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INDUSTRIAL PUMP SOLUTIONS

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A New Lineup Has Flange-Connection Type World's Largest Process Magnetic Drive Pump

Magnetic Drive Pumps
MDW

Patent

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

The Heart of Industry

Max. Flow Capacity of 300m³/hr and Max. Discharge Head of 98m The World's Largest Class Fluoroplastic Magnetic Drive Pump

A new lineup has emerged in the world-largest fluororesin process magnetic drive pump MDW series. Flange-connection type has been adopted while maintaining high durability for chemical process applications. Contributes to reducing installation space and improving maintainability.

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.



MDW80-F (Flange motor type)



MDW100-C (Foot mounted motor type)

NEW

MDW100-F (Foot mounted flange motor type)



High Discharge Capacity and High Head

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



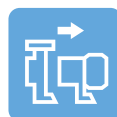
ISO Compliant

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



Highly Chemically Resistant

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



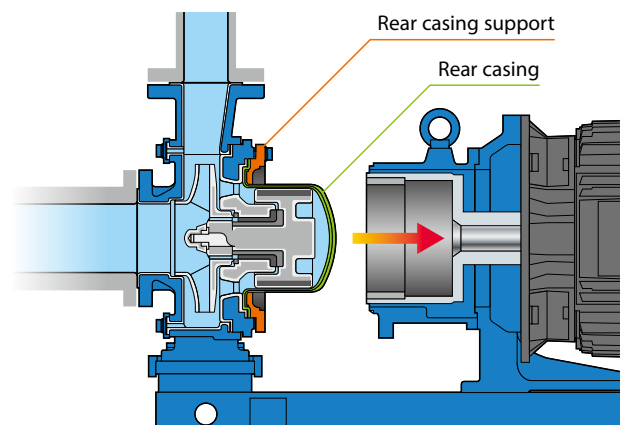
Back Pullout System

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.



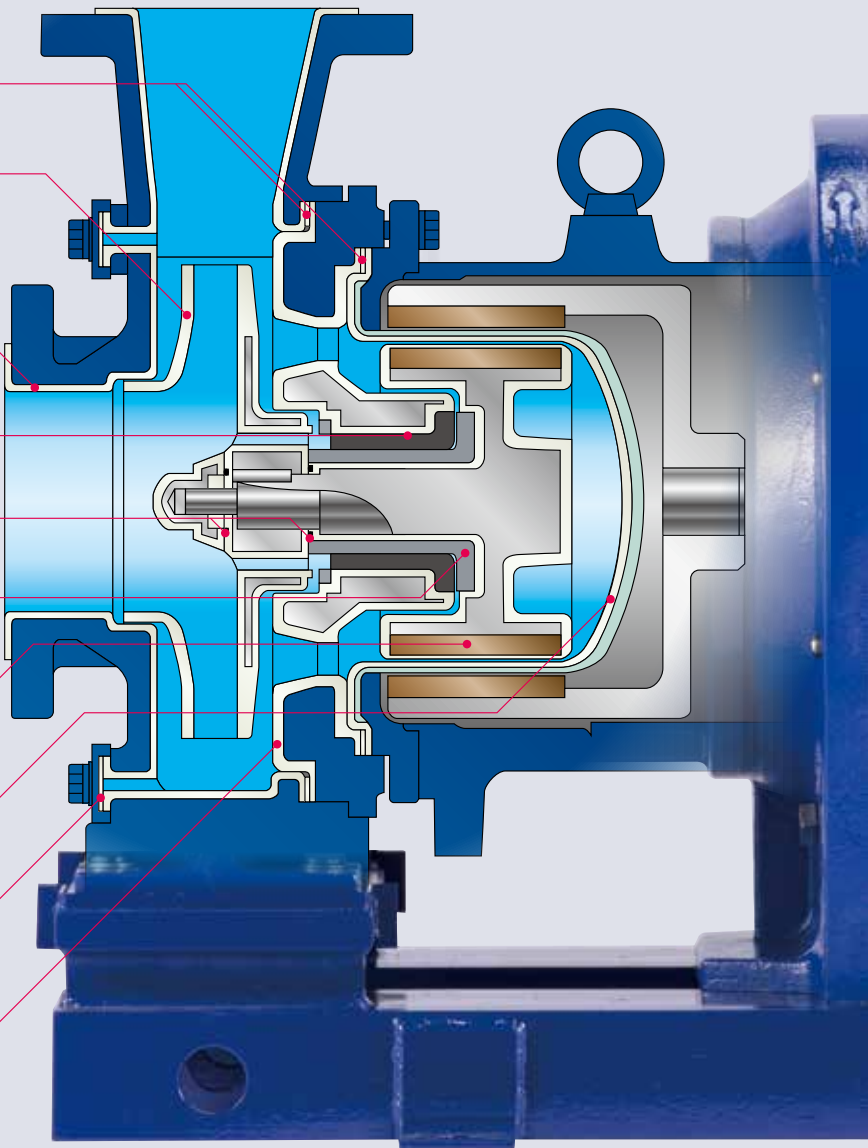
Robust Structure

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.



Construction and Materials

- Gasket
- PTFE
- Impeller
- PFA (MDW50)
- CFRETFE (MDW80/100)
- Front casing
- PFA (MDW50)
- ETFE (MDW80/100)
- Bearing
- SiC
- O ring
- Kalrez®
- FKM
- EPDM
- Sleeve
- SiC
- Magnet capsule
- PFA
- CFRETFE
- Rear casing
- PFA
- Gasket
- PTFE
- Split plate
- PFA



Pump Identification

MDW

50

-

260

P

K

Z

F

450

I

-

E

2

1

2

3

4

5

6

7

8

9

10

1 Pump diameter · Motor output

Model	Pump diameter (Suction×Discharge) [mm]	Motor output [kW]	
		2P	4P
50	80×50	22, 30, 37, 45, 55, 75	11, 15, 18.5, 22, 37
80	125×80	37, 45, 55, 75	
100	125×100		

2 Nominal impeller size
170 to 260 (mm)

4 Material of Bearing / Sleeve
K : SiC/SiC

3 Wet end main material
E : ETFE+PFA
P : PFA

5 Material of O-ring
Z : Kalrez®
V : FKM
E : EPDM

6 Type of motor
F : Flange motor / Foot mounted flange motor (Flange motor type)
C : Foot mounted motor (Coupling type)

7 Motor output
110 : 11kW, 150 : 15kW, 185 : 18.5kW, 220 : 22kW, 300 : 30kW,
370 : 37kW, 450 : 45kW, 550 : 55kW, 750 : 75kW

8 Pump standard

I : ISO flange + IEC motor

9 Special version

	With or without drain / air release	Product form	Special version
A	Without drain / air release	Pump body + Base set	Standard
S			Special version
D	With drain / air release	Pump body set Without base (Applies to coupling type)	Standard
X			Special version
B	Without drain / air release		Standard
Y			Special version
E	With drain / air release		Standard
Z			Special version

10 Motor poles
2 : 2P
4 : 4P



• Photograph shows model MDW-F

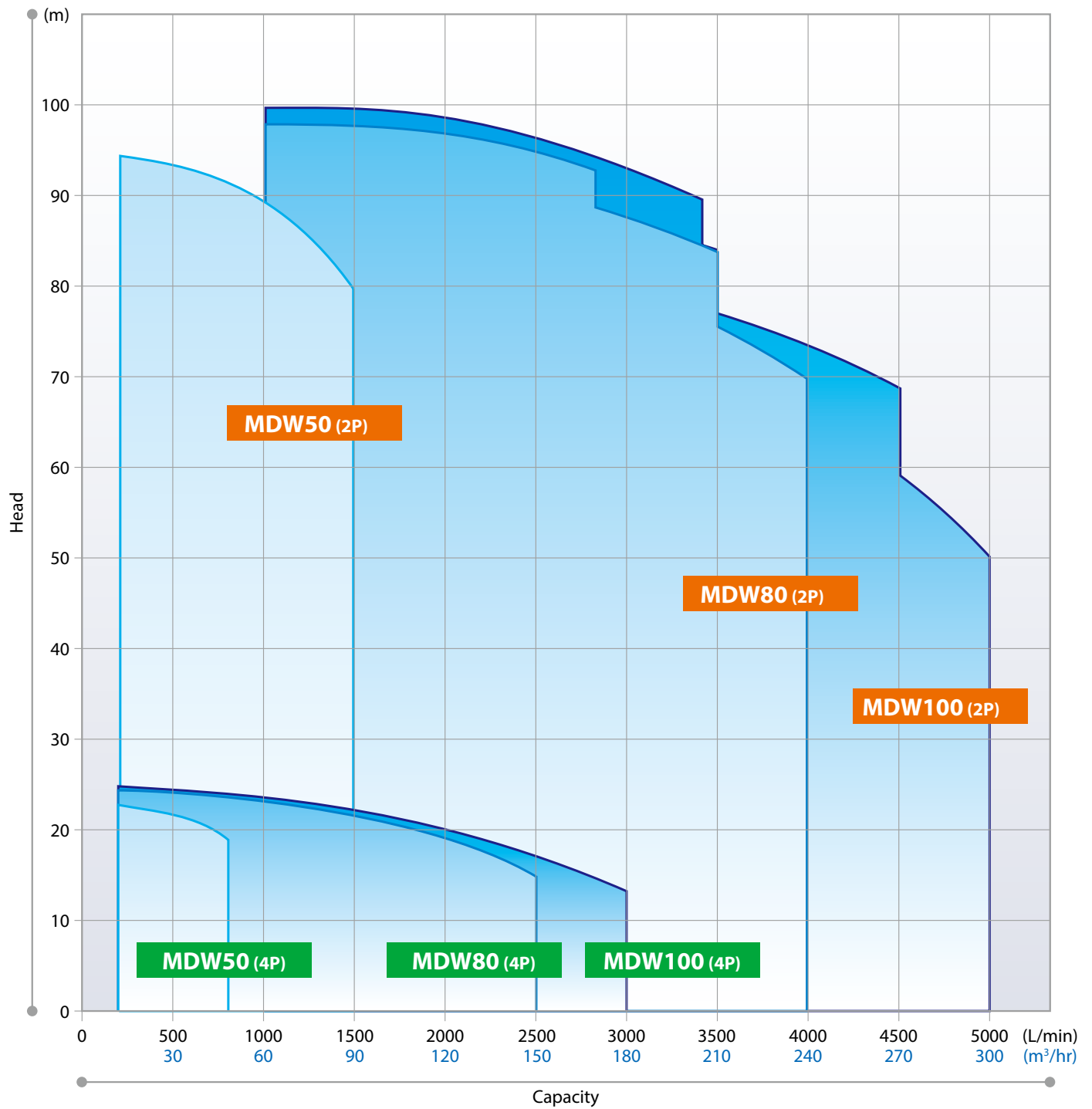
Specification

Model	Suction × Discharge (mm)	Nominal impeller size	Capacity		Head (m)	Motor output (kW)	
			(L/min)	(m ³ /hr)			
MDW50	80×50	250	833	50	83	2P	22, 30, 37, 45, 55, 75
		260	417	25	21.5	4P	11, 15, 18.5, 22, 30, 37
MDW80	125×80	250	2667	160	90	2P	37, 45, 55, 75
		255	1333	80	23	4P	11, 15, 18.5, 22, 30, 37
MDW100	125×100	200	3333	200	62	2P	37, 45, 55, 75
		235	1667	100	21.5	4P	11, 15, 18.5, 22, 30, 37

Common Specification

Temperature range of liquid handled	ETFE type : -10 to 105°C, PFA type : -10 to 120°C (In the case of low-temperature specifications, please be careful of dew condensation on the pump.)
Allowable slurry	Please contact us for details.
Maximum operating pressure	1.6MPa
Standard paint color	Ultramarine blue RAL5002

Performance Curves



Dimensions in mm

Illustration 1

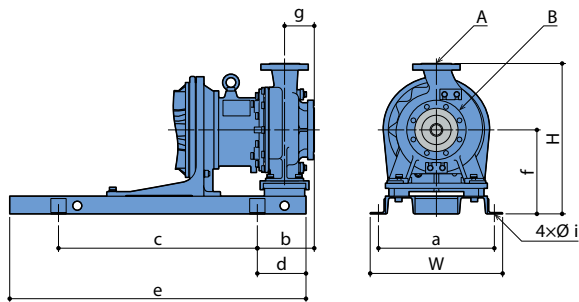
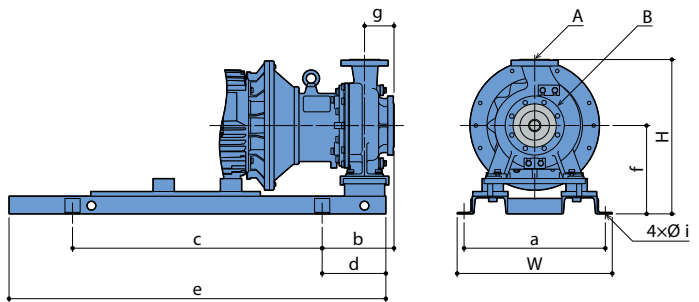


Illustration 2



MDW50-F (Flange motor / Foot mounted flange motor)

Motor output kW		W	H	a	b	c	d	e	f	g	i	A	B	Mass (Less motor) kg	Illustration	
2P	22	560	580	490	255	840	205	1250	355	125	23	50	80	290	1	
	30	610		550	280	940	230	1400			27			295		
	37													275		
	45	660		600	600	320	1060	270			1600			375	290	2
	55		670						350						1200	
	75	730														
4P	11	560	580	490	255	840	205	1250	355	125	23	50	80	290	1	
	15			490	255	840	205	1250			27			290		
	18.5															610
	22															
	30															
	37															

MDW80-F (Flange motor / Foot mounted flange motor)

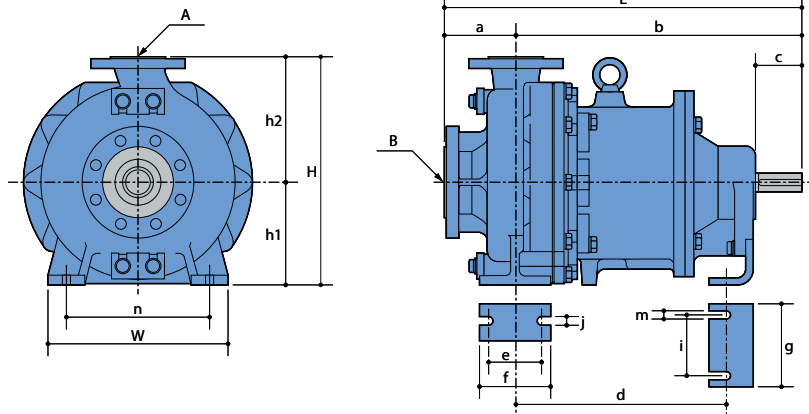
Motor output kW		W	H	a	b	c	d	e	f	g	i	A	B	Mass (Less motor) kg	Illustration			
2P	37	610	635	550	265	940	230	1400	355	125	27	80	125	280	1			
	45																	
	55	660	655	600	305	1060	270	1600	375					295	2			
	75	730		670	335	1200	300	1800			310							
4P	11	560	635	490	240	840	205	1250	355		23				295	1		
	15																	
	18.5	610																
	22																	
	30																	
37																		

MDW100-F (Flange motor / Foot mounted flange motor)

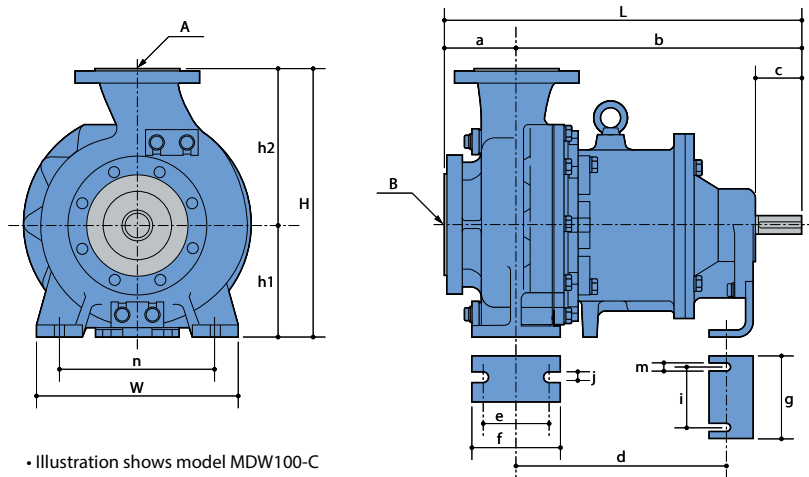
Motor output kW		W	H	a	b	c	d	e	f	g	i	A	B	Mass (Less motor) kg	Illustration
2P	37	610	635	550	265	940	230	1400	355	125	27	100	125	285	1
	45	610	655	600	305	1060	270	1600	375					300	2
	55	660		670	335	1200	300	1800						315	
	75	730													
4P	11	560	635	490	240	840	205	1250	355	125	23	100	125	300	1
	15			490	240	840	205	1250			27			300	
	18.5														
	22	610		550	265	940	230	1400		27	305				
	30														
	37														

Dimensions in mm

MDW50-C



MDW80/100-C



• Illustration shows model MDW100-C

MDW-C (Foot mounted motor)

	W	H	L	A	B	a	b	c	d	e	f	g	h1	h2	i	j	n	m
MDW50	320	(405)		50mm dia.	80mm dia.					95	125		180	225		14	250	
MDW80	400	(505)	(625)	80mm dia.		125	500	80	370	120	160	150	225	280	110	18	315	14
MDW100	360	(480)		100mm dia.	125mm dia.								200				280	

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() Country codes

Caution for safety use:
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