

SPECIFICATIONS	Model	22-BER5	
		BER-series 2.2kW, 3-phase	

<p><b>Type of Equipment</b> Submersible self-aspiration ejector suitable for pre-aeration and mixing in sewage and wastewater treatment</p> <p><b>Type of Fluid</b> Sewage and wastewater</p> <p>Temperature: 0 to 40°C</p> <p><b>Air-inlet Bore</b> 50mm</p> <p><b>Motor Output</b> 2.2kW</p> <p><b>Power Supply</b> Three-phase</p> <p><b>Starting Method</b> Direct on Line</p> <p><b>Motor</b> Continuous-duty rated, dry-type induction motor</p> <p>Insulation Class: E (available in F on special request) Degree of Protection: IP68</p> <p>No. of Poles &amp; Speed (Synchronous Speed) 2-pole, 3000/3600min<sup>-1</sup> (50/60Hz)</p> <p>Power Supply Voltages &amp; Rated Currents</p> <table border="0"> <tr> <td>50Hz</td> <td>60Hz</td> </tr> <tr> <td>380V – 5.1A</td> <td>220V – 8.8A</td> </tr> <tr> <td>400V – 5.0A</td> <td>380V – 4.9A</td> </tr> <tr> <td>415V – 5.0A</td> <td>440V – 4.4A</td> </tr> </table> <p><b>Power Cable</b> Sheath: PVC Standard Length: 6m 380 to 600V supply: 1 × 4 × 1.25mm<sup>2</sup>, O.D. 11.1mm 200 to 240V supply: 1 × 4 × 2.0mm<sup>2</sup>, O.D. 11.8mm</p> <p><b>Dry Weight</b> (excluding cable) Free Standing Type: 75kg Guide Rail Fitting Type: 61kg</p>	50Hz	60Hz	380V – 5.1A	220V – 8.8A	400V – 5.0A	380V – 4.9A	415V – 5.0A	440V – 4.4A	<p><b>Impeller</b> Semi-open single-channel impeller for solid-handling design, dynamically balanced</p> <p>Solids Passage 50Hz – <math>\phi</math>35mm 60Hz – <math>\phi</math>35mm</p> <p><b>Cable Entry with Anti-Wicking Block</b> Watertight cable entry with strain-relief device. The anti-wicking block prevents water incursion due to capillary action should the power cable be damaged or the end submerged.</p> <p><b>Bearings</b> Permanently lubricated, deep-groove, double-shielded C3 ball bearings</p> <p><b>Shaft</b> 420 stainless steel</p> <p><b>Shaft Seal (Mechanical Seal)</b> Furnished with a double-face mechanical seal located in oil chamber. Both upper and lower seal faces always run in a clean environment.</p> <p>Upper Seal Faces: Ceramic + Carbon Lower Seal Faces: SiC + SiC</p> <p><b>Oil Seal (Lip Seal)</b> Used as a “Dust Seal”, it protects the mechanical seal from abrasive particles.</p> <p><b>OIL LIFTER (Patented)</b> Equipped in oil chamber. It forcibly supplies lubricating oil to the mechanical seal and continues to supply the oil to the upper seal faces even if lubricant falls below the rated volume.</p> <p>Type of Lubricating Oil &amp; Volume Turbine Oil (ISO VG32), 1350ml</p> <p><b>Motor Protection Device</b> A circle thermal protector built in the motor housing. Directly cuts the motor circuit if excessive heat builds up or an overcurrent condition occurs in the motor.</p>
50Hz	60Hz								
380V – 5.1A	220V – 8.8A								
400V – 5.0A	380V – 4.9A								
415V – 5.0A	440V – 4.4A								

### Optional Accessories

**Ejector Set** (Free Standing Type)

- Silencer & Valve Set
- Lifting Chain 5m (with Shackles)
- Suction Casing
- Screwed Flange
- Diffuser
- Diffuser Base

**TOS-Ejector Set** (Guide Rail Fitting Type)

- Silencer & Valve Set
- Lifting Chain 5m (with Shackles)
- Guide Support
- Guide Hook
- Suction Casing
- Screwed Flange
- Diffuser

**External Leakage Sensor**

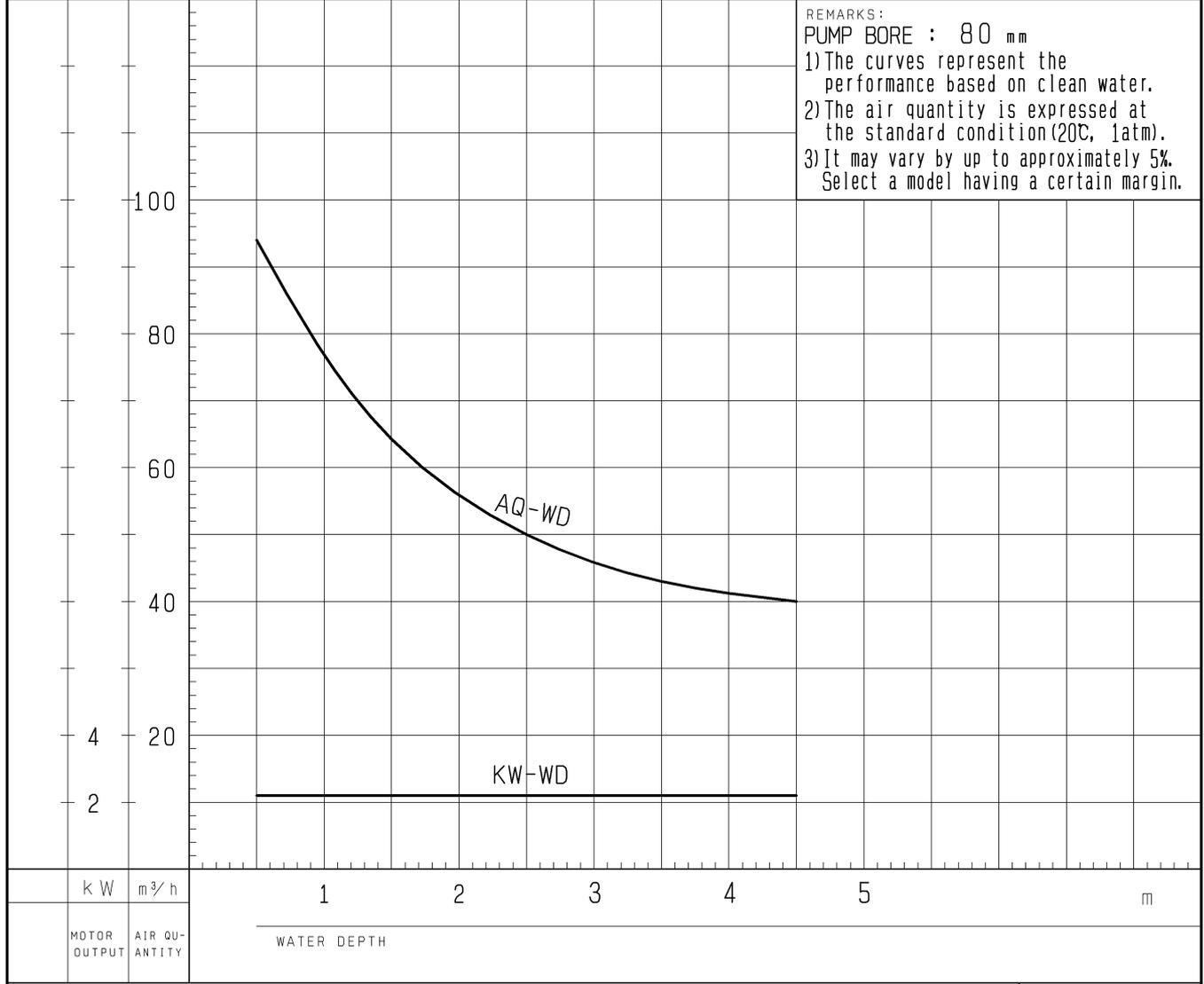
NO. A-09766-3

# AERATOR PERFORMANCE CURVES

TYPE SUBMERSIBLE EJECTOR (AERATOR)      MODEL 22-BER5, TOS-22BER5      FREQUENCY 50 Hz

CUSTOMER'S NAME \_\_\_\_\_  
 EQUIPMENT TITLE \_\_\_\_\_ NO. \_\_\_\_\_

	STANDARD SPECIFICATIONS	REQUIRED SPECIFICATIONS
AIR INLET BORE	50 mm	mm
AIR QUANTITY	at 3 m 45 m <sup>3</sup> /h	at m m <sup>3</sup> /h
WATER DEPTH	Max. 4.5 m	Max. m
MOTOR OUTPUT	2.2 kW	kW
PHASE x VOLTAGE	3 φ × V	φ × V
CURRENT	A	A
POLES / REVOLUTION	4 P / s. s. 1500 min <sup>-1</sup>	P / min <sup>-1</sup>
STARTING METHOD	DIRECT ON LINE	
INSULATION CLASS	E	

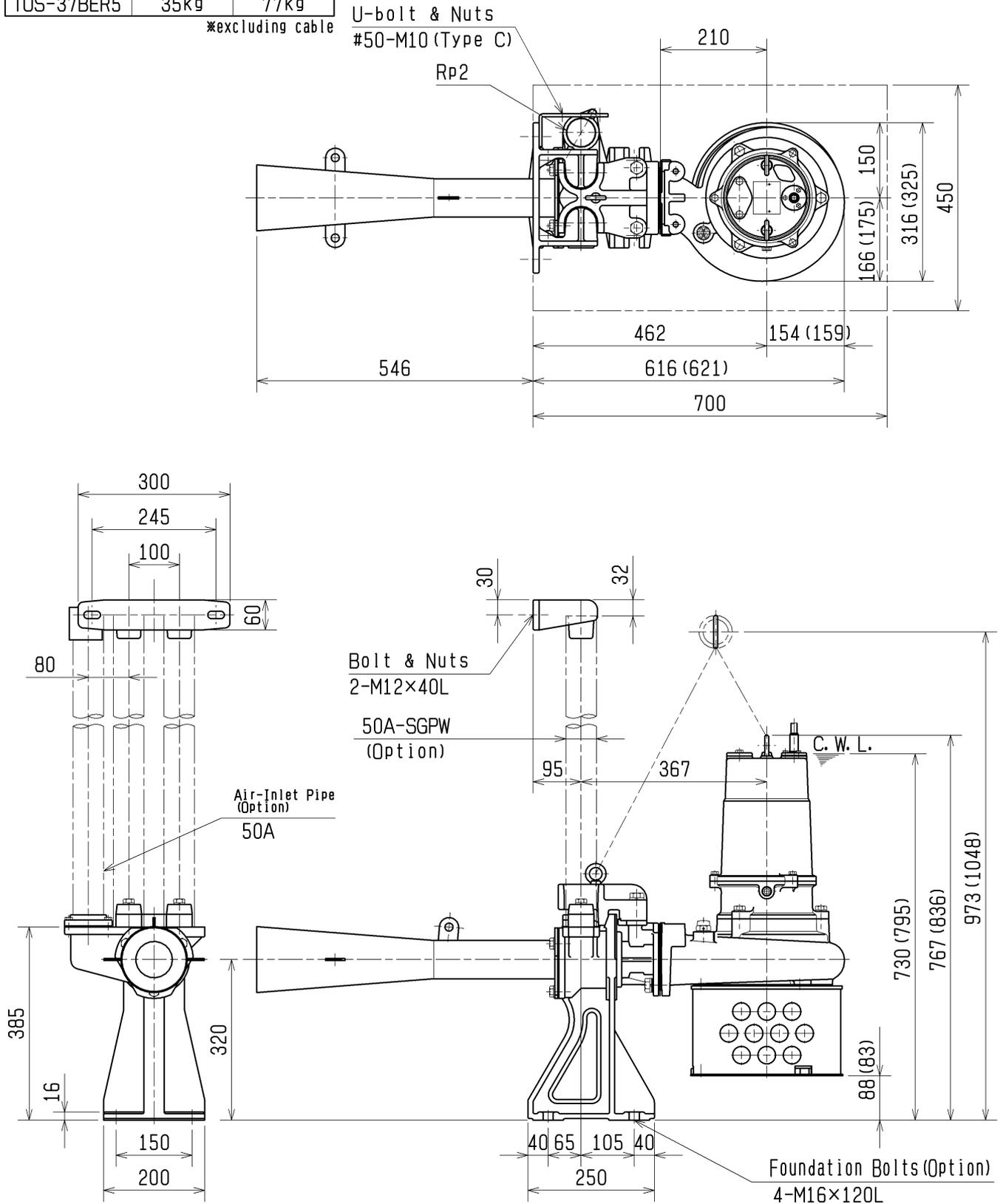


TSURUMI MFG. CO., LTD.

<b>DIMENSION DRAWING</b>		No.	No. A-09782-5
TYPE	SUBMERSIBLE EJECTOR (AERATOR)	MODEL	TOS-22BER5 TOS-37BER5

MODEL	Approximate Weight (※)	
	Duckfoot Bend	Pump
TOS-22BER5	35kg	61kg
TOS-37BER5	35kg	77kg

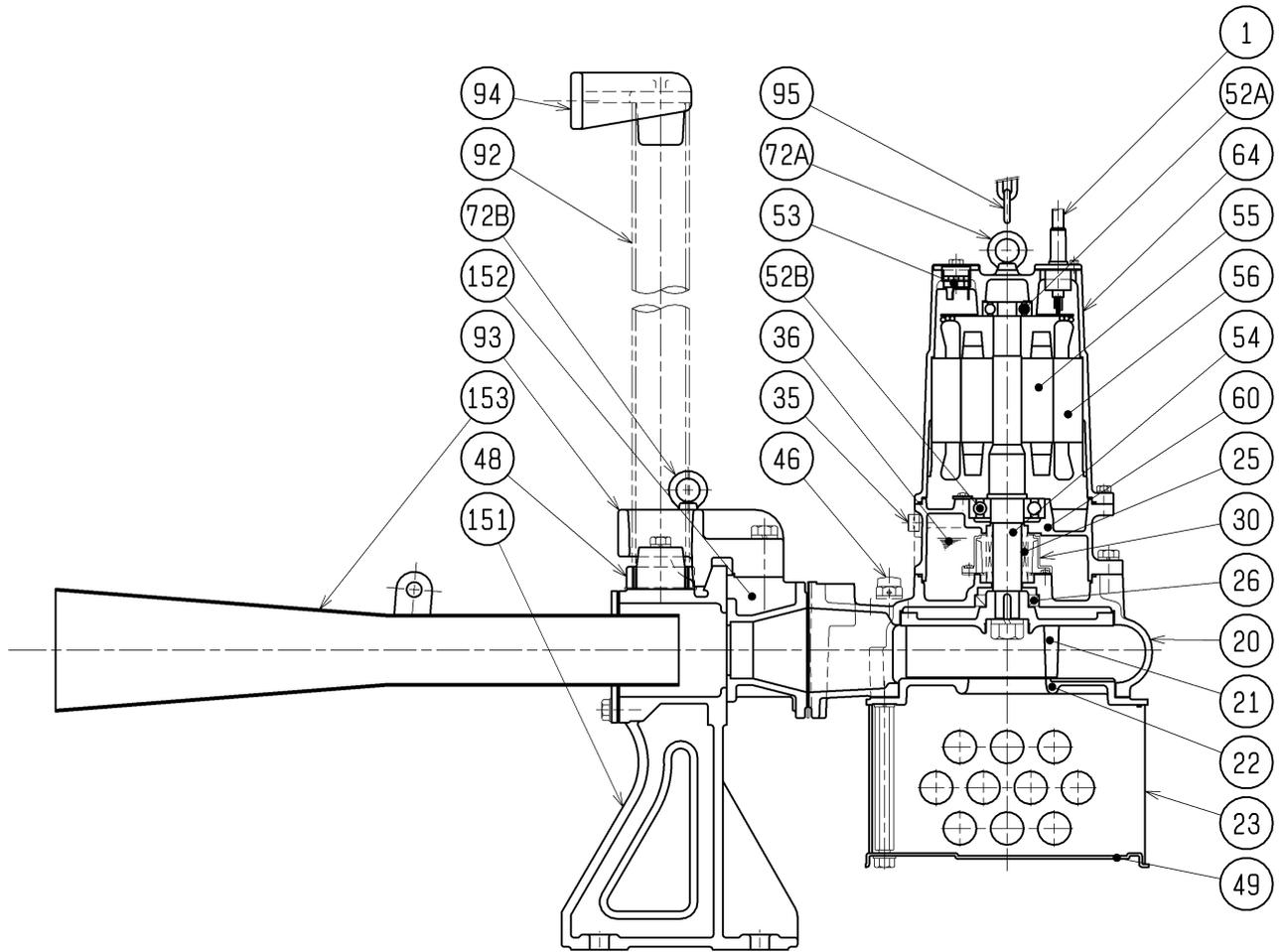
※excluding cable



The Figure in ( ) shows the dimensions of Model TOS-37BER5.

C.W.L.:Continuous running Water Level

<b>SECTIONAL DRAWING</b>		No.	No. A-09786-5
TYPE	SUBMERSIBLE EJECTOR (AERATOR)	MODEL	TOS-22BER5 TOS-37BER5



	2.2kW	3.7kW
※1	H-30A	H-35A
※2	TC456812	TC507212
※3	6307ZZC3	6309ZZC3

※4 the wetted part

REQ. SPECIFICATION	

No.	DESCRIPTION	QTY	MATERIAL / NOTE	No.	DESCRIPTION	QTY	MATERIAL / NOTE
1	Cable	1	PVC Sheath	54	Shaft	1	Stainless Steel 420J2(※4)
20	Pump Casing	1	Gray Iron Casting	55	Rotor	1	
21	Impeller	1	Gray Iron Casting	56	Stator	1	
22	Suction Cover	1	Gray Iron Casting	60	Bearing Housing	1	Gray Iron Casting
23	Strainer Stand	1	Steel Plate	64	Motor Frame	1	Gray Iron Casting
25	Mechanical Seal	1	※1	72A	Eye Bolt	2	Stainless Steel 304
26	Oil Seal	1	※2	72B	Eye Bolt	1	Stainless Steel 304
30	Oil Lifter	1	Plastic	92	Guide Pipe	2	Galvanized Steel Pipe (Option)
35	Oil Plug	1	Stainless Steel 304	93	Guide Hook	1	Ductile Iron Casting
36	Lubricant		Turbine Oil (ISO VG32)	94	Guide Support	1	Ductile Iron Casting
46	Air Release Valve	1	Nylon	95	Chain	1	Structure Steel, 5m
48	Screwed Flange	1	Gray Iron Casting	151	Air-Inlet Casing	1	Gray Iron Casting
49	Bottom Plate	1	Steel Plate	152	Nozzle	1	Gray Iron Casting
52A	Upper Bearing	1	6304ZZC3	153	Diffuser	1	Structure Steel (Nylon Coated)
52B	Lower Bearing	1	※3				
53	Motor Protector	1					