DAMPERS

WE CONTROL AIR















PRODUCTS CATALOGUE

PRODUCT BULLETIN

Ver. 6 September 2022



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Note: AMCA certified products are available at AMCA directory of listed products at http://www.amca.org/certified-listed/listedproducts.php



VOLUME CONTROL DAMPER - 3VCD SERIES 3V-SHAPED STEEL BLADES

STANDARD CONSTRUCTION

Frame: I.2mm thick galvanized steel sheet.

Blades: 3 V-shaped I.2mm thick roll-formed galvanized steel.

Axles: ½" square galvanized steel rod.

Linkage: made of galvanized steel.

Concealed in frame.

Bushing: Self lubricating plastic bushes.

Quadrant: Plated steel with wing nut to lock the blades position. Marked to show the position of the blades.

Fixing to duct: Flanged frame.

Single section minimum size:

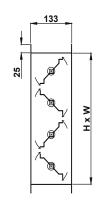
IOOXIOOmm for Flanged/Box/Slip & clip types.

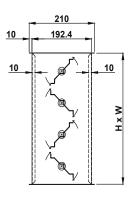
IOOXISOmm for Hat-shaped type.

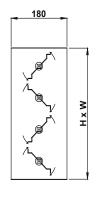
Single section maximum size:
I200XI200mm for Hat-shaped/Flanged types.
I000XI000mm for Slip & clip/Box types.

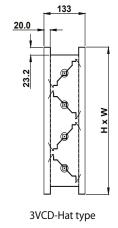


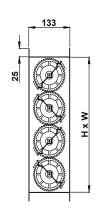














3VCD-Flange type 3VCI

3VCD-Slip & Clip type

3VCD-Box type

3VCD with gear mechanism

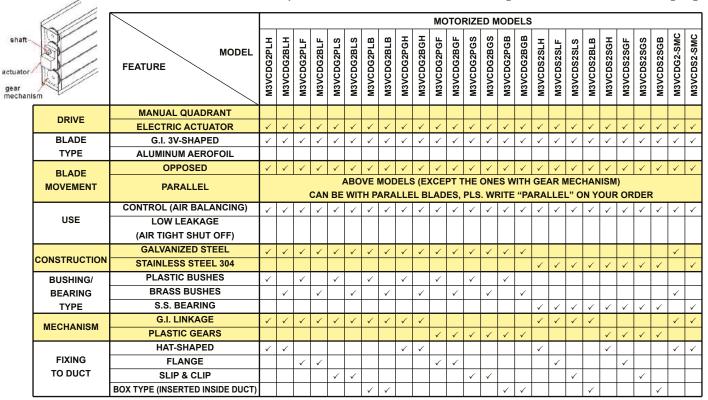


VOLUME CONTROL DAMPER - 3VCD SERIES 3V-SHAPED STEEL BLADES

OPTIONS

| | | | | | | | | | | | MAN | IUA | L Q | UAE | DRA | NT I | MOE | ELS | 3 | | | | | | | | |
|---|--|--|---------------------------------------|-----------|---------------------------------------|-----------|-----------|-----------|-------------|---------------------------------------|---|---|---------------------------------------|-----------|-------------|-----------|---------------------------------------|-------------|---------------------------------------|-----------|-----------|-------------|-------------|-----------|-----------|------------|--|
| blades shaft frame | MODEL FEATURE | зусреден | зусреден | 3VCDG2PLF | 3VCDG2BLF | 3VCDG2PLS | 3VCDG2BLS | 3VCDG2PLB | 3VCDG2BLB | зусрезрен | зусрезвен | 3VCDG2PGF | 3VCDG2BGF | 3VCDG2PGS | 3VCDG2BGS | 3VCDG2PGB | 3VCDG2BGB | 3VCDS2SLH | 3VCDS2SLF | 3VCDS2SLS | 3VCDS2BLB | зусрѕ2ѕбн | 3VCDS2SGF | 3VCDS2SGS | 3VCDS2SGB | 3VCDG2-SMC | |
| DRIVE | MANUAL QUADRANT | ✓ | ✓ | ✓ | 1 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | |
| DRIVE | ELECTRIC ACTUATOR | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BLADE | G.I. 3V-SHAPED | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | \ | \ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | |
| TYPE | ALUMINUM AEROFOIL | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BLADE | OPPOSED | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | \ | \ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | |
| MOVEMENT | PARALLEL | | | | CAI | | | | | | • | | | | | | | | | | | | , | 2DFI | 2 | | |
| | | | | | | | | | | | | | LJ, | L | . VVI | XIII E | | 11177 | | | ,,, | 001 | ٠ ٠. | | • | | |
| | CONTROL (AIR BALANCING) | ABOVE MODELS (EXCEPT THE ONES WITH GEAR MECHANISM) CAN BE WITH PARALLEL BLADES, PLS. WRITE "PARALLEL" ON YOUR ORDER | | | | | | | | | | | | | | | | | | | | | | | | | |
| USE | CONTROL (AIR BALANCING) LOW LEAKAGE | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | √ | √ | | √ | ✓ | <u>√</u> | | | | ✓ | ✓ | | √ | √ | √ | | _ | √ | ✓ | |
| USE | , | ✓ | ✓ | √ | ✓ | ✓ | ✓ | ✓ | ✓ | | √ | √ | ∠ | | | | √ | ✓ | | ✓ | ✓ | ✓ | | _ | ✓ | ✓ | |
| | LOW LEAKAGE | ✓ | ✓ | ✓ ✓ | ✓ | ✓ | ✓ ✓ | ✓ ✓ | ✓ | | ✓ ✓ | ✓ ✓ | ∠ ✓ | | | | ✓ ✓ | ✓ | | ✓ | ✓ | ✓ | | _ | ✓ | ✓ | |
| USE | LOW LEAKAGE (AIR TIGHT SHUT OFF) | | 1 | √ √ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ ✓ | √ | ✓ | ✓ | ✓ | ✓ ✓ | ✓ ✓ | | ✓ ✓ | ✓ ✓ | √ | | _ | ✓ ✓ | √ ✓ | |
| | LOW LEAKAGE (AIR TIGHT SHUT OFF) GALVANIZED STEEL | | ✓ | ✓ ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | \[\langle \] \[\langle \] \[\langle \] \[\langle \] | √ | ✓ | ✓ | ✓ | ✓ ✓ | √ | | ✓ ✓ | ✓ ✓ | ✓ ✓ | | ✓ | ✓ ✓ | ✓ | |
| CONSTRUCTION | LOW LEAKAGE (AIR TIGHT SHUT OFF) GALVANIZED STEEL STAINLESS STEEL 304 | √ | \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ | | ✓ | 1 | ✓ | √ ✓ | ✓ | √ ✓ | ✓ | ✓ | √ | √ √ | ✓ | √ √ | ✓ | √ | | ✓ ✓ | ✓ ✓ | ✓ ✓ | | ✓ | ✓ ✓ | ✓ ✓ | |
| CONSTRUCTION BUSHING/ | LOW LEAKAGE (AIR TIGHT SHUT OFF) GALVANIZED STEEL STAINLESS STEEL 304 PLASTIC BUSHES | √ | | | ✓ | 1 | ✓ ✓ | √ ✓ | ✓ ✓ | √ ✓ | ✓ ✓ | ✓ | ✓ ✓ | √ √ | ✓ | √ √ | ✓ ✓ | √ | | ✓ ✓ | ✓ ✓ | ✓ ✓ | | ✓ | ✓ ✓ | ✓ <u> </u> | |
| CONSTRUCTION BUSHING/ BEARING TYPE | LOW LEAKAGE (AIR TIGHT SHUT OFF) GALVANIZED STEEL STAINLESS STEEL 304 PLASTIC BUSHES BRASS BUSHES | √ | | | ✓ | 1 | ✓ ✓ | √ ✓ | ✓ ✓ | √ ✓ | ✓ ✓ | ✓ | ✓ ✓ | √ √ | ✓ | √ √ | ✓ ✓ | ✓ ✓ | ✓ ✓ | ✓ ✓ | √ ✓ | ✓ ✓ | ✓ ✓ | ✓ ✓ | ✓ ✓ | ✓ <u> </u> | |
| CONSTRUCTION BUSHING/ BEARING | LOW LEAKAGE (AIR TIGHT SHUT OFF) GALVANIZED STEEL STAINLESS STEEL 304 PLASTIC BUSHES BRASS BUSHES S.S. BEARING | ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ | √ | ✓ | \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ | ✓ ✓ | ✓ ✓ | ✓ ✓ | ✓ ✓ ✓ | ✓ ✓ ✓ | ✓ ✓ | ✓ | ✓ ✓ | √ √ | ✓ | √ √ | \ \ \ | ✓ ✓ | ✓ ✓ | ✓ ✓ | √ ✓ | ✓ ✓ ✓ | ✓ ✓ | ✓ ✓ | ✓ ✓ | ✓ ✓ | |
| CONSTRUCTION BUSHING/ BEARING TYPE MECHANISM | LOW LEAKAGE (AIR TIGHT SHUT OFF) GALVANIZED STEEL STAINLESS STEEL 304 PLASTIC BUSHES BRASS BUSHES S.S. BEARING G.I. LINKAGE | ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ | √ | ✓ | \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ | ✓ ✓ | ✓ ✓ | ✓ ✓ | ✓ ✓ ✓ | ✓ ✓ ✓ | ✓ ✓ | ✓ | ✓ ✓ | √ √ | ✓ ✓ ✓ | ✓ ✓ | \ \ \ \ | ✓ ✓ | ✓ ✓ | ✓ ✓ | √ ✓ | \(\) | ✓ ✓ | ✓ ✓ | ✓ ✓ | ✓ ✓ | |
| BUSHING/ BEARING TYPE MECHANISM FIXING | LOW LEAKAGE (AIR TIGHT SHUT OFF) GALVANIZED STEEL STAINLESS STEEL 304 PLASTIC BUSHES BRASS BUSHES S.S. BEARING G.I. LINKAGE PLASTIC GEARS | ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ | √ ✓ | ✓ | \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ | ✓ ✓ | ✓ ✓ | ✓ ✓ | ✓ ✓ ✓ | \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ | \[\lambda \] \[\lambda \] \[\lambda \] \[\lambda \] | ✓ | ✓ ✓ | √ √ | ✓ ✓ ✓ | ✓ ✓ | \frac{1}{4} | ✓ ✓ ✓ | ✓ ✓ | ✓ ✓ | √ ✓ | ✓ ✓ ✓ | ✓ ✓ | ✓ ✓ | ✓ ✓ | ✓ ✓ | |
| CONSTRUCTION BUSHING/ BEARING TYPE MECHANISM | LOW LEAKAGE (AIR TIGHT SHUT OFF) GALVANIZED STEEL STAINLESS STEEL 304 PLASTIC BUSHES BRASS BUSHES S.S. BEARING G.I. LINKAGE PLASTIC GEARS HAT-SHAPED | ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ | √ ✓ | ✓ ✓ ✓ | \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ | ✓ ✓ | ✓ ✓ | ✓ ✓ | ✓ ✓ ✓ | \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ | \[\lambda \] \[\lambda \] \[\lambda \] \[\lambda \] | √ | ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ | √ √ | ✓ ✓ ✓ | ✓ ✓ | \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ | ✓ ✓ ✓ | \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ | ✓ ✓ | √ ✓ | ✓ ✓ ✓ | \frac{1}{4} | ✓ ✓ | ✓ ✓ | ✓ ✓ | |

**Other options of S.S. bushes "X" and S.S. bearing "S" are shown at the ordering key.



**Other options of S.S. bushes "X" and S.S. bearing "S" are shown at the ordering key.





VOLUME CONTROL DAMPER - 3VCD SERIES 3V-SHAPED STEEL BLADES

PERFORMANCE DATA

Beta Industrial LLC certifies that the 3VCD shown hereon is licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 511 and comply with the requirements of the AMCA Certified Ratings Program.

The AMCA Certified Ratings Seal applies to Air Leakage and Air Performance ratings only.

Test Information

- * Air leakage is based on operation between 32 °F and 120 °F
- * Tested for air leakage at standard air density in accordance with ANSI/AMCA Standard 500-D, Figure 5.4
- * Tested for air performance at standard air density in accordance with ANSI/AMCA 500-D, Figure 5.3
- * Data are based on a torque of 21 in-lb/ft2 applied to close and seat the damper during the test.



PRESSURE DROP DATA

| Size 12 | 2"* 12" | Size 2 | 4"* 24" | Size 36 | 5"* 36" | Size 12 | 2"* 48" | Size 48 | 8"* 12" |
|--------------|------------|--------------|------------|--------------|------------|--------------|------------|--------------|------------|
| Air Velocity | Pressure |
| (fpm) | Drop (IWG) |
| 297 | 0.002 | 347 | 0.003 | 318 | 0.002 | 346 | 0.003 | 346 | 0.003 |
| 730 | 0.009 | 749 | 0.01 | 747 | 0.009 | 756 | 0.01 | 754 | 0.01 |
| 976 | 0.02 | 999 | 0.02 | 995 | 0.015 | 1003 | 0.02 | 1001 | 0.02 |
| 1466 | 0.04 | 1514 | 0.05 | 1494 | 0.034 | 1520 | 0.04 | 1515 | 0.04 |
| 1958 | 0.08 | 2008 | 0.08 | 1991 | 0.061 | 2014 | 0.07 | 2007 | 0.08 |

AIR LEAKAGE DATA

| Size 12"* | 48" | Size 24"* | 36" | Size 36"* | 36" | Size 48"* 36" | | | | | | |
|-------------------------------|------------|-------------------------------|----------------------------|-----------------|------------|-------------------------------|------------|--|--|--|--|--|
| Leakage through | Pressure | Leakage through | Pressure | Leakage through | Pressure | Leakage through | Pressure | | | | | |
| face area cfm/ft ² | Drop (IWG) | face area cfm/ft ² | ce area cfm/ft² Drop (IWG) | | Drop (IWG) | face area cfm/ft ² | Drop (IWG) | | | | | |
| 6.1 | 0.098 | 10.3 | 0.109 | 5.5 | 0.106 | 4.6 | 0.105 | | | | | |
| 14.9 | 0.509 | 22.6 | 0.510 | 11.5 | 0.511 | 10.6 | 0.514 | | | | | |
| 21.3 | 1.025 | 32.7 | 1.025 | 15.7 | 1.025 | 14.8 | 1.031 | | | | | |
| 30.2 | 2.052 | 46.5 | 2.063 | 23.2 | 2.049 | 20.6 | 2.070 | | | | | |
| 43.6 | 4.104 | 66.4 | 4.137 | 34.4 | 4.097 | 26.4 | 4.137 | | | | | |

| Maximum A | llowable | Leakage | , cfm/ft² |
|-------------------|-------------|-----------|-----------|
| Pressure Class | 1.0" W.G | 4" W.G | 8" W.G |
| 1A | 3 | N/A | N/A |
| 1 | 4 | 8 | 11 |
| 2 | 10 | 20 | 28 |
| 3 | 40 | 80 | 112 |

| | Width | Height |
|---------|-------|--------|
| Minimum | 4" | 4" * |
| Maximum | 48" | 48" |

^{*} Minimum height for Hat-shaped type is 6"(150mm)

Bulletin No. 8, June 2021



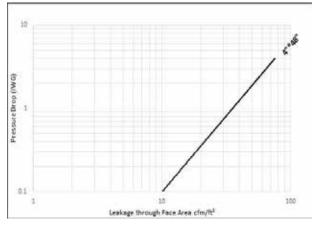


VOLUME CONTROL DAMPER - 3VCD SERIES 3V-SHAPED STEEL BLADES

PERFORMANCE DATA



AIR LEAKAGE DATA



PRESSURE DROP DATA

| Size 4 | "* 48" |
|-----------------------|------------------------|
| Air Velocity (fpm) | Pressure Drop (IWG) |
| 516 | 0.034 |
| 992 | 0.130 |
| 1482 | 0.291 |
| 1985 | 0.524 |
| 2480 | 0.819 |

Tested at AMCA 500-D lab Arlington Heights, USA



Orderina Keu:

| rdering Key: | | | | |
|---|------|---------------------|---------|----------|
| M 3 VCE | G2 | Р | L | F |
| : | | | | |
| QUADRANT | | | | |
| DRIVEN | | | | |
| M: MOTORIZED | | | | |
| | | | | |
| 3: 3V-SHAPED G.I. BLADES | | | | |
| CD: VOLUME CONTROL DAMPER | | | | |
| il: 0.9MM G.I.CONSTRUCTION | | | | |
| 52: I.2MM G.I.CONSTRUCTION | | | | |
| 33: I.5MM G.I.CONSTRUCTION | | | | |
| 54: I.7MM G.I.CONSTRUCTION | | | | |
| 51: I.OMM S.S. 304 CONSTRUCTION | | | | |
| 52: I.2MM S.S. 304 CONSTRUCTION | | | | |
| 53 I.5MM S.S. 304 CONSTRUCTION | | | | |
| 54: I.7MM S.S. 304 CONSTRUCTION | | | | |
| P: PLASTIC BUSHES | | | | |
| B: BRASS BUSHES | | | | |
| K: S.S. BUSHES | | | | |
| 5: S.S. BEARINGS | | | | |
| .: G.I. LINKAGE MECHANISM | | | | |
| 5: PLASTIC GEARS MECHANISM 1: HAT-SHAPED FRAME | | | | |
| :: HAI-SHAPED FRAME F: FLANGED TO DUCT | | | | |
| -: FLANGED TO DUCT 5: SLIP & CLIP WITH DUCT | | | | |
| B: BOX TYPE (INSERTED INSIDE DUCT) | | | | |
| SIZE: WIDTH X HEIGHT | | | | |
| Single section minimum size: | Sin | gle section maximun | n sizo: | |
| 100X100mm for Flanged/Box/Slip & clip types. | Sili | I200XI200mm for | | ed tupes |
| 00X150mm for Hat-shaped types. | | IOOOXIOOOmm for | | |





VOLUME CONTROL DAMPER - AVCD SERIES AEROFOIL BLADES

STANDARD CONSTRUCTION

Frame: I.2mm thick galvanized steel sheet. Blades: Aerofoil I.Omm double skin extruded

Aluminum profiles/ GI Sheet.

½" square galvanized steel rod.

Linkage: Made of galvanized steel. Concealed in

frame.

Bushing: Self lubricating plastic bushes.

Quadrant: Plated steel with wing nut to lock the blades position. Marked to show the

position of the blades.

Fixing to duct: Flanged frame. Single section minimum size:

IOOXIOOmm for Flanged/Box/Slip & clip types.

IOOXI50mm for Hat-shaped type.

Single section maximum size:

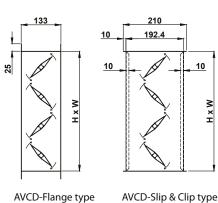
I200XI200mm for Hat-shaped/Flanged types.

IOOOXIOOOmm for Slip & clip/Box types.

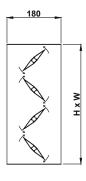




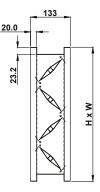




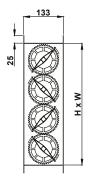
AVCD-Slip & Clip type



AVCD-Box type



AVCD-Hat type



AVCD with gear mechanism





VOLUME CONTROL DAMPER - AVCD SERIES AEROFOIL BLADES

ALUMINIUM BLADES OPTIONS

| | | | | | | | | | | | MAI | NUA | L Q | UAD | RA | NT I | MOE | ELS | s | | | | | | | | |
|--------------------------|--|--------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|-------------|-------------|
| blades shaft frame | MODEL FEATURE | AUVCDG2PLH | AUVCDG2BLH | AUVCDG2PLF | AUVCDG2BLF | AUVCDG2PLS | AUVCDG2BLS | AUVCDG2PLB | AUVCDG2BLB | AUVCDG2PGH | AUVCDG2BGH | AUVCDG2PGF | AUVCDG2BGF | AUVCDG2PGS | AUVCDG2BGS | AUVCDG2PGB | AUVCDG2BGB | AUVCDS2SLH | AUVCDS2SLF | AUVCDS2SLS | AUVCDS2BLB | AUVCDS2SGH | AUVCDS2SGF | AUVCDS2SGS | AUVCDS2SGB | AUVCDG2-SMC | AUVCDS2-SMC |
| BB0/5 | MANUAL QUADRANT | ✓ | 1 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | 1 | 1 | 1 | 1 | ✓ | 1 | ✓ | ✓ | ✓ | ✓ | 1 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| DRIVE | ELECTRIC ACTUATOR | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BLADE | G.I. AEROFOIL BLADES | | | | | | | | | | | | | | | | | | | | | | | | | | |
| TYPE | ALUMINUM AEROFOIL | ✓ | ✓ | ✓ | ✓ | \ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| BLADE | OPPOSED | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| MOVEMENT | PARALLEL | | | | CAN | | ABO WIT | | | | • | | | | | | | | | | | | • | DEF | ₹ | | |
| | CONTROL (AIR BALANCING) | ✓ | ✓ | √ | ✓ | ✓ | ✓ | ✓ | ✓ | √ | √ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| USE | LOW LEAKAGE | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | (AIR TIGHT SHUT OFF) | | | | | | | | | | | | | | | | | | | | | | | | | | |
| FRAME | GALVANIZED STEEL | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | | | | | | | ✓ | |
| CONSTRUCTION | STAINLESS STEEL 304 | | | | | | | | | | | | | | | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ |
| BUSHING/ | PLASTIC BUSHES | ✓ | | ✓ | | \ | | ✓ | | ✓ | | ✓ | | ✓ | | ✓ | | | | | | | | | | | |
| BEARING | BRASS BUSHES | | ✓ | | ✓ | | ✓ | | ✓ | | ✓ | | ✓ | | ✓ | | ✓ | | | | | | | | | ✓ | |
| TYPE | S.S. BEARING | | | | | | | | | | | | | | | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ |
| MECHANISM | G.I. LINKAGE | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | | | | | ✓ | ✓ | ✓ | ✓ | | | | | ✓ | ✓ |
| III E OTIVATIONI | PLASTIC GEARS | | | | | | | | | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | | | ✓ | ✓ | ✓ | ✓ | | |
| | HAT-SHAPED | ✓ | ✓ | | | | | | | ✓ | ✓ | | | | | | | ✓ | | | | ✓ | | | | ✓ | ✓ |
| FIXING | FLANGE | $oxed{oxed}$ | | ✓ | ✓ | | | | | | | ✓ | ✓ | | | | | | ✓ | | | | ✓ | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| то рист | SLIP & CLIP BOX TYPE (INSERTED INSIDE DUCT) | | | | | ✓ | ✓ | | | | | | | ✓ | ✓ | | | | | ✓ | | | | ✓ | | | |

^{**}Other options of S.S. bushes "X" and S.S. bearing "S" are shown at the ordering key.

| | 1/1/1 | | | | | | | | | | | | МО | TOF | RIZE | D M | ODI | ELS | | | | | | | | | | \neg |
|--------------------------------------|---------------------|---------------------------------------|------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|-------------|-------------|-------------|-------------|--------------|-------------|--------------|--------------|
| shaft actuator gear mechani | sm sm | MODEL FEATURE | MAUVCDG2PL | MAUVCDG2BLH | MAUVCDG2PLF | MAUVCDG2BLF | MAUVCDG2PLS | MAUVCDG2BLS | MAUVCDG2PLB | MAUVCDG2BLB | MAUVCDG2PGH | MAUVCDG2BGH | MAUVCDG2PGF | MAUVCDG2BGF | MAUVCDG2PGS | MAUVCDG2BGS | MAUVCDG2PGB | MAUVCDG2BGB | MAUVCDS2SLH | MAUVCDS2SLF | MAUVCDS2SLS | MAUVCDS2BLB | MAUVCDS2SGH | MAUVCDS2SGF | MAUVCDS2SGS | MAUVCDS2SGB | MAUVCDG2-SMC | MAUVCDS2-SMC |
| | DRIVE | MANUAL QUADRANT | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | DRIVE | ELECTRIC ACTUATOR | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | \checkmark | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| | BLADE | G.I. AEROFOIL BLADES | Ш | | | | | | | | | | | | | | | | | | | | | | | | | |
| | TYPE | ALUMINUM AEROFOIL | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| | BLADE | OPPOSED | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | \checkmark | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| | MOVEMENT | PARALLEL | | | (| CAN | | | | | | • | CEF | | | | | | | | | | |) ORI | DER | ₹ | | |
| | | CONTROL (AIR BALANCING) | ✓ | ✓ | 1 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| | USE | LOW LEAKAGE | | | | | | | | | | | | | | | | | | | | | | | | | \neg | |
| | | (AIR TIGHT SHUT OFF) | | | | | | | | | | | | | | | | | | | | | | 1 | | | | |
| | FRAME | GALVANIZED STEEL | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | 1 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | | | | | | | 1 | |
| | CONSTRUCTION | STAINLESS STEEL 304 | | | | | | | | | | | | | | | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ |
| | BUSHING/ | PLASTIC BUSHES | ✓ | | ✓ | | ✓ | | ✓ | | ✓ | | ✓ | | ✓ | | ✓ | | | | | | | | | | \Box | \Box |
| | BEARING | BRASS BUSHES | | ✓ | | ✓ | | ✓ | | ✓ | | ✓ | | ✓ | | ✓ | | ✓ | | | | | | | | | ✓ | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | TYPE | S.S. BEARING | | | | | | | | | | | | | | | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | \checkmark | ✓ | | ✓ |
| | | S.S. BEARING G.I. LINKAGE | ✓ | √ | ✓ | √ | √ | ✓ | ✓ | ✓ | ✓ | ✓ | | | | | | | ✓ | ✓ | ✓ | ✓ | ✓ | √ | ✓ | √ | ✓ | ✓ |
| | TYPE MECHANISM | | √ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | √ | √ | ✓ | √ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ ✓ | ✓ ✓ | ✓ ✓ | √ | ✓ ✓ |
| | MECHANISM | G.I. LINKAGE | ✓ ✓ | | √ | ✓ | ✓ | √ | ✓ | ✓ | ✓ ✓ | ✓ | √ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ ✓ | ✓ ✓ | | ✓ | ✓ ✓ ✓ |
| | MECHANISM FIXING | G.I. LINKAGE PLASTIC GEARS | | √ | ✓ ✓ | ✓ ✓ | √ | √ | √ | ✓ · | | | ✓ ✓ | ✓ ✓ | √ | √ | √ | ✓ | ✓ | ✓ ✓ ✓ | ✓ ✓ | ✓ ✓ | ✓ ✓ ✓ | ✓ ✓ ✓ | ✓ ✓ | | | ✓ ✓ ✓ |
| | MECHANISM | G.I. LINKAGE PLASTIC GEARS HAT-SHAPED | | √ | | | ✓ | ✓ ✓ | √ | ✓ | | | ✓ ✓ | ✓ | ✓ ✓ | ✓ ✓ | ✓ | ✓ | ✓ | ✓ | ✓ ✓ ✓ | ✓ ✓ | ✓ ✓ ✓ | ✓ | ✓ ✓ | | | ✓ ✓ ✓ |

**Other options of S.S. bushes "X" and S.S. bearing "S" are shown at the ordering key.



quad

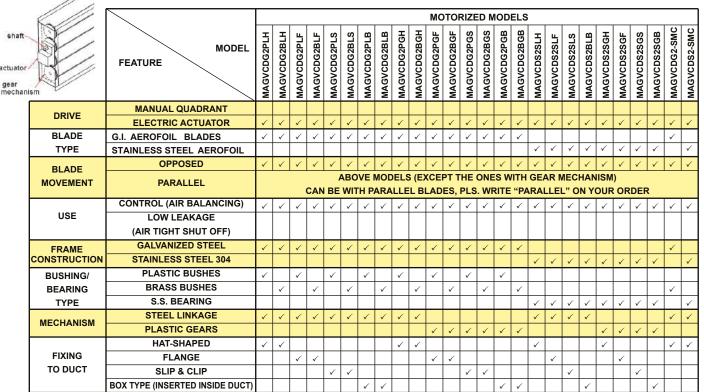


VOLUME CONTROL DAMPER - AVCD SERIES AEROFOIL BLADES

STEEL BLADES OPTIONS

| | | MANUAL QUADRANT MODELS | | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------|--|------------------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|-------------|-------------|
| blades | MODEL | АGVCDG2PLH | AGVCDG2BLH | AGVCDG2PLF | AGVCDG2BLF | AGVCDG2PLS | AGVCDG2BLS | AGVCDG2PLB | AGVCDG2BLB | AGVCDG2PGH | АGVCDG2BGH | AGVCDG2PGF | AGVCDG2BGF | AGVCDG2PGS | AGVCDG2BGS | AGVCDG2PGB | AGVCDG2BGB | AGVCDS2SLH | AGVCDS2SLF | AGVCDS2SLS | AGVCDS2BLB | AGVCDS2SGH | AGVCDS2SGF | AGVCDS2SGS | AGVCDS2SGB | AGVCDG2-SMC | AGVCDS2-SMC |
| DDIVE. | MANUAL QUADRANT | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | 1 | ✓ | ✓ | ✓ | 1 | 1 | ✓ | 1 | ✓ | ✓ | ✓ | ✓ | ✓ | 1 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| DRIVE | ELECTRIC ACTUATOR | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BLADE | G.I. AEROFOIL BLADES | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | | | | | | | ✓ | |
| TYPE | STAINLESS STEEL AEROFOIL | | | | | | | | | | | | | | | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ |
| BLADE | OPPOSED | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| MOVEMENT | PARALLEL ABOVE MODELS (EXCEPT CAN BE WITH PARALLEL BLADES, | | | | | | | | | | | | | | | | | | • | DEF | ₹ | | | | | | |
| | CONTROL (AIR BALANCING) | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| USE | LOW LEAKAGE (AIR TIGHT SHUT OFF) | | | | | | | | | | | | | | | | | | | | | | | | | | |
| FRAME | GALVANIZED STEEL | 1 | 1 | 1 | √ | 1 | ✓ | 1 | 1 | ✓ | √ | 1 | 1 | 1 | 1 | √ | 1 | | | | | | | | | 1 | |
| CONSTRUCTION | STAINLESS STEEL 304 | | | | | | | | | | | | | | | | | 1 | 1 | 1 | 1 | 1 | 1 | ✓ | ✓ | | 1 |
| BUSHING/ | PLASTIC BUSHES | ✓ | | ✓ | | ✓ | | ✓ | | ✓ | | ✓ | | √ | | ✓ | | | | | | | | | | | |
| BEARING | BRASS BUSHES | | ✓ | | ✓ | | ✓ | | ✓ | | √ | | ✓ | | ✓ | | ✓ | | | | | | | | | ✓ | |
| TYPE | S.S. BEARING | | | | | | | | | | | | | | | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ |
| MECHANISM | STEEL LINKAGE | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | | | | | ✓ | ✓ | ✓ | ✓ | | | | | ✓ | ✓ |
| MEGNAMIOW | PLASTIC GEARS | | | | | | | | | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | | | ✓ | ✓ | ✓ | ✓ | | |
| | HAT-SHAPED | ✓ | ✓ | | | | | | | ✓ | ✓ | | | | | | | ✓ | | | | ✓ | | | | ✓ | ✓ |
| FIXING | FLANGE | | | ✓ | ✓ | | | | | | | ✓ | ✓ | | | | | | ✓ | | | | ✓ | | | | |
| TO DUCT | | | 1 | ı | 1 | | | | 1 | | 1 1 | | 1 | ı . I | _ / | 1 1 | 1 | | ı | 1 / | 1 | 1 | 1 1 | | | | |
| TO DUCT | SLIP & CLIP | | | | | ✓ | ✓ | | | | | | | √ | ✓ | | | | | ✓ | | | | ✓ | | | |

**Other options of S.S. bushes "X" and S.S. bearing "S" are shown at the ordering key.



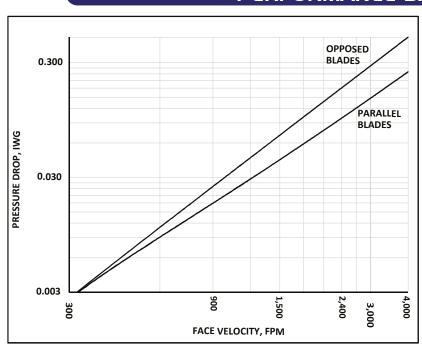
**Other options of S.S. bushes "X" and S.S. bearing "S" are shown at the ordering key.

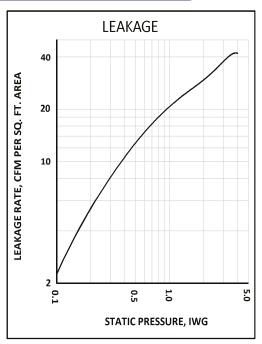




VOLUME CONTROL DAMPER - AVCD SERIES AEROFOIL BLADES

PERFORMANCE DATA





SWACKA

Ordering Key:

| M | AU | VCD | G2 | Р | L | F | S |
|---|---------------------|-----------------|--------|-----------------|---------------|----------------|-------|
| | 710 | 7.25 | | • | | • | |
| QUADRANT | | | | | | | |
| DRIVEN | | | | | | | |
| M: | | | | | | | |
| MOTORIZED | | | | | | | |
| | I LUMINUM BLADES | | | | | | |
| AG: AEROFOIL S | | | | | | | |
| | CONTROL DAMP |) PER | | | | | |
| | ONSTRUCTION | | | | | | |
| | ONSTRUCTION (| STANDARD) | | | | | |
| | ONSTRUCTION | | | | | | |
| G4: I.7MM G.I.0 | ONSTRUCTION | | | | | | |
| SI: I.OMM S.S. | 304 CONSTRUCT | TION | | | | | |
| S2: I.2MM S.S. | 304 CONSTRUC | TION | | | | | |
| S3 I.5MM S.S. | 304 CONSTRUC | TION | | | | | |
| S4 : I.7MM S . S . | 304 CONSTRUC | TION | | | | | |
| P: PLASTIC BU | SHES (STANDAR | RD) | | · | | | |
| B: BRASS BUS | HES | | | | | | |
| X: S.S. BUSHES | 5 | | | | | | |
| S: S.S. BEARIN | | | | | | | |
| | AGE MECHANISM | | | | | | |
| | ARS MECHANISI | M | | | | | |
| H: HAT-SHAPEI | | > | | | | | |
| | D DUCT (STANDA | ARD) | | | | | |
| S: SLIP & CLIP | | C DUCT) | | | | | |
| | INSERTED INSID | E DUCI) | | | | | |
| SIZE: WIDTH X | | | | | | | |
| _ | n minimum size: | D/C!!- C !! | S S | ingle section m | | | |
| IOOXIOOm | nm for Flanged/ | Box/Slip & clip | types. | 1500X1500L | nm for Hat-sh | aped/Flanged t | yp∈s. |

IOOOXIOOOmm for Slip & Clip/ Box types.



IOOXI50mm for Hat-shaped types.



LOW-LEAKAGE VOLUME CONTROL DAMPER - LVCD SERIES 3V-SHAPED STEEL BLADES

STANDARD CONSTRUCTION

Frame: I33mm Roll formed hat-shaped made of I.2mm

thick galvanized steel with reinforced corners, having integral bracing and 90° perpendicular

overlap at a corner.

Blades: Roll formed 3 V-shaped made of I.2mm thick

galvanized steel.

Bushes: Brass bushes.

Axles: I/2" Square axles made of galvanized steel.

Linkage: Mechanical and concealed in frame.

Jamb Seals: Stainless steel jamb seals.

Blades Seal: Silicone blades edges seal/gasket.

Leakage: Class I

Air Flow Rating: 2000 FPM / 4 IWG.

Single section minimum size:

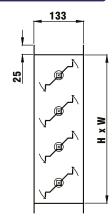
ISOXISOmm for Hat-shaped/Flanged types.

Single section maximum size:

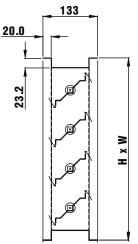
I200XI200mm for Hat-shaped/Flanged types.

Model LVCDG2BLH





LVCD-Flange type



LVCD-Hat type



LOW-LEAKAGE VOLUME CONTROL DAMPER - LVCD SERIES 3V-SHAPED STEEL BLADES

OPTIONS

| | 1 | | MA | NUA | L Q | UAD | RAN | т м | ODE | LS |
|----------|--------------------------|---------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|------------|------------|
| quadrant | blades shaft frame | MODEL | гусрезвин | LVCDG2XLH | LVCDG2BLF | LVCDG2XLF | LVCDS2SLH | LVCDS2SLF | LVCDG2-SCM | LVCDS2-SMC |
| | DRIVE | MANUAL QUADRANT | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| | DRIVE | ELECTRIC ACTUATOR | | | | | | | | |
| | BLADE | G.I. 3V-SHAPED | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| | TYPE | ALUMINUM AEROFOIL | | | | | | | | |
| | BLADE | OPPOSED | | | | | | | | |
| | MOVEMENT | PARALLEL | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| | | CONTROL (AIR BALANCING) | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| | USE | LOW LEAKAGE | / | _ | / | _ | 1 | _ | / | / |
| | | APPLICATIONS | | | v | ľ | ľ | ľ | v | v |
| | | GALVANIZED STEEL | ✓ | ✓ | ✓ | ✓ | | | ✓ | |
| | CONSTRUCTION | STAINLESS STEEL 304 | | | | | ✓ | ✓ | | ✓ |
| | BUSHING/ | PLASTIC BUSHES | | | | | | | | |
| | BEARING | BRASS BUSHES | ✓ | | ✓ | | | | ✓ | |
| | TYPE | S.S. BEARING | | ✓ | | ✓ | | | | |
| | | S.S. BEARING | | | | | ✓ | ✓ | | ✓ |
| | MECHANISM | G.I. LINKAGE | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| | | PLASTIC GEARS | | | | | | | | |
| | | HAT-SHAPED | ✓ | ✓ | | | ✓ | | ✓ | ✓ |
| | FIXING | FLANGE | | | ✓ | ✓ | | ✓ | | |
| | TO DUCT | SLIP & CLIP | | | | | | | | |
| | | BOX TYPE (INSERTED INSIDE DUCT) | | | | | | | | |

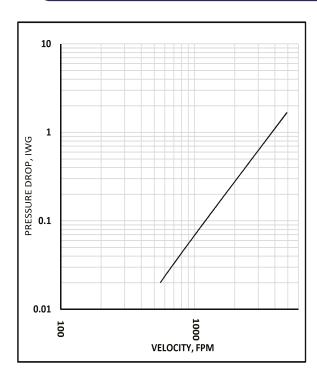
| | | | | 140 | | RISE | D 14 | <u> </u> | -1.0 | \neg |
|-------|---------------------|---------------------------------|------------|--------------|--------------|--------------|--------------|--------------|-------------|-------------|
| SHAFT | | MODEL FEATURE | MLVCDG2BLH | MLVCDG2XLH S | MLVCDG2BLF G | MLVCDG2XLF 6 | MLVCDS2SLH ☐ | MLVCDS2SLF G | MLVCDG2-SMC | MLVCDS2-SMC |
| | DRIVE | MANUAL QUADRANT | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| | DRIVE | ELECTRIC ACTUATOR | | | | | | | | |
| | BLADE | G.I. 3V-SHAPED | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| | TYPE | ALUMINUM AEROFOIL | | | | | | | | Ш |
| | BLADE | OPPOSED | | | | | | | | |
| | MOVEMENT | PARALLEL | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| | | CONTROL (AIR BALANCING) | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| | USE | LOW LEAKAGE | ~ | / | / | / | 1 | ./ | 1 | / |
| | | APPLICATIONS | v | • | v | v | v | v | v | Ľ |
| | | GALVANIZED STEEL | ✓ | ✓ | ✓ | ✓ | | | ✓ | |
| | CONSTRUCTION | STAINLESS STEEL 304 | | | | | ✓ | ✓ | | ✓ |
| | BUSHING/ | PLASTIC BUSHES | | | | | | | | |
| | BEARING | BRASS BUSHES | ~ | | ✓ | | | | ✓ | |
| | TYPE | S.S. BUSHES | | ✓ | | ✓ | | | | |
| | | S.S. BEARING | | | | | ✓ | ✓ | | ✓ |
| | MECHANISM | G.I. LINKAGE | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| | III E OTI I ATTIONI | PLASTIC GEARS | | | | | | | | |
| | | HAT-SHAPED | ✓ | ✓ | | | ✓ | | ✓ | ✓ |
| | FIXING | FLANGE | | | ✓ | ✓ | | ✓ | | \Box |
| | TO DUCT | SLIP & CLIP | | | | | | | | |
| | | BOX TYPE (INSERTED INSIDE DUCT) | | | | | | | | |





LOW-LEAKAGE VOLUME CONTROL DAMPER - LVCD SERIES 3V-SHAPED STEEL BLADES

PERFORMANCE DATA



Note:

Pressure drop test was done at an independent laboratory in accordance with the AMCA 500-D standard on 36"X36" sample.

| Maximum Leakage, cfm/ft ² | | | | | | | | |
|--------------------------------------|-------------|-----------|-----------|--|--|--|--|--|
| Pressure Class | 1.0" W.G | 4" W.G | 8" W.G | | | | | |
| 1 | 4 | 8 | 11 | | | | | |

Ordering Key:



| M | L | VCD | G2 | В | L | H | |
|------------------------|---------------------------------|---------------------------------------|-------|-------------------------------|---|----------------|----|
| | | | | | | | |
| QUADRANT- | | | | | | | |
| DRIVED | | | | | | | |
| M: | | | | | | | |
| MOTORIZED | | | | | | | |
| L: 3V-SHAPE | G.I. BLADES | | | | | | |
| LOW-LEAK | AGE TYPE | | | | | | |
| VCD: CONTRO | DL DAMPER | | | | | | |
| GI: O.9MM G. | . CONSTRUCTIO |)N | | | | | |
| G2: 1.2MM G.1 | . CONSTRUCTIO | N (STANDARD) | 1 | | | | |
| G3: I.5MM G.I | . CONSTRUCTIO | N | | | | | |
| | . CONSTRUCTIO | | | | | | |
| | i. 304 CONSTRU | | | | | | |
| | 5 304 CONSTRU | | | | | | |
| | 5 304 CONSTRU | | | | | | |
| | 5 304 CONSTRU | | | | | | |
| | ISHES (STANDA | (RD) | | | | | |
| X: S.S. BUSH | | | | | | | |
| S: S.S. BEAR | | (STANDADD) | | | | | |
| | E MECHANISM (| · · · · · · · · · · · · · · · · · · · | | | | | |
| | ED FRAME (STA | ANDARD) | | | | | |
| F: FLANGED SIZE: WIDTH | | | | | | | |
| | | | | | | | |
| | on minimum siz mm for Hat-sh | e: aped/Flanged t | ypes. | ingle section n I200XI200r | | aped/Flanged t | уp |

B



ROUND VOLUME CONTROL DAMPER - VDR MODEL STEEL BLADE

STANDARD CONSTRUCTION

Frame: 0.9mm thick galvanized steel

sheet.

Blades: O.9mm thick galvanized steel

sheet.

Axles: 1/2" square hollow Aluminum

extruded profile.

Bushing: Self lubricating plastic bushes.

Quadrant: Plated steel with wing nut to

lock the blades position.

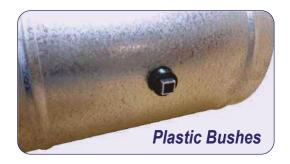
Marked to show the position

of the blades.

Seal: Foam gasket.

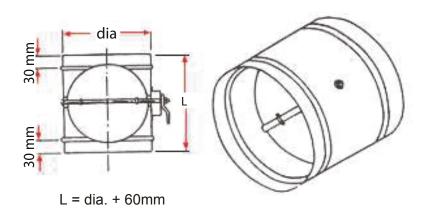
Sizes: 4, 5, 6, 8, 10, 12 inch diameter (AMCA certified).

Diameters I4 inch and above are available up on request.













ROUND VOLUME CONTROL DAMPER - VDR MODEL STEEL BLADE

OPTIONS

| | | | MANUAL QUADRANT MODELS | | | | | | MOTORIZED MODELS | | | | | | | | |
|---------------|--------------------------------------|----------|------------------------------|----------|----------|----------|----------|-----------|---------------------|----------|----------|----------|----------|----------|----------|------------|------------|
| | FEATURE | VDRG2P | VDRG2B | VDRG2X | VDRG2S | VDR52X | VDR52S | VDRG2-SMC | VDRS2-SMC | MVDRG2P | MVDRG2B | MVDRG2X | MVDRG2S | MVDR52X | MVDR52S | MVDRG2-SMC | MVDRS2-SMC |
| DRIVE | MANUAL QUADRANT | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | | | | | | |
| DRIVE | ELECTRIC ACTUATOR | | | | | | | | | √ | ✓ | ✓ | > | ✓ | ✓ | ✓ | ✓ |
| BLADE TYPE | SINGLE SKIN | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | √ | ✓ | ✓ | ✓ | ~ |
| | CONTROL (AIR BALANCING) | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| USE | LOW LEAKAGE (AIR TIGHT SHUTT OFF) | | | | | | | | | | | | | | | | |
| CONSTRUCTION | GALVANIZED STEEL | ✓ | ✓ | ✓ | ✓ | | | ✓ | | ✓ | ✓ | ✓ | ✓ | | | ✓ | |
| CONSTRUCTION | STAINLESS STEEL 304 | | | | | ✓ | ✓ | | ✓ | | | | | ✓ | ✓ | | ✓ |
| DUCUING! | PLASTIC BUSHES | ✓ | | | | | | | | ✓ | | | | | | | |
| BUSHING/ | BRASS BUSHES | | ✓ | | | | | 1 | ✓ | | 1 | | | | | ✓ | ✓ |
| BEARING | S.S. BUSHES | | | 1 | | √ | | | | | | ✓ | | ✓ | | | |
| TYPE | S.S. BEARING | | | | ✓ | | ✓ | | | | | | ✓ | | ✓ | | |

^{**}Other options of S.S. bushes "X" and S.S. bearing "S" are shown at the ordering key.

Ordering Key:



| M | V | DR | G2 | Р | SIZE |
|-------------------|--------------------------|------------------------|----|---|------|
| : QUADRANT- | | | | | |
| DRIVED | | | | | |
| M: MOTORIZED | | | | | |
| V: SINGLE SKIN B | LADE | | | | |
| DR: CONTROL DA | MPER ROUND TYPE | • | | | |
| GI: O.7MM G.I. CO | NSTRUCTION | | • | | |
| G2: 0.9MM G.I. CO | | | | | |
| G3: I.2MM G.I. CO | | | | | |
| G4: I.5MM G.I. CO | NSTRUCTION | | | | |
| SI: 0.8MM S.S. 30 | 04 CONSTRUCTION | | | | |
| 52: I.OMM 5.5 30 | 4 CONSTRUCTION | | | | |
| 53: I.2MM 5.5 30 | 4 CONSTRUCTION | | | | |
| P: PLASTIC BUSH | IES (STANDARD) | | | | |
| B: BRASS BUSH | S | | | | |
| X: S.S. BUSHES | | | | | |
| S: S.S. BEARINGS | 5 | | | | |
| SIZE: DIAMETER | OF 4, 5, 6, 8, 10, 12, 1 | 4, 16, 18, 20, 22 or 2 | 4 | | |





ROUND VOLUME CONTROL DAMPER - VDR MODEL STEEL BLADE

PERFORMANCE DATA

Beta Industrial LLC certifies that the VDR shown hereon is licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 511 and comply with the requirements of the AMCA Certified Ratings Program.

The AMCA Certified Ratings Seal applies to Air Leakage and Air Performance ratings.

Test Information

AIR PERFORMANCE DATA

- * Air leakage is based on operation between 32 °F and 120 °F
- * Tested for air leakage at standard air density in accordance with ANSI/AMCA Standard 500-D, Figure 5.4
- * Tested for air performance at standard air density in accordance with ANSI/AMCA 500-D, Figure 5.3
- * Data are based on a torque of 49 in-lb/ft² applied to close and seat the damper during the test.

AIR LEAKAGE DATA

AND CONTROL ON ASSOCIATION INTERNATIONAL, INC.

AIR

LENKAGE AIR PERFORMANCE

0.001 1 10 100 1000 10000 Air Velocity Through Face Area (fpm)

| | | Leakage Class | | | | | | | | | |
|------------|-----------|---------------|---------|---------|--|--|--|--|--|--|--|
| Damper Dia | 0.5 in.wg | 1 in.wg | 2 in.wg | 4 in.wg | | | | | | | |
| 4" | 1 | 1A | 1 | 1 | | | | | | | |
| 12" | 3 | 3 | 3 | 3 | | | | | | | |

| Maximum Allowable Leakage, cfm/ft ² | | | | | | | | | |
|--|------|-----|-----|--|--|--|--|--|--|
| Pressure | 1.0" | 4" | 8" | | | | | | |
| Class | W.G | W.G | W.G | | | | | | |
| 1A | 3 | N/A | N/A | | | | | | |
| 1 | 4 | 8 | 11 | | | | | | |
| 2 | 10 | 20 | 28 | | | | | | |
| 3 | 40 | 80 | 112 | | | | | | |

Bulletin No. 8, September 2022





NON-RETURN DAMPER - MODEL NRD

STANDARD CONSTRUCTION

Frame: 0.9mm thick galvanized steel.

Blades: I.Omm thick extruded Aluminum profiles.

Bushing: Brass bushes.

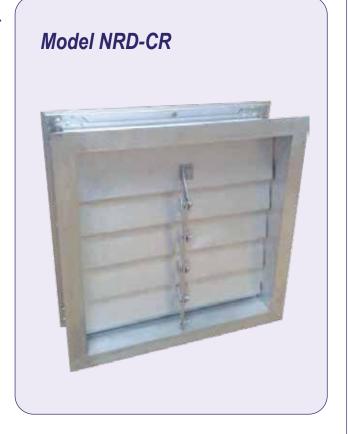
Axles: Round extruded Aluminum profiles.

Seal: Foam blades seals.

Size: Single section up to 600 X 600mm.

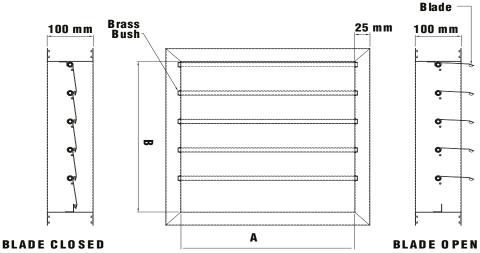
OPTIONS

| | MODEL FEATURE | NRD | NRD-CR | NRDE | NRDE-CR |
|----------------|-----------------------|-----|----------|------|----------|
| BRASS BUSHES | YES | ✓ | ✓ | | |
| | NO | | | ✓ | ✓ |
| CONNECTING ROD | YES | | ✓ | | ✓ |
| CONNECTING ROD | NO | ✓ | | ✓ | |
| COUNTERWEIGHT | NO | ✓ | ✓ | ✓ | ✓ |
| FLANGES | 2 SIDES | ✓ | ✓ | ✓ | ✓ |
| FINISH | MILL FINISH | ✓ | ✓ | ✓ | ✓ |
| INSTALLATION | 2-SIDES DUCTED | ✓ | ✓ | ✓ | ✓ |
| APPLICATION | DISCHARGE & INTAKE | ✓ | ✓ | ✓ | ✓ |



DIMENSIONS

DUCTED NON RETURN DAMPER NRD MODEL:







NON-RETURN DAMPER - MODEL NRD

PERFORMANCE DATA

Beta Industrial LLC certifies that the NRD-CR shown hereon is licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 511 and comply with the requirements of the AMCA Certified Ratings Program.

The AMCA Certified Ratings Seal applies to Air Leakage and Air Perfomance ratings.

Test Information

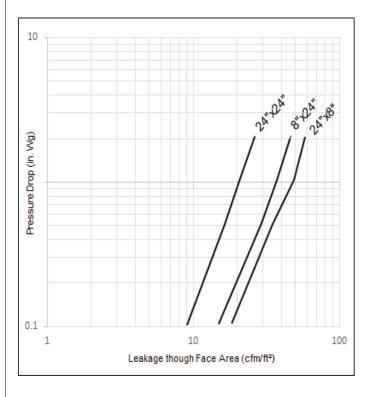
Air leakage is based on operation between 32 °F and 120 °F Tests were conducted at standard air density in accordance with ANSI/AMCA Standard 500-D, Figure 5.4 for Air Leakage & Fig 5.5 for Pressure drop, on a 24 in. x 24 in. sample.

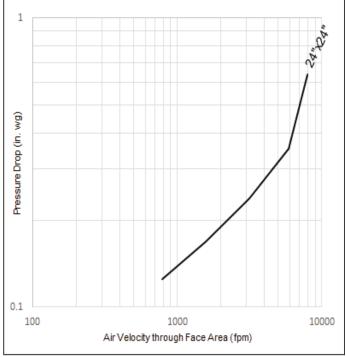
Air Performance testing conducted in accordance with ANSI/AMCA Standard 500-D, Figure 5.4 for Air Leakage & Fig 5.5 for Pressure drop.



AIR LEAKAGE DATA

AIR PERFORMANCE DATA





Ordering Key:

| | | 4 |
|---|---|---|
| (| н | |

| N | R | D | € | CR | W | X | Н |
|--------------|---------------|---|---|----|---|---|---|
| NRD: NON-RE | TURN DAMPER V | | | | | | |
| NRD-CR: NON- | RETURN DAMPE | | | | | | |
| NRDE: NON-R | ETURN DAMPER | | | | | | |

NRDE-CR: NON-RETURN DAMPER WITHOUT BRASS BUSHES WITH CONNECTING ROD

SIZE: WIDTH X HEIGHT

Bulletin No. 8, June 2021





PRESSURE RELIEF DAMPER - MODEL PRD

STANDARD CONSTRUCTION

PRD:

Frame: 0.9mm thick galvanized steel.

Blades: I.Omm thick extruded Aluminum profiles with adjustable counterweight for fine-tune operation.

Axles: Round extruded Aluminum profiles.

Bushing: Brass bushes. Seal: Foam blades seals.

Size: Single section up to I200 X I200mm.

DPRD & IPRD:

Frame: I.2mm thick extruded Aluminum profiles.

Blades: I.Omm thick extruded Aluminum profiles with
adjustable counterweight for fine-tune operation.

Axles: Round extruded Aluminum profiles.

Bushing: Brass bushes. Seal: Foam blades seals.

Size: Single section up to I200 X I200mm.



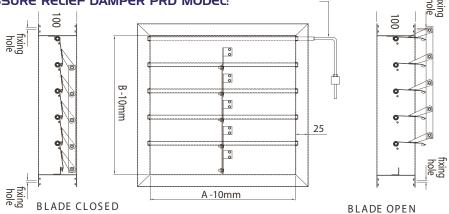
OPTIONS

| | MODEL FEATURE | PRD | DPRD | IPRD |
|----------------------|------------------------------|----------|----------|------|
| BRASS BUSHES | YES | ✓ | 1 | |
| BLADES CONNECTING | YES | ✓ | ✓ | ~ |
| COUNTERWEIGHT | YES | ✓ | 1 | ~ |
| FLANGES | 1 SIDE | | ✓ | ✓ |
| FLANGES | 2 SIDES | ✓ | | |
| FINISH | MILL FINISH | ✓ | | |
| FINISH | POWDER COATED TORAL9010/9016 | | ✓ | ✓ |
| INSTALLATION | 2-SIDES DUCTED | ✓ | | |
| INSTALLATION | WALL-MOUNTED | | ✓ | ✓ |
| APPLICATION | DISCHARGE | | ✓ | |
| AFFLICATION | INTAKE | | | ✓ |



DIMENSIONS

DUCTED PRESSURE RELIEF DAMPER PRD MODEL:

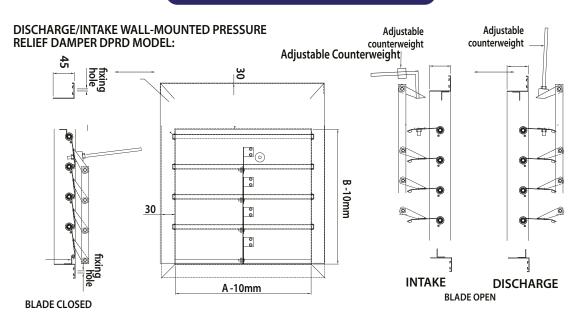


OPTION: PRD MODELS CAN BE MADE OF I.2MM THICK ALUMINUM FRAME INSTEAD OF STEEL FRAME. OTHER COMPENENTS REMAIN AS STANDARD CONSTRUCTION.

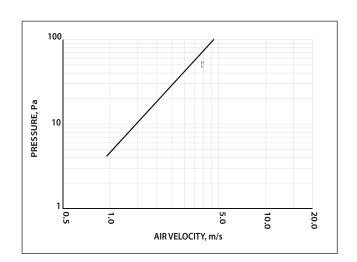




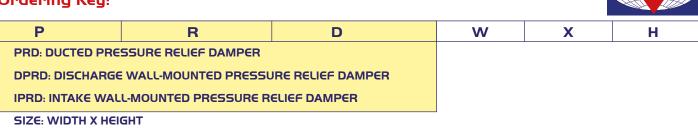
DIMENSIONS



FOR PRD MODELS:



Ordering Key:







MOTORIZED PRESSURE RELIEF DAMPER - MODEL MPRD

STANDARD CONSTRUCTION

DESCRIPTION

Frame: I.2mm thick galvanized steel.

Blade: 3-V shaped I.2mm thick roll formed galvanized steel.

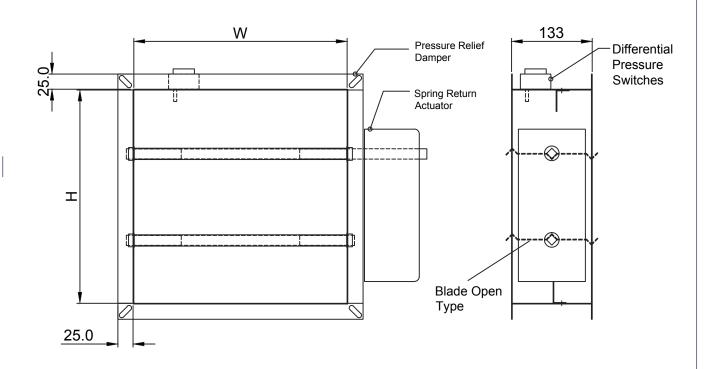
Axels: I/2" square galvanized steel rod.

Bushing: Plastic Bushes / Brass Bushes

Size: Single section upto = I200XI200 mm

Multiple section upto = 2400 X 2400 mm









MOTORIZED PRESSURE RELIEF DAMPER - MODEL MPRD

DIFFERENTIAL PRESSURE SWITCH

Differential Pressure Switches DPS Series

FOR AIR CONDITIONING / VENTILATION. USER-ADJUSTABLE

PRODUCT DATA AND INSTALLATION INSTRUCTIONS



BENEFITS

- Switching-point easily adjustable with scale in Pascal;
- Direction of M2Oxl.5 conduit entry can be rotated in steps of I2O°;

APPROVALS

- CE approval according to low-voltage directive 2006/95/EC;
- Switch according to VDE 0630;
- EC Gas Appliance Directive 90/396/EEC according to DIN EN I854 (Nov. OI, 1997)
- ROHS 2002/95/EC

TECHNICAL SPECIFICATIONS

Max. operating pressure IO kPa

Pressure media air, non-flammable gases, and

non-aggressive gases

Pressure connections two plastic tubes, outside

diameter: 6.0 mm

Switching capacity I.5 A, (0.4) /250 Vac

Electrical connections AMP connectors, 6.3 x 0.8,

DIN 46244 or screw terminals

Conduit entry M20xl.5
Protection class IP 54

Mounting lugs integrated in bottom housing

(alternative: mounting angles)

Medium/ambient temp. -20...+85 °C Storage temperature -40...+85 °C Membrane material silicone

OPERATING RANGES

| type | adjustment | switching | tolerance at | |
|---------|-----------------|--------------|--------------|--|
| | range for upper | difference | adjusted | |
| | trip pressure* | (hysteresis) | switch-point | |
| DPS 200 | 20200 (Pa) | IO (Pa) | ±20% | |

*The trip pressure refers to ve rtical mounting. In case of horizontal mounting (with the cover pointing upwards), the range values increase by 20 Pa.

Ordering Key:

| M | Р | R | D | G2 | P/B | | | |
|--|---|---|---|----|-----|--|--|--|
| M: MOTORIZED | | | | | | | | |
| PRD- Pressure Relief Damper | | | | | | | | |
| G2 = 1.2 mm GI Blade G3 = 1.5 mm GI Blade G4 = 1.7 mm GI Blade | | | | | | | | |
| P - Plastic Bushes B - Brass Bushes | | | | | | | | |







ACCESS DOORS







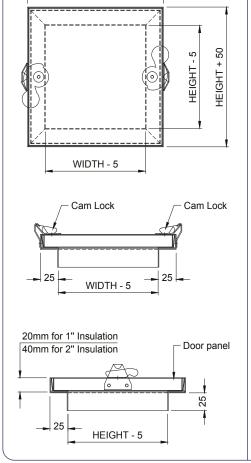
Description:

- Made of I.2mm thick galvanized steel.
- Contain I" thick glass fiber insulation of 24kg/m³ (2" optional).
- Provided with gasket betwen door & frame.
- For closure, equipped with one of the following alternatives.
 - 2 cam locks (standard)
 - -I cam lock & Piano-hinge.
 - Piano-hinge & handle operated lock with key.

Dimensions:

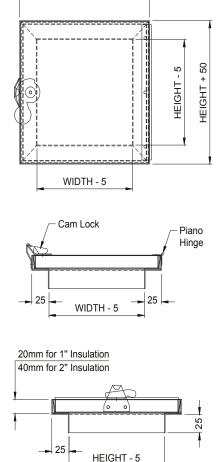
WIDTH + 50

ACCESS DOOR WITH 2 CAM LOCKS

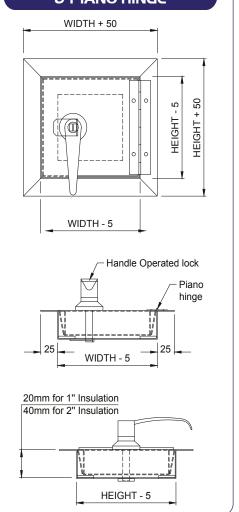


ACCESS DOOR WITH A CAM LOCK & PIANO HINGE

WIDTH + 50



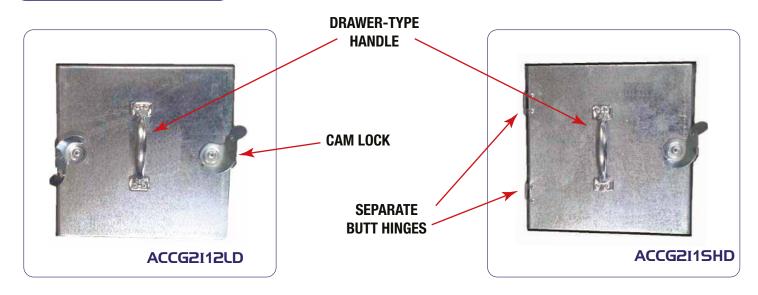
ACCESS DOOR WITH A HANDLE OPERATED LOCK & PIANO HINGE







OPTIONS





Ordering Key:

| Α | С | C | G2 | I1 | Р | Н | L | K | W | X | Н |
|--|-------------|----------|-------------------|---------------|----------|-----|---|---|---|---|---|
| ACCES | ACCESS DOOR | | | | | | | | | | - |
| GO: 0. | .7MM G.I. | CONSTR | UCTION | | | | | | | | |
| G1: O. | 9MM G.I. | CONSTRI | JCTION | | | | | | | | |
| G2: 1.2 | MM G.I. C | ONSTRU | CTION (STANDARD) | | | | | | | | |
| G3: I.5 | MM G.I. C | ONSTRU | CTION | | | | | | | | |
| I1: 1" | INSULATI | ON THICK | (NESS (STANDARD) | | | | | | | | |
| I2: 2" | INSULATI | ON THIC | KNESS (OPTIONAL) | | | | | | | | |
| 2L: W | ITH 2 CAN | / LOCKS | (STANDARD) | | | | | | | | |
| ZLD: V | NITH 2 CA | M LOCK | 5 & DRAWER - TYPE | HANDLE | | | | | | | |
| PH: WITH PIANO HINGE AND A CAM LOCK | | | | | | | | | | | |
| PHD: WITH PIANO HINGE, A CAM LOCK & DRAWER - TYPE HANDLE | | | | | | | | | | | |
| SH: WITH SEPARATE HINGES & A CAM LOCK | | | | | | | | | | | |
| SHD: WITH SEPARATE HINGES, A CAM LOCK & DRAWER - TYPE HANDLE | | | | | | | | | | | |
| PHLK: | WITH PIA | NO HING | SES & HANDLE OPER | ATED LOCK WIT | TH A KEY | | | | | | |
| SHLK: WITH SEPARATE BUTT HINGES & HANDLE OPE | | | | | LOCK / | KEY | | | | | |
| SIZE: WIDTH X HEIGHT | | | | | | | | | | | |



Dubai Head Office: Tel: +971 4 706 9777 Fax: +971 4 706 9787

Abu Dhabi Branch: Tel: +971 2 645 0107 Fax: +971 2 645 0167

Saudi Arabia:

Tel: +966 1 265 4551 Fax: +966 1 265 4550

Email: betai@betag.com P.O.Box 50708, Dubai United Arab Emirates

www.betag.com









