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ISO 9001 CERTIFIED COMPANY

25 YEARS OF EXCELLENCE

ROUND DIFFUSERS

ISO 9001 CERTIFIED VINÇOTTE

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Cover Page Photo Commercial Bank Qatar

CONSTRUCTION:

Frame and disc: Steel sheet construction.

Mounting rings: Galvanized sheet steel.

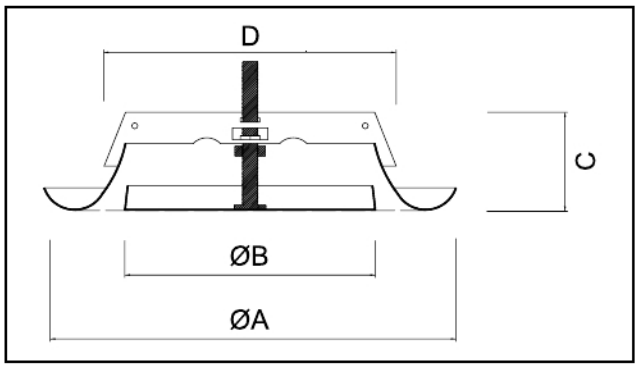
Description:

- Frame and disc is made of high quality steel sheet construction with powder coating to RAL colours.
- Disc is attached to the frame by threaded rod.
- Air flow can be adjusted by regulating the cone up or down (+A or -A)
- Foam gasket is sealed around the back of the frame to avoid air leakage.
- These valves can be used for supply, exhaust and ventilation applications.
- Air master disc valves are best suited to air distribution systems handling relatively low air flow rates.
- Can be mounted in wall, ceiling or exposed air ducts with mounting rings.
- Recommended for exhaust of greasy and damp air in areas such as toilets, bathrooms and kitchens.

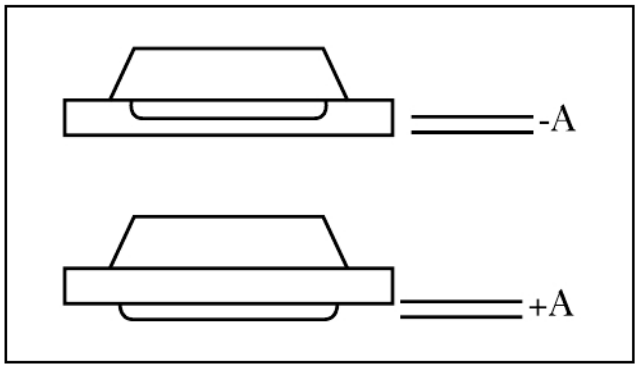
Standard finishes:

- Steel sheet powder coated to RAL 9010 colour.
- Flexibility of finish is available as option.

ADV



Position of the Disc



Standard size & Dimensions

Size	A	B	C	D
80	115	62	42	77.5
100	138	75	40	97.5
125	164	100	46	122.5
160	211	130	54	157.5
200	248	158	63	197.5

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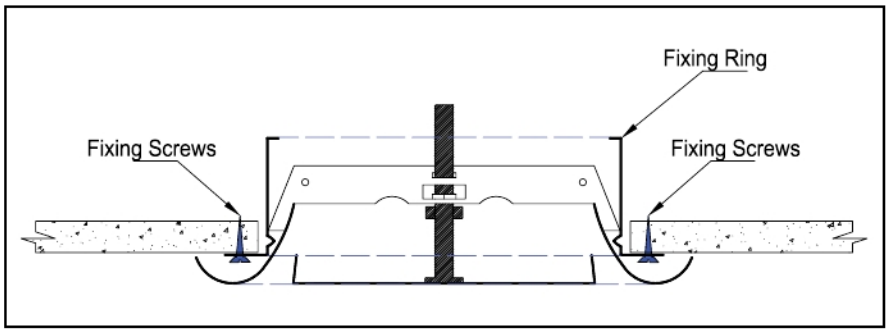
Fixing details:

- Step-1. Mounting ring has to be fixed into the duct.
- Step-2. The frame can now be fixed into the mounting ring.

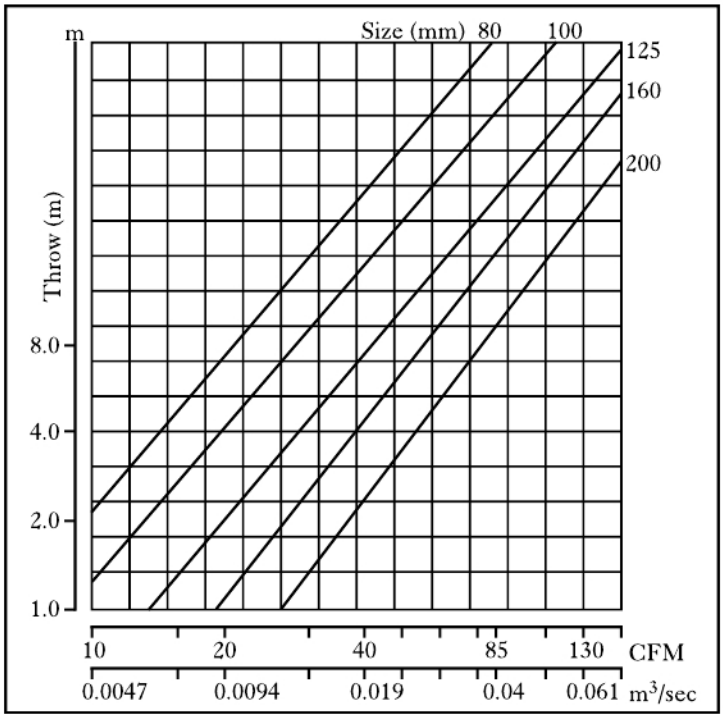


Product Order Checklist

- Model
- Size
- Quantity
- Colour (RAL 9010 standard; other RAL colours are available on request)

Performance data:

Table 9.1 Supply air volume Vs Throw in meters for (A = 0)



Note:

- For position A = +10, reduce throw by 30%.
- For position A = -10, increase throw by 40%.

Table 9.2(A) Air flow data
Supply air disc valve

Neck size in mm dia.	Position of disc	Air flow rate								
		CFM	10	20	40	60	80	100	120	140
		M³/sec	0.0047	0.0094	0.0189	0.0283	0.0378	0.0472	0.0567	0.0661
80	A = +10	P_t in mm H_2O NC in dB	0.76 <20	1.83 22	5.6 38	----------	----------	----------	--------	----------
	A = 0	P_t in mm H_2O NC in dB	1.22 <20	3.4 26	9.6 44	----------	----------	----------	----------	----------
	A = –10	P_t in mm H_2O NC in dB	2.04 <20	5.6 35	>20 >45	----------	----------	----------	----------	----------
100	A = +10	P_t in mm H_2O NC in dB	0.51 <20	1.12 <20	3.46 30	6.6 38	----------	----------	----------	----------
	A = 0	P_t in mm H_2O NC in dB	0.71 <20	2.04 20	6.11 36	11.21 44	----------	----------	----------	----------
	A = –10	P_t in mm H_2O NC in dB	1.43 <20	4.08 31	12.23 45	>20 >45	----------	----------	----------	----------
125	A = +10	P_t in mm H_2O NC in dB	0.41 <20	1.12 <20	3.06 26	5.61 33	9.2 42	----------	----------	----------
	A = 0	P_t in mm H_2O NC in dB	0.82 <20	1.83 <20	5.61 33	9.4 40	14.78 >45	----------	----------	----------
	A = –10	P_t in mm H_2O NC in dB	1.22 <20	3.06 26	8.87 42	16.3 >45	>20 >45	----------	----------	----------
160	A = +10	P_t in mm H_2O NC in dB	<0.4 <20	0.61 <20	1.83 20	4.3 25	5.7 31	9.2 37	12.7 40	----------
	A = 0	P_t in mm H_2O NC in dB	<0.4 <20	1.22 <20	3.78 25	8.2 35	11.2 41	18.3 45	>20 >45	----------
	A = –10	P_t in mm H_2O NC in dB	1.0 <20	2.75 30	8.2 41	16.3 >45	>20 >45	>20 >45	>20 >45	----------
200	A = +10	P_t in mm H_2O NC in dB	<0.4 <20	<0.4 <20	0.82 <20	1.63 <20	3.1 22	4.1 25	5.1 33	7.9 37
	A = 0	P_t in mm H_2O NC in dB	<0.4 <20	0.71 <20	1.83 <20	4.1 24	5.61 30	9.1 36	10.7 40	18.3 45
	A = –10	P_t in mm H_2O NC in dB	<0.4 <20	1.22 <20	4.3 26	7.6 35	10.7 39	18.3 45	>20 >45	>20 >45

- P_t = Total pressure loss across the disc valve in mm of H_2O.
- NC based on a room attenuation of 10 dB.
- A = +10, 0 & -10 represents position of the disc 10 mm below normal position, at normal position and 10 mm above normal position.

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Table 9.2(B) Air flow data
Return air disc valve

Neck size in mm dia.	Position of disc	Air flow rate								
		CFM	10	20	40	60	80	100	150	200
		M^3/sec	0.0047	0.0094	0.0189	0.0283	0.0378	0.0472	0.071	0.094
80	A = +10	P_t in mm H_2O NC in dB	<0.4 <20	0.91 <20	4.3 26	10.2 37	----------	----------	--------	----------
	A = 0	P_t in mm H_2O NC in dB	<0.4 <20	1.43 <20	7.1 32	17.3 45	----------	----------	----------	----------
	A = –10	P_t in mm H_2O NC in dB	1.83 <20	5.1 23	18 45	>20 >45	----------	----------	----------	----------
100	A = +10	P_t in mm H_2O NC in dB	<0.4 <20	<0.4 <20	1.63 <20	3.8 23	5.8 31	9.7 37	----------	----------
	A = 0	P_t in mm H_2O NC in dB	<0.4 <20	0.76 <20	2.5 <20	5.6 30	9.7 35	14.7 45	----------	----------
	A = –10	P_t in mm H_2O NC in dB	0.61 <20	2.24 <20	7.6 35	15.2 40	>20 >45	>20 >45	----------	----------
125	A = +10	P_t in mm H_2O NC in dB	<0.4 <20	<0.4 <20	0.71 <20	1.42 <20	2.9 20	4.1 25	9.7 37	----------
	A = 0	P_t in mm H_2O NC in dB	<0.4 <20	<0.4 <20	1.83 <20	4.1 21	8.15 30	11.2 35	>20 >45	----------
	A = –10	P_t in mm H_2O NC in dB	<0.4 <20	2.1 <20	7.1 23	16.8 35	>20 >45	>20 >45	>20 >45	----------
160	A = +10	P_t in mm H_2O NC in dB	<0.4 <20	<0.4 <20	0.4 <20	0.81 <20	1.43 <20	2.1 <20	5.2 28	9.7 37
	A = 0	P_t in mm H_2O NC in dB	<0.4 <20	<0.4 <20	0.81 <20	1.74 <20	3.4 <20	5.3 25	12.2 37	>20 >45
	A = –10	P_t in mm H_2O NC in dB	<0.4 <20	<0.5 <20	1.74 <20	3.8 <20	7.6 27	14.7 35	>20 >45	>20 >45
200	A = +10	P_t in mm H_2O NC in dB	<0.4 <20	<0.4 <20	<0.4 <20	<0.4 <20	0.76 <20	1.12 <20	2.6 27	4.38 34
	A = 0	P_t in mm H_2O NC in dB	<0.4 <20	<0.4 <20	0.7 <20	1.4 <20	2.3 <20	3.4 20	8.4 35	12.2 42
	A = –10	P_t in mm H_2O NC in dB	<0.4 <20	<0.5 <20	1.62 <20	3.4 <20	7.1 <20	11.2 34	>20 >45	>20 >45

- P_t = Total pressure loss across the disc valve in mm of H_2O.
- NC based on a room attenuation of 10 dB.
- A = +10, 0 & -10 represents position of the disc 10 mm below normal position, at normal position and 10 mm above normal position.

ROUND CEILING DIFFUSER
FIXED CORE

CONSTRUCTION:

Frame and inner cones: High quality aluminium construction.

Damper frame and blades: Steel sheet with black matt finish.

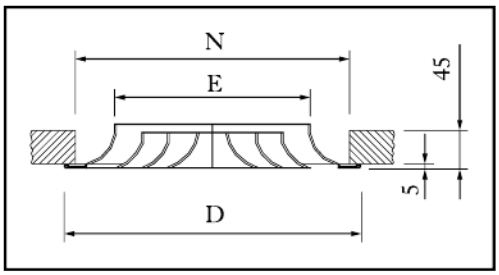
Description:

- Frame and inner cones are constructed from high quality aluminium sheet.
- Inner cones fixed rigidly to the frame.
- The standard butterfly damper in supply diffuser can be easily adjusted through the face of the unit by means of screw drive or by means of a simple hook. Please refer Fig:1 & Fig:2.
- The diffuser can be used for ceiling or exposed duct mounting and has a fixed horizontal air pattern.
- Foam gasket is sealed around the back of the frame as option to avoid air leakage.

Standard finishes:

- Aluminium construction with white powder coated finish (RAL 9010).
- Powder coated colour finish as per other RAL colour codes available as option.

	D	N	E
160	263	223	150
200	313	273	200
250	353	313	250
315	425	385	312
355	463	423	350
400	513	473	400



Model - ARDF:
Construction is same as ARDF+D without butterfly damper.

Fig:1 Damper - Standard (Hook Operated)

Fig:2 Damper - Optional (Screw Operated)

ROUND CEILING DIFFUSER
FIXED CORE

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Air flow data

Neck dia in mm	Face velocity in m/sec	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0
160	Cfm M^3/sec P_S in mm H_2O Throw in m NC	51 0.0241 0.20 0.9-0.5 <15	66 0.0311 0.264 1.1-0.7 15	78 0.037 0.387 1.3-0.9 20	91 0.043 0.536 1.6-1.1 24	106 0.050 0.680 2.0-1.5 29	125 0.059 0.810 2.5-2.0 31	137 0.065 0.950 2.9-2.4 36	152 0.072 1.120 3.4-2.8 42	172 0.081 1.40 4.0-3.3 49
200	Cfm M^3/sec P_S in mm H_2O Throw in m NC	72 0.034 0.230 1.3-0.85 <15	93 0.044 0.279 1.5-1.0 15	117 0.055 0.447 1.8-1.3 20	136 0.064 0.677 2.1-1.5 23	155 0.073 0.850 2.5-1.9 28	174 0.082 1.050 2.9-2.2 31	195 0.092 1.250 3.4-2.6 35	218 0.103 1.510 4.0-3.1 42	248 0.117 2.1 4.8-3.7 50
250	Cfm M^3/sec P_S in mm H_2O Throw in m NC	116 0.055 0.301 1.6-1.1 <15	146 0.067 0.362 1.9-1.4 15	176 0.083 0.487 2.4-1.8 18	203 0.096 0.661 2.7-2.0 23	231 0.109 1.080 3.0-2.2 29	258 0.122 1.290 3.5-2.5 33	288 0.136 1.530 4.2-3.0 38	320 0.151 2.0 5.0-3.6 45	358 0.167 2.40 6.0-4.4 53
315	Cfm M^3/sec P_S in mm H_2O Throw in m NC	177 0.083 0.410 1.8-1.3 <15	222 0.105 0.480 2.2-1.6 15	267 0.126 0.653 2.5-2.0 21	314 0.148 1.020 3.1-2.5 25	354 0.167 1.260 3.6-3.0 30	392 0.185 1.820 4.2-3.2 34	437 0.206 2.20 4.9-3.8 38	487 0.230 2.60 5.8-4.6 45	542 0.257 3.20 7.0-5.6 55
355	Cfm M^3/sec P_S in mm H_2O Throw in m NC	244 0.115 0.194 2.0-1.4 <15	297 0.140 0.229 2.5-1.7 15	350 0.165 0.390 3.1-2.4 19	413 0.195 0.586 3.6-2.7 26	466 0.220 0.809 4.2-3.0 30	530 0.250 1.160 4.7-2.3 35	583 0.275 1.40 5.6-3.9 43	639 0.301 1.680 6.7-4.6 52	699 0.330 2.020 8.1-5.6 60
400	Cfm M^3/sec P_S in mm H_2O Throw in m NC	270 0.127 0.163 2.1-1.5 <15	333 0.157 0.192 2.5-1.8 15	396 0.187 0.309 3.0-2.3 20	460 0.217 0.469 3.6-2.7 25	530 0.250 0.589 4.1-3.0 29	591 0.279 0.827 4.6-3.2 34	654 0.308 1.10 5.4-3.8 41	719 0.339 1.40 6.5-4.6 50	789 0.372 1.70 7.9-5.4 61

- Neck size is measured in m/sec.
- P_S: Static pressure loss in mm of H_2O.
- Throw (meters) is measured for a terminal velocities of 0.25 & 0.5 m/sec.
- Noise criteria (NC) based on a room attenuation of 10 dB.

Option : Fixed round ceiling diffuser with removable core

Model : ARD-FRC

- Constuction is same as ARDF with removable inner Cone
- Inner cones fixed to the frame with aluminium pins loaded with steel springs. Inner cones can be easily removable and interchangeable to allow or maximum flexibility in installation, maintanance and adjustment.

ROUND CEILING DIFFUSER
ADJUSTABLE CORE

CONSTRUCTION:

Frame & inner cones: High quality aluminium sheet as standard. Steel construction as option.

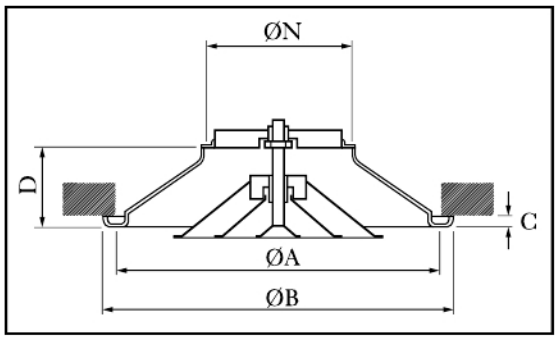
Damper frame and blade: Steel sheet with black matt finish.

Description:

- Frame and inner cones are made of high quality aluminium sheet construction with the advantages of corrosion resistance and rigidity.
- By means of its inner adjustable cones, air pattern can be adjusted from horizontal projection to vertical projection.
- Inner cones are fixed centrally to the frame. Cones can be easily removed and fixed. This provides easy installation, maintenance and access to the duct.
- The butterfly damper in supply diffuser can be easily adjusted through the face of the unit by means of screw driver after removing the inner cones.
- Discharge pattern can be adjusted for horizontal flow by extending the cones and for vertical flow by retracting the cones.
- Can be used for ceiling or exposed duct mounting especially in installation when an adjustable pattern is required.

Standard finishes:

- Aluminium construction with white powder coated finish (RAL 9010).
- Steel construction with white powder coated finish (9010).
- Powder coated color finish as per other RAL colour codes available as option.



Model - ARD:
Construction is same as ARD+D without butterfly damper.

ARD	N in mm	A	B	C	D
160	150	295	320	9.5	46
200	200	398	428	11	60
250	245	504	546	12.8	88
315	305	590	636	16	95
355	345	655	702	18	120
400	400	745	806	20	130
450	445	820	866	20	147
500	500	880	940	22	160

- Nominal size.
- All the dimension are in mm.

ROUND CEILING DIFFUSER
ADJUSTABLE CORE

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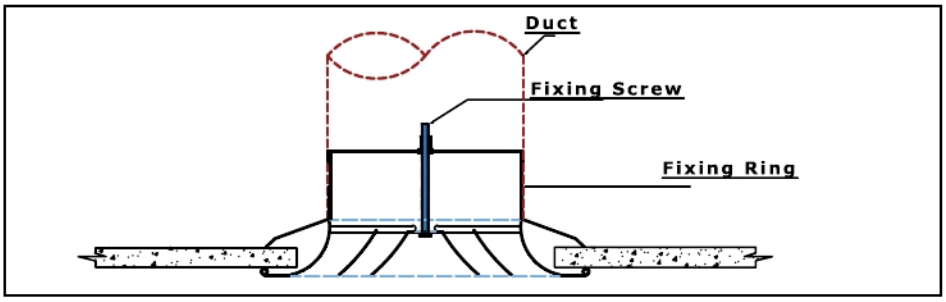
Air flow data

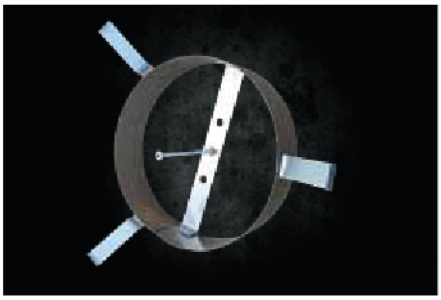
Neck dia in mm	Face velocity in m/sec	2.0	2.5	3.0	4.0	5.0	6.0	7.0
160	Cfm M³/sec P_s in mm H_2O Throw in m NC	60 0.028 0.36 0.3-0.5-0.8 <15	74 0.035 0.55 0.4-0.6-1.2 16	89 0.042 0.78 0.5-0.7-1.6 22	119 0.056 1.43 0.7-1.2-1.8 30	148 0.07 2.24 0.9-1.4-2.4 35	178 0.084 3.26 1.2-1.7-2.9 40	207 0.098 4.28 1.4-2.0-3.4 45
200	Cfm M³/sec P_s in mm H_2O Throw in m NC	110 0.052 0.36 0.5-0.7-1.3 15	138 0.065 0.55 0.6-0.9-1.7 19	165 0.078 0.78 0.7-1.2-2.0 24	220 0.104 1.43 1.0-1.6-2.5 31	275 0.13 2.24 1.3-1.9-3.3 37	330 0.156 3.26 1.6-2.4-4.0 41	385 0.182 4.28 1.9-2.8-4.8 47
250	Cfm M³/sec P_s in mm H_2O Throw in m NC	178 0.084 0.36 0.7-0.9-1.7 15	222 0.105 0.55 0.8-1.3-2.3 21	267 0.126 0.78 1.0-1.5-2.5 26	356 0.168 1.43 1.3-2.0-3.4 32	445 0.21 2.24 1.7-2.4-4.0 38	534 0.252 3.26 2.0-3.0-5.0 43	622 0.294 4.28 2.3-3.6-6.2 48
315	Cfm M³/sec P_s in mm H_2O Throw in m NC	263 0.124 0.36 0.8-1.2-2.0 15	328 0.155 0.55 0.9-1.4-2.2 22	394 0.186 0.78 1.2-1.7-2.8 26	525 0.248 1.43 1.4-2.2-3.8 34	656 0.31 2.24 2.0-3.0-5.0 39	788 0.372 3.26 2.2-3.5-5.7 44	920 0.434 4.28 2.8-4.4-6.8 49
355	Cfm M³/sec P_s in mm H_2O Throw in m NC	360 0.17 0.36 0.9-1.3-2.3 16	450 0.213 0.55 1.1-1.6-2.8 23	540 0.255 0.78 1.3-2.0-3.4 27	720 0.34 1.43 1.8-2.8-4.4 35	900 0.425 2.24 2.2-3.5-5.7 41	1080 0.51 3.26 2.8-4.4-6.8 45	1260 0.595 4.28 3.4-5.0-8.6 50
400	Cfm M³/sec P_s in mm H_2O Throw in m NC	475 0.224 0.36 1.0-1.6-2.6 17	593 0.28 0.55 1.3-2.0-3.2 23	711 0.336 0.78 1.6-2.4-4.0 27	949 0.448 1.43 2.1-3.2-5.2 36	1186 0.56 2.24 2.6-4.0-5.6 41	1423 0.672 3.26 3.1-4.8-7.6 46	1660 0.784 4.28 3.6-5.6-9.6 51
450	Cfm M³/sec P_s in mm H_2O Throw in m NC	605 0.286 0.36 1.3-1.8-3.0 19	758 0.358 0.55 1.5-2.4-3.6 25	908 0.429 0.78 1.8-2.7-4.5 29	1210 0.572 1.43 2.4-3.6-6.0 37	1514 0.715 2.24 3.0-4.5-7.5 43	1817 0.858 3.26 3.5-5.4-8.6 48	2117 1.0 4.28 4.0-6.0-0.0 52
500	Cfm M³/sec P_s in mm H_2O Throw in m NC	750 0.354 0.36 1.4-2.0-3.4 20	938 0.443 0.55 1.8-2.6-4.4 26	1125 0.531 0.78 2.0-3.0-5.0 31	1500 0.708 1.43 2.7-4.0-5.4 38	1874 0.885 2.24 3.5-5.2-8.4 44	2245 1.06 3.26 4.2-6.2-10 48	2623 1.239 4.28 4.8-7.6-2.0 53

- Neck size is measured in m/sec.
- P_S: Static pressure loss in mm of H_2O.
- Throw (meters) is measured for a terminal velocities of 0.25 & 0.5 m/sec.
- Noise criteria (NC) based on a room attenuation of 10 dB.

ROUND CEILING DIFFUSER
FIXING DETAILS

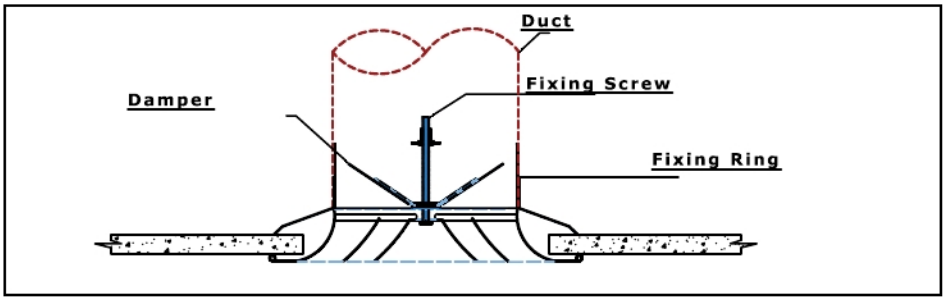
1. ARDF



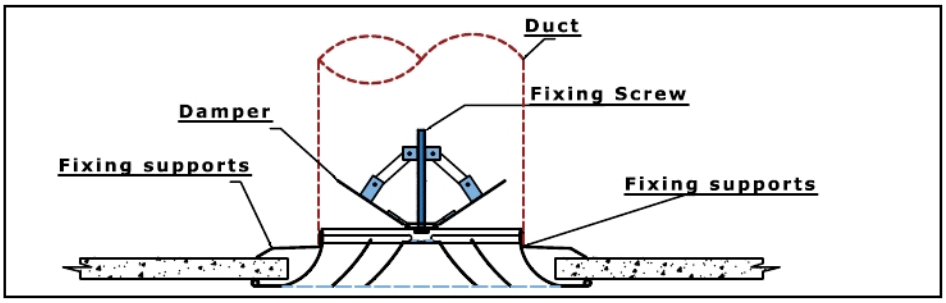


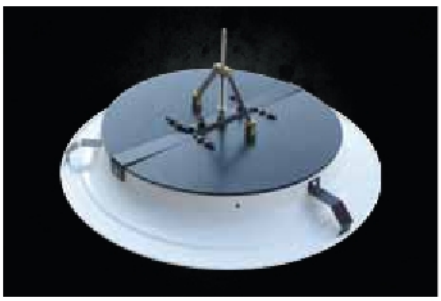
2. ARDF+D

Option 1 : Hook operated damper

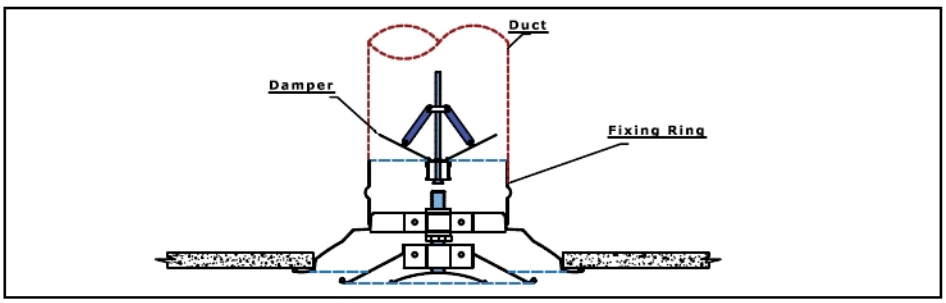


Option 2 : Screw operated damper





3. ARD & ARD+D



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