

Submittal

Job: 1523
667 Congress
667 Congress Street
Portland, ME

Spec Section No: AERO
Submittal No: 3
Revision No: 2
Sent Date: 8/25/2016

Spec Section Title:

Submittal Title: Fans

Contractor:

Ranor Mechanical
Wes Sirois

Contractor's Stamp

GC (Primary):

PC Construction

Architect's Stamp

Engineer's Stamp

No Exceptions Taken:

No Comments:



131 Presumpscot Street
 Portland, ME 04103
 T: 207.874.2323
 F: 207.874.2727
 E:

Project No. 15015
667 Congress Street
 667 Congress Street
 Portland, ME 04102

CONSTRUCTION

Submittal 233423-001

Review Cycle 2

Title	Fans		
Type	Product Data		
Sent Date	24-Aug-2016	Spec Section	233423
Due Date	07-Sep-2016	Spec Sub-Section	

Sent To For Review

Wes Sirois
 Ranor Mechanical

Responsible Subcontractor / Vendor

Rodney Collard
 Aero Heating & Ventilating, Inc.

Item Being Submitted

Fans

233423-001.1

Product data for fans per 233423, including re-submittal for SF-R1 & SF-R2.

233423-001

Product data for fans per 233423.

Contractor's Review Stamp

Architect's Review Stamp

I hereby certify that I have examined the enclosed submittal(s) and have determined and verified all field measurements, construction criteria, materials, catalog numbers, and similar data, coordinated the submittal(s) with other submissions and the work of other trades and contractors and, to the best of my knowledge and belief, the enclosed submittal(s) is/are in full compliance with the Contract requirements, except as noted above.

Signature	Date
<i>Marieke Thormann</i>	<i>8.24.15</i>

Name
Marieke Thormann PC Construction Company

This approval does not release subcontractor / vendor from the contractual responsibilities.



**667 Congress Street
233423
Stair Pressurization Fans
Resubmittal Rev 2**

RODGERS~AERO-TECH, INC.

"Carefully attending the Engineer, Contractor and Owner"

P.O. BOX 370

207-729-0921

BRUNSWICK, MAINE 04011-0370

FAX 207-424-0103

www.hvaciaq.com

DATE: 8/24/2016

BRANCH ORDER:

OF COPIES

1

SUBMITTAL DATA :

GREENHECK

PROJECT:

667 CONGRESS STREET

LOCATION:

PORTLAND, ME.

JOB SPECIFICATION, DWGS:

2/24/16 BUT REVISED AFTER THIS

CUSTOMER:

AERO HEATING & VENTILATING

MECHANICAL CONTRACTOR:

RANOR MECHANICAL

GENERAL CONTRACTOR:

PC CONSTRUCTION

ARCHITECT:

ENGINEER:

PLEASE INITIAL AND DATE ANY NOTATIONS ON SUBMITTAL SHEET

CONTENTS:

PREPARED BY: BILL FOLEY/SR

REV DATE: 4-01-03

Performance Corrections	
Elevation (ft)	62
Airstream Temp.(F)	70
Air Density (lb/ft3)	0.075
Inlet Conditions	Ducted Inlet
Outlet Conditions	Ducted Outlet

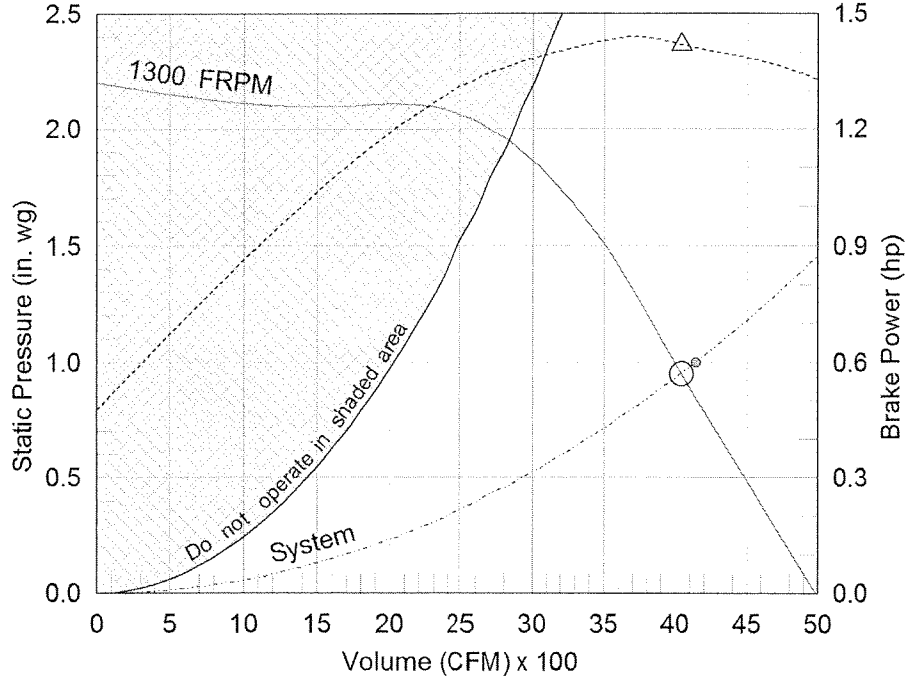
Model: SWD-18-VG
Direct Drive Backward Inclined Centrifugal Utility Fan

Actual Performance	
Requested Volume (CFM)	4,142
Actual Volume (CFM)	4,039
External SP (in. wg)	1
Total SP (in. wg)	0.951
OV (ft/min)	2,160
Fan RPM	1300
Operating Power (hp)	1.42
Tip Speed (ft/min)	6,296
Static Eff. (%)	43
FEG	75

Fan Configuration	
Quantity	1
Arrangement	4
Rotation	CCW
Discharge Position	TH
Drive Type	Direct

Dimensional	
Weight w/o Acc's (lb)	145
Weight w/ Acc's (lb)	191
Optional Damper (in.)	14.75 x 19.25

Motor	
Motor Mounted	Yes
Size (hp)	2
V/C/P	208/60/1
Enclosure	TEFC
Motor RPM	1300
Windings	1
FLA (Amps)	12



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

External SP	1 in. wg
Total SP	0.951 in. wg

Sound Power by Octave Band

Sound Data	62.5	125	250	500	1000	2000	4000	8000	LwA	dBA	Sones
Inlet	93	83	81	81	73	69	66	58	81	69	18.8

Notes:

All dimensions shown are in units of in.
*NEC FLA - based on tables 430.248 or 430.250 of National Electrical Code 2014. 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 AMCA 301 at 5 ft



Model: SWD-18-VG

Direct Drive Backward Inclined Centrifugal Utility Fan

Standard Construction Features:

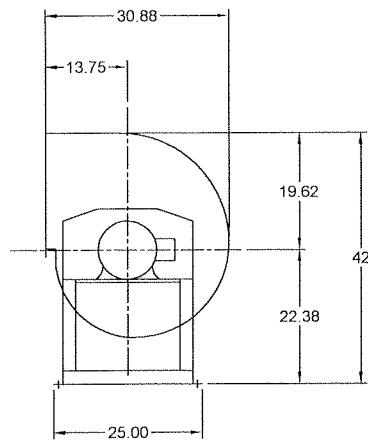
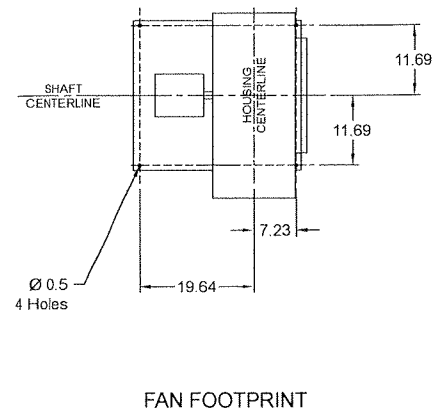
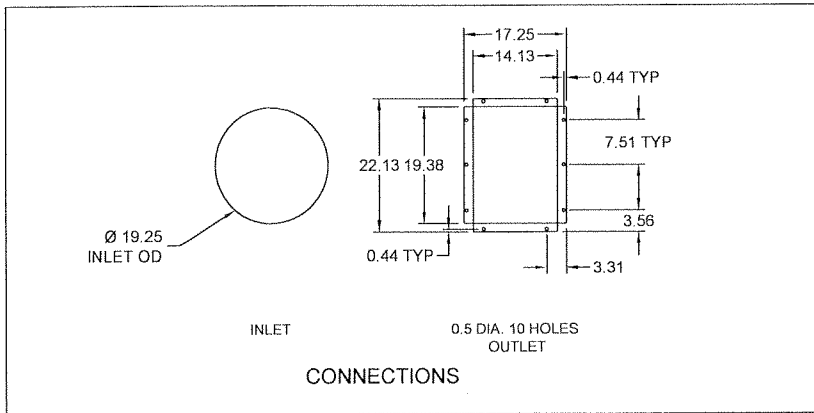
HOUSING: Steel housing with Lock-seam construction - Unit support angles with prepunched mounting holes - Corrosion resistant fasteners - Steel components are phosphatized and coated.

Selected Options & Accessories:

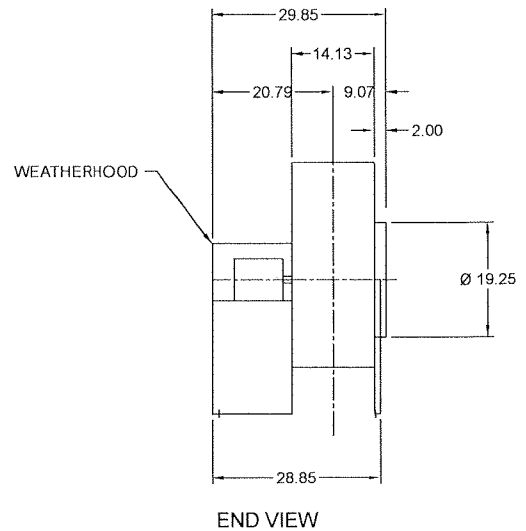
Motor - Vari-Green EC motor 0-10 VDC Input Signal
Control - Vari-Green Constant Pressure, Remote Transducer, Room Tap Qty 1
Control - Vari-Green Transformer 85-277VAC to 24 VDC, Mounted & Wired
Painted Steel Housing Material
Aluminum Wheel Construction
Painted Steel Inlet Cone
UL/cUL 705 Listed - "Power Ventilators"
Switch, NEMA-3R, Toggle, Shipped with Unit
Isolators (Qty:4), Rubber Mount for Indoor/Outdoor use, Single Deflection 0.25 in. (PN: 370074)
Damper Mounted, WD-340-PB-14.75X19.25, Gravity Operated, Coated
Weatherhood
Coated with Permatecor, Concrete Gray-RAL 7023, Standard Coating on Entire Fan
Threaded Pipe Drain Connection, 1 in. Diameter
Outlet Flange - Punched
Shaft Seal w/Rub Ring
Unit Warranty: 1 Yr (Standard)

SWD-18-VG

Direct Drive Backward Inclined Centrifugal Utility Fan



*SIDE VIEW IS VIEWED FROM DRIVE SIDE



Notes: All dimensions shown are in units of in.

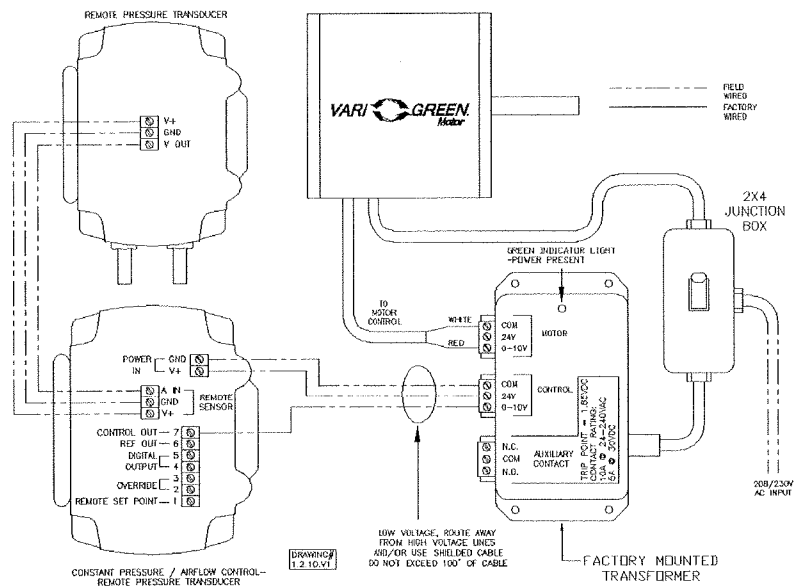
Vari-Green Motor & Control Options

An EC motor that uses AC input power and internally converts it to DC power. Motor accepts a 0-10VDC control signal. Motor is operable in the 2-10VDC range and off while in the 0-1.9VDC range. Constant pressure control with remote pressure transducer can maintain a constant static pressure on the inlet or outlet of a fan. Remote pressure transducer range is +/- 1.00 " W.C. A 24VDC transformer with 85-277VAC input range is provided to power the control.

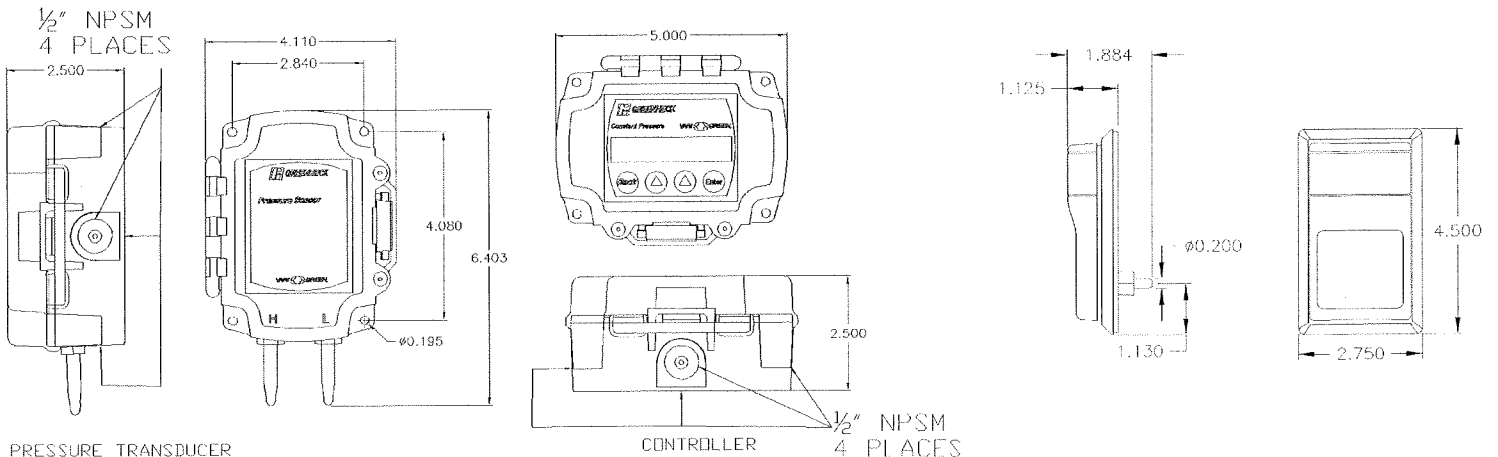
Motor Type: 0-10 VDC
Control Type: Constant Pressure
Transformer: Mounted and Wired

Pressure Transducer Remote
Location: Room Static
Probe Type:

Wiring Diagram



Dimensional Detail



Performance Corrections	
Elevation (ft)	62
Airstream Temp.(F)	70
Air Density (lb/ft3)	0.075
Inlet Conditions	Ducted Inlet
Outlet Conditions	Ducted Outlet

Model: SWD-18-VG

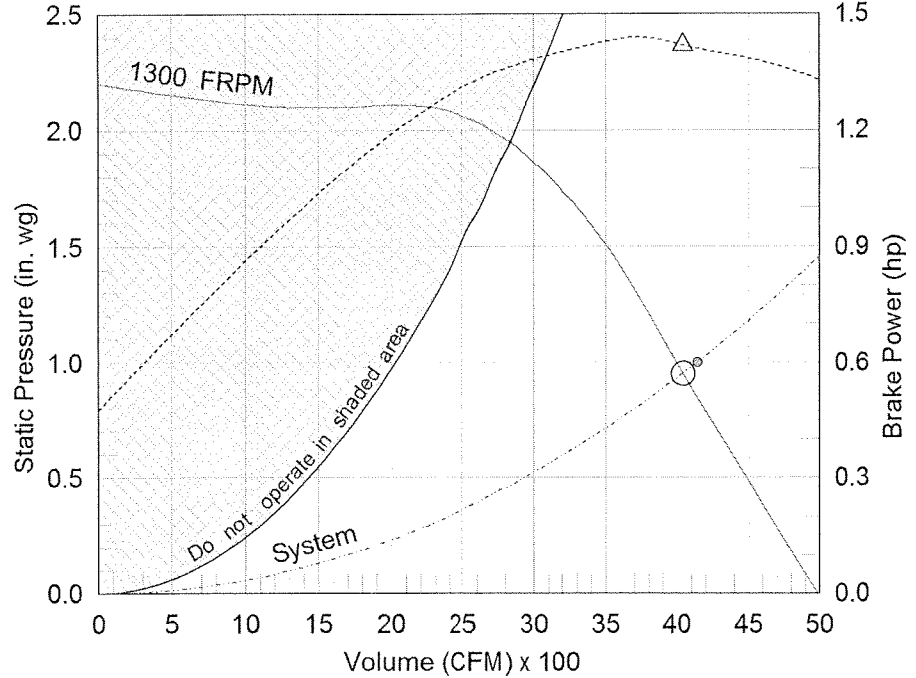
Direct Drive Backward Inclined Centrifugal Utility Fan

Actual Performance	
Requested Volume (CFM)	4,142
Actual Volume (CFM)	4,039
External SP (in. wg)	1
Total SP (in. wg)	0.951
OV (ft/min)	2,160
Fan RPM	1300
Operating Power (hp)	1.42
Tip Speed (ft/min)	6,296
Static Eff. (%)	43
FEG	75

Fan Configuration	
Quantity	1
Arrangement	4
Rotation	CCW
Discharge Position	TH
Drive Type	Direct

Dimensional	
Weight w/o Acc's (lb)	145
Weight w/ Acc's (lb)	191
Optional Damper (in.)	14.75 x 19.25

Motor	
Motor Mounted	Yes
Size (hp)	2
V/C/P	208/60/1
Enclosure	TEFC
Motor RPM	1300
Windings	1
FLA (Amps)	12



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

External SP	1 in. wg
Total SP	0.951 in. wg

Sound Power by Octave Band

Sound Data	62.5	125	250	500	1000	2000	4000	8000	LwA	dBA	Sones
Inlet	93	83	81	81	73	69	66	58	81	69	18.8

Notes:

All dimensions shown are in units of in.
*NEC FLA - based on tables 430.248 or 430.250 of National Electrical Code 2014. 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 AMCA 301 at 5 ft



Model: SWD-18-VG

Direct Drive Backward Inclined Centrifugal Utility Fan

Standard Construction Features:

HOUSING: Steel housing with Lock-seam construction - Unit support angles with pre-punched mounting holes - Corrosion resistant fasteners - Steel components are phosphatized and coated.

Selected Options & Accessories:

Motor - Vari-Green EC motor 0-10 VDC Input Signal

Control - Vari-Green Constant Pressure, Remote Transducer, Room Tap Qty 1

Control - Vari-Green Transformer 85-277VAC to 24 VDC, Mounted & Wired

Painted Steel Housing Material

Aluminum Wheel Construction

Painted Steel Inlet Cone

UL/cUL 705 Listed - "Power Ventilators"

Switch, NEMA-3R, Toggle, Shipped with Unit

Isolators (Qty:4), Rubber Mount for Indoor/Outdoor use, Single Deflection 0.25 in. (PN: 370074)

Damper Mounted, WD-340-PB-14.75X19.25, Gravity Operated, Coated

Weatherhood

Coated with Permatector, Concrete Gray-RAL 7023, Standard Coating on Entire Fan

Threaded Pipe Drain Connection, 1 in. Diameter

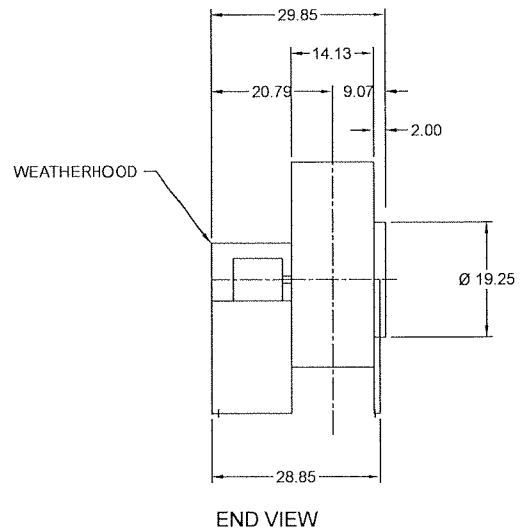
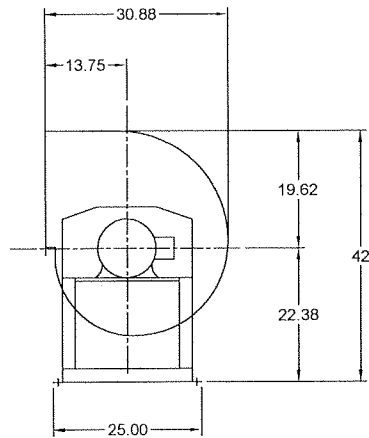
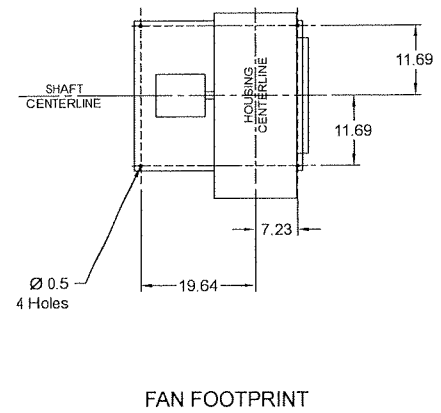
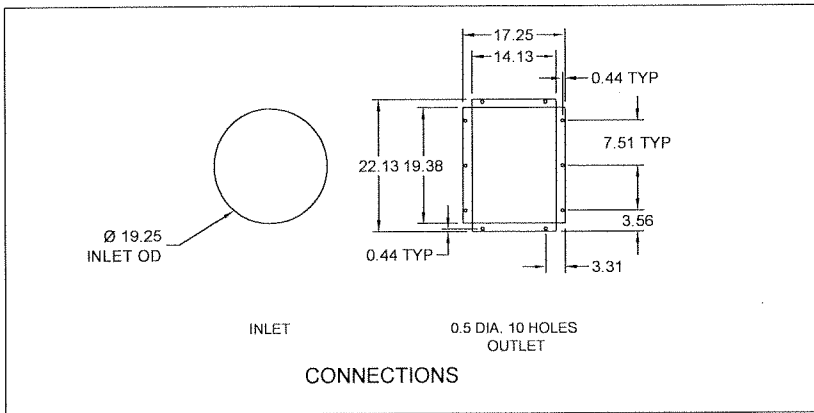
Outlet Flange - Punched

Shaft Seal w/Rub Ring

Unit Warranty: 1 Yr (Standard)

SWD-18-VG

Direct Drive Backward Inclined Centrifugal Utility Fan



Notes: All dimensions shown are in units of in.

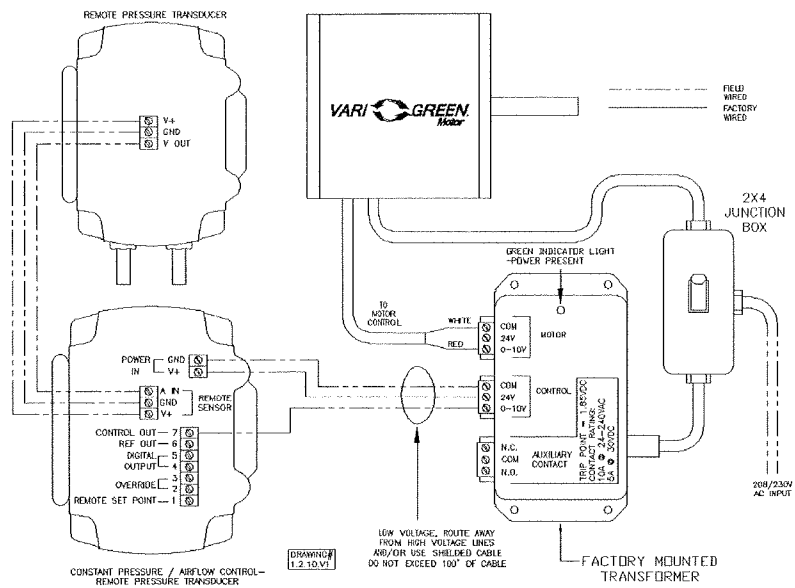
Vari-Green Motor & Control Options

An EC motor that uses AC input power and internally converts it to DC power. Motor accepts a 0-10VDC control signal. Motor is operable in the 2-10VDC range and off while in the 0-1.9VDC range. Constant pressure control with remote pressure transducer can maintain a constant static pressure on the inlet or outlet of a fan. Remote pressure transducer range is +/- 1.00 " W.C. A 24VDC transformer with 85-277VAC input range is provided to power the control.

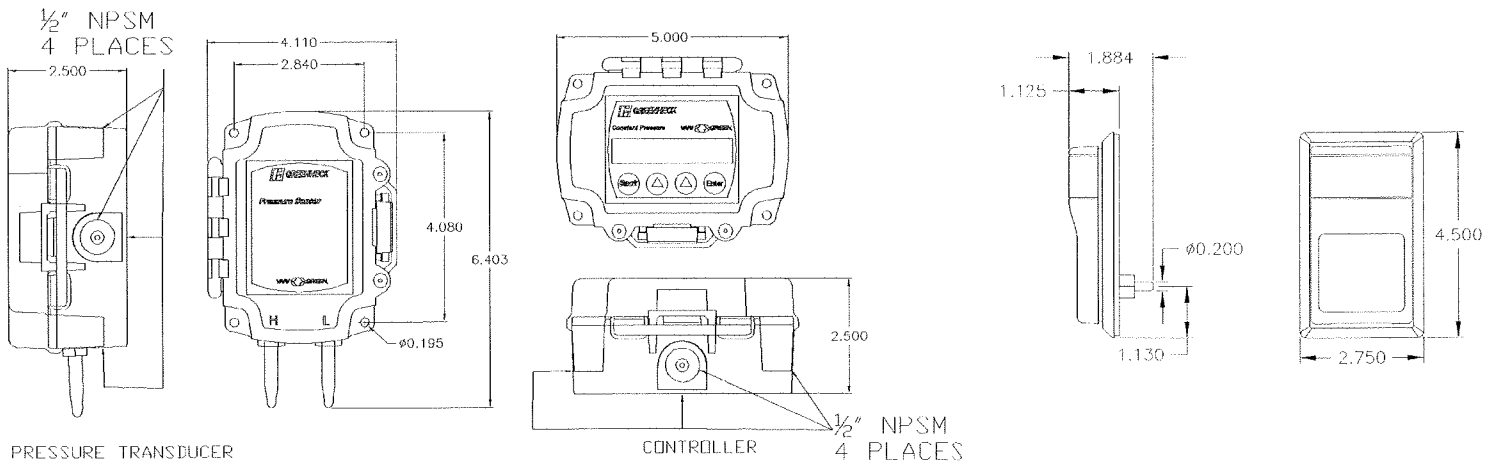
Motor Type: 0-10 VDC
Control Type: Constant Pressure
Transformer: Mounted and Wired

Pressure Transducer: Remote
Location: Room Static
Probe Type: Room Static

Wiring Diagram

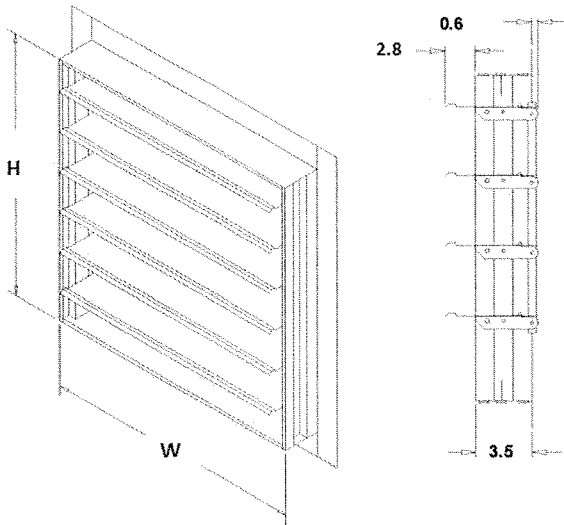


Dimensional Detail



Vertical Mount 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.. A vertical mount 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
- Synthetic axle bushings

Damper Configuration:

ID #:	Tag:	Quantity:	W (in.):	H (in.):	Act Qty:	Actuator Model:
2	SF-R1	1	14.75	19.25	0	
3	SF-R2	1	14.75	19.25	0	

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