

ShinMaywa Submersible Sewage Pump CNMJ

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* Voltage: 2 means 208/230V, 3 means 460V.

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MECHANICAL SEAL

MOTOR DATA

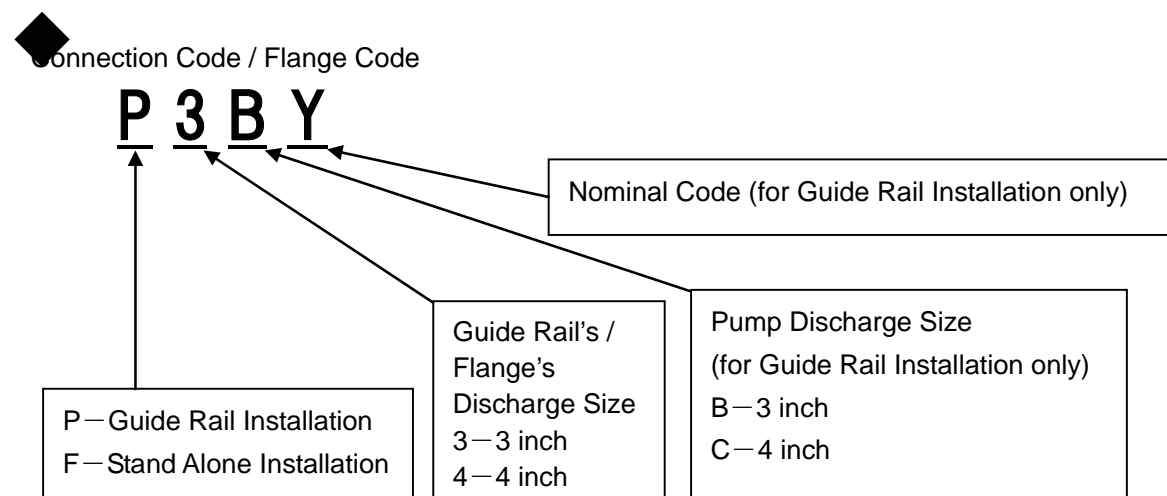
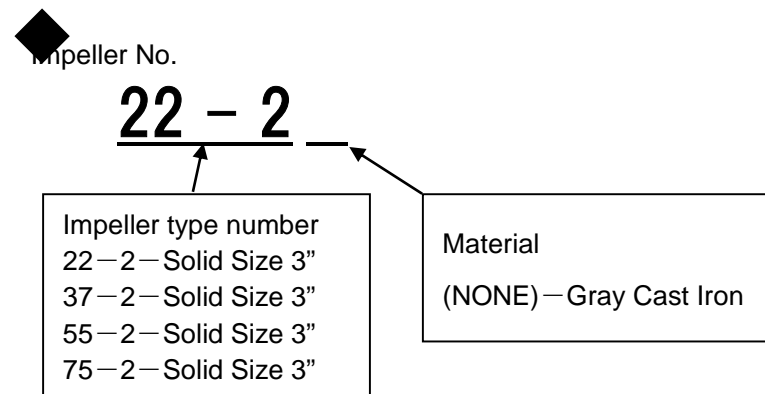
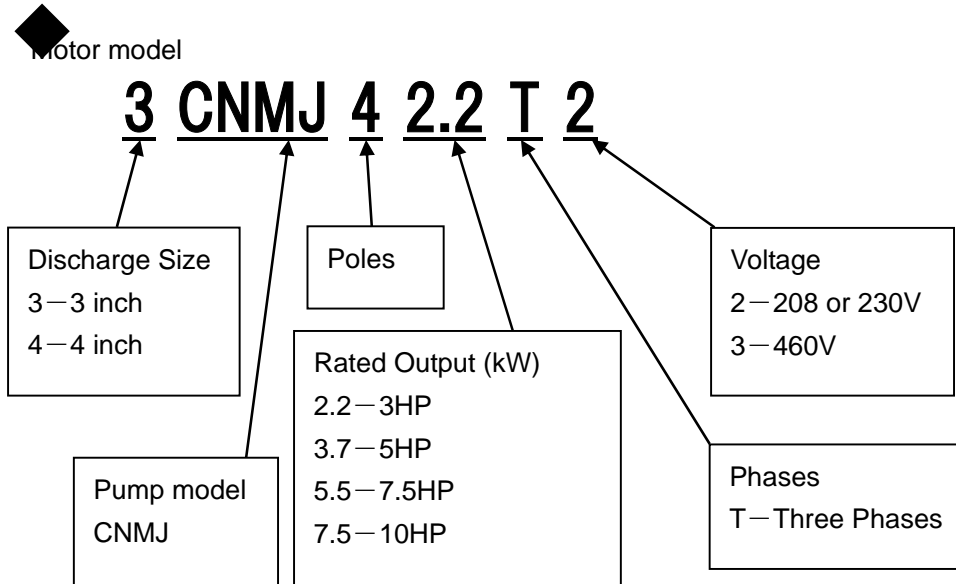
PROTECTOR

WIRING DIAGRAM

WEIGHT (PUMP, ACCESSORY)

ShinMaywa Submersible Sewage Pump CNMJ

MODEL DESIGNATION



ShinMaywa Submersible Sewage Pump CNMJ

SPECIFICATIONS

Model: 3CNMJ, 4CNMJ

	STANDARD	OPTIONAL
Discharge Size	3, 4 inch	
Solid Size	3 inch	
Range of HP	3, 5, 7.5, 10 HP	
Range of Performance	Capacity 26 to 818 (USgpm) Total Head 6 to 84 (ft)	
Limitation		
Type of Liquid Handled	Sewage, Waste water	
Minimum Water Temperature	32 °F (0°C)	
Maximum Water Temperature	104 °F (40°C)	
Motor	Insulation Class F, Three Phase	
Voltage / Hz	208/230V, 460V / 60Hz	
Synchronous Speed	1800 RPM	
Impeller Type	ShinMaywa Non-clog Single-vane Semi-open Impeller	
Material		
Pump Housing	Cast Iron (ASTM A48 Class 35)	
Impeller	Cast Iron (ASTM A48 Class 35)	
Shaft	420J2 Stainless Steel	
Motor Frame	Cast Iron (ASTM A48 Class 30)	
Fastener	304 Stainless Steel	
Chopper Plate	304 Stainless Steel	
Mechanical Seal Materials		
Upper side	Silicon Carbide / Silicon Carbide	
Lower Side	Silicon Carbide / Silicon Carbide	
Bearing		
Upper side	Single Deep Groove Ball Bearing (Creep Prevention Type)	
Lower Side	Single Deep Groove Ball Bearing	
Motor Protection	Thermal Protector (Auto Reset Type)	Leakage Detector
Accessory	Submersible Cable 50ft (15m)	

ShinMaywa Submersible Sewage Pump CNMJ

SPECIFICATIONS

•OPERATING CONDITION

Temperature	32-104 °F (0-40°C)
pH	6-9
Electric Conductivity	100mS/m or less
DO(Dissolved Oxygen)	1-4mg O ₂ /ℓ
Chlorine Iron	1,000mg/ℓ or less
SS	3,000mg/ℓ or less
BOD,COD	1,000mg/ℓ or less
Viscosity	5 cP or less
Liquid Specific Gravity	1.05 or less
Sludge Concentration	1% or less

ShinMaywa Submersible Sewage Pump CNMJ

SPECIFICATIONS

A. General

CNMJ series is the submersible sewage pumps, which has ShinMaywa original non-clog single-vane semi-open impeller. CNMJ impeller has helix shaped channel, and brand-new chopper mechanism. It makes overcome weakness about pass-through capability of semi-open impeller by the brand-new chopper mechanism. Generally, in a conventional pump which is employed semi-open impeller, if the gap between the suction port of the impeller and the casing is widened due to wear, the pump performance is decreased such as the flow rates and the pump efficiency. In the CNMJ series, the gap can be adjusted by inserting shims between the chopper plate and the pump housing. It makes the pump performance can be restored.

Pump system design shall include a guide rail system be such that the pump will be automatically connected to the discharge piping when lowered into place on the discharge connection. The pump shall be easily removable for inspection or service, requiring no bolts, nuts, or other fasteners to be disconnected, or the need for personnel to enter the wet well. The nameplate ratings of the motor shall be based on 104 °F (40°C) ambient environment and depth of 26 feet (8m). The motor and pump shall be designed, manufactured, and assembled by same manufacturer.

B. Manufacturer

ShinMaywa Industries, Ltd.

C. Pump Characteristics

Pumps shall conform to the following requirements:

Number of units

Design flow (GPM)

Design TDH (ft)

Minimum shut off head (ft)

Synchronous Speed (RPM) 1800

Maximum HP 3HP, 5HP, 7.5HP, 10HP

Minimum efficiency at design (%)

Minimum power factor at design (%)

Voltage / Hz / Phase 208/230V, 460V / 60Hz / 3

D. Pump Construction

Major parts of the pumping unit(s) including pump housing and impeller shall be manufactured from gray cast iron, ASTM A48-Class 35. Major parts of the submersible motor unit(s) include motor frame and oil casing shall be manufactured from gray cast iron, ASTM A48-Class 30. Casting shall have smooth surfaces devoid of blowholes or other casting irregularities. Units shall be furnished 150lb.flat face ANSI flange fitting. All exposed bolts and nuts shall be 304 stainless steel. All mating surface of major components shall be machined and fitting with NBR O-rings where watertight sealing required. Machining and fitting shall be such that sealing is accomplished by automatic compression of O-rings in two planes and O-ring contact is made on four surfaces without the requirement of specific torque limits. All metal surfaces coming into contact with the water, other than stainless steel or copper alloy, shall be coated by Epoxy paint.

ShinMaywa Submersible Sewage Pump CNMJ

SPECIFICATIONS

1. Impeller

CNMJ is employed the non-clog single-vane semi-open impeller which has helix shaped channel. The impeller(s) has good pump characteristics with no overload in its operation range. It can also pass-through 3 inch spherical solid, qualifying it as a “true” non-clog by definitions.

2. Chopper Plate

The design shall be replaceable chopper plate to maintain pass-through capability.

3. Mechanical Seal

One coil double design mechanical seal operating in an oil bath shall be provided on all units. The mechanical seal shall be located in the oil chamber to prevent the entry of foreign materials in to mechanical seal area and also mechanical seal's NBR elastomer shall be designed for submersible pumps to increase sealing quality. Lower side seal faces and Upper side seal faces (All seal faces) material shall be silicon carbide. These feature makes high reliable than popular design mechanical seal.

E. Motor construction

The pump motor shall be an air filled single phase induction type with a squirrel cage rotor, shell type design. Stator windings shall be copper, insulated with moisture resistance Class F insulation, rated for 311 °F (155°C). The stator shall be dipped and baked in Class F varnish and heat shrank fitted into the stator housing. Rotor bars and short circuit rings shall be manufactured of cast aluminum. Motor Shaft shall be made from JIS420 J2 stainless steel. The pump shaft shall rotated on two bearing. Motor bearings shall be permanently grease lubricated. The upper bearing and lower bearing shall be a single deep groove ball bearing. Motor service factor shall be 1.15. Motor capable 10 starts per hour. The motor shall be designed for operation up to 104 °F (40°C) ambient and with a temperature rise not to exceed 70 degree. The motor shall have a voltage tolerance of plus or minus 10%. The motor shall be non-overloading the entire specified range of operation. Motor over temperature protection shall be provided by thermal protector (auto reset type).

Leakage probe detector is available as an option to provide mechanical seal failure protection.

ShinMaywa Submersible Sewage Pump CNMJ

SPECIFICATIONS

F. Cable

Power cable jacket is made of polyvinylchloride (PVC) or ethylene-propylene rubber (2PNCT), designed for submerged applications. Standard power cable length is 50ft (15m). Cable entry of submersible motor shall prevent incursion of the pumpage into the motor due to the phenomena known as "WICKING", a portion of each conductor is stripped back exposing the copper conductor. The cable is placed in a mold and is molded into one piece. The mold rubber seals the end of the power cable and flows in between each strand of conductor. This feature prevents "WICKING", through the fiber reinforcement found in standard submersible cable, and through the strands of the conductor itself.

G. Guide rail system

Design shall include two 304 stainless steel guide rails to mount directly to the Connection Elbow, at the floor of the wetwell and to a guide rail bracket at the top of the wetwell below the hatch opening. Intermediate guide brackets are recommended for rail lengths over 15 feet.

Guide rails are not part of the pump package and shall be supplied by others.

The Connection Elbow shall be manufactured of cast iron, ASTM A48 Class 30. It shall be designed to adequately support the guide rails, discharge piping, and pumping unit under both static and dynamic loading conditions with support legs that are suitable for anchoring it to the wetwell floor. The face of the inlet Connection Elbow flange shall be perpendicular to the floor of the wetwell. The discharge flange of the Connection Elbow shall conform to ANSI B16.1 Class 125.

The pump design shall include an integral self-aligning slide bracket. Sealing of the pumping unit to the Connection Elbow shall be accomplished by single, linear, downward motion of the pump. The entire weight of the pump unit shall be guided to and wedged tightly against the inlet flange of the Connection Elbow, making metal-to-metal contact with the pump discharge forming a seal without the use of bolts, gaskets or O-rings.

Lifting chain shall be galvanized (stainless steel) suitable for removing and installing the pump unit.

ShinMaywa Submersible Sewage Pump CNMJ

DRAWING LIST (Performance Curve)

Performance Curve

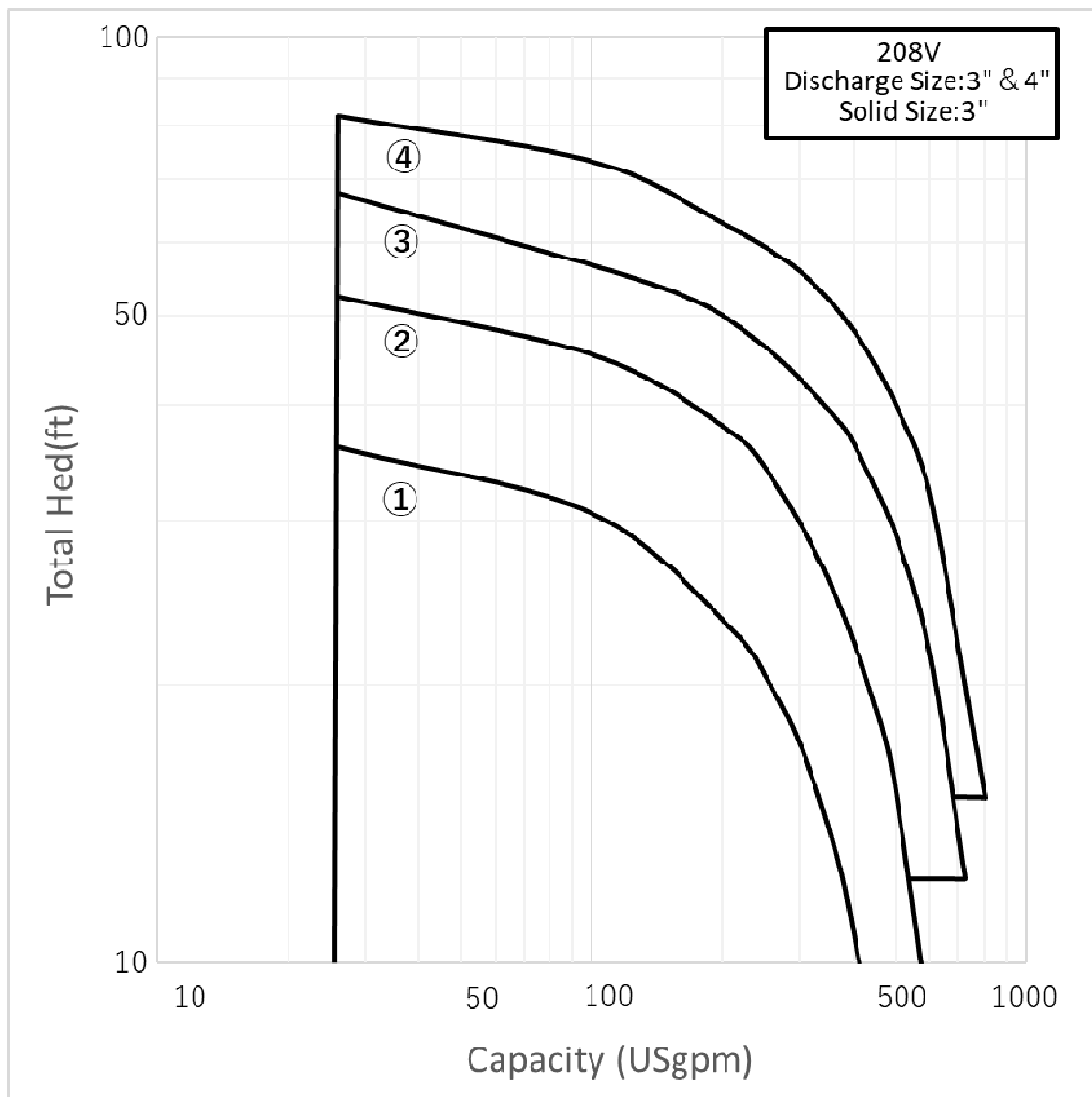
Discharge	Solid Size	Model		HP	Voltage	
		Motor	Impeller		208V	230V, 460V
3"	3" (80mm)	3CNMJ42.2T *	22-2	3	Y407583	Y407584
		3CNMJ43.7T *	37-2	5	Y407585	Y407586
4"	3" (80mm)	4CNMJ42.2T *	22-2	3	Y407583	Y407584
		4CNMJ43.7T *	37-2	5	Y407585	Y407586
		4CNMJ45.5T *	55-2	7.5	Y407587	Y407588
		4CNMJ47.5T *	75-2	10	Y407589	Y407590

* Voltage: 2 means 208/230V, 3 means 460V.

ShinMaywa Submersible Sewage Pump CNMJ

PERFORMANCE CURVE (208V)

Discharge	Solid Size	Model		HP	208V	
		Motor	Impeller		Curve No.	Drawing
3"	3" (80mm)	3CNMJ42.2T2	22-2	3	①	Y407583
		3CNMJ43.7T2	37-2	5	②	Y407585
4"	3" (80mm)	4CNMJ42.2T2	22-2	3	①	Y407583
		4CNMJ43.7T2	37-2	5	②	Y407585
		4CNMJ45.5T2	55-2	7.5	③	Y407587
		4CNMJ47.5T2	75-2	10	④	Y407589

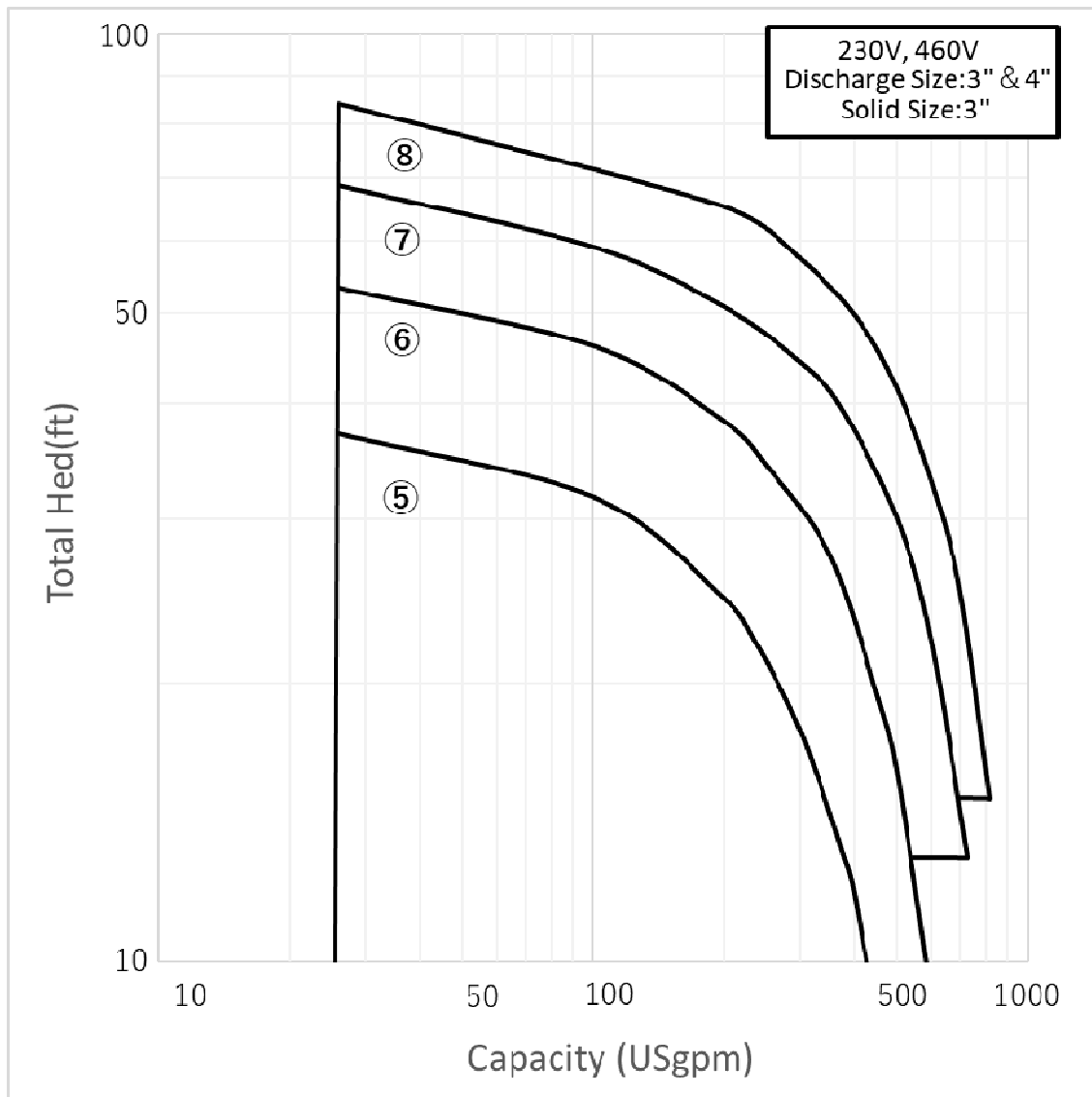


ShinMaywa Submersible Sewage Pump CNMJ

PERFORMANCE CURVE (230V, 460V)

Discharge	Solid Size	Model		HP	230V, 460V	
		Motor	Impeller		Curve No.	Drawing
3"	3" (80mm)	3CNMJ42.2T*	22-2	3	⑤	Y407584
		3CNMJ43.7T*	37-2	5	⑥	Y407586
4"	3" (80mm)	4CNMJ42.2T*	22-2	3	⑤	Y407584
		4CNMJ43.7T*	37-2	5	⑥	Y407586
		4CNMJ45.5T*	55-2	7.5	⑦	Y407588
		4CNMJ47.5T*	75-2	10	⑧	Y407590

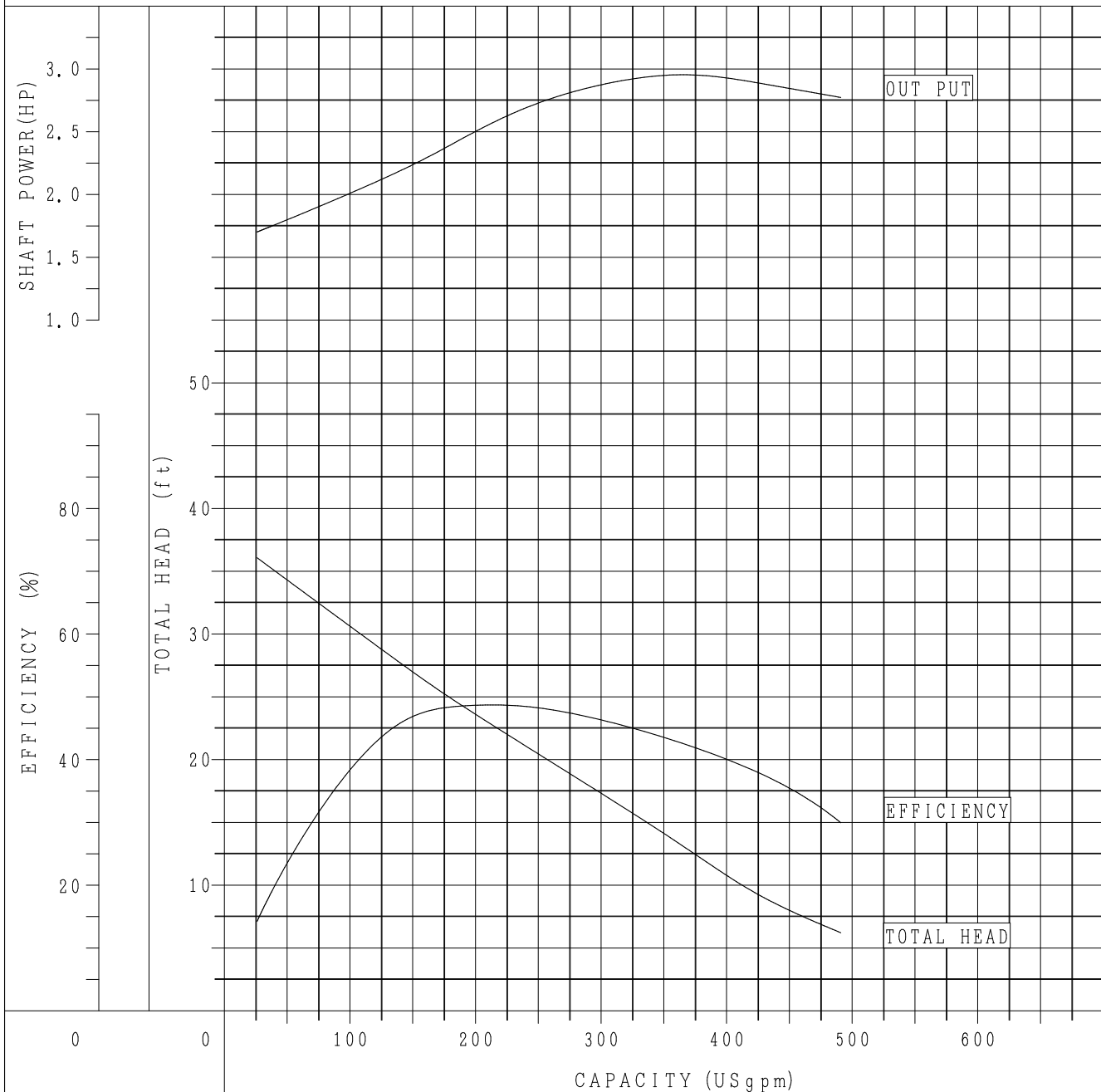
* Voltage: 2 means 208/230V, 3 means 460V.



MODEL (Motor Impeller) 3CNMJ42.2T2_22-2, 4CNMJ42.2T2_22-2

DISCHARGE	SOLID SIZE	RATED POWER		VOLTAGE	POLE	SYNCHRONOUS SPEED (RPM)	FREQ.	INS. CLASS
		HP	kW					
3" (80mm), 4" (100mm)	3" (80mm)	3	2.2	208	4	1800	60	F

	FLOW (US gpm)	HEAD (ft)	EFF. (%)
B. E. P	212	22.8	48.7



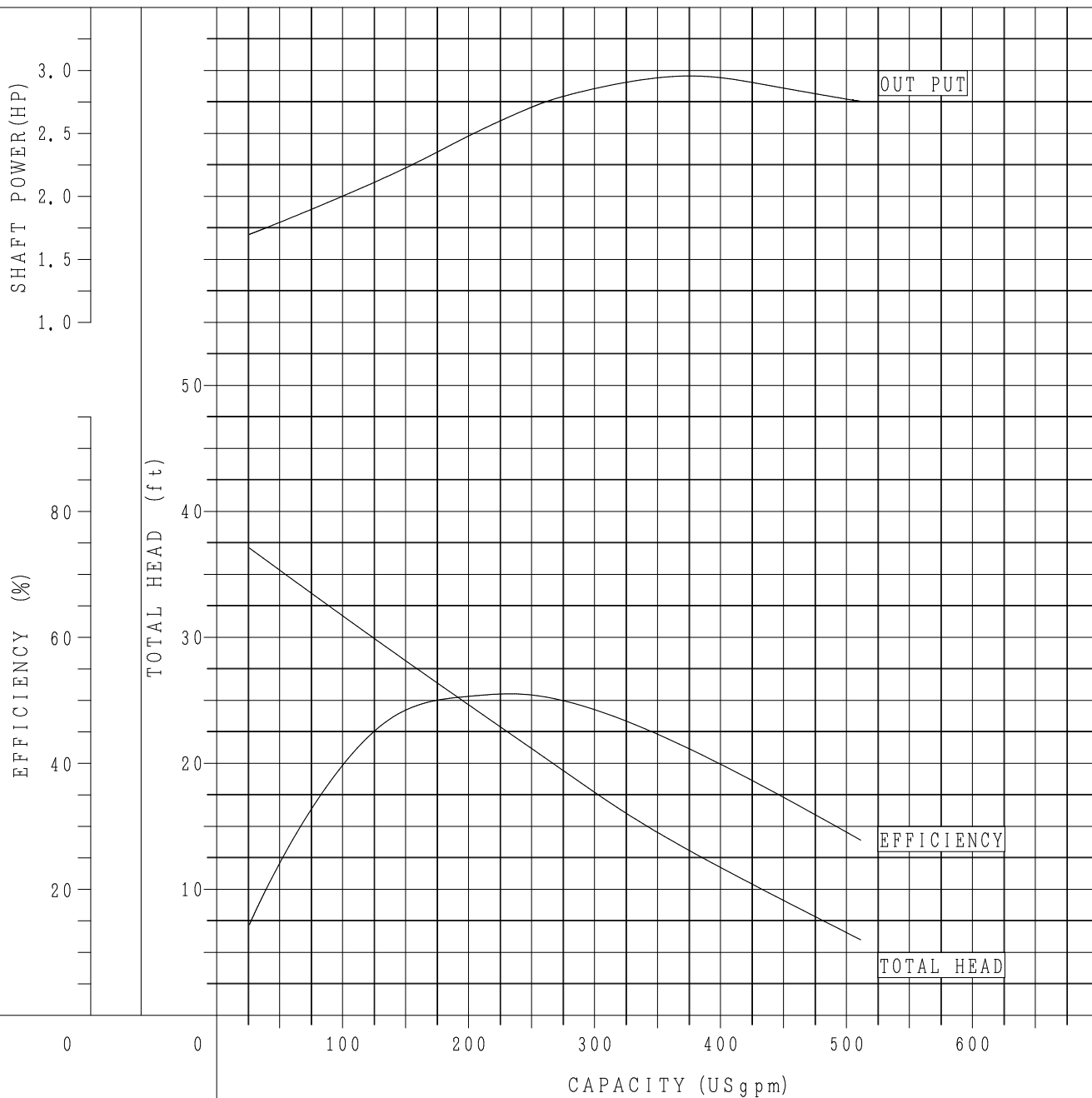
Performance with clear water and ambient temp Max. 40°C

DWG. K. Umemura Mar.16.21	PERFORMANCE CURVE	DWG No. △0
JUDG. T. Tachibana Mar.16.21		Y 4 0 7 5 8 3
APPD. M. Hashimoto Mar.16.21		

MODEL (Motor Impeller) 3CNMJ42.2T2/T3_22-2, 4CNMJ42.2T2/T3_22-2

DISCHARGE	SOLID SIZE	RATED POWER		VOLTAGE	POLE	SYNCHRONOUS SPEED (RPM)	FREQ.	INS. CLASS
		HP	kW					
3" (80mm), 4" (100mm)	3" (80mm)	3	2.2	230/460	4	1800	60	F

	FLOW (US gpm)	HEAD (ft)	EFF. (%)
B. E. P	233	22.3	51.0



Performance with clear water and ambient temp Max. 40°C

DWG.	K. Umemura	Mar. 16. 21
JUDG.	T. Tachibana	Mar. 16. 21
APPD.	M. Hashimoto	Mar. 16. 21

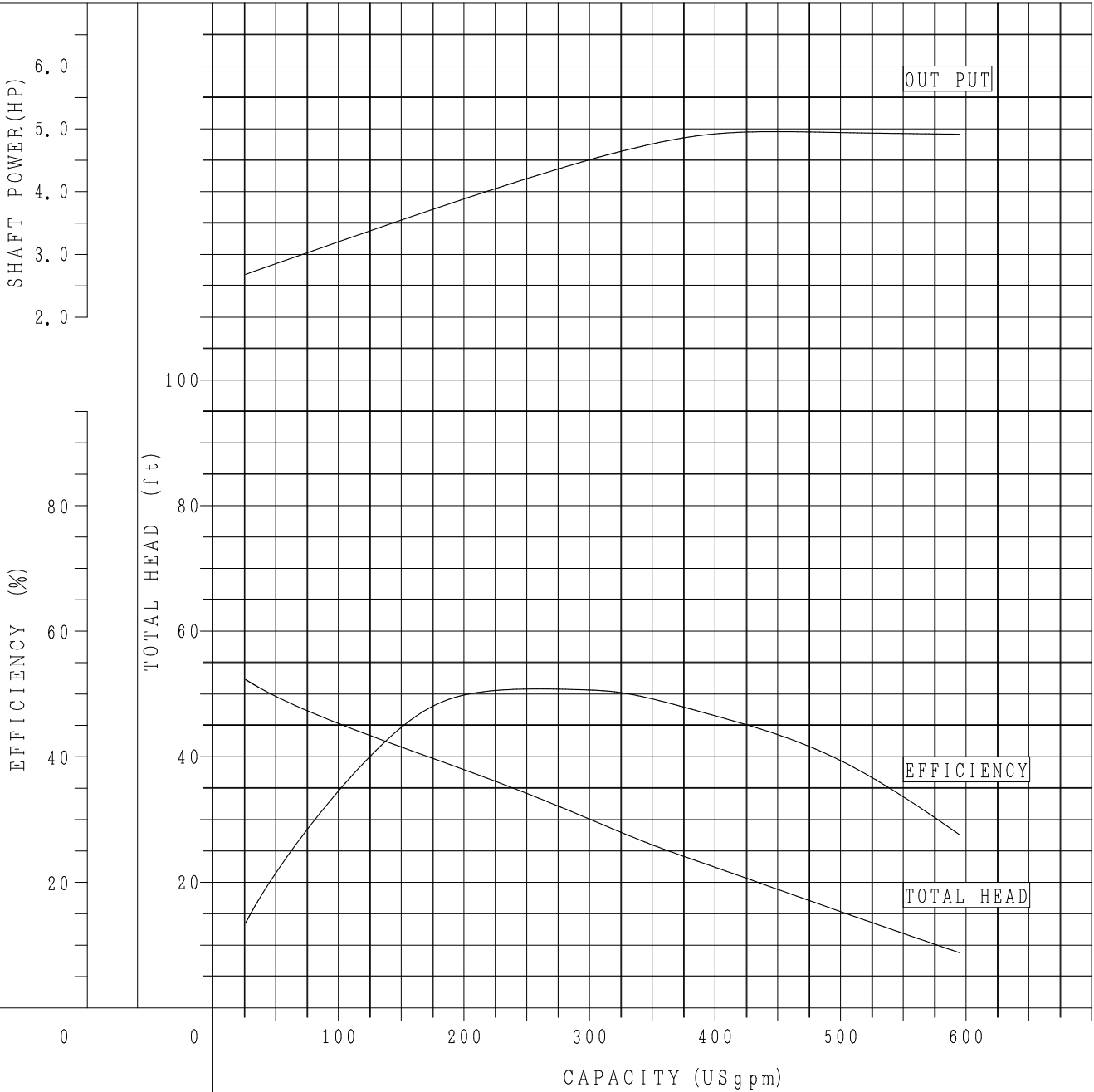
PERFORMANCE CURVE

DWG No.	△0
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MODEL (Motor Impeller) 3CNMJ43.7T2_37-2, 4CNMJ43.7T2_37-2

DISCHARGE	SOLID SIZE	RATED POWER		VOLTAGE	POLE	SYNCHRONOUS SPEED (RPM)	FREQ.	INS. CLASS
		HP	kW					
3" (80mm), 4" (100mm)	3" (80mm)	5	3.7	208	4	1800	60	F

	FLOW (US gpm)	HEAD (ft)	EFF. (%)
B. E. P	256	33.6	50.8



Performance with clear water and ambient temp Max. 40°C

DWG.	K. Umemura	Mar. 16. 21
JUDG.	T. Tachibana	Mar. 16. 21
APPD.	M. Hashimoto	Mar. 16. 21

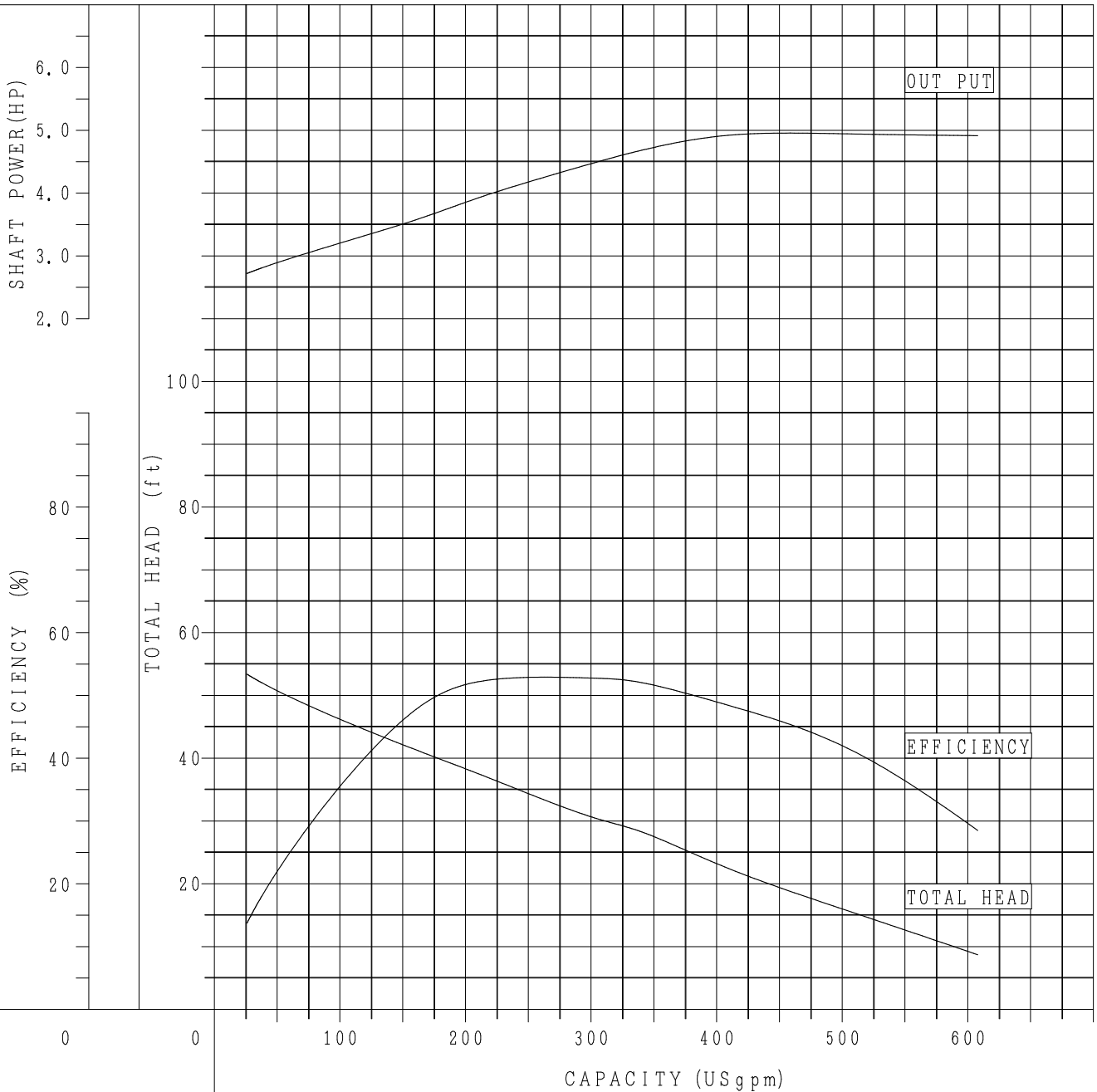
PERFORMANCE CURVE

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MODEL (Motor Impeller) 3CNMJ43.7T2/T3_37-2, 4CNMJ43.7T2/T3_37-2

DISCHARGE	SOLID SIZE	RATED POWER		VOLTAGE	POLE	SYNCHRONOUS SPEED (RPM)	FREQ.	INS. CLASS
		HP	kW					
3" (80mm), 4" (100mm)	3" (80mm)	5	3.7	230/460	4	1800	60	F

	FLOW (US gpm)	HEAD (ft)	EFF. (%)
B. E. P	250	34.3	52.8



Performance with clear water and ambient temp Max. 40°C

DWG.	K. Umemura	Mar. 16. 21
JUDG.	T. Tachibana	Mar. 16. 21
APPD.	M. Hashimoto	Mar. 16. 21

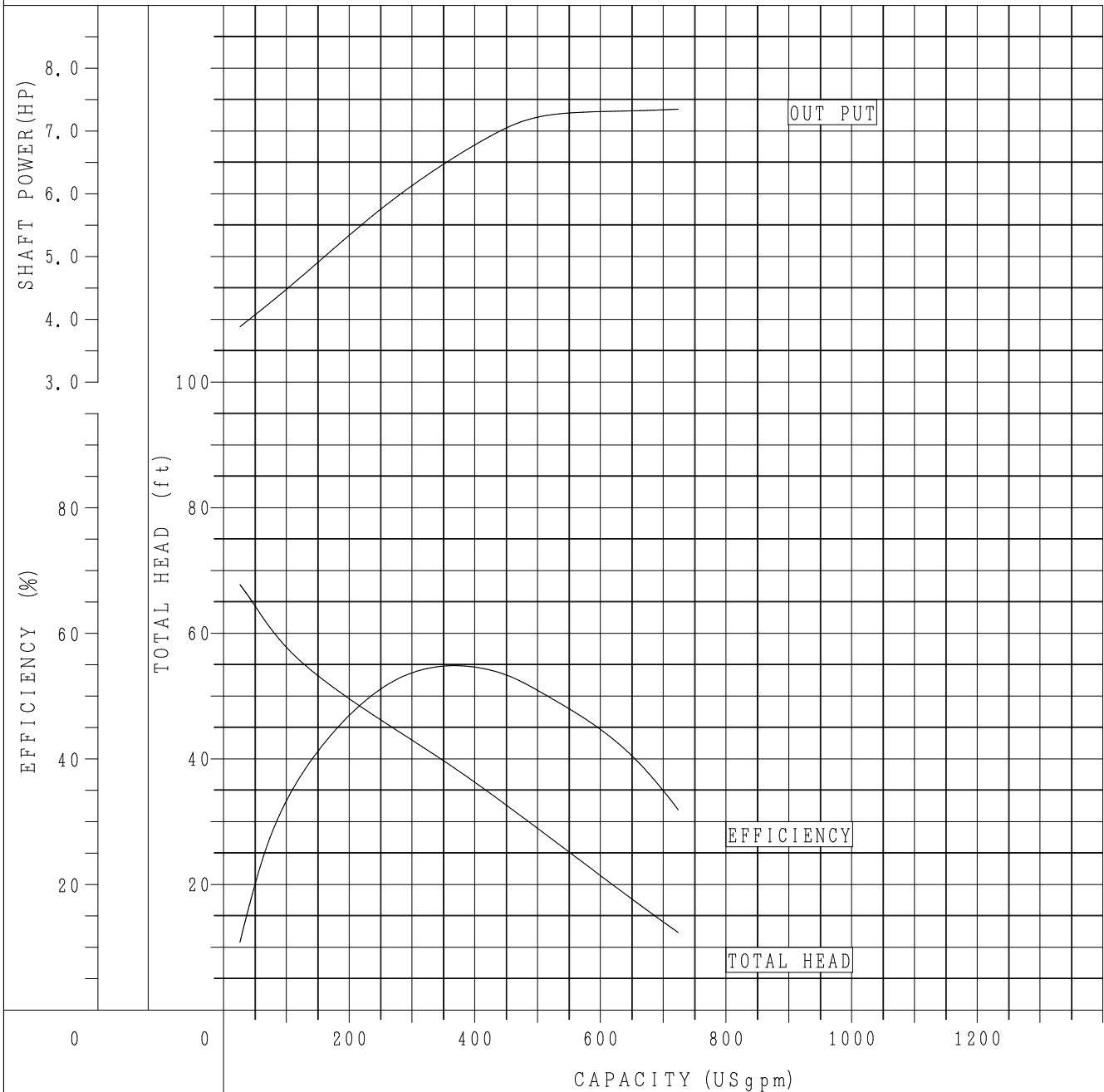
PERFORMANCE CURVE

DWG No. Δ0
Y 4 0 7 5 8 6

MODEL (Motor Impeller) 4CNMJ45.5T2_55-2

DISCHARGE	SOLID SIZE	RATED POWER		VOLTAGE	POLE	SYNCHRONOUS SPEED (RPM)	FREQ.	INS. CLASS
		HP	kW					
4" (100mm)	3" (80mm)	7.5	5.5	208	4	1800	60	F

	FLOW (US gpm)	HEAD (ft)	EFF. (%)
B. E. P	368	38.4	54.8



Performance with clear water and ambient temp Max. 40°C

DWG.	K. Umemura	Mar. 16. 21
JUDG.	T. Tachibana	Mar. 16. 21
APPD.	M. Hashimoto	Mar. 16. 21

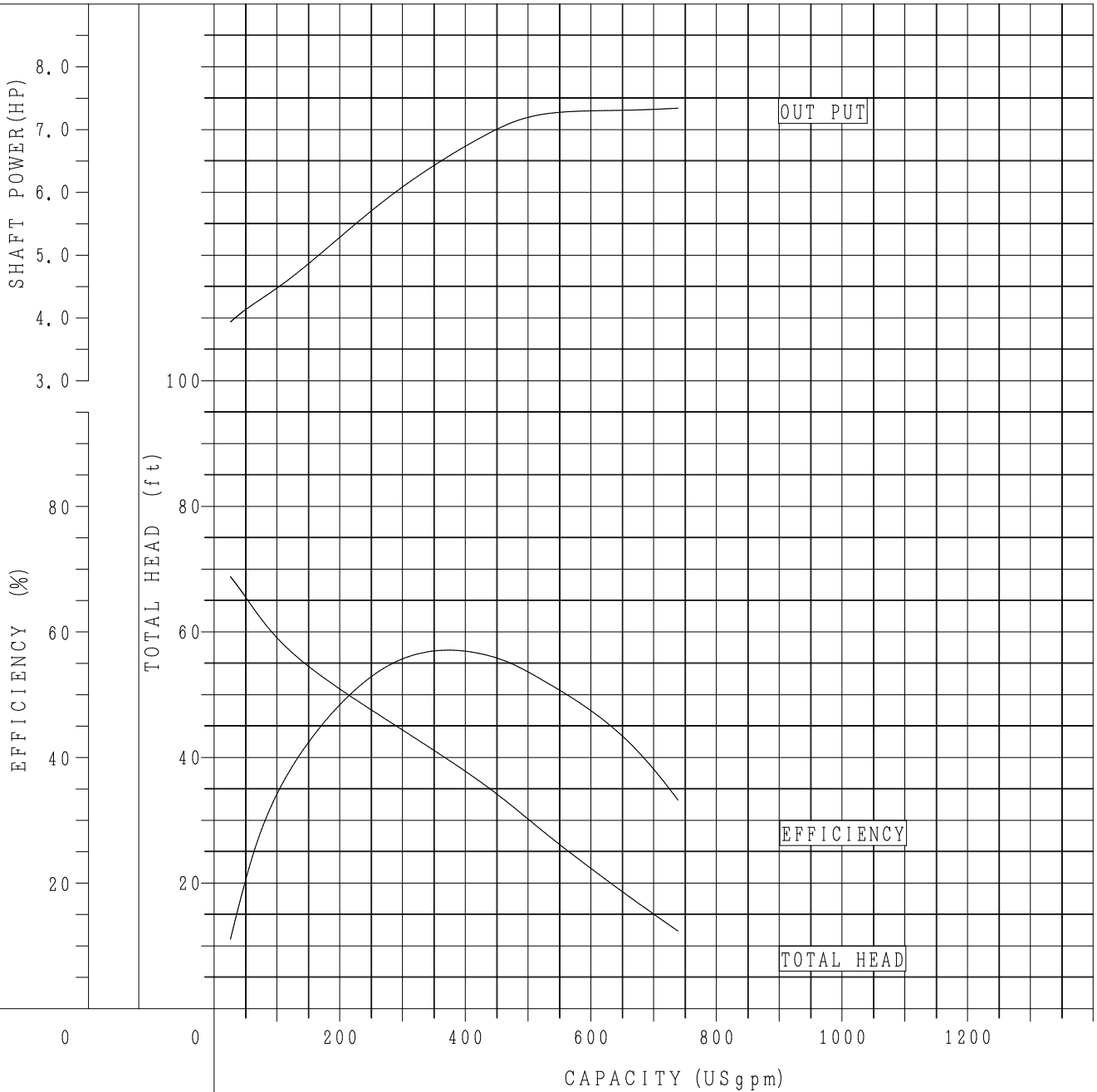
PERFORMANCE CURVE

DWG No. Δ0
Y 4 0 7 5 8 7

MODEL (Motor Impeller) 4CNMJ45.5T2/T3_55-2

DISCHARGE	SOLID SIZE	RATED POWER		VOLTAGE	POLE	SYNCHRONOUS SPEED (RPM)	FREQ.	INS. CLASS
		HP	kW					
4" (100mm)	3" (80mm)	7.5	5.5	230/460	4	1800	60	F

	FLOW (US gpm)	HEAD (ft)	EFF. (%)
B. E. P	371	39.7	57.1



Performance with clear water and ambient temp Max. 40°C

DWG.	K. Umemura	Mar. 16. 21
JUDG.	T. Tachibana	Mar. 16. 21
APPD.	M. Hashimoto	Mar. 16. 21

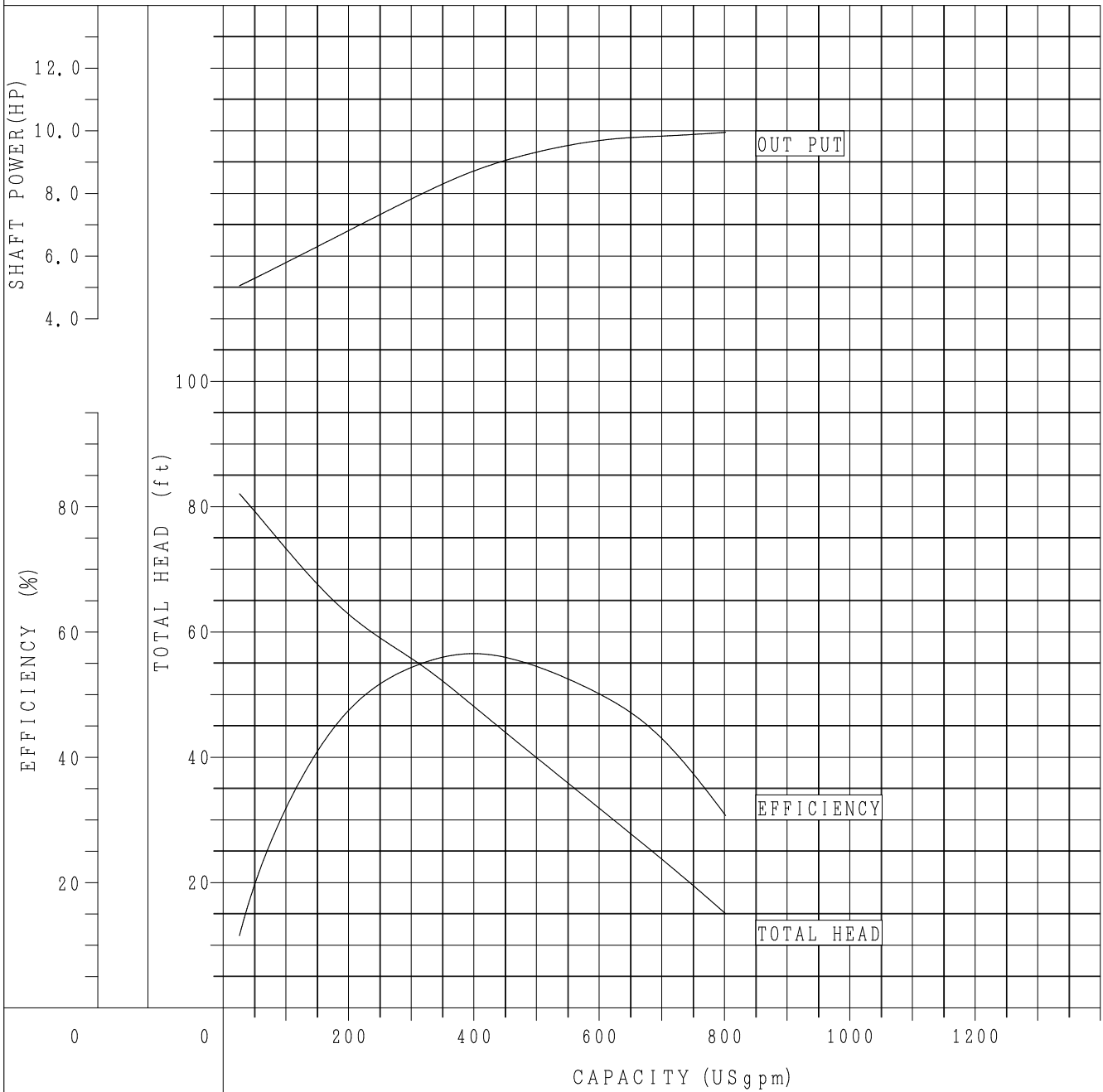
PERFORMANCE CURVE

DWG No. Δ0
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MODEL (Motor Impeller) 4CNMJ47.5T2_75-2

DISCHARGE	SOLID SIZE	RATED POWER		VOLTAGE	POLE	SYNCHRONOUS SPEED (RPM)	FREQ.	INS. CLASS
		HP	kW					
4" (100mm)	3" (80mm)	10	7.5	208	4	1800	60	F

	FLOW (US gpm)	HEAD (ft)	EFF. (%)
B. E. P	400	48.1	56.5



Performance with clear water and ambient temp Max. 40°C

DWG.	K. Umemura	Mar. 16. 21
JUDG.	T. Tachibana	Mar. 16. 21
APPD.	M. Hashimoto	Mar. 16. 21

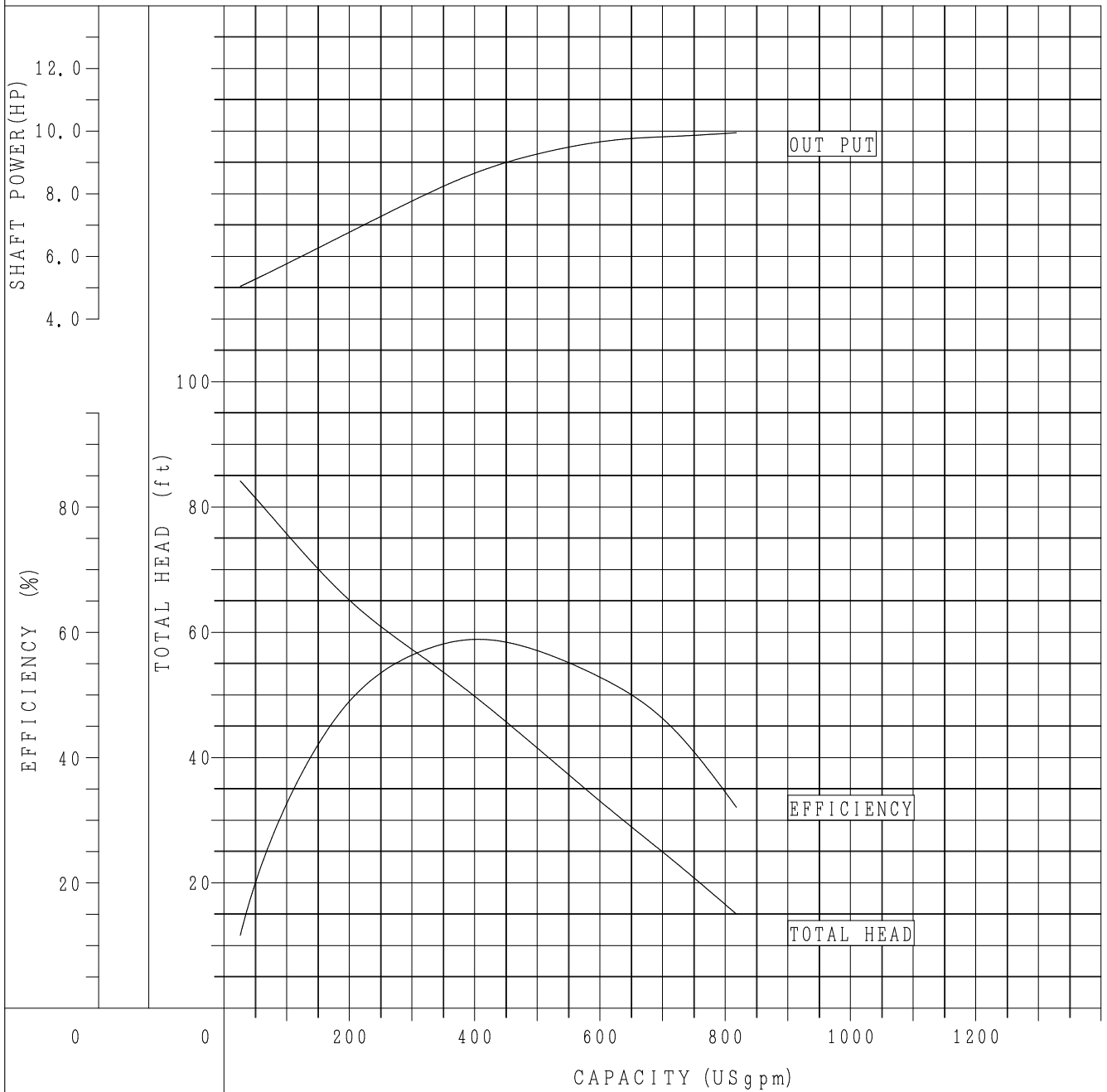
PERFORMANCE CURVE

DWG No. Δ0
Y 4 0 7 5 8 9

MODEL (Motor Impeller) 4CNMJ47.5T2/T3_75-2

DISCHARGE	SOLID SIZE	RATED POWER		VOLTAGE	POLE	SYNCHRONOUS SPEED (RPM)	FREQ.	INS. CLASS
		HP	kW					
4" (100mm)	3" (80mm)	10	7.5	230/460	4	1800	60	F

	FLOW (US gpm)	HEAD (ft)	EFF. (%)
B. E. P	405	49.3	58.8



Performance with clear water and ambient temp Max. 40°C

DWG.	K. Umemura	Mar. 16. 21
JUDG.	T. Tachibana	Mar. 16. 21
APPD.	M. Hashimoto	Mar. 16. 21

PERFORMANCE CURVE

DWG No. Δ0
Y 4 0 7 5 9 0

ShinMaywa Submersible Sewage Pump CNMJ

DRAWING LIST (Pump Dimensions)

Pump Dimensions

Discharge	Solid Size	Model		HP	Drawing No.
		Motor	Impeller		
3"	3" (80mm)	3CNMJ42.2T *	22-2	3	A426044
		3CNMJ43.7T *	37-2	5	A426045
4"	3" (80mm)	4CNMJ42.2T *	22-2	3	A426046
		4CNMJ43.7T *	37-2	5	A426047
		4CNMJ45.5T *	55-2	7.5	A426048
		4CNMJ47.5T *	75-2	10	A426049

Pump Dimensions for Guide Rail Installation

Discharge	Solid Size	Model		HP	Drawing No.	Guide Rail Type
		Motor	Impeller			
3"	3" (80mm)	3CNMJ42.2T *	22-2	3	A426050	P3BY
		3CNMJ43.7T *	37-2	5	A426051	
4"	3" (80mm)	4CNMJ42.2T *	22-2	3	A426052	P4CY
		4CNMJ43.7T *	37-2	5	A426053	
		4CNMJ45.5T *	55-2	7.5	A426054	
		4CNMJ47.5T *	75-2	10	A426055	

Pump Dimensions for Stand Alone Installation

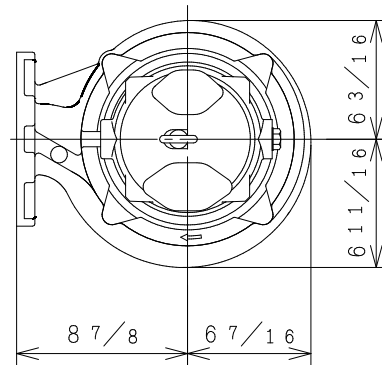
Discharge	Solid Size	Model		HP	Drawing No.	Stand Type
		Motor	Impeller			
3"	3" (80mm)	3CNMJ42.2T *	22-2	3	A426056	F3/F4 (M78967-A)
		3CNMJ43.7T *	37-2	5	A426057	
4"	3" (80mm)	4CNMJ42.2T *	22-2	3	A426058	
		4CNMJ43.7T *	37-2	5	A426059	
		4CNMJ45.5T *	55-2	7.5	A426060	
		4CNMJ47.5T *	75-2	10	A426061	

* Voltage: 2 means 208/230V, 3 means 460V.

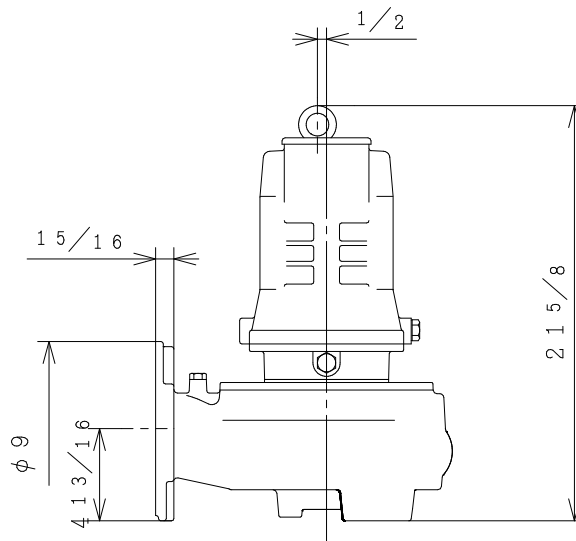
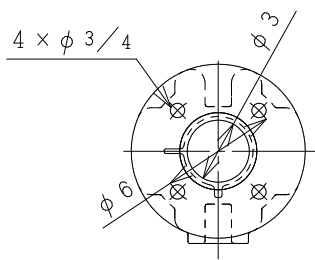
INSTALLATION TYPE	DRAWING NO.
GUIDE RAIL	A426050
STAND ALONE	A426056

MODEL	Impeller No.	RATED POWER (HP)	FREQ.
3CNMJ42.2T2	22-2	3	60
3CNMJ42.2T3			

UNIT: inch



FLANGE (ANSI 150 PSI F.F)



[Note] Cables are not shown on this drawing.

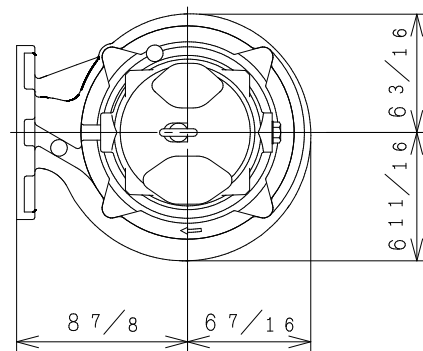
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JUDG.	T. Tachibanaki	Mar.15.21			A426044	
APPD.	M. Hashimoto	Mar.15.21				

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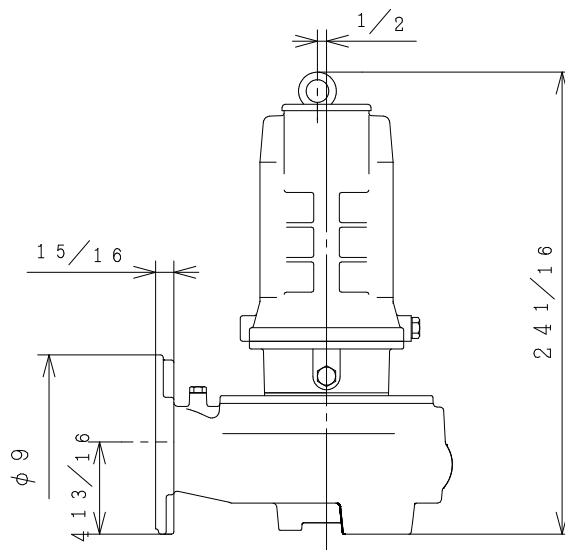
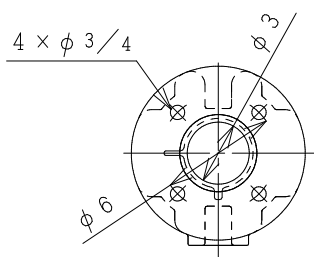
INSTALLATION TYPE	DRAWING NO.
GUIDE RAIL	A 4 2 6 0 5 1
STAND ALONE	A 4 2 6 0 5 7

MODEL	Impeller No.	RATED POWER (HP)	FREQ.
3CNMJ43.7T2	37-2	5	60
3CNMJ43.7T3			

UNIT: inch



FLANGE (ANSI 150 PSI F.F)



[Note] Cables are not shown on this drawing.

DWG.	M. Tajima	Mar. 15. 21
JUDG.	T. Tachibanaki	Mar. 15. 21
APPD.	M. Hashimoto	Mar. 15. 21

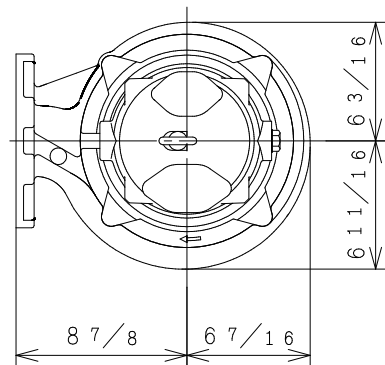
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△0

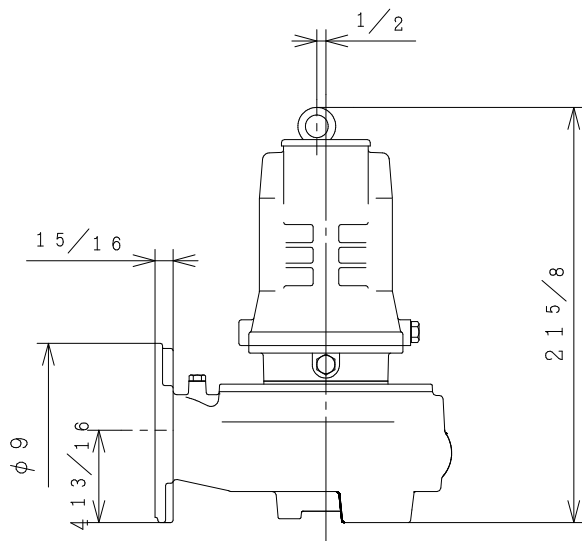
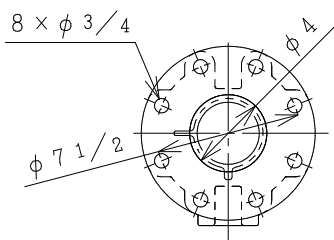
INSTALLATION TYPE	DRAWING NO.
GUIDE RAIL	A 4 2 6 0 5 2
STAND ALONE	A 4 2 6 0 5 8

MODEL	Impeller No.	RATED POWER (HP)	FREQ.
4CNMJ42.2T2	2 2 - 2	3	6 0
4CNMJ42.2T3			

UNIT: inch



FLANGE (ANSI 150 PSI F.F)



[Note] Cables are not shown on this drawing.

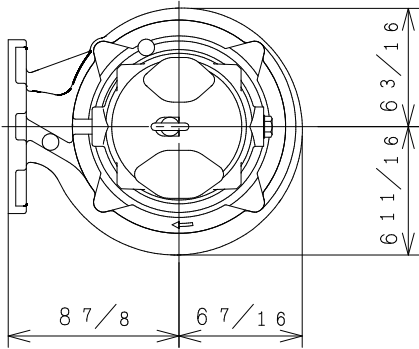
DWG.	M. Tajima	Mar. 15. 21	TITLE PUMP DIMENSION	DWG No.	△0
JUDG.	T. Tachibanaki	Mar. 15. 21		A 4 2 6 0 4 6	
APPD.	M. Hashimoto	Mar. 15. 21			

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0 2 0 1

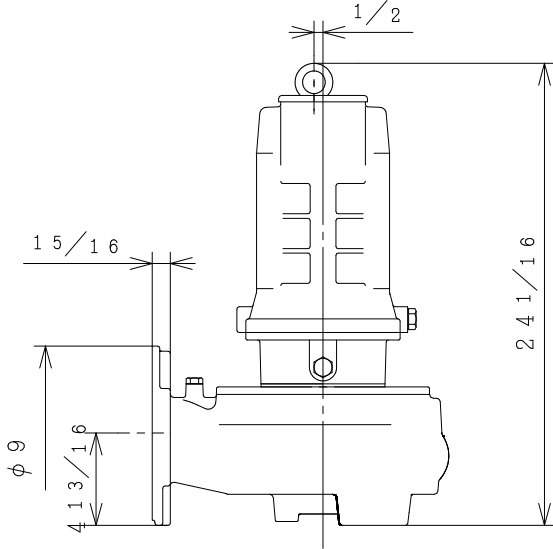
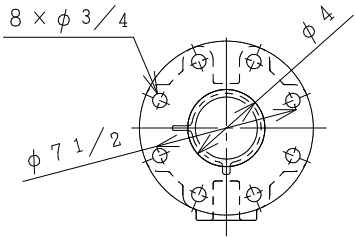
INSTALLATION TYPE	DRAWING NO.
GUIDE RAIL A	A426053
STAND ALONE A	A426059

MODEL	Impeller No.	RATED POWER (HP)	FREQ.
4CNMJ43.7T2	37-2	5	60
4CNMJ43.7T3			

UNIT: inch



FLANGE (ANSI 150 PSI F.F)



[Note] Cables are not shown on this drawing.

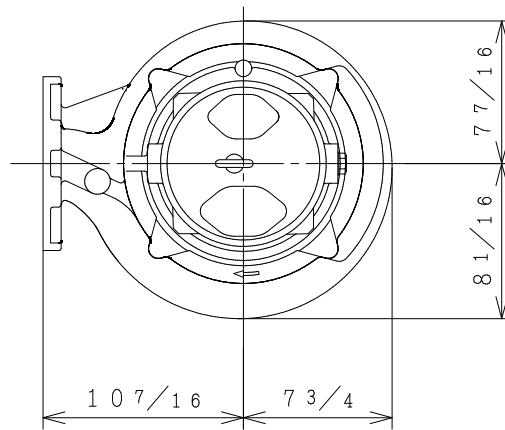
DWG.	M. Tajima	Mar.15.21	TITLE	PUMP DIMENSION	DWG No.	A426047
JUDG.	T. Tachibanaki	Mar.15.21			△0	
APPD.	M. Hashimoto	Mar.15.21				

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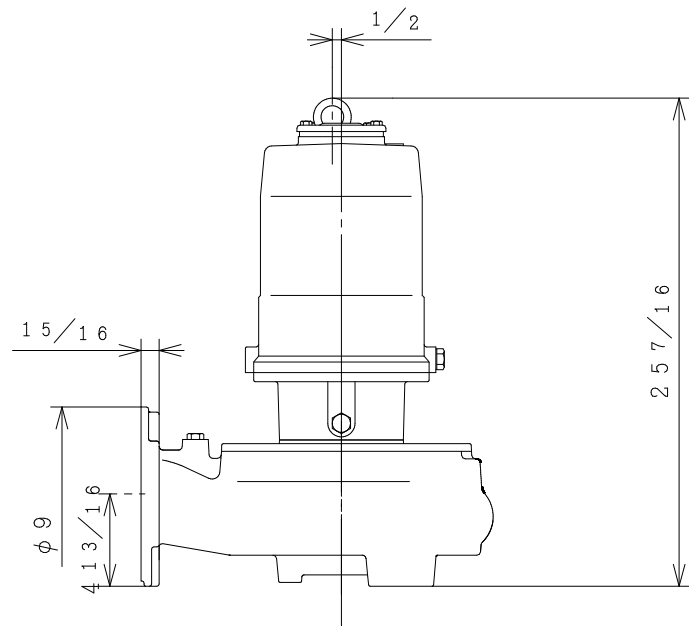
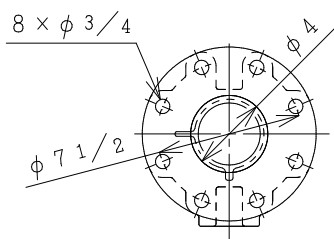
INSTALLATION TYPE	DRAWING NO.
GUIDE RAIL	A 4 2 6 0 5 4
STAND ALONE	A 4 2 6 0 6 0

MODEL	Impeller No.	RATED POWER (HP)	FREQ.
4CNMJ45.5T2	55-2	7.5	60
4CNMJ45.5T3			

UNIT: inch



FLANGE (ANSI 150 PSI F.F)



[Note] Cables are not shown on this drawing.

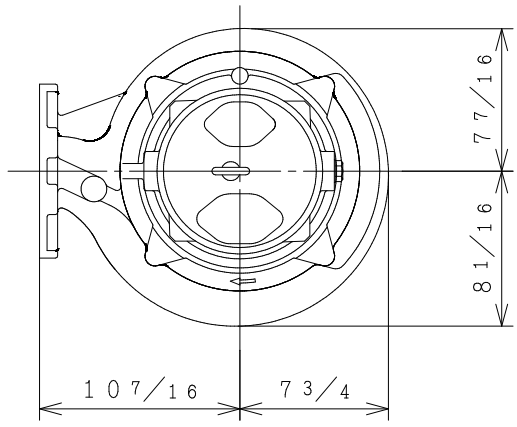
DWG.	M. Tajima	Mar. 15. 21	TITLE PUMP DIMENSION	DWG No.	A 4 2 6 0 4 8
JUDG.	T. Tachibanaki	Mar. 15. 21		Δ0	
APPD.	M. Hashimoto	Mar. 15. 21			

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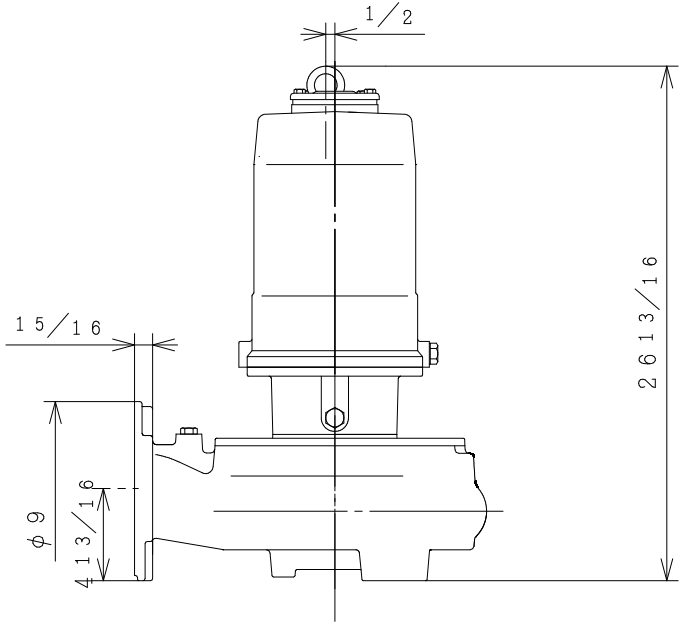
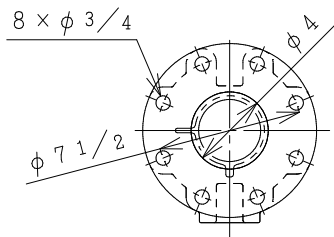
INSTALLATION TYPE	DRAWING NO.
GUIDE RAIL	A 4 2 6 0 5 5
STAND ALONE	A 4 2 6 0 6 1

MODEL	Impeller No.	RATED POWER (HP)	FREQ.
4CNMJ47.5T2	7 5 - 2	1 0	6 0
4CNMJ47.5T3			

UNIT: inch



FLANGE (ANSI 150 PSI F.F)



[Note] Cables are not shown on this drawing.

DWG.	M. Tajima	Mar. 15. 21	TITLE PUMP DIMENSION	DWG No.	A 4 2 6 0 4 9
JUDG.	T. Tachibana	Mar. 15. 21		Δ0	
APPD.	M. Hashimoto	Mar. 15. 21			

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0 2 0 1

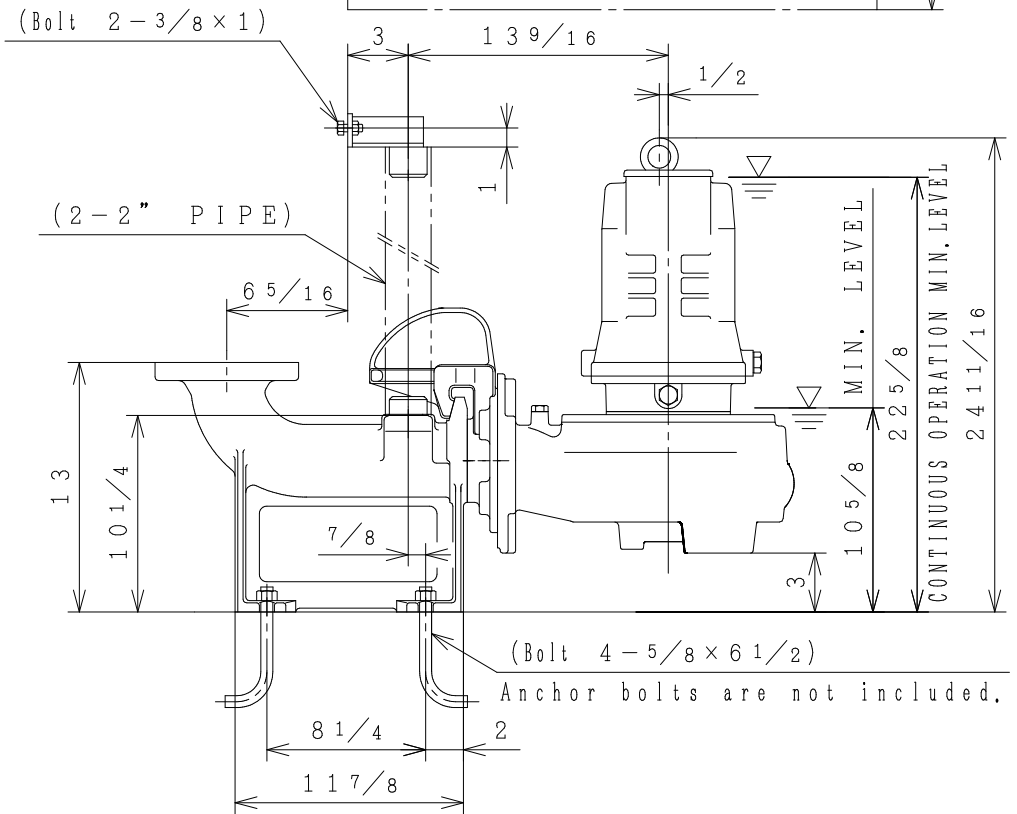
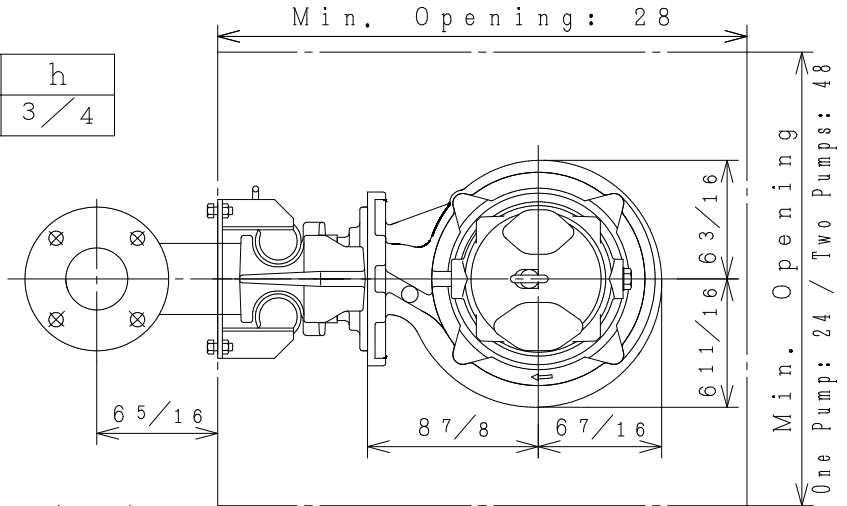
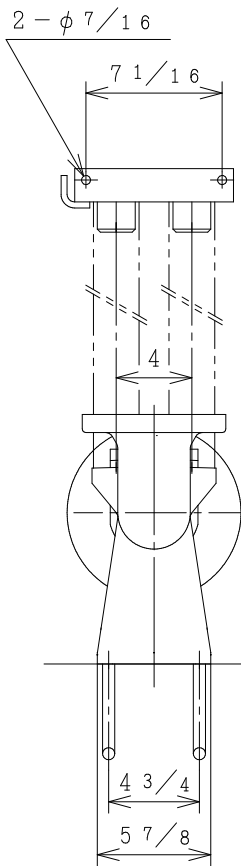
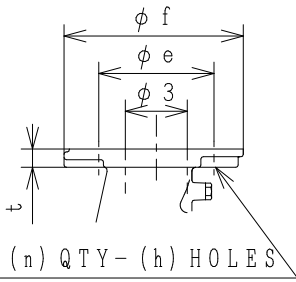
GUIDE RAIL INSTALLATION TYPE

UNIT: inch

MODEL	Impeller No.	Guide Rail system	RATED POWER (HP)	FREQ.
3CNMJ42.2T2	22-2	P3BY	3	60
3CNMJ42.2T3				

FLANGE (ANSI 150 PSI F.F)

e	f	t	n	h
6	7 1/2	15/16	4	3/4



[Note] Limit operation to 30 minutes (maximum) when operating the pump between the MIN. LEVEL and CONTINUOUS OPERATION MIN. LEVEL.
 In the event of continuous operation, the CONTINUOUS OPERATION MIN. LEVEL must be maintained.
 Cables are not shown on this drawing.

DWG.	M. Tajima	Mar. 15. 21
JUDG.	T. Tachibana	Mar. 15. 21
APPD.	M. Hashimoto	Mar. 15. 21

TITLE
 PUMP DIMENSION

DWG No.	△0
A 4 2 6 0 5 0	

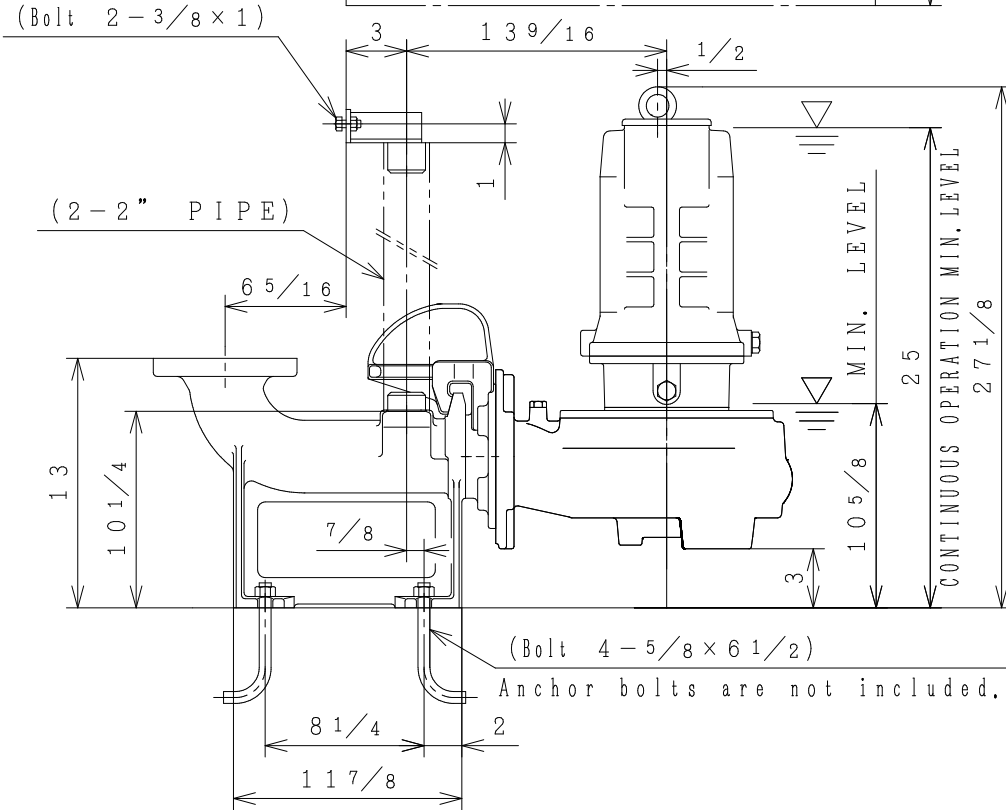
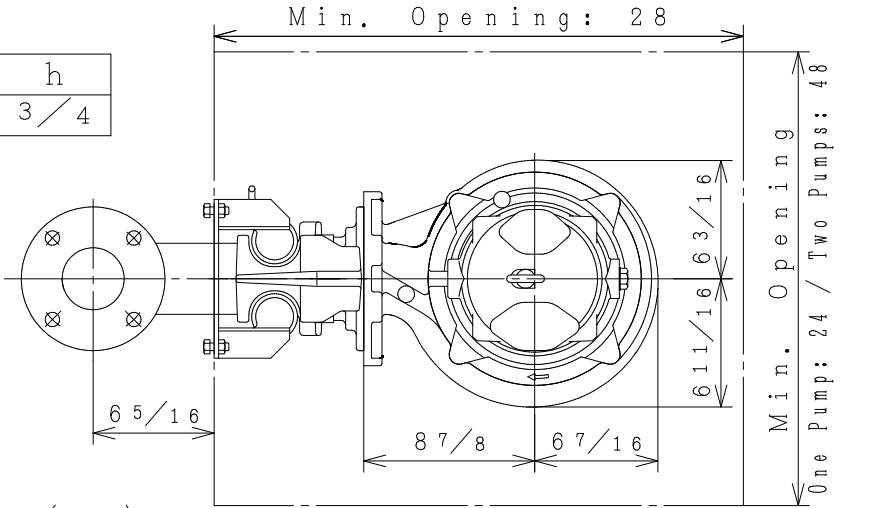
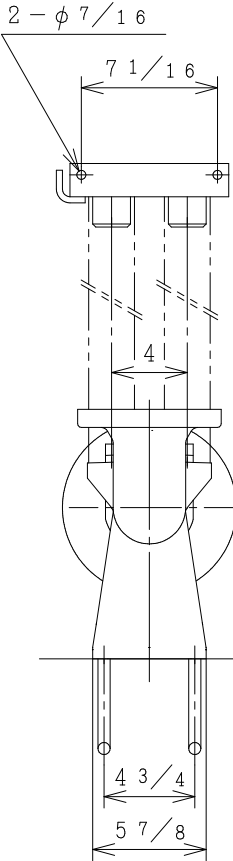
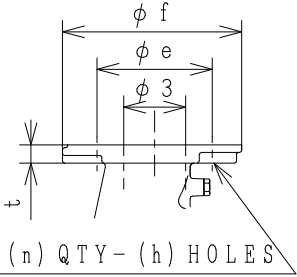
GUIDE RAIL INSTALLATION TYPE

UNIT: inch

MODEL	Impeller No.	Guide Rail system	RATED POWER (HP)	FREQ.
3CNMJ43.7T2	37-2	P3BY	5	60
3CNMJ43.7T3				

FLANGE (ANSI 150 PSI F.F)

e	f	t	n	h
6	7 1/2	15/16	4	3/4



[Note] Limit operation to 30 minutes (maximum) when operating the pump between the MIN. LEVEL and CONTINUOUS OPERATION MIN. LEVEL.
 In the event of continuous operation, the CONTINUOUS OPERATION MIN. LEVEL must be maintained.
 Cables are not shown on this drawing.

DWG. M. Tajima	Mar. 15. 21	TITLE PUMP DIMENSION	DWG No.	△0
JUDG. T. Tachibanaki	Mar. 15. 21		A 4 2 6 0 5 1	
APPD. M. Hashimoto	Mar. 15. 21			

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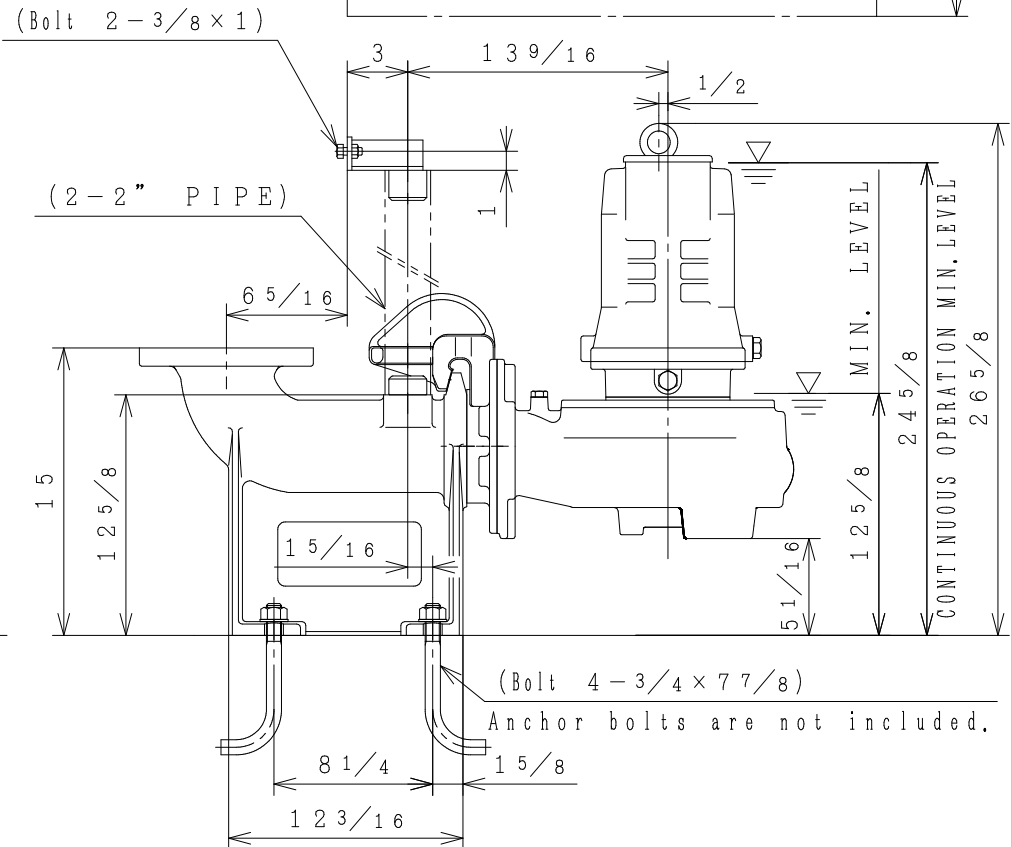
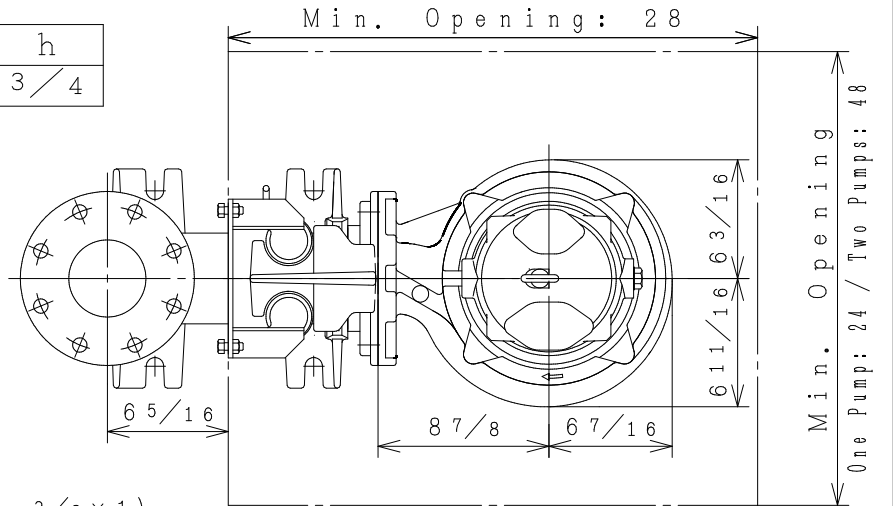
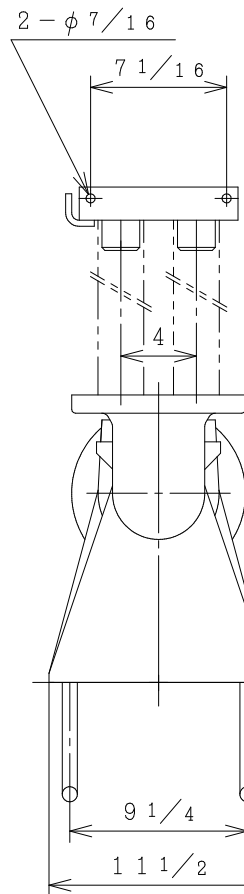
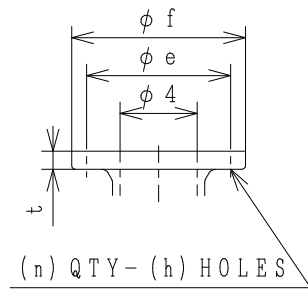
GUIDE RAIL INSTALLATION TYPE

UNIT: inch

MODEL	Impeller No.	Guide Rail system	RATED POWER (HP)	FREQ.
4CNMJ42.2T2	22-2	P4CY	3	60
4CNMJ42.2T3				

FLANGE (ANSI 150 PSI F.F)

e	f	t	n	h
7 1/2	9	15/16	8	3/4



[Note] Limit operation to 30 minutes (maximum) when operating the pump between the MIN. LEVEL and CONTINUOUS OPERATION MIN. LEVEL. In the event of continuous operation, the CONTINUOUS OPERATION MIN. LEVEL must be maintained. Cables are not shown on this drawing.

DWG.	M. Tajima	Mar. 15. 21
JUDG.	T. Tachibanaki	Mar. 15. 21
APPD.	M. Hashimoto	Mar. 15. 21

TITLE
PUMP DIMENSION

DWG No.	△0
A 4 2 6 0 5 2	

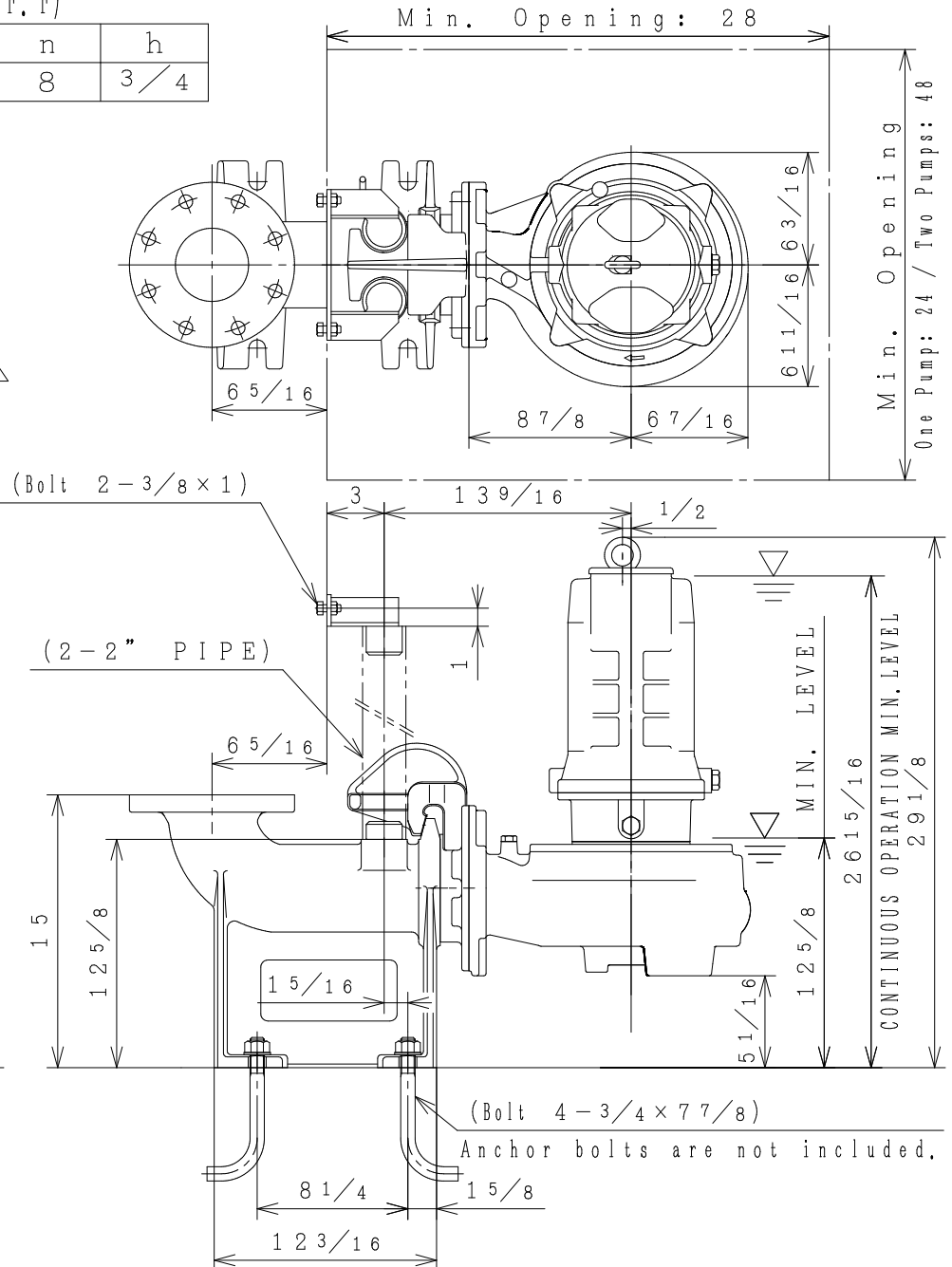
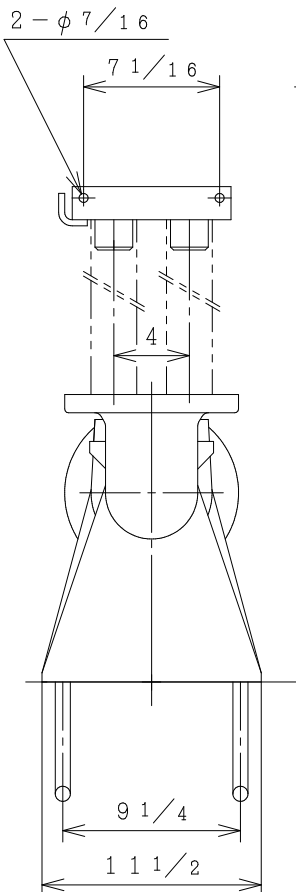
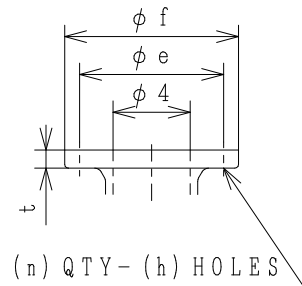
GUIDE RAIL INSTALLATION TYPE

UNIT: inch

MODEL	Impeller No.	Guide Rail system	RATED POWER (HP)	FREQ.
4CNMJ43,7T2	37-2	P4CY	5	60
4CNMJ43,7T3				

FLANGE (ANSI 150 PSI F.F)

e	f	t	n	h
7 1/2	9	15/16	8	3/4



[Note] Limit operation to 30 minutes (maximum) when operating the pump between the MIN. LEVEL and CONTINUOUS OPERATION MIN. LEVEL. In the event of continuous operation, the CONTINUOUS OPERATION MIN. LEVEL must be maintained. Cables are not shown on this drawing.

DWG.	M. Tajima	Mar. 15. 21	TITLE	PUMP DIMENSION	DWG No.	A 4 2 6 0 5 3
JUDG.	T. Tachibana	Mar. 15. 21			△0	
APPD.	M. Hashimoto	Mar. 15. 21				

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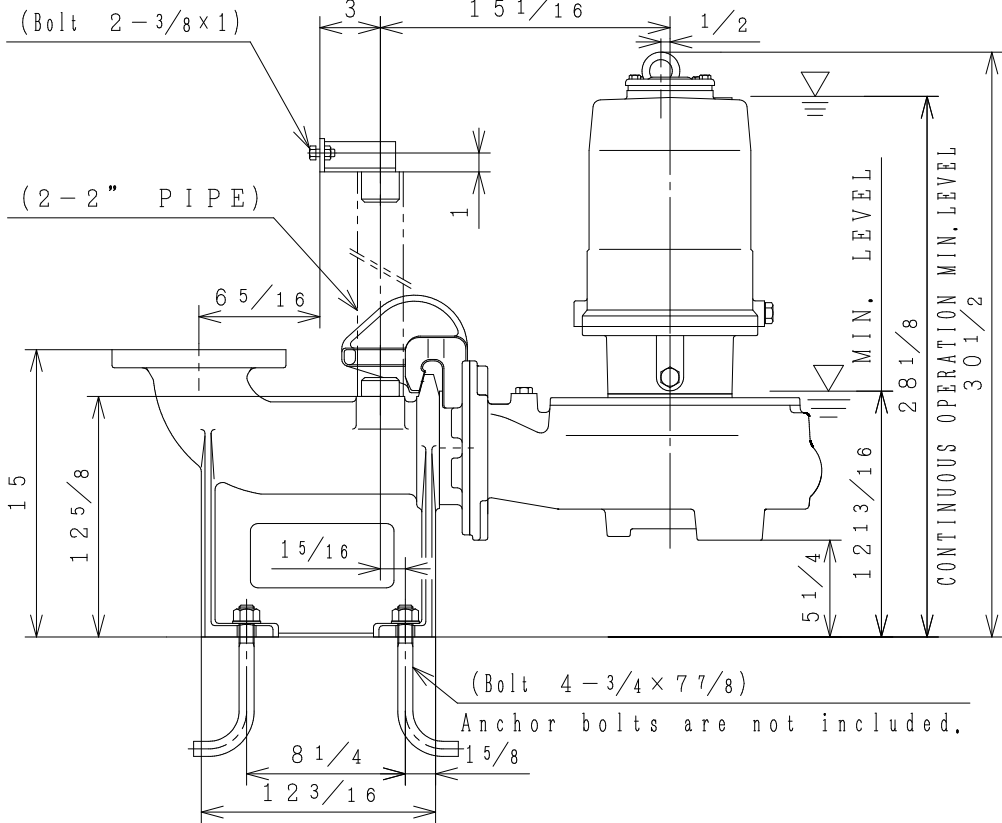
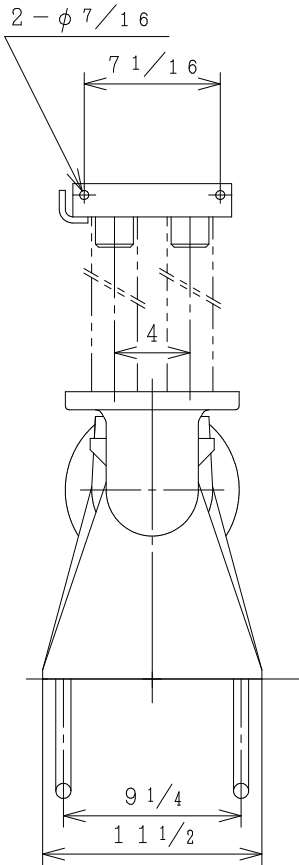
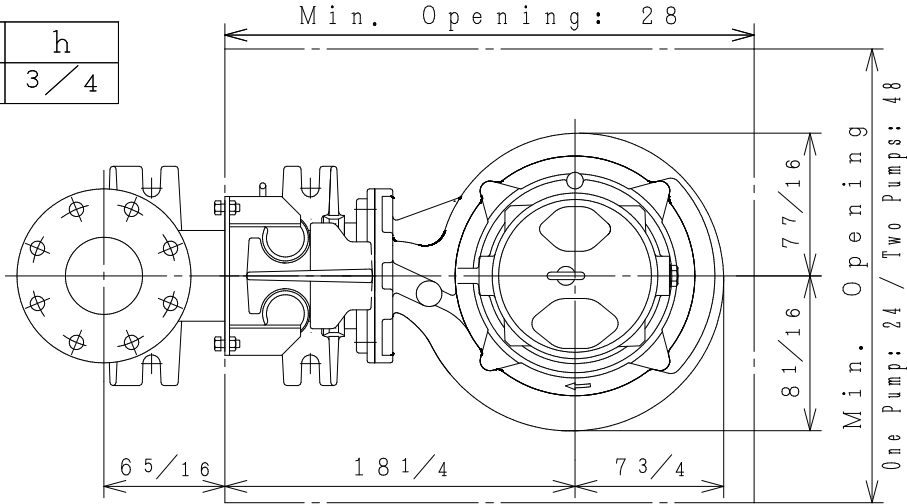
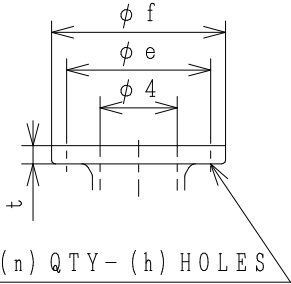
GUIDE RAIL INSTALLATION TYPE

UNIT: inch

MODEL	Impeller No.	Guide Rail system	RATED POWER (HP)	FREQ.
4CNMJ45.5T2	55-2	P4CY	7.5	60
4CNMJ45.5T3				

FLANGE (ANSI 150 PSI F.F)

e	f	t	n	h
7 1/2	9	15/16	8	3/4



[Note] Limit operation to 30 minutes (maximum) when operating the pump between the MIN. LEVEL and CONTINUOUS OPERATION MIN. LEVEL. In the event of continuous operation, the CONTINUOUS OPERATION MIN. LEVEL must be maintained. Cables are not shown on this drawing.

	DWG. M. Tajima	Mar. 15. 21	TITLE	DWG No.
	JUDG. T. Tachibana	Mar. 15. 21	PUMP DIMENSION	A 4 2 6 0 5 4
	APPD. M. Hashimoto	Mar. 15. 21		

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0201

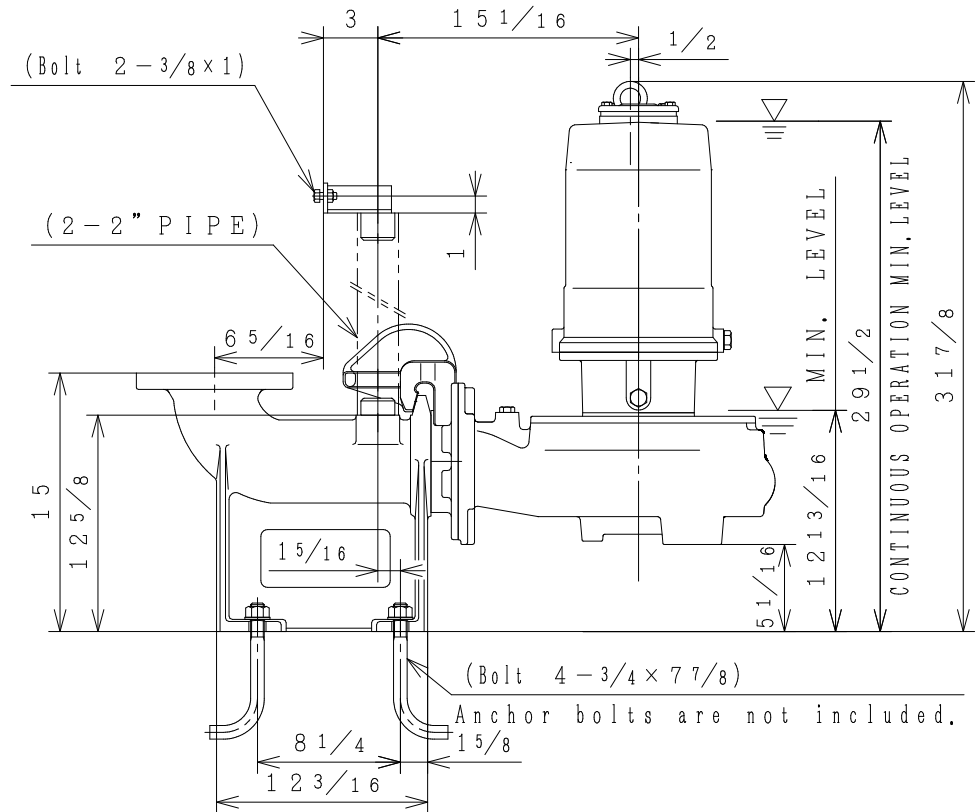
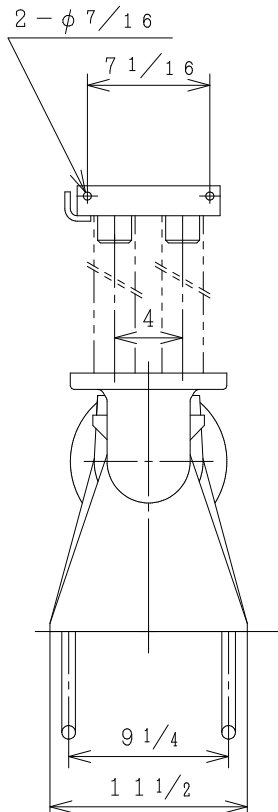
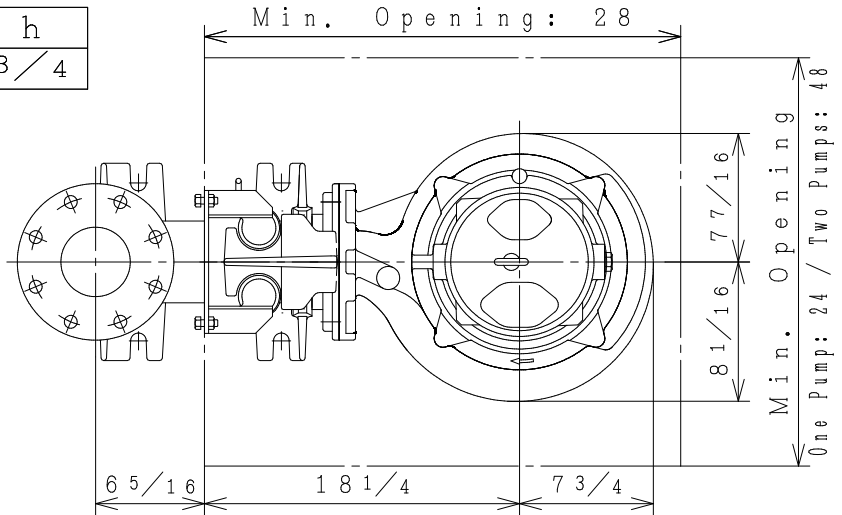
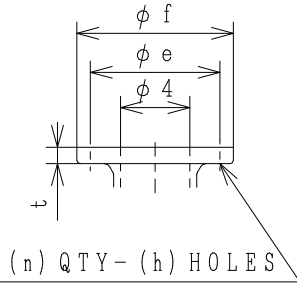
GUIDE RAIL INSTALLATION TYPE

UNIT: inch

MODEL	Impeller No.	Guide Rail system	RATED POWER (HP)	FREQ.
4CNMJ47.5T2	75-2	P4CY	10	60
4CNMJ47.5T3				

FLANGE (ANSI 150 PSI F.F)

e	f	t	n	h
7 1/2	9	15/16	8	3/4



[Note] Limit operation to 30 minutes (maximum) when operating the pump between the MIN. LEVEL and CONTINUOUS OPERATION MIN. LEVEL. In the event of continuous operation, the CONTINUOUS OPERATION MIN. LEVEL must be maintained. Cables are not shown on this drawing.

DWG.	M. Tajima	Mar. 15. 21
JUDG.	T. Tachibana	Mar. 15. 21
APPD.	M. Hashimoto	Mar. 15. 21

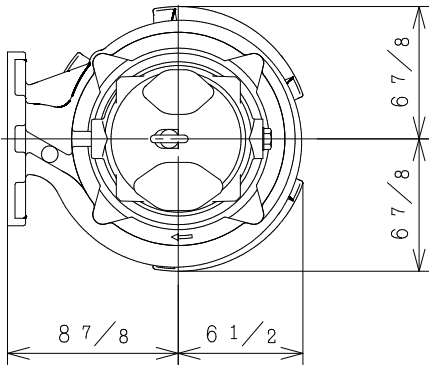
TITLE
PUMP DIMENSION

DWG No.
A 4 2 6 0 5 5

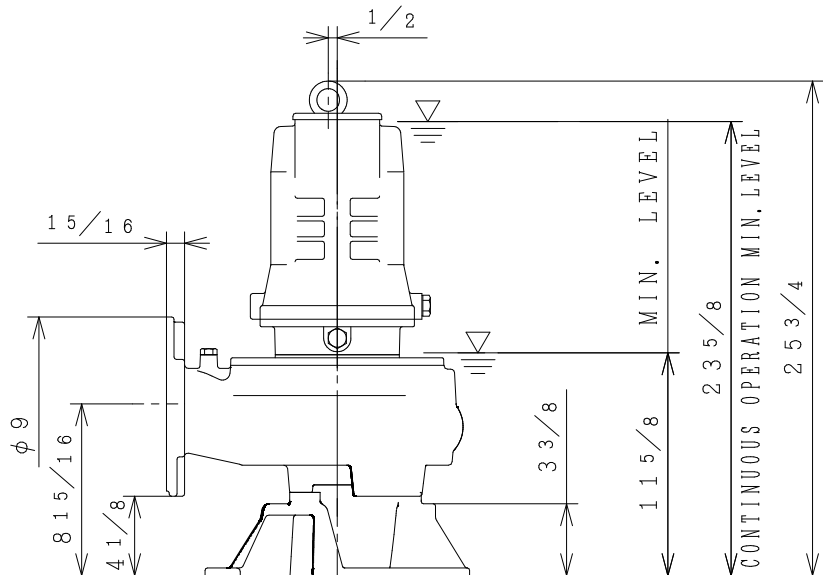
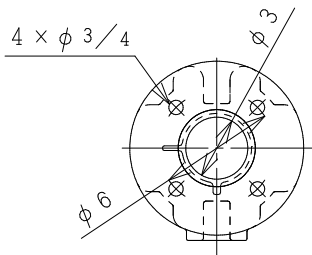
STAND ALONE INSTALLATION TYPE

MODEL	Impeller No.	RATED POWER (HP)	FREQ.
3CNMJ42,2T2	22-2	3	60
3CNMJ42,2T3			

UNIT: inch



FLANGE (ANSI 150 PSI F.F)



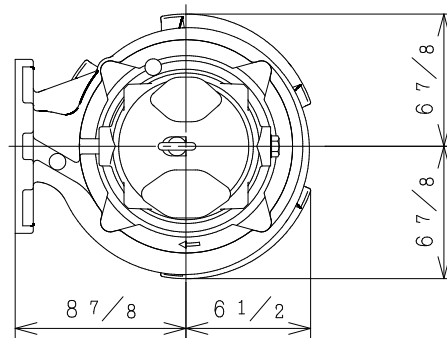
[Note] Limit operation to 30 minutes (maximum) when operating the pump between the MIN. LEVEL and CONTINUOUS OPERATION MIN. LEVEL. In the event of continuous operation, the CONTINUOUS OPERATION MIN. LEVEL must be maintained. Cables are not shown on this drawing.

1805001 0201	DWG.	M. Tajima	Mar. 16. 21	TITLE PUMP DIMENSION	DWG No.	
	JUDG.	T. Tachibana	Mar. 16. 21		A 4 2 6 0 5 6	
	APPD.	M. Hashimoto	Mar. 16. 21			

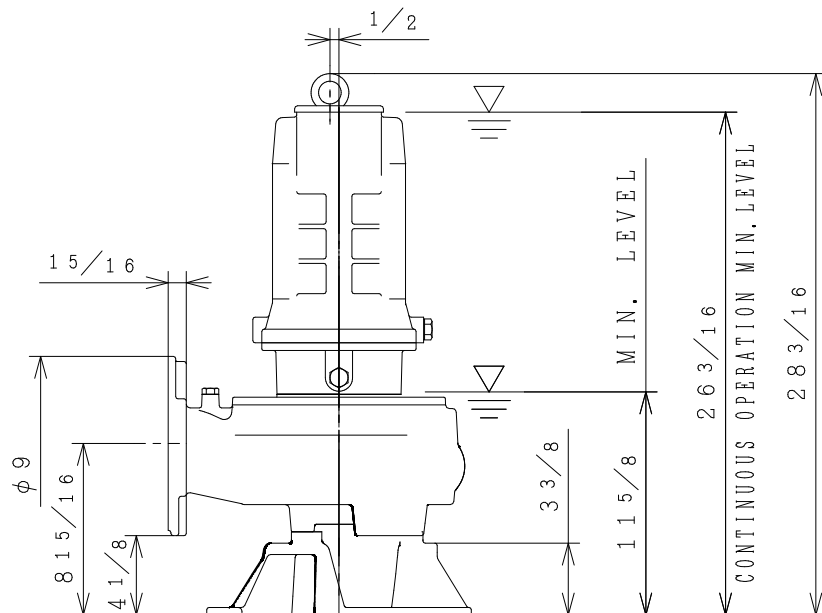
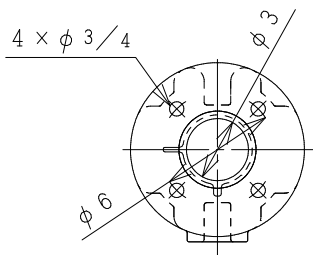
STAND ALONE INSTALLATION TYPE

MODEL	Impeller No.	RATED POWER (HP)	FREQ.
3CNMJ43.7T2	37-2	5	60
3CNMJ43.7T3			

UNIT: inch



FLANGE (ANSI 150 PSI F.F)



[Note] Limit operation to 30 minutes (maximum) when operating the pump between the MIN. LEVEL and CONTINUOUS OPERATION MIN. LEVEL. In the event of continuous operation, the CONTINUOUS OPERATION MIN. LEVEL must be maintained. Cables are not shown on this drawing.

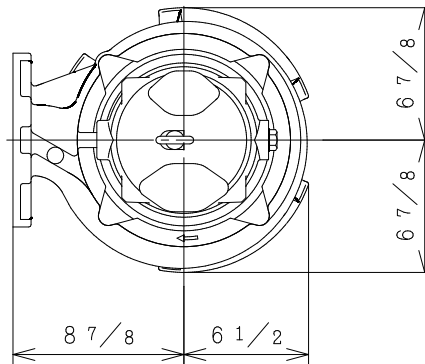
DWG. M. Tajima	Mar. 16. 21	TITLE PUMP DIMENSION	DWG No.	
JUDG. T. Tachibanaki	Mar. 16. 21		A 4 2 6 0 5 7	
APPD. M. Hashimoto	Mar. 16. 21			

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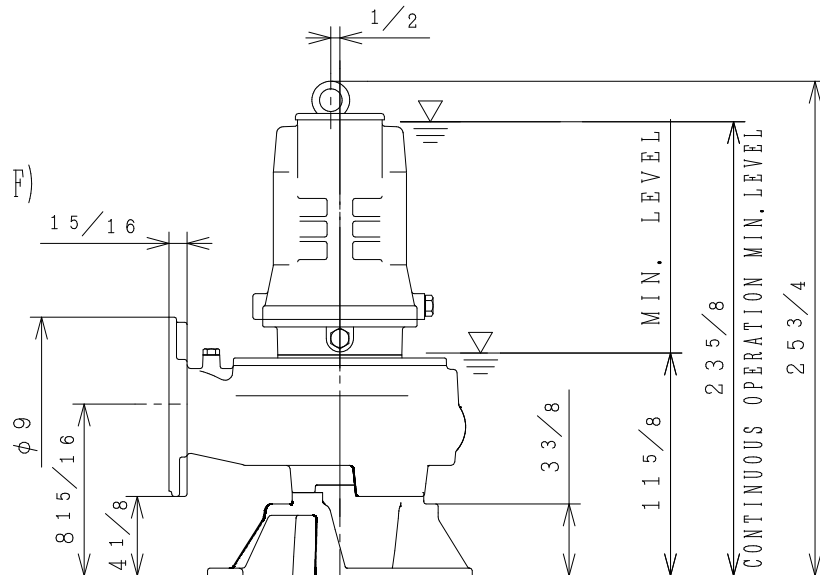
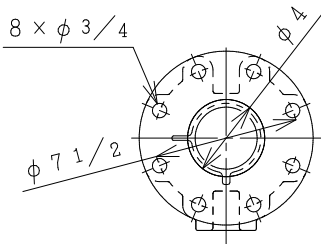
STAND ALONE INSTALLATION TYPE

MODEL	Impeller No.	RATED POWER (HP)	FREQ.
4CNMJ42.2T2	22-2	3	60
4CNMJ42.2T3			

UNIT: inch



FLANGE (ANSI 150 PSI F.F)



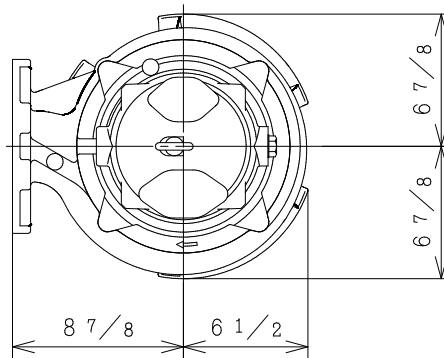
[Note] Limit operation to 30 minutes (maximum) when operating the pump between the MIN. LEVEL and CONTINUOUS OPERATION MIN. LEVEL. In the event of continuous operation, the CONTINUOUS OPERATION MIN. LEVEL must be maintained. Cables are not shown on this drawing.

1805001 0201	DWG. M. Tajima	Mar. 16. 21	TITLE PUMP DIMENSION	DWG No.	△0
	JUDG. T. Tachibana	Mar. 16. 21		A 4 2 6 0 5 8	
	APPD. M. Hashimoto	Mar. 16. 21			

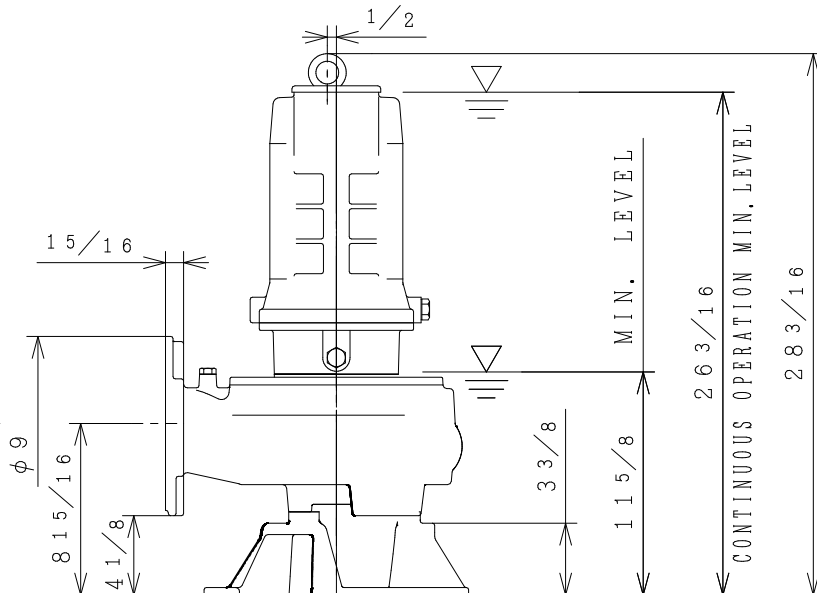
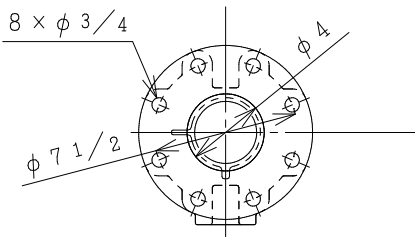
STAND ALONE INSTALLATION TYPE

MODEL	Impeller No.	RATED POWER (HP)	FREQ.
4CNMJ43,7T2	37-2	5	60
4CNMJ43,7T3			

UNIT: inch



FLANGE (ANSI 150 PSI F.F)



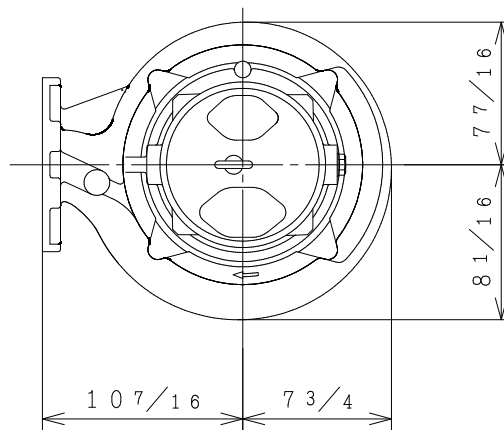
[Note] Limit operation to 30 minutes (maximum) when operating the pump between the MIN. LEVEL and CONTINUOUS OPERATION MIN. LEVEL. In the event of continuous operation, the CONTINUOUS OPERATION MIN. LEVEL must be maintained. Cables are not shown on this drawing.

1805001 0201	DWG.	M. Tajima	Mar. 16. 21	TITLE PUMP DIMENSION	DWG No.	A 4 2 6 0 5 9
	JUDG.	T. Tachibanaki	Mar. 16. 21		△0	
	APPD.	M. Hashimoto	Mar. 16. 21			

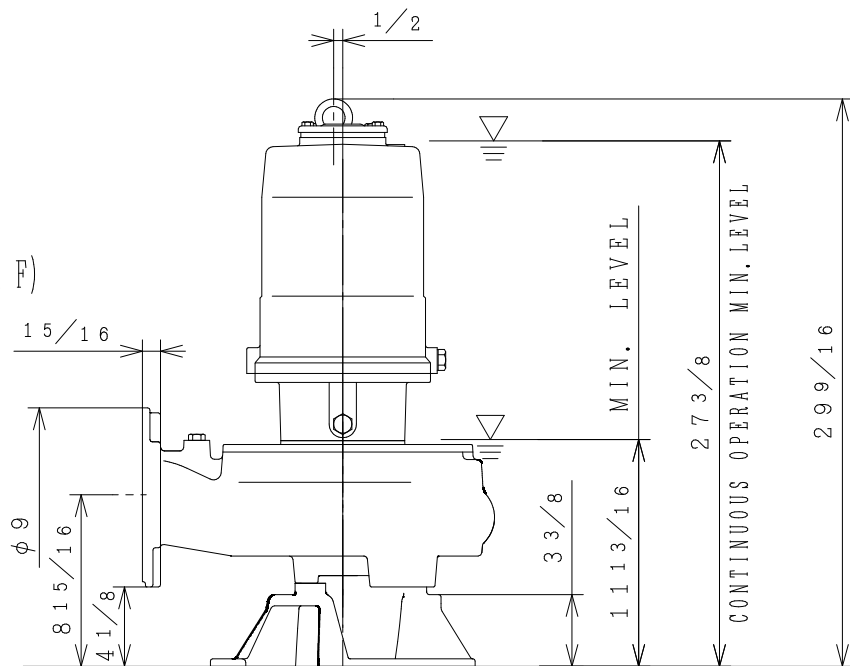
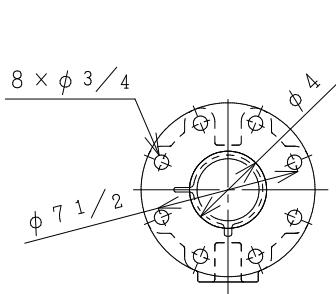
STAND ALONE INSTALLATION TYPE

MODEL	Impeller No.	RATED POWER (HP)	FREQ.
4CNMJ45.5T2	55-2	7.5	60
4CNMJ45.5T3			

UNIT: inch



FLANGE (ANSI 150 PSI F.F)



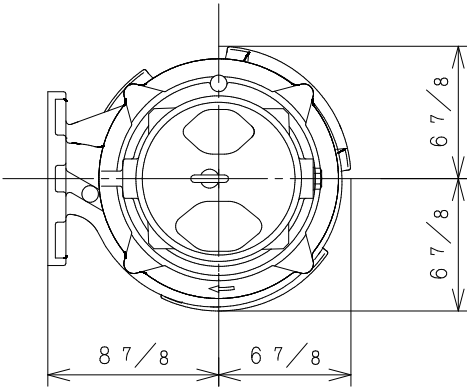
[Note] Limit operation to 30 minutes (maximum) when operating the pump between the MIN. LEVEL and CONTINUOUS OPERATION MIN. LEVEL. In the event of continuous operation, the CONTINUOUS OPERATION MIN. LEVEL must be maintained. Cables are not shown on this drawing.

1805001 0201	DWG. M. Tajima Mar. 16. 21	TITLE PUMP DIMENSION	DWG No.
	JUDG. T. Tachibana Mar. 16. 21		A 4 2 6 0 6 0
	APPD. M. Hashimoto Mar. 16. 21		

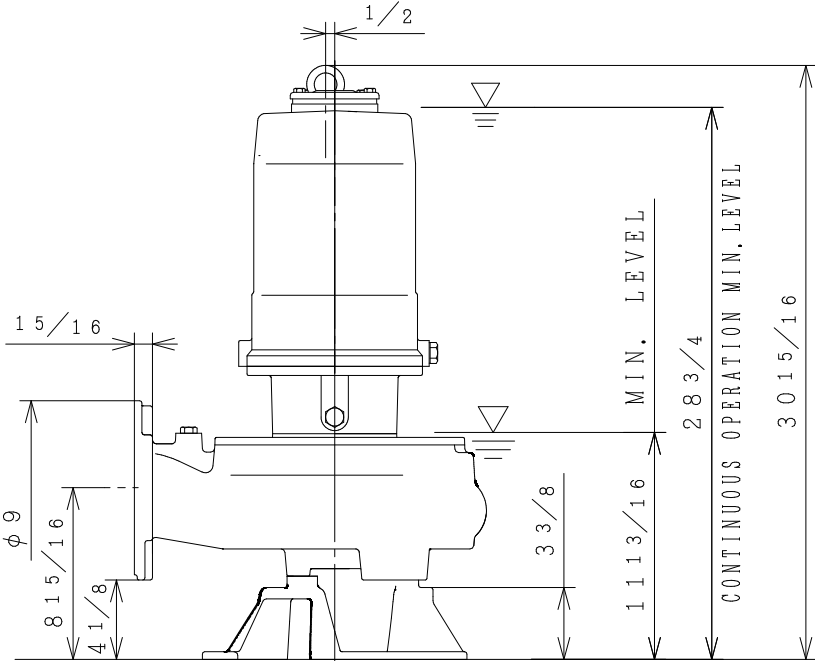
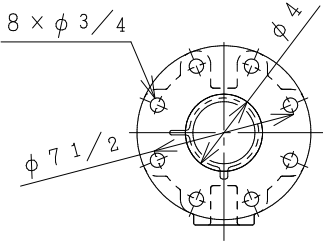
STAND ALONE INSTALLATION TYPE

MODEL	Impeller No.	RATED POWER (HP)	FREQ.
4CNMJ47.5T2	75-2	10	60
4CNMJ47.5T3			

UNIT: inch



FLANGE (ANSI 150 PSI F.F)



[Note] Limit operation to 30 minutes (maximum) when operating the pump between the MIN. LEVEL and CONTINUOUS OPERATION MIN. LEVEL. In the event of continuous operation, the CONTINUOUS OPERATION MIN. LEVEL must be maintained. Cables are not shown on this drawing.

DWG.	M. Tajima	Mar. 16. 21	TITLE PUMP DIMENSION	DWG No.	
JUDG.	T. Tachibana	Mar. 16. 21		A 4 2 6 0 6 1	
APPD.	M. Hashimoto	Mar. 16. 21			

1805001
0 2 0 1

ShinMaywa Submersible Sewage Pump CNMJ

DRAWING LIST (Section View and Material List)

Section View and Material List for Pump

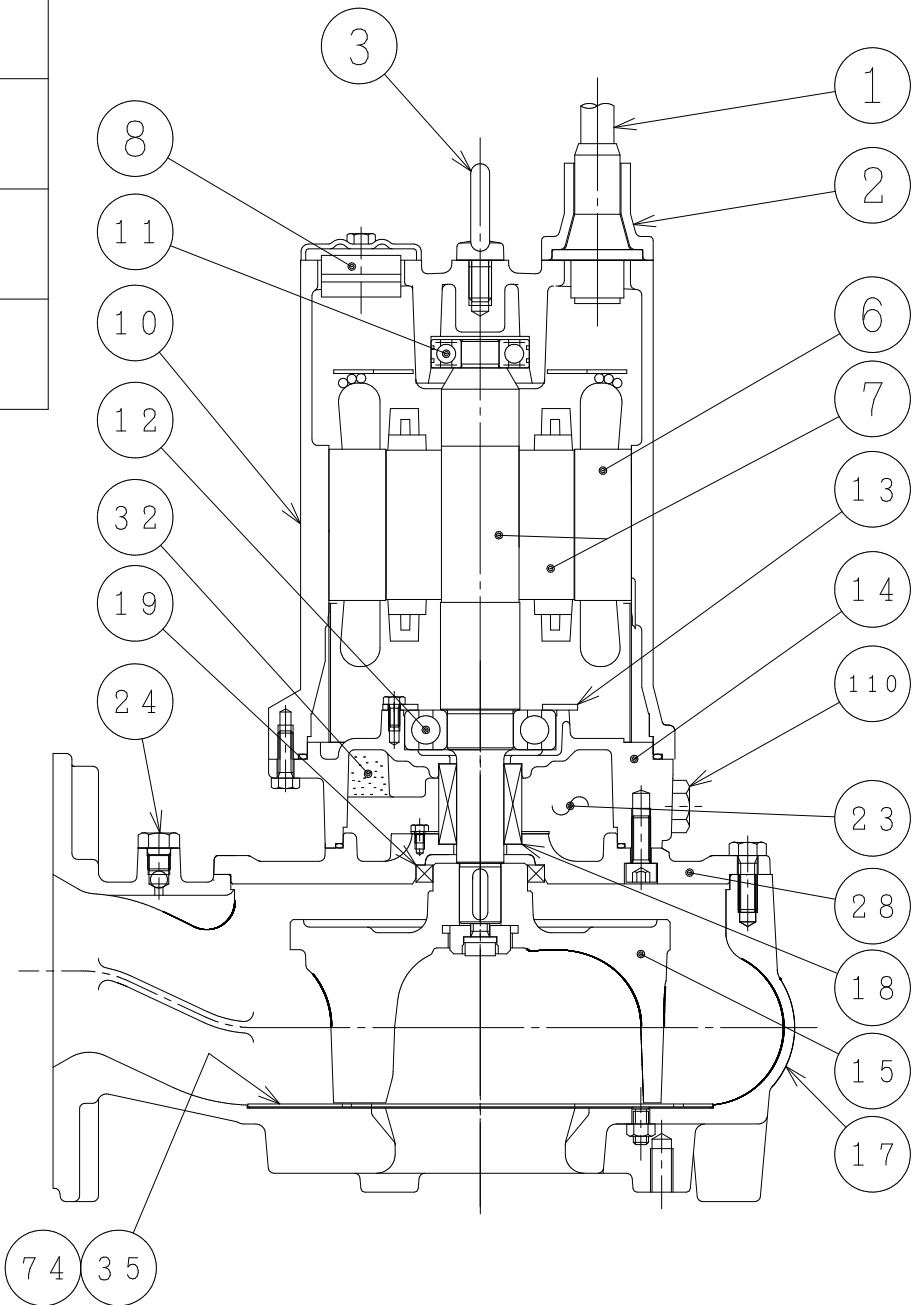
Discharge	Solid Size	Model		HP	Guide Rail Installation Pump		
		Motor	Impeller		Section View	Material List	
						208/230V	460V
3"	3" (80mm)	3CNMJ42.2T *	22-2	3	A426062	A426064	A426064
		3CNMJ43.7T *	37-2	5			
4"	3" (80mm)	4CNMJ42.2T *	22-2	3			
		4CNMJ43.7T *	37-2	5			
		4CNMJ45.5T *	55-2	7.5			
		4CNMJ47.5T *	75-2	10			
					A426118		

Section View and Material List for Stand Alone Installation

Discharge	Solid Size	Model		HP	Stand Alone Installation Pump		
		Motor	Impeller		Section View	Material List	
						208/230V	460V
3"	3" (80mm)	3CNMJ42.2T *	22-2	3	A426063	A426065	A426065
		3CNMJ43.7T *	37-2	5			
4"	3" (80mm)	4CNMJ42.2T *	22-2	3			
		4CNMJ43.7T *	37-2	5			
		4CNMJ45.5T *	55-2	7.5			
		4CNMJ47.5T *	75-2	10			
					A426119		

* Voltage: 2 means 208/230V, 3 means 460V.

MODEL	RATED POWER (HP)
3CNMJ42.2T2	3
3CNMJ42.2T3	
4CNMJ42.2T2	3
4CNMJ42.2T3	
3CNMJ43.7T2	5
3CNMJ43.7T3	
4CNMJ43.7T2	5
4CNMJ43.7T3	
4CNMJ45.5T2	7.5
4CNMJ45.5T3	
4CNMJ47.5T2	10
4CNMJ47.5T3	



1805001 0201	DWG.	M. Tajima	Mar. 16. 21	TITLE P U M P S E C T I O N	DWG No.	A 4 2 6 0 6 2
	JUDG.	T. Tachibanaki	Mar. 16. 21			
	APPD.	M. Hashimoto	Mar. 16. 21			

MATERIALS LIST

No.	Denomination	Material
1	Cable(power)	V C T PVC insulated PVC sheathed cable
2	Cable entry	F C 2 0 0 (ASTM A48 Class 30) Gray Iron Casting
3	Eyebolt	S U S 3 0 4 series (ASTM S30400SERIES) Stainless Steel
6	Stator	_____
7	Rotor Assembly	Shaft=S U S 4 2 0 J 2 Stainless Steel
8	Thermal protector	Auto Reset Type Motor Protector
10	Stator Casing	F C 2 0 0 (ASTM A48 Class 30) Gray Iron Casting
11	Ball Bearing(Upper)	_____
12	Ball Bearing(Lower)	_____
13	Bearing Cover	F C 2 0 0 (ASTM A48 Class 30) Gray Iron Casting
14	Oil housing	F C 2 0 0 (ASTM A48 Class 30) Gray Iron Casting
15	Impeller	F C 2 5 0 (ASTM A48 Class 35) Gray Iron Casting
17	Pump Casing	F C 2 5 0 (ASTM A48 Class 35) Gray Iron Casting
18	Mechanical Seal	Upper : SiC/SiC Lower : SiC/SiC
19	Oil seal	Acrylonitrile Butadiene Rubber (NBR)
23	Oil	Turbine Oil #32
24	Air Valve	Locating Pin : Polyethylene Ball: Acrylonitrile Butadiene Rubber (NBR)
28	Mechanical Seal Bracket	F C 2 0 0 (ASTM A48 Class 30) Gray Iron Casting
32	Equalizer	Acrylonitrile Butadiene Rubber (NBR)
35	Shim	Polyethylene
74	Chopper plate	S U S 3 0 4 series (ASTM S304SERIES) Stainless Steel
110	Oil Plug	S U S 3 0 4 series (ASTM S304SERIES) Stainless Steel

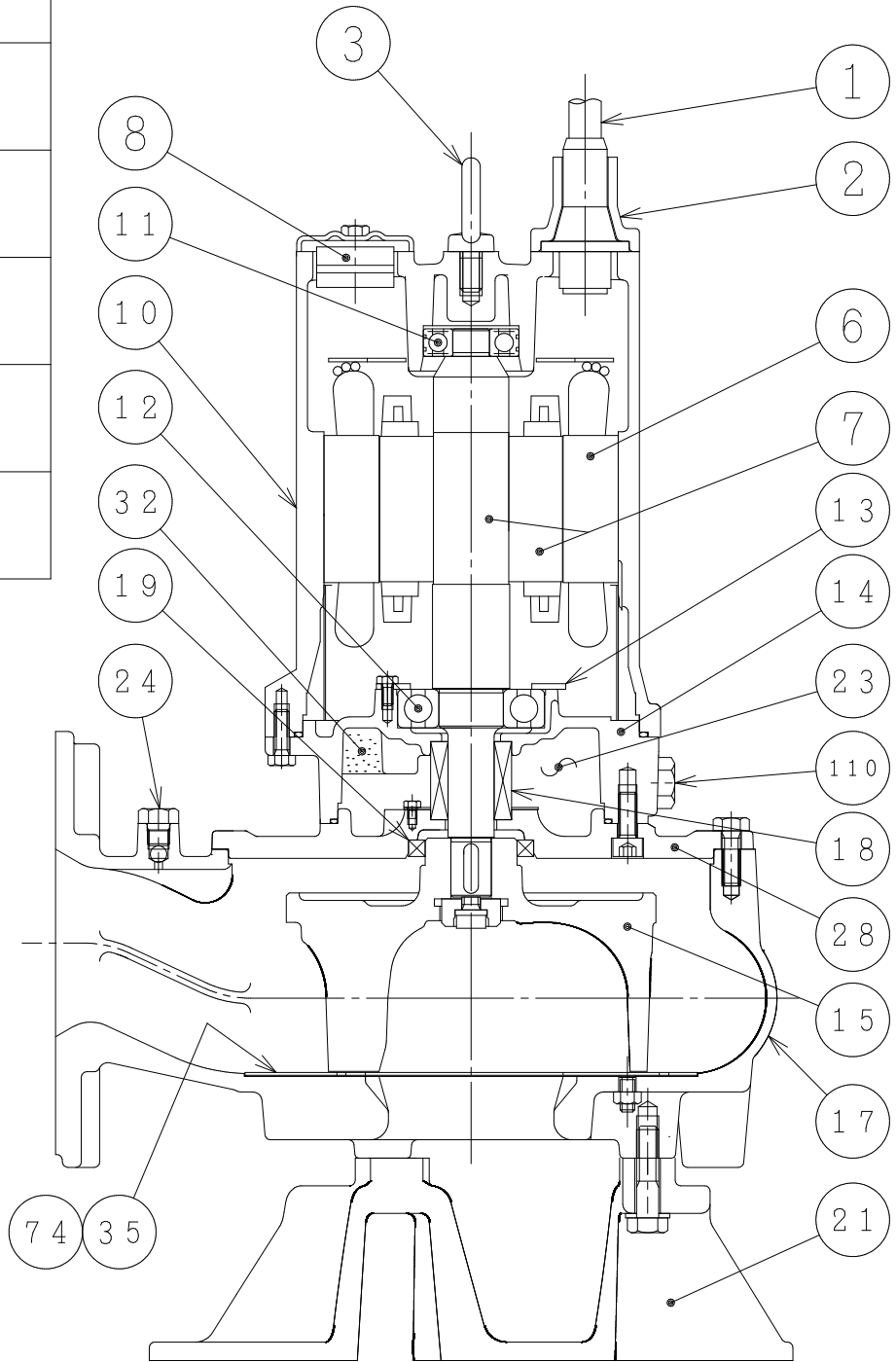
1805001	DWG.	S. Ohnishi	Mar·10·2021	TITLE	MATERIALS LIST	DWG No.	A426064	Δ0
	JUDG.	T. Tachibanak	Mar·10·2021					
	APPD.	M. Hashimoto	Mar·10·2021					

MATERIALS LIST

No.	Denomination	Material
1	Cable (power)	2 P N C T EPR insulated PCP sheathed cable
2	Cable entry	F C 2 0 0 (ASTM A48 Class 30) Gray Iron Casting
3	Eyebolt	S U S 3 0 4 series (ASTM S30400SERIES) Stainless Steel
6	Stator	_____
7	Rotor Assembly	Shaft=S U S 4 2 0 J 2 Stainless Steel
8	Thermal protector	Auto Reset Type Motor Protector
10	Stator Casing	F C 2 0 0 (ASTM A48 Class 30) Gray Iron Casting
11	Ball Bearing (Upper)	_____
12	Ball Bearing (Lower)	_____
13	Bearing Cover	F C 2 0 0 (ASTM A48 Class 30) Gray Iron Casting
14	Oil housing	F C 2 0 0 (ASTM A48 Class 30) Gray Iron Casting
15	Impeller	F C 2 5 0 (ASTM A48 Class 35) Gray Iron Casting
17	Pump Casing	F C 2 5 0 (ASTM A48 Class 35) Gray Iron Casting
18	Mechanical Seal	Upper : SiC/SiC Lower : SiC/SiC
19	Oil seal	Acrylonitrile Butadiene Rubber (NBR)
23	Oil	Turbine Oil #32
24	Air Valve	Locating Pin : Polyethylene Ball : Acrylonitrile Butadiene Rubber (NBR)
28	Mechanical Seal Bracket	F C 2 0 0 (ASTM A48 Class 30) Gray Iron Casting
32	Equalizer	Acrylonitrile Butadiene Rubber (NBR)
35	Shim	Polyethylene
74	Chopper plate	S U S 3 0 4 series (ASTM S304SERIES) Stainless Steel
110	Oil Plug	S U S 3 0 4 series (ASTM S304SERIES) Stainless Steel

1805001	DWG.	S. Ohnishi	Mar·10·2021	TITLE	MATERIALS LIST	DWG No.	A426118	Δ0
	JUDG.	T. Tachibanak	Mar·10·2021					
	APPD.	M. Hashimoto	Mar·10·2021					

MODEL	RATED POWER (HP)
3CNMJ42.2T2	3
3CNMJ42.2T3	
4CNMJ42.2T2	3
4CNMJ42.2T3	
3CNMJ43.7T2	5
3CNMJ43.7T3	
4CNMJ43.7T2	5
4CNMJ43.7T3	
4CNMJ45.5T2	7.5
4CNMJ45.5T3	
4CNMJ47.5T2	10
4CNMJ47.5T3	



DWG.	M. Tajima	Mar. 16. 21	TITLE	DWG No.
JUDG.	T. Tachibanaki	Mar. 16. 21	P U M P S E C T I O N	A 4 2 6 0 6 3
APPD.	M. Hashimoto	Mar. 16. 21		

1805001
0201

MATERIALS LIST

No.	Denomination	Material
1	Cable (power)	V C T PVC insulated PVC sheathed cable
2	Cable entry	F C 2 0 0 (ASTM A48 Class 30) Gray Iron Casting
3	Eyebolt	S U S 3 0 4 series (ASTM S30400SERIES) Stainless Steel
6	Stator	_____
7	Rotor Assembly	Shaft=S U S 4 2 0 J 2 Stainless Steel
8	Thermal protector	Auto Reset Type Motor Protector
10	Stator Casing	F C 2 0 0 (ASTM A48 Class 30) Gray Iron Casting
11	Ball Bearing (Upper)	_____
12	Ball Bearing (Lower)	_____
13	Bearing Cover	F C 2 0 0 (ASTM A48 Class 30) Gray Iron Casting
14	Oil housing	F C 2 0 0 (ASTM A48 Class 30) Gray Iron Casting
15	Impeller	F C 2 5 0 (ASTM A48 Class 35) Gray Iron Casting
17	Pump Casing	F C 2 5 0 (ASTM A48 Class 35) Gray Iron Casting
18	Mechanical Seal	Upper : SiC/SiC Lower : SiC/SiC
19	Oil seal	Acrylonitrile Butadiene Rubber (NBR)
21	Stand	F C 2 0 0 (ASTM A48 Class 30) Gray Iron Casting
23	Oil	Turbine Oil #32
24	Air Valve	Locating Pin : Polyethylene Ball: Acrylonitrile Butadiene Rubber (NBR)
28	Mechanical Seal Bracket	F C 2 0 0 (ASTM A48 Class 30) Gray Iron Casting
32	Equalizer	Acrylonitrile Butadiene Rubber (NBR)
35	Shim	Polyethylene
74	Chopper plate	S U S 3 0 4 series (ASTM S304SERIES) Stainless Steel
110	Oil Plug	S U S 3 0 4 series (ASTM S304SERIES) Stainless Steel

1805001	DWG.	S. Ohnishi	Mar·10·2021	TITLE	MATERIALS LIST	DWG No.	A426065	Δ0
	JUDG.	T. Tachibanak	Mar·10·2021					
	APPD.	M. Hashimoto	Mar·10·2021					

MATERIALS LIST

No.	Denomination	Material
1	Cable (power)	2 P N C T EPR insulated PCP sheathed cable
2	Cable entry	F C 2 0 0 (ASTM A48 Class 30) Gray Iron Casting
3	Eyebolt	S U S 3 0 4 series (ASTM S30400SERIES) Stainless Steel
6	Stator	_____
7	Rotor Assembly	Shaft=S U S 4 2 0 J 2 Stainless Steel
8	Thermal protector	Auto Reset Type Motor Protector
10	Stator Casing	F C 2 0 0 (ASTM A48 Class 30) Gray Iron Casting
11	Ball Bearing (Upper)	_____
12	Ball Bearing (Lower)	_____
13	Bearing Cover	F C 2 0 0 (ASTM A48 Class 30) Gray Iron Casting
14	Oil housing	F C 2 0 0 (ASTM A48 Class 30) Gray Iron Casting
15	Impeller	F C 2 5 0 (ASTM A48 Class 35) Gray Iron Casting
17	Pump Casing	F C 2 5 0 (ASTM A48 Class 35) Gray Iron Casting
18	Mechanical Seal	Upper : SiC/SiC Lower : SiC/SiC
19	Oil seal	Acrylonitrile Butadiene Rubber (NBR)
21	Stand	F C 2 0 0 (ASTM A48 Class 30) Gray Iron Casting
23	Oil	Turbine Oil #32
24	Air Valve	Locating Pin : Polyethylene Ball: Acrylonitrile Butadiene Rubber (NBR)
28	Mechanical Seal Bracket	F C 2 0 0 (ASTM A48 Class 30) Gray Iron Casting
32	Equalizer	Acrylonitrile Butadiene Rubber (NBR)
35	Shim	Polyethylene
74	Chopper plate	S U S 3 0 4 series (ASTM S304SERIES) Stainless Steel
110	Oil Plug	S U S 3 0 4 series (ASTM S304SERIES) Stainless Steel

1805001	DWG.	S. Ohnishi	Mar·10·2021	TITLE	MATERIALS LIST	DWG No.	Δ0
	JUDG.	T. Tachibanak	Mar·10·2021			A426119	
	APPD.	M. Hashimoto	Mar·10·2021				

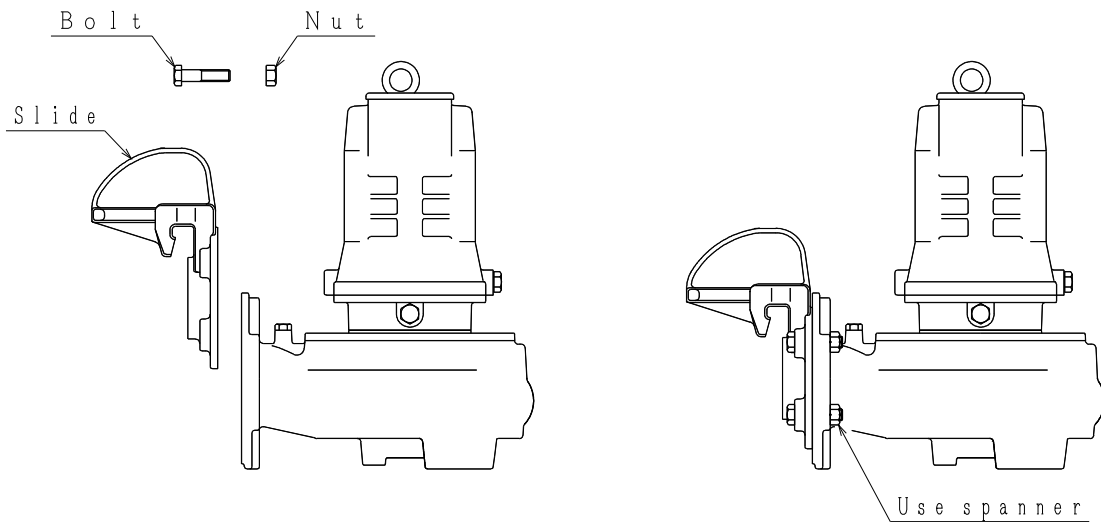
ShinMaywa Submersible Sewage Pump CNMJ

DRAWING LIST (Section View and Material List)

Section View and Material List for Guide Rail Connection

Discharge	Solid Size	Model		HP	Guide Rail Type	Drawing
		Motor	Impeller			
3"	3" (80mm)	3CNMJ42.2T *	22-2	3	P3BY	A403837
		3CNMJ43.7T *	37-2	5		
4"	3" (80mm)	4CNMJ42.2T *	22-2	3	P4CY	A403838
		4CNMJ43.7T *	37-2	5		
		4CNMJ45.5T *	55-2	7.5		
		4CNMJ47.5T *	75-2	10		

* Voltage: 2 means 208/230V, 3 means 460V.



(Note)

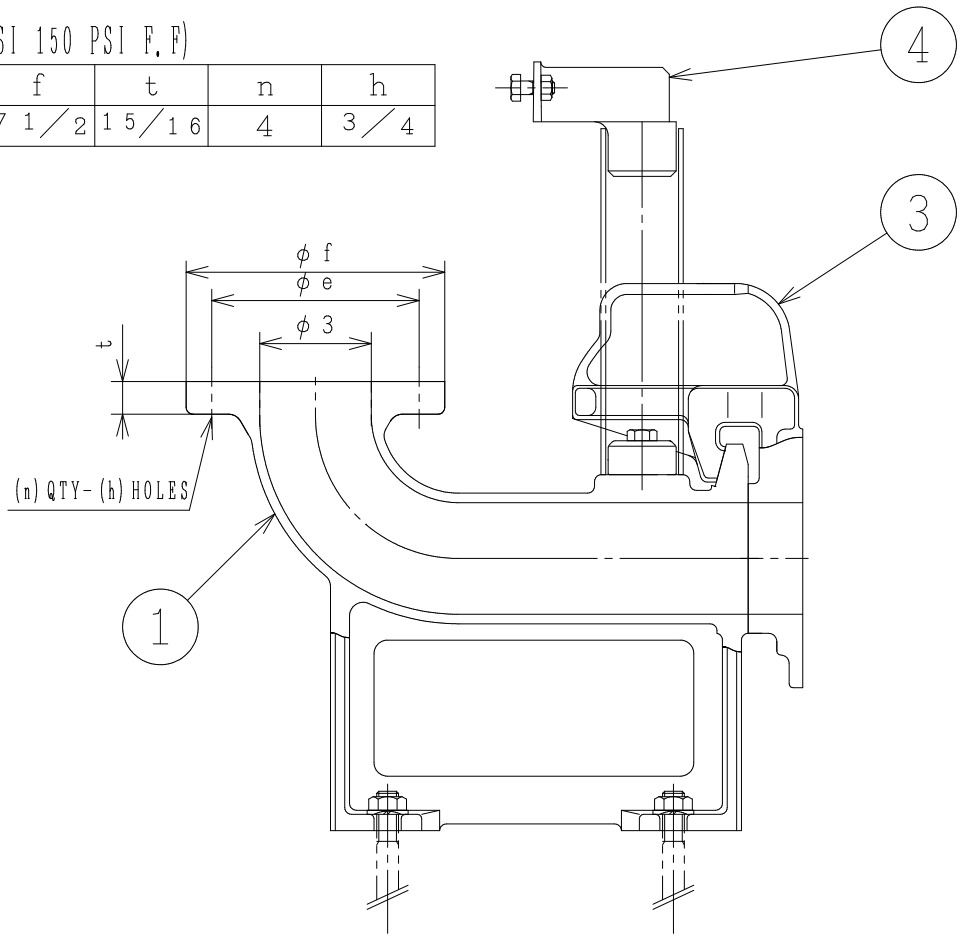
1. Use a spanner to fasten the slide fastening nut because the box wrench interferes with the pump housing.

GUIDE RAIL INSTALATION SET P 3 B Y

FLANGE (ANSI 150 PSI F.F)

e	f	t	n	h
6	7 1/2	1 5/16	4	3/4

UNIT: inch



※Anchor bolts, Chain and Guide Pipes are not included.

NO.	Part Name	Material
1	Guide Rail Base w. Integral Elbow	Gray iron casting (A48-class No. 30)
3	Sliding bracket	Gray iron casting (A48-class No. 30)
4	Upper Guide Rail Bracket	Mild steel/Stainless steel casting (A283/A351 Gr. CF-8)

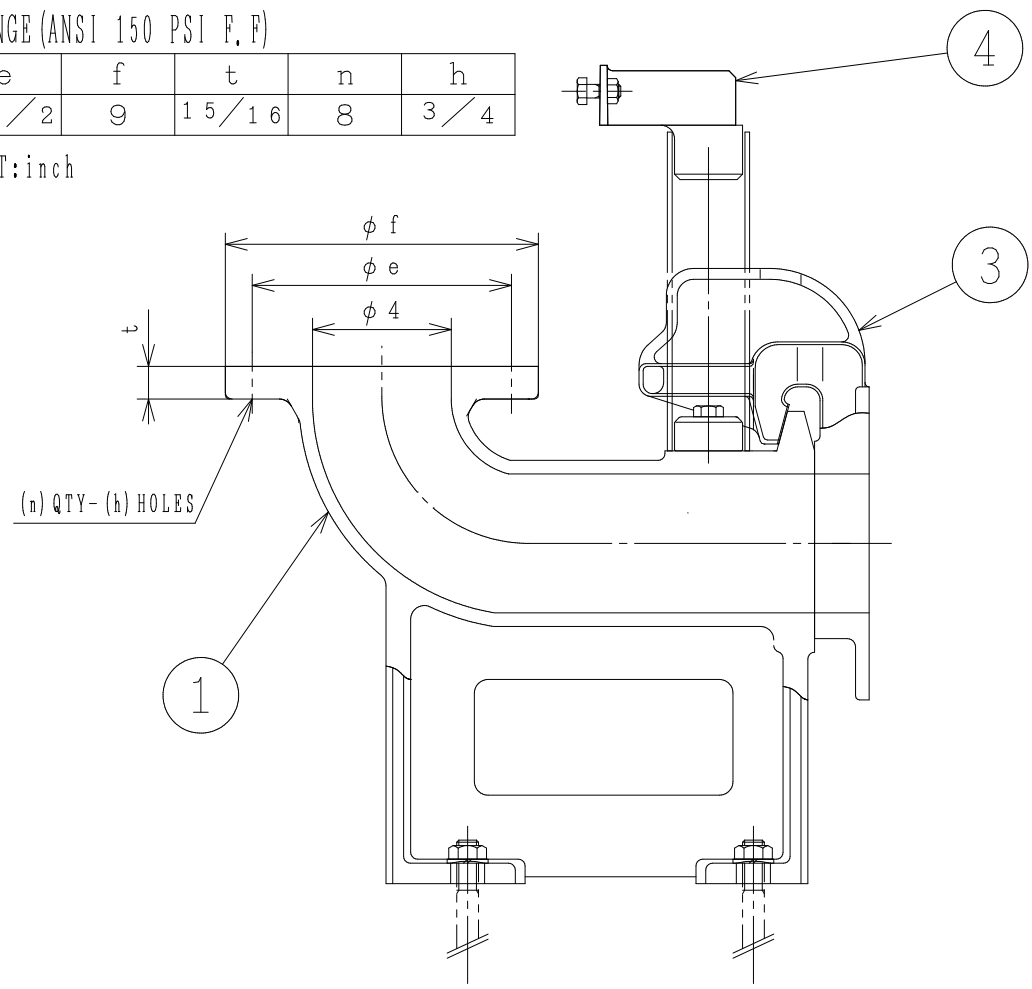
DWG.	M. Higuchi	Sep. 28, 2012	TITLE GUIDE RAIL SECTION	DWG No. A 4 0 3 8 3 7
JUDG.	M. Ikeda	Sep. 28, 2012		
APPD.	M. Ikeda	Sep. 28, 2012		

GUIDE RAIL INSTALATION SET P4CY

FLANGE (ANSI 150 PSI F.F)

e	f	t	n	h
7 1/2	9	1 5/16	8	3/4

UNIT: inch



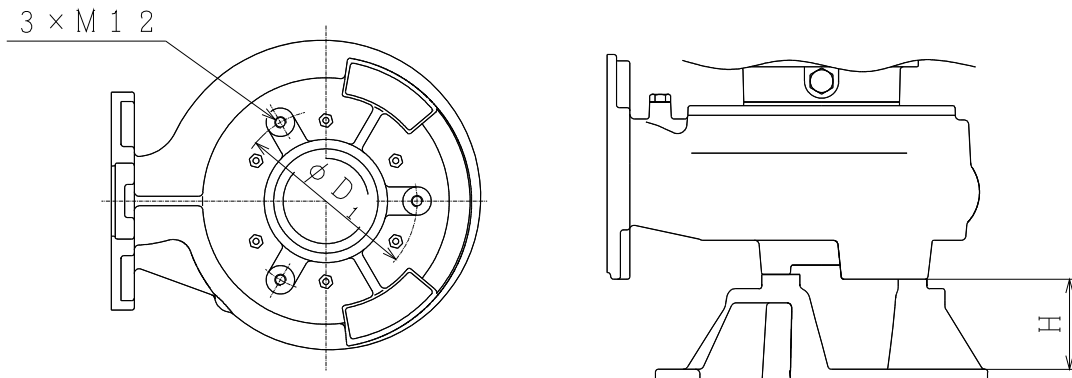
※Anchor bolts, Chain and Guide Pipes are not included.

NO.	Part Name	Material
1	Guide Rail Base w. Integral Elbow	Gray iron casting (A48-class No. 30)
3	Sliding bracket	Gray iron casting (A48-class No. 30)
4	Upper Guide Rail Bracket	Mild steel/Stainless steel casting (A283/A351 Gr. CF-8)

DWG.	M. Higuchi	Sep. 28, 2012	TITLE GUIDE RAIL SECTION	DWG No. A 4 0 3 8 3 8
JUDG.	M. Ikeda	Sep. 28, 2012		
APPD.	M. Ikeda	Sep. 28, 2012		

ShinMaywa Submersible Sewage Pump CNMJ

TAP INFORMATION FOR STAND



Discharge Size	Type	Impeller No.	HP	Solid Size	P.C.D ϕ D1 (mm)	Clearance H	Tap Drill Length (mm)	Stand type
3 inch	3CNMJ42.2T *	22-2	3	3 inch	192 \pm 0.3	3 inch	23	F3/F4 (M78967-A)
	3CNMJ43.7T *	37-2	5					
4 inch	4CNMJ42.2T *	22-2	3					
	4CNMJ43.7T *	37-2	5					
	4CNMJ45.5T *	55-2	7.5					
	4CNMJ47.5T *	75-2	10					

* Voltage: 2 means 208/230V, 3 means 460V.

ShinMaywa Submersible Sewage Pump CNMJ

SHOP PAINTING STANDARD

1. Scope

This specification covers the methods for painting the following ShinMaywa pumps in the shop.
ShinMaywa Models: CNMJ

2. Surface Preparation

All surfaces to be painted shall be cleaned of oil, grease or other similar materials with solvent, and then shall be brushed and air blasted to remove rust or scale.

Prior to above preparation, mill scale, rust scale, chips and other foreign materials shall be removed in accordance with painting schedule.

3. Coating Procedure

Detailed coating procedures are as shown in each paint schedule.

Service	Painting Schedule		
	Painting Part	Coating Material	Thickness of standards
3"	Cast Parts and The other	Epoxy resin paint (Non-Tar) Final color: BLACK (Munsell system of color No.1.0)	50µm or more

(Note)

2. Painting is assumed to be spray painting.
3. Painting excludes the cable and the resin parts.
4. Finishing coat is included priming coat due to circumstances of manufacturing.

ShinMaywa Submersible Sewage Pump CNMJ

MECHANICAL SEAL, BALL BEARING AND LUBRICATION OIL LIST

Bearing and Mechanical Seal information

Discharge	Solid Size	Model		HP	Bearing Type		Mechanical Seal Size
		Motor	Impeller		Upper	Lower	
3"	3" (80mm)	3CNMJ42.2T*	22-2	3	AC6304ZZC3/L448	6307ZZC3*	φ25
		3CNMJ43.7T*	37-2	5	AC6304ZZC3/L448	6308ZZC3*	φ30
4"	3" (80mm)	4CNMJ42.2T*	22-2	3	AC6304ZZC3/L448	6307ZZC3*	φ25
		4CNMJ43.7T*	37-2	5	AC6304ZZC3/L448	6308ZZC3*	φ30
		4CNMJ45.5T*	55-2	7.5	AC6305ZZC3/L448	6310ZZC3*	φ35
		4CNMJ47.5T*	75-2	10	AC6305ZZC3/L448	6310ZZC3*	φ35

Lubricating Oil

Discharge	Solid Size	Model		HP	Lubricating Oil		
		Motor	Impeller		Capacity (ozs)	Capacity (cc)	Name
3"	3" (80mm)	3CNMJ42.2T*	22-2	3	Full tank (16)	Full tank (470)	Turbine Oil #32
		3CNMJ43.7T*	37-2	5	Full tank (16)	Full tank (470)	
4"	3" (80mm)	4CNMJ42.2T*	22-2	3	Full tank (16)	Full tank (470)	
		4CNMJ43.7T*	37-2	5	Full tank (16)	Full tank (470)	
		4CNMJ45.5T*	55-2	7.5	Full tank (18)	Full tank (530)	
		4CNMJ47.5T*	75-2	10	Full tank (18)	Full tank (530)	

* Voltage: 2 means 208/230V, 3 means 460V.

* Grease: Multemp SRL (KYODO YUSHI CO.,LTD.)

ShinMaywa Submersible Sewage Pump CNMJ

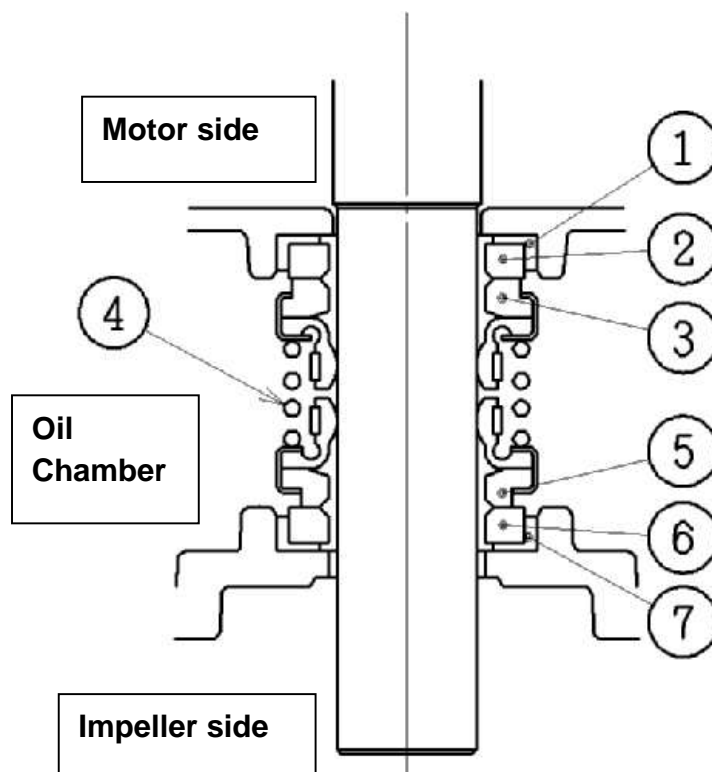
MECHANICAL SEAL

Mechanical seal is the most critical part of submersible pumps.

ShinMaywa provides the most reliable mechanical seal available for submersible pumps.

ShinMaywa provides hard seal face materials for all "CNMJ" series submersible pumps.

The one coil double design mechanical seal in oil chamber provides long life and friction-free sealing of the motor shaft.



Standard Material for CNMJ series

No.	Part Name	Materials
1	Cup Gasket	Acrylonitrile Butadiene Rubber (NBR)
2	Mating Ring	Silicon Carbide
3	Seal Ring	Silicon Carbide
4	Coil Spring	304 Stainless Steel
5	Seal Ring	Silicon Carbide
6	Mating Ring	Silicon Carbide
7	Cup Gasket	Acrylonitrile Butadiene Rubber (NBR)

ShinMaywa Submersible Sewage Pump CNMJ

MOTOR DATE

1. The data listed below are the design values.
2. The calculation of current is for a power supply of 60Hz 208/230V or 460V, direct on line start.

[208V]

Output		3HP (2.2kW)	5HP (3.7kW)	7.5HP (5.5kW)	10HP (7.5kW)
Pole		4			
Full Load Current (A)		9.5	15.5	23.7	32.0
Efficiency (%)	1/2 Load	73.8	70.7	79.3	77.1
	3/4 Load	75.8	74.7	80.8	80.8
	1/1 Load	74.8	75.1	80.5	80.3
Power Factor (%)	1/2 Load	78.7	86.6	80.8	82.3
	3/4 Load	84.4	90.2	85.5	86.4
	1/1 Load	86.7	91.0	85.7	87.6
Start Current (A)		51.4	93.9	118	187
Locked-Rotor-Torque (%)		114	107	138	131
Power Cable Size		1.25mm ² (AWG16)	2.0mm ² (AWG14)	3.5mm ² (AWG12)	5.5mm ² (AWG10)
Power Cable Length		50ft (15m)			

[230V]

Output		3HP (2.2kW)	5HP (3.7kW)	7.5HP (5.5kW)	10HP (7.5kW)
Pole		4			
Full Load Current (A)		8.6	14.0	21.4	29.0
Efficiency (%)	1/2 Load	72.4	68.7	80.9	78.9
	3/4 Load	75.6	74.0	81.8	82.1
	1/1 Load	76.7	75.8	82.7	81.8
Power Factor (%)	1/2 Load	72.3	82.4	74.2	78.3
	3/4 Load	81.4	87.8	82.8	84.8
	1/1 Load	84.8	90.0	85.0	87.7
Start Current (A)		56.8	104	131	207
Locked-Rotor-Torque (%)		139	130	169	161
Power Cable Size		1.25mm ² (AWG16)	2.0mm ² (AWG14)	3.5mm ² (AWG12)	5.5mm ² (AWG10)
Power Cable Length		50ft (15m)			

ShinMaywa Submersible Sewage Pump CNMJ

MOTOR DATE

【460V】

Output		3HP (2.2kW)	5HP (3.7kW)	7.5HP (5.5kW)	10HP (7.5kW)
Pole		4			
Full Load Current (A)		4.3	7.0	10.7	14.5
Efficiency (%)	1/2 Load	72.4	68.7	80.9	78.9
	3/4 Load	75.6	74.0	81.8	82.1
	1/1 Load	76.7	75.8	82.7	81.8
Power Factor (%)	1/2 Load	72.3	82.4	74.2	78.3
	3/4 Load	81.4	87.8	82.8	84.8
	1/1 Load	84.8	90.0	85.0	87.7
Start Current (A)		28.4	51.9	65.2	103
Locked-Rotor-Torque (%)		139	130	169	161
Power Cable Size		1.25mm ² (AWG16)		2.0mm ² (AWG14)	3.5mm ² (AWG12)
Power Cable Length		50ft (15m)			

ShinMaywa Submersible Sewage Pump CNMJ

PROTECTOR

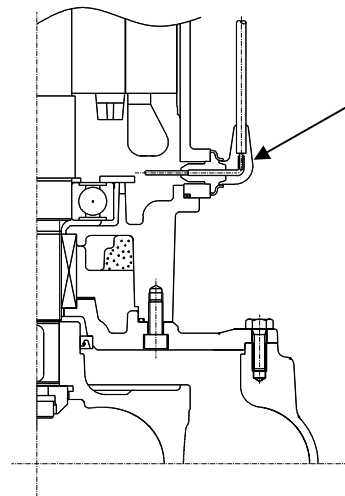
【Thermal Protector】

The pump shall incorporate Thermal protector (Auto reset type) as a standard.

Output	Voltage	Protector Model
3HP (2.2kW)	208/230V	ShinMaywa A423669B
	460V	ShinMaywa A425993B
5HP (3.7kW)	208/230V	ShinMaywa AM3863-B
	460V	ShinMaywa A423778A
7.5HP (5.5kW)	208/230V	ShinMaywa A400115C
	460V	ShinMaywa A423778B
10HP (7.5kW)	208/230V	ShinMaywa H18347-D
	460V	ShinMaywa AM3863-B

【Leakage Detector (OPTION)】

Leakage probe detector is available as an option to provide mechanical seal failure protection.



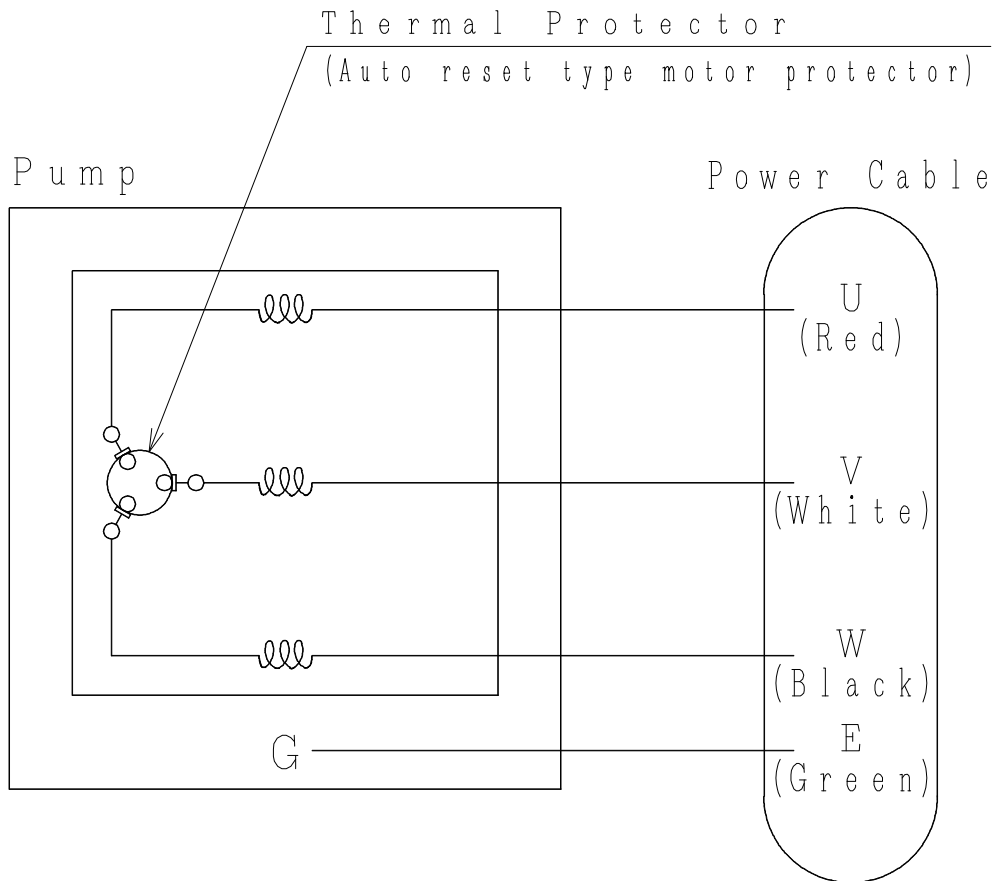
Leakage Detector

Max. Contact Capacity : AC250V 8A (Resistance Load)

Output	Protector Model	Type of Contact
3HP (2.2kW) 5HP (3.7kW) 7.5HP (5.5kW) 10HP (7.5kW)	ShinMaywa BK2774-B(15m)	a (Normally Open)

ShinMaywa Submersible Sewage Pump CNMJ

WIRING DIAGRAM



ShinMaywa Submersible Sewage Pump CNMJ

WEIGHT

【Pump】

Discharge	Solid Size	Model		HP	Pump Weight	
		Motor	Impeller		lb	kg
3"	3" (80mm)	3CNMJ42.2T*	22-2	3	159	72
		3CNMJ43.7T*	37-2	5	183	83
4"	3" (80mm)	4CNMJ42.2T*	22-2	3	159	72
		4CNMJ43.7T*	37-2	5	183	83
		4CNMJ45.5T*	55-2	7.5	243	110
		4CNMJ47.5T*	75-2	10	267	121

* Voltage: 2 means 208/230V, 3 means 460V.

【Accessory】

Code		Weight	
		lb	kg
Pump Stand	F3/F4 (M78967-A)	22	10
Guide Rail	P3BY	70.5	32
Installation Set	P4CY	132	60