

ShinMaywa

Submersible Pumps

Large-sized (Channel Impeller Type) CN Series

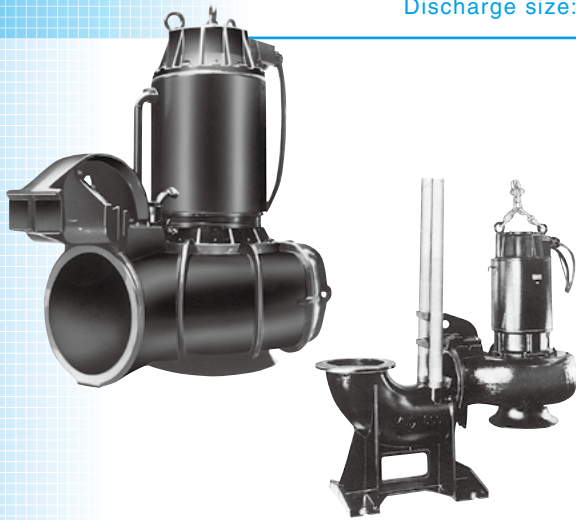
- Discharge size 200 mm or more -



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

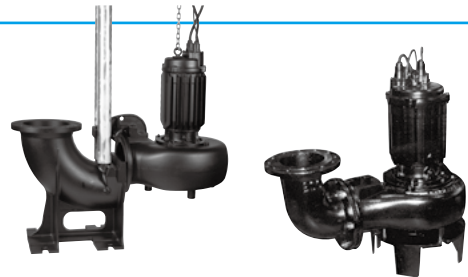
Discharge size:200-400mm/Rated output:7.5-45kW

Guide rail installation type

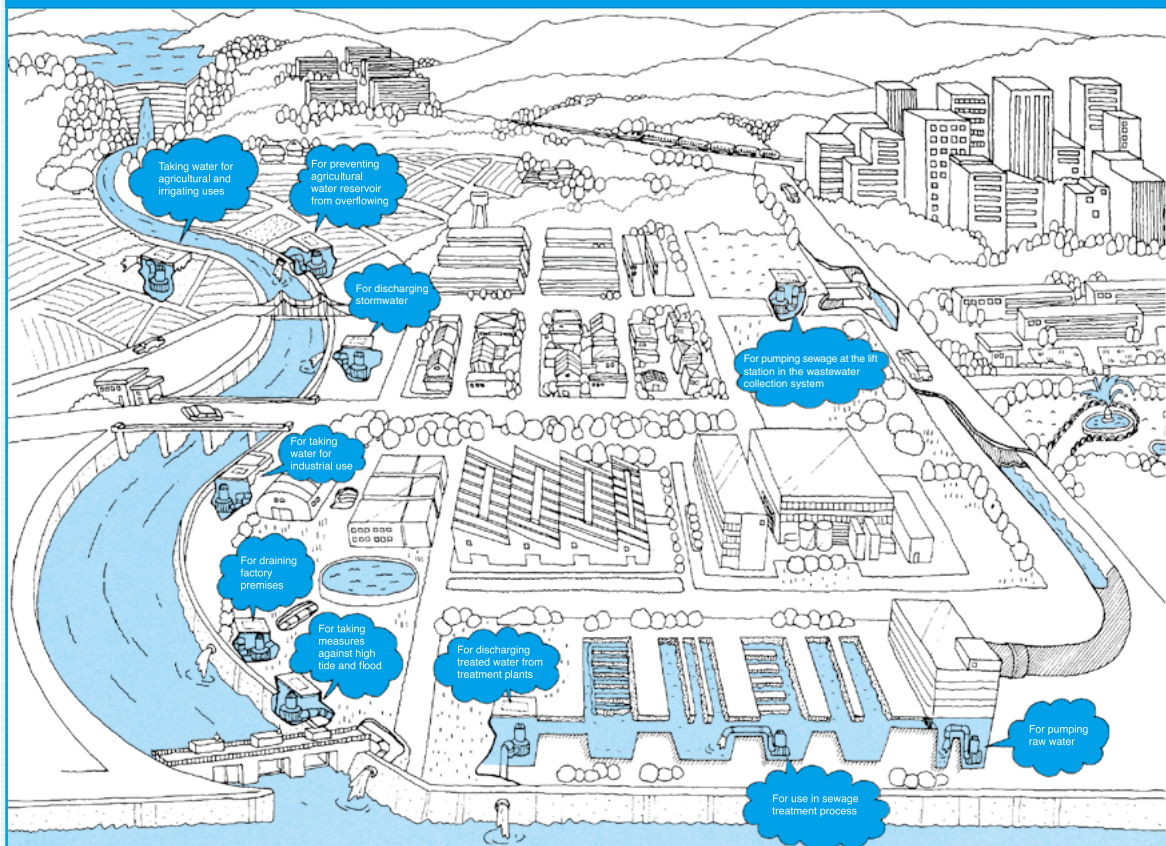
The guide rail installation type CN-P pump can be taken out of the pit by just pulling it up to the ground requesting no manual works inside the pit. And then it is automatically connected with the “discharge connection” again by just letting it down to the bottom of the pit along the guide pipe.

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.

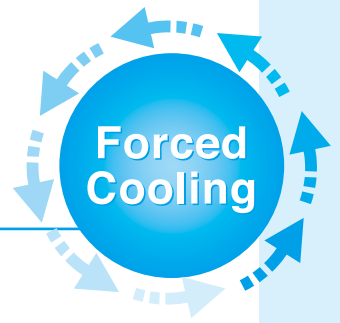


A wide variety of applications are self-evident for our customer's reliance on our submersible pumps



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

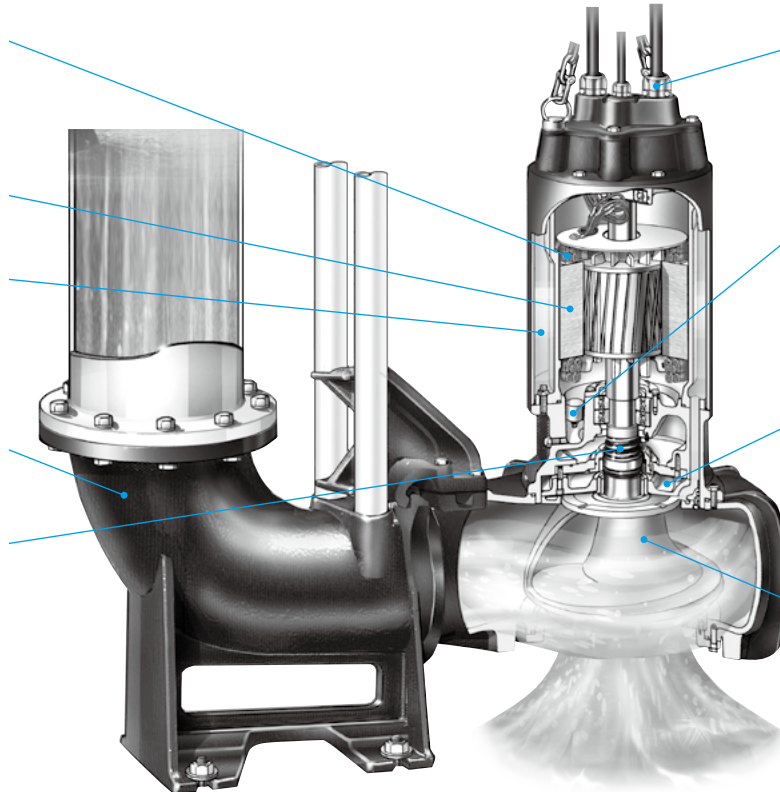
Motor is always cooled during the operation by the water surrounding the motor which is part of the pumped liquid and circulated by the differential pressure in the pump.

● 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

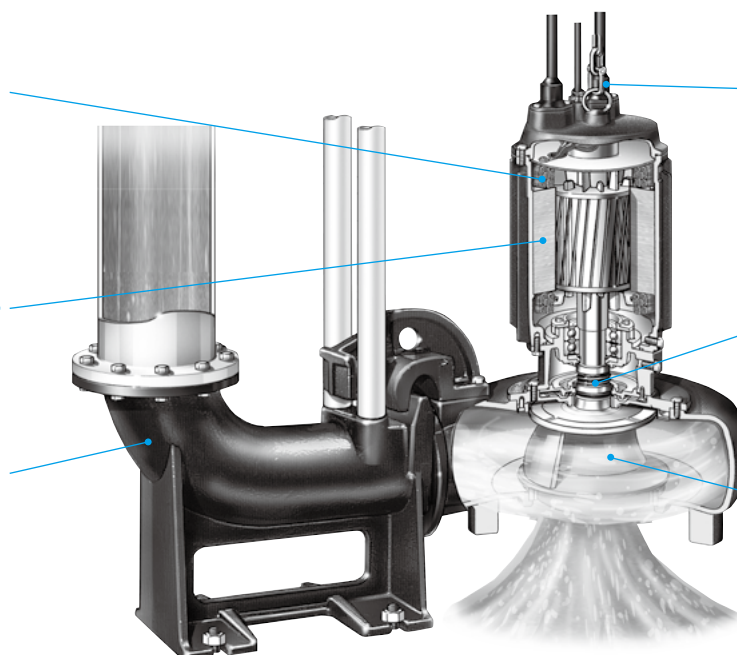
The normally closed thermal switches are embedded to the motor windings.

● 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

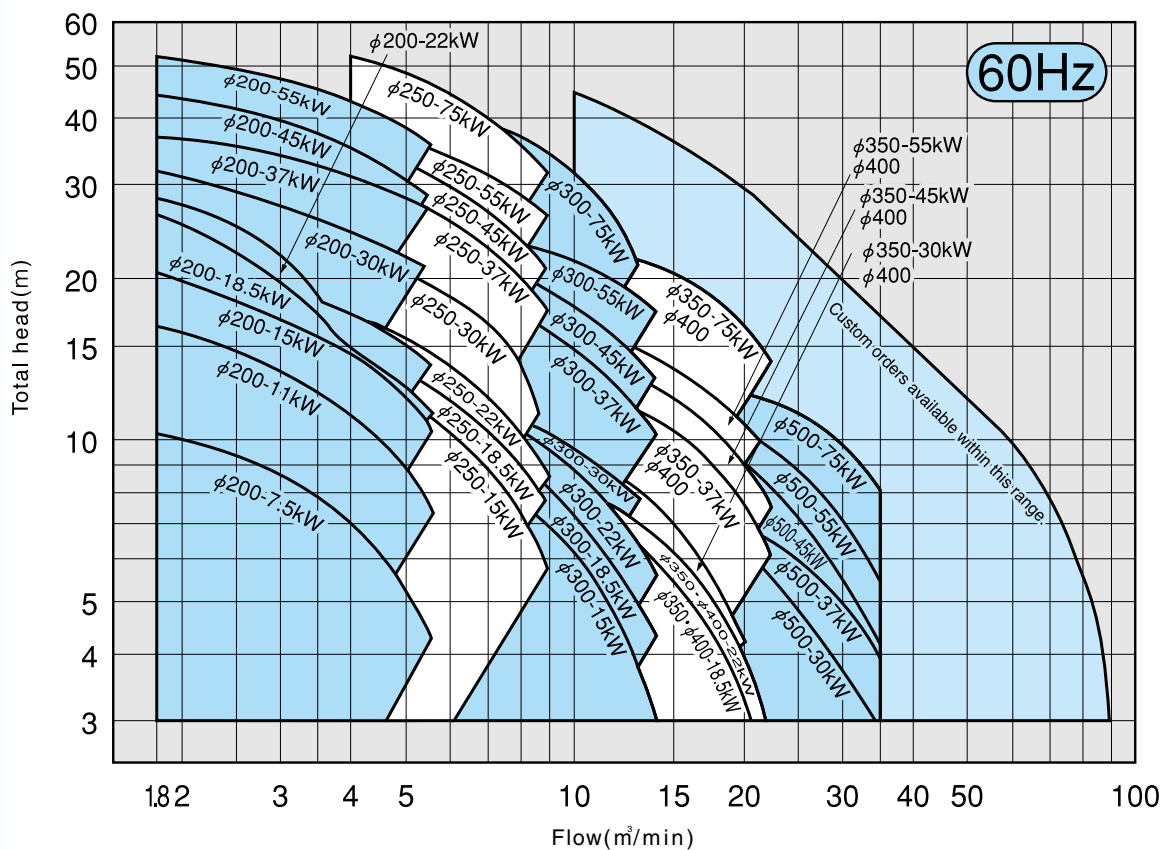
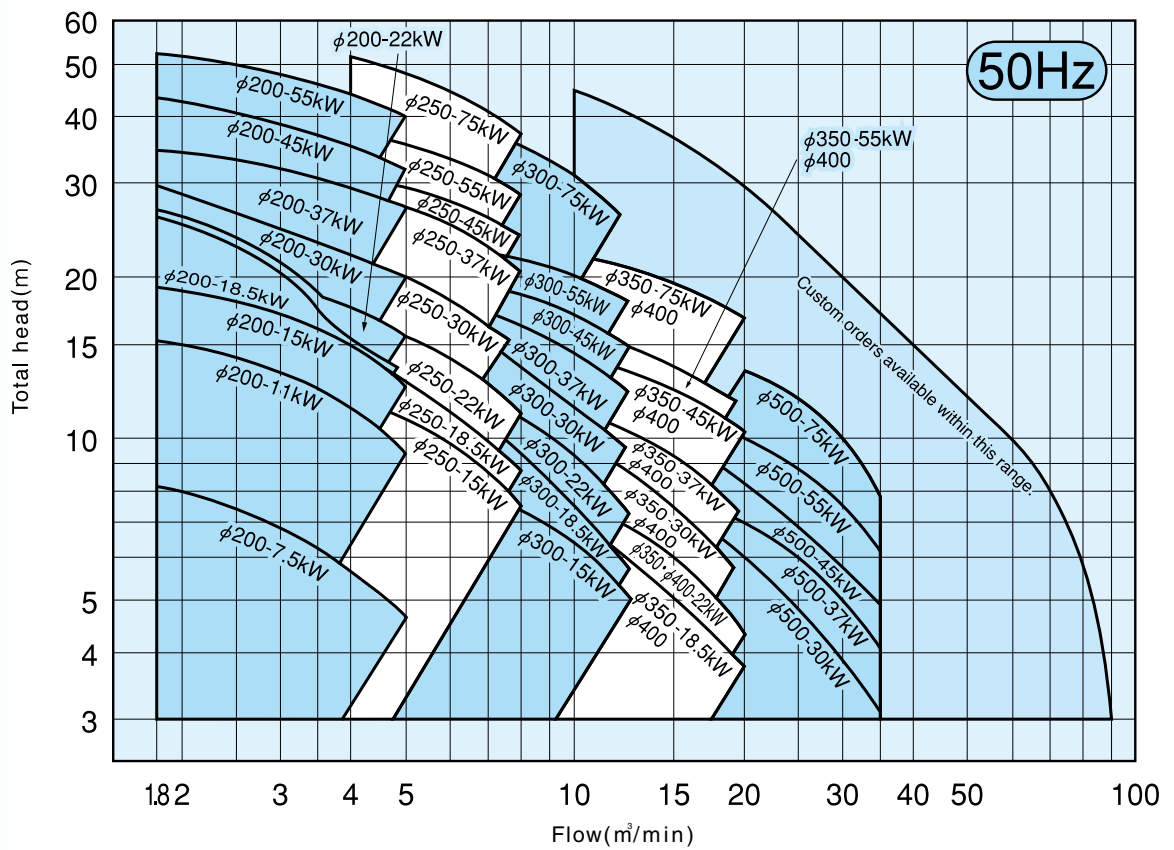
The core wire seal shuts the water out from penetrating into the motor through the core wire.

● 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	2PNCT	8	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				Carbon ／SiC	Hard metal ／Hard metal						
			(610AY)	φ123																	
			(470Y)	φ75	(480AY)	φ75	4														
		22	(640)	φ113	(640)	φ115	6														
			(630)	φ120																	
			(620)	φ124	(630)	φ120															
			(610A)	φ123																	
		30	(470)	φ75	(480A)	φ75	4														
			(251AY)	φ75	(252AY)	φ75															
(251A)	φ75		(252A)	φ75																	
(205AY)	φ40		(206AY)	φ45																	
45	(205A)	φ40	(206A)	φ45		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													
		22	(253)	φ80	(254)	φ80															
		30	(251AY)	φ70	(252AY)	φ70	4	900	F												
		37	(251A)	φ70	(252A)	φ70															
		45	(255Y)	φ65	(256Y)	φ70															
		55	(255)	φ65	(256)	φ70															
75	(257B)	φ60	(258A)	φ60	1,440																
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													
		22	(321A)	φ95	(322A)	φ105															
		30	(301Y)	φ130	(302AY)	φ95		975	F												
		37	(301)	φ130	(302A)	φ95															
		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															
		30	(351Y)	φ135	(352Y)	φ105	6	1,150													
		37	(351)	φ135	(352)	φ105															
		45	(353)	φ140	(354)	φ125															
		55	(405)	φ150	(406)	φ130															
75	(401)	φ135	(402)	φ120	2,100																
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															
		30	(351Y)	φ135	(352Y)	φ105	6	1,150													
		37	(351)	φ135	(352)	φ105															
		45	(353)	φ140	(354)	φ125															
		55	(405)	φ150	(406)	φ130															
75	(401)	φ135	(402)	φ120	2,100																
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

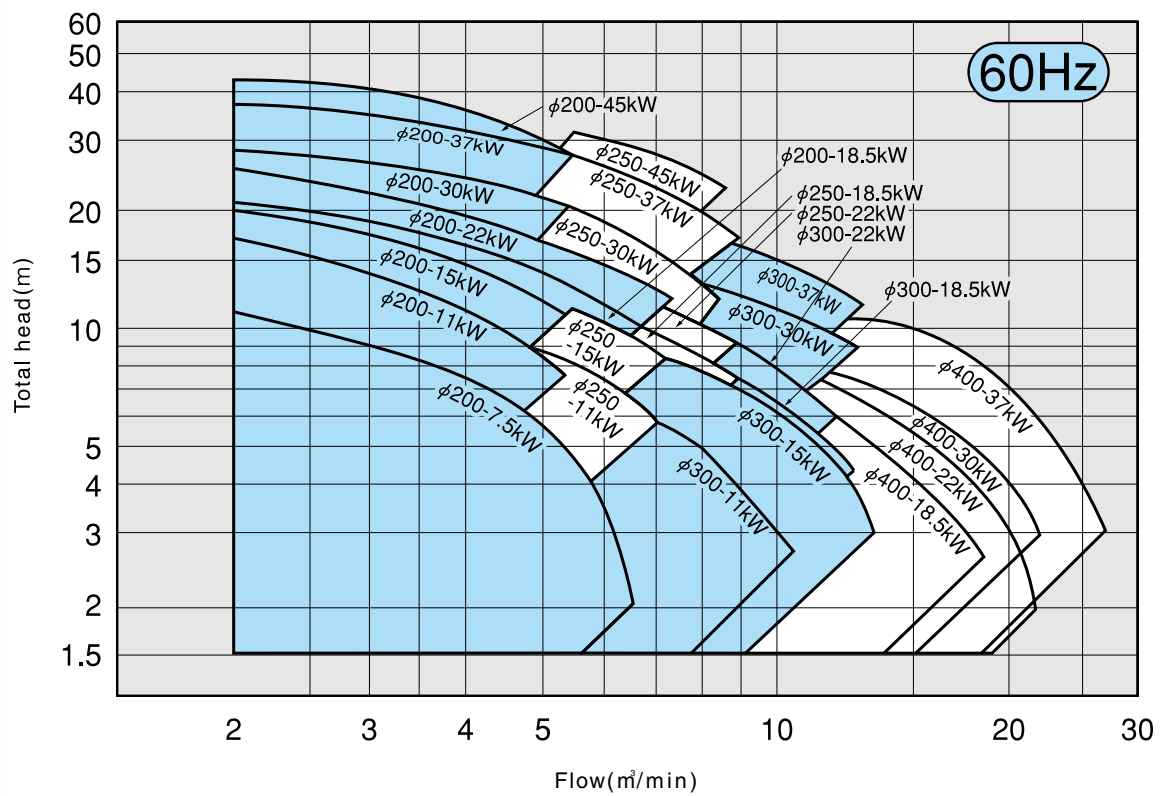
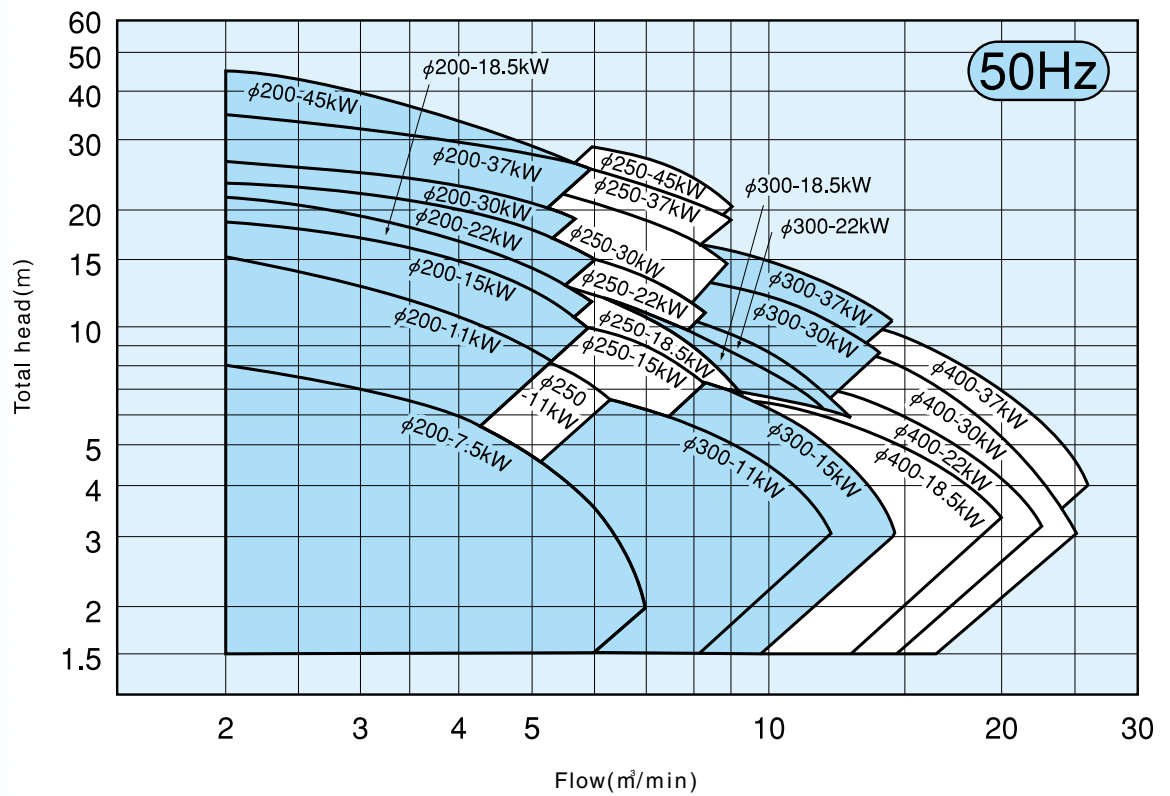
DOL: Direct on line 2PNCT : EPR insulated PCP sheathed cable SiC: Silicon carbide

Standard Accessories

- Discharge connection (with bolts and nuts) ..1set
- Guide holder (with bolts and nuts)1set
- Sliding bracket1set
- 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	4														
			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											
			37	(251A)	φ75	(252A)	φ75															
			45	(205AY)	φ40	(244A)	φ45										700	780				
	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	280				330										
18.5				(263DY)	φ85	(264DY)	φ80						330	380								
22				(263D)	φ85	(264D)	φ80															
CN2501-P		CN2501-F	30	(251AY)	φ70	(252AY)	φ70	4	650	735	F											
			37	(251A)	φ70	(252A)	φ70															
			45	(251B)	φ65	(244A)	φ70					700	785									
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	4													
	22			(331D)	φ95	(332D)	φ70															
	CN3001-P	CN3001-F	18.5	(321AY)	φ95	(322AY)	φ100	6	790	895	F											
			22	(321A)	φ95	(322A)	φ100															
			30	(301Y)	φ130	(302AY)	φ95		810	915												
			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.

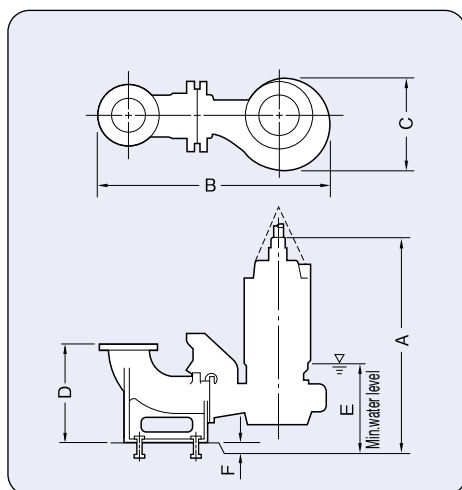
Free standing

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

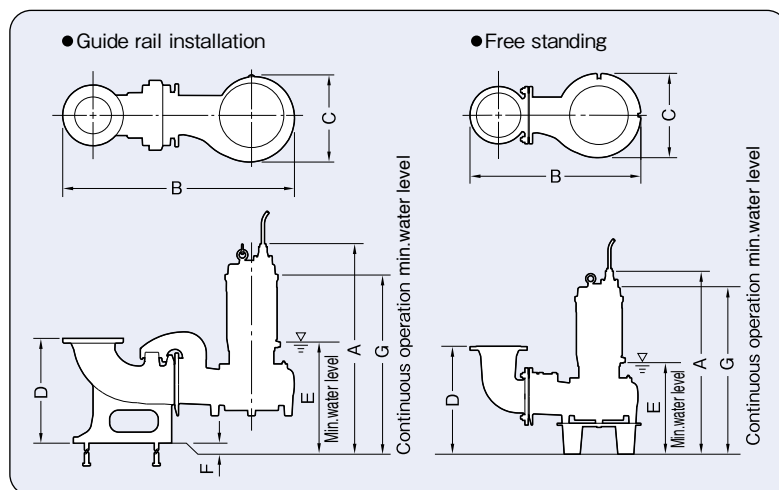
Weight of discharge connection

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	1,107	1,307	1,307	458	458						
	18.5 · 22	1,284	1,378	674	555	570	60						
	30 · 37	1,524	1,519	603	570	—	—						
	45 · 55	1,492	1,646	583	—	—	—						
CN250-P	15	1,145	1,391	461	663	650	75	100					
	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	—	—	910	1,000	70	270					
	30 · 37	1,825	1,847	819									
	45	1,762	—	—									
	55	1,851	—	—									
	75	2,165	2,133	857									
CN400-P	18.5 · 22	1,747	—	—	819	750	245	270					
	30 · 37	1,825	1,912	819									
	45	1,762	—	—									
	55	1,851	—	—									
	75	2,165	2,168	857									
CN500-P	30 · 37 · 45 · 55	2,389	2,485	997	1,220	1,300	155						
	75	2,434	—	—									

Pump model	Rated output kW	A		B		C		D		E		F		G	
		50Hz	60Hz	50Hz	60Hz	50Hz	60Hz	50Hz	60Hz	50Hz	60Hz	50Hz	60Hz	50Hz	60Hz
Guide rail installation	CN2003-P200G	7.5 · 11 · 15	974	1,260	474	570	550	—	880						
		18.5 · 22	1,068												
	CN2001-P	30 · 37	1,253	1,519	603	570	550	—	1,240						
		45	1,344												
	CN2503-P250G	11 · 15	1,006	1,327	505	563	650	75	900						
		18.5 · 22	1,094												
	CN2501-P	30 · 37	1,271	1,602	603	663	650	75	1,255						
		45	1,347												
	CN3003-P300G	11 · 15	1,433	1,482	604	775	750	45	1,090						
		22	1,578												
Free standing	CN3001-P	18.5 · 22	1,482	1,682	755	805	750	80	1,470						
		30 · 37	1,482												
	CN4001-P	18.5 · 22	1,630	1,912	819	750	1,000	245	1,515						
		30 · 37	1,630												
	CN2003-F200	7.5 · 11 · 15	999	1,021	504	645	550	—	905						
		18.5 · 22	1,093												
	CN2001-F	30 · 37	1,258	1,201	700	625	550	—	1,245						
		45	1,334												
	CN2503-F250	11 · 15	1,008	1,095	530	645	660	—	915						
		18.5 · 22	1,101												
Free standing	CN2501-F	30 · 37	1,258	1,275	700	625	660	—	1,245						
		45	1,334												
	CN3003-F300	11 · 15 · 22	1,159	1,232	604	703	730	—	1,070						
		18.5 · 22	1,368												
	CN3001-F	30 · 37	1,444	1,381	755	723	730	—	1,355						
		45	1,444												
Free standing	CN4001-F	18.5 · 22	1,660	1,631	934	1,295	1,000	—	1,645						
		30 · 37	1,660												

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.

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Website

ShinMaywa ONO PLANT
ISO 9001-0066539/ISO 14001-0066652