



The competence brand for energy saving systems

ComfortLine Gas fired condensing boilers



Wall mounted gas fired condensing boilers CGB / CGB-K
Gas fired condensing centres CGS / CGW



TESTSIEGER

Stiftung
Warentest

test

GUT (1,6)

Gasbrennwertzentrale
CGS-20/160
mit drehzahlergepöblter (modu-
lierender) Pumpe in Ausführung
Erdgas E, Art.-Nr. 86 11 237

Im Test:
11 Gasbrennwertkessel,
davon zwei Testsieger mit
Note 1,6

Ausgabe 6/2006



ComfortLine

Gas fired condensing boilers

Benefits of the WOLF gas fired condensing boilers up to 24 kW CGB / CGB-K / CGW / CGS



Pivoting heat exchanger

- Gas fired condensing boilers, sealed combustion chamber, for open and balanced flue operation
- Certified with the DVGW quality symbol; tested in accordance with German and European Directives; extremely clean combustion
- High standard efficiency up to 110% (Hi) / 99% (Hs) for the best possible energy utilisation
- Meets the requirements for the "Blue Angel" certificate of environmental excellence to RAL-UZ 61 when operated with natural gas
- Premix burner for natural gas E, LL and LPG
- As standard with expansion vessel and three-stage or modulating heating circuit pump; no mechanical switch in the heating water
- Heating water heat exchanger can be pivoted for easy cleaning without having to drain off the heating water
- Easy installation, operation and maintenance through convenient access to all components
- Flue gas test port accessible from outside; the equipment does not need to be opened
- 2 year warranty

CGB-11, -20, -24 wall mounted gas fired condensing central heating boilers



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

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

CGB-11	from 3.6 to 10.9 kW
CGB-20	from 6.1 to 20.5 kW
CGB-24	from 7.8 to 24.8 kW
- Booster output during cylinder heating:

CGB-11	14.6 kW
CGB-20	22.9 kW
CGB-24	27.6 kW

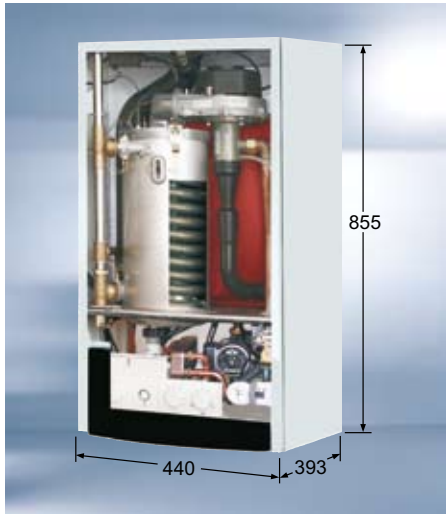
CSW-120 DHW cylinder



- Connections R 3/4" for flow, return, cold water, hot water and DHW circulation as well as the cleaning aperture at the top of the cylinder for easy connection and cleaning
- Powder-coated white (RAL 9016) casing
- CFC-free thermal insulation all around the cylinder, applied directly to the cylinder surface, highly effective and low heat losses
- Corrosion protection through enamelled cylinder interior and indirect internal coil to DIN 4753, part 3
Additional corrosion protection through magnesium anode integrated into the inspection and cleaning aperture
- Indirect internal coil with large heat exchanger surface area for short heat-up times
- High constant DHW output
- Drain R 1/2" at the front, incl. drain valve and hose connection
- Adjustable feet
- 5 year warranty

ComfortLine Gas fired condensing boilers

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



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

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

CGB-K-20	from 6.1 to 20.5 kW
CGB-K-24	from 7.8 to 24.8 kW
- Booster output for DHW heating:

CGB-K-20	22.9 kW
CGB-K-24	27.6 kW
- Wall mounted combi boiler easily retrofitted - optionally without cylinder or with cylinder CSW-120

CGW-20/120, -24/140 gas fired condensing centres with high performance stainless steel stratification cylinder

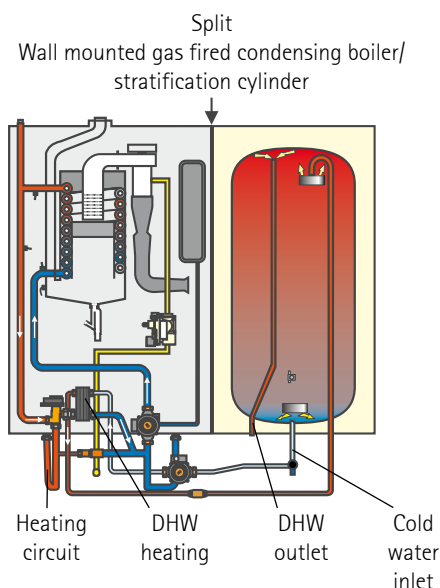


Wall mounted gas fired condensing centre, comprising a wall mounted gas fired condensing boiler with a stainless steel DHW heat exchanger and a stainless steel stratification cylinder in modular design

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

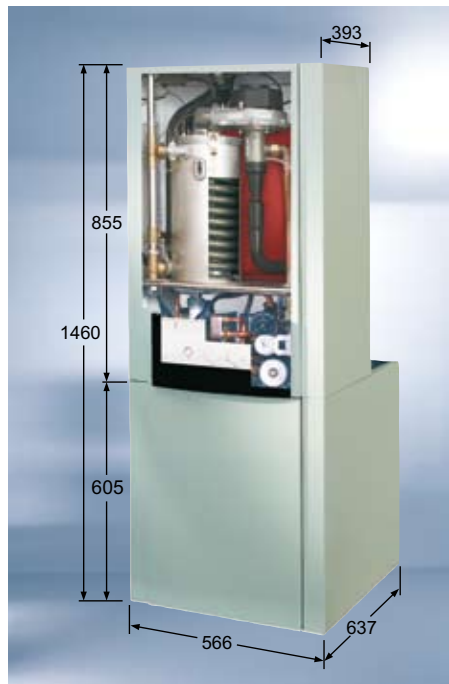
CGW-20/120	from 6.1 to 20.5 kW
CGW-24/140	from 7.8 to 24.8 kW
- Booster output for the stratification cylinder:

CGW-20/120	22.9 kW
CGW-24/140	27.6 kW
- Integral convenient DHW heating, better than a DHW cylinder with 120 or 140 l capacity
- "DHW turbo" with a new routing and distribution system for hot and cold water inside the stratification cylinder ensure a calm, radial water distribution for excellent DHW performance (patent applied for)
- Hot water always available - even after filling a bath
- High savings in operating costs through efficient DHW heating and innovative insulation technology (patent applied for)
- Cylinder heating with return control for the highest energy efficiency (utilisation of condensing technology)
- Compact layout as condensing boiler and stratification cylinder for the lowest assembly and installation costs
- Gas fired condensing centre, fully wired and hydraulically ready to connect
- Can be split for easy handling and installation into two modules of 28 and 42 kg respectively
- The following accessories are available to ensure a quick and clean installation:
 - Connection set DHW with pressure reducer for unfinished / finished walls
 - Connection set DHW without pressure reducer for unfinished / finished walls
 - DHW circulation set
 - Solar heating connection set
 - Pipe cover



ComfortLine Gas fired condensing boilers

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

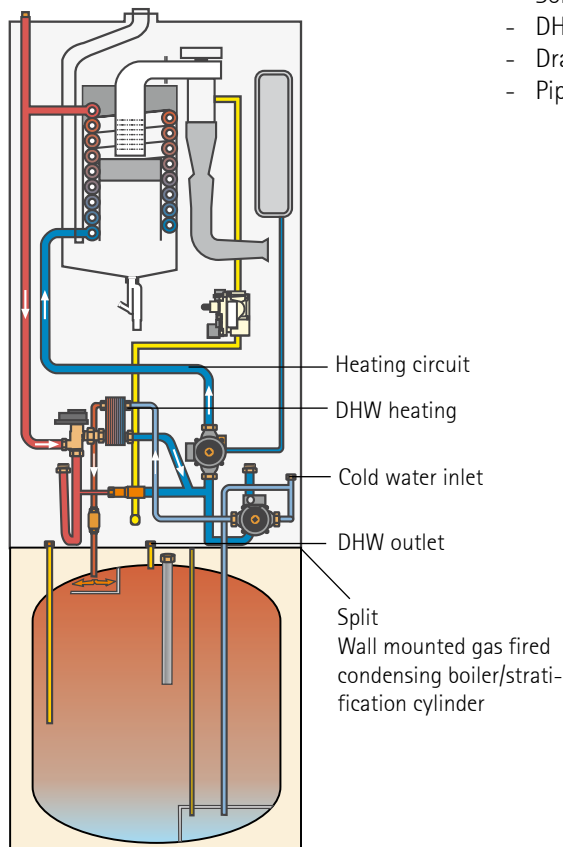


Gas fired condensing centre, comprising a wall mounted gas fired condensing boiler with a stainless steel DHW heat exchanger and a stratification cylinder in modular design

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

CGS-20/160	from 6.1 to 20.5 kW
CGS-24/200	from 7.8 to 24.8 kW
- Booster output for DHW heating:

CGS-20/160	22.9 kW
CGS-24/200	27.6 kW
- The "Turbostop system" (patent applied for) provides a convenient DHW heating inside the stratification cylinder corresponding to that of a DHW cylinder with 160 or 200 l capacity
- Cylinder heating with return control for the highest energy efficiency through the effective utilisation of condensing technology (patent applied for)
- Filling a bath tub with 200 l of hot water at 45 °C only takes 10 or 8 minutes respectively
- 16 or 14 minutes later, 90 l DHW are available again at 60 °C
- High performance factor $N_L = 2.1$ or 2.5
- Compact design as condensing boiler with stratification cylinder. Can be split for easy installation into two modules of 52 and 47 kg respectively
- The following accessories are available to ensure a quick and clean installation:
 - Connection set with flexible stainless steel pipes; insulation to EnEV for heating flow/return, hot/cold water and gas; suitable for installation on unfinished and finished walls (see Fig. below)
 - Solar heating connection set for the additional control of a solar cylinder
 - DHW circulation set to EnEV incl. DHW circulation pump
 - Drain outlet kit with triple hose retainer
 - Pipework cover with variable knock-out entries



Connection set (accessory)



ComfortLine Gas fired condensing boilers

CGB-35, -50 wall mounted gas fired condensing central heating boilers CGB-K40-35 wall mounted gas fired condensing boilers for DHW and central heating



Figure: CGB-35,-50

Wall mounted gas fired condensing central heating boiler CGB-35, -50, sealed combustion chamber, for open and balanced flue operation, may be combined with DHW cylinders, e.g. SE-2

Wall mounted gas fired condensing boiler CGB-K40-35 for DHW and central heating with integral stainless steel DHW heat exchanger, sealed combustion chamber, for open and balanced flue operation



- Modulation range for flow/return 50/30 °C:
CGB-35, CGB-K40-35 from 9,0 to 35,0 kW
CGB-50 from 12,2 to 50,0 kW
- Booster output for DHW heating:
CGB-K40-35 40,0 kW
- Certified with the DVGW quality symbol; tested in accordance with German and European Directives; extremely clean combustion
- High standard efficiency up to 110% (Hi) / 99% (Hs) for the best possible energy utilisation
- The CGB-35, CGB-K40-35 meets the requirements for the "Blue Angel" certificate of environmental excellence to RAL-UZ 61 when operated with natural gas
- Premix burner for natural gas E, LL and LPG
- As standard with modulating heating circuit pump; no mechanical switches in the heating water
- Easy installation, operation and maintenance through convenient access to all components
- Flue gas test port accessible from outside; the equipment does not need to be opened
- 2 year warranty
- Heating water heat exchanger can be pivoted into two maintenance positions for easy cleaning without having to drain off the heating water

Easy maintenance

For maintenance and cleaning, the heat exchanger can be pivoted into two different maintenance positions.



Maintenance position 1:
Removing the burner unit



Maintenance position 2:
Cleaning the heat exchanger with a cleaning bag and brush (accessories)

ComfortLine Gas fired condensing boilers

CGB-75, -100 wall mounted gas fired condensing central heating boilers



Wall mounted gas fired condensing central heating boilers CGB-75, -100, sealed combustion chamber, for open and balanced flue operation, may be combined with DHW cylinders, e.g. SE-2

- Modulation range for flow/return 50/30 °C:
CGB-75 from 19,6 to 75,8 kW
CGB-100 from 19,6 to 98,8 kW
- Tested in accordance with German and European Directives; extremely clean combustion
- High standard efficiency up to 110% (Hi) / 99% (Hs) for the best possible energy utilisation
- The conditions set for the "Blue Angel" certificate of environmental excellence acc. to RAL UZ 61 are met
- Premix burner for natural gas E, LL and LPG
- Easy installation, operation and maintenance through convenient access to all components
- Standard flue gas non-return device; lowest cool-down losses; optional cascade operation with positive pressure for up to four wall mounted gas fired condensing boilers and an output range up to 400 kW
- High performance heat exchanger made from a robust aluminium:silicone alloy, with vertically arranged smooth fins; easy cleaning, high self-cleaning effect; long service life
- Compact space-saving design; side clearances for installation and maintenance are not required
- Flue gas test port accessible from outside; the equipment does not need to be opened
- The heating water heat exchanger can be cleaned under system pressure, i.e. without need to drain off the heating water
- No minimum throughput and overflow valve required
- 2 year warranty



Easy maintenance



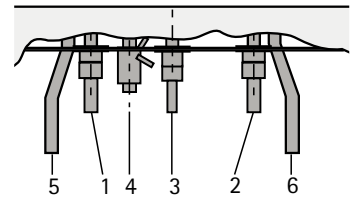
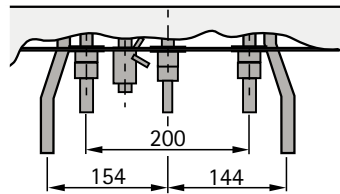
After the burner unit has been removed, the smooth heat exchanger fins can be easily cleaned.

Hydraulic connections

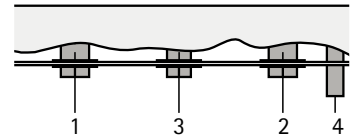
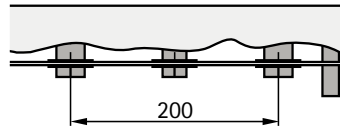
CGB connections

- 1 Heating flow
- 2 Heating return
- 3 Gas connection
- 4 Condensate drain
- 5 DHW flow
- 6 Cylinder return

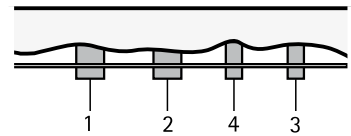
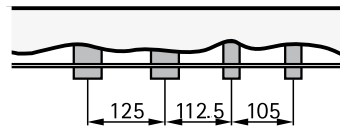
CGB-11, 20, 24



CGB-35,50



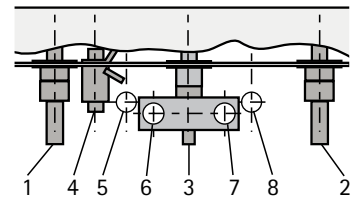
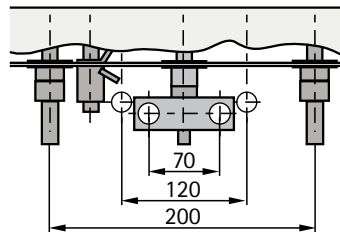
CGB-75, 100



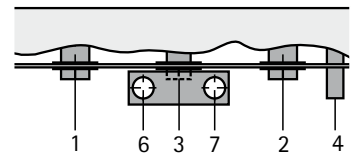
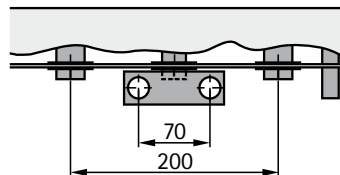
CGB-K connections

- 1 Heating flow
- 2 Heating return
- 3 Gas connection
- 4 Condensate drain
- 5 DHW connection (on site)
- 6 DHW connection
- 7 Cold water connection
- 8 Cold water connection (on site)

CGB-K-20, 24

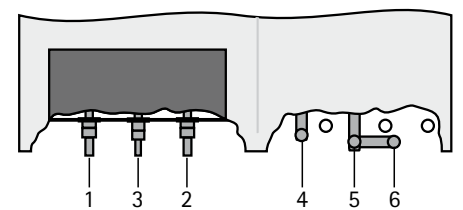
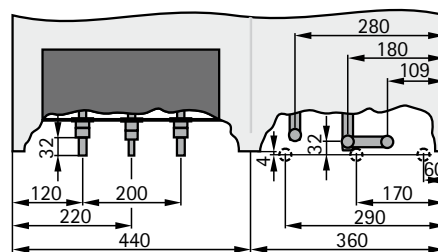


CGB-K40-35



CGW connections

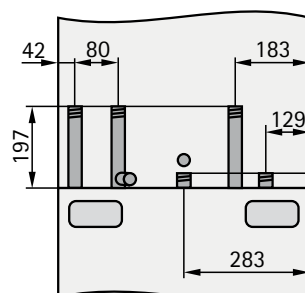
- 1 Heating flow
- 2 Heating return
- 3 Gas connection
- 4 DHW connection
- 5 Cold water connection
- 6 DHW circulation line



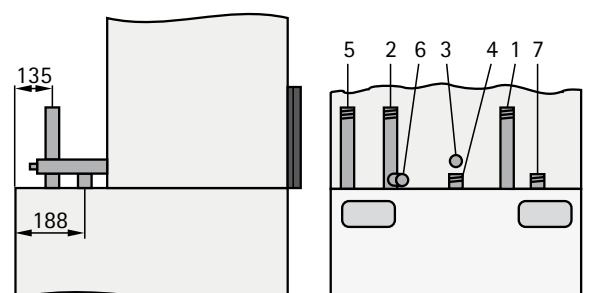
CGS connections

- 1 Heating flow
- 2 Heating return
- 3 Gas connection
- 4 DHW connection
- 5 Cold water connection
- 6 BDF valve
- 7 DHW circulation line

View from the back



View from the side



Specification

Type		CGB-11	CGB-20	CGB-24	CGB-35	CGB-50	CGB-75	CGB-100
Rated output at 80/60 °C	kW	10.0/14.6 ¹⁾	19.0/22.9 ¹⁾	23.1/27.6 ¹⁾	32	46	70.1	91.9
Rated output at 50/30 °C	kW	10.9	20.5	24.8	35	50	75.8	98.8
Rated thermal load	kW	10.3/15.0 ¹⁾	19.5/25.5 ¹⁾	23.8/28.5 ¹⁾	33	47	71.5	94
Boiler output (modul.) at 80/60 °C	kW	3.2	5.6	7.1	8/8.5 ³⁾	11/11.7 ³⁾	18.2	18.2
Boiler output (modul.) at 50/30 °C	kW	3.6	6.1	7.8	9/9.5 ³⁾	12.2/12.9 ³⁾	19.6	19.6
Boiler thermal load (modul.)	kW	3.3	5.7	7.3	8.5/9 ³⁾	11.7/12.4 ³⁾	18.5	18.5
Heating flow outside diameter	G	3/4"	3/4"	3/4"	1 1/4"	1 1/4"	1 1/2"	1 1/2"
Heating return outside diameter	G	3/4"	3/4"	3/4"	1 1/4"	1 1/4"	1 1/2"	1 1/2"
DHW connection/DHW circulation	G	3/4"	3/4"	3/4"	-	-	-	-
Cold water connection	G	3/4"	3/4"	3/4"	-	-	-	-
Gas connection	R	1/2"	1/2"	1/2"	3/4"	3/4"	3/4"	3/4"
Air/flue gas connection	mm	95.5/63	95.5/63	95.5/63	125/80	125/80	100/150	100/150
Gas category		I ₂ ELL	II ₂ ELL3B/P	II ₂ ELL3P	II ₂ ELL3P	II ₂ ELL3P	II ₂ ELL3P	II ₂ ELL3
Gas supply details:								
Nat. gas E/H (H _i = 9.5 kWh/m ³ = 34.2 MJ/m ³)	m ³ /h	1.08/1.58 ¹⁾	2.05/2.47 ¹⁾	2.50/3.00 ¹⁾	3.47	4.94	7.77	10.03
Nat. gas LL (H _i = 8.6 kWh/m ³ = 31.0 MJ/m ³) ²⁾	m ³ /h	1.20/1.74 ¹⁾	2.27/2.73 ¹⁾	2.77/3.31 ¹⁾	3.84	5.5	8.6	11.11
LPG (H _i = 12.8 kWh/kg = 46.1 MJ/kg)	kg/h	-	1.52/1.84 ¹⁾	1.86/2.23 ¹⁾	2.57	3.65	5.76	7.44
Gas supply pressure: Natural gas	mbar	20	20	20	20	20	20	20
LPG	mbar	-	50	50	50	50	50	50
Standard efficiency at 40/30 °C (H _i / H _u)	%	110 / 99	109 / 98	109 / 98	109 / 98	110 / 99	110 / 99	110 / 99
Standard efficiency at 75/60 °C (H _i / H _u)	%	107 / 96	107 / 96	106 / 96	108 / 97	107 / 96	107 / 96	107 / 96
Efficiency at rated load at 80/60 °C (H _i / H _u)	%	98 / 88	98 / 88	98 / 88	98 / 88	98 / 88	98 / 88	97 / 88
Efficiency at 30% partial load and TR=30 °C (H _i / H _u)	%	108 / 97	107 / 97	107 / 97	109 / 98	109 / 98	107 / 96	107 / 96
Factory-set flow temperature	°C	75	75	75	75	75	80	80
Flow temperature up to approx.	°C	90	90	90	90	90	90	90
Max. system pressure	bar	3.0	3.0	3.0	3.0	3.0	6.0	6.0
Residual head for heating circuit								
3-stage pump at stages 3/2/1								
570 l/h pump rate (10 kW at Δt=15K)	mbar	250/250/100	250/250/100	250/250/100	-	-	-	-
860 l/h pump rate (15 kW at Δt=15K)	mbar	-	250/160/-	250/160/-	-	-	-	-
1140 l/h pump rate (20 kW at Δt=15K)	mbar	-	140/-/-	140/-/-	-	-	-	-
Regulated pump (100%)								
475 l/h pump rate (11 kW at Δt=20K)	mbar	150	250	250	-	-	-	-
860 l/h pump rate (20 kW at Δt=20K)	mbar	-	100	190	-	-	-	-
1834 l/h pump rate (32 kW at Δt=20K)	mbar	-	-	-	175	210	-	-
1977 l/h pump rate (46 kW at Δt=20K)	mbar	-	-	-	-	195	-	-
3000 l/h pump rate (70kW at Δt=20K)	mbar	-	-	-	-	-	300	-
4000 l/h pump rate (92kW at Δt=20K)	mbar	-	-	-	-	-	-	80
Heating water heat exchanger water content	l	1.3	1.3	1.3	2.5	2.5	10	10
Expansion vessel: Total content	l	12	12	12	-	-	-	-
Inlet pressure	bar	0.75	0.75	0.75	-	-	-	-
Permissible sensor temperatures	°C	95	95	95	95	95	95	95
Flue gas mass flow at Q _{max}	g/s	4.7/6.8 ¹⁾	8.9/10.7 ¹⁾	10.8/13.0 ¹⁾	15	21.5	33.7	43.5
Flue gas mass flow at Q _{min}	g/s	1.45	2.62	2.7	3.9	5.3	8.9	8.9
Flue gas temperature 80/60-50/30 at Q _{max}	°C	75-45	75-45	85-45	65-45	80-50	72.48	78-53
Flue gas temperature 80/60-50/30 at Q _{min}	°C	45-26	36-27	43-41	66-47	60-38	60-36	60-36
Available gas fan draught at Q _{max}	Pa	90	90	90	115	145	145	200
Available gas fan draught at Q _{min}	Pa	12	12	12	10	10	12	12
Flue gas group according to DVGW G 635		G52	G52	G52	G52	G52	G52	G52
NO _x class		5	5	5	5	5	5	5
Electrical connection	V~/Hz	230/50	230/50	230/50	230/50	230/50	230/50	230/50
Fitted fuse (medium slow)	A	3.15	3.15	3.15	3.15	3.15	3.15	3.15
Power consumption	W	110	110	110	130	190	75	130
Protection		IPX4D	IPX4D	IPX4D	IPX4D	IPX4D	IPX4D	IPX4D
Total weight (dry):	kg	42	42	42	45	45	92	92
Condensate volume at 50/30°C	l/h	approx. 1.2	approx. 2.0	approx. 2.4	approx. 3.5	approx. 5.0	approx. 7.1	approx. 9.8
Condensate pH value		approx. 4.0	approx. 4.0	approx. 4.0	approx. 4.0	approx. 4.0	approx. 4.0	approx. 4.0
CE ID		CE-0085BN0380			CE-0085BP5571		CE-0085BR0164	
DIN DVGW quality symbol		QG-3202AV0430			QG-3202BQ0155		-	

¹⁾ Heating operation / DHW operation ²⁾ Not applicable to Austria / Switzerland ³⁾ LPG

CSW-120 DHW cylinder

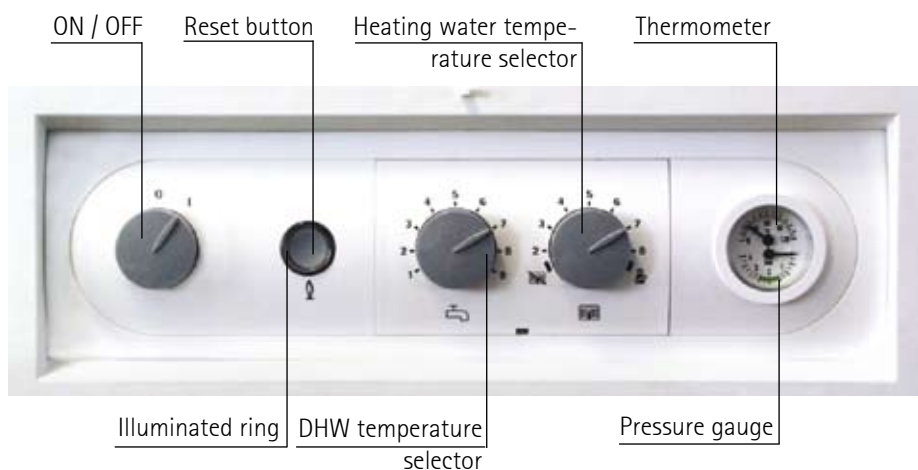
Cylinder capacity	Ltr.	115
Constant DHW cylinder rating (80/60 - 10/45 °C)	kW-Ltr./h	29-710
Standby loss	kWh/24 h	1,5
Output factor	N _i	1,0
Max. operating pressure – DHW	bar	10
Max. operating pressure – heating water	bar	12
Max. permissible DHW cylinder temperature	°C	92
Max. permissible heating water temperature	°C	110
Weight (dry)	kg	65

Specification

Type		CGB-K-20	CGB-K-24	CGB-K40-35	CGW-20/120	CGW-24/140	CGS-20/160	CGS-24/200
Rated output at 80/60°C	kW	19.0/22.9 ¹⁾	23.1/27.6 ¹⁾	32/39 ¹⁾	19.0/22.9 ¹⁾	23.1/27.6 ¹⁾	19.0/22.9 ¹⁾	23.1/27.6 ¹⁾
Rated output at 50/30 °C	kW	20.5	24.8	35/-	20.5	24.8	20.5	24.8
Rated thermal load	kW	19.5/23.5 ¹⁾	23.8/25.5 ¹⁾	33/40 ¹⁾	19.5/23.5 ¹⁾	23.8/28.5 ¹⁾	19.5/23.5 ¹⁾	23.8/28.5 ¹⁾
Boiler output (modul.) at 80/60 °C	kW	5.6	7.1	8/8.5 ³⁾	5.6	7.1	5.6	7.1
Boiler output (modul.) at 50/30 °C	kW	6.1	7.8	9/9.5 ³⁾	6.1	7.8	6.1	7.8
Boiler thermal load (modul.)	kW	5.7	7.3	8.5/9 ³⁾	5.7	7.3	5.7	7.3
Heating flow outside diameter	G	3/4"	3/4"	1 1/4"	3/4"	3/4"	3/4"	3/4"
Heating return outside diameter	G	3/4"	3/4"	1 1/4"	3/4"	3/4"	3/4"	3/4"
DHW connection/DHW circulation	G	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"
Cold water connection	G	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"
Gas connection	R	1/2"	1/2"	3/4"	1/2"	1/2"	1/2"	1/2"
Air/flue gas connection	mm	95.5/63	95.5/63	125/80	95.5/63	95.5/63	95.5/63	95.5/63
Gas category		II ₂ ELL3B/P	II ₂ ELL3P	II ₂ ELL3P	II ₂ ELL3B/P	II ₂ ELL3P	II ₂ ELL3B/P	II ₂ ELL3P
Gas supply details:								
Nat. gas E/H (H _i =9.5 kWh/m ³ =34.2 MJ/m ³)	m ³ /h	2.05/2.47 ¹⁾	2.50/3.00 ¹⁾	3.47/4.34 ¹⁾	2.05/2.47 ¹⁾	2.50/3.00 ¹⁾	2.05/2.47 ¹⁾	2.50/3.00 ¹⁾
Nat. gas LL (H _i = 8.6 kWh/m ³ =31.0 MJ/m ³ ²⁾)	m ³ /h	2.27/2.73 ¹⁾	2.77/3.31 ¹⁾	3.84/5.10 ¹⁾	2.27/2.73 ¹⁾	2.77/3.31 ¹⁾	2.27/2.73 ¹⁾	2.77/3.31 ¹⁾
LPG (H _i =12.8 kWh/kg=46.1 MJ/kg)	kg/h	1.52/1.84 ¹⁾	1.86/2.23 ¹⁾	2.57/3.40 ¹⁾	1.52/1.84 ¹⁾	1.86/2.23 ¹⁾	1.52/1.84 ¹⁾	1.86/2.23 ¹⁾
Gas supply pressure: Natural gas	mbar	20	20	20	20	20	20	20
LPG	mbar	50	50	50	50	50	50	50
Standard efficiency at 40/30 °C (H _i / H _s)	%	110 / 99	109 / 98	109 / 98	109 / 98	110 / 99	110 / 99	110 / 99
Standard efficiency at 75/60 °C (H _i / H _s)	%	107 / 96	107 / 96	106 / 96	108 / 97	107 / 96	107 / 96	107 / 96
Efficiency at rated load at 80/60 °C (H _i / H _s)	%	98 / 88	98 / 88	98 / 88	98 / 88	98 / 88	98 / 88	97 / 88
Efficiency at 30% partial load and TR=30 °C (H _i / H _s)	%	108 / 97	107 / 97	107 / 97	109 / 98	109 / 98	107 / 96	107 / 96
Factory-set flow temperature	°C	75	75	75	75	75	75	75
Flow temperature up to approx.	°C	90	90	90	90	90	90	90
Max. system pressure	bar	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Residual head for heating circuit:								
3-stage pump at stage 3/2/1								
570 l/h pump rate (10 kW at Δt=15K)	mbar	250/250/100	250/250/100	-	250/250/100	250/250/100	250/250/100	250/250/100
860 l/h pump rate (15 kW at Δt=15K)	mbar	250/100/-	250/100/-	-	250/160/-	250/160/-	250/160/-	250/160/-
1140 l/h pump rate (20 kW at Δt=15K)	mbar	140/-/-	140/-/-	-	140/-/-	140/-/-	140/-/-	140/-/-
Modulating pump (100%)								
475 l/h pump rate (11 kW at Δt=20K)	mbar	250	250	-	250	250	250	250
860 l/h pump rate (20 kW at Δt=20K)	mbar	110	190	-	110	190	110	190
1834 l/h pump rate (32 kW at Δt=20K)	mbar	-	-	175	-	-	-	-
Heat exchanger water content	l	1.3	1.3	2.5	1.3	1.3	1.3	1.3
Nominal content / equivalent rated content of the stratification cylinder	l	-	-	-	50/120	50/140	90/160	90/200
DHW throughput	l/min	2.0-6.5	2.0-8.0	2.0-12.0	-	-	-	-
Spec. water throughput "D" to DIN EN 625	l/min	9.4	13.0	18	17.9	20	23.2	25.2
Continuous DHW rating	l/h (kW)	-	-	-	563 (22.9)	681 (27.6)	563 (22.9)	681 (27.6)
Performance factors to DIN 4708	N _i	-	-	-	1.1	1.5	2.1	2.5
DHW output	l/10 min	-	-	-	150	171	199	216
Standby loss	kWh/24h	-	-	-	0.8	0.8	1.1	1.1
Min. flow pressure/min. flow pressure to EN 625	bar	0.2/1.0	0.2/1.0	0.2/1.0	-	-	-	-
Max. design pressure	bar	10	10	10	10	10	10	10
DHW temperature range (adjustable) ⁴⁾	°C	40-60	40-60	40-60	15-65	15-65	15-65	15-65
DHW heat exchanger corrosion protection		Stainless steel	Stainless steel	Stainless steel	Stainless steel	Stainless steel	Stainless steel	Stainless steel
Cylinder corrosion protection		-	-	-	Stainless steel	Stainless steel	Enamelled to DIN 4753	Enamelled to DIN 4753
Expansion vessel: Total content	l	12	12	-	12	12	12	12
Inlet pressure	bar	0.75	0.75	-	0.75	0.75	0.75	0.75
Permissible sensor temperatures	°C	95	95	95	95	95	95	95
Flue gas mass flow at Q _{max}	g/s	8.9/10.7 ¹⁾	10.8/13.0 ¹⁾	15/18 ¹⁾	8.9/10.7 ¹⁾	10.8/13.0 ¹⁾	8.9/10.7 ¹⁾	10.8/13.0 ¹⁾
Flue gas mass flow at Q _{min}	g/s	2.62	2.7	3.9	2.62	2.7	2.62	2.7
Flue gas temperature 80/60-50/30 at Q _{max}	°C	75-45	85-45	65-45	75-45	85-45	75-45	85-45
Flue gas temperature 80/60-50/30 at Q _{min}	°C	36-27	43-41	66-47	36-27	43-41	36-27	43-41
Available gas fan draught at Q _{max}	Pa	90	90	115/125 ¹⁾	90	90	90	90
Available gas fan draught at Q _{min}	Pa	12	12	10	12	12	12	12
Flue gas group according to DVGW G 635		G52	G52	G52	G52	G52	G52	G52
NO _x class		5	5	5	5	5	5	5
Electrical connection	V~/Hz	230/50	230/50	230/50	230/50	230/50	230/50	230/50
Fitted fuse (medium slow)	A	3.15	3.15	3.15	3.15	3.15	3.15	3.15
Power consumption	W	110	110	130	145	145	145	145
Protection		IPX4D	IPX4D	IPX4D	IPX4D	IPX4D	IPX4D	IPX4D
Total weight (dry)	kg	45	45	48	70	70	99	99
Condensate volume at 50/30°C	l/h	approx. 2.0	approx. 2.4	3.9/4.4 ¹⁾	approx. 2.0	approx. 2.4	approx. 2.0	approx. 2.4
Condensate pH value		approx. 4.0	approx. 4.0	approx. 4.0	approx. 4.0	approx. 4.0	approx. 4.0	approx. 4.0
CE ID		CE-0085BN0380	CE-0085BP5571		CE-0085B00001			
DIN DVGW quality symbol		QG-3202AV0430	QG-3202BQ0155		QG-3204B00014			

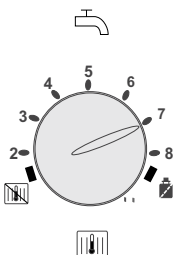
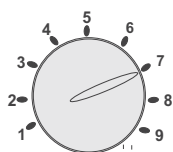
¹⁾ Heating operation / DHW operation ²⁾ Not applicable to Austria / Switzerland ³⁾ LPG ⁴⁾ Relative to a cold water temperature of 10 °C

Standard control



Illuminated indicator ring as status display

Display	Explanation
Flashing green	Standby (power supply ON, burner OFF)
Constant green	Heat demand: pump running, burner OFF
Flashing yellow	Emissions test mode
Constant yellow	Burner ON, flame steady
Flashing red	Fault



DHW temperature selector

The setting range 1-9 corresponds to a cylinder temperature of 15 to 65 °C. Combined with a control thermostat for wall mounted gas fired boilers, the adjustment at the DHW temperature selector is disabled; instead the temperature is selected at the boiler control thermostat.

Heating water temperature selector

The setting range 2 - 8 corresponds to a heating water temperature of 20 to 75 °C. Combined with a control thermostat for wall mounted gas fired boilers, the adjustment at the heating water temperature selector is disabled; instead the temperature is selected at the boiler control thermostat.

Settings




Winter mode (position 2 to 8)

The circulation pump operates in heating mode.




Summer mode

Switch set to  circulation pump OFF (heating OFF); only DHW heating, frost protection, pump anti-seizing protection enabled, i.e. the circulation pump runs for approx. 30 s every 24 hours.



Emissions test mode

Turning the switch to position  lets the boiler operate at maximum output. The illuminated indicator ring flashes yellow for 15 minutes or until the maximum flow temperature has been exceeded.



Thermometer/pressure gauge

The heating water temperature is displayed in the upper half, the heating system water pressure in the lower half.

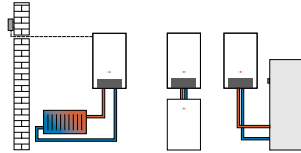


Standard controller; part of the standard delivery of the gas fired condensing boiler

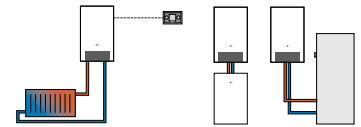
Two-wire eBUS cable



BM programming module (incl. outside temperature sensor) as weather-compensated control thermostat



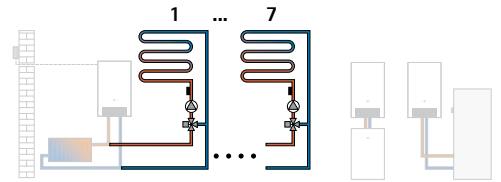
BM programming module with wall mounting base (accessory) as remote control



- Time programs for DHW and central heating
- LCD with background illumination
- Easy plain text guide through the menus
- Control by rotary selector with key function
- Four function keys for frequently used functions (heating, DHW, setback, help)
- Installation either inside the boiler control unit or, as remote control, in a wall mounting base
- Option for mixer module MM
- Only one programming unit is required for multi-boiler systems
- May be extended with mixer module MM (up to 7 mixer circuits)
- Fault diagnosis

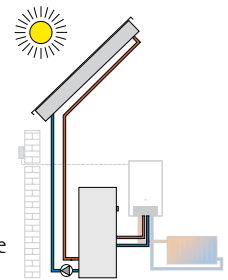
MM mixer module

- Extension module for regulating one mixer circuit
- Weather-compensated flow temperature control
- Easy controller configuration by selecting one of the preset system versions
- BM programming module to clip into boiler, or extendable with wall mounting base as remote control
- Rast-5 connection technology
- Incl. flow temperature sensor



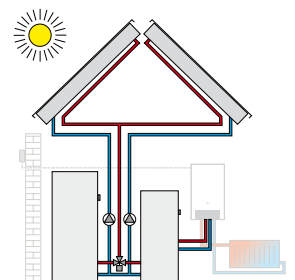
Solar module SM1

- Extension module for the regulation of 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 yield
- Temperature differential controller for one heat consumer
- Maximum cylinder temperature limit
- Display of the set and actual values on the BM 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



Solar module SM2

- Extension module for the regulation of a solar system including up to 2 cylinders and 2 collector fields, incl. 1 collector sensor, 1 cylinder sensor, each with sensor well
- Easy configuration of the controller through selection of pre-defined system options
- In conjunction with Wolf boilers, greater energy savings through intelligent cylinder reheating, i.e. blocking cylinder reheating when there is sufficient solar yield
- Heat meter function
- Display of the set and actual values on the BM programming module
- eBus interface with automatic energy management
- Rast-5 connection technology



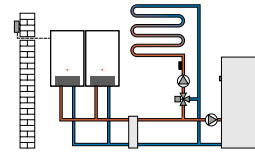
Control accessories

Two-wire eBUS cable



Cascade module KM

- Extension module for control of systems with low loss header or cascade configuration
- Applicable for controls of condensing gas boilers (4 appliances)
- Easy configuration of the controller through selection of pre-defined system options
- Suitable for regulating one mixer circuit
- Programming module BM may either be plugged in or used as remote control with wall mounting base
- 0-10V input for building control network systems, fault signal output 230V
- eBus interface with automatic energy management
- Rast-5 connection technology



Radio clock (DCF 77 signal) with outside temperature sensor for automatic time adjustment.



Radio clock (DCF 77 signal) for automatic time adjustment.



External wireless sensor

(only in conjunction with a receiver for external wireless sensor and remote control, part no. 27 44 209)



Wireless receiver for wireless outside temperature sensor and wireless remote control

Incl. radio clock (DCF 77 signal)



Wireless remote control

(only in conjunction with a receiver for external wireless sensor and remote control)
Max. one wireless remote control per mixer circuit.



ISM 4 - LON interface module

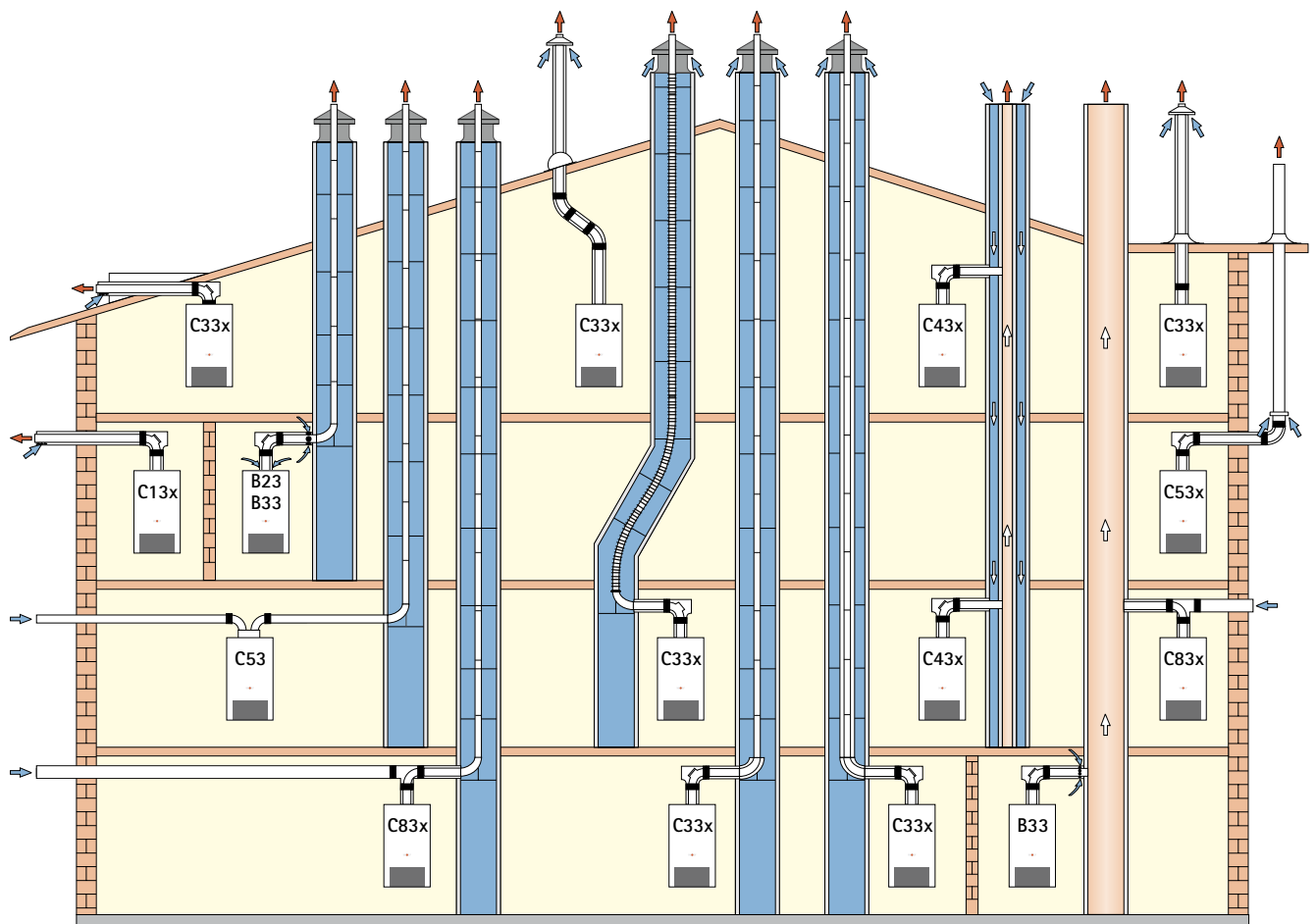
for communication between the control unit and the building management system applying the LON standard network variables



WRS-Remote service system

for direct or remote access to the control system via PC and for transferring fault text messages.
Consisting of: Interface module ISM1 and remote service software "WRS-Soft"

Balanced flue routing for wall mounted gas fired boilers up to 24 kW and gas fired condensing centres



System versions		Maximum length ¹⁾ [m]	
		System Ø 60/100	System Ø 80/125
C33x	Vertical concentric roof outlet through a pitched or flat roof, vertical concentric balanced flue routing for installation in a duct (balanced flue)	9	22
C33x	Horizontal roof outlet through a pitched roof (balanced flue) except CGB-11 with DN 60/100	9	10
C33x	Flue for installation in a rigid or flexible duct DN 80 + 2m horizontal concentric connecting line	13	22
C43x	Connection to a moisture-resistant balanced flue chimney (LAS flue) maximum pipe length from the centre of the boiler bend to the connector 2 m (balanced flue)	Calculation to EN 13384 (LAS manufacturer)	
C53	Connection to the flue in a duct and ventilation air supply through the external wall	-	30
C83x	Connection to the flue in a duct and ventilation air through an external wall (balanced flue)	-	30
C53x	Connection to a flue on an external wall (balanced flue)	-	22
C83x	Concentric connection to a moisture-resistant flue gas chimney and combustion air through an external wall (balanced flue)	Calculation to EN 13384 (LAS manufacturer)	
B23	Flue in a duct and combustion air directly through the boiler (open flue)	-	30
B33	Flue in a duct with horizontal, concentric connection line (open flue)	13	30
B33	Connection to a moisture-resistant flue gas chimney with horizontal, concentric connection line (open flue)	Calculation to EN 13384 (LAS manufacturer)	
C13x	Outside wall outlet (balanced flue) < 11 kW	5	10

¹⁾ Available fan draught: 90 Pa

Note: Systems C 33x and C 83x are also suitable for installation in garages.

Where necessary, adapt the installation examples to the relevant Building Regulations and requirements of your country/region. Discuss any questions relating to the installation of inspection covers and ventilation apertures with your local heating engineer.

The indicated lengths refer to either a concentric balanced flue or a flue in a duct and exclusively to original WOLF components.

WOLF flue components of PPs are supplied in "heavily inflammable" design (colour grey) and are thus providing additional safety in operation.

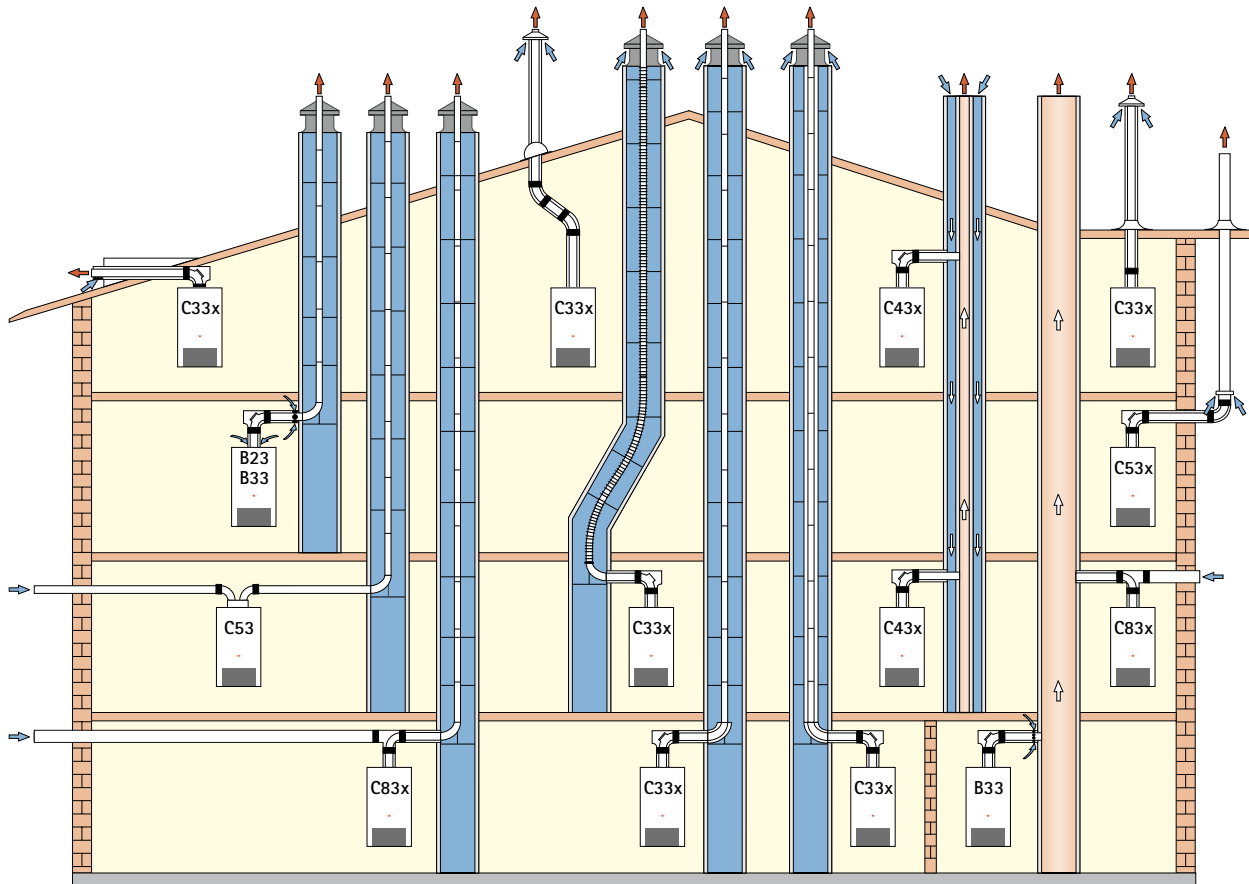
The balanced flue systems DN 60/100 and DN 80/125 are certified with the wolf condensing boilers.

The following balanced flue or flue pipes with EC certification may be used:

- CE-0063-CPD-8045 Flue pipe DN 80
- CE-0063-CPD-8045 Concentric balanced flue DN 60/100 and DN 80/125
- CE-0432-CPD-221051 Flue pipe DN 100
- CE-0036-CPD-9169003 Concentric balanced flue (on an outside wall) DN 80/125
- CE-0432-BPR-220556 Flue pipe, flexible DN 80

The necessary type plates and certificates are included with the respective WOLF accessory. The installation instructions supplied with the accessories have to be adhered to additionally.

Balanced flue routing for wall mounted gas fired boilers from 35 kW to 50 kW



System versions		Maximum length ¹⁾ [m]			
		CGB-35	CGB-K40-35	CGB-50	
C33x	Vertical concentric roof outlet through a pitched or flat roof, vertical concentric balanced flue routing for installation in a duct (balanced flue)	22	13	13	
C33x	Horizontal roof outlet through a pitched roof (balanced flue)	20	11	11	
C33x	Flue for installation in a rigid or flexible duct with horizontal concentric connecting line	DN 80	22	15	15
		DN 100	30	22	22
C43x	Connection to a moisture-resistant balanced flue chimney (LAS flue) maximum pipe length from the centre of the boiler bend to the connector 2 m (balanced flue)	Calculation to EN 13384 (LAS manufacturer)			
C53	Connection to a flue in a duct and ventilation air supply through an external wall (balanced flue)	DN 80	30	20	20
		DN 100	35	28	28
C83x	Connection to a flue in a duct and ventilation air supply through an external wall (balanced flue)	DN 80	30	20	20
		DN 100	35	28	28
C53x	Connection to a flue on an external wall (balanced flue)	DN 80	22	15	15
C83x	Concentric connection to a moisture-resistant flue gas chimney and combustion air through an external wall (balanced flue)	Calculation to EN 13384 (LAS manufacturer)			
B23	Flue pipe inside a duct and combustion air directly through the boiler (open flue)	DN 80	30	20	20
		DN 100	35	28	28
B33	Flue pipe inside a duct with horizontal, concentric Connection line (open flue)	DN 80	30	20	20
		DN 100	35	28	28
B33	Connection to a moisture-resistant flue gas chimney with horizontal concentric connection line (open flue)	Calculation to EN 13384 (LAS manufacturer)			

¹⁾ Available fan draught:

CGB-35 115 Pa, CGB-50 145 Pa,
CGB-K40-35 115 Pa (heating mode) / 125 Pa (DHW mode)

The max. length corresponds to the total length from the boiler to the flue terminal.

Note: System C 33x is also suitable for installation in garages.

Where necessary, adapt the installation examples to the relevant Building Regulations and requirements of your country/region. Discuss any questions relating to the installation of inspection covers and ventilation apertures with your local heating engineer.

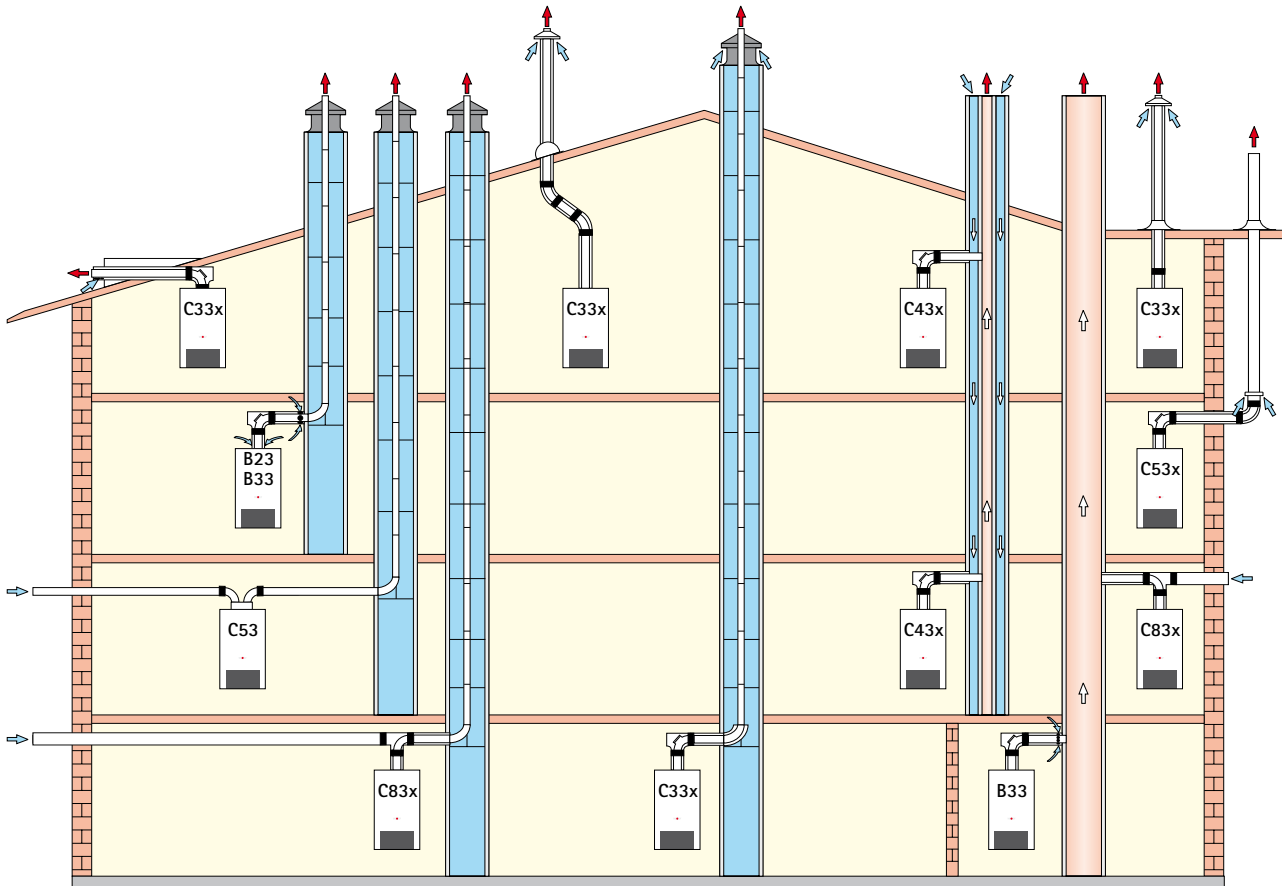
To safeguard the optimum function we recommend that you use only original WOLF components for the concentric routing of balanced and conventional flues.

The following balanced flue or flue pipes with CE certification may be used:

- CE-0063-CPD-8045 Flue pipe DN 80
- CE-0063-CPD-8045 Concentric balanced flue DN 80/125
- CE-0432-CPD-221051 Flue pipe DN 100
- CE-0036-CPD-9169003 Concentric balanced flue (on an outside wall) DN 80/125
- CE-0432-BPR-220556 Flue pipe, flexible DN 80

The necessary type plates and certificates are included with the respective WOLF accessory. The installation instructions supplied with the accessories have to be adhered to additionally.

Balanced flue routing for wall mounted gas fired boilers from 75 kW to 100 kW



System versions		Maximum length ¹⁾ [m]		
		CGB-75	CGB-100	
C33x	Vertical concentric roof outlet through a pitched or flat roof, vertical concentric balanced flue routing for installation in a duct (balanced flue)	DN100/150	14	14
C33x	Horizontal roof outlet through a pitched roof (balanced flue)	DN100/150	14	14
C33x	Flue for installation in a rigid duct with horizontal concentric connecting line	DN100 DN100/DN160 ²⁾	14 45	14 39
C43x	Connection to a moisture-resistant balanced flue chimney (LAS flue) maximum pipe length from the centre of the boiler bend to the connector 2 m (balanced flue)		Calculation to EN 13384 (LAS manufacturer)	
C53	Connection to a flue in a duct and ventilation air supply through an external wall (balanced flue)	DN100 DN100/DN160 ²⁾	23 50	23 50
C83x	Connection to a flue in a duct and ventilation air supply through an external wall (balanced flue)	DN100 DN100/DN160 ²⁾	23 50	23 50
C53x	Connection to a flue on an external wall (balanced flue)	DN 100	15	15
C83x	Concentric connection to a moisture-resistant flue gas chimney and combustion air through an external wall (balanced flue)		Calculation to EN 13384 (LAS manufacturer)	
B23	Flue pipe inside a duct and combustion air directly through the boiler (open flue)	DN100 DN100/DN160 ²⁾	23 50	23 50
B33	Flue pipe inside a duct with horizontal, concentric Connection line (open flue)	DN100 DN100/DN160 ²⁾	23 50	23 50
B33	Connection to a moisture-resistant flue gas chimney with horizontal concentric connection line (open flue)		Calculation to EN 13384 (LAS manufacturer)	
B23	Two-party cascade, flue pipe inside a duct and combustion air directly through the boiler (open flue)	DN160	45	23

¹⁾ Available fan draught: CGB-75 12-145 Pa, CGB-100 12-200 Pa,

²⁾ Expansion in the duct from DN 100 to DN 160

Note: System C 33x and C 83x is also suitable for installation in garages.

Where necessary, adapt the installation examples to the relevant Building Regulations and requirements of your country/region. Discuss any questions relating to the installation of inspection covers and ventilation apertures with your local heating engineer.

The indicated lengths refer to either a concentric balanced flue or a flue in a duct and exclusively to original WOLF components.

The following balanced flue or flue pipes with CE certification may be used:

CE-0432-CPD-221051 Flue pipe DN 100
 CE-0432-CPD-221051 Concentric balanced flue DN 100/150
 CE-0036-CPD-9169003 Flue pipe DN 160 und DN 200
 CE-0036-CPD-9169003 Concentric balanced flue (on an outside wall)
 DN 160/225 and DN 200/300

The necessary type plates and certificates are included with the respective WOLF accessory. The installation instructions supplied with the accessories have to be adhered to additionally.

ComfortLine

Gas fired condensing boilers



The competence brand for energy saving systems

- CGB** Wall mounted gas fired condensing central heating boiler with optional connection of a DHW cylinder
CGB-K Wall mounted gas fired condensing boiler for DHW and central heating
CGW Wall mounted gas fired condensing boiler for DHW and central heating with wall mounted stainless steel stratification cylinder
CGS Gas fired condensing centre for DHW and central heating with enamelled steel stratification cylinder

Tested in accordance with EC Directive and DIN EN 483 for heating systems to DIN 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; automatic matching of the air factor to the balanced flue system; premix burner; equipped and adjusted in the factory 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.

	CGB 11 20 24	CGB 35 50 75 100	CGB w. CSW 120	CGB-K 20 24	CGB-K 40-35	CGW 20/120 24/140	CGS 20/160 24/200
Control accessories							
BM programming module	•	•	•	•	•	•	•
Wall mounting base	•	•	•	•	•	•	•
MM mixer module	•	•	•	•	•	•	•
Solar module SM1	•	•	•	•	•	•	•
Solar module SM2	•	•	•	•	•	•	•
KM Cascade module		•					
Radio clock with outside temperature sensor	•	•	•	•	•	•	•
Radio clock for automatic time adjustment	•	•	•	•	•	•	•
Wireless receiver - required for external wireless sensor and wireless remote control	•	•	•	•	•	•	•
ISM 4 - LON interface module	•	•	•	•	•	•	•
WRS-Remote service system	•	•	•	•	•	•	•
Telecontrol module	•	•	•	•	•	•	•
Hydraulic accessories and gas supply accessories							
Gas ball valve (angle/straight-through version), chrome-plated, with/without thermally activated shut-off valve	•	•	•	•	•	•	•
Safety valve Rp 1/2" up to 3 bar, chrome plated	•	•	•	•	•	•	•
Drain outlet kit R1" with siphon and bezel, grey plastic	•	•	•	•	•	•	•
Accessories for installation on unfinished walls							
Angle maintenance valve G 3/4", chrome plated	•		•	•		•	•
Angle maintenance valve G 3/4" with connection R 1/2" for safety valve, chrome plated	•		•	•		•	•
DHW connector G 1/2", chrome plated				•		•	
Cold water connector G 1/2", chrome plated				•		•	
Connection set for installation on unfinished walls	•		•	•		•	•
DHW connection set with or without pressure reducer						•	
Accessories for installation on finished walls							
Straight-through maintenance valve Rp 3/4", chrome-plated	•		•	•		•	•
Straight-through maintenance valve Rp 3/4" with connection R 1/2" for safety valve, chrome-plated	•		•	•		•	•
DHW connector R 1/2", chrome plated				•		•	
Cold water connector R 1/2", chrome plated				•		•	
Connection set for installation on finished walls	•		•	•		•	•
Preassembled connection set for finished walls							•
Heating circuit connection set		•			•		
Low loss header set with complete pipework and insulation for 1 or 2 boilers							only for CGB-75/100
DHW connection set with or without pressure reducer						•	
Solar heating connection set for the additional control of a solar cylinder						•	•
DHW circulation set to EnEV incl. DHW circulation pump with analog time switch		•				•	•
DHW circulation set to EnEV incl. DHW circulation pump with digital time switch		•				•	•
Pipe cover		•				•	•
DHW cylinder CSW-120	•						
Balanced flue accessories							
Concentric balanced flue system	•	•	•	•	•	•	•
External wall system	•	•	•	•	•	•	•
Connection set for flues in a duct	•	•	•	•	•	•	•