

PRODUCT CATALOGUE

2021



30 [®]
1990 - 2020 **Thermona**

Czech producer of boilers

THERM gas condensing boilers

Heating power (kW)	Only for heating *	With flow heating of water	With connection to external storage tank *	With integrated storage tank for DHW
PREMIUM Condens				
1,8 - 19,0	THERM 18 KD		THERM 18 KDZ	THERM 18 KDZ 5 (55 l, stainless)
2,65 - 24,9	THERM 25 KD	THERM 25 KDC	THERM 25 KDZ	THERM 25 KDZ 5 (55 l, stainless)
3,4 - 37,0	THERM 35 KD		THERM 35 KDZ	THERM 35 KDZ 5 (55 l, stainless)
8,4 - 68,5	THERM 65 KD			
OPTIMUM Condens				
3,2 - 14,8	THERM 14 KDN		THERM 14 KDZN	THERM 14 KDZN 5 (55 l, stainless)
4,9 - 20,7 (24,0)	THERM 24 KDN	THERM 24 KDCN	THERM 24 KDZN	THERM 24 KDZN 5 (55 l, stainless)
4,7 - 26,0	THERM 24 KDNS **			
CLASSIC Condens				
13,0 - 45,0	THERM 45 KD.A			
25,0 - 95,0	THERM 90 KD.A			

THERM wall-mounted gas atmospheric boilers

Heating power (kW)	With flow heating of water	With connection to external storage tank	With integrated storage tank for DHW
5,0 - 14,0		THERM PRO 14 XZ.A	THERM PRO 14 KX.A (55 l, stainless)
8,0 - 20,0	THERM 20 CXE.AA	THERM 20 LXZE.A	THERM 20 LXZE.A 5 (55 l, stainless)
12,0 - 28,0	THERM 28 CXE.AA	THERM 28 LXZE.A	

THERM wall-mounted electric boilers

Heating power (kW)	For heating with the option for connection to an external storage tank	Heating power (kW)	For heating with the option for connection to an external storage tank	Heating power (kW)	For heating with the option for connection to an external storage tank
Economic series		Standard series		With touch display	
2,5 - 7,5	THERM ELN 8	2,5 - 7,5	THERM EL 8	0,5 - 4,5	THERM EL 5
5,0 - 15,0	THERM ELN 15	2,5 - 15,0	THERM EL 15	1,0 - 9,0	THERM EL 9
		2,5 - 22,5	THERM EL 23	1,5 - 13,5	THERM EL 14
		5,0 - 30,0	THERM EL 30		
		5,0 - 37,5	THERM EL 38		
		5,0 - 45,0	THERM EL 45		

LEGEND

DHW Domestic hot water

* With the use of additional accessories, all boilers listed in the "Only for heating" column can be connected to an external storage tank

** It is a stationary gas boiler

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PREMIUM *Condens* Series

The **PREMIUM Condens** condensing gas boiler series includes boilers that operate with natural gas or propane, designed for central heating and supply water heating. This boiler series brings top technology based in the latest observations in the field. The boiler is made of most modern components enabling its active control of combustion process which provides its ecological, economic and safe operation. Customers can choose from four output series: – **18 kW, 25 kW, 35 kW** and **65 kW**.

The boilers have stainless exchanger with cooled front burner wall. The special type of the gas valve in combination with the BLUEJET® burner provides a high level modulation. It allows for operation and quality combustion even at low gas flow rate. The regulation ratio of this type of boiler is then 1:10 and the minimum output starts at 1.8 kW. Moreover, the gas valve allows for optimisation of the combustion process and gas consumption preventing unnecessary heat losses. This series provides very quiet operation thanks to the multiphase fan.

Thanks to the broad range of output modulation the boilers are suitable to be used in low-energy buildings with low heat loss. The boilers can also be used for a very quick hot water warming. The maximum possible heat output of the boiler is always used. Of course, these boilers can be regulated according to the outdoor temperature.

THERM 18 KD  

THERM 25 KD  

THERM 35 KD  



The boilers are designed for heating the heating system. These boilers are recommended in cases where heating the water is resolved by an electric reservoir. Additionally, these boilers can be completed by heating the water in an indirect heating reservoir by using an additional three-way valve accessory.

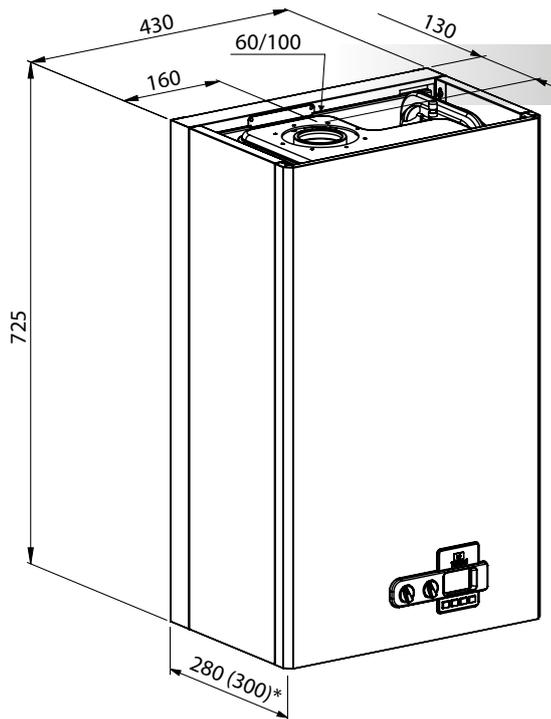
- Exceptionally ecological operation – Class NOx 6
- Condensing body with a brand new type of boiler: BLUEJET®
- Broad range of boiler output modulation
- A multiphase fan with a low operating noise level
- Electrically modulated gas valve
- Modulated circulating pump with high effectiveness
- New control unit with auto-diagnostics
- Boiler communication via OpenTherm+ protocol

PREMIUM
Condens

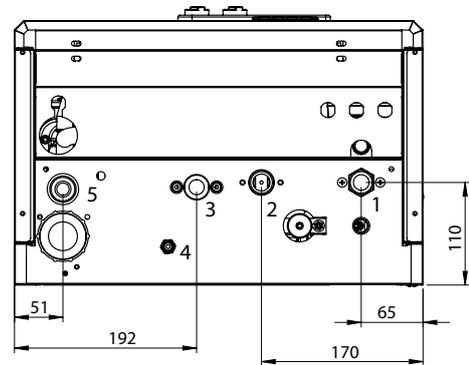


- There is also the option to heat water in an external reservoir and fitting with a three-way valve
- Suitable combination with the floor heating system

THERM BOILERS condensing boilers for heating



DIMENSIONS AND CONNECTION OF BOILER

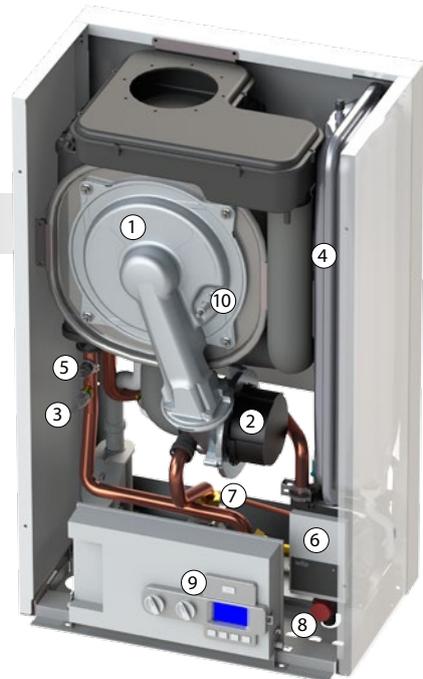


- 1 Input for returned water G 3/4" outside
- 2 Output for heating water G 3/4" outside
- 3 Input for gas G 3/4" outside
- 4 Additional filling
- 5 Condensate outlet

* The value in parenthesis is valid for THERM 35 KD

BOILER SET

- 1 - Condensing chamber
- 2 - Ventilator
- 3 - Heating temperature probe
- 4 - Expansion heating vessel
- 5 - Emergency thermostat
- 6 - Energy saving pump
- 7 - Gas valve
- 8 - Safety valve
- 9 - Control panel
- 10 - Compound ignition and ionising electrode



Technical data	Unit	THERM 18 KD	THERM 25 KD	THERM 35 KD
Min. – max. thermal output for heating	kW	1.8 – 19.0	2,65 – 24,9	3,4 – 37,0
Consumption of gas - natural gas	m ³ /h	0.181 – 1.749	0,26 – 2,50	0,33 – 3,50
Consumption of gas - propane	m ³ /h	0.070 – 0.711	0,10 – 0,92	0,14 – 1,45
Min. – max. overpressure of heating system	bar	0.8-3.0	0,8 – 3,0	0,8 – 3,0
Max. output temperature of heating water	°C	80	80	80
Boiler efficiency	%	99 – 106	99 – 106	99 – 106
Volume of expansion unit	l	7	7	7
Nominal supply voltage / frequency	V/Hz	230/50 ~	230/50 ~	230/50 ~
Auxiliary electricity at the nominal thermal input power	W	68.2	68.2	68.2
Level of coverage of electrical part	-	IP 41 (D)	IP 41 (D)	IP 41 (D)
Diameter of smoke flue	mm	60/100, 80/125, 2x 80	60/100, 80/125, 2x 80	60/100, 80/125, 2x 80
Dimensions: height/width/depth	mm	725/430/280	725/430/280	725/430/300
Weight of boiler	kg	28	28	28
Class of seasonal energy efficiency of heating	-	A	A	A
Order number	-	10105	1096	10117

THERM BOILERS condensing boilers with connection to external storage tank

THERM 18 KDZ 

THERM 25 KDZ 

THERM 35 KDZ 



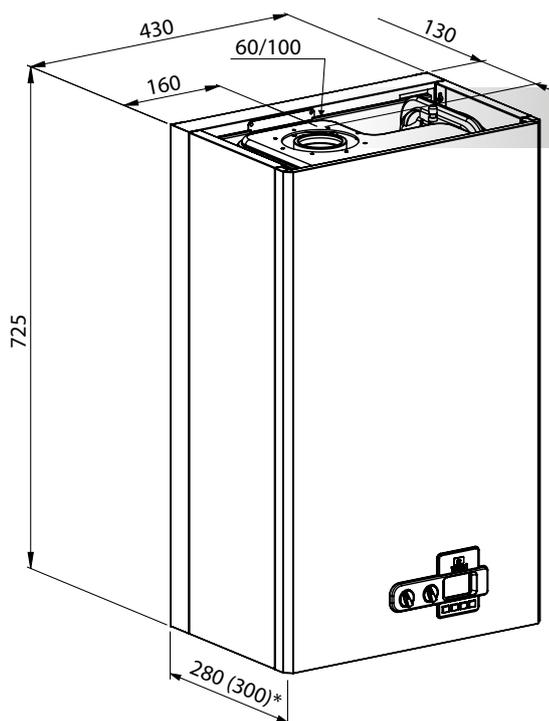
The boilers are designed for heating the heating system and heating water in an indirect heating external reservoir. The water is heated using the built-in three-way valve, which is part of the boiler. The advantage of this solution for heating water is a fast and comfort supply of hot water.

- The built-in three-way valve has the option to heat the water in an external storage tank
- Exceptionally ecological operation – Class NOx 6
- Condensing body with a brand new type of boiler: BLUEJET®
- Broad range of boiler output modulation
- A multiphase fan with a low operating noise level
- Electrically modulated gas valve
- Modulated circulating pump with high effectiveness

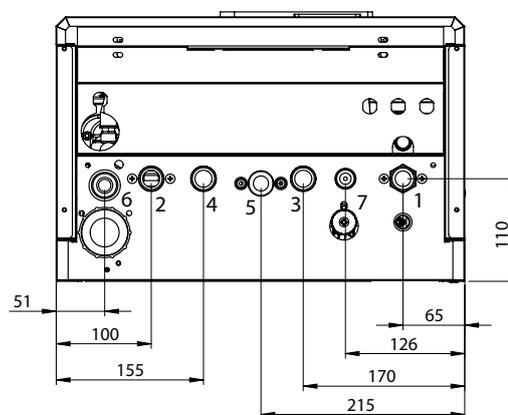
PREMIUM
Condens



- New control unit with auto-diagnostics
- Boiler communication via OpenTherm+ protocol
- Suitable combination with the floor heating system



DIMENSIONS AND CONNECTION OF BOILER



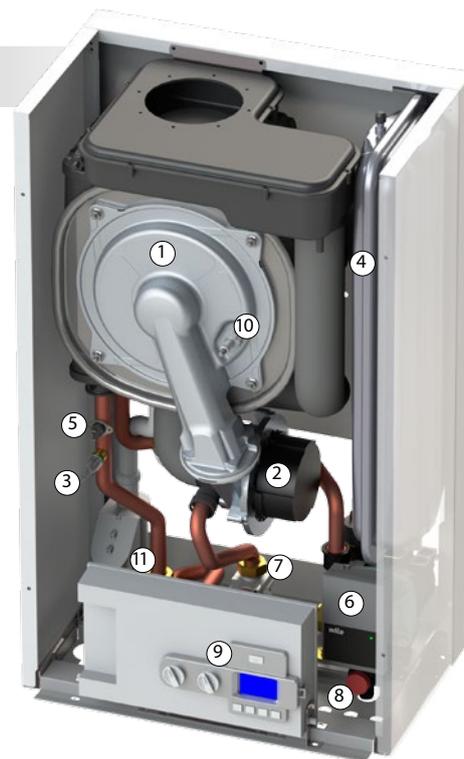
- 1 Input for returned water G 3/4" outside
- 2 Output for heating water G 3/4" outside
- 3 Input for returned water from the reservoir G 3/4" external
- 4 Output for heating water into the reservoir G 3/4" external
- 5 Input for gas G 3/4" outside
- 6 Condensate outlet
- 7 Additional filling

* The value in parenthesis is valid for THERM 35 KDZ

THERM BOILERS condensing boilers with connection to external storage tank

BOILER SET

- 1 - Condensing chamber
- 2 - Ventilator
- 3 - Heating temperature probe
- 4 - Expansion heating vessel
- 5 - Emergency thermostat
- 6 - Energy saving pump
- 7 - Gas valve
- 8 - Safety valve
- 9 - Control panel
- 10 - Compound ignition and ionising electrode
- 11 - Three-way valve



SPECIAL SET - Boilers are available in a set with stainless steel 80 liter reservoir of the boiler's design **THERM 80/S**, with connections, expansion tank for DHW and impurities separator with magnet (Order number 10106/80, 1097/80 or 10118/80).

Technical data	Unit	THERM 18 KDZ	THERM 25 KDZ	THERM 35 KDZ
Min. – max. thermal output for heating	kW	1.8 – 19.0	2,65 – 24,9	3,4 – 37,0
Nominal thermal output for heating DHW	kW	17.5	23.0	34.0
Consumption of gas - natural gas	m ³ /h	0.181 – 1.749	0,26 – 2,50	0,33 – 3,50
Consumption of gas - propane	m ³ /h	0.070 – 0.711	0,10 – 0,92	0,14 – 1,45
Min. – max. overpressure of heating system	bar	0.8-3.0	0,8 – 3,0	0,8 – 3,0
Max. output temperature of heating water	°C	80	80	80
Boiler efficiency	%	99 – 106	99 – 106	99 – 106
Volume of expansion unit	l	7	7	7
Nominal supply voltage / frequency	V/Hz	230/50 ~	230/50 ~	230/50 ~
Auxiliary electricity at the nominal thermal input power	W	68.2	68.2	68.2
Level of coverage of electrical part	-	IP 41 (D)	IP 41 (D)	IP 41 (D)
Diameter of smoke flue	mm	60/100, 80/125, 2x 80	60/100, 80/125, 2x 80	60/100, 80/125, 2x 80
Dimensions: height/width/depth	mm	725/430/280	725/430/280	725/430/300
Weight of boiler	kg	28	29	29
Class of seasonal energy efficiency of heating	-	A	A	A
Order number	-	10106	1097	10118

BOILER	The time for heating water in the storage tank from 10 to 60 °C in minutes					
	OKH 100 NTR/HV	OKH 125 NTR/HV	OKC 100 NTR	OKC 125 NTR	OKC 160 NTR	OKC 200 NTR
THERM 18 KDZ	20	25	20	25	32	40
THERM 25 KDZ	16	19	16	19	24	33
THERM 35 KDZ	12	14	12	14	18	25

THERM BOILERS condensing boilers with integrated storage tank

THERM 18 KDZ 5



THERM 25 KDZ 5



THERM 35 KDZ 5



The boilers are designed for heating of the central heating system and heating water in an indirect heating external tank. The water is heated in the same manner as for a combination of a boiler and an external indirect heating storage tank. The difference is only in the fact that for the type with a built-in storage tank, the storage tank is covered under the classification of the boiler. It can be used anywhere where a technical room is missing and the boiler is situated in the interior of a flat or a house.

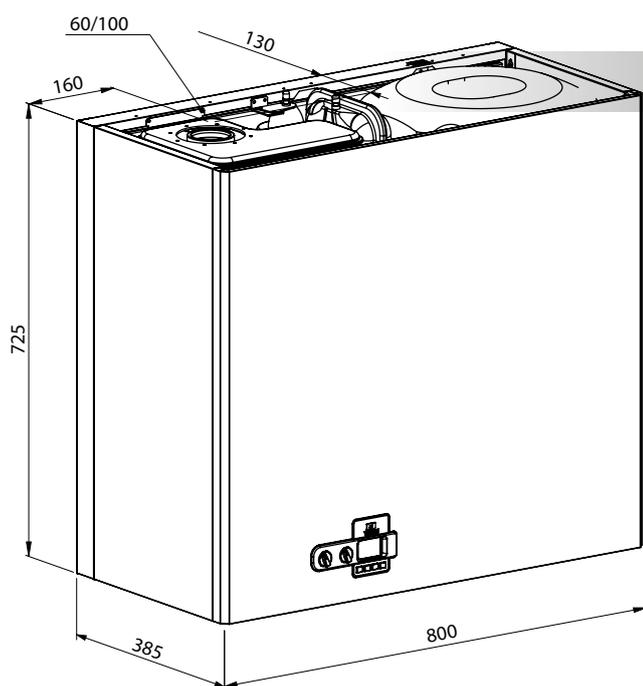
The advantage - there is no need for connections between the boiler and the tank.

- The boiler includes an indirect tank with a capacity of 55 litres (stainless)
- Exceptionally ecological operation – Class NOx 6

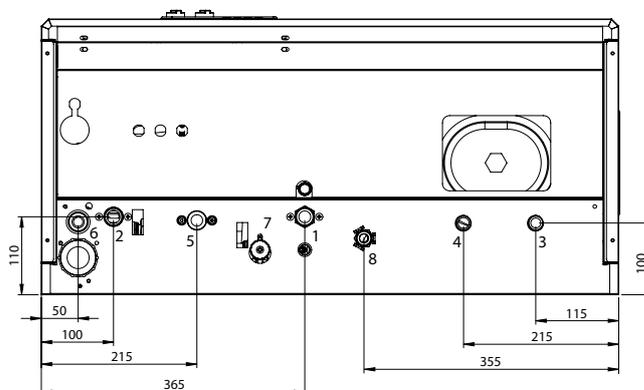
PREMIUM Condens



- Broad range of boiler output modulation
- Condensing body with a brand new type of boiler: BLUEJET®
- A multiphase fan with a low operating noise level
- Electrically modulated gas valve
- Modulated circulating pump with high effectiveness
- New control unit with auto-diagnostics
- Boiler communication via OpenTherm+ protocol
- Suitable combination with the floor heating system



DIMENSIONS AND CONNECTION OF BOILER



- 1 Input for returned water G 3/4" outside
- 2 Output for heating water G 3/4" outside
- 3 Input for service water G 1/2" outside
- 4 Output for service water G 1/2" outside
- 5 Input for gas G 3/4" outside
- 6 Condensate outlet
- 7 Additional filling
- 8 Circulation of service water G 1/2" outside

THERM BOILERS condensing boilers with integrated storage tank

SET OF BOILER

- 1 - Condensing chamber
- 2 - Ventilator
- 3 - Heating temperature probe
- 4 - Expansion heating vessel
- 5 - Emergency thermostat
- 6 - Energy saving pump
- 7 - Gas valve
- 8 - Tank DHW
- 9 - Control panel
- 10 - Compound ignition and ionising electrode
- 11 - Three-way valve
- 12 - Expansion tank DHW



Technical data	Unit	THERM 18 KDZ 5	THERM 25 KDZ 5	THERM 35 KDZ 5
Min. – max. thermal output for heating	kW	1.8 – 19.0	2,65 – 24,9	3,4 – 37,0
Nominal thermal output for heating DHW	kW	17.5	23.0	34.0
Consumption of gas - natural gas	m ³ /h	0.181 – 1.749	0,26 – 2,50	0,33 – 3,50
Consumption of gas - propane	m ³ /h	0.070 – 0.711	0,10 – 0,92	0,14 – 1,45
Min. – max. overpressure of heating system	bar	0.8-3.0	0,8 – 3,0	0,8 – 3,0
Max. output temperature of heating water	°C	80	80	80
Boiler efficiency	%	99 – 106	98 – 106	98 – 106
Volume of the expansion tank for heating water	l	7	7	7
Volume of integrated tank for water	l	55 (stainless)	55 (stainless)	55 (stainless)
Volume of expansion unit of DHW	l	2	2	2
Nominal supply voltage / frequency	V/Hz	230/50 ~	230/50 ~	230/50 ~
Auxiliary electricity at the nominal thermal input power	W	68.2	68.2	68.2
Level of coverage of electrical part	-	IP 41 (D)	IP 41 (D)	IP 41 (D)
Diameter of smoke flue	mm	60/100, 80/125, 2x 80	60/100, 80/125, 2x 80	60/100, 80/125, 2x 80
Dimensions: height/width/depth	mm	725/800/385	725/800/385	725/800/385
Weight of boiler	kg	54	54	54
Class of seasonal energy efficiency of heating	-	A	A	A
Energy efficiency class of water heating	-	A	A	A
Declared loading profile	-	L	XL	XL
Order number	-	10107	1099	10119

THERM BOILERS condensing boilers with flow heating of water

THERM 25 KDC



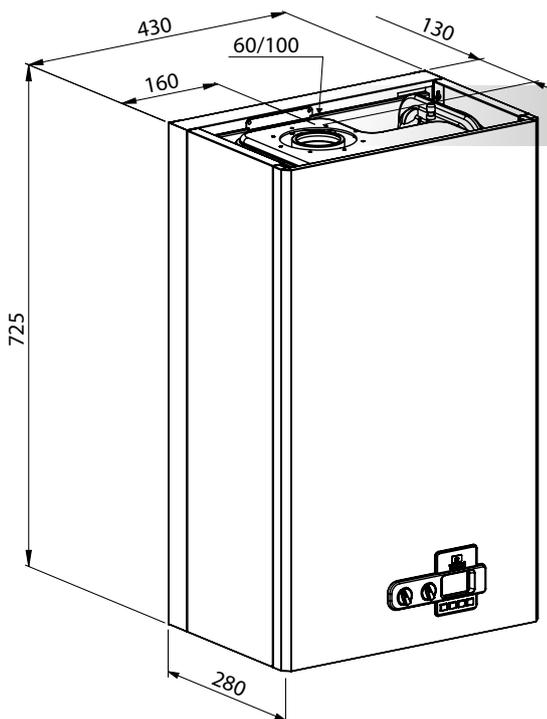
The boilers are designed for heating the heating system and heating running utility water. The water is heated using a secondary plate exchanger, which is part of the boiler. The advantages of this solution for heating utility water are the compact dimensions for small spaces and the low acquisition price of the device.

- Heating running utility water in the secondary plate exchanger
- Exceptionally ecological operation – Class NOx 6
- Condensing body with a brand new type of boiler: BLUEJET®
- Broad range of boiler output modulation
- A multiphase fan with a low operating noise level
- Electrically modulated gas valve
- Modulated circulating pump with high effectiveness
- New control unit with auto-diagnostics

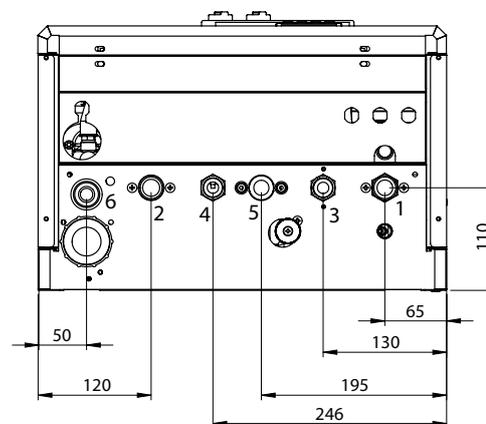
PREMIUM Condens



- Boiler communication via OpenTherm+ protocol
- Suitable combination with the floor heating system



DIMENSIONS AND CONNECTION OF BOILER

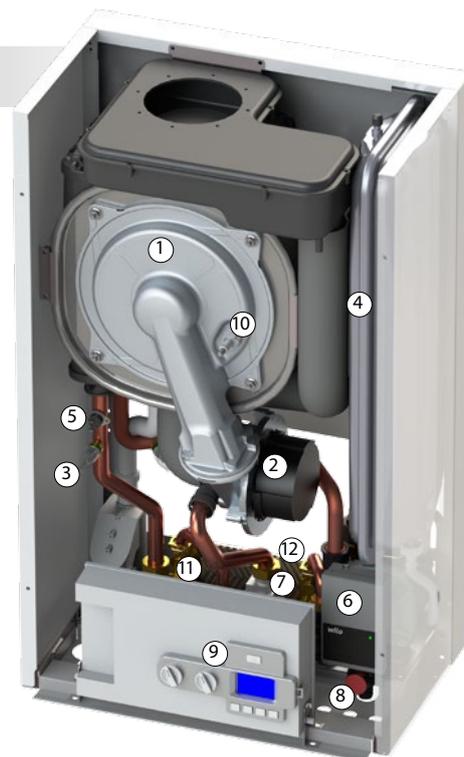


- 1 Input for returned water G 3/4" outside
- 2 Output for heating water G 3/4" outside
- 3 Input for service water G 1/2" outside
- 4 Output for service water G 1/2" outside
- 5 Input for gas G 3/4" outside
- 6 Condensate outlet

THERM BOILERS condensing boilers with flow heating of water

SET OF BOILER

- 1 - Condensing chamber
- 2 - Ventilator
- 3 - Heating temperature probe
- 4 - Expansion heating vessel
- 5 - Emergency thermostat
- 6 - Energy saving pump
- 7 - Gas valve
- 8 - Safety valve
- 9 - Control panel
- 10 - Compound ignition and ionising electrode
- 11 - Three-way valve
- 12 - Plate exchanger



Hydroblock



Technical data	Unit	THERM 25 KDC
Min. – max. thermal output for heating	kW	2,65 – 24,9
Nominal thermal output for heating DHW	kW	23.0
Consumption of gas - natural gas	m ³ /h	0,26 – 2,50
Consumption of gas - propane	m ³ /h	0,10 – 0,92
Min. – max. overpressure of heating system	bar	0,8 – 3,0
Max. output temperature of heating water	°C	80
Boiler efficiency	%	99 – 106
Volume of expansion unit	l	7
Nominal supply voltage / frequency	V/Hz	230/50 ~
Auxiliary electricity at the nominal thermal input power	W	68.2
Level of coverage of electrical part	-	IP 41 (D)
Diameter of smoke flue	mm	60/100, 80/125, 2x 80
Dimensions: height/width/depth	mm	725/430/280
Weight of boiler	kg	29
Class of seasonal energy efficiency of heating	-	A
Energy efficiency class of water heating	-	A
Declared loading profile	-	XL
Order number	-	1098

THERM 65 KD



NEWS

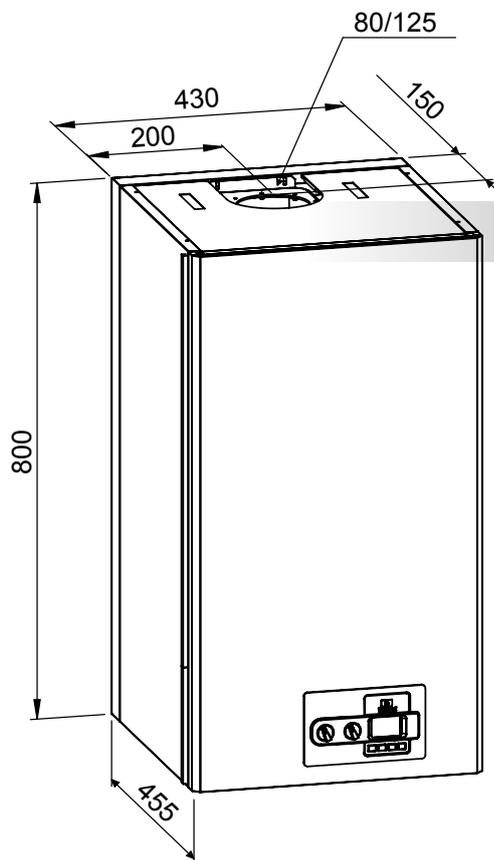
The boilers are designed for heating the heating system. These boilers are recommended in cases where heating the water is resolved by an electric reservoir. Additionally, these boilers can be completed by heating the water in an indirect heating reservoir by using an additional three-way valve accessory.

- Exceptionally ecological operation – Class NOx 6
- Condensing body with a brand new type of boiler: BLUEJET®
- Broad range of boiler output modulation
- A multiphase fan with a low operating noise level
- Electrically modulated gas valve
- Modulated circulating pump with high effectiveness
- New control unit with auto-diagnostics
- There is also the option to heat water in an external reservoir and fitting with a three-way valve
- Boiler communication via OpenTherm+ protocol

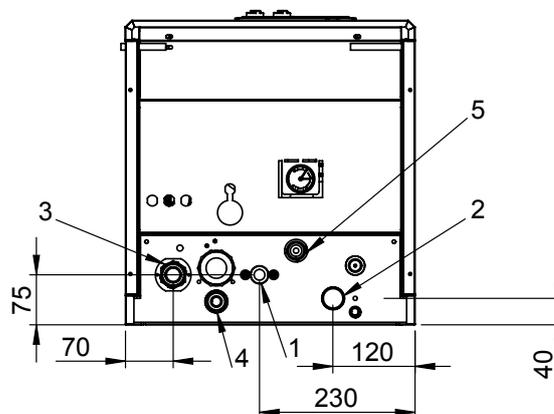
PREMIUM
Condens



- Suitable combination with the floor heating system
- Option of connection into cascade boiler rooms in order to increase heating power



DIMENSIONS AND CONNECTION OF BOILER



- 1 Input for gas G 3/4" outside
- 2 Input for returned water G 1" outside
- 3 Output for heating water G 1" outside
- 4 Condensate outlet
- 5 Output safety valve

THERM BOILERS condensing boilers for heating

BOILER SET

- 1 - Condensing chamber
- 2 - Ventilator
- 3 - Heating temperature probe
- 4 - Emergency thermostat
- 5 - Circulation pump
- 6 - Gas valve
- 7 - Safety valve
- 8 - De-aerating valve*
- 9 - Control panel
- 10 - Compound ignition and ionising electrode
- 11 - Pressure gauge
- 12 - Gully trap (siphon)



Technical data	Unit	THERM 65 KD
Min. – max. thermal output for heating	kW	8,4 – 68,5
Consumption of gas - natural gas	m ³ /h	0,80 – 6,30
Consumption of gas - propane	m ³ /h	-
Min. – max. overpressure of heating system	bar	0,8 – 3,0
Max. output temperature of heating water	°C	80
Boiler efficiency	%	98 – 106
Volume of expansion unit	l	-
Nominal supply voltage / frequency	V/Hz	230/50 ~
Auxiliary electricity at the nominal thermal input power	W	74.5
Level of coverage of electrical part	-	IP x1D
Diameter of smoke flue	mm	80/125, 2x 80
Dimensions: height/width/depth	mm	800/430/455
Weight of boiler	kg	42
Class of seasonal energy efficiency of heating	-	A
Order number	-	10120

OPTIMUM *Condens* Series

The **OPTIMUM *Condens*** condensing gas boiler series includes boilers that operate with natural gas or propane, designed for central heating and supply water heating. We are currently offering two output series – **14 kW** and **24 kW**. The boilers of this series consist of components that provide an alternative of a condensing boiler with an optimal price/performance ratio. Thus, we offer customers a high-quality condensation boiler with a wide range of use for a very favourable price.

The boiler consists of a **condensing body with stainless exchanger**, providing long service life, and a top-quality burner with high efficiency and ecological operation. The shape and dimensions of the exchanger tube plate **limit the settlement of scale** and sedimentation of the exchanger.

The boilers have built-in equithermic regulation for optimisation of the hot water temperature based on the outdoor temperature, thus reducing the cost of heating. The THERM 24 KDxN boiler series has an **increased output for hot water** production and meet the high comfort demands of customers.

The advantages of the boilers also include the very quiet operation and small compact dimensions that allow for the installation of the boiler in the interior of family homes and flats. It is ideal to combine them with floor heating.

A stationary boiler model THERM 24 KDNS, which preserves all advantages of condensing boiler, is new in the assortment and is determined for replacement of older stationary boilers versions in family houses and apartments.

THERM 14 KDN



THERM 24 KDN



The boilers are designed for heating the heating system. These boilers are recommended in cases where heating the water is resolved by an electric reservoir. Additionally, these boilers can be completed by heating the water in an indirect heating reservoir by using an additional three-way valve accessory.

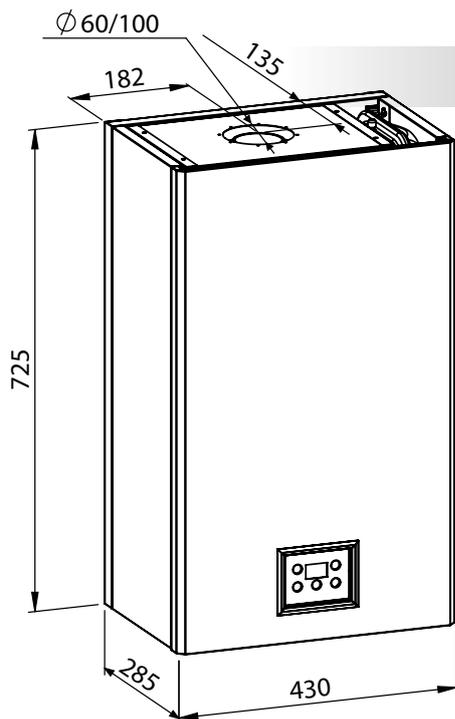
- Energy saving pump with electronic control
- Micro processor automatic control system
- Stainless condensing exchanger
- Fluent regulation of boiler output
- There is also the option to heat water in an external reservoir and fitting with a three-way valve
- Option of regulation according to the spatial or outdoor temperature (equithermal regulation)
- High efficiency with the use of the principle of condensing water steam from burnt gases
- Boiler communication via OpenTherm+ protocol

OPTIMUM
Condens



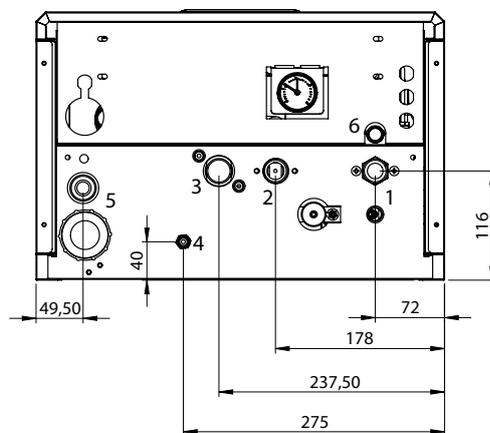
- Display of parameters via LCD display
- Suitable combination with the floor heating system
- Reliability and long service life

THERM BOILERS condensing boilers for heating



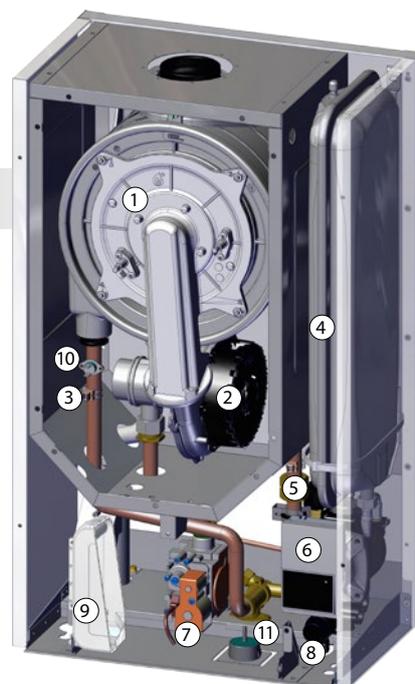
DIMENSIONS AND CONNECTION OF BOILER

- 1 Input for returned water G 3/4" outside
- 2 Output for heating water G 3/4" outside
- 3 Input for gas G 3/4" outside
- 4 Input for additional filling
- 5 Condensate outlet
- 6 Output safety valve



SET OF BOILER

- 1 - Condensing body
- 2 - Ventilator
- 3 - Heating temperature probe
- 4 - Expansion heating vessel
- 5 Pressure sensor
- 6 - Circulation pump
- 7 - Gas valve
- 8 - Safety valve
- 9 - Control panel
- 10 - Emergency thermostat
- 11 - Manometer



Technical data	Unit	THERM 14 KDN	THERM 24 KDN
Min. – max. thermal output for heating	kW	3,2 – 14,8	4,9 – 20,7
Consumption of gas - natural gas	m ³ /h	0,31 – 1,52	0,48 – 2,04
Consumption of gas - propane	m ³ /h	0,12 – 0,60	0,20 – 0,80
Min. – max. overpressure of heating system	bar	0,8 – 3,0	0,8 – 3,0
Max. output temperature of heating water	°C	80	80
Boiler efficiency	%	99 – 107	99 – 107
Volume of expansion unit	l	7	7
Nominal supply voltage / frequency	V/Hz	230/50 ~	230/50 ~
Auxiliary electricity at the nominal thermal input power	W	70.0	70.0
Level of coverage of electrical part	-	IP 41 (D)	IP 41 (D)
Diameter of smoke flue	mm	60/100, 80/125, 2x 80	60/100, 80/125, 2x 80
Dimensions: height/width/depth	mm	725/430/285	725/430/285
Weight of boiler	kg	32	32
Class of seasonal energy efficiency of heating	-	A	A
Order number	-	10101	1093

THERM BOILERS condensing boilers with connection to external storage tank

THERM 14 KDZN 

THERM 24 KDZN 



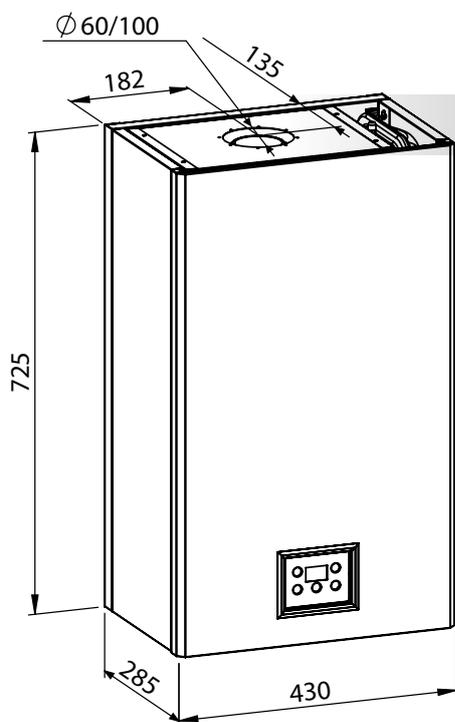
The boilers are designed for heating the heating system and heating water in an indirect heating external reservoir. The water is heated using the built-in three-way valve, which is part of the boiler. The advantage of this solution for heating water is a fast and comfort supply of hot water.

- The built-in three-way valve has the option to heat the water in an external storage tank
- Energy saving pump with electronic control
- Micro processor automatic control system
- Stainless condensing exchanger
- Fluent regulation of boiler output
- Option of regulation according to the spatial or outdoor temperature (equithermal regulation)
- High efficiency with the use of the principle of condensing water steam from burnt gases
- Boiler communication via OpenTherm+ protocol

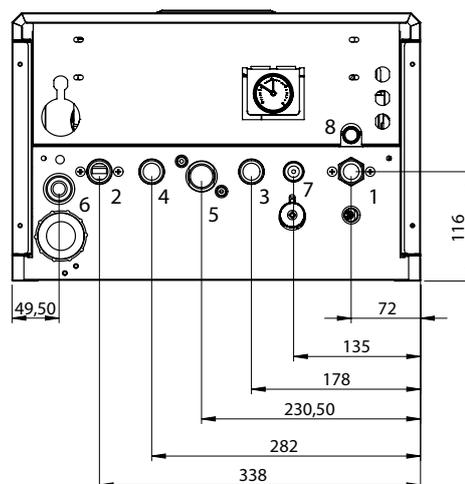
OPTIMUM
Condens



- Display of parameters via LCD display
- Suitable combination with the floor heating system
- Reliability and long service life



DIMENSIONS AND CONNECTION OF BOILER

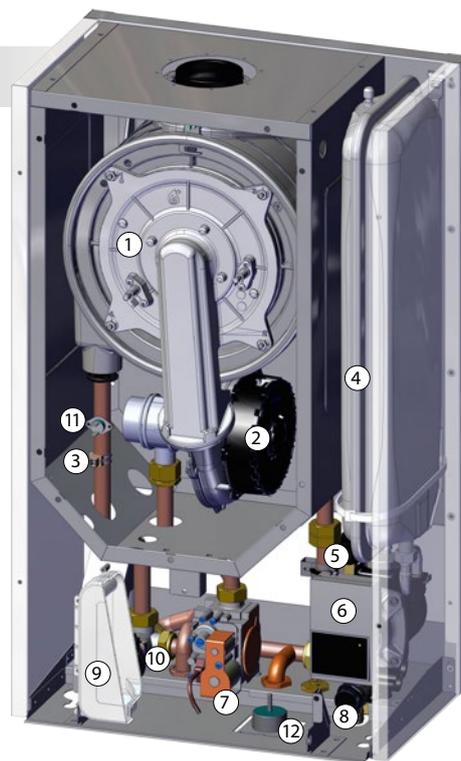


- 1 Input for returned water G 3/4" outside
- 2 Output for heating water G 3/4" outside
- 3 Input for returned water from the reservoir G 3/4" external
- 4 Output for heating water into the reservoir G 3/4" external
- 5 Input for gas G 3/4" outside
- 6 Condensate outlet
- 7 Input for additional filling G 1/2" outside
- 8 Output safety valve

THERM BOILERS condensing boilers with connection to external storage tank

SET OF BOILER

- 1 - Condensing body
- 2 - Ventilator
- 3 - Heating temperature probe
- 4 - Expansion heating vessel
- 5 Pressure sensor
- 6 - Circulation pump
- 7 - Gas valve
- 8 - Safety valve
- 9 - Control panel
- 10 - Three-way valve
- 11 - Emergency thermostat
- 12 - Manometer



Technical data	Unit	THERM 14 KDZN	THERM 24 KDZN
Min. – max. thermal output for heating	kW	3.2 – 14.8	4,9 – 20,7
Nominal thermal output for heating DHW	kW	14.2	24.0
Consumption of gas - natural gas	m ³ /h	0.31 – 1.52	0,48 – 2,04
Consumption of gas - propane	m ³ /h	0.12 – 0.60	0,20 – 0,80
Min. – max. overpressure of heating system	bar	0.8-3.0	0,8 – 3,0
Max. output temperature of heating water	°C	80	80
Boiler efficiency	%	99 – 107	99 – 107
Volume of expansion unit	l	7	7
Nominal supply voltage / frequency	V/Hz	230/50 ~	230/50 ~
Auxiliary electricity at the nominal thermal input power	W	70.0	70.0
Level of coverage of electrical part	-	IP 41 (D)	IP 41 (D)
Diameter of smoke flue	mm	60/100, 80/125, 2x 80	60/100, 80/125, 2x 80
Dimensions: height/width/depth	mm	725/430/285	725/430/285
Weight of boiler	kg	33	33
Class of seasonal energy efficiency of heating	-	A	A
Order number	-	10102	1092

BOILER	The time for heating water in the storage tank from 10 to 60 °C in minutes					
	OKH 100 NTR/HV	OKH 125 NTR/HV	OKC 100 NTR	OKC 125 NTR	OKC 160 NTR	OKC 200 NTR
THERM 14 KDZN	25	30	25	30	38	53
THERM 24 KDZN	16	19	16	19	24	33

THERM BOILERS condensing boilers with integrated storage tank

THERM 14 KDZN 5  

THERM 24 KDZN 5  



The boilers are designed for heating of the central heating system and heating water in an indirect heating external tank. The water is heated in the same manner as for a combination of a boiler and an external indirect heating storage tank. The difference is only in the fact that for the type with a built-in storage tank, the storage tank is covered under the classification of the boiler. It can be used anywhere where a technical room is missing and the boiler is situated in the interior of a flat or a house.

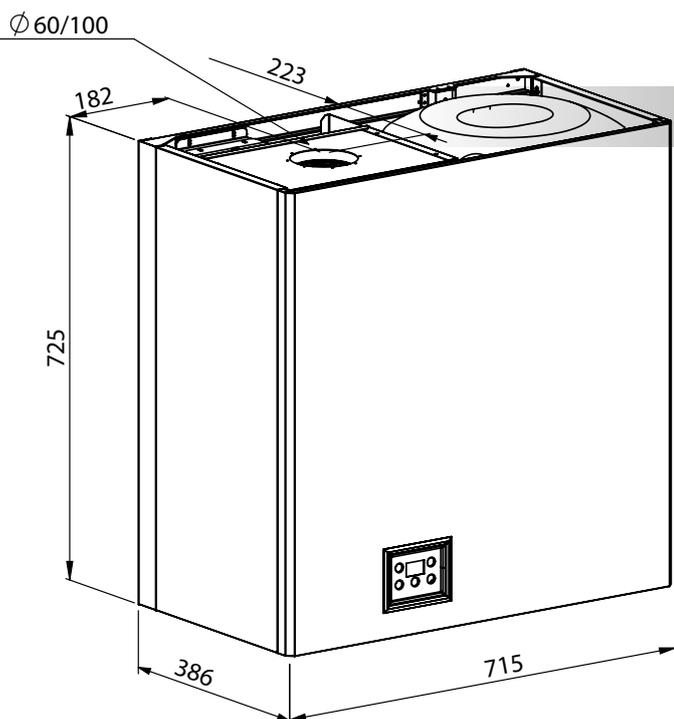
The advantage - there is no need for connections between the boiler and the tank.

- The boiler includes an indirect tank with a capacity of 55 litres (stainless)
- Boiler width only 715 mm
- Energy saving pump with electronic control
- Micro processor automatic control system

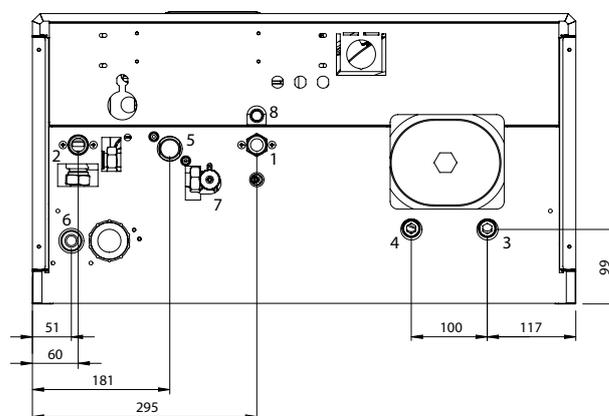
OPTIMUM
Condens



- Stainless condensing exchanger
- Fluent regulation of boiler output
- Option of regulation according to the spatial or outdoor temperature (equithermal regulation)
- High efficiency with the use of the principle of condensing water steam from burnt gases
- Boiler communication via OpenTherm+ protocol
- Display of parameters via LCD display
- Suitable combination with the floor heating system
- Reliability and long service life



DIMENSIONS AND CONNECTION OF BOILER



- 1 Input for returned water G 3/4" outside
- 2 Output for heating water G 3/4" outside
- 3 Input for service water G 1/2" outside
- 4 Output for service water G 1/2" outside
- 5 Input for gas G 3/4" outside
- 6 Condensate outlet
- 7 Input for additional filling G 1/2" outside
- 8 Output safety valve

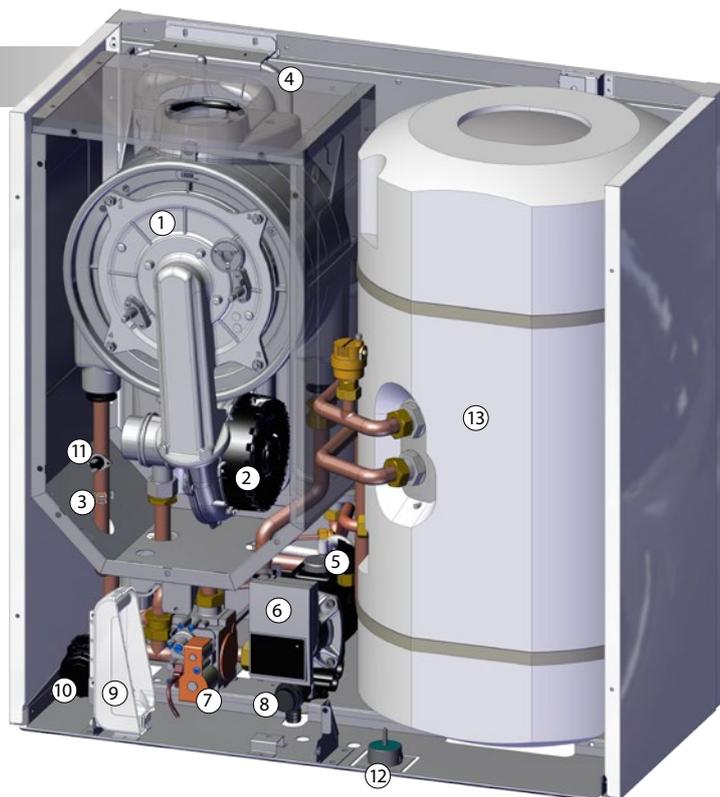
THERM BOILERS condensing boilers with integrated storage tank

SET OF BOILER

- 1 - Condensing body
- 2 - Ventilator
- 3 - Heating temperature probe
- 4 - Expansion heating vessel
- 5 Pressure sensor
- 6 - Circulation pump
- 7 - Gas valve
- 8 - Safety valve
- 9 - Control panel
- 10 - Three-way valve
- 11 - Emergency thermostat
- 12 - Manometer
- 13 - Tank DHW



Condensation body



Technical data	Unit	THERM 14 KDZN 5	THERM 24 KDZN 5
Min. – max. thermal output for heating	kW	3.2 – 14.8	4,9 – 20,7
Nominal thermal output for heating DHW	kW	14.2	24.0
Consumption of gas - natural gas	m ³ /h	0.31 – 1.52	0,48 – 2,04
Consumption of gas - propane	m ³ /h	0.12 – 0.60	0,20 – 0,80
Min. – max. overpressure of heating system	bar	0.8-3.0	0,8 – 3,0
Max. output temperature of heating water	°C	80	80
Boiler efficiency	%	99 – 107	98 – 107
Volume of the expansion tank for heating water	l	7	7
Volume of integrated tank for water	l	55 (stainless)	55 (stainless)
Volume of expansion unit of DHW	l	2	2
Nominal supply voltage / frequency	V/Hz	230/50 ~	230/50 ~
Auxiliary electricity at the nominal thermal input power	W	70.0	70.0
Level of coverage of electrical part	-	IP 41 (D)	IP 41 (D)
Diameter of smoke flue	mm	60/100, 80/125, 2x 80	60/100, 80/125, 2x 80
Dimensions: height/width/depth	mm	725/715/386	725/715/386
Weight of boiler	kg	48	48
Class of seasonal energy efficiency of heating	-	A	A
Energy efficiency class of water heating	-	A	A
Declared loading profile	-	XL	XL
Order number	-	10103	1094

THERM BOILERS condensing boilers with flow heating of water

THERM 24 KDCN



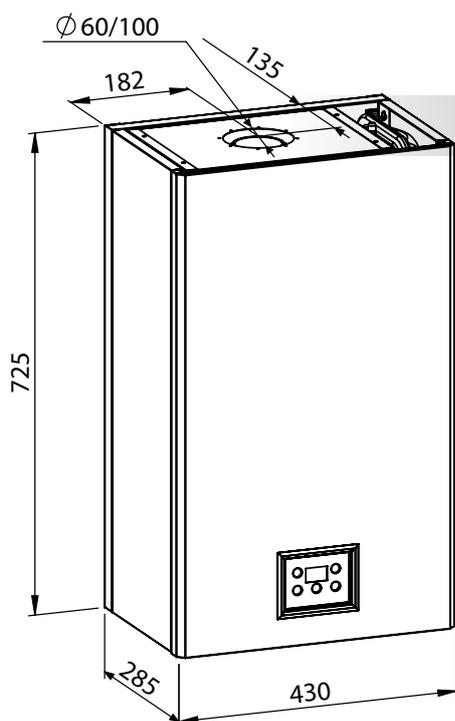
The boilers are designed for heating the heating system and heating running utility water. The water is heated using a secondary plate exchanger, which is part of the boiler. The advantages of this solution for heating utility water are the compact dimensions for small spaces and the low acquisition price of the device.

- Heating running utility water in the secondary plate exchanger
- Energy saving pump with electronic control
- Micro processor automatic control system
- Stainless condensing exchanger
- The COMFORT function - more flexible heating of water
- Fluent regulation of boiler output
- Option of regulation according to the spatial or outdoor temperature (equithermal regulation)
- High efficiency with the use of the principle of condensing water steam from burnt gases

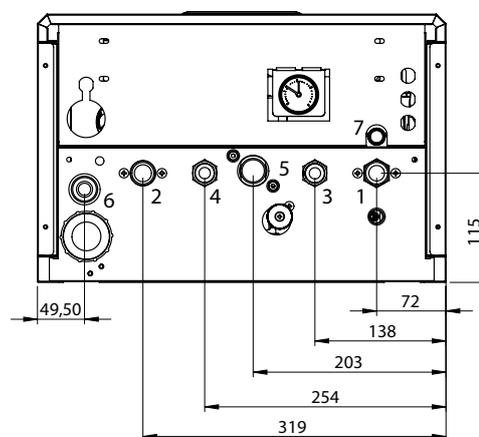
OPTIMUM Condens



- Display of parameters via LCD display
- Boiler communication via OpenTherm+ protocol
- Suitable combination with the floor heating system
- Reliability and long service life



DIMENSIONS AND CONNECTION OF BOILER

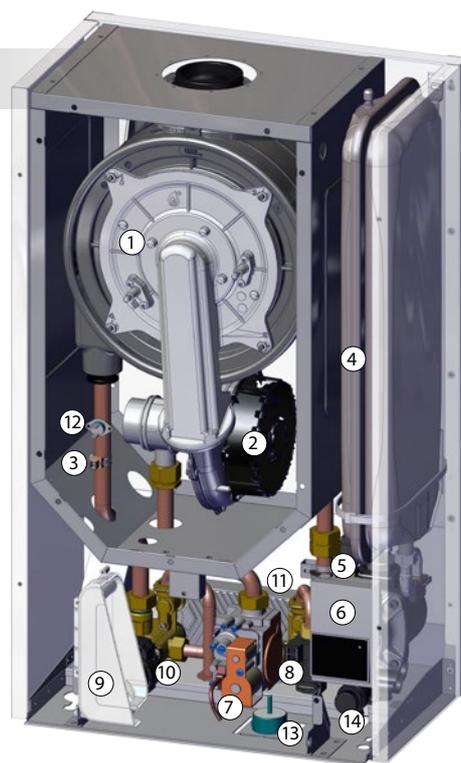


- 1 Input for returned water G 3/4" outside
- 2 Output for heating water G 3/4" outside
- 3 Input for service water G 1/2" outside
- 4 Output for service water G 1/2" outside
- 5 Input for gas G 3/4" outside
- 6 Condensate outlet
- 7 Output safety valve

THERM BOILERS condensing boilers with flow heating of water

SET OF BOILER

- 1 - Condensing body
- 2 - Ventilator
- 3 - Heating temperature probe
- 4 - Expansion heating vessel
- 5 Pressure sensor
- 6 - Circulation pump
- 7 - Gas valve
- 8 - Flow switch
- 9 - Control panel
- 10 - Three-way valve
- 11 - Plate exchanger
- 12 - Emergency thermostat
- 13 - Manometer
- 14 - Safety valve



Technical data	Unit	THERM 24 KDCN
Min. – max. thermal output for heating	kW	4,9 – 20,7
Nominal thermal output for heating DHW	kW	24,0
Consumption of gas - natural gas	m ³ /h	0,48 – 2,04
Consumption of gas - propane	m ³ /h	0,20 – 0,80
Min. – max. overpressure of heating system	bar	0,8 – 3,0
Max. output temperature of heating water	°C	80
Boiler efficiency	%	99 – 107
Volume of expansion unit	l	7
Nominal supply voltage / frequency	V/Hz	230/50 ~
Auxiliary electricity at the nominal thermal input power	W	70,0
Level of coverage of electrical part	-	IP 41 (D)
Diameter of smoke flue	mm	60/100, 80/125, 2x 80
Dimensions: height/width/depth	mm	725/430/285
Weight of boiler	kg	34
Class of seasonal energy efficiency of heating	-	A
Energy efficiency class of water heating	-	A
Declared loading profile	-	L
Order number	-	1091

THERM 24 KDNS



Stationary gas condensing boilers are designed only for heating the heating system. They fit for location in cellars with very low ceiling where the suspended boiler cannot be used and where the water heating is ensured in another way, for example with an electric storage. Additionally, these boilers can be completed by heating the water in an indirect heating reservoir by using an additional three-way valve accessory.

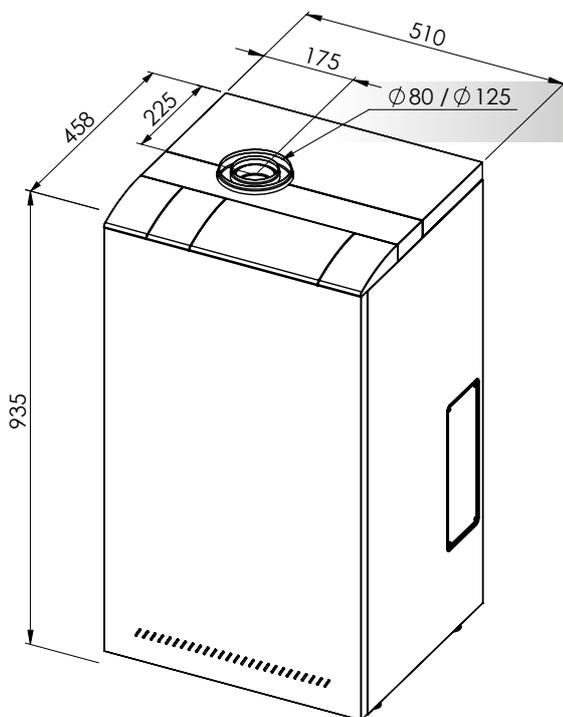
- Energy saving pump with electronic control
- Micro processor automatic control system
- Stainless condensing exchanger
- Fluent regulation of boiler output
- There is also the option to heat water in an external reservoir and fitting with a three-way valve
- Option of regulation according to the spatial or outdoor temperature (equithermal regulation)
- High efficiency with the use of the principle of condensing water steam from burnt gases
- Boiler communication via OpenTherm+ protocol



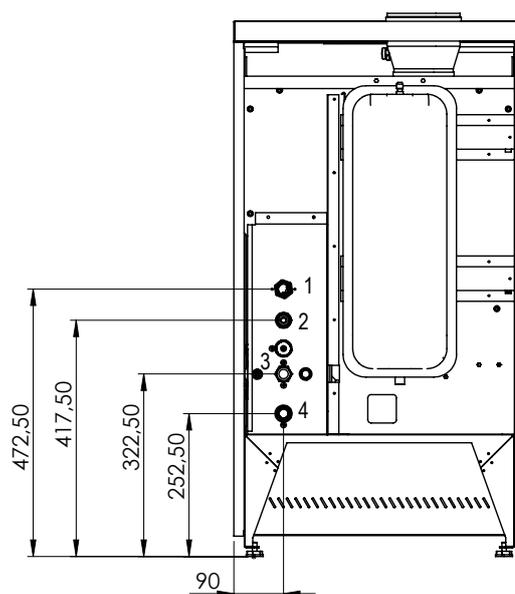
OPTIMUM
Condens



- Display of parameters via LCD display
- Suitable combination with the floor heating system
- Reliability and long service life



DIMENSIONS AND CONNECTION OF BOILER

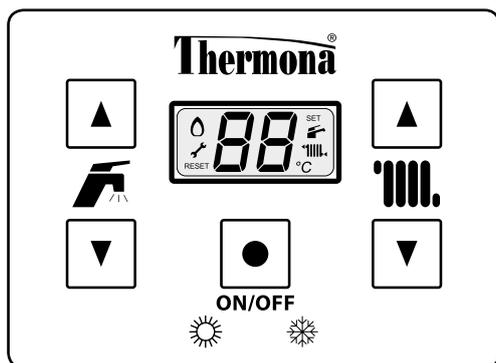


- 1 Input for gas G 3/4" outside
- 2 Input for additional filling G 1/2" outside
- 3 Input for returned water G 3/4" outside
- 4 Output for heating water G 3/4" outside

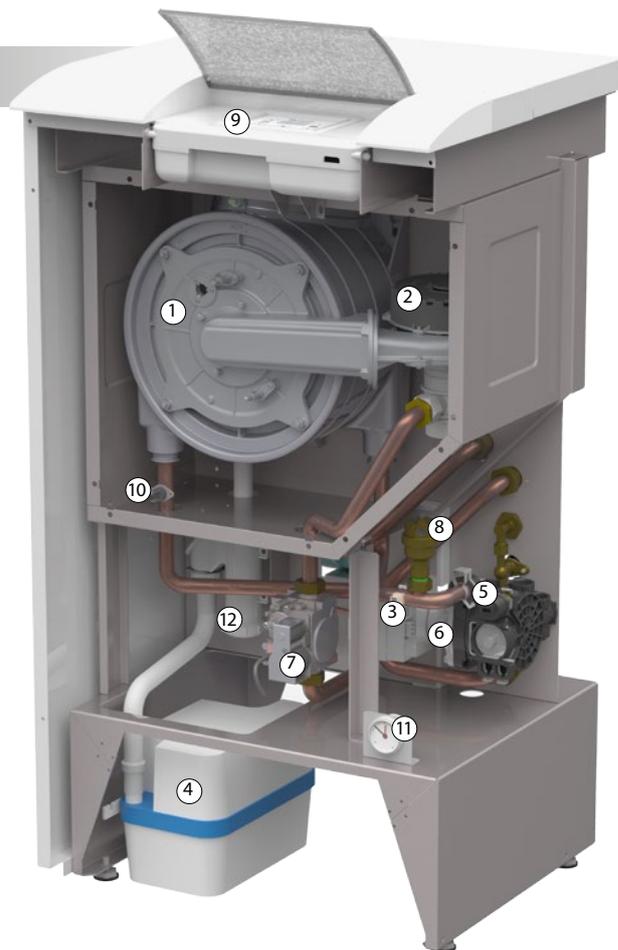
THERM BOILERS stationary condensing boilers for heating

SET OF BOILER

- 1 - Condensing body
- 2 - Ventilator
- 3 - Heating temperature probe
- 4 - Condensate pumping stations (optional accessories, not included)
- 5 Pressure sensor
- 6 - Circulation pump
- 7 - Gas valve
- 8 - De-aerating valve*
- 9 - Control panel
- 10 - Emergency thermostat
- 11 - Manometer
- 12 - Gully trap (siphon)



Control panel



The boiler includes a reduction flange from 60/100 to 80/125 (24678). Condensate pumping station (36522) is not a standard boiler part. Need to be ordered separately if necessary.

Technical data	Unit	THERM 24 KDNS
Min. – max. thermal output for heating	kW	4,7 – 26,0
Consumption of gas - natural gas	m ³ /h	0,46 – 2,70
Consumption of gas - propane	m ³ /h	0,20 – 1,03
Min. – max. overpressure of heating system	bar	0,8 – 3,0
Max. output temperature of heating water	°C	80
Boiler efficiency	%	98 – 107
Volume of expansion unit	l	7
Nominal supply voltage / frequency	V/Hz	230/50 ~
Auxiliary electricity at the nominal thermal input power	W	70.0
Level of coverage of electrical part	-	IP 41 (D)
Diameter of smoke flue	mm	80/125, 2x 80
Dimensions: height/width/depth	mm	935/510/458
Weight of boiler	kg	33
Class of seasonal energy efficiency of heating	-	A
Order number	-	1095

CLASSIC *Condens* Series

The **CLASSIC *Condens*** condensing gas boiler series includes boilers that operate with natural gas or propane, designed for central heating and supply water heating. We are currently offering three output series – **45 kW** and **90 kW**. These are condensing boilers with an attested design for heating larger objects. This type of boilers is also **base for condensing cascade boiler rooms** for heating residential homes, schools, medical facilities, accommodation facilities, or industrial objects.

The boiler consists of a condensing body with stainless exchanger and other quality components that provide safe operation at low cost. Also these boilers have built-in equithermic regulation for optimisation of the hot water temperature based on the outdoor temperature, thus reducing the cost of heating. These boilers can prepare the hot water in an external reservoir. An external three-way valve is necessary to be installed in the system for this type of heating.

THERM 45 KD.A



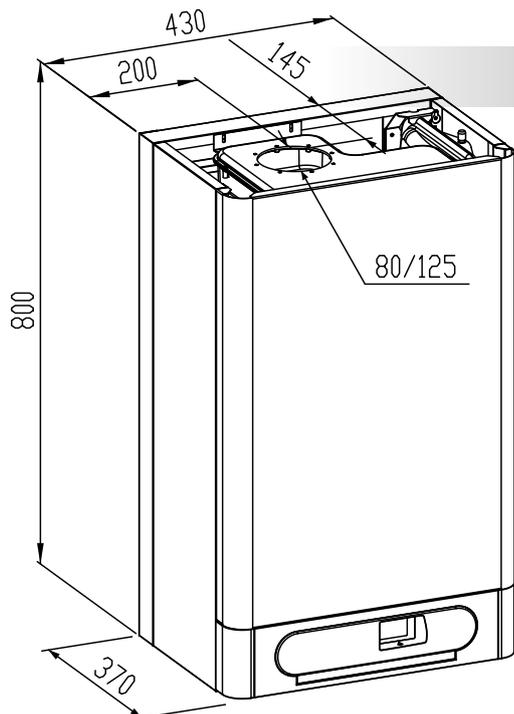
Suspended KD.A condensing boilers are only designed only for heating. These boilers are recommended in cases where heating the water is resolved by an electric reservoir. Additionally, these boilers can be completed by heating the water in an indirect heating reservoir by using an additional three-way valve accessory.

- Energy saving pump - savings of electric energy up to 50 %
- Use of new HDIMS 20-TH20 automatic control system
- There is also the option to heat water in an external reservoir and fitting with a three-way valve
- Option of regulation according to the spatial or outdoor temperature (equithermal regulation)
- Fluent regulation of boiler output
- High ecological operation
- Suitable combination with the floor heating system
- Option of connection into cascade boiler rooms in order to increase heating power

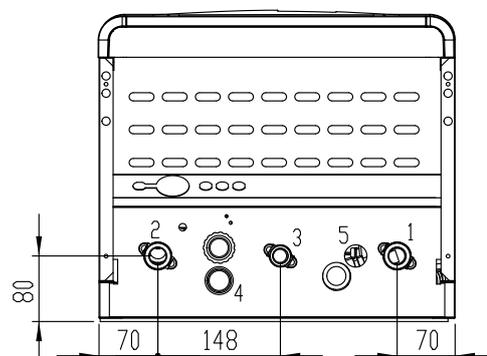
CLASSIC *Condens*



THERM BOILERS condensing boilers for heating



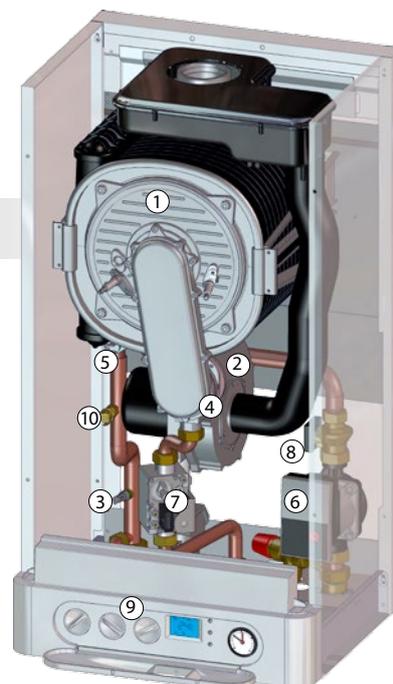
DIMENSIONS AND CONNECTION OF BOILER



- 1 Input for returned water G 1" outside
- 2 Output for heating water G 1" outside
- 3 Input for gas G 3/4" outside
- 4 Condensate outlet
- 5 Output safety valve

SET OF BOILER

- 1 - Condensing chamber
- 2 - Ventilator
- 3 - Heating temperature probe
- 4 - Mixer
- 5 - Emergency thermostat
- 6 - Energy saving pump
- 7 - Gas valve
- 8 - Flow switch
- 9 - Control panel
- 10 - Pressure switch



Technical data	Unit	THERM 45 KD.A
Min. – max. thermal output for heating	kW	13,0 – 45,0
Consumption of gas - natural gas	m ³ /h	1,28 – 4,52
Consumption of gas - propane	m ³ /h	-
Min. – max. overpressure of heating system	bar	0,8 – 3,0
Max. output temperature of heating water	°C	80
Boiler efficiency	%	98 – 106
Volume of expansion unit	l	-
Nominal supply voltage / frequency	V/Hz	230/50 ~
Auxiliary electricity at the nominal thermal input power	W	141.4
Level of coverage of electrical part	-	IP 41 (D)
Diameter of smoke flue	mm	80/125, 2x 80
Dimensions: height/width/depth	mm	800/430/370
Weight of boiler	kg	45
Class of seasonal energy efficiency of heating	-	A
Order number	-	1065.7

THERM 90 KD.A

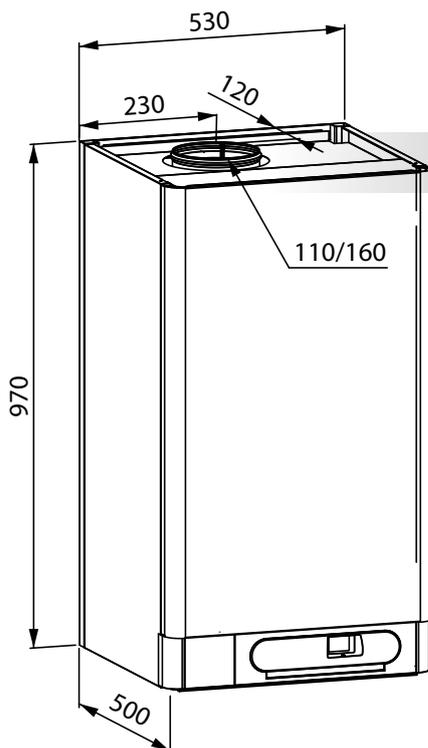
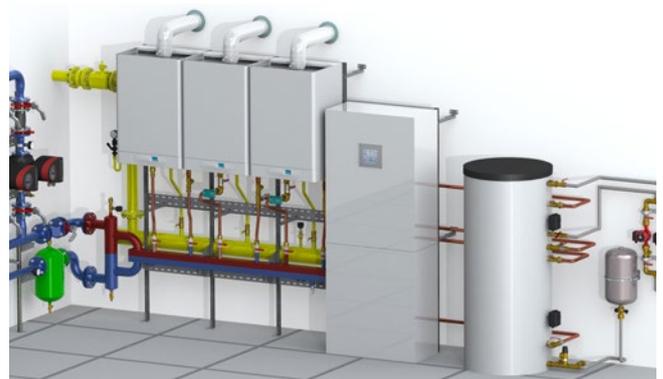


Suspended boilers are designed for heating buildings with heat losses of up to 95 kW. Heating buildings with a higher heat loss (up to 3040 kW) can be ensured with the advantage of using cascade boilers. The boiler can also be used for heating water in an external indirect storage tank. In this case, the boiler must be fitted with a three-way valve accessory.

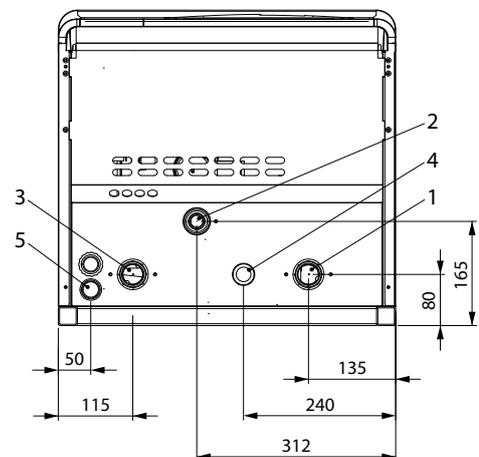
- Energy saving pump - savings of electric energy up to 50%
- HDIMS automatic steel Microprocessor system
- Stainless condensing body
- Option of regulation according to the spatial or outdoor temperature (equithermal regulation)
- Fluent regulation of boiler output
- High efficiency with the use of the principle of condensing water steam from burnt gases
- Display of parameters via LCD display
- Option of connection into cascade boiler rooms in order to increase heating power

CLASSIC
Condens

CLASS
NOx 6



DIMENSIONS AND CONNECTION OF BOILER

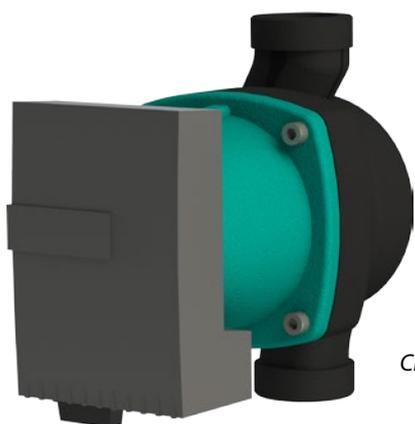
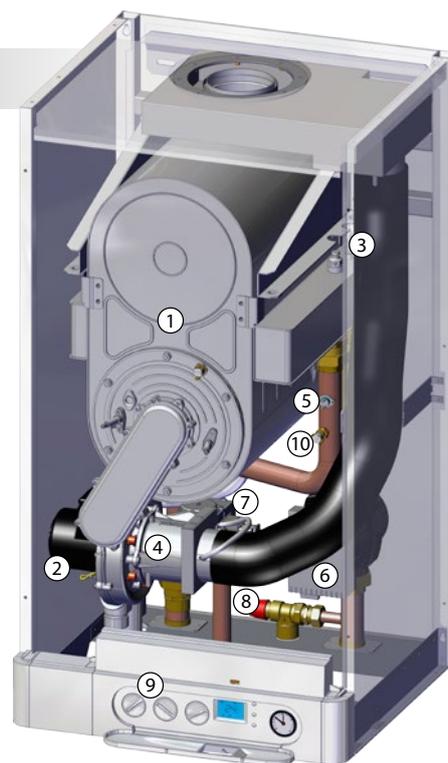


- 1 Input for returned water G 6/4" outside
- 2 Input for gas G 5/4" outside
- 3 Output for heating water G 6/4" outside
- 4 Output safety valve
- 5 Condensate outlet

THERM BOILERS condensing boilers for heating

BOILER SET

- 1 - Condensing chamber
- 2 - Ventilator
- 3 - Heating temperature probe
- 4 - Mixer
- 5 - Emergency thermostat
- 6 - Circulation pump
- 7 - Gas valve
- 8 - Safety valve
- 9 - Control panel
- 10 - Pressure switch



Circulation pump

Technical data	Unit	THERM 90 KD.A
Min. – max. thermal output for heating	kW	25,0 – 95,0
Consumption of gas - natural gas	m ³ /h	2,46 – 9,53
Consumption of gas - propane	m ³ /h	-
Min. – max. overpressure of heating system	bar	0,8 – 4,0
Max. output temperature of heating water	°C	80
Boiler efficiency	%	98 – 106
Volume of expansion unit	l	-
Nominal supply voltage / frequency	V/Hz	230/50 ~
Auxiliary electricity at the nominal thermal input power	W	288.0
Level of coverage of electrical part	-	IP 41 (D)
Diameter of smoke flue	mm	110/160, 2x 110
Dimensions: height/width/depth	mm	970/530/500
Weight of boiler	kg	71
Class of seasonal energy efficiency of heating	-	-
Order number	-	1090

THERM ATMOSPHERIC Gas Boiler Series

The THERM atmospheric gas boiler series includes boilers that operate with natural gas or propane, designed for central heating and supply water heating. Three power series are currently offered – 14 kW, 20 kW and 28 kW, with the option of water heating in an external tank, an integrated supply hot water storage tank, or instantaneous supply water heating.

The use of the boilers is defined in Directive No. 813/2013 of the European Commission that allows installing atmospheric combined boilers of type B1 with rated heat output below 30 kW only when connected to a flue common for several housing units in existing buildings.

Installation of condensed boilers would be technically complicated, and even impossible in some cases. Any other use of the boilers has to be avoided with respect to their lower output as it would lead to higher energy consumption and higher operating costs.

The base of the THERM atmospheric gas boilers is the combustion system formed by a copper lamellar heat exchanger and a special, water-cooled, low-emission burner. The components provide high-efficiency heat transfer from the combustion products to the heating medium with minimal production of harmful emission substances. Thanks to that, the boilers meet the requirements of the highest emission class, NOx 6.

THERM 20 CXE.AA



THERM 28 CXE.AA



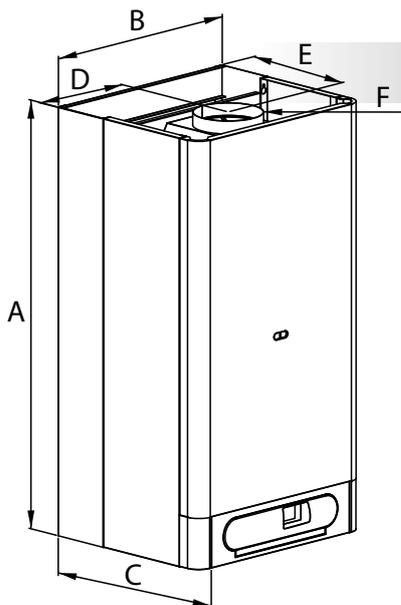
The boiler is designed for heating family houses, flats and other small buildings. The flow heating of the water is integrated in the boiler, which ensures the consumption of hot water. The advantage of the flow heating is the simple construction and the resulting low price of the equipment. For higher consumption of hot water, the connection of a gas boiler and the storage tank is recommended.

- Wall-mounted boilers with flow heating of water
- Water cooled low-emission burner
- Simple and intuitive control
- Fluent regulation of boiler output
- Option of regulation according to the spatial or outdoor temperature (equithermal regulation)
- Suitable combination with the floor heating system



- High efficiency and low gas consumption
- Option to control by room thermostat or intelligent room regulator using OpenTherm+ communication

THERM BOILERS with flow heating of water



DIMENSIONS OF BOILER

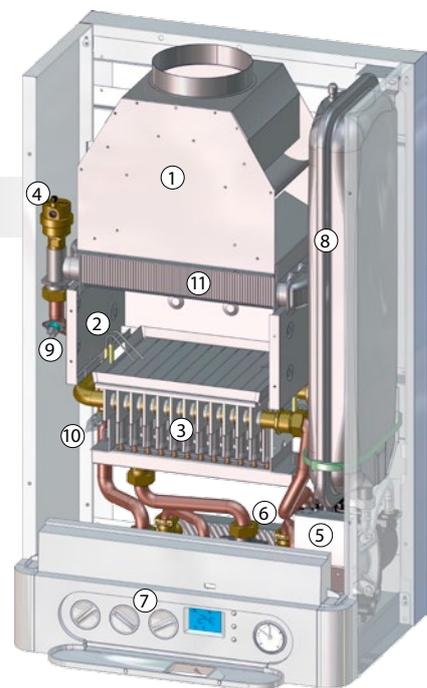
DIMENSIONS OF BOILER (mm)	BOILER MODEL	
	20 CXE.AA	28 CXE.AA
A	725	830
B	430	500
C	300	367
D	186	250
E	120	225
F	120	130

SET OF BOILER

- 1 - Burnt gases draught interrupting unit
- 2 - Combustion chamber
- 3 - Lownox burners
- 4 - De-aerating valve*
- 5 - Circulation pump
- 6 - Plate exchanger
- 7 - Control panel
- 8 - Expansion vessel
- 9 - Emergency thermostat
- 10 - Heating temperature probe
- 11 - Exchanger



Hydroblock



Technical data	Unit	THERM 20 CXE.AA	THERM 28 CXE.AA
Min. – max. thermal output for heating	kW	8 – 20	12 – 28
Consumption of gas - natural gas	m ³ /h	0,90 – 2,30	1,40 – 3,25
Consumption of gas - propane	m ³ /h	0,34 – 0,85	0,50 – 1,20
Flow of DHW at $\Delta t = 25\text{ }^{\circ}\text{C}$	l/min.	11.5	16.1
Flow of DHW at $\Delta t = 35\text{ }^{\circ}\text{C}$	l/min.	8.2	11.4
Maximum input pressure of cold water	bar	6	6
Min. – max. overpressure of heating system	bar	0,8 – 3,0	0,8 – 3,0
Max. output temperature of heating water	$^{\circ}\text{C}$	80	80
Boiler efficiency	%	92	92
Volume of expansion unit	l	7	10
Nominal supply voltage / frequency	V/Hz	230/50 ~	230/50 ~
Auxiliary electricity at the nominal thermal input power	W	65	65
Level of coverage of electrical part		IP 44	IP 44
Diameter of smoke flue	mm	120	130
Dimensions: height/width/depth	mm	725/430/300	830/500/367
Weight of boiler	kg	39	40
Class of seasonal energy efficiency of heating		C	C
Energy efficiency class of water heating		A	B
Declared loading profile		L	XL
Order number		1038.9	1044.9

THERM BOILERS with connection to external storage tank

THERM PRO 14 XZ.A  **C** 

THERM 20 LXZE.A  **C** 

THERM 28 LXZE.A  **C** 

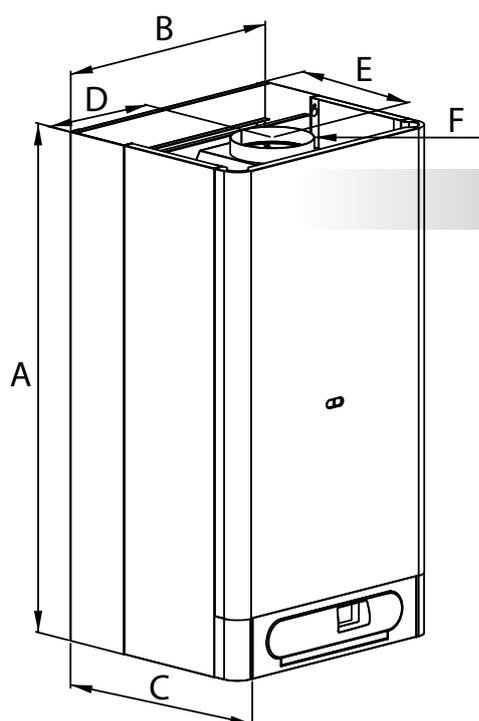


Boilers with the option for heating water in an external storage tank operate in the same manner as the series of boilers only designed for heating. In addition, these boilers are completed with a three-way valve enabling the heating of hot water storage tanks. Due to wide range of models and volumes of storage tanks, this type of boiler enables to produce a relatively high volume of hot water and to satisfy both common household and those demanding clients who require a high level of comfort.

- Wall-mounted boilers with connection to indirect hot water storage tank
- The boiler contains a three-way valve for alternative heating of the heating system and the hot water storage tank
- Water cooled low-emission burner
- Simple and intuitive control
- Fluent regulation of boiler output
- Option of regulation according to the spatial or outdoor temperature (equithermal regulation)



- High efficiency and low gas consumption
- Suitable combination with the floor heating system
- Option to control by room thermostat or intelligent room regulator using OpenTherm+ communication
- The boilers are fitted with a low-emission burner with very low emissions of CO and NOx



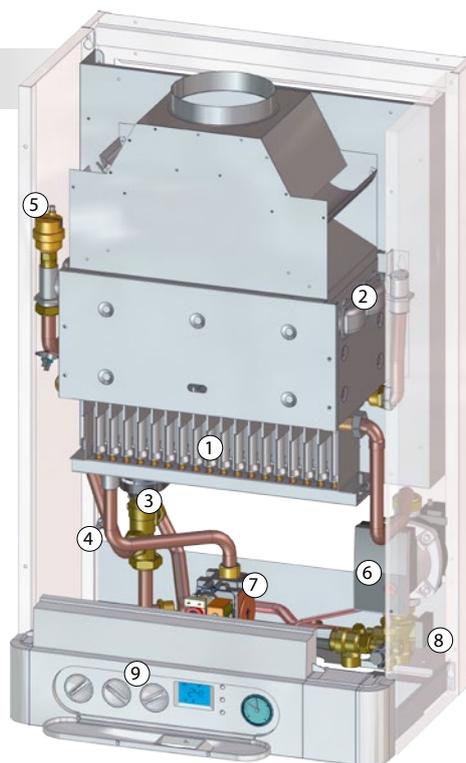
DIMENSIONS OF BOILER

DIMENSIONS OF BOILER (mm)	BOILER MODEL		
	PRO 14 XZ.A	20 LXZE.A	28 LXZE.A
A	800	725	830
B	430	430	500
C	275	300	367
D	255	186	250
E	140	120	225
F	110	120	130

THERM BOILERS with connection to external storage tank

SET OF BOILER

- 1 - Lownox burners
- 2 - Exchangers (burnt gases - water)
- 3 - Three-way valve
- 4 - Heating temperature probe
- 5 - Automatic de-aerating valve
- 6 - Circulation pump
- 7 - Gas valve
- 8 - Flow switch
- 9 - Control panel



Technical data	Unit	THERM PRO 14 XZ.A	THERM 20 LXZE.A	THERM 28 LXZE.A
Min. – max. thermal output for heating	kW	5 – 14	8 – 20	12 – 28
Consumption of gas - natural gas	m ³ /h	0,58 – 1,62	0,90 – 2,30	1,40 – 3,25
Consumption of gas - propane	m ³ /h	0,21 – 0,59	0,34 – 0,85	0,50 – 1,20
Min. – max. overpressure of heating system	bar	0,8 – 3,0	0,8 – 3,0	0,8 – 3,0
Max. output temperature of heating water	°C	80	80	80
Boiler efficiency	%	92	92	92
Volume of expansion unit	l	7	7	10
Nominal supply voltage / frequency	V/Hz	230/50 ~	230/50 ~	230/50 ~
Auxiliary electricity at the nominal thermal input power	W	60	65	65
Level of coverage of electrical part	-	IP 44 (D)	IP 44	IP 44
Diameter of smoke flue	mm	110	120	130
Dimensions: height/width/depth	mm	800/430/275	725/430/300	830/500/367
Weight of boiler	kg	30	37	41
Class of seasonal energy efficiency of heating	-	C	C	C
Order number	-	1014.9	1039.9	1045.9

BOILER	The time for heating water in the storage tank from 10 to 60 °C in minutes					
	OKH 100 NTR/HV	OKH 125 NTR/HV	OKC 100 NTR	OKC 125 NTR	OKC 160 NTR	OKC 200 NTR
THERM PRO 14 XZ.A	25	30	25	30	38	53
THERM 20 LXZE.A	17	20	17	20	27	35
THERM 28 LXZE.A	14	17	14	17	22	28

THERM BOILERS with integrated storage tank

THERM PRO 14 KX.A



THERM 20 LXZE.A 5

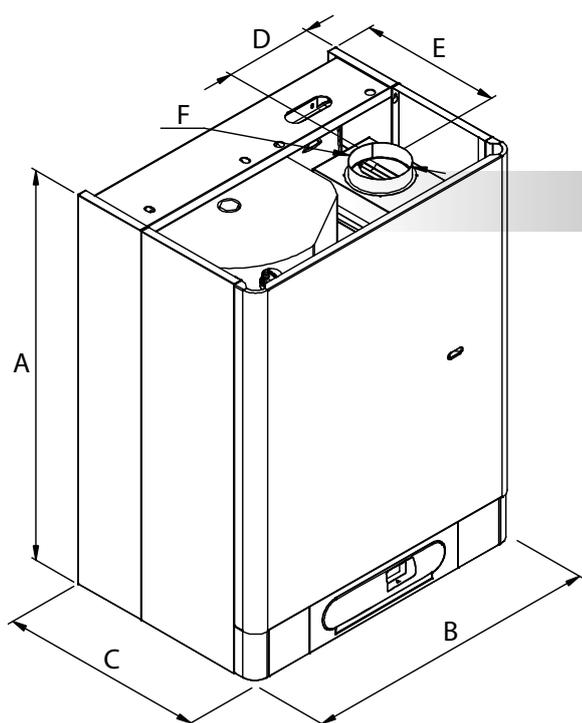


Boilers with built-in storage tanks are recommended for heating hot water in small-sized and medium-sized flats with insufficient space for the location of the boiler and the storage tank. The boiler is adapted for location in the interior. The connection between the boiler and the tank is not necessary.

- Wall-mounted boilers with built-in storage tank
- The boiler includes an indirect tank with a capacity of 55 litres (stainless)
- The boiler contains a three-way valve for alternative heating of the heating system and the storage tank
- Water cooled low-emission burner
- Simple and intuitive control
- Fluent regulation of boiler output
- Option of regulation according to the spatial or outdoor temperature (equithermal regulation)



- High efficiency and low gas consumption
- Suitable combination with the floor heating system
- Option to control by room thermostat or intelligent room regulator using OpenTherm+ communication



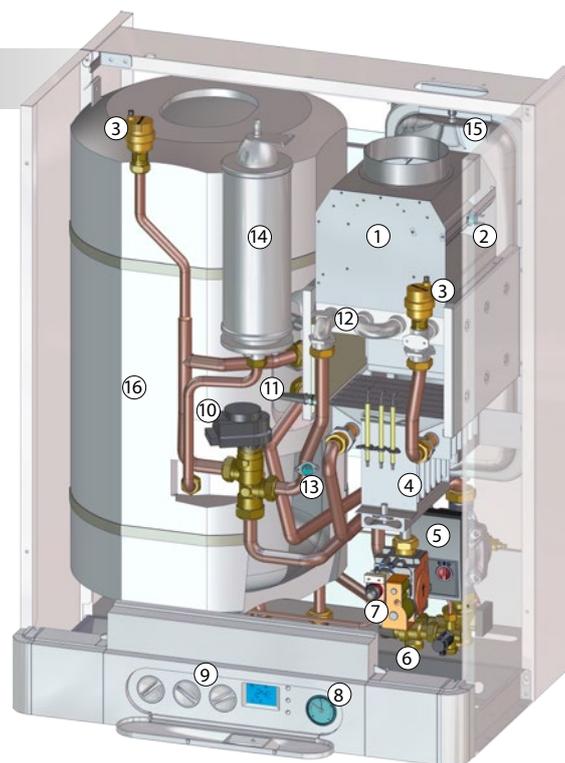
DIMENSIONS OF BOILER

DIMENSIONS OF BOILER (mm)	BOILER MODEL
	PRO 14 KX.A
A	830
B	630
C	435
D	142
E	250
F	110

THERM BOILERS with integrated storage tank

SET OF BOILER

- 1 - Draught interrupting unit
- 2 - Burnt gases thermostat
- 3 - De-aerating valve*
- 4 - Lownox burners
- 5 - Circulation pump
- 6 - Safety valve
- 7 - Gas valve
- 8 - Manometer
- 9 - Control panel
- 10 - Three-way valve
- 11 - Heating temperature probe
- 12 - Exchangers (burnt gases - water)
- 13 - Emergency thermostat
- 14 - Expansion tank DHW
- 15 - Expansion heating vessel
- 16 - Tank DHW



Technical data	Unit	THERM PRO 14 KX.A	THERM 20 LXZE.A 5
Min. – max. thermal output for heating	kW	5 – 14	8 – 20
Consumption of gas - natural gas	m ³ /h	0,58 – 1,62	0.90 – 2.30
Consumption of gas - propane	m ³ /h	0,21 – 0,59	0.34 – 0.85
Min. – max. overpressure of heating system	bar	0,8 – 3,0	0,8 – 3,0
Max. output temperature of heating water	°C	80	80
Boiler efficiency	%	92	92
Volume of expansion unit	l	7	10
Volume of storage tank for water	l	55 (stainless)	55 (stainless)
Volume of expansion unit of DHW	l	2	2
Nominal supply voltage / frequency	V/Hz	230/50 ~	230/50 ~
Auxiliary electricity at the nominal thermal input power	W	60	65
Level of coverage of electrical part	-	IP 44 (D)	IP 44
Diameter of smoke flue	mm	110	120
Dimensions: height/width/depth	mm	830/630/435	830/800/390
Weight of boiler	kg	70	62
Class of seasonal energy efficiency of heating	-	C	C
Energy efficiency class of water heating	-	B	A
Declared loading profile	-	L	L
Order number	-	1019.10	1076.1

THERM *Electric* Series

THERM electric boilers can be used as a universal heat source for heating in flats, family houses, recreational and industrial buildings, etc. The boilers can also be used for heating water in an external storage tank. In this case, the boiler must be fitted with appropriate accessories.

The indisputable advantage of a heating system with electric boilers is the low acquisition costs - there is no need for an expensive gas or chimney connection. The electric boiler operates in a hot-water heating system in a similar way as gas boilers with burners. The regulation principle is also very similar. Even the regulators that are used for regulating boilers and heating are the same. The advantage of the electric boiler is that it can be used to maintain temperature and heat recreational or other occasionally inhabited objects with the use of simple remote management via a GSM modem.

The electric boiler is also used as additional source for modern methods of heating, such as a thermal pump or solar thermal collectors. In cool periods when the primary source cannot heat the building to the required thermal comfort, the electric boiler is automatically activated.

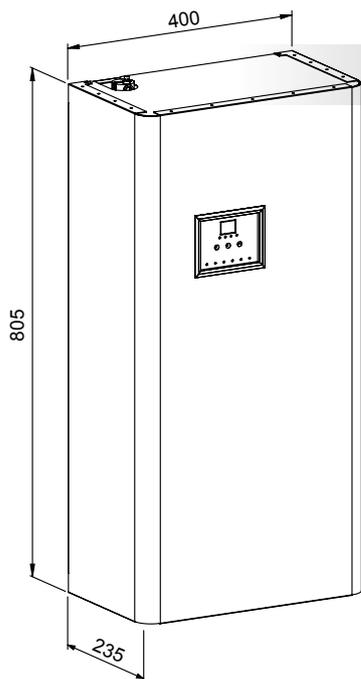
THERM ELN 8, 15



- Energy saving pump
- Very quiet operation due to selected switching relays
- Fluent regulation in low steps by 2.5 kW (5 kW for the boiler ELN 15)
- Minimum output of the boiler 2.5 kW (THERM ELN 8) or 5 kW (THERM ELN 15)
- Easy-to-orientate two-digit LED display
- Safety switch contactor
- There is also the option to hot water in an external reservoir and fitting with a three-way valve.
- Option to control output temperature by 0 - 10 V signal
- DSM communication - remote switching of the operation at low rate by the electricity supplier

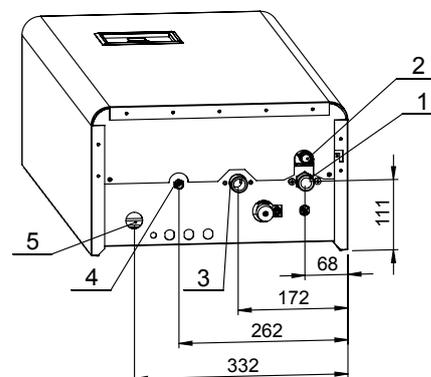


THERM BOILERS electric - economic series



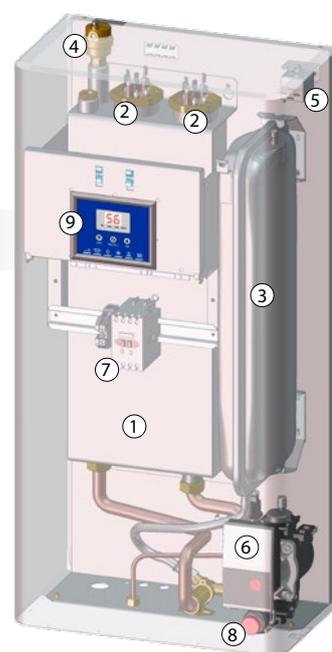
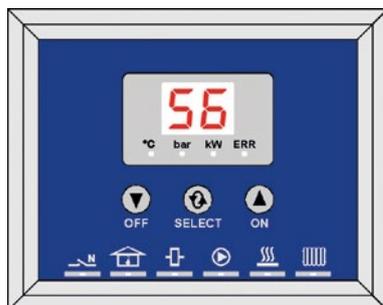
DIMENSIONS AND CONNECTION OF BOILER

- 1 Input for returned water G 3/4" outside
- 2 Output safety valve
- 3 Output for heating water G 3/4" outside
- 4 Input for additional filling of system G 1/2" outside
- 5 Supply electric cable lead-through



SET OF BOILER

- 1 - Boiler exchanger
- 2 - Heating body
- 3 - Expansion heating vessel
- 4 - Automatic de-aerating valve
- 5 - Emergency thermostat
- 6 - Energy saving pump
- 7 - Safety switch contactor
- 8 - Safety valve
- 9 - Control panel

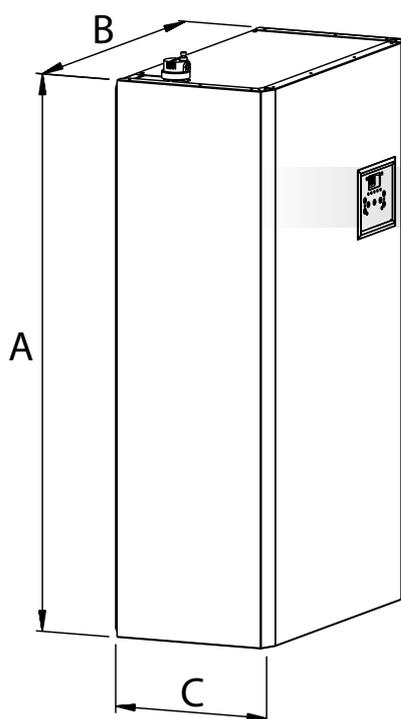


Technical data	Unit	THERM ELN 8	THERM ELN 15
Nominal heat output	kW	7.5	15
Minimum regulation level of the output	W	2500	5000
Rated current (single-phase connection)	A	11 (33)	22
Level of electric coverage	IP	40	40
Supply voltage / frequency	V/Hz	3 x 400/230 + N + PE/50 ~	3 x 400 + N + PE/50 ~
Maximum rated current	A	3 x 12 (1 x 36)	3 x 24
Main circuit breaker for electric installation	A	16 (40)	25
Rated current of the control circuit breaker	A	1.25	1.25
Electric service life of relay	-	1.10 ⁵ cycles (16 A, 250 V/50 Hz)	1.10 ⁵ cycles (16 A, 250 V/50 Hz)
Mechanical service life of relay	-	10.10 ⁶ cycles	10.10 ⁶ cycles
Input - output for heating water	-	G 3/4" outer	G 3/4" outer
Min. - maximum working overpressure of heating system	bar	0,5 - 3,0	0,5 - 3,0
Maximum temperature of heating water	°C	80	80
Water volume of the boiler	l	6.8	9.6
Efficiency at the rated power	%	99.5	99.5
Volume of expansion tank	l	7	7
Dimensions: height/width/depth	mm	805/400/235	805/400/235
Weight of the boiler without water	kg	31	33
Class of seasonal energy efficiency of heating	-	D	D
Order number	-	1611.1	1612.1

THERM EL 8, 15, 23, 30, 38, 45



- Energy saving pump
- Very quiet operation due to selected switching relays
- Smooth output regulation in small steps (by 2,5 or 5,0 kW)
- Minimum output of the boiler 2,5 kW (THERM EL 8, 15, 23), or 5 kW (THERM EL 30, 38, 45)
- Option to connect the regulator with OpenTherm+ communication
- Option of regulation according to the spatial or outdoor temperature - equithermal regulation
- There is also the option to hot water in an external reservoir and fitting with a three-way valve.
- Option of remote boiler control through SMS messages after fitting with the SMS module
- DSM communication - remote switching of the operation at low rate by the electricity supplier
- Option to add monitoring of the current maximum to prevent overloading of the electricity network in the building
- Option to connect up to 32 boilers to intelligent cascade boiler rooms in order to increase heating power

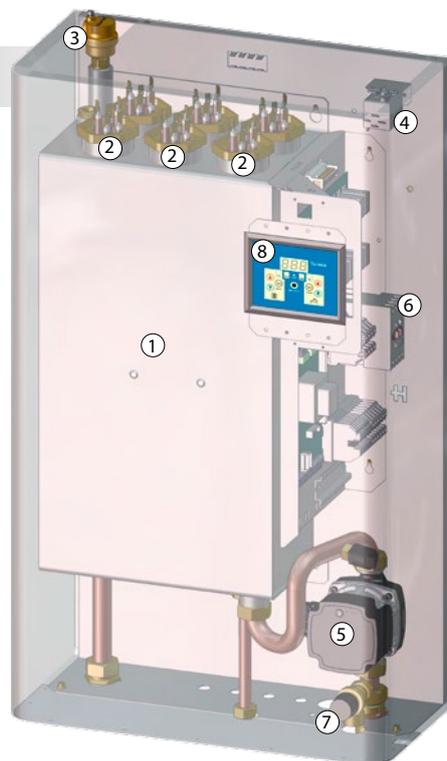


DIMENSIONS OF BOILER

DIMENSIONS OF BOILER (mm)	BOILER MODEL					
	EL 8	EL 15	EL 23	EL 30	EL 38	EL 45
A	820	820	820	805	805	805
B	475	475	475	475	475	475
C	238	238	238	238	238	238

SET OF BOILER

- 1 - Boiler exchanger
- 2 - Heating body
- 3 - Automatic de-aerating valve
- 4 - Emergency thermostat
- 5 - Energy saving pump
- 6 - Safety switch contactor
- 7 - Safety valve
- 8 - Control display



Technical data	Unit	THERM EL 8	THERM EL 15	THERM EL 23	THERM EL 30	THERM EL 38	THERM EL 45
Nominal heat output	kW	7.5	15.0	22.5	30.0	37.5	45.0
Minimum regulation level of the output	W	2500	2500	2500	2500/5000	2500/5000	5000
Rated current (single-phase connection)	A	11 (33)	22 (66)	33	44	55	66
Level of electric coverage	IP	40	40	40	40	40	40
Supply voltage / frequency	V/Hz	3 x 400/230 + N + PE/50 ~			3 x 400 + N + PE/50 ~		
Maximum rated current	A	3 x 12 (1 x 36)	3 x 24	3 x 36	3 x 48	3 x 60	3 x 72
Main circuit breaker for electric installation	A	16 (40)	25 (80)	40	50	63	80
Rated current of the control circuit breaker	A	1.25	1.25	1.25	1.25	1.25	1.25
Electric service life of relay	-	1.10 ⁵ cycles (16 A, 250 V/50 Hz)					
Mechanical service life of relay	-	10.10 ⁶ cycles					
Input - output for heating water	-	G 3/4" outer			G 1" outer		
Min. - maximum working overpressure of heating system	bar	0,5 – 3,0	0,5 – 3,0	0,5 – 3,0	0,5 – 3,0	0,5 – 3,0	0,5 – 3,0
Maximum temperature of heating water	°C	80	80	80	80	80	80
Water volume of the boiler	l	14.5	14.5	14.5	28.0	28.0	28.0
Efficiency at the rated power	%	99.5	99.5	99.5	99.5	99.5	99.5
Volume of expansion tank	l	7	7	7	order based (location outside the boiler)		
Dimensions: height/width/depth	mm	820/475/238			805/475/238		
Weight of the boiler without water	kg	37	38	39	43	44	45
Class of seasonal energy efficiency of heating	-	D	D	D	D	D	D
Order number	-	1601.1	1602.1	1603.1	1604.1	1605.1	1606.1

THERM EL 5, 9, 14

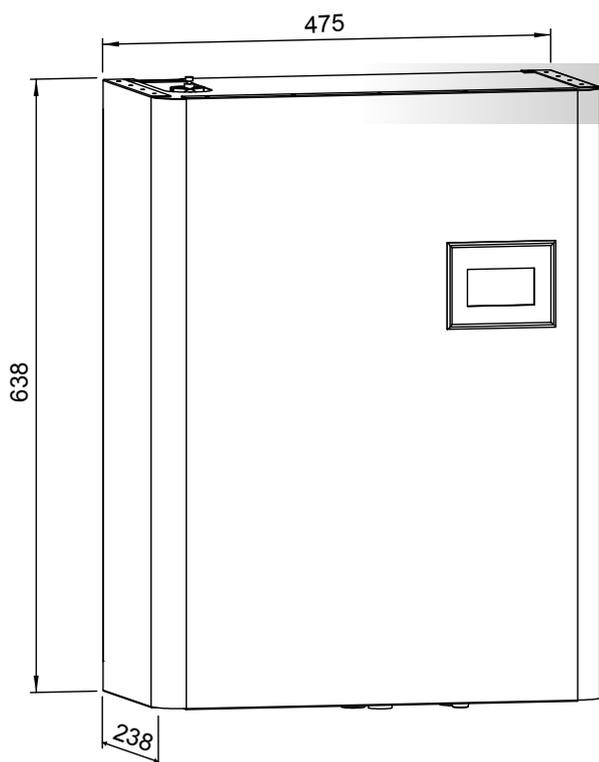


THERM electric boilers are characterized by simple servicing. THERM EL 5, 9 and 14 electric boilers are fitted as standard with a touch display. This control is very user-friendly, the parameters are displayed verbally and various language versions can be selected. Due to the low minimum performance and the modulation option, these boilers are recommended for low energy houses.

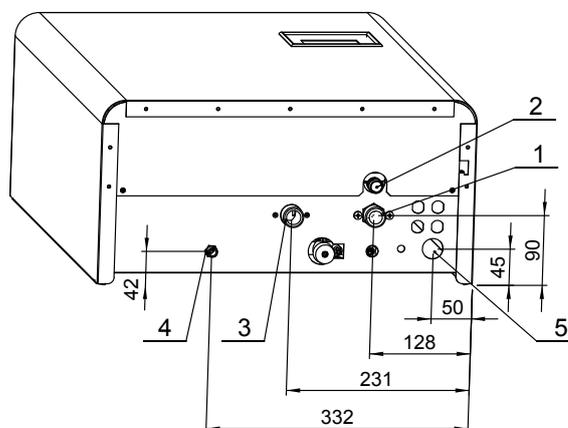
- Energy saving pump
- Very quiet operation due to selected switching relays
- The simple and intuitive control is due to the easy-arranged touch display
- Fluent regulation in low steps by 500 W (THERM EL 5), by 1000 W (THERM EL 9), 1500 W (THERM EL 14)
- Minimum output of the boiler 500 W (THERM EL 5), 1000 W (THERM EL 9), 1500 W (THERM EL 14)
- Option to connect the regulator with OpenTherm+ communication
- Option of regulation according to the spatial or outdoor temperature (equithermal regulation)
- There is also the option to hot water in an external reservoir and fitting with a three-way valve.



- Option of remote boiler control through SMS messages after fitting with the SMS module
- DSM communication - remote switching of the operation at low rate by the electricity supplier
- Option to add monitoring of the current maximum to prevent overloading of the electricity network in the building
- Recommended for low-energy and passive houses (low minimum power)



DIMENSIONS AND CONNECTION OF BOILER

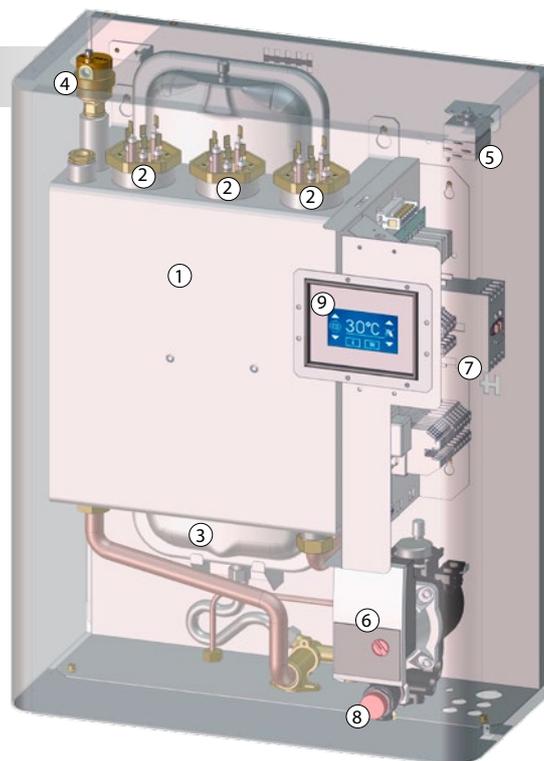


- 1 Input for returned water G 3/4" outside
- 2 Output safety valve
- 3 Output for heating water G 3/4" outside
- 4 Input for additional filling of system G 1/2" outside
- 5 Supply electric cable lead-through

THERM BOILERS electric - with touch display

SET OF BOILER

- 1 - Boiler exchanger
- 2 - Heating body
- 3 - Expansion heating vessel
- 4 - Automatic de-aerating valve
- 5 - Emergency thermostat
- 6 - Energy saving pump
- 7 - Safety switch contactor
- 8 - Safety valve
- 9 - Control touch display



Technical data	Unit	THERM EL 5	THERM EL 9	THERM EL 14
Nominal heat output	kW	4.5	9.0	13.5
Minimum regulation level of the output	W	500	1000	1500
Rated current (single-phase connection)	A	7 (21)	13 (39)	20 (60)
Level of electric coverage	IP	40	40	40
Supply voltage / frequency	V/Hz	3 x 400/230 + N + PE/50 ~		
Maximum rated current	A	3 x 8 (1 x 24)	3 x 14 (1 x 42)	3 x 21 (1 x 63)
Main circuit breaker for electric installation	A	10 (25)	16 (50)	25 (80)
Rated current of the control circuit breaker	A	1.25	1.25	1.25
Electric service life of relay	-	1.10 ⁵ cycles (16 A, 250 V/50 Hz)		
Mechanical service life of relay	-	10.10 ⁶ cycles	10.10 ⁶ cycles	10.10 ⁶ cycles
Input - output for heating water	-	G 3/4" outer	G 3/4" outer	G 3/4" outer
Min. - maximum working overpressure of heating system	bar	0,5 – 3,0	0,5 – 3,0	0,5 – 3,0
Maximum temperature of heating water	°C	80	80	80
Water volume of the boiler	l	6.0	6.0	6.0
Efficiency at the rated power	%	99.5	99.5	99.5
Volume of expansion tank	l	7	7	7
Dimensions: height/width/depth	mm	638/475/238	638/475/238	638/475/238
Weight of the boiler without water	kg	27	27	27
Class of seasonal energy efficiency of heating	-	D	D	D
Order number	-	1607.1	1608.1	1609.1



THERM STORAGE TANKS

THERM DESIGNED STORAGE TANKS

Through their construction and the number of versions available, THERM storage tank water heaters provide economical preparation of water using energy from an external source. They are recommended for installation in interiors.



THERM 60/S



THERM 55/Z

Type	Unit	THERM 60/Z	THERM 55/Z, stainless	THERM 60/S
Volume	l	55	55	55
Output	kW	17	25	17
Height / width / depth	mm	830 / 400 / 395	830 / 400 / 395	830 / 400 / 395
Material	-	enamel	stainless	enamel
Class of energy efficiency	-	B	C	B
Order number	-	14136 *	14135 *	14137 *

* THERM designed storage tanks, OPTIMUM, Condens and PREMIUM Condens series



THERM OKC, OKH STORAGE TANKS

The series of THERM OKC, OKH stationary storage tank water heaters, through the construction and the number of versions available, provide economical preparation of water using energy from a hot-water source. The heater is fitted with the regulation of the water temperature, a safety valve and a circulation outlet. NTR/HV storage tanks have IN/OUT connections to the boiler outlets in the upper part and they are suitable for wall boiler installation.

Storage tanks of NTR and NTRR type

In NTR storage tanks, there is one exchanger for the conversion of energy from heating water to hot water. In NTRR storage tanks with large volumes, two exchanges are used. This enables to hot water from a source with a higher output or to connect two various heat sources to each exchanger.



OKC 125 NTR/HV



OKH 100 NTR/HV

Type	Unit	OKH 100 NTR/HV	OKH 125 NTR/HV	OKC 100 NTR	OKC 125 NTR	OKC 160 NTR
Volume	l	87	115	87	112	148
Weight	kg	55	67	53	66	73
Exchanger power	kW	24	32	24	32	32
Height	mm	897	1058	902	1067	1255
Width	mm	520	520	524	524	524
Class of energy efficiency	-	B	B	B	C	C
Order number	-	14355	14356	14311	14312	14313

STORAGE TANKS for indirect hot water heating

Type	Unit	OKC 200 NTR	OKC 200 NTRR	OKC 250 NTR	OKC 250 NTRR	OKC 300 NTR/BP	OKC 300 NTRR/BP
Volume	l	208	200	242	234	296	285
Weight	kg	93	102	92	104	108	126
Exchanger power	kW	32	24/24	32	24/24	35	24/35
Height	mm	1400	1400	1580	1580	1558	1558
Width	mm	584	584	584	584	670	670
Class of energy efficiency	-	C	C	C	C	C	C
Order number	-	14314	14315	14457	14352	14444	14394

Type	Unit	OKC 400 NTR/BP	OKC 400 NTRR/BP	OKC 500 NTR/BP	OKC 500 NTRR/BP	OKC 750 NTRR/BP	OKC 1000 NTRR/BP
Volume	l	373	363	447	433	710	930
Weight	kg	139	153	137	158	197	248
Exchanger power	kW	58	58/26	58	58/37	60/33	76/32
Height	mm	1920	1920	1924	1924	2030	2050
Width	mm	650	650	700	700	910	1010
Class of energy efficiency	-	C	C	C	C	C	C
Order number	-	14409	14411	14685	14412	14413	14476



THERM OKCE STORAGE TANKS

The series of THERM OKCE stationary storage tanks provides a standard option for additional heating of water by electric energy due to the body in the lower part of the storage tank.

Type	Unit	OKCE 100 NTR / 2,2 kW	OKCE 125 NTR / 2,2 kW	OKCE 160 NTR / 2,2 kW	OKCE 200 NTR / 2,2 kW	OKCE 300 NTRR / 3 - 6 kW
Volume	l	87	113	148	208	285
Weight	kg	58	70	80	95	135
Exchanger power	kW	24	32	32	32	35/27
Height	mm	902	1067	1047	1357	1581
Width	mm	524	524	584	584	670
Class of energy efficiency	-	B	C	C	D	C
Order number	-	14339	14340	14341	14342	14349



Regulation of gas boilers and electric boilers

All types of boilers produced by Thermona are fitted with by modern regulation elements. Each boiler can be regulated either on the basis of the temperature in the indoor area (thermostat), or on the basis of the temperature in the outdoor environment using built-in equithermal regulation within the boiler after installing the outdoor sensor. The equithermal regulation can be completed by the intelligent regulator, which is located in the reference room and which controls the heating on the basis of the temperature in the outdoor environment and makes corrections and on the basis of the temperature in the indoor area (mixed regulation). These regulators communicate with the boiler on the basis of OpenTherm+ protocol; they take this from information and on the basis of this adjust the heating process according to the program set by the user.

Wire regulation



PT22 (order No. 43531) - room digital thermostat with weekly program setting option. Keep the set value with the precision 0,5 °C and display the temperature on the large display. It is recommended for all types of THERM boilers.



PT32 (order No. 43537) - intelligent room digital thermostat with option of several weekly program settings. Keep the set value with the precision 0,5 °C and display the temperature on the large display. It is recommended for all types of THERM boilers. Option to use GSM of GST1 module.



Lyric T3 (order No. 43956) - digital room thermostat with weekly program setting option. Option to connect an external room sensor. It is recommended for all types of THERM boilers.



CR 04 (order No. 43452) - intelligent room regulator, which is located in the reference room and which controls the heating on the basis of the temperature of the outdoor environment and makes corrections on the basis of the temperature in the indoor area (mixed regulation). It enables to control the heat source with OpenTherm+ communication (= data communication system between the boiler and the regulator). The regulator can be used to control the cascade boiler room.



Equithermal set CR 04 (order No. 43559) - set of equithermal regulation consisting of regulator CR 04 and an outdoor temperature sensor.



PT59 (order No. 43507) - intelligent room regulator, which is located in the reference room and which controls the heating on the basis of the temperature of the outdoor environment and makes corrections on the basis of the temperature in the indoor area (mixed regulation). It enables to control the heat source with OpenTherm+ communication (= data communication system between the boiler and the regulator). The advantage is the backlit display, easy control and programming, display in the Czech language. The regulator can be used to control the cascade boiler room.

VI Class of temperature regulator according to the requirements of Commission Directive EC No. 811/2013

REGULATION



Equithermal set PT59 (order No. 43513) - set of equithermal regulation consisting of regulator PT59 and an outdoor temperature sensor.



PT59X (order No. 43506) - intelligent room digital thermostat with OpenTherm + communication. Adds-in of PT59 regulator with identical functions. In addition, this regulator completes the external GST modules for sending SMS messages and the MS module for external signalling of errors. Option to connect an external temperature sensor.



Module GSM - GST1 (order No. 43460) supplementary SMS module for PT32, BT32 and PT59X regulators. It enables the heating connecting and disconnecting, regulates the temperature and in the case of connection to PT59X, also obtains information about the condition and failures of the boiler.



Signalling module MS2 (order No. 43570) - additional module for signalling failures in the cascade boiler room order with the boiler. It is connected to the PT59X. In the case of failure, lighting or sound signalling is activated.

Wireless regulation



BT013 (obj. č. 43509) - the simplest wireless room thermostat. Setting the temperature by a simple roll regulates the temperature to the precision of 1 °C. After pressing the NOC button, the temperature is reduced by 3 °C over 8 hours. It can be used for all types of THERM boilers.



BT22 (order No. 43532) - room digital thermostat with weekly program setting option. Keep the set value with the precision 0,5 °C and display the temperature on the large display. It is recommended for all types of THERM boilers.



BT32 (order No. 43538) - wireless intelligent room digital thermostat with option of several weekly program settings. Keep the set value with the precision 0,5 °C and display the temperature on the large display. It is recommended for all types of THERM boilers. Option to use GSM of GST1 module.



Lyric T3R (order No. 43597) - wireless digital room thermostat with weekly program setting option. Option to connect an external room sensor. Set with receiving boiler unit. It is recommended for all types of THERM boilers.

VI Class of temperature regulator according to the requirements of Commission Directive EC No. 811/2013

REGULATION

Internet regulation



IV

ROUND - modern wireless room thermostat with ON/OFF unit and internet firewall for remote access through a mobile application. A thermostat with a weekly program can be comfortably controlled using a turn knob, which is the body of the thermostat. It is recommended for all types of THERM boilers.



V

Lyric T6 (order No. 43958) - wall-mounted version - smart programmable thermostat which can adapt to your schedule. Weekly program and Internet gate for remote access through mobile application, touch display. Set with switching / OpenTherm unit.



V

Lyric T6R (order No. 43959) - portable version - smart wireless programmable thermostat which can adapt to your schedule. Weekly program and Internet gate for remote access through mobile application, touch display. Set with switching / OpenTherm unit.

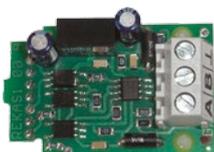
Accessories of regulation



Outdoor temperature sensor (order No. 40579.1), which is used for equithermal regulation of boilers and cascade boiler rooms depending on the value of the outdoor temperature. It is recommended for all types of THERM boilers.



Leakage detector CO Honeywell XC70-CS (order No. 43696) - it can detect the presence of carbon monoxide in the air from the value 43 ppm. It is installed in rooms in which gas consumer appliances are installed - potential sources of CO.



INTERFACE REKAS 1 (order No. 42188) - communication interface for cascade connection up to 32 electric boilers. In each boiler is one interface, individual interfaces are interconnected in parallel by a 3-core conductor. All parameters and data are set on one control boiler, the other controlled boilers in the cascade work according to information stated by the control boiler.



REK GSM (order No. 43505) - additional SMS module for THERM electric boilers. Using SMS messages, the module activates and deactivates the heating, regulates temperature, obtains information about the condition of the boiler and any errors. Due to this module, it is possible to check the temperature in a flat, a house or a cottage at any time.

VI

Class of temperature regulator according to the requirements of Commission Directive EC No. 811/2013

REGULATION



HJ103TRX (order No. 43518.1) - relief relay (current limitation). The relay controls the electric voltage in the whole house (flat) and in the case of exceeding the permitted values of the electric current it reduces the input power of THERM electric boiler.



Temperature probe with cable SO 10001 (order No. 23657.1)



Outdoor temperature sensor CT01-10K (metal) (order No. 43469)



Internal temperature sensor CT02-10K (plastic) (order No. 43556) - it is used with THERM EL electric boilers for room temperature sensing.



HAG contactor ES110A, 25A, 230 V (order No. 40779.1)



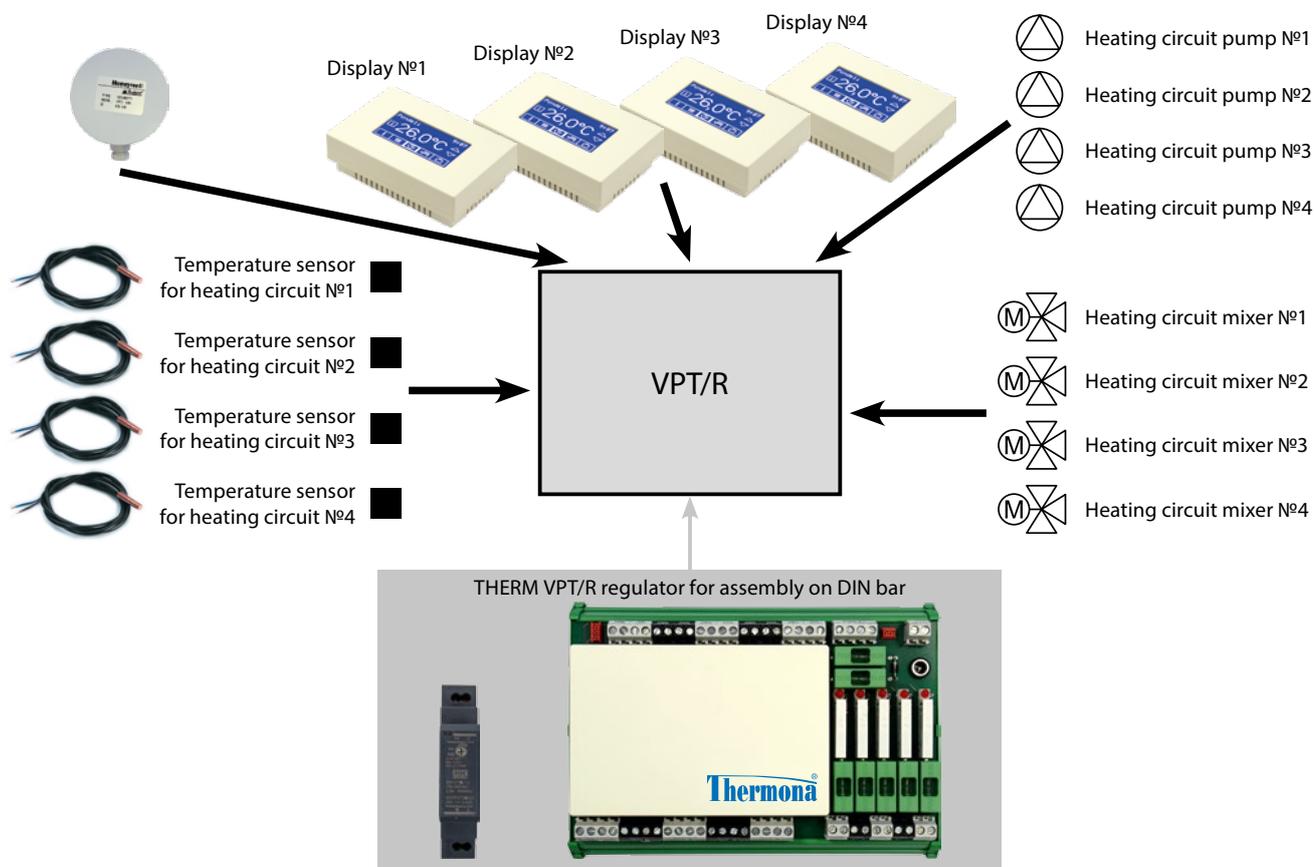
EST switchboard EK 002, small (for contactor HAG) (order No. 40780)

Zone regulation

THERM VPT regulator for 1 – 4 heating circuits VIII

- Regulation according to outside temperature and room temperature
- Regulator is placed on DIN bar into the switchboard
- Option to control the servo drives by 24 V or 230 V voltage
- Option for automatic filling of the heating system
 - VPT ADS module
- Option to connect additional displays
 - LAN module
 - WiFi module
 - GSM module (through SMS)
- Possibility of signalling errors
 - VPT PSK module

The THERM VPT regulator is designed for controlling the system with up to four mixing (or only pumping) circuits with the boiler or a cascade of boilers in possible combination with securing and automatically charging the heating system. Each circuit is regulated independently according to the outdoor temperature (equithermal regulation) or according to the temperature of the reference room or for the constant temperature of heating water. The advantage of the simple setting and the touch screen control is the comparison of individual parameters in several language versions, which enables easy user orientation in the menu for the device and simple changes to the heating parameters.



REGULATION

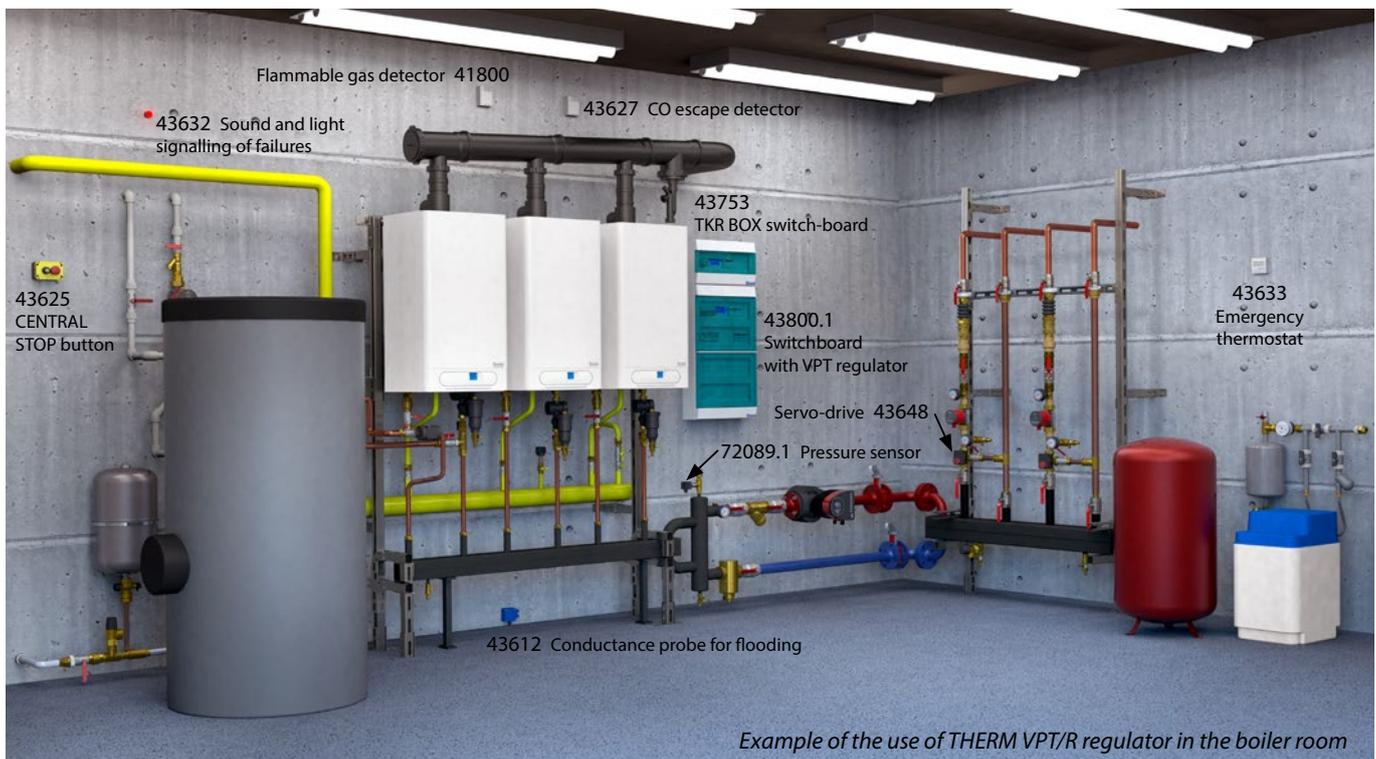
VPT/R SET - for regulation of the respective number of circuits with analogue servo drives 0 - 10 V contains an outdoor sensor and the respective number of sensors for regulation of the requested number of heating circuits, including the control display. It must be completed by the supply source.

	Order number	Sign	Name of item
	42730	VPT/R SET	Switchboard set - basic, equithermal regulation - without source!
	42731	VPT/R - 1 SET	Switchboard set - 1 circuit, equithermal regulation - without source!
	42732	VPT/R - 2 SET	Switchboard set - 2 circuits, equithermal regulation - without source!
	42733	VPT/R - 3 SET	Switchboard set - 3 circuits, equithermal regulation - without source!
	42734	VPT/R - 4 SET	Switchboard set - 4 circuits, equithermal regulation - without source!
	43667	VPT-L WIFI	Wi-Fi communication module on DIN rail
	43668	VPT-L LAN	LAN communication module on DIN-rail
	43669	VPT-L GSM	GSM communication module on DIN-rail
	42736.1		Source for DIN bar 24 V / 0,63 A - for connecting the set with the switchboard
	42726.1		Source for DIN bar 24 V / 2,50 A - for connecting the set with the switchboard
	42763	VPTRSB	Output module 3-pos. servo - output module for 3-position servo drive
	42760	VPT DIS SET	Additional display set (wall-mounted)

VIII Class of temperature regulator according to the requirements of Commission Directive EC No. 811/2013

REGULATION

Order number	Sign	Name of item
 43628	VPT PSK	Boiler room security module
 43629	VPT ADS	Automatic filling module
 43658	VPTTBI	Module for controlling branches with ON/OFF signal
43663	VPT-L CPJ	Regulator for 1 heating circuit



Further components of THERM VPT regulation can be found at www.thermona.eu. or in separate „Catalogue of components for cascade boiler rooms“.

REGULATION

THERM VPT regulators in distributors

To simplify and accelerate the installation of THERM VPT regulation, THERMONA supplies VPT regulators built in the distributors, with a single test report according to the valid legislation.



43800.1 Switch board
THERM VPT PSK ADS FI

The customer can choose the most suitable version from the following table:

Order number	Name of item	Description
 43800.1	Switchboard VPT PSK ADS FI	The distributor with a VPT regulator, a PSK boiler room protection module and ADS automatic fill-up module is designed for boiler rooms with up to four heating circuits.
 43801.1	Switchboard VPT PSK FI	The distributor with a VPT regulator, a PSK boiler room protection module is designed for boiler rooms with up to four heating circuits.
 43820	VPT switchboard	The distributor with a VPT regulator is designed for smaller boiler rooms without the requirement to protect the boiler room, with up to four heating circuits.

Zone hydraulic units SIM 3Z.H-21, SIM 2Z.H-20, SIM.H 2Z-11

The zone hydraulic unit ensures simple and elegant interconnection of the heat source with heating circuits. The built-in automatic regulation system ensures problem-free operation of a multi-circuit heating system. It is mainly used in the case of combining circuits with heating bodies and floor heating, which is a requirement of most modern heating systems.

- Control of up to three independent heating circuits
- Energy saving pump
- Option to control the floor heating circuit in combination with the radiator circuit
- Option for the connection of gas or electric boilers up to an output of 30 kW
- Compact construction and dimensions - hydraulic and regulation elements integrated in the unit
- Version with built-in zone regulation unit SZ 10004
- Built-in equithermal regulation
- Connection to the boiler by OpenTherm+ communication protocol



Only upon request!

SIM 3Z.H-21 - two mixed circuits + one non-mixed circuit

Unit SIM 3Z.H-21 enables to regulate three independent heating zones (2x mixed + 1x not mixed). Each zone can be controlled by the room regulator.



Without regulator (order No. 43742)
With regulator (order No. 43745)

SIM 2Z.H-20 - two mixed circuits

Unit SIM 2Z.H-20 enables to regulate two independent heating zones (2x mixed). Each zone can be controlled by the room regulator.



(order No. 43741)
(order No. 43744)

SIM 2Z.H-11 - one mixed circuits + one non-mixed circuit

Unit SIM 2Z.H-11 enables to regulate two independent heating zones (1x mixed + 1x not mixed). Each zone can be controlled by the room regulator.



(order No. 43740)
(order No. 43743)

Zone hydraulic unit i.a. includes:

- Hydraulic balancer for dynamic pressures
- Honeywell mixing valves
- Zone modulation regulator SZ 10004
- Circulation pump
- Temperature sensors
- Discharging valve
- De-aerating valve
- Shut-off valves
- Informative thermometers

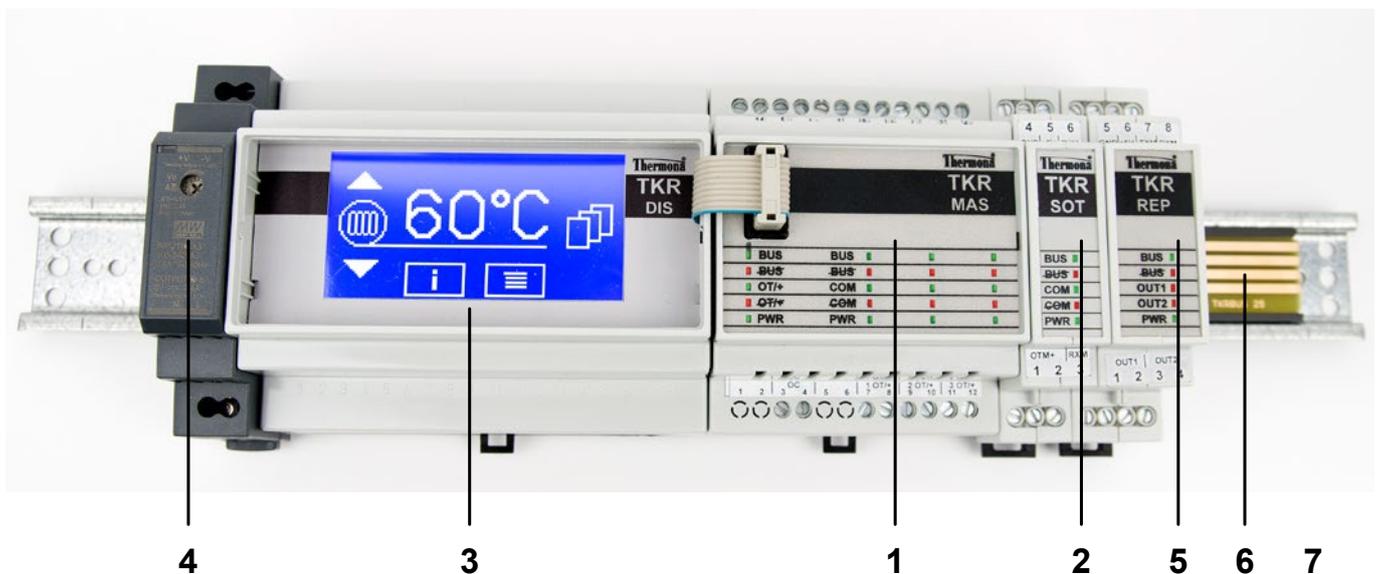
Cascade regulators

THERM TKR cascade regulator



The THERM TKR regulator represents the simplest method of controlling wall-mounted THERM boilers, connected in a cascade. The regulator can control a cascade with up to 32 boilers, which represents the output of up to 3 MW! All THERM condensation boilers can be connected in a cascade, as well as the formerly manufactured boilers with mono-thermal exchanger and DIMS and H-DIMS automatics, and also THERM EL boiler series. The regulator is equipped with an input for connecting a master regulator with communication OT/+ and an input for controlling with voltage of 0 – 10 V, in case of control with a regulator that does not support communication via OT/+.

The TKR MAS regulator control modules are delivered with basic setting for 2 or 3 boilers with an atmospheric burner, with activated equitherm regulation, and 60-minute run-down of the heating system pump. The regulator must be fed from a 5 V power supply and it must have a temperature sensor installed on the output of the circular ring. In case of requirement for equitherm regulation, an outside temperature sensor must also be connected.



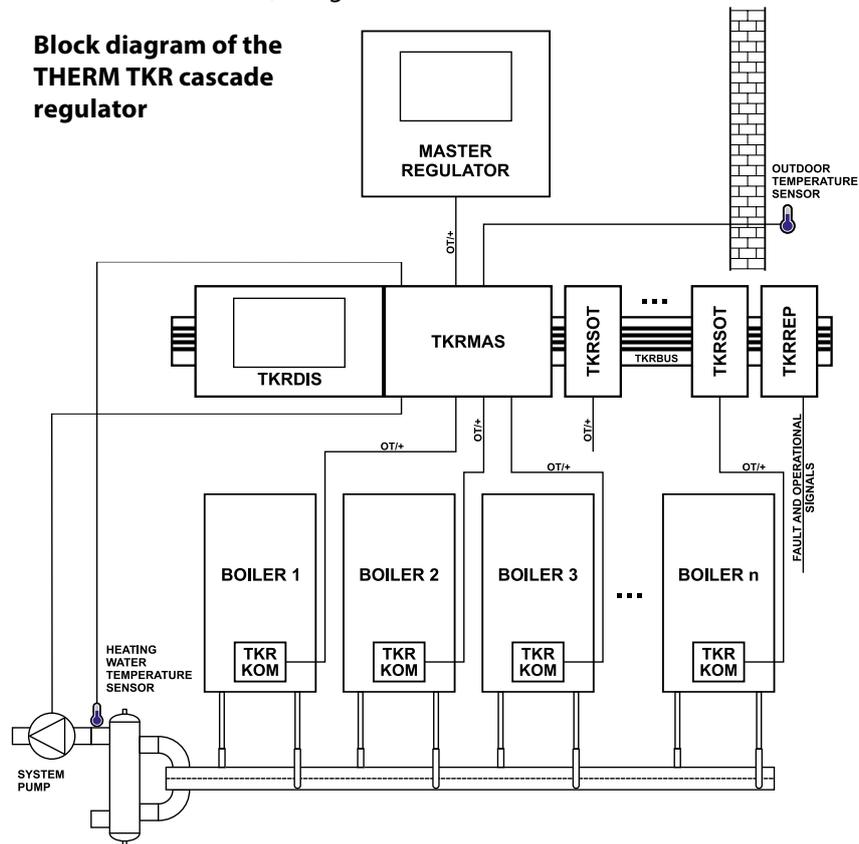
1. **TKR MAS/3** (order No. 42717) – basic module of the THERM TKR regulator – controls a cascade of up to 3 boilers independently
(**TKR MAS/2** (order No. 42727) – controls a cascade of up to 2 boilers independently).
2. **TKR SOT** (order No. 42718) – extension module – used for connecting additional boiler to the cascade.
3. **TKR DIS** (order No. 42719) – touch display for setting additional functions, displaying the status of the regulator and parameters of all boilers connected to the cascade. When the option of setting and permanent display is not required, it is possible to use a service display, REK GTP-S during service activity for THERM EL electric boilers (the regulator works according to the last setting entered on the display when the setting is complete the display disconnected).
4. **Power supply** (order No. 42721.1) - 230 V / 5 V, 2.4 A – to feed the TKR regulator and all additional modules.
5. **TKR REP** (order No. 42720) – module for signalling malfunction of one of the boilers in the cascade or for signalling an emergency when all boilers in the cascade are malfunctioning.
6. **TKR BUS** (order No. 42722) – bus bar for fast and reliable connection of the TKR MAS regulator, with TKR SOT extension modules and TKR REP signalling modules. When only one additional module is used, the connection can be made using wire jumpers.
7. **TKR KOM** (order No. 42728) – communication module for connecting boilers with DIMS and H-DIMS automatics to the cascade.



REGULATION

All sensors required for the activity of the cascade regulator are connected to the basic TKR MAS regulator module – in any case, a heating system sensor located on the output pipe from the anchor ring, and also an outside temperature sensor in case equitherm regulation is required. A contactor of the heating system pump is also connected to the regulator, as well as a master regulator and OT/+ communication to the boilers. When installing the TKR MAS regulator module on a DIN-rail with a built-in TKR BUS bar, the contact spots are connected with the bus bar, providing communication and power supply for all modules. The power supply must always be connected using a cable to the TKR MAS regulator module! The display is mounted on the DIN-rail to the left of TKR MAS, using a flat cable with a connector.

Block diagram of the THERM TKR cascade regulator



	Order number	Sign	Name of item
	43753	TKR BOX	TKR regulator for 3 boilers in an installation box (can be expanded to 8 boilers).
	43749	TKR BOX II	TKR regulator for 3 boilers in an installation box (can be expanded to 24 boilers).
	42053	TKR MAS/3 SET	The set contains a TKR MAS/3 regulator for controlling a cascade of up to 3 boilers, power supply, the cascade temperature sensor and TKR KOM modules.
	42729	TKR MAS/2 SET	The set contains a TKR MAS/2 regulator for controlling a cascade of 2 boilers, power supply, the cascade temperature sensor and TKR KOM modules.
	42054	TKR SOT set	The set contains the TKR SOT extension module and the TKR KOM communication module.

REGULATION

	Order number	Sign	Name of item
	42719	TKR DIS	Control display for DIN-rail.
	42721.1		Power supply 5V/2A.
	42722	TKR BUS	Busbar for additional modules.
	42720	TKR REP	Module of defect signalization
	42728	TKR KOM	Communication module
	43515	REK GTP-S	External portable display (also as a service display for THERM EL 8 - 45 boilers)

Other components to the THERM TKR cascade regulator can be found on the website at www.thermona.eu.

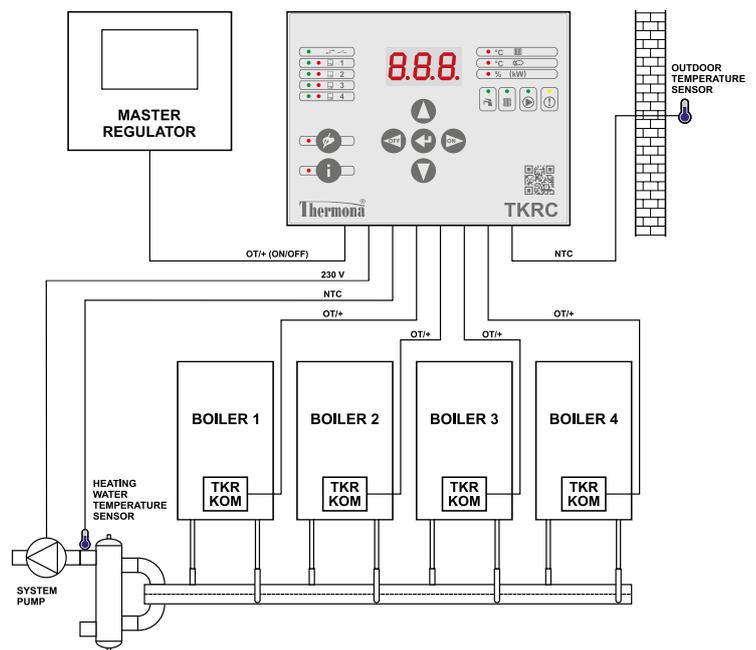
THERM TKRC cascade regulator

The THERM TKRC regulator is designed for controlling a cascade of up to four Thermona boilers. All THERMONA boilers with DIMS and H-DIMS automatics, all THERMONA condensing boilers and the THERM EL electric boiler series can be connected in the cascade.



- Control of a cascade of up to four boilers
- Using NTC sensor to measure the temperature of the cascade output water
- Cascade system pump activation
- Optional connection of the NTC sensor for measuring outside temperature
- Option to read outside temperature data from one of the controlled boilers
- Supporting the water heating controlled by slave boilers
- Option to control the cascade by the OT/+ master regulator
- Option of autonomous operation - ON/OFF regulator control (voltage-free contact) or equithermic regulation with voltage-free contact operation blocking
- Built-in three-digit numerical display and keyboard with seven buttons
- LED operating and error signalization
- Mains power supply, universal power supply unit 120 – 230 Vst, 50 – 60 Hz
- Wall installation, resistant compact box

Block diagram of the THERM TKRC cascade regulator



	Order number	Sign	Name of item
	43797	TKRC SET	Set for the regulation of a boiler room (TKRC regulator, outside sensor and system temperature sensor).
	42728	TKR KOM	Communication module

EXHAUSTION OF BURNT GASES



EXHAUSTION OF BURNT GASES - CONDENSING BOILERS

MAX. LENGTHS OF EXHAUSTION OF BURNT GASES FROM CONDENSING THERM BOILERS (m)

APPLIANCE	Ø 60/100		Ø 80/125		2 x Ø 80	Flex Ø 80
	horizontal	vertical	horizontal	vertical	Horizontal and vertical	Horizontal and vertical
THERM 14 KDN, KDZN, KDZN 5	6	6	11	11	11 + 11 (suction + exhaust)	11 + 11 (suction + exhaust)
THERM 18 KD, KDZ, KDZ 5	7	6	14	14	15 + 15 (suction + exhaust)	15 + 15 (suction + exhaust)
THERM 24 KDN, KDCN, KDZN, KDZN 5	6	6	11	11	11 + 11 (suction + exhaust)	11 + 11 (suction + exhaust)
THERM 24 KDNS	-	-	11	11	11 + 11 (suction + exhaust)	11 + 11 (suction + exhaust)
THERM 25 KD, KDC, KDZ, KDZ 5	7	6	14	14	15 + 15 (suction + exhaust)	15 + 15 (suction + exhaust)
THERM 35 KD, KDZ, KDZ 5	7	6	14	14	15 + 15 (suction + exhaust)	15 + 15 (suction + exhaust)
THERM 45 KD.A	-	-	5 (10, 15)*	5 (10, 15)*	5 + 5 (suction + exhaust)	5 + 5 (suction + exhaust)
THERM 65 KD	-	-	5	5	5 + 5 (suction + exhaust)	5 + 5 (suction + exhaust)

* If extending the exhaust to 10 m, the boiler output must be restricted to a maximum output of 2 kW; in the case of extending to 15 m, then by a further 2 kW

Shortening of the maximum lengths of elbows: when using elbow 90° = 0.75 m; 45° = 0.50 m

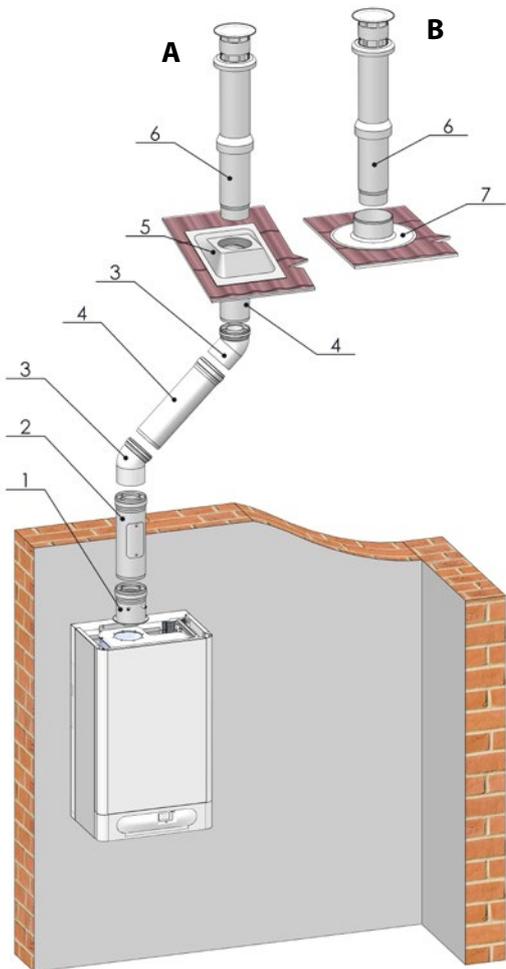
MAX. LENGTHS OF EXHAUSTION OF BURNT GASES FROM CONDENSING THERM BOILERS (m)

APPLIANCE	Ø 110/160		2 x Ø 110
	horizontally	vertically	Horizontally and vertically
THERM 90 KD.A	9	8	10 + 10 (suction + exhaust)

Shortening of the maximum lengths of elbows: when using elbow 90° = 0.75 m; 45° = 0.50 m

EXHAUSTION OF BURNT GASES

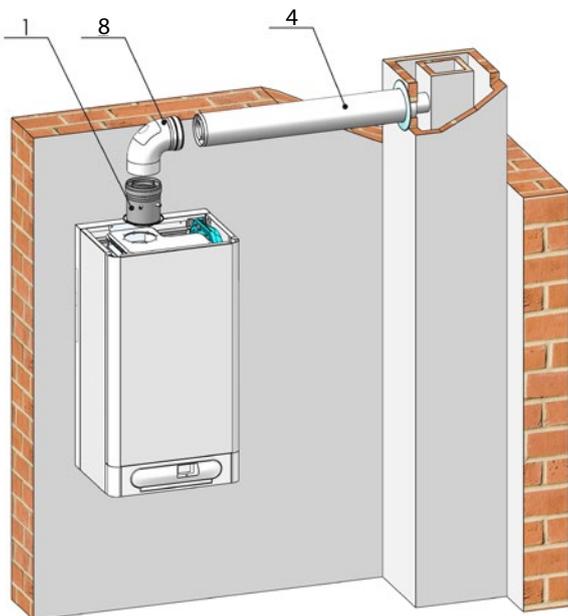
Flue system \varnothing 60/100 - THERM 14, 18, 24, 25, 35 KD...



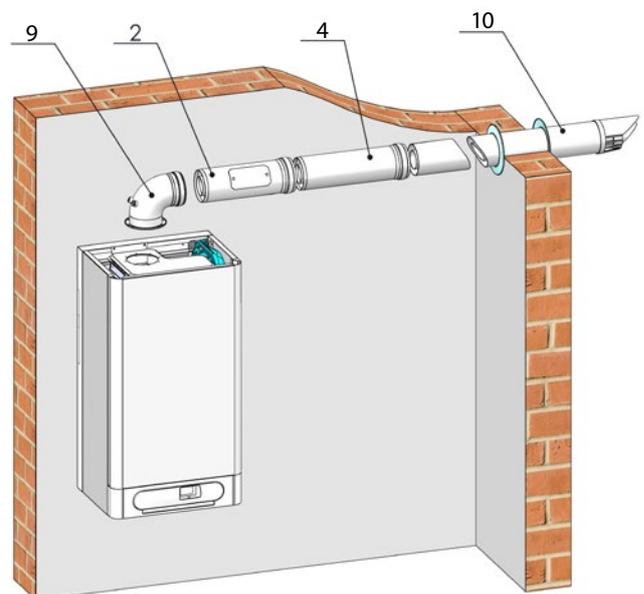
Flue system \varnothing 60/100 vertical

- A – installation on sloped roof
- B – installation on flat roof

	Name of item	Order number	
1	Flange \varnothing 60/100 with measuring points	24673	
2	Insert with inspection hole \varnothing 60/100	213835	
3	Coaxial elbow \varnothing 60/100, 45°	26140	
4	Concentric tube extension \varnothing 60/100	0.5 m	29596
		1.0 m	29597
5	Roof penetration, sloped, hole \varnothing 125 mm	28014	
6	Vertical chimney \varnothing 60/100	211253	
7	Roof penetration, plain, hole \varnothing 125 mm	20363	
8	Elbow \varnothing 60/100, 90° with control hole	212756	
9	Elbow \varnothing 60/100, 90° with flange and points of measurement	27216	
10	Air tube \varnothing 60/100 horizontal	24677	
	Coaxial elbow \varnothing 60/100, 90°	26653	
	Flange from \varnothing 60/100 at 80 mm exhaust - suction from the room	27471	
!	Silicone paste for smoke extraction installation 250 g	210280	
	Internal lead-through \varnothing 100 mm	21081	
	External lead-through \varnothing 100 mm	21184	



Flue system \varnothing 60/100 horizontal

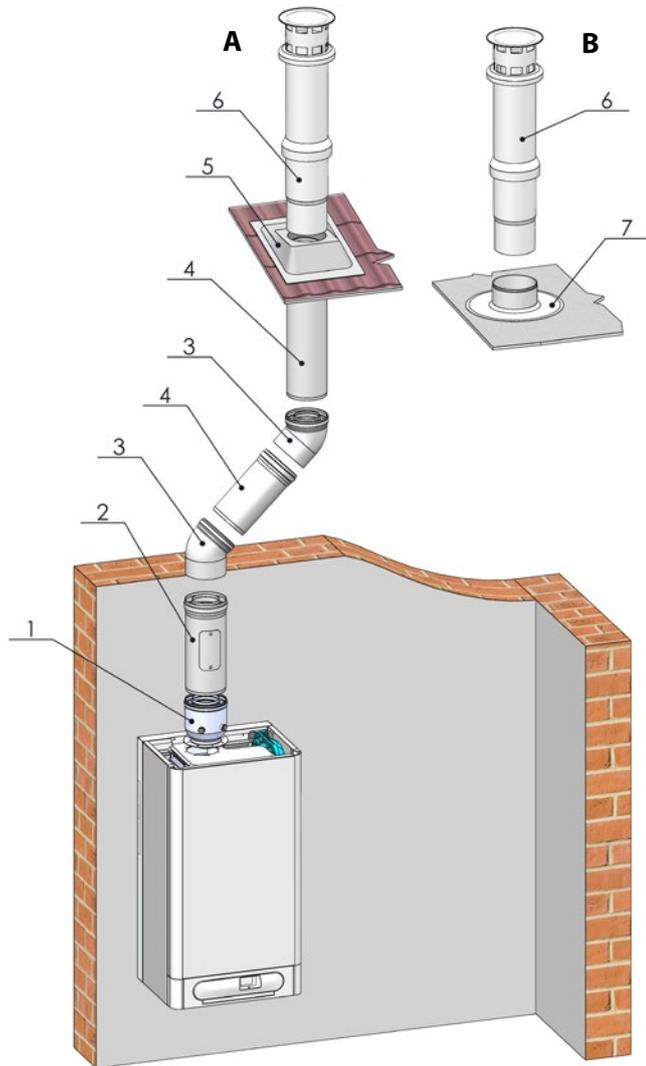


Flue system \varnothing 60/100 horizontal

EXHAUSTION OF BURNT GASES

Flue system \varnothing 80/125

- THERM 14, 18, 24, 25, 35, 65 KD... and 45 KD.A

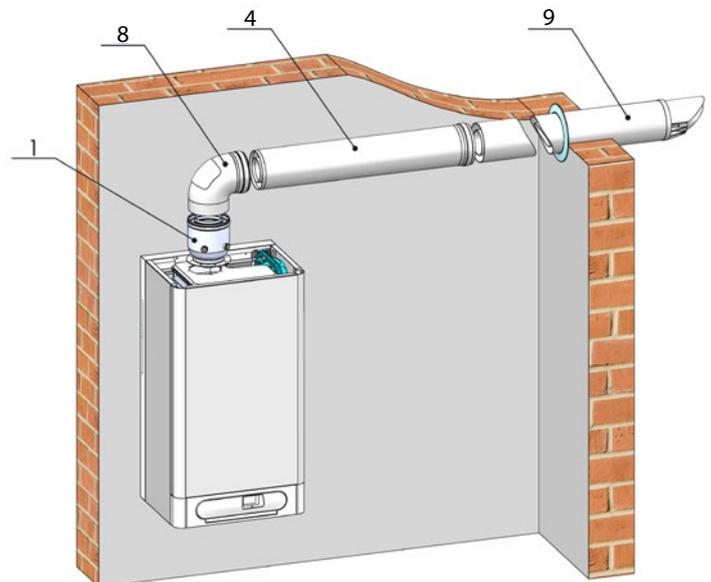


Flue system \varnothing 80/125 vertical

A – installation on sloped roof

B – installation on flat roof

Name of item		Order number	
1	Regulating flange from \varnothing 60/100 on \varnothing 80/125 with measuring points, for 14, 18, 24, 25 and 35 KD...	24678	
1	Regulating flange from \varnothing 80/105 on \varnothing 80/125 with measuring points, for 45 KD.A and 65 KD	27468	
2	Insert with inspection hole \varnothing 80/125	211265	
3	Coaxial elbow \varnothing 80/125, 45°	26432	
4	Concentric tube extension \varnothing 80/125	0.5 m	24675
		1.0 m	27004
5	Roof penetration, sloped, hole \varnothing 125 mm	28014	
6	Vertical chimney \varnothing 80/125	211255	
7	Roof penetration, plain,, hole \varnothing 125 mm	20363	
8	Elbow \varnothing 80/125, 90° with control hole	27648	
9	Tube suction - exhaust \varnothing 80/125 - 1 m	27003	
	Coaxial elbow \varnothing 80/125, 90°	24676	
!	Silicone paste for smoke extraction installation 250 g	210280	
	Lead-through \varnothing 125, internal/external	23776	

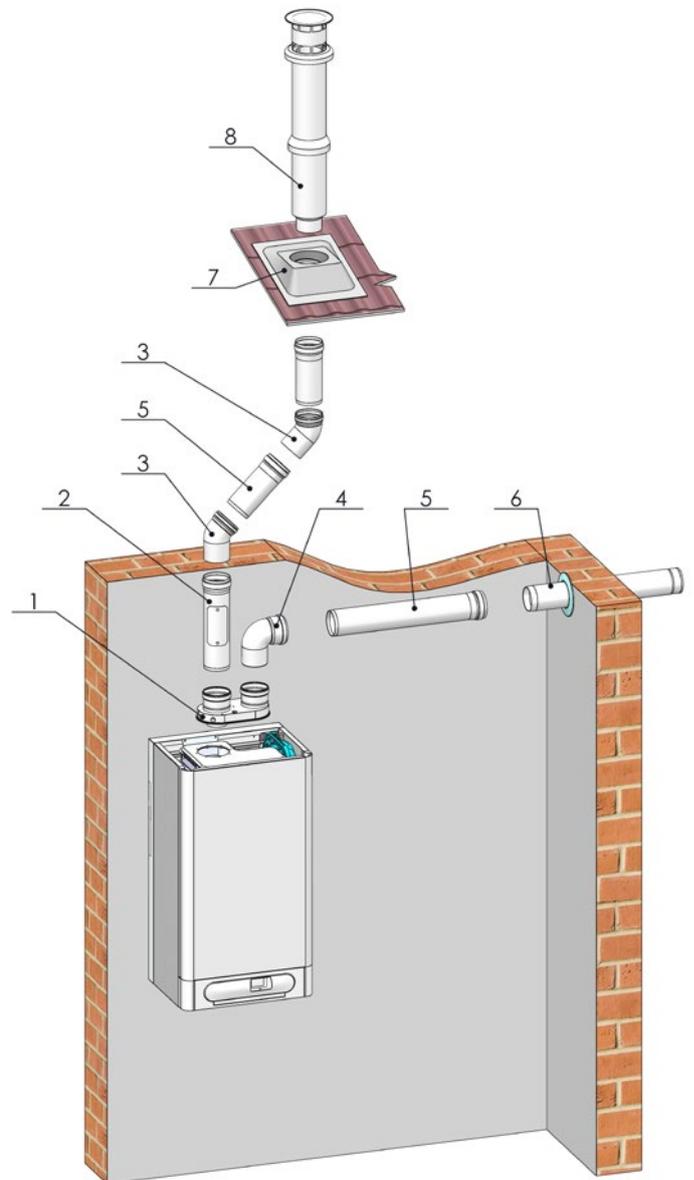


Flue system \varnothing 80/125 horizontal

EXHAUSTION OF BURNT GASES

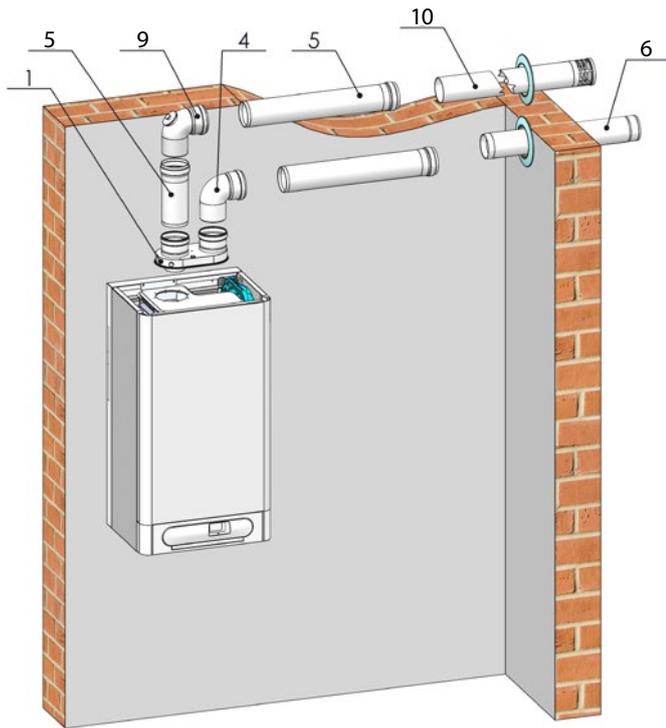
Flue system 2x ø 80 (suction / exhaust) - THERM 14, 18, 24, 25, 35, 65 KD... and 45 KD.A

	Name of item	Order number	
1	Divider from ø 60/100 on 2x ø 80, for 14, 18, 24, 25 and 35 KD...	212109	
1	Divider from ø 80/125 on 2x ø 80, for 45 KD.A, 65 KD and 24 KDNS	212110	
	+ Regulating flange from ø 80/105 on ø 80/125 for 45 KD.A and 65 KD	27468	
2	Insert with round control hole ø 80	211511	
3	Elbow ø 80, 45°	26142	
4	Elbow ø 80, 90°	26143	
5	Extension tubex ø 80	0.5 m	24666
		1.0 m	26141
6	Suction tube ø 80, 1 m	26435	
7	Roof penetration, sloped, hole ø 125 mm	28014	
8	Vertical chimney ø 80 (outer ø 125 mm)	211258	
9	Elbow ø 80, 90° with control hole	212755	
10	Air tube ø 80, 1 m	26144	
11	Chimney head, ø 80	28167	
	Reduction ø 80, neck-neck (for suction)	43771	
	Flexible extension, 1,5 m	26874	
	Chimney holder, including elbow 90°	28201	
	Centring piece for the chimney	21961	
	External air intake cover Ø 80 mm	36855	
	End piece Ø 80mm for chimney body	28555	
!	Silicone paste for smoke extraction installation 250 g	210280	
	Internal lead-through ø 80 mm	21020	
	External lead-through ø 80 mm	21021	

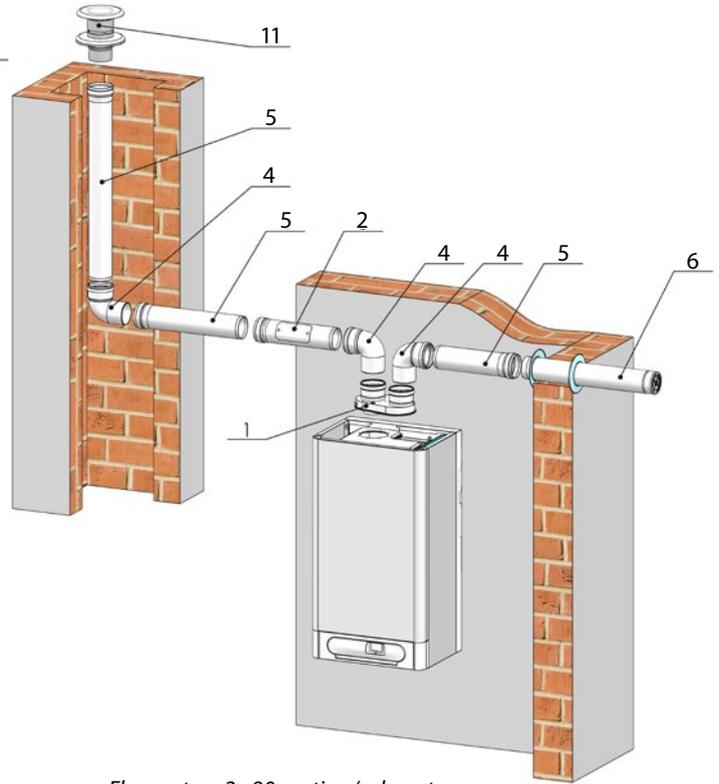


Flue system 2x 80 suction/exhaust

EXHAUSTION OF BURNT GASES



Flue system 2x 80 suction/exhaust

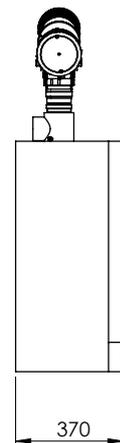
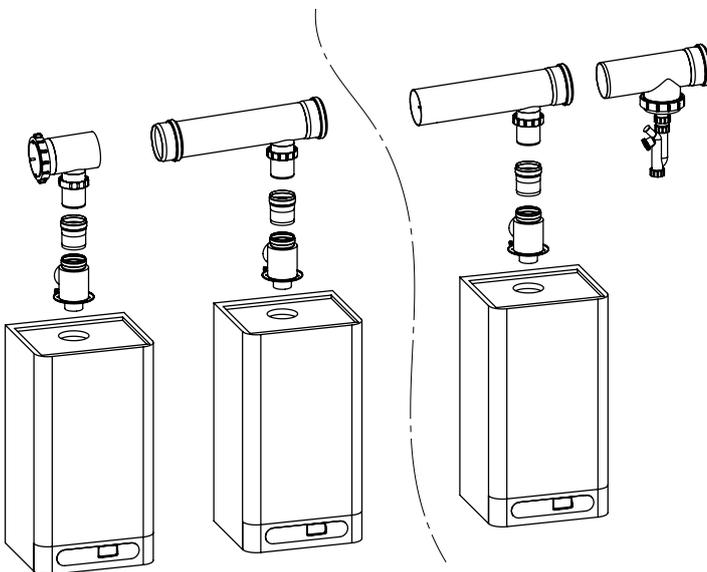
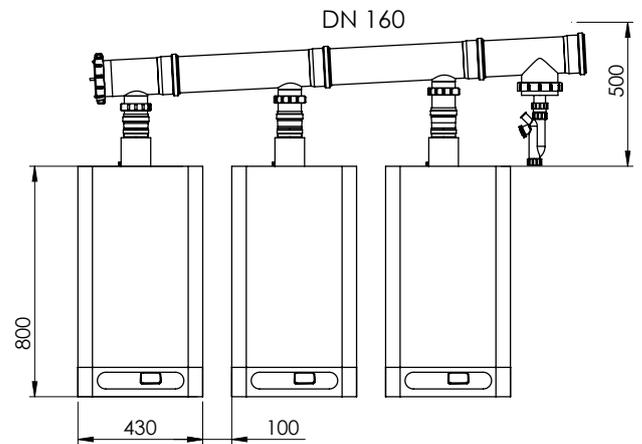


Flue system 2x 80 suction/exhaust

Basic sets flue system for THERM 45 KD.A, 65 KD boiler in the cascade

Order number	Name of item
43760.1	Set for 2 boilers 45 KD.A, \varnothing 125 mm
43761.1	Set for 2 boilers 45 KD.A, 65 KD, \varnothing 160 mm
43762.1	Boiler extension, 45 KD.A, 65 KD, \varnothing 160 mm

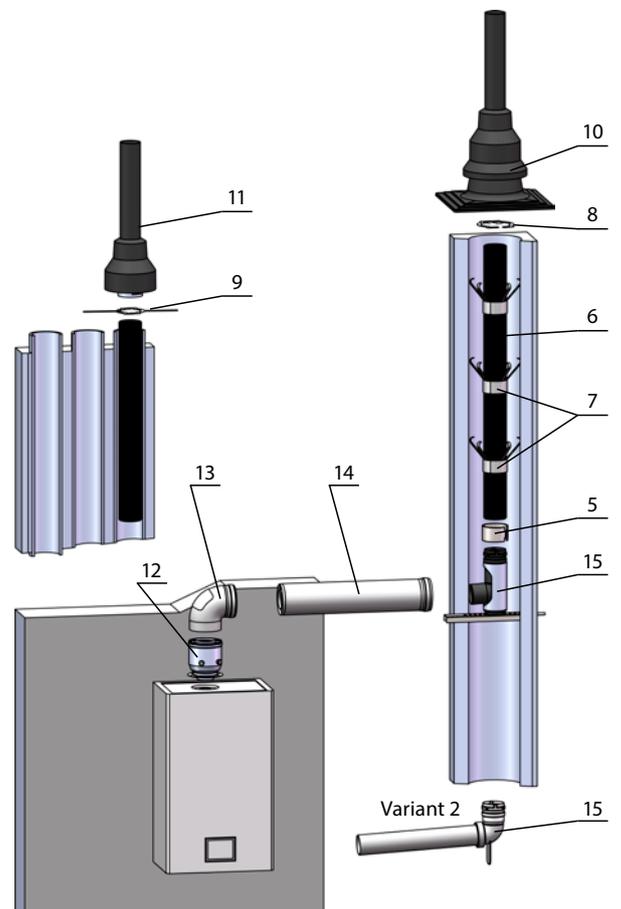
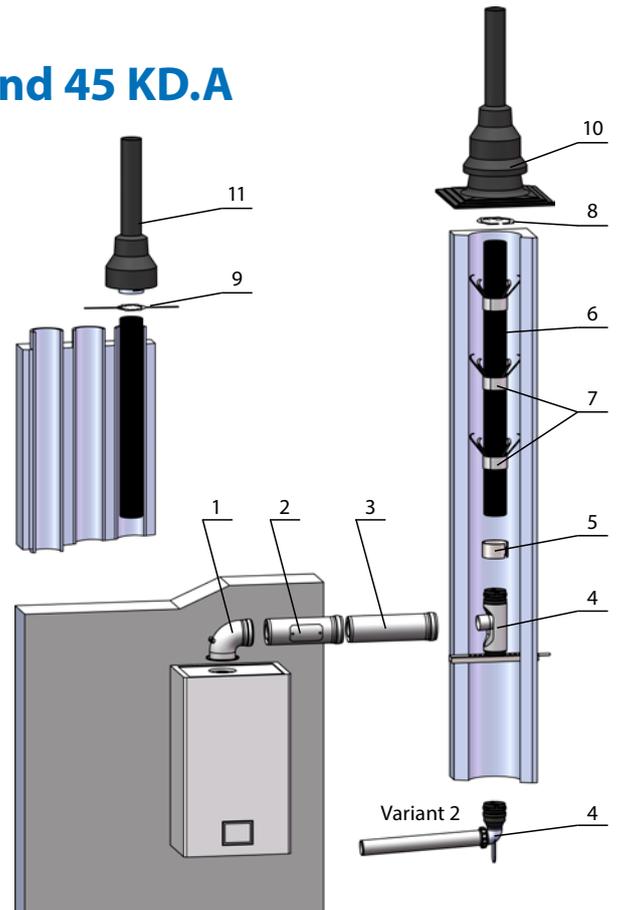
Rem.: Maximum expansion by a further two boilers with the diameter 160 mm



EXHAUSTION OF BURNT GASES

Flexible flue system \varnothing 80 and \varnothing 100 - THERM 14, 18, 24, 25, 35, 65 KD... and 45 KD.A

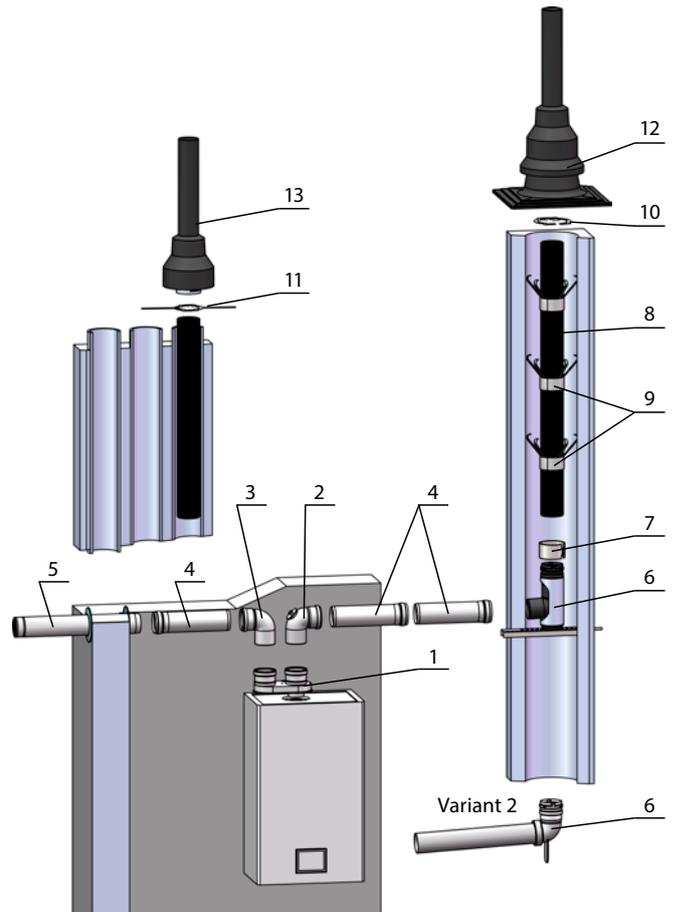
	Name of item	Order number
1	Elbow \varnothing 60/100, 90° with flange and points of measurement	27216
2	Insert with inspection hole \varnothing 60/100	213835
3	Concentric tube extension \varnothing 60/100 - 1,0m	29597
4	Variant 1 FLEX - foot elbow reduced at 87° with DN60/80 anchor	43877
	Variant 2 FLEX - elbow 87° for lining DN60/80	43879
5	FLEX - protective sleeve for DN80 joint	43881
6	FLEX - Black pipe UV stable DN80 - 15.0 m	43873
	FLEX - Black pipe UV stable DN80 - 30.0 m	43874
7	Spacing collar DN80	43871
8	FLEX - safety clamp DN80	43882
9	FLEX - anchoring clamp DN80	43883
10	FLEX - black plastic chimney capital DN80 - set (including safety clamp 43882)	43884
11	FLEX - flue grouping chimney ending, black DN80 - set (including anchoring clamp 43883)	43885
12	Regulating flange from \varnothing 60/100 on \varnothing 80/125 with measuring points, for 14, 18, 24, 25 and 35 KD...	24678
13	Elbow \varnothing 80/125, 90° with control hole	27648
14	Concentric tube extension \varnothing 80/125 - 1,0m	27004
15	Variant 1 FLEX - foot elbow 87° with DN80 anchor	43876
	Variant 2 FLEX - Elbow 87° for lining DN80	43878
	FLEX - adapter flex/fixed DN80	43875
	FLEX - sealing DN80	43880



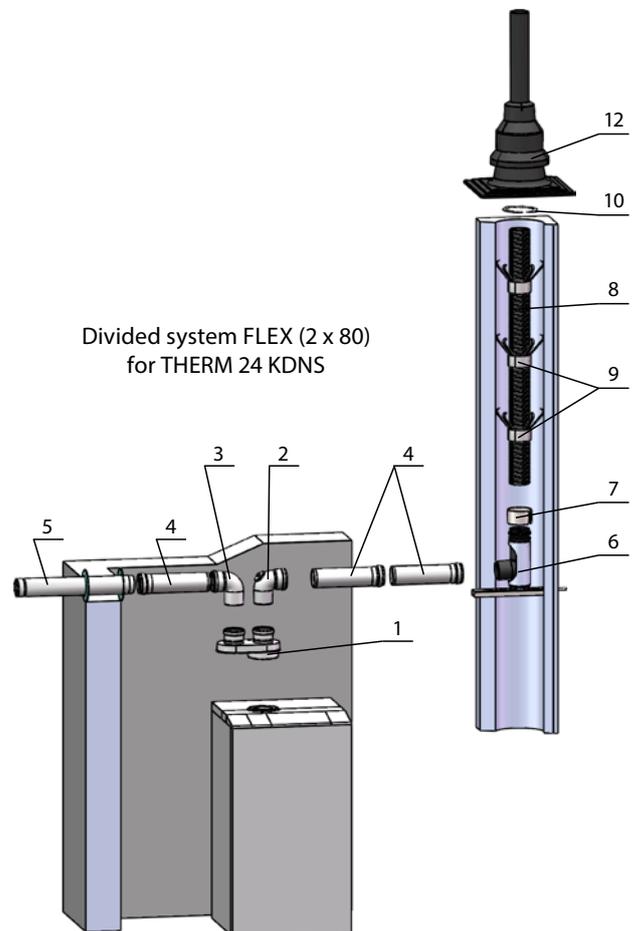
The area for delivering combustion air must be free from all impurities (ash, dust).

EXHAUSTION OF BURNT GASES

	Name of item	Order number
1	Divider from \varnothing 60/100 on 2x \varnothing 80, for 14, 18, 24, 25 and 35 KD...	212109
	Divider from \varnothing 80/125 on 2x \varnothing 80, for 45 KD.A, 65 KD and 24 KDNS	212110
2	Elbow \varnothing 80, 90° with control hole	212755
3	Elbow \varnothing 80, 90°	26143
4	Extension tube \varnothing 80 - 0,5 m	24666
5	Suction tube \varnothing 80 - 1,0 m	26435
6	Variant 1 FLEX - foot elbow 87° with DN80 anchor	43876
	Variant 1 FLEX - foot elbow 87° with anchor, reduced at DN80/100	43889
7	Variant 2 FLEX - Elbow 87° for lining DN80	43878
	FLEX - protective sleeve for DN80 joint	43881
8	FLEX - protective sleeve for DN100 joint	43892
	FLEX - Black pipe UV stable DN80 - 15,0 m	43873
9	FLEX - Black pipe UV stable DN80 - 30,0 m	43874
	FLEX - Black pipe UV stable DN100 - 15,0 m	43886
10	FLEX - Black pipe UV stable DN100 - 30,0 m	43887
	Spacing collar DN80	43871
11	Spacing collar DN110	43872
	FLEX - safety clamp DN80	43882
12	FLEX - safety clamp DN100	43893
	FLEX - anchoring clamp DN80	43883
13	FLEX - anchoring clamp DN100	43894
	FLEX - black plastic chimney capital DN80 - set (including safety clamp 43882)	43884
13	FLEX - black plastic chimney capital DN100 - set (including safety clamp 43893)	43895
	FLEX - flue grouping chimney ending, black DN80 - set (including anchoring clamp 43883)	43885
13	FLEX - flue grouping chimney ending, black DN100 - set (including anchoring clamp 43894)	43896
	FLEX - adapter flex/fixed DN100/110	43888
	FLEX - foot elbow 87° with anchor, reduced at DN110/100	43890
	FLEX - sealing DN100	43891



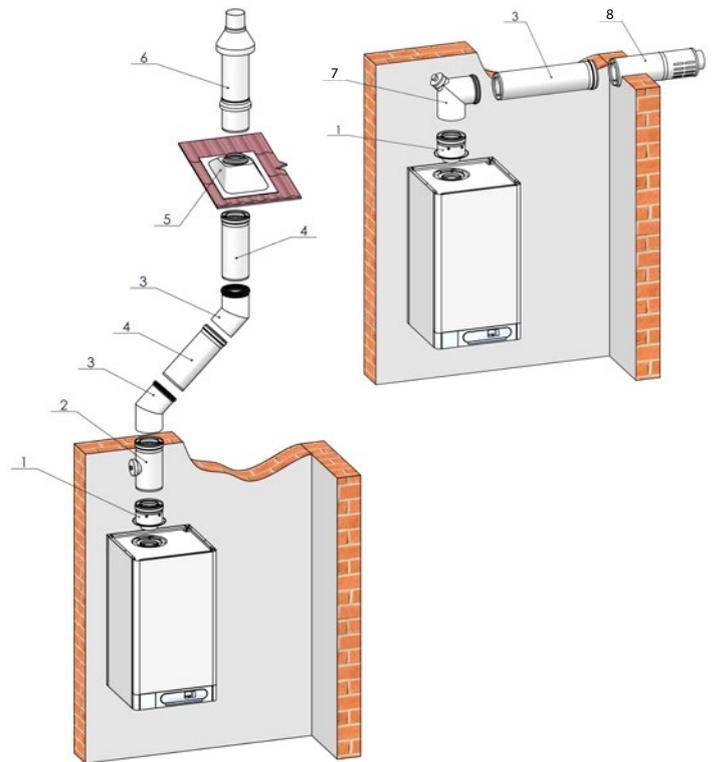
Divided system FLEX (2 x 80) for THERM 24 KDNS



EXHAUSTION OF BURNT GASES

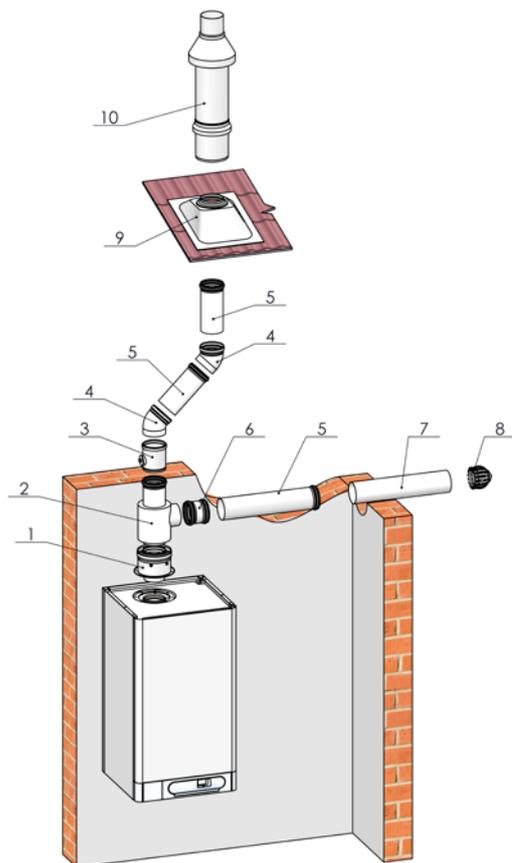
Flue system \varnothing 110/160 - THERM 90 KD.A

	Name of item	Order number	
1	Flange for boiler	43707	
2	Revision T-piece \varnothing 110/160 mm with outflow for condensate	43710	
3	Coaxial elbow \varnothing 110, 45°	43701	
4	Concentric tube extension \varnothing 110/160 mm	0.5 m	43713
		1.0 m	43703
5	Roof lead-in 25-45° degree	43715	
6	Vertical roof chimney \varnothing 110/160 mm	43714	
7	Revision elbow \varnothing 110/160 mm, 87°	43709	
8	Air tube \varnothing 110/160 mm, into a wall	43706	
	Insert \varnothing 110/160 mm with outflow for condensate	43711	
	Coaxial elbow \varnothing 110, 87°	43704	



Flue system 2x \varnothing 110 (suction / exhaust) - THERM 90 KD.A

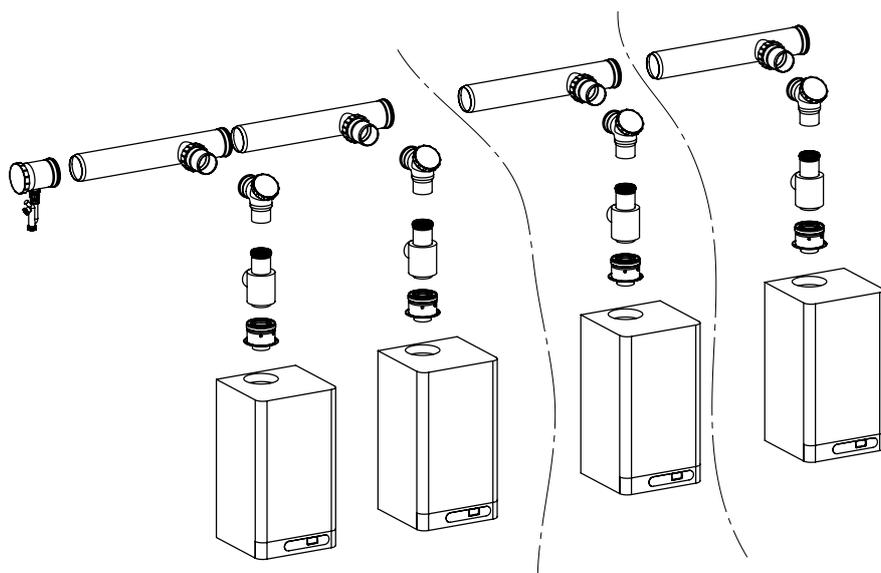
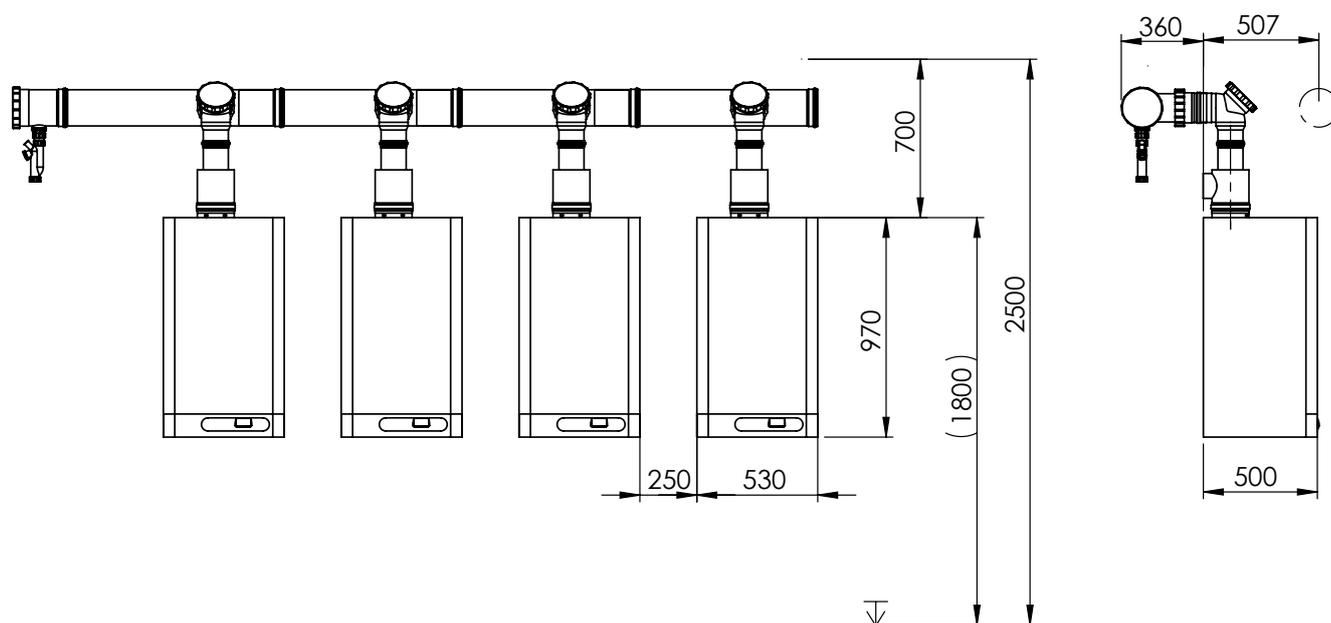
	Name of item	Order number	
1	Flange for boiler	43707	
2	Divider from \varnothing 110/160 mm on 2x \varnothing 110 mm	43712	
3	Revision T-piece \varnothing 110 mm	43719	
4	Elbow \varnothing 110, 45°	43716	
5	Extension tube \varnothing 110 mm	0.5 m	43722
		1.0 m	43721
6	Reduction \varnothing 110 mm, neck-neck (for suction)	43723	
7	Termination tube without the neck \varnothing 110 mm (suction), 0,5 m	43724	
8	Protecting basket for suction	43725	
9	Roof lead-in 25-45° degree	43715	
10	Vertical roof chimney \varnothing 110/160 mm	43714	
	Elbow \varnothing 110, 87°	43717	
	Revision elbow \varnothing 110 mm, 87°	43718	
	Insert \varnothing 110 mm with outflow for condensate	43720	
	Air tube \varnothing 110/160 mm, into a wall	43706	



Basic sets flue system for THERM 90 KD.A boiler in the cascade

Order number	Name of item
43763.1	Set for 2 boilers 90 KD.A, \varnothing 160 mm
43764.1	Set for 2 boilers 90 KD.A, \varnothing 200 mm
43765.1	Boiler extension, 90 KD.A, \varnothing 200 mm

Rem.: Maximum expansion by a further two boilers with the diameter 160 mm



Protective and cleaning agents



Filter with magnet for central heating - TF1 (G3/4" - order No. 211527; G1" - order No. 211189) - The filter shall be mounted directly into the heating circuit and is designed for its use with water treatment products. Hydrocyclone filter and magnetic filter TF1 remove magnetic as well as non magnetic impurities from the heating system. It can be placed on vertical or horizontal pipelines. A dosage valve for cleaning agents is part of the device.



Separator of impurities with magnet (G3/4" - order No. 43566; G1" - order No. 43567) - Impurities are collected in a large sediment chamber which needs only a small cleaning frequency and they can be removed from it when the system is working. The separator of impurities is equipped with removable magnetic ring for ferric impurities separation and is made of a resistant composite material. The device is extremely versatile as it can be mounted on vertical as well as horizontal pipelines.



Separator of impurities with magnet and filter (G3/4" - order No. 43684; G1" - order No. 43685) - The use of separator and exchange filter enables a complex and continuous protection of devices in heating system from impurities which form at the system launch as well as under standard operation conditions. Fine impurities are separated in separator first, then the rough impurities are collected in the filter chamber. The separator of impurities is also equipped with removable magnetic ring for ferric impurities separation. The separator is made of resistant composite material, it is extremely versatile as it can be mounted on vertical as well as horizontal pipelines. The delivery includes closing valves for simple separator maintenance.



Separator of impurities with magnet (G5/4" - order No. 43697) - It differentiates with its screw-coupling of size 5/4" or 1 1/4". The separator is designed for heating systems with lower heat loss. Impurities are collected in a large deposit chamber which does not need frequent cleaning. The separator versatility underlines the option of installation in vertical or horizontal pipelines.



Separator SLIM with magnet - with mounting reduction (G3/4" - order No. 43755) - Thanks to its compact dimensions this separator type fits for installation directly under the boiler. It fits for sites where there is a lack of space and a traditional impurities separator cannot be used. It is installed using fix pipes set or flexible pipes when needed.



Separator SLIM with magnet - direct (G3/4" - order No. 43754) - Thanks to its compact dimensions this separator type fits for installation directly under the boiler. It fits for sites where there is a lack of space and a traditional impurities separator cannot be used. It is installed using fix pipes set or flexible pipes when needed.



Cover for SLIM separator (order No. 43756) - It has an aesthetic as well as insulation function.



XS Separator of impurities with magnet under the boiler (3/4" M x 3/4" F - order No. 43955) - This is an extra small, most compact magnetic filter on the market, with agreeable design that fits to household environment, its large inside strainer collects impurities of heating system and ensures a reliable system operation. The magnet in filter cover separates and collects ferric impurities and thus protects the pump and other components of boiler against damage and fits for every boiler.



Protective filling in central heating - C1 (order No. 43968, package 500 ml) - It ensures a long-term protection of household central heating against corrosion and scale deposits. It avoid a corrosion of all metals in these systems - the corrosion of ferrous metals, copper and copper alloys and aluminium. It fits to all THERM boiler types, radiators and pipeline systems. The product is compatible with all metals and materials usually used in central heating systems.



Cleaning filling in central heating - C3 (order No. 43969, package 500 ml) - Quick and effective neutral agent for central heating. It is designed to remove all impurities, sludge and scale from current systems of any age. In this way it restores the heating effectiveness and removes or reduces the boiler noise. This cleaning agent is namely effective in older heating systems. C3 agent is a neutral product which inhibits well all metals and materials used in heating systems and is fully compatible.

AZK automatic cabinet softeners

Automatic cabinet softeners AZK are designed to soften drinking, service or technological water with no above-limit content of iron and manganese.

The device is made of pressure Pe tank, situated inside the cabinet - plastic storage tank equipped with electronic control valve. Multiple-function control valve contains a microcomputer which commands an automatic regeneration based on real operational analysis. It measures the water flow and when the softener capacity is exhausted it initiates and performs, in night hours, the regeneration of softening resin in order to provide the softened water during the day. The regeneration start is set for two o'clock at night but the user can change it for any other time during the day. The control valve enables setting of so-called forced regeneration in chosen time period. During the regeneration which takes about 80 minutes the supply of non-treated water is ensured with the softener inside by-pass.

The valve function section is made of high-polished and very hard ceramic discs of which one is movable and another one fixed. With their mutual rotation channels are made for five different flow ways that are needed for individual softener action stages. This new solution represents a great progress against traditional control units which use a large number of valves, plastic and rubber sealing parts prone to operational failures.

Under the automatic mode a regeneration saline is prepared in the plastic storage tank.

The removal of hardness ions - calcium and magnesium - is made in a filtration bed of softening resin - very strong cation exchange resin of Na⁺ form. The water leaving the softener has its residual hardness which equals to 1% of input water hardness. The control valve is equipped with a blender which can set mixing of softened water with untreated water and thus reach another output hardness if needed. Depending on the input water quality the cation resin service life is about 6 - 8 years.

The automatic cabinet softener installation needs:

- water supply G 3/4", overpressure 3 - 6 bars, max. temperature 40 °C
- sewerage drain, capacity about 0,7 m³/hr.
- electric installation 230 V / 50 Hz, device input is 5W.



The capacity or the water volume in m³, adapted by individual softener filter types between two regenerations is an important information for choosing the correct softener size - see the second table line. This value is valid if the input water is of T=1 mmol/l hardness. You divide this value with the real water hardness in mmol/l at the installation site and you find out which size softens m³ of water between two regenerations.

The hardness is stated in various units for which the following conversion is valid: 1 mmol/l = 2 mval/l = 5,6 °N.

Technical data	Unit	AZK1	AZK2	AZK3	AZK4	AZK5	AZK6
Softened water volume at T=1 mmol/l	m ³	2.75	5.50	8.25	11.00	13.75	16.50
Capacity in m ³ x °dH	-	20	40	60	80	100	120
Volume of softening resin	li	5	10	15	20	25	30
Approximate flow	m ³ /h	0,2 - 0,6	0,3 - 1,2	0,3 - 1,5	0,6 - 2,0	0,6 - 2,0	0,6 - 2,0
Salt consumption / regeneration approx.	kg	0.75	1.50	2.25	3.00	3.75	4.50
Water consumption / regeneration approx.	li	50	100	150	200	250	300
Ground plan: width x depth	mm	220 x 420	350 x 470				
Height of filter with cover	mm	no cover	680	1130	1130	1130	1130
Height of filter without cover	mm	550	650	1100	1100	1100	1100
Height of G 3/4" entrance	mm	385	485	935	935	935	935
Height of hose drain	mm	420	520	970	970	970	970
Weight	kg	10	15	25	30	35	40
Order number	-	72710	72711	72712	72713	72714	72715

Note

A series of horizontal dashed lines for taking notes.

LEGEND



Consumer appliance with the highest NOx 6 class



Boilers designed for heating



Boilers with flow water heating



Boilers with preparation of hot water in external storage tank
Storage tanks for indirect heating of water



Boilers with preparation of hot water in built-in reservoir.



Gas boilers



Condensing boilers



Electric boilers



Boilers with the option to connect to a cascade



Equithermal regulation



Communication between the boiler and the regulator by OpenTherm+ protocol



Regulation of gas boilers, electric boilers and cascade boiler rooms



Exhaustion of burnt gases for condensing boilers



Communication through WiFi



Communication through LAN



Communication through GSM

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