

IWAKI
MAGNETIC
DRIVE
PUMPS

MDW



Patent

JAPAN / U.S.A. / EU / CHINA / TAIWAN

Solutions for chemical handling applications

Max. flow capacity of 5,000 L/min and max. discharge head of 98m. The world's largest class fluoroplastic magnetic drive pump.

The MDW series are the largest class fluoroplastic magnetic drive pumps in the world, offering high efficiency and durability for chemical process applications. Using larger motors for even higher output, the MDW series opens up performance potential in previously unexplored areas.

Application example

- Chemical transfer between supply tanks and through chemical process equipment.
- Chemical recirculation for filtration and heat exchange applications.
- Scrubber liquid recirculation.
- Replacements for conventional sealed pumps.



MDW100



High discharge capacity, High head and high efficiency

The heavy-duty MDW is capable of a maximum discharge capacity of 300m³/hr and max. discharge head of 98m, enabling applications in previously unexplored areas with a wide range of liquid specific gravities.

Highly chemically resistant

Fluoroplastic and fine ceramic wetted parts offer high resistance to virtually every industrial chemical, irrespective of concentration.

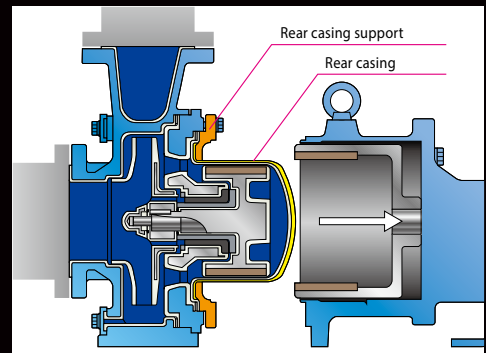
Robust structure

Use of the high strength ductile cast iron external armour is mandatory for heavy duty chemical process applications. High casing pressure resistance is achieved with a unique rear casing design preventing stress concentration and incorporating a triple-layer structure (PAT). A special metal shaft is used on the MDW to withstand high radial forces and allow continuous extended operation even under harsh service conditions.



Back pullout system

The back pullout system allows easy maintenance and inspection without removing pipework. Integrated components and a sealed rear casing support structure enable motor removal safely without chemical leakage.

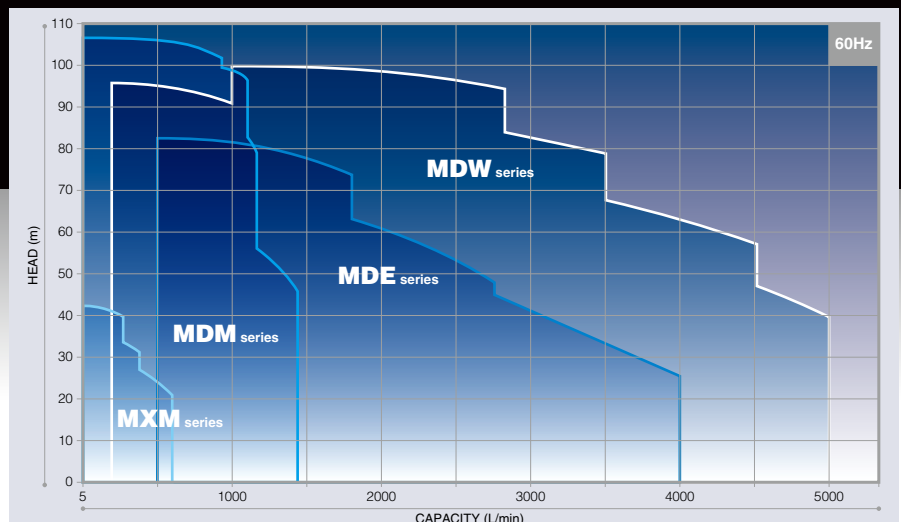


ISO compliant

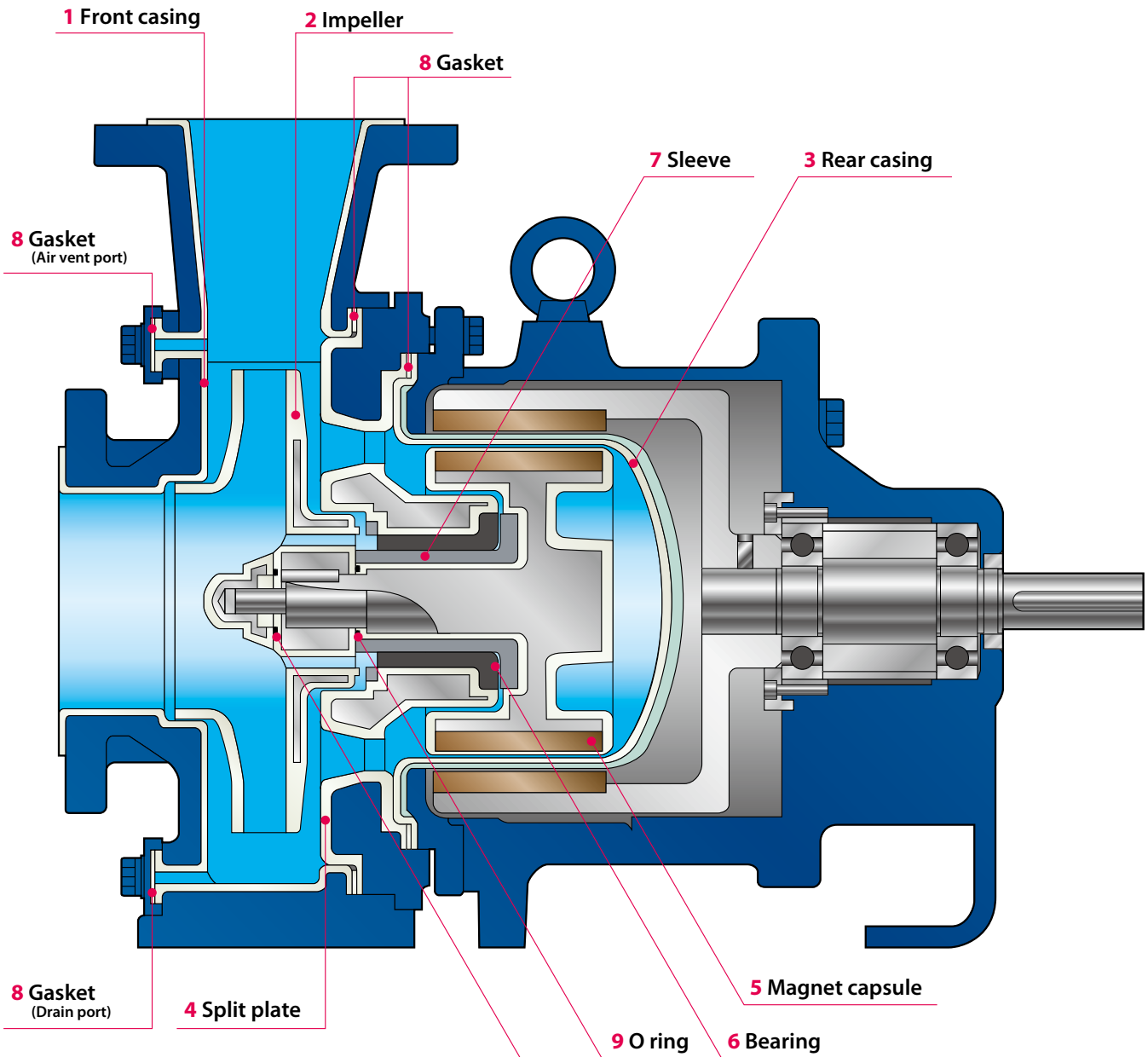
The MDW is dimensionally compliant with the international standard (ISO2858, 3661) and is interchangeable with conventional sealed centrifugal pumps.

Performance curves

(Flow range of IWAKI Magnetic drive process pumps)



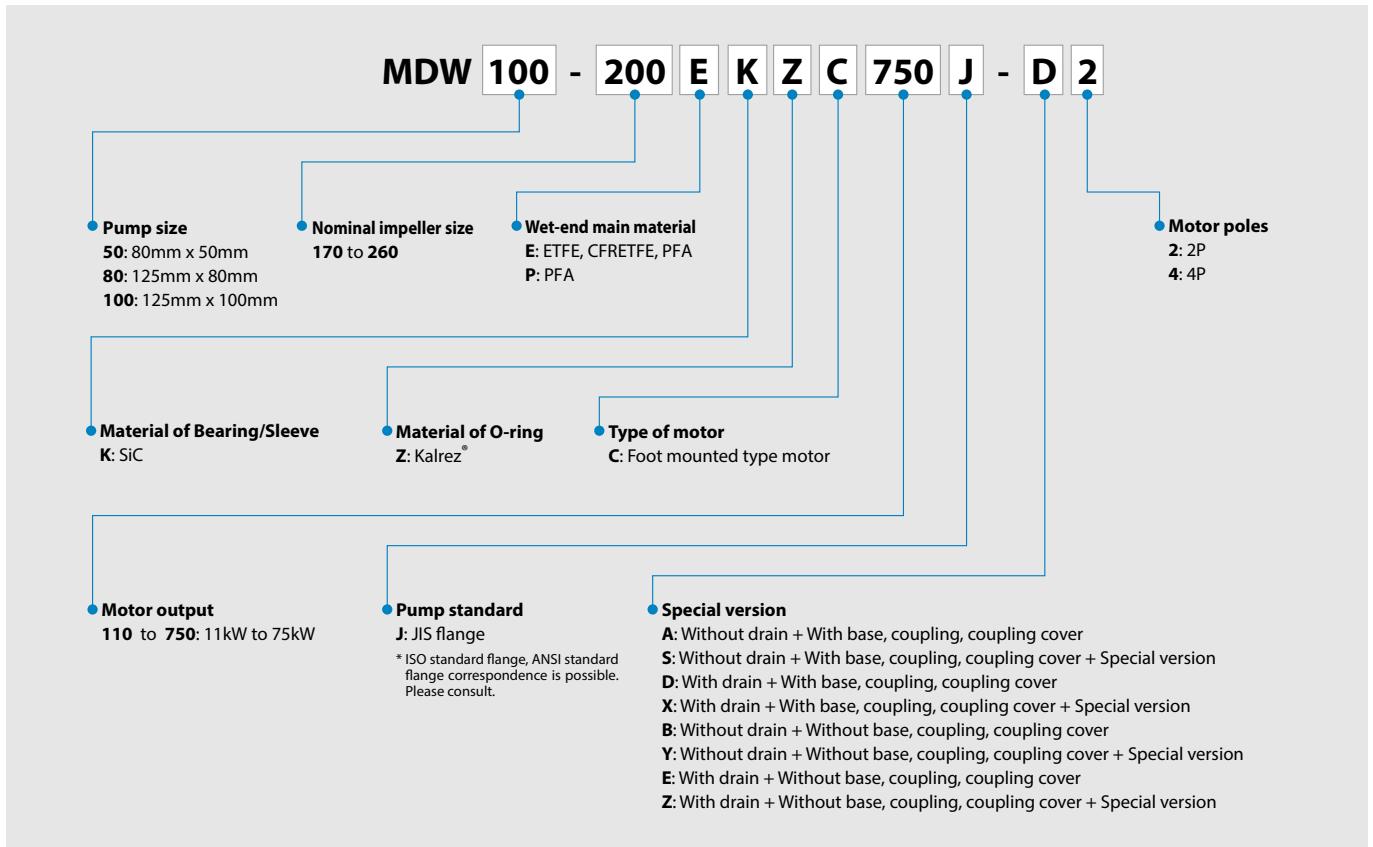
Construction



Wet-end materials

Part number	Part name	MDW50	MDW80, 100
1	Front casing	PFA	ETFE
2	Impeller	PFA	CFRETFE
3	Rear casing		PFA
4	Split plate		PFA
5	Magnet capsule		PFA
6	Bearing		SiC
7	Sleeve		SiC
8	Gasket		PTFE
9	O-ring		Kalrez®

Pump identification



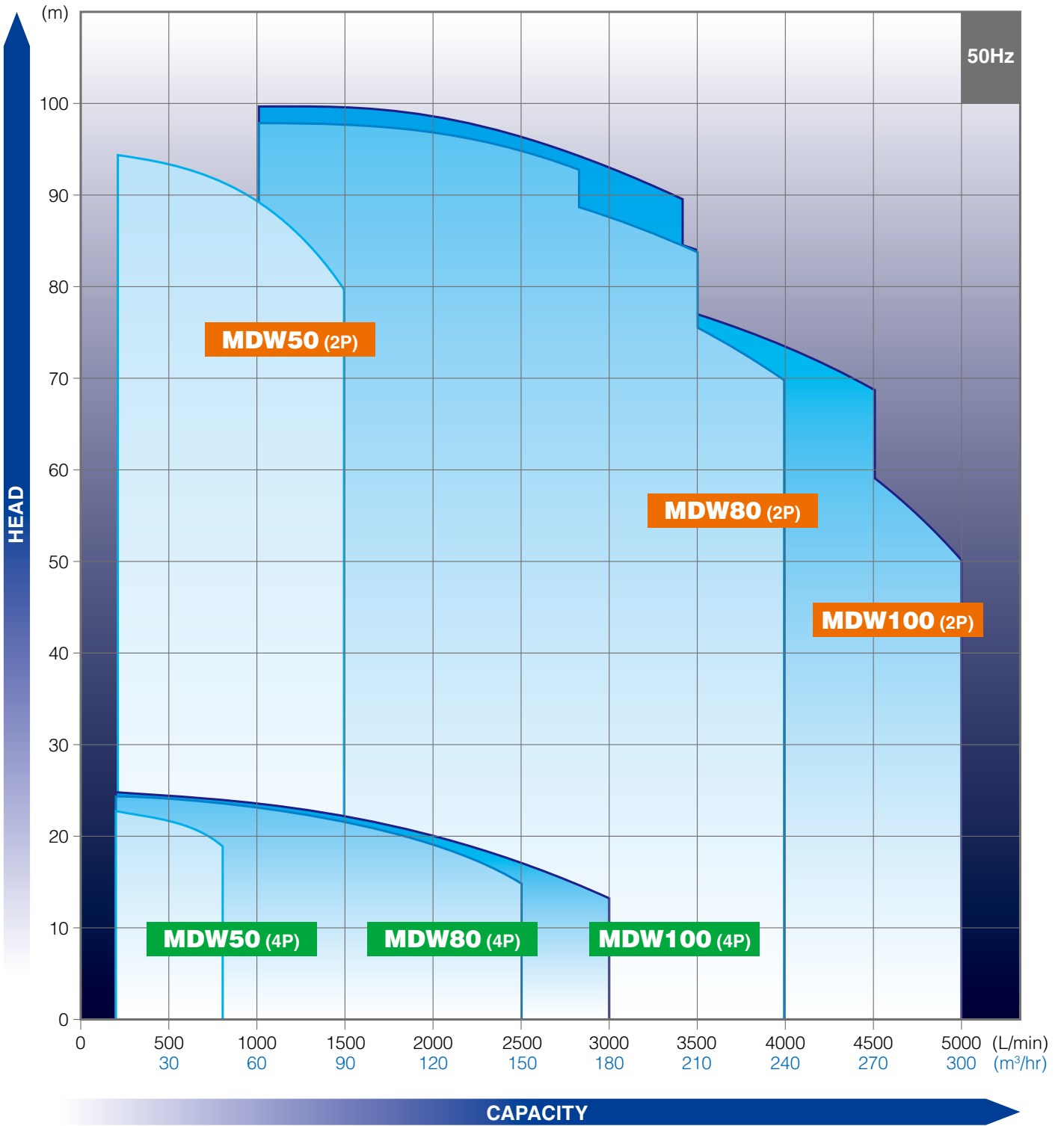
Specification (50/60Hz)

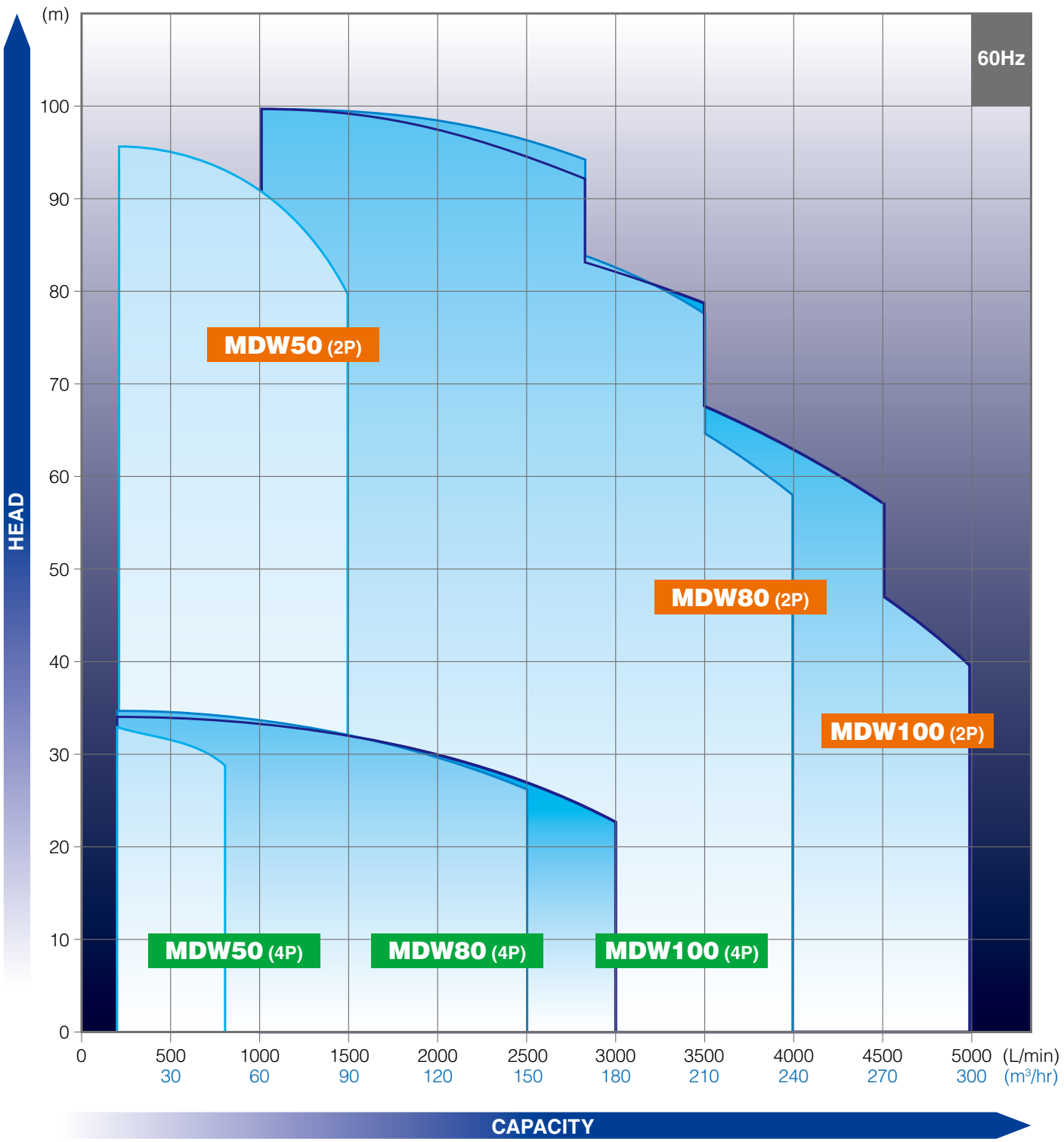
Model	Pump size Suction X Discharge mm	Nominal Impeller size	Capacity		Head m	Motor kW	
			L/min	m³/hr			
MDW50	80 X 50	250 / 220	833 / 1000	50 / 60	83 / 93	2P	22, 30, 37, 45, 55, 75
		260 / 260	417 / 500	25 / 30	21.5 / 31	4P	11, 15, 18.5, 22, 30, 37
MDW80	125 X 80	250 / 220	2667 / 2000	160 / 120	90 / 99	2P	37, 45, 55, 75
		255 / 255	1333 / 2000	80 / 120	23 / 30	4P	11, 15, 18.5, 22, 30, 37
MDW100	125 X 100	200 / 200	3333 / 2000	200 / 120	62 / 97	2P	37, 45, 55, 75
		235 / 235	1667 / 2000	100 / 120	21.5 / 30	4P	11, 15, 18.5, 22, 30, 37

Common specification

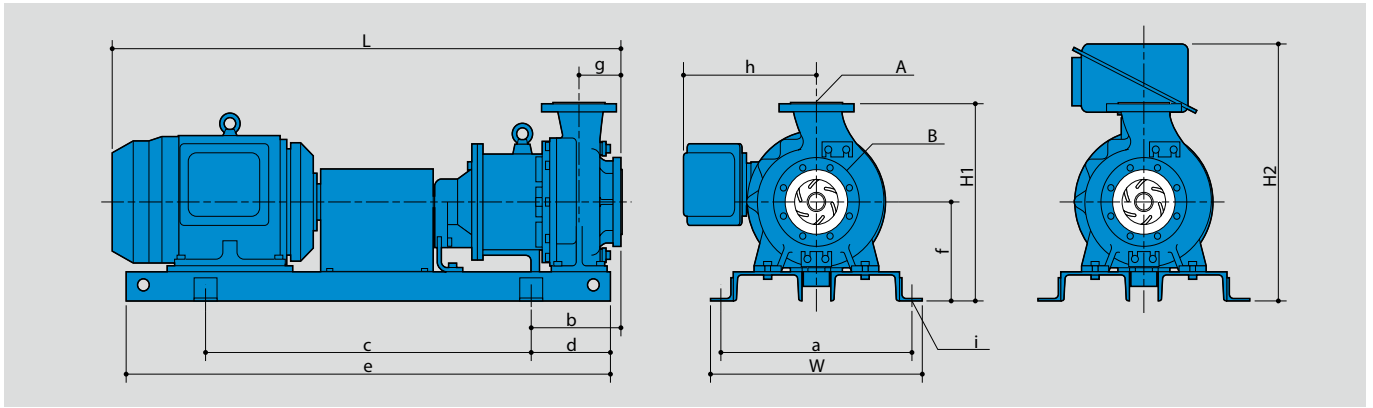
Temperature range of liquid handled	MDW80/100: -10 to 105°C, MDW50: -10 to 120°C
Maximum operating pressure	1.6MPa
Motor	Foot mounted type motor

Performance curves





Dimension (mm)



Model	Motor output kW	W	H1	H2	L	a	b	c	d	e	f	g	h	i	A	B	Mass kg	
MDW50	2P	22	(540)	(485)	-	(1364)	500	(255)	840	205	1250	260	125	(390)	4Xø23	50A	80A	440
		30				(1442)								465				
		37	(610)	(505)		(1515)	550	(280)	940	230	1400	280		(410)	4Xø27			605
		45				(1508)								615				
		55				(525)								(1508)				655
	75	(660)	-	(782)	(1737)	600	(320)	1060	270	1600	330	-	-	735				
	4P	11	(540)	(485)	-	(1338)	500	(255)	840	205	1250	260	125	(283)	4Xø23	50A	80A	350
		15				(1364)								365				
		18.5				(1442)								420				
		22				(1545)								425				
30		(1545)				470												
37	(610)	(505)	-	(1545)	550	(280)	940	230	1400	280	(410)	4Xø27	615					
MDW80	2P	37	(610)	(580)	-	(1555)	550	(265)	940	230	1400	300	125	(410)	4Xø27	80A	125A	590
		45				(1548)								600				
		55				(1548)								645				
		75				(660)								-				(782)
	4P	11	(540)	(580)	-	(1378)	500	(240)	840	205	1250	260	125	(283)	4Xø23	80A	125A	365
		15				(1404)								380				
		18.5				(1482)								440				
		22				(1585)								445				
		30				(1585)								500				
		37				(610)								(560)				-
MDW100	2P	37	(610)	(560)	-	(1555)	550	(265)	940	230	1400	280	125	(410)	4Xø27	100A	125A	585
		45				(1548)								600				
		55				(1548)								695				
		75				(660)								-				(782)
	4P	11	(540)	(560)	-	(1378)	500	(240)	840	205	1250	260	125	(283)	4Xø23	100A	125A	370
		15				(1404)								385				
		18.5				(1482)								445				
		22				(1585)								450				
		30				(1585)								505				
		37				(610)								(560)				-

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Caution for safety use: Before use of pump, read instruction manual carefully to use the product correctly. Actual pumps may differ from the photos. Specifications and dimensions are subject to change without prior notice. For further details please contact us.

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