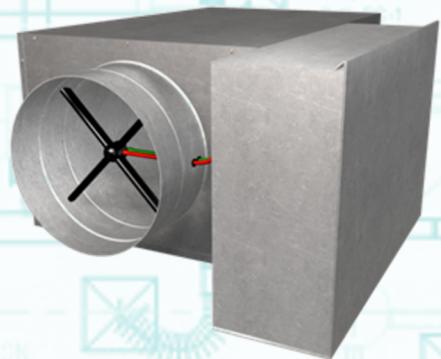
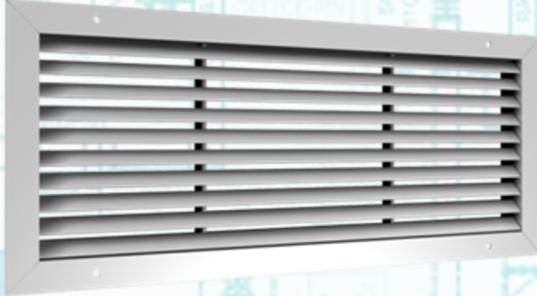




**Rist
& Associates, Inc.**

STOCK CATALOG





A. TERMS OF SALE

- 1) Net 30 days with approved credit.
- 2) No minimum order charge.
- 3) All prices are subject to change without notice.
- 4) Every attempt is made to maintain adequate inventory of all items that we stock.

B. DELIVERY

- 1) Prices are F.O.B. Rist & Associates warehouse.
- 2) Freight charges will be added to invoice, we ship UPS whenever possible, or common carrier of our choice.

C. TAXES

- 1) Catalog prices do not include sales tax, use tax, or local option tax.

D. RETURNS

- 1) No item may be returned for credit without prior approval and return authorization.
- 2) Items must be new and in original packaging, subject to our inspection.
- 3) All items to be returned to our warehouse, freight pre-paid.

E. WARRANTIES

- 1) The warranties of respective product manufacturers will apply. Rist & Associates bears no responsibility for costs incurred in replacing parts under warranty.

F. DISCLAIMER

- 1) Performance & dimensional data have been provided by respective manufacturers. Rist & Associates bears no responsibility nor makes any warranty concerning said data. This data is subject to change without notice.

Table of Contents

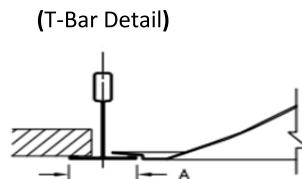
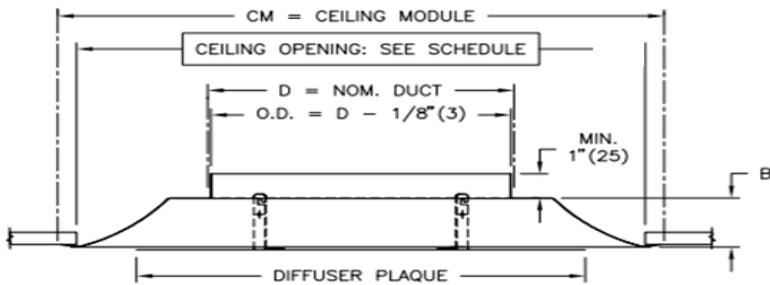
| | |
|---|-------|
| Grilles, Registers & Diffusers | |
| (SPD) Square Plaque Supply Diffuser..... | 1 |
| (SCD) Square Cone Supply Diffuser..... | 2 |
| (PDDR) Perforated Face Return Diffuser..... | 3 |
| (PDN) Perforated Face Supply Diffuser..... | 4 |
| (PFRF) Perforated Return Panel..... | 5 |
| (QMF) Plaster Frames..... | 6 |
| (VCR8E) Round Butterfly Damper..... | 7 |
| Plastic Eggcrates..... | 8 |
| Plenum Slot Diffusers..... | 9 |
| (520D) Surface Mount Supply Register..... | 10 |
| (530F) Surface Mount Return Grille..... | 11 |
| (530FF) Filter Grille..... | 12 |
| (80F) Eggcrate Return/Transfer Grille..... | 13 |
| (VCS3) Opposed Blade Damper..... | 14 |
| Take-Offs / Collars | |
| Straight Take-Offs & Dampers..... | 15 |
| Conical Take-Offs & Collars..... | 16 |
| Flex Duct | |
| Flex Duct..... | 17 |
| Flex Duct Accessories..... | 18 |
| Gripple | |
| Gripple Kits..... | 19 |
| Snap Lock Pipe / Access Doors / Fire Dampers | |
| Access Doors..... | 20 |
| Snap Lock Pipe..... | 21 |
| Transitions..... | 22 |
| Fire Dampers..... | 23 |
| VAV Boxes & Hot Water Coils | |
| VAV Boxes..... | 24 |
| Hot Water Coils..... | 25 |
| VAV Controls..... | 26 |
| CP101 Control Calibration..... | 27 |
| Exhaust Fans / Roof Curbs / Pipe Portals | |
| Exhaust Fans..... | 28 |
| Roof Curbs..... | 29 |
| Pipe Portals..... | 30 |
| Line Voltage T-Stat..... | 31 |
| Our Location..... | 32 |
| Line Card | 33,34 |
| Notes..... | 35 |



Model SPD

Lay-In Square Plaque Ceiling Diffuser

- Steel Construction
- White Baked Enamel Finish
- Surface Mount w/ QMF Plaster Frame
- Diffuser Face Mounts Flush With Ceiling Tile



| Part Number | Neck Size | Module Size | Max CFM at NC 30 |
|-------------|-----------|-------------|------------------|
| SPD121206 | 6" | 12"x12" | 210 |
| SPD121208 | 8" | 12"x12" | 310 |
| SPD242406 | 6" | 24"x24" | 245 |
| SPD242408 | 8" | 24"x24" | 390 |
| SPD242410 | 10" | 24"x24" | 550 |
| SPD242412 | 12" | 24"x24" | 710 |
| SPD242414 | 14" | 24"x24" | 925 |

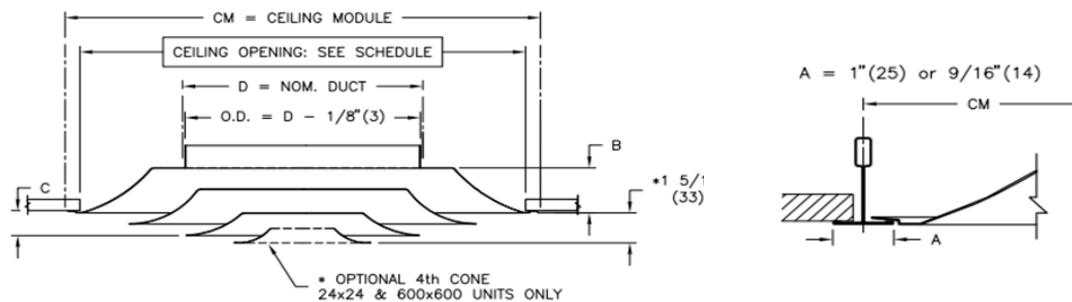
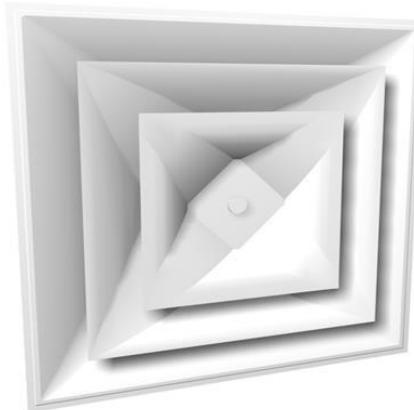
Maximum CFM recommended for NC 30 or less



Model SCD

Lay-In Square Cone Ceiling Diffuser

- Steel Construction
- White Baked Enamel Finish
- Surface Mount w/ QMF Plaster Frame
- Optional 4th Cone In-Stock
- Fixed Non-Removable Core w/ Center Plug For Damper Adjustment



| Part Number | Neck Size | Module Size | Max CFM at NC 30 |
|-------------|-----------|-------------|------------------|
| SCD121206 | 6" | 12" x 12" | 245 |
| SCD121208 | 8" | 12" x 12" | 360 |
| SCD242406 | 6" | 24" x 24" | 250 |
| SCD242408 | 8" | 24" x 24" | 400 |
| SCD242410 | 10" | 24" x 24" | 580 |
| SCD242412 | 12" | 24" x 24" | 775 |
| SCD242414 | 14" | 24" x 24" | 980 |

Maximum CFM recommended for NC 30 or less

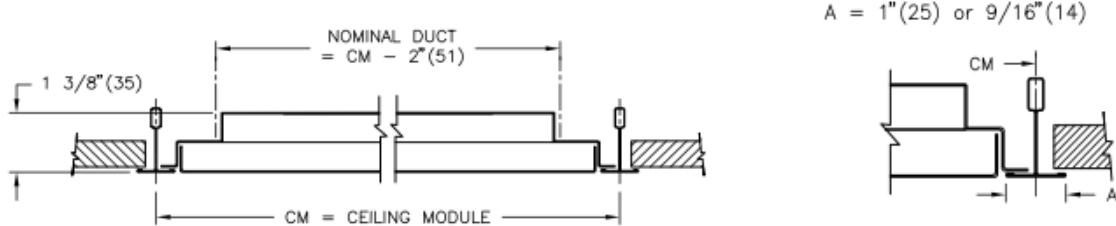
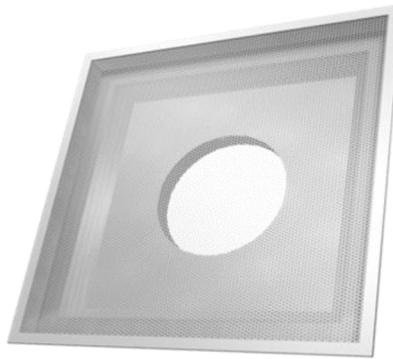
| | | |
|-------|----------|---------------|
| SCD4C | 4th Cone | 6.25" x 6.25" |
|-------|----------|---------------|



Model PDDR

Lay-In Perforated Return Diffuser

- Steel Construction
- White Baked Enamel Finish
- Surface Mount w/ QMF Plaster Frame
- Ducted or Non-Ducted



| Part Number | Neck Size | Module Size | Max CFM at NC 30 |
|-------------|-----------|-------------|------------------|
| PDDR242406 | 6" | 24" x 24" | 440 |
| PDDR242408 | 8" | 24" x 24" | 660 |
| PDDR242410 | 10" | 24" x 24" | 930 |
| PDDR242412 | 12" | 24" x 24" | 1200 |
| PDDR242414 | 14" | 24" x 24" | 1500 |
| PDDR2424222 | 22" x 22" | 24" X 24" | 2940 |

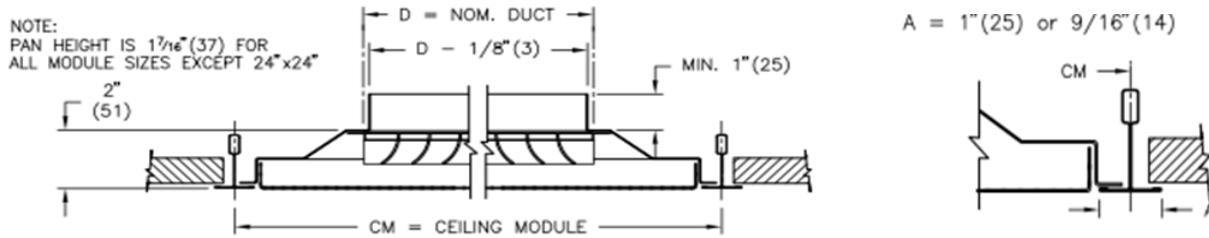
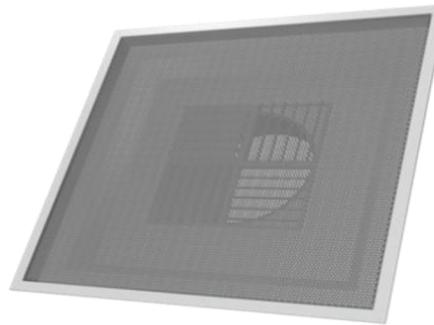
Maximum CFM recommended for NC 30 or less



Model PDN

Lay-In Perforated Ceiling Diffuser (with neck deflectors)

- Steel Construction
- White Baked Enamel Finish
- Adjustable Deflectors Are Supplied In 4-Way Pattern
- Other Patterns Achieved By Rotating Deflectors
- Surface Mount w/ QMF Plaster Frame



| Part Number | Neck Size | Module Size | Max CFM at NC 30 |
|-------------|-----------|-------------|------------------|
| PDN242406 | 6" | 24" x 24" | 135 |
| PDN242408 | 8" | 24" x 24" | 200 |
| PDN242410 | 10" | 24" x 24" | 300 |
| PDN242412 | 12" | 24" x 24" | 390 |

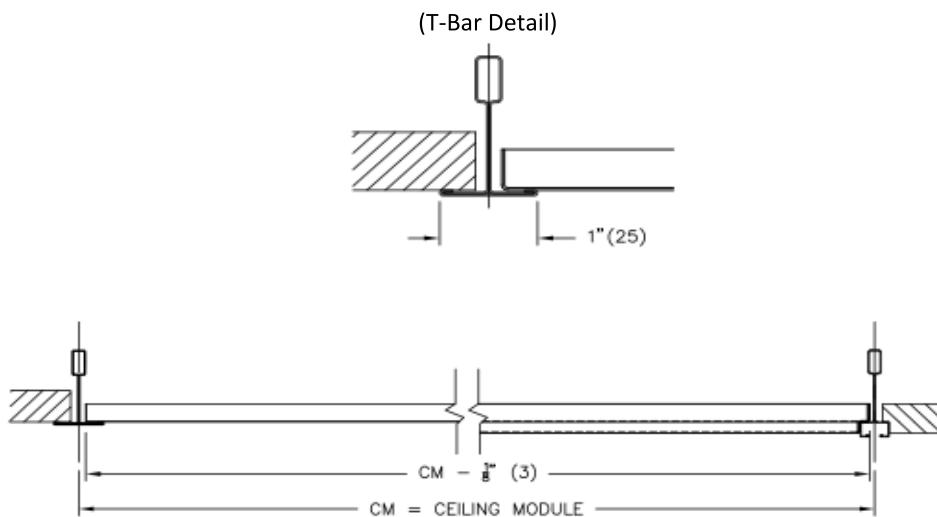
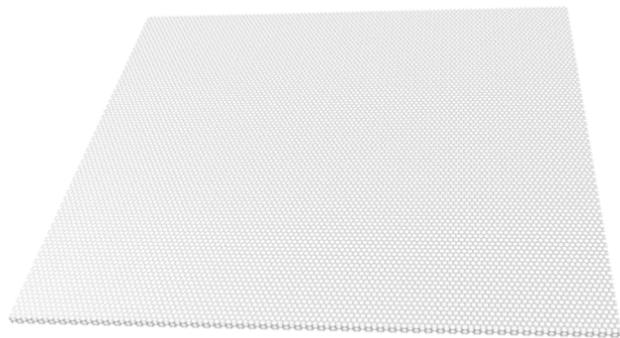
Maximum CFM recommended for NC 30 or less



Model PFRF

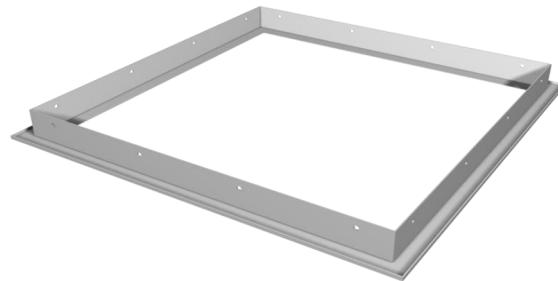
Lay-In Perforated Return Panel

- Steel Construction
- White Baked Enamel Finish
- Surface Mount w/ QMF Plaster Frame



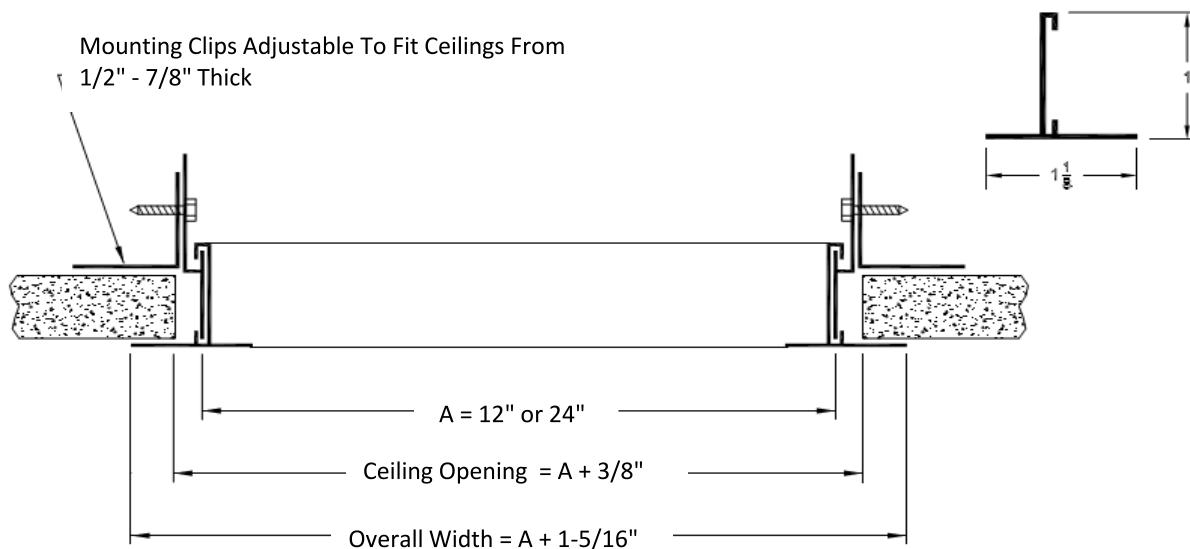
| Part Number | Description | Module Size | Max CFM at NC 30 |
|-------------|--------------------------|-------------|------------------|
| PFRF2424 | Perforated Ceiling Panel | 24" x 24" | 2940 |

Maximum CFM recommended for NC 30 or less



QMF Plaster Frames

- Allows Installation of Lay-In Diffusers in Plaster or Gypsum Ceilings
- Mounting Clips & Screws Standard (8 Clips / Frame)
- Aluminum Construction
- Mitered Corners
- White Finish



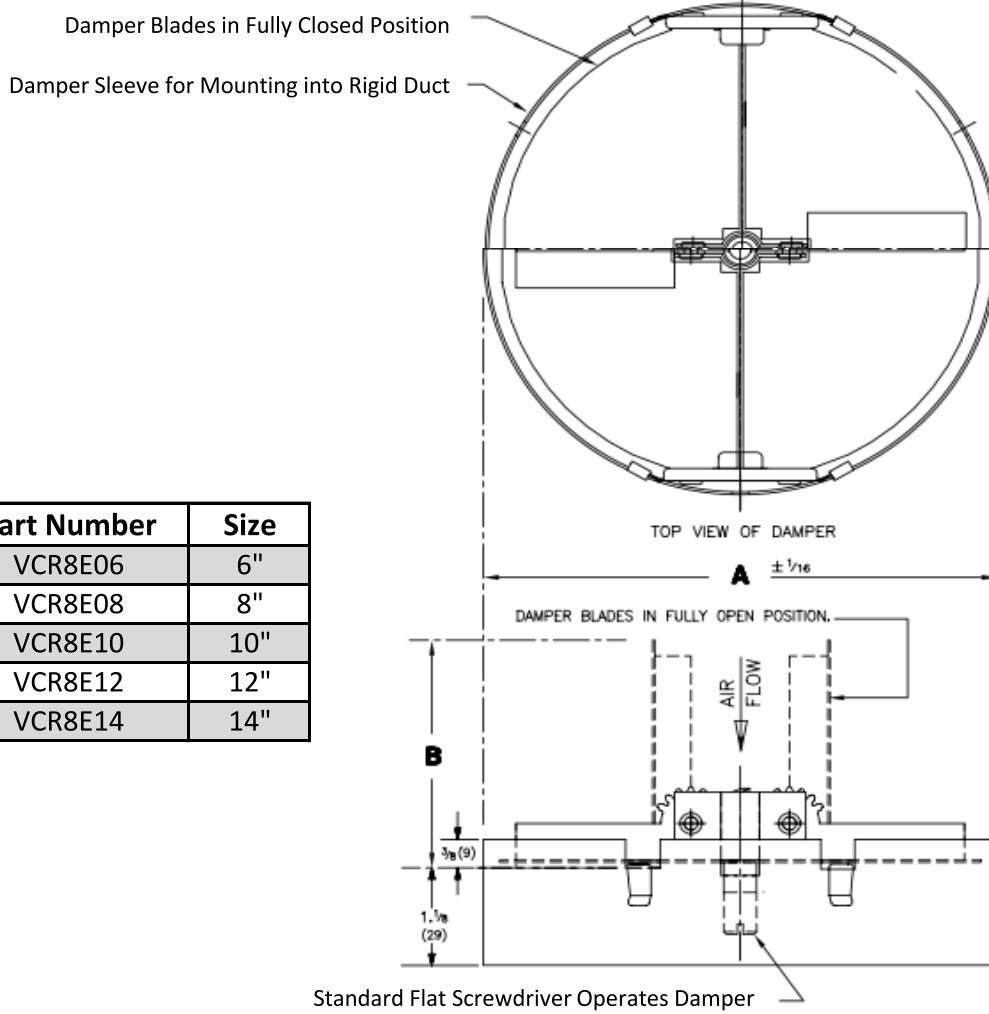
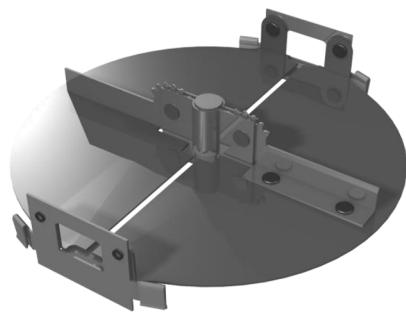
| Part Number | Size |
|-------------|-------|
| QMF1212 | 12X12 |
| QMF2424 | 24X24 |



Model VCR8E

Round Butterfly Damper

- Steel Construction
- Standard Screwdriver Operator
- Diffuser Neck Mounted or Duct Mounted
- Mill Finish



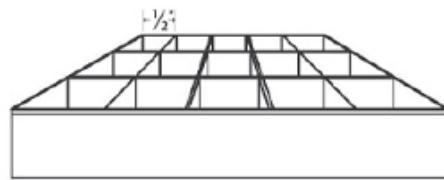
| Part Number | Size |
|-------------|------|
| VCR8E06 | 6" |
| VCR8E08 | 8" |
| VCR8E10 | 10" |
| VCR8E12 | 12" |
| VCR8E14 | 14" |

Accessories

Plastic Eggcrates

- Transluscent White Finish
- Easily Field Cut to Custom Dimensions
- 1/2" x 1/2" x 3/8" Core
- Available Sizes:

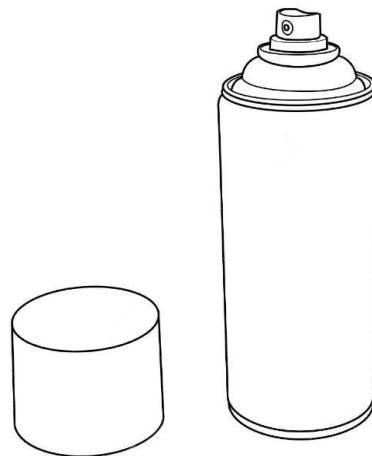
| Part Number | Sizes |
|-------------|-----------|
| PEC2424 | 24" x 24" |
| PEC4824 | 48" x 24" |



B12 White Touch Up Paint

- Matches Standard B12 Finish On Price Industries Grilles & Diffusers
- Spray Can

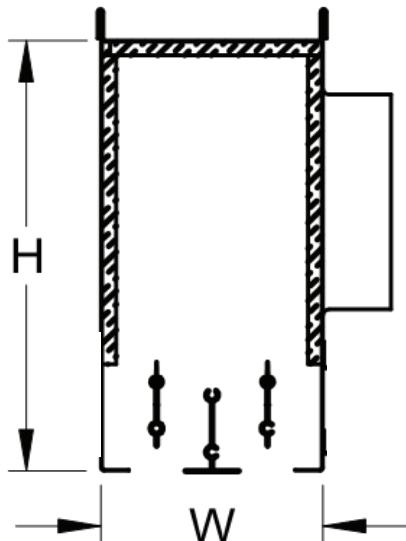
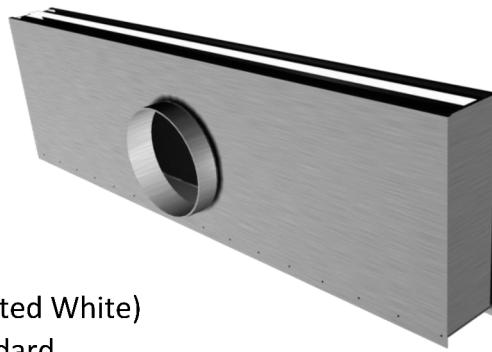
| Part Number |
|-------------|
| TUP-B12 |





Plenum Slot Diffusers

- Plenum = 24 Gauge Galvannealed Steel
- Interior Surfaces Painted Flat Black (Tee Bar Painted White)
- 1/2" Insulation (Interior Coated Fiberglass) Standard
- Fully Adjustable Directional Vanes with Felt Edge Seal
- 2-Slots Standard



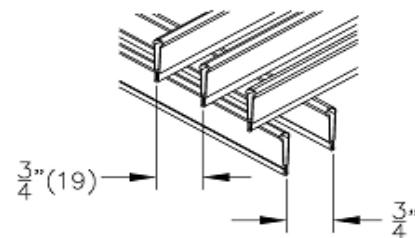
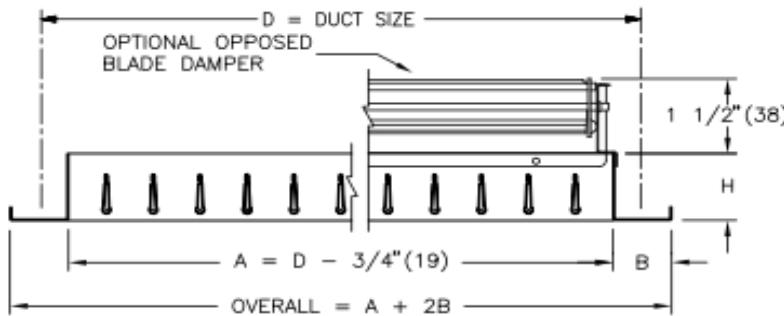
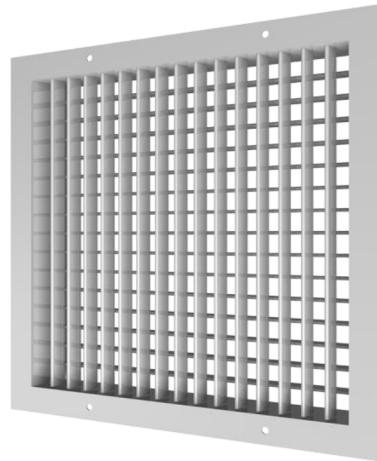
| Part Number | Length | Neck Size | Slot Width | "W" | "H" | Max CFM at NC 30 |
|---------------|--------|-----------|------------|--------|-----|------------------|
| DCD24-2-75-6 | 24" | 6" | 3/4" | 3-1/2" | 9" | 135 |
| DCD24-2-10-8 | 24" | 8" | 1" | 4" | 11" | 170 |
| DCD24-2-15-8 | 24" | 8" | 1-1/2" | 5" | 11" | 250 |
| DCD48-2-75-8 | 48" | 8" | 3/4" | 3-1/2" | 11" | 240 |
| DCD48-2-15-8 | 48" | 8" | 1-1/2" | 5" | 11" | 350 |
| DCD48-2-15-10 | 48" | 10" | 1-1/2" | 5" | 13" | 425 |



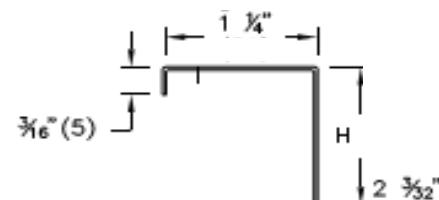
Model 520D

Double Deflection Supply Register

- Steel Construction
- White Baked Enamel Finish
- 3/4" Blade Spacing
- VCS3 Opposed Blade Damper Included
- Countersunk Screwholes For Surface Mount
- Front Blades Parallel To Short Dimension



(Blade Spacing Detail)



(Frame Detail)

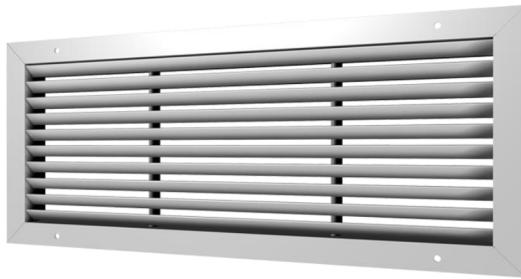
| Part Number | Size | Max CFM at NC 30 |
|-------------|-----------|------------------|
| 520D0606 | 6" x 6" | 210 |
| 520D0808 | 8" x 8" | 370 |
| 520D1010 | 10" x 10" | 560 |
| 520D1206 | 12" x 6" | 410 |
| 520D1208 | 12" x 8" | 530 |
| 520D1210 | 12" x 10" | 660 |
| 520D1212 | 12" x 12" | 790 |
| 520D1406 | 14" x 6" | 450 |
| 520D1408 | 14" x 8" | 615 |
| 520D1410 | 14" x 10" | 750 |
| 520D1414 | 14" x 14" | 945 |
| 520D1616 | 16" x 16" | 1280 |

Maximum CFM recommended for NC 30 or less



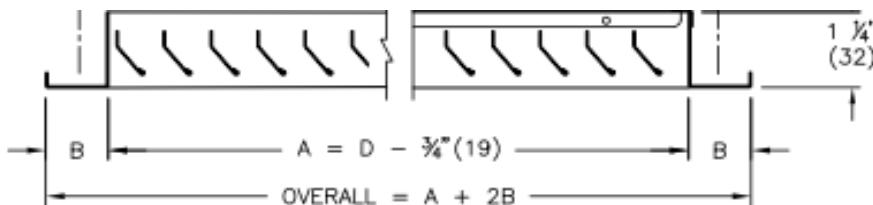
Model 530/F

Single Deflection Return Grille



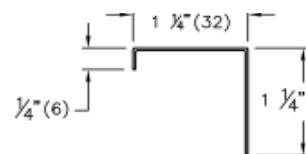
- Steel Construction
- White Baked Enamel Finish
- 45° Deflection - 3/4" Blade Spacing
- Front Blades Parallel To Long Dimension
- Countersunk Screwholes For Surface Mount

* No Screwholes On 22"x22" Lay-In Style*



| Part Number | Size | Max CFM at NC 30 |
|-------------|--------------------|------------------|
| 530F0606 | 6" x 6" | 160 |
| 530F0806 | 8" x 6" | 215 |
| 530F0808 | 8" x 8" | 300 |
| 530F1008 | 10" x 8" | 360 |
| 530F1010 | 10" x 10" | 460 |
| 530F1210 | 12" x 10" | 485 |
| 530F1212 | 12" x 12" | 635 |
| 530F1414 | 14" x 14" | 830 |
| 530F1616 | 16" x 16" | 1075 |
| 530F2222LI | 22" x 22" (Lay-In) | 2100 |

Maximum CFM recommended for NC 30 or less



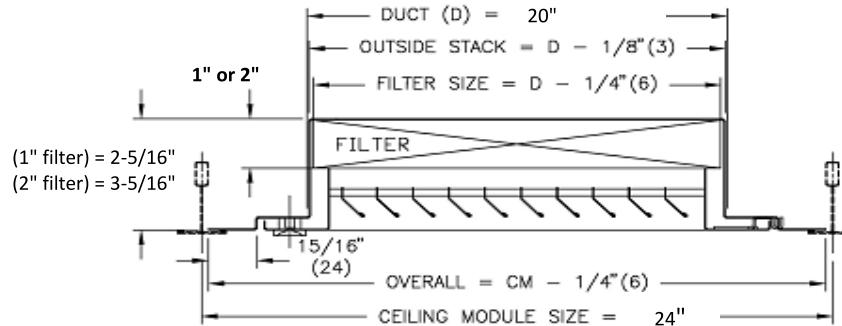
(Frame Detail)



Model 530/FF

Lay-In Single Deflection Filter Return Grille

- Steel Construction
- White Baked Enamel Finish
- 45° Deflection - 3/4" Blade Spacing
- Hinged Face w/ Quarter Turn Fasteners
- Accepts 1" or 2" Filter (By Others)



| Part Number | Neck Size | Face Size | Filter | Max CFM at NC 30 |
|---------------|-----------|-----------|--------|------------------|
| 530FF2020-1LI | 20"x20" | 24"x24" | 1" | 1750 |
| 530FF2020-2LI | 20"x20" | 24"x24" | 2" | 1750 |

Maximum CFM recommended for NC 30 or less

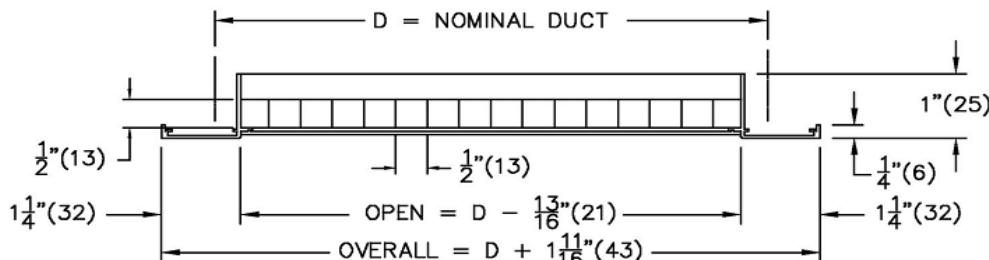
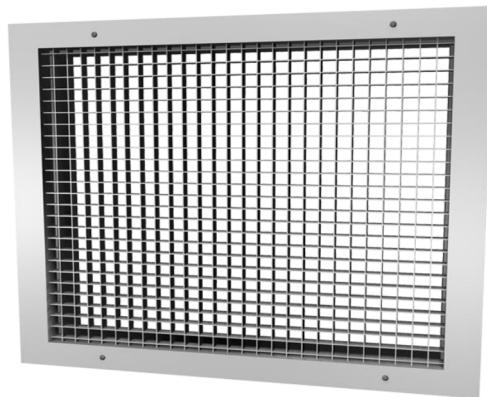


Model 80/F

Eggcrate Return Grille

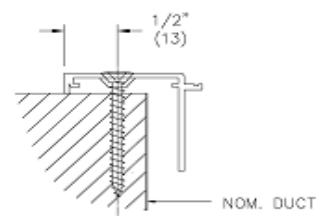
- Aluminum Construction
- White Baked Enamel Finish
- 1/2" x 1/2" x 1/2" Core
- Countersunk Screwholes For Surface Mount

* No Screwholes On 22"x22" or 22"x10" Lay-In Style*



| Part Number | Size | Max CFM at NC 30 |
|-------------|--------------------|------------------|
| 80F0606 | 6" x 6" | 215 |
| 80F0808 | 8" x 8" | 390 |
| 80F1010 | 10" x 10" | 600 |
| 80F1212 | 12" x 12" | 900 |
| 80F1616 | 16 x 16" | 1280 |
| 80F2210LI | 22" x 10" (Lay-In) | 1300 |
| 80F2222LI | 22" x 22" (Lay-In) | 2800 |

Maximum CFM recommended for NC 30 or less



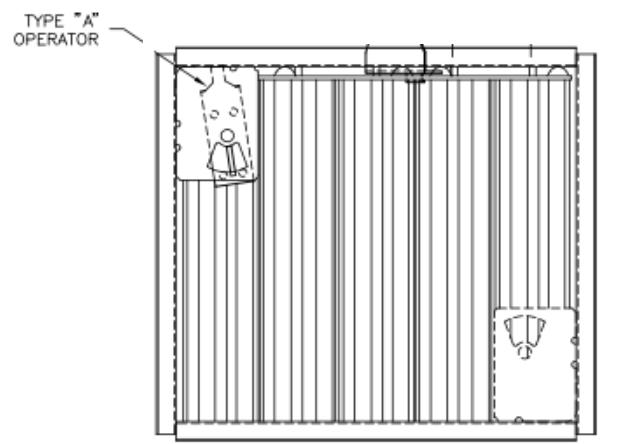
(Frame Detail)



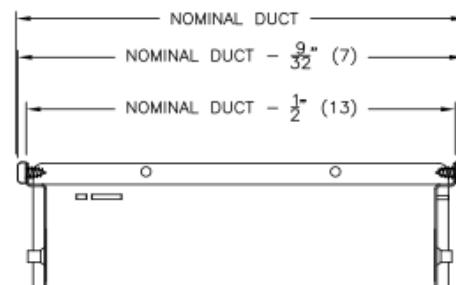
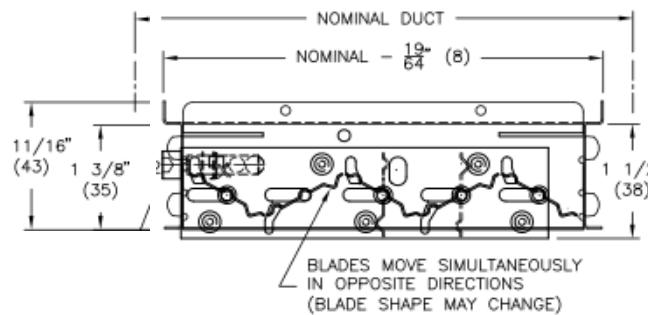
Model VCS3

Square Opposed Blade Damper

- Steel Construction
- Standard Screwdriver Operator
- Mill Finish

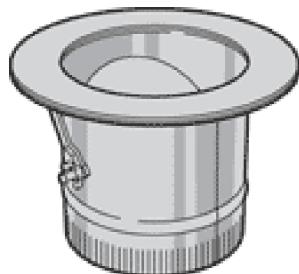


| Part Number | Size |
|-------------|---------|
| VCS30606 | 6"X6" |
| VCS30808 | 8"X8" |
| VCS31010 | 10"X10" |
| VCS31212 | 12"X12" |
| VCS31616 | 16"X16" |



Straight Take-Offs & Dampers

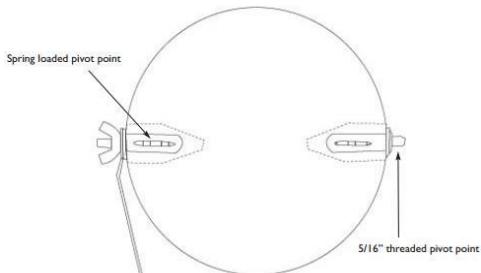
Adhesive Tap with Damper



| Part Number | Size Ø |
|-------------|--------|
| ADT04 | 4" |
| ADT06 | 6" |
| ADT08 | 8" |
| ADT10 | 10" |
| ADT12 | 12" |
| ADT14 | 14" |

- Single Blade Damper with Locking Quadrant Handle
- Adhesive Flange Adds 2.5" to Ø
- Length Varies with Ø

Single Blade Damper

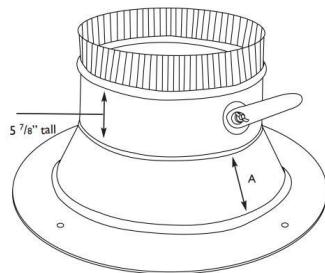


| Part Number | Size Ø |
|-------------|--------|
| SBD06 | 6" |
| SBD08 | 8" |
| SBD10 | 10" |
| SBD12 | 12" |
| SBD14 | 14" |

- 26 gauge Damper Blade
- 18 gauge Handle w/ Wing Nut
- Overall Ø Minus 1/4"

Conical Take-Offs & Collars

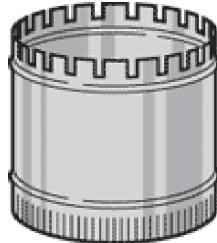
Adhesive Conical Tap with Damper



| Part Number | Size Ø |
|-------------|--------|
| CNPR06 | 6" |
| CNPR08 | 8" |
| CNPR10 | 10" |
| CNPR12 | 12" |
| CNPR14 | 14" |

- Single Blade Damper with Locking Quadrant Handle
- Adhesive Flange = 1-1/2"
- Bellmouth Ø = "Size" + 2.0"
- "A" Dimension = 2.0"
- Overall Height = 8.0"

Start Collar



| Part Number | Size Ø |
|-------------|--------|
| SC06 | 6" |
| SC08 | 8" |
| SC10 | 10" |
| SC12 | 12" |
| SC14 | 14" |
| SC16 | 16" |
| SC18 | 18" |
| SC20 | 20" |

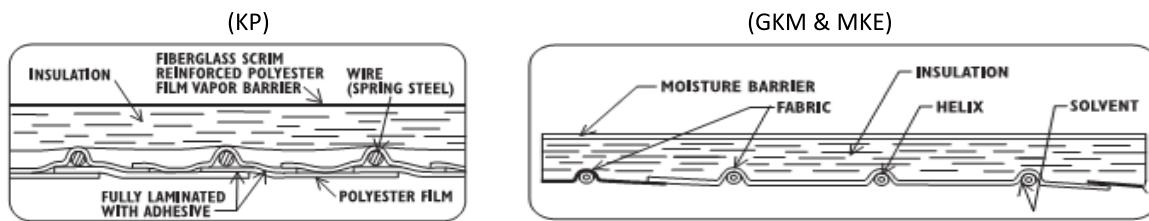
- 28 gauge Sizes 6"- 8"
- 26 gauge Sizes 10"- 20"
- Pre-Formed Tabs to Secure to Duct
- Length Varies with Ø



Thermaflex®

Flex Duct

| | KP | GKM | MKE |
|-------------------------------------|---|---|--|
| Insulation: | R-4.2 | R-4.2 | R-4.2 |
| Exterior Facing: | Polyolefin Film, Flame Resistant | Polyolefin Film, Flame Resistant | Fiberglass Scrim Reinforced Aluminized Polyester Vapor Barrier |
| Fabric Type: | Polyester Film | Acoustically Rated CPE Material | Acoustically Rated CPE Material |
| Rated Velocity: | 5000 FPM | 5000 FPM | 5000 FPM |
| Max Pressure: (positive) | 4"- 16" = 10" w.g. 16"-20" = 6" w.g. | 3" - 16" = 6" w.g. 18" - 20" = 4" w.g. | 4"- 12" = 10" w.g. 14"- 16" = 6" w.g. 18"- 20" = 4" w.g. |



| Available Sizes (I.D.) | (25' Lengths) | | |
|------------------------|---------------|-----|-----|
| | KP | GKM | MKE |
| 4" | | | 4" |
| 5" | | | |
| 6" | | 6" | 6" |
| 7" | | | |
| 8" | | 8" | 8" |
| 9" | | | |
| 10" | | 10" | 10" |
| 12" | | 12" | 12" |
| 14" | | 14" | 14" |
| | | 16" | 16" |
| | | 18" | 18" |
| | | 20" | 20" |

Flex Duct Accessories



Flex Flow Elbows

- One Piece Fits Duct Sizes 6"-16" Round
- Fits Over any Size/Brand of Flex Duct in 30 Seconds
- Molded From Composite Material / UL Listed
- Quantity = 25 / Box

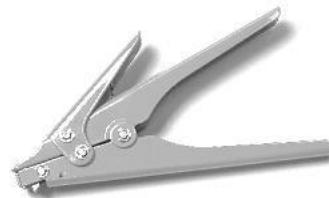
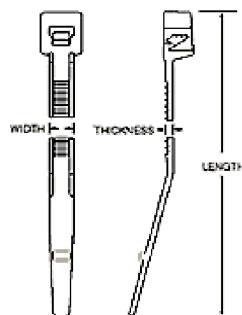
(Part Number: FFE)



Flex Ties

- 1 - 1/2" Wide
- Adjustable From 4" - 16" Diameters
- Reusable
- Quantity = 100 / Box

(Part Number: FTHS)



Advanced Cable Ties, Inc.

- **Faster** - low insertion and pull through force
- **Stronger** - high tensile strength achieved from one piece (filtered nylon) design
- **Easier** - angled tail provides quicker initial insertion
- **Safer** - rounded edges provide added safety & eliminates insulation damage

(Part Number: ACT)

AL-300 Tensioning Tool

- Quickly Tensions and Cuts Off Excess Strap
- Durable: The AL-300 is Designed For Larger Cable Ties & Manually Cuts Off Excess Strap With a Squeeze of the Cutoff Handle
- Travel Stop Prevents Pinched Fingers
- All-Steel Construction

(Part Number: ACT-TOOL)

| Length | Width | Thickness | Tensile Strength | Diameter | per Bag | per Case |
|--------|-------|-----------|------------------|----------|---------|----------|
| 37.25" | 0.34" | 0.09" | 175lbs | 11.00" | 50 | 500 |



| Part Number | Product | No. | End Fixing | Cable Length |
|------------------|---------------------------|-----|-------------|--------------|
| XP2-LG-10FT | Express | 2 | Loop | 10' |
| XP2-LG-20FT | Express | 2 | Loop | 20' |
| XP2-SQG-10FT | Express | 2 | 1/4" Stud | 10' |
| XP2-S3/8G-10FT | Express | 2 | 3/8" Stud | 10' |
| XP2-EY90QG-10FT | Express | 2 | 90° Eyelet | 10' |
| XP2-TQG-10FT | Express | 2 | 1/4" Toggle | 10' |
| SDT2-LG-10FT | Duct Trapeze | 2 | Loop | 10' |
| SDT2-EY90QG-10FT | Duct Trapeze | 2 | 90° Eyelet | 10' |
| HF3-LG-10FT | Standard | 3 | Loop | 10' |
| HF3-LG-20FT | Standard | 3 | Loop | 20' |
| CUTTER-GRIPPLE | Cutter (Cable Sizes #1-4) | | | |

Product



Express



Standard



Duct Trapeze

Cable

| Load Rating Per Hanger (5:1 Safety Factor) | No. 2 | No.3 |
|---|---------|---------|
| | 100 lbs | 200 lbs |

End Fixing



Loop



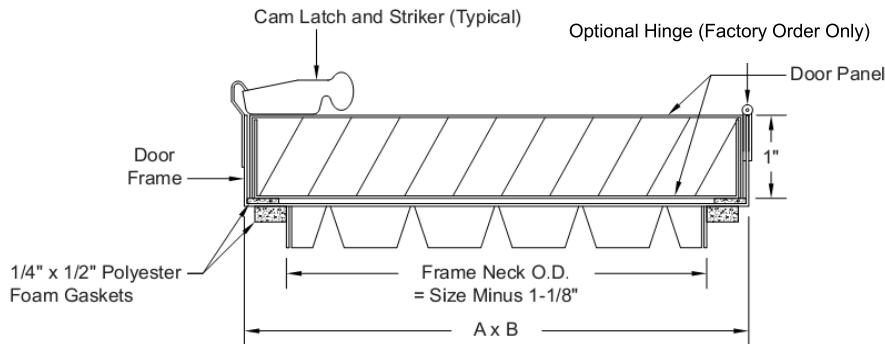
Stud



Toggle



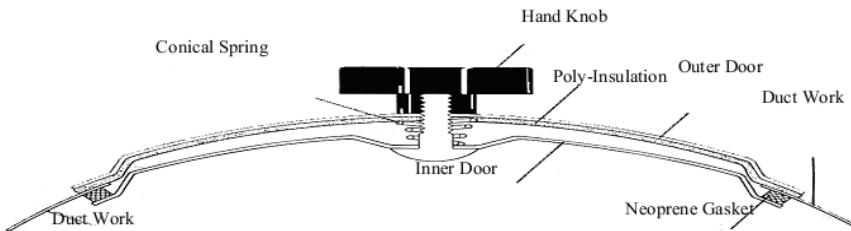
90° Eyelet



Access Doors

- 24ga Galvanized Steel Door Panel
- 1" Fiberglass Insulation
- Pre-Formed 22ga Tabs
- Cam Locks

| Part Number | Sizes: | | |
|-------------|--------|---|-----|
| | "A" | x | "B" |
| AD0606 | 6" | x | 6" |
| AD0808 | 8" | x | 8" |
| AD1010 | 10" | x | 10" |
| AD1212 | 12" | x | 12" |
| AD1414 | 14" | x | 14" |
| AD1616 | 16" | x | 16" |
| AD1818 | 18" | x | 18" |
| AD2020 | 20" | x | 20" |
| AD2424 | 24" | x | 24" |



Access Doors (Round Duct)

- Tested From -10" - +20" w.g. With No Leakage
- Galvanized Coating
- Closed Cell Neoprene Gasket For Optimum Seal
- Self Adhesive Template Provided For Easy Install

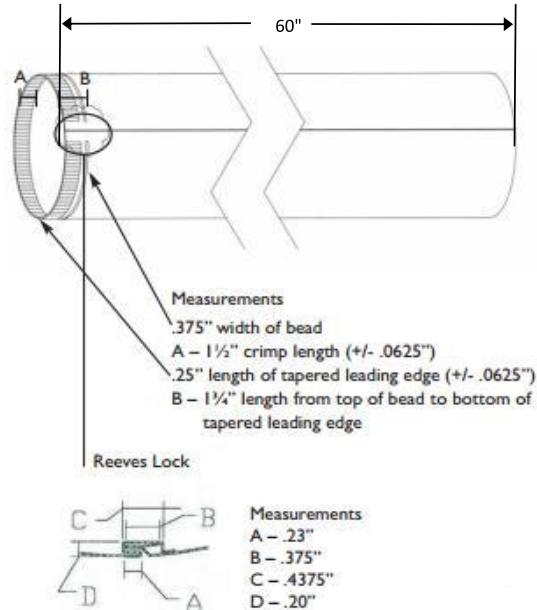
| Part Number | Duct Ø | Size |
|-------------|---------|--------|
| RAD0608 | 6" & 8" | 10"x6" |
| RAD10 | 10" | |
| RAD12 | 12" | |
| RAD14 | 14" | |
| RAD16 | 16" | |

Snap Lock Pipe & Fittings

Snap Lock Pipe

| Part Number | Pipe Ø |
|-------------|--------|
| SLP04 | 4"Ø |
| SLP06 | 6"Ø |
| SLP08 | 8"Ø |
| SLP10 | 10"Ø |
| SLP12 | 12"Ø |
| SLP14 | 14"Ø |

- 26 Gauge Galvanized Steel
- G-60 Galvanized Coating
- RL-7 Longitudinal Seam
- Meets 2" W.G. Pressure
- .0625" Thickness of Crimp
- Crimp & Bead Male Connection; Straight Female Connection



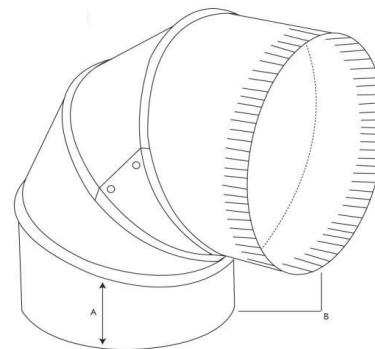
End Caps (No Crimp)

| Part Number | Size |
|-------------|------|
| EC04 | 4" |
| EC06 | 6" |
| EC08 | 8" |
| EC10 | 10" |
| EC12 | 12" |
| EC14 | 14" |



90° Elbows

| Part Number | Size | "A" | "B" |
|-------------|------|--------|--------|
| SLP90-04 | 4" | 1-7/8" | 3" |
| SLP90-06 | 6" | 1-7/8" | 3-1/8" |
| SLP90-08 | 8" | 2" | 3-3/8" |
| SLP90-10 | 10" | 2-1/4" | 4" |
| SLP90-12 | 12" | 1-5/8" | 3" |
| SLP90-14 | 14" | 2-1/8" | 4" |

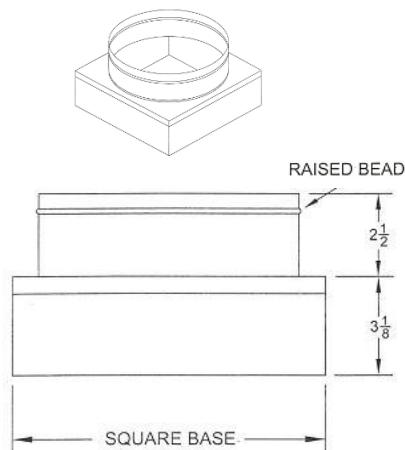


Transitions

Square → Round Transitions

| Part Number | Square→Round |
|-------------|--------------|
| SQTR0606-06 | 6 x 6 → 6" |
| SQTR0808-08 | 8 x 8 → 8" |
| SQTR1010-08 | 10x10 → 8" |
| SQTR1010-10 | 10x10 → 10" |
| SQTR1212-06 | 12x12 → 6" |
| SQTR1212-08 | 12x12 → 8" |
| SQTR1212-10 | 12x12 → 10" |
| SQTR1212-12 | 12x12 → 12" |

- 24 Gauge Galvannealed Steel
- Interior Painted Flat Black

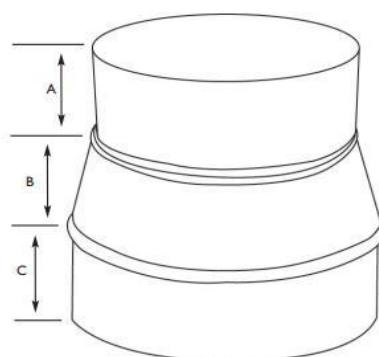


Round → Round Transitions

| Part Number | Round→Round |
|-------------|-------------|
| RTR0406 | 4" - 6" |
| RTR0608 | 6" - 8" |
| RTR0810 | 8" - 10" |
| RTR1012 | 10" - 12" |

- 28 Gauge Galvanized Steel
- 3/8" Overlap for Riveting Using 1/8" Rivets
- Overall Height = 5-3/4" (+/- 1/4")

A = 2"
 B = 1-3/4"
 C = 2"



Fire Dampers

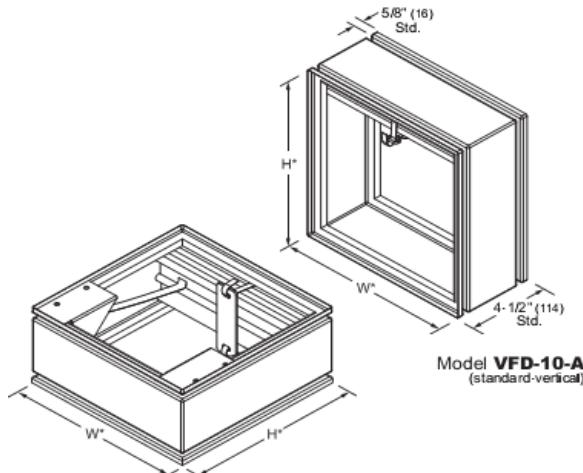
Fire Dampers

1-1/2 Hour Rated Static - Curtain Style

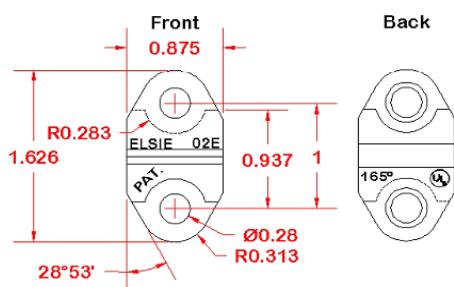


| Part Number | Sizes |
|-------------|---------|
| FD0606 | 6"x6" |
| FD0808 | 8"x8" |
| FD1010 | 10"x10" |
| FD1208 | 12"x8" |
| FD1210 | 12"x10" |
| FD1212 | 12"x12" |
| FD1412 | 14"x12" |
| FD2412 | 24"x12" |

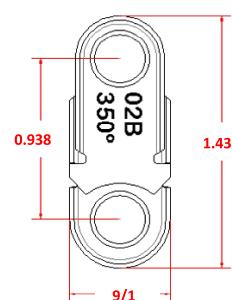
- 22 gauge Galvanized Steel Frame
- 24 gauge Galvanized Steel Curtain
- 165°F Fusible Link
- Vertical or Horizontal Applications
- UL Listed



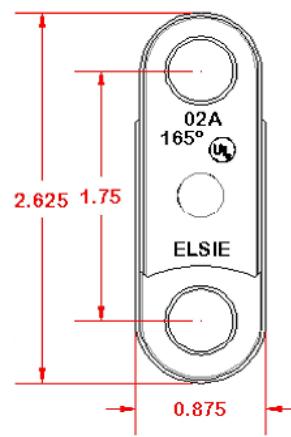
Fusible Links



E Style (Star Link)



B Style (Small)



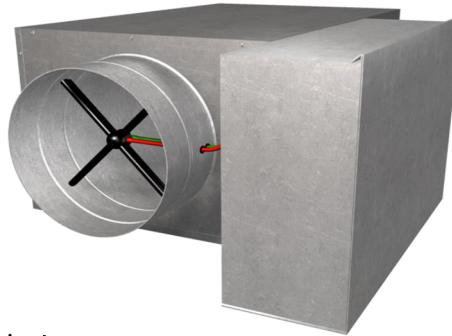
A Style (Large)

165° or 212°

165° or 212°

165° or 212°

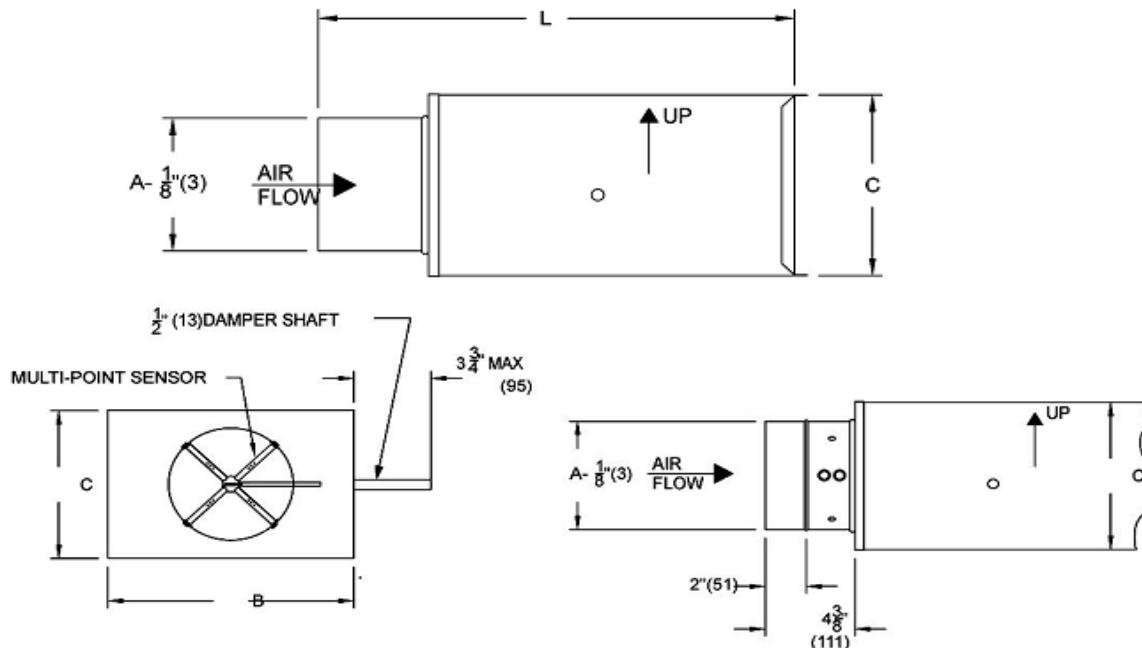
(Shown With Optional Control Shroud / Enclosure)



Model SDV5

Single Duct VAV (Bare) Box

- 22ga Zinc Coated Steel Housing
- 1/2" Thick, 1-1/2lb Density Internal Fiberglass Insulation
- Designed To Accept Pneumatic or Digital Controls
- 2-Row Water Coils, Control Shrouds & Pneumatic Controllers/Actuators In Stock

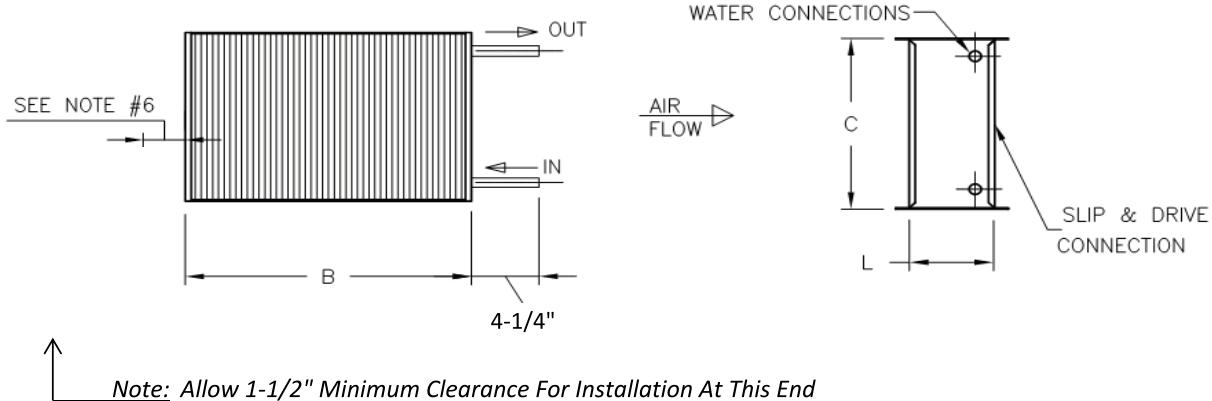
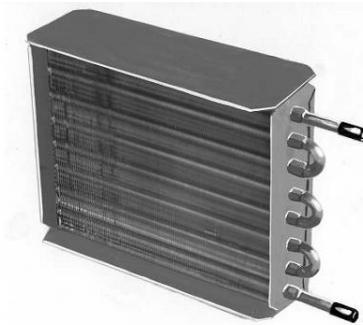


| Part Number | Unit Size | Max CFM | Outlet | | Inlet | Length |
|-------------|-----------|---------|--------|---------|-------|---------|
| | | | B | C | | |
| SDV506 | 6 | 450 | 12" | 8" | 6" | 20-1/8" |
| SDV508 | 8 | 800 | 12" | 10" | 8" | 20-1/8" |
| SDV510 | 10 | 1350 | 14" | 12-1/2" | 10" | 20-1/8" |
| SDV512 | 12 | 2100 | 16" | 15" | 12" | 20-1/8" |



Hot Water Reheat Coils (2-Row)

- Aluminum Fins (10 Fins Per Inch)
- Slip & Drive Duct Connection
- 22ga Galvanized Steel Mechanically Sealed, Leak Resistant
- O.D. Sweat Connections
- Copper Tubes

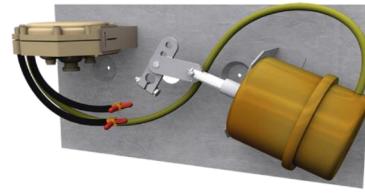


| Part Number | (VAV Box) Inlet Size | B | C | L | Coil Connection |
|-------------|----------------------|-----|---------|----|-----------------|
| HWC06 | 6" | 12" | 8" | 5" | 7/8" |
| HWC08 | 8" | 12" | 10" | 5" | 7/8" |
| HWC10 | 10" | 14" | 12-1/2" | 5" | 7/8" |
| HWC12 | 12" | 16" | 15" | 5" | 7/8" |

Control Shroud

| Part Number | Description |
|-------------|----------------------------|
| PS | Control Shroud for VAV Box |





CP-101 Pneumatic VAV Controller

- Pressure Independent Pneumatic Controller
- Separate Adjustment Knobs For Max & Min Airflows
- Air Consumption = 1 scfm @ 20 psig
- Requires 15-30 psig Main Air Pressure
- Calibration Procedure on Next Page
(Part Number: CP101)



KMC Pneumatic VAV Actuator

- MCP-8031 Series Ideal For Terminal Unit Applications
- Stroke = 1-11/16"
- Supply Pressure = 0-20 psi Operating, 30 psi Maximum
- Operating Temperature Limits = -20°F to 180°F
- 3/16" OD Metal Fittings
(Part Number: PNACT)



▲ CAUTION

Pneumatic devices must be supplied with clean, dry control air. Any other medium (e.g., oil or moisture contamination) will cause the device to fail.

SP300 Airflow Sensor

- Velocity Pressure Sensor for VAV Box Inlet
- Provides .03 in. w.g. Signal at Flows 400 FPM or Greater

| Part Number | Size Ø |
|-------------|--------|
| SP300-6 | 6" |
| SP300-8 | 8" |
| SP300-10 | 10" |
| SP300-12 | 12" |



CP101 Calibration Procedure

A. Damper Action

1. Damper action is factory set. To reset action, loosen damper selection switch screw and align desired action with the damper position. Retighten screw.
2. Actuator must be repositioned to provide appropriate fail safe position. (See Page 4 for instructions)

B. Reset Start Point

1. Reset start point is factory calibrated to the specified setting on the control assembly label.
2. To field adjust, remove the gauge tap cap at "G" and attach a 0 - 30 psi pressure gauge.
3. Adjust the thermostat pressure at "T" port to the desired start point value with a gradual switch or pressure regulator. (Start point is lowest span pressure).
4. Adjust reset start knob until the gauge pressure begins to increase slightly (greater than zero but less than 0.3).
5. Replace gauge tap cap.

C. Reset Span

1. Reset span is factory calibrated to the specified setting on the control assembly label.
2. To field adjust, remove the gauge tap cap at "G" and attach a 0 - 30 psi pressure gauge.
3. Adjust the thermostat pressure at "T" port to above 15 psi.
4. Adjust reset span knob until the gauge pressure is equal to the desired reset span (total span pressure, not end span pressure).
5. Replace gauge tap cap.

D. Air Volume Limits

1. Remove the caps from the tees in the HI (red) and LO (green) tubes leading from the air flow sensor in the assembly inlet. Connect a differential pressure gauge to the tees. A gauge with a 0 to 1 inch w.g. scale is recommended.
2. Refer to the calibration curve for the size assembly being serviced. From the curve read the differential pressure across the sensor for the required air flow. (See Page 6)
3. Alternately, calculate the differential pressure from the equations on page 6.

Direct Acting Cooling or Reverse Acting Heating

4. Adjust the minimum air flow limit first.
5. Set the thermostat signal to 0 psi or disconnect the thermostat tube from the controller.
6. Adjust the "LO STAT" dial on the controller (centre knob) until the gauge reads the required differential pressure for minimum air volume. Turn the dial slowly, allowing time for the damper actuator to complete its travel in response to the adjustments.
7. Adjust the maximum air flow limit, after verifying the minimum air flow limit is set correctly.
8. Apply 15 psi minimum air pressure to the thermostat connection at the controller.

9. Adjust the "HI STAT" dial on the controller (outer knob) until the gauge reads the required differential pressure for maximum air volume. Turn the dial slowly, allowing time for the damper actuator to complete its travel in response to the adjustments.
10. Cycle the thermostat several times. This can be quickly accomplished by removing the cap from the gauge tap (Port G) and varying the bleed rate with finger pressure. Replace cap and check the air flow limits. If set points have changed, repeat steps 4 to 10.

Reverse Acting Cooling or Direct Acting Heating

4. Adjust the maximum air flow limit first.
5. Set the thermostat signal to 0 psi or disconnect the thermostat tube from the controller.
6. Adjust the "LO STAT" dial on the controller (centre knob) until the gauge reads the required differential pressure for maximum air volume. Turn the dial slowly, allowing time for the damper actuator to complete its travel in response to the adjustments.
7. Adjust the minimum air flow limit, after verifying the maximum air flow limit is set correctly.
8. Apply 15 psi minimum air pressure to the thermostat connection at the controller.
9. Adjust the "HI STAT" dial on the controller (outer knob) until the gauge reads the required differential pressure for minimum air volume. Turn the dial slowly, allowing time for the damper actuator to complete its travel in response to the adjustment.
10. Cycle the thermostat several times. This can be quickly accomplished by removing the cap from the gauge tap (Port G) and varying the bleed rate with finger pressure. Replace cap and check the air flow limits. If set points have changed, repeat steps 4 to 10.

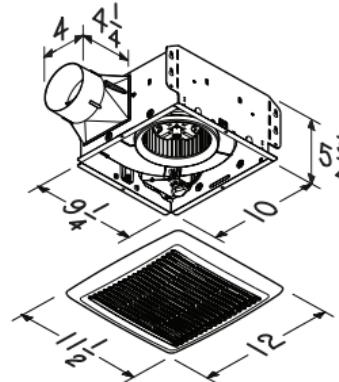
General

11. Always adjust the "LO STAT" dial first.
12. After calibration is complete, reconnect the thermostat tube to the controller if it has been removed during the calibration procedure.
13. Disconnect the gauge and replace the caps on the tees.
14. Replace the protective metal cover.

Exhaust Fans

BROAN® Model A80

- 80 CFM @ 0.1" Static Pressure
- White Polymeric Grille
- Plug-in Permanently Lubricated Motor
- 4" Round Duct Connection with Damper
- UL Listed For Shower/Tub Enclosures When Used With a GFCI Branch Circuit Wiring
- Weight = 10.0 lbs

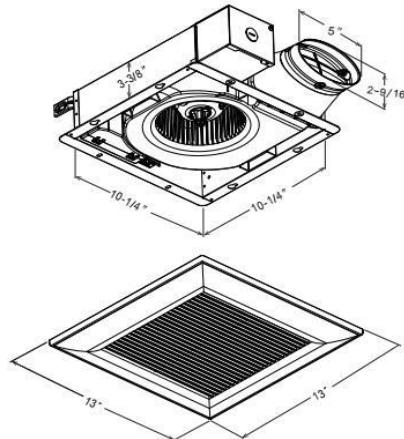


Part Number: A80

| 0.1 Ps - Static Pressure (in H ₂ O) | | | | 0.25 Ps | Volts | Watts | Amps | Duct Ø |
|--|-------|-------|-------|---------|-------|-------|------|--------|
| CFM | Sones | Watts | CFM/W | CFM | | | | |
| 80 | 2.0 | 43.1 | 1.89 | 67 | 120 | 43.1 | 0.37 | 4" |

Panasonic Model FV-0510VS1

- Manually Adjustable to 50-80-100 CFM
- White Plastic Grille
- Enclosed DC Brushless ECM Motor
- 4" Oval Duct Connection with Damper
- UL Listed For Shower/Tub Enclosures When Used With a GFCI Branch Circuit Wiring
- Weight = 8.8 lbs



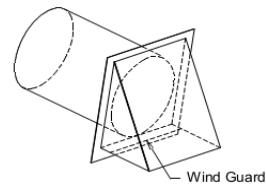
Part Number: FV0510VS1

| CFM @ Static Pressure | Sones | Watts | CFM/W | Volts | Amps | Duct Ø |
|-----------------------|-------|-------|-------|-------|------|---------|
| 100 CFM @ 0.1 Ps | 0.9 | 11.1 | 9.2 | 120 | 0.20 | 4" Oval |
| 100 CFM @ 0.25 Ps | 1.3 | 16.0 | 6.4 | 120 | 0.27 | 4" Oval |
| 80 CFM @ 0.1 Ps | 0.4 | 7.2 | 11.4 | 120 | 0.13 | 4" Oval |
| 81 CFM @ 0.25 Ps | 0.8 | 11.5 | 7.2 | 120 | 0.20 | 4" Oval |
| 50 CFM @ 0.1 Ps | <0.3 | 4.4 | 12.8 | 120 | 0.09 | 4" Oval |
| 53 CFM @ 0.25 Ps | 0.5 | 7.5 | 7.9 | 120 | 0.14 | 4" Oval |

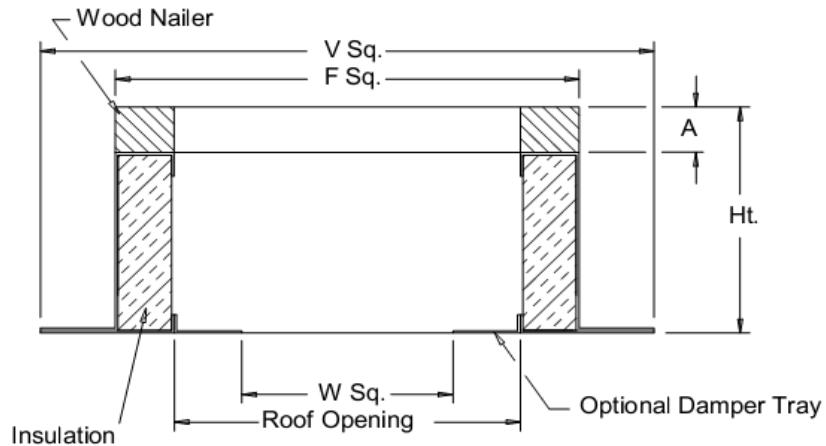
Wall Caps

- Aluminum with Backdraft Damper
- Closed Cell Foam Tape for Quiet Operation
- Stainless Steel Spring

| Part # | Sizes |
|--------|-------|
| WCR4 | 4" Ø |
| WCR6 | 6" Ø |



(Flat) Roof Curbs



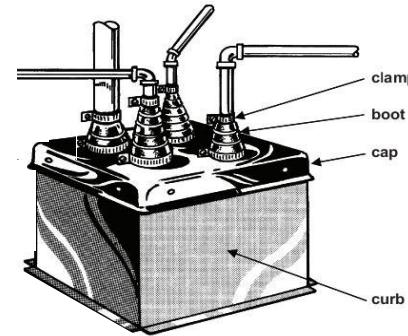
- 18 Gauge Galvanized Steel
- Continuously Welded Corners
- 1-1/2" 3lb Density Thermal & Acoustical Insulation
- Wood Nailer

| Part Number | Height | "A" | "F" Sq | "V" Sq | Roof Opening |
|-------------|--------|------|--------|--------|--------------|
| RCG16-13 | 13.5" | 1.5" | 16.5" | 20.5" | 13.5" |
| RCG18-13 | | 1.5" | 18.5" | 22.5" | 15.5" |
| RCG22-13 | | 1.5" | 22.5" | 26.5" | 19.5" |
| RCG28-13 | | 1.5" | 28.5" | 32.5" | 25.5" |
| RCG16-16 | 16.5" | 1.5" | 16.5" | 20.5" | 13.5" |
| RCG18-16 | | 1.5" | 18.5" | 22.5" | 15.5" |
| RCG22-16 | | 1.5" | 22.5" | 26.5" | 19.5" |
| RCG28-16 | | 1.5" | 28.5" | 32.5" | 25.5" |

Pipe Portal Systems

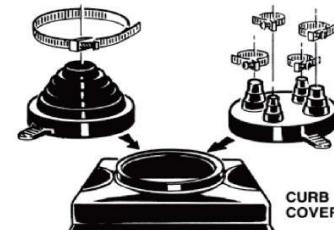


- 18 Gauge Galvanized Steel Roof Curb
- 1-1/2", 3lb Density Fiberglass Insulation
- Wood Nailer
- Molded ABS Plastic Cover
- Molded EPDM Rubber Cap
- Stainless Steel Clamps
- (1) System Includes Curb, Cover, Clamps & One of Five Caps Listed Below



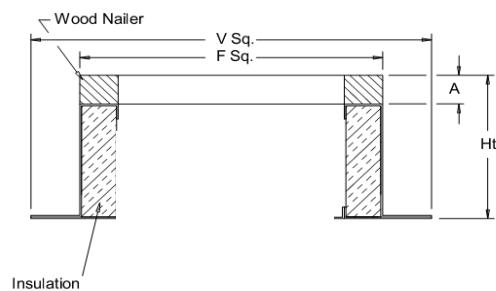
Caps:

| Part # | Description |
|--------|--|
| N18 | For Four 3/8" Thru 1" Pipes |
| N21 | For Four 1" Thru 2" Pipes |
| N28 | For Two 3/8" Thru 1" & Two 1" Thru 2" |
| N52 | For One 2" Thru 6" Pipe |
| N182 | For One 8" Thru 12" Pipe (Requires 20x20 Curb) |



Curbs:

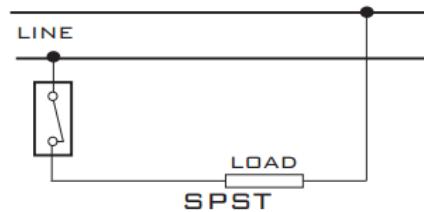
| | 12x12 | 20x20 |
|--------|---------------------|------------|
| Fits: | N18, N21, N28 & N52 | N182 |
| "V" | 16"x16" | 24"x24" |
| "F" | 12"x12" | 20"x20" |
| "Ht" | 12" | 12" |
| Part # | PPC1212-12 | PPC2020-12 |



Line Voltage Cooling Thermostat



The Choice of Professionals Since 1921



(Part Number: ET5SRTS)

- Single Pole, Single Throw
- Cooling Only
- Celcius & Farenheit Temperature Scale
- Cooling: 3/4HP @ 125VAC / 1.5HP @ 250/277 VAC
- Range: 50-90°F
- Differential: Cooling Approx. 4°F
- Dimensions: 4-3/4" x 2-3/4" x 2-3/4" (HxWxD)
- Finish: White
- U.L. Approved, C.S.A. Certified

Our Location



From I-235

Exit the interstate northbound on 2nd Avenue (this requires westbound traffic to exit on 3rd Street and loop around onto 2nd Avenue). Remain northbound on 2nd Avenue past the Des Moines Main Post Office and through the stop light on University Avenue. The following stop light will be College Avenue and the next street north of College is Washington Avenue. Proceed east on either until they dead end (approximately 5 blocks). We are in a tan metal building with a canvas entry awning - there will be white name and address signs posted.

Rist & Associates, Inc.
4 Washington Avenue
Des Moines, IA 50314

515.243.8720

Manufacturers Represented



Specialty Diffusers



Gas & Electric Make-Up Air Units



ARROW UNITED INDUSTRIES

Louvers & Dampers



Gas Make-Up Air Units



Ceiling Exhaust Fans & Accessories



Louvers, Dampers, Access Doors, Fire Dampers



FRP Fans & Blowers



Roof Curbs, Support Rails, Curb Adaptors



UL300A Fire Suppression Range Hoods



Fabric Air Duct Dispersion Systems



Controls & Guages



Electronic Airflow Measurement Equipment



Electronic Airflow Measurement Equipment



Cable Hangers & Support Pieces



Kitchen Hoods, Access Doors, Air Blenders



Spiral Duct & Fittings



Industrial Fans & Blowers



Electric Heating Products



Air Doors & Fly Fans



B-Vent, Flue, Grease Duct Systems

Manufacturers Represented



Access Panels, Heat/Smoke Vents, Roof Hatches



Welding, Underfloor, Overhead Exhaust Systems



Spiral Duct & Fittings



Ceiling Exhaust Fans



Louvers, Dampers, Attenuators



Grilles, Registers, Diffusers, VAV Boxes, Attenuators



RAYMON
DONCO AIR DISTRIBUTION EQUIPMENT

Light Troffers, Plenum, Slot & Specialty Diffusers



Wood, Cast Iron, & Aluminum Grilles



Roof Curbs, Support Rails, Curb Adaptors



UVC Products for HVAC Systems



Insulated & Non-Insulated Flexible Duct



Gas Detection Systems, Sensors & Controls



FRP Duct & Fittings



Heat & Fume Exhaust Hoods, Fans, Controls



VENT PRODUCTS CO., INC.



Duct Connection Flanges, Corners, Hardware



Vibration Eliminator Co., Inc.



Thermometers & Pressure Gauges



Specialty Dampers, Remote Cable Operators, & Hardware



Destratification & Spot Cooling Fans

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