

MAGSON MAS - size 4-6

Magnetically coupled centrifugal pumps
made of plastics PP / ETFE



More than just pumps



MAGSON MAS pumps – strong, safe, self-priming

Whenever you have to deliver highly aggressive fluids out of tanks from above, self-priming pumps should be your first choice. Using a special valveless technique, MAGSON MAS pumps feature an excellent priming capacity.

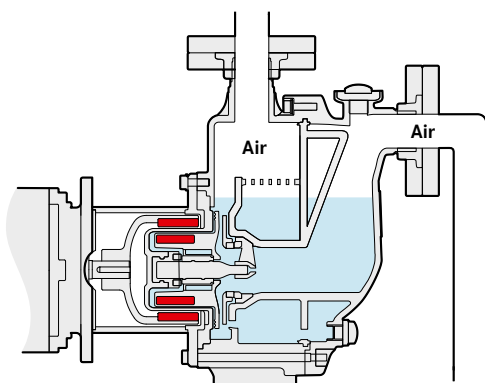


To prevent damage to the environment, most polluting and aggressive fluids are stored in double shell tanks. When delivering fluids out of such tanks, a non-selfpriming centrifugal pump would have to be attached at bottom level of the tank. As the risk of leakage there is very high, this would require a lot of safety precautions.

By far the safer and less expensive thing is to use a selfpriming magnetically coupled centrifugal pump. This pump also has to prime fluid, but due to its integrated priming tank takes in and delivers the fluid from the bottom up.

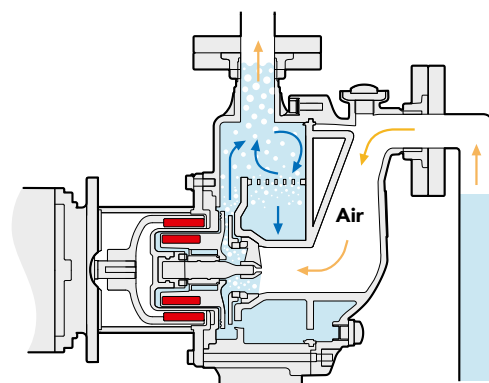
Being suitable to run dry for a limited period of time, MAGSON MAS pumps are also able to drain a tank down to the last drop.

Operating principle of MAGSON MAS pumps



Before starting the pump

The housing with integrated priming tank has several chambers. Before starting the MAGSON MAS pump for the first time, fill it up with fluid.

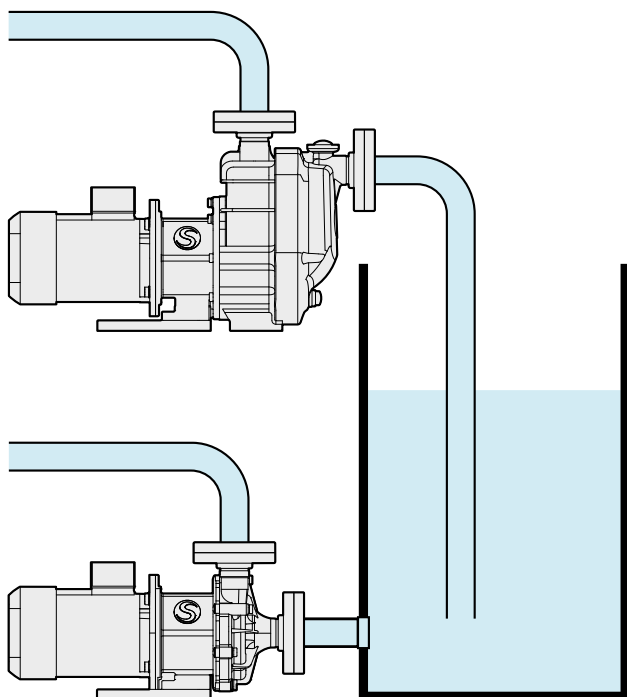


Priming

The impeller and priming chambers' design ensures that air is evacuated and a two-phase mixture (of fluid and air) is delivered without causing any damage. There is always enough fluid in the bottom chamber to supply both the impeller and the bearing with fluid.

→ Delivery flow → Air

Installation of an MAS pump in comparison to a non-self-priming MA pump



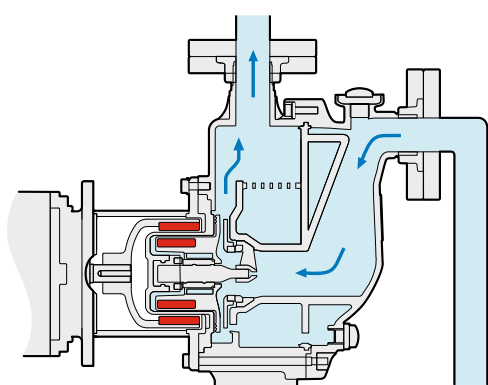
Advantages of MAS pumps are:

- excellent priming capacity of 5 m.WC in less than 2 minutes
- capacity range of up to 27 m.WC and 470l/min
- no additional priming tank required
- being suitable to run dry for some time, they can also be used for total drainage



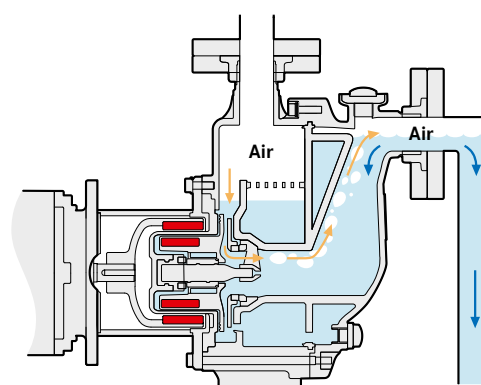
For all advantages of MAGSON pumps see page 9

MAGSON MAS pumps (above) prime fluid from the bottom up whereas non-self-priming MA pumps only prime horizontally.



Delivery

When delivering, MAGSON MAS pumps like MA pumps operate as magnetically coupled centrifugal pumps without shaft seal in an equally reliable and efficient way.



Stop

When the pump stops, the fluid in the suction line flows back into the tank. The special layout of the internal chambers makes sure that there is always enough residual fluid in the pump housing and the priming tank is not emptied totally. This special technique does not require any valves.

MAS type 4, 5 and 6



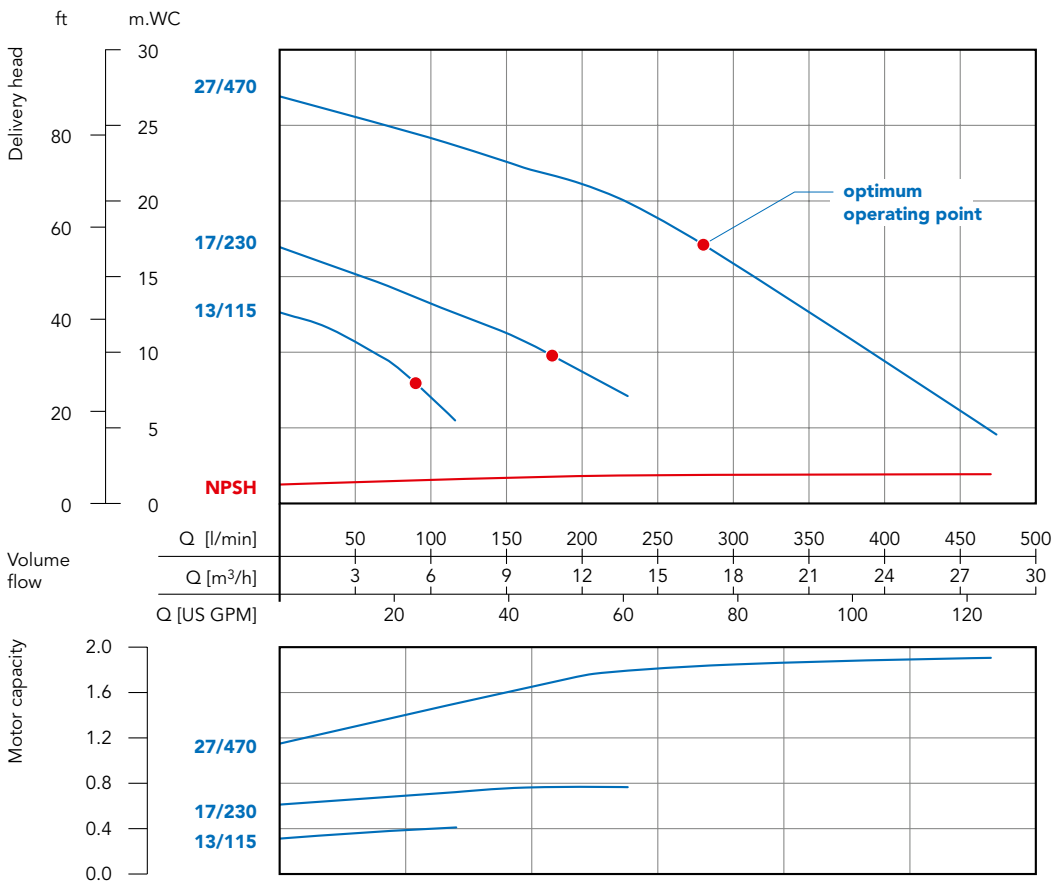
Fig.: MAS type 5

- self-priming
- without shaft seal
- streamlined housing made of PP or ETFE
- volume flow up to 470 l/min
- discharge head up to 27 m.WC
- Back pull-out design



For all advantages of MAGSON pumps see page 9.

Characteristic curves



Determined with water of 20 °C;
measured values ± 10%

Technical data MAS	type 4	type 5		type 6		
Type	13/115	17/230		27/470		
Material *	PP (glass-fibre reinforced) / ETFE (carbon-fibre reinforced)					
Max. delivery head in [m.WC] at 50 Hz	13	17		27		
Max. volume flow in [l/min] at 50 Hz	115	230		470		
Max. suction head for water of 20 °C in [m.WC]	5					
Max. density in [g/cm ³] at 50 Hz **	1.8	1	1.4	1.15	1.6	2
Motor capacity in [kW]	0.75	0.75	1.1	2.2	3	4
Current rating (400 V, 50 Hz) in [A]	1.56	1.56	2.25	2.0	5.6	7.3
Rated speed in [rpm] at 50 Hz / 60 Hz	3000 / 3600					
Suction port ***	DN 25 / G 1 1/2"	DN 40 / G 2 1/4"		DN 50 / G 2 3/4"		
Discharge port ***	DN 25 / G 1 1/2"	DN 40 / G 2 1/4"		DN 50 / G 2 3/4"		
Voltage in [V]	230 / 400 V three-phase AC					
Protection class	IP 55					
Max. flow velocity in [m/s]	suction side = 1 / discharge side = 3					
Max. temperature for PP / ETFE in [°C]	70 / 60					
Max. system pressure for PP / ETFE at 20 °C in [bar]	2	2.2		4	5.2 / 4.4	

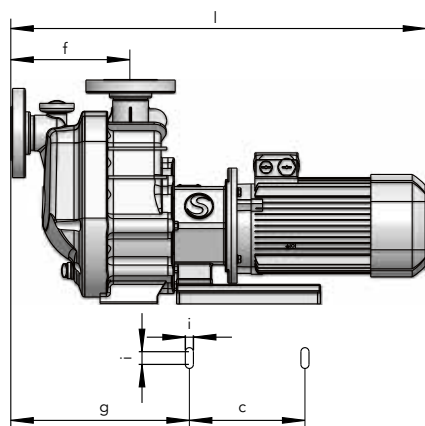
* Material used for housing, impeller unit and rear casing: (sheath of inner magnet made of PP without fibre reinforcement)

** approx. value at max. volume flow (higher density possible when flow rate is reduced)

Dimensions in [mm]	type 4	type 5		type 6		
Size	13/115	17/230		27/470		
Dimension a in [mm]	130	130		208	230	
Dimension c in [mm]	130	130		200	261	
Dimension d in [mm]	255	276		296		
Dimension e / E in [mm] ***	70 / 73	84 / 72		93 / 103		
Dimension f / F in [mm] ***	167 / 170	190 / 198		206 / 216		
Dimension g / G in [mm] ***	275 / 278	305 / 313		309 / 319		
Dimension i in [mm]	Ø 12	Ø 12		Ø 14×36		
Dimension J in [mm] ***	196	228		248		
Dimension h / H in [mm] ***	325 / 328	360 / 368		389 / 399		
Dimension K in [mm]	18	18		18	20	
Dimension l / L in [mm] ***	582 / 585	612 / 620	647 / 655	718 / 728	772 / 782	755 / 765
Dimension w in [mm]	160	160		260		

Motor dimensions may differ according to manufacture. *** Dimension with flanged execution / thread adapter

Flanged execution:



Execution with thread adapter:

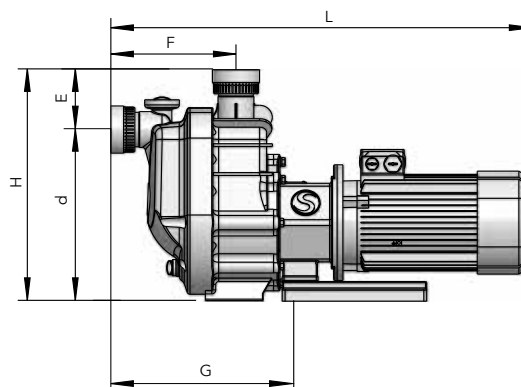
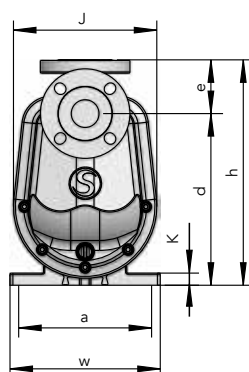


Fig.: MAS pump type 6 with motor of up to 2.2 kW



More than just pumps

Today the FLUX name is recognised around the globe as the trademark for top standards in pump technology. Everything started with the invention of the electric drum pump in 1950. Nowadays FLUX has an extensive range of products each of which can be customized. FLUX pumps are used for example in the chemical and pharmaceutical industries; in machinery and plant engineering as well as companies in electroplating, effluent treatment and the foodstuffs sector.

Whether single-product or system solution – FLUX quality is synonymous with a long service life, excellent economy and maximum safety.

In addition to the excellent product quality FLUX customers appreciate the superb level of expertise our staff has to offer as well as their genuine customer focus.

These days FLUX-GERÄTE GMBH supplies pumps to almost 100 countries around the globe.

FLUX-GERÄTE GMBH

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