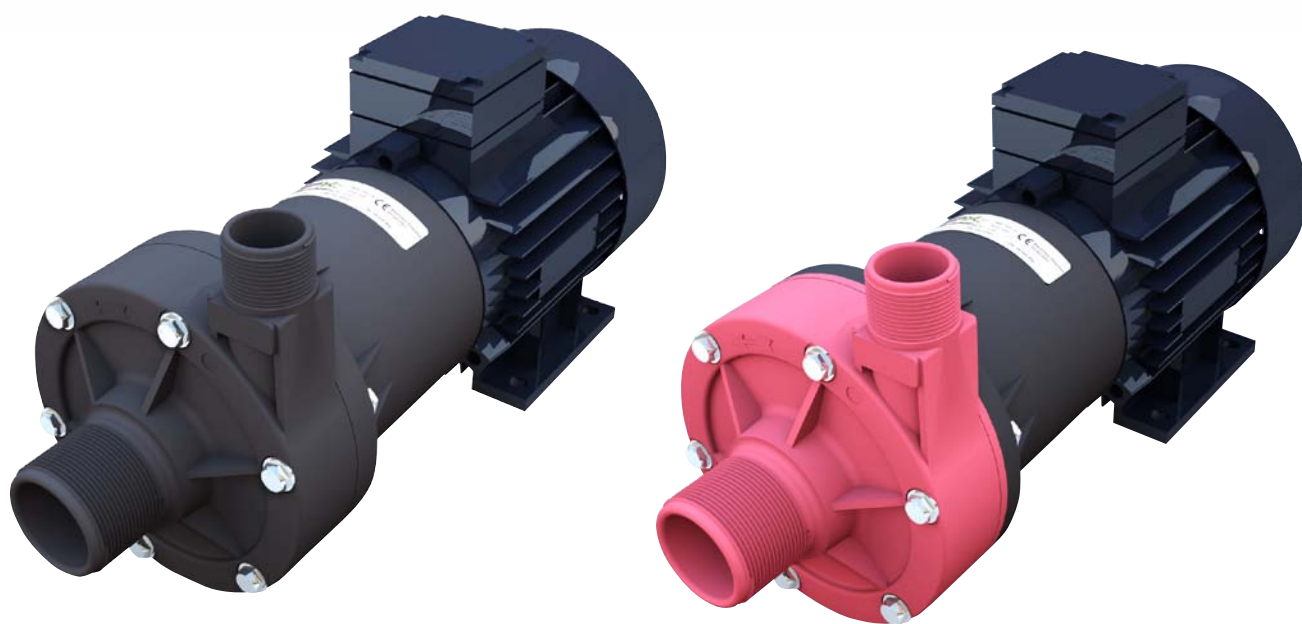


MDR

Seal-less Centrifugal Pumps



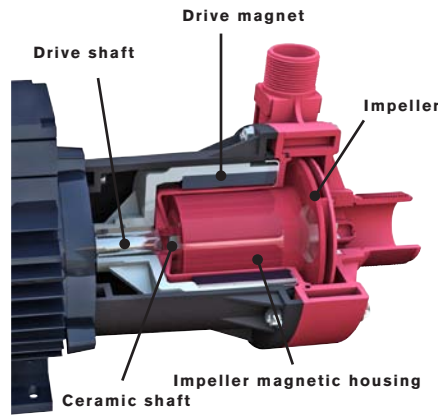
CE

MDR – Seal-less Centrifugal Pumps

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

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)

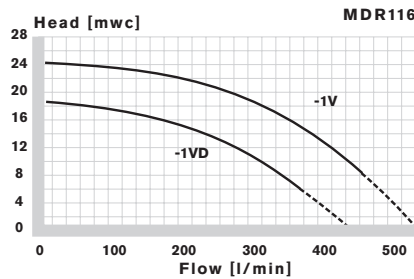
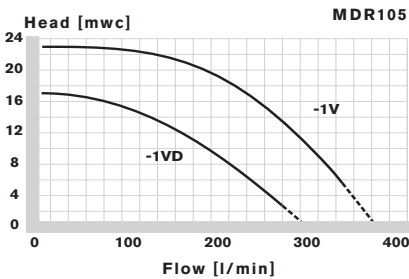
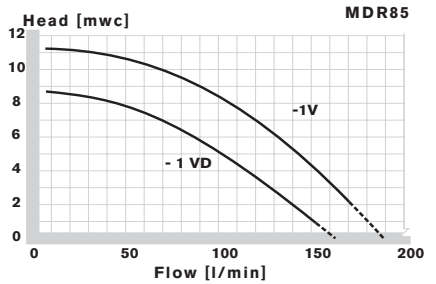
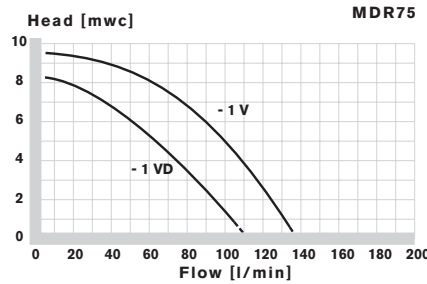
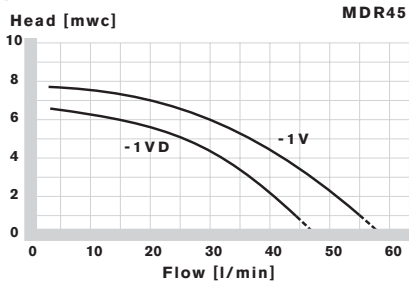


Operating principle

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.

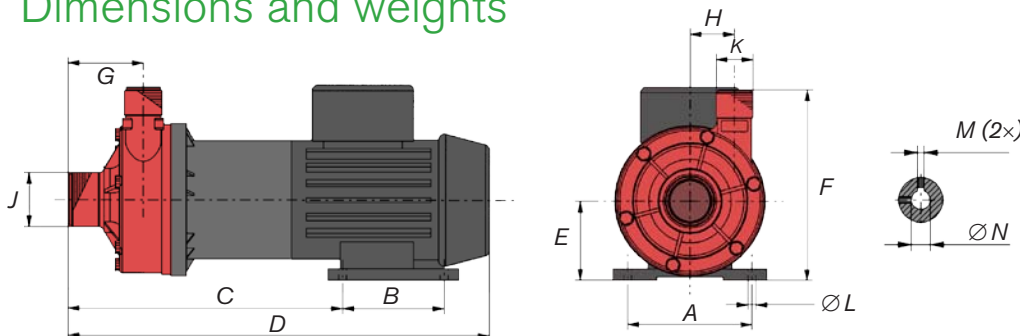
No shaft seal to leak, wear or replace!

Capacity curves



Based on water at 20°C, 50 Hz, 2800rpm
 Maximum density of pumped media:
 Impeller -1V = 1.2 kg/dm³
 Impeller -1VD = 1.8 kg/dm³
 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

Density

Two different types of impellers are available for maximum density

- 1V for maximum 1.2kg/dm³
- 1VD for maximum 1.8kg/dm³

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

Typical product applications

SURFACE TREATMENT

WATER PURIFICATION AND CLEANING

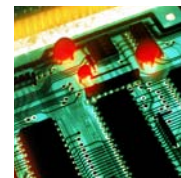
PHOTO DEVELOPMENT

BATTERY PRODUCTION

PAPER INDUSTRY

CIP

SOAP PRODUCTION



PUMP TYPE	CONNECTION R OUTSIDE		MATERIAL					SPEC. WEIGHT MAX	MOTOR			HEAD MAX	FLOW MAX	TEMP MAX
			PUMP BODY, IMPELLER, MAGNETIC HOUSING		SHAFT	BEARING	O-RING							
	INLET	OUTLET	PP	PVDF	CERAMIC	RULON®	VITON®	KG/DM ³	KW	RPM	PHASE	M	L/MIN	°C
MDR45P3-1V	1"	½"	•		•	•	•	1.2	0.12	2800	1 3	7.5	55	85
MDR45P2-1V	1"	½"		•	•	•	•	1.2	0.12	2800	1 3	7.5	55	100
MDR45P3-1VD	1"	½"	•		•	•	•	1.8	0.12	2800	1 3	6.5	45	85
MDR45P2-1VD	1"	½"		•	•	•	•	1.8	0.12	2800	1 3	6.5	45	100
MDR75P3-1V	1.¼"	¾"	•		•	•	•	1.2	0.25	2800	1 3	9.5	135	85
MDR75P2-1V	1.¼"	¾"		•	•	•	•	1.2	0.25	2800	1 3	9.5	135	100
MDR75P3-1VD	1.¼"	¾"	•		•	•	•	1.8	0.25	2800	1 3	8.0	80	85
MDR75P2-1VD	1.¼"	¾"		•	•	•	•	1.8	0.25	2800	1 3	8.0	80	100
MDR85P3-1V MDR85P2-1V	1.½"	1"	•	•	•	•	•	1.2	0.55	2800	3	11.0	175	85 100
MDR85P3-1VD MDR85P2-1VD	1.½"	1"	•	•	•	•	•	1.8	0.55	2800	3	8.5	160	85 100
MDR105P3-1V MDR105P2-1V	2"	1.¼"	•	•	•	•	•	1.2	1.5	2800	3	22.5	350	85 100
MDR105P3-1VD MDR105P2-1VD	2"	1.¼"	•	•	•	•	•	1.8	1.5	2800	3	17.0	250	85 100
MDR116P3-1V MDR116P2-1V	2"	1.¼"	•	•	•	•	•	1.2	2.2	2800	3	23.5	500	85 100
MDR116P3-1VD MDR116P2-1VD	2"	1.¼"	•	•	•	•	•	1.8	2.2	2800	3	18.0	360	85 100

MDR



Seal-less Centrifugal Pumps

Your local contact:

http://www.johnson-pump.com/JPIndustry/JohnsonPump_distributors.htm

SPX FLOW TECHNOLOGY ASSEN B.V.

Dr. A.F. Philipsweg 51, 9403 AD Assen

P.O. Box 9, 9400 AA Assen, THE NETHERLANDS

P: +31 (0)592 37 67 67

F: +31 (0)592 37 67 60

E: johnson-pump.nl@spx.com

SPX reserves the right to incorporate our latest design and material changes without notice or obligation.

Design features, materials of construction and dimensional data, as described in this bulletin, are provided for your information only and should not be relied upon unless confirmed in writing. Please contact your local sales representative for product availability in your region. For more information visit www.spx.com and www.johnson-pump.com.

The green ">" is a trademark of SPX Corporation, Inc..

ISSUED 11/2012 JP-MDR-EN

COPYRIGHT © 2009, 2012 SPX Corporation