

# WALRUS

## PUMPS CATALOGUE



Better life through innovation





# **WALRUS**

**WALRUS PUMP CO., LTD.**





Pump Performance Test



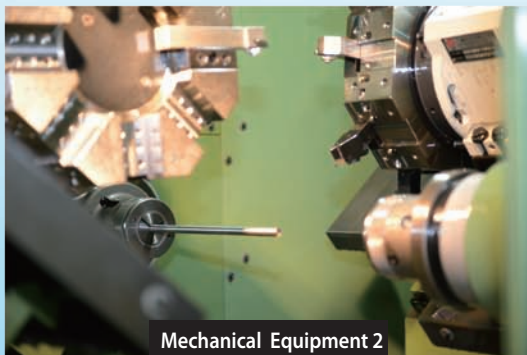
Dynamics Laboratory



CNC Facilities



Mechanical Equipment 1



Mechanical Equipment 2



Mechanical Equipment 3

# WALRUS

**WALRUS Pump Co., Ltd is the leading manufacturers of pumps located in Taiwan since 1967, our value is to satisfy customers with a range of comprehensive products, innovative technology and superior quality, value and service. We continuously invest in new product research and development to bring you the best in the industry. Walrus has obtained ISO 9001 and continuously to meet worldwide safety standards.**

**WALRUS established two primary factories in Taiwan, which located in Taipei and Kaohsiung. We invest the state of art CNC facilities to upgrade the quality of our manufacture. Industrial water pump products (TPH,TPHK,TPAK) were tested to ensure the quality and reliability.**

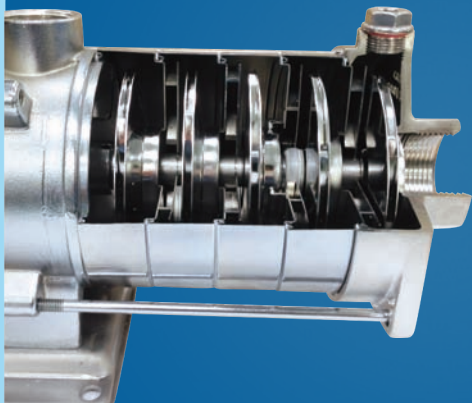
**Currently, WALRUS is already the number 1 brand in Taiwan's home use market, its products are exported to over 40 countries, and it has received 5 global certifications: European CE & RoHS, Canadian CSA-C/US, Chinese 3C and ISO9001. Now, WALRUS is laying out regional markets in the US, Mainland China, Japan, Europe, India, Southeast Asia, Canada, Brazil, Australia, etc.**



Completed Support with Full range Service

# Competition

Walrus is actively expanding its export markets; we provide wide range pumps for three major applications, such as residential, commercial and industrial, and established sales/distribution channels and service centers worldwide. We are to satisfy our customers' needs with the best quality products, reasonable price, shortest lead time, highest safety standards, and most comprehensive and reliable after sales services.



Go Beyond Excellence

# Innovation

To become a major worldwide manufacturer of very high-quality pumps as our goal, from market research to product design to source raw material to manufacturing and quality control, Walrus takes worldwide perspectives and needs into account to produce world class products.

Promising Future of Human Beings

# Environment

Walrus's vision is to utilize water usage and provide our society with greater convenience, we using non-toxic materials as components for wide range pumps to meets RoHS, and we proactively reduce waste and use recyclable materials to maintain a balance in our environment, society and economy.



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# HQ Series Electronic Control Pump



## Applications

The HQ series pumps are designed for water supply and pressure boosting in residential, commercial and light industrial applications where low or inadequate water pressure exists. It is suitable for boosting pressure from underground or surface water supplies.

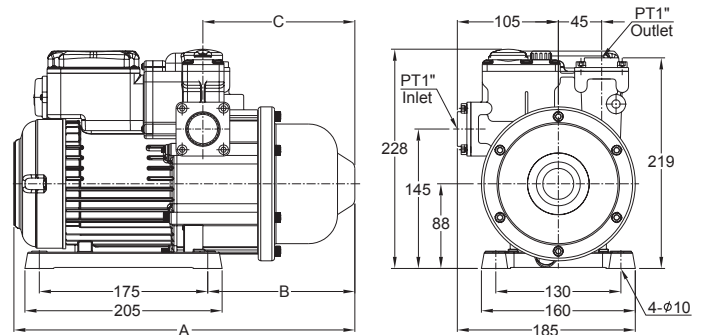
## Operating Conditions

1. Ambient temperature: Max. +40°C
2. Liquid temperature: +4°C ~ +40°C
3. System Pressure : Max. 8.5 kg/cm<sup>2</sup>
4. Relative humidity: Max. 85% (RH)
5. Under normal operation, it is not necessary to adjust the pressure unless the cut in pressure is higher than preset activation point (refer to specification).

## Product Features

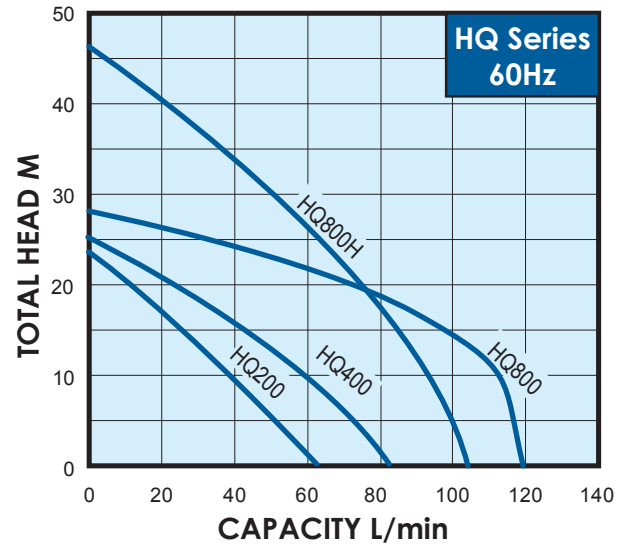
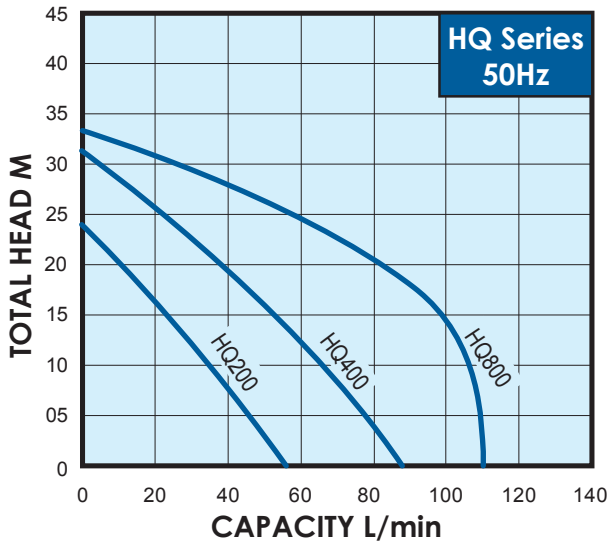
1. The HQ is a complete, all-in-one unit, consisting of pump, motor, pressure tank, and electronic controller. The built-in electronic controller provides constant pressure which ensures that the pump starts automatically when water is consumed and operates continuously until water is not required.
2. Compact design and quiet operation make the HQ series suitable for many applications.
3. The HQ is constructed from the top quality corrosion resistant materials.
4. Pump has built in dry-run shut off with automatic reset function.
5. The motor has built-in thermal overload to protect against high operating temperatures and over current.
6. The HQ has an anti-cycling feature which prevents the pump from continuous starting and stopping when you have a dripping tap or minor leak in the system.
7. The pumps will lift water up to 7.6m. with foot valve and pump suction piping filled with water.

## Dimensions




Model	Cycle ( Hz )	Dimensions(mm)		
		A	B	C
HQ200	50 / 60	355	153	158
HQ400	50 / 60	355	153	158
HQ800	50 / 60	410	162	167
HQ800H	60	410	162	167


## Performance curve



## Specification, 50Hz

Model	Power (kW)	Cycle (Hz)	Phase (Ø)	Voltage (V)	Amp's (A)	Inlet (in.)	Outlet (in.)	Preset activation point (kg/cm <sup>2</sup> )	H max. (m)	Q max. (L/min)	N.W. kg	
HQ200	0.18	50	1	200~240	1.5	1"	1"	1.6	24	55	7.5	30
HQ400	0.37	50	1	200~240	2.8	1"	1"	2.0	31	85	8.5	30
HQ800	0.75	50	1	200~240	4.5	1"	1"	2.0	33	110	11.3	24

## Specification, 60Hz

Model	Power (kW)	Cycle (Hz)	Phase (Ø)	Voltage (V)	Amp's (A)	Inlet (in.)	Outlet (in.)	Preset activation point (kg/cm <sup>2</sup> )	H max. (m)	Q max. (L/min)	N.W. kg	
HQ200	0.18	60	1	110/220	4.0/2.0	1"	1"	1.6	24	60	7.5	30
HQ400	0.37	60	1	110/220	6.0/3.0	1"	1"	1.8	26	80	8.5	30
HQ800	0.75	60	1	110/220	9.0/4.5	1"	1"	2.0	28	120	10.8	24
HQ800H	0.75	60	1	110/220	9.0/4.5	1"	1"	2.5	46	105	11.3	



# TQ Series Electronic Control Pump



**50Hz**

**Power:** 0.18 - 2.2 kW

**Head:** Up to 34M

**Flow:** Up to 250 L/min

**60Hz**

**Power:** 0.18 - 3.7 kW

**Head:** Up to 52M

**Flow:** Up to 270 L/min

**Outlet:** 1" - 2"

## Applications

The TQ series pumps are designed for water supply and pressure boosting in residential, commercial and light industrial applications where low or inadequate water pressure exists. It is suitable for boosting pressure from underground or surface water supplies.

## Operating Conditions

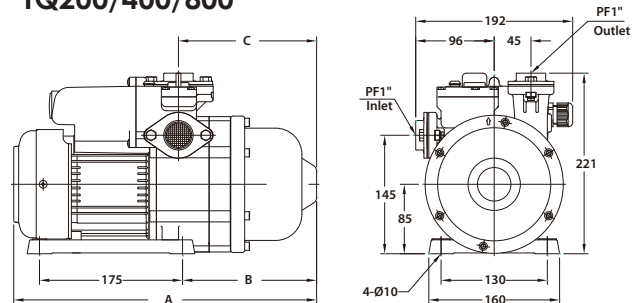
1. Ambient temperature: Max. +40°C
2. Liquid temperature: +4°C ~ +40°C
3. System Pressure : Max. 8.5 kg/cm<sup>2</sup>
4. Relative humidity: Max. 85% (RH)
5. Under normal operation, it is not necessary to adjust the pressure unless the cut in pressure is higher than preset activation point (refer to specification).

## Product Features

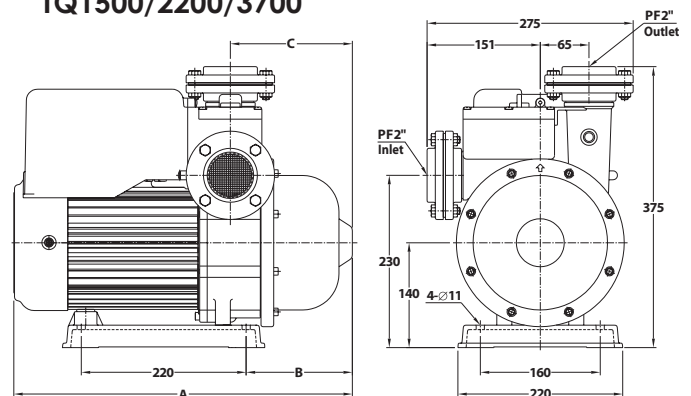
1. The TQ is a complete, all-in-one unit, consisting of pump, motor, pressure tank, and electronic controller. The built-in electronic controller provides constant pressure which ensures that the pump starts automatically when water is consumed and operates continuously until water is not required.
2. Compact design and quiet operation make the TQ series suitable for many applications.
3. The TQ is constructed from the top quality corrosion resistant materials.
4. Pump has built in dry-run shut off with automatic reset function.
5. The motor has built-in thermal overload to protect against high operating temperatures and over current. (Single phase motor only)
6. The TQ has an anti-cycling feature which prevents the pump from continuous starting and stopping when you have a dripping tap or minor leak in the system.
7. The pumps will lift water up to 7.6m. with foot valve and pump suction piping filled with water.

## Dimensions

### TQ200/400/800

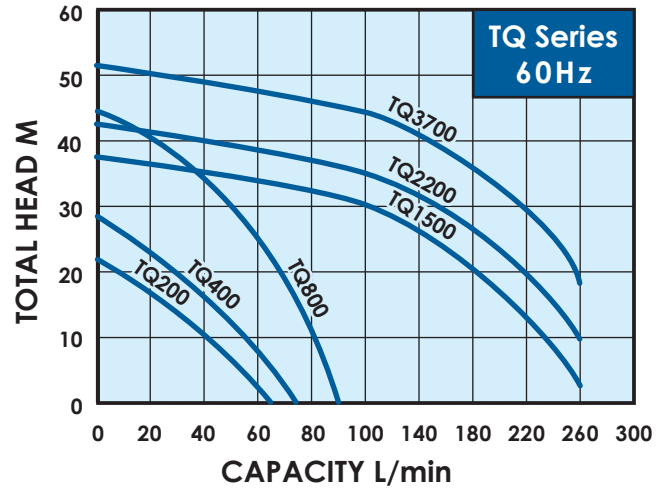
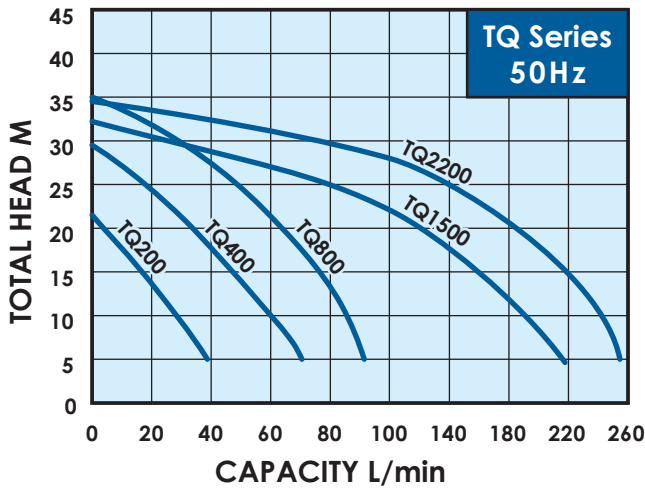


### TQ1500/2200/3700




Model	Cycle (Hz)	Dimensions (mm)		
		A	B	C
TQ200	50	360	153	158
	60	336	129	134
TQ400	50	371	164	169
	60	345	138	143
TQ800	50 / 60	417	164	169
TQ1500 ~ 2200	50 / 60	452	142	163
TQ3700	60	452	142	163


## Performance curve



## Specification, 50Hz

Model	Power (kW)	Cycle (Hz)	Phase (Ø)	Voltage (V)	Amp's (A)	Inlet (in.)	Outlet (in.)	Preset activation point (kg/cm <sup>2</sup> )	H max. (m)	Q max. (L/min)	N.W. kg	
TQ200	0.18	50	1	200~240	1.5	1"	1"	1.2	22	45	7.4	30
TQ400	0.37	50	1	200~240	3	1"	1"	1.8	30	75	9.4	30
TQ800	0.75	50	1	200~240	4.4	1"	1"	2.0	35	95	11	24
TQ1500	1.5	50	1	200~240	7.2	2"	2"	2.5	32	230	28	12
			3	200~240	5.8							
TQ2200	2.2	50	1	200~240	11.1	2"	2"	2.5	34	250	31	12
			3	200~240	7.2							

## Specification, 60Hz

Model	Power (kW)	Cycle (Hz)	Phase (Ø)	Voltage (V)	Amp's (A)	Inlet (in.)	Outlet (in.)	Preset activation point (kg/cm <sup>2</sup> )	H max. (m)	Q max. (L/min)	N.W. kg	
TQ200	0.18	60	1	110/220	4.0/2.0	1"	1"	1.4	22	60	7.4	30
TQ400	0.37	60	1	110/220	6.0/3.0	1"	1"	2.0	28	70	9.4	30
TQ800	0.75	60	1	110/220	11/5.5	1"	1"	2.5	44	90	11.6	24
TQ1500	1.5	60	1	220	9.5	2"	2"	3.0	37	270	28	12
			3	220	6.5							
TQ2200	2.2	60	3	220	9.5	2"	2"	3.0	42	270	31	12
TQ3700	3.7	60	3	220	13.8	2"	2"	3.0	52	270	31.5	12

# HQC Series Automatic Flow-Controlled Pump



**Power:** 0.18 - 0.75 kW

**50Hz**

**Head:** Up to 3.5 kg/cm<sup>2</sup>

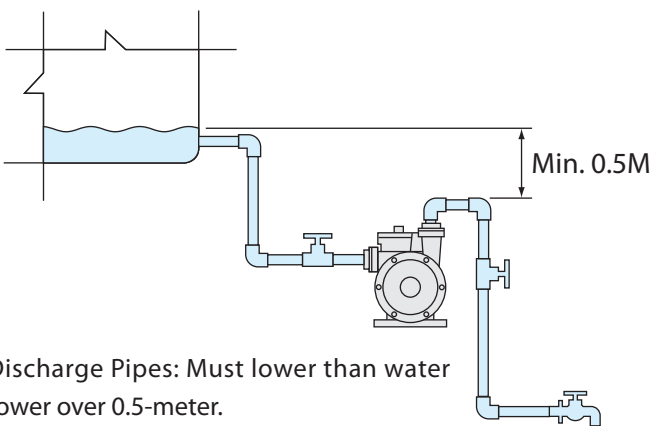
**Flow:** Up to 95 L/min

**60Hz**

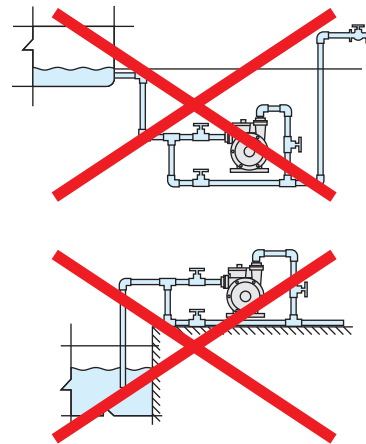
**Head:** Up to 4.4 kg/cm<sup>2</sup>

**Flow:** Up to 90 L/min

**Outlet:** 1"



Discharge Pipes: Must lower than water tower over 0.5-meter.



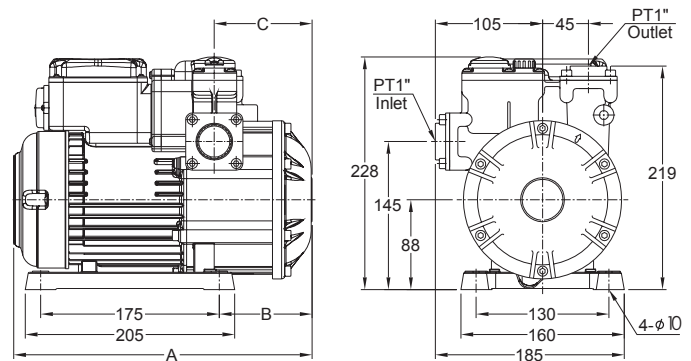
## Product Features

1. This HQC series most suitable to install it below the water tower, to downward pressurization, When using the water; the pump will automatically start increase the pressure to supply water, when stop using the pump will automatically stop supply power and water.
2. Compact design and quiet operation make the HQC series suitable for many applications.
3. The HQC is constructed from the top quality corrosion resistant materials.
4. The motor has built-in thermal overload to protect against high operating temperatures and over current.

## Operating Conditions

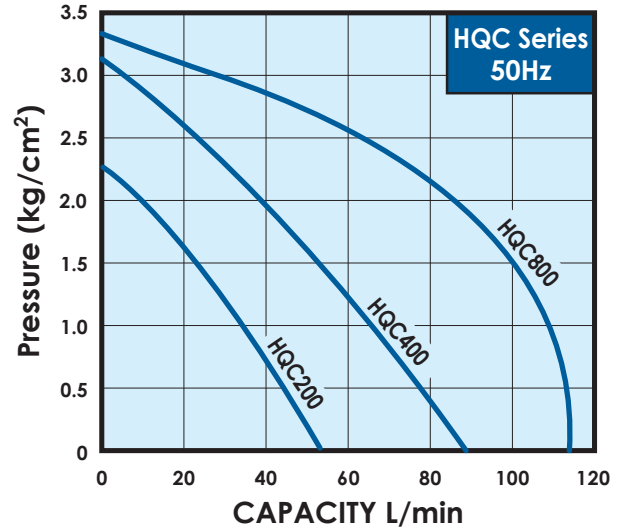
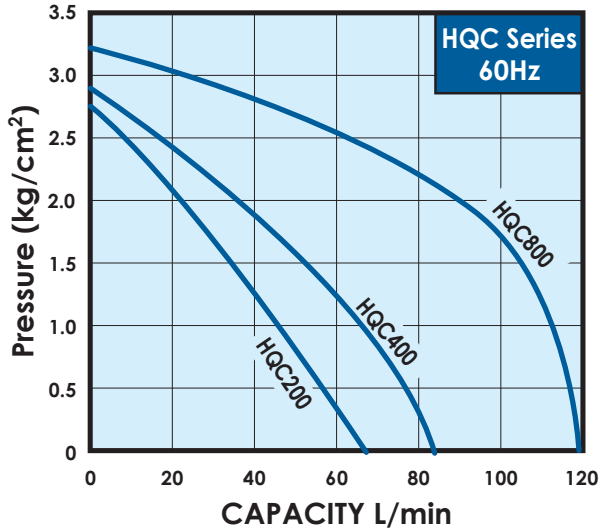
1. Ambient temperature: Max. +40°C
2. Liquid temperature: + 4°C ~ + 40°C
3. Pressure Range : Max. 6kg/cm<sup>2</sup>
4. Suction Pipes: Must run in positive pressure only a negative pressure unable to work the pump.
5. Discharge Pipes: Must lower than water tower over 0.5-meter.

## Dimensions




Model	Cycle (Hz)	Dimensions (mm)		
		A	B	C
HQC200	50 / 60	292	91	96
HQC400	50 / 60	292	91	96
HQC800	50 / 60	344	96	101


## Performance curve:



## Specification, 50Hz

Model	Power (kW)	Cycle (Hz)	Phase (∅)	Voltage (V)	Amp's (A)	Inlet (in.)	Outlet (in.)	P max. (kg/cm <sup>2</sup> )	Q max. (L/min)	N.W. (kg)	
HQC200	0.18	50	1	200~240	1.5	1"	1"	2.4	55	7.3	36
HQC400	0.37	50	1	200~240	2.8	1"	1"	3.1	85	8.3	36
HQC800	0.75	50	1	200~240	4.5	1"	1"	3.3	110	11.1	30

## Specification, 60Hz

Model	Power (kW)	Cycle (Hz)	Phase (∅)	Voltage (V)	Amp's (A)	Inlet (in.)	Outlet (in.)	P max. (kg/cm <sup>2</sup> )	Q max. (L/min)	N.W. (kg)	
HQC200	0.18	60	1	110/220	4.0/2.0	1"	1"	2.4	60	7.3	36
HQC400	0.37	60	1	110/220	6.0/3.0	1"	1"	2.6	80	8.3	36
HQC800	0.75	60	1	110/220	9.0/4.5	1"	1"	2.8	120	10.6	30

# TQC Series Automatic Flow-Controlled Pump



**Power:** 0.18 - 0.75 kW

**50Hz**

**Head:** Up to 3.5 kg/cm<sup>2</sup>

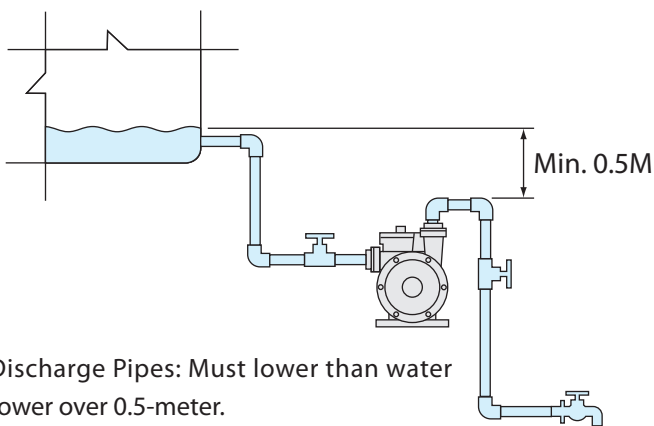
**Flow:** Up to 95 L/min

**60Hz**

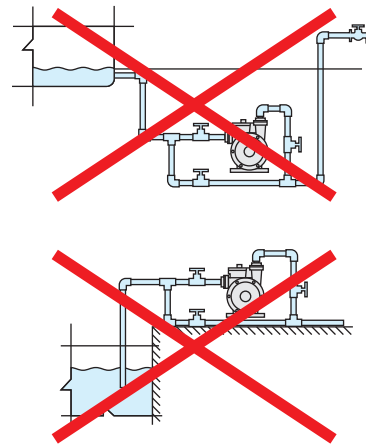
**Head:** Up to 4.4 kg/cm<sup>2</sup>

**Flow:** Up to 90 L/min

**Outlet:** 1"



Discharge Pipes: Must lower than water tower over 0.5-meter.



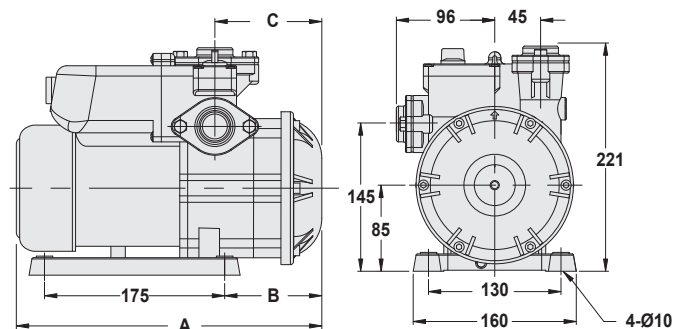
## Product Features

1. This TQC series most suitable to Install it below the water tower, to downward pressurization, When using the water; the pump will automatically start increase the pressure to supply water, when stop using the pump will automatically stop supply power and water.
2. Compact design and quiet operation make the TQC series suitable for many applications.
3. The TQC is constructed from the top quality corrosion resistant materials.
4. The motor has built-in thermal overload to protect against high operating temperatures and over current.

## Operating Conditions

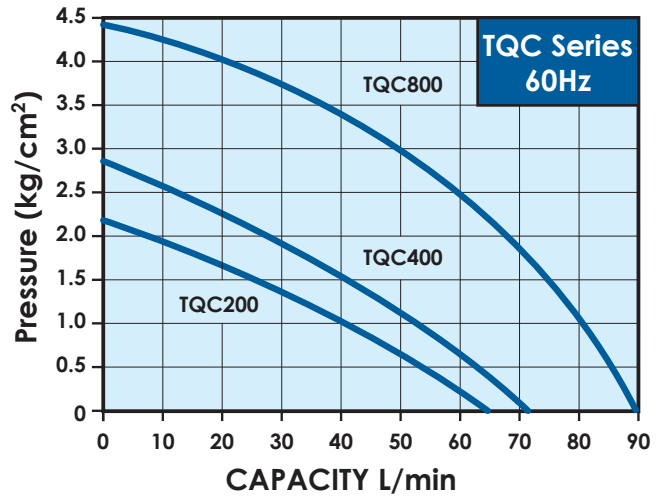
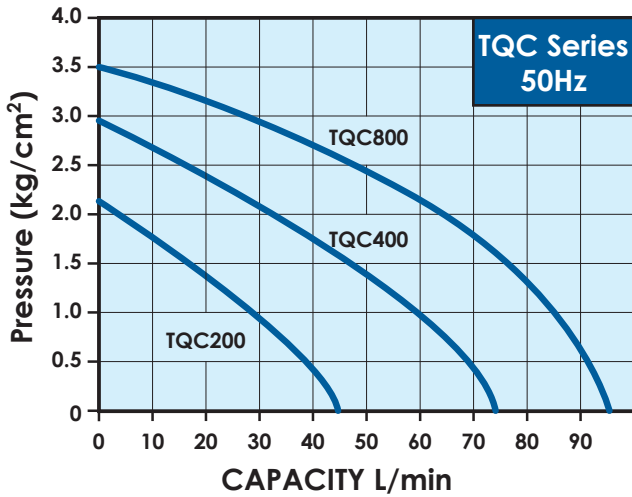
1. Ambient temperature: Max. +40°C
2. Liquid temperature: + 4°C ~ + 40°C
3. Pressure Range : Max. 6kg/cm<sup>2</sup>
4. Suction Pipes: Must run in positive pressure only a negative pressure unable to work the pump.
5. Discharge Pipes: Must lower than water tower over 0.5-meter.

## Dimensions




Model	Cycle ( Hz )	Dimensions (mm)		
		A	B	C
TQC200	50	297	91	96
	60	273	67	72
TQC400	50	306	99	104
	60	280	73	78
TQC800	50/60	352	99	104


## Performance curve:



## Specification, 50Hz

Model	Power (kW)	Cycle (Hz)	Phase (∅)	Voltage (V)	Amp's (A)	Inlet (in.)	Outlet (in.)	P max. (kg/cm <sup>2</sup> )	Q max. (L/min)	N.W. (kg)	
TQC200	0.18	50	1	200~240	1.5	1"	1"	2.2	45	6.4	36
TQC400	0.37	50	1	200~240	3	1"	1"	3.0	75	8.2	36
TQC800	0.75	50	1	200~240	4.4	1"	1"	3.5	95	10.4	30

## Specification, 60Hz

Model	Power (kW)	Cycle (Hz)	Phase (∅)	Voltage (V)	Amp's (A)	Inlet (in.)	Outlet (in.)	P max. (kg/cm <sup>2</sup> )	Q max. (L/min)	N.W. (kg)	
TQC200	0.18	60	1	110/220	4.0/2.0	1"	1"	2.2	60	6.4	36
TQC400	0.37	60	1	110/220	6.0/3.0	1"	1"	2.8	70	8.2	36
TQC800	0.75	60	1	110/220	11/5.5	1"	1"	4.4	90	11.0	30

# HQCN Series Hot Water Pump



**50Hz**

**Power:** 0.18 - 2.2 kW

**Head:** Up to 34M

**Flow:** Up to 250 L/min

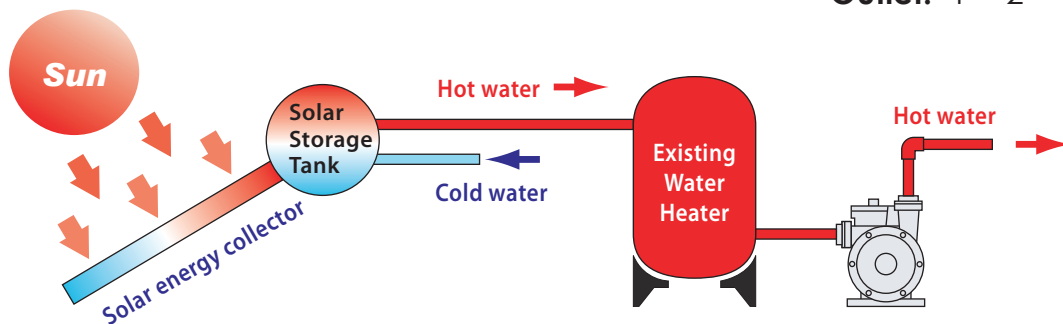
**60Hz**

**Power:** 0.18 - 3.7 kW

**Head:** Up to 52M

**Flow:** Up to 270 L/min

**Outlet:** 1" - 2"



## Applications

This HQCN Series are designed for hot water supply (up to +90°C) and pressure boosting in residential and commercial applications. They are suitable for solar energy hot water system or other types of hot water systems.

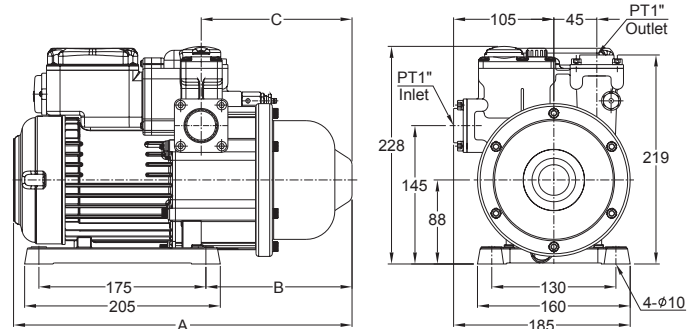
## Operating Conditions

1. Ambient temperature: Max. +40°C
2. Liquid temperature: +4°C ~ +90°C
3. Relief pressure value automatically : 5kg/cm<sup>2</sup>
4. Relative humidity: Max. 85% (RH)
5. Before using the pump, be sure the inlet pressure setting is lower than factory pressure setting.

## Product Features

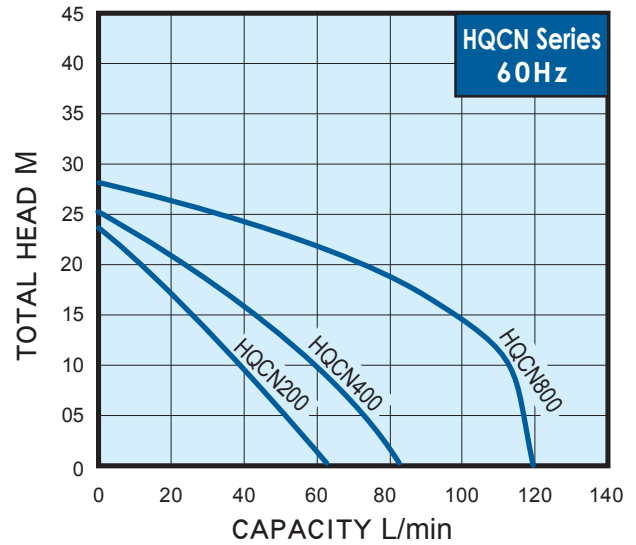
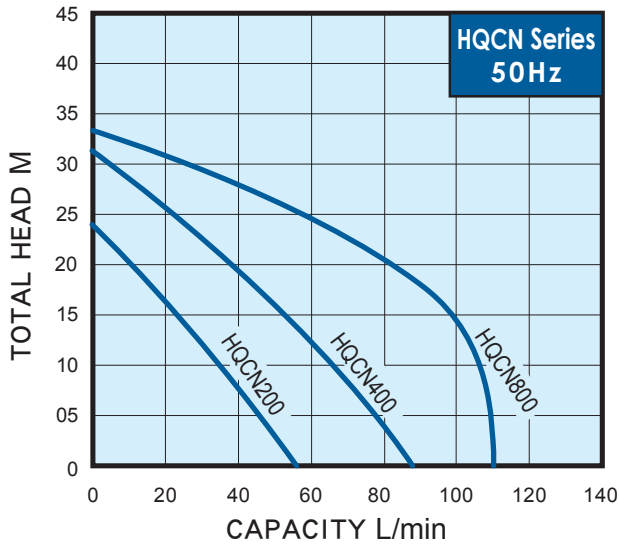
1. The HQCN is a complete, all-in-one unit, consisting of pump, motor, pressure tank, and electronic controller. The built-in electronic controller provides constant pressure which ensures that the pump starts automatically when water is consumed and operates continuously until water is not required.
2. Compact design and quiet operation make the HQCN series suitable for many applications.
3. The HQCN is constructed from the top quality corrosion resistant materials.
4. The motor has built-in thermal overload to protect against high operating temperatures and over current.
5. The HQCN has an anti-cycling feature which prevents the pump from continuous starting and stopping when you have a dripping tap or minor leak in the system.
6. Relief value will automatically release the pressure when the HQCN full system pressure exceeds 5kg/cm<sup>2</sup>.

## Dimensions




Model	Cycle ( Hz )	Dimensions(mm)		
		A	B	C
HQCN200	50 / 60	355	153	158
HQCN400	50 / 60	355	153	158
HQCN800	50 / 60	410	162	167


## Performance curve



## Specification, 50Hz

Model	Power (kW)	Cycle (Hz)	Phase (Ø)	Voltage (V)	Amp's (A)	Inlet (in.)	Outlet (in.)	Preset activation point (kg/cm <sup>2</sup> )	H max. (m)	Q max. (L/min)	N.W. kg	
HQCN200	0.18	50	1	200~240	1.5	1"	1"	1.6	24	55	7.5	30
HQCN400	0.37	50	1	200~240	2.8	1"	1"	2.0	31	85	8.5	30
HQCN800	0.75	50	1	200~240	4.5	1"	1"	2.0	33	110	11.3	24

## Specification, 60Hz

Model	Power (kW)	Cycle (Hz)	Phase (Ø)	Voltage (V)	Amp's (A)	Inlet (in.)	Outlet (in.)	Preset activation point (kg/cm <sup>2</sup> )	H max. (m)	Q max. (L/min)	N.W. kg	
HQCN200	0.18	60	1	110/220	4.0/2.0	1"	1"	1.6	24	60	7.5	30
HQCN400	0.37	60	1	110/220	6.0/3.0	1"	1"	1.8	26	80	8.5	30
HQCN800	0.75	60	1	110/220	9.0/4.5	1"	1"	2.0	28	120	10.8	24



# TQCN Series Hot Water Pump



**50Hz**

**Power:** 0.18 - 2.2 kW

**Head:** Up to 34M

**Flow:** Up to 250 L/min

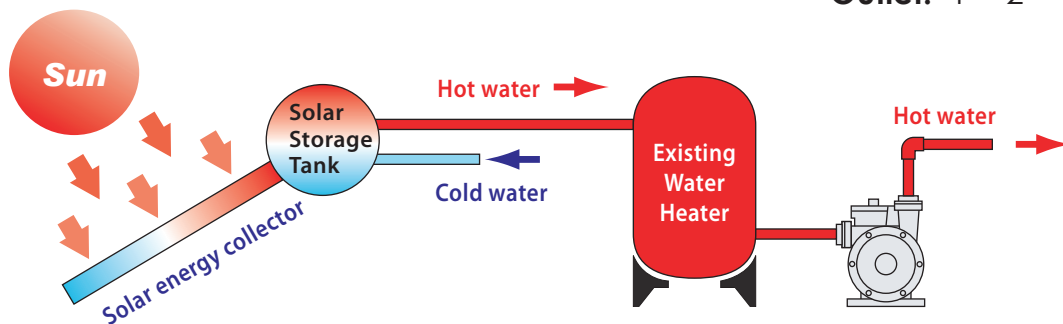
**60Hz**

**Power:** 0.18 - 3.7 kW

**Head:** Up to 52M

**Flow:** Up to 270 L/min

**Outlet:** 1" - 2"



## Applications

This TQCN Series are designed for hot water supply (up to +90°C) and pressure boosting in residential and commercial applications. They are suitable for solar energy hot water system or other types of hot water systems.

## Operating Conditions

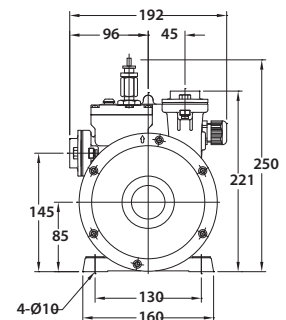
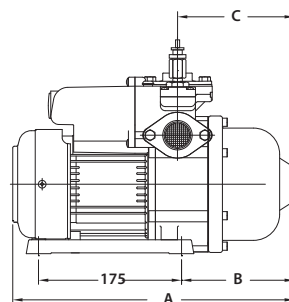
1. Ambient temperature: Max. +40°C
2. Liquid temperature: +4°C ~ +90°C
3. Relief pressure value automatically : 5kg/cm<sup>2</sup>
4. Relative humidity: Max. 85% (RH)
5. Before using the pump, be sure the inlet pressure setting is lower than factory pressure setting.

## Product Features

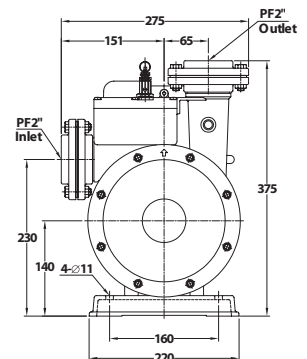
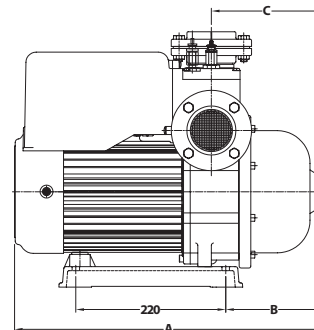
1. The TQCN is a complete, all-in-one unit, consisting of pump, motor, pressure tank, and electronic controller. The built-in electronic controller provides constant pressure which ensures that the pump starts automatically when water is consumed and operates continuously until water is not required.
2. Compact design and quiet operation make the TQCN series suitable for many applications.
3. The TQCN is constructed from the top quality corrosion resistant materials.
4. The motor has built-in thermal overload to protect against high operating temperatures and over current.
5. The TQCN has an anti-cycling feature which prevents the pump from continuous starting and stopping when you have a dripping tap or minor leak in the system.
6. Relief value will automatically release the pressure when the TQCN full system pressure exceeds 5kg/cm<sup>2</sup>.

## Dimensions

### TQCN 200/400/800

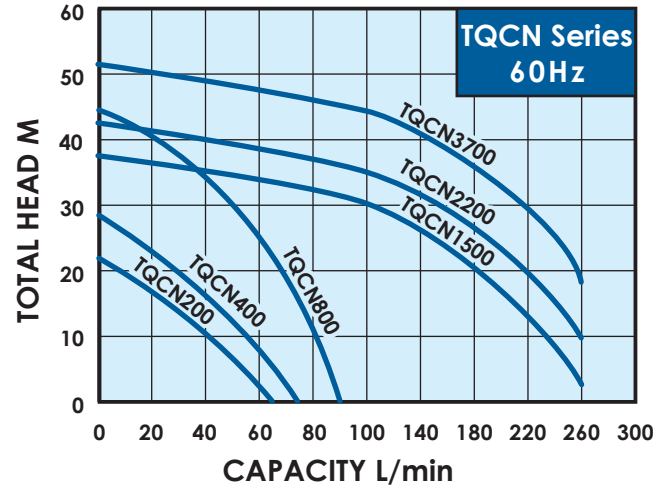
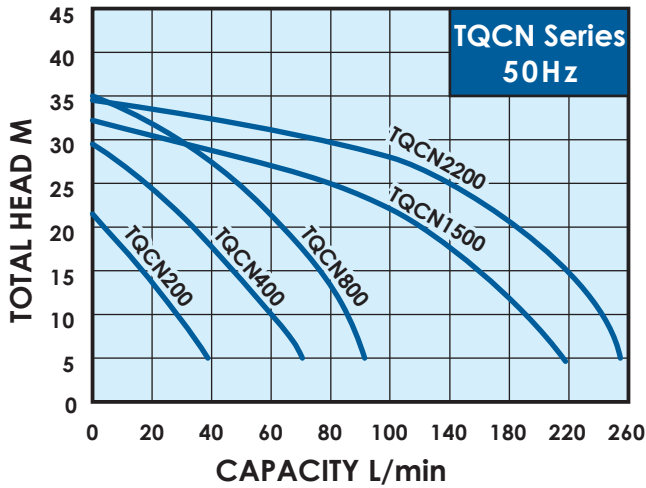


### TQCN1500/2200/3700




Model	Cycle (Hz)	Dimensions (mm)		
		A	B	C
TQCN200	50	360	153	158
	60	336	129	134
TQCN400	50	371	164	169
	60	345	138	143
TQCN800	50 / 60	417	164	169
TQCN1500 ~ 2200	50 / 60	452	142	163
TQCN 3700	60	452	142	163


## Performance curve



## Specification, 50Hz

Model	Power (kW)	Cycle (Hz)	Phase (Ø)	Voltage (V)	Amp's (A)	Inlet (in.)	Outlet (in.)	Preset activation point (kg/cm <sup>2</sup> )	H max. (m)	Q max. (L/min)	N.W. kg	
TQCN200	0.18	50	1	200~240	1.5	1"	1"	1.2	22	45	7.4	30
TQCN400	0.37	50	1	200~240	3	1"	1"	1.8	30	75	9.4	30
TQCN800	0.75	50	1	200~240	4.4	1"	1"	2.0	35	95	11	24
TQCN1500	1.5	50	1	200~240	7.2	2"	2"	2.5	32	230	28	12
			3	200~240	5.8							
TQCN2200	2.2	50	1	200~240	11.1	2"	2"	2.5	34	250	31	12
			3	200~240	7.2							

## Specification, 60Hz

Model	Power (kW)	Cycle (Hz)	Phase (Ø)	Voltage (V)	Amp's (A)	Inlet (in.)	Outlet (in.)	Preset activation point (kg/cm <sup>2</sup> )	H max. (m)	Q max. (L/min)	N.W. kg	
TQCN200	0.18	60	1	110/220	4.0/2.0	1"	1"	1.4	22	60	7.4	30
TQCN400	0.37	60	1	110/220	6.0/3.0	1"	1"	2.0	28	70	9.4	30
TQCN800	0.75	60	1	110/220	11/5.5	1"	1"	2.5	44	90	11.6	24
TQCN1500	1.5	60	1	220	9.5	2"	2"	3.0	37	270	28	12
			3	220	6.5							
TQCN2200	2.2	60	3	220	9.5	2"	2"	3.0	42	270	31	12
TQCN3700	3.7	60	3	220	13.8	2"	2"	3.0	52	270	31.5	12

# TP8-P Series Automatic Booster Pump



**Power:** 0.18 - 0.37 kW

**50Hz**

**Head:** Up to 30 M

**Flow:** Up to 35 L/min

**60Hz**

**Head:** Up to 38 M

**Flow:** Up to 42 L/min

**Outlet:** 3/4" - 1"

## Applications

Ideal for pumping clean, non-volatile liquids without fibres or solids in such applications as :

1. Homes where the incoming city water supply pressure is too low
2. Portable water supply or underground
3. Irrigation
4. Washing/cleaning system

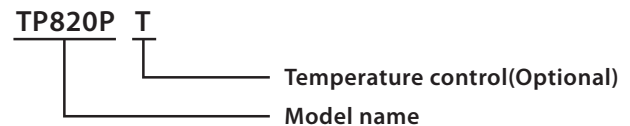
## Operating Conditions

1. Ambient temperature: Max. +40°C
2. Liquid temperature: +4°C ~ +40°C
3. Suction head: Max. 8 m
4. Inlet pressure: Lower than the pressure switch OFF setting. ( See Specification )

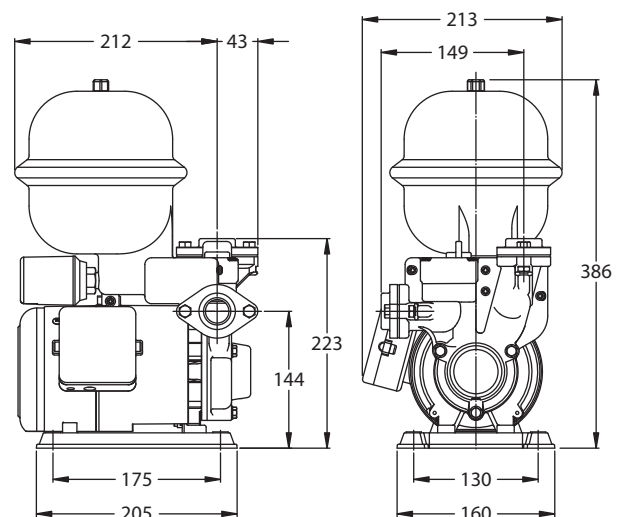
## Product Features

1. Manufactured with non-corrosive rust proof materials.
2. Special design corrosive resistant pressure tank with good appearance.
3. Appropriate reliable check valve with silent operation.
4. Compact design, small size, easy installation.
5. Every pumps tested in our factory to ensure quality and reliability.
6. High performance, electricity saving motor with patented cooling construction. Build-in thermal overload protector for motor burnt out protection.

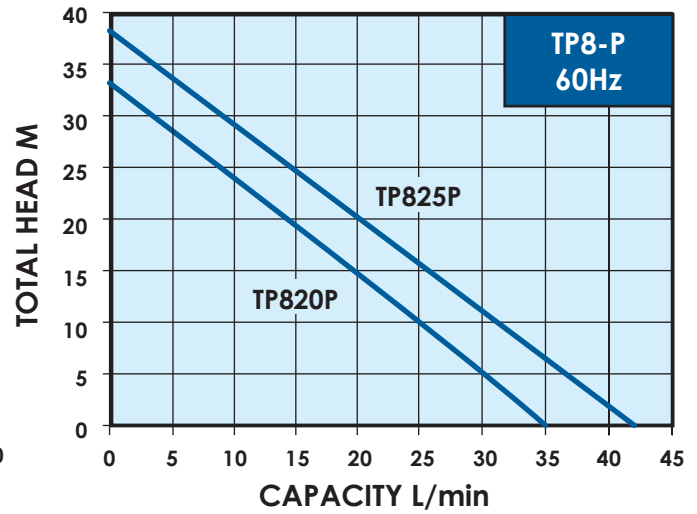
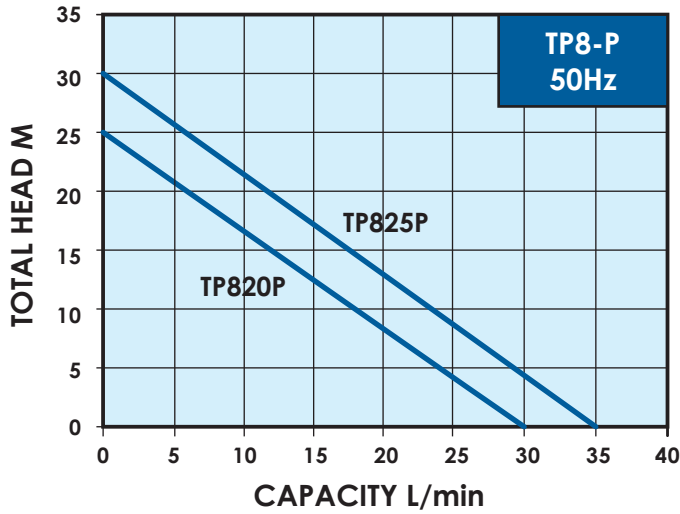
## Model code




## Dimensions




## Performance curve



## Specification, 50Hz

Model	Power (kW)	Cycle (Hz)	Phase (Ø)	Voltage (V)	Amp's (A)	Pressure Switch kg/cm <sup>2</sup>		Inlet (in.)	Outlet (in.)	H max. (m)	Q max. (L/min)	N.W. (kg)	
						ON	OFF						
TP820P(T)	0.18	50	1	200-240	1.4	0.9	1.8	¾"	¾"	25	30	6.7	32
TP825P(T)	0.37	50	1	200-240	2.7	1.8	2.8	1"	1"	30	35	7.6	32

## Specification, 60Hz

Model	Power (kW)	Cycle (Hz)	Phase (Ø)	Voltage (V)	Amp's (A)	Pressure Switch kg/cm <sup>2</sup>		Inlet (in.)	Outlet (in.)	H max. (m)	Q max. (L/min)	N.W. (kg)	
						ON	OFF						
TP820P(T)	0.18	60	1	110/220	3.2/1.6	1.2	2.4	¾"	¾"	34	35	6.7	32
TP825P(T)	0.37	60	1	110/220	5.2/2.6	2.0	3.0	1"	1"	38	42	7.6	32

# TPHIC Series Constant Pressure Inverter Control System



**Power:** 0.5 - 15 HP

**Pre-set Pressure:** Up to 6 kg/cm<sup>2</sup>

**Flow:** Up to 1610 L/min

**Outlet:** 1" -6"

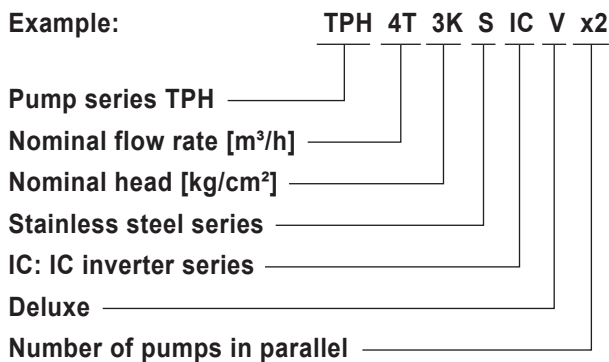
## Applications

Apartment buildings, houses, villa water supply, factories, water supply systems, drinking water systems, RO water treatment equipment, supermarkets, motels, SPA, etc.

## Operating Conditions

1. Ambient temperature: Max. +40°C
2. Liquid temperature: +4°C ~+40°C
3. Suitable liquids: Potable water or other clean, thin or non-aggressive liquids.
4. Inlet pressure: Lower than the constant pressure setting limit (see page 12~17)

## Model code



## Product Features

The pump will start smoothly when water is consumed. The inverter controller has a pressure sensor to detect down-stream pressure and adjust the motor speed to keep it at the required psi.

### Constant and stable pressure control:

The pump will maintain a constant operating pressure at the pressure setting. This ensures a stable water supply even though occasionally the output flow is over the capacity.

### Dry-run protection:

The pump will automatically shut down to protect against dry running. Once the pump starts to operate, the pressure sensor will automatically detect the pressure limit.

### Automatic stop when flow stops:

The pump will automatically cycle down as water usage decreases.

### Pressure compensation for pipeline leaks:

Should the down steam pressure drop due to leaks in the piping system, the microcomputer will detect the pressure loss automatically and operate the pump to maintain the pressure setting limit.

### Single or parallel unit operation:

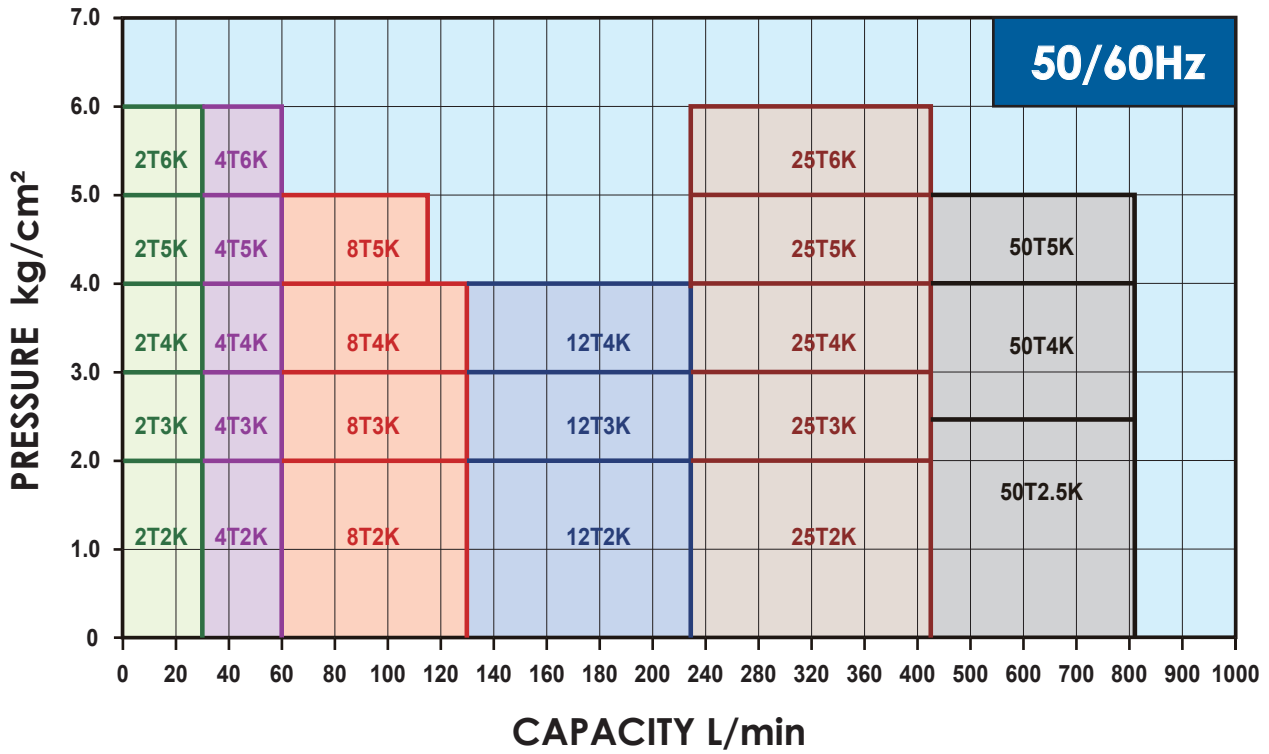
Parallel operation: When water usage is low, one unit will begin to operate until the water usage increases, when it can no longer handle the required water pressure, the other unit will start functioning in parallel. The duplex unit will switch to single unit operation automatically with the decrease in water demand.

### Interchangeable operation:

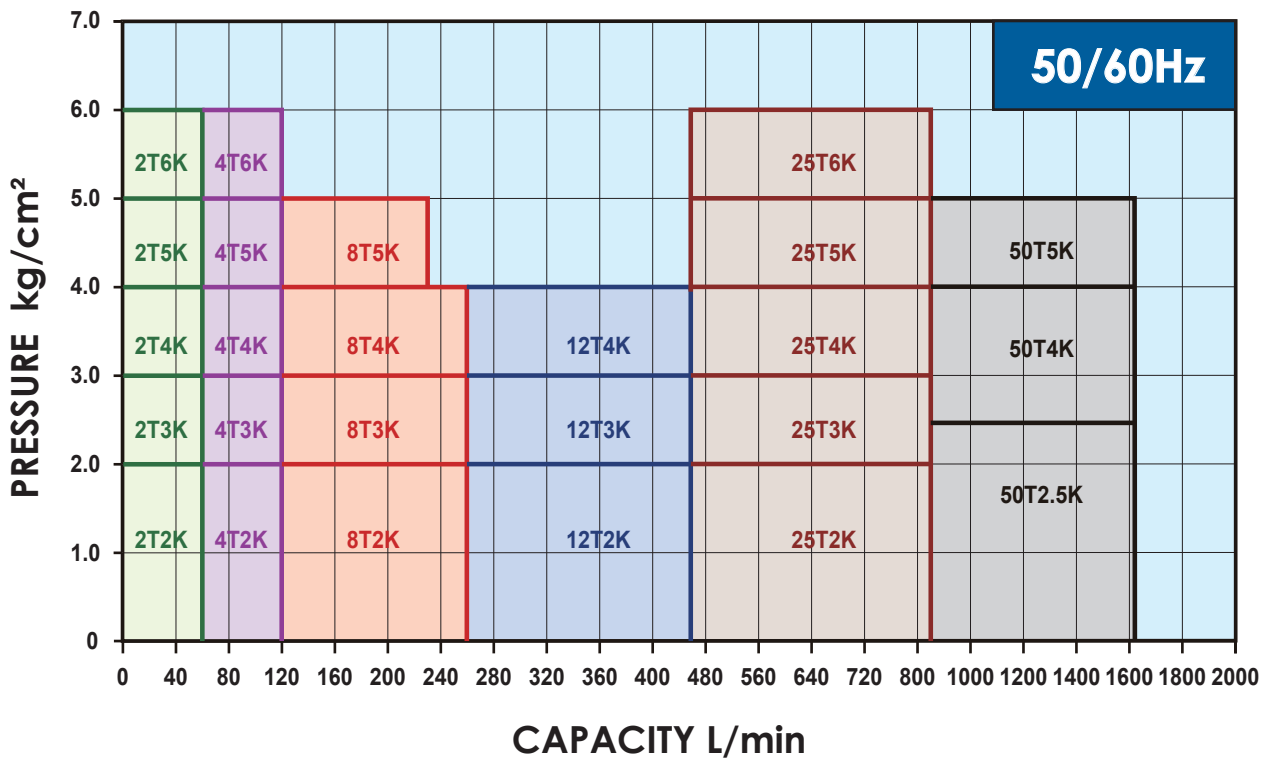
When a pump has operated through the preset interval (adjustable at 0-24 hours) the system will automatically switch to the other unit. This cycle will continue through time.



## Performance curves - Single unit



## Performance curves - Duplex



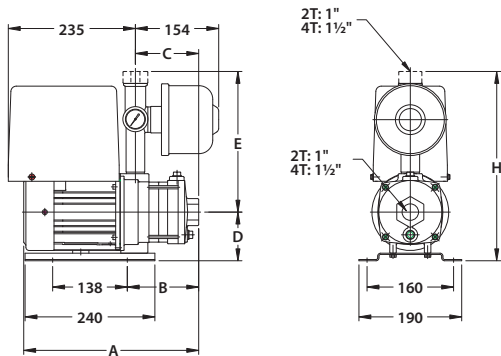
# 2T/4T IC

## Specifications - Single unit

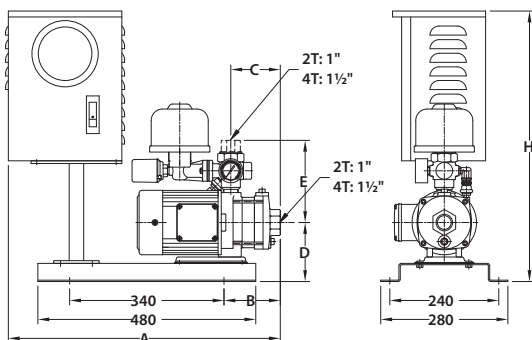
Model	Inverter Controller Output Power (HP)	Phase (Ø)	Voltage (V)	No-Fuse Breaker	Pre-set Pressure (kg/cm <sup>2</sup> )	Inlet (in.)	Outlet (in.)	Nominal Set Head (M)	Nominal Set Flow (L/min)
TPH2T2KIC	1	1Ø	200-240V	10A	2.0	1	1	20	30
		3Ø	200-240V or 380-440V	5A					
TPH2T3KIC	1	1Ø	200-240V	10A	3.0	1	1	30	30
		3Ø	200-240V or 380-440V	5A					
TPH2T4KIC	1	1Ø	200-240V	10A	4.0	1	1	40	30
		3Ø	200-240V or 380-440V	5A					
TPH2T5KIC	1	1Ø	200-240V	10A	5.0	1	1	50	30
		3Ø	200-240V or 380-440V	5A					
TPH2T6KIC	1	1Ø	200-240V	10A	6.0	1	1	60	30
		3Ø	200-240V or 380-440V	10A   5 A					
TPH4T2KIC	1	1Ø	200-240V	10A	2.0	1½	1½	20	60
		3Ø	200-240V or 380-440V	5A					
TPH4T3KIC	1	1Ø	200-240V	10A	3.0	1½	1½	30	60
		3Ø	200-240V or 380-440V	10A   5 A					
TPH4T4KIC	2	1Ø	200-240V	15A	4.0	1½	1½	40	60
		3Ø	200-240V or 380-440V	10A   5 A					
TPH4T5KIC	2	1Ø	200-240V	15A	5.0	1½	1½	50	60
		3Ø	200-240V or 380-440V	10A					
TPH4T6KIC	2	1Ø	200-240V	20A	6.0	1½	1½	60	60
		3Ø	200-240V or 380-440V	15A   10A					

## Dimensions ( mm )

• Fig.1 TPH2T/4T – IC



• Fig.2 TPH2T/4T – ICV



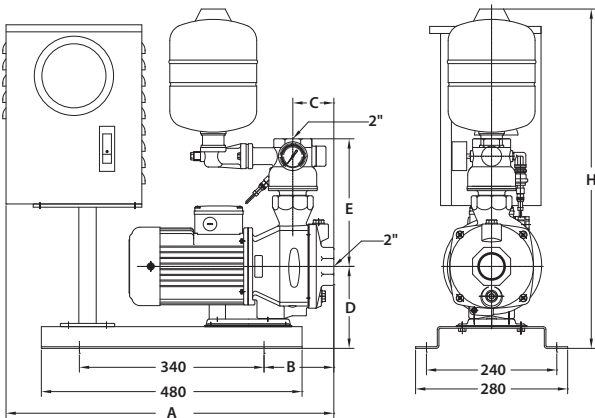
Model	A	B	C	D	E	H	Pressure tank (L)	Fig
TPH2T2KIC	306	114	99	90	267	357	0.8	1
TPH2T3KIC	324	132	117	90	267	357	0.8	1
TPH2T4KIC	342	150	135	90	267	357	0.8	1
TPH2T5KIC	400	168	153	90	267	357	0.8	1
TPH2T6KIC	418	186	171	90	267	357	0.8	1
TPH2T2KICV	589	114	99	130	181	596	0.8	2
TPH2T3KICV	607	132	117	130	181	596	0.8	2
TPH2T4KICV	625	150	135	130	181	596	0.8	2
TPH2T5KICV	643	168	153	130	181	596	0.8	2
TPH2T6KICV	661	186	171	130	181	596	0.8	2
TPH4T2KIC	315	123	108	90	238	328	0.8	1
TPH4T3KIC	382	150	135	90	238	328	0.8	1
TPH4T4KIC	409	177	162	90	238	328	0.8	1
TPH4T5KIC	436	204	189	90	238	328	0.8	1
TPH4T6KIC	494	231	216	90	238	328	0.8	1
TPH4T2KICV	598	123	108	130	153	596	0.8	2
TPH4T3KICV	625	150	135	130	153	596	0.8	2
TPH4T4KICV	652	177	162	130	153	596	0.8	2
TPH4T5KICV	679	204	189	130	153	596	0.8	2
TPH4T6KICV	706	231	216	130	153	596	0.8	2

## Specifications - Single unit

Model	Inverter Controller Output Power (HP)	Phase (Ø)	Voltage (V)	No-Fuse Breaker	Pre-set Pressure (kg/cm <sup>2</sup> )	Inlet (in.)	Outlet (in.)	Nominal Set Head (M)	Nominal Set Flow (L/min)
TPH 8 T 2 KIC	1	1Ø	200-240V	10A	2.0	2	2	20	130
		3Ø	200-240V or 380-440V	10A   5 A					
TPH 8 T 3 KIC	2	1Ø	200-240V	15A	3.0	2	2	30	130
		3Ø	200-240V or 380-440V	10A   5 A					
TPH 8 T 4 KIC	3	1Ø	200-240V	20A	4.0	2	2	40	130
		3Ø	200-240V or 380-440V	15A   10A					
TPH 8 T 5 KIC	3	1Ø	200-240V	20A	5.0	2	2	50	115
		3Ø	200-240V or 380-440V	15A   10A					
TPH12T 2 KIC	2	1Ø	200-240V	15A	2.0	2	2	20	230
		3Ø	200-240V or 380-440V	10A					
TPH12T 3 KIC	3	1Ø	200-240V	20A	3.0	2	2	30	230
		3Ø	200-240V or 380-440V	15A   10A					
TPH12T 4 KIC	5	3Ø	200-240V or 380-440V	30A   20A	4.0	2	2	40	230

## Dimensions ( mm )

• Fig.3 TPH8T /12T - IC



Model	A	B	C	D	E	H	Pressure tank (L)	Fig
TPH8T2KIC	603.5	128.5	75	151	235	625	4	3
TPH8T3KIC	635	160	107	151	235	625	4	3
TPH8T4KIC	635	160	107	151	235	625	4	3
TPH8T5KIC	669	194	141	151	235	625	4	3
TPH12T2KIC	603.5	128.5	75	151	235	625	4	3
TPH12T3KIC	635	160	107	151	235	625	4	3
TPH12T4KIC	635	160	107	151	235	625	4	3



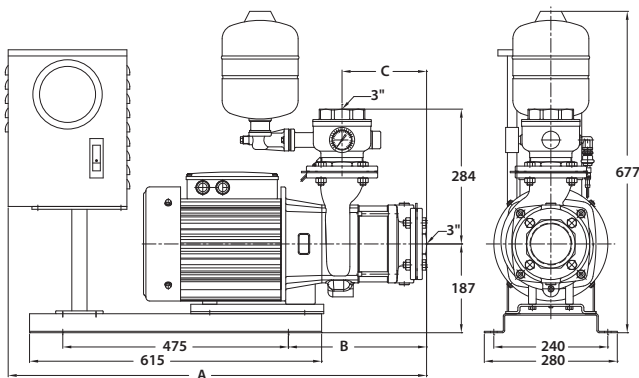
# 25T/50T IC

## Specifications - Single unit

Model	Inverter Controller Output Power (HP)	Phase (Ø)	Voltage (V)	No-Fuse Breaker		Pre-set Pressure (kg/cm <sup>2</sup> )	Inlet (in.)	Outlet (in.)	Nominal Set Head (M)	Nominal Set Flow (L/min)
TPH25T 2 KIC	5	3Ø	200-240V or 380-440V	20A	15A	2.0	3	3	20	415
TPH25T 3 KIC	5	3Ø	200-240V or 380-440V	30A	15A	3.0	3	3	30	415
TPH25T 4 KIC	7½	3Ø	200-240V or 380-440V	30A	20A	4.0	3	3	40	415
TPH25T 5 KIC	10	3Ø	200-240V or 380-440V	40A	20A	5.0	3	3	50	415
TPH25T 6 KIC	10	3Ø	200-240V or 380-440V	50A	30A	6.0	3	3	60	415
TPH50T2.5KIC	7½	3Ø	200-240V or 380-440V	40A	30A	2.5	4	4	25	810
TPH50T 4 KIC	10	3Ø	200-240V or 380-440V	60A	40A	4.0	4	4	40	810
TPH50T 5 KIC	15	3Ø	200-240V or 380-440V	75A	40A	5.0	4	4	50	810

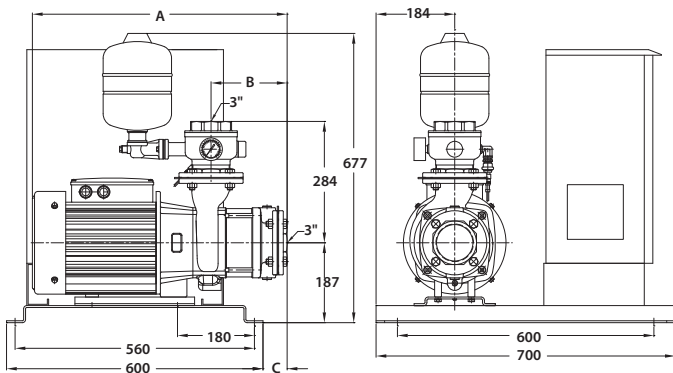
## Dimensions ( mm )

• Fig. 4 TPH 25T2KIC / TPH 25T3KIC

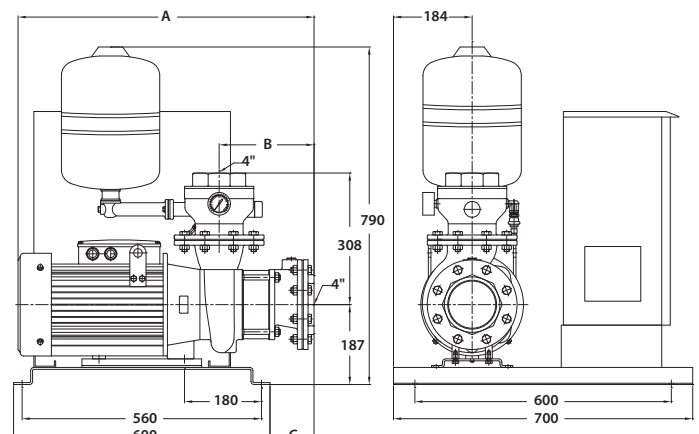


Model	A	B	C	Pressure tank (L)	Fig
TPH25T2KIC	821	231	118	4	4
TPH25T3KIC	881	291	178	4	4
TPH25T4KIC	596	178	57	4	5
TPH25T5KIC	706	238	117	4	5
TPH25T6KIC	706	238	117	4	5
TPH50T2.5KIC	583	162	43	12	6
TPH50T4KIC	693	222	103	12	6
TPH50T5KIC	743	222	103	12	6

• Fig. 5 TPH 25T4KIC ~ TPH25T6KIC



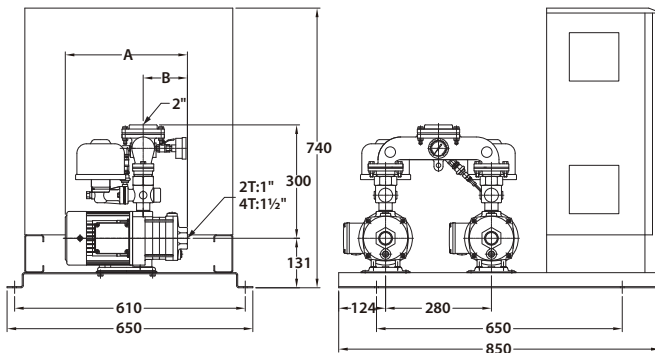
• Fig. 6 TPH 50T - IC



## Specifications - Duplex

Model	Inverter Controller Output Power (HP)	Phase (Ø)	Voltage (V)	No-Fuse Breaker	Pre-set Pressure (kg/cm <sup>2</sup> )	Inlet (in.)	Outlet (in.)	Nominal Set Head (M)	Nominal Set Flow (L/min)
TPH2T2KIC x2	1 x2	1Ø	200-240V	15A	2.0	1	2	20	60
		3Ø	200-240V or 380-440V	10A   5 A					
TPH2T3KIC x2	1 x2	1Ø	200-240V	15A	3.0	1	2	30	60
		3Ø	200-240V or 380-440V	10A   5 A					
TPH2T4KIC x2	1 x2	1Ø	200-240V	15A	4.0	1	2	40	60
		3Ø	200-240V or 380-440V	10A   5 A					
TPH2T5KIC x2	1 x2	1Ø	200-240V	15A	5.0	1	2	50	60
		3Ø	200-240V or 380-440V	10A					
TPH2T6KIC x2	1 x2	1Ø	200-240V	20A	6.0	1	2	60	60
		3Ø	200-240V or 380-440V	15A   10A					
TPH4T2KIC x2	1 x2	1Ø	200-240V	15A	2.0	1½	2	20	120
		3Ø	200-240V or 380-440V	10A   5 A					
TPH4T3KIC x2	1 x2	1Ø	200-240V	20A	3.0	1½	2	30	120
		3Ø	200-240V or 380-440V	15A   10A					
TPH4T4KIC x2	2 x2	1Ø	200-240V	25A	4.0	1½	2	40	120
		3Ø	200-240V or 380-440V	15A   10A					
TPH4T5KIC x2	2 x2	1Ø	200-240V	30A	5.0	1½	2	50	120
		3Ø	200-240V or 380-440V	20A   15A					
TPH4T6KIC x2	2 x2	1Ø	200-240V	40A	6.0	1½	2	60	120
		3Ø	200-240V or 380-440V	25A   15A					

## Dimensions ( mm )



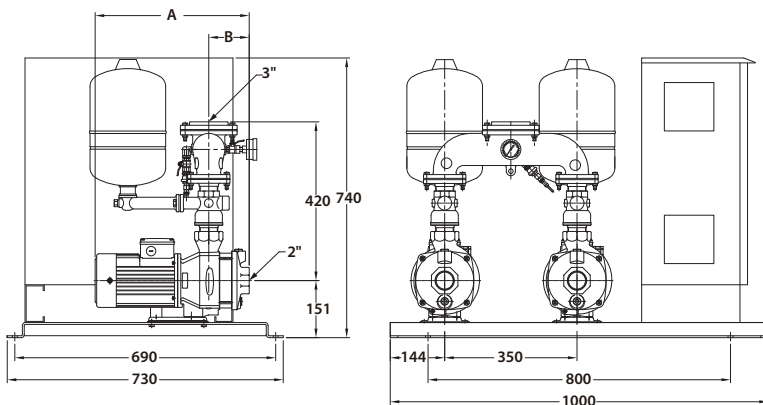
Model	A	B	Pressure tank (L)
TPH2T2KIC x2	306	99	0.8 x2
TPH2T3KIC x2	324	117	0.8 x2
TPH2T4KIC x2	342	135	0.8 x2
TPH2T5KIC x2	400	153	0.8 x2
TPH2T6KIC x2	418	171	0.8 x2
TPH4T2KIC x2	315	108	0.8 x2
TPH4T3KIC x2	382	135	0.8 x2
TPH4T4KIC x2	409	162	0.8 x2
TPH4T5KIC x2	436	189	0.8 x2
TPH4T6KIC x2	494	216	0.8 x2

# 8T/12T ICx2

## Specifications - Duplex

Model	Inverter Controller Output Power (HP)	Phase (∅)	Voltage (V)	No-Fuse Breaker	Pre-set Pressure (kg/cm <sup>2</sup> )	Inlet (in.)	Outlet (in.)	Nominal Set Head (M)	Nominal Set Flow (L/min)
TPH 8 T 2 KIC x2	1 x2	1∅	200-240V	20A	2.0	2	3	20	260
		3∅	200-240V or 380-440V	15A   10A					
TPH 8 T 3 KIC x2	2 x2	1∅	200-240V	30A	3.0	2	3	30	260
		3∅	200-240V or 380-440V	20A   10A					
TPH 8 T 4 KIC x2	3 x2	1∅	200-240V	40A	4.0	2	3	40	260
		3∅	200-240V or 380-440V	30A   20A					
TPH 8 T 5 KIC x2	3 x2	1∅	200-240V	40A	5.0	2	3	50	230
		3∅	200-240V or 380-440V	30A   15A					
TPH12T 2 KIC x2	2 x2	1∅	200-240V	30A	2.0	2	3	20	460
		3∅	200-240V or 380-440V	20A   15A					
TPH12T 3 KIC x2	3 x2	1∅	200-240V	40A	3.0	2	3	30	460
		3∅	200-240V or 380-440V	30A   20A					
TPH12T 4 KIC x2	5 x2	3∅	200-240V or 380-440V	60A   50A	4.0	2	3	40	460

## Dimensions ( mm )



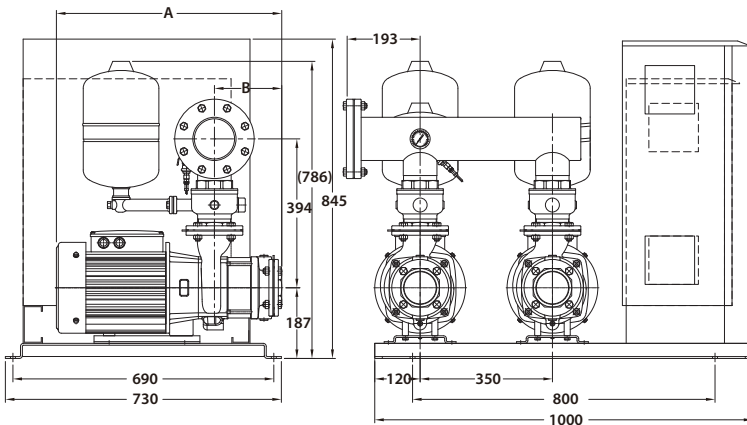
Model	A	B	Pressure tank (L)
TPH8T2KIC x2	376.5	75	12 x2
TPH8T3KIC x2	408.5	107	12 x2
TPH8T4KIC x2	435.5	107	12 x2
TPH8T5KIC x2	469.5	141	12 x2
TPH12T2KIC x2	376.5	75	12 x2
TPH12T3KIC x2	435.5	107	12 x2
TPH12T4KIC x2	435.5	107	12 x2

## Specifications - Duplex

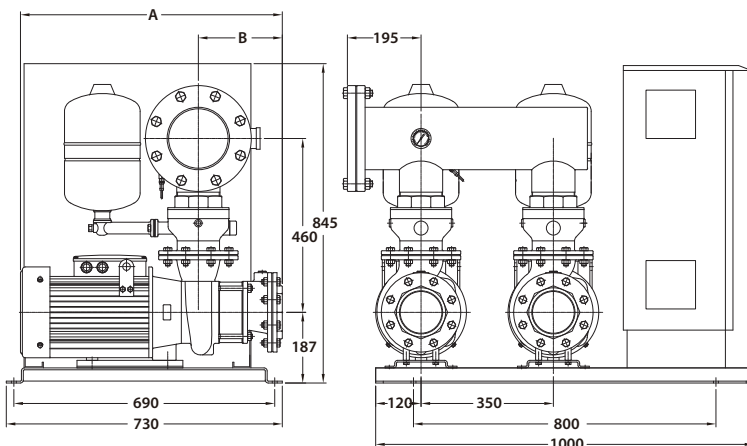
Model	Inverter Controller Output Power (HP)	Phase (Ø)	Voltage (V)	No-Fuse Breaker		Pre-set Pressure (kg/cm <sup>2</sup> )	Inlet (in.)	Outlet (in.)	Nominal Set Head (M)	Nominal Set Flow (L/min)
TPH25T 2 KIC x2	5 x2	3Ø	200-240V or 380-440V	40A	30A	2.0	3	4	20	830
TPH25T 3 KIC x2	5 x2	3Ø	200-240V or 380-440V	50A	30A	3.0	3	4	30	830
TPH25T 4 KIC x2	7½ x2	3Ø	200-240V or 380-440V	75A	40A	4.0	3	4	40	830
TPH25T 5 KIC x2	10 x2	3Ø	200-240V or 380-440V	100A	50A	5.0	3	4	50	830
TPH25T 6 KIC x2	10 x2	3Ø	200-240V or 380-440V	100A	60A	6.0	3	4	60	830
TPH50T2.5KIC x2	7½ x2	3Ø	200-240V or 380-440V	75A	50A	2.5	4	6	25	1610
TPH50T 4 KIC x2	10 x2	3Ø	200-240V or 380-440V	125A	75A	4.0	4	6	40	1610
TPH50T 5 KIC x2	15 x2	3Ø	200-240V or 380-440V	150A	100A	5.0	4	6	50	1610

## Dimensions ( mm )

• Fig. 7 TPH 25T – IC x2



• Fig. 8 TPH 50T – IC x2



Model	A	B	Pressure tank (L)	Fig
TPH25T2KIC x2	536	118	12 x2	7
TPH25T3KIC x2	596	178	12 x2	7
TPH25T4KIC x2	596	178	12 x2	7
TPH25T5KIC x2	706	238	12 x2	7
TPH25T6KIC x2	706	238	12 x2	7
TPH50T2.5KIC x2	582.5	162	12 x2	8
TPH50T4KIC x2	692.5	222	12 x2	8
TPH50T5KIC x2	742.5	222	12 x2	8

# TP3-P Series Direct Water Pump



**Power:** 0.37 kW

**50Hz**

**Head:** Up to 35 M

**Flow:** Up to 35 L/min

**60Hz**

**Head:** Up to 40 M

**Flow:** Up to 42 L/min

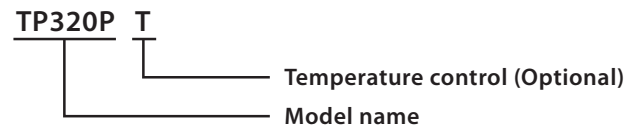
**Outlet:** 3/4" - 1"

## Applications

Ideal for pumping clean, non-volatile liquids without fibres or solids in such applications as :

1. The water supply for apartment and residences
2. Portable water supply or underground
3. Irrigation
4. Washing/cleaning system

## Model code



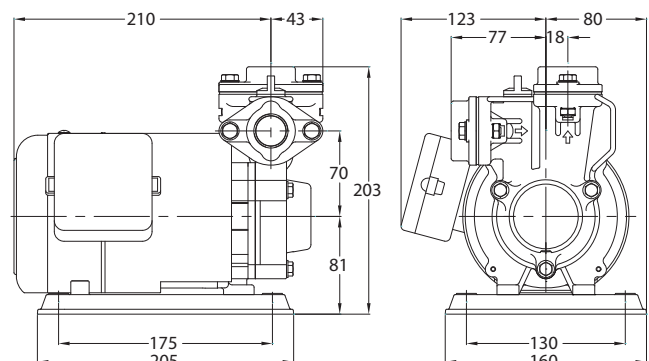
## Operating Conditions

1. Ambient temperature: Max. +40°C
2. Liquid temperature: +4°C ~ +40°C
3. Suction head: Max. 8 m

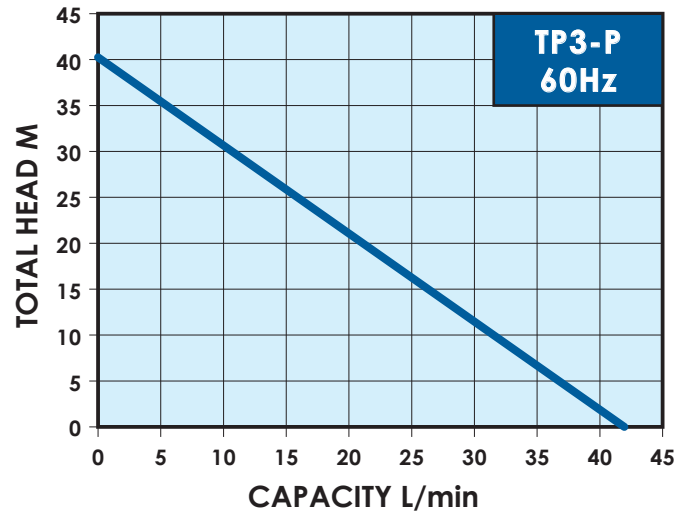
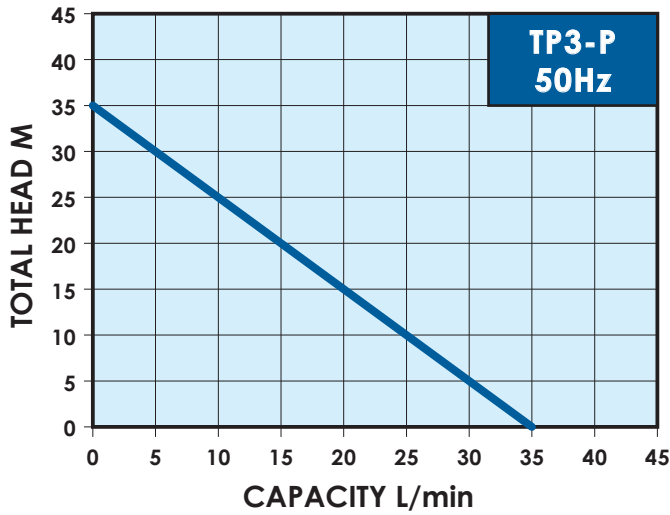
## Dimensions

## Product Features


1. Manufactured with non-corrosive rust proof materials.
2. Special design high efficiency and low noise impeller.
3. High quality mechanical seal ensuring no leakage and long life.
4. Compact design, small size, easy installation.
5. Every pumps tested in our factory to ensure quality and reliability.
6. High performance, electricity saving motor with patented cooling construction. Build-in thermal overload protector for motor burnt out protection.




## Performance curve



## Specification, 50Hz

Model	Power (kW)	Cycle (Hz)	Phase (Ø)	Voltage (V)	Amp's (A)	Inlet (in.)	Outlet (in.)	H max. (m)	Q max. (L/min)	N.W. (kg)	
TP320P(T)	0.37	50	1	200-240	2.7	¾"	¾"	35	35	6.7	60
TP325P(T)						1"	1"				

## Specification, 60Hz

Model	Power (kW)	Cycle (Hz)	Phase (Ø)	Voltage (V)	Amp's (A)	Inlet (in.)	Outlet (in.)	H max. (m)	Q max. (L/min)	N.W. (kg)	
TP320P(T)	0.37	60	1	110/220	5.2/2.6	¾"	¾"	40	42	6.7	60
TP325P(T)						1"	1"				

# HS Series Multistage Centrifugal Pump



## 50Hz

**Power:** 0.37 - 0.75 kW

**Head:** Up to 35 M

**Flow:** Up to 100L/min

## 60Hz

**Power:** 0.37 - 0.75 kW

**Head:** Up to 42 M

**Flow:** Up to 95 L/min

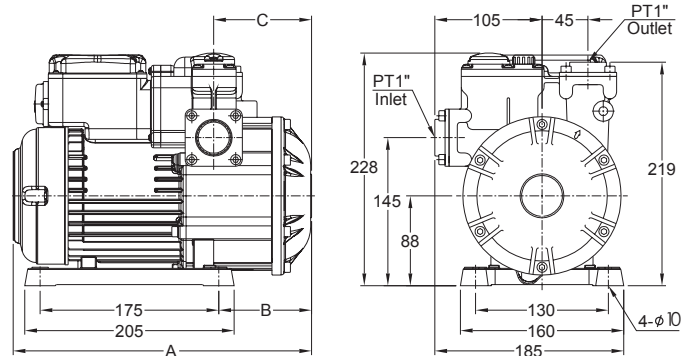
**Outlet:** 1"

## Applications

The HS series are multistage centrifugal pumps suitable for pressure boosting applications such as increasing water pressure from city mains or private water systems. They are also suitable for other applications such as:

- Water circulation
- Liquid transfer
- Irrigation systems
- Lawn sprinkle systems
- Washing systems
- General purpose pumping

## Dimensions



## Operating Conditions

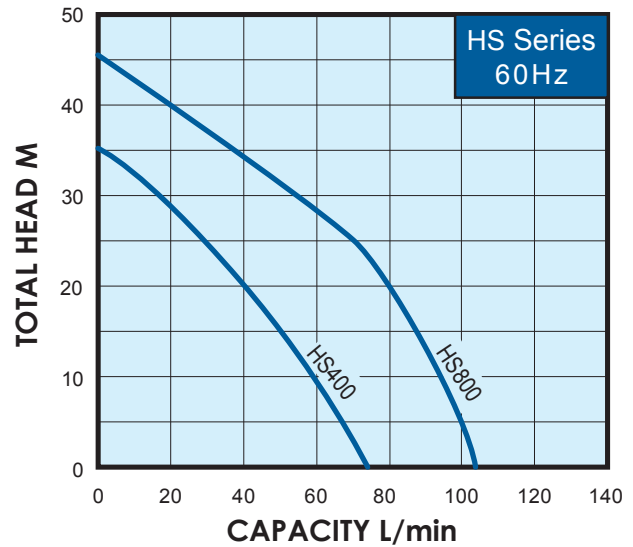
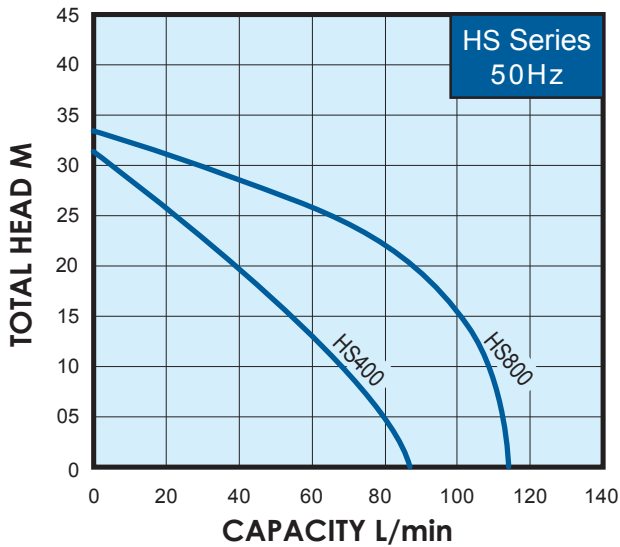
1. Ambient temperature: Max. +40°C
2. Liquid temperature: +4°C ~ +40°C
3. System Pressure : Max. 8.5 kg/cm<sup>2</sup>

Model	Cycle (Hz)	A (mm)	B (mm)	C (mm)
HS400	50 / 60	292	91	96
HS800	50 / 60	344	96	101


## Product Features

1. Multistage design provides steady, quiet and vibration-free operation for years of trouble-free service.
2. Close coupled, space saving design provides easy installation.
3. All parts in contact with water are made from corrosion resistant materials.
4. The pump is installed with thermostat protection switch to protect against dry running. The pump will shut off when water temperature exceeds 130°F (55°C).
5. The motor has a built-in thermal overload to protect against high operating temperatures and over current.
6. The pumps will lift water up to 7.6m. with foot valve and pump suction piping filled with water


## Performance curve



## Specification, 50Hz

Model	Power (kW)	Cycle (Hz)	Phase (Ø)	Voltage (V)	Amp's (A)	Inlet (in.)	Outlet (in.)	H max. (m)	Q max. (L/min)	N.W. (kg)	
HS400	0.37	50	1	200-240	2.8	1"	1"	31	85	8.2	36
HS800	0.75	50	1	200-240	4.5	1"	1"	33	110	11	30

## Specification, 60Hz

Model	Power (kW)	Cycle (Hz)	Phase (Ø)	Voltage (V)	Amp's (A)	Inlet (in.)	Outlet (in.)	H max. (m)	Q max. (L/min)	N.W. (kg)	
HS400	0.37	60	1	110/220	6.0/3.0	1"	1"	36	75	8.2	36
HS800	0.75	60	1	110/220	9.0/4.5	1"	1"	46	105	11	30



# TS Series Multistage Centrifugal Pump



**50Hz**

**Power:** 0.18 - 2.2 kW

**Head:** Up to 34 M

**Flow:** Up to 250 L/min

**60Hz**

**Power:** 0.18 - 3.7 kW

**Head:** Up to 50 M

**Flow:** Up to 270 L/min

**Outlet:** 1" - 2"

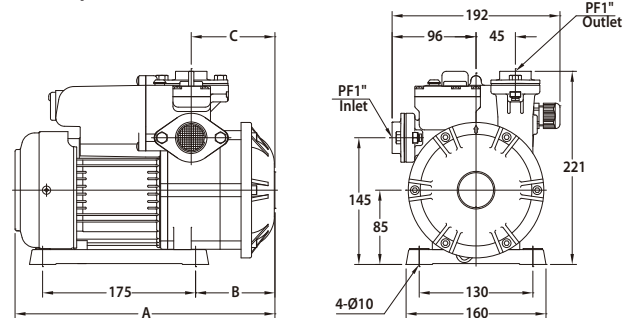
## Applications

The TS series are multistage centrifugal pumps suitable for pressure boosting applications such as increasing water pressure from city mains or private water systems. They are also suitable for other applications such as:

- Water circulation
- Liquid transfer
- Irrigation systems
- Lawn sprinkle systems
- Washing systems
- General purpose pumping

## Dimensions

### TS400 / 800



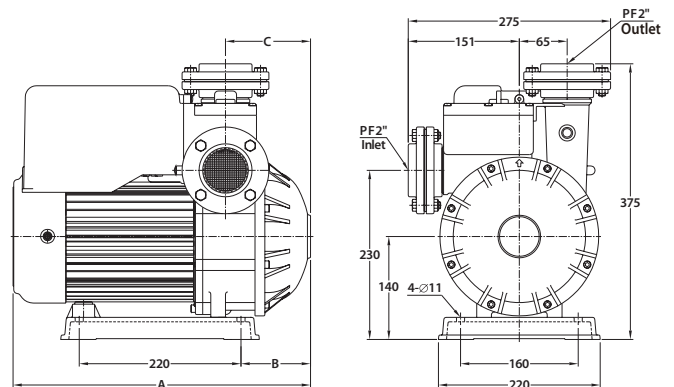
## Operating Conditions

1. Ambient temperature: Max. +40°C
2. Liquid temperature: +4°C ~ +40°C
3. System Pressure : Max. 8.5 kg/cm<sup>2</sup>

## Product Features

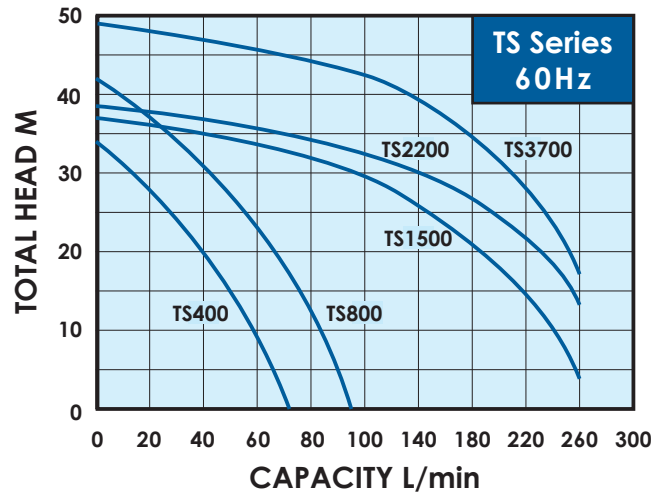
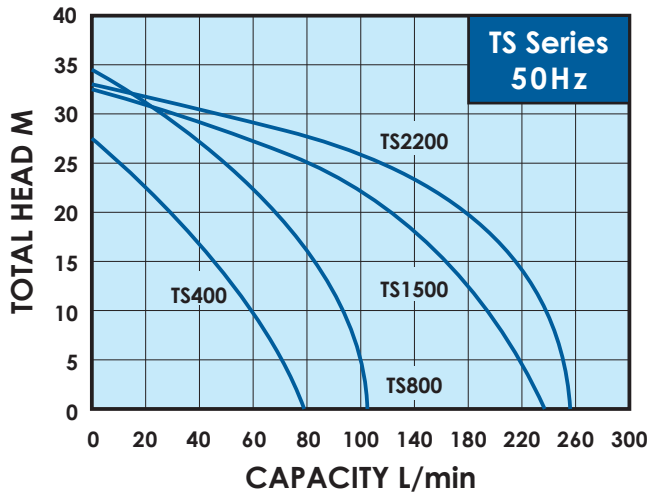
1. Multistage design provides steady, quiet and vibration-free operation for years of trouble-free service.
2. Close coupled, space saving design provides easy installation.
3. All parts in contact with water are made from corrosion resistant materials.
4. Capable of transferring both plain and salt water.
5. The pump is installed with thermostat protection switch to protect against dry running. The pump will shut off when water temperature exceeds 130° F (55° C). (TS400 /800 only)
6. The motor has a built-in thermal overload to protect against high operating temperatures and over current (Single phase motor only)
7. The pumps will lift water up to 7.6m. with foot valve and pump suction piping filled with water

### TS1500 / 2200 / 3700




Model	Cycle (Hz)	A (mm)	B (mm)	C (mm)
TS400	50	305	99	104
	60	297	91	96
TS800	50 / 60	352	99	104
TS1500/2200	50 / 60	405	95	116
TS3700	60	405	95	116


## Performance curve



## Specification, 50Hz

Model	Power (kW)	Cycle (Hz)	Phase (Ø)	Voltage (V)		Amp's (A)		Inlet (in.)	Outlet (in.)	H max. (m)	Q max. (L/min)	N.W. (kg)	
TS400	0.37	50	1	200-240		3.0		1"	1"	30	75	8	36
TS800	0.75	50	1	200-240		4.4		1"	1"	35	100	11	30
TS1500	1.5	50	1	200-240		7.2		2"	2"	32	230	26	18
			3	200-240	380-440	6.2	3.5	2"	2"	32	230	26	18
TS2200	2.2	50	1	200-240		11.1		2"	2"	34	250	27	18
		50	3	200-240	380-440	9.0	4.5	2"	2"	34	250	27	18

## Specification, 60Hz

Model	Power (kW)	Cycle (Hz)	Phase (Ø)	Voltage (V)		Amp's (A)		Inlet (in.)	Outlet (in.)	H max. (m)	Q max. (L/min)	N.W. (kg)	
TS400	0.37	60	1	110/220		6.0/3.0		1"	1"	35	70	8	36
TS800	0.75	60	1	110/220		11/5.5		1"	1"	42	95	11	30
TS1500	1.5	60	1	220		9.5		2"	2"	38	265	26	18
			3	220	380	6.5	4.2	2"	2"	38	265	26	18
TS2200	2.2	60	3	220	380	9.5	5.2	2"	2"	39	270	27	18
TS3700	3.7	60	3	220	380	13.8	6.8	2"	2"	50	270	29	18

# TH Series Atomize Pump



**Power:** 0.25 - 0.37 kW

**50Hz**

**Pressure:** Up to 30 kg/cm<sup>2</sup>

**Flow:** Up to 7.5 L/min

**60Hz**

**Pressure:** Up to 30 kg/cm<sup>2</sup>

**Flow:** Up to 8.5 L/min

**Outlet:** 1/4"

## Applications

1. Household and industrial washing and cleaning.
2. High pressure water supplying.
3. Garden and agricultural chemicals spraying.
4. Hydraulic piping leakage testing.

## Maximum output pressure

1. TH400P - 30 kg/cm<sup>2</sup>
2. TH250P - 20 kg/cm<sup>2</sup>

## Standard Accessories



1. Suction hose pipe with inlet filter.
2. High pressure hose (30 ft.)
3. Overflow hose.
4. Spray gun.

## Product Features

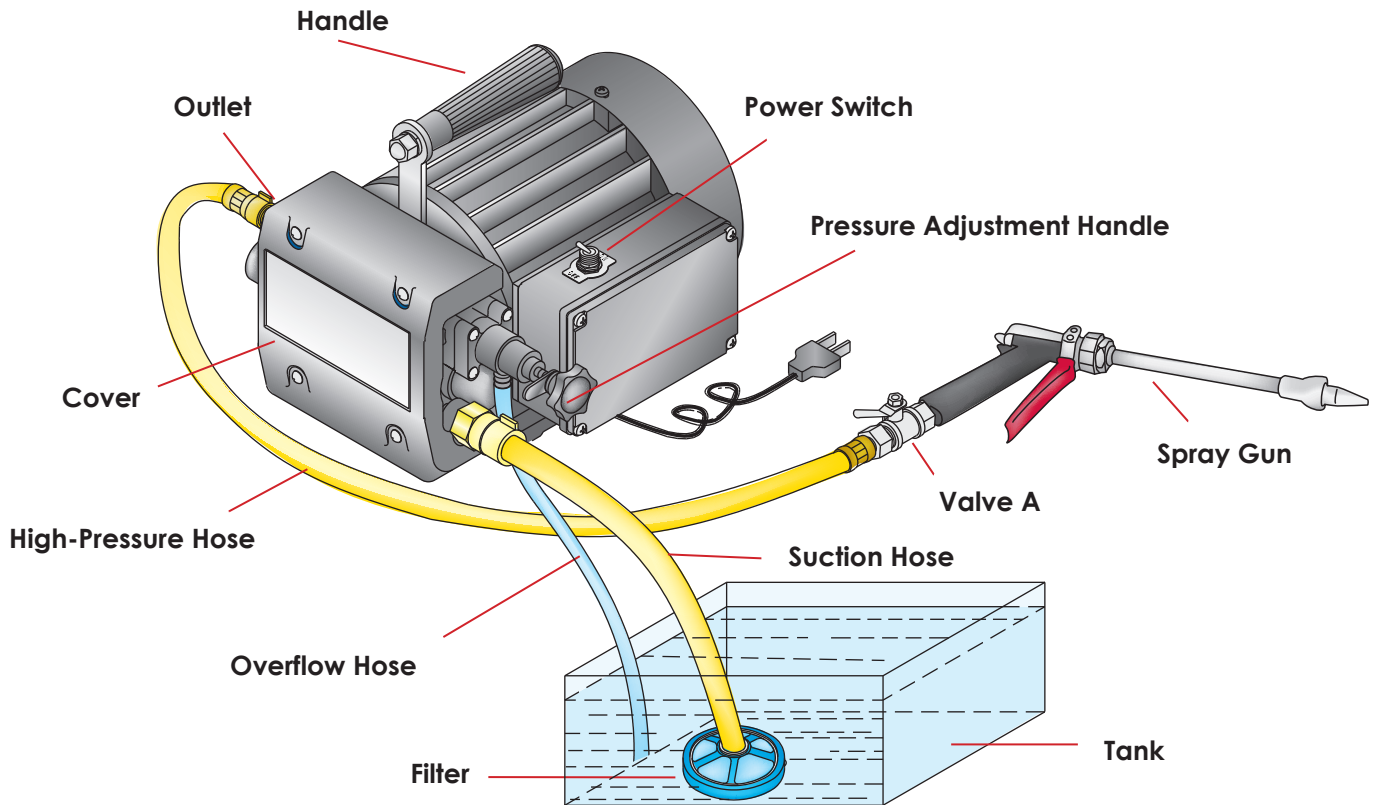
1. Portable compact design, easy to carry.
2. Easy operation, and maintenance.
3. High pressure discharge head, and large capacity.
4. Powerful electrical motor, high reliability.
5. Suitable for agricultural spraying.
6. Self priming suction function.

## Optional Accessories




Hydraulic testing kit  
(pressure gauge, valve and high pressure hose pipe).


## Sprayer Components



## Specification, 50Hz

Type	Output (kW)	Cycle Hz	Pole P	Voltage Single V	Pressure kg/cm <sup>2</sup>	Capacity L/min	Box Outline L x W x H mm	Weight kg	
TH250P	0.25	50	4	200 - 240	20	7.5	358 X 288 X 261	9.0	27
TH400P	0.37	50	4	200 - 240	30	7.5	358 X 288 X 261	13.2	27

## Specification, 60Hz

Type	Output (kW)	Cycle Hz	Pole P	Voltage Single V	Pressure kg/cm <sup>2</sup>	Capacity L/min	Box Outline L x W x H mm	Weight kg	
TH250P	0.25	60	4	110 or 220	20	8.5	358 X 288 X 261	9.0	27
TH400P	0.37	60	4	110 or 220	30	8.5	358 X 288 X 261	13.2	27

# PW-A Series Submersible Pump

**Power:** 0.1 - 0.4 kW

**Head:** Up to 10 M

**Flow:** Up to 260 L/min

**Outlet:** 1" - 2"



## Coverage of Application

1. To be used to circulate water in garden ponds
2. To be applicable to the sprinkler for vegetations of parks.
3. Watering in the garden and washing car.
4. To drain the accumulated water for basement of residence.
5. To drain the ground water.
6. To drain accumulated water for civil and architecture engineering.
7. The "R" type available to used in sea fish breeding.
8. The "C" type equipped level regulator.
9. The "F" type equipped float ball level switch.
10. The "D" type low suction capability up to 3 mm

## Characteristic

1. Submersible pumps for clean water.
2. Corrosion-resistant and compact.
3. Built-in capacitor.
4. Supplied with power cable with plug
5. Motor with thermo overload protection

## Specifications

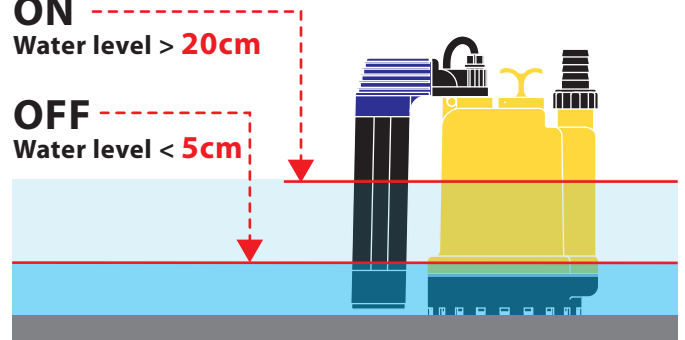
1. Power supply: single-phase 50 or 60 Hz
2. Power: 100W to 400W
3. Insulation class: B
4. Protection: IP68
5. Length of cable: 4 or 5 m  
10 m (Optional)
6. Delivery: up to 260 L/min
7. Head: up to 10 m
8. Temperature of pumped liquid: 4°C to +35°C

## Level regulator

PW100AC / PW100ARC

**ON**  
Water level > 20cm

**OFF**  
Water level < 5cm

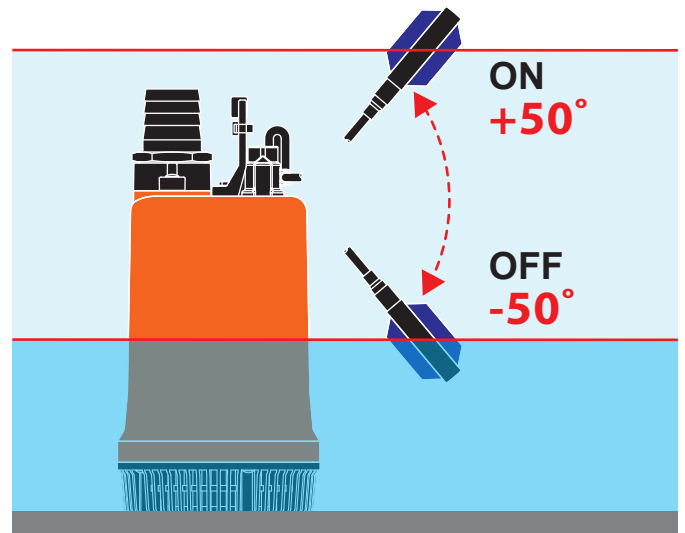


## Float ball level switch

PW100AF / PW100ARF / PW250AF  
PW400AF / PW400ARF

**ON**  
+50°

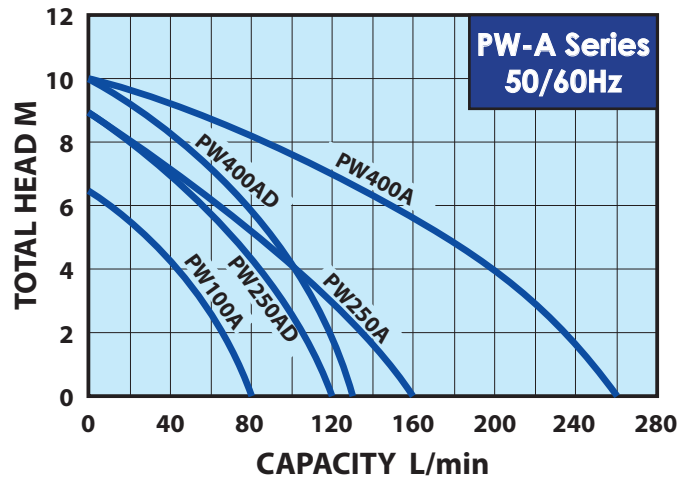
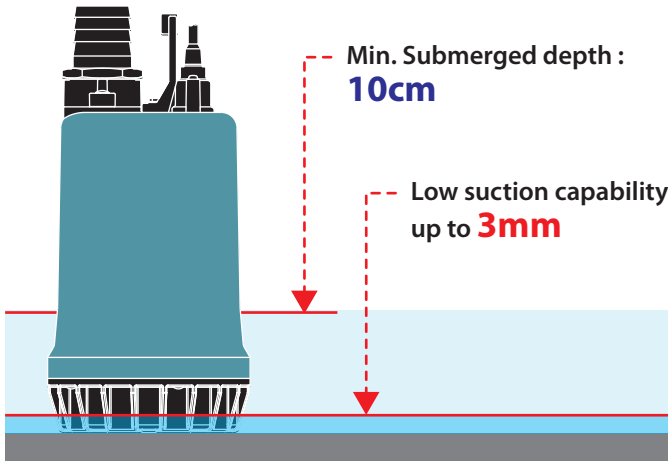
**OFF**  
-50°




## Low suction Pump

## Performance curve

PW250AD / PW400AD



## Specification

Type	Outlet Diameter In. (mm)	Output W	Cycle Hz	Volt V	Amp's A	Maximum		Dimensions L x W x H mm	Cable Wire C x mm <sup>2</sup> x m	N.W. kg	G.W. kg	
						Head m	Capacity L/min					
PW100A	1" (25)	100	50	220 - 240	1.0	6.5	80	155 x 140 x 241	3 x 0.75 x 4	4.1	4.7	72
			60	110 220	2.0 1.0							
PW250A	1½" (32)	250	50	220 - 240	2.0	9.0	160	164 x 164 x 350	3 x 1.25 x 5	5.1	5.5	48
			60	110 220	4.0 2.0							
PW400A	2" (50)	400	50	220 - 240	3.5	10	260	183 x 183 x 382	3 x 1.25 x 5	7.9	8.3	50
			60	110 220	7.0 3.5							

### Sea water pump

PW100AR	1" (25)	100	50	220 - 240	1.0	6.5	80	155 x 140 x 241	3 x 0.75 x 4	4.1	4.7	72
			60	110 220	2.0 1.0							
PW400AR	2" (50)	400	50	220 - 240	3.5	10	260	183 x 183 x 382	3 x 1.25 x 5	7.9	8.3	50
			60	110 220	7.0 3.5							

### Pump with level regulator

PW100AC PW100ARC	1" (25)	100	50	220 - 240	1.0	6.5	80	220 x 140 x 241	3 x 0.75 x 4	4.6	5.1	48
			60	110 220	2.0 1.0							

### Pump with float ball level switch.

PW100AF PW100ARF	1" (25)	100	50	220 - 240	1.0	6.5	80	155 x 140 x 241	3 x 0.75 x 4	4.3	4.9	48
			60	110 220	2.0 1.0							
PW250AF	1½" (32)	250	50	220 - 240	2.0	9.0	160	164 x 164 x 350	3 x 1.25 x 5	5.3	5.7	48
			60	110 220	4.0 2.0							
PW400AF PW400ARF	2" (50)	400	50	220 - 240	3.5	10	260	183 x 183 x 382	3 x 1.25 x 5	8.1	8.5	50
			60	110 220	7.0 3.5							

### Low Suction Pump (Drainage to 3 mm from floor)

PW250AD	1½" (32)	250	50	220 - 240	2.0	9	120	164 x 164 x 350	3 x 1.25 x 5	5.6	6.0	48
			60	110 220	4.0 2.0							
PW400AD	2" (50)	400	50	220 - 240	3.5	10	130	183 x 183 x 384	3 x 1.25 x 5	8.4	8.8	50
			60	110 220	7.0 3.5							

# TPHP Series Multistage Centrifugal Pump



## 50Hz

**Power:** 0.38- 1.2 kW

**Head:** Up to 55M

**Flow:** Up to 140 L/min

## 60Hz

**Power:** 0.54- 1.8 kW

**Head:** Up to 75M

**Flow:** Up to 140 L/min

**Outlet:** 1" -1¼"

## Applications

The TPHP pumps are primarily designed for industrial applications:

Water supply and pressure boosting

Air-conditioning

Water treatment

Heating and cooling in industrial processes

Industrial washing and dish-washing machines

Softened water

Pressure boosting of process water

Fertilizer/dosing systems

## Operating Conditions

1. Ambient temperature :Max. +40°C
2. Liquid temperature range:+0°C ~ +90°C
3. Operating pressure:Max. 10 kg/cm<sup>2</sup>
4. Inlet pressure:Max. 6 kg/cm<sup>2</sup>

## Pump Construction

Horizontal, multistage centrifugal pump of the non selfpriming type with extended pump/motor shaft and fitted with a mechanical shaft seal.

Compact pump unit with small physical dimensions, axial suction port and radial discharge port.

## Pumped liquids

Thin, clean and non-explosive liquids without solid particles or fibres.

The pumps are able to pump liquids such as demineralised water, softened water, sea water, cleaning solutions and light oils.

When pumping liquids with a density and/or viscosity higher than that of water, motors with correspondingly higher outputs must be used, if required.

Whether a pump is suitable for a particular liquid depends on a number of factors of which the most important are chloride content, pH value, temperature and content of solvents, oils, etc.

## Motor

Enclosure protection class: IP54

Insulation class: F.

Frequency range: 50 / 60 Hz

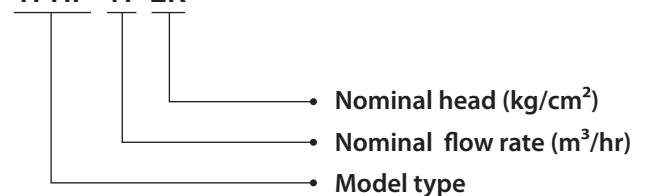
Nominal speed : 2900 / 3500 rpm

Standard voltages: 3Ø 200-240 / 380-440V, 50Hz

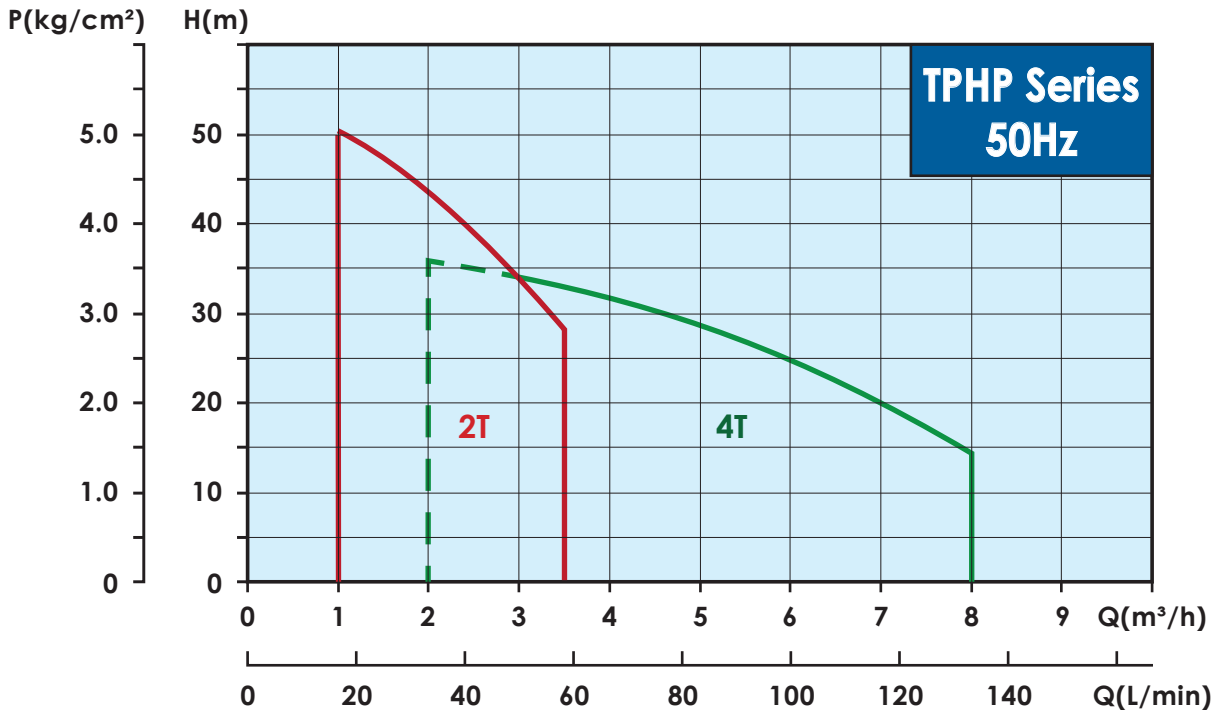
3Ø 200-255 / 380-480V, 60Hz

## Model code

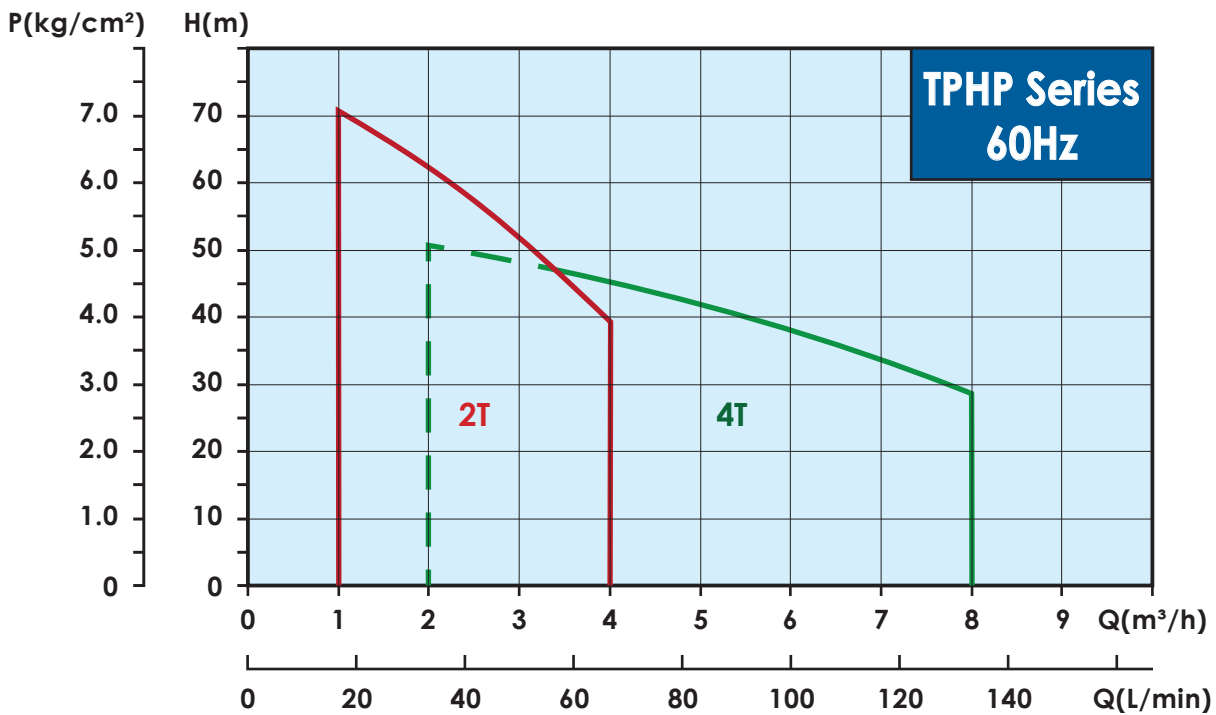
TPHP 4T 2K



## Performance curve (50Hz)



## Performance curve (60Hz)



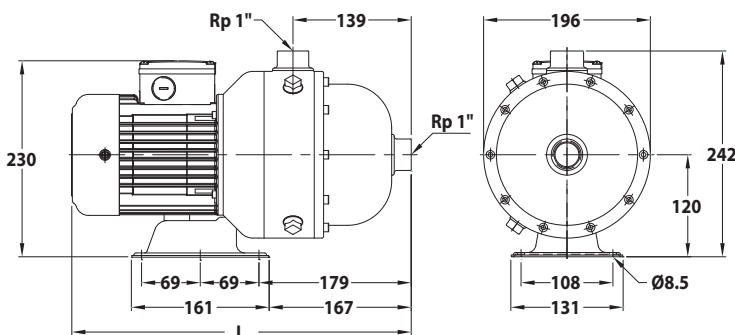



# TPHP 2T

## Electrical data, 50/60Hz

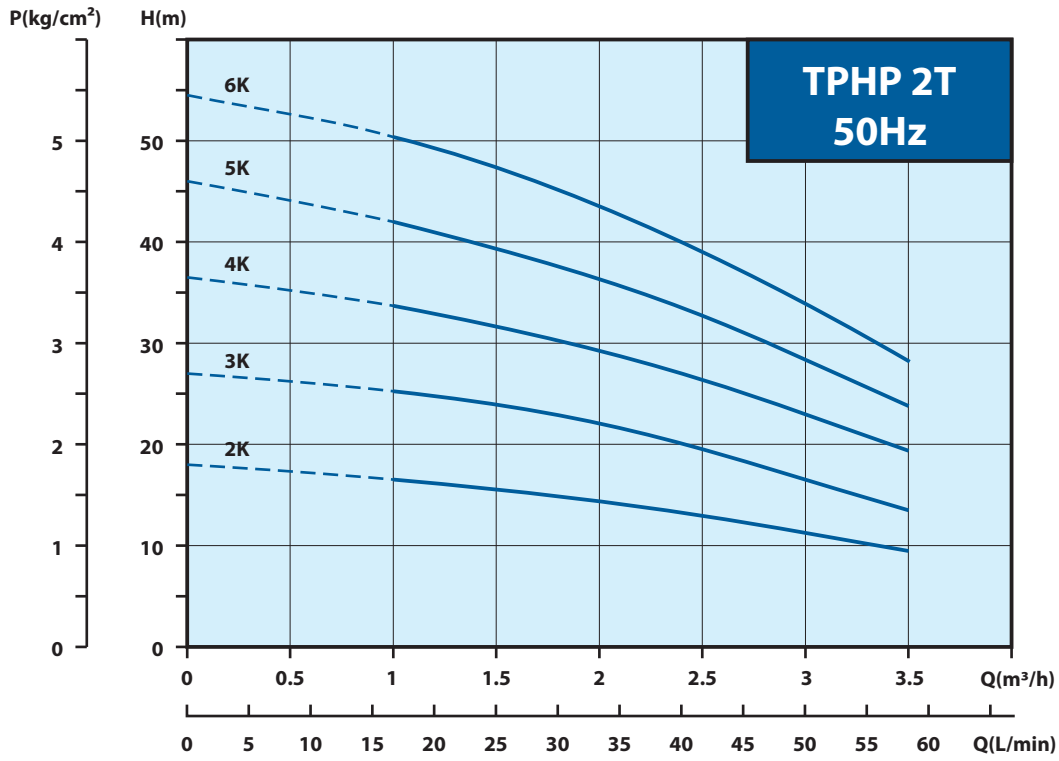
Model	PH (Ø)	Cycle ( Hz )	Volts ( V )	Input Power ( W )	Ampere ( A )
TPHP 2T 2K	3	50	200-240 / 380-440	380	1.7-2.2 / 1.1-1.4
		60	200-255 / 380-480	540	1.9-2.0 / 1.2-1.2
TPHP 2T 3K	3	50	200-240 / 380-440	500	1.9-2.3 / 1.2-1.5
		60	200-255 / 380-480	740	2.4-2.3 / 1.4-1.4
TPHP 2T 4K	3	50	200-240 / 380-440	620	2.2-2.4 / 1.3-1.6
		60	200-255 / 380-480	930	2.9-2.7 / 1.6-1.6
TPHP 2T 5K	3	50	200-240 / 380-440	810	2.9-3.8 / 1.8-2.6
		60	200-255 / 380-480	1170	3.7-3.6 / 2.2-2.2
TPHP 2T 6K	3	50	200-240 / 380-440	920	3.2-3.9 / 1.9-2.7
		60	200-255 / 380-480	1350	4.2-4.0 / 2.4-2.4

## Dimensions ( mm )

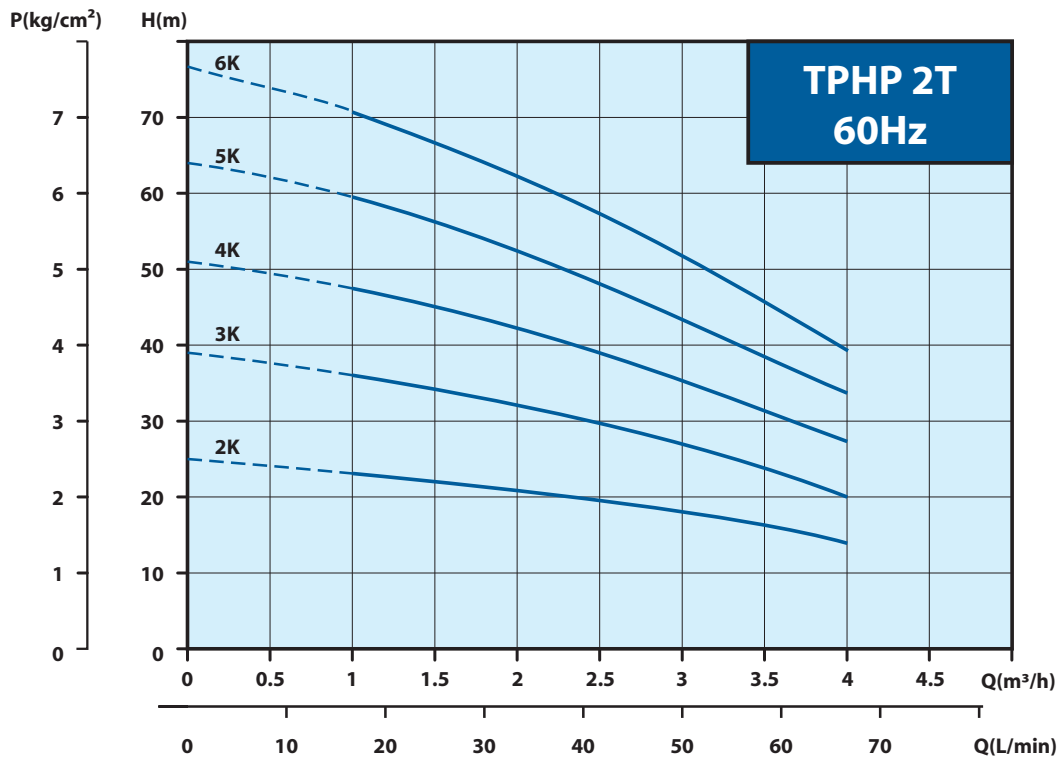


Model	L(mm)	N.W.(kg)	24 pcs 
TPHP 2T 2K	400	11.6	
TPHP 2T 3K	400	11.8	
TPHP 2T 4K	400	12.0	
TPHP 2T 5K	440	13.1	
TPHP 2T 6K	440	13.3	

## Performance curve (50Hz)



## Performance curve (60Hz)

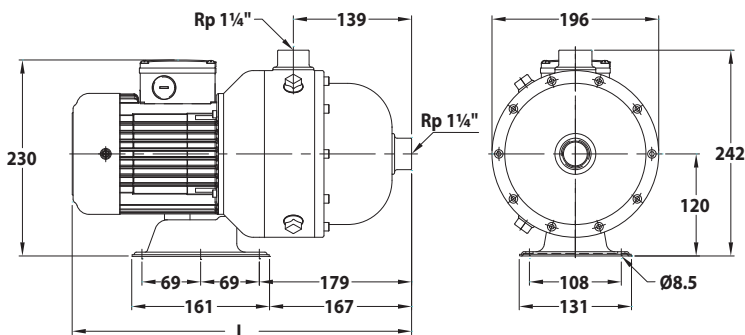



# TPHP 4T

## Electrical data, 50/60Hz

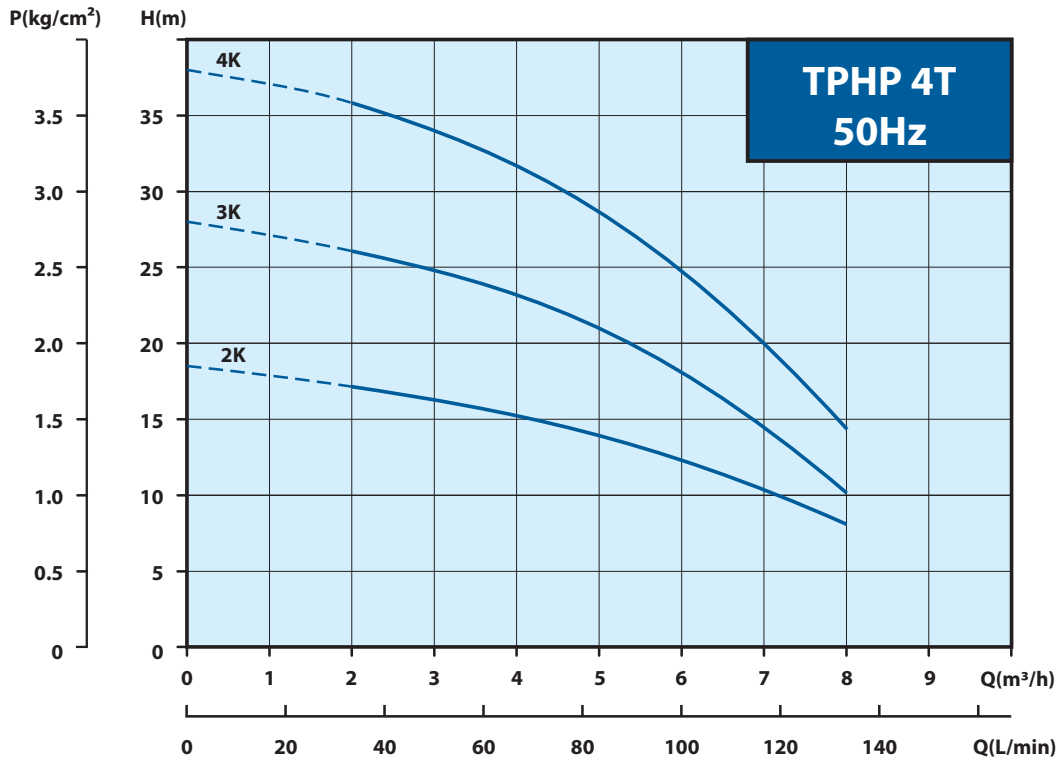
Model	PH (Ø)	Cycle ( Hz )	Volts ( V )	Input Power ( W )	Ampere ( A )
TPHP 4T 2K	3	50	200-240 / 380-440	670	2.3-2.5 / 1.4-1.6
		60	200-255 / 380-480	1000	3.1-2.8 / 1.7-1.7
TPHP 4T 3K	3	50	200-240 / 380-440	960	3.3-4.1 / 2.0-2.7
		60	200-255 / 380-480	1420	4.4-4.1 / 2.5-2.5
TPHP 4T 4K	3	50	200-240 / 380-440	1200	4.0-4.7 / 2.4-3.1
		60	200-255 / 380-480	1800	5.5-5.1 / 3.0-3.0

## Dimensions ( mm )

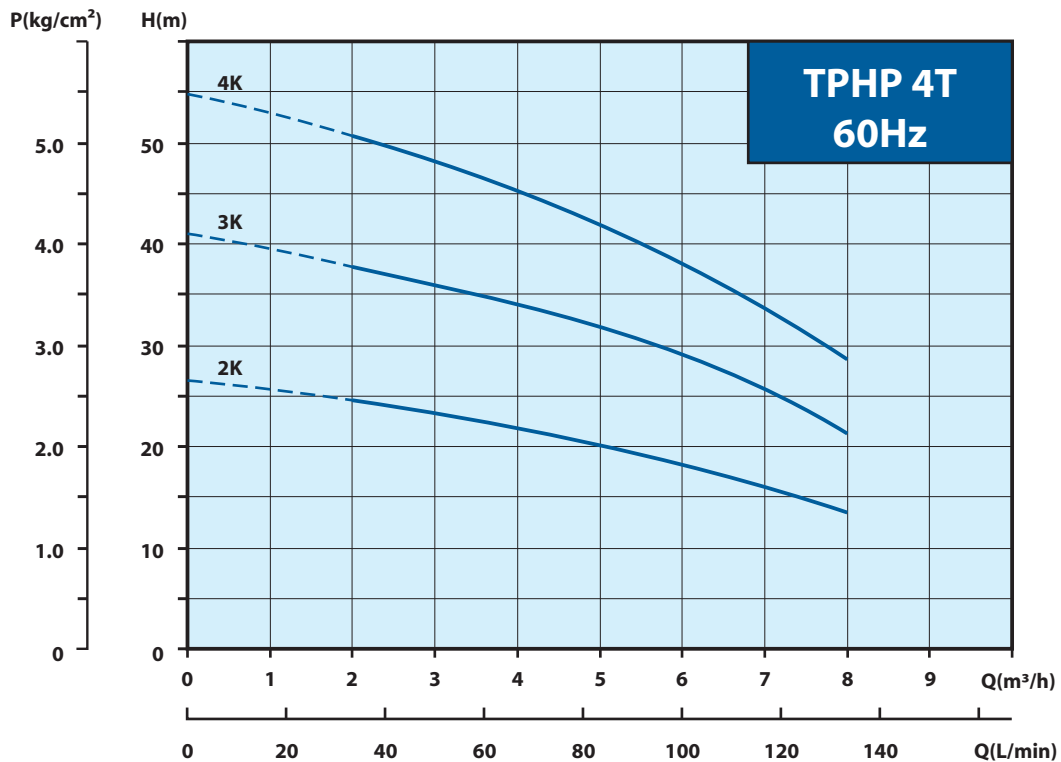


Model	L(mm)	N.W.(kg)	24 pcs 
TPHP 4T 2K	400	11.8	
TPHP 4T 3K	440	12.9	
TPHP 4T 4K	440	13.5	

## Performance curve (50Hz)



## Performance curve (60Hz)





# Memo

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# TPH Series Multistage Centrifugal Pump



## 50Hz

**Power:** 0.42 - 11.6 kW

**Head:** Up to 70M

**Flow:** Up to 1200 L/min

## 60Hz

**Power:** 0.37 - 14.2 kW

**Head:** Up to 80M

**Flow:** Up to 1400 L/min

**Outlet:** 1" - 4"

## Applications

The TPH Series is horizontal multistage centrifugal pump, suitable for clean water/liquid without abrasive matters. The applications are versatile, such as pressure boosting, transfer, circulation, and machinery.

- Industrial circulation system
- Washing/cleaning system
- Pressure booster system
- Water/liquid transfer
- Agricultural irrigation

## Standard Mode

	TPH	4T	2K	S	F	A	H	CH
Model type								
Nominal flow rate (m <sup>3</sup> /hr)								
Nominal head (kg/cm <sup>2</sup> )								
Standard mode								
N: SUS 316 (25T/50T)								
S: SUS 304 (2T/4T/8T/12T)								
Flange type (25T/50T)								
Air conditioning (IP 44)								
Insulation class: H.								
Insulation class: H. (2T/4T)								
Mechanical seal type: HGSV (Carbon + SiC + Viton)								
Water temperature : +4°C ~ +120°C								
Oil temperature : +0°C ~ +150°C								

## Operating Conditions

1. Ambient temperature :Max. +40°C
2. Liquid temperature range:+0°C ~ +90°C
3. Operating pressure:Max. 10 kg/cm<sup>2</sup>
4. Inlet pressure:Max. 6 kg/cm<sup>2</sup>

## Pump Construction

Horizontal multistage centrifugal pump, non self-priming, co-axial pump/motor design, impellers mounted on extended motor shaft. Main working parts made by stainless steel.

## Motor

Enclosure protection class: IP54

Insulation class: F.

Frequency range: 50 / 60 Hz

Nominal speed : 2900 / 3500 rpm

Voltages code:

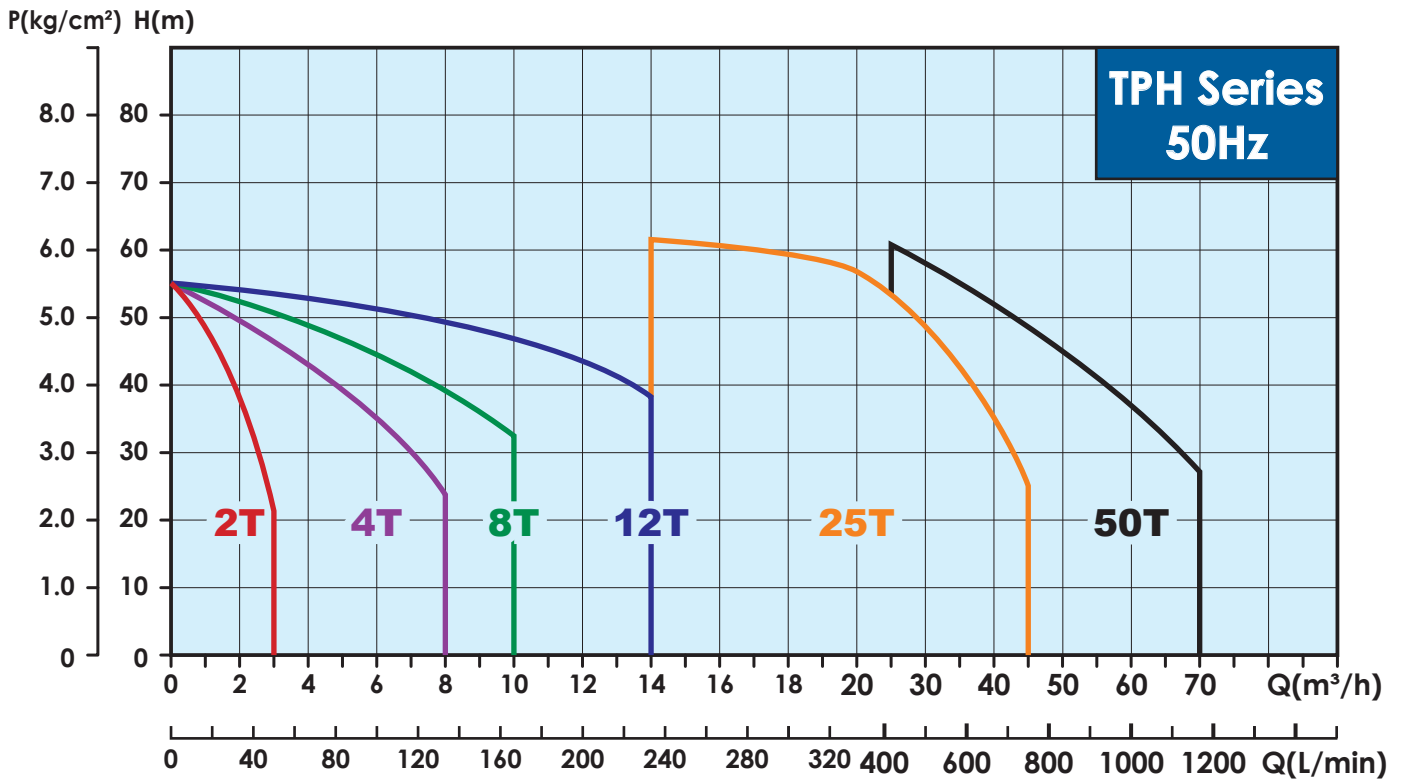
Code	PH	50Hz	60Hz
61B	1	-	220V
51R	1	200-240V	-
53Q	3	200-240/380-440V	-
A3Z*	3	200-255/380-440V	200-255/380-480V
A3U*	3	200-240/380-415V	200-240/380-440V
63Q	3	-	200-240/380-440V
63Z	3	-	200-255/380-480V

Optional : 50hz, 60hz models are available on request.

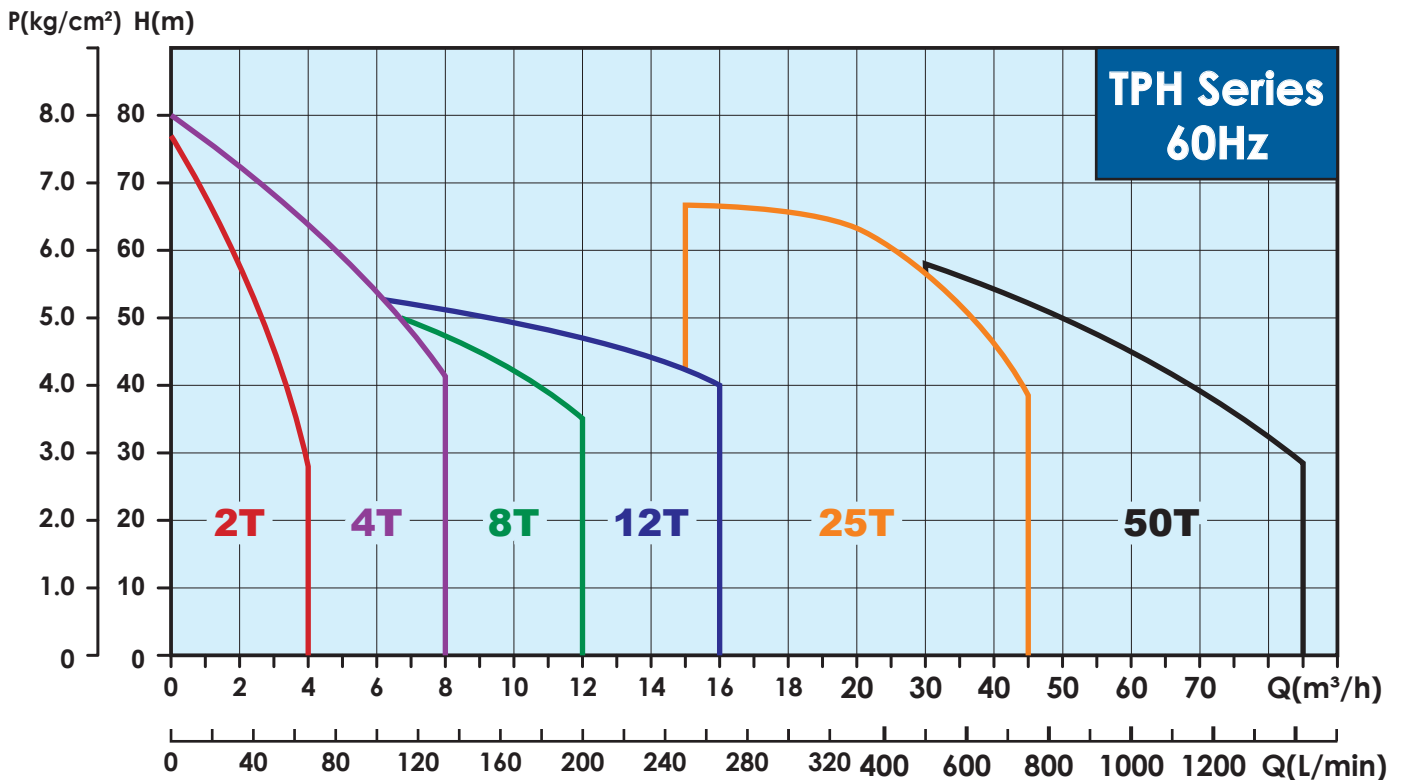
\* The motor can be use in both 50/60 hz.

# TPH Series Multistage Centrifugal Pump

## Performance curve (50Hz)

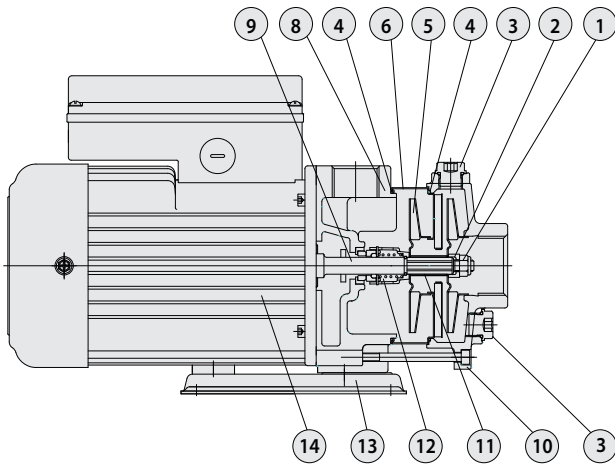


## Performance curve (60Hz)

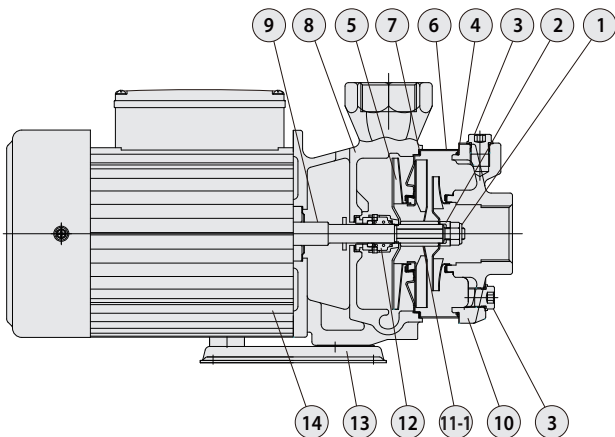


## Sectional drawing

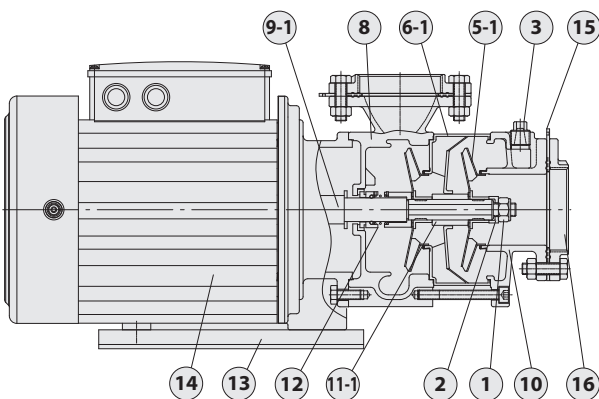
(TPH2/4T)



(TPH 8/12T)



(TPH 25/50T)



## Materials

No.	Part name	Material		
		Standard	S series	N series
1	Lock Nut	SUS 316	SUS 316	SUS 316
2	Sleeve(Shaft End)	SUS 316	SUS 316	SUS 316
3	Water Plug	FC 20	SUS 304	SUS 316
4	O Ring	HNBR	HNBR	-
5	Impeller	SUS 304	SUS 304	-
5-1	Impeller	SUS 316	-	SUS316
6	Intermediate Chamber	SUS 304	SUS 304	-
6-1	Intermediate Chamber	SUS 316	-	SUS 316
7	Gasket	Teflon	Teflon	-
8	Pump Casing	FC 20	SUS 304	SUS 316
9	Shaft	SUS 304	SUS 304	-
9-1	Shaft	SUS 316	-	SUS 316
10	Suction Chamber	FC 20	SUS 304	SUS316
11	Sleeve	SUS 304	SUS 304	-
11-1	Sleeve	SUS 316	SUS 316	SUS 316
12	Mechanical Seal	HGSH		
13	Mounted Base	Coating Steel		
14	Motor Shell	Aluminum alloy		
15	Gasket	Teflon+NBR		
16	Flange	FC 20	-	SUS 316

SUS 304 may be replaced by SUS316 depended on stock availability.

## Options on request

- Terminal box position adjustable
- Special mechanical seal

Mechanical seal type	Material	
	Stationary Face/ Rotary Face	Cup Gasket & O Ring
HGSH HGSV HGSE	(G)Carbon/ (S)Silicium carbide	(H) HNBR (V) Viton
HSSH HSSV HSSE	(S)Silicium carbide/ (S)Silicium carbide	(E) EPDM



# TPH 2T

## Electrical data, 50Hz

Model	PH (Ø)	voltage code	Cycle ( Hz )	Volts ( V )	Input Power ( W )	Ampere ( A )
TPH 2T 2K	1	51R	50	200-240	450	2.4
	3	53Q	50	200-240 / 380-440	420	2.0 / 1.3
TPH 2T 3K	1	51R	50	200-240	500	2.5
	3	53Q	50	200-240 / 380-440	520	2.2 / 1.4
TPH 2T 4K	1	51R	50	200-240	600	2.9
	3	53Q	50	200-240 / 380-440	590	2.3 / 1.4
TPH 2T 5K	1	51R	50	200-240	760	4.0
	3	53Q	50	200-240 / 380-440	680	3.0 / 1.9
TPH 2T 6K	1	51R	50	200-240	880	4.3
	3	53Q	50	200-240 / 380-440	860	3.1 / 2.0

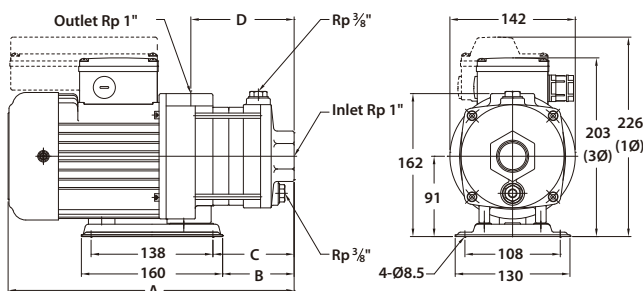
## Electrical data, 50/60Hz

Model	PH (Ø)	voltage code	Cycle ( Hz )	Volts ( V )	Input Power ( W )	Ampere ( A )
TPH 2T 1K	3	A3Z	50	200-255 / 380-440	340	1.6-2.8 / 1.0-1.5
			60	200-255 / 380-480	370	1.5-1.9 / 1.0-1.3
TPH 2T 2K	3	A3Z	50	200-255 / 380-440	450	1.9-2.8 / 1.2-1.5
			60	200-255 / 380-480	560	2.1-2.2 / 1.5-1.5
TPH 2T 3K	3	A3Z	50	200-255 / 380-440	530	2.0-2.8 / 1.3-1.6
			60	200-255 / 380-480	750	2.6-2.5 / 1.6-1.6
TPH 2T 4K	3	A3Z	50	200-255 / 380-440	620	2.2-2.9 / 1.4-1.7
			60	200-255 / 380-480	910	3.0-2.9 / 1.7-1.7
TPH 2T 5K	3	A3Z	50	200-255 / 380-440	700	2.4-3.0 / 1.4-1.6
			60	200-255 / 380-480	1060	3.3-3.0 / 1.8-1.8
TPH 2T 6K	3	A3Z	50	200-255 / 380-440	850	3.1-3.6 / 1.8-2.1
			60	200-255 / 380-480	1290	4.0-3.6 / 2.4-2.4

## Electrical data, 60Hz

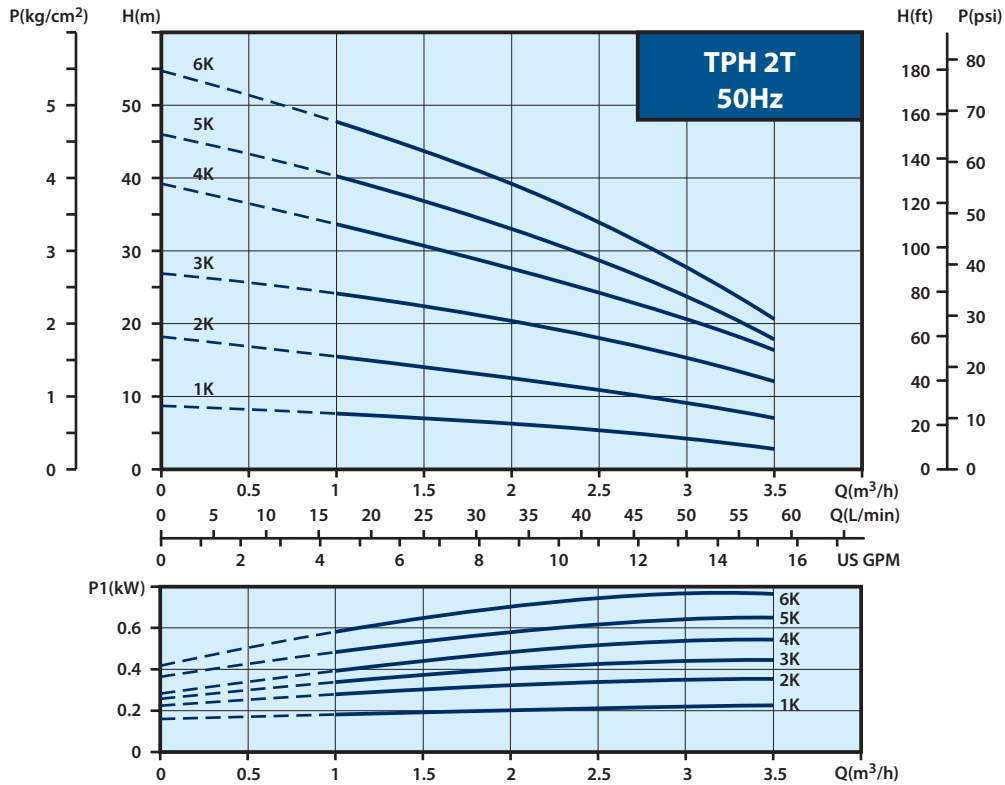
Model	PH (Ø)	voltage code	Cycle ( Hz )	Volts ( V )	Input Power ( W )	Ampere ( A )
TPH 2T 1K	1	61B	60	220	450	2.1
TPH 2T 2K	1	61B	60	220	760	4.3
TPH 2T 3K	1	61B	60	220	900	4.8
TPH 2T 4K	1	61B	60	220	1030	5.3
TPH 2T 5K	1	61B	60	220	1300	6.3
TPH 2T 6K	1	61B	60	220	1500	7.0

## Dimensions ( mm )

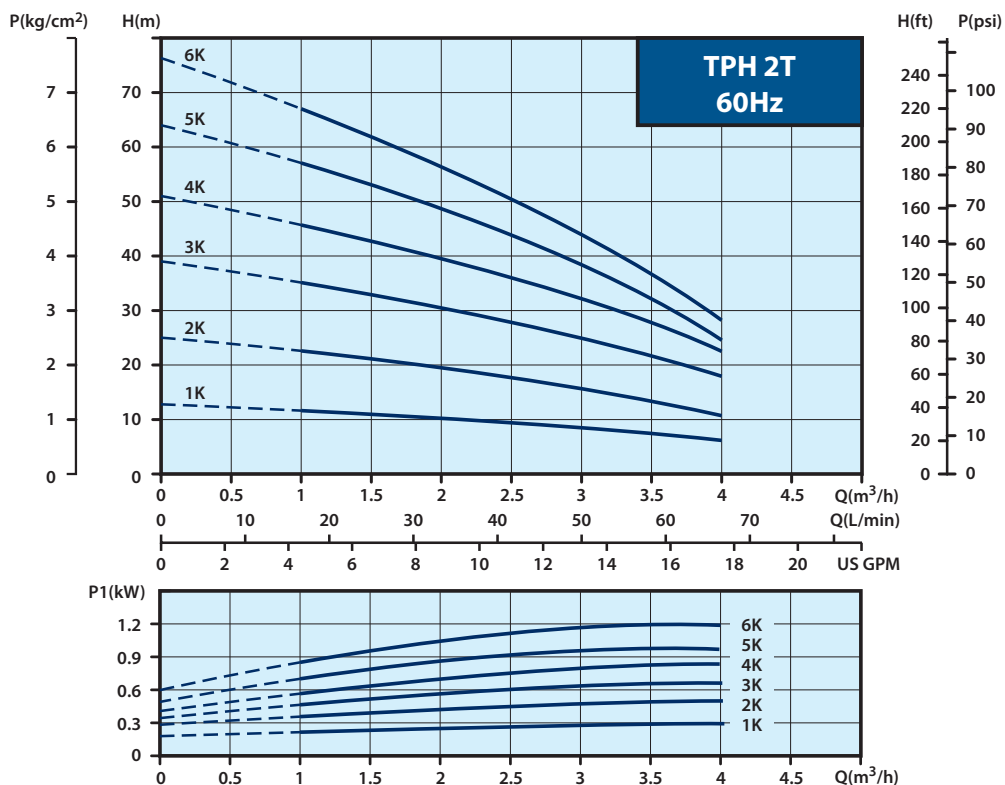


Model	A(mm)	B(mm)	C(mm)	D(mm)	N.W.(kg)	
TPH 2T 1K	306	63	74	99	11.7	36 pcs
TPH 2T 2K	306	63	74	99	11.8	
TPH 2T 3K	324	81	92	117	11.9	
TPH 2T 4K	342	99	110	135	12.0	30 pcs
TPH 2T 5K	400	117	128	153	13.5	
TPH 2T 6K	418	135	146	171	13.6	

## Performance curve (50Hz)



## Performance curve (60Hz)



# TPH 4T

## Electrical data, 50Hz

Model	PH (Ø)	voltage code	Cycle ( Hz )	Volts ( V )	Input Power ( W )	Ampere ( A )
TPH 4T 2K	1	51R	50	200-240	600	3.1-2.9
	3	53Q	50	200-240 / 380-440	600	2.3 / 1.4
TPH 4T 3K	1	51R	50	200-240	950	4.5
	3	53Q	50	200-240 / 380-440	830	3.3 / 2.1
TPH 4T 4K	1	51R	50	200-240	1200	5.7
	3	53Q	50	200-240 / 380-440	1010	3.7 / 2.2
TPH 4T 5K	1	51R	50	200-240	1370	6.9
	3	53Q	50	200-240 / 380-440	1300	4.1 / 2.4
TPH 4T 6K	1	51R	50	200-240	1470	7.7
	3	53Q	50	200-240 / 380-440	1640	5.5 / 3.5

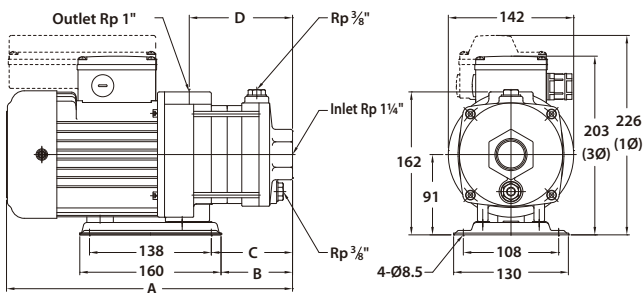
## Electrical data, 50/60Hz


Model	PH (Ø)	voltage code	Cycle ( Hz )	Volts ( V )	Input Power ( W )	Ampere ( A )
TPH 4T 2K	3	A3Z	50	200-255 / 380-440	650	2.2-2.9 / 1.4-1.7
			60	200-255 / 380-480	960	3.0-2.7 / 1.7-1.7
TPH 4T 3K	3	A3Z	50	200-255 / 380-440	850	3.1-3.6 / 1.8-2.1
			60	200-255 / 380-480	1290	4.0-3.6 / 2.4-2.4
TPH 4T 4K	3	A3U	50	200-240 / 380-415	1080	3.4-3.5 / 2.0-2.0
			60	200-240 / 380-440	1620	4.5-5.0 / 2.9-2.9
TPH 4T 5K	3	A3U	50	200-240 / 380-415	1440	4.9-6.8 / 3.0-3.8
			60	200-240 / 380-440	2100	6.2-6.0 / 3.5-3.5
TPH 4T 6K	3	A3U	50	200-240 / 380-415	1740	6.3-9.9 / 4.2-5.5
			60	200-240 / 380-440	2400	7.7-7.6 / 4.5-4.5

## Electrical data, 60Hz

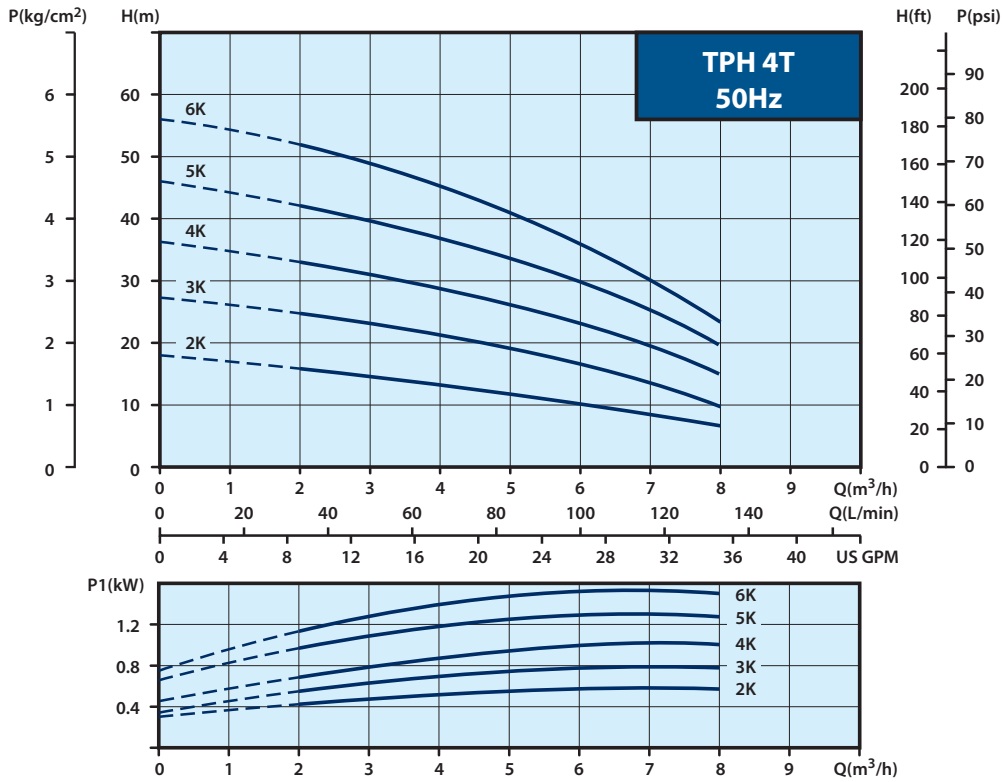
Model	PH (Ø)	voltage code	Cycle ( Hz )	Volts ( V )	Input Power ( W )	Ampere ( A )
TPH 4T 2K	1	61B	60	220	1030	5.3
TPH 4T 3K	1	61B	60	220	1500	7.0
TPH 4T 4K	1	61B	60	220	1760	8.6
TPH 4T 5K	1	61B	60	220	2100	10.0
TPH 4T 6K	1	61B	60	220	2600	12.0

## Dimensions ( mm )

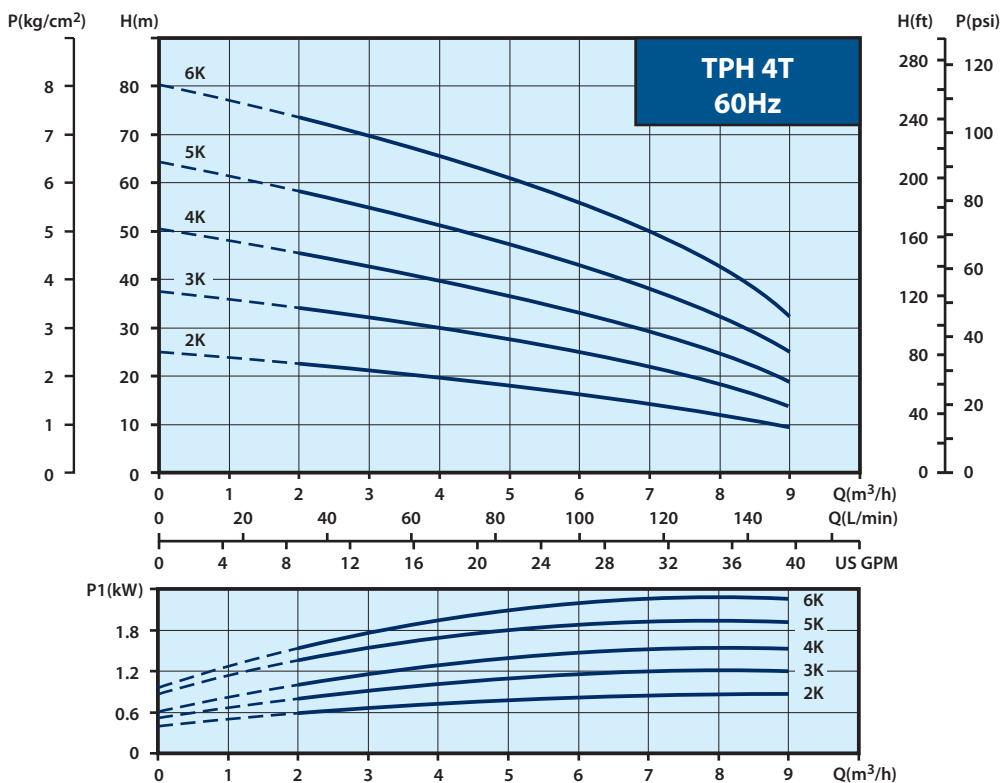


Model	Cycle ( Hz )	A(mm)	B(mm)	C(mm)	D(mm)	N.W.(kg)	
TPH 4T 2K	50/60	315	72	83	108	11.7	36 pcs
TPH 4T 3K	50/60	382	99	110	135	13.3	
TPH 4T 4K	50/60	409	126	137	162	14.1	
TPH 4T 5K	50/60	436	153	164	189	14.2	
TPH 4T 6K	50	463	180	191	216	15.1	24 pcs
	60	494	180	191	216	16.1	

## Performance curve (50Hz)



## Performance curve (60Hz)



# TPH 8T

## Electrical data, 50Hz

Model	PH (Ø)	voltage code	Cycle ( Hz )	Volts ( V )	Input Power ( W )	Ampere ( A )
TPH 8T 2K	1	51R	50	200-240	900	4.3
	3	53Q	50	200-240 / 380-440	810	3.0 / 1.9
TPH 8T 3K	1	51R	50	200-240	1300	6.3
	3	53Q	50	200-240 / 380-440	1110	3.3 / 2.1
TPH 8T 4K	1	51R	50	200-240	1520	7.6
	3	53Q	50	200-240 / 380-440	1600	5.6 / 3.5
TPH 8T 5K	3	53Q	50	200-240 / 380-440	2000	6.0 / 3.6
TPH 8T 6K	3	53Q	50	200-240 / 380-440	2230	6.7 / 3.9

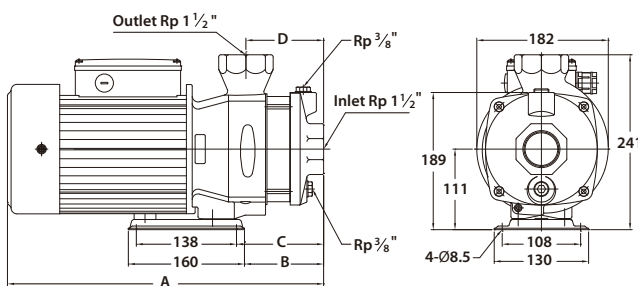
## Electrical data, 50/60Hz

Model	PH (Ø)	voltage code	Cycle ( Hz )	Volts ( V )	Input Power ( W )	Ampere ( A )
TPH 8T 2K	3	A3Z	50	200-255 / 380-440	850	3.1-3.6 / 1.8-2.1
			60	200-255 / 380-480	1290	4.0-3.6 / 2.4-2.4
TPH 8T 2.5K	3	A3U	50	200-240 / 380-415	980	3.1-3.3 / 1.8-2.0
			60	200-240 / 380-440	1460	4.4-4.1 / 2.4-2.4
TPH 8T 3K	3	A3U	50	200-240 / 380-415	1400	4.9-6.8 / 3.0-3.8
			60	200-240 / 380-440	2100	6.2-6.0 / 3.5-3.5
TPH 8T 4K	3	A3U	50	200-240 / 380-415	1780	5.5-8.7 / 3.8-4.9
			60	200-240 / 380-440	2460	7.6-7.2 / 4.4-4.4
TPH 8T 5K	3	A3U	50	200-240 / 380-415	2000	5.9-8.5 / 3.8-5.0
			60	200-240 / 380-440	2700	8.1-7.8 / 4.6-4.6

## Electrical data, 60Hz

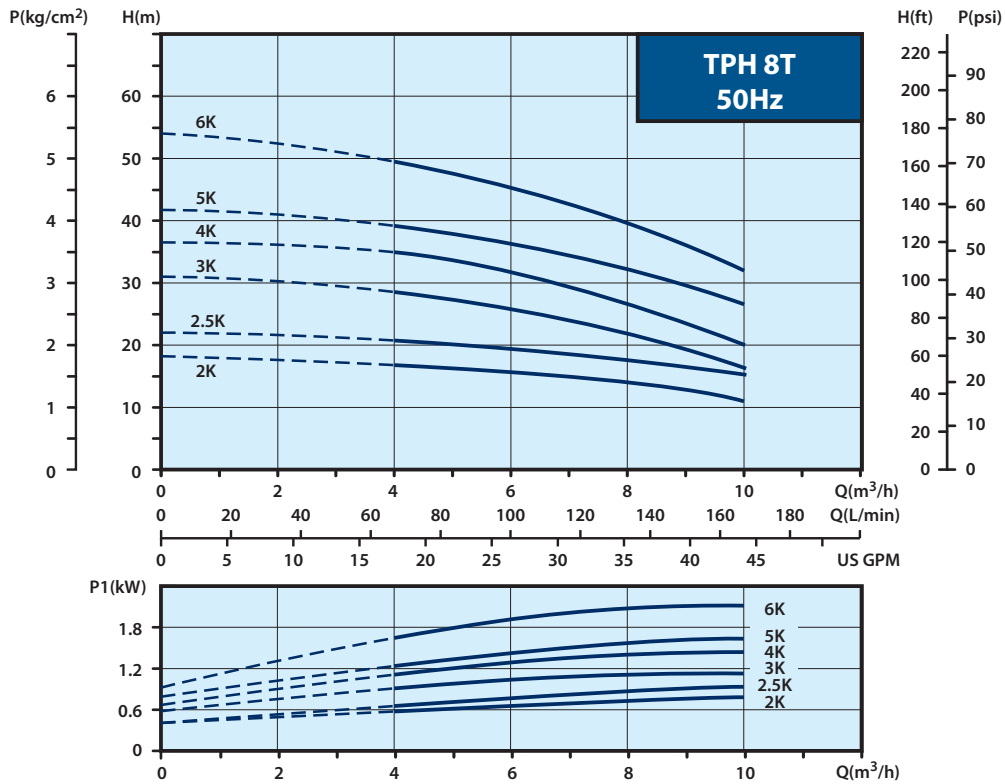
Model	PH (Ø)	voltage code	Cycle ( Hz )	Volts ( V )	Input Power ( W )	Ampere ( A )
TPH 8T 2K	1	61B	60	220	1500	7.0
TPH 8T 2.5K	1	61B	60	220	1720	8.7
TPH 8T 3K	1	61B	60	220	1970	10.0

## Dimensions ( mm )

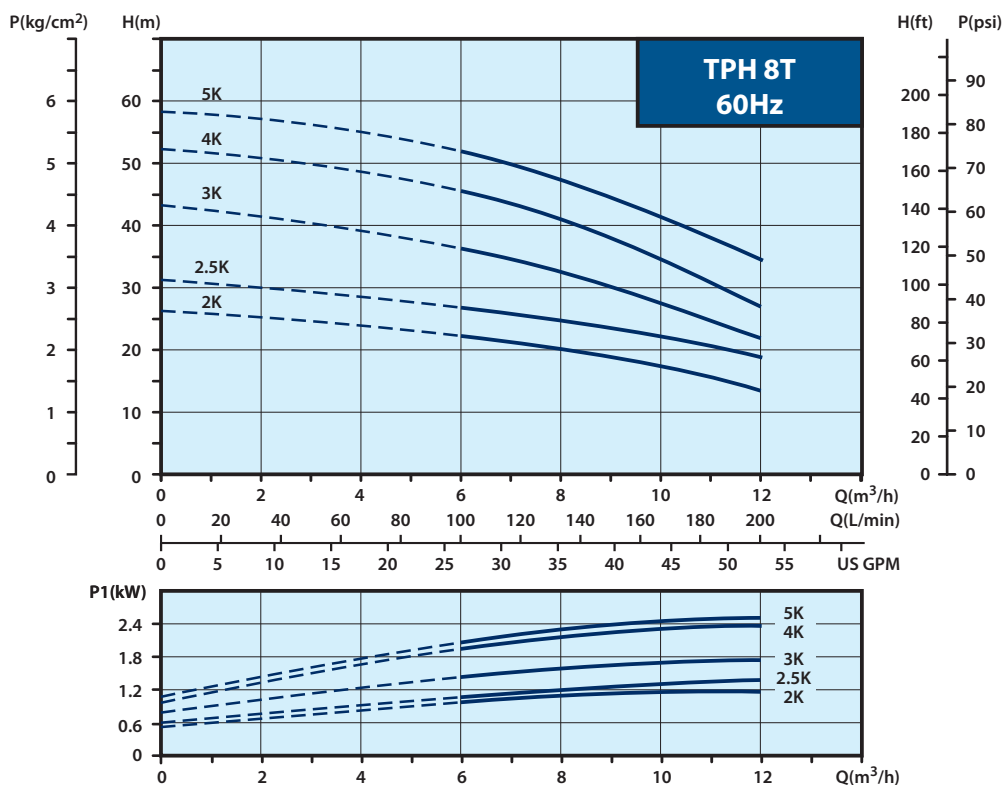


Model	Cycle ( Hz )	A(mm)	B(mm)	C(mm)	D(mm)	N.W.(kg)	
TPH 8T 2K	50/60	376.5	77	88	75	18.8	24 pcs
TPH 8T 2.5 K	60	408.5	109	120	107	19.5	
TPH 8T 3K	50/60	408.5	109	120	107	20.0	
TPH 8T 4K	50	408.5	109	120	107	22.2	
	60	435.5	109	120	107	25.4	
TPH 8T 5K	50/60	469.5	143	154	141	25.5	
TPH 8T 6K	50	469.5	143	154	141	25.5	

## Performance curve (50Hz)



## Performance curve (60Hz)



# TPH 12T

## Electrical data, 50Hz

Model	PH (Ø)	voltage code	Cycle ( Hz )	Volts ( V )	Input Power ( W )	Ampere ( A )
TPH 12T 2K	1	51R	50	200-240	1380	6.5
	3	53Q	50	200-240 / 380-440	1140	3.6 / 2.1
TPH 12T 3K	1	51R	50	200-240	1700	7.9
	3	53Q	50	200-240 / 380-440	1580	5.8 / 3.6
TPH 12T 4K	3	53Q	50	200-240 / 380-440	2500	7.1 / 4.1
TPH 12T 5K	3	53Q	50	200-240 / 380-440	3050	10.8 / 6.8
TPH 12T 6K	3	53Q	50	200-240 / 380-440	3700	11.3 / 7.0

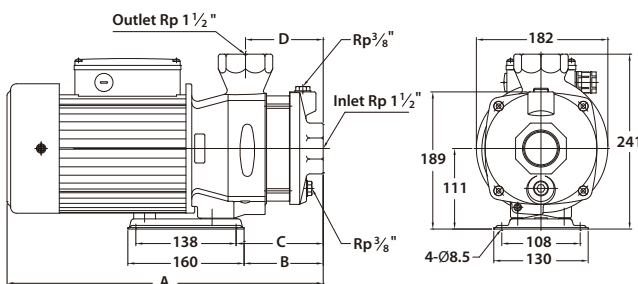
## Electrical data, 50/60Hz


Model	PH (Ø)	voltage code	Cycle ( Hz )	Volts ( V )	Input Power ( W )	Ampere ( A )
TPH 12T 1K	3	A3Z	50	200-255 / 380-440	600	2.2-2.9 / 1.4-1.7
			60	200-255 / 380-480	860	2.6-2.6 / 1.7-1.7
TPH 12T 2K	3	A3U	50	200-240 / 380-415	1500	4.9-6.8 / 3.0-3.8
			60	200-240 / 380-440	2200	6.2-6.0 / 3.5-3.5
TPH 12T 3K	3	A3U	50	200-240 / 380-415	2000	6.2-8.8 / 3.9-5.0
			60	200-240 / 380-440	2900	8.8-8.0 / 4.9-4.9
TPH 12T 4K	3	A3U	50	200-240 / 380-415	2900	9.0-13.1 / 5.8-7.9
			60	200-240 / 380-440	4100	12.4-11.2 / 6.7-6.7

## Electrical data, 60Hz

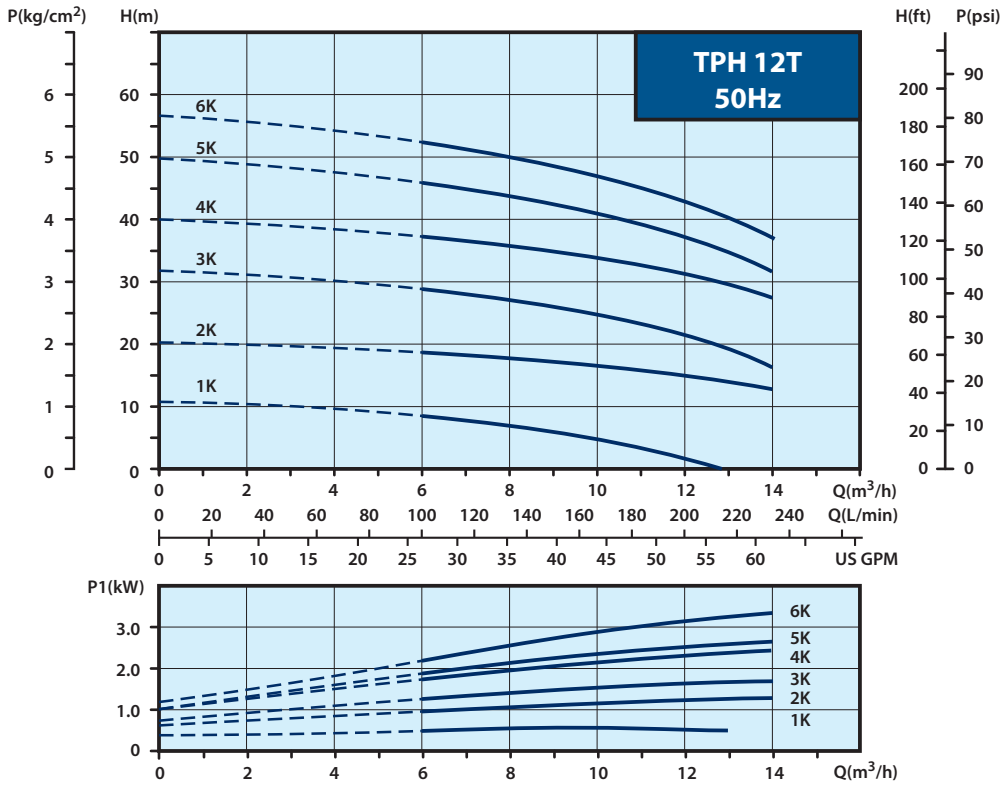
Model	PH (Ø)	voltage code	Cycle ( Hz )	Volts ( V )	Input Power ( W )	Ampere ( A )
TPH 12T 1K	1	61B	60	220	1030	5.3
TPH 12T 2K	1	61B	60	220	2200	11.2

## Dimensions ( mm )

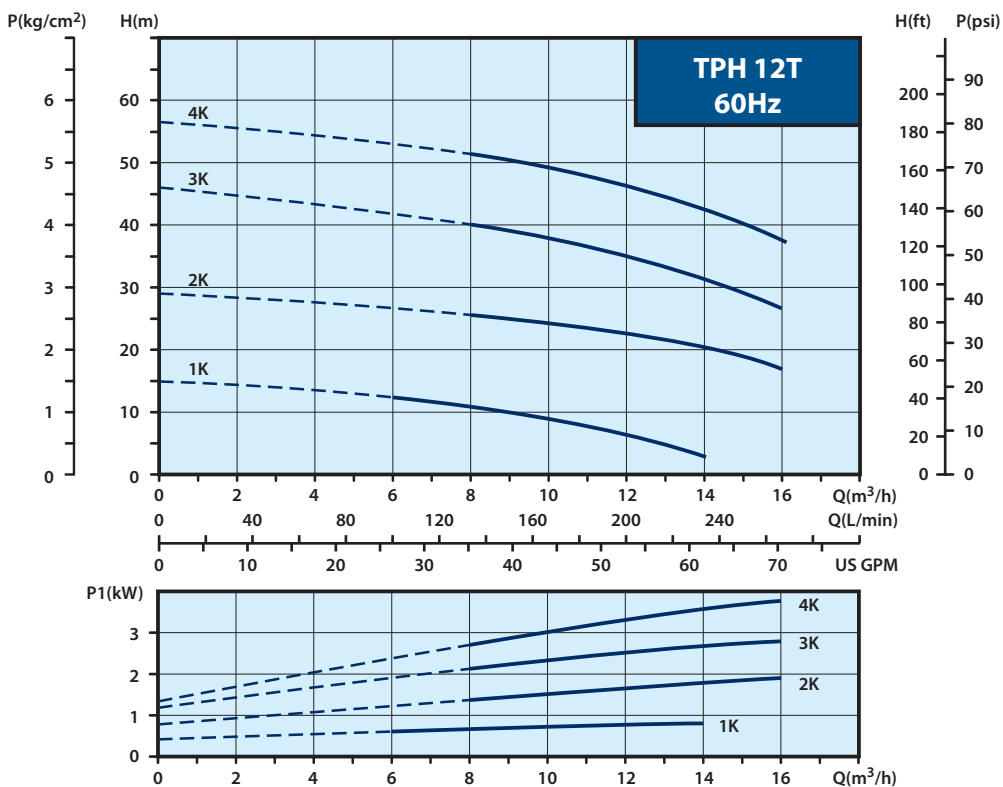


Model	Cycle ( Hz )	A(mm)	B(mm)	C(mm)	D(mm)	N.W.(kg)	
TPH 12T 1K	50/60	336.5	77	88	75	17.6	24 pcs
TPH 12T 2K	50/60	376.5	77	88	75	20.0	
TPH 12T 3K	50	408.5	109	120	107	22.0	
	60	435.5	109	120	107	25.4	
TPH 12T 4K	50/60	435.5	109	120	107	28.0	
TPH 12T 5K	50	469.5	143	154	141	29.2	
TPH 12T 6K	50	469.5	143	154	141	29.2	

## Performance curve (50Hz)



## Performance curve (60Hz)



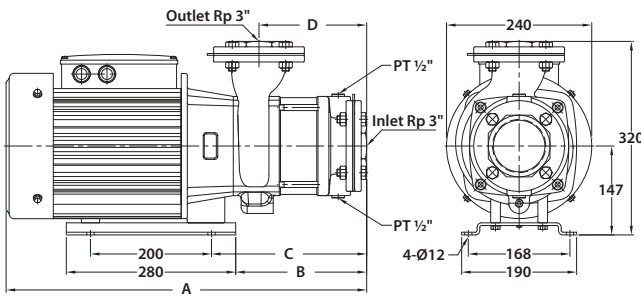


# TPH 25T

## Electrical data, 50Hz

Model	PH (Ø)	voltage code	Cycle ( Hz )	Volts ( V )	Input Power ( W )	Ampere ( A )
TPH 25T 2KF	3	53Q	50	200-240 / 380-440	4000	12.0 / 6.5
TPH 25T 3KF	3	53Q	50	200-240 / 380-440	4800	15.6 / 10.0
TPH 25T 4KF	3	53Q	50	200-240 / 380-440	5700	18.0 / 11.3
TPH 25T 5KF	3	53Q	50	200-240 / 380-440	7800	24.1 / 13.9

## Dimensions ( mm ), 50Hz

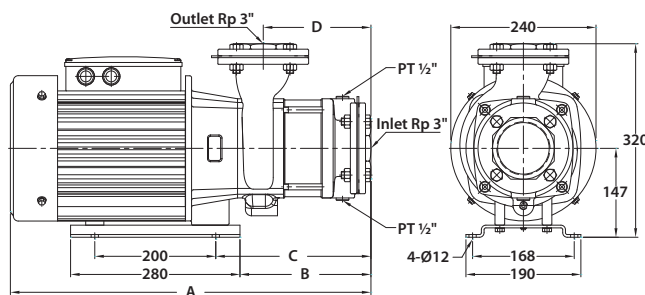


Model	A(mm)	B(mm)	C(mm)	D(mm)	N.W.(kg)
TPH 25T2KF	596	216.5	256.5	178	53.0
TPH 25T3KF	656	276.5	316.5	238	58.8
TPH 25T4KF	656	276.5	316.5	238	59.0
TPH 25T5KF	766	336.5	376.5	298	71.0

## Electrical data, 60Hz

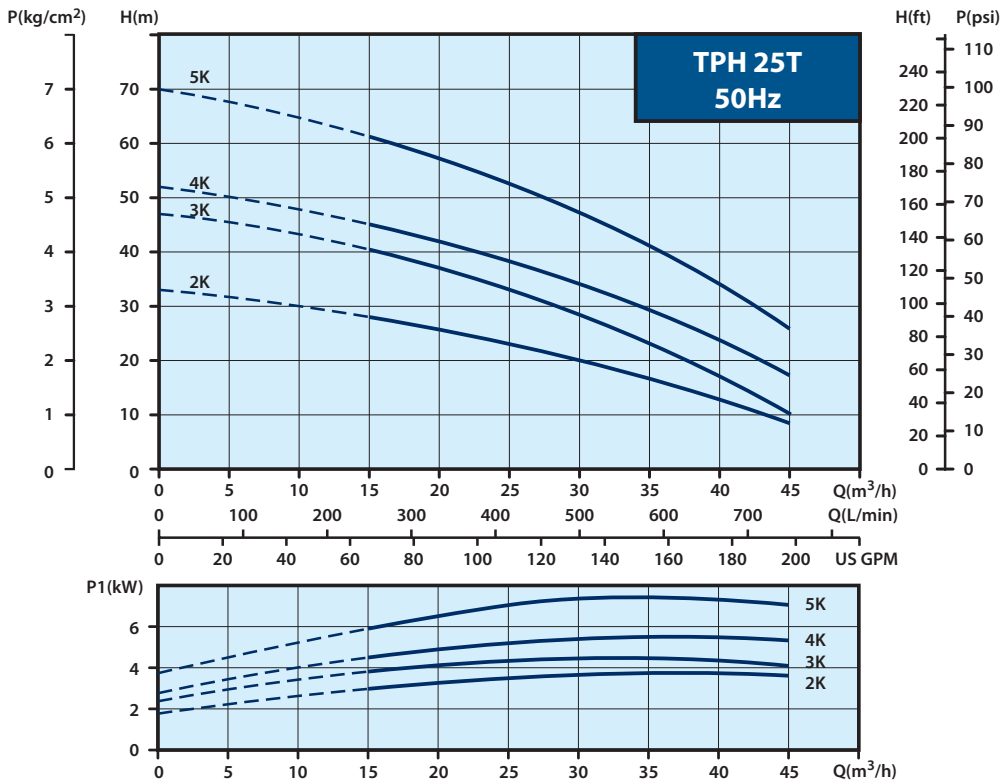
Model	PH (Ø)	voltage code	Cycle ( Hz )	Volts ( V )	Input Power ( W )	Ampere ( A )
TPH 25T 2KF	3	63Z	60	200-255 / 380-480	4000	12.9-10.5 / 7.3-5.8
TPH 25T 3KF	3	63Z	60	200-255 / 380-480	5100	15.6-13.1 / 8.7-8.2
TPH 25T 4KF	3	63Z	60	200-255 / 380-480	7200	21.2-20.5 / 12.3-12.5
TPH 25T 5KF	3	63Z	60	200-255 / 380-480	8000	25.6-22.4 / 13.7-13.2
TPH 25T 6KF	3	63Z	60	200-255 / 380-480	10200	31.2-27.5 / 17.5-15.8

## Dimensions ( mm ), 60Hz

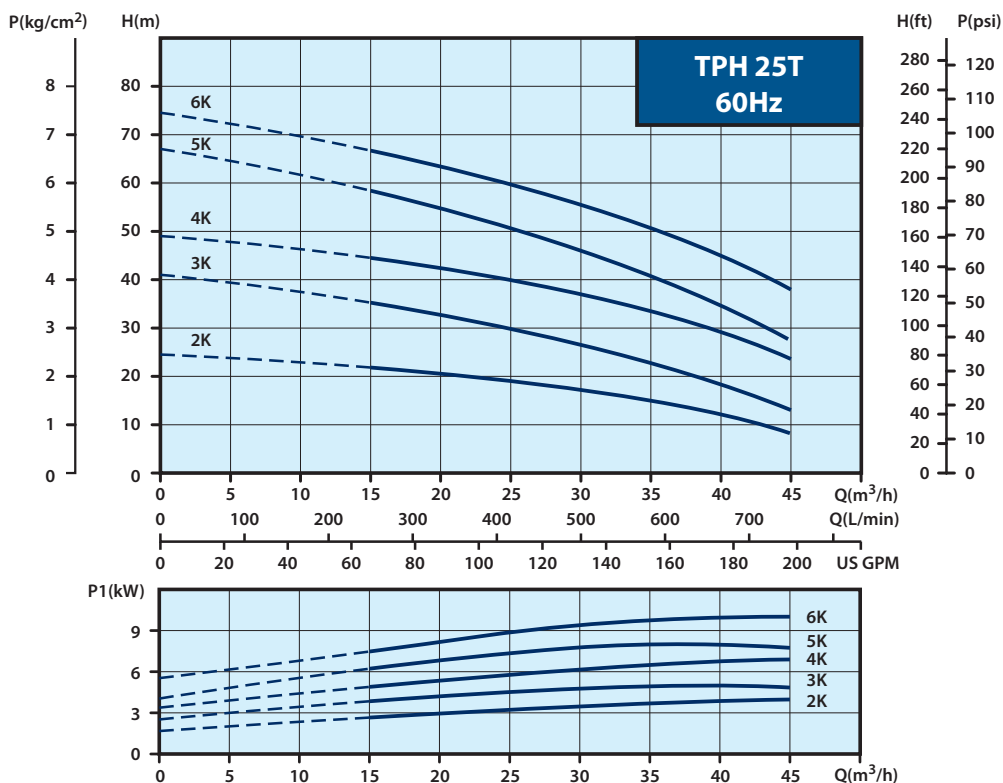


Model	A(mm)	B(mm)	C(mm)	D(mm)	N.W.(kg)
TPH 25T2KF	536	156.5	196.5	118	51.0
TPH 25T3KF	596	216.5	256.5	178	56.8
TPH 25T4KF	596	216.5	256.5	178	57.0
TPH 25T5KF	706	276.5	316.5	238	68.8
TPH 25T6KF	706	276.5	316.5	238	69.0

## Performance curve (50Hz)



## Performance curve (60Hz)

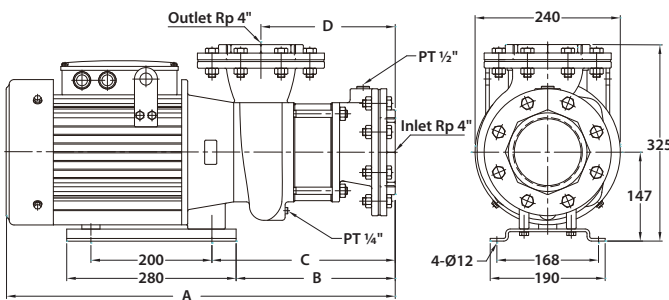


# TPH 50T

## Electrical data, 50Hz

Model	PH (Ø)	voltage code	Cycle ( Hz )	Volts ( V )	Input Power ( W )	Ampere ( A )
TPH 50 T 2 KF	3	53Q	50	200-240 / 380-440	6600	20.3-19.2 / 11.2-12.9
TPH 50 T 3 KF	3	53Q	50	200-240 / 380-440	8700	26.0-22.6 / 14.4-14.8
TPH 50 T 4 KF	3	53Q	50	200-240 / 380-440	11600	36.3-30.8 / 19.8-20.4

## Dimensions ( mm ), 50Hz

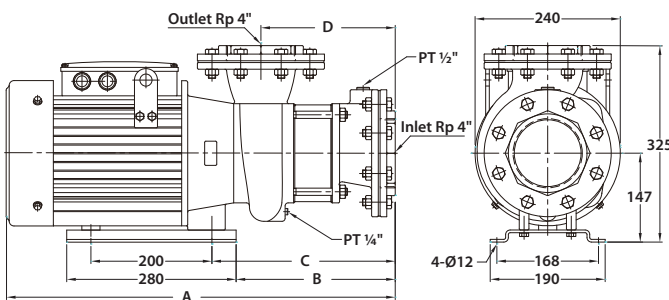


Model	A(mm)	B(mm)	C(mm)	D(mm)	N.W.(kg)
TPH 50T 2KF	642.5	263	303	222	61.5
TPH 50T 3KF	752.5	323	363	282	80.6
TPH 50T 4KF	802.5	323	363	282	88.0

## Electrical data, 60Hz

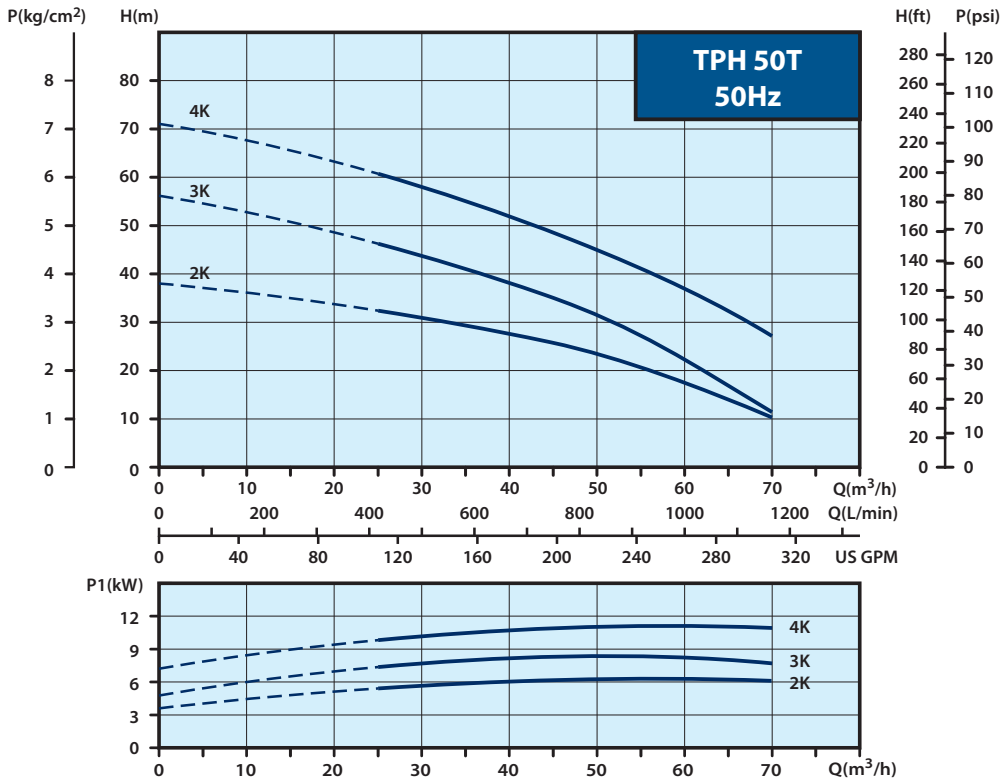
Model	PH (Ø)	voltage code	Cycle ( Hz )	Volts ( V )	Input Power ( W )	Ampere ( A )
TPH 50 T2.5KF	3	63Q	60	200-240 / 380-440	8500	25.0-23.3 / 14.1-14.8
TPH 50 T 4 KF	3	63Z	60	200-255 / 380-480	11500	34.8-32.2 / 19.1-21.7
TPH 50 T 5 KF	3	63Q	60	200-240 / 380-440	14200	44.3-42.6 / 23.9-26.3

## Dimensions ( mm ), 60Hz

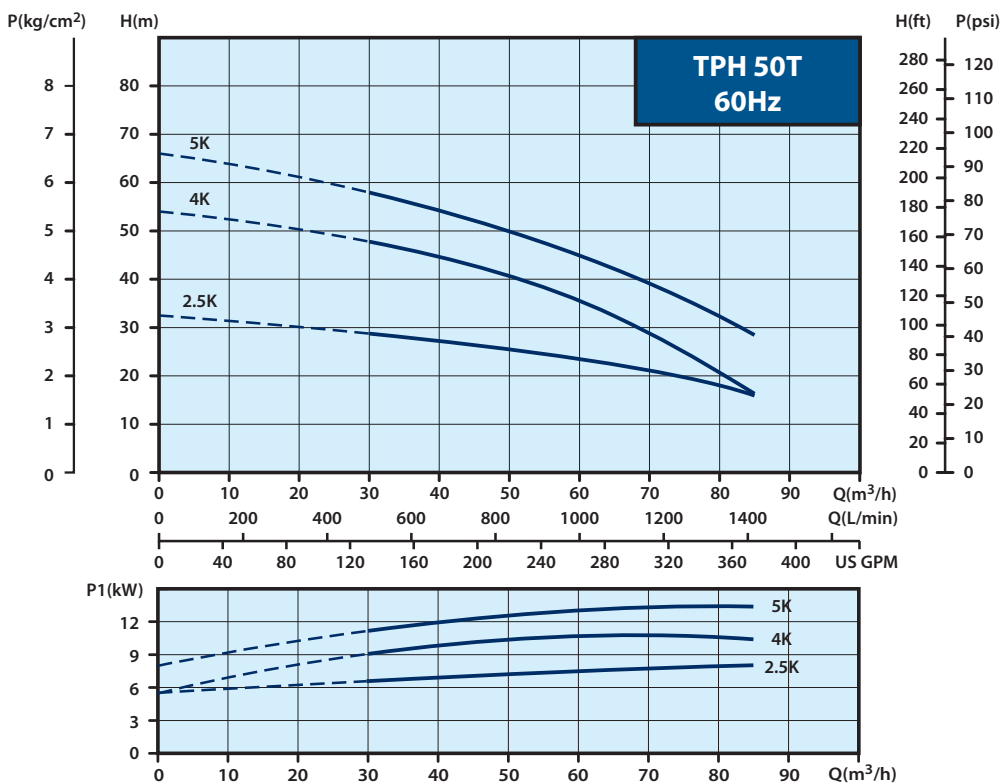


Model	A(mm)	B(mm)	C(mm)	D(mm)	N.W.(kg)
TPH 50T2.5KF	582.5	203	243	162	55.6
TPH 50T 4KF	692.5	263	303	222	77.6
TPH 50T 5KF	742.5	263	303	222	86.7

## Performance curve (50Hz)



## Performance curve (60Hz)



# TPAK Series Coolant Pump



**Power:** ¼ - 1.5 HP

**50Hz**

**Head:** Up to 12M

**Flow:** Up to 360 L/min

**60Hz**

**Head:** Up to 17M

**Flow:** Up to 400 L/min

**Outlet:** ½" - 1½"

## Applications

The TPAK Series coolant pump is design for the circulation and spraying of cooling lubricants, especially for machine tools.

This series may use on all machine tools performing Turning, Milling, Drilling, Cutting, Slitting, Grinding etc. operation.

It is suitable to carry liquids such as water, coolant, light oil and other clean, non aggressive matters.

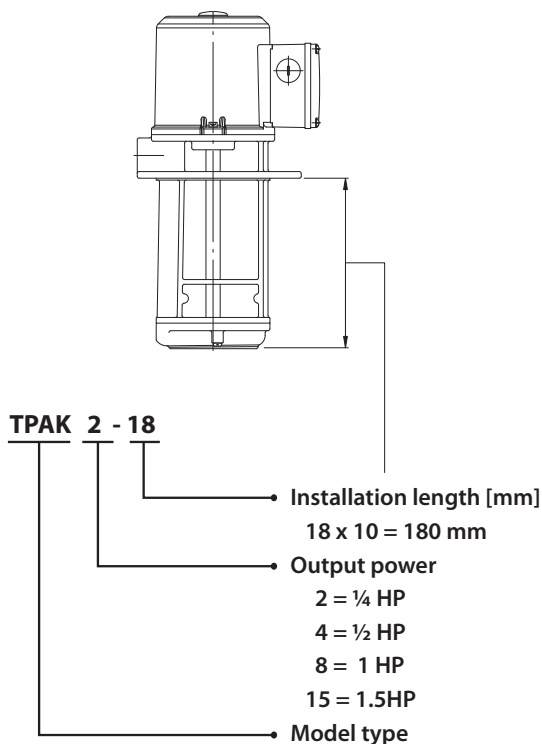
## Operating Conditions:

1. Ambient temperature :Max. +40°C
2. Liquid temperature range:+0°C ~ +90°C
3. Operating pressure:Max. 10 kg/cm<sup>2</sup>

## Pump Construction

The pump is one-chamber vertical centrifugal pump, co-axial pump/motor design, impellers mounted on extended motor shaft.

## Model code



## Motor

Enclosure protection class: IP54

Insulation class: F.

Frequency range: 50 / 60 Hz

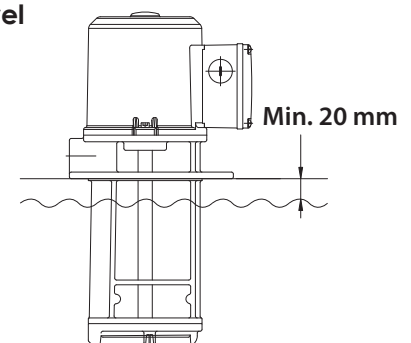
Nominal speed : 2900 / 3500 rpm

Standard voltages : 3Ø 50Hz: 200-255V / 380-440V

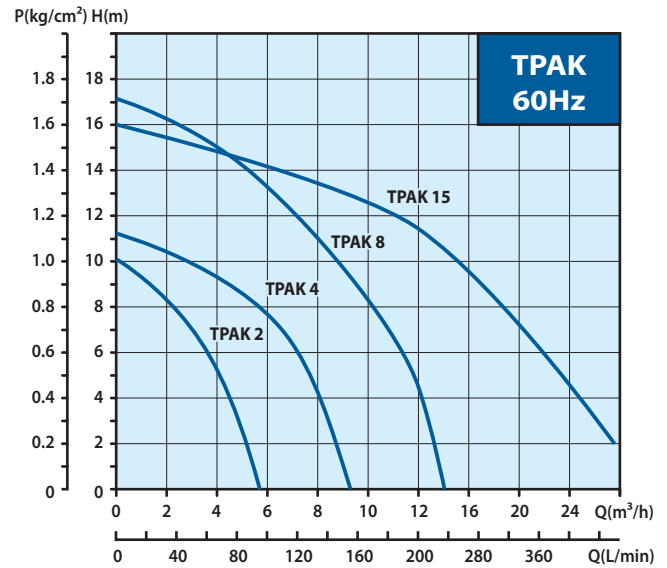
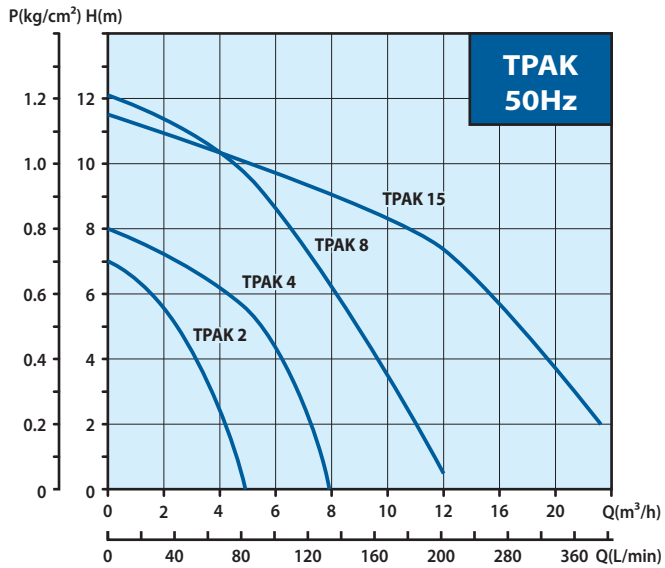
3Ø 60Hz: 200-255V / 380-480V

## Installation


Maximum liquid level

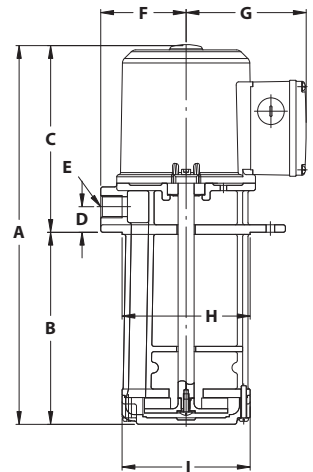


## Performance curve



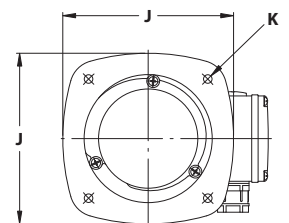
## Dimensions ( mm )

Model	DIMENSIONS ( mm )											N.W.(kg)	
	A	B	C	D	E	F	G	H	I	J	K		
TPAK 2-15	325	150	175	24	Rp 1/2"	80	113	Ø120	Ø120	160	4xØ8 PCD158	9.5	36
TPAK 2-18	355	180	175	24	Rp 1/2"	80	113	Ø120	Ø120	160	4xØ8 PCD158	10.0	36
TPAK 2-25	425	250	175	24	Rp 1/2"	80	113	Ø120	Ø120	160	4xØ8 PCD158	10.6	24
TPAK 4-15	386	150	236	28	Rp 3/4"	85	111	Ø135	Ø135	170	4xØ9 PCD170	11.2	24
TPAK 4-18	416	180	236	28	Rp 3/4"	85	111	Ø135	Ø135	170	4xØ9 PCD170	11.9	24
TPAK 4-25	486	250	236	28	Rp 3/4"	85	111	Ø135	Ø135	170	4xØ9 PCD170	12.7	24
TPAK 8-18	457	180	277	29	Rp 1"	95	111	Ø150	Ø150	190	4xØ9 PCD185	15.5	24
TPAK 8-25	527	250	277	29	Rp 1"	95	111	Ø150	Ø150	190	4xØ9 PCD185	17.1	24
TPAK 15-25	573.5	250	323.5	40	Rp 1 1/2"	122	124	Ø180	Ø180	200	4xØ9 PCD210	24.0	15



## Electrical data, 50/60Hz

Model	PH (Ø)	Cycle ( Hz )	Input Power ( W )	Volts ( V )	Ampere ( A )
TPAK 2	3	50	270	200-255 / 380-440	1.0-1.3 / 0.6-0.8
		60	350	200-255 / 380-480	1.2 / 0.7
TPAK 4	3	50	440	200-255 / 380-440	1.5-1.9 / 0.9-1.2
		60	620	200-255 / 380-480	2.0 / 1.1
TPAK 8	3	50	930	200-255 / 380-440	3.1-4.4 / 1.9-2.6
		60	1320	200-255 / 380-480	4.0 / 2.4
TPAK 15	3	50	1300	220 / 380	4.8 / 2.8
		60	2000	220 / 380	5.4 / 3.1





# Memo

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# TPK Series Immersible Pump



## 50Hz

**Power:** 0.22 - 1.3 kW

**Head:** Up to 70 M

**Flow:** Up to 90 L/min

## 60Hz

**Power:** 0.28 - 1.58 kW

**Head:** Up to 100 M

**Flow:** Up to 100 L/min

**Outlet:** 3/4"

## Applications

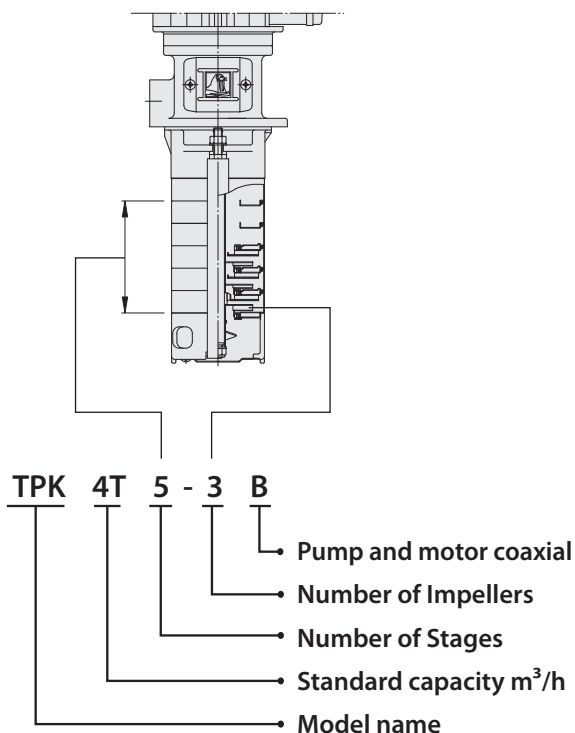
The WALRUS TPK Series is vertical multistage centrifugal pump, designed for industrial use, specially for machine tools, to carry fluids such as water, coolant, light oil and other clean, non aggressive matters.

- Industrial circulation system
- Washing/cleaning system
- Filtration system

## Operating Conditions

1. Ambient temperature :Max. +40°C
2. Liquid temperature range:+0°C ~ +90°C
3. Operating pressure:Max. 10 kg/cm<sup>2</sup>
4. Submerged depth :Min. 40mm

## Model code



## Pump Construction

Immersible vertical multistage centrifugal pump, self-priming, stub pump shaft per coupling connect with motor. Main working parts made by stainless steel.

## Motor

Enclosure class : IP54

Insulation class : F.

Nominal speed :2900 / 3500 rpm

Frequency range : 50 / 60 Hz

Voltages Code:

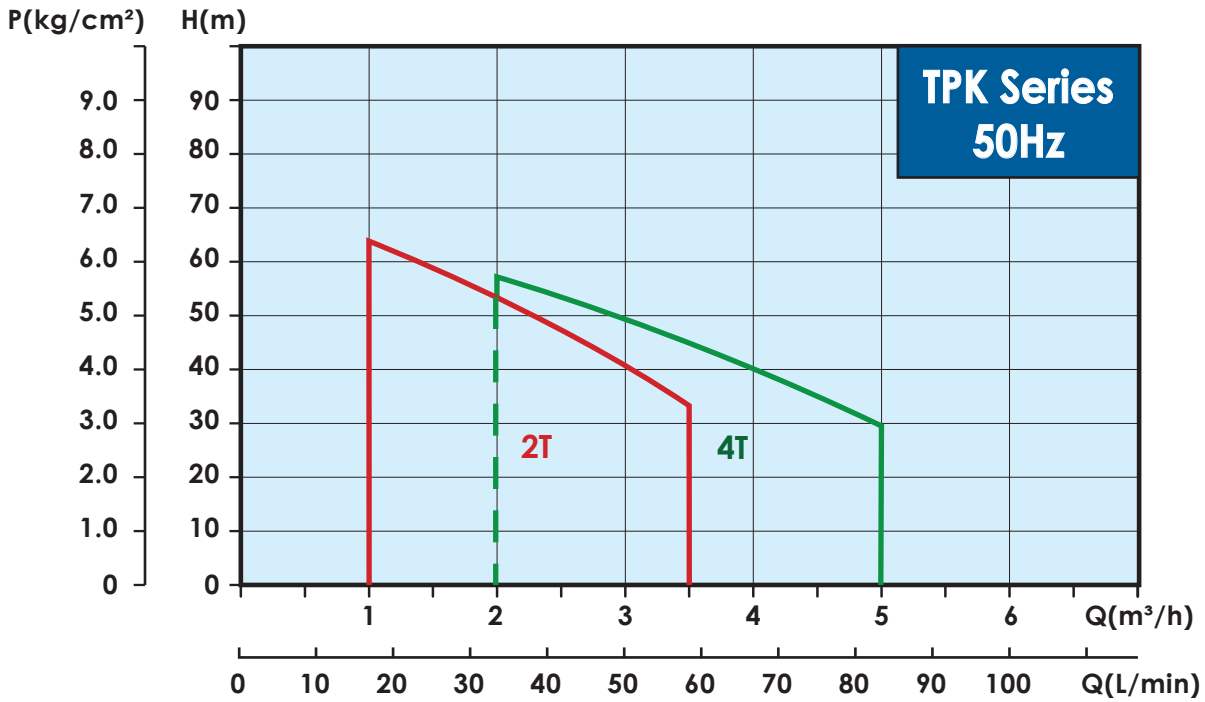
Code	PH	50Hz	60Hz
53Q	3	200-240/380-440V	-
A3Z*	3	200-255/380-440V	200-255/380-480V
A3U*	3	200-240/380-415V	200-240/380-440V

\* The motor can be use in both 50/60 hz.

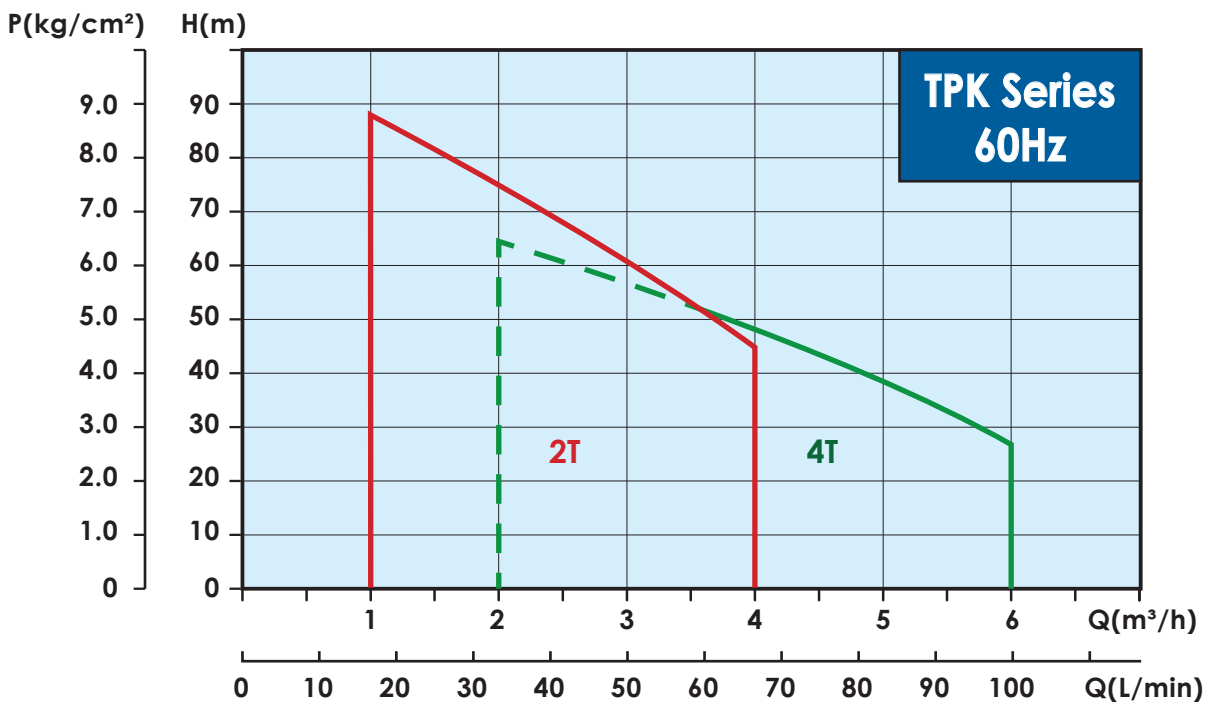


# TPK Series Immersible Pump

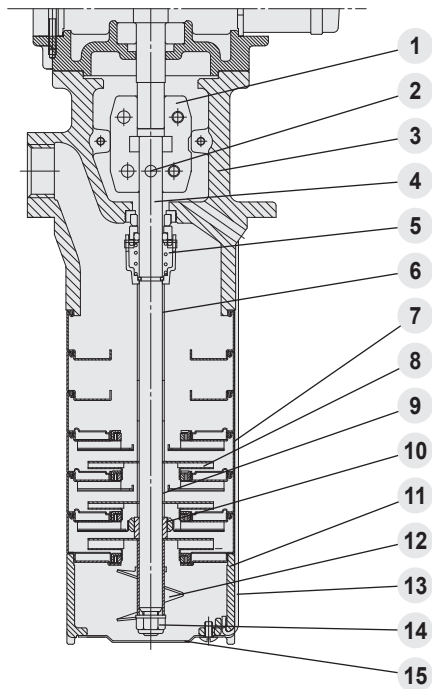
## Performance curve (50Hz)



## Performance curve (60Hz)



## Sectional drawing



## Materials

No.	Part name	Material
1	Coupling	ADC 6
2	Shaft pin	SUS 304
3	Pump head	FCD 45
4	Shaft	SUS 304
5	Mechanical Seal	HSSH
6	Sleeve	SUS 304
7	Intermediate chamber	SUS 304
8	Impeller	SUS 304
9	Sleeve (impeller)	SUS 304
10	Bearing ring	SiC
11	Suction intercon-necter	SUS 304
12	Priming screw	SUS 304
13	Strap	SUS 304
14	Lock Nut	SUS 316
15	Filter	SUS 304

## Options on request

- Special mechanical seal

Mechanical seal type	Material	
	Stationary Face/ Rotary Face	Cup Gasket & O Ring
HSSH HSSV HSSE	(S)Silicium carbide/ (S)Silicium carbide	(H) HNBR (V) Viton
HGSH HGSV HGSE	(G)Carbon/ (S)Silicium carbide	(E) EPDM

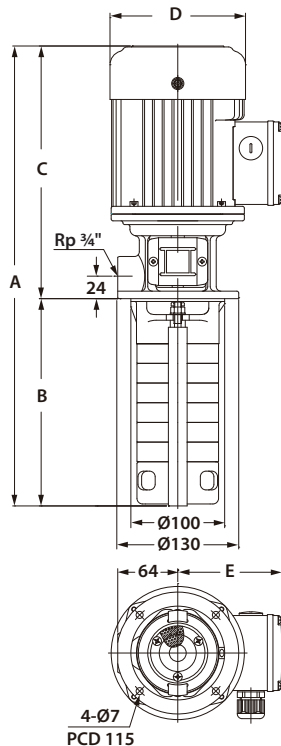
# TPK 2T


## Electrical data

Standard Model	Phase (Ø)	voltage code	Cycle (Hz)	Volts (V)	Input Power (W)	Ampere (A)
TPK 2T 5 - 1 B	3	A3Z	50	200-255 / 380-440	220	0.9 / 0.6
			60	200-255 / 380-480	280	0.9 / 0.6
TPK 2T 3 - 3 B	3	A3Z	50	200-255 / 380-440	280	0.9 / 0.7
			60	200-255 / 380-480	370	1.1 / 0.6
TPK 2T 5 - 5	3	A3Z	50	200-255 / 380-440	450	2.6 / 1.5
			60	200-255 / 380-480	600	2.2 / 1.5
TPK 2T 8 - 8	3	A3Z	50	200-255 / 380-440	580	2.9 / 1.7
			60	200-255 / 380-480	820	2.7 / 1.6
TPK 2T 11-11	3	A3Z	50	200-255 / 380-440	700	3.2 / 1.8
			60	200-255 / 380-480	1050	3.5 / 1.9
TPK 2T 12-12	3	A3Z	50	200-255 / 380-440	780	3.5 / 1.9
			60	200-255 / 380-480	1160	3.6 / 2.0
TPK 2T 15-15	3	A3U	50	200-240 / 380-415	850	3.0 / 1.8
			60	200-240 / 380-440	1300	4.1 / 2.3
TPK 2T 17-17	3	A3U	50	200-240 / 380-415	950	3.6 / 2.1
			60	200-240 / 380-440	1450	5.0 / 2.7

Maximum 19 Stages

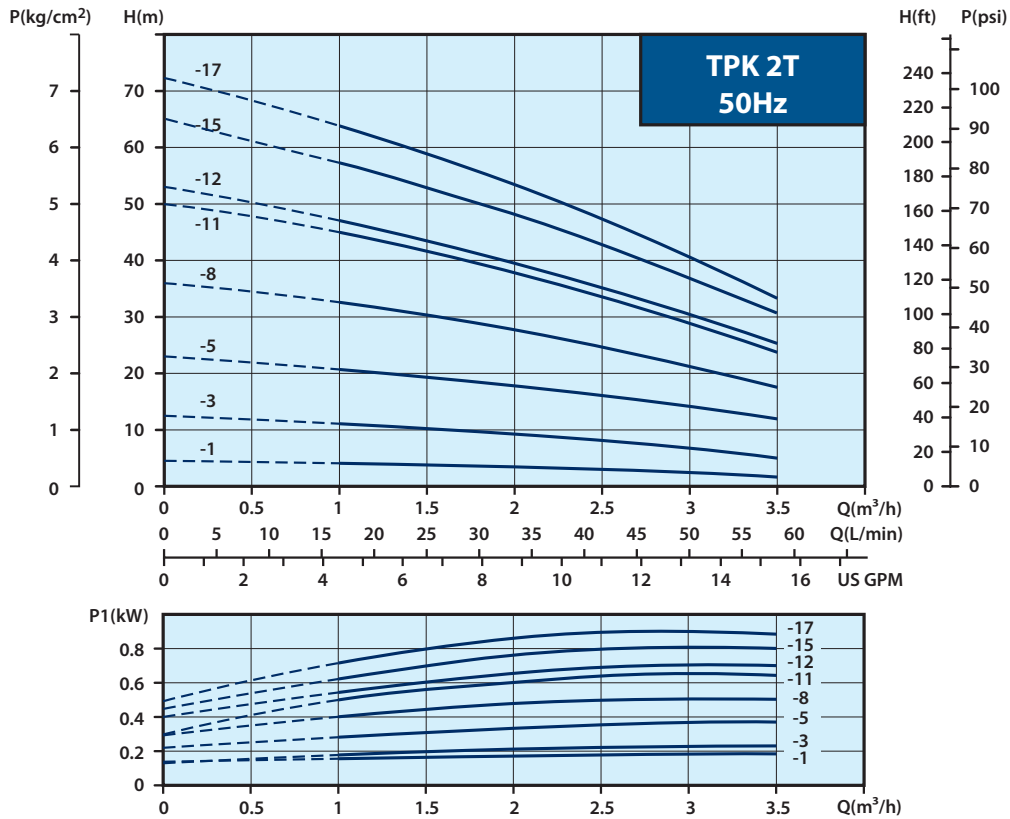
## Dimensions ( mm )



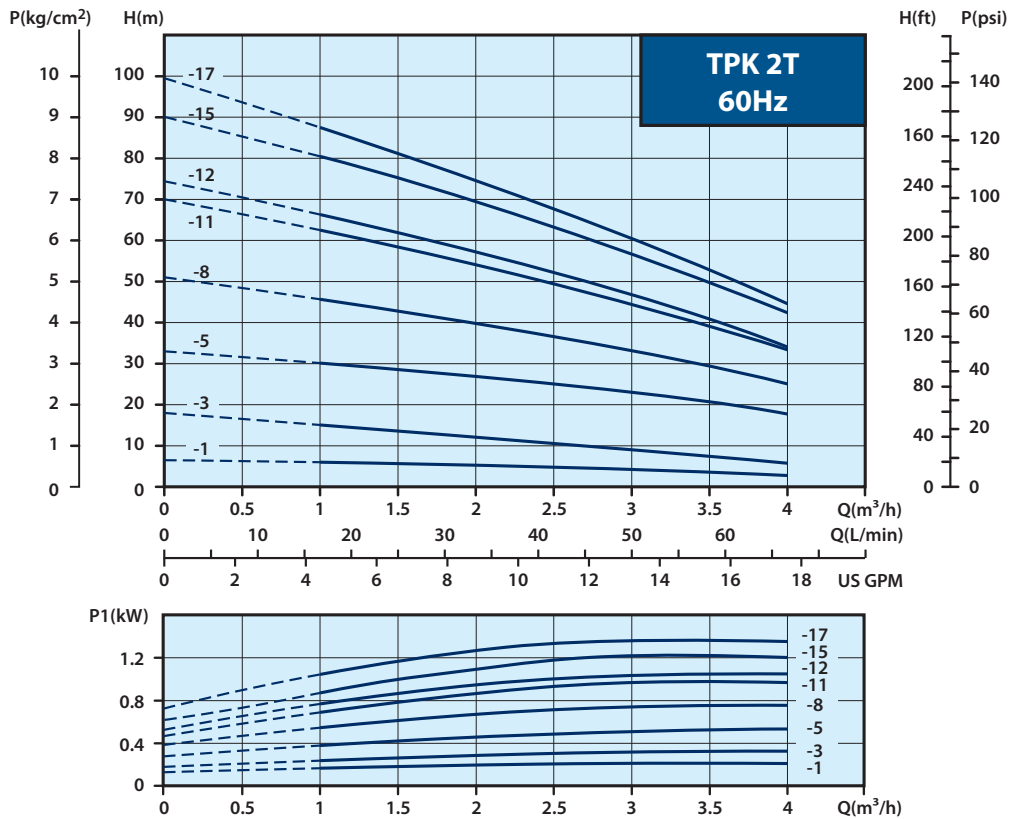
Model	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	N.W.(kg)	
TPK2T 5 - 1 B	447	221	226	123	101	8.7	30
TPK2T 3 - 3 B	405	179	226	123	101	8.7	30
TPK2T 5 - 3 B	447	221	226	123	101	8.9	30
TPK2T 8 - 3 B	510	284	226	123	101	9.2	24
TPK2T 11- 3 B	573	347	226	123	101	9.6	24
TPK2T 5 - 5	491	221	270	144.5	111	12.1	30
TPK2T 8 - 5	554	284	270	144.5	111	12.4	24
TPK2T 10- 5	596	326	270	144.5	111	12.6	24
TPK2T 11- 5	617	347	270	144.5	111	12.7	18
TPK2T 15- 5	701	431	270	144.5	111	13.0	18
TPK2T 8 - 8	554	284	270	144.5	111	12.7	24
TPK2T 11- 8	617	347	270	144.5	111	13.0	18
TPK2T 11-11	657	347	310	144.5	111	14.3	18
TPK2T 15-12	741	431	310	144.5	111	14.5	18
TPK2T 15-15	741	431	310	144.5	111	15.0	18
TPK2T 19-15	825	515	310	144.5	111	15.4	18
TPK2T 19-17	825	515	310	144.5	111	15.8	18

B Model without coupling design.

## Performance curve (50Hz)



## Performance curve (60Hz)



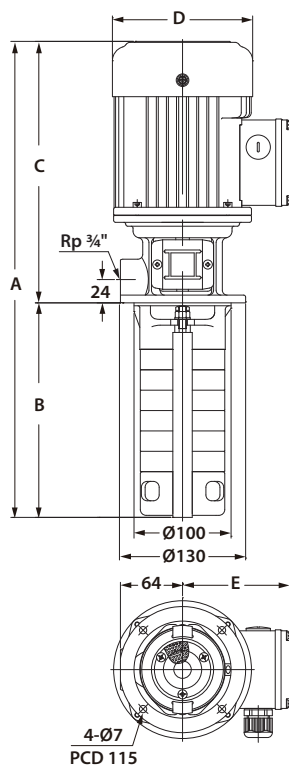
# TPK 4T


## Electrical data

Standard Model	Phase (Ø)	voltage code	Cycle (Hz)	Volts (V)	Input Power (W)	Ampere (A)
TPK 4T 3 - 1 B	3	A3Z	50	200-255 / 380-440	250	1.0 / 0.6
			60	200-255 / 380-480	300	1.0 / 0.6
TPK 4T 3 - 3 B	3	A3Z	50	200-255 / 380-440	430	2.8 / 1.4
			60	200-255 / 380-480	550	2.2 / 1.2
TPK 4T 5 - 5	3	A3Z	50	200-255 / 380-440	580	2.9 / 1.7
			60	200-255 / 380-480	900	2.7 / 1.6
TPK 4T 7 - 7	3	A3Z	50	200-255 / 380-440	680	3.2 / 1.8
			60	200-255 / 380-480	1000	3.4 / 1.9
TPK 4T 8 - 8	3	A3Z	50	200-255 / 380-440	750	3.5 / 1.9
			60	200-255 / 380-480	1160	3.6 / 2.0
TPK 4T 10-10	3	A3Z	50	200-255 / 380-440	900	4.7 / 2.6
			60	200-255 / 380-480	1420	4.7 / 2.6
TPK 4T 11-11	3	A3U	50	200-240 / 380-415	950	3.6 / 2.1
			60	200-240 / 380-440	1450	5.0 / 2.7
TPK 4T 12-12	3	A3U	50	200-240 / 380-415	1050	3.9 / 2.3
			60	200-240 / 380-440	1580	5.3 / 2.9
TPK 4T 15-15	3	53Q	50	200-240 / 380-440	1300	4.4 / 2.8

Maximum 19 Stages

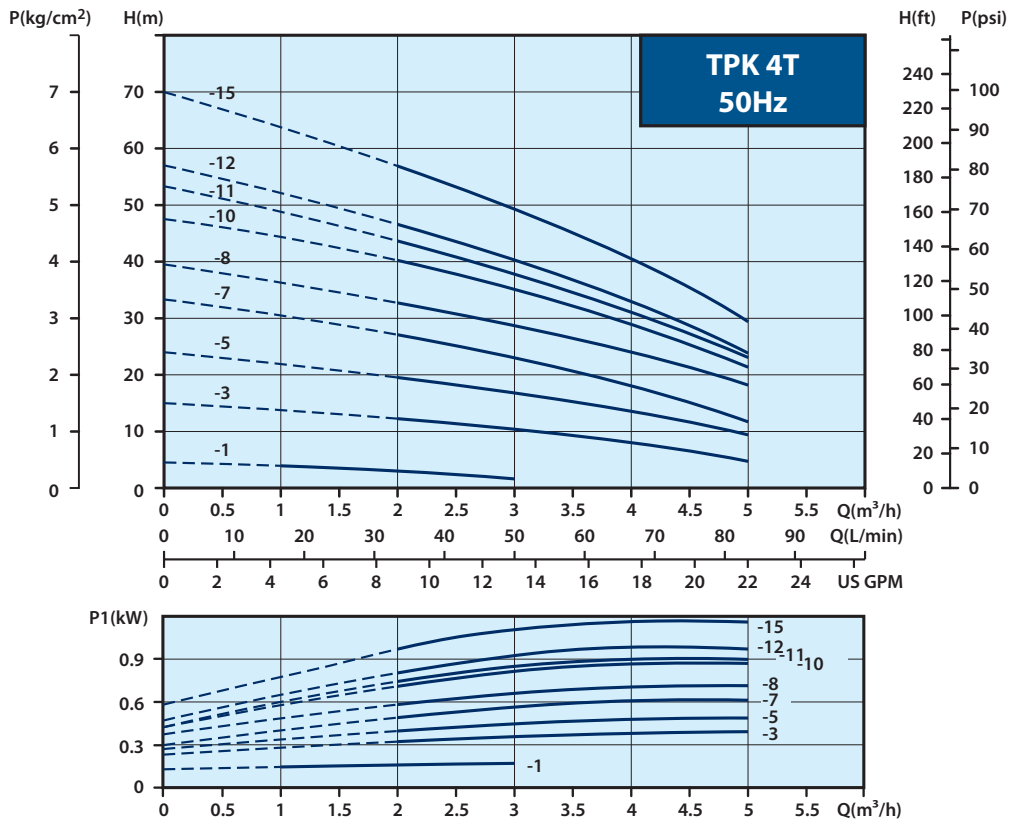
## Dimensions ( mm )



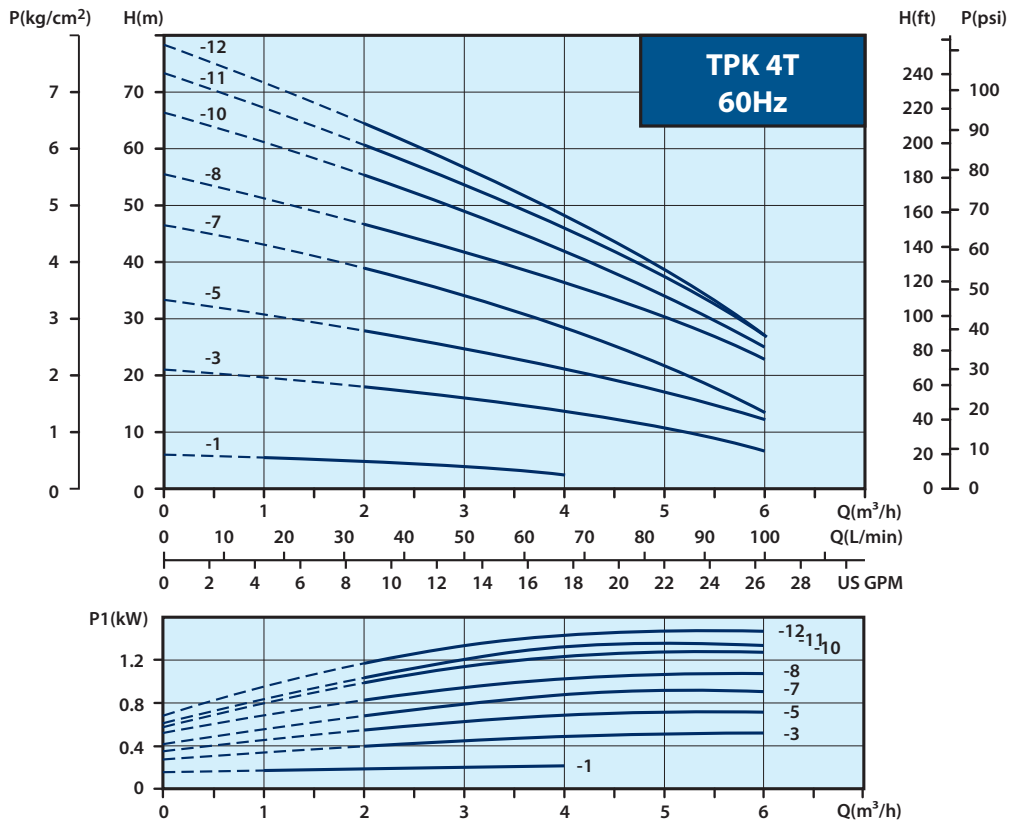
Model	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	N.W.(kg)	
TPK4T 3 - 1B	405	179	226	123	101	8.4	30
TPK4T 5 - 1B	447	221	226	123	101	8.7	30
TPK4T 3 - 3B	449	179	270	144.5	111	11.8	30
TPK4T 5 - 3	491	221	270	144.5	111	12.0	30
TPK4T 8 - 3	554	284	270	144.5	111	12.3	24
TPK4T 19- 3	785	515	270	144.5	111	13.4	18
TPK4T 5 - 5	491	221	270	144.5	111	12.1	30
TPK4T 8 - 5	554	284	270	144.5	111	12.4	24
TPK4T 11- 5	617	347	270	144.5	111	12.7	18
TPK4T 15- 5	701	431	270	144.5	111	13.0	18
TPK4T 19- 5	785	515	270	144.5	111	13.3	18
TPK4T 19- 7	825	515	310	144.5	111	14.8	18
TPK4T 8 - 8	594	284	310	144.5	111	13.8	24
TPK4T 11- 8	657	347	310	144.5	111	14.1	18
TPK4T 15- 8	741	431	310	144.5	111	14.4	18
TPK4T 19- 8	825	515	310	144.5	111	14.8	18
TPK4T 11-10	657	347	310	144.5	111	14.2	18
TPK4T 15-10	741	431	310	144.5	111	14.5	18
TPK4T 19-10	825	515	310	144.5	111	14.9	18
TPK4T 11-11	657	347	310	144.5	111	14.3	18
TPK4T 15-12	741	431	310	144.5	111	14.6	18
TPK4T 19-12	825	515	310	144.5	111	14.8	18
TPK4T 15-15	741	431	310	144.5	111	15.0	18
TPK4T 19-15	825	515	310	144.5	111	15.4	18

B Model without coupling design.

## Performance curve (50Hz)



## Performance curve (60Hz)





# Memo

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# TPHK Series Immersible Pump



## 50Hz

**Power:** 0.34 - 3.8 kW

**Head:** Up to 65M

**Flow:** Up to 280 L/min

## 60Hz

**Power:** 0.37 - 4.15 kW

**Head:** Up to 90M

**Flow:** Up to 280 L/min

**Outlet:** 3/4" - 1 1/4"

## Applications

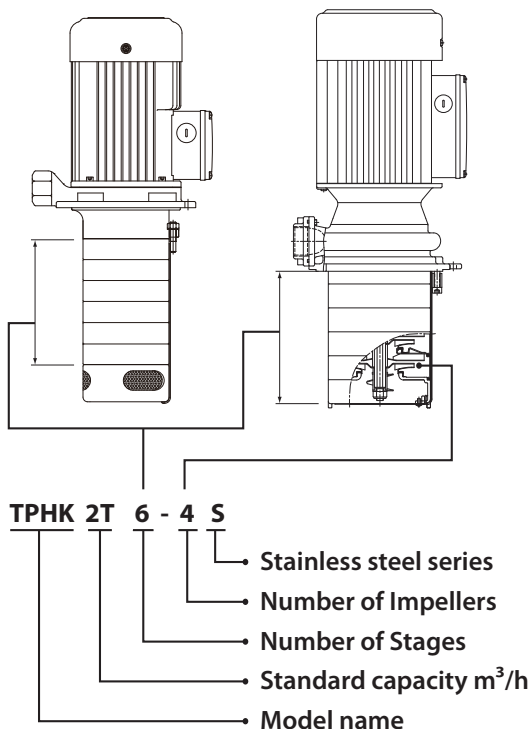
The TPHK Series is vertical multistage centrifugal pump, designed for industrial use, specially for machine tools. It is suitable to carry fluids such as water, coolant, light oil and other clean, non aggressive matters:

- Industrial circulation system
- Washing/cleaning system
- Filtration system

## Operating Conditions

1. Ambient temperature : Max. +40°C
2. Liquid temperature range : +0°C ~ +90°C
3. Operating pressure : Max. 10 kg/cm<sup>2</sup>
4. Submerged depth : Min. 40mm

## Model code



## Pump Construction

Immersible vertical multistage centrifugal pump, self-priming, co-axial pump/motor design, impellers mounted on extended motor shaft. Main working parts made by stainless steel.

## Motor

Enclosure class : IP54

Insulation class : F.

Nominal speed : 2900 / 3500 rpm

Frequency range : 50 / 60 Hz

Voltages Code :

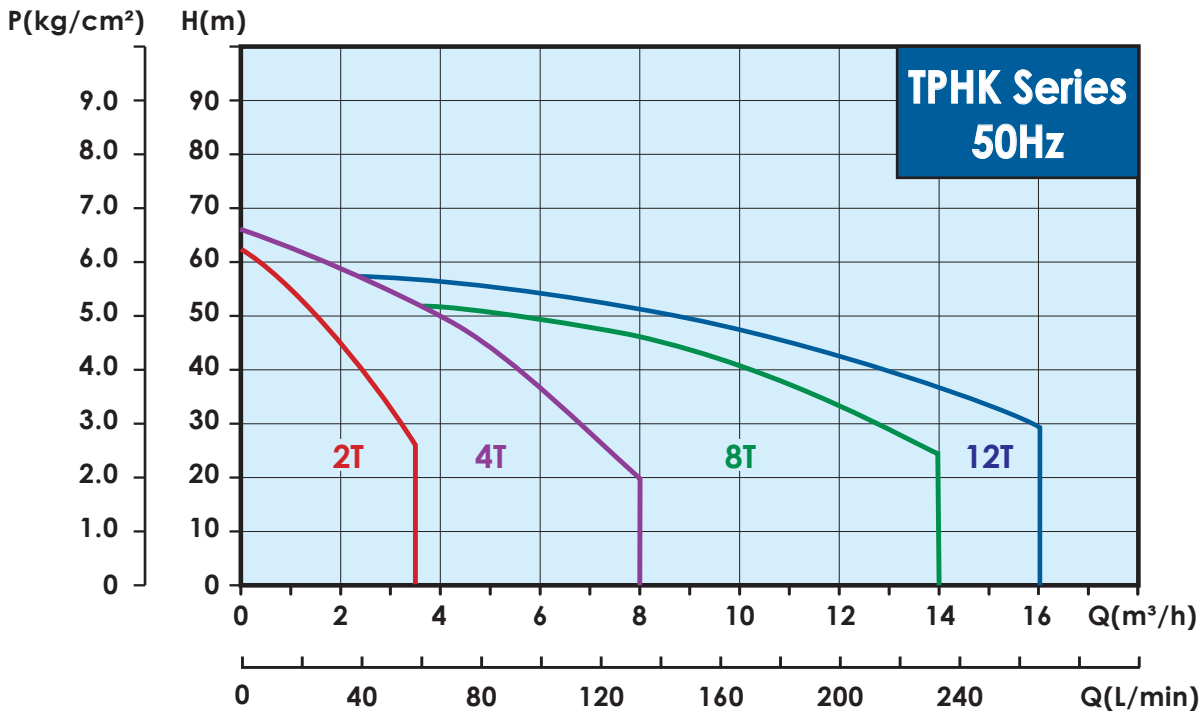
Code	PH	50Hz	60Hz
53Q	3	200-240/380-440V	-
A3Z*	3	200-255/380-440V	200-255/380-480V
A3U*	3	200-240/380-415V	200-240/380-440V

\* The motor can be use in both 50/60 hz.

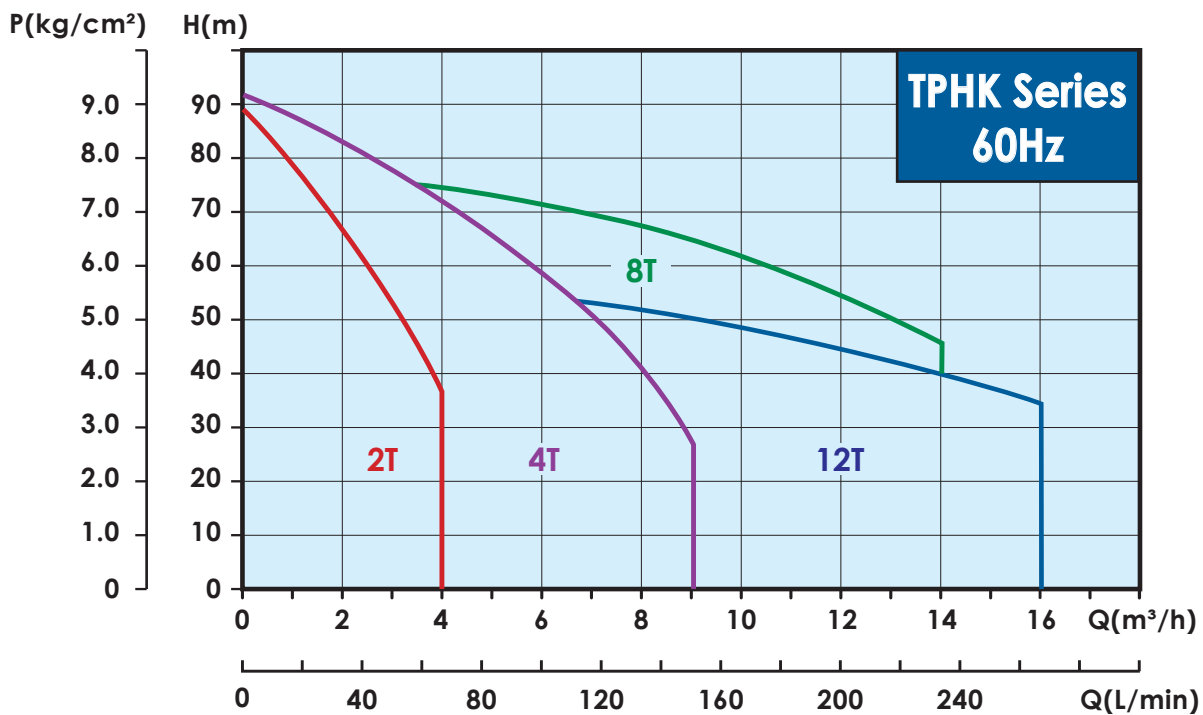


# TPHK Series Immersible Pump

## Performance curve (50Hz)

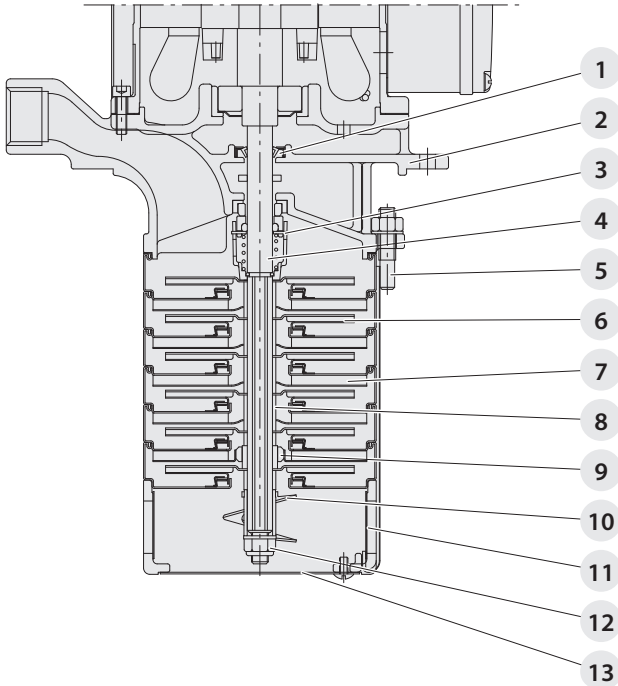


## Performance curve (60Hz)



## Sectional drawing

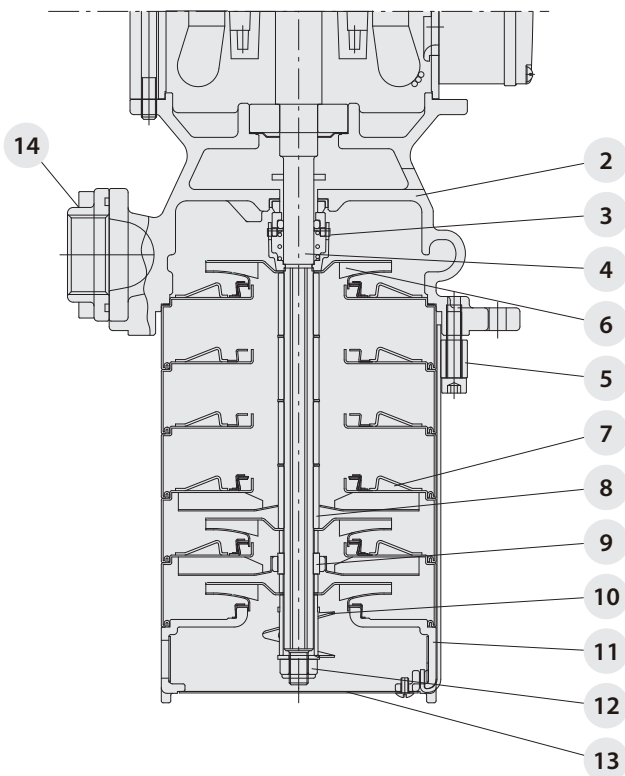
TPHK 2T/4T



## Materials

NO.	Part name	Material	
		Standard	S series
1	Oil Seal	NBR	
2	Pump Casing	FCD 45	SUS 304
3	Mechanical Seal	HSSH	HGSH
4	Shaft	SUS 304	
5	Strap	SUS 304	
6	Impeller	SUS 304	
7	Intermediate chamber	SUS 304	
8	Sleeve	SUS 304	
9	Bearing	SiC	
10	Priming screw	SUS 304	
11	Suction intercon-necter	SUS 304	
12	Lock Nut	SUS 316	
13	Filter	SUS 304	
14	Flange	SUS 304	

TPHK 8T/12T



## Options on request

- Special mechanical seal

Mechanical seal type	Material	
	Stationary Face/ Rotary Face	Cup Gasket & O Ring
HGSH HGSV HGSE	(G)Carbon/ (S)Silicium carbide	(H) HNBR (V) Viton
HSSH HSSV HSSE	(S)Silicium carbide/ (S)Silicium carbide	(E) EPDM

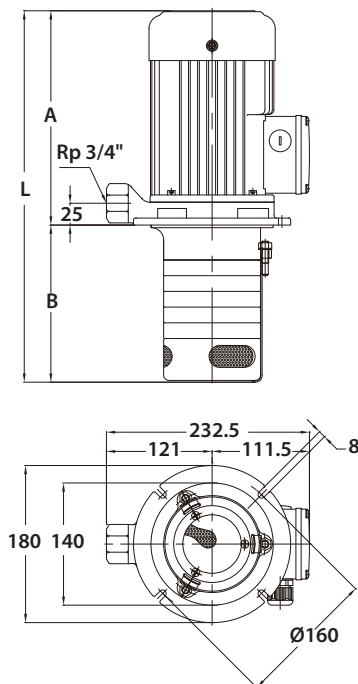
# TPHK 2T


## Electrical data

Standard Model	Phase (Ø)	Voltage code	Cycle (Hz)	Volts (V)	Input Power (W)	Ampere (A)
TPHK 2T 3 - 1	3	A3Z	50	200-255 / 380-440	340	1.6-2.8 / 1.0-1.5
			60	200-255 / 380-480	370	1.5-1.9 / 1.0-1.3
TPHK 2T 3 - 2	3	A3Z	50	200-255 / 380-440	450	1.9-2.8 / 1.2-1.5
			60	200-255 / 380-480	560	2.1-2.2 / 1.5-1.5
TPHK 2T 3 - 3	3	A3Z	50	200-255 / 380-440	530	2.0-2.8 / 1.3-1.6
			60	200-255 / 380-480	750	2.6-2.5 / 1.6-1.6
TPHK 2T 4 - 4	3	A3Z	50	200-255 / 380-440	620	2.2-2.9 / 1.4-1.7
			60	200-255 / 380-480	910	3.0-2.9 / 1.7-1.7
TPHK 2T 5 - 5	3	A3Z	50	200-255 / 380-440	700	2.4-3.0 / 1.4-1.6
			60	200-255 / 380-480	1060	3.3-3.0 / 1.8-1.8
TPHK 2T 6 - 6	3	A3Z	50	200-255 / 380-440	850	3.1-3.6 / 1.8-2.1
			60	200-255 / 380-480	1290	4.0-3.6 / 2.4-2.4
TPHK 2T 7 - 7	3	A3U	50	200-240 / 380-415	1320	4.6-6.7 / 2.9-3.7
			60	200-240 / 380-440	1800	5.6-5.4 / 3.2-3.2

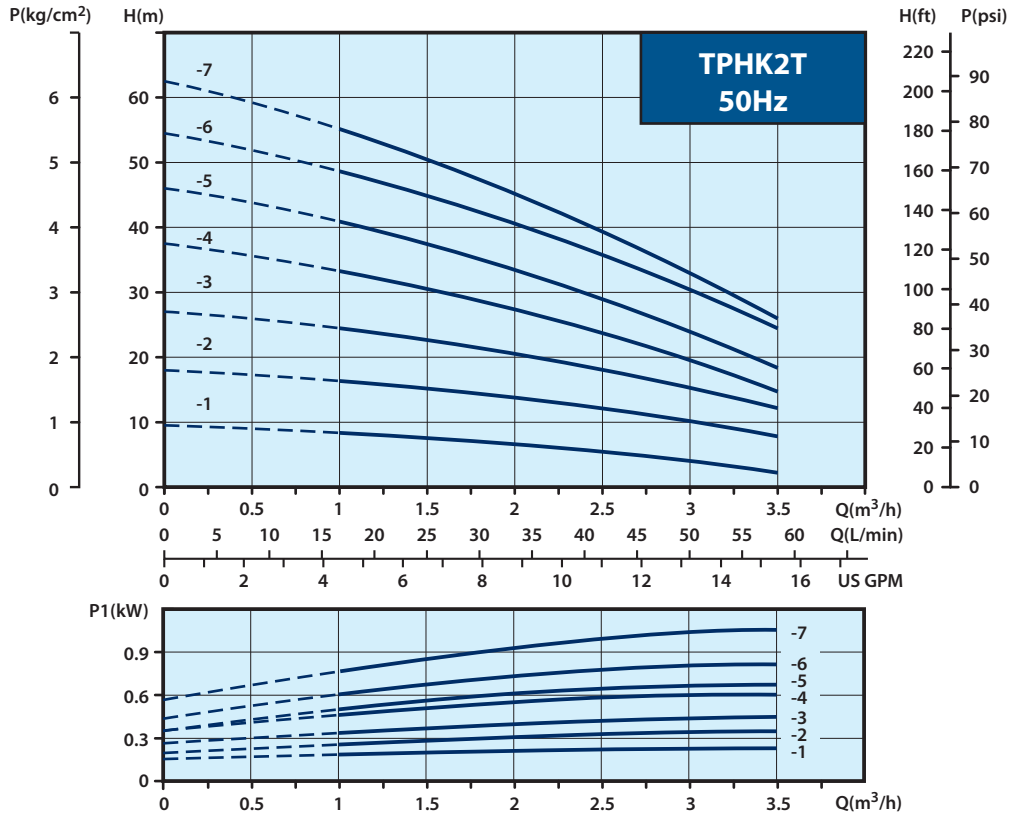
Maximum 11 Stages

## Dimensions ( mm )

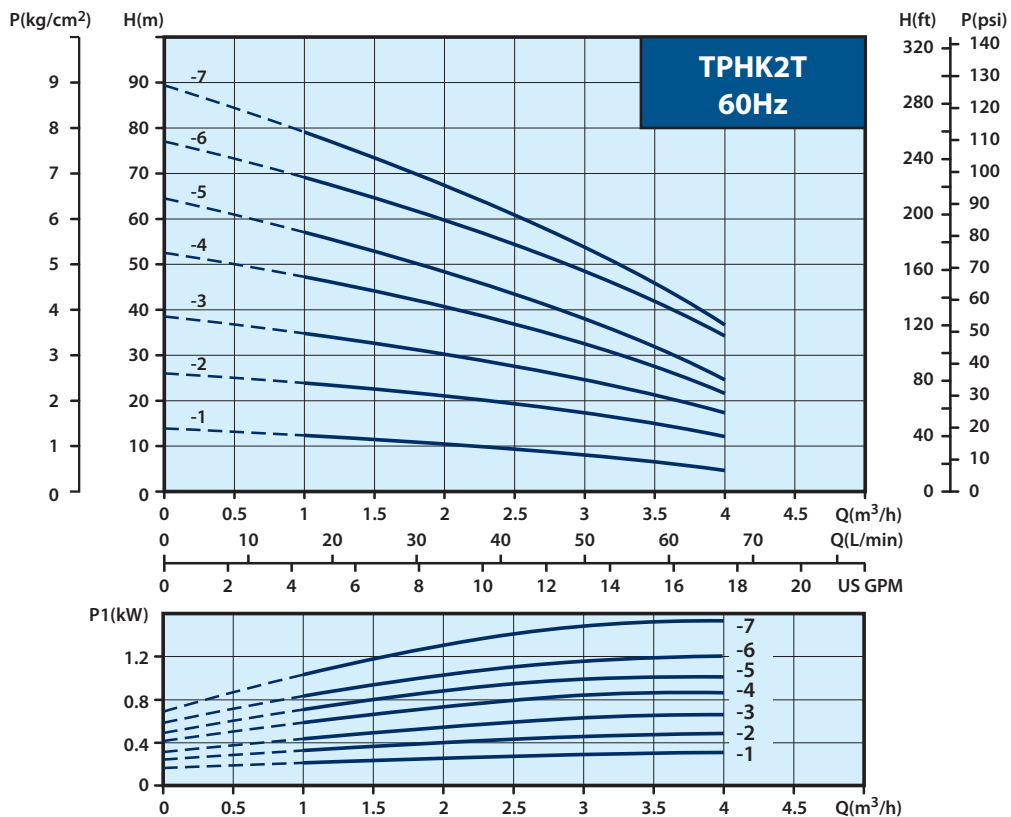


Model	A (mm)	B (mm)	L (mm)	N.W.(kg)	
TPHK 2T 3 - 1	205.5	144	349.5	10.9	30
TPHK 2T 8 - 1	205.5	234	439.5	11.9	30
TPHK 2T 3 - 2	205.5	144	349.5	11.1	30
TPHK 2T 5 - 2	205.5	180	385.5	11.5	30
TPHK 2T 9 - 2	205.5	252	457.5	12.3	30
TPHK 2T 3 - 3	205.5	144	349.5	11.2	30
TPHK 2T 4 - 3	205.5	162	367.5	11.4	30
TPHK 2T 5 - 3	205.5	180	385.5	11.6	30
TPHK 2T 6 - 3	205.5	198	403.5	11.8	30
TPHK 2T 8 - 3	205.5	234	439.5	12.2	30
TPHK 2T11-3	205.5	288	493.5	12.6	24
TPHK 2T 4 - 4	205.5	162	367.5	11.5	30
TPHK 2T 6 - 4	205.5	198	403.5	11.9	30
TPHK 2T 5 - 5	245.5	180	425.5	12.7	30
TPHK 2T 6 - 5	245.5	198	443.5	13.3	30
TPHK 2T 6 - 6	253.5	198	451.5	13.5	30
TPHK 2T 8 - 6	253.5	234	487.5	13.9	30
TPHK 2T 9 - 6	253.5	252	505.5	14.1	24
TPHK 2T10-6	253.5	270	523.5	14.2	24
TPHK 2T11-6	253.5	288	541.5	14.4	24
TPHK 2T 7 - 7	253.5	216	469.5	13.0	30

## Performance curve (50Hz)



## Performance curve (60Hz)



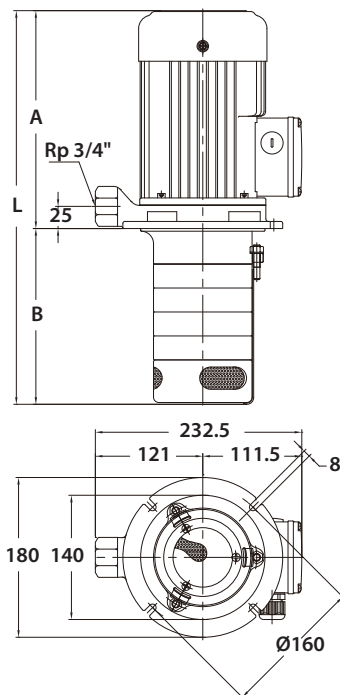
# TPHK 4T


## Electrical data

Standard Model	Phase (Ø)	Voltage code	Cycle (Hz)	Volts (V)	Input Power (W)	Ampere (A)
TPHK 4T 2 - 1	3	A3Z	50	200-255 / 380-440	570	1.9-2.8 / 1.2-1.7
			60	200-255 / 380-480	600	2.3-2.3 / 1.4-1.4
TPHK 4T 2 - 2	3	A3Z	50	200-255 / 380-440	650	2.2-2.9 / 1.4-1.7
			60	200-255 / 380-480	960	3.0-2.7 / 1.7-1.7
TPHK 4T 3 - 3	3	A3Z	50	200-255 / 380-440	850	3.1-3.6 / 1.8-2.1
			60	200-255 / 380-480	1290	4.0-3.6 / 2.4-2.4
TPHK 4T 4 - 4	3	A3U	50	200-240 / 380-415	1080	3.4-3.5 / 2.0-2.0
			60	200-240 / 380-440	1620	4.5-5.0 / 2.9-2.9
TPHK 4T 5 - 5	3	A3U	50	200-240 / 380-415	1440	4.9-6.8 / 3.0-3.8
			60	200-240 / 380-440	2100	6.2-6.0 / 3.5-3.5
TPHK 4T 6 - 6	3	A3U	50	200-240 / 380-415	1740	6.3-9.9 / 4.2-5.5
			60	200-240 / 380-440	2400	7.7-7.6 / 4.5-4.5
TPHK 4T 7 - 7	3	A3U	50	200-240 / 380-415	2140	6.9-10.3 / 4.5-5.8
			60	200-240 / 380-440	2800	8.7-8.4 / 4.9-4.9

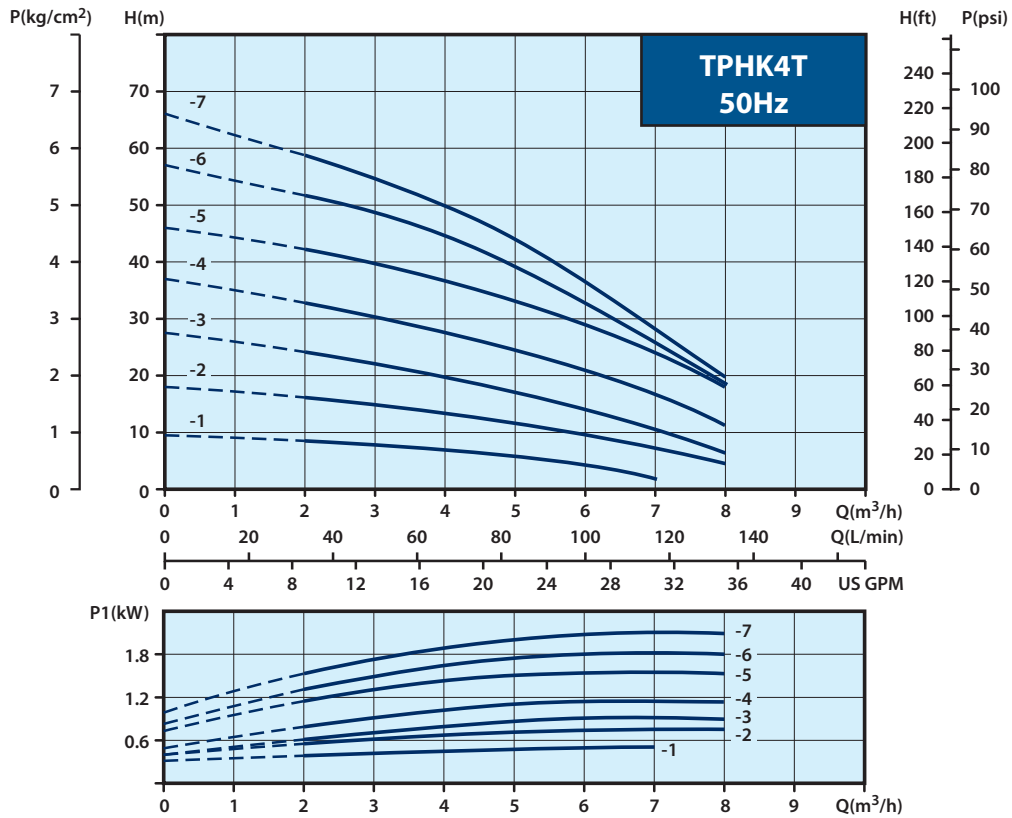
Maximum 8 Stages

## Dimensions ( mm )

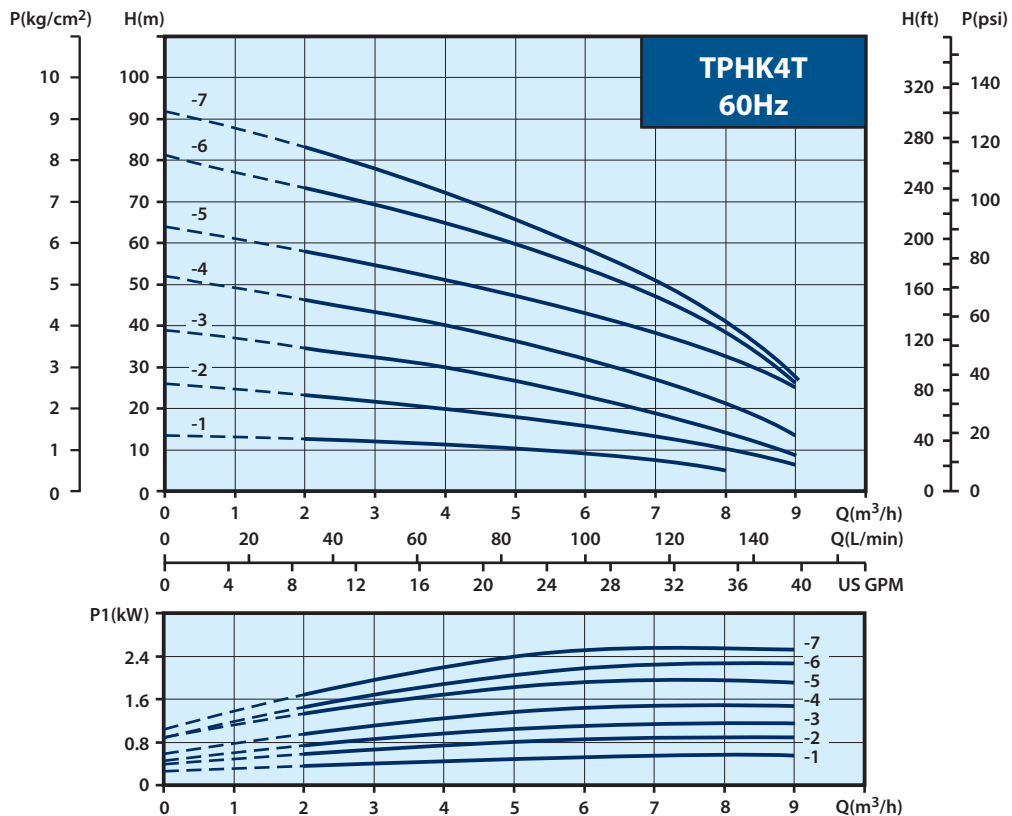


Model	A (mm) 50Hz / 60Hz	B (mm)	L (mm) 50Hz / 60Hz	N.W.(kg)	
TPHK 4T 2 - 1	205.5	144	349.5	10.8	30
TPHK 4T 3 - 1	205.5	171	376.5	11.0	30
TPHK 4T 2 - 2	205.5	144	349.5	11.0	30
TPHK 4T 3 - 2	205.5	171	376.5	11.2	30
TPHK 4T 4 - 2	205.5	198	403.5	11.4	30
TPHK 4T 6 - 2	205.5	252	457.5	11.6	24
TPHK 4T 3 - 3	245.5	171	416.5	11.7	30
TPHK 4T 4 - 3	245.5	198	443.5	11.9	30
TPHK 4T 5 - 3	245.5	225	470.5	12.1	30
TPHK 4T 6 - 3	245.5	252	497.5	12.3	24
TPHK 4T 8 - 3	245.5	306	551.5	12.7	24
TPHK 4T 4 - 4	245.5	198	443.5	13.3	30
TPHK 4T 5 - 4	245.5	225	470.5	13.5	30
TPHK 4T 6 - 4	245.5	252	497.5	13.7	24
TPHK 4T 5 - 5	253.5	225	478.5	13.9	30
TPHK 4T 8 - 5	253.5	306	559.5	14.5	24
TPHK 4T 6 - 6	253.5 / 284	252	505.5 / 536	14.1	24
TPHK 4T 8 - 6	253.5 / 284	306	559.5 / 590	14.6	24
TPHK 4T 7 - 7	284	279	563	14.6	24
TPHK 4T 8 - 7	284	306	590	14.8	24

## Performance curve (50Hz)



## Performance curve (60Hz)



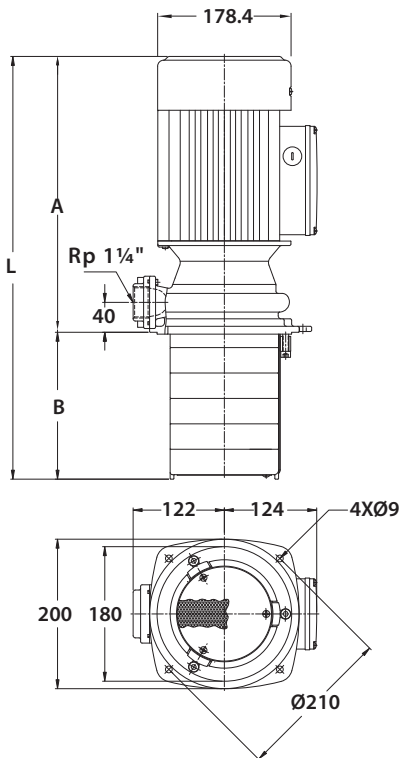
# TPHK 8T


## Electrical data

Standard Model	Phase (Ø)	Voltage code	Cycle (Hz)	Volts (V)	Input Power (W)	Ampere (A)
TPHK 8T 6 - 2	3	A3Z	50	200-255 / 380-440	1200	3.7-6.0 / 2.3-3.2
			60	200-255 / 380-480	1650	5.1-4.7 / 2.8-2.9
TPHK 8T 3 - 3	3	A3Z	50	200-255 / 380-440	1550	4.9-6.3 / 2.9-3.6
			60	200-255 / 380-480	2350	7.1-6.4 / 4.0-3.7
TPHK 8T 4 - 4	3	A3U	50	200-240 / 380-415	2200	7.6-13.2 / 5.7-8.0
			60	200-240 / 380-440	3000	9.3-9.6 / 5.3-5.7
TPHK 8T 5 - 5	3	A3U	50	200-240 / 380-415	2600	8.5-13.5 / 5.7-7.9
			60	200-240 / 380-440	3900	11.4-12.3 / 6.3-6.5

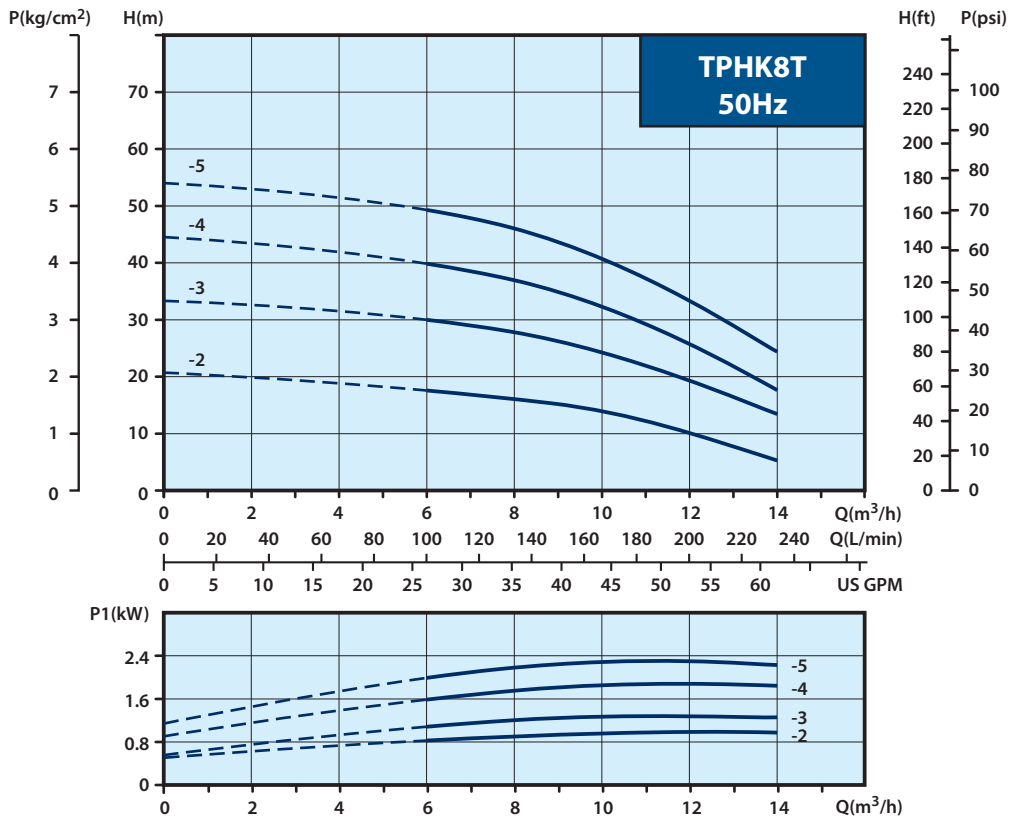
Maximum 9 Stages

## Dimensions ( mm )

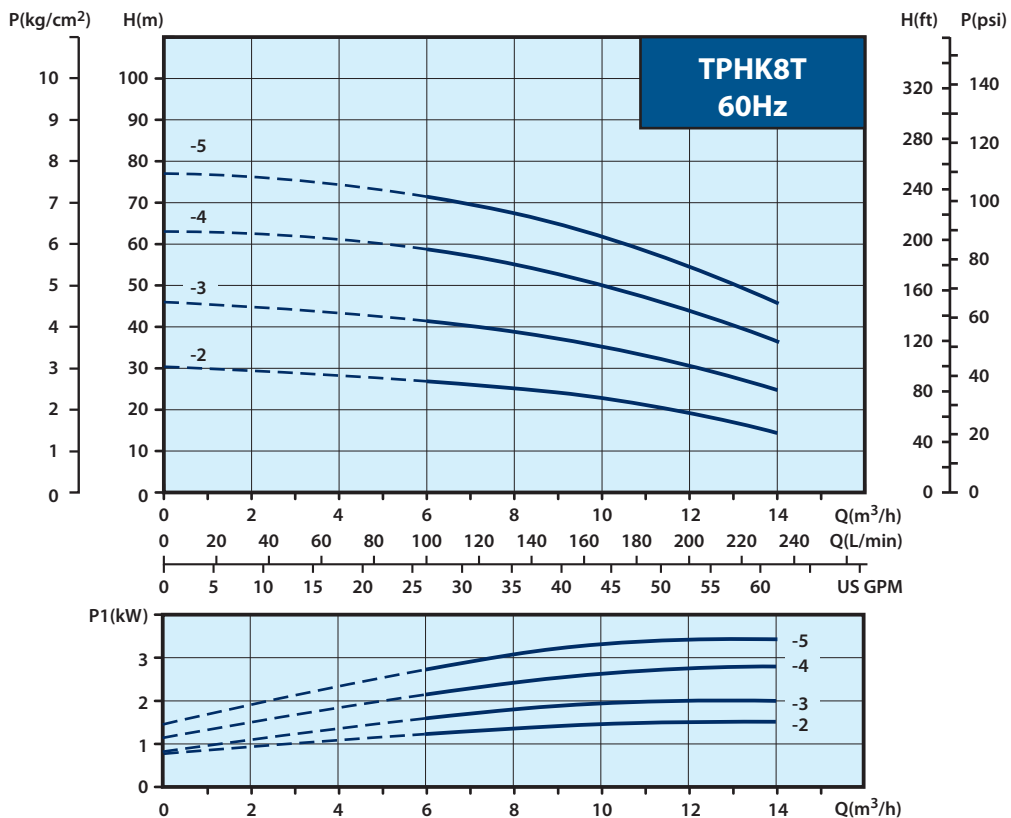


Model	A (mm)	B (mm)	L (mm)	N.W.(kg)	
TPHK 8T 6 - 2	369	196.5	565.5	24.0	15
TPHK 8T 9 - 2	369	298.5	667.5	25.3	15
TPHK 8T 3 - 3	369	94.5	463.5	23.0	15
TPHK 8T 6 - 3	369	196.5	565.5	24.3	15
TPHK 8T 9 - 3	369	298.5	667.5	25.6	15
TPHK 8T 4 - 4	369	128.5	497.5	27.0	15
TPHK 8T 6 - 4	369	196.5	565.5	28.0	15
TPHK 8T 5 - 5	369	162.5	531.5	28.0	15

## Performance curve (50Hz)



## Performance curve (60Hz)





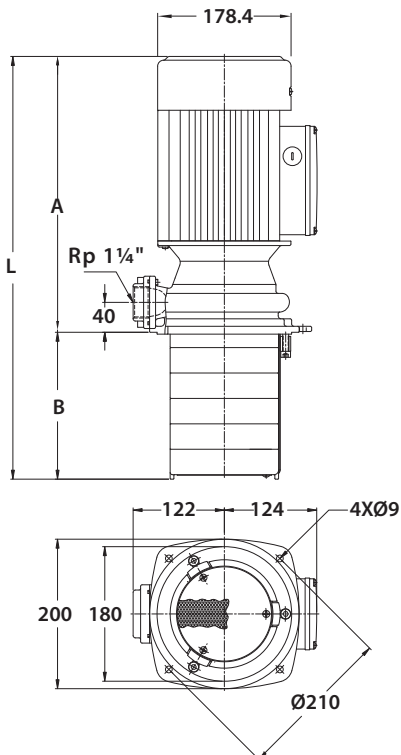
# TPHK 12T


## Electrical data

Standard Model	Phase (Ø)	Voltage code	Cycle (Hz)	Volts (V)	Input Power (W)	Ampere (A)
TPHK 12T 6 - 1	3	A3Z	50	200-255 / 380-440	1400	4.5-6.3 / 2.7-3.4
			60	200-255 / 380-480	2000	6.6-5.8 / 3.6-2.9
TPHK 12T 6 - 2	3	A3U	50	200-240 / 380-415	3120	9.6-13.9 / 6.4-8.4
			60	200-240 / 380-440	4150	12.8-12.4 / 7.1-7.4
TPHK 12T 6 - 3	3	53Q	50	200-240 / 380-440	3830	11.6-11.5 / 6.5-7.2

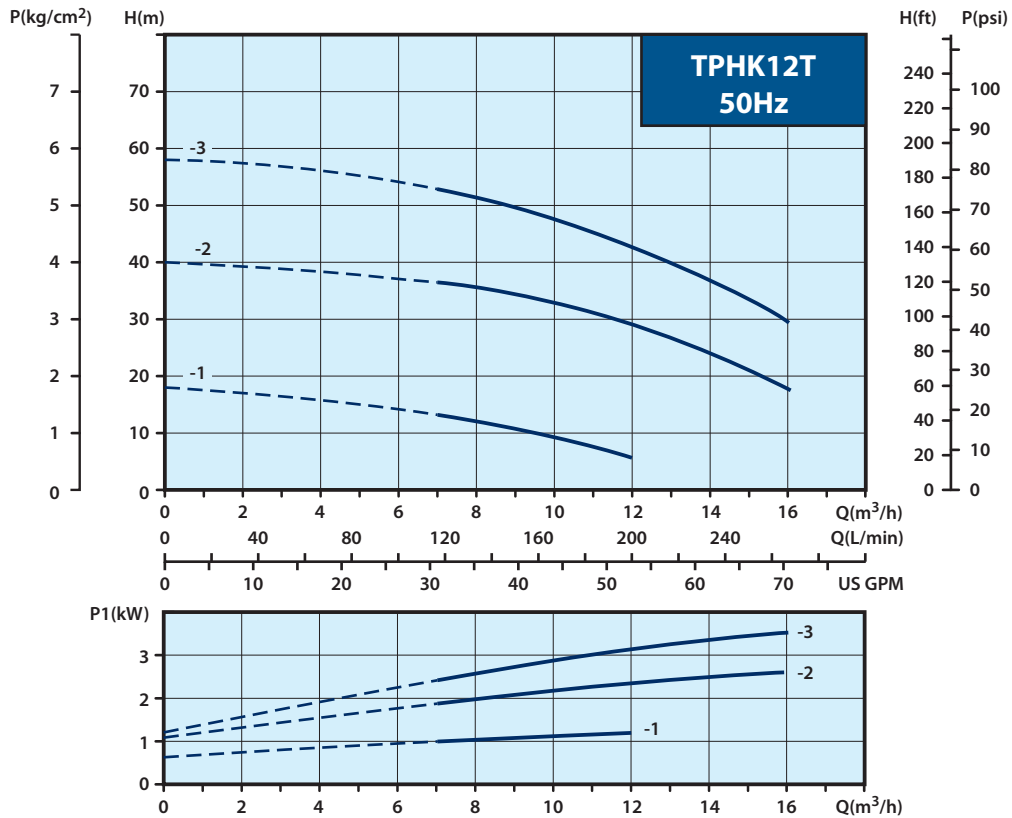
Maximum 9 Stages

## Dimensions ( mm )

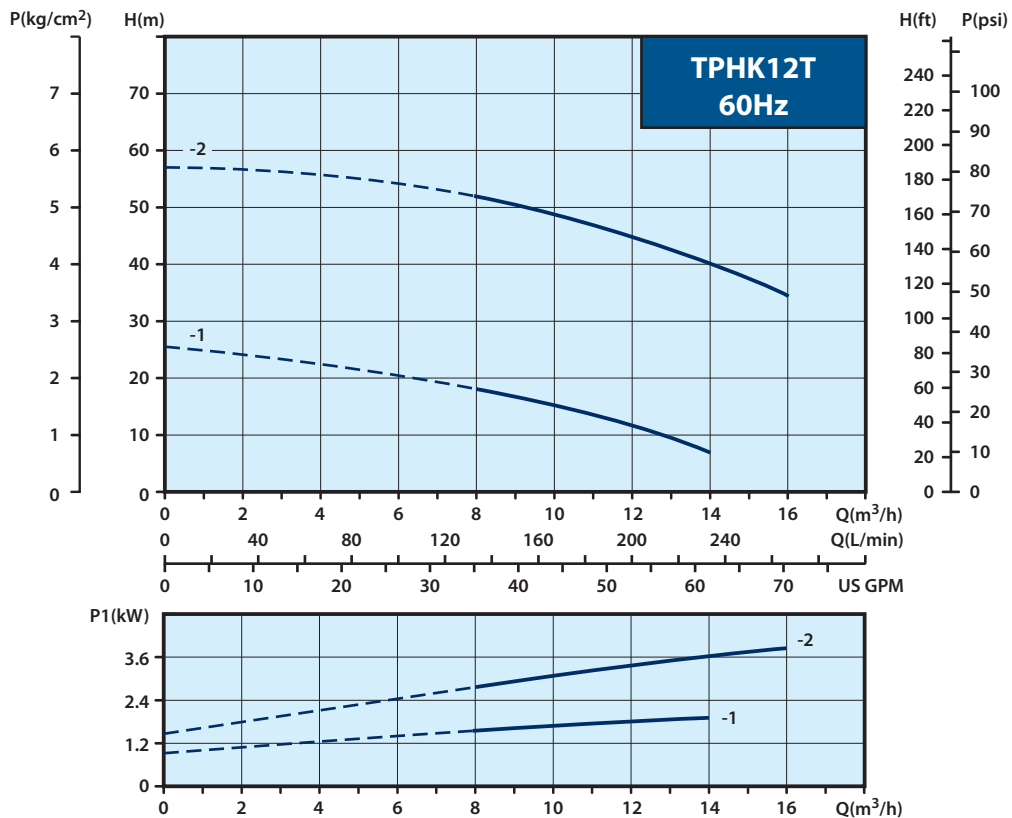


Model	A (mm)	B (mm)	L (mm)	N.W.(kg)	
TPHK12T 6 - 1	369	196.5	565.5	27.0	15
TPHK12T 6 - 2	369	196.5	565.5	29.0	15
TPHK12T 9 - 2	369	298.5	667.5	30.5	15
TPHK12T 6 - 3	369	196.5	565.5	30.0	15
TPHK12T 9 - 3	369	298.5	667.5	31.5	15

## Performance curve (50Hz)



## Performance curve (60Hz)





# Memo

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# TPCK Series Immersible Pump



## 50Hz

**Power:** 1.5 - 4.0 kW

**Head:** Up to 240 M

**Flow:** Up to 150 L/min

## 60Hz

**Power:** 2.2 - 4.0 kW

**Head:** Up to 260 M

**Flow:** Up to 180 L/min

**Outlet:** 1¼"

## Applications

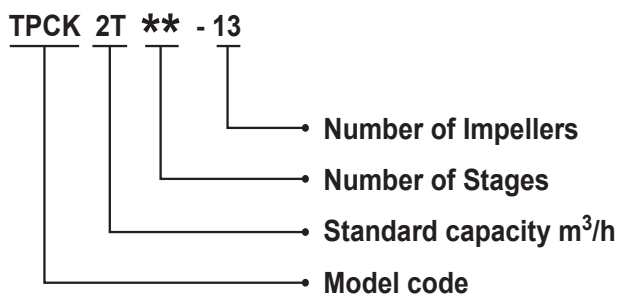
The TPCK Series is vertical multistage centrifugal pump, designed for industrial use, specially for machine tools, to carry fluids such as water, coolant, light oil and other clean, non aggressive matters.

- Industrial circulation system
- Washing/cleaning system
- Filtration system

## Operating Conditions

1. Ambient temperature : Max. +40°C
2. Liquid temperature range : +0°C ~ +90°C
3. Operating pressure : Max. 30 kg/cm<sup>2</sup>
4. Submerged depth : Min. 40mm

## Model code



## Pump Construction

Immersible vertical multistage centrifugal pump, self-priming, coupling connection between pump and motor, stainless steel construction design ensures corrosion-free operation.

## Motor

Nominal speed : 2860 or 3450 rpm

Frequency range : 50 or 60 Hz

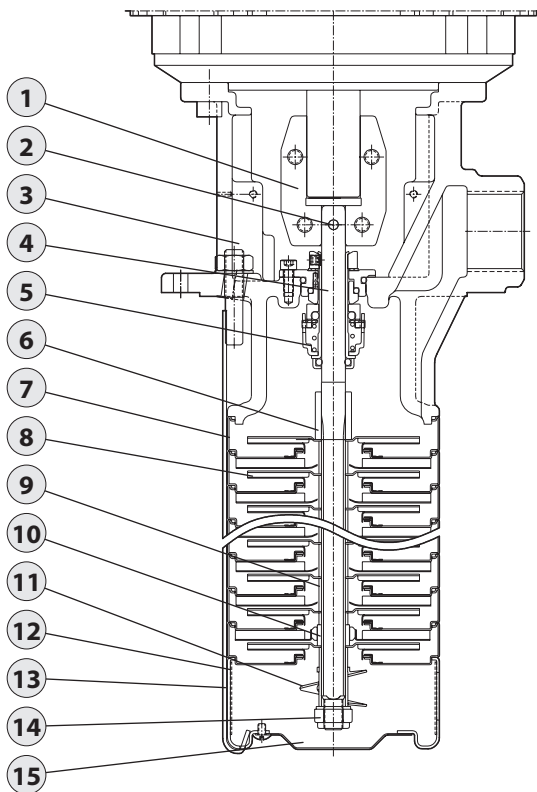
Standard voltages : 3Ø 198-242 / 342-418V

Enclosure class : IP54

Insulation class : F.

# TPCK Series Immersible Pump

## Sectional drawing



## Materials

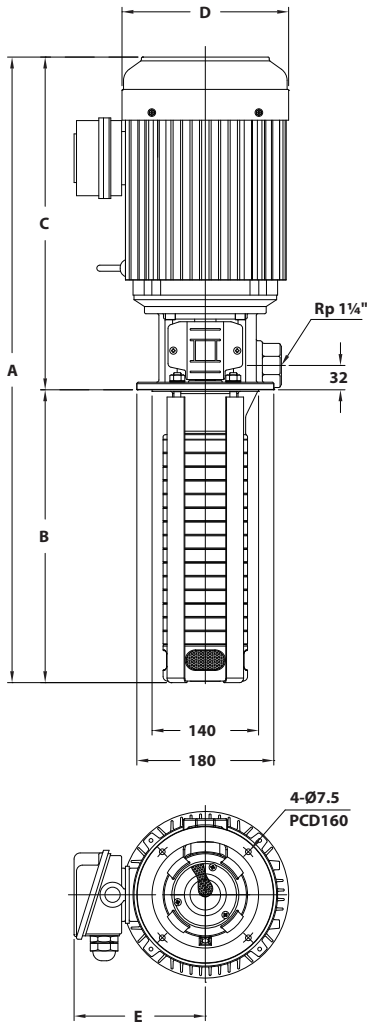
No.	Part name	Material
1	Coupling	SUS 304
2	Spring Pin	SUS 304
3	Pump Casing	Cast iron FCD 45
4	Shaft	SUS 304
5	Mechanical Seal	RTTH
6	Sleeve	SUS 304
7	Intermediate Chamber	SUS 304
8	Impeller	SUS 304
9	Sleeve (impeller)	SUS 304
10	Bearing	SiC
11	Priming Screw	SUS 304
12	Suction Intercon-necter	SUS 304
13	Strap	SUS 304
14	Lock Nut	SUS 316
15	Filter	SUS 304


## Options on request

- Special mechanical seal

Mechanical seal type	Material	
	Stationary Face/ Rotary Face	Cup Gasket & O Ring
RTTH	(T)Tungsten/ (T)Carbide	(H) HNBR
RGTH	(G)Carbon/ (T)Tungsten	

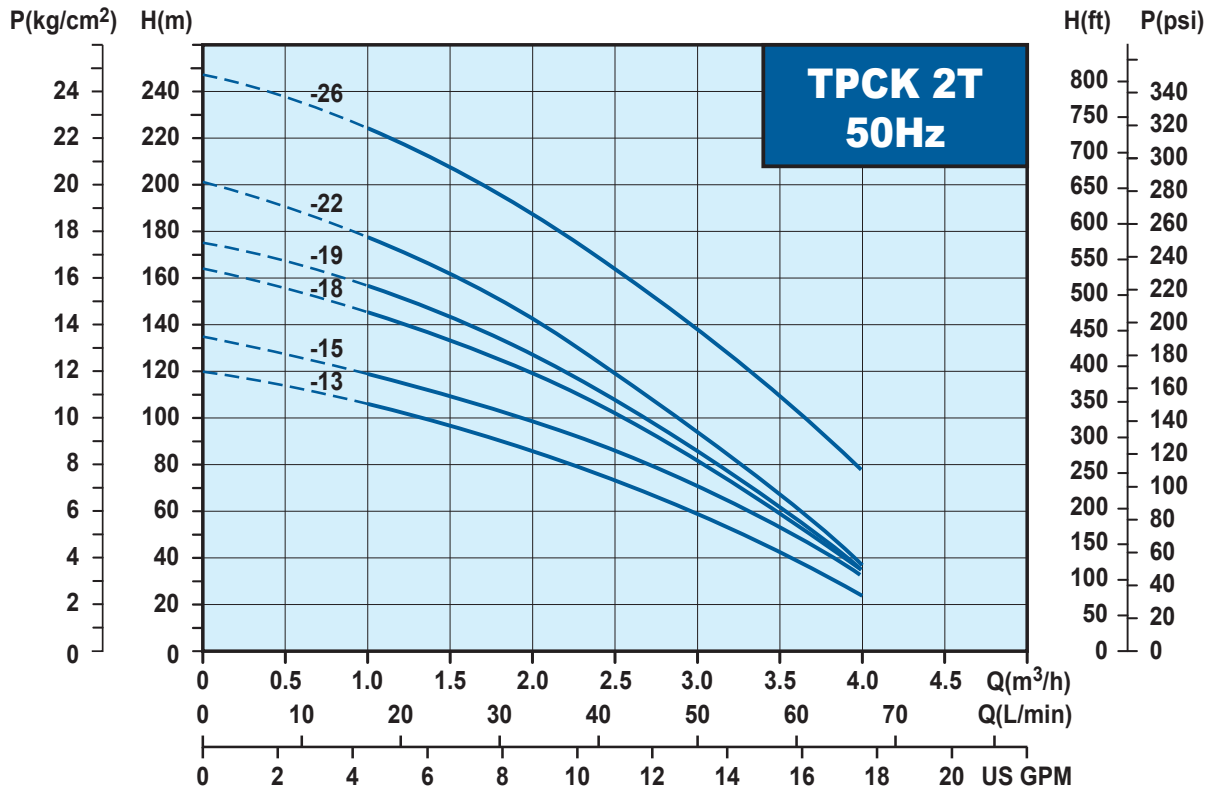
## Dimensions ( mm )



Model	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	N.W. (kg)	
<b>TPCK 2T 60Hz</b>							
TPCK2T 13-13	792	349	443	219	173	43.3	6
TPCK2T 15-15	828	385	443	219	173	43.5	6
TPCK2T 18-18	882	439	443	219	173	44.2	6
TPCK2T 20-20	918	475	443	219	173	45.5	6
TPCK2T 22-20	954	511	443	219	173	47.3	6
TPCK2T 26-20	1026	583	443	219	173	47.8	6
<b>TPCK 2T 50Hz</b>							
TPCK2T 13-13	724	349	375	175	142	28.8	6
TPCK2T 15-15	760	385	375	175	142	29.3	6
TPCK2T 18-18	814	439	375	175	142	30.0	6
TPCK2T 19-19	832	457	375	175	142	30.8	6
TPCK2T 22-22	886	511	375	175	142	31.3	6
TPCK2T 26-26	1026	583	443	219	173	47.6	6
<b>TPCK 4T 60Hz</b>							
TPCK4T 5 - 5	625	250	375	175	142	27.4	6
TPCK4T 6 - 6	652	277	375	175	142	27.7	6
TPCK4T 8 - 8	774	331	443	219	173	41.7	6
TPCK4T 10-10	828	385	443	219	173	43.1	6
TPCK4T 12-12	882	439	443	219	173	44.2	6
TPCK4T 14-12	936	493	443	219	173	44.6	6
TPCK4T 16-12	990	547	443	219	173	45.0	6
TPCK4T 17-12	1017	574	443	219	173	45.2	6
TPCK4T 19-12	1071	628	443	219	173	45.8	6
TPCK4T 22-12	1152	709	443	219	173	46.4	6
<b>TPCK 4T 50Hz</b>							
TPCK4T 8 - 8	706	331	375	175	142	27.1	6
TPCK4T 10-10	760	385	375	175	142	29.0	6
TPCK4T 12-12	814	439	375	175	142	29.4	6
TPCK4T 14-14	936	493	443	219	173	43.3	6
TPCK4T 16-16	990	547	443	219	173	44.8	6
TPCK4T 19-19	1071	628	443	219	173	46.1	6
TPCK4T 22-22	1152	709	443	219	173	47.6	6

# TPCK 2T

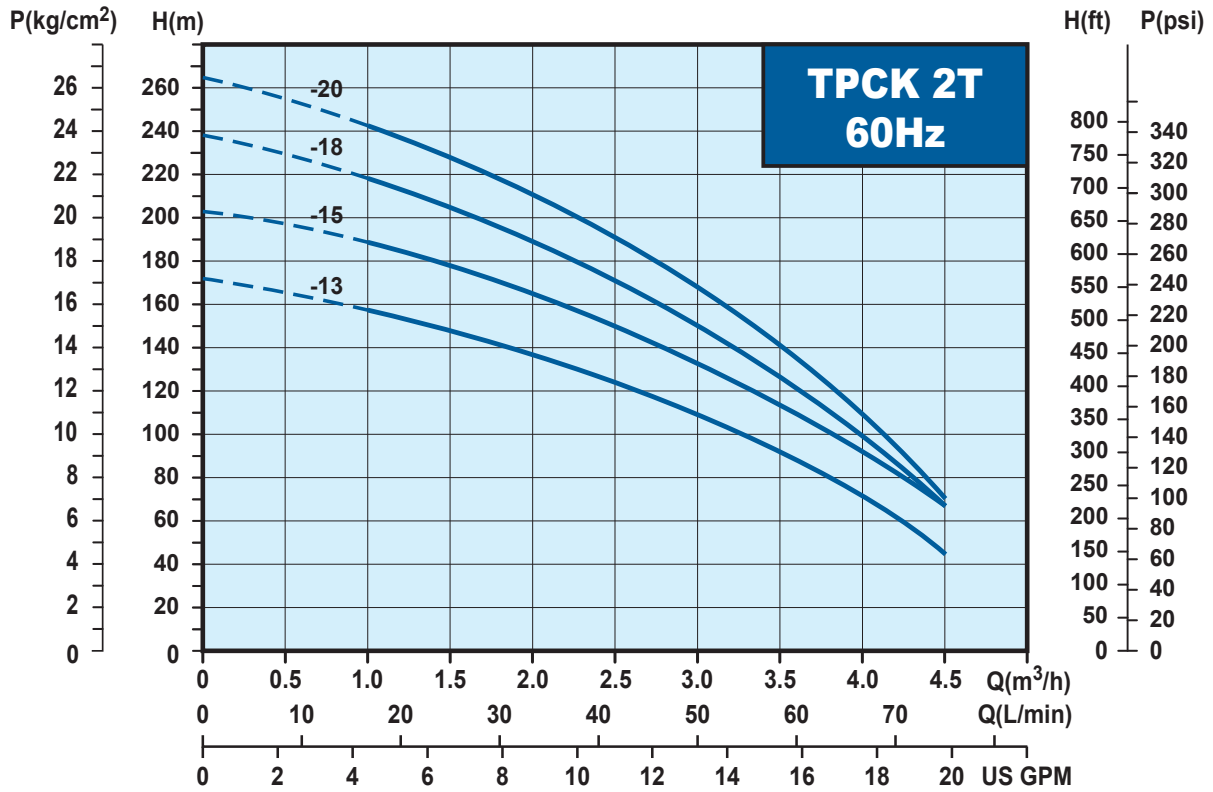
## Performance curve, 50Hz



## Electrical data, 50Hz

Model	PH (Ø)	Power (kW)	Volts (V)	Ampere (A)
TPCK2T 13-13	3	1.5	198-242 / 342-418	6.2-5.1 / 3.6-2.9
TPCK2T 15-15	3	1.5	198-242 / 342-418	6.2-5.1 / 3.6-2.9
TPCK2T 18-18	3	2.2	198-242 / 342-418	8.9-7.3 / 5.1-4.2
TPCK2T 19-19	3	2.2	198-242 / 342-418	8.9-7.3 / 5.1-4.2
TPCK2T 22-22	3	2.2	198-242 / 342-418	8.9-7.3 / 5.1-4.2
TPCK2T 26-26	3	3.0	198-242 / 342-418	11.4-9.3 / 6.6-5.4

## Performance curve, 60Hz



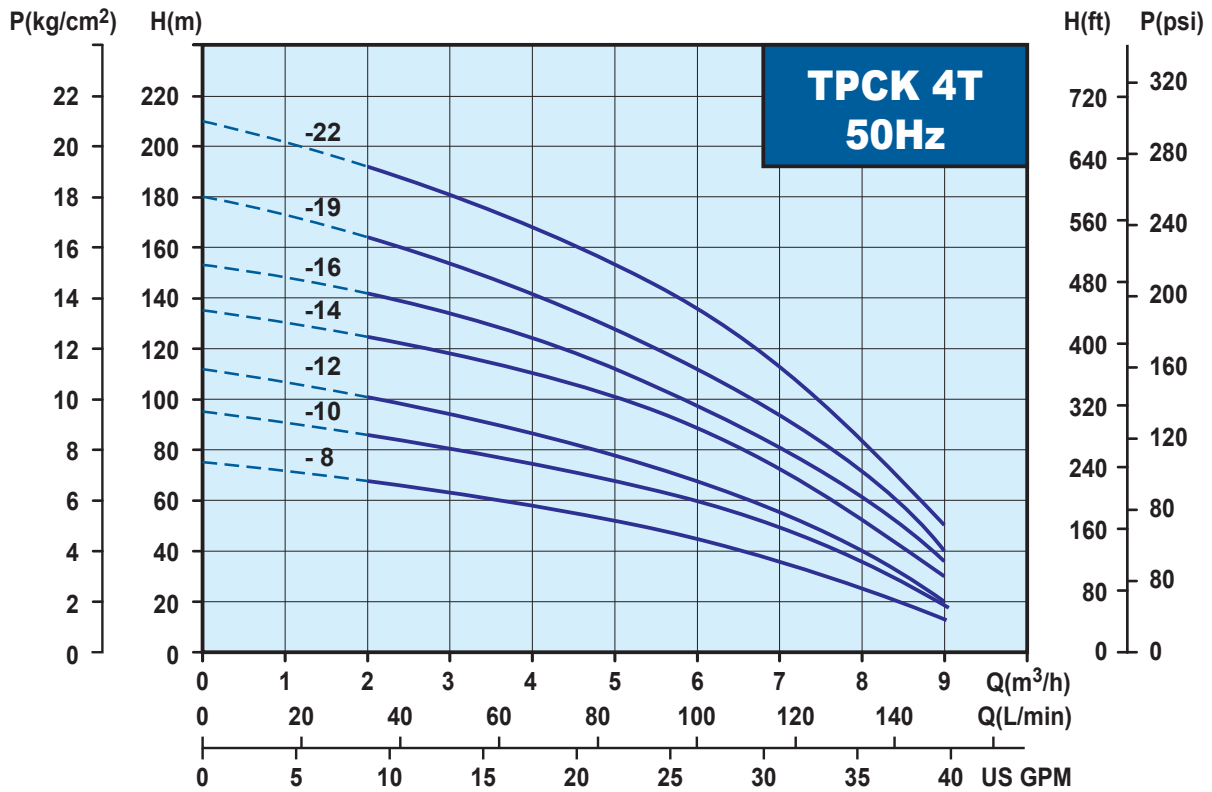
## Electrical data, 60Hz

Model	PH (Ø)	Power (kW)	Volts (V)	Ampere (A)
TPCK2T 13-13	3	3.0	198-242 / 342-418	11.4-9.3 / 6.6-5.4
TPCK2T 15-15	3	3.0	198-242 / 342-418	11.4-9.3 / 6.6-5.4
TPCK2T 18-18	3	4.0	198-242 / 342-418	16.6-13.6 / 9.6-7.9
TPCK2T 20-20	3	4.0	198-242 / 342-418	16.6-13.6 / 9.6-7.9



# TPCK 4T

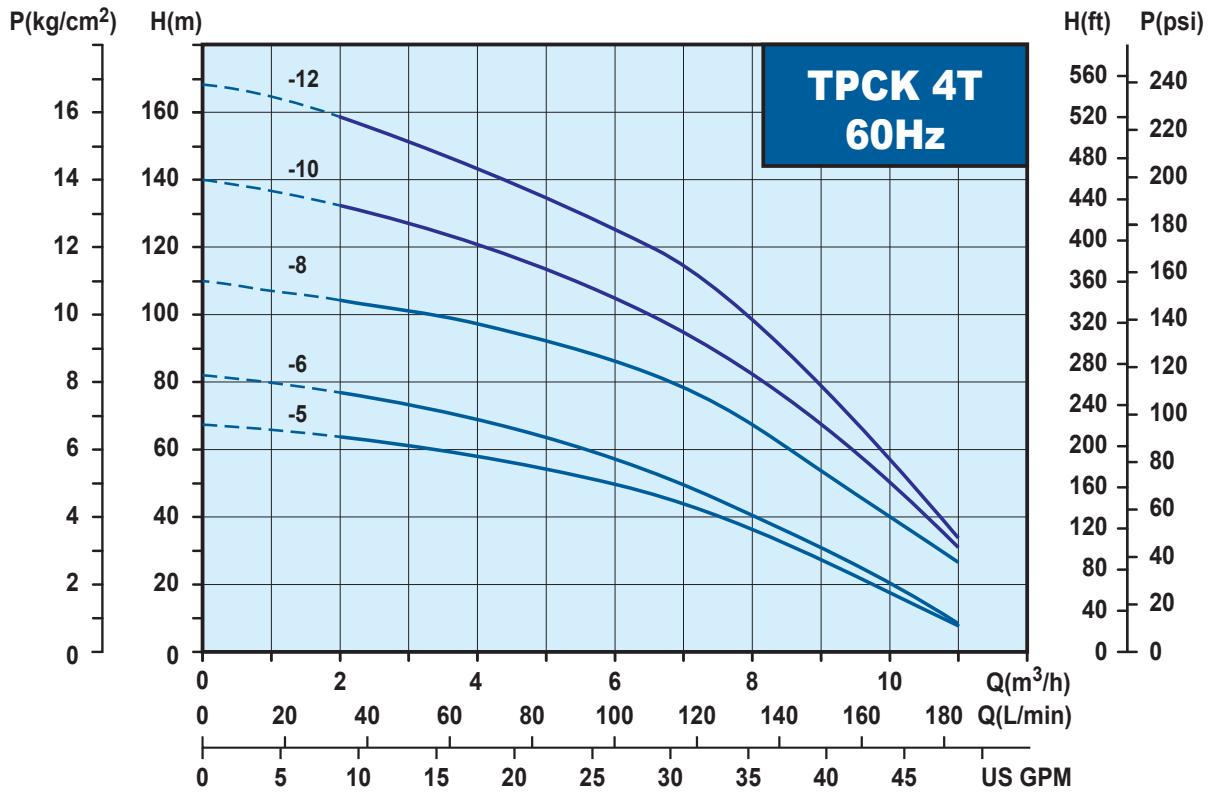
## Performance curve, 50Hz



## Electrical data, 50Hz

Model	PH (Ø)	Power (kW)	Volts (V)	Ampere (A)
TPCK4T 8 - 8	3	1.5	198-242 / 342-418	6.2-5.1 / 3.6-2.9
TPCK4T 10-10	3	2.2	198-242 / 342-418	8.9-7.3 / 5.1-4.2
TPCK4T 12-12	3	2.2	198-242 / 342-418	8.9-7.3 / 5.1-4.2
TPCK4T 14-14	3	3.0	198-242 / 342-418	11.4-9.3 / 6.6-5.4
TPCK4T 16-16	3	3.0	198-242 / 342-418	11.4-9.3 / 6.6-5.4
TPCK4T 19-19	3	4.0	198-242 / 342-418	16.6-13.6 / 9.6-7.9
TPCK4T 22-22	3	4.0	198-242 / 342-418	16.6-13.6 / 9.6-7.9

## Performance curve, 60Hz



## Electrical data, 60Hz

Model	PH (Ø)	Power (kW)	Volts (V)	Ampere (A)
TPCK4T 5 - 5	3	2.2	198-242 / 342-418	8.9-7.3 / 5.1-4.2
TPCK4T 6 - 6	3	2.2	198-242 / 342-418	8.9-7.3 / 5.1-4.2
TPCK4T 8 - 8	3	3.0	198-242 / 342-418	11.4-9.3 / 6.6-5.4
TPCK4T 10-10	3	4.0	198-242 / 342-418	16.6-13.6 / 9.6-7.9
TPCK4T 12-12	3	4.0	198-242 / 342-418	16.6-13.6 / 9.6-7.9



# **WALRUS**

**WALRUS PUMP CO., LTD.**





# WALRUS

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