

ShinMaywa

Submersible Pumps

(Channel Impeller) **CNMJ80 · CNMJ100**



CNMJ Series



**New Advanced
Technology!**

Solids passage up to 3-inch,
self-cleaning with chopper

New Advanced Technology!

Improved passing capability, solids passage up to 3-inch (80mm) in diameter. Semi-open channel impeller has helix-shaped channel and brand-new chopper mechanism.



CNMJ Technology

Conventional Pumps

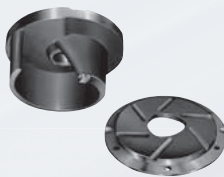
CNWX
(High passing with helix)



CN
(Simple design with semi-open impeller)



CJ
(Chopper)



Combine those **Merit**

CNMJ Brand-New Pumps

Improved Passing Capability

Impeller has a helix-shaped passage based on CNWX.

Solids Passage up to 3-inch (80mm) in diameter

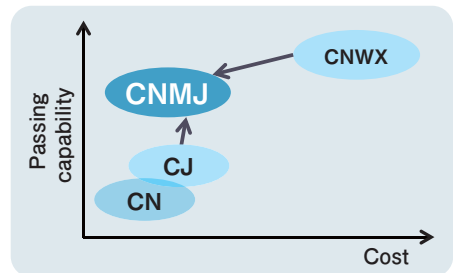
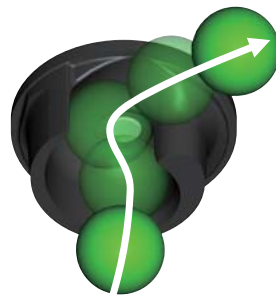
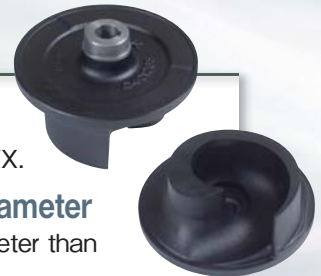
Impeller provides much greater solids passage diameter than ever before.

Simple Design

With single-vane semi-open channel impeller like the CN.

Brand-New Chopper Mechanism

CNMJ is equipped with a brand-new chopper mechanism, that is more advanced than CJ.



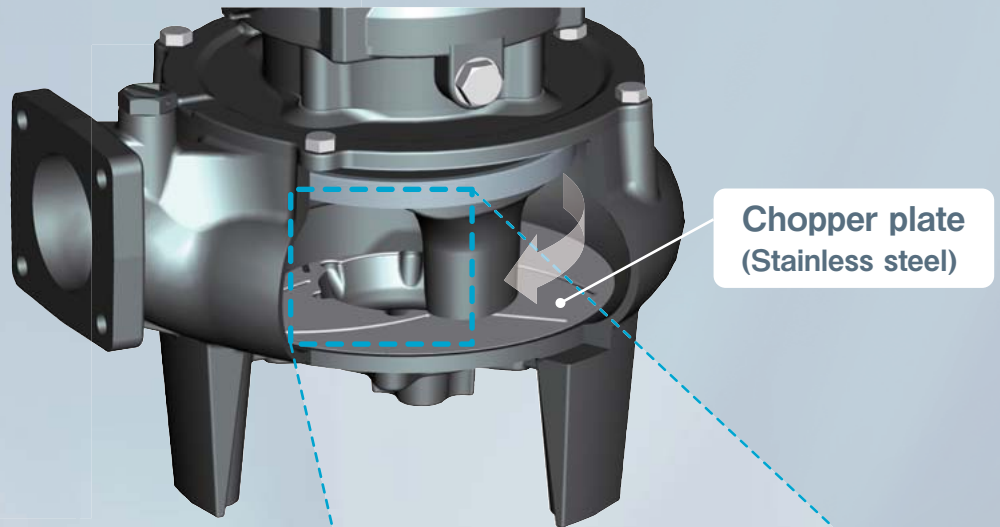
Pass-through Test

★★★★ = Excellent
★★★ = Very good
★★ = Good
★ = Poor/Normal

	Tennis ball OD66mm	Sanitary items	Plastic bag	Steel can OD53×L105mm	Plastic bottle 500ml
CNWX	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★
CNMJ	★★★★★	★★★★★	★★★★	★★★★★	★★★★★
CN/CJ	★	★★	★★	★	★

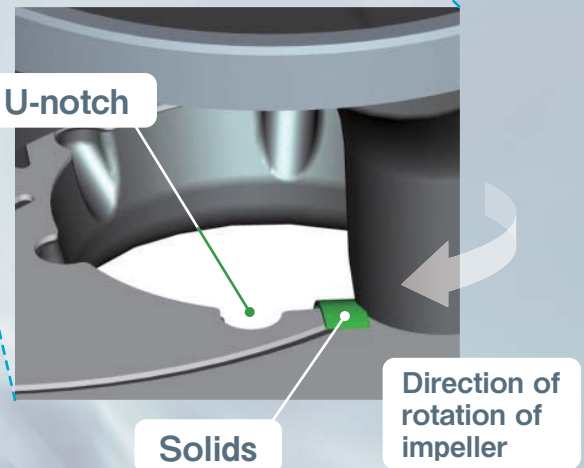
Chopper Mechanism

Brand-new chopper mechanism using a chopper plate.



Chopper plate
(Stainless steel)

Pump model	Pass-through test	Remarks
CNMJ	★★★★	<ul style="list-style-type: none"> Brand-new chopper mechanism Improved wear resistance
CJ	★★★	Chopper mechanism
CN	★	Standard type



U-notch

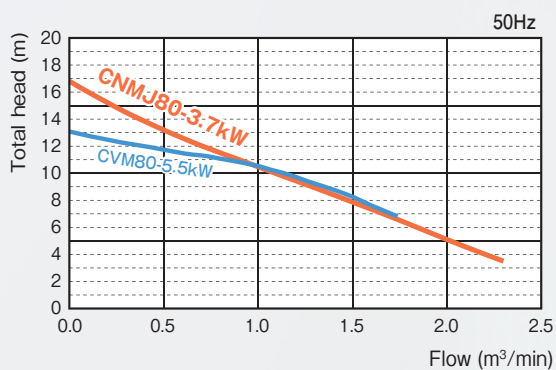
Solids

Direction of rotation of impeller

The brand-new chopper mechanism of the CNMJ overcomes the weak pass-through capability of a semi-open impeller.

Improved Performance

In comparison with our vortex-type 80mm passable model CVM80, this new product may also cut down on power consumption while providing similar performance.

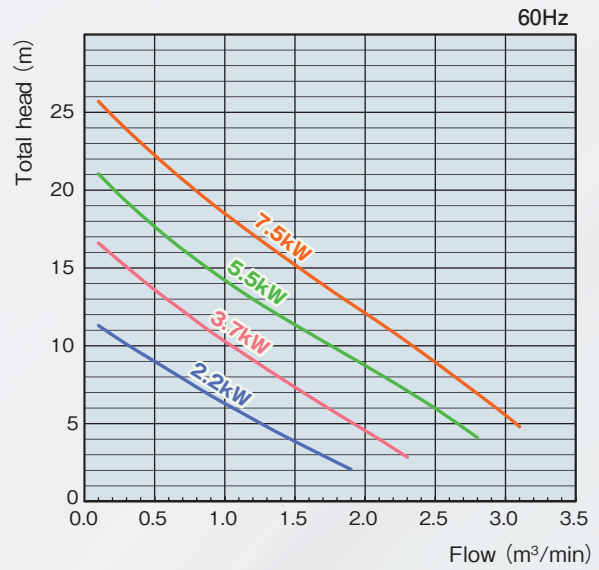
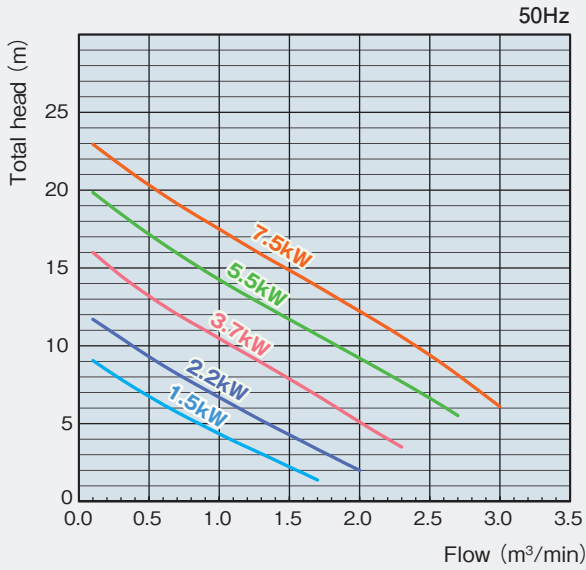


Quick, Easy Maintenance

The pull-out design allows for easier and more efficient inspection and parts replacement. The pump unit can be detached without removing the impeller from the motor shaft.



Performance Curves



Standard Specifications

Liquid handled	Kind of liquid	Wastewater and sewage
	Temperature	0~40°C
Material	Cable	PVC insulated PVC sheathed cable
	Motor shaft	420J2 stainless steel
	Pump housing	Gray iron casting (FC250)
	Impeller	Gray iron casting (FC250)
Electric motor	Type	Air-filled submersible induction motor
	Insulation class	Class F
	Enclosure	IP68
	Phase	3
	No. of poles	4
	Frequency	50/60Hz
	Rated voltage	380V/400V/415V (50Hz) 380V/400V/440V (60Hz)

Cable Specifications

Model	Cable size				
	Type	Section area (mm ²)	Cores	Outer dia. (mm)	Length (m)
CNMJ80	1.5 kW	PVC insulated PVC sheathed cable	1.25	4	11.5
	2.2 kW				
	3.7 kW				
CNMJ100	5.5 kW	2.0	4	12	8
	7.5 kW	3.5		14	

*Cable extension (option): 10-30m (every 5m)

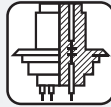
Standard Specifications

Discharge (mm)	Pump model	Installation kit No.		Rated output (kW)	Solid size (mm)	Flow – Total head (m ³ /min-m)		Pump weight (kg)
		Guide rail installation	Free standing			50Hz	60Hz	
80	CNMJ80	P80B	F80	1.5	80	0.8 – 5.2	–	63
				2.2		0.9 – 7.1	0.9 – 6.8	69
				3.7		1.1 – 9.9	1.1 – 9.6	81
	CNMJ100			5.5		1.5 – 11.6	1.5 – 11.3	105
				7.5		1.7 – 13.7	1.7 – 13.9	116
100	CNMJ80	P100B	F100	1.5	80	0.8 – 5.2	–	63
				2.2		0.9 – 7.1	0.9 – 6.8	69
				3.7		1.1 – 9.9	1.1 – 9.6	81
	CNMJ100			5.5		1.5 – 11.6	1.5 – 11.3	105
				7.5		1.7 – 13.7	1.7 – 13.9	116

Features and Construction

Cable entry with core wire seal

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



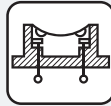
Shaft seal

A highly wear resistant double mechanical seal combined with the use of an oil seal further extends working life. (not available on all models)

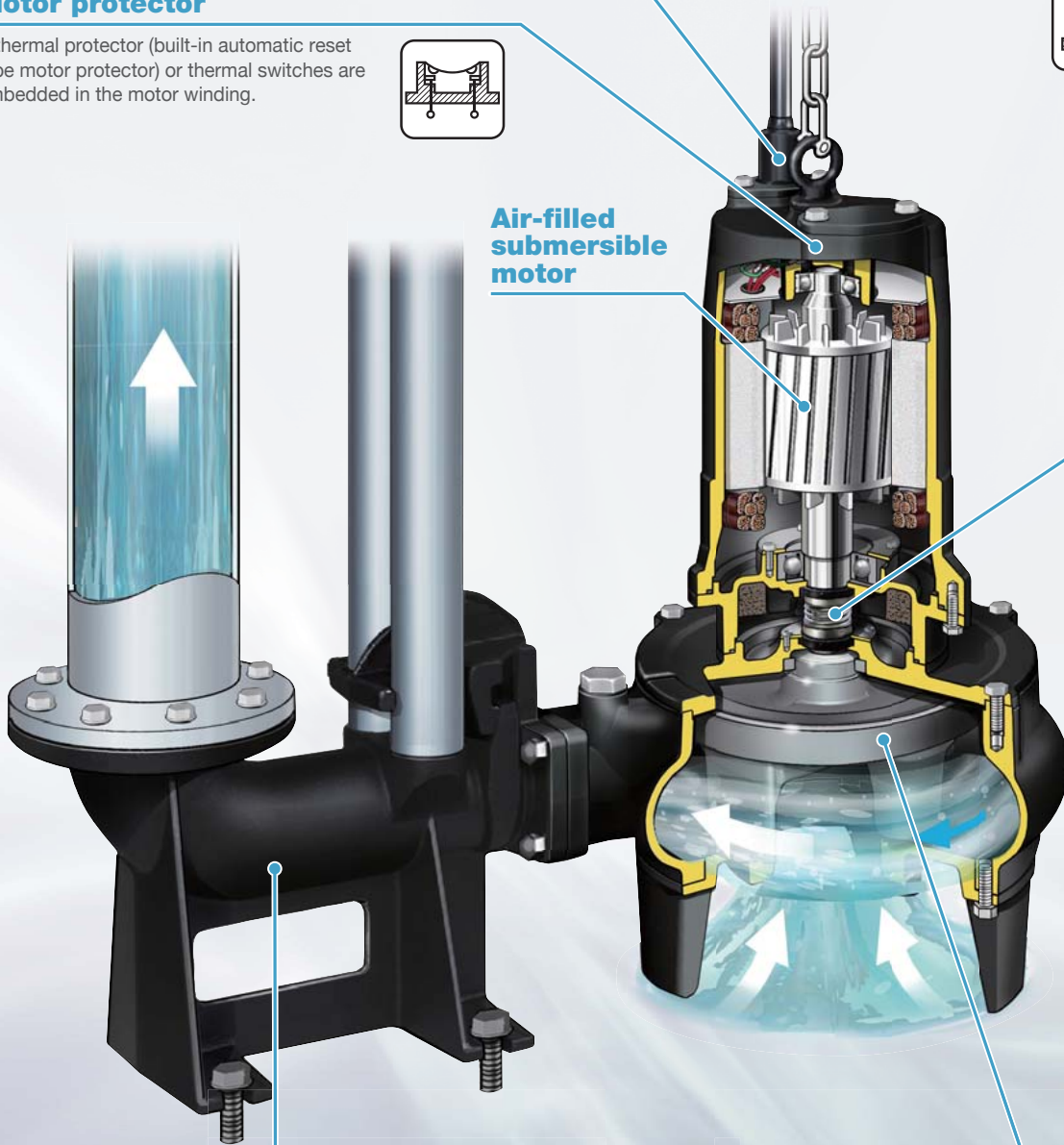


Motor protector

A thermal protector (built-in automatic reset type motor protector) or thermal switches are embedded in the motor winding.



Air-filled submersible motor



Discharge connection

The pump is automatically connected to the discharge pipe.

Impeller

Single-vane, semi-open channel impeller with helix formed passage realizes excellent pass-through capability. All impellers are subject to the dynamic and static balance adjustment at factory.

Applications

■ Sewage treatment plant & Onsite wastewater treatment system

Handling of raw water and other treatment processes

■ Pump station

Collection of sewage, wastewater or stormwater

■ Building & Shopping complex

Drainage of sanitary and kitchen wastewater

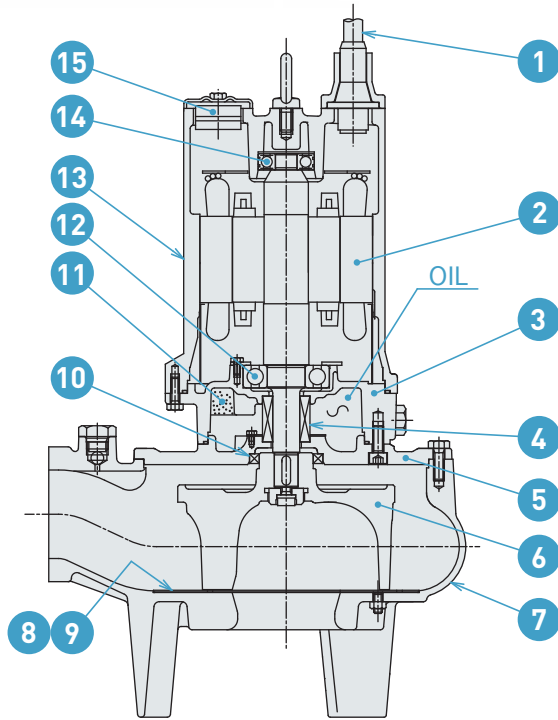
■ Road, Underpass & Subway

Drainage of stormwater

■ Factory & other facilities

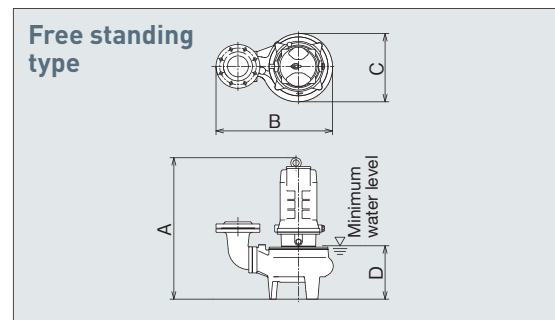
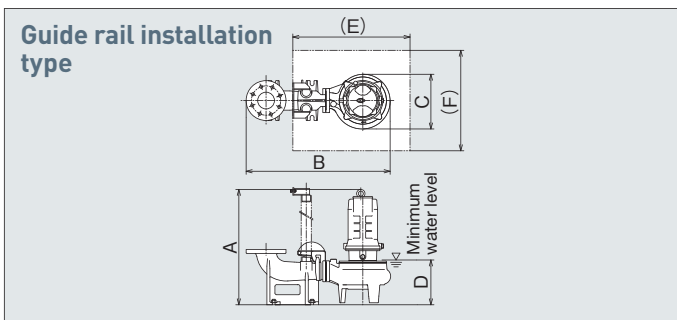
Handling of industrial wastewater, etc.

Sectional View (CNMJ80, CNMJ100)



No.	Name	Material
1	Cable	PVC insulated PVC sheathed cable
2	Motor	Shaft: 420J2 stainless steel
3	Oil housing	Gray iron casting (FC200)
4	Mechanical seal	Upper SiC/SiC Lower SiC/SiC
5	Mechanical seal bracket	Gray iron casting (FC200)
6	Impeller	Gray iron casting (FC250)
7	Pump housing	Gray iron casting (FC250)
8	Chopper plate	304 stainless steel
9	Shim	Polyethylene (PE)
10	Oil seal	Acrylonitrile butadiene rubber (NBR)
11	Pressure equalizer (Not on 1.5 kW pumps)	Foamed acrylonitrile butadiene rubber
12	Ball bearing (lower)	-
13	Stator housing	Gray iron casting (FC200)
14	Ball bearing (upper)	-
15	Thermal protector	-

Dimensions (unit:mm)



Pump model	Installation kit No.	Rated output (kW)	A	B	C	D	E	F
CNMJ80	P80B	1.5	619	847	327	270	700	600
	P100B			861				
	P80B	2.2	627	847				
	P100B			861				
CNMJ100	P80B	3.7	689	847	394	275	700	600
	P100B			861				
	P80B	5.5	724	926				
	P100B			939				
CNMJ100	P80B	7.5	759	926	394	275	700	600
	P100B			939				

Pump model	Installation kit No.	Rated output (kW)	A	B	C	D
CNMJ80	F80	1.5	607	541	327	260
	F100			558		
	F80	2.2	615	541		
	F100			558		
CNMJ100	F80	3.7	677	541	394	265
	F100			558		
	F80	5.5	712	619		
	F100			637		
CNMJ100	F80	7.5	747	619	394	265
	F100			637		

Specifications and dimensions are subject to change without notice.

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ShinMaywa ONO PLANT

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