

**ShinMaywa**

# Submersible Pumps

(Non-Clogging Channel Type) **CNMJ80 · CNMJ100**



**CNMJ Series**



**New Advanced Technology!**

Solid passage up to 3 inches and self-cleaning with chopper

# New Advanced Technology!

Improved passing capability, solid passage up to 3 inches "80mm" in diameter.  
Semi-open channel impeller has helix, and brand-new chopper mechanism.



## CNMJ Technology

### Conventional Pumps

#### CNWX

(High passing with helix)



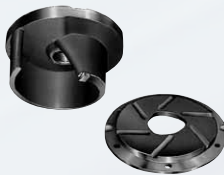
#### CN

(Simple design with semi open impeller)



#### CJ

(Chopper)



Combine those **Merit**

### CNMJ Brand-New Pumps

#### Improved Passing Capability

Impeller has a helix formed passage based on CNWX.

#### Solid Passage up to 3 inches "80mm" in diameter

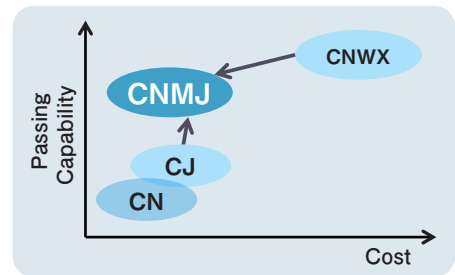
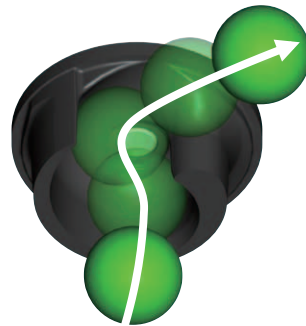
Impeller is much better in solid passage diameter than ever before.

#### Simple Design

Impeller is single vane semi-open impeller like CN.

#### Brand-New Chopper Mechanism

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



## Passing Test

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

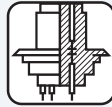
	Tennis Ball φ66	Sanitary Items	Plastic Bag	Steel Can φ53×L105mm	Pet Bottle 500ml
CNWX	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★
<b>CNMJ</b>	★★★★★	★★★★★	★★★★	★★★★★	★★★★★
CN/CJ	★	★★	★★	★	★



# Features And Construction

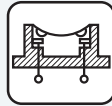
## Cable outlet with core sealer

The self-contained core sealer of the cable outlet shuts the water out from penetrating into the motor chamber through the core wires even if the cable tip is immersed in water or the sheath is damaged.



## Motor protector

A built-in automatic reset type motor protector (automatic cutoff or thermal protector) positively protects the motor from burnout due to overload, impeller clogging and open phase.



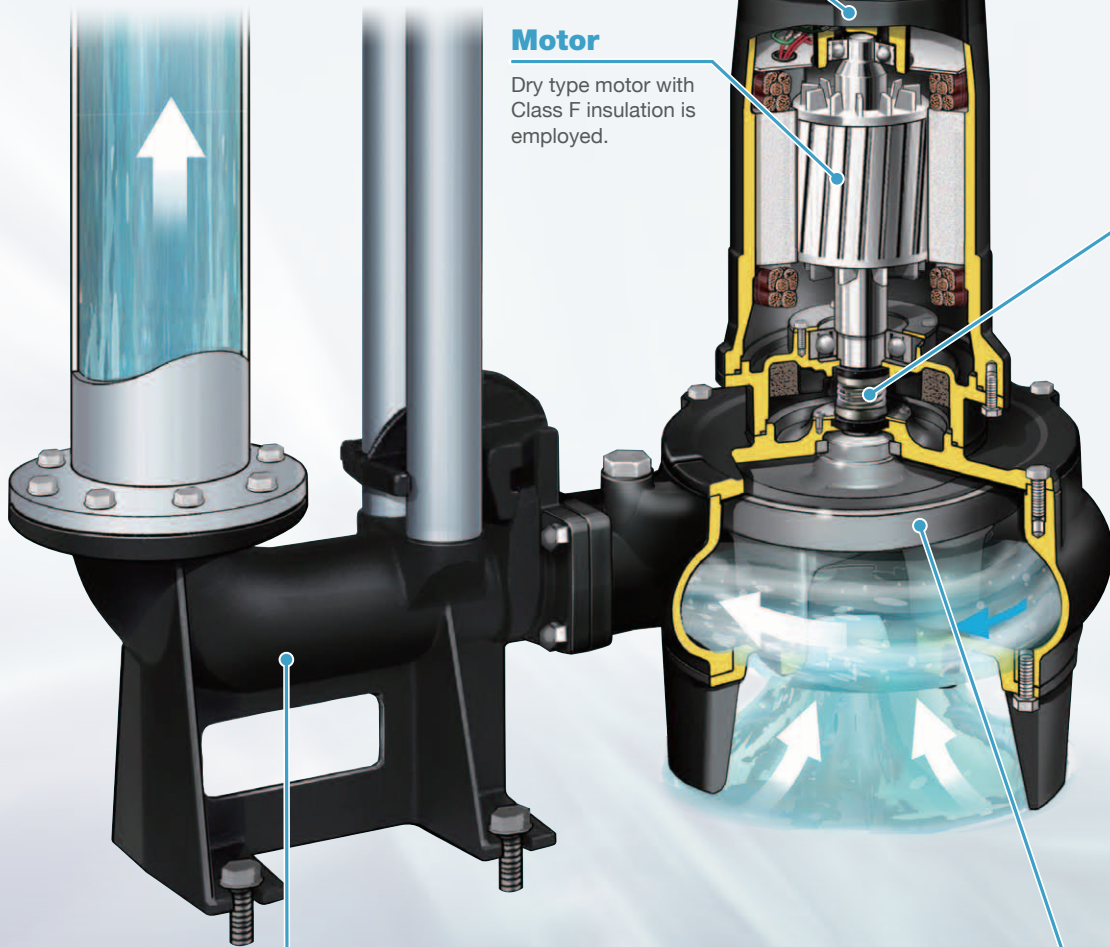
## Shaft seal

A highly wear resistant silicon carbide double mechanical seal positively prevents the water from penetrating into the motor chamber. Besides, combined use of an oil seal further extends the service life of the mechanical seal.



## Motor

Dry type motor with Class F insulation is employed.



## Discharge connection

When the automatic connection type submersible pump is lowered along with the guide pipe, the pump is automatically connected to the discharge pipe with the Discharge connection.

## Impeller

Impellers most suitable for respective pump applications are employed. For example, the non-clogging type impellers are 100% subject to the dynamic and static balance adjustment at factory.

## Applications

### ■ Sewage treatment plant & Septic tank

Handling of raw water and other treatment process

### ■ Pumping station

Relaying of sewage and rainwater

### ■ Building & Shopping complex

Drainage of sanitary and kitchen wastewater

### ■ Road, Underpass & Subway

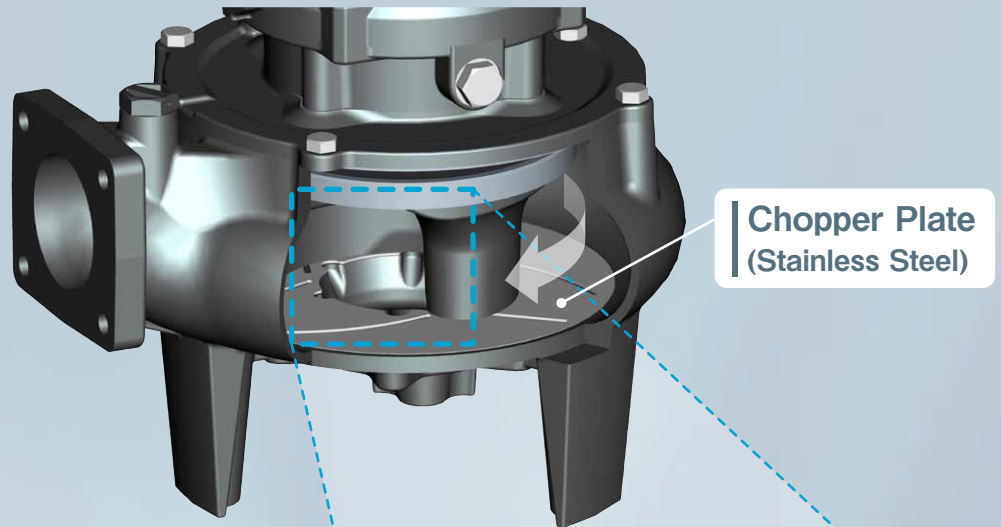
Drainage of rainwater

### ■ Factory & other facilities

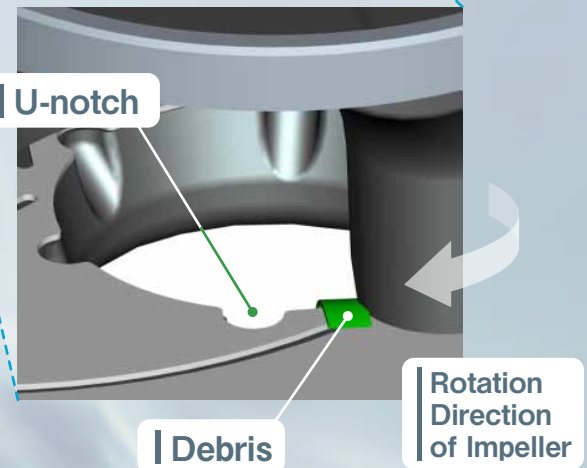
Handling of industrial wastewater, etc.

## Chopper Mechanism

Brand-new chopper mechanism using chopper plate.



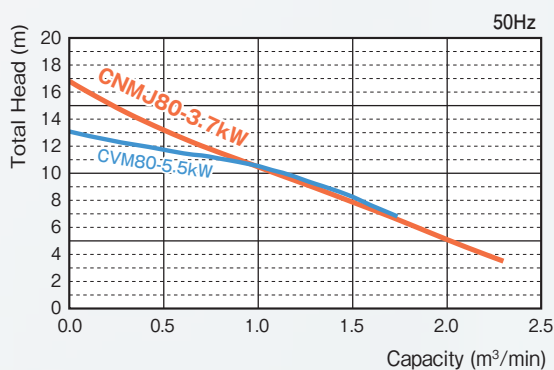
Pump Model	Passing Test	Remarks
<b>CNMJ</b>	★★★★	·Brand-new chopper mechanism ·Improved wear resistance
CJ	★★★	Chopper mechanism
CN	★	Standard type



CNMJ overcome weakness about passing capability of semi-open impeller by the brand-new chopper mechanism.

### Improved Performance

Compared with our vortex-type 80mm passable model CVM80, this new product may also cut down on its power consumption for similar performance.

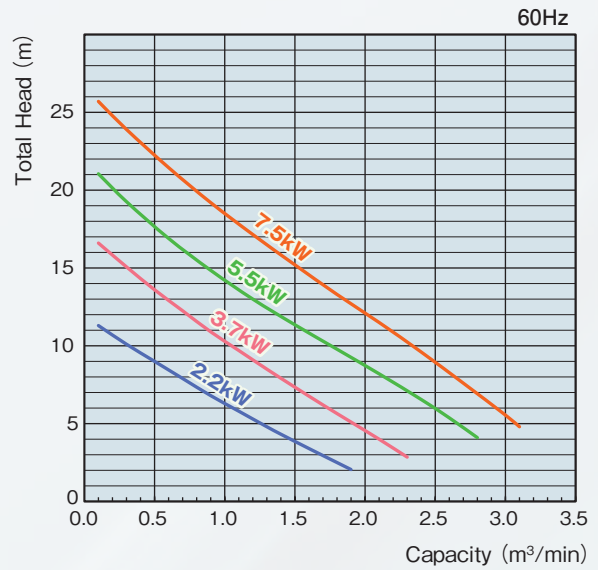
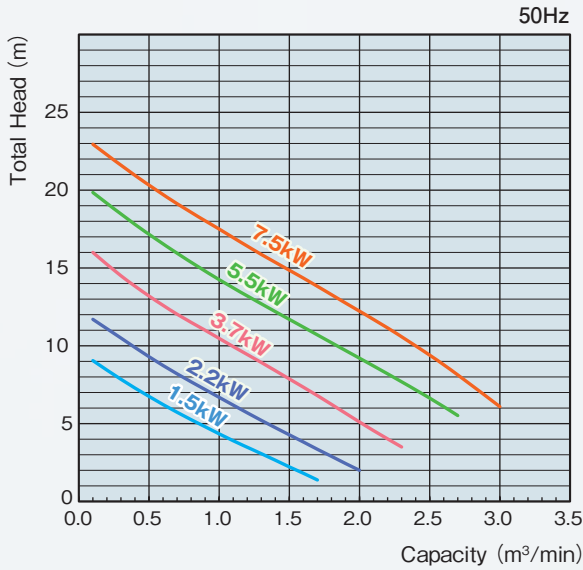


### Quick, Easy Maintenance

The vertical mounting design allows for easier and more efficient inspection and part replacement. The pump unit can be detached without removing the impeller from the motor shaft.



## Performance Curves



\*Compliant with ISO 9906 Annex A and JIS B8301 (Appendix A) requirements

## Standard Specifications

Handling Liquid	Kind of Liquid	Wastewater and Sewage
	Temperature	0~40°C
Material	Cable	VCT
	Motor Shaft	Stainless steel(SUS420J2)
	Pump Housing	Cast iron(FC250)
	Impeller	Cast iron(FC250)
Electric Motor	Name	Air-filled Type Submersible Induction Motor
	Insulation Class	Class F
	Enclosure	IP68
	Phase	3-ph
	Pole	4 Poles
	Frequency	50/60Hz
	Voltage	380V/400V/415V (50Hz) 380V/400V/440V (60Hz)

## Cable Specifications

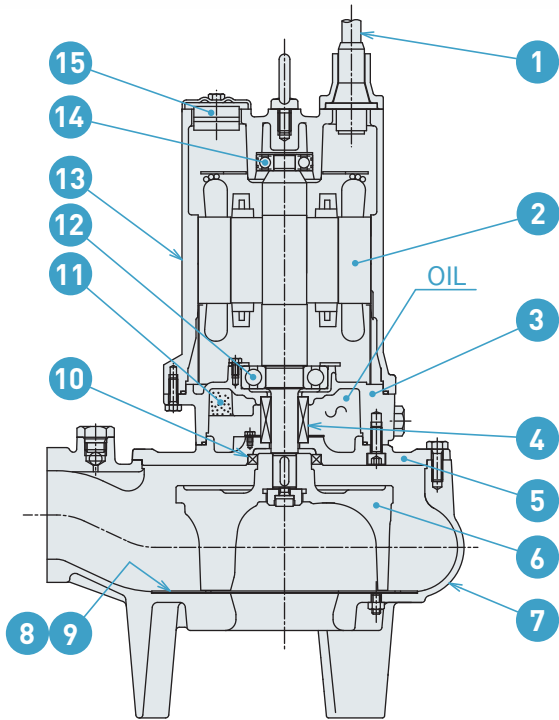
Applicable Model	Cable Size				
	Type	Section Area (mm <sup>2</sup> )	Cores	Outer Dia. (mm)	Length (m)
CNMJ80	1.5 kW	1.25	4	φ11.5	8
	2.2 kW				
	3.7 kW				
CNMJ100	5.5 kW	2.0	4	φ12	8
	7.5 kW				

\*Longer cable (option) 10-30m (every 5m)

## Standard Specifications

Bore (mm)	Pump Model	Connection Part No.		Output (kW)	Solid Size (mm)	Capacity – Total Head (m <sup>3</sup> /min-m)		Weight (Bare Pump) (kg)
		Auto-Connection	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	100	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

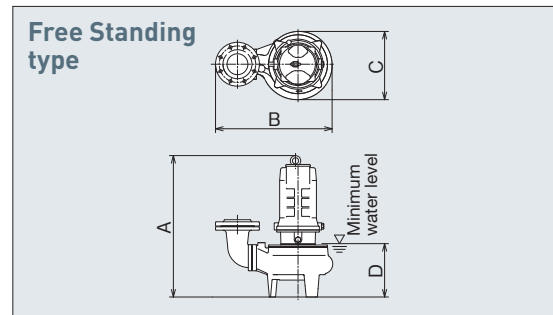
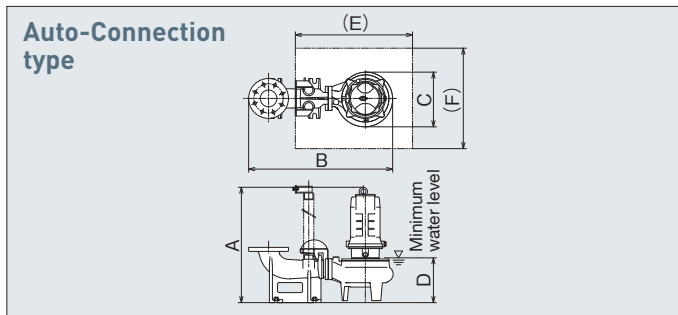
## Sectional View (CNMJ80, CNMJ100)



No.	Name	Material
1	Cable	VCT
2	Motor	Shaft: SUS420J2
3	Oil Housing	FC200
4	Mechanical Seal	Upper SiC/SiC Lower SiC/SiC
5	Mecha-Seal Housing	FC200
6	Impeller	FC250
7	Pump Housing	FC250
8	Chopper Plate	SUS304
9	Shim	Polyethylene
10	Oil seal	NBR
11	Equalizer (Upper 2.2kW)	NBR
12	Ball Bearing (Lower)	-
13	Stator Housing	FC200
14	Ball Bearing (Upper)	-
15	Thermal Protector	-

\* Note VCT : Polyvinyl-chloride sheathed cable  
 SUS : Stainless steel  
 FC : Gray iron casting  
 NBR : Nitril rubber

## Dimensions (unit:mm)



Pump Model	Connection Part No.	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					
	P80B	3.7	689	847				
	P100B		861					
CNMJ100	P80B	5.5	724	926	394	275		
	P100B		939					
	P80B	7.5	759	926				
	P100B		939					

Pump Model	Connection Part No.	Output (kW)	A	B	C	D
CNMJ80	F80	1.5	607	541	327	260
	F100		558			
	F80	2.2	615	541		
	F100		558			
	F80	3.7	677	541		
	F100		558			
CNMJ100	F80	5.5	712	619	394	265
	F100		637			
	F80	7.5	747	619		
	F100		637			

Specifications and dimensions are subject to change without notice.

### ShinMaywa Industries, Ltd.

International Business Group  
 Sales & Marketing Dept., Fluid Div.

3-2-43, Shitte, Tsurumi-ku, Yokohama, 230-0003, Japan  
 Phone : +81-45-584-1322 Fax : +81-45-575-2286  
 E-mail : sales.eisui@shinmaywa.co.jp

### ShinMaywa (America), Ltd.

10737 Gateway West, Suite 240,  
 El Paso, Texas 79935, U.S.A.  
 Phone : +1-915-594-9862  
 Fax : +1-915-594-9866  
 E-mail : info@shinmaywaamerica.com

### ShinMaywa (Asia) Pte. Ltd.

8 Burn Road, #14-10 Trivex,  
 Singapore 369977  
 Phone : +65-6224-0728  
 Fax : +65-6224-9678  
 E-mail : asia.ad@shinmaywa.com.sg

### ShinMaywa (Shanghai) Trading Co., Ltd.

201107 Building 6, Lane 333, Zhujian Road,  
 Minhang District, Shanghai, China  
 Phone : +86-21-5296-2966  
 Fax : +86-21-5296-2970  
 E-mail : shanghai@shinmaywa.co.jp



**ShinMaywa ONO PLANT**

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