



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.

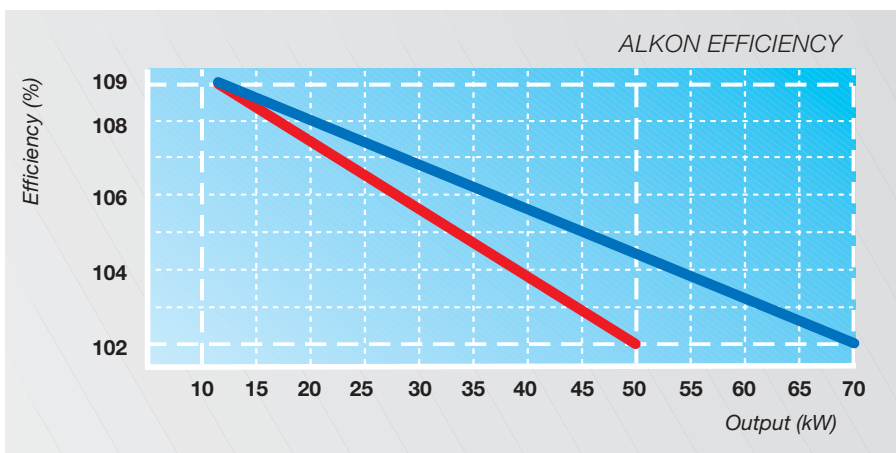
In order to increase the total operating efficiency of the ALKON CASKAD, the E8 heating controller maintains the major number of ALKON units in the multiple boiler installation, firing at the lowest possible rate (as shown in the besides examples).

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

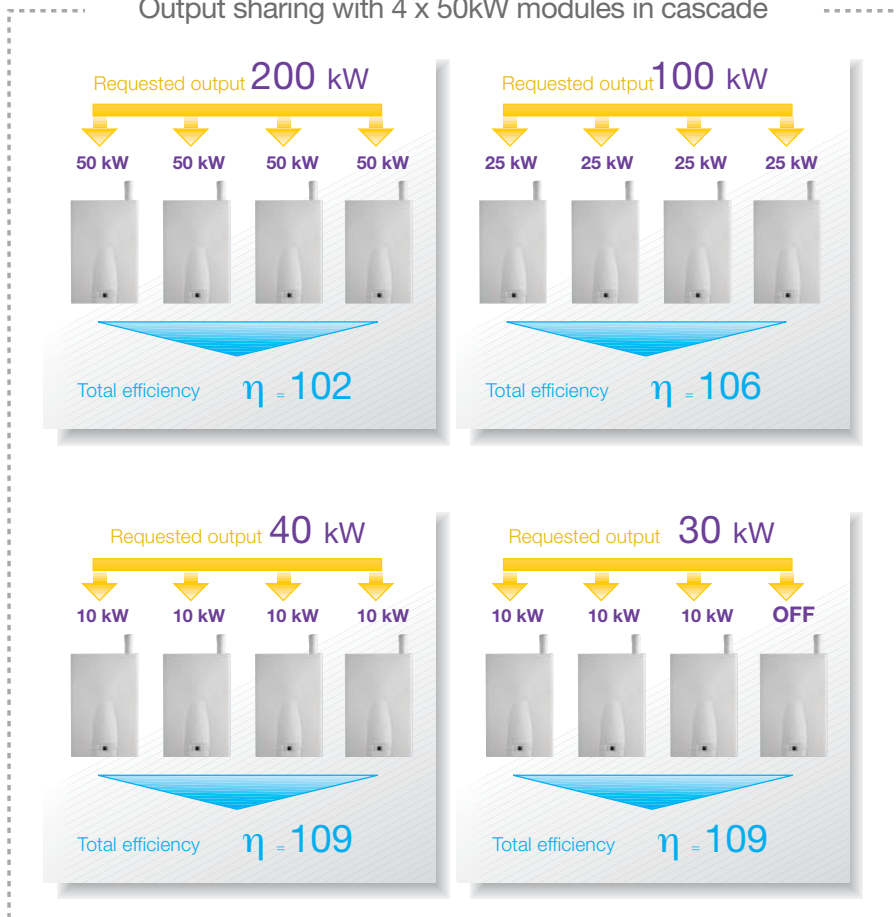
Always with the same operation principle, when the heating load slowly reduce itself, the output of each module will also be controlled and proportionally reduced.

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.



Output sharing with 4 x 50kW modules in cascade



...the configurations

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 450 kW Cod. 00361500
- 8** - Kit di collegamento separatore up to 450 kW 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

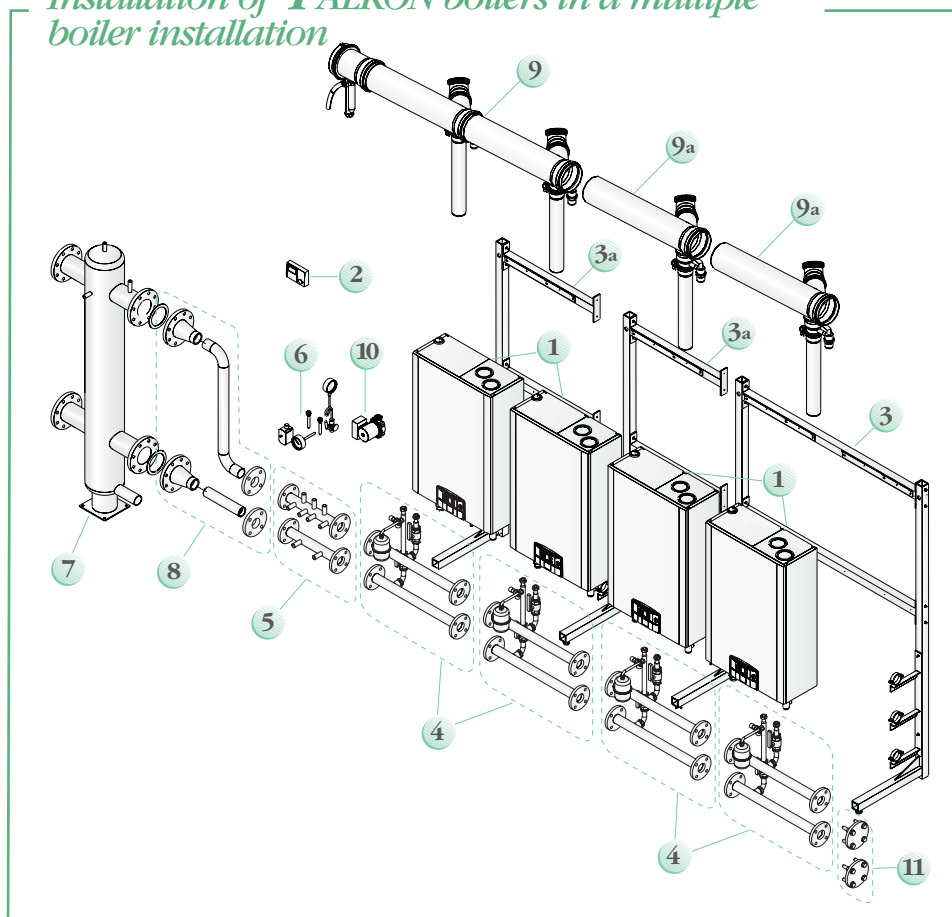
ADDITIONAL FLUE OUTLET ACCESSORIES

- 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

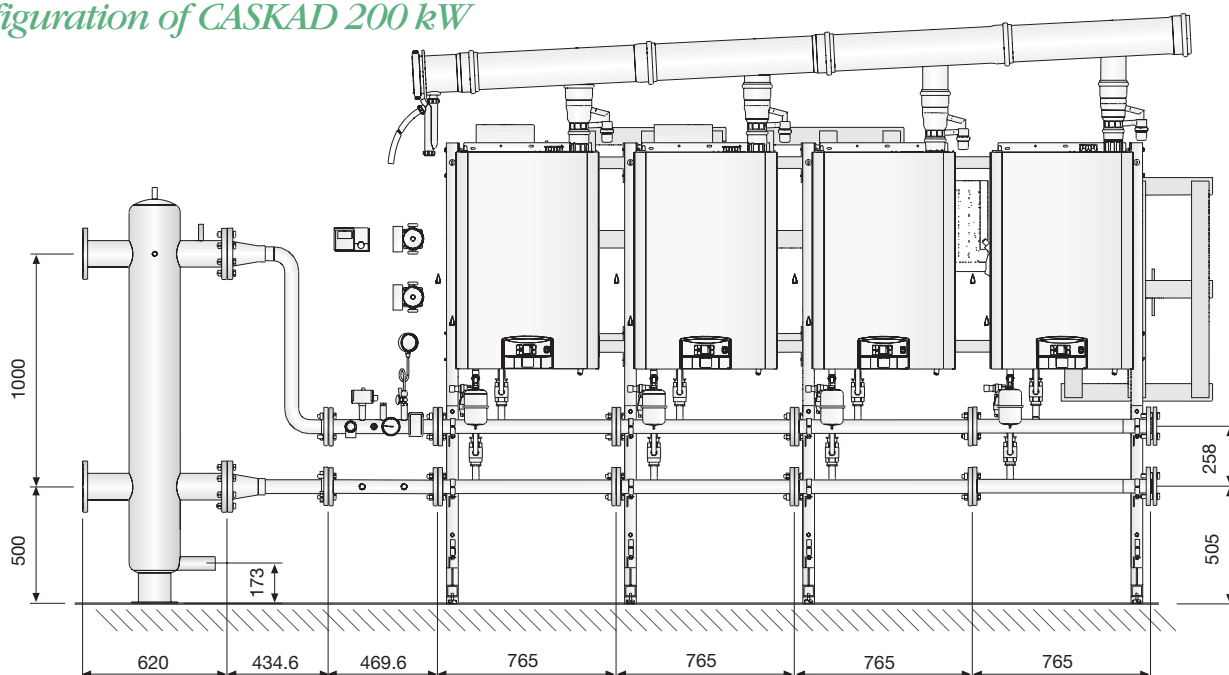
CONTROLS ACCESSORIES

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

Installation of 4 ALKON boilers in a multiple boiler installation



Configuration of CASKAD 200 kW



Note: The gas feed pipes are not supplied.

If installing a heating system with outputs higher than 200 kW (with ALKON 50) AND 280 kW (with ALKON 70), please look at the user and servicing instructions manuals on www.unical.ag.

Unical



Unical®
CENTRO STUDI CALDAIE A GAS

Unical AG s.p.A. - 46033 casteldario - mantova - italy - tel. 0376 57001 (r.a.) - telefax 0376 660556 - e-mail: info@unical-ag.com - www.unical.ag

Unical AG declines any liability for the inaccuracies that may appear due to errors in transcription or printing. It also reserves the right to introduce those modifications to its products that it considers necessary or useful, without compromising the essential characteristics of the said products.