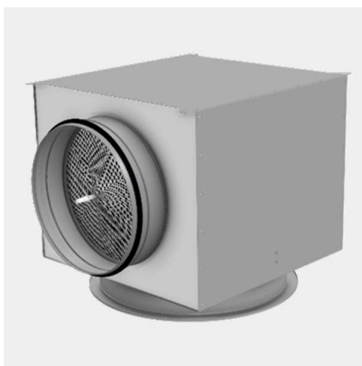
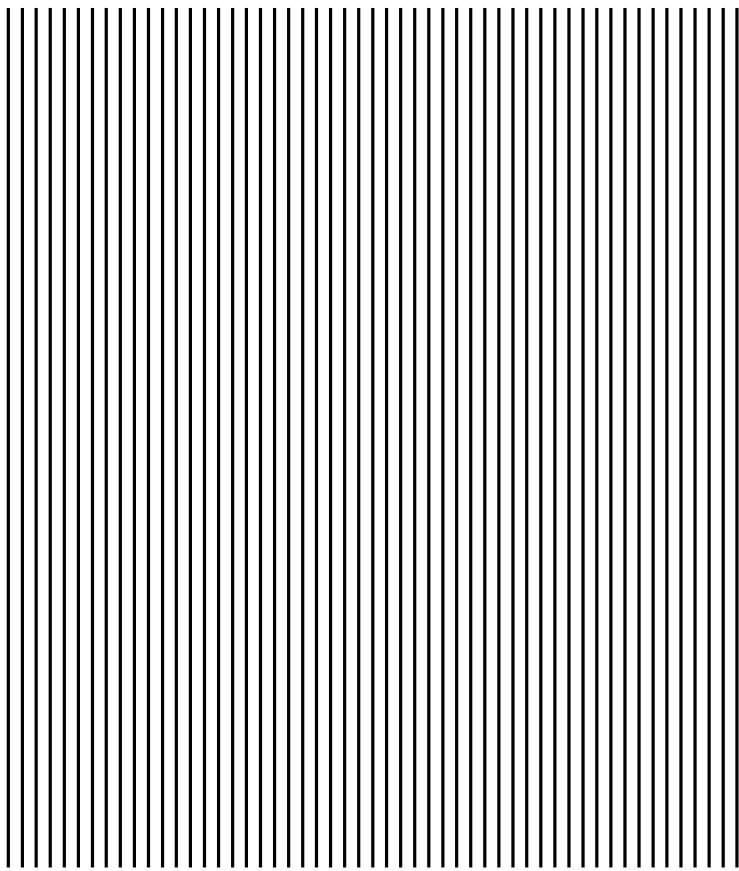


**PLENUM BOX FOR ROUND INTAKE DIFFUSER  
DRA / DRAX / DRA-J / DRAX-J**



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## 1. PRODUCT DESCRIPTION

**DRA/DRAX Plenum Boxes** are designed to supply or extract air in or from the consumption zone, suitable to connect AON (or identical) ceiling diffusers to circular ducts and to achieve air flow rate equalizing, pressure drop and noise-reduction.

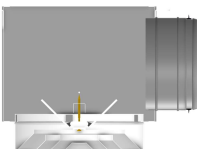
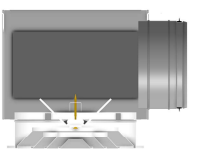
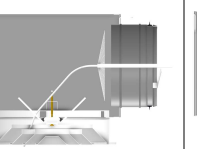
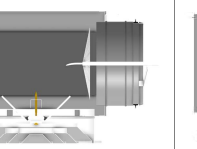


**DRAX – type Plenum Box** is acoustically insulated with 15 mm mineral wool transition part

**J -adjusting perforated blade** to provide the most comfortable supply or exhaust air balancing conditions

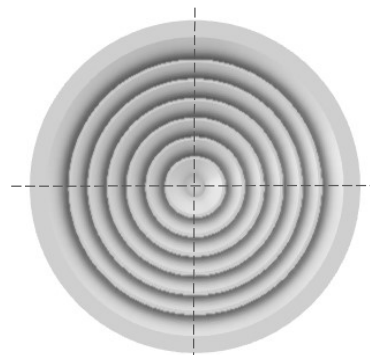
**H /V – vertical or horizontal connections of duct** are available

**Stainless steel (AISI304/AISI316) or powder-coated plenum boxes** are available upon request

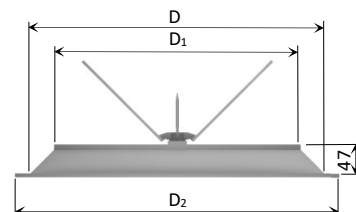
The DRA Plenum box is a connection unit specially designed for round low- and medium-pressure round air diffusers. Six selection options with combinations are available on request for Plenum box individual design:

DRA		DRAX		DRA-J		DRAX-J		Horizontal spigot connection H	Vertical spigot connection V
Insulation	Regulating damper	Insulation	Regulating damper	Insulation	Regulating damper	Insulation	Regulating damper		
-	-	+	-	-	+	+	+		
									

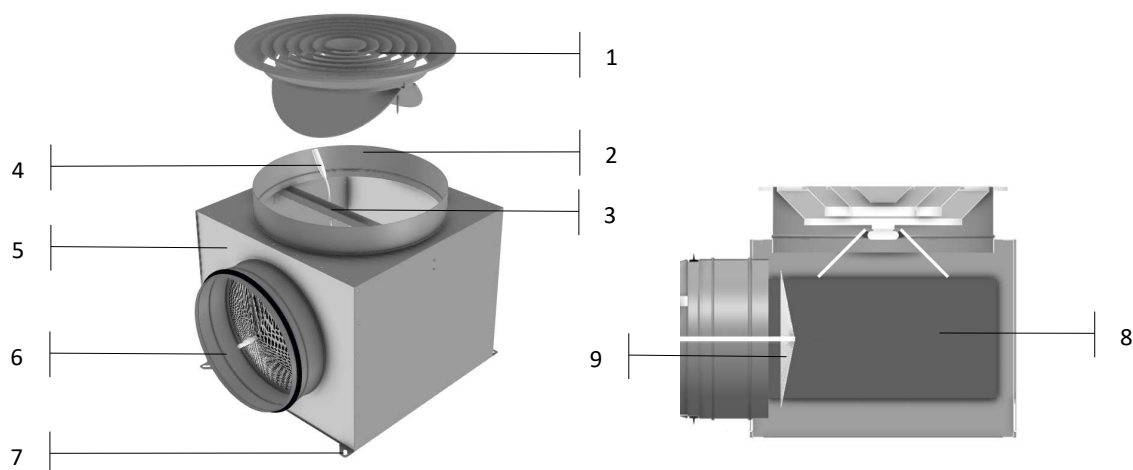
### 1.1 Dimensions of AON-type air diffusers



Size	D, mm	D <sub>1</sub> , mm	D <sub>2</sub> , mm
AON-150	225	149	257
AON-200	275	199	307
AON-250	325	249	357
AON-300	375	299	407
AON-350	425	349	457



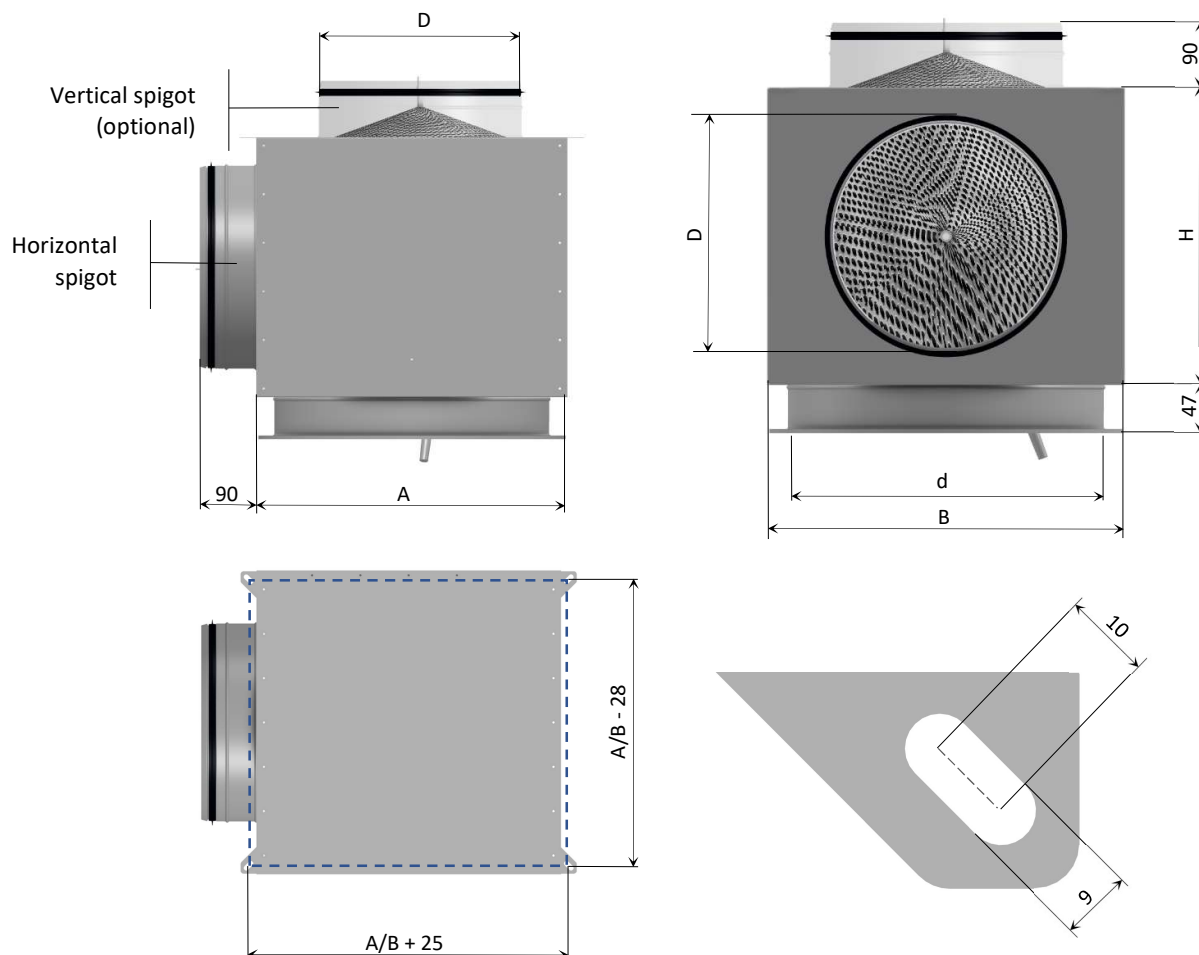
## 1.2 Design and dimensions of DRA Plenum box



1 – AON-type air diffuser; 2 – diffuser's connecting duct; 3 – diffuser mounting bracket; 4 – air volume regulating cord; 5 – the casing of the plenum box; 6 – air inlet spigot (vertical [V] or horizontal [H] location); 7 – ceiling mounting brackets; 8 – insulating material (optional); 9 – air regulating damper (optional)

## 1.3 Main sizes and configurations

DRA Plenums box is a multipurpose air distributing unit for vertical or horizontal air inlet spigot connection:

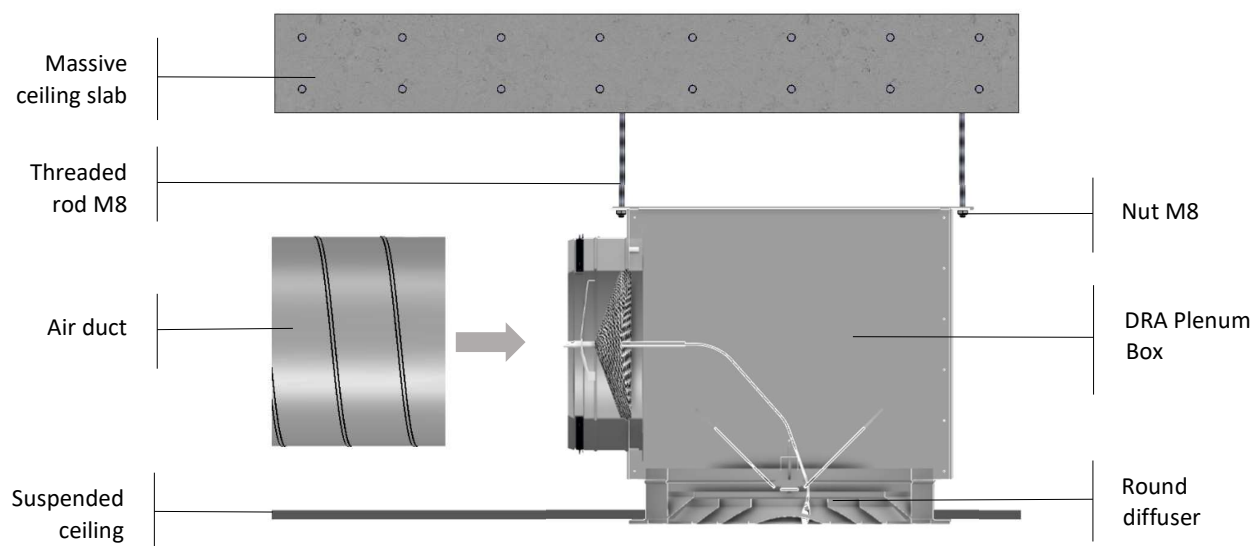


Dimension table

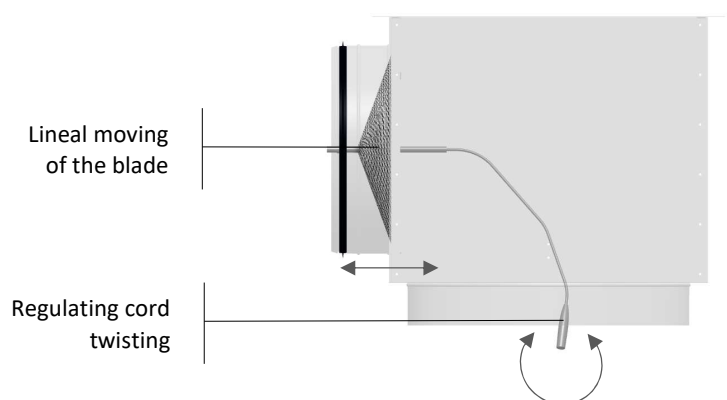
Type		D, mm	A x B, mm	d, mm	H, mm
DRA-H 150-125	DRA-V 150-125	125	310x310	224	200
DRA-H 150-160	DRA-V 150-160	160	310x310	224	200
DRA-H 200-160	DRA-V 200-160	160	360x360	274	250
DRA-H 200-200	DRA-V 200-200	200	360x360	274	250
DRA-H 250-200	DRA-V 250-200	200	415x415	312	300
DRA-H 250-250	DRA-V 250-250	250	415x415	312	300
DRA-H 300-250	DRA-V 300-250	250	480x480	370	300
DRA-H 350-315	DRA-V 350-315	315	480x480	424	400
DRAX-H 150-125	DRAX-V 150-125	125	310x310	224	200
DRAX-H 150-160	DRAX-V 150-160	160	310x310	224	200
DRAX-H 200-160	DRAX-V 200-160	160	360x360	274	250
DRAX-H 200-200	DRAX-V 200-200	200	360x360	274	250
DRAX-H 250-200	DRAX-V 250-200	200	415x415	312	300
DRAX-H 250-250	DRAX-V 250-250	250	415x415	312	300
DRAX-H 300-250	DRAX-V 300-250	250	480x480	370	300
DRAX-H 350-315	DRAX-V 350-315	315	480x480	424	400
DRA-J-H 150-125	DRA-J-V 150-125	125	310x310	224	200
DRA-J-H 150-160	DRA-J-V 150-160	160	310x310	224	200
DRA-J-H 200-160	DRA-J-V 200-160	160	360x360	274	250
DRA-J-H 200-200	DRA-J-V 200-200	200	360x360	274	250
DRA-J-H 250-200	DRA-J-V 250-200	200	415x415	312	300
DRA-J-H 250-250	DRA-J-V 250-250	250	415x415	312	300
DRA-J-H 300-250	DRA-J-V 300-250	250	480x480	370	300
DRA-J-H 350-315	DRA-J-V 350-315	315	480x480	424	400
DRAX-J-H 150-125	DRAX-J-V 150-125	125	310x310	224	200
DRAX-J-H 150-160	DRAX-J-V 150-160	160	310x310	224	200
DRAX-J-H 200-160	DRAX-J-V 200-160	160	360x360	274	250
DRAX-J-H 200-200	DRAX-J-V 200-200	200	360x360	274	250
DRAX-J-H 250-200	DRAX-J-V 250-200	200	415x415	312	300
DRAX-J-H 250-250	DRAX-J-V 250-250	250	415x415	312	300
DRAX-J-H 300-250	DRAX-J-V 300-250	250	480x480	370	300
DRAX-J-H 350-315	DRAX-J-V 350-315	315	480x480	424	400

## 2. INSTALLATION OF THE PLENUM BOX

All types of DRA Plenum Boxes are intended to be hung to the massive ceiling using 4 pcs. of M8 threaded rods and nuts and connecting them through fastening hangers. Length of the threaded rod should be long enough to allow the bottom part of the DRA Plenum Box joined flush to the suspended ceiling. Then the air duct and round ceiling diffuser is connected in a common way:

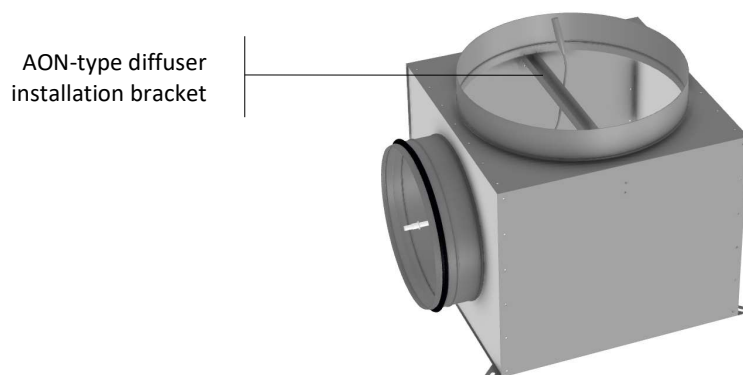


After the ventilation system being launched, **the delicate air flow regulation** may be required. This extension can easily be reached by twisting the regulating cord. Clockwise twisting moves the blade to the left and reduces the amount of supplying / exhausting air, counterclockwise twisting moves the blade to the right and increases the amount of the air:

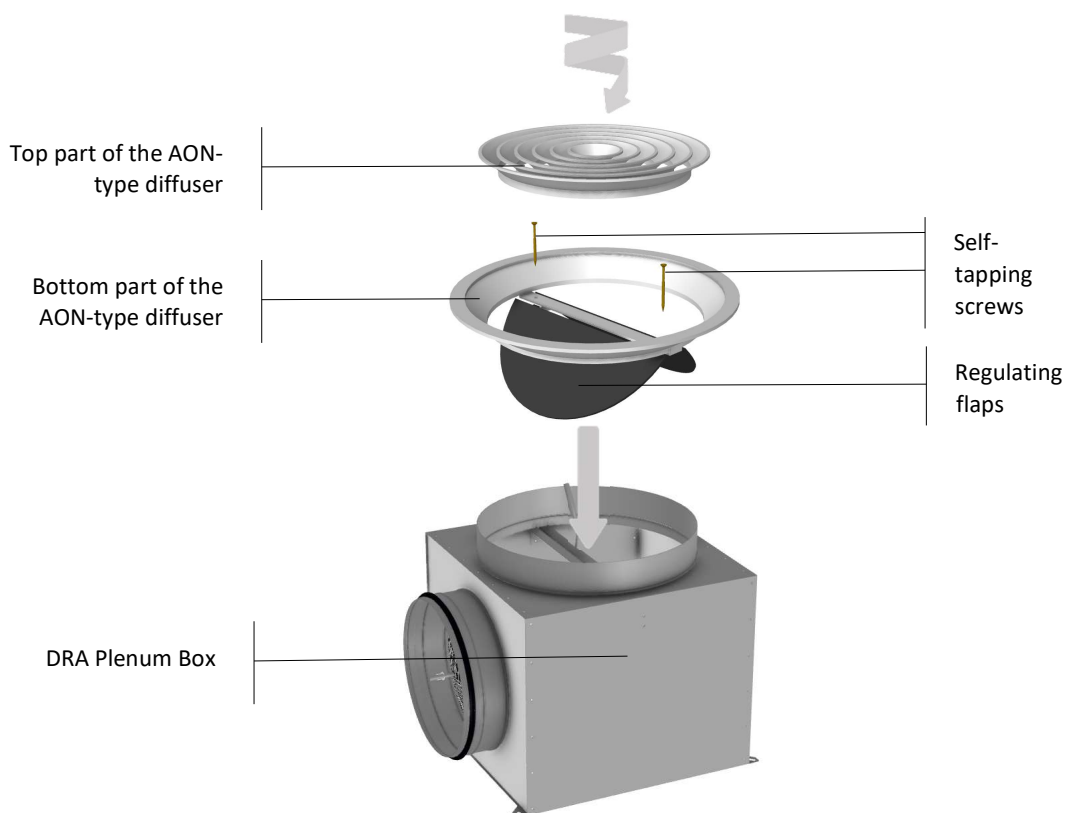


**Connection of the round AON-type air diffuser** can be done following the few installation steps:

1. AON-type diffuser is installed on the already mounted installation C-shaped bracket:



2. The bottom part of the diffuser is mounted primarily using 2 self-tapping screws (come together with AON-type diffuser). At this stage airflow regulating flaps could be adjusted as required. Then the top part of the diffuser is installed by simple tightening up:



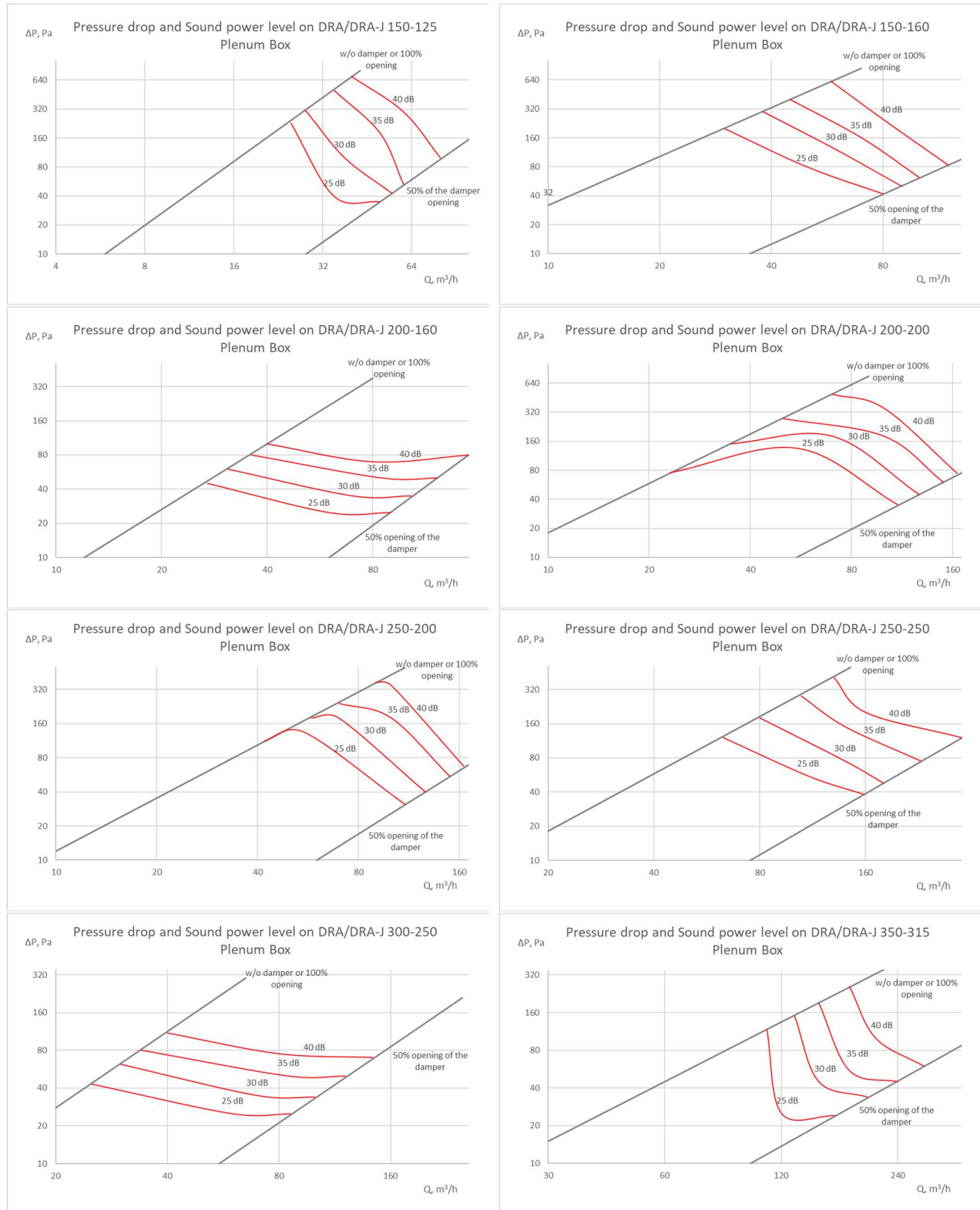
### 3. TECHNICAL DATA

Pressure drop, air volume rate and generated sound level data for AON-type round diffuser:

Air flow, m <sup>3</sup> /h	Parameter	AON-150	AON-200	AON-250	AON-300	AON-350
100	Air velocity, m/s	2.75	1.2	0.77	0.54	0.4
	Pressure drop, Pa	7	3	2	2	2
	Generated sound level, dB(A)	<15	<15	<15	<15	<15
	Throw length (straight trajectory), m	0.5-0.92	0.33-0.7	0.27-0.61	0.22-0.55	0.19-0.51
150	Air velocity, m/s	4.12	1.79	1.16	0.81	0.6
	Pressure drop, Pa	13	4	3	2	2
	Generated sound level, dB(A)	<15	<15	<15	<15	<15
	Throw length (straight trajectory), m	0,75-1,25	0,49-0,92	0,4-0,79	0,33-0,7	0,29-0,64
200	Air velocity, m/s	5,5	2,39	1,55	1,08	0,81
	Pressure drop, Pa	22	6	3	3	2
	Generated sound level, dB(A)	<15	<15	<15	<15	<15
	Throw length (straight trajectory), m	1-1,59	0,66-1,13	0,53-0,96	0,44-0,85	0,38-0,77
250	Air velocity, m/s	6,87	2,99	1,94	1,35	1,01
	Pressure drop, Pa	33	8	4	3	3
	Generated sound level, dB(A)	32	18	<15	<15	<15
	Throw length (straight trajectory), m	1,24-1,92	0,82-1,35	0,66-1,14	0,55-0,99	0,48-0,89
300	Air velocity, m/s	8,25	3,59	2,32	1,61	1,21
	Pressure drop, Pa	47	10	5	4	3
	Generated sound level, dB(A)	37	24	<15	<15	<15
	Throw length (straight trajectory), m	1,49-2,25	0,99-1,57	0,79-1,32	0,66-1,14	0,57-1,02
350	Air velocity, m/s	9,62	4,18	2,71	1,88	1,41
	Pressure drop, Pa	63	13	7	4	3
	Generated sound level, dB(A)	41	28	18	<15	<15
	Throw length (straight trajectory), m	1,74-2,58	1,15-1,79	0,93-1,49	0,77-1,29	0,67-1,15
400	Air velocity, m/s	10.99	4.78	3.1	2.15	1.61
	Pressure drop, Pa	82	17	8	5	4
	Generated sound level, dB(A)	45	32	21	<15	<15
	Throw length (straight trajectory), m	1.99-2.91	1.31-2.01	1.06-1.67	0.88-1.43	0.76-1.28
450	Air velocity, m/s	12.37	5.38	3.49	2.42	1.81
	Pressure drop, Pa	103	21	10	6	4
	Generated sound level, dB(A)	48	35	25	16	<15
	Throw length (straight trajectory), m	2.24-3.24	1.48-2.23	1.19-1.84	0.99-1.58	0.86-1.4
500	Air velocity, m/s	-	5.98	3.87	2.69	2.02
	Pressure drop, Pa	-	26	12	7	5
	Generated sound level, dB(A)	-	38	28	19	<15
	Throw length (straight trajectory), m	-	1.64-2.45	1.32-2.02	1.1-1.73	0.95-1.53



Pressure drop and generated sound power levels for DRA and DRA-J type Plenum Boxes:



Sound attenuation for DRAX and DRAX-J type Plenum Boxes:

Size	Frequency, Hz							
	63	125	250	500	1000	2000	4000	8000
DRAX-[J] 150-125	24	12	11	18	12	15	12	17
DRAX-[J] 150-160	20	9	10	16	14	9	14	16
DRAX-[J] 200-160	19	8	9	14	13	10	13	15
DRAX-[J] 200-200	18	7	8	13	10	10	13	14
DRAX-[J] 250-200	16	7	8	12	10	11	13	15
DRAX-[J] 250-250	12	6	8	12	11	12	14	16
DRAX-[J] 300-250	17	7	10	14	10	8	11	14
DRAX-[J] 350-315	10	6	7	11	11	11	12	15

## 4. GENERAL REQUIREMENTS FOR SAFETY



**WARNING!** The danger of serious damage to health due to incorrect use. It may only be installed by suitably trained personnel. Any legal regulations or regulations issued by authorities must be observed during installation.

**Personal protective equipment must be worn for mechanical connection of the Plenum Box to the air duct system (ductwork) and any type of service or maintenance works.**



**Protective gloves must be worn**

Protective gloves protect hands against abrasion, oily environment, sharp metal parts and contact with hot surfaces.



**Protective industrial helmet must be worn**

Industrial helmets protect the head against impact from objects falling from above, by resisting and deflecting blows to the head.



**Protective boots must be worn**

Protective boots protect the foot from falling objects or compression and prevent slipping on a slippery floor.

## 5. ORDERING SAMPLE

DRA / DRAX	-	J	-	d	-	D	-	H
①		②		③		④		⑤

Type of the Plenum Box:

① DRA – non-insulated Plenum Box

DRAX – insulated Plenum Box

② J – with regulating damper

No entry – without regulating damper

③ Duct connection diameter: 125 / 160 / 200 / 250 / 315

④ Diffuser connection diameter: 150 / 200 / 250 / 300 / 350

Location of the duct connection:

⑤ H – horizontal connection

V – vertical connection

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Plenum box for round intake diffuser DRA-DRAX 2022