



## HIGH INDUCTION DIFFUSERS FOR CIRCULAR DUCTS

KO  
SERIES

### INSTALLATION

**TECHNICAL DATA:** KO series diffusers for round ducts are an absolutely innovative solution. This diffuser permits to adapt the round shape of the air terminal diffuser to the round duct where the diffuser will be mounted.

It's important to receive the correct values of the duct diameter during the order processing phase. It will be in charge to our production plant to make the diffuser with the same curving of duct (see before page for diameter limits).

KO series diffusers have an exceptional versatility. Indeed, it is possible to orient the air flow on frontal side without modification on free area, pressure drop and acoustic level, for any position of deflecting blades.

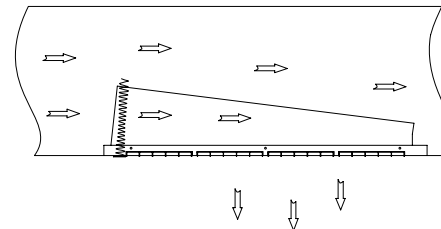
**MATERIALS:** Diffuser in galvanised sheet steel, deflectors in abs, gate in galvanized sheet steel.

**FINISH:** Diffuser painted white in epoxy powder finish RAL 9010 and deflectors in black colour RAL 9005.

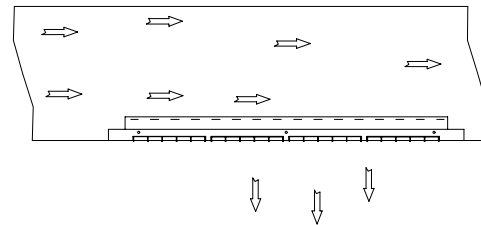
**MOUNTING :** The diffuser has to be fixed with threaded screws on sight directly in the channel.

**REGULATION :** The deflectors can be adjusted manually.

#### FITTING WITH COLLECTING DAMPER



#### FITTING WITH SLIDING DAMPER





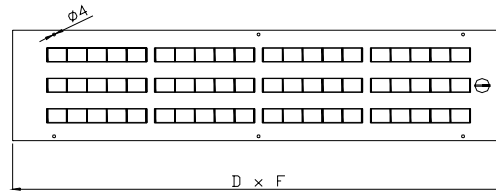
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### TECHNICAL DATA

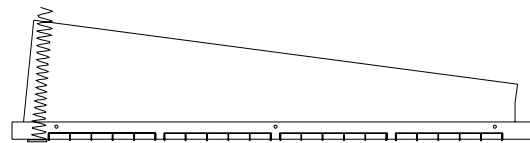
**KO**

Diffuser with adjustable deflectors - dimensions from mm. 425 x 65 to mm. 1025 x 315.



**KO + SB**

Diffuser with adjustable deflectors and with collecting gate.



**KO + SG**

Diffuser with adjustable deflectors and with slide gate.



**KO1** = Diffuser with horizontal deflectors

**SB** = Collecting gate

**SG** = Slide gate

**425x65** = Nominal dimension of the hole in mm

**∅ 200** = Diameter of the duct in mm

Technical data

Nominal dimension of the hole		Diameter of the duct	Duct diameter				
			D	F	G	Minimum	Maximum
425 x 65	x	∅ ???	450	100	55	140	400
525 x 65	x	∅ ???	550	100	55	140	400
425 x 115	x	∅ ???	450	164	55	300	900
525 x 115	x	∅ ???	550	164	55	300	900
625 x 115	x	∅ ???	650	164	55	300	900
825 x 115	x	∅ ???	850	164	55	300	900
1025 x 115	x	∅ ???	1050	164	55	300	900
425 x 215	x	∅ ???	450	264	55	600	2400
525 x 215	x	∅ ???	550	264	55	600	2400
625 x 215	x	∅ ???	650	264	55	600	2400
825 x 215	x	∅ ???	850	264	55	600	2400
1025 x 215	x	∅ ???	1050	264	55	600	2400
525 x 315	x	∅ ???	550	364	55	1000	2400
625 x 315	x	∅ ???	650	364	55	1000	2400
825 x 315	x	∅ ???	850	364	55	1000	2400
1025x315	x	∅ ???	1050	364	55	1000	2400



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### PERFORMANCE

#### KO Series diffusers characteristics

Air supply velocity $V_k$ [m/s]	2	3	4	5	6	8	9	10	12
Sound power [dB(A)]	< 20	20	25	30	35	40	45	50	55
Installation height max [m]	$H_{\max} = 4,1$ m								
Installation height min [m]	$H_{\min} = 2,6$ m								
Terminal air velocity [m/s]	$V_t = 0,37$ m/s								

#### KO 425x115

Air supply velocity $V_k$ [m/s]	2	3	4	5	6	8	9	10	12
Pressure drop [Pa]	17	36	61	91	127	215	267	324	453
Air flow [m <sup>3</sup> /h]	117	176	234	293	352	469	527	586	703
Throw [m]	0,4	0,6	0,8	1,1	1,3	1,7	1,9	2,1	2,5

#### KO 525x115

Air supply velocity $V_k$ [m/s]	2	3	4	5	6	8	9	10	12
Pressure drop [Pa]	17	35	59	89	125	211	262	318	444
Air flow [m <sup>3</sup> /h]	133	200	266	333	399	532	599	665	799
Throw [m]	0,5	0,7	0,9	1,1	1,4	1,8	2	2,3	2,7

#### KO 625x115

Air supply velocity $V_k$ [m/s]	2	3	4	5	6	8	9	10	12
Pressure drop [Pa]	16	34	57	86	120	204	253	307	428
Air flow [m <sup>3</sup> /h]	166	249	332	415	498	664	747	830	996
Throw [m]	0,5	0,8	1	1,3	1,5	2	2,3	2,5	3

#### KO 825x115

Air supply velocity $V_k$ [m/s]	2	3	4	5	6	8	9	10	12
Pressure drop [Pa]	15	32	54	82	114	193	240	291	406
Air flow [m <sup>3</sup> /h]	230	345	460	576	691	921	1036	1151	1381
Throw [m]	0,6	0,9	1,2	1,5	1,8	2,4	2,7	3	3,6

#### KO 1025x115

Air supply velocity $V_k$ [m/s]	2	3	4	5	6	8	9	10	12
Pressure drop [Pa]	15	31	52	79	110	187	231	281	392
Air flow [m <sup>3</sup> /h]	286	429	572	715	858	1144	1284	1431	1717
Throw [m]	0,7	1	1,3	1,6	2	2,6	3	3,3	4

#### KO 425x215

Air supply velocity $V_k$ [m/s]	2	3	4	5	6	8	9	10	12
Pressure drop [Pa]	16	34	58	87	122	207	256	311	434
Air flow [m <sup>3</sup> /h]	152	227	304	381	457	609	685	761	913
Throw [m]	0,5	0,7	1	1,2	1,4	1,9	2,2	2,4	2,9

#### KO 525x215

Air supply velocity $V_k$ [m/s]	2	3	4	5	6	8	9	10	12
Pressure drop [Pa]	15	32	55	82	115	195	242	293	409
Air flow [m <sup>3</sup> /h]	219	328	438	547	657	876	985	1095	1314
Throw [m]	0,6	0,9	1,2	1,4	1,7	2,3	2,6	2,9	3,5



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### PERFORMANCES

#### KO 625x215

Air supply velocity V <sub>k</sub> [m/s]	2	3	4	5	6	8	9	10	12
Pressure drop [Pa]	15	31	53	79	111	188	233	283	395
Air flow [m <sup>3</sup> /h]	273	410	546	683	819	1092	1229	1366	1639
Throw [m]	0,6	1	1,3	1,6	1,9	2,6	2,9	3,2	3,9

#### KO 825x215

Air supply velocity V <sub>k</sub> [m/s]	2	3	4	5	6	8	9	10	12
Pressure drop [Pa]	14	30	50	75	105	178	221	268	375
Air flow [m <sup>3</sup> /h]	379	568	757	947	1136	1515	1704	1893	2272
Throw [m]	0,8	1,1	1,5	1,9	2,3	3	3,4	3,8	4,6

#### KO 1025x215

Air supply velocity V <sub>k</sub> [m/s]	2	3	4	5	6	8	9	10	12
Pressure drop [Pa]	14	29	48	73	102	172	214	259	362
Air flow [m <sup>3</sup> /h]	471	706	941	1177	1412	1883	2118	2353	2824
Throw [m]	0,8	1,3	1,7	2,1	2,5	3,4	3,8	4,2	5,1

#### KO 525x315

Air supply velocity V <sub>k</sub> [m/s]	2	3	4	5	6	8	9	10	12
Pressure drop [Pa]	14	30	51	77	107	181	224	272	380
Air flow [m <sup>3</sup> /h]	346	519	692	865	1038	1384	1557	1731	2077
Throw [m]	0,7	1,1	1,5	1,8	2,2	2,9	3,3	3,6	4,4

#### KO 625x315

Air supply velocity V <sub>k</sub> [m/s]	2	3	4	5	6	8	9	10	12
Pressure drop [Pa]	14	29	49	74	103	175	217	263	367
Air flow [m <sup>3</sup> /h]	432	648	863	1079	1295	1727	1943	2159	2590
Throw [m]	0,8	1,2	1,6	2	2,4	3,2	3,6	4	4,9

#### KO 825x315

Air supply velocity V <sub>k</sub> [m/s]	2	3	4	5	6	8	9	10	12
Pressure drop [Pa]	13	27	47	70	98	166	205	249	348
Air flow [m <sup>3</sup> /h]	599	898	1197	1496	1796	2394	2694	2993	3592
Throw [m]	1	1,4	1,9	2,4	2,9	3,8	4,3	4,8	5,7

#### KO 1025x315

Air supply velocity V <sub>k</sub> [m/s]	2	3	4	5	6	8	9	10	12
Pressure drop [Pa]	13	27	45	68	94	160	198	241	336
Air flow [m <sup>3</sup> /h]	744	1116	1488	1860	2232	2976	3348	3720	###
Throw [m]	1,1	1,6	2,1	2,7	3,2	4,3	4,8	5,3	6,4


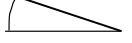
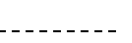




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CODES  
Ak SURFACES  
AND ACCESSORIES

In the panel of each article is shown the effective area of the air passage Ak in m<sup>2</sup>

					
	KO	SB	SG	KO + SB	KO + SG
Nominal sizes	High induction diffuser for circular ducts	collecting damper	Sliding damper	Diffuser for circular ducts+ collecting damper	Diffuser for circular ducts + sliding damper
KO425x65 ???	0,0054	X	X	X	X
KO525x65 ???	0,0061	X	X	X	X
KO425x115 ???	0,0163	X	X	X	X
KO525x115 ???	0,0185	X	X	X	X
KO625x115 ???	0,0231	X	X	X	X
KO825x115 ???	0,0320	X	X	X	X
KO1025x115 ???	0,0397	X	X	X	X
KO425x215 ???	0,0211	X	X	X	X
KO525 x 215 ???	0,0304	X	X	X	X
KO625 x 215???	0,0379	X	X	X	X
KO825 x 215 ???	0,0526		X	X	X
KO1025x215 ???	0,0654		X	X	X
KO525 x 315 ???	0,0481	X	X	X	X
KO625 x 315???	0,0600	X	X	X	X
KO825 x 315 ???	0,0831		X	X	X
KO1025x315 ???	0,1033		X	X	X

KO Diffuser for circular channel  
 SB Tilted gate  
 SG Collecting gate  
 425 x 65 Dimension  
 ??? Diameter of the duct

Example: KO SB 525 215  
 Diffuser for circular ductl with collecting gate and sizes 525x215.

