



ALKON 50-70.



Unical

CASKAD



Integration and perfect compatibility

ALKON multiplies itself!
The flexible E8 heating controller via the e-Bus connection system permits the management, with only two wires, of up to 8 ALKON units.
Subdivided in two banks of 4 boilers each, they can supply a total output of up to 560 kW (with 8 ALKON 70) and up to 400 kW (with 8 ALKON 50), with a subsequent flexibility of

use. Suitable hydraulic connection kits, approved flue outlet systems, easy to mount frames and all the ADDITIONAL SAFETY DEVICES in order to present the system approved by Unical, permits the fast installation of the complete circuit with a mixing header, suitably dimensioned for the designed output. This gives you the advantage of having at disposal,

where space is very reduced, high efficiency modules, guaranteeing:

- *Recovery and restoration of old heating plants*
- *Better efficiency levels thanks to the excellent modulation ratio which reduces the output in all the boilers, proportionally to the output required and shuts them down in sequence.*



CASKAD with n° 4 ALKON units
in a multiple boiler installation.

■ *Reliable operation under every condition thanks to output sharing.*

The versatility of combinations which the ALKON CASKAD modular system offers, is practically endless. In this case you can choose an ALKON as the “master” boiler who, via the E8 heating controller, “controls” the subsequent ALKON “slave” boilers, who are also equipped with a pump.

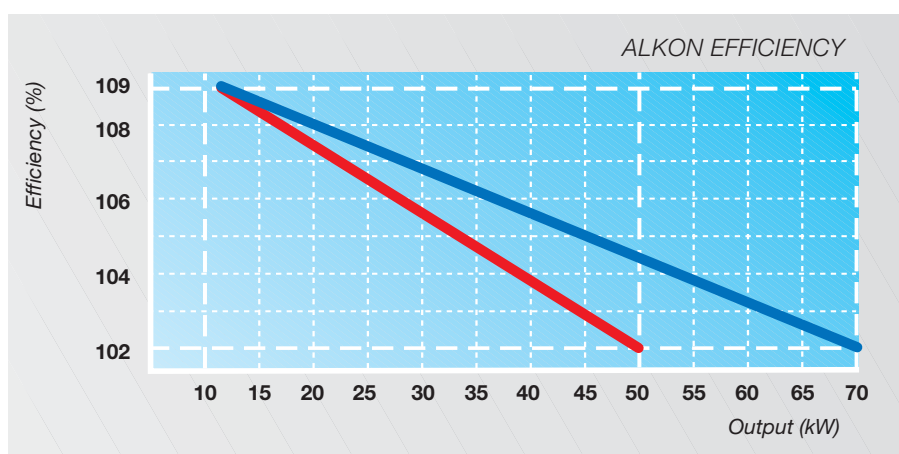
Choosing from the accessories available, the multiple arrangement of boilers will be constructed on the basis of the C.H. system’s requirements.

Each boiler can be fitted with a single flue outlet configuration which, then, conveys the flue gases into a sole collector.

The above applications are approved and certified according to the existing Standards.

CASKAD

increases output and efficiency

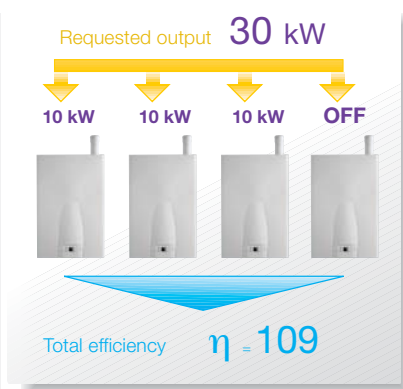
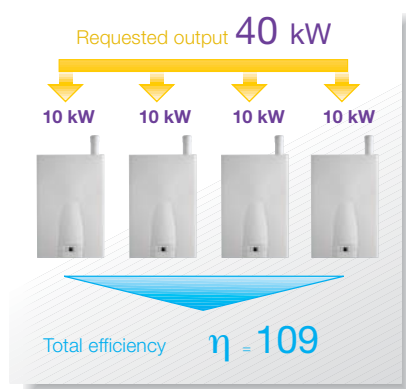
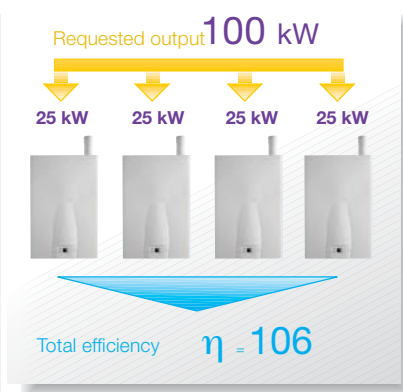
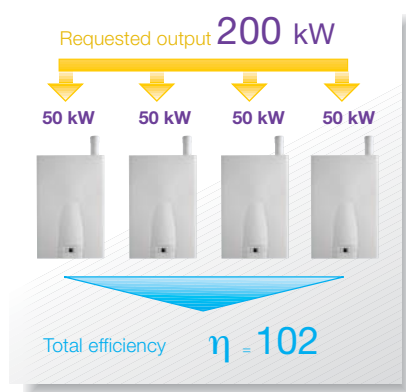


The ALKON offers flexible operation and high operating efficiencies

We have seen that the individual ALKON boiler has an approved efficiency which, when the output reduces, increases progressively from 102 to 109% (in condensing mode).

This is possible because to the heat exchanger increases its efficiency, and flue temperature decreases, when the input is reduced.

Output sharing with 4 x 50kW modules in cascade



In order to increase the total operating efficiency of the ALKON CASKAD, the E8 heating controller maintains the major number of ALKON units in the multiple boiler installation, firing at the lowest possible rate (as shown in the besides examples).

Using this method the heating system will always operate at the maximum possible efficiency, independently from the rate supplied.

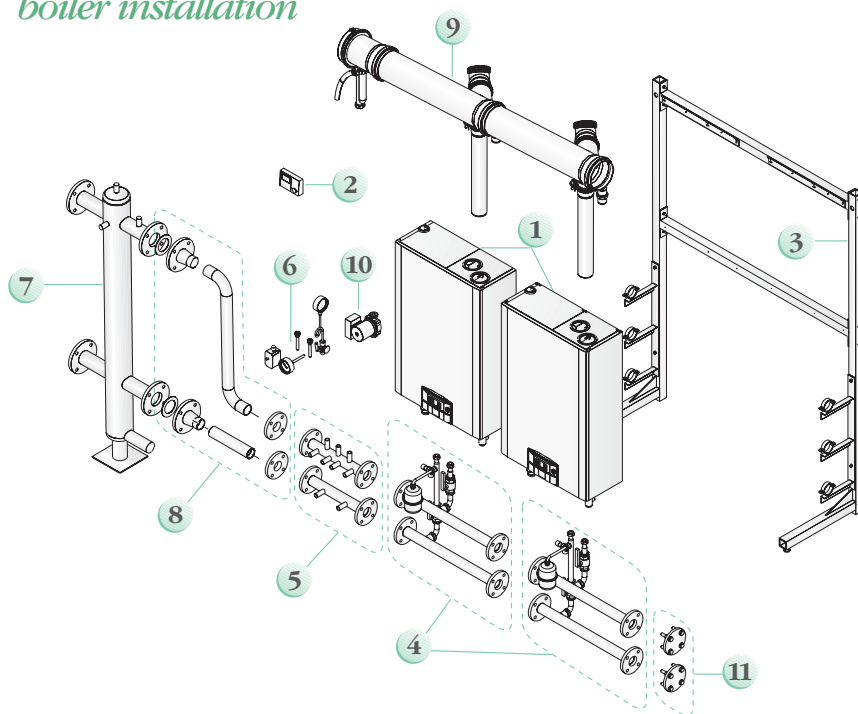
Always with the same operation principle, when the heating load slowly reduce itself, the output of each module will also be controlled and proportionally reduced.

As the minimum rate of each module is 10 kW, if the required load is inferior to the total minimum output of the single units (n° units \times 10 kW), only the ALKON boilers, needed to reach the requested output at the maximum efficiency level, will be fired and the other units will be shut down.

Moreover, in order to ensure an equal daily rotation of each module, every 24 hours each unit will be fired alternately, so as to ensure that each one operates for the same number of hours.

CASKAD ...

Installation of 2 ALKON boilers in a multiple boiler installation



■ CONFIGURATION

- | | | |
|-----------|--|---------------|
| 1 | - ALKON 50 natural gas | Cod. 41010012 |
| | - ALKON 50 LPG | Cod. 41010028 |
| or: | | |
| | - ALKON 70 natural gas | Cod. 41010098 |
| | - ALKON 70 LPG | Cod. 41010099 |
| 2 | - E8 heating controller | Cod. 00361332 |
| 3 | - Supporting frame for 2 units | Cod. 00361363 |
| 4 | - ALKON collectors kit | Cod. 00361314 |
| 5 | - Additional Safety Device Kit stub pipe 50-200 kW | Cod. 00361313 |
| 6 | - Additional Safety Device Kit | Cod. 00361316 |
| 7 | - Hydraulic separator kit up to 180 kW | Cod. 00361499 |
| 8 | - Separator connection kit up to 180 kW | Cod. 00361414 |
| 9 | - Flue outlet kit 2 ALKON units | Cod. 00361361 |
| 10 | - Modulating pump (optional for Alkon 50) | Cod. 00361320 |
| | - Fixed rate pump (optional for Alkon 50) | Cod. 00361321 |
| 11 | - Blind flange kit | Cod. 00361450 |

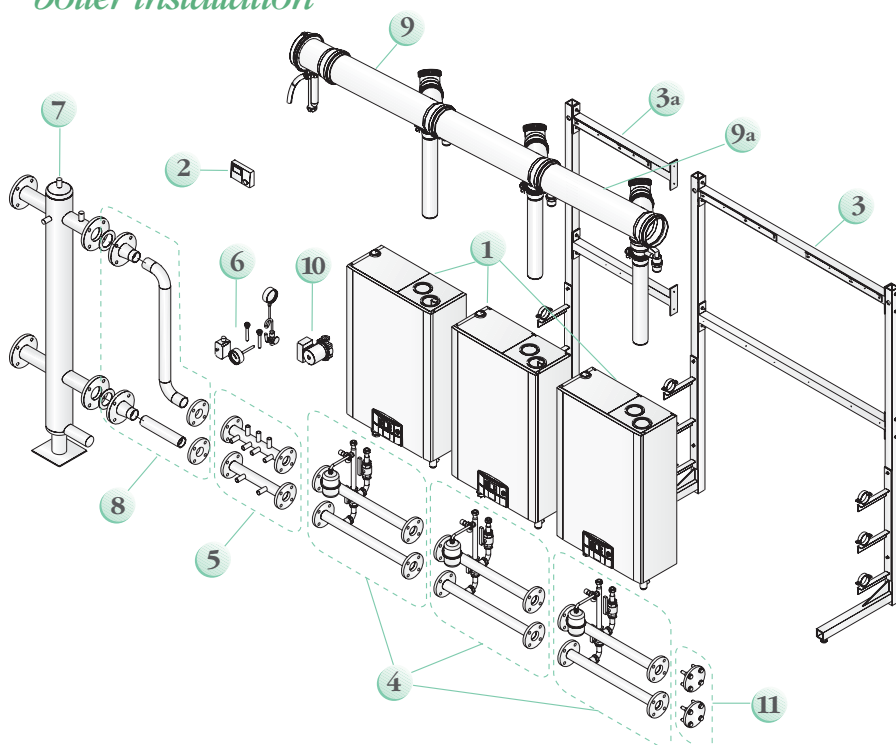
■ ADDITIONAL FLUE OUTLET ACCESSORIES

- | | |
|---------------------------|---------------|
| 45° elbow DN 160 | Cod. 00262430 |
| 87° elbow DN 160 | Cod. 00262431 |
| Extension DN 160 L = 250 | Cod. 00262432 |
| Extension DN 160 L = 500 | Cod. 00262433 |
| Extension DN 160 L = 1000 | Cod. 00262434 |
| Extension DN 160 L = 2000 | Cod. 00262435 |
| Inspection pipe DN 160 | Cod. 00262438 |
| Smoke thermostat kit* | Cod. 00361451 |

■ CONTROLS ACCESSORIES

- | | |
|---|---------------|
| WAG holder kit for wall mounting installation | Cod. 00361359 |
| BM8 remote control kit | Cod. 00361358 |

Installation of 3 ALKON boilers in a multiple boiler installation



■ COMPOSIZIONE

- | | | |
|-----------|---|---------------|
| 1 | - ALKON 50 natural gas | Cod. 41010012 |
| | - ALKON 50 LPG | Cod. 41010028 |
| oppure: | | |
| | - ALKON 70 natural gas | Cod. 41010098 |
| | - ALKON 70 LPG | Cod. 41010099 |
| 2 | - E8 heating controller | Cod. 00361332 |
| 3 | - Supporting frame for 2 units | Cod. 00361363 |
| 3a | - Expansion frame for 1 unit | Cod. 00361365 |
| 4 | - ALKON collectors kit | Cod. 00361314 |
| 5 | - Additional Safety Devices Kit stub pipe 50-200 kW | Cod. 00361313 |
| 6 | - Additional Safety Devices Kit | Cod. 00361316 |
| 7 | - Hydraulic separator kit up to 180 kW (per mod. Alkon 50) | Cod. 00361499 |
| | up to 450 kW (per mod. Alkon 70) | Cod. 00361500 |
| 8 | - Separator connection kit up to 180 kW (per mod. Alkon 50) | Cod. 00361414 |
| | up to 450 kW (per mod. Alkon 70) | Cod. 00361415 |
| 9 | - Flue outlet kit 2 ALKON units | Cod. 00361361 |
| 9a | - Expansion flue outlet kit 1 ALKON unit | Cod. 00361362 |
| 10 | - Modulating pump (optional for Alkon 50) | Cod. 00361320 |
| | Fixed rate pump (optional for Alkon 50) | Cod. 00361321 |
| 11 | - Blind flange kit | Cod. 00361450 |

■ ADDITIONAL FLUE OUTLET ACCESSORIES

- | | |
|---------------------------|---------------|
| 45° elbow DN 160 | Cod. 00262430 |
| 87° elbow DN 160 | Cod. 00262431 |
| Extension DN 160 L = 250 | Cod. 00262432 |
| Extension DN 160 L = 500 | Cod. 00262433 |
| Extension DN 160 L = 1000 | Cod. 00262434 |
| Extension DN 160 L = 2000 | Cod. 00262435 |
| Inspection pipe DN 160 | Cod. 00262438 |
| Smoke thermostat kit* | Cod. 00361451 |

■ CONTROLS ACCESSORIES

- | | |
|---|---------------|
| WAG holder kit for wall mounting installation | Cod. 00361359 |
| BM8 remote control kit | Cod. 00361358 |

* Usable also on single boiler with PPS flue.

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