

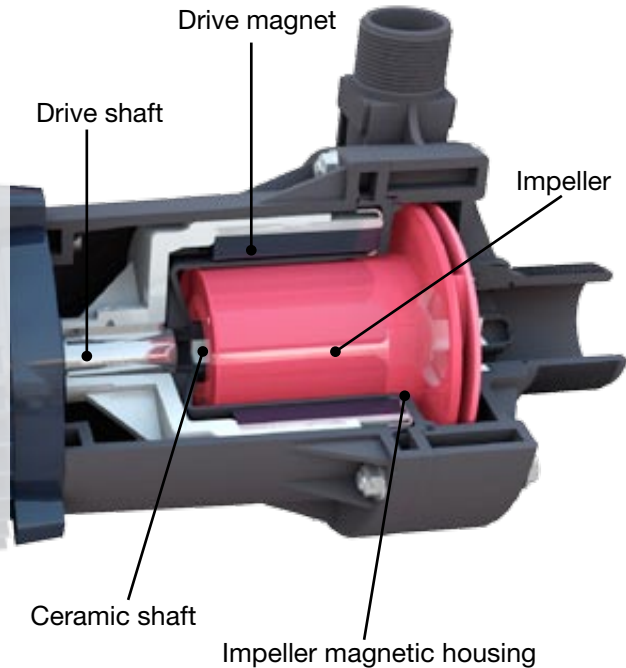
# *MDR*

*Seal-less Centrifugal Pumps*



## Design features

- No shaft seal
- High chemical resistance
- Liquid not in contact with any metal
- Wide range of application fields
- Compact design
- Easy maintenance
- Standard electric motors (IEC)



## Operating principle

The drive magnet attached to the drive shaft transfers its torque to the impeller magnet. The impeller then rotates around its ceramic shaft on the impeller body – without any physical contact between the drive shaft and the pump body.

No shaft seal to leak, wear or replace!

## Applications

Johnson Pump MDR magnetic drive centrifugal pumps are seal-less and chemically resistant, making them ideal for transporting aggressive, hazardous and valuable liquids.

Surface treatment, water purification and cleaning, photo development, battery production, paper industry, CIP and soap production are just a few of the application areas where MDR excels.

## Density

Two different types of impellers are available for maximum density

- -1V for maximum 1.2 kg/dm<sup>3</sup>
- -1VD for maximum 1.8 kg/dm<sup>3</sup>

## Motors

The pumps are delivered with three-phase standard foot-mounted motors with small IEC-flanges. For the smaller pumps–MDR45 and MDR75–single phase motors can be provided.

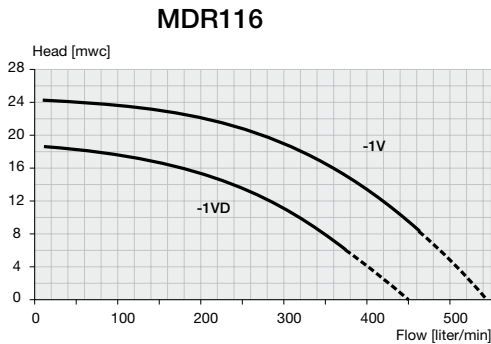
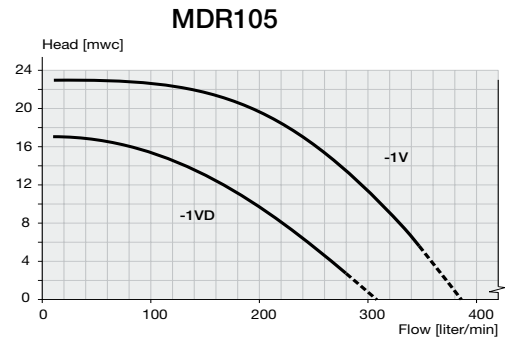
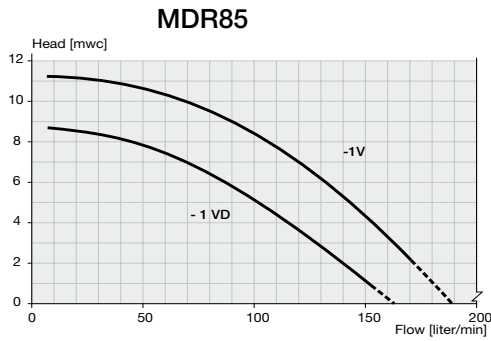
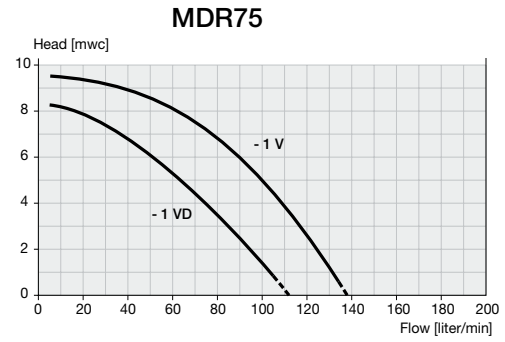
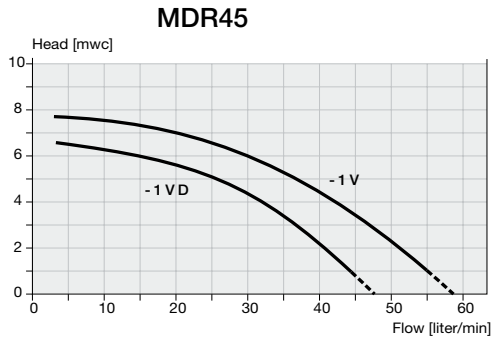
The flange between the motor and pump body is made of PP for improved chemical resistance.

## Materials

- All wetted parts are made of non-metallic materials.
- Pump body and magnetic housing are moulded in the plastic materials PP or PVDF.
  - PP (P3) = Fiberglass reinforced Polypropylene
  - PVDF (P2) = Carbon Filled Polyvinylidene Flouride
- Impeller magnets are fully encapsulated in the plastic impeller of PP or PVDF – *for maximum chemical resistance*
- Shaft end and thrust washers are made of high quality ceramic, impeller bearings of Rulon – *for optimal service life*
- Viton O-ring between pump body and magnet housing – *resistant to most chemicals*
- Other O-ring materials on request



# Capacity curves



Based on water at 20°C, 50Hz, 2800rpm

Maximum density of pumped media:

Impeller -1V = 1.2 kg/dm<sup>3</sup>

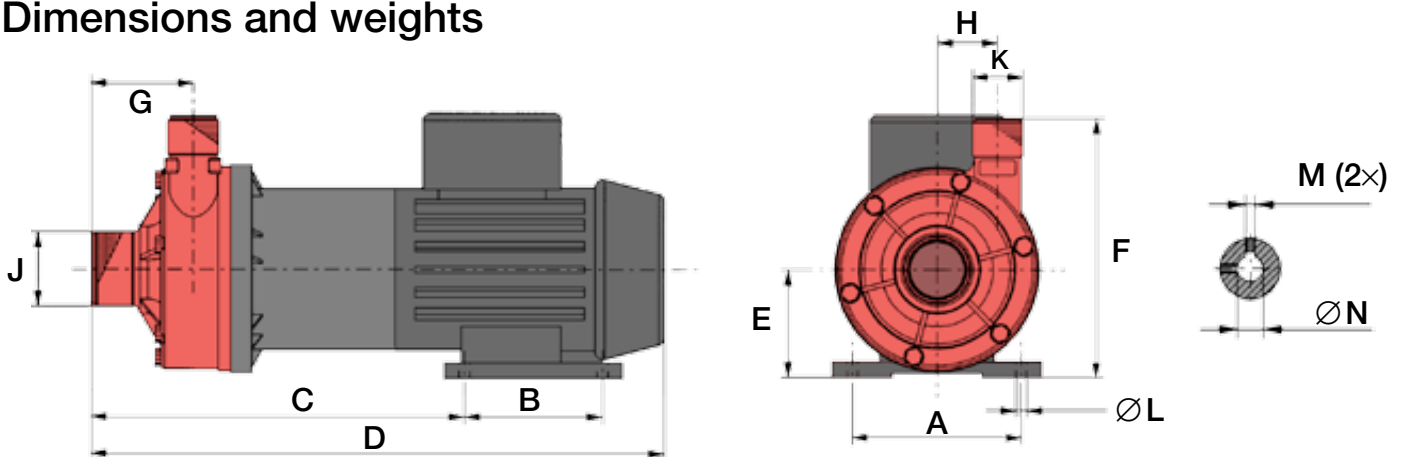
Impeller -1VD = 1.8 kg/dm<sup>3</sup>

Maximum temperature:

PP = +85°C

PVDF = +100°C

# Dimensions and weights



	A	B	C	D	E	F	G	H	J male	K male	L Ø	M	N	Weight, kg	
														Compl pump	Head kit
MDR45P-1V/-VD	90	71	166	272	56	130	44	35	BSP1"	BSP1/2"	5.8	M6	9	4.5	1.2
MDR75P-1V/-VD	100	80	191.5	322	63	141	60	37	BSP1.1/4"	BSP3/4"	7	M5	11	5.8	1.5
MDR85P-1V/-VD	112	90	242	373	71	171	66	40	BSP1.1/2"	BSP1"	7	M5	14	10.3	2.9
MDR105P-1V/-VD	140	100	319.5	490	90	222	93	58.5	BSP2"	BSP1.1/4"	10	M8	24	23.6	7.2
MDR116P-1V/-VD	140	125	319.5	512	90	222	93	58.5	BSP2"	BSP1.1/4"	10	M8	24	26.6	7.2

Dimensions in mm



## Johnson Pump Group

### Parent Company

#### SWEDEN

Johnson Pump AB  
Tel. +46 (0)19 21 83 00  
Fax +46 (0)19 27 23 30

### National Sales Organisations

#### AUSTRALIA

Johnson Pump (Australia) Pty. Ltd.  
Tel. +61 (0)7 3899 9933  
Fax +61 (0)7 3899 8574

#### BELGIUM

Johnson Pump N.V./S.A.  
Belgium:  
Tel. +32 (0)2 422 15 50  
Fax +32 (0)2 422 15 59

#### DENMARK

Johnson Pumper A/S  
Tel. +45 43 52 24 00  
Fax +45 43 52 15 77

#### FINLAND

Johnson Pump Oy  
Tel. +358 (0)9 348 3800  
Fax +358 (0)9 348 38495

#### FRANCE

Johnson Pompes  
Tel. +33 (0)1 39 20 50 00  
Fax +33 (0)1 39 56 54 22

#### GERMANY

Johnson Pumpen GmbH  
Tel. +49 (0)5731 480 80  
Fax +49 (0)5731 414 00

#### ITALY

Johnson Pump Italiana S.r.l.  
Tel. +39 039 604 14 63  
Fax +39 039 604 90 97

#### NETHERLANDS

Johnson Pump B.V.  
Tel. +31 (0)592 37 67 67  
Fax +31 (0)592 37 67 06

#### Johnson Pump Horticulture

Tel. +31 (0)174 51 84 10  
Fax +31 (0)174 51 84 44

#### NORWAY

Johnson Pump A/S  
Tel. +47 22 74 08 40  
Fax +47 22 22 70 30

#### SPAIN

Johnson Pump España, S.L.  
Tel. +34 972 58 08 01  
Fax +34 972 58 08 03  
Sales Office:  
Madrid: Tel. +34 91 888 79 22

#### SWEDEN

Johnson Pump Svenska  
Tel. +46 (0)19 21 83 70  
Fax +46 (0)19 27 23 18

#### SWITZERLAND

Johnson Pumpen AG  
Tel. +41 (0)43 477 71 22  
Fax +41 (0)43 477 71 20

#### UNITED KINGDOM

JP Pumps Ltd.  
Tel. +44 (0)1293 55 34 95  
Fax +44 (0)1293 52 46 35  
Northern Regional Office:  
Bradford: Tel. +44 (0)1274 74 22 47  
Fax +44 (0)1274 74 22 28

### Business Units

#### BELGIUM

Johnson Pump Brussels N.V.  
Tel. +32 (0)53 60 27 15  
Fax +32 (0)53 60 27 01

#### INDIA

Johnson Pump (India) Ltd.  
Tel. +91 (0)79 2287 03 11  
Fax +91 (0)79 2287 25 22

#### NETHERLANDS

Johnson Pump Water B.V.  
Tel. +31 (0)592 37 67 67  
Fax +31 (0)592 37 67 60

#### SWEDEN

Johnson Pump AB  
Tel. +46 (0)19 21 83 00  
Fax +46 (0)19 27 23 72

#### USA

Johnson Pumps of America, Inc.  
Tel. +1 847 671 7867  
Fax +1 847 671 7909



*In addition to our own companies we are represented by independent distributors in over 50 countries worldwide.*

[www.johnson-pump.com](http://www.johnson-pump.com)

  
**JOHNSON PUMP**  
Johnson Pump

