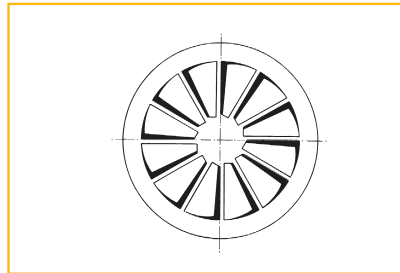
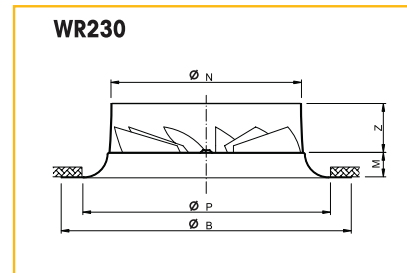
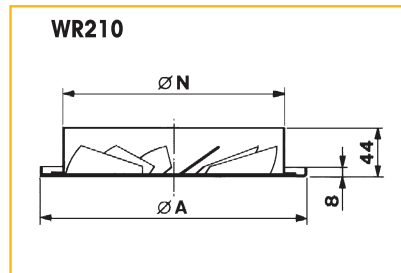


CIRCULAR SWIRL DIFFUSER

TYPE: WR200 • WR210 • WR230

Installation dimensions



Application

The swirl diffuser type WR200 is used for the supply of cooled and heated air in facilities such as offices, shopping centres, schools, ... Diffuser for ceiling or exposed duct mounting. The diffuser is equipped with fixed vanes in a round frontsheet. A high induction is obtained by the exceptional swirl discharge, which makes them very suitable for VAV application from 100% down to 25%. A downwards inclined swirl is obtained in the flat version WR200, when fitted with the diffusion collar WR220 a horizontal swirl is obtained.

Technical information

Characteristics:

- available with the dimensions 100, 125, 160, 200, 250, 315, 400 and 500 mm
- 2,4 < installation height < 4 m
- diffuser with central screw fixing that can be dismantled from plenum or transition piece.
- diffuser without central screw fixed to plenum or transition piece.

Construction:

- diffuser; steel, painted white (RAL 9010)
- optional insulated plenum; galvanised steel sheet
- provided with mounting eyes (Ø 7 mm), mounting straps available upon request

Size	ØN	ØA	ØB	M	ØP	Z
100	98	138	160	15	135	50
125	123	178	200	25	180	50
160	158	195	250	25	215	50
200	198	248	300	25	255	50
250	248	296	350	25	305	50
315	313	363	450	35	395	50
400	398	600	570	60	535	65
500	498	700	700	70	620	50

Δ P = minimal ceiling opening. All dimensions in mm.

CIRCULAR SWIRL DIFFUSER

TYPE: WR200 • WR210 • WR230

Specifications description

Example:

Circular steel swirl diffuser with fixed vanes in a round frontsheet and diffusion collar. Complete with side entry plenum and damper.

The diffuser is painted white (RAL 9010)

Type: WR231S
size ... mm

Accessories

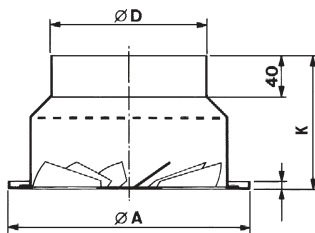
GR003: mounting support for central screw fixing (only for WR210 and WR230)

Options

- **WR200:** Flat swirl diffuser
- **WR200S:** Flat swirl diffuser and plenum with side entry
- **WR200T:** Flat swirl diffuser with transition piece, top entry
- **WR210:** Flat swirl diffuser with central screw fixing
- **WR210T:** Flat swirl diffuser with central screw fixing and transition piece, top entry
- **WR210S:** Flat swirl diffuser with central screw fixing and plenum with side entry
- **WR211S:** Flat swirl diffuser with central screw fixing, plenum with side entry and damper
- **WR220:** Swirl diffuser with diffusion collar
- **WR220S:** Swirl diffuser with diffusion collar and plenum with side entry
- **WR220T:** Swirl diffuser with diffusion collar and transition piece, top entry
- **WR230:** Swirl diffuser with diffusion collar and central screw fixing
- **WR230T:** Swirl diffuser with diffusion collar, with central screw fixing and transition piece, top entry
- **WR230S:** Swirl diffuser with diffusion collar, central screw fixing and plenum with side entry
- **WR231S:** Swirl diffuser with diffusion collar, central screw fixing and damper in inlet spigot

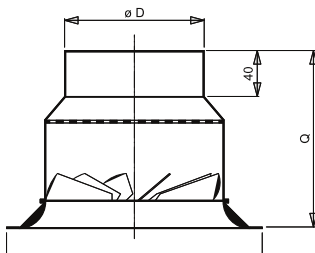
Installation dimensions

WR210T

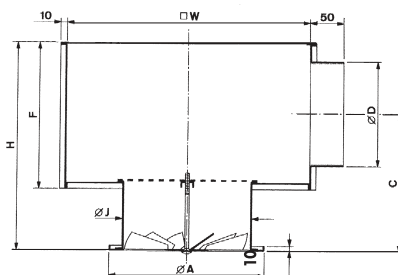


Size	C	ø D	E	F	G	H	ø J	□ W	K	Q
100	172	78	195	140	250	235	102	200	120	135
125	192	98	217	160	280	255	127	275	126	155
160	205	123	230	185	305	280	162	325	131	160
200	223	158	248	220	340	315	202	375	131	165
250	243	198	268	260	380	355	252	450	136	165
315	264	248	299	310	440	405	317	500	144	185
400	291	313	351	375	530	470	402	600	177	240
500	344	398	404	460	615	555	502	800	-	-

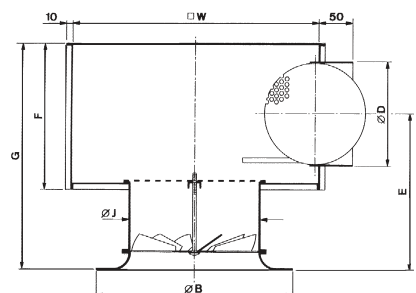
WR230T



WR210S



WR231S



SQUARE SWIRL DIFFUSER

TYPE: WS200 • WR200 SELECTION DATA

SIZE DIA	VOLUME L/S	THROW	PA	OUTLET VEL M/S	NR
125	16	0.33	9	3.5	20
125	22	0.45	18	4.8	25
125	28	0.58	29	6.1	30
125	35	0.72	45	7.6	35
125	40	0.83	59	8.7	40
125	45	0.93	75	9.8	45

SIZE DIA	VOLUME L/S	THROW	PA	OUTLET VEL M/S	NR
160	25	0.4	7	3.2	20
160	32	0.5	11	4.1	25
160	40	0.6	17	5.1	30
160	50	0.8	26	6.4	35
160	65	1.0	45	8.3	40
160	75	1.2	59	9.6	45

SIZE DIA	VOLUME L/S	THROW	PA	OUTLET VEL M/S	NR
200	35	0.4	10	2.8	20
200	50	0.6	21	4.0	25
200	60	0.7	30	4.8	30
200	70	0.9	40	5.6	35
200	90	1.1	67	7.2	40
200	110	1.4	100	8.8	45

SIZE DIA	VOLUME L/S	THROW	PA	OUTLET VEL M/S	NR
250	50	0.5	8	2.5	20
250	60	0.9	12	3.0	25
250	75	1.1	19	3.8	30
250	95	1.4	30	4.8	35
250	120	1.7	48	6.1	40
250	145	2.1	70	7.3	45

SQUARE SWIRL DIFFUSER

TYPE: WS200 • WR200 SELECTION DATA

SIZE DIA	VOLUME L/S	THROW	PA	OUTLET VEL M/S	NR
315	65	0.7	6	2.1	20
315	80	0.9	9	2.6	25
315	100	1.1	14	3.3	30
315	130	1.5	23	4.2	35
315	160	1.8	35	5.2	40
315	200	2.3	55	6.5	45

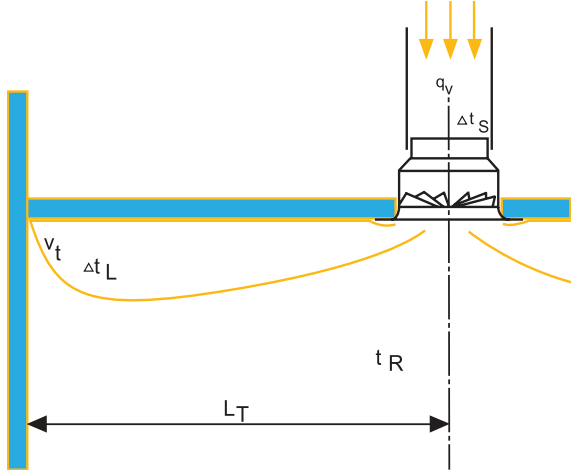
SIZE DIA	VOLUME L/S	THROW	PA	OUTLET VEL M/S	NR
400	90	0.8	4	1.8	20
400	110	1.0	6	2.2	25
400	140	1.2	10	2.8	30
400	170	1.5	15	3.4	35
400	225	2.0	26	4.4	40
400	300	2.7	46	5.9	45

SIZE DIA	VOLUME L/S	THROW	PA	OUTLET VEL M/S	NR
500	110	1.0	2	1.5	20
500	150	1.3	4	2.1	25
500	175	1.6	6	2.5	30
500	225	2.0	10	3.2	35
500	275	2.5	15	3.9	40
500	375	3.4	28	5.3	45

SWIRL DIFFUSERS

TYPE: WR200 • WS200

Example



selection data:

- Air flow rate $q_v = 0,045 \text{ m}^3/\text{s}$
- Throw $L_T = 0,6 \text{ m}$ at $v_t = 0,5 \text{ m/s}$

solution:

- Size 200 mm
- Supply air velocity $v_k = 3,6 \text{ m/s}$
- Noise level NR 26
- Correction noise level for side inlet: NR 26 + 2 = NR 28
- Total pressure loss, diagram 2, with damper 100% open (= 0°): $\Delta p_t = 20 \text{ Pa}$

Pressure loss

Diagram n°1

Valid for:

- Swirl diffusers in all dimensions
- Swirl diffusers with transition piece diam. 125 mm and 160 mm: $p_t \times 1,3$

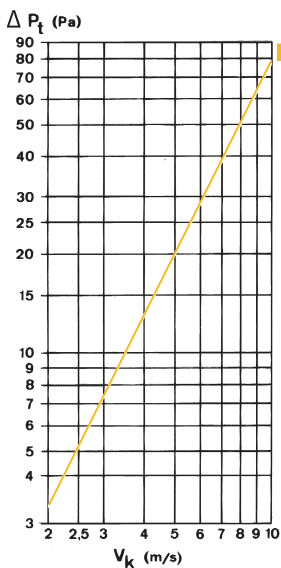
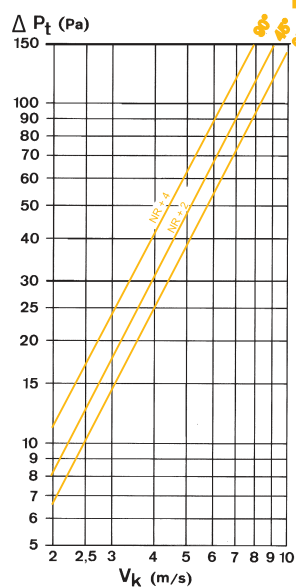


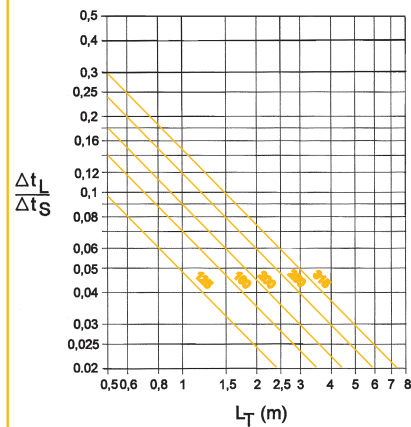
Diagram n°2

Valid for:

- All swirl diffusers with plenum
- Swirl diffusers with transition piece diam. 200, 250, 315, 400 mm: read at 90°



Temperature quotient

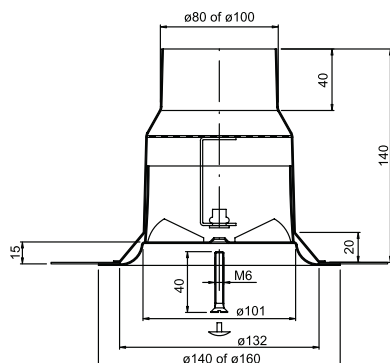


ROUND SWIRL DIFFUSER WITH TRANSITION PIECE

TYPE: WR230 • WP270T

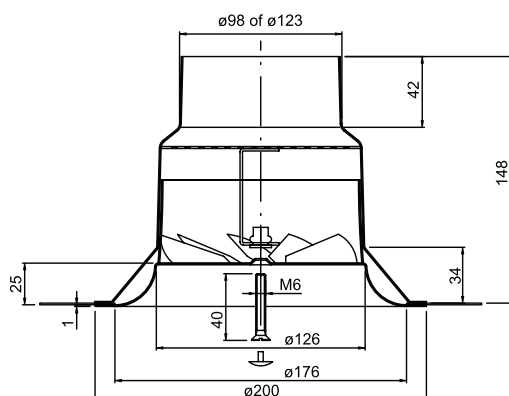
Installation dimensions

WR230 + WP270T - size 100 mm



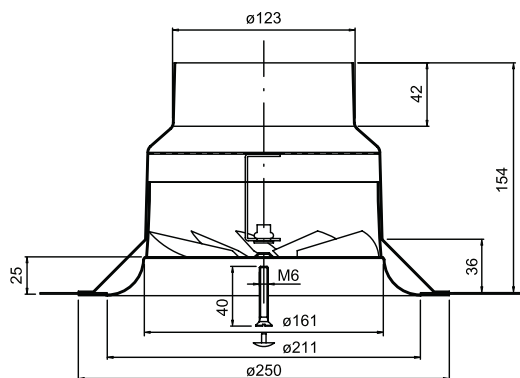
WR230 with outside dimension 140 or 160 mm
WP270T with connection diameter 80 or 100 mm

WR230 + WP270T - size 125 mm



WR230 with outside dimension 200 mm
WP270T with connection diameter 100 or 125 mm

WR230 + WP270T - size 160 mm



WR230 with outside dimension 215 or 250 mm
WP270T with connection diameter 125 mm

Alle dimensions in mm

Application

The swirl diffuser type WR230 is used for the supply of cooled and heated air in facilities such as offices, shopping centres, schools, ...

Diffuser for ceiling or exposed duct mounting. The diffuser is equipped with fixed vanes in a round front sheet. A high induction is obtained because of the exceptional swirl discharge, which makes them very suitable for VAV applications from 100% down to 25%.

The swirl diffusers are universally applicable. Thanks to the simple assembly to the transition piece and the restricted outer dimensions, this grating is ideal for the supply of fresh air in cooling ceilings.

Technical information

Characteristics:

- available with outer dimensions 100, 125 and 160 mm (see drawings)
- transition piece available with 3 connection diameters: 80, 100 and 125 mm
- 2,4 m < installation height < 4 m
- diffuser with central screw fixing which can be dismantled from plenum or transition piece
- suitable for ceilings of 1 to 20 mm thick

Construction:

WR230:
steel painted white RAL 9010

WP270T:
galvanised unpainted steel

ROUND SWIRL DIFFUSER WITH TRANSITION PIECE

TYPE: WR230 • WP270T

Specifications description

Example:

Circular steel swirl diffuser with fixed vanes for small air volumes. Provided with central screw with cap and transition piece.

The diffuser is painted white (RAL 9010)

Type: WR230 + WP270T
Size ... mm

Delivery possibilities

WR230:
round swirl diffuser with central screw and cap.

WP270T:
transition piece

Fixing

Easy fixing using the central screw on the transition piece WP270T.

The ceiling can be clasped between the grill and the transition piece.

Selection table - supply

Size	q _v (m ³ /h)	Δp _T (Pa)	L _w (NR)	L _T (m)
100	40	15	23	0,4
100	50	24	28	0,75
100	75	60	33	1,15
125	70	14	23	0,4
125	90	20	28	0,5
125	115	28	33	0,65
160	100	10	23	0,45
160	130	18	28	0,55
160	160	28	33	0,75

L_T current for v_T = 0,5 m/s

How to order

WR230, size 100 mm, outside dimension 140 mm

W	R	2	3	0			0	1	0	0	0	1	4	0
							size				outside dimension			

Executions: - WR230 size 100 mm, outside dimension 140 or 160 mm
- WR230 size 125 mm, outside dimension 200 mm
- WR230 size 160 mm, outside dimension 215 or 250 mm

WP270T, size 100 mm with connection diameter 80 mm

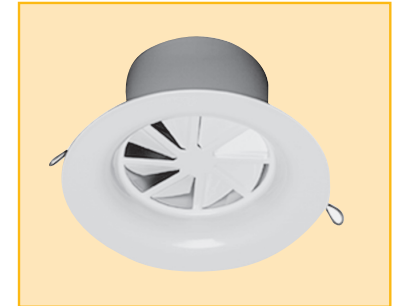
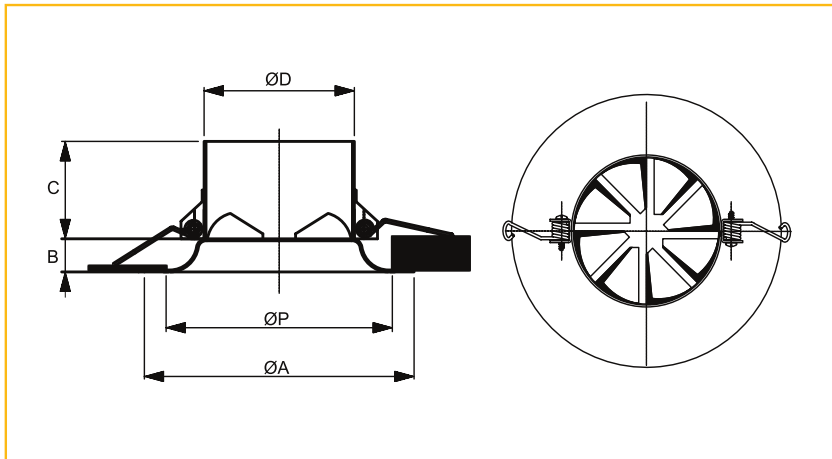
W	P	2	7	0	T	-	0	1	0	0	0	0	8	0
							size				connection diameter			

Executions: - WP270T size 100 mm with connection diameter 80 or 100 mm
- WP270T size 125 mm with connection diameter 100 or 125 mm
- WP270T size 160 mm with connection diameter 125 mm

CIRCULAR SWIRL DIFFUSER

TYPE: WR250

Installation dimensions



Application

The swirl diffuser type WR250 is used for the supply of cooled and heated air in facilities such as offices, shopping centres, schools, ... Diffuser especially designed for system ceiling mounting. The friction springs and the small overall dimension (ΔA) offer extremely easy mounting and a perfect integration in system ceilings. Suitable for ceiling sheets with thickness between 1,5 and 20 mm. Fixed horizontal air pattern.

Size	Ø A	Ø D	Ø P	B	C
63	98	61	91	15	40
80	140	78	115	17	50
100	160	98	130	17	50
125	200	123	170	25	30

ΔP = minimal ceiling opening. All dimensions in mm.

Technical information

Construction:

- steel, painted white (RAL 9010)
- available with 4 dimensions 63, 80, 100 and 125 mm

Selection table - supply

Size	qv (m ³ /h)	Δpt (Pa)	L _w (NR)	L _T (m)
63	25	63	35	0,80
80	25	29	28	0,45
80	35	41	32	0,60
100	50	24	28	0,75
100	75	60	35	1,15
125	90	28	30	0,55
125	120	40	35	0,75

Throw factor is based on a v_T of 0,5 m/s

CIRCULAR SWIRL DIFFUSER

TYPE: WR250

Specifications description

Example:

Circular swirl diffuser for small air volumes with a horizontal air flow pattern, complete with friction springs. The diffuser is painted white (RAL 9010).

Type: **WR250**
size ... mm

Delivery possibilities

WR250: circular swirl diffuser with friction springs

Fixing

- diameter 63, 80 and 100 mm: fixing with 2 friction springs
- diameter 125 mm fixing with 3 friction springs

How to order

WR250 size 100 mm.

W	R	2	5	0	-	-	0	1	0	0	0	0	0	0
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size