

Quality People. Building Solutions.

Comfort Systems USA (Arkansas), Inc.
P.O. Box 16620
Little Rock, AR 72231
Phone 501-834-3320
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Date: 1/13/2025

Return Request: 1/23/2025

Project: HSU – Reynolds Hall Lap Renovation

Supplier: Airetech

Manufacturer: Greenheck

Submittal: HVAC Power Ventilators

Submittal Number: 23 34 23-01

Drawing # and Installation: Mechanical Drawings

ARCHITECT

SCM Architects
1400 Kirk Road, Suite 220
Little Rock, AR 72223
501-224-3055

ENGINEER

Pettit & Pettit
201 E. Markham, Suite 400
Little Rock, AR 72201
501-374-3731

GENERAL CONTRACTOR

Nabholz
612 Garland St.
Conway, AR 72032
501-505-5800

MECHANICAL SUBCONTRACTOR

Comfort Systems USA (Arkansas), Inc.
9924 Landers Rd.
N. Little Rock, AR 72117
501-834-3320

Notes:

CSUSA PROJECT NO.

22-6091

sean@comfortar.com

9924 Landers Rd.
No. Little Rock, AR 72117



SUBMITTAL DATA

EQUIPMENT: Greenheck Utility Set Fans

TAGS: EF-1 & EF-2

PROJECT: HSU Reynolds Hall Lab Renovation

LOCATION: Arkadelphia, Arkansas

ENGINEER: The logo for PettitPettit Consulting Engineers, Inc. features a stylized red 'P' above the company name in a lowercase, sans-serif font, with 'CONSULTING ENGINEERS, INC' in a smaller font below it.

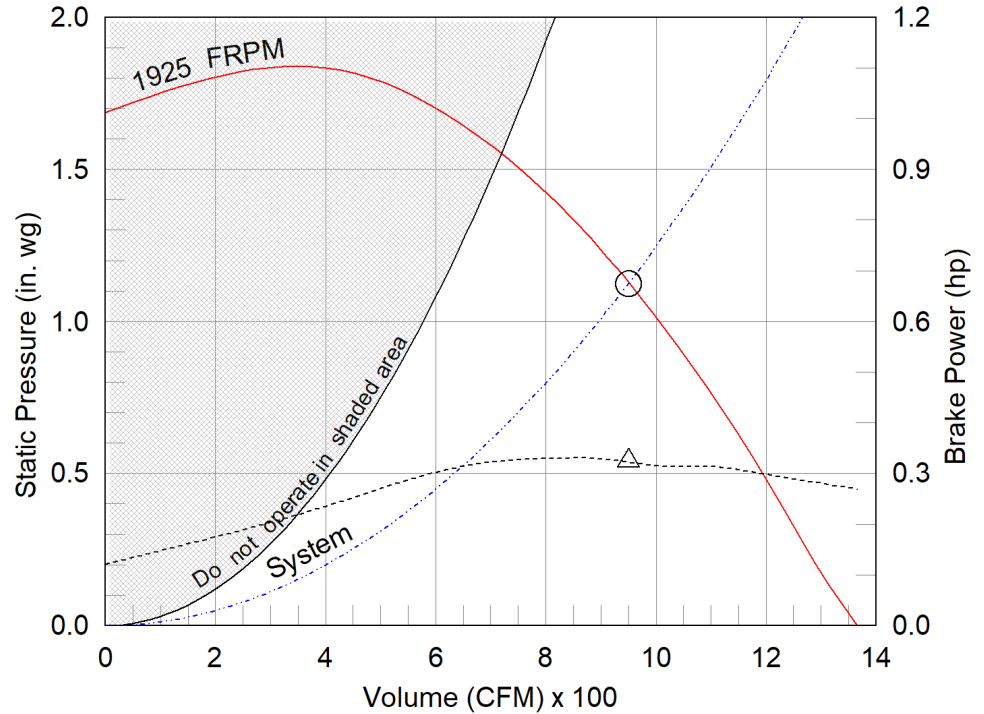
CONTRACTOR: The logo for Comfort Systems USA Arkansas features the words 'COMFORT SYSTEMS' in a bold, black, sans-serif font, followed by 'USA' in a large, stylized font with a red and blue outline, and 'ARKANSAS' in a smaller, spaced-out font below it.

DATE: 1/6/2025

SUBMITTED BY: Forrest Moseley
forrest@airetechcorp.com

Performance	
Quantity	1
Volume (CFM)	950
Total External SP (in. wg)	1.125
Operating Power (hp)	0.32
Required Power (hp)	0.32
Fan RPM	1925
Max Fan RPM	2,615
Oper. Frequency (Hz)	60
Elevation (ft)	338
Start-up Temp.(F)	70
Operating Temp.(F)	70

Model: USF-8
Universal Single Width Fan
Operating Performance



Fan Configuration	
Size	8
Wheel Type	BI
Arrangement	10
Drive Type	Belt
Class	0
Rotation	CW
Discharge Position	UB
Construction Type	PermaLock
Spark Resistance	None
Scroll Material	Steel
Wheel Material	Aluminum
Inlet Cone Material	Galvanized
Pedestal Material	Steel

Equipment Weights	
Fan (LMD)(lb)	109
Motor/Drive (lb)	26
Accessories (lb)	12
Fan Total (lb)	147

Misc Fan Data	
Fan Energy Index (FEI)	-
Outlet Velocity (ft/min)	1,100
Static Efficiency (%)	58
Tip Speed (ft/min)	5,636
Shaft Bearing Type	Standard
Bearing Life Calculation	Operating Point
L10 - Bearing Life (hrs.)	1,000,000

Motor and Drives	
Motor	Included
Size (hp)	1/3
RPM	1725
Enclosure	TEFC
V/C/P	115/60/1
Frame Size	56
Max Frame Size	145
Location	Centered
Pulley Type	Constant
Drive Loss (%)	10.6
Drives	Standard
Drive Service Factor	1.5
MCA* (Amps)	9
MOP* (Amps)	15
SCCR* (Kiloamps)	5

Static Pressure Calculations	
External SP	1 in. wg
Damper	0.125 in. wg
Total External SP	1.125 in. wg

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

Nameplate Model: USF-08-5-B7-00-02-02

Sound Power by Octave Band

Sound Data	62.5	125	250	500	1000	2000	4000	8000	LwA	dBA	Sones
Inlet	82	80	77	76	70	65	63	55	77	65	13.8
Outlet	91	96	82	78	71	69	66	56	83	72	24

*Values are estimated and subject to change. Actual values provided on fan at time of manufacture.
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: USF-8

Universal Single Width Fan

Standard Construction Features:

HOUSING: Class II and under feature Perma-Lock construction on sizes 4 - 49 and continuously welded on sizes 54 - 73 and all class III fans - Unit support angles with mounting holes - Adjustable motor plate - Corrosion resistant fasteners - Inlet collars - Outlet flange standard on sizes 27 - 73 and all class III fans - Untreated steel parts are processed through a multi-stage cleaning and pre-treatment and then finished with a high-performance powder coating. Sizes 24 and less are rotatable in 45 deg. increments. Sizes 27 to 40 are rotatable in 90 deg. increments. Sizes greater than 40 and all class III are not rotatable.

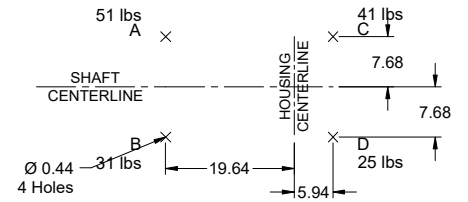
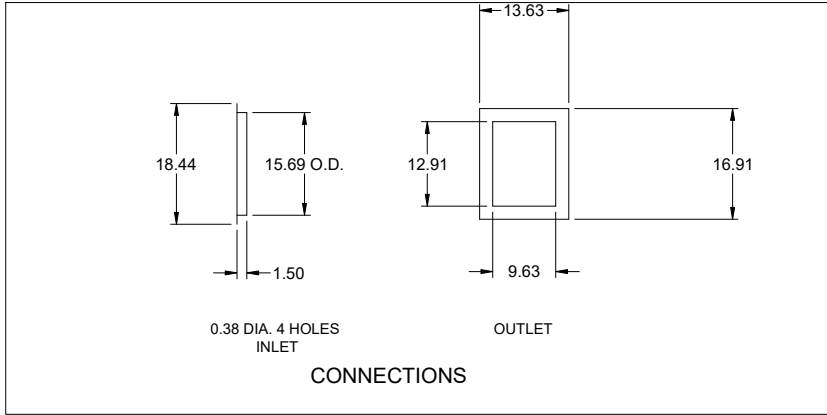
BEARINGS, SHAFT, AND WHEEL: Air handling quality, self-aligning, ball bearing in pillow block housing - Polished, solid steel shafts with rust inhibitor - Centrifugal wheel

Selected Options & Accessories:

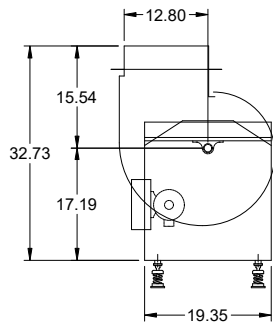
Motor with Capacitor Start
Switch - NEMA-3R, Toggle, For Indoor or Outdoor Use, Mounted & Wired
Motor with Class B or Greater Insulation
Standard Drives
Finish - Coated
Coating - Hi-Pro Z, Concrete Gray-RAL 7023, Fan and Attached Accessories
Direct Mount Isolators, Isolator-Spring, Free Standing, 1 Inch, Indoor Use Only, Base Coating - N/A
Bearings - L10 Standard Life, 1000k hours at OperatingPoint
Housing - PermaLock
Wheel - Backward Inclined
UL Listed for UL/cUL-705 - "Power Ventilators"
Polished Steel Shaft
Access Door - Bolted
Damper, Gravity, WD-340, Galv. Blade, Parallel, w/ Mill Finish
Extended Lube Lines - Nylon
Inlet Flange, Punched with Companion Flange
Outlet Flange, Punched
Weatherhood - Steel Construction
Shaft Seal - Standard
Fasteners - Standard
Unit Warranty: 1 Yr (Standard)

Model: USF-8

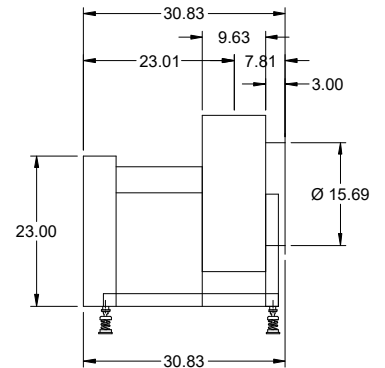
Universal Single Width Fan



FOOTPRINT VIEW



SIDE VIEW



END VIEW

Notes: All dimensions shown are in units of in.

Isolators

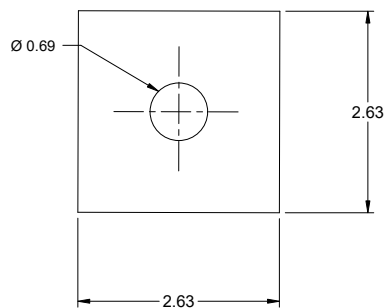
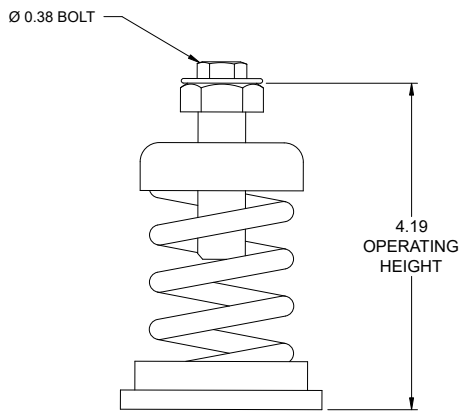
Type: Spring, Free Standing, 1 Inch

Standard Construction Features:

Laterally stable spring mounts. Springs are color coded or identified to indicate load capacity. Neoprene pad for noise reduction.

Fan Configuration

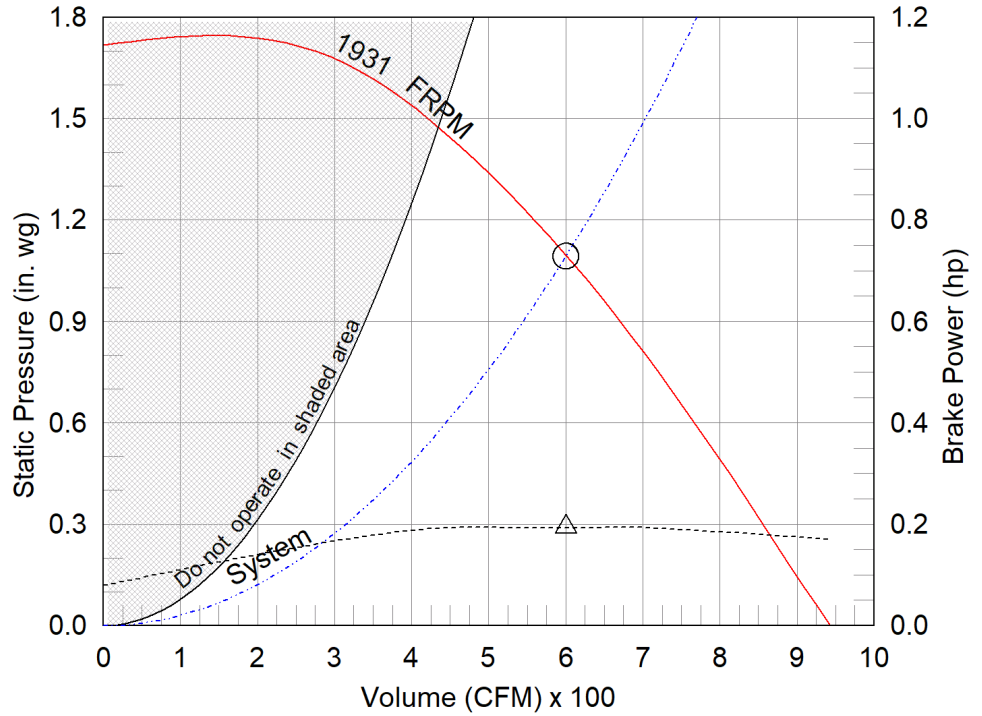
Model:	USF-8	Discharge Position:	UB
Arrangement:	10	Class:	0
Rotation:	CW	Motor Frame Size:	56
Motor Position:	Centered	Isolator/Deflection:	Spring, Free Standing, 1 Inch
Isolator Color A:	Green	Isolator Color B:	Green
Isolator Color C:	Green	Isolator Color D:	Blue
Isolator Description A:	FDS-1-70	Isolator Description B:	FDS-1-70
Isolator Description C:	FDS-1-70	Isolator Description D:	FDS-1-35
Isolator Manufacturer:	Kinetics		



Notes: All dimensions shown are in units of in.

Performance	
Quantity	1
Volume (CFM)	600
Total External SP (in. wg)	1.093
Operating Power (hp)	0.19
Required Power (hp)	0.19
Fan RPM	1931
Max Fan RPM	4,500
Oper. Frequency (Hz)	60
Elevation (ft)	338
Start-up Temp.(F)	70
Operating Temp.(F)	70

Model: USF-8
Universal Single Width Fan
Operating Performance



Fan Configuration	
Size	8
Wheel Type	BI
Arrangement	10
Drive Type	Belt
Class	I
Rotation	CW
Discharge Position	UB
Construction Type	PermaLock
Spark Resistance	None
Scroll Material	Steel
Wheel Material	Steel
Inlet Cone Material	Steel
Pedestal Material	Steel

Equipment Weights	
Fan (LMD)(lb)	105
Motor/Drive (lb)	26
Accessories (lb)	10
Fan Total (lb)	141

Misc Fan Data	
Fan Energy Index (FEI)	-
Outlet Velocity (ft/min)	946
Static Efficiency (%)	63
Tip Speed (ft/min)	5,309
Shaft Bearing Type	Standard
Bearing Life Calculation	Operating Point
L10 - Bearing Life (hrs.)	1,000,000

Motor and Drives	
Motor	Included
Size (hp)	1/3
RPM	1725
Enclosure	TEFC
V/C/P	115/60/1
Frame Size	56
Max Frame Size	145
Location	Centered
Pulley Type	Adjustable
Drive Loss (%)	14.6
Drives	Standard
Drive Service Factor	1.5
MCA* (Amps)	9
MOP* (Amps)	15
SCCR* (Kiloamps)	5

Static Pressure Calculations	
External SP	1 in. wg
Damper	0.093 in. wg
Total External SP	1.093 in. wg

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

Nameplate Model: USF-08-5-B6-00-02-02

Sound Power by Octave Band

Sound Data	62.5	125	250	500	1000	2000	4000	8000	LwA	dBA	Sones
Inlet	83	83	81	76	71	67	61	55	78	67	15.3
Outlet	90	89	85	78	70	68	61	55	81	69	18.9

*Values are estimated and subject to change. Actual values provided on fan at time of manufacture.
 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: USF-8

Universal Single Width Fan

Standard Construction Features:

HOUSING: Class II and under feature Perma-Lock construction on sizes 4 - 49 and continuously welded on sizes 54 - 73 and all class III fans - Unit support angles with mounting holes - Adjustable motor plate - Corrosion resistant fasteners - Inlet collars - Outlet flange standard on sizes 27 - 73 and all class III fans - Untreated steel parts are processed through a multi-stage cleaning and pre-treatment and then finished with a high-performance powder coating. Sizes 24 and less are rotatable in 45 deg. increments. Sizes 27 to 40 are rotatable in 90 deg. increments. Sizes greater than 40 and all class III are not rotatable.

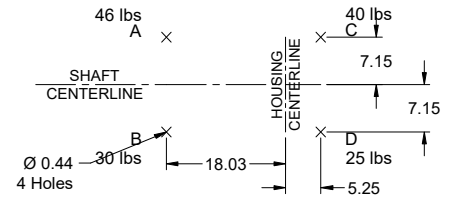
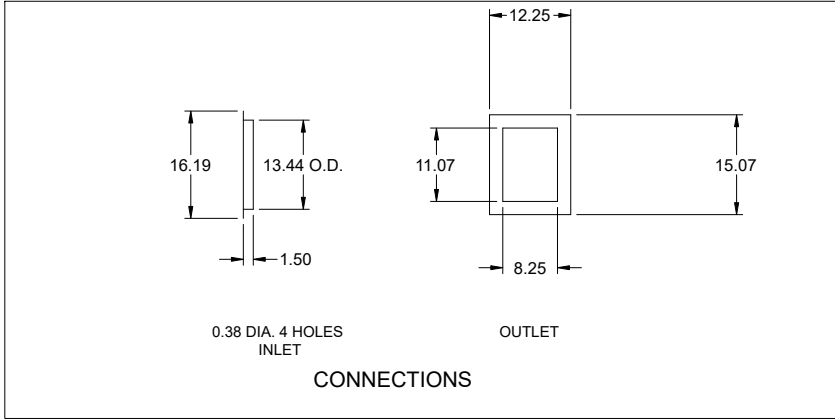
BEARINGS, SHAFT, AND WHEEL: Air handling quality, self-aligning, ball bearing in pillow block housing - Polished, solid steel shafts with rust inhibitor - Centrifugal wheel

Selected Options & Accessories:

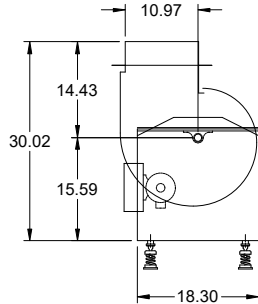
Motor with Capacitor Start
Switch - NEMA-3R, Toggle, For Indoor or Outdoor Use, Mounted & Wired
Motor with Class B or Greater Insulation
Standard Drives
Finish - Coated
Coating - Hi-Pro Z, Concrete Gray-RAL 7023, Fan and Attached Accessories
Direct Mount Isolators, Isolator-Spring, Free Standing, 1 Inch, Indoor Use Only, Base Coating - N/A
Bearings - L10 Standard Life, 1000k hours at OperatingPoint
Housing - PermaLock
Wheel - Backward Inclined
UL Listed for UL/cUL-705 - "Power Ventilators"
Polished Steel Shaft
Access Door - Bolted
Damper, Gravity, WD-340, Galv. Blade, Parallel, w/ Mill Finish
Extended Lube Lines - Nylon
Inlet Flange, Punched with Companion Flange
Outlet Flange, Punched
Weatherhood - Steel Construction
Shaft Seal - Standard
Fasteners - Standard
Unit Warranty: 1 Yr (Standard)

Model: USF-8

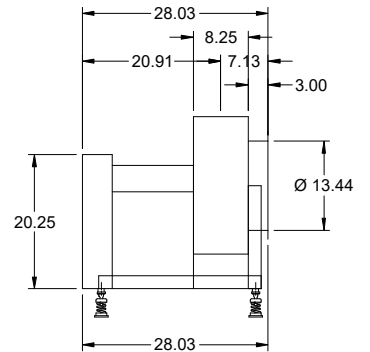
Universal Single Width Fan



FOOTPRINT VIEW



SIDE VIEW



END VIEW

Notes: All dimensions shown are in units of in.

Isolators

Type: Spring, Free Standing, 1 Inch

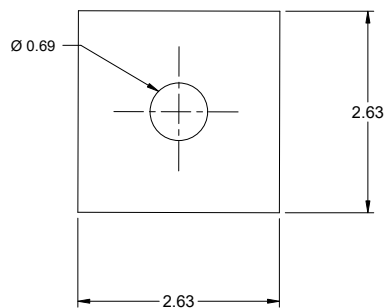
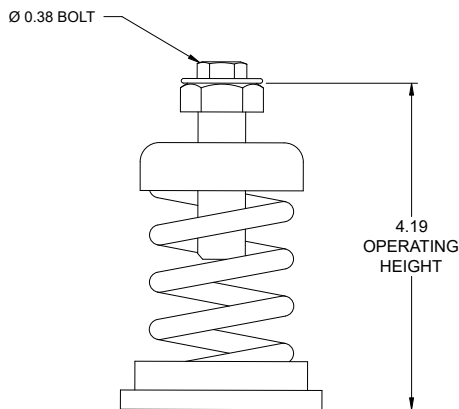
Standard Construction Features:

Laterally stable spring mounts. Springs are color coded or identified to indicate load capacity. Neoprene pad for noise reduction.

Fan Configuration

Model: USF-8
Arrangement: 10
Rotation: CW
Motor Position: Centered
Isolator Color A: Green
Isolator Color C: Green
Isolator Description A: FDS-1-70
Isolator Description C: FDS-1-70
Isolator Manufacturer: Kinetics

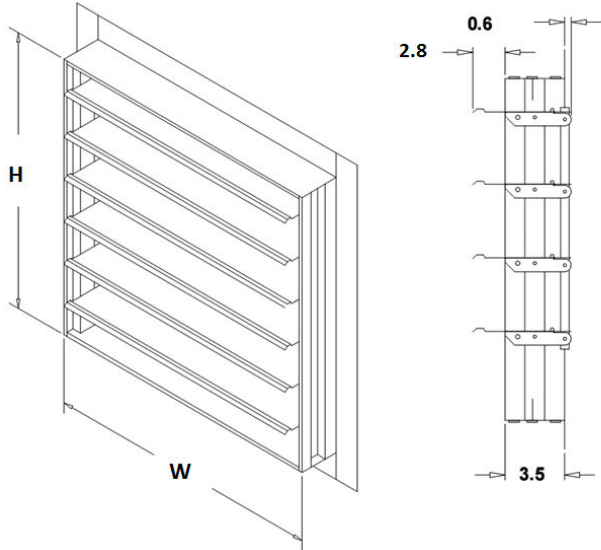
Discharge Position: UB
Class: I
Motor Frame Size: 56
Isolator/Deflection: Spring, Free Standing, 1 Inch
Isolator Color B: Green
Isolator Color D: Blue
Isolator Description B: FDS-1-70
Isolator Description D: FDS-1-35



Notes: All dimensions shown are in units of in.

Exhaust Damper

Model: WD-340



Standard Construction Features:

- Model WD-340 is designed to be bolted to the flanged outlet of our utility blowers. Maximum velocities not to exceed 3,600 in.. Exhaust damper constructed of 18 ga galvanized steel with pre-punched mounting holes and a flanged frame. - Damper blades are 0.032 in. roll-formed aluminum with vinyl seals on the closing edge - Steel axles are 0.188 in. diameter zinc plated steel - Nylon bushings

Damper Configuration:

ID #:	Tag:	Quantity:	W (in.):	H (in.):	Act Qty:	Actuator Model:
2	EF-2	1	9.8	13	0	
3	EF-1	1	8.4	11.2	0	

Notes: All dimensions shown are in units of in.
Width And height furnished approximately 0.25 in. undersize