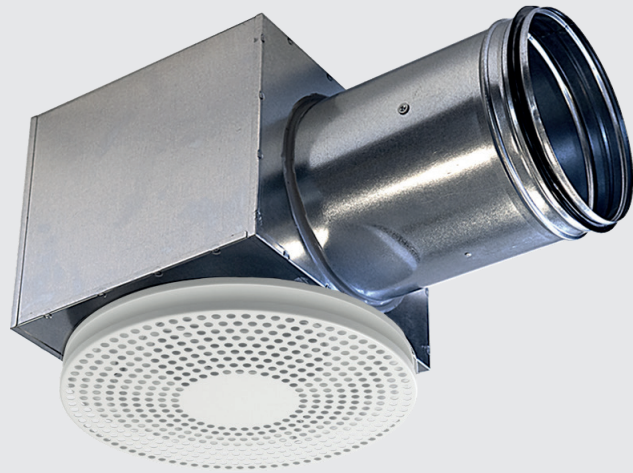


Circular ceiling diffuser with perforated front plate

NAPT



TLS plenum box is an optional accessory for NAPT diffusers, has to be ordered separately.

Description

NAPT circular ceiling diffuser consists of a perforated front plate and a back part with a circular air connection. The diffuser can be connected directly to an air duct system, or to a TLR plenum box which is equipped with a damper and insulation.

NAPT can be used for supply and also exhaust. Recommended max. Δt : 10 °C.

Application

NAPT circular ceiling diffuser is mostly used in offices, malls, stores and for comfort ventilation.

Standard sizes

Ø100, 125, 160, 200, 250, 315 and 400 mm.*

* connection sizes

Airflow range

Supply with plenum box:

40 - 1800 m³/h (11-500 l/s)

Supply without plenum box:

40 - 1800 m³/h (11-500 l/s)

Exhaust with plenum box:

60 - 1650 m³/h (16-460 l/s)

Exhaust without plenum box:

40 - 1800 m³/h (11-500 l/s), further information at the diagrams.

Material & finish

NAPT front diffuser plate and the back part is made of steel sheet. The unit is powder coated in standard RAL 9003 white colour, with a rubber gasket on the air connection.

Main features

- Circular ceiling diffuser
- Perforated front plate
- Can be used for supply and also exhaust
- Draught-free operation at a low noise level

Optional accessories

TLR plenum box:

NAPT diffuser can be connected directly to an air duct system, or to a TLR plenum box which is equipped with a damper and insulation. The plenum is made of galvanized steel sheet, sound-reducing glass-wool laminated glass fibre insulation.

Mounting

NAPT circular diffusers can be connected to the TRL plenum box, or directly to an air duct connection. The diffuser front plate can easily be removed by carefully pulling it down enabling a quick installation and cleaning.

T.1. Installation into the system

After elbow	After Tee
Can be installed directly	L ≥ 3 x Ød

Noise data

T.2.

NAPT supply diffuser, Correction K_o dB

Size	Medium frequency(Hz)							
	63	125	250	500	1000	2000	4000	8000
100	+4	+4	+2	+1	0	-4	-19	-31
125	+2	+1	+2	+1	0	-5	-24	-26
160	+7	-2	+1	0	0	-3	-14	-28
200	+3	+4	+2	0	0	-4	-16	-28
250	+13	+4	+3	+1	+1	-6	-21	-29
315	+11	+3	+2	0	+1	-5	-20	-31
400	+22	+8	+4	+3	-4	-7	-21	-33

Tolerance ± 3 dB

T.3.

NAPT exhaust diffuser, Correction K_o dB

Size	Medium frequency (Hz)							
	63	125	250	500	1000	2000	4000	8000
100	+9	+3	+5	+4	-1	-9	-16	-31
125	+3	+3	+6	+1	-2	-4	-10	-26
160	+5	+7	+5	0	-2	-2	-7	-26
200	+3	+6	+5	-1	-2	-3	-11	-24
250	+4	-2	0	+3	-2	-4	-14	-29
315	+7	+4	+4	-1	0	-2	-14	-31
400	+4	+5	+6	-1	-2	-3	-13	-30

Tolerance ± 3 dB

T.4.

NAPT supply diffuser with plenum box, Correction K_o dB

Size	Medium frequency (Hz)							
	63	125	250	500	1000	2000	4000	8000
100	+5	-3	0	-2	+2	-4	-17	-33
125	+8	-1	+2	-1	+1	-5	-19	-32
160	+8	-3	-1	0	+1	-4	-19	-33
200	+10	0	0	+1	+1	-7	-20	-32
250	+6	0	0	0	+1	-5	-18	-33
315	+3	+5	+1	+1	+1	-5	-18	-32
400	+7	+6	+1	+2	0	-6	-18	-32

Tolerance ± 3 dB

T.5

NAPT exhaust diffuser with plenum box, Correction K_o dB

Size	Medium frequency (Hz)							
	63	125	250	500	1000	2000	4000	8000
100	+2	+4	+7	-1	0	-7	-15	-27
125	-1	+5	+6	-1	0	-7	-18	-33
160	+5	+4	+4	0	+1	-6	-17	-29
200	0	+4	+2	-1	+1	-5	-13	-25
250	0	+4	+1	0	+1	-7	-15	-27
315	+3	+1	0	-1	+2	-6	-14	-27
400	+5	+8	+1	+1	+1	-7	-19	-33

Tolerance ± 3 dB

T.6.

NAPT diffuser, Self-noise attenuation K_o dB

Size	Medium frequency (Hz)							
	63	125	250	500	1000	2000	4000	8000
100	17	16	13	8	3	4	7	7
125	20	14	12	7	2	3	8	7
160	18	12	9	5	2	5	6	6
200	20	13	8	3	2	6	6	7
250	17	11	6	2	2	6	6	6
315	16	10	5	2	3	5	5	6
400	14	9	5	3	3	5	5	6

Tolerance ± 3 dB

T.7.

NAPT diffuser with plenum box, Self-noise attenuation K_o dB

Size	Medium frequency (Hz)							
	63	125	250	500	1000	2000	4000	8000
100	19	16	18	21	17	18	17	20
125	17	15	17	22	16	17	20	20
160	17	14	15	22	17	16	19	21
200	16	12	14	20	16	15	16	18
250	20	10	14	18	15	15	16	18
315	17	9	15	16	15	15	17	18
400	16	8	16	15	15	13	16	16

Tolerance ± 3 dB

The sound data applies to an equivalent surface of 10 m², which corresponds to an attenuation of 4 dB in a 25 m³ room with normal attenuation.

Sound power level / octave band: L_w [dB]

Sound Pressure Level: L_{PA} [dB(A)] (Read from diagrams 3-13.)

Correction: K_o [dB] (Read from tables 2-5)

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

The measurements have been performed in accordance with ISO 9614-2 and ISO 11691: 1995.

Please see the chart below for correction examples of different room types.

T.8.

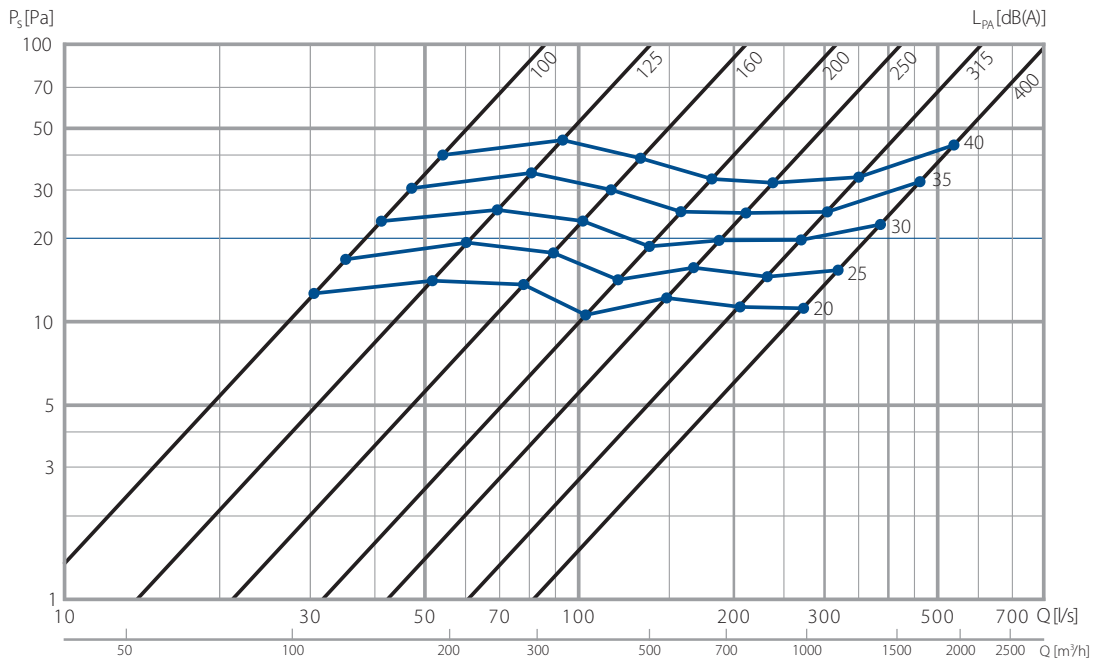
Sound pressure level L_{PA}

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

Diagrams

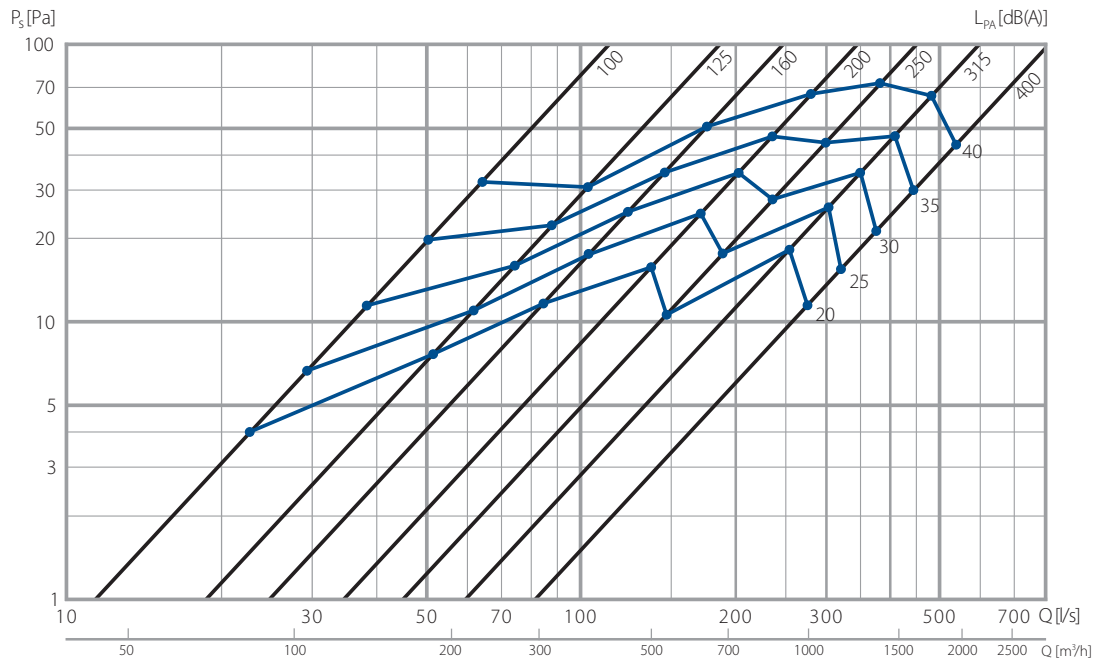
D.1.

Sound pressure level of NAPT diffuser used for supply air - without plenum box.



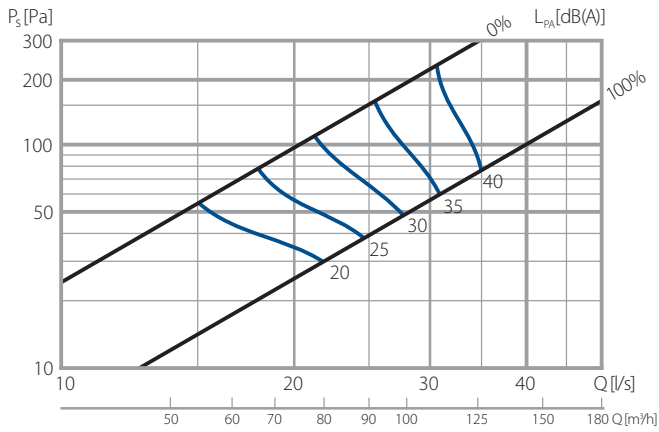
D.2.

Sound pressure level of NAPT diffuser used for exhaust air - without plenum box.

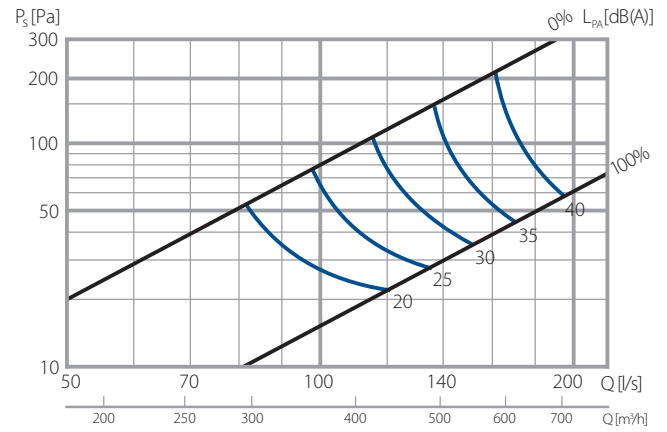


Sound pressure level of NAPT supply diffuser with plenum box.

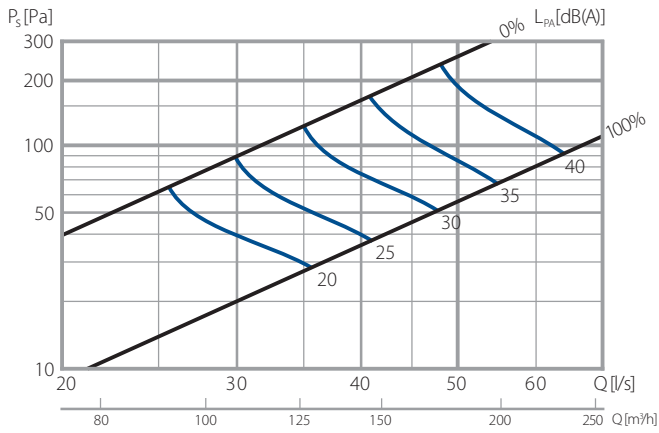
D.3. NAPT 100 + TLR 100



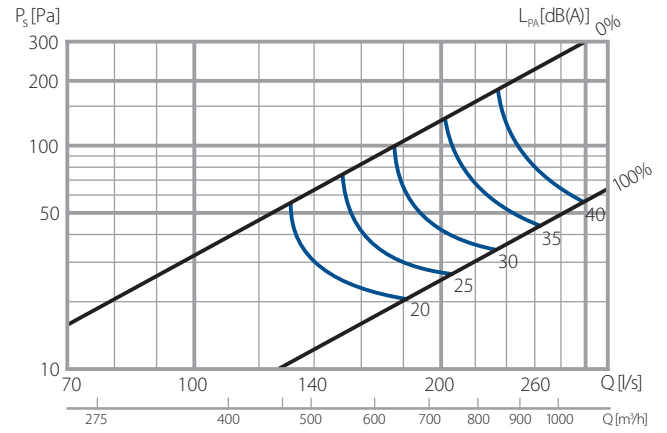
D.7 NAPT 250 + TLR 250



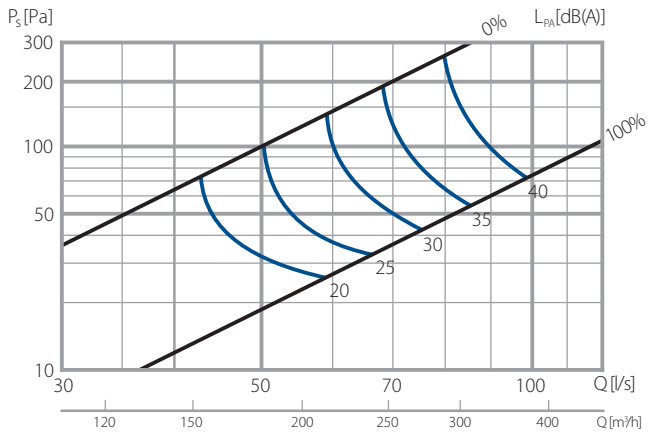
D.4. NAPT 125 + TLR 125



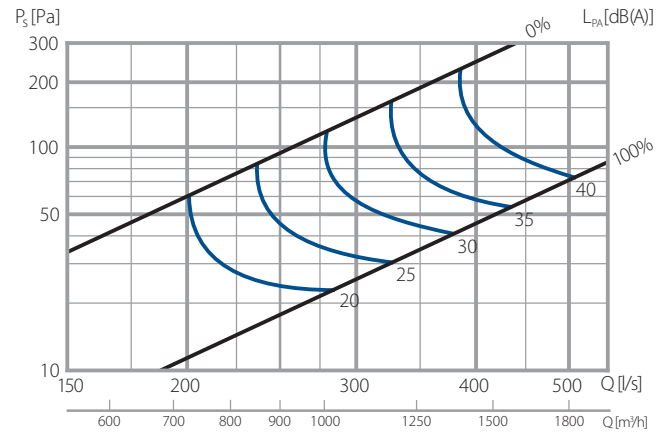
D.8. NAPT 315 + TLR 315



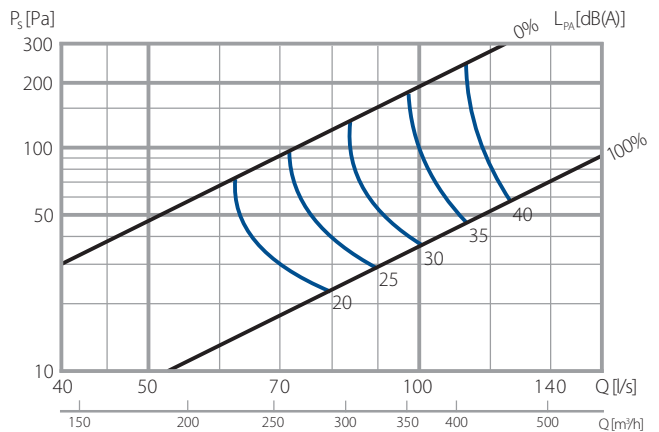
D.5. NAPT 160 + TLR 160



D.9. NAPT 400 + TLR 400

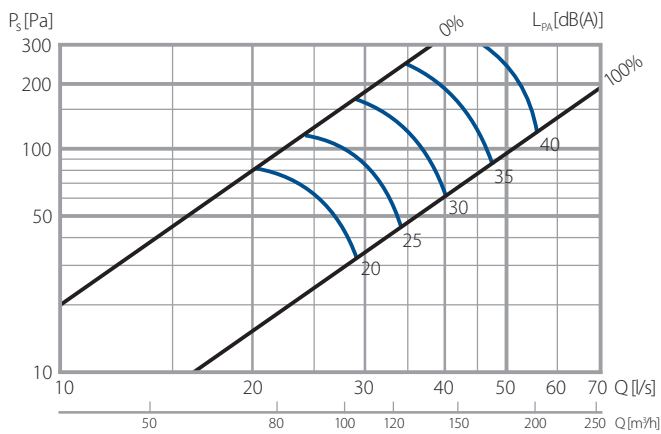


D.6. NAPT 200 + TLR 200

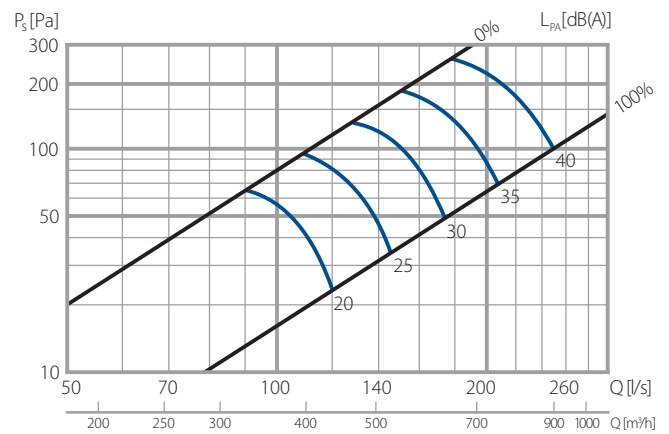


Sound pressure level of NAPT exhaust diffuser with plenum box.

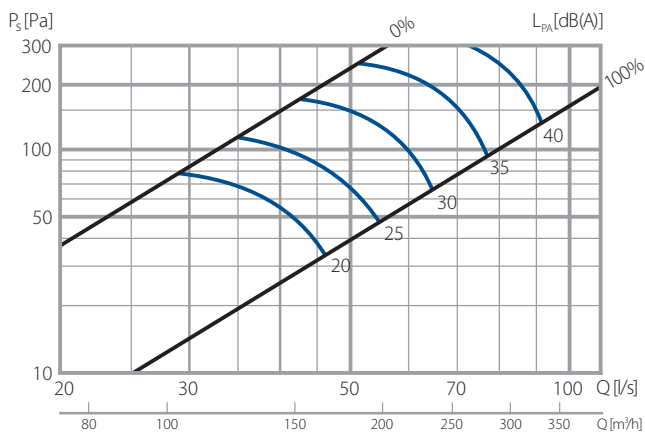
D.10. NAPT 100 + TLR 100



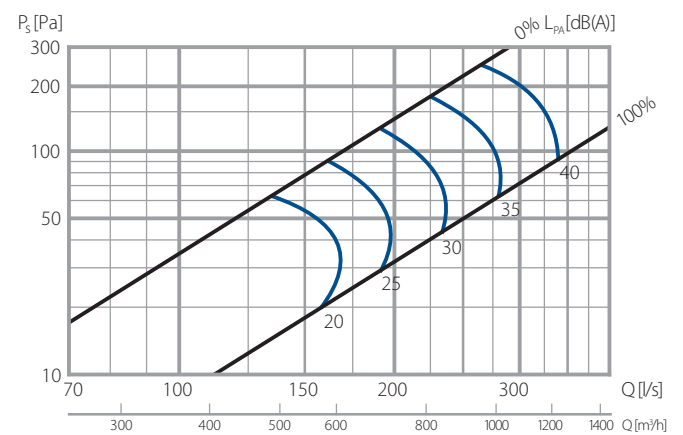
D.14. NAPT 250 + TLR 250



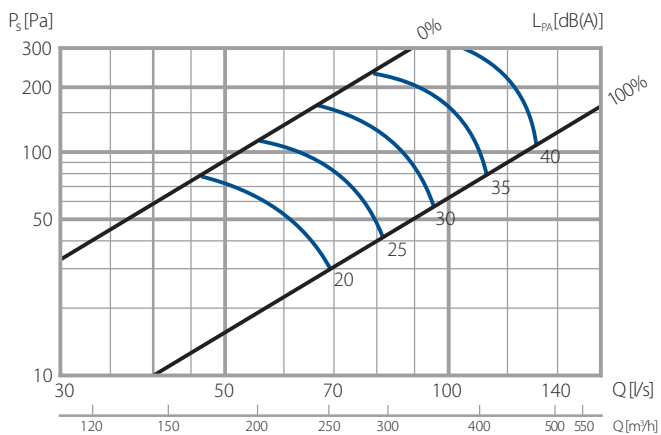
D.11. NAPT 125 + TLR 125



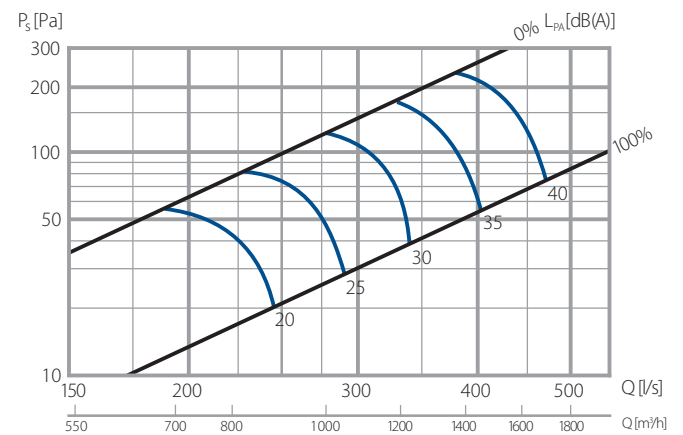
D.15. NAPT 315 + TLR 315



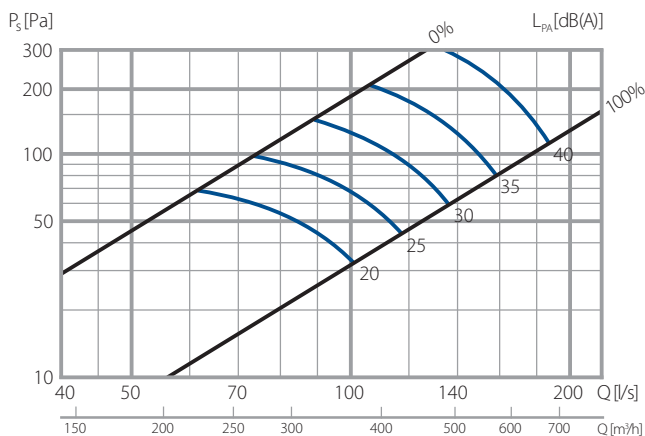
D.12. NAPT 160 + TLR 160



D.16. NAPT 400 + TLR 400



D.13. NAPT 200 + TLR 200



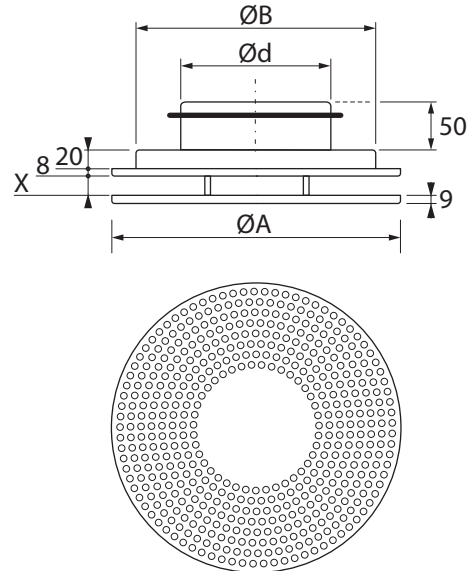
Dimensions

T.9.

NAPT circular ceiling diffuser with perforated front plate

Sizes (mm)	Dimensions				Weight (kg)	
	ØA	ØB	X*	Ød	NAPT	NAPT + TLR
100	238	187	18	98	0,80	2,10
125	238	187	20	123	0,80	2,55
160	304	253	20	158	1,15	4,25
200	392	341	20	198	1,75	5,80
250	454	403	23	248	2,20	7,70
315	534	483	27	313	2,95	11,75
400	534	483	27	398	2,80	15,65

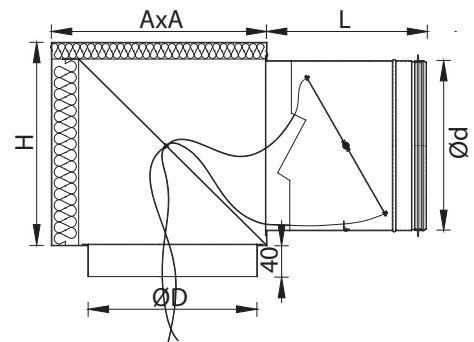
* Gap distance



T.10.

TLR plenum box

Sizes (mm)	Dimensions					Weight (kg)
	A	H	L	Ød	ØD	
100	170	130	130	98	125	1,3
125	190	170	150	125	125	1,8
160	270	220	175	160	160	3,0
200	300	250	220	200	200	4,0
250	350	300	300	250	250	5,6
315	400	375	300	315	315	9,0
400	480	460	400	400	400	13,2



Specification

Ordering code:	NAPT -XXX
Product code:	NAPT
Size of connection (Ød, mm):	100 125 160 200 250 315 400
Example: NAPT-250	

Specification

Ordering code:	TLR -XXX
Product code:	TLR
Size of plenum box:	100 125 160 200 250 315 400
Example: TLR-250	