

Circular diffuser OD-10

Version HIDDEN Mod. OD-10IA-CRL

Application

Circular diffusers OD-10 are designed for ceiling installation in rooms with heights from 2.6 to 4 m and temperature difference between supply and room air of 10K.

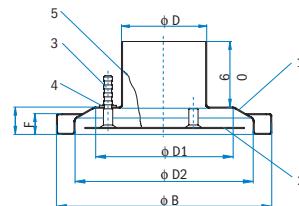
By rotating the central disc, the discharge angle can be adjusted horizontally or vertically.

Description

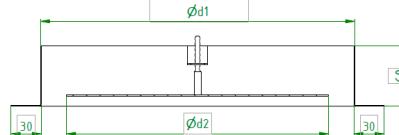
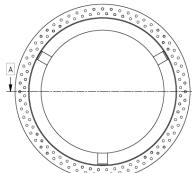
Diffuser housing is made of sheet aluminium, valve disc of pickled sheet steel. Diffuser is powder coated in RAL 9010 or upon customer's wish.

Component parts

1. Housing with connection valve
2. Disc control element
3. Spring
4. Holder
5. Safety rope



• The HIDDEN version is only available for the sizes 200-250-315



Size	d1	d2
1/200	313	261
2/250	398	325
3/315	448	370

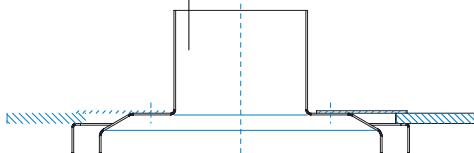
Size	ΦB	ΦD	ΦD1	ΦD2	C	F	A _{ef} s = -5	A _{ef} s = +5
80	197	78	128	163	25	20	0.00435	0.00498
100	215	98	146	181	25	20	0.00486	0.00556
125	249	123	180	215	25	20	0.00582	0.00666
160	308	158	204.5	264	35	25	0.01173	0.01236
200			313	261		60	0.01437	0.01514
250			398	325		60	0.02434	0.02507
315			448	448		60	0.03034	0.03119

A_{ef} Effective area (m²)

Installation

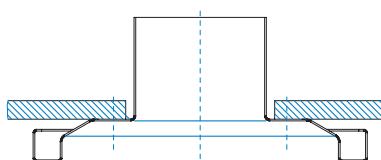
OD-10/1

- Installation with fastening section



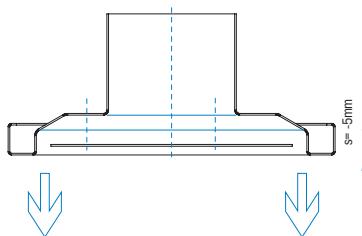
OD-10/2

- Direct installation in the ceiling width screws

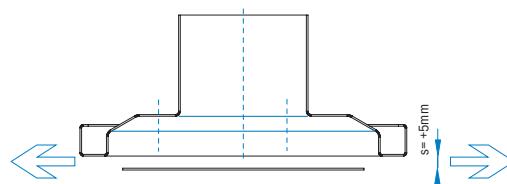


Set-up of the next valve disc

- Air jet direction by heating



- Air jet direction by cooling



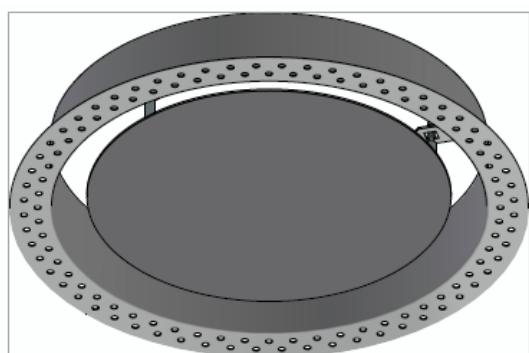
• Version HIDDEN Mod. OD-10IA-CRL

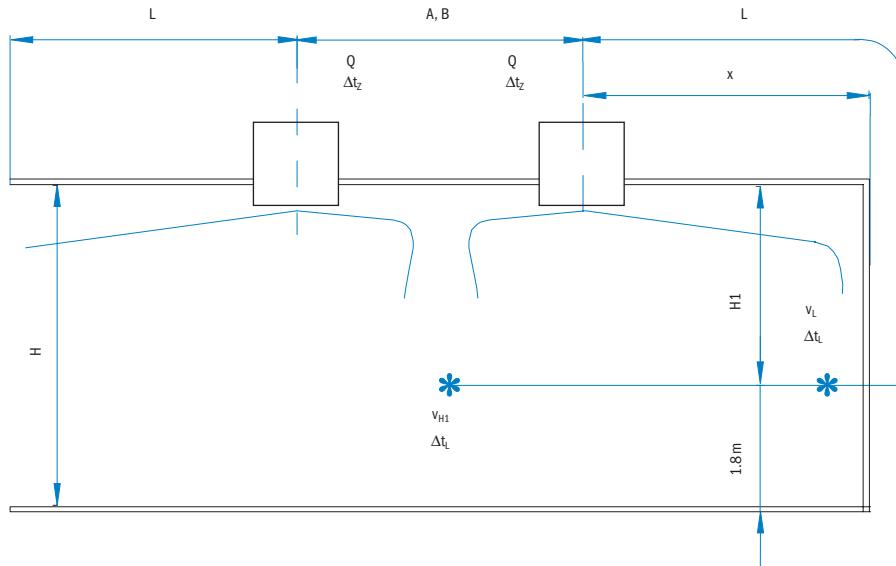
Ordering key

OD-10/1 Size 160



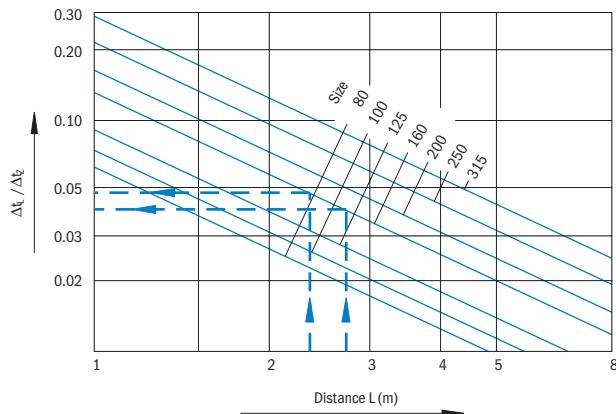
- 1 Installation with attaching section
- 2 Direct ceiling installation





Definition of symbols

Q (m³/h)	Air flow
x (m)	Horizontal distance to the wall
H (m)	Room height
H1 (m)	Distance between the ceiling and occupied zone
L (m)	Throw distance ($L = H_1 + x$)
v_L (m)	Air velocity at the throw distance L
Δt_z (K)	Temperature difference between supply and room air
Δt_L (K)	Temperature difference between room air and air jet temperature
Δp (Pa)	Pressure drop
L_{WA} (dB(A))	Sound power level
v_{H1} (m/s)	Air velocity at the H_1 distance
A, B (m)	Distance between two diffusers (by width and length)



Dim. S	Sizes 80, 100, 125	Sizes 160, 200	Sizes 250, 315	Correction factor
5	1.05	1.04	1.03	k1
10	0.95	0.97	0.98	k1
5	-6.0	-5.5	-5.0	k2
10	2.0	1.5	1.5	k2
5	1.17	1.11	1.08	k3
10	0.90	0.92	0.94	k3

k1 Velocity corrections v_{H1} in v_L :

$$v_{H1} = (v_{H1} \text{ from diagram}) \times k1$$

$$v_L = (v_L \text{ from diagram}) \times k1$$

k2 Sound power corrections:

$$L_{WA} = (L_{WA} \text{ from diagram}) - k2$$

k3 Pressure drop corrections:

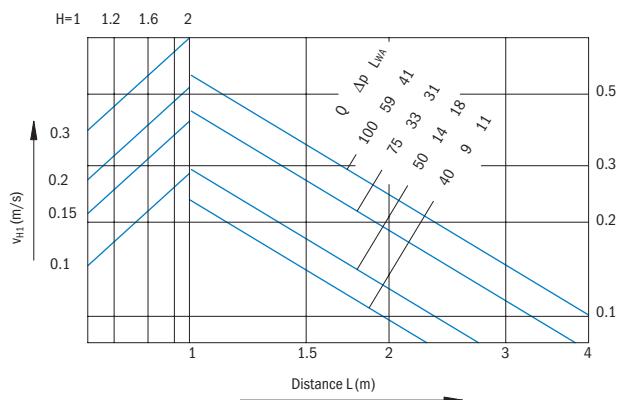
$$\Delta p = (\Delta p \text{ from diagram}) \times k3$$

Circular diffusers, Square diffusers

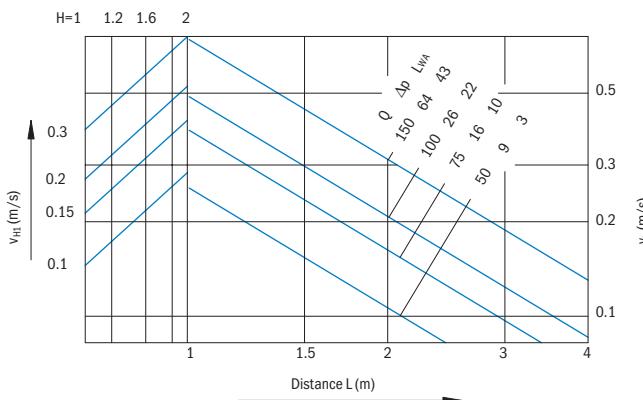
Circular diffusers

Technical data for horizontal discharge (central disc adjustment $s = 10 \text{ mm}$)

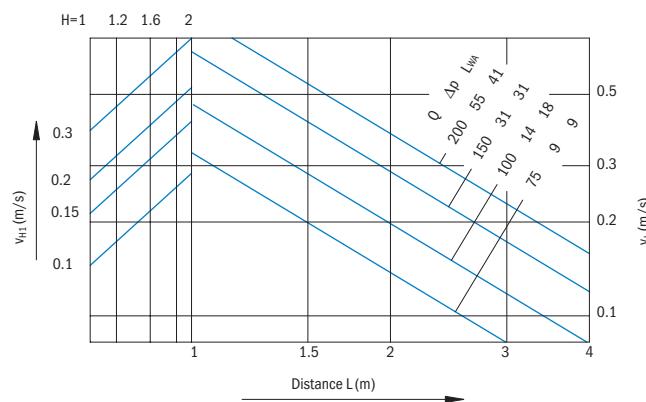
Size 80



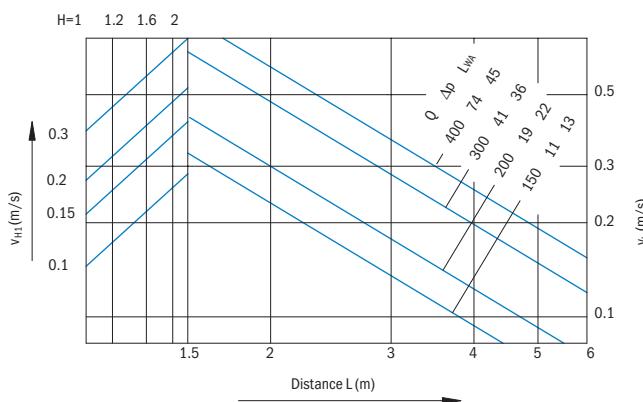
Size 100



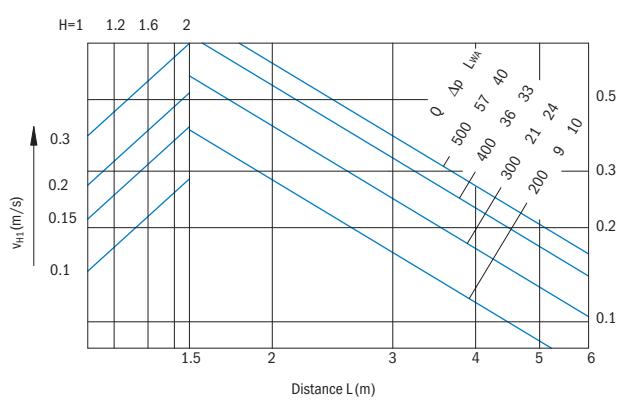
Size 125



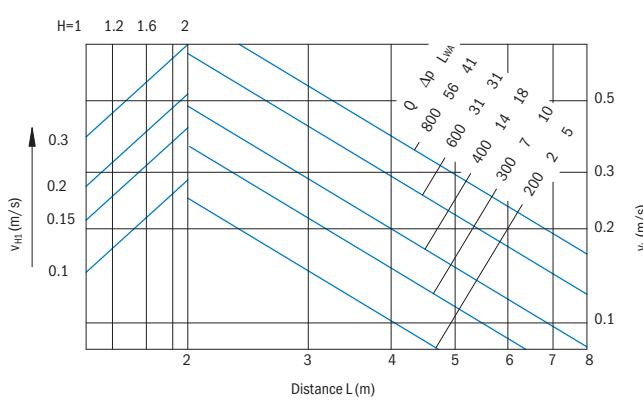
Size 160



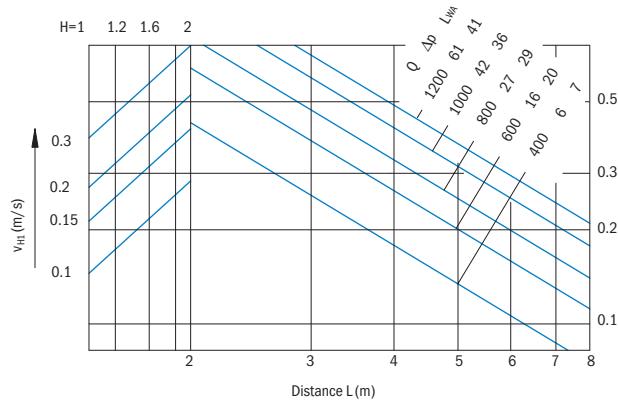
Size 200



Size 250



Size 315

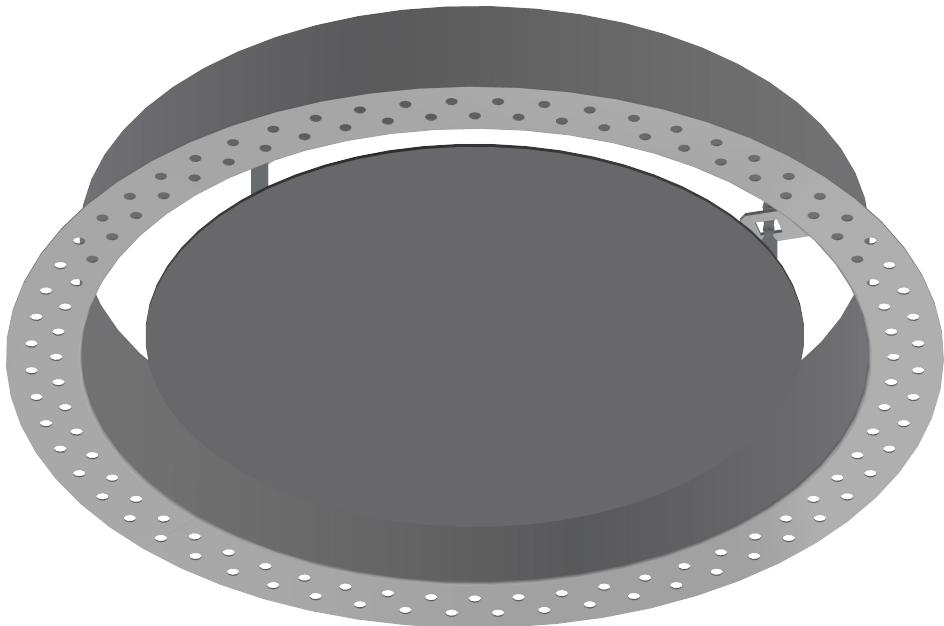


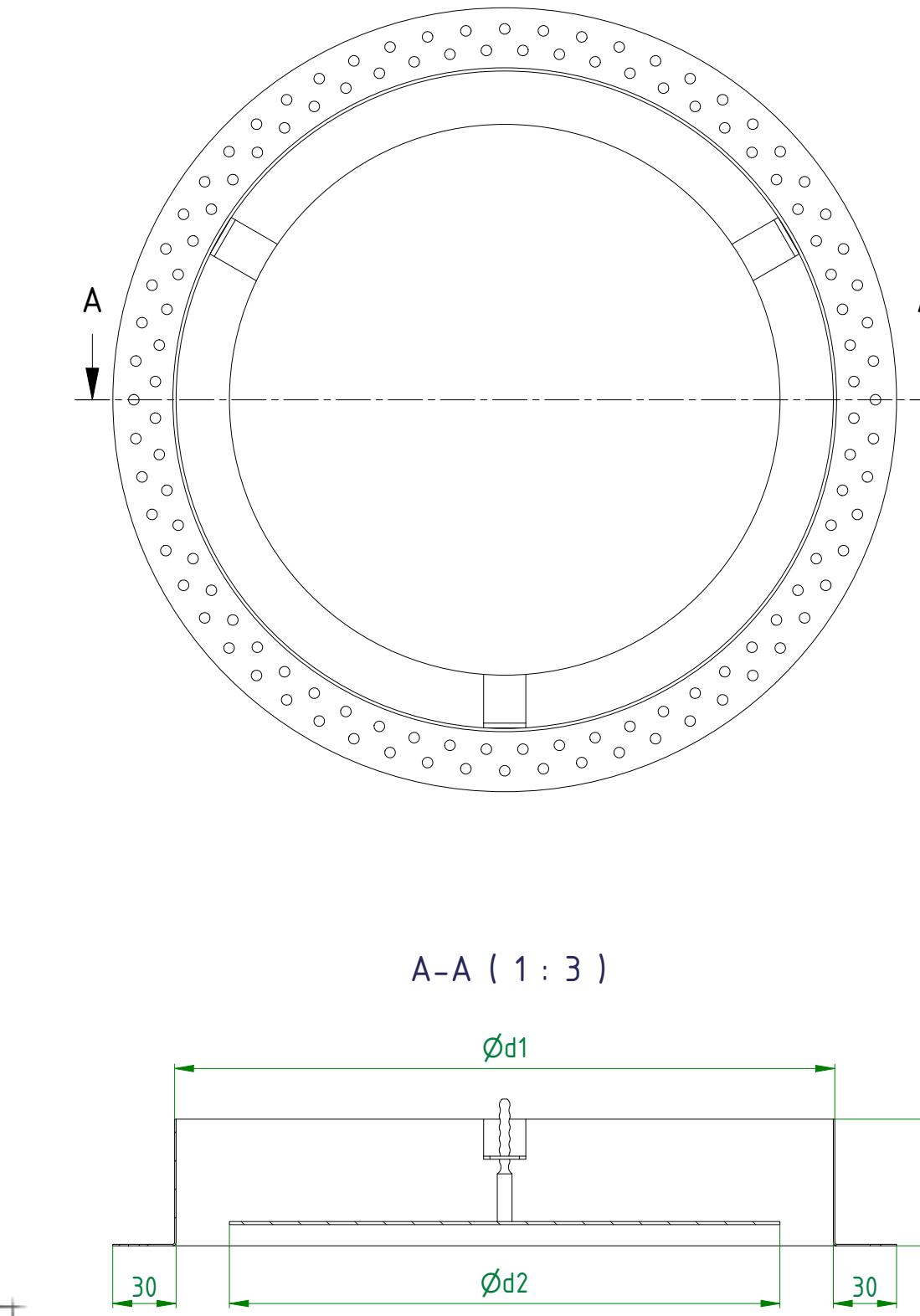
Technical data - Quick selection - SIMPLY 4.1

Size	d1	d2
1/200	313	261
2/250	398	325
3/315	448	370

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OD-10IA-CRL_200_Caudal 250 m3h	250 m3/h	14 Pa	20 dB(A)	3 m/s
OD-10IA-CRL_200_Caudal 300 m3h	300 m3/h	20 Pa	23 dB(A)	3 m/s
OD-10IA-CRL_200_Caudal 400 m3h	400 m3/h	36 Pa	31 dB(A)	4 m/s
OD-10IA-CRL_200_Caudal 450 m3h	450 m3/h	45 Pa	34 dB(A)	5 m/s
OD-10IA-CRL_250_Caudal 450 m3h	450 m3/h	21 Pa	20 dB(A)	4 m/s
OD-10IA-CRL_250_Caudal 500 m3h	500 m3/h	26 Pa	27 dB(A)	4 m/s
OD-10IA-CRL_250_Caudal 550 m3h	500 m3/h	32 Pa	30 dB(A)	4 m/s
OD-10IA-CRL_250_Caudal 600 m3h	600 m3/h	38 Pa	32 dB(A)	5 m/s
OD-10IA-CRL_315_Caudal 600 m3h	600 m3/h	15 Pa	22 dB(A)	3 m/s
OD-10IA-CRL_315_Caudal 700 m3h	740 m3/h	21 Pa	26 dB(A)	3 m/s
OD-10IA-CRL_315_Caudal 800 m3h	800 m3/h	27 Pa	30 dB(A)	4 m/s
OD-10IA-CRL_315_Caudal 900 m3h	900 m3/h	35 Pa	33 dB(A)	4 m/s
OD-10IA-CRL_315_Caudal 1000 m3h	1000 m3/h	43 Pa	36 dB(A)	5 m/s





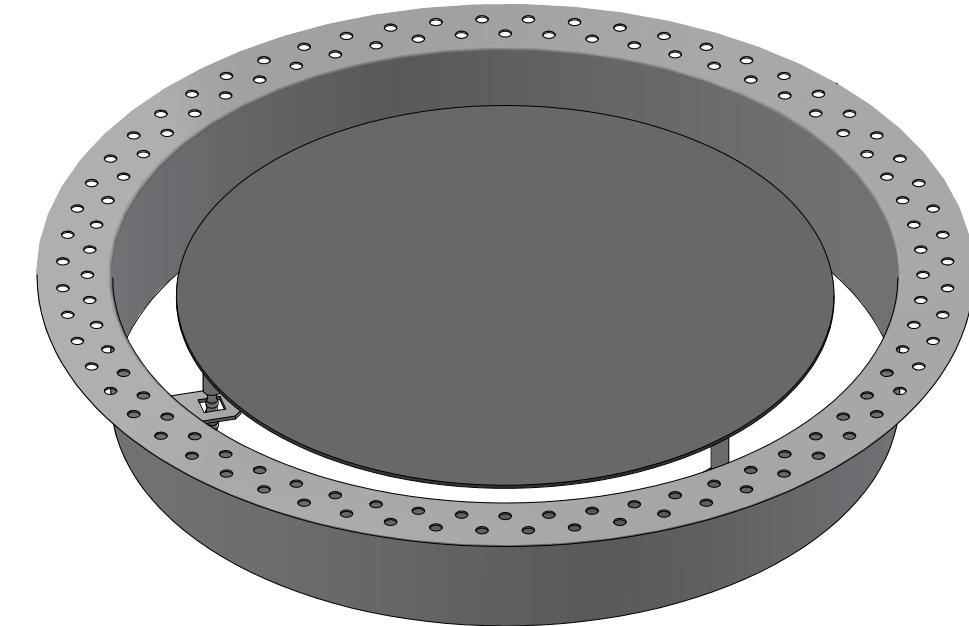
A-A (1 : 3)

ZAUPNO / CONFIDENTIAL / КОНФИДЕНЦИАЛЬНО

dopustni odstopki za netolerirane mere /
deviation for untolerated dimensions

SIST ISO 2768: m

POGLED V IZOMETRIJI
ISOMETRIC VIEW



ZA POTRDITEV: Potrditi v 24 h od prejema! Po izteku
24 h si pridržujemo pravico do spremembe dobavnega
roka.

FOR APPROVAL: Please note, our delivery times are
from receipt of approval of our drawings.

BESTÄTIGUNG ERFORDERLICH: Bitte beachten
Sie, dass die Lieferfrist ab Eingang der Bestätigung
unserer Zeichnungen gilt.

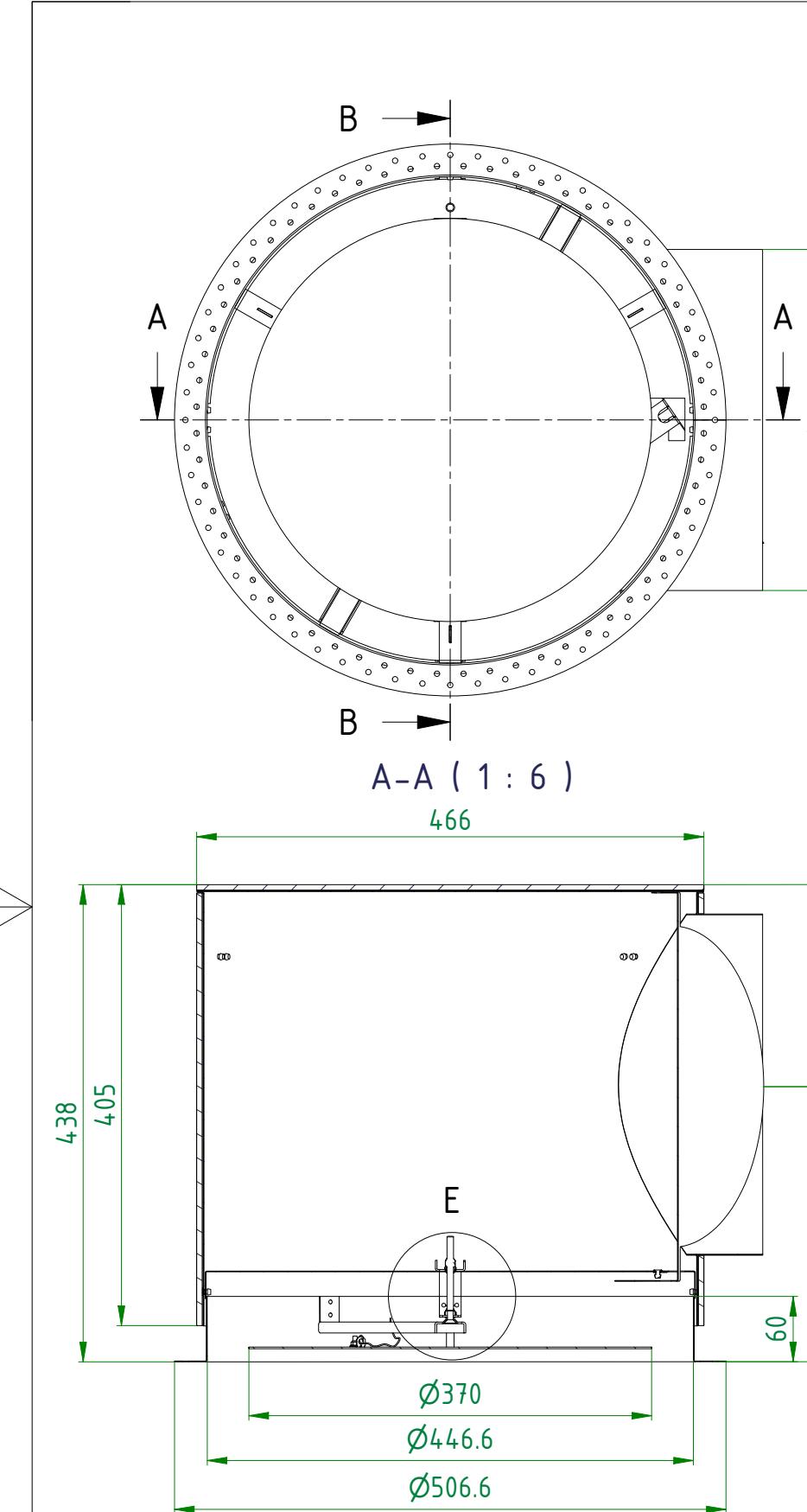
25.3.2025

Size	d1	d2
1/200	313	261
2/250	398	325
3/315	448	370

material / material	površinska zaščita / surface protection	obdelava / surface finish	način projekcije / projection type	
velikost / sheet size	A3	pripada / reference	list / sheet	1 / 1
konstruiral / drawn	25/03/2025	urupnik	merilo / scale	
pregledal / checked by				
tehnolog / approved				
teža / weight	N/A	ime datoteke / file name OD-101A v.1-200.lam		
sprememba / change				
datum sprem. / date of change				
št. posla / order number			koda artikla / product code	

OD-101A

Sketch for confirmation

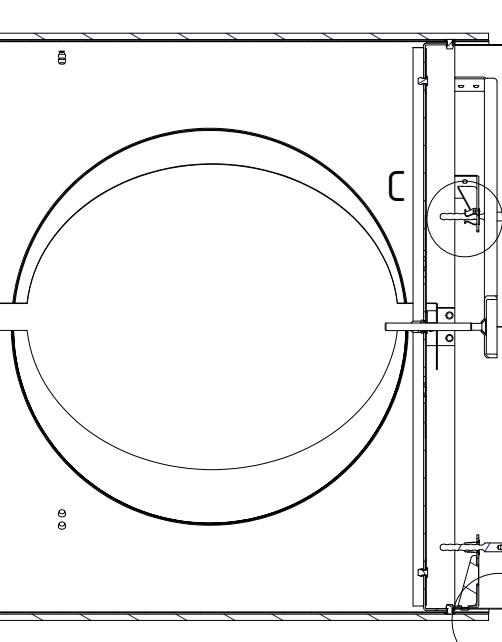
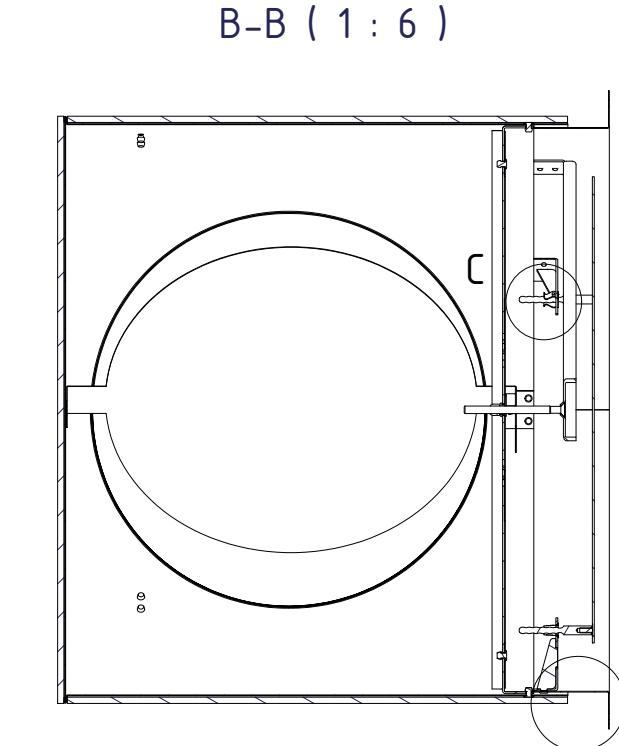


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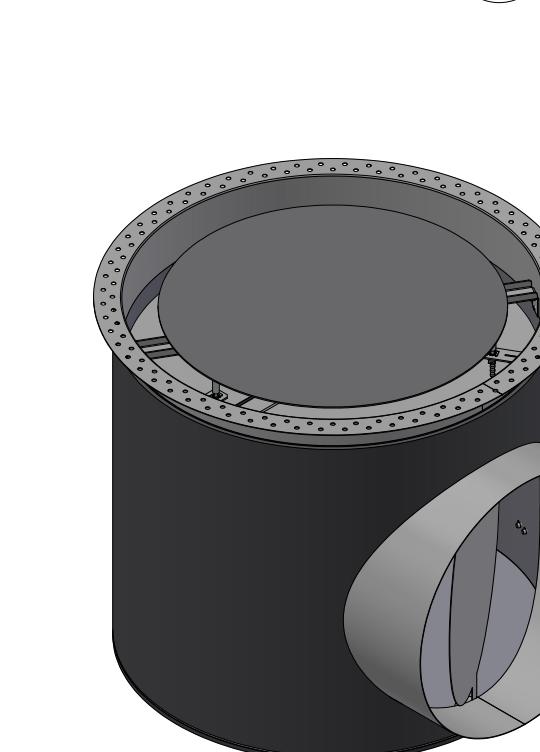
23.4.2025



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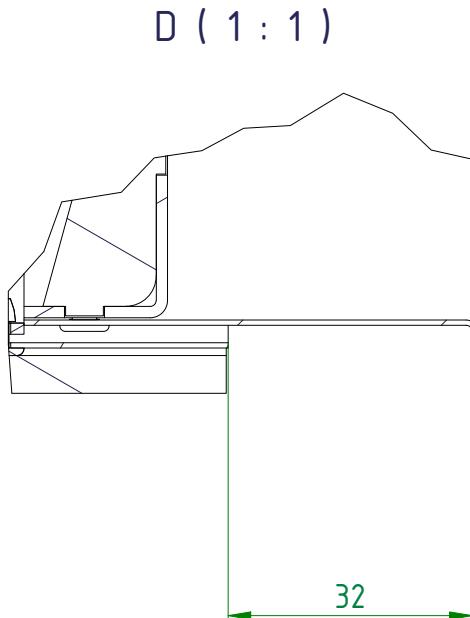
dopustni odstopki za netolerirane mere /
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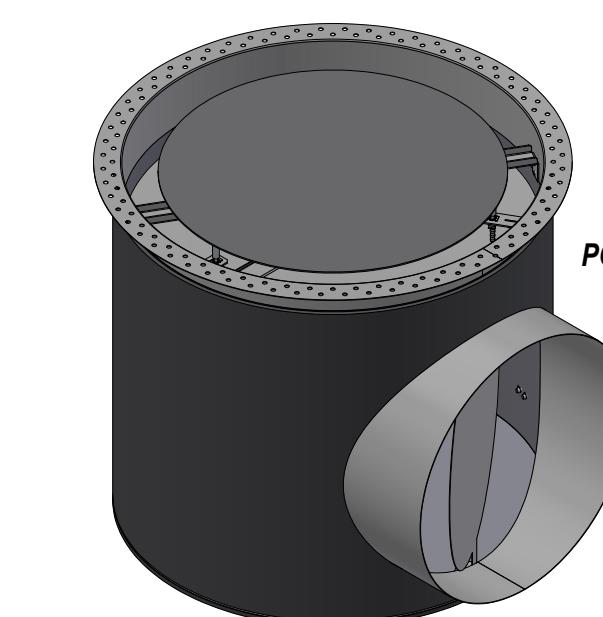


D

C



E (1:2)



POGLEJ V IZOMETRIJI
ISOMETRIC VIEW

Datum veljavnosti od: 23/04/2025
Date of validity:

material / material		površinska zaščita / surface protection	obdelava / surface finish	način projekcije / projection type	
velikost / sheet size	A3	pripada / reference	list / sheet	1 / 1	merilo / scale
konstruiral / drawn	23/04/2025	urupnik			
pregledal / checked by					
tehnolog / approved					
teža / weight	N/A	ime datoteke / file name 101-00000 - OD-10IA-2R-S-M-I5 3-315.iaw			
sprememba / change					
datum sprem. / date of change					

OD-10IA/ZR/S/M/I5 3/315

Sketch for confirmation

številka posla / order number 140096118 | koda artikla / product code 101-00000