

**PHOENIX**

# VERTICAL MULTI-STAGE HIGH PRESSURE CENTRIFUGAL PUMP

**FP-TPHK Series**



**PHOENIX**

**TOP PHOENIX  
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# FP-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

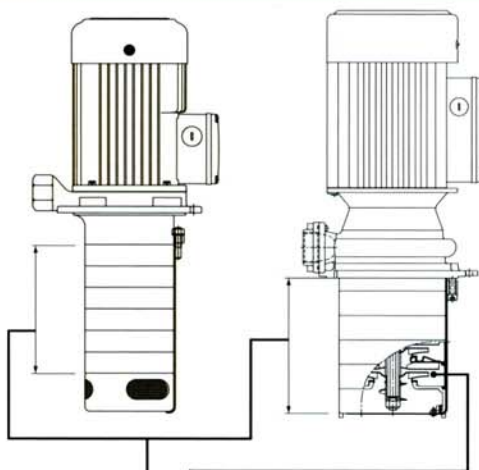
The FP-TPHK Series is vertical multistage centrifugal pump, designed for industrial use, specially for machine tools. It is suitable to carry fluids such as water, coolant, light oil and other clean, non aggressive matters:

- 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



**FP - TPHK 2T 6 - 4 S**

- Stainless steel series
- Number of Impellers
- Number of Stages
- Standard capacity m<sup>3</sup>/h
- Model name

## 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

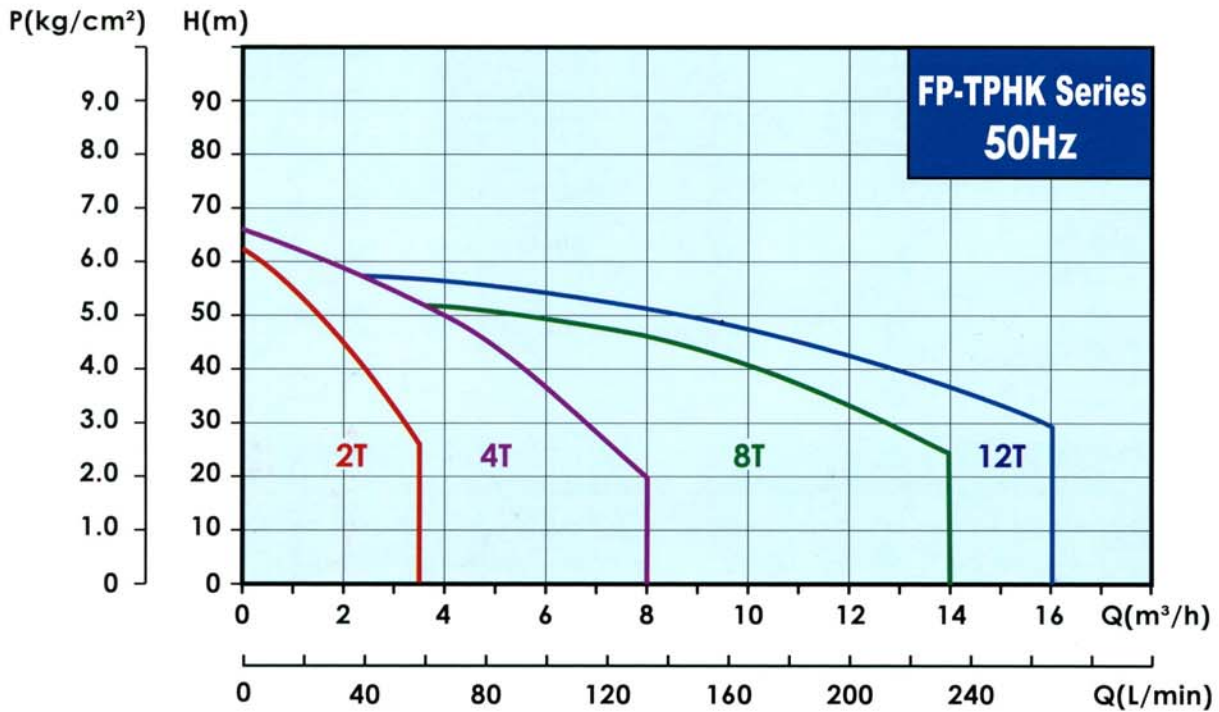
Voltages Code :

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

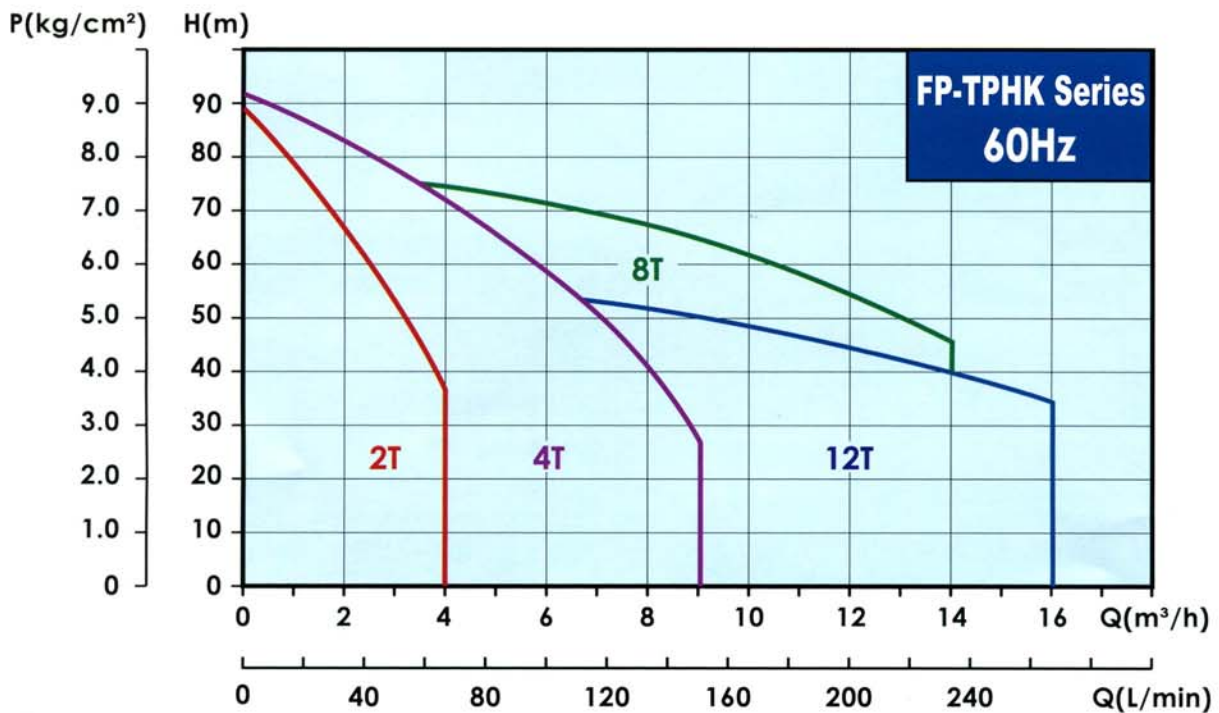
\* The motor can be use in both 50/60 hz.

# FP-TPHK Series Immersible Pump

## Performance curve (50Hz)



## Performance curve (60Hz)

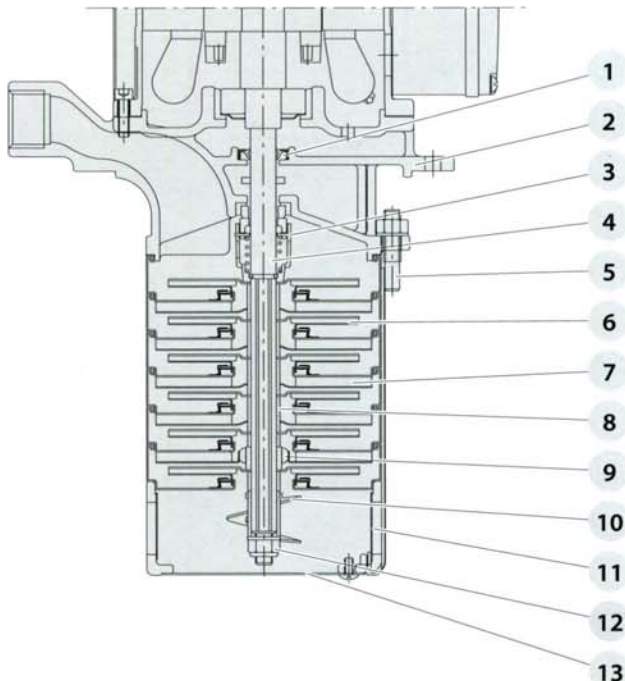




# FP-TPHK Series

## Sectional drawing

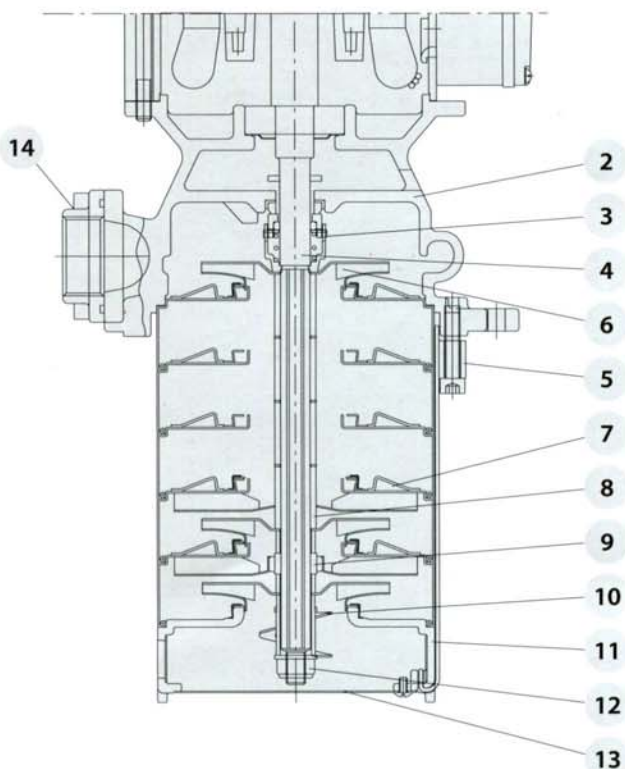
FP-TPHK 2T/4T



## 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 interconnector	SUS 304	
12	Lock Nut	SUS 316	
13	Filter	SUS 304	
14	Flange	SUS 304	

FP-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

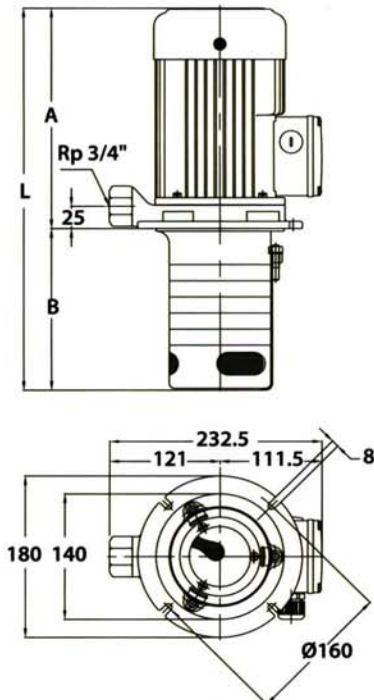
# FP-TPHK 2T

## Electrical data

Standard Model	Phase (Ø)	Voltage code	Cycle (Hz)	Volts (V)	Input Power (W)	Ampere (A)
FP-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
FP-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
FP-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
FP-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
FP-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
FP-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
FP-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 )

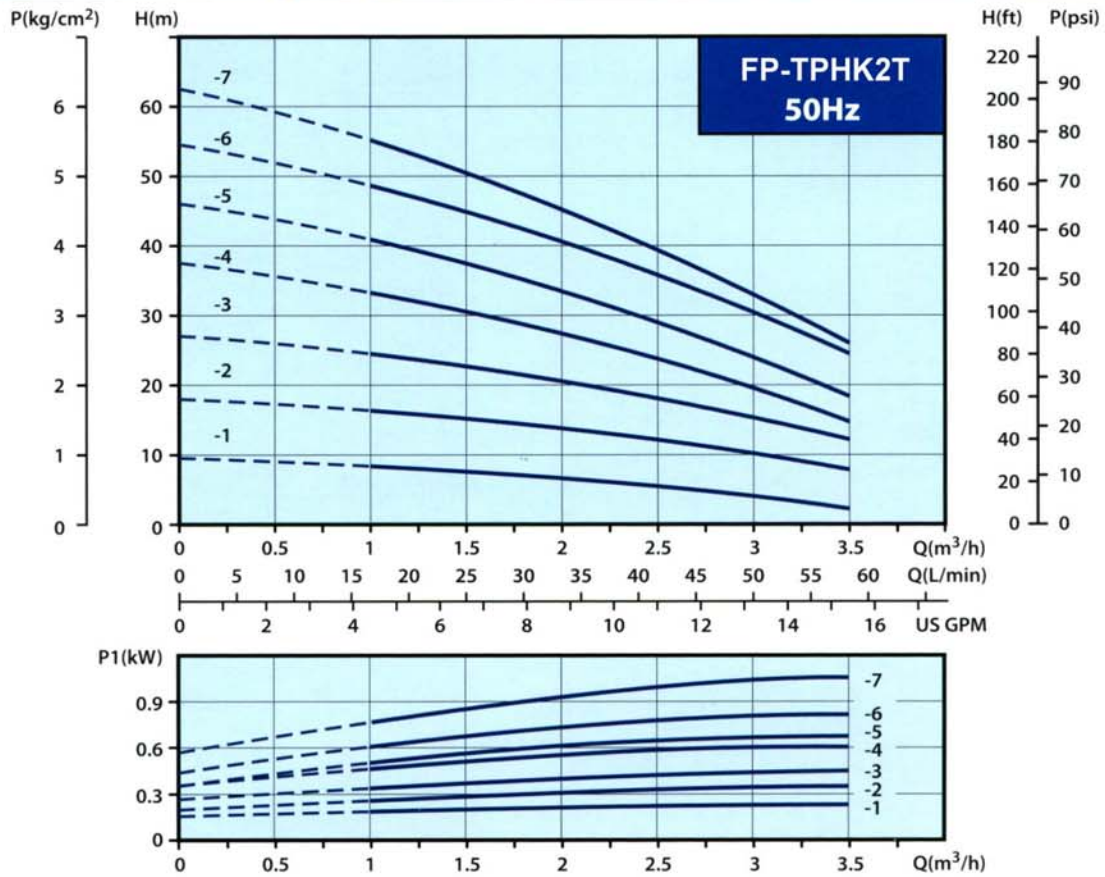


Model	A (mm)	B (mm)	L (mm)	N.W.(kg)	
FP-TPHK 2T 3 - 1	205.5	144	349.5	10.9	30
FP-TPHK 2T 8 - 1	205.5	234	439.5	11.9	30
FP-TPHK 2T 3 - 2	205.5	144	349.5	11.1	30
FP-TPHK 2T 5 - 2	205.5	180	385.5	11.5	30
FP-TPHK 2T 9 - 2	205.5	252	457.5	12.3	30
FP-TPHK 2T 3 - 3	205.5	144	349.5	11.2	30
FP-TPHK 2T 4 - 3	205.5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

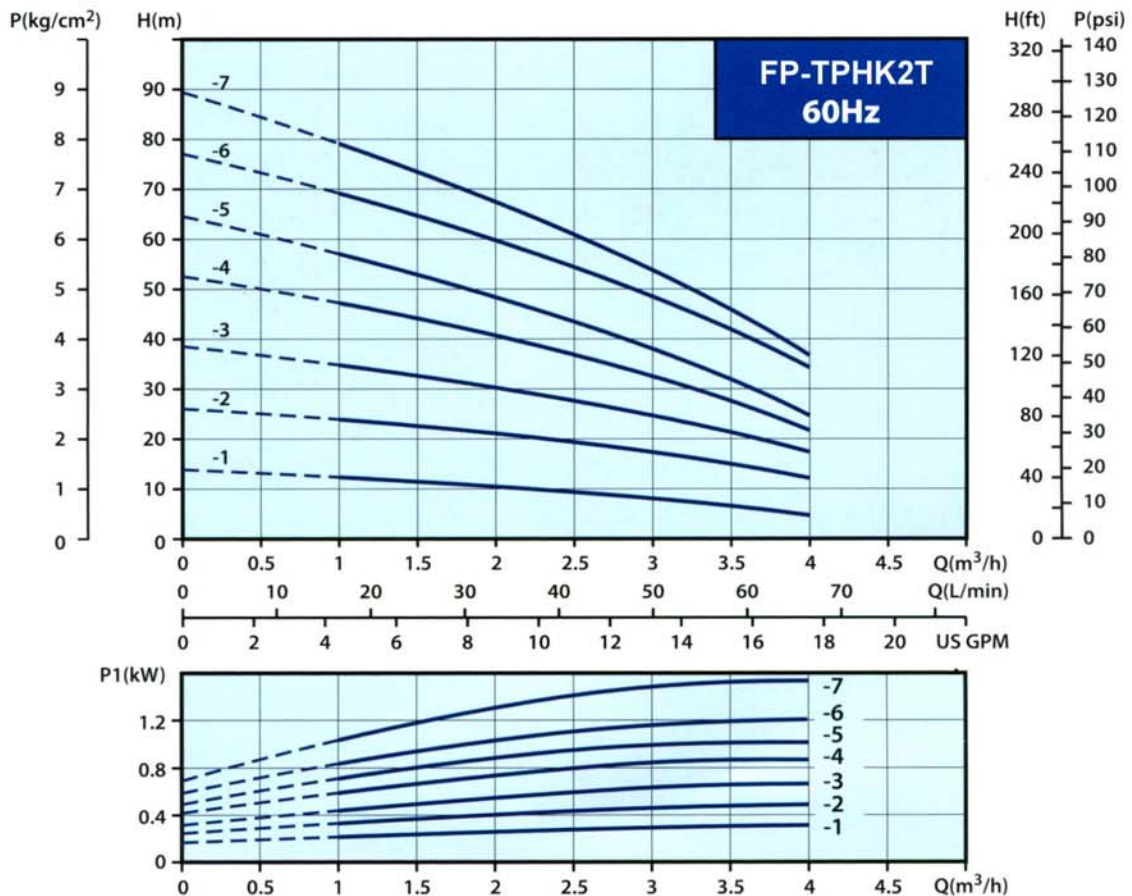


# FP-TPHK 2T

## Performance curve (50Hz)



## Performance curve (60Hz)



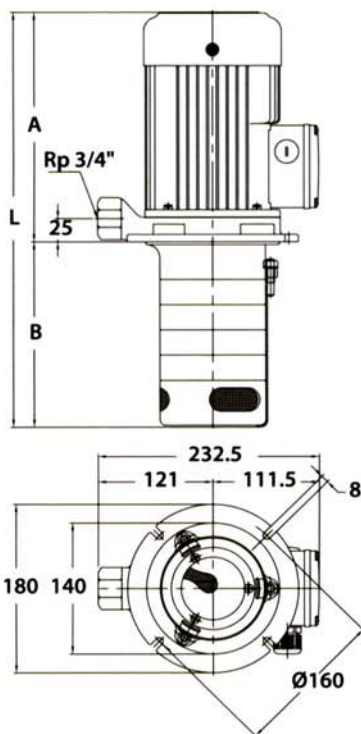
# FP-TPHK 4T

## Electrical data

Standard Model	Phase (Ø)	Voltage code	Cycle (Hz)	Volts (V)	Input Power (W)	Ampere (A)
FP-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
FP-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
FP-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
FP-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
FP-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
FP-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
FP-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 )

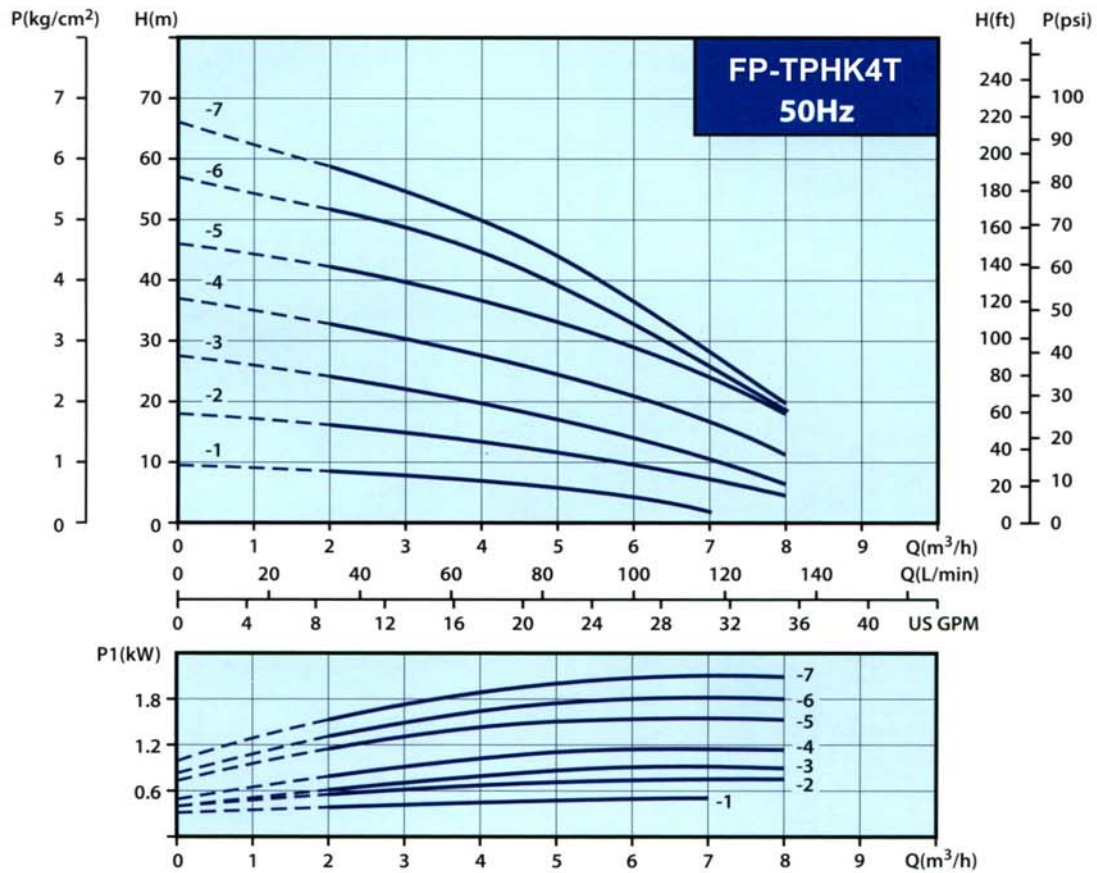


Model	A (mm)	B (mm)	L (mm)	N.W.(kg)	
	50Hz / 60Hz		50Hz / 60Hz		
FP-TPHK 4T 2 - 1	205.5	144	349.5	10.8	30
FP-TPHK 4T 3 - 1	205.5	171	376.5	11.0	30
FP-TPHK 4T 2 - 2	205.5	144	349.5	11.0	30
FP-TPHK 4T 3 - 2	205.5	171	376.5	11.2	30
FP-TPHK 4T 4 - 2	205.5	198	403.5	11.4	30
FP-TPHK 4T 6 - 2	205.5	252	457.5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

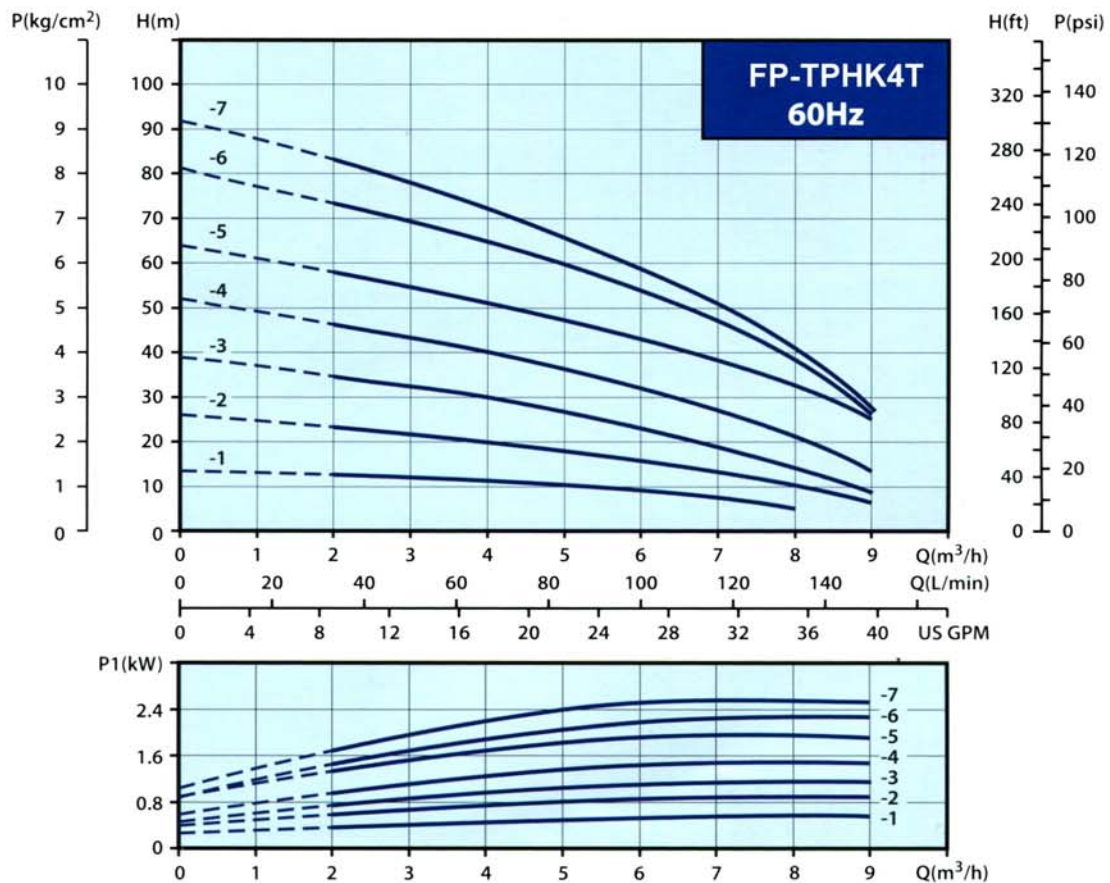


# FP-TPHK 4T

## Performance curve (50Hz)



## Performance curve (60Hz)





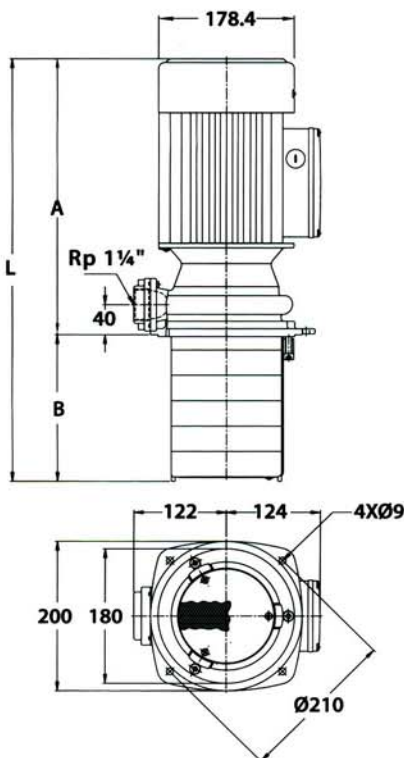
# FP-TPHK 8T

## Electrical data

Standard Model	Phase (Ø)	Voltage code	Cycle (Hz)	Volts (V)	Input Power (W)	Ampere (A)
FP-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
FP-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
FP-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
FP-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

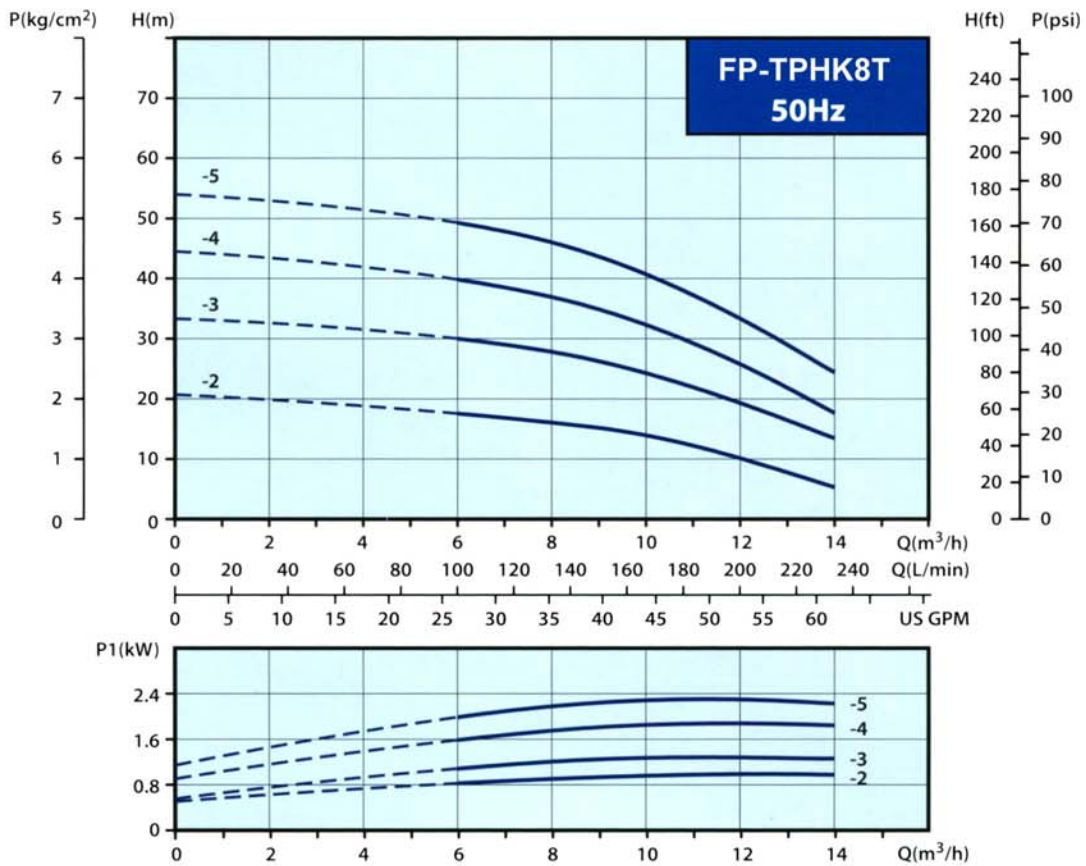
## Dimensions ( mm )



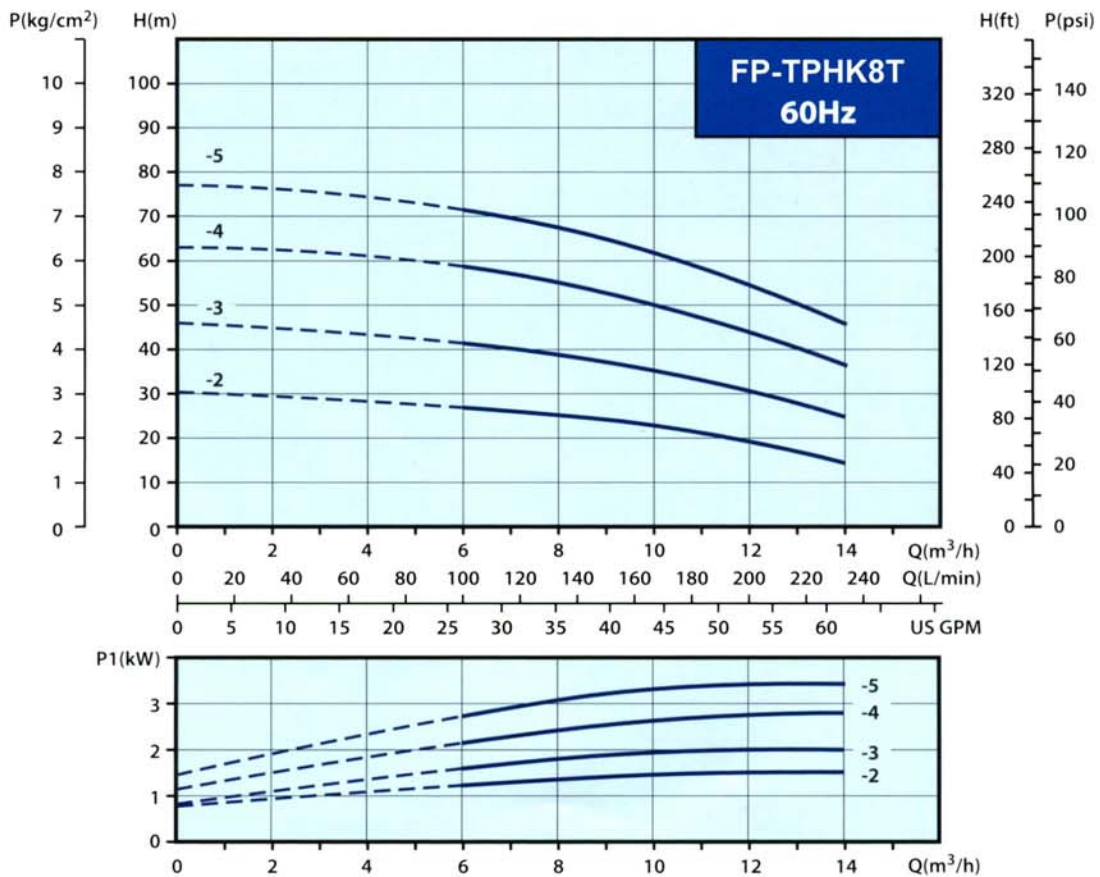
Model	A (mm)	B (mm)	L (mm)	N.W.(kg)	
FP-TPHK 8T 6 - 2	369	196.5	565.5	24.0	15
FP-TPHK 8T 9 - 2	369	298.5	667.5	25.3	15
FP-TPHK 8T 3 - 3	369	94.5	463.5	23.0	15
FP-TPHK 8T 6 - 3	369	196.5	565.5	24.3	15
FP-TPHK 8T 9 - 3	369	298.5	667.5	25.6	15
FP-TPHK 8T 4 - 4	369	128.5	497.5	27.0	15
FP-TPHK 8T 6 - 4	369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

# FP-TPHK 8T

## Performance curve (50Hz)



## Performance curve (60Hz)





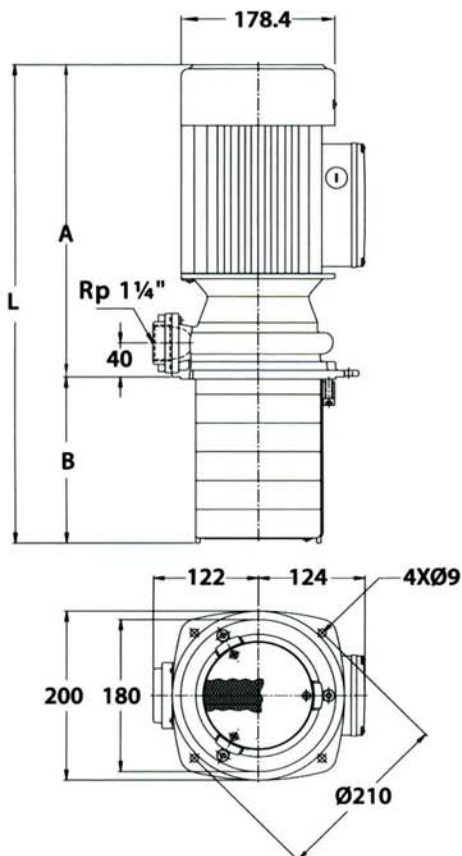
# FP-TPHK 12T

## Electrical data

Standard Model	Phase (Ø)	Voltage code	Cycle (Hz)	Volts (V)	Input Power (W)	Ampere (A)
FP-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
FP-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
FP-TPHK 12T 6-3	3	53Q	50	200-240 / 380-440	3830	11.6-11.5 / 6.5-7.2

Maximum 9 Stages

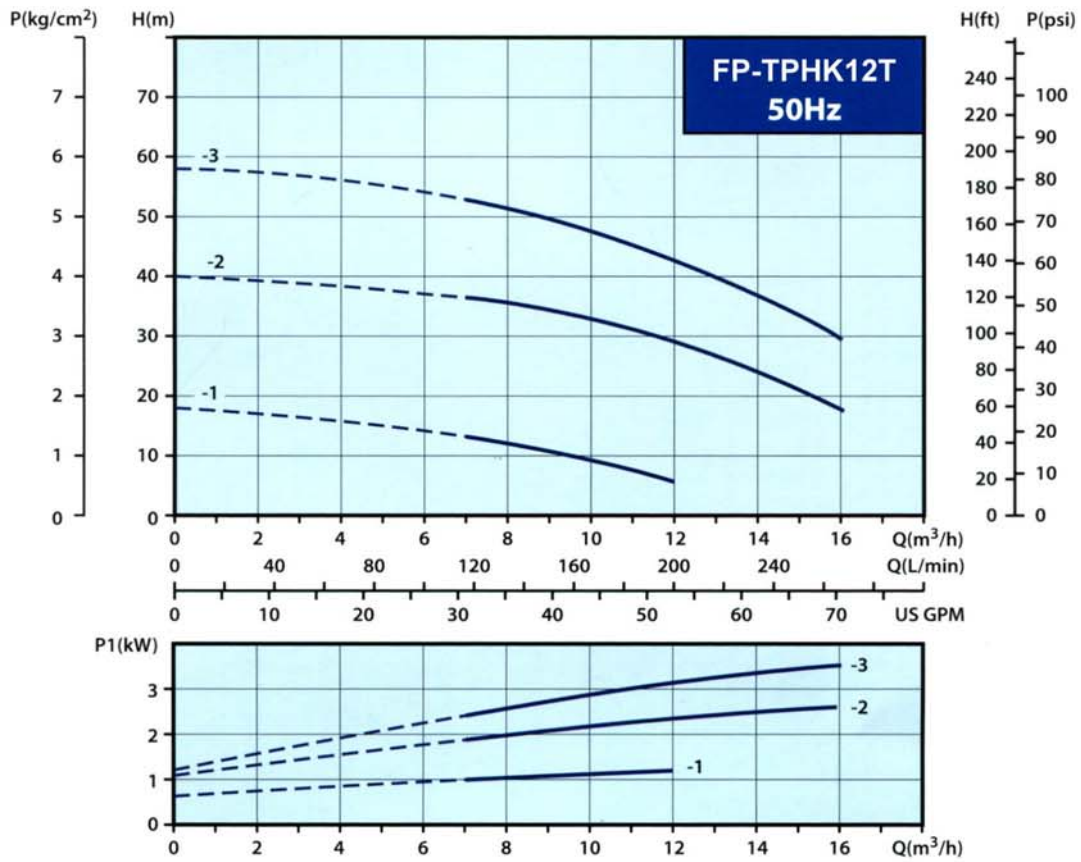
## Dimensions ( mm )



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

# FP-TPHK 12T

## Performance curve (50Hz)



## Performance curve (60Hz)

