

ShinMaywa

Non-Clog Scroll Submersible Pumps

CNWX series



CNWX

High Efficiency and High Solid Passing Capability

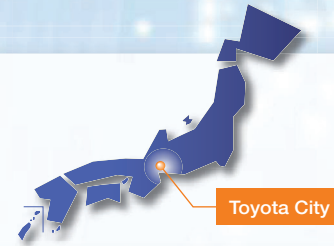
ShinMaywa, the innovation company

We have continued to make advances through further development of the CNW/CNWX series of innovative products, featuring high pass-through capabilities. There has been a significant increase in sales since the release of the series in 2006. (Sales performance: over 10,000 units delivered as of December 2015).

Instances of Application

Toyota City

Sewage pump station for "Motor City"



Delivered to: Toyota City Office

Toyota City is located almost in the center of Aichi Prefecture, to the east of Nagoya City. Toyota City, otherwise known as "Motor City", is home to the headquarters of Toyota Motor Corporation.

Toyota City is actively tackling the problems common to all humankind, including helping to create a low-carbon society.

Our CNWX series high-efficiency, high pass-through submersible pumps are used in the public sewage system of the city to reduce electricity consumption and ensure stable operation.



Pump station

Facility

- Facility name: Municipal Sewage Pump Station

Installations

Type	CNW 1001	CNW 801	CNW 651	CNWX 80	CNWX 65
No. of installations	10	32	24	10	8

Features

- Reduced clogging by foreign matter (Paper diapers, gauze, towels, etc.)
- Lower electricity consumption (run time)

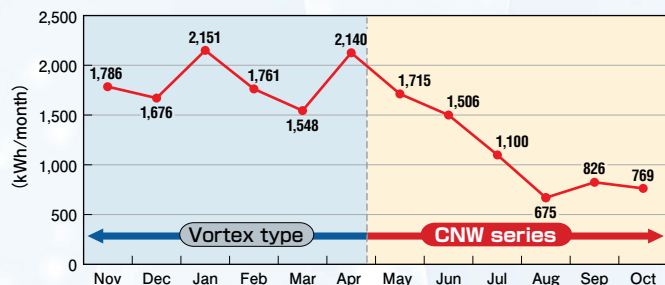
Verification using CNW series pumps

- Reduced clogging at pump station A

Pump used	Vortex type			
Fiscal year	2004	2005	2006	Average
No. of issues	25	17	23	21.7

Pump used	CNW series pump			
Fiscal year	2007	2008	2009	Average
No. of issues	1	1	2	1.3

- Reduction in electricity consumption (at pump station B)



Retirement Home Pump Station, Burlingame, CA, USA

Reduction of Clogging Issues



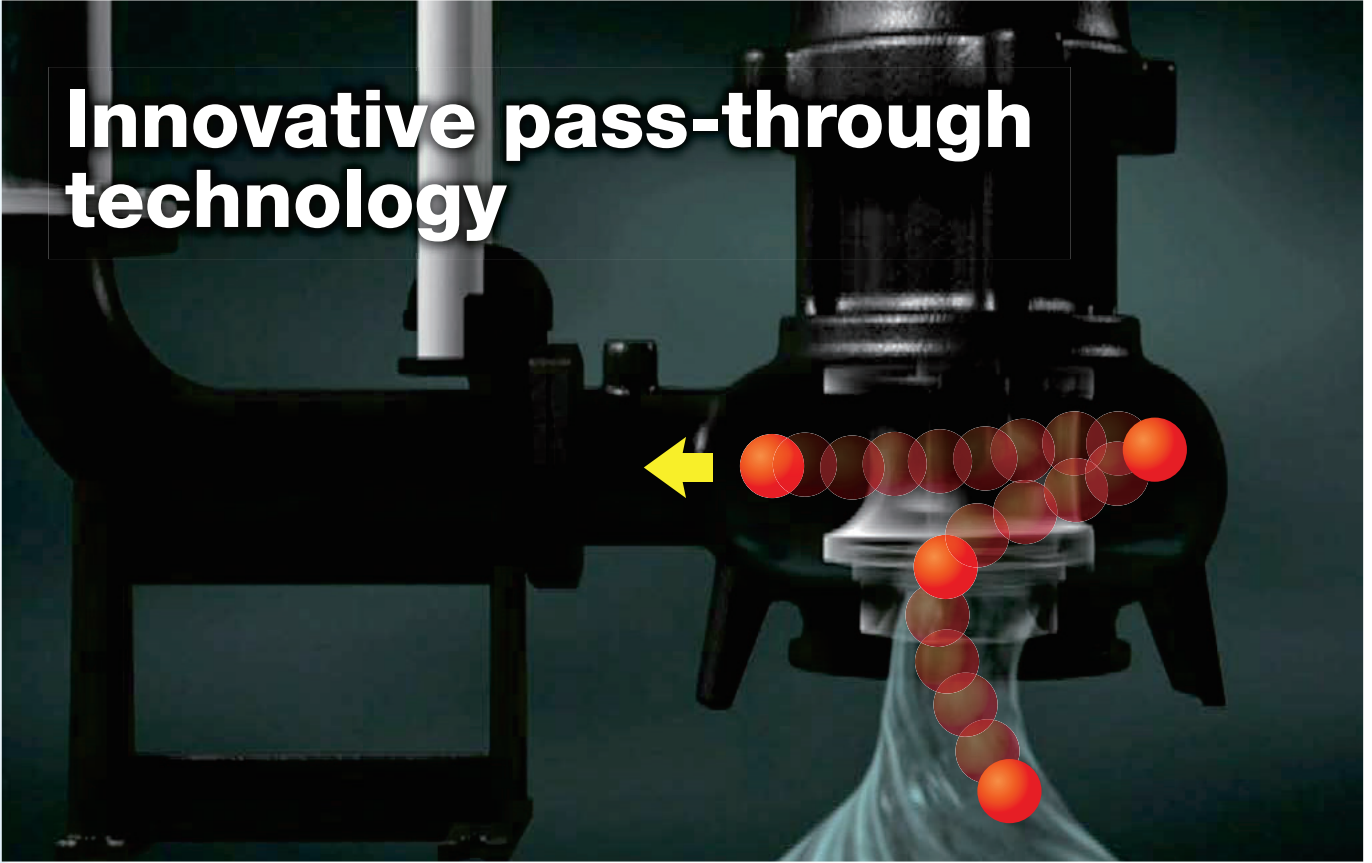
Non-clog pump (3" solid size, 2HP)	
Issue	Clogging multiple times per week
Debris	Diapers, feminine sanitary products, rags, etc.

CNWX (3" solid size, 2HP)
 No clog since Jan. 2011.




CNWX

Innovative pass-through technology



Highly Effective Passing

Pass-through tests

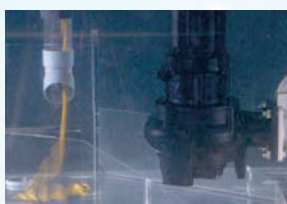
Towel



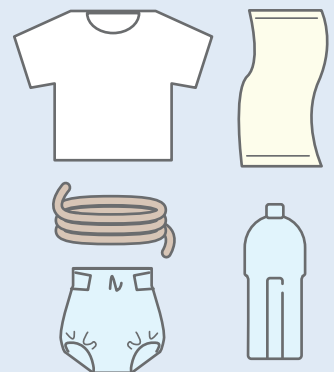
T-Shirt



Rope



Significantly reduces the clogging, plugging and entangling of fibrous materials that would clog most rival pumps, leading to less downtime and lower maintenance costs.



Note: Foreign matter pass-through ability may vary with flow rates.

Quick, Easy Maintenance

The pull out design allows for easier and more efficient inspection and parts replacement.

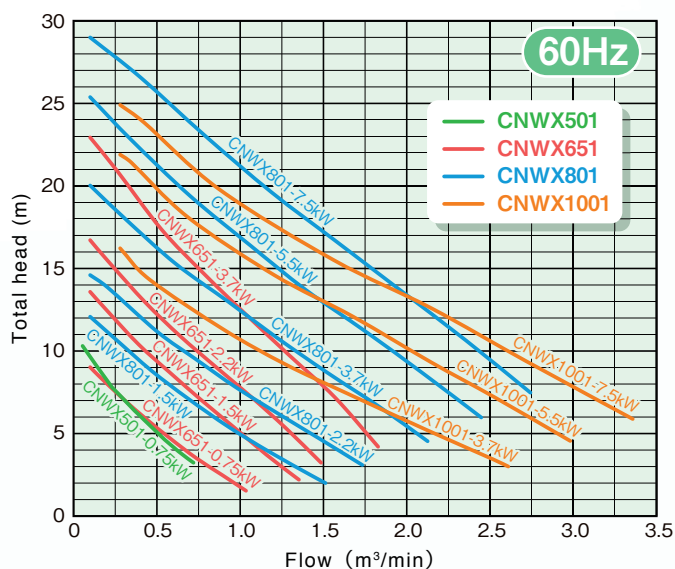
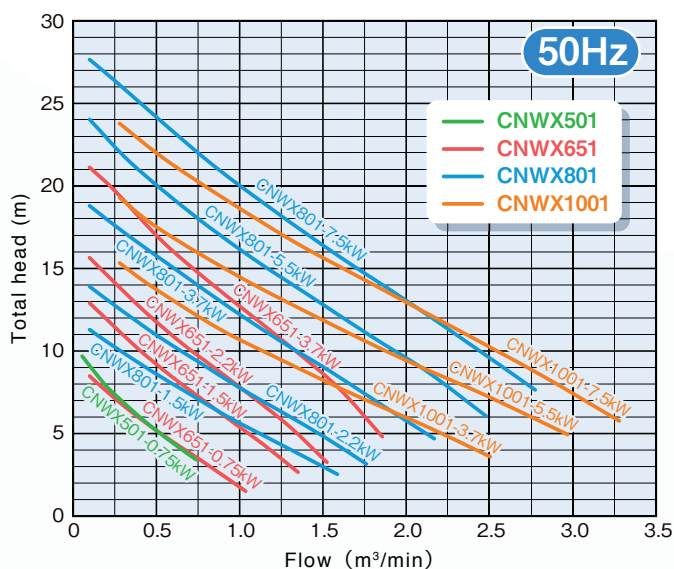
The pump unit can be detached without the impeller being removed from the motor.



Standard Specifications

Discharge (mm)	Pump model	Installation kit No.		Rated output (kW)	Phase	Flow – Total head (m ³ /min-m)		No. of poles	Pump weight (kg)	
		Guide rail installation	Free standing			50Hz	60Hz		50Hz	60Hz
50	CNWX501	P50GWX	F50WX	0.75	Three-phase	0.43– 5.6	0.43– 5.6	4	50	50
65	CNWX651	P65WX (P65GWX)	F65	0.75	Three-phase	0.5 – 5.1	0.5 – 5.1	4	47	47
				1.5		0.7 – 7.6	0.7 – 7.4		63	60
				2.2		0.8 – 9.3	0.8 – 9.4		82	83
				3.7		1.0 –12.6	1.0 –12.5		92	89
80	CNWX801	P80BWX (P80GWX)	F80	1.5	Three-phase	0.85– 6.4	0.85– 5.8	4	66	63
				2.2		0.9 – 8.3	0.9 – 8.2		86	87
				3.7		1.2 –10.8	1.2 –10.8		94	92
				5.5		1.45–13.0	1.45–13.2		127	125
				7.5		1.65–15.4	1.65–15.9		139	134
100	CNWX1001	P100C (P100CG)	F100B	3.7	Three-phase	1.4 – 8.6	1.4 – 8.5	4	102	105
				5.5		1.7 –10.8	1.7 –11.7		135	137
				7.5		2.0 –12.8	2.0 –13.1		147	143

Performance Curves



Standard Accessories

Cable (6m) 0.75 kW 1 pc.
 (8m) 1.5 kW or over 1 pc.

● Guide rail installation type

Discharge connection
 Guide holder (with bolts and nuts)
 Sliding bracket
 Lifting chain (6m)

Installation kit No.	Kit weight	Connection weight
P50GWX	22 kg	13 kg
P65WX	24 kg	15 kg
P65GWX		
P80BWX	31.5kg	18 kg
P80GWX	38.5kg	25 kg
P100C	55 kg	37 kg
P100CG	44 kg	30.5kg

● Free standing type

Discharge flange
 Companion flange (with bolts, nuts and gasket)

Installation kit No.	Kit weight
F50WX	7 kg
F65	7 kg
F80	9.5kg
F100B	12 kg

Cable Specifications

Rated output	Type	Section area	Cores	Outer diameter
0.75kW	PVC insulated sheathed cable	1.25mm ²	4 Cores	11.5mm
1.5 kW				
2.2 kW				
3.7 kW				
5.5 kW				
7.5 kW	2.0 mm ²	12 mm		
	3.5 mm ²	14 mm		
	5.5 mm ²	16.5mm		

Optional Accessories

- Leakage detector
- Thermal switches embedded in the stator (1.5 to 7.5 kW)

Optional Specifications

- Longer cable: 10 to 30 m (in increments of 5 m)
- Impeller material: 304/316 stainless steel casting
High chromium cast iron
- For specifications other than those given here, please contact us.

CNWX

Non-Clog Scroll Submersible Pumps

The CNWX series of non-clog submersible pumps has a high pass-through capability that exceeds that of current submersible pumps.

Applications

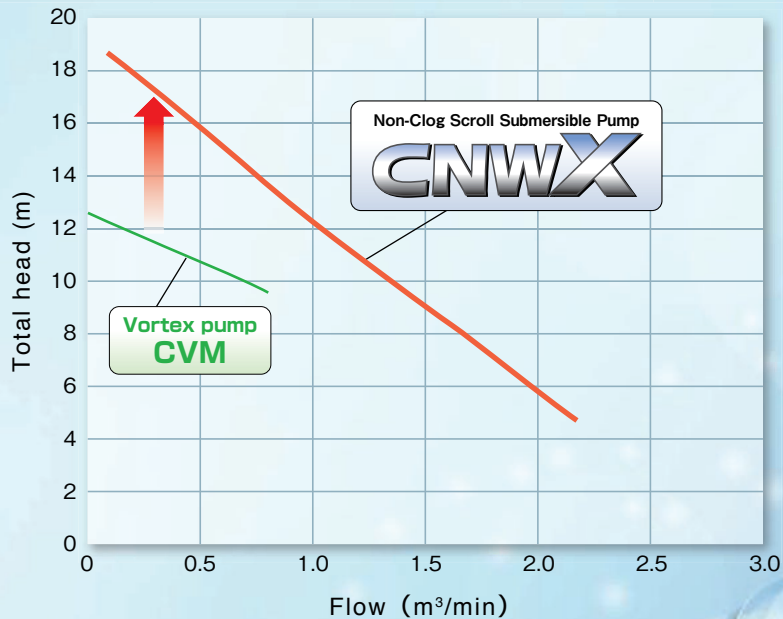
The CNWX series are the pumps of choice for the following applications.

- Pump stations for sewage and wastewater collection systems
- Raw water transfer in pump stations
- Drainage from commercial/public buildings
- Handling of raw water in wastewater treatment plants
- Drainage in industrial wastewater treatment plants
- Drainage of wastewater containing foreign matters such as solids and fibrous materials



Performance curve

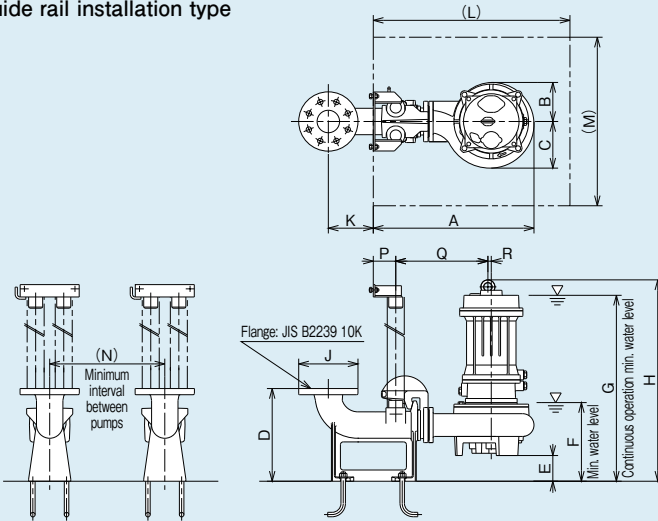
In comparison with vortex pump
(Both models have same motor output: 3.7 kW and solid passage diameter: 80 mm)



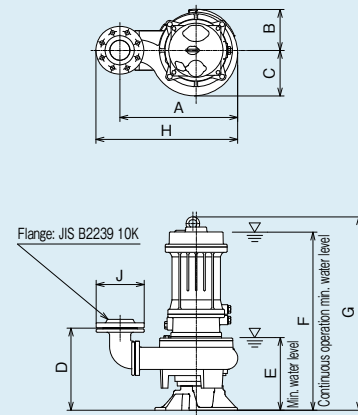
Standard Specifications

Handling liquid	Kind of liquid	Wastewater and sewage
	Temperature	0 - 32°C
Material	Cable (for motor)	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	Three-phase

● Guide rail installation type



● Free standing type



Frequency (Hz)	Discharge (mm)	Pump model	Installation kit No.	Rated output (kW)	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R				
50	50	CNWX501	P50GWX	0.75	443				42				155	79						251				
				0.75	455	130		63	230			505	571				550	350			400	263	22	
				1.5	499		154	223	56			555	612			175	145				50	285		
	65	CNWX651	P65GWX	2.2	529	139	166		*51		235	620	677			600	500				315		12	
				3.7	594	158	191		*45								700	600	500			358		
				1.5	535	145	148		89	275	600	659					600	500	450			296	22	
				2.2	563	146	157		84				665	722			211	160				326		
				3.7	605	153	183	330	80	280			740	798				700	600	500	80	344		12
				5.5	645	166	198		74				740	798				900	700	550		371		
	80	CNWX801	P80GWX	7.5	687	178	214		*64	285	745	807									399			
				3.7	575		172				114		725	782								326		
				5.5	634	172	185	380		103		340	800	858	238	160	700	600	550	80	371		12	
100	CNWX1001	P100C	7.5	649		202				800	861									371				
			0.75	429		130		45			66	230				550	350			400	263	22		
			0.75	441		136	223	63			555	612			175	145				50	283			
60	CNWX651	P65GWX	2.2	511	136	146		56		235	620	677			600	500	450			313		12		
			3.7	529	139	166		*51												315				
			1.5	519		145	145		89	275	600	659									296	22		
			2.2	554				88				665	722			600	500	450			326			
			3.7	563	146	157	330	84	280			740	798				700	600	550		371		12	
			5.5	624	151	174		79				740	798				900	600	550		371			
80	CNWX801	P80GWX	7.5	635	157	187		74	285	745	807									371				
			3.7	563		172				725	782										326			
			5.5	615	172	176	380	114	340		800	858	238	160	700	600	550	80	371		12			
100	CNWX1001	P100C	7.5	626		176			800	861										371				

Frequency (Hz)	Discharge (mm)	Pump model	Installation kit No.	Rated output (kW)	A	B	C	D	E	F	G	H	J	
50	50	CNWX501	F50WX	0.75	367			309	270	545	609	444	155	
				0.75	377		150	288	245	520	588	464		
				1.5	399	150	154	293	255	575	636	487		175
	65	CNWX651	F65	2.2	429		166	299	265	650	707	517		
				3.7	494	158	191	306	270	660	713	582		
				1.5	431		175	353	290	615	672	523		
				2.2	451		175	358	295	685	739	543		
				3.7	472	175	183	362	300	690	744	565	185	
				5.5	512		198	368	310	765	826	605		
	80	CNWX801	F80	7.5	554	178	214	378	325	785	845	647		
				3.7	475		195	408	345	735	790	580		
				5.5	520	195	202	419	360	820	880	626		
100	CNWX1001	F100B	7.5	521		202	419	360	820	880	626			
			0.75	367			306	270	545	606	444	155		
			0.75	377		150	285	245	515	585	464			
60	CNWX651	F65	1.5	397	150		288	250	570	630	484		175	
			2.2	417		166	293	260	645	701	504			
			3.7	429		166	300	265	650	707	517			
			1.5	431			353	290	615	672	523			
			2.2	451		175	354	295	680	735	543			
			3.7	451	175	175	358	295	685	739	543	185		
80	CNWX801	F80	5.5	496		187	368	315	775	835	595			
			7.5	502		187	368	315	775	835	595			
			3.7	475			345	735	790	580				
			5.5	520	195	195	408	350	805	866	625	210		
			7.5	520			350	810	869	625				
			7.5	521		202	419	360	820	880	626			

Note 1. The pumps which have ※ mark on E dimension require a special set-up to pass the maximum size solid. Please contact us for details.
 Note 2. Please contact us for dimensions of P65GWX, P80GWX and P100CG.

Specifications and dimensions are subject to change without notice.

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ShinMaywa ONO PLANT

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