

VCD

VOLUME CONTROL DAMPER



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APPLICATION

- Volume control dampers with manual quadrant are generally installed in branches / duct to manually adjust the air flow in that particular branch / duct or to isolate any particular area of the building.
- Volume control dampers with motorization are generally installed at the inlet and outlet of the AHU to facilitate the airflow or to protect the AHU or ductwork against unwanted ingress.



EH PRICE GULF certifies that the VCD model: K-VCD-GI-200 shown herein is licensed to bear the AMCA Seal. The rating shown are based on tests and procedures performed in accordance with AMCA Publications 511 and comply with requirements of the AMCA Certified Rating Programs. The AMCA certified Ratings seal applies to air performance and air leakage ratings.

DESCRIPTION

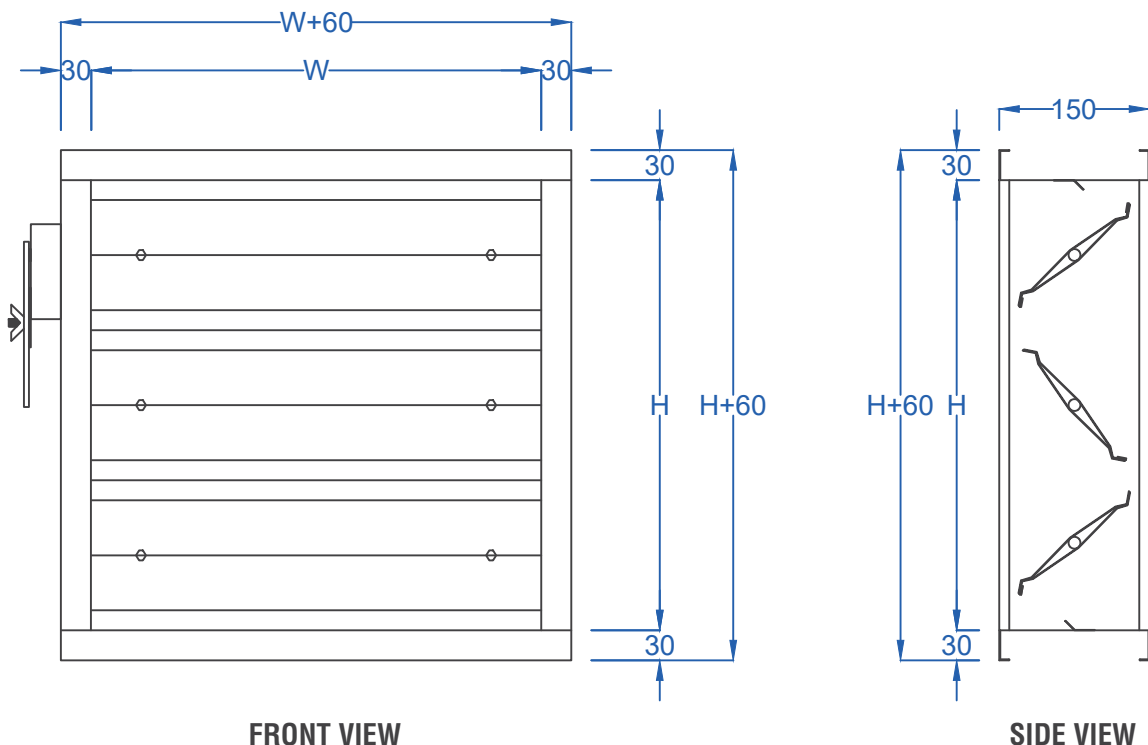
K-VCD-GI-200 used for balancing air flow in a branch / duct.

FEATURES

- Operation: Opposed blade movement
- Frame: Hat shaped 18 gauge (1.20 mm) galvanized steel sheet
- Blade: Aerofoil, double walled, 1.60 mm equivalent thickness galvanized steel sheet
- Linkage: Internal galvanized steel
- Bush: Option available Nylon / Plastic / Brass
- Gasket: Option available Rubber foam / Neoprene / Silicon fire rated
- Fixing: Box type / Slip and clip / Integral flange / External flange
- Option available with frame thickness of upto 12 gauge galvanized steel sheet



DIMENSIONS

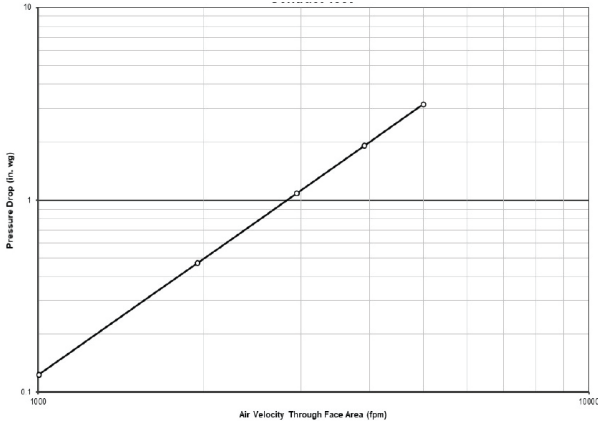


AIR PERFORMANCE

Pressure Drop - Intake

K-VCD-GI-200 **Air Performance** testing has been performed in accordance with Test Method as per ANSI/AMCA STANDARD 500 D (Pressure Drop), Figure 5.1

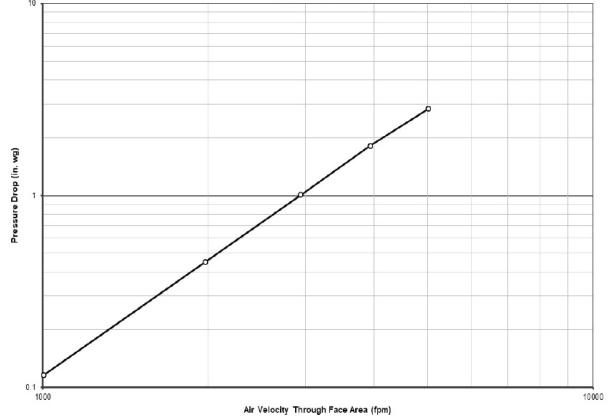
The maximum static pressure drop for specified air flow at standard air density



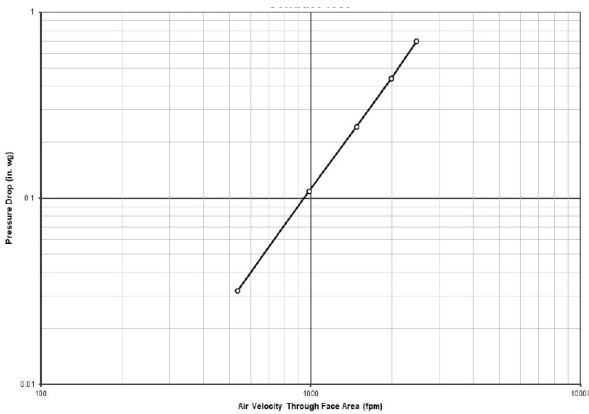
| 12" x 12" | |
|----------------|---------------------|
| Velocity (fpm) | ΔP (In. wg) |
| 5008 | 3.14 |
| 3910 | 1.92 |
| 2951 | 1.09 |
| 1946 | 0.47 |
| 1003 | 0.12 |

Pressure Drop – Exhaust

K-VCD-GI-200 **Air Performance** testing has been performed in accordance with Test Method as per ANSI/AMCA STANDARD 500 D (Pressure Drop), Figure 5.1



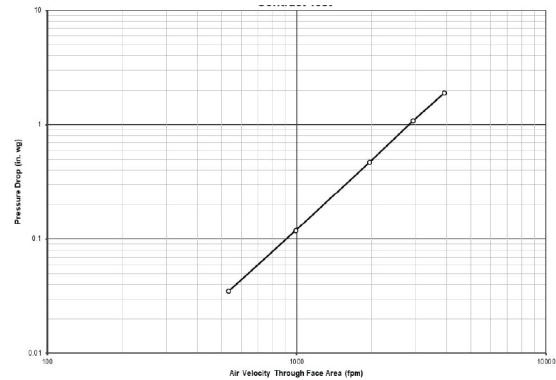
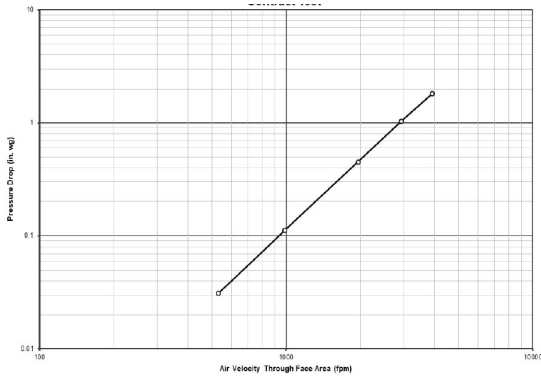
| 12" x 12" | |
|----------------|---------------------|
| Velocity (fpm) | ΔP (In. wg) |
| 5018 | 2.83 |
| 3936 | 1.81 |
| 2946 | 1.01 |
| 1976 | 0.45 |
| 1003 | 0.12 |



| 24" x 24" | |
|----------------|---------------------|
| Velocity (fpm) | ΔP (In. wg) |
| 2467 | 0.7 |
| 1984 | 0.44 |
| 1479 | 0.24 |
| 986 | 0.11 |
| 536 | 0.03 |



| 24" x 24" | |
|----------------|---------------------|
| Velocity (fpm) | ΔP (In. wg) |
| 2471 | 0.68 |
| 1977 | 0.43 |
| 1485 | 0.24 |
| 982 | 0.11 |
| 531 | 0.04 |



| 36" x 36" | |
|----------------|---------------------|
| Velocity (fpm) | ΔP (In. wg) |
| 3913 | 1.83 |
| 2934 | 1.04 |
| 1956 | 0.45 |
| 989 | 0.11 |
| 531 | 0.03 |

| 36" x 36" | |
|----------------|---------------------|
| Velocity (fpm) | ΔP (In. wg) |
| 3912 | 1.9 |
| 2928 | 1.09 |
| 1961 | 0.47 |
| 991 | 0.12 |
| 534 | 0.04 |

AIR LEAKAGE

K-VCD-GI-200, is tested for **Air Leakage** in accordance with Test Method as per ANSI/AMCA STANDARD 500 D (Leakage), Figure 5.4. Data is based on operation between 0 °C to 49 °C with a torque of 24 lb.in applied to close and seal the Damper during test.

| Maximum Allowable Leakage, cfm/ft ² | | | | |
|--|------------|------------|------------|------------|
| Class | 1 Inch. wg | 2 Inch. wg | 3 Inch. wg | 4 Inch. wg |
| 1A | 3 | N/A | N/A | N/A |
| 1 | 4 | 6 | 7 | 8 |
| 2 | 10 | 14 | 17 | 20 |
| 3 | 40 | 57 | 69 | 80 |

| AMCA Leakage Class | | | | |
|--------------------|------------|------------|------------|------------|
| Class | 1 Inch. wg | 2 Inch. wg | 3 Inch. wg | 4 Inch. wg |
| 36" x 36" | CLASS 3 | CLASS 3 | CLASS 3 | CLASS 3 |

Model CCD-GI-AL-200



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Model CCD-GI-AL-200

Steel Frame Construction
Aluminum Blade

Commercial Control Damper - Steel Frame

Model

Commercial Control Damper Steel
CCD-GI-AL-200

Features

- The CCD-GI-AL-200 series Control Dampers have been designed and tested to provide the ultimate in performance features for sophisticated HVAC systems. Streamlined ("airfoil") blades provide reduced turbulence and noise. Inflatable blade edge and jamb seals allow extremely tight sealing without unduly increasing torque requirements.
 - The CCD-GI-AL-200 series damper's rigid frame and integrally braced corners provide true damper alignment that greatly resists being installed out of square or out of flat. This insures on site performance equal to test results.
 - The CCD-GI-AL-200 series dampers have been leakage tested to AMCA standard 500 with the following results:
- | LEAKAGE | AT
1.0" w.g. | AT
4.0" w.g. | AT
8.0" w.g. |
|-------------|-----------------|-----------------|-----------------|
| cfm/SQ. FT. | 3.0 | 5.0 | 7.0 |
- CCD-GI-AL-200 is available in either parallel or opposed blade models.
 - Factory installed electric or pneumatic operators are available.

Features:

- Operation: Opposed / Parallel, blade movement
- Frame: Hat shaped 20 gauge (1.00 mm) / 16 gauge (1.60 mm) galvanized steel sheet.
- Blade: Aerofoil, double walled, 1.20 mm wall thickness extruded aluminum profile
- Linkage: Internal galvanized steel, stainless steel options are available.
- Bush: Nylon standard, option available with Plastic / Brass.
- Gasket: Rubber foam standard, option available with Neoprene or Silicon fire rated
- Fixing: Integral flange option available Box type / Slip and Clip external flange.
- Option available with frame thickness of up to 12 gauge galvanized steel sheet.



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.

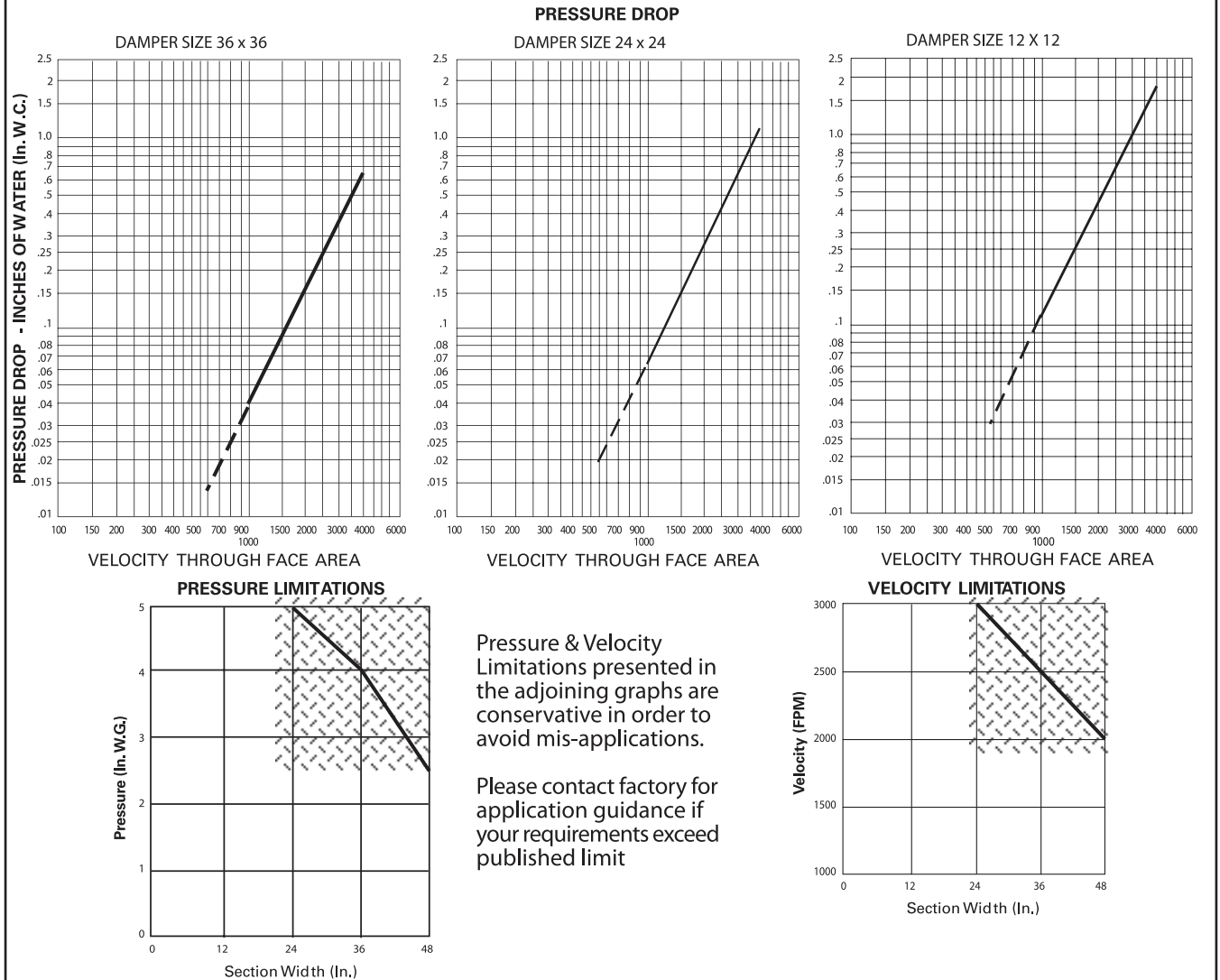
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|------------------------|----------------------|-------------------------|--|
| PROJECT: | | e.h.price Gulf | |
| ENGINEER: | | | |
| CUSTOMER: | | Jul / 12 | |
| SUBMITTAL DATE: | SPEC. SYMBOL: | 244967 | |

Model CCD-GI-AL-200

Steel Frame Construction
Aluminum Blade

Commercial Control Damper - Steel Frame

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



Model CCD-GI-AL-200-M



Model CCD-GI-AL-200-M

Motorized Shut Off Damper

Steel Construction
Aluminum Blade

Commercial Control Damper - Steel

Model

Commercial Control Damper Steel
CCD-GI-AL-200-M

Features

- The CCD-GI-AL-200-M 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-GI-AL-200-M).
- The CCD-GI-AL-200-M 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-GI-AL-200-M is available in either parallel or opposed blade models.
- Damper section 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-GI-AL-200-M 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: Aerofoil, double wall, 1.20 mm wall thickness, extruded aluminum profile.
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.

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-GI-AL-200-M.

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.



Roll formed galvanized steel Hat shaped, Z257 GSM, 20 Gauge to 16 Gauge.

Blade: Natural anodized extruded aluminum profile, 18 Gauge.

Blade Seal: Silicon Rubber, temperature resistance upto 400 C.

Side Seal: Stainless steel -302, popup side steel.

Blade Linkage: Galvanized steel or Stainless steel.

Blade Spindle: Stainless steel.

| | | | |
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| PROJECT: | | e.h.price Gulf | |
| ENGINEER: | | | |
| CUSTOMER: | | Jul / 12 | |
| SUBMITTAL DATE: | SPEC. SYMBOL: | 244964 | |

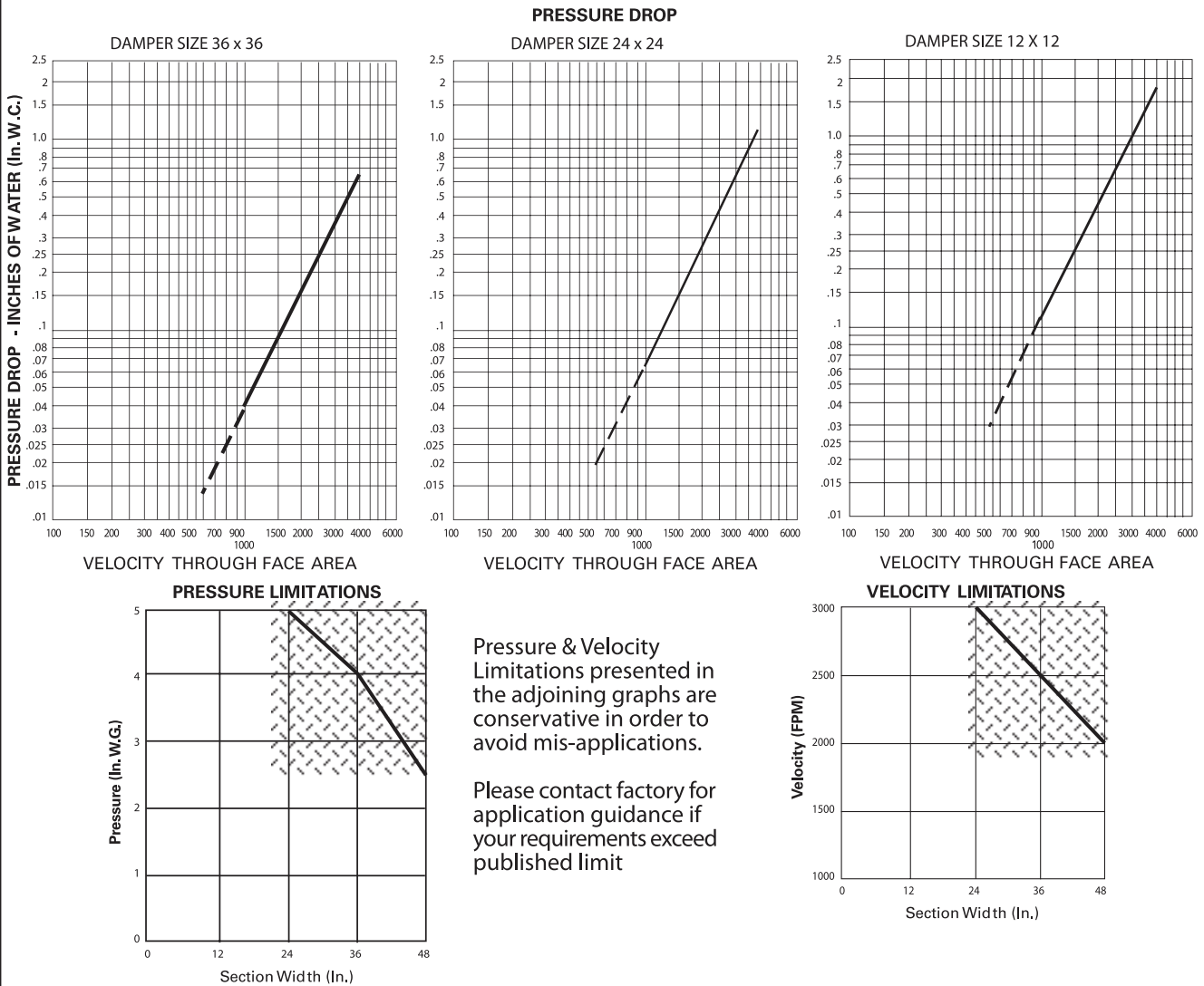
Model CCD-GI-AL-200-M

Motorized Shut Off Damper

Steel Construction
Aluminum Blade

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



Model CCD-GI-GI-100



Model CCD-GI-GI-100

Commercial Control Damper Steel Frame Construction Galvanized Triple Vee Blade

Commercial Control Damper - Steel

Model

Commercial Control Damper Steel
CCD-GI-GI-100

Features

- The CCD-GI-GI-100 series Control Dampers have been designed and tested to provide the ultimate in performance features for sophisticated HVAC systems. Streamlined ("airfoil") blades provide reduced turbulence and noise. Inflatable blade edge and jamb seals allow extremely tight sealing without unduly increasing torque requirements.
- The CCD-GI-GI-100 series damper's rigid frame and integrally braced corners provide true damper alignment that greatly resists being installed out of square or out of flat. This insures on site performance equal to test results.
- CCD-GI-GI-100 is available in either parallel or opposed blade models.
- CCD-GI-GI-100 is available as face and bypass mixing dampers.
- Factory installed electric or pneumatic operators are available.

Features:

- Operation: Opposed blade movement.
- Frame: Hat shaped 20 Gauge (1.00 mm) to 16 Gauge (1.50 mm) galvanized steel sheet.
- Blade: 16-18 ga , Triple Vee profile , Roll formed galvanized steel.
- Linkage: Internal galvanized steel.
- Bush: Option available Nylon / Plastic / Brass.
- Gasket: Option available Rubber foam / Neoprene / Silicon fire rated
- Fixing: Box type / Slip and clip / Integral flange / External flange.
- Option available with frame thickness of upto 12 gauge galvanized steel sheet.



Options:

- Bearings:** Nylon. Press-fit into frame.
- Silicone blade edge seals.

Notes:

- Not recommended with blades running vertically.

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.

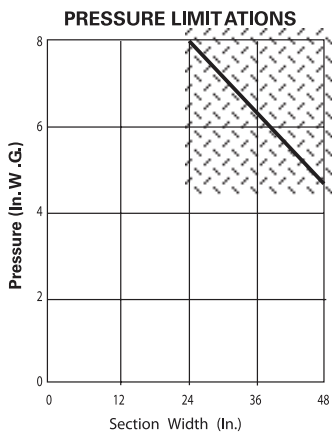
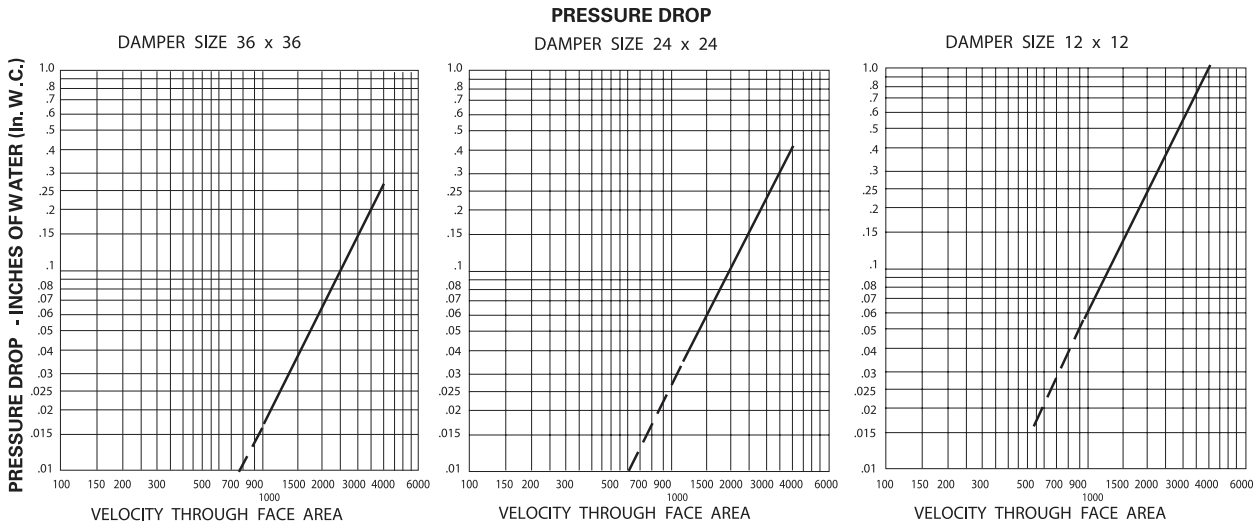
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| PROJECT: | | e.h.price Gulf | |
| ENGINEER: | | | |
| CUSTOMER: | | Jul / 12 | |
| SUBMITTAL DATE: | SPEC. SYMBOL: | 244970 | |

Model CCD-GI-GI-100

Commercial Control Damper
Steel Frame Construction
Galvanized Triple Vee Blade

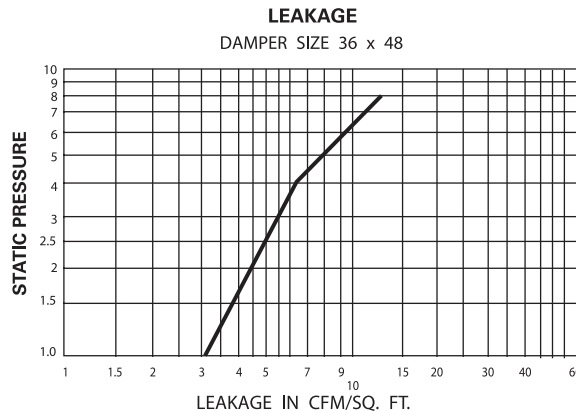
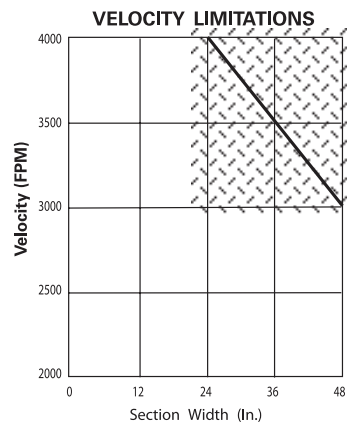
Commercial Control Damper - Steel

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



Pressure & Velocity Limitations presented in the adjoining graphs are conservative in order to avoid mis-applications.

Please contact factory for application guidance if your requirements exceed published limitations.

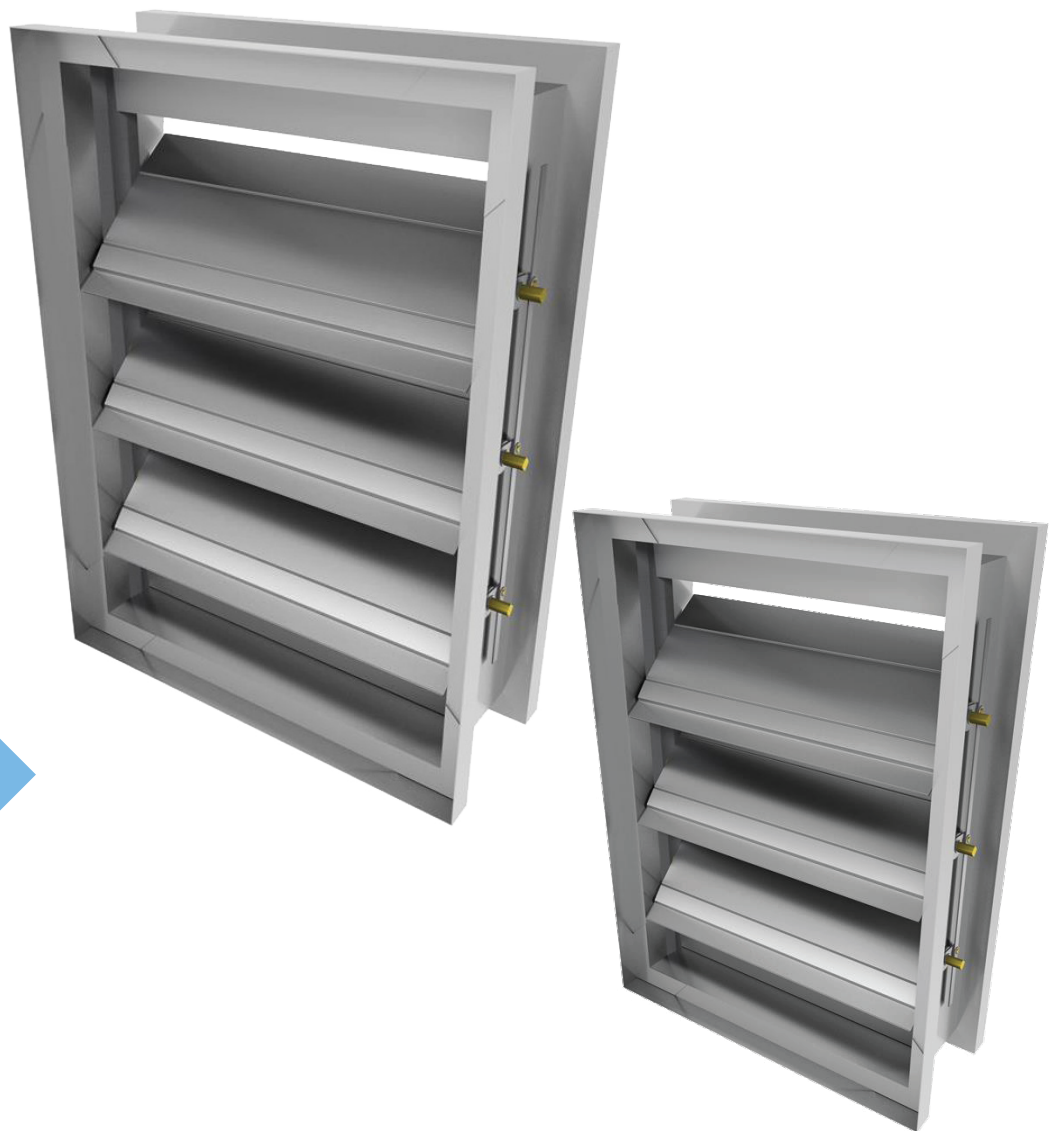


Leakage Performance test was conducted by an independent laboratory in accordance with AMCA Standard 500-D and is expressed as CFM/SQ. FT. of damper face area.

| LEAKAGE | AT 1.0" w.g. | AT 4.0" w.g. | AT 8.0" w.g. |
|-------------|--------------|--------------|--------------|
| cfm/SQ. FT. | 3.1 | 6.3 | 12.4 |



Model CCD-GV5-AF



Model CCD-GV5-AF

Commercial Control Damper Steel Frame Construction Galvanized Airfoil Blade

Commercial Control Damper - Steel

Model

Commercial Control Damper Steel
CCD-GV5-AF

Features

- The CCD-GV5-AF series Control Dampers have been designed and tested to provide the ultimate in performance features for sophisticated HVAC systems. Streamlined ("airfoil") blades provide reduced turbulence and noise. Inflatable blade edge and jamb seals allow extremely tight sealing without unduly increasing torque requirements.
- The CCD-GV5-AF series damper's rigid frame and integrally braced corners provide true damper alignment that greatly resists being installed out of square or out of flat. This insures on site performance equal to test results.
- CCD-GV5-AF is available in either parallel or opposed blade models.
- CCD-GV5-AF is available as face and by-pass mixing dampers.
- Factory installed electric or pneumatic operators are available.

Standard Construction:

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

Blades: Airfoil-shaped, double skin galvanized steel of roll-formed construction. Mechanically joined to form construction equivalent to 14 ga. steel. Minimum 5" w (127 mm), maximum 7" w (178mm)

Bearings: Bronze Oilite. Press fit into frame.

Axles: Square, plated steel.

Seals: 450°F inflatable PVC blade edge seals and flexible metal jamb seals.

Linkage: Concealed in frame. Linkage bars are 12ga. 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.

Maximum Temperature: 450°F (Bronze Oilite Bearings)

Size: Minimum size: 8" w x 8" h (203 mm x 203 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.


Silicone blade edge seals.

Notes:

- Dampers fabricated 1/4" (6mm) under opening size unless otherwise noted
- Not recommended with blades running vertically.
- All dampers 32" (813mm) and over are supplied with Jackshifting. (See Jackshifting & 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.



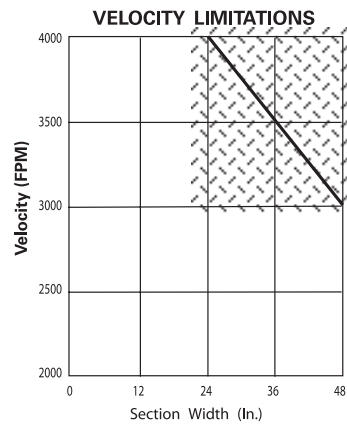
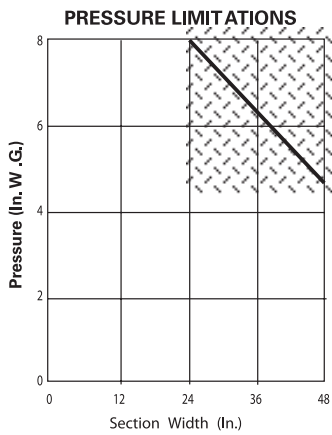
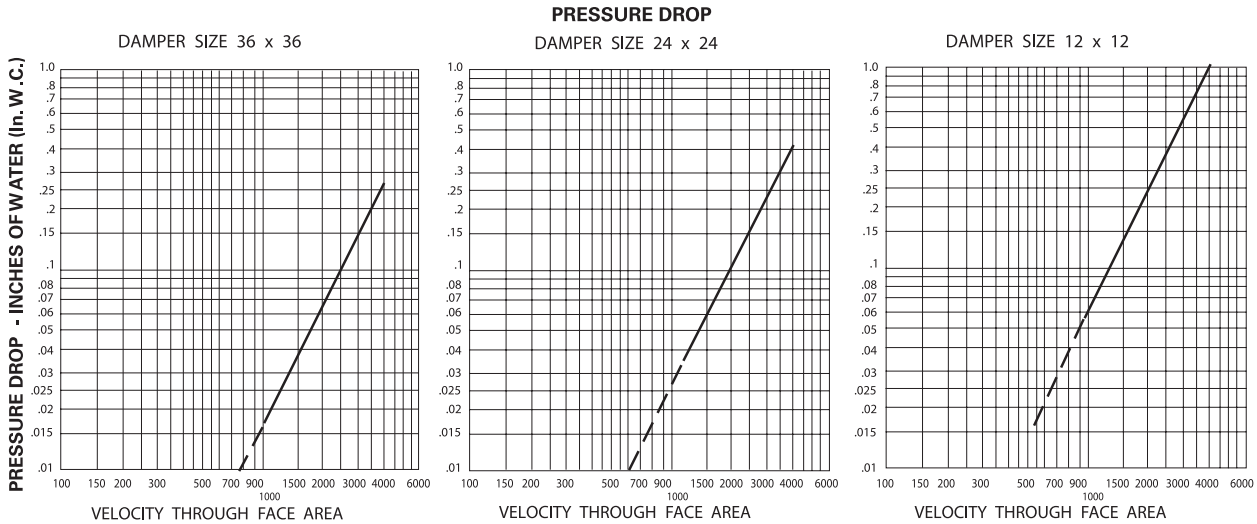
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| PROJECT: | |  | |
| ENGINEER: | | | |
| CUSTOMER: | | Jul / 12 | |
| SUBMITTAL DATE: | SPEC. SYMBOL: | 244970 | |

Model CCD-GV5-AF

Commercial Control Damper Steel Frame Construction Galvanized Airfoil Blade

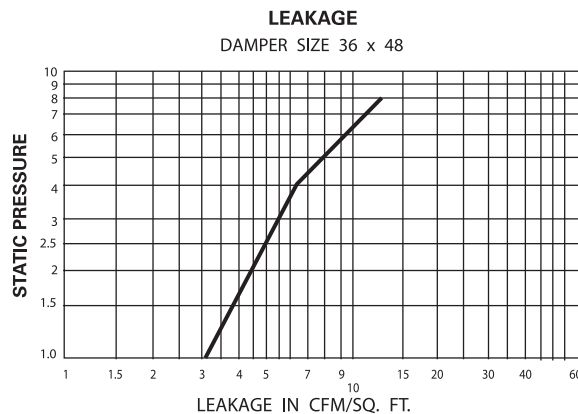
Commercial Control Damper - Steel

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



Pressure & Velocity Limitations presented in the adjoining graphs are conservative in order to avoid mis-applications.

Please contact factory for application guidance if your requirements exceed published limitations.



Leakage Performance test was conducted by an independent laboratory in accordance with AMCA Standard 500-D and is expressed as CFM/SQ. FT. of damper face area.

| LEAKAGE | AT 1.0" w.g. | AT 4.0" w.g. | AT 8.0" w.g. |
|-------------|--------------|--------------|--------------|
| cfm/SQ. FT. | 3.1 | 6.3 | 12.4 |



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