

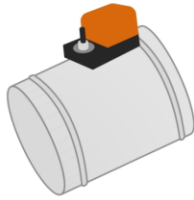
ECOJAY DAMPERS ARE AVAILABLE IN OVER 100 DIFFERENT SIZES AND STYLES. SUPERIOR DESIGNS FOR ENHANCED RELIABILITY AND SIMPLICITY.



5 YEAR LIMITED
WARRANTY

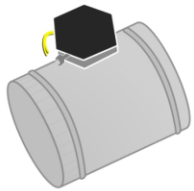
MADE
IN THE
USA

ecojay.com
888-523-3265



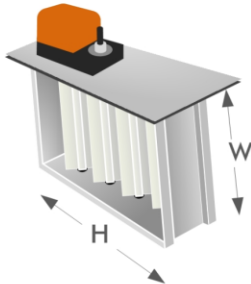
ROUND POWER

D	S	U	P	D										
DAMPER	SUPPLY	ROUND	POWER	DIAMETER										
					<table><tr><td>6"</td><td>9"</td><td>14"</td></tr><tr><td>7"</td><td>10"</td><td>16"</td></tr><tr><td>8"</td><td>12"</td><td>18"</td></tr></table>	6"	9"	14"	7"	10"	16"	8"	12"	18"
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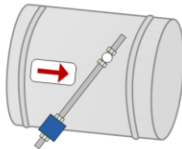
ROUND SPRING

D	S	U	S	D										
DAMPER	SUPPLY	ROUND	SOWER	DIAMETER										
					<table><tr><td>6"</td><td>9"</td><td>14"</td></tr><tr><td>7"</td><td>10"</td><td>16"</td></tr><tr><td>8"</td><td>12"</td><td></td></tr></table>	6"	9"	14"	7"	10"	16"	8"	12"	
6"	9"	14"												
7"	10"	16"												
8"	12"													



RECTANGLE POWER

D	S	E	P	W	H	8" - 24" SEE SPEC
DAMPER	SUPPLY	RECTANGULAR	POWER	WIDTH	HEIGHT	



BAROMETRIC BYPASS

D	B	U	B	D							
DAMPER	BYPASS	ROUND	BAROMET	DIAMETER							
					<table><tr><td>8"</td><td>10"</td><td>14"</td></tr><tr><td></td><td>12"</td><td>16"</td></tr></table>	8"	10"	14"		12"	16"
8"	10"	14"									
	12"	16"									



MODULATING BYPASS

D	B	U	M	D										
DAMPER	BYPASS	ROUND	MODULAT	DIAMETER										
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A ZONING SYSTEM CAN TYPICALLY USE THE SAME DUCT SIZING AS A TRADITIONAL SINGLE-THERMOSTAT SYSTEM. IT IS IMPORTANT TO PROPERLY SIZE AND INSTALL A PRESSURE RELIEF DAMPER AS WELL AS PROPERLY BALANCE THE ZONES. TO MINIMIZE BYPASS AIR FLOW, INCREASE THE DUCT CAPACITY BY ONE SIZE FOR EACH ZONE LESS THAN 25% OF THE TOTAL SYSTEM AIR FLOW CAPACITY. FOR SYSTEMS WITH MORE THAN 4 ZONES, INCREASING THE DUCT & DAMPER SIZES OF THE SMALLER ZONES (OR ALL THE ZONES) WILL MINIMIZE THE AMOUNT OF PRESSURE RELIEF NEEDED WHEN ONLY THE SMALLEST ZONE DAMPER IS OPEN. **NOTE:** CONNECT DAMPERS DIRECTLY TO THE PLENUM WHEN POSSIBLE AND BRANCH OFF SMALLER DUCTS GOING TO DIFFERENT AREAS WITHIN THE ZONES. USING THIS TRUNK/BRANCH DUCT DESIGN WILL MINIMIZE COST AND REDUCE AIR NOISE.

ECOJAY DAMPERS ARE AVAILABLE IN OVER 100 DIFFERENT SIZES, SHAPES AND STYLES

ECOJAY'S 24VAC AIR DAMPERS ARE DESIGNED AND PRECISION BUILT FOR LONG TERM RELIABILITY. THE GASKET INSURES A TIGHT AIR SEAL WHEN CLOSED AND ALLOWS UNOBSTRUCTED AIR FLOW WHEN OPEN. ECOJAY DAMPERS USE HEAVY GAUGE GALVANIZED STEEL RIBBED CAN & ALUMINUM RECTANGULAR CONSTRUCTION INSURING RELIABILITY IN A WIDE RANGE OF APPLICATIONS.

ZONE BALANCING

TO MAINTAIN OPTIMAL EQUIPMENT PERFORMANCE IN A TYPICAL ZONING APPLICATION, IT IS PREFERABLE FOR ALL ZONES TO BE CLOSE TO EQUAL IN SIZE. (IN TERMS OF CFM). THIS DOES NOT MEAN THAT EVERY ZONE MUST HAVE EXACTLY THE SAME CFM REQUIREMENTS BUT THE SYSTEM WILL WORK MOST EFFICIENTLY IF THEY ARE APPROXIMATELY THE SAME SIZE. FOLLOWING THIS GUIDELINE WILL MINIMIZE THE AMOUNT OF PRESSURE RELIEF (BYPASS) NECESSARY.

NOTE: AVOID CREATING MORE THAN THREE ZONES WITH SINGLE SPEED EQUIPMENT OR ZONES SMALLER THAN 20% OF THE TOTAL CFM CAPACITY WHEN TO ENSURE BEST PERFORMANCE.

AIR NOISE

TO MINIMIZE AIR NOISE, INSTALL THE DAMPERS AS CLOSE AS POSSIBLE TO THE SUPPLY PLENUM. A GOOD RULE FOR ACCEPTABLE AIR NOISE IS THAT THE SUPPLY DUCT SHOULD BE DESIGNED TO PROVIDE 600 TO 700 FPM VELOCITY AIRFLOW. USE THE "NORMAL CFM" CHART TO CHECK ROUND DUCT SIZE(S) THAT WILL ACHIEVE THIS VELOCITY RANGE.

► FOR ZONES WITH MULTIPLE DAMPERS, THE TOTAL ZONE CFM IS THE SUM OF ALL THE DAMPERS "NORMAL CFM"

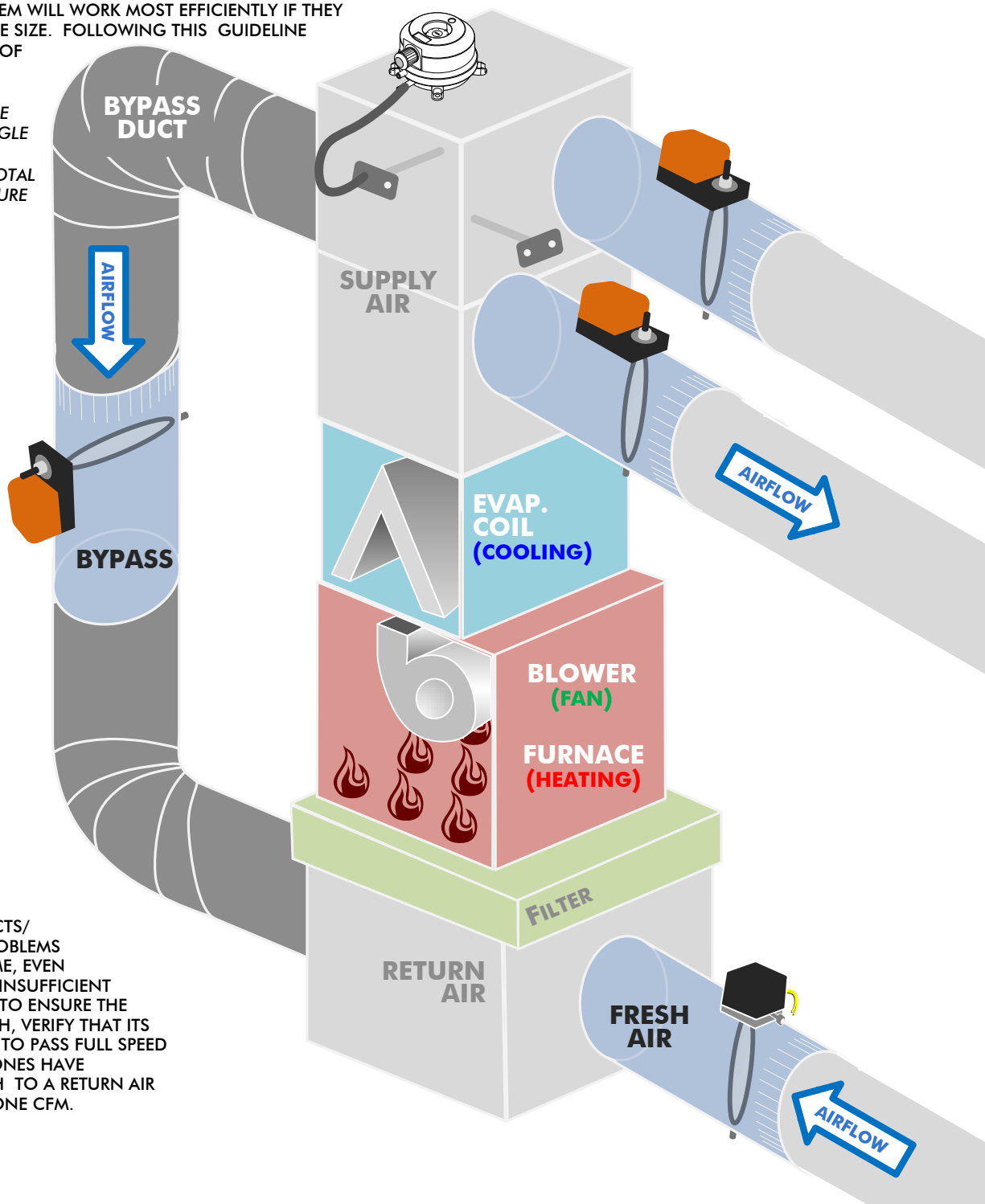
► FOR RECTANGULAR DUCT SYSTEMS USE THE RECTANGULAR CFM EQUATION PROVIDED FOR "NORMAL CFM" (FORMULAS & CHARTS IN DUCT & DAMPER GUIDE)

BYPASS AIR

DAMPER TO RELIEVE PRESSURE IN DUCT SYSTEM WHEN ONE OR MORE ZONE SUPPLY DAMPERS CLOSE

RETURN AIR

UNDERSIZED RETURN AIR DUCTS/REGISTERS CAN RESULT IN PROBLEMS SUCH AS INCREASED RUN TIME, EVEN EQUIPMENT FAILURE DUE TO INSUFFICIENT AIRFLOW (CFM & VELOCITY). TO ENSURE THE RETURN AIR IS LARGE ENOUGH, VERIFY THAT ITS SURFACE AREA IS SUFFICIENT TO PASS FULL SPEED BLOWER CFM. ENSURE ALL ZONES HAVE UNRESTRICTED AIRFLOW PATH TO A RETURN AIR GRILL EQUIVALENT TO THE ZONE CFM.



ROUND POWER OPEN/POWER CLOSE*

POWER DAMPERS POWER OPEN /POWER CLOSE DAMPERS USE THREE WIRES TO POWER THE DAMPER OPEN OR POWER IT CLOSED. THE ZONE PANEL IS RESPONSIBLE FOR SUPPLYING A 24VAC SIGNAL TO EITHER THE PO (POWER OPEN) OR PC (POWER CLOSED) TERMINAL OF THESE DAMPERS. PRIMARY ADVANTAGES OF POWER OPEN/POWER CLOSE DAMPERS INCLUDE LOWER POWER CONSUMPTION, QUIET OPERATION AND GREATER RELIABILITY.

- **RELIABLE ACTUATOR WITH HIGH TORQUE & LOW POWER CONSUMPTION**
- **HEAVY DUTY GALVANIZED DAMPER WITH 1 CRIMPED & 2 BEADED ENDS**
- **PRECISION CONSTRUCTION & QUALITY PARTS FOR LONG-LIFE & QUIET OPERATION**
- **360° FULL-DIAMETER POLY GASKET FOR LOWEST LEAKAGE SEAL**
- **SET MINIMUM OR MAXIMUM OPEN & CLOSE**
- **ALL METAL SHAFT WITH NYLON BUSHINGS & TENSION CLIPS TO ENSURE FREE MOVEMENT**

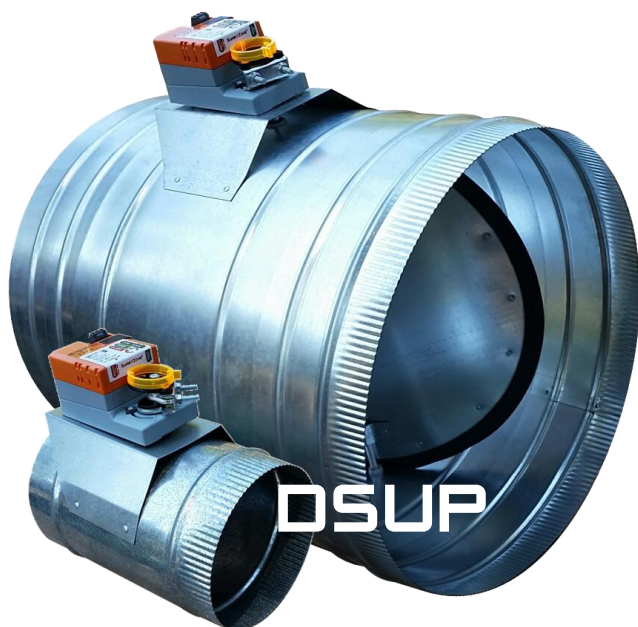
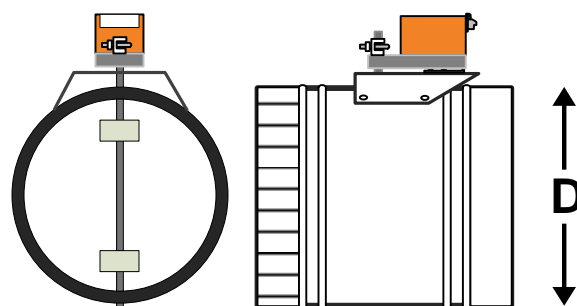
D DAMPER **S** SUPPLY **U** ROUND **P** POWER **D** DIAMETER

PART

DSUP06
DSUP07
DSUP08
DSUP09
DSUP10
DSUP12
DSUP14
DSUP16
DSUP18

D

6"
7"
8"
9"
10"
12"
14"
16"
18"



SPECIFICATIONS

TUBE (CAN):	22 - 24 GA. GALVANIZED STEEL
BLADE:	URETHANE (RUBBERIZED) GASKET
SHAFT:	5/16" ROUND ALUMINUM
BUSHINGS:	HARDENED NYLON
WIRING:	18 OR 20 AWG (OPEN -PO, CLOSE - PC, COM -24VAC COMMON)
MOUNTING:	ANY ORIENTATION, FLEX DUCT, HARD DUCT, SPIRAL DUCT, STARTING COLLAR, ETC
MOTOR:	PART # APDM-3 POWER OPEN/POWER CLOSE (3-WIRE) VOLTAGE: 24VAC POWER: 2.5VA (1.5W) TORQUE: 18IN-LB (2NM) TRAVEL TIME: 35 SEC TRAVEL ANGLE: 90 DEG (FULL OPEN/CLOSE)

WIRING

USE 18-AWG SOLID WIRE TO CONNECT "COM", "PO" & "PC" TERMINALS TO ZONE PANEL

CLUTCH

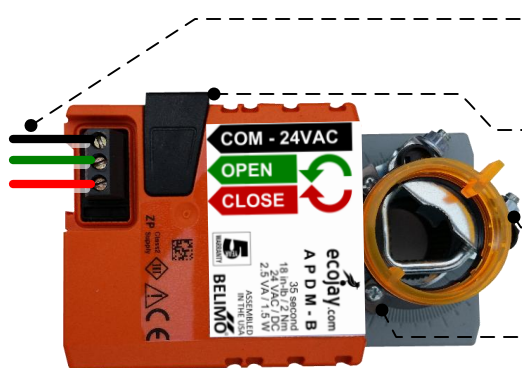
USE THIS BUTTON TO MANUALLY ROTATE THE SHAFT/BLADE

SHAFT CLAMP

TO REMOVE MOTOR, LOOSEN TWO NUTS ON THE V-BOLT

MIN / MAX SETTING

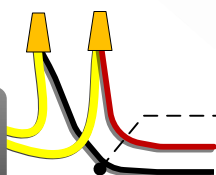
MOVE SCREWS TO SET A MINIMUM OR MAXIMUM OPEN OR CLOSE OF THE DAMPER



ROUND SPRING OPEN/POWER CLOSE

SPRING OPEN /POWER CLOSE DAMPERS USE TWO WIRES TO POWER THE DAMPER CLOSED & IT AUTOMATICALLY SPRINGS OPEN WHEN POWER IS REMOVED. THE ZONE PANEL IS RESPONSIBLE FOR SUPPLYING A 24VAC SIGNAL TO EITHER THE PO (POWER OPEN) OR PC (POWER CLOSED) TERMINAL OF THESE DAMPERS. ECOJAY'S SPRING DAMPERS PROVIDE A TOP QUALITY ROUND DAMPER AT A BUDGET-DRIVEN PRICE POINT.

- **RELIABLE & QUIET SPRING ACTUATOR**
- **HEAVY DUTY GALVANIZED DAMPER WITH 1 CRIMPED & 2 BEADED ENDS**
- **PRECISION CONSTRUCTION & QUALITY PARTS FOR LONG-LIFE & QUIET OPERATION**
- **360° FULL-DIAMETER POLY GASKET FOR LOWEST LEAKAGE SEAL**
- **ALL METAL SHAFT WITH NYLON BUSHINGS & TENSION CLIPS TO ENSURE FREE MOVEMENT**



WIRING

USE 18-AWG WIRE TO CONNECT "COM", "PC" (CLOSE) TO ZONE PANEL

SHAFT CLAMP

TO REMOVE MOTOR, 3/16" HEX (ALLEN WRENCH REQUIRED)



DAMPER



SUPPLY



ROUND



SOWER



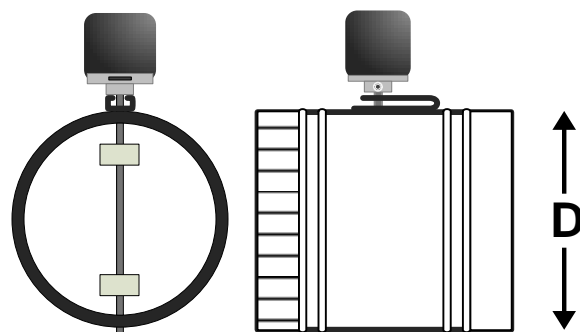
DIAMETER

PART

DSUS06
DSUS07
DSUS08
DSUS09
DSUS10
DSUS12
DSUS14
DSUS16

D

6"
7"
8"
9"
10"
12"
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SPECIFICATIONS

TUBE (CAN):	22 - 24 GA. GALVANIZED STEEL
BLADE:	URETHANE (RUBBERIZED) GASKET
SHAFT:	5/16" ROUND ALUMINUM
BUSHINGS:	HARDENED NYLON
WIRING:	18 OR 20 AWG (CLOSE - PC, COM -24VAC COMMON)
MOUNTING:	ANY ORIENTATION, FLEX DUCT, HARD DUCT, SPIRAL DUCT, STARTING COLLAR, ETC
MOTOR:	PART # ASDM-2
POWER	24VAC / 60HZ, 10 VA
ACTUATOR (DIRECT DRIVE)	MODEL # ASDM-2 MOTOR-CLOSE / SPRING-OPEN
	VOLTAGE: 24VAC
	POWER: 2.5VA (1.5W)
	TORQUE: 45 IN-OZ (MOTOR) 20 IN-OZ (SPRING)
	TRAVEL TIME: 30 SEC (CLOSE) 8 SEC (OPEN)
	TRAVEL ANGLE: 90 DEG (FULL OPEN/CLOSE)
SET SCREW	ALLEN/HEX: 3/16"



**ECOJAY
PRODUCTS
LIMITED
WARRANTY**

BYPASS MODULATING

THE ECOJAY MODULATING BYPASS DAMPER INCLUDES THE STANDARD DSUP OR DSEP DAMPER WITH A PRE-WIRED STATIC PRESSURE SWITCH. MODULATING (STATIC PRESSURE CONTROLLED) BYPASS DAMPERS SHOULD BE USED WHERE RELIABILITY AND QUIET OPERATION ARE NEEDED. THIS METHOD PROVIDES THE MOST ACCURATE AND EFFICIENT VERSION OF PRESSURE RELIEF IN THE SUPPLY DUCT FOR ANY ZONING SYSTEM. ASSEMBLED BY HAND IN THE USA.

- **ACCURATE AND RELIABLE STATIC PRESSURE CONTROLLED**
- **HEAVY DUTY GALVANIZED DAMPER WITH 1 CRIMPED & 2 BEADED ENDS**
- **PRECISION CONSTRUCTION & QUALITY PARTS FOR LONG-LIFE & QUIET OPERATION**
- **FULL-DIAMETER POLY GASKET FOR LOW LEAKAGE SEAL**
- **ALL METAL SHAFT WITH NYLON BUSHINGS**

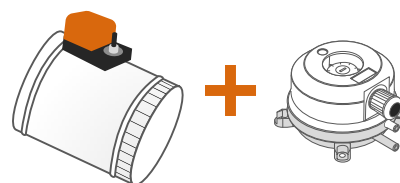
D	B	U	M	D
DAMPER	BYPASS	ROUND	MODULAT	DIAMETER

PART

DBUM08
DBUM10
DBUM12
DBUM14
DBUM16
DBUM18

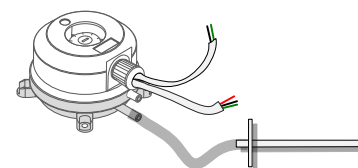
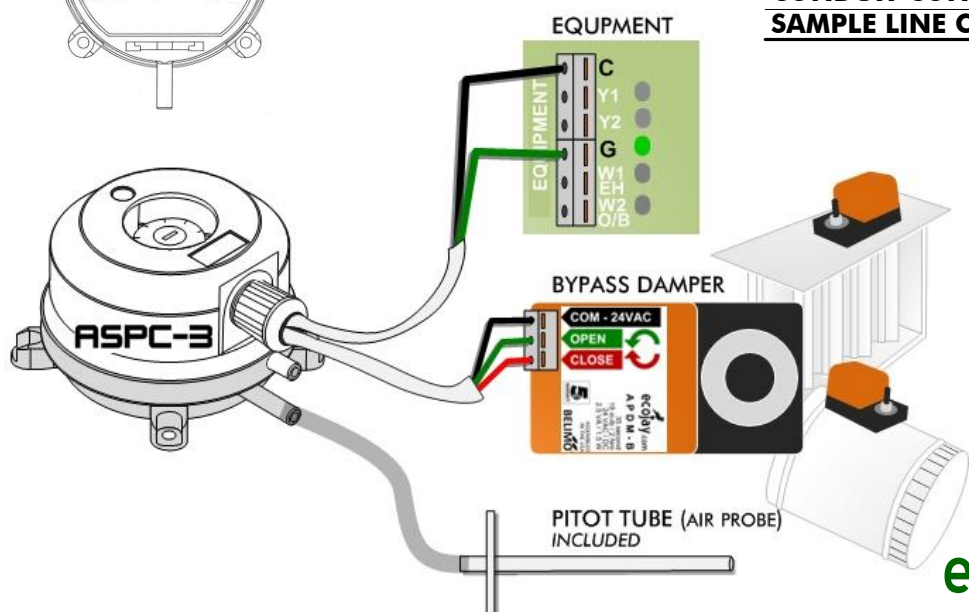
D

8"
10"
12"
14"
16"
18"



SPECIFICATIONS

SET POINT RANGE	0.08" w.c. TO 0.80" w.c. (20 TO 200 PA)
PRESSURE CONNECTIONS	P1 (+) HIGH PRESSURE P2 (-) LOW PRESSURE
SWITCHING DIFFERENTIAL	5PA (0.02" w.c.)
MAXIMUM PRESSURE	10KPA
OPERATING TEMPERATURE	-4 °F TO +140 °F
ELECTRICAL RATING	1.0 A MAX
ELECTRICAL CONNECTIONS	1 NO – NORMALLY OPEN 2 NC – NORMALLY CLOSED 3 COM – POWER SUPPLY
CONDUIT CONNECTION	1/2" NPT THREADED
SAMPLE LINE CONNECTIONS	1/4" ID TUBING



ASPC-3

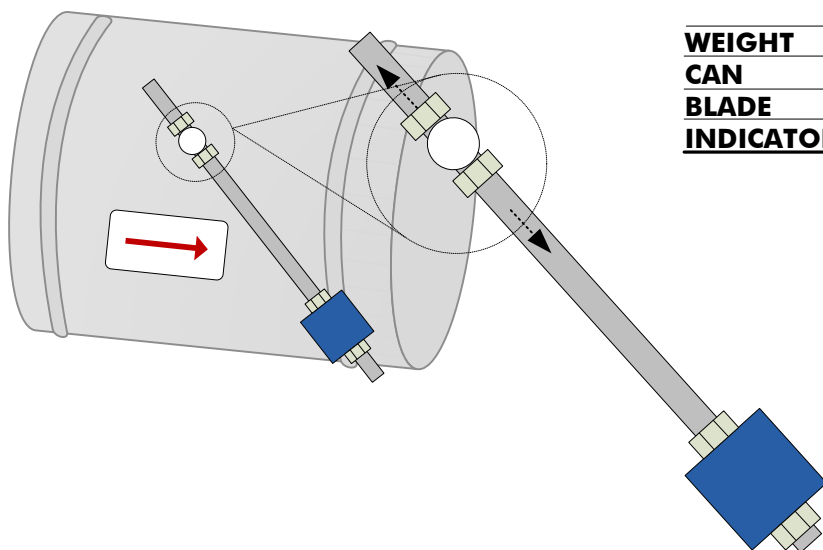
INCLUDES PITOT TUBE, AIR PRESSURE TUBING, & WIRES PRE-CONNECTED TO THE ASPC-3.
CAN BE PURCHASED SEPARATELY AND USED WITH ANY 3-WIRE DAMPER TO CREATE A BYPASS OR PRESSURE RELIEF SYSTEM.



BYPASS BAROMETRIC ROUND

THE ECOJAY BAROMETRIC BYPASS DAMPER WAS DEVELOPED WITH ECONOMY AND SIMPLICITY IN MIND. THE NEED FOR A BYPASS DAMPER IN MOST ZONING APPLICATIONS CALLS FOR AN EASY TO USE AND COST EFFECTIVE DAMPER TO SERVE THIS PURPOSE. THE "WEIGHTED ARM" BYPASS METHOD OF RELIEVING AIR PRESSURE HAS PROVEN RELIABILITY AND QUIET OPERATION. CUSTOM COMPONENTS WITH CRITICAL DIMENSIONS ARE MANUFACTURED USING LASER CUTTERS TO ENSURE A PRECISION FIT. ASSEMBLED BY HAND IN THE USA.

- **RELIABLE WEIGHT ARM LOCKED IN PLACE (NO GUESSING AT POSITION)**
- **HEAVY DUTY GALVANIZED DAMPER WITH 1 CRIMPED & 2 BEADED ENDS**
- **PRECISION CONSTRUCTION & QUALITY PARTS FOR LONG-LIFE & QUIET OPERATION**
- **FULL-DIAMETER POLY GASKET FOR LOW LEAKAGE SEAL**
- **ALL METAL SHAFT WITH NYLON BUSHINGS**



D	B	U	B	D
DAMPER	BYPASS	ROUND	BAROMET	DIAMETER

PART

DBUB08

DBUB10

DBUB12

DBUB14

DBUB16

D

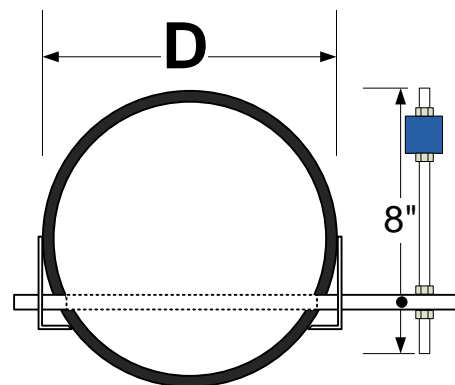
8"

10"

12"

14"

16"



SPECIFICATIONS

PRESSURE RANGE	0.1 TO 2 INCHES-H ₂ O
WEIGHTED ARM	3/8" FULL THREADED 8" LENGTH
SHAFT	1/2" ALL METAL SHAFT PARTS TENSION-FIT RE-ENFORCED L-BRACKET
WEIGHT	~9 OZ
CAN	GALVANIZED, RIVETED, CRIMPED
BLADE	METAL W/'SANDWICHED' FOAM SEAL
INDICATOR	AIR-FLOW ► DIRECTION STICKER

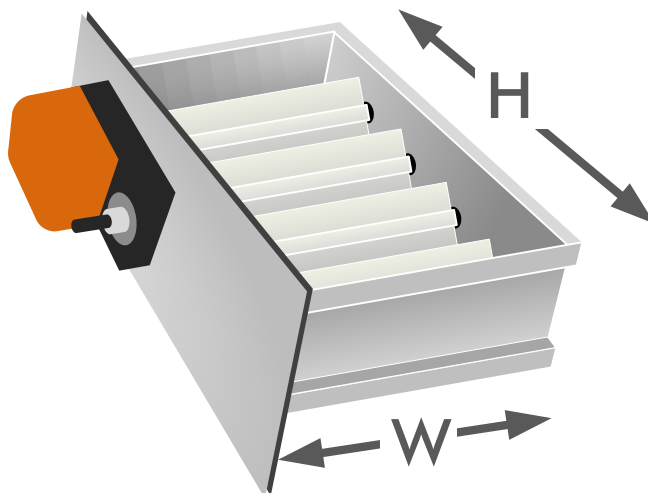


RECTANGLE POWER OPEN/POWER CLOSE

POWER DAMPERS POWER OPEN /POWER CLOSE DAMPERS USE THREE WIRES TO POWER THE DAMPER OPEN OR POWER IT CLOSED. THE ZONE PANEL IS RESPONSIBLE FOR SUPPLYING A 24VAC SIGNAL TO EITHER THE PO (POWER OPEN) OR PC (POWER CLOSED) TERMINAL OF THESE DAMPERS. PRIMARY ADVANTAGES OF POWER OPEN/POWER CLOSE DAMPERS INCLUDE LOWER POWER CONSUMPTION, QUIET OPERATION AND GREATER RELIABILITY.

- **RELIABLE ACTUATOR WITH HIGH TORQUE & LOW POWER CONSUMPTION**
- **STURDY EXTRUDED ALUMINUM FRAME AND LOUVER BLADES**
- **PRECISION CONSTRUCTION & QUALITY PARTS FOR LONG-LIFE & QUIET OPERATION**
- **COMMERCIAL-GRADE**
- **SET MINIMUM OR MAXIMUM OPEN & CLOSE**
- **GEARED LINKAGE TO ENSURE FREE MOVEMENT**

D	S	E	P	W	H
DAMPER	SUPPLY	RECTANGULAR	POWER	WIDTH	HEIGHT

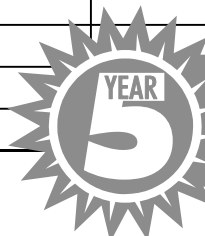


SEE DSUP SPEC
FOR MORE INFO

SPECIFICATIONS

FRAME:	ALUMINUM
BLADE:	ALUMINUM
SHAFT:	NYLON (GEAR INTEGRATED)
BUSHINGS:	HARDENED ABS
WIRING:	18 OR 20 AWG (OPEN -PO, CLOSE - PC, COM -24VAC COMMON)
MOUNTING:	ANY ORIENTATION, FITS INSIDE STANDARD SIZE HARD DUCT OR DIRECT TO PLENUM
MOTOR:	PART # APDM-3 POWER OPEN/POWER CLOSE (3-WIRE)
	VOLTAGE: 24VAC
	POWER: 2.5VA (1.5W)
	TORQUE: 18IN-LB (2NM)
	TRAVEL TIME: 35 SEC
	TRAVEL ANGLE: 90 DEG (FULL OPEN/CLOSE)

		WIDTH (INCHES)								
		08	10	12	14	16	18	20	22	24
HEIGHT (ACTUATOR MOUNTED)	08	DSEP0808	DSEP1008	DSEP1208	DSEP1408	DSEP1608	DSEP1808	DSEP2008	DSEP2208	DSEP2408
	10	DSEP0810	DSEP1010	DSEP1210	DSEP1410	DSEP1610	DSEP1810	DSEP2010	DSEP2210	DSEP2410
	12	DSEP0812	DSEP1012	DSEP1212	DSEP1412	DSEP1612	DSEP1812	DSEP2012	DSEP2212	DSEP2412
	14	DSEP0814	DSEP1014	DSEP1214	DSEP1414	DSEP1614	DSEP1814	DSEP2014		
	16	DSEP0816	DSEP1016	DSEP1216	DSEP1416	DSEP1616	DSEP1816			
	18	DSEP0818	DSEP1018	DSEP1218	DSEP1418	DSEP1618				
	20	DSEP0820	DSEP1020	DSEP1220	DSEP1420					
	22	DSEP0822	DSEP1022	DSEP1222						
24	DSEP0824	DSEP1024	DSEP1224							



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