

WE CARE FOR YOUR NEEDS.

## UPBLAST ROOF EXHAUSTERS

RT/RE Series

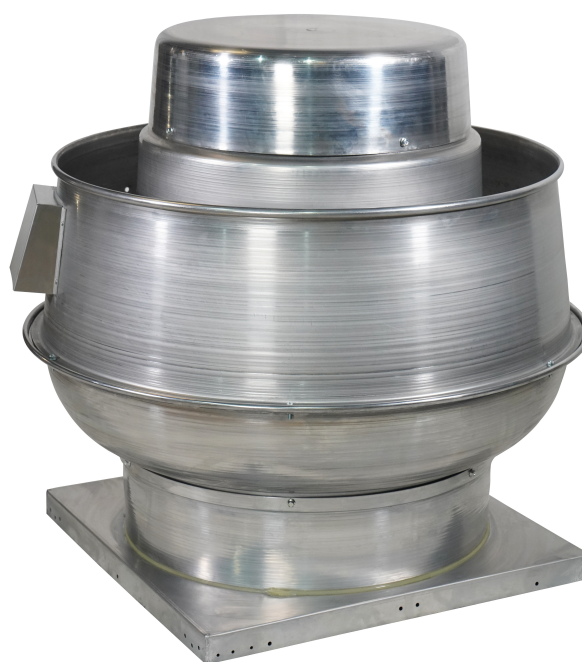


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## Overview

RTxxDU | RExxDU | RTxxBU

Twin City's line of quiet, efficient and economical spun aluminum centrifugal power roof and wall exhausters are designed to offer value and long-lasting service in a wide variety of commercial and industrial ventilating applications.

### STRUCTURAL INTEGRITY

Durable housings of spun aluminum have a high strength-to-weight ratio and incorporate a rolled bead for additional strength. There are no welds to break or seams to leak. The heavy-gauge motor mounting platform provides positive rigidity between all components of the power train assembly.

### TYPICAL APPLICATIONS INCLUDE

Agriculture, Automotive, Boilers, Brick, Car Wash, Commercial Plan & Spec, Composting, Ethanol, Food & Beverage, Foundry, General Manufacturing, Glass, HVAC, Institutional & Hospitality, Metal & Minerals, Microchip, OEM, Pharmaceutical, Power Generation, Recycling, Textile, Transportation

### IMPELLER TYPE

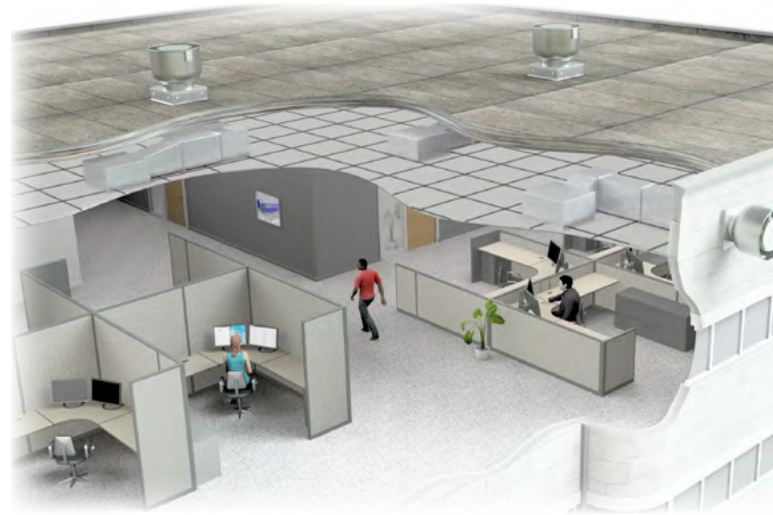
Backward Inclined/Curved Centrifugal

### OPTIONAL CONSTRUCTION

Special Coatings, IEC-ex Spark Resistant

### CERTIFICATIONS

AMCA Sound and Air Performance, IEC, CE Mark for Electrical and RoHS



Office Building Application

### CONFIGURATIONS

#### RExxDU (Direct Drive, Roof)

Available in five sizes – 9.0" to 16.0" impeller diameters  
External Rotor Motor

#### RExxDW (Direct Drive, Wall)

Available in five sizes – 9.0" to 16.0" impeller diameters  
External Rotor Motor

#### RTxxDU (Direct Drive, Roof)

Available in five sizes – 8.0" to 16.0" impeller diameters  
Std. Induction Motor

#### RTxxDW (Direct Drive, Wall)

Available in five sizes – 8.0" to 16.0" impeller diameters  
Std. Induction Motor

#### RTxxDK (Direct Drive, Kitchen)

Available in five sizes – 8.0" to 16.0" impeller diameters  
Std. Induction Motor

#### RTxxBU (Belt Driven, Roof)

Available in seven sizes – 12.0" to 36.0" impeller diameters  
Std. Induction Motor

#### RTxxBW (Belt Driven, Wall)

Available in seven sizes – 12.0" to 36.0" impeller diameters  
Std. Induction Motor

#### RTxxBK (Belt Driven, Kitchen)

Available in seven sizes – 12.0" to 36.0" impeller diameters  
Std. Induction Motor

### CERTIFICATIONS



Twin City Fan & Blower certifies that the models RT08DU, RT10DU, RT11DU, RT13DU & RT16DU shown herein are licensed to bear the AMCA Seal. The rating 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. Model RExxDU and RTxxBU are not licensed by AMCA International.



CE Conformity with Low Voltage Directive 2014/35/EU relating to electrical equipment designed for use within certain voltage limits.



Restriction of Hazardous Substances in Electrical and Electronic Equipment.

# CONSTRUCTION FEATURES

## UPBLAST ROOF EXHAUSTERS

### HOUSINGS

RT and RE housings feature heavy-gauge spun aluminum construction of the shroud and top cover. Shrouds feature a rolled bead edge for rigidity. All housings provide complete protection of the motor and drive assembly, while allowing quick access to these components.

### EASY MAINTENANCE ACCESS

By removing the fasteners, the motor chamber and chamber cover lifts off for complete access to all of the drive train components.

### CHAMBER COVER

Provides complete protection for the motor and drive assembly, while allowing quick access to these components without the need for tools.

### MOTOR CHAMBER

Constructed from heavy-gauge aluminum, rolled and beaded, for durability and appearance.

### MOTORS

ODP, TEFC, TEAO and explosion proof, single and three phase motors are carefully matched to the fan load.

### INTERNAL WIRING

Single phase motors are factory-wired between the motor and junction box. For either direct drive or belt driven models, an electric disconnect is available.

### BEARINGS

Heavy-duty re-greaseable pillow block ball bearings are specifically designed for air handling applications to provide an average life (L-50) of 500,000 hours or more at maximum cataloged operating speeds.

### SHAFT

Precision ground and polished with a first critical speed of at least 125% of the fan's maximum operating speed.

### DRIVE

Adjustable pitch V-belt drives with cast iron sheaves and heat resistant belts are selected at 150% of the driven motor horsepower.

### VIBRATION ISOLATION

Motor and drive assembly is completely isolated from the fan supports by rubber isolators to reduce transmission of noise and vibration.

### IMPELLER

Non-overloading impellers with backwardly curved blades are precisely matched to a deep spun venture. All impellers are statically and dynamically balanced to ensure smooth and quiet operation.

### GALVANIZED BIRD SCREEN

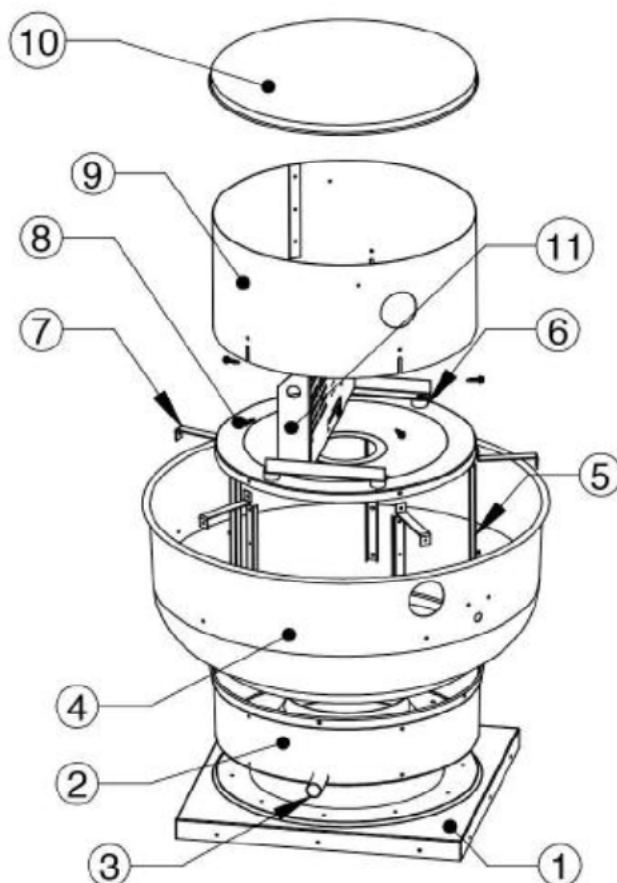
Protects the impeller, inlet and internal components from entry of birds.

### CURB CAP

One-piece curb cap/inlet venture assembly provides protection from weather. Pre-punched mounting holes provide easy and accurate attachment to the roof curb.

### CONDUIT TUBING

A conduit tube is furnished for running electrical wiring through the curb cap and into the motor compartment.



- |                    |                     |
|--------------------|---------------------|
| 1. Base Assembly   | 7. Horizontal Brace |
| 2. Wind Band       | 8. Fan Plate        |
| 3. Drain           | 9. Motor Chamber    |
| 4. Apron           | 10. Chamber Cover   |
| 5. Vertical Brace  | 11. Motor Plate     |
| 6. Rubber Isolator |                     |



### BACKDRAFT DAMPER

With automatic or motorized operation, features a felt seal on the edge of the damper blades for quiet operation. Damper frames are constructed of steel and blades are constructed of aluminum.



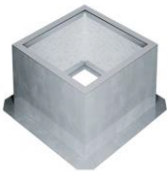
### NEMA 1 DISCONNECT SWITCH

Mounted in the motor compartment when ODP or TEFC motors are used. When explosion proof motors are specified, a NEMA 7/9 disconnect switch will be shipped loose for field mounting and wiring.



### NEMA 4 DISCONNECT SWITCH (OPTIONAL)

Mounted externally and is water- and dust-tight. Switch is available shipped loose for field mounting and wiring or factory mounted and wired.



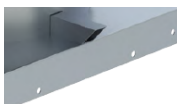
### ROOF CURB

Constructed of galvanized steel with continuous, wide base plate (flashing) to ensure watertight seal to roof, wood nailer secured to top ledge, lined with fiberglass fire-resistant, sound-absorbing insulation. Optional aluminum construction is available.



### GALVANIZED MESH (STANDARD)

Optional aluminum or stainless steel rigid wire is also available.



### DRAIN CONNECTION (DOWNSPOUT)

Removable, for disposal of collected grease.

### VARIABLE SPEED CONTROL

Allows the adjustment of airflow for system balancing. Variable speed controllers are solid state design, variable speed controls can be shipped separately.



### NEMA 3R DISCONNECT SWITCH

Externally mounted when ODP or TEFC motors are used. NEMA 3R, rain proof, disconnects are available shipped loose for field mounting and wiring or factory mounted and wired.



### NEMA 7/9 DISCONNECT SWITCH

Provided on fans with explosion proof motors. The NEMA 7/9 switch is designed for use with fans operating in hazardous environments. NEMA 7/9 disconnect switch will be shipped loose for field mounting and wiring.



### VENTED ROOF CURB

Self-flashing style curbs with ventilation louvers allow ambient air in to cool and dilute grease- or smoke-laden airstreams.



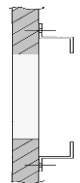
### GREASE BOX

Removable, for disposal of collected grease. Available for RTxxDK fans only.



### WALL MOUNTING BRACKET

Self-flashing with prepunched mounting holes.



### ADDITIONAL ACCESSORIES

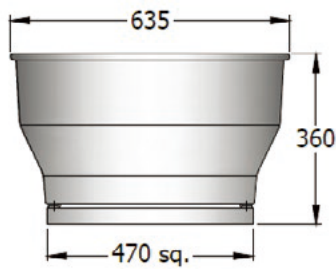
- Special coatings
- AMCA Spark B or C
- Aluminum bird screen
- Stainless steel hardware/accessories
- Insect screen

# RT SERIES DIRECT DRIVE FAN DATA

## UPBLAST ROOF EXHAUSTERS

### ➤ RT08DU

#### Dimensional Data

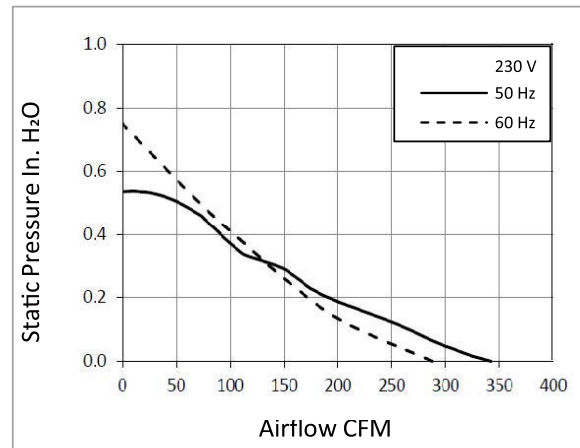


All dimensions in mm.

\*Maximum Input Power

Roof Opening
225 x 225
Damper Size
215 x 215
Weight (kg)
22.5

#### ➤ Performance Curve



### ➤ Performance Data

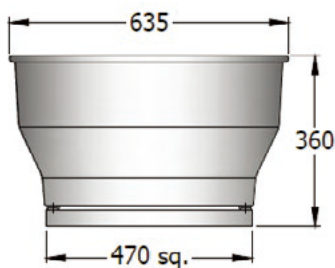
Hz	KW*	A	RPM	0.000" Pst CFM Sones	0.125" Pst CFM Sones	0.250" Pst CFM Sones	0.375" Pst CFM Sones	0.500" Pst CFM Sones	0.625" Pst CFM Sones	0.750" Pst CFM Sones	1.000" Pst CFM Sones
50	0.080	0.27	1350	341 4.6	250 4.3	165 4.6	100 5.1	—	—	—	—
60	0.080	0.30	1550	290 2.4	200 2.8	150 3.2	115 4.2	70 5.0	—	—	—

Performance certified is for installation type A: Free Inlet, Free Outlet. The sound ratings shown are loudness values in fan sones at 1.5m (5ft) in a hemispherical free field calculated per AMCA International Standard 301. Speed (RPM) shown is nominal. Performance is based on actual speed of test. Performance ratings do not include the effects of appurtenances (accessories)..

Model RT08DU 60 Hz are not certified by AMCA International.

### ➤ RT10DU

#### Dimensional Data

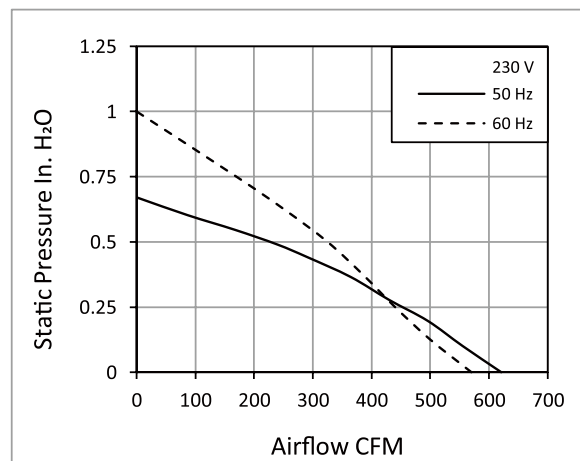


All dimensions in mm.

\*Maximum Input Power

Roof Opening
300 x 300
Damper Size
290 x 290
Weight (kg)
23

#### ➤ Performance Curve



### ➤ Performance Data

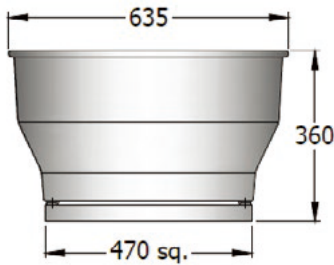
Hz	KW*	A	RPM	0.000" Pst CFM Sones	0.125" Pst CFM Sones	0.250" Pst CFM Sones	0.375" Pst CFM Sones	0.500" Pst CFM Sones	0.625" Pst CFM Sones	0.750" Pst CFM Sones	1.000" Pst CFM Sones
50	0.123	0.81	1350	621 8.2	540 7.8	452 7.7	355 7.3	227 6.8	—	—	—
60	0.123	0.90	1550	545 5.8	505 6.5	443 7.0	381 7.1	315 7.1	250 7.2	—	—

Performance certified is for installation type A: Free Inlet, Free Outlet. The sound ratings shown are loudness values in fan sones at 1.5m (5ft) in a hemispherical free field calculated per AMCA International Standard 301. Speed (RPM) shown is nominal. Performance is based on actual speed of test. Performance ratings do not include the effects of appurtenances (accessories)..

Model RT10DU 60 Hz are not certified by AMCA International.

### ➤ RT11DU

#### Dimensional Data

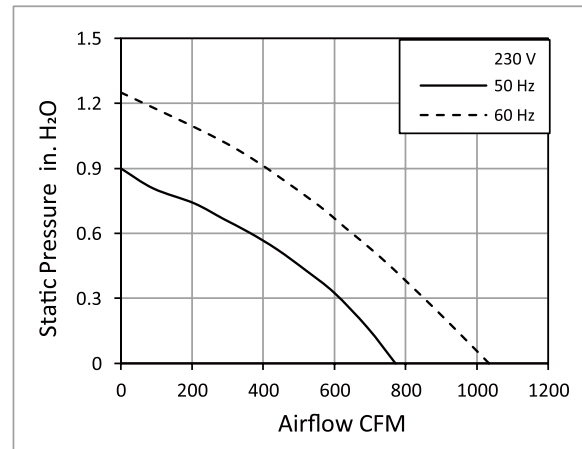


All dimensions in mm.

\*Maximum Input Power

Roof Opening
300 x 300
Damper Size
290 x 290
Weight (kg)
25

#### ➤ Performance Curve



#### ➤ Performance Data

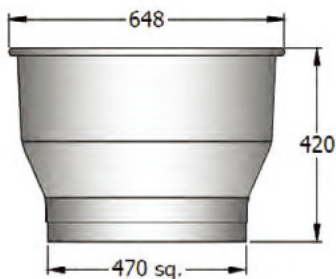
Hz	KW*	A	RPM	0.000" Pst CFM Sones	0.125" Pst CFM Sones	0.250" Pst CFM Sones	0.375" Pst CFM Sones	0.500" Pst CFM Sones	0.625" Pst CFM Sones	0.750" Pst CFM Sones	1.000" Pst CFM Sones
50	0.170	1.26	1375	771 9.0	712 8.6	643 8.3	562 7.9	461 7.5	337 7.2	—	—
60	0.170	1.40	1725	1010 10.3	949 10.1	880 10.1	795 10.1	720 10.3	625 10.4	535 10.7	—

Performance certified is for installation type A: Free Inlet, Free Outlet. The sound ratings shown are loudness values in fan sones at 1.5m (5ft) in a hemispherical free field calculated per AMCA International Standard 301. Speed (RPM) shown is nominal. Performance is based on actual speed of test. Performance ratings do not include the effects of appurtenances (accessories).

Model RT11DU 60 Hz are not certified by AMCA International.

### ➤ RT13DU

#### Dimensional Data

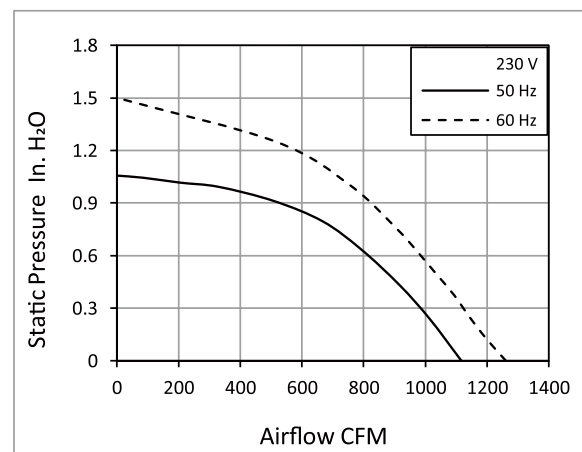


All dimensions in mm.

\*Maximum Input Power

Roof Opening
300 x 300
Damper Size
290 x 290
Weight (kg)
28

#### ➤ Performance Curve



#### ➤ Performance Data

Hz	KW*	A	RPM	0.000" Pst CFM Sones	0.125" Pst CFM Sones	0.250" Pst CFM Sones	0.375" Pst CFM Sones	0.500" Pst CFM Sones	0.625" Pst CFM Sones	0.750" Pst CFM Sones	1.000" Pst CFM Sones
50	0.247	1.71	1375	1117 12.2	1063 11.8	1008 11.3	945 10.9	875 10.5	799 10.1	703 9.7	—
60	0.247	1.90	1725	1250 14	1190 13.0	1130 12.7	1050 12	1010 11.5	970 11.5	899 11.5	750 11.0

Performance certified is for installation type A: Free Inlet, Free Outlet. The sound ratings shown are loudness values in fan sones at 1.5m (5ft) in a hemispherical free field calculated per AMCA International Standard 301. Speed (RPM) shown is nominal. Performance is based on actual speed of test. Performance ratings do not include the effects of appurtenances (accessories).

Model RT13DU 60 Hz are not certified by AMCA International.

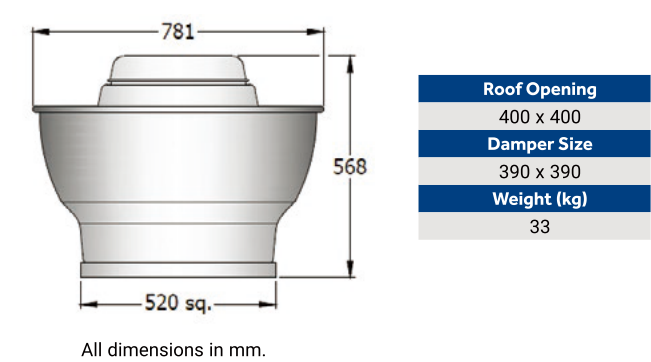


RT SERIES DIRECT DRIVE FAN DATA

UPBLAST ROOF EXHAUSTERS

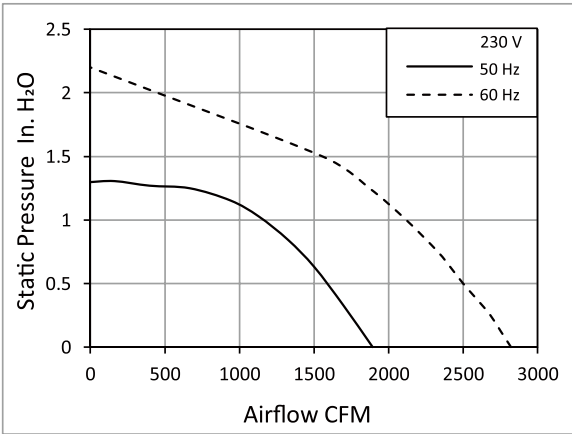
RT16DU

Dimensional Data



\*Maximum Input Power

Performance Curve



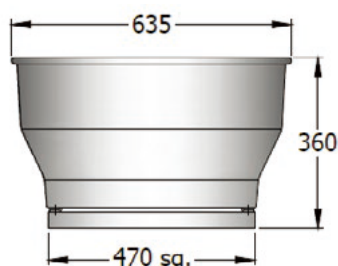
Performance Data

Hz	KW*	A	RPM	0.000" Pst	0.125" Pst	0.250" Pst	0.375" Pst	0.500" Pst	0.625" Pst	0.750" Pst	1.000" Pst
				CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM
50	0.420	3.51	1375	1894	1820	1745	1668	1587	1506	1404	1160
				15.5	15.0	14.8	14.4	14.1	13.7	13.2	12.3
60	0.420	3.90	1725	2800	2710	2650	2600	2500	2400	2310	2100
				16.9	16.9	16.5	16	16	15.7	15.5	14.3

Performance certified is for installation type A: Free Inlet, Free Outlet. The sound ratings shown are loudness values in fan sones at 1.5m (5ft) in a hemispherical free field calculated per AMCA International Standard 301. Speed (RPM) shown is nominal. Performance is based on actual speed of test. Performance ratings do not include the effects of appurtenances (accessories)..  
Model RT16DU 60 Hz are not certified by AMCA International.

### ➤ RE09DU

#### Dimensional Data

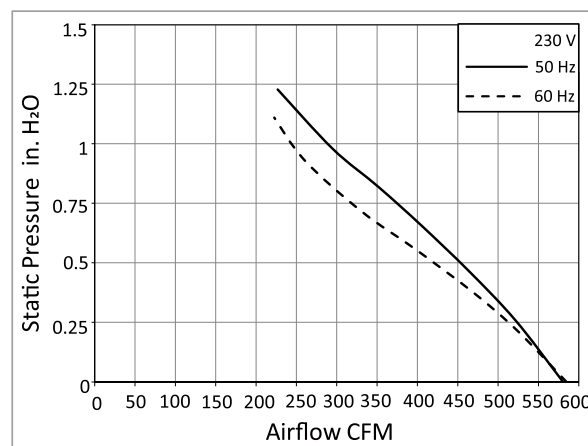


All dimensions in mm.

\*Maximum Input Power

Roof Opening
225 x 225
Damper Size
215 x 215
Weight (kg)
22.5

#### ➤ Performance Curve

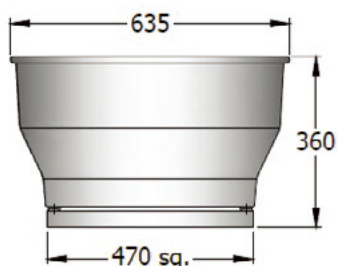


#### ➤ Performance Data

Hz	KW *	A	RPM	0.000" Pst CFM Sones	0.125" Pst CFM Sones	0.250" Pst CFM Sones	0.375" Pst CFM Sones	0.500" Pst CFM Sones	0.625" Pst CFM Sones	0.750" Pst CFM Sones	1.000" Pst CFM Sones
50	0.13	0.55	2450	581 17.5	552 17.5	523 17.5	489 13.7	453 13.7	415 13.7	374 13.7	289 11.0
60	0.17	0.74	2700	585 17.8	549 17.8	512 16.0	469 16	420 11.8	369 11.8	320 11.8	246 9.1

### ➤ RE10DU

#### Dimensional Data

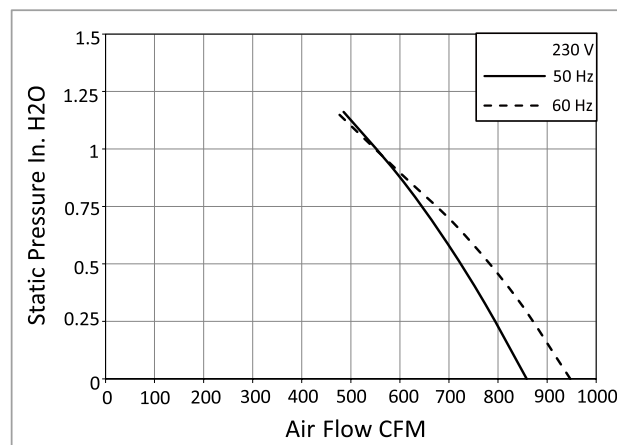


All dimensions in mm.

\*Maximum Input Power

Roof Opening
300 x 300
Damper Size
290 x 290
Weight (kg)
23

#### ➤ Performance Curve



#### ➤ Performance Data

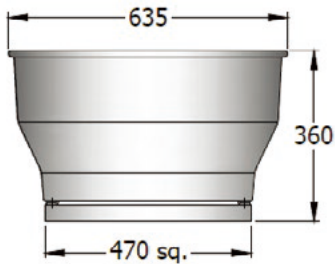
Hz	KW*	A	RPM	0.000" Pst CFM Sones	0.125" Pst CFM Sones	0.250" Pst CFM Sones	0.375" Pst CFM Sones	0.500" Pst CFM Sones	0.625" Pst CFM Sones	0.750" Pst CFM Sones	1.000" Pst CFM Sones
50	0.18	0.78	2800	858 18.9	826 18.9	793 18.9	759 18.9	722 18.9	686 16.3	643 16.3	551 13.3
60	0.22	1.05	2850	947 23	908 23	869 23	829 23	780 23	731 17.6	673 17.6	550 17.6

# RE SERIES DIRECT DRIVE FAN DATA

## UPBLAST ROOF EXHAUSTERS

### ➤ RE12DU

#### Dimensional Data

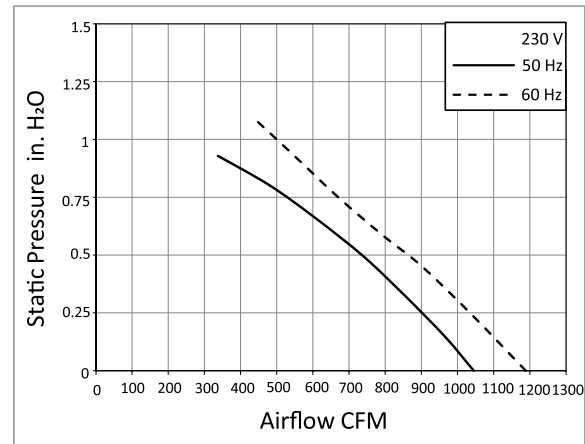


All dimensions in mm.

\*Maximum Input Power

Roof Opening
300 x 300
Damper Size
290 x 290
Weight (kg)
25

#### ➤ Performance Curve

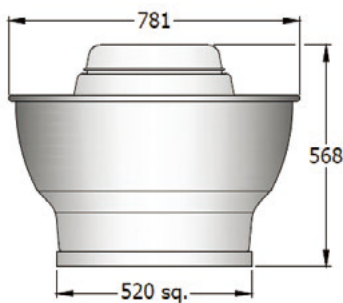


### ➤ Performance Data

Hz	KW*	A	RPM	0.000" Pst CFM Sones	0.125" Pst CFM Sones	0.250" Pst CFM Sones	0.375" Pst CFM Sones	0.500" Pst CFM Sones	0.625" Pst CFM Sones	0.750" Pst CFM Sones	1.000" Pst CFM Sones
50	0.13	0.60	1400	1045 11	977 11	901 11	820 8.8	735 8.8	635 7.1	527 7.1	— —
60	0.18	0.80	1580	1189 14	1112 14	1035 14	952 11.5	862 11.5	764 9.2	670 9.2	500 8.8

### ➤ RE13DU

#### Dimensional Data

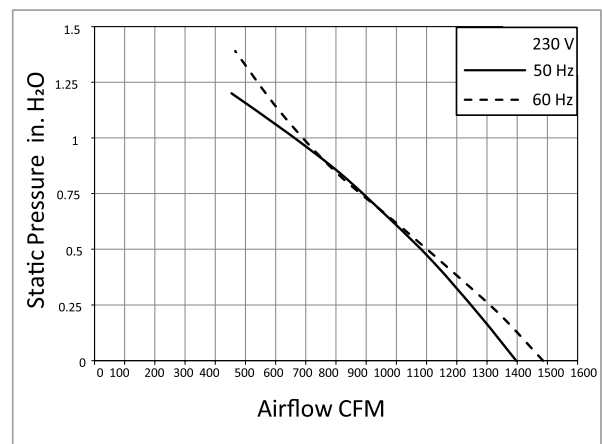


All dimensions in mm.

\*Maximum Input Power

Roof Opening
400 x 400
Damper Size
390 x 390
Weight (kg)
33

#### ➤ Performance Curve



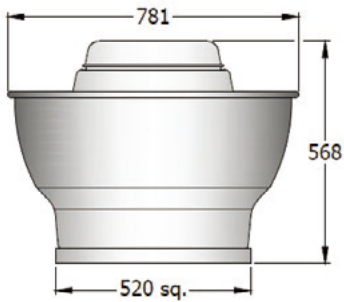
### ➤ Performance Data

Hz	KW*	A	RPM	0.000" Pst CFM Sones	0.125" Pst CFM Sones	0.250" Pst CFM Sones	0.375" Pst CFM Sones	0.500" Pst CFM Sones	0.625" Pst CFM Sones	0.750" Pst CFM Sones	1.000" Pst CFM Sones
50	0.20	0.88	1340	1396 14.2	1322 14.2	1246 14.2	1166 14.2	1080 12.0	986 12.0	661 12.0	— —
60	0.28	1.25	1380	1485 15.3	1400 15.3	1308 14.2	1206 14.2	1100 14.2	994 11.9	695 11.9	542 11.9



### ➤ RE16DU

#### Dimensional Data

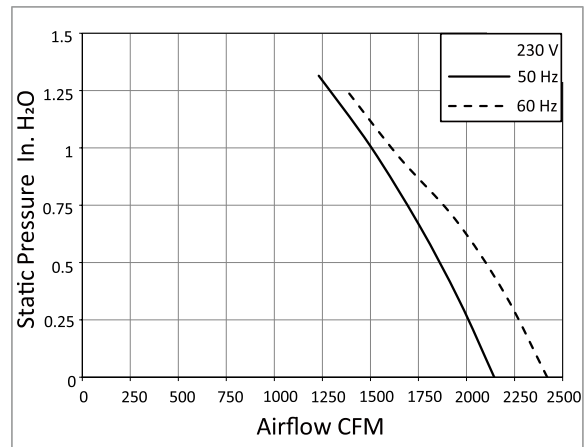


All dimensions in mm.

\*Maximum Input Power

Roof Opening
400 x 400
Damper Size
390 x 390
Weight (kg)
33

#### ➤ Performance Curve



#### ➤ Performance Data

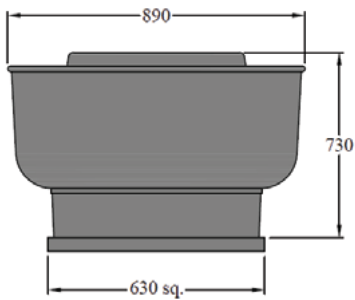
Hz	KW*	A	RPM	0.000" Pst CFM Sones	0.125" Pst CFM Sones	0.250" Pst CFM Sones	0.375" Pst CFM Sones	0.500" Pst CFM Sones	0.625" Pst CFM Sones	0.750" Pst CFM Sones	1.000" Pst CFM Sones
50	0.43	1.50	1380	2144	2076	2008	1936	1857	1778	1505	1288
				23	23	23	23	23	19.4	19.4	19.4
60	0.61	1.80	1656	2420	2344	2268	2190	2091	1992	1612	1378
				27	27	27	25	25	25	21	21

# RT SERIES BELT DRIVE FAN DATA

## UPBLAST ROOF EXHAUSTERS

### ➤ RT12BU

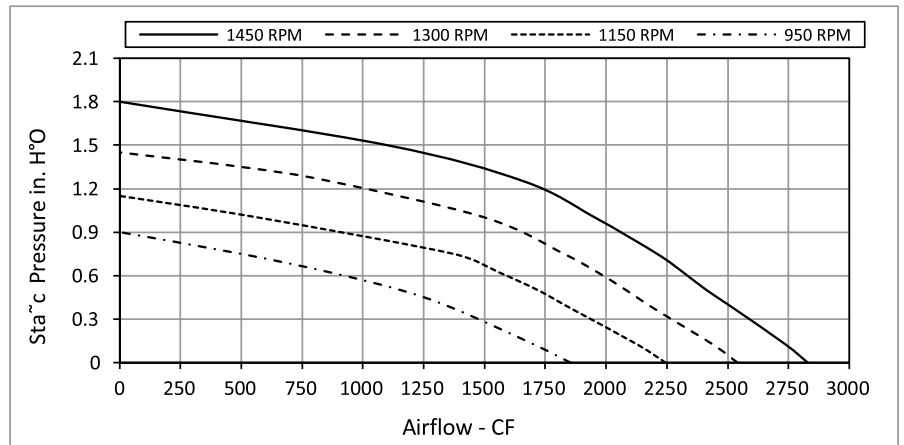
#### Dimensional Data



All dimensions in mm.

Roof Opening	Max Mtr. Frame
400 x 400	81
Damper Size	Weight (kg)
390 x 390	55

#### ➤ Performance Curve



### ➤ Performance Data

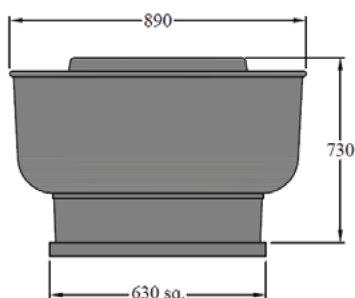
Motor HP	Fan RPM	0.000" Pst CFM		0.125" Pst CFM		0.375" Pst CFM		0.500" Pst CFM		0.625" Pst CFM		0.750" Pst CFM		1.000" Pst CFM		1.250" Pst CFM	
		Sones	BHP	Sones	BHP	Sones	BHP	Sones	BHP	Sones	BHP	Sones	BHP	Sones	BHP	Sones	BHP
1/4	700	1368		1151		-		-		-		-		-		-	
		9.4	0.06	8.7	0.07	-	-	-	-	-	-	-	-	-	-	-	-
	850	1658		1485		1084		769		-		-		-		-	
		11.5	0.11	10.8	0.13	10.2	0.14	9.6	0.12	-	-	-	-	-	-	-	-
1/3	950	1853		1703		1371		1155		858		-		-		-	
		12.9	0.16	12.3	0.17	11.4	0.19	11.0	0.20	10.4	0.19	-	-	-	-	-	-
	1050	2020		1894		1597		1422		1219		930		-		-	
		13.7	0.21	13.2	0.22	12.2	0.25	11.7	0.26	11.6	0.26	11.2	0.25	-	-	-	-
1/2	1100	2146		2023		1740		1591		1408		1197		-		-	
		14.5	0.24	13.9	0.26	12.9	0.29	12.5	0.30	12.3	0.31	12.2	0.31	-	-	-	-
	1150	2244		2128		1854		1719		1556		1373		572		-	
		15.3	0.28	14.7	0.29	13.7	0.33	13.3	0.34	12.9	0.35	12.9	0.36	12.0	0.28	-	-
	1250	2439		2333		2077		1963		1831		1676		1300		-	
		17.2	0.36	16.8	0.37	15.7	0.42	15.1	0.43	14.7	0.44	14.4	0.45	14.5	0.45	-	-
3/4	1300	2540		2439		2195		2080		1963		1827		1503		869	
		18.1	0.40	17.6	0.42	16.6	0.46	16.0	0.48	15.4	0.49	14.7	0.51	14.9	0.52	14.5	0.45
	1350	2635		2536		2303		2190		2083		1956		1654		1248	
		18.9	0.45	18.4	0.47	17.4	0.51	16.8	0.53	16.3	0.54	15.7	0.56	15.1	0.58	15.6	0.56
	1450	2829		2738		2524		2413		2315		2210		1955		1663	
		21.0	0.56	20.0	0.58	19.3	0.62	18.7	0.65	18.2	0.66	17.6	0.68	16.6	0.70	16.6	0.72
	1500	2925		2833		2627		2520		2421		2327		2090		1811	
		22.0	0.61	21.0	0.63	20.0	0.68	19.7	0.71	19.2	0.72	18.7	0.74	17.5	0.77	17.3	0.79

# RT SERIES BELT DRIVE FAN DATA

## UPBLAST ROOF EXHAUSTERS

### ➤ RT14BU

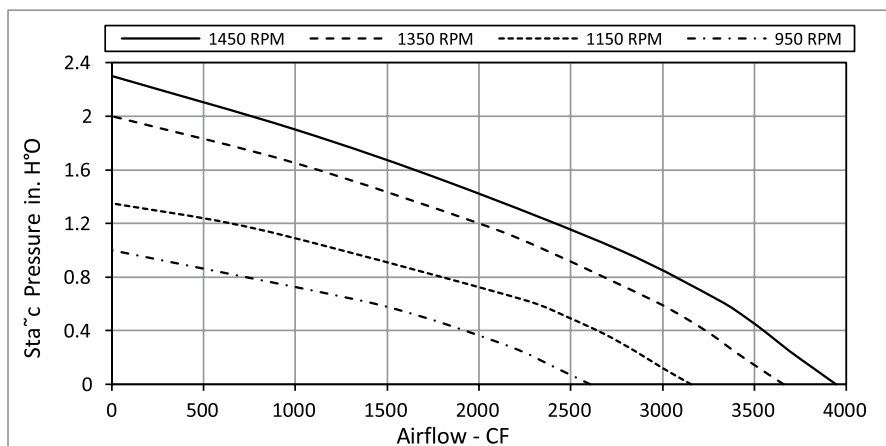
#### Dimensional Data



All dimensions in mm.

Roof Opening	Max Mtr. Frame
400 x 400	90
Damper Size	Weight (kg)
390 x 390	55

#### ➤ Performance Curve



#### ➤ Performance Data

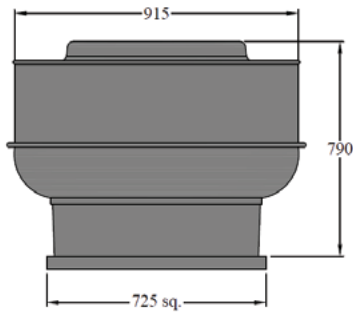
Motor HP	Fan RPM	0.000" Pst CFM		0.125" Pst CFM		0.250" Pst CFM		0.375" Pst CFM		0.500" Pst CFM		0.625" Pst CFM		1.000" Pst CFM		1.500" Pst CFM	
		Sones	BHP	Sones	BHP	Sones	BHP	Sones	BHP	Sones	BHP	Sones	BHP	Sones	BHP	Sones	BHP
1/4	850	2295		2077		1835		1522		1104							
		9.7	0.15	9.0	0.17	8.3	0.18	7.4	0.18	6.3	0.17	-	-	-	-	-	-
	950	2606		2415		2226		1977		1699		1355		-	-	-	-
		11.8	0.23	11.2	0.24	10.6	0.26	10.0	0.26	8.8	0.26	7.6	0.25	-	-	-	-
1/2	1000	2720		2536		2360		2135		1870		1588		-	-	-	-
		12.6	0.26	12.0	0.27	11.4	0.29	10.8	0.30	9.8	0.30	8.5	0.29	-	-	-	-
	1050	2885		2708		2549		2348		2106		1854		-	-	-	-
		13.4	0.31	12.8	0.32	12.4	0.34	11.7	0.35	11.0	0.36	9.8	0.35	-	-	-	-
	1150	3155		2995		2847		2683		2484		2257		1251		-	-
		16.0	0.40	15.5	0.42	15.1	0.44	14.5	0.46	13.8	0.47	12.9	0.47	9.8	0.40	-	-
3/4	1200	3264		3109		2965		2812		2627		2412		1629		-	-
		17.3	0.45	16.8	0.46	16.3	0.48	15.8	0.50	15.1	0.52	14.4	0.52	10.6	0.49	-	-
	1300	3577		3435		3306		3173		3019		2844		2238		-	-
		18.7	0.59	18.2	0.60	17.7	0.62	17.3	0.65	16.8	0.67	16.2	0.68	13.3	0.67	-	-
1	1350	3659		3520		3387		3262		3116		2944		2363		-	-
		19.0	0.63	18.5	0.65	18.1	0.67	17.7	0.69	17.2	0.71	16.6	0.73	14.0	0.72	-	-
	1400	3808		3675		3546		3426		3293		3140		2587		939	
		19.9	0.71	19.4	0.73	19.0	0.75	18.6	0.77	18.2	0.79	17.6	0.81	15.5	0.82	13.2	0.53
	1450	3942		3816		3689		3574		3451		3309		3783		1848	
		21.0	0.79	21.0	0.81	20.0	0.83	19.7	0.85	19.3	0.87	18.8	0.90	16.8	0.91	14.0	0.85
	1500	4075		3951		3826		3714		3602		3465		2974		2200	
		22.0	0.87	22.0	0.89	21.0	0.91	21.0	0.93	20.0	0.96	19.8	0.98	18.1	1.01	14.6	0.97

# RT SERIES BELT DRIVE FAN DATA

## UPBLAST ROOF EXHAUSTERS

### ➤ RT16BU

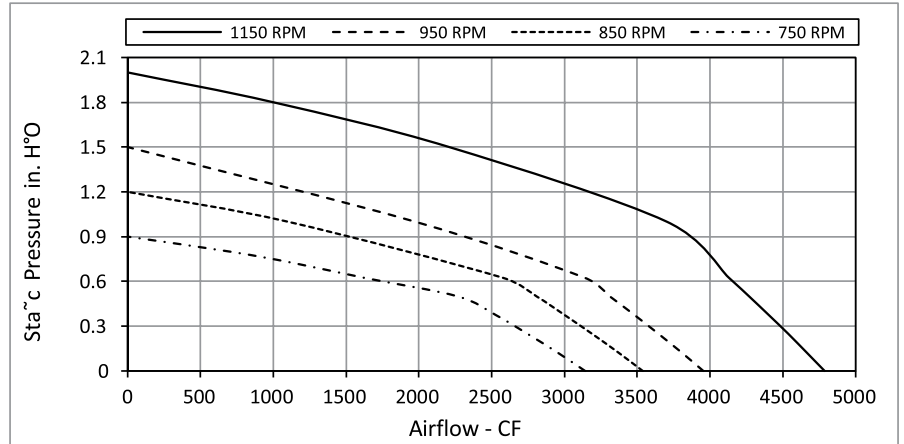
#### Dimensional Data



All dimensions in mm.

Roof Opening	Max Mtr. Frame
500 x 500	90
Damper Size	Weight (kg)
490 x 490	66

#### ➤ Performance Curve

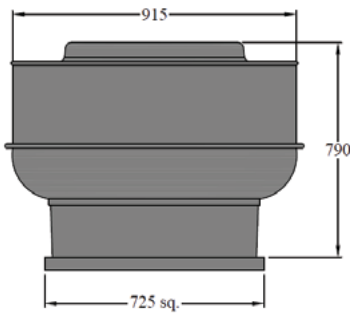


### ➤ Performance Data

Motor HP	Fan RPM	0.000" Pst CFM		0.125" Pst CFM		0.250" Pst CFM		0.375" Pst CFM		0.500" Pst CFM		0.625" Pst CFM		1.000" Pst CFM		1.500" Pst CFM	
		Sones	BHP	Sones	BHP	Sones	BHP	Sones	BHP	Sones	BHP	Sones	BHP	Sones	BHP	Sones	BHP
1/3	700	2971		2772		2552		2323		1948		907		—		—	
		10.9	0.25	10.5	0.27	10.1	0.28	9.8	0.29	9.2	0.29	8.9	0.20	—	—	—	—
	750	3142		2950		2744		2528		2266		1620		—		—	
		11.9	0.30	11.6	0.31	11.1	0.33	10.7	0.34	10.3	0.34	9.7	0.31	—	—	—	—
1/2	800	3330		3151		2957		2755		2546		2183		—		—	
		12.8	0.35	12.4	0.37	12.0	0.38	11.7	0.40	11.3	0.41	10.6	0.40	—	—	—	—
	850	3538		3368		3188		3001		2808		2575		—		—	
		13.8	0.42	13.5	0.44	13.1	0.46	12.7	0.47	12.3	0.49	11.9	0.49	—	—	—	—
3/4	900	3850		3694		3531		3362		3187		3009		1563		—	
		15.8	0.54	15.4	0.56	15.0	0.58	14.7	0.60	14.3	0.62	13.9	0.63	12.5	0.50	—	—
	950	3954		3803		3642		3481		3311		3138		1972		—	
		16.5	0.59	16.1	0.61	15.8	0.63	15.4	0.65	15.0	0.66	15.0	0.68	13.1	0.60	—	—
1	1000	4266		4126		3982		3831		3676		3518		2880		—	
		17.9	0.74	17.6	0.76	17.2	0.78	16.9	0.80	16.5	0.82	16.2	0.84	14.6	0.86	—	—
	1050	4500		4366		4231		4088		3943		3794		3299		—	
		18.9	0.87	18.6	0.89	18.3	0.92	17.9	0.94	17.6	0.96	17.2	0.97	15.9	1.01	—	—
	1150	4787		4662		4532		4403		4268		4129		3703		2209	
		21.0	1.04	20.0	1.07	20.0	1.10	19.7	1.12	19.3	1.14	19.0	1.16	17.7	1.21	15.6	1.03
1-1/2	1200	5037		4918		4798		4673		4546		4416		4012		3056	
		22.0	1.22	22.0	1.24	22.0	1.27	21.0	1.30	21.0	1.32	21.0	1.34	19.3	1.40	16.8	1.36
	1250	5166		5055		4933		4812		4688		4563		4170		3398	
		23.0	1.31	23.0	1.34	22.0	1.37	22.0	1.39	22.0	1.42	21.0	1.44	20.0	1.50	17.8	1.51

## RT18BU

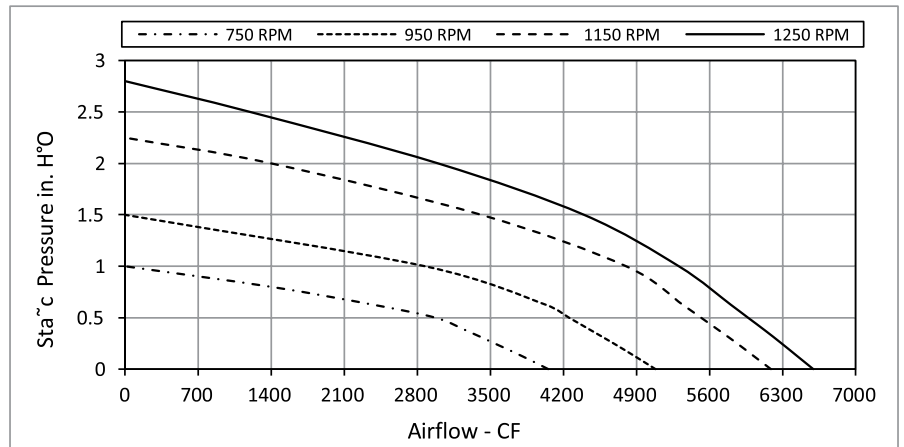
### Dimensional Data



All dimensions in mm.

Roof Opening	Max Mtr. Frame
500 x 500	100
Damper Size	Weight (kg)
490 x 490	74

### Performance Curve



### Performance Data

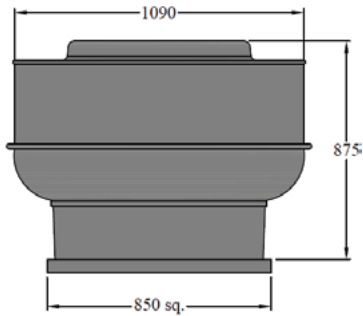
Motor HP	Fan RPM	0.000" Pst CFM		0.125" Pst CFM		0.250" Pst CFM		0.375" Pst CFM		0.500" Pst CFM		0.625" Pst CFM		1.000" Pst CFM		1.500" Pst CFM	
		Sones	BHP	Sones	BHP	Sones	BHP	Sones	BHP	Sones	BHP	Sones	BHP	Sones	BHP	Sones	BHP
1/2	750	4052		3808		3542		3271		2974		2383		—		—	
		13.1	0.39	12.7	0.42	12.2	0.44	11.5	0.46	10.6	0.48	9.7	0.46	—	—	—	—
3/4	800	4345		4115		3868		3618		3357		3010		—		—	
		15.2	0.48	14.8	0.51	14.2	0.53	13.7	0.56	12.6	0.58	11.6	0.58	—	—	—	—
	850	4503		4281		4042		3804		3555		3278		—		—	
		15.5	0.53	15.1	0.57	14.6	0.59	14.1	0.62	13.2	0.64	12.2	0.65	—	—	—	—
1	900	4804		4595		4376		4151		3923		3684		1675		—	
		17.1	0.65	16.8	0.68	16.3	0.71	15.8	0.74	15.1	0.76	14.3	0.78	12.3	0.59	—	—
	950	5081		4886		4682		4469		4255		4034		2875		—	
		18.9	0.77	18.7	0.81	18.3	0.84	17.8	0.86	17.3	0.89	16.5	0.92	13.8	0.90	—	—
1-1/2	1000	5425		5241		5053		4853		4653		4451		3671		—	
		21.0	0.93	21.0	0.97	20.0	1.01	19.9	1.04	19.5	1.07	18.9	1.10	16.5	1.12	—	—
	1050	5610		5431		5251		5058		4865		4671		4006		—	
		22.0	1.03	21.0	1.07	21.0	1.12	21.0	1.14	20.0	1.17	19.5	1.20	17.3	1.25	—	—
2	1100	5792		5621		5448		5262		5075		4887		4290		—	
		22.0	1.13	22.0	1.18	22.0	1.23	21.0	1.25	21.0	1.28	20.0	1.31	18.1	1.39	—	—
	1150	6189		6027		5860		5694		5520		5345		4802		3414	
		24.0	1.38	24.0	1.43	24.0	1.48	23.0	1.51	23.0	1.54	22.0	1.57	20.0	1.67	17.6	1.60
2	1200	6321		6162		6004		5838		5667		5495		4967		3786	
		25.0	1.47	25.0	1.52	24.0	1.57	24.0	1.61	23.0	1.64	23.0	1.67	21.0	1.77	18.3	1.77
	1250	6594		6443		6291		6134		5970		5806		5307		4399	
		26.0	1.67	26.0	1.73	26.0	1.78	26.0	1.82	25.0	1.85	25.0	1.88	23.0	1.99	21.0	2.00

# RT SERIES BELT DRIVE FAN DATA

## UPBLAST ROOF EXHAUSTERS

### ➤ RT24BU

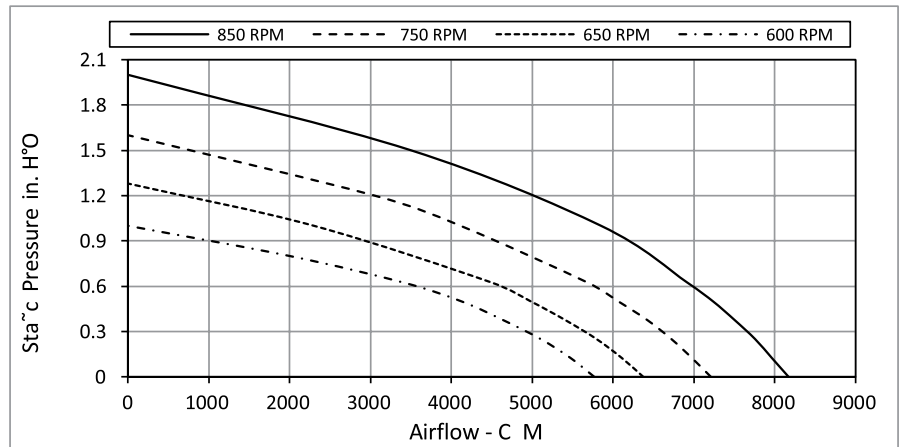
#### Dimensional Data



All dimensions in mm.

Roof Opening	Max Mtr. Frame
635 x 635	100
Damper Size	Weight (kg)
625 x 625	99

#### ➤ Performance Curve

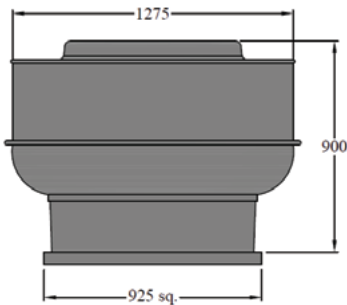


### ➤ Performance Data

Motor HP	Fan RPM	0.000" Pst CFM		0.125" Pst CFM		0.250" Pst CFM		0.375" Pst CFM		0.500" Pst CFM		0.625" Pst CFM		1.000" Pst CFM		1.500" Pst CFM	
		Sones	BHP	Sones	BHP	Sones	BHP	Sones	BHP	Sones	BHP	Sones	BHP	Sones	BHP	Sones	BHP
3/4	600	5762		5473		5100		4642		4122		3399		-		-	
		13.1	0.52	12.6	0.57	11.9	0.59	11.2	0.62	10.3	0.62	8.2	0.59	-	-	-	-
	625	6003		5726		5382		4955		4484		3890		-		-	
		14.3	0.59	13.7	0.64	13.0	0.67	12.3	0.70	11.6	0.71	9.9	0.69	-	-	-	-
1	650	6365		6107		5793		5411		4980		4493		-		-	
		14.7	0.71	14.2	0.76	13.7	0.79	13.0	0.82	12.3	0.85	11.4	0.84	-	-	-	-
	700	6720		6477		6191		5847		5450		5031		-		-	
		15.5	0.83	15.0	0.89	14.5	0.93	13.9	0.96	13.3	0.99	12.6	1.00	-	-	-	-
	750	7200		6974		6720		6425		6063		5680		4113		-	
		17.0	1.02	16.6	1.09	16.1	1.14	15.5	1.16	14.9	1.20	14.3	1.22	11.1	1.15	-	-
1-1/2	775	7439		7222		6984		6697		6360		5992		4619		-	
		17.9	1.13	17.5	1.19	17.1	1.25	16.5	1.27	16.0	1.31	15.4	1.34	12.4	1.30	-	-
	800	7725		7519		7296		7022		6713		6374		5182		-	
		19.1	1.27	18.6	1.33	18.1	1.40	17.6	1.42	17.0	1.45	16.5	1.50	14.1	1.48	-	-
	850	8155		7963		7750		7505		7235		6912		5851		-	
		19.6	1.49	19.2	1.56	18.8	1.63	18.3	1.66	17.8	1.69	17.2	1.74	15.5	1.77	-	-
2	875	8529		8327		8129		7898		7648		7352		6384		4317	
		21.0	1.69	21.0	1.77	20.0	1.84	19.7	1.89	19.2	1.91	18.6	1.95	17.0	2.04	13.9	1.83

RT30BU

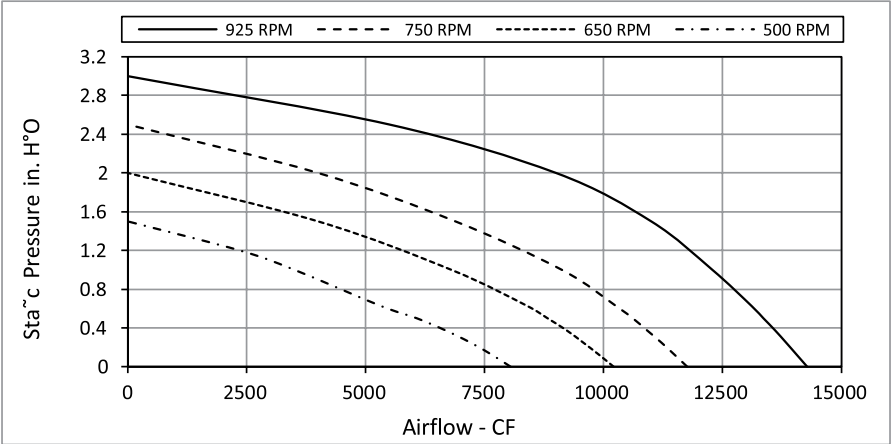
Dimensional Data



All dimensions in mm.

Roof Opening	Max Mtr. Frame
710 x 710	112
Damper Size	Weight (kg)
700 x 700	115

Performance Curve



Performance Data

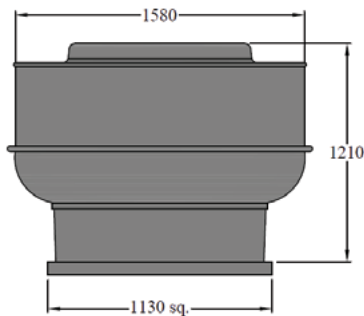
Motor HP	Fan RPM	0.000" Pst CFM		0.125" Pst CFM		0.250" Pst CFM		0.375" Pst CFM		0.500" Pst CFM		0.625" Pst CFM		1.000" Pst CFM		1.500" Pst CFM	
		Sones	BHP	Sones	BHP	Sones	BHP	Sones	BHP	Sones	BHP	Sones	BHP	Sones	BHP	Sones	BHP
1	500	8040		7642		7195		6674		6071		5324		-		-	
		14.1	0.73	13.3	0.79	12.4	0.83	11.6	0.87	10.8	0.91	9.9	0.92	-	-	-	-
1-1/2	550	8661		8295		7890		7427		6927		6303		-		-	
		15.4	0.91	14.8	0.98	14.2	1.02	13.4	1.06	12.7	1.12	11.8	1.14	-	-	-	-
	600	9280		8938		8566		8153		7698		7192		4847		-	
		16.8	1.12	16.2	1.19	15.6	1.24	15.0	1.29	14.3	1.34	13.5	1.39	10.4	1.33	-	-
2	650	10200		9897		9567		9220		8820		8400		6798		-	
		19.1	1.49	18.6	1.57	18.1	1.63	17.6	1.68	17.0	1.73	16.2	1.80	13.4	1.88	-	-
	675	10471		10168		9842		9513		9129		8724		7235		-	
		19.5	1.61	19.0	1.69	18.6	1.75	18.2	1.80	17.7	1.86	16.9	1.92	14.2	2.03	-	-
	700	10981		10692		10392		10073		9723		9346		8011		-	
		20.0	1.86	19.9	1.94	19.5	2.01	19.1	2.06	18.7	2.12	18.1	2.18	15.6	2.32	-	-
3	750	11755		11480		11210		10910		10611		10263		9120		6886	
		22.0	2.28	22.0	2.37	21.0	2.45	21.0	2.51	21.0	2.56	20.0	2.63	17.9	2.83	14.8	2.79
	725	12018		11754		11488		11196		10905		10563		9485		7426	
		23.0	2.44	22.0	2.53	22.0	2.61	22.0	2.67	21.0	2.73	21.0	2.79	18.7	3.01	15.5	3.01
	800	12602		12354		12102		11827		11549		11249		10244		8513	
		24.0	2.81	24.0	2.91	23.0	3.00	23.0	3.06	23.0	3.12	23.0	3.19	21.0	3.42	17.2	3.55
5	900	13991		13771		13544		13308		13058		12808		11952		10610	
		28.0	3.85	28.0	3.96	28.0	4.06	27.0	4.15	27.0	4.22	27.0	4.28	26.0	4.50	22.0	4.79
	925	14275		14054		13831		13603		13355		13112		12284		11001	
		29.0	4.09	29.0	4.19	29.0	4.30	28.0	4.39	28.0	4.46	28.0	4.53	27.0	4.75	23.0	5.07

# RT SERIES BELT DRIVE FAN DATA

## UPBLAST ROOF EXHAUSTERS

### ➤ RT36BU

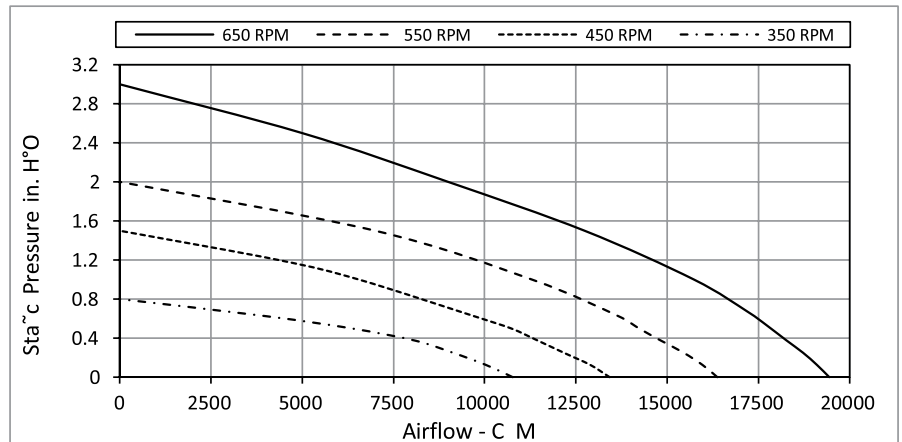
#### Dimensional Data



All dimensions in mm.

Roof Opening	Max Mtr. Frame
915 x 915	132
Damper Size	Weight (kg)
905 x 905	223

#### ➤ Performance Curve



### ➤ Performance Data

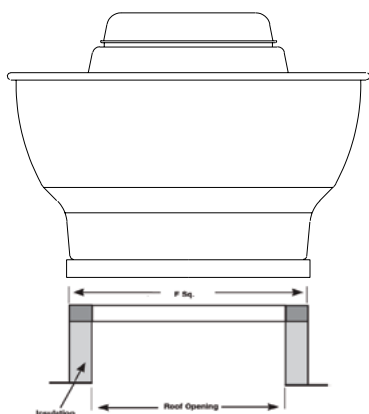
Motor HP	Fan RPM	0.000" Pst CFM		0.125" Pst CFM		0.250" Pst CFM		0.375" Pst CFM		0.500" Pst CFM		0.625" Pst CFM		1.000" Pst CFM		1.500" Pst CFM	
		Sones	BHP	Sones	BHP	Sones	BHP	Sones	BHP	Sones	BHP	Sones	BHP	Sones	BHP	Sones	BHP
1	350	10766		10037		9130		8086		6338		-		-		-	
		11.4	0.65	11.1	0.72	10.2	0.82	9.7	0.87	9.3	0.85	-	-	-	-	-	-
	375	11065		10362		9469		8523		7027		-		-		-	
1-1/2	400	12000	0.71	11169	0.78	10314	0.88	9503	0.94	8351	0.93	-	-	-	-	-	-
		13.5	0.86	13.3	0.93	12.5	1.04	11.7	1.11	10.9	1.16	-	-	-	-	-	-
	425	12680		12115		11324		10586		9711		8478		-		-	
2	450	15500	1.06	15400	1.15	14800	1.26	14000	1.35	13200	1.42	12300	1.42	-	-	-	-
		17.0	1.26	17.0	1.36	16.5	1.46	15.7	1.57	15.0	1.65	14.3	1.71	-	-	-	-
	475	14270		13798		13136		12432		11778		10998		-		-	
3	500	18800	1.52	18800	1.63	18600	1.71	18000	1.85	17200	1.95	16500	2.02	-	-	-	-
		21.0	1.72	21.0	1.85	21.0	1.92	20.0	2.07	19.4	2.18	18.6	2.26	-	-	-	-
	550	16376		15969		15455		14826		14223		13662		11292		-	
5	575	23.0	2.29	23.0	2.43	23.0	2.50	22.0	2.65	22.0	2.80	21.0	2.91	18.9	3.09	-	-
		24.0	2.55	24.0	2.69	24.0	2.77	23.0	2.90	23.0	3.07	22.0	3.20	20.0	3.45	-	-
	600	18143		17779		17345		16824		16245		15715		14033		-	
5	650	27.0	3.12	27.0	3.27	27.0	3.37	26.0	3.48	26.0	3.66	25.0	3.82	23.0	4.13	-	-
		29.0	3.83	29.0	4.00	29.0	4.13	29.0	4.22	28.0	4.38	28.0	4.57	26.0	4.97	23.0	5.10



# ACCESSORIES DIMENSIONS

## UPBLAST ROOF EXHAUSTERS

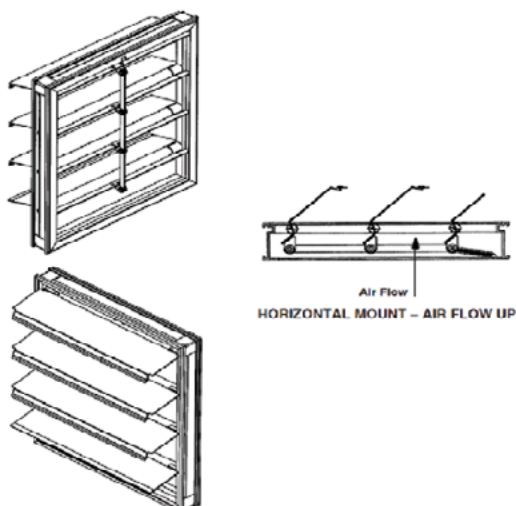
### ROOF CURB



MODEL NO.	Roof Opening	Curb Size F Sq.
RE09DU	225 x 225	460 x 460
RE10DU	300 x 300	460 x 460
RE12DU	300 x 300	460 x 460
RE13DU	400 x 400	510 x 510
RE16DU	400 x 400	510 x 510
RT08DU	225 x 225	460 x 460
RT10DU	300 x 300	460 x 460
RT11DU	300 x 300	460 x 460
RT13DU	300 x 300	460 x 460
RT16DU	400 x 400	510 x 510
RT12BU	400 x 400	620 x 620
RT14BU	400 x 400	620 x 620
RT16BU	500 x 500	720 x 720
RT18BU	500 x 500	720 x 720
RT24BU	635 x 635	840 x 840
RT30BU	710 x 710	920 x 920
RT36BU	915 x 915	1120 x 1120

All dimensions in mm.

### BACKDRAFT DAMPER



MODEL NO.	Curb Size F Sq.
RE09DU	215 x 215
RE10DU	290 x 290
RE12DU	290 x 290
RE13DU	390 x 390
RE16DU	390 x 390
RT08DU	215 x 215
RT10DU	290 x 290
RT11DU	290 x 290
RT13DU	290 x 290
RT16DU	390 x 390
RT12BU	390 x 390
RT14BU	390 x 390
RT16BU	490 x 490
RT18BU	490 x 490
RT24BU	625 x 625
RT30BU	700 x 700
RT36BU	905 x 905

All dimensions in mm.

#### Notes:

1. All dimensions are in mm unless otherwise noted.
2. Dimensions are not to be used for construction.
3. Damper sizes are nominal.

### PERFORMANCE

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

### CONSTRUCTION

Fans shall be constructed of aluminum for durability and appearance. Fan spinning shall have rolled bead edge for rigidity. Units shall have a deep venture inlet to prevent snow and rain entry into the building. The curb cap shall include pre-punched mounting holes for ease of attachment.

### INSTALLATION

Fans shall bear a permanently attached nameplate displaying model and serial number of the unit for future identification.

### MOTOR ASSEMBLY

RT motors shall be mounted out of the exhaust airstream and RE motors shall be mounted within the exhaust airstream.

### IMPELLER

Fan impellers shall be of the centrifugal backward inclined/curved type, constructed of aluminum and containing a matching inlet venturi for optimum unit performance. Impellers shall be statically and dynamically balanced.

### MOTOR

Motors shall be heavy-duty ball bearing type, closely matched to the fan load. All single-phase TEAO motors shall contain thermal overload protection. Motors for use with speed control shall provide good speed controllability without any objectionable noise.

### FINISH AND COATING

Fans shall be constructed of aluminum. Optional coatings shall be available.

### ACCESSORIES

When specified, accessories such as backdraft damper, roof curb, variable speed controller, NEMA 4 disconnect switch, aluminum bird screen, aluminum insect screen and special coatings shall be provided by Twin City.

### FACTORY RUN TEST

Prior to shipment, all fans shall be completely assembled and test run as a unit at operating speed or maximum RPM allowed for the particular construction type. Each impeller shall be statically and dynamically balanced in accordance with ISO1940 G 2.5 or 6.3 "Balance Quality and Vibration Levels for Fans."

### GUARANTEE

The manufacturer shall guarantee the workmanship and materials for its roof and wall mounted centrifugal exhaust fans for at least one (1) year from startup or eighteen (18) months from shipment, whichever occurs first.

# INDUSTRIAL PROCESS AND COMMERCIAL VENTILATION SYSTEMS

CENTRIFUGAL FANS | UTILITY SETS | PLENUM & PLUG FANS | INLINE CENTRIFUGAL FANS  
MIXED FLOW FANS | TUBEAXIAL & VANEAXIAL FANS | PROPELLER WALL FANS | PROPELLER ROOF VENTILATORS  
CENTRIFUGAL ROOF & WALL EXHAUSTERS | CEILING VENTILATORS | GRAVITY VENTILATORS | DUCT BLOWERS  
RADIAL BLADED FANS | RADIAL TIP FANS | HIGH EFFICIENCY INDUSTRIAL FANS | PRESSURE BLOWERS  
LABORATORY EXHAUST FANS | FILTERED SUPPLY FANS | MANCOOLERS | FIBERGLASS FANS | CUSTOM FANS



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