

SHOP DRAWING TRANSMITTAL

To: Daniel Cusimano Architect Inc.
185 Bridgeland Ave.
Suite 107
Toronto, ON M6A 1Y7

Att: Stacey Melville

Project: **Shopper's Drug Mart #830**
Fairview Mall
1800 Sheppard Ave. East, Unit 2075
Toronto, Ontario

From: Kyle McCallum
Date: May 15, 2025
File: 7467.pt

We have reviewed the attached contractor's equipment shop drawings for general conformity with the design documents and are forwarding them to you for your use in association with the above noted project.

The documents are sent by: Courier • Hand • Pick-up • Facsimile • **E-mail**

<u>Qty</u>	<u>Shop Drawings</u>	<u>Notes</u>
1	Grilles & Diffuser (EH Price)	Reviewed: Exhaust grilles tagged E-1 & E-2 shall be for t-bar ceiling application. Countersunk screw holes not required. REVISED.
1	Exhaust Fans (Greenheck)	Reviewed: No comment.
1	Motorized Dampers For Exhaust Fans	Reviewed: No comment.



54 Audia Court, Unit 2
Concord, ON L4K 3N5
(905)-738-1400

Submittal

PROJECT NAME	PROJECT ADDRESS	DATE SUBMITTED
SDM 830 - Fairview Mall	25-027 1800 Sheppard Ave E, Fairview Mall	
TO	FROM	
Nick Cvik		
COMPANY	COMPANY	
FLUID CONSTRUCTION & PROJECT MANAGEMENT		
EMAIL	EMAIL	
nick@fluidconstruction.ca		
ADDRESS	ADDRESS	
2800 JOHN ST #23 MARKHAM, ON L3R 0E2	54 Audia Court, Unit 2 Concord, ON L4K 3N5	

Title

Fans: EF-1,2 / GRDs: S-1,R-1,E-1,E-2 / Damper

Description

GRDs:

S-1 Model# SPD 7

R-1 Model# 80 3

E-1 Model# 80 2

E-2 Model# 80 2

Fans:

EF-1 GREENHECK GB-098-6

EF-2 GREENHECK GB-098-6

Damper:

CCD-GV5-3V

INTEGRATED ENGINEERING		
REVIEW OF THIS DRAWING IS FOR GENERAL CONFORMITY WITH THE DESIGN ONLY. THE CONTRACTOR IS RESPONSIBLE FOR ALL REQUIREMENTS OF THE INSTALLATION.		
PROJ No.	7467	REVIEWED
DATE	25.05.15	REVISED
BY	KJM	RESUBMIT



SEE NOTES & COMMENTS
ON TRANSMITTAL

Package Items

SPEC

SUBSECTION

ITEM

TYPE



Grilles/Registers/Diffusers Submittals

Date Printed: 5/8/2025
Spec Section: 15 - HVAC

Contact: 571 Chrislea Rd., Unit 3
Woodbridge, ON L4L 8A2



All-In-One
Detailed Submittal Schedule
Grilles/Registers/Diffusers

#	Qty	Model	Tag	Unit Size	Inlet Size	Border	Face Size	Accessories
3	7	SPD	S-1	12	12	31	24, 24	
31 - 15/16" T-Bar Lay-In or Surface Mount Application								
4	3	80	R-1	24.000, 12.000		CORE		LI
CORE - Core Only LI - T-Bar Lay-In								
5	2	80	E-1	24.000, 12.000		F		SW
F - 1 1/4" (32) Flat Frame SW - Sidewall Application								
6	2	80	E-2	24.000, 24.000		F		SW
F - 1 1/4" (32) Flat Frame SW - Sidewall Application								

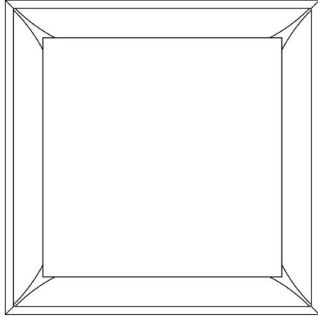


Performance Notes

Date Printed: 5/8/2025

1. Tested in accordance with ASHRAE Standard 70-2006 "Method of Testing for Rating the Performance of Air Outlets and Inlets".
2. Throw data is based on the temperature differential (Dt), in degrees Fahrenheit (°F), between supply air temperature and room temperature.
3. Throw values, in feet (ft), are provided at terminal air velocities of 150 fpm, 100 fpm, and 50 fpm for supply applications.
4. The NC, sound pressure level, is based on a room absorption of 10dB re 10^{-12} Watts in each octave band.
5. Blanks (--) indicate an NC level below 15.
6. Air flow is in cubic feet per minute (cfm).
7. Static pressure (Ps), velocity pressure (Pv), and total pressure (Pt) are in inches of water (in. w.g.).

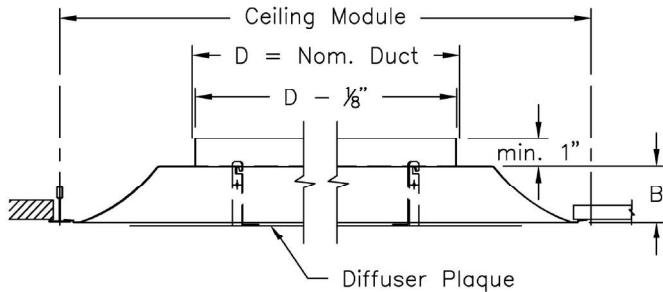
SPD Square Plaque Diffuser



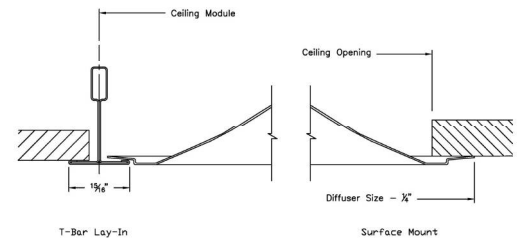
Duct Diameter: 12"
Backpan Height (B): 2 1/2"
Ceiling Module: 24" x 24"
Ceiling Opening: 22" x 22"
(Surface Mount App)

Border: 31

15/16" T-Bar Lay-In or Surface Mount Application



Frame Detail:



Notes:

- 360° radial horizontal air pattern
- Removable face panel
- For 9/16" flat tee installation with style 31 frame, cross-tees must be firmly secured. Locking any unopposed cross tees to the main beam with clips such as Armstrong STAC is recommended. Corner clips from ceiling suppliers may also be used, or order 916 clip in GRD-PARTS (confirming fit with ceiling on site is recommended).
- Integral hanger loops
- Factory tolerance +/- 1/32"



Scan for link to additional product information

Material:

- Diffuser: Steel

Finish:

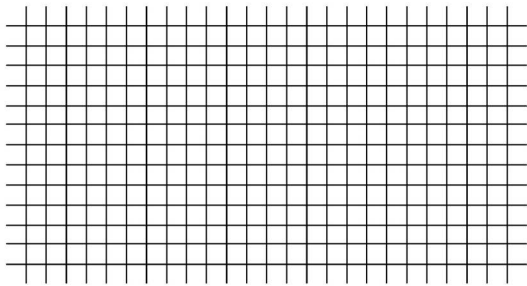
- B12 - Standard White

PROJECT:
ENGINEER:
DESCRIPTION: Square Plaque Diffuser
SPD-1-2/11/12/24/24/31/1111/B12

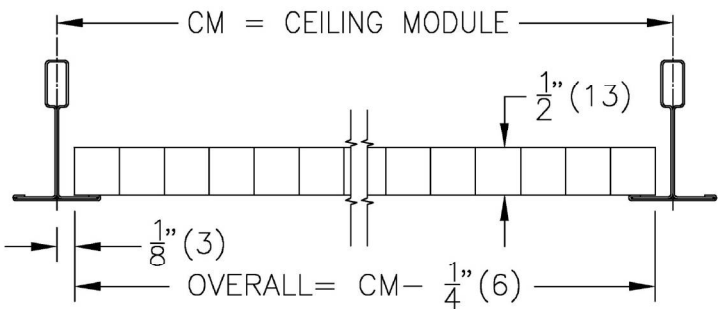
SUBMITTAL NO: 258503-F
CUSTOMER:

SUBMITTAL DATE: 5/8/2025

80 Egg Crate Grid Core Only – 1/2" x 1/2" x 1/2"



Border: CORE Core only



Material:

- Grille - Aluminum construction

Finish:

- B12 - Standard White

Notes:

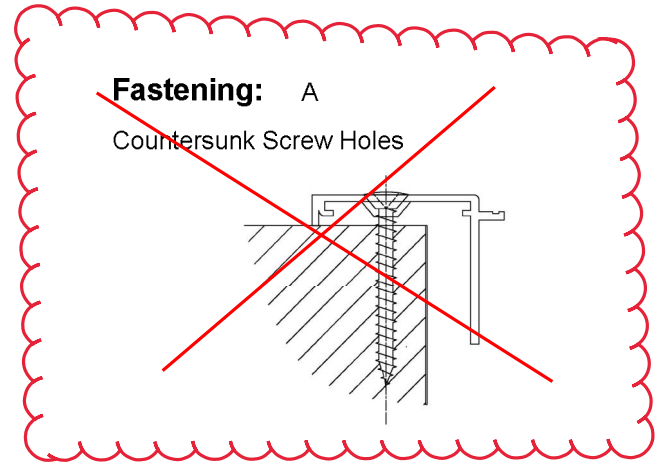
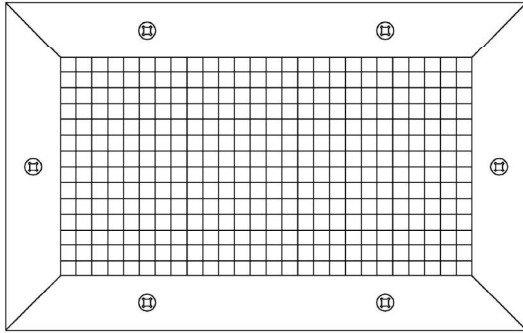
- 1/2" x 1/2" x 1/2" aluminum grid core
- Minimum duct size = 6" x 4" (152mm x 102mm)
- CORE units maximum duct size = 48" x 24" (1219mm x 610mm)
- Factory tolerance $\pm 1/32"$ (1mm)

PROJECT:
ENGINEER:
DESCRIPTION: Egg Crate Grille, 1/2" X 1/2" X 1/2"
80///1/24.000/12.000//LI/CORE/////24/12///0/////B12

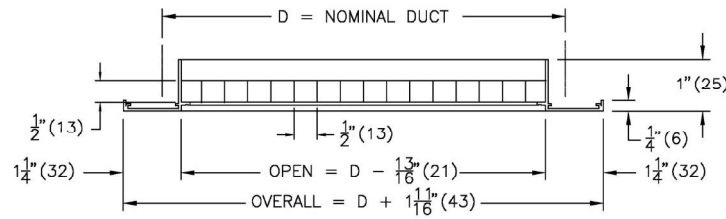
SUBMITTAL NO: 259683-E
CUSTOMER:

SUBMITTAL DATE: 5/8/2025

80 Egg Crate Grille – 1/2" x 1/2" x 1/2" Core



Border: F
1 1/4" (32) Flat Frame



Material:

- Grille - Aluminum construction

Finish:

- B12 - Standard White

Notes:

- 1/2" x 1/2" x 1/2" aluminum grid core
- Minimum duct size = 6" x 4" (152mm x 102mm)
- Maximum duct size without mullion = 48" x 24" (1219mm x 610mm)
- Maximum duct size with mullion = 96" x 48" (2438mm x 1219mm)
- Units with mullion supplied in one-piece frame construction
- Units over 96" x 48" (2438mm x 1219mm) supplied in sections c/w Duct Mounting Channel
- Factory tolerance $\pm 1/32"$ (1mm)

PROJECT:
ENGINEER:
DESCRIPTION: Egg Crate Grille, 1/2" X 1/2" X 1/2"
80//1/24.000/12.000//SW/F////////A////////B12

SUBMITTAL NO: 259683-E
CUSTOMER:

SUBMITTAL DATE: 5/8/2025

SUBMITTAL

Job Name: **SHOPPERS DRUG MART #830**

Elevation: (ft) 568

Date: 5/08/2025

Submitted By: Amanda Stennett

Email: astennett@ehpricesales.com

Phone: (905)660-0066

E H PRICE LIMITED

571 CHRISLEA ROAD UNIT 3

WOODBIDGE, ON L4L 8A2

CA

Phone: (905)669-8988

Fax: (905)660-9121

Email Address: astennett@ehpricesales.com

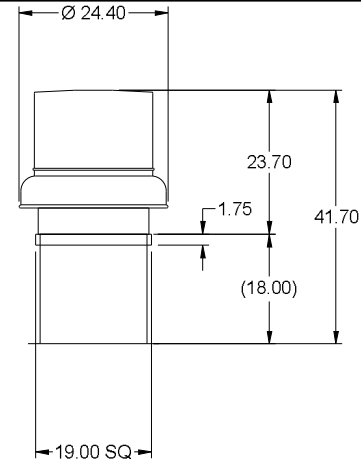


P.O. Box 410 Schofield, WI 54476 (715) 359-6171 FAX (715) 355-2399 www.greenheck.com

Model: GB-098-6

Belt Drive Centrifugal Roof Exhaust Fan

Dimensional	
Quantity	2
Weight w/o Acc's (lb)	52
Weight w/ Acc's (lb)	57
Weight w/ Acc's and Curb (lb)	85
Max T Motor Frame Size	56
Standard Curb Cap Size (in.)	19 x 19
Roof Opening (in.)	15.5 x 15.5

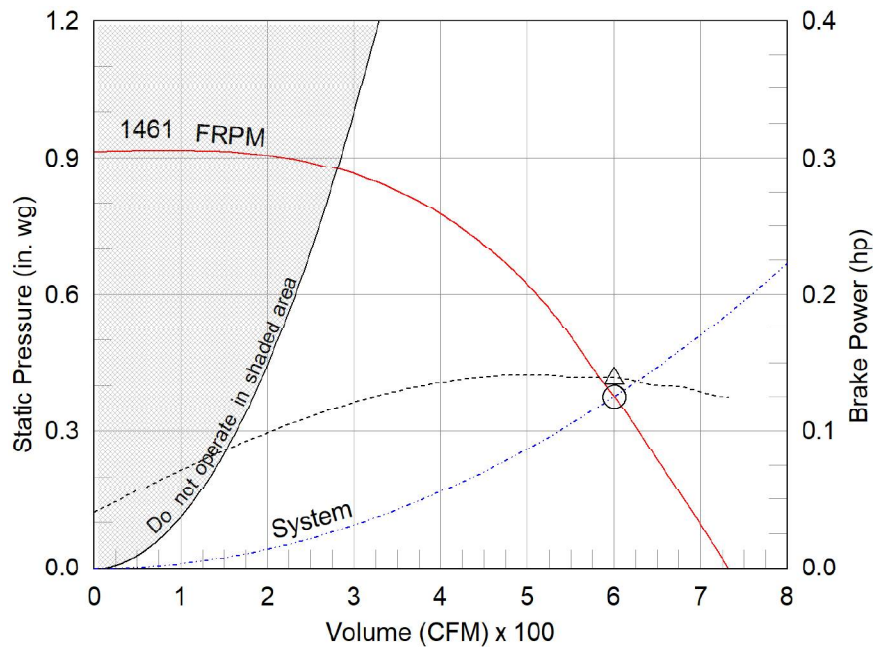


Performance	
Requested Volume (CFM)	600
Actual Volume (CFM)	600
Total External SP (in. wg)	0.375
Fan RPM	1461
Operating Power (hp)	0.14
Elevation (ft)	568
Airstream Temp.(F)	70
Air Density (lb/ft3)	0.073
Drive Loss (%)	18.4
Tip Speed (ft/min)	4,280
Static Eff. (%)	31

Misc Fan Data	
Fan Energy Index (FEI)	-
Outlet Velocity (ft/min)	625

Motor	
Motor Included	Yes
Size (hp)	1/6
Voltage/Cycle/Phase	115/60/1
Enclosure	ODP
Motor RPM	1725
Efficiency Rating	Standard
Windings	1
NEC FLA* (Amps)	4.4
Min. Circuit Ampacity (MCA)	5.5
Max. Overcurrent Protection (MOP)	15
Short Circuit Current Rtg (SCCR)	5 kA

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



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

Notes:

All dimensions shown are in units of in.
*NEC FLA, MCA and MOP are for reference only – based on tables 430.248 or 430.25 of National Electric Code 2020. Actual motor FLA may vary, for sizing thermal overload, consult factory. MCA and MOP values shown only account for the motor, not accessories (damper actuator, field supplied VFD, etc).
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

Sound Power by Octave Band

Sound Data	62.5	125	250	500	1000	2000	4000	8000	LwA	dBA	Sones
Inlet	77	75	73	65	61	57	51	46	69	57	8.9



Model: GB-098-6

Belt Drive 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 - Birdscreen - 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 - Sizes 141 and larger have internal lifting lugs.

Selected Options & Accessories:

Motor with CSA Approval
Standard Curb Cap Size - 19 Square
UL/cUL 705 Listed - "Power Ventilators"
Switch, NEMA-1, Toggle,
Junction Box Mounted & Wired in weather-protected motor compartment
Foam Curb Seal (Factory Applied)
Birdscreen: Galvanized, nom. 84% Free Area
Aluminum Wheel Material
Conduit Chase Qty 1
Unit Warranty: 1 Yr (Standard)

Selected Sub Marks

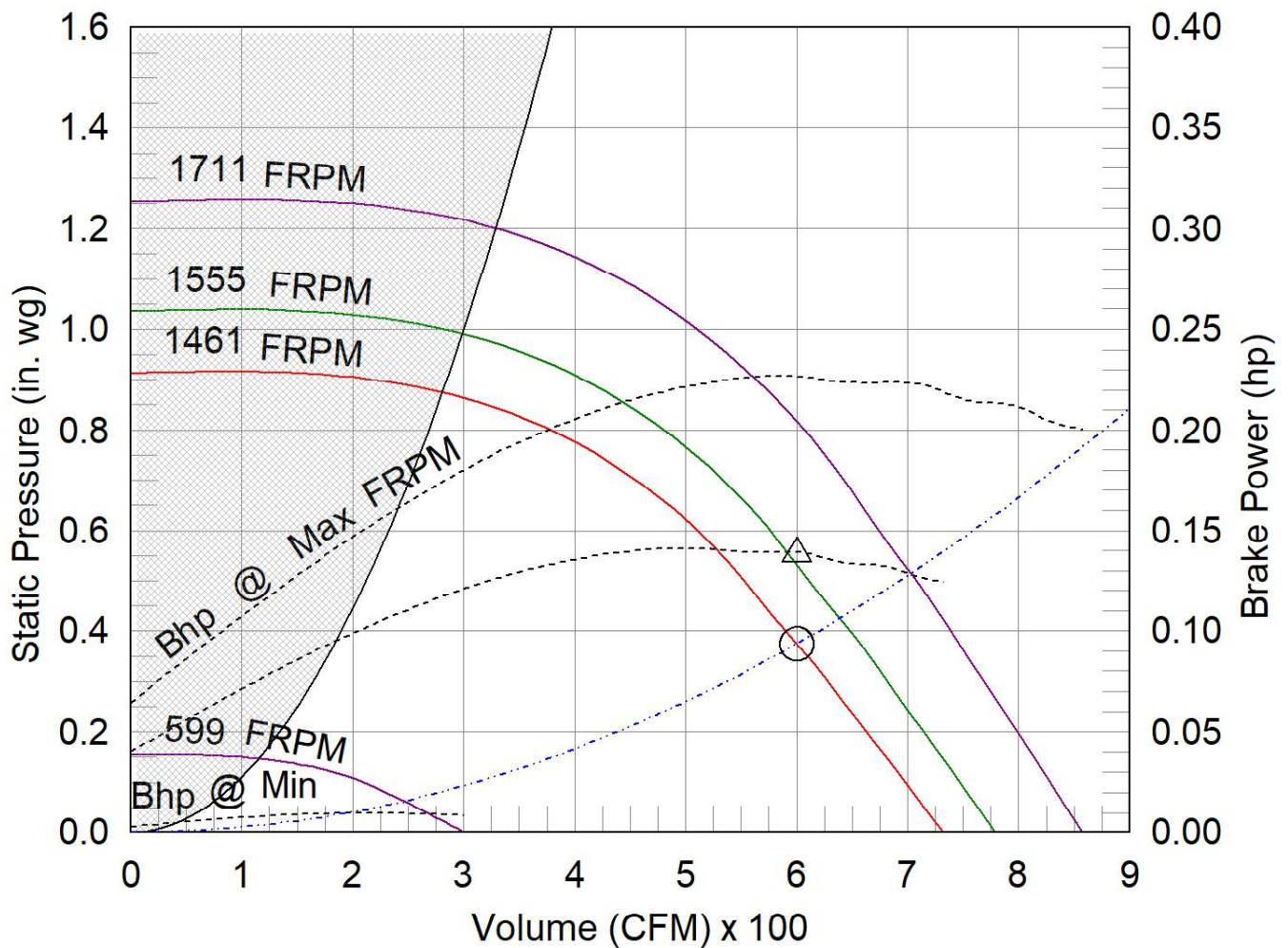
See individual submittals for full details
GPI-19-G18

GB-098-6

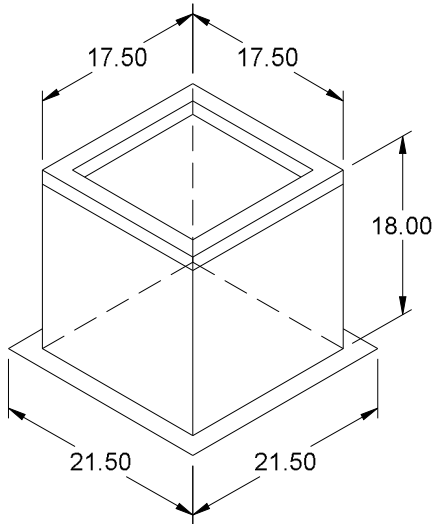
Min/Max Fan Curve

Performance

Requested Volume (CFM)	Actual Volume (CFM)	Total External SP (in. wg)	Fan RPM	Operating Power (hp)
600	600	0.375	1461	0.14



- △ Operating Bhp point
- Operating point at Total External SP
- Construction Limit
- Motor/System Limit
- Fan curve
- Min FRPM
- ... System curve
- Brake horsepower curve



Model: GPI

Roof Curb

Standard Construction Features:

- Roof Curb fits between the building roof and the fan mounted directly to the roof support structure - Constructed of either 18 ga galvanized steel or 0.064 in. aluminum - Straight Sided without a cant - 2 in. mounting flange - 3 lb density insulation - Height - Available from 12 in. to 42 in. as specified in 0.5 in. increments. Notes: - The maximum roof opening dimension should not be greater than the "Actual" top outside dimension minus 2 in.. - The minimum roof opening dimension should be at least 2.5 in. more than the damper dimension or recommended duct size. - The Roof Opening Dimension may or may not be the same as the Structural Opening Dimension. - Damper Tray is optional and must be specified. Tray size is same as damper size. - Security bars are optional and must be specified. Frames and gridwork are all 12 ga steel.

General

Tag	Qty	Model	Sizing Method	Undersizing (in.)	Weight (lb)	Shipped Assembled	Union Label
	2	GPI-19	Nominal	1.5	27	Yes	No Preference

Dimensions

Curb Height (in.)	Nominal Outside Width (in.)	Nominal Outside Length (in.)	Actual Outside Width (in.)	Actual Outside Length (in.)	Actual Inside Width (in.)	Actual Inside Length (in.)	Hinge Base Width* (in.)	Hinge Base Length* (in.)
18	19	19	17.5	17.5	14	14	18	18

*May not be applicable

Accessories

Material	Security Bars	Liner	Insulation (in.)	Insulation R Value
Galvanized	No	No	1	R4.3



Dampers Submittals

Date Printed: 5/8/2025
Spec Section: 15 - HVAC

Contact: 571 Chrislea Rd., Unit 3
Woodbridge, ON L4L 8A2



All-In-One
Detailed Submittal Schedule
Dampers

#	Qty	Model	Width, Height	Design	Sections	Frame Style	Sleeve Length
1	2	CCD	12.00, 12.00	3V	1, 1	GV5	0.00
3V - Formed Triple-Vee Blades GV5 - 5" Frame Galvanized Steel							
2	2	DMPR-PRTS					

Commercial Control Damper - Steel

Model

Commercial Control Damper Steel
CCD-GV5-3V

Features

- The CCD-GV5-3V series Control Dampers have been designed and tested to provide a reliable cost effective control damper where tight sealing is not of primary importance. (Note: For tight sealing dampers see Model: CCD-GV5-3V-LL).
- The CCD-GV5-3V damper's rigid frame and integrally braced corners provide true damper alignment that greatly resists being installed out of square or out of flat.
- The CCD-GV5-3V is available in either parallel or opposed blade models.
- Damper sections smaller than 48"w x 12"h (1219mm x 305mm) are furnished with a low profile top and bottom to maximize free areas.
- The CCD-GV5-3V series dampers may be made to accommodate higher than the recommended 2.5" w.g. static pressure. If application involves pressures in excess of 2.5" w.g. or velocities greater than 2000 fpm, contact the factory.
- Factory installed electric or pneumatic operators are available.

Standard Construction:

Frame: Roll-formed galvanized steel hat-section with staked corners with integral bracing.

Blades: 16-18 ga. triple-vee profile Roll-formed, galvanized steel
Minimum width: 4 1/4" (108 mm)
Maximum width: 7 1/4" (184 mm)

Bearings: Bronze Oilite. Press fit into frame.

Axles: Square, plated steel.

Linkage: Concealed in frame. Linkage bars are 12 ga. thick galvanized steel.

Finish: Mill galvanized.

Extended Shaft: Removable, 6" long x 1/2" dia. (152 mm x 13 mm) plated steel coupled to square axle.

Max. Temperature: 250°F

Sizes: Minimum size: 5"w x 4"h (127 mm x 102 mm) Maximum size: Single section - 48" w x 72"h (1219 mm x 1829 mm) Multiple section - size unlimited

Options:

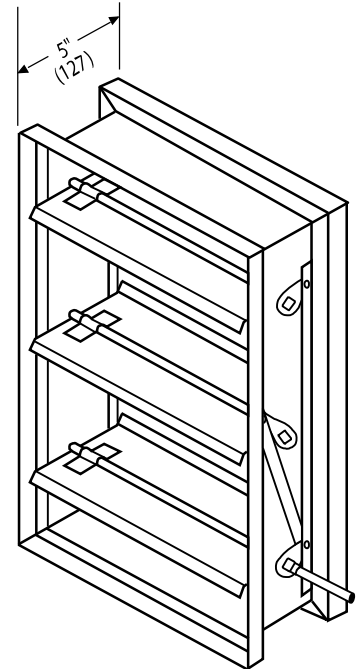
☐ **Bearings:** Nylon. Press-fit into frame.

☐ **Seals:** For pressure sensitive blade edge & jamb seals, see Model CCD-GV5-3V-LL.

Notes:

- Dampers fabricated 1/4" (6mm) under opening size unless otherwise noted
- Specify parallel or opposed blade action.
- All dampers 32" (813 mm) and over are supplied with Jackshafting. (See Jackshafting & Enclosure submittal drawing for details).

Specifications are correct at time of printing. However, as part of our continuous improvement program, we reserve the right to make further improvements without notice.



PROJECT:		price®	
ENGINEER:			
CUSTOMER:		Jul / 12	
SUBMITTAL DATE: 5/8/2025	SPEC. SYMBOL:	244964	

Model CCD-GV5-3V

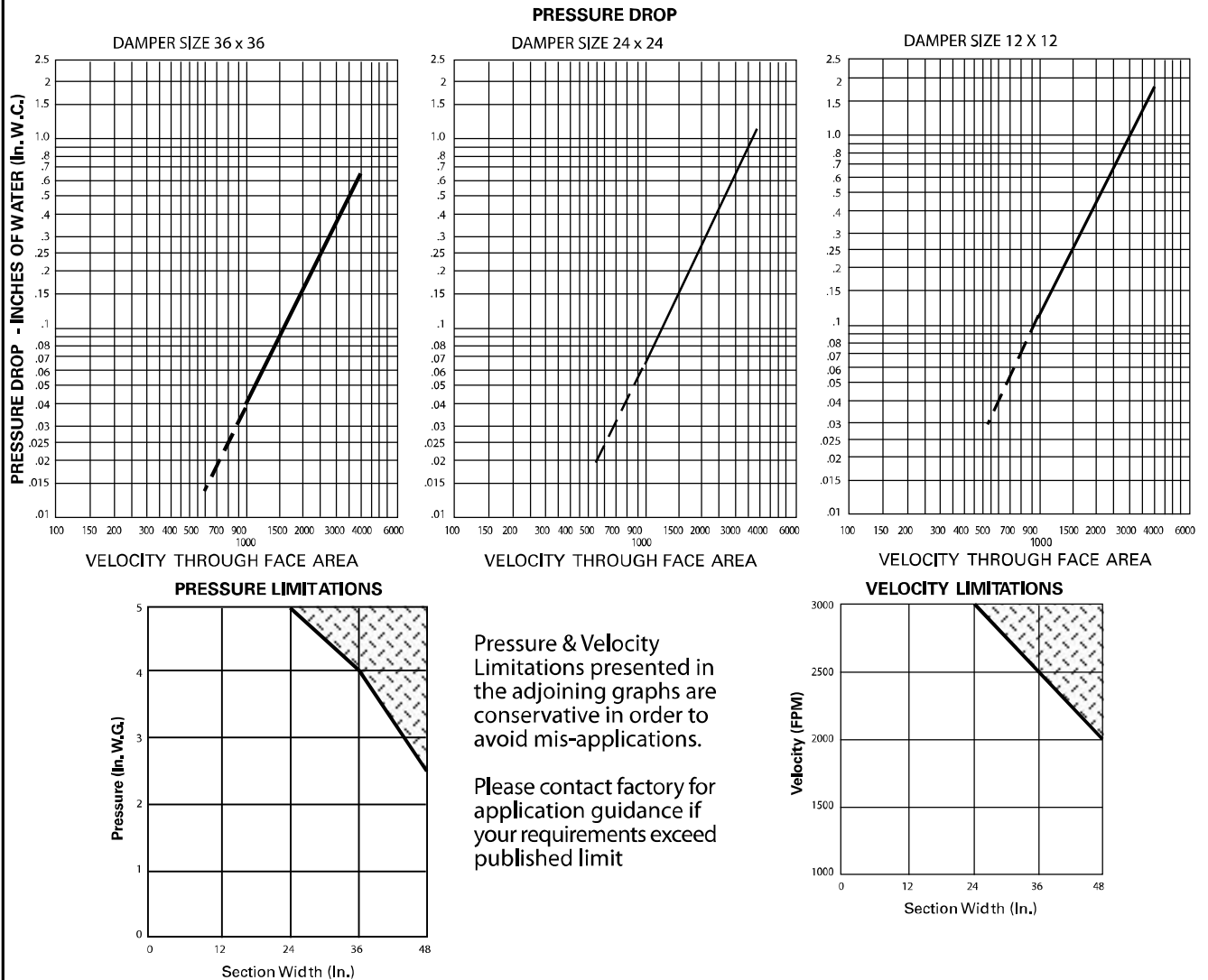
Steel Construction

3V Blade

price[®]

Commercial Control Damper - Steel

Pressure drop testing was conducted by an independent laboratory in accordance with the AMCA Standard 500-D, Fig. 5.3 ductwork upstream & downstream



Basic Fail-Safe actuator for controlling dampers in typical commercial HVAC applications.

- Torque motor 22 in-lb [2.5 Nm]
- Nominal voltage AC 100...240 V
- Control On/Off
- 1x SPDT



5-year warranty



Technical data

Electrical data	Nominal voltage	AC 100...240 V
	Nominal voltage frequency	50/60 Hz
	Nominal voltage range	AC 85...265 V
	Power consumption in operation	2.5 W
	Power consumption in rest position	1.3 W
	Transformer sizing	5 VA
	Auxiliary switch	1x SPDT, 1 mA...3 A (0.5 A inductive), DC 5 V...AC 250 V, adjustable 0...95°
	Switching capacity auxiliary switch	1 mA...3 A (0.5 A inductive), DC 5 V...AC 250 V
	Electrical Connection	(2) 18 GA appliance cables, 1 m, with 1/2" NPT conduit connectors
	Overload Protection	electronic throughout 0...95° rotation
Functional data	Electrical Protection	actuators are double insulated
	Torque motor	22 in-lb [2.5 Nm]
	Direction of motion motor	selectable by ccw/cw mounting
	Direction of motion fail-safe	reversible with cw/ccw mounting
	Angle of rotation	Max. 95°
	Angle of rotation note	adjustable with mechanical stop
	Running Time (Motor)	75 s
	Running time fail-safe	<25 s @ -4...122°F [-20...50°C], <60 s @ -22°F [-30°C]
	Noise level, motor	50 dB(A)
	Noise level, fail-safe	62 dB(A)
Safety data	Position indication	Mechanical
	Degree of protection IEC/EN	IP42
	Degree of protection NEMA/UL	NEMA 2
	Enclosure	UL Enclosure Type 2
	Agency Listing	cULus acc. to UL60730-1A/-2-14, CAN/CSA E60730-1:02 CE acc. to 2014/30/EU and 2014/35/EU
	Quality Standard	ISO 9001
	UL 2043 Compliant	Suitable for use in air plenums per Section 300.22(C) of the NEC and Section 602 of the IMC
	Ambient humidity	Max. 95% RH, non-condensing
	Ambient temperature	-22...122°F [-30...50°C]
	Storage temperature	-40...176°F [-40...80°C]
	Servicing	maintenance-free
	Weight	1.1 lb [0.50 kg]

Materials	Housing material	UL94-5VA
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Footnotes †Rated Impulse Voltage 4kV, Type of Action 1.AA.B, Control Pollution Degree 3.

Product features

Application	For On/Off, fail-safe control of dampers in HVAC systems. Actuator sizing should be done in accordance with the damper manufacturer's specifications. Control is On/Off from an auxiliary contact, or a manual switch. The actuator is mounted directly to a damper shaft from 1/4" up to 1/2" in diameter by means of its universal clamp, 1/2" shaft centered at delivery. A crank arm and several mounting brackets are available for applications where the actuator cannot be direct coupled to the damper shaft.
Operation	<p>The TF series actuators provide true spring return operation for reliable fail-safe application and positive close off on air tight dampers. The spring return system provides consistent torque to the damper with, and without, power applied to the actuator. The TF series provides 95° of rotation and is provided with a graduated position indicator showing 0° to 90°. The actuator may be stalled anywhere in its normal rotation without the need of mechanical end switches. Power consumption is reduced in holding mode. The actuator is double insulated so an electrical ground connection is not necessary. The TF-S versions are provided with one built-in auxiliary switch. This SPDT switch is provided for safety interfacing or signaling, for example, for fan start-up. The switching function is adjustable between 0° and 95°.</p> <p>Safety Note: Screw a conduit fitting into the actuator's bushing. Jacket the actuator's input and output wiring with suitable flexible conduit. Properly terminate the conduit in a suitable junction box.</p>
Typical specification	On/Off spring return damper actuators shall be direct coupled type which require no crank arm and linkage and be capable of direct mounting to a shaft up to a 1/2" diameter and center a 1/2" shaft. The actuators must be designed so that they may be used for either clockwise or counter clockwise fail-safe operation. Actuators shall be protected from overload at all angles of rotation. If required, one SPDT auxiliary switch shall be provided having the capability of being adjustable. Actuators with auxiliary switch must be constructed to meet the requirements for Double Insulation so an electrical ground is not required to meet agency listings. Actuators shall be cULus listed, have a 5 year warranty, and be manufactured under ISO 9001 International Quality Control Standards. Actuators shall be as manufactured by Belimo.

Accessories

Electrical accessories	Description	Type
	Auxiliary switch, mercury-free	P475
	Auxiliary switch, mercury-free	P475-1
	Signal simulator, Power supply AC 120 V	PS-100
	Cable conduit connector 1/2"	TF-CC US

Mechanical accessories	Description	Type
	Shaft extension 170 mm ø10 mm for damper shaft ø6...16 mm	AV6-20
	Position indicator for TFB(X)	IND-TF
	Shaft clamp for TFB(X)	K8 US
	Ball joint suitable for damper crank arm KH8 / KH10	KG10A
	Ball joint suitable for damper crank arm KH8	KG6
	Ball joint suitable for damper crank arm KH8	KG8
	Damper crank arm Slot width 8.2 mm, for ø1.05"	KH12
	Damper crank arm Slot width 6.2 mm, clamping range ø10...18 mm	KH6
	Damper crank arm Slot width 8.2 mm, clamping range ø10...18 mm	KH8
	TFB(X) crankarm with 5/16" slot.	KH-TF US
	TFB(X) crankarm with 1/4" slot.	KH-TF-1 US
	Screw fastening kit	SB-TF
	Push rod for KG10A ball joint 36" L, 3/8" diameter	SH10
	Push rod for KG6 & KG8 ball joints (36" L, 5/16" diameter).	SH8
	Anti-rotation bracket TF/NKQ/AM/NM/LM.	TF-P
	Wrench 0.32 in and 0.39 in [8 mm and 10 mm]	TOOL-06
	Angle of rotation limiter, with end stop	ZDB-TF
	Mounting bracket for TFB(X)	ZG-113
	Damper clip for damper blade, 3.5" width.	ZG-DC1
	Damper clip for damper blade, 6" width.	ZG-DC2
	Shaft extension for 3/8" diameter shafts (4" L).	ZG-LMSA-1
	Shaft extension for 1/2" diameter shafts (5" L).	ZG-LMSA-1/2-5
	TFB(X) crankarm adaptor kit (includes ZG-113).	ZG-TF112
	TFB(X) crankarm adaptor kit (T bracket included).	ZG-TF2
	Mounting kit for TFB(X)	ZG-TF3
	Weather shield 13x8x6" [330x203x152 mm] (LxWxH)	ZS-100
	Baseplate, for ZS-100	ZS-101
	Weather shield 406x213x102 mm [16x8-3/8x4"] (LxWxH)	ZS-150

Electrical installation

Warning! Live electrical components!

During installation, testing, servicing and troubleshooting of this product, it may be necessary to work with live electrical components. Have a qualified licensed electrician or other individual who has been properly trained in handling live electrical components perform these tasks. Failure to follow all electrical safety precautions when exposed to live electrical components could result in death or serious injury.

Meets cULus requirements without the need of an electrical ground connection.

Apply only AC line voltage or only UL-Class 2 voltage to the terminals of auxiliary switches. Mixed or combined operation of line voltage/safety extra low voltage is not allowed.

Actuators with appliance cables are numbered.

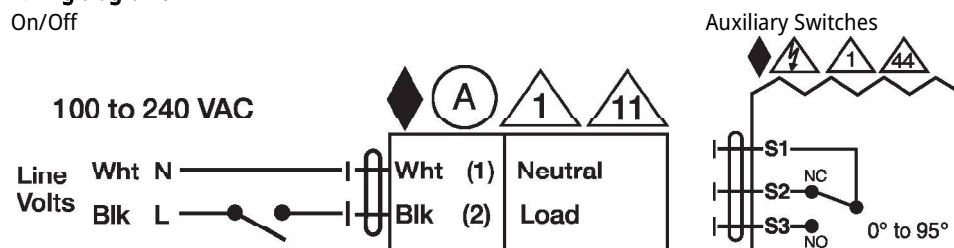
Provide overload protection and disconnect as required.

Actuators may be connected in parallel if not mechanically linked. Power consumption and input impedance must be observed.

One built-in auxiliary switch (1x SPDT), for end position indication, interlock control, fan startup, etc.

Wiring diagrams

On/Off



Dimensions
