

bösch optima flat

Standardised flat ceiling units





WE DELIVER SUSTAINABLE SOLUTIONS

ALL FROM ONE SOURCE

Long-standing quality

Having initially specialised in burners, we have evolved over more than 90 years to become a full-range supplier of heating and air handling equipment – connected by intelligent control technology. Thanks to our knowledge of all energy sources, we can find the best solution for your property. With all components perfectly matched, bösch systems are both convenient and reliable. Because we don't just offer products, but sustainable solutions!

A family business with vision

We are aware of our responsibility as an owner-managed, Austrian family business and are committed to the cause of a liveable environment – now and in the future. By growing at a sustainable level, we ensure we are a reliable partner for our customers and employees, through the generations.

Personal, local and ready to go

Useful services complete our portfolio. Our service team is made up of trained employees with many years of experience in the heating and air handling sectors. More than 230 technicians are at your service 24 hours a day, 365 days a year. Just pick up the phone – you can depend on us to reach you quickly. Our technicians carry all commonly needed spare parts in their service vehicles.



SYSTEM SOLUTIONS – THE BÖSCH WAY

ECONOMICAL, RELIABLE AND GREEN

We have the perfect heating, DHW, air conditioning and ventilation system for every customer. All from one source. After all, convenience and reliability can only be guaranteed when the individual components are matched to one another.



Whether you rely on gas, wood or a heat pump for heating, bösch has the perfect solution for your needs. Enjoy efficient green heat with the various bösch units while saving money through many possible funding options.



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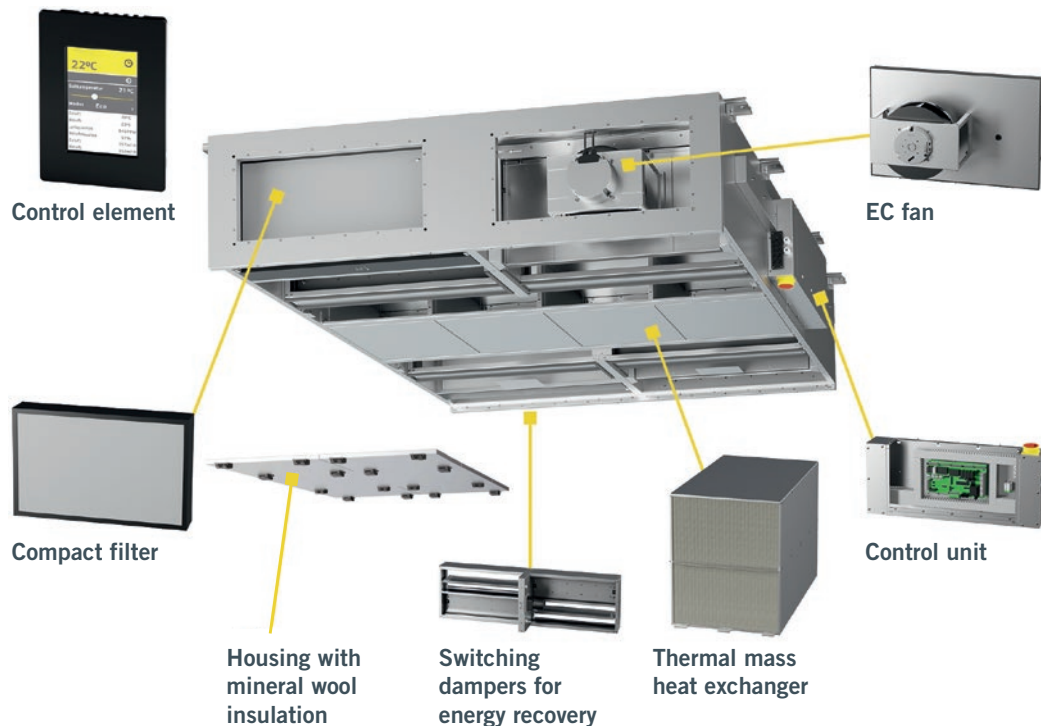
The bösch building automation department guarantees high operational reliability and low running costs by ensuring the efficient and seamless operation of all of the systems in use at your property.



bösch ventilation and air conditioning units **deliver, filter, heat and cool the supply air** in compliance with current energy and hygiene standards. The design and production of our high grade ventilation systems are based on over 40 years of know-how.

BÖSCH OPTIMA FLAT

STANDARDISED FLAT CEILING UNITS



bösch ventilation and air conditioning units deliver, filter, heat and cool the supply air in compliance with current energy and hygiene standards. The design and production of our high grade ventilation systems are based on over 40 years of know-how.

These flat ceiling units with their compact dimensions and various designs can be used in a variety of ways:

- Hotels
- Nurseries
- Meeting rooms
- Offices
- Cafés
- Apartment blocks
- Schools
- Restaurants
- Ancillary rooms

The flat ceiling units in the optima flat range are designed for indoor installation and come fully wired, including a microprocessor control unit. Every unit is factory-tested for reliable plug & play operation, whilst ease of use is enabled through the touchscreen control unit supplied as standard.

Energy efficiency and sustainability are ensured by high grade components, such as the aluminium countercurrent heat exchanger (over 85 % efficiency) or accumulator with enthalpy heat exchanger (up to 93 % efficiency and up to 70 % moisture recovery), high performance EC fans and compact panel filters with the largest possible filter surface area. The housing panels are made of galvanised sheet steel with mineral wool insulation. Service panels can be opened on both sides or completely removed.

The optima flat units comply with VDI 6022 requirements.

Numerous options and control accessories complete the offering. What's more, our customer service team is available for commissioning, maintenance and call-outs, in keeping with our claim:

"BÖSCH – ALL FROM ONE SOURCE"

BÖSCH OPTIMA FLAT

UNIT TYPES

DESIGN – COUNTERCURRENT HEAT EXCHANGER

Housing made of galvanised sheet steel with 40 mm mineral wool insulation

One-piece filter and fan access panels

Condensate drain connector

Control box installed on the outside of the unit

Switch disconnecter

Connections for DHW heating coil (also available with electric heating coil)

DESIGN – ACCU ENTHALPY HEAT EXCHANGER

Housing made of galvanised sheet steel with 30 mm mineral wool insulation

Access panel for straightforward filter changes

Access panel for straightforward fan maintenance (4 access panels for type accu 1500 only)

Cable bushings

Control box installed on the outside of the unit

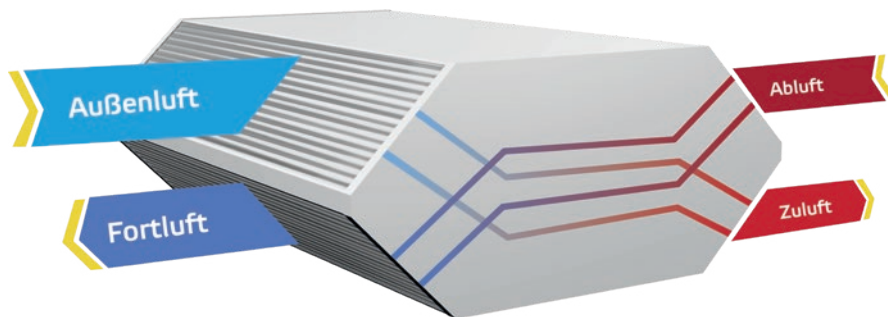
Switch disconnecter

BÖSCH OPTIMA FLAT

OPERATING PRINCIPLE

optima flat GS – countercurrent heat exchanger

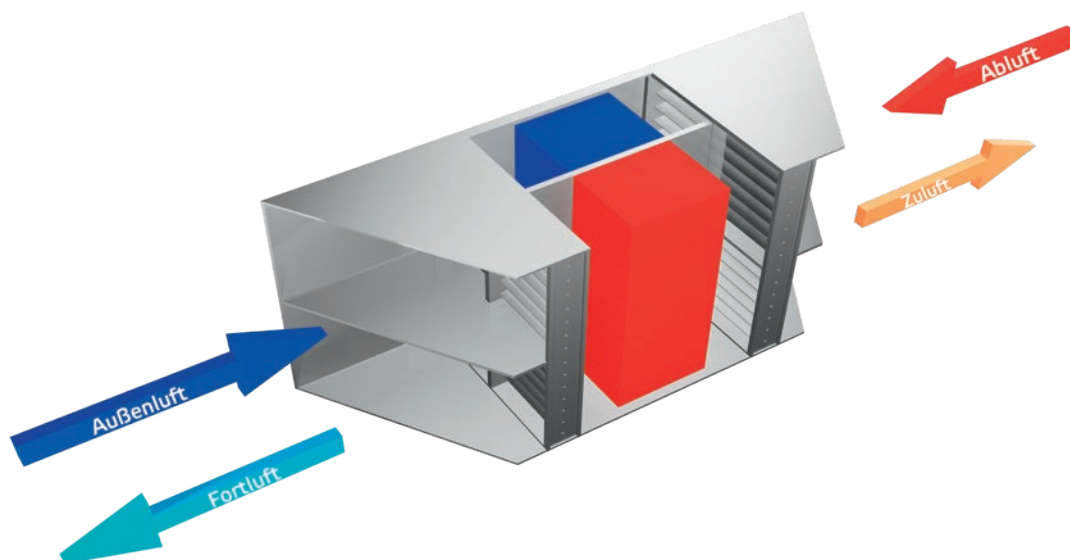
These ventilation units come with a recuperative, cross-countercurrent heat exchanger made of aluminium, with which impressive heat recovery rates of up to 90 % can be achieved. At low minus temperatures, a continuously variable bypass prevents the heat exchanger from icing up. The same bypass also allows for free cooling during the cool morning hours in the summer months. Aluminium panels are used to keep the supply and extract air flows completely separate.



optima flat accu – enthalpy heat exchanger

The accu version with thermal mass heat exchanger delivers an impressive heat recovery level of up to 93 %. Even at very low minus temperatures, the thermal mass heat exchanger is not prone to becoming iced up. This means that the full heat recovery performance is still achieved at temperatures of -15°C and lower. Annual efficiency in cold regions is therefore higher than with a countercurrent heat exchanger, for example.

The accumulator consists of two static thermal storage blocks. Via the integral damper system, an alternating supply of outdoor air and extract air continually passes over one thermal storage block. This is when the energy exchange takes place. The alternating flow also has a self-cleaning effect. In addition, any resulting condensate is re-absorbed by the drier air.



BENEFITS OF THE ACCU VERSION:

- ⊕ Heat recovery of up to 93 %
- ⊕ Moisture recovery of up to 70 %
- ⊕ No condensate drain required
- ⊕ No risk of icing up in winter
- ⊕ Higher **annual efficiency** than countercurrent heat exchanger
- ⊕ Full heat recovery, even at low outside temperatures down to -15°C
- ⊕ Maximum utilisation of the unit cross-section

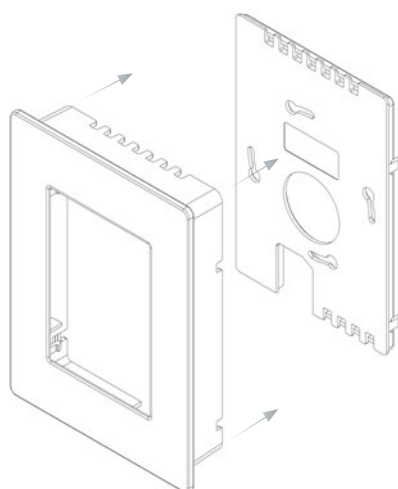
BÖSCH OPTIMA FLAT

CONTROL

- Supply air, extract air or room temperature control (integral temperature sensor in control element), can be adjusted as required
- Various operating modes (eco, standard, etc.) with separate flow rates and temperature setpoints
- On-board Modbus RTU for integration in higher ranking BMS
- Current operating data displayed on the control element
- All key operating parameters of the field devices (fans, damper drives and sensors) displayed on the control element
- Control box installed on the outside of the unit for ease of maintenance
- Fully pre-wired flat ceiling unit
- High grade touchscreen control element with an elegant design included in standard delivery



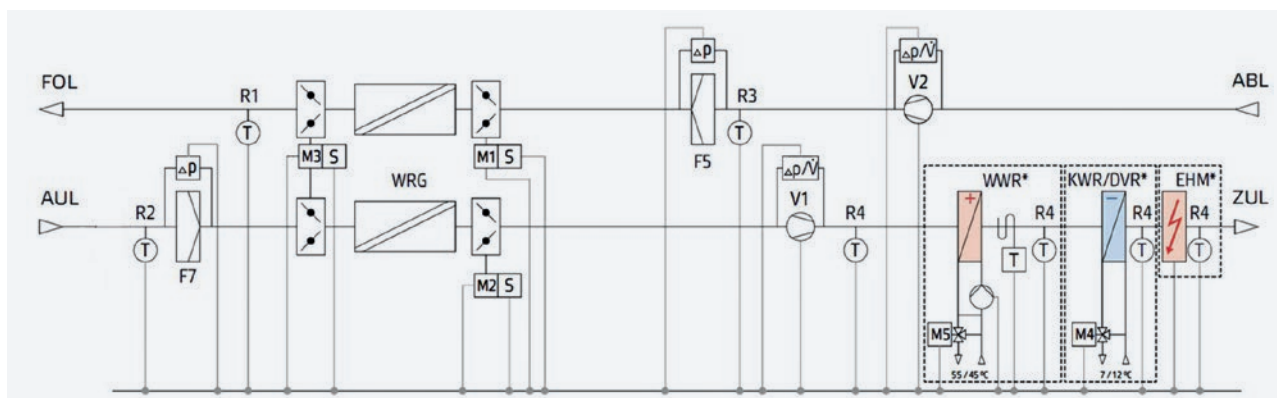
3.5" touchscreen
with clear and
uncomplicated
user interface



Control options

- Room humidity monitor – surface mounting
- Constant pressure controller and hose with connection nipple
- CO₂ air quality sensor as room sensor and for duct installation
- NTC 5K duct temperature sensor
- Smoke detector, duct installation

EXAMPLE OF AN OPTIMA FLAT ACCU INSTALLATION



BÖSCH OPTIMA FLAT

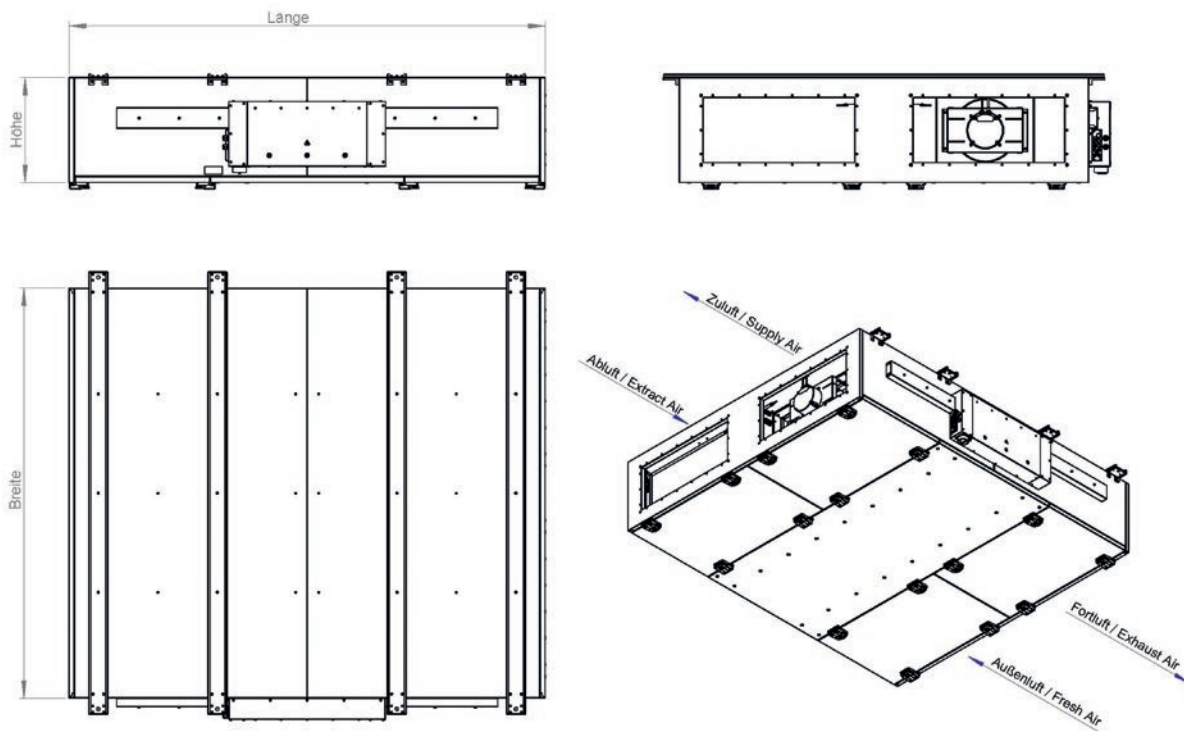
SPECIFICATION

SPECIFICATION – ACCU ENTHALPY HEAT EXCHANGER

Type		accu 550	accu 1050	accu 1500
V standard	m³/h	550	1050	1500
Δp ext	Pa	250	250	250
Heat recovery	%	93.0	92.0	93.0
Moisture recovery, up to	%	70.0	70.0	70.0
ODA filter	ISO 16890	ePM1 70 %	ePM1 70 %	ePM1 70 %
ETA filter	ISO 16890	ePM10 65 %	ePM10 65 %	ePM10 65 %
Mains voltage	V	230	230	400
Max. current drawn *	A	2.9	4.2	4.0
Max. power consumption *	W	380	605	1950
Radiated sound power	dB(A)	53	59	60

* Measurements at operating point are lower

DIMENSIONS – ACCU ENTHALPY HEAT EXCHANGER



Drawing provided by way of example, supply air on left in this case. Air connections mirrored in "RE" design with supply air on right.

Type		accu 550	accu 1050	accu 1500
V standard	m³/h	550	1050	1500
Δp ext	Pa	250	250	250
Length	mm	1800	2200	2200
Width *	mm	960	1460	1890
Height *	mm	365	485	485
Weight	kg	198	363	430

* Without fittings and/or superstructural parts

BÖSCH OPTIMA FLAT

SPECIFICATION

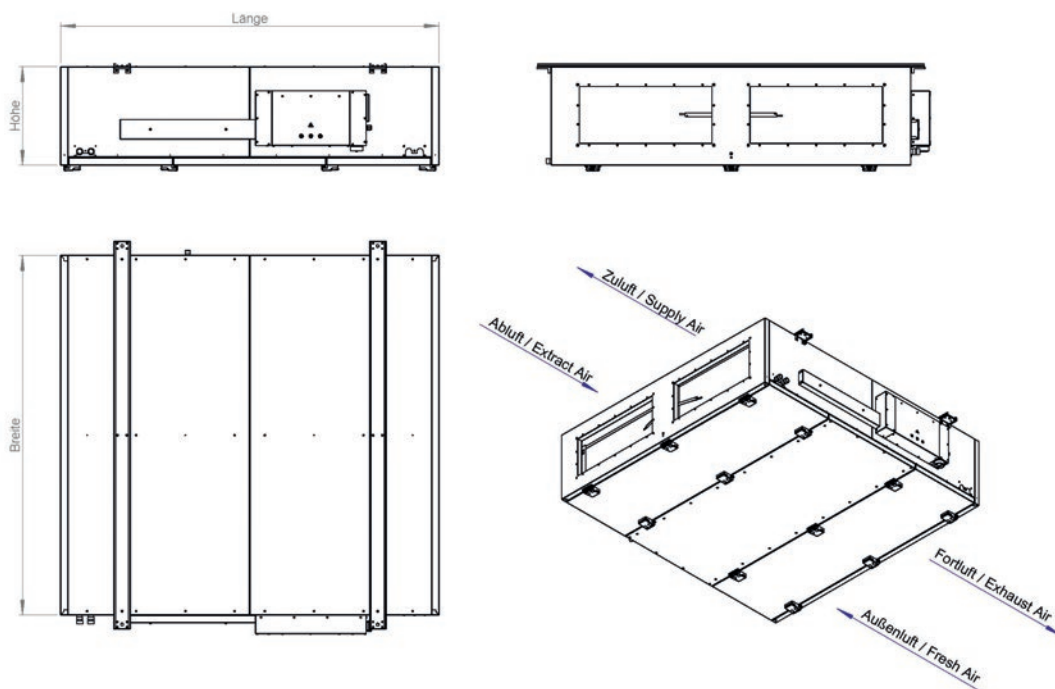
SPECIFICATION – COUNTERCURRENT HEAT EXCHANGER

Type		GS 600	GS 1100	GS 1500	GS 2300
V standard	m³/h	600	1100	1500	2300
Δp ext	Pa	250	250	250	250
Heat recovery	%	84.0	85.0	84.0	85.0
ODA filter	ISO 16890	ePM1 70 %	ePM1 70 %	ePM1 70 %	ePM1 70 %
ETA filter	ISO 16890	ePM10 65 %	ePM10 65 %	ePM10 65 %	ePM10 65 %
Max. heating output at 40/30 °C	kW	4.9	9.4	11.4	20.7
Heating output at 40/30 °C **	kW	1.6	3.1	3.8	7.5
Heating coil connections	inch	R 1/2"	R 3/4"	R 3/4"	R 3/4"
Control valve kvs **	m³/h	1.0	1.6	2.5	4.0
Mains voltage	V	230	230	230	230
Max. current drawn *	A	2.9	4.0	4.7	6.5
Max. power consumption *	W	360	590	1060	1470
Radiated sound power	dB(A)	54	62	65	66
Type with electric heating coil		integral	integral	integral	external (400 V)
Max. heating output	kW	3	6	6	18
Max. current drawn *	A	16	13.1	13.1	26.1
Max. power consumption *	W	3360	6590	7060	18,000

* Measurements at operating point are lower

** Air intake 15 °C, air discharge approx. 20 °C

DIMENSIONS – COUNTERCURRENT HEAT EXCHANGER



Drawing provided by way of example, supply air on left in this case. Air connections mirrored in "RE" design with supply air on right.

Type		GS 600	GS 1100	GS 1500	GS 2300**
V standard	m³/h	600	1100	1500	2300
Δp ext	Pa	250	250	250	250
Length	mm	1473	1800	1800	2000
Width *	mm	1000	1460	1460	1900
Height *	mm	390	435	435	520
Weight	kg	136	241	250	350

* Without fittings and/or superstructural parts

** For design with electric heating coil, external coil for duct installation

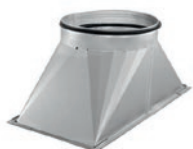
BÖSCH OPTIMA FLAT

UNIT OPTIONS AND ACCESSORIES



CW COOLING COIL/DIRECT EVAPORATOR

CW cooling coil or direct evaporator for post-cooling of the supply air, coil with 4 rows of pipes, fin clearance 2.1 mm, incl. condensate pan and mist eliminator, interchangeable direction of air flow and connection side, incl. supply air filter (NTC), for ceiling or floor installation.



MOULDED SQUARE TO ROUND ADAPTOR

Square to round adaptor, galvanised sheet steel matched to optima flat unit connections, incl. 4 M8x16 cylinder screws and serrated washers.



INSULATED MOTOR SHUT-OFF DAMPER

Combined outdoor and exhaust air louvre damper, galvanised sheet steel housing, with servomotor, 3-point control, connecting cable of 1 m in length, insulated damper.



FLEXIBLE CANVAS CONNECTOR

Flexible canvas connector, structure-borne sound decoupling, expansion compensation, incl. equipotential bonding (supplied loose). 4 connectors recommended per unit.



SIPHON

Siphon, suction side, Ø 40, transparent, incl. DN 30 adaptor, self-filling and self-closing siphon for draining ventilation units in the area of the cooling coil or other wet areas. With negative pressure relative to the environment for optima flat GS countercurrent heat exchangers.



OVERVIEW OF BÖSCH SERVICES

OUR SERVICE – YOUR GAIN



COMMISSIONING & TRAINING

Our employees help you to correctly commission your new system. Once your system has been set up by the installer and wired by the electrician, our service technician carries out an inspection to ensure everything has been properly connected.

Parameters are checked and optimised during the initial test run. After that, the system is adjusted and fine-tuned. We accompany you during commissioning so that you additionally benefit from our professional training in the process.



TROUBLESHOOTING

The bösch customer service department provides outstanding support in an emergency. The first step if you have an issue is simply to pick up the phone and contact us. We will gladly assist you there and then, or can be with you on site in no time.

As we always aim to solve any issue at the first attempt, our technicians carry all the most important spare parts in their vehicles.



MAINTENANCE AGREEMENTS

You can avoid call-outs and ensure your system is operating at a hygienic and energy efficient level through routine maintenance. Regular filter replacement is not only very important for your health but also for a long service life. Get in touch, we'd be delighted to put together a quote for you. At the end of the day, you can save yourself unnecessary stress and expense by finding and remedying issues before they become a problem.

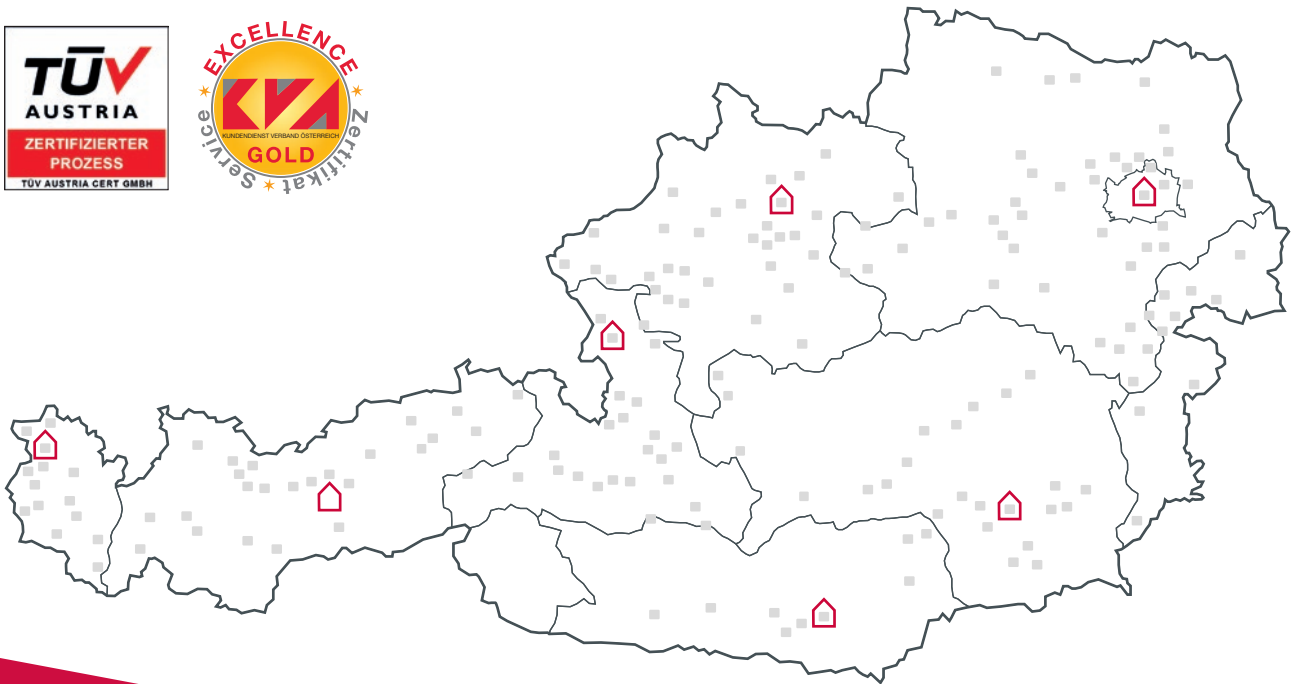


MODERNISATION ADVICE

Nobody is more familiar with your system than our service technicians. They know when it is time to replace components in order to guarantee uninterrupted, consistent and economical operation.

And they are happy to provide (energy-)neutral, no-obligation advice. Together with our in-house modernisation experts, we can find the best solution for your needs and your budget.

Our 250 service technicians are available to you, on site,
365 days a year.



A PARTNER YOU CAN TRUST

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