



Products brochure

2022

AIR OUTLETS

AIR FILTERS

AIR DUCT ACCESSORIES

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Introduction

GMECH Group

Gmech group is one of the fast-developing private business groups in Egypt , it has 4 companies in diverse business sectors such as consultancy , contracting and Manufacturing.

Gmech group of companies has a strong foothold in the Egyptian HVAC sector . It expands its manufacturing base and precise procedures to increase production volumes, accelerate production times and improve project delivery times.

CLIMA VAC

Clima vac is a well - established brand for Air handling units , Fan sections , DX condensing units and hygienic HVAC equipment which are designed to Italian technology it is owned today by the Gmech group.

Clima vac units are manufactured in a fully integrated facility in Abou - Rawash industrial zone , equipped with the most modern machinery, our core production team has more than 25 years of technical experience . The product range features premium components with AHRI certified coils , AMCA certified fans and CE certified motors and optionally UL certified filters.

Clima vac quality assurance policy assures that the quality of all manufactured air handling units and fan sections meets the highest international standards we are committed to continuous quality improvement and maintain focus on enhanced customer satisfaction levels.

Clima vac units are ideal for installation in residential and commercial buildings , cinemas, sports complexes hotels , hospitals , pharmaceutical installations and shopping malls. Our units have been supplied to numerous projects in the middle east , we offer our clients the best technical support and quick responding after- sales services.

Clima vac commitment to research the product range features premium components with AHRI certified coils, AMCA certified fans and CE certified motors, and optionally UL certified filters and development has led the company to constantly improve its products and thus guarantee system reliability and performance.

OUR VISION

Is to support all HVAC projects with our products and improve the Group's position as a leading HVAC manufacturer and supplier in Egypt Africa and the middle East with a global vision.

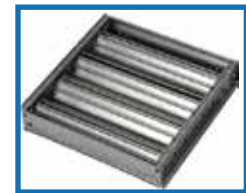
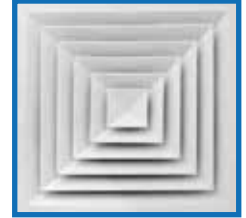
Square ceiling diffusers

Description

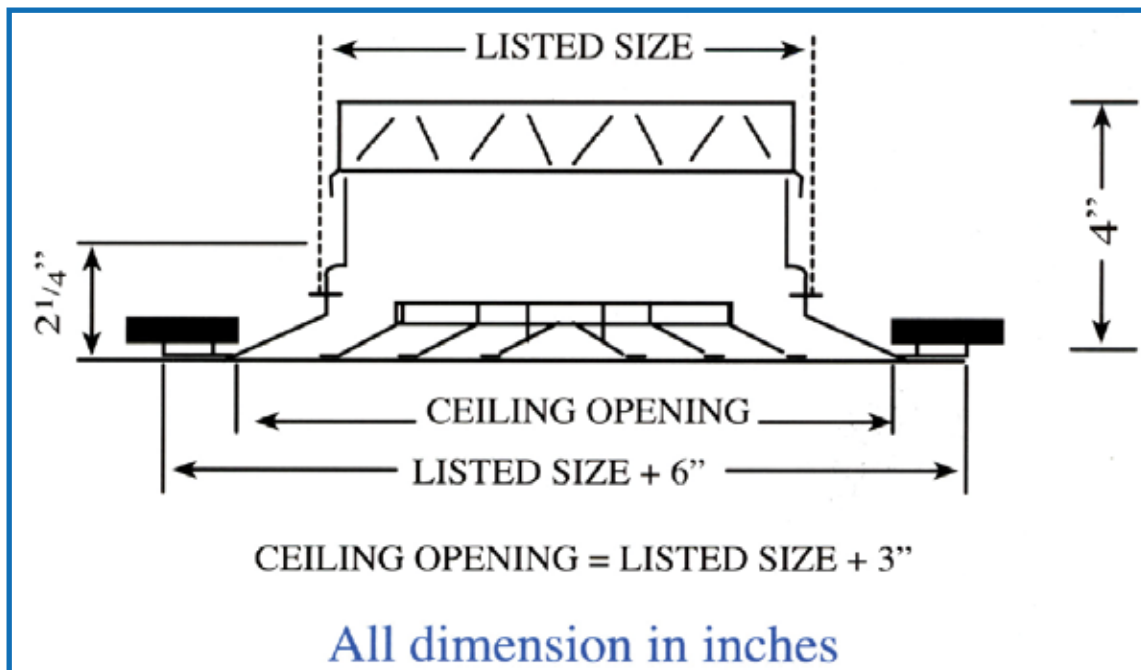
Square ceiling diffuser is ideal for flush mounting in ceilings . It is suitable for use in rooms with heights up to 4.00 m . The recommended supply air temperature differential $\pm 10K$. Ceiling diffusers can be used both for supply and extract applications . Specially developed ancillaries and plenum boxes,with optional flow rate control dampers ,are available to ensure optimum discharge characteristics.

Construction

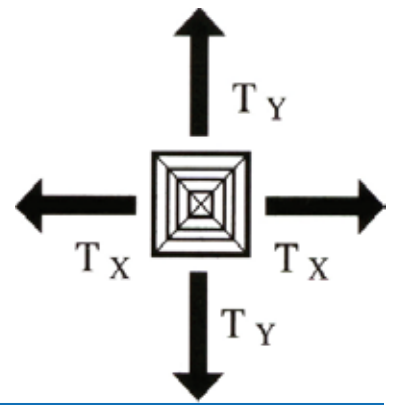
The face section of the diffuser consists of peripheral border, fixed air control blades and center cone . The diffuser and accessories are manufactured of extruded aluminum. The inner section easily removable and locks in place without the use of tools . The diffuser can be supplied with : control damper "opposed blades". Plenum box.



Dimensions



Performance data



≤ NC 40
 NC 40
 NC 35
 NC 30

-Listed size -Outlet Area	Outlet velocity FPM												
	Pt Total pressure (in.eg)												
	500	600	700	800	900	1000	1200	1400	1600	1800	2000		
6"X6" A _k 0.10	CFM	50	60	70	80	90	100	120	140	160	180	200	
	T	X	2-3	2-3	2-4	2-4	3-5	3-5	4-6	4-8	5-8	5-9	6-11
		Y	2-3	2-3	2-4	2-4	3-5	3-5	4-6	4-8	5-8	5-9	6-11
9"X9" A _k 0.22	CFM	110	135	155	180	205	255	270	315	360	410	450	
	T	X	2-4	2-4	3-5	3-5	4-6	5-8	5-9	6-11	6-12	7-13	8-14
		Y	2-4	2-4	3-5	3-5	4-6	5-8	5-9	6-11	6-12	7-13	8-14
12"X12" A _k 0.40	CFM	200	240	280	320	360	400	480	560	640	725	800	
	T	X	3-5	4-6	4-8	5-8	5-9	6-11	6-12	7-13	8-15	9-17	10-19
		Y	3-5	4-6	4-8	5-8	5-9	6-11	6-12	7-13	8-15	9-17	10-19
15"X15" A _k 0.62	CFM	310	375	440	500	565	625	750	875	1000	1125	1250	
	T	X	4-6	4-8	5-9	6-11	6-11	6-12	8-15	10-18	10-19	12-21	13-23
		Y	4-6	4-8	5-9	6-11	6-11	6-12	8-15	10-18	10-19	12-21	13-23
18"X18" A _k 0.90	CFM	450	540	630	720	810	900	1080	1260	1440	1620	1800	
	T	X	4-8	5-9	5-11	6-12	7-13	8-15	10-17	11-20	13-23	15-27	16-30
		Y	4-8	5-9	5-11	6-12	7-13	8-15	10-17	11-20	13-23	15-27	16-30

Order code :

SQ / SCD / 3 / 18X18 / 2 / RAL 9006

SQ : Square diffuser

SCD : supply ceiling diffuser
RCD : return ceiling diffuser

Diffuser size
Neck size (inch)

- 1: Face only
- 2: Face with opposed blade damper
- 3: Face with plenum box
- 4: Face with opposed blade damper and plenum box

Finish powder coating
0 - Anodized Aluminum
1 - white color.RAL 9010
2 - Other color RAL specify by customer

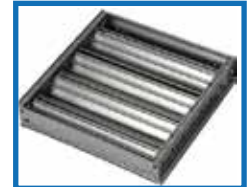
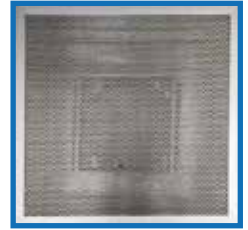
Perforated face diffuser

Description

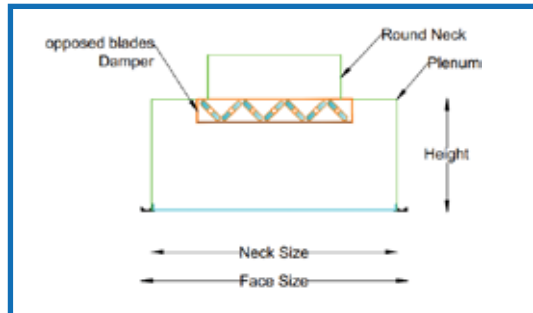
Perforated stainless steel grille is ideal for flush mounting in ceilings. It is suitable for use in rooms with heights up to 4.00m. The recommended supply air temperature differential is +10 K. Ceiling diffusers can be used both for supply extract applications. Specially developed ancillaries and plenum boxes, with optional flow rate control dampers, are available to ensure optimum discharge characteristics.

Construction

The face section of the diffuser consists of peripheral border, fixed air control blades and center cone. The diffuser and accessories are manufactured of extruded aluminum. The inner section easily removable and locks in place without the use of tools. The diffuser can be supplied with: control damper "opposed blades". Plenum box.



Dimensions



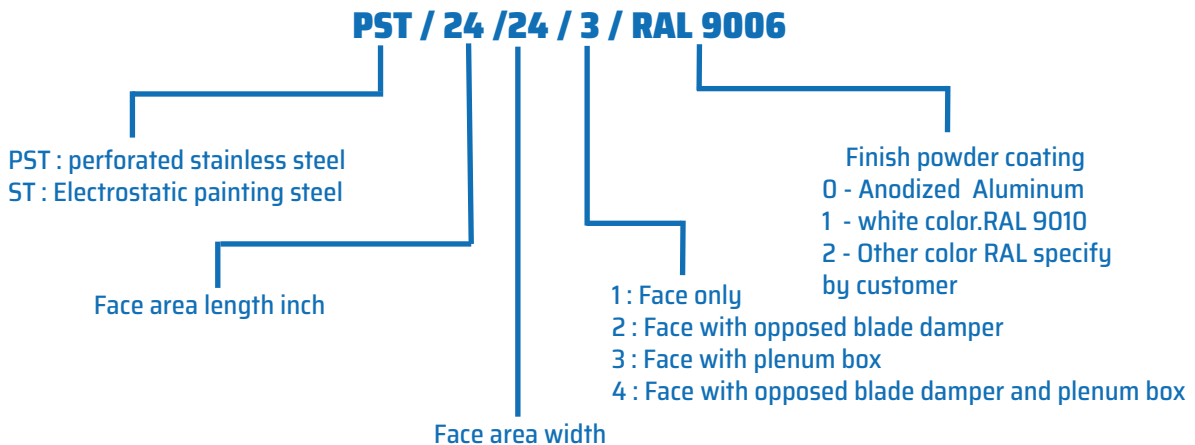
Performance data

Core Area (sq.ft)	Nominal size		Outlet velocity FPM											
			400	500	600	700	800	900	1000	1200	1400	1600	1800	2000
	L (in)	W (in)	Velocity pressure (in.wg)											
			0.010	0.016	0.022	0.031	0.040	0.050	0.062	0.090	0.122	0.160	0.202	0.249
			Flow (CFM)											
0.08	8	8	30	38	45	53	60	68	75	90	105	120	135	150
0.10	8	10	41	51	61	71	81	92	102	122	142	163	183	203
0.13	8	12	51	64	77	90	103	115	128	154	180	205	231	257
0.15	8	14	62	77	93	108	124	139	155	186	217	248	279	310
0.18	8	16	73	91	109	127	145	163	182	218	254	290	327	363
0.14	10	10	55	69	83	99	110	124	138	165	193	220	248	275
0.17	10	12	70	87	104	122	139	156	174	209	243	278	313	348
0.21	10	14	84	105	126	147	168	189	210	252	294	336	378	420
0.25	10	16	98	123	148	172	197	221	246	295	344	394	443	492
0.28	10	18	113	141	169	197	226	254	282	338	395	451	508	564
0.32	10	20	127	159	191	223	254	286	318	382	445	509	573	636
0.22	12	12	88	110	132	154	175	197	219	263	307	351	395	439
0.26	12	14	106	132	159	185	212	238	265	318	371	424	477	530
0.31	12	16	124	155	186	217	248	279	310	372	434	497	559	621
0.36	12	18	142	178	214	249	285	320	356	427	498	569	641	712
0.40	12	20	161	201	241	281	321	361	401	482	562	642	722	803
0.45	12	22	179	223	268	313	358	402	447	536	626	715	804	894
0.94	12	24	197	246	295	345	394	443	492	591	689	788	886	985

Performance data

Core Area (sq.ft)	Nominal size		Outlet velocity FPM											
			400	500	600	700	800	900	1000	1200	1400	1600	1800	2000
	L	W	Velocity pressure (in.wg)											
(in)	(in)	0.010	0.016	0.022	0.031	0.040	0.050	0.062	0.090	0.122	0.160	0.202	0.249	
		Flow (CFM)												
0.32	14	14	128	160	192	224	256	288	320	384	448	512	576	640
0.37	14	16	150	187	225	262	300	337	375	450	525	600	675	749
0.43	14	18	172	215	258	301	344	387	430	516	602	688	773	859
0.48	14	20	194	242	291	339	388	436	485	582	679	775	872	969
0.54	14	22	216	270	324	378	432	486	540	648	755	863	971	1079
0.59	14	24	238	297	357	416	476	535	595	713	832	951	1070	1189
0.44	16	16	176	220	263	307	351	395	439	527	615	703	790	878
0.50	16	18	201	252	302	352	403	453	504	604	705	806	906	1007
0.57	16	20	227	284	341	398	454	511	568	682	795	909	1022	1136
0.63	16	22	253	316	379	443	506	569	632	759	885	1012	1138	1265
0.70	16	24	279	348	418	488	557	627	697	836	975	1115	1254	1393
0.58	18	18	231	289	346	404	462	520	577	693	808	924	1039	1155
0.65	18	20	260	326	391	456	521	586	651	781	912	1042	1172	1302
0.73	18	22	290	363	435	508	580	653	725	870	1015	1160	1305	1450
0.80	18	24	320	399	479	559	639	719	799	959	1118	1278	1438	1598
0.73	20	20	294	367	441	514	588	661	735	881	1028	1175	1322	1469
0.82	20	22	327	409	491	572	654	736	818	981	1145	1308	1472	1636
0.90	20	24	360	451	541	631	721	811	901	1081	1262	1442	1622	1802
0.91	22	22	364	455	546	637	728	819	911	1093	1275	1457	1639	1821
1.00	22	24	401	502	602	702	803	903	1003	1204	1405	1605	1806	2007
1.11	24	24	442	553	663	774	884	995	1105	1327	1548	1769	1990	2211

Order code



Grilles & Registers

Description

Supply and return air grilles and registers are considered to be the most frequently used parts in any heating, ventilation and air conditioning (HVAC) systems. Whether the grilles and registers are kept unobtrusive, or played up as decorative accents, their appearance and workmanship are as important as their performance. They are architectural as well as engineering products. With their taut, clean lines, solid construction, silence and controlled performance, Climavac grilles and registers are an excellent choice for all of your HVAC requirements.

Climavac air grilles and registers

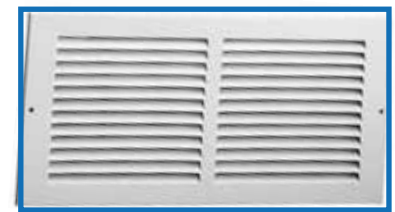
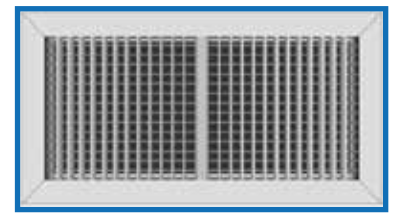
Are designed to suite HVAC applications where a high side wall or exposed duct is required, they are also used for adjusting airflow patterns of air conditioned spaces and yet with an architectural appearance and curved-back frames.

Introduction

Multi parallel and adjustable blade type with aero foil section of blade which allow a smooth and uniform pattern for quiet and low pressure drop application. Adjustable horizontal or vertical planes. The frame is curved - back or flat from according to client requirements.

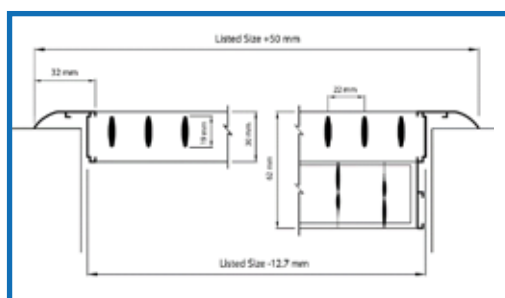
Description

High quality extruded aluminum in mat silver anodized finish for blades and frame. White electrostatic polyester powder coating finish is available as a standard. Other RAL standard colors are also available upon request. Gaskets are provided when specified as optional. Dampers are of extruded aluminum construction.

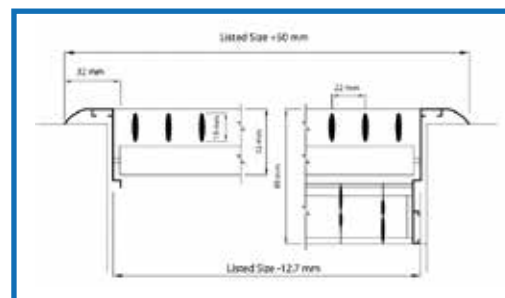


Types of grilles or register according to blades deflection

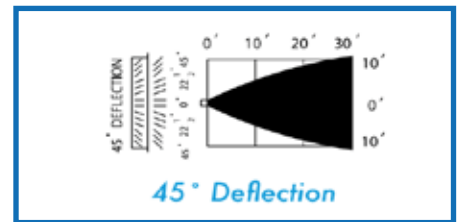
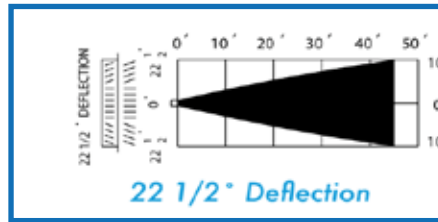
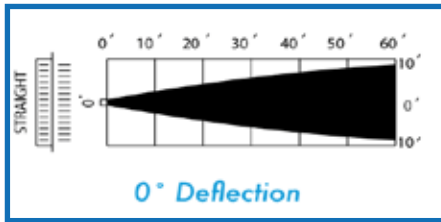
SINGLE DEFLECTION



DOUBLE DEFLECTION



Deflection settings

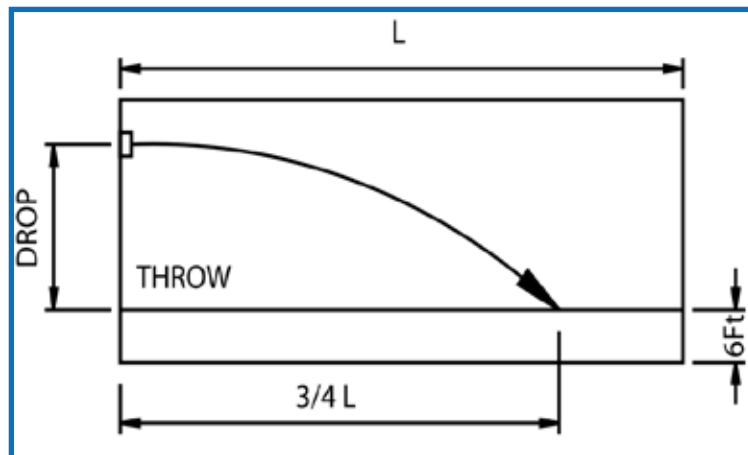


The figures above show the air pattern of different of different blade settings. It is noted that throw and drop will decrease as the angle of deflection increased.

Spread Requirements

The vane angle adjustment of grilles will affect the spread as follows :

- 1- For 0° deflection angle , the total spread of the air stream is one - third of the throw.
- 2- For 22.5° deflection angle, the total spread of the air stream is about 45 percent of the throw.
- 3- For 45° deflection angle , the total spread of the air stream is two - t hird of the throw.



The total drop of an air stream is the sum of drop due to throw and drop due to temperature difference of air in the room and air at the grille.

Products quick selection

Size (inch)	CFM range	Size (inch)	CFM rang	Size (inch)	CFM range
12 X 6	100 - 300	12 X 8	150 - 400	12 X 10	150 - 450
16 X 6	150 - 350	16 X 8	175 - 500	16 X 10	200 - 600
18 X 6	200 - 400	18 X 8	200 - 550	18 X 10	250 - 700
20 X 6	200 - 450	20 X 8	225 - 625	20 X 10	275 - 800
24 X 6	225 - 252	24 X 8	250 - 750	24 X 10	325 - 1000
30 X 6	300 - 700	30 X 8	325 - 950	30 X 10	400 - 1200
36 X 6	350 - 900	36 X 8	400 X 1150	36 X 10	500 X 1400
Size (inch)	CFM range	Size (inch)	CFM rang	Size (inch)	CFM range
12 X 12	200 - 550	16 X 14	300 - 850	24 X 18	600 - 1650
16 X 12	250 - 750	18 X 14	350 - 950	30 X 18	750 - 2100
18 X 12	300 - 850	20 X 14	400 - 1050	36 X 18	900 - 2500
20 X 12	325 - 925	24 X 14	450 - 1200	24 X 24	800 - 2300
24 X 12	400 - 1150	30 X 14	550 - 1600	30 X 24	1000 - 2800
30 X 12	500 - 1400	36 X 14	700 - 2000	36 X 24	1200 - 3200
36 x 12	600 X 1700	20 X 18	500 - 1400		

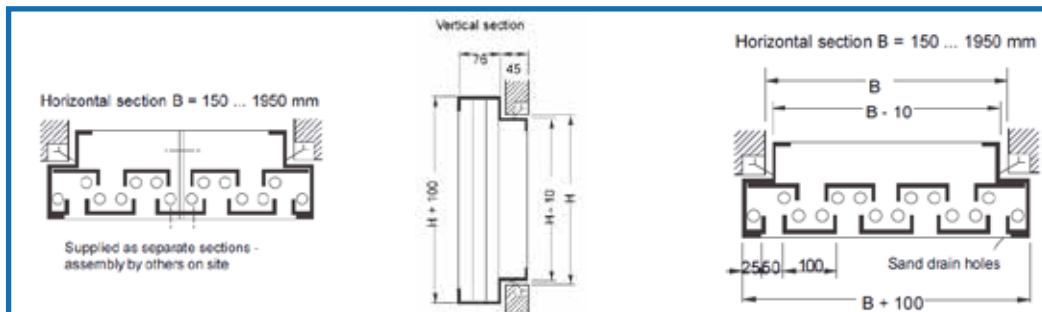
Sand trap louver

Description

The louver is used for sandy areas to separate sand from intake air. The frame and blades made from formed mill finish aluminum. The louver provided with self - emptying sand drain holes from the base. The louver can supplied with galvanized bird screen mesh. For very large sand trap we will applied it as parts.



Construction



Dimensions

For single size section, the standard dimensions as below in table.

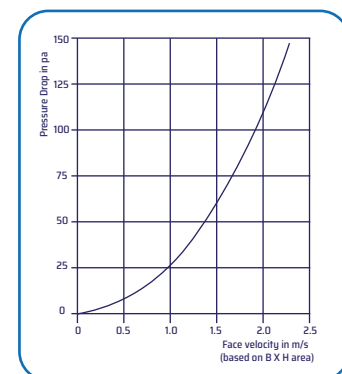
Width B (mm)	150	300	450	600	750	900	1050	1200	1350	1500	1650	1800	1950
Height H (mm)	150	300	450	600	750	900	1050	1200	1350	1500	1650	1800	1950

Performance Date

The filtration performance is depend on the particale size of dust and also the velocity of the air.

Particle size Range	Filtration efficiency in %	
	at 1 m/s	at 2 m/s
350 - 700	90	70
75 - 700	60	35

Pressure Drop



Order code

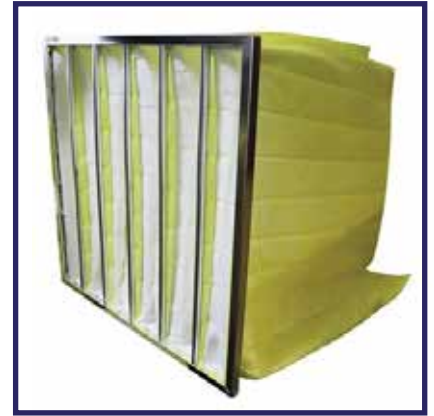
STL / 1800X1350 / 2 / 2 / RAL 9006



Pocket filter fine filtration

Description

Bag filters are the most common air filter in HVAC systems for industrial and commercial applications as well as for residential use to improve indoor air quality and comfort. The filters in the supply air are used as first and second filter stages, either as complete filtration solutions for these applications or as prefilter for cleanroom process applications. The filters are also used in the exhaust air or in recirculation systems to protect the air handling units. Bag filters have a significantly higher dust holding capacity and longer.



Description

For fine filtration in HVAC and plants of all kinds

- Offices, Hospitals, computer centers.
- Pharmaceuticals, food and beverage industries.
- Air ports, commercial buildings.
- Any building who has central air conditioning.

Classifications according to EN 779

- Filter class G4 (30-35%) - White color
- Filter class F6 (60-65%) - Green color
- Filter class F7 (80-85%) - Pink color
- Filter class F8 (90-95%) - Yellow color
- Filter class F9 (90>95%) - Off white color



Material characteristics

- Humidity Resistant up to 100% R.H.
- Higher density and pressure load due to endless.
- Pockets and their edge.
- Synthetic fiber material.
- Spacers inside media for better air distribution.
- Welded pockets.

Class	F6	F7	F8	F9
Average Efficiency %	60 - 80	80 - 90	90-95	>95
Initial pressure loss pa	65	85	95	125
Final pressure loss pa	450	450	450	450
Max. Relative Humidity resistance	100%	100%	100%	100%

Aluminum washable air filter

Description

Pre filters are the most common air filters in HVAC systems for industrial and commercial applications as well as for residential use to improve indoor air quality and comfort . The filters in the supply air are used as first stage , either as complete filtration solutions for these applications or cleanroom process applications. The filters are also used in the exhaust air or in recirculation systems to protect the air handling units .pre filters have a significantly higher dust holding capacity and longer lifetimes than other filters.



Applications

For fine filtration in HVAC and plants of all kinds

- Offices, Hospitals, computer centers.
- Pharmaceuticals, food and beverage industries.
- Air ports, commercial buildings.
- Any building who has central air conditioning.

Classifications according to EN 779

- Filter class G1 (50-65%)
- Filter class G2 (65-80%)
- Filter class G3 (80-90%)
- Filter class G4 >95

Material specifications

- FRAME : Galvanized steel.
- Media : Multiple layers of corrugated and fine mesh expanded metal sheets.

CLIMA VAC AIR DUCT ACCESSORIES

Rectangular volume damper opposed blades

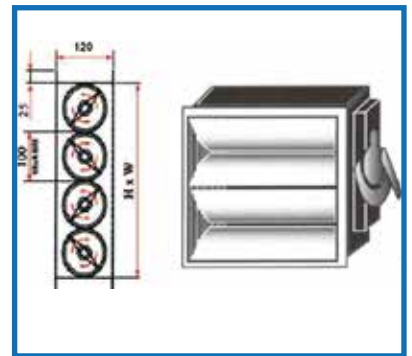
Description

- The volume control dampers are used to regulate the flow of air an HVAC system.
- They can be used in intake , exhaust or mixed air applications.
- We can use it as manual volume damper by using Drive arm ; and we can use it as motorized volume damper by using electric actuator.



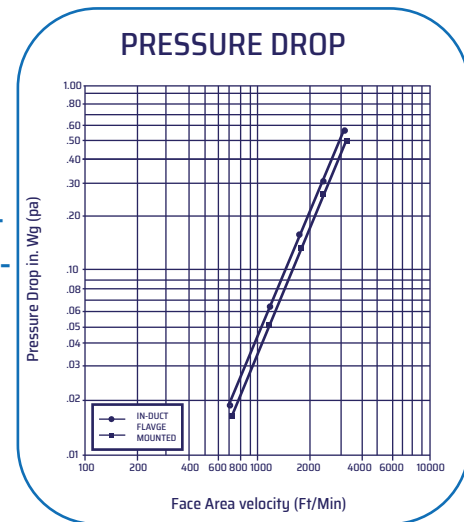
Construction

CASING : made of extruded aluminum and the casing depth 120mm.
BLADES : made of extruded aluminum profile aero foil blades and blade pitch 100 mm.
DRIVE ARM : made of galvanized steel.
GEAR : made of specific plastic temperature resistance 70 C.
HAND LOCKING QUADRANT : made from galvanized steel,

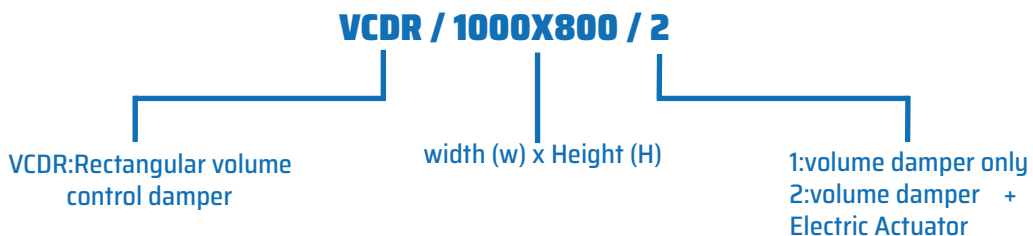


Performance data

PRESSURE DROP : pressure drop ratings are based on AMCA standard 500-D-97 using test setup figure for damper installed with upstream and downstream. Static pressures are corrected to 0.75 Lb./Cu. Ft. air density.



Order code :



Motorized Fire & Smoke Damper

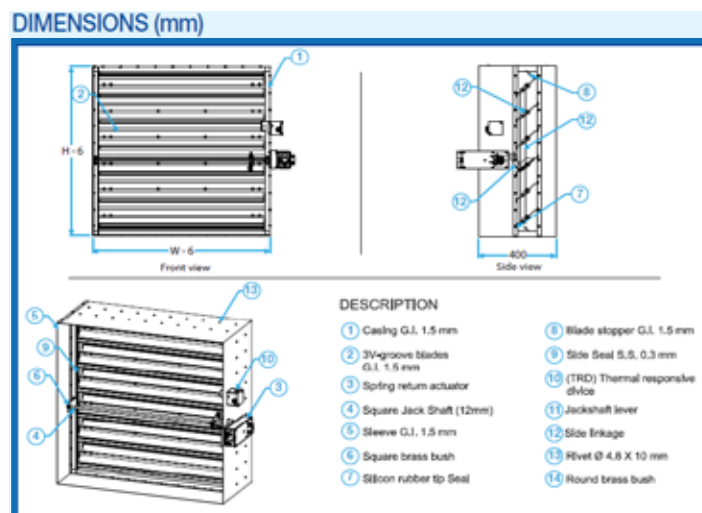
Application

- MFSD are designed to be installed in HVAC ductwork at the locationsthat are designated as fire barrier or fire & smoke barrier it should not be installed in a somke extraction ductwork for some extraction applications.
- It is suitable for vertical installation in walls / partitions and horizontal installation in floors having a fire resistance rating of less than 2 hours.
- It prevents the spread of fire/somke inside residential,commercial and industrial bulidings.



Constraction

- CASING : 140mm deep,hat-shaped casing manufactured from 16 ga. (1.5mm) galvanized steel.
- BLADE : 3V - groove shaped,single skin blades mmanufactured from 16 ga . (1.5mm) galvanized steel. parallel blade operation.
- BLADE TIP SEAL : silicon rubber seals permanently bonded to blade edge through self-forming silicon sealant.
- JAMB SEAL : stainless, spring action type.
- ACTUATOR : UL listed , spring return , Electric 24 VAC / 230 AC , quick opening and colsing.
- JACKSHAFT : 12mm X 12mm square jackshaft to ensure tight grip at the actuator.
- BRASS BUSH : round for spindles and square for jackshaft.
- SLEEVE : 400mm long factory installed sleeve (standard supply) manufactured from 16a (1.5mm) galvanized steel.



CLIMA VAC
OUR SUCCESS PARTNERS



Al Andalous
 MEDICAL COMPANY



KIROVEST
 PHARMACEUTICAL CO.



GlaxoSmithKline



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