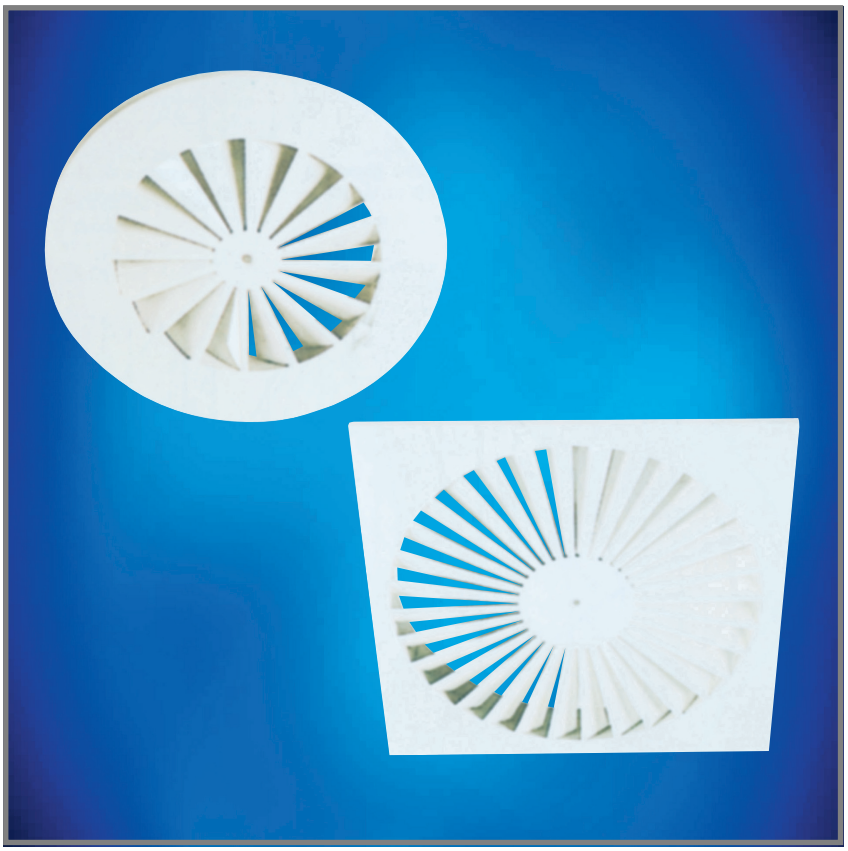
CEILING SWIRL DIFFUSERS



selection assistance

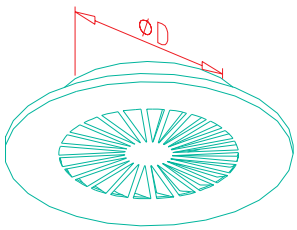
GRYFIT AIR

ADVANTAGES

- Optimal air induction
- Low airflow velocity in occupied zone
- Aesthetic design

in the libraries

Fluid Desk
Building Engineering Solutions



parametric libraries

GRYFIT CAD

FUNCTION

KRE and RME diffusers are designed for use as a part of supply or exhaust ventilation and air-conditioning systems. They may be used in public buildings and lower height industrial premises.

APPLICATION

KRE and RME diffusers are used in all types of rooms having height of up to 4 m, where the swirl air supply is foreseen. The profile of KRE and RME blades allows them to achieve an optimal air induction factor and at the same time to provide a quick drop of supplied airflow velocity. They may be installed in the ceilings or directly on ventilation ducts.

DESCRIPTION

KRE and RME diffusers are fitted with fixed blades which provide swirling air distribution. KRE type is fitted with a round front frame while RME type has a rectangular front frame. RME-FP type is additionally adapted for direct installation in a false ceiling construction. The diffusers are made of steel painted RAL 9010 colour (white). There is available option of coating the surface with paint in any other RAL colour.

INSTALLATION

Standard installation of the diffuser is carried out with the use of the central fixing screw which is fitted with a covering plug. To install the diffuser an appriopriate mounting bar or a plenum box are need to be used.

ACCESSORIES

- KRP damper made of steel painted RAL 9005 colour (black), fixed on the diffuser
- DNK or DNKL plenum box made of galvanised steel, with a side connection, insulated as an optional extra
- VFP damper made of galvanised steel and fixed in the connection of the plenum box
- FG-K mounting bar made of galvanised steel and used for the installation of the diffuser at the ending of ventilation duct
- FH-K mounting bar made of galvanised steel and used for the installation of the diffuser in a false ceiling construction

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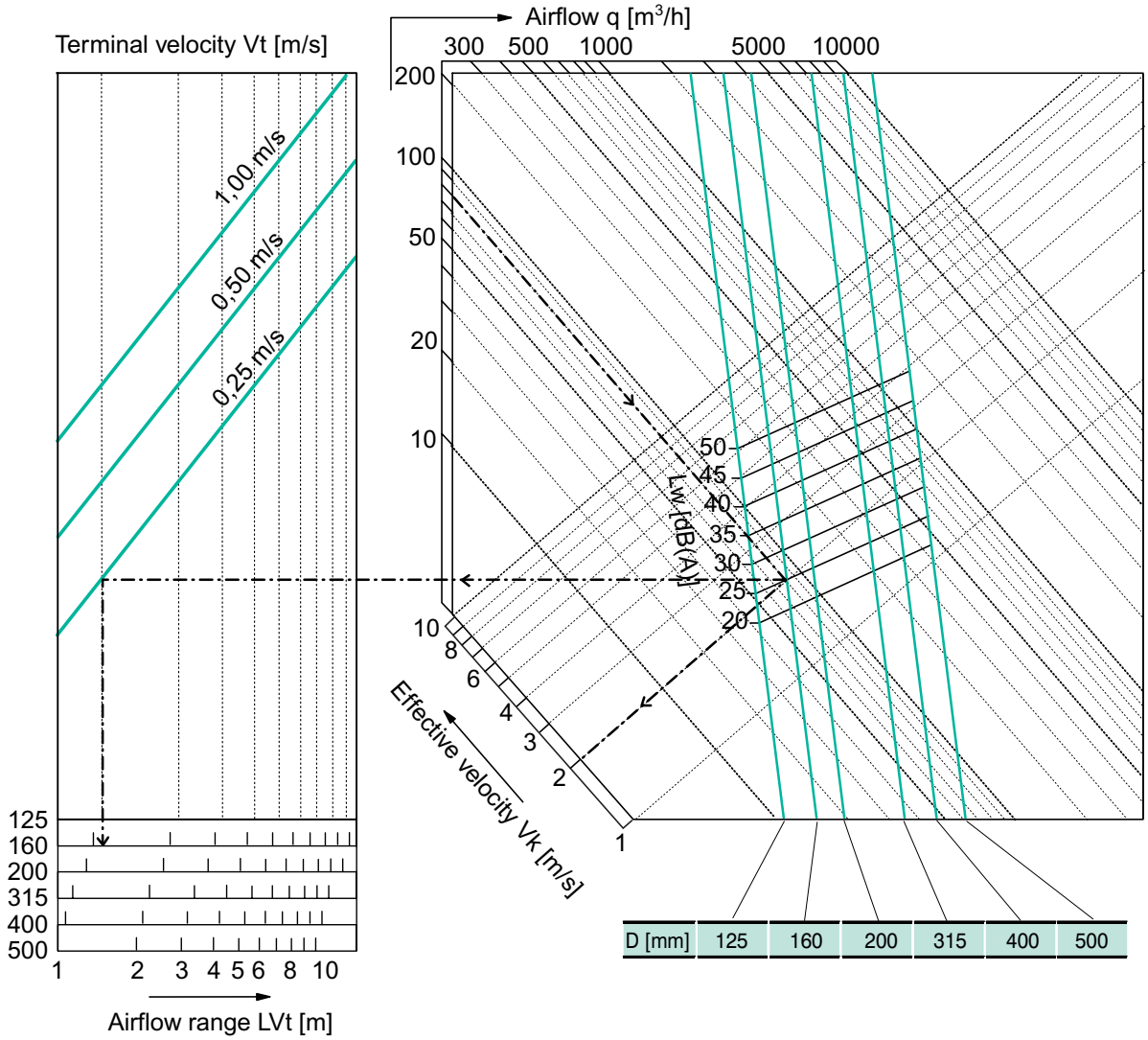
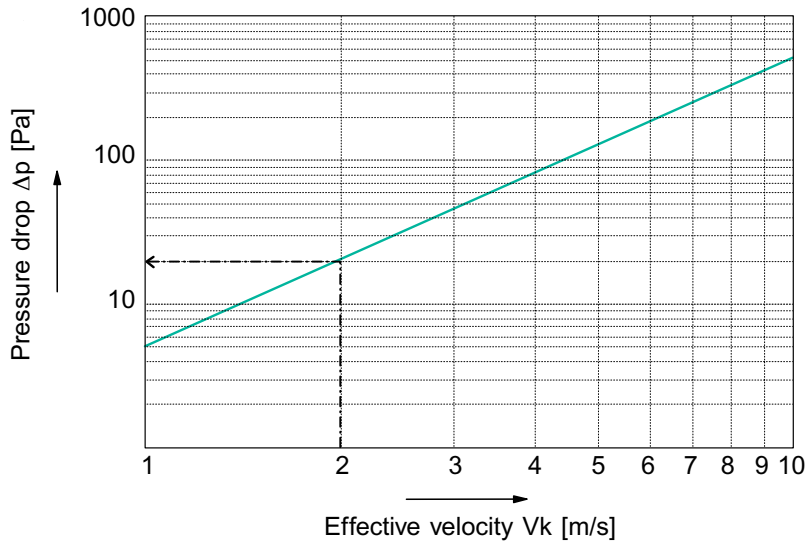
SELECTION



PRESSURE DROP



Example of selection:

Airflow Q	= 80	[m³/h]	Sound power level Lw	= 25	[dB(A)]
Diameter of the diffuser	= 160	[mm]	Pressure drop ΔP	= 20	[Pa]
Effective velocity Vk	= 2	[m/s]	Airflow range LVt for Vt=0,25 m/s	= 1,2	[m]

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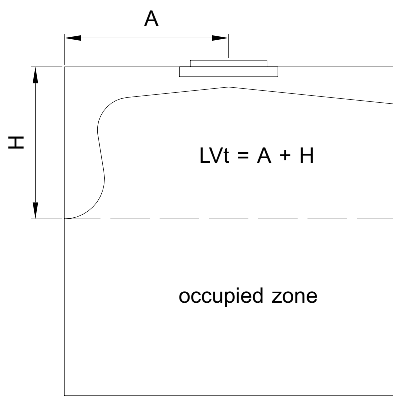
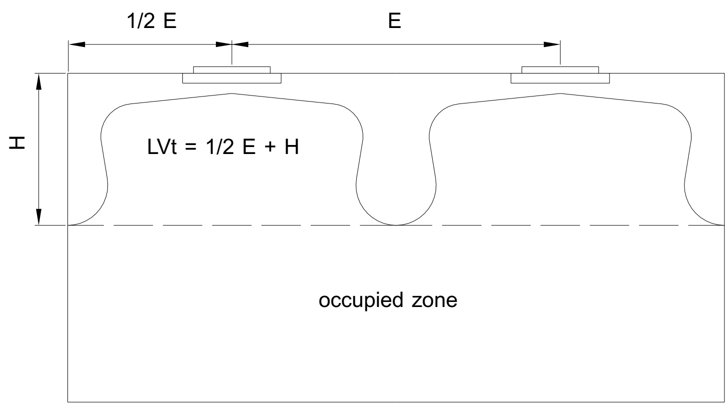
AIRFLOW RANGE FOR KRE / RME DIFFUSERS

Single diffuser



Two or more diffusers



KRE/RME DIFFUSERS USED IN AIR SUPPLY VENTILATION

Airflow range LVt for Vt=0,25 m/s	*1 m*				*1,5 m*				*2 m*				*2,5 m*				*3 m*				*3,5 m*				*4 m*			
Airflow range LVt for Vt=0,50 m/s	*0,5 m*				*0,8 m*				*1 m*				*1,3 m*				*1,5 m*				*1,8 m*				*2 m*			
D [mm]	*Q* [m^3/h]	*Vk* [m/s]	*Δpt* [Pa]	*Lw* [dB(A)]	*Q* [m^3/h]	*Vk* [m/s]	*Δpt* [Pa]	*Lw* [dB(A)]	*Q* [m^3/h]	*Vk* [m/s]	*Δpt* [Pa]	*Lw* [dB(A)]	*Q* [m^3/h]	*Vk* [m/s]	*Δpt* [Pa]	*Lw* [dB(A)]	*Q* [m^3/h]	*Vk* [m/s]	*Δpt* [Pa]	*Lw* [dB(A)]	*Q* [m^3/h]	*Vk* [m/s]	*Δpt* [Pa]	*Lw* [dB(A)]	*Q* [m^3/h]	*Vk* [m/s]	*Δpt* [Pa]	*Lw* [dB(A)]
125	61	2,4	30	27	91	3,6	67	37	121	4,8	119	44	152	6,0	187	50	182	7,2	269	54	213	8,4	366	58	243	9,6	478	61
160	78	1,9	18	24	117	2,8	41	33	155	3,8	73	40	194	4,7	114	46	233	5,7	164	50	272	6,6	223	54	311	7,5	291	57
200	97	1,5	12	<20	146	2,3	26	30	194	3,0	47	37	243	3,8	73	42	291	4,5	105	47	340	5,3	143	50	389	6,0	187	53
315	153	1,0	5	<20	230	1,4	11	22	306	1,9	19	29	383	2,4	29	35	459	2,9	42	39	536	3,3	58	43	612	3,8	75	46
400	194	0,8	3	<20	291	1,1	7	<20	389	1,5	12	26	486	1,9	18	31	583	2,3	26	35	680	2,6	36	39	777	3,0	47	42
500	243	0,6	2	<20	364	0,9	4	<20	486	1,2	7	22	607	1,5	12	27	729	1,8	17	32	850	2,1	23	36	972	2,4	30	39

LVt – supplied airflow range
Q – airflow capacity
Vk – effective velocity of supplied airflow
Δpt – pressure drop
Lw – sound power of the diffuser
Vt – terminal velocity of supplied airflow

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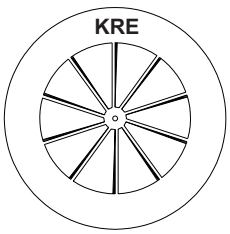
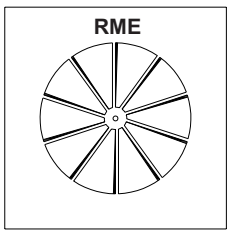
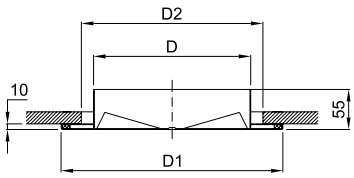
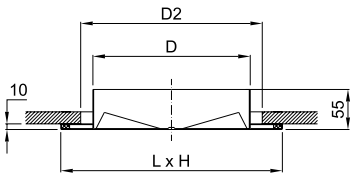
DIMENSIONS AND INSTALLATION METHOD

DIMENSIONS



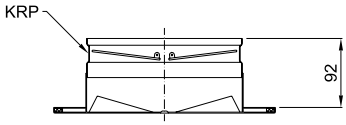






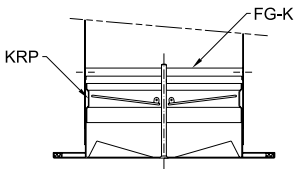
D	KRE	RME	RME-FP	D2	DNK(L)
	D1	LxH	LxH		NA*
125	200	200x200	-	155	100
160	260	250x250	595x595	190	125
200	300	250x250	595x595	230	160
315	400	350x350	595x595	345	250
400	500	450x450	595x595	430	315
500	600	550x550	595x595	530	315

* Standard diameters of the connections. There is available option to order a plenum box with connection which is smaller than standard connection diameter

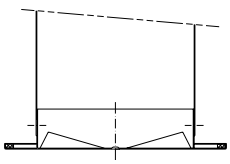


INSTALLATION

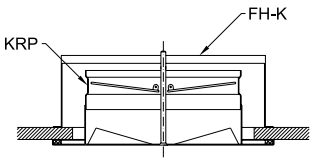
Installation of a diffuser is carried out with the use of M6 central screw with a covering plug (except for direct fixing to the diffuser flange).



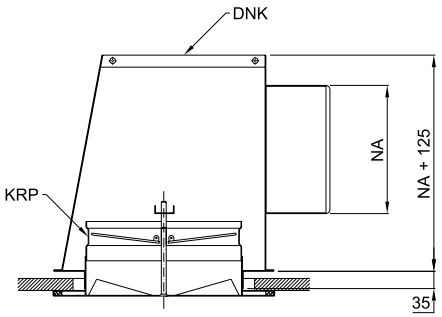
Installation in a ventilation duct with the use of FG-K mounting bar



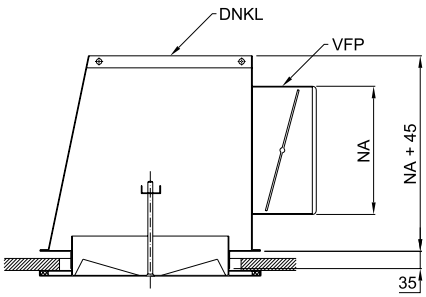
Installation in a ventilation duct: direct fixing to the diffuser flange



Installation of the diffuser in a false ceiling with the use of FH-K mounting bar

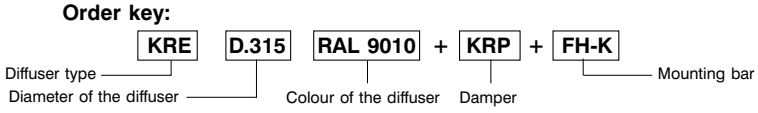


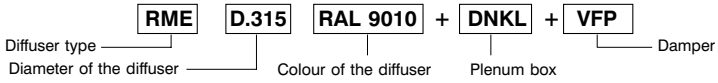
Installation with the use of DNK plenum box with side connection



Installation with the use of DNKL plenum box with VFP damper

Order key:





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