WALRUS PUMP

TPH_IC Series

Constant Pressure Inverter Control System



Better Life
Through Innovation

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TPH_IC Series Constant Pressure Inverter Control System



50 / 60 Hz

Power: 0.5 - 15 HP

Pre-set Head: Up to 6 kg/cm²

Flow: Up to 830 L/min

Outlet: 1" - 6"

Inlet: 1" - 6"



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 kg/cm^2 .

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.

Applications

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

Operating Conditions

- Ambient Temperature: Max.+40°C
- Liquids Temperature: +4°C ~ +75°C
- Suitable liquids: Potable water or other clean, thin or non-aggressive liquids.
- Inlet pressure: Lower than the constant pressure setting limit (see page 5~10)
- System Pressure: Max.10 kg/cm²

Motor

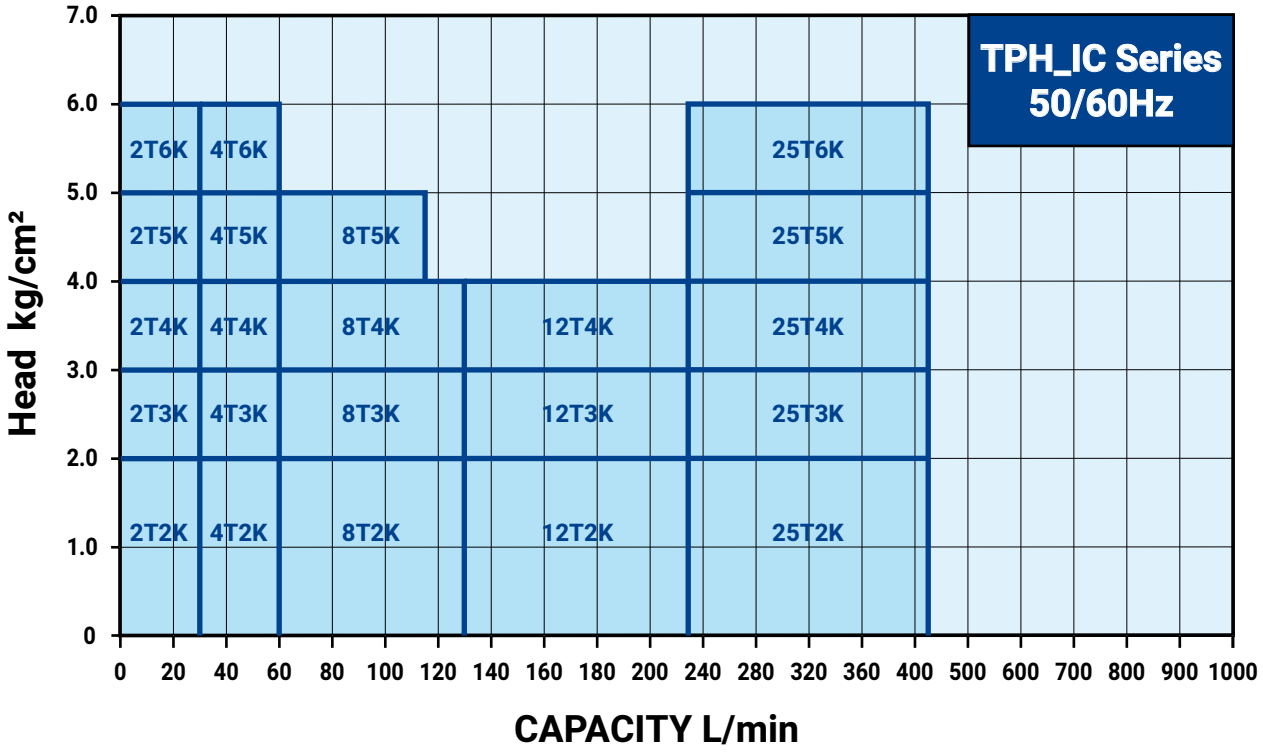
- Enclosure protection class: IP44 (Standard type)
  IP54 (Optional)
- Insulation class: F.

Model Code

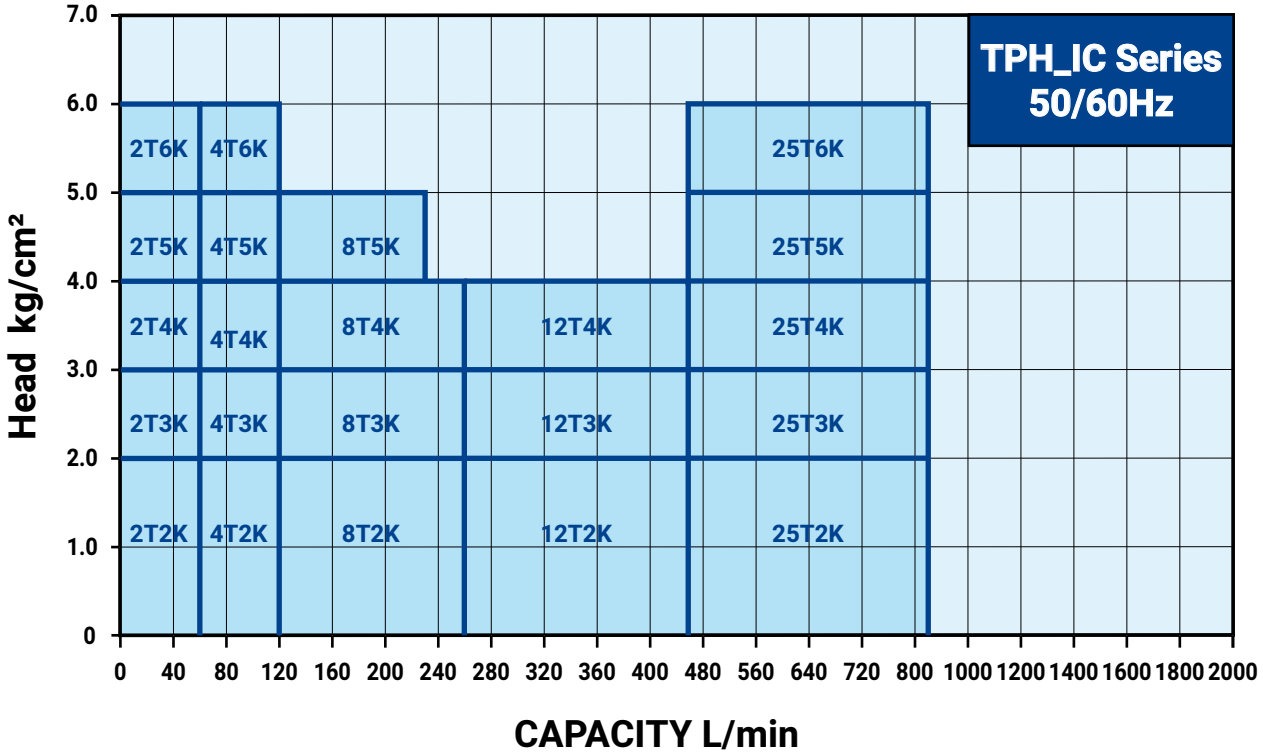
TPH 4T 3K S IC x2

- TPH: Model type
- 4T: Nominal flow rate (m³/h)
- 3K: Nominal head (kg/cm²)
- S: Stainless steel series
- IC: IC inverter series
- x2: Number of pumps in parallel

Performance Curve - Single unit



Performance Curve - Duplex



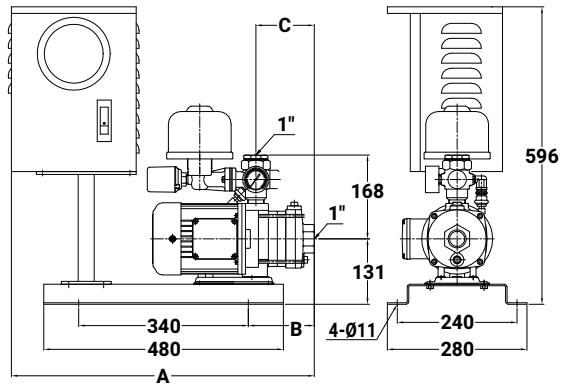


2T/4T IC

Model	Inverter Controller Output Power HP	PH Ø	Volts V	No-Fuse Breaker	Pre-set Pressure kg/cm²	Inlet in.	Outlet in.	Nominal Set Head M	Nominal Set Flow L/min
TPH2T2KIC	1	1 3	200-240 200-240 or 380-440	10A 5A	2.0	1	1	20	30
TPH2T3KIC	1	1 3	200-240 200-240 or 380-440	10A 5A	3.0	1	1	30	30
TPH2T4KIC	1	1 3	200-240 200-240 or 380-440	10A 5A	4.0	1	1	40	30
TPH2T5KIC	1	1 3	200-240 200-240 or 380-440	10A 5A	5.0	1	1	50	30
TPH2T6KIC	1	1 3	200-240 200-240 or 380-440	10A 5A	6.0	1	1	60	30
TPH4T2KIC	1	1 3	200-240 200-240 or 380-440	10A 5A	2.0	1½	1½	20	60
TPH4T3KIC	1	1 3	200-240 200-240 or 380-440	10A 5A	3.0	1½	1½	30	60
TPH4T4KIC	2	1 3	200-240 200-240 or 380-440	15A 10A | 5A	4.0	1½	1½	40	60
TPH4T5KIC	2	1 3	200-240 200-240 or 380-440	15A 10A | 5A	5.0	1½	1½	50	60
TPH4T6KIC	2	1 3	200-240 200-240 or 380-440	20A 10A | 5A	6.0	1½	1½	60	70

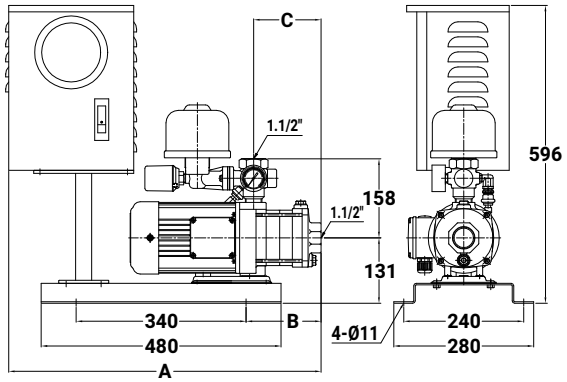
Dimensions

Fig.1 TPH2T _IC



Model	A mm	B mm	C mm	Pressure tank L	Fig
TPH2T2KIC	589	114	99	0.8	1
TPH2T3KIC	607	132	117	0.8	1
TPH2T4KIC	625	150	135	0.8	1
TPH2T5KIC	643	168	153	0.8	1
TPH2T6KIC	661	186	171	0.8	1
TPH4T2KIC	598	123	108	0.8	2
TPH4T3KIC	625	150	135	0.8	2
TPH4T4KIC	652	177	162	0.8	2
TPH4T5KIC	679	204	189	0.8	2
TPH4T6KIC	706	231	216	0.8	2

Fig.2 TPH4T _IC



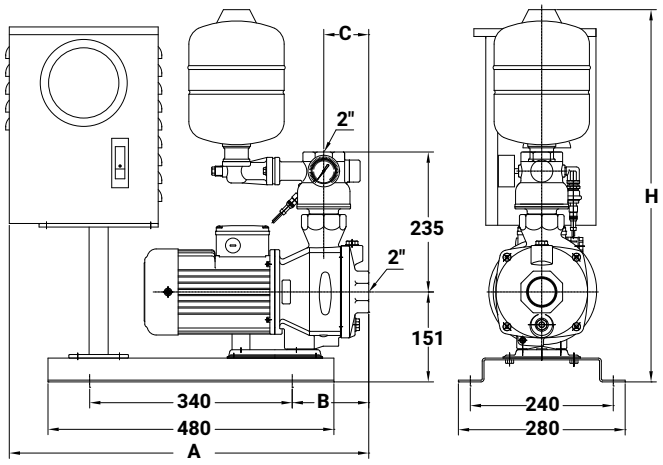


8T/12T IC

Model	Inverter Controller Output Power HP	PH Ø	Volts V	No-Fuse Breaker	Pre-set Pressure kg/cm²	Inlet in.	Outlet in.	Nominal Set Head M	Nominal Set Flow L/min
TPH8T2KIC	1	1 3	200-240 200-240 or 380-440	10A 10A | 5A	2.0	2	2	20	130
TPH8T3KIC	2	1 3	200-240 200-240 or 380-440	15A 10A | 5A	3.0	2	2	30	140
TPH8T4KIC	3	1 3	200-240 200-240 or 380-440	30A 15A | 10A	4.0	2	2	40	130
TPH8T5KIC	3	1 3	200-240 200-240 or 380-440	30A 15A | 10A	5.0	2	2	50	115
TPH12T2KIC	2	1 3	200-240 200-240 or 380-440	15A 10A | 5A	2.0	2	2	20	230
TPH12T3KIC	3	1 3	200-240 200-240 or 380-440	30A 15A | 10A	3.0	2	2	30	230
TPH12T4KIC	5	3	200-240 or 380-440	20A | 10A	4.0	2	2	40	230

Dimensions

TPH8T/12T _IC



Model	A mm	B mm	C mm	H mm	Pressure tank L
TPH8T2KIC	603.5	128.5	75	625	4
TPH8T3KIC	635	160	107	625	4
TPH8T4KIC	635	160	107	625	4
TPH8T5KIC	669	194	141	625	4
TPH12T2KIC	603.5	128.5	75	625	4
TPH12T3KIC	635	160	107	625	4
TPH12T4KIC	635	160	107	625	4

Model	A mm	B mm	C mm	H mm	Pressure tank L
TPH8T2KSIC	603.5	128.5	75	670	8
TPH8T3KSIC	635	160	107	670	8
TPH8T4KSIC	635	160	107	670	8
TPH8T5KSIC	669	194	141	670	8
TPH12T2SKIC	603.5	128.5	75	670	8
TPH12T3SKIC	635	160	107	670	8
TPH12T4SKIC	635	160	107	670	8

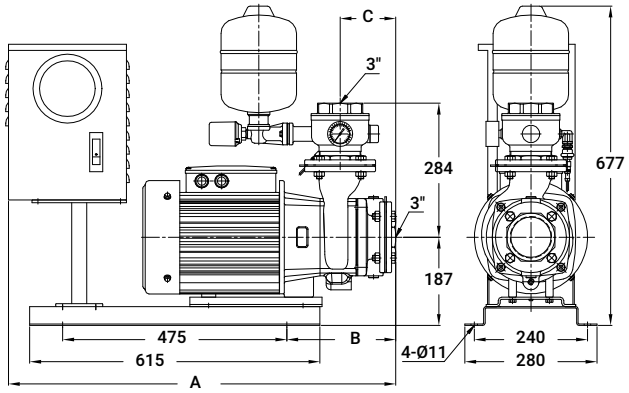


25T IC

Model	Inverter Controller Output Power HP	PH Ø	Volts V	No-Fuse Breaker	Pre-set Pressure kg/cm²	Inlet in.	Outlet in.	Nominal Set Head M	Nominal Set Flow L/min
TPH25T2KIC	5	3	200-240 or 380-440	20A | 10A	2.0	3	3	20	350
TPH25T3KIC	5	3	200-240 or 380-440	20A | 10A	3.0	3	3	30	415
TPH25T4KIC	7½	3	200-240 or 380-440	30A | 15A	4.0	3	3	40	415
TPH25T5KIC	10	3	200-240 or 380-440	40A | 20A	5.0	3	3	50	415
TPH25T6KIC	10	3	200-240 or 380-440	40A | 20A	6.0	3	3	60	415

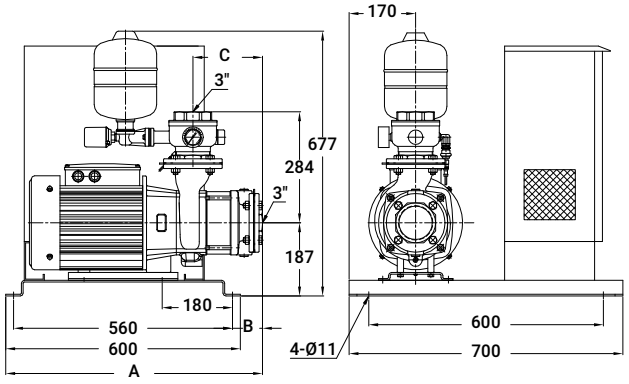
Dimensions

Fig.3 TPH25T2KIC / TPH25T3KIC



Model	A mm	B mm	C mm	Pressure tank L	Fig
TPH25T2KIC	821	231	118	4	3
TPH25T3KIC	881	291	178	4	3
TPH25T4KIC	657	77	178	4	4
TPH25T5KIC	717	137	238	4	4
TPH25T6KIC	717	137	238	4	4

Fig.4 TPH25T4KIC ~ TPH25T6KIC



Model	A mm	B mm	C mm	Pressure tank L	Fig
TPH25T2KSIC	821	231	118	8	3
TPH25T3KSIC	881	291	178	8	3
TPH25T4KSIC	657	77	178	8	4
TPH25T5KSIC	717	137	238	8	4
TPH25T6KSIC	717	137	238	8	4

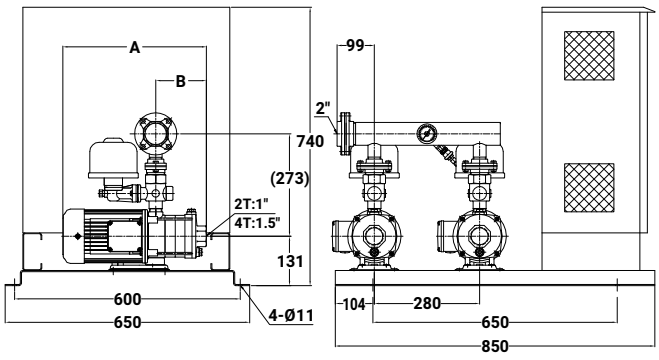


2T/4T ICx2

Model	Inverter Controller Output Power HP	PH Ø	Volts 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	1 3	200-240 200-240 or 380-440	15A 10A | 5A	2.0	1	2	20	60
TPH2T3KIC x2	1 x2	1 3	200-240 200-240 or 380-440	15A 10A | 5A	3.0	1	2	30	60
TPH2T4KIC x2	1 x2	1 3	200-240 200-240 or 380-440	15A 10A | 5A	4.0	1	2	40	60
TPH2T5KIC x2	1 x2	1 3	200-240 200-240 or 380-440	15A 10A	5.0	1	2	50	60
TPH2T6KIC x2	1 x2	1 3	200-240 200-240 or 380-440	20A 10A	6.0	1	2	60	60
TPH4T2KIC x2	1 x2	1 3	200-240 200-240 or 380-440	15A 10A | 5A	2.0	1½	2	20	120
TPH4T3KIC x2	1 x2	1 3	200-240 200-240 or 380-440	20A 10A	3.0	1½	2	30	120
TPH4T4KIC x2	2 x2	1 3	200-240 200-240 or 380-440	30A 15A | 10A	4.0	1½	2	40	120
TPH4T5KIC x2	2 x2	1 3	200-240 200-240 or 380-440	30A 20A | 10A	5.0	1½	2	50	120
TPH4T6KIC x2	2 x2	1 3	200-240 200-240 or 380-440	40A 20A | 10A	6.0	1½	2	60	140

Dimensions

TPH2T/4T _IC x2



Model	A mm	B mm	Pressure tank L
TPH2T2KICx2 **TPH2T2KSICx2**	306	99	0.8 x2
TPH2T3KICx2 **TPH2T3KSICx2**	324	117	0.8 x2
TPH2T4KICx2 **TPH2T4KSICx2**	342	135	0.8 x2
TPH2T5KICx2 **TPH2T5KSICx2**	400	153	0.8 x2
TPH2T6KICx2 **TPH2T6KSICx2**	418	171	0.8 x2
TPH4T2KICx2 **TPH4T2KSICx2**	315	108	0.8 x2
TPH4T3KICx2 **TPH4T3KSICx2**	382	135	0.8 x2
TPH4T4KICx2 **TPH4T4KSICx2**	409	162	0.8 x2
TPH4T5KICx2 **TPH4T5KSICx2**	436	189	0.8 x2
TPH4T6KICx2 **TPH4T6KSICx2**	494	216	0.8 x2

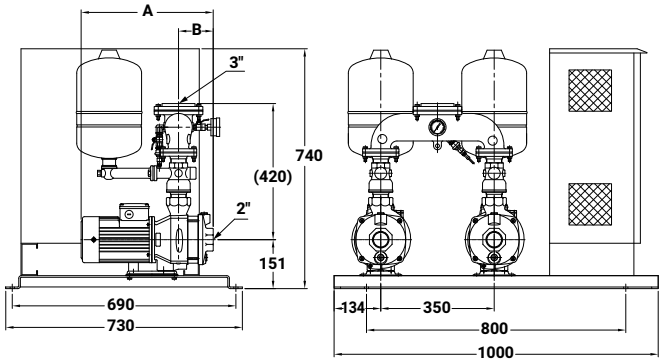


8T/12T ICx2

Model	Inverter Controller Output Power HP	PH Ø	Volts V	No-Fuse Breaker	Pre-set Pressure kg/cm²	Inlet in.	Outlet in.	Nominal Set Head M	Nominal Set Flow L/min
TPH8T2KIC x2	1 x2	1 3	200-240 200-240 or 380-440	20A 15A | 10A	2.0	2	3	20	260
TPH8T3KIC x2	2 x2	1 3	200-240 200-240 or 380-440	30A 20A | 10A	3.0	2	3	30	280
TPH8T4KIC x2	3 x2	1 3	200-240 200-240 or 380-440	50A 30A | 15A	4.0	2	3	40	260
TPH8T5KIC x2	3 x2	1 3	200-240 200-240 or 380-440	50A 30A | 15A	5.0	2	3	50	230
TPH12T2KIC x2	2 x2	1 3	200-240 200-240 or 380-440	30A 20A | 10A	2.0	2	3	20	460
TPH12T3KIC x2	3 x2	1 3	200-240 200-240 or 380-440	50A 30A | 15A	3.0	2	3	30	460
TPH12T4KIC x2	5 x2	3	200-240 or 380-440	40A | 20A	4.0	2	3	40	460

Dimensions

TPH8T/12T _ICx2



Model	A mm	B mm	Pressure tank L
TPH8T2KICx2 **TPH8T2KSICx2**	376.5	75	12 x2 8 x2
TPH8T3KICx2 **TPH8T3KSICx2**	408.5	107	12 x2 8 x2
TPH8T4KICx2 **TPH8T4KSICx2**	435.5	107	12 x2 8 x2
TPH8T5KICx2 **TPH8T5KSICx2**	469.5	141	12 x2 8 x2
TPH12T2KICx2 **TPH12T2KSICx2**	376.5	75	12 x2 8 x2
TPH12T3KICx2 **TPH12T3KSICx2**	435.5	107	12 x2 8 x2
TPH12T4KICx2 **TPH12T4KSICx2**	435.5	107	12 x2 8 x2

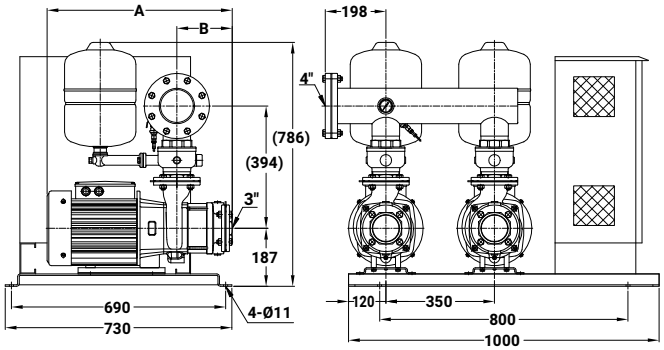


25T ICx2

Model	Inverter Controller Output Power HP	PH Ø	Volts V	No-Fuse Breaker	Pre-set Pressure kg/cm²	Inlet in.	Outlet in.	Nominal Set Head M	Nominal Set Flow L/min
TPH25T2KIC x2	5 x2	3	200-240 or 380-440	40A | 30A	2.0	3	4	20	700
TPH25T3KIC x2	5 x2	3	200-240 or 380-440	40A | 30A	3.0	3	4	30	830
TPH25T4KIC x2	7½ x2	3	200-240 or 380-440	75A | 30A	4.0	3	4	40	830
TPH25T5KIC x2	10 x2	3	200-240 or 380-440	75A | 40A	5.0	3	4	50	830
TPH25T6KIC x2	10 x2	3	200-240 or 380-440	75A | 40A	6.0	3	4	60	830

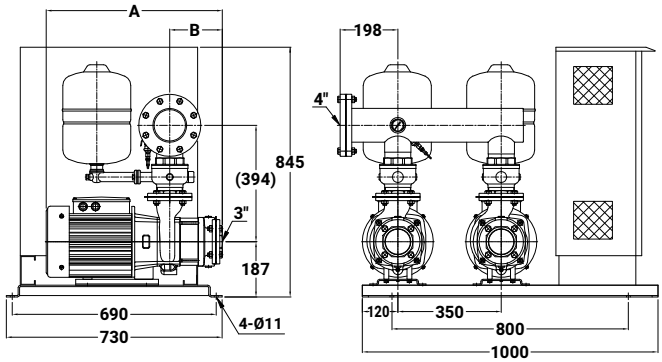
Dimensions

Fig.5 TPH25T2KIC x2 / TPH25T3KIC x2



Model	A mm	B mm	Pressure tank L	Fig
TPH25T2KIC x2 **TPH25T2KSIC x2**	536	118	12 x2 8 x2	5
TPH25T3KIC x2 **TPH25T3KSIC x2**	596	178	12 x2 8 x2	5
TPH25T4KIC x2 **TPH25T4KSIC x2**	596	178	12 x2 8 x2	6
TPH25T5KIC x2 **TPH25T5KSIC x2**	706	238	12 x2 8 x2	6
TPH25T6KIC x2 **TPH25T6KSIC x2**	706	238	12 x2 8 x2	6

Fig.6 TPH25T4KIC x2 ~ TPH25T6KIC x2



Memo

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