



## HIGH INDUCTION DIFFUSERS WITH VARIABLE GEOMETRY

KZ  
SERIES

### OVERVIEW CHARACTERISTICS APPLICATIONS

#### OVERVIEW :

The high induction diffusers with variable geometry series KZ are a new type of air terminal devices. Their unique regulation system is suitable for heating and cooling applications. Indeed the throw optimization can be obtained by the adjustment of finning inclination. The finning regulation can be controlled by servomotor.

This characteristic together with the good inductive power and the variety of model enables the diffuser to be used in ventilation system for installation height from 3 to 25 meters, with temperature variation from supplied air and ambient from -12° to +30°C (depend on the model, air flow and temperature variation).

Within this range, KZ diffusers ensure the correct air speed in the occupied area, thus maintaining a steady temperature and preventing any irregular unwanted air currents.

Any problems installing the diffusers in false ceiling are solved by the models fitted with a 595x595 panel.

#### CHARACTERISTICS AND OPERATION :

KZ series ceiling diffusers are equipped with 6 pivoting fins, which enable high induction. In this way, the delivery speed and temperature gradient are quickly reduced to the optimum values for the occupied area.

The 6 deflector fins employ a variable horizontal part to subdivide the air flow into radial jets, which are forced to swirl around the main axis.

The KZ diffusers are suitable to application on rooms with high ceiling. Furthermore the finning configuration can be regulated in 4 ways (depending on the KZ model):

- manual for each fin during installation
- manual with a mechanism that controls all fins simultaneously
- automatic by on-off actuator kind
- automatic by proportional actuator kind

Standard the motor externally, upon request the diffuser can be supplied with motor mounted internally.

#### APPLICATIONS :

The diffuser is designed for civil and industrial applications with any type of mixing ventilation plant and should be installed at heights between 3 and 25 meters. The high induction diffuser with variable geometry, which can be changed during operation, can set flows between 200 and 12.000 m<sup>3</sup>/h with variable temperature gradients ranging from +30 °C and -11 °C.

#### SELECTION PROGRAM:

MP3 has at its disposal a selection program to identify the most ideal product, the best regulation, the number and layout of diffusers on the basis of the room characteristics and the heat values required.

For this selection it is possible to contact the Sales Department. The multilingual program, is usable in the customer area of the company website [www.mp3-italia.it](http://www.mp3-italia.it).

The required password must be requested from the Sales Department.



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TECHNICAL DRAWINGS  
CONSTRUCTION DIMENSIONS

CONSTRUCTION DIMENSIONS :

Figura n° 1 Standard circular construction

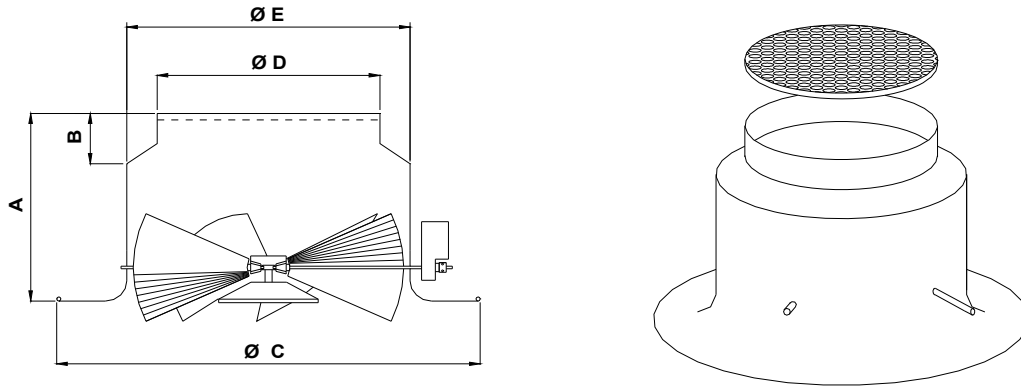
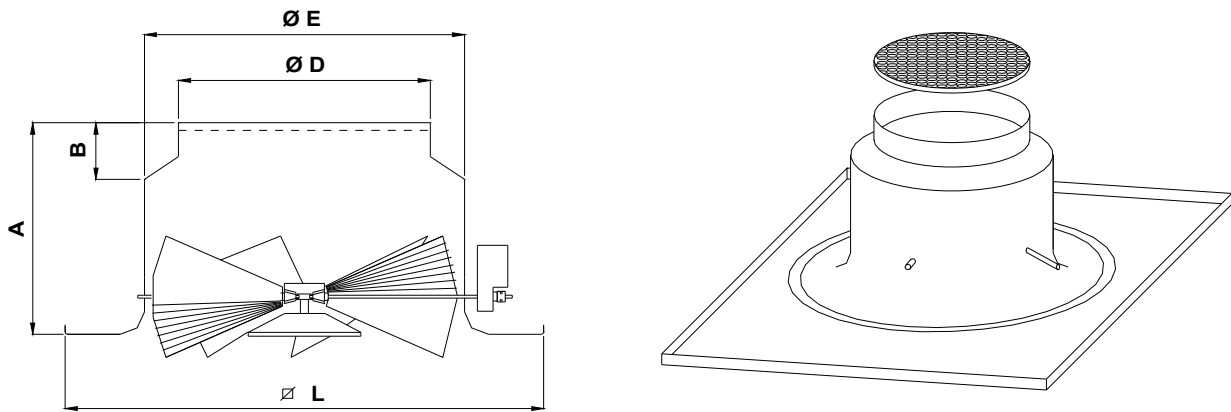


Figura n° 2 Construction with false ceiling panel



Nominal diameter	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	L [mm]	[kg]
160	155	65	300	158	198	595	1,3
200	180	60	350	198	248	595	2,0
250	205	70	400	248	298	595	2,7
315	230	70	500	313	398	595	3,8
400	270	105	615	398	465	=	6,3
500	320	95	780	498	565	=	8,9
630	390	105	935	628	665	=	14,5
800	390	0	1020	798	798	=	30,0

Note: equalizer optional



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### INSTALLATION EXAMPLE

#### INSTALLATION INSTRUCTIONS:

The diffuser is installed directly in both the channel (side or inferior) and the plenum, as illustrated below. The diffuser is fitted directly onto the channel or the plenum itself with screws at the side. The 595x595 integrated panel is installed as a standard false ceiling panel would be.

Figure no.3  
Fastening to plenum (diffuser with panel)

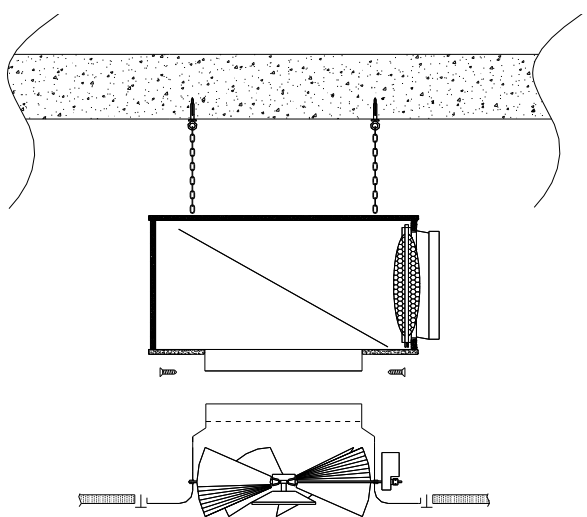


Figure no.4  
Fastening to plenum (diffuser standard)

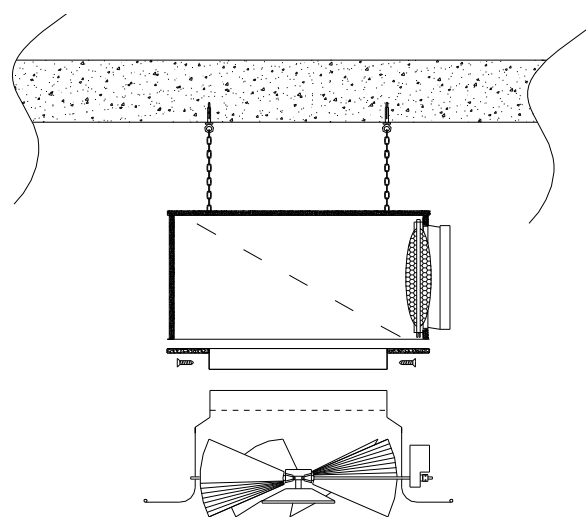


Figure no.5  
Fastening to channel with circular coupling

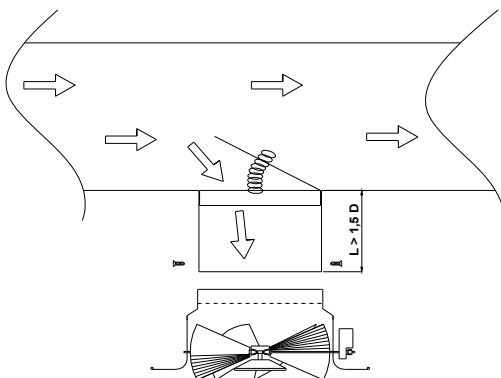
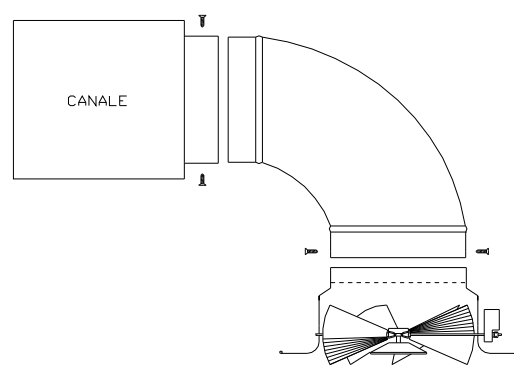


Figure no.6  
Fastening to channel with circular coupling





## HIGH INDUCTION DIFFUSERS WITH VARIABLE GEOMETRY

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### OPERATIONS

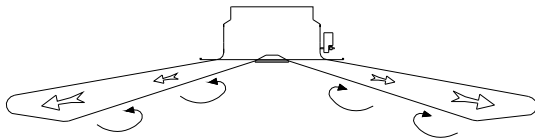
#### OPERATIONS:

Depending on the installation angle, different types of airflow are given off.

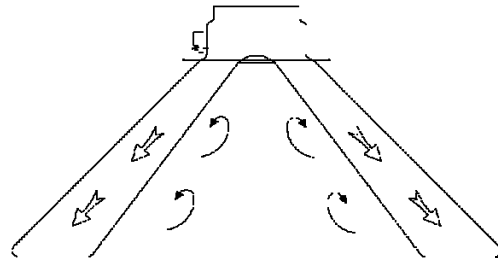
When the fixture is fitted into the ceiling and with the blades at an angle of more than 50°, there is coanda effect, in this case the launch is increased by approx. 40%.

For cooling, the neck speed must not be less than the speeds given in the table below:

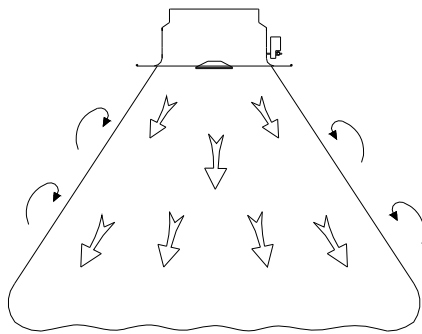
Blade angle: 67°  
Immission angle : 150°  
Radial launch



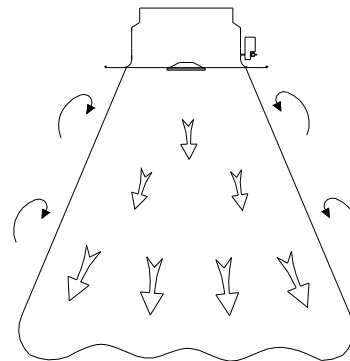
Blade angle: 45°  
Immission angle: 95°  
Radial/axial launch



Blade angle: 30°  
Immission angle: 50°  
Axial launch



Blade angle: 15°  
Immission angle: 30°  
Axial launch





## HIGH INDUCTION DIFFUSERS WITH VARIABLE GEOMETRY

KZ-CT SERIES

WITH AUTOMATIC REGULATION WITH THERMOSTATIC SPRING

### OVERVIEW :

The KZ-CT series of high induction diffusers use a thermostatic spring with form memory mechanism for the simultaneous inclination of the blades. this systems allows to better obtain an optimum air flow direction in relation to the temperature, in an automatic way.

The injected air temperature, in fact, determines the dilation or contraction of the thermostatic spring, which in turn determines the simultaneous rotation of the distribution blades reaching the ideal angel on inclination.

By choosing the KZ-CT diffuser, one can eliminate:

- electric thermostats
- electric circuit
- servomotors.

### CHARACTERISTICS :

The directional blades inject air into the room at a horizontal to vertical directional throw.

In the case of a horizontal air flow, the 6 blades divide the flow in 6 radiant jets and at the same time form a rotary motion around the axis of the diffuser. A helicoidal air flow is therefore had , capable of injecting a large volume of air in the room and mixing it with the injected air.

In the case of a vertical flow, the phenomenon of stratification is eliminated.

The rotation of the blades from the maximum to the minimum angle of inclination corresponds to a range in temperature of the injected air from 16° C to 35° C and occurs in less than 5 minutes.

The maximum and minimum angle can be determined and regulated very simply acting on the two screws having a hexagon shape.

### SELECTION SOFTWARE :

The aeraulic qualities of the KZ-CT are identical to those of the KZ diffusers as they only differ in the way in which the blades are regulated.

The company MP3 makes use of a selection program to identify the best product, the best regulation, the number and arrangement of diffusers on the basis of the room characteristics and of the thermal values required.

The multilingual program, is available inside the registered customer area of the company web site ([www.mp3-italia.it](http://www.mp3-italia.it)). The access password can be request from our Export Office.

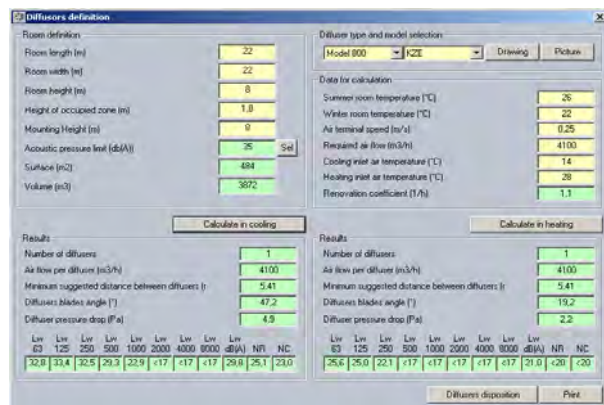
### METHOD OF REGULATION :

With the use of the selection program it is possible to determine the most appropriate model of diffuser for each application.

The software also indicates, as output data, the maximum and minimum angles of inclination of the blades equal to the heating and cooling conditions.

The plate on the side of the diffuser indicates a graduated scale for the inclination of the blades and two slidable blocks fixable in correspondence to the angle indicated by the program for the heating (red zone of the scale) and for the cooling (the blue zone of the scale).

The diffuser now regulated is ready to be installed.



Output date from the selection software



Detail of the graduate plate



## HIGH INDUCTION DIFFUSERS WITH VARIABLE GEOMETRY

KZ-CT  
SERIES

WITH AUTOMATIC REGULATION  
WITH THERMOSTATIC SPRING

### WORKING PRINCIPLE :

The angle of the blades is adjusted by rotating the central axis of the diffuser, connected to the adjustable blades with the use of cone shaped grooved wheels.

The central axis of the diffuser is connected to two springs, of which one is in thermo sensitive material and the another in steel.

The thermo sensitive spring varies its own elasticity in relation of the injected air temperature, where as the steel spring maintains constant its own characteristics.

The balance between the two springs determines the different angles of rotation of the axis and therefore the angles of inclination of the blades - in relation to the Supply air temperature.



### Ordering codes

Diffuser	Diffuser on 595x595 pannel
KZCT160	KZCT160T
KZCT200	KZCT200T
KZCT250	KZCT250T
KZCT315	KZCT315T
KZCT400	
KZCT500	
KZCT630	
KZCT800	



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### PERFORMANCE

The performances here shown allow for a maximum sizing.

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Air flow		Model	Neck speed in m/s	Blade angle 0° (heating)								Blade angle 67° (cooling)					
				Vertical throw						ΔP <sub>st</sub>	L <sub>p</sub>	Vertical throw				ΔP <sub>st</sub>	L <sub>p</sub>
				Temperature difference								Temperature difference					
				+5	+10	+15	+20	+25	+30	Pa	dB(A)	-3	-5	-10	-15	Pa	dB(A)
60	216	200	2,0	5,2	3,7	3,0	2,6	2,3	2,1	2	--	0,5	0,5	0,5	0,5	14	23
		250	1,3	4,1	2,9	2,4	2,0	1,8	1,7	1	--	0,7	0,7	0,7	0,7	5	--
80	288	200	2,7	6,7	4,7	3,8	3,3	3,0	2,7	3	20	0,5	0,5	0,5	0,5	25	32
		250	1,7	5,2	3,7	3,0	2,6	2,3	2,1	1	--	0,7	0,7	0,7	0,7	10	23
100	360	200	3,4	8,0	5,7	4,6	4,0	3,6	3,3	4	26	0,5	0,5	0,5	0,5	39	38
		250	2,1	6,2	4,4	3,6	3,1	2,8	2,6	2	--	0,7	0,7	0,7	0,7	15	29
		315	1,3	4,7	3,3	2,7	2,4	2,1	1,9	1	--	1,0	1,0	1,0	1,0	6	--
125	450	200	4,2	9,7	6,8	5,6	4,8	4,3	3,9	7	33	0,5	0,5	0,5	0,5	61	45
		250	2,7	7,5	5,3	4,3	3,8	3,4	3,1	3	20	0,7	0,7	0,7	0,7	24	36
		315	1,7	5,9	4,2	3,4	3,0	2,6	2,4	1	--	1,0	1,0	1,0	1,0	10	22
150	540	200	5,0	11,2	7,9	6,5	5,6	5,0	4,6	10	39	0,5	0,5	0,5	0,6	87	50
		250	3,2	8,8	6,2	5,1	4,4	3,9	3,6	4	25	0,7	0,7	0,7	0,7	34	42
		315	2,0	7,1	5,0	4,1	3,5	3,2	2,9	2	--	1,0	1,0	1,0	1,0	14	28
175	630	200	5,9	12,8	9,0	7,4	6,4	5,7	5,2	13	43	0,5	0,5	0,6	0,7	119	55
		250	3,7	10,0	7,0	5,7	5,0	4,4	4,1	5	29	0,7	0,7	0,7	0,7	47	46
		315	2,3	8,2	5,8	4,7	4,1	3,7	3,4	2	--	1,0	1,0	1,0	1,0	19	33
200	720	200	6,7	14,3	10,1	8,2	7,1	6,4	5,8	17	47	0,5	0,6	0,7	0,8	155	58
		250	4,2	11,1	7,9	6,4	5,6	5,0	4,5	7	34	0,7	0,7	0,7	0,7	61	50
		315	2,7	9,4	6,6	5,4	4,7	4,2	3,8	3	--	1,0	1,0	1,0	1,0	24	37
		400	1,6	6,3	4,4	3,6	3,1	2,8	2,6	1	--	1,0	1,0	1,0	1,0	10	23
250	900	250	5,3	13,4	9,5	7,7	6,7	6,0	5,5	11	40	0,7	0,7	0,7	0,8	95	56
		315	3,3	11,7	8,3	6,7	5,8	5,2	4,8	4	26	1,0	1,0	1,0	1,0	38	43
		400	2,0	7,8	5,5	4,5	3,9	3,5	3,2	2	--	1,0	1,0	1,0	1,0	15	30
300	1080	250	6,4	15,6	11,0	9,0	7,8	7,0	6,4	15	46	0,7	0,7	0,8	0,9	137	61
		315	4,0	14,0	9,9	8,1	7,0	6,3	5,7	6	31	1,0	1,0	1,0	1,0	55	49
		400	2,4	9,4	6,6	5,4	4,7	4,2	3,8	2	20	1,0	1,0	1,0	1,0	22	36
		500	1,6	6,8	4,8	3,9	3,4	3,0	2,8	1	--	1,0	1,0	1,0	1,0	9	25
350	1260	315	4,6	16,3	11,5	9,4	8,1	7,3	6,6	8	36	1,0	1,0	1,0	1,0	75	52
		400	2,9	10,9	7,7	6,3	5,5	4,9	4,5	3	24	1,0	1,0	1,0	1,0	29	40
		500	1,8	7,9	5,6	4,6	4,0	3,5	3,2	1	--	1,0	1,0	1,0	1,0	12	30
		630	1,1	5,3	3,7	3,0	2,6	2,4	2,2	1	--	1,0	1,0	1,0	1,0	5	--
400	1440	315	5,3	18,6	13,1	10,7	9,3	8,3	7,6	11	40	1,0	1,0	1,0	1,0	98	57
		400	3,3	12,5	8,8	7,2	6,2	5,6	5,1	4	28	1,0	1,0	1,0	1,0	38	44
		500	2,1	9,1	6,4	5,2	4,5	4,1	3,7	2	--	1,0	1,0	1,0	1,0	15	34
450	1620	315	6,0	20,8	14,7	12,0	10,4	9,3	8,5	14	43	1,0	1,0	1,0	1,0	124	60
		400	3,7	14,0	9,9	8,1	7,0	6,3	5,7	5	32	1,0	1,0	1,0	1,0	49	48
		500	2,3	10,2	7,2	5,9	5,1	4,6	4,2	2	--	1,0	1,0	1,0	1,0	19	38
		630	1,5	6,8	4,8	3,9	3,4	3,0	2,8	1	--	1,0	1,0	1,0	1,0	8	25





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### PERFORMANCE

Air flow		Model	Neck speed in m/s	Blade angle 0° (heating)								Blade angle 67° (cooling)					
				Vertical throw						ΔP <sub>st</sub>	L <sub>p</sub>	Vertical throw				ΔP <sub>st</sub>	L <sub>p</sub>
				Temperature difference								Temperature difference					
l/s	m <sup>3</sup> /h		+5	+10	+15	+20	+25	+30	Pa	dB(A)	-3	-5	-10	-15	Pa	dB(A)	
500	1800	315	6,6	23,1	16,4	13,4	11,6	10,3	9,4	17	47	1,0	1,0	1,0	1,0	153	63
		400	4,1	15,5	11,0	9,0	7,8	7,0	6,3	7	35	1,0	1,0	1,0	1,0	60	51
		500	2,6	11,4	8,1	6,6	5,7	5,1	4,6	3	20	1,0	1,0	1,0	1,0	24	41
		630	1,6	7,6	5,4	4,4	3,8	3,4	3,1	1	--	1,0	1,0	1,0	1,0	10	28
600	2160	400	4,9	18,6	13,2	10,8	9,3	8,3	7,6	10	40	1,0	1,0	1,0	1,0	86	56
		500	3,1	13,7	9,7	7,9	6,9	6,1	5,6	4	26	1,0	1,0	1,0	1,0	34	46
		630	2,0	9,1	6,4	5,3	4,6	4,1	3,7	2	--	1,0	1,0	1,0	1,0	14	34
700	2520	400	7,5	21,7	15,4	12,5	10,9	9,7	8,9	13	45	1,0	1,0	1,0	1,0	118	60
		500	5,7	16,1	11,4	9,3	8,0	7,2	6,6	5	30	1,0	1,0	1,0	1,1	47	51
		630	4,1	10,6	7,5	6,1	5,3	4,8	4,3	2	--	1,0	1,0	1,0	1,0	19	39
800	2880	400	8,6	24,8	17,5	14,3	12,4	11,1	10,1	17	49	1,0	1,0	1,0	1,0	154	64
		500	6,5	18,4	13,0	10,6	9,2	8,2	7,5	7	34	1,0	1,0	1,1	1,3	61	55
		630	4,7	12,2	8,6	7,0	6,1	5,4	5,0	3	--	1,0	1,0	1,0	1,0	25	43
900	3240	500	7,3	20,8	14,7	12,0	10,4	9,3	8,5	9	38	1,0	1,0	1,2	1,4	78	58
		630	5,3	13,7	9,7	7,9	6,9	6,1	5,6	3	21	1,0	1,0	1,0	1,1	32	46
1.000	3600	500	8,1	23,1	16,4	13,4	11,6	10,3	9,4	11	41	1,1	1,1	1,4	1,6	96	61
		630	5,8	15,3	10,8	8,8	7,6	6,8	6,2	4	24	1,0	1,0	1,1	1,3	39	50
1.100	3960	500	9,0	25,5	18,0	14,7	12,8	11,4	10,4	13	44	1,2	1,3	1,5	1,8	116	64
		630	6,4	16,8	11,9	9,7	8,4	7,5	6,9	5	27	1,0	1,0	1,2	1,4	47	52
1.200	4320	500	9,8	27,9	19,7	16,1	13,9	12,5	11,4	15	47	1,3	1,4	1,6	1,9	138	66
		630	7,0	18,3	13,0	10,6	9,2	8,2	7,5	6	30	1,0	1,1	1,3	1,6	56	55
1.300	4680	630	7,6	19,9	14,1	11,5	9,9	8,9	8,1	7	32	1,1	1,2	1,4	1,7	66	57
1.400	5040	630	8,2	21,4	15,2	12,4	10,7	9,6	8,8	8	35	1,2	1,3	1,6	1,8	76	59
1.500	5400	630	8,8	23,0	16,3	13,3	11,5	10,3	9,4	10	37	1,3	1,4	1,7	2,0	88	61
1.700	6120	630	9,9	26,1	18,4	15,1	13,0	11,7	9,4	13	40	1,5	1,6	1,9	2,3	112	65
1.900	6840	630	11,1	29,2	20,6	16,8	14,6	13,1	9,4	16	44	1,7	1,8	2,2	2,6	140	68

The throw values are based on a terminal speed of approx. 0.20 m/s

The pressure drop values are for a diffuser without plenum

The acoustic pressure values (LpA) have considered an acoustic attenuation of 8 dB

Values lower than 20 dB(A) are given by "--"

All the values refer to diffusers without equaliser (see correction factors)

The intermediate values can be calculated by interpolation





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Air flow		Model	Neck speed in m/s	Distance in m	Blade angle 45°						Blade angle 30°					
					Vertical throw				$\Delta P_{st}$	$L_{pA}$	Vertical throw				$\Delta P_{st}$	$L_{pA}$
					Temperature difference						Temperature difference					
l/s	m <sup>3</sup> /h				-10	-5	+5	+15	Pa	dB(A)	-10	-5	+5	+15	Pa	dB(A)
60	216	200	2,0	1,9	2,3	1,9	1,6	1,2	3	--	5,3	4,4	3,5	2,0	2	--
		250	1,3	1,7	1,7	1,4	1,2	0,9	1	--	4,0	3,3	2,7	1,6	1	--
80	288	200	2,7	2,5	3,1	2,6	2,2	1,6	6	22	7,1	5,9	4,4	2,5	4	19
		250	1,7	1,8	2,3	1,9	1,7	1,2	2	--	5,4	4,5	3,4	2,0	2	--
100	360	200	3,4	3,1	3,9	3,2	2,8	2,0	10	29	8,9	7,4	5,3	3,1	6	26
		250	2,1	2,3	2,9	2,5	2,1	1,5	4	--	6,8	5,7	4,1	2,4	2	--
		315	1,3	2,1	1,8	1,5	1,4	1,0	2	--	4,1	3,5	3,1	1,8	1	--
125	450	200	4,2	3,9	4,9	4,1	3,5	2,5	15	36	11,2	9,4	6,4	3,7	9	33
		250	2,7	2,8	3,7	3,1	2,7	1,9	6	23	8,5	7,1	5,0	2,9	4	20
		315	1,7	2,1	2,3	1,9	1,7	1,2	2	--	5,2	4,4	3,9	2,2	1	--
150	540	200	5,0	4,7	5,9	4,9	4,2	3,0	22	41	13,5	11,3	7,4	4,3	14	38
		250	3,2	3,4	4,5	3,7	3,2	2,3	9	29	10,3	8,6	5,8	3,3	5	25
		315	2,0	2,3	2,7	2,3	2,1	1,5	3	--	6,3	5,3	4,7	2,7	2	--
175	630	200	5,9	5,4	6,9	5,7	4,9	3,5	30	46	15,8	13,2	8,4	4,9	18	43
		250	3,7	4,0	5,2	4,4	3,8	2,7	12	34	12,1	10,1	6,6	3,8	7	30
		315	2,3	2,7	3,2	2,7	2,4	1,7	5	19	7,4	6,2	5,4	3,1	3	--
200	720	200	6,7	6,2	7,9	6,6	5,7	4,1	39	49	18,1	15,2	9,4	5,4	24	47
		250	4,2	4,5	6,0	5,0	4,3	3,1	15	38	13,9	11,6	7,3	4,2	9	34
		315	2,7	3,1	3,7	3,1	2,8	2,0	6	23	8,5	7,1	6,2	3,6	4	20
		400	1,6	2,7	2,2	1,8	1,7	1,2	2	--	5,0	4,2	4,1	2,4	1	--
250	900	250	5,3	5,7	7,6	6,4	5,5	3,9	24	44	17,5	14,6	8,8	5,1	15	41
		315	3,3	3,9	4,7	3,9	3,5	2,5	10	30	10,7	9,0	7,7	4,4	6	26
		400	2,0	2,7	2,7	2,3	2,1	1,5	4	--	6,3	5,3	5,1	3,0	2	--
300	1080	250	6,4	6,8	9,2	7,7	6,6	4,7	34	50	21,1	17,7	10,3	5,9	21	46
		315	4,0	4,7	5,6	4,7	4,3	3,0	14	36	13,0	10,9	9,2	5,3	9	32
		400	2,4	3,2	3,3	2,8	2,6	1,8	5	23	7,6	6,4	6,2	3,6	3	20
		500	1,6	3,5	4,4	3,7	3,4	2,4	2	--	10,1	8,5	4,4	2,6	1	--
350	1260	315	4,6	5,5	6,6	5,5	5,0	3,6	19	40	15,2	12,8	10,7	6,2	12	37
		400	2,9	3,7	3,9	3,2	3,0	2,2	7	28	8,9	7,5	7,2	4,1	5	24
		500	1,8	3,5	5,2	4,3	4,0	2,8	3	--	11,9	10,0	5,2	3,0	2	--
		630	1,1	4,1	4,0	3,3	2,9	2,1	1	--	9,2	7,7	3,5	2,0	1	--
400	1440	315	5,3	6,2	7,6	6,4	5,7	4,1	24	44	17,5	14,7	12,2	7,1	15	41
		400	3,3	4,3	4,4	3,7	3,5	2,5	10	32	10,2	8,6	8,2	4,7	6	29
		500	2,1	3,5	5,9	5,0	4,5	3,3	4	--	13,7	11,5	6,0	3,4	2	--
450	1620	315	6,0	7,0	8,6	7,2	6,5	4,6	31	48	19,8	16,6	13,7	7,9	19	44
		400	3,7	4,8	5,0	4,2	3,9	2,8	12	36	11,5	9,7	9,2	5,3	8	32
		500	2,3	3,7	6,7	5,6	5,1	3,7	5	22	15,5	13,0	6,7	3,9	3	--
		630	1,5	4,1	5,2	4,4	3,9	2,8	2	--	12,0	10,1	4,5	2,6	1	--



## HIGH INDUCTION DIFFUSERS WITH VARIABLE GEOMETRY

KZ  
SERIES

### PERFORMANCE

Air flow		Model	Neck speed in m/s	Distance in m	Blade angle 45°						Blade angle 30°					
					Vertical throw				$\Delta p_{st}$	$L_{pA}$	Vertical throw				$\Delta p_{st}$	$L_{pA}$
					Temperature difference						Temperature difference					
l/s	m <sup>3</sup> /h				-10	-5	+5	+15	Pa	dB(A)	-10	-5	+5	+15	Pa	dB(A)
500	1800	315	6,6	7,8	9,6	8,0	7,2	5,2	38	51	22,1	18,5	15,2	8,8	24	47
		400	4,1	5,4	5,6	4,7	4,3	3,1	15	39	12,8	10,8	10,2	5,9	9	35
		500	2,6	4,1	7,5	6,3	5,7	4,1	6	26	17,3	14,5	7,5	4,3	4	21
		630	1,6	4,1	5,9	4,9	4,4	3,1	2	--	13,5	11,3	5,0	2,9	2	--
600	2160	400	4,9	6,4	6,7	5,6	5,2	3,8	22	44	15,5	13,0	12,3	7,1	13	41
		500	3,1	4,9	9,1	7,6	7,0	5,0	9	31	21,0	17,6	9,0	5,2	5	27
		630	2,0	4,1	7,2	6,0	5,3	3,8	3	--	16,5	13,8	6,0	3,5	2	--
700	2520	400	5,7	7,5	7,9	6,6	6,1	4,4	29	49	18,2	15,2	14,3	8,3	18	45
		500	3,6	5,7	10,7	9,0	8,2	5,8	12	36	24,6	20,6	10,6	6,1	7	32
		630	2,3	4,1	8,5	7,1	6,3	4,5	5	21	19,5	16,3	7,0	4,0	3	--
800	2880	400	6,5	8,6	9,0	7,6	7,0	5,0	38	53	20,8	17,5	16,3	9,4	24	49
		500	4,2	6,5	12,3	10,3	9,4	6,7	15	40	28,3	23,7	12,1	7,0	10	36
		630	2,6	4,7	9,8	8,2	7,3	5,2	6	25	22,5	18,9	8,0	4,6	4	19
900	3240	500	4,7	7,3	13,9	11,7	10,6	7,6	19	44	32,1	26,9	13,7	7,9	12	39
		630	2,9	5,3	11,1	9,3	8,3	5,9	8	28	25,6	21,5	9,0	5,2	5	23
1.000	3600	500	5,2	8,1	15,5	13,0	11,9	8,5	24	47	35,8	30,0	15,2	8,8	15	42
		630	3,3	5,8	12,5	10,5	9,3	6,6	10	32	28,7	24,1	10,1	5,8	6	26
1.100	3960	500	5,7	9,0	17,2	14,4	13,1	9,4	29	49	39,6	33,2	16,8	9,7	18	45
		630	3,6	6,4	13,8	11,6	10,3	7,3	12	35	31,9	26,7	11,1	6,4	7	29
1.200	4320	500	6,2	9,8	18,8	15,8	14,4	10,3	34	52	43,3	36,3	18,4	10,6	21	48
		630	3,9	7,0	15,2	12,8	11,3	8,1	14	37	35,0	29,4	12,1	7,0	9	32
1.300	4680	630	4,2	7,6	16,6	13,9	12,3	8,8	16	40	38,2	32,0	13,1	7,6	10	34
1.400	5040	630	4,6	8,2	18,0	15,1	13,4	9,6	19	42	41,4	34,7	14,1	8,2	12	36
1.500	5400	630	4,9	8,8	19,4	16,3	14,4	10,3	22	44	44,7	37,4	15,1	8,7	14	38
1.700	6120	630	5,5	9,9	22,2	18,6	16,5	11,8	28	48	51,2	42,9	17,2	9,9	18	42
1.900	6840	630	6,2	11,1	25,1	21,0	18,6	13,3	35	51	57,8	48,4	19,2	11,1	22	46

The throw values are based on a terminal speed of approx. 0.20 m/s

The pressure drop values are for a diffuser without plenum

The acoustic pressure values (LpA) have considered an acoustic attenuation of 8 dB

Values lower than 20 dB(A) are given by "--"

All the values refer to diffusers without equaliser (see correction factors)

The intermediate values can be calculated by interpolation



## HIGH INDUCTION DIFFUSERS WITH VARIABLE GEOMETRY

### PERFORMANCE

KZ  
SERIES

CORRECTION FACTOR FOR DIFFUSER WITH EQUALIZER :

Model	Multiplying factor of throw			
	Blades angle			
	0°	30°	45°	67°
160				
200	0,70	0,78	0,85	1,00
250				
315				
400				
500				
630				
800				

Model	Multiplying factor of pressure drop			
	Blades angle			
	0°	30°	45°	67°
160				
200	4,7	3,7	2,7	1,4
250	4,9	3,8	2,7	1,4
315	5,5	4,2	3,0	1,5
400	5,7	4,4	3,1	1,5
500	5,9	4,5	3,2	1,5
630	5,9	4,5	3,2	1,5
800				

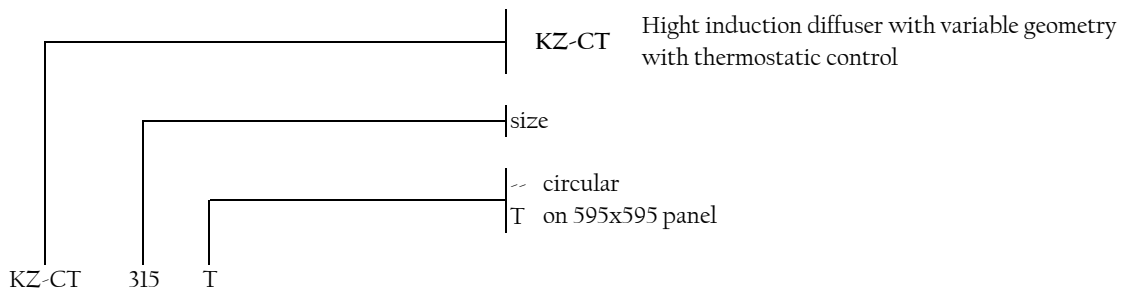
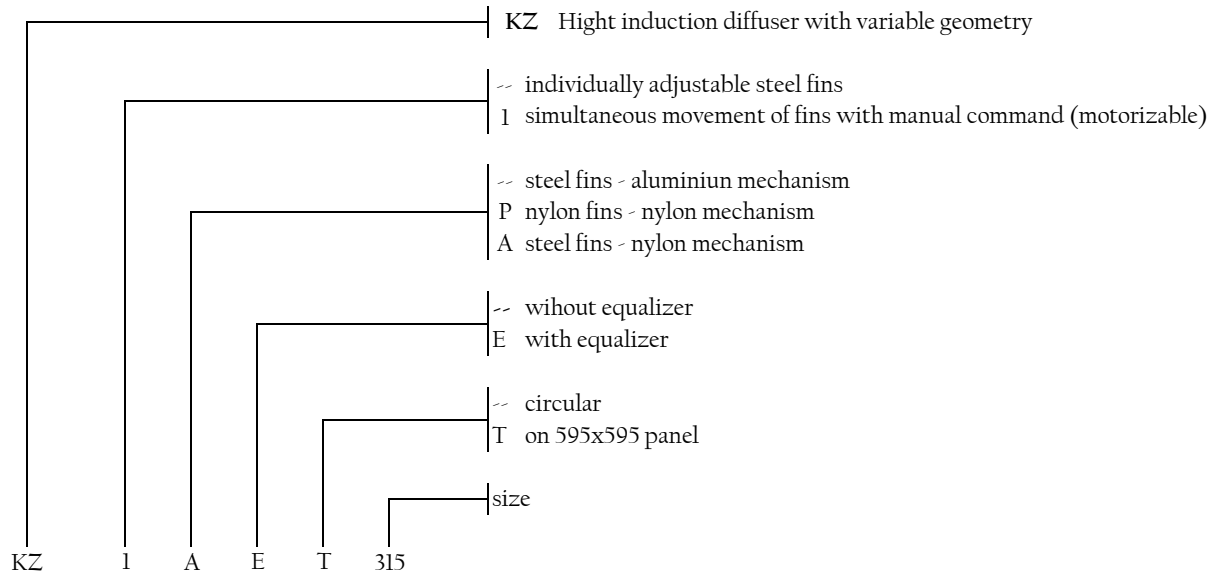
Model	Addiction factor of noise			
	Blades angle			
	0°	30°	45°	67°
160				
200	9	9	7	5
250	10	9	8	4
315	13	11	9	5
400	13	12	10	6
500	15	13	11	5
630	18	16	12	6
800				





# HIGH INDUCTION DIFFUSERS WITH VARIABLE GEOMETRY

KZ  
SERIES

## HOW TO ORDER



### Actuators for motorizable mechanisms

		
Nominal diameter	Electric proportional actuator 24 V	Electric on-off actuator 24 V
160 - 200 - 250 - 315	WM-LM24ASR WM-GDBI61.1E	WM-LM24A WM-GDBI31.1E
400 - 500	WM-NM24ASR WM-GDBI61.1E	WM-NM24A WM-GDBI31.1E
630	WM-SM24ASR WM-GDBI61.1E	WM-SM24A WM-GDBI31.1E
800	WM-SM24ASR WM-GLBI61.1E	WM-SM24A WM-GLBI31.1E



## PLENUM FOR CIRCULAR DIFFUSER

PP 60  
SERIES

### OVERVIEW

#### PLENUM :

The PP60 plenums, also named "calm cases", allow the correct entry of air in the neck of the diffuser thus ensuring that the throw of air in the room is homogenous along all the circumference of the diffuser.

#### Materials :

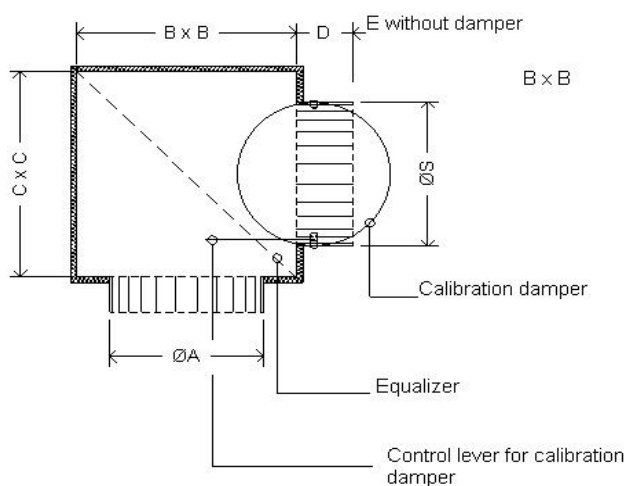
PP 60 standard plenum : galvanized steel sheet.  
Insulation: expanded polyethylene certified for the reaction to fire according to Italian class 1.

#### Versions :

Made from insulated steel sheet with expanded polyethylene, ideal for the supply of air, and in simple sheet steel normally used for air extraction.

#### Accessories:

Regulation damper and equalizing net in the connection of the plenum.



nominal neck diameter mm	A mm	B mm	C mm	D mm	E mm	N° of connections	S [mm] mm	connection and damper material
160	162	250	250	90	60	1	156	ABS (*)
200	202	300	300	90	60	1	196	ABS (*)
250	252	350	350	90	60	1	246	ABS (*)
315	317	400	400	90	60	1	311	steel
400	402	500	500	90	90	1	396	steel
500	503	600	600	100	100	1	496	steel
630	633	730	730	100	100	1	600	steel
800	803	900	900	90	90	2	396x2	steel

(\*) steel on request



# PLENUM FOR CIRCULAR DIFFUSER

PP 60  
SERIES

## HOW TO ORDER

