

# MR SERIES

Low-shear sanitary pumps



*Watson-Marlow...Innovation in Full Flow*

# MasoSine MR Pumps: High-throughput sanitary pumps

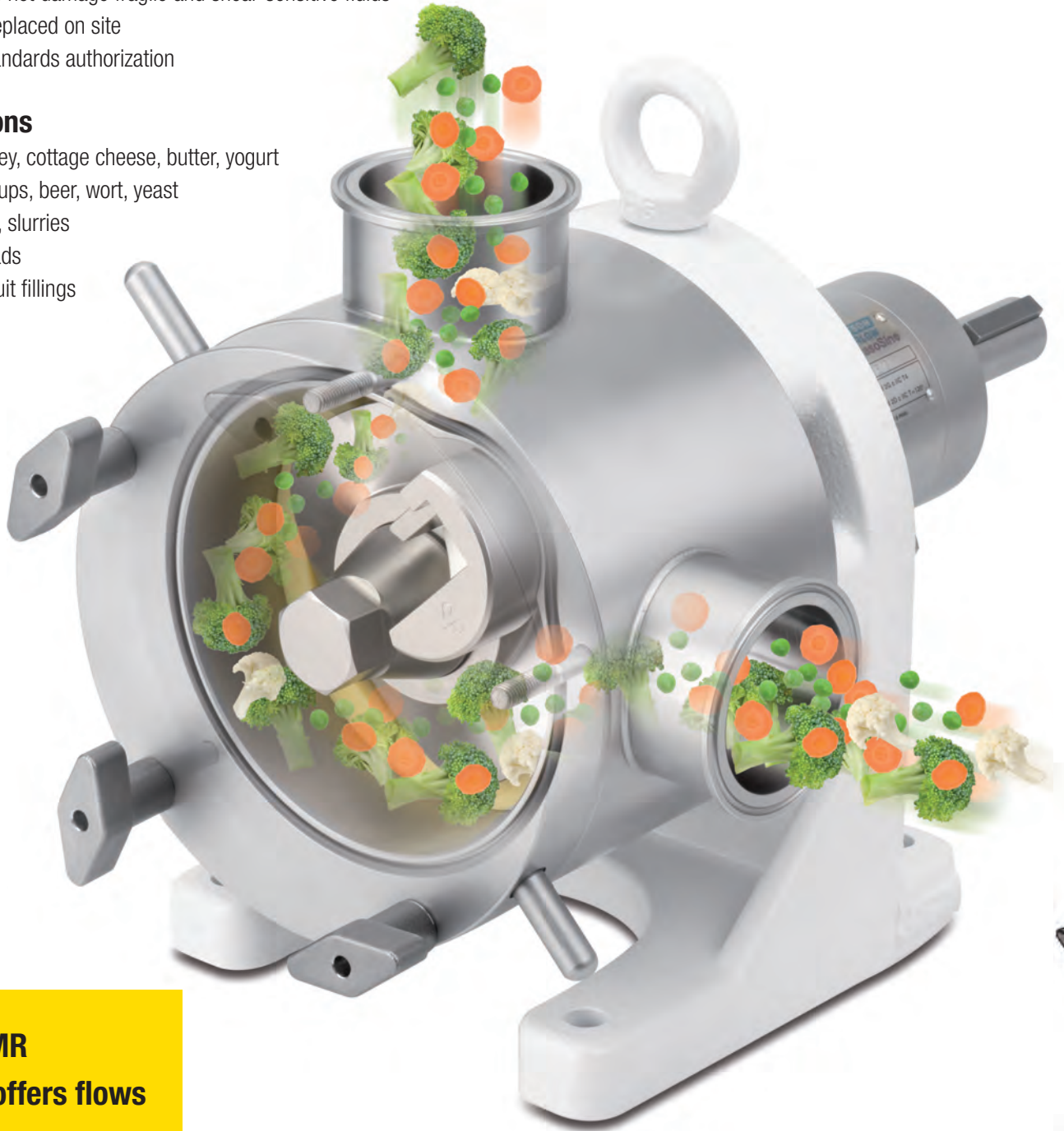
MasoSine's MR pump satisfies demanding processing requirements cost-effectively, using the unique MasoSine pumping principle.

## Design advantages

- Powerful suction even for viscous products
- Low pulsation for smooth, consistent flow
- Low-shear action does not damage fragile and shear-sensitive fluids
- Wearing parts easily replaced on site
- Holds 3-A Sanitary Standards authorization

## Typical applications

- Cheese, curds and whey, cottage cheese, butter, yogurt
- Fruit concentrates, syrups, beer, wort, yeast
- Batter, frosting, fillings, slurries
- Soups, stews, deli salads
- Chocolate, caramel, fruit fillings



**The MasoSine MR  
sanitary pump offers flows  
to 400 gpm and  
pressures to 150 psi.**

# MasoSine MR Pumps: Options and accessories

## High-temperature pumping

The MasoSine MR's heat-retaining (or heat-excluding) jacket allows the pump to reach the duty fluid temperature rapidly, and stay there. A heat-retaining front cover is available. This model is for high-throughput sanitary pumps up to 150 psi pressure.

## Seal systems

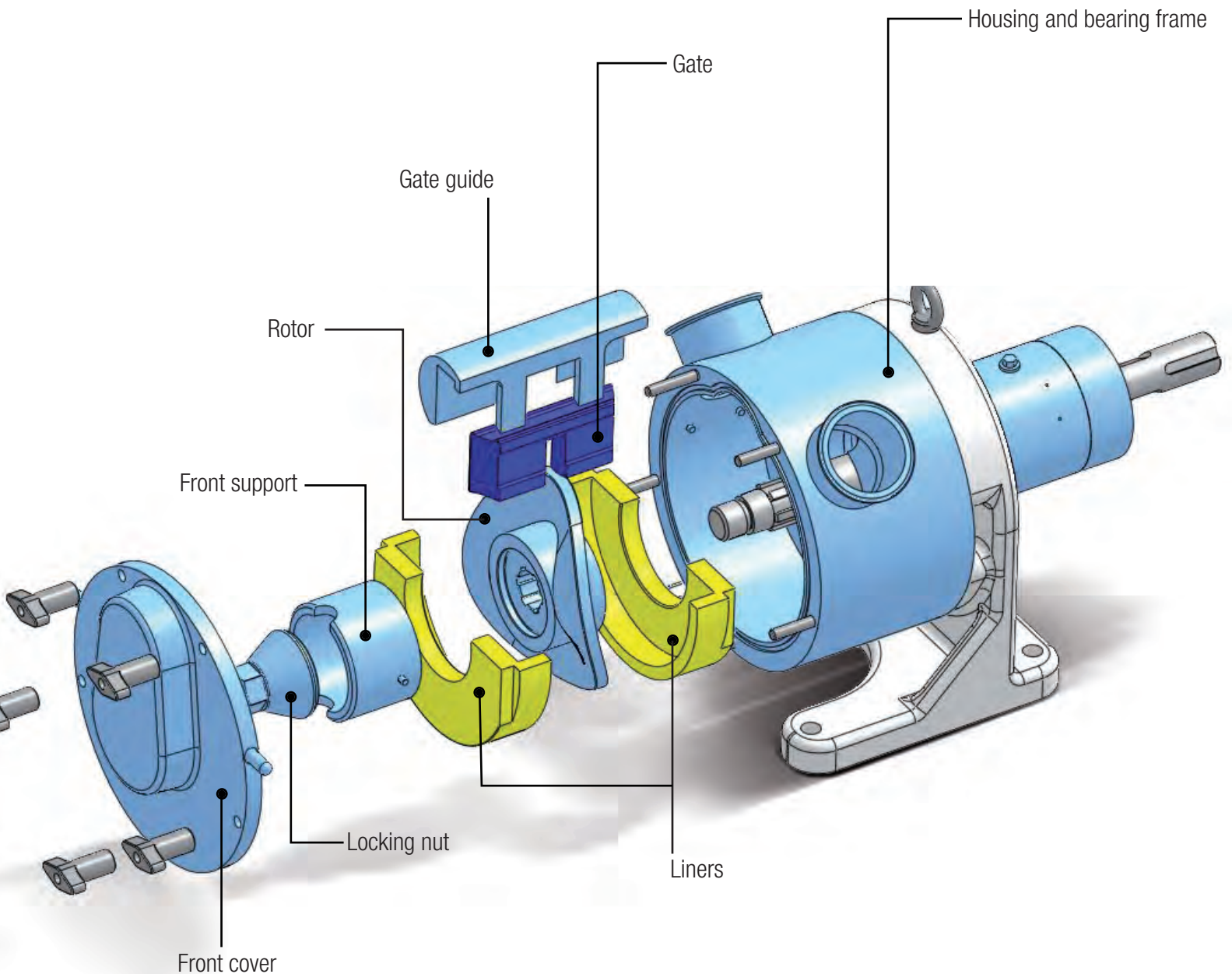
MasoSine pumps have one shaft and therefore one seal, unlike regular two-shaft rotary lobe pumps that require two seals. The standard seal is a triple lipseal design, which is ideal for most food and beverage applications. Mechanical seal systems are available on request for applications where CIP is a requirement.

## Ports

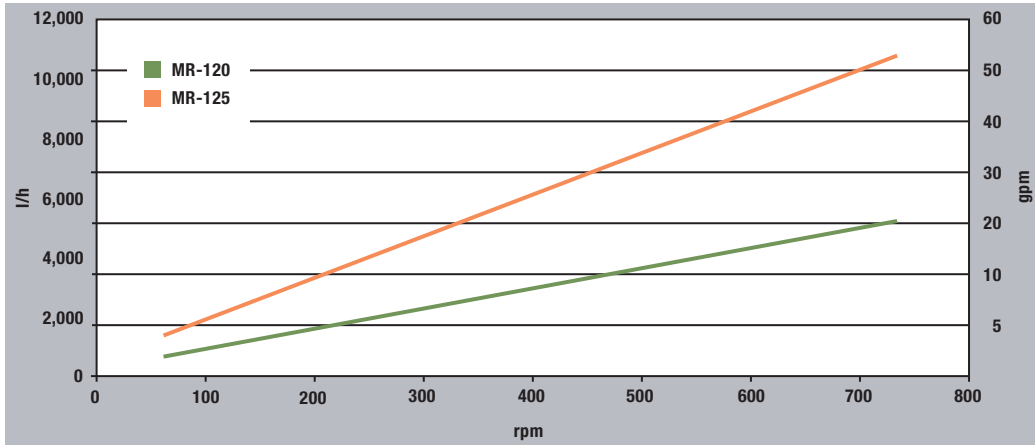
MasoSine pumps are supplied as standard with Tri-Clamp connections. I-Line, SMS and ANSI flanges are available on request. Customized ports can also be supplied.

## Port orientation

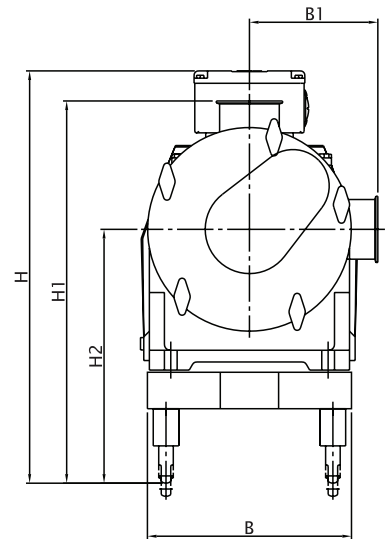
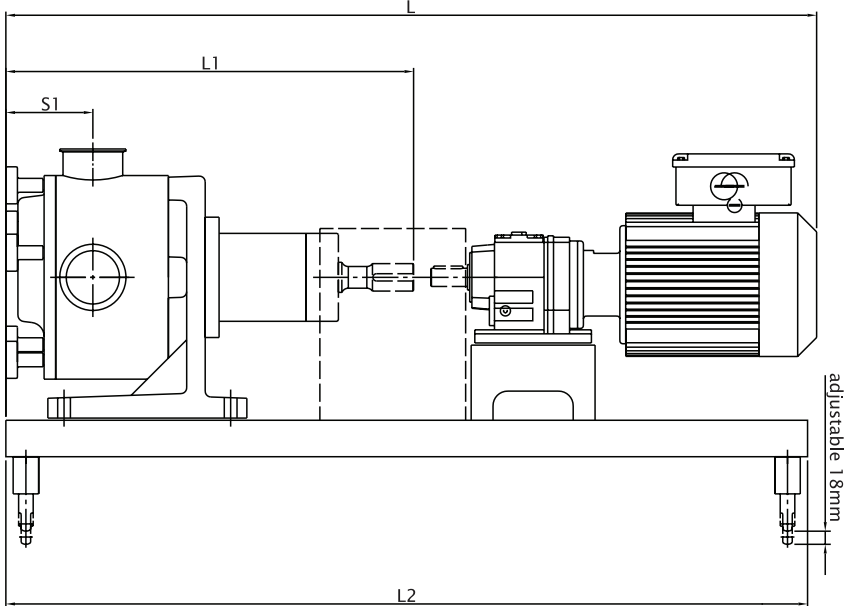
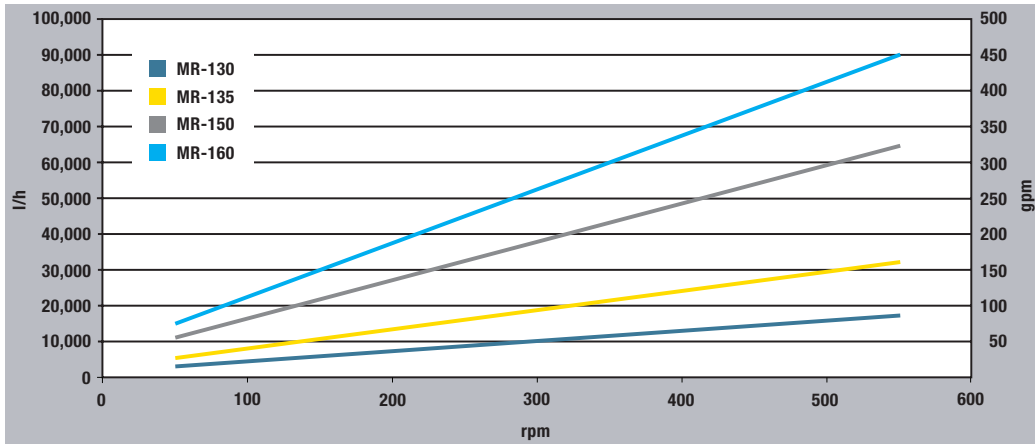
MasoSine pump ports are orientated 90 degrees apart. They may be fitted in 45-degree incremental positions to fit your exact piping requirements. MasoSine MR pumps may be operated clockwise or counter-clockwise.



# MasoSine MR Pumps: Performance tables and dimensions



These curves are theoretical. Actual performance may be affected by pressure and viscosity.



Model	L		L1	L2	S1	B	B1	H		H2	
	min.	max.						min.	max.	min.	max.
MR-120	34.1	39.1	15.8	31.5	3.9	8.3	4.7	14.8	20.1	14.7	10.0
MR-125	34.1	42.7	16.6	31.5	4.2	8.3	5.2	15.1	20.9	15.9	9.7
MR-130	39.8	48.0	20.0	43.3	4.8	11.0	6.3	19.5	19.5	19.5	13.2
MR-135	43.7	53.7	22.0	43.3	4.7	11.0	6.9	20.6	22.2	20.6	13.7
MR-150	51.2	64.8	26.1	51.2	5.1	15.0	8.1	23.5	29.1	23.5	15.4
MR-160	51.3	82.7	27.0	55.1	9.2	15.8	10.6	26.0	33.8	26.6	19.2

Model	flow per revolution	max. particle size	max. speed	inlet outlet*	shaft diameter	shaft height
MR-120	0.03 gal	0.5 in	800 rpm	2 in	25 mm (0.98 in)	114 mm (4.49 in)
MR-125	0.06 gal	0.75 in	800 rpm	2.5 in	25 mm (0.98 in)	146 mm (5.75 in)
MR-130	0.12 gal	1.0 in	600 rpm	3 in	38 mm (1.50 in)	181 mm (7.13 in)
MR-135	0.23 gal	1.25 in	600 rpm	3 in	38 mm (1.50 in)	193 mm (7.60 in)
MR-150	0.47 gal	2.0 in	600 rpm	4 in	50 mm (1.97 in)	235 mm (9.25 in)
MR-160	0.66 gal	2.25 in	600 rpm	6 in	65 mm (2.56 in)	235 mm (9.25 in)

\*Note: Sizes listed are stocked items. Additional port options available upon request.

# MasoSine MR Pumps: Applications



## Food products

The MR pump is well-established in the food industry for transferring fluids containing soft solids. Typical applications include chicken breasts, ready meals, soups, sauces, frozen foods, and meat. Loading filling machines is a MasoSine specialty.



## Beverages

The high suction capacity of the MR pump, over 80% vacuum, is valuable to the beverage industry. Orange juice concentrates with temperatures down to 14°F and other fruit juices are transferred without damaging the product.



## Dairy products

MasoSine MR pumps are ideal for transferring sensitive cheese curd, yogurt, cream cheese, cottage cheese and cream. They are also perfect for adding fruit preparations and handling butter.



## Cosmetics and pharmaceuticals

MR pumps are successful in the cosmetics industry for gentle transfer of shampoos, creams, pastes and lotions.



## Fine chemicals

MR pumps stand out from the competition for handling shear-sensitive suspensions, solutions, soap and detergents, as well as very viscous media such as silicones.



## Confectionery

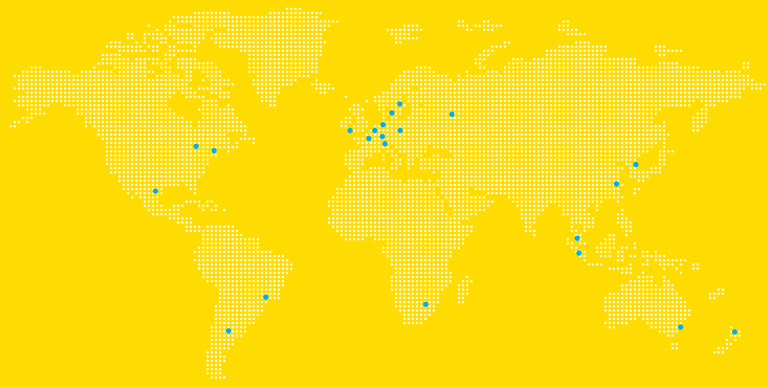
In the confectionery industry, MR pumps transfer chocolate glazes and fillings, glucose, fats and many other products. A pump-housing heater is available for this application area.



Watson-Marlow Pumps Group

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