

Gas condensing boiler
Output: 150 – 570kW

elco

heating
solutions

TRIGON[®] XL

Compact, powerful performance



Achieves
**MAXIMUM
BREEAM
CREDITS**



TRIGON[®] XL – Flexible for every application



Comprehensive control features

A clear text display with integrated master-slave cascade functionality (up to 16 boilers) makes commissioning simple. Plus, upgradeable module capacity provides straightforward connections for additional heating zones, solar system or external heat sources.



Compact dimensions

All models are designed to pass through standard 760mm wide doors. The range comprises 7 models with 2 widths with the boiler capable of being dismantled into lightweight components.



Wider applications

With an 8 bar max. working pressure, the boiler is compatible with higher buildings without the need for hydraulic system separation. Plus, a 30K flow/return temperature differential allows easier integration with district heating systems while maintaining optimum efficiency.



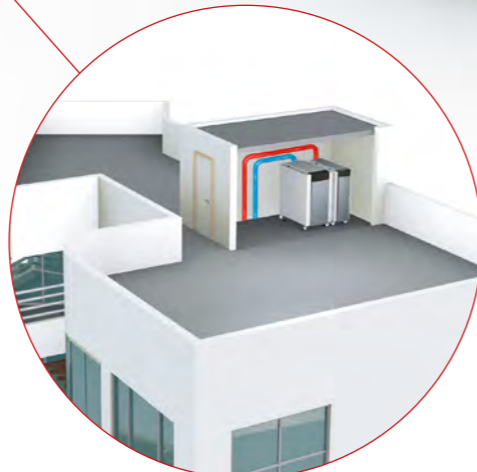
Flexible configurations

The inspection glass and spark ignition electrode can be fitted on either side of the boiler, allowing a more flexible boiler positioning on site.



BMS connections

The TRIGON[®] XL is compatible with common building management system protocols, utilising the ELCO Commercial Gateway for a hassle-free connection.



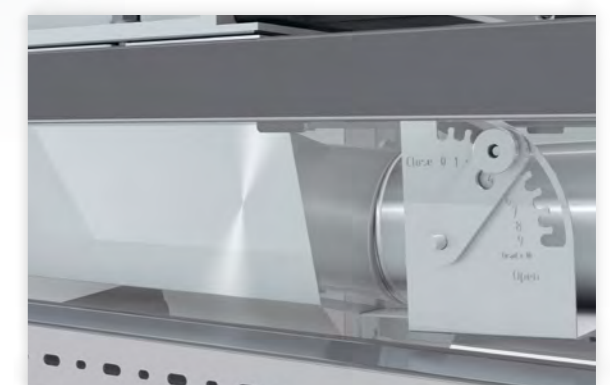
Lightweight construction

By utilising low water content technology, the boiler can be easily installed on a rooftop – while also delivering superb response times and reduced running costs.



Easy transportation

The boiler is supplied with cargo wheels, allowing it to be easily manoeuvred on site. After positioning, the boiler can be levelled and lifted from its cargo wheels by adjusting the feet.



Simple commissioning

An integrated flue gas damper and rear flue connection provides an installer-friendly arrangement.

TRIGON[®] XL – Designed for challenging environments

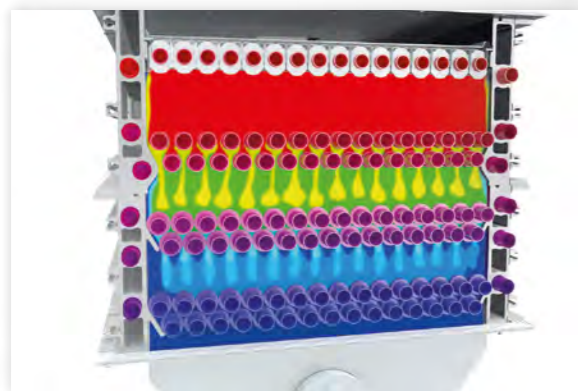
The burner

TRIGON[®] XL's advanced burner design provides the most technologically advanced and best performing unit on the market.



Unique premix-burner system

A fully modulating, water-cooled cold flame burner utilises a proven and innovative combustion system to provide reliable and robust performance.



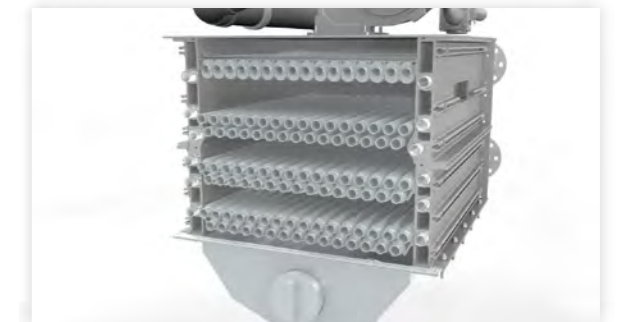
Low emissions

The water-cooled cold flame burner and the optimised combustion zone achieve extremely low NO_x and CO emissions, which already comply with NO_x class 6 requirements (34-40 mg/kWh depending on model).



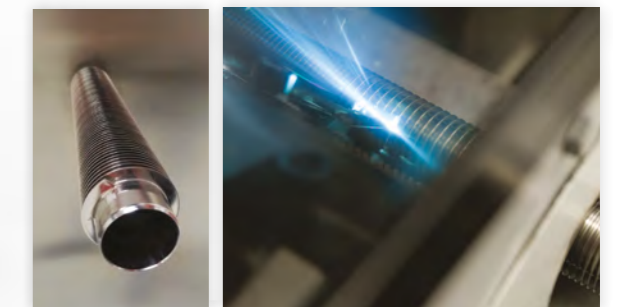
The heat exchanger

TRIGON[®] XL has a stainless steel heat exchanger built for challenging working conditions. It is specifically designed for optimised efficiency and performance during its entire lifetime.



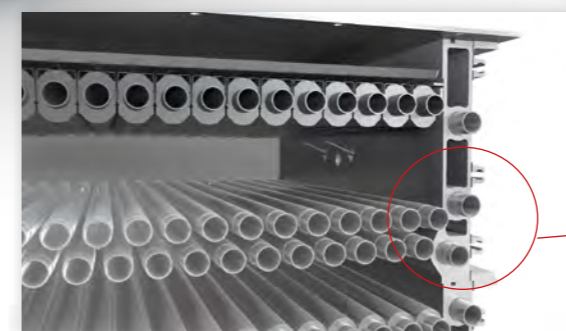
Lifetime high efficiency

By combining the unique premix-burner/heat exchanger system with the optimised controls, TRIGON[®] XL provides impressive lifetime high efficiencies of up to 110%.



Stainless steel laser welded fin tube

Advanced robot laser welding technology ensures superb heat transfer between the fins and the tube.



Water cooled combustion chamber

A carefully engineered hydroforming process fixes the cooling tubes inside the sidewalls, providing the highest possible thermal conductivity.



Technical data - TRIGON® XL

TRIGON® XL		150	200	250	300	400	500	570
Nominal heat output at 80/60°C	kW	142.3	190.4	237.6	285.7	381.3	476.7	540.2
Minimum heat output at 80/60°C	kW	31.3	42.0	47.0	56.5	75.2	94.6	120.0
Nominal heat output at 40/30°C	kW	151.2	202.3	249.7	300.3	401.1	503.2	572.8
Minimum heat output at 40/30°C	kW	35.1	47.0	52.9	63.6	85.0	106.1	133.4
Nominal heat input full load Net	kW	145.0	194.0	242.0	291.0	388.0	485.0	550.0
Minimum heat input min load Net	kW	32.2	43.1	48.4	58.2	77.6	97.0	122.2
Efficiency at 80/60°C full load Net/Gross	%	98.2/88.4	98.2/88.4	98.2/88.5	98.2/88.5	98.3/88.5	98.3/88.5	98.2/88.5
Efficiency at 40/30°C min load Net/Gross	%	109.2/99.1	109.2/99.1	109.4/99.3	109.4/99.3	109.5/99.3	109.4/99.3	109.2/99.6
Efficiency at 30°C return 30% load Gross	%	98.3	98.3	98.3	98.3	98.3	98.3	98.3
Gross seasonal efficiency*	%	96.4	96.4	96.5	96.5	96.5	96.6	96.6
Gas consumption max/min nat gas G20	m³/h	13.3/3.0	17.8/4.0	22.2/4.4	26.7/5.3	35.6/7.1	44.5/8.9	50.5/11.2
Gas consumption max/min LPG G31	kg/h	11.3/2.5	15.2/3.4	18.9/3.8	22.7/4.5	30.3/6.1	37.9/7.6	43.0/9.5
Gas inlet pressure max/min nat gas G20	mbar	50/17	50/17	50/17	50/17	50/17	50/17	50/17
Gas inlet pressure max/min LPG G31	mbar	50/30	50/30	50/30	50/30	50/30	50/30	50/30
NOx annual emissions (EN 15502)***	mg/kWh	28	28	27	27	26	29	31
BREEAM Credits**	-	1	1	2	2	2	1	0
Flue gas temperature at 80/60°C full load	°C	75	75	75	75	75	75	76
Max. permissible flue resistance	Pa	200	200	200	160	400	300	400
Water pressure max/min	bar	8/1	8/1	8/1	8/1	8/1	8/1	8/1
Maximum temperature setpoint	°C	90	90	90	90	90	90	90
Water flow at ΔT=11K (nominal)	lit/sec	3.1	4.1	5.2	6.2	8.3	10.4	11.7
Hydraulic resistance at ΔT=11K	kPa	37	86	107	40	105	114	185
Water flow at ΔT=20K (nominal)	lit/sec	1.7	2.3	2.8	3.4	4.6	5.7	6.5
Hydraulic resistance at ΔT=20K	kPa	11	27	31	12	32	34	57
Water flow at ΔT=30K (nominal)	lit/sec	1.1	1.5	1.9	2.3	3	3.8	4.3
Hydraulic resistance at ΔT=30K	kPa	5	12	14	5	14	15	25
Water content	l	27.0	31.0	35.0	61.0	68.0	75.0	82.0
Electrical connection	V	230/400	230/400	230/400	230/400	230/400	230/400	230/400
Electrical power consumption boiler	W	176	267	286	230	504	620	676
Sound Power Level	dB(A)	70.3	70.3	70.3	70.3	77.3	77.3	77.3
Weight (empty)	kg	290	332	366	434	496	540	595
Dimensions								
Water connections (W1/W2)	-	R2"	R2"	R2"	DN65 PN16	DN65 PN16	DN65 PN16	DN65 PN16
Gas connection (G)	-	R1 ½"	R1 ½"	R1 ½"	R1 ½"	R1 ½"	R2"	R2"
Flue gas connection (F)	mm	150	150	200	200	250	250	250
Air intake connection (A)	mm	130	130	130	130	130	150	150
Condensate connection (C)	mm	32	32	32	32	32	32	32
Boiler length with water connection (L1)	mm	1349	1499	1649	1348	1496	1646	1769
Boiler length without water connection (L2)	mm	1165	1315	1465	1152	1302	1452	1602
Width	mm	468.5	468.5	468.5	748.5	748.5	748.5	748.5
Height (incl. cargo wheels)	mm	1466	1466	1466	1466	1466	1466	1466

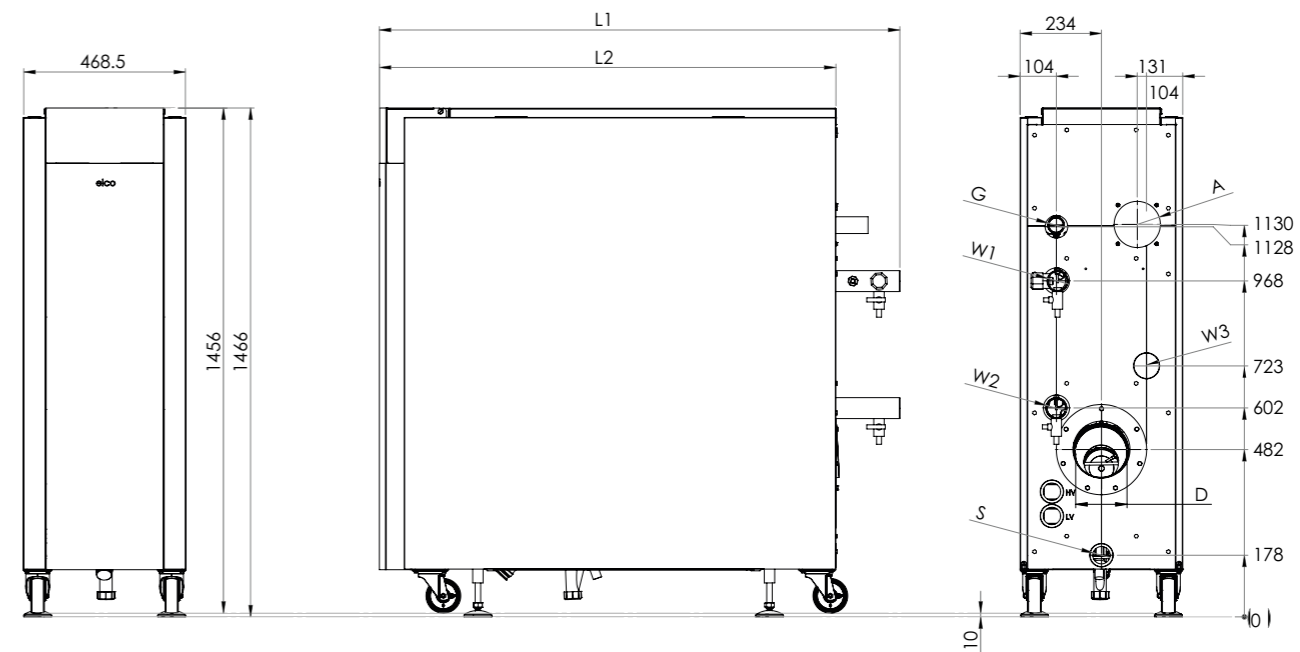
* In accordance with equation 2 in the Non-Domestic Building Services Compliance Guide

** BREEAM UK New Construction 2018

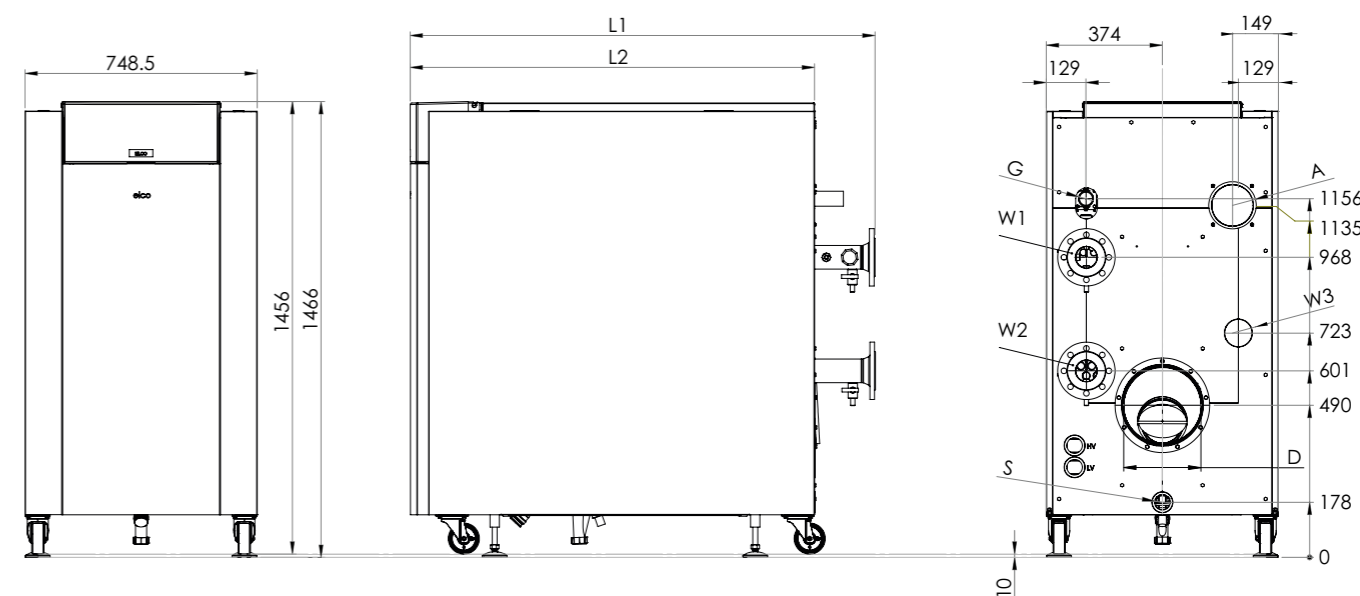
*** NOx values are calculated on GCV

Dimensions - TRIGON® XL

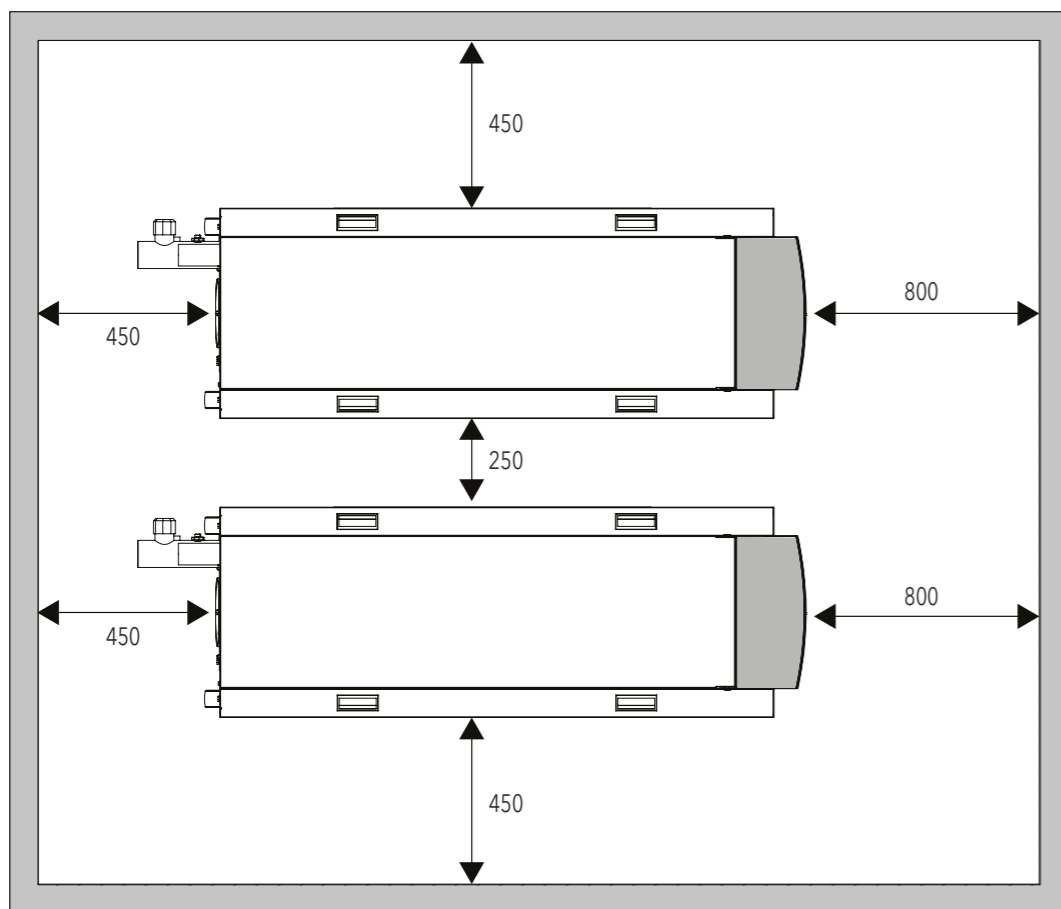
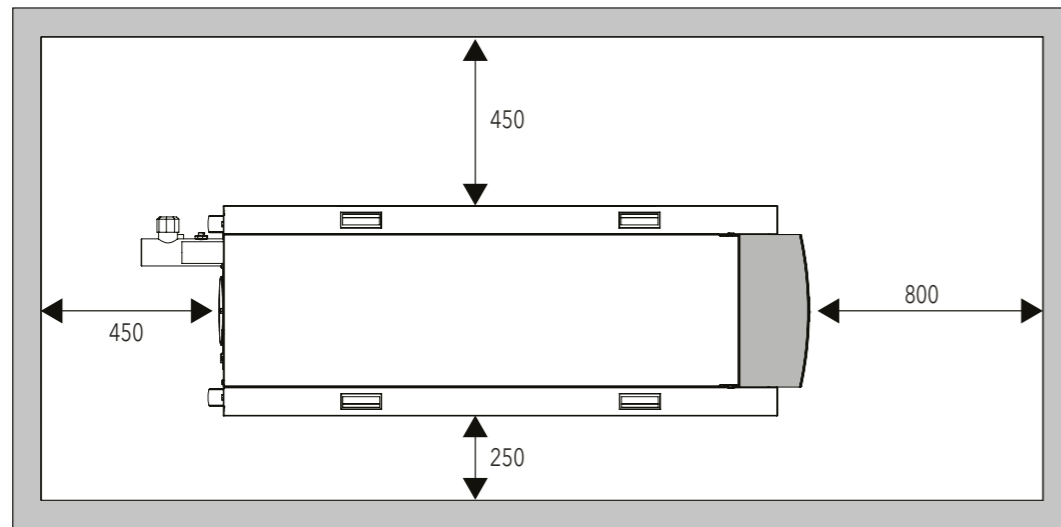
TRIGON® XL 150, 200 & 250



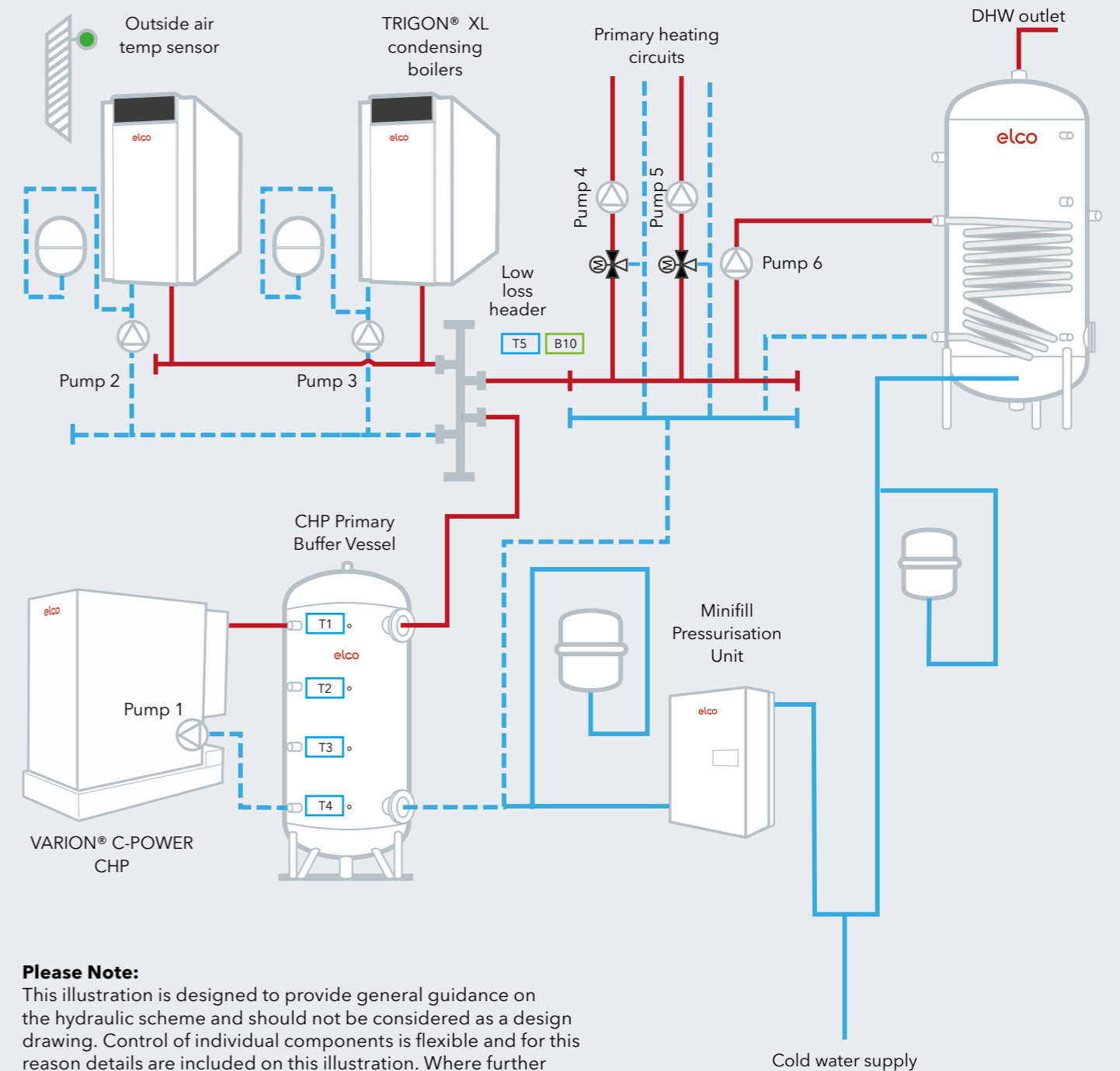
TRIGON® XL 300, 400, 500 & 570



Clearances - TRIGON® XL



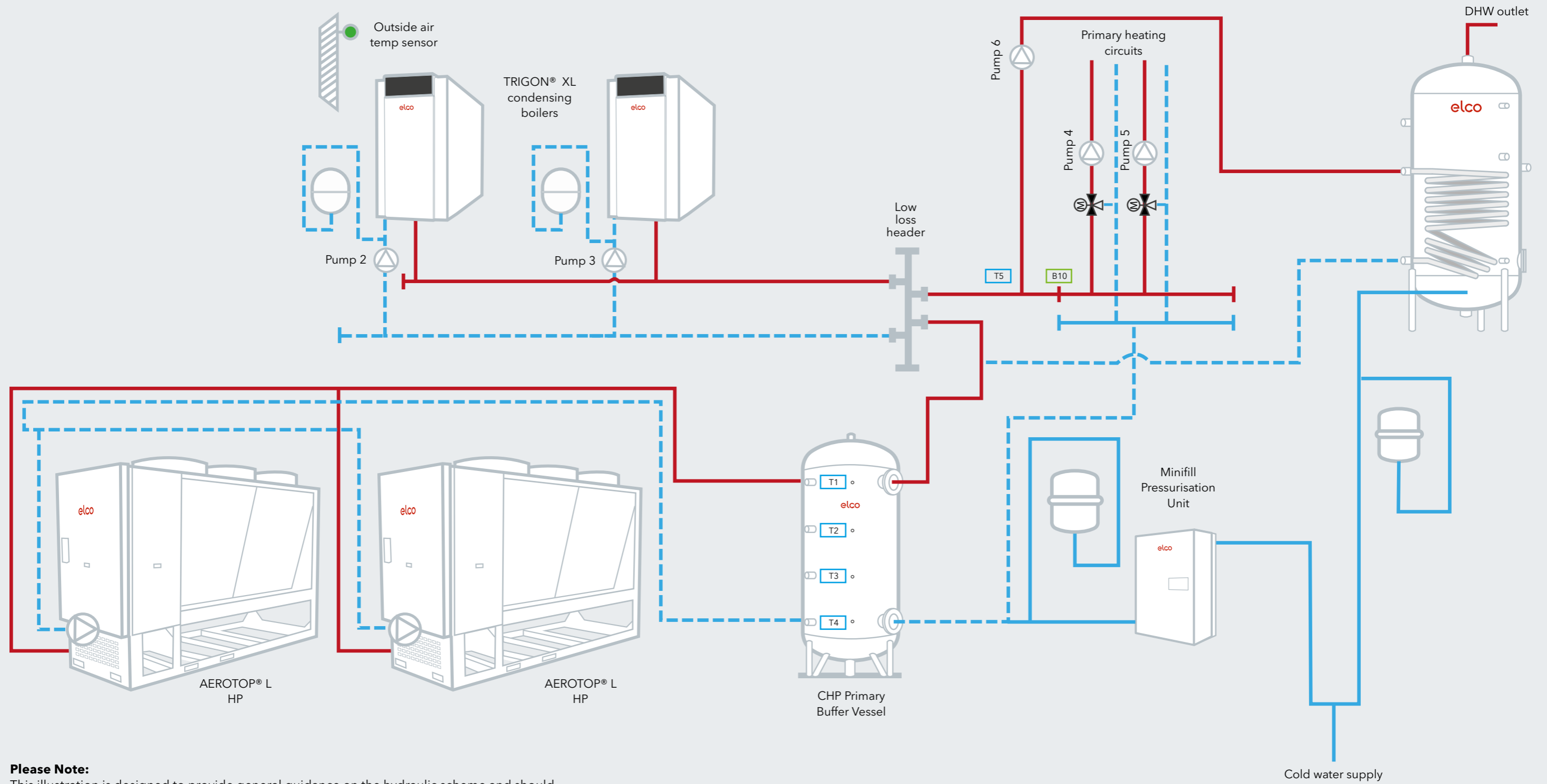
Schematics - TRIGON® XL



Please Note:
 This illustration is designed to provide general guidance on the hydraulic scheme and should not be considered as a design drawing. Control of individual components is flexible and for this reason details are included on this illustration. Where further guidance is required, please contact ELCO Heating Solutions.



Schematics - TRIGON[®] XL



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Full range of accessories

Safety devices



2x max. Water pressure switch + pressure gauge



Max. gas pressure switch



External high limit thermostat



Gas valve leakage tester

Hydraulics

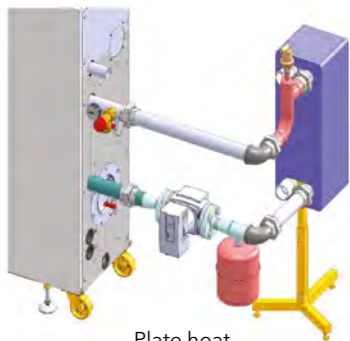
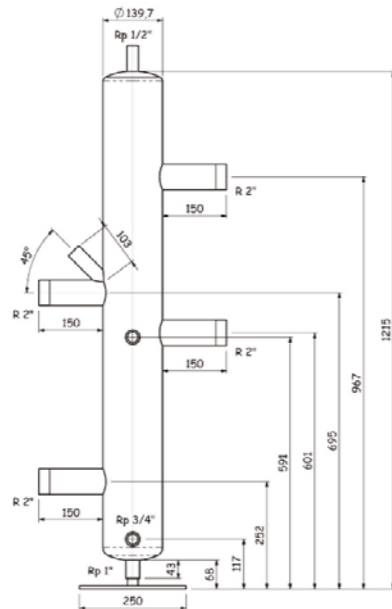


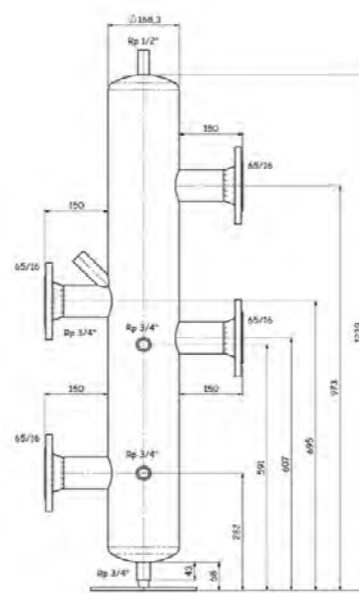
Plate heat exchanger + connection kit



Low loss header + connection kit Mono header

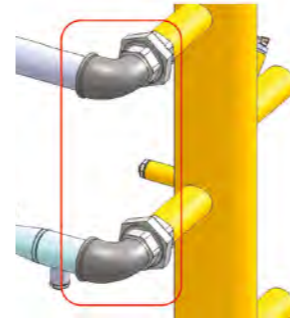


TR-XL 150-250 MONO
Low loss header
(DN125)

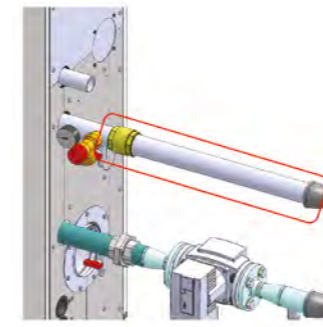


TR-XL 300-570 MONO
Low loss header
(DN150)

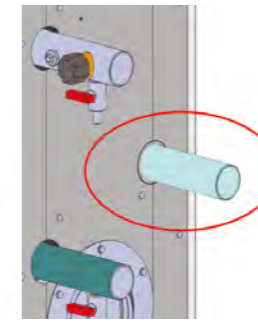
Hydraulics



2x Bends 90°



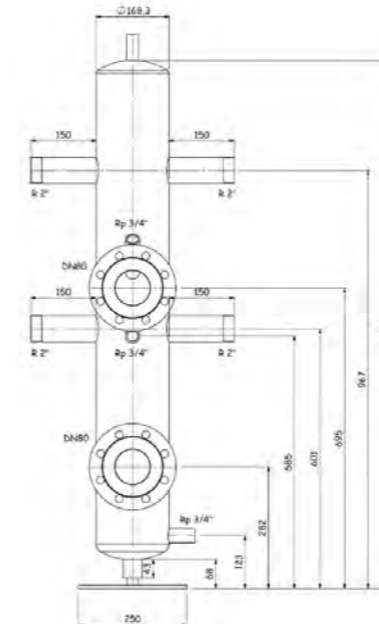
Flow adapter + NRV



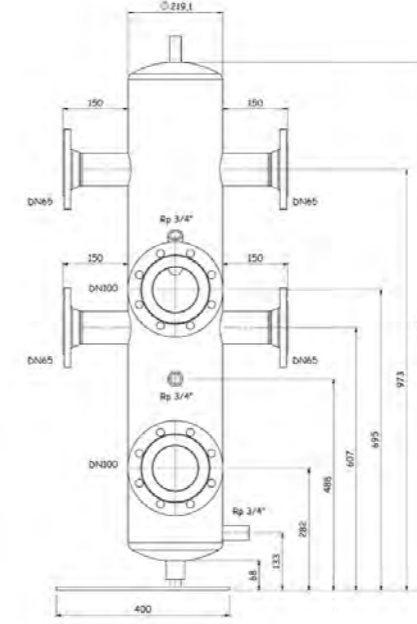
2nd Return connection



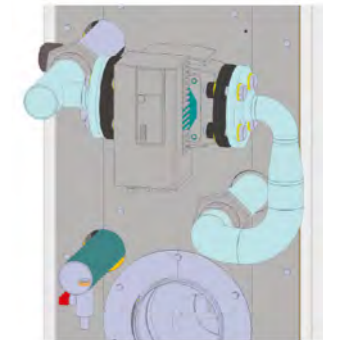
Safety valve (3 or 6 bar) + pressure gauge



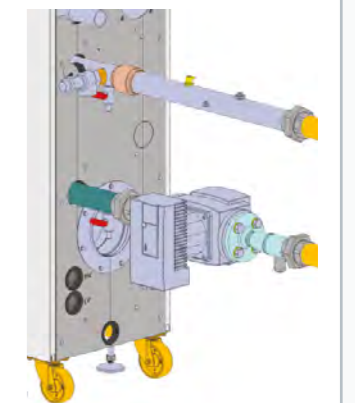
TR-XL 150-250 DUO
Low loss header
(DN150)



TR-XL 300-570 MONO
Low loss header
(DN150)



Bypass

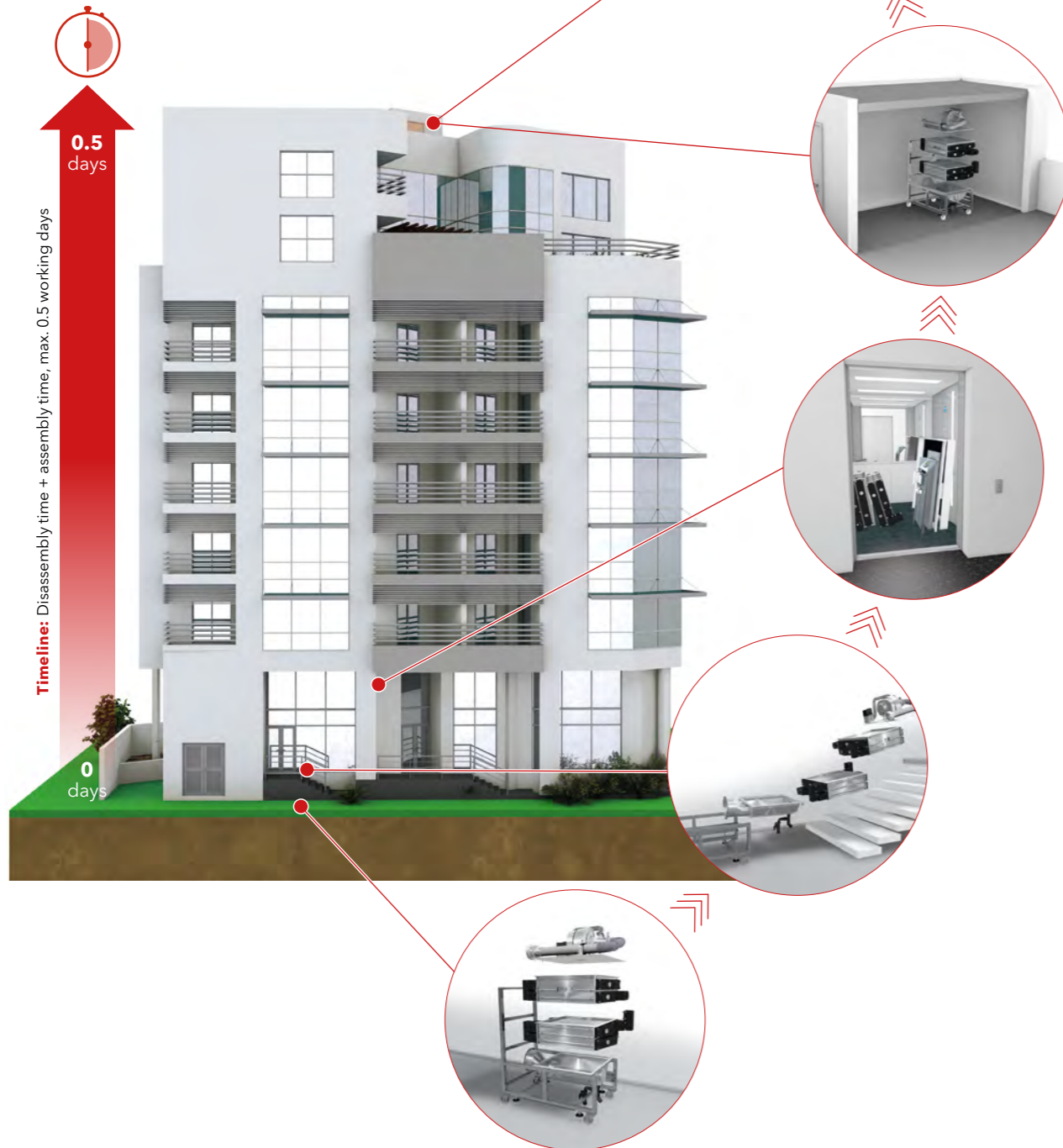


Speed controlled pump

Easy installation

The smart modular concept

All TRIGON® XL boilers can be disassembled for easy on site handling. This also allows the boiler to be easily installed into buildings with restricted access.



CPDs from ELCO

Our CIBSE-approved CPDs are now available online!

We have a range of CPDs focussed on commercial heating systems, including our latest module on the application of heat pumps. This is supported by another module on condensing boiler technology and how it shapes the design of commercial heating systems, plus our final program which outlines how to maximise the benefits of Combined Heat and Power (CHP) when incorporated within a commercial heating system.

Alternatively, we can also offer 1-2-1 CPDs, tailored to your company's requirements.

These can be attended online or we can visit your offices.

Contact enquiries@elco.co.uk for more information.



We have 3 CIBSE Approved CPDs

1 Introduction to and application of heat pumps

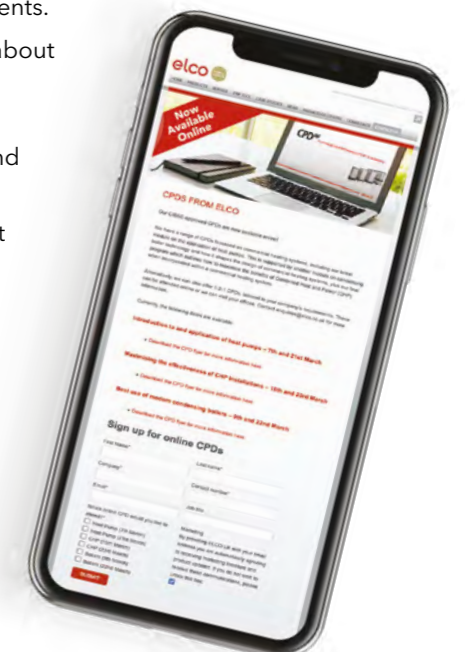
2 Maximising the effectiveness of CHP Installations

3 Best use of modern condensing boilers



What are the benefits of attending ELCO's CPDs?

- Increase your knowledge on how ELCO products can benefit your clients.
- Join us at 'Introduction to and application of heat pumps', and learn about heat pump technology; and discover how to apply it to commercial projects.
- Attend the 'Maximising the effectiveness of CHP Installations' CPD, and learn how to effectively size a CHP unit.
- Increase your knowledge of condensing boilers and system design at our 'Best use of modern condensing boilers' CPD.
- Better understand the latest legislation and regulations.
- All ELCO CPDs count towards a CIBSE member's annual CPD hours.
- You will receive a certificate of attendance, a summary form for future reading and an event feedback form to enable us to enhance our upcoming CPDs.





ELCO – A partner you can rely on

As a specialist partner, you can rely on ELCO's extensive commercial heating expertise, from planning right through to servicing and maintenance. Our specially trained technicians are available around the clock to help with the installation and commissioning of commercial heat pumps, DHW, CHP and boilers – offering their experience and assistance when you need it the most.



Commissioning

Our specialists always work together with you in commissioning an ELCO boiler properly to provide a high quality service.



First class service

Whether it is repairs, maintenance or troubleshooting, our service technicians are there for you seven days a week.



Trained and certified service technicians

Our ELCO service technicians are specially trained, qualified and fully equipped with the tools required to ensure boilers are maintained to the highest standards.

More information

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Sales Department	01268 207244	enquiries@elco.co.uk
After Sales Technical	01268 546772	technical@elco.co.uk
Training	01268 207244	marketing@elco.co.uk



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