Catalogue # SF-06

November 2015

ROOF TOP CENTRIFUGAL FANS

Backward Inclined Impellers

Belt & Direct Driven

Type: **RTCB / RTCD Series**

Saudi Fan Industries

2nd Industrial City, Dammam, Saudi Arabia

www.refhouse.com. , Tel: 8121866, Fax: 8121894

Saudi Fan Industries

Management Commitment To Quality

We are continuously striving to provide higher quality products and services to achieve total customer satisfaction by understanding their requirements and anticipating their future expectations or needs.

We are committed to development and strengthening of partnership with our external and internal customers and suppliers.

We are dedicated to the continual improvement of all products and services through involvement of all employees.

We value all people by understanding and drawing upon their strengths i.e. abilities and knowledge and make efforts for their training and development.

President

Ali Saleh Al-Khalaf

Contents

Saudi Fan Industries

amca INTERNATIONAL

ACCREDITED LABORATORY

The laboratory of

SAUDI FAN INDUSTRIES

at

2ND INDUSTRIAL CITY
SAUDI ARABIA

is accredited with AMCA International as being qualified
to conduct tests in accordance with

AMCA STANDARD 210

FIGURES 12 AND 15

DEPUTY EXECUTIVE DIRECTOR

EXECUTIVE DIRECTOR

DECEMBER 30, 2011
ORIGINAL ACCREDITATION DATE

DECEMBER 30, 2017
ACCREDITATION EXPIRATION DATE

AIR MOVEMENT AND CONTROL ASSOCIATION INTERNATIONAL, INC.
30 West University Drive, Arlington Heights, Illinois 60004-1893 USA

About Us

Saudi Fan Industries *was established In 1999 as another manufacturing division of steadily growing organization "**Refrigeration House group**" in order to fulfill requirements of local market for air movement and control equipments.*

As a member of Refrigeration House Group , that has market research for ventilation equipments spread over 25 years ,Saudi Fan industries now has grown into a full swing manufacturing unit to satisfy the demanding needs of air movement and control equipments for modern residential , commercial and industrial zones .

*Saudi Fan Industries has acquired modern manufacturing technology and modern testing facilities like **AMCA Accredited Test Laboratory for Standard 210** in order to achieve **"TotalCustomer Satisfaction"**. Not only still it has been investing significant resources in latest technology but also has created a medium where everyone in the organization can contribute. We have a stringent policy of research,development and making awareness of technology throughout the organization . **Saudi Fan Industries has been implemented Quality Assurance Management System as per EN ISO 9001:2008 Standard** . As a result ,Saudi Fan Industries products are manufactured precisely and consistently through all production stages under strict quality control procedures.*

*Saudi Fan Industries strictly acting on the policy of **"The high quality product should be delivered to our valued customers right from the beginning"** .*

Now Saudi Fan Industries is not only the leading supplier of air movement and control equipment in Kingdom but also a famous name in entire gulf. It offers wide range of fans and ventilator products for residential,commercial ,institutional and industrial buildings in applications from comfort ventilation to manufacturing processes.

Products are available for exhaust,supply,re-circulate, filtered process and gravity applications. Fans are available in either direct drive or belt drive.

Saudi Fan Industries has significant production capacity in order to fulfill markets demand. It also has a pool of qualified staff,who are fully dedicated to give best advice to our valued customers inquiries .

Saudi Fan Industries Certifies Models shown herein are Licenced to bear the AMCA Sound and Air Performance seals.The ratings shown are based on tests and procedures performed in accordance with AMCA publication 211 , AMCA publication 311 and comply with requirements of the AMCA Certified Ratings Programme.

Fan Laws

Speed Variation at constant fan size and constant density :

The volume flow changes proportionately to the speed

$$\frac{V_1}{V_2} = \frac{n_1}{n_2}$$

All pressures (static, dynamic and total) change proportionately to the square of speed .

$$\frac{P_{st\,1}}{P_{st\,2}} = \left(\frac{n_1}{n_2}\right)^2 = \left(\frac{V_1}{V_2}\right)^2$$

The Power requirement changes proportionately to the third power of speed

$$\frac{P_1}{P_2} = \left(\frac{n_1}{n_2}\right)^3 = \left(\frac{V_1}{V_2}\right)^3$$

In the case of changes in the wheel diameter of geometrically similar wheels at constant speed :

The volume flow changes proportionately to the third power of the wheel diameter .

$$\frac{V_1}{V_2} = \left(\frac{D_1}{D_2}\right)^3$$

All pressures (static, dynamic and total) change proportionately to the square of wheel diameter .

$$\frac{P_{st\,1}}{P_{st\,2}} = \left(\frac{D_1}{D_2}\right)^2$$

The Power requirement changes proportionately to the fifth power of wheel diameter .

$$\frac{P_1}{P_2} = \left(\frac{D_1}{D_2}\right)^5$$

Pressure units

Convert from	Convert to										
	Pa (N/m^2)	***bar***	***atm***	***mm Hg =1 torr***	***mm H_2O***	***m H_2O***	***kg/cm^2***	***lb/ft^2***	***lb/in^2 (psi)***	***inches Hg***	***inches H_2O***
Pa (N/m^2)	1	10^{-5}	$9.87\ 10^{-6}$	0.0075	0.1	10^{-4}	$1.02\ 10^{-5}$	0.021	$1.45\ 10^{-4}$	$2.96\ 10^{-4}$	$4.02\ 10^{-3}$
bar	105	1	0.987	750	1.01910^4	10.197	1.0197	2090	14.5	29.61	402
atmosphere	$1.01\ 10^5$	1.013	1	759.9	10332	10.332	1.03	2117.5	14.69	29.92	407
mm Hg	133.3	$1.33\ 10^{-3}$	$1.32\ 10^{-3}$	1	13.3	0.013	$1.36\ 10^{-3}$	2.79	0.019	0.039	0.54
mm H_2O	10	0.000097	$9.87\ 10^{-5}$	0.075	1	0.001	$1.02\ 10^{-4}$	0.209	$1.45\ 10^{-3}$	$2.96\ 10^{-3}$	0.04
m H_2O	104	0.097	$9.87\ 10^{-2}$	75	1000	1	0.102	209	1.45	2.96	40.2
kg/cm^2	$9.8\ 10^4$	0.98	0.97	735	10000	10	1	2049	14.21	29.03	394
lb/ft^2	47.8	$4.78\ 10^{-4}$	$4.72\ 10^{-4}$	0.36	4.78	$4.78\ 10^{-3}$	$4.88\ 10^{-4}$	1	0.0069	0.014	0.19
lb/in^2 (psi)	6894.76	0.069	0.068	51.7	689.7	0.69	0.07	144	1	2.04	27.7
inches Hg	3377	0.0338	0.033	25.4	337.7	0.337	0.034	70.8	0.49	1	13.57
inches H_2O	248.8	$2.49\ 10^{-3}$	$2.46\ 10^{-3}$	1.87	25.4	0.0254	0.0025	5.2	0.036	0.074	1

Volume Flow Units

Convert from	Convert to										
	m^3/s	***m^3/min***	***m^3/h***	***liter/sec***	***liter/min***	***liter/h***	***cfm***	***US gpd***	***US gpm***	***IMP gpd***	***IMP gpm***
m^3/s	1	60	3600	1000	60000	3600000	2119	22800000	15852	19000000	13200
m^3/min	0.0167	1	60	16.67	1000	60000	35.32	380000	264.2	316667	220
m^3/h	0.000278	0.0167	1	0.278	16.67	1000	0.589	6333.3	4.403	5277.8	3.67
liter/sec	0.001	0.06	3.6	1	60	3600	2.119	22800	15.852	19000	13.2
liter/min	$1.67\ 10^{-5}$	0.001	0.06	0.0167	1	60	0.0353	380	0.2642	316.7	0.22
liter/h	$2.7\ 10^{-7}$	0.000017	0.001	0.00028	0.0167	1	0.00059	6.33	0.0044	5.28	0.0037
cfm	0.00047	0.028	1.699	0.472	28.32	1698.99	1	10760.3	7.48	8966.9	6.23
US gpd	$4.39\ 10^{-8}$	$2.6\ 10^{-6}$	0.000158	0.000044	0.0026	0.158	0.000093	1	0.000695	0.833	0.000579
US gpm	0.000063	0.00379	0.227	0.063	3.785	227.1	0.1337	1438.3	1	1198.6	0.833
IMP gpd UK	$5.26\ 10^{-8}$	$3.2\ 10^{-6}$	0.000189	$5.26\ 10^{-5}$	0.00316	0.1895	0.00011	1.2	0.00083	1	0.00069
IMPgpm UK	0.000076	0.0046	0.272	0.076	4.55	272.7	0.161	1727.3	1.2	1439.4	1

Fan Introduction

Saudi Fan Centrifugal Roof exhaust Fans provide the industry's best performance and durability fans for general clean air applications. Saudi Fan Industries subjects these products to extensive life testing , assuring you that the fans will provide years of reliable performance.

Specialities

- ★ *Built-in motor protection through thermal overload as standard*
- ★ *Performance as cataloged is assured.*
- ★ *A range of useful accessories available for different application.*

Capabilities

Roof Top Centrifugal Fans are available in 8 Models , 300 through 1000 . Performance capabilities include a broad capacity range from 350 to 18000 cfm

Performance

Fans shall be tested in accordance with AMCA 210 and AMCA 300 test codes for air moving devices and shall be guaranteed by the manufacturer to deliver rated published performance levels. Fans shall be licensed to bear the AMCA certified ratings seal for both sound and air.

Impellers
Backward Inclined impellers made from sea water resistant aluminum, mounted onto the drive shaft .The impellers with shaft are statically and dynamically balanced according to quality level G 2,5 DIN/ISO 1940.

Motors
TEFC *-Total Enclosed fan cooled motors with protection against humidity IP 55, Class- F, 50°C Ambient. Available at Single and Three phase Supply.*

XPFC - Explosion Proof –*The Explosion proof motor shall be suitable for hazardous duty and shall bear UL listed label suitable for Group 1, class C & D*

Motor Bracket *:*
It Supports Motor and made from Galvanized steel sheet .

Vibration Isolators
Vibration isolators consist of two independent studs separated by a rubber center. Reduces vibration and noise transfer between drive system and fan housing.

Drive Assembly
Belts, pulleys and keys are oversized 150% of driven horsepower. Belts are static-free and oil-resistant

Shafts
Precisely sized, ground and polished so the first critical speed is at least 25% over the maximum operating speed. Where the shaft makes contact with bearings, close tolerances result in longer bearing life.

Bearings
Cast iron frame pre-lubricated self-aligning ball bearing. The low noise precision ball bearings are designed for a theoretical life of at least 200,000 working hours.

Motor Chamber and Cover
Constructed of aluminum. Attached with stainless steel fasteners for easy removal and access to the motor compartment and drive assembly.

Wind band
One-piece, heavy-gauge aluminum with a rolled bead for extra strength directs exhaust air away from the mounting surface.

Internal Supports
Heavy-gauge supports provide additional strength to withstand winds and supports motor and drives.

Curb Cap with Mounting Holes
One-piece for a weather-tight fit. Constructed of aluminum with an integral deep spun venturi. Aluminum curb cap has pre-punched mounting holes to ensure correct attachment to the roof.

Galvanized Bird screen and post
Rigid wire protects the fan discharge from birds and small objects.

Roof Top Centrifugal Fans

Centrifugal Wheel : Excellent Exhaust Effect

Maximum wheel diameter is 1 meter ,

Quiet and Low Noise ,

Reduce fan quantity and primary investment .

Active cooling : long lasting Motor and Bearings

Auxiliary blades suck in air : Negative pressure in drive chamber .

Fresh cool air continuosly made upto drive chamber

Motor bearing life extended effectively

Professional Design : Enhance taste of the building

Elegant profile design : Professional industrial Product

Silver white metalic lustre casing : harmonius with different building colours .

Modernize building with enhanced taste

Epoxy coating available upon request .

Reference Code :

RTC 750 3 D/B

RTC - Roof Top Centrifugal Fan
750 - Impeller Diameter
3 - Motor power kW
B - Belt Driven
D - Direct Driven

Accessories

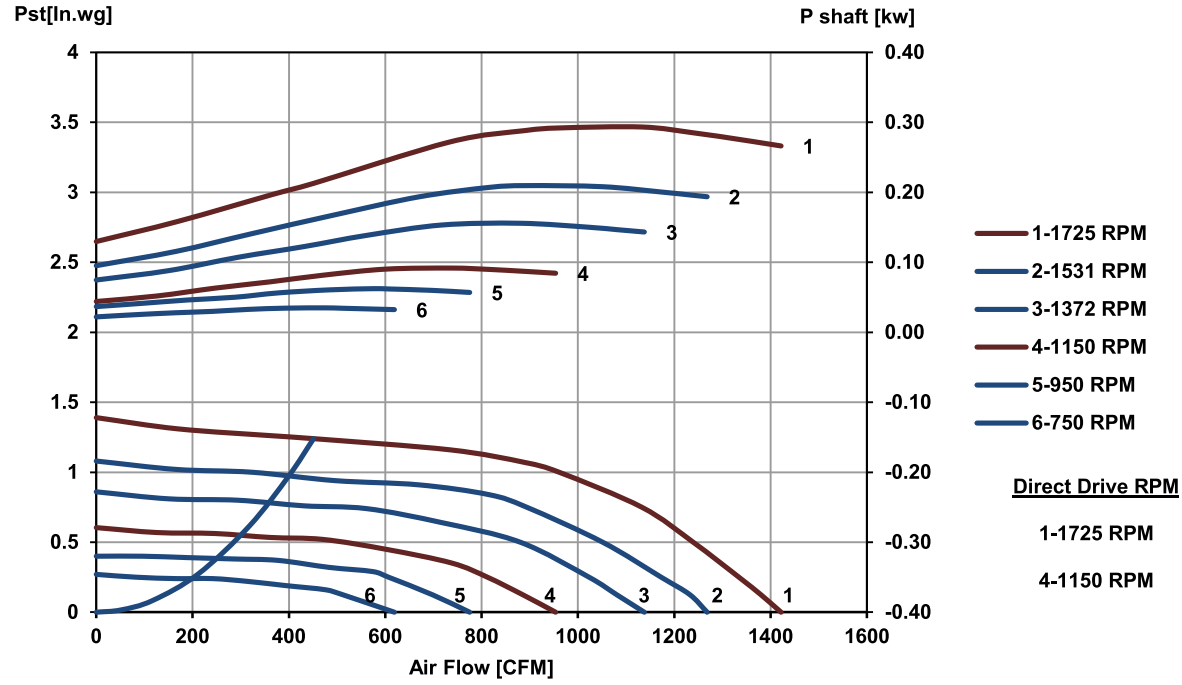
Roof Curb

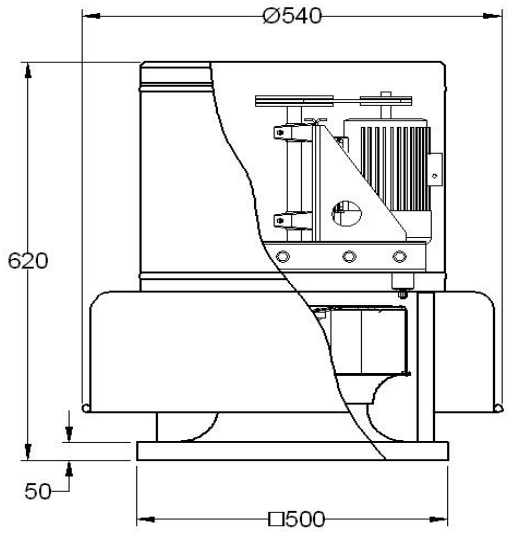
Damper

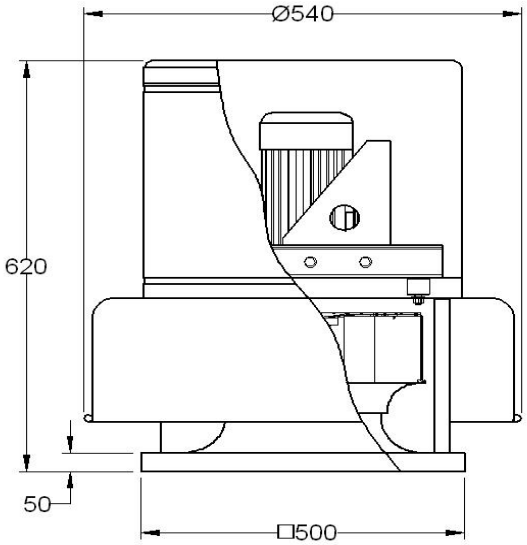
Variable Frequency Drive

Isolator Switch

Motor Starters .







Approximate Unit Weight (kg) = 37 + W_m*

* Wm Motor Weight (see table)

Recommended Roof Opening (mm) = 390 x 390

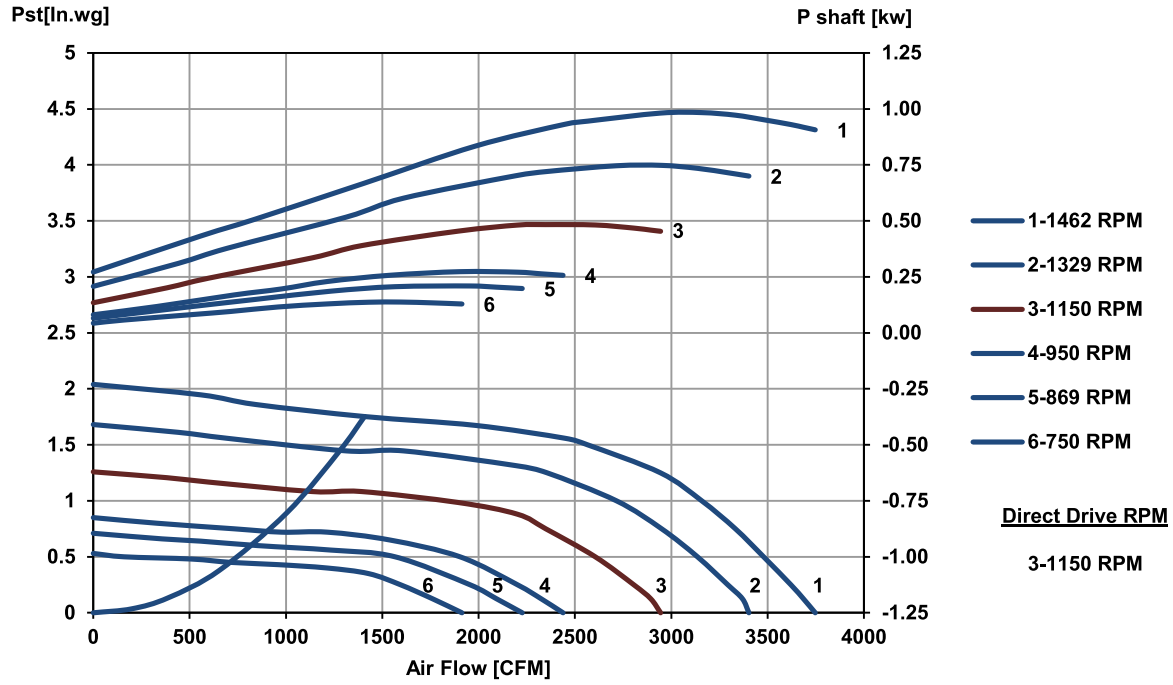
Damper size (See table)

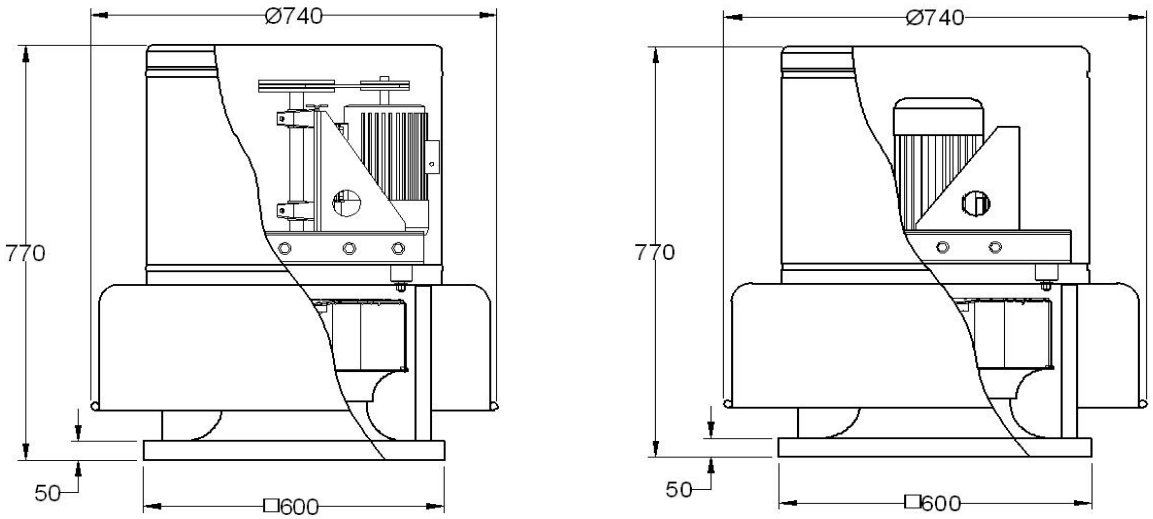
(All dimensions in *millimeters*)

Performance certified is for installation type A - Free inlet ,Free outlet per AMCA Standard 210 . Power rating (BKW) does not include transmission losses. The Sound ratings shown are loudness values in fan sones at 1.5 m (5 ft) in a hemispherical free field calculated per AMCA International Standard 301 . Values shown are for : Installation Type A - free inlet hemispherical sone levels .

Motor kW	Fan RPM		Static Pressure in Inches wg					
			0	0.125	0.25	0.5	0.75	1
RTC 300								
0.18	750	CFM	619	511				
		BKW	0.03	0.03				
		SONES	11.3	11.6				
	825	CFM	673	584	399			
		BKW	0.04	0.04	0.04			
		SONES	13	12.5	10.5			
	907	CFM	740	659	561			
		BKW	0.05	0.05	0.05			
		SONES	14.3	13.9	13.2			
	950	CFM	775	698	607			
		BKW	0.06	0.06	0.06			
		SONES	15.3	15.5	14.8			
	998	CFM	828	749	653			
		BKW	0.06	0.06	0.06			
		SONES	16	15.6	14.8			
	1098	CFM	911	839	758			
		BKW	0.07	0.08	0.08			
		SONES	17.6	17.3	16.8			
	1150	CFM	954	885	812			
		BKW	0.08	0.09	0.09			
		SONES	18.4	18.1	17.8			
	1208	CFM	1002	937	871	625		
		BKW	0.10	0.10	0.10	0.10		
		SONES	19.4	19.1	18.9	16.6		
	1329	CFM	1102	1043	984	816		
		BKW	0.13	0.13	0.14	0.14		
		SONES	21.3	21.2	21	19.9		
0.25	1372	CFM	1138	1080	1023	880		
		BKW	0.14	0.15	0.15	0.16		
		SONES	22	22	22	21		
	1462	CFM	1211	1171	1109	981	793	
		BKW	0.17	0.17	0.18	0.18	0.18	
		SONES	23.4	23.4	23.4	22.9	21.6	
	1531	CFM	1268	1232	1173	1051	894	
		BKW	0.19	0.20	0.20	0.21	0.21	
		SONES	25	25	24	24	22	
0.37	1608	CFM	1325	1280	1231	1125	1011	
		BKW	0.22	0.22	0.22	0.23	0.24	
		SONES	25.6	25.6	25.6	25.5	25.3	
	1725	CFM	1422	1380	1334	1239	1133	961
		BKW	0.27	0.27	0.28	0.29	0.29	0.29
		SONES	27	27	27	27	26	26

Performance certified is for installation type A - Free inlet ,Free outlet per AMCA Standard 210 . Power rating (BKW) does not include transmission losses. The Sound ratings shown are loudness values in fan sones at 1.5 m (5 ft) in a hemispherical free field calculated per AMCA International Standard 301 . Values shown are for : Installation Type A - free inlet hemispherical sone levels .



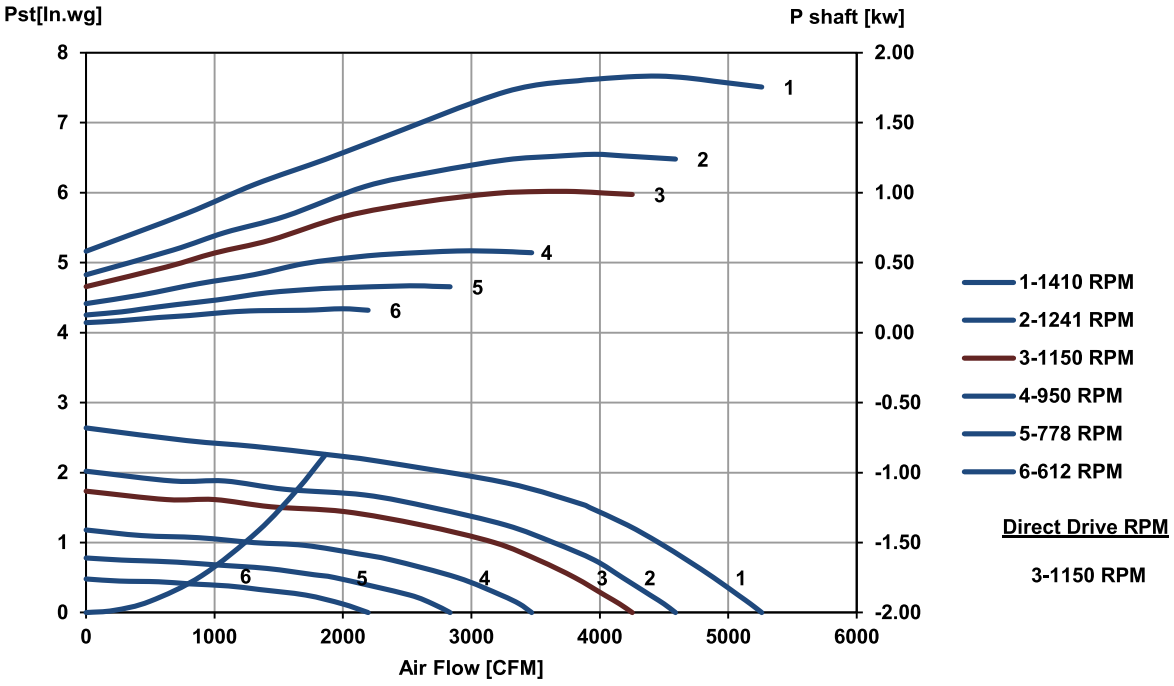


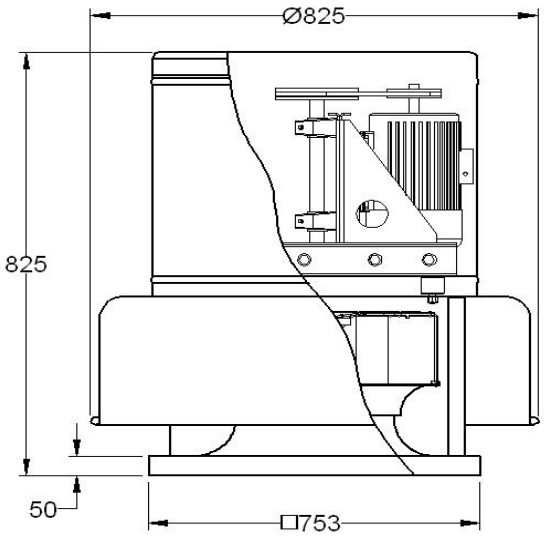
Approximate Unit Weight (kg) = 49 + W_m*
* Wm Motor Weight (see table)
Recommended Roof Opening (mm) = 490 x 490
Damper size (See table)
(All dimensions in *millimeters*)

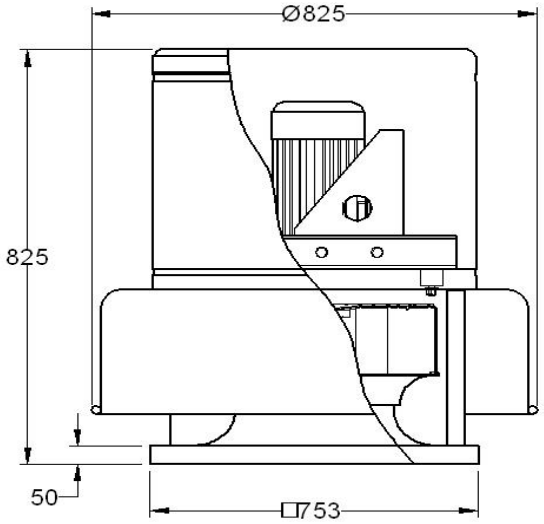
Performance certified is for installation type A - Free inlet ,Free outlet per AMCA Standard 210 . Power rating (BKW) does not include transmission losses. The Sound ratings shown are loudness values in fan sones at 1.5 m (5 ft) in a hemispherical free field calculated per AMCA International Standard 301 . Values shown are for : Installation Type A - free inlet hemispherical sone levels .

Motor kW	Fan RPM		Static Pressure in Inches wg							
			0	0.125	0.25	0.5	0.75	1	1.25	1.5
RTC 425										
0.25	750	CFM	1914	1761	1595					
		BKW	0.13	0.13	0.14					
		SONES	10.2	9.6	8.9					
	825	CFM	2114	1973	1824					
		BKW	0.17	0.18	0.18					
		SONES	12.5	11.8	11.1					
0.37	869	CFM	2227	2093	1956	1566				
		BKW	0.20	0.20	0.21	0.21				
		SONES	12.8	11.9	11.2	9.8				
	950	CFM	2438	2325	2202	1904				
		BKW	0.26	0.26	0.27	0.27				
		SONES	16	15	14.4	13.4				
0.55	990	CFM	2541	2433	2315	2057				
		BKW	0.29	0.30	0.31	0.31				
		SONES	16.4	15.8	15.1	13.9				
	1098	CFM	2812	2755	2662	2448	2164			
		BKW	0.39	0.40	0.41	0.42	0.42			
		SONES	19.1	18.8	18.3	17.2	15.9			
0.75	1130	CFM	2894	2840	2751	2545	2278			
		BKW	0.43	0.44	0.44	0.46	0.46			
		SONES	19.9	19.7	19.1	18	16.8			
	1150	CFM	2945	2893	2806	2606	2349			
		BKW	0.45	0.46	0.47	0.48	0.48			
		SONES	20.4	20.2	19.7	18.6	17.4			
	1208	CFM	3093	3048	2964	2779	2550	2233		
		BKW	0.53	0.53	0.54	0.56	0.56	0.55		
		SONES	21.9	21.8	21.2	20.2	19.1	17.8		
1.1	1253	CFM	3208	3168	3087	2913	2704	2445		
		BKW	0.59	0.59	0.60	0.62	0.63	0.62		
		SONES	23.2	23.0	22.5	21.5	20.4	19.4		
	1329	CFM	3403	3369	3293	3136	2950	2716	2355	
		BKW	0.70	0.70	0.72	0.73	0.75	0.75	0.72	
		SONES	25.3	25.2	24.6	23.7	22.7	21.7	20.2	
1.5	1424	CFM	3646	3621	3550	3408	3238	3045	2817	2370
		BKW	0.86	0.87	0.88	0.90	0.91	0.92	0.92	0.87
		SONES	29	29	29	26	26	25	25	24
	1462	CFM	3747	3686	3621	3479	3333	3158	2944	2566
		BKW	0.91	0.92	0.93	0.95	0.97	0.98	0.98	0.95
		SONES	29.2	28.7	28.2	27.3	26.6	25.8	25	25

Performance certified is for installation type A - Free inlet ,Free outlet per AMCA Standard 210 . Power rating (BKW) does not include transmission losses. The Sound ratings shown are loudness values in fan sones at 1.5 m (5 ft) in a hemispherical free field calculated per AMCA International Standard 301 . Values shown are for : Installation Type A - free inlet hemispherical sone levels .





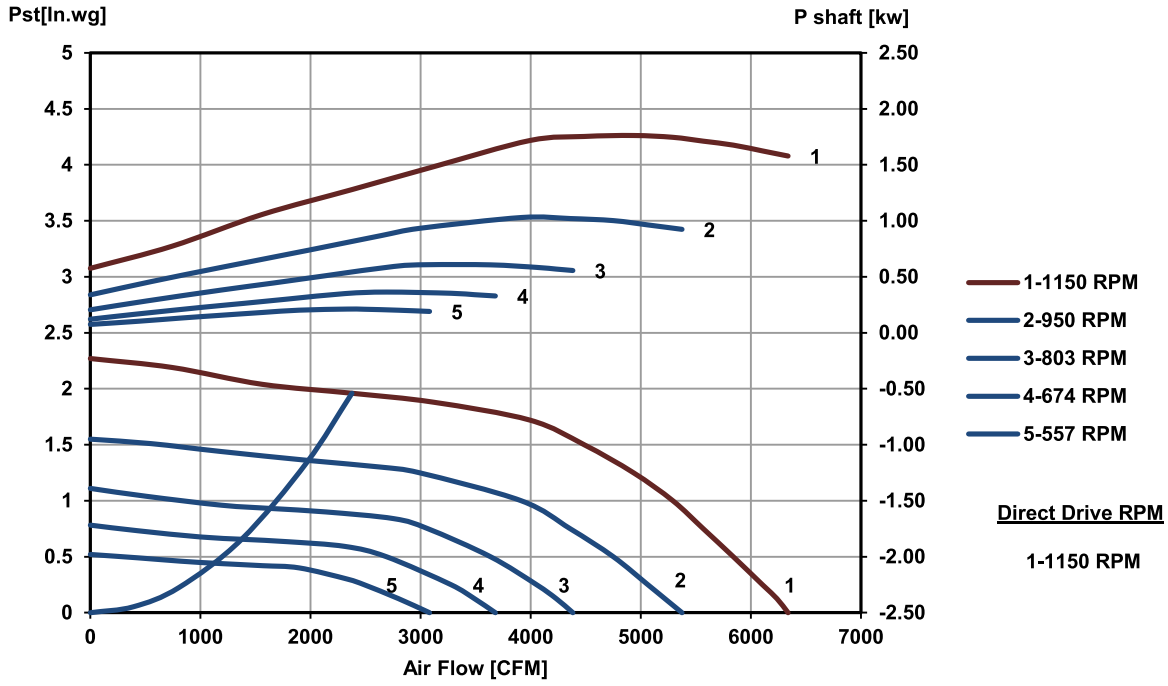


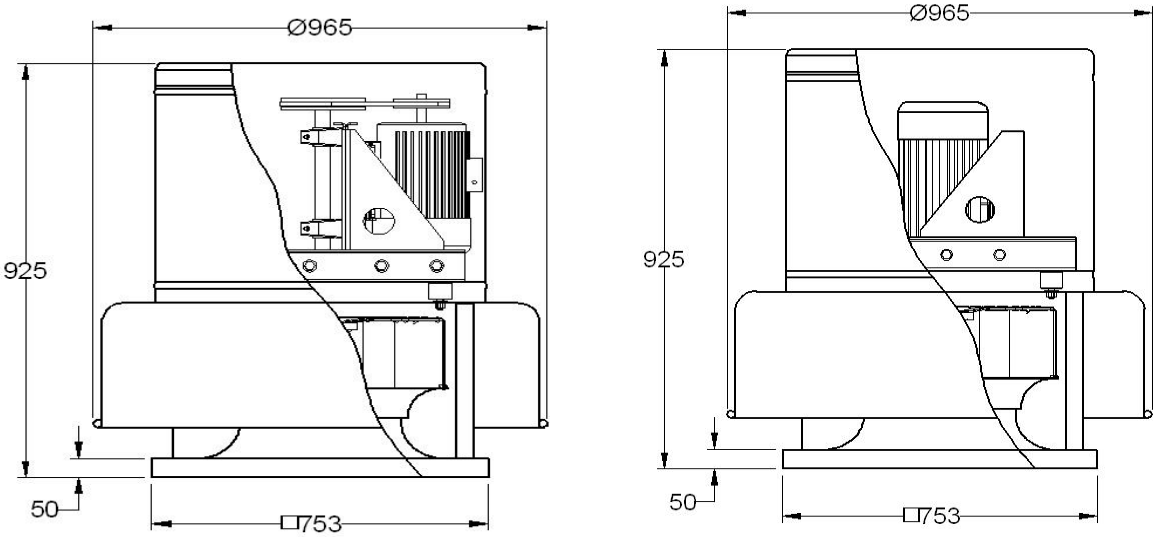
Approximate Unit Weight (kg) = 60 + W_m*
* Wm Motor Weight (see table)
Recommended Roof Opening (mm) = 640 x 640
Damper size (See table)
(All dimensions in *millimeters*)

Performance certified is for installation type A - Free inlet ,Free outlet per AMCA Standard 210 . Power rating (BKW) does not include transmission losses. The Sound ratings shown are loudness values in fan sones at 1.5 m (5 ft) in a hemispherical free field calculated per AMCA International Standard 301 . Values shown are for : Installation Type A - free inlet hemispherical sone levels .

Motor kW	Fan RPM		Static Pressure in Inches wg							
			0	0.125	0.25	0.5	0.75	1	1.25	1.5
RTC 500										
0.37	612	CFM	2196	1994	1708					
		BKW	0.17	0.17	0.17					
		SONES	9.2	8.7	8.1					
	683	CFM	2488	2322	2085					
		BKW	0.22	0.22	0.22					
		SONES	11.4	10.9	10.5					
0.55	778	CFM	2834	2698	2519	1934				
		BKW	0.33	0.33	0.33	0.32				
		SONES	13.8	13.1	12.4	11.4				
	888	CFM	3243	3133	2981	2583	1919			
		BKW	0.47	0.47	0.48	0.47	0.44			
		SONES	16.8	16.5	16.2	15.4	14.5			
0.75	896	CFM	3272	3164	3013	2623	1986			
		BKW	0.48	0.48	0.49	0.49	0.45			
		SONES	17.1	16.7	16.5	15.7	14.8			
	950	CFM	3469	3372	3230	2890	2380			
		BKW	0.57	0.57	0.58	0.58	0.56			
		SONES	18.7	18.7	18.7	18.2	17.6			
1.1	985	CFM	3642	3520	3385	3097	2690	1937		
		BKW	0.62	0.62	0.63	0.64	0.62	0.55		
		SONES	20	19.5	19.3	18.8	18.1	17.1		
	1084	CFM	4008	3900	3777	3531	3198	2745		
		BKW	0.83	0.83	0.84	0.85	0.84	0.81		
		SONES	23.1	22.6	22.4	22	21.3	20.6		
1.5	1119	CFM	4138	4034	3915	3677	3371	2983	2331	
		BKW	0.91	0.91	0.92	0.93	0.93	0.91	0.83	
		SONES	24.2	23.7	23.5	23.1	22.5	21.9	20.9	
	1150	CFM	4252	4152	4036	3805	3522	3179	2614	
		BKW	0.99	0.99	1.00	1.01	1.01	0.99	0.93	
		SONES	25.2	24.8	24.5	24.2	23.6	23.1	22.1	
	1192	CFM	4408	4312	4200	3977	3724	3394	2932	2236
		BKW	1.10	1.10	1.11	1.12	1.13	1.11	1.07	0.95
		SONES	26.6	26.2	26	25.6	25.1	24.4	23.7	22.8
	1241	CFM	4589	4498	4391	4176	3957	3640	3267	2694
		BKW	1.24	1.25	1.25	1.26	1.27	1.26	1.23	1.15
		SONES	28	28	28	27	27	25	25	25
2.2	1312	CFM	4895	4799	4696	4486	4263	4012	3710	3260
		BKW	1.41	1.42	1.43	1.45	1.48	1.47	1.46	1.41
		SONES	31.2	30.6	30.4	30	29.5	29	28.4	27.5
	1410	CFM	5260	5172	5077	4885	4678	4459	4215	3921
		BKW	1.75	1.76	1.78	1.80	1.82	1.83	1.83	1.81
		SONES	34.8	34.2	34	33.6	31.1	32.6	32.2	31.7

Performance certified is for installation type A - Free inlet ,Free outlet per AMCA Standard 210 . Power rating (BKW) does not include transmission losses. The Sound ratings shown are loudness values in fan sones at 1.5 m (5 ft) in a hemispherical free field calculated per AMCA International Standard 301 . Values shown are for : Installation Type A - free inlet hemispherical sone levels .



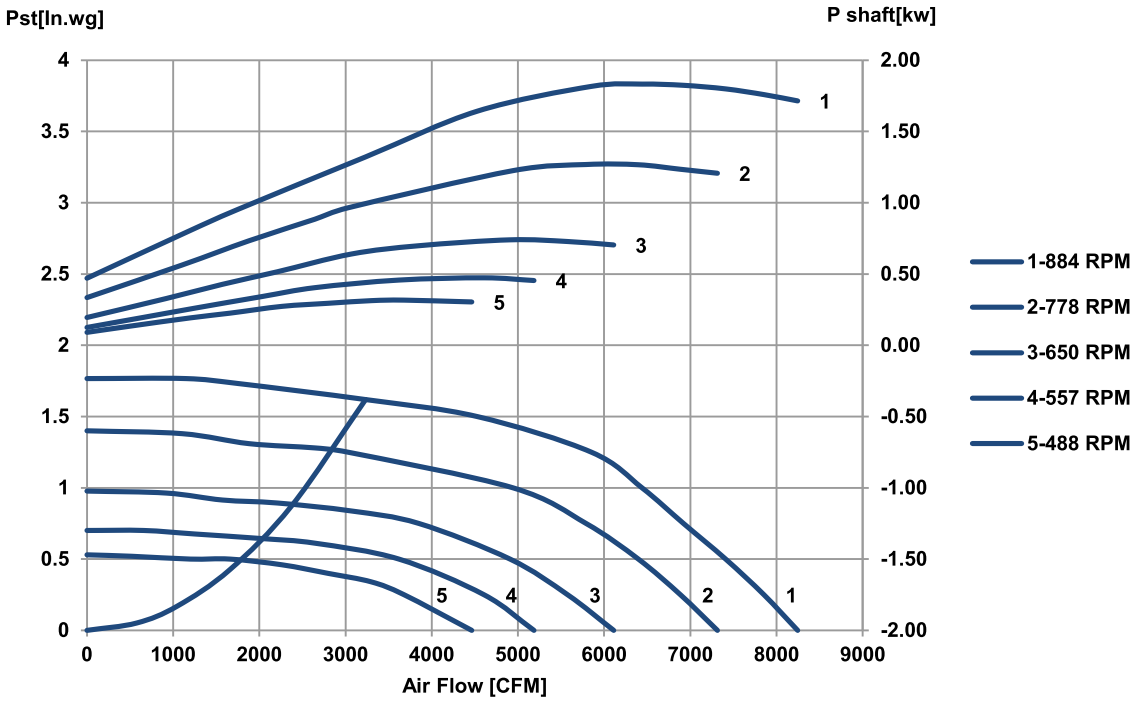


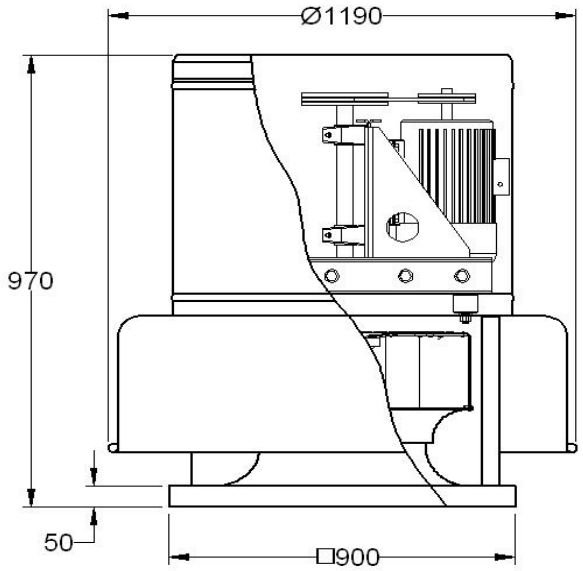
Approximate Unit Weight (kg) = 74+W_m*
* Wm Motor Weight (see table)
Recommended Roof Opening (mm) = 640 x 640
Damper size (See table)
(All dimensions in *millimeters*)

Performance certified is for installation type A - Free inlet ,Free outlet per AMCA Standard 210 . Power rating (BKW) does not include transmission losses. The Sound ratings shown are loudness values in fan sones at 1.5 m (5 ft) in a hemispherical free field calculated per AMCA International Standard 301 . Values shown are for : Installation Type A - free inlet hemispherical sone levels .

Motor kW	Fan RPM		Static Pressure in Inches wg							
			0	0.125	0.25	0.5	0.75	1	1.25	1.5
RTC 575										
0.37	557	CFM	3081	2800	2487					
		BKW	0.19	0.20	0.21					
		SONES	11.2	11.4	10.9					
	613	CFM	3346	3133	2882					
		BKW	0.25	0.26	0.27					
		SONES	11.6	11.6	11.6					
0.55	634	CFM	3461	3256	3025	2279				
		BKW	0.27	0.28	0.30	0.29				
		SONES	11.9	11.9	11.9	11.9				
	674	CFM	3679	3490	3276	2690				
		BKW	0.33	0.34	0.35	0.36				
		SONES	12.6	12.6	12.8	12.8				
	724	CFM	3952	3779	3580	3071				
		BKW	0.41	0.42	0.43	0.45				
		SONES	13.7	13.7	14	14				
0.75	741	CFM	4045	3877	3683	3194				
		BKW	0.44	0.45	0.46	0.48				
		SONES	14.2	14.2	14.5	14.4				
	803	CFM	4383	4233	4053	3635	3066			
		BKW	0.56	0.57	0.58	0.61	0.61			
		SONES	16.8	16.8	16.3	16	15.9			
1.1	815	CFM	4611	4430	4249	3834	3310			
		BKW	0.58	0.60	0.62	0.64	0.65			
		SONES	17.6	17.6	17.6	17.5	17.4			
	897	CFM	5075	4910	4746	4395	3980	3363		
		BKW	0.78	0.80	0.82	0.85	0.86	0.85		
		SONES	20.8	20.8	20.8	20.8	20.7	20.5		
	912	CFM	5159	4998	4836	4496	4088	3521		
		BKW	0.82	0.84	0.86	0.89	0.91	0.90		
		SONES	21.4	21.4	21.4	21.4	21.3	21.1		
1.5	950	CFM	5374	5219	5064	4750	4359	3914	2988	
		BKW	0.92	0.94	0.96	1.00	1.02	1.03	0.93	
		SONES	23	23	23	22	23	23	23	
	987	CFM	5444	5317	5163	4850	4525	4108	3480	
		BKW	1.00	1.02	1.04	1.08	1.11	1.12	1.09	
		SONES	23.4	23.4	23.6	23.6	23.6	23.6	23.6	
	1011	CFM	5576	5454	5304	4999	4689	4288	3721	
		BKW	1.08	1.09	1.12	1.16	1.19	1.20	1.18	
		SONES	24.3	24.3	24.5	24.5	24.5	24.5	24.5	
2.2	1085	CFM	5985	5874	5734	5452	5164	4832	4444	3851
		BKW	1.33	1.35	1.37	1.42	1.45	1.48	1.49	1.45
		SONES	26.8	26.8	26.8	26.8	26.8	26.8	26.8	26.8
	1150	CFM	6338	6237	6105	5840	5567	5291	4933	4486
		BKW	1.58	1.60	1.62	1.68	1.71	1.75	1.76	1.75
		SONES	30	30	30	28	28	27	27	27

Performance certified is for installation type A - Free inlet ,Free outlet per AMCA Standard 210 . Power rating (BKW) does not include transmission losses. The Sound ratings shown are loudness values in fan sones at 1.5 m (5 ft) in a hemispherical free field calculated per AMCA International Standard 301 . Values shown are for : Installation Type A - free inlet hemispherical sone levels .





Approximate Unit Weight (kg) = 87 + W_m*

* Wm Motor Weight (see table)

Recommended Roof Opening (mm) = 790 x 790

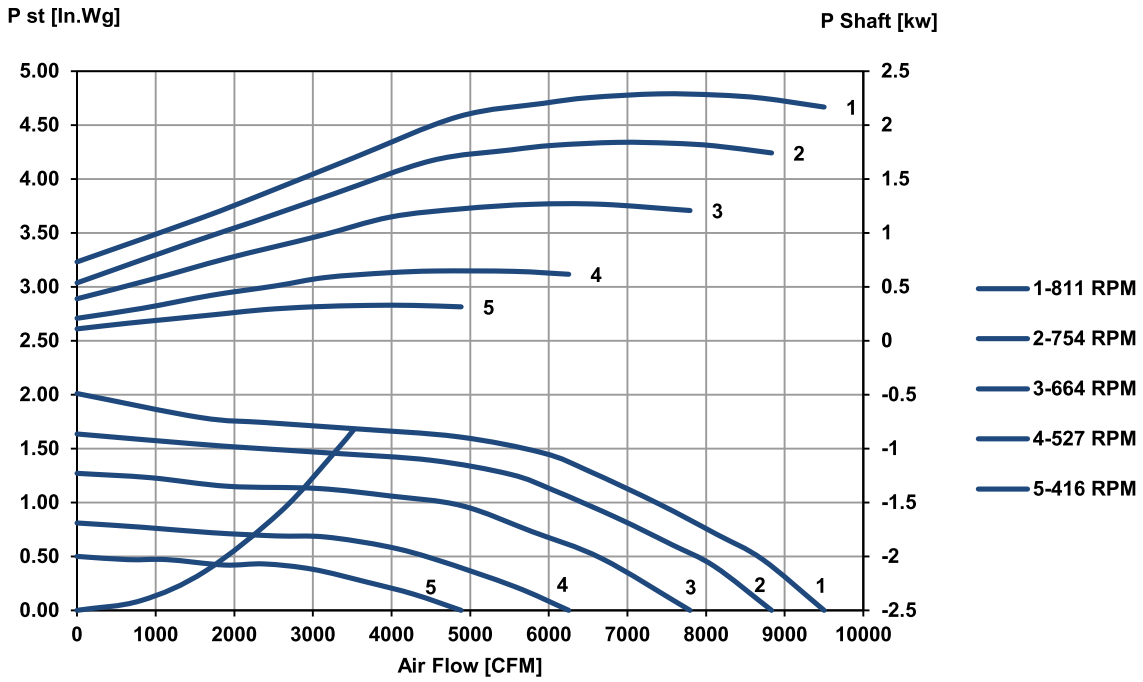
Damper size (See table)

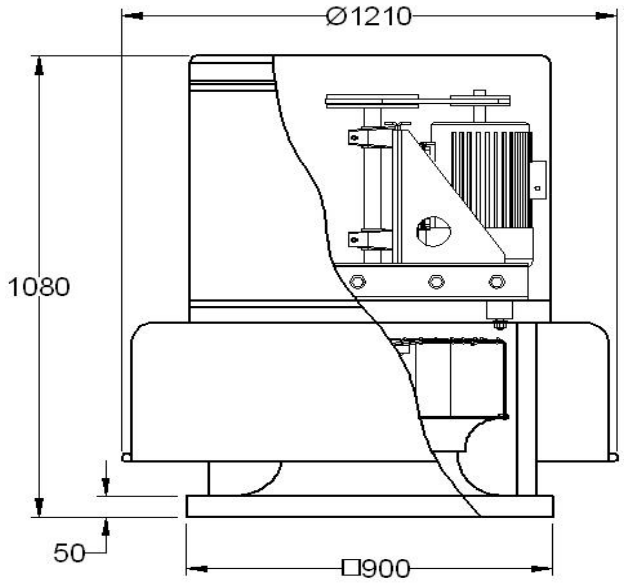
(All dimensions in *millimeters*)

Performance certified is for installation type A - Free inlet ,Free outlet per AMCA Standard 210 . Power rating (BKW) does not include transmission losses. The Sound ratings shown are loudness values in fan sones at 1.5 m (5 ft) in a hemispherical free field calculated per AMCA International Standard 301 . Values shown are for : Installation Type A - free inlet hemispherical sone levels .

Motor kW	Fan RPM		Static Pressure in Inches wg						
			0	0.25	0.5	0.75	1	1.25	1.5
RTC 675									
0.55	488	CFM	4465	3679					
		BKW	0.30	0.32					
		SONES	11	9.7					
	537	CFM	5000	4378					
		BKW	0.41	0.42					
		SONES	12.3	11.8					
0.75	557	CFM	5186	4606	3620				
		BKW	0.45	0.47	0.46				
		SONES	13	12.6	11.6				
	590	CFM	5493	4962	4159				
		BKW	0.54	0.56	0.56				
		SONES	14.3	13.2	13.1				
	617	CFM	5745	5247	4507				
		BKW	0.62	0.64	0.64				
		SONES	15.3	14.2	13.6				
1.1	650	CFM	6111	5576	4909	3851			
		BKW	0.70	0.73	0.74	0.70			
		SONES	17.1	16.4	15.6	14.6			
	701	CFM	6591	6102	5522	4763			
		BKW	0.88	0.91	0.93	0.92			
		SONES	19.4	18.9	18.1	17.2			
1.5	714	CFM	6713	6235	5675	4989	3458		
		BKW	0.93	0.96	0.98	0.98	0.86		
		SONES	20.1	19.5	18.7	18	16.5		
	778	CFM	7315	6885	6397	5790	4943		
		BKW	1.21	1.23	1.27	1.27	1.23		
		SONES	22	22	22	20	20		
2.2	786	CFM	7331	6884	6358	5813	5153		
		BKW	1.21	1.25	1.27	1.29	1.27		
		SONES	23.4	22.8	21.9	21.4	21		
	864	CFM	8059	7657	7197	6697	6207	5487	
		BKW	1.60	1.64	1.68	1.71	1.71	1.68	
		SONES	27.8	27.3	26.4	25.7	25.4	24.9	
	884	CFM	8245	7854	7410	6921	6440	5853	4528
		BKW	1.71	1.76	1.80	1.82	1.83	1.82	1.64
		SONES	29	28.5	27.7	26.9	26.5	26.3	24.7

Performance certified is for installation type A - Free inlet ,Free outlet per AMCA Standard 210 . Power rating (BKW) does not include transmission losses. The Sound ratings shown are loudness values in fan sones at 1.5 m (5 ft) in a hemispherical free field calculated per AMCA International Standard 301 . Values shown are for : Installation Type A - free inlet hemispherical sone levels .





Approximate Unit Weight (kg) = 116 + W_m*

* Wm Motor Weight (see table)

Recommended Roof Opening (mm) = 790 x 790

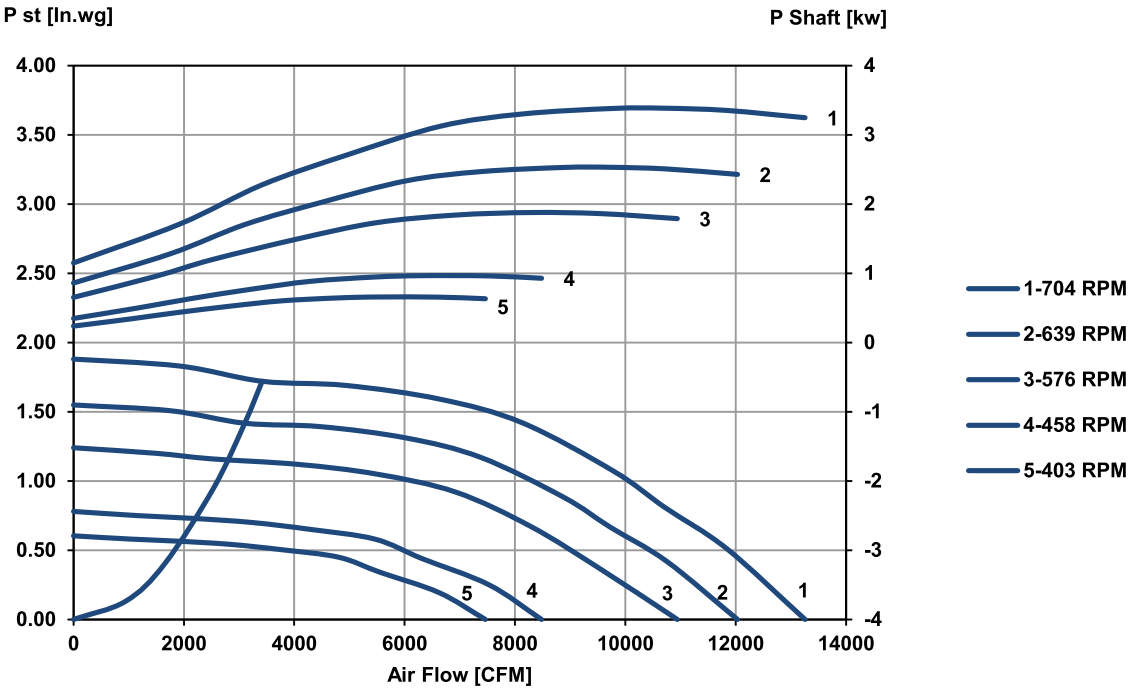
Damper size (See table)

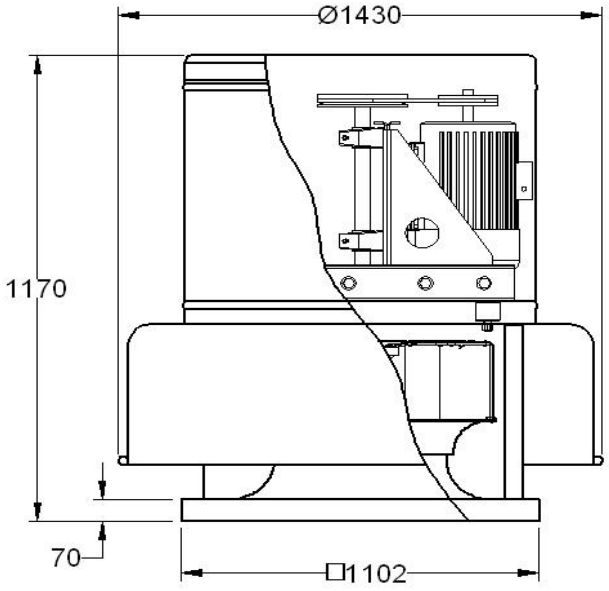
(All dimensions in *millimeters*)

Performance certified is for installation type A - Free inlet ,Free outlet per AMCA Standard 210 . Power rating (BKW) does not include transmission losses. The Sound ratings shown are loudness values in fan sones at 1.5 m (5 ft) in a hemispherical free field calculated per AMCA International Standard 301 . Values shown are for : Installation Type A - free inlet hemispherical sone levels .

Motor kW	Fan RPM		Static Pressure in Inches wg						
			0	0.25	0.5	0.75	1	1.25	1.5
RTC 750									
0.55	416	CFM	4884	3748					
		BKW	0.31	0.32					
		SONES	10.1	9.3					
0.75	458	CFM	5434	4451					
		BKW	0.40	0.42					
		SONES	12.5	11.6					
	475	CFM	5636	4700					
		BKW	0.45	0.47					
		SONES	13.2	12.4					
	503	CFM	5968	5104	3973				
		BKW	0.54	0.56	0.55				
		SONES	14.5	13.7	12.8				
1.1	527	CFM	6253	5445	4413				
		BKW	0.62	0.64	0.64				
		SONES	16.3	15.1	14.6				
	554	CFM	6504	5825	4863				
		BKW	0.70	0.73	0.73				
		SONES	16.7	16.2	15.3				
1.5	599	CFM	7032	6418	5590	4577			
		BKW	0.89	0.91	0.93	0.90			
		SONES	18.9	18.4	17.6	16.8			
	609	CFM	7150	6549	5749	4756			
		BKW	0.93	0.96	0.98	0.95			
		SONES	19.4	18.9	18.2	17.3			
	664	CFM	7796	7260	6603	5712	4590		
		BKW	1.21	1.23	1.26	1.26	1.20		
		SONES	22	21	21	19.8	19.2		
2.2	737	CFM	8634	8206	7618	6910	6129	5028	
		BKW	1.63	1.66	1.70	1.72	1.70	1.62	
		SONES	26.4	26.1	25.5	24.6	23.7	22.7	
	754	CFM	8833	8418	7857	7168	6417	5551	
		BKW	1.74	1.78	1.82	1.84	1.82	1.77	
		SONES	27.4	27.1	26.5	25.6	24.7	24	
3	811	CFM	9501	9127	8647	8017	7361	6630	5631
		BKW	2.17	2.21	2.25	2.28	2.29	2.26	2.17
		SONES	30.9	30.6	30.1	29.2	28.3	27.5	26.5

Performance certified is for installation type A - Free inlet ,Free outlet per AMCA Standard 210 . Power rating (BKW) does not include transmission losses. The Sound ratings shown are loudness values in fan sones at 1.5 m (5 ft) in a hemispherical free field calculated per AMCA International Standard 301 . Values shown are for : Installation Type A - free inlet hemispherical sone levels .





Approximate Unit Weight (kg) = 166 + W_m*

* Wm Motor Weight (see table)

Recommended Roof Opening (mm) = 990 x 990

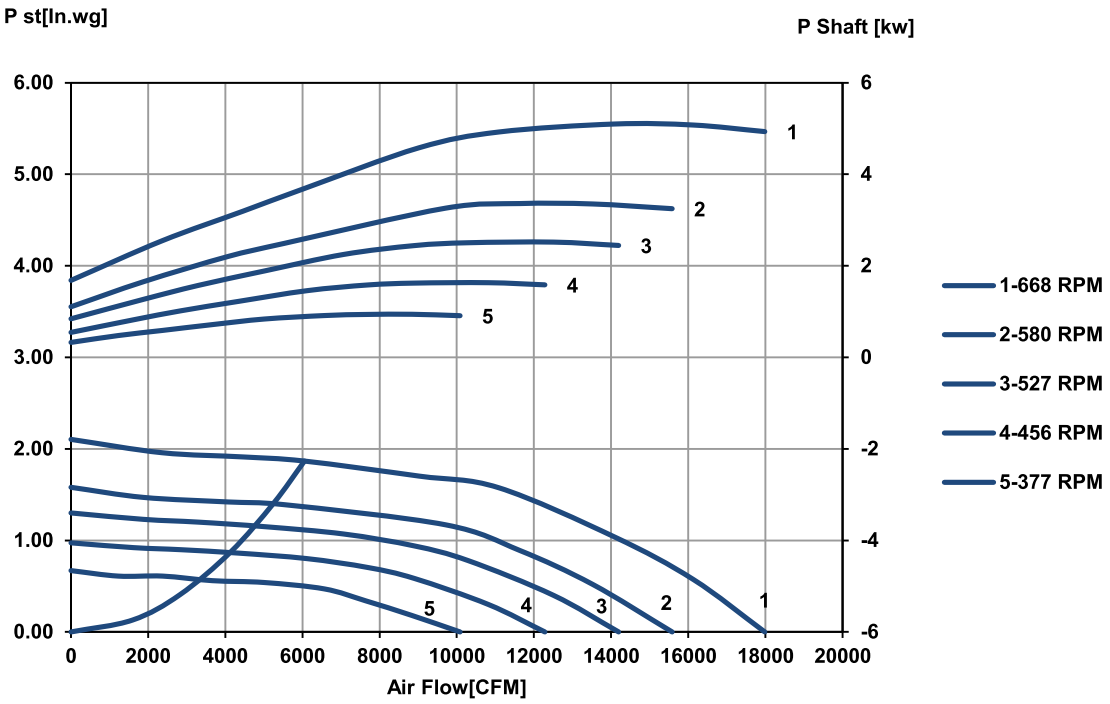
Damper size (See table)

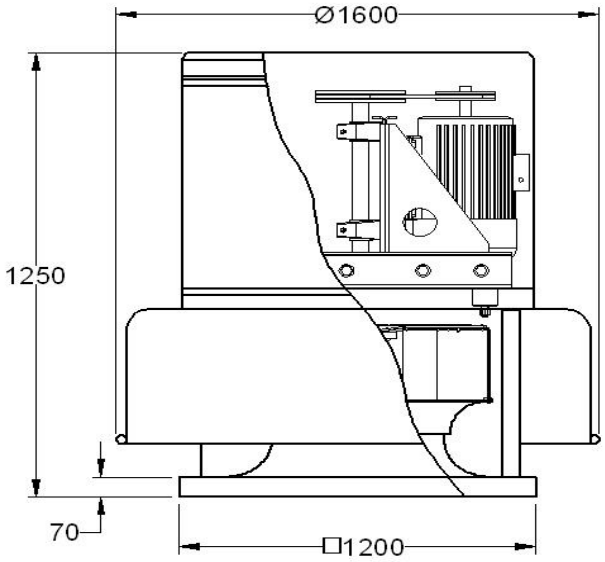
(All dimensions in *millimeters*)

Performance certified is for installation type A - Free inlet ,Free outlet per AMCA Standard 210 . Power rating (BKW) does not include transmission losses. The Sound ratings shown are loudness values in fan sones at 1.5 m (5 ft) in a hemispherical free field calculated per AMCA International Standard 301 . Values shown are for : Installation Type A - free inlet hemispherical sone levels .

Motor kW	Fan RPM		Static Pressure in Inches wg						
			0	0.25	0.5	0.75	1	1.25	1.5
RTC 900									
1.1	403	CFM	7464	6215					
		BKW	0.63	0.66					
		SONES	13.5	12.3					
	439	CFM	8131	7082	5445				
		BKW	0.82	0.85	0.84				
		SONES	15.6	14.7	13				
1.5	458	CFM	8483	7530	5949				
		BKW	0.93	0.96	0.96				
		SONES	16.9	15.7	14.9				
	483	CFM	9176	8035	6766				
		BKW	1.05	1.10	1.10				
		SONES	19	17.5	16.5				
	507	CFM	9632	8545	7389	5628			
		BKW	1.22	1.26	1.28	1.23			
		SONES	20.6	19.2	18.3	16.4			
2.2	531	CFM	10088	9050	7955	6573			
		BKW	1.40	1.45	1.47	1.45			
		SONES	22.2	20.8	20	18.9			
	576	CFM	10943	9986	8991	7856	6040		
		BKW	1.79	1.84	1.87	1.87	2		
		SONES	24	23	23	21	21		
3	585	CFM	11017	10203	9171	8073	6555		
		BKW	1.86	1.90	1.94	1.94	1.88		
		SONES	25.7	24.9	24	23.3	21.9		
	639	CFM	12034	11302	10418	9401	8270	6612	
		BKW	2.43	2.47	2.51	2.53	2.50	2.39	
		SONES	29.7	29.1	28.4	27.7	27	25.2	
4	643	CFM	12109	11383	10509	9496	8386	6804	
		BKW	2.47	2.52	2.56	2.58	2.55	2.45	
		SONES	30	29.4	28.8	28	27.3	25.7	
	704	CFM	13258	12609	11872	10939	10040	8939	7435
		BKW	3.25	3.29	3.35	3.38	3.38	3.34	3.22
		SONES	36	36	35	35	35	35	33

Performance certified is for installation type A - Free inlet ,Free outlet per AMCA Standard 210 . Power rating (BKW) does not include transmission losses. The Sound ratings shown are loudness values in fan sones at 1.5 m (5 ft) in a hemispherical free field calculated per AMCA International Standard 301 . Values shown are for : Installation Type A - free inlet hemispherical sone levels .





Approximate Unit Weight (kg) = 223 + W_m*

* Wm Motor Weight (see table)

Recommended Roof Opening (mm) = 1090 x 1090

Damper size (See table)

(All dimensions in *millimeters*)

Performance certified is for installation type A - Free inlet ,Free outlet per AMCA Standard 210 . Power rating (BKW) does not include transmission losses. The Sound ratings shown are loudness values in fan sones at 1.5 m (5 ft) in a hemispherical free field calculated per AMCA International Standard 301 . Values shown are for : Installation Type A - free inlet hemispherical sone levels .

Motor kW	Fan RPM		Static Pressure in Inches wg						
			0	0.25	0.5	0.75	1	1.25	1.5
RTC 1000									
2.2	418	CFM	11259	9929	8060				
		BKW	1.22	1.26	1.25				
		SONES	19.4	18.8	18.4				
	456	CFM	12283	11069	9470				
		BKW	1.58	1.62	1.63				
		SONES	21.5	20.9	20.5				
3.0	475	CFM	12795	11632	10140	8151			
		BKW	1.79	1.83	1.84	1.79			
		SONES	22.7	22.1	21.7	21.3			
	502	CFM	13522	12427	11074	9416			
		BKW	2.11	2.16	2.17	2.15			
		SONES	24.4	23.8	23.5	23.3			
	527	CFM	14196	13156	11923	10465	8054		
		BKW	2.45	2.49	2.51	2.51	2.35		
		SONES	28	26	26	26	26		
4.0	552	CFM	14830	13845	12712	11373	9675		
		BKW	2.80	2.85	2.89	2.90	2.83		
		SONES	29	27.1	26.9	26.8	26.7		
	580	CFM	15582	14656	13604	12347	10879	8194	
		BKW	3.25	3.29	3.35	3.36	3.32	2.98	
		SONES	29	29	29	27	27	27	
5.5	607	CFM	16437	15414	14351	13157	11883	10322	
		BKW	3.70	3.76	3.81	3.82	3.79	3.70	
		SONES	32.3	31.2	30.9	30.7	30.9	31	
	645	CFM	17466	16503	15540	14416	13291	11998	9717
		BKW	4.43	4.50	4.57	4.58	4.58	4.52	4.27
		SONES	37	37	36	36	34	34	34
7.5	668	CFM	17983	17227	16379	15354	14254	12905	11510
		BKW	4.93	4.99	5.06	5.08	5.10	5.03	4.95
		SONES	37.1	36.6	36.5	36.4	36.4	36.3	36

Performance certified is for installation type A - Free inlet ,Free outlet per AMCA Standard 210 . Power rating (BKW) does not include transmission losses. The Sound ratings shown are loudness values in fan sones at 1.5 m (5 ft) in a hemispherical free field calculated per AMCA International Standard 301 . Values shown are for : Installation Type A - free inlet hemispherical sone levels .

VFD : *Variable frequency drives is a type of motor controller that drives an electric motor by varying the frequency and voltage supplied to the electric motor .*

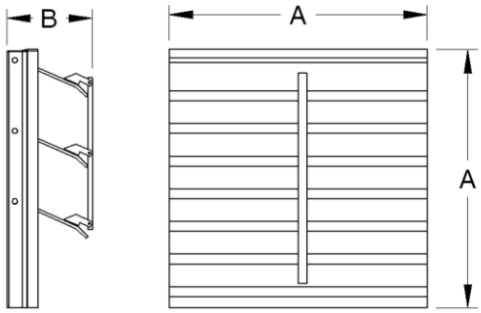
Starters : *Manual Motor starter , Push Button operator, NEMA Style starters are available for different requirements*

Isolator Switches: *are used to break the circuits . A wide range selection of NEMA rated switches are available for positive electrical shut-off and safety including dust tight , rain proof corrosion resistant . Switches may be internally or externally*

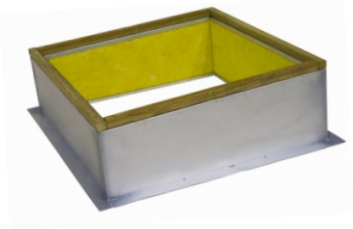
Gravity Back Draft Damper :

Dampers are designed to prevent outside air from entering back into the building when fan is off.

Model	A	B
RTC 300	300	107
RTC 425	400	110
RTC 500	550	115
RTC 575	550	115
RTC 675	650	125
RTC 750	650	125
RTC 900	900	120
RTC 1000	1000	120

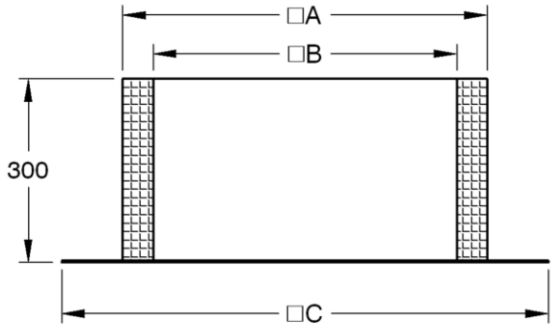


Roof Curb :



Pre-fabricated roof curbs are made of galvanizes steel sheet. All roof curbs are insulated with fiber glass / rock wool. A wide variety of roof curbs are available, including flange and sound absorbing wool. Curb for different Roof angles also available upon request.

Model	A	B	C
RTC 300	490	390	730
RTC 425	590	490	840
RTC 500	740	640	980
RTC 575	740	640	980
RTC 675	890	790	1135
RTC 750	890	790	1135
RTC 900	1090	990	1350
RTC 1000	1190	1090	1450

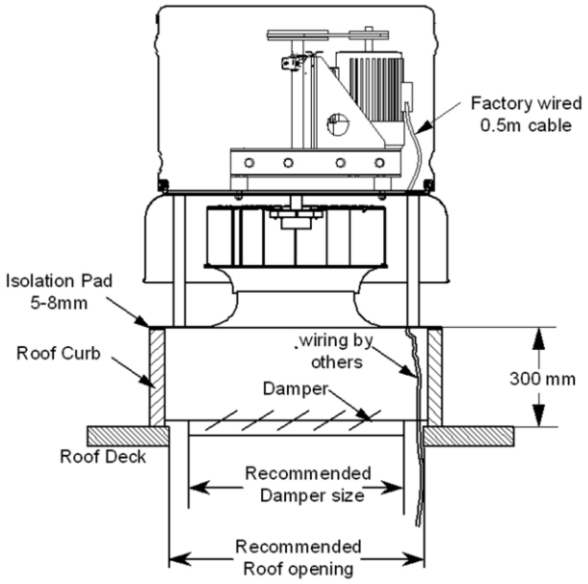


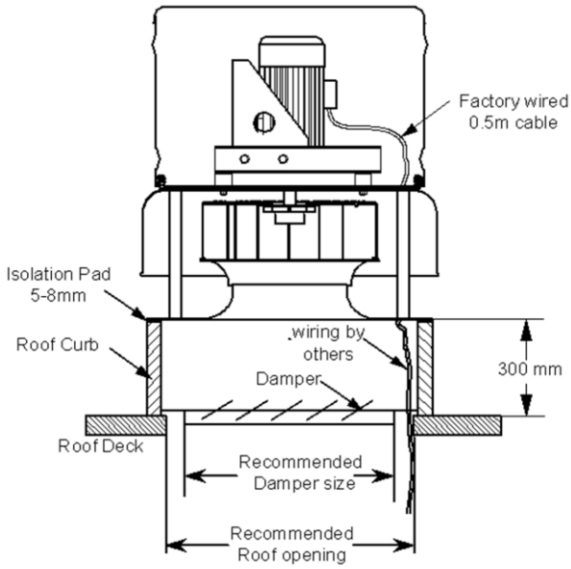
Motor Weight:

The following Table Showing Weight for Standard 4 pole and 6 Pole Motors.

Motor kW		0.18	0.25	0.37	0.55	0.75	1.10	1.50	2.20	3.00	4.00	5.50	7.50	9.0
Weight Kg	4 Pole	4.6	5.0	6.9	9.6	10.9	13.8	16.7	23.0	34.0	46.0	55.0	64.0	93.0
	6 Pole	9.0	11.5	12.1	15.5	18.0	22.0	27.0	37.0	55.0	59.0	72.0	103.0	113.0

Typical Installation:





Instructions

1. *The Roof curb height shall be defined by design engineer. We suggest the height shall be 300 mm according to local rain fall.*
2. *The Rubber Isolation pads should be decided according to the weight of the fan, typically the thickness of the pad is 5-8 mm.*
3. *The elasticity of isolation pads shall remain good when the fan load is applied and shall not become soft even at summer high temperature situation on the roof. It also acts as a seal*
4. *The pad can be cut from typical carpet type isolation pads and are to be provided by contractors.*

How to mount the fan

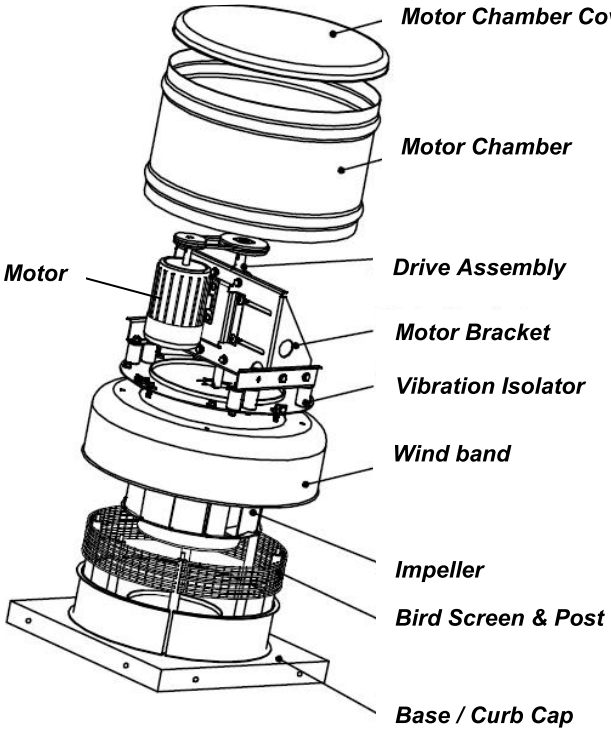
Put the Fan on Roof curb, and fix it all sides by self-tapping screw, Make sure the fan must be keep leveled.

How to mount the Back Draft Damper

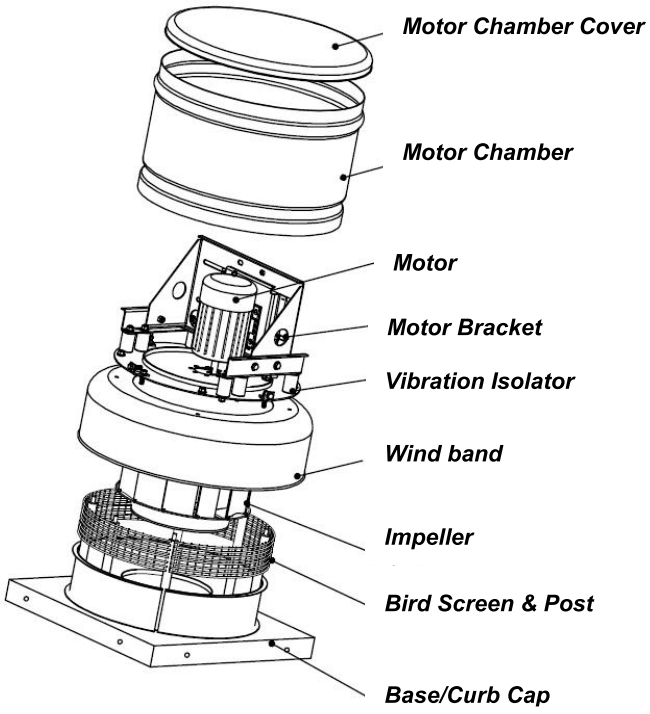
Make sure the damper blades can fully open to 90 degree when the fan starts, and shut down automatically by gravity when fan is stopped.

In order to fit the damper inside the roof curb, the contractor must provide special adaptor otherwise can be provide by SFI upon request.

Belt Driven



Direct Driven



Pre –Start Check List

Fan Type : _____
(refer to fan name plate)

After the fan installation , all the items below should be checked by the maintenance personnel before start running the fan .

Check the items if Yes / No or Not Applicable (N/A) .Check the appropriate box .

1. Ensure the fan and ductwork are clean and no tools and other object left .
   Yes ☐ No ☐
2. Inspect the tightness of fasteners ,bolts and screws ,such as motor mounting bolts, bushing screws,bearing bolts, fan shaft screws ,impeller fasten bolts,installation bolts,vibration insulators,… etc .(fan should not damaged during shipment).
   Yes ☐ No ☐
3. Impeller must rotate freely and not rub on the inlet ventury .
   Yes ☐ No ☐
4. Proper pulley alignment (pulley might be misaligned during fan shipment) .
   Yes ☐ No ☐ N/A ☐
5. Proper belt tension.
   Yes ☐ No ☐ N/A ☐
6. The fan and motor should be electricity grounding .
   Yes ☐ No ☐
7. Ensure the power supply ,wiring and Amperage are in accordance with the motor name plate . Actual Testing ampere : _____ Rated ampere (motor name plate): _____
   Yes ☐ No ☐
8. Wiring connection should confirm the correct impeller rotation .
   Clock-Wise (CW) ☐ Counter Clock-Wise ☐
9. The power supply should have motor overload protector .Ensure that thermal protection of the motor should be connected .
   Yes ☐ No ☐
10. Ensure the motor insulation is accordance with the electrifying requirements .
    Yes ☐ No ☐

Checked By : _____ Date : _____
Name & Signature

Note :

- The fan can be start up and run if all the above items are checked .
- This check list should be submitted to the manufacturer together with the customer complaint, warranty/maintanance claim (if any)

Warranty

Saudi Fan Industries warrants this equipment to be free from defects in material and workmanship for a period of One year from the Delivery date .

Terms :

- ***This warranty will cover for defective parts only excluding labour.***
- ***The warranty does not cover the following***
    a. ***Defects or malfunction resulting from mishandling&improper operation***
    b. ***Damage caused by abuse, accident,fire,flood…..etc :and***
    c. ***Defects due to absence of magnetic starters sized to correct overload rating***

- ***Any units or parts ,which proved defective during the warranty period will be replaced at our option when returned to our factory .***

Saudi Fan Industries

Notes

For contacts & inquiry

Refrigeration House Group
P. O. Box 1823 - Al-Khobar 31952
SAUDI ARABIA

- **Head Office** (Sales & Marketing)
  Tel. : (03) 882 1713 - 882 3515 Fax : (03) 882 3066
  E-mail : sales@refhouse.com / rhadmin@refhouse.com

- **Manufacturing Divisions**
  Dammam 2nd Industrial City
  National Factory Tel. : (03) 812 1282 Fax : (03) 812 1280
  Saudi Fan Industries Tel. : (03) 812 1866 Fax : (03) 812 1894

- **Contracting Divisions**
  Klimatechnik Tel. : (03) 882 3534 Fax : (03) 882 2807
  Riyadh Tel. : (01) 465 6198 Fax : (01) 462 8347

- **Trading Divisions**
  Refrigeration House
  Al-Khobar Tel. : (03) 869 1043 Fax : (03) 898 4161
  Riyadh Tel. : (01) 476 9720 Fax : (01) 477 5430
  Jeddah Tel. : (02) 665 2276 Fax : (02) 661 2265

www.refhouse.com

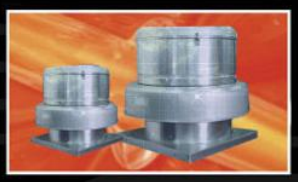
Klimatechnik

Saudi Fan® Industries

Second Manufacturing Division of

Refrigeration House Group

Centrifugal Roof Fan
Direct Drive DH / DV



Centrifugal Roof Fan
Belt & Direct Driven / RTC

Centrifugal Radial Fan
Direct Drive ERAE-ERAD / DRAE-DRAD

Centrifugal Radial Fan
Belt Driven HRE-TRE / HRZ-TRZ

Square Inline Fans
Belt & Direct Driven / ISQ

Fresh Air Musfan
Belt & Direct Driven MU

Air Box Fresh Air Fan
Belt & Direct Driven AirBox

Centrifugal Twin Fan
Belt & Direct Driven TW

Axial Low Pressure Fan
Direct Drive EQ / DQ

Axial High Pressure Fan
Direct Drive AND

Inline Centrifugal Duct Fan
Direct Drive EKAE / EKAD

Inline Centrifugal Tube Fan
Direct Drive R / RS

Centrifugal Silent Fan
Direct Drive SSF

Axial Circulation Fan
Direct Drive SACF 30" - 36"

Axial Agricultural Fan
Direct Drive SAAF 125"

Axial Portabl Tunnel Fan
Direct Drive SPTF 8"-12"

- Head Office Tel:(03) 882 1713 - 882 3515 Fax: (03)882 3066
  Dammam 2nd Industrial City
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