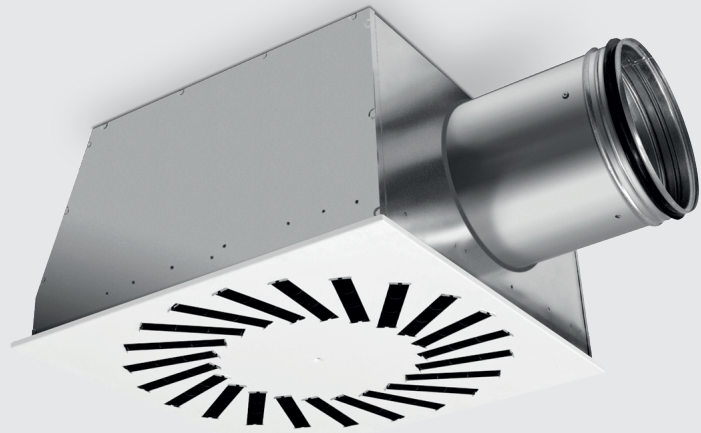


Supply air swirl diffuser
with adjustable deflectors

PRNX



The TLS connection box is an optional accessory for PRNX.

Description

The PRNX is a rectangular supply air swirl diffuser with integrated black plastic air deflectors, which can be manually and individually adjusted depending on the specific demand. By rotating the deflectors (from 0 to approx. 180°), the air direction can be adjusted from horizontal to vertical, without changing the overall pressure drop in the diffuser, making sure the balance remains the same in the system. In case of extract air, the PRNX diffuser can be ordered without the air deflectors as well.

Recommended max. Δt : -10°C.

For PRNX sizes with a smaller frame dimension of 595x595 mm, we recommend using the standard powder coated adapter (type SI), with an external dimension that is the same as that of the standard raster ceiling plate. Thus making it easy for the diffuser to be integrated into a standard 600x600 mm suspended raster ceiling..

Area of use

The diffuser is suitable for the ventilation of comfort rooms, offices, schools, department stores, hospitals, etc.

Serial sizes

PRNX outside dimensions: 400, 500, 595 mm
SI dimensions of connection: 400, 500 mm
(the outside dimension is 595 or 620 mm)

See the sizes of TLS connection box on page 6.

Airflow range

70 - 500 m³/h, see the diagrams below for further information.

Main features

- Adjustable air deflectors
- Flexible air distribution, air can be adjusted in the range of nearly 180°
- Aesthetic appearance
- Draught-free, silent operation - Excellent ventilation efficiency - Easily accessible front plate

Material

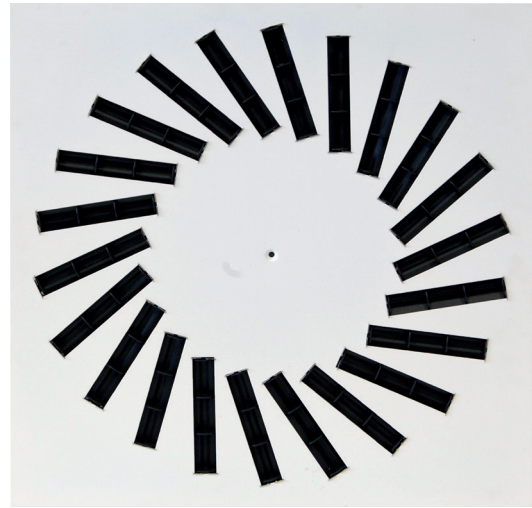
The front panel is made of galvanized steel sheet, powder coated in RAL 9003 white colour, with black plastic air deflector nozzles.

Optional accessories

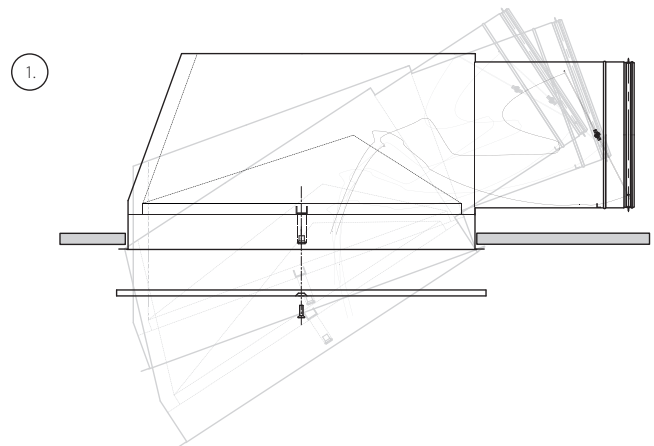
The TLS is a commissioning plenum box for ceiling diffusers with rectangular front plate connection design, such as PRNX. The TLS box is equipped with insulation, an air deflector plate and a commissioning damper. TLS is made of galvanized sheet steel, sound insulation and an air-tight rubber sealing on the connection.

Mounting

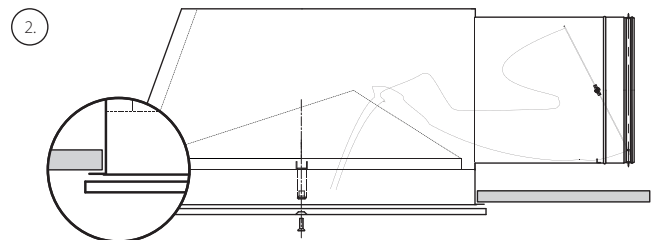
The PRNX front panel is mounted to the TLS connection box with a simple screw positioned in the center of the diffuser. After positioning the TLS box and suspending it to the ceiling, the PRNX diffuser should be securely fastened with a centrally placed (color painted) screw to the support bracket inside the.



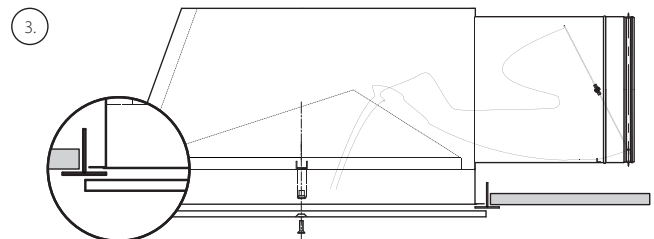
TLS connection box. The shape of the TLS box is designed to be easily tiltable into the ceiling. (Figure 1.)



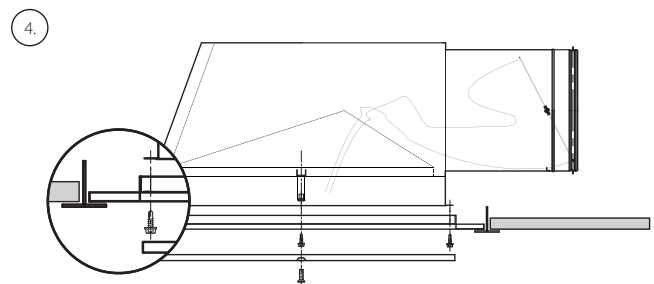
Mounting in case of monolithic ceiling. (Figure 2.)



Installation to case of a cassette (raster) suspended ceilings. (Figure 3.)



Installation to case of a cassette (raster) suspended ceilings, with SI adapter element. (Figure 4.)



Sound data

T.1. Correction K_o dB

| PRNX | TLS | Medium frequency (Hz) | | | | | | | |
|------|---------|-----------------------|-----|-----|-----|------|------|------|------|
| | | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 |
| 400 | 125-400 | +2 | -0 | +6 | +1 | -1 | -7 | -21 | -33 |
| 400 | 160-400 | +7 | +4 | +8 | +2 | -2 | -11 | -22 | -35 |
| 500 | 200-500 | +6 | +6 | +7 | +2 | -2 | -10 | -23 | -35 |
| 595 | 200-595 | +6 | +6 | +6 | +1 | -1 | -8 | -19 | -32 |
| 595 | 250-595 | +7 | +7 | +6 | +2 | -1 | -7 | -20 | -37 |
| 595 | 315-595 | +10 | +8 | +6 | +2 | -1 | -7 | -20 | -35 |

Tolerance ± 3 dB

T.2. Sound attenuation dB

| PRNX | TLS | Medium frequency (Hz) | | | | | | | |
|------|---------|-----------------------|-----|-----|-----|------|------|------|------|
| | | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 |
| 400 | 125-400 | +20 | +9 | +6 | +9 | +11 | +8 | +12 | +13 |
| 400 | 160-400 | +20 | +7 | +6 | +10 | +13 | +11 | +12 | +14 |
| 500 | 200-500 | +19 | +6 | +5 | +9 | +11 | +10 | +12 | +14 |
| 595 | 200-595 | +19 | +4 | +5 | +9 | +10 | +10 | +11 | +13 |
| 595 | 250-595 | +16 | +5 | +6 | +10 | +10 | +9 | +11 | +13 |
| 595 | 315-595 | +17 | +6 | +7 | +10 | +11 | +11 | +13 | +15 |

Tolerance ± 3 dB

The sound level is applicable at an equivalent sound absorption area of 10 m².

Sound power level: L_w [dB]

Sound level: L_A [dB(A)]

See diagram 1-6.

Correction factor: K_o [dB]

Correction factor K_o [dB] from table 1.

$$L_w = L_{PA} + K_o$$

T.3. Sound pressure level L_{PA}

| Room volume | Room type | Correction |
|--------------------|------------|------------|
| 25 m ³ | hard | +2 dB |
| 25 m ³ | attenuated | -2 dB |
| 150 m ³ | hard | -3 dB |
| 150 m ³ | normal | -5 dB |
| 150 m ³ | attenuated | -7 dB |

The sound pressure level L_{PA} dB(A) applies to an equivalent surface of 10 m², which corresponds to an attenuation of 4 dB in a 25 m³ room with normal attenuation.

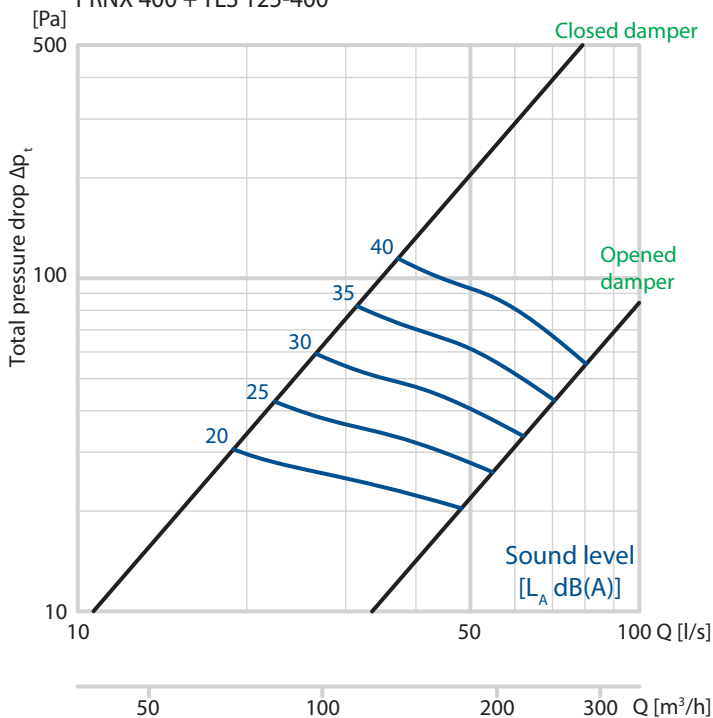
Table 3: A few examples for sound corrections in different type of rooms.

Diagrams

The PRNX diffusers data are valid only with the integrated TLS connection box.

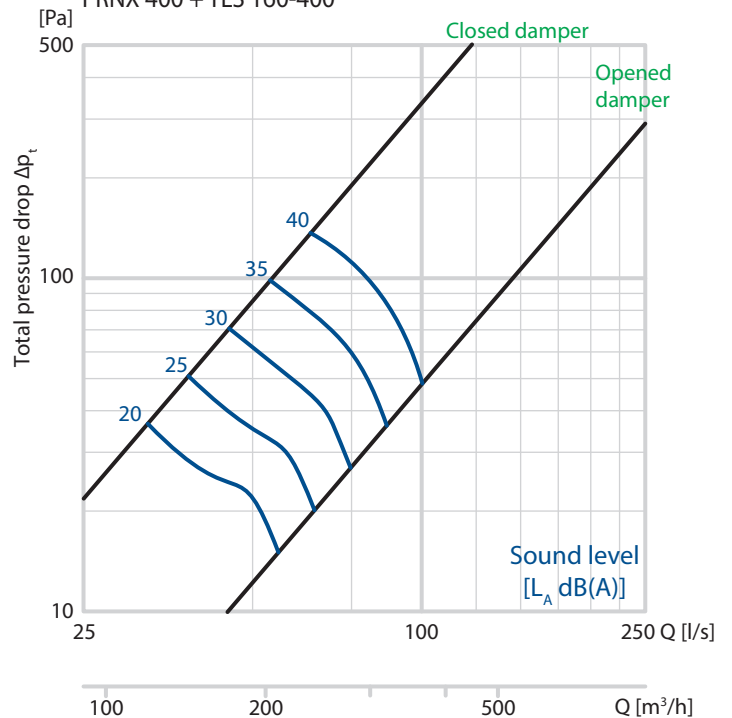
D.1.

PRNX 400 + TLS 125-400



D.2.

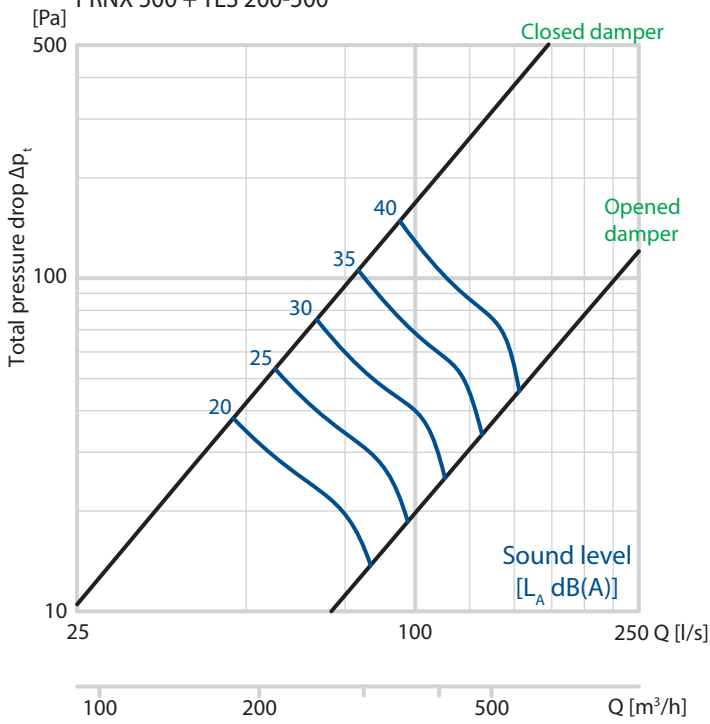
PRNX 400 + TLS 160-400



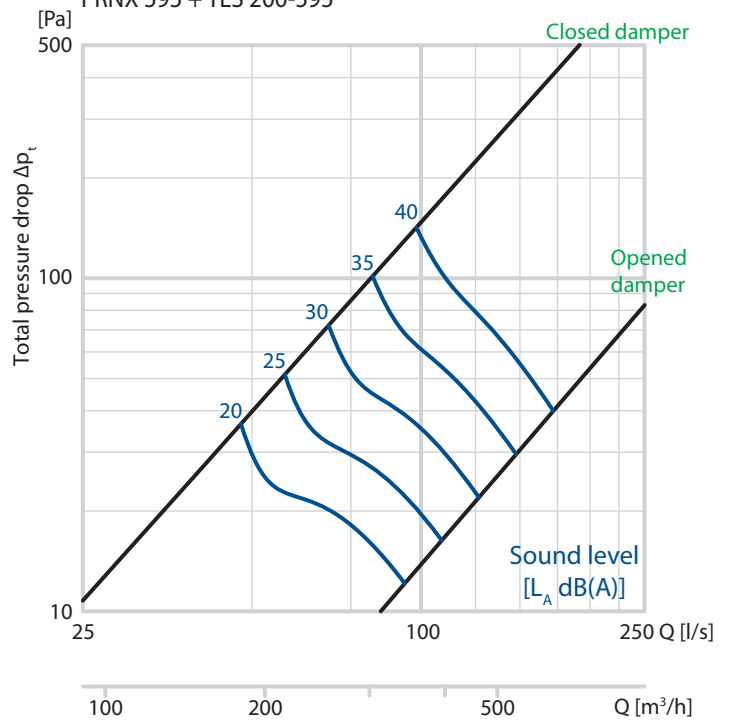
Diagrams

The PRNX diffusers data are valid only with the integrated TLS connection box.

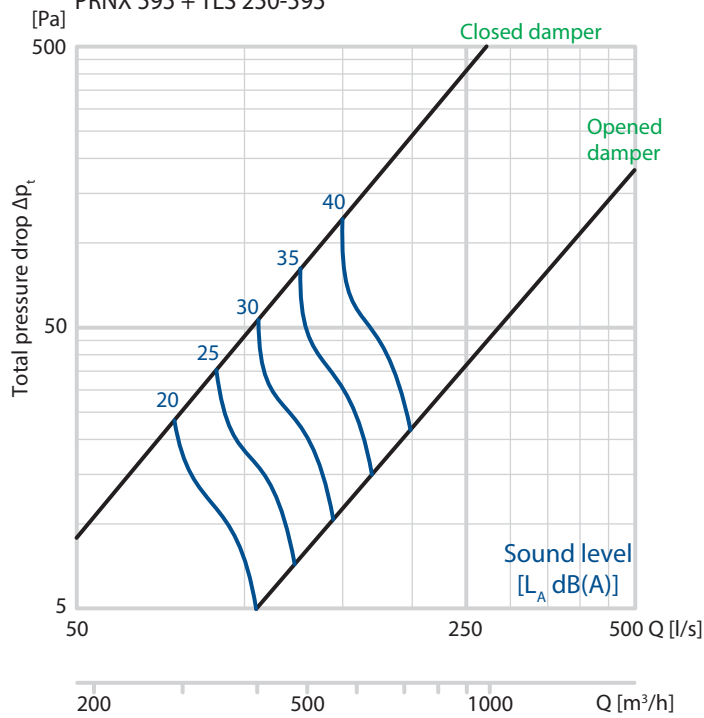
D.3.
PRNX 500 + TLS 200-500



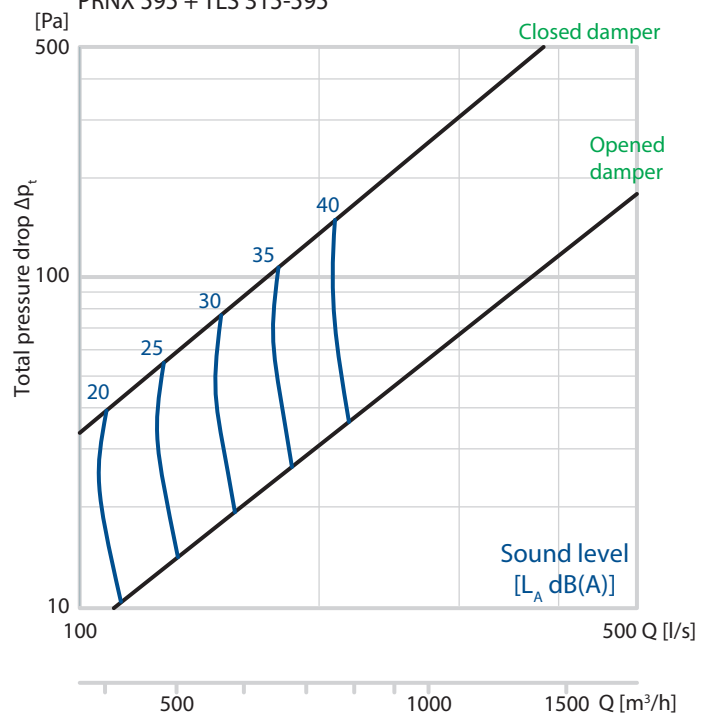
D.4.
PRNX 595 + TLS 200-595



D.5.
PRNX 595 + TLS 250-595



D.6.
PRNX 595 + TLS 315-595



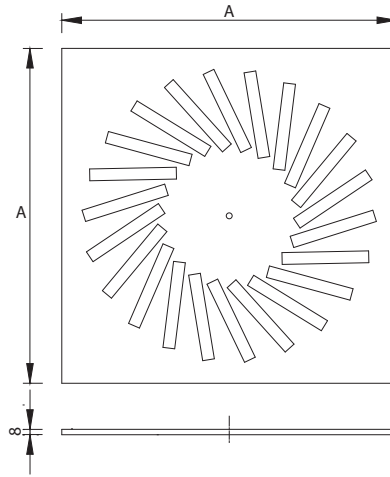
Dimensions

T.4.

PRNX supply air swirl diffuser with adjustable deflectors

| Type | AxA | Weight/kg |
|------|---------|-----------|
| 400 | 400x400 | 1,1 |
| 500 | 500x500 | 1,7 |
| 595 | 595x595 | 2,3 |

The indicated sizes in mm.

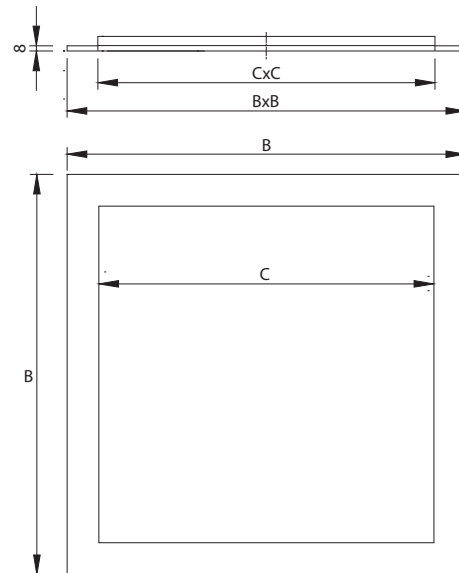


T.5.

SI adapter

| Type | BxB | CxC | Weight/kg |
|------|---------|---------|-----------|
| 400 | 595x595 | 403x403 | 1,9 |
| 500 | 595x595 | 503x503 | 1,4 |

The indicated sizes in mm.



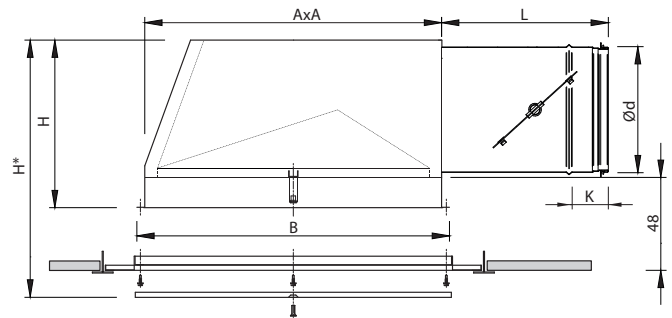
T.6.

TLS plenum box

| Size | AxA | B | H | H* | K | L | Ød | Weight [kg] |
|---------|-----|-----|-----|-----|----|-----|-----|-------------|
| 125-400 | 371 | 393 | 191 | 198 | 36 | 153 | 124 | 3,26 |
| 160-400 | 371 | 393 | 226 | 233 | 36 | 183 | 159 | 3,64 |
| 200-500 | 471 | 493 | 266 | 273 | 36 | 213 | 199 | 5,43 |
| 200-595 | 571 | 588 | 266 | 273 | 36 | 214 | 199 | 6,92 |
| 250-595 | 571 | 588 | 316 | 323 | 56 | 283 | 249 | 7,84 |
| 315-595 | 571 | 588 | 381 | 388 | 56 | 343 | 314 | 9,02 |

The indicated sizes in mm.

* minimum installation height



Specification

PRNX supply air swirl diffuser with adjustable deflectors

| | | | | |
|--------------------------------|-------------------|------|-----|------|
| Ordering code: | PRNX | -XXX | -SI | -TLS |
| Product acronym: | PRNX | | | |
| Size: | 400 500 595 | | | |
| SI adapter (optional)* | | | | |
| TLS connection box (optional)* | | | | |
| Example: PRNX 500 | | | | |

*See specifications below.

SI adapter

| | | |
|------------------|------------|------|
| Ordering code: | SI | -XXX |
| Product acronym: | SI | |
| SI adapter: | 400 500 | |
| Example: SI 500 | | |

TLS connection box

| | | |
|----------------------|--|----------|
| Ordering code: | TLS | -XXX-XXX |
| Product acronym: | TLS | |
| Connection box size: | 125-400 160-400 200-500 200-595 250-595 315-595 | |
| Example: TLS-200-500 | | |