





# CFI MECHANICAL, INC.

[www.cfimechanical.com](http://www.cfimechanical.com)

THIS ABOVE PROPOSAL AND TERMS ARE ACCEPTED:

6109 Brittmoore • Houston, TX 77041

P: (832) 467-8200 • F: (832) 467-8203

\_\_\_\_\_  
**(“Purchaser”)**

BY: \_\_\_\_\_

TITLE: \_\_\_\_\_

DATE: \_\_\_\_\_

**CFI MECHANICAL, INC.**

**(“Seller”)**

BY: *Art Filkins*

TITLE: Service Sales

DATE: 3/26/2021



TERMS AND CONDITIONS

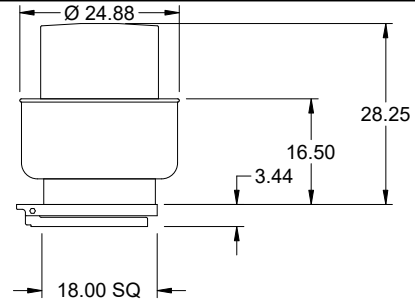
The acceptance of this Proposal is expressly limited to the following terms and conditions (the "Terms"). No attempted acceptance which varies or adds to the Terms shall be effective and any such counter-proposal are hereby deemed rejected. Seller shall not be bound by terms additional to or different from those contained in these Terms t, unless such terms are expressly agreed to in writing and signed by Seller. These Terms represents the entire agreement between the parties and supersedes any prior or contemporaneous written or oral agreements, representations, or warranties.

1. Purchaser shall provide Seller with timely access to areas and equipment and a safe environment in which to perform the Work, which shall be performed during normal working hours of Seller. Purchaser represents that it is not aware of any asbestos-containing or other hazardous materials at the Project, Seller has no responsibility or liability for the investigation, detection, testing, removal, remediation and/or encapsulation of any and all asbestos-containing or other hazardous materials at the site of the Project., Any investigation, detection, testing, removal, remediation and/or encapsulation of any and all asbestos-containing or other hazardous material will be the responsibility of and at the expense of Purchaser, the Owner or others, If Seller encounters any material believed to be asbestos-containing or other hazardous material, Seller may stop all work in the affected area until Purchaser notifies Seller in writing that it is safe to proceed. Seller shall have no responsibility or liability arising out of or related to, and **PURCHASER HEREBY WAIVES AND RELEASES ANY CLAIMS OR CAUSES OF ACTION FOR, THE PRESENCE, GROWTH OR DEVELOPMENT OF MOLD OR MILDEW AT THE PROJECT, OR FOR THE REMEDIATION OF ANY SUCH MOLD OR MILDEW, OR ANY COSTS, EXPENSES, DAMAGES, OR LIABILITIES RELATED THERETO, EVEN IF SUCH MOLD OR MILDEW IS CAUSED IN WHOLE OR IN PART BY ANY DEFECTIVE LABOR OR MATERIAL FURNISHED HEREUNDER OR ANY BREACH OF THIS AGREEMENT.**
2. Any Work found to be defective for a period of ninety (90) days from the date the material is installed or the Work is completed, shall at Seller's option, be repaired or replaced and such repair or replacement shall be Purchaser's sole and exclusive remedy. This warranty does not cover damage or defects caused by normal wear and tear, improper use or maintenance of the material by Purchaser, accident, fire, flood, natural disaster, act of vandalism or terrorism, or other causes beyond Seller's reasonable control. This warranty does not cover replacement of belts or filter maintenance. **SELLER HEREBY EXPRESSLY DISCLAIMS ANY AND ALL IMPLIED OR STATUTORY WARRANTIES, INCLUDING BUT NOT LIMITED TO ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR INTENDED USE.**
3. Purchaser and Seller hereby waive any and all claims for incidental, indirect, special, consequential, punitive or exemplary damages against the other party, arising out of or related to the Work hereunder or any breach of the Terms hereof. The Seller will not be liable for any delays, costs, loss or damages caused by or any delays due to fire, strikes, labor troubles, governmental regulations (including orders, recommendations or guidelines), the elements, virus, epidemic pandemic (including the Novel Coronavirus), transportation delays, or any other causes beyond its reasonable control.
4. **TO THE FULLEST EXTENT PERMITTED BY LAW, PURCHASER SHALL DEFEND, INDEMNIFY AND HOLD HARMLESS SELLER, ITS AGENTS AND EMPLOYEES (EACH AN "INDEMNIFIED PARTY") FROM AND AGAINST ALL CLAIMS, DAMAGES, LOSSES AND EXPENSES, INCLUDING BUT NOT LIMITED TO ATTORNEYS' FEES, ARISING OUT OF OR RESULTING FROM THE PERFORMANCE OF WORK HEREUNDER, PROVIDED THAT SUCH CLAIM, DAMAGE, LOSS OR EXPENSE IS CAUSED IN WHOLE OR IN PART BY AN ACTIVE OR PASSIVE ACT OR OMISSION OF PURCHASER, ANYONE DIRECTLY OR INDIRECTLY EMPLOYED BY PURCHASER, OR ANYONE FOR WHOSE ACTS PURCHASE MAY BE LIABLE, REGARDLESS OF WHETHER IT IS CAUSED IN PART BY THE NEGLIGENCE OF SELLER.**
5. **NOTWITHSTANDING ANYTHING TO THE CONTRARY, SELLER'S TOTAL LIABILITY FOR WORK UNDER THE PROPOSAL OR FOR ANY OTHER WORK PROVIDED TO PURCHASER BY SELLER SHALL BE LIMITED TO AND SHALL NEVER EXCEED THE AMOUNT PAID TO SELLER UNDER THIS AGREEMENT.**
6. If by any act or omission on Purchaser's part or any act beyond the reasonable control of Seller, the Seller's performance is delayed for a period of 90 days or more, Seller shall have the option of terminating the Work t, and in case of such termination after Seller has partially performed the Work, Purchaser agrees to pay Seller the portion of the total contract price attributable to the Work installed, ordered or delivered as of the date of termination, as well as any and all costs of termination, including but not limited to costs of terminating subcontracts or purchase orders, costs of work-in-progress, and costs of demobilization, and any and all delay damages incurred by Seller.
7. Purchaser shall be responsible for securing the Work from loss and protecting from damage and shall bear the risk of loss with respect to all material installed and all material delivered to the Project. Notwithstanding the foregoing, the title to all material shall remain in the Seller until payment in full is made by Purchaser. Purchaser shall insure such materials against loss or damage in amount and manner sufficient to protect the interest of the Seller, and Seller shall be named as an additional insured under such insurance.
8. It is agreed the Seller reserves a contractual lien and security interest in all material furnished hereunder until the entire price to be paid and all other sums due Seller u have been fully paid. Purchaser shall execute such financing statements or other documents requested by Seller as necessary to perfect Seller's security interest. In the event of default in the making of any such payment, or in the event Purchaser becomes insolvent, makes an assignment for the benefit of creditors or in the event that a proceeding in bankruptcy or insolvency be instituted against Purchaser, or voluntarily by Purchaser, then at Seller's option, Seller, its agents, successors and assigns may, without notice or demand, resell the material or any part thereof at either public or private sale. If the unpaid balance due Seller under this agreement, including any interest due and damages resulting from Purchaser's default, including any attorneys' fees incurred and the expenses of resale, are not satisfied by proceeds of the sale, Purchaser agrees promptly to pay such deficiency. If there is a surplus from the proceeds of the sale after the payment of the above items, it shall be paid to Purchaser.
9. In the event of any default by Seller t, Purchaser shall give Seller written notice of default, and shall give Seller five (5) days from the date of Seller's receipt of such notice to cure or commence and diligently pursue cure of such default.
10. The rights, duties and obligations of the parties hereunder shall be governed and construed in accordance with the laws of the State of Texas, excluding any conflicts or laws or rules which would refer its interpretation to the laws of another jurisdiction.
11. At Seller's option, all claims, disputes, and other matters in question arising out of or relating to this Agreement, or the breach thereof, may be decided by arbitration, which shall be conducted in accordance with the Construction Industry Arbitration Rules of the American Arbitration Association then in effect, with a single arbitrator under regular track procedures unless otherwise elected by Seller. All arbitration proceedings or other legal proceedings will be in Houston, Texas. This agreement to arbitrate shall be specifically enforceable. It is agreed that the Work performed, and labor and/or materials furnished pursuant to this Agreement affects and involves interstate commerce. Any legal action against the Seller relating, or the breach of these Terms, shall be commenced within one (1) year from the date of the completion of the Work. The award rendered by the arbitrators shall be final and judgment may be entered upon it in accordance with the applicable law in the court having jurisdiction thereof.

# Model: CUE-120-A

Direct Drive Upblast Centrifugal Roof Exhaust Fan

Previously: CUE-121-A

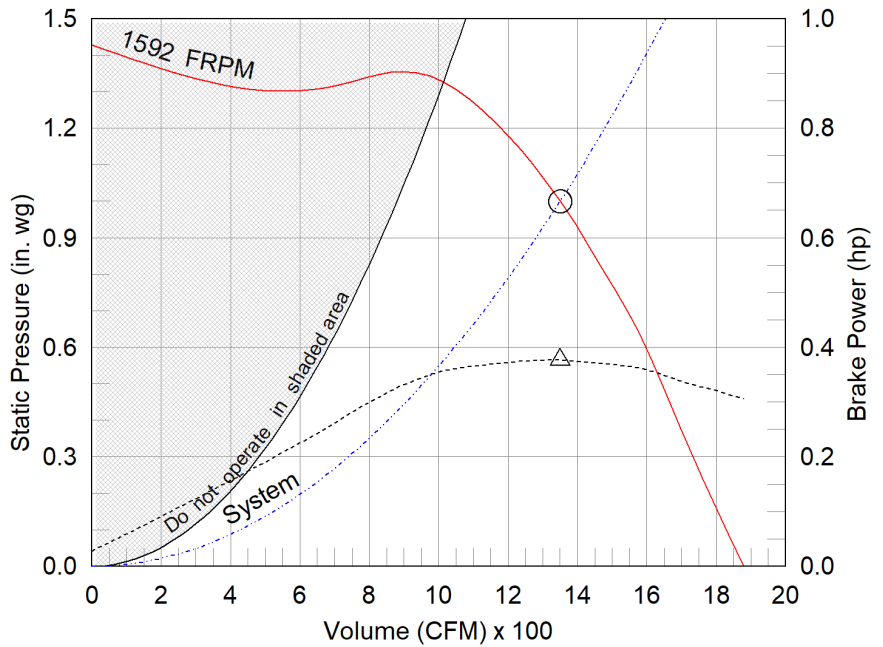


OVERALL HEIGHT MAY BE GREATER DEPENDING ON MOTOR, ADAPTER, AND/OR HINGE BASE.

Dimensional	
Quantity	1
Weight w/o Acc's (lb)	60
Weight w/ Acc's (lb)	78
Max T Motor Frame Size	56
Standard Curb Cap Size (in.)	19 x 19
Roof Opening (in.)	14.5 x 14.5

Performance	
Requested Volume (CFM)	1,350
Actual Volume (CFM)	1,350
Total External SP (in. wg)	1
Fan RPM	1592
Operating Power (hp)	0.38
Elevation (ft)	105
Airstream Temp.(F)	70
Air Density (lb/ft3)	0.075
Tip Speed (ft/min)	5,444
Static Eff. (%)	56

Motor	
Motor Mounted	Yes
Size (hp)	1/2
Voltage/Cycle/Phase	115/60/1
Enclosure	ODP
Motor RPM	1725
Efficiency Rating	Standard
Windings	1
NEC FLA* (Amps)	9.8



- △ Operating Bhp point
- Operating point at Total External SP
- Fan curve
- - - System curve
- - - Brake horsepower curve

### Sound Power by Octave Band

Sound Data	62.5	125	250	500	1000	2000	4000	8000	LwA	dBA	Sones
Inlet	80	80	86	72	67	66	61	52	79	68	15.8

### Notes:

All dimensions shown are in units of in.  
\*NEC FLA - based on tables 430.248 or 430.250 of National Electrical Code 2017. Actual motor FLA may vary, for sizing thermal overload, consult factory.  
LwA - A weighted sound power level, based on ANSI S1.4  
dBA - A weighted sound pressure level, based on 11.5 dB attenuation per Octave band at 5 ft - dBA levels are not licensed by AMCA International  
Sones - calculated using ANSI/AMCA 301 at 5 ft



## Model: CUE-120-A

### Direct Drive Upblast Centrifugal Roof Exhaust Fan

#### Standard Construction Features:

- Aluminum housing - Backward inclined aluminum wheel - Aluminum curb cap with prepunched mounting holes - Drain trough - Ball bearing motors (sizes 85-300 and all Vari Green), sleeve bearing motors (sizes 60-80) - Motor isolated on shock mounts - Corrosion resistant fasteners

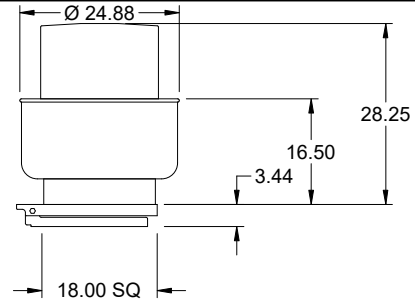
#### Selected Options & Accessories:

PSC Motor  
Standard Curb Cap Size - 19 in. Square  
UL/cUL 762 Listed - "Power Ventilators for Rest. Exh. Appliances"  
Switch, NEMA-3R, Toggle, Shipped with Unit  
Junction Box Mounted & Wired  
High Wind Rated (+/- 150 PSF Rating)  
Florida Product Approval #FL13225.1 & Miami-Dade NOA #19-0717.02  
Hinged Base (Attached)  
High Temp Curb Seal Rated for Continuous Duty at 1500 F (Attached)  
Coated with Permator, Concrete Gray-RAL 7023, Fan And Attached Acc  
Non-Stick Coated Wheel (Teflon)  
Solid State Speed Control, 10 Amp, Shipped Loose  
Grease Trap with Absorbent Material  
Birdscreen: Aluminum, nom. 86% Free Area  
Clean-out Port  
Unit Warranty: 1 Yr (Standard)

# Model: CUE-120-A

Direct Drive Upblast Centrifugal Roof Exhaust Fan

Previously: CUE-121-A

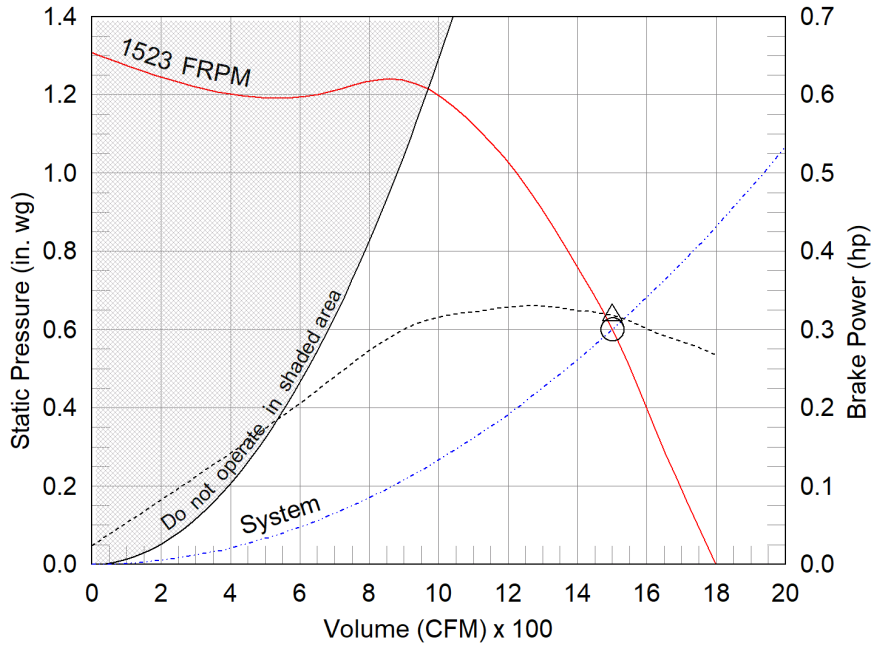


OVERALL HEIGHT MAY BE GREATER DEPENDING ON MOTOR, ADAPTER, AND/OR HINGE BASE.

Dimensional	
Quantity	1
Weight w/o Acc's (lb)	60
Weight w/ Acc's (lb)	78
Max T Motor Frame Size	56
Standard Curb Cap Size (in.)	19 x 19
Roof Opening (in.)	14.5 x 14.5

Performance	
Requested Volume (CFM)	1,500
Actual Volume (CFM)	1,500
Total External SP (in. wg)	0.6
Fan RPM	1523
Operating Power (hp)	0.32
Elevation (ft)	105
Airstream Temp.(F)	70
Air Density (lb/ft3)	0.075
Tip Speed (ft/min)	5,210
Static Eff. (%)	45

Motor	
Motor Mounted	Yes
Size (hp)	1/2
Voltage/Cycle/Phase	115/60/1
Enclosure	ODP
Motor RPM	1725
Efficiency Rating	Standard
Windings	1
NEC FLA* (Amps)	9.8



- △ Operating Bhp point
- Operating point at Total External SP
- Fan curve
- - - System curve
- - - Brake horsepower curve

### Sound Power by Octave Band

Sound Data	62.5	125	250	500	1000	2000	4000	8000	LwA	dBA	Sones
Inlet	78	78	85	70	65	65	59	51	78	66	14.5

### Notes:

All dimensions shown are in units of in.  
\*NEC FLA - based on tables 430.248 or 430.250 of National Electrical Code 2017. Actual motor FLA may vary, for sizing thermal overload, consult factory.  
LwA - A weighted sound power level, based on ANSI S1.4  
dBA - A weighted sound pressure level, based on 11.5 dB attenuation per Octave band at 5 ft - dBA levels are not licensed by AMCA International  
Sones - calculated using ANSI/AMCA 301 at 5 ft



## Model: CUE-120-A

### Direct Drive Upblast Centrifugal Roof Exhaust Fan

#### Standard Construction Features:

- Aluminum housing - Backward inclined aluminum wheel - Aluminum curb cap with prepunched mounting holes - Drain trough - Ball bearing motors (sizes 85-300 and all Vari Green), sleeve bearing motors (sizes 60-80) - Motor isolated on shock mounts - Corrosion resistant fasteners

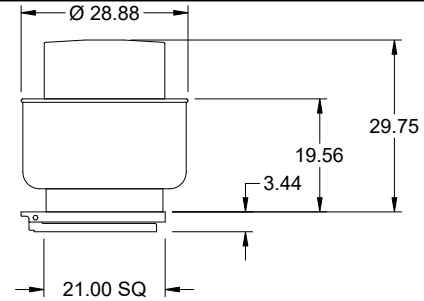
#### Selected Options & Accessories:

PSC Motor  
Standard Curb Cap Size - 19 in. Square  
UL/cUL 762 Listed - "Power Ventilators for Rest. Exh. Appliances"  
Switch, NEMA-3R, Toggle, Shipped with Unit  
Junction Box Mounted & Wired  
High Wind Rated (+/- 150 PSF Rating)  
Florida Product Approval #FL13225.1 & Miami-Dade NOA #19-0717.02  
Hinged Base (Attached)  
High Temp Curb Seal Rated for Continuous Duty at 1500 F (Attached)  
Coated with Permator, Concrete Gray-RAL 7023, Fan And Attached Acc  
Non-Stick Coated Wheel (Teflon)  
Solid State Speed Control, 10 Amp, Shipped Loose  
Grease Trap with Absorbent Material  
Birdscreen: Aluminum, nom. 86% Free Area  
Clean-out Port  
Unit Warranty: 1 Yr (Standard)

# Model: CUE-160-B

Direct Drive Upblast Centrifugal Roof Exhaust Fan

Previously: CUE-161-B

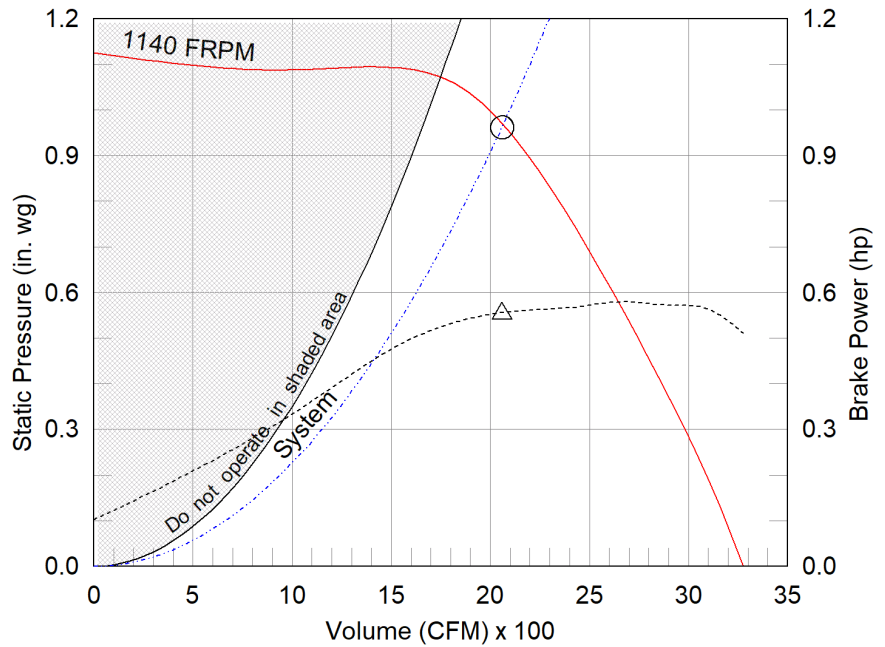


OVERALL HEIGHT MAY BE GREATER DEPENDING ON MOTOR, ADAPTER, AND/OR HINGE BASE.

Dimensional	
Quantity	1
Weight w/o Acc's (lb)	104
Weight w/ Acc's (lb)	125
Max T Motor Frame Size	145
Standard Curb Cap Size (in.)	22 x 22
Roof Opening (in.)	18.5 x 18.5

Performance	
Requested Volume (CFM)	2,100
Actual Volume (CFM)	2,059
Total External SP (in. wg)	0.961
Fan RPM	1140
Operating Power (hp)	0.55
Elevation (ft)	105
Airstream Temp.(F)	70
Air Density (lb/ft3)	0.075
Tip Speed (ft/min)	4,962
Static Eff. (%)	56

Motor	
Motor Mounted	Yes
Size (hp)	1
Voltage/Cycle/Phase	460/60/3
Enclosure	TEFC
Motor RPM	1140
Efficiency Rating	Standard
Windings	1



- △ Operating Bhp point
- Operating point at Total External SP
- Fan curve
- - - System curve
- - - Brake horsepower curve

### Static Pressure Calculations

External SP	1 in. wg
Direct Drive RPM Adjustment	-0.039 in. wg
<b>Total External SP</b>	<b>0.961 in. wg</b>

### Sound Power by Octave Band

Sound Data	62.5	125	250	500	1000	2000	4000	8000	LwA	dBA	Sones
Inlet	73	79	76	75	70	66	62	58	76	65	13.1

### Notes:

All dimensions shown are in units of in.  
\*Please consult factory for actual motor amp draw  
LwA - A weighted sound power level, based on ANSI S1.4  
dBA - A weighted sound pressure level, based on 11.5 dB attenuation per Octave band at 5 ft - dBA levels are not licensed by AMCA International  
Sones - calculated using ANSI/AMCA 301 at 5 ft  
The motor provided on this fan is inverter ready and meets NEMA MG1 Part 31.4.4.2





## Model: CUE-160-B

### Direct Drive Upblast Centrifugal Roof Exhaust Fan

#### Standard Construction Features:

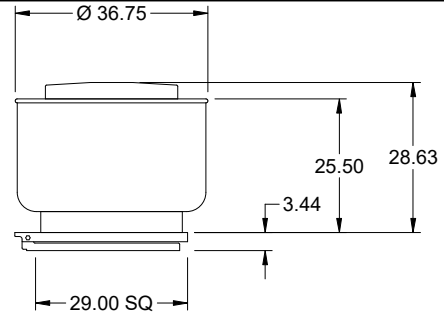
- Aluminum housing - Backward inclined aluminum wheel - Aluminum curb cap with prepunched mounting holes - Drain trough - Ball bearing motors (sizes 85-300 and all Vari Green), sleeve bearing motors (sizes 60-80) - Motor isolated on shock mounts - Corrosion resistant fasteners

#### Selected Options & Accessories:

Motor VFD Rated without Shaft Grounding Protection  
Standard Curb Cap Size - 22 in. Square  
UL/cUL 762 Listed - "Power Ventilators for Rest. Exh. Appliances"  
Switch, NEMA-1, Toggle, Shipped with Unit  
Junction Box Mounted & Wired  
High Wind Rated (+/- 150 PSF Rating)  
Florida Product Approval #FL13225.1 & Miami-Dade NOA #19-0717.02  
Hinged Base (Attached)  
High Temp Curb Seal Rated for Continuous Duty at 1500 F (Attached)  
Coated with Permator, Concrete Gray-RAL 7023, Fan And Attached Acc  
Non-Stick Coated Wheel (Teflon)  
Grease Trap with Absorbent Material  
Birdscreen: Aluminum, nom. 86% Free Area  
Clean-out Port  
Unit Warranty: 1 Yr (Standard)

# Model: CUBE-200HP-30

## Belt Drive Upblast Centrifugal Roof Exhaust Fan

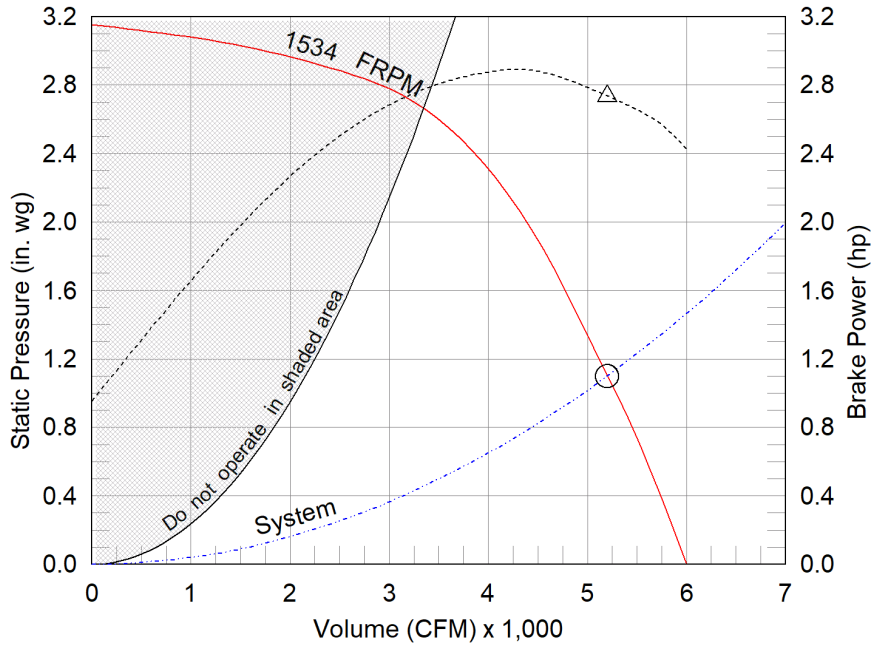


OVERALL HEIGHT MAY BE GREATER DEPENDING ON MOTOR, ADAPTER, AND/OR HINGE BASE.

Dimensional	
Quantity	1
Weight w/o Acc's (lb)	162
Weight w/ Acc's (lb)	188
Max T Motor Frame Size	184
Standard Curb Cap Size (in.)	30 x 30
Roof Opening (in.)	20.5 x 20.5

Performance	
Requested Volume (CFM)	5,200
Actual Volume (CFM)	5,200
Total External SP (in. wg)	1.1
Fan RPM	1534
Operating Power (hp)	2.73
Elevation (ft)	105
Airstream Temp.(F)	70
Air Density (lb/ft3)	0.075
Drive Loss (%)	4.5
Tip Speed (ft/min)	8,584
Static Eff. (%)	34

Motor	
Motor Mounted	Yes
Size (hp)	3
Voltage/Cycle/Phase	460/60/3
Enclosure	TEFC
Motor RPM	1725
Efficiency Rating	NEMA Premium
Windings	1
NEC FLA* (Amps)	4.8



- △ Operating Bhp point
- Operating point at Total External SP
- Fan curve
- - - System curve
- - - Brake horsepower curve

### Sound Power by Octave Band

Sound Data	62.5	125	250	500	1000	2000	4000	8000	LwA	dBA	Sones
Inlet	82	80	92	83	82	79	74	70	88	77	27

### Notes:

All dimensions shown are in units of in.  
\*NEC FLA - based on tables 430.248 or 430.250 of National Electrical Code 2017. Actual motor FLA may vary, for sizing thermal overload, consult factory.  
LwA - A weighted sound power level, based on ANSI S1.4  
dBA - A weighted sound pressure level, based on 11.5 dB attenuation per Octave band at 5 ft - dBA levels are not licensed by AMCA International  
Sones - calculated using ANSI/AMCA 301 at 5 ft  
The motor provided on this fan is inverter ready and meets NEMA MG1 Part 31.4.4.2



## Model: CUBE-200HP-30

### Belt Drive Upblast Centrifugal Roof Exhaust Fan

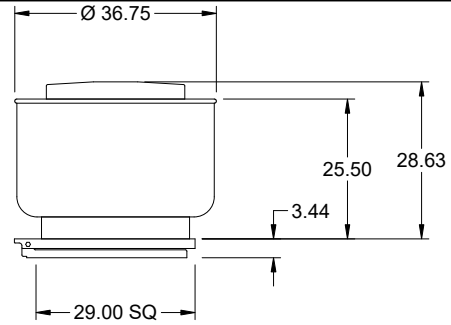
#### Standard Construction Features:

- Aluminum housing - Backward inclined aluminum wheel - Curb cap with prepunched mounting holes - Motor and drives isolated on shock mounts - Drain trough - Ball bearing motors - Adjustable motor pulley - Adjustable motor plate - Fan shaft mounted in ball bearing pillow blocks - Bearings meet or exceed temperature rating of fan - Static resistant belts - Corrosion resistant fasteners - Internal lifting lugs

#### Selected Options & Accessories:

NEMA Premium Efficient Motor - meets NEMA Table 12-12  
Motor VFD Rated without Shaft Grounding Protection  
Standard Curb Cap Size - 30 in. Square  
UL/cUL 762 Listed - "Power Ventilators for Rest. Exh. Appliances"  
Switch, NEMA-1, Toggle, Shipped with Unit  
Junction Box Mounted & Wired  
High Wind Rated (+/- 150 PSF Rating)  
Florida Product Approval #FL13225.1 & Miami-Dade NOA #19-0717.02  
Hinged Base (Attached)  
High Temp Curb Seal Rated for Continuous Duty at 1500 F (Attached)  
Coated with Permator, Concrete Gray-RAL 7023, Fan And Attached Acc  
Non-Stick Coated Wheel (Teflon)  
Grease Trap with Absorbent Material  
Birdscreen: Aluminum, nom. 86% Free Area  
Heat Baffle (Attached)  
Bearings with Grease Fittings, L10 life of 100,000 hrs (L50 avg. life 500,000 hrs)  
Clean-out Port  
Unit Warranty: 1 Yr (Standard)

**Model: CUBE-180HP-20**  
Belt Drive Upblast Centrifugal Roof Exhaust Fan

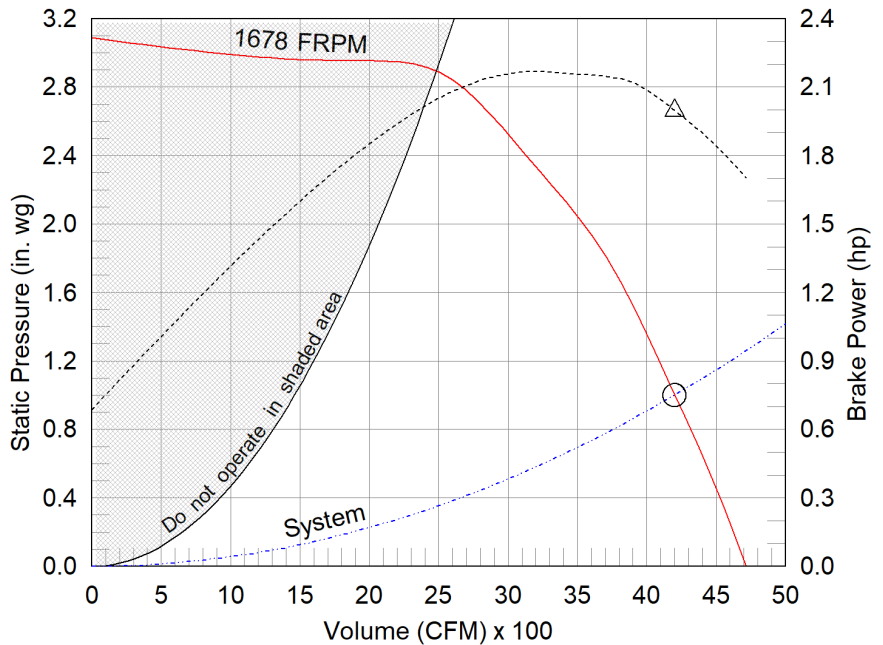


OVERALL HEIGHT MAY BE GREATER DEPENDING ON MOTOR, ADAPTER, AND/OR HINGE BASE.

Dimensional	
Quantity	1
Weight w/o Acc's (lb)	132
Weight w/ Acc's (lb)	158
Max T Motor Frame Size	184
Standard Curb Cap Size (in.)	30 x 30
Roof Opening (in.)	20.5 x 20.5

Performance	
Requested Volume (CFM)	4,200
Actual Volume (CFM)	4,200
Total External SP (in. wg)	1
Fan RPM	1678
Operating Power (hp)	2
Elevation (ft)	105
Airstream Temp.(F)	70
Air Density (lb/ft3)	0.075
Drive Loss (%)	4.9
Tip Speed (ft/min)	8,125
Static Eff. (%)	35

Motor	
Motor Mounted	Yes
Size (hp)	2
Voltage/Cycle/Phase	460/60/3
Enclosure	TEFC
Motor RPM	1725
Efficiency Rating	Standard
Windings	1
NEC FLA* (Amps)	3.4



- △ Operating Bhp point
- Operating point at Total External SP
- Fan curve
- - - System curve
- - - Brake horsepower curve

Sound Power by Octave Band

Sound Data	62.5	125	250	500	1000	2000	4000	8000	LwA	dBA	Sones
Inlet	88	83	88	87	78	77	76	69	87	76	26

**Notes:**

All dimensions shown are in units of in.  
\*NEC FLA - based on tables 430.248 or 430.250 of National Electrical Code 2017. Actual motor FLA may vary, for sizing thermal overload, consult factory.  
LwA - A weighted sound power level, based on ANSI S1.4  
dBA - A weighted sound pressure level, based on 11.5 dB attenuation per Octave band at 5 ft - dBA levels are not licensed by AMCA International  
Sones - calculated using ANSI/AMCA 301 at 5 ft  
The motor provided on this fan is inverter ready and meets NEMA MG1 Part 31.4.4.2



## Model: CUBE-180HP-20

### Belt Drive Upblast Centrifugal Roof Exhaust Fan

#### Standard Construction Features:

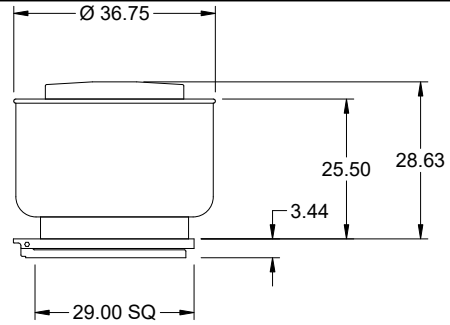
- Aluminum housing - Backward inclined aluminum wheel - Curb cap with prepunched mounting holes - Motor and drives isolated on shock mounts - Drain trough - Ball bearing motors - Adjustable motor pulley - Adjustable motor plate - Fan shaft mounted in ball bearing pillow blocks - Bearings meet or exceed temperature rating of fan - Static resistant belts - Corrosion resistant fasteners - Internal lifting lugs

#### Selected Options & Accessories:

Motor VFD Rated without Shaft Grounding Protection  
Standard Curb Cap Size - 30 in. Square  
UL/cUL 762 Listed - "Power Ventilators for Rest. Exh. Appliances"  
Switch, NEMA-1, Toggle, Shipped with Unit  
Junction Box Mounted & Wired  
High Wind Rated (+/- 150 PSF Rating)  
Florida Product Approval #FL13225.1 & Miami-Dade NOA #19-0717.02  
Hinged Base (Attached)  
High Temp Curb Seal Rated for Continuous Duty at 1500 F (Attached)  
Coated with Permator, Concrete Gray-RAL 7023, Fan And Attached Acc  
Non-Stick Coated Wheel (Teflon)  
Grease Trap with Absorbent Material  
Birdscreen: Aluminum, nom. 86% Free Area  
Heat Baffle (Attached)  
Bearings with Grease Fittings, L10 life of 100,000 hrs (L50 avg. life 500,000 hrs)  
Clean-out Port  
Unit Warranty: 1 Yr (Standard)

# Model: CUBE-180HP-20

## Belt Drive Upblast Centrifugal Roof Exhaust Fan

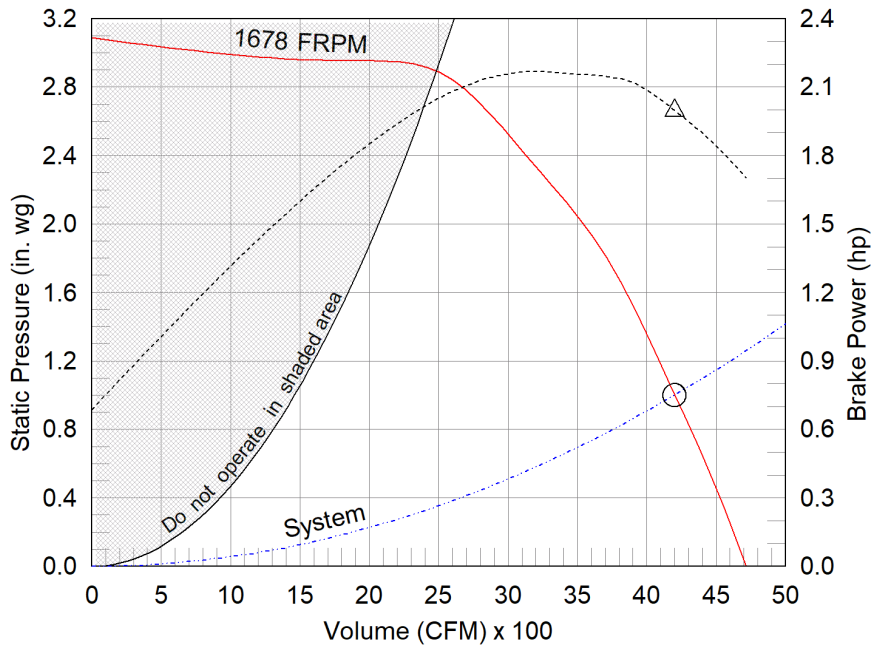


OVERALL HEIGHT MAY BE GREATER DEPENDING ON MOTOR, ADAPTER, AND/OR HINGE BASE.

Dimensional	
Quantity	1
Weight w/o Acc's (lb)	132
Weight w/ Acc's (lb)	158
Max T Motor Frame Size	184
Standard Curb Cap Size (in.)	30 x 30
Roof Opening (in.)	20.5 x 20.5

Performance	
Requested Volume (CFM)	4,200
Actual Volume (CFM)	4,200
Total External SP (in. wg)	1
Fan RPM	1678
Operating Power (hp)	2
Elevation (ft)	105
Airstream Temp.(F)	70
Air Density (lb/ft3)	0.075
Drive Loss (%)	4.9
Tip Speed (ft/min)	8,125
Static Eff. (%)	35

Motor	
Motor Mounted	Yes
Size (hp)	2
Voltage/Cycle/Phase	460/60/3
Enclosure	TEFC
Motor RPM	1725
Efficiency Rating	Standard
Windings	1
NEC FLA* (Amps)	3.4



- △ Operating Bhp point
- Operating point at Total External SP
- Fan curve
- - - System curve
- - - Brake horsepower curve

### Sound Power by Octave Band

Sound Data	62.5	125	250	500	1000	2000	4000	8000	LwA	dBA	Sones
Inlet	88	83	88	87	78	77	76	69	87	76	26

### Notes:

All dimensions shown are in units of in.  
\*NEC FLA - based on tables 430.248 or 430.250 of National Electrical Code 2017. Actual motor FLA may vary, for sizing thermal overload, consult factory.  
LwA - A weighted sound power level, based on ANSI S1.4  
dBA - A weighted sound pressure level, based on 11.5 dB attenuation per Octave band at 5 ft - dBA levels are not licensed by AMCA International  
Sones - calculated using ANSI/AMCA 301 at 5 ft  
The motor provided on this fan is inverter ready and meets NEMA MG1 Part 31.4.4.2



## Model: CUBE-180HP-20

### Belt Drive Upblast Centrifugal Roof Exhaust Fan

#### Standard Construction Features:

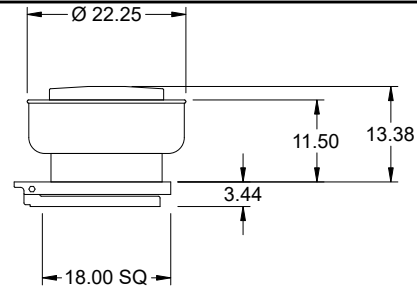
- Aluminum housing - Backward inclined aluminum wheel - Curb cap with prepunched mounting holes - Motor and drives isolated on shock mounts - Drain trough - Ball bearing motors - Adjustable motor pulley - Adjustable motor plate - Fan shaft mounted in ball bearing pillow blocks - Bearings meet or exceed temperature rating of fan - Static resistant belts - Corrosion resistant fasteners - Internal lifting lugs

#### Selected Options & Accessories:

Motor VFD Rated without Shaft Grounding Protection  
Standard Curb Cap Size - 30 in. Square  
UL/cUL 762 Listed - "Power Ventilators for Rest. Exh. Appliances"  
Switch, NEMA-1, Toggle, Shipped with Unit  
Junction Box Mounted & Wired  
High Wind Rated (+/- 150 PSF Rating)  
Florida Product Approval #FL13225.1 & Miami-Dade NOA #19-0717.02  
Hinged Base (Attached)  
High Temp Curb Seal Rated for Continuous Duty at 1500 F (Attached)  
Coated with Permator, Concrete Gray-RAL 7023, Fan And Attached Acc  
Non-Stick Coated Wheel (Teflon)  
Grease Trap with Absorbent Material  
Birdscreen: Aluminum, nom. 86% Free Area  
Heat Baffle (Attached)  
Bearings with Grease Fittings, L10 life of 100,000 hrs (L50 avg. life 500,000 hrs)  
Clean-out Port  
Unit Warranty: 1 Yr (Standard)

# Model: CUE-080-D

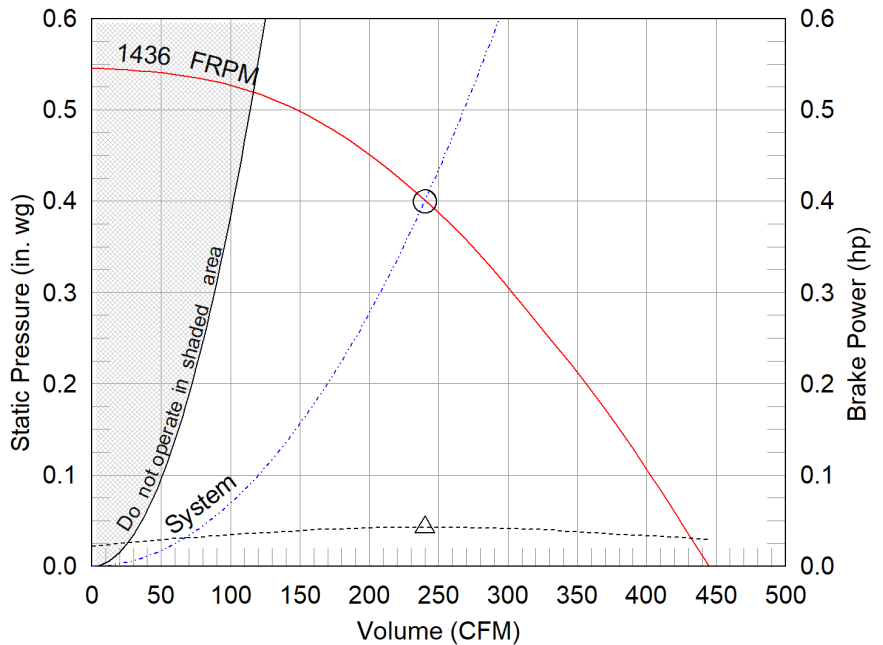
Direct Drive Upblast Centrifugal Roof Exhaust Fan



OVERALL HEIGHT MAY BE GREATER DEPENDING ON MOTOR, ADAPTER, AND/OR HINGE BASE.

Dimensional	
Quantity	1
Weight w/o Acc's (lb)	31
Weight w/ Acc's (lb)	45
Standard Curb Cap Size (in.)	19 x 19
Roof Opening (in.)	12.5 x 12.5

Performance	
Requested Volume (CFM)	240
Actual Volume (CFM)	240
Total External SP (in. wg)	0.4
Fan RPM	1436
Operating Power (hp)	0.04
Elevation (ft)	105
Airstream Temp.(F)	70
Air Density (lb/ft3)	0.075
Tip Speed (ft/min)	4,088
Static Eff. (%)	35



- △ Operating Bhp point
- Operating point at Total External SP
- Fan curve
- - - System curve
- - - Brake horsepower curve

Motor	
Motor Mounted	Yes
Size (hp)	1/20 (or greater)
Voltage/Cycle/Phase	230/60/1
Enclosure	TEAO
Motor RPM	1550
Efficiency Rating	Standard
Windings	1

### Sound Power by Octave Band

Sound Data	62.5	125	250	500	1000	2000	4000	8000	LwA	dBA	Sones
Inlet	68	73	66	59	57	55	48	43	64	53	6.6

### Notes:

All dimensions shown are in units of in.  
\*Please consult factory for actual motor amp draw  
LwA - A weighted sound power level, based on ANSI S1.4  
dBA - A weighted sound pressure level, based on 11.5 dB attenuation per Octave band at 5 ft - dBA levels are not licensed by AMCA International  
Sones - calculated using ANSI/AMCA 301 at 5 ft





## Model: CUE-080-D

### Direct Drive Upblast Centrifugal Roof Exhaust Fan

#### Standard Construction Features:

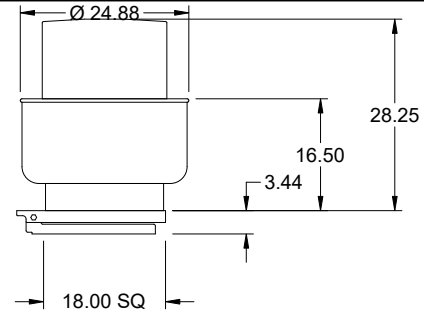
- Aluminum housing - Backward curved composite (sizes 60-95) or aluminum (sizes 99-300) wheel - Aluminum curb cap with prepunched mounting holes - Drain trough - Ball bearing motors (sizes 85-300 and all Vari Green), sleeve bearing motors (sizes 60-80) - Motor isolated on shock mounts - Corrosion resistant fasteners

#### Selected Options & Accessories:

Standard Curb Cap Size - 19 in. Square  
UL/cUL 705 Listed - "Power Ventilators"  
Switch, NEMA-3R, Toggle, Shipped with Unit  
Junction Box Mounted & Wired  
High Wind Rated (+/- 150 PSF Rating)  
Florida Product Approval #FL13225.1 & Miami-Dade NOA #19-0717.02  
Hinged Base (Attached)  
Foam Curb Seal (Attached)  
Coated with Permator, Concrete Gray-RAL 7023, Fan And Attached Acc  
Solid State Speed Control, 6 Amp, Shipped Loose  
Birdscreen: Aluminum, nom. 86% Free Area  
Composite Wheel Material  
Unit Warranty: 1 Yr (Standard)

# Model: CUE-099-A

Direct Drive Upblast Centrifugal Roof Exhaust Fan

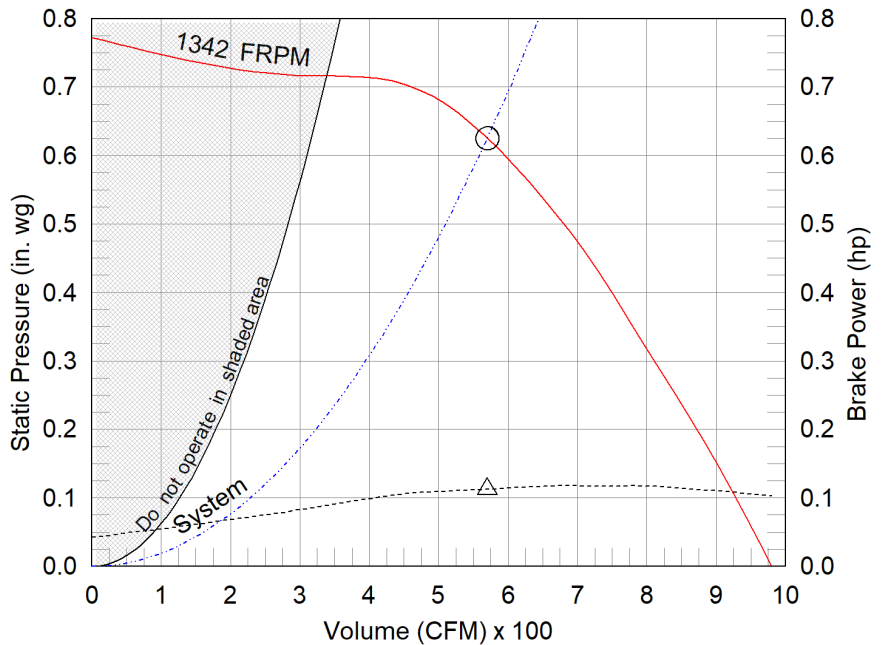


OVERALL HEIGHT MAY BE GREATER DEPENDING ON MOTOR, ADAPTER, AND/OR HINGE BASE.

Dimensional	
Quantity	1
Weight w/o Acc's (lb)	45
Weight w/ Acc's (lb)	63
Max T Motor Frame Size	56
Standard Curb Cap Size (in.)	19 x 19
Roof Opening (in.)	14.5 x 14.5

Performance	
Requested Volume (CFM)	570
Actual Volume (CFM)	570
Total External SP (in. wg)	0.625
Fan RPM	1342
Operating Power (hp)	0.11
Elevation (ft)	105
Airstream Temp.(F)	70
Air Density (lb/ft3)	0.075
Tip Speed (ft/min)	3,931
Static Eff. (%)	50

Motor	
Motor Mounted	Yes
Size (hp)	1/4
Voltage/Cycle/Phase	115/60/1
Enclosure	ODP
Motor RPM	1725
Efficiency Rating	Standard
Windings	1
NEC FLA* (Amps)	5.8



- △ Operating Bhp point
- Operating point at Total External SP
- Fan curve
- - - System curve
- - - Brake horsepower curve

### Sound Power by Octave Band

Sound Data	62.5	125	250	500	1000	2000	4000	8000	LwA	dBA	Sones
Inlet	71	70	67	61	59	57	53	44	65	54	7.0

### Notes:

All dimensions shown are in units of in.  
\*NEC FLA - based on tables 430.248 or 430.250 of National Electrical Code 2017. Actual motor FLA may vary, for sizing thermal overload, consult factory.  
LwA - A weighted sound power level, based on ANSI S1.4  
dBA - A weighted sound pressure level, based on 11.5 dB attenuation per Octave band at 5 ft - dBA levels are not licensed by AMCA International  
Sones - calculated using ANSI/AMCA 301 at 5 ft



## Model: CUE-099-A

### Direct Drive Upblast Centrifugal Roof Exhaust Fan

#### Standard Construction Features:

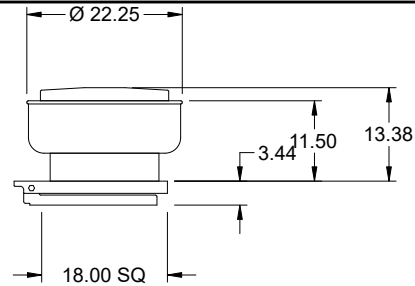
- Aluminum housing - Backward inclined aluminum wheel - Aluminum curb cap with prepunched mounting holes - Drain trough - Ball bearing motors (sizes 85-300 and all Vari Green), sleeve bearing motors (sizes 60-80) - Motor isolated on shock mounts - Corrosion resistant fasteners

#### Selected Options & Accessories:

PSC Motor  
Standard Curb Cap Size - 19 in. Square  
UL/cUL 762 Listed - "Power Ventilators for Rest. Exh. Appliances"  
Switch, NEMA-3R, Toggle, Shipped with Unit  
Junction Box Mounted & Wired  
High Wind Rated (+/- 150 PSF Rating)  
Florida Product Approval #FL13225.1 & Miami-Dade NOA #19-0717.02  
Hinged Base (Attached)  
High Temp Curb Seal Rated for Continuous Duty at 1500 F (Attached)  
Coated with Permator, Concrete Gray-RAL 7023, Fan And Attached Acc  
Non-Stick Coated Wheel (Teflon)  
Solid State Speed Control, 6 Amp, Shipped Loose  
Grease Trap with Absorbent Material  
Birdscreen: Aluminum, nom. 86% Free Area  
Clean-out Port  
Unit Warranty: 1 Yr (Standard)

# Model: CUE-090-D

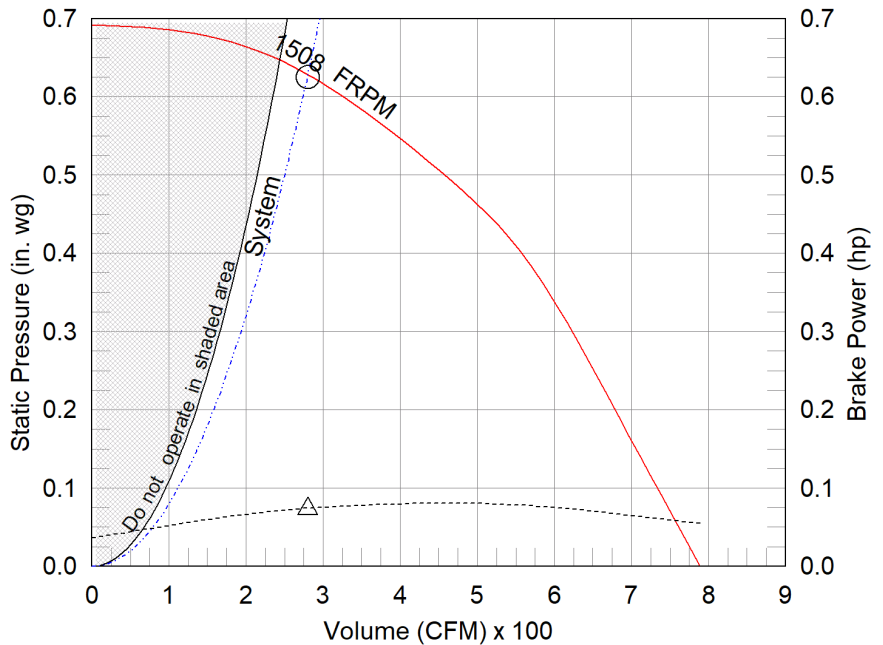
Direct Drive Upblast Centrifugal Roof Exhaust Fan



OVERALL HEIGHT MAY BE GREATER DEPENDING ON MOTOR, ADAPTER, AND/OR HINGE BASE.

Dimensional	
Quantity	1
Weight w/o Acc's (lb)	28
Weight w/ Acc's (lb)	42
Standard Curb Cap Size (in.)	19 x 19
Roof Opening (in.)	12.5 x 12.5

Performance	
Requested Volume (CFM)	280
Actual Volume (CFM)	280
Total External SP (in. wg)	0.625
Fan RPM	1508
Operating Power (hp)	0.07
Elevation (ft)	105
Airstream Temp.(F)	70
Air Density (lb/ft3)	0.075
Tip Speed (ft/min)	4,294
Static Eff. (%)	37



- △ Operating Bhp point
- Operating point at Total External SP
- Fan curve
- - - System curve
- - - Brake horsepower curve

Motor	
Motor Mounted	Yes
Size (hp)	1/15 (or greater)
Voltage/Cycle/Phase	230/60/1
Enclosure	TEAO
Motor RPM	1550
Efficiency Rating	Standard
Windings	1

### Sound Power by Octave Band

Sound Data	62.5	125	250	500	1000	2000	4000	8000	LwA	dBA	Sones
Inlet	81	75	66	62	58	53	48	42	66	54	7.7

### Notes:

All dimensions shown are in units of in.  
\*Please consult factory for actual motor amp draw  
LwA - A weighted sound power level, based on ANSI S1.4  
dBA - A weighted sound pressure level, based on 11.5 dB attenuation per Octave band at 5 ft - dBA levels are not licensed by AMCA International  
Sones - calculated using ANSI/AMCA 301 at 5 ft



## Model: CUE-090-D

### Direct Drive Upblast Centrifugal Roof Exhaust Fan

#### Standard Construction Features:

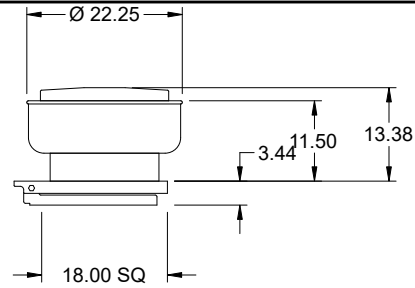
- Aluminum housing - Backward curved composite (sizes 60-95) or aluminum (sizes 99-300) wheel - Aluminum curb cap with prepunched mounting holes - Drain trough - Ball bearing motors (sizes 85-300 and all Vari Green), sleeve bearing motors (sizes 60-80) - Motor isolated on shock mounts - Corrosion resistant fasteners

#### Selected Options & Accessories:

Standard Curb Cap Size - 19 in. Square  
UL/cUL 705 Listed - "Power Ventilators"  
Switch, NEMA-3R, Toggle, Shipped with Unit  
Junction Box Mounted & Wired  
High Wind Rated (+/- 150 PSF Rating)  
Florida Product Approval #FL13225.1 & Miami-Dade NOA #19-0717.02  
Hinged Base (Attached)  
Foam Curb Seal (Attached)  
Coated with Permator, Concrete Gray-RAL 7023, Fan And Attached Acc  
Solid State Speed Control, 6 Amp, Shipped Loose  
Birdscreen: Aluminum, nom. 86% Free Area  
Composite Wheel Material  
Unit Warranty: 1 Yr (Standard)

# Model: CUE-090-D

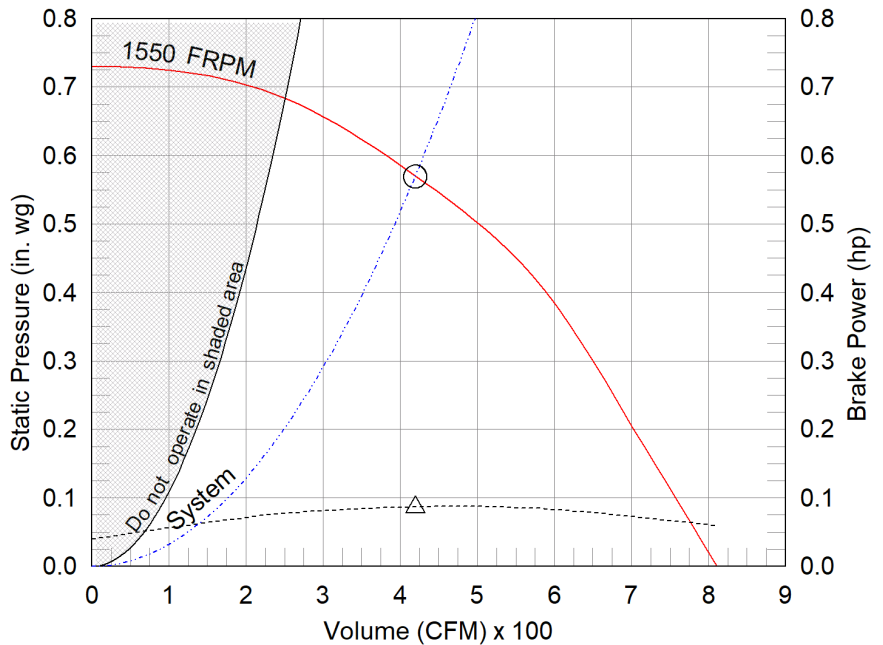
Direct Drive Upblast Centrifugal Roof Exhaust Fan



OVERALL HEIGHT MAY BE GREATER DEPENDING ON MOTOR, ADAPTER, AND/OR HINGE BASE.

Dimensional	
Quantity	1
Weight w/o Acc's (lb)	28
Weight w/ Acc's (lb)	42
Standard Curb Cap Size (in.)	19 x 19
Roof Opening (in.)	12.5 x 12.5

Performance	
Requested Volume (CFM)	440
Actual Volume (CFM)	420
Total External SP (in. wg)	0.569
Fan RPM	1550
Operating Power (hp)	0.09
Elevation (ft)	105
Airstream Temp.(F)	70
Air Density (lb/ft3)	0.075
Tip Speed (ft/min)	4,413
Static Eff. (%)	43



Motor	
Motor Mounted	Yes
Size (hp)	1/15 (or greater)
Voltage/Cycle/Phase	230/60/1
Enclosure	TEAO
Motor RPM	1550
Efficiency Rating	Standard
Windings	1

- △ Operating Bhp point
- Operating point at Total External SP
- Fan curve
- - - System curve
- - - Brake horsepower curve

**Static Pressure Calculations**

External SP	0.625 in. wg
Direct Drive RPM Adjustment	-0.056 in. wg
<b>Total External SP</b>	<b>0.569 in. wg</b>

Sound Power by Octave Band

Sound Data	62.5	125	250	500	1000	2000	4000	8000	LwA	dBA	Sones
Inlet	79	74	68	62	58	54	50	43	66	54	7.6

**Notes:**

All dimensions shown are in units of in.  
\*Please consult factory for actual motor amp draw  
LwA - A weighted sound power level, based on ANSI S1.4  
dBA - A weighted sound pressure level, based on 11.5 dB attenuation per Octave band at 5 ft - dBA levels are not licensed by AMCA International  
Sones - calculated using ANSI/AMCA 301 at 5 ft



## Model: CUE-090-D

### Direct Drive Upblast Centrifugal Roof Exhaust Fan

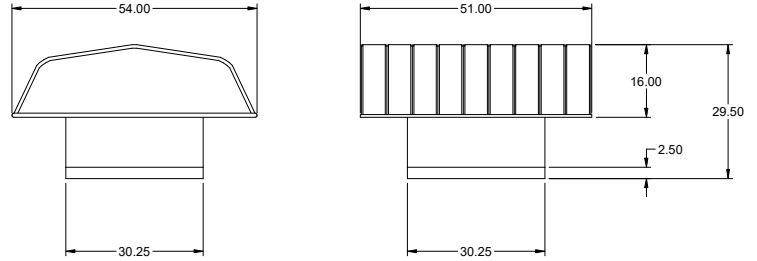
#### Standard Construction Features:

- Aluminum housing - Backward curved composite (sizes 60-95) or aluminum (sizes 99-300) wheel - Aluminum curb cap with prepunched mounting holes - Drain trough - Ball bearing motors (sizes 85-300 and all Vari Green), sleeve bearing motors (sizes 60-80) - Motor isolated on shock mounts - Corrosion resistant fasteners

#### Selected Options & Accessories:

Standard Curb Cap Size - 19 in. Square  
UL/cUL 705 Listed - "Power Ventilators"  
Switch, NEMA-3R, Toggle, Shipped with Unit  
Junction Box Mounted & Wired  
High Wind Rated (+/- 150 PSF Rating)  
Florida Product Approval #FL13225.1 & Miami-Dade NOA #19-0717.02  
Hinged Base (Attached)  
Foam Curb Seal (Attached)  
Coated with Permator, Concrete Gray-RAL 7023, Fan And Attached Acc  
Solid State Speed Control, 6 Amp, Shipped Loose  
Birdscreen: Aluminum, nom. 86% Free Area  
Composite Wheel Material  
Unit Warranty: 1 Yr (Standard)

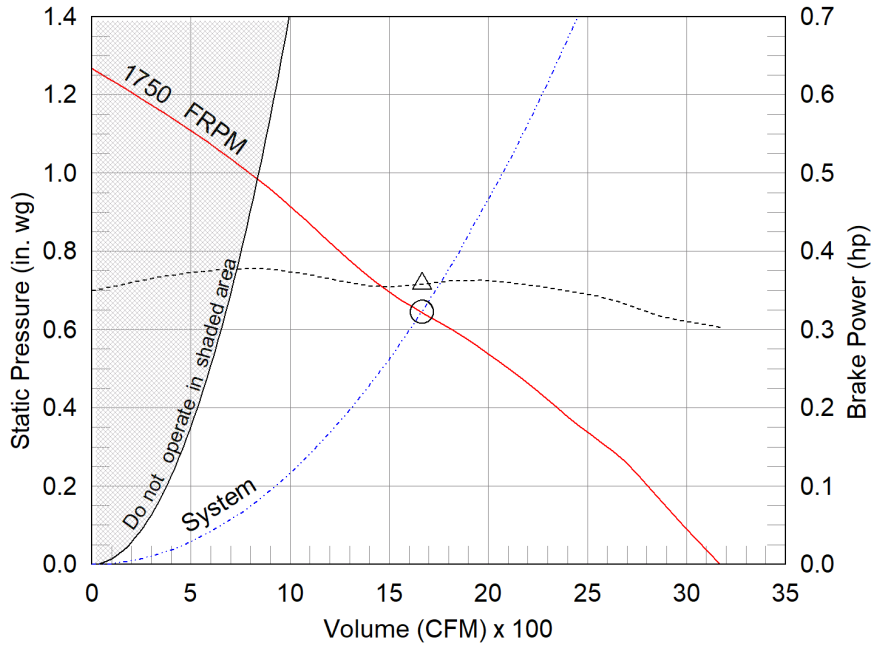
**Model: RCS3-20-608-A5**  
Propeller Hooded Roof Direct Drive Supply Fan



Dimensional	
Quantity	1
Weight w/o Acc's (lb)	158
Weight w/ Acc's (lb)	166
Max T Motor Frame Size	145
Roof Opening (in.)	22.5 x 22.5

Performance	
Requested Volume (CFM)	1,605
Actual Volume (CFM)	1,665
Total External SP (in. wg)	0.646
Fan RPM	1750
Operating Power (hp)	0.36
Elevation (ft)	105
Airstream Temp.(F)	70
Air Density (lb/ft3)	0.075
Tip Speed (ft/min)	9,163
Static Eff. (%)	47

Motor	
Motor Mounted	Yes
Size (hp)	1/2
Voltage/Cycle/Phase	115/60/1
Enclosure	TEFC
Motor RPM	1750
Efficiency Rating	Standard
Windings	1



- △ Operating Bhp point
- Operating point at Total External SP
- Fan curve
- System curve
- Brake horsepower curve

**Static Pressure Calculations**

External SP	0.6 in. wg
Direct Drive RPM Adjustment	0.046 in. wg
<b>Total External SP</b>	<b>0.646 in. wg</b>

Sound Power by Octave Band

Sound Data	62.5	125	250	500	1000	2000	4000	8000	LwA	dBA	Sones
Inlet	77	84	94	84	84	81	75	69	90	78	29

**Notes:**

All dimensions shown are in units of in.  
\*Please consult factory for actual motor amp draw  
LwA - A weighted sound power level, based on ANSI S1.4  
dBA - A weighted sound pressure level, based on 11.5 dB attenuation per Octave band at 5 ft - dBA levels are not licensed by AMCA International  
Sones - calculated using AMCA 301 at 5 ft





## Model: RCS3-20-608-A5

### Propeller Hooded Roof Direct Drive Supply Fan

#### Standard Construction Features:

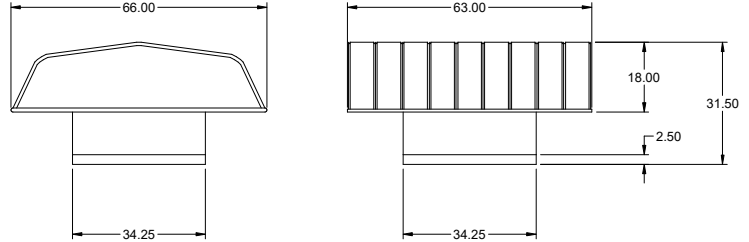
- Base and hoods of galvanized steel - Drive frames and fan panels of fabricated steel - Wire mesh birdscreens - Ball bearing motors - Cast aluminum airfoil blade propeller - Corrosion resistant fasteners - Due to shipping size limitations, hoods will be shipped knocked down. Hood assembly requires no special tools or training. Complete illustrated assembly and installation instructions are packed with each fan.

#### Selected Options & Accessories:

Hood  
Switch, NEMA-3R, Toggle, Shipped with Unit  
Junction Box Mounted & Wired  
High Wind Rated (+/- 40 PSF Rating)  
Florida Product Approval #FL12917.1 & Miami-Dade NOA #16-0209.03  
Cast Aluminum Propeller  
Coated with Permator, Concrete Gray-RAL 7023, Fan And Attached Acc  
Aluminum Construction  
Tie Down Points/Lifting Lugs  
Unit Warranty: 1 Yr (Standard)

# Model: RCS3-24-617-A20

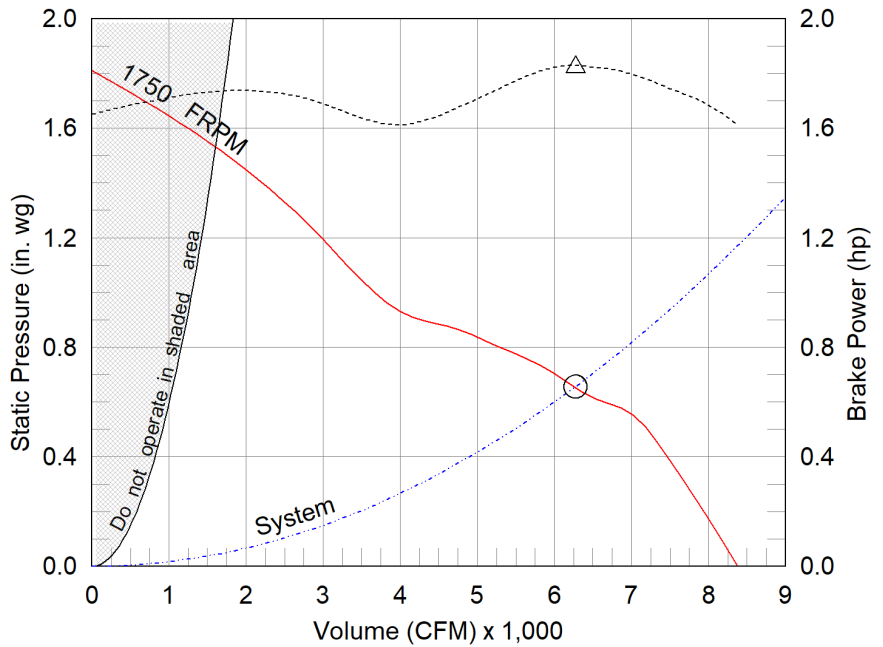
## Propeller Hooded Roof Direct Drive Supply Fan



Dimensional	
Quantity	1
Weight w/o Acc's (lb)	208
Weight w/ Acc's (lb)	215
Max T Motor Frame Size	184
Roof Opening (in.)	26.5 x 26.5

Performance	
Requested Volume (CFM)	6,000
Actual Volume (CFM)	6,276
Total External SP (in. wg)	0.657
Fan RPM	1750
Operating Power (hp)	1.82
Elevation (ft)	105
Airstream Temp.(F)	70
Air Density (lb/ft3)	0.075
Tip Speed (ft/min)	10,996
Static Eff. (%)	36

Motor	
Motor Mounted	Yes
Size (hp)	2
Voltage/Cycle/Phase	460/60/3
Enclosure	TEFC
Motor RPM	1750
Efficiency Rating	Standard
Windings	1



- △ Operating Bhp point
- Operating point at Total External SP
- Fan curve
- System curve
- Brake horsepower curve

### Static Pressure Calculations

External SP	0.6 in. wg
Direct Drive RPM Adjustment	0.057 in. wg
<b>Total External SP</b>	<b>0.657 in. wg</b>

### Sound Power by Octave Band

Sound Data	62.5	125	250	500	1000	2000	4000	8000	LwA	dBA	Sones
Inlet	86	94	99	93	94	91	84	79	98	87	48

### Notes:

All dimensions shown are in units of in.  
\*Please consult factory for actual motor amp draw  
LwA - A weighted sound power level, based on ANSI S1.4  
dBA - A weighted sound pressure level, based on 11.5 dB  
attenuation per Octave band at 5 ft - dBA levels are not  
licensed by AMCA International  
Sones - calculated using AMCA 301 at 5 ft



## Model: RCS3-24-617-A20

### Propeller Hooded Roof Direct Drive Supply Fan

#### Standard Construction Features:

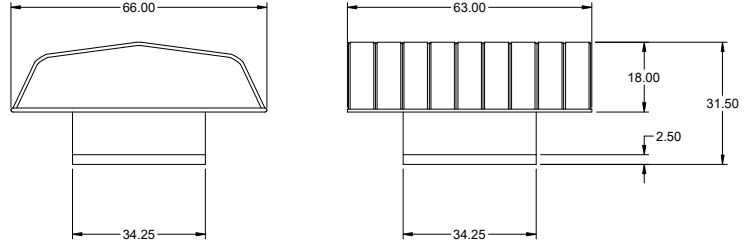
- Base and hoods of galvanized steel - Drive frames and fan panels of fabricated steel - Wire mesh birdscreens - Ball bearing motors - Cast aluminum airfoil blade propeller - Corrosion resistant fasteners - Due to shipping size limitations, hoods will be shipped knocked down. Hood assembly requires no special tools or training. Complete illustrated assembly and installation instructions are packed with each fan.

#### Selected Options & Accessories:

Hood  
Switch, NEMA-3R, Toggle, Shipped with Unit  
Junction Box Mounted & Wired  
High Wind Rated (+/- 40 PSF Rating)  
Florida Product Approval #FL12917.1 & Miami-Dade NOA #16-0209.03  
Cast Aluminum Propeller  
Coated with Permator, Concrete Gray-RAL 7023, Fan And Attached Acc  
Aluminum Construction  
Tie Down Points/Lifting Lugs  
Unit Warranty: 1 Yr (Standard)

# Model: RCS3-24-617-A20

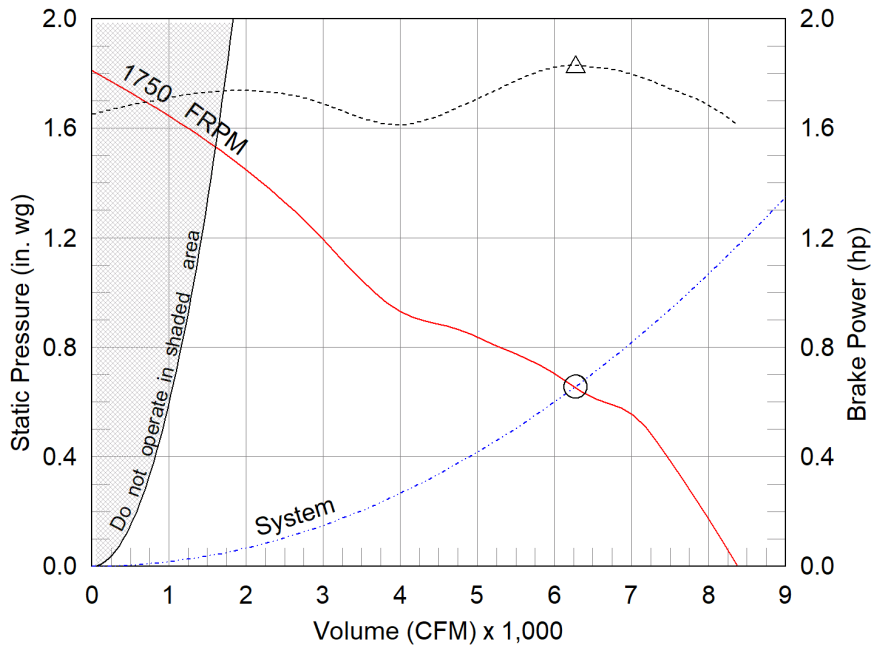
## Propeller Hooded Roof Direct Drive Supply Fan



Dimensional	
Quantity	1
Weight w/o Acc's (lb)	208
Weight w/ Acc's (lb)	215
Max T Motor Frame Size	184
Roof Opening (in.)	26.5 x 26.5

Performance	
Requested Volume (CFM)	6,000
Actual Volume (CFM)	6,276
Total External SP (in. wg)	0.657
Fan RPM	1750
Operating Power (hp)	1.82
Elevation (ft)	105
Airstream Temp.(F)	70
Air Density (lb/ft3)	0.075
Tip Speed (ft/min)	10,996
Static Eff. (%)	36

Motor	
Motor Mounted	Yes
Size (hp)	2
Voltage/Cycle/Phase	460/60/3
Enclosure	TEFC
Motor RPM	1750
Efficiency Rating	Standard
Windings	1



- △ Operating Bhp point
- Operating point at Total External SP
- Fan curve
- System curve
- Brake horsepower curve

### Static Pressure Calculations

External SP	0.6 in. wg
Direct Drive RPM Adjustment	0.057 in. wg
<b>Total External SP</b>	<b>0.657 in. wg</b>

### Sound Power by Octave Band

Sound Data	62.5	125	250	500	1000	2000	4000	8000	LwA	dBA	Sones
Inlet	86	94	99	93	94	91	84	79	98	87	48

### Notes:

All dimensions shown are in units of in.  
\*Please consult factory for actual motor amp draw  
LwA - A weighted sound power level, based on ANSI S1.4  
dBA - A weighted sound pressure level, based on 11.5 dB attenuation per Octave band at 5 ft - dBA levels are not licensed by AMCA International  
Sones - calculated using AMCA 301 at 5 ft



## Model: RCS3-24-617-A20

### Propeller Hooded Roof Direct Drive Supply Fan

#### **Standard Construction Features:**

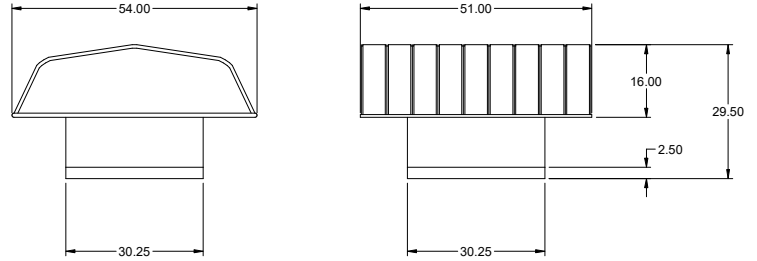
- Base and hoods of galvanized steel - Drive frames and fan panels of fabricated steel - Wire mesh birdscreens - Ball bearing motors - Cast aluminum airfoil blade propeller - Corrosion resistant fasteners - Due to shipping size limitations, hoods will be shipped knocked down. Hood assembly requires no special tools or training. Complete illustrated assembly and installation instructions are packed with each fan.

#### **Selected Options & Accessories:**

Hood  
Switch, NEMA-3R, Toggle, Shipped with Unit  
Junction Box Mounted & Wired  
Cast Aluminum Propeller  
Coated with Permatector, Concrete Gray-RAL 7023, Fan And Attached Acc  
Aluminum Construction  
Tie Down Points/Lifting Lugs  
Unit Warranty: 1 Yr (Standard)

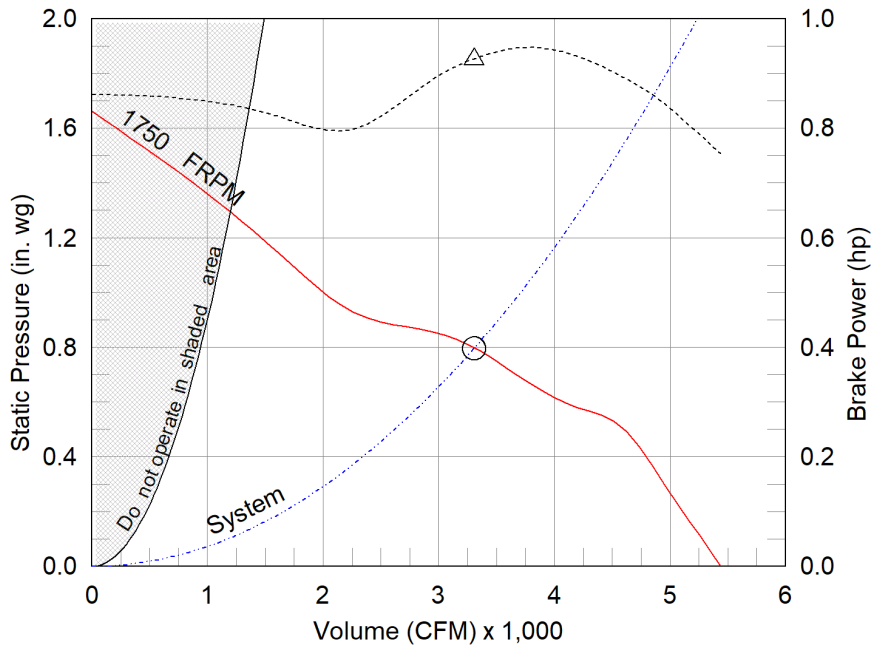
# Model: RCS3-20-620-A10

## Propeller Hooded Roof Direct Drive Supply Fan



Dimensional	
Quantity	1
Weight w/o Acc's (lb)	166
Weight w/ Acc's (lb)	173
Max T Motor Frame Size	145
Roof Opening (in.)	22.5 x 22.5

Performance	
Requested Volume (CFM)	3,100
Actual Volume (CFM)	3,305
Total External SP (in. wg)	0.796
Fan RPM	1750
Operating Power (hp)	0.93
Elevation (ft)	105
Airstream Temp.(F)	70
Air Density (lb/ft3)	0.075
Tip Speed (ft/min)	9,163
Static Eff. (%)	45



Motor	
Motor Mounted	Yes
Size (hp)	1
Voltage/Cycle/Phase	460/60/3
Enclosure	TEFC
Motor RPM	1750
Efficiency Rating	Standard
Windings	1

- △ Operating Bhp point
- Operating point at Total External SP
- Fan curve
- - - System curve
- - - Brake horsepower curve

### Static Pressure Calculations

External SP	0.7 in. wg
Direct Drive RPM Adjustment	0.096 in. wg
<b>Total External SP</b>	<b>0.796 in. wg</b>

### Sound Power by Octave Band

Sound Data	62.5	125	250	500	1000	2000	4000	8000	LwA	dBA	Sones
Inlet	84	91	93	87	85	83	78	74	91	79	31

### Notes:

All dimensions shown are in units of in.  
\*Please consult factory for actual motor amp draw  
LwA - A weighted sound power level, based on ANSI S1.4  
dBA - A weighted sound pressure level, based on 11.5 dB  
attenuation per Octave band at 5 ft - dBA levels are not  
licensed by AMCA International  
Sones - calculated using AMCA 301 at 5 ft



## Model: RCS3-20-620-A10

### Propeller Hooded Roof Direct Drive Supply Fan

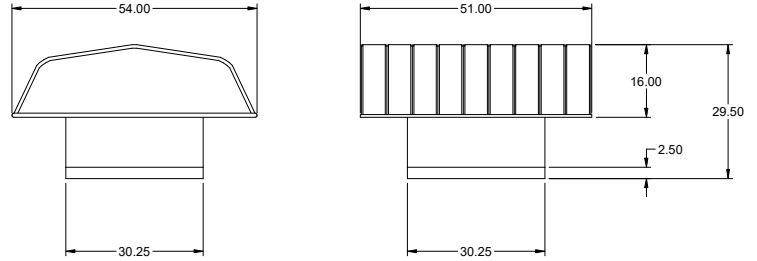
#### **Standard Construction Features:**

- Base and hoods of galvanized steel - Drive frames and fan panels of fabricated steel - Wire mesh birdscreens - Ball bearing motors - Cast aluminum airfoil blade propeller - Corrosion resistant fasteners - Due to shipping size limitations, hoods will be shipped knocked down. Hood assembly requires no special tools or training. Complete illustrated assembly and installation instructions are packed with each fan.

#### **Selected Options & Accessories:**

Hood  
Switch, NEMA-3R, Toggle, Shipped with Unit  
Junction Box Mounted & Wired  
Cast Aluminum Propeller  
Coated with Permatector, Concrete Gray-RAL 7023, Fan And Attached Acc  
Aluminum Construction  
Tie Down Points/Lifting Lugs  
Unit Warranty: 1 Yr (Standard)

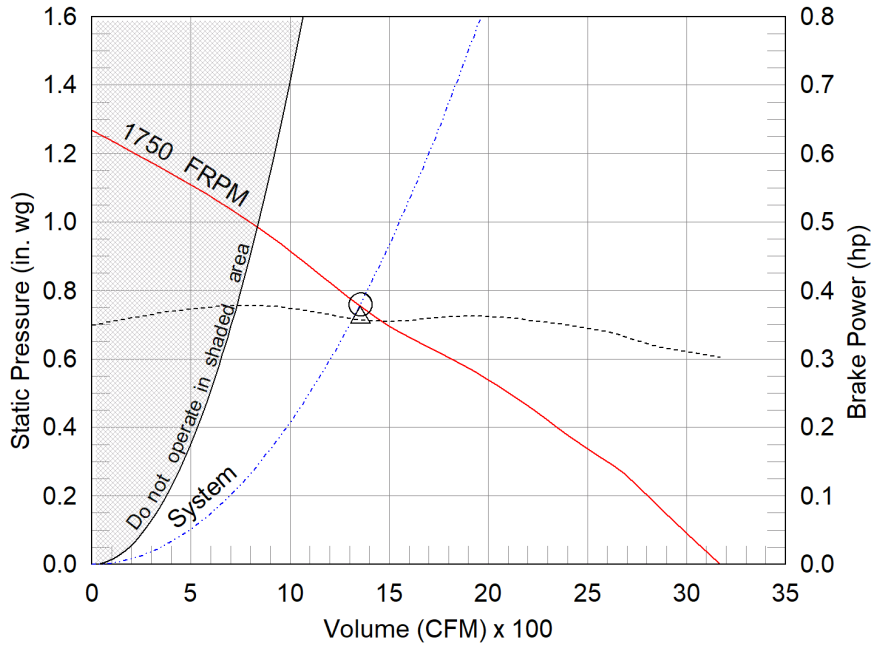
**Model: RCS3-20-608-A5**  
Propeller Hooded Roof Direct Drive Supply Fan



Dimensional	
Quantity	1
Weight w/o Acc's (lb)	158
Weight w/ Acc's (lb)	166
Max T Motor Frame Size	145
Roof Opening (in.)	22.5 x 22.5

Performance	
Requested Volume (CFM)	1,300
Actual Volume (CFM)	1,354
Total External SP (in. wg)	0.76
Fan RPM	1750
Operating Power (hp)	0.36
Elevation (ft)	105
Airstream Temp.(F)	70
Air Density (lb/ft3)	0.075
Tip Speed (ft/min)	9,163
Static Eff. (%)	45

Motor	
Motor Mounted	Yes
Size (hp)	1/2
Voltage/Cycle/Phase	115/60/1
Enclosure	TEFC
Motor RPM	1750
Efficiency Rating	Standard
Windings	1



- △ Operating Bhp point
- Operating point at Total External SP
- Fan curve
- - - System curve
- - - Brake horsepower curve

**Static Pressure Calculations**

External SP	0.7 in. wg
Direct Drive RPM Adjustment	0.06 in. wg
<b>Total External SP</b>	<b>0.76 in. wg</b>

Sound Power by Octave Band

Sound Data	62.5	125	250	500	1000	2000	4000	8000	LwA	dBA	Sones
Inlet	76	84	96	84	83	80	74	69	90	79	30

**Notes:**

All dimensions shown are in units of in.  
\*Please consult factory for actual motor amp draw  
LwA - A weighted sound power level, based on ANSI S1.4  
dBA - A weighted sound pressure level, based on 11.5 dB attenuation per Octave band at 5 ft - dBA levels are not licensed by AMCA International  
Sones - calculated using AMCA 301 at 5 ft





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## Model: RCS3-20-608-A5

### Propeller Hooded Roof Direct Drive Supply Fan

#### **Standard Construction Features:**

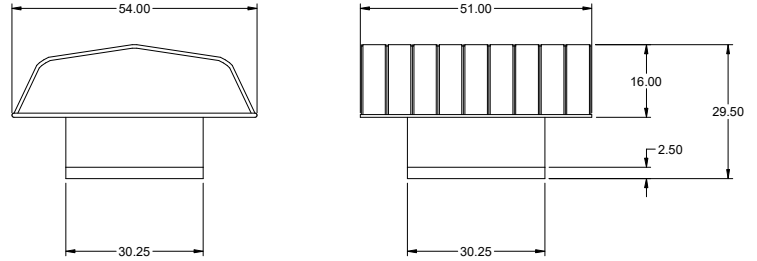
- Base and hoods of galvanized steel - Drive frames and fan panels of fabricated steel - Wire mesh birdscreens - Ball bearing motors - Cast aluminum airfoil blade propeller - Corrosion resistant fasteners - Due to shipping size limitations, hoods will be shipped knocked down. Hood assembly requires no special tools or training. Complete illustrated assembly and installation instructions are packed with each fan.

#### **Selected Options & Accessories:**

Hood  
Switch, NEMA-3R, Toggle, Shipped with Unit  
Junction Box Mounted & Wired  
Cast Aluminum Propeller  
Coated with Permatector, Concrete Gray-RAL 7023, Fan And Attached Acc  
Aluminum Construction  
Tie Down Points/Lifting Lugs  
Unit Warranty: 1 Yr (Standard)

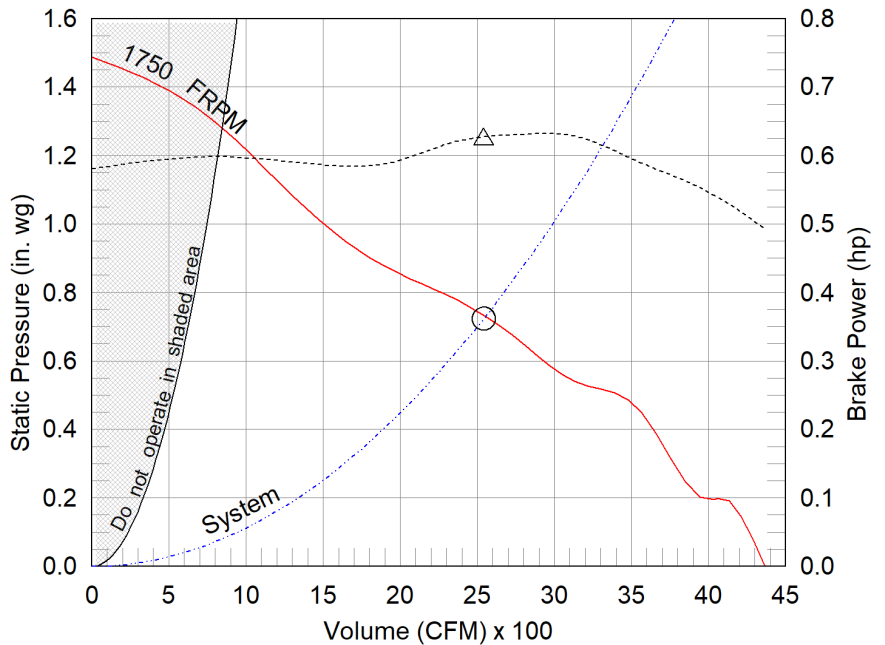
# Model: RCS3-20-614-A7

## Propeller Hooded Roof Direct Drive Supply Fan



Dimensional	
Quantity	1
Weight w/o Acc's (lb)	154
Weight w/ Acc's (lb)	155
Max T Motor Frame Size	145
Roof Opening (in.)	22.5 x 22.5

Performance	
Requested Volume (CFM)	2,500
Actual Volume (CFM)	2,541
Total External SP (in. wg)	0.723
Fan RPM	1750
Operating Power (hp)	0.62
Elevation (ft)	105
Airstream Temp.(F)	70
Air Density (lb/ft3)	0.075
Tip Speed (ft/min)	9,163
Static Eff. (%)	46



Motor	
Motor Mounted	Yes
Size (hp)	3/4
Voltage/Cycle/Phase	460/60/3
Enclosure	TEFC
Motor RPM	1750
Efficiency Rating	Standard
Windings	1

- △ Operating Bhp point
- Operating point at Total External SP
- Fan curve
- System curve
- Brake horsepower curve

### Static Pressure Calculations

External SP	0.7 in. wg
Direct Drive RPM Adjustment	0.023 in. wg
<b>Total External SP</b>	<b>0.723 in. wg</b>

### Sound Power by Octave Band

Sound Data	62.5	125	250	500	1000	2000	4000	8000	LwA	dBA	Sones
Inlet	82	87	96	87	85	81	76	71	92	80	33

### Notes:

All dimensions shown are in units of in.  
\*Please consult factory for actual motor amp draw  
LwA - A weighted sound power level, based on ANSI S1.4  
dBA - A weighted sound pressure level, based on 11.5 dB  
attenuation per Octave band at 5 ft - dBA levels are not  
licensed by AMCA International  
Sones - calculated using AMCA 301 at 5 ft



## Model: RCS3-20-614-A7

### Propeller Hooded Roof Direct Drive Supply Fan

#### **Standard Construction Features:**

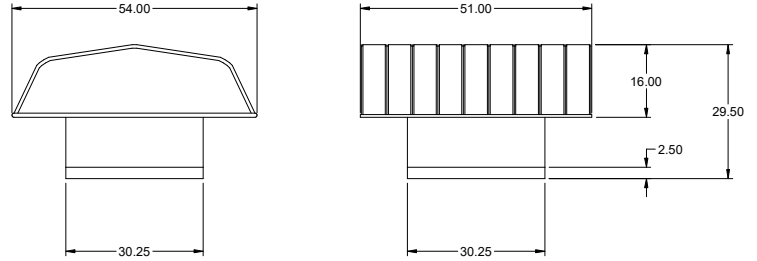
- Base and hoods of galvanized steel - Drive frames and fan panels of fabricated steel - Wire mesh birdscreens - Ball bearing motors - Cast aluminum airfoil blade propeller - Corrosion resistant fasteners - Due to shipping size limitations, hoods will be shipped knocked down. Hood assembly requires no special tools or training. Complete illustrated assembly and installation instructions are packed with each fan.

#### **Selected Options & Accessories:**

Hood  
Switch, NEMA-3R, Toggle, Shipped with Unit  
Junction Box Mounted & Wired  
Cast Aluminum Propeller  
Coated with Permatector, Concrete Gray-RAL 7023, Fan And Attached Acc  
Aluminum Construction  
Unit Warranty: 1 Yr (Standard)

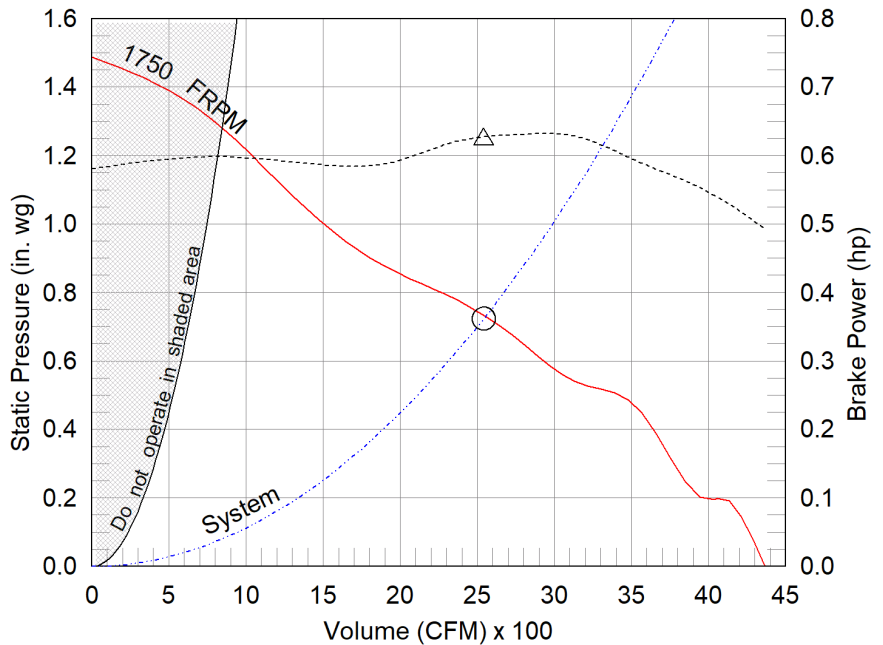
# Model: RCS3-20-614-A7

## Propeller Hooded Roof Direct Drive Supply Fan



Dimensional	
Quantity	1
Weight w/o Acc's (lb)	154
Weight w/ Acc's (lb)	155
Max T Motor Frame Size	145
Roof Opening (in.)	22.5 x 22.5

Performance	
Requested Volume (CFM)	2,500
Actual Volume (CFM)	2,541
Total External SP (in. wg)	0.723
Fan RPM	1750
Operating Power (hp)	0.62
Elevation (ft)	105
Airstream Temp.(F)	70
Air Density (lb/ft3)	0.075
Tip Speed (ft/min)	9,163
Static Eff. (%)	46



Motor	
Motor Mounted	Yes
Size (hp)	3/4
Voltage/Cycle/Phase	460/60/3
Enclosure	TEFC
Motor RPM	1750
Efficiency Rating	Standard
Windings	1

- △ Operating Bhp point
- Operating point at Total External SP
- Fan curve
- System curve
- Brake horsepower curve

### Static Pressure Calculations

External SP	0.7 in. wg
Direct Drive RPM Adjustment	0.023 in. wg
<b>Total External SP</b>	<b>0.723 in. wg</b>

### Sound Power by Octave Band

Sound Data	62.5	125	250	500	1000	2000	4000	8000	LwA	dBA	Sones
Inlet	82	87	96	87	85	81	76	71	92	80	33

### Notes:

All dimensions shown are in units of in.  
\*Please consult factory for actual motor amp draw  
LwA - A weighted sound power level, based on ANSI S1.4  
dBA - A weighted sound pressure level, based on 11.5 dB  
attenuation per Octave band at 5 ft - dBA levels are not  
licensed by AMCA International  
Sones - calculated using AMCA 301 at 5 ft



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## Model: RCS3-20-614-A7

### Propeller Hooded Roof Direct Drive Supply Fan

#### **Standard Construction Features:**

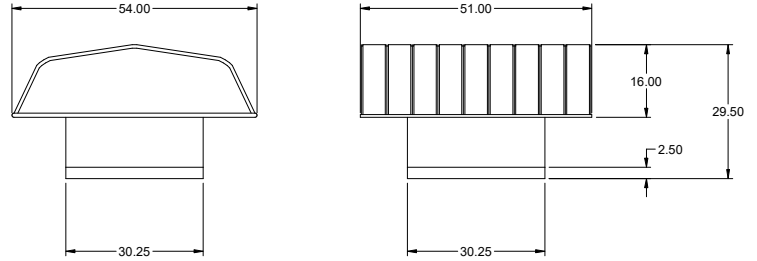
- Base and hoods of galvanized steel - Drive frames and fan panels of fabricated steel - Wire mesh birdscreens - Ball bearing motors - Cast aluminum airfoil blade propeller - Corrosion resistant fasteners - Due to shipping size limitations, hoods will be shipped knocked down. Hood assembly requires no special tools or training. Complete illustrated assembly and installation instructions are packed with each fan.

#### **Selected Options & Accessories:**

Hood  
Switch, NEMA-3R, Toggle, Shipped with Unit  
Junction Box Mounted & Wired  
Cast Aluminum Propeller  
Coated with Permatector, Concrete Gray-RAL 7023, Fan And Attached Acc  
Aluminum Construction  
Unit Warranty: 1 Yr (Standard)

# Model: RCS3-20-604-A4

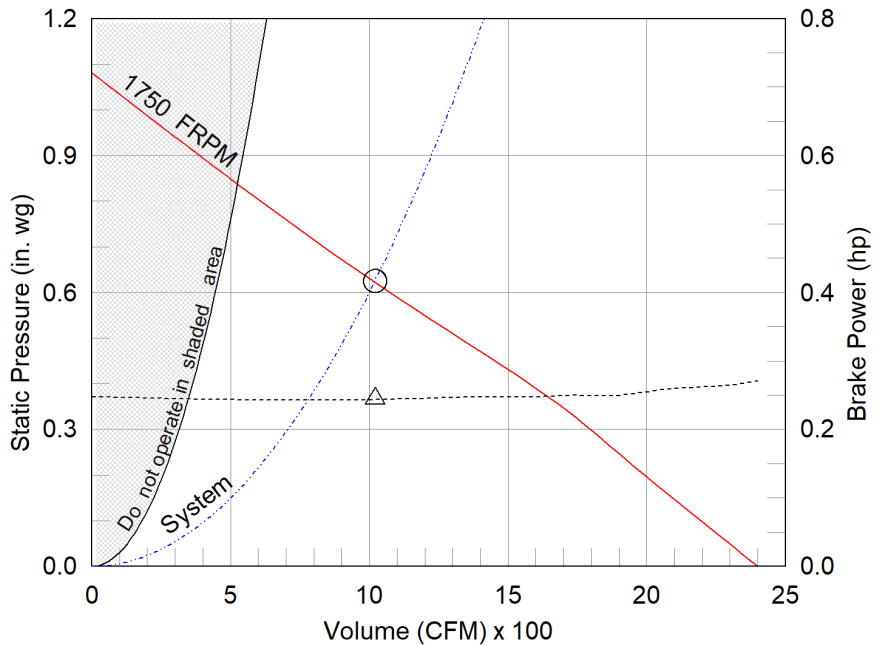
## Propeller Hooded Roof Direct Drive Supply Fan



Dimensional	
Quantity	1
Weight w/o Acc's (lb)	155
Weight w/ Acc's (lb)	157
Max T Motor Frame Size	145
Roof Opening (in.)	22.5 x 22.5

Performance	
Requested Volume (CFM)	1,000
Actual Volume (CFM)	1,021
Total External SP (in. wg)	0.625
Fan RPM	1750
Operating Power (hp)	0.24
Elevation (ft)	105
Airstream Temp.(F)	70
Air Density (lb/ft3)	0.075
Tip Speed (ft/min)	9,163
Static Eff. (%)	41

Motor	
Motor Mounted	Yes
Size (hp)	1/4
Voltage/Cycle/Phase	115/60/1
Enclosure	TEFC
Motor RPM	1750
Efficiency Rating	Standard
Windings	1



- △ Operating Bhp point
- Operating point at Total External SP
- Fan curve
- - - System curve
- - - Brake horsepower curve

### Static Pressure Calculations

External SP	0.6 in. wg
Direct Drive RPM Adjustment	0.025 in. wg
<b>Total External SP</b>	<b>0.625 in. wg</b>

### Sound Power by Octave Band

Sound Data	62.5	125	250	500	1000	2000	4000	8000	LwA	dBA	Sones
Inlet	71	79	89	80	81	78	71	66	86	74	22

### Notes:

All dimensions shown are in units of in.  
\*Please consult factory for actual motor amp draw  
LwA - A weighted sound power level, based on ANSI S1.4  
dBA - A weighted sound pressure level, based on 11.5 dB attenuation per Octave band at 5 ft - dBA levels are not licensed by AMCA International  
Sones - calculated using AMCA 301 at 5 ft



## Model: RCS3-20-604-A4

### Propeller Hooded Roof Direct Drive Supply Fan

#### **Standard Construction Features:**

- Base and hoods of galvanized steel - Drive frames and fan panels of fabricated steel - Wire mesh birdscreens - Ball bearing motors - Cast aluminum airfoil blade propeller - Corrosion resistant fasteners - Due to shipping size limitations, hoods will be shipped knocked down. Hood assembly requires no special tools or training. Complete illustrated assembly and installation instructions are packed with each fan.

#### **Selected Options & Accessories:**

Hood  
Switch, NEMA-3R, Toggle, Shipped with Unit  
Junction Box Mounted & Wired  
Cast Aluminum Propeller  
Coated with Permator, Concrete Gray-RAL 7023, Fan And Attached Acc  
Aluminum Construction  
Unit Warranty: 1 Yr (Standard)