

Competent with gas.



GENIO the multi-talented device.

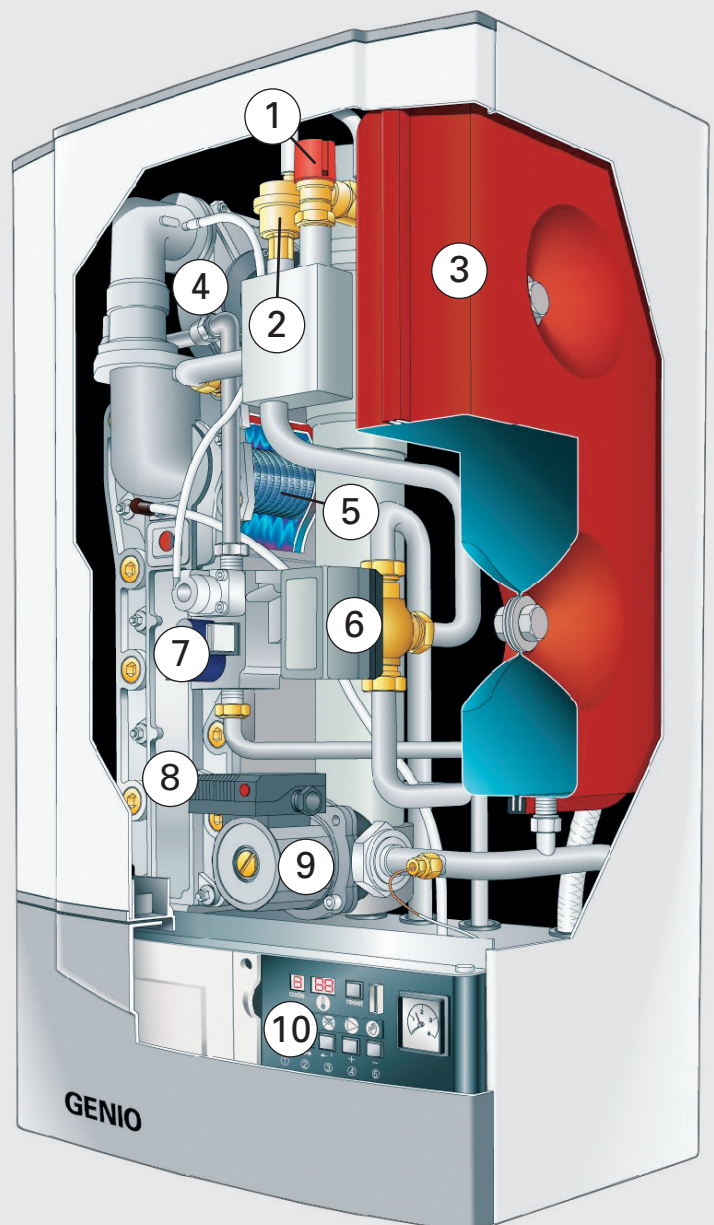
GENIO – perfect heating technology for a performance greater than 100%
Modulating condensing gas boiler
for natural and liquid gas
Boiler rating range: 2,6 to 65 kW

Supplies perfect heat – in strict accordance with your needs.

GENIO - the multi-talented device which features ultramodern technology.

Genio, the modulating condensing gas boiler, points the way forwards in terms of operating comfort and economicalness and sets new standards in gas heating technology. The large number of types – GENIO is offered in a number of performance ranges even as a heat centre with a hot water tank – allows individual applications to suit every situation. Thus futuristic heating with gas has taken on a new name: GENIO from WINDHAGER ZENTRALHEIZUNG.

- ① Safety valve
- ② Automatic air vent
- ③ Expansion vessel
- ④ Readily adjustable combustion air fan
- ⑤ Modulating pre-mix burner
- ⑥ Hot water recharge valve
- ⑦ Gas-solenoid
- ⑧ Aluminium heat exchanger
- ⑨ 3-step circulation pump
- ⑩ Device control panel with a covering screen





It even converts flue gas energy into heat.

The ultimate maxim when developing this new condensing gas boiler was to combine comfort and flexibility with future-oriented technology. The GENIO from WINDHAGER ZENTRALHEIZUNG offers a sophisticated condensing gas boiler technology which will satisfy even the most stringent requirements of modern and economical gas heating.

The advantages are obvious:

- **Economicalness:** the combination of condensing gas technology and a modulating mode of operation guarantees that the GENIO has an exceptionally low fuel consumption. The GENIO goes as far as to use the heat from the flue gases as an additional source of energy and reaches an energy co-efficient figure of up to 110%.
- **Flexibility:** a true multi-talent, GENIO can be used in different applications and can be readily and easily expanded by the addition of heating circuits.
- **Easy to combine:** by virtue of an intelligent MES regulation system (Modular Energy System) and a simple connecting technique GENIO proves itself to be a genius when it comes to combinations for plants with alternative heat generators or solid fuel boilers.
- **Variety of types:** GENIO provides individual solutions for all kinds of heating requirements.

Heat performance – so manifold is the multitalented device GENIO

Model:	Boiler rating range:
GENIO 100	2,9 – 11,6 kW
210	5,0 – 22,6 kW
280	5,9 – 29,6 kW
400	8,9 – 43,0 kW
600	13,3 – 65,0 kW

Based on a heating circuit temperature of 40/30 °C

All of this makes the multi-talented GENIO the perfect condensing gas boiler for a wide range of different applications: Single-family and multiple-family homes, flats, commercial enterprises, B & B's and even small hotels. Thanks to its sophisticated technology GENIO is characterised by an exceptionally high reliability which lasts for years!

The cost-saving solution - less space, cost and exhaust gases.

The compact design gives you more living space.

Thanks to its small size the GENIO condensing gas boiler does not take up a lot of space and can be installed almost anywhere. With its clear design and simple colouring, the GENIO is timeless and readily fits in with different styles and tastes. Whether it be in the bath room, kitchen or entrance hall, GENIO can be easily integrated. What's more the GENIO is so quiet when in operation that it is barely audible.

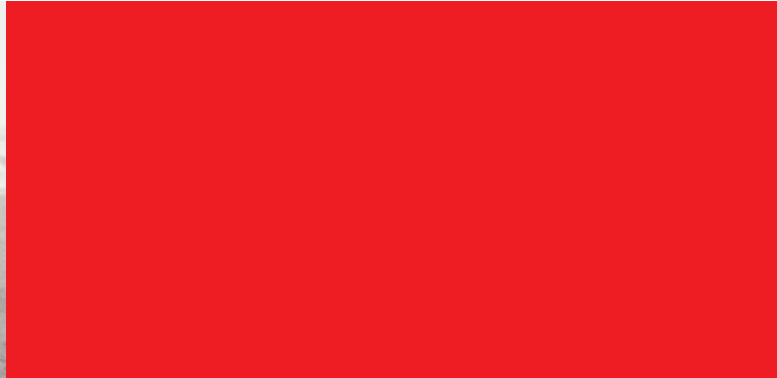


GENIO's small size means that it can easily fit into niches...



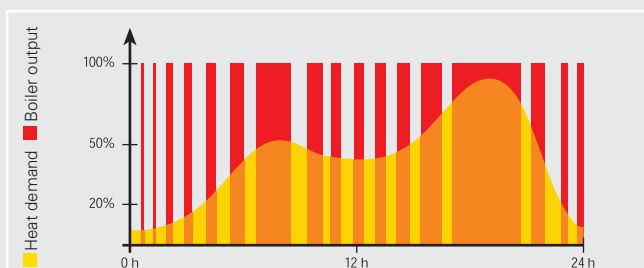
... and thanks to its timeless appearance it fits perfectly in a modern interior.

Photo: EWE

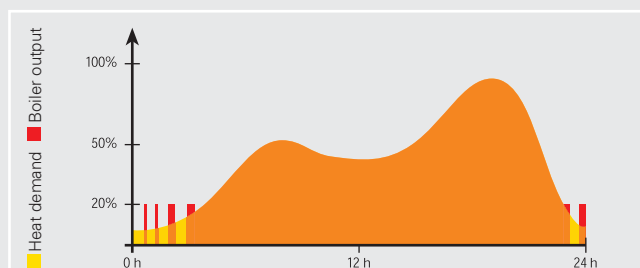


Lower heating costs and a performance of 110%.

With the modulating pre-mix burner of the GENIO, the device's performance can be readily adjusted to the actual heat requirements. As of 20% of the boiler rating, the boiler performance is exactly adjusted to the amount of energy required. This means that fewer phases of switching the device on and off are needed than with conventional burners. This revolutionary combustion technique is optimised by the interaction of the modulating burner and the MES regulation system (Modular Energy System). The adjustment to the actual heat requirements is performed via a data BUS which is also used to control the performance of the burner.



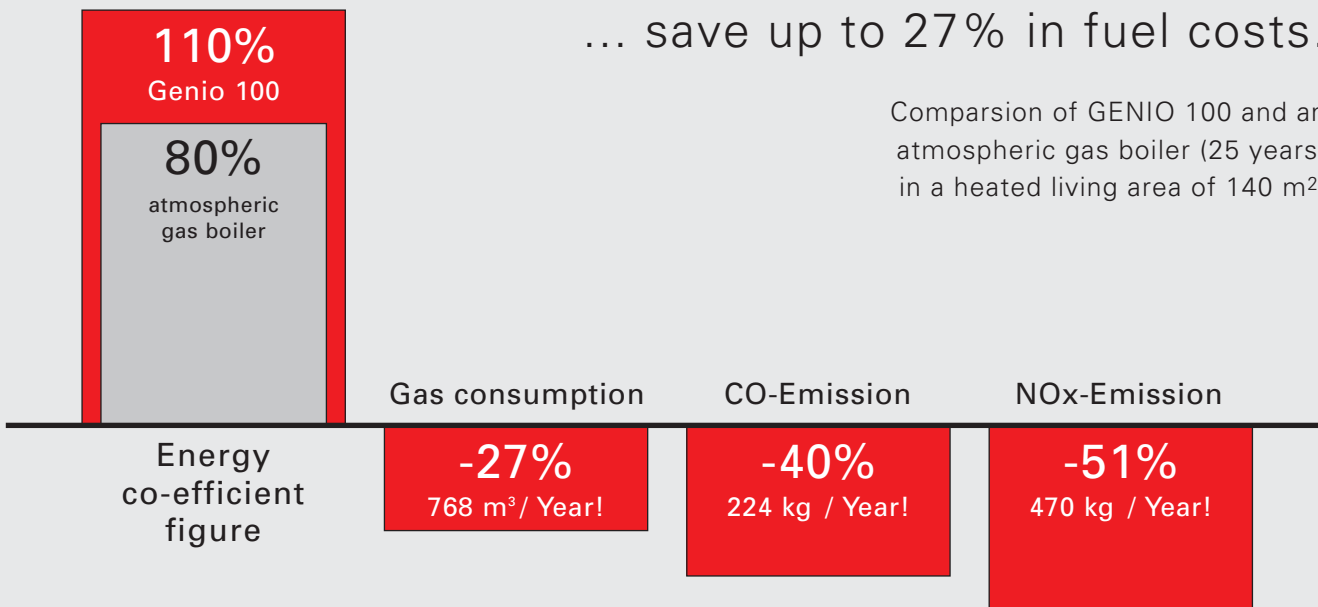
In conventional burners actual heating requirements throughout the day can only be met by switching the device on and off which means a performance of either 0% or 100 %.



The modulating pre-mix burner and the MES regulation system (Modular Energy System) in the GENIO boiler make it possible to readily adjust the device to the actual heating requirements as of 20% of the boiler rating in an energy-saving manner Radiators, floor heating, and other forms of heating.

... save up to 27% in fuel costs.

Comparison of GENIO 100 and an atmospheric gas boiler (25 years) in a heated living area of 140 m².



Readily combinable for individual solutions.

GENIO - the comfortable solution for all kinds of requirements.

GENIO offers superior hot water comfort thanks to rapid and need-oriented hot water recharging. The GENIO works silently in the background making sure that you have a comfortable environment at home. An electronic system, which constantly monitors all the functions relevant to safety, ensures optimum safety. An integrated error diagnosis system and simple and clear design mean that the GENIO is very user-friendly. And thanks to a simple connecting technique the GENIO can be readily combined: to make a comfortable heat centre or a flexibel heating system with alternative heat generators.

For superior hot water comfort.

In connection with a 115 litre wall mounted hot water tank the GENIO becomes a heat centre. This central hot water supply offers superior comfort. The well thought-out design, reduced need for space and the lack of a need for a chimney all mean that the device can be installed anywhere you want in your home or flat.

For individual solutions.

GENIO can also be integrated without any problems into existing WINDHAGER heating systems whereby a central control system (for example the MES - **Modular Energy System** from WINDHAGER) ensures smooth operation. A wide range of WINDHAGER AquaWIN hot water tanks and special boilers for oil and solid fuels allows for flexibel heating situation to suit every situation.





Perfect regulation for each and every heating situation.

The **MES – Modular Energy System** – ensures economical and need-oriented energy management from the cosiness of your own living-room. Equipped with either an analog or a digital operating module, in line with customer wishes, MES stands for optimum regulation comfort, economical gas consumption and the intelligent use of energy.

The **REG – Standard-Control** – offers superior regulation and operating comfort for a heating and hot water circuit. The regulation is performed dependently of the outside (REG 020) or room temperature (REG 011). REG is available with either the analog or the digital operating module.



Digital operating module MES



Digital operating module REG



Analog operating module MES



Analog operating module REG

Applications for the different control systems:

	GENIO 100 - 600	GENIO WZ-W (Heat centre wall mounted)
MES-System control	X	
REG Standard control	X	X

Combustion air inlet and flue gas system from WINDHAGER

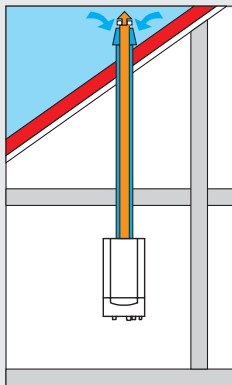
Flexible thanks to a range of installation variants.

Technically speaking it is not possible to use the flue gas heat 100%. For this reason flue gases can still contain some moisture which is condensed further in the exhaust gas line. The flue gas line must be designed so that it can cope with this. WINDHAGER air inlet and flue gas systems offer the optimum solution for each and every requirement.

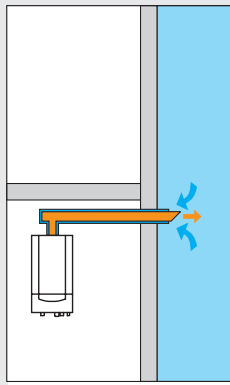
Regardless of whether you wish to operate the GENIO with air inlet and flue gas lines via the roof, chimney or outside wall – independently of the atmospheric air: the GENIO adapts in a flexible manner. When installing the GENIO it should be remembered that condensate occurs when using the condensing gas boiler. This can be disposed of via the sewerage since it is environmentally safe.

Please observe the local regulations pertaining to planning and building laws.

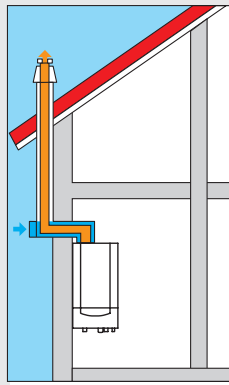
Room sealed flue gas systems



Air inlet /exhaust pipe via roof

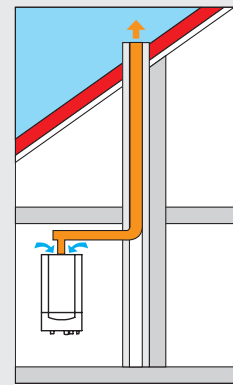


Air inlet / exhaust pipe through outside wall

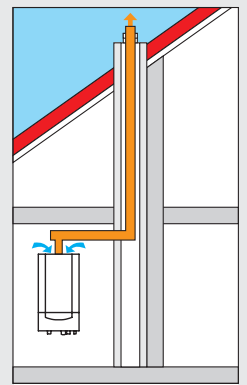


Air inlet through outside wall, exhaust pipe via roof

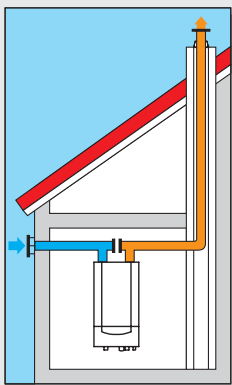
Open flue gas systems



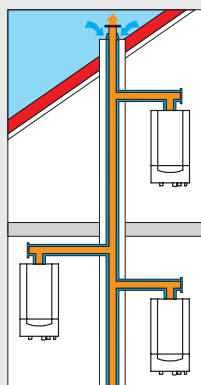
Air inlet from the room, exhaust pipe in the chimney



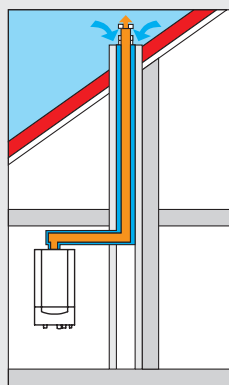
Air inlet from the room, exhaust pipe in the chimney



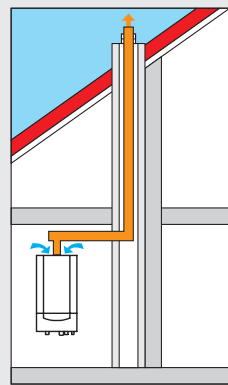
Air inlet through outside wall, exhaust pipe in the chimney



Air inlet from the chimney, exhaust pipe in the chimney



Air inlet from the chimney, exhaust pipe through chimney



Air inlet from the room, exhaust pipe (Technaflon) in the chimney/shaft

- combustion air
- flue gas



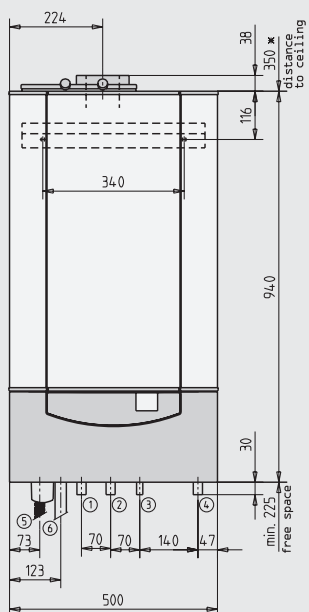
Technical Data

Type		GENIO 100	GENIO 210	GENIO 280	GENIO 400	GENIO 600
General						
CE-Approval:		0063BM3043	0063BM3043	0063BM3043	0063BL3253	0063BL3253
ÖVGW-Reg.-No.:		applied for	applied for	applied for	G 2.657	G 2.657
DVGW-Reg.-No.:		applied for	applied for	applied for	—	—
SVGW-Reg.-No.:		applied for	applied for	—	00-093-4	00-093-4
Buwal No.:		applied for	applied for	applied for	400050	400050
Load regulation		modulating	modulating	modulating	modulating	modulating
Nominal output (75/60 °C)	min. kW	2,6	4,4	5,6	8,0	12,0
	max. kW	10,6	21,2	28,0	40,0	61,0
Nominal output (40/30 °C)	min. kW	2,9	5,0	5,9	8,9	13,3
	max. kW	11,6	22,6	29,6	43,0	65,0
Nominal output (Hi)	min. kW	2,7	4,6	5,7	8,2	12,2
	max. kW	10,8	21,6	28,5	41,2	62,0
Nominal output (Hot water prod.)	max. kW	13,0	21,2	28,0	40,0	61,0
Efficiency						
Boiler efficiency (Hi)						
75/60 °C (full load/part load)	%	till 98,2	till 97,7	till 98,0	till 99	till 99
40/30 °C (full load/part load)	%	till 109,0	till 109,3	till 108,8	till 110	till 110
Energy co-efficient figure, 75/60 °C 40/30 °C	%	107,0 / 110,3	106,6 / 110,1	106,0 / 109,9	105,9 / 109	106,4 / 110
Gas- and flue details						
Inlet pressure natural gas/Nominal value	mbar	18 –25 / 20	18 –25 / 20	18 –25 / 20	18 –25 / 20	18 –25 / 20
Inlet pressure LPG	mbar	50	50	50	50	50
Emissions	NOx	mg/kWh <20	<20	<20	<20	<20
	CO	mg/kWh <15	<15	<15	<15	<15
Values for the chimney design						
Residual fan duty Full load	Pa	80	100	100	150	100
Residual fan duty Part load	Pa	10	10	10	10	10
Mass flue rate Full load	kg/sec	0,0061	0,0100	0,0133	0,0192	0,0288
Mass flue rate Part load	kg/sec	0,0014	0,0022	0,0028	0,0039	0,0058
Exhaust gas temperature Full load (75/60 °C)	°C	60	67	74	65	65
Exhaust gas temperature Part load (75/60 °C)	°C	54	55	55	60	60
CO ₂ –content (Full load/Part load)	%	9,0 / 9,5	9,0 / 9,0	9,0 / 9,0	9,0 / 9,0	9,0 / 9,0
Water side						
Max.flow temperature	°C	110	110	110	110	110
Max. operating temperature heating circuit	°C	20	20	20	20 – 90	20 – 90
Operating pressure	min. bar	0,8	0,8	0,8	0,8	0,8
	max. bar	3	3	3	3	3
Boiler water content	l	2,6	2,6	3,0	5,5	6,5
Water resistance ($\Delta T=20$ °C)	mbar	25	100	140	90	130
Water resistance ($\Delta T=10$ °C)	mbar	100	400	560	360	520
Electrical						
Electric rating (without pump)	max. W	46	46	46	85	90
Insulation class	IP	20	20	20	20	20
Others						
Mounting weight	kg	46	46	48	57	64
Max. condensate rate (40/30 °C)	l/h	1,6	3,0	3,9	5,7	8,5
Noise level in 1 m distance to the boiler	dB(A)	<44	<44	<44	<48	<48

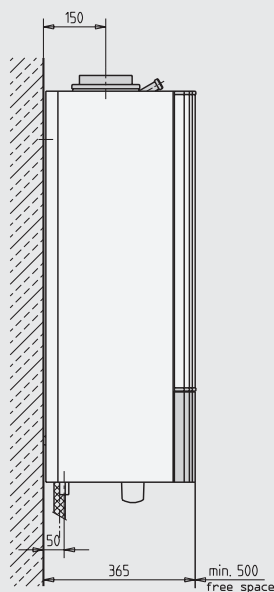
The profile of a multi-talented device.

Dimensions GENIO 100 / 210 / 280

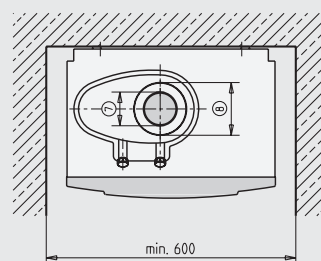
Front view



Side view



Top view



- ① Flow connection $\varnothing 22$
- ② Hot water flow $\varnothing 22$
- ③ Gas connection $\varnothing 15$
- ④ Return connection $\varnothing 22$
- ⑤ Condensate connection
..... (hose $\varnothing 25$, ca. 200 mm long)
- ⑥ Condensate safety valve
- ⑦ Flue gas connection $\varnothing 80$
- ⑧ Combustion air supply $\varnothing 125$

Clamping ring screwing as adaptor piece from $\varnothing 15$ to R1/2" (outside), resp. from $\varnothing 22$ to R3/4" (outside) attached!

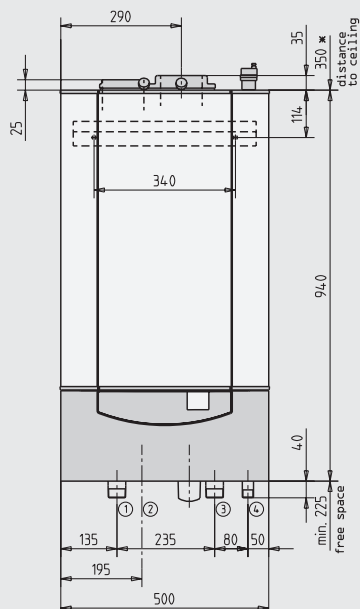
*Measurement depends on the chosen flue gas system. Please observe the local regulations!

All measurements in mm. Technical updates are subject to change.

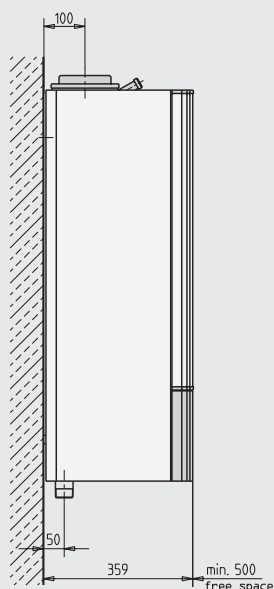
R = Outside screw thread

Dimensions GENIO 400 / 600

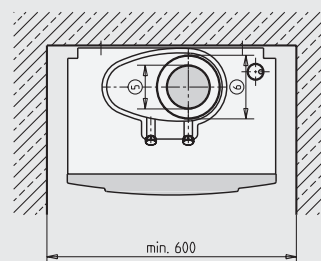
Front view



Side view



Top view



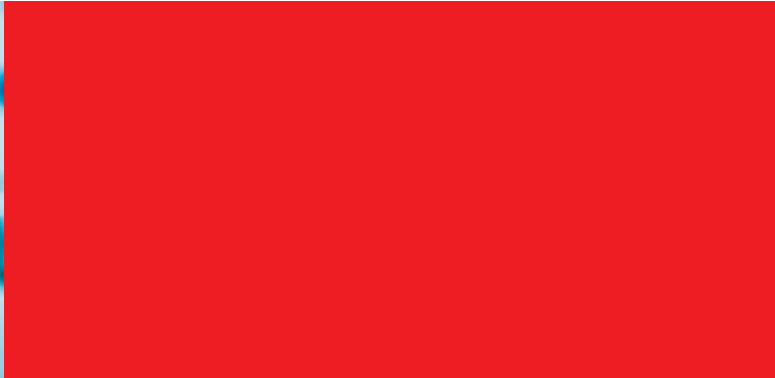
- ① Return connection : Rp1" (inside), bzw. R5/4" (outside)
- ② Condensate : hose $\varnothing 25$, ca. 200 mm long
- ③ Flow connection : Rp1" (inside), bzw. R5/4" (outside)
- ④ Gas connection : R3/4" (outside)
- ⑤ Flue gas connection : GENIO400: $\varnothing 80$; GENIO600: $\varnothing 100$
- ⑥ Combustion air supply: GENIO400: $\varnothing 125$; GENIO600: $\varnothing 150$

*Measurement depends on the chosen flue gas system. Please observe the local regulations!

All measurements in mm. Technical updates are subject to change.

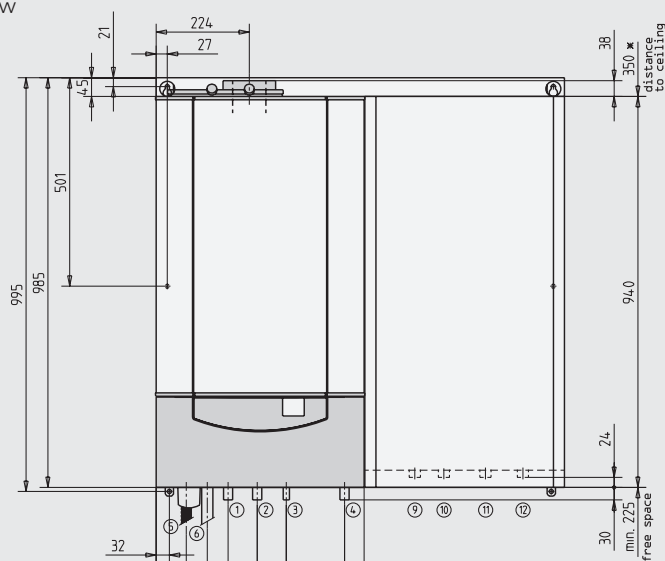
R = Outside screw thread

Rp = Inside thread



Dimensions GENIO WZ-W 100 / 210 (Heat centre wall mounted)

Front view



- ①Flow connection $\varnothing 22$
- ②Hot water flow $\varnothing 22$
- ③Gas connection $\varnothing 15$
- ④Return connection $\varnothing 22$
- ⑤Condensate connection
(hose $\varnothing 25$, ca. 200 mm long)
- ⑥Condensate safety valve
- ⑦Flue gas connection $\varnothing 80$
- ⑧Combustion air supply $\varnothing 125$
- ⑨Flow connection R 3/4" (outside)
- ⑩Hot water connection R 3/4" (outside)
- ⑪Cold water connection R 3/4" (outside)
- ⑫Return connection R 3/4" (outside)

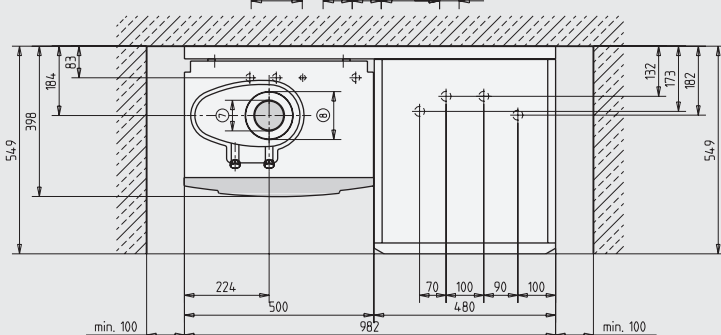
Clamping ring screwing as adaptor piece from $\varnothing 15$ to R1/2" (outside), resp. from $\varnothing 22$ to R3/4" (outside) attached!

*Measurement depends on the chosen flue gas system. Please observe the local regulations!

All measurements in mm. Technical updates are subject to change.

R = Outside screw thread

Top view



Technical datas: Hot water tank for WZW (Heat centre wall mounted)

Type		GENIO 100 WZW	GENIO 210 WZW
Water content	l	115,0	115,0
Max. operating pressure hot water	bar	4,8	4,8
Max. operating pressure heating water	bar	2,5	2,5
Max. temperature hot water ¹⁾	°C	70,0	70,0
Max. temperature heating water	°C	90,0	90,0
Heat exchange surface area	m ²	1,1	1,1
Heating water content	l	9,0	9,0
Constant flow rate by $\Delta T = 35 \text{ °C}$	l/h	320,0	480,0
10 min peak performance by $\Delta T = 35 \text{ °C}$	l	154,0	168,0

1) To avoid lime scale we recommend to set the hot water temperature on max. 55 °C.

www.windhager.com

Windhager offers more than first-class products:

Top advice from a Windhager partner.

Products from WINDHAGER ZENTRALHEIZUNG can be obtained at specialist stores such as companies who are partners of WINDHAGER. These are proficient heating specialists who work closely together with WINDHAGER ZENTRALHEIZUNG in a professional manner in the interests of our customers.

A professional customer services network.

Perfect customer services is one of the pillars of the success of WINDHAGER. Our reliable and professional customer services network guarantees optimum attendance to customers' needs day by day. Our service technicians are experienced professionals who work reliably, quickly and without a lot of red tape to get you results.



Austria (Headquarters/Production):

Windhager Zentralheizung AG
A-5201 Seekirchen near Salzburg
Anton-Windhager-Straße 20
Tel. +43 (0)6212/23 41-0
Fax +43 (0)6212/4228

Windhager Zentralheizung AG
A-1230 Vienna
Carlberggasse 39
Tel. +43 (0)1/869 43 28
Fax +43 (0)1/865 13 81

e-mail info@windhager-ag.at

Germany:

Windhager Zentralheizung GmbH
D-86405 Meitingen near Augsburg
Deutzring 2
Tel. +49 (0)8271/80 56-0
Fax +49 (0)8271/80 56-30

Windhager Zentralheizung GmbH
D-04509 Delitzsch near Leipzig
Heinrich-Rudolf-Hertz-Straße 2
Tel. +49 (0)34202/723-0
Fax +49 (0)34202/723-30

e-mail info@windhager-ag.de

Switzerland:

Windhager Zentralheizung Schweiz AG
CH-6203 Sempach-Station near Luzern
Industriestrasse 13
Tel. +41 (0)41/469 469-0
Fax +41 (0)41/469 469-9
e-mail info@windhager-ag.ch

Windhager Zentralheizung Schweiz AG
CH-1162 St.-Prex near Genf
Z. I. Au Glapin
Tel. +41 (0)21/806 15 12
Fax +41 (0)21/806 16 61
e-mail bureau@windhager-chauffage.ch

Your WINDHAGER partner:
