

Submersible Aerator:

TRN

Air-inlet Bore:

32-50mm

Motor Output / Pole:

0.75 - 5.5kW / 2-4-pole



The TRN-series is a submersible self-aspirating aerator designed for aeration and mixing of wastewater. The liquid flow generated by Tsurumi's special semi-open impeller causes negative pressure to form on the backside of the impeller vanes and draw in air from above the water's surface. The aspirated air, mixed with water viciously by mechanical forces inside the impeller and guide vane, transforms into tiny bubbles. Moreover, the mixed flow of air and water is evenly discharged in multiple directions along the circumference. The compounded action of the air lift and convective currents that are generated in the process makes aeration and agitation very efficient and increases the amount of oxygen dissolved in the water.

Application to Deeper Installation

Each aerator has a limit in its installation depth, but Tsurumi provides an optional device by which the aerator can be installed in deeper places. It is a simple stand or a stand with draft tube. Details are available on request.

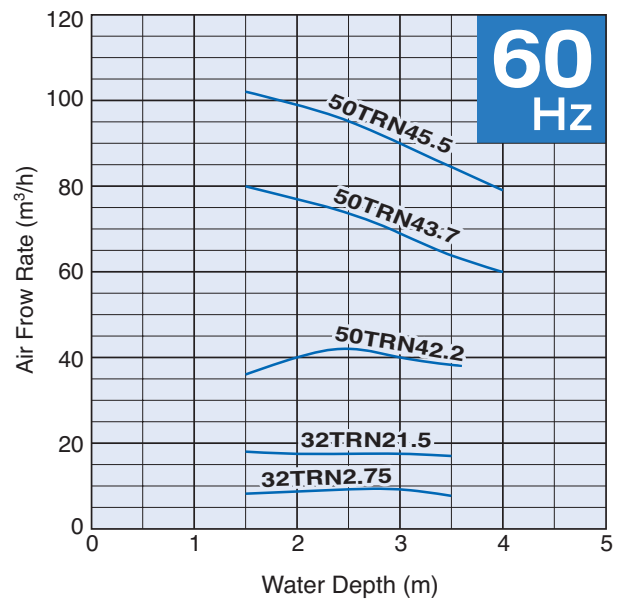
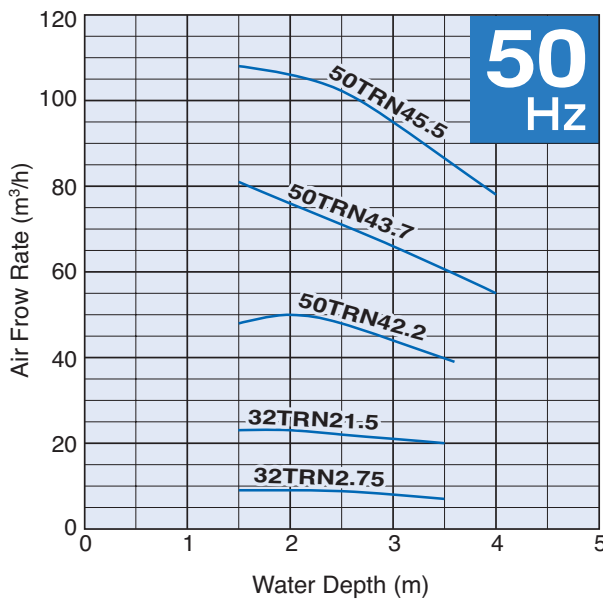
Selection Table

Model	Air-inlet Bore mm	Motor Output kW	Phase	Pole	Max. Water Depth m	No. of Outlets
32TRN2.75	32	0.75	3-phase	2	3.5	6
32TRN21.5	32	1.5	3-phase	2	3.5	6
50TRN42.2	50	2.2	3-phase	4	3.6	6
50TRN43.7	50	3.7	3-phase	4	4	6
50TRN45.5	50	5.5	3-phase	4	4	6

● Max. water depth is the load limit of the motor. The load placed on the motor increase the deeper the submersible aerator is installed, therefore if the aerator is operated below the max. water depth, the overload will trip the motor protection device and stop the aerator from running continuously.

Air Flow Rate – Water Depth Curves

(The air flow rates are expressed at the standard condition, i.e. temperature of 20°C, 1 atm and may vary by up to approximately 5%)



SPECIFICATIONS	Model	32TRN2.75	
		TRN-series 0.75kW, 3-phase	

<p>Type of Equipment Submersible self-aspirating aerator suitable for aeration and mixing in sewage and wastewater treatment</p> <p>Type of Fluid Sewage and wastewater</p> <p>Temperature: 0 to 40°C</p> <p>Air-inlet Bore & Connection 32mm, Threaded Oval Flange</p> <p>Motor Output 0.75kW</p> <p>Power Supply Three-phase</p> <p>Starting Method Direct on Line</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) 2-pole, 3000/3600min⁻¹ (50/60Hz)</p> <p>Power Supply Voltages & Rated Currents</p> <table border="0"> <tr> <td>50Hz</td> <td>60Hz</td> </tr> <tr> <td>380V – 2.3A</td> <td>220V – 4.1A</td> </tr> <tr> <td>400V – 2.4A</td> <td>380V – 2.2A</td> </tr> <tr> <td>415V – 2.5A</td> <td>440V – 2.0A</td> </tr> </table> <p>Power Cable Sheath: PVC Standard Length: 6m 200 to 600V supply: 1 × 4 × 1.25mm², O.D. 11.1mm</p> <p>Dry Weight (excluding cable) 55kg</p>	50Hz	60Hz	380V – 2.3A	220V – 4.1A	400V – 2.4A	380V – 2.2A	415V – 2.5A	440V – 2.0A	<p>Impeller Special semi-open impeller made of 304 stainless steel casting</p> <p>Solids Passage 50Hz – φ10mm 60Hz – φ10mm</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 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 Face: Ceramic + Carbon Lower Seal Face: 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 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), 1400ml</p> <p>Motor Protection Device 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 – 2.3A	220V – 4.1A								
400V – 2.4A	380V – 2.2A								
415V – 2.5A	440V – 2.0A								

Standard Accessory
Silencer & Valve Set
Optional Accessory
External Leakage Sensor (Electrode)
Special Specifications
High Temperature Liquids Version (60°C)

SPECIFICATIONS	Model	32TRN21.5	TRN-series
			1.5kW, 3-phase

<p>Type of Equipment Submersible self-aspirating aerator suitable for aeration and mixing in sewage and wastewater treatment</p> <p>Type of Fluid Sewage and wastewater</p> <p>Temperature: 0 to 40°C</p> <p>Air-inlet Bore & Connection 32mm, Threaded Oval Flange</p> <p>Motor Output 1.5kW</p> <p>Power Supply Three-phase</p> <p>Starting Method Direct on Line</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) 2-pole, 3000/3600min⁻¹ (50/60Hz)</p> <p>Power Supply Voltages & Rated Currents</p> <table border="0"> <tr> <td>50Hz</td> <td>60Hz</td> </tr> <tr> <td>380V – 3.5A</td> <td>220V – 6.0A</td> </tr> <tr> <td>400V – 3.5A</td> <td>380V – 3.6A</td> </tr> <tr> <td>415V – 3.5A</td> <td>440V – 3.2A</td> </tr> </table> <p>Power Cable Sheath: PVC Standard Length: 6m 200 to 600V supply: 1 × 4 × 1.25mm², O.D. 11.1mm</p> <p>Dry Weight (excluding cable) 55kg</p>	50Hz	60Hz	380V – 3.5A	220V – 6.0A	400V – 3.5A	380V – 3.6A	415V – 3.5A	440V – 3.2A	<p>Impeller Special semi-open impeller made of 304 stainless steel casting</p> <p>Solids Passage 50Hz – φ12mm 60Hz – φ12mm</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 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 Face: Ceramic + Carbon Lower Seal Face: 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 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), 1400ml</p> <p>Motor Protection Device 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 – 3.5A	220V – 6.0A								
400V – 3.5A	380V – 3.6A								
415V – 3.5A	440V – 3.2A								

Standard Accessory

Silencer & Valve Set

Optional Accessory

External Leakage Sensor (Electrode)

Special Specifications

High Temperature Liquids Version (60°C)

SPECIFICATIONS	Model	50TRN42.2	TRN-series
			2.2kW, 3-phase

<p>Type of Equipment Submersible self-aspirating aerator suitable for aeration and mixing in sewage and wastewater treatment</p> <p>Type of Fluid Sewage and wastewater</p> <p>Temperature: 0 to 40°C</p> <p>Air-inlet Bore & Connection 50mm, Threaded Oval Flange</p> <p>Motor Output 2.2kW</p> <p>Power Supply Three-phase</p> <p>Starting Method Direct on Line</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 border="0"> <tr> <td>50Hz</td> <td>60Hz</td> </tr> <tr> <td>380V – 5.3A</td> <td>220V – 9.0A</td> </tr> <tr> <td>400V – 5.3A</td> <td>380V – 5.2A</td> </tr> <tr> <td>415V – 5.4A</td> <td>440V – 4.7A</td> </tr> </table> <p>Power Cable Sheath: PVC Standard Length: 6m 200 to 600V supply: 1 × 4 × 2.0mm², O.D. 11.8mm</p> <p>Dry Weight (excluding cable) 140kg</p>	50Hz	60Hz	380V – 5.3A	220V – 9.0A	400V – 5.3A	380V – 5.2A	415V – 5.4A	440V – 4.7A	<p>Impeller Special semi-open impeller made of 410 stainless steel casting</p> <p>Solids Passage 50Hz – φ12mm 60Hz – φ12mm</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 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 Face: Ceramic + Carbon Lower Seal Face: 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 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), 5100ml</p> <p>Motor Protection Device 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 – 5.3A	220V – 9.0A								
400V – 5.3A	380V – 5.2A								
415V – 5.4A	440V – 4.7A								

Standard Accessory

Silencer & Valve Set

Optional Accessory

External Leakage Sensor (Electrode)

Special Specifications

High Temperature Liquids Version (60°C)

SPECIFICATIONS	Model	50TRN43.7	TRN-series
			3.7kW, 3-phase

<p>Type of Equipment Submersible self-aspirating aerator suitable for aeration and mixing in sewage and wastewater treatment</p> <p>Type of Fluid Sewage and wastewater</p> <p>Temperature: 0 to 40°C</p> <p>Air-inlet Bore & Connection 50mm, Threaded Oval Flange</p> <p>Motor Output 3.7kW</p> <p>Power Supply Three-phase</p> <p>Starting Method Direct on Line</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 border="0"> <tr> <td>50Hz</td> <td>60Hz</td> </tr> <tr> <td>380V – 8.8A</td> <td>220V – 15.0A</td> </tr> <tr> <td>400V – 8.6A</td> <td>380V – 8.4A</td> </tr> <tr> <td>415V – 8.6A</td> <td>440V – 7.5A</td> </tr> </table> <p>Power Cable Sheath: PVC Standard Length: 6m 380 to 600V supply: 1 × 4 × 2.0mm², O.D. 11.8mm 200 to 240V supply: 1 × 4 × 3.5mm², O.D. 13.9mm</p> <p>Dry Weight (excluding cable) 150kg</p>	50Hz	60Hz	380V – 8.8A	220V – 15.0A	400V – 8.6A	380V – 8.4A	415V – 8.6A	440V – 7.5A	<p>Impeller Special semi-open impeller made of 410 stainless steel casting</p> <p>Solids Passage 50Hz – φ12mm 60Hz – φ12mm</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 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 Face: Ceramic + Carbon Lower Seal Face: 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 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), 5100ml</p> <p>Motor Protection Device 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 – 8.8A	220V – 15.0A								
400V – 8.6A	380V – 8.4A								
415V – 8.6A	440V – 7.5A								

Standard Accessory

Silencer & Valve Set

Optional Accessory

External Leakage Sensor (Electrode)

Special Specifications

High Temperature Liquids Version (60°C)

SPECIFICATIONS	Model	50TRN45.5	
		TRN-series 5.5kW, 3-phase	

<p>Type of Equipment Submersible self-aspirating aerator suitable for aeration and mixing in sewage and wastewater treatment</p> <p>Type of Fluid Sewage and wastewater</p> <p>Temperature: 0 to 40°C</p> <p>Air-inlet Bore & Connection 50mm, Threaded Oval Flange</p> <p>Motor Output 5.5kW</p> <p>Power Supply Three-phase</p> <p>Starting Method Direct on Line (Star-Delta available on special request)</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 border="0"> <tr> <td>50Hz</td> <td>60Hz</td> </tr> <tr> <td>380V – 12.4A</td> <td>220V – 21.4A</td> </tr> <tr> <td>400V – 12.1A</td> <td>380V – 12.1A</td> </tr> <tr> <td>415V – 12.0A</td> <td>440V – 10.7A</td> </tr> </table> <p>Power Cable Sheath: Chloroprene rubber Standard Length: 8m 200 to 600V supply: 1 × 4 × 3.5mm², O.D. 14.1mm</p> <p>Dry Weight (excluding cable) 150kg</p>	50Hz	60Hz	380V – 12.4A	220V – 21.4A	400V – 12.1A	380V – 12.1A	415V – 12.0A	440V – 10.7A	<p>Impeller Special semi-open impeller made of 410 stainless steel casting</p> <p>Solids Passage 50Hz – φ15mm 60Hz – φ15mm</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 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 Face: SiC + SiC Lower Seal Face: 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 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), 6000ml</p> <p>Motor Protection Device 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 – 12.4A	220V – 21.4A								
400V – 12.1A	380V – 12.1A								
415V – 12.0A	440V – 10.7A								

Standard Accessory
Silencer & Valve Set
Optional Accessory
External Leakage Sensor (Electrode)
Special Specifications
High Temperature Liquids Version (60°C)

Submersible Aerator:

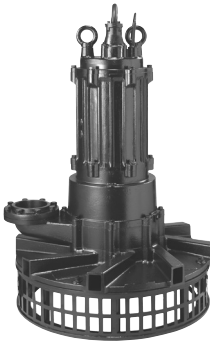
TRN

Air-inlet Bore:

80 - 150mm

Motor Output / Pole:

7.5 - 40kW / 4-pole



The TRN-series is a submersible self-aspirating aerator designed for aeration and mixing of wastewater. The liquid flow generated by Tsurumi's special semi-open impeller causes negative pressure to form on the backside of the impeller vanes and draw in air from above the water's surface. The aspirated air, mixed with water viciously by mechanical forces inside the impeller and guide vane, transforms into tiny bubbles. Moreover, the mixed flow of air and water is evenly discharged in multiple directions along the circumference. The compounded action of the air lift and convective currents that are generated in the process makes aeration and agitation very efficient and increases the amount of oxygen dissolved in the water.

Application to Deeper Installation

Each aerator has a limit in its installation depth, but Tsurumi provides an optional device by which the aerator can be installed in deeper places. It is a simple stand or a stand with draft tube. Details are available on request.

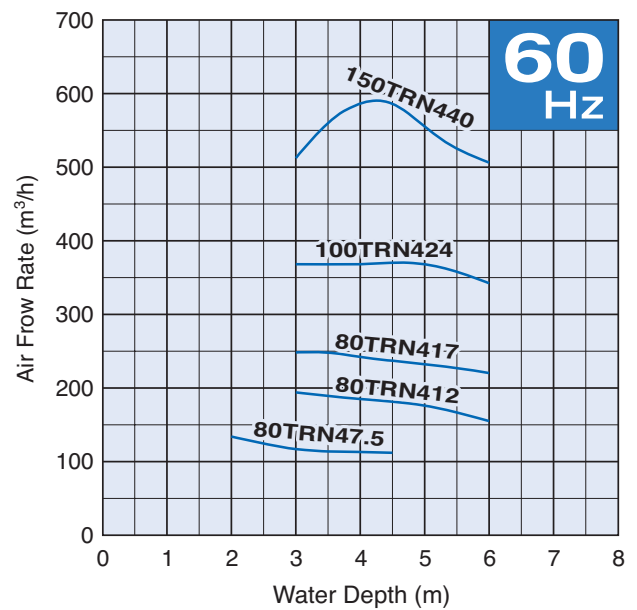
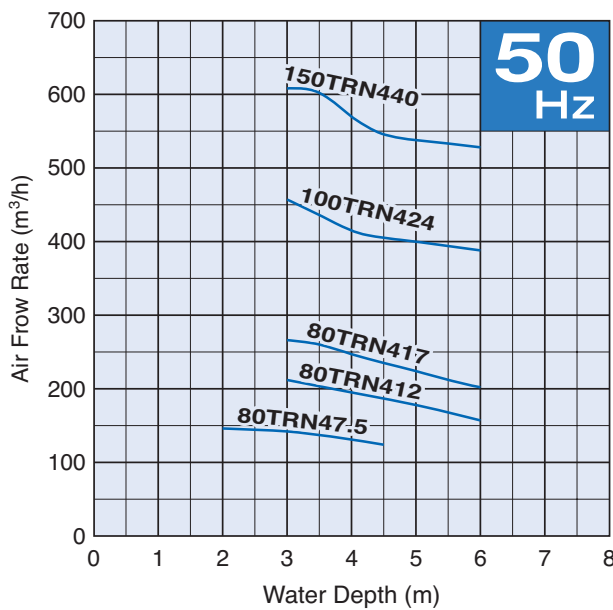
Selection Table

Model	Air-inlet Bore mm	Motor Output kW	Phase	Pole	Max. Water Depth m	No. of Outlets
80TRN47.5	80	7.5	3-phase	4	4.5	6
80TRN412	80	12	3-phase	4	6	6
80TRN417	80	17	3-phase	4	6	6
100TRN424	100	24	3-phase	4	6	8
150TRN440	150	40	3-phase	4	6	8

● Max. water depth is the load limit of the motor. The load placed on the motor increase the deeper the submersible aerator is installed, therefore if the aerator is operated below the max. water depth, the overload will trip the motor protection device and stop the aerator from running continuously.

Air Flow Rate – Water Depth Curves

(The air flow rates are expressed at the standard condition, i.e. temperature of 20°C, 1 atm and may vary by up to approximately 5%)



SPECIFICATIONS	Model	80TRN47.5	
		TRN-series 7.5kW, 3-phase	

<p>Type of Equipment Submersible self-aspirating aerator suitable for aeration and mixing in sewage and wastewater treatment</p> <p>Type of Fluid Sewage and wastewater</p> <p>Temperature: 0 to 40°C</p> <p>Air-inlet Bore & Connection 80mm, Threaded Oval Flange</p> <p>Motor Output 7.5kW</p> <p>Power Supply Three-phase</p> <p>Starting Method Direct on Line (Star-Delta available on special request)</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 border="0"> <tr> <td>50Hz</td> <td>60Hz</td> </tr> <tr> <td>380V – 16.6A</td> <td>220V – 28.4A</td> </tr> <tr> <td>400V – 16.4A</td> <td>380V – 16.0A</td> </tr> <tr> <td>415V – 16.1A</td> <td>440V – 14.2A</td> </tr> </table> <p>Power Cable Sheath: Chloroprene rubber Standard Length: 8m 200 to 600V supply: 1 × 4 × 5.5mm², O.D. 16.8mm</p> <p>Dry Weight (excluding cable) 190kg</p>	50Hz	60Hz	380V – 16.6A	220V – 28.4A	400V – 16.4A	380V – 16.0A	415V – 16.1A	440V – 14.2A	<p>Impeller Special semi-open impeller made of 410 stainless steel casting</p> <p>Solids Passage 50Hz – φ15mm 60Hz – φ15mm</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 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 Face: SiC + SiC Lower Seal Face: 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 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), 6000ml</p> <p>Motor Protection Device 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 – 16.6A	220V – 28.4A								
400V – 16.4A	380V – 16.0A								
415V – 16.1A	440V – 14.2A								

Standard Accessory
Silencer & Valve Set
Optional Accessory
External Leakage Sensor (Electrode)
Special Specifications
High Temperature Liquids Version (60°C)

SPECIFICATIONS	Model	80TRN412	
		TRN-series 12kW, 3-phase	

<p>Type of Equipment Submersible self-aspirating aerator suitable for aeration and mixing in sewage and wastewater treatment</p> <p>Type of Fluid Sewage and wastewater</p> <p>Temperature: 0 to 40°C</p> <p>Air-inlet Bore & Connection 80mm, Threaded Oval Flange</p> <p>Motor Output 12kW</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 border="0"> <tr> <td>50Hz</td> <td>60Hz</td> </tr> <tr> <td>380V – 26.0A</td> <td>220V – 43.2A</td> </tr> <tr> <td>400V – 24.7A</td> <td>380V – 25.2A</td> </tr> <tr> <td>415V – 24.0A</td> <td>440V – 21.6A</td> </tr> </table> <p>Power Cable Standard Length: 8m 200 to 600V supply: 1 × 4 × 3.5mm², O.D. 14.1mm, Chloroprene rubber 1 × 3 × 3.5mm², O.D. 12.9mm, Chloroprene rubber 1 × 2 × 1.25mm², O.D. 9.6mm, PVC</p> <p>Dry Weight (excluding cable) 192kg</p>	50Hz	60Hz	380V – 26.0A	220V – 43.2A	400V – 24.7A	380V – 25.2A	415V – 24.0A	440V – 21.6A	<p>Impeller Special semi-open impeller made of 410 stainless steel casting</p> <p>Solids Passage 50Hz – φ15mm 60Hz – φ15mm</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 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 Face: SiC + SiC Lower Seal Face: 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 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), 6000ml</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 – 26.0A	220V – 43.2A								
400V – 24.7A	380V – 25.2A								
415V – 24.0A	440V – 21.6A								

<p>Standard Accessory</p> <p>Silencer & Valve Set</p> <p>Optional Accessory</p> <p>External Leakage Sensor (Electrode)</p>	<p>Special Specifications</p> <p>High Temperature Liquids Version (60°C)</p>
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SPECIFICATIONS	Model	80TRN417									
		TRN-series 17kW, 3-phase									
<p>Type of Equipment Submersible self-aspirating aerator suitable for aeration and mixing in sewage and wastewater treatment</p> <p>Type of Fluid Sewage and wastewater</p> <p>Temperature: 0 to 40°C</p> <p>Air-inlet Bore & Connection 80mm, Threaded Oval Flange</p> <p>Motor Output 17kW</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 border="0"> <tr> <td>50Hz</td> <td>60Hz</td> </tr> <tr> <td>380V – 36.5A</td> <td>220V – 60.8A</td> </tr> <tr> <td>400V – 34.7A</td> <td>380V – 34.5A</td> </tr> <tr> <td>415V – 33.8A</td> <td>440V – 30.4A</td> </tr> </table> <p>Power Cable Standard Length: 8m 200 to 600V supply: 1 × 4 × 5.5mm², O.D. 16.8mm, Chloroprene rubber 1 × 3 × 5.5mm², O.D. 15.2mm, Chloroprene rubber 1 × 2 × 1.25mm², O.D. 9.6mm, PVC</p> <p>Dry Weight (excluding cable) 213kg</p>	50Hz	60Hz	380V – 36.5A	220V – 60.8A	400V – 34.7A	380V – 34.5A	415V – 33.8A	440V – 30.4A	<p>Impeller Special semi-open impeller made of 410 stainless steel casting</p> <p>Solids Passage 50Hz – φ15mm 60Hz – φ15mm</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 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 Face: SiC + SiC Lower Seal Face: 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 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), 6000ml</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 – 36.5A	220V – 60.8A										
400V – 34.7A	380V – 34.5A										
415V – 33.8A	440V – 30.4A										
<p>Standard Accessory</p> <p>Silencer & Valve Set</p>		<p>Optional Accessory</p> <p>External Leakage Sensor (Electrode)</p>									
TSURUMI MANUFACTURING CO., LTD.											

SPECIFICATIONS	Model	100TRN424	
		TRN-series 24kW, 3-phase	

<p>Type of Equipment Submersible self-aspirating aerator suitable for aeration and mixing in sewage and wastewater treatment</p> <p>Type of Fluid Sewage and wastewater</p> <p>Temperature: 0 to 40°C</p> <p>Air-inlet Bore & Connection 100mm, Threaded JIS 10kg/cm² Flange</p> <p>Motor Output 24kW</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 border="0"> <tr> <td>50Hz</td> <td>60Hz</td> </tr> <tr> <td>380V – 50.0A</td> <td>220V – 93.3A</td> </tr> <tr> <td>400V – 48.0A</td> <td>380V – 54.0A</td> </tr> <tr> <td>415V – 48.0A</td> <td>440V – 46.6A</td> </tr> </table> <p>Power Cable Standard Length: 10m 200 to 600V supply: 1 × 4 × 14mm², O.D. 21.7mm, Chloroprene rubber 1 × 3 × 14mm², O.D. 19.7mm, Chloroprene rubber 1 × 2 × 1.25mm², O.D. 9.8mm, PVC</p> <p>Dry Weight (excluding cable) 435kg</p>	50Hz	60Hz	380V – 50.0A	220V – 93.3A	400V – 48.0A	380V – 54.0A	415V – 48.0A	440V – 46.6A	<p>Impeller Special semi-open impeller made of 410 stainless steel casting</p> <p>Solids Passage 50Hz – ϕ22mm 60Hz – ϕ22mm</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 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 Face: SiC + SiC Lower Seal Face: 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 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), 10000ml</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 – 50.0A	220V – 93.3A								
400V – 48.0A	380V – 54.0A								
415V – 48.0A	440V – 46.6A								

Standard Accessory

Silencer & Valve Set

Optional Accessory

External Leakage Sensor (Electrode)

SPECIFICATIONS	Model	150TRN440	TRN-series
			40kW, 3-phase

<p>Type of Equipment Submersible self-aspirating aerator suitable for aeration and mixing in sewage and wastewater treatment</p> <p>Type of Fluid Sewage and wastewater</p> <p>Temperature: 0 to 40°C</p> <p>Air-inlet Bore & Connection 150mm, Threaded JIS 10kg/cm² Flange</p> <p>Motor Output 40kW</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 border="0"> <tr> <td>50Hz</td> <td>60Hz</td> </tr> <tr> <td>380V – 85A</td> <td>220V – 140A</td> </tr> <tr> <td>400V – 83A</td> <td>380V – 81A</td> </tr> <tr> <td>415V – 82A</td> <td>440V – 71A</td> </tr> </table> <p>Power Cable Standard Length: 10m 380 to 600V supply: 1 × 4 × 14mm², O.D. 21.7mm, Chloroprene rubber 1 × 3 × 14mm², O.D. 19.7mm, Chloroprene rubber 1 × 2 × 1.25mm², O.D. 9.8mm, PVC 200 to 240V supply: 1 × 4 × 22mm², O.D. 28.8mm, Chloroprene rubber 1 × 3 × 22mm², O.D. 26.1mm, Chloroprene rubber 1 × 2 × 1.25mm², O.D. 9.8mm, PVC</p> <p>Dry Weight (excluding cable) 583kg</p>	50Hz	60Hz	380V – 85A	220V – 140A	400V – 83A	380V – 81A	415V – 82A	440V – 71A	<p>Impeller Special semi-open impeller made of 410 stainless steel casting</p> <p>Solids Passage 50Hz – ϕ25mm 60Hz – ϕ25mm</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 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 Face: SiC + SiC Lower Seal Face: 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 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), 16000ml</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 – 85A	220V – 140A								
400V – 83A	380V – 81A								
415V – 82A	440V – 71A								

<p style="background-color: #eee; padding: 2px;">Standard Accessory</p> <p>Silencer & Valve Set</p>	<p style="background-color: #eee; padding: 2px;">Optional Accessory</p> <p>External Leakage Sensor (Electrode)</p>
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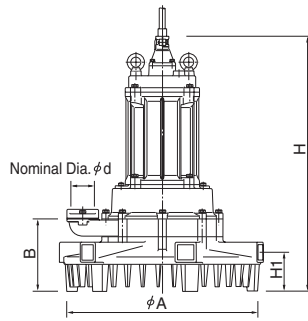
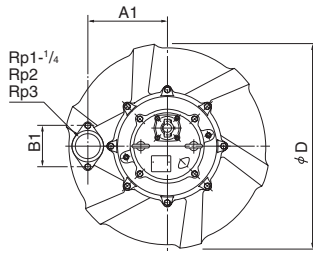
DIMENSIONS

Model 32TRN2.75 to 150TRN440

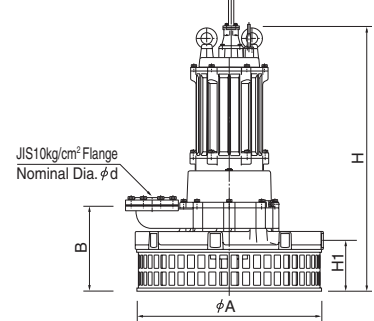
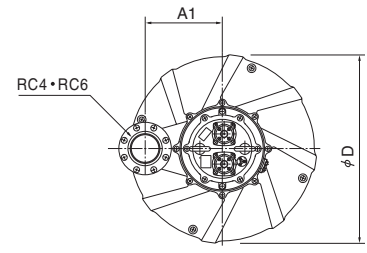
TRN-series

32 - 150mm

32TRN2.75
32TRN21.5
50TRN42.2
50TRN43.7
50TRN45.5
80TRN47.5
80TRN412
80TRN417



100TRN424
150TRN440



Unit: mm

Model	d	A	A1	B	B1	D	H	H1
32TRN2.75	32	371	184	146	90	400	473	81
32TRN21.5	32	371	184	146	90	400	473	81
50TRN42.2	50	660	271	226	140	700	689	123
50TRN43.7	50	660	271	226	140	700	694	123
50TRN45.5	50	660	271	226	140	700	835	123
80TRN47.5	80	660	271	246	140	700	868	133
80TRN412	80	660	271	246	140	700	898	133
80TRN417	80	660	271	246	140	700	958	133
100TRN424	100	980	385	417	—	1000	1225	272
150TRN440	150	980	410	452	—	1000	1459	269

Silencer & Valve Set

Unit: mm

Pipe Bore	A	B	C	D	G
φ 32	180	116	275	—	Rc 1-1/4
φ 50	230	154	370	—	Rc 2
φ 80	245	180	—	585	Rc 3
φ 100	345	256	—	760	Rc 4
φ 150	448	370	—	930	Rc 5

Material of Silencer: PVC (24kW and below)
Rolled Steel (40kW only)

