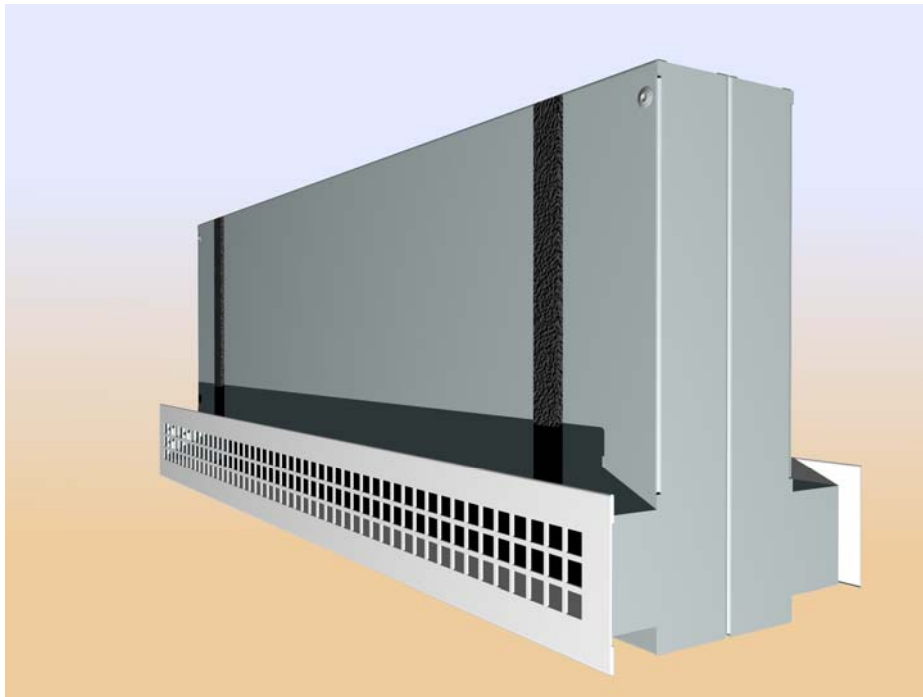


Technical Information

Sound absorbing Transfer Grilles INDUSILENT



- Quick and easy installation
- For flush partition wall installation
- High input attenuation
- Low pressure losses
- Incombustible sound insulation lining



- Features..... 3
- Dimensions / types.....4
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Architecture

- The transfer grille INDUSILENT consists of a plenum box with integrated sound attenuation that is installed flush with the wall. The slot visible from the room is lined with a beautiful Deco-frame (type R) or can be formed alternatively as an open shadow joint (type G). This version TS is specially developed for the installation in system partition walls.

Technology

- Transfer grille with high sound attenuation values, equipped with an acoustically highly effective inner lining. The lining has the building materials class A2 according to DIN 4102 (incombustible).
- A dust protection prevents the transfer grille from soiling during inner construction of the transfer grille. The dust protection is to be removed after terminating dust generating tasks.
- Volume flow rates up to 200 m³/hm at pressure losses < 20 Pa.
- High sound attenuation value R_w.
- Deliverable in lengths up to 1.200 mm.
- Structure-borne noise attenuated version.

Application range

- The energy saving regulations require air-tight building shells and a minimum of ventilation heating demand. To prevent damages to buildings such as mould formation and to supply building users with the required amount of outdoor air, a ventilation system is necessary.
- If the ventilation technology concept provides for free flow-over from one room to the other, then cross-talk silencers are necessary to prevent noise interference. Space is not available for conventional cross-talk silencers so that the transfer grille must assume the sound attenuation function.
- The optimum solution for such systems is offered by INDUSILENT, a compact transfer grille for the partition wall installation with integrated cross-talk silencer.

Installation

- The transfer grille is mounted during the construction of the dry wall between the wall partition pieces.
- After completing dry construction wall and paintwork the dust protection must be removed from the air slots.
- **Type...R** is fitted with a Deco-frame on both sides.

Transfer grille type TR

For installation in a double skin partition wall – made of 12.5 mm board panels – with a free minimum internal measurement of 75 mm (corresponds to 125 mm wall thickness).

Transfer grille made of galvanized sheet steel with highly effective sound proof, abrasion resistant, incombustible interior lining of building materials class A2 according to DIN 4102. Both sides with Deco-frame made of galvanized sheet steel, colour treated in RAL colours as desired (RAL-9010 is standard).

Deco-frames stamped to nominal length, selective with hole pattern Qg 8-10 or Rv 5-6 (see Page 11).

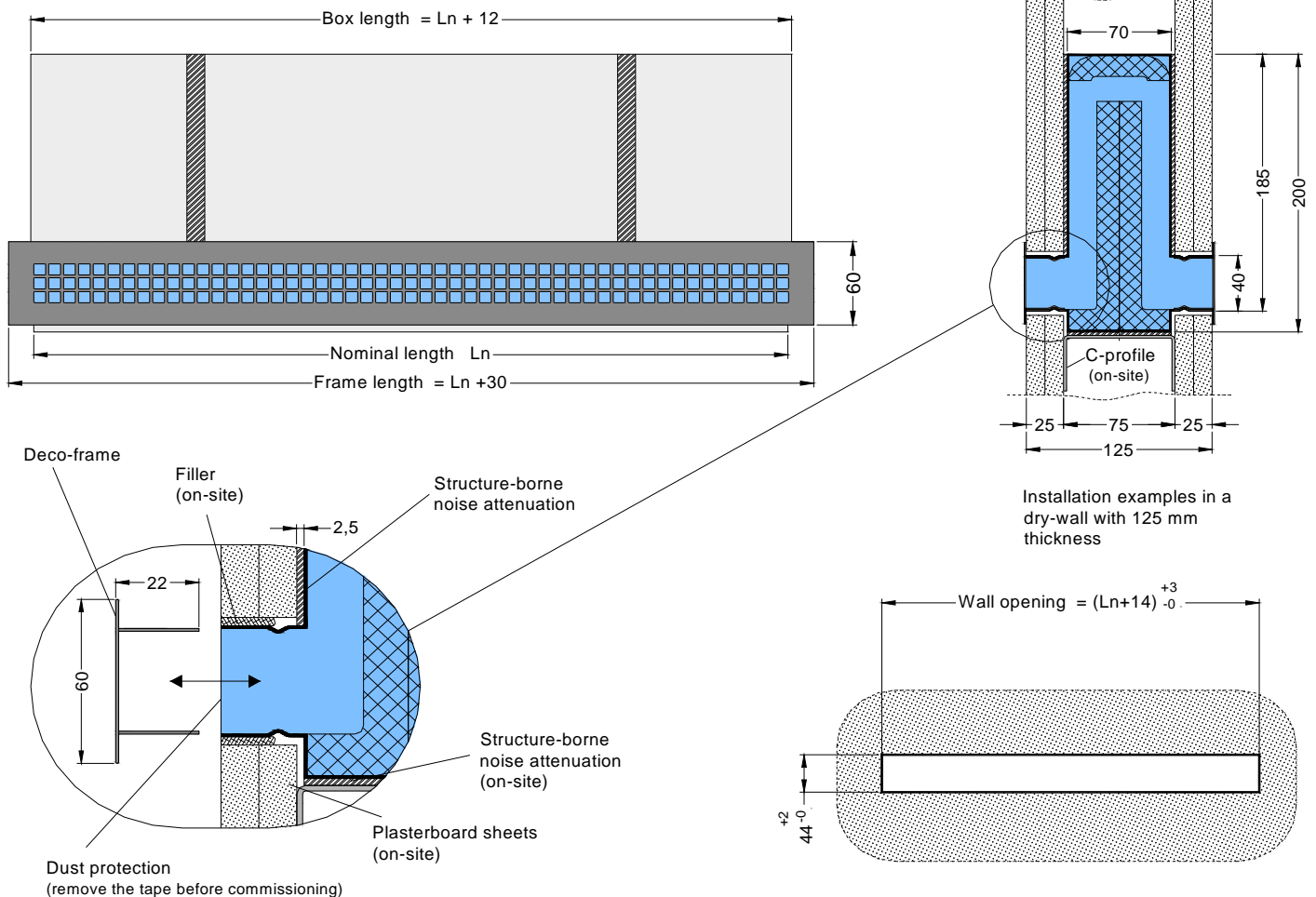
Installation/dismounting of Deco-frame via a spring connector, without additional tools.

Dimensions

Nominal length Ln	500	800	1.000	1.200
Box length [mm]	512	812	1.012	1.212
Frame length [mm]	530	830	1.030	1.230

Note:

- Other dimensions on request.



Note:

- Gaps to be sealed on site to prevent noise bypass.
- We supply products that comply with machine and equipment manufacturing standards where dimensional are in accordance with DIN ISO 2768 Part 1 and 2.

Transfer grille type TG

For installation in a double skin partition wall – made of 12.5 mm board panels – with a free minimum internal measurement of 75 mm (corresponds to 125 mm wall thickness).

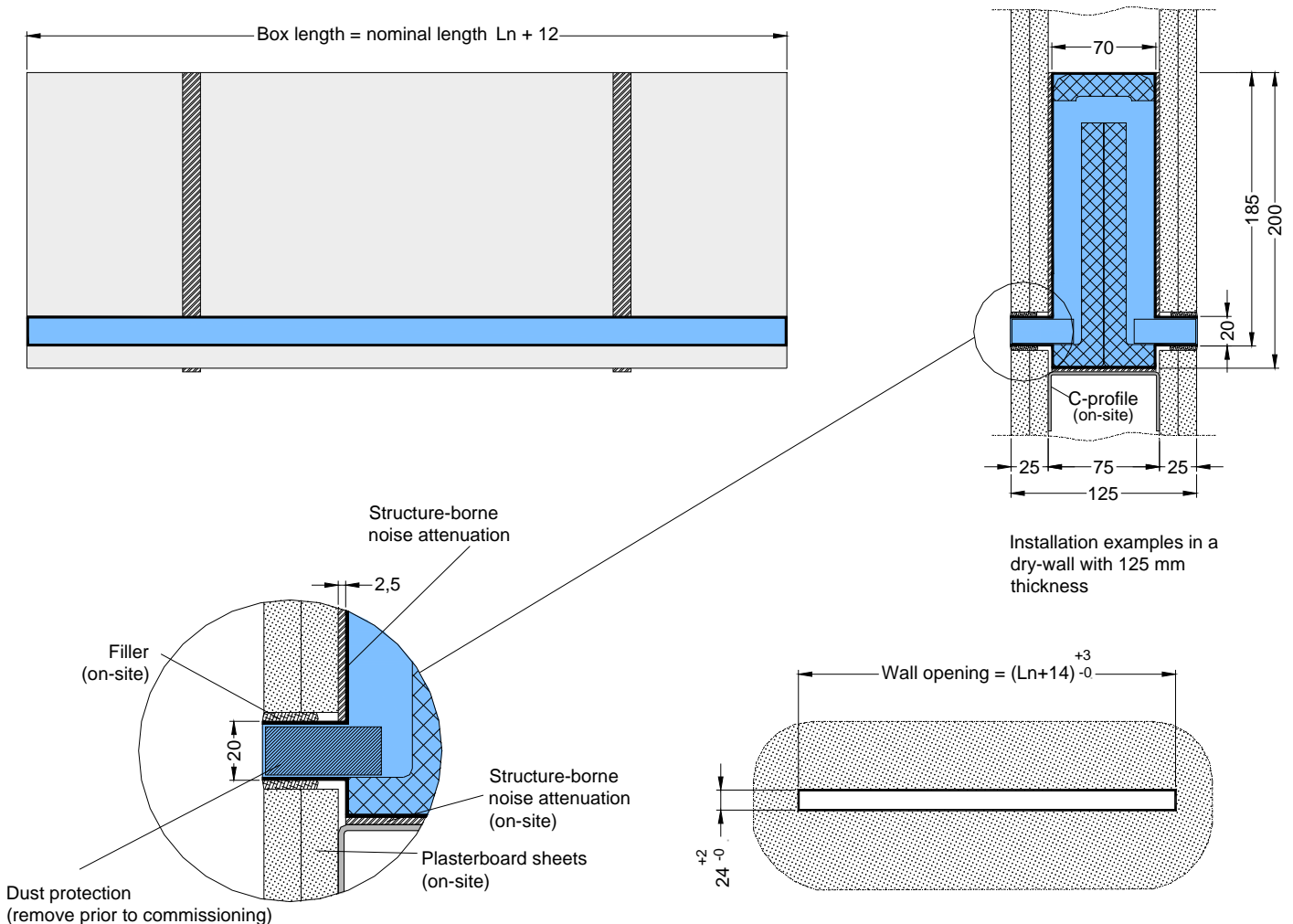
Transfer grille made of galvanized sheet steel with highly effective sound proof, abrasion resistant, incombustible interior lining of building materials class A2 according to DIN 4102 with openings for flush-wall installation.

Dimensions

Nominal length Ln	500	800	1.000	1.200
Box length [mm]	512	812	1.012	1.212

Note:

- Other dimensions on request.



Installation examples in a dry-wall with 125 mm thickness

Note:

- Gaps to be sealed on site to prevent noise bypass.
- We supply products that comply with machine and equipment manufacturing standards where dimensional are in accordance with DIN ISO 2768 Part 1 and 2.

Transfer grille type SR

For installation in a double skin partition wall – made of 12.5 mm plasterboard sheets – with a free minimum internal measurement of 50 mm (corresponds to 100 mm wall thickness).

Transfer grille made of galvanized sheet steel with highly effective sound proof, abrasion resistant, incombustible interior lining of building materials class A2 according to DIN 4102. Both sides with Deco-frame made of galvanized sheet steel, colour treated in RAL colours as desired (RAL-9010 is standard).

Deco-frames stamped to nominal length, selective with hole pattern Qg 8-10 or Rv 5-6 (see Page 11).

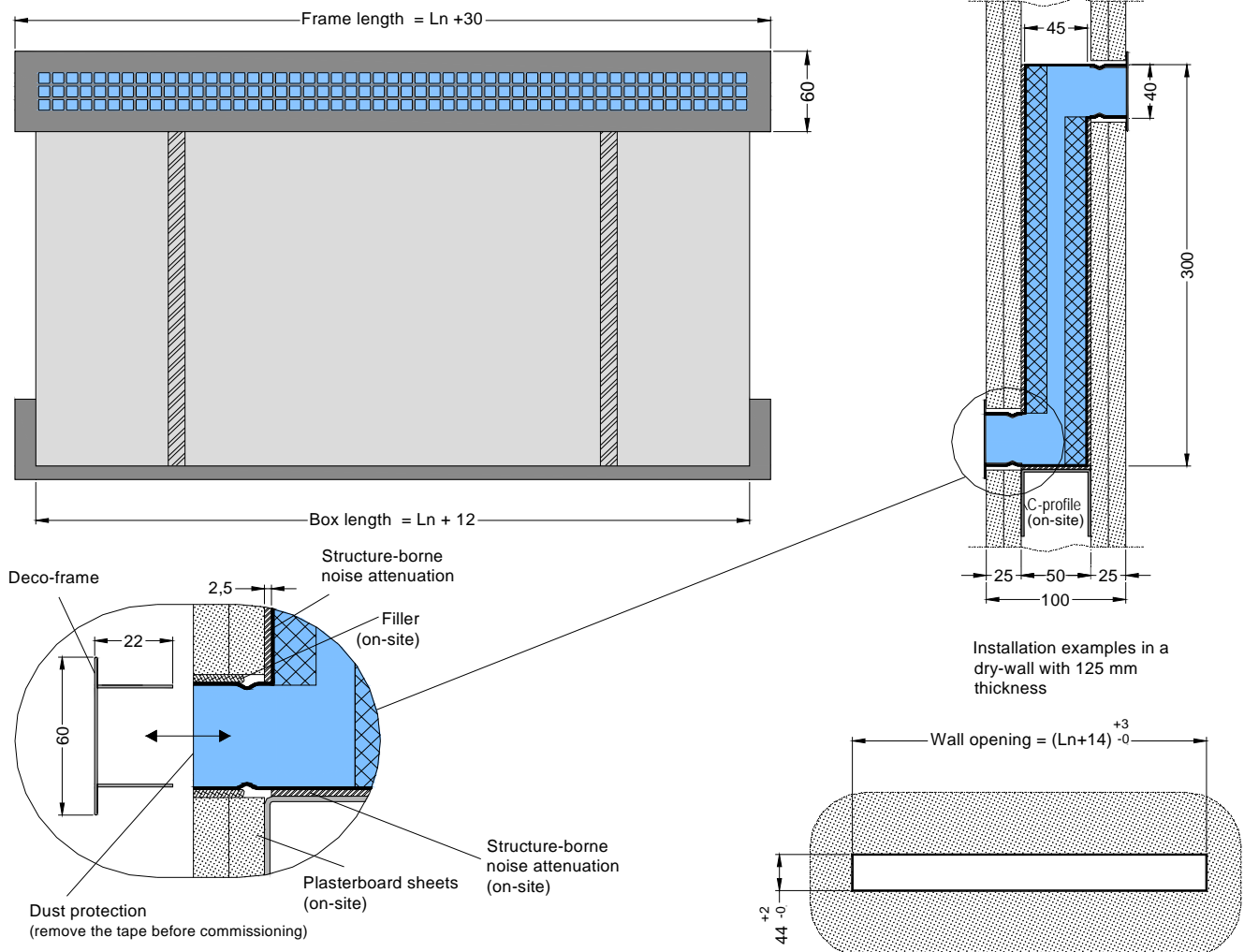
Installation/dismounting of Deco-frame via a spring connector, without additional tools.

Dimensions

Nominal length Ln	500	800	1.000	1.200
Box length [mm]	512	812	1.012	1.212
Frame length [mm]	530	830	1.030	1.230

Note:

- Other dimensions on request.



Note:

- Gaps to be sealed on site to prevent noise bypass.
- We supply products that comply with machine and equipment manufacturing standards where dimensional are in accordance with DIN ISO 2768 Part 1 and 2.

Transfer grille type SG

For installation in a double skin partition wall – made of 12.5 mm plasterboard sheets – with a free minimum internal measurement of 50 mm (corresponds to 100 mm wall thickness).

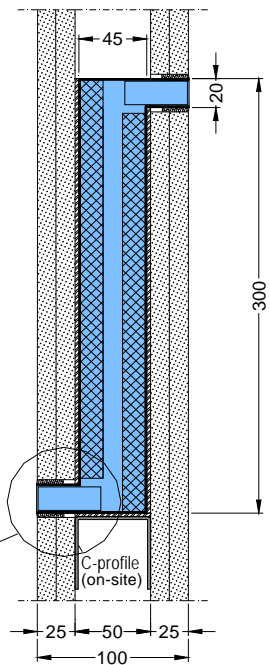
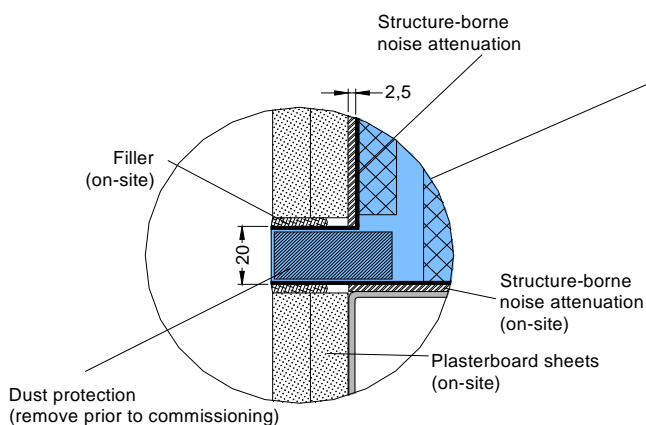
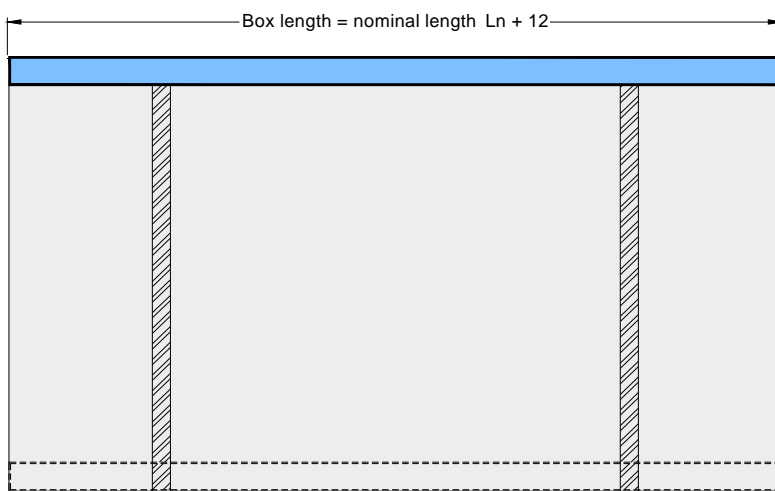
Transfer grille made of galvanized sheet steel with highly effective sound proof, abrasion resistant, incombustible interior lining of building materials class A2 according to DIN 4102 with openings for flush-wall installation.

Dimensions

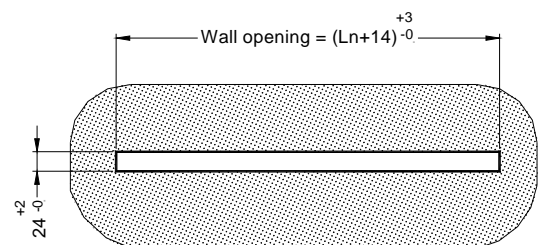
Nominal length Ln	500	800	1.000	1.200
Box length [mm]	512	812	1.012	1.212

Note:

- Other dimensions on request.



Installation examples in a dry-wall with 125 mm thickness



Note:

- Gaps to be sealed on site to prevent noise bypass.
- We supply products that comply with machine and equipment manufacturing standards where dimensional are in accordance with DIN ISO 2768 Part 1 and 2.

Transfer grille type TS

In narrow type for the installation in system partition walls and other wall constructions.

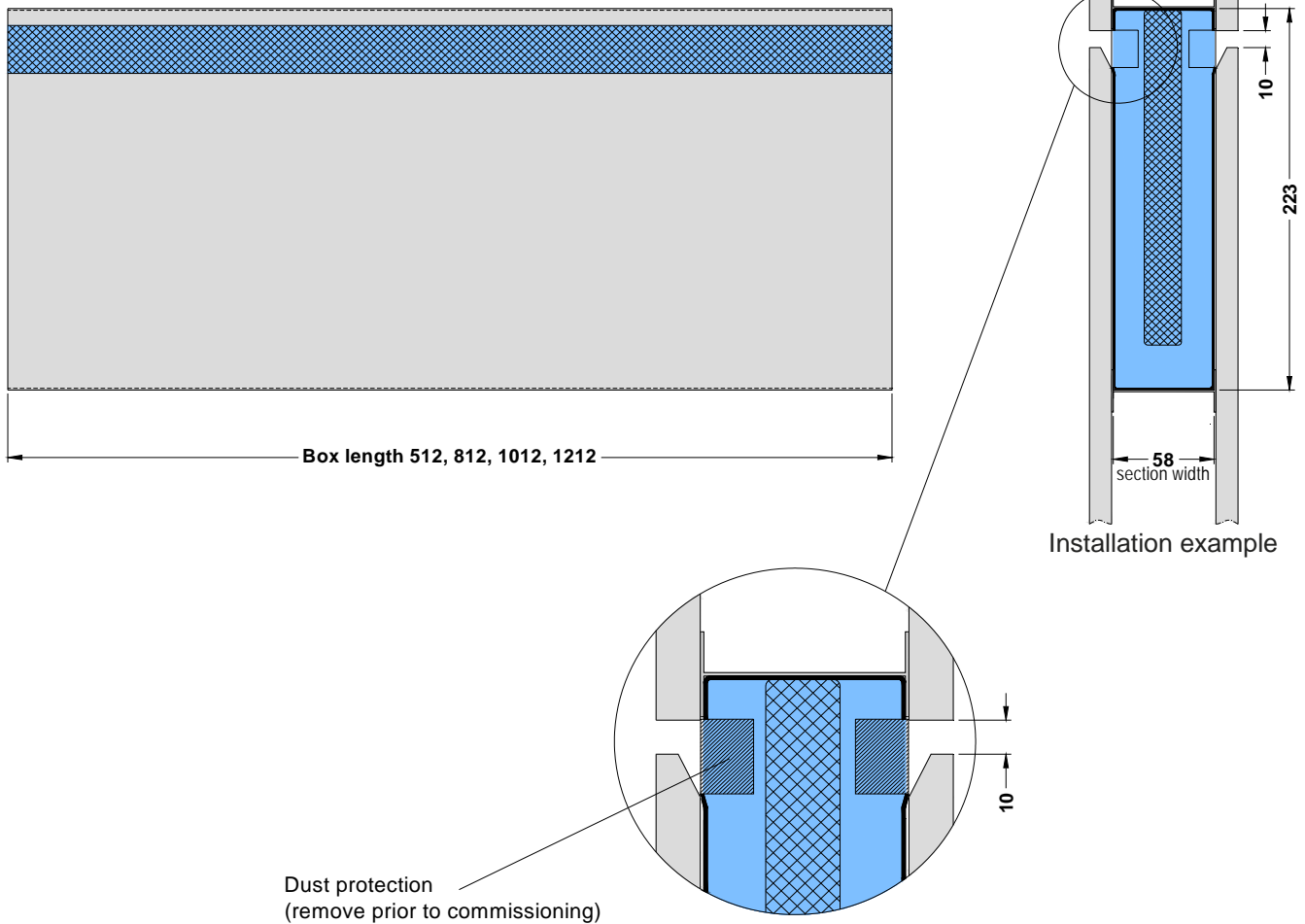
Transfer grille made of galvanized sheet steel with highly effective sound proof, abrasion resistant, incombustible interior lining of building materials class A2 according to DIN 4102.

Dimensions

Nominal length L _n	500	800	1.000	1.200
Box length [mm]	512	812	1.012	1.212

Note:

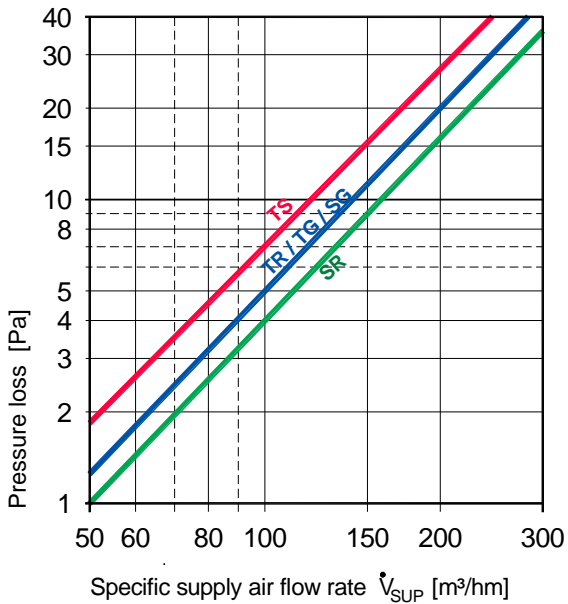
- Other dimensions on request.



Note:

- Gaps to be sealed on site to prevent noise bypass.
- We supply products that comply with machine and equipment manufacturing standards where dimensional are in accordance with DIN ISO 2768 Part 1 and 2.

Pressure loss characteristic curves



Proven sound attenuation value R_w according to DIN EN ISO 10140-3

Type TR				
Nominal length	500	800	1000	1200
Reference plan [m ²]	0,102	0,162	0,202	0,242
R_w^* [dB]	18	21	22	23

Type TG				
Nominal length	500	800	1000	1200
Reference plan [m ²]	0,102	0,162	0,202	0,242
R_w^* [dB]	20	22	23	24

Type SR				
Nominal length	500	800	1000	1200
Reference plan [m ²]	0,153	0,243	0,303	0,363
R_w^* [dB]	18	19	20	21

Type SG				
Nominal length	500	800	1000	1200
Reference plan [m ²]	0,153	0,243	0,303	0,363
R_w^* [dB]	24	26	28	29

Type TS				
Nominal length	500	800	1000	1200
Reference plan [m ²]	0,114	0,181	0,225	0,270
R_w^* [dB]	23	27	29	30

* Depending on fabrication and measuring technology deviations of up to ± 2 dB are possible.

Example for calculating the resultant sound attenuation value $R_{W\ res}$ for jointed components

Dimensions

Room width	5,4 m
Room height	3,0 m
Total wall surface area (incl. door) A_{tot}	16,2 m ²
Area of door A_{Door}	2,0 m ²

Selected data

$R_{W\ Wall}$	=	55,0 dB	(typical range 40 - 58 dB)
$R_{W\ Door}$	=	35,0 dB	(typical range 30 - 40 dB)

Formula for calculating the resultant sound attenuation value

$$R_{W\ res} = -10 \cdot \log [1/A_{ges} \cdot (A_1 \cdot 10^{-R_{w1}/10} + A_2 \cdot 10^{-R_{w2}/10} + A_3 \cdot 10^{-R_{w3}/10})]$$

Calculation of jointed wall without INDUSILENT

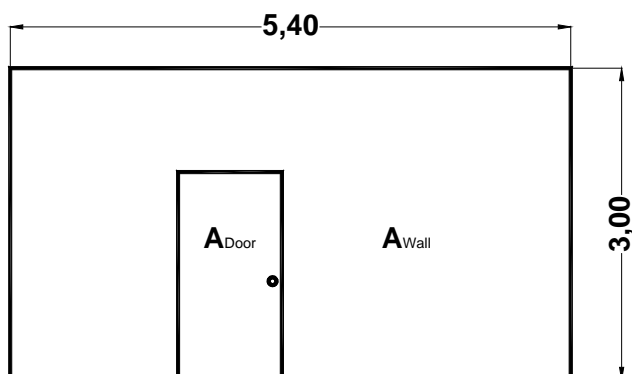
	Without INDUSILENT	
	R_W [dB]	A [m ²]
Wall	55,0	14,200
Door	35,0	2,000
$R_{W\ tot}$	43,8	

Calculation of jointed wall with INDUSILENT

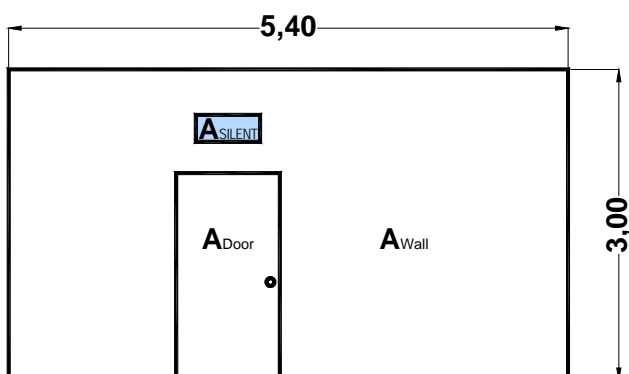
	Type TR (Ln = 500)		Type TG (Ln = 500)		Type TS (Ln = 500)	
	R_W [dB]	A [m ²]	R_W [dB]	A [m ²]	R_W [dB]	A [m ²]
Wall	55,0	14,098	55,0	14,098	55,0	14,086
Door	35,0	2,000	35,0	2,000	35,0	2,00
INDUSILENT	18,0	0,102	20,0	0,102	23,0	0,114
$R_{W\ res}$	38,5		39,8		41,1	

	Type SR (Ln = 500)		Type SG (Ln = 500)	
	R_W [dB]	A [m ²]	R_W [dB]	A [m ²]
Wall	55,0	14,047	55,0	14,047
Door	35,0	2,000	35,0	2,000
INDUSILENT	18,0	0,153	24,0	0,153
$R_{W\ res}$	37,2		41,0	

Wall without INDUSILENT

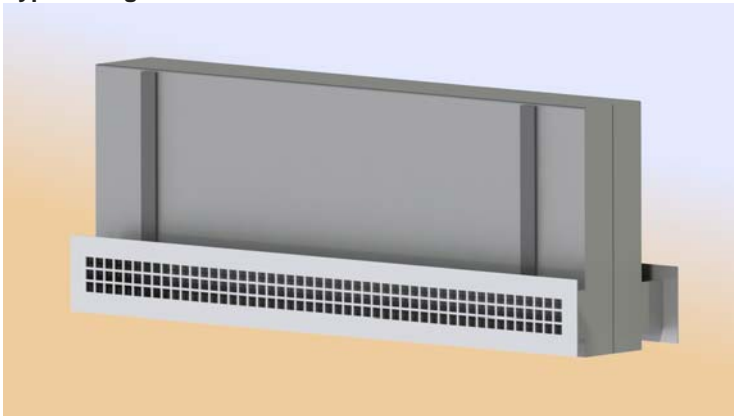


Wall with INDUSILENT

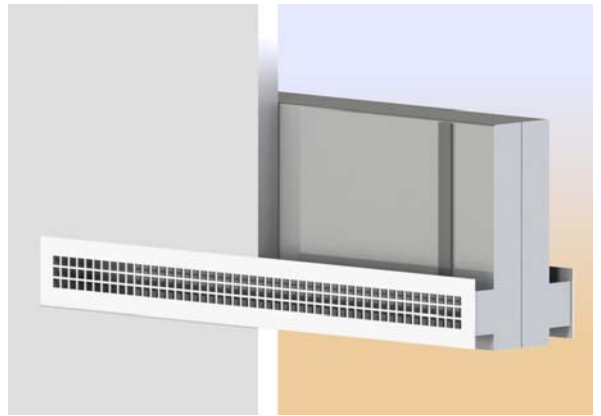


Overview of types - INDUSILENT with frame

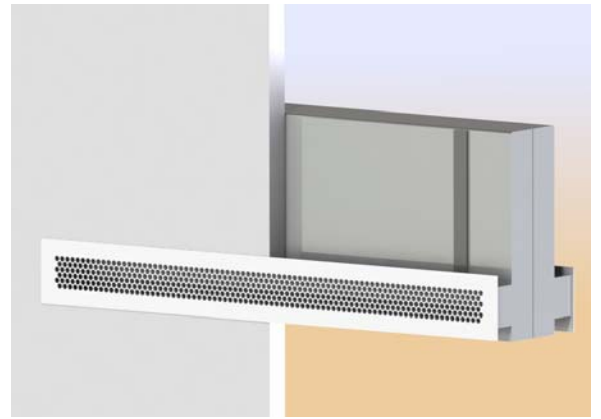
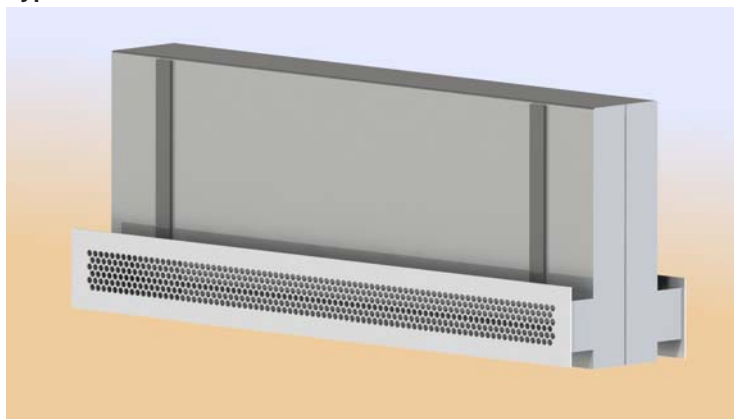
Type TR Qg 8-10



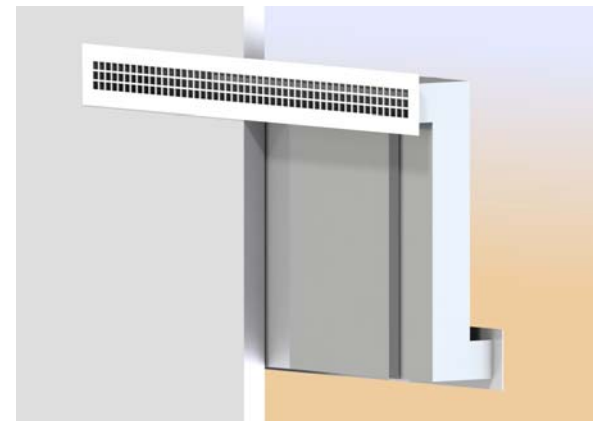
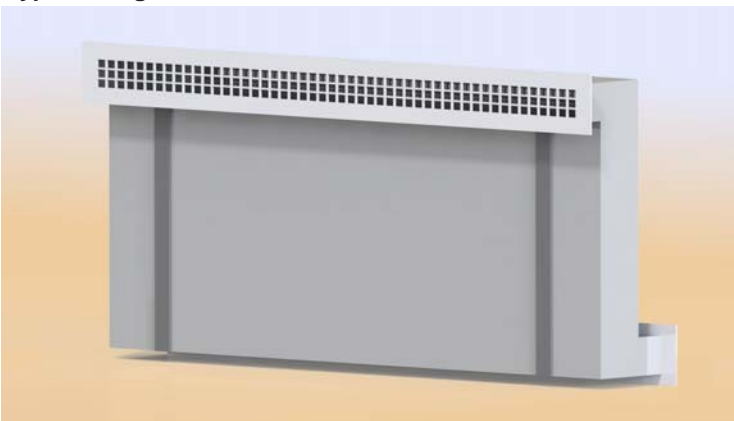
Wall installation



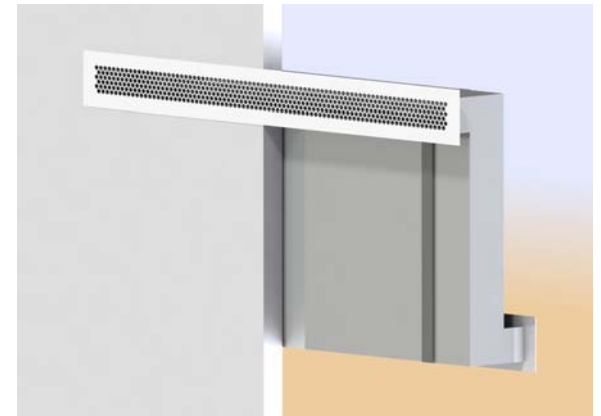
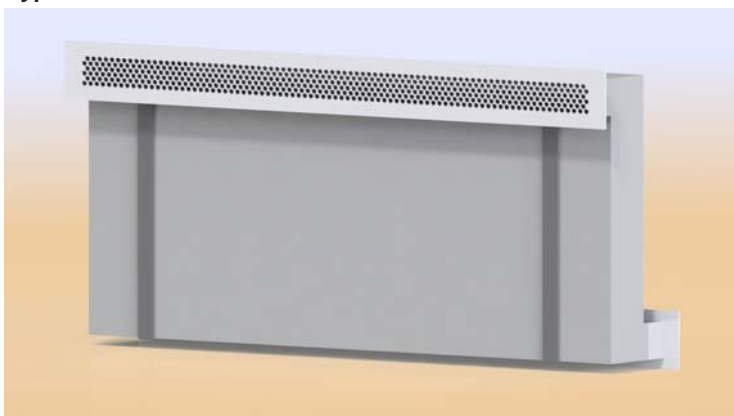
Type TR Rv 5-6



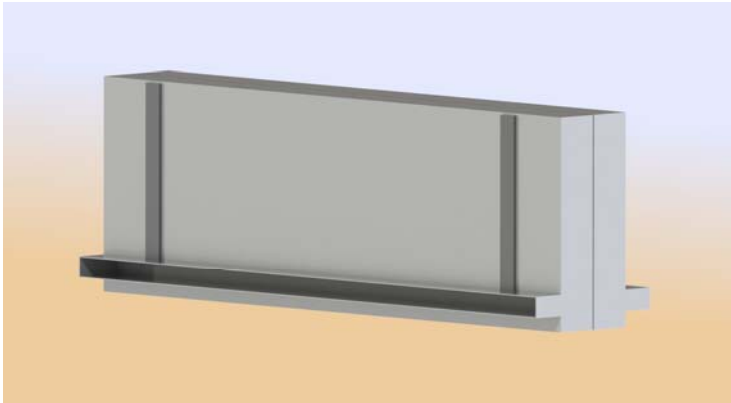
Type SR Qg 8-10



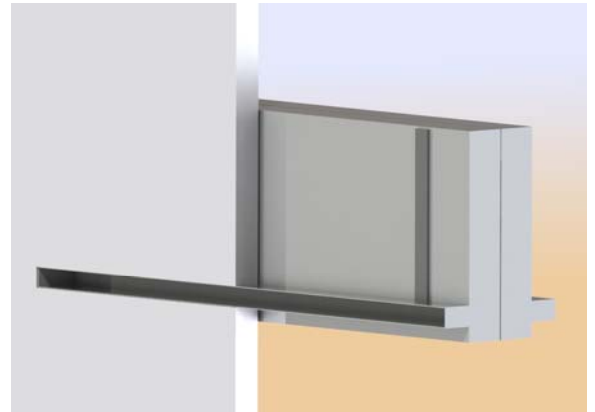
Type SR Rv 5-6



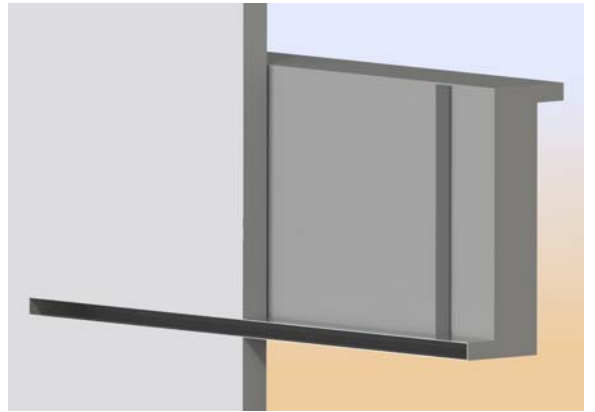
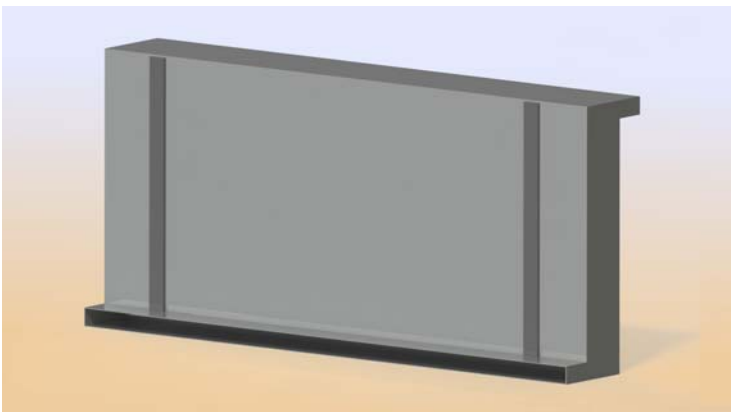
Type TG



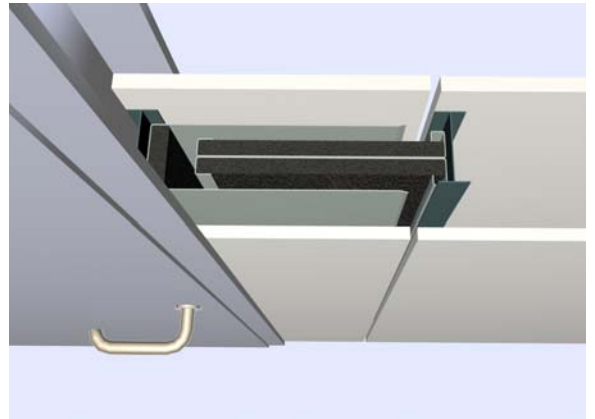
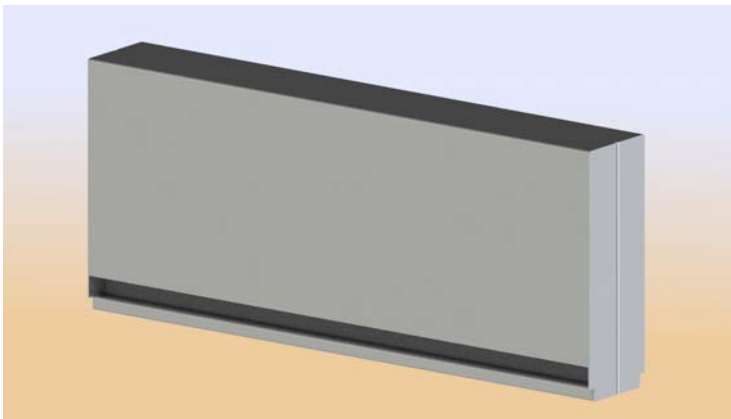
Wall installation



Type SG



Type TS



Sound absorbing Transfer Grilles INDUSILENT

for surface flush installation in wall constructions with fitting depths of 100 and/or 125 mm. Low pressure loss and high sound attenuation value. Suitable for volume flow rates of up to 200 m³/hm.

Air diffuser comprising:

- Transfer grille made of galvanized sheet steel with highly effective sound proof, abrasion resistant inner lining of incombustible building materials class A2 according to DIN 4102.
- Deco-frame made of galvanized sheet steel with round or square hole. Surface is painted in RAL 9010. Mounting by clipping into the overflow element (only for type TR, SR).
- Dust protection by preventing soiling during the design phase according to VDI 6022.

Type:

TR TG SR SG

Nominal length:

500 800 1000 1200

Hole pattern of Deco-frame (only for type TR, SR)

- Square hole Qg 8-10
 Round hole Rv 5-6

Manufacturer: Maschinenfabrik Gg. Kiefer GmbH

Series: Sound absorbing Transfer Grilles

Type: INDUSILENT

Sound absorbing Transfer Grilles INDUSILENT TS

in narrow type for installation in system partition walls and constructions available with small fitting depth. Low pressure loss and high level of sound attenuation. Suitable for volume flow rates of up to 200 m³/hm.

Air diffuser comprising:

- Transfer grille made of galvanized sheet steel with highly effective sound proof, abrasion resistant inner lining of incombustible building materials class A2 according to DIN 4102.
- Dust protection by preventing soiling during the design phase according to VDI 6022.

Type:

TS

Nominal length:

500 800 1000 1200

Manufacturer: Maschinenfabrik Gg. Kiefer GmbH

Series: Sound absorbing Transfer Grilles

Type: INDUSILENT TS

Product Range

Components:

Linear, wall, ceiling and air outlet diffusers, chilled ceiling panels, recirculation coolers, cross-flow units, concrete core cooling with air. Axial and radial ventilators, hot-gas ventilators, plastic ventilators.

Systems:

Air conditioning plants of all kinds for comfort (office, administration, shopping centres, hospitals, libraries, museums, etc.) and industrial applications (machine construction, high-tech, textile, plastics, chemicals, automotive, soft drinks, food industry, etc.).

Services

Consulting and planning:

We provide advice concerning all aspects of our systems and create system analyses and cost estimates based on cooling load / pipe network / energy cost / efficiency calculations. We also develop proposals concerning suggested layouts for air distribution, lighting and ceiling systems; and compile lighting-related data using the latest software tools, as well as developing and implementing control-technology related concepts in our own MSR division.

We are furthermore able to draw on a wealth of experience from previous projects when it comes to designing innovative products and new projects.

Services

Laboratory:

Certificates, 1:1 room airflow laboratory analyses; acoustic and aerodynamic analyses of air-conditioning modules. Development of innovative air conditioning components. Caloric performance measurements of air and water-related components on test stands. On-site comfort measurements to assess thermal comfort and indoor air quality.

Maintenance and servicing

All kinds of air-conditioning and climate control systems as part of maintenance and service contracts.