

Model P Direct-Drive Fans



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Model P Direct-Drive Wall Fans

Model P Direct-Drive Fans Description

PRODUCT DESCRIPTION

Model P Direct-Drive sidewall propeller fans are for exhaust or supply applications. This includes several different styles of propellers, two-drive configurations, and with a variety of available accessories. Drive frames are built of heavy-gauge construction and built for a lifetime of service.

STANDARD FEATURES

- Drive: Direct
- Size: 24" - 54"
- Performance: 250 - 100,000 cfm
- Static Pressure: 1.25" w.g.
- Orientation
 - Supply
 - Exhaust
- Motors: Heavy-duty motor for years of trouble-free operation
- Propellers: High performance propeller
- Housing: G90 galvanized steel (mill finish) with flanges for mounting. protective finish.
- Frame: Heavy-gauge construction

OPTIONAL FEATURES

- Weather Hoods
 - 45° (Relief)
 - 90° (Intake)
- Coatings:
 - Polyurethane
 - Custom

INDUSTRY APPLICATION

- Aluminum Plants
- Automotive Plants
- General Manufacturing
- Glass & Glass Products
- Pulp & Paper Plants
- Schools
- Warehouses
- Work Rooms

Model P Direct-Drive Wall Fans

Mounting Options

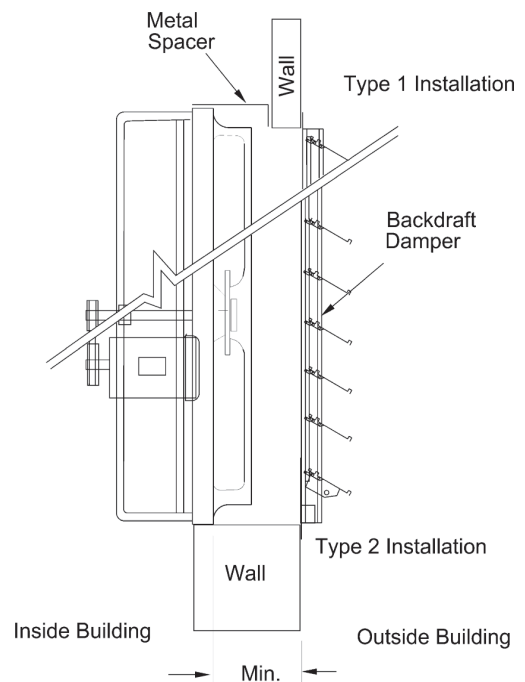
STANDARD FAN MOUNTING

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 installations.

On exhaust applications, it is important to maintain minimum dimensions 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 uses a damper the same size as the venturi O.D.

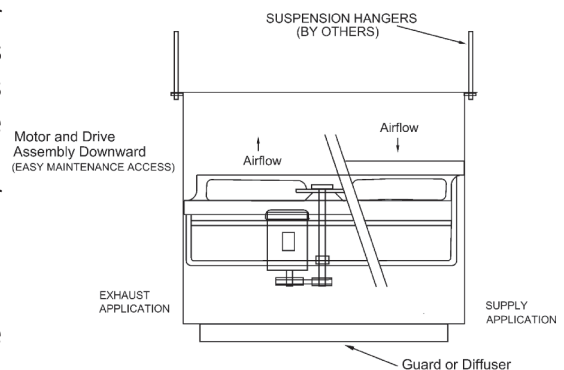
The chart below provides the recommended minimum dimensions and the wall opening dimensions for these two different installations.



HORIZONTAL FAN 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

Fan Size	Min. Dimension	Type 1 Wall Opening	Type 2 Wall Opening	Fan Size	Min. Dimension	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				

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Housing Options

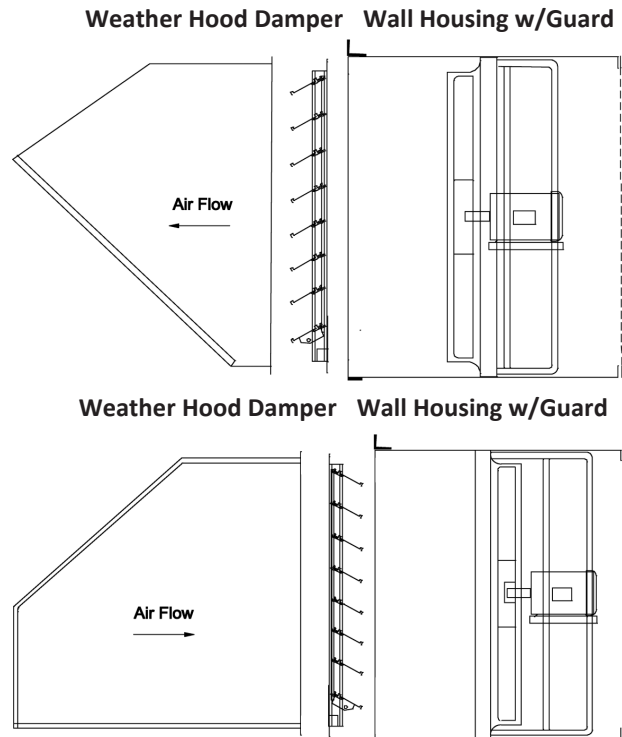
FAN WALL HOUSING

Wall housing provides weather protection when mounting a fan to a wall. These housings reduce installation time, and allow the attachment of backdraft 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 are shipped separately.

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

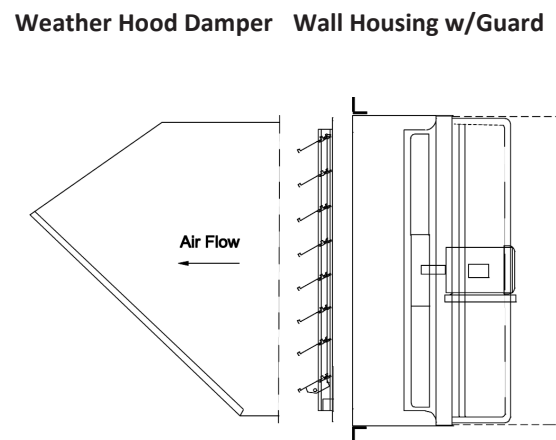
Wall housing, fan, damper, and guards are shipped fully assembled. Weather hoods are shipped loose.



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.



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.

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Filtered Supply Wall Housing Options

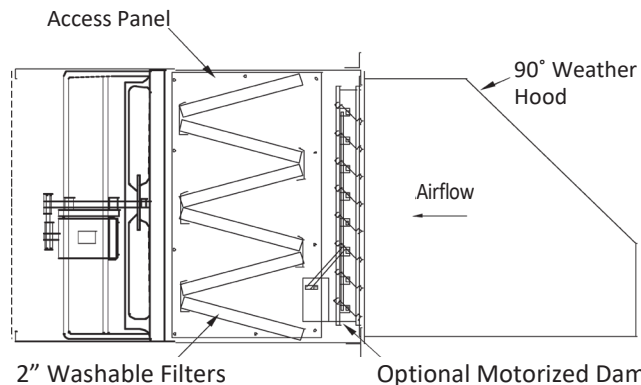
FILTERED SUPPLY WALL HOUSING

Filtered supply wall housings are available in fan sizes ranging from 24" to 54". Standard construction is painted galvanized steel housing with installed mounting flanges for flush interior or flush exterior mounting. Standard filters are 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 fpm. Optional closure angles are available to provide a finished appearance on the interior wall opening. *Consult factory for custom designs which include larger sizes, and different filter quantities.*



Typical Installation

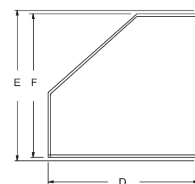


2" Washable Filters

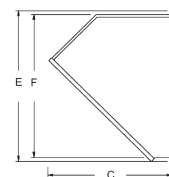
Optional Motorized Damper

Size	Motor Side Guide		Damper	Weather Hood				
	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

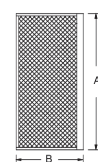
90° Weatherhood



45° Weatherhood



Motor Side Guard



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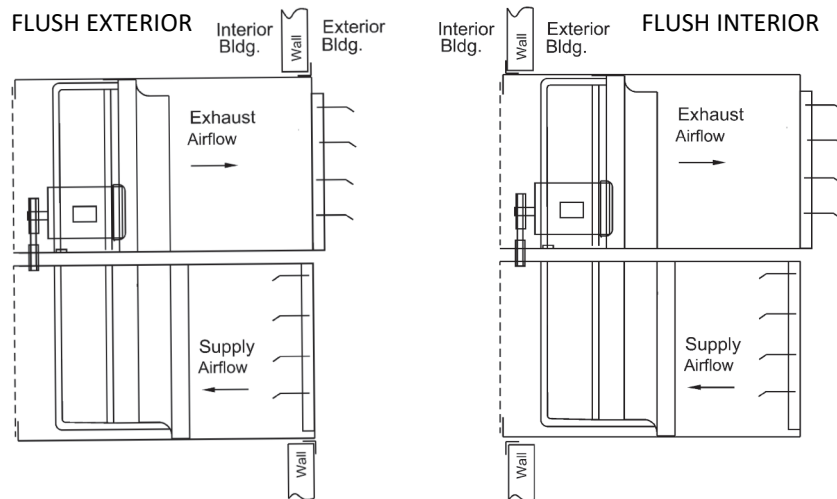
Mounting Configurations

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.

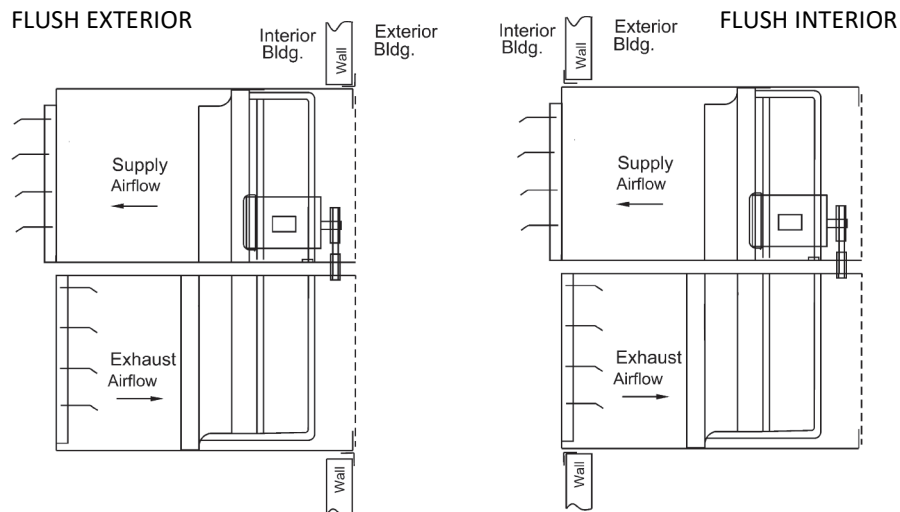
MOUNTING CONFIGURATION FOR INTERIOR SERVICE

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



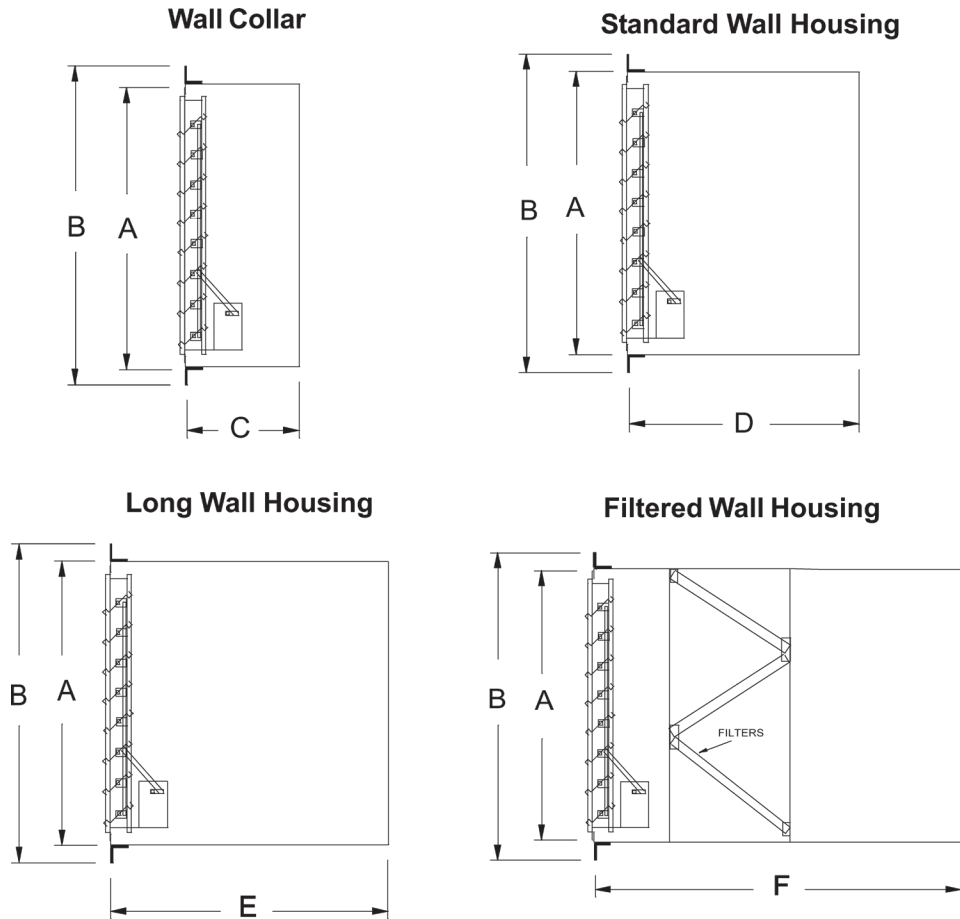
MOUNTING CONFIGURATION FOR EXTERIOR SERVICE

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. This is a reverse mount wall housing for exterior service.



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Wall Collar and Housing Dimensions



Size	Wall Collar and Housings							Gauge
	A	B	C	D	E	F	Wall Opening	
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

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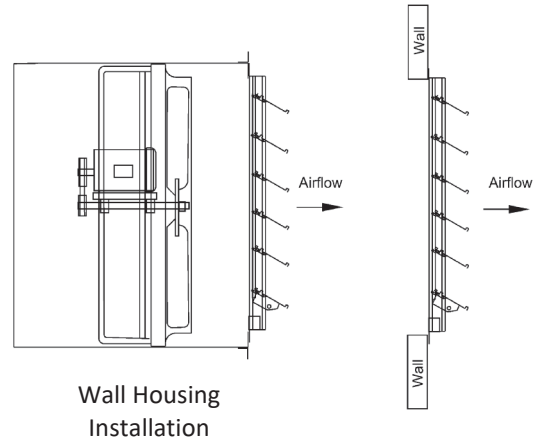
Backdraft Dampers



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.

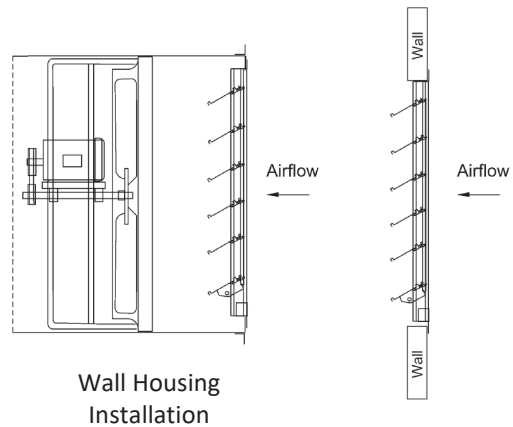
RWD and RWD-M exhaust

dampers are available as either gravity operated or with motor actuator 115v.



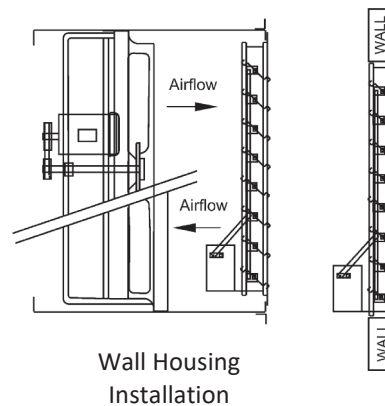
Supply Dampers

RWD can be used as a supply damper 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 wall housing or alone. Designed for higher air velocities than the standard backdraft dampers. Optional blade and jamb seals are available for low leakage applications.



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Model P Fan Dimensional Data

SIZE	DIMENSIONS-INCHES							AVG WT
	A	B	C	D	E	G	H	
24	30	25	5	2-3/4	15-5/8	16-1/8	18-7/8	110
30	36	31	5	2-3/4	15-3/4	16-1/4	19	150
36	42	37	5	2-3/4	21-1/4	19	21-3/4	205
42	48	43	5	2-3/4	21-3/4	20-1/8	22-7/8	270
48	54	49	5	2-3/4	26-3/4	22-5/8	25-3/8	305
54	60	55	5-1/2	2-3/4	26	25-7/8	28-5/8	400
60	66	61	5-1/2	2-3/4	26-1/2	25-7/8	28-5/8	440

