


MODELS LCE/LCS, L2E/L2S, L3E/L3S

BELT DRIVE SIDEWALL PROPELLER FANS

LINE OVERVIEW




JencoFan's Belt Drive Sidewall Propeller Fan line is designed to exhaust or supply large volumes of air at relatively low static pressures. With 3 levels of construction, the belt drive models are for use in a variety of applications for commercial, industrial and agricultural buildings such as manufacturing and assembly plants, warehouses, parking garages, gymnasiums, equipment rooms, distribution centers, foundries, boiler rooms, greenhouses and OEM applications. The direct drive models provide general ventilation for a wide variety of buildings and enclosed areas within buildings. Examples include factories, assembly plants, warehouses, gymnasiums, garages, jails, machine rooms and many others.

These Sidewall Propeller Fans are rated from 3,000 to 85,000 CFM with static pressures to 1" w.g. Models range from 20 to 72". A wide range of accessories are available to meet any need or specification. See the below Model Comparison to find the right Belt Drive Sidewall Propeller Fan for your application.

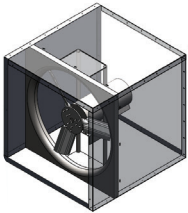
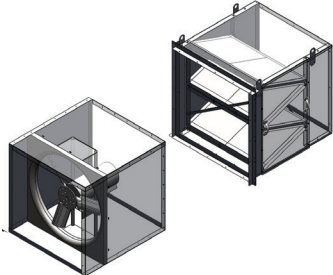
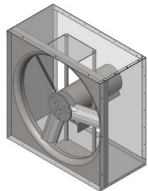


Models LCE & LCS are available in our Quickship program. Most sizes are available for next day or 10-day shipping from stock.

MODEL COMPARISON

Construction Level		Model	Size Range	Performance
1	 G90 galvanized steel blades bolted to an epoxy coated hub	LCE LCS	20 to 60"	3,000 to 40,000 CFM up to .625" w.g.
2	 G90 galvanized steel blade bolted to a welded, structural steel hub plate	L2E L2S	24 to 60"	5,000 to 47,000 CFM up to .75" w.g.
3	 G90 galvanized steel with double 16 gauge laminations bolted to a welded, structural steel hub plate	L3E L3S	42 to 72"	35,000 to 85,000 CFM up to 1" w.g..

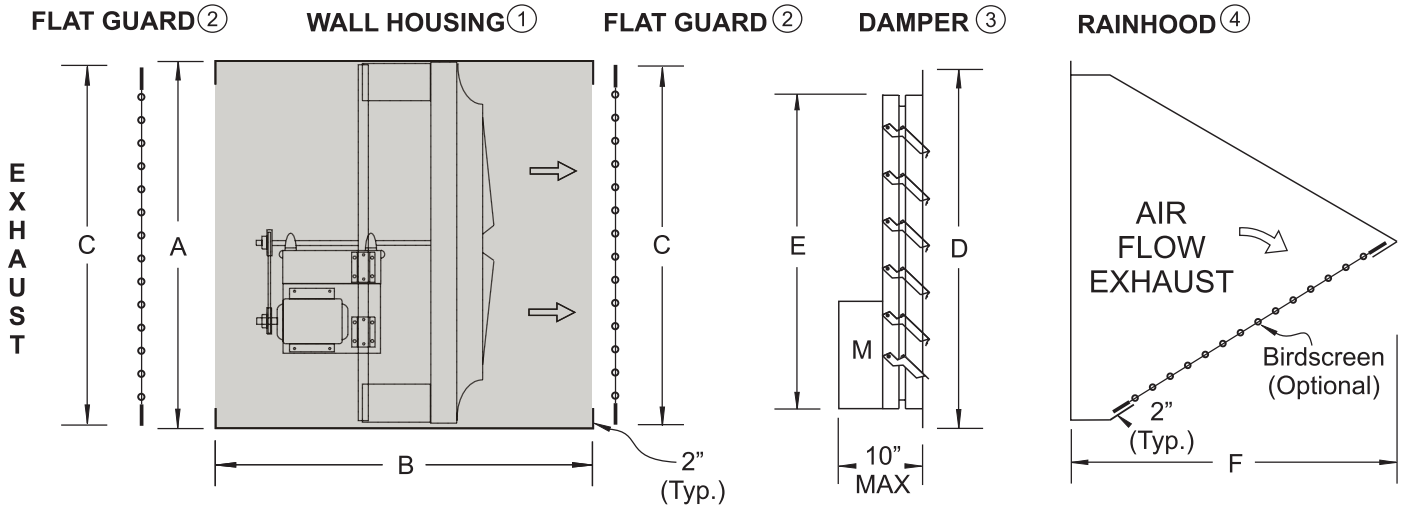
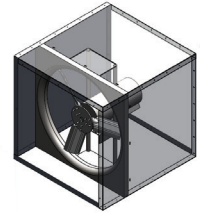
MOUNTING ARRANGEMENT OPTIONS

Mounting Arrangement	Description
Wall Housing 	Heavy-gauge, all galvanized G-90 steel housing provides a simple solution to installing a fan and all required accessories in a rough wall opening. It can be used in exhaust or supply applications and in fan sizes 20 through 72 inch.
Filtered Wall Housing 	For installations where filtering is required. Heavy-gauge, all galvanized G-90 steel filtered wall housings are available in both supply and exhaust configurations. They are available in eight (8) sizes for fans ranging from size 20 to 60 inches. They are designed with the draw-thru concept to achieve the highest filter and fan efficiencies.
Wall Collar 	Heavy-gauge, all G-90 galvanized mounting collar provides a simple solution to installing a fan in a rough wall opening when a rear safety guard is NOT required.

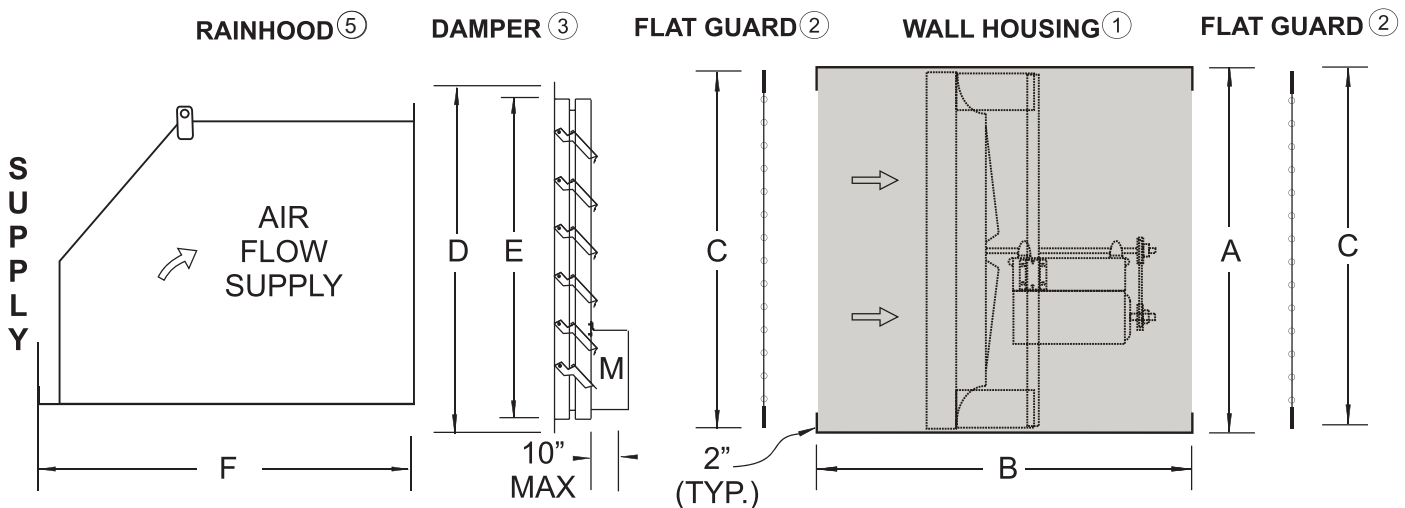


WALL HOUSING MOUNTING OPTION

This heavy-gauge, all galvanized G-90 steel housing provides a simple solution to installing a fan and all required accessories in a rough wall opening. It can be used in exhaust or supply applications and in fan sizes 20 through 72 inch. Depending on space and maintenance requirements, the wall housing may be installed inward or outward of the building. All housings ship assembled with the fan to lessen job site installation costs. Wire guards, shutters and and/or rainhoods may be attached to the prepunched flange. We strongly recommend rainhoods and motorized shutters for all supply applications and whenever additional weather protection is desired.



Fan Size	Wall Housing ①		Minimum Wall Opening	Flat Guard ②	Damper ③		Exhaust	Supply
	A (Sq. O.D)	B Length			Optional Rainhood 45 Deg. ④	Required Rainhood 90 Deg. ⑤		
		Exh/Sup						
LC, L2 & L3	(Sq)	C (Sq)	D (O.D)	E	F	F		
20	25	44	25 1/2	24	22 1/2	20	24 1/4	27 3/4
24	31	44	31 1/2	30	28 1/2	26	28 1/2	38 1/2
30	37	44	37 1/2	36	34 1/2	32	34 1/2	44 1/2
36	43	44	43 1/2	42	40 1/2	38	40 1/2	49
42	49	44	49 1/2	48	46 1/2	44	44 1/2	56 1/2
48	55	44	55 1/2	54	52 1/2	50	49 1/2	62 1/2
54	61	44	61 1/2	60	58 1/2	56	55	73
60	67	44	67 1/2	66	64 1/2	62	69	73
72	81	44	81 1/2	80	78 1/2	76	75 1/2	73

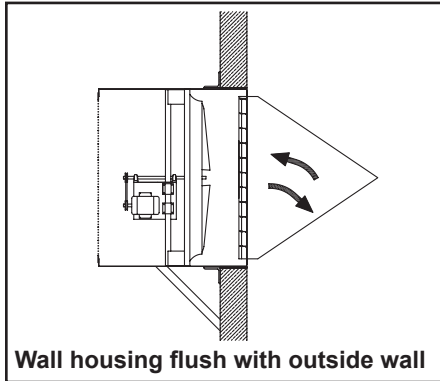


Rainhood recommended for supply applications.

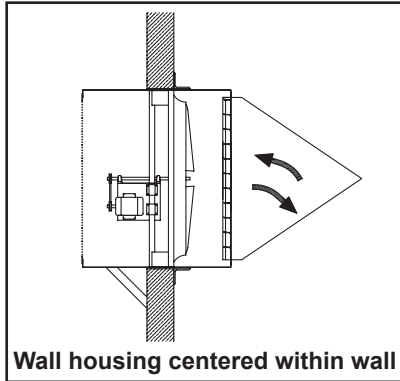


WALL HOUSING STANDARD MOUNTING ARRANGEMENTS

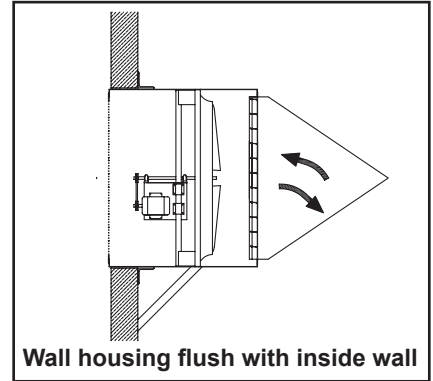
The most common mounting arrangement (below left) leaves a clean building exterior and allows access to the fan, motor and drives from inside the building. Additional bracing angle, rod or cable (field provided) should be used in addition to the mounting angles to support the fan and wall housing assembly.



Wall housing flush with outside wall



Wall housing centered within wall

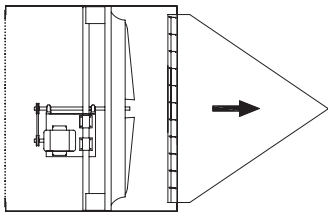


Wall housing flush with inside wall

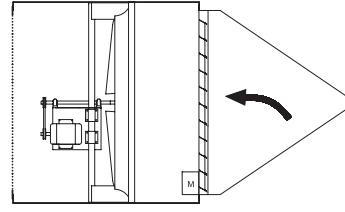
NOTE: Supply applications have the fan venturi spun on the opposite side of the fans shown above. The fans shown are exhaust. Rainhoods are required on supply applications and recommended on exhaust applications where additional weather protection is desired. Exhaust and/or supply fans installed as shown should be serviced from the interior of the building. Where service is required from the exterior of the building, consult the factory or representative for recommendations. All bracing shown is field provided. Field flashing and caulking of wall housing seams and unused mounting holes, will ensure a weather resistant installation.

PRESSURE LOSS GUIDE FOR WALL HOUSING ACCESSORIES

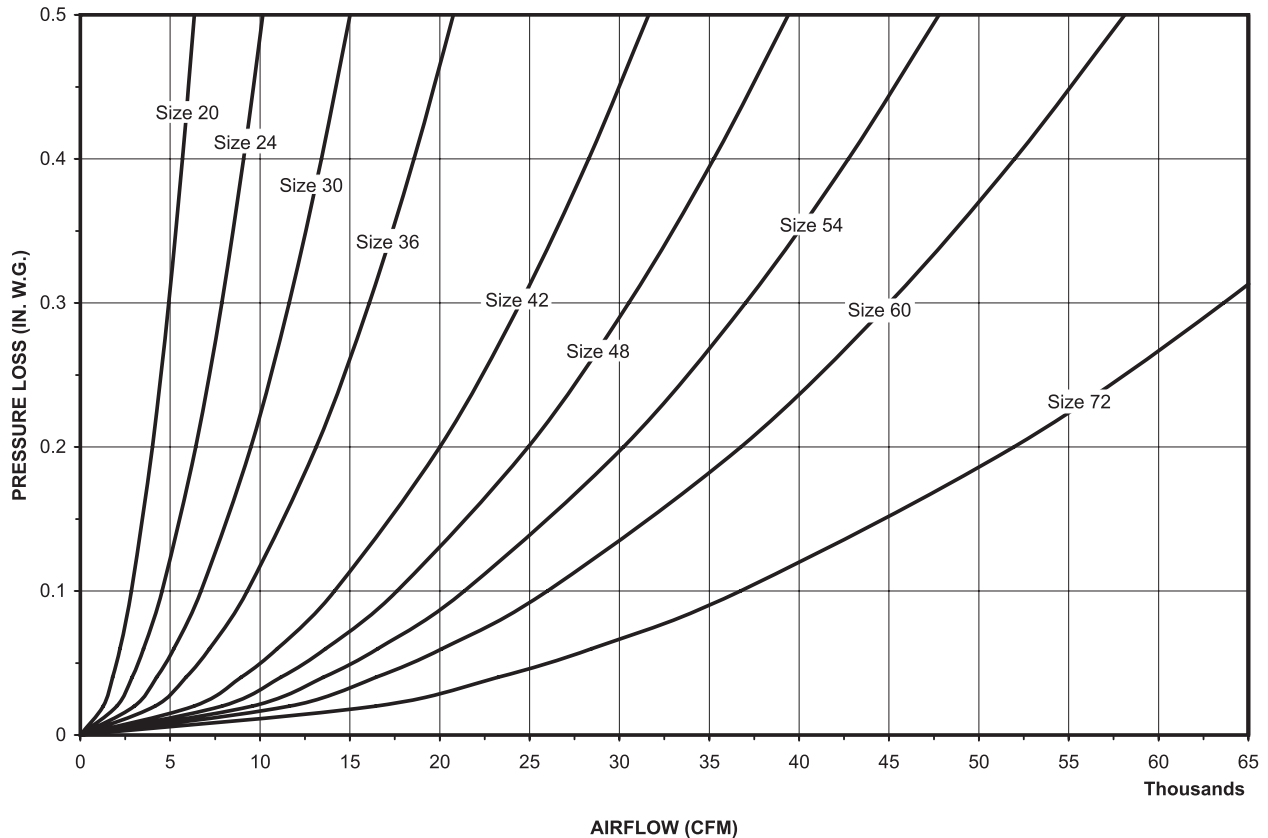
Use the estimated pressure drop graphs to help select the proper exhaust or supply fan package that will deliver the desired airflow. Enter the graph from the bottom at the specified CFM and move vertically upward to the fan curve for the desired fan size, then horizontally to the left and read the estimated static pressure drop resulting from these typical accessory packages. Add the accessory pressure loss to the system (or building) design static pressure loss to obtain the total static pressure loss to be used for the proper fan selection.



Exhaust Airflow
with Wall Housing
Gravity Damper
Rainhood
Motorside Guard



Supply Airflow
with Wall Housing
Gravity Damper
Rainhood
Motorside Guard

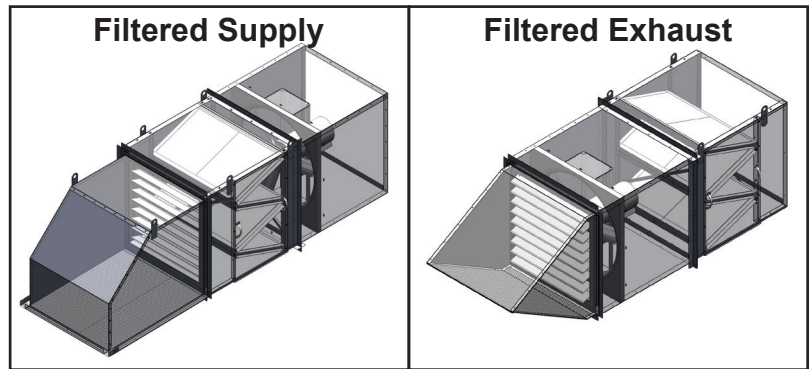




FILTERED WALL HOUSING MOUNTING OPTIONS

Filtered wall housings are available in both supply and exhaust configurations. They are available in eight (8) sizes for fans ranging from size 20 to 60 inches. They are designed with the draw-thru concept to achieve the highest filter and fan efficiencies.

Standard construction is galvanized steel. Mounting flanges are factory installed for either flush exterior or flush interior. Permanent 2-inch (51 mm) washable filters are accessed through a bolted or hinged panel and can be easily removed for cleaning.



FILTERED SUPPLY WALL HOUSING

Standard Features and Options

1. **Wall Housing Box (Standard)**

2. **Filter Box (Standard)**

- Bolted or Hinged Door
- Includes 2 sets of flanges for mounting filter box to wall housing.

3. **Wall Mount Flanges (Standard)**

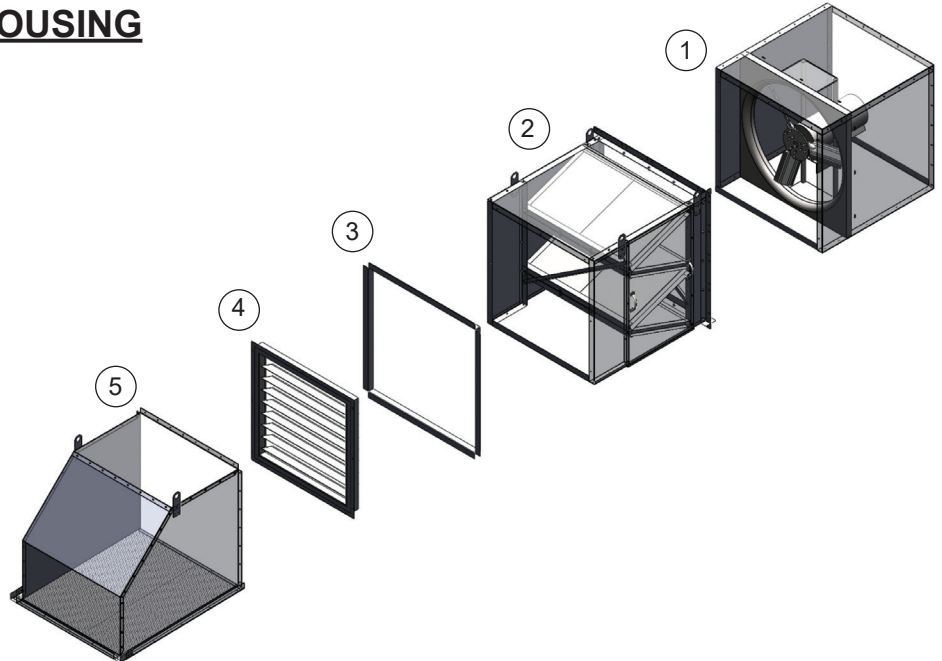
- Set of 4 - shipped loose

4. **Damper (Optional)**

- Supply Type
- Gravity, Motorized, or Center Pivot

5. **Rain Hood (Optional)**

- 90 Degree - Supply Type



FILTERED EXHAUST WALL HOUSING

Standard Features and Options

1. **Wall Housing Box (Standard)**

2. **Filter Box (Standard)**

- Bolted or Hinged Door
- Includes 2 sets of flanges for mounting filter box to wall housing.

3. **Wall Mount Flanges (Standard)**

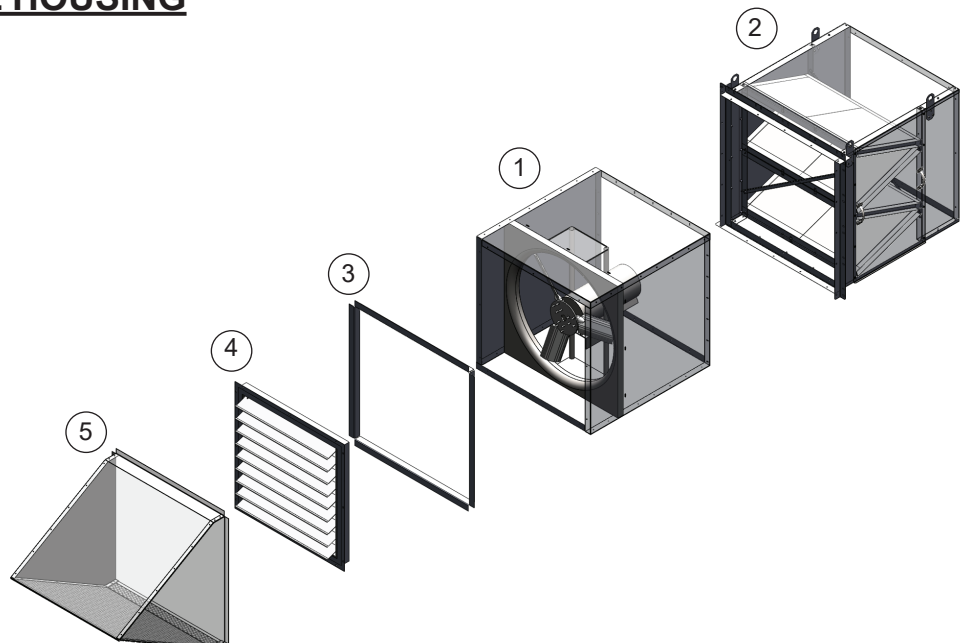
- 1 set of 4 - shipped loose

4. **Damper (Optional)**

- Exhaust Type
- Gravity, Motorized, or Center Pivot

5. **Rain Hood (Optional)**

- 45 Degree - Exhaust Type

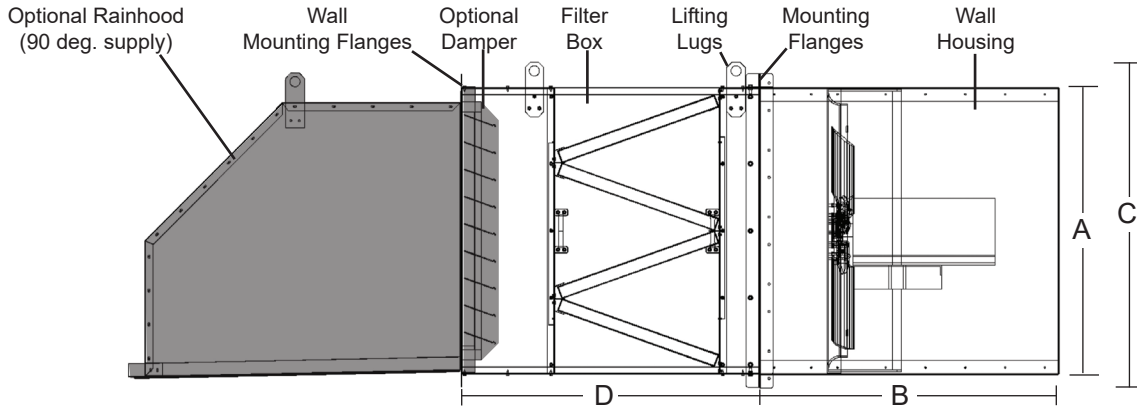




FILTERED WALL HOUSING MOUNTING OPTIONS Cont.

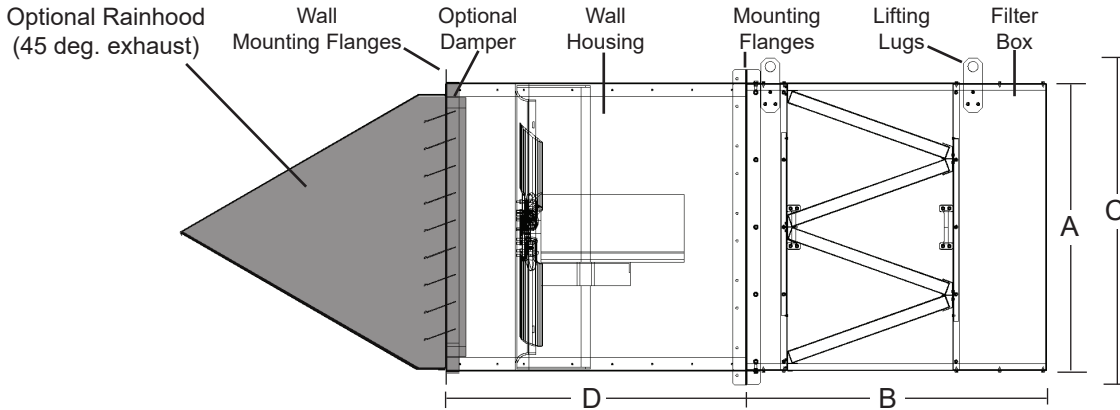
Filtered Wall Housing Dimensions

Filtered Supply



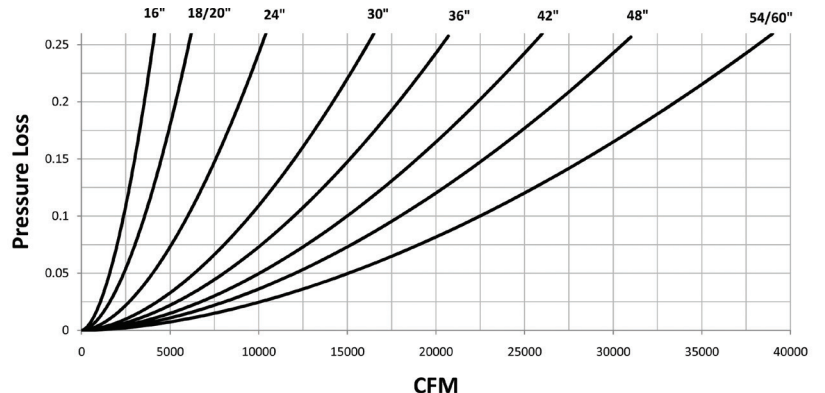
Fan Size	Wall Housing		Minimum Wall Opening Sq	Filter Box			
	A	B Length LC & L2		C	D	# of Filters	Filter Actual Dimensions
20	25	44	25 1/2	25	44 1/8	3	19 5/8 x 24 5/8 x 1 7/8
24	31	44	31 1/2	31	41 1/8	4	19 5/8 x 24 5/8 x 1 7/8
30	37	44	37 1/2	37	44 1/8	8	15 5/8 x 24 5/8 x 1 7/8
36	43	44	43 1/2	43	44 1/8	8	19 5/8 x 24 5/8 x 1 7/8
42	49	44	49 1/2	49	44 1/8	10	19 5/8 x 24 5/8 x 1 7/8
48	55	44	55 1/2	55	40 1/2	12	19 5/8 x 24 5/8 x 1 7/8
54	61	44	61 1/2	61	44 1/8	15	19 5/8 x 24 5/8 x 1 7/8
60	67	44	67 1/2	67	44 1/8	15	19 5/8 x 24 5/8 x 1 7/8

Filtered Exhaust



PRESSURE LOSS GUIDE FOR FILTER BOX

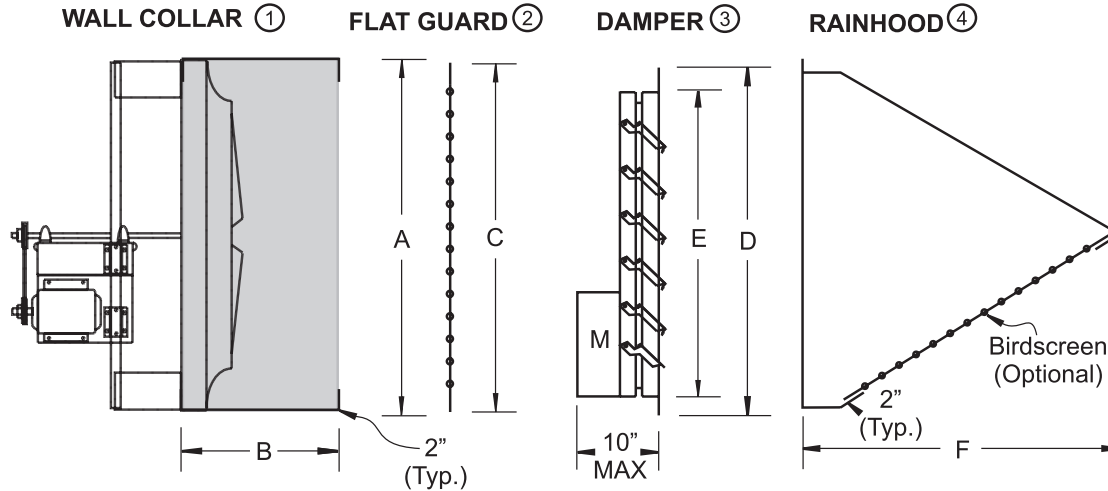
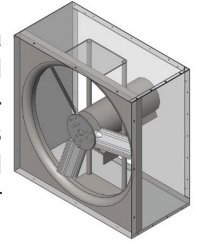
Use the estimated pressure drop graphs to help select the proper exhaust or supply fan that will deliver the desired airflow. Enter the graph from the bottom at the specified CFM and move vertically upward to the fan curve for the desired size, then horizontally to the left and read the estimated static pressure drop resulting from these typical accessory packages. Add the accessory pressure loss to the system (or building) design static pressure loss to obtain the total static pressure loss to be used for the proper fan selection.





WALL COLLAR MOUNTING OPTION

The heavy-gauge, all G-90 galvanized mounting collar provides a simple solution to installing a fan in a rough wall opening when a rear safety guard is **NOT** required. A front wire guard, shutter, and/or rainhood can be attached to the front prepunched flanges. The wall collar can be used in exhaust or supply applications for all fan sizes. The wall collar is mounted with the fan on the interior side of the building. All collars ship fully assembled with the fan to lessen jobsite installation costs. We strongly recommend rainhoods and motorized shutter for all supply applications as well as for exhaust applications where additional weather protection is desired.



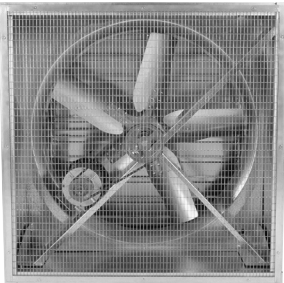


Dimensions

Fan Size	Wall Collar ①		Minimum Wall Opening	Flat Guard ②	Damper ③		Rainhood ④
	A	B	Sq	C	D (O.D)	E	F
20	24 1/4	21	25 1/2	24	22 1/2	20	24 1/4
24	30 1/4	21	31 1/2	30	28 1/2	26	28 1/2
30	36 1/4	21	37 1/2	36	34 1/2	32	34 1/2
36	42 1/4	21	43 1/2	42	40 1/2	38	40 1/2
42	48 1/8	21	49 1/2	48	46 1/2	44	44 1/2
48	54 1/8	21	55 1/2	54	52 1/2	50	49 1/2
54	60 1/8	21	61 1/2	60	58 1/2	56	55
60	66 1/8	21	67 1/2	66	64 1/2	62	69
72	80 1/8	26	81 1/2	80	78 1/2	76	75 1/2

(a) Level 3 Construction requires a deeper motorside guard as shown. Unless shown otherwise supply and exhaust dimensions are similar.



ACCESSORIES & OPTIONS FOR MOUNTING ARRANGEMENTS

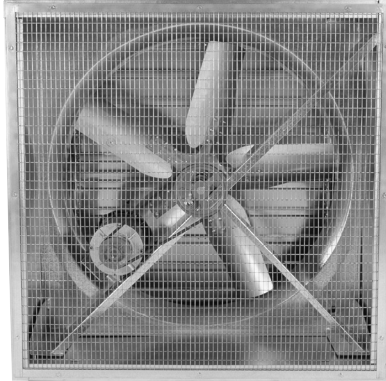
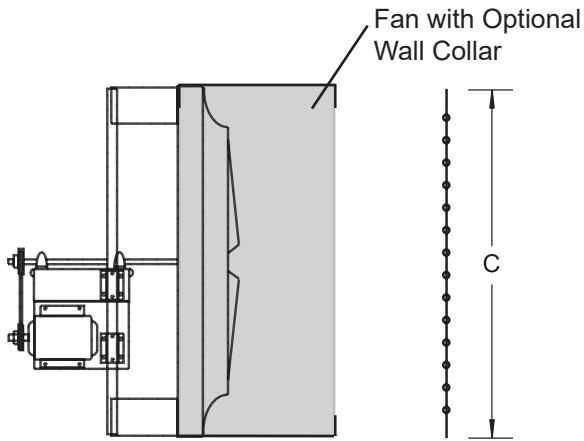
Accessory or Option	
	<p>Safety Guards Safety Guards (Standard or Heavy-Duty Flat Guards) are strongly recommended to protect personnel from accidental injury and to prevent debris from entering the fan. OSHA approved guards are required in many installations including when the fans are within 7 feet of the floor or work/access area.</p>
	<p>Rainhoods or Weatherhoods Designed to provide additional weather protection by partially shielding the wall opening and should be used for all supply applications and whenever additional weather resistance is desired. The galvanized (aluminum optional) hood attaches to the wall housing or wall collar flanges. Field flashing and caulking will reduce moisture penetration. Shown with optional birdscreen.</p>
	<p>Dampers Used alone or in conjunction with the wall housing or wall collar, a complete line of dampers are available for exhaust or supply configurations.</p>



ACCESSORIES & OPTIONS FOR MOUNTING ARRANGEMENTS Cont.

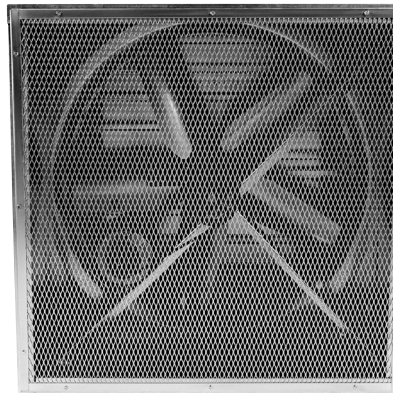
Safety Guards

Safety guards are strongly recommended to protect personnel from accidental injury and to prevent debris from entering the fan. OSHA approved guards are required in many installations including when the fans are within 7 feet of the floor or work/access area.



Standard Duty Flat Wire Guard

The removable safety guard satisfies OSHA requirements when used with the optional wall housing as a motor-side (rear) guard. The 16 ga. 1/2" X 1" welded wire mesh is mounted in a galvanized frame and attaches to the inward flanges of the wall housing.



Heavy-Duty Flat Wire Guard

The removable safety guard satisfies OSHA requirements when used with the optional wall housing as a motor-side (rear) guard. The H.D. expanded aluminum mesh is mounted in a galvanized frame and attaches to the inward flanges of the wall housing.

Dimensions

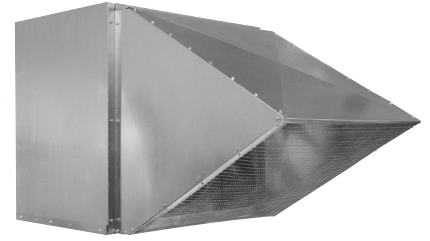
Fan Size	C
20	24
24	30
30	36
36	42
42	48
48	54
54	60
60	66
72	80



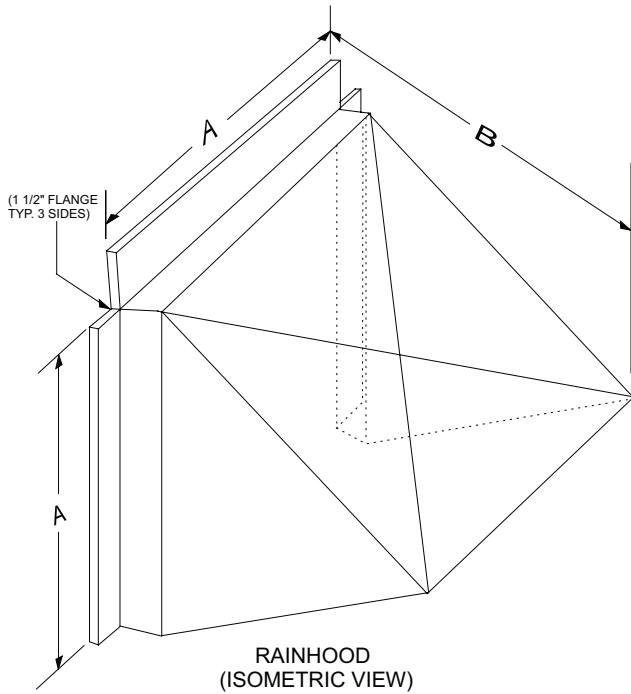
ACCESSORIES & OPTIONS FOR MOUNTING ARRANGEMENTS Cont.

Rainhoods or Weatherhoods

Designed to provide additional weather protection by partially shielding the wall opening and should be used for all supply applications and whenever additional weather resistance is desired. The galvanized (aluminum optional) hood attaches to the wall housing or wall collar flanges. Field flashing and caulking will reduce moisture penetration. Shown with optional birdscreen.



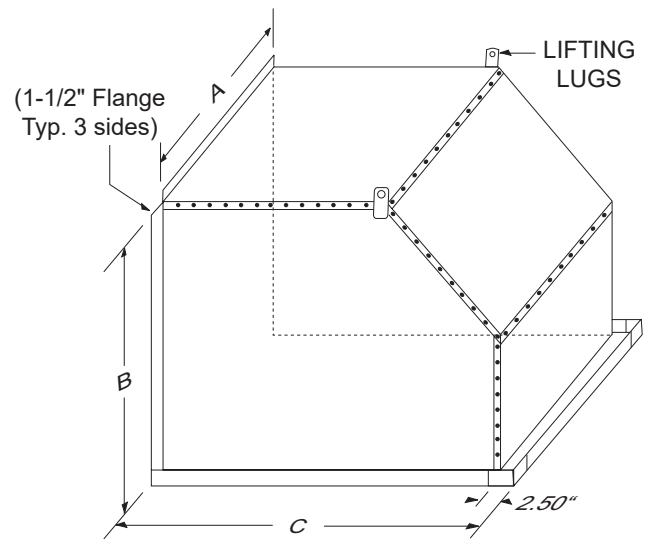
45 Degree Exhaust



RAINHOOD
(ISOMETRIC VIEW)

Fan Size	A	B	GAUGE (2)	AVG. WT.
20	22	24-1/4	18	25
24	28	28-1/2	18	30
30	34	34-1/2	18	40
36	40	40-1/2	18	50
42	46	46-1/2	18	60
48	52	49-1/2	16	70
54	58	58-1/2	16	120
60	64	64-1/2	16	175
72	78	64-1/2	16	200

90 Degree Supply



Fan Size	A	B	C	GAUGE (2)	AVG. WT.
20	22	22	27-3/4	18	25
24	27-1/4	26-1/2	38-1/2	18	30
30	32-1/2	33-1/2	44-1/2	18	40
36	38-1/2	39-1/4	49	18	50
42	44-1/2	45-1/4	56-1/2	18	60
48	50-1/2	51-1/2	62-1/2	18	70
54	56-3/4	57	73	18	120
60	62-3/4	63	73	18	175
72	76-3/4	76-3/4	73	18	200



ACCESSORIES & OPTIONS FOR MOUNTING ARRANGEMENTS Cont.

Damper Types (Shutters)

Heavy-Duty Galvanized Exhaust Motorized Shutter



This damper has a flanged frame and is designed to fit the inside flanges of the optional wall housing or wall mounting collar. The frame and blades are constructed of galvanized steel and are rated to 3000 FPM with proper clearance as provided by all factory accessories. The damper body recesses into the opening for a flush appearance.

Standard Duty Aluminum Exhaust Gravity Shutter



This damper can greatly reduce the infiltration of outside air and although not completely watertight, will provide weather protection in an economical fashion. Constructed with a galvanized frame and aluminum blades this damper is rated to 2000 FPM with the proper clearance as provided by all factory accessories. The damper body is recessed into the opening for a flush appearance.

Heavy-Duty Galvanized Supply Motorized Shutter



The motorized option improves weather protection by providing a tighter closure seal and is recommended for all supply applications. Heavy-duty dampers are constructed with galvanized frames and blades and are rated to 3000 FPM. The damper body is not recessed providing extra clearance between the fan and damper blades.

Standard Duty Aluminum Supply Motorized Shutter



The motorized option improves weather protection by providing a tighter closure seal and is recommended for all supply applications. Standard duty dampers are constructed with galvanized frames and aluminum blades and are rated to 2000 FPM. The damper body is not recessed providing extra clearance between the fan and damper blades.

Center Pivot Motorized Damper - Supply or Exhaust



The flanged frame damper is designed to recess inside the flanges of the optional wall housing or wall mounting collar. The center pivot style damper provides superior weather resistance. Galvanized (optional aluminum) construction is rated to 3500 FPM with proper clearance as provided by all factory accessories.

Electric Damper Operators

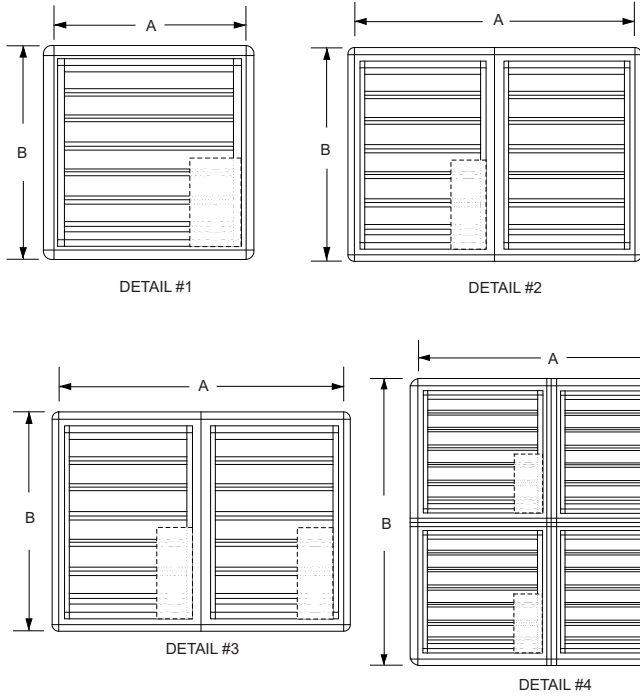
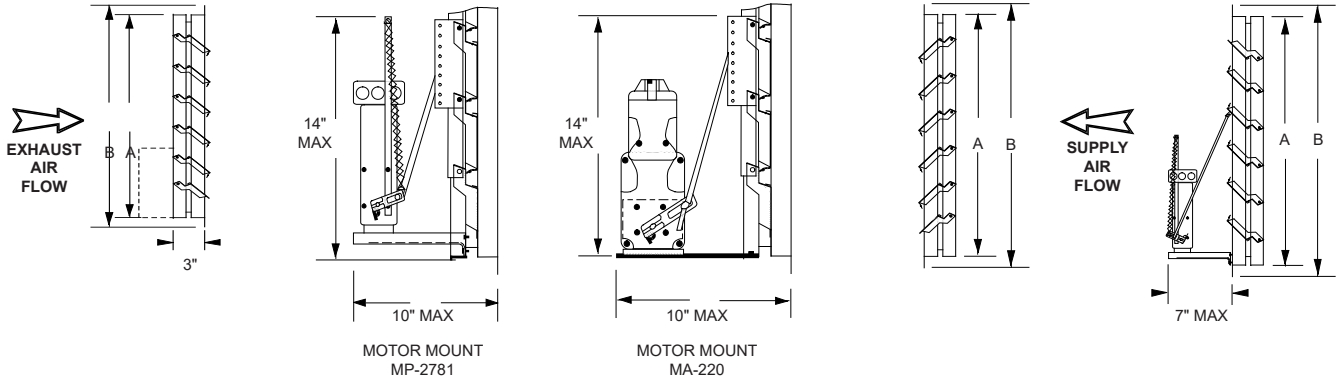
Electric damper operators provide more positive open and closed damper positions which helps increase weather resistance. Power open - spring close (POSC) motor and linkage kits are field installed (except for center pivot style) and are available in 24, 120/240, or 460 volts (single phase) and require approximately 0.5 amps at 120/1/60 power supply. Transformers are available for voltage reduction. For fan motors 5HP and larger, we recommend a factory tilt switch or "delay-on" timer in the control circuit (by others) to allow the damper to open prior to allowing fan operation, which will protect the damper blades and fan from damage when the fan is first energized.



ACCESSORIES & OPTIONS

FOR MOUNTING ARRANGEMENTS Cont.

Dimensions (Standard and Heavy-Duty Dampers)



Fan Size	A Sq. Size	B Sq. OD Flange	Panels (Detail)	Motor Type			
				Exhaust		Supply	
				Type	Qty	Type	Qty
20	20	22 1/2	1	MP-2781	1	MP-2781-S	1
24	26	28 1/2	1	MP-2781	1	MP-2781-S	1
30	32	34 1/2	1	MP-2781	1	MA-220-S	1
36	38	40 1/2	1	MA-220	1	MA-220-S	1
42	44	46 1/2	2	MA-220	1	MA-220-S	2
48	50	52 1/2	2	MA-220	1	MA-220-S	2
54	56	58 1/2	3	MA-220	2	MA-220-S	2
60	62	64 1/2	3	MA-220	2	MA-220-S	2
72	77	79 1/2	4	MA-220	4	MA-220-S	4

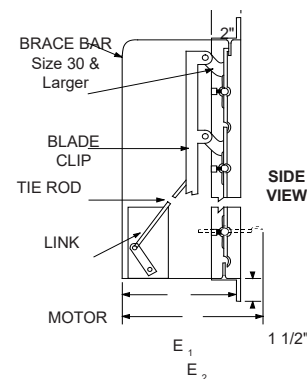
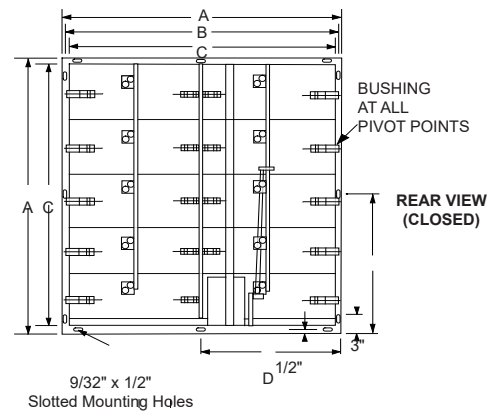
Heavy Duty Dampers required on all units with 7 1/2HP motors and above.

Dimensions (Center Pivot Motorized Damper)

Fan Size	Opening Required	A O.D.	B (1)	C "Size"	D (Center of Holes)	# of Panels	G	
							Closed (E-1)	Open (E-2)
24	27	29	24-1/2	26	-	1 x 1	7-1/4	8-1/2
30	33	35	30-1/2	32	-	1 x 1	10-1/4	13-3/4
36	39	41	36-1/2	38	19-1/2	1 x 1	10-1/4	13-3/4
42	45	47	42-1/2	44	22-1/2	1 x 1	10-1/4	13-3/4
48	51	53	48-1/2	50	25-1/2	2 x 1	10-1/4	13-3/4
54	57	59	54-1/2	56	28-1/2	2 x 1	10-1/4	12-3/4
60	63	65	60-1/2	62	31-1/2	2 x 1	10-1/4	12-3/4
72	77	79	76-1/2	76	39-1/2	2 x 1	10-1/4	12-3/4

Fan Size	Motor (2)		
	Power Supply	Max Amps	Stall Torque (in. lbs)
24-48	120-240V 60Hz	0.3/0.6	25
54-60	240V 60Hz	0.5	60

(1) Minimum opening to clear pins.
(2) Motor is 60 Hz, single phase continuous duty with 104°F (40°C), maximum ambient temperature





ACCESSORIES & OPTIONS

Electrical Accessories are available to simplify the installation and reduce the total project cost.

Disconnect Switches can be shipped loose or factory mounted and wired (except explosion proof and two speed) in NEMA 1, 3R, 4X, or other enclosures. Two-speed and explosion proof disconnects are available but may be subject to more stringent code requirements. It is the responsibility of the buyer and the installer to comply with all local and national codes.

Aluminum Construction is available for most models and typically includes propeller blades, fan panel, motor and drive support (large frame motors may have steel reinforcement) and accessories. When an explosion proof motor is specified, aluminum fan construction must be used for additional spark resistance.

cULus705 or UL705 Listing is available for sidewall propeller fans with most motors and should be specified for electrical safety and reliability.

Extended Lube Lines provide convenient access for routine bearing lubrication. Lubrication lines are installed from the fan shaft bearings to the exterior of the wall housing or sheet metal motorside guard and are provided with zerk fittings.

Paints and Coatings for protective and decorative purposes. Available coatings include: Epoxy, Synthetic Resin, and Heresite (air-dried phenolic). Contact your JencoFan representative or the factory for more information on available coatings and colors.

Mounting Angles facilitate the installation and a secure attachment of the wall housing or wall collar into the framed wall opening. Galvanized or aluminum angles are available and are pre-cut to the proper length. Additional bracing, mounting hardware, flashing and caulking are typically provided by the installer.

Factory Wiring can simplify jobsite installation and reduce the overall project cost. Optional services include wiring of motor, disconnect switch, damper actuator, and other custom controls. Please note that some wiring options may not be available in conjunction with the cULus705 and UL705 listing option (for example explosion proof, two speed and special motors).