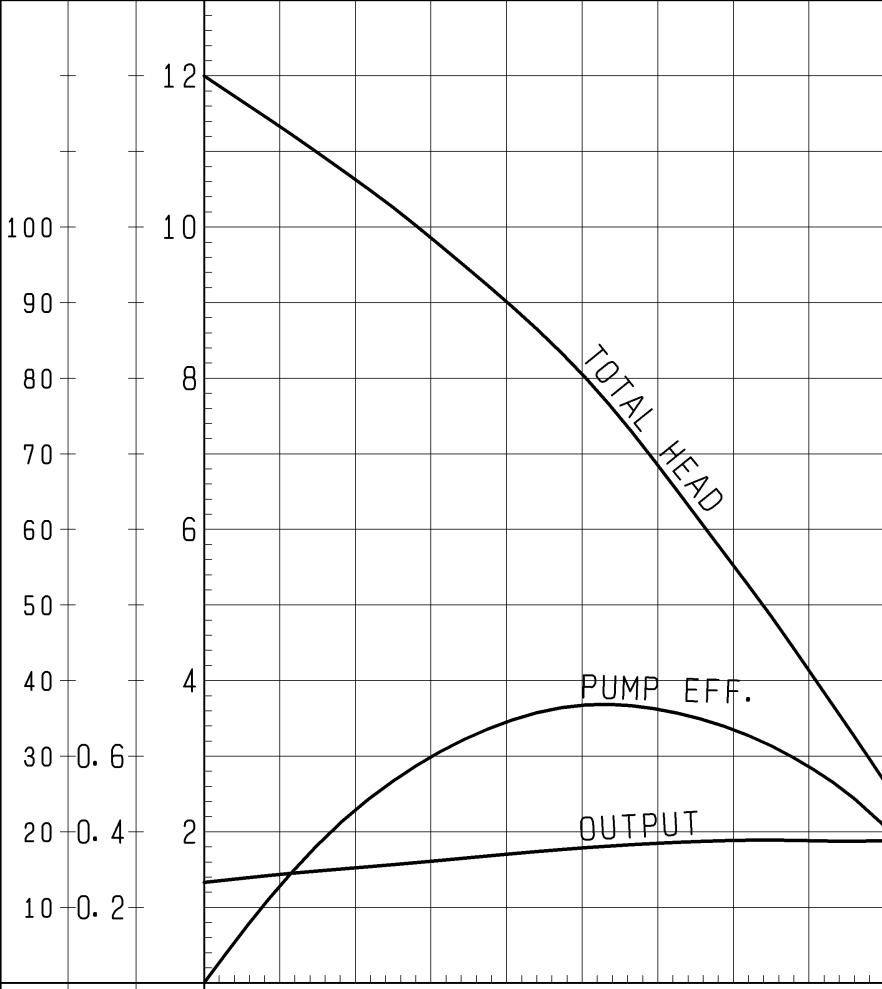
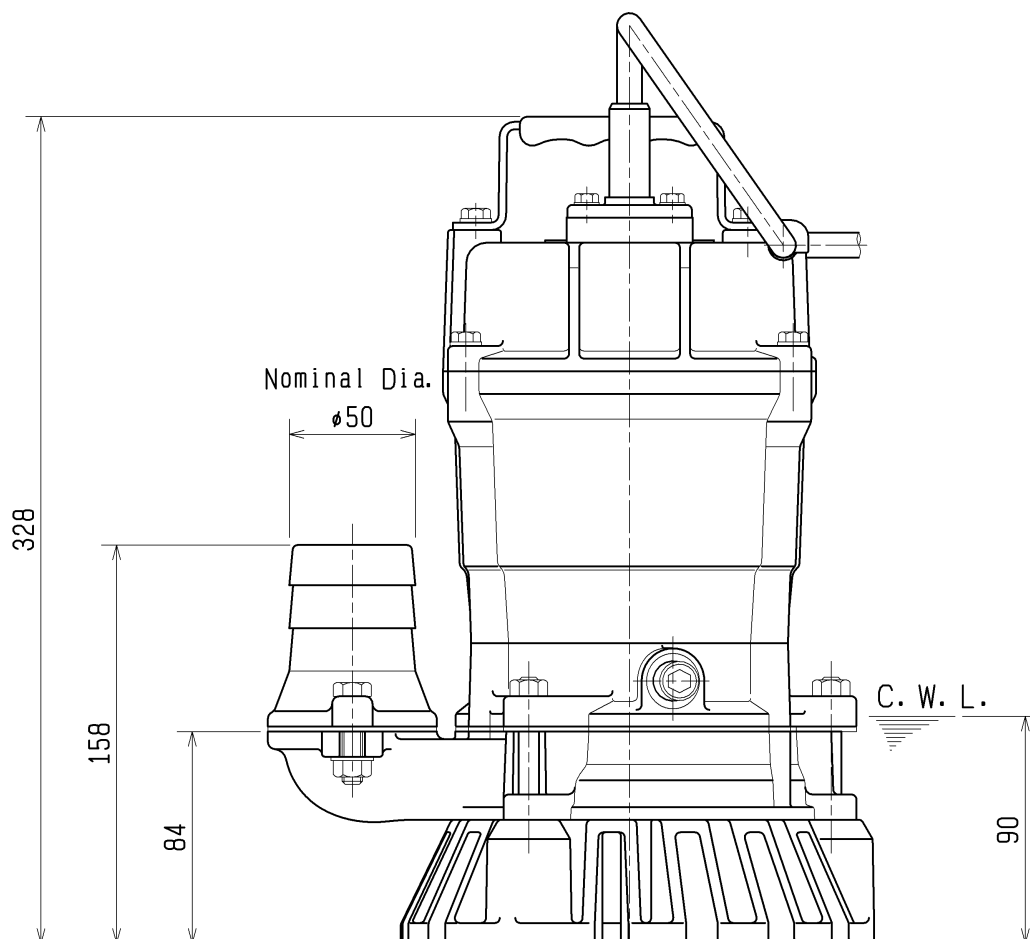
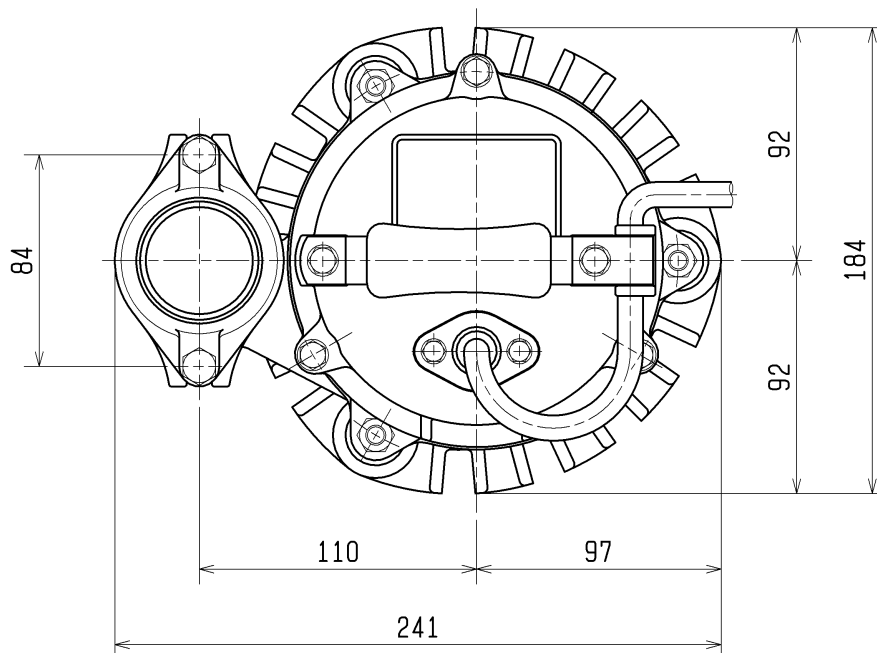


SPECIFICATIONS	Model	HS2.4S	HS-series								
			0.4kW, 1-phase								
<p>Type of Pump Submersible drainage pump for construction and foundation works, floodwater drainage, etc.</p> <p>Type of Fluid Stormwater, groundwater, wash water, and sand-carrying water</p> <p>Temperature: 0 to 40°C</p> <p>Discharge Bore & Connection 50mm, Hose Coupling</p> <p>Motor Output 0.4kW</p> <p>Power Supply Single-phase</p> <p>Starting Method Capacitor Run</p> <p>Motor Continuous-duty rated, dry-type induction motor</p> <p>Insulation Class: E Degree of Protection: IP68</p> <p>No. of Poles & Speed (Synchronous Speed) 2-pole, 3000/3600min⁻¹ (50/60Hz)</p> <p>Power Supply Voltages & Rated Currents</p> <table><tr><td>50Hz</td><td>60Hz</td></tr><tr><td>220V – 2.7A</td><td>110V – 5.4A</td></tr><tr><td>230V – 2.6A</td><td>220V – 2.7A</td></tr><tr><td>240V – 2.6A</td><td></td></tr></table> <p>Power Cable Sheath: PVC Standard Length: 5m 100 to 240V supply: 1 x 3 x 1.25mm², O.D. 10.1mm</p> <p>Dry Weight (excluding cable) 11.3kg</p>		50Hz	60Hz	220V – 2.7A	110V – 5.4A	230V – 2.6A	220V – 2.7A	240V – 2.6A		<p>Impeller Vortex impeller deigned for “high-gap structure”, made of urethane rubber</p> <p>Solids Passage 50Hz – ϕ7mm 60Hz – ϕ7mm</p> <p>Agitator Sintered alloy</p> <p>Cable Entry with Anti-Wicking Block 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>Bearing Permanently lubricated, deep-groove, double-shielded C3 ball bearings</p> <p>Shaft 403 stainless steel</p> <p>Shaft Seal (Mechanical Seal) 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 Face: Ceramic + Carbon Lower Seal Face: SiC + Ceramic</p> <p>OIL LIFTER (Patented) 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 & Volume Turbine Oil (ISO VG32), 160ml</p> <p>Motor Protection Device A miniature thermal protector is embedded in each winding of the motor. Should excessive heat builds up, the bimetal strip opens to cause the control panel to shut the power supply.</p>	
50Hz	60Hz										
220V – 2.7A	110V – 5.4A										
230V – 2.6A	220V – 2.7A										
240V – 2.6A											
TSURUMI MANUFACTURING CO., LTD.											

				NO.	A-14663-2																	
PUMP PERFORMANCE CURVES																						
TYPE		Submersible Portable Dewatering Pump		MODEL		HS2.4S -63 HSZ2.4S -63																
				FREQUENCY		60 Hz																
CUSTOMER'S NAME																						
EQUIPMENT TITLE																						
NO.																						
		STANDARD SPECIFICATIONS		REQUIRED SPECIFICATIONS																		
DISCHARGE BORE		50 mm		mm																		
TOTAL HEAD		8 m		m																		
CAPACITY		0.1 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. 3600 min ⁻¹		P / min ⁻¹																		
STARTING METHOD		CAPACITOR MOTOR																				
INSULATION CLASS		E																				
				REMARKS:																		
 <p>The graph plots three performance metrics against capacity (m³/min). The y-axis has three scales: Total Head (m) from 0 to 12, Pump Efficiency (%) from 0 to 100, and Motor Output (kW) from 0 to 1.0. The x-axis ranges from 0 to 0.2 m³/min. The 'TOTAL HEAD' curve starts at 12m at 0 capacity and decreases to about 1.2m at 0.2 m³/min. The 'PUMP EFF.' curve starts at 0%, peaks at approximately 38% efficiency at 0.1 m³/min, and then declines. The 'OUTPUT' curve starts at about 0.15 kW at 0 capacity and rises to about 0.2 kW at 0.2 m³/min.</p> <table border="1"><caption>Approximate data points from the performance curves</caption><thead><tr><th>Capacity (m³/min)</th><th>Total Head (m)</th><th>Pump Efficiency (%)</th><th>Motor Output (kW)</th></tr></thead><tbody><tr><td>0.0</td><td>12.0</td><td>0</td><td>0.15</td></tr><tr><td>0.1</td><td>8.0</td><td>38</td><td>0.18</td></tr><tr><td>0.2</td><td>1.2</td><td>20</td><td>0.20</td></tr></tbody></table>				Capacity (m³/min)	Total Head (m)	Pump Efficiency (%)	Motor Output (kW)	0.0	12.0	0	0.15	0.1	8.0	38	0.18	0.2	1.2	20	0.20			
Capacity (m³/min)	Total Head (m)	Pump Efficiency (%)	Motor Output (kW)																			
0.0	12.0	0	0.15																			
0.1	8.0	38	0.18																			
0.2	1.2	20	0.20																			
%	kW	m	CAPACITY																			
PUMP EFF.	MOTOR OUTPUT	TOTAL HEAD																				
TSURUMI MFG. CO., LTD.																						

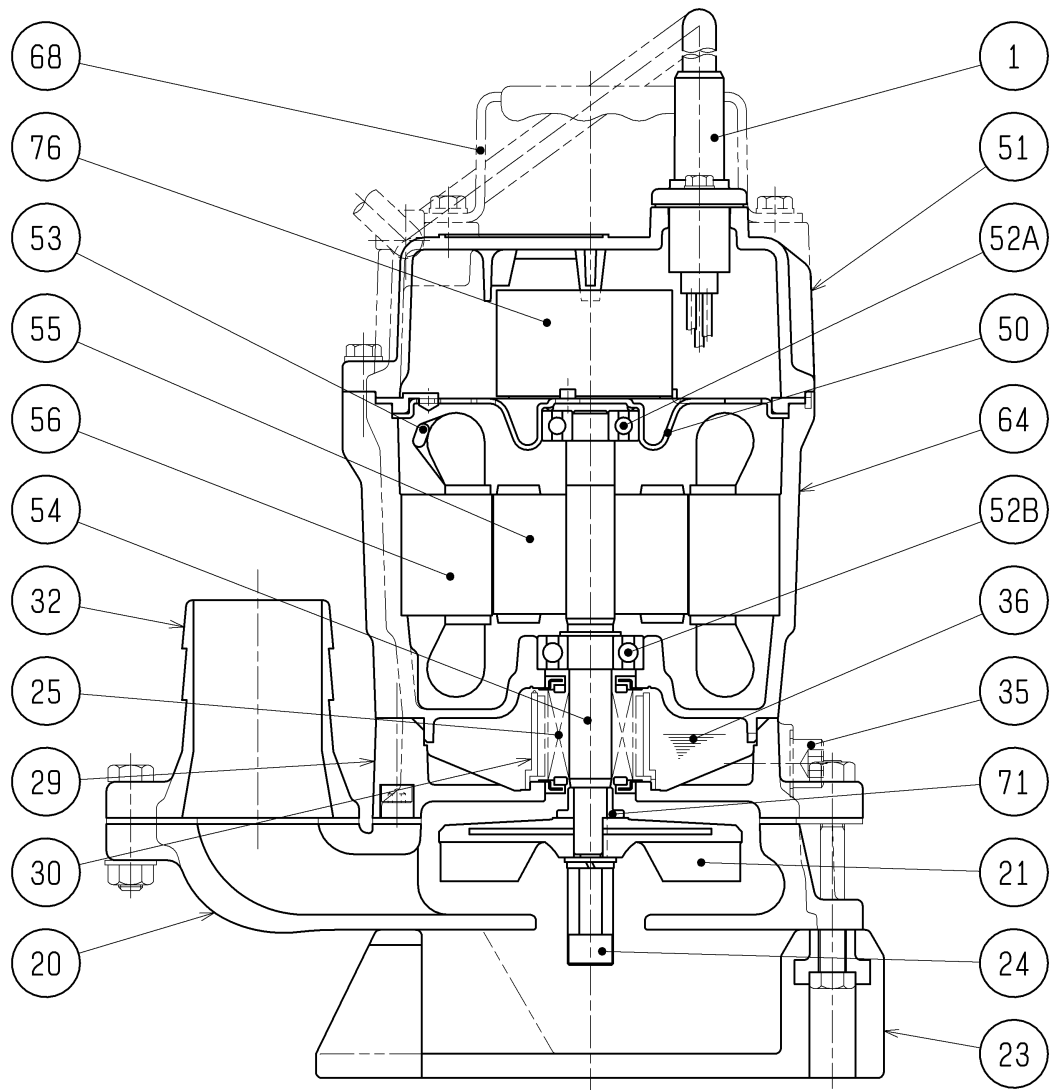
DIMENSION DRAWING			No.	No.	A-09152-3
TYPE	Submersible Portable Dewatering Pump		MODEL	HS2.4S -53/63	

Approximate Weight(※)
11.3kg
※excluding cable



C.W.L. :Continuous running Water Level

SECTIONAL DRAWING		No.	No.	A-09153-7
TYPE	Submersible Portable Dewatering Pump	MODEL	HS2.4S -53/63	



REQ. SPECIFICATION

No.	DESCRIPTION	Q'TY	MATERIAL / NOTE	No.	DESCRIPTION	Q'TY	MATERIAL / NOTE
1	Cabtyre Cable	1	PVC Sheath	52A	Upper Bearing	1	6201ZZC3
20	Pump Casing	1	Gray Iron Casting	52B	Lower Bearing	1	6202ZZC3
21	Impeller	1	Urethane Rubber	53	Motor Protector	1	
23	Strainer Stand	1	Vinyl Chloride	54	Shaft	1	Stainless Steel 403
24	Agitator	1	Sintered Alloy	55	Rotor	1	
25	Mechanical Seal	1	W-14VCA	56	Stator	1	
29	Oil Casing	1	Gray Iron Casting	64	Motor Frame	1	Aluminium Die Casting
30	Oil Lifter	1	Plastic	68	Handle	1	Steel Sheet & Natural Rubber
32	Hose Coupling	1	Aluminium Die Casting	71	Shaft Sleeve	1	Stainless Steel 304
35	Oil Plug	1	Stainless Steel 304	76	Capacitor	1	
36	Lubricant		Turbine Oil (ISO VG32)				
50	Motor Bracket	1	Steel Sheet				
51	Motor Head Cover	1	Aluminium Die Casting				