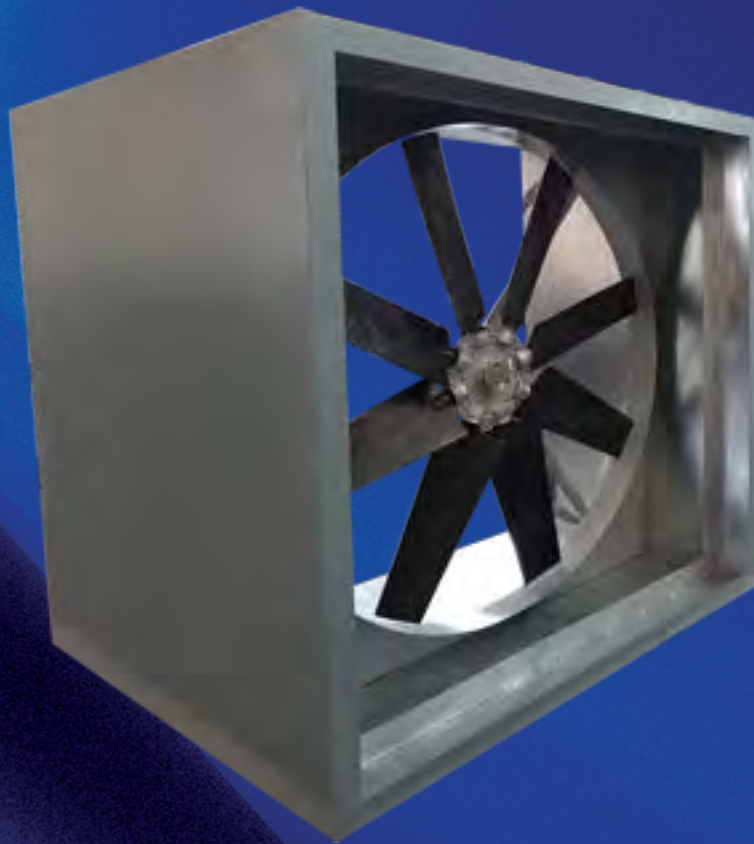


 **ROMLAIR**



**SIDEWALL PROPELLER FANS
BELT AND DIRECT DRIVE**

Exhaust, Supply, Reversible, & Filtered Applications

SIDEWALL FANS

Romlair Ventilator Company offers several different styles of propellers, in two drive configurations, and with a variety of available accessories. Romlair sidewall propeller fans are the ideal choice for factory and warehouse applications where large volumes of air are required. Performance ranges from 250 to 100,000 cfm with static pressure up to 1.25" wg. Fan sizes range from 24" to 54" for direct drive models and 24" to 72" for belt drive models. Our special application department can engineer fans outside these ranges for specific requirements.

All Romlair sidewall propeller fans are available in exhaust or supply arrangements. Propellers are available in fabricated steel, cast aluminum airfoil, and polypropylene with aluminum hubs. All drive frames are built of heavy-gauge construction and built for a lifetime of service.

A wide variety of fans to choose from including:

- Three airflow directions; exhaust, supply and reversible
- Fans include both belt drive and direct drive
- Filter housing options available
- Custom Design: Several blade designs to achieve low sound and optimum performance

FAN PROPELLER TYPES

- Cast Aluminum Airfoil Propeller: Model PA and Model P feature a cast aluminum airfoil type designed for high volumes at higher pressures. They are also used in non-sparking applications.
- Fabricated Steel Propeller: Model PS features a fabricated steel propeller design to run at lower fan speeds which results in lower sound levels. These models are available up to 60".
- Advanced Design Polypropylene PPG Propellers: Special fan designs feature polypropylene propeller designed for all conditions, and the highest of performance at low and high static pressures. Consult with the factory to assist in selecting your optimal propeller.

BASICS OF FAN SELECTION

Belt Drive vs. Direct Drive

- Ability to adjust fan speed for system balancing
- Belt Drive typically more cost effective
- Direct drives favorable where access is difficult
- Maintenance costs are generally lower with direct drive fans

Larger Fans vs. Small Fans

- Larger fans turn slower and generate less sound but have higher initial cost and lower operating costs
- Smaller fans have lower initial costs and more stable performance, but higher sound levels and higher operating costs

Motor Service Factor

- Motors in sidewall fans are cooled by the air stream. If the flow of cooling is uninterrupted, motors may be operated in their service factor up to 20% above the motor's nameplate. However, when 1.2 Bhp service factor is not desirable for the application

1

Special Fan Designs Available



Special Direct Drive
Agriculture Fans



Special 40 Hp, Low Sound,
High CFM Fans

MOUNTING OPTIONS

STANDARD FAN MOUNTING OPTIONS

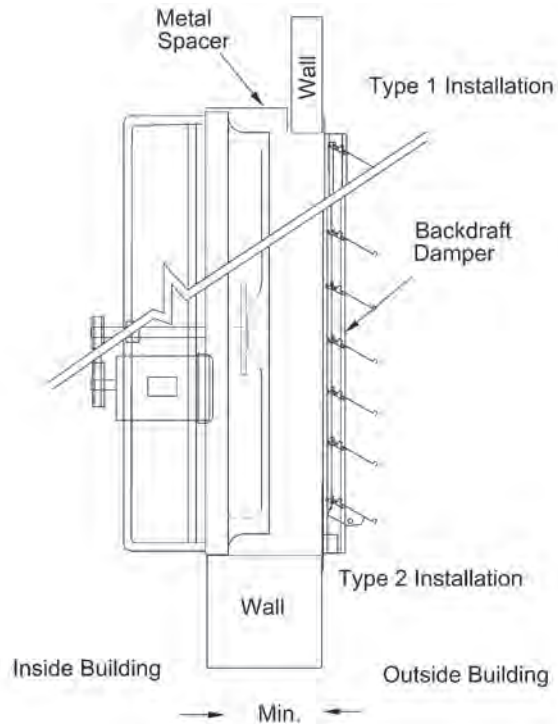
The split drawing shows a Type 1 and Type 2 installation for mounting fans when a wall housing or wall collar is not used. The wall openings are different on the Type 1 and Type 2 installations.

On exhaust applications, it is important to maintain minimum dimension between the propeller and damper for maximum performance.

Type 1 installation requires a metal spacer between the fan and the wall to achieve the minimum distance recommendation. This type of installation uses a damper the same size as the fan propeller.

Type 2 installation requires a minimum wall opening to allow the fan venturi to fit inside the wall opening. This type of installation uses a damper the same size as the venturi O.D.

The chart below provides the recommended minimum dimensions and the wall opening dimensions for these two different installations.



Fan Size	Min. Dim.	Type 1 Wall Opening	Type 2 Wall Opening	Fan Size	Min. Dim.	Type 1 Wall Opening	Type 2 Wall Opening
8	6	8-1/2	11-1/2	30	13	30-1/2	36-3/4
10	6	10-1/2	14-1/2	36	14	36-1/2	42-3/4
12	7	12-1/2	15-3/4	42	15	42-1/2	48-3/4
14	8	14-1/2	18-3/4	48	16	48-1/2	54-3/4
16	9	16-1/2	20-3/4	54	17	54-1/2	60-3/4
18	10	18-1/2	22-3/4	60	19	60-1/2	66-3/4
20	12	20-1/2	24-3/4	72	19	72-1/2	80-3/4
24	13	24-1/2	30-3/4				

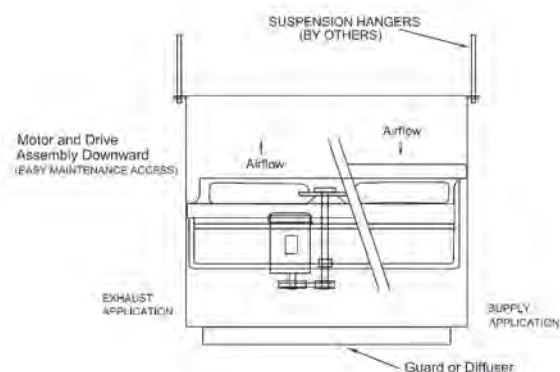
HORIZONTAL MOUNTING

Romlair Sidewall fans can be mounted horizontally for applications that require vertical airflow.

Some applications would include mounting fans in a wall housing for use as recirculation fans, or install them in ductwork and use them as transfer fans. All models can be mounted horizontally. On horizontal applications, specify motor location and direction of airflow.

Note: Guarding is recommended on this type of application. If guarding is not provided by the factory, it should be supplied by others.

Suspended Installation – Fan Mounted Horizontally In Wall Box Housing



MOUNTING OPTIONS

FAN WALL HOUSING

Choosing the proper wall housing is integral when mounting and accessories. The correct housings reduce installation time and allow the attachment of back-draft dampers, guards, and weather hoods on either end of the housing.

Weather hoods are available in both 45° (Relief) and 90° (Intake) configurations. They are recommended to help prevent water entrainment. The hoods ship separately.

Housings are constructed of G90 galvanized steel (mill finish) with flanges for mounting. Housings can be coated with an optional polyurethane protective finish.

Wall housing, fan, damper, and guards are shipped fully assembled. Weather hoods ship loose.

FAN WALL COLLAR

Fan wall collar is an alternative method of mounting a fan and optional damper in a wall. Housing is constructed of G90 galvanized steel (mill finish) with flanges for mounting. Housing can be coated with an optional polyurethane protective finish.

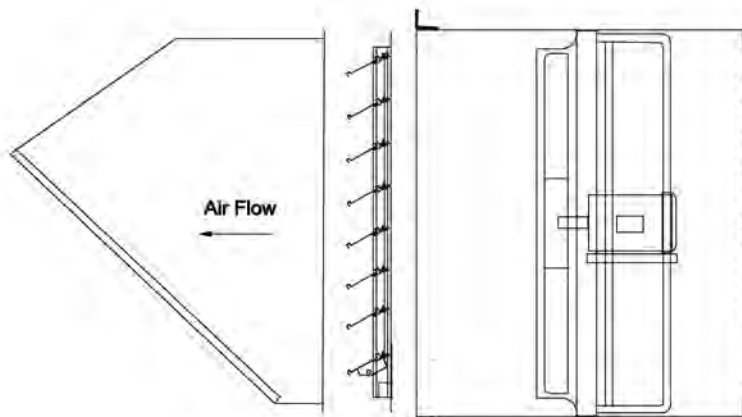
Optional motor side guards must be installed to meet safety requirements (see note below).

Weather hoods are recommended to prevent water entrainment and are available in both 45° (Relief) and 90° (Intake) configurations.

Wall collar, fan, damper, and guards are shipped fully assembled. Weather hoods are shipped loose.

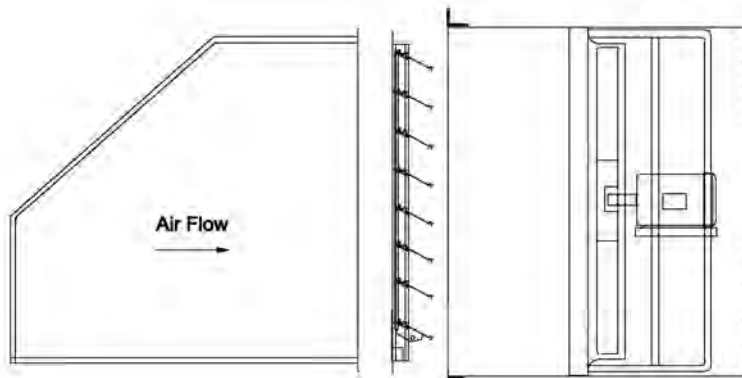
Weatherhood Damper

Wall Housing w/Guard



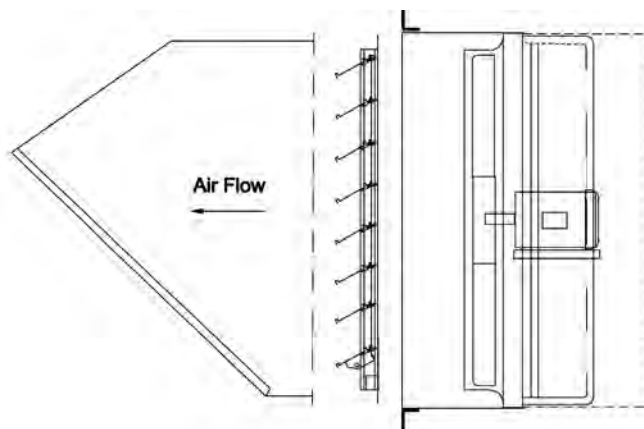
Weatherhood Damper

Wall Housing w/ Guard



Weatherhood Damper

Wall Housing w/ Guard



CAUTION! Guards must be installed when a fan is within reach of personnel or within seven (7) feet of working level or when deemed advisable for safety.

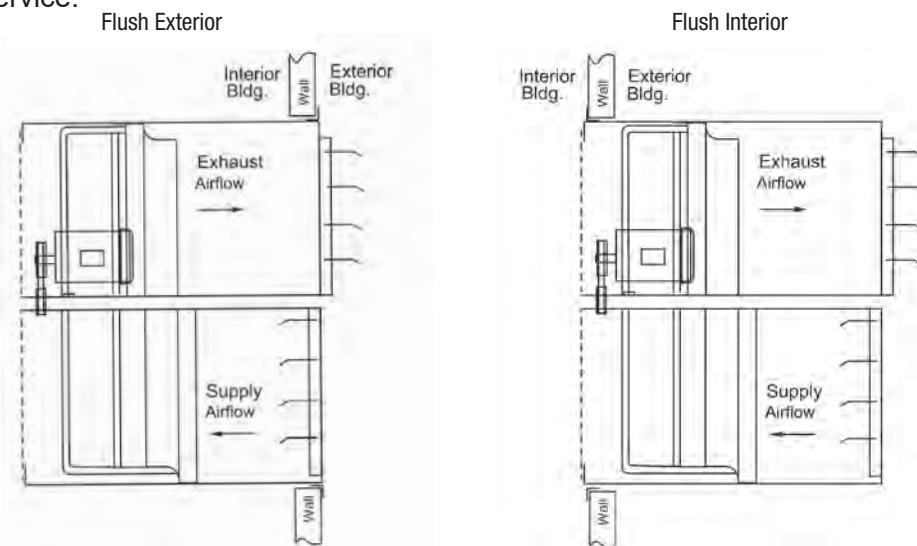
MOUNTING OPTIONS

Different arrangements should be considered depending on several factors.

1. Accessibility for service may be desired from one side of the building vs. the other side.
2. The desired appearance by the designer.
3. Obstruction or space considerations.

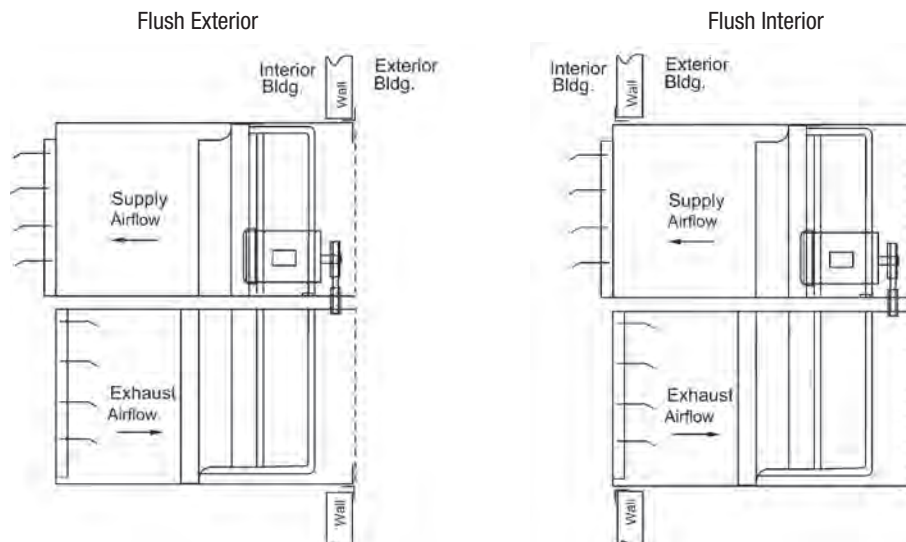
Mounting Configuration for Interior Service

With this arrangement the drive components consisting of the belts, pulleys and motors are serviced from inside the building. This is a standard mount wall housing for interior service.



Mounting Configuration for Exterior Service

With this arrangement the drive components consisting of the belts, pulleys and motors are serviced from outside the building in the opposite direction of the above configuration. This is a reverse mount wall housing for exterior service.



MOUNTING OPTIONS

Filtered Supply Wall Housing

Romlair filtered supply wall housings are available in fan sizes ranging from 24" to 54". Consult factory for custom designs which include larger sizes, and different filter quantities.

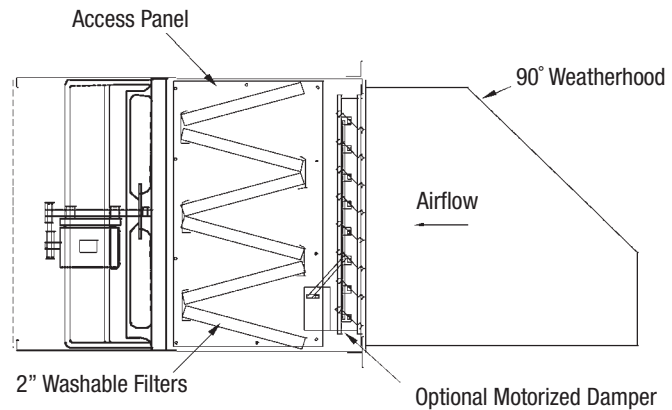
Standard construction is painted galvanized steel housing with installed mounting flanges for flush interior or flush exterior mounting. Standard filters are a 2 inch washable aluminum filters and are easily accessible through a bolted access panel. Accessories include a 90° intake weather hood, closure angles, and dampers (automatic or motorized).

Diffusers are mounted on fan wall housing and are manually operated. They are available in both 2-way and 4-way models featuring airfoil blade, and heavy-gauge galvanized steel frames. Designed for a maximum velocity of 3000 feet per minute.

Optional closure angles are available to provide a finished appearance on the interior wall opening.



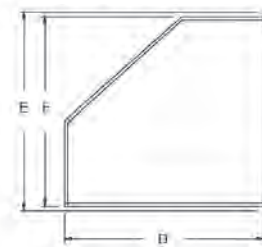
Typical Installation



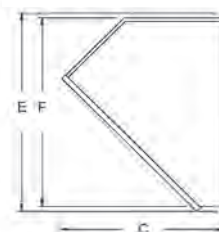
DIMENSIONS FOR ACCESSORIES

Size	Motor Side Guide		Damper	Weatherhood				
	A	B		C	D	E	Width	Gauge
10	N/A	N/A	10	15	13	15.25	13	20
12	14.75	9	12	16.5	15.5	18.25	15.5	20
14	14.75	12	14	17.5	17.5	20.25	17.5	20
16	19.75	12	16	19.5	19.5	22.25	19.5	20
18	21.75	12	18	22	21.5	24.25	21.5	20
20	23.75	12	20	24.5	23.5	26.25	23.5	18
24	29.875	20	24	26.875	27.5	30.25	27.5	18
30	35.875	20	30	31.125	33.5	36.25	33.5	18
36	41.875	20	36	35.375	39.5	42.25	39.5	18
42	47.875	24	42	39.625	45.5	48.25	45.5	18
48	53.875	24	48	43.875	51.5	54.25	51.5	18
54	59.875	24	54	46.625	57.5	60.25	57.5	16
60	65.875	35	60	50.375	63.5	66.25	63.5	16
72	79.875	35	72	54.0	75.5	79.5	75.5	12

90° Weatherhood



45° Weatherhood

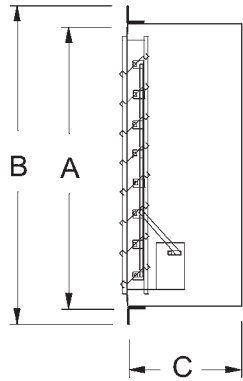


Motor Side Guard

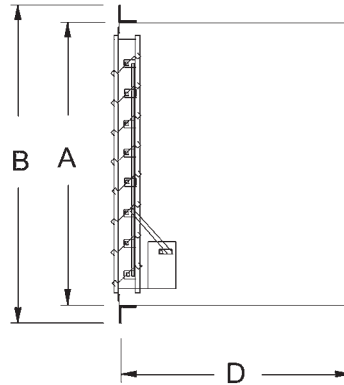


DIMENSIONS FOR ACCESSORIES

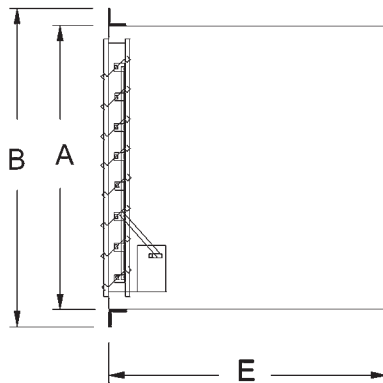
Wall Collar



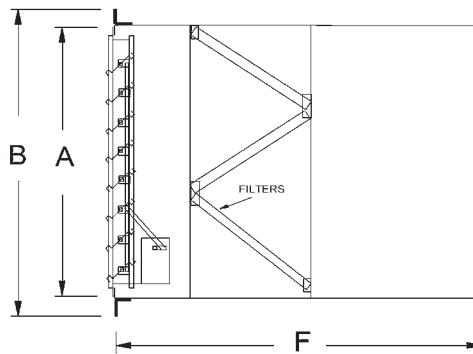
Standard Wall Housing



Long Wall Housing



Filtered Wall Housing



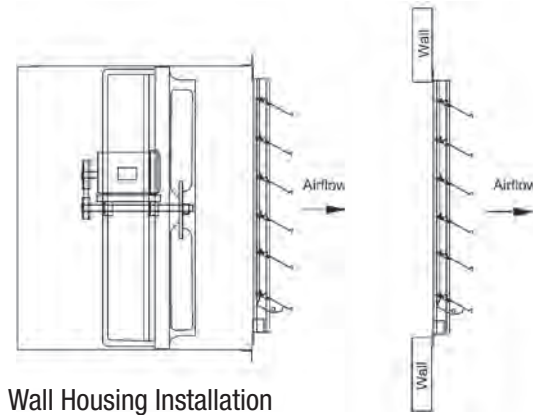
Size	Wall Collar and Housings							Gauge
	A	B	C	D	E	F	Wall Open	
10	15-3/8	18-3/8	16	19	25	–	16-3/8	20
12	18-3/8	21-3/8	16	23	29	–	19-3/8	20
14	20-3/8	23-3/8	18	26	32	–	21-3/8	20
16	22-3/8	25-3/8	18	27	33	–	23-3/8	20
18	24-3/8	27-3/8	18	28	34	–	25-3/8	20
20	26-3/8	29-3/8	18	32	38	–	27-3/8	18
24	30-3/8	36-3/8	18	37	43	63	31-3/8	18
30	36-3/8	42-3/8	18	38	44	65	37-3/8	18
36	42-3/8	48-3/8	18	39	45	67	43-3/8	18
42	48-3/8	54-3/8	19	44	50	73	49-3/8	18
48	54-3/8	60-3/8	19	44	50	73	55-3/8	18
54	60-3/8	66-3/8	20	52	58	80	61-3/8	16
60	66-3/8	72-3/8	21	54	60	–	67-3/8	16
72	80-3/8	86-3/8	22	60	66	–	81-3/8	12

BACKDRAFT DAMPERS

Romlair backdraft dampers can be used as stand alone or they can be used with both the wall collar and wall housing options. Many types of backdraft dampers are available to fit any requirement. Actuators are available for all electrical voltages. In some cases a step down transformer may be required.

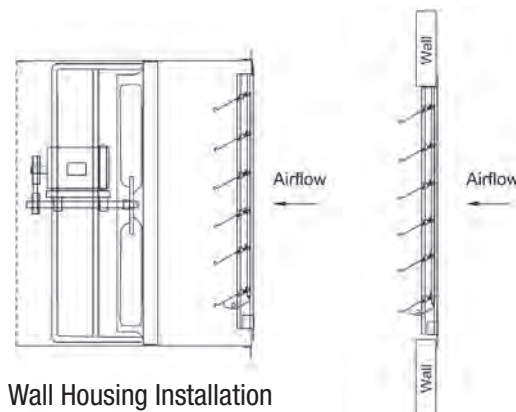


Exhaust Dampers



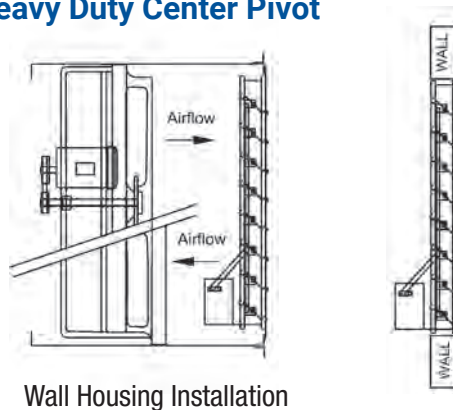
RWD and RWD-M exhaust dampers are available as either gravity operated or with motor actuator 115v

Supply Dampers



RWD can be used as a supply dampers by installing as shown in the Wall housing illustration. RBDS-M should be used for high velocity and motorized supply applications.

Exhaust or Supply - Heavy Duty Center Pivot

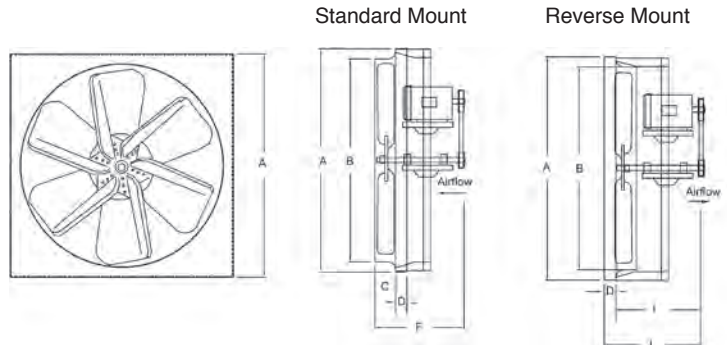


RVC can be used for both exhaust and supply configurations. Can be used with the wall housing or alone. Designed for higher air velocities than the standard back draft dampers. Optional blade and jamb seals are available for low leakage applications.

FAN DIMENSIONAL DATA

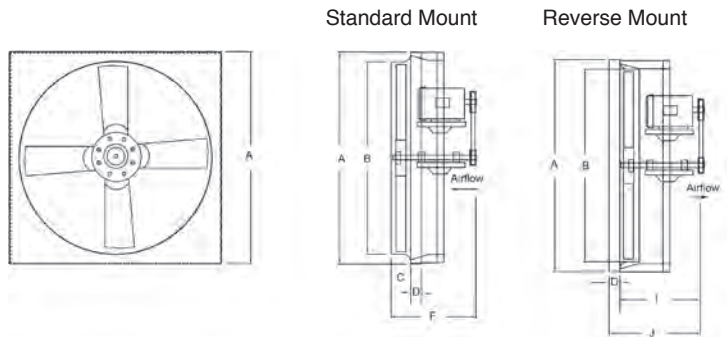
Model PS Belt Drive - Steel Propeller

Size	Dimensions – Inches						
	A	B	C	D	F	I	J
24	30	25	5	2-3/4	18-5/8	17-3/8	20-1/8
30	36	31	5	2-3/4	19-3/4	18-3/4	21-1/2
36	42	37	5	2-3/4	23-1/4	21-1/2	24-1/4
42	48	43	5	2-3/4	24-3/4	23	25-3/4
48	54	49	5	2-3/4	25-3/4	24-7/8	27-5/8
54	60	55	5	2-3/4	26	27	29-3/4
60	66	61	5-1/2	2-3/4	24-1/2	27-1/2	30-1/4



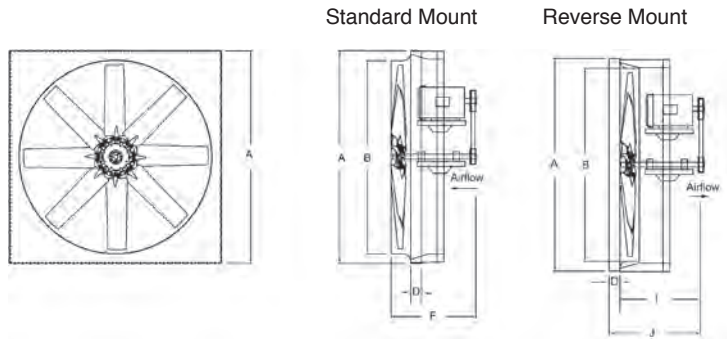
Model PA Belt Drive - Cast Aluminum Airfoil Propeller

Size	Dimensions – Inches						
	A	B	C	D	F	I	J
24	30	25	5	2-3/4	18-5/8	17-3/8	20-1/8
30	36	31	5	2-3/4	19-3/4	18-3/4	21-1/2
36	42	37	5	2-3/4	23-1/4	21-1/2	24-1/4
42	48	43	5	2-3/4	24-3/4	23	25-3/4
48	54	49	5	2-3/4	25-3/4	24-7/8	27-5/8
54	60	55	5	2-3/4	26	27	29-3/4
60	66	61	5-1/2	2-3/4	24-1/2	27-1/2	30-1/4
72	80	73	5-1/2	2-3/4	28-1/2	31-1/2	34-1/4



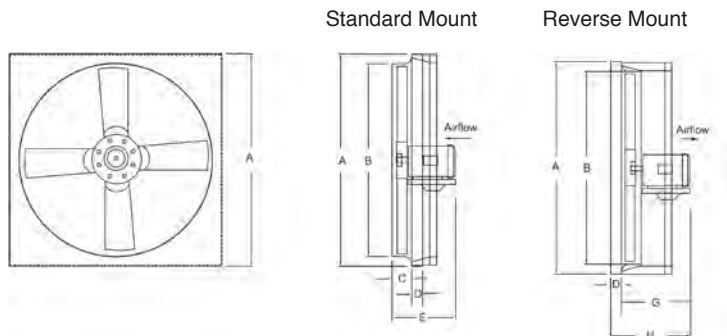
Model PATW Belt Drive - Reversible Cast Aluminum Propeller

Size	Dimensions – Inches						
	A	B	C	D	F	I	J
24	30	25	5	2-3/4	15-5/8	16-1/8	18-7/8
30	36	31	5	2-3/4	15-3/4	16-1/4	19
36	42	37	5	2-3/4	21-1/4	19	21-3/4
42	48	43	5	2-3/4	21-3/4	20-1/8	22-7/8
48	54	49	5	2-3/4	26-3/4	22-5/8	25-3/8
54	60	55	5-1/2	2-3/4	26	25-7/8	28-5/8
60	66	61	5-1/2	2-3/4	26-1/2	25-7/8	28-5/8



Model P Direct Drive - Cast Aluminum Airfoil Propeller

Size	Dimensions – Inches						
	A	B	C	D	E	G	H
24	30	25	5	2-3/4	15-5/8	16-1/8	18-7/8
30	36	31	5	2-3/4	15-3/4	16-1/4	19
36	42	37	5	2-3/4	21-1/4	19	21-3/4
42	48	43	5	2-3/4	21-3/4	20-1/8	22-7/8
48	54	49	5	2-3/4	26-3/4	22-5/8	25-3/8
54	60	55	5-1/2	2-3/4	26	25-7/8	28-5/8



Model PATW Belt Drive Performance Data

MODEL	HP	FAN RPM	MAX BHP	*SONES	STATIC PRESSURE/CAPACITY								
					0	0.1	0.125	.25	.375	.5	.625	.75	1.00
PATW-241	1/4	902	.27	14	5128	4442	4249						
PATW-242	1/3	993	.37	16	5645	5038	4863						
PATW-243	1/2	1137	.57	19	6464	5942	5806	4928					
PATW-244	3/4	1301	.88	24	7396	6940	6826	6183	4785				
PATW-245	1	1432	1.14	28	8141	7727	7623	7062	6350	4570			
PATW-303	1/2	837	.59	19	9101	8006	7661						
PATW-304	3/4	958	.89	24	10417	9530	9236	7309					
PATW-305	1	1055	1.10	28	11472	10685	10462	9094					
PATW-306	1-1/2	1208	1.79	33	13136	12448	12277	11156	9743				
PATW-307	2	1329	2.35	38	14451	13827	13671	12731	11645	9043			
PATW-308	3 3/4	1521	3.56	48	16539	15993	15857	15144	14209	13260	11867		
PATW-364	1	763	.82	23	12753	11363	10972						
PATW-365		838	1.15	27	14007	12774	12418	10127					
PATW-366	1-1/2	961	1.79	31	16063	15044	14730	13192	10213				
PATW-367	2	1056	2.27	36	17651	16723	16483	15069	13368				
PATW-368	3	1209	3.42	46	20208	19328	19196	18016	16796	15101			
PATW-425	1	716	1.17	27	17434	15436	14885						
PATW-426	1-1/2	820	1.80	33	19966	18276	17797	14879					
PATW-427	2	902	2.38	38	21963	20458	20036	17757	13049				
PATW-428	3	1033	3.52	49	25153	23839	23510	21631	19286				
PATW-429	5	1224	5.88	68	29803	28694	28417	26933	25312	23350	19917		
PATW-486	1-1/2	689	1.78	33	24378	21392	20453	14553					
PATW-487	2	758	2.36	38	26819	24252	23399	18493					
PATW-488	3	867	3.56	46	30676	28562	27913	24184	19210				
PATW-489	5	1028	5.92	63	36372	34590	34144	31228	27907	23707			
PATW-4810	7-1/2	1178	9.13	84	41680	40214	39735	37503	34759	31764	28108	23919	
PATW-548	3	622	3.41	35	32038	29474	28752	24486					
PATW-549	5	737	5.59	45	37961	35889	35299	32252	28243				
PATW-5410	7-1/2	844	8.83	57	43472	41663	41211	38592	35614	32051	24896		
PATW-5411	10	929	11.87	70	47850	46207	45796	43501	41084	38039	34658	28147	
PATW-608	3	548	3.43	35	36238	32450	31389	24853					
PATW-609	5	650	5.50	45	43379	40269	39492	34921	28826				
PATW-6010	7-1/2	744	8.67	57	49652	46936	46256	42534	38345	32626			
PATW-6011	10	819	11.63	70	54658	52190	51573	48314	44666	40492	35179		

Model P Direct Drive Performance Data

MODEL	HP	FAN RPM	MAX BHP	*SONES	STATIC PRESSURE/CAPACITY								
					0	0.1	0.125	.25	.375	.5	.625	.75	1.00
P-242-11	1/3	1160	.39	19	5501	5010	4891	4208	3446				
P-243-11	1/2	1160	.61	22	6054	5690	5592	5103	4516	3712			
P-244-11	3/4	1160	.88	25	7321	6941	6840	6311	5648	4821			
P-245-17	1	1750	1.18	41	7805	7505	7430	7009	6606	6191	5737	5215	
P-246-17	1-1/2	1750	1.82	44	8647	8414	8356	8056	7751	7430	7075	6704	5808
P-247-17	2 1/2	1750	2.40	52	9818	9596	9541	9251	8932	8573	8210	7835	6955
P-303-8	3/4 1	860	.60	20	9483	8423	8120	6284					
P-304-8	1	860	.88	22	10500	9930	9752	8441	6521				
P-305-8		860	1.02	22	11304	10488	10284	8986	6938				
P-305-11		1160	1.22	29	10786	10270	10138	9442	8629	7698	6411		
P-306-11	1-1/2	1160	1.88	31	13396	12869	12741	12061	11202	10182	8954		
P-307-11	2 3/4	1160	2.35	35	14927	14302	14145	13352	12500	11388	10025		
P-364-8	1	860	.87	33	13586	12221	11879	9574					
P-365-8		860	1.20	24	15052	14018	13715	12200	10314				
P-366-8	1-1/2	860	1.88	29	17378	16299	16005	14470	12314				
P-365-11	1	1160	1.19	33	14590	13421	13130	11557	9301				
P-366-11	1-1/2	1160	1.84	38	17299	16306	16046	14706	13182	11323	8495		
P-367-11	2	1160	2.43	42	18082	17340	17155	16175	15142	14037	12558	10606	
P-368-11	3	1160	3.55	43	21998	21166	20958	19907	18793	17571	16158	14274	
P-425-8	1	860	1.15	34	14917	13745	13422	11639	9375	6578			
P-426-8	1-1/2	860	1.65	34	17968	16981	16708	15083	13086	10043			
P-427-8	2	860	2.23	35	21349	20112	19793	18219	16137	13776			
P-428-8	3	860	3.12	35	24484	23339	23018	21392	19302	16745	12328		
P-486-8	1-1/2	860	1.79	44	23303	21701	21264	18953	16189	12795	7380		
P-487-8	2	860	2.35	47	26755	24958	24508	22193	19570	16262	11373		
P-488-8	3	860	3.41	50	31811	30082	29650	27274	24783	21435			
P-489-8	5	860	5.62	51	3475	37613	37119	34503	31576	28043			
P-4810-8	7-1/2	860	7.68	52	43722	41737	41152	38122	35212	31038			
P-547-8	2	860	2.45	41	26755	24958	24508	22193	19570	16262	11373		
P-548-8	3	860	3.52	50	31909	30065	29576	26971	23521	19790	15492	10342	
P-549-8	5	860	5.80	45	42794	40911	40440	37609	34898	31383	27518	20263	
P-5410-8	7-1/2	860	9.0	50	51718	49469	48908	45858	43139	39700	35377	30238	

* Performance shown for Models PS, PA, PATW and P is for Installation type A: free inlet. Power rating (BHP) does not include drive losses. Performance ratings does not include the effects of accessories in the air stream. The sound ratings shown are loudness values in fan sones at 5'.

MODEL SPF – SMALL PANEL FANS

CONSTRUCTION

Sizes 8-10 and 12" are mounted in protective wire guards and larger sizes supported by tubular struts welded to a one piece venturi. This venturi combined with quiet slow speed motors assures a quiet and positive air displacement.

OPTIONAL ACCESSORIES

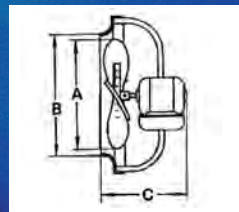
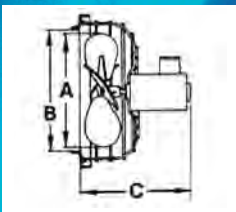
Wire guards are available for sizes 14 thru 20. Wall shutters can also be supplied and are usually ordered the same size as the panel O.D.



8, 10, 12" Models



14 thru 20" Models



Model	HP	RPM	Wall Collar and Housings		Inches			Panel O.D. SQ.
			CFM		A	B	C	
			0" SP	1/8" SP				
SPF-8A	1/40	1550	336	222	8	8-1/2	7	10-3/4
SPF-10A	1/40	1550	460	304	10	10-1/2	7	13-3/4
SPF-10B	1/20	1550	610	420	10	10-1/2	9	13-3/4
SPF-12A	1/40	1550	660	510	12	12-1/2	7	15
SPF-12B	1/20	1550	950	735	12	12-1/2	9	15
SPF-14A	1/20	1550	1120	835	14	14-3/4	9	18
SPF-14B	1/6	1140	1420	1045	14	14-3/4	12	18
SPF-16A	1/6	1140	1620	1545	16	16-3/4	13	20
SPF-16B	1/4	1725	2550	2345	16	16-3/4	13	20
SPF-18A	1/6	1140	2280	2115	18	18-3/4	13	22
SPF-18B	1/4	1140	2920	2730	18	18-3/4	13	22
SPF-20A	1/6	1140	2510	2345	20	20-3/4	13	24
SPF-20B	1/4	1140	3260	3000	20	20-3/4	13	24

1 YEAR WARRANTY

Romlair Fan Company (Romlair) warrants this equipment to be free from defects in material and workmanship under normal use and service for a period of one year from date of delivery. During the warranty period if any parts prove to be defective, they will be repaired or replaced free of charge at factory option: If upon receipt of written authorization they are delivered prepaid to the factory. This guarantee does not cover any damage caused by neglect of lubrication, accident or overload, improper installation, nor does it cover the cost of repairs made or attempted outside the factory, without authorization from Romlair. Electric motors are guaranteed only to the extent of the motor manufacturer's warranty.

Romlair is not responsible for the cost of removal of the defective product or part, or the installation of the repaired or replaced product or part. Correction of any verified defects by repair or replacement shall constitute fulfillment of this warranty.

Distributed By



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