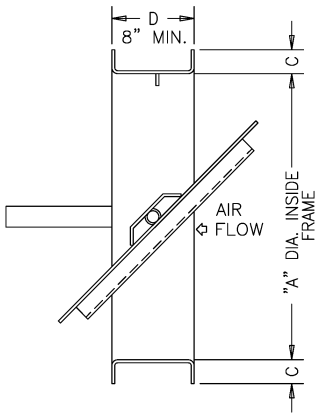
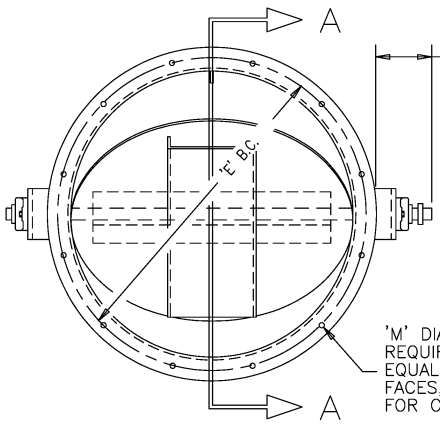
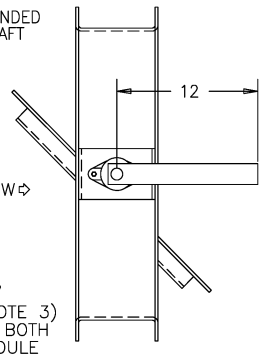
ROUND VOLUME CONTROL DAMPER, 6400 FPM MAX. VEL., 30" W.G. MAX. DIFF. PRESS., 12" THRU 72" DIAMETER



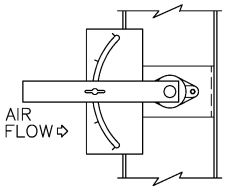
SECTION A–A



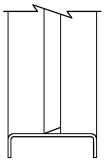
FACE VIEW
FLOW ENTERING SIDE
SHOWN WITH OPTIONAL MOUNTING HOLES



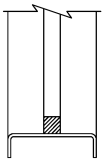
END VIEW
SHOWN WITH STD. LEVER ARM (SHIPPED LOOSE)



MANUAL QUADRANT



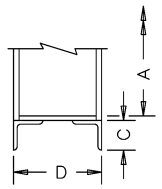
EPT SEAL



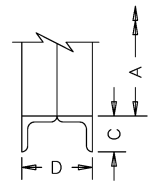
BAR STOP/SEAL

NOTE
DAMPERS ARE CONSTRUCTED PER THE STANDARD SPECIFICATIONS UNLESS OTHERWISE SPECIFIED ON DAMPER SCHEDULE OR MODIFIED DAMPER SHEET.

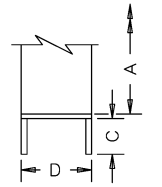
OPTIONAL FRAME STYLES



☐ ANGLE RINGS & SLEEVE



☐ BUTT WELDED ANGLE RINGS



☐ DONUT RINGS & SLEEVE

AWV ITEM No.	QUANTITY	"A" INSIDE FRAME DIAMETER	CONSTRUCTION OPTIONS: "C" FLANGE WIDTH	"D" FRAME DEPTH	FRAME GA./THK.	SLEEVE GA./THK.	FLANGE GA./THK.	BLADE GA./THK.	AXLE DIAMETER	MANUAL QUAD.	EPT SEAL	BAR STOP/SEAL	OPTIONAL MOUNTING HOLE DIMENSIONS: "E"	"F"	"M"	STRADDLE VERT. CENTERLINE	ON VERTICAL CENTERLINE	REMARKS

1 FLANGE AIR ENTERING SIDE ☐
1 FLANGE AIR LEAVING SIDE ☐
BOTH FLANGES ☐

SPECIAL ACTUATOR:

SPECIAL FINISH:

VC–565 STANDARD SPECIFICATIONS

FRAME:	8 x 1–1/2 x 10 GA. ROLLED STEEL CHANNEL, THRU 25" DIAMETER. 10 x 2 x 10 GA. ROLLED STEEL CHANNEL, 25"+ THRU 36" DIAMETER. 10 x 2 x 3/16" THK. ROLLED STEEL CHANNEL, 36"+ THRU 60" DIAMETER 2 x 2 x 1/4" THK. STEEL ANGLES WITH 3/16" THK. STEEL SLEEVE, 10" DEEP, 60"+ THRU 72" DIAMETER.
SLEEVE:	(USED WITH OPTIONAL FRAMES) 10 GA. STEEL, THRU 36" DIAMETER, 3/16" THK. STEEL, 36"+ THRU 72" DIAMETER.
BLADE:	3/16" THK. STEEL, WELDED TO AXLE, THRU 18" DIAMETER. 1/4" THK. STEEL, WELDED TO AXLE, 18"+ THRU 36" DIAMETER. 3/8" THK. STEEL, WELDED TO AXLE, 36"+ THRU 72" DIAMETER. ALL SIZES HAVE STEEL REINFORCING CHANNELS AS REQUIRED.
AXLE:	3/4" DIAMETER STEEL FULL LENGTH, THRU 18" DIAMETER. 1" DIAMETER STEEL FULL LENGTH, 18"+ THRU 30" DIAMETER. 1–1/4" DIAMETER STEEL FULL LENGTH, 30"+ THRU 42" DIAMETER. 1–1/2" DIAMETER STEEL FULL LENGTH, 42"+ THRU 54" DIAMETER. 1–3/4" DIAMETER STEEL FULL LENGTH, 54"+ THRU 66" DIAMETER. 2" DIAMETER STEEL FULL LENGTH, 66"+ THRU 72" DIAMETER.
BEARINGS:	RELUBRICABLE BALL WITH DOUBLE GLAND STUFFING BOXES.
STOPS:	1/2" DIAMETER STEEL PIN.
SEALS:	(OPTIONAL, SEE SCHEDULE)
FINISH:	ONE (1) COAT AWV STANDARD PRIMER.
ACTUATORS:	EXTENDED SHAFT WITH LEVER ARM (SHIPPED LOOSE) IS STANDARD. (SEE SCHEDULE FOR OPTIONS)

NOTES

1. MAX. TEMP. = 250 °F WITHOUT SEALS AND 150 °F WITH SEALS.
2. DAMPERS ARE FOR CLEAN AIR USE ONLY.
3. REFERENCE DWG. #VC–56–6 FOR OPTIONAL MOUNTING HOLE PATTERNS.

REV.	DESCRIPTION	DATE	BY

DATE:
AWV PROD. No.:
CUSTOMER:
CUSTOMER ORDER No.:
AGENT:
AGENT ORDER No.:

awv® american warming and ventilating
A MESTEK COMPANY
7301 INTERNATIONAL DRIVE HOLLAND, OHIO

VC–565 HEAVY DUTY VOLUME CONTROL DAMPER

DRN. BY	DWG. NO.	REV.
KNP	VC–565–9	
DATE 1/15/99		

TORQUE: The torque required to operate a control damper is the greatest torque value that the damper will see in operation. The tables below give torque values for various face velocities, differential pressures, and sealing requirements. The torque required for a damper without seals is the torque due to velocity.

The torque required for a damper with seals is the torque due to velocity, differential pressure or sealing the damper, whichever is greater.

TORQUE:

FACE VELOCITY TORQUE		DIFFERENTIAL PRESSURE TORQUE WITH BAR SEALS	EPT SEALING TORQUE
DIAMETER	IN. LBS.	IN. LBS.	IN. LBS.
12	94	72	52
18	221	111	65
24	478	177	95
30	885	314	120
36	1,503	431	160
42	2,351	570	196
48	3,490	730	248
54	4,940	1355	295
60	6,770	1679	367
66	8,980	2015	426
72	11,652	2403	509
These values are based on 6400 fpm face velocity. Use multiplier chart below for other face velocities.		These values are based on 30 in. wg. Use multiplier chart below for other differential pressures.	These values are based on the use of EPT wedge seals.

FACE VELOCITY (FPM)	MULTIPLIER
6000	.879
5500	.739
5000	.610
4500	.494
4000	.391
3500	.299
3000	.220
2500	.153
2000	.098
1500	.055
1000	.024

DIFFERENTIAL PRESSURE (IN. WG.)	MULTIPLIER
28	.963
26	.867
24	.800
22	.733
20	.667
18	.600
16	.533
14	.467
12	.400
10	.333
8	.267
6	.200
4	.133
2	.067

LEAKAGE: Values expressed in. SCFM

DIAMETER	BAR SEALS	EPT SEALS	NO SEALS
12	42	11	217
18	60	13	325
24	79	16	433
30	98	21	541
36	117	24	649
42	137	28	757
48	155	31	865
54	175	35	1622
60	194	38	1802
66	215	42	1983
72	233	47	2163

Above values are based on 1 in. wg differential pressure; for differential pressures other than 1 in. wg (not exceeding 30 in. wg) use the following multiplier chart below.

DIFFERENTIAL PRESSURE IN. WG	MULTIPLIER
2	1.41
4	2.00
6	2.45
8	2.83
10	3.16
12	3.46
14	3.74
16	4.00
18	4.24
20	4.47
22	4.69
24	4.90
26	5.10
28	5.29
30	5.48

PRESSURE DROP: In inches of water

Values are in accordance with AMCA 500; fig. 5.3

DIAMETER	NO SEALS	BAR SEALS
12	.431	.871
18	.339	.497
24	.356	.647
30	.339	.597
36	.339	.545
42	.322	.520
48	.339	.570
54	.322	.545
60	.322	.521
66	.322	.500
72	.322	.474

Above values are based on 6400 fpm face velocity. Use multiplier chart below for other velocities.

FACE VELOCITY (FPM)	MULTIPLIER
6000	.879
5500	.739
5000	.610
4500	.494
4000	.391
3500	.299
3000	.220
2500	.153
2000	.098
1500	.055
1000	.024