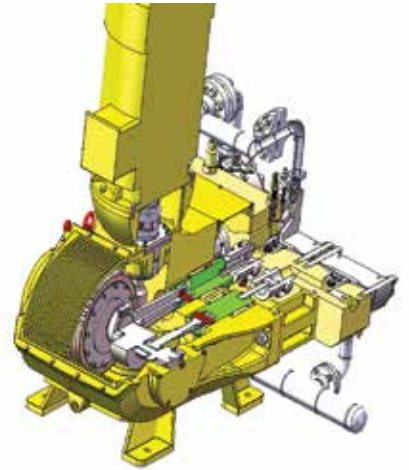


# MEGARoyal Series Diaphragm Process Pump



## Overview

- Designed for injection and transfer of hazardous chemicals at high pressures and flow rates in petrochemical and chemical processes
- Can be used in other industries that require zero-leakage control of critical process liquids
- Modular design provides ease of installation and maintenance
- Compact design suitable for space-constrained applications
- API 675 compliant\*



## Applications

- Oil and gas industries for high-pressure liquid injection and transfer
- Zero-leakage liquid transfer of high pressures and flow rates in petrochemical process applications and other key industries
- Slurry fluid transfer such as bauxite, coal water slurry and sewage

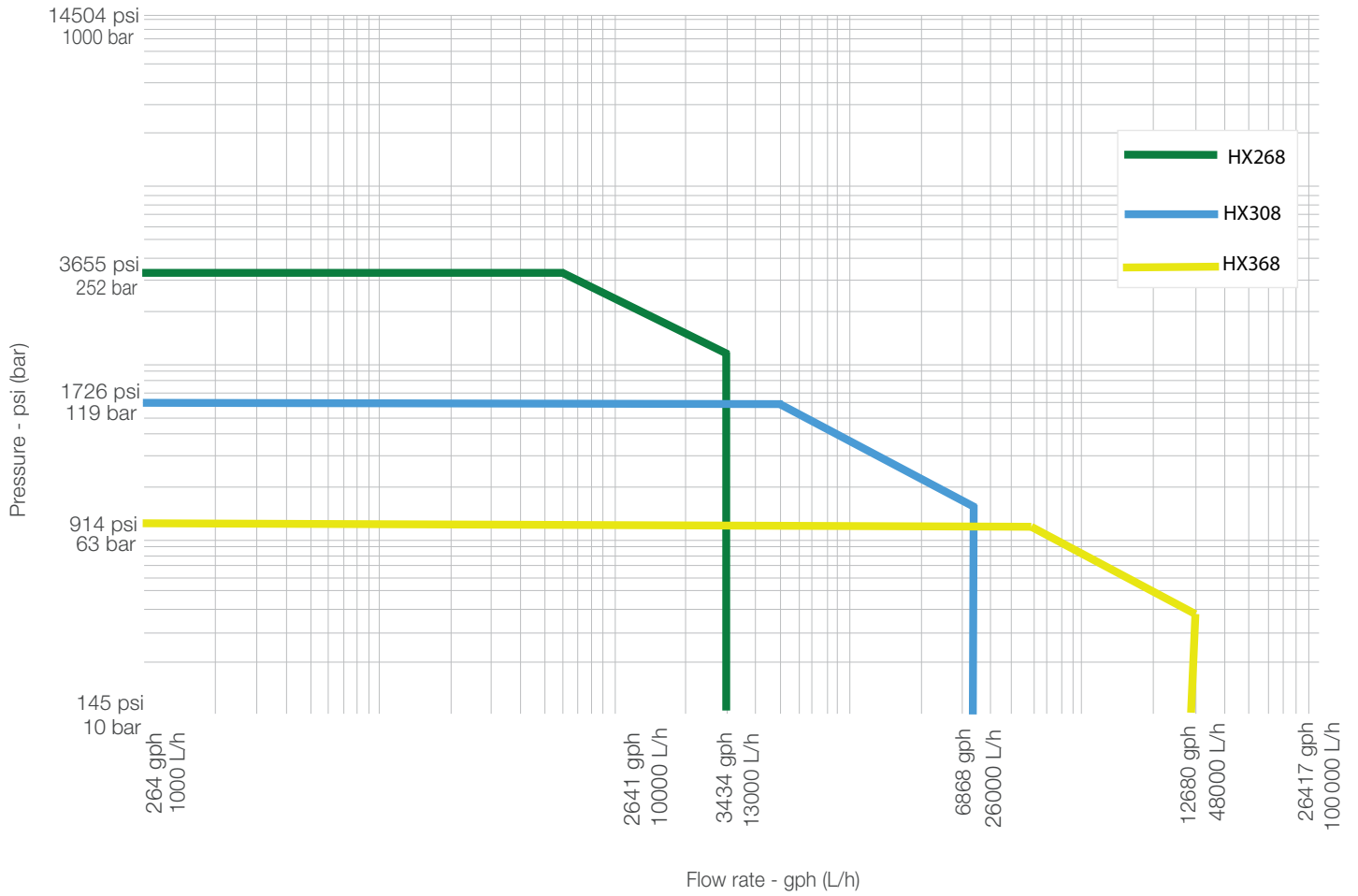
## Specifications

- Maximum capacity: 12680 gph or 211 gpm (48 m<sup>3</sup>/h or 800 L/min)
- Maximum discharge pressure: 3655 psi (252 bar)\*\*
- Maximum motor power: 100 hp (75 kW)
- Pumped fluid temperature: 14°F to 203°F (-10°C to 95°C)
- Capacity adjustment: By variable frequency drive (VFD) with variable frequency motor

\* Consult Milton Roy for minor deviations

\*\* Pressures over 2320 psi (160 bar) are currently being tested.

## Flow and Pressure Range



## Features

### Compact Drive End

*Built-in worm gear reducer, compact structure, spacing saving*

#### Benefits

- Wear-resistant copper alloy worm gear provides longer service life
- Moving parts lubricated in oil bath to reduce wear
- Connecting rods with standard bearing for convenient maintenance
- Unique cross-head seal structure eliminates leakage
- Forged alloy steel crankshaft is strong and durable
- Advanced bearing configuration provides stable movement

### Unique Liquid End

*High-performance hydraulic diaphragm pump*

#### Benefits

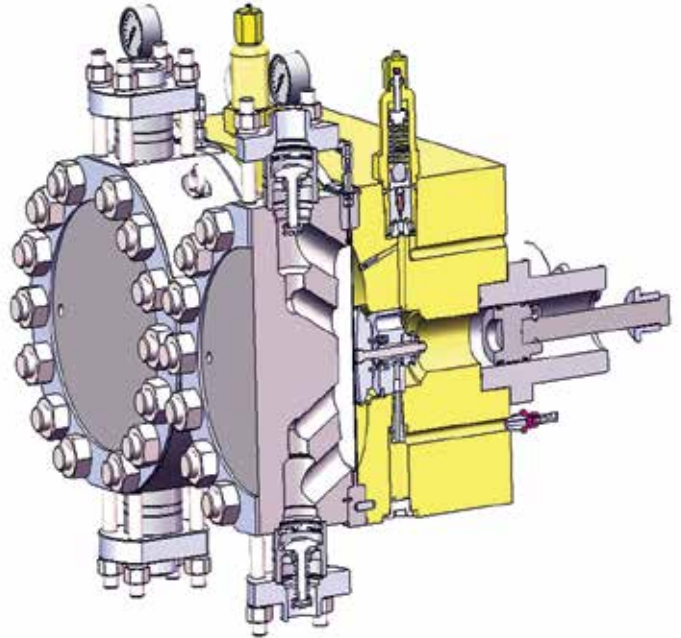
- Leak-resistant
- Patented diaphragm design with a service life over 20,000 hours
- Integrated air-bleed valve for accurate control flow
- Patented MARS refill system to automatically control the compensated hydraulic oil volume to reliably protect diaphragm
- Double diaphragm rupture detection system, available with local or remote alarm

## Multiple Options

*Variety of special designs available to meet specific requirements*

### Benefits

- Specially designed suction and discharge valves
- Low temperature
- High temperature
- Jacket insulation
- Slurry application
- Variety of diaphragm material
- Special corrosion-resistant material



### Dimensions

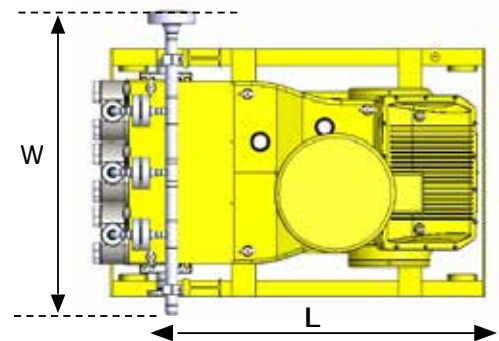
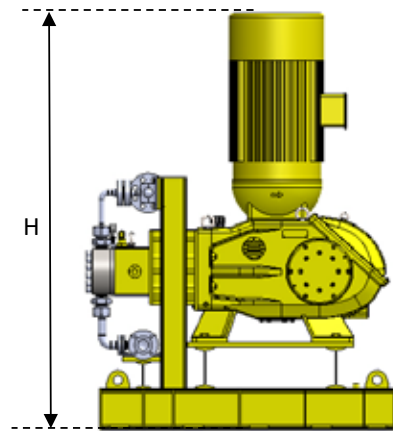
HX268	
in.	79.3 × 68.9 × 99.6
mm	2015 × 1750 2530

HX308	
in.	106.8 × 75.2 × 99.6
mm	2715 × 1910 × 2530

HX368	
in.	115.4 × 83.9 × 99.6
mm	2930 × 2130 2530



## TYPE HX 268 - 50 and 60 Hz Motors

Plunger Diameter Code	Swept Volume	50 Hz Motor						60 Hz Motor						Connections	Check Valve
		Stroke Speed Max.	Motor Speed Max.	Flow Rate Max. L/h		P. Max Suction (bar)	Max. Pres. (bar) @ 75 kW	Stroke Speed Max.	Motor Speed Max.	Flow Rate Max. gph		P. Max Suction (psi)	Max. Pres. (bar) @ 100 hp		
				@ 10 bar	@ P. Max.					@ 145 psi	@ P. Max.				
Ø	cm <sup>3</sup>	spm	rpm					spm	rpm						
55	285.1	146	1440	6968	5582	70	252	140	1728	1770	1418	1015	3654	Inlet 4"-HH3, Outlet 3"-HH3	Ø50-NS
60	339.3	146	1440	8471	6982	70	212	140	1728	2152	1774	1015	3074	Inlet 4"-HH3, Outlet 3"-HH3	Ø50-NS
63	374.1	146	1440	9336	7766	64	192	140	1728	2372	1973	931	2784	Inlet 4"-HH3, Outlet 3"-HH3	Ø50-NS
65	398.2	146	1440	9941	8362	60	181	140	1728	2526	2124	874	2622	Inlet 4"-HH3, Outlet 3"-HH3	Ø50-NS
70	461.8	146	1440	11530	9952	52	155	140	1728	2928	2528	754	2248	Inlet 4"-HH3, Outlet 3"-HH3	Ø50-NS
75	530.1	146	1440	13236	11564	45	135	140	1728	3361	2938	657	1958	Inlet 4"-HH3, Outlet 3"-HH3	Ø50-NS

## TYPE HX 308 - 50 and 60 Hz Motors

Plunger Diameter Code	Swept Volume	50 Hz Motor						60 Hz Motor						Connections	Check Valve
		Stroke Speed Max.	Motor Speed Max.	Flow Rate Max. L/h		P. Max Suction (bar)	Max. Pres. (bar) @ 75 kW	Stroke Speed Max.	Motor Speed Max.	Flow Rate Max. gph		P. Max Suction (psi)	P. Max. (bar) @ 100 hp		
				@ 10 bar	@ P. Max.					@ 145 psi	@ P. Max.				
Ø	cm <sup>3</sup>	spm	rpm					spm	rpm						
80	603.2	146	1440	15058	13315	40	119	140	1728	3825	3383	577	1725	Inlet 5"-HH3, Outlet 4"-HH3	Ø70-NS
85	680.9	146	1440	17000	15175	35	105	140	1728	4319	3855	511	1522	Inlet 5"-HH3, Outlet 4"-HH3	Ø70-NS
90	763.4	146	1440	19059	17138	31	94	140	1728	4842	4354	456	1363	Inlet 5"-HH3, Outlet 4"-HH3	Ø70-NS
95	850.6	146	1440	21236	19224	28	84	140	1728	5395	4883	409	1218	Inlet 5"-HH3, Outlet 4"-HH3	Ø70-NS
100	942.5	146	1440	23530	21796	25	76	140	1728	5977	5537	369	1102	Inlet 5"-HH3, Outlet 4"-HH3	Ø70-NS
105	1039.1	146	1440	25942	24167	23	69	140	1728	6590	6139	335	1000	Inlet 5"-HH3, Outlet 4"-HH3	Ø70-NS

## TYPE HX 368 - 50 and 60 Hz Motors

Plunger Diameter Code	Swept Volume	50 Hz Motor						60 Hz Motor						Connections	Check Valve
		Stroke Speed Max.	Motor Speed Max.	Flow Rate Max. L/h		P. Max Suction (bar)	Max. Pres. (bar) @ 75 kW	Stroke Speed Max.	Motor Speed Max.	Flow Rate Max. gph		P. Max Suction (psi)	P. Max. (bar) @ 100 hp		
				@ 10 bar	@ P. Max.					@ 145 psi	@ P. Max.				
Ø	cm <sup>3</sup>	spm	rpm					spm	rpm						
110	1140.4	146	1440	28471	26585	21	63	140	1728	7233	6754	305	913	Inlet 6"-HH3, Outlet 5"-HH3	Ø110-NS
115	1246.4	146	1440	31118	29153	19	57	140	1728	7905	7406	279	826	Inlet 6"-HH3, Outlet 5"-HH3	Ø110-NS
120	1357.2	146	1440	33883	31894	18	53	140	1728	8608	8102	256	768	Inlet 6"-HH3, Outlet 5"-HH3	Ø110-NS
125	1472.6	146	1440	36765	34830	16	48	140	1728	9340	8848	236	696	Inlet 6"-HH3, Outlet 5"-HH3	Ø110-NS
130	1592.8	146	1440	39766	37761	15	45	140	1728	10102	9593	219	652	Inlet 6"-HH3, Outlet 5"-HH3	Ø110-NS
135	1717.7	146	1440	42883	40889	14	41	140	1728	10894	10387	203	594	Inlet 6"-HH3, Outlet 5"-HH3	Ø110-NS
140	1847.3	146	1440	46119	44047	13	39	140	1728	11716	11190	188	565	Inlet 6"-HH3, Outlet 5"-HH3	Ø110-NS
145	1981.6	146	1440	49472	47389	12	36	140	1728	12568	12039	176	522	Inlet 6"-HH3, Outlet 5"-HH3	Ø110-NS



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