Series:	Discharge Bore:	Motor Output / Pole:
KTVE	50·80(100)mm	0.75 - 5.5kW / 2-pole

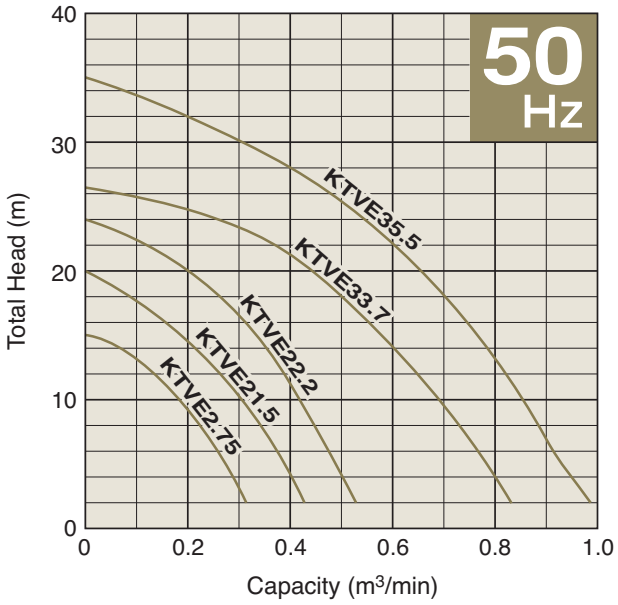
The KTVE-series is a submersible three-phase automatic portable drainage pump. An innovative electrode type relay unit built into the pump automatically starts and stops the pump to eliminate dry-running. This mechanism greatly reduces power consumption and extends operating life. The pump body is made of die-casted aluminium alloy, which is extremely advantageous in terms of portability. The sleeves that protect the pump casing, oil casing and water passages are made of synthetic rubber as a consideration against wear. The top discharge, side flow design assures efficient motor cooling even when it operates with its motor exposed to air. The slim design allows the pump to be placed in a confined space.

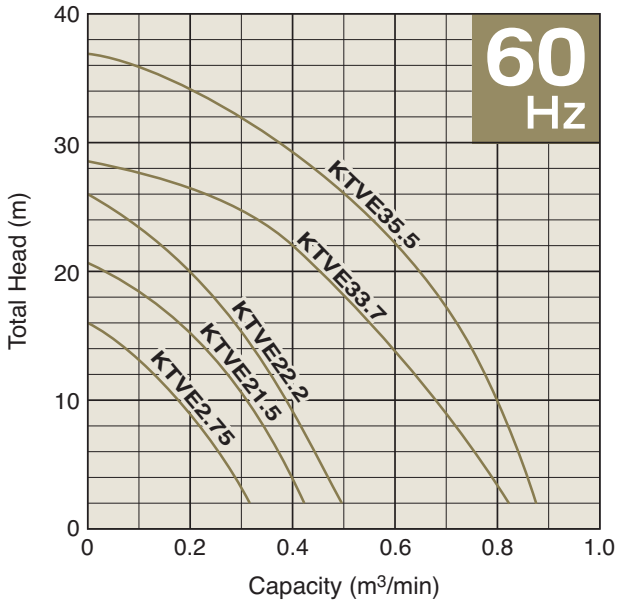
Selection Table

Model	Discharge Bore mm	Motor Output kW	Phase	Starting Method	Pole	Dry Weight kg
KTVE2.75	50	0.75	3-phase	Direct on Line	2	13.3
KTVE21.5	50(80)	1.5	3-phase	Direct on Line	2	22
KTVE22.2	50(80)	2.2	3-phase	Direct on Line	2	25
KTVE33.7	80(100)	3.7	3-phase	Direct on Line	2	40
KTVE35.5	80(100)	5.5	3-phase	Direct on Line	2	52

● Discharge bore in parentheses available on special request.

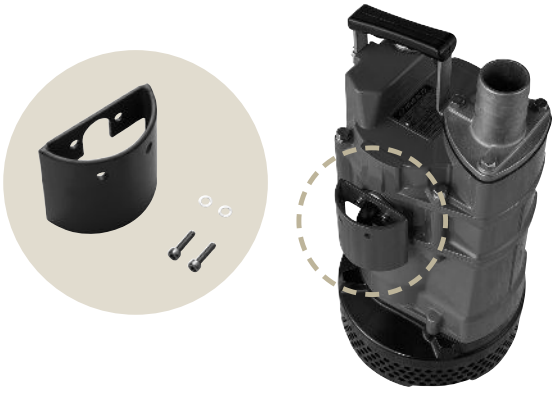
Performance Curves





Electrode Probe Cover (Optional Accessory)

The electrode probe for the water level sensor is a critical component for the automatic operation of the pump. Pumps are occasionally subjected to strong impacts during installation or when moving from place to place in harsh sites such as construction and mining.
Therefore, Tsurumi has prepared a probe cover made of structural steel to protect the electrode probe from strong impacts. This component can be easily installed in the field.



SPECIFICATIONS	Model	KTVE2.75	KTVE-series
			0.75kW, 3-phase

Type of Pump
Submersible automatic drainage pump for construction and foundation works, floodwater drainage, etc.

Automatic Control Device
Electrode

Die-casted Aluminium Alloy Body & Wear-resistant Synthetic Rubber
Provide a great advantage in terms of portability. The pump body is made of die-casted aluminium alloy. The sleeves that protect the pump casing, oil casing and water passages are made of synthetic rubber, thus eliminating worries about durability and wear.

Type of Fluid
Stormwater, groundwater, wash water, and sand-carrying water

Temperature: 0 to 40°C

Discharge Bore & Connection
50mm, Hose Coupling

Motor Output
0.75kW

Power Supply
Three-phase

Starting Method
Direct on Line

Motor
Continuous-duty rated, dry-type induction motor

Insulation Class: E
Degree of Protection: IP68

No. of Poles & Speed (Synchronous Speed)
2-pole, 3000/3600min^{-1} (50/60Hz)

Power Supply Voltages & Rated Currents

50Hz	60Hz
380V – 2.0A	220V – 3.6A
400V – 2.2A	380V – 1.9A
415V – 2.2A	440V – 1.7A

Power Cable
Sheath: PVC
Standard Length: 5m
200 to 600V supply:
1 x 4 x 1.25mm^2, O.D. 11.1mm

Dry Weight (excluding cable)
13.3kg

Impeller
Vortex impeller deigned for "high-gap structure", made of urethane rubber

Solids Passage
50Hz – ϕ8.5mm
60Hz – ϕ8.5mm

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.

Bearing
Permanently lubricated, deep-groove, double-shielded C3 ball bearings

Shaft
420 stainless steel

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.

Upper Seal Face: Ceramic + Carbon
Lower Seal Face: SiC + Ceramic

V-Ring
Used as a "Dust Seal", it protects the mechanical seal from abrasive particles.

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.

Type of Lubricating Oil & Volume
Turbine Oil (ISO VG32), 150ml

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.

Optional Accessories

Male Threaded Coupling
Extension Probe
Electrode Probe Cover

SPECIFICATIONS	Model	KTVE21.5	KTVE-series 1.5kW, 3-phase

Type of Pump
Submersible automatic drainage pump for construction and foundation works, floodwater drainage, etc.

Automatic Control Device
Electrode

Die-casted Aluminium Alloy Body & Wear-resistant Synthetic Rubber
Provide a great advantage in terms of portability. The pump body is made of die-casted aluminium alloy. The sleeves that protect the pump casing, oil casing and water passages are made of synthetic rubber, thus eliminating worries about durability and wear.

Type of Fluid
Stormwater, groundwater, wash water, and sand-carrying water

Temperature: 0 to 40°C

Discharge Bore & Connection
50mm, Hose Coupling
(80mm discharge bore available on special request)

Motor Output
1.5kW

Power Supply
Three-phase

Starting Method
Direct on Line

Motor
Continuous-duty rated, dry-type induction motor

Insulation Class: E
Degree of Protection: IP68

No. of Poles & Speed (Synchronous Speed)
2-pole, 3000/3600min^{-1} (50/60Hz)

Power Supply Voltages & Rated Currents

50Hz	60Hz
380V – 3.4A	220V – 5.6A
400V – 3.3A	380V – 3.3A
415V – 3.2A	440V – 2.8A

Power Cable
Sheath: PVC
Standard Length: 8m
200 to 600V supply:
1 x 4 x 1.25mm^2, O.D. 11.1mm

Dry Weight (excluding cable)
22kg

Impeller
Vortex impeller deigned for "high-gap structure", made of ductile cast iron

Solids Passage
50Hz – ϕ8.5mm
60Hz – ϕ8.5mm

Protection Plate
Made of 304 stainless steel, protect the oil casing made of aluminium alloy die casting from abrasive particles.

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.

Bearing
Permanently lubricated, deep-groove, double-shielded C3 ball bearings

Shaft
403 stainless steel

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.

Upper Seal Face: SiC + SiC
Lower Seal Face: SiC + SiC

V-Ring
Used as a "Dust Seal", it protects the mechanical seal from abrasive particles.

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.

Type of Lubricating Oil & Volume
Turbine Oil (ISO VG32), 270ml

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.

Optional Accessories

Male Threaded Coupling
Extension Probe
Electrode Probe Cover

SPECIFICATIONS	Model	KTVE22.2	KTVE-series 2.2kW, 3-phase

Type of Pump
Submersible automatic drainage pump for construction and foundation works, floodwater drainage, etc.

Automatic Control Device
Electrode

Die-casted Aluminium Alloy Body & Wear-resistant Synthetic Rubber
Provide a great advantage in terms of portability. The pump body is made of die-casted aluminium alloy. The sleeves that protect the pump casing, oil casing and water passages are made of synthetic rubber, thus eliminating worries about durability and wear.

Type of Fluid
Stormwater, groundwater, wash water, and sand-carrying water

Temperature: 0 to 40°C

Discharge Bore & Connection
50mm, Hose Coupling
(80mm discharge bore available on special request)

Motor Output
2.2kW

Power Supply
Three-phase

Starting Method
Direct on Line

Motor
Continuous-duty rated, dry-type induction motor

Insulation Class: E
Degree of Protection: IP68

No. of Poles & Speed (Synchronous Speed)
2-pole, 3000/3600min^{-1} (50/60Hz)

Power Supply Voltages & Rated Currents

50Hz	60Hz
380V – 4.4A	220V – 7.6A
400V – 4.3A	380V – 4.3A
415V – 4.2A	440V – 3.8A

Power Cable
Sheath: PVC
Standard Length: 8m
200 to 600V supply:
1 x 4 x 1.25mm^2, O.D. 11.1mm

Dry Weight (excluding cable)
25kg

Impeller
Vortex impeller deigned for "high-gap structure", made of ductile cast iron

Solids Passage
50Hz – ϕ8.5mm
60Hz – ϕ8.5mm

Protection Plate
Made of 304 stainless steel, protect the oil casing made of aluminium alloy die casting from abrasive particles.

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.

Bearing
Permanently lubricated, deep-groove, double-shielded C3 ball bearings

Shaft
403 stainless steel

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.

Upper Seal Face: SiC + SiC
Lower Seal Face: SiC + SiC

V-Ring
Used as a "Dust Seal", it protects the mechanical seal from abrasive particles.

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.

Type of Lubricating Oil & Volume
Turbine Oil (ISO VG32), 270ml

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.

Optional Accessories

Male Threaded Coupling
Extension Probe
Electrode Probe Cover

SPECIFICATIONS	Model	KTVE33.7	KTVE-series 3.7kW, 3-phase

Type of Pump
Submersible automatic drainage pump for construction and foundation works, floodwater drainage, etc.

Automatic Control Device
Electrode

Die-casted Aluminium Alloy Body & Wear-resistant Synthetic Rubber
Provide a great advantage in terms of portability. The pump body is made of die-casted aluminium alloy. The sleeves that protect the pump casing, oil casing and water passages are made of synthetic rubber, thus eliminating worries about durability and wear.

Type of Fluid
Stormwater, groundwater, wash water, and sand-carrying water

Temperature: 0 to 40°C

Discharge Bore & Connection
80mm, Hose Coupling
(100mm discharge bore available on special request)

Motor Output
3.7kW

Power Supply
Three-phase

Starting Method
Direct on Line

Motor
Continuous-duty rated, dry-type induction motor

Insulation Class: E
Degree of Protection: IP68

No. of Poles & Speed (Synchronous Speed)
2-pole, 3000/3600min^{-1} (50/60Hz)

Power Supply Voltages & Rated Currents

50Hz	60Hz
380V – 8.6A	220V – 13.0A
400V – 7.4A	380V – 8.0A
415V – 7.4A	440V – 6.5A

Power Cable
Sheath: Chloroprene rubber
Standard Length: 8m
200 to 600V supply:
1 x 4 x 2.0mm^2, O.D. 14.4mm

Dry Weight (excluding cable)
40kg

Impeller
Vortex impeller deigned for "high-gap structure", made of ductile cast iron

Solids Passage
50Hz – ϕ8.5mm
60Hz – ϕ8.5mm

Protection Plate
Made of 304 stainless steel, protect the oil casing made of aluminium alloy die casting from abrasive particles.

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.

Bearing
Permanently lubricated, deep-groove, double-shielded C3 ball bearings

Shaft
403 stainless steel

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.

Upper Seal Face: SiC + SiC
Lower Seal Face: SiC + SiC

V-Ring
Used as a "Dust Seal", it protects the mechanical seal from abrasive particles.

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.

Type of Lubricating Oil & Volume
Turbine Oil (ISO VG32), 400ml

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.

Optional Accessories

Male Threaded Coupling
Extension Probe
Electrode Probe Cover

SPECIFICATIONS	Model	KTVE35.5	KTVE-series 5.5kW, 3-phase

Type of Pump
Submersible automatic drainage pump for construction and foundation works, floodwater drainage, etc.

Automatic Control Device
Electrode

Die-casted Aluminium Alloy Body & Wear-resistant Synthetic Rubber
Provide a great advantage in terms of portability. The pump body is made of die-casted aluminium alloy. The sleeves that protect the pump casing, oil casing and water passages are made of synthetic rubber, thus eliminating worries about durability and wear.

Type of Fluid
Stormwater, groundwater, wash water, and sand-carrying water

Temperature: 0 to 40°C

Discharge Bore & Connection
80mm, Hose Coupling
(100mm discharge bore available on special request)

Motor Output
5.5kW

Power Supply
Three-phase

Starting Method
Direct on Line

Motor
Continuous-duty rated, dry-type induction motor

Insulation Class: E
Degree of Protection: IP68

No. of Poles & Speed (Synchronous Speed)
2-pole, 3000/3600min^{-1} (50/60Hz)

Power Supply Voltages & Rated Currents

50Hz	60Hz
380V – 11.6A	220V – 19.5A
400V – 11.0A	380V – 11.7A
415V – 10.6A	440V – 10.0A

Power Cable
Sheath: Chloroprene rubber
Standard Length: 8m
200 to 600V supply:
1 x 4 x 3.5mm^2, O.D. 16.8mm

Dry Weight (excluding cable)
52kg

Impeller
Vortex impeller deigned for "high-gap structure", made of ductile cast iron

Solids Passage
50Hz – ϕ8.5mm
60Hz – ϕ8.5mm

Protection Plate
Made of 304 stainless steel, protect the oil casing made of aluminium alloy die casting from abrasive particles.

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.

Bearing
Permanently lubricated, deep-groove, double-shielded C3 ball bearings

Shaft
403 stainless steel

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.

Upper Seal Face: SiC + SiC
Lower Seal Face: SiC + SiC

V-Ring
Used as a "Dust Seal", it protects the mechanical seal from abrasive particles.

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.

Type of Lubricating Oil & Volume
Turbine Oil (ISO VG32), 680ml

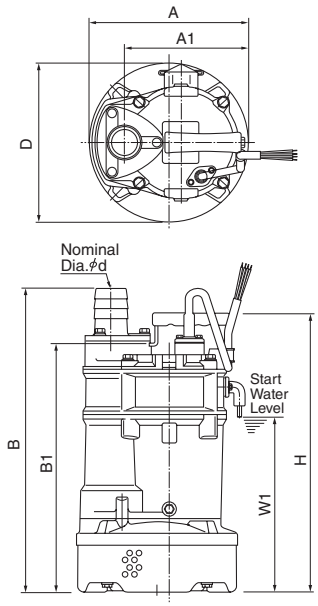
Motor Protection Device
A circle thermal protector built in the motor housing. Directly cuts the motor circuit if excessive heat builds up or an overcurrent condition occurs in the motor.

Optional Accessories

Male Threaded Coupling
Extension Probe
Electrode Probe Cover

DIMENSIONS | Model KTVE2.75 to KTVE35.5

KTVE-series
50·80mm



Unit: mm

Model	d	A	A1	B	B1	D	H	W1
KTVE2.75	50	200	155	408	334	200	422	239
KTVE21.5	50(80)	240	187	462	380	240	426	266
KTVE22.2	50(80)	240	187	462	380	240	426	266
KTVE33.7	80(100)	285	210	585	462	285	585	327
KTVE35.5	80(100)	300	229	620	497	300	620	357