

ShinMaywa

Submersible Pumps

Large-sized (Channel Impeller Type) CN Series

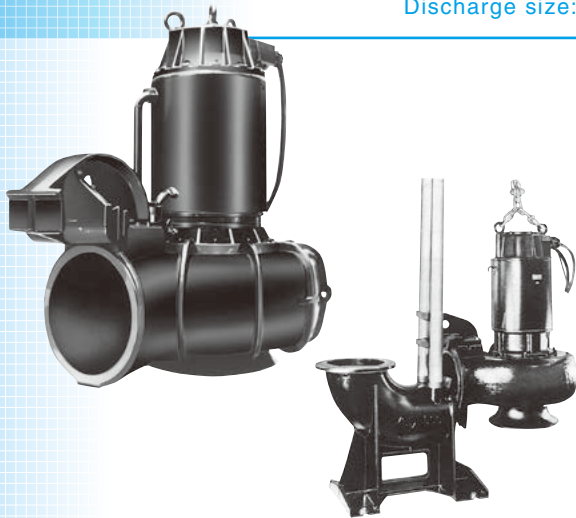
- Discharge size 200 mm or more -



CN

CN Large-sized with Forced Cooling

Discharge size:200-800mm/Rated output:7.5-250kW



Guide rail installation type

The guide rail installation 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 it is automatically connected with the "discharge connection" again by just letting it down to the bottom of the pit along the guide pipe.

CN Large-sized with Natural Cooling

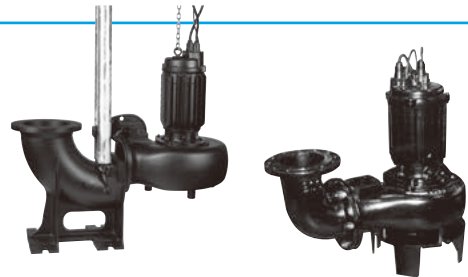
Discharge size:200-400mm/Rated output:7.5-45kW

Guide rail installation type

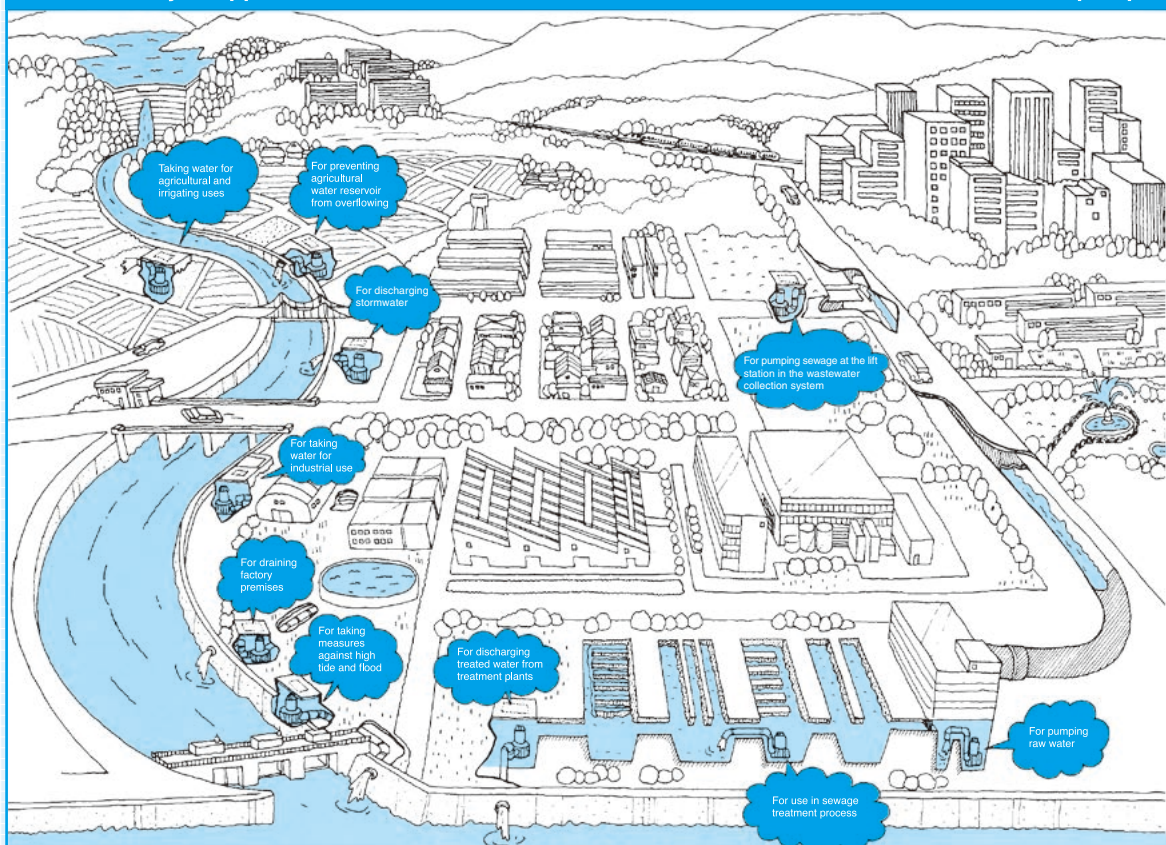
The guide rail installation type CN-P pump can be taken out of the pit by just pulling it up to the ground requesting no manual works inside the pit. And then it is automatically connected with the "discharge connection" again by just letting it down to the bottom of the pit along the guide pipe.

Free standing type

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

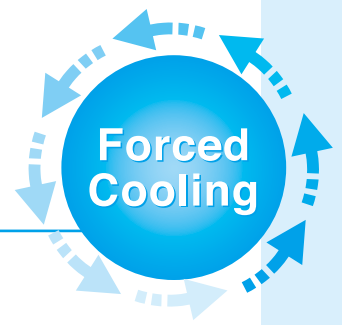


A wide variety of applications are self-evident for our customer's reliance on our submersible pumps

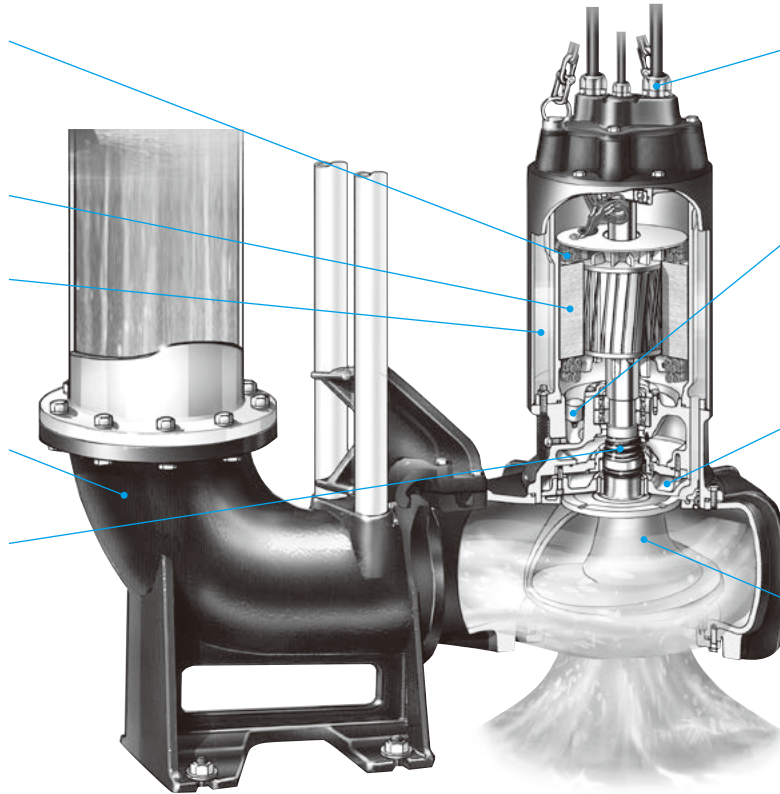


CN

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



- **Motor protector**
The normally closed thermal switches are embedded to the motor windings.
- **Air-filled submersible motor**
Insulation class: E (or F)
- **Forced cooling system**
Motor is always cooled during the operation by the water surrounding the motor which is part of the pumped liquid and circulated by the differential pressure in the pump.
- **Discharge connection**
The pump is automatically connected to the discharge pipe.
- **Shaft seal**
A highly wear resistant double mechanical seal is employed.



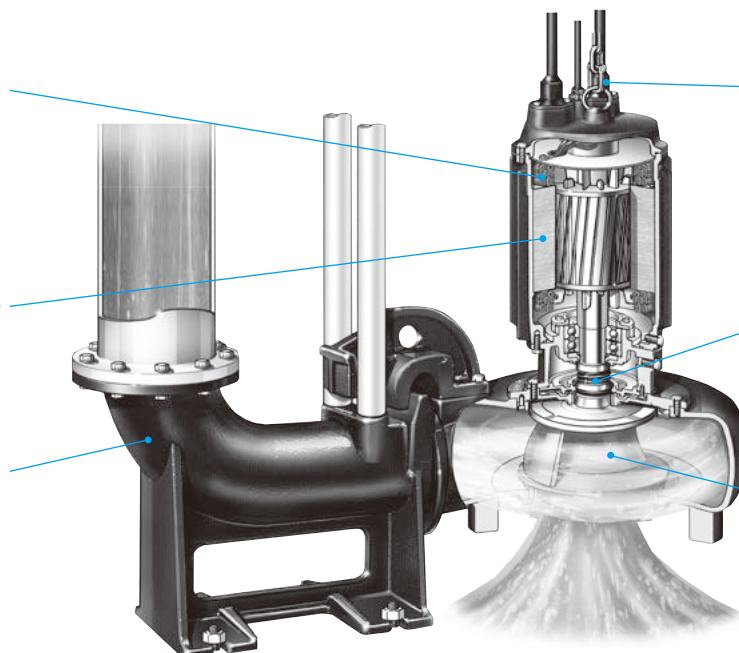
- **Cable entry with core wire seal**
The core wire seal shuts the water out from penetrating into the motor through the core wire.
- **Leakage detector**
The moisture detector is activated to cut off the power supply when the water or oil containing the moisture penetrates into the motor chamber.
- **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. (Applicable range : part of 18.5/22kW and all models of 30kW and over)
- **Impeller**
Channel type impeller is employed. Each impeller is dynamically balanced.

CN

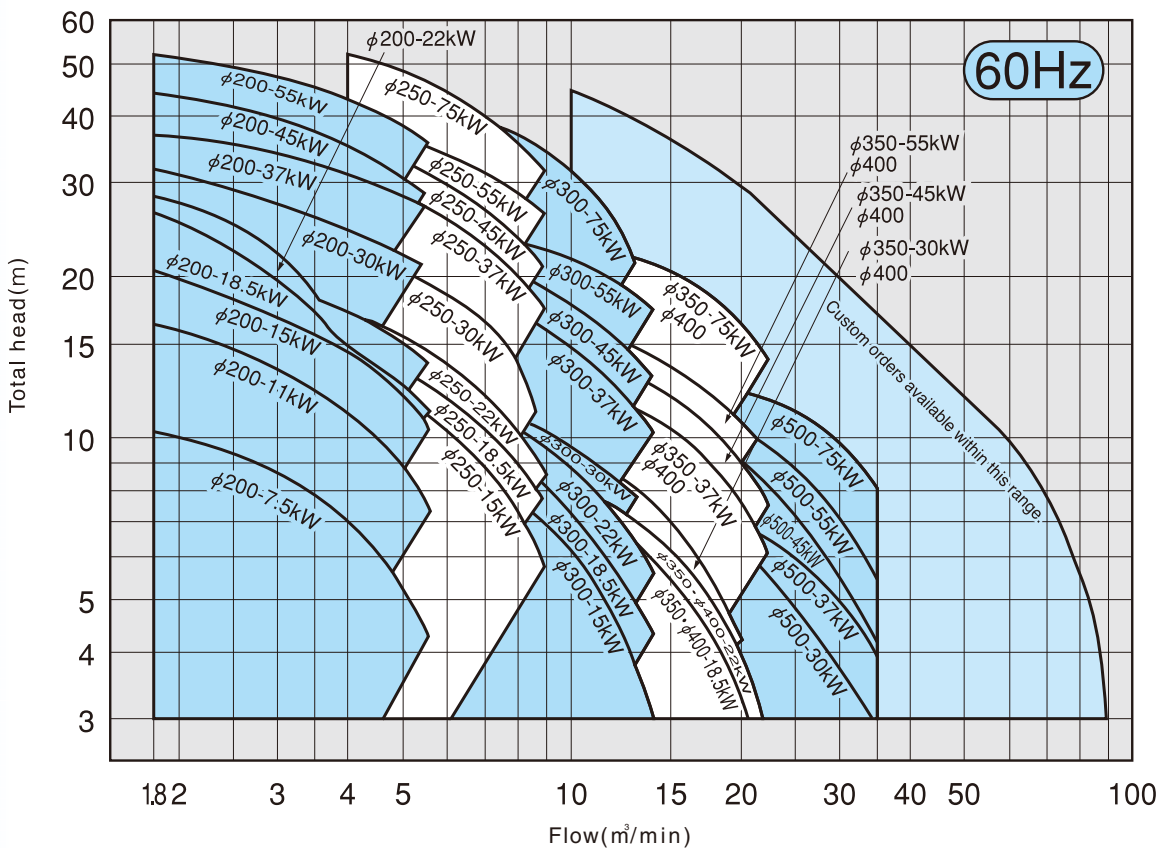
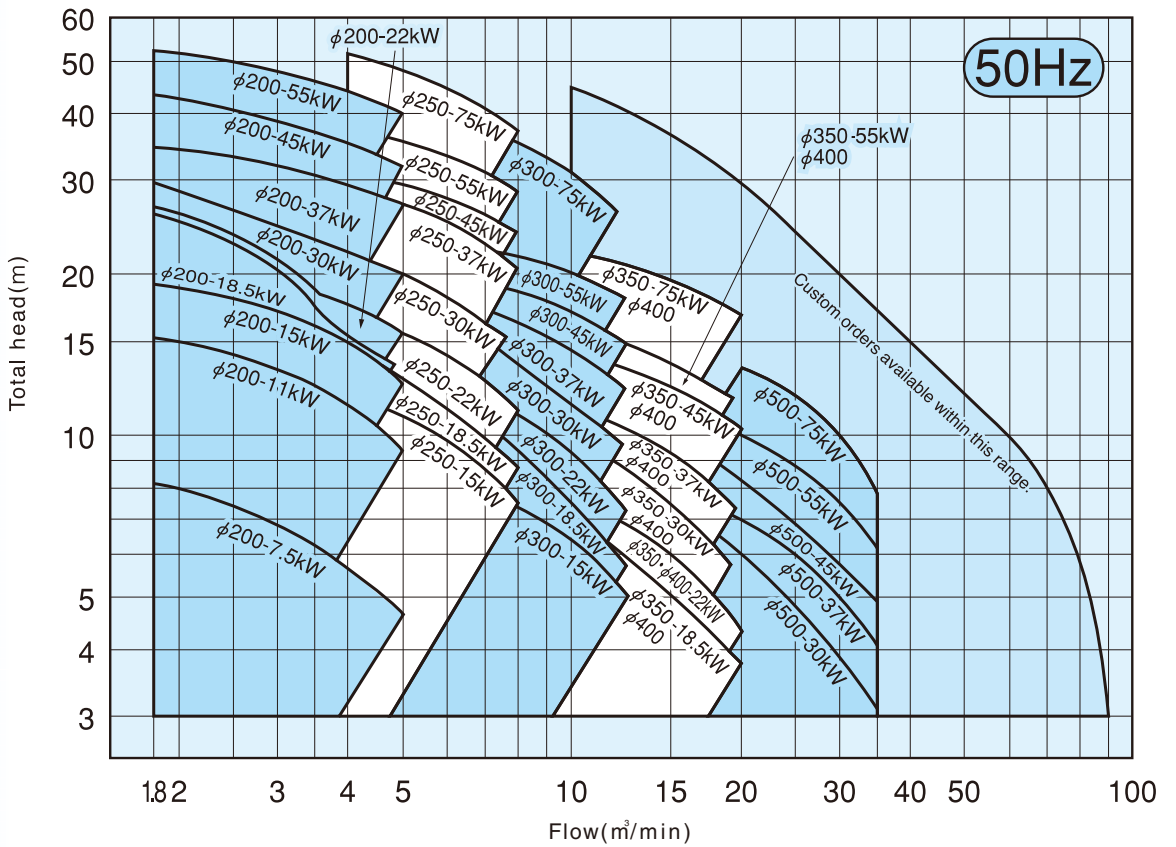
- Lightweight
- Both free standing type and guide rail installation type are available.



- **Motor protector**
The normally closed thermal switches are embedded to the motor windings.
- **Air-filled submersible motor**
Insulation class: E (or F)
- **Discharge connection**
The pump is automatically connected to the discharge pipe.



- **Cable entry with core wire seal**
The core wire seal shuts the water out from penetrating into the motor through the core wire.
- **Shaft seal**
A highly wear resistant double mechanical seal is employed.
- **Impeller**
Channel type impeller is employed. Each impeller is dynamically balanced.



Standard Specifications

Discharge mm	Pump model	Rated output kW	Solid passage dia. (Soft solid) (mm) () : Impeller No.		No. of poles	Weight (kg)	Motor insulation class	Starting method	Power cable		Mechanical seal	
			50Hz	60Hz					Material	Length(m)	Upper	Lower
200	CN200-P	7.5	(263DY) φ85	(215Y) φ60	6	400	E	DOL			SiC/SiC	Carbon/SiC
		11	(211A) φ65	(212) φ65	4	390					Carbon/Hard metal	Hard metal / Hard metal
		15	(215) φ70	(216) φ60	4	410						
		18.5	(620Y) φ124	(630Y) φ110	6	540	F	Star-delta	2PNCT	8	Carbon / SiC	
			(610AY) φ123									
		22	(470Y) φ75	(480AY) φ75	4							
			(640) φ113	(640) φ115	6							
			(630) φ120									
		30	(620) φ124	(630) φ120	4	900						
			(610A) φ123									
		37	(251AY) φ75	(252A) φ75	4	930						
45	(205AY) φ40	(206AY) φ45	4	930								
55	(205A) φ40	(206A) φ45	4	930								
250	CN250-P	15	(259) φ90	(250) φ80	4	415	E	Star-delta	2PNCT	8	Carbon/Hard metal	Hard metal / Hard metal
		18.5	(253Y) φ80	(254Y) φ75	6	615	F					
		22	(253) φ80	(254) φ80	6	900						
		30	(251AY) φ70	(252AY) φ70	4	940						
		37	(251A) φ70	(252A) φ70		1,440						
		45	(255Y) φ65	(256Y) φ70								
		55	(255) φ65	(256) φ70								
75	(257B) φ60	(258A) φ60										
300	CN300-P	15	(315) φ115	(316) φ100	6	520	E	Star-delta	2PNCT	8	Carbon/Hard metal	Hard metal / Hard metal
		18.5	(321AY) φ95	(322AY) φ105		640	F					
		22	(321A) φ95	(322A) φ105		975						
		30	(301Y) φ130	(302AY) φ95	4	1,040						
		37	(301) φ130	(302A) φ95		1,280						
		45	(303) φ110	(304) φ140								
		55	(305) φ110	(306) φ105								
75	(307) φ80	(308) φ80	4	1,500								
350	CN350-P	18.5	(411Y) φ150	(412Y) φ135	8	1,090	F	Star-delta	2PNCT	8	Carbon / SiC	Hard metal / Hard metal
		22	(411) φ150	(412) φ135	6	1,150						
		30	(351Y) φ135	(352Y) φ105		1,200						
		37	(351) φ135	(352) φ105		1,400						
		45	(353) φ140	(354) φ125		2,100						
		55	(405) φ150	(406) φ130								
75	(401) φ135	(402) φ120										
400	CN400-P	18.5	(411Y) φ150	(412Y) φ135	8	1,090	F	Star-delta	2PNCT	8	Carbon / SiC	Hard metal / Hard metal
		22	(411) φ150	(412) φ135	6	1,150						
		30	(351Y) φ135	(352Y) φ105		1,200						
		37	(351) φ135	(352) φ105		1,400						
		45	(353) φ140	(354) φ125		2,100						
		55	(405) φ150	(406) φ130								
75	(401) φ135	(402) φ120										
500	CN500-P	30	(511Y) φ175	(511Y) φ175	50Hz:10	2,160	F	Star-delta	2PNCT	8	Carbon / SiC	Hard metal / Hard metal
		37	(511) φ175	(511) φ175	60Hz:12							
		45	(505Y) φ180	(506Y) φ160	8	2,000						
		55	(505) φ180	(506) φ160								
		75	(628Y) φ160	(614Y) φ150	8	2,500						

※Motor insulation class F also available

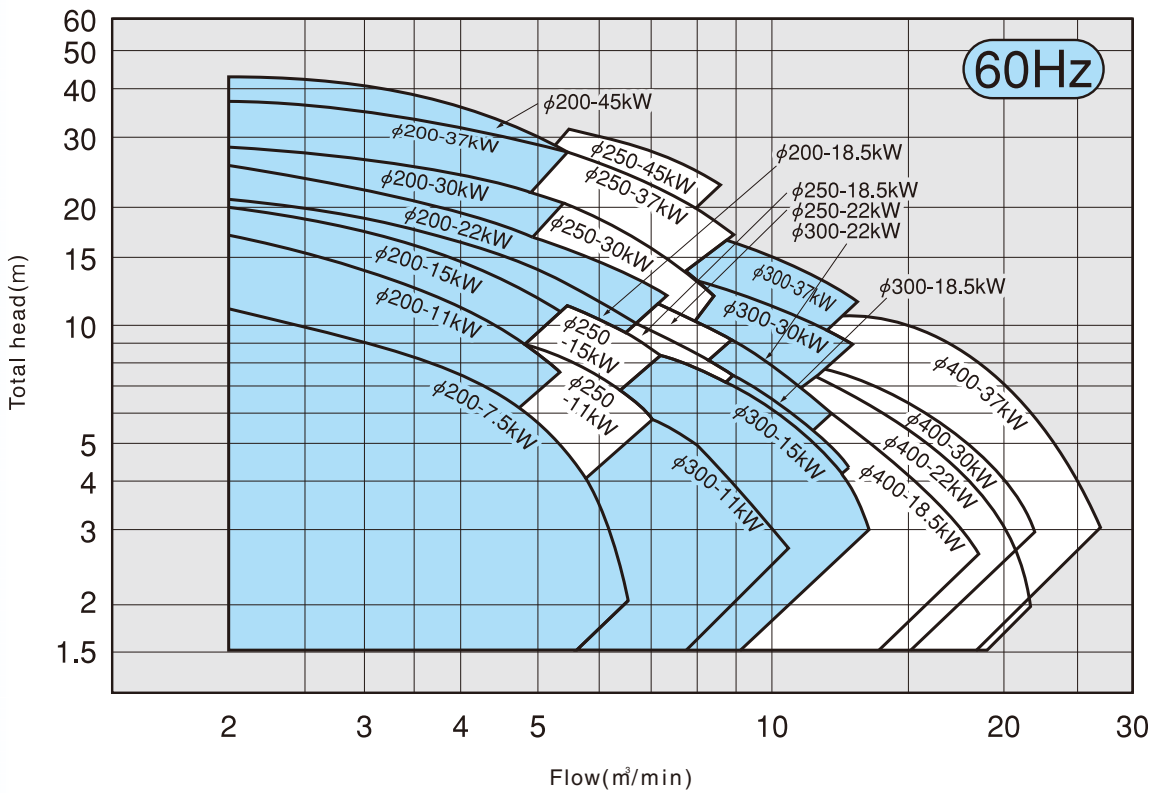
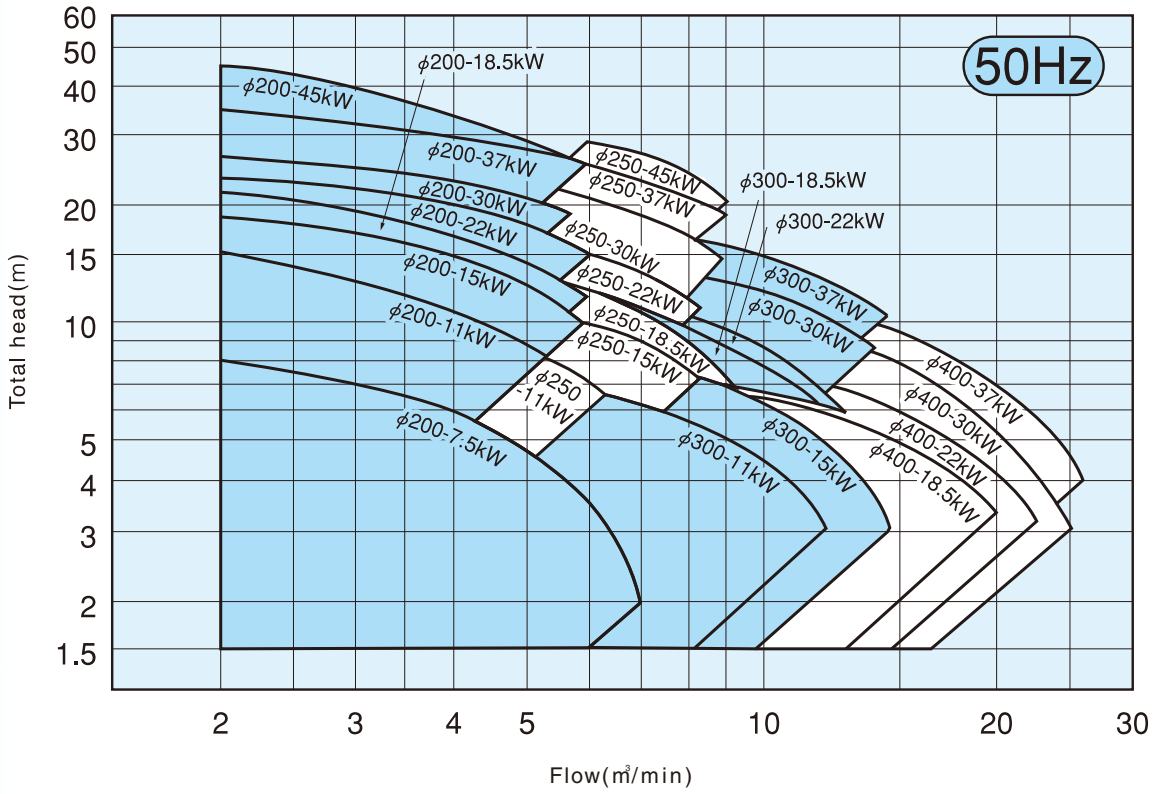
DOL: Direct on line 2PNCT : EPR insulated PCP sheathed cable SiC: Silicon carbide

Standard Accessories

- Discharge connection (with bolts and nuts) ..1 set
- Guide holder (with bolts and nuts)1 set
- Sliding bracket1 set
- Cable (8m)3pcs.
- ※7.5kW : Cable (8m)2pcs.
- Lifting chain (6m).....1pc.

Weight of discharge connection

Discharge (mm)	Weight (kg)	Remarks
200	120(90)	():18.5·22kW
250	195	
300	215(250)	():30·37·45kW
350	310(400)	():75kW
400	310(400)	():75kW
500	830	



Standard Specifications

Discharge mm	Model		Rated output kW	Solid passage dia.(Soft solid)(mm) [Impeller No.]				No. of poles	Weight(kg)		Motor insulation class	Starting method	Power cable		Mechanical seal material	
	Guide rail installation	Free standing		50Hz	60Hz	Guide rail installation	Free standing		Material	Length(m)			Upper	Lower		
200	CN2003-P200G	CN2003-F200	7.5	(263DY) φ85	(A215Y) φ70	6	255	300	E	Star-delta	2PNCT	8	SiC/SiC	SiC/SiC		
			11	(A211A) φ65	(A212) φ50											
			15	(A215) φ70	(A216) φ50											
			18.5	(221DY) φ70	(222DY) φ55											
			22	(221D) φ70	(222D) φ55											
	CN2001-P	CN2001-F	30	(251AY) φ75	(252AY) φ75	4	650	730	F	Star-delta	2PNCT	8	SiC/SiC	SiC/SiC		
37			(251A) φ75	(252A) φ75												
45			(205AY) φ40	(244A) φ45												
250	CN2503-P250G	CN2503-F250	11	(A211A) φ65	(A250Y) φ70	4	270	320	E	Star-delta	2PNCT	8	SiC/SiC	SiC/SiC		
			15	(A259) φ90	(A250) φ70											
			18.5	(263DY) φ85	(264DY) φ80											
			22	(263D) φ85	(264D) φ80											
	CN2501-P	CN2501-F	30	(251AY) φ70	(252AY) φ70	4	650	735	F	Star-delta	2PNCT	8	SiC/SiC	SiC/SiC		
			37	(251A) φ70	(252A) φ70											
45			(251B) φ65	(244A) φ70												
300	CN3003-P300G	CN3003-F300	11	(A315DY) φ115	(A316DY) φ90	6	370	435	E	Star-delta	2PNCT	8	SiC/SiC	SiC/SiC		
			15	(A315D) φ115	(A316D) φ90											
			22	(331D) φ95	(332D) φ70											
	CN3001-P	CN3001-F	18.5	(321AY) φ95	(322AY) φ100	6	790	895	F	Star-delta	2PNCT	8	SiC/SiC	SiC/SiC		
			22	(321A) φ95	(322A) φ100											
			30	(301Y) φ130	(302AY) φ95											
37			(301) φ130	(302A) φ95												
400	CN4001-P	CN4001-F	18.5	(411Y) φ150	(412Y) φ135	8	830	1,030	F	Star-delta	2PNCT	8	SiC/SiC	SiC/SiC		
			22	(411) φ150	(412) φ135											
			30	(351Y) φ135	(352Y) φ105	6	850	1,090								
			37	(351) φ135	(352) φ105											

※Motor insulation class F also available
 2PNCT : EPR insulated PCP sheathed cable SiC: Silicon carbide

Standard Accessories

Guide rail installation

- Discharge connection (with bolts and nuts) ··· 1set
- Guide holder (with bolts and nuts) ········· 1set
- Sliding bracket ··························· 1set
- Cable (8m) ····························· 3pcs.
- ※7.5kW : Cable (8m) ··················· 2pcs.
- Lifting chain (6m) ····················· 1pc.

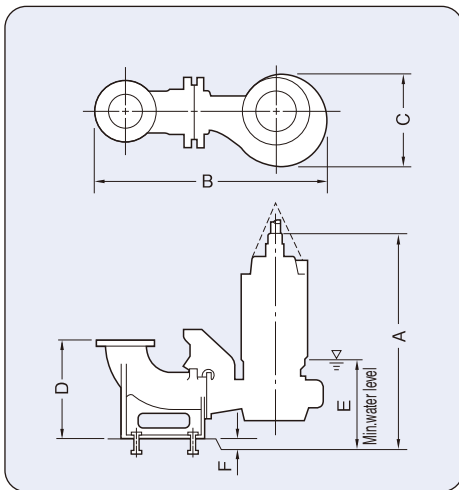
Free standing

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

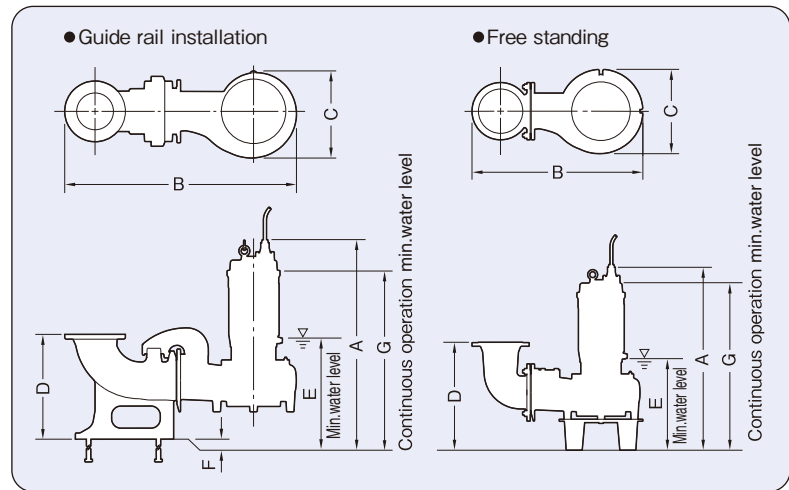
Weight of discharge connection

Discharge (mm)	Rated output (kW)	Weight (kg)
200	7.5~22	110
	30~45	120
250	11~22	160
	30~45	195
300	11~22	190
	18.5~37	215
400	18.5~37	310

CN Forced cooling



CN Natural cooling



Pump model	Rated output kW	A		B		C		D		E		F	
		50Hz	60Hz	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	60	-		
	11 · 15	1,118	1,307	458									
	18.5 · 22	1,284	1,378	674									
	30 · 37	1,524	1,519	603									
	45 · 55	1,492	1,646	583									
CN250-P	15	1,145	1,391	461	663	650	75						
	18.5 · 22	1,307											
	30 · 37	1,542	1,602	603									
	45 · 55	1,519											
	75	1,662	1,729	583									
CN300-P	15	1,231	1,528	587	805	750	80						
	18.5 · 22	1,442											
	30 · 37	1,677	1,682	755									
	45	1,614											
	55	1,703											
CN350-P	18.5 · 22	1,747	1,847	819	910	1,000	70						
	30 · 37	1,825											
	45	1,762											
	55	1,851											
	75	2,165						2,133	857	870			
CN400-P	18.5 · 22	1,747	1,912	819	750	1,000	245						
	30 · 37	1,825											
	45	1,762											
	55	1,851											
	75	2,165						2,168	857	870			
CN500-P	30 · 37 · 45 · 55	2,389		997	1,220	1,300	155						
	75	2,434						1,500	200				

Pump model	Rated output kW	A	B	C	D	E	F	G	
									(mm)
Guide rail installation	CN2003-P200G	7.5 · 11.15	974	1,260	474	570	550	-	880
		18.5 · 22	1,068						975
	CN2001-P	30 · 37	1,253	1,519	603	570	550	-	1,240
		45	1,344						1,330
	CN2503-P250G	11 · 15	1,006	1,327	505	563	650	75	900
		18.5 · 22	1,094						1,000
	CN2501-P	30 · 37	1,271	1,602	603	663	650	75	1,255
		45	1,347						1,335
	CN3003-P300G	11 · 15	1,181	1,433	604	775	750	45	1,090
		22	1,578						614
CN3001-P	18.5 · 22	1,482	1,682	755	805	750	80	1,470	
	30 · 37								
CN4001-P	18.5 · 22	1,630	1,912	819	750	1,000	245	1,515	
	30 · 37								
Free standing	CN2003-F200	7.5 · 11.15	999	1,021	504	645	550	-	905
		18.5 · 22	1,093						1,000
	CN2001-F	30 · 37	1,258	1,201	700	625	550	-	1,245
		45	1,334						1,320
	CN2503-F250	11 · 15	1,008	1,095	530	645	660	-	915
		18.5 · 22	1,101						1,005
	CN2501-F	30 · 37	1,258	1,275	700	625	660	-	1,245
		45	1,334						1,320
	CN3003-F300	11 · 15 · 22	1,159	1,232	604	703	730	-	1,070
		30 · 37	1,444						1,355
CN3001-F	18.5 · 22	1,368	1,381	755	723	730	-	1,355	
	30 · 37	1,444						1,430	
CN4001-F	18.5 · 22	1,660	1,631	934	1,295	1,000	-	1,645	
	30 · 37								

Please provide the following information with your inquiry on the pump:

- Actual and total pump head
- Flow rate
- Discharge size
- Intended uses

Specifications and dimensions are subject to change without notice.

ShinMaywa Industries, Ltd.

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ShinMaywa ONO PLANT

ISO 9001(No.956445)/ISO 14001(No.771888)