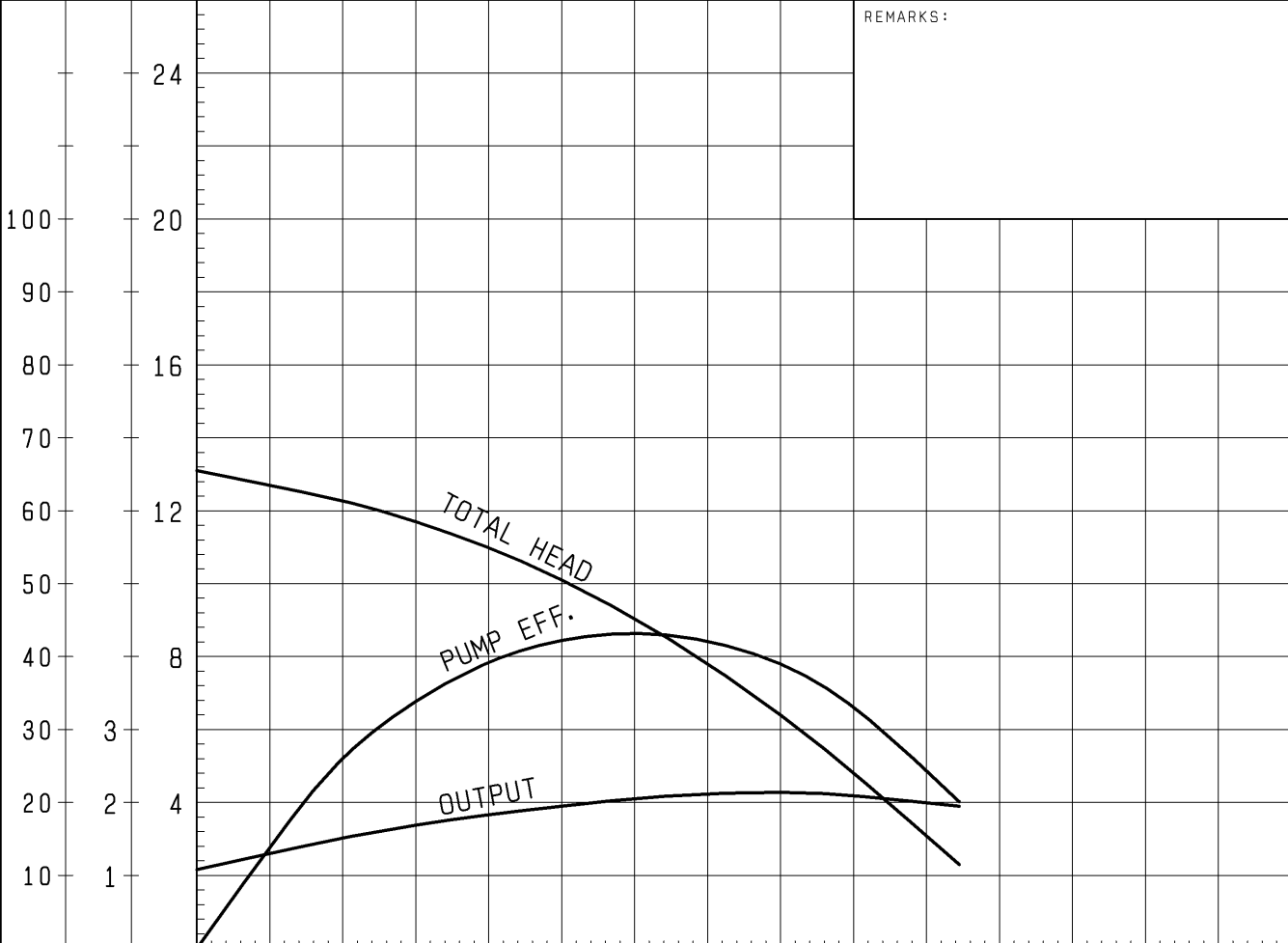


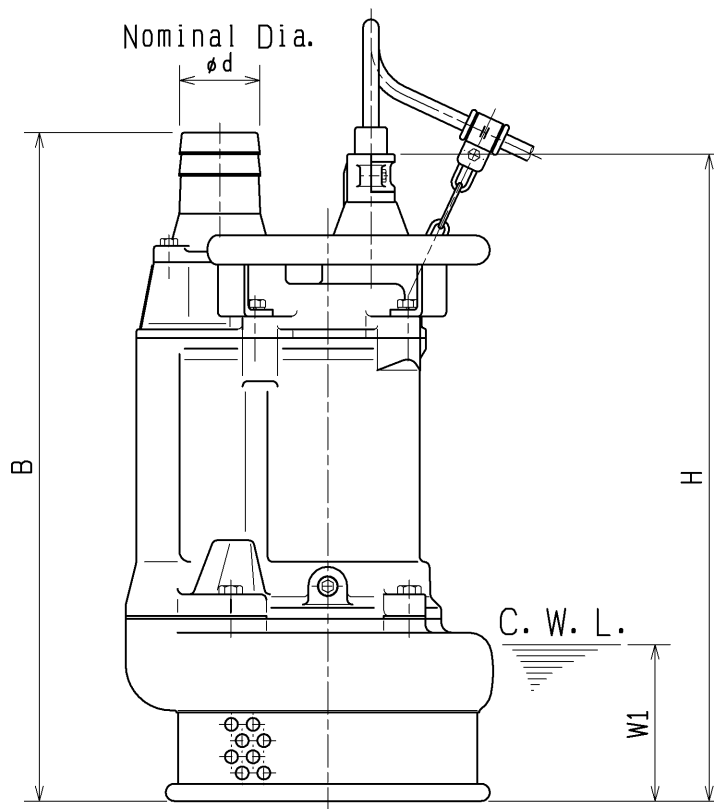
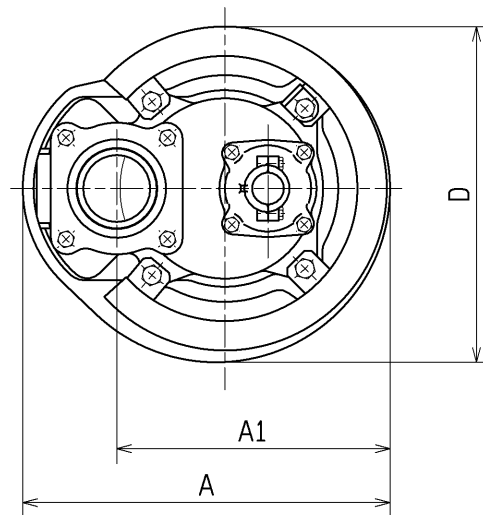
SPECIFICATIONS	Model	KRS2-C3/A3	KRS-series								
			2.2kW, 3-phase								
<p><b>Type of Pump</b> Submersible high volume drainage pump for construction and foundation works, floodwater drainage, etc.</p> <p><b>Type of Fluid</b> Stormwater, groundwater, wash water, and sand-carrying water</p> <p>Temperature: 0 to 40°C (High temperature model available on special request)</p> <p><b>Discharge Bore &amp; Connection</b> 80mm, Hose Coupling</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 (Star-Delta available on special request)</p> <p><b>Motor</b> Continuous-duty rated, dry-type induction motor</p> <p>Insulation Class: E Degree of Protection: IP68</p> <p>No. of Poles &amp; Speed (Synchronous Speed) 4-pole, 1500/1800min<sup>-1</sup> (50/60Hz)</p> <p>Power Supply Voltages &amp; Rated Currents</p> <table><tr><td>50Hz</td><td>60Hz</td></tr><tr><td>380V – 5.2A</td><td>220V – 9.0A</td></tr><tr><td>400V – 5.1A</td><td>380V – 5.2A</td></tr><tr><td>415V – 5.1A</td><td>440V – 4.5A</td></tr></table> <p><b>Power Cable</b> Sheath: Chloroprene rubber Standard Length: 8m 200 to 600V supply: 1 x 4 x 2.0mm<sup>2</sup>, O.D. 14.4mm</p> <p><b>Dry Weight</b> (excluding cable) 72kg</p>		50Hz	60Hz	380V – 5.2A	220V – 9.0A	400V – 5.1A	380V – 5.2A	415V – 5.1A	440V – 4.5A	<p><b>Impeller</b> Semi-open Impeller made of ductile cast iron</p> <p>Solids Passage 50Hz – ϕ12mm 60Hz – ϕ12mm</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>Bearing</b> Permanently lubricated, deep-groove, double-shielded C3 ball bearings</p> <p><b>Shaft</b> 420 stainless steel</p> <p><b>Shaft Seal</b> (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: SiC + SiC Lower Seal Face: SiC + SiC</p> <p><b>Oil Seal</b> (Lip Seal) Used as a “Dust Seal”, it protects the mechanical seal from abrasive particles.</p> <p><b>OIL LIFTER</b> (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 &amp; Volume Turbine Oil (ISO VG32), 1200ml</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 – 5.2A	220V – 9.0A										
400V – 5.1A	380V – 5.2A										
415V – 5.1A	440V – 4.5A										
TSURUMI MANUFACTURING CO., LTD.											

				NO.	A-22162-1																																	
PUMP PERFORMANCE CURVES																																						
TYPE Submersible Dewatering Pump			MODEL KRS2-A3		FREQUENCY 60 Hz																																	
CUSTOMER'S NAME																																						
EQUIPMENT TITLE																																						
NO.																																						
		STANDARD SPECIFICATIONS		REQUIRED SPECIFICATIONS																																		
DISCHARGE BORE		80 mm		mm																																		
TOTAL HEAD		10 m		m																																		
CAPACITY		0.5 m <sup>3</sup> /min		m <sup>3</sup> /min																																		
MOTOR OUTPUT		2.2 kW		kW																																		
PHASE × VOLTAGE		3 φ × V		φ × V																																		
CURRENT		A		A																																		
POLES / REVOLUTION		4 P / S. S. 1800 min <sup>-1</sup>		P / min <sup>-1</sup>																																		
STARTING METHOD		DIRECT ON LINE																																				
INSULATION CLASS		E																																				
				REMARKS:																																		
 <p>The graph plots three performance metrics against capacity (m³/min). The left y-axis has three scales: % (0-100), kW (0-10), and m (0-24). The x-axis ranges from 0 to 1.2 m³/min. The 'TOTAL HEAD' curve starts at ~12.5m and drops to ~1.5m. The 'PUMP EFF.' curve starts at 0%, peaks at ~45% (0.6 m³/min), and drops to ~10%. The 'OUTPUT' curve starts at ~1.2 m³/min and rises to ~2.2 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>Output (m³/min)</th></tr></thead><tbody><tr><td>0.0</td><td>12.5</td><td>0</td><td>0.0</td></tr><tr><td>0.2</td><td>11.5</td><td>25</td><td>0.2</td></tr><tr><td>0.4</td><td>10.5</td><td>40</td><td>0.4</td></tr><tr><td>0.6</td><td>9.5</td><td>45</td><td>0.6</td></tr><tr><td>0.8</td><td>8.5</td><td>40</td><td>0.8</td></tr><tr><td>1.0</td><td>7.5</td><td>30</td><td>1.0</td></tr><tr><td>1.2</td><td>6.5</td><td>20</td><td>1.2</td></tr></tbody></table>				Capacity (m³/min)	Total Head (m)	Pump Efficiency (%)	Output (m³/min)	0.0	12.5	0	0.0	0.2	11.5	25	0.2	0.4	10.5	40	0.4	0.6	9.5	45	0.6	0.8	8.5	40	0.8	1.0	7.5	30	1.0	1.2	6.5	20	1.2			
Capacity (m³/min)	Total Head (m)	Pump Efficiency (%)	Output (m³/min)																																			
0.0	12.5	0	0.0																																			
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1.2	6.5	20	1.2																																			
%	kW	m	CAPACITY																																			
PUMP EFF.	MOTOR OUTPUT	TOTAL HEAD																																				
TSURUMI MFG. CO., LTD.																																						

DIMENSION DRAWING					No.		No.	A-22182-1
TYPE Submersible Dewatering Pump					MODEL			
					KRS2-A3/B3/C3/D3			
					KRS2-A4/B4/C4/D4			

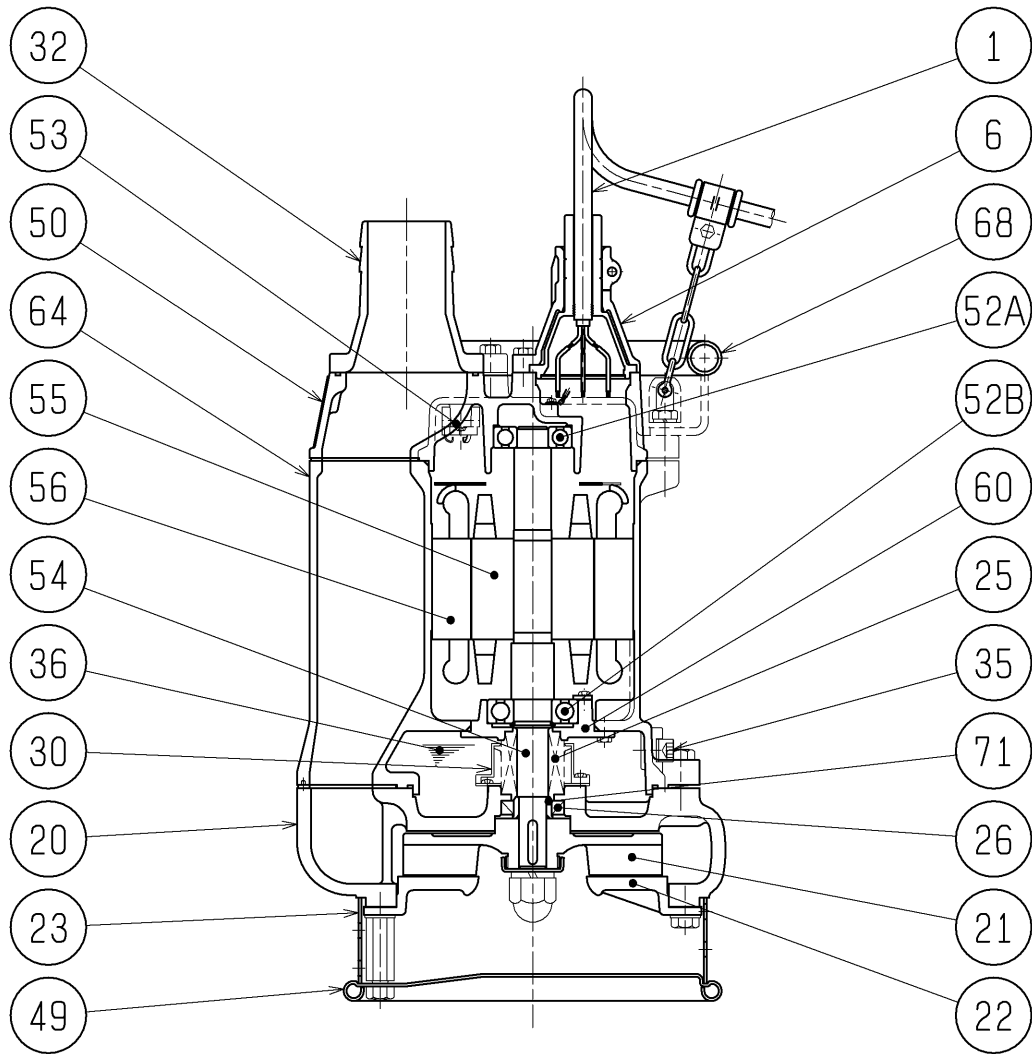
FREQUENCY	MODEL	φd	A	A1	D	B	H	W1	Approximate Weight (※)
50Hz	C3	80	340	253	311	619	599	145	72kg
	C4	100	349	259	320	719	684	155	88kg
	D3	80	362	272	346	704	684	155	91kg
	D4	100	362	272	346	709	674	155	98kg
60Hz	A3	80	340	253	311	619	599	145	72kg
	A4	100	349	259	320	719	684	155	88kg
	B3	80	349	259	320	704	684	155	89kg
	B4	100	349	259	320	709	674	155	95kg

※excluding cable



C. W. L. :Continuous running Water Level

SECTIONAL DRAWING		No.	No.	A-22189-1
TYPE	Submersible Dewatering Pump	MODEL	KRS2-A3/B3/C3/D3 KRS2-A4/B4/C4/D4	



	※1	※2	※3
2. 2kW	H-25	TC305011	6306ZZC3
3. 7kW	H-30	TC355511	6307ZZC3
5. 5kW	H-30	TC355511	6308ZZC3

REQ. SPECIFICATION

No.	DESCRIPTION	Q'TY	MATERIAL / NOTE	No.	DESCRIPTION	Q'TY	MATERIAL / NOTE
1	Cabtyre Cable	1	Chloroprene Sheath	50	Motor Bracket	1	Gray Iron Casting
6	Stuffing Box	1	Gray Iron Casting	52A	Upper Bearing	1	6305ZZC3
20	Pump Casing	1	Gray Iron Casting	52B	Lower Bearing	1	※3
21	Impeller	1	Ductile Iron Casting	53	Motor Protector	1	
22	Suction Cover	1	Gray Iron Casting	54	Shaft	1	Stainless Steel 420J2
23	Strainer	1	Steel Sheet	55	Rotor	1	
25	Mechanical Seal	1	※1	56	Stator	1	
26	Oil Seal	1	※2	60	Bearing Housing	1	Gray Iron Casting
30	Oil Lifter	1	Plastic	64	Motor Frame	1	Gray Iron Casting
32	Hose Coupling	1	Gray Iron Casting	68	Handle	1	Carbon Steel Pipe & Steel Sheet
35	Oil Plug	1	Stainless Steel 304	71	Shaft Sleeve	1	Stainless Steel 403
36	Lubricant		Turbine Oil (ISO VG32)				
49	Bottom Plate	1	Steel Sheet				