

IMD Teflon lined Magnetic Drive Pump



IMD is a horizontal, seal less centrifugal pump with permanent magnetic coupling, compliant with ASME B73.3-2003 standard for volatile chemical, inflammable, aggressive, explosive and toxic liquids.

Patent no.	The name of the patent	The patent type	Available Date
ZL200820038728.3	Can assembly type magnetic drive pump	The patent for utility model	08/Aug./2008 -07/Aug. 2018
ZL200820038729.8	New Type Teflon Magnetic Drive Pump	The patent for utility model	08/Aug./2008 -07/Aug. 2018

Application

- Corrosive, pure and contaminated media in the chemical
- Pharmaceutical and petrochemical industries
- In metal processing, waste water treatment etc.
- When Stainless steel is not sufficiently resistant
- Alternatively to expensive Hastelloy, titanium alloy Pumps
- When anti-adhesive surfaces are important.

Pumping Liquid

- Strong corrosive liquids
- Aggressive, explosive and toxic liquids
- volatile chemicals
- Flammable liquids
- Difficult-to-seal liquids

Economic and Reliable Design Features

Sealless design and free leakage

without shaft seal and driving through by magnetic coupling, which avoid leakage.

Compact structure

Close-coupled design, magnetic coupling connect to motor shaft end directly, without rolling bearing loss. High efficiency and low noise. Reduce installation space and easily assembly.

Convenient maintenance

Pull-back construction, which allows easy on-site maintenance, no need to dis-assembly pipes,

No magnetic eddy current heating

Spacer sleeve made of Carbon-fiber-reinforced plastic [CFRP],With high-strength mechanical property, free from the magnetic eddy current phenomenon. Inspection and maintenance work.

Operating Range

- Flow rate: 1~160 m³/h;
- Total delivery head: 17~62m
- Temperature ratings from -20 °C to +100 °C

Advantages

The Pump Housing Virgin Fluor plastic

Considerably easier and more reliable quality control
No reduction in the permeation resistance.
Pure pharmaceutical and fine chemical media: no contamination

With ductile cast iron casing absorbs all the hydraulic and pipe work-forces.
According to DIN/ISO5199/Europump 1979 standard. Comparing to plastic pumps, no expansion joints are required.Flange with service-minded through holes to DIN;ANSI,BS;JIS. For flushing system and monitoring device as required, the draining nozzle will be offered.



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Spacer sleeve made of Carbon-fiber-reinforced plastic [CFRP]



The metal-free system does not induce any eddy currents and thus avoids unnecessary heat generation. Efficiency and operational reliability benefit from this. Even low flow rates or media near their boiling point can therefore be conveyed without the introduction of heat.

Close Impeller

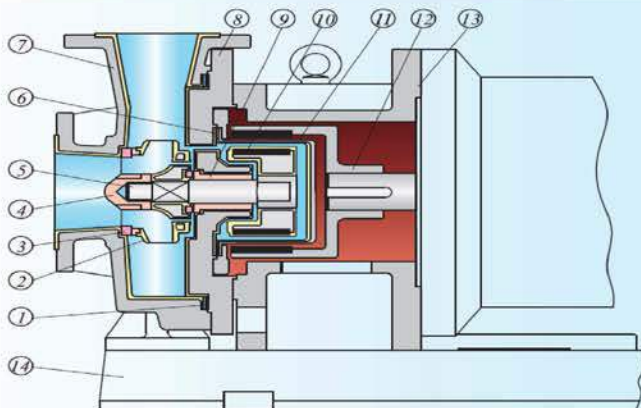
Closed impeller with flow-optimized vane channels: for high efficiency and low NPSH values. The metal core is protected by a thick-walled seamless plastic lining, the large metal core and increase the mechanical strength considerably even at elevated temperature and high flow rates. Secured screw connection to the shaft to against loosening if the pump is started up in the wrong direction of rotation or in the case of back-flowing media



Bearing

Pure SSIC bearing make a decisive contribution to operational reliability and the long service life of the pump. pure SSIC as a base material produces maximum dimensional stability. SSIC is extremely resistant to corrosion and abrasion

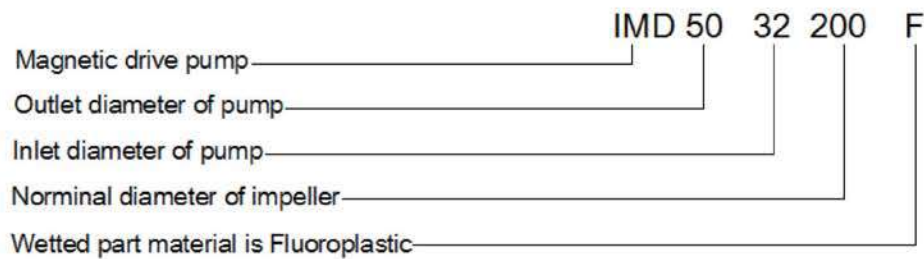
Parts and Materials



Item	Designation	Material
1	Housing seal ring	PTFE
2	Impeller	FEP fused with PTFE
3	Pump housing mouth ring	Silicon carbide
4	Impeller cap	PTFE
5	Pump shaft	Silicon carbide
6	Can seal ring	Fluororubber
7	Housing	Cast iron HT200 lined with FEP
8	Pump cover	Cast iron HT200 lined with FEP
9	Bearing	PTFE
10	Rotor assembly	FEP,NdFeB
11	Can assembly	FEP,Carbon-fiber-reinforced plastic
12	Drive magnet assembly	Cast iron HT200, magnet(NdFeB)
13	Bracket	Cast iron HT200
14	Baseplate	Cast iron HT200

Model and Parameter

Model Identification



Item	Model	Flow (m3/h)	Pump head (m)	Efficiency (%)	NPSHa (m)	Inlet x outlet (mm)	Speed (rpm)	KW	Cross weight (kg)
1	IMD40-25-130FA	4	21	25	3	40*25	2900	3	85
		*6	20	32					
		8	18	33					
2	IMD40-25-140FA	4	27	25	3	40*25	2900	3	85
		*6	26	32					
		8	24	33					
3	IMD40-25-150FA	4	31	25	3	40*25	2900	3	85
		*6	30	32					
		8	28	33					
4	IMD40-25-160FA	4	35	25	3	40*25	2900	3	85
		*6	34	31					
		8	32	32					

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Item	Model	Flow (m ³ /h)	Pump head (m)	Effic- iency (%)	NPSHa (m)	Inlet x outlet (mm)	Speed (rpm)	KW	Cross weight (kg)
5	IMD40-25-165FA	4	37	25	3	40*25	2900	3	85
		*6	36	29					
		8	34	30					
6	IMD40-25-170FA	4	40	25	3	40*25	2900	4	90
		*6	39	28					
		8	36	29					
7	IMD40-25-185F	0.7	39	25	3	40*25	2900	3	85
		*1	39	28					
		2	38	28					
8	IMD40-25-230F	4	62	15	3	40*25	2900	7.5	170
		*6	60	20					
		10	57	32					
9	IMD50-40-140F	8	28	27	3.5	50*40	2900	5.5	140
		*15	26	40					
		20	23	41					
10	IMD50-40-150F	8	32	25	3.5	50*40	2900	5.5	140
		*15	30	38					
		20	27	39					
11	IMD50-40-160F	8	37	23	3.5	50*40	2900	5.5	140
		*15	36	36					
		20	33	39					
12	IMD50-40-165F	8	40	28	3.5	50*40	2900	5.5	140
		*15	39	40					
		20	36	43					
13	IMD50-32-200F	7	52	20	3.5	50*32	2900	7.5	170 including baseplate
		*12.5	50	31					
		15	47	28					
14	IMD50-32-195F	5	51	25	3.5	50*32	2900	7.5	170 including baseplate
		*7	50	28					
		10	48	33					
15	IMD65-50-120	20	21	40	4	65*50	2900	5.5	135
		*30	15	50					
		35	12	50					
16	IMD65-50-130F	20	20	45	4	65*50	2900	5.5	135
		*30	19	55					
		35	17	56					
17	IMD65-50-165F	20	35	40	4	65*50	2900	7.5	145
		*30	33	54					
		35	30	52					
18	IMD65-40-200F	15	52	25	4	65*50	2900	11	300
		*25	50	37					
		35	45	42					
19	IMD-80-65-120F	35	19	35	4	80*65	2900	11	300 including baseplate
		*60	17	51					
		70	13	48					
20	IMD-80-65-140F	35	28	35	4	80*65	2900	11	300 including baseplate
		*60	25	46					
		70	22	46					

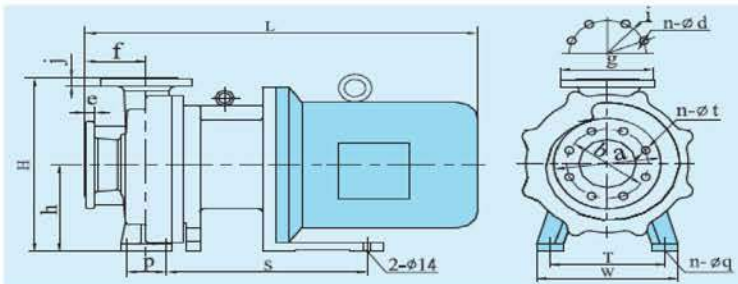
Item	Model	Flow (m ³ /h)	Pump head (m)	Efficiency (%)	NPSHa (m)	Inlet x outlet (mm)	Speed (rpm)	KW	Cross weight (kg)
21	IMD-80-50-200F	35	52	50	4	80*50	2900	18.5	335 including baseplate
		*50	50	55					
		60	45	56					
22	IMD100-80-160F	60	34	50	5	100*80	2900	30	435 including baseplate
		*100	32	60					
		120	27	62					
23	IMD100-80-180F	60	42	50	5	100*80	2900	30	435 including baseplate
		*100	40	60					
		120	35	62					
24	IMD125-100-160F	80	22	50	6	125*100	2900	30	660 including baseplate
		120	20	56					
		140	15	56					
25	IMD125-100-200F	100	40	50	6	125*100	2900	37	680 including baseplate
		120	37	56					
		160	32	56					

Note:

- Item marked with "*" for standard parameter. Please choose similar or same parameter pump, if the parameter is not in the range of this table, we could improve it according to on site application.
- If the capacity data is too small, back flow pipe is required, specific please contact the application engineer in SBMC

Installation Drawing

Model without base plate (Table 1)



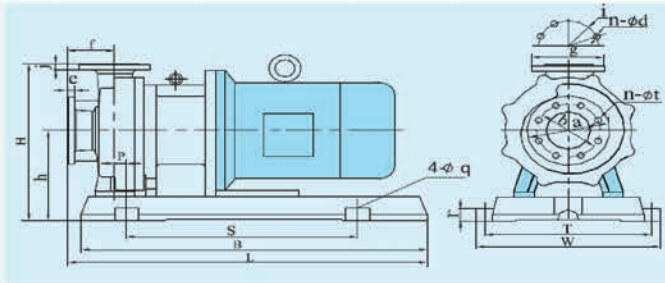
Item	Model	L	S	P	f	W	T	H	h	a	b	e	g	i	j	n-Øt	n-Ød	n-Øq
1	IMD40-25-130FA	610	250	70	80	210	160	310	150	Ø150	Ø110	20	Ø115	Ø85	18	4-M16	4-M12	4-Ø15
2	IMD40-25-140FA	610	250	70	80	210	160	310	150	Ø150	Ø110	20	Ø115	Ø85	18	4-M16	4-M12	4-Ø15
3	IMD40-25-150FA	610	250	70	80	210	160	310	150	Ø150	Ø110	20	Ø115	Ø85	18	4-M16	4-M12	4-Ø15
4	IMD40-25-160FA	610	250	70	80	210	160	310	150	Ø150	Ø110	20	Ø115	Ø85	18	4-M16	4-M12	4-Ø15
5	IMD40-25-165FA	610	250	70	80	210	160	310	150	Ø150	Ø110	20	Ø115	Ø85	18	4-M16	4-M12	4-Ø15
6	IMD40-25-170FA	610	250	70	80	210	160	310	150	Ø150	Ø110	20	Ø115	Ø85	18	4-M16	4-M12	4-Ø15
7	IMD40-25-185F	610	250	70	80	210	160	310	150	Ø150	Ø110	20	Ø115	Ø85	18	4-M16	4-M12	4-Ø15
8	IMD40-25-230F	730	336	70	100	275	212	370	180	Ø180	Ø110	20	Ø115	Ø85	18	4-M16	4-M12	4-Ø15
9	IMD50-40-140F	730	330	70	80	265	212	360	180	Ø180	Ø125	20	Ø150	Ø110	20	4-M16	4-M16	4-Ø15
10	IMD50-40-150F	730	330	70	80	265	212	360	180	Ø170	Ø125	20	Ø150	Ø110	20	4-M16	4-M16	4-Ø15

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Item	Model	L	S	P	f	W	T	H	h	a	b	e	g	i	j	n-Øt	n-Ød	n-Øq
11	IMD50-40-160F	730	330	70	80	265	212	360	180	Ø165	Ø125	20	Ø150	Ø110	20	4-M16	4-M16	4-Ø15
12	IMD50-40-165F	730	330	70	80	265	212	360	180	Ø165	Ø125	20	Ø150	Ø100	20	4-M16	4-M16	4-Ø15
13	IMD50-32-195F	730	330	70	90	265	212	360	180	Ø165	Ø125	22	Ø140	Ø100	20	4-M16	4-M16	4-Ø15
14	IMD50-32-200F	730	330	70	90	265	212	360	180	Ø165	Ø125	22	Ø140	Ø100	20	4-M16	4-M16	4-Ø15
15	IMD65-50-120F	725	318	95	80	265	212	360	180	Ø185	Ø145	20	Ø165	Ø125	20	4-M16	4-Ø18	4-Ø15
16	IMD65-50-130F	725	318	95	80	265	212	360	180	Ø185	Ø145	20	Ø165	Ø125	20	4-M16	4-Ø18	4-Ø15
17	IMD65-50-165F	730	318	95	80	265	212	365	180	Ø185	Ø145	24	Ø165	Ø125	24	4-M16	4-M16	4-Ø15
18	IMD65-40-200F	928	410	70	100	290	220	430	230	Ø185	Ø145	22	Ø150	Ø110	22	4-Ø18	4-M16	4-Ø15
19	IMD80-65-120F	935	416	70	100	290	220	430	230	Ø200	Ø160	22	Ø185	Ø145	22	4-Ø18	4-M16	4-Ø15
20	IMD80-65-140F	935	416	70	100	290	220	430	230	Ø200	Ø160	22	Ø185	Ø145	22	4-Ø18	4-M16	4-Ø15
21	IMD80-50-200F	970	398	70	100	320	240	445	230	Ø200	Ø160	22	Ø165	Ø125	22	8-Ø18	4-M16	4-Ø15
22	IMD100-80-160F	1110	485	95	125	345	280	500	250	Ø220	Ø180	24	Ø200	Ø160	24	8-Ø18	8-M16	4-Ø15
23	IMD100-80-180F	1110	485	95	125	345	280	500	250	Ø220	Ø180	24	Ø200	Ø160	24	8-Ø18	8-M16	4-Ø15
24	IMD125-100-160F	1110	490	95	125	345	280	500	250	Ø250	Ø210	24	Ø225	Ø180	24	8-Ø18	8-M16	4-Ø15
25	IMD125-100-200F	1110	490	95	125	345	280	500	250	Ø250	Ø210	24	Ø225	Ø180	24	8-Ø18	8-M16	4-Ø15

Model with base plate (Table 2)



Item	Model	L	S	P	B	f	W	T	H	h	a	b	e	r	g	i	n-Ød	n-Øt	n-Øq
1	IMD40-25-165FA	615	440	380	600	80	330	290	360	200	∅150	∅110	20	25	∅115	∅85	4-M16	4-M12	4-∅20
2	IMD40-25-230F	750	530	90	710	100	370	330	440	240	∅150	∅110	20	25	∅115	∅85	4-M16	4-M12	4-∅20
3	IMD50-40-165F	730	530	90	710	80	370	330	425	240	∅165	∅125	22	25	∅150	∅110	4-M16	4-M16	4-∅20
4	IMD50-32-200F	750	530	90	710	100	370	330	420	240	∅165	∅125	22	25	∅140	∅100	4-M16	4-M16	4-∅20
5	IMD65-50-130F	730	530	90	710	80	370	330	420	240	∅185	∅145	22	25	∅165	∅125	4-M16	4-M16	4-∅20
6	IMD65-50-165F	740	530	90	710	90	370	330	425	240	∅185	∅145	22	25	∅165	∅125	4-M16	4-M16	4-∅20
7	IMD65-40-200F	930	740	105	950	100	950	440	510	310	∅185	∅145	22	40	∅150	∅110	4-∅18	4-M16	4-∅20
8	IMD80-65-140F	930	740	105	950	100	950	440	510	310	∅200	∅160	22	40	∅185	∅145	4-∅18	4-M16	4-∅20
9	IMD80-50-200F	970	740	105	950	100	950	440	525	310	∅200	∅160	22	40	∅165	∅125	8-M16	4-M16	4-∅20
10	IMD100-80-125F	950	740	105	950	125	950	440	535	310	∅220	∅180	22	30	∅200	∅160	8-∅18	8-M16	4-∅25
11	IMD100-80-180F	1100	870	110	1090	125	1090	475	595	345	∅220	∅180	22	50	∅200	∅160	8-∅18	8-M16	4-∅25
12	IMD125-100-160F	1100	870	110	1090	125	1090	475	595	345	∅250	∅210	24	50	∅225	∅180	8-∅18	8-M16	4-∅25
13	IMD125-100-200F	1100	870	110	1090	125	1090	475	595	345	∅250	∅210	24	50	∅225	∅180	8-∅18	8-M16	4-∅25

● Performance curve diagram

