TPHIC Series Constant Pressure Inverter Control System

Power: 0.5 - 15 HP

Pre-set Pressure: Up to 6 kg/cm²

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 ~+75°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 18~23)
5. System Pressure:Max.10kg/cm^2

Model code

Example: TPH 4T 3K S IC V x2

- **Pump series TPH**
- **Nominal flow rate [m³/h]**
- **Nominal head [kg/cm²]**
- **Stainless steel series**
- **IC: IC inverter series**
- **Deluxe**
- **Number of pumps in parallel**

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.

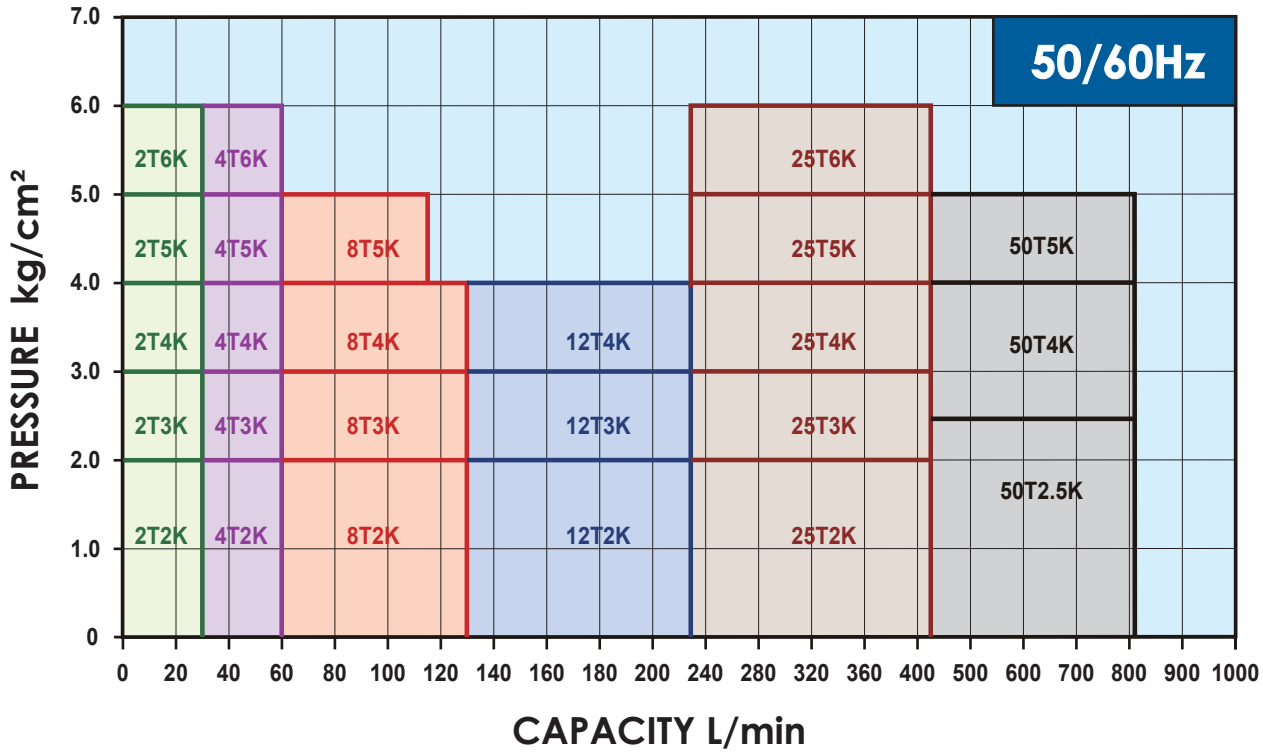
Automatic stop when flow stops:
The pump will automatically cycle down as water usage decreases.

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.

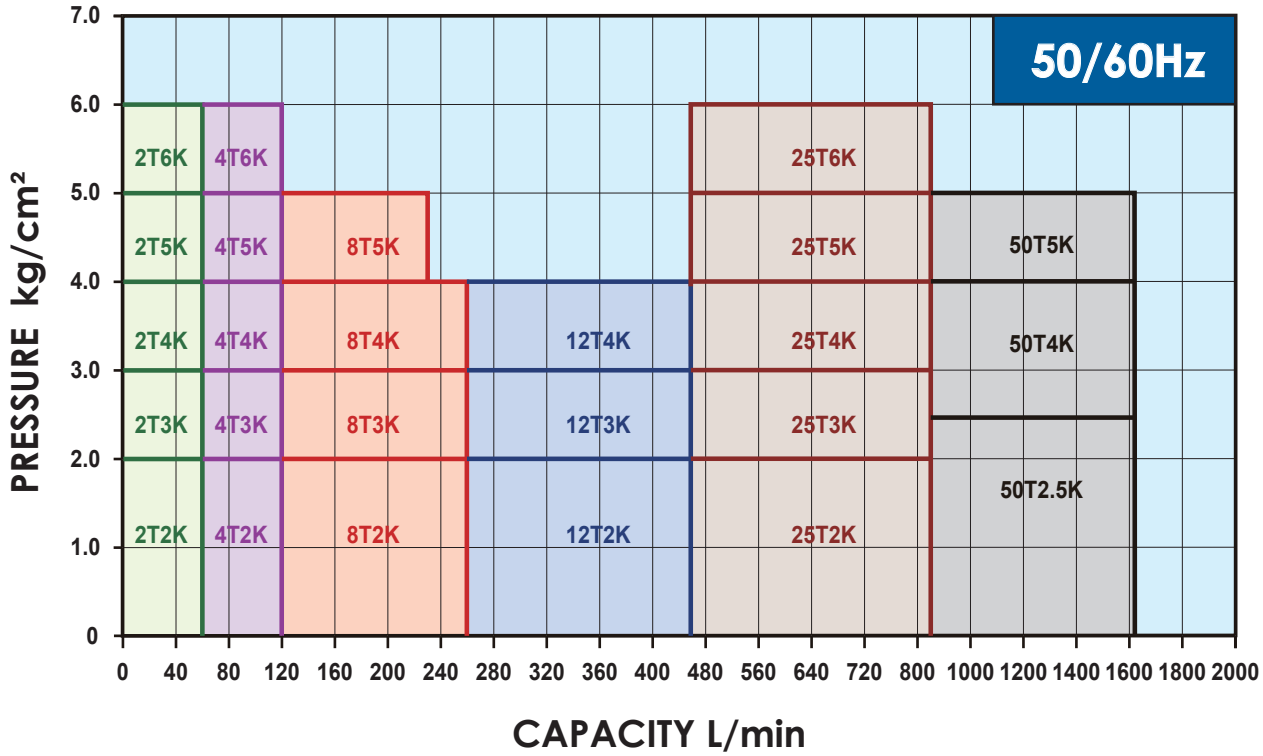
Single or parallel unit operation:
Parallel operation: When water usage is low, one unit will begin to operate until the water usage increases, when it can no longer handle the required water pressure, the other unit will start functioning in parallel. The duplex unit will switch to single unit operation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



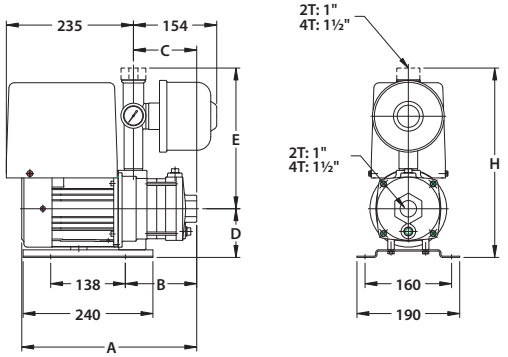
2T/4T **IC**

Specifications - Single unit

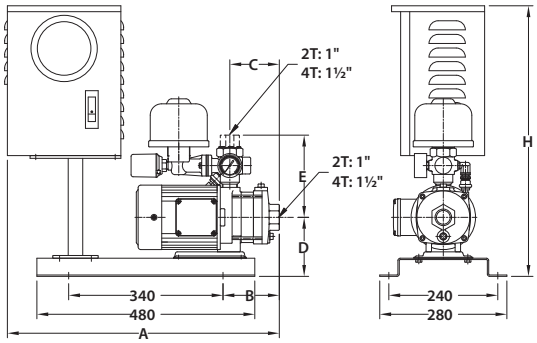
Model	Inverter Controller Output Power (HP)	Phase (Ø)	Voltage (V)	No-Fuse Breaker	Pre-set Pressure (kg/cm^2)	Inlet (in.)	Outlet (in.)	Nominal Set Head (M)	Nominal Set Flow (L/min)
TPH2T2KIC	1	1Ø	200-240V	10A	2.0	1	1	20	30
		3Ø	200-240V or 380-440V	5A					
TPH2T3KIC	1	1Ø	200-240V	10A	3.0	1	1	30	30
		3Ø	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



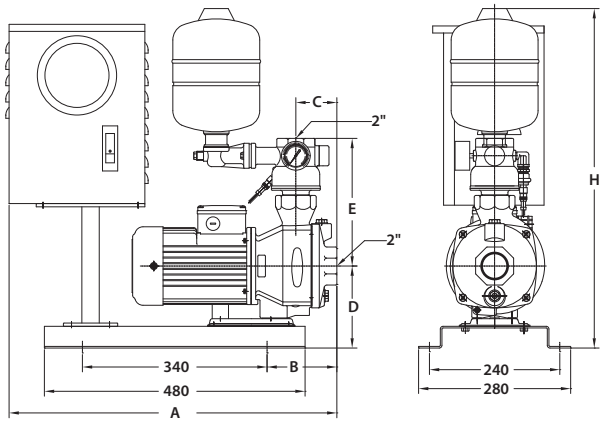
Model	A	B	C	D	E	H	Pressure tank (L)	Fig
TPH2T2KIC	306	114	99	90	267	357	0.8	1
TPH2T3KIC	324	132	117	90	267	357	0.8	1
TPH2T4KIC	342	150	135	90	267	357	0.8	1
TPH2T5KIC	400	168	153	90	267	357	0.8	1
TPH2T6KIC	418	186	171	90	267	357	0.8	1
TPH2T2KICV	589	114	99	130	181	596	0.8	2
TPH2T3KICV	607	132	117	130	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^2)	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

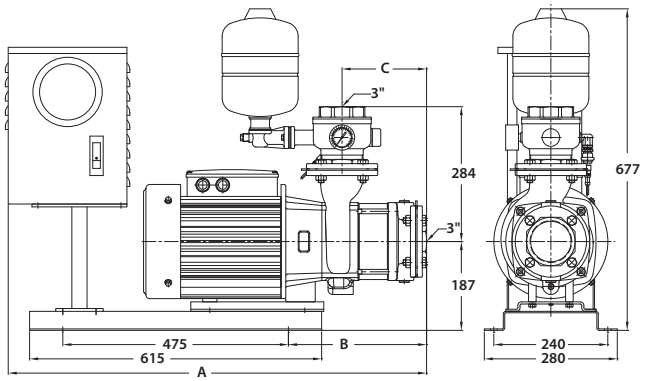
25T/50T IC

Specifications - Single unit

Model	Inverter Controller Output Power (HP)	Phase (Ø)	Voltage (V)	No-Fuse Breaker		Pre-set Pressure (kg/cm^2)	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

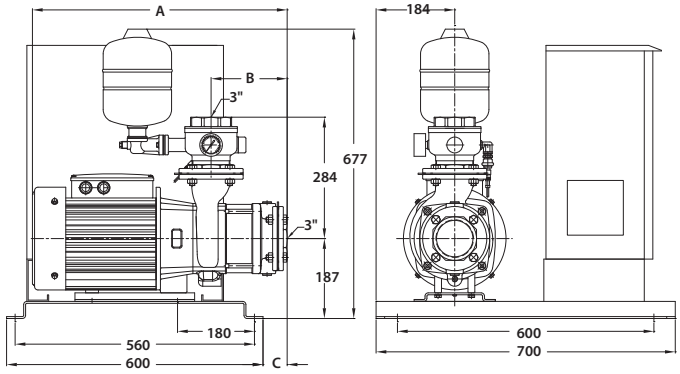
Dimensions (mm)

- Fig. 4 TPH 25T2KIC / TPH 25T3KIC

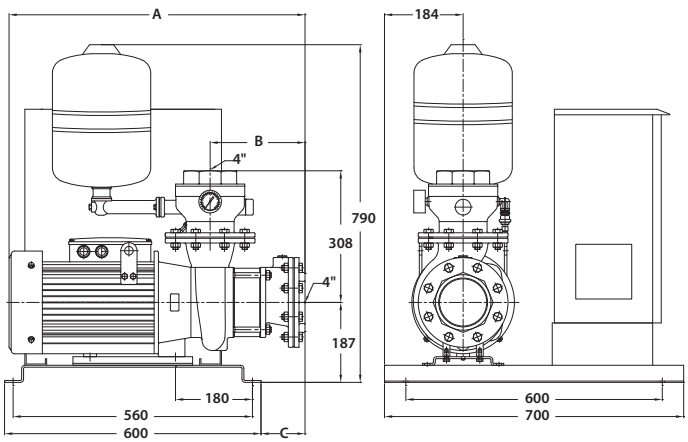


Model	A	B	C	Pressure tank (L)	Fig
TPH25T2KIC	821	231	118	4	4
TPH25T3KIC	881	291	178	4	4
TPH25T4KIC	596	178	57	4	5
TPH25T5KIC	706	238	117	4	5
TPH25T6KIC	706	238	117	4	5
TPH50T2.5KIC	583	162	43	12	6
TPH50T4KIC	693	222	103	12	6
TPH50T5KIC	743	222	103	12	6

- Fig. 5 TPH 25T4KIC ~ TPH25T6KIC



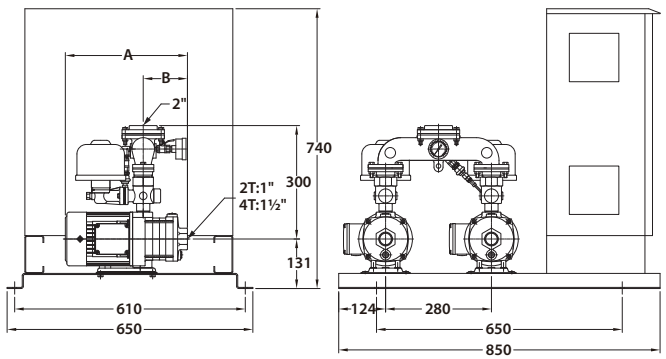
- Fig. 6 TPH 50T - IC



Specifications - Duplex

Model	Inverter Controller Output Power (HP)	Phase (Ø)	Voltage (V)	No-Fuse Breaker	Pre-set Pressure (kg/cm²)	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)



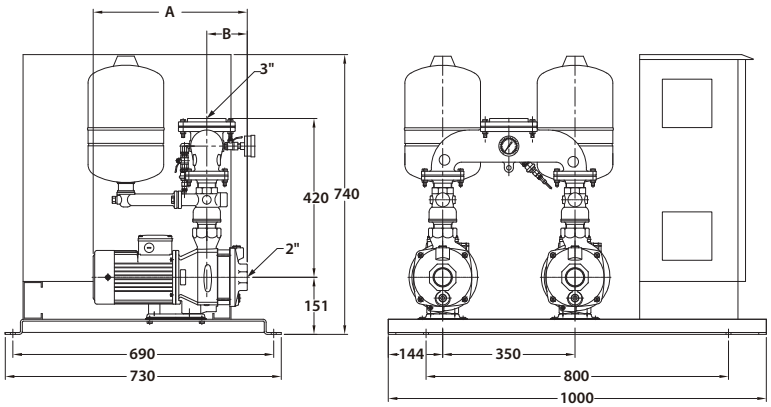
Model	A	B	Pressure tank (L)
TPH2T2KIC x2	306	99	0.8 x2
TPH2T3KIC x2	324	117	0.8 x2
TPH2T4KIC x2	342	135	0.8 x2
TPH2T5KIC x2	400	153	0.8 x2
TPH2T6KIC x2	418	171	0.8 x2
TPH4T2KIC x2	315	108	0.8 x2
TPH4T3KIC x2	382	135	0.8 x2
TPH4T4KIC x2	409	162	0.8 x2
TPH4T5KIC x2	436	189	0.8 x2
TPH4T6KIC x2	494	216	0.8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

8T/12T ICx2

Specifications - Duplex

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

Dimensions (mm)



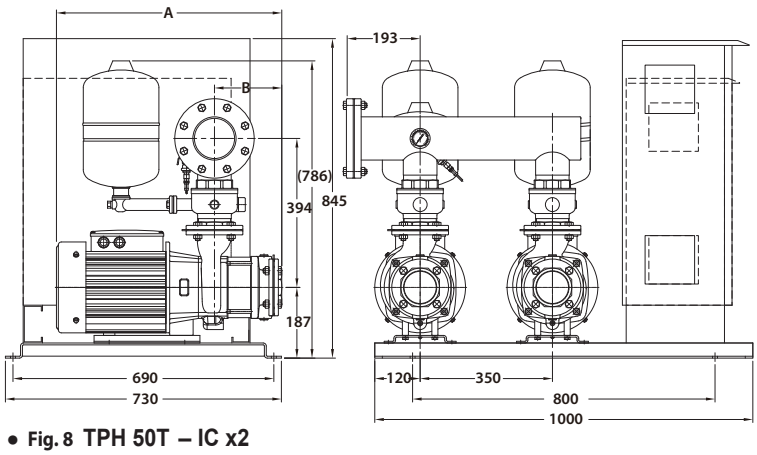
Model	A	B	Pressure tank (L)
TPH8T2KIC x2	376.5	75	12 x2
TPH8T3KIC x2	408.5	107	12 x2
TPH8T4KIC x2	435.5	107	12 x2
TPH8T5KIC x2	469.5	141	12 x2
TPH12T2KIC x2	376.5	75	12 x2
TPH12T3KIC x2	435.5	107	12 x2
TPH12T4KIC x2	435.5	107	12 x2

Specifications - Duplex

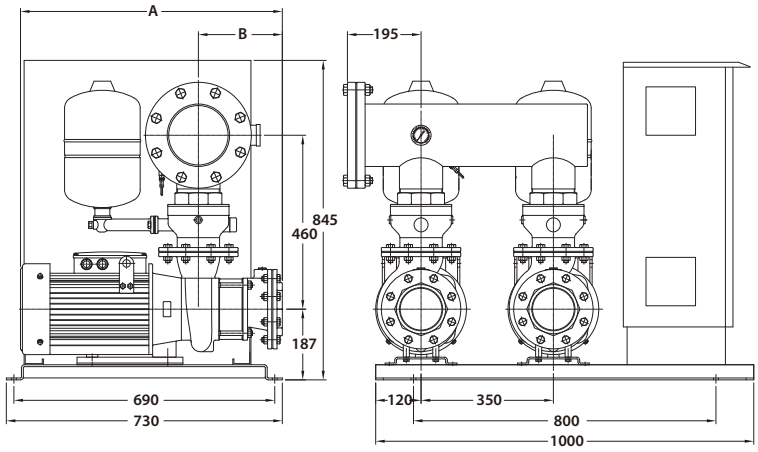
Model	Inverter Controller Output Power (HP)	Phase (Ø)	Voltage (V)	No-Fuse Breaker		Pre-set Pressure (kg/cm²)	Inlet (in.)	Outlet (in.)	Nominal Set Head (M)	Nominal Set Flow (L/min)
TPH25T 2 KIC x2	5 x2	3Ø	200-240V or 380-440V	40A	30A	2.0	3	4	20	830
TPH25T 3 KIC x2	5 x2	3Ø	200-240V or 380-440V	50A	30A	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