

TPH Series

Multi-stage Centrifugal Pump



WALRUS
WALRUS PUMP CO., LTD.

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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"

Inlet: 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						
Model type									
Nominal flow rate (m ³ /hr)									
Nominal head (kg/cm ²)									
Code	TPH	4T	2K	S	F	A	H	CH	
Standard mode									
N: SUS 316 (2T/4T/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/cm²
4. Inlet pressure: Max. 6 kg/cm²

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:

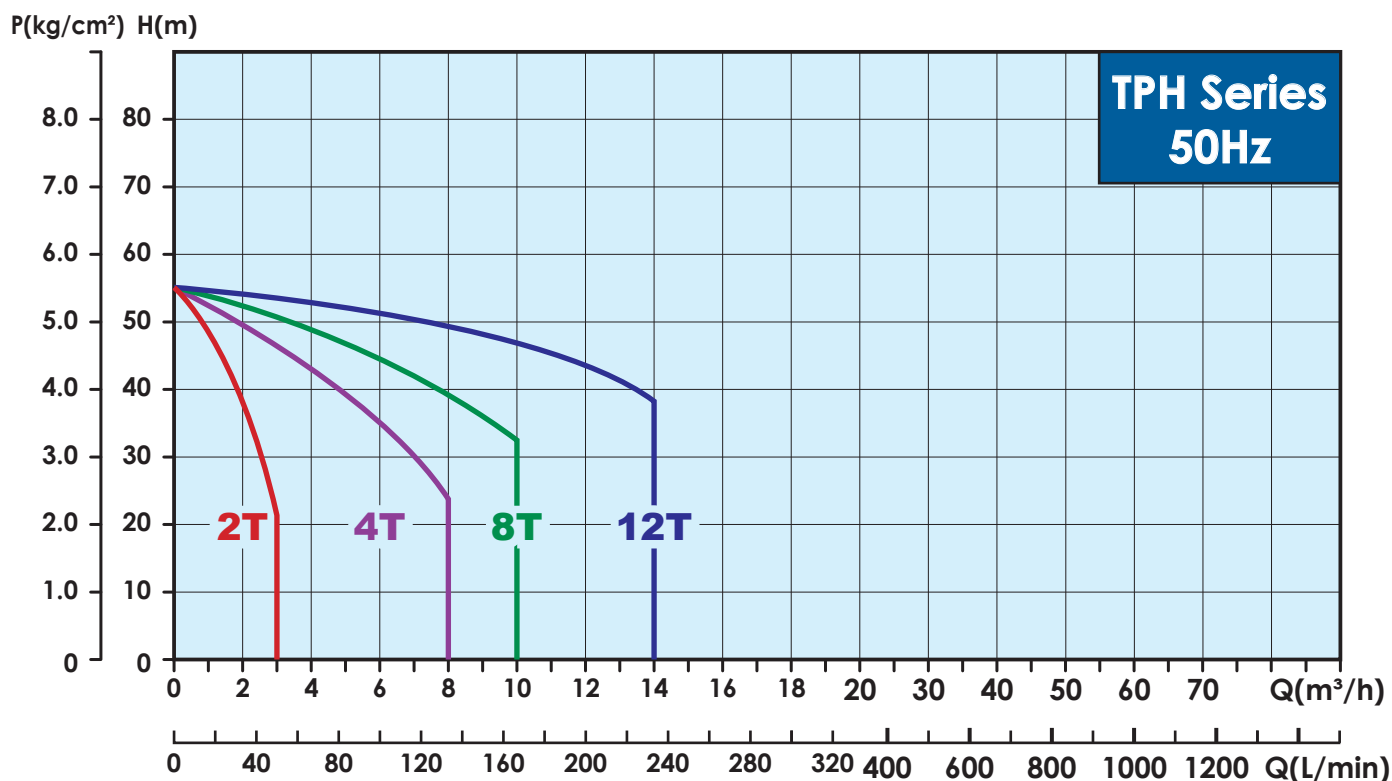
Code	PH	50Hz	60Hz
61B	1	-	220V
51R	1	200-240V	-
53Q	3	200-240/380-440V	-
A3Z*	3	200-255/380-440V	200-255/380-480V
A3U*	3	200-240/380-415V	200-240/380-440V
63Q	3	-	200-240/380-440V
63Z	3	-	200-255/380-480V

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

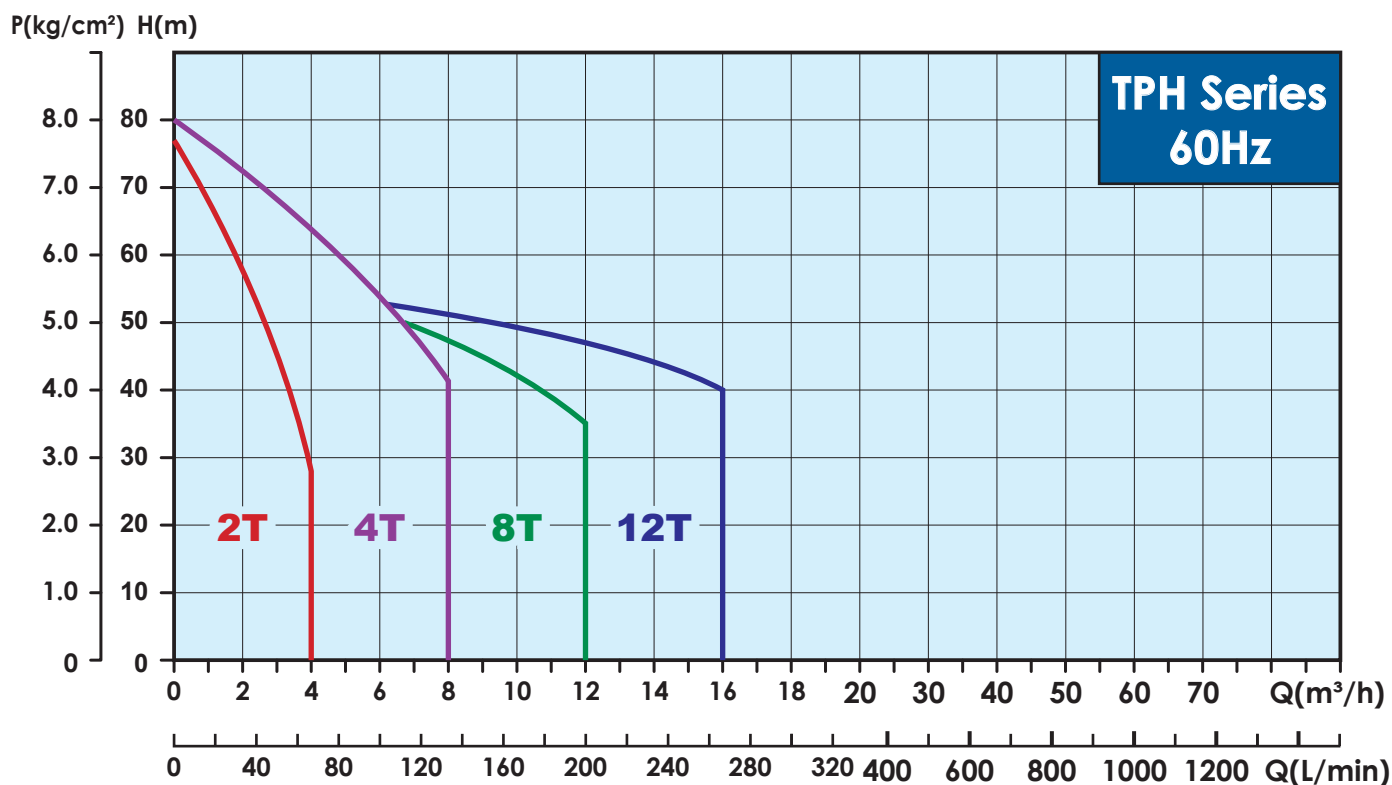
* The motor can be use in both 50/60 Hz.

TPH Series Multistage Centrifugal Pump

Performance curve (50Hz)

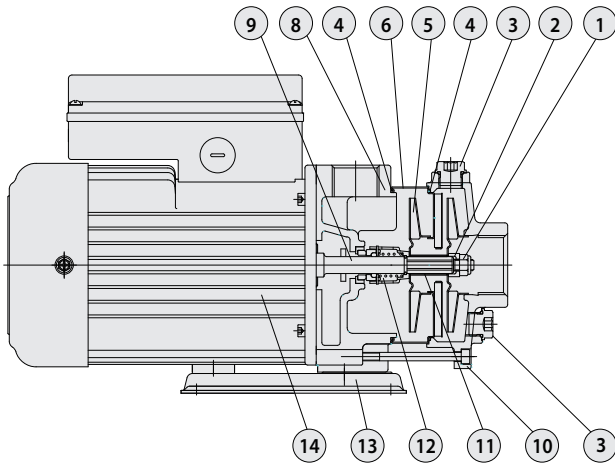


Performance curve (60Hz)

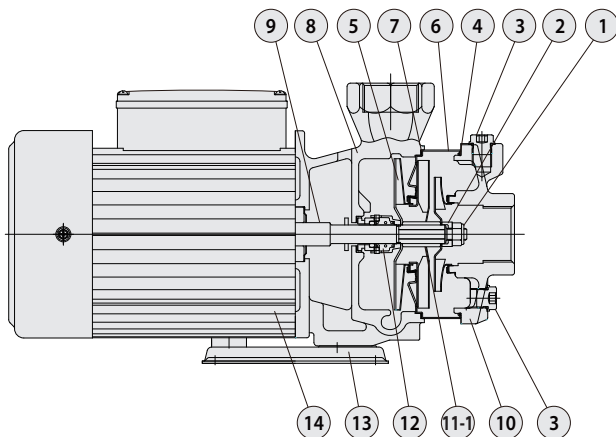


Sectional drawing

(TPH2/4T)



(TPH 8/12T)



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 (E) EPDM
HSSH HSSV HSSE	(S)Silicium carbide/ (S)Silicium carbide	

Electrical data, 50Hz

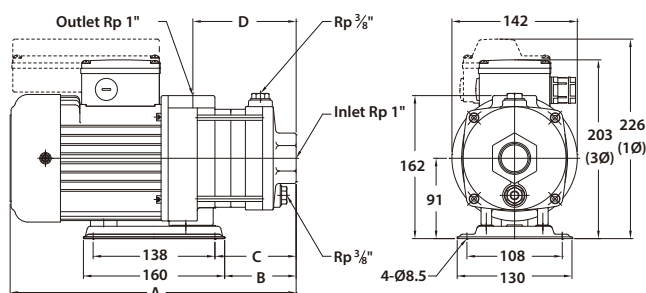
Model	PH (Ø)	voltage code	Cycle (Hz)	Volts (V)	Input Power (W)	Ampere (A)
TPH 2T 2K	1	51R	50	200-240	450	2.4
			50	200-240 / 380-440	420	2.0 / 1.3
TPH 2T 3K	1	51R	50	200-240	500	2.5
			50	200-240 / 380-440	520	2.2 / 1.4
TPH 2T 4K	1	51R	50	200-240	600	2.9
			50	200-240 / 380-440	590	2.3 / 1.4
TPH 2T 5K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

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

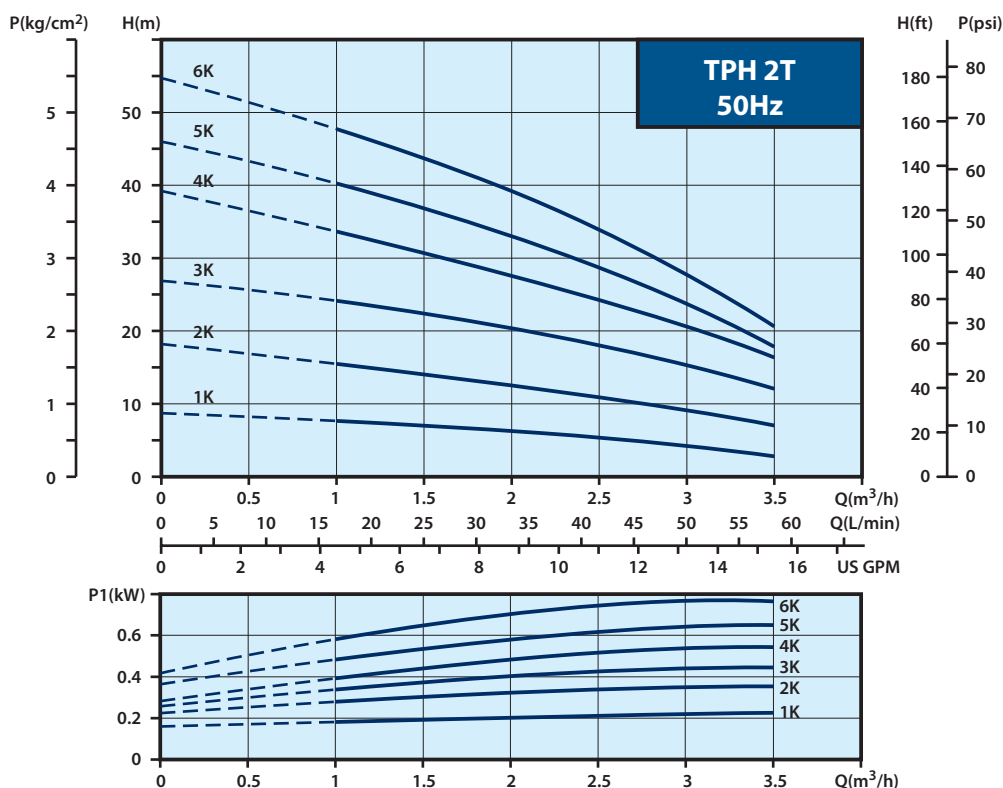
Model	PH (Ø)	voltage code	Cycle (Hz)	Volts (V)	Input Power (W)	Ampere (A)
TPH 2T 1K	1	61E	60	110 / 220	450	4.8 / 2.4
TPH 2T 2K	1	61E	60	110 / 220	570	6.0 / 3.0
TPH 2T 3K	1	61E	60	110 / 220	780	7.8 / 3.9
TPH 2T 4K	1	61E	60	110 / 220	900	9.0 / 4.5
TPH 2T 5K	1	61E	60	110 / 220	1080	12.0 / 6.0
TPH 2T 6K	1	61E	60	110 / 220	1420	14.0 / 7.0

Dimensions (mm)

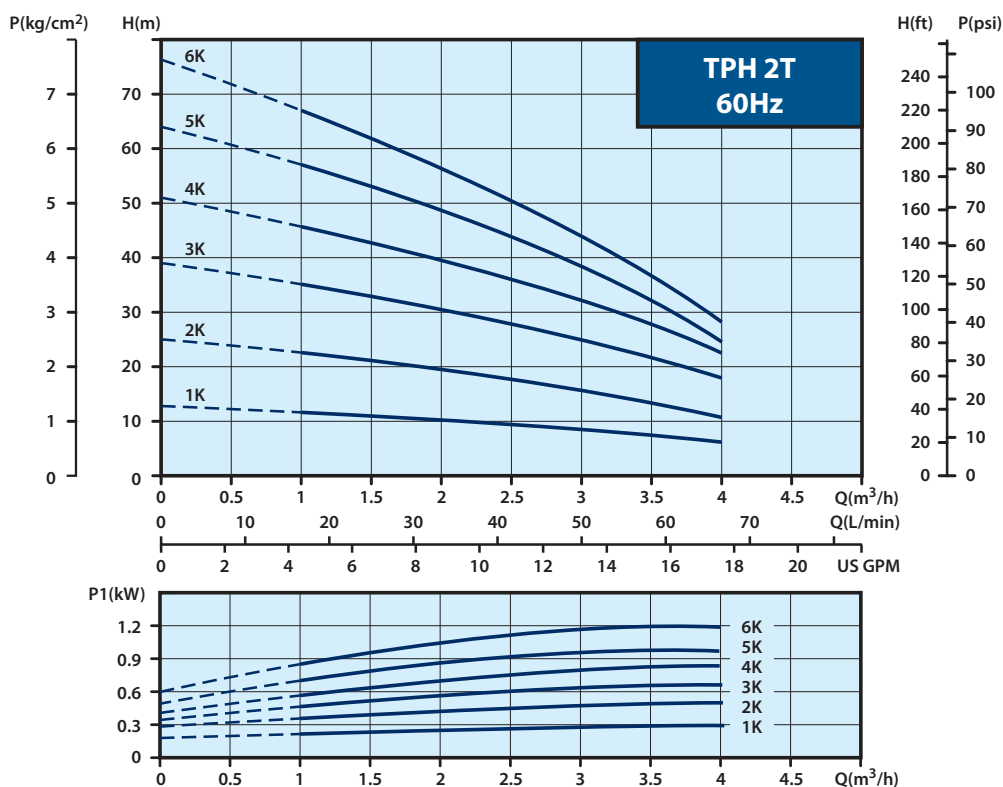


Model	A(mm)	B(mm)	C(mm)	D(mm)	N.W.(kg)	
TPH 2T 1K	306	63	74	99	11.7	36 pcs
TPH 2T 2K	306	63	74	99	11.8	
TPH 2T 3K	324	81	92	117	11.9	
TPH 2T 4K	342	99	110	135	12.0	
TPH 2T 5K	400	117	128	153	13.5	30 pcs
TPH 2T 6K	418	135	146	171	13.6	

Performance curve (50Hz)



Performance curve (60Hz)



Electrical data, 50Hz

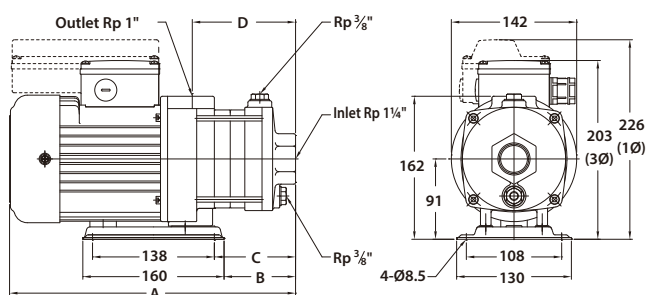
Model	PH (Ø)	voltage code	Cycle (Hz)	Volts (V)	Input Power (W)	Ampere (A)
TPH 4T 2K	1	51R	50	200-240	600	3.1-2.9
			50	200-240 / 380-440	600	2.3 / 1.4
TPH 4T 3K	1	51R	50	200-240	950	4.5
			50	200-240 / 380-440	830	3.3 / 2.1
TPH 4T 4K	1	51R	50	200-240	1200	5.7
			50	200-240 / 380-440	1010	3.7 / 2.2
TPH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

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

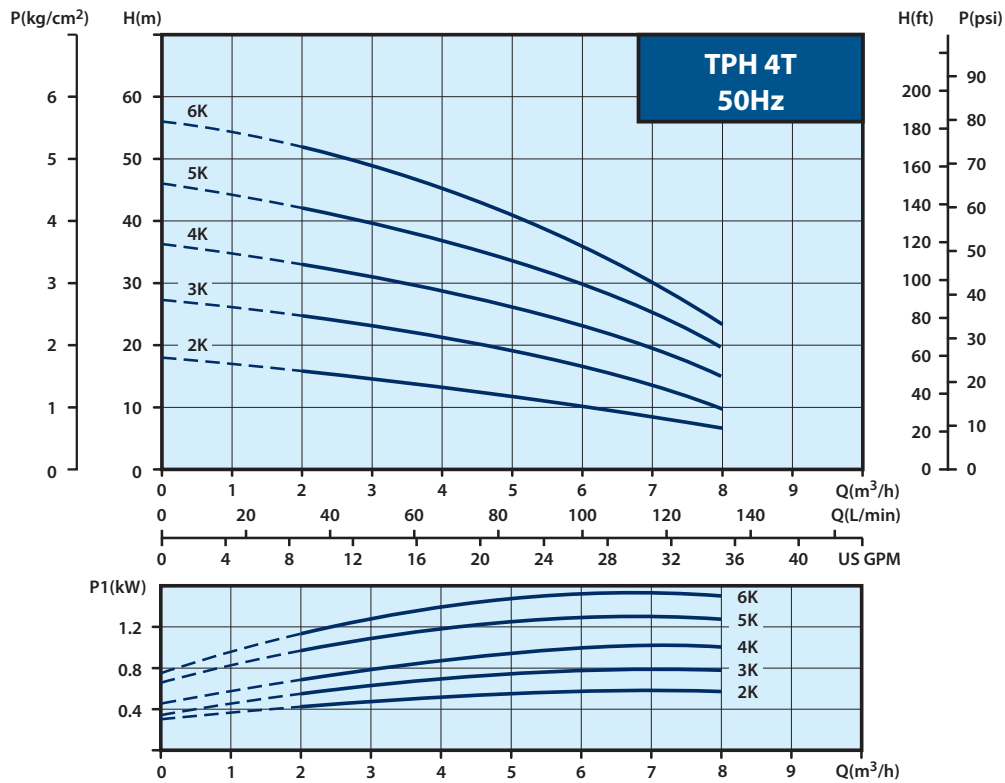
Model	PH (Ø)	voltage code	Cycle (Hz)	Volts (V)	Input Power (W)	Ampere (A)
TPH 4T 2K	1	61E	60	110/220	1030	10.4/5.3
TPH 4T 3K	1	61E	60	110/220	1500	14.8/7.4
TPH 4T 4K	1	61E	60	110/220	1760	17.2/8.6

Dimensions (mm)

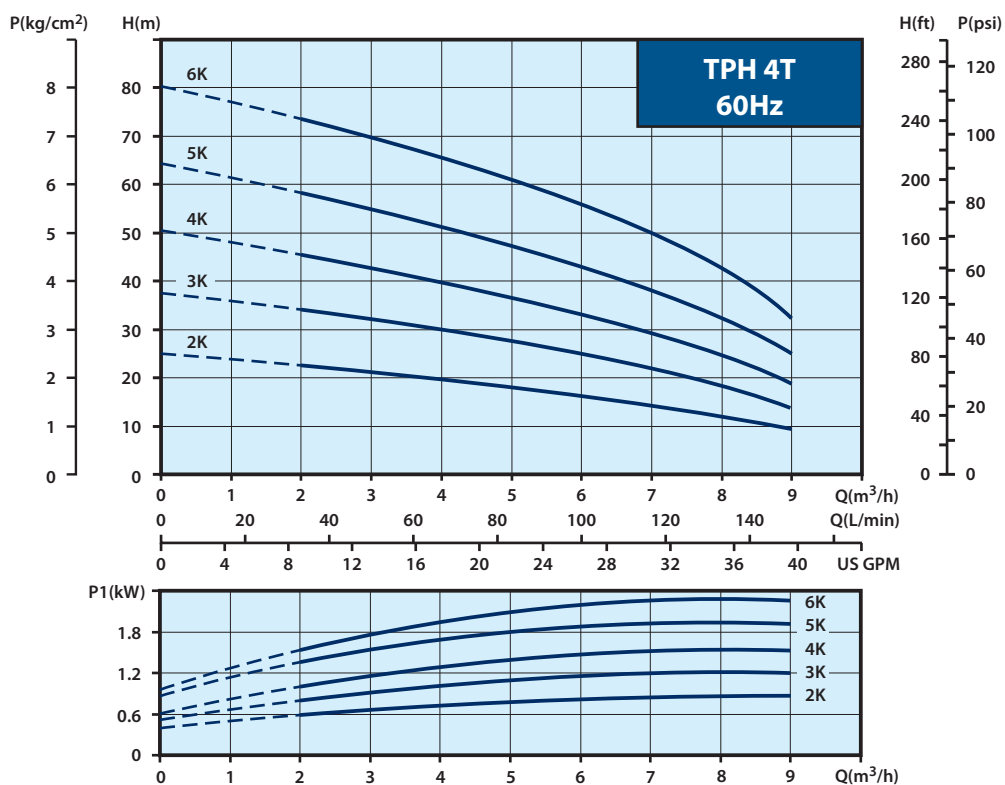


Model	Cycle (Hz)	A(mm)	B(mm)	C(mm)	D(mm)	N.W.(kg)	
TPH 4T 2K	50/60	315	72	83	108	11.7	36 pcs
TPH 4T 3K	50/60	382	99	110	135	13.3	30 pcs
TPH 4T 4K	50/60	409	126	137	162	14.1	
TPH 4T 5K	50/60	436	153	164	189	14.2	
TPH 4T 6K	50	463	180	191	216	15.1	24 pcs
	60	494	180	191	216	16.1	

Performance curve (50Hz)



Performance curve (60Hz)



Electrical data, 50Hz

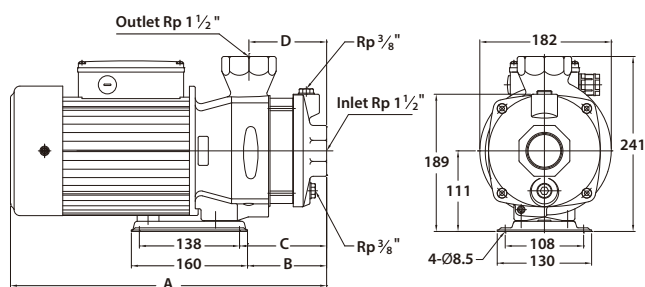
Model	PH (Ø)	voltage code	Cycle (Hz)	Volts (V)	Input Power (W)	Ampere (A)
TPH 8T 2K	1	51R	50	200-240	900	4.3
			50	200-240 / 380-440	810	3.0 / 1.9
TPH 8T 3K	1	51R	50	200-240	1300	6.3
			50	200-240 / 380-440	1110	3.3 / 2.1
TPH 8T 4K	1	51R	50	200-240	1520	7.6
			50	200-240 / 380-440	1600	5.6 / 3.5
TPH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

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

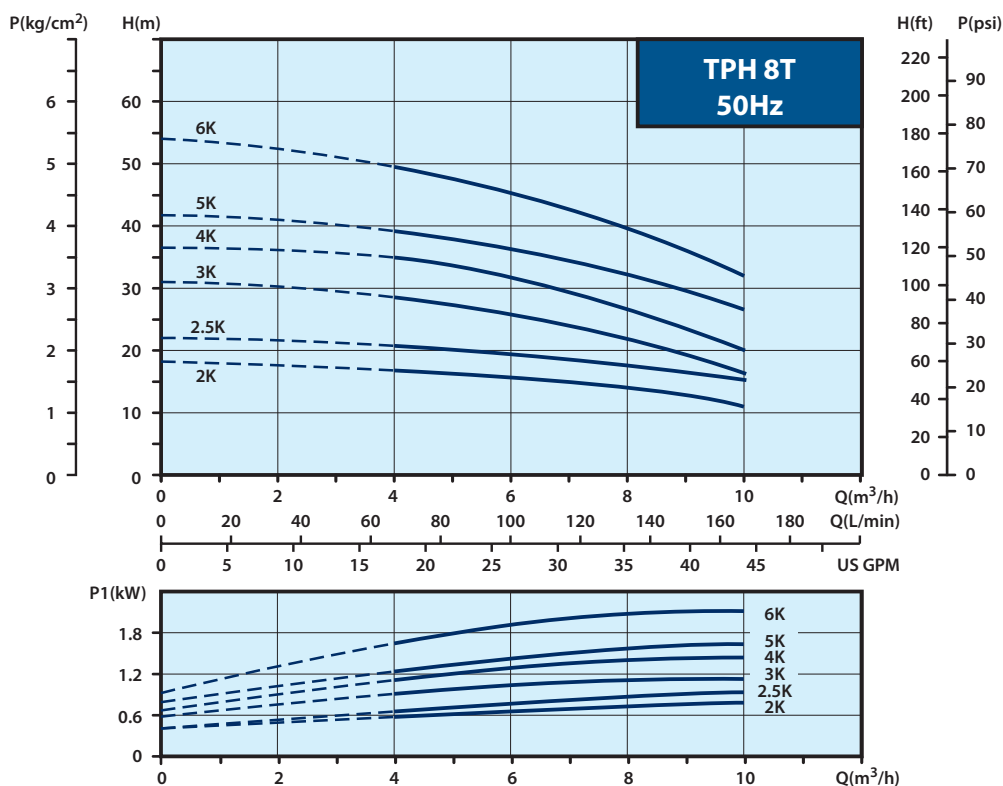
Model	PH (Ø)	voltage code	Cycle (Hz)	Volts (V)	Input Power (W)	Ampere (A)
TPH 8T 2K	1	61E	60	110/220	1330	14.0/7.0
TPH 8T 2.5K	1	61E	60	110/220	1600	15.0/7.5
TPH 8T 3K	1	61E	60	110/220	2000	19.4/9.7

Dimensions (mm)

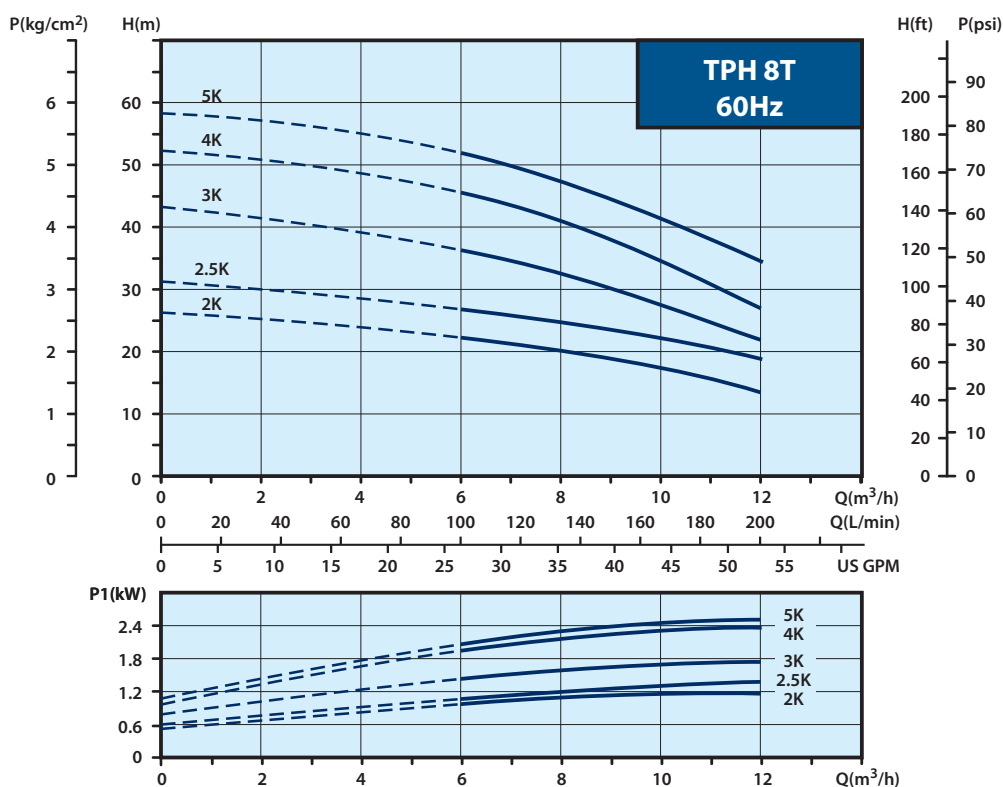


Model	Cycle (Hz)	A(mm)	B(mm)	C(mm)	D(mm)	N.W.(kg)	
TPH 8T 2K	50/60	376.5	77	88	75	18.8	24 pcs
TPH 8T 2.5 K	60	408.5	109	120	107	19.5	
TPH 8T 3K	50/60	408.5	109	120	107	20.0	
TPH 8T 4K	50	408.5	109	120	107	22.2	
	60	435.5	109	120	107	25.4	
TPH 8T 5K	50/60	469.5	143	154	141	25.5	
TPH 8T 6K	50	469.5	143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

Performance curve (50Hz)



Performance curve (60Hz)



TPH 12T

Electrical data, 50Hz

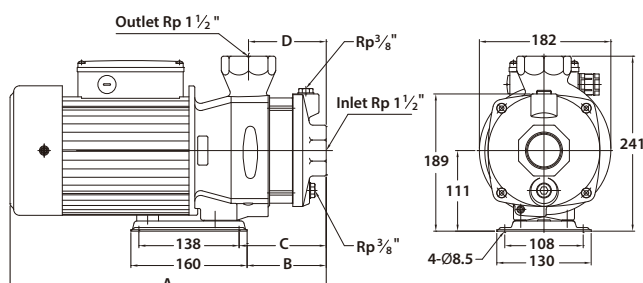
Model	PH (Ø)	voltage code	Cycle (Hz)	Volts (V)	Input Power (W)	Ampere (A)
TPH 12T 2K	1	51R	50	200-240	1380	6.5
			50	200-240 / 380-440	1140	3.6 / 2.1
TPH 12T 3K	1	51R	50	200-240	1700	7.9
			50	200-240 / 380-440	1580	5.8 / 3.6
TPH 12T 4K			50	200-240 / 380-440	2500	7.1 / 4.1
TPH 12T 5K			50	200-240 /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

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

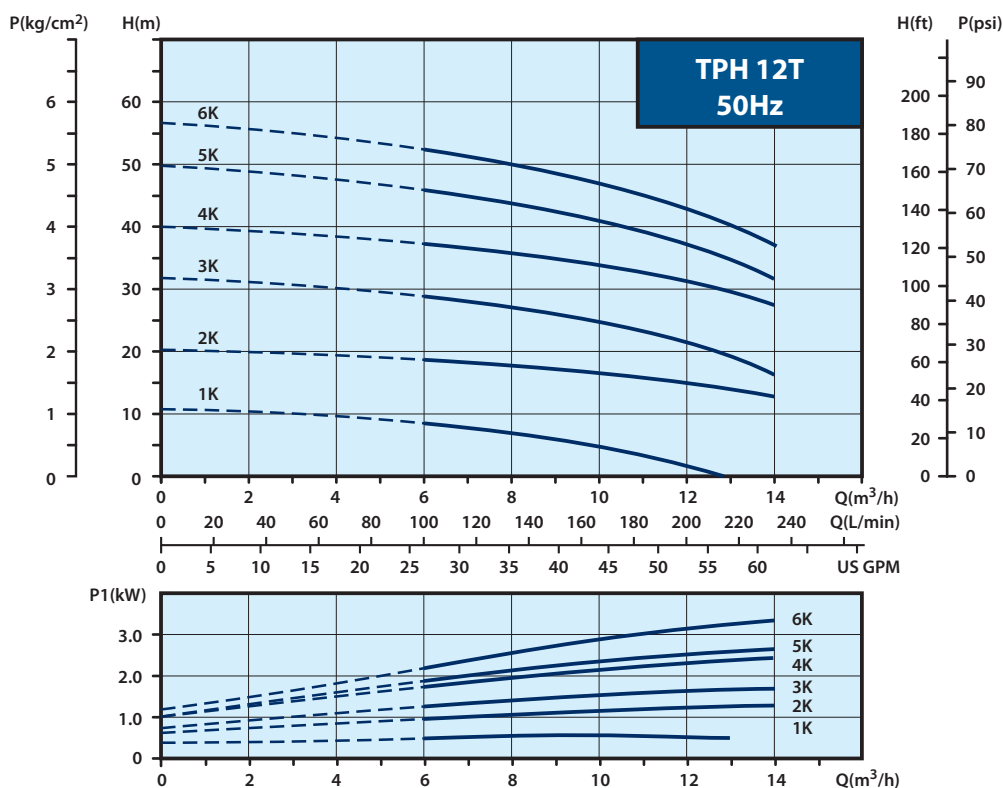
Model	PH (Ø)	voltage code	Cycle (Hz)	Volts (V)	Input Power (W)	Ampere (A)
TPH 12T 1K	1	61E	60	110/220	950	9.0 / 4.5

Dimensions (mm)

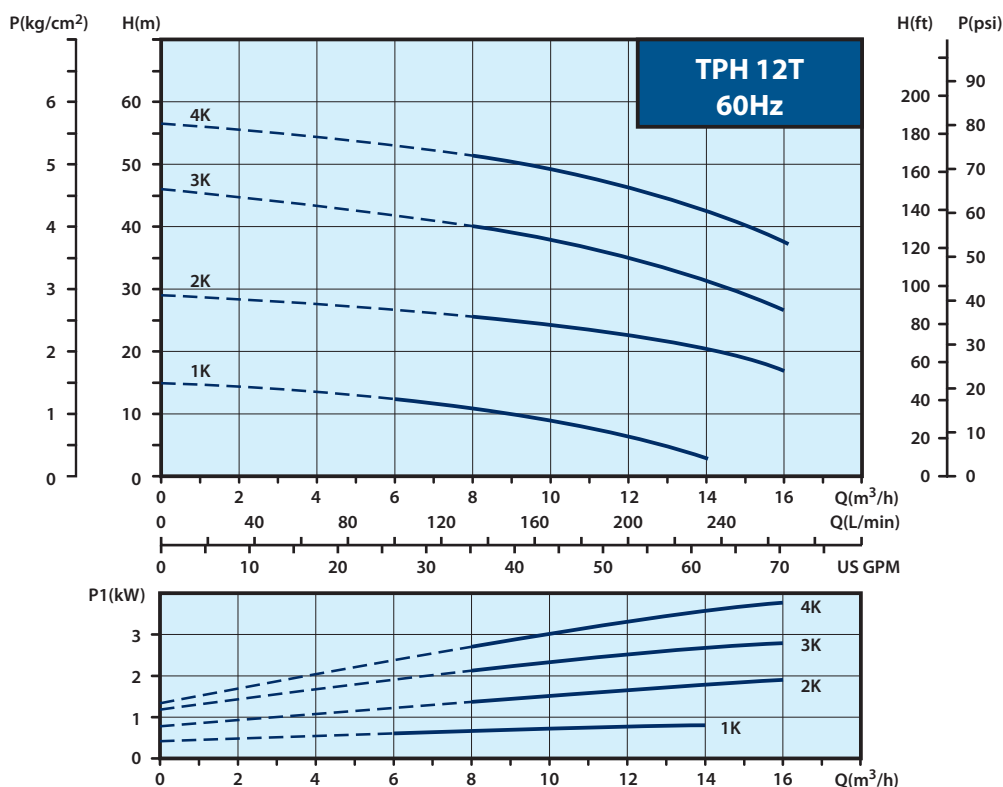


Model	Cycle (Hz)	A(mm)	B(mm)	C(mm)	D(mm)	N.W.(kg)	
TPH 12T 1K	50/60	336.5	77	88	75	17.6	24 pcs
TPH 12T 2K	50/60	376.5	77	88	75	20.0	
TPH 12T 3K	50	408.5	109	120	107	22.0	
	60	435.5	109	120	107	25.4	
TPH 12T 4K	50/60	435.5	109	120	107	28.0	
TPH 12T 5K	50	469.5	143	154	141	29.2	
TPH 12T 6K	50	469.5	143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

Performance curve (50Hz)



Performance curve (60Hz)





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