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CQB

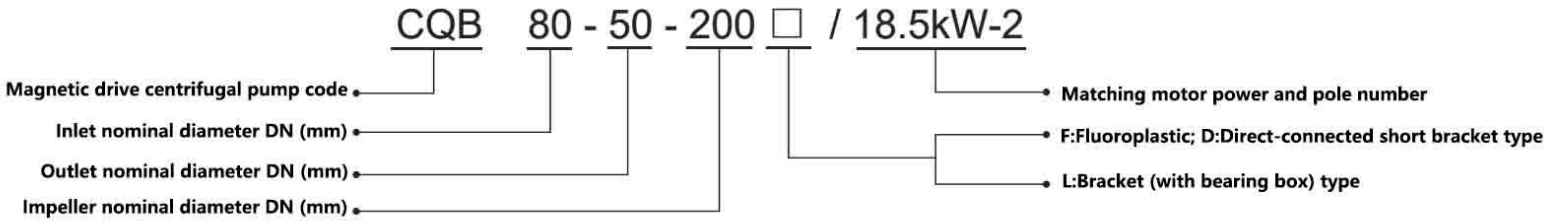
MAGNETIC PUMP

Product Introduction

The CQB series fluoroplastic magnetic drive pump has its flow-passing components made of fluoroplastic and high-purity industrial ceramics, providing excellent corrosion resistance and sealing performance. The load-bearing parts of the pump are made of metal materials, which can fully bear the weight of pipelines and fluids and mechanical impact. The pump chamber is fully enclosed, and the impeller is driven indirectly through a magnetic coupler, eliminating the shaft seal. Therefore, it completely prevents the leakage at the shaft seal of general shaft-driven centrifugal pumps, meeting the working condition requirements of zero leakage and no pollution. It is widely used in chemical, pharmaceutical, aluminum foil, acid making, coating, non-ferrous metal and other industries.

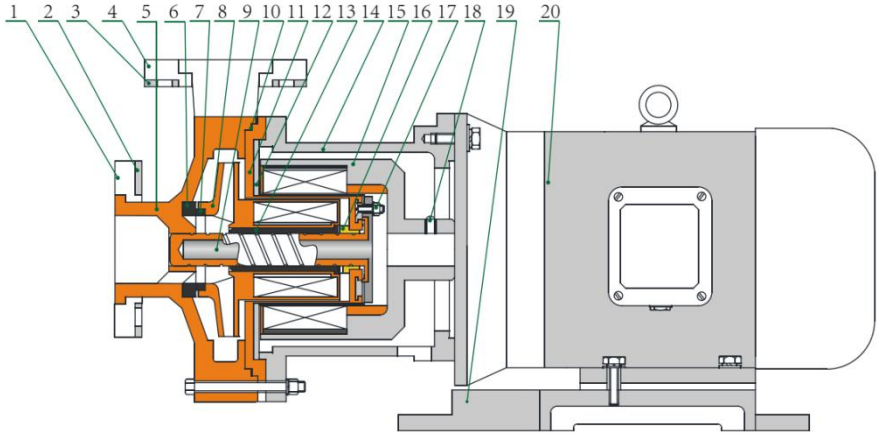
Due to the special structure of this series of pumps, it is not suitable for conveying liquid hydrocarbons with poor lubricity, alkalis and salts with crystals, and slurries containing solid particles. It can only convey pure clear liquids. The applicable temperature range is -20℃ ~ 100℃. It can be used to convey strong acids, strong alkalis, highly toxic substances, organic solvents and pure, valuable chemical media, suitable for various chemical processes, and fully meets the strict requirements of safety, reliability and ecological environmental protection.

Model Explanation



Structure Diagrams and Components

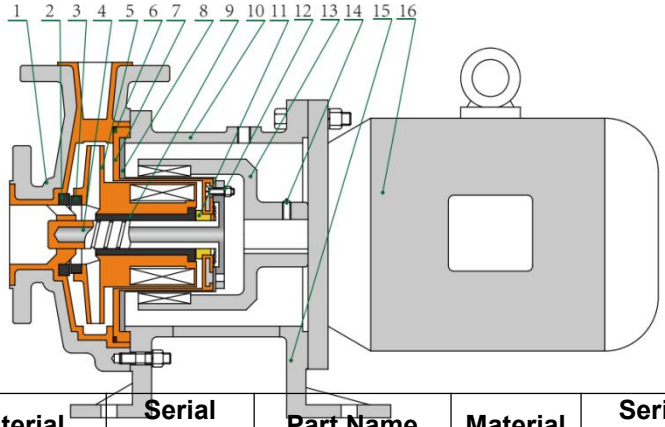
3.1 Full Plastic Casing Pump Structure Diagram



Serial No.	Part Name	Material	Serial No.	Part Name	Material	Serial No.	Part Name	Material
1	Inlet Flange	Polyethylene	√8	Impeller	45 Steel/F46	√15	External Magnetic Coupling	
2	Inlet Support Plate	1Cr18Ni9Ti	√9	Pump Shaft	PTFE Filled	√16	Bearing	PTFE Filled
3	Outlet Support Plate	1Cr18Ni9Ti	√10	Sealing Ring	Fluororubber	17	Connecting Bolt	
4	Outlet Flange	Polyethylene	√11	Isolation Sleeve	F46	18	Set Screw	
√5	Pump Casing	F46	√12	Stainless Steel Sleeve	304	19	Base Plate	HT200
√6	Pump Wear Ring	Al_2O_3	√13	Impeller Ceramic Tube	SiC/F4	20	Motor	
√7	Impeller Wear Ring	Al_2O_3	√14	Bracket	HT200			

Note: Components marked with "√" are wearing parts, for users' reference when purchasing spare parts.

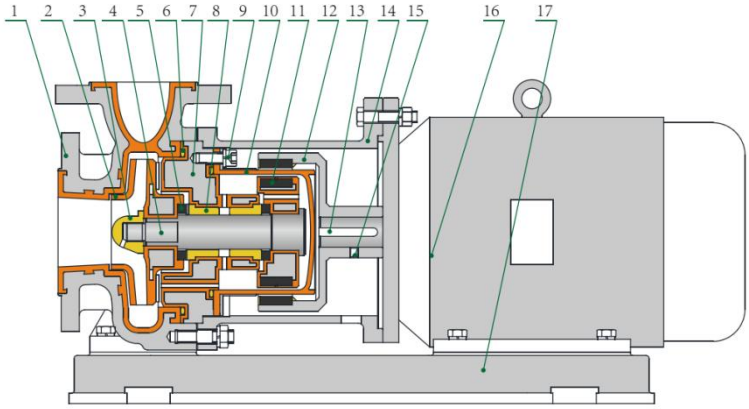
3.2 Steel Lined Plastic Casing Pump Structure Diagram (Without Base Plate)



Serial No.	Part Name	Material	Serial No.	Part Name	Material	Serial No.	Part Name	Material
√1	Pump Casing	HT200/F46	√7	Isolation Sleeve	F46	√13	External Magnetic Coupling	HT200/HS38
2	Pump Wear Ring	Al_2O_3	√8	Stainless Steel Sleeve	304	14	Set Screw	
3	Impeller Wear Ring	Al_2O_3	√9	Impeller Ceramic Tube	SiC/F4	15	Base Plate	HT-200
√4	Pump Shaft	PTFE Filled	√10	Bracket	HT200	16	Motor	
√5	Impeller	45 Steel/F46	√11	Bearing	PTFE Filled			
√6	Sealing Ring	Fluororubber	12	Connecting Bolt				

Note: Components marked with "√" are wearing parts, for users' reference when purchasing spare parts.

3.3 Steel Lined Plastic Casing Pump Structure Diagram (With Base Plate)



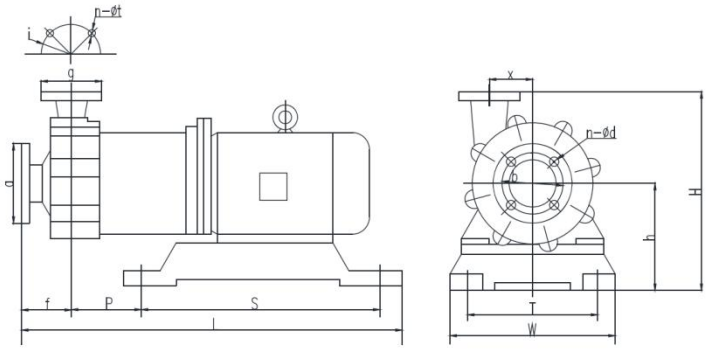
Serial Number	Component Name	Material	Serial Number	Component Name	Material	Serial Number	Component Name	Material
√1	Pump Casing	QT Lined F46	√7	Bearing Housing Assembly	HT Lined F46	13	Key	45# Steel
√2	Impeller	45# Steel/F46	√8	Bearing	F4 Filled	14	Bracket	HT200
3	Lock Nut	PVDF	√9	Connecting Bolt	A1-50	15	Set Screw	-
4	Pump Shaft	SiC	√10	Isolation Sleeve Assembly	F46/PPS	16	Motor	-
√5	Thrust Ring	SiC	√11	Inner Magnetic Rotor Assembly	-	17	Base Plate	HT200
√6	O-Ring	FPM	√12	Outer Magnetic Coupling	45# Steel/HS38	-	-	-

Note: Components marked with "√" are wearing parts, for users' reference when purchasing spare parts.

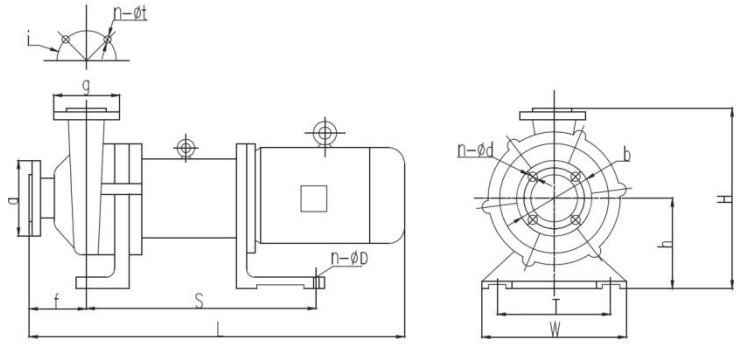
Performance Parameters Table

Serial No.	Model	Flow Rate (m^3/h)	Head (m)	Efficiency (%)	NPSH (m)	Inlet × Outlet (mm)	Rotational Speed (r/min)	Motor Power (kW)	Weight (kg)
1	CQB25-20-100	2	10	30	6	25x20	2900	.0.37	15
2	CQB25-20-160	1.5	32	35	5	25x20	2900	1.5	40
		2	25	35	5	25x20	2900	1.5	40
3	CQB32-20-110	3.6	13	35	5	32x20	2900	0.55	20
		3.5	20	35	5	32x20	2900	0.75	25
4	CQB32-20-160	3.6	32	39	5	32x20	2900	1.5	45
		5	25	39	5	32x20	2900	1.5	45
5	CQB40-25-120	6.3	15	10	5	40x25	2900	0.75	30
		5	20	10	5	40x25	2900	1.1	40
6	CQB40-25-160	6.3	32	42	3.5	40x25	2900	2.2	55
		5	35	42	3.5	40x25	2900	3	55
7	CQB50-32-125	12.5	20	45	3.6	50x32	2900	1.5	46
		8	22	42	3.6	50x32	2900	2.2	50
8	CQB50-32-160	12.5	32	45	3.6	50x32	2900	4	60
		8	36	42	4	50x32	2900	4	60
9	CQB50-32-200	12.5	50	42	3.5	50x32	2900	7.5	75
		15	40	42	3.5	50x32	2900	7.5	75
10	CQB50-32-250	12.5	80	45	3.5	50x32	2900	15	120
		15	75	45	3.5	50x32	2900	11	120
11	CQB65-50-125	25	20	50	4	65x50	2900	3	55
		18	24	45	4	65x50	2900	3	55
12	CQB65-50-160	25	32	55	4	65x50	2900	5.5	90
		20	35	55	4	65x50	2900	5.5	90
13	CQB65-40-200	25	50	48	4	65x40	2900	11	160
		30	40	48	4	65x40	2900	11	160
14	CQB65-40-250	25	80	50	4	65x40	2900	22	220
		30	75	50	4	65x40	2900	22	220
15	CQB80-65-125	50	20	55	4	80x65	2900	7.5	130
		35	25	55	4	80x65	2900	7.5	130
16	CQB80-65-160	50	32	60	4	80x65	2900	15	170
		40	35	55	4	80x65	2900	11	170
17	CQB80-50-200	50	50	55	4	80x50	2900	18.5	190
		60	40	55	4	80x50	2900	15	180
18	CQB80-50-250	50	80	60	4.5	80x50	2900	30	260
		60	70	60	4.5	80x50	2900	30	260
19	CQB100-80-125	100	20	62	4.5	100x80	2900	11	190
		120	15	62	4.5	100x80	2900	11	190
20	CQB100-80-160	100	32	63	5	100x80	2900	18.5	220
		80	35	63	5	100x80	2900	18.5	220
21	CQB100-65-200	100	50	63	5	100x65	2900	30	300
		120	40	63	5	100x65	2900	30	300
22	CQB125-80-160	160	32	65	5	125x80	2900	30	310
		200	20	66	5	125x80	2900	30	310
23	CQB150-125-315	200	32	70	5	150x125	1450	37	310

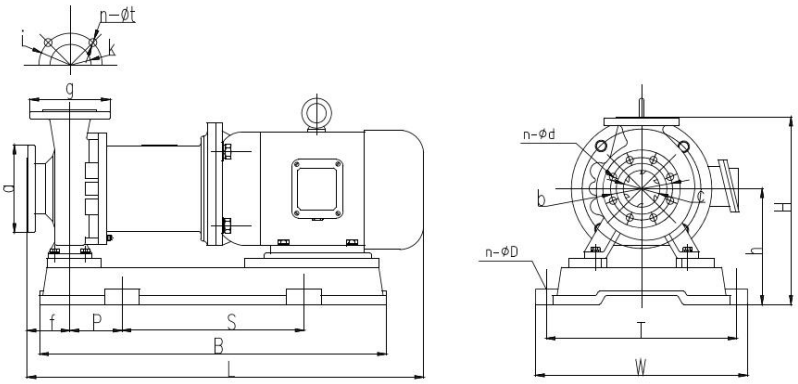
Installation Dimensions Table



Model	L	S	P	f	W	T	H	h	a	b	g	i	x	nØd	nØt	nØD
CQB25-20-100	360	80	150	60	148	115	215	105	/	/	/	/	49	/	/	4Ø11
CQB32-20-110	430	200	125	65	148	115	215	105	140	100	105	70	60	4Ø13	4Ø11	4Ø11
CQB40-25-120	435	265	65	50	180	150	244	110	150	110	100	85	67	4 Ø12	4Ø11	4Ø11
CQB50-32-125	510	265	65	85	180	150	270	125	150	125	140	100	76	4Ø13	4Ø13	4Ø11



Model	L	S	F	W	T	H	h	a	g	b	i	nØd	nØt	nØD
CQB25-20-160	578	230	85	225	180	330	160	115	85	100	75	4-Ø13	4-Ø13	4-Ø15
CQB32-20-160	578	230	85	225	180	330	160	140	100	100	75	4-Ø13	4-Ø13	4-Ø15
CQB40-25-160	625	225	85	220	220	330	170	150	115	110	85	4-Ø17.5	4-Ø13	4-Ø17
CQB50-32-160	625	225	85	260	220	330	170	165	140	125	100	4-Ø17.5	4-Ø17.5	4-Ø17.5



Model	L	B	S	P	W	T	H	h	f	nØD	a	b	c	g	i	k	nØd	nØt
CQB50-32-200	720	600	440	16	350	320	390	210	80	4-Ø15	165	125	50	140	100	32	4-Ø17.5	4-Ø17.5
CQB50-32-250	895	750	580	16	420	380	465	240	100	4-Ø24	165	125	50	140	100	32	4-Ø17.5	4-Ø17.5
CQB65-50-125	645	540	400	5	350	320	313	173	80	4-Ø15	185	145	65	165	125	50	4-Ø17.5	4-Ø17.5
CQB65-50-160	900	600	440	21.5	350	320	400	220	100	4-Ø15	185	145	65	165	125	50	4-Ø17.5	4-Ø17.5
CQB65-40-200	940	750	580	21.5	420	380	400	220	100	4-Ø24	185	145	65	150	110	40	4-Ø17.5	4-Ø17.5
CQB65-40-250	980	850	650	13	450	410	465	240	100	4-Ø24	185	145	65	150	110	40	4-Ø17.5	4-Ø17.5
CQB80-65-125	745	600	440	20	350	320	340	180	100	4-Ø15	200	160	80	185	145	65	8-Ø17.5	4-Ø17.5
CQB80-65-160	940	750	580	21.5	420	380	400	220	100	4-Ø24	200	160	80	185	145	65	8-Ø17.5	4-Ø17.5
CQB80-50-200	985	850	650	18	420	380	420	220	100	4-Ø24	200	160	80	165	125	50	8-Ø17.5	4-Ø17.5
CQB100-80-125	910	850	580	21.5	420	380	400	220	100	4-Ø24	220	180	100	200	160	80	8-Ø17.5	4-Ø17.5
CQB100-80-160	985	850	650	18	420	380	420	220	100	4-Ø24	220	180	100	200	160	80	8-Ø17.5	8-Ø17.5

Operation and Maintenance

Installation Precautions

1. Construct a concrete foundation according to the foundation dimensions and embed the anchor bolts in advance.
2. Before installation, carefully inspect the pump and motor to ensure all parts are intact and there is no debris inside the pump.
3. Place the unit on the foundation, put paired wedge gaskets between the base plate and the foundation, and level the pump by adjusting the wedge gaskets. Tighten the anchor bolts after leveling.
4. The inlet and outlet pipelines of the pump shall be supported by separate brackets.
5. After installation, manually rotate the coupling to check for friction or movement. It should rotate freely and smoothly.
6. The magnetic pump is strictly prohibited from conveying media with particles.
7. To prevent debris from entering the pump, it is recommended to install a filter at the inlet. The filtration area should be 3-4 times larger than the pipeline cross-sectional area.
8. For pumps with high head, a check valve should be installed on the outlet pipeline to prevent water hammer damage caused by sudden shutdown.
9. Ensure that the installation height of the pump meets the NPSH of the pump, and consider the pipeline loss and medium temperature.

Start-up and Operation

1. Before starting, fill the pump with the liquid to be conveyed (if the pump is in a suction condition), close the outlet gate valve, and connect the power supply.
2. Turn on the power supply and check if the pump rotation direction is correct according to the direction indicated on the nameplate.
3. Test-run the unit for 5-10 minutes. If there is no abnormal phenomenon, it can be put into operation.
4. When stopping the pump, first close the outlet gate valve, and then cut off the power supply.

Maintenance and Servicing

1. Regularly inspect the pump and motor, and replace wearing parts.
2. If the pump is not used for a long time, clean the flow channel inside the pump, cut off the power supply, and cover it with a dust cover.
3. Start and operate the pump according to the direction indicated on the nameplate. Reversing and idling are strictly prohibited.

Disassembly and Assembly

1. When disassembling, first rinse the pump body with clean water until the corrosive medium inside the pump casing is completely removed.
2. When replacing pump accessories, do not hit the pump parts with sharp or hard objects. Use a wooden block wrapped with a soft cloth to tap lightly. Place the disassembled parts gently with the sealing surface facing up.
3. During maintenance, keep tools and metal parts away from the magnetic pump impeller and magnetic coupling.

Service Commitment

1. We guarantee the long-term supply of wearing parts and other accessories.
2. We can design new corrosion-resistant pumps according to user requirements and match explosion-proof motors for standard pumps.
3. We provide free consultation and lifelong service for all our products.

Safety Instructions

1. The magnetic pump has a strong magnetic field. Prevent physical injuries caused by the strong attraction of magnetic parts, such as finger pinching, and adverse effects on people with electronic medical devices such as pacemakers.
2. Prohibit idling: Idling will cause the bearing to heat up and expand, leading to shaft seizure and pump damage. Operation with the inlet valve closed is also regarded as idling.
3. Prevent electrostatic damage: When the pump conveys liquids with low conductivity, such as ultrapure water or fluorine-containing inert liquids, static electricity will be generated in the pump, which may cause discharge and pump damage. Take countermeasures to prevent static electricity generation or conduct static electricity away.
4. Magnetic pumps with specific materials can only be used under specific working conditions. Using them beyond the working condition range will not guarantee the normal performance and service life of the pump, and may even lead to accidents.
5. Select the electromagnetic switch according to the motor specifications, such as rated voltage and rated power.
6. If the pump is used outdoors, protective measures must be taken for the electrical circuit to prevent water from entering the switch.
7. The electromagnetic switch and button switch should be installed safely and kept away from the pump.
8. The magnetic pump is prohibited from conveying chemical media with particles or crystals.