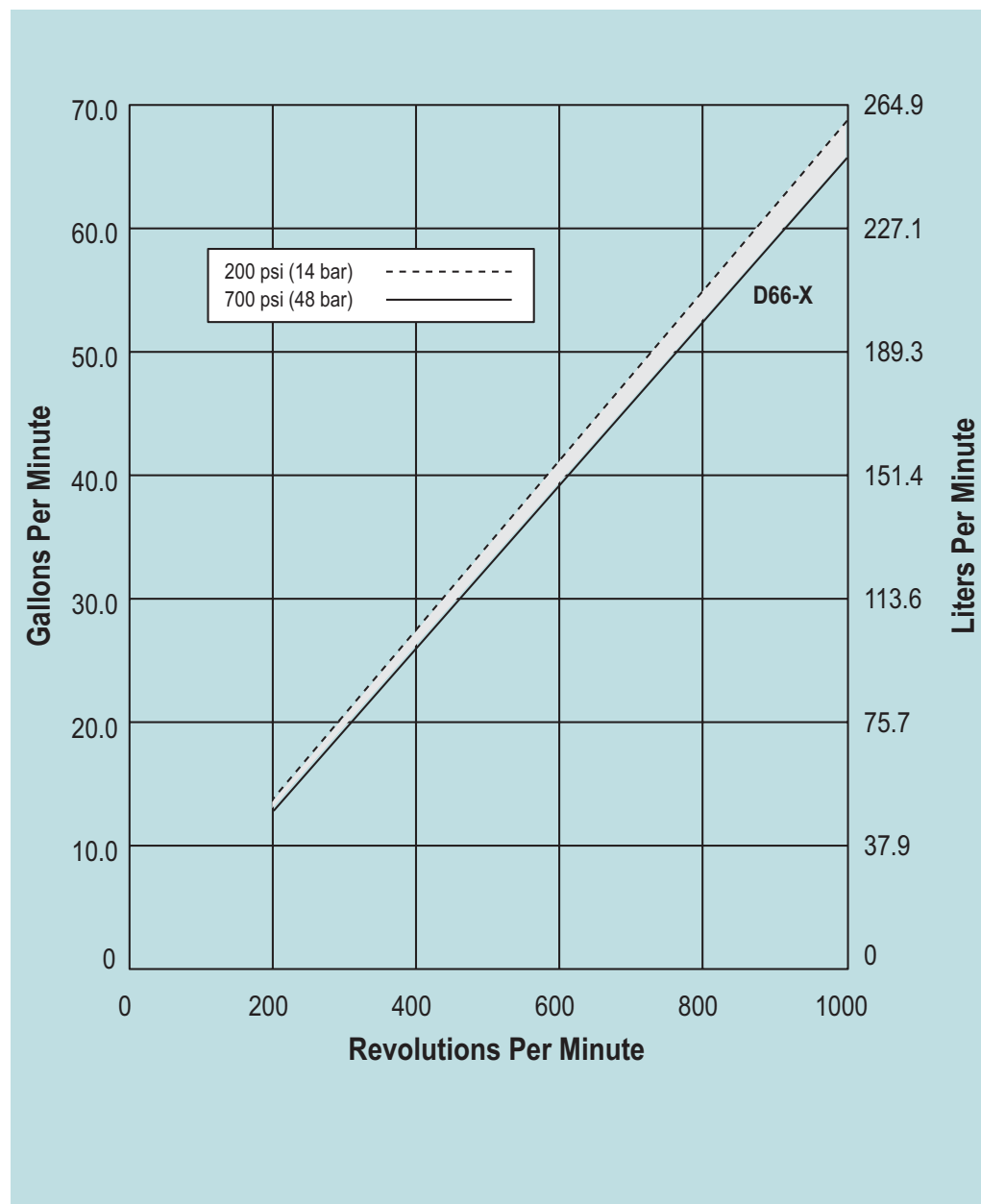
Metallic Pump Heads: 250 psi (17 bar)
 Non-metallic Pump Heads: 50 psi (3.4 bar)

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)	0.0675	0.255

Delivery @ 700 psi (48 bar)

Model	gal/rev	liters/rev
D66-X (Metallic)	0.0657	0.248

Maximum Discharge Pressure

Metallic Heads:	700 psi (48 bar)
Non-metallic Heads:	250 psi (17 bar)

Maximum Inlet Pressure	Metallic Heads:	250 psi (17 bar)
	Non-metallic Heads:	50 psi (3.4 bar)

Maximum Operating Temperature

Metallic Heads:	200 °F (93.3 °C) - Consult factory for correct component selection for temperatures from 160 °F (71 °C) to 200 °F (93.3 °C).
Non-metallic Heads:	120 °F (49 °C) - Consult factory for temperatures above 120 °F (49 °C).

Maximum Solids Size	800 microns
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Inlet Port	3 inch NPT 2-1/2 inch SAE J518 Flange (Non-metallic) 3 inch SAE J518 Flange (Metallic)
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Discharge Port	1-1/2 inch NPT 1-1/2 inch SAE
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Shaft Diameter	2 inch (50.8 mm)
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Shaft Rotation	Reverse (bi-directional)
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Bearings	Tapered roller bearings
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Oil Capacity	8 US quarts (7.5 liters) - See page 100 and 101 for oil selection and specification.
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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 178, *Design Considerations* on page 179, and *Installation Guidelines* on pages 180-181.

Calculating Required Power

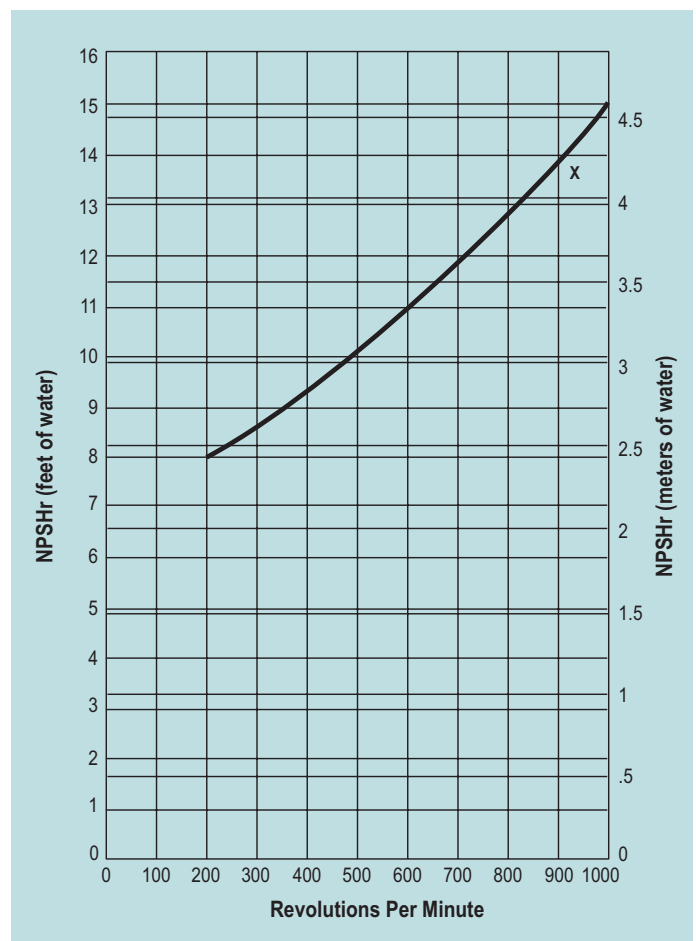
$$\frac{100 \times \text{rpm}}{63,000} + \frac{\text{gpm} \times \text{psi}}{1,460} = \text{electric motor hp}$$

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

See page 180 for calculating pulley size.

When using a variable frequency drive (VFD) controller 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)

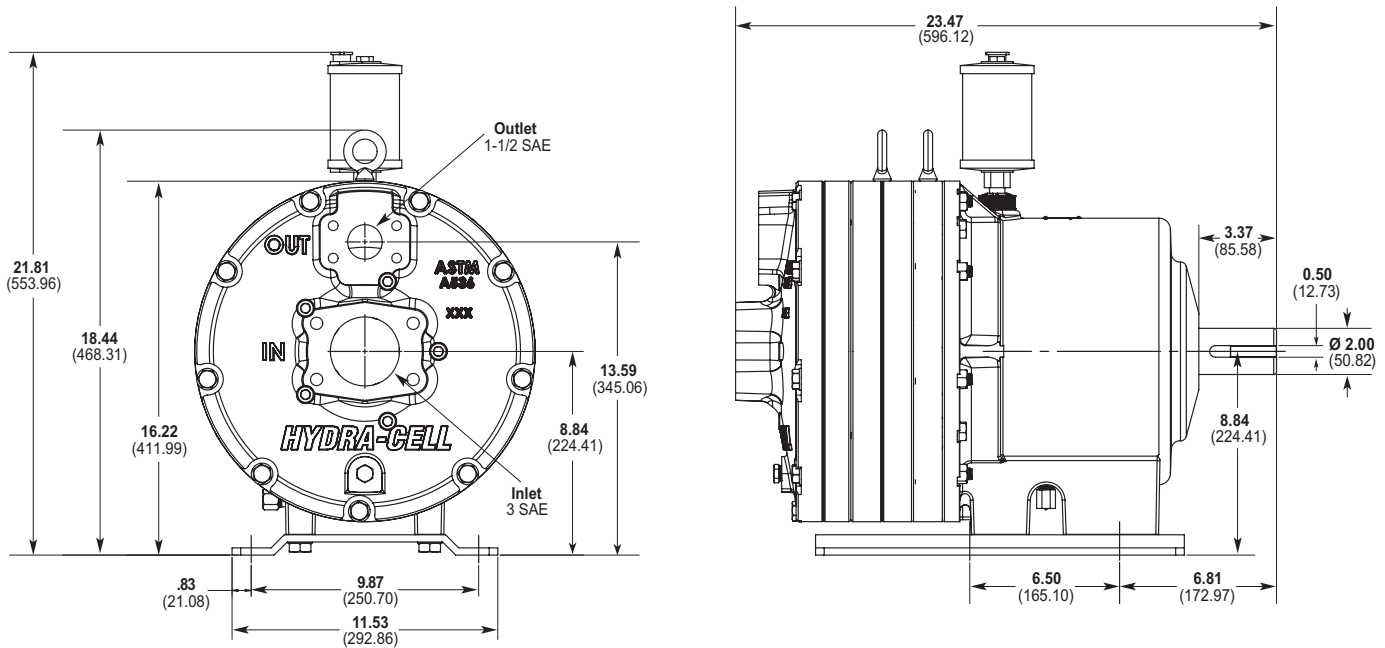


Suction Lift:

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.

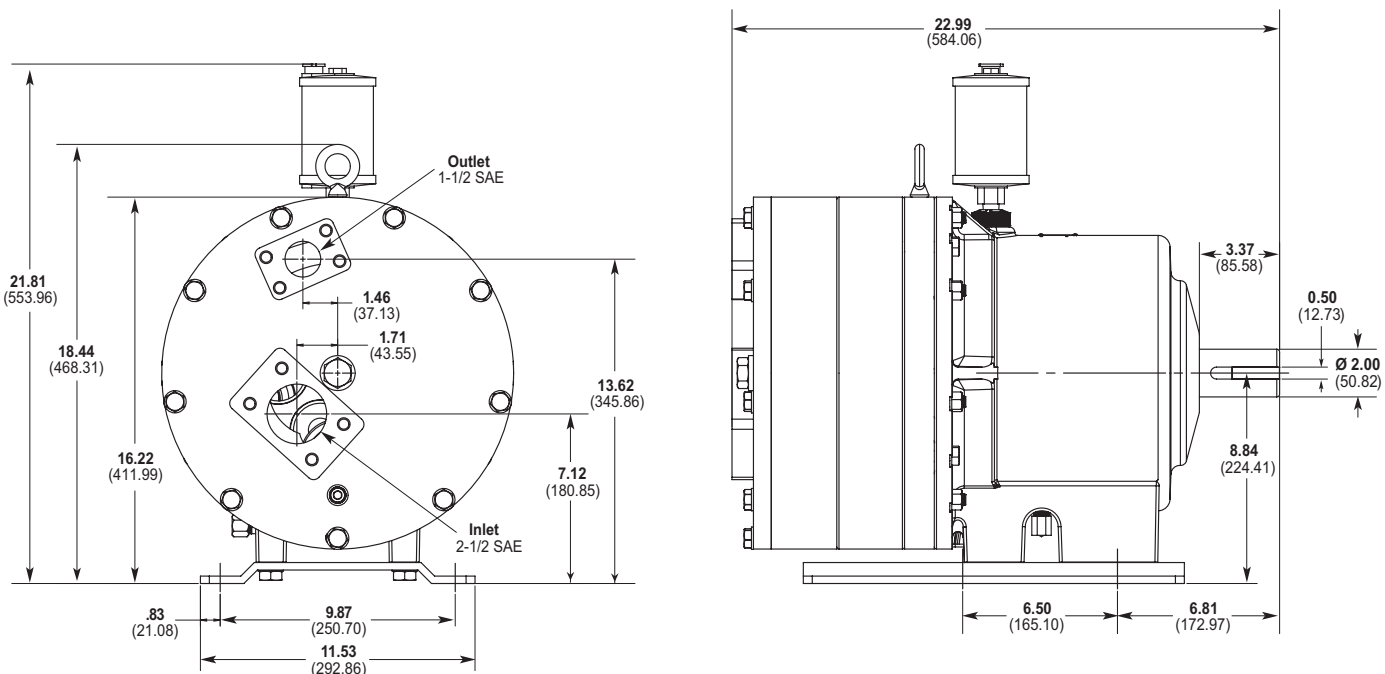
D66 Series Representative Drawings

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: Dimensions are for reference only. Contact factory for certified drawings.

D66 Series **How to Order**

Ordering Information



A complete D66 Series Model Number contains 12 digits including 7 customer-specified design and materials options, for example: D66XKSGHFHMH.

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

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