



Foot mounted type

**NEW**

Flange-connection type

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

**Patent**

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

The Heart of Industry

# Max. Flow Capacity of 300m<sup>3</sup>/hr and Max. Discharge Head of 98m The World's Largest Class Fluoroplastic Magnetic Drive Pump

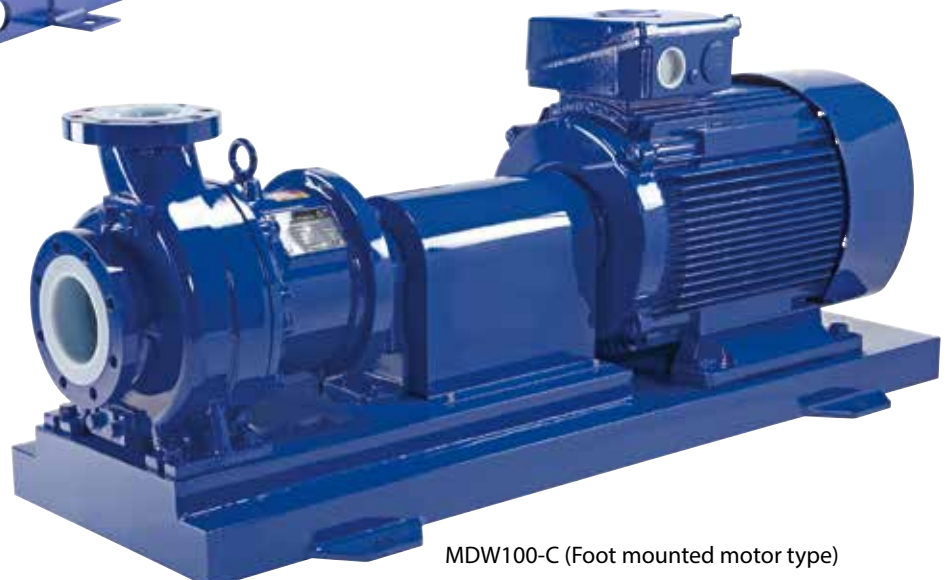
A new lineup has emerged in the world-largest fluoro-resin process magnetic drive pump MDW series. Flange-connection type has been adopted while maintaining high durability for chemical process applications. Contributes to reducing installation space and improving maintainability.

## 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 300m<sup>3</sup>/hr. discharge head of 98m, enabling applications in previously unexplored areas with a wide range of liquid specific gravities.



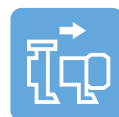
### ISO Compliant

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.



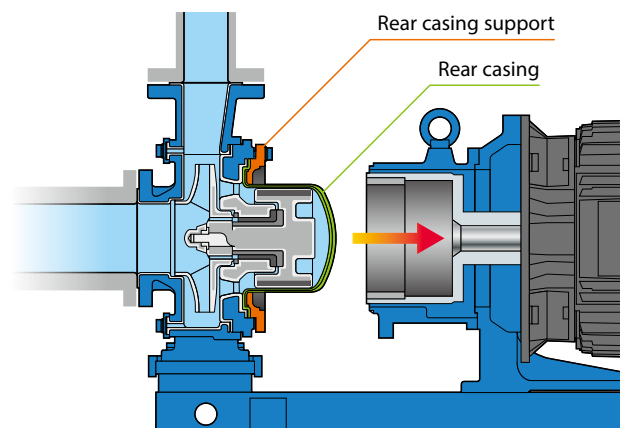
### Back Pullout System

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**

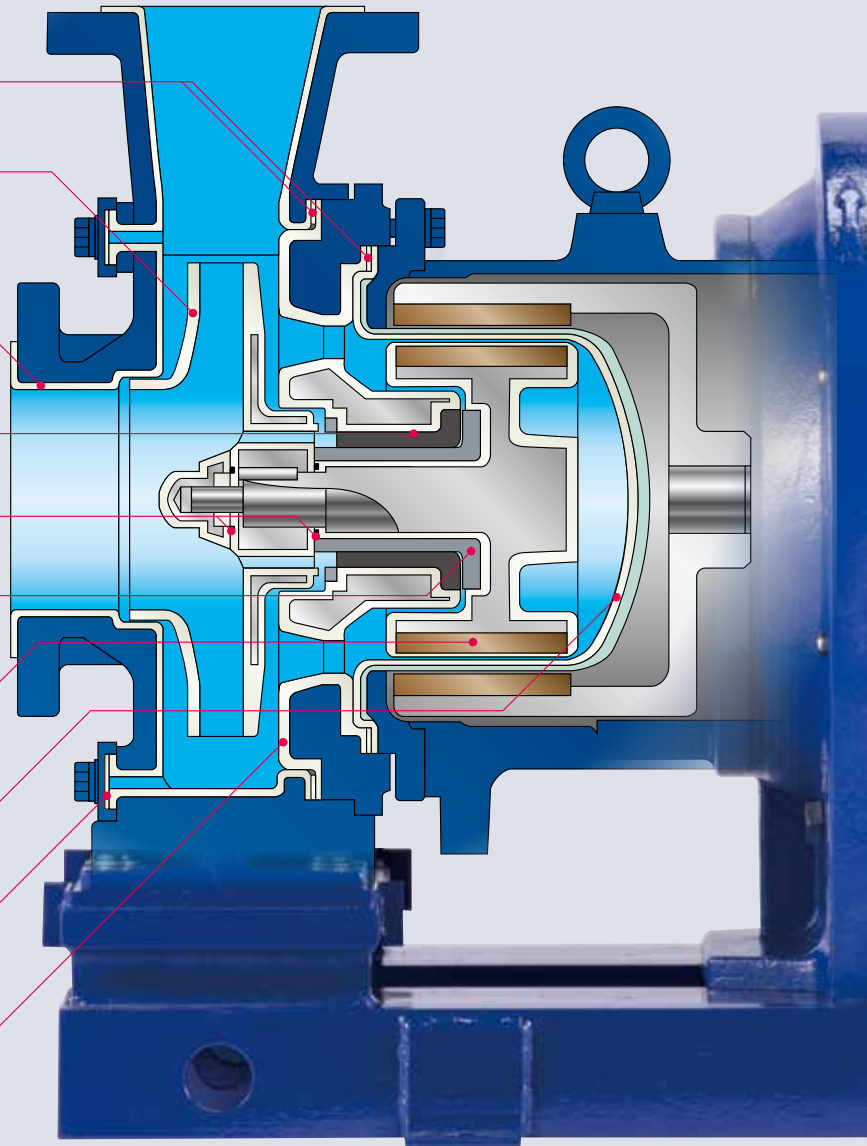
**PFA**

**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
<b>50</b>	80×50	22, 30, 37, 45, 55, 75	
<b>80</b>	125×80	37, 45, 55, 75	11, 15, 18.5, 22, 37
<b>100</b>	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
<b>A</b>	Without drain / air release	Pump body + Base set	Standard
<b>S</b>			Special version
<b>D</b>	With drain / air release	Pump body set Without base (Applies to coupling type)	Standard
<b>X</b>			Special version
<b>B</b>	Without drain / air release	Pump body set Without base (Applies to coupling type)	Standard
<b>Y</b>			Special version
<b>E</b>	With drain / air release	Pump body set Without base (Applies to coupling type)	Standard
<b>Z</b>			Special version

**10 Motor poles**

**2 : 2P**

**4 : 4P**



• Photograph shows model MDW-F

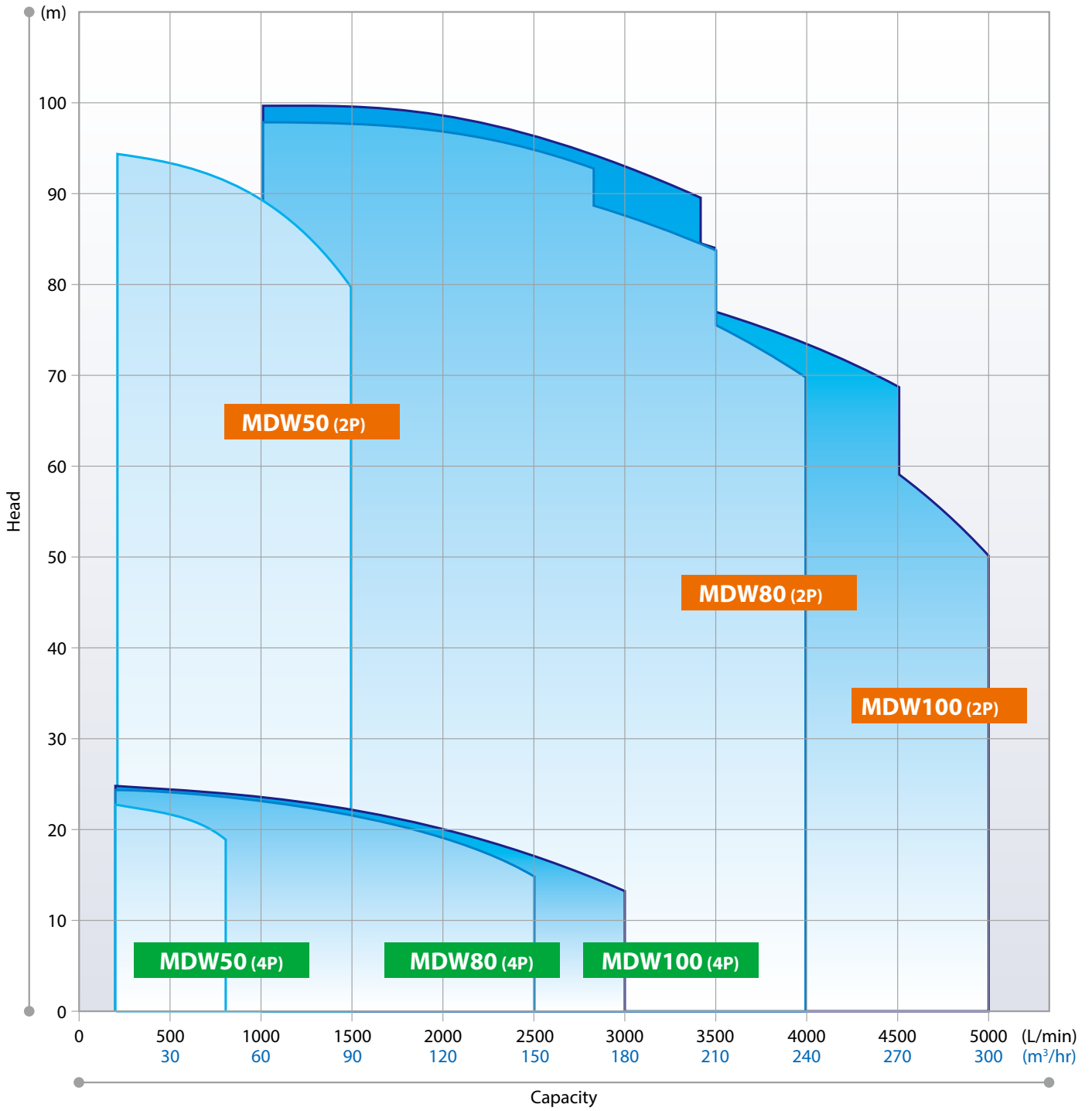
## Specification

Model	Suction × Discharge (mm)	Nominal impeller size	Capacity		Head (m)	Motor output (kW)	
			(L/min)	(m <sup>3</sup> /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

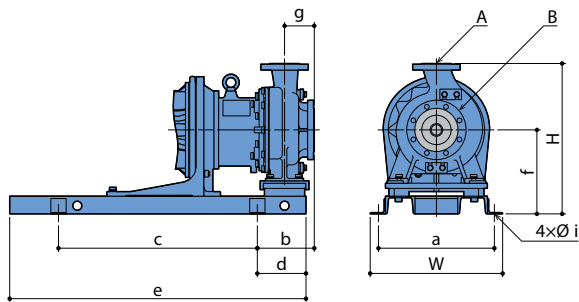
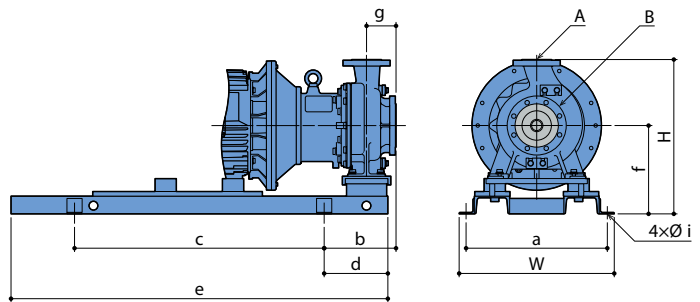


Illustration 2



**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	125	23	50	80	290	1		
	30			550	280	940	230	1400					355		295	
	37			610	600	600	320	1060					270		1600	375
	45	660		670	350	1200	300	1800		305			2			
	55	730		490	255	840	205	1250		355					23	290
	75	550		280	940	230	1400	27		295						
4P	11	560	580	490	255	840	205	1250	125	23	80	125	290	1		
	15			550	280	940	230	1400					355		27	295
	18.5			610	600	600	320	1060					270		1600	375
	22	660		670	350	1200	300	1800		305			2			
	30	490		255	840	205	1250	355		23					290	
	37	550		280	940	230	1400	27		295						

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

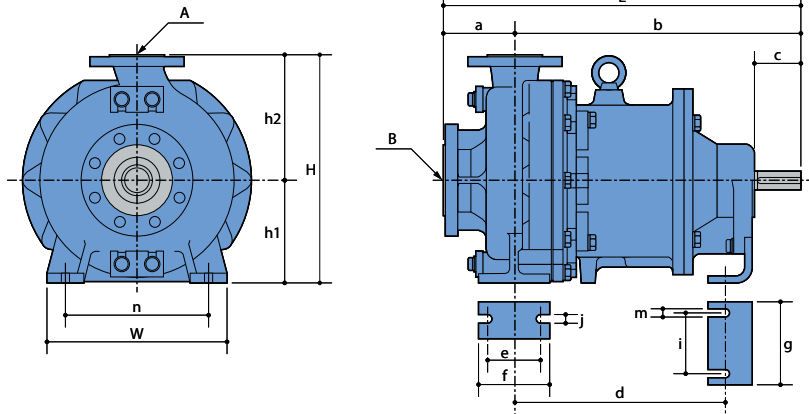
Motor output kW	W	H	a	b	c	d	e	f	g	i	A	B	Mass (Less motor) kg	Illustration		
2P	37	610	655	550	265	940	230	1400	125	27	80	125	280	1		
	45			600	305	1060	270	1600					375		295	
	55	660		670	335	1200	300	1800		310			2			
	75	730		490	240	840	205	1250		355				23	295	
4P	11	560	635	490	240	840	205	1250	125	23	100	125	300	1		
	15			550	265	940	230	1400					355		27	305
	18.5			610	600	600	320	1060					270		1600	375
	22	660		670	335	1200	300	1800		305			2			
	30	490		240	840	205	1250	355		23					300	
37	550	265	940	230	1400	27	305									

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

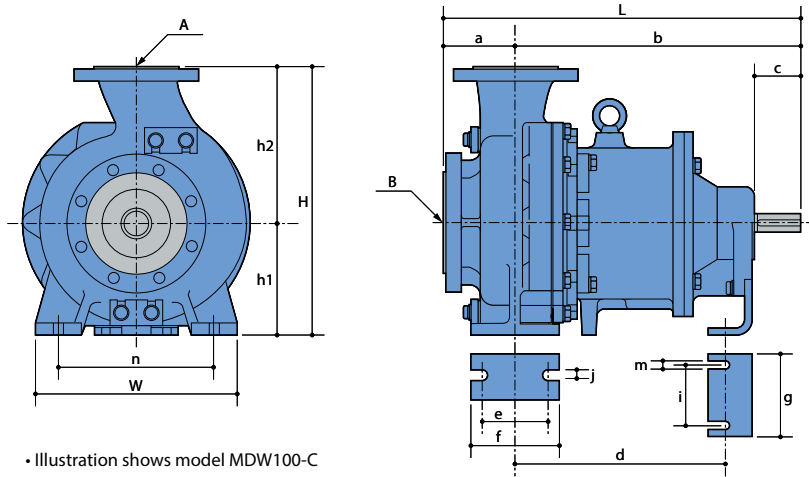
Motor output kW	W	H	a	b	c	d	e	f	g	i	A	B	Mass (Less motor) kg	Illustration		
2P	37	610	655	550	265	940	230	1400	125	27	100	125	285	1		
	45			600	305	1060	270	1600					375		300	
	55	660		670	335	1200	300	1800		315			2			
	75	730		490	240	840	205	1250		355				23	300	
4P	11	560	635	490	240	840	205	1250	125	23	100	125	300	1		
	15			550	265	940	230	1400					355		27	305
	18.5			610	600	600	320	1060					270		1600	375
	22	660		670	335	1200	300	1800		305			2			
	30	490		240	840	205	1250	355		23					300	
37	550	265	940	230	1400	27	305									

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.	125mm dia.	125	500	80	370	120	160	150	225	280	110	18	315	14
MDW100	360	(480)		100mm dia.									200					280

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( ) Country codes

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