



**WALRUS®**



**WALRUS PUMP**

**TPHK Series**  
Immersible Pumps



### Applications

The WALRUS 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 for:

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

### Pump construction

Submersible 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 : 3500 / 2900 rpm

Frequency range : 60 / 50 Hz

Voltages Code:

Code	PH	50Hz	60Hz
3Q	3	200-240/380-440V	-
3Z*	3	200-255/380-440V	200-255/380-480V
4U*	3	200-240/380-415V	200-240/380-440V

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

### Operation conditions

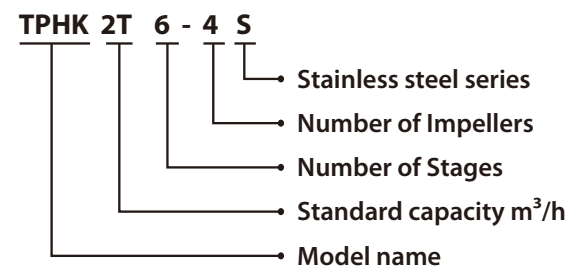
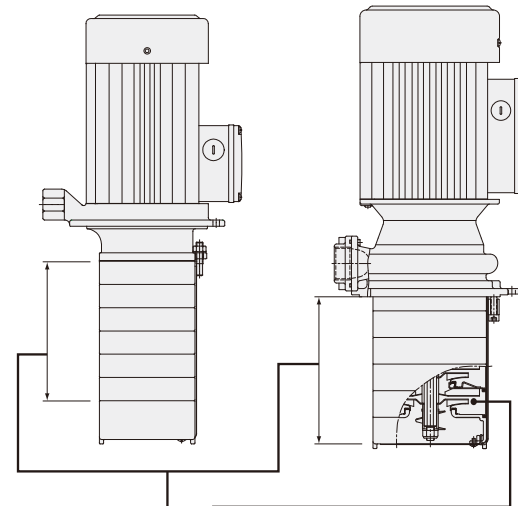
Ambient temperature :Max. +50°C

Liquid temperature range :+0°C ~ +90°C

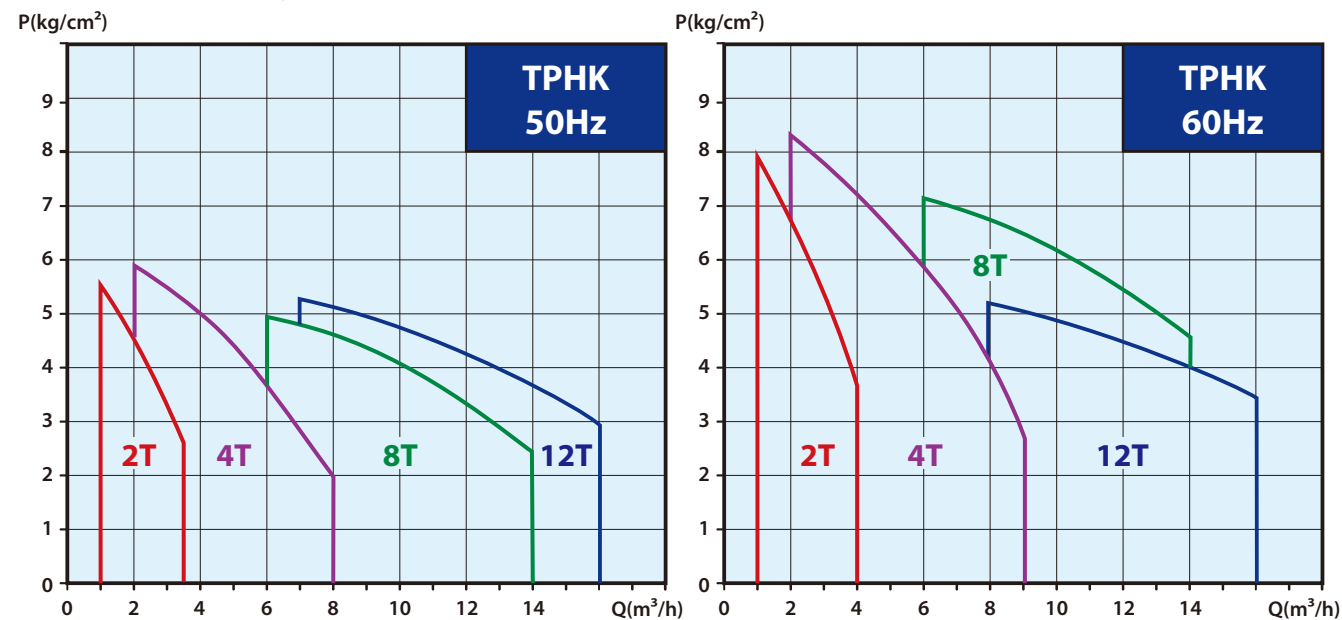
Operating pressure :Max. 10 kg/cm<sup>2</sup>

Submerged depth :Min. 65mm

### Model code

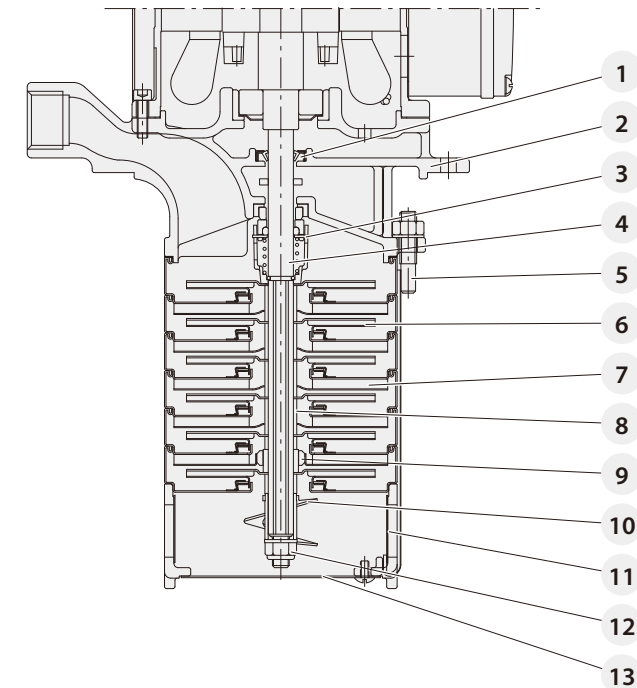


### Performance range



### Sectional drawing

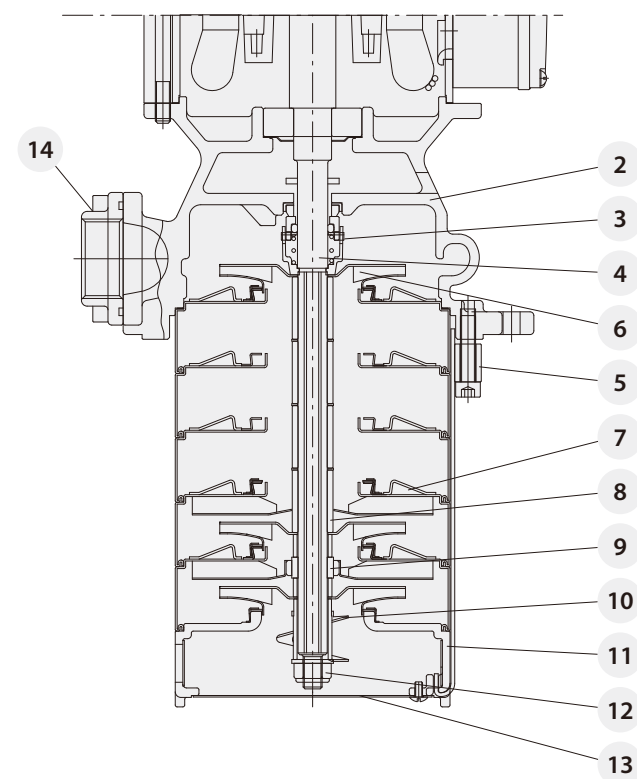
#### TPHK 2T/4T



### Materials

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

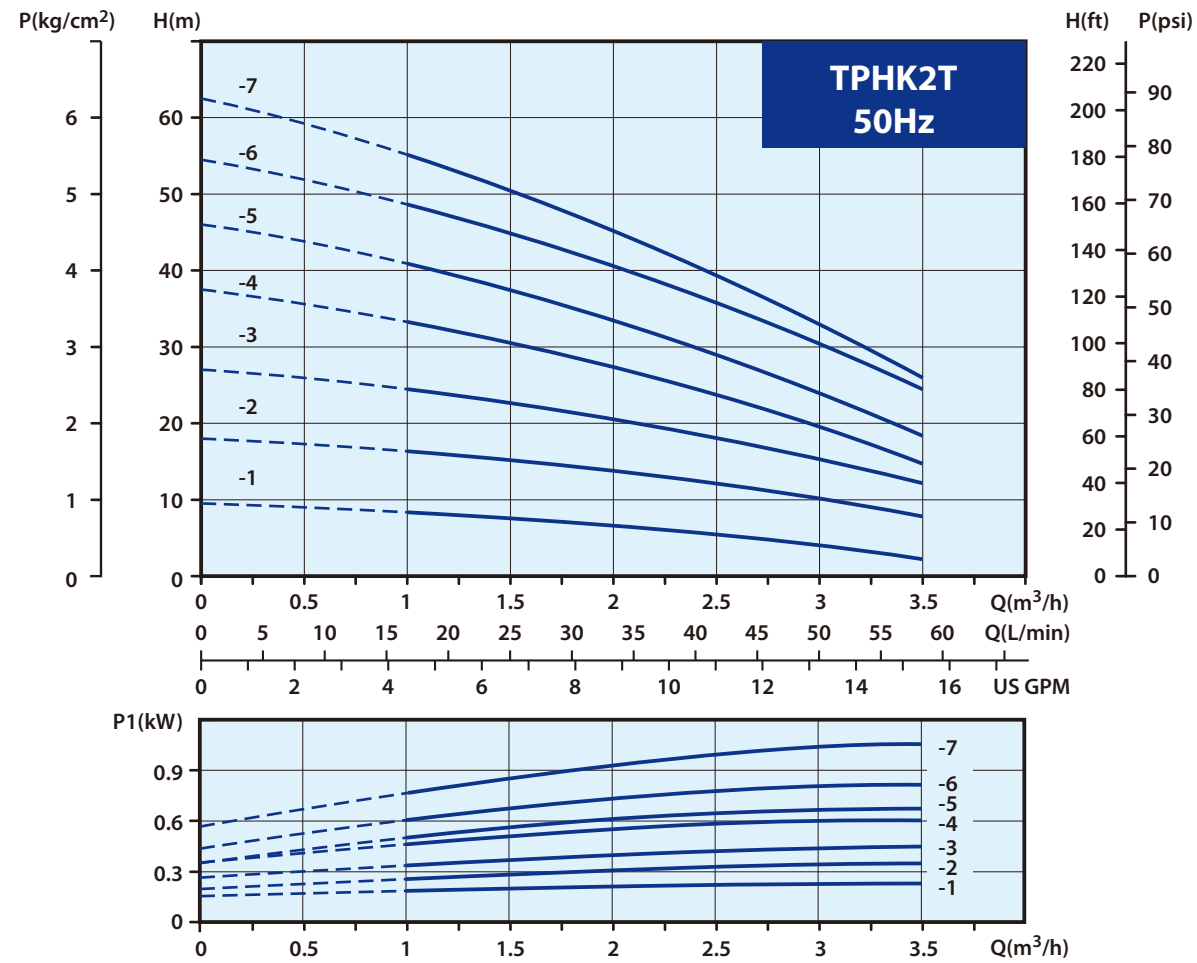
#### TPHK 8T/12T



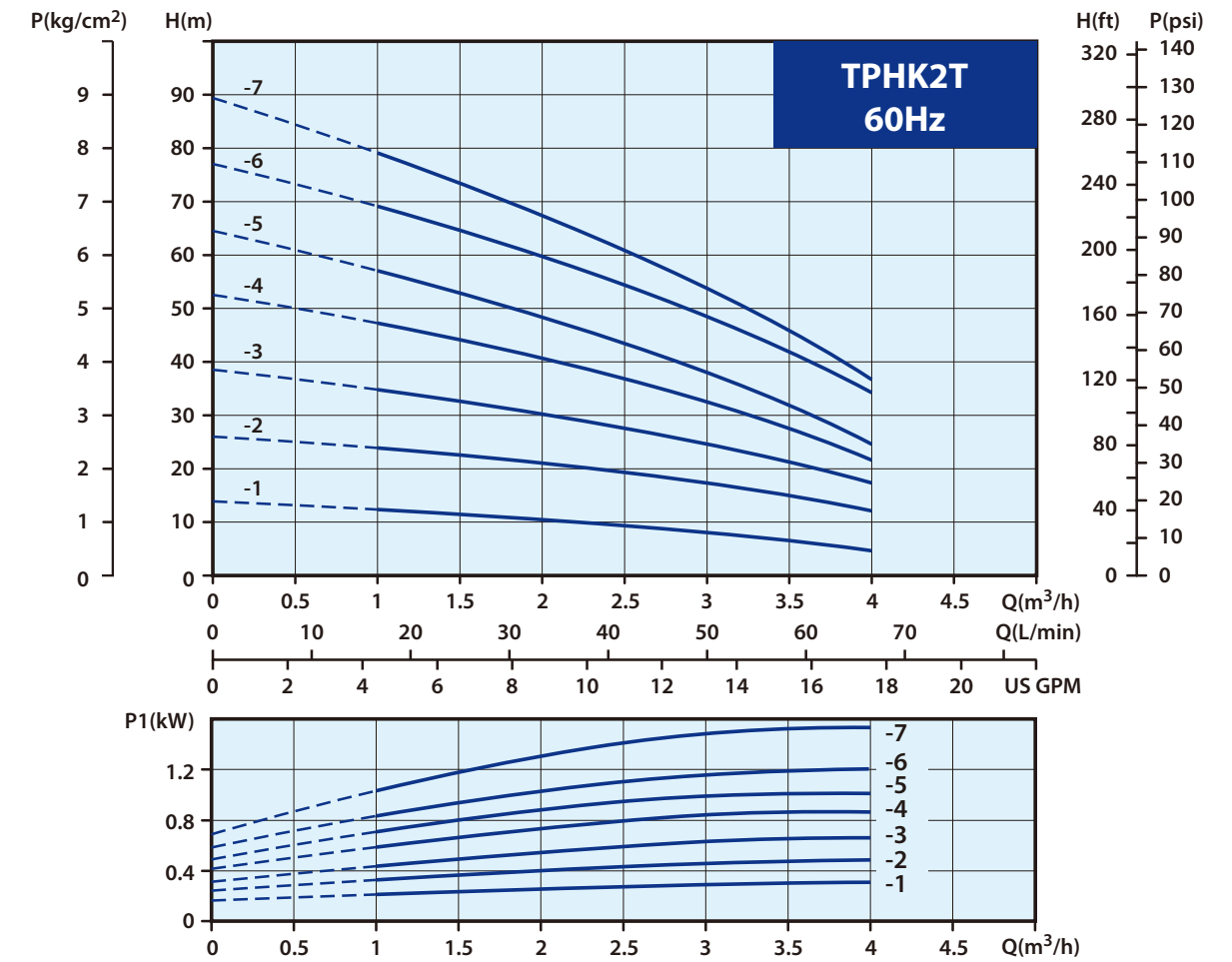
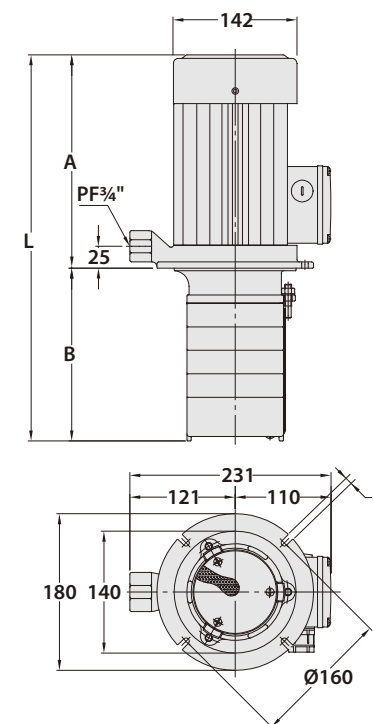
### Options on request

- Special mechanical seal

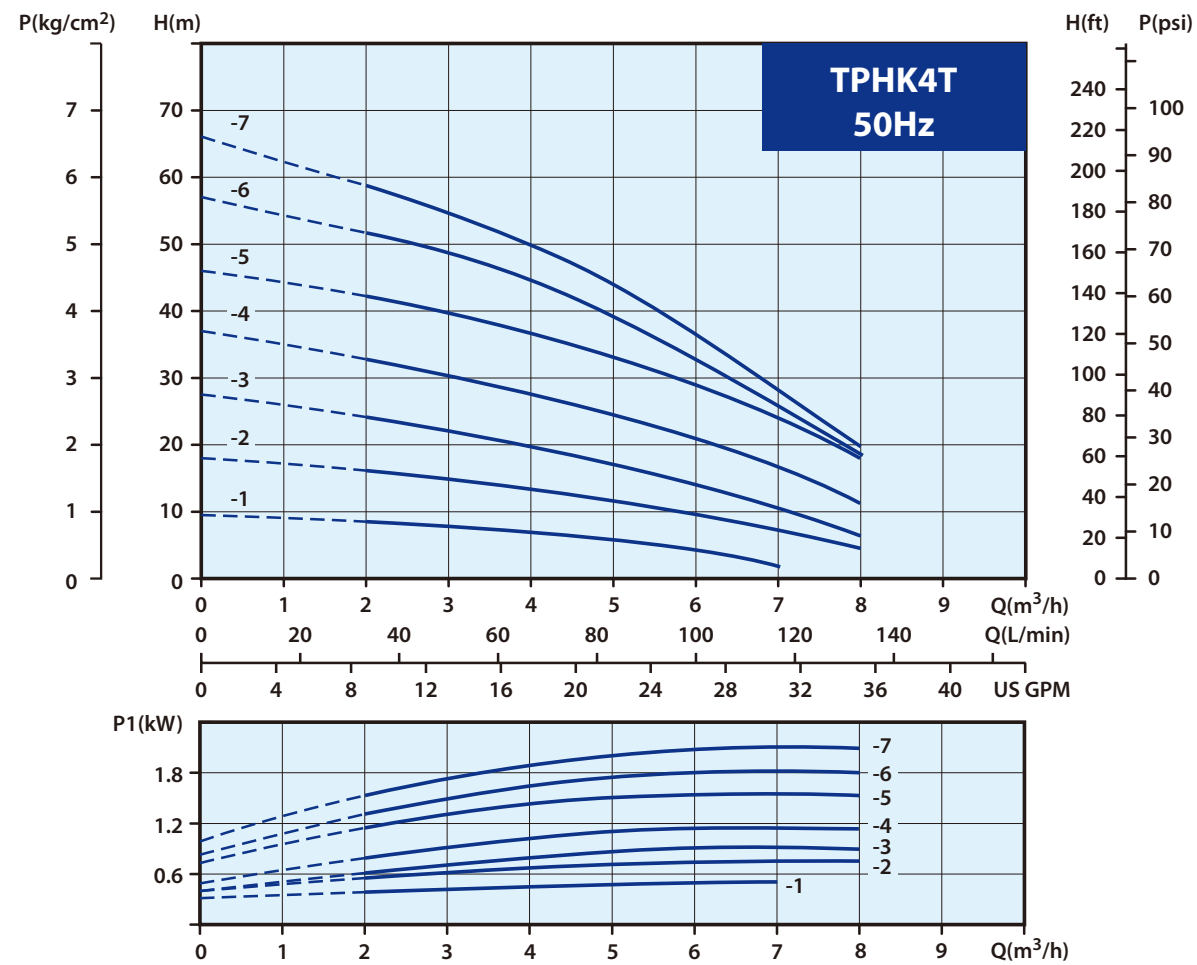
Mechanical seal type	Material	
	Stationary Face/ Rotary Face	Cup Gasket & O Ring
HGSH	(G)Carbon/	(H) HNBR
HGSV	(S)Silicium carbide	
HGSE	(S)Silicium carbide	
HTTH	(T)Tungsten Carbide/	(V) Viton
HTTV	(T)Tungsten Carbide	(E) EPDM
HTTE	(T)Tungsten Carbide	
HSSH	(S)Silicium carbide/	
HSSV	(S)Silicium carbide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

**Performance curves**

**Electrical data**

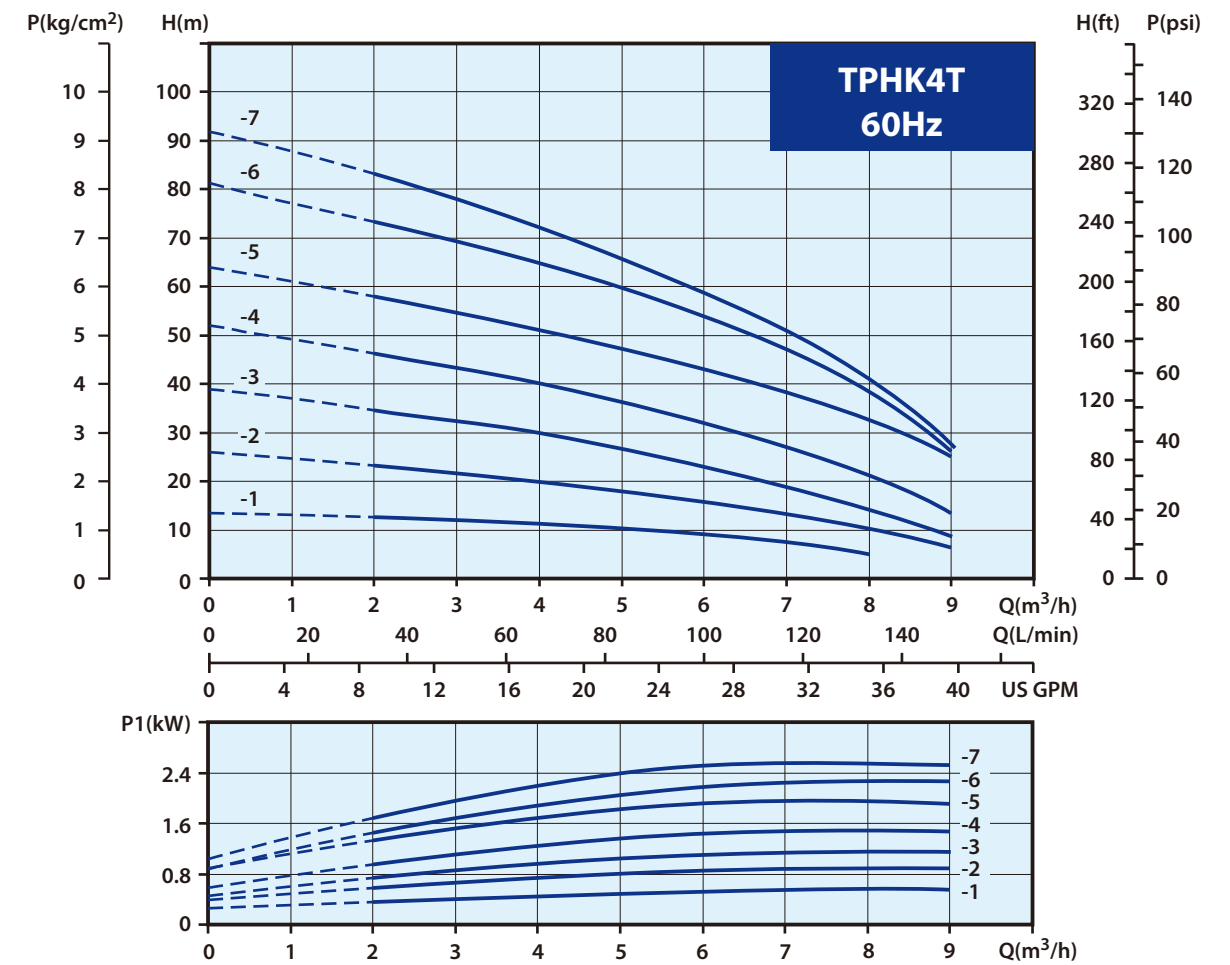
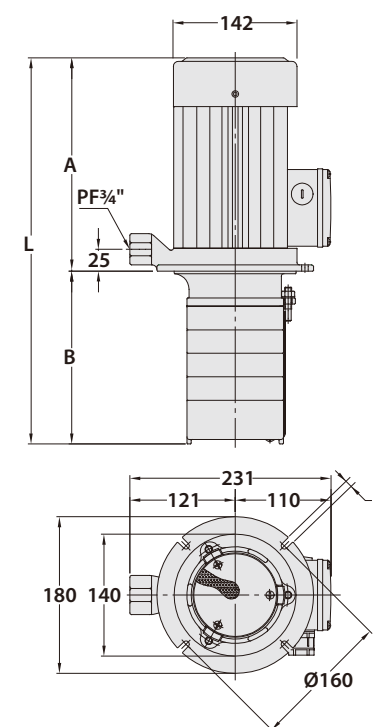
Standard Model	Phase (Ø)	voltage code	Cycle (Hz)	Volts (V)	Input Power (W)	Input Ampere (A)
TPHK 2T 3 - 1	3	3Z	50	200-255 / 380-440	340	1.6-2.8 / 1.0-1.5
			60	200-255 / 380-480	370	1.5-1.9 / 1.0-1.3
TPHK 2T 3 - 2	3	3Z	50	200-255 / 380-440	450	1.9-2.8 / 1.2-1.5
			60	200-255 / 380-480	560	2.1-2.2 / 1.5-1.5
TPHK 2T 3 - 3	3	3Z	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	3Z	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	3Z	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	3Z	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	4U	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**
**Performance curves**

**Dimensions**


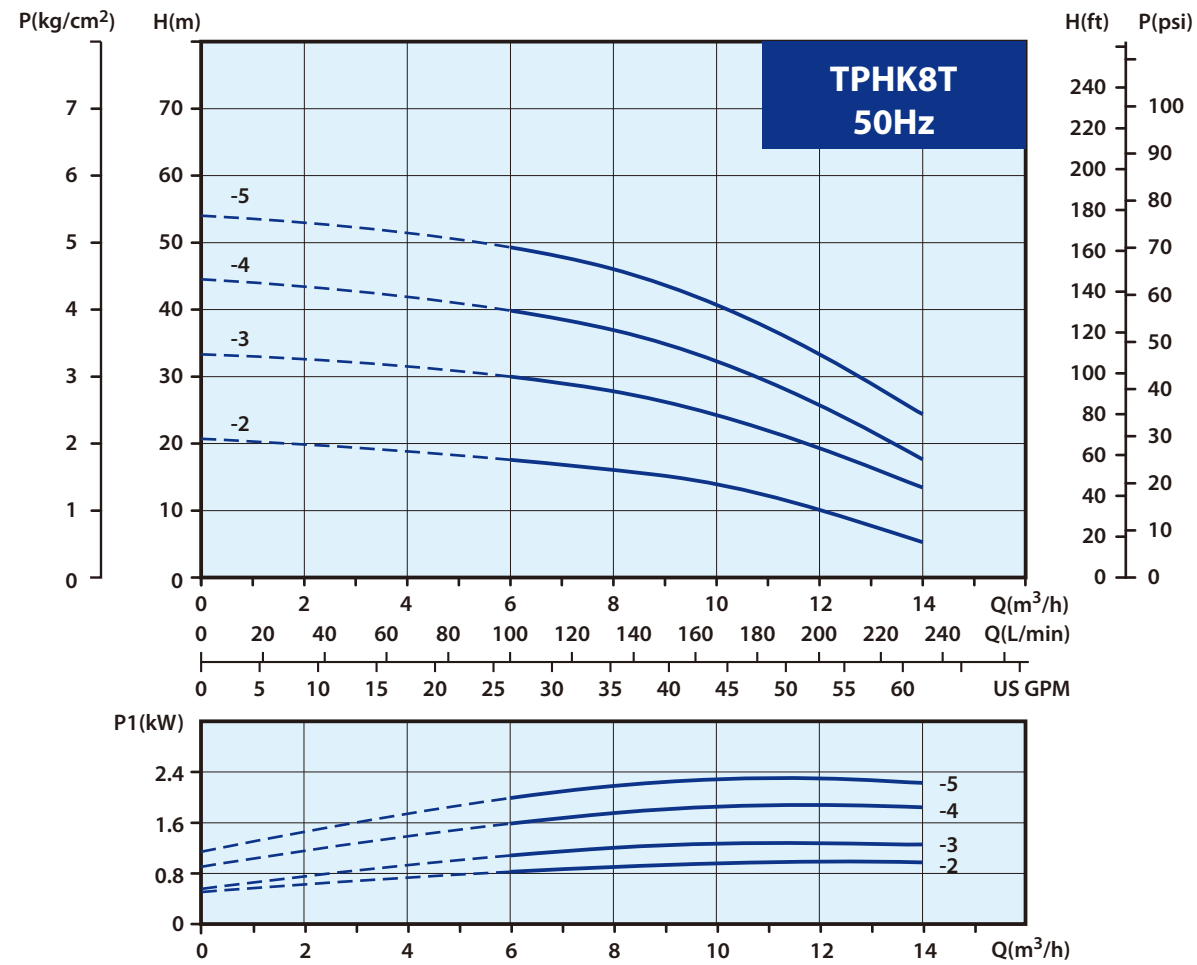
Model	A (mm)	B (mm)	L (mm)	N.W.(kg)
TPHK 2T 3 - 1	205	145	350	10.9
TPHK 2T 8 - 1	205	235	440	11.9
TPHK 2T 3 - 2	205	145	350	11.1
TPHK 2T 5 - 2	205	181	386	11.5
TPHK 2T 9 - 2	205	253	458	12.3
TPHK 2T 3 - 3	205	145	350	11.2
TPHK 2T 4 - 3	205	163	368	11.4
TPHK 2T 5 - 3	205	181	386	11.6
TPHK 2T 6 - 3	205	199	404	11.8
TPHK 2T 8 - 3	205	235	440	12.2
TPHK 2T11-3	205	289	494	12.6
TPHK 2T 4 - 4	205	163	368	11.5
TPHK 2T 6 - 4	205	199	404	11.9
TPHK 2T 5 - 5	245	181	426	12.7
TPHK 2T 6 - 5	245	199	444	13.3
TPHK 2T 6 - 6	253	199	452	13.5
TPHK 2T 8 - 6	253	235	488	13.9
TPHK 2T 9 - 6	253	253	506	14.1
TPHK 2T10-6	253	271	524	14.2
TPHK 2T11-6	253	289	542	14.4
TPHK 2T 7 - 7	253	217	470	13.0

**Performance curves**

**Electrical data**

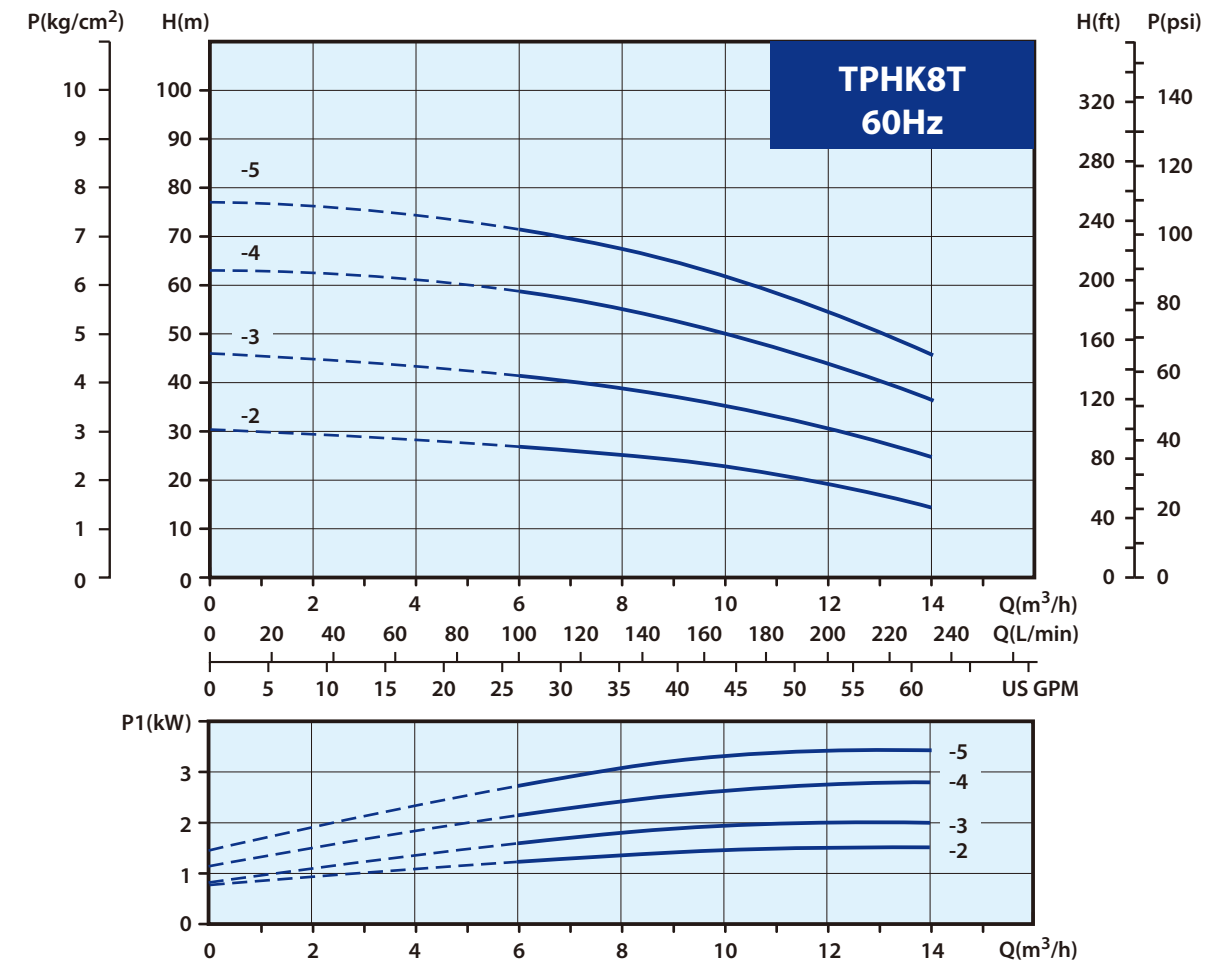
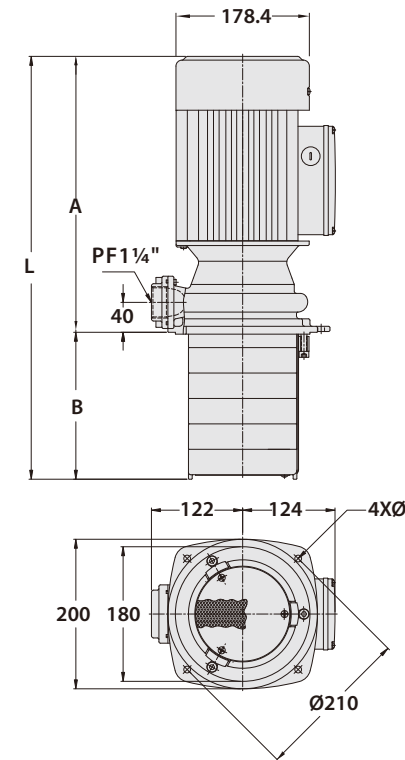
Standard Model	Phase (Ø)	voltage code	Cycle (Hz)	Volts (V)	Input Power (W)	Input Ampere (A)
TPHK 4T 2 - 1	3	3Z	50	200-255 / 380-440	570	1.9-2.8 / 1.2-1.7
			60	200-255 / 380-480	600	2.3-2.3 / 1.4-1.4
TPHK 4T 2 - 2	3	3Z	50	200-255 / 380-440	650	2.2-2.9 / 1.4-1.7
			60	200-255 / 380-480	960	3.0-2.7 / 1.7-1.7
TPHK 4T 3 - 3	3	3Z	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	4U	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	4U	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	4U	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	4U	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**
**Performance curves**

**Dimensions**


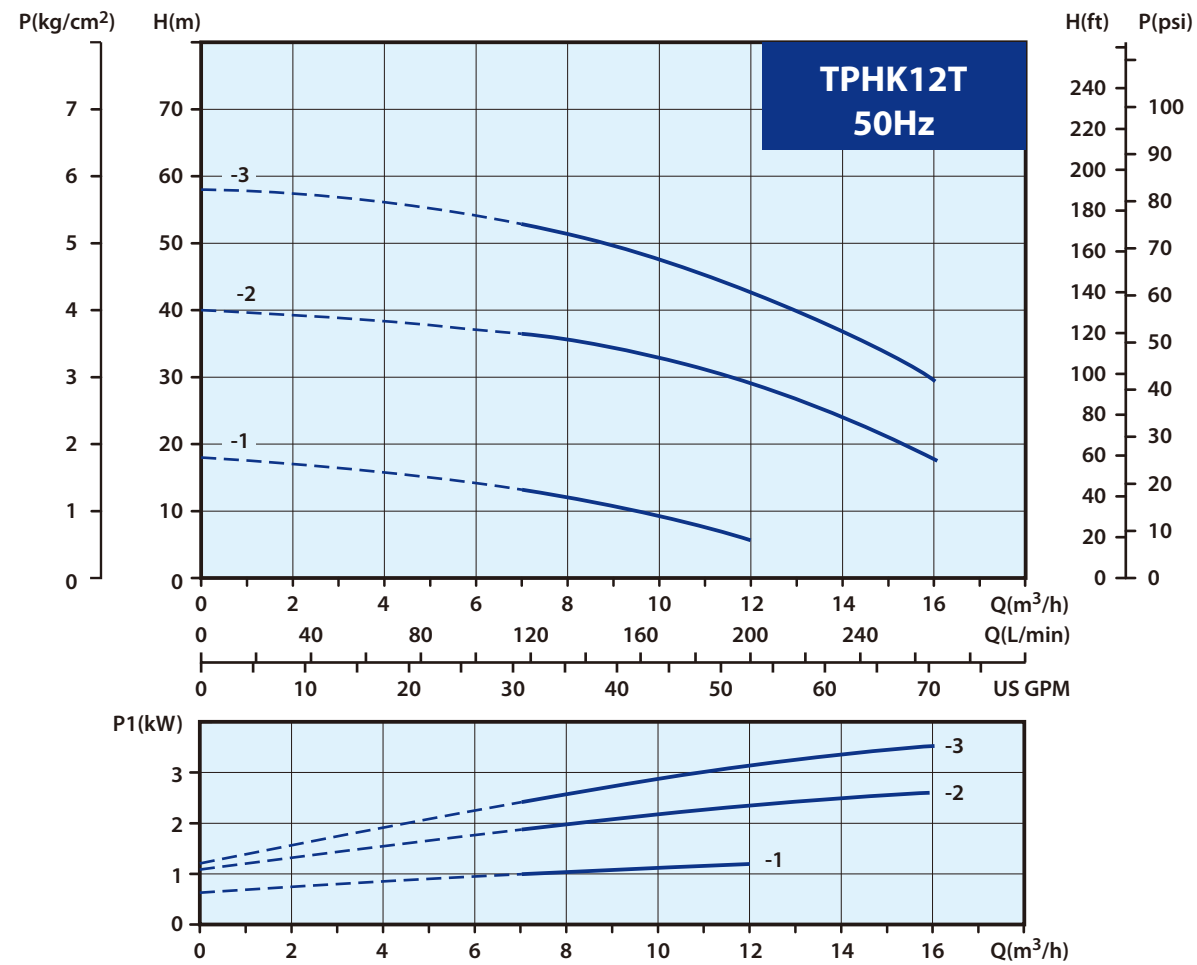
Model	A (mm) 50Hz / 60Hz	B (mm)	L (mm) 50Hz / 60Hz	N.W.(kg)
TPHK 4T 2 - 1	205	145	350	10.8
TPHK 4T 3 - 1	205	172	377	11.0
TPHK 4T 2 - 2	205	145	350	11.0
TPHK 4T 3 - 2	205	172	377	11.2
TPHK 4T 4 - 2	205	199	404	11.4
TPHK 4T 6 - 2	205	253	458	11.6
TPHK 4T 3 - 3	245	172	417	11.7
TPHK 4T 4 - 3	245	199	444	11.9
TPHK 4T 5 - 3	245	226	471	12.1
TPHK 4T 6 - 3	245	253	498	12.3
TPHK 4T 8 - 3	245	307	552	12.7
TPHK 4T 4 - 4	245	199	444	13.3
TPHK 4T 5 - 4	245	226	471	13.5
TPHK 4T 6 - 4	245	253	498	13.7
TPHK 4T 5 - 5	245	226	471	13.9
TPHK 4T 8 - 5	245	307	552	14.5
TPHK 4T 6 - 6	253 / 283	253	506 / 536	14.1
TPHK 4T 8 - 6	253 / 283	307	560 / 590	14.6
TPHK 4T 7 - 7	283	280	563	14.6
TPHK 4T 8 - 7	283	307	590	14.8

**Performance curves**

**Electrical data**

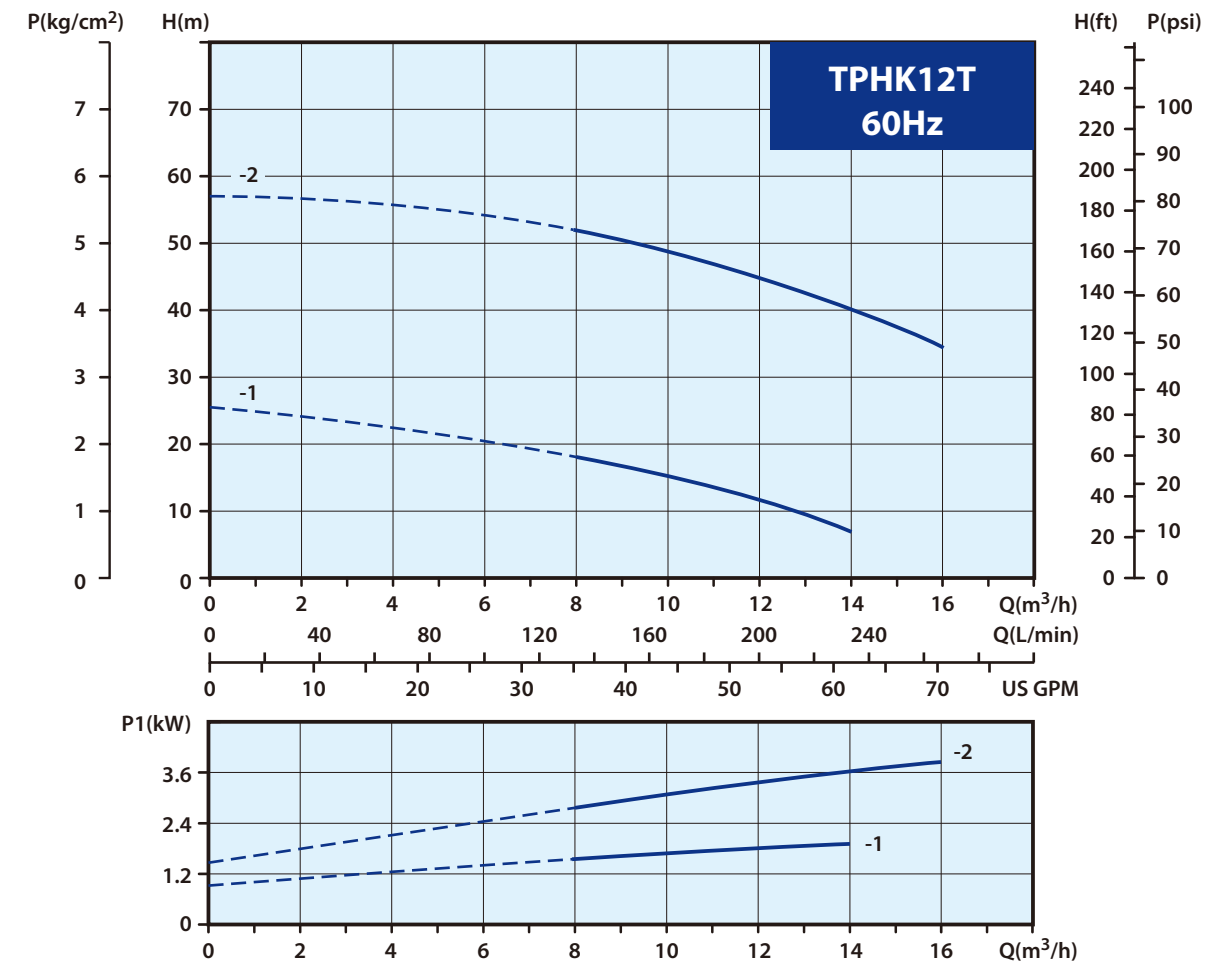
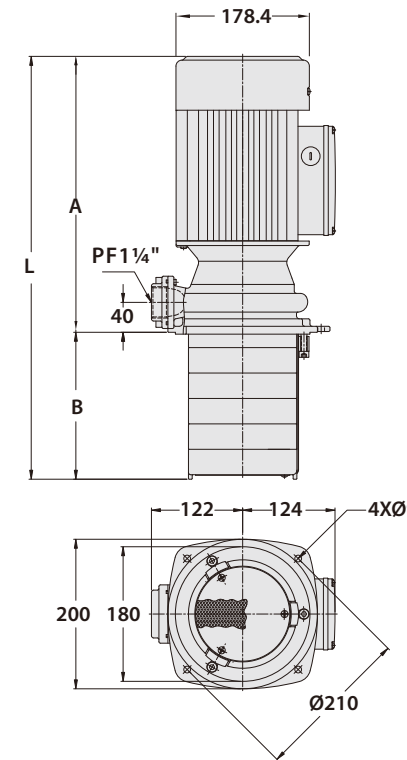
Standard Model	Phase (Ø)	voltage code	Cycle (Hz)	Volts (V)	Input Power (W)	Input Ampere (A)
TPHK 8T 6 - 2	3	3Z	50	200-255 / 380-440	1200	3.7-6.0 / 2.3-3.2
			60	200-255 / 380-480	1650	5.1-4.7 / 2.8-2.9
TPHK 8T 3 - 3	3	3Z	50	200-255 / 380-440	1550	4.9-6.3 / 2.9-3.6
			60	200-255 / 380-480	2350	7.1-6.4 / 4.0-3.7
TPHK 8T 4 - 4	3	4U	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	4U	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**
**Performance curves**

**Dimensions**


Model	A (mm)	B (mm)	L (mm)	N.W.(kg)
TPHK 8T 6 - 2	369	199	568	24.0
TPHK 8T 9 - 2	369	298.5	667.5	25.3
TPHK 8T 3 - 3	369	95.5	464.5	23.0
TPHK 8T 6 - 3	369	199	568	24.3
TPHK 8T 9 - 3	369	298.5	667.5	25.6
TPHK 8T 4 - 4	369	130	499	27.0
TPHK 8T 6 - 4	369	199	568	28.0
TPHK 8T 5 - 5	369	164.5	533.5	28.0

**Performance curves**

**Electrical data**

Standard Model	Phase (Ø)	voltage code	Cycle (Hz)	Volts (V)	Input Power (W)	Input Ampere (A)
TPHK 12T 6 - 1	3	3Z	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	4U	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	3Q	50	200-240 / 380-440	3830	11.6-11.5 / 6.5-7.2

**Maximum 9 Stages**
**Performance curves**

**Dimensions**


Model	A (mm)	B (mm)	L (mm)	N.W.(kg)
TPHK12T 6 - 1	369	199	568	27.0
TPHK12T 6 - 2	369	199	568	29.0
TPHK12T 9 - 2	369	298.5	667.5	30.5
TPHK12T 6 - 3	369	199	568	30.0
TPHK12T 9 - 3	369	298.5	667.5	31.5