Merlin Industrial Range

Mono® NOY
One Company, Unlimited Solutions
Introduction

The Merlin Industrial range has 20 models available in both cast iron and stainless steel construction.

This range of pumps has a considerable degree of flexibility achieved through the availability of free moulded and moulded to metal stators.

The Merlin pump is capable of handling applications up to 10 bar and capacities up to 60m³/h and is based on the popular and well proven pin joint design.

The Mono Pedigree

Mono have been at the forefront of progressing cavity pump design since 1935. With the experience gained from over 70 years we are able to reflect the varying needs of our extensive customer base worldwide. And an all round efficiency and quality which our customers demand, and to which we are committed.

A long term commitment which is underlined by our attainment of ISO 9001:2000.

The Merlin Industrial Pump Range has been developed out of this commitment.

With such a broad choice the Merlin range is the ideal selection for many different duties.

The normal operating characteristics associated with PC pumps are also applicable to the Mono Merlin pump. They are capable of self priming, can operate in either rotation and have a gentle, smooth pumping action which maintains the product integrity. This simple construction results in a pump range that is extremely reliable and easy to maintain.

They can be utilised to handle abrasive, shear sensitive and viscous materials, solids in suspension and air/liquid/solids mixtures.
Performance Data

Cast Iron and Stainless Steel Models

NOTES:

1. Performance Data is typical only on water at 20°C.
2. All curves extend to ZERO.
3. Ref M in pump models above indicates moulded to metal stators.
# Pump Performance

## Cast Iron and Stainless Steel Models

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<td>m³/h ABS Power kW</td>
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<td>AG1</td>
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## NOTES

1. The tabulated performance data is based upon handling clean water at 20°C using a natural rubber stator grade A.

2. ABS kW = Absorbed power on pump operation.

3. For guidance in selecting a pump for use with other fluids of varying abrasion and viscosity refer to Mono Pumps Ltd., Audenshaw, Manchester.

4. For F & G Builds use H performance details under Model No.
# Mono Merlin Pump Coding

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<tr>
<th>FEATURES</th>
<th>DESCRIPTION</th>
<th>BASIC PUMP CODING</th>
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**Example of Typical Coding As Seen on Pump Nameplate**

C A C 1 2 M 1 R 3

For options not detailed above please refer to Mono Pumps Ltd., Audenshaw, Manchester.
# Bareshaft Pump Dimensions

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NOTES:
1. All dimensions are in millimetres unless otherwise stated and are for guidance only. For full certified drawings refer to Mono Pumps Ltd.
2. On models AA AB AC AE and AF cast iron flanges are to BS EN 1092 25/11 and stainless steel flanges are to BS EN 1092 25/1. On models AG only cast iron flanges are to BS 4505 16/11 and stainless steel flanges are to BS EN 1092 16/1.
3. Shaft diameters are to BS 4506: 1970 and keyways to BS 4234 Part No. 1/ISO R773.
4. SOG refers to pump suction at the gland or drive end of the pump. DOG refers to pump delivery at the gland or drive end of the pump.
5. E & E1 refer to hold down bolt sizes.
Applications

Liquid PVC
A CAE12H193 pump installed on a tile production line to pump liquid PVC backing at 300 kg/h from storage vessels to the coating heads. The low speed Merlin pump has a gentle conveying action to ensure the integrity of the shear sensitive PVC coating and enable the liquid PVC to be delivered to the coating heads at a constant flow rate, crucial to obtaining an even coating.

Chemicals
A manufacturer of industrial hygiene cleaning products is using a Merlin pump for chemical transfer and tanker loading duties. As some chemicals can have a viscosity as high as 2,000 cP and be shear sensitive, the progressing cavity pumping principle produces a low shear pumping action to maintain product integrity and prevent foaming.

Raw Sewage
The combination of a Merlin pump and Mono macerator provides a highly effective pumping and macerating system. This unit is installed in a rural outhouse to transfer sewage at a capacity of 15m³/h to the main sewage system. Situated above a well that collects raw sewage from local cottages, the suction of the Merlin pump lifts the sewage from the well and into the macerating chamber. The positive displacement action offers the benefits of blockage-free operation and smooth transfer of the sewage through small bore pipes into the main sewer.

Cattle Slurry
This CAB22H1R3 pump is part of a system to distribute the liquid from cattle slurry over farm fields. Handling a capacity of 3000 l/h, the pump is connected to pulser devices situated in various fields up to 1000m away. The pulser is fitted with a bladder accumulator, which discharges the liquid when the pressure reaches 7½ bar.
Service and Technology

Applications

Mono progressing cavity pumps are used throughout the many sectors of industry.

Indicated below are just a few of the many fluids handled.

1. The Paper and Ceramics Industry
   clay slurry, titanium dioxide, bentonite slurry, latex, coating, starch, ceramic slip.

2. The Chemical Industry
   phosphoric acid, alum, caustic solutions, petroleum spirit, diesel fuel oil, ferric chloride, ethylene glycol.

3. The Food Industry
   molasses, sauces, cooking oil, whey, jellies, fruit juices, yoghurt, pet food.

4. Mining
   waste water, grouting mixtures, cavity filling mixes, coal slurries, nuisance water.

5. Sewage & Waste Water Treatment
   polyelectrolyte, lime, acids, carbon slurries, chlorine, digested sewage sludge, filter pressed sludges, aluminium sulphate.

Total Quality - Guaranteed

It is the policy of Mono Pumps Ltd. to achieve Total Quality performance in every aspect of customer service.

This commitment to quality, which has been recognised by our attainment of ISO 9001:2000 of Lloyd's Register of Quality Assurance, can be seen in the high standards of pre and post sales support which we offer.

We use the very latest technology, including computer based flexible manufacturing systems, computerised bar stores and information systems.

These control systems are supported by advanced manufacturing facilities, like our comprehensive stator manufacturing plant, to ensure that we always produce pumps and parts to a consistently high standard.

And by using only genuine Mono spares you automatically reduce the risk of pump breakdown and preserve the full Mono guarantee. Mono spares result in lower fitting costs, greater efficiency, reduced running costs and longer pump life. Not to mention guaranteed quality and value for money.

What's more, genuine Mono spare parts are available 24 hours a day, 365 days a year thanks to our international distributor network. And we also offer a full back-up service to provide technical advice and support.

As you can see, the Mono service is comprehensive, dedicated and totally committed to giving the customer the quality they require.
Published information other than that marked CERTIFIED does not extend any warranty or representation, expressed or implied, regarding these products. Any such warranties or other terms and conditions of sales and products shall be in accordance with Mono Pumps Limited standard terms and conditions of sale, available on request.

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