



**CHA**

Slot Diffuser

## Description

The CHA type diffusers are designed for ceiling applications. They can be used for supply or extract air

## Properties

The CHA type diffusers have adjustable blades. Due to their blade characteristics, they have variable net areas. They are suitable for horizontal and vertical throws. These diffusers are recommended for use with ceiling heights up to 4 m., with a supply air temperature difference of (+/-) 10°C.

## Materials

The frame and the blades are manufactured from ETIAL-60 norm aluminium profiles.

## Surface Treatment

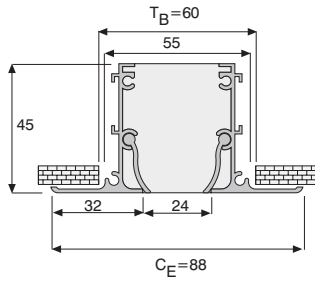
The surfaces of the diffusers are first cleaned, then treated with chromating process; after which, are painted electrostatically, with 20% gloss RAL 9010 (white) as standard. Other colours are also available upon request. The blades are black eloxal treated.

## Accessories

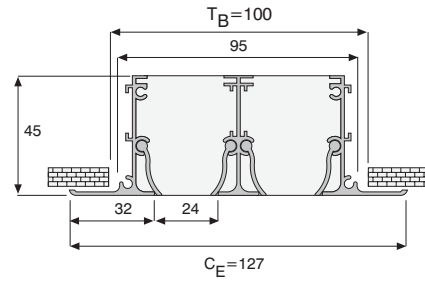
### Plenum Box

The plenum box is used to achieve optimum throw characteristics. It has the inlet at one side. A damper is installed at the inlet, which can be operated internally, through a slot. The plenum boxes are made from 0.6 mm thick galvanized steel sheets and have 4 hanging brackets on their body. Optionally, a 6 mm thick acoustic foam can be laid inside the plenum box.

## Dimensions (mm)



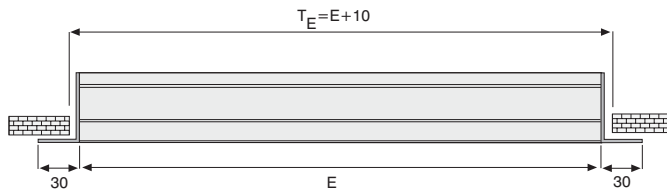
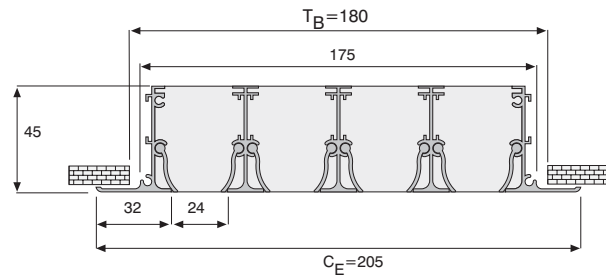
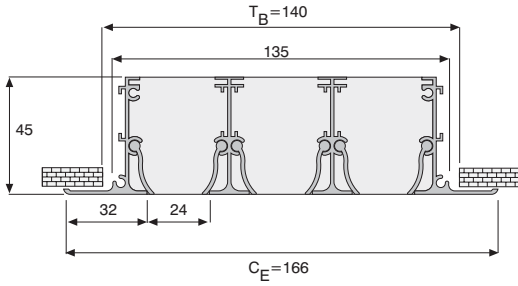
1 Slot



2 Slots

3 Slots

4 Slots

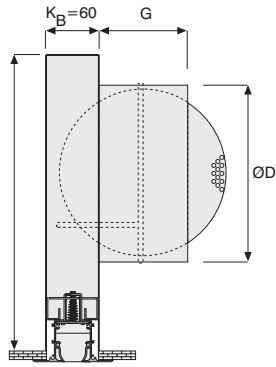


## Standard Dimensions (mm)

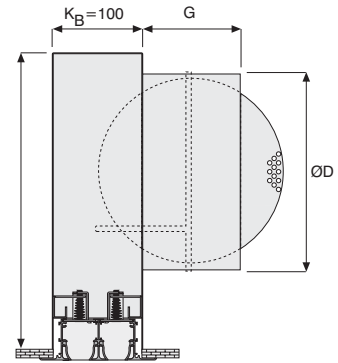
1 Slot	E	2 Slots	E	3 Slots	E	4 Slots	E
	500		500		500		500
	600		600		600		600
	700		700		700		700
	800		800		800		800
	900		900		900		900
	1000		1000		1000		1000
	1100		1100		1100		1100
	1200		1200		1200		1200
	1300		1300		1300		1300
1400	1400	1400	1400				
1500	1500	1500	1500				

## Plenum Box Dimensions (mm)

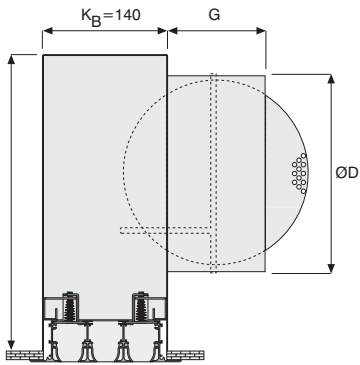
1 Slot



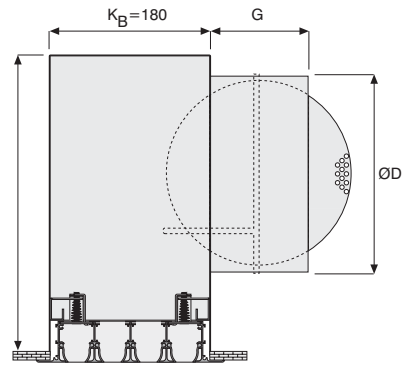
2 Slots



3 Slots



4 Slots

Plenum Box length  $K_E = E$ 

## Standard Dimensions

1 Slot	E	H	ØD	G
	500	260	142 x 1	80
	600	260	142 x 1	80
	700	260	170 x 1	80
	800	260	170 x 1	80
	900	260	170 x 1	80
	1000	260	142 x 2	80
	1100	260	142 x 2	80
	1200	260	150 x 2	80
	1300	260	150 x 2	80
	1400	260	170 x 2	80
	1500	260	170 x 2	80

2 Slots	E	H	ØD	G
	500	310	170 x 1	80
	600	310	193 x 1	80
	700	310	219 x 1	110
	800	310	219 x 1	110
	900	310	193 x 2	80
	1000	310	193 x 2	80
	1100	310	193 x 2	80
	1200	310	193 x 2	80
	1300	310	193 x 2	80
	1400	310	219 x 2	110
	1500	310	219 x 2	110

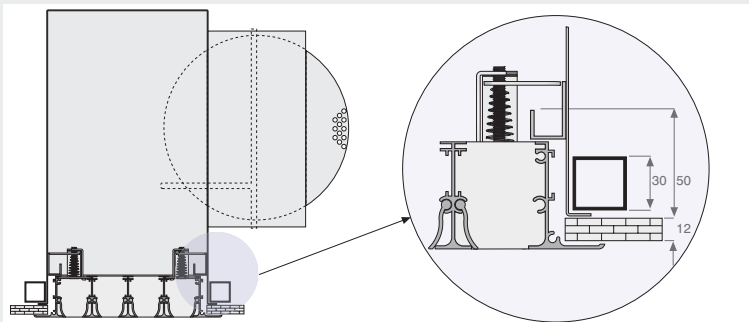
3 Slots	E	H	ØD	G
	500	315	193 x 1	80
	600	315	219 x 1	110
	700	315	193 x 2	80
	800	315	193 x 2	80
	900	315	193 x 2	80
	1000	315	219 x 2	110
	1100	315	219 x 2	110
	1200	315	219 x 2	110
	1300	315	219 x 2	110
	1400	315	219 x 2	110
	1500	315	224 x 2	110

4 Slots	E	H	ØD	G
	500	340	219 x 1	110
	600	340	193 x 2	80
	700	340	193 x 2	80
	800	340	219 x 2	110
	900	340	219 x 2	110
	1000	340	244 x 2	80
	1100	340	244 x 2	110
	1200	340	244 x 2	110
	1300	340	244 x 2	110
	1400	340	244 x 2	110
	1500	340	244 x 2	110

## Installation

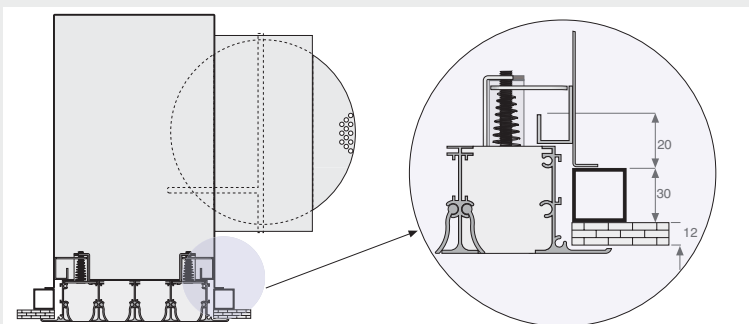
### Type A

This type is suitable for ceiling thicknesses of 12-22 mm. For other thicknesses, please contact us.

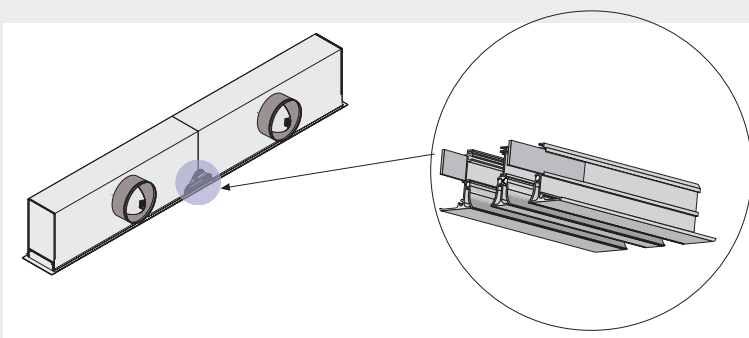


### Type B

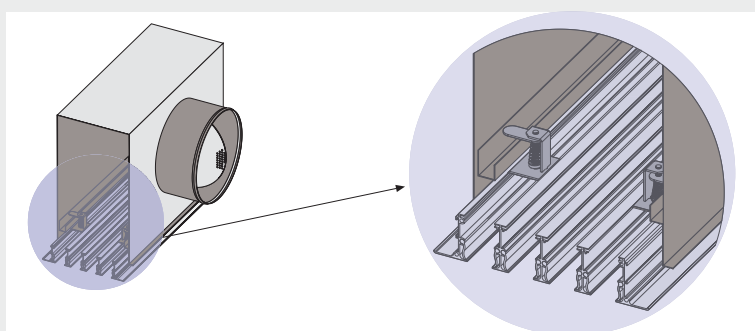
This type is suitable for ceiling thicknesses of 12 - 22 mm and carrying member thickness of 30 mm (total max.52 mm ). For other thicknesses, please contact us.



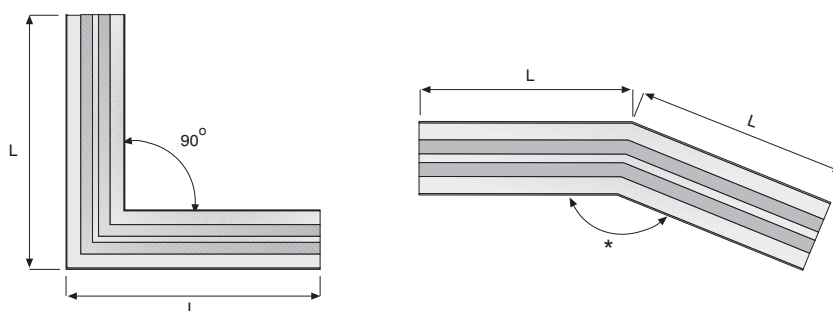
### Adjacent Installation of Diffusers



### Detail of Concealed Fixing

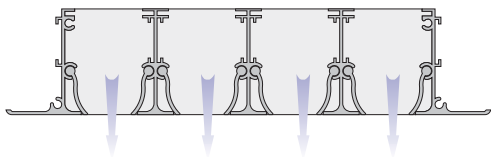


### Specially Mitered Parts

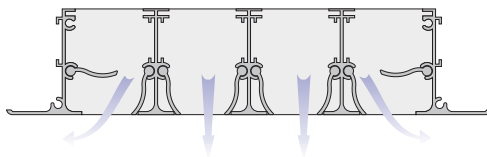


\* Please advise

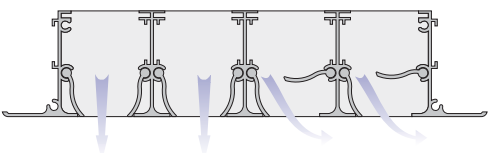
Vertical Supply



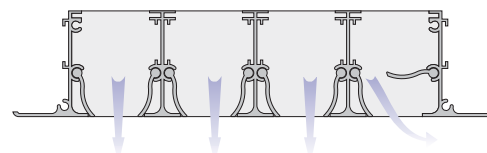
Multi-way Supply



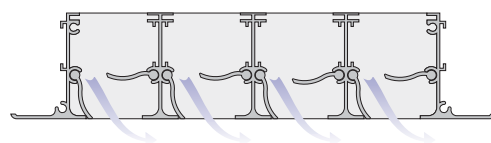
Multi-way Supply



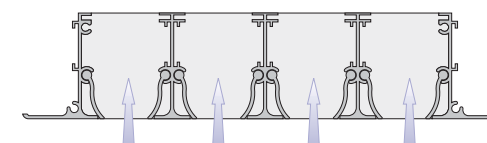
Multi-way Supply



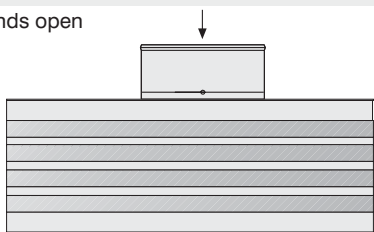
One-way Supply



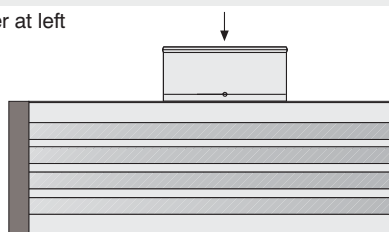
Extract



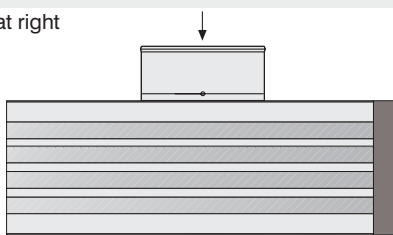
Both ends open



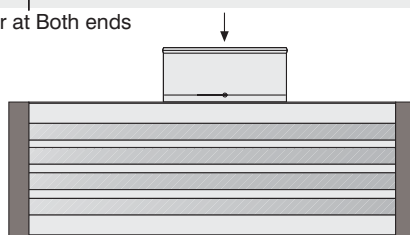
Cover at left



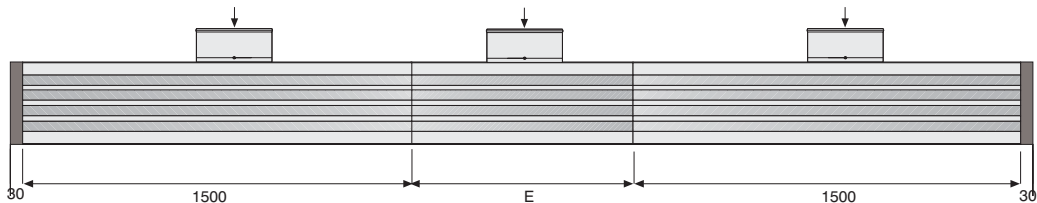
Cover at right



Cover at Both ends

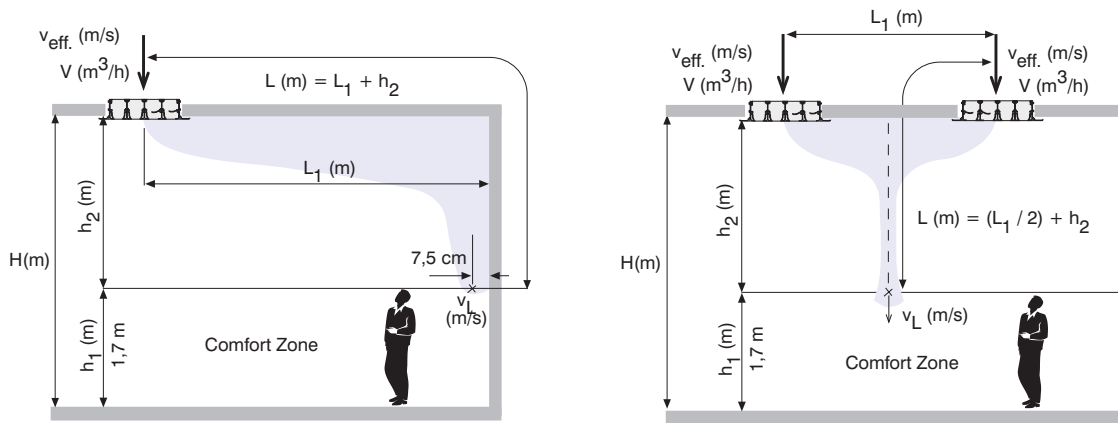


Adjacent Installation



\* Dimension  $E_{\max} = 1500\text{mm}$

## Nomenclature



<b>L<sub>1</sub></b>	Distance between diffuser centres or diffuser centre and wall. (m)
<b>h<sub>1</sub></b>	Comfort zone height (m)
<b>h<sub>2</sub></b>	Distance between a diffuser and comfort zone (m)
<b>v<sub>eff</sub></b>	Effective outlet velocity (m/s)
<b>v<sub>L</sub></b>	Velocity of core in comfort zone
<b>Δt<sub>0</sub></b>	Difference between supply air and room temperature (°C)
<b>Δt<sub>L</sub></b>	Difference between core and comfort zone temperature (°C)
<b>L</b>	Throw distance (m)
<b>V</b>	Air flow rate (m <sup>3</sup> /h)
<b>H</b>	Room height (m)
<b>S</b>	Sound power level dB(A)

To achieve "Coanda effect", the outlet velocity must be greater than 2m/s. The general comfort conditions require that the sound power level is below 40 dB(A). The height of the comfort zone is taken as 1.70m above the floor. It is important that 0.25 m/s core velocity is not exceeded in this zone. On the following pages, there are two groups of tables, namely, "With Ceiling Effect" and "Vertical or Wall Throw".

### For Tables "With Ceiling Effect":

These tables are valid for one way horizontal throw and 100% open damper position. For 2+ slotted diffusers, if throw is divided into different directions, then data must be analysed by looking at the common number of slots

in one same direction

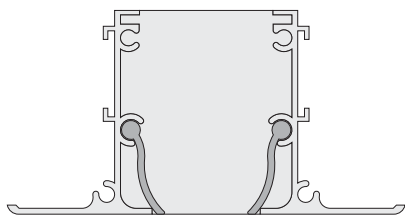
### For Tables "Vertical or Wall Throw":

These tables are valid for one way horizontal throw and 100% open damper position. The throw distances are given for isothermal throws. For different temperatures, the throws that are read from the tables must be multiplied by the factors in the table below:

No. of slots	Temperature difference between supply air and room (°C)						
	-15	-10	-5	0	+5	+10	+15
1	1,55	1,30	1,15	1,00	0,85	0,75	0,65
2	2,00	1,60	1,25	1,00	0,80	0,65	0,50
3	2,45	1,85	1,35	1,00	0,75	0,55	0,40
4	2,70	1,95	1,40	1,00	0,70	0,50	0,35

## 1 Slot

With Ceiling Effect



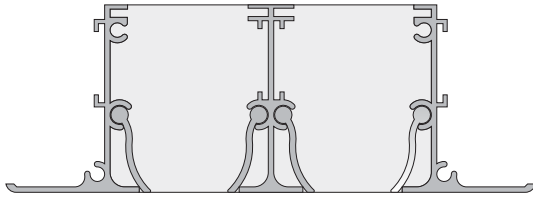
KESKlima

Dimensions E (mm)	Flow Rate V (m <sup>3</sup> /h)	Throw , L (m) v <sub>L</sub> = 0,25 m/s	Pressure loss ΔP (Pa)	Sound power level S (dB(A))
500	70	1,00	18	24
	95	2,80	30	31
	120	3,60	44	37
	145	4,50	60	40
	170	5,60	82	45
800	110	1,30	18	25
	150	3,40	30	32
	190	4,40	44	38
	230	5,50	60	41
	270	6,80	82	46
1000	140	1,50	18	27
	190	4,00	30	34
	240	5,20	44	40
	290	6,50	60	43
	340	8,00	82	48
1100	155	1,55	18	27
	210	4,10	30	34
	265	5,35	44	40
	320	6,70	60	43
	375	8,20	82	48
1200	170	1,60	18	28
	230	4,25	30	35
	290	5,50	44	41
	350	6,90	60	44
	410	8,50	82	49
1300	180	1,60	18	28
	250	4,30	30	35
	310	5,60	44	41
	380	7,00	60	44
	440	8,60	82	49
1400	200	1,70	18	29
	270	4,50	30	36
	340	5,80	44	42
	410	7,30	60	45
	480	8,90	82	50
1500	210	1,70	18	29
	285	4,60	30	36
	360	6,00	44	42
	435	7,50	60	45
	510	9,20	82	50



2 Slots

With Ceiling Effect



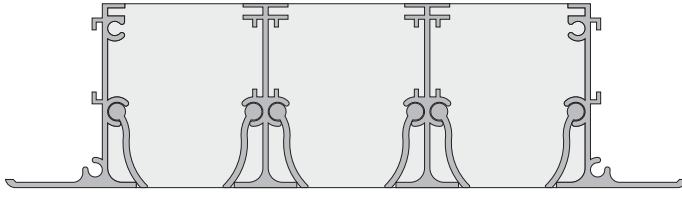
KESKLIMA

Dimensions E (mm)	Flow Rate V (m <sup>3</sup> /h)	Throw , L (m) v <sub>L</sub> =0,25 m/s	Pressure loss ΔP (Pa)	Sound power level S (dB(A))
500	145	3,15	17	28
	185	4,25	29	33
	225	5,60	45	39
	265	6,30	55	52
	305	7,35	70	67
800	240	3,80	17	29
	300	5,20	29	34
	360	6,80	45	40
	420	7,65	55	53
	480	8,90	70	68
1000	290	4,50	17	31
	370	6,10	29	36
	450	8,00	45	42
	530	9,00	55	45
	610	10,50	70	48
1100	320	4,60	17	31
	410	6,20	29	36
	500	8,20	45	42
	590	9,20	55	45
	680	10,80	70	48
1200	350	4,70	17	32
	445	6,40	29	37
	540	8,45	45	43
	635	9,50	55	46
	730	11,10	70	49
1300	375	4,90	17	32
	480	6,60	29	37
	585	8,70	45	43
	690	9,80	55	46
	795	11,40	70	49
1400	410	5,00	17	33
	520	6,80	29	38
	630	8,90	45	44
	740	10,00	55	47
	850	11,70	70	50
1500	435	5,10	17	33
	555	7,00	29	38
	675	9,20	45	44
	795	10,30	55	47
	915	12,00	70	50

## Technical Data

3 Slots

With Ceiling Effect

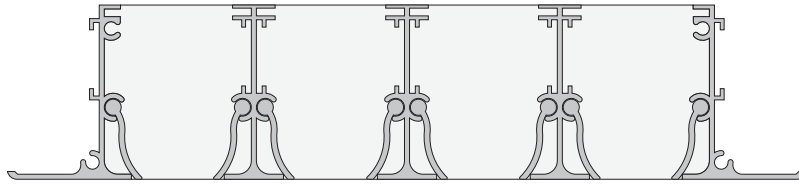


KESKLIMA

Dimensions E (mm)	Flow Rate V (m <sup>3</sup> /h)	Throw , L (m) $v_L=0,25$ m/s	Pressure loss $\Delta P$ (Pa)	Sound power level S (dB(A))
500	215	4,20	17	30
	260	5,25	26	34
	305	6,20	35	38
	350	6,90	45	40
	395	8,30	60	45
800	350	5,10	17	31
	420	6,30	26	35
	490	7,50	35	39
	560	8,40	45	41
	630	10,00	60	46
1000	430	6,00	17	33
	520	7,50	26	37
	610	8,90	35	41
	700	9,90	45	43
	790	11,90	60	48
1100	470	6,10	17	33
	570	7,70	26	37
	670	9,10	35	41
	770	10,20	45	43
	870	12,20	60	48
1200	525	6,30	17	34
	630	7,90	26	38
	735	9,40	35	42
	840	10,40	45	44
	945	12,50	60	49
1300	565	6,50	17	34
	680	8,10	26	38
	795	9,70	35	42
	910	10,70	45	44
	1025	12,90	60	49
1400	605	6,70	17	35
	730	8,40	26	39
	855	9,90	35	43
	980	11,00	45	45
	1105	13,20	60	50
1500	645	6,90	17	35
	780	8,60	26	39
	915	10,20	35	43
	1050	11,30	45	45
	1185	13,50	60	50

4 Slots

With Ceiling Effect



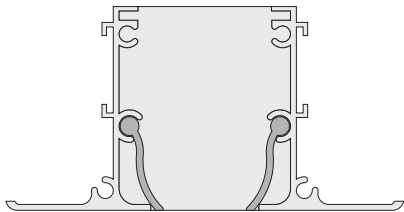
KESKLIMA

Dimensions E (mm)	Flow Rate V (m <sup>3</sup> /h)	Throw , L (m) v <sub>L</sub> = 0,25 m/s	Pressure loss ΔP (Pa)	Sound power level S (dB(A))
500	290	5,00	17	27
	350	6,20	24	35
	415	7,20	35	39
	475	8,10	42	42
	540	8,90	47	45
800	460	6,10	17	28
	560	7,50	24	36
	660	8,80	35	40
	760	9,80	42	43
	860	10,80	47	46
1000	575	7,20	17	30
	700	8,90	24	38
	825	10,40	35	42
	950	11,60	42	45
	1075	12,80	47	48
1100	635	7,40	17	30
	770	9,10	24	38
	910	10,70	35	42
	1045	11,90	42	45
	1185	13,10	47	48
1200	690	7,60	17	31
	840	9,40	24	39
	990	11,00	35	43
	1140	12,30	42	46
	1290	13,50	47	49
1300	750	7,80	17	31
	910	9,70	24	39
	1075	11,30	35	43
	1235	12,60	42	46
	1400	13,90	47	49
1400	805	8,00	17	32
	980	9,90	24	40
	1155	11,60	35	44
	1330	12,90	42	47
	1505	14,30	47	50
1500	860	8,20	17	32
	1050	10,20	24	40
	1235	11,90	35	44
	1425	13,30	42	47
	1610	14,60	47	50

## Technical Data

## 1 Slot

Vertical or wall throw



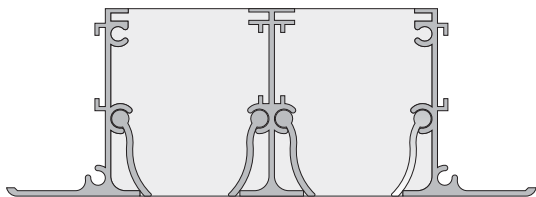
KESKlima

Refer to table on page 7 for corrections

Dimensions E (mm)	Flow Rate V (m <sup>3</sup> /h)	Throw , L (m) $v_L=0,25$ m/s	Pressure loss $\Delta P$ (Pa)	Sound power level S (dB(A))
500	70	1,30	17	22
	95	1,90	30	32
	120	2,50	46	37
	145	3,20	60	40
	170	3,90	84	45
800	110	1,60	17	23
	150	2,35	30	33
	190	3,15	46	38
	230	3,90	60	41
	270	4,70	84	46
1000	140	1,90	17	25
	190	2,80	30	35
	240	3,70	46	40
	290	4,60	60	43
	340	5,60	84	48
1100	155	1,90	17	25
	210	2,85	30	35
	265	3,80	46	40
	320	4,70	60	43
	375	5,70	84	48
1200	170	2,00	17	26
	230	2,90	30	36
	290	3,90	46	41
	350	4,80	60	44
	410	5,90	84	49
1300	180	2,05	17	27
	250	3,05	30	37
	310	4,00	46	42
	380	5,00	60	45
	440	6,00	84	50
1400	200	2,10	17	28
	270	3,10	30	38
	340	4,10	46	43
	410	5,15	60	46
	480	6,20	84	51
1500	210	2,15	17	28
	285	3,10	30	38
	360	4,10	46	43
	435	5,15	60	46
	510	6,20	84	51

2 Slots

Vertical or wall throw



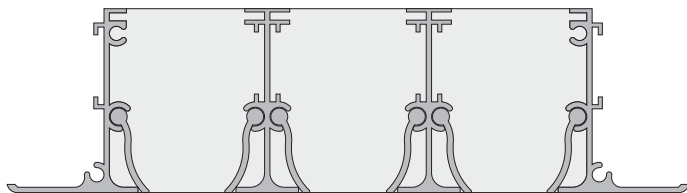
KESKLIMA

Refer to table on page 7 for corrections

Dimensions E (mm)	Flow Rate V (m <sup>3</sup> /h)	Throw , L (m) v <sub>L</sub> =0,25 m/s	Pressure loss ΔP (Pa)	Sound power level S (dB(A))
500	145	2,20	16	24
	185	3,00	27	29
	225	3,80	44	34
	265	4,40	52	37
	305	5,00	68	40
800	240	2,70	16	25
	300	3,60	27	30
	360	4,60	44	35
	420	5,30	52	38
	480	6,10	68	41
1000	290	3,20	16	27
	370	4,30	27	32
	450	5,50	44	37
	530	6,30	52	40
	610	7,20	68	43
1100	320	3,30	16	27
	410	4,40	27	32
	500	5,60	44	37
	590	6,40	52	40
	680	7,40	68	43
1200	350	3,35	16	28
	445	4,50	27	33
	540	5,80	44	38
	635	6,60	52	41
	730	7,60	68	44
1300	375	3,50	16	29
	480	4,60	27	34
	585	6,00	44	39
	690	6,80	52	42
	795	7,80	68	45
1400	410	3,50	16	30
	520	4,80	27	35
	630	6,10	44	40
	740	7,00	52	43
	850	8,00	68	46
1500	435	3,60	16	30
	555	4,80	27	35
	675	6,00	44	40
	795	7,00	52	43
	915	8,00	68	46

## 3 Slots

Vertical or wall throw



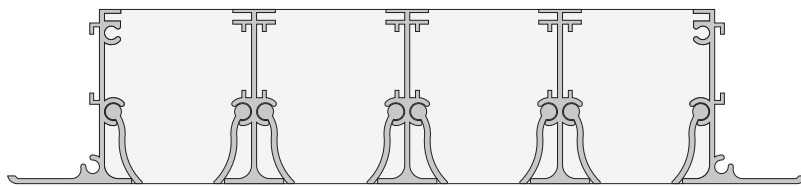
KESKLIMA

Refer to table on page 7 for corrections

Dimensions E (mm)	Flow Rate V (m <sup>3</sup> /h)	Throw , L (m) $v_L=0,25$ m/s	Pressure loss $\Delta P$ (Pa)	Sound power level S (dB(A))
500	215	3,00	17	31
	260	3,60	25	35
	305	4,30	36	39
	350	4,90	45	41
	395	5,40	55	43
800	350	3,60	17	32
	420	4,40	25	36
	490	5,20	36	40
	560	5,95	45	42
	630	6,60	55	44
1000	430	4,30	17	34
	520	5,20	25	38
	610	6,20	36	42
	700	7,00	45	44
	790	7,80	55	46
1100	470	4,40	17	34
	570	5,30	25	38
	670	6,30	36	42
	770	7,20	45	44
	870	8,00	55	46
1200	525	4,50	17	35
	630	5,50	25	39
	735	6,50	36	43
	840	7,40	45	45
	945	8,20	55	47
1300	565	4,60	17	36
	680	5,60	25	40
	795	6,70	36	44
	910	7,60	45	46
	1025	8,50	55	48
1400	605	4,80	17	37
	730	5,80	25	41
	855	6,90	36	45
	980	7,80	45	47
	1105	8,70	55	49
1500	645	4,90	17	37
	780	5,90	25	41
	915	7,10	36	45
	1050	8,00	45	47
	1185	8,90	55	49

4 Slots

Vertical or wall throw



KESKLIMA

Refer to table on page 7 for corrections

Dimensions E (mm)	Flow Rate V (m <sup>3</sup> /h)	Throw, L (m) v <sub>L</sub> =0,25 m/s	Pressure loss ΔP (Pa)	Sound power level S (dB(A))
500	290	3,50	17	32
	350	4,30	24	36
	415	5,00	35	39
	475	5,60	45	42
	540	6,20	53	44
800	460	4,30	17	33
	560	5,20	24	37
	660	6,10	35	40
	760	6,80	45	43
	860	7,50	53	45
1000	575	5,10	17	35
	700	6,20	24	39
	825	7,20	35	42
	950	8,00	45	45
	1075	8,90	53	47
1100	635	5,20	17	35
	770	6,30	24	39
	910	7,40	35	42
	1045	8,20	45	45
	1185	9,10	53	47
1200	690	5,40	17	36
	840	6,50	24	40
	990	7,60	35	43
	1140	8,40	45	46
	1290	9,40	53	48
1300	750	5,50	17	37
	910	6,70	24	41
	1075	7,80	35	44
	1235	8,70	45	47
	1400	9,60	53	49
1400	805	5,70	17	38
	980	6,90	24	42
	1155	8,00	35	45
	1330	8,90	45	48
	1505	9,90	53	50
1500	860	5,80	17	38
	1050	7,10	24	42
	1235	8,20	35	45
	1425	9,20	45	48
	1610	10,20	53	50

## Technical Data

Temperature gradients along the throw path are read from the table below, depending on the  $\Delta t_0$ ,  $\Delta t_L$  and throw length values. The temperature of the core at L metres from the diffuser, differs from the room temperature by the value read from the tables. The difference is plus in

heating and minus in cooling. The less the difference, the better the comfort conditions.

With Ceiling Effect **Temperature gradients along the throw path  $\Delta t_L$  (°C) Values**

No. of slots	Throw (L) m	$\Delta t_0$ (°C)					
		4	6	8	10	12	14
1	1	0,88	1,32	1,76	2,20	2,64	3,08
	2	0,56	0,84	1,12	1,40	1,68	1,96
	3	0,36	0,54	0,72	0,90	1,08	1,26
	4	0,24	0,36	0,48	0,60	0,72	0,84
	5	0,18	0,27	0,36	0,45	0,54	0,63
	6	0,14	0,20	0,27	0,34	0,41	0,48
	7	0,12	0,18	0,24	0,30	0,36	0,42
	8	0,10	0,15	0,20	0,25	0,30	0,35
	9	0,08	0,12	0,16	0,20	0,24	0,28
	10	0,06	0,09	0,12	0,15	0,18	0,21
2	1	1,40	2,10	2,80	3,50	4,20	4,90
	2	0,96	1,44	1,92	2,40	2,88	3,36
	3	0,72	1,08	1,44	1,80	2,16	2,52
	4	0,52	0,78	1,04	1,30	1,56	1,82
	5	0,42	0,63	0,84	1,05	1,26	1,47
	6	0,34	0,51	0,68	0,85	1,02	1,19
	7	0,28	0,42	0,56	0,70	0,84	0,98
	8	0,24	0,36	0,48	0,60	0,72	0,84
	9	0,20	0,30	0,40	0,50	0,60	0,70
	10	0,18	0,26	0,35	0,44	0,53	0,62
3	1	2,00	3,00	4,00	5,00	6,00	7,00
	2	1,20	1,80	2,40	3,00	3,60	4,20
	3	0,96	1,44	1,92	2,40	2,88	3,36
	4	0,80	1,20	1,60	2,00	2,40	2,80
	5	0,64	0,96	1,28	1,60	1,92	2,24
	6	0,56	0,84	1,12	1,40	1,68	1,96
	7	0,48	0,72	0,96	1,20	1,44	1,68
	8	0,40	0,60	0,80	1,00	1,20	1,40
	9	0,36	0,54	0,72	0,90	1,08	1,26
	10	0,28	0,42	0,56	0,70	0,84	0,98
4	1	2,52	3,78	5,04	6,30	7,56	8,82
	2	1,60	2,40	3,20	4,00	4,80	5,60
	3	1,20	1,80	2,40	3,00	3,60	4,20
	4	0,96	1,44	1,92	2,40	2,88	3,36
	5	0,84	1,26	1,68	2,10	2,52	2,94
	6	0,72	1,08	1,44	1,80	2,16	2,52
	7	0,60	0,90	1,20	1,50	1,80	2,10
	8	0,56	0,84	1,12	1,40	1,68	1,96
	9	0,48	0,72	0,96	1,20	1,44	1,68
	10	0,42	0,63	0,84	1,05	1,26	1,47



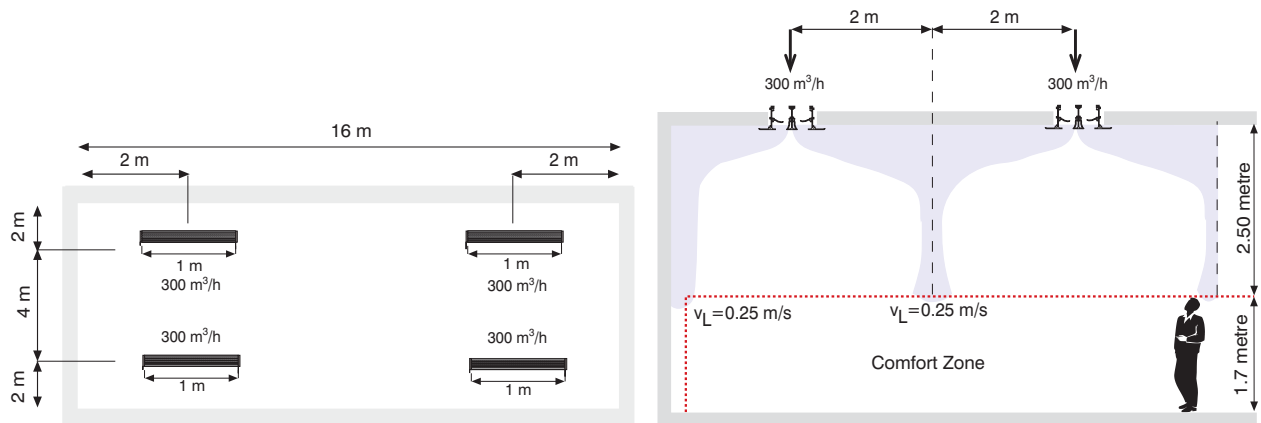
## Technical Data

Temperature gradients along the throw path are read from the table below, depending on the  $\Delta t_o$ ,  $\Delta t_L$  and throw length values. The temperature of the core at L metres from the diffuser, differs from the room temperature by the value read from the tables. The difference is plus in

heating and minus in cooling. The less the difference, the better the comfort conditions.

Vertical or wall throw Temperature gradients along the throw path  $\Delta t_L$  (°C) Values

No. of slots	Throw (L) m	$\Delta t_o$ (°C)					
		4	6	8	10	12	14
1	0,7	0,80	1,20	1,60	2,00	2,40	2,80
	1.0	0,60	0,90	1,20	1,50	1,80	2,10
	1,5	0,44	0,66	0,88	1,10	1,32	1,54
	2.0	0,34	0,52	0,69	0,86	1,03	1,20
	3.0	0,24	0,36	0,48	0,60	0,72	0,84
	4.0	0,16	0,24	0,32	0,40	0,48	0,56
	5.0	0,12	0,18	0,24	0,30	0,36	0,42
2	0,7	1,04	1,56	2,08	2,60	3,12	3,64
	1.0	0,96	1,44	1,92	2,40	2,88	3,36
	1,5	0,80	1,20	1,60	2,00	2,40	2,80
	2.0	0,64	0,96	1,28	1,60	1,92	2,24
	3.0	0,44	0,66	0,88	1,10	1,32	1,54
	4.0	0,34	0,51	0,68	0,85	1,02	1,19
	5.0	0,28	0,42	0,56	0,70	0,84	0,98
3	0,7	1,20	1,80	2,40	3,00	3,60	4,20
	1.0	1,12	1,68	2,24	2,80	3,36	3,92
	1,5	0,96	1,44	1,92	2,40	2,88	3,36
	2.0	0,88	1,32	1,76	2,20	2,64	3,08
	3.0	0,60	0,90	1,20	1,50	1,80	2,10
	4.0	0,48	0,72	0,96	1,20	1,44	1,68
	5.0	0,40	0,60	0,80	1,00	1,20	1,40
4	0,7	1,40	2,10	2,80	3,50	4,20	4,90
	1.0	1,20	1,80	2,40	3,00	3,60	4,20
	1,5	1,04	1,56	2,08	2,60	3,12	3,64
	2.0	0,96	1,44	1,92	2,40	2,88	3,36
	3.0	0,80	1,20	1,60	2,00	2,40	2,80
	4.0	0,60	0,90	1,20	1,50	1,80	2,10
	5.0	0,52	0,78	1,04	1,30	1,56	1,82



### Example:

Air at 1200 m<sup>3</sup>/h, is to be supplied into a room with dimensions 16 x 8 m, and a height of 4.20 m. The supply air is 8°C below room temperature and 4 diffusers will be used. Determine diffuser spacings so that the core velocity in comfort zone is below 0.25 m/s.

### Solution:

- 1) Diffusers are placed on the ceiling plan symmetrically.
- 2) Air flow rate per diffuser is calculated as  $1200 / 4 = 300$  m<sup>3</sup>/h.
- 3) Calculation of path length to the comfort zone:  
Minimum distance:  $L = 2.0 + 2.50 = 4.50$  m
- 4) From the tables on pages 8-9-10-11, the most suitable size is found as 1000 mm x 2 slots; for 300 m<sup>3</sup>/h and 4.50 m throw.
- 5) From the same table, pressure loss is calculated, by interpolation, as 18.5 Pa and sound power level as 31 dB(A).
- 6) From the table on page 16; for 1000 mm x 2 slots size,  $\Delta t_o = 8^\circ\text{C}$ , and 4.50 m throw,  $\Delta t_L$  is found by interpolation as  $0.94^\circ\text{C}$ .

## Specification Text

Air diffuser for ceiling installation. The diffuser will be manufactured from ETIAL-60 norm aluminium profiles, and chromated. After chromating, will be painted to ordered request with electrostatic powder paint and a minimum thickness of 60  $\mu$ . The diffuser will have black eloxal treated adjustable blades. The plenum box will be manufactured from 0.6 mm galvanized steel sheets by seams. There will be 4 hanging brackets on the box.

The entry spigot will be equipped with a volume control damper, operated internally and through a slot. A layer of 6-mm thick acoustic foam (according to BS 476 Part 6 & 7 Class 0) will be installed inside the plenum box.

## Order Code

Model		<b>CHA.32.AA.3 0-1000 x 4-9010</b>	
Frame	32 mm	E (mm) x No.of slots Refer to page 3	Indicate RAL colour code
Accessories	AA..Extract(without blades) AK..Supply (with blade) SA..Extract ,with damper SK..Supply ,with damper		
Installation	3.....Concealed fixing		
Installation Accessories	0.....Without installation subframe 1.....with installation subframe		
		<b>Standard Dimensions</b>	<b>Colour Code</b>

## Plenum Box Order Code

Model		<b>PLA.30.S B.01- 950 x 175 x 310 x 219 x 2</b>	
Installation	10...With screws 30...Concealed fixing	Please indicate if special dimensions are requested $K_E \times K_B \times H \times \text{ØD (mm)} \times s$ (no.of inlet spigots)	<b>Plenum Box Dimensions</b>
Box inlet	S ....Side inlet		
Spigot Damper	A ...Without damper C ....Internally operated		
Insulation	00...Without insulation 01...With acoustic insulation		