

NO. A-09959-1

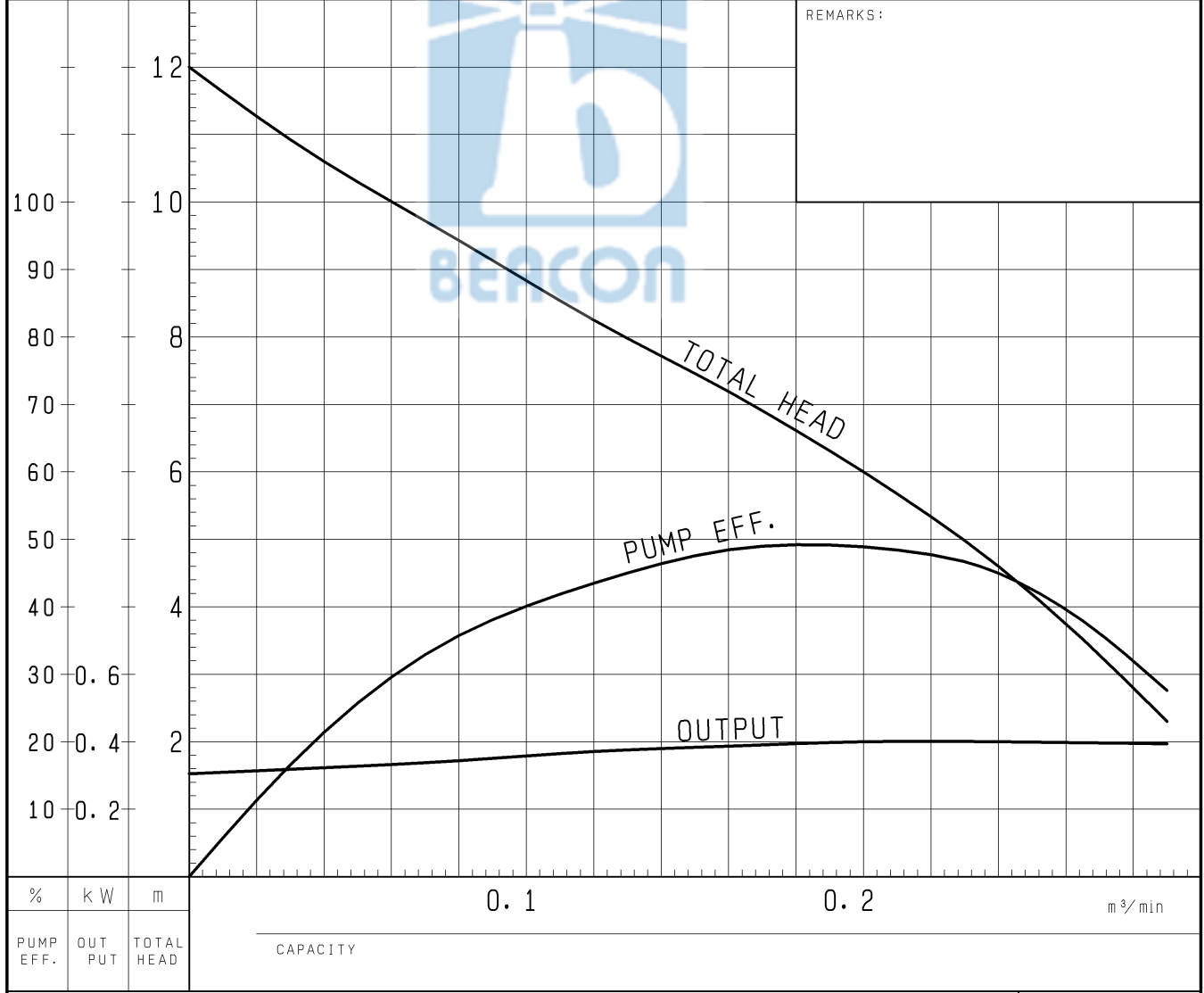
PUMP PERFORMANCE CURVES

TYPE Waste Water Submersible Vortex Pump	MODEL 50PN2.4 -52, 50PNA2.4 -52 50PNW2.4 -52	FREQUENCY 50 Hz
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CUSTOMER'S NAME _____

EQUIPMENT TITLE _____ NO. _____

	STANDARD SPECIFICATIONS	REQUIRED SPECIFICATIONS
DISCHARGE BORE	50 mm	mm
TOTAL HEAD	9.3 m	m
CAPACITY	0.08 m ³ /min	m ³ /min
MOTOR OUTPUT	0.4 kW	kW
PHASE x VOLTAGE	3 ϕ x V	ϕ x V
CURRENT	A	A
POLES / REVOLUTION	2 P / S. S. 3000 min ⁻¹	P / min ⁻¹
STARTING METHOD	DIRECT ON LINE	
INSULATION CLASS	E	

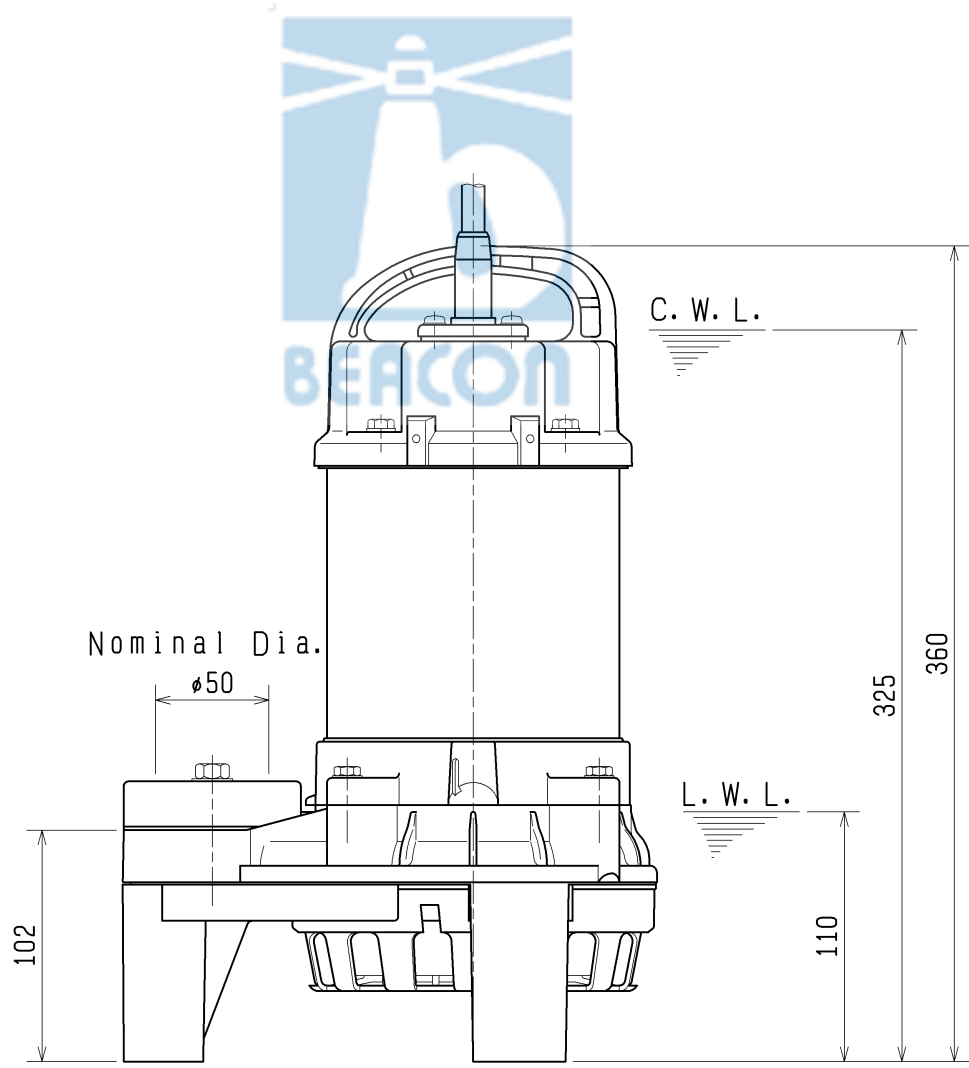
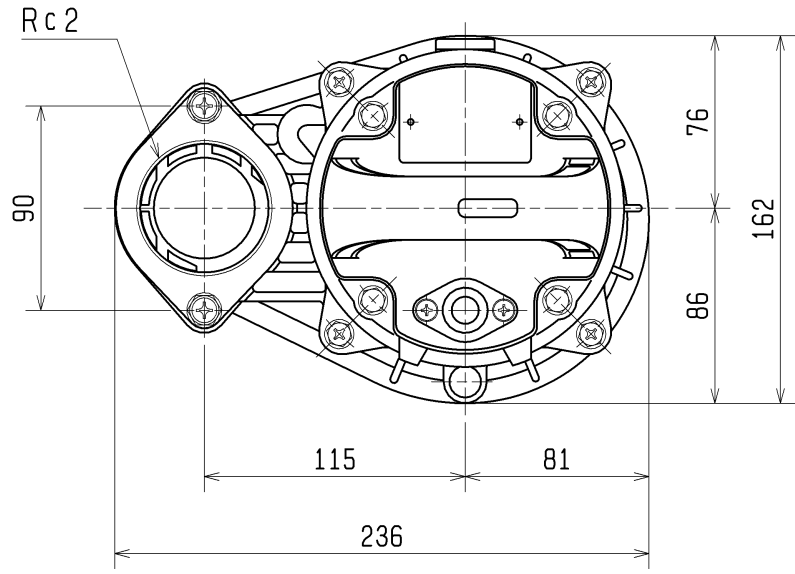


%	kW	m	
PUMP EFF.	OUT PUT	TOTAL HEAD	CAPACITY

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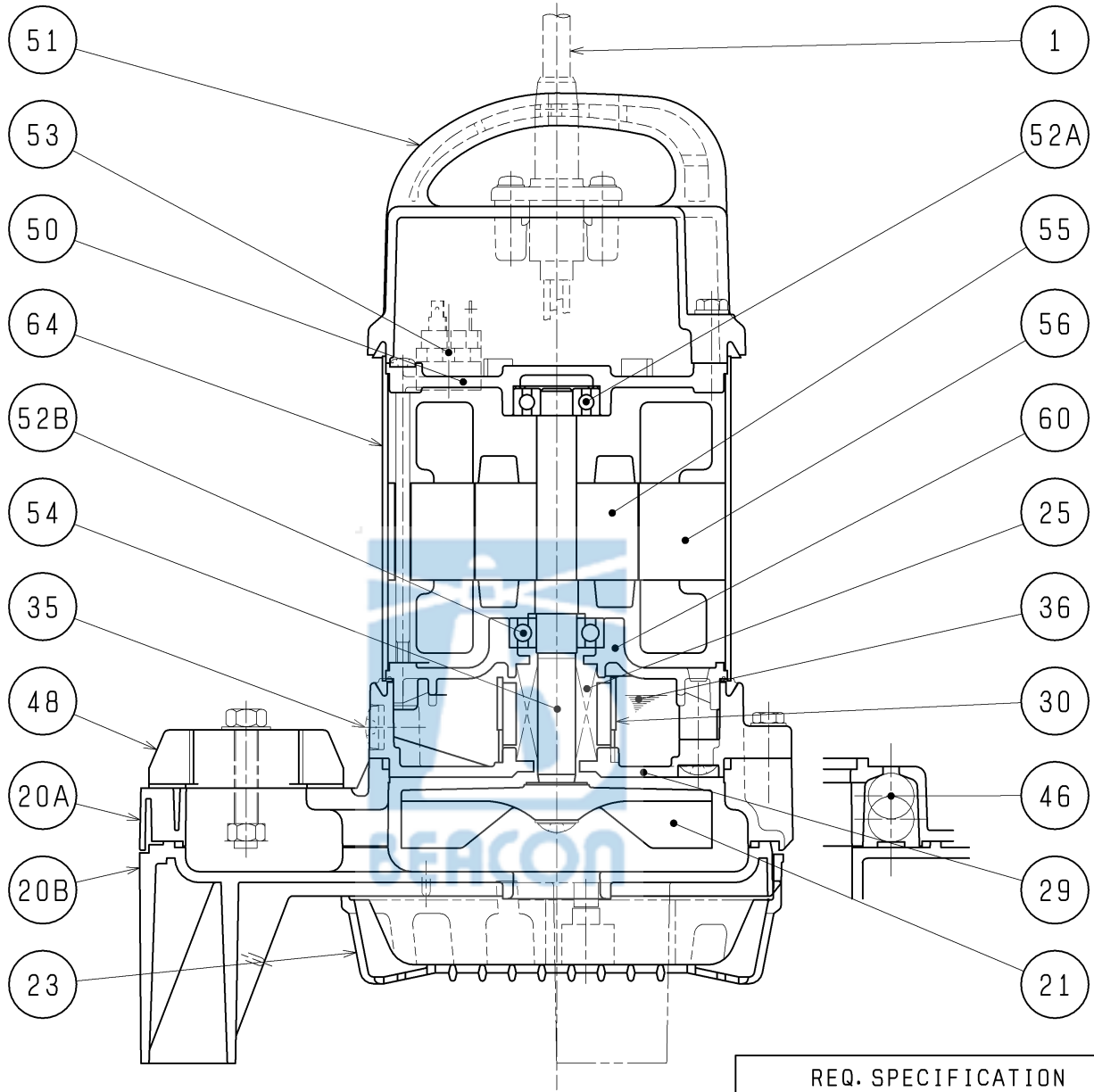
DIMENSION DRAWING		No.	No. A-09998-2
TYPE	Waste Water Submersible Vortex Pump	MODEL	50PN2.4 -52/62

Approximate Weight (※)
7kg
※excluding cable



C.W.L. :Continuous running Water Level
L.W.L. :Lowest running Water Level

SECTIONAL DRAWING		No.	No. A-10028-3
TYPE	Waste Water Submersible Vortex Pump	MODEL	40PN2.25 -52/62, 50PN2.4 -52/62 50PN2.75 -52/62



REQ. SPECIFICATION

* Upper and lower blocks form a one-piece casing.

No.	DESCRIPTION	QTY	MATERIAL / NOTE	No.	DESCRIPTION	QTY	MATERIAL / NOTE
1	Cable	1	PVC Sheath	51	Head Cover	1	Plastic W/GF
20A	Upper Pump Casing	*1	Plastic W/GF	52A	Upper Bearing	1	6201ZZC3
20B	Lower Pump Casing		Plastic	52B	Lower Bearing	1	0.25/0.4kW:6202ZZC3 0.75kW :6302ZZC3
21	Impeller	1	Plastic W/GF				
23	Strainer	1	Plastic				
25	Mechanical Seal	1	W-14HC	53	Motor Protector	1	
29	Oil Casing	1	Plastic W/GF	54	Shaft	1	Stainless Steel 304
30	Oil Lifter	1	Plastic	55	Rotor	1	
35	Oil Plug	1	Stainless Steel 304	56	Stator	1	
36	Lubricant		Liquid Paraffin (ISO VG32)	60	Bearing Housing	1	Aluminium Die Casting
46	Air Release Valve	1	Glass Ball	64	Motor Frame	1	Stainless Steel 304
48	Screwed Flange	1	Plastic W/GF				
50	Motor Bracket	1	Aluminium Die Casting				

NO. A-09957-2

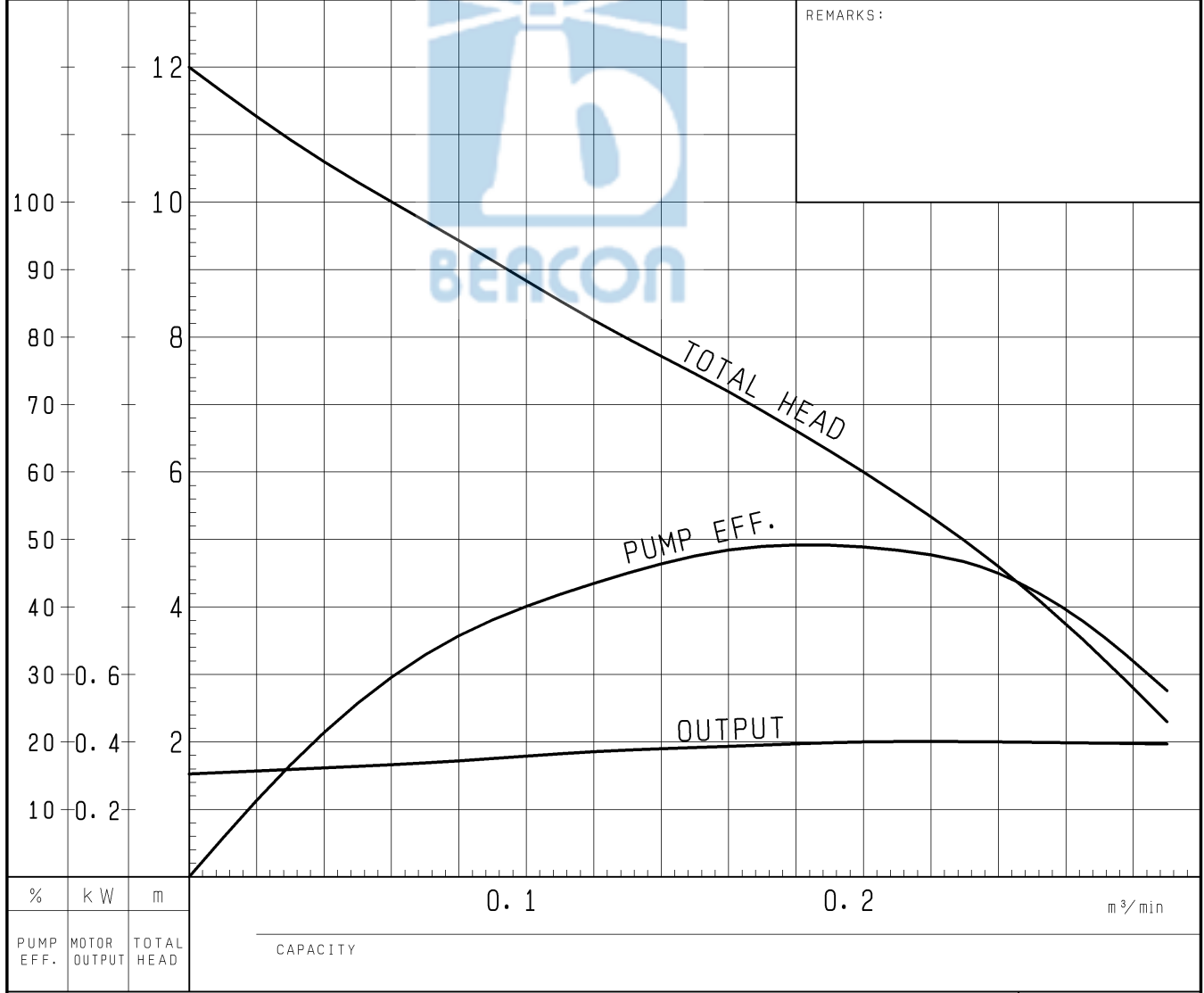
PUMP PERFORMANCE CURVES

TYPE Waste Water Submersible Vortex Pump	MODEL 50PN2.4S -52, 50PNA2.4S -52 50PNW2.4S -52	FREQUENCY 50 Hz
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CUSTOMER'S NAME _____

EQUIPMENT TITLE _____ NO. _____

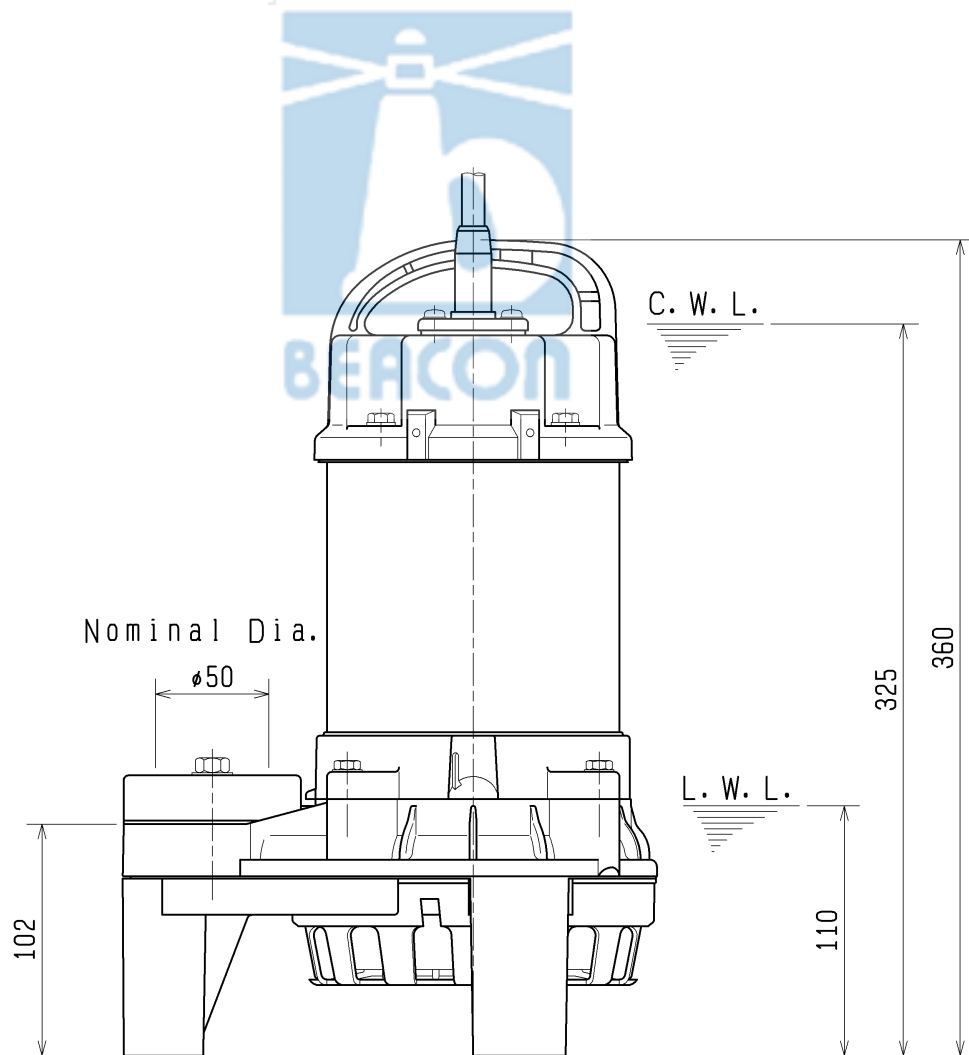
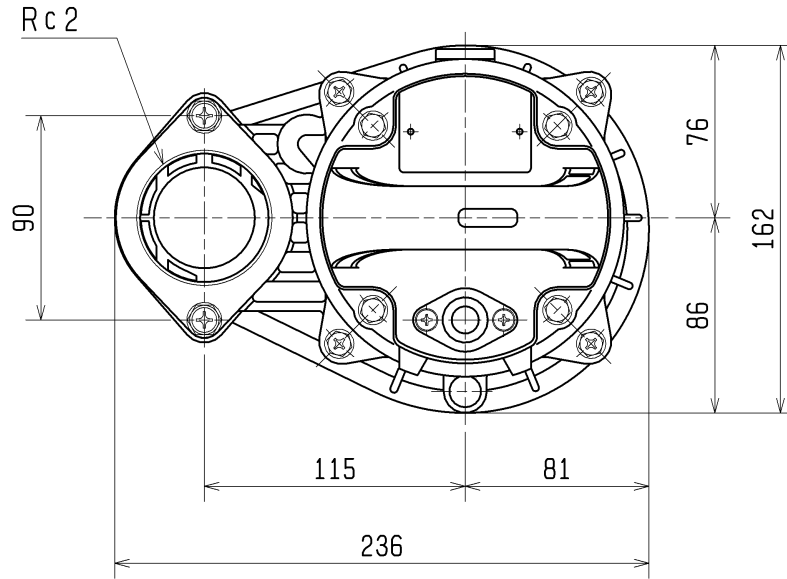
	STANDARD SPECIFICATIONS	REQUIRED SPECIFICATIONS
DISCHARGE BORE	50 mm	mm
TOTAL HEAD	9.3 m	m
CAPACITY	0.08 m ³ /min	m ³ /min
MOTOR OUTPUT	0.4 kW	kW
PHASE × VOLTAGE	1 φ × V	φ × V
CURRENT	A	A
POLES / REVOLUTION	2 P / s. s. 3000 min ⁻¹	P / min ⁻¹
STARTING METHOD	CAPACITOR MOTOR	
INSULATION CLASS	E	



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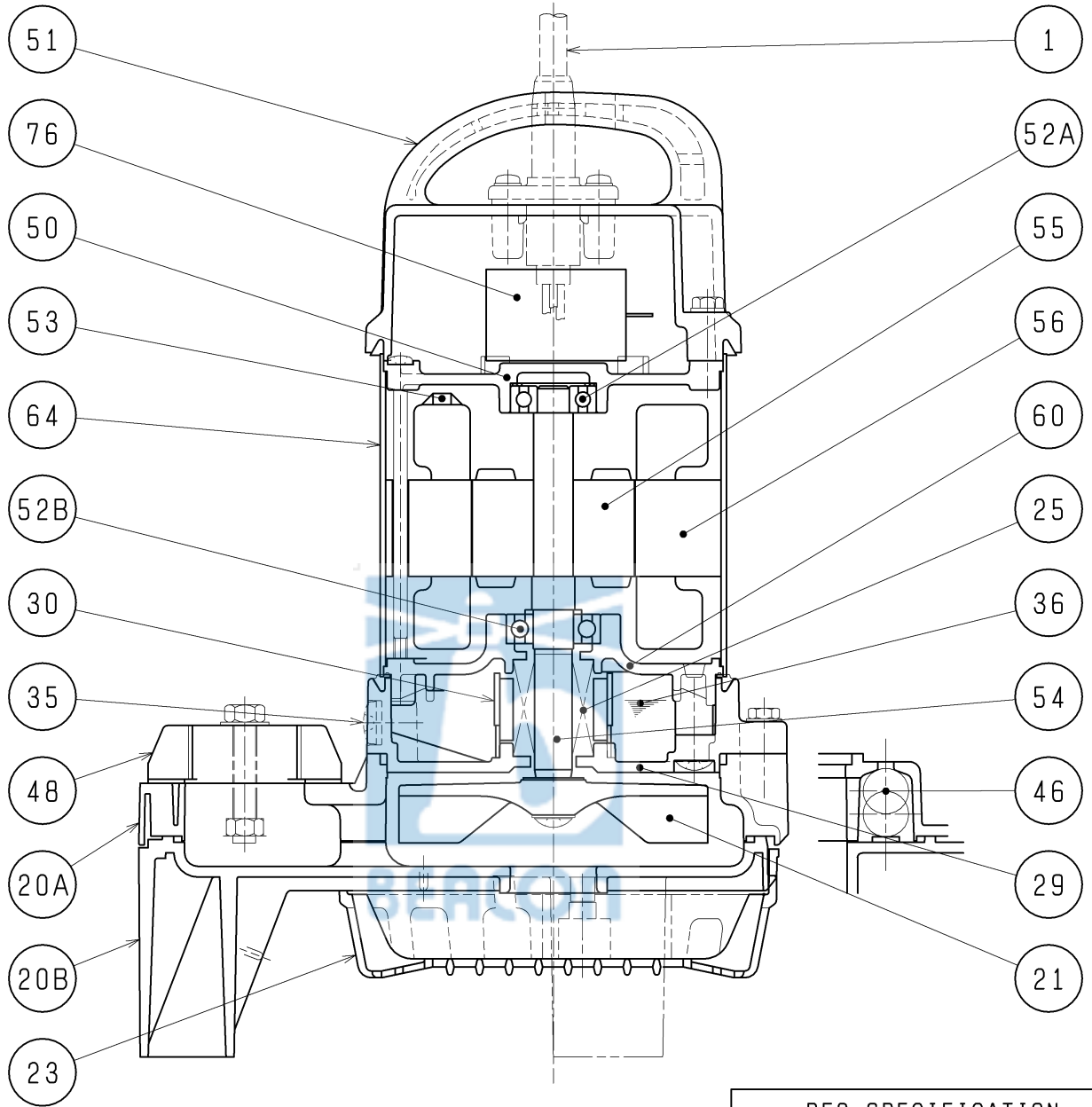
DIMENSION DRAWING		No.	No. A-09995-2
TYPE	Waste Water Submersible Vortex Pump	MODEL	50PN2.4S -52/62

Approximate Weight (※)
7.1kg
※excluding cable



C. W. L. : Continuous running Water Level
L. W. L. : Lowest running Water Level

SECTIONAL DRAWING		No.	No. A-10025-3
TYPE	Waste Water Submersible Vortex Pump	MODEL	40PN2.25S -52/62 50PN2.4S -52/62



REQ. SPECIFICATION	

* Upper and lower blocks form a one-piece casing.

No.	DESCRIPTION	Q'TY	MATERIAL / NOTE	No.	DESCRIPTION	Q'TY	MATERIAL / NOTE
1	Cable	1	PVC Sheath	51	Head Cover	1	Plastic W/GF
20A	Upper Pump Casing	*1	Plastic W/GF	52A	Upper Bearing	1	6201ZZC3
20B	Lower Pump Casing		Plastic	52B	Lower Bearing	1	6202ZZC3
21	Impeller	1	Plastic W/GF	53	Motor Protector	1	
23	Strainer	1	Plastic	54	Shaft	1	Stainless Steel 304
25	Mechanical Seal	1	W-14HC	55	Rotor	1	
29	Oil Casing	1	Plastic W/GF	56	Stator	1	
30	Oil Lifter	1	Plastic	60	Bearing Housing	1	Aluminium Die Casting
35	Oil Plug	1	Stainless Steel 304	64	Motor Frame	1	Stainless Steel 304
36	Lubricant		Liquid Paraffin (ISO VG32)	76	Capacitor	1	
46	Air Release Valve	1	Glass Ball				
48	Screwed Flange	1	Plastic W/GF				
50	Motor Bracket	1	Aluminium Die Casting				

NO. A-09961-1

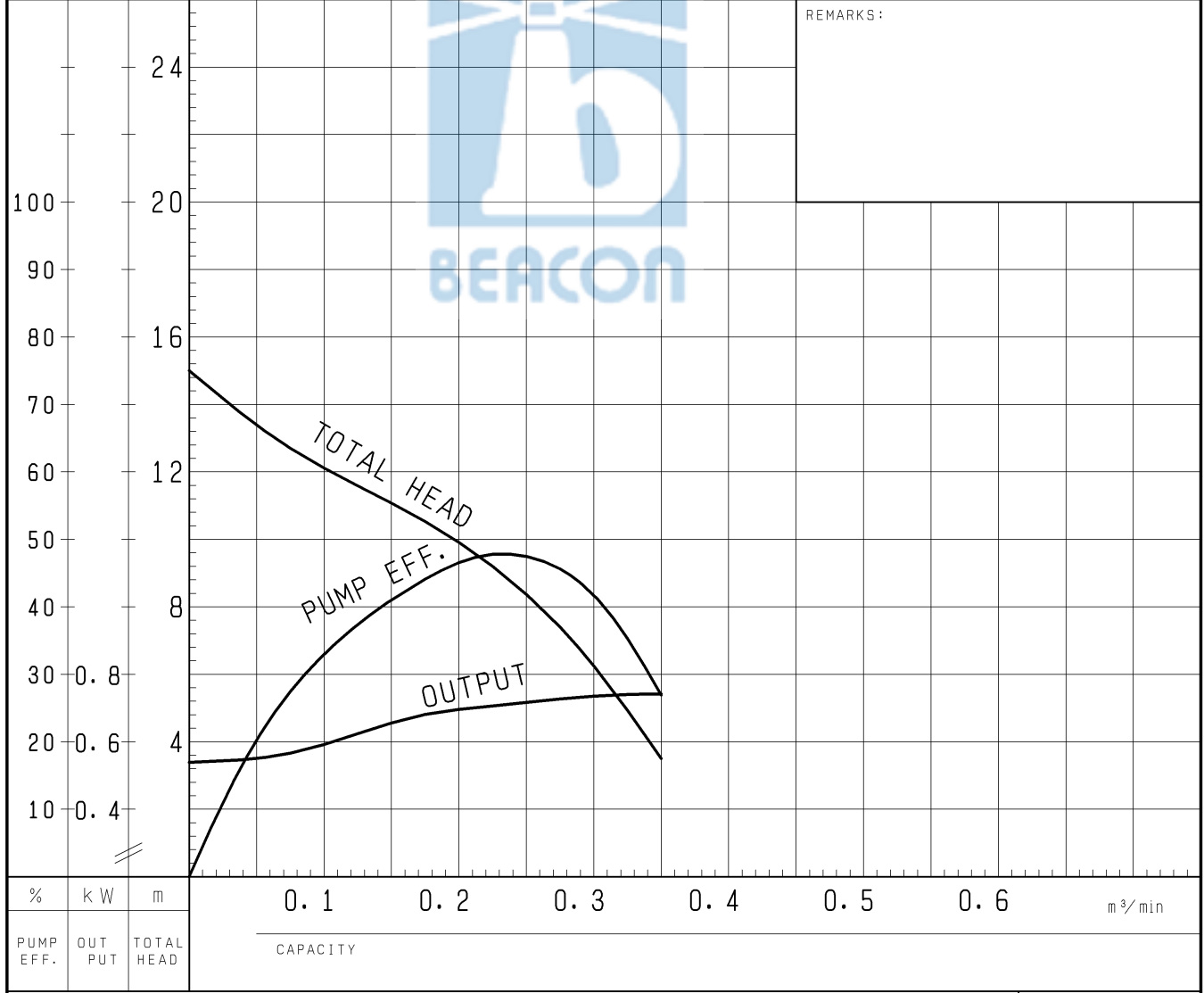
PUMP PERFORMANCE CURVES

TYPE Waste Water Submersible Vortex Pump	MODEL 50PN2.75 -52, 50PNA2.75 -52 50PNW2.75 -52	FREQUENCY 50 Hz
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CUSTOMER'S NAME _____

EQUIPMENT TITLE _____ NO. _____

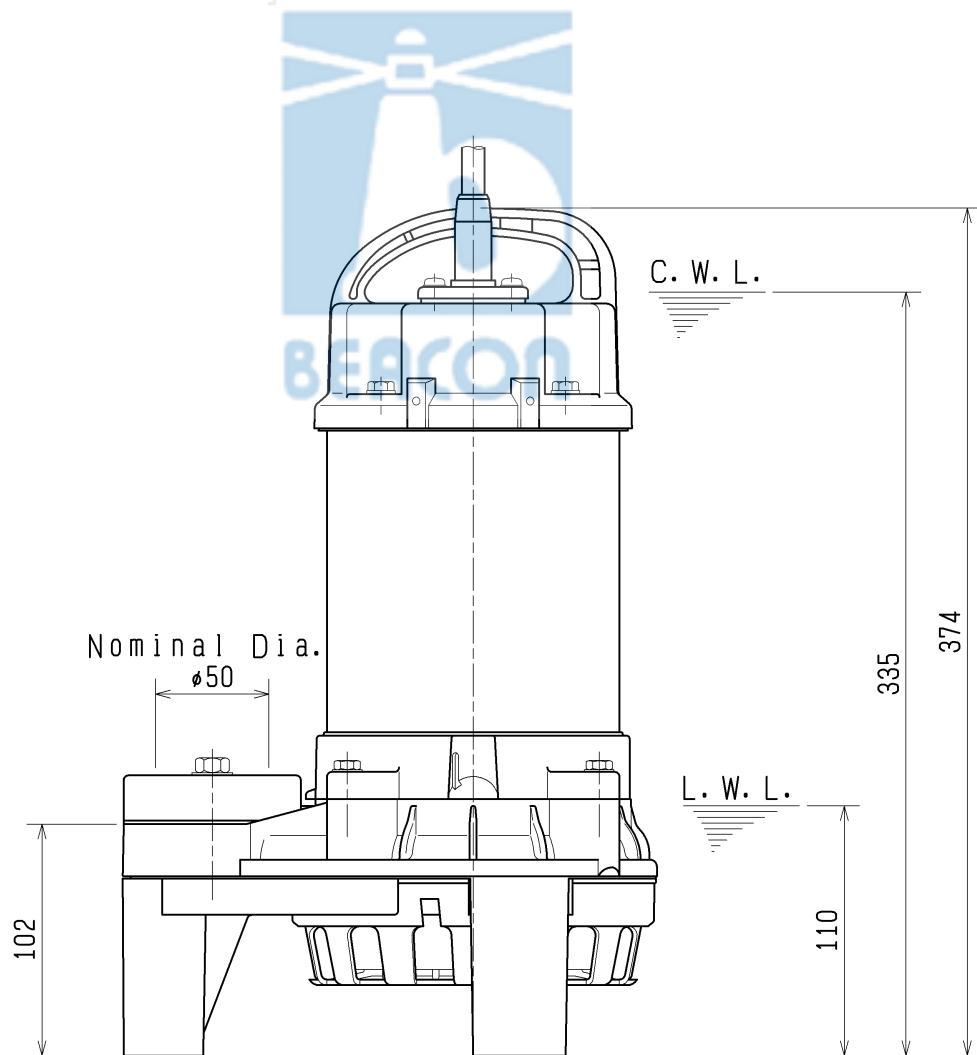
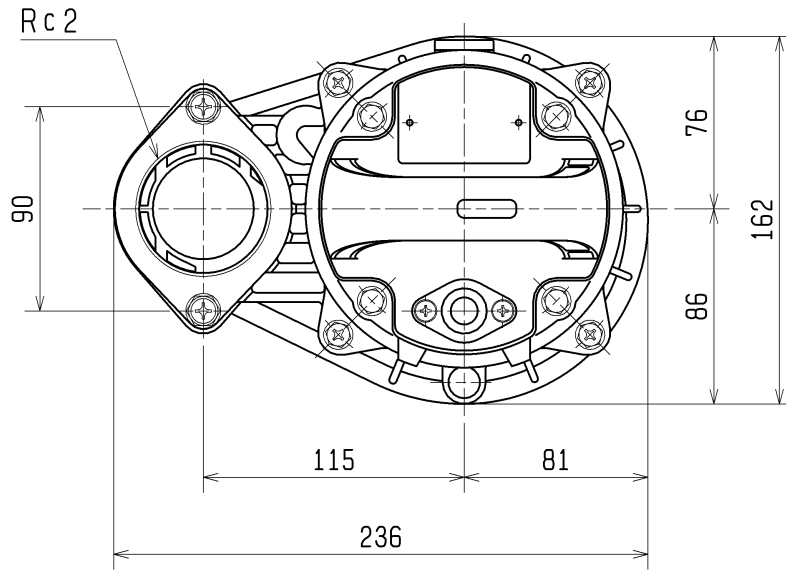
	STANDARD SPECIFICATIONS	REQUIRED SPECIFICATIONS
DISCHARGE BORE	50 mm	mm
TOTAL HEAD	11.5 m	m
CAPACITY	0.13 m ³ /min	m ³ /min
MOTOR OUTPUT	0.75 kW	kW
PHASE × VOLTAGE	3 φ × V	φ × V
CURRENT	A	A
POLES / REVOLUTION	2 P / S. S. 3000 min ⁻¹	P / min ⁻¹
STARTING METHOD	DIRECT ON LINE	
INSULATION CLASS	E	



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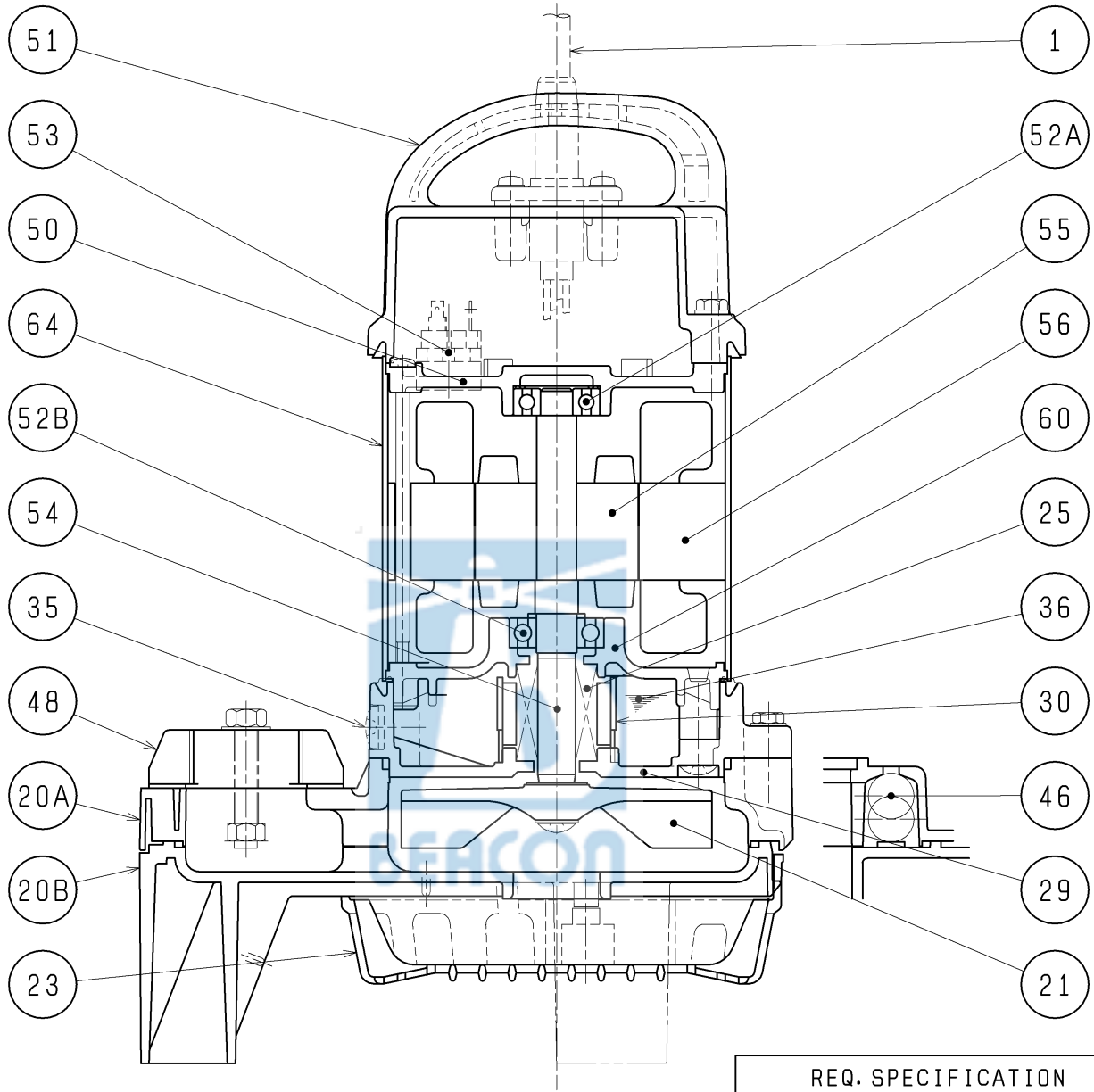
DIMENSION DRAWING		No.	No. A-10001-2
TYPE	Waste Water Submersible Vortex Pump	MODEL	50PN2.75 -52/62

Approximate Weight (※)
8.3kg
※excluding cable



C.W.L.:Continuous running Water Level
L.W.L.:Lowest running Water Level

SECTIONAL DRAWING		No.	No. A-10028-3
TYPE	Waste Water Submersible Vortex Pump	MODEL	40PN2.25 -52/62, 50PN2.4 -52/62 50PN2.75 -52/62



REQ. SPECIFICATION

* Upper and lower blocks form a one-piece casing.

No.	DESCRIPTION	Q'TY	MATERIAL / NOTE	No.	DESCRIPTION	Q'TY	MATERIAL / NOTE
1	Cable	1	PVC Sheath	51	Head Cover	1	Plastic W/GF
20A	Upper Pump Casing	*1	Plastic W/GF	52A	Upper Bearing	1	6201ZZC3
20B	Lower Pump Casing		Plastic	52B	Lower Bearing	1	0.25/0.4kW:6202ZZC3 0.75kW :6302ZZC3
21	Impeller	1	Plastic W/GF				
23	Strainer	1	Plastic				
25	Mechanical Seal	1	W-14HC	53	Motor Protector	1	
29	Oil Casing	1	Plastic W/GF	54	Shaft	1	Stainless Steel 304
30	Oil Lifter	1	Plastic	55	Rotor	1	
35	Oil Plug	1	Stainless Steel 304	56	Stator	1	
36	Lubricant		Liquid Paraffin (ISO VG32)	60	Bearing Housing	1	Aluminium Die Casting
46	Air Release Valve	1	Glass Ball	64	Motor Frame	1	Stainless Steel 304
48	Screwed Flange	1	Plastic W/GF				
50	Motor Bracket	1	Aluminium Die Casting				

NO. A-19842-1

PUMP PERFORMANCE CURVES

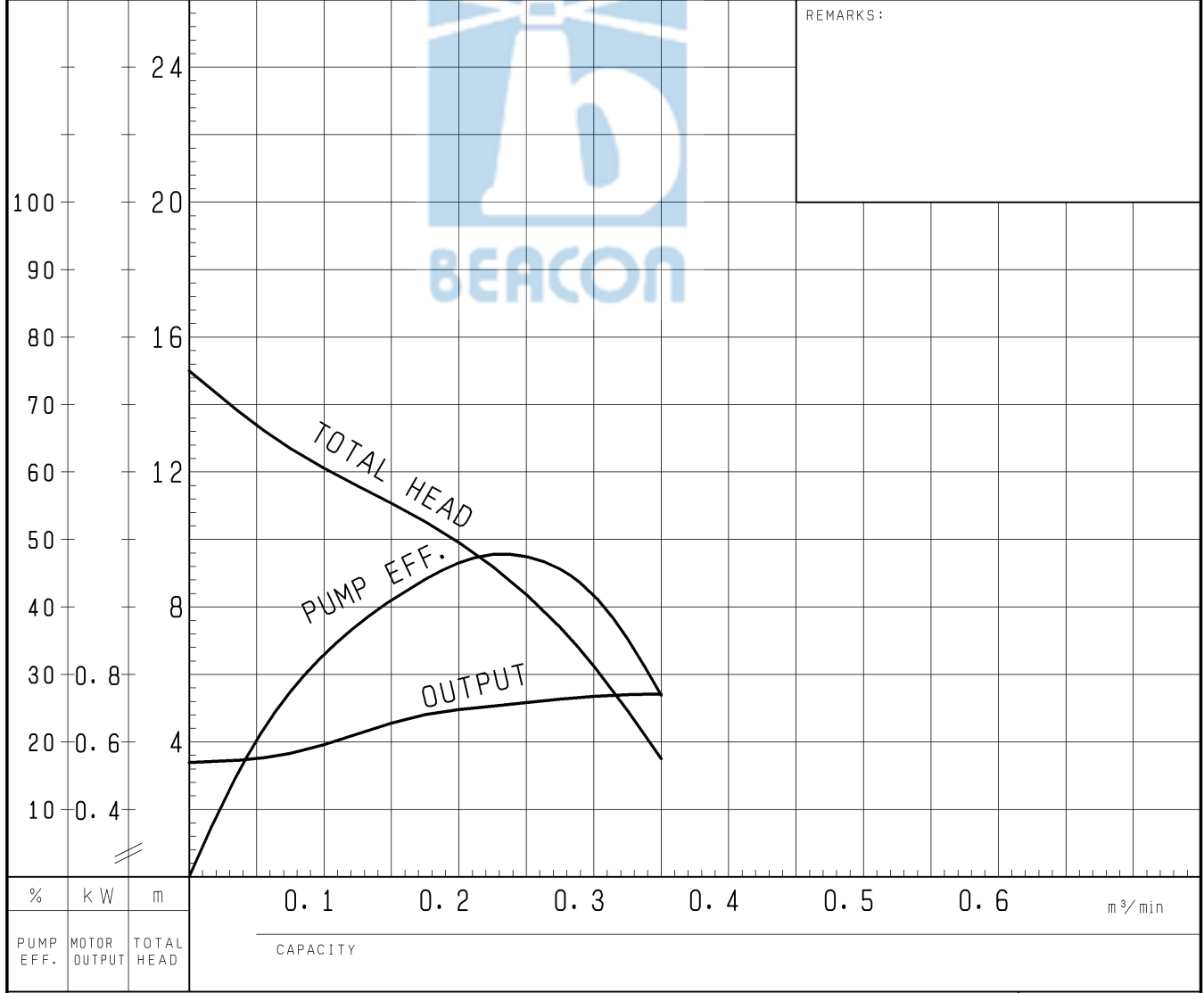
TYPE	Waste Water Submersible Vortex Pump	MODEL	50PN2.75S -52 50PNA2.75S -52	FREQUENCY	50 Hz
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CUSTOMER'S NAME _____

EQUIPMENT TITLE _____

NO. _____

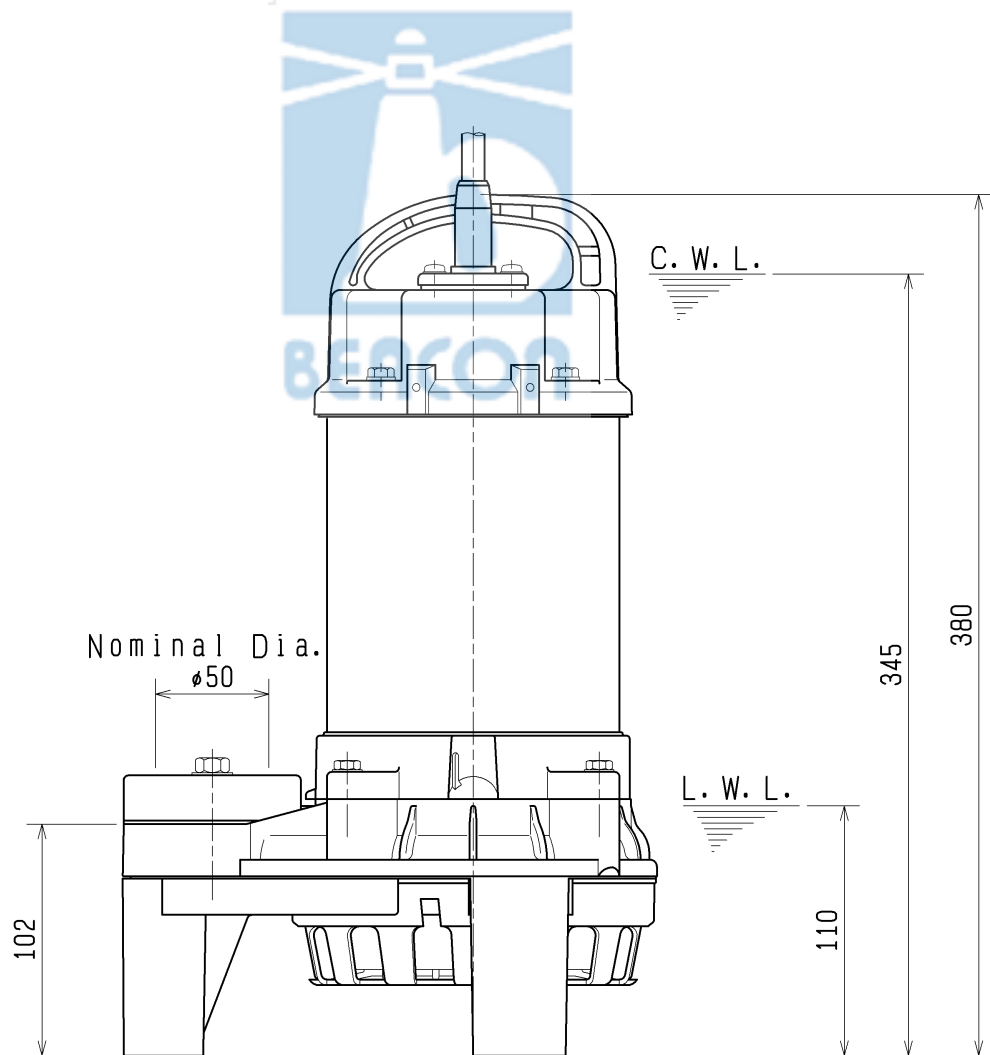
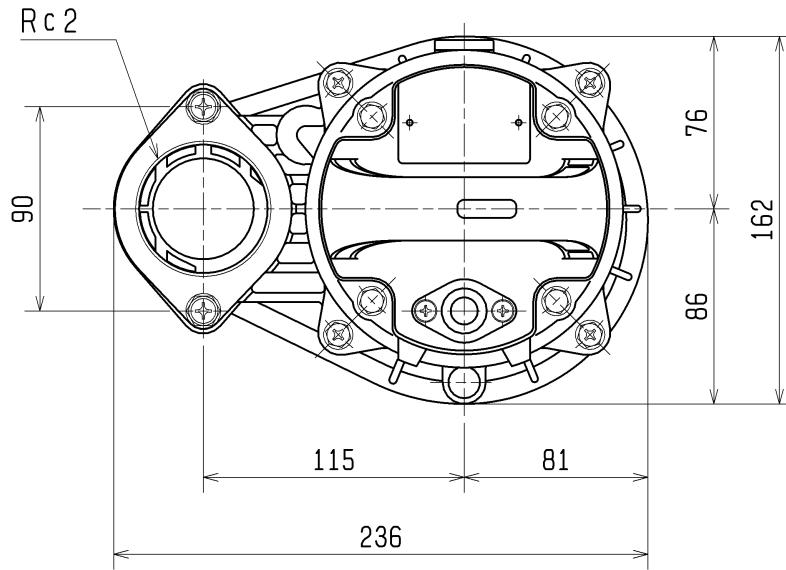
	STANDARD SPECIFICATIONS	REQUIRED SPECIFICATIONS
DISCHARGE BORE	50 mm	mm
TOTAL HEAD	11.5 m	m
CAPACITY	0.13 m ³ /min	m ³ /min
MOTOR OUTPUT	0.75 kW	kW
PHASE x VOLTAGE	1 ϕ x V	ϕ x V
CURRENT	A	A
POLES / REVOLUTION	2 P / S. S. 3000 min ⁻¹	P / min ⁻¹
STARTING METHOD	CHPACITOR MOTOR	
INSULATION CLASS	E	



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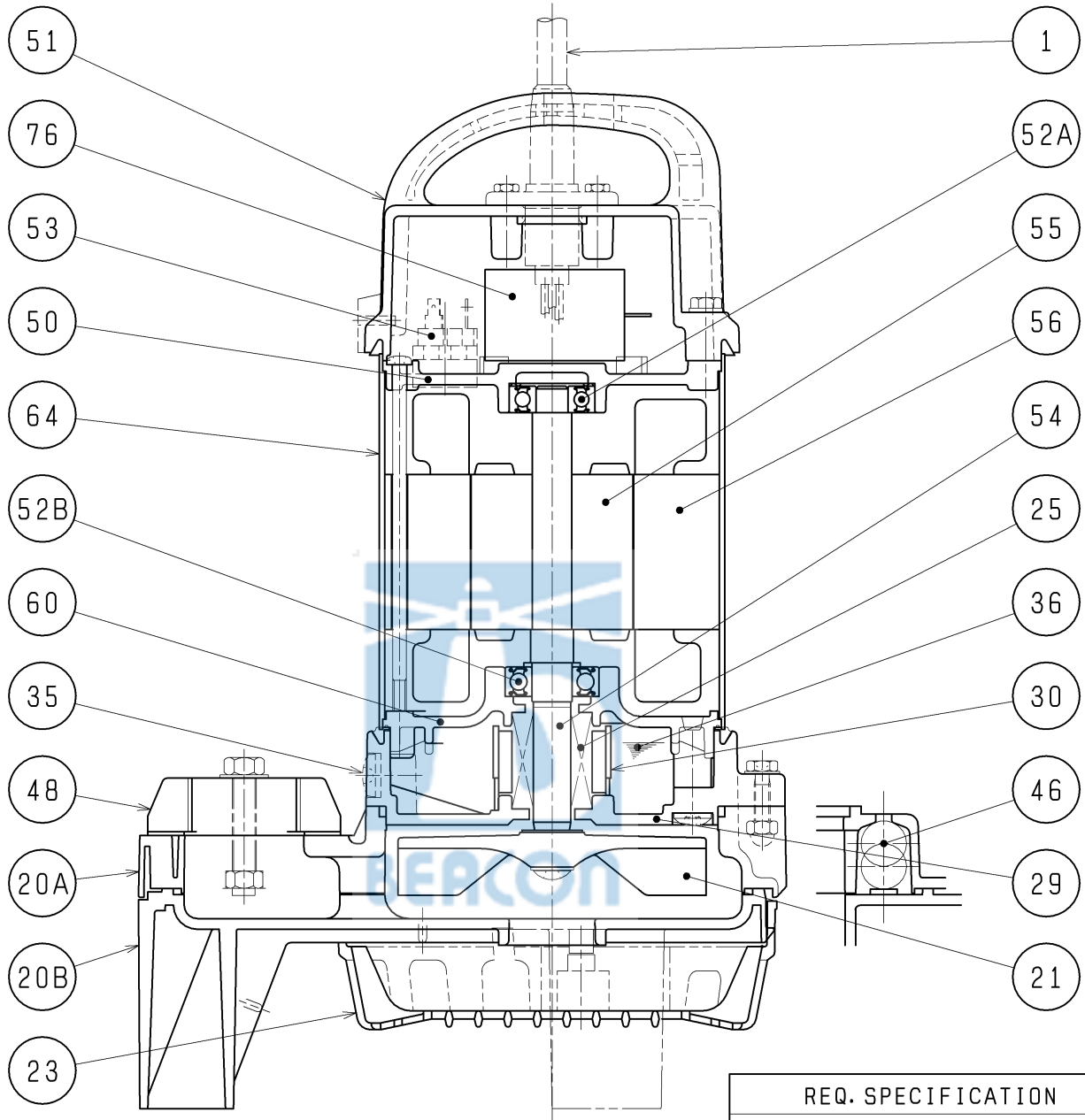
DIMENSION DRAWING		No.	No. A-19846-1
TYPE	Waste Water Submersible Vortex Pump	MODEL	50PN2.75S -52/62

Approximate Weight (※)
8.9kg
※excluding cable



C.W.L.: Continuous running Water Level
L.W.L.: Lowest running Water Level

SECTIONAL DRAWING		No.	No. A-19849-1
TYPE Waste Water Submersible Vortex Pump		MODEL	50PN2.75S -52/62



REQ. SPECIFICATION	

* Upper and lower blocks form a one-piece casing.

No.	DESCRIPTION	Q'TY	MATERIAL / NOTE	No.	DESCRIPTION	Q'TY	MATERIAL / NOTE
1	Cable	1	PVC Sheath	51	Head Cover	1	Plastic W/GF
20A	Upper Pump Casing	* 1	Plastic W/GF	52A	Upper Bearing	1	6201ZZC3
20B	Lower Pump Casing		Plastic	52B	Lower Bearing	1	6302ZZC3
21	Impeller	1	Plastic W/GF	53	Motor Protector	1	
23	Strainer	1	Plastic	54	Shaft	1	Stainless Steel 304
25	Mechanical Seal	1	W-14HC	55	Rotor	1	
29	Oil Casing	1	Plastic W/GF	56	Stator	1	
30	Oil Lifter	1	Plastic	60	Bearing Housing	1	Aluminium Die Casting
35	Oil Plug	1	Stainless Steel 304	64	Motor Frame	1	Stainless Steel 304
36	Lubricant		Liquid Paraffin (ISO VG32)	76	Capacitor	1	
46	Air Release Valve	1	Glass Ball				
48	Screwed Flange	1	Plastic W/GF				
50	Motor Bracket	1	Aluminium Die Casting				

NO. A-18002-1

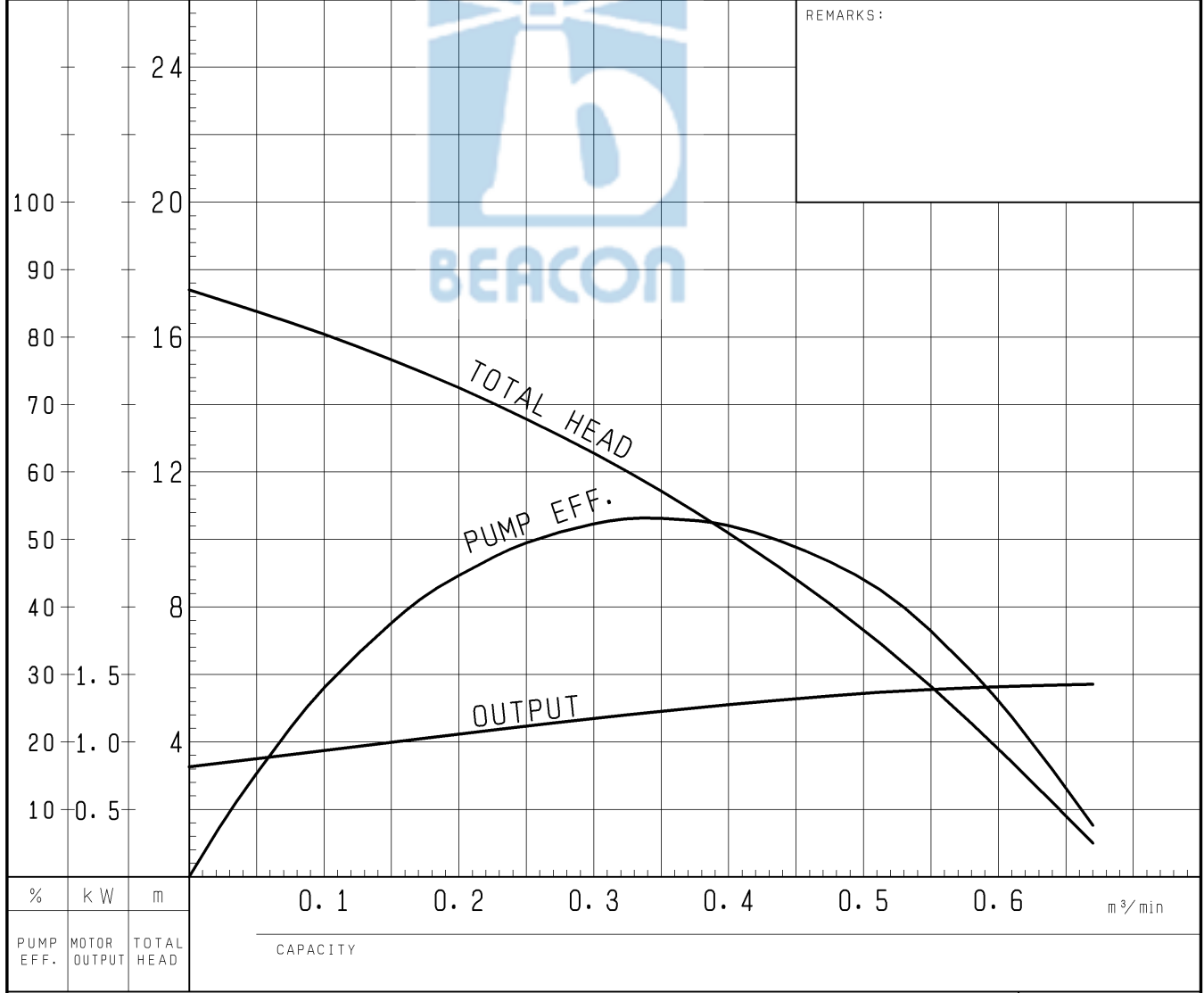
PUMP PERFORMANCE CURVES

TYPE Waste Water Submersible Vortex Pump	MODEL 50PN (A/W) 21.5 -52	FREQUENCY 50 Hz
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CUSTOMER'S NAME _____

EQUIPMENT TITLE _____ NO. _____

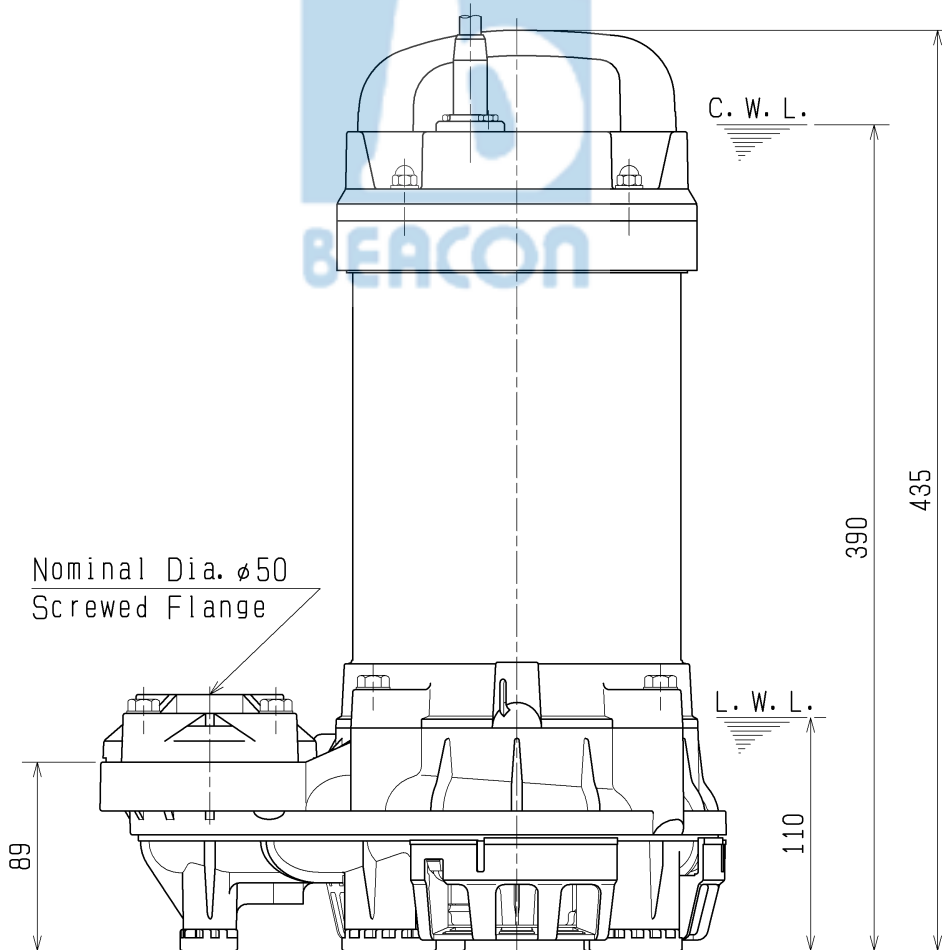
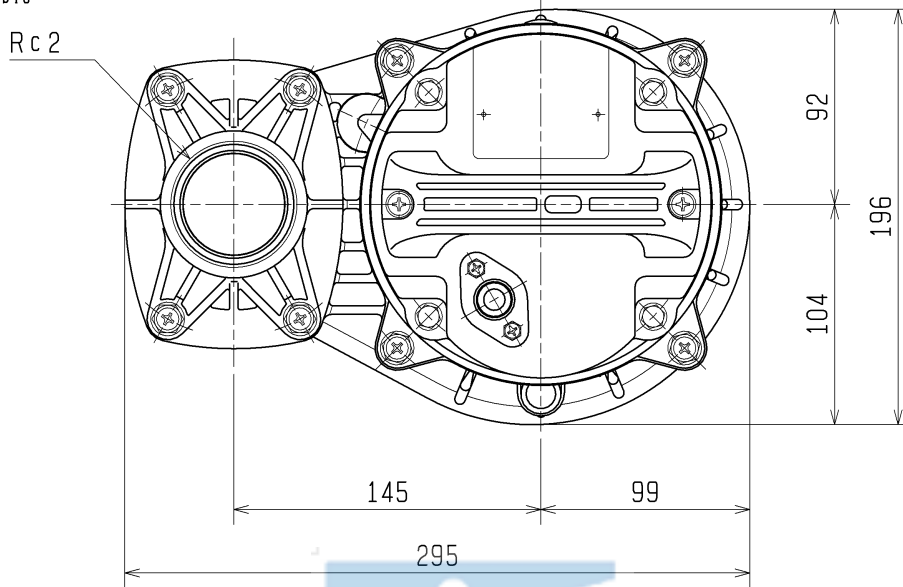
STANDARD SPECIFICATIONS	REQUIRED SPECIFICATIONS
DISCHARGE BORE 50 mm	mm
TOTAL HEAD 14.5 m	m
CAPACITY 0.2 m ³ /min	m ³ /min
MOTOR OUTPUT 1.5 kW	kW
PHASE x VOLTAGE 3 ϕ x V	ϕ x V
CURRENT A	A
POLES / REVOLUTION 2 P / s. s. 3000 min ⁻¹	P / min ⁻¹
STARTING METHOD DIRECT ON LINE	
INSULATION CLASS E	



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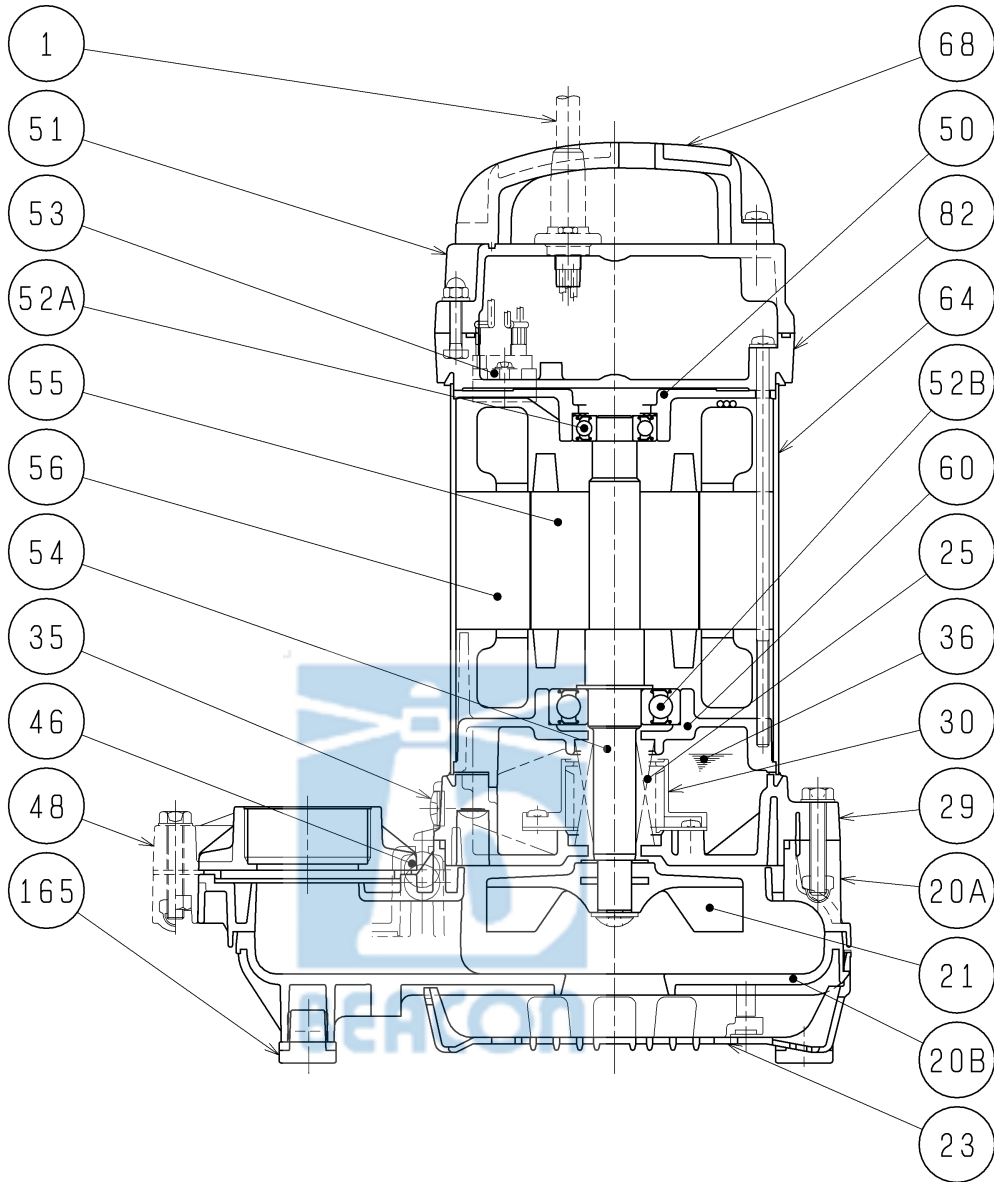
DIMENSION DRAWING		No.	No. A-18008-1
TYPE	Waste Water Submersible Vortex Pump	MODEL	50PN21.5 -52/62

Approximate
Weight (※)
15.9kg
※excluding cable



C.W.L. :Continuous running Water Level
L.W.L. :Lowest running Water Level

SECTIONAL DRAWING		No.	No. A-18017-2
TYPE	Waste Water Submersible Vortex Pump	MODEL	50PN21.5 -52/62



REQ. SPECIFICATION

※1 Upper and lower blocks form a one-piece casing.

※2 the wetted part

No.	DESCRIPTION	Q'TY	MATERIAL / NOTE	No.	DESCRIPTION	Q'TY	MATERIAL / NOTE
1	Cable	1	PVC Sheath	52A	Upper Bearing	1	6203ZC3
20A	Upper Pump Casing	※1	Plastic W/GF	52B	Lower Bearing	1	6305ZC3
20B	Lower Pump Casing	1	Plastic W/GF	53	Motor Protector	1	
21	Impeller	1	Plastic W/GF	54	Shaft	1	Stainless Steel 304(※2)
23	Strainer	1	Plastic	55	Rotor	1	
25	Mechanical Seal	1	H-20A	56	Stator	1	
29	Oil Casing	1	Plastic W/GF	60	Bearing Housing	1	Aluminium Alloy Casting
30	Oil Lifter	1	Plastic	64	Motor Frame	1	Stainless Steel 304
35	Oil Plug	1	Stainless Steel 304	68	Handle	1	Plastic
36	Lubricant		Liquid Paraffin (ISO VG32)	82	Head Cover Spacer	1	Plastic W/GF
46	Air Release Valve	1	Glass Ball	165	Rubber Foot	5	Nitrile Butadien Rubber
48	Screwed Flange	1	Plastic W/GF				
50	Motor Bracket	1	Aluminium Alloy Casting				
51	Head Cover	1	Plastic W/GF				

NO. A-19462-1

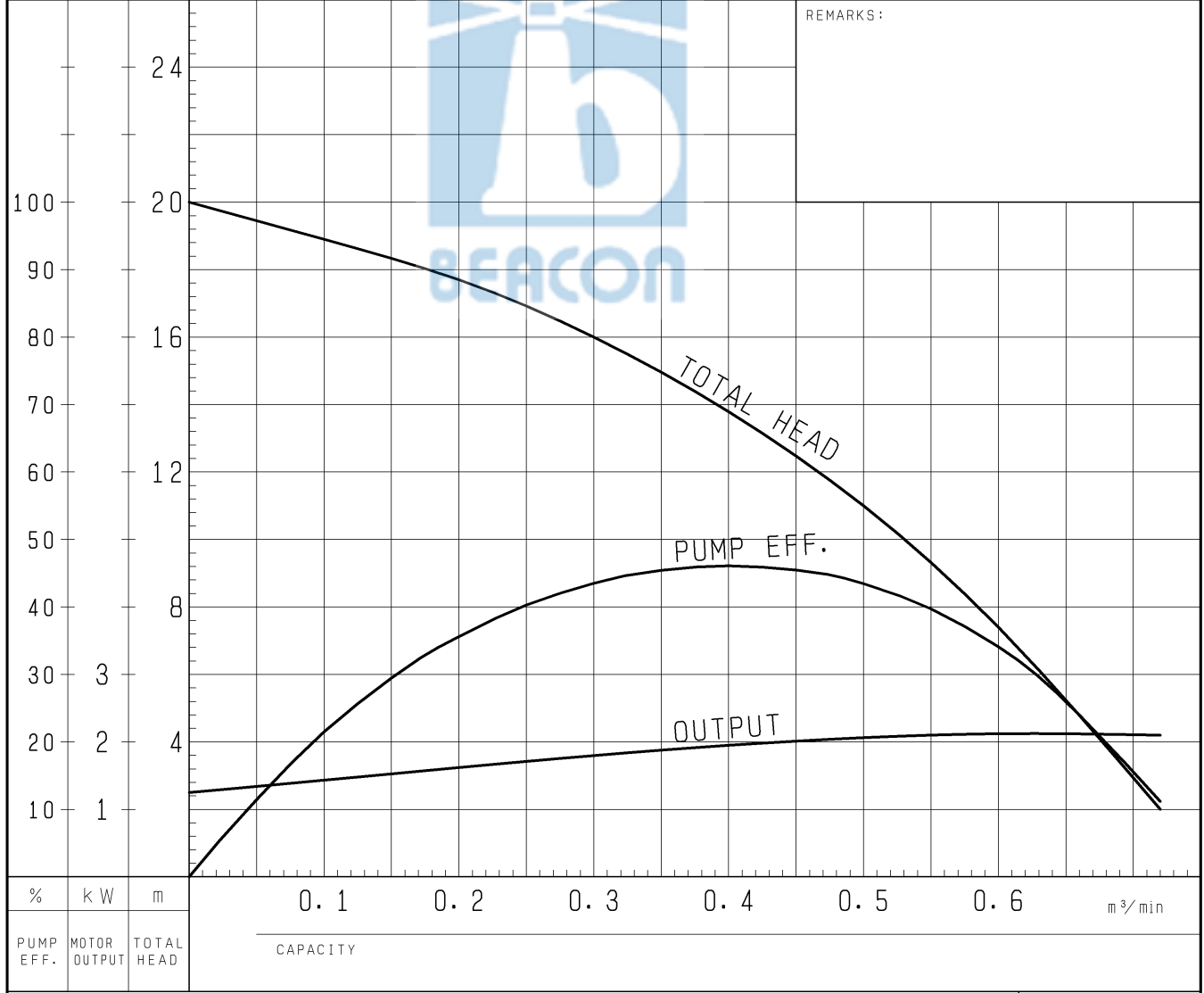
PUMP PERFORMANCE CURVES

TYPE Waste Water Submersible Vortex Pump	MODEL 80PN (A/W) 22.2 -51	FREQUENCY 50 Hz
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CUSTOMER'S NAME _____

EQUIPMENT TITLE _____ NO. _____

	STANDARD SPECIFICATIONS	REQUIRED SPECIFICATIONS
DISCHARGE BORE	80 mm	mm
TOTAL HEAD	16.0 m	m
CAPACITY	0.3 m ³ /min	m ³ /min
MOTOR OUTPUT	2.2 kW	kW
PHASE x VOLTAGE	3 ϕ x V	ϕ x V
CURRENT	A	A
POLES / REVOLUTION	2 P / s. s. 3000 min ⁻¹	P / min ⁻¹
STARTING METHOD	DIRECT ON LINE	
INSULATION CLASS	E	

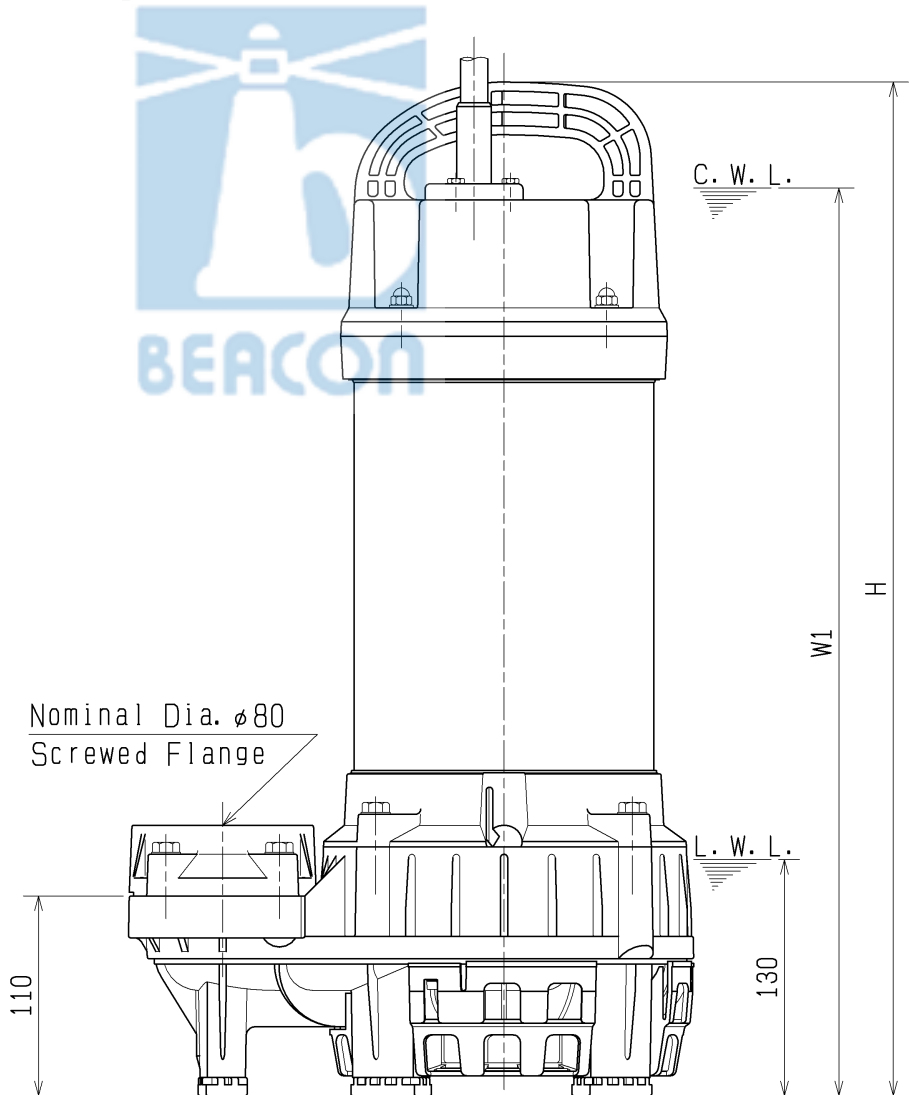
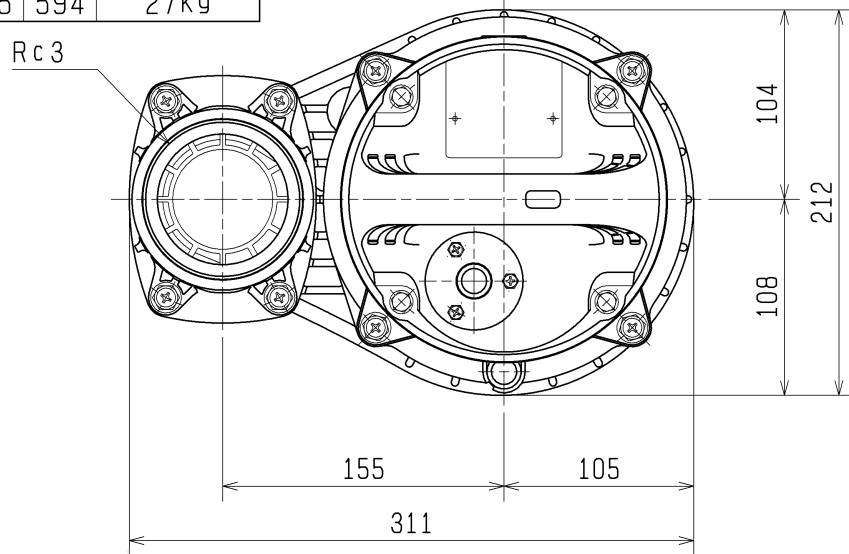


TSURUMI MFG. CO., LTD.

DIMENSION DRAWING		No.	No. A-19474-1
TYPE	Waste Water Submersible Vortex Pump	MODEL	80PN22.2 -51/61 80PN23.7 -51/61

MODEL	W1	H	Approximate Weight (kg)
80PN22.2-51/61	500	559	22kg
80PN23.7-51/61	535	594	27kg

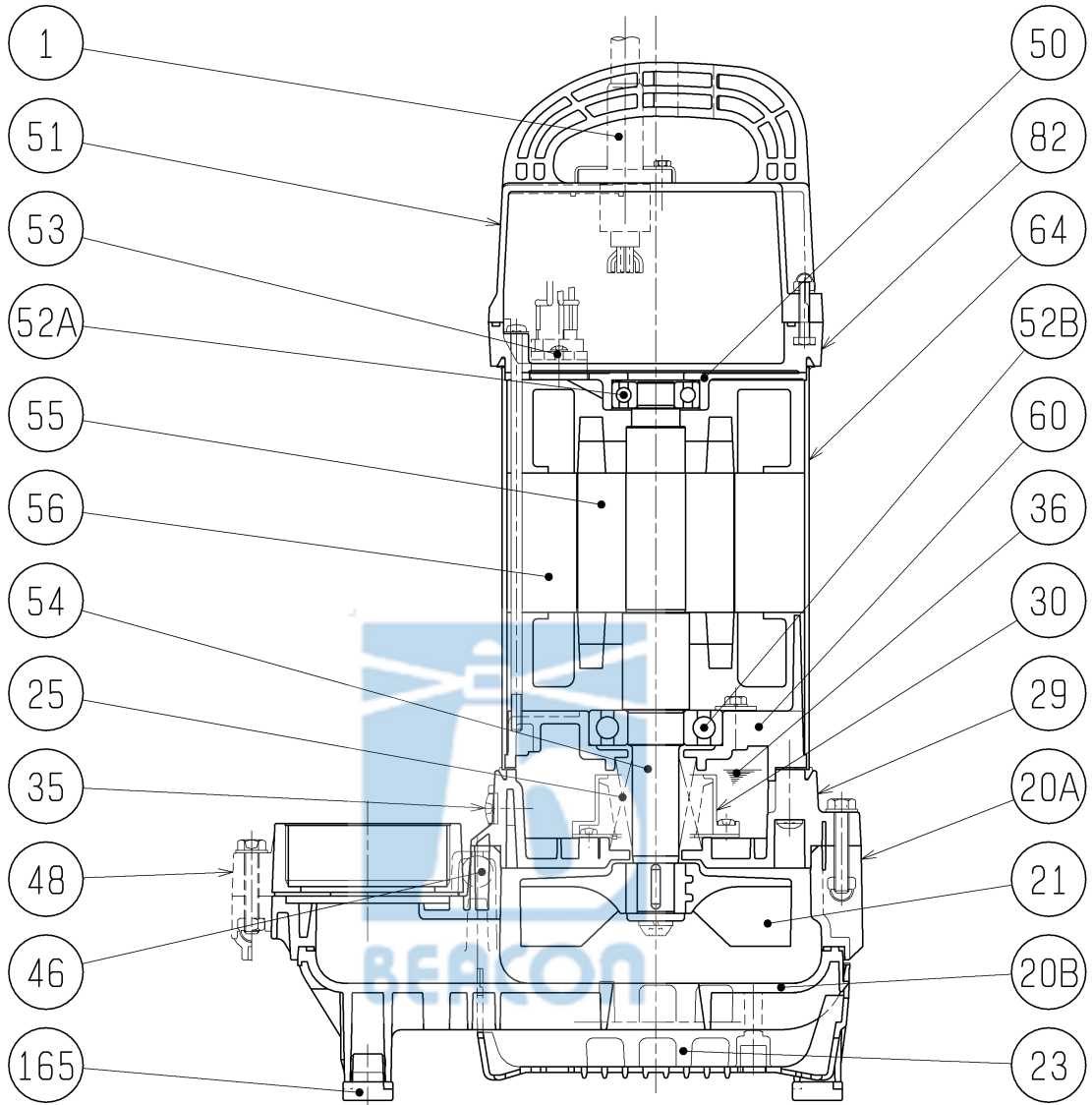
※excluding cable



C. W. L. :Continuous running Water Level

L. W. L. :Lowest running Water Level

SECTIONAL DRAWING		No.	No. A-19482-1
TYPE	Waste Water Submersible Vortex Pump	MODEL	80PN22.2 -51/61 80PN23.7 -51/61



※1 Upper and lower blocks form a one-piece casing.

※2 the wetted part

	2.2kW	3.7kW
※3	H-25A	H-25AT

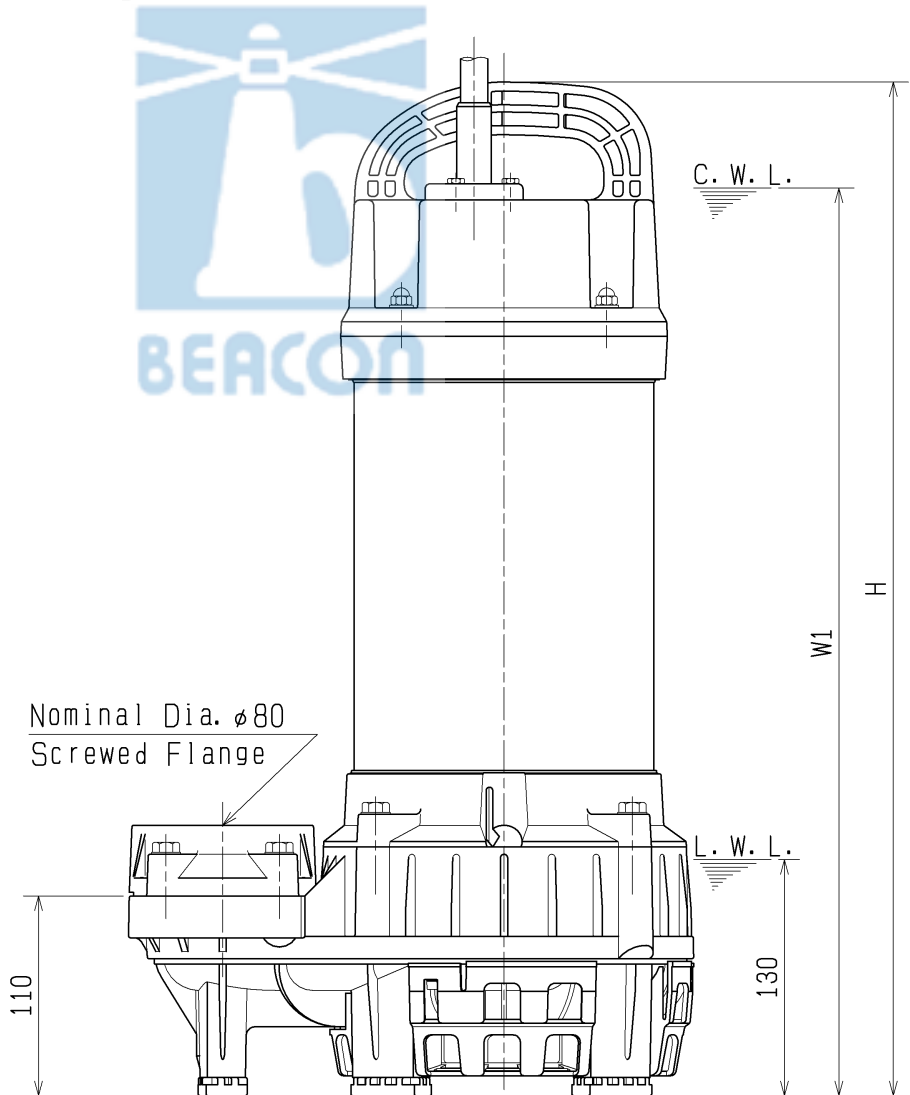
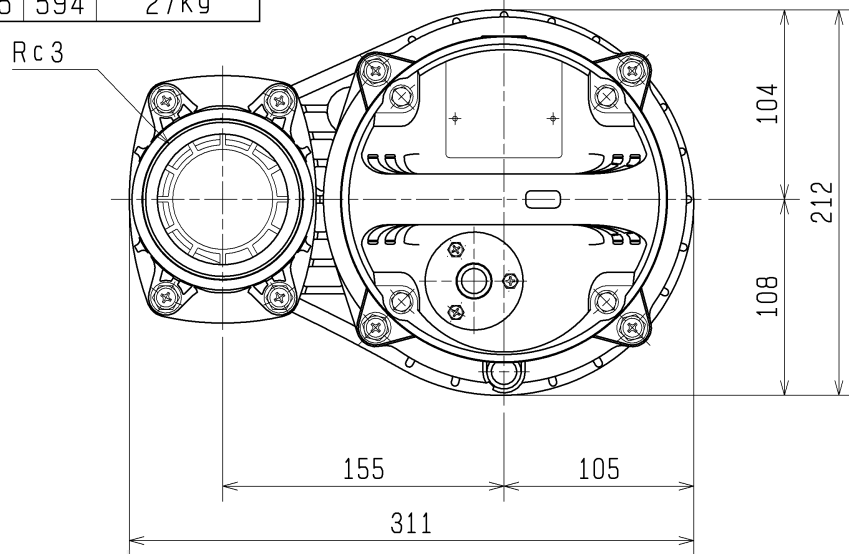
REQ. SPECIFICATION	

No.	DESCRIPTION	Q'TY	MATERIAL / NOTE	No.	DESCRIPTION	Q'TY	MATERIAL / NOTE
1	Cabtyre Cable	1	PVC Sheath	51	Head Cover	1	Plastic W/GF
20A	Upper Pump Casing	※1	Plastic W/GF	52A	Upper Bearing	1	6204ZCC3
20B	Lower Pump Casing	1	Plastic W/GF	52B	Lower Bearing	1	6306ZCC3
21	Impeller	1	Plastic W/GF	53	Motor Protector	1	
23	Strainer	1	Plastic	54	Shaft	1	Stainless Steel 304(※2)
25	Mechanical Seal	1	※3	55	Rotor	1	
29	Oil Casing	1	Plastic W/GF	56	Stator	1	
30	Oil Lifter	1	Plastic	60	Bearing Housing	1	Aluminium Alloy Casting
35	Oil Plug	1	Stainless Steel 304	64	Motor Frame	1	Stainless Steel 304
36	Lubricant		Liquid Paraffin (ISO VG32)	82	Head Cover Spacer	1	Plastic W/GF
46	Air Release Valve	1	Glass Ball	165	Rubber Foot	5	Nitrile Butadien Rubber
48	Screwed Flange	1	Plastic W/GF				
50	Motor Bracket	1	Aluminium Alloy Casting				

DIMENSION DRAWING		No.	No. A-19474-1
TYPE	Waste Water Submersible Vortex Pump	MODEL	80PN22.2 -51/61 80PN23.7 -51/61

MODEL	W1	H	Approximate Weight (kg)
80PN22.2-51/61	500	559	22kg
80PN23.7-51/61	535	594	27kg

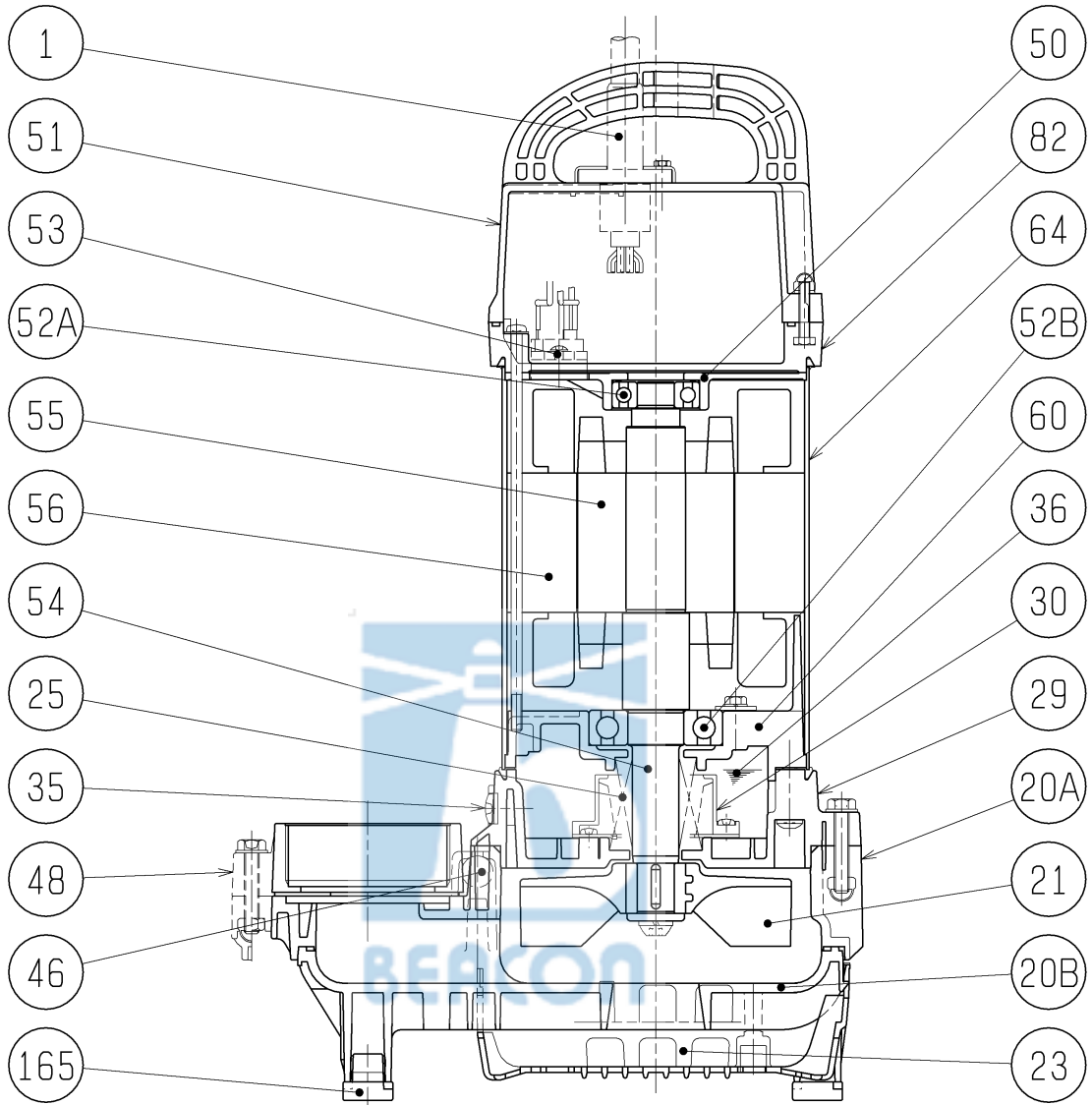
※excluding cable



C.W.L. :Continuous running Water Level

L.W.L. :Lowest running Water Level

SECTIONAL DRAWING		No.	No. A-19482-1
TYPE	Waste Water Submersible Vortex Pump	MODEL	80PN22.2 -51/61 80PN23.7 -51/61



※1 Upper and lower blocks form a one-piece casing.

※2 the wetted part

	2.2kW	3.7kW
※3	H-25A	H-25AT

REQ. SPECIFICATION	

No.	DESCRIPTION	Q'TY	MATERIAL / NOTE	No.	DESCRIPTION	Q'TY	MATERIAL / NOTE
1	Cable	1	PVC Sheath	51	Head Cover	1	Plastic W/GF
20A	Upper Pump Casing	※1	Plastic W/GF	52A	Upper Bearing	1	6204ZCC3
20B	Lower Pump Casing	1	Plastic W/GF	52B	Lower Bearing	1	6306ZCC3
21	Impeller	1	Plastic W/GF	53	Motor Protector	1	
23	Strainer	1	Plastic	54	Shaft	1	Stainless Steel 304(※2)
25	Mechanical Seal	1	※3	55	Rotor	1	
29	Oil Casing	1	Plastic W/GF	56	Stator	1	
30	Oil Lifter	1	Plastic	60	Bearing Housing	1	Aluminium Alloy Casting
35	Oil Plug	1	Stainless Steel 304	64	Motor Frame	1	Stainless Steel 304
36	Lubricant		Liquid Paraffin (ISO VG32)	82	Head Cover Spacer	1	Plastic W/GF
46	Air Release Valve	1	Glass Ball	165	Rubber Foot	5	Nitrile Butadien Rubber
48	Screwed Flange	1	Plastic W/GF				
50	Motor Bracket	1	Aluminium Alloy Casting				