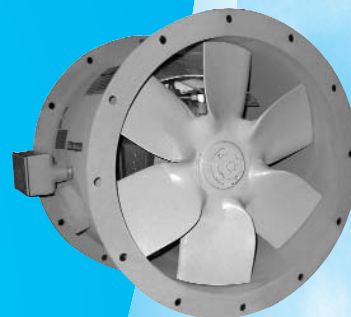


HRS

HARTZELL RAPID SHIP

FAN SOLUTIONS... FAST!



Fast Shipment of Stock, Modified Stock and Build to Order Fans

ABS Certificates of Design Assessment received on multiple products. See inside for applicable products.



Hartzell Fan, Inc.
www.hartzellfan.com
800.336.FANS (3267)

48 hours or less stock fans can also be purchased online at



CHOSEN FIRST, TO LAST

HRS—April 2010

Over 80 Years of Innovation, Quality, and Reliability

About Hartzell Fan, Inc.

Since 1927 when Hartzell first engineered the propeller fan, the Hartzell name has been synonymous with quality air moving equipment. Through the years, Hartzell has continually been recognized as having one of the broadest product and service lines in the air moving industry.

With production and stocking facilities in Piqua, Ohio, Portland, Indiana and Birmingham, Alabama, Hartzell serves customers worldwide via its Manufacturers Representative network. The Research and Development Center in Piqua is an accredited Air Movement and Control Association (AMCA) International Lab where all testing is done in accordance with AMCA standards.

Hartzell is the industrial ventilation expert producing high quality, efficient, and innovative ventilation solutions for a wide variety of industries and applications. Products include fans for general and process ventilation including a complete line of axial and centrifugal fans and blowers, an extensive fiberglass product line, a complete line of direct gas fired and steam fired make-up air and heating equipment, and a full range of options and accessories.



CHOSEN FIRST, TO LAST

Mission: Our mission is to provide engineered, high quality, and reliable industrial air moving equipment and services.

We are committed to:

- provide prompt and accurate responses to our internal and external customer's needs
- create a cohesive work environment for all employees in which safety and pride are key elements
- the design of innovative and functional products and services
- provide an acceptable return on shareholder equity





HARTZELL RAPID SHIP

FAN SOLUTIONS... FAST!

48 Hours or Less

In stock direct drive models ship in **48 hours** as catalogued:

- HartKool, Series HKA
- Panel Fans, Series 02S & 09S
- Upblast Roof Vents, Series 61-G
- Utility Duct Fan, Series 31U

In stock models ship in **48 hours** as catalogued if shipped broken down (loose). If assembly required ships in 5 days or less:

- Cool Blast & Utility Fans, Series 20, 22 & 23
- Adjustable Pitch Assemblies, Series 89, 90 and 90R

48 hours or less stock fans can also be purchased online at:



Express Build to Order

Most products can be built to order in **15 days** or less. Contact factory for availability.


Out of stock models may require ten days to replenish.

To ensure complete customer satisfaction, all fans and blowers in HRS are fully assembled, test run, and electronically balanced before shipment.

Prefab curbs will ship direct from supplier with their normal delivery schedule.

Stock program designed for limited on hand quantities. For quantities over five, contact factory.



How to Order

 For an HRS quotation or to place your HRS order, please call your local Hartzell representative.



48 hours or less stock fans can also be purchased online at www.FansInStock.com

  To find your local Hartzell representative, please visit our Website at www.hartzellfan.com or call us at **800.336.FANS (3267)**.

  Hartzell Fan will ship your HRS order and charge it to your credit card or your open, approved Hartzell Fan account. MasterCard and Visa are gladly accepted.

For models noted herein Certificates of Design Assessment are issued by the American Bureau of Shipping. The assessment is a representation by the Bureau as to the degree of compliance the design exhibits with applicable sections of the Rules. The certificates, by itself, do not reflect that the products are Type Approved.

5 Days or Less

In stock belt drive models ship in **5 days** or less as catalogued (with available accessories mounted or shipped loose but modification fee may apply):

- Hooded Roof Vent, Series 16I
- Upblast Roof Vent, Series 69
- Duct & Duct Axial Fans, Series 31 & 46
- Vaneaxial Fans, Series 54G
- Industrial Exhausters, Series 05
- Centrifugal Fans, Series 03P & 03U
- Marine Duty Duct Axial, Series 44M
- FRP Centrifugal Fans, Series 41P & 41U
- FRP Duct & Duct Axial Fans, Series 34 & 35
- FRP Upblast Exhausters, Series 87
- Heating Equipment, Series 78V & 79

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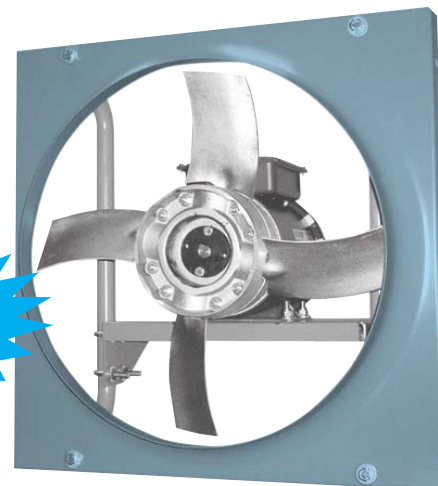
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48 Hours or Less
Order Online at FansInStock.com

Panel Fans

Standard Panel Fan (Direct Drive) – Series 02S

- In stock models ship in 48 hours or less (see page 3).
- 5 day shipment with non-standard angle on adjustable pitch propeller or if accessories required.
- Exclusive Air-Seal Ring design.
- Adjustable pitch propeller on 18" to 36" fans; one-piece, cast aluminum, airfoil-bladed propeller on 40" to 48" fans.
- Totally enclosed fan cooled motor.
- See page 25 for accessories available from stock.
- Stocked as "G" (General Industrial) Duty Construction.
- For complete Certified Ratings Data, see Bulletin A-109.



U.S. PATENT GRANTED ON PROP

Series 02S

ABS Certificate of Design Assessment Received



Hartzell Fan, Inc. certifies that the Series 02S, Direct Drive Panel Fan, Standard Flow size 40 and above, shown hereon is licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 and comply with the requirements of the Certified Ratings Program.

The AMCA certified ratings seal applies to air performance ratings only.

CE Hartzell Fan, Inc. certifies that Panel Fans, Series 02S, shown hereon, is authorized to bear CE Marking in accordance with Machinery Safety Directive 98/37/EC of the European Union. Reference Technical File E.S. 13.2.2.



Rating Table – Series 02S

Size	Model	Motor		Phase	Peak Fan BHP*	CFM @ 0" S.P.	Approx. dB _A @ 5'	Approx. Ship Wgt.
		HP	RPM					
18	S02SG-184AL350STFCF3	½	1725	3	0.50	4564	75	64
24	S02SG-243AL250STFCH3	1	1750	3	0.98	8021	77	97
28	S02SG-283AL265STFCH4	1	1160	3	1.01	10030	70	137
32	S02SG-323AL260STFCI4	1½	1160	3	1.50	14091	75	214
32	S02SG-323AL315STFCJ4	2	1160	3	1.99	15787	77	224
36	S02SG-363AL140STFCH4	1	1160	3	1.00	13053	76	188
36	S02SG-363AL200STFCJ4	2	1160	3	1.97	17610	76	218
36	S02SG-363AL265STFCK4	3	1160	3	2.97	20781	78	298
40	S02SG-402NA---STFCJ4	2	1155	3	2.20	22750	82	253
48	S02SG-482NB---STFCK4	3	1160	3	3.10	31426	82	328
48	S02SG-482NA---STFCL4	5	1155	3	5.40	35621	86	391
48	S02SG-482NA---STFCJ5	2	865	3	2.20	26709	79	336

- Performance certified is for Installation Type B: Free Inlet, Ducted Outlet.
- Speed (RPM) shown is nominal. Performance is based on actual speed of test.
- Performance ratings do not include the effects of appurtenances (accessories).
- *Peak BHP over entire catalogued performance range and occurs at higher static pressures.
- The dB_A values shown above are based on Hartzell laboratory tests and are not indicative of actual installation values.

Principal Dimensions – Series 02S and Series 09S (See drawing Page 5)

Size	A	B	C	D	SERIES 02 F MAX.	SERIES 09 F MAX.	G	L
18	18 ⁷ / ₈	22	2 ¹ / ₂	1 ³ / ₄	13 ³ / ₈	—	4 ¹ / ₄	16 GA.
24	24 ³ / ₁₆	28	3 ¹ / ₂	2	14 ³ / ₄	18 ¹ / ₂	5 ¹ / ₂	14 GA.
28	28 ³ / ₁₆	33	3 ¹ / ₂	2 ¹ / ₂	20 ¹ / ₂	19 ¹ / ₂	6	14 GA.
32	32 ³ / ₁₆	36	3 ¹ / ₂	2 ³ / ₄	20 ¹ / ₂	20 ¹ / ₂	6 ¹ / ₄	14 GA.
36	36 ³ / ₁₆	42	4	2 ³ / ₄	22 ¹ / ₂	21 ³ / ₄	6 ³ / ₄	14 GA.
40	40 ³ / ₁₆	46	4 ³ / ₈	2 ³ / ₄	22 ³ / ₄	23	7 ¹ / ₈	14 GA.
48	48 ³ / ₁₆	54	4 ³ / ₄	2 ³ / ₄	25 ¹ / ₂	23	7 ¹ / ₂	14 GA.

NOTE: Dimensions and specifications are subject to change. Certified prints are available.



Panel Fans

Low-Noise Panel Fan (Belted) – Series 09S

- 48 hours or less shipment for in stock models with stock motor and drives mounted and no accessories.
- 5 day shipment if accessories required.
- One-piece, cast aluminum, 3-bladed airfoil-type propeller.
- Provides full efficiency at slow speeds, low-noise characteristics.
- Belted arrangement; motor in airstream. Motors are totally enclosed fan cooled, 1750 RPM.
- See page 25 for accessories available from stock.
- Stocked as “G” (General Industrial) Duty Construction.
- For complete Certified Ratings Data, see Bulletin A-109.



Series 09S



Hartzell Fan, Inc. certifies that the Series 09S, Belted Panel Fan, Standard Flow, shown hereon is licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 and comply with the requirements of the Certified Ratings Program.

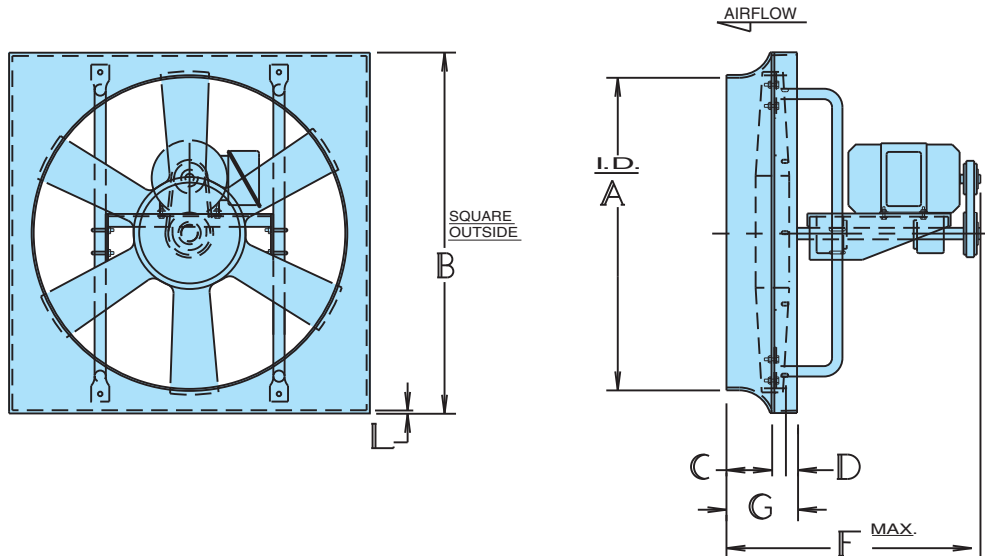
The AMCA certified ratings seal applies to air performance ratings only.



Rating Table – Series 09S

Size	Model	Motor		Phase	Peak Fan BHP*	Fan RPM	CFM @ 0" S.P.	Approx. dB _A @ 5'	Approx. Ship Wgt.
		HP	RPM						
36	S09SG-363-L---STFCI3	1½	1750	3	1.70	990	15838	76	235
36	S09SG-363-L---STFCJ3	2	1750	3	2.10	1060	16968	77	240
48	S09SG-483-L---STFCL3	5	1750	3	5.60	905	33873	82	415

- Performance certified is for Installation Type B: Free Inlet, Ducted Outlet.
- Power ratings (BHP) include transmission losses.
- Performance ratings do not include the effects of appurtenances (accessories).
- *Peak BHP over entire catalogued performance range and occurs at higher static pressures.
- The dB_A values shown above are based on Hartzell laboratory tests and are not indicative of actual installation values.



Refer to page 4 for Principal Dimensions chart.

48 Hours or Less
Order Online at FansInStock.com

Cool Blast and Utility Fans

Cool Blast Fans – Series 20

- In stock models ship in 48 hours or less (see page 3).
- Tilt-head type can be adjusted up or down.
- Provides spot ventilation and quick heat relief.
- Tip-proof base, rugged steel construction.
- Totally enclosed fan cooled motors.
- For complete information on Cool Blast Fans, see Bulletin A-120.



Stationary Series 20

**ABS Certificate
of Design Assessment
Received**



Utility Fans – Series 22 and 23

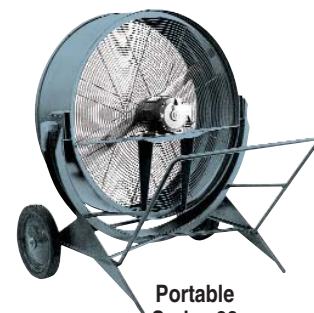
- In stock models ship in 48 hours or less (see page 3).
- Compact design; versatile; durable construction.
- Requires limited space.
- Tilt-head type can be adjusted up or down.
- Totally enclosed fan cooled motors.
- Series 22F has drilled flat base for wall, column or ceiling mounting.
- Series 22T comes with heavy-duty, stable, low center-of-gravity, tank head base.
- Series 23 features portable wheel base with handle.
- For complete information on Utility Fans, see Bulletin A-120.



Flat Base
Series 22F



Stationary
Series 22T



Portable
Series 23

Rating Table – Series 20, 22 and 23

Size	Model	Motor		Phase	CFM @ 0" S.P.	Approx. dBA @ 5'	Approx. Ship Wgt.
		HP	RPM				
28	S_---282NB---STFCG3	¾	1725	3	10032	86	311
36	S_---362NA---STFCH4	1	1160	3	16178	83	396
36	S_---363-L---STFCJ4	2	1160	3	18770	85	420

NOTE: The dBA values shown above are based on Hartzell laboratory tests and are not indicative of actual installation values.

Overall Dimensions – Series 20

Fan Size	Height	Width	Depth	Base Diameter	Ship Wgt. #
28	63½	41	18	24	330
36	67½	49	22 ⁵ / ₈	30	440

Overall Dimensions – Series 22T

Fan Size	Height	Width	Depth	Base Diameter	Ship Wgt. #
28	40½	39	21	24	301
36	49 ³ / ₄	47	23	30	396

Dimensions and specifications are subject to change.
Certified prints are available.



HartKool®

Cooling Fans – Series HKA

- In stock models and in stock accessories ship in 48 hours or less (see page 3).
- Polyethylene venturi orifice ring.
- Efficient cast aluminum, airfoil propeller.
- Front and rear, OSHA approved integral guarding.
- Durable, high quality finish.
- Quiet operation.
- The motor is totally enclosed air over, 115/230/60/1 voltage with 6' cord and grounded plug.
- Colors: 18" and 24" available in black; 32" and 36" available in yellow.
- For complete information on HartKool® fans, see Bulletin A-120.



Series HKA

Rating Table – Series HKA

Size	Model	Motor		Amps @ 115/60/1	CFM @ 0" S.P.	Approx. dBA @ 5'
		HP	RPM			
18	SHKAB-182NB---PLYAEC	1/8	1700	3.0	4236	71
24	SHKAB-242NB---PLYAFC	1/8	1700	7.0	8480	77
32	SHKAY-322NA---PLYAFD	1/2	1100	6.0	11187	71
36	SHKAY-362NC---PLYAFD	1/2	1100	6.0	13450	74

Principal Dimensions – Series HKA

Fan Size/Item	Length	Width	Depth	Ship Weight #
18	22 3/8"	22 3/8"	11 1/2"	58 lbs.
24	29"	29"	12 13/16"	66 lbs.
32	37"	37"	13 9/32"	86 lbs.
36	42 3/8"	42 3/8"	14 7/16"	100 lbs.
Mounting Hook - Small (18" & 24")	12"	2"	3"	2 lbs.
Mounting Hook - Large (32" & 36")	23"	2"	3"	3 lbs.
Wall/Ceiling Bracket	24"	1 1/2"	16"	12 lbs.
Wheeled Cart*	42"	24"	29"	45 lbs.
Low Pressure Mist Kit				1 lb.

*Ships unassembled

HartKool® Accessories



Wall/Ceiling Bracket

Permanently mount the HartKool® from posts, walls, and ceilings.



Low Pressure Mist Kit

For evaporative cooling. Female coupling attaches to tap or garden hose.

Corrosion resistant hose, stainless steel clamps, and ULV fog nozzles, with cup filters. Available for 18", 24", 32" and 36" fans.

Wheeled Cart

Makes the HartKool® a truly portable fan, ready to go where you need it most. Holds one fan (any size) or two 18" or 24" fans.



Hooded Roof Ventilator (Belted)



Series 16I

- In stock models ship in 48 hours or less if shipped broken down, 5 days or less if assembly required (see page 3).
- 5 day shipment if accessories required.
- Supply units are for intake flow. Contact factory for availability of exhaust flow units.
- Welded reinforced painted galvanized steel housings.
- Cast aluminum, airfoil type, 3-blade, low-noise propellers.
- Motors are totally enclosed fan cooled.
- Motor-operated damper and access door standard.
- Lifting eyes are standard.
- Birdscreens are standard.
- Filter rack is standard. Accommodates field or factory installation of filters.
- Pre-fab roof curb available, direct shipped from supplier. Galvanized construction, 8" high, for flat roof standard. See page 26.
- Stocked as "G" (General Industrial) Duty Construction.
- For complete information on Hooded Ventilators, see Bulletin A-157.

Rating Table – Series 16I

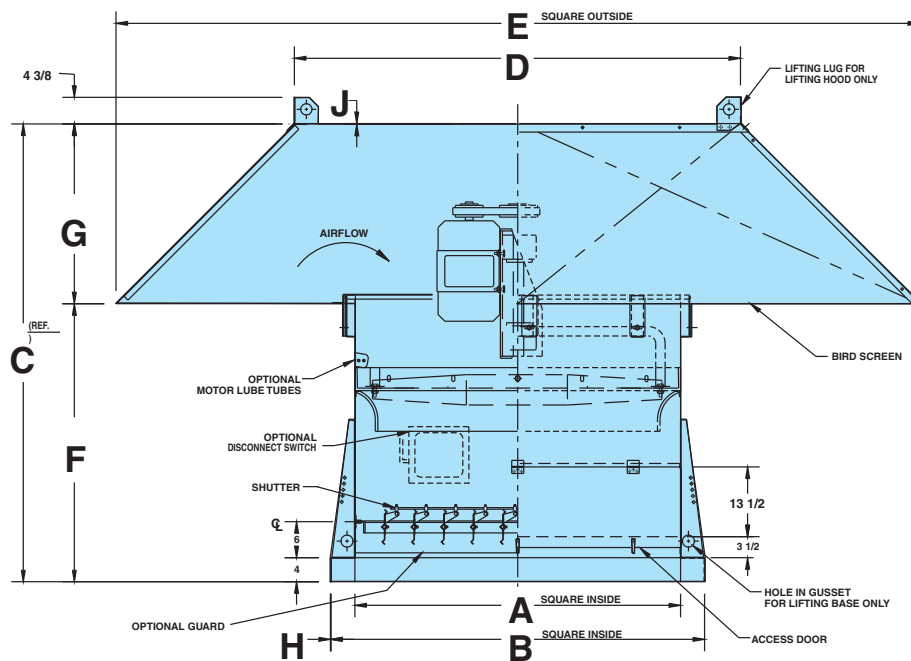
Size	Model	Motor		Phase	Peak Fan BHP*	Fan Rpm	CFM @ 0" S.P.	Approx. dBA @ 5'	Approx. Ship Wgt.
		HP	RPM						
36	S16IG-363-L---STFCJ3	2	1750	3	2.09	1050	16180	77	560
48	S16IG-483-L---STFCL3	5	1750	3	5.17	895	32260	82	1185

- *Peak BHP over entire catalogued performance range and occurs at higher static pressures.
- NOTE: CFM shown is net flow at the discharge and includes static pressure loss through ventilator. Static pressure for calculated resistance is external to the unit.
- The dBA values shown above are based on Hartzell laboratory tests and are not indicative of actual installation values.

Principal Dimensions – Series 16I

Fan Size	A	B	C	D	E	F	G	H	J
36	42 ¹ / ₄	50 ¹ / ₄	57 ⁷ / ₈	50 ⁵ / ₈	90	38 ⁷ / ₈	19 ³ / ₄	14 GA.	18 GA.
48	54 ¹ / ₄	62 ¹ / ₄	72 ¹ / ₂	67 ⁵ / ₈	120	46 ¹ / ₄	26 ¹ / ₄	14 GA.	18 GA.

NOTE: Dimensions and specifications are subject to change. Certified prints are available.



NOTE: 36" units have one-piece hood. 48" units have a two-piece hood and ship loose.



Upblast Roof Vent (Direct Drive)



Series 61-G

- In stock models ship in 48 hours or less (see page 3).
- 5 day shipment with non-standard angle on adjustable pitch propeller or if accessories required.
- Painted hot rolled steel fan frames. Painted galvanized steel windband and - panel. Galvanized damper lids.
- Adjustable pitch propeller on 18" to 36" fans; one-piece cast aluminum airfoil type 2-bladed propellers on 40" to 48" fans.
- Motors are totally enclosed fan cooled.
- Disconnect switch mounted and wired 460 volts.
- Pre-fab roof curb available. Galvanized construction, 8" high, for flat roof (direct ship with suppliers delivery schedule). See page 26.
- Stocked as "G" (General Industrial) Duty Construction.
- For complete information on Roof Vents, see Bulletin A-157.

ABS Certificate
of Design Assessment
Received

Rating Table – Series 61-G

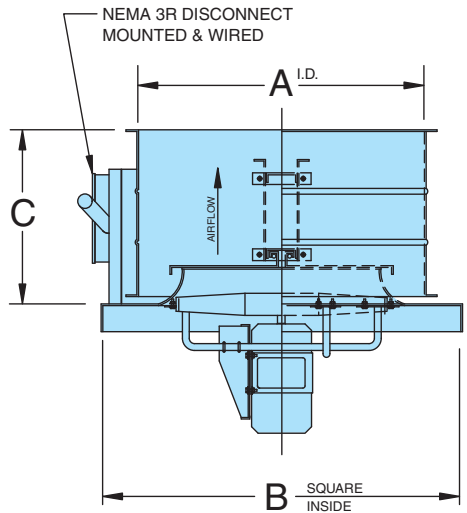
Size	Model	Motor		Phase	Peak Fan BHP*	CFM @ 0" S.P.	Approx. dBA @ 5'	Approx. Ship Wgt.
		HP	RPM					
18	S61-G-184AL350STFCF3	½	1725	3	0.50	3824	71	118
24	S61-G-243AL320STFCI3	1½	1750	3	1.46	8391	79	203
30	S61-G-304AL325STFCJ4	2	1160	3	1.99	11769	76	255
36	S61-G-363AL135STFCH4	1	1160	3	0.97	11062	78	299
36	S61-G-363AL200STFCJ4	2	1160	3	1.98	15956	76	316
36	S61-G-363AL265STFCK4	3	1160	3	2.96	18793	78	386
40	S61-G-402NA---STFCJ4	2	1160	3	2.25	20630	82	350
42	S61-G-422NA---STFCK4	3	1160	3	2.98	24440	85	425
44	S61-G-442NA---STFCK4	3	1160	3	3.50	27050	86	506
48	S61-G-482NA---STFCL4	5	1160	3	5.37	34350	85	648

Note: The dBA values shown above are based on Hartzell laboratory tests and are not indicative of actual installation values.

Principal Dimensions – Series 61-G

Fan Size	18	24	30	36	40	42	44	48
A	24	30	36	44	48	50	52	56
B	28	36	42	48	50	54	54	60
C	20¾	20¾	20¾	26¾	26¾	26¾	38¾	38¾

NOTE: Dimensions and specifications are subject to change. Certified prints are available.



Upblast Roof Vent (Belt Drive)



Series 69



Hartzell Fan, Inc. certifies that the Series 69, Belt Drive Upblast Roof Ventilator shown hereon is licensed to bear the AMCA Seal for air and sound. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 and Publication 311 and comply with the requirements of the AMCA Certified Ratings Program.

Sound performance data is available upon request. Please contact the factory and ask for Engineering Publication #SD-157.

- Built to order in 5 days or less with accessories.
- Exterior motor mounting arrangement places the motor and belts out of air stream, making the unit ideal for handling tempered air, smoke, dust and fumes.
- Fan is heavy gauge, painted hot rolled steel, bolted to painted galvanized panel. Stack cap and windband are painted galvanized steel. Galvanized damper lids.
- Cast aluminum, 6-blade, Type W, airfoil propeller.
- Motors are totally enclosed fan cooled. All motors are 1750 RPM.
- Lube tubes are standard with compatible relubricable motor.
- Weather cover, stack cap, and curb panel are standard.
- Units are shipped assembled and skid mounted.
- Fans outside noted RPM range are subject to mod fee.
- Pre-fab roof curb available, direct shipped from supplier. Galvanized construction, 8" high, for flat roof standard. See page 26.
- For complete information on Certified Ratings Data, see Bulletin A-157.

Rating Table – Series 69

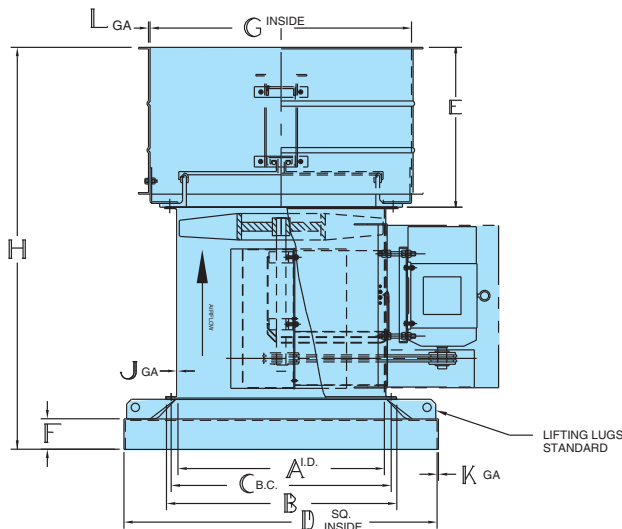
Size	Model	Motor		Phase	Peak Fan BHP*	Fan RPM Range	Fan RPM	CFM @ 0" S.P.	Approx. dB _A @ 5'	Approx. Ship. Wgt.
		HP	RPM							
24	S69--246WB--STFCH3	1	1750	3	1.10	1114 - 1511	1346	6955	80	385
24	S69--246WB--STFCI3	1½	1750	3	1.65	1346 - 1795	1540	7966	84	395
24	S69--246WB--STFCJ3	2	1750	3	2.20	1346 - 1795	1696	8795	86	410
30	S69--306-W--STFCI3	1½	1750	3	1.58	843 - 1167	975	10288	78	550
30	S69--306-W--STFCJ3	2	1750	3	2.11	843 - 1167	1075	11343	81	555
30	S69--306-W--STFCK3	3	1750	3	3.14	972 - 1296	1230	12979	84	565
36	S69--366-W--STFCK3	3	1750	3	2.36	942 - 1167	1040	19060	86	755
36	S69--366-W--STFCL3	5	1750	3	5.97	1077 - 1301	1195	21901	89	800
48	S69--486-W--STFCK3	3	1750	3	3.27	588 - 743	677	25680	84	1200
48	S69--486-W--STFCL3	5	1750	3	5.51	728 - 914	803	31045	90	1215

- Performance certified is for Installation Type A: Free Inlet, Free Outlet.
- Power ratings (BHP) include transmission losses.
- Performance ratings do not include the effects of appurtenances (accessories).
- *Peak BHP over entire catalogued performance range and occurs at higher static pressures.
- CFM shown is net flow at the inlet and includes static pressure loss through ventilator.
- The dB_A values shown above are based on Hartzell laboratory tests and are not indicative of actual installation values.

Principal Dimensions – Series 69

Fan Size	24	30	36	48
A	24 ⁷ / ₈	30 ⁷ / ₈	37	49 ¹ / ₈
B	29 ⁷ / ₈	35 ⁷ / ₈	41 ³ / ₈	53 ¹ / ₂
C	26 ⁷ / ₈	33	39	51 ⁵ / ₈
D	36	42	48	60
E	20 ¹ / ₂	20 ¹ / ₂	26 ¹ / ₂	38 ¹ / ₂
F	2 ³ / ₄	2 ³ / ₄	2 ³ / ₄	3 ³ / ₄
G	30	36	44	56
H	57 ¹³ / ₁₆	61 ⁵ / ₁₆	67 ⁵ / ₁₆	89 ¹ / ₈
J	10	10	10	10
K	14	14	14	14
L	20	20	20	16

NOTE: Dimensions and specifications are subject to change. Certified prints are available.



Duct Fan and Duct Axial® Fan (Belt Drive)

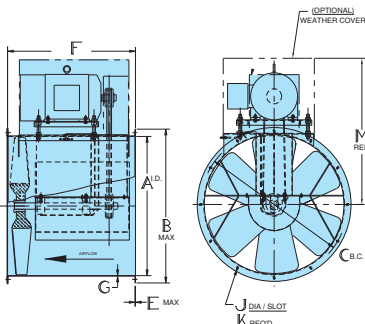


Series 31



Hartzell Fan, Inc. certifies that the Series 31, Belt Drive Duct Fan, shown hereon is licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 and comply with the requirements of the Certified Ratings Program.

The AMCA certified ratings seal applies to air performance ratings only.



- Shipment in 5 days or less with accessories.
- 6-blade "W" prop operates efficiently under pressure with low RPM and brake horsepower.
- Bearings are heavy-duty, pillow block, ball or roller type selected for minimum L-50 life of 500,000 hours for horizontal fans; and 300,000 hours for vertical fans, and include extended lubrication fittings.
- Shaft seal and slinger are standard.
- Motors are totally enclosed fan cooled and out of the airstream. All motors are 1750 RPM.
- Fans outside noted RPM range are subject to mod fee.
- See page 26 for accessories available from stock.
- For complete Certified Ratings Data, see Bulletin A-130.

Rating Table – Series 31

Size	Model	Motor		Phase	Peak Fan BHP*	Fan RPM Range	Fan RPM	CFM @ S.P.			Approx. dBA @ 5'	Approx. Ship Wgt.
		HP	RPM					0"	1/4"	1/2"		
24	S31---246WB---STFCH3	1	1750	3	1.12	1114 - 1511	1346	7550	6900	5925	81	235
24	S31---246WB---STFCJ3	1 1/2	1750	3	1.65	1346 - 1795	1540	8640	8100	7330	84	240
24	S31---246WB---STFCJ3	2	1750	3	2.20	1346 - 1795	1696	9525	9000	8375	88	246
30	S31---306-W---STFCJ3	1 1/2	1750	3	1.63	843 - 1167	975	11120	10105	8700	79	330
30	S31---306-W---STFCJ3	2	1750	3	2.19	843 - 1167	1075	12260	11345	10285	81	335
30	S31---306-W---STFCJ3	3	1750	3	3.28	972 - 1296	1230	14025	13235	12385	84	355
36	S31---366-W---STFCJ3	3	1750	3	3.60	942 - 1167	1040	19300	18100	16550	84	463
36	S31---366-W---STFCJ3	5	1750	3	5.55	1077 - 1301	1195	22200	21200	19850	86	481
48	S31---486-W---STFCJ3	3	1750	3	3.29	588 - 743	677	26430	23095	19865	84	830
48	S31---486-W---STFCJ3	5	1750	3	5.50	728 - 914	803	31350	28570	25735	88	845

- Performance certified is for Installation Type D: Ducted Inlet/Ducted Outlet.
- Power ratings (BHP) include transmission losses.
- Performance ratings do not include the effects of appurtenances (accessories).
- *Peak BHP over entire catalogued performance range and occurs at higher static pressures.
- The dBA values shown above are based on Hartzell laboratory tests and are not indicative of actual installation values.
- Drives are variable pitch. RPM shown is for listed performance and can be reduced approximately 15%.

Principal Dimensions – Series 31 and Series 46

Fan Size	A	Max. B	C	Max. E	F	Max. G	J	K	M	Max. Mtr. Frame
12	12 1/2	15 1/2	14 1/2	7 GA.	22	12 GA.	3/8	6	24 1/2	145T
16	16 1/2	19 1/2	18 1/2	7 GA.	25	12 GA.	3/8 x 3/8	6	30 1/2	182T
18	18 1/2	21 1/2	20 1/2	7 GA.	25	12 GA.	3/8 x 3/8	6	31 1/2	213T
24	24 1/2	29 1/2	26 1/2	7 GA.	31	10 GA.	3/8 x 3/8	6	39 1/2	215T
28	28 1/2	33 1/2	30 1/2	7 GA.	31	10 GA.	3/8 x 3/8	6	41 1/2	215T
30	30 1/2	34	33	7 GA.	34	10 GA.	3/8 x 3/8	6	43 1/2	215T
36	37	41 1/2	39	7 GA.	34	10 GA.	3/8 x 3/8	6	47 1/2	215T
48	49 1/2	53 1/2	51 1/2	3/8 GA.	42	10 GA.	3/8 x 3/8	12	60 1/2	215T

NOTE: Dimensions and specifications are subject to change. Certified prints are available.



Series 46 (DA Prop)



Hartzell Fan, Inc. certifies that the Series 46 Belt Drive Duct Axial® Fan, shown hereon is licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 and comply with the requirements of the AMCA Certified Ratings Program.

- Shipment in 5 days or less with accessories.
- One-piece, cast aluminum, 6-bladed, airfoil-type propeller provides maximum efficiency at medium static pressure ranges, with low speed and low noise characteristics.
- Bearings are heavy-duty, pillow block, ball or roller type selected for minimum L-50 life of 400,000 hours for horizontal fans; and 250,000 hours for vertical fans, and include extended lubrication fittings.
- Shaft seal and slinger are standard.
- Vane section available in all sizes as production unit.
- Motors are totally enclosed fan cooled and out of the airstream. All motors are 1750 RPM.
- Fans outside noted RPM range are subject to mod fee.
- See page 26 for accessories available from stock.
- For complete Certified Ratings Data, see Bulletin A-118.

Rating Table – Series 46

Size	Model	Motor		Phase	Peak Fan BHP*	Fan RPM Range	Fan RPM	CFM @ S.P.			Approx. dBA @ 5'	Approx. Ship Wgt.
		HP	RPM					0"	1/4"	1/2"		
12	S46---126DA---STFCH3	1	1750	3	1.18	2625-3354	3010	1405	1000	620	80	127
16	S46---166DA---STFCH3	1	1750	3	1.54	1750-2423	2300	3020	2670	1625	87	145
18	S46---186DA---STFCJ3	1 1/2	1750	3	1.45	1625-2550	2055	3500	2922	1424	86	199
18	S46---186DA---STFCJ3	2	1750	3	3.06	2250-2875	2470	4604	4302	3220	91	239
24	S46---246DA---STFCJ3	2	1750	3	2.20	1346-1795	1550	6320	5605	2825	84	335
24	S46---246DA---STFCJ3	3	1750	3	3.60	1615-2064	1865	8215	7750	6565	87	357
24	S46---246DA---STFCJ3	5	1750	3	4.70	1869-2347	2020	9100	8700	7730	91	382
28	S46---286DA---STFCJ3	5	1750	3	5.75	1432-1830	1615	11750	11100	9900	87	420
28	S46---286DA---STFCM3	7 1/2	1750	3	8.60	1750-2148	1890	14220	13700	12570	91	450
36	S46---366DA---STFCJ3	5	1750	3	6.45	991-1244	1155	16800	15550	12200	88	555
36	S46---366DA---STFCM3	7 1/2	1750	3	8.60	1096-1349	1260	18950	17900	15200	90	617
36	S46---366DA---STFCN3	10	1750	3	11.10	1192-1496	1365	21000	20050	17800	93	622

- Performance certified is for Installation Type D: Ducted Inlet/Ducted Outlet.
- Power ratings (BHP) include transmission losses.
- Performance ratings do not include the effects of appurtenances (accessories).
- *Peak BHP over entire catalogued performance range and occurs at higher static pressures.
- The dBA values shown above are based on Hartzell laboratory tests and are not indicative of actual installation values.
- Drives are variable pitch. RPM shown is for listed performance.

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Utility Duct Fan (Belt Drive)

Process Ventilation



Series 31U

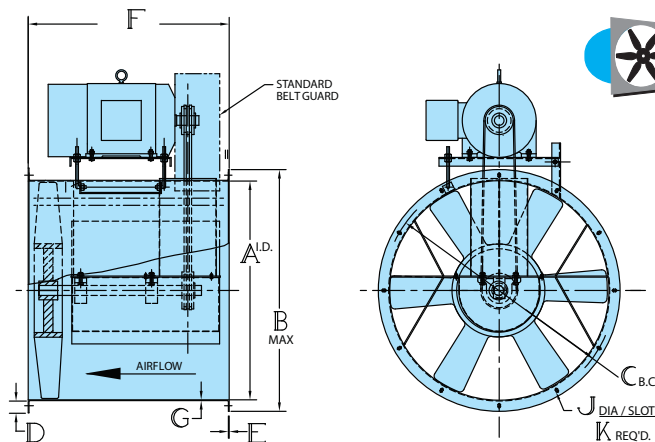
- In stock models ship in 48 hours or less (see page 3).
- 6-blade "W" prop operates efficiently under pressure with low RPM and brake horsepower.
- Bearings are heavy-duty, pillow block ball bearings selected for minimum L-50 life of 350,000 hours for horizontal fans, and 250,000 hours for vertical fans and include extended lubrication fittings.
- Motors are totally enclosed fan cooled and out of the airstream. All motors are 1750 RPM.
- Belt guard is standard. Stocked with variable pitch drives as standard.
- No accessories are available from stock and fans are available only at the noted RPMs.
- For complete Certified Ratings Data, see Bulletin A-130.

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of Design Assessment
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Rating Table – Series 31U

Size	Model	Motor		Peak BHP	Fan RPM	CFM vs. SP											Est. Ship Weight
		HP	RPM			Free Air	¼"	½"	¾"	1"	1 ½"	2"	3"	4"	5"	6"	
12	S31U-126-W---STFCF3	½	1750	0.50	2845	1830	1750	1655	1510	1260	865	740	605				84
16	S31U-166-W---STFCG3	¾	1750	0.75	2250	3180	3075	2955	2825	2660	2455	2045	1590	1335	1105		119
20	S31U-206-W---STFCH3	1	1750	1.10	1800	4925	4710	4520	4275	3960	3505	2675	2165	1690			169
34	S31U-346-W---STFCL3	5	1750	5.46	1275	19410	18915	18435	17,965	17490	17010	16520	15995	15345	14440	13290	360
42	S31U-426-W---STFCL3	5	1750	5.49	980	25645	24985	24345	23,670	22920	22055	21085	19940	18520	14630	11600	536

- Performance certified is for Installation Type D: Ducted Inlet/Ducted Outlet.
- Power ratings (BHP) include transmission losses.
- Performance ratings do not include the effects of appurtenances (accessories).
- *Peak BHP over entire catalogued performance range and occurs at higher static pressure.
- Drives are variable pitch. RPM shown is for listed performance and can be reduced by approximately 15%.



Principal Dimensions – Series 31U

Fan Size	A	B	C	D	E	F	G	H	J	Max. Mtr. Frame
12	12 ³ / ₈	15 ¹ / ₈	14 ¹ / ₈	1 ¹ / ₄	7 GA	18	12 GA	5 ⁵ / ₁₆ X 5 ⁵ / ₈	6	56
16	16 ³ / ₈	19 ¹ / ₈	18 ¹ / ₈	1 ¹ / ₄	7 GA	18	12 GA	5 ⁵ / ₁₆ X 5 ⁵ / ₈	6	56
20	20 ³ / ₈	23 ¹ / ₈	21 ⁷ / ₈	1 ¹ / ₄	7 GA	23	12 GA	5 ⁵ / ₁₆ X 5 ⁵ / ₈	6	143T
34	34 ³ / ₈	37 ¹¹ / ₁₆	36 ¹ / ₂	1 ¹ / ₂	¼	28	10 GA	7 ⁷ / ₁₆ X 3 ³ / ₄	6	184T
42	42 ³ / ₈	46 ³ / ₁₆	44 ¹ / ₂	2	¼	34	10 GA	7 ⁷ / ₁₆ X 3 ³ / ₄	12	184T



Vaneaxial Blower (Belt Drive), Type VA



Series 54-G

- Shipment in 5 days or less with accessories.
- Drives are fixed pitch based on using 1750 RPM motors. Certain speeds require 3600 RPM motors.
- Impellers are 7-bladed, airfoil design of cast aluminum construction. Large hub-to-blade ratio prevents back flow of air. Moves large volumes of air at high static pressures.
- Bearings are heavy-duty, ball or roller type selected for minimum L-50 life of 200,000 hours and include extended lubrication fittings.
- Housings are one-piece, heavy gauge hot rolled steel with internal discharge vanes welded in the blower housing.
- Extended lube tubes with compatible relubricable motor.
- Stocked as "G" (General Industrial) Duty Construction.
- Fans outside noted RPM range are subject to mod fee.
- See page 26 for accessories available from stock.
- For complete Certified Ratings Data, see Bulletin A-110.



Hartzell Fan, Inc. certifies that the Series 54, Belt Drive Vaneaxial, VA fan shown hereon is licensed to bear the AMCA Seal for air and sound. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 and Publication 311 and comply with the requirements of the AMCA Certified Ratings Program.

Sound performance data is available upon request. Please contact the factory and ask for Engineering Publication #SD-157.

Process Ventilation

Rating Table – Series 54, Type VA, G Duty

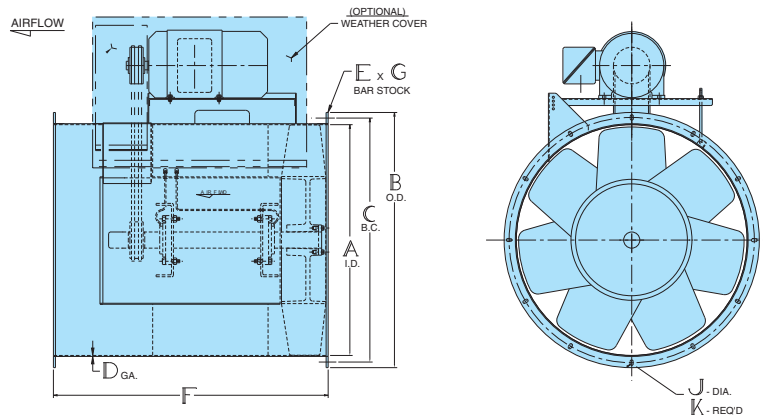
Size	Model	Max BHP	Max Motor Frame	Fan RPM Range	CFM @ S.P.					
					1"	2"	3"	4"	5"	6"
14	S54-G-147VA---STFC__	5	184T	1050-4600	1350-3800	1700-3450	2050-3100	2400-2750	—	—
18	S54-G-187VA---STFC__	10	215T	840-3650	2700-7600	3400-7600	4100-6900	4800-6200	5500-5500	—
21	S54-G-217VA---STFC__	15	254T	650-3120	3300-10500	4200-9600	5100-8700	6000-8700	6000-7800	—
26	S54-G-267VA---STFC__	15	254T	550-2520	5400-16600	6800-15200	9600-15200	9600-13800	11000-12400	—
29	S54-G-297VA---STFC__	25	284T	450-2250	6500-21700	8400-19800	10300-19800	12200-17900	14100-16000	14100-14100
36	S54-G-367VA---STFC__	30	286T	330-1810	9400-33400	12400-30400	15400-27400	18400-27400	21400-24400	21400-21400
42	S54-G-427VA---STFC__	50	326T	260-1550	12000-44000	20000-40000	20000-40000	24000-36000	28000-32000	28000-28000

- Performance certified is for belt drive fans, Installation Type D: Ducted Inlet/Ducted Outlet.
- Power ratings (BHP) include transmission losses.
- Performance ratings do not include the effects of appurtenances (accessories).

Principal Dimensions – Series 54, G Duty

Size	A	B	C	D	E	F	G	J	K	Max. Mtr. Frame	Ship. Wgt.
14	14	16 ³ / ₄	15 ¹ / ₂	12	1 ¹ / ₄	23	1 ¹ / ₄	5 ⁵ / ₁₆	6	184T	100
18	18	21 ¹ / ₄	19 ³ / ₄	12	1 ¹ / ₄	29	1 ¹ / ₂	7 ⁷ / ₁₆ X 13 ¹³ / ₁₆	12	215T	180
21	21	24 ¹ / ₄	22 ³ / ₄	12	1 ¹ / ₄	31	1 ¹ / ₂	7 ⁷ / ₁₆ X 13 ¹³ / ₁₆	12	256T	230
26	26	30 ⁵ / ₁₆	28	10	1 ¹ / ₄	32	2	7 ⁷ / ₁₆ X 13 ¹³ / ₁₆	12	256T	340
29	29	33 ⁵ / ₁₆	31	10	3 ³ / ₈	36	2	7 ⁷ / ₁₆ X 13 ¹³ / ₁₆	12	284T	460
36	36	40 ⁵ / ₁₆	38	10	3 ³ / ₈	42	2	9 ⁹ / ₁₆ X 13 ¹³ / ₁₆	16	286T	680
42	42	46 ⁵ / ₁₆	44 ³ / ₈	10	3 ³ / ₈	50	2	9 ⁹ / ₁₆ X 13 ¹³ / ₁₆	16	326T	900

NOTE: Dimensions and specifications are subject to change. Certified prints are available.



Backward Curved Centrifugal Fans, Packaged (Belt Drive)

Process Ventilation



Series 03P
Class II Construction



Hartzell Fan, Inc. certifies that the Backward Curved Centrifugal Fan, Packaged, Series 03P Class II Construction, shown herein, is licensed to bear the AMCA Seal for air and sound. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 and AMCA Publication 311 and comply with the requirements of the AMCA Certified Ratings Program.

Sound performance data is available upon request. Please contact the factory and ask for Engineering Publication #SD-147.

- 5 days or less shipment for in stock models with stock motor and available drives mounted, with standard rotation. Rotating of scroll, drain kit, or bolt-on access door available with mod fee.
- Clockwise rotation (CCW not available from stock) with top horizontal discharge standard. Rotatable in field. Stock fans cannot be rotated to BAD, TAD, and DB. Flanges interfere with base. Mod fee may apply.
- Class II construction. Housing of heavy gauge hot rolled steel.
- Wheels are non-overloading backward curved, with single thickness airfoil blades.
- Fans are stocked with shafts and bearings to accommodate maximum performance as shown.
- Weather cover, drilled inlet and outlet flanges (1-1/2" wide), and ceramic shaft seal to minimize leakage standard.
- Maximum temperature is 250°F.
- See page 27 for information about accessories available from stock.
- For complete information on Certified Ratings Data, see Bulletin A-147.

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Rating Table – Series 03P

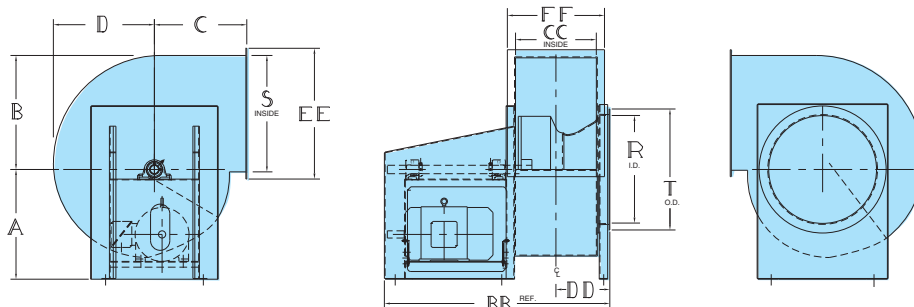
Size	Model	Max BHP	Max. Motor Frame	Fan RPM Range	CFM @ S.P.					Ship Wgt. Less Motor and Acc.
					2"	4"	6"	8"	10"	
12	S03P0-122BC100ST----	10	215T	1375-4400	775-3825	1050-3575	1300-3225	1475-2875	1650-2250	249
15	S03P0-152BC100ST----	10	215T	1075-3400	1225-6450	1775-5900	2200-5200	2475-4375	2750-3300	295
18	S03P0-182BC100ST----	15	254T	900-2800	1775-9125	2575-8325	2975-7550	3375-6550	3775-4750	403
22	S03P0-222BC100ST----	20	256T	725-2275	2675-13650	3850-12475	4450-11275	5050-9800	5650-7125	546
24	S03P0-242BC100ST----	20	256T	650-2050	3175-16175	4575-15125	5625-13000	6325-10900	7025-8075	631
27	S03P0-272BC100ST----	30	286T	575-1825	3975-20350	5750-19025	7075-16825	7975-14150	8850-10175	845
30	S03P0-302BC100ST----	40	324T	550-1675	4700-24000	6775-22450	8350-19825	9400-16700	10425-12000	1002
33	S03P0-332BC100ST----	40	324T	475-1500	5675-29050	8200-26525	10100-24000	11375-20200	12625-14525	1173

- Performance certified is for Installation Type D: Ducted Inlet/Ducted Outlet.
- Power ratings (BHP) do not include transmission losses.
- Performance ratings do not include the effects of appurtenances (accessories).

Principal Dimensions – Series 03P

Fan Size	A	B	C	D	R	S	T	BB	CC	DD	EE	FF
12	17	13 ⁵ / ₁₆	14 ¹ / ₄	11 ³ / ₄	12 ¹¹ / ₁₆	13 ⁵ / ₃₂	16 ⁵ / ₁₆	40 ³ / ₄	9 ¹ / ₂	11 ¹ / ₈	16 ⁷ / ₁₆	12 ¹³ / ₁₆
15	17	16 ¹¹ / ₁₆	16 ⁹ / ₁₆	14 ³ / ₄	15 ¹⁵ / ₁₆	16 ¹ / ₂	19 ³ / ₁₆	43 ¹ / ₈	11 ¹⁵ / ₁₆	12 ⁵ / ₈	19 ³ / ₁₆	15 ¹ / ₄
18	20	20	18 ⁷ / ₈	17 ¹¹ / ₁₆	19 ³ / ₁₆	19 ¹ / ₈	23 ¹ / ₂	50 ¹ / ₄	14 ⁴ / ₈	13 ³ / ₁₆	23 ³ / ₁₆	17 ¹¹ / ₁₆
22	24 ³ / ₄	24 ⁷ / ₁₆	22	21 ⁵ / ₈	23 ¹⁹ / ₃₂	24 ⁹ / ₃₂	27 ³ / ₁₆	53 ⁷ / ₁₆	17 ⁹ / ₁₆	15 ⁵ / ₃₂	27 ⁷ / ₈	20 ⁷ / ₈
24	27	26 ⁵ / ₈	23 ⁹ / ₁₆	23 ¹ / ₂	25 ¹⁷ / ₃₂	26 ⁷ / ₁₆	29 ¹ / ₈	55	19 ¹ / ₈	16	29 ³ / ₄	22 ⁷ / ₁₆
27	28 ¹ / ₂	29 ¹³ / ₁₆	25 ³ / ₄	26 ³ / ₈	28 ²¹ / ₃₂	29 ¹¹ / ₁₆	32	61 ¹³ / ₁₆	21 ⁷ / ₁₆	17 ⁷ / ₁₆	32 ¹⁵ / ₁₆	24 ³ / ₄
30	30 ¹ / ₂	32 ⁵ / ₈	27 ¹ / ₂	28 ⁹ / ₁₆	31 ³ / ₃₂	32 ⁷ / ₃₂	35 ¹ / ₁₆	67 ⁷ / ₁₆	23 ³ / ₁₆	18 ¹ / ₈	35 ¹ / ₂	26 ⁵ / ₈
33	37	35 ⁹ / ₁₆	30	31 ¹ / ₁₆	34 ¹ / ₃₂	35 ¹ / ₁₆	39 ⁹ / ₁₆	69 ⁷ / ₁₆	25 ⁵ / ₈	19 ⁹ / ₁₆	38 ¹³ / ₁₆	29 ¹ / ₁₆

NOTE: Dimensions and specifications are subject to change. Certified prints available.



Backward Curved Utility Set



**Series 03U
Utility Set**

- 5 days or less shipment for in stock models with stock motor and available drives mounted, with standard rotation. Rotating of scroll, drain kit, or bolt-on access door available with mod fee.
- Clockwise rotation (CCW not available from stock) with top horizontal discharge standard. Rotatable in field. Stock fans cannot be rotated to BAD, TAD, and DB. Flanges interfere with base. Mod fee may apply.
- Continuously welded, painted hot rolled steel scrolls with aluminum shaft rubbing plate. AMCA Type "B" non-sparking construction is standard.
- Wheels are welded aluminum, non-overloading backward curved, with single thickness air-foil blades.
- Weather cover is standard.
- Maximum temperature is 200° F.
- See page 27 for information about accessories available from stock.
- For complete information on Certified Ratings Data, see Bulletin A-147.



Hartzell Fan, Inc. certifies that the Backward Curved Utility Set, Single Width Series 03U, shown hereon, is licensed to bear the AMCA Seal for air and sound. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 and AMCA Publication 311 and comply with the requirements of the AMCA Certified Ratings Program.

Sound performance data is available upon request. Please contact the factory and ask for Engineering Publication #SD-03U.

Rating Table – Series 03U

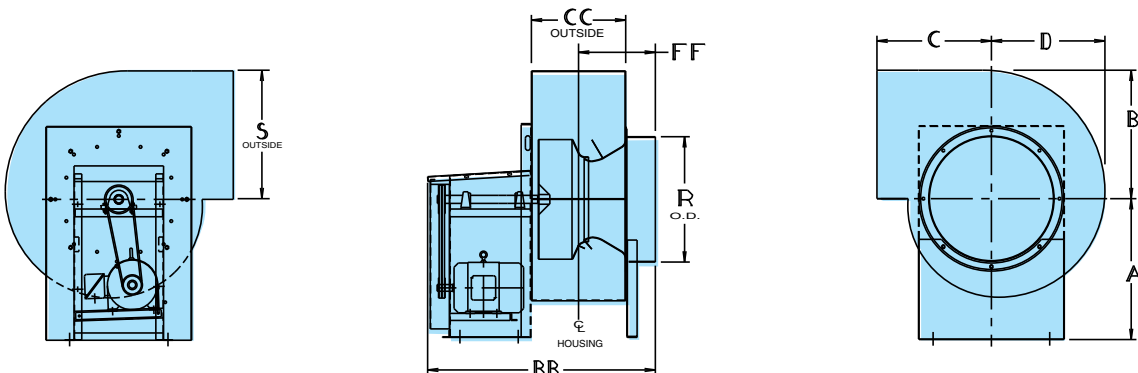
Size	Model	Max BHP	Max. Motor Frame	Fan RPM Range	CFM @ S.P.					Ship Wgt. Less Motor and Acc.
					1/2"	1"	2"	3"	4"	
10	S03U0-10-BU100BN----	1 1/2	145T	1375-3500	520-1755	515-1690	520-1495	520-1300	585-1105	137
12	S03U0-12-BU100BN----	2	145T	1100-2835	700-2440	700-2440	780-2175	960-1910	1045-1475	147
15	S03U0-15-BU100BN----	3	182T	900-2265	1095-3700	1095-3700	1235-3560	1510-3014	1780-2465	194
18	S03U0-18-BU100BN----	5	184T	800-1885	1590-5950	1590-5950	1785-5550	2180-4960	2580-3970	256

- Performance certified is for Installation Type D: Ducted Inlet/Ducted Outlet.
- Power ratings (BHP) do not include transmission losses.
- Performance ratings do not include the effects of appurtenances (accessories).
- * For motor frame sizes larger than listed, contact factory.

Principal Dimensions – Series 03U

Fan Size	A	B	C	D	R	S	BB	CC	FF
10	18 7/16	11 3/8	12 1/4	10 1/16	11 1/16	11 3/8	35 1/8	8 7/16	10 1/4
12	18 7/16	13 1/4	14 1/4	11 23/32	12 13/16	13 1/4	36 1/2	9 1/16	10 15/16
15	23	16 19/32	16 9/16	14 11/16	16 1/16	16 5/8	38 19/16	12 1/8	12 29/16
18	23	20	18 7/8	17 11/16	19 3/8	20 1/16	41 9/8	14 1/2	13 3/8

NOTE: Dimensions and specifications are subject to change.



Industrial Exhauster (Belt Drive)



Hartzell Fan, Inc. certifies that all sizes and all wheel designs of the Series 05- Industrial Exhausters shown herein, are licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 and comply with the requirements of the Certified Ratings Program.



Series 05- Arrangement 9
(Shown with Accessories)

- 5 days or less shipment for in stock models with stock motors, available drives and accessories. Specify wheel type and discharge. Mounted accessories include guards, weather cover, drain kit, and bolt-on access door. Mod fee may apply.
- Available in Arrg. 9 only.
- Designed to meet general industrial air-moving and pneumatic conveying requirements. Constructed of heavy gauge hot rolled steel.
- Drilled inlet and outlet flanges furnished as standard. Flanges 1½" wide.
- Air type AH wheel or open type MH wheel.
- Ceramic shaft seal is standard to minimize leakage.
- Stocked with shafts and bearings to accommodate maximum performance as shown.
- Clockwise rotation (CCW not available from stock). Rotatable in field. Downblast not available.
- Maximum temperature is 250°F.
- See page 27 for information about accessories available from stock.
- For complete information on Certified Ratings Data, see Bulletin A-155.

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Air Wheel – Type AH

Backward inclined flat blades continuously welded to back plate and flat ring. Standard hub is straight bore with set screws. Ideal for handling air and gases at high pressure.



Open Wheel – Type MH

Non-clogging radial blades welded to heavy gauge back plate. Standard hub is straight bore with set screws. Sturdy wheel designed for resistance to the impact of dense or stringy material; tends to prevent material buildup.

Rating Table – AH Wheel

Size	Max. Model	Arr.9 Fan Mtr. Frame	RPM Range	CFM @ S.P.			
				4"	8"	12"	16"
12	S05-9-122AH100ST----	184T	2205-5035	235-1800	335-1800	410-1800	470-1600
15	S05-9-152AH100ST----	215T	1725-3945	385-3000	545-3000	665-3000	770-2600
19	S05-9-192AH100ST----	256T	1380-3215	640-4400	905-4400	1110-4400	1280-4300
22	S05-9-222AH100ST----	256T	1215-2725	985-6150	1400-6150	1710-6150	1975-5900

- Performance certified is for Installation Type D: Ducted Inlet/Ducted Outlet.
- Power ratings (BHP) do not include transmission losses.
- Performance ratings do not include the effects of appurtenances (accessories).

Rating Table – MH Wheel

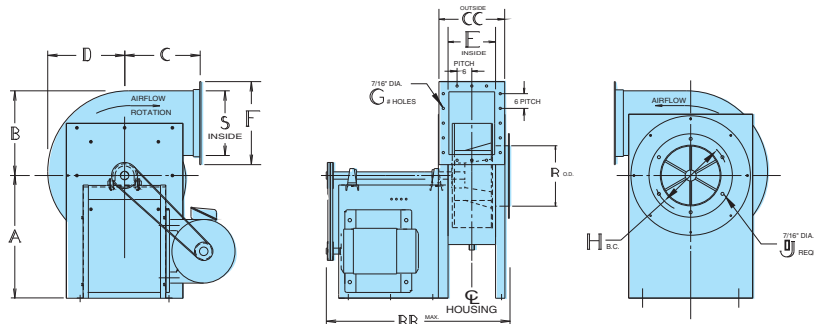
Size	Max. Model	Arr.9 Fan Mtr. Frame	RPM Range	CFM @ S.P.			
				4"	8"	12"	16"
12	S05-9-122MH100ST----	184T	2235-5035	230-1800	330-1800	400-1800	460-1480
15	S05-9-152MH100ST----	215T	1755-3945	380-3000	540-3000	660-3000	760-2400
19	S05-9-192MH100ST----	256T	1390-3215	590-4400	800-4400	980-4400	1130-4200
22	S05-9-222MH100ST----	256T	1190-2725	800-6150	1120-6150	1370-6150	1590-5800

- Performance certified is for Installation Type D: Ducted Inlet/Ducted Outlet.
- Power ratings (BHP) do not include transmission losses.
- Performance ratings do not include the effects of appurtenances (accessories).

Principal Dimensions – Series 05-

Fan Size	A	B	C	D	E	F	G	H	J	R	S	BB	CC
12	18½	11½	14¼	10%	5⅝	10	8	8¾	6	7	6¾	30¾	9¾
15	21½	14¾	16%	13¾	7⅞	11¾	8	10¾	6	9	8⅞	35¾	10⅞
19	24¾	18¾	18%	16¾	9½	13¾	10	12¾	6	11	10½	42⅞	12⅞
22	30	21¾	22	19¾	10%	15¾	10	14¾	6	13	12¾	45%	14¾

NOTE: Dimensions and specifications are subject to change. Certified prints are available.



Note: Inlet support are not standard for sizes 12 and 15 except when vibration isolators are specified.



Process Ventilation

Fiberglass Duct Fan/ Duct Axial® Fan (Belt Drive)

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Series 34

- 5 days or less shipment on in stock models and in stock accessories (see page 3).
- Excellent in corrosive atmospheres – temperatures up to 200°F.
- Weighs 25% less than comparable carbon steel equipment.
- Six-bladed fiberglass airfoil-type propeller provides maximum efficiency at medium pressure ranges with low speeds and low noise characteristics.
- Separate vane section available for added efficiency in higher static pressure ranges on production units. **Note: HartKoate, Hi-Cor, and electrical grounding not available on stock units.**
- Motors are totally enclosed fan cooled. All motors are 1750 RPM.
- Fans outside noted RPM range are subject to mod fee.
- See page 26 for accessories available from stock.
- For complete information on Certified Ratings Data, see Bulletin A-139.

Rating Table – Series 34

Size	Model	Motor			Peak Fan BHP*	Fan RPM Range	Fan RPM	CFM @ S.P.			Approx. dBA @ 5'	Approx. Ship Wgt.
		HP	RPM	Phase				0"	1/4"	1/2"		
12	S34---126FW---FGFCF3	3/4	1750	3	0.52	2218 - 2834	2538	1745	1540	950	84	110
16	S34---166FW---FGFCG3	1	1750	3	0.75	1990 - 2654	2278	3630	3310	2780	87	115
18	S34---186FW---FGFCG3	1 1/4	1750	3	0.69	1346 - 2019	1764	4190	3750	2775	80	125
24	S34---246FW---FGFCJ3	2	1750	3	2.00	1346 - 1795	1625	8650	8050	7280	86	200
28	S34---286FW---FGFCJ3	3	1750	3	3.00	1114 - 1434	1434	12550	11850	11050	83	270
36	S34---366FW---FGFCL3	5	1750	3	5.00	1085 - 1331	1149	21300	20150	18700	88	425



Hartzell Fan, Inc. certifies that the Series 34 Fiberglass Belt Drive Duct Fan and Series 35 Fiberglass Belt Drive Duct Axial® Fan, shown hereon are licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 and comply with the requirements of the Certified Ratings Program.

The AMCA certified ratings seal applies to air performance ratings only.



Series 35

Rating Table – Series 35

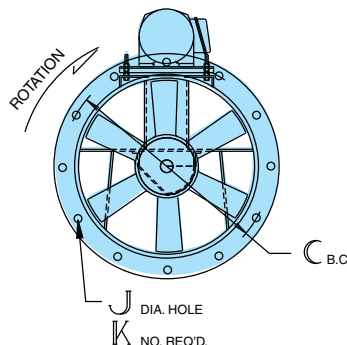
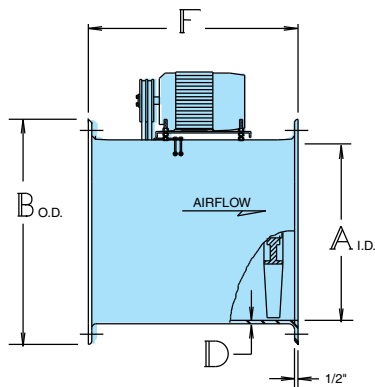
Size	Model	Motor			Peak Fan BHP*	Fan RPM Range	Fan RPM	CFM @ S.P.			Approx. dBA @ 5'	Approx. Ship Wgt.
		HP	RPM	Phase				3/4"	1"	1 1/2"		
12	S35---126-E---FGFCH3	1	1750	3	1.18	2625 - 3250	3010	1405	1000	620	80	92
16	S35---166-E---FGFCH3	1	1750	3	1.46	1750 - 2423	2300	2820	2050	1310	87	102
18	S35---186-E---FGFCJ3	2	1750	3	3.06	2333 - 2981	2470	4604	4302	3220	91	169
18	S35---186-E---FGFCJ3	3	1750	3	3.87	2333 - 2981	2680	5124	4854	4230	93	190
24	S35---246-E---FGFCK3	3	1750	3	3.83	1615 - 2064	1865	8490	7995	6250	87	243
24	S35---246-E---FGFCL3	5	1750	3	4.95	1869 - 2347	2020	9410	9000	7800	91	268
28	S35---286-E---FGFCL3	5	1750	3	5.35	1432 - 1830	1620	11750	11100	9300	87	288
28	S35---286-E---FGFCM3	7 1/2	1750	3	8.60	1750 - 2148	1890	14220	13700	12570	91	320
36	S35---366-E---FGFCM3	7 1/2	1750	3	8.60	1158 - 1454	1260	18950	17900	15200	90	486
36	S35---366-E---FGFCN3	10	1750	3	13.80	1282 - 1577	1475	23100	22300	20450	95	514

- Performance certified is for Installation Type D: Ducted Inlet/Ducted Outlet.
- Power ratings (BHP) include transmission losses.
- Performance ratings do not include the effects of appurtenances (accessories).
- *Peak BHP over entire catalogued performance range and occurs at higher static pressures.
- The dBA values shown above are based on Hartzell laboratory tests and are not indicative of actual installation values.
- Drives are variable pitch.

Principal Dimensions – Series 34 and 35

Nominal Size	12	16	18	24	28	36
A	12 ^{7/8}	16 ^{7/8}	18 ^{7/8}	24 ^{7/8}	28 ^{7/8}	37
B	16 ^{1/4}	20	22 ^{1/8}	28 ^{1/2}	32 ^{3/8}	40 ^{5/8}
C	14 ^{1/2}	18 ^{1/2}	20 ^{1/2}	26 ^{5/8}	30 ^{5/8}	38 ^{7/8}
D	3 ^{1/16}	3 ^{1/16}	1/4	1/4	1/4	1/4
F	20	21	22	25	25	28
J	5 ^{5/16}	5 ^{5/16}	5 ^{5/16}	7 ^{1/16}	7 ^{1/16}	7 ^{1/16}
K	6	6	6	6	6	6

NOTE: Dimensions and specifications are subject to change. Certified prints are available.



Fiberglass Exhausters

- In stock models ship in 5 days or less (see page 3).
- The dome ventilators consist of a fiberglass housing, fiberglass curb cap, and fiberglass weather cover all constructed of Ashland 693 resin. The solid fiberglass wheel is molded with Dow Derakane 510-A corrosion resistant vinylester resin. Unit has a formed fiberglass venturi inlet and outlet. All airstream hardware is 304 SS.
- Wheel is FE, the FA wheel slightly modified to improve performance in an exhauster application. The manufactured wheel is a single piece and removed from the pattern whole. This ensures that each wheel is aerodynamically identical and provides reliable, repeatable performance without the variability of hand made and taped components. It is highly efficient with tapered inlet side and airfoil blades.
- Maximum temperature is 125°F.
- Direct drive motors standard with extended shaft. Motor is protected from the airstream.
- See page 27 for accessories available from stock. **Note: HartKoate, Hi-Cor, and electrical grounding not available on stock units.**
- For complete information on all our fiberglass exhausters, see Bulletin A-161.



Series 87

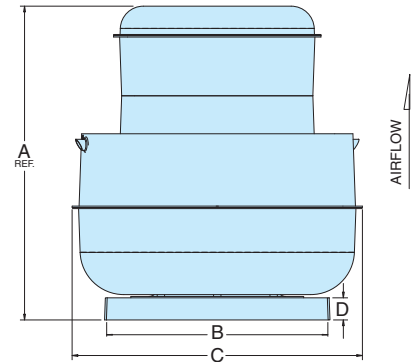
Rating Table – Series 87

Size	Model Code	Motor		Peak Fan BHP	Cubic Feet Per Minute vs. Static Pressure									Outlet Area Sq. Ft.	Wheel Dia. Inches
		HP	RPM		0"	1/8"	1/4"	3/8"	1/2"	5/8"	3/4"	1"	1 1/4"		
12	S87-4-121FE100FGXCD4	1/4	1160	0.09	972	885	798	714	614					1.603	12.250
15	S87-4-151FE100FGXCE4	1/2	1160	0.27	2017	1911	1803	1694	1587	1482	1372			2.100	15.375
18	S87-4-181FE100FGXCG4	3/4	1160	0.67	3668	3518	3375	3240	3111	2983	2852	2567	2181	3.230	18.500

- Performance shown is for installation Type A: free inlet/free outlet.
- Performance ratings do not include the effects of appurtenances (accessories).
- Performance data is based on standard air conditions (0.075 lb/cu. ft.).

Principal Dimensions – Series 87

Fan Size	A (Ref)	B	C	D	Frame Size		Estimated Ship Weight
					MIN	MAX	
12	32 1/2	20	30	2	143T	182T	100 lb.
15	32 1/2	24	34 3/4	2	143T	143T	145 lb.
18	42 5/8	30	39 3/4	3	143T	143T	205 lb.



Corrosion Resistant



Fiberglass Backward Curved Centrifugal Fan, Packaged (Belt Drive)



Series 41P
Class II Construction
(shown with optional inlet flange)

ABS Certificate of Design Assessment Received



Hartzell Fan, Inc. certifies that the Fiberglass Backward Curved Centrifugal Fan, Packaged, Series 41P, shown hereon is licensed to bear the AMCA Seal. The ratings are based on tests and procedures performed in accordance with AMCA Publication 211 and comply with the requirements of the AMCA Certified Ratings Program.

Sound performance data is available upon request. Please contact the factory and ask for Engineering Publication #SD-160.



Fiberglass Backward Curved Wheel Type
FA Wheel 100% Width

- 5 days or less shipment for in-stock models with stock motor and drives mounted. Rotation of scroll or mounted drain kit subject to mod fee.
- Clockwise rotation (CCW not available from stock) with top horizontal discharge standard. Rotatable scroll. Stock fans cannot be rotated to BAD, TAD and DB. Flanges interfere with base. Mod fee may apply.
- Class II construction.
- Offers non-overloading efficiency and economy in corrosive atmospheres up to 10" W.G. Temperatures to 250°F.
- Wheel is one-piece airfoil type, constructed with vinylester resin. Housing constructed of special corrosive resistant polyester resin plus flame retardant additives, reducing the flame spread rate below 25. Base is hot rolled steel, epoxy coated.
- Internal hardware is 304 stainless steel encapsulated with fiberglass. Shaft is 304 stainless steel.
- Flanged outlet is standard, inlet flange shown is optional.
- Weather cover is standard.
- See page 27 for accessories available from stock. **Note: HartKoate, Hi-Cor, and electrical grounding not available on stock units.**
- For complete information on Certified Ratings Data, see Bulletin A-160.

Corrosion Resistant

Rating Table – Series 41P

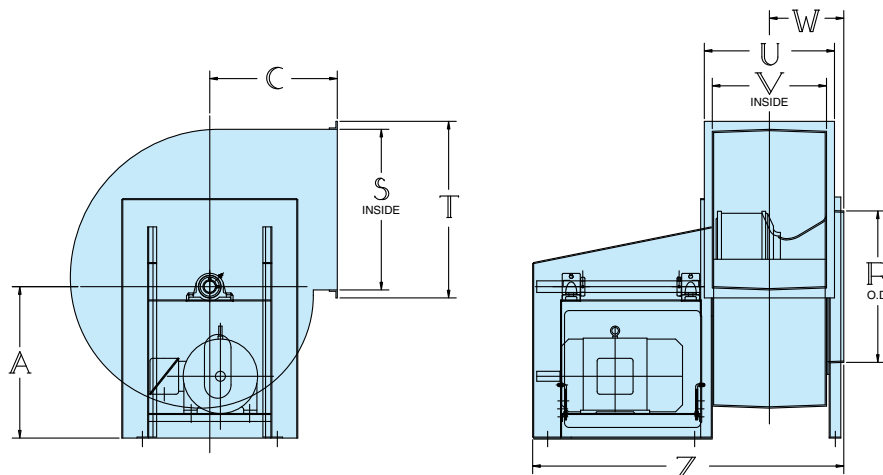
Size	Model	Max BHP	Max. Motor Frame	Fan RPM Range	CFM @ S.P.					Ship Wgt. Less Motor and Acc.
					2"	4"	6"	8"	10"	
12	S41P0-122FA100FG----	10	215T	1475-4400	800-3400	1100-3000	1300-2700	1500-2300	1600-1800	188
15	S41P0-152FA100FG----	10	215T	1175-3600	1150-5625	1600-5025	1900-4450	2200-3850	2500-3100	215
18	S41P0-182FA100FG----	15	254T	1010-2993	1800-8025	2400-7225	2800-6425	3200-5625	3600-4625	309

- Performance certified is for Installation Type D: Ducted Inlet/Ducted Outlet.
- Power ratings (BHP) do not include transmission losses.

Principal Dimensions – Series 41P

Fan Size	A	C	R	S	T	U	V	W	Z
12	17	13	12 ¹ / ₄	12 ⁷ / ₈	18 ¹ / ₈	14 ³ / ₈	9 ⁹ / ₁₆	8 ¹ / ₈	37 ⁵ / ₈
15	17	16 ⁷ / ₁₆	16 ⁷ / ₈	16 ⁷ / ₈	21 ¹ / ₁₆	16 ⁵ / ₈	11 ¹¹ / ₁₆	9 ⁹ / ₁₆	40 ¹ / ₈
18	20	19	19 ⁷ / ₈	19 ⁷ / ₈	24 ¹ / ₂	19 ¹ / ₁₆	14	10 ⁹ / ₁₆	47 ¹ / ₁₆

NOTE: Dimensions and specifications are subject to change. Certified prints are available.



Fiberglass Backward Curved Centrifugal Utility Fan



**Series 41U
FRP Utility Fan**

- 5 days or less shipment for mounted stock motor and drives. Rotation of scroll and addition of drain kit subject to mod fee.
- Clockwise rotation (CCW not available from stock) with top horizontal discharge standard. Rotatable in field. Stock fans cannot be rotated to BAD, TAD, and DB. Flanges interfere with base. Mod fee may apply.
- Temperatures to 200°F.
- Wheel is one-piece airfoil type, constructed with vinylester resin. Housing constructed of special corrosive resistant polyester resin plus flame retardant additives, reducing the flame spread rate below 25. Base is hot rolled steel, epoxy coated.
- Shaft is carbon steel enclosed in a fiberglass sleeve.
- Internal hardware is 304 SS encapsulated with fiberglass.
- Weather cover is standard.
- See page 27 for accessories available from stock. **Note: HartKoate, Hi-Cor, and electrical grounding not available on stock units.**
- For complete information on Certified Ratings Data, see Bulletin A-410.

Corrosion Resistant



Hartzell Fan, Inc. certifies that the Fiberglass Backward Curved Centrifugal Utility Fan, Series 41U, shown hereon, is licensed to bear the AMCA seal for air and sound. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 and AMCA Publication 311 and comply with the requirements of the AMCA Certified Ratings Program.

Sound performance data is available upon request. Please contact the factory and ask for Engineering Publication #SD-160.

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Rating Table – Series 41U

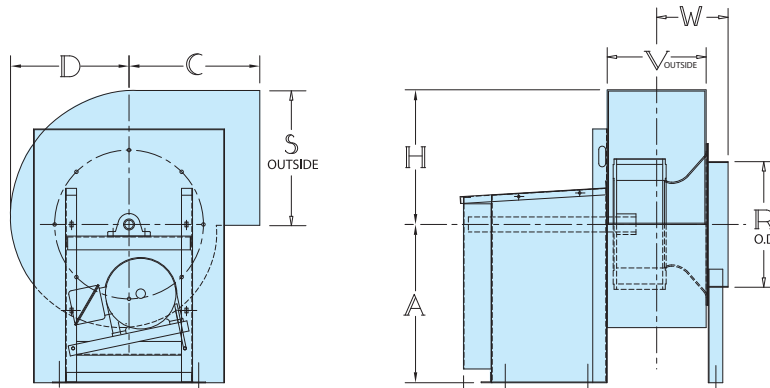
Size	Model	Max BHP	Max. Motor Frame	Fan RPM Range	CFM @ S.P.					Ship Wgt. Less Motor and Acc.
					1/2"	1"	2"	3"	4"	
12	S41U0-12-FA100FG----	3	182T	1190-3760	700-3000	700-3000	800-2800	900-2600	1100-2400	107
18	S41U0-18-FA100FG----	5	184T	770-2290	1600-6200	1600-6200	1600-6000	2000-5400	2400-4800	206
24	S41U0-24-FA100FG----	7 1/2	213T	560-1610	2800-11300	2800-10800	3300-10300	3800-9300	4300-7800	300

- Performance certified is for Installation Type D: Ducted Inlet/Ducted Outlet.
- Power ratings (BHP) do not include transmission losses.
- Performance ratings do not include the effects of appurtenances (accessories).
- For motor frame sizes larger than listed, contact factory.

Principal Dimensions – Series 41U

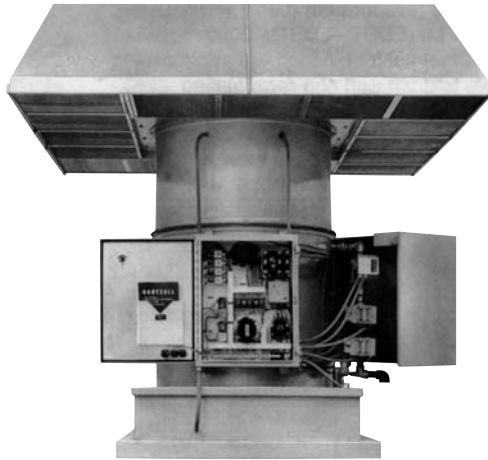
Fan Size	A	C	D	H	R	S	V	W	Z
12	18 ^{1/16}	13	11 ^{1/2}	10	12 ^{1/4}	13 ^{1/8}	9 ^{9/16}	8	32 ^{5/8}
18	23	19	17 ^{1/4}	15 ^{1/16}	18 ^{1/4}	19 ^{11/16}	14 ^{9/8}	10 ^{9/8}	37 ^{9/8}
24	29	23	22 ^{15/16}	20	24 ^{1/4}	26 ^{1/8}	19	12 ^{2/4}	42 ^{5/16}

NOTE: Dimensions and specifications are subject to change. Certified prints are available.



Heating Equipment

Vertical Gas Fired Make-up Air Heater



Series 78V

- In stock models ship in 5 days or less (see page 3).
- IRI pipetrain.
- 460 volt and natural gas only.
- Economical and Energy Efficient.
- Each unit is a complete air supply system in a self-contained package, consisting of a fan, burner, 3-place remote station and controls.
- Excellent for localized supply air applications.
- Industrial duty – constructed of painted 12-gauge hot rolled steel. The unit's propellers are #319 cast aluminum alloy.
- Low noise – all Series 78V units are at 83 dBA or less @ 5'.
- Units are direct drive, no belts to adjust or replace. Extended lube lines to the motors are standard.
- Series 78V vertical units are set up for roof curb mounting. Units are ready for connection to gas line and power source.
- Standard units have bird screen and filter racks, less filters.
- For complete information on Series 78V Make-Up Air Heaters, see Bulletin A-125.

Rating Table – Series 78V

Model No.	BTU/HR	H.P.	Motor RPM	Basic Unit				Min. Inlet Gas Pressure	Est. Ship Weight
				0" Ext. SP		1/4" Ext. SP			
				CFM*	Temp. Rise	CFM*	Temp. Rise		
S78V---486AA---STFCL5	2,900,000	5	860	27300	98°F	22900	116°F	14"	1350 lbs

*CFM shown is net flow at discharge and includes static pressure loss for burner, shutter and the intake roof hood.

NOTE: Static pressure for calculated resistances external to the unit assembly.

Door Heaters



Series 79 (Direct Drive)

- In stock models ship in 5 days or less (see page 3).
- IRI/FM gas plumbing train.
- 460 volt only.
- Electronic flame safeguard with LED status.
- Magnetic starter.
- Rear inlet guard.
- Block & vent valves.
- High & low gas pressure switches.
- High temperature limit switch.
- Remote station for floor mounting with selector switch.
- Door switch for automatic start and stop of unit.
- For complete information on door heaters, see Bulletin A-125.

Rating Table – Series 79

Model No.	Motor H.P.	Fan RPM	CFM	Input BTU	Temp. Rise	Min. Inlet Gas Pressure	Est. Ship Weight
S79---226DA---STFCI3	1½	1750	6,500	700,000	99°F	5"	350 lbs
	1½	1750	6,500	765,000	109°F	6"	
	1½	1750	6,500	820,000	117°F	7"	
S79---246DA---STFCJ3	2	1750	7,900	865,000	101°F	6"	400 lbs
	2	1750	7,900	930,000	109°F	7"	
	2	1750	7,900	990,000	116°F	8"	



Marine Duty Duct Axial Fan (Direct Drive)



Series 44-M – Type DA

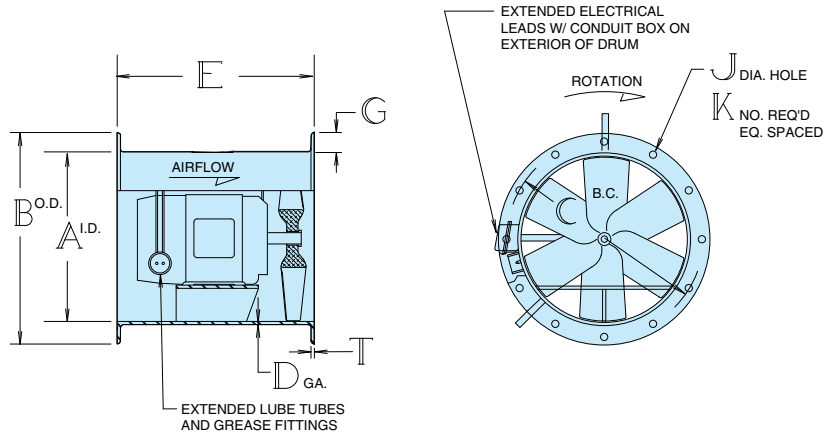
- In stock models ship in 5 days or less (see page 3).
- 5 day shipment with non-standard motor voltage.
- 6-blade airfoil design, cast aluminum propeller, mounted with taperlock bushing.
- Housings are one-piece, heavy gauge hot rolled steel with steel flanges.
- Standard finish is a marine duty inorganic zinc base coat applied to sand blasted steel housings and an epoxy coating applied to cast aluminum impellers. This provides excellent weathering characteristics and protection against sea spray.
- Motors are totally enclosed, certified to meet IEEE 45, 50°C ambient rise, below deck, 230/460/60/3. Fractional HP motors equipped with permanently lubricated, non-regreasable bearings. Integral HP motors equipped with relubricable bearings as standard. 12", ¾ HP fan available in single phase 115 volt.
- Motors are pre-wired 460V with electrical leads extended to watertight conduit boxes located on the exterior of the fan housings. 230V available with mod fee applied.
- Blowers are designed for mounting in any position from horizontal to vertical.
- For complete information on Certified Ratings Data, see Bulletin A-143.



Hartzell Fan, Inc. certifies that the Series 44-M, Marine Duty Duct Axial®, Direct Drive Fans shown hereon are licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 and comply with the requirements of the AMCA Certified Ratings Program.



Hartzell Fan, Inc. certifies that Maine Duty Duct Axial Fan, Series 44-M, shown hereon, is authorized to bear CE Marking in accordance with Machinery Safety Directive 98/37/EC of the European Union. Reference Technical File E.S. 13.2.2.



ABS Certificate of Design Assessment Received

Series 44-M Direct Drive Marine Duty Blowers

Size	Model	Fan (Motor)		Phase	Max Flow	Est. Ship Wgt.
		HP	RPM			
12	S44-M-126DA--STFIGB	3/4	3450	1	2308	105
12	S44-M-126DA--STFIG2	3/4	3450	3	2308	105
16	S44-M-166DA--STFIK2	3	3500	3	5831	154
18	S44-M-186DA--STFIL2	5	3500	3	8155	229
24	S44-M-246DA--STFIK3	3	1760	3	9126	349
28	S44-M-286DA--STFIL3	5	1750	3	14559	457
32	S44-M-326DA--STFIN3	10	1765	3	21884	669
36	S44-M-366DA--STFIP3	20	1765	3	30514	859

- In stock models and in stock accessories ship in 48 hours or less (see Page 3).
- 460V standard; 230V is available as modified stock.
- For complete information on Marine Duty Blowers, see Bulletin A-143.

Principal Dimensions – Series 44-M

Fan Size	A	B	C	D	E	G	J	K	T	Max. Motor Frame
12	12¼	16⅞	15¼	¼	15	1½	⅞	12	¼	145T
16	16¼	20⅞	19¼	¼	15	1½	⅞	12	¼	184T
18	18¼	22⅞	21¼	¼	15	1½	⅞	12	¼	184T
24	24¼	29⅞	27¼	¼	23	2	⅞	12	¼	184T
28	28¼	33⅞	31¼	¼	23	2	⅞	12	¼	184T
32	33	37⅞	35¼	¼	24	2	⅞	12	¼	215T
36	37	41⅞	39¼	¼	28	2	⅞	12	¼	256T

Specialty Products



Adjustable Pitch Propeller Assemblies

Specifications and Features

Hartzell adjustable pitch, airfoil fan assemblies are available from stock as follows:

- Castings are precision balanced against master weighted units. Ships as components (i.e. individual blades or hubs) as standard. Can ship assembled up to 72" for an additional charge. Wide range of bushings available.
- Cast aluminum models available in stock as clockwise rotation only, sizes 4' through 12', 4- and 6-blade assemblies.
- Cast aluminum reversible assemblies available in 48", 60", 72", and 84" sizes, 4- and 6-blade assemblies. 100% airflow in either direction.
- Designed for efficient, long-lasting service in cooling towers, air-cooled heat exchangers, and product cooling applications. Well suited for OEM and replacement applications.

Note:

CW – Clockwise rotation facing airstream. When ordering Cooling Tower and Heat Exchanger Fans, indicate Series, Model and Code. Also please specify bore, keyway and rotation. Full selection and application assistance available.



Series 89 – Model “A”

- **In stock models ship in 48 hours or less if shipped broken down. 5 days or less if assembly required. See page 3.**
- Sizes 5' to 12'; 4- and 6-bladed assembly.
- Cast aluminum blades and hub.
- **Threaded blade retention.**
- Manually adjustable pitch – blades and hubs are index-marked to indicate pitch settings.
- On 84" and larger fans, the hub is furnished with split taper bushing. 60" and 72" fans furnished with straight bore.
- Clockwise rotation only.
- **Maximum Tip Speed – 15,000 feet per minute.**
- **For complete information on Series 89 Aluminum Adjustable Pitch Fans, see Technical Data Sheet A-111-89.**

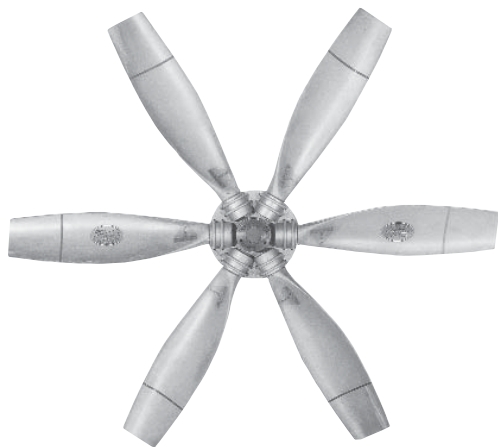
Series 89

Model	Fan Diameter	Ship Weight #
S89--604-A__AL----	60"	42
S89--606-A__AL----		56
S89--724-A__AL----	72"	65
S89--726-A__AL----		85
S89--844-A__AL----	84"	91
S89--846-A__AL----		117
S89--964-A__AL----	96"	107
S89--966-A__AL----		141
S89--1084-A__AL----	108"	155
S89--1086-A__AL----		216
S89--1204-A__AL----	120"	305
S89--1206-A__AL----		395
S89--1324-A__AL----	132"	391
S89--1326-A__AL----		503
S89--1444-A__AL----	144"	407
S89--1446-A__AL----		527

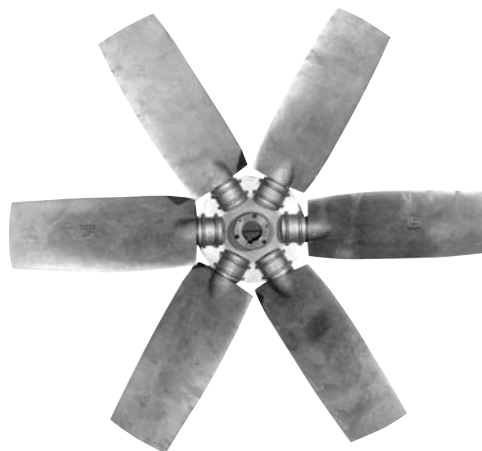
Specialty Products



Adjustable Pitch Propeller Assemblies



Series 90 – Model “AA”



**Series 90R – Model “AAR”
Reversible**

- In stock models ship in 48 hours or less if shipped broken down. 5 days or less if assembly required. See page 3.
- Sizes 4' to 12'; 4- and 6-bladed assembly.
- Cast aluminum blades and hub.
- **Drop-in blade retention.**
- Manually adjustable pitch – blades have a retention shoulder that fits into a recess in the hub to ensure proper location.
- Split taper bushing furnished as standard.
- Clockwise rotation only.
- Temperatures to 200°F.
- **Maximum Tip Speed – 15,000 feet per minute.**
- **For complete information on Series 90 Aluminum Adjustable Pitch Fans, see Technical Data Sheet A-111-90.**

- In stock models ship in 48 hours or less if shipped broken down. 5 days or less if assembly required. See page 3.
- All aluminum construction – Sizes 48", 60" 72" and 84"; 4- and 6-bladed assembly. Blades are alloy #319 aluminum, ground to satin finish for balance. Hubs are permanent mold castings ground to satin finish for balance. U-bolts are plated S.A.E. Grade 5 U-bolts with class 2A thread.
- Airfoil section – Blade design is a field-proven Hartzell airfoil, modified such that the leading edges and the trailing edges of the blades are identical in either direction of rotation. The result is 100% airflow in reverse rotation.
- **Drop-in blade retention;** Manual adjustment – Blades have a retention shoulder which fits into a recess in the hub to insure proper location. Design does not require accessory port in the fan orifice to assemble the blades.
- Split taper bushing furnished as standard.
- Maximum tip speed – 17,000 feet per minute.
- Stable performance under varying pressures without stall.
- Standard rotation is clockwise.
- Maximum temperature – 300°F.
- **For complete information on Series 90R Adjustable Pitch Fans, see Technical Data Sheet A-111-90R.**

Series 90

Model	Fan Diameter	Ship Weight #
S90--484AA __AL----	48"	33
S90--486AA __AL----		36
S90--544AA __AL----	54"	45
S90--546AA __AL----		64
S90--604AA __AL----	60"	47
S90--606AA __AL----		67
S90--724AA __AL----	72"	59
S90--726AA __AL----		70
S90--844BA __AL----	84"	91
S90--846BA __AL----		129
S90--964AA __AL----	96"	95
S90--966AA __AL----		136
S90--1084BA __AL----	108"	177
S90--1086BA __AL----		248
S90--1204AA __AL----	120"	185
S90--1206AA __AL----		260
S90--1324BA __AL----	132"	285
S90--1326BA __AL----		397
S90--1444AA __AL----	144"	295
S90--1446AA __AL----		412

Series 90R

Model	Fan Diameter	Ship Weight #
S90R--484AR __AL----	48½"	80
S90R--486AR __AL----		98
S90R--604AR __AL----	60¾"	156
S90R--606AR __AL----		186
S90R--724AR __AL----	72"	191
S90R--726AR __AL----		239
S90R--844AR __AL----	84"	285
S90R--846AR __AL----		310

Specialty Products

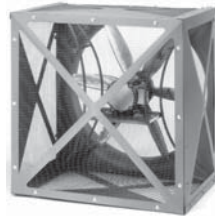


Panel Fan and Wall Ventilator Accessories

Steel Panel Fan Accessories – Series 02S and 09S



Front Guard



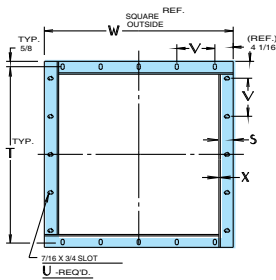
Rear Guard



Shutter Mounting Boot and Flange*

NOTE: Rear guard, flange, and wall hood ship unassembled as standard. Assembly available for an additional charge.

* Panel fans (Series 02S and 09S) can be supplied with an optional mounting flange around the panel to facilitate fan mounting to the wall opening. The optional shutter mounting boot is furnished with a mounting flange as standard. Both flanges have the same bolt pattern. See chart below.



Mounting Dimensions – Series 02S and 09S (with optional boot or mounting flange)

Size	18	24	28	32	36	40	44	48
S	1½	1½	1½	1½	1½	1½	1½	1½
T	23⅞	29⅞	34⅞	37⅞	43⅞	47⅞	51⅞	55⅞
U	8	20	20	20	20	20	20	24
V	17	5¾	7	7¾	9¼	10¼	11¼	9¾
W	25⅞	31⅞	36⅞	39⅞	45⅞	49⅞	53⅞	57⅞
X	10 GA.	⅜	⅜	⅜	⅜	⅜	⅜	⅜

NOTE: Dimensions and specifications are subject to change. Certified prints are available.

Shutters



Automatic Shutter
(.050 Aluminum)

Principal Dimensions (Shutters)

Size	18	24	28	32	36	40	44	48
Flange I.D.	18	24	28	32	36	40	44	48
Flange O.D.	21	27	31	35	39	43	47	51

Wall Hood**



Principal Dimensions (Wall Hood)

HOOD SIZE	A	B	C	D	E	F	G	R ⁰¹	R ⁰²	S	T	U	V	W	X	FF	GG	AREA (FT ²)	FAN SIZES AVAILABLE PER HOOD SERIES 02, 09
24	24	31 ⁹ / ₁₆	20 ¹ / ₈	27	25 ¹ / ₂	5 ¹ / ₄	20	24 ¹ / ₂	24 ¹ / ₂	25 ¹ / ₂	25 ¹ / ₂	20	5 ¹ / ₄	27	27	3	3	4	12, 16
36	36	44 ⁷ / ₁₆	28 ²⁹ / ₃₂	39	37 ¹ / ₂	8 ¹ / ₄	20	36 ¹ / ₂	36 ¹ / ₂	37 ¹ / ₂	37 ¹ / ₂	20	8 ¹ / ₄	39	39	3	3	9	18, 20, 24, 28
42	42	52 ⁵ / ₈	33 ¹¹ / ₃₂	45	43 ¹ / ₂	9 ³ / ₄	20	42 ¹ / ₂	42 ¹ / ₂	43 ¹ / ₂	43 ¹ / ₂	20	9 ³ / ₄	45	45	3	3	12 ¹ / ₄	24, 28, 30, 32
48	48	56 ³ / ₄	37 ⁷ / ₈	51	49 ¹ / ₂	11 ¹ / ₄	20	48 ¹ / ₂	48 ¹ / ₂	49 ¹ / ₂	49 ¹ / ₂	20	11 ¹ / ₄	51	51	3	3	16	32, 36
60	60	69 ¹ / ₈	46 ¹¹ / ₁₆	63	61 ¹ / ₂	9 ¹ / ₂	28	60 ¹ / ₂	60 ¹ / ₂	61 ¹ / ₂	61 ¹ / ₂	28	9 ¹ / ₂	63	63	3	3	25	36, 40, 42, 44, 48
72	72	80 ²³ / ₃₂	55 ¹⁹ / ₃₂	75	73 ¹ / ₂	11 ¹ / ₂	28	72 ¹ / ₂	72 ¹ / ₂	73 ¹ / ₂	73 ¹ / ₂	28	11 ¹ / ₂	75	75	3	3	36	48, 54, 60

** Painted steel wall hoods are available to protect the fan and building opening from the weather. These wall hoods are designed to provide maximum airflow with minimum resistance. Designed to mount directly to exterior wall surface, or panel fan mounting flange or panel fan mounting boot, if purchased.

**Inlet hood velocity must be less than 1,000 fpm to prevent entrainment of water.



Roof Ventilator and Duct Fan Accessories (Steel and Fiberglass)

Weather Cover

Designed to fit all belt drive duct and duct axial fans. Covers are vented. Steel construction. Specify horizontal or vertical mounting. This accessory is optional on Hartzell HRS Series 31, 46, 54G, and 69.

Companion Flanges

Drilled to fit the flanges of the duct fan; allows easy installation. Available in steel or fiberglass construction.

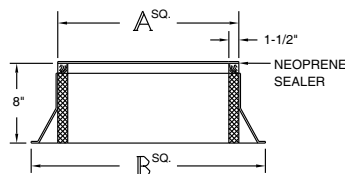
Mounting Feet

Bolted to the inlet and discharge flanges, mounting feet allow positioning of the duct axial fan on the floor, ceiling, wall or platform. Can be used with vibration isolators.

Prefabricated Curb*

The IRC-1 prefabricated curb is for flat roof installation of Hartzell roof ventilators. The curb is designed for metal, concrete or wood roof decks that are not surface insulated. 8" high.

Prefabricated curbs are designed to support the weight of the fans cataloged herein and attachments not exceeding over 100 additional pounds in a 40 mph wind. Non-standard curb construction is available.



*All prefab curbs will ship direct with suppliers standard delivery.

Roof Mounted Upblast Roof Ventilator

By combining a curb panel, stack cap, and duct fan, an efficient vertical air discharge ventilator in either steel or fiberglass construction can be assembled.

For performance, refer to the appropriate Duct Fan Rating Table, allowing 1/8" SP resistance for the stack cap.

Birdscreen

Half-inch square opening wire mesh, 19 ga. galvanized steel available.

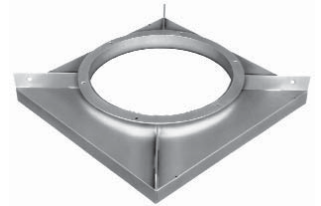
Stack Cap

Lids in the stack cap open automatically when the fan starts and close weathertight when the fan stops.



Curb Panel

The flanged panel provides a convenient method of curb mounting a duct fan and stack cap for a complete roof ventilator unit. Both the stack cap and panel are available in steel or fiberglass construction.



Principal Dimensions for Series 69

Fan Size	18	24	30	36	42	48
A	27 ¹ / ₄	35 ¹ / ₄	41 ¹ / ₄	47 ¹ / ₄	53 ¹ / ₄	59 ¹ / ₄
B	35 ¹ / ₄	43 ¹ / ₄	49 ¹ / ₄	55 ¹ / ₄	61 ¹ / ₄	67 ¹ / ₄

Principal Dimensions for Series 61

Fan Size	18	24	30	36	40	42	44	48
A	27 ¹ / ₄	35 ¹ / ₄	41 ¹ / ₄	47 ¹ / ₄	49 ¹ / ₄	53 ¹ / ₄	53 ¹ / ₄	59 ¹ / ₄
B	35 ¹ / ₄	43 ¹ / ₄	49 ¹ / ₄	55 ¹ / ₄	57 ¹ / ₄	61 ¹ / ₄	61 ¹ / ₄	67 ¹ / ₄

Principal Dimensions for Series 161

Fan Size	36	48
A	49 ¹ / ₂	61 ¹ / ₂
B	57 ¹ / ₂	69 ¹ / ₂

Specifications and dimensions are subject to change. Certified prints are available.

SAFETY ACCESSORIES, APPLICATION AND USE WARNING

The safe application and use of equipment supplied by Hartzell Fan, Inc. is the responsibility of the installer, the user, the owner, and the employer. Since the application and use of its equipment can vary greatly, Hartzell Fan, Inc. offers various product types, optional safety accessories, and sound performance data per laboratory tests. Hartzell Fan, Inc. sells its equipment with and without safety accessories, and accordingly, it can supply such safety accessories only upon receipt of an order. The need for safety accessories will frequently depend upon the type of system, fan location and operating procedures being employed. The proper protective safety accessories to meet company standards, local codes, and the requirements of the Occupational Safety and Health Act must be determined by the user since safety requirements vary depending on the location and use of the equipment. If applicable local conditions, standards, codes or OSHA rules require the addition of the safety accessories, the user should specify and obtain the required safety accessories from Hartzell Fan, Inc. and should not allow the operation of the equipment without them.

Owners, employers, users and installers should read "RECOMMENDED SAFETY PRACTICES FOR USERS AND INSTALLERS OF INDUSTRIAL AND COMMERCIAL FANS" published by the Air Movement and Control Association International, Inc., 30 West University Drive, Arlington Heights, Illinois 60004. A copy of this publication is enclosed with each fan shipped from Hartzell Fan, Inc., and is also available upon request at Hartzell's office in Piqua, Ohio 45356.

Please contact Hartzell Fan, Inc. or your local Hartzell representative for more information on product types, safety accessories, and sound performance estimates.

Remember, the selection of safety accessories and the safe application and use of equipment supplied by Hartzell Fan, Inc. is **your** responsibility.

Centrifugal Fan Accessories

Bolt-On Access Door – For maintenance and clean out of internal fan housing. Bolted and gasketed. Available for Series 05- and 03P only.

Guards – Series 05- stock fans can be supplied with drive and shaft guards. Guards enclose the assemblies while permitting circulation of ambient air. Standard features include tach opening, belt tension openings, and adjustable length.

Weather Cover – Series 05- stock fans can also be supplied with a weather cover.

Outlet Flanges – Series 41U stock fans can be modified with outlet flanges.

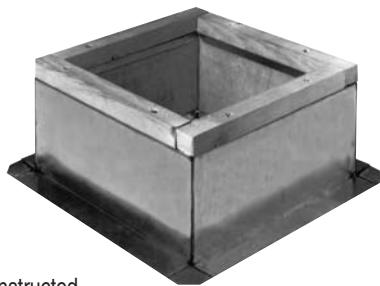
Scroll Discharge Position – Series 05-, 03P, 03U, 41U, and 41P stock fans can have discharge position modified to match customer requirements. Not all discharges are available for all fans. Top horizontal is standard. Mod fee may apply if changed.

Drain Kit – For Series 05-, 03P, and 03U stock fans, a standard pipe coupling is bolted to housing at its lowest point; female pipe has threaded plug. For Series 41U and 41P stock fans, a PVC bulkhead fitting with gasket is shipped loose.

Fiberglass Exhauster Accessories

Prefabricated Curbs*

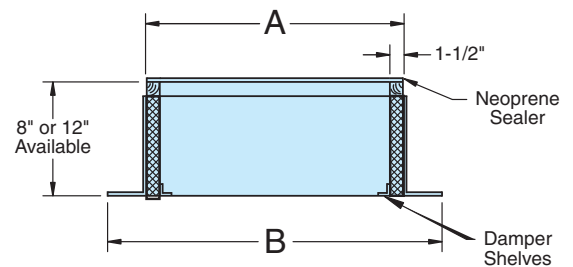
The CT-1 fiberglass prefabricated curb shown is for flat roof installation of Hartzell roof ventilators. The curb is designed for metal, concrete or wood roof decks that are not surface insulated. The curb is available either 8" or 12" high and is standard with damper shelf.



Model IRC-1 prefabricated curb constructed of galvanized steel is also available with identical features as Model CT-1. Galvanized models can be furnished with epoxy coating. Aluminum construction also available.

All prefabricated curbs can be furnished for slope or peak bases. Prefabricated curbs are designed to support the weight of the fans cataloged herein, and attachments not exceeding over 100 additional pounds in a 40 mph wind. Nonstandard curb construction is available.

***All prefab curbs will ship direct with suppliers standard delivery.**



Series 87, Fiberglass Exhauster

Fan Size	12	15	18
A	19 $\frac{1}{4}$	23 $\frac{1}{4}$	29 $\frac{1}{4}$
B	27 $\frac{1}{4}$	31 $\frac{1}{4}$	37 $\frac{1}{4}$

Disconnect Switch

Shipped loose for field mounting.

Bird Screen

304 stainless steel birdscreen available on all exhausters.



Hartzell Warranty

LIMITED WARRANTIES

Hartzell represents to Buyer that any goods to be delivered hereunder will be produced in compliance with the requirements of the Fair Labor Standards Act of 1938 as amended.

Hartzell also warrants to Buyer its goods to be free from defects in workmanship and material under normal use and service for one (1) year after tender of delivery by Hartzell, plus six (6) months allowance for shipment to approved stocking dealers and distributors. No warranty extends to future performance of goods and any claims for breach of warranty or otherwise accrues upon tender of delivery.

The foregoing constitute Hartzell's sole and exclusive warranties in lieu of all other warranties, whether written, oral, express, implied or statutory.

LIMITATION OF LIABILITY FOR BREACH OF WARRANTY

Hartzell's obligation for any breach of warranty is limited to repairing or replacing, at its option, without cost to Buyer at its factory any goods which shall, within such a warranty period, be returned to it with transportation charges prepaid, and which its examination shall disclose to its satisfaction to have been defective. Any request for repair or replacement should be directed to Hartzell Fan, Inc., P.O. Box 919, Piqua, Ohio 45356. Hartzell will not pay for any repairs made outside its factory without its prior written consent. This does not apply to any such Hartzell goods which have failed as a result of faulty installation or abuse, or incorrect electrical connections or alterations, made by others, or use under abnormal operating conditions or misapplication of the goods.

LIMITATION OF LIABILITY

To the extent the above limitation of liability for breach of warranty is not applicable, the liability of Hartzell on any claim of any kind, including negligence, for any loss or damage arising out of or connected with, or resulting from the sale and purchase of the goods or services covered by these Terms and Conditions of Sale or from the performance or breach of any contract pertaining to such sale or purchase or from the design manufacture, sale, delivery, resale, installation, technical direction installation, inspection repair, operation or use of any goods or services covered by these Terms and Conditions shall, in no case exceed the price allocable to the goods or services which gave rise to the claim and shall terminate one year after tender of delivery of said goods or services.

In no event whether as a result of breach of contract, or warranty or alleged negligence, defects incorrect advice or other causes, shall Hartzell be liable for special or consequential damages, including, but not limited to, loss of profits or revenue, loss of use of the equipment or any associated equipment, cost of substitute equipment, facilities or services, down time costs, or claims of customers of the Buyer for such damages. Hartzell neither assumes nor authorizes any person to assume for it any other liability in connection with the sale of its goods or services.

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