

Submersible Pumps

Large Size (Non-Clogging Type) CN Series



CN

CN Large Bore and Forced Cooling

Bore:200~800mm/Output:7.5~75kW



Automatic connection type

The automatic connection type CN-P pump is automatically detached from the discharge pipe by just pulling it up from the ground or automatically connected to the discharge pipe by just letting it down to the bottom of the pit along with the guide pipe.

Vertical wet/dry pit type with submersible motor

The vertical wet/dry pit type CNT pump is a stationary type sewage pump which can be installed outside the pit. The motor is always cooled during the operation by the differential pressure type forced cooling system. Since the pump is equipped with a submersible motor that features complete watertight construction, it can be used as it is even if the pump room is flooded with water. To obtain higher pump head, it is recommended to use the CN-P type pump in combination with this pump in direct-coupling.

※A portable type with detachable hoses is also available upon request.

CN Large Bore and Natural Cooling

Bore:200~400mm/Output:7.5~45kW

Automatic connection type

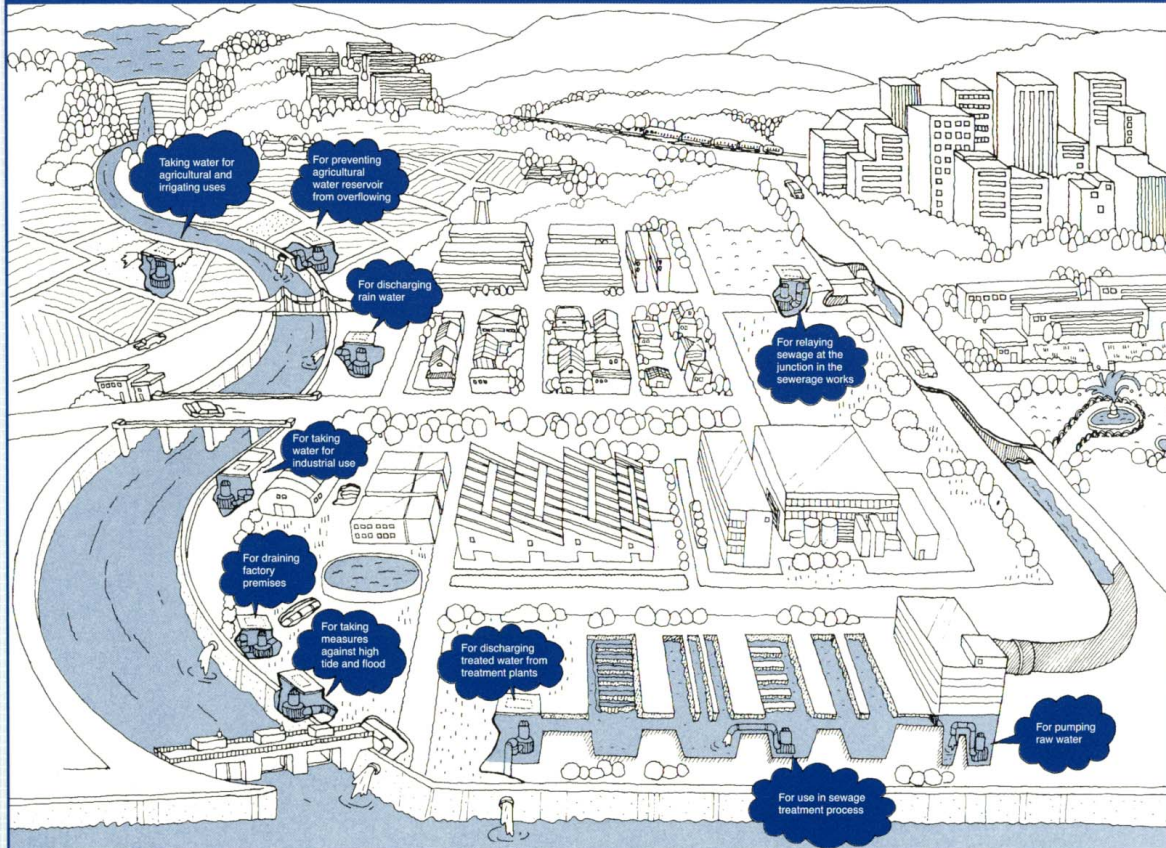
The automatic connection type CN-P pump can be taken out of the pit by just pulling it up to the ground requesting no manual works inside the pit and then be automatically connected with the discharge pipe again by just letting it down to the bottom of the pit along with the guide pipe.

Flange connection type

The flange connection type CN-F pump is installed in the pit at the bottom and connected to the discharge pipe via flange.



A wide variety of applications are self-evident for our customer's reliance on our submersible pumps

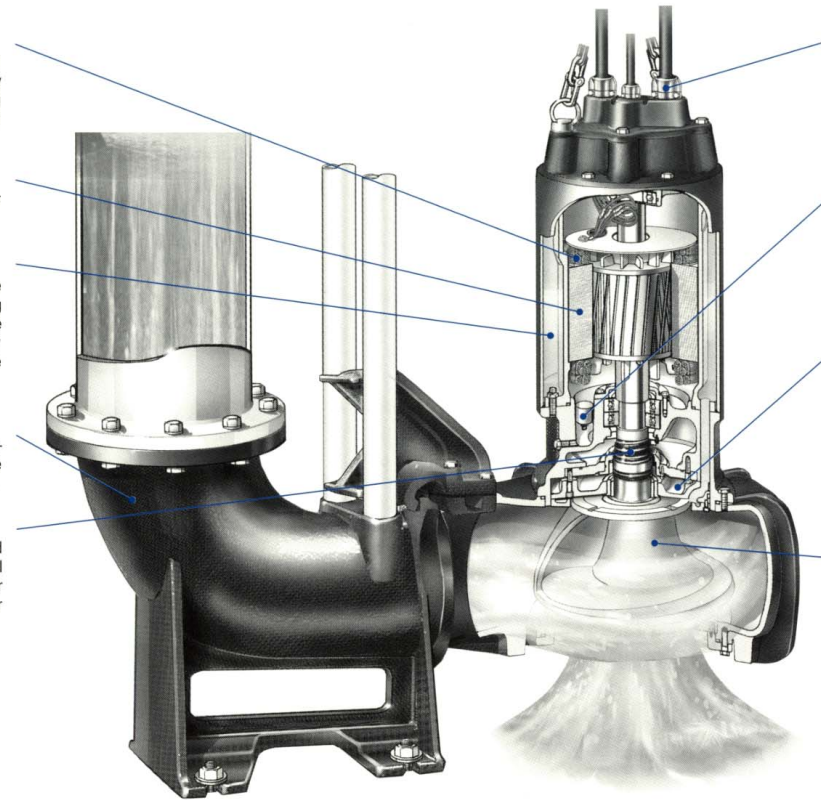


CN

- Built-in moisture detector
 - Adoption of forced cooling system for motor
- The minimum water level can be set low.



- **Micro-thermal protector**
The built-in micro-thermal protector (motor protector) positively prevents the motor from burning due to overloading, impeller clogging or open phase operation.
- **Motor**
Dry type motor with Class E or F insulation is employed
- **Forced cooling system**
Motor is always cooled during the operation by the water surrounding the motor through which part of the sewage is allowed to pass by making good use of the pressure difference in the pump.
- **Discharge connection**
The submersible pump is automatically connected to the discharge pipe with the discharge connection.
- **Shaft seal**
A highly wear resistant upper and lower two stage double mechanical seal positively prevents the water from penetrating into the motor chamber.



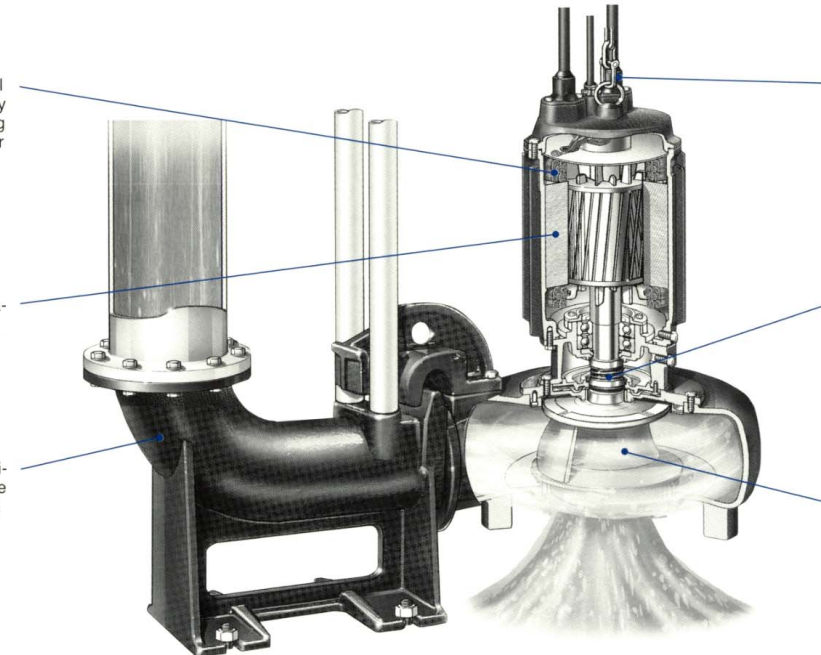
- **Cable outlet with core sealer**
The self-contained core sealer of the cable outlet shuts out the water from penetrating into the motor chamber through the core wires even if the cable tip is immersed in water or the sheath is damaged.
- **Moisture detector**
The moisture detector is activated to cut off the power supply when the water or oil containing the moisture penetrates into the motor chamber thus preventing deterioration of the motor insulation.
- **Pressure relief construction**
The service life of the mechanical seal is remarkably extended because the high pressure pulsation flow generated by the impeller is fully relieved in here. (Applicable range: part of 18.5/22kW models and all models from 30kW and over)
- **Impeller**
Non-clogging type impellers are specially adopted to prevent overloading at any permissible flow rate of the pump.

CN

- Lightweight
- Both flange connection type and automatic connection type are available.



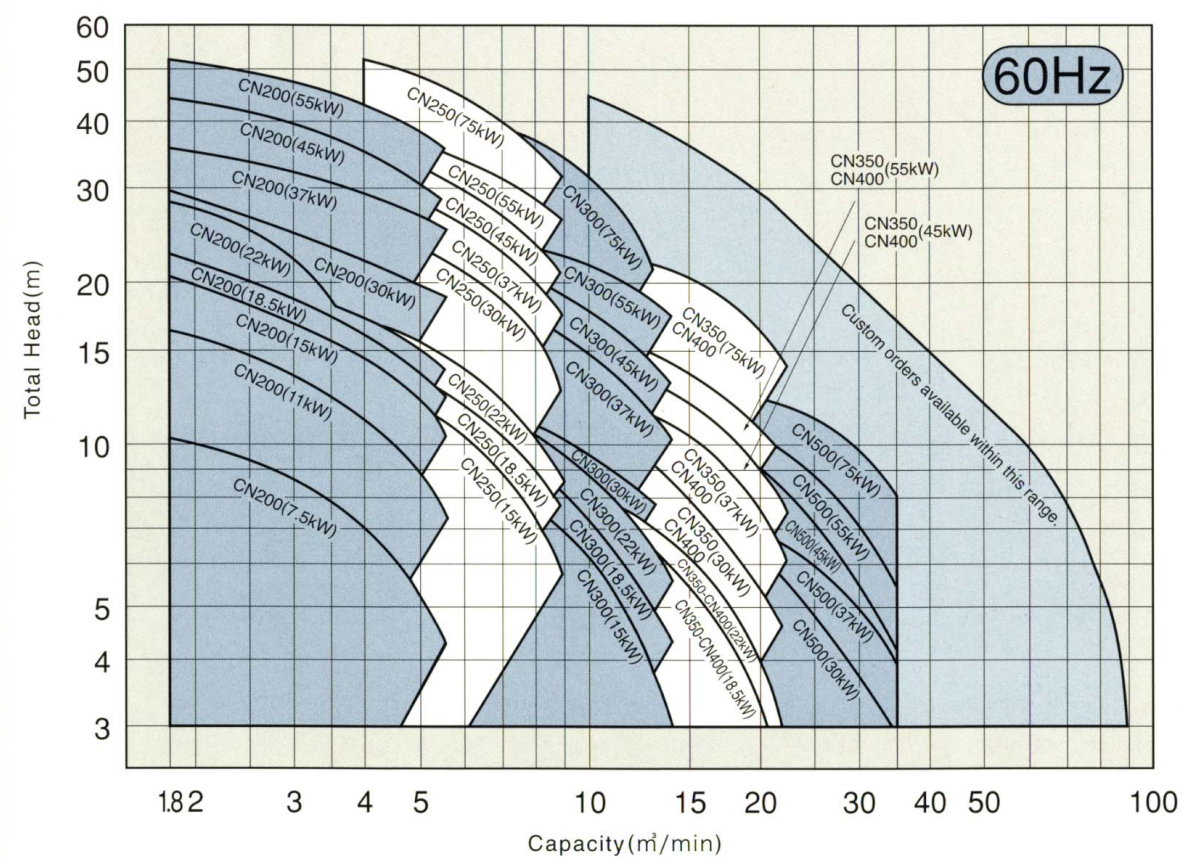
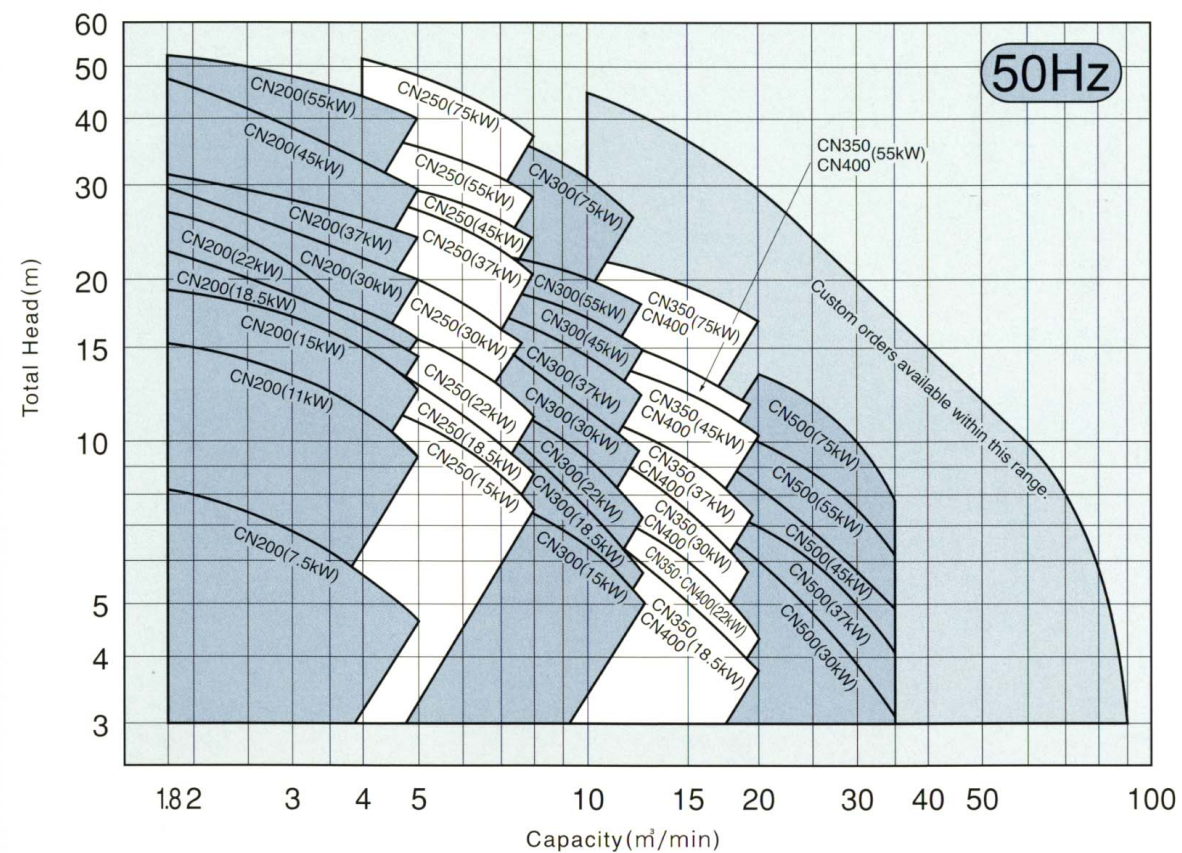
- **Micro-thermal protector**
The built-in micro-thermal protector (motor protector) positively prevents the motor from burning due to overloading, impeller clogging or open phase operation.
- **Motor**
Dry type motor with Class E insulation is employed.
- **Discharge connection**
The submersible pump is automatically connected to the discharge pipe with the discharge connection.



- **Cable outlet with core sealer**
The self-contained core sealer of the cable outlet shuts out the water from penetrating into the motor chamber through the core wires even if the cable tip is immersed in water or the sheath is damaged.
- **Shaft seal**
A highly wear resistant upper and lower two stage double mechanical seal positively prevents the water from penetrating into the motor chamber.
- **Impeller**
Non-clogging type impellers are specially adopted to prevent overloading at any permissible flow rate of the pump.



Performance Curves



Standard Specifications

Bore mm	Model	output kW	Impeller Passage Size(mm) ():Impeller No.				Poles P	Weight kg	Motor Insulation Class	Actuating System	Power Cable		Mechanical Seal Material														
			50Hz		60Hz						Class	Length(m)	Upper	Lower													
200	CN200-P	7.5	(263DY)	110 × 70	(215Y)	85 × 70	6	400	E	Direct			SiC / SiC	Carbon / SiC													
		11	(211A)	95 × 65	(212)	95 × 65	4	390		Carbon / Hard Metal																	
		15	(215)	85 × 70	(216)	75 × 60		410																			
		18.5	(620Y)	125 × 124	(630Y)	125 × 120	6	540	F	Star-Delta	2PNCT	8	Carbon / SiC	Hard Metal / Hard Metal													
			(610AY)	125 × 123																							
			(470Y)	φ75	(480Y)	φ75	4																				
		22	(640)	115 × 113	(640)	115 × 115	6																				
			(630)	125 × 120																							
			(620)	125 × 124	(630)	125 × 120																					
		30	(610A)	125 × 123	(630)	125 × 120	4																				
			(470)	φ75																(480)	φ75						
			(251AY)	75 × 100	(252AY)	75 × 75														4	900						
(251A)	75 × 100	(252A)	75 × 75																								
(205AY)	40 × 70	(206AY)	45 × 90	930																							
(205A)	40 × 70	(206A)	45 × 90																								
250	CN250-P	15	(259)	115 × 90	(250)	100 × 80	4	415	E	Star-Delta	2PNCT	8	Carbon / Hard Metal	Hard Metal / Hard Metal													
		18.5	(253Y)	80 × 110	(254Y)	80 × 90	6	615	F																		
		22	(253)	80 × 110	(254)	80 × 90																					
		30	(251AY)	70 × 95	(252AY)	75 × 70	4	900																			
		37	(251A)	70 × 95	(252A)	75 × 70																					
		45	(255Y)	65 × 110	(256Y)	70 × 95																					
		55	(255)	65 × 110	(256)	70 × 95	1,440																				
		75	(257B)	60 × 150	(258A)	60 × 120																					
300	CN300-P	15	(315)	145 × 115	(316)	130 × 100	6	520	E	Star-Delta	2PNCT	8	Carbon / Hard Metal	Hard Metal / Hard Metal													
		18.5	(321AY)	175 × 95	(322AY)	140 × 105		640	F																		
		22	(321A)	175 × 95	(322A)	140 × 105																					
		30	(301Y)	180 × 130	(302AY)	135 × 95		975																			
		37	(301)	180 × 130	(302A)	135 × 95																					
		45	(303)	135 × 110	(304)	140 × 145		1,040																			
		55	(305)	110 × 140	(306)	105 × 125																					
		75	(307)	80 × 85	(308)	85 × 80	4	1,500																			
350	CN350-P	18.5	(411Y)	185 × 150	(412Y)	165 × 135	8	1,090	F	Star-Delta	2PNCT	8	Carbon / SiC	Hard Metal / Hard Metal													
		22	(411)	185 × 150	(412)	165 × 135	6	1,150																			
		30	(351Y)	185 × 135	(352Y)	185 × 105																					
		37	(351)	185 × 135	(352)	185 × 105	1,200																				
		45	(353)	185 × 140	(354)	180 × 125																					
		55	(405)	150 × 190	(406)	130 × 170	1,400																				
		75	(401)	135 × 165	(402)	120 × 150																					
400	CN400-P	18.5	(411Y)	185 × 150	(412Y)	165 × 135	8	1,090	F	Star-Delta	2PNCT	8	Carbon / SiC	Hard Metal / Hard Metal													
		22	(411)	185 × 150	(412)	165 × 135	6	1,150																			
		30	(351Y)	185 × 135	(352Y)	185 × 105																					
		37	(351)	185 × 135	(352)	185 × 105	1,200																				
		45	(353)	180 × 140	(354)	180 × 125																					
		55	(405)	150 × 190	(406)	130 × 170	1,400																				
		75	(401)	135 × 165	(402)	120 × 150																					
500	CN500-P	30	(511Y)	175 × 250	(511Y)	175 × 250	50Hz:10	2,160	F	Star-Delta	2PNCT	8	Carbon / SiC	Hard Metal / Hard Metal													
		37	(511)	175 × 250	(511)	175 × 250	60Hz:12								8												
		45	(505Y)	220 × 180	(506Y)	200 × 160	8	2,000																			
		55	(505)	220 × 180	(506)	200 × 160																					
		75	(628Y)	210 × 160	(614Y)	200 × 150	8	2,400																			

Standard Accessories

- Connection (with bolts and nuts)1set
- Guide holder (with bolts and nuts)1set
- Sliding bracket1set
- Cable (8m)3pcs.
- Pump lifting chain (6m)1pc.

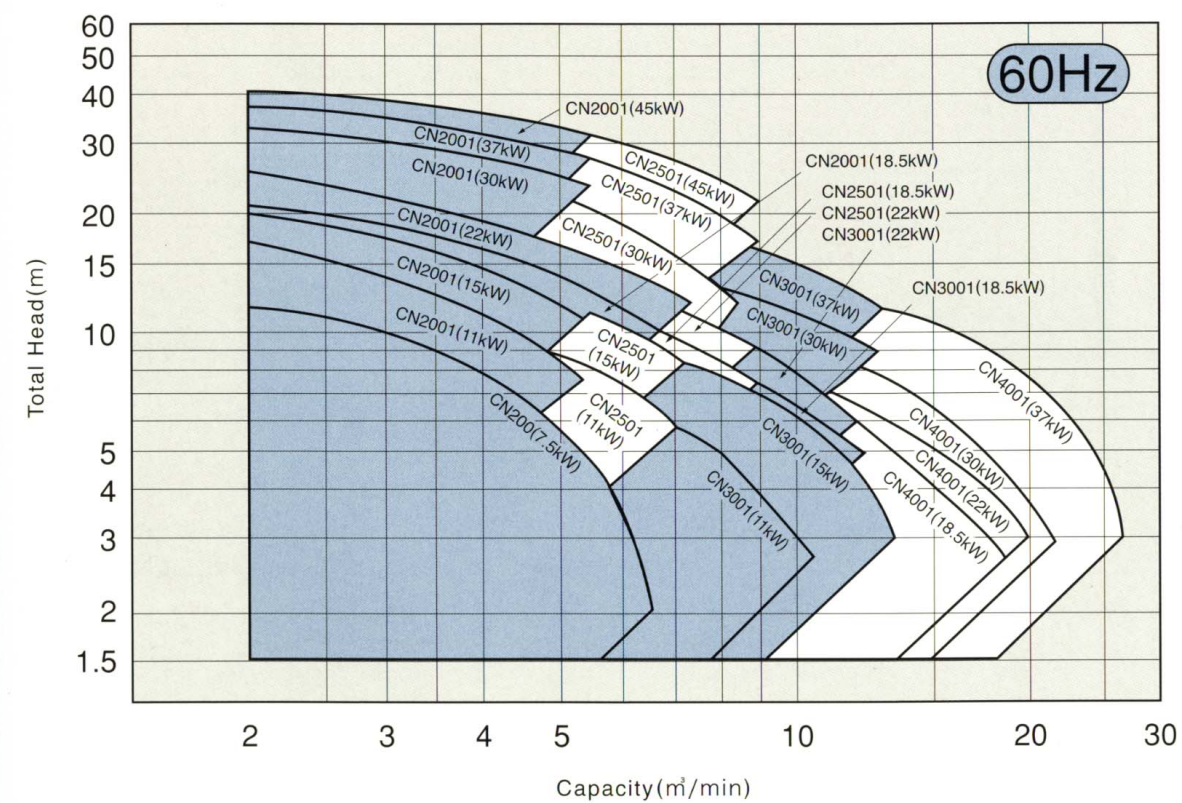
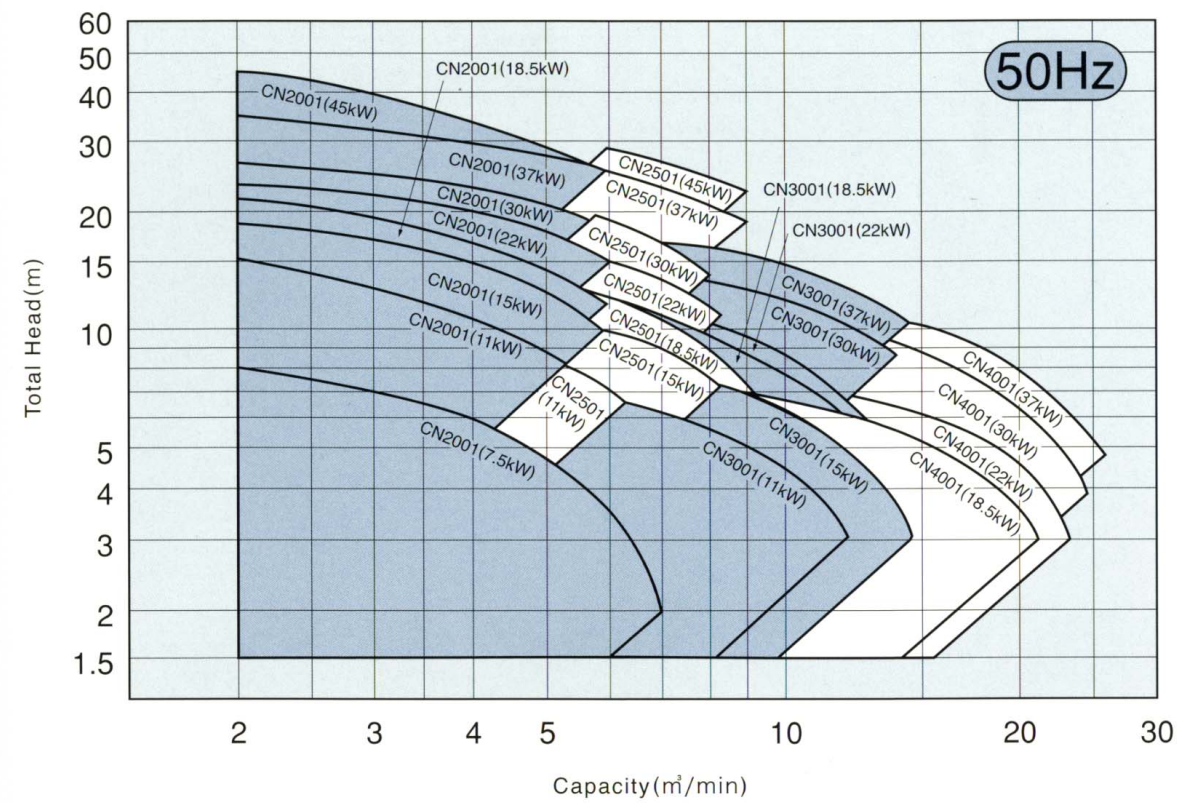
※7.5kW:Cable (8m)2pcs.

Connection Weight

Bore (mm)	Weight (kg)	Remarks
200	190(90)	() :18.5~22kW
250	195	
300	215(250)	() :37~45kW
350	310(400)	() :75kW
400	310(400)	() :75kW
500	830	



Performance Curves



Standard Specifications

Bore mm	Model		output kW	Impeller Passage Size(mm) ():Impeller No.				Poles P	Weight(kg)		Motor Insulation Class	Actuating System	Power Cable		Mechanical Seal Material	
	Automatic Connection	Flange Connection		50Hz		60Hz			Automatic Connection	Flange Connection			Class	Length(m)	Upper	Lower
200	CN2001-P	CN2001-F	7.5	(263DY)	110 × 70	(A215Y)	85 × 70	6	270	315	E	Star-Delta	2PNCT	8	SiC/SiC	SiC/SiC
			11	(A211A)	95 × 65	(A212)	95 × 65	4								
			15	(A215)	85 × 70	(A216)	85 × 60									
			18.5	(221DY)	75 × 70	(222DY)	100 × 75									
			22	(221D)	75 × 70	(222D)	100 × 75									
			30	(251AY)	75 ×100	(252AY)	75 × 75									
			37	(251A)	75 ×100	(252A)	75 × 75									
			45	(205AY)	40 × 70	(244A)	45 × 90									
250	CN2501-P	CN2501-F	11	(A211A)	115 × 90	(A250Y)	100 × 80	4	270	315	E	Star-Delta	2PNCT	8	SiC/SiC	SiC/SiC
			15	(A259)	115 × 90	(A250)	100 × 80		275	325						
			18.5	(263DY)	115 × 85	(264DY)	100 × 90		345	395						
			22	(263D)	115 × 85	(264D)	100 × 90									
			30	(251AY)	70 × 95	(252AY)	75 × 70		650	735						
			37	(251A)	70 × 95	(252A)	75 × 70									
			45	(251B)	65 ×110	(244A)	70 × 95		700	785						
300	CN3001-P	CN3001-F	11	(A315Y)	145 ×115	(A316Y)	130 × 100	6	385	450	E	Star-Delta	2PNCT	8	SiC/SiC	SiC/SiC
			15	(A315)	145 ×115	(A316)	130 × 100									
			18.5	(321AY)	175 × 95	(322AY)	140 × 105									
			22	(321A)	175 × 95	(322A)	140 × 105	4	420	475						
			(331D)	130 × 95	(332D)	130 × 75										
			30	(301Y)	180 ×130	(302AY)	135 × 95	6	810	915						
			37	(301)	180 ×130	(302A)	135 × 95									
400	CN4001-P	CN4001-F	18.5	(411Y)	185 ×150	(412Y)	165 × 135	8	830	1,030	E	Star-Delta	2PNCT	8	SiC/SiC	SiC/SiC
			22	(411)	185 ×150	(412)	165 × 135									
			30	(351Y)	185 ×135	(352Y)	185 × 105	6	850	1,090						
			37	(351)	185 ×135	(352)	185 × 105									

※Motor insulation class F also available

Standard Accessories

Automatic Connection

- Connection (with bolts and nuts)1set
- Guide holder (with bolts and nuts)1set
- Sliding bracket1set
- Cable (8m)3pcs.
- ※7.5kW:Cable (8m)2pcs.
- Pump lifting chain (6m)1pc.

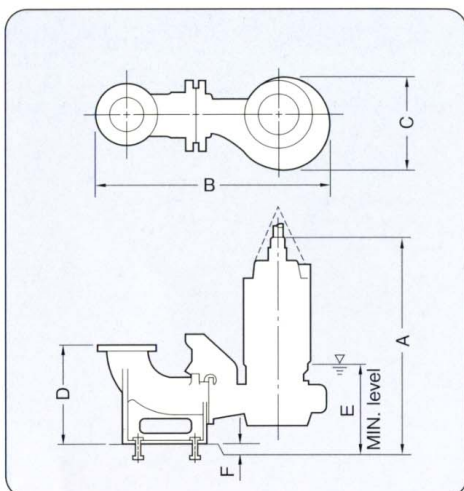
Flange Connection

- Cable (8m)3pcs.
- ※7.5kW:Cable (8m)2pcs.

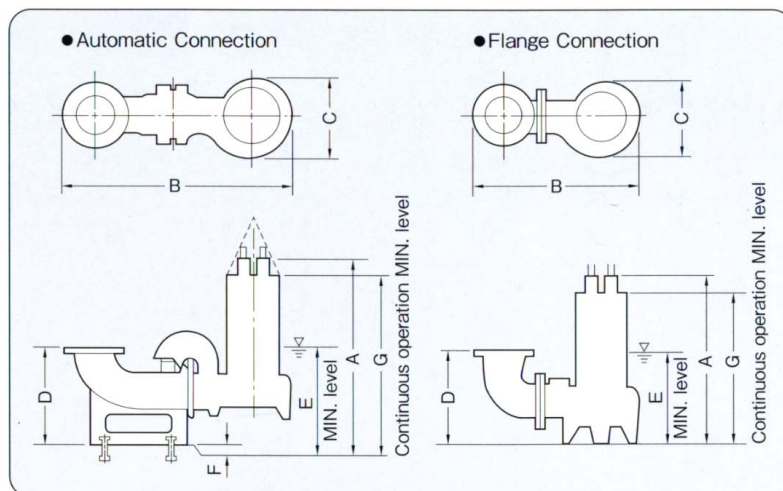
Connection Weight

Bore (mm)	Weight (kg)
200	120
250	195
300	215
400	310

CN Forced Cooling



CN Natural Cooling



Model	Output kW	A (mm)						E (mm)		F (mm)	
		50Hz	60Hz	50Hz	60Hz	50Hz	60Hz	50Hz	60Hz	50Hz	60Hz
CN200-P	7.5	1,127	1,118	1,308	1,307	461	458	570	550	—	
	11 · 15	1,118	1,107	1,307	1,307	458	458				
	18.5 · 22	1,284	1,278	1,378	1,378	674	674	570	550	60	
	30 · 37	1,524	1,519	1,519	1,519	603	603				
	45 · 55	1,492	1,486	1,646	1,646	583	583				
CN250-P	15	1,145	1,139	1,391	1,391	461	461	663	650	75	
	18.5 · 22	1,307	1,307	1,602	1,602	603	603				
	30 · 37	1,542	1,542	1,602	1,602	603	603				
	45 · 55	1,519	1,519	1,602	1,602	603	603				
	75	1,662	1,662	1,729	1,729	583	583	805	750	80	
CN300-P	15	1,231	1,231	1,528	1,528	587	587			45	
	18.5 · 22	1,442	1,442	1,682	1,682	755	755				
	30 · 37	1,677	1,677	1,682	1,682	755	755				
	45	1,614	1,614	1,682	1,682	755	755				
	55	1,703	1,703	1,682	1,682	755	755	805	750	80	
CN350-P	75	1,755	1,755	1,748	1,748	691	691				
	18.5 · 22	1,747	1,747	1,847	1,847	819	819	910	1,000	70	
	30 · 37	1,825	1,825	1,847	1,847	819	819				
	45	1,762	1,762	1,847	1,847	819	819				
	55	1,851	1,851	1,847	1,847	819	819				
CN400-P	75	2,165	2,165	2,133	2,133	857	857	870	1,000	270	
	18.5 · 22	1,747	1,747	1,912	1,912	819	819				
	30 · 37	1,825	1,825	1,912	1,912	819	819				
	45	1,762	1,762	1,912	1,912	819	819				
	55	1,851	1,851	2,165	2,165	857	857	1,220	1,300	155	
CN500-P	30 · 37 · 45 · 55	2,389	2,389	2,485	2,485	997	997				
	75	2,434	2,434	2,485	2,485	997	997	1,500	1,500	200	

Model	Output kW	A (mm)						E (mm)		F (mm)	
		50Hz	60Hz	50Hz	60Hz	50Hz	60Hz	50Hz	60Hz	50Hz	60Hz
Automatic Connection	CN2001-P	7.5	974	1,364	478	570	550	—		880	
		11 · 15	1,068	1,253	603						
		18.5 · 22	1,253	1,519	603	663	650	75		1,000	
		30 · 37	1,271	1,602	603						
		45	1,344	1,602	603						
	CN2501-P	11 · 15	1,000	1,444	497	663	650	75		1,000	
		18.5 · 22	1,094	1,444	497						
		30 · 37	1,271	1,602	603						
		45	1,347	1,602	603						
	CN3001-P	11 · 15	1,181	1,528	601	805	750	45		1,090	
		22 [4P]	1,675	1,675	603						
		18.5 · 22 [6P]	1,482	1,682	755						
		30 · 37	1,482	1,682	755						
Flange Connection	CN2001-F	7.5 (50Hz)	1,008	527	645	550	—	915		905	
		7.5 (60Hz)	999	528							
		11 · 15	999	508	700	625	660	—		1,000	
		18.5 · 22	1,101	508							
		30 · 37	1,241	508							
	CN2501-F	45	1,334	508	645	550	—	915		905	
		11 · 15	1,008	527							
		18.5 · 22	1,101	508							
		30 · 37	1,258	508							
	CN3001-F	45	1,334	508	645	550	—	915		905	
		11 · 15	1,008	527							
		18.5 · 22	1,101	508							
		30 · 37	1,258	508							
Flange Connection	CN4001-P	18.5 · 22	1,630	1,912	819	750	1,000	245		1,540	
		30 · 37	1,630	1,912	819						
	CN2001-F	7.5 (50Hz)	1,008	527	645	550	—	915		905	
		7.5 (60Hz)	999	528							
		11 · 15	999	508	700	625	660	—		1,000	
		18.5 · 22	1,101	508							
		30 · 37	1,241	508							
	CN2501-F	45	1,334	508	645	550	—	915		905	
		11 · 15	1,008	527							
		18.5 · 22	1,101	508							
		30 · 37	1,258	508							
Flange Connection	CN3001-F	45	1,334	508	645	550	—	915		905	
		11 · 15	1,008	527							
		18.5 · 22	1,101	508							
		30 · 37	1,258	508							
	CN4001-F	18.5 · 22	1,660	1,631	934	1,295	1,000	—		1,585	
		30 · 37	1,660	1,631	934						

Please let us know the following information when you have an inquiry on the pump;
 ●Actual and total pump head ●Capacity ●Bore ●Intended uses

Specifications and dimensions are subject to change without notice.

ShinMaywa Industries, Ltd.

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