TECHNICAL SUBMISSION

TRIGON XL H2 WH - IP DHW Generator – Bypass Pump Option- All models

General Description:

The TRIGON XL H2 WH-IP can be offered with a By-pass pump kit. The required kit is model specific and the requirement should be detailed at time of order. The water heater would then be supplied with the kit installed.

The By-pass pump kit can be considered when a higher DHW delivery temperature is required. As standard, the TRIGON XL H2 WH-IP water heater can raise the temperature of the DHW supply by approximately 17°C, with one pass across the heat exchanger. The By-pass kit is designed for applications where a higher temperature increase is desired.

All of the optional kits include a Bronze pump. The pumps are suitable for use in domestic hot water applications, but the pumps do not have specific WRAS approval. This would impact on the WRAS certification for the TRIGON XL H2-IP water heaters. This must be considered before placing any orders!

The TRIGON XL H2 WH IP represents a significant step forward in heating technology, providing a continuous supply of hot water at an efficient recovery rate. With extremely flexible configurations, clever design and the range of models available, this water heater is perfect for a variety of commercial applications. Typical example being health clubs, Hotels, manufacturing plant and commercial laundrettes.

By combining the unique premix burner with the stainless steel heat exchanger, the appliance is built for challenging working conditions. The appliance is specifically designed for optimised efficiency and performance during its entire lifetime.

The DHW generator is supplied in one piece, with a fitted robust and stylish outer casing fabricated from stove enabled steel sheet. If access to the plant room is difficult, then our engineers can dismantle the boiler into manageable sections, transport the parts to the desired location and then re-assemble the boilers. This service is a chargeable extra.

The DHW generator is designed to operate with a DHW storage cylinder for optimised performance. The nominal flow rate must be maintained to prevent over-temperature faults. The nominal flow rate is designed to provide a 17°C temperature rise, with each pass through the heat exchanger.

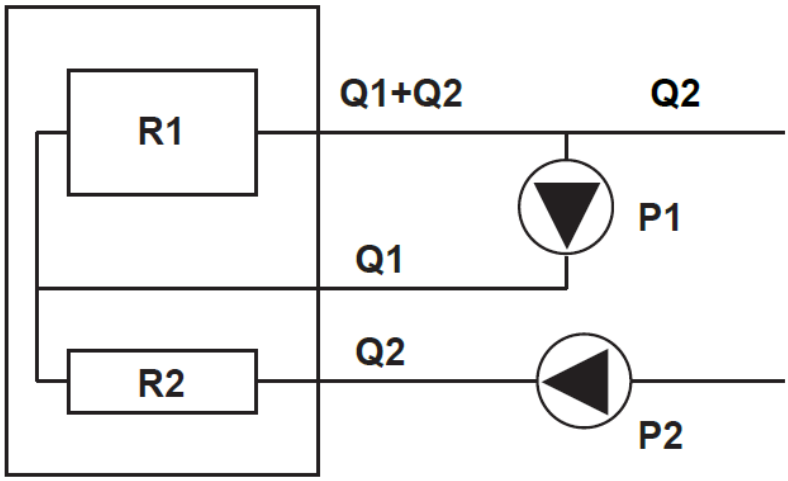
The TRIGON XL H2 DHW generator is certified as being H2 ready. **This means that the appliance is suitable for use with a fuel supply consisting of up-to a maximum of a 20% hydrogen and 80% natural gas.** The same appliance can operate using natural gas only, with no modifications.

Warranty: To activate warranty, you must **register your product** within six months of the purchase date. This can be completed by telephone or email.
Tele: **0333 240 8777 option 0ne** - New product registrations.
e-mail: **customer.service.uk@ariston.com**
The following information must be provided:
Appliance serial number
Purchase date
Installation date
Site contact name, email address and telephone number
Product installation address.
On the condition that the product has been installed to manufacturers instructions and the warranty terms and conditions have not been compromised, the standard warranty term for the **TRIGON XL boilers** is **two years** from date of purchase.

All products that are **not registered,** will have a **one year** warranty period and this will cover **material and manufacture**

By-pass DHW Generator:

When a higher temperature increase than 17°C is desired, with one pass across the heat exchanger, this can be achieved using the TRIGON XL H2 WH with an integral by-pass. The pumps supplied with the internal by-pass, will enable a higher temperature rise across the heat exchanger. The by-pass pump circulate a volume of water from the outlet and directs it to the secondary return to the heat exchanger. This does not affect the operating efficiency of the appliance, as it enters up-stream of the condensing heat exchanger. The standard water heater needs to be ordered with this integral by-pass kit. Retrofit is not available.



P1 = bypass pump
P2 = system pump

Bypass pump data								
			TRX-L 150	TRX-L 200	TRX-L 250	TRX-L 300	TRX-L 400	TRX-L 500	TRX-L 570
Pump type		[-]	UPS 32-80B	UPS 32-80B	UPS 32-80B	UPS 32-80B	UPS 32-120FB	UPS 40-120FB	UPS 50-120FB
Voltage		[V]	230	230	230	230	230	230	400
ΔT = 40K	Curve setting	[-]	2	2	3	3	1	1	1
ΔT = 50K			2	3	3	3	2	2	2
ΔT = 55K			2	3	3	3	2	2	2
ΔT = 60K			2	3	3	3	3	2	2
ΔT = 70K			2	3	3	3	3	3	2
ΔT =80K			2	3	3	3	3	3	2

The pump in the by-pass kit Q1, does not contribute toward system flow and an additional system pump is required P2.

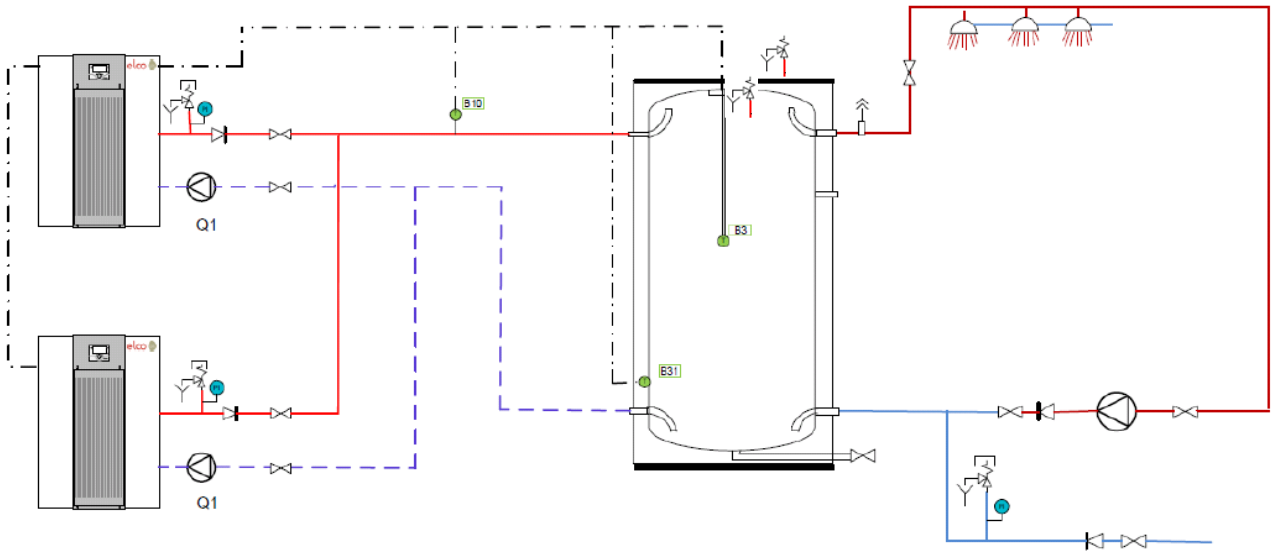
System Pump Design Data:

			TRX-L 150	TRX-L 200	TRX-L 250	TRX-L 300	TRX-L 400	TRX-L 500	TRX-L 570
ΔT = 40K	Flow rate	[m³/h]	3.1	4.1	5.1	6.1	8.2	10.2	11.6
	Req. pump head	[kPa]	35.5	28.9	57.3	50.7	42.3	49.0	60.6
ΔT = 50K	Flow rate	[m³/h]	2.4	3.2	4.1	4.9	6.5	8.2	9.2
	Req. pump head	[kPa]	30.3	58.5	50.8	44.4	40.8	56.3	64.6
ΔT = 55K	Flow rate	[m³/h]	2.2	2.9	3.7	4.4	5.9	7.4	8.4
	Req. pump head	[kPa]	27.3	56.4	48.7	41.4	34.7	53.0	61.4
ΔT = 60K	Flow rate	[m³/h]	2.0	2.7	3.4	4.1	5.4	6.8	7.7
	Req. pump head	[kPa]	26.2	55.4	46.6	39.3	58.6	47.9	69.1
ΔT = 70K	Flow rate	[m³/h]	1.7	2.3	2.9	3.5	4.7	5.8	6.6
	Req. pump head	[kPa]	24.2	52.3	44.4	35.2	51.4	61.6	66.8
ΔT =80K	Flow rate	[m³/h]	1.5	2.0	2.6	3.1	4.1	5.1	5.8
	Req. pump head	[kPa]	22.1	50.2	40.3	30.2	45.3	53.5	65.6

General Guidance Schematics:

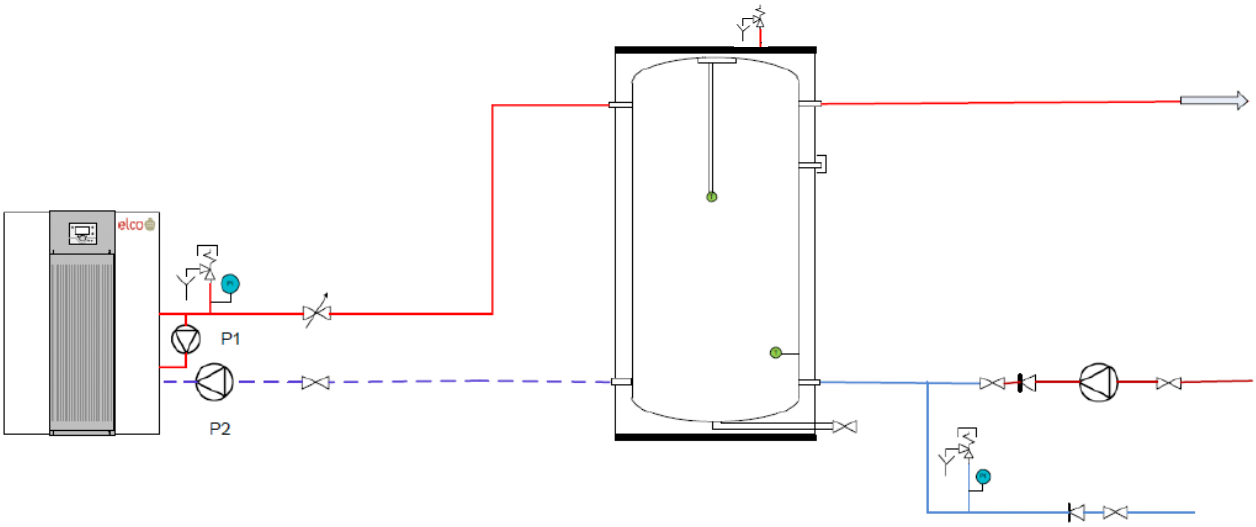
ystem 2: water heater cascade

When having a constant high demand of hot water, it's useful to install a high capacity water heater (or even a cascade of multiple water heaters) in combination with a small buffer tank. The Buffer tank is only covering the starting delay of the boilers, after that the boilers completely cover the hot water demand constantly.



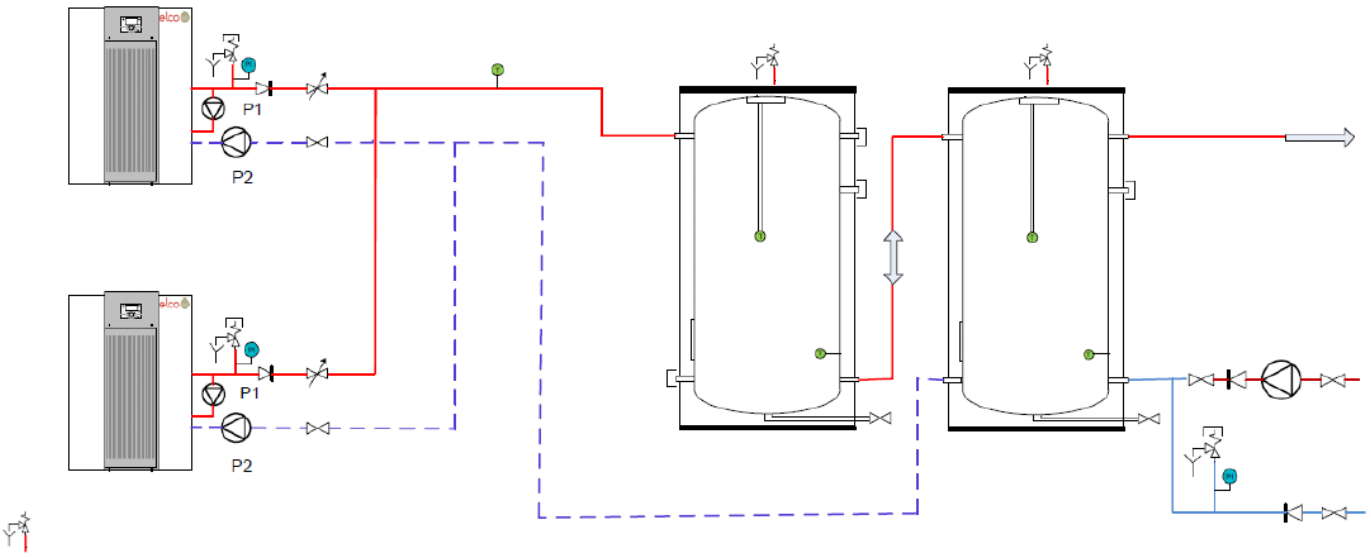
System 3: bypass water heater with buffer tank

This system is mainly used in industrial processes, where there is a requirement for direct increase of the water temperature with more than 17K, without having a constant demand. Without the buffer tank the bypass water heater would generate many starts and stops and have a restive regulation.



System 5: bypass water heater cascade with 2 buffer tanks

This system is mainly used in industrial processes, where there is a requirement for direct increase of the water temperature with more than 17K, without having a constant demand. Without the buffer tank the bypass water heater would generate many starts and stops and have a restive regulation.



The schematics are for general guidance and do not show all necessary isolation valves. Further guidance is available from Elco Heating Solutions