

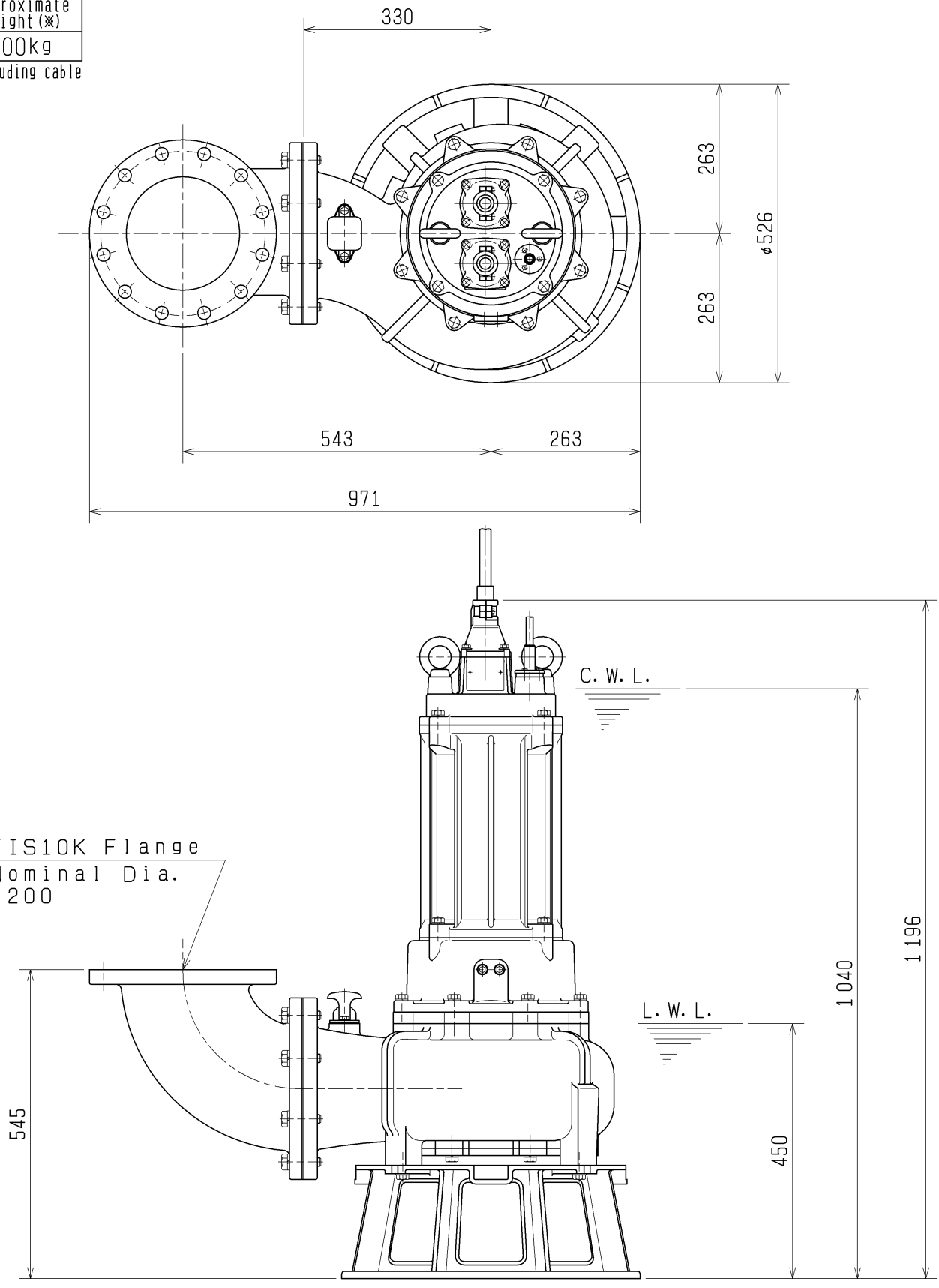
SPECIFICATIONS	Model	200B415	B-series								
			15kW, 3-phase								
<p>Type of Pump Submersible cast iron pump suitable for pumping sewage, wastewater, storm water, etc.</p> <p>Type of Fluid Sewage, wastewater, and water carrying solid matters</p> <p>Temperature: 0 to 40°C (High temperature model available on special request)</p> <p>Discharge Bore 200mm</p> <p>Motor Output 15kW</p> <p>Power Supply Three-phase</p> <p>Starting Method Star-Delta</p> <p>Motor Continuous-duty rated, dry-type induction motor</p> <p>Insulation Class: F Degree of Protection: IP68</p> <p>No. of Poles & Speed (Synchronous Speed) 4-pole, 1500/1800min⁻¹ (50/60Hz)</p> <p>Power Supply Voltages & Rated Currents</p> <table><tr><td>50Hz</td><td>60Hz</td></tr><tr><td>380V – 32.6A</td><td>220V – 54.6A</td></tr><tr><td>400V – 31.9A</td><td>380V – 30.7A</td></tr><tr><td>415V – 31.2A</td><td>440V – 27.2A</td></tr></table> <p>Power Cable Sheath: Chloroprene rubber Standard Length: 8m 200 to 600V supply: 1 × 4 × 5.5mm², O.D. 16.8mm 1 × 3 × 5.5mm², O.D. 15.2mm 1 × 2 × 1.25mm², O.D. 9.8mm</p> <p>Dry Weight (excluding cable) Free Standing Type: 300kg Guide Rail Fitting Type: 285kg</p>		50Hz	60Hz	380V – 32.6A	220V – 54.6A	400V – 31.9A	380V – 30.7A	415V – 31.2A	440V – 27.2A	<p>Impeller Shrouded two-channel impeller for solid-handling design, dynamically balanced</p> <p>Solids Passage 50Hz – 70 × 60mm 60Hz – 69 × 60mm</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>Bearings Permanently lubricated, deep-groove, double-shielded C3 ball bearings</p> <p>Shaft 420 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 Faces: SiC + SiC Lower Seal Faces: SiC + SiC</p> <p>Oil Seal (Lip Seal) Used as a “Dust Seal”, it protects the mechanical seal from abrasive particles.</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), 5500ml</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										
380V – 32.6A	220V – 54.6A										
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415V – 31.2A	440V – 27.2A										
<p>Optional Accessory</p> <p>External Leakage Sensor</p>											
TSURUMI MANUFACTURING CO., LTD.											

		NO.		A-18737-1																																					
PUMP PERFORMANCE CURVES																																									
TYPE		Sewage Submersible Channel Impeller Pump		MODEL 200B415 -53 T0200B415 -53																																					
				FREQUENCY 50 Hz																																					
CUSTOMER'S NAME																																									
EQUIPMENT TITLE																																									
NO.																																									
		STANDARD SPECIFICATIONS		REQUIRED SPECIFICATIONS																																					
DISCHARGE BORE		200 mm		mm																																					
TOTAL HEAD		14 m		m																																					
CAPACITY		4.5 m ³ /min		m ³ /min																																					
MOTOR OUTPUT		15 kW		kW																																					
PHASE × VOLTAGE		3 φ × V		φ × V																																					
CURRENT		A		A																																					
POLES / REVOLUTION		4 P / s. s. 1500 min ⁻¹		P / min ⁻¹																																					
STARTING METHOD		STAR-DELTA																																							
INSULATION CLASS		F																																							
				REMARKS:																																					
<p>The graph plots three performance metrics against capacity (m³/min). The left y-axis has two scales: one for head (m) from 10 to 100 and one for efficiency/output from 5 to 20. The x-axis ranges from 0 to 12 m³/min. The 'TOTAL HEAD' curve starts at approximately 18m at 1 m³/min and decreases to about 4m at 8 m³/min. The 'PUMP EFF.' curve starts at 10% at 1 m³/min, peaks at 70% around 5 m³/min, and drops to 40% at 8 m³/min. The 'OUT PUT' curve starts at 10 kW at 1 m³/min, peaks at 15 kW around 5 m³/min, and drops to 10 kW at 8 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 (kW)</th></tr></thead><tbody><tr><td>1</td><td>18</td><td>10</td><td>10</td></tr><tr><td>2</td><td>16</td><td>55</td><td>12</td></tr><tr><td>3</td><td>14</td><td>65</td><td>13</td></tr><tr><td>4</td><td>12</td><td>68</td><td>14</td></tr><tr><td>5</td><td>10</td><td>70</td><td>15</td></tr><tr><td>6</td><td>8</td><td>65</td><td>14</td></tr><tr><td>7</td><td>6</td><td>55</td><td>12</td></tr><tr><td>8</td><td>4</td><td>40</td><td>10</td></tr></tbody></table>				Capacity (m³/min)	Total Head (m)	Pump Efficiency (%)	Output (kW)	1	18	10	10	2	16	55	12	3	14	65	13	4	12	68	14	5	10	70	15	6	8	65	14	7	6	55	12	8	4	40	10		
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CAPACITY																																									
PUMP EFF.		MOTOR OUTPUT		TOTAL HEAD																																					
TSURUMI MFG. CO., LTD.																																									

DIMENSION DRAWING			No.		No.	A-18778-1
TYPE	Sewage Submersible Channel Impeller Pump		MODEL	200B415 -53/63		

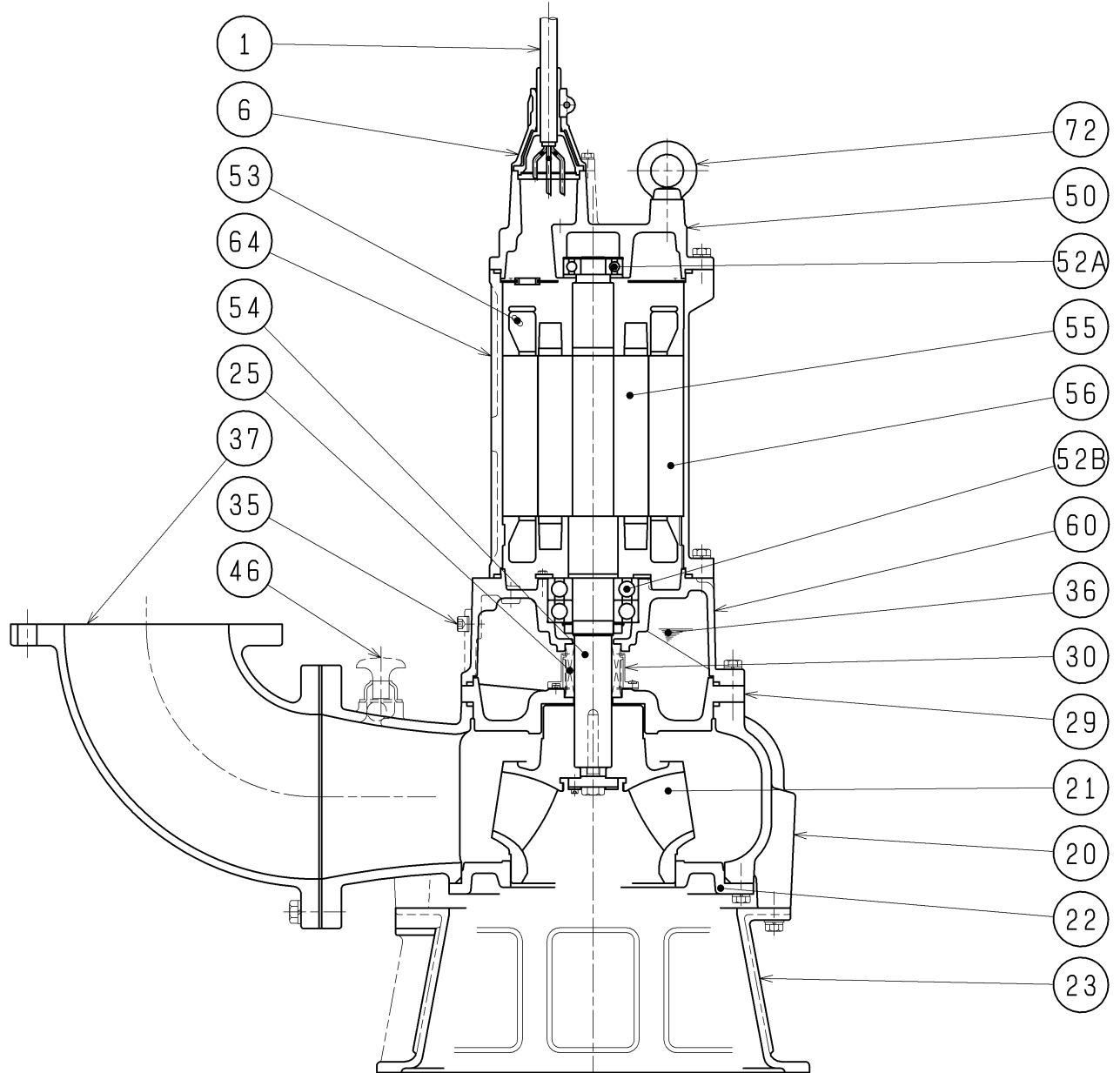
Approximate Weight(※)
300kg

※excluding cable



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

SECTIONAL DRAWING			No.		No.	A-18795-1
TYPE	Sewage Submersible Channel Impeller Pump		MODEL	200B415 -53/63		



REQ. SPECIFICATION

No.	DESCRIPTION	Q'TY	MATERIAL / NOTE	No.	DESCRIPTION	Q'TY	MATERIAL / NOTE
1	Cabtyre Cable	3	Chloroprene Sheath	50	Motor Bracket	1	Gray Iron Casting
6	Stuffing Box	2	Gray Iron Casting	52A	Upper Bearing	1	6306ZZC3
20	Pump Casing	1	Gray Iron Casting	52B	Lower Bearing	1	6310ZZD2C3
21	Impeller	1	Gray Iron Casting	53	Motor Protector	3	
22	Suction Cover	1	Gray Iron Casting	54	Shaft	1	Stainless Steel 420J2
23	Strainer Stand	1	Malleable Iron Casting	55	Rotor	1	
25	Mechanical Seal	1	H-45	56	Stator	1	
29	Oil Casing	1	Gray Iron Casting	60	Bearing Housing	1	Gray Iron Casting
30	Oil Lifter	1	Plastic	64	Motor Frame	1	Gray Iron Casting
35	Oil Plug	2	Stainless Steel 304	72	Eyebolt	2	Structure Steel
36	Lubricant		Turbine Oil (ISO VG32)				
37	Discharge Bend	1	Gray Iron Casting				
46	Air Release Valve	1	Steel Plate				