

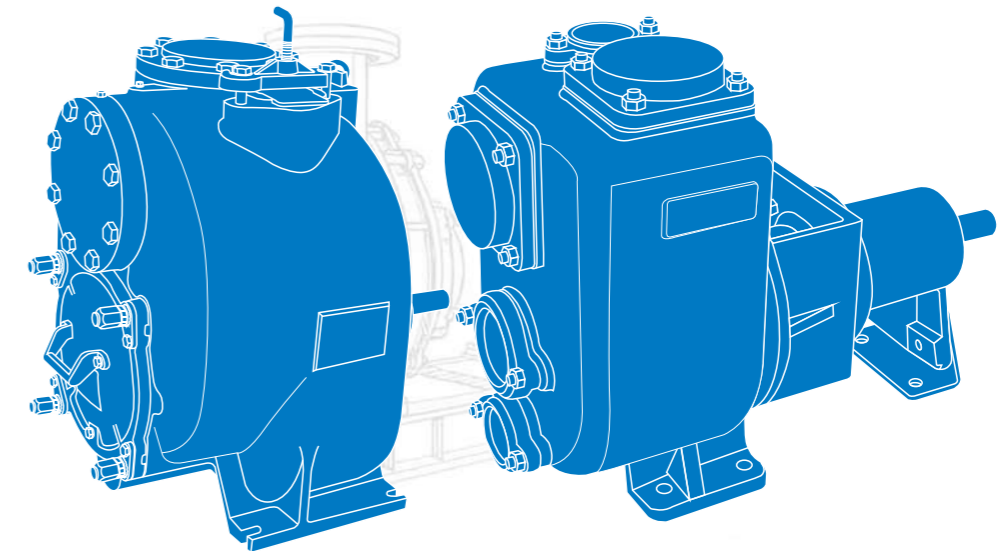


Innovative fluid solutions.

The choice of trust in the chemical industry

CYE series

PRODUCT CATALOG



Anhui Changyu pump and valve manufacturing Co., LTD

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Contact address: Jingxian Economic Development Zone,
Xuancheng City, Anhui Province

Contact number: +8613651913727

Website: www.changyupump.com

Email: Jade.changyupump.com



whatsapp

CORPORATE INTRO

Anhui Changyu Pump & Valve Manufacturing Co., Ltd. was established in 2006 and has more than 20 years of industry experience. It integrates R&D, production, sales and service, Concentrating on the corrosion resistance and safe transportation of valuable fluids, with an annual output of 20,000 units.

Changyu is an industrial enterprise supported by the Xuancheng Municipal Government, covering an area of 20,000 square meters, and ranks among the top four industrial manufacturing enterprises in the region.

The company has passed ISO 9001, CE, CQC, KC and other certifications. It is a national high-tech enterprise with more than 50 patents and has won the titles of Xuancheng City's "Specialized, Refined and New" Enterprise (SRII), "Famous Trademark of Anhui Province" and "Contract-abiding and Credit-worthy".

Changyu products are sold to 30 regions in China and exported to more than 20 countries including Europe, Africa, and Central Asia.

At present, the new factory has been successfully completed. The total investment of this factory amounts to 100 million yuan, with a total area of 20,000 square meters. It has over 70 employees and is a digital factory integrating 5G technology and intelligence.



20000+ square meter

floor area

3500 Ten thousand yuan

Total investment

20000 Table

Annual production capacity

100+ individual

Enterprise certificate

CYE Series Self-Priming Sewage Pump

The CYE series self-priming sewage pump is a self-priming sewage conveying equipment optimized for performance and dimensions according to European standards. It boasts excellent self-priming capability, operational stability, and convenient maintenance. The pump body features a dedicated repair hole for easy daily inspection and debris removal, while internal wear-resistant plates effectively extend the equipment's service life under particulate conditions.

This series of pumps is suitable for conveying mixed liquids containing abrasive solid particles, with a maximum applicable medium viscosity of up to 50 mm²/s. It is widely used in industrial, municipal engineering, marine, and wastewater treatment fields. It can convey sewage containing sand, slurry, suspended particulate liquids, low-viscosity petroleum products, lime slurry, sodium hydroxide, and various wastewater and industrial liquids in cleaning, cooling, circulation, and flue gas purification systems.

The product adopts a drive structure where the motor shaft is directly inserted into the pump shaft bore, providing high coaxiality. Combined with a dynamically and statically balanced impeller design, this ensures smoother and more reliable operation. The entire unit is equipped with an IEC standard three-phase motor, further shortening the axial dimension and reducing the equipment's footprint compared to traditional structures. Meanwhile, some units adopt a coupling connection structure and IEC standard installation method, facilitating later maintenance and repair.

Overall, the CYE series self-priming sewage pumps feature a compact structure, good self-priming performance, strong wear resistance, stable operation, and convenient maintenance, making them suitable for various complex sewage and industrial fluid transportation conditions.

Inlet and Outlet Diameter: DN = 40 – 200 mm

Speed: 1450 – 3600 rpm; lower speeds available upon special request

Flow Rate: 2 – 130 L/s

Head: 4 – 55 m

Temperature Range: -10°C to 80°C

Self-Priming Height: 3 – 7 m

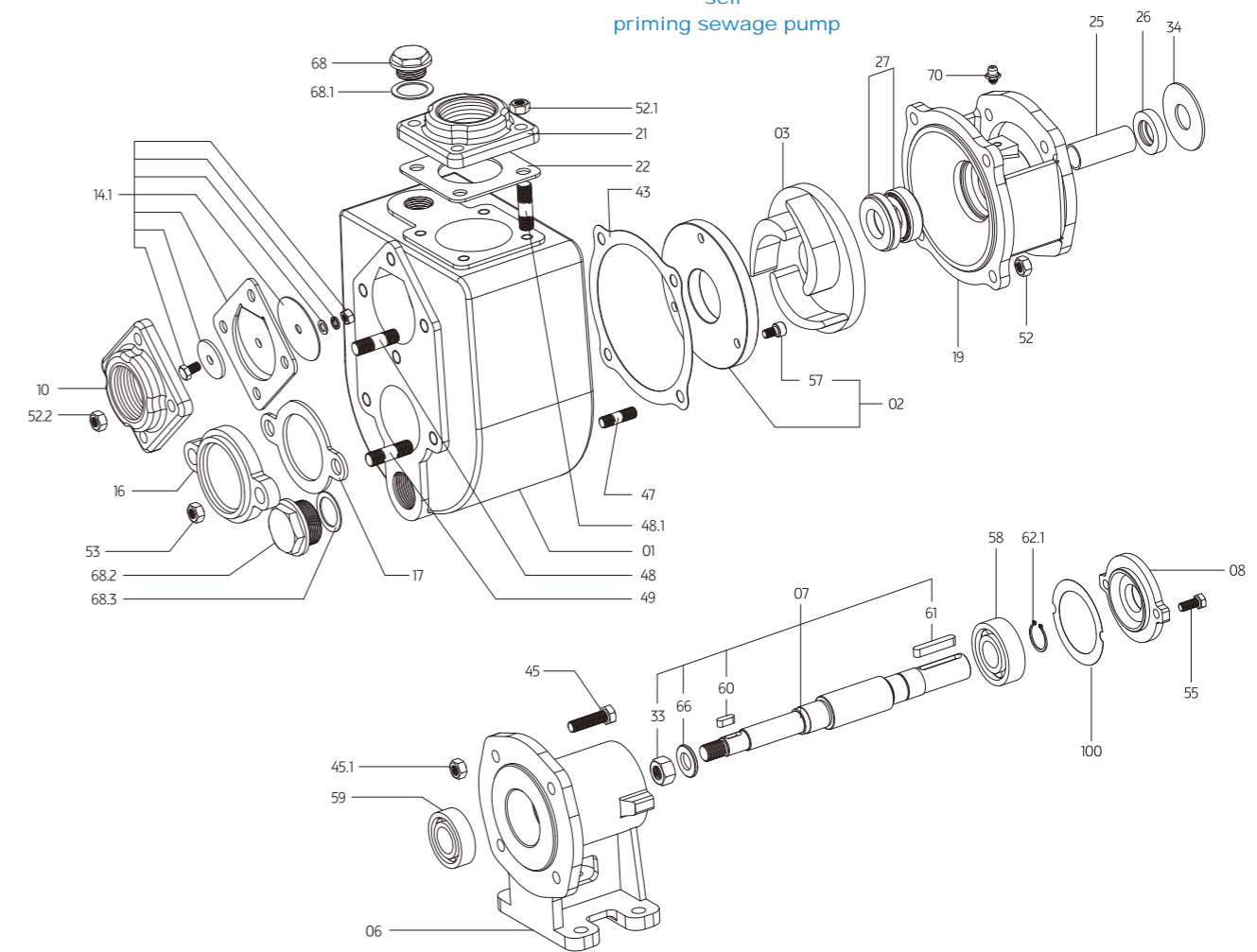
Operating Pressure: 6 bar

Solid Particle Size: 76 mm

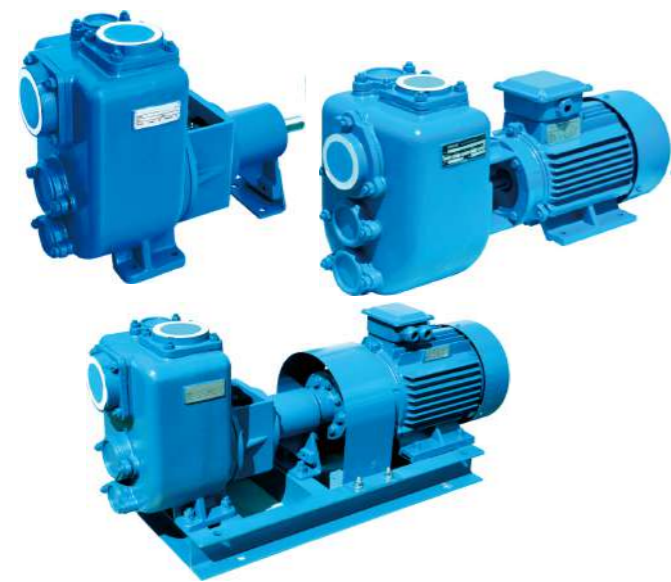
3. Pump Structural Features

Design	Performance and dimensions conform to European standards.		
Structural Form	Semi-open impeller, pump body with repair hole, and wear-resistant plate; single-stage self-priming centrifugal pump.		
Flange	For inlet and outlet diameters of 100mm and below, threaded flanges are used; for diameters above 100mm, non-standard flanges are used (the pump comes with its own flange).		
Shaft Seal	mechanical seal	bearings	Imported high-quality bearings are selected, and grease lubrication is used.

CYE40-110, CYE50-120, CYE80-215, CYE100-160 Explosion diagram of a self-priming sewage pump

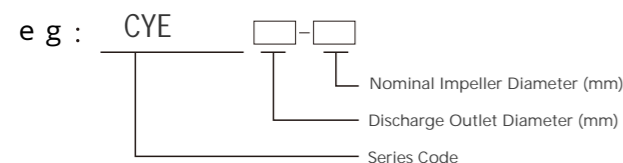


Number	Name	Number	Name	Number	Name	Number	Name
1	Pump body	14.1	Elastic washer	45	Bolts	59	Bearings
2	Wear-resistant plate		Nut	45.1	Nuts	60	Keys
3	Impeller	16	Repair hole cover	47	Studs	61	Shaft retaining rings
6	Bracket	17	Repair hole gasket	48	Studs	62.1	Flat washers
7	Shaft	19	Pump cover	48.1	Studs	66	Plugs
8	Bearing cover	21	Outlet flange	49	Studs	68	O-rings
10	Inlet flange	22	Outlet flange sleeve	52	Nuts	68.1	O-rings
14.1	Check valve elastic gasket	25	Shaft sleeve	52.1	Nuts	68.2	Plugs
	Check valve plate	26	Skeleton oil seal	52.2	Nuts	68.3	Plug seals
14.1	Bolt	27	Mechanical seal	53	Nuts	70	Oil cups
	Flat washer	33	Anti-loosening nut	55	Bolts	100	Bearing cap gaskets
		34	Water slinger ring	57	Hex socket head cap screws		
		43	Pump cover gasket	58	Bearings		



1. Main technical parameters

Model Designation :

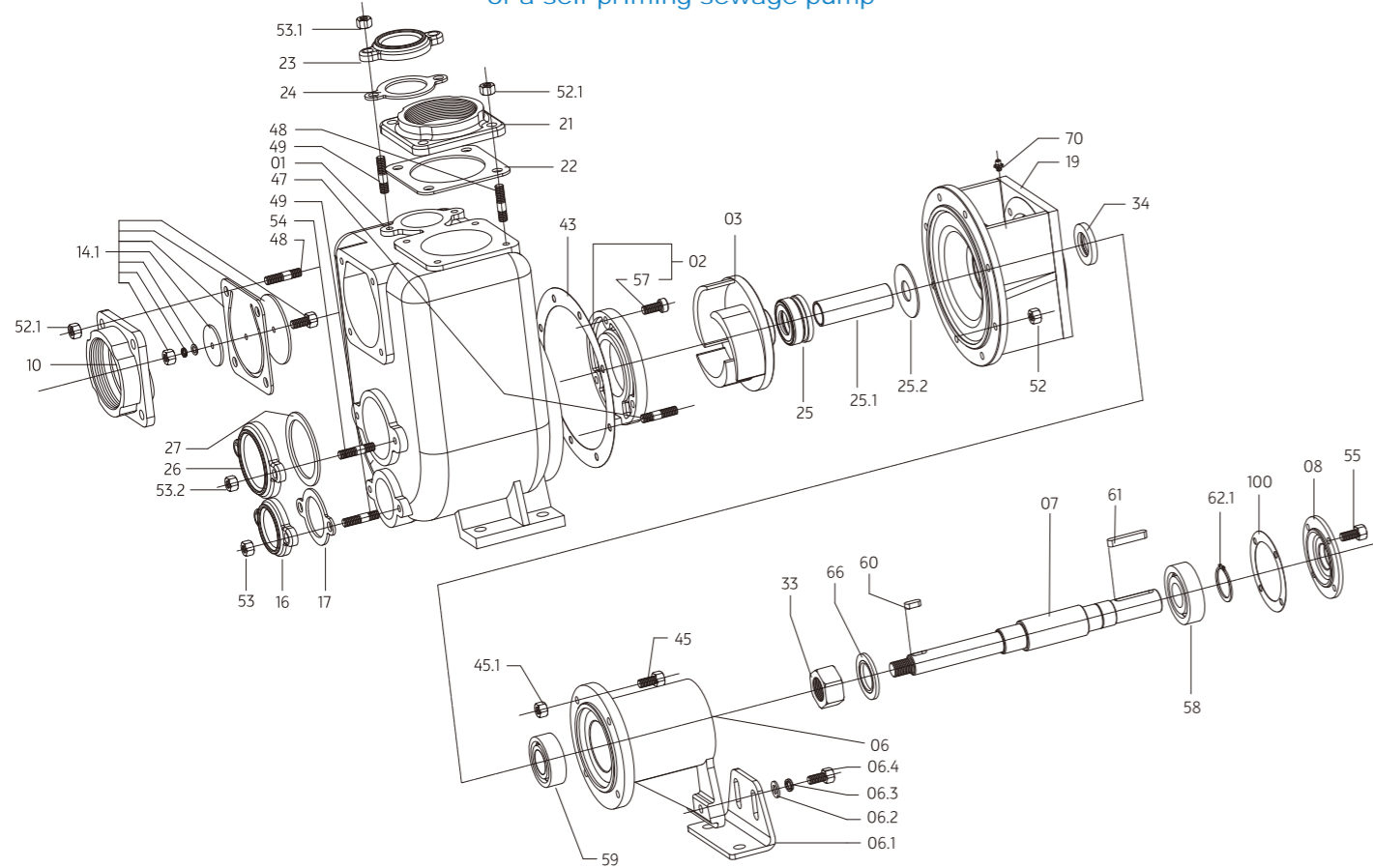


Pump rotation direction: When viewed from the drive end, the pump rotates clockwise; when viewed from the suction inlet, it rotates counterclockwise.

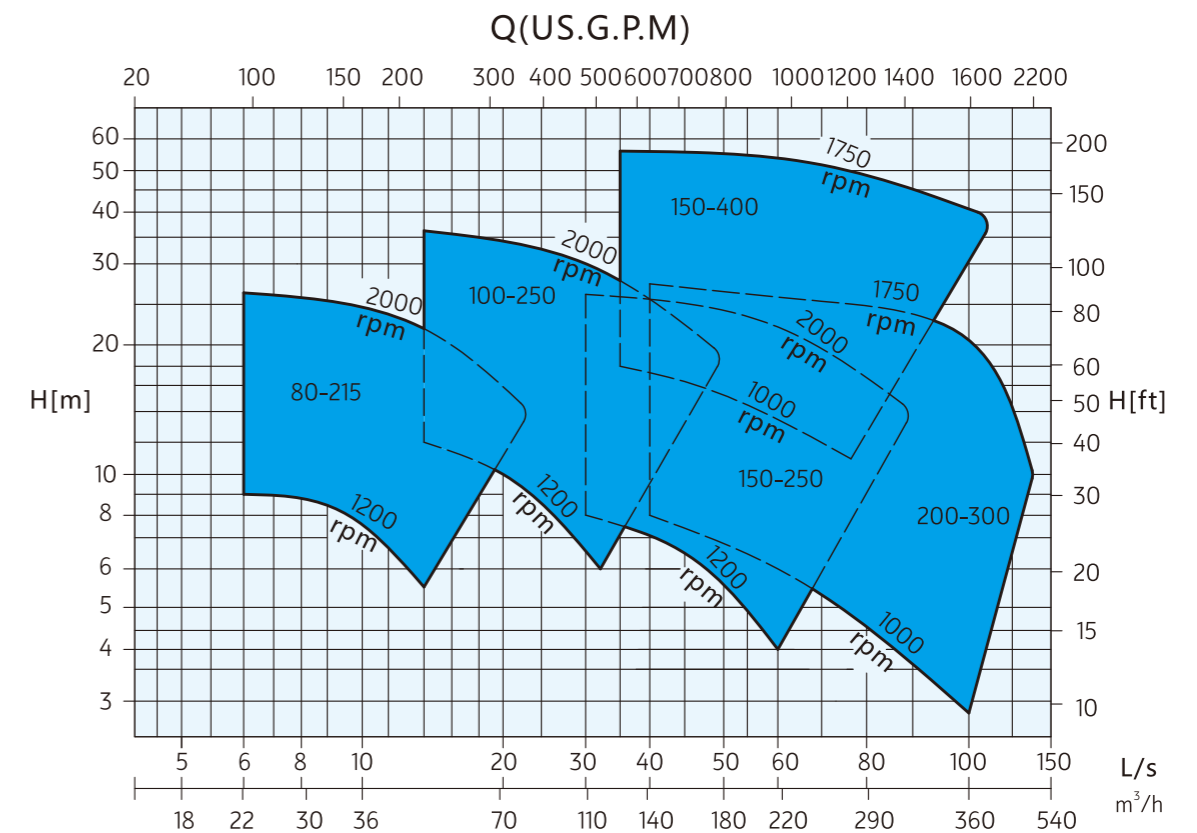
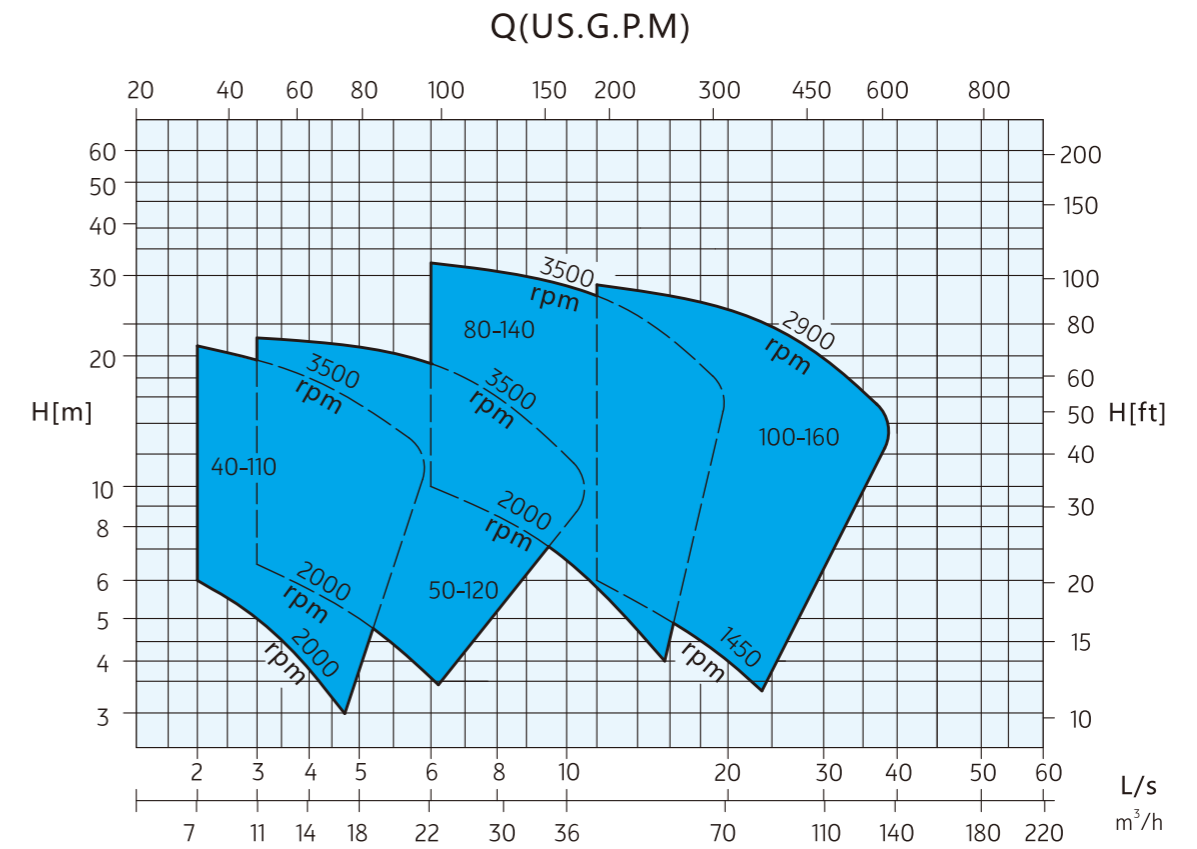
2. Material for main parts

Part Name	Standard materials	Optional materials
Pump body	Gray cast iron	Ductile iron
Impeller	Ductile cast iron	Bronze, 304/316 stainless steel
Shaft	45# steel	2Cr13/40Cr/304/316 stainless steel
Shaft sleeve	304 stainless steel	316 stainless steel
Shaft seal	Mechanical seal	\

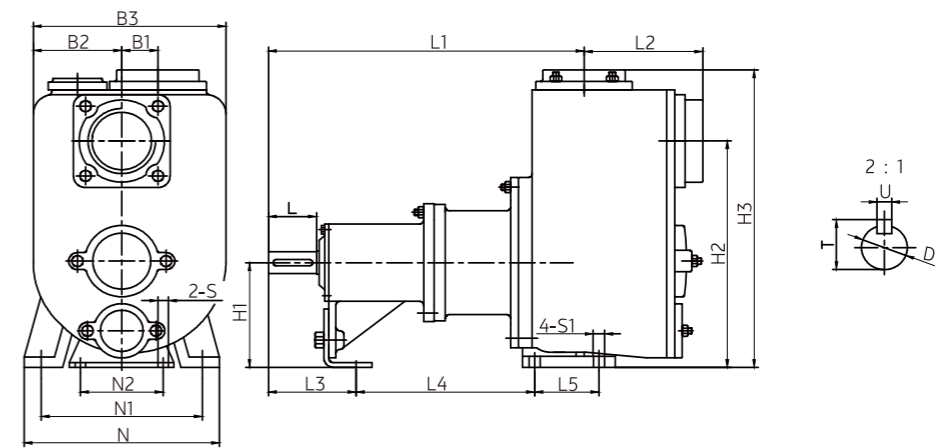
CYE80-140, CYE100-250, CYE150-250, CYE150-400, CYE200-300 Explosion diagram of a self-priming sewage pump



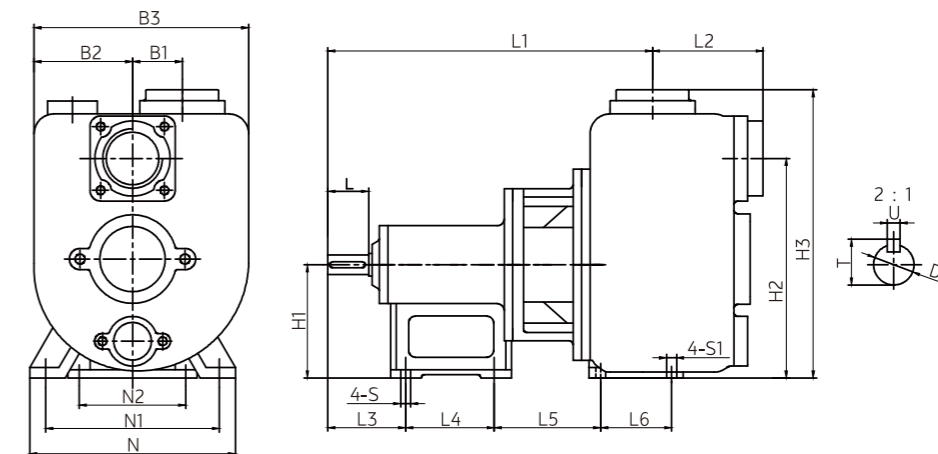
Number	Name	Number	Name	Number	Name	Number	Name
1	Pump body	14.1	Bolts	25.1	Shaft sleeve	53	Nuts
2	Wear-resistant plate		Flat Washers	25.2	Skeleton shaft seal	53.1	Nuts
3	Impeller		Elastic Washers	26	Repair hole cover	53.2	Nuts
6	Bracket		Nuts	27	Repair hole cover gasket	54	Studs
6.1	Pump bracket	16	Maintenance Hole Covers	33	Anti-loosening nut	55	Bolts
6.2	Flat washer	17	Maintenance Hole Cover Gaskets	34	Water slinger ring	57	Hex socket head cap screws
6.3	Elastic washer	19	Pump Covers	43	Pump cover gasket	58	Bearings
6.4	Bolt	21	Outlet Flanges	45.1	Bolt	59	Bearings
7	Shaft	22	Outlet Flange Gaskets	45.1	Nut	60	Keys
8	Bearing cover	23	Maintenance Hole Covers	47	Stud	61	Keys
10	Inlet flange	24	Maintenance Hole Cover Gaskets	48	Stud	62.1	Shaft retaining rings
14.1	Check valve elastic gasket	25	Mechanical Seals	49	Stud	66	Flat washers
	Check valve plate			52	Nut	70	Oil cups
	Check valve plate			52.1	Nut	100	Bearing cap washers



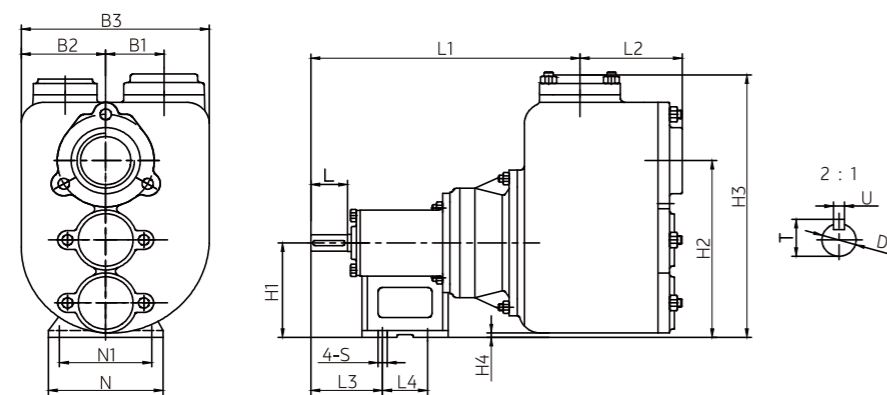
Model	Inlet/Outlet		Particle Size	Flow	Head	Speed	Power
	mm	in					
CYE40-110	40	1 1/2"	20	7	14	2900	1.1
				14	11		
				19	8		
CYE50-120	50	2"	25	13	15	2900	2.2
				25	11		
				34	8		
CYE80-140	80	3"	28	24	21	2900	5.5
				43	18		
				63	12		
CYE80-215	80	3"	40	25	13	1450	4
				44	11		
				60	8		
CYE100-160	100	4"	45	50	27	2900	15
				100	23		
				130	18		
CYE100-160A	100	4"	45	50	24.5	2900	15
				100	20		
				130	14		
CYE100-250	100	4"	50	50	18	1450	7.5
				100	14		
				130	10		
CYE150-250	150	6"	76	95	13	1450	11
				200	10		
				230	8		
CYE150-400	150	6"	50	150	37	1450	45
				200	36		
				310	30		
CYE200-300	200	8"	60	150	18.5	1450	22
				300	14		
				380	10		



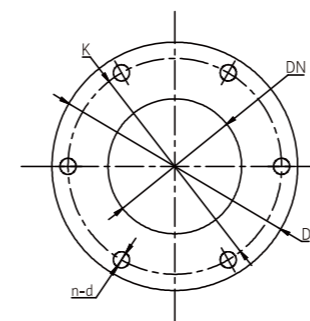
Model	External dimensions						Installation dimensions											Shaft extension end dimensions			Weight
	B1	B2	B3	L1	L2	H1	H2	H3	N2	N1	N	L	L3	L4	L5	s1	s	T	U	D	
CYE80-140	45	110	240	392	148	132	289	381	90	200	245	60	109	222	80	Φ14	Φ14	31	8	Φ28	55
CYE100-250	160	180	420	469	275	200	350	487	110	295	340	80	138	347	95	Φ14	Φ15	35	10	Φ32	148
CYE150-250	90	220	480	566	292	250	454	590	110	350	410	80	138	322	170	Φ18	Φ15	35	10	Φ32	261
CYE150-400	280	280	700	700	365	350	645	795	150	450	510	110	180	478	200	Φ18	Φ18	59	16	Φ55	445
CYE200-300	75	288	575	822	232	315	535	720	150	450	510	110	165	499	200	Φ18	Φ18	45	12	Φ42	395



Model	External dimensions						Installation dimensions											Shaft extension end dimensions			Weight	
	B1	B2	B3	L1	L2	H1	H2	H3	N2	N1	N	L	L3	L4	L5	L6	s1	s	T	U		D
CYE80-215	70	139	303	458	155	160	310	410	150	245	290	60	110	125	150	100	Φ14	Φ14	31	8	Φ28	75

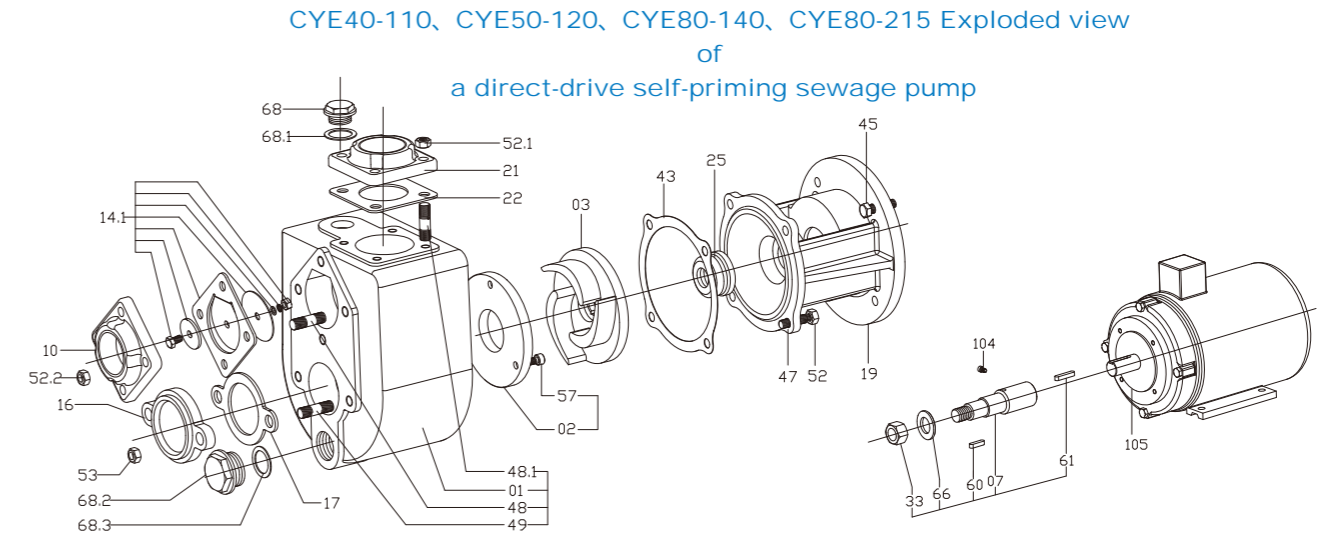


Model	External dimensions						Installation dimensions											Shaft extension end dimensions			Weight
	B1	B2	B3	L1	L2	H1	H2	H3	H4	L	N1	N	L3	L4	s	T	U	D	kg		
CYE40-110	30	80	173	263	75	90	163	240	-5	40	80	102	70	50	Φ10	21.5	6	Φ19	19		
CYE50-120	36	94	210	300	114	110	206	306	5	41	103	128	80	50	Φ12	21.5	6	Φ19	31		
CYE100-160	37	150	300	442	180	160	341	462	10	60	150	182	110	125	Φ14	31	8	Φ28	130		

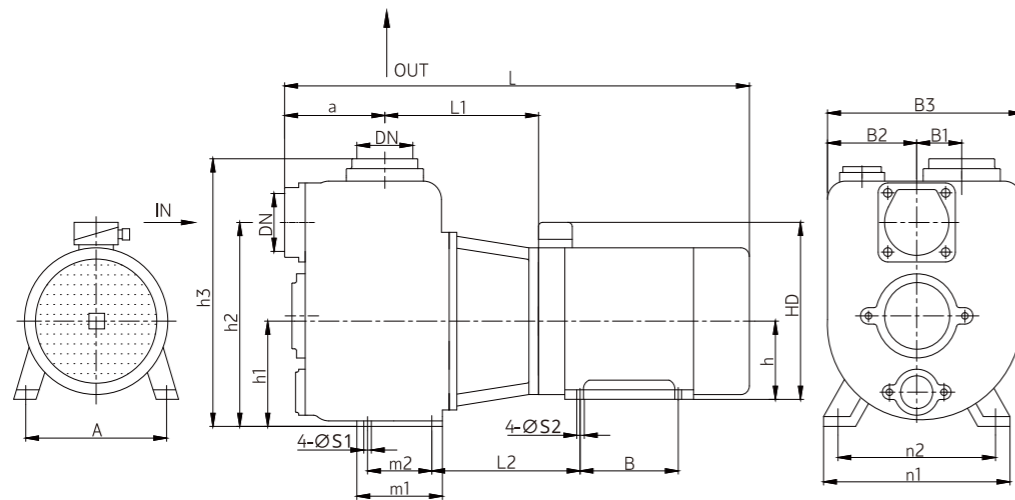


Model	Imported flange (mm)				Export flange (mm)			
	DN	D	K	n-d	DN	D	K	n-d
CYE40-110	RP1 1/2				RP1 1/2			
CYE50-120	RP2				RP2			
CYE80-140	RP3	--	--	--	RP3	--	--	--
CYE80-215					RP3	--	--	--
CYE100-160	RP4	--	--	--	RP4	--	--	--
CYE100-250					RP4	--	--	--
CYE150-250	Φ150	Φ276	Φ240	6-Φ18	Φ150	Φ276	Φ240	6-Φ18
CYE150-400	Φ150	Φ276	Φ240	6-Φ18	Φ150	Φ276	Φ240	6-Φ18
CYE200-300	Φ200	Φ320	Φ280	8-Φ18	Φ200	Φ320	Φ280	8-Φ18

Model	Inlet/Outlet Particle Size		Flow mm	Head m ³ /h	Speed m	Speed rpm	Power kw
	mm	in					
CYE40-110	40	1 1/2"	20	7	14	2900	1.1
				14	11		
				19	8		
CYE50-120	50	2"	25	13	15	2900	2.2
				25	11		
				34	8		
CYE80-140	80	3"	28	24	21	2900	5.5
				43	18		
				63	12		
CYE80-215	80	3"	40	25	13	1450	4
				44	11		
				60	8		
CYE100-160	100	4"	45	50	27	2900	15
				100	23		
				130	18		
CYE100-160A	100	4"	45	50	24.5	2900	15
				100	20		
				130	14		
CYE100-250	100	4"	50	50	18	1450	7.5
				100	14		
				130	10		

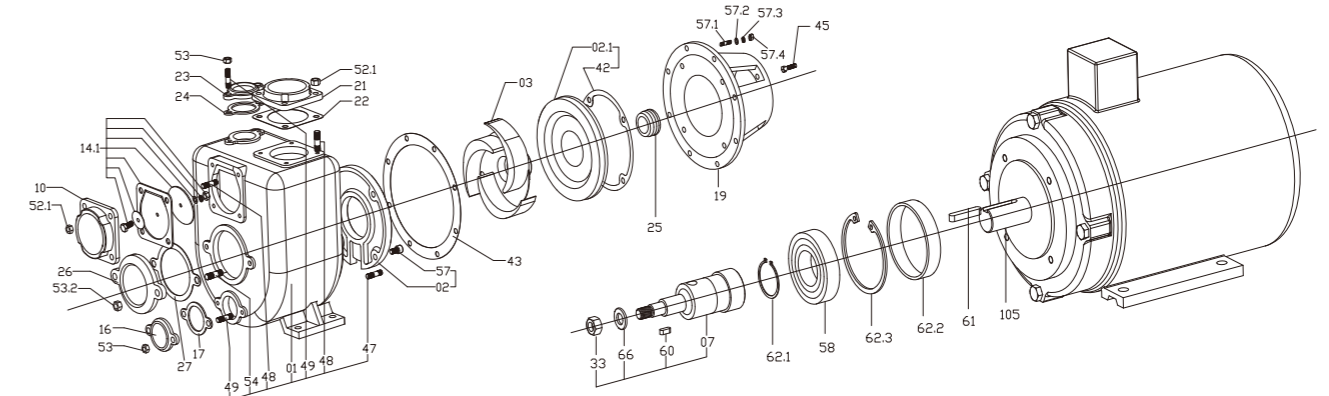


Number	Name	Number	Name	Number	Name	Number	Name	Number	Name
1	Pump body	14.1	Bol ts	22	Outlet flange gasket	49	Stud	66	Flat washer
2	Wear-resistant plate	16	Flat Washers	25	Mechanical seal	52	Nut	68	Plug
3	Impeller	17	Elastic Washers	33	Anti-loosening nut	52.1	Nut	68.1	O-ring
7	Shaft	19	Nuts	43	Pump cover gasket	52.2	Nut	68.2	Plug
10	Inlet flange	16	Maintenance Hole Caps	45	Bolt	53	Nut	68.3	Plug gasket
14.1	Check valve elastic gasket	17	Maintenance Hole Cap Gaskets	47	Stud	53.2	Nut	104	Hex socket set
	Check valve plate	19	Direct Connector Brackets	48	Stud	60	Key	105	screw
	Check valve plate	21	Outlet Flanges	48.1	Stud	61	Key		Motor



Number	model	Motor (B34)		Water pump installation dimensions (mm)																	Weight (kg)						
		model	Power kw	DN	B1	B2	B3	h1	h2	h3	m1	m2	n1	n2	a	L1	s1	s2	H	HD	A	B	L2	L	single mot pump or	Total weight of the unit	
1	CYE40-110-01102	MS-802-2	1.1	1 1/2"	30	80	173	95	168	245	-	-	-	-	75	153.5	-	10	80	215	125	100	-	485	17	17	34
2	CYE50-120-02202	MS90L-2	2.2	2"	36	94	210	105	201	321	-	-	-	-	114	185	-	10	90	235	140	125	-	595	27	25	52
3	CYE80-140-04002	MS112M-2	4	3"	45	110	240	132	287	380	115	80	245	200	148	202.5	-	12	112	284	190	-	211	690	48	42	90
4	CYE80-140-05502	MS132S1-2	5.5		45	132	287	380	115	80	245	200	148	202.5	14	12	132	324	216	140	-	253	763	50	64	114	
5	CYE80-215-04004	MS112M-4	4	4"	70	139	303	160	310	410	133	100	290	245	156	239	-	12	112	284	190	-	226	735	67	46	113
6	CYE100-160-15002	MS160M2-2	15		37	150	300	160	341	462	-	-	-	-	180	283.5	-	15	160	406	254	210	-	969	125	107	232
7	CYE100-250-07504	MS132M-4	7.5	160	180	420	200	350	487	145	95	340	295	275	226.5	14	12	132	324	216	178	331.5	932	135	77	212	

CYE80-215, CYE100-250 Exploded view of a direct-drive self-priming sewage pump



Number	Name	Number	Name	Number	Name	Number	Name	Number	Name
1	Pump body	14.1	Flexible washers	26	Repair hole cover	52.2	Nuts	61	Key
2	Front wear plate	16	Nuts	27	Repair hole cover gasket	53	Nuts	62.1	Shaft retaining ring
2.1	Rear wear plate	16	Maintenance port covers	33	Anti-loosening nut	53.2	Nuts		Bore retaining ring
3	Impeller	17	Maintenance port cover gaskets	43	Pump cover gasket	57	Hex socket head cap screws	62.2	Elastic washer
7	Shaft	19	Direct coupling brackets	45	Bolt	57.1	Studs	66	Flat washer
10	Inlet flange	21	Outlet flanges	47	Stud	57.2	Flat washers	68	Screw plug
14.1	Check valve elastic gasket	22	Outlet flange gaskets	48	Stud	57.3	Flexible washers	68.1	O-ring
	Check valve plate	23	Maintenance port covers	48.1	Stud	57.4	Nuts	68.2	Screw plug
	Check valve plate	24	Maintenance port cover gaskets	49	Stud	58	Bearings	68.3	Screw plug washer
	Bolt	25	Mechanical seals	52.1	Nut	60	Keys	104	Hex socket set screw
	Flat washer							105	Motor

Fault Repair Checklist

Fault	Causes	Solution
The water pump is not discharging water.	<ul style="list-style-type: none"> Inlet/outlet valves not open; inlet/outlet pipes blocked; impeller blocked; motor running in the wrong direction; motor phase loss; very slow speed. Air leakage in the suction pipe; air in the pump chamber. Insufficient inlet water supply; excessive suction head; foot valve leakage; excessive pipeline resistance; improper pump selection. 	<ul style="list-style-type: none"> Inspect and remove blockages Adjust motor direction and tighten motor wiring Tighten all sealing surfaces and purge air Open pump cover or vent valve to release air Stop inspection and adjustment: Reduce pipe bends and select a new pump
There is a lot of noise and vibration.	<ul style="list-style-type: none"> Unstable base Bent pump shaft Cavitation Severe bearing wear Debris in the inlet pipe Misalignment between the pump and motor shafts 	<ul style="list-style-type: none"> Reinforcement Replacement or correction Adjust working conditions Replacement Remove debris Adjust coaxiality
Insufficient water output	<ul style="list-style-type: none"> First, check the cause (step 1). The impeller flow path and suction pipe are blocked, or the valve opening is insufficient. The impeller or wear-resistant disc is severely worn. Insufficient power or too low speed. 	<ul style="list-style-type: none"> First, press 1 to clear the blockage. Clear the blockage and readjust the valve opening. Replace the valve. Add sufficient power and adjust to the rated speed.
Excessive shaft power consumption	<ul style="list-style-type: none"> Exceeding the rated flow rate Excessive suction head Damaged bearings Bent pump shaft or stuck impeller Blocked or jammed flow channels inside the pump 	<ul style="list-style-type: none"> Adjust flow rate, partially close outlet valve Lower mounting surface Replace bearing Replace or calibrate Remove blockage
Motor heating	<ul style="list-style-type: none"> Excessive flow rate, overload operation Friction and rubbing Motor bearing damage Insufficient voltage 	<ul style="list-style-type: none"> Close the outlet valve slightly Inspect and troubleshoot Replace the bearing Stabilize the pressure
Water pump leaking	<ul style="list-style-type: none"> Mechanical seal wear Sand holes or cracks in the pump body Uneven sealing surface Loose mounting bolts 	<ul style="list-style-type: none"> Replacement Welding or replacement Repair Tightening

Pipeline and Pipeline Fittings Loss Estimation

Pipe diameter (mm)	Flow rate (L/s)																							
	1	2	4	6	8	10																		
25	3.27	13.0																						
38	2.8	11.0	55.0				15	20																
50	0.8	3.1	13.0	29.0					25	30														
65		0.8	3.2	7.1	13.0	20.0					40	50												
75		0.4	1.6	3.3	5.9	9.6	21.6						60	70										
100			0.4	0.8	1.3	2.1	6.8	8.6	13.0	19.4									80	90				
125				0.23	0.4	0.63	1.3	2.7	4.1	5.9	10.7								100	110				
150					0.16	0.26	0.58	1.1	1.6	2.3	4.2	6.4	9.4							120	130			
175						0.11	0.27	0.5	0.74	1.05	1.9	2.9	4.3	5.8	7.7	9.6					140	160		
200							0.13	0.26	0.37	0.53	0.93	1.5	2.1	2.9	3.7	4.7	6.1	7.2	8.5			180	200	
250								0.07	0.12	0.18	0.3	0.48	0.68	0.93	1.2	1.5	1.9	2.3	2.8	3.3	3.7	4.9	6.5	
300										0.07	0.12	0.19	0.27	0.37	0.49	0.61	0.76	0.9	1.1	1.3	1.5	2.0	2.4	3.0

A simplified table of straight pipe friction losses (for estimation purposes). The number of meters of straight pipe loss per 100m is based on new cast iron pipes; the number of meters for old pipes is doubled.

Maximum flow limit for a given pipe diameter

Pipe diameter (mm)	Maximum flow (L/s)	Maximum flow velocity (m/s)	Pipe diameter (mm)	Maximum flow (L/s)	Maximum flow velocity (m/s)
25	1.0	2.04	125	30.0	2.44
38	2.5	2.2	150	43.0	2.45
50	4.17	2.12	175	60.0	2.49
65	6.67	2.01	200	83.3	2.69
75	10.0	2.26	250	133.3	2.72
100	18.4	2.33	300	192.0	2.71

Each valve and bend is equivalent to the straight pipe length.

Type	Conversion pipe diameter multiple	Remark
Fully open gate valve	13	Double the amount if not fully opened
Standard bend	25	
Check valve	100	
Foot valve	100	Partial congestion doubled

Note: For example, for a 100mm diameter pipe, the foot valve is equivalent to 100 times the diameter, which equals 100 x 100 - 10000mm = 10m of straight pipe length. Assuming a flow rate of 8L/s, referring to the table above, the head loss is 1.3m per 100m of straight pipe. Therefore, the head loss is 0.13m per 10m. That is, when the flow rate of the 100m foot valve is 8L/s, the head loss is 0.13m.