

ShinMaywa

Submersible Pumps

Large-sized (Channel Impeller Type) CN Series

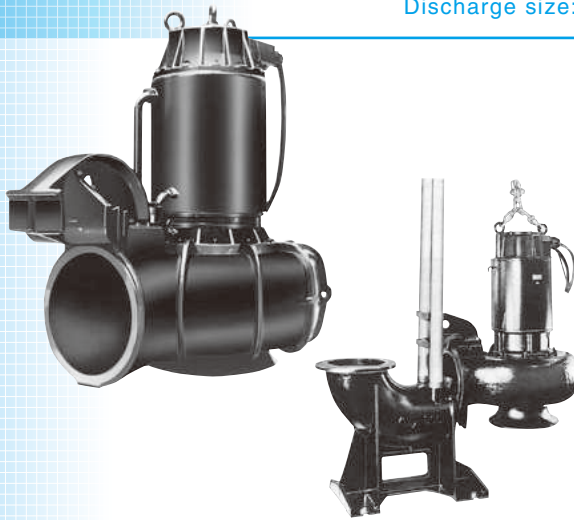
- Discharge size 200 mm or more -



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

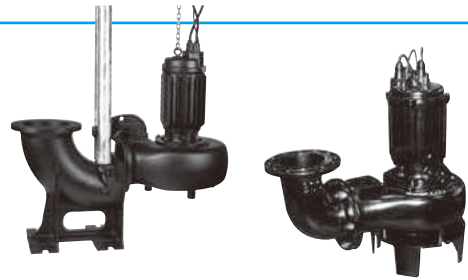
Discharge size:200-400mm/Rated output:7.5-45kW

Guide rail installation type

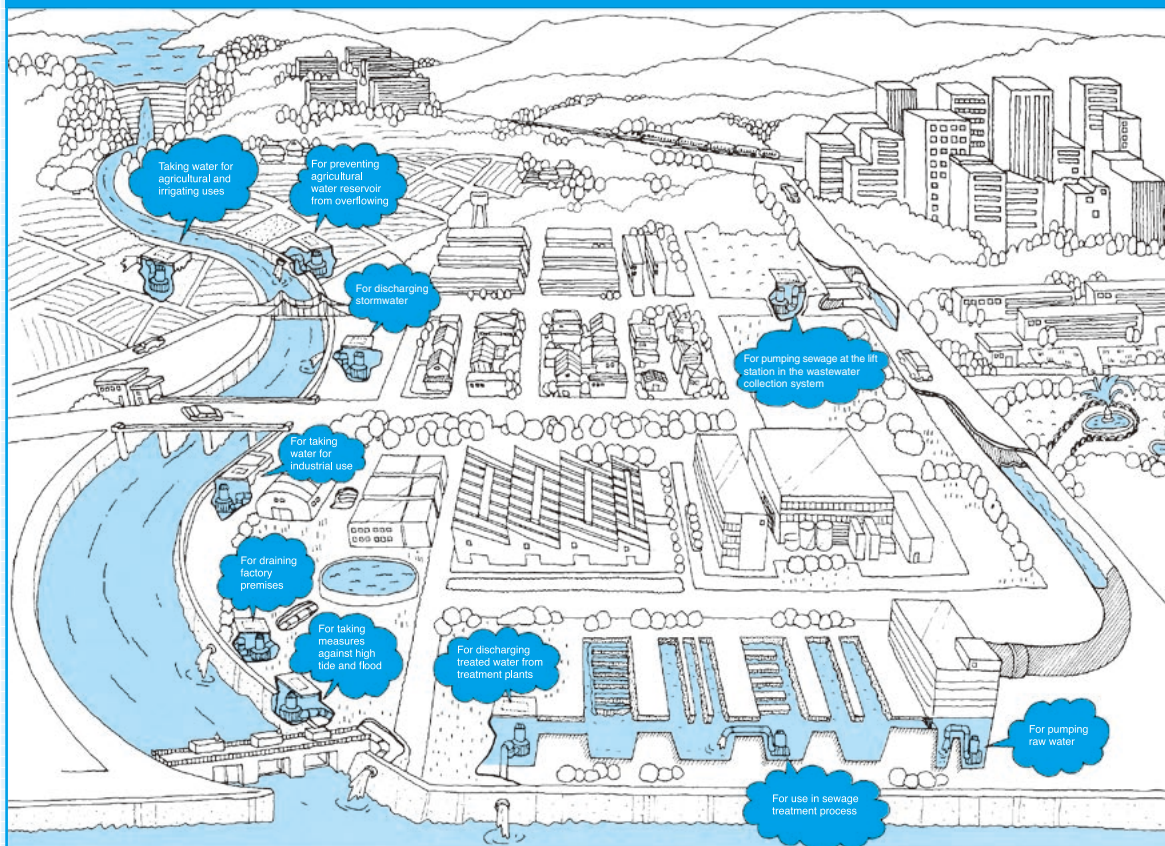
The guide rail installation type CN-P pump can be taken out of the pit by just pulling it up to the ground requesting no manual works inside the pit. And then it is automatically connected with the "discharge connection" again by just letting it down to the bottom of the pit along the guide pipe.

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.

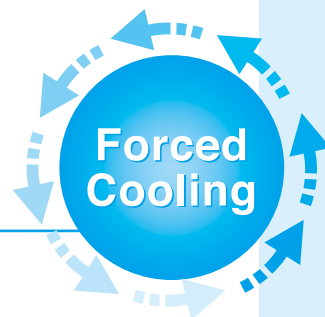


A wide variety of applications are self-evident for our customer's reliance on our submersible pumps



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

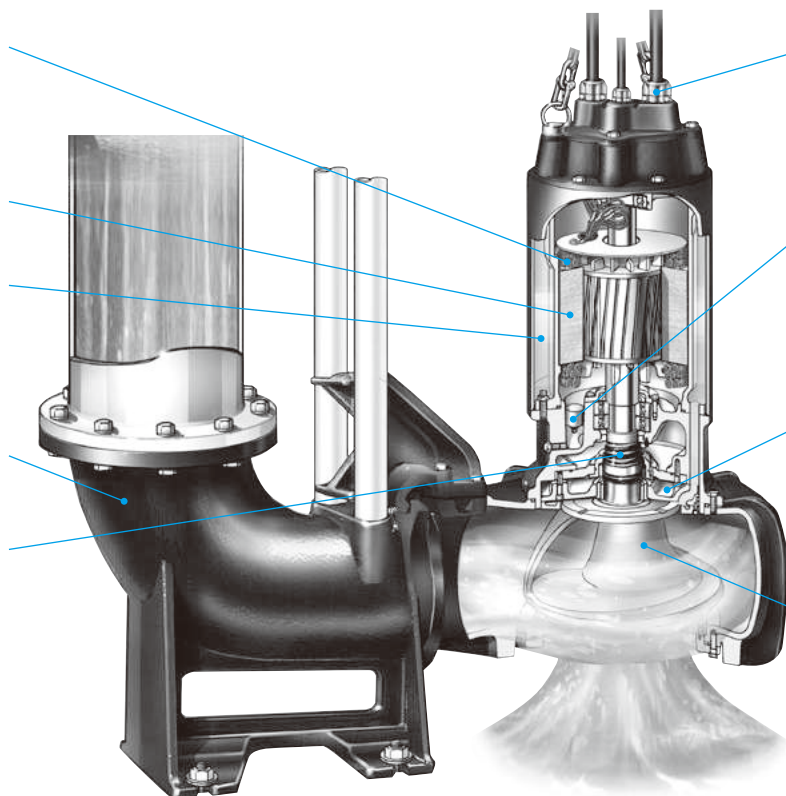
Motor is always cooled during the operation by the water surrounding the motor which is part of the pumped liquid and circulated by the differential pressure in the pump.

• 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

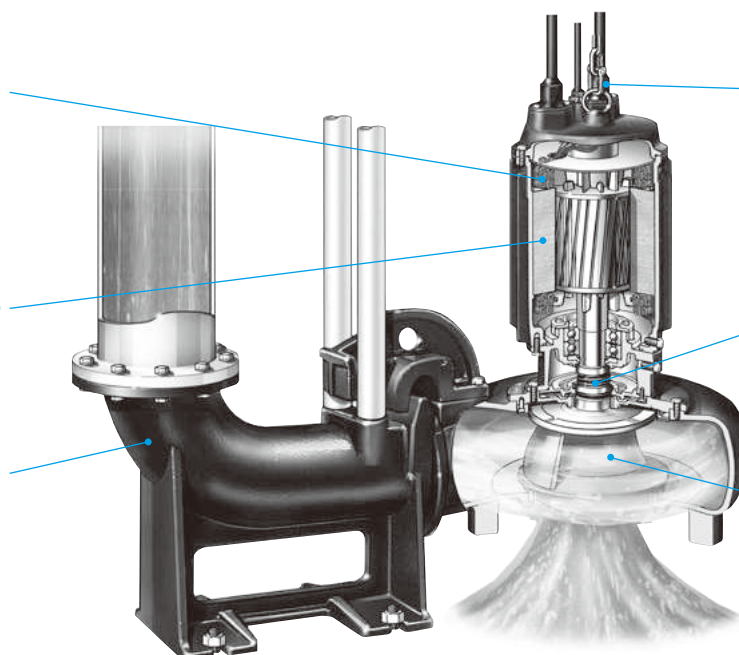
The normally closed thermal switches are embedded to the motor windings.

• 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

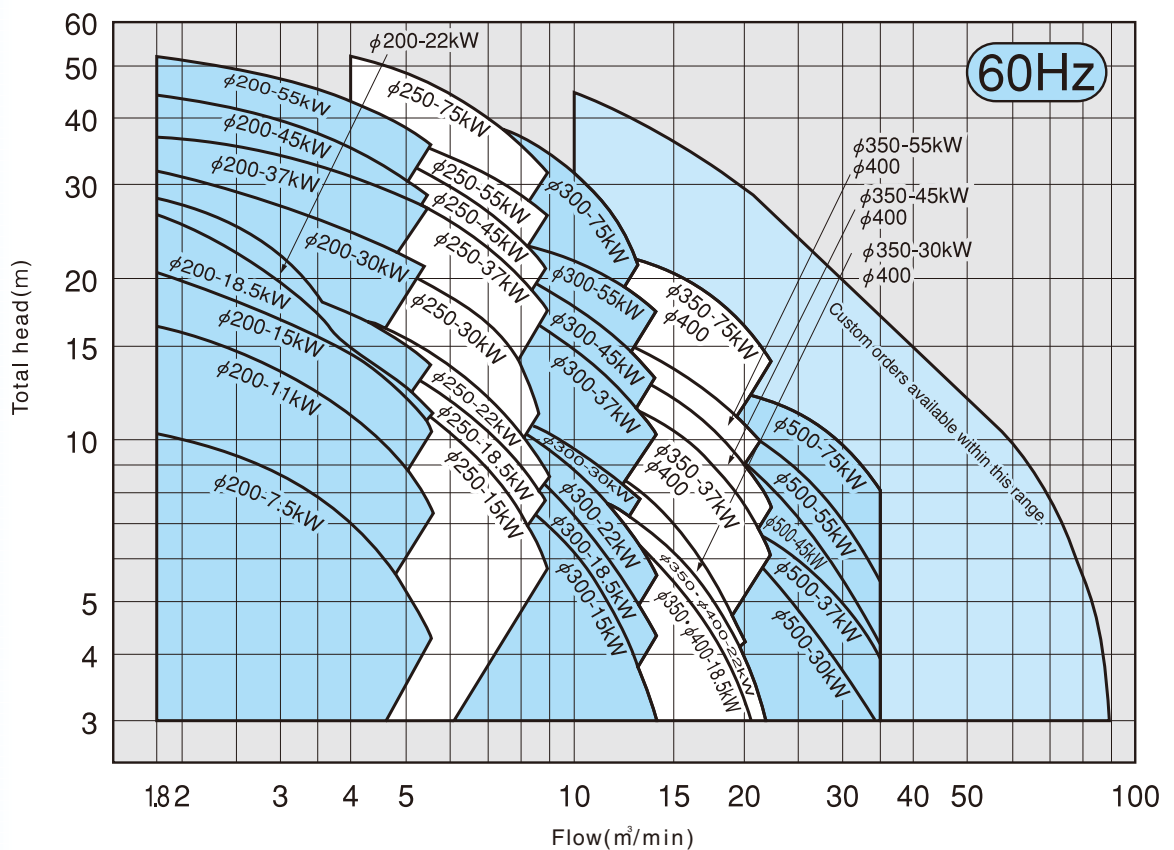
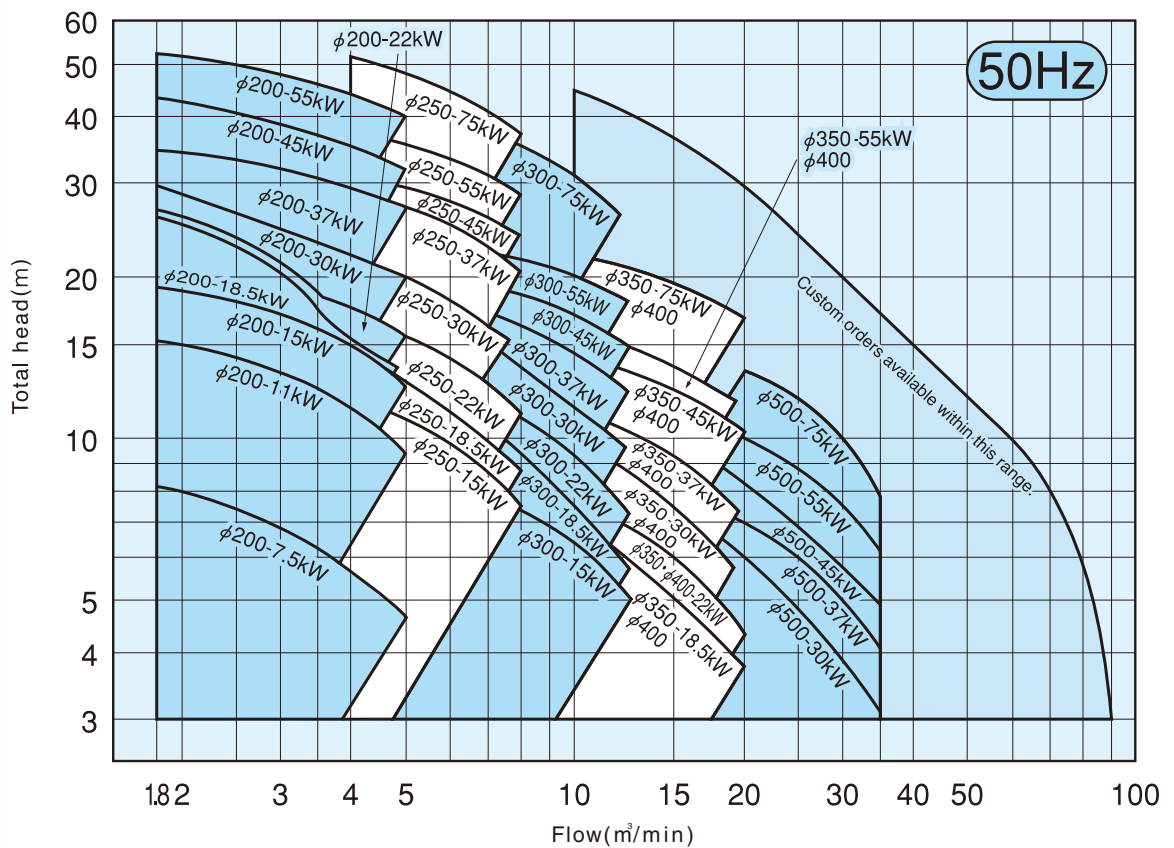
The core wire seal shuts the water out from penetrating into the motor through the core wire.

• 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									900	Star-delta	2PNCT	8	Carbon ／SiC	Hard metal ／Hard metal								
			(630)	φ120																									
			(620)	φ124	(630)	φ120																							
			(610A)	φ123																									
		(470)	φ75	(480A)	φ75	4	930						Star-delta									2PNCT	8	Carbon ／SiC	Hard metal ／Hard metal				
		30	(251AY)	φ75	(252AY)																					φ75			
37	(251A)	φ75	(252A)	φ75																									
45	(205AY)	φ40	(206AY)	φ45																									
55	(205A)	φ40	(206A)	φ45																									
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					Star-delta											2PNCT	8	Carbon ／SiC	Hard metal ／Hard metal
		22	(253)	φ80	(254)	φ80																							
		30	(251AY)	φ70	(252AY)	φ70		4	900								Star-delta	2PNCT	8	Carbon ／SiC	Hard metal ／Hard metal								
		37	(251A)	φ70	(252A)	φ70																							
		45	(255Y)	φ65	(256Y)	φ70	940																						
		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	F				Star-delta		2PNCT	8						Carbon ／SiC	Hard metal ／Hard metal						
		22	(321A)	φ95	(322A)	φ105																							
		30	(301Y)	φ130	(302AY)	φ95																							
		37	(301)	φ130	(302A)	φ95																							
		45	(303)	φ110	(304)	φ140											1,040												
		55	(305)	φ110	(306)	φ105											1,280												
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											1,200												
		55	(405)	φ150	(406)	φ130											1,400												
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											1,200												
		55	(405)	φ150	(406)	φ130											1,400												
75	(401)	φ135	(402)	φ120	2,100																								
500	CN500-P	30	(511Y)	φ175	(511Y)	φ175	50Hz:10 60Hz:12	2,160	F	Star-delta	2PNCT	8	Carbon ／SiC	Hard metal ／Hard metal															
		37	(511)	φ175	(511)	φ175																							
		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

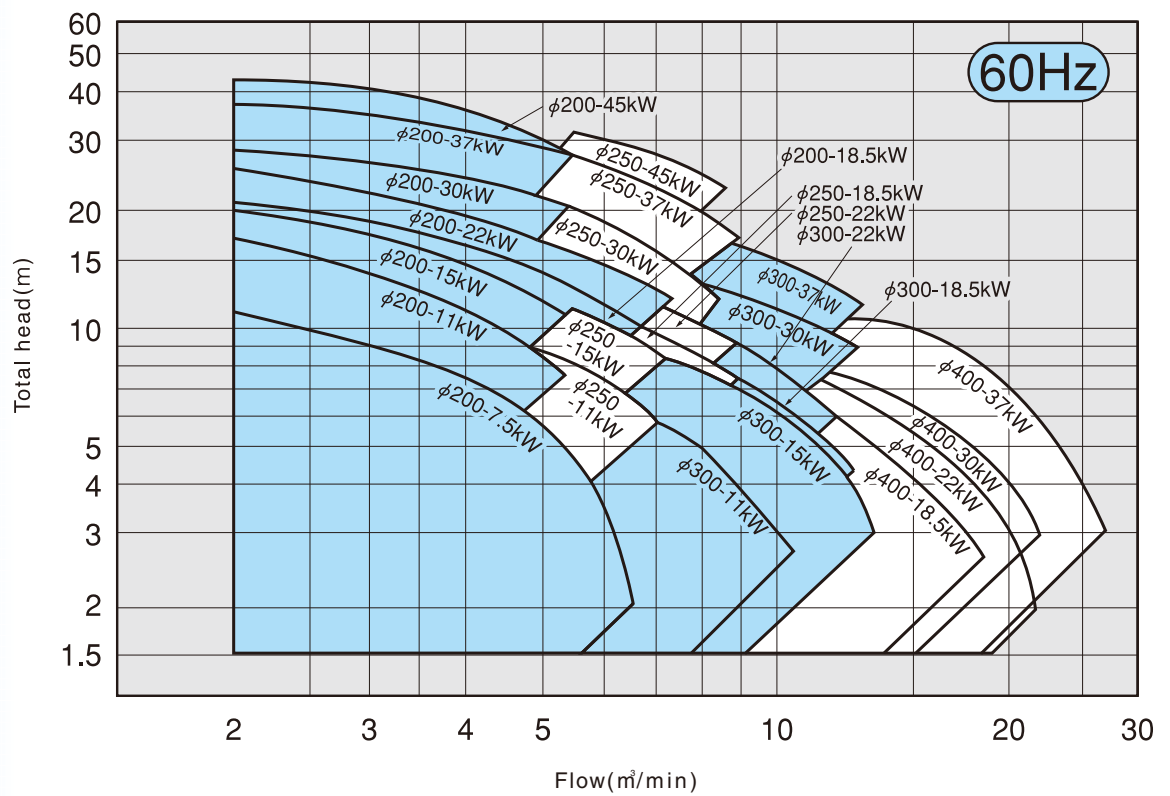
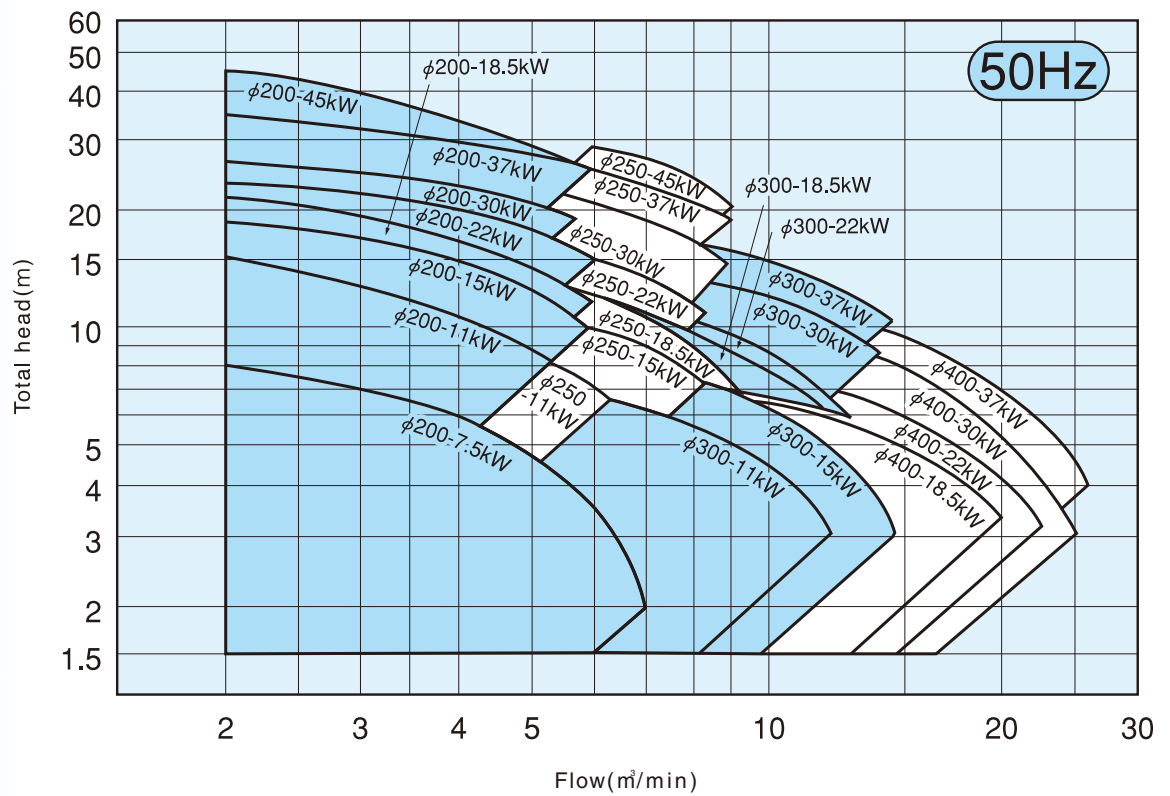
DOL: Direct on line 2PNCT : EPR insulated PCP sheathed cable SiC: Silicon carbide

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		4	650						
	CN2001-P	CN2001-F	30	(251AY)	φ75	(252AY)	φ75									
			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									
	300	CN3003 -P300G	CN3003 -F300	11	(A315DY)	φ115	(A316DY)	φ90	6	370	435					
15				(A315D)	φ115	(A316D)	φ90	4	390	445						
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
	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.

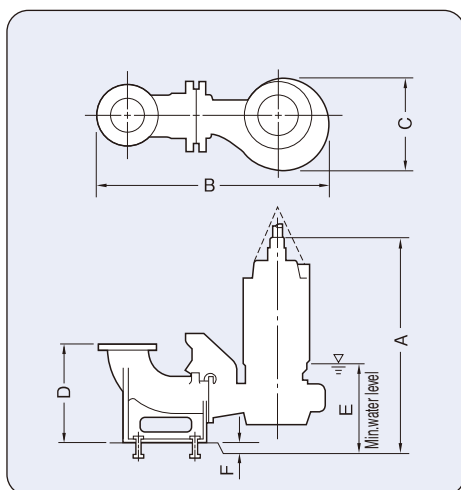
Free standing

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

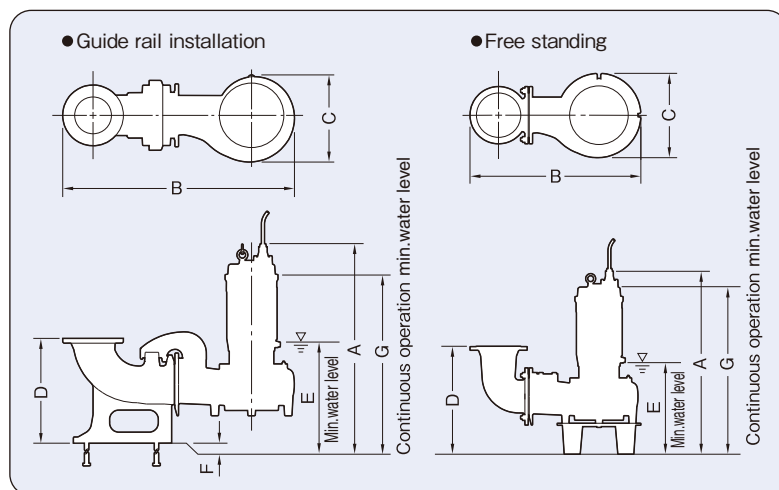
Weight of discharge connection

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	1,278	1,378	1,378	674	674						
	30 · 37	1,524	1,519	1,603	1,603	803	803						
	45 · 55	1,492	1,486	1,583	1,583	783	783						
CN250-P	15	1,145	1,139	1,391	1,391	461	458	663	650	75	100	—	—
	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						
CN300-P	15	1,231	1,231	1,528	1,528	587	587	805	750	80	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						
CN350-P	18.5 · 22	1,747	1,747	1,825	1,825	819	819	910	1,000	70	270	—	—
	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						
	75	2,165	2,165	2,133	2,133	857	857						
CN400-P	18.5 · 22	1,747	1,747	1,825	1,825	819	819	750	1,000	245	270	—	—
	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	1,912	1,912	819	819						
	75	2,165	2,165	2,168	2,168	857	857						
CN500-P	30 · 37 · 45 · 55	2,389	2,389	2,485	2,485	997	997	1,220	1,300	155	200	—	—
	75	2,434	2,434	2,485	2,485	997	997						

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	1,201	700	625	550	—	1,320
		18.5 · 22	1,068	1,260	474	570	550	—	975						
	CN2001-P	30 · 37	1,253	1,519	603	570	550	—	1,240						
		45	1,344	1,519	609	570	550	—	1,330						
	CN2503-P250G	11 · 15	1,006	1,327	505	563	650	75	900						
		18.5 · 22	1,094	1,327	505	563	650	75	1,000						
	CN2501-P	30 · 37	1,271	1,602	603	663	650	75	1,255						
		45	1,347	1,602	603	663	650	75	1,335						
	CN3003-P300G	11 · 15	1,433	1,433	604	775	750	45	1,090						
		22	1,181	1,578	614	775	750	45	1,090						
Free standing	CN3001-P	18.5 · 22	1,482	1,682	755	805	750	80	1,470						
		30 · 37	1,482	1,682	755	805	750	80	1,470						
	CN4001-P	18.5 · 22	1,630	1,912	819	750	1,000	245	1,515						
		30 · 37	1,630	1,912	819	750	1,000	245	1,515						
	CN2003-F200	7.5 · 11.15	999	1,021	504	645	550	—	905						
		18.5 · 22	1,093	1,021	504	645	550	—	1,000						
	CN2001-F	30 · 37	1,258	1,201	700	625	550	—	1,245						
		45	1,334	1,201	700	625	550	—	1,320						
	CN2503-F250	11 · 15	1,008	1,095	530	645	660	—	915						
		18.5 · 22	1,101	1,095	530	645	660	—	1,005						
Free standing	CN2501-F	30 · 37	1,258	1,275	700	625	660	—	1,245						
		45	1,334	1,275	700	625	660	—	1,320						
	CN3003-F300	11 · 15 · 22	1,159	1,232	604	703	730	—	1,070						
		18.5 · 22	1,368	1,381	755	723	730	—	1,355						
	CN3001-F	30 · 37	1,444	1,381	755	723	730	—	1,430						
		18.5 · 22	1,444	1,381	755	723	730	—	1,430						
Free standing	CN4001-F	18.5 · 22	1,660	1,631	934	1,295	1,000	—	1,645						
		30 · 37	1,660	1,631	934	1,295	1,000	—	1,645						

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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ShinMaywa ONO PLANT

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