Technical documentation

ComfortLine gas condensing boilers

CGB-2(K) • CGW-2 • CGS-2 • CSZ-2

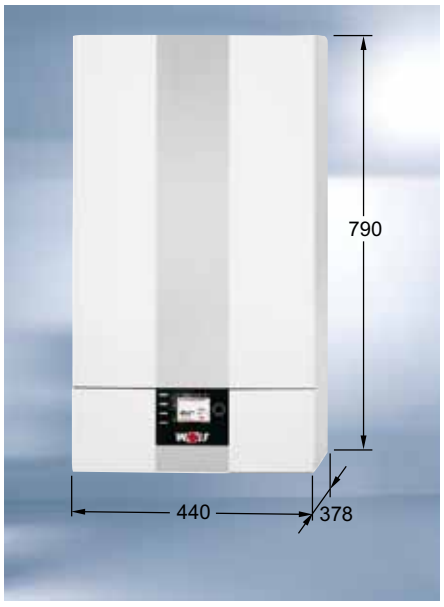
ComfortLine gas condensing boilers

ComfortLine gas condensing boilers

Benefits of the WOLF gas condensing boilers up to 24kW CGB-2(K) / CGW-2 / CGS-2 / CSZ-2

- Sealed combustion chamber, for open and balanced flue operation
- High standard seasonal efficiency [to DIN] up to 110 % (Hi net cv) / 99 % (Hs gross cv) for the best possible energy utilisationg
- Premix burner for natural gas H, LL and LPG, variable modulating heating output from 1.8 kW
- With expansion vessel, modulating high efficiency [HE] pump (EEI < 0.23) and three-way valve as standard
- The heating water heat exchanger can be pivoted under system pressure for easy maintenance without having to drain the system
- Wolf "ALUPro" coated heating water heat exchanger
- Convenient access to all components for quick installation, easy operation and maintenance
- Easy flue gas emissions testing from outside without opening the appliance
- Efficient combustion technology with gas-adaptive self-calibrating combustion controller that adjusts automatically to the prevailing gas quality
- The appliance converts automatically to a different gas type without a conversion kit or resetting of the control unit
- Automatic CO_2 settings with self-calibrating combustion controller ensure extremely clean combustion
- New Wolf WRS control system can be set and adjusted via smartphone or PC
- Optimum utilisation of the condensing effect by controlling the spread without an overflow valve; no return temperature raising required
- ISM7i LAN/WLAN module allows communication via smartphone, laptop or PC

CGB-2-14, -20, -24 wall mounted gas condensing system boilers



Wall mounted gas condensing system boiler with optional connection of a DHW cylinder, e.g. CSW-120

- Modulation range for 50/30 °C flow/return:

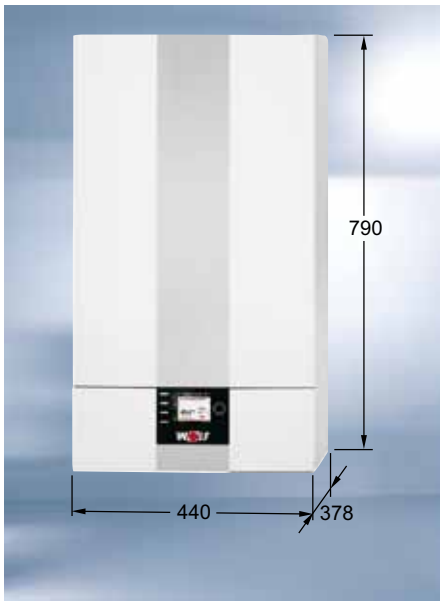
CGB-2-14	2.1 to 15.2 kW
CGB-2-20	4.4 to 20.4 kW
CGB-2-24	5.6 to 25.8 kW

- Booster output during cylinder heating:

CGB-2-20	22.2 kW
CGB-2-24	27.1 kW

ComfortLine gas condensing boilers

CGB-2K-20, -24 wall mounted gas condensing boilers for DHW and central heating



Wall mounted gas condensing boiler for DHW and central heating with integral stainless steel DHW heat exchanger

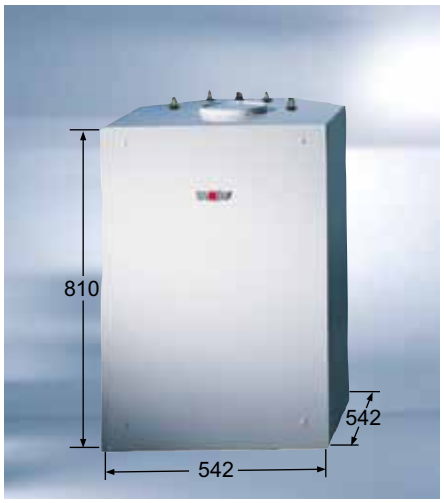
- For demand-dependent, hygienic DHW heating
- Precise flow control ensures constant draw-off temperature
- Modulation range for 50/30 °C flow/return:

  CGB-2K-20 4.4 to 20.4 kW
  CGB-2K-24 5.6 to 25.8 kW

- Booster output for DHW heating:

  CGB-2K-20 22.2 kW
  CGB-2K-24 27.1 kW

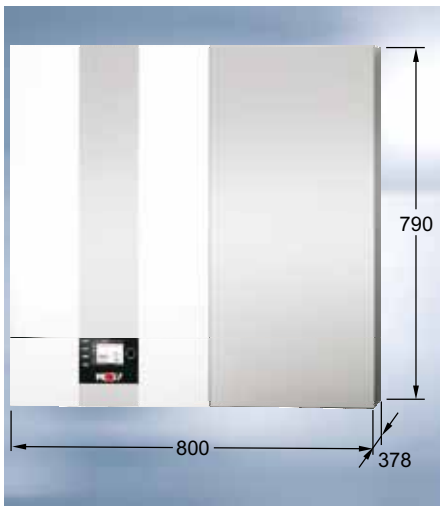
CSW-120 DHW cylinder



- R ¾ connections for flow, return, cold water, hot water and DHW circulation above the cylinder as well as the cleaning aperture at the top of the cylinder for easy connection and cleaning
- Powder-coated white (RAL 9016) casing
- PUR foam thermal insulation all around the cylinder, applied directly to the cylinder surface, highly effective and with low heat losses
- Corrosion protection through enamelled cylinder interior and internal indirect coil to DIN 4753, part 3 Additional corrosion protection through magnesium anode integrated into the inspection and cleaning aperture
- Internal indirect coil with large heat exchanger surface area for short heat-up times
- High constant DHW output thanks to generously sized indirect coil
- R ½ drain outlet at the front, incl. drain valve and hose fitting
- Adjustable feet
- Five-year warranty

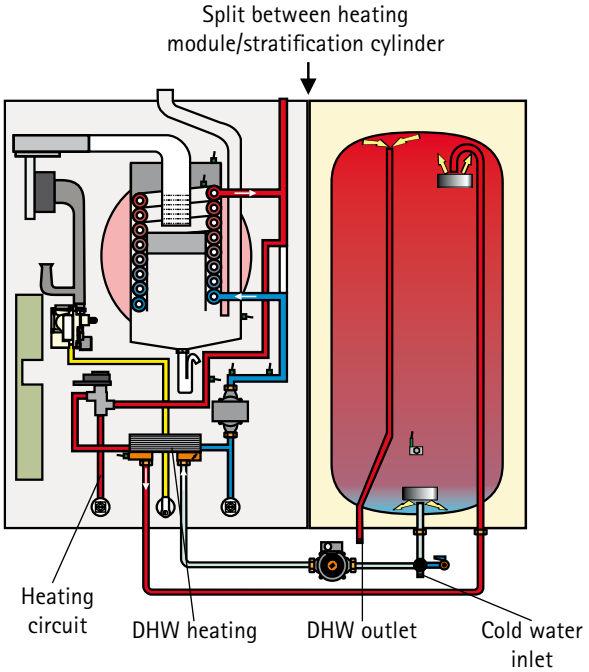
ComfortLine gas condensing boilers

CGW-2-14/100L, -20/120L, -24/140L gas condensing centres with high performance stainless steel stratification cylinder



Wall mounted gas condensing centre, comprising a wall mounted gas condensing boiler with a stainless steel DHW heat exchanger and a stainless steel stratification cylinder in modular design

- Modulation range for 50/30 °C flow/return:
  CGW-2-14/100L 2.1 to 15.2 kW
  CGW-2-20/120L 4.4 to 20.4 kW
  CGW-2-24/140L 5.6 to 25.8 kW
- Booster output for stratification cylinder:
  CGW-2-20/120L 22.2 kW
  CGW-2-24/140L 27.1 kW
- Integral and convenient DHW heating – better than a DHW cylinder (with indirect coil) with 100, 120 or 140 l capacity
- "DHW turbo" with a stainless steel routing and distribution system for hot and cold water ensures steady, radial water distribution and excellent DHW output (European patent pending)
- With the CGW-2-14/100L, filling a bath tub with around 140 l of water at 40 °C only takes 10 minutes
- High savings in operating costs through efficient DHW heating and innovative insulation technology with integrated annular gap system (utility model protection)
- Controlled cylinder heating for optimum energy efficiency through the effective utilisation of condensing technology (European patent granted)
- Compact layout as condensing boiler with attached stratification cylinder for very low assembly and installation costs
- Gas condensing centre, fully wired and ready to connect to the water system
- Can be split quickly and easily into two easy-to-handle modules weighing 35 kg and 19 kg respectively for straightforward installation
- The following accessories are available to ensure quick and clean installation:
  - DHW connection set with pressure reducer for flush / surface mounting
  - DHW connection set without pressure reducer for flush / surface mounting
  - DHW circulation set
  - Solar connection set
  - Pipework cover

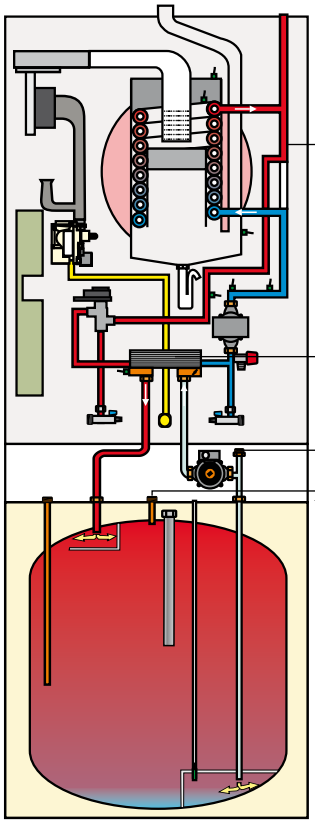


ComfortLine gas condensing boilers

CGS-2-14/120L, -20/160L, -24/200L gas condensing centres with stainless steel DHW heat exchanger and enamelled steel stratification cylinder

Gas condensing centre, comprising a wall mounted gas condensing boiler with a stainless steel DHW heat exchanger and a stratification cylinder in modular design

- Modulation range for 50/30 °C flow/return:
  CGS-2-14/120L 2.1 to 15.2 kW
  CGS-2-20/160L 4.4 to 20.4 kW
  CGS-2-24/200L 5.6 to 25.8 kW
- Booster output for DHW heating:
  CGS-2-20/160L 22.2 kW
  CGS-2-24/200L 27.1 kW
- The "Turbostop system" provides convenient DHW heating inside the stratification cylinder – better than a DHW cylinder (with indirect coil) with 120, 160 or 200 l capacity
- Controlled cylinder heating for optimum energy efficiency through the effective utilisation of condensing technology (European patent granted)
- With the CGS-2-20/160L, filling a bath tub with around 230 l of water at 40 °C only takes 10 minutes; the CGS-2-14/120L fills a bath with around 190 l of water at 40 °C in the same time
- High performance factor N_L = 1.3 or 2.5 for heating from 10 °C to 60 °C
- Lowest possible heat losses thanks to highly effective insulation technology – just 1.0 kWh standby loss in 24 hours
- Compact design as condensing boiler with stratification cylinder. Can be split easily into two modules of 52 kg and 49 kg respectively for easy installation
- The following accessories are available to ensure quick and clean installation:
  - Pipework connection set with flexible stainless steel pipes, thermal insulation for heating flow/return, hot/cold water and gas; suitable for concealed installation and surface mounting
  - Solar heating connection set for the additional control of a solar cylinder
  - DHW circulation set incl. DHW circulation pump
  - Drain outlet kit with triple hose retainer
  - Pipework cover with knock-outs for versatile entry locations



ComfortLine gas condensing boilers

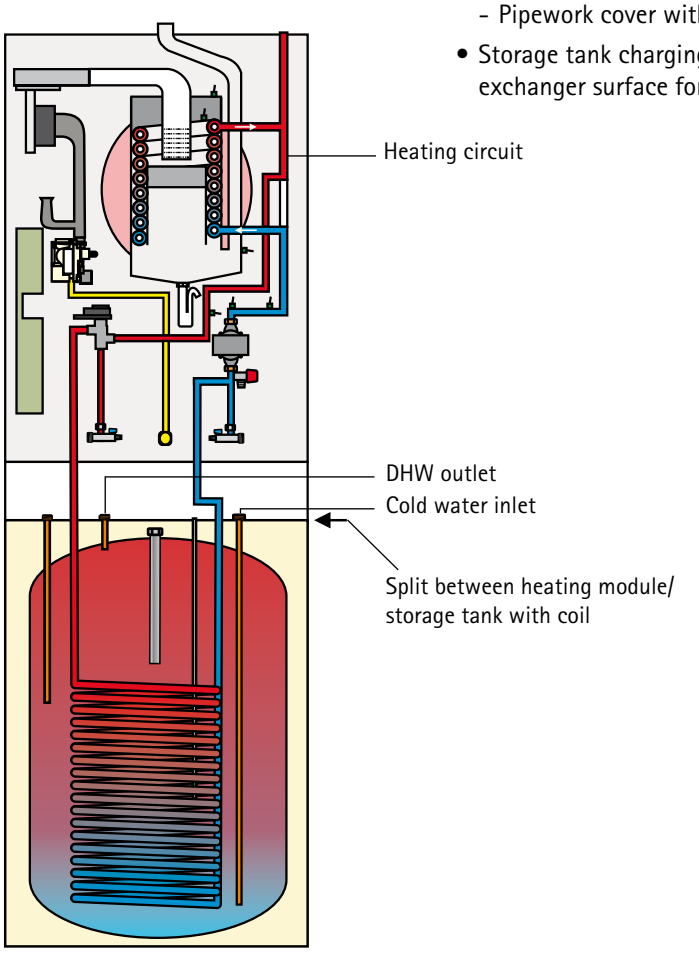
NEW

available from
November 2014 on

CGS-2-14/150R, -20/150R, -24/150R gas condensing centres with stainless steel DHW heat exchanger and enamelled steel storage tank with coil

Gas condensing centre, comprising a wall mounted gas condensing boiler with a storage tank with coil in modular design

- Modulation range for 50/30 °C flow/return:
  CGS-2-14/150R 2.1 to 15.2 kW
  CGS-2-20/150R 4.4 to 20.4 kW
  CGS-2-24/150R 5.6 to 25.8 kW
- Booster output for DHW heating:
  CGS-2-20/150R 22.2 kW
  CGS-2-24/150R 27.1 kW
- Controlled cylinder heating for optimum energy efficiency through the effective utilisation of condensing technology (European patent granted)
- With the CGS-2-20/150R, filling a bath tub with around 230 l of water at 40 °C only takes 10 minutes; the CGS-2-14/150R fills a bath with around 180l of water at 40 °C in the same time
- High performance factor N_L = 1.4 or 1.8 for heating from 10 °C to 60 °C
- Lowest possible heat losses thanks to highly effective insulation technology – just 1.47 kWh standby loss in 24 hours
- Compact design as condensing boiler with storage tank with coil. Can be split easily into two modules of 35 kg and 80 kg respectively for easy installation
- The following accessories are available to ensure quick and clean installation:
  - Pipework connection set with flexible stainless steel pipes, thermal insulation for heating flow/return, hot/cold water and gas; suitable for concealed installation and surface mounting
  - Solar heating connection set for the additional control of a solar cylinder
  - DHW circulation set incl. DHW circulation pump
  - Drain outlet kit with triple hose retainer
  - Pipework cover with knock-outs for versatile entry locations
- Storage tank charging via robust heating coil with generously dimensioned heat exchanger surface for short reheating cycles.



ComfortLine gas condensing boilers

In the shape of its CSZ-2 product range, Wolf offers the optimum, compact solution – gas condensing technology combined with solar DHW heating – with a solar coverage rate of up to 60 % for buildings with up to 150 m^2 available floor area.

CSZ-2-14/300R, -20/300R, -24/300R ComfortLine gas condensing solar centres

ComfortLine CSZ-2 gas condensing solar centre in modular form

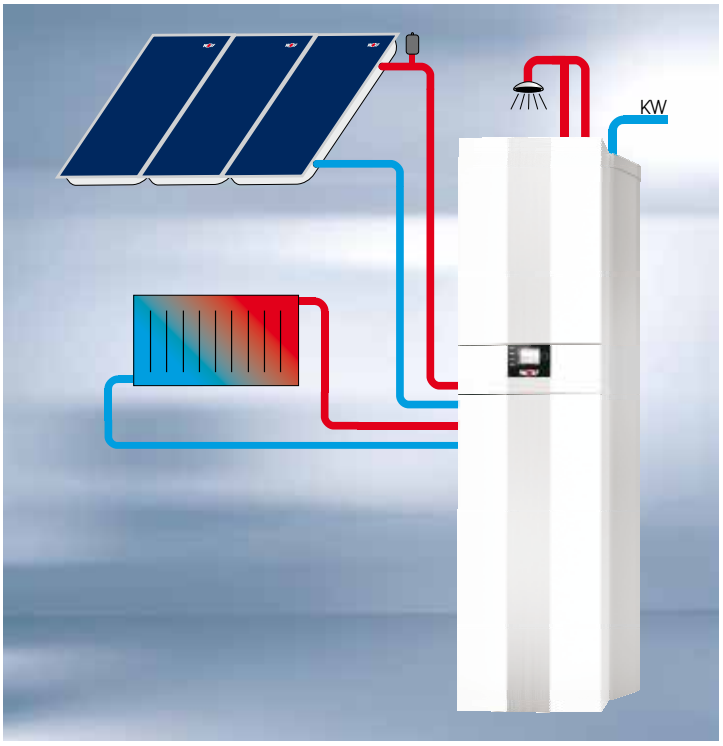
Heating output from 1.8 to 27.1 kW, for central and DHW heating, comprising:

- Gas condensing boiler, solar cylinder, solar pump assembly with SM1 solar module and 25 l expansion vessel, 10 l drip tank for solar fluid, standard control unit for gas condensing boiler with BM-2 programming module incl. outside temperature sensor
- Solar boiler shutdown for high solar yield
- Compact design – the gas condensing solar centre fits in almost any recess
- Side clearances for service purposes are not required as all components are accessible from the front; minor clearance required on the connection side
- Solar cylinder with highly effective thermal insulation, even protecting the cylinder floor
- Connections for central heating and solar circuit either on the l.h. or r.h. side, connections for DHW, cold water and DHW circulation at the top
- HE solar circuit pump as standard

ComfortLine gas condensing boilers

- **Wall mounted gas condensing boiler**, sealed combustion chamber, for open and balanced flue operation
- High standard seasonal efficiency [to DIN] up to 110 % (Hi net cv) / 99 % (Hs gross cv) for the best possible energy utilisation
- Premix burner for natural gas H, LL and LPG, variable modulating heating output from 1.8 kW
- With expansion vessel, modulating high efficiency [HE] pump (EEI < 0.23) and three-way valve as standard
- The heating water heat exchanger can be pivoted under system pressure for easy maintenance without having to drain the system
- Wolf "ALUPro" coated heating water heat exchanger
- Convenient access to all components for quick installation, easy operation and maintenance
- Easy flue gas emissions testing from outside without opening the appliance
- Efficient combustion technology with gas-adaptive self-calibrating combustion controller that adjusts automatically to the prevailing gas quality
- The appliance converts automatically to a different gas type without a conversion kit or resetting of the control unit
- Automatic CO_2 settings with self-calibrating combustion controller for all gas types (natural gas, LPG)
- New Wolf WRS control system can be set and adjusted via smartphone or PC
- Optimum utilisation of the condensing effect by controlling the spread without an overflow valve; no return temperature raising required
- ISM7i LAN/WLAN module allows communication via smartphone, laptop or PC
- Modulation range for 50/30 °C flow/return:
  CSZ-2-14/300R 2.1 to 15.2 kW
  CSZ-2-20/300R 4.4 to 20.4 kW
  CSZ-2-24/300R 5.6 to 25.8 kW
- Booster output during cylinder heating:
  CSZ-2-20/300R 22.2 kW
  CSZ-2-24/300R 27.1 kW

- **Solar cylinder**, 285 l capacity, made of steel with two robust, bare tube internal indirect coils for very hard water, with enamel coating to DIN 4753
- Highly effective thermal insulation and low thermal losses through high grade rigid PU foam insulation below the cylinder foil jacket
- The interior of the cylinder and the indirect coils are protected by an enamel coating and a magnesium anode
- Large heat exchanger surface areas ensure a short heat-up time and a high constant DHW output
- Control unit with solar-dependent boiler shutdown for high solar yield
- With its compact design and single casing, which has a space requirement of 600 x 1013 mm, the gas condensing solar centre will fit in almost any recess
- Small side clearances only required on the connection side
- All control and service elements are accessible from the front offering plenty of siting options



CGB-2 / CGB-2K specification

Type	CGB-2	14	20	24	-	-
	CGB-2K	-	-	-	20	24
Energy efficiency class Space heating		A	A	A	A	A
Energy efficiency class Water heating		-	-	-	A	A
Rated heating output at 80/60 °C	kW	13,5	18,9/22,2 [1]	23,8/27,1 [1]	18,9/22,2 [1]	23,8/27,1 [1]
Rated heating output at 50/30 °C	kW	15,2	20,4	25,8	20,4	25,8
Rated heat input	kW	14,0	19,6/23,0	24,6/28,0	19,6/23,0	24,6/28,0
Lowest heating output (modulating) at 80/60 °C	kW	1,8/4,6 [2]	3,8/6,8 [2]	4,8/6,8 [2]	3,8/6,8 [2]	4,8/6,8 [2]
Lowest heating output (modulating) at 50/30 °C	kW	2,1/5,4 [2]	4,4/7,4 [2]	5,6/7,4 [2]	4,4/7,4 [2]	5,6/7,4 [2]
Lowest heat input (modulating)	kW	1,9/4,9 [2]	3,9/6,9 [2]	4,9/6,9 [2]	3,9/6,9 [2]	4,9/6,9 [2]
Heating flow connection	G	3/4" (DN20)	3/4" (DN20)	3/4" (DN20)	3/4" (DN20)	3/4" (DN20)
Heating return connection	G	3/4" (DN20)	3/4" (DN20)	3/4" (DN20)	3/4" (DN20)	3/4" (DN20)
Cold water connection / DHW circulation	G	3/4"	3/4"	3/4"	3/4"	3/4"
Cold water connection	G	3/4"	3/4"	3/4"	3/4"	3/4"
Gas connection	R	1/2"	1/2"	1/2"	1/2"	1/2"
Air/flue pipe connection	mm	60/100	60/100	60/100	60/100	60/100
Dimensions						
Depth	mm	378	378	378	378	378
Width	mm	440	440	440	440	440
Height	mm	790	790	790	790	790
Air/flue gas routing	Typ	$B23_P$, $B33_P$, C13(x), C33(x), C43(x), C53(x), C63(x), C83(x), C93(x)				
Gas		II_{2N3P}	II_{2N3P}	II_{2N3P}	II_{2N3P}	II_{2N3P}
Gas supply details						
Natural gas E/H (Hi [net cv]=9.5 kWh/m^3=34.2 MJ/m^3)	m^3/h	1,44	2,06/2,42	2,52/2,95	2,06/2,42	2,52/2,95
Natural gas LL (Hi [net cv]=8.6 kWh/m^3=31.0 MJ/m^3)	m^3/h	1,59	2,28/2,67	2,79/3,25	2,28/2,67	2,79/3,25
LPG P (Hi [net cv]=12.8 kWh/m^3=46.1 MJ/m^3)	kg/h	1,07	1,53/1,80	1,87/2,19	1,53/1,80	1,87/2,19
Natural gas supply pressure (permissible min./max.)	mbar	20 (17-25)	20 (17-25)	20 (17-25)	20 (17-25)	20 (17-25)
LPG gas supply pressure (permissible min./max.)	mbar	50 (42,5-57,5)	50 (42,5-57,5)	50 (42,5-57,5)	50 (42,5-57,5)	50 (42,5-57,5)
Standard seasonal efficiency [to DIN] at 40/30 °C (Hi[net cv]/Hs[gross cv])	%	110/99	110/99	110/99	110/99	110/99
Standard seasonal efficiency [to DIN] at 75/60 °C (Hi[net cv]/Hs[gross cv])	%	107/96	107/96	107/96	107/96	107/96
Efficiency at rated load at 80/60 °C (Hi[net cv]/Hs[gross cv])	%	98/88	98/88	98/88	98/88	98/88
Efficiency at 30 % partial load and TR=30 °C (Hi[net cv]/Hs[gross cv])	%	108/97	108/97	108/97	108/97	108/97
Factory-set flow temperature	°C	75	75	75	75	75
Flow temperature up to approx.	°C	90	90	90	90	90
Max. overall pressure	bar	3,0	3,0	3,0	3,0	3,0
Max. residual head for heating circuit: HE pump (EEI <0.23)						
600 l/h pump rate (14 kW at Δt=20 K)	mbar	550	550	550	550	550
860 l/h pump rate (20 kW at Δt=20 K)	mbar	-	430	430	430	430
1030 l/h pump rate (24 kW at Δt=20 K)	mbar	-	-	280	-	280
DHW throughput	l/min	-	-	-	2,0-6,5	2,0-8,0
Minimum flowpressure acc. to EN 625	bar	-	-	-	0,4	0,65
Spec. water throughput D at Δt = 30 K	l/min	-	-	-	10,3	13,0
Max. permissible positive DHW pressure	bar	-	-	-	10	10
DHW temperature range (adjustable)	°C	-	-	-	45-65	45-65
Hot water content of heating water heat exchanger	l	1,3	1,3	1,3	1,3	1,3
Expansion vessel total capacity	l	10	10	10	10	10
Expansion vessel pre-charge pressure	bar	0,75-0,95	0,75-0,95	0,75-0,95	0,75-0,95	0,75-0,95
Flue gas temperature 80/60-50/30 at Qmax	°C	62-45	70-50	76-50	70-50	76-50
Flue gas temperature 80/60-50/30 at Qmin	°C	30-25	30-25	33-27	30-25	33-27
Flue gas mass flow at Qmax	g/s	6,2	8,8/10,7 [1]	10,9/13,0 [1]	8,8/10,7 [1]	10,9/13,0 [1]
Flue gas mass flow at Qmin	g/s	0,9	1,8	2,3	1,8	2,3
Available gas fan draught at Qmax	Pa	125	135	180	135	180
Available gas fan draught at Qmin	Pa	10	14	17	14	17
Flue gas category		G_{52}	G_{52}	G_{52}	G_{52}	G_{52}
NOx category		5	5	5	5	5
Amount of condensate at 50/30 °C	l/h	ca. 1,4	ca. 2,0	ca. 2,4	ca. 2,0	ca. 2,4
pH value of condensate		ca. 4,0	ca. 4,0	ca. 4,0	ca. 4,0	ca. 4,0
Standby power consumption	W	3	3	3	3	3
Maximum power consumption	W	17-45/59 [1]	17-51/63 [1]	17-62/88 [1]	17-51/63 [1]	17-62/88 [1]
IP rating	IP	IPX4D	IPX4D	IPX4D	IPX4D	IPX4D
Power supply/fuse/MCB protection		230V / 50Hz / 16A/B				
Total weight	kg	33	33	33	35	35
CE ID		CE-0085CO0098				

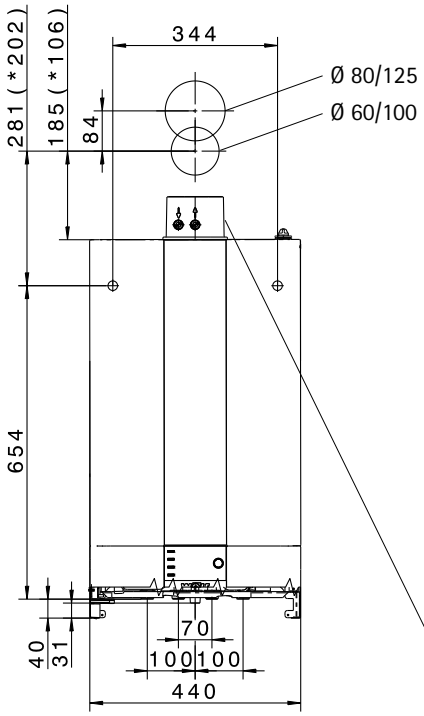
[1] Heating operation/DHW operation

[2] Natural gas/LPG (G31)

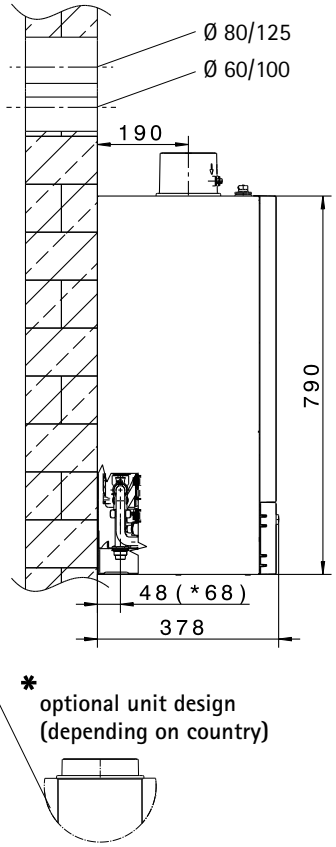
The requirements of proKlima and KfW are fulfilled.

CGB-2/CGB-2K dimensions and connection dimensions

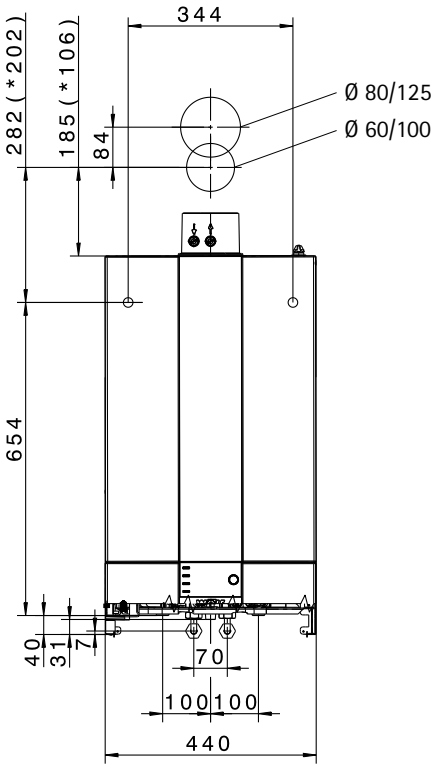
Front view
CGB-2



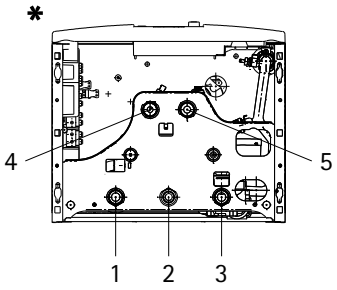
Side view
CGB-2/CGB-2K



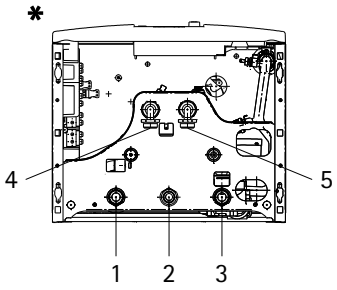
Front view
CGB-2K



View from below
CGB-2



View from below
CGB-2K



CGB-2 connections

1 Heating flow G ¾"
2 Gas connection R ½"
3 Heating return G ¾"
4 Cylinder flow G ¾"
5 Cylinder return G ¾"

CGB-2K connections

1 Heating flow G ¾"
2 Gas connection R ½"
3 Heating return G ¾"
4 DHW connection with connection elbow G ¾"
5 Cold water connection with connection elbow G ¾"

CGW-2 specification

Type	CGW-2	14/100L	20/120L	24/140L
Energy efficiency class Space heating		A	A	A
Energy efficiency class Water heating		A	A	A
Rated heating output at 80/60 °C	kW	13,5	18,9/22,2 [1]	23,8/27,1 [1]
Rated heating output at 50/30 °C	kW	15,2	20,4	25,8
Rated heat input	kW	14,0	19,6/23,0 [1]	24,6/28,0 [1]
Lowest heating output (modulating) at 80/60 °C	kW	1,8/4,6 [2]	3,8/6,8 [2]	4,8/6,8 [2]
Lowest heating output (modulating) at 50/30 °C	kW	2,1/5,4 [2]	4,4/7,4 [2]	5,6/7,4 [2]
Lowest heat input (modulating)	kW	1,9/4,9 [2]	3,9/6,9 [2]	4,9/6,9 [2]
Heating flow connection	G	3/4" (DN20)	3/4" (DN20)	3/4" (DN20)
Heating return connection	G	3/4" (DN20)	3/4" (DN20)	3/4" (DN20)
DHW connection	G	1/2"	1/2"	1/2"
Cold water connection / DHW circulation	G	3/4"	3/4"	3/4"
Gas connection	R	1/2"	1/2"	1/2"
Air/flue pipe connection	mm	60/100	60/100	60/100
Dimensions				
Depth	mm	378	378	378
Width	mm	800	800	800
Height	mm	790	790	790
Air/flue gas routing	Typ	$B23_P$, $B33_P$, C13(x), C33(x), C43(x), C53(x), C63(x), C83(x), C93(x)		
Gas		II_{2N3P}	II_{2N3P}	II_{2N3P}
Gas supply details				
Natural gas E/H (Hi [net cv]=9.5 kWh/m^3=34.2 MJ/m^3)	m^3/h	1,44	2,06/2,42	2,52/2,95
Natural gas LL (Hi [net cv]=8.6 kWh/m^3=31.0 MJ/m^3)	m^3/h	1,59	2,28/2,67	2,79/3,25
LPG P (Hi [net cv]=12.8 kWh/m^3=46.1 MJ/m^3)	kg/h	1,07	1,53/1,80	1,87/2,19
Natural gas supply pressure (permissible min./max.)	mbar	20 (17-25)	20 (17-25)	20 (17-25)
LPG gas supply pressure (permissible min./max.)	mbar	50 (42,5-57,5)	50 (42,5-57,5)	50 (42,5-57,5)
Standard seasonal efficiency [to DIN] at 40/30 °C (Hi[net cv]/Hs[gross cv])	%	110/99	110/99	110/99
Standard seasonal efficiency [to DIN] at 75/60 °C (Hi[net cv]/Hs[gross cv])	%	107/96	107/96	107/96
Efficiency at rated load at 80/60 °C (Hi[net cv]/Hs[gross cv])	%	98/88	98/88	98/88
Efficiency at 30 % partial load and TR=30 °C (Hi[net cv]/Hs[gross cv])	%	108/97	108/97	108/97
Factory-set flow temperature	°C	75	75	75
Flow temperature up to approx.	°C	90	90	90
Max. overall positive heating circuit pressure	bar	3	3	3
Residual head for heating circuit: HE pump (EEI <0.23)				
600 l/h pump rate (14 kW at Δt=20 K)	mbar	550	550	550
860 l/h pump rate (20 kW at Δt=20 K)	mbar	-	430	430
1030 l/h pump rate (24 kW at Δt=20 K)	mbar	-	-	280
Max. permissible positive DHW pressure	bar	10	10	10
DHW temperature range (adjustable)	°C	15-65	15-65	15-65
Water content, heating water heat exchanger	l	1,3	1,3	1,3
Nominal capacity of the stratification cylinder / equivalent nominal capacity	l	44 / 100	44 / 120	44 / 140
Spec. water throughput D at Δt = 30 K	l/min	14,3	18,0	20
Constant DHW output	l/h (kW)	366 (14,6)	560 (23,1)	684 (27,8)
Performance factors to DIN 4708	N_L	0,8	1,1	1,5
DHW output	l/10 min	115	150	171
Standby heat loss to DIN EN 12897	kWh/24 h	0,8	0,8	0,8
Corrosion protection, DHW heat exchanger / cylinder		Stainless steel	Stainless steel	Stainless steel
Expansion vessel total capacity	l	10	10	10
Expansion vessel pre-charge pressure	bar	0,75-0,95	0,75-0,95	0,75-0,95
Flue gas temperature 80/60-50/30 at Qmax	°C	62-45	70-50	76-50
Flue gas temperature 80/60-50/30 at Qmin	°C	30-25	30-25	33-27
Flue gas mass flow at Qmax	g/s	6,2	8,8/10,7 [1]	10,9/13,0 [1]
Flue gas mass flow at Qmin	g/s	0,9	1,8	2,3
Available gas fan draught at Qmax	Pa	125	135	180
Available gas fan draught at Qmin	Pa	10	14	17
Flue gas category		G_{52}	G_{52}	G_{52}
NOx category		5	5	5
Amount of condensate at 50/30 °C	l/h	ca. 1,4	ca. 2,0	ca. 2,4
pH value of condensate		ca. 4,0	ca. 4,0	ca. 4,0
Standby power consumption	W	3	3	3
Maximum power consumption	W	17-45/93 [1]	17-51/110 [1]	17-62/135 [1]
IP rating	IP	IPX4D	IPX4D	IPX4D
Power supply/fuse/MCB protection		230V / 50Hz / 16A/B	230V / 50Hz / 16A/B	230V / 50Hz / 16A/B
Total weight	kg	54 (35+19)	54 (35+19)	54 (35+19)
CE ID		CE-0085CO0098		

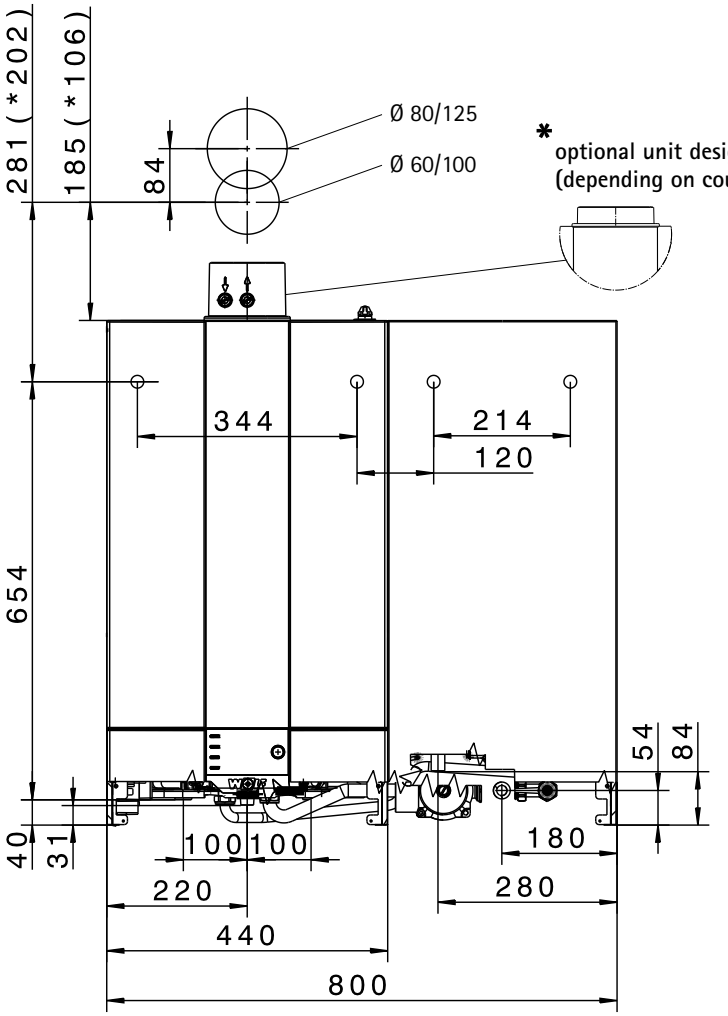
[1] Heating operation/DHW operation

[2] Natural gas/LPG (G31)

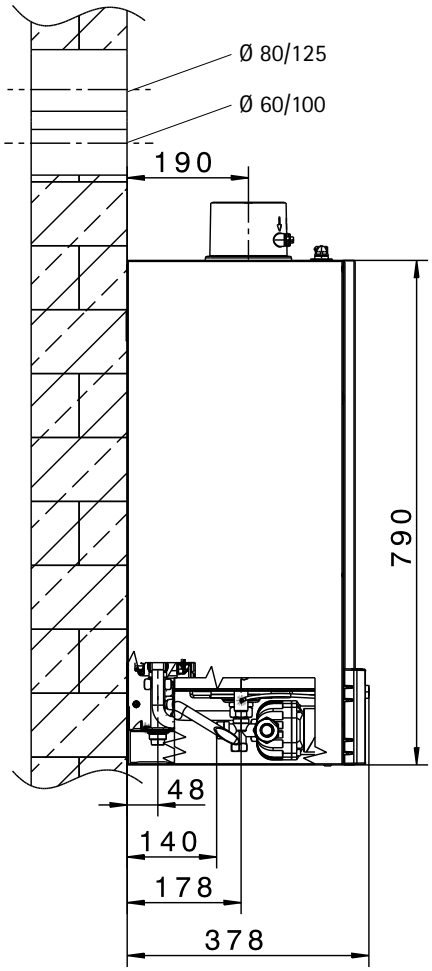
The requirements of proKlima and KfW are fulfilled.

CGW-2 dimensions and connection dimensions

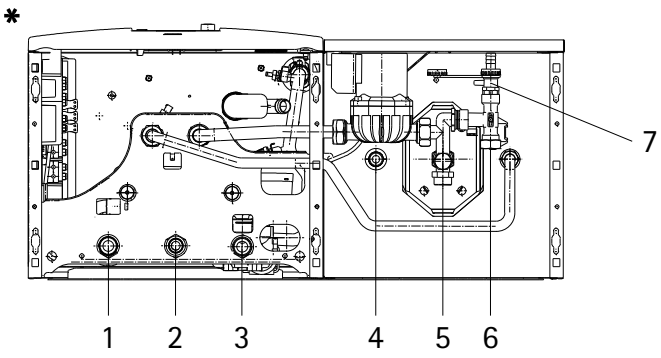
Front view
CGW-2



Side view
CGW-2



View from below
CGW-2



CGW-2 connections

1 Heating flow G ¾"
2 Gas connection R ½"
3 Heating return G ¾"
4 DHW connection G ½"
5 Cold water connection G ¾"
6 DHW circulation connection G ¾"
7 Drain & fill valve

CGS-2L specification

Type	CGS-2	14/120L	20/160L	24/200L
Energy efficiency class Space heating		A	A	A
Energy efficiency class Water heating		A	A	A
Rated heating output at 80/60 °C	kW	13,5	18,9/22,2 [1]	23,8/27,1 [1]
Rated heating output at 50/30 °C	kW	15,2	20,4	25,8
Rated heat input	kW	14,0	19,6/23,0 [1]	24,6/28,0 [1]
Lowest heating output (modulating) at 80/60 °C	kW	1,8/4,6 [2]	3,8/6,8 [2]	4,8/6,8 [2]
Lowest heating output (modulating) at 50/30 °C	kW	2,1/5,4 [2]	4,4/7,4 [2]	5,6/7,4 [2]
Lowest heat input (modulating)	kW	1,9/4,9 [2]	3,9/6,9 [2]	4,9/6,9 [2]
Heating flow connection	G	3/4" (DN20)	3/4" (DN20)	3/4" (DN20)
Heating return connection	G	3/4" (DN20)	3/4" (DN20)	3/4" (DN20)
DHW connection	G	3/4"	3/4"	3/4"
Cold water connection / DHW circulation	G	3/4"	3/4"	3/4"
Gas connection	R	1/2"	1/2"	1/2"
Air/flue pipe connection	mm	60/100	60/100	60/100
Dimensions				
Depth	mm	635	635	635
Width	mm	600	600	600
Height	mm	1462	1462	1462
Air/flue gas routing	Typ	$B23_P$, $B33_P$, C13(x), C33(x), C43(x), C53(x), C63(x), C83(x), C93(x)		
Gas		II_{2N3P}	II_{2N3P}	II_{2N3P}
Gas supply details				
Natural gas E/H (Hi [net cv]=9.5 kWh/m³=34.2 MJ/m³)	m³/h	1,44	2,06/2,42	2,52/2,95
Natural gas LL (Hi [net cv]=8.6 kWh/m³=31.0 MJ/m³)	m³/h	1,59	2,28/2,67	2,79/3,25
LPG P (Hi [net cv]=12.8 kWh/m³=46.1 MJ/m³)	kg/h	1,07	1,53/1,80	1,87/2,19
Natural gas supply pressure (permissible min./max.)	mbar	20 (17-25)	20 (17-25)	20 (17-25)
LPG gas supply pressure (permissible min./max.)	mbar	50 (42,5-57,5)	50 (42,5-57,5)	50 (42,5-57,5)
Standard seasonal efficiency [to DIN] at 40/30 °C (Hi[net cv]/Hs[gross cv])	%	110/99	110/99	110/99
Standard seasonal efficiency [to DIN] at 75/60 °C (Hi[net cv]/Hs[gross cv])	%	107/96	107/96	107/96
Efficiency at rated load at 80/60 °C (Hi[net cv]/Hs[gross cv])	%	98/88	98/88	98/88
Efficiency at 30 % partial load and TR=30 °C (Hi[net cv]/Hs[gross cv])	%	108/97	108/97	108/97
Factory-set flow temperature	°C	75	75	75
Flow temperature up to approx.	°C	90	90	90
Max. overall positive heating circuit pressure	bar	3	3	3
Residual head for heating circuit: HE pump (EEI <0.23)				
600 l/h pump rate (14 kW at Δt=20 K)	mbar	550	550	550
860 l/h pump rate (20 kW at Δt=20 K)	mbar	-	430	430
1030 l/h pump rate (24 kW at Δt=20 K)	mbar	-	-	280
Max. permissible positive DHW pressure	bar	10	10	10
DHW temperature range (adjustable)	°C	15-65	15-65	15-65
Water content, heating water heat exchanger	l	1,3	1,3	1,3
Nominal capacity of the stratification cylinder / equivalent nominal capacity	l	90 / 120	90 / 160	90 / 200
Spec. water throughput D at ΔT = 30 K	l/min	18,7	23,2	25,2
Constant DHW output	l/h (kW)	366 (14,6)	560 (23,1)	684 (27,8)
Performance factors	N_L	1,3	2,1	2,5
DHW output	l/10 min	161	199	215
Standby heat loss to DIN EN 12897	kWh/24 h	1,0	1,0	1,0
Corrosion protection, DHW heat exchanger / cylinder		Stainless steel / two-layer enamel coating to DIN 4753		
Expansion vessel total capacity	l	10	10	10
Expansion vessel pre-charge pressure	bar	0,75-0,95	0,75-0,95	0,75-0,95
Flue gas temperature 80/60-50/30 at Qmax	°C	62-45	70-50	76-50
Flue gas temperature 80/60-50/30 at Qmin	°C	30-25	30-25	33-27
Flue gas mass flow at Qmax	g/s	6,2	8,8/10,7 [1]	10,9/13,0 [1]
Flue gas mass flow at Qmin	g/s	0,9	1,8	2,3
Available gas fan draught at Qmax	Pa	125	135	180
Available gas fan draught at Qmin	Pa	10	14	17
Flue gas category		G_{52}	G_{52}	G_{52}
NOx category		5	5	5
Amount of condensate at 50/30 °C	l/h	ca. 1,4	ca. 2,0	ca. 2,4
pH value of condensate		ca. 4,0	ca. 4,0	ca. 4,0
Standby power consumption	W	3	3	3
Maximum power consumption	W	17-45/93 [1]	17-51/110 [1]	17-62/135 [1]
IP rating	IP	IPX4D	IPX4D	IPX4D
Power supply/fuse/MCB protection		230V / 50Hz / 16A/B	230V / 50Hz / 16A/B	230V / 50Hz / 16A/B
Total weight	kg	84 (35+49)	84 (35+49)	84 (35+49)
CE ID		CE-0085CO0098		

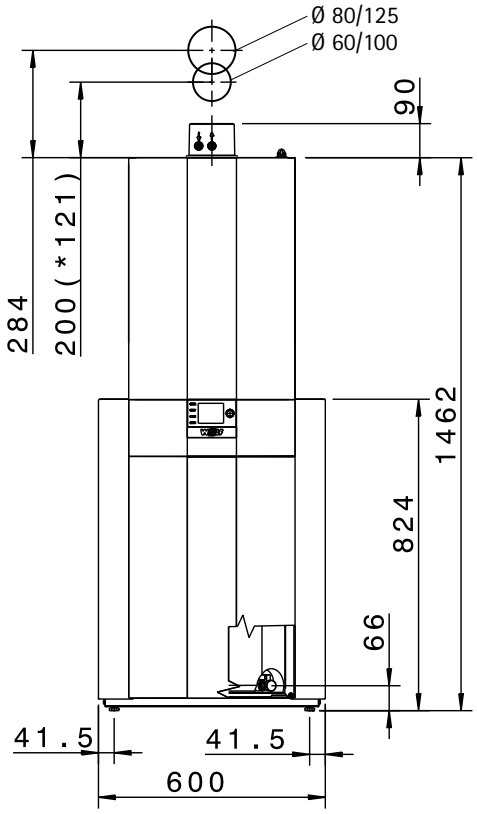
[1] Heating operation/DHW operation

[2] Natural gas/LPG (G31)

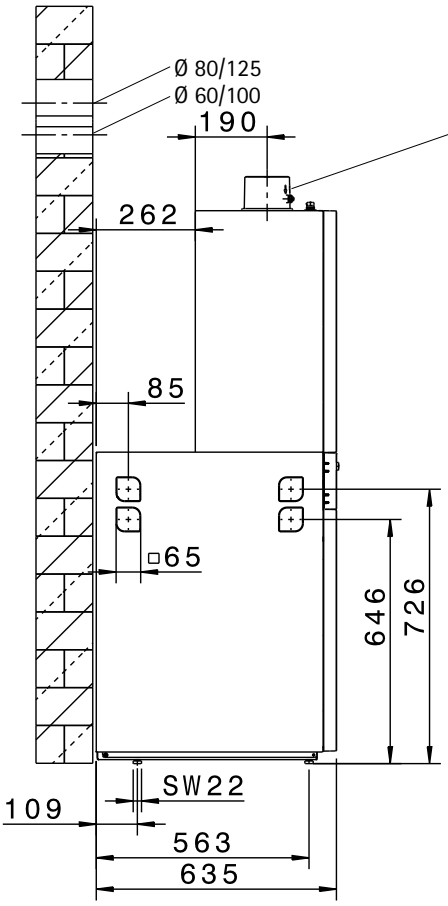
The requirements of proKlima and KfW are fulfilled.

CGS-2L dimensions and connection dimensions

Front view
CGS-2L

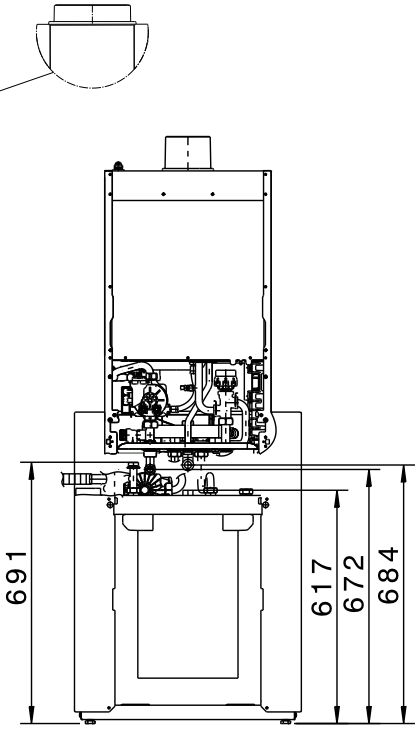


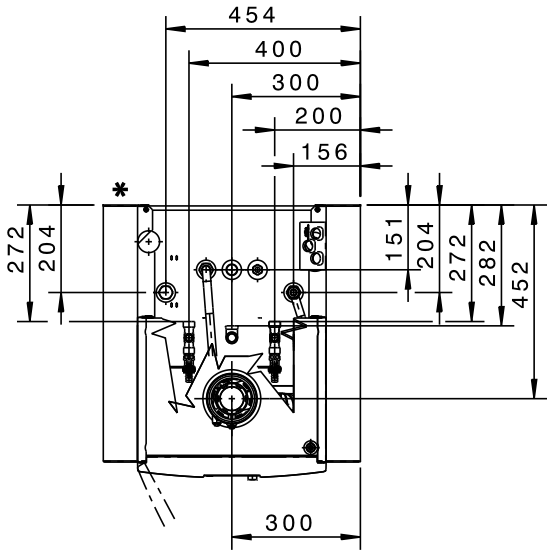
Side view
CGS-2L



View from the back
CGS-2L

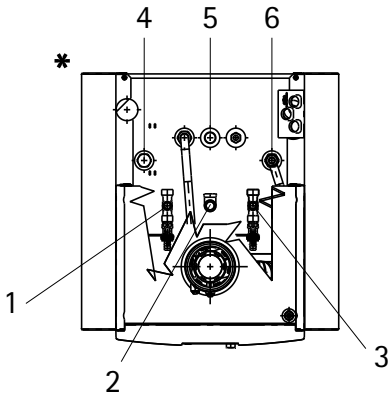
* optional unit design (depending on country)





Control unit cover
hinged on the left

Plan view
CGS-2L



CGS-2L connections

1 Heating flow G ¾"
2 Heating return G ¾"
3 Gas connection R ½"
4 DHW circulation connection G ¾"
5 DHW connection G ½"
6 Cold water connection G ¾"

CGS-2R specification

Type	CGS-2	14/150R	20/150R	24/150R
Energy efficiency class Space heating		A	A	A
Energy efficiency class Water heating		A	A	A
Rated heating output at 80/60 °C	kW	13,5	18,9/22,2 [1]	23,8/27,1 [1]
Rated heating output at 50/30 °C	kW	15,2	20,4	25,8
Rated heat input	kW	14,0	19,6/23,0 [1]	24,6/28,0 [1]
Lowest heating output (modulating) at 80/60 °C	kW	1,8/4,6 [2]	3,8/6,8 [2]	4,8/6,8 [2]
Lowest heating output (modulating) at 50/30 °C	kW	2,1/5,4 [2]	4,4/7,4 [2]	5,6/7,4 [2]
Lowest heat input (modulating)	kW	1,9/4,9 [2]	3,9/6,9 [2]	4,9/6,9 [2]
Heating flow connection	G	3/4" (DN20)	3/4" (DN20)	3/4" (DN20)
Heating return connection	G	3/4" (DN20)	3/4" (DN20)	3/4" (DN20)
DHW connection	G	3/4"	3/4"	3/4"
Cold water connection / DHW circulation	G	3/4"	3/4"	3/4"
Gas connection	R	1/2"	1/2"	1/2"
Air/flue pipe connection	mm	60/100	60/100	60/100
Dimensions				
Depth	mm	635	635	635
Width	mm	600	600	600
Height	mm	1792	1792	1792
Air/flue gas routing	Typ	$B23_P$, $B33_P$, C13(x), C33(x), C43(x), C53(x), C63(x), C83(x), C93(x)		
Gas		II_{2N3P}	II_{2N3P}	II_{2N3P}
Gas supply details				
Natural gas E/H (Hi [net cv]=9.5 kWh/m³=34.2 MJ/m³)	m³/h	1,44	2,06/2,42	2,52/2,95
Natural gas LL (Hi [net cv]=8.6 kWh/m³=31.0 MJ/m³)	m³/h	1,59	2,28/2,67	2,79/3,25
LPG P (Hi [net cv]=12.8 kWh/m³=46.1 MJ/m³)	kg/h	1,07	1,53/1,80	1,87/2,19
Natural gas supply pressure (permissible min./max.)	mbar	20 (17-25)	20 (17-25)	20 (17-25)
LPG gas supply pressure (permissible min./max.)	mbar	50 (42,5-57,5)	50 (42,5-57,5)	50 (42,5-57,5)
Standard seasonal efficiency [to DIN] at 40/30 °C (Hi[net cv]/Hs[gross cv])	%	110/99	110/99	110/99
Standard seasonal efficiency [to DIN] at 75/60 °C (Hi[net cv]/Hs[gross cv])	%	107/96	107/96	107/96
Efficiency at rated load at 80/60 °C (Hi[net cv]/Hs[gross cv])	%	98/88	98/88	98/88
Efficiency at 30 % partial load and TR=30 °C (Hi[net cv]/Hs[gross cv])	%	108/97	108/97	108/97
Factory-set flow temperature	°C	75	75	75
Flow temperature up to approx.	°C	90	90	90
Max. overall positive heating circuit pressure	bar	3	3	3
Residual head for heating circuit: HE pump (EEI <0.23)				
600 l/h pump rate (14 kW at Δt=20 K)	mbar	550	550	550
860 l/h pump rate (20 kW at Δt=20 K)	mbar	-	430	430
1030 l/h pump rate (24 kW at Δt=20 K)	mbar	-	-	280
Max. permissible positive DHW pressure	bar	10	10	10
DHW temperature range (adjustable)	°C	15-65	15-65	15-65
Water content, heating water heat exchanger	l	1,3	1,3	1,3
Nominal capacity of the storage tank with coil	l	145	145	145
Spec. water throughput D at ΔT = 30 K	l/min	19,7	21,4	21,7
Constant DHW output	l/h (kW)	324 (13,6)	555 (22,6)	612 (25)
Performance factors to DIN 4708	N_L	1,4	1,6	1,8
DHW output	l/10 min	162	176	182
Standby heat loss to DIN EN 12897	kWh/24 h	1,47	1,47	1,47
Corrosion protection, DHW heat exchanger / cylinder		Stainless steel / two-layer enamel coating to DIN 4753		
Expansion vessel total capacity	l	10	10	10
Expansion vessel pre-charge pressure	bar	0,75-0,95	0,75-0,95	0,75-0,95
Flue gas temperature 80/60-50/30 at Qmax	°C	62-45	70-50	76-50
Flue gas temperature 80/60-50/30 at Qmin	°C	30-25	30-25	33-27
Flue gas mass flow at Qmax	g/s	6,2	8,8/10,7 [1]	10,9/13,0 [1]
Flue gas mass flow at Qmin	g/s	0,9	1,8	2,3
Available gas fan draught at Qmax	Pa	90	90	90
Available gas fan draught at Qmin	Pa	12	12	12
Flue gas category		G_{52}	G_{52}	G_{52}
NOx category		5	5	5
Amount of condensate at 50/30 °C	l/h	ca. 1,4	ca. 2,0	ca. 2,4
pH value of condensate		ca. 4,0	ca. 4,0	ca. 4,0
Standby power consumption	W	3	3	3
Maximum power consumption	W	17-59/45 [1]	17-51/63 [1]	17-62/88 [1]
IP rating	IP	IPX4D	IPX4D	IPX4D
Power supply/fuse/MCB protection		230V / 50Hz / 16A/B	230V / 50Hz / 16A/B	230V / 50Hz / 16A/B
Total weight	kg	115 (35+80)	115 (35+80)	115 (35+80)
CE ID		CE-0085CO0098		

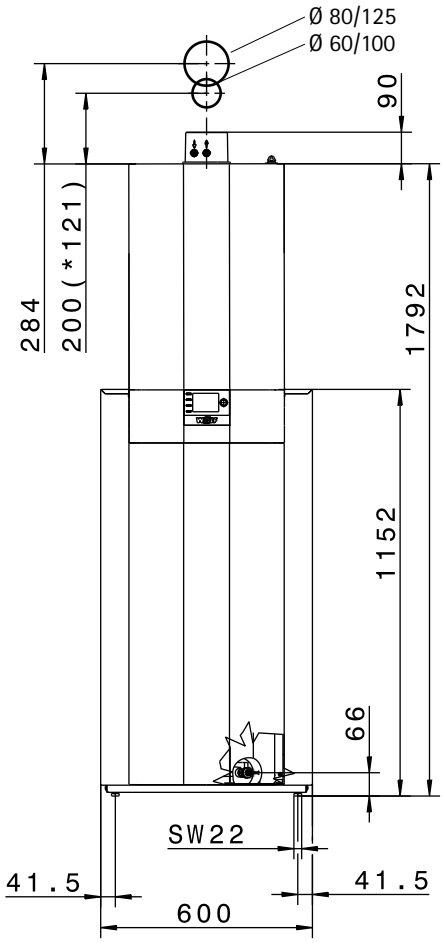
[1] Heating operation/DHW operation

[2] Natural gas/LPG (G31)

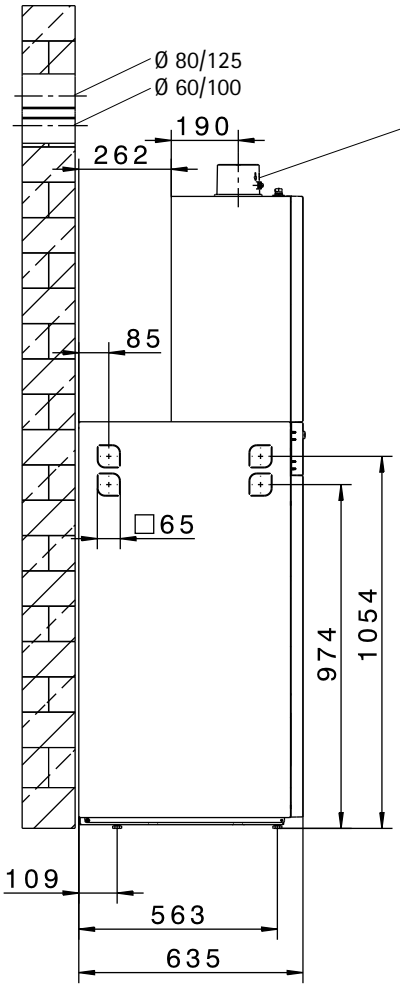
The requirements of proKlima and KfW are fulfilled.

CGS-2R dimensions and connection dimensions

Front view
CGS-2R

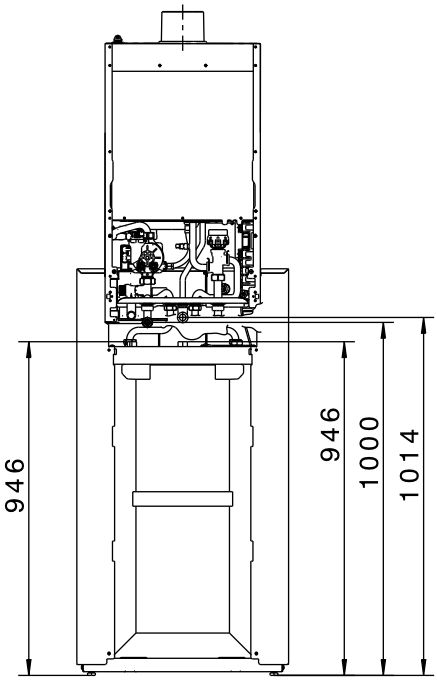


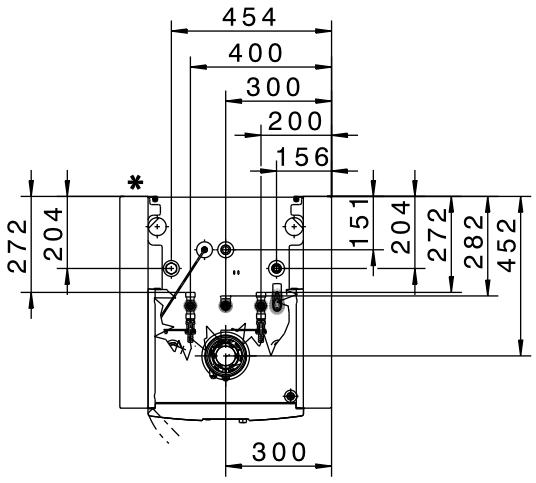
Side view
CGS-2R



View from the back
CGS-2R

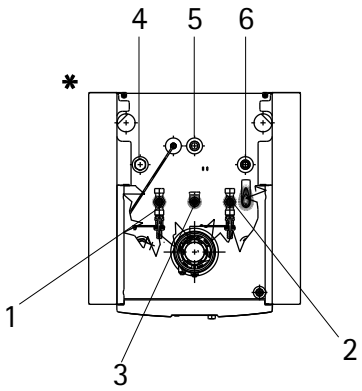
* optional unit design (depending on country)





Control unit cover hinged on the left

Plan view
CGS-2R



CGS-2R connections

1 Heating flow G ¾"
2 Heating return G ¾"
3 Gas connection R ½"
4 DHW circulation connection G ¾"
5 DHW connection G ½"
6 Cold water connection G ¾"

CSZ-2 specification

Typ	CSZ-2	14/300R	20/300R	24/300R
Energy efficiency class Space heating		A	A	A
Energy efficiency class Water heating		A	A	A
Rated heating output at 80/60 °C	kW	13,5	18,9/22,2 [1]	23,8/27,1 [1]
Rated heating output at 50/30 °C	kW	15,2	20,4	25,8
Rated heat input	kW	14,0	19,6/23,0 [1]	24,6/28,0 [1]
Lowest heating output (modulating) at 80/60 °C	kW	1,8/4,6 [2]	3,8/6,8 [2]	4,8/6,8 [2]
Lowest heating output (modulating) at 50/30 °C	kW	2,1/5,4 [2]	4,4/7,4 [2]	5,6/7,4 [2]
Lowest heat input (modulating)	kW	1,9/4,9 [2]	3,9/6,9 [2]	4,9/6,9 [2]
Heating flow connection	G	3/4" (DN20)	3/4" (DN20)	3/4" (DN20)
Heating return connection	G	3/4" (DN20)	3/4" (DN20)	3/4" (DN20)
DHW connection	G	3/4"	3/4"	3/4"
Cold water connection / DHW circulation	G	3/4"	3/4"	3/4"
Gas connection	R	1/2"	1/2"	1/2"
Air/flue pipe connection	mm	60/100	60/100	60/100
Dimensions				
Depth	mm	1013	1013	1013
Width	mm	600	600	600
Height	mm	1785	1785	1785
Air/flue gas routing	Typ	$B23_P$, $B33_P$, C13(x), C33(x), C43(x), C53(x), C63(x), C83(x), C93(x)		
Gas		II_{2N3P}	II_{2N3P}	II_{2N3P}
Gas supply details				
Natural gas E/H (Hi [net cv]=9.5 kWh/m³=34.2 MJ/m³)	m³/h	1,44	2,06/2,42	2,52/2,95
Natural gas LL (Hi [net cv]=8.6 kWh/m³=31.0 MJ/m³)	m³/h	1,59	2,28/2,67	2,79/3,25
LPG P (Hi [net cv]=12.8 kWh/m³=46.1 MJ/m³)	kg/h	1,07	1,53/1,80	1,87/2,19
Natural gas supply pressure (permissible min./max.)	mbar	20 (17-25)	20 (17-25)	20 (17-25)
LPG gas supply pressure (permissible min./max.)	mbar	50 (42,5-57,5)	50 (42,5-57,5)	50 (42,5-57,5)
Standard seasonal efficiency [to DIN] at 40/30 °C (Hi[net cv]/Hs[gross cv])	%	110/99	110/99	110/99
Standard seasonal efficiency [to DIN] at 75/60 °C (Hi[net cv]/Hs[gross cv])	%	107/96	107/96	107/96
Efficiency at rated load at 80/60 °C (Hi[net cv]/Hs[gross cv])	%	98/88	98/88	98/88
Efficiency at 30 % partial load and TR=30 °C (Hi[net cv]/Hs[gross cv])	%	108/97	108/97	108/97
Factory-set flow temperature	°C	75	75	75
Flow temperature up to approx.	°C	90	90	90
Max. overall positive heating circuit pressure	bar	3	3	3
Residual head for heating circuit: HE pump (EEI <0.23)				
600 l/h pump rate (14 kW at Δt=20 K)	mbar	550	550	550
860 l/h pump rate (20 kW at Δt=20 K)	mbar	-	430	430
1030 l/h pump rate (24 kW at Δt=20 K)	mbar	-	-	280
Max. permissible positive DHW pressure	bar	10	10	10
DHW temperature range (adjustable)	°C	15-65	15-65	15-65
Water content, heating water heat exchanger	l	6,6/8,8	6,6/8,8	6,6/8,8
Nominal cylinder capacity	l	285	285	285
Spec. water throughput D at ΔT = 30 K	l/min	20,5	24,5	24,5
Constant DHW output	l/h (kW)	366 (14,6)	560 (23,1)	684 (27,8)
Performance factors to DIN 4708	N_L	1,5	2,3	2,3
DHW output	l/10 min	175	210	210
Standby heat loss to DIN EN 12897	kWh/24 h	2,3	2,3	2,3
Cylinder corrosion protection		Two-layer enamel coating to DIN 4753		
Expansion vessel total capacity	l	10	10	10
Expansion vessel pre-charge pressure	bar	0,75-0,95	0,75-0,95	0,75-0,95
Flue gas temperature 80/60-50/30 at Qmax	°C	62-45	70-50	76-50
Flue gas temperature 80/60-50/30 at Qmin	°C	30-25	30-25	33-27
Flue gas mass flow at Qmax	g/s	6,2	8,8/10,7 [1]	10,9/13,0 [1]
Flue gas mass flow at Qmin	g/s	0,9	1,8	2,3
Available gas fan draught at Qmax	Pa	125	135	180
Available gas fan draught at Qmin	Pa	10	14	17
Flue gas category		G_{52}	G_{52}	G_{52}
NOx category		5	5	5
Amount of condensate at 50/30 °C	l/h	ca. 1,4	ca. 2,0	ca. 2,4
pH value of condensate		ca. 4,0	ca. 4,0	ca. 4,0
Standby power consumption	W	3	3	3
Maximum power consumption	W	17-45/59 [1]	17-51/63 [1]	17-62/88 [1]
IP rating	IP	IPX4D	IPX4D	IPX4D
Power supply/fuse/MCB protection		230V / 50Hz / 16A/B		
Total weight	kg	160 (35+125)	160 (35+125)	160 (35+125)
CE ID		CE-0085CO0098		

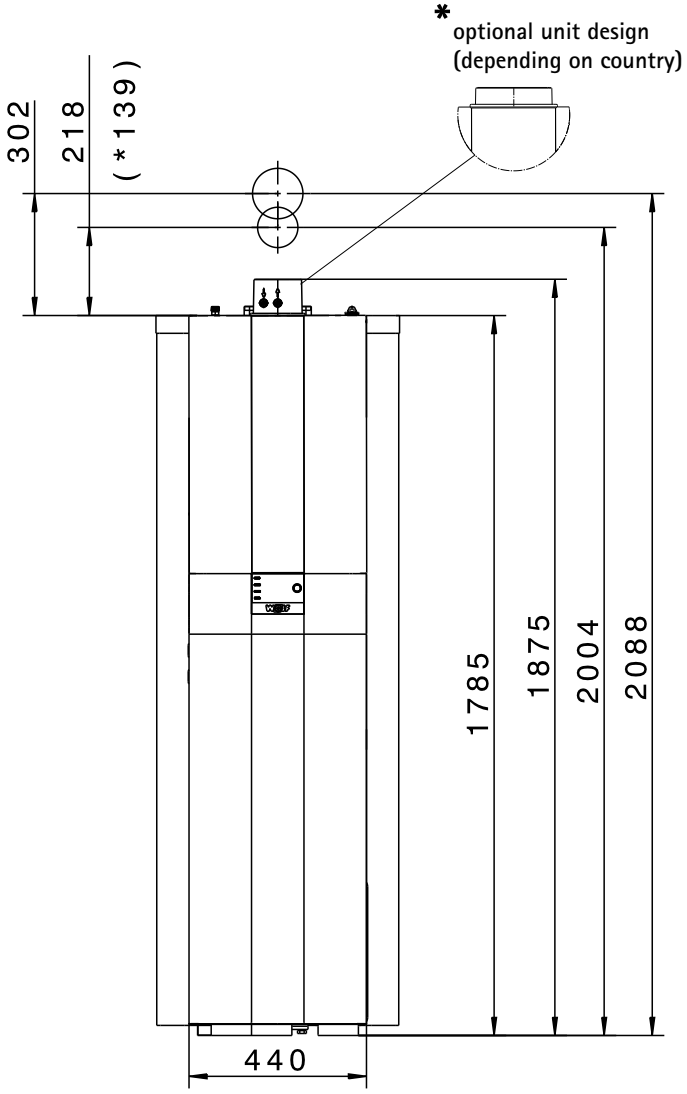
[1] Heating operation/DHW operation

[2] Natural gas/LPG (G31)

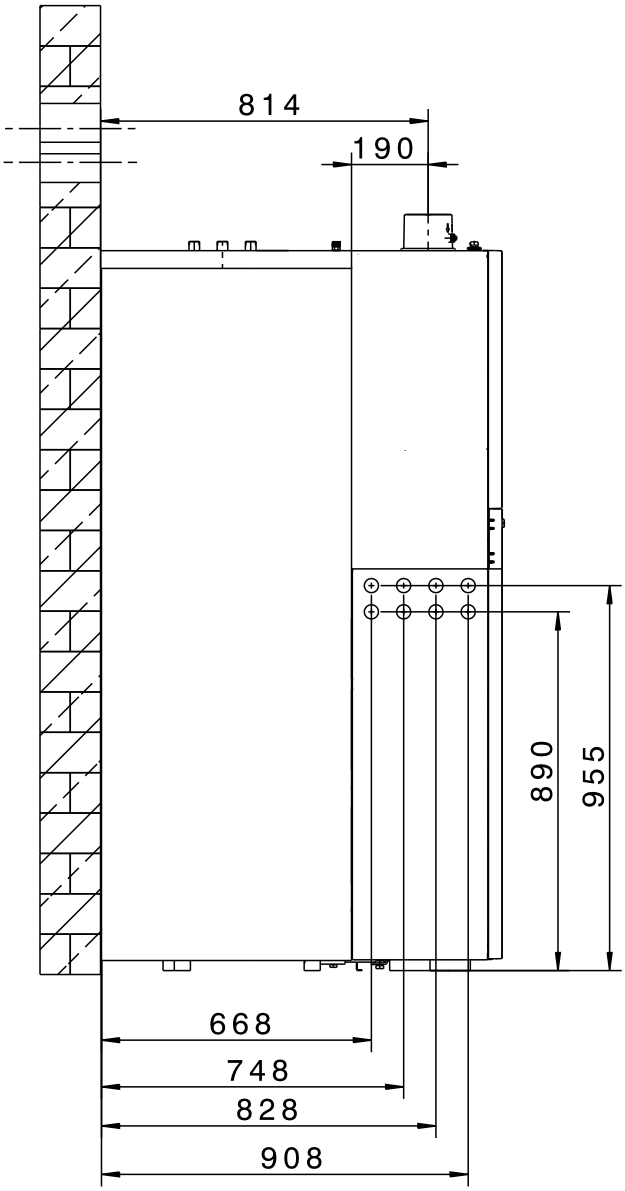
The requirements of proKlima and KfW are fulfilled.

CSZ-2 dimensions and connection dimensions

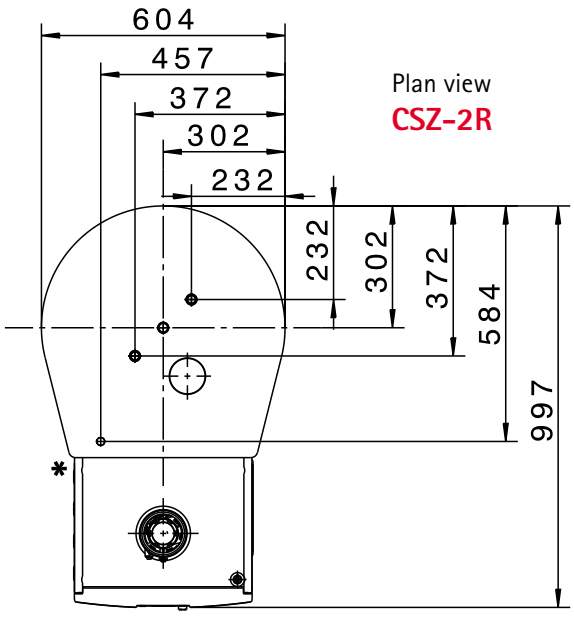
Front view
CSZ-2R



Side view
CSZ-2R



Plan view
CSZ-2R



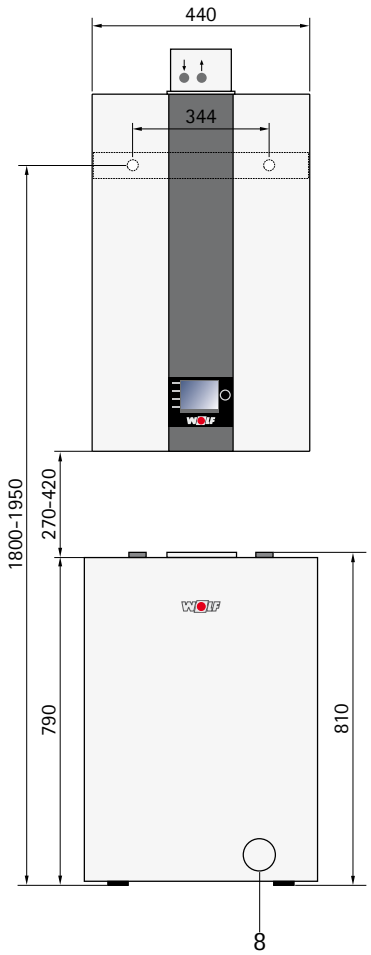
Control unit cover
hinged on the left

CSW-120 specification

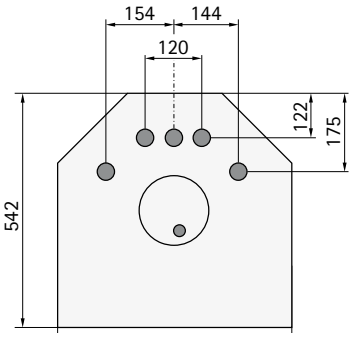
Type	CSW	120
Energy efficiency class Cylinder		B
Cylinder capacity	l	115
Constant cylinder output (80/60 – 10/45 °C)	kW – l/h	29 – 710
Standby heat loss	kWh/24h	1,5
Performance factor	NL	1,0
Permissible DHW operating pressure	bar	10
Permissible heating water operating pressure	bar	12
Max. permissible cylinder water temperature	°C	95
Max. permissible heating water temperature	°C	110
Cold water connection	R	¾"
DHW connection	R	¾"
Cylinder flow	R	¾"
Cylinder return	R	¾"
DHW circulation	R	¾"
Drain outlet	R	½"
Sensor well	Ø mm	12
Dry weight	kg	65

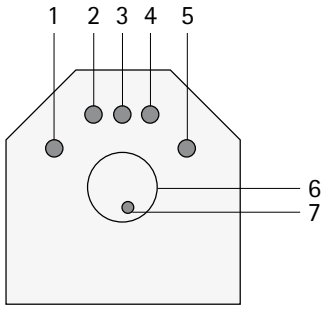
CSW-120 dimensions and connection dimensions

Front view
CSW-120



Plan view
CSW-120





CSW-120 connections

1 Cylinder flow R ¾"
2 DHW connection R ¾"
3 DHW circulation R ¾"
4 Cold water connection R ¾"
5 Cylinder return R ¾"
6 Cleaning aperture with protective anode
7 Sensor well Ø 12 mm
8 Drain outlet R ½"

CGB-2(K) / CGW-2 / CGS-2 / CSZ-2 control accessories

To operate a CGB-2(K)/CGW-2/CGS-2/CSZ-2 gas condensing boiler requires either an AM display module or a BM-2 programming module.

or

AM display module

- Boiler display module
- Only required if BM-2 is used as a remote control or in a cascade circuit
- Control by rotary selector with pushbutton function
- 4 hot keys for frequently used functions
- Backlit LCD

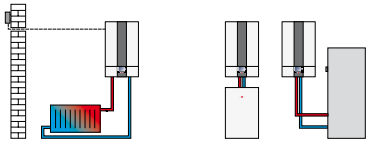
NB:

- Use when BM-2 is used as a remote control or in a cascade circuit
- AM is always in the boiler

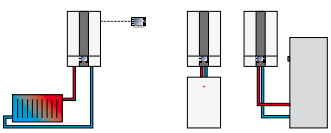
BM-2 programming module (incl. outside temperature sensor) weather-compensated flow temperature

- Time programs for heating, DHW and DHW circulation
- 3.5" colour display
- Easy user prompts on a plain text display
- Control by rotary selector with pushbutton function
- 4 function keys for frequently used functions
- microSD card slot for software update
- Installation either inside the boiler control unit or in wall mounting base as a remote control
- Only one programming module required for multi boiler systems
- Can be extended with MM mixer module (up to 7 heating circuits with mixer)
- Part of the standard delivery for CSZ-2

BM-2 programming module (incl. outside temperature sensor) as weather-compensated temperature controller



BM-2 programming module with wall mounting base (accessory) as remote control



AM display module or BM-2 programming module essential

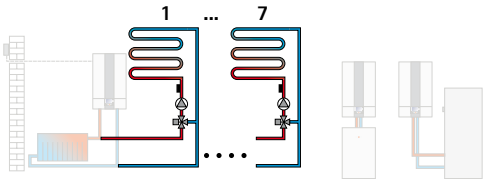
CGB-2(K) / CGW-2 / CGS-2 / CSZ-2 control accessories

2-wire eBUS connection

BM-2 programming module as remote control for additional mixer circuits (if BM-2 in boiler, max. 6 additional remote controls possible) weather-compensated flow temperature

- Time programs for heating, DHW and DHW circulation
- 3.5" colour display
- Easy user prompts on a plain text display
- Control by rotary selector with pushbutton function
- 4 function keys for frequently used functions
- Installation either inside the boiler control unit or on a wall mounting base as a remote control
- Only one programming module required for multi boiler systems
- Can be extended with MM mixer module (up to 7 heating circuits with mixer)

MM mixer module

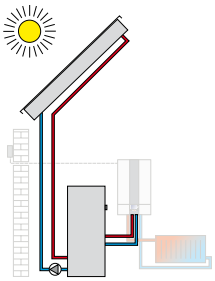


- Extension module for regulating one mixer circuit
- Weather-compensated flow temperature control
- Easy controller configuration by selecting one of the preset system versions
- BM-2 programming module with wall mounting base can be extended as a remote control
- Rast 5 connection technology
- Incl. flow temperature sensor

CGB-2(K) / CGW-2 / CGS-2 / CSZ-2 control accessories

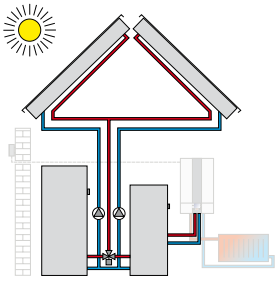
2-wire eBUS connection

SM1 solar module



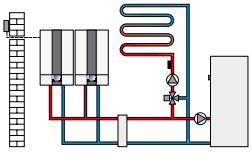
- Extension module for controlling one solar circuit
- In conjunction with Wolf boilers, greater energy savings through intelligent cylinder reheating, i.e. blocking cylinder reheating when there is sufficient solar energy
- Temperature differential control for one heat consumer
- Maximum cylinder temperature limit
- Display of the set and actual values on the BM-2 programming module
- Integral hours run meter
- Optional connection of heat meters
- Rast 5 connection technology
- Incl. collector sensor and cylinder sensor, each with sensor well
- Part of the standard delivery for CSZ-2

SM2 solar module



- Extension module to control a solar thermal system with up to 2 cylinders and 2 collector arrays, incl. 1 collector sensor and 1 cylinder sensor, each with sensor well
- Easy controller configuration by selecting one of the preset system versions
- In conjunction with Wolf boilers, greater energy savings through intelligent cylinder reheating, i.e. blocking cylinder reheating when there is sufficient solar energy
- Heat metering
- Indication of the set and actual values on the BM-2 programming module
- eBUS interface with automatic energy management
- Rast 5 connection technology

KM cascade module



- Extension module for controlling systems with a low loss header or cascade control
- Can be used for gas condensing boiler control units (4 appliances)
- Easy controller configuration by selecting one of the preset system versions
- Switching one heating circuit with mixer
- BM-2 programming module with wall mounting base can be extended as a remote control
- 0-10 V input for BMS systems; 230 V fault message output
- eBUS interface with automatic energy management
- Rast 5 connection technology

CGB-2(K) / CGW-2 / CGS-2 / CSZ-2 control accessories

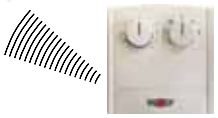
2-wire eBUS connection

Radio clock (DCF77 signal) with outside temperature sensor
for automatically setting the time.

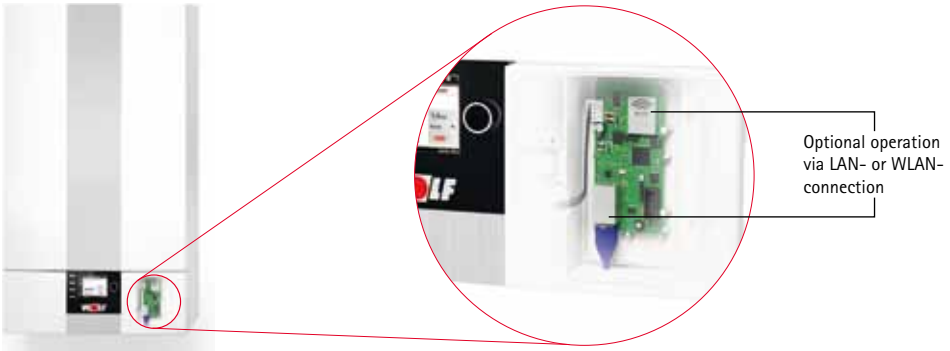
Radio clock (DCF77 signal)
for automatically setting the time.

Wireless outside temperature sensor
(only in conjunction with receiver for wireless outside temperature sensor and remote control

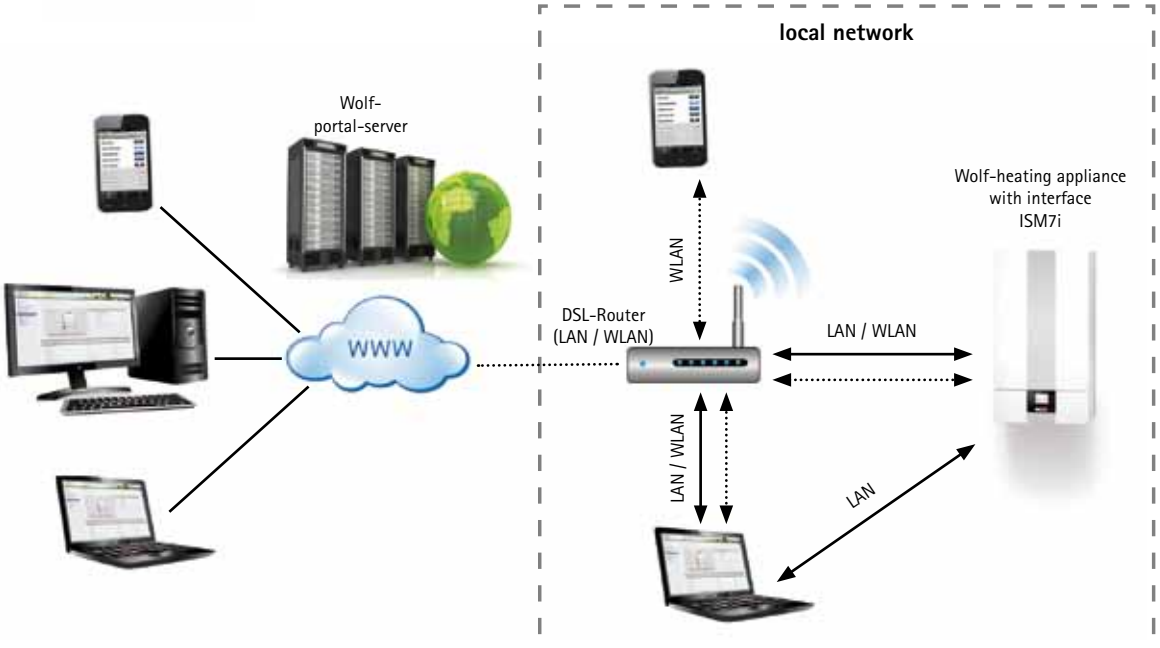
Wireless receiver for wireless outside temperature sensor and wireless remote control incl. radio clock (DCF77 signal)



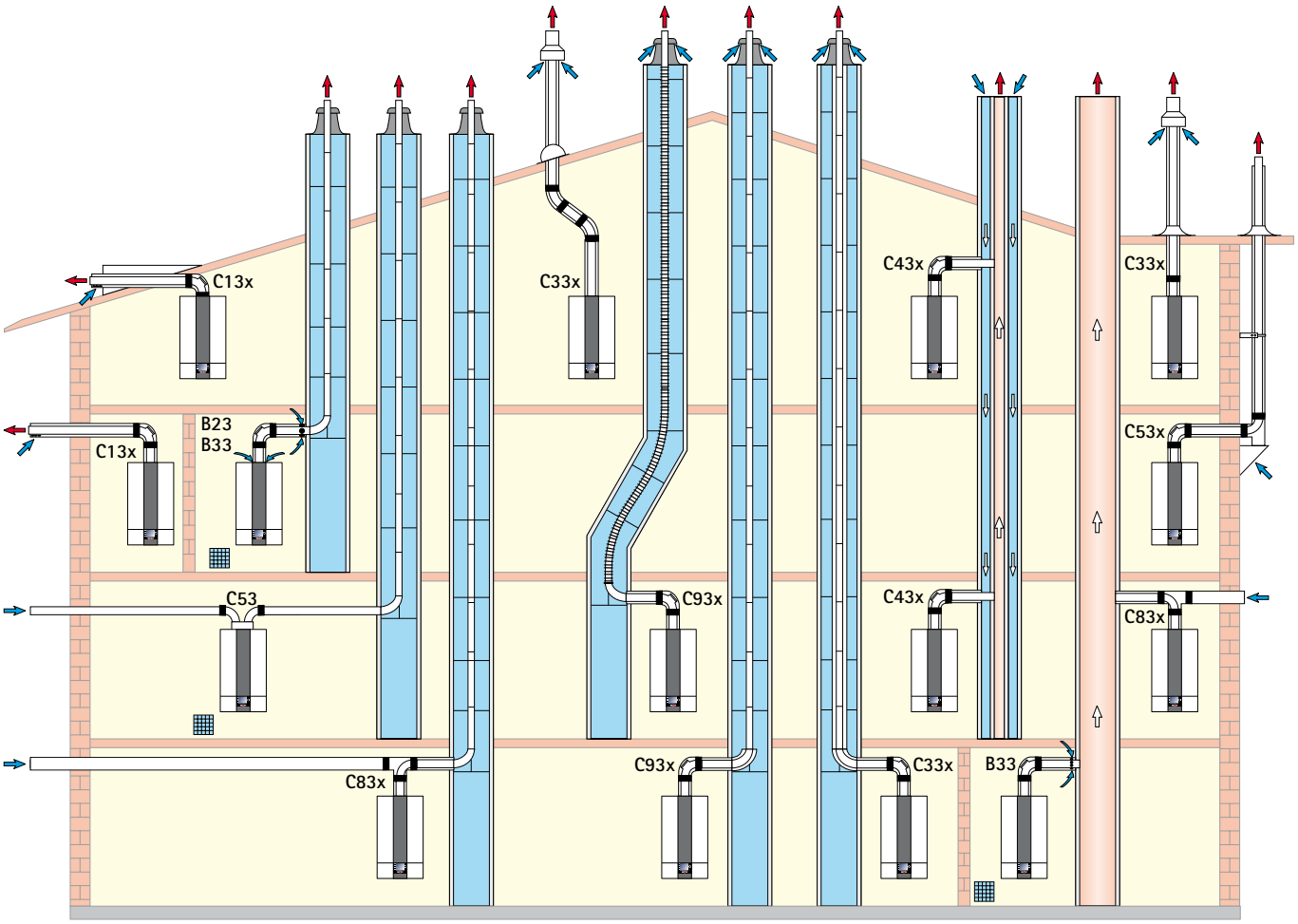
Wireless remote control
(only in conjunction with receiver for wireless outside temperature sensor and remote control). Max. one wireless remote control per mixer circuit.



ISM7i
LAN / WLAN interface for accessing the control unit via the internet or a local network. Control via iPhone app or Wolf portal.
For integration in the appliance control unit.



Air/flue gas routing for gas condensing boilers CGB-2(K) / CGW-2 / CGS-2 / CSZ-2



Provide ventilation for B23, B33, C53

Air/flue gas routing for gas condensing boilers CGB-2(K) / CGW-2 / CGS-2 / CSZ-2

Versions			Maximum length [1] [m]		
Type			CGB-2-14 CGW-2-14 CGS-2-14 CSZ-2-14	CGB-2(K)-20 CGW-2-20 CGS-2-20 CSZ-2-20	CGB-2(K)-24 CGW-2-24 CGS-2-24 CSZ-2-24
B23	Flue in a shaft and combustion air directly via the boiler (open flue)	DN60 DN80	45 -	25 50	21 50
B33	Flue in a shaft with horizontal, concentric connection line (open flue)	DN60 DN80	43 50	23 50	19 50
B33	Connection to a moisture-resistant flue gas chimney with a horizontal concentric connection line (open flue)		Calculation according to EN 13384 (balanced flue manufacturer)		
C13x	Horizontal roof outlet through a pitched roof (balanced flue – on-site dormer)	DN60/100 DN80/125	10 10	10 10	10 10
C33x	Vertical concentric roof outlet through a pitched or flat roof, vertical concentric air/flue gas routing for installation in a shaft (balanced flue)	DN60/100 DN80/125 DN110/160	16 17 18	14 22 25	12 26 30
C43x	Connection to a moisture-resistant balanced flue chimney, maximum pipe length from centre of boiler bend to connection 2 m (balanced flue)		Calculation to EN 13384 (balanced flue manufacturer)		
C53	Connection to the flue in a shaft and ventilation air supply through an external wall (balanced flue), 3 m ventilation air supply incl.	DN80/125	50	50	50
C53x	Connection to a flue on an external wall (balanced flue). Combustion air intake through an external wall	DN60/100 DN80/125	46 -	24 50	20 50
C83x	Connection to the flue in a shaft and ventilation air through an external wall (balanced flue)	DN80/125	50	50	50
C83x	Concentric connection to a moisture-resistant flue gas chimney and combustion air through an external wall (balanced flue)		Calculation to EN 13384 (balanced flue manufacturer)		
C93x	Flue for installation in a shaft. Connection line DN60/100, vertical DN60	Rigid Flexible	17 13	17 13	17 13
C93x	Flue for installation in a shaft. Connection line DN60/100 or DN80/125, vertical DN80	Rigid Flexible	18 14	21 17	26 22

[1] **The maximum length corresponds to the total length from the appliance to the flue terminal**

Note: Systems C33x and C83x are also suitable for installation in garages.
Where necessary, adapt the installation examples to the relevant Building Regulations and requirements in your country/region. Discuss any questions relating to the installation, particularly of inspection pieces and ventilation apertures (ventilation generally required above 50 kW output) prior to installation with your local heating engineer/flue gas inspector.

The length dimensions refer to concentric balanced flue and flues, specifically only to original Wolf components.

Balanced flue systems DN60/100 and DN80/125 are certified as systems together with Wolf gas condensing boilers.

The following balanced flue or flues with CE-0036-CPD-9169003 certification may be used:

- Flue DN60, DN80, DN110 and DN125
- Concentric balanced flue DN60/100 and DN80/125
- Concentric balanced flue (on an external wall) DN80/125
- Flue, flexible DN60 and DN83

The necessary identification labels are supplied with the respective WOLF accessory.

Please also observe the installation information supplied with the accessories.

ComfortLine gas condensing boilers

CGB-2 Wall mounted gas condensing system boiler for central heating with option to connect a DHW cylinder

CGB-2K Wall mounted gas condensing system boiler for central and DHW heating

CGW-2 Gas condensing centre for DHW and central heating with wall mounted stainless steel stratification cylinder

CGS-2L Gas condensing centre for DHW and central heating with enamelled steel stratification cylinder

CGS-2R Gas condensing centre for DHW and central heating with enamelled steel storage tank with coil

CSZ-2 Gas condensing solar centre in modular form for DHW and central heating

Tested in accordance with EC Directives and EN 483 for heating systems according to EN 12828 with flow temperatures up to 90 °C and 3 bar permissible operating pressure. Suitable for modulating operation down to room temperature; modulating output control; gas-adaptive, self-calibrating combustion controller for extremely clean combustion and adaptation to changing gas qualities; premix burner suitable for natural gas E, LL or LPG; sealed combustion chamber for open and balanced flue operation.

Control with gas burner control unit, electronic ignition and ionisation flame monitor; variable speed fan.

Powder-coated white RAL 9016 casing.

Accessories	CGB-2 -14 -20 -24	CGB-2 with CSW-120	CGB-2K -20 -24	CGW-2 -14/100L -20/120L -24/140L	CGS-2 -14/120L -20/160L -24/200L	CGS-2 -14/150R -20/150R -24/150R	CSZ-2 -14/300R -20/300R -24/300R
Control accessories							
AM display module	○	○	○	○	○	○	
BM-2 programming module	○	○	○	○	○	○	●
Wall mounting base	○	○	○	○	○	○	○
AFB analogue remote control	○	○	○	○	○	○	○
MM mixer module	○	○	○	○	○	○	○
SM1 solar module	○	○	○	○	○	○	●
SM2 solar module	○	○	○	○	○	○	
KM cascade module	○						
Heat meter set for capturing solar yield							○
Radio clock (DCF77 signal) with outside temperature sensor	○	○	○	○	○	○	○
Radio clock (DCF77 signal) for automatically setting the time	○	○	○	○	○	○	○
Wireless receiver for wireless outside temperature sensor and wireless remote control incl. radio clock (DCF77 signal)	○	○	○	○	○	○	○
Wireless outside temperature sensor	○	○	○	○	○	○	○
Wireless remote control	○	○	○	○	○	○	○
ISM 7 – LAN/WLAN interface module incl. PC software	○	○	○	○	○	○	○

ComfortLine gas condensing boilers

Accessories	CGB-2 -14 -20 -24	CGB-2 with CSW-120	CGB-2K -20 -24	CGW-2 -14/100L -20/120L -24/140L	CGS-2 -14/120L -20/160L -24/200L	CGS-2 -14/150R -20/150R -24/150R	CSZ-2 -14/300R -20/300R -24/300R
Hydraulic accessories and gas supply accessories							
Gas ball valve (angle or straight-through version), chrome plated, with thermally activated shut-off valve	○	○	○	○	○	○	●
Safety valve Rp ½ up to 3 bar	○	○	○	○	○	○	●
Drain outlet kit R 1 with siphon and bezel, grey plastic	○	○	○	○	○	○	●
Filling device			○	○	○		
Accessories for concealed installation							
Angle maintenance valve G ¾, chrome plated	○	○	○	○	○	○	
Angle maintenance valve G ¾ with connection R ½ for safety valve, chrome plated	○	○	○	○	○	○	
DHW connector G ½, chrome plated			○	○			
Cold water connector G ½, chrome plated	○		○	○			
Connection set for concealed installation	○	○	○	○	○	○	
DHW connection set with or without pressure reducer				○			
Accessories for surface mounting							
Straight-through maintenance valve Rp ¾, chrome plated	○	○	○	○	○	○	
Straight-through maintenance valve Rp ¾ with connection R ½ for safety valve, chrome plated	○	○	○	○	○	○	
DHW connector R ½, chrome plated			○	○			
Cold water connector R ½, chrome plated			○	○			
Connection set for surface mounting	○	○	○	○	○	○	
Pre-assembled connection set for surface mounting					○	○	
DHW connection set with or without pressure reducer				○			

ComfortLine gas condensing boilers

Accessories	CGB-2 -14 -20 -24	CGB-2 with CSW-120	CGB-2K -20 -24	CGW-2 -14/100L -20/120L -24/140L	CGS-2 -14/120L -20/160L -24/200L	CGS-2 -14/150R -20/150R -24/150R	CSZ-2 -14/300R -20/300R -24/300R
Accessories for connection sets							
Solar heating connection set for the additional control of a solar cylinder				○	○		
Kit for solar integration			○				
Partially pre-assembled gas condensing centre pipework connection set for connection on heating flow/return, DHW/cold water, gas					○		
Flow and return connection set for heating and solar circuit and gas connection							○
Connection set: hot/cold water with thermostatic water mixer and HE DHW circulation pump							○
DHW circulation accessories							
DHW circulation set to EnEV incl. DHW circulation pump with analogue time switch				○	○	○	
DHW circulation set to EnEV incl. DHW circulation pump with digital time switch				○	○	○	
HE DHW circulation pump							○
Other accessories							
Pipe cover	○		○	○	○		
Height-adjustable support platform for unfinished floors							○
Impressed current anode					○		○
Solar heat meter set							○
CSW-120 DHW cylinder	○						
Balanced flue accessories							
Concentric balanced flue system	○	○	○	○	○	○	○
External wall system	○	○	○	○	○	○	○
Connection set for flues in a shaft	○	○	○	○	○	○	○

● Included in standard delivery
○ Available accessory

Notes

The comprehensive equipment range from system supplier Wolf offers the ideal solution for commercial and industrial buildings, for new build and for modernisation projects alike. The range of Wolf control units fulfils every need where heating convenience is concerned. The products are easy to operate, energy-efficient and reliable. Solar heating systems can be quickly integrated into existing systems. All Wolf products can be easily and rapidly commissioned and maintained.

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Dealer address

The competence brand for energy saving systems

Part no. 4800818