

HVAC EQUIPMENT SALES, INC.



STOCK BOOK

TEL: 801-266-4559

FAX: 801-281-8417

4060 SOUTH 500 WEST, STE #2

SALT LAKE CITY, UTAH 84123

DUCTWORK & ACCESSORIES

SECTION 1

GALVANIZED SNAP LOCK PIPE			
Quantity	Size	Inventory Number	List Price
	3" Ø, 5' Length, 30 Gauge Sheet Metal	GP3305	\$16.00
	4" Ø, 5' Length, 30 Gauge Sheet Metal	GP4305	\$20.00
	5" Ø, 5' Length, 30 Gauge Sheet Metal	GP5305	\$22.00
	6" Ø, 5' Length, 26 Gauge Sheet Metal	GP6265	\$24.00
	7" Ø, 5' Length, 26 Gauge Sheet Metal	GP7265	\$28.00
	8" Ø, 5' Length, 26 Gauge Sheet Metal	GP8265	\$34.00
	9" Ø, 5' Length, 26 Gauge Sheet Metal	GP9265	\$38.00
	10" Ø, 5' Length, 26 Gauge Sheet Metal	GP10265	\$42.00
	12" Ø, 5' Length, 26 Gauge Sheet Metal	GP12265	\$48.00
	14" Ø, 5' Length, 26 Gauge Sheet Metal	GP14265	\$58.00
	16" Ø, 5' Length, 24 Gauge Sheet Metal	GP16265	\$104.00

5' Lengths 26 ga. Snap Lock Pipe

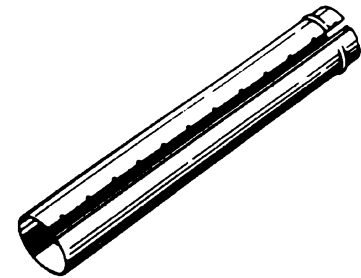
SIZE	PROD. #	WT/FT	FT/BNDL
4"	4265	1.1	50'
5"	5265	1.3	50'
6"	6265	1.5	50'
7"	7265	1.6	50'
8"	8265	1.8	50'
9"	9265	2.1	25'
10"	10265	2.5	25'
12"	12265	2.9	25'
14"	14265	3.4	25'

24 ga. Snap Lock Pipe

SIZE	PROD. #	LENGTHS	WT/FT	FT/BNDL
6"	6245	5'	2.0	20'
8"	8245	5'	2.4	20'
10"	10245	5'	3.3	20'
12"	12245	5'	3.8	20'
14"	14245	5'	4.4	20'
16"	16245	5'	5.0	20'
18"	18242	2'	5.6	20'
20"	20242	2'	6.2	20'
22"	22242	2'	6.8	20'
24"	24242	2'	7.4	20'

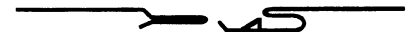
3' Lengths 26 ga. Snap Lock Pipe

SIZE	PROD. #	WT/FT	FT/BNDL
3"	3263	.8	30'
4"	4263	1.1	30'
5"	5263	1.3	30'
6"	6263	1.5	30'
7"	7263	1.8	30'
8"	8263	2.0	30'
9"	9263	2.3	30'
10"	10263	2.5	30'
12"	12263	3.0	30'
14"	14263	3.4	30'
16"	16263	3.9	30'



Snap Lock Pipe

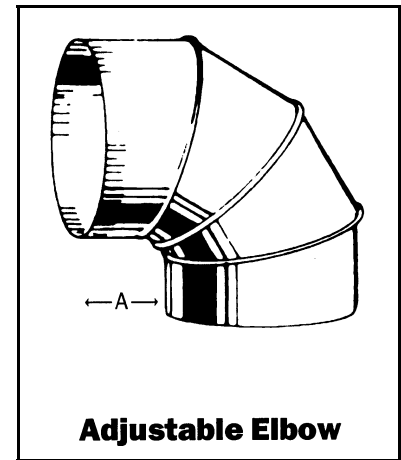
Snap Lock Seams



GALVANIZED 90 DEGREE ADJUSTABLE ELBOWS			
Quantity	Size	Inventory Number	List Price
	3" Ø, 30 Gauge Sheet Metal	GE330	\$6.00
	4" Ø, 30 Gauge Sheet Metal	GE430	\$6.00
	5" Ø, 30 Gauge Sheet Metal	GE530	\$6.00
	6" Ø, 26 Gauge Sheet Metal	GE626	\$8.00
	7" Ø, 26 Gauge Sheet Metal	GE726	\$10.00
	8" Ø, 26 Gauge Sheet Metal	GE826	\$10.00
	9" Ø, 26 Gauge Sheet Metal	GE926	\$14.00
	10" Ø, 26 Gauge Sheet Metal	GE1026	\$14.00
	12" Ø, 26 Gauge Sheet Metal	GE1226	\$18.00
	14" Ø, 26 Gauge Sheet Metal	GE1426	\$30.00
	16" Ø, 26 Gauge Sheet Metal	GE1626	\$34.00
	18" Ø, 26 Gauge Sheet Metal	GE1826	\$40.00
	20" Ø, 26 Gauge Sheet Metal	GE2026	\$46.00

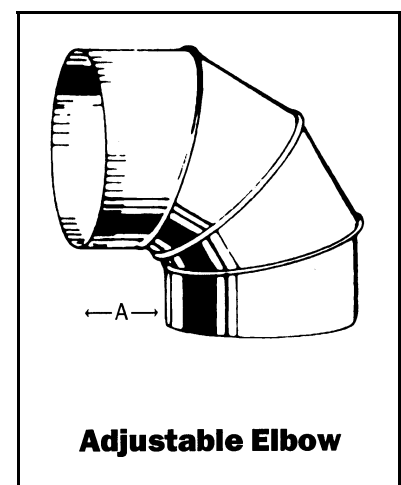
30 ga. Adjustable Elbows

SIZE	PROD. #	QT/BNDL	WT / EA	'A' DIM.
3"	33090	boxed	.3	3 $\frac{1}{2}$ "
4"	43090	12	.5	3 $\frac{1}{2}$ "
5"	53090	12	.7	3 $\frac{1}{2}$ "
6"	63090	12	.9	3 $\frac{1}{2}$ "
7"	73090	12	1.2	3 $\frac{1}{2}$ "
8"	83090	12	1.4	3 $\frac{1}{2}$ "



26 ga. Adjustable Elbows

SIZE	PROD. #	QT/BNDL	WT / EA	'A' DIM.
3"	32690	boxed	.6	3 $\frac{1}{2}$ "
4"	42690	12	.7	3 $\frac{1}{2}$ "
5"	52690	12	1.0	3 $\frac{1}{2}$ "
6"	62690	12	1.3	3 $\frac{1}{2}$ "
7"	72690	12	1.6	3 $\frac{1}{2}$ "
8"	82690	12	1.8	3 $\frac{1}{2}$ "
9"	92690	12	2.4	3 $\frac{1}{2}$ "
10"	102690	12	3.8	3 $\frac{1}{2}$ "
12"	122690	each	4.0	4 $\frac{1}{2}$ "
14"	142690	each	5.0	4 $\frac{1}{2}$ "
16"	162690	each	6.3	4 $\frac{1}{2}$ "



24 ga. Adjustable Elbows

SIZE	PROD. #	QT/BNDL	WT / EA	'A' DIM.
6"	62490	each	2.9	3 $\frac{1}{2}$ "
8"	82490	each	3.5	3 $\frac{1}{2}$ "
10"	102490	each	4.6	3 $\frac{1}{2}$ "
12"	122490	each	5.2	4 $\frac{1}{2}$ "
14"	142490	each	6.2	4 $\frac{1}{2}$ "
16"	162490	each	8.0	4 $\frac{1}{2}$ "
18"	182490	each	10.6	4 $\frac{1}{2}$ "
20"	202490	each	11.9	4 $\frac{1}{2}$ "



GALVANIZED 90 DEGREE TEES			
Quantity	Size	Inventory Number	List Price
	4" Ø X 4" Ø X 4" Ø, 30 Gauge Sheet Metal	GT430	\$10.00
	6" Ø X 6" Ø X 6" Ø, 24 Gauge Sheet Metal	GT624	\$18.00
	7" Ø X 7" Ø X 7" Ø, 24 Gauge Sheet Metal	GT724	\$22.00
	8" Ø X 8" Ø X 8" Ø, 24 Gauge Sheet Metal	GT824	\$26.00
	9" Ø X 9" Ø X 9" Ø, 24 Gauge Sheet Metal	GT924	\$32.00
	10" Ø X 10" Ø X 10" Ø, 24 Gauge Sheet Metal	GT1024	\$34.00
	12" Ø X 12" Ø X 12" Ø, 24 Gauge Sheet Metal	GT1224	\$50.00
	14" Ø X 14" Ø X 14" Ø, 24 Gauge Sheet Metal	GT1424	\$58.00
	16" Ø X 16" Ø X 16" Ø, 24 Gauge Sheet Metal	GT1624	\$76.00
	18" Ø X 18" Ø X 18" Ø, 24 Gauge Sheet Metal	GT1824	\$82.00
	20" Ø X 20" Ø X 20" Ø, 24 Gauge Sheet Metal	GT2024	\$102.00

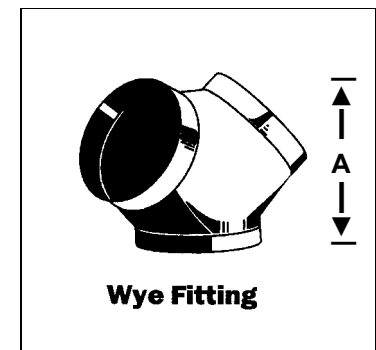
Straight 90° Tees

PROD #	SQUARE	ROUND	FT/BNDL
Size (all 3 dim. are common)	PROD #	WT / EA	'A' DIM
3"	333T	.7	8"
4"	444T	1.0	9"
5"	555T	1.4	11"
6"	666T	2.2	12"
7"	777T	2.4	13"
8"	888T	3.0	14"
9"	999T	3.2	15"
10"	101010T	3.5	15"
12"	121212T	3.9	20"
14"	141414T	4.2	22"
16"	161616T	5.0	23"
18"	181818T	6.5	27"
20"	202020T	8.0	29"



Wye fittings

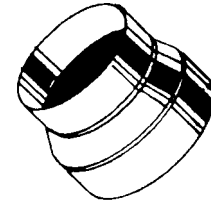
SIZE	PROD #	WT / EA	'A' DIM
4 x 4 x 4	444Y	1.4	8"
6 x 6 x 6	666Y	1.7	9"
8 x 8 x 8	888Y	2.6	11"
10 x 10 x 10	101010Y	4.1	12"
12 x 12 x 12	121212Y	5.0	13"
14 x 14 x 14	141414Y	6.1	14"
8 x 6 x 6	866Y	2.3	8"



GALVANIZED TAPERED TYPE ROUND TO ROUND			
Quantity	Size	Inventory Number	List Price
	4" Ø to 3" Ø	GBR43	\$10.00
	5" Ø to 3" Ø	GBR53	\$12.00
	5" Ø to 4" Ø	GBR54	\$10.00
	6" Ø to 3" Ø	GBR63	\$12.00
	6" Ø to 4" Ø	GBR64	\$12.00
	6" Ø to 5" Ø	GBR65	\$12.00
	7" Ø to 5" Ø	GBR75	\$14.00
	7" Ø to 6" Ø	GBR76	\$32.00
	8" Ø to 5" Ø	GBR85	\$16.00
	8" Ø to 6" Ø	GBR86	\$16.00
	8" Ø to 7" Ø	GBR87	\$16.00
	9" Ø to 6" Ø	GBR96	\$16.00
	9" Ø to 8" Ø	GBR98	\$18.00
	10" Ø to 6" Ø	GBR106	\$18.00
	10" Ø to 7" Ø	GBR107	\$20.00
	10" Ø to 8" Ø	GBR108	\$20.00
	10" Ø to 9" Ø	GBR109	\$22.00
	12" Ø to 6" Ø	GBR126	\$20.00
	12" Ø to 7" Ø	GBR127	\$54.00
	12" Ø to 8" Ø	GBR128	\$22.00
	12" Ø to 9" Ø	GBR129	\$20.00
	12" Ø to 10" Ø	GBR1210	\$22.00
	14" Ø to 8" Ø	GBR148	\$26.00
	14" Ø to 10" Ø	GBR1410	\$24.00
	14" Ø to 12" Ø	GBR1412	\$28.00
	15" Ø to 10" Ø	GBR1510	\$74.00
	15" Ø to 12" Ø	GBR1512	\$74.00
	15" Ø to 14" Ø	GBR1514	\$74.00
	16" Ø to 10" Ø	GBR1610	\$26.00
	16" Ø to 12" Ø	GBR1612	\$30.00
	16" Ø to 14" Ø	GBR1614	\$34.00
	18" Ø to 16" Ø	GBR1816	\$38.00

Tapered Reducers / Increases

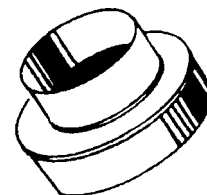
Large DIM x Small DIM	PROD #	WT / EA	LENGTH
4 x 3	43TR	.5	6"
5 x 3	53TR	.8	7"
5 x 4	54 TR	.8	7"
6 x 3	63 TR	.9	7"
6 x 4	64 TR	.9	7"
6 x 5	65 TR	1.0	7"
7 x 5	75 TR	1.2	7"
7 x 6	76 TR	1.2	7"
8 x 5	85 TR	1.3	7"
8 x 6	86 TR	1.3	7"
8 x 7	87 TR	1.5	7"
9 x 6	96 TR	1.5	7"
9 x 7	97 TR	1.5	7"
9 x 8	98 TR	1.6	7"
10 x 6	106 TR	1.6	7"
10 x 7	107 TR	1.6	7"
10 x 8	108 TR	1.6	7"
10 x 9	109 TR	1.6	7"
12 x 6	126 TR	1.7	7"
12 x 7	127 TR	1.8	7"
12 x 8	128 TR	1.8	7"
12 x 9	129 TR	1.9	7"
12 x 10	1210 TR	2.0	7"
14 x 8	148 TR	2.2	7"
14 x 10	1410 TR	2.3	7"
14 x 12	1412 TR	2.2	7"
16 x 10	1610 TR	2.1	7"
16 x 12	1612 TR	2.1	7"
16 x 14	1614 TR	2.2	7"
18 x 14	1814 TR	2.9	8"
18 x 16	1816 TR	3.0	8"
20 x 18	2018 TR	3.2	8"



**Tapered
Reducers/Increases**

Cap Reducers / Increases

Large DIM x Small DIM	PROD #	WT / EA	LENGTH
5 x 4	54CR	.5	4"
6 x 3	63CR	.6	4"
6 x 4	64CR	.7	4"
6 x 5	65CR	.8	4"
7 x 5	75CR	.9	4"
7 x 6	76CR	.9	4"
8 x 6	86CR	1.0	4"
8 x 7	87CR	1.1	4"
9 x 7	97CR	1.1	4"
9 x 8	98CR	1.2	4"
10 x 6	106CR	1.2	4"
10 x 8	108CR	1.3	4"
10 x 9	109CR	1.3	4"
12 x 8	128CR	1.5	4"
12 x 10	1210CR	1.6	4"
14 x 12	1412CR	1.8	4"

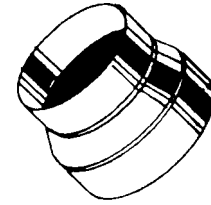


**Cap
Reducer/Increaser**

GALVANIZED PANCAKE TYPE ROUND TO ROUND			
Quantity	Size	Inventory Number	List Price
	5" Ø to 3" Ø	GTCR53	\$16.00
	5" Ø to 4" Ø	GTCR54	\$10.00
	6" Ø to 3" Ø	GTCR63	\$16.00
	6" Ø to 4" Ø	GTCR64	\$12.00
	6" Ø to 5" Ø	GTCR65	\$10.00
	7" Ø to 5" Ø	GTCR75	\$10.00
	7" Ø to 6" Ø	GTCR76	\$12.00
	8" Ø to 4" Ø	GTCR84	\$22.00
	8" Ø to 5" Ø	GTCR85	\$22.00
	8" Ø to 6" Ø	GTCR86	\$12.00
	8" Ø to 7" Ø	GTCR87	\$12.00
	9" Ø to 7" Ø	GTCR97	\$12.00
	9" Ø to 8" Ø	GTCR98	\$12.00
	10" Ø to 6" Ø	GTCR106	\$14.00
	10" Ø to 8" Ø	GTCR108	\$14.00
	10" Ø to 9" Ø	GTCR109	\$14.00
	12" Ø to 8" Ø	GTCR128	\$16.00
	12" Ø to 10" Ø	GTCR1210	\$16.00
	14" Ø to 10" Ø	GTCR1410	\$36.00
	14" Ø to 12" Ø	GTCR1412	\$18.00
	15" Ø to 10" Ø	GTCR1510	\$42.00
	15" Ø to 12" Ø	GTCR1512	\$42.00
	15" Ø to 14" Ø	GTCR1514	\$42.00
	16" Ø to 14" Ø	GTCR1614	\$42.00
	16" Ø to 15" Ø	GTCR1615	\$42.00

Tapered Reducers / Increases

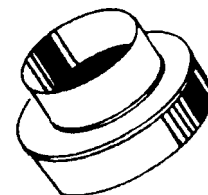
Large DIM x Small DIM	PROD #	WT / EA	LENGTH
4 x 3	43TR	.5	6"
5 x 3	53TR	.8	7"
5 x 4	54 TR	.8	7"
6 x 3	63 TR	.9	7"
6 x 4	64 TR	.9	7"
6 x 5	65 TR	1.0	7"
7 x 5	75 TR	1.2	7"
7 x 6	76 TR	1.2	7"
8 x 5	85 TR	1.3	7"
8 x 6	86 TR	1.3	7"
8 x 7	87 TR	1.5	7"
9 x 6	96 TR	1.5	7"
9 x 7	97 TR	1.5	7"
9 x 8	98 TR	1.6	7"
10 x 6	106 TR	1.6	7"
10 x 7	107 TR	1.6	7"
10 x 8	108 TR	1.6	7"
10 x 9	109 TR	1.6	7"
12 x 6	126 TR	1.7	7"
12 x 7	127 TR	1.8	7"
12 x 8	128 TR	1.8	7"
12 x 9	129 TR	1.9	7"
12 x 10	1210 TR	2.0	7"
14 x 8	148 TR	2.2	7"
14 x 10	1410 TR	2.3	7"
14 x 12	1412 TR	2.2	7"
16 x 10	1610 TR	2.1	7"
16 x 12	1612 TR	2.1	7"
16 x 14	1614 TR	2.2	7"
18 x 14	1814 TR	2.9	8"
18 x 16	1816 TR	3.0	8"
20 x 18	2018 TR	3.2	8"



**Tapered
Reducers/Increases**

Cap Reducers / Increases

Large DIM x Small DIM	PROD #	WT / EA	LENGTH
5 x 4	54CR	.5	4"
6 x 3	63CR	.6	4"
6 x 4	64CR	.7	4"
6 x 5	65CR	.8	4"
7 x 5	75CR	.9	4"
7 x 6	76CR	.9	4"
8 x 6	86CR	1.0	4"
8 x 7	87CR	1.1	4"
9 x 7	97CR	1.1	4"
9 x 8	98CR	1.2	4"
10 x 6	106CR	1.2	4"
10 x 8	108CR	1.3	4"
10 x 9	109CR	1.3	4"
12 x 8	128CR	1.5	4"
12 x 10	1210CR	1.6	4"
14 x 12	1412CR	1.8	4"

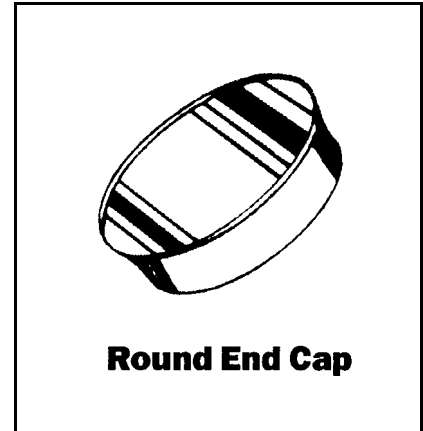


**Cap
Reducer/Increaser**

GALVANIZED END CAP			
Quantity	Size	Inventory Number	List Price
	4" Ø	GTC04	\$6.00
	5" Ø	GTC05	\$6.00
	6" Ø	GTC06	\$8.00
	7" Ø	GTC07	\$8.00
	8" Ø	GTC08	\$8.00
	9" Ø	GTC09	\$10.00
	10" Ø	GTC10	\$10.00
	12" Ø	GTC12	\$14.00
	14" Ø	GTC14	\$16.00
	16" Ø	GTC16	\$18.00
	18" Ø	GTC18	\$18.00
	20" Ø	GTC20	\$30.00

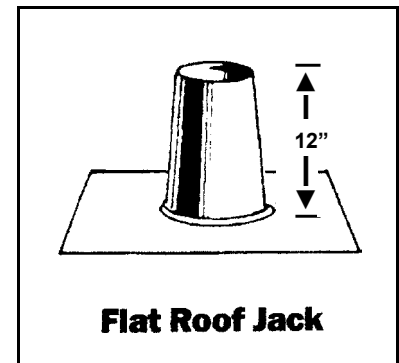
Round End Caps

SIZE	PROD #	WT / EA
4"	4FC	.2
5"	5FC	.3
6"	6FC	.4
7"	7FC	.5
8"	8FC	.6
9"	9FC	.6
10"	10FC	.8
12"	12FC	1.0
14"	14FC	1.2
16"	16FC	1.4
18"	18FC	1.9
20"	20FC	2.2



Flat Roof Jacks

OPENING SIZE	PROD #	WT / EA
1/2"	.5FRF	2.0
2"	2FRF	2.3
3"	3FRF	2.5
3 1/2"	3.5FRF	2.7
4"	4FRF	2.8
4 1/2"	4.5FRF	3.0
5"	5FRF	3.0
5 1/2"	5.5FRF	3.0
6"	6FRF	3.2
6 1/2"	6.5FRF	3.3
7 3/4"	7.75FRF	3.9
8 3/4"	8.75FRF	4.1
10"	10FRF	4.5
11"	11FRF	4.7
12"	12FRF	4.8
13"	13FRF	7.0
14"	14FRF	7.0
15"	15FRF	8.9
16"	16FRF	9.5



GALVANIZED ANGLE / END / STRAIGHT BOOTS			
Quantity	Size	Inventory Number	List Price
	10" X 4" TO 6" Ø ANGLE BOOT	AB1046	\$8.00
	10" X 4" TO 7" Ø ANGLE BOOT	AB1047	\$12.00
	10" X 4" TO 6" Ø END BOOT	EB1046	\$8.00
	10" X 4" TO 7" Ø END BOOT	EB1047	\$12.00
	10" X 4" TO 6" Ø STRAIGHT BOOT	SB1046	\$8.00
	10" X 4" TO 7" Ø STRAIGHT BOOT	SB1047	\$12.00

GALVANIZED SLIP & DRIVE			
Quantity	Size	Inventory Number	List Price
	10' SLIP AND DRIVE	STS1022	\$2.48
	10' FLAT	FLS1026	\$10.00
	10' DRIVE, 26 GAUGE	DR1026	\$0.60
	10' DRIVE, 30 GAUGE	DR1030	\$0.44

GALVANIZED HANGER STRAP			
Quantity	Size	Inventory Number	List Price
	1" X 100' HANGER STRAP, 26 GAUGE	HANGERSTR26	\$46.00

GALVANIZED SHEET METAL SCREWS			
Quantity	Size	Inventory Number	List Price
	#8 X 1/2" LONG DRILL POINT, QTY OF 1,000	5SCR81-2DP	\$32.00
	#8 X 1/2" LONG DRILL POINT, QTY OF 10,000	5SCR81-2DP/BULK	\$198.00
	#8 X 1/2" LONG SELF TAPPING, QTY OF 1,000	5SCR81-2TP	\$24.00
	#8 X 1/2" LONG SELF TAPPING, QTY OF 12,000	5SCR81-2TP/BULK	\$272.00
	#8 X 3/4" LONG DRILL POINT, QTY OF 500	5SCR83-4DP	\$20.00
	#8 X 3/4" LONG DRILL POINT, QTY OF 10,000	5SCR83-4DP/BULK	\$368.00
	#10 X 3/4" LONG DRILL POINT, QTY OF 500	5SCR103-4DP	\$26.00

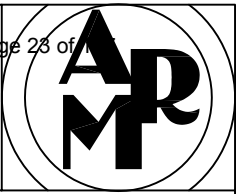
DUCT / FOIL TAPE			
Quantity	Size	Inventory Number	List Price
	3" X 150' FSK TAPE	1525CW3	\$22.00
	2" X 150' FOIL TAPE	3520CW2	\$12.00
	3" X 150' FOIL TAPE	3520CW3	\$22.00
	2½" X 180' UL FOIL TAPE	1581A-UL	\$28.00
	2" X 360' UL FOIL TAPE FOR FLEX DUCT	1599B-UL	\$20.00
	2" X 300' HIGH PRESSURE MASTIK TAPE	1580-K020	\$36.00
	3" X 300' HIGH PRESSURE MASTIK TAPE	1580-K030	\$52.00
	SILVER DUCT TAPE	1500S	\$10.00
	BLACK DUCT TAPE	1500B	\$10.00
	METALIZED DUCT TAPE	1502M	\$12.00

HARDCAST DUCT SEALANTS			
Quantity	Size	Inventory Number	List Price
	1 GALLON	DS321-4	\$34.00
	11 OZ. CARTRIDGE	DS321-25	\$5.00
	2" APPLICATION BRU	F5301	\$3.00

MANUAL, FIRE, FIRE/SMOKE DAMPERS, ACCESS DOORS

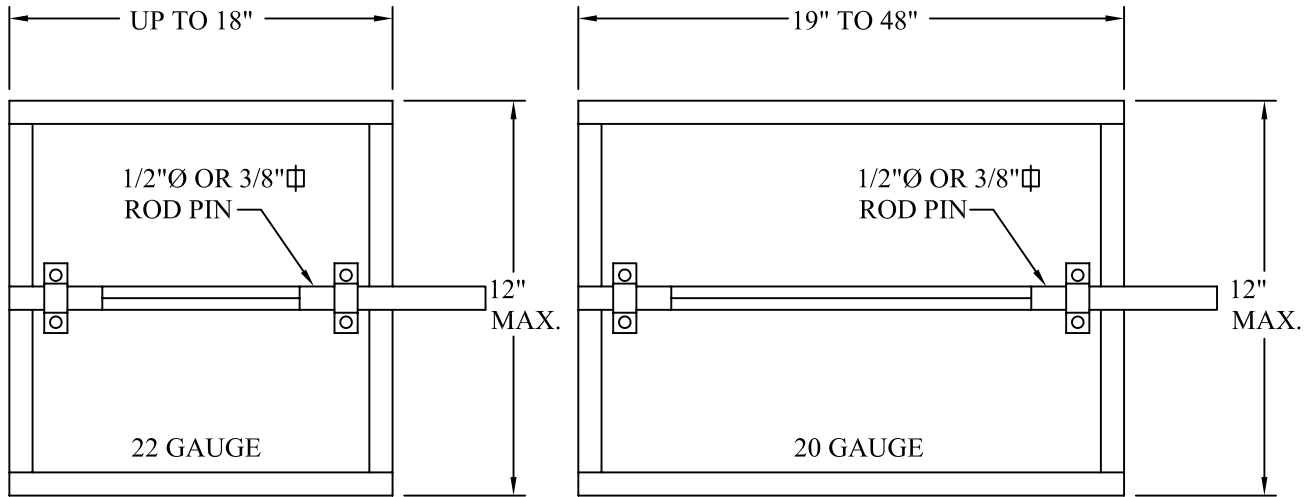
SECTION 2

SQUARE SINGLE BLADE MANUAL VOLUME DAMPERS			
Quantity	Size	Inventory Number	List Price
	6" X 6"	MVD0606	\$76.00
	8" X 6"	MVD0806	\$76.00
	8" X 8"	MVD0808	\$78.00
	10" X 6"	MVD1006	\$78.00
	10" X 8"	MVD1008	\$78.00
	10" X 10"	MVD1010	\$84.00
	12" X 6"	MVD1206	\$84.00
	12" X 8"	MVD1208	\$84.00
	12" X 10"	MVD1210	\$88.00
	12" X 12"	MVD1212	\$92.00
	14" X 12"	MVD1412	\$100.00
	16" X 12"	MVD1612	\$112.00
	24" X 12"	MVD2412	\$144.00



SUBMITTAL/FABRICATION DETAIL:

MODEL: CD-3 VOLUME DAMPERS-SINGLE BLADE TYPE



1/8" CLEARANCE ALL AROUND

Count	W x H

Count	W x H

Standard Construction

- 18 ga. galvanized steel frame.
- 22 ga. galvanized steel blade (up to 18").
- 20 ga. galvanized steel blade (19" to 48").
- 3/8" sq. x 6" drive pin.
- 1/2" bronze bushing.
- 18 ga. blade stop.

Optional Construction

- Blade and jam seals.
- Quade handle (1/2" or 3/8").
- Electric motor.
- 1/2" nylon bushing.
- 1/2"Ø x 6" drive pin.

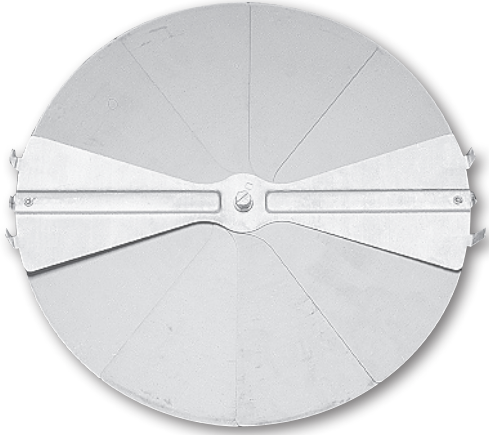
Union "Blue Label" Made.

PROJECT NAME:
W/O #:
TAG #:
CONTRACTOR:
SUBMITTED BY:

ROUND RADIAL FAN BLADE TYPE DAMPERS			
Quantity	Size	Inventory Number	List Price
	6" Ø	PRN10006	\$32.00
	8" Ø	PRN10008	\$34.00
	10" Ø	PRN10010	\$34.00
	12" Ø	PRN10012	\$36.00
	14" Ø	PRN10014	\$50.00
	16" Ø	PRN10016	\$70.00
	18" Ø	PRN10018	\$70.00

PRN100 | Radial, Sliding Blade Damper

AIR DISTRIBUTION ACCESSORIES



PRN100

Introduction: PRN100

MODEL

PRN100 - Neck Mounted Radial Sliding Blade Damper, Heavy Gage Steel Construction

FEATURES

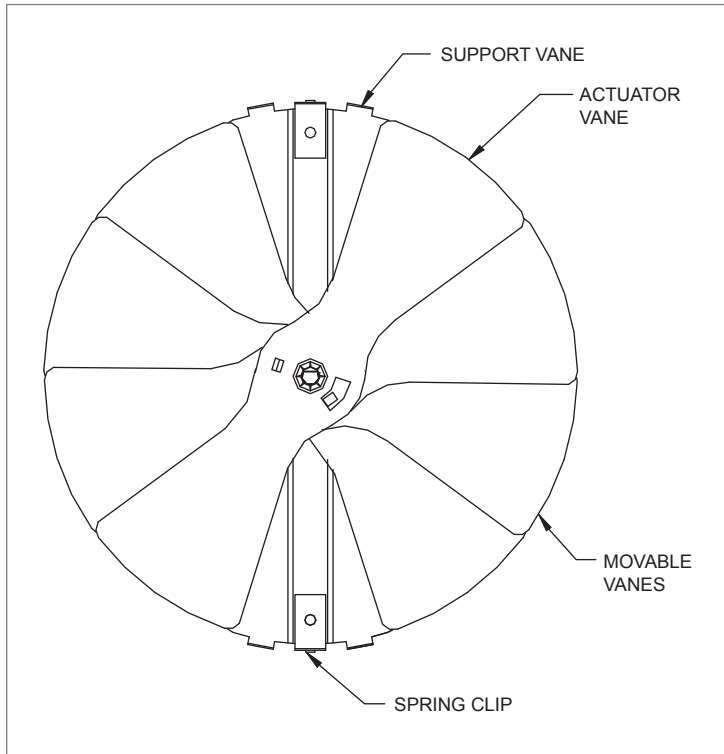
- Gang operated radial blades that slide at right angles to the duct to allow damper to work effectively in flexible duct applications.
- Operated by flat-head screwdriver through face.
- Shipped loose for field installation.

FINISH

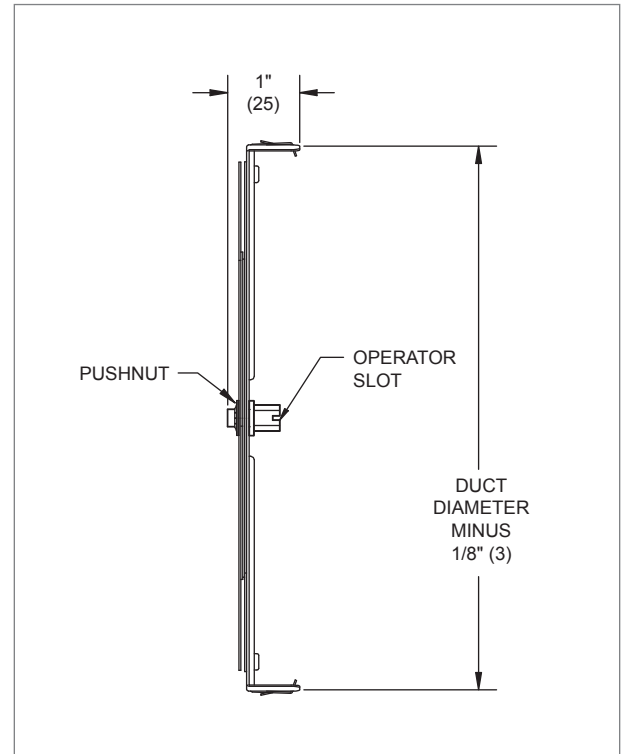
- Standard finish is Mill.

PRN100 Dimensional Information

PRN100, FACE VIEW



PRN100, CROSS SECTION



AVAILABLE SIZES

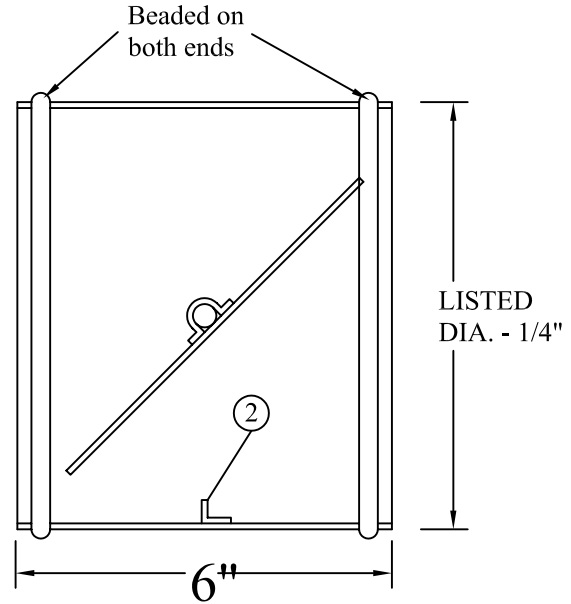
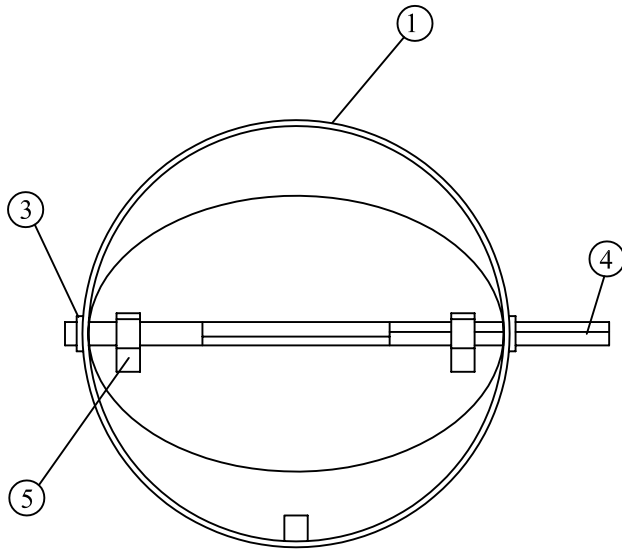
Nominal Duct Diameter
6" (152)
7" (178)
8" (203)
10" (254)
12" (305)
14" (356)

NOTES: Dimensions in parentheses are mm. Reference page Q1-26 for applicable product.

P R N 1 0 0

ROUND MANUAL VOLUME DAMPERS			
Quantity	Size	Inventory Number	List Price
	6" Ø	MVDR06	\$60.00
	7" Ø	MVDR07	\$60.00
	8" Ø	MVDR08	\$60.00
	9" Ø	MVDR09	\$60.00
	10" Ø	MVDR10	\$60.00
	12" Ø	MVDR12	\$66.00
	14" Ø	MVDR14	\$76.00
	16" Ø	MVDR16	\$88.00
	18" Ø	MVDR18	\$92.00
	20" Ø	MVDR20	\$94.00
	22" Ø	MVDR22	\$94.00
	24" Ø	MVDR24	\$102.00
	26" Ø	MVDR26	\$106.00

**SUBMITTAL/FABRICATION DETAIL:
MODEL: CD-8 SINGLE BLADE ROUND DAMPER**



Count	Size

Standard Construction

- ① -20 ga. galvanized steel frame.
- ② -3/8" angle blade stop.
- ③ -1/2" bronze bushing.
- ④ -3/8" x 5.5" drive pin.
- ⑤ -Blade straps/slide pin.

Optional Construction

- Blade and jam seals.
- Quadrant Handle (3/8").
- Electric motor.
- 1/2" nylon bushing.

Union "Blue Label" Made.

PROJECT NAME:
W/O #:
TAG #:
CONTRACTOR:
SUBMITTED BY:

FIRE DAMPERS			
Quantity	Size	Inventory Number	List Price
	6" X 6"	FD0606	\$76.00
	8" X 8"	FD0808	\$80.00
	10" X 10"	FD1010	\$94.00
	12" X 12"	FD1212	\$98.00
	14" X 14"	FD1414	\$128.00
	16" X 16"	FD1616	\$132.00
	18" X 18"	FD1818	\$152.00
	24" X 12"	FD2412	\$136.00



MODEL FDD-A
DYNAMIC CURTAIN TYPE FIRE DAMPERS
DYNAMIC CLOSURE MODELS — 1 1/2 & 3 HOUR

Standard Construction:

- Frame:** Roll Formed Galvanized Steel with Safety Edge.
- Blades:** Roll Formed Galvanized Steel, Curtain-Type
- Springs:** Stainless Steel.
- Fusible Link:** U.L. Listed 165°F.
- Vertical Mount:**
 - Min. Size:** 6" w X 6" h (152 mm x 152 mm)
 - Max. Size:** 36" w X 36" h (914 mm x 914 mm)
- Horizontal Mount:**
 - Min. Size:** 6" w X 6" h (152 mm x 152 mm)
- Max. Single Section:** 18" w X 18" h (457 mm x 457 mm)
- Max. Size:** 36" w X 36" h (914 mm x 914 mm)

Optional Construction:

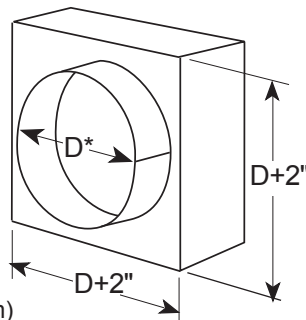
- Factory Supplied Sleeve
- 18 - 16 - 14 - 10 Gauge Sleeve Length (Required) 12"
- 3 Hour Rating
- Round Transition FDD-(V/H) AR

Notes: Dampers are furnished approximately 1/4" (6.4mm) smaller than given duct dimensions.

"These Dampers are UL/ULC Approved For Use in Dynamic and Static Systems."

- * D = Duct Size Minus 1/4"
- * Maximum Diameter = 34" (864 mm)

FDD-(V/H) AR



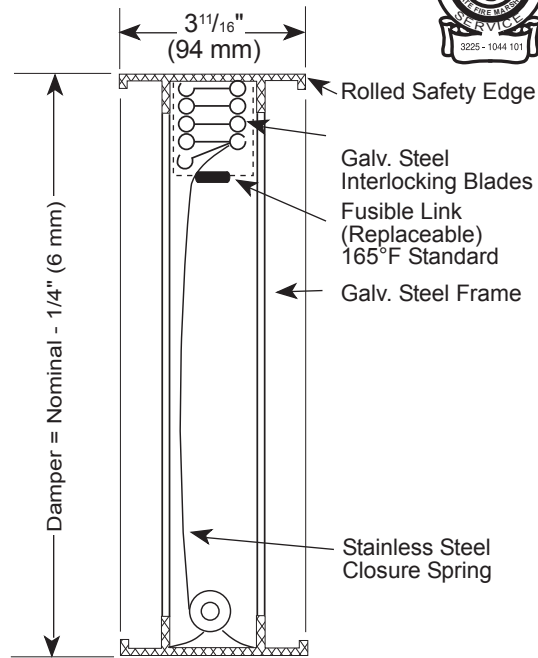
DESIGNED AND TESTED IN ACCORDANCE WITH UL-555 AND ULC-S112. MEETS ALL NFPA-90A REQUIREMENTS FOR FIRE DAMPERS.



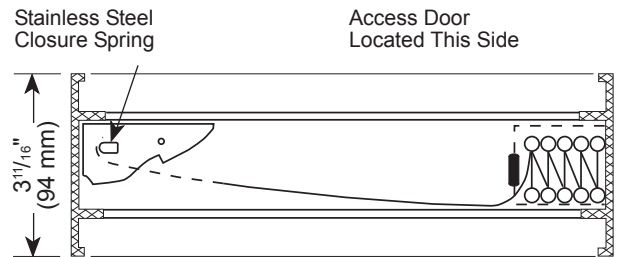
LISTED AND LABELLED BY:



FDD-VA



FDD-HA



Manufacturer's Recommendations

All moving parts of the damper must be inspected and cycled at intervals not greater than every six months and in accordance with the latest edition of NFPA 90A, 92A, local codes and the actuator manufacturer. In addition, fuse links shall be removed and inspected for corrosion. Dry lubricants are recommended.

Specifications are correct at time of printing. However, as part of our 'continuous improvement program,' we reserve the right to make further improvements without notice. © 2003 NCA Manufacturing

FDD-A - 02-05

Project:	Contractor:
Location:	Address:
Architect:	P.O. Number:
Engineer:	Date:

2/15/2013



FIRE DAMPERS (STATIC AND DYNAMIC) INSTALLATION INSTRUCTIONS



Important General Notes:

When UL is referred to in this document, it represents UL/ULC. This installation instruction applies to Fire Dampers (static, dynamic, curtain, single and multi-blade types) mounted in the plane of an UL approved fire partition. The dampers are designed for operation in the vertical or horizontal position with blades running horizontal. The dampers are to be installed square and free from twisting or racking. The dampers shall not be compressed or stretched into the opening. Transportation and installation of the dampers shall be handled with the sleeve or frame. Do not lift the damper with the blades or actuator. Special care shall be given to the damper before installation and after to insure it is protected against dirt, weather, mortar and drywall dust, wall texture and paint. Any of these conditions could cause the damper not to operate correctly and void the warranty. Suitable access to inside duct is to be provided for inspection and replacement of parts such as heat response devices and actuators per NFPA 90A and local authority having jurisdiction. As with all joints, contractor must seal duct-collar connections in the field after installation. NCA Model numbers which are UL approved to utilize this installation are **FD, FD-SL, FD-USL, FD-MB-3V, FD-MB-AF, FD-3V-SB, FDD, FDD-SL, FDD-MB-3V, FDD-MB-AF.**

1. Opening Preparation/Clearances:

The fire barrier opening shall be larger than the damper to allow for thermal expansion and ease of installation. When steel stud/gypsum or wood stud/gypsum partitions are being used then refer to Fig. 1-3 for additional information and details.

A. Dampers Assemblies Using 2 Angles Methods (see note 4a) shall be a minimum of 1/8" (3mm) per linear foot (305mm) of height and width of sleeved assembly up to a maximum of 1 1/2" (38mm) and a minimum of 1/4" (6mm). For **Static Systems** the maximum single section curtain damper is 60"x60" (1524mm x 1524mm) and 40"x40" (1016mm x 1016mm) in horizontal mountings, based on type "A" dampers. The maximum single section multi-blade damper is 36"x48" (914mm x 1219mm) in vertical or horizontal mountings. For **Dynamic Systems** the maximum single section curtain damper is 36"x36" (914mm x 914mm) in vertical mountings and 18"x18" (457mm x 457mm) in horizontal mountings, based on type "A" dampers. The maximum single section multi-blade damper is 36"x48" (914mm x 1219mm) in vertical or horizontal mountings. This method is acceptable for 1 1/2 and 3 hour fire dampers. See Underwriter's Laboratories Listings for maximum multiple assembly sizes.

B. Dampers Assemblies Using 1 Angle Methods (see note 4b) shall be a minimum of 1/8" (3mm) per linear foot (305mm) of height and width of sleeved assembly up to a maximum of 1 1/2" (38mm) and a minimum of 1/4" (6mm). The maximum single section is the same as in A above. The maximum multi-section is 108" w and 108" h up to 36 square feet. This method is acceptable for 1 1/2 hour fire dampers mounted in a masonry/concrete or steel stud/gypsum wall only.

C. Dampers Assemblies Using No Angles Methods (see note 4c) shall be a minimum of 1/4" (6mm) and a maximum of 1/2" (13mm). The maximum single section is the same as in A above. The maximum multi-section is 42" w x 48" h. This method is acceptable for 1 1/2 hour fire dampers mounted in a masonry/concrete or steel stud/gypsum wall only.

2. Damper Sleeves and Breakaway Connections:

Sleeves shall be of the SAME GAUGE or heavier as the duct to which it is attached, if one of the breakaway connection is used as defined in the SMACNA Fire, Smoke and Radiation Damper Guide for HVAC Systems (Fig. 4-6) and in NFPA 90A. Gauges shall conform to SMACNA or ASHRAE duct standards. Sleeves shall not extend beyond the fire barrier more than 6" (152mm) unless an actuator or factory installed access door is supplied, then the sleeve may extend up to 16" (406mm). Sleeve shall terminate at both sides of wall within dimensions shown. If a rigid connection is used, then the sleeve shall be a minimum of 16 gage for dampers up to 36" (914mm) wide by 24" (610mm) high and 14 gage for dampers exceeding 36" (914mm) wide by 24" (610mm) high.

Round and oval breakaway connections must use either a 4" (102mm) wide draw band or #10 (M5) sheet metal screws spaced equally around the circumference of the duct as follows: 3 screws for duct sizes 22" (559mm) and smaller; 5 screws for duct sizes greater than 22" (559mm) and up to and including 36" (914mm); 8 screws for duct sizes greater than 36" (914mm). Refer to SMACNA Fire, Smoke and Radiation Damper Guide for HVAC Systems for information on Ductmate, Nexus, Ward, TDC and TDF systems and any additional information (Fig. 5-6). A sleeve may not be required if the damper frame is of sufficient size and shape so the mounting angles can be directly fastened to it.

3. Multi-Section and "Damper to Sleeve" Connections:

Damper shall be secured to the sleeve and to each other (when joined to make multiple damper assemblies) with #10 sheet metal screws, 1/4" (6mm) nut and bolts, 1/4" (6mm) tack welds, 3/16" (5mm) steel rivets, or clinching (toggle) on 6" (152mm) centers.

Fig. 1: Metal Stud/Gypsum Wall Design

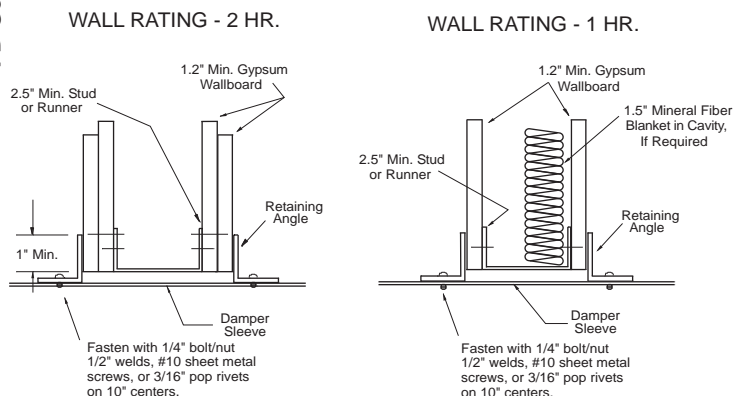
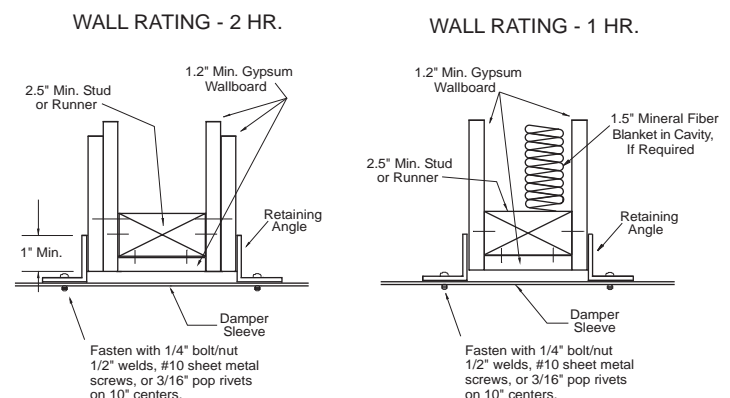
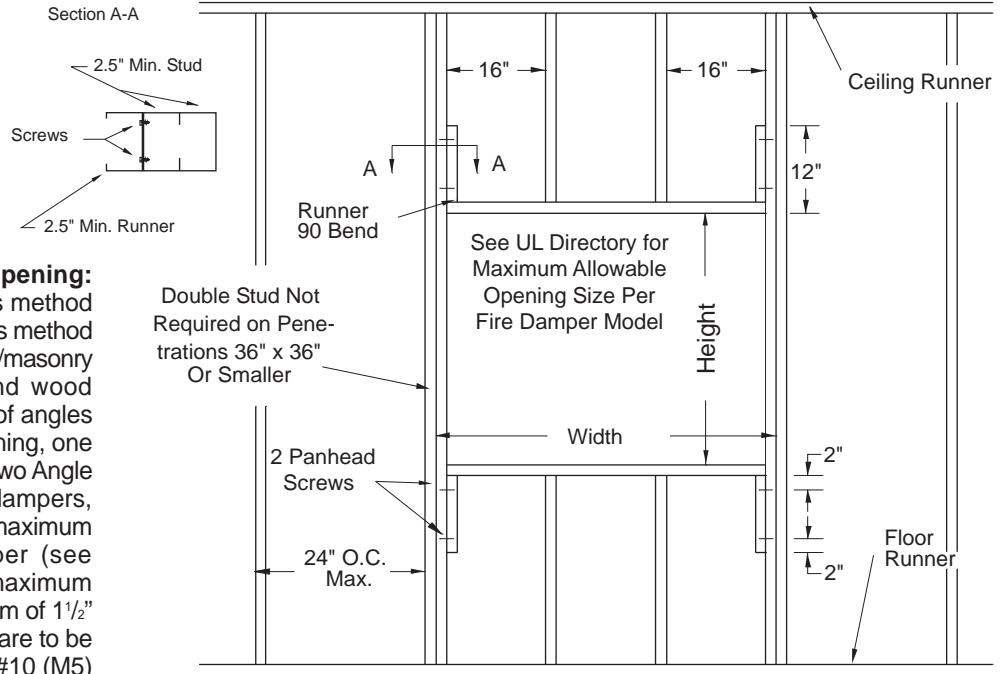


Fig. 2: Wood Stud/Gypsum Wall Design



Note: Gypsum panels screwed to all studs and runner flanges, 12" oc maximum surrounding opening. All fasteners are to be UL approved per UL design.



4. Methods of Securing Damper in Opening:

a. Two Angle (Two Sided) Method:

This method is the oldest and most commonly used. This method is approved for use in UL approved concrete/masonry partitions, steel stud/gypsum walls, and wood stud/gypsum walls. In this method 2 sets of angles are used to secure the damper in the opening, one on each side of the partition (See Fig. 7). Two Angle Method is approved for 1½ and 3 hour dampers, vertical or horizontal orientation, and any maximum size multi-section UL approved damper (see Underwriter's Laboratories Listings for maximum assembly sizes). Angles shall be a minimum of 1½" x 1½" (37mmx37mm) x 16 gauge. Angles are to be fastened to the sleeve on 6" centers with #10 (M5) sheet metal screws, 3/16" (5mm) steel pop rivets, ½" (13mm) tack welds, or ¼" (6mm) diameter nut and bolts with not more than 2" (51mm) from each end with a minimum of two connections per side/leg. The angles are to overlap the partition a minimum of 1"(25mm). These angles may be of a unit type construction and may or may not be fastened to each other at the corners. When the duct work terminates at the damper or installation prohibits angles from turning out/away from the wall, the retaining angle shall be reversed (leg turned into the opening) providing the size of the opening is increased by an amount equal to twice the combined thickness of the angle and the height of the screw or bolthead to maintain expansion clearances. See note 1A for information on clearances. See Fig. 7 for detailed drawings of installations.

b. One Angle (Single Sided) Method: In this method 1 set of angles are used to secure the damper in the opening. This method is approved for use in UL approved concrete/masonry partitions and steel stud/gypsum walls. Only one side of the fire partition will have the angles installed (see Fig. 8). One Angle Method is approved for 1½ hour dampers only, vertical and horizontal (angles on top side only) orientations, and the maximum size shall be 108" wide or 108" high up to 36 square feet and up to the maximum multi-section UL approved damper size (see Underwriter's Laboratories Listings for maximum assembly sizes). Angle shall be a minimum of 1½" x 1½" (37mmx37mm) by 16 gauge. Angles are to be fastened to the sleeve on 6" centers with #10 (M5) sheet metal screws, 3/16" (5mm) steel pop rivets, ½" (13mm) tack welds, or ¼" (6mm) diameter nut and bolts with not more than 2" (51mm) from each end with a minimum of two connections on each side/leg top and bottom. The angles are also to be fastened to the fire partition with: **in concrete/masonry partitions** with #10 (M5) self-tapping concrete anchors or concrete screws on 6" (152mm) centers and must engage the fire partition a minimum of 1½" (38mm); **in steel stud/gypsum partitions** secure the angles to the partition with #10 (M5) screws long enough to penetrate the J-Runners and E-Stud by a minimum of 3/8" (10mm). Use a minimum of two fasteners per side. The angles are to overlap the partition a minimum of 1" (25mm). These angles may be of a unit type construction and may or may not be fastened to each other at the corners. When the duct work terminates at the damper or installation prohibits angles from turning out/away from the wall, the retaining angle shall be reversed (leg turned into the opening) providing the size of the opening is increased by an amount equal to twice the combined thickness of the angle and the height of the screw or bolt head to maintain expansion clearances. Angles can be placed in front of or behind the drywall attaching directly to the steel studs or masonry. NCA's Frame Retaining Angles (FRA) can be used in place of the angle mentioned above. See note 1B for information on clearances. See Fig. 8 for detailed drawings of installations.

c. No Angle Method: In this method No angles are used to secure the damper in the opening. This method is approved for use in UL approved concrete/masonry partitions and steel stud/gypsum walls. This method uses a minimum ¾" (19mm) flange is on one end of the sleeve. The damper/sleeve assembly is placed in the opening so that the flange rest flush up to the partition, then the fasteners are placed through the sleeve into the partition (see Fig. 9). No Angle Method is approved for 1½ hour dampers only, vertical and horizontal (flange on top side only) orientations, and the maximum size shall be 42" (1067mm) wide by 48" (1219mm) high up to the maximum multi-section UL approved damper size (see Underwriter's Laboratories Listings for maximum assembly sizes). The sleeve flange shall be a minimum of ¾" (19mm) high by 20 gauge steel. If a flange/angle is added, it shall be a minimum of 1" x 1" (25mm x 25mm) by 18 gauge steel and fastened with #10 (M5) bolts or screws, ½" (13mm) welds, or 3/16" (5mm) rivets to the sleeve, at a maximum spacing of 6" (152mm) o.c., not more than 2" (51mm) from each end with a minimum of two fasteners per side. The sleeve is to be fastened to the fire partition with: **in concrete/masonry partitions** with #10 self-tapping concrete anchors or concrete screws on 6" (152mm) centers and must engage the fire partition a minimum of 1½" 38mm); **in steel stud/gypsum partitions** secure the angles to the partition with #10 (M5) screws long enough to penetrate the J-Runners and E-Stud by a minimum of 3/8" (10mm). Use a minimum of two fasteners per side. The sleeve flange can be placed in front of or behind the drywall attaching directly to the steel studs or masonry. Be sure to not stretch the damper when securing it into the partition. Stretching the damper can cause it to bind up and prevent it from operating properly. NCA's Frame Retaining Angles (FRA) can be used in place of the angle mentioned above. See note 1C for information on clearances. See Fig. 9 for detailed drawings of installations.



BREAKAWAY CONNECTIONS

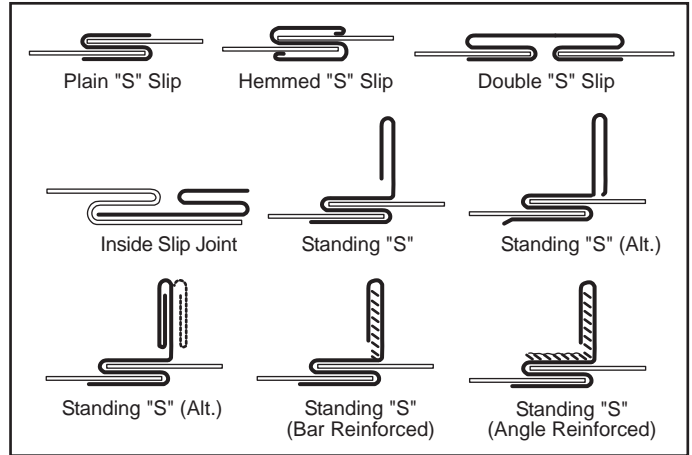
Traditional Breakaway Style Transverse Joints

Transverse joints illustrated at right have always been approved as breakaway connections. SMACNA testing has also approved the following variations as breakaway connections.

- Standing "S" joints can be applied with no. 10 sheetmetal screws (through joint and duct) subject to the following limitations: Maximum 2 screws in each side and in bottom joint.
- Transverse joints illustrated can be applied as top and bottom joints with Drive Slip - side joints in duct heights up to 20 inches. (508 mm)



Fig. 4



Round and Oval Duct Breakaway Connections

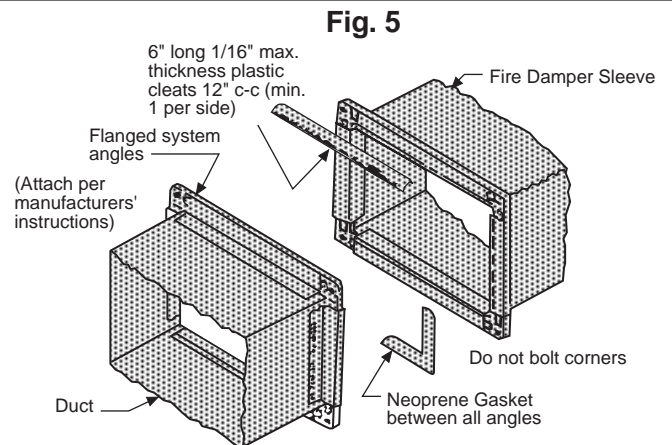
Round or flat oval ducts connected to Type R, CR or CO damper collars may use no. 10 sheetmetal screws as follows:

- Ducts to 22" (558 mm) wide (or dia.) and smaller may use 3 screws.
- Ducts larger than 22" (558 mm) wide (or dia.) and up to 36" (914 mm) dia. may use 5 screws.
- Ducts larger than 36" (914 mm) wide (or dia.) may use 8 screws.

NOTE: All breakaway connections described may have duct sealant applied in accordance with SMACNA recommendations.

Manufactured Flanged System Breakaway Connections

Flanged connection systems manufactured by Ductmate, Ward, and Nexus are approved as breakaway connections when installed as illustrated.



Proprietary Flange System Breakaway Connections

TDC and TDF systems are approved as breakaway connections when installed as described in the TDC or TDF addendum to the SMACNA Duct Construction Standards except the corners may not be bolted. Standard 6" (152 mm) metal clip may be used with spacing as shown in diagram.

Fig. 6

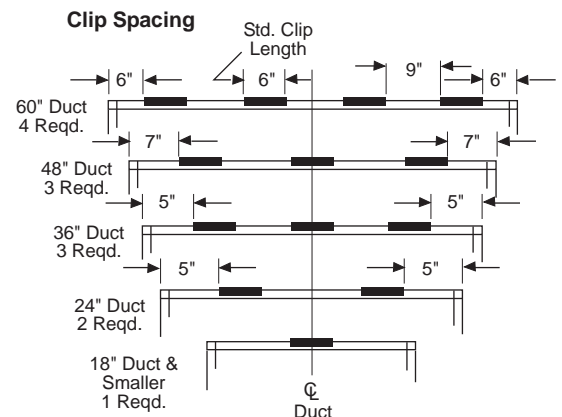
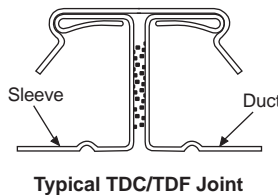


Fig. 7 – Two Angle (Two Sided) Method

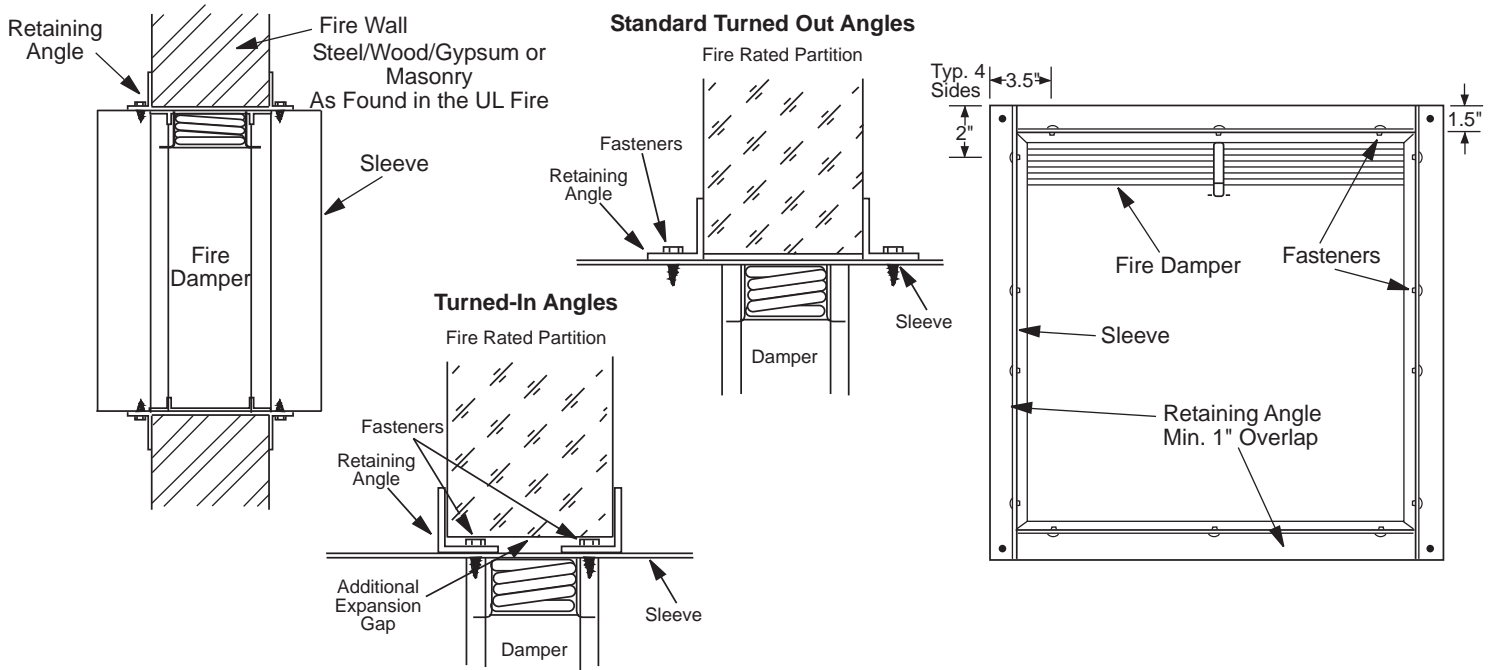


Fig. 8 – One Angle (Single Sided) Method

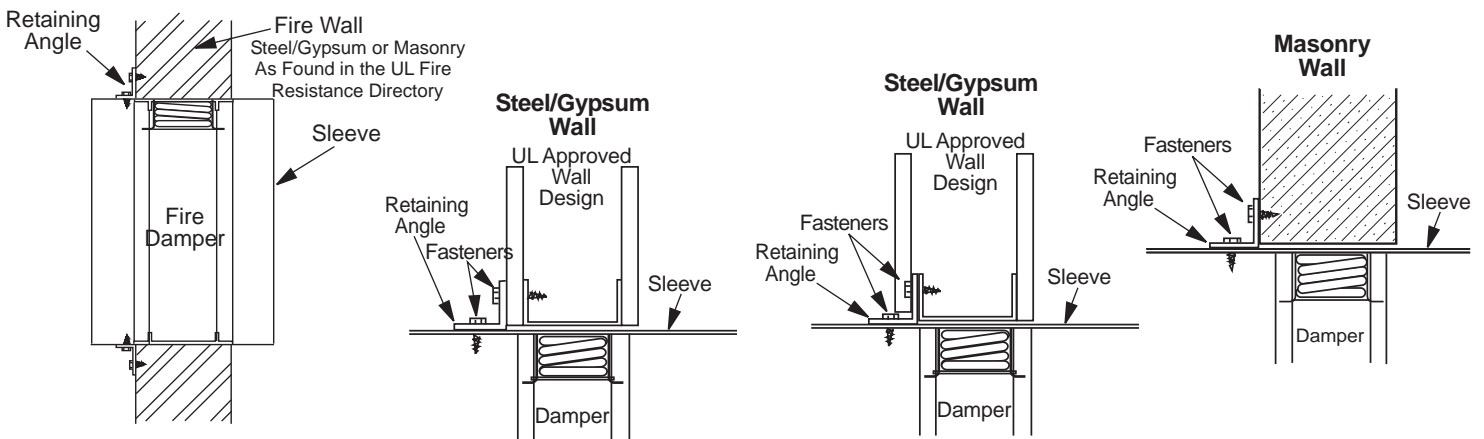
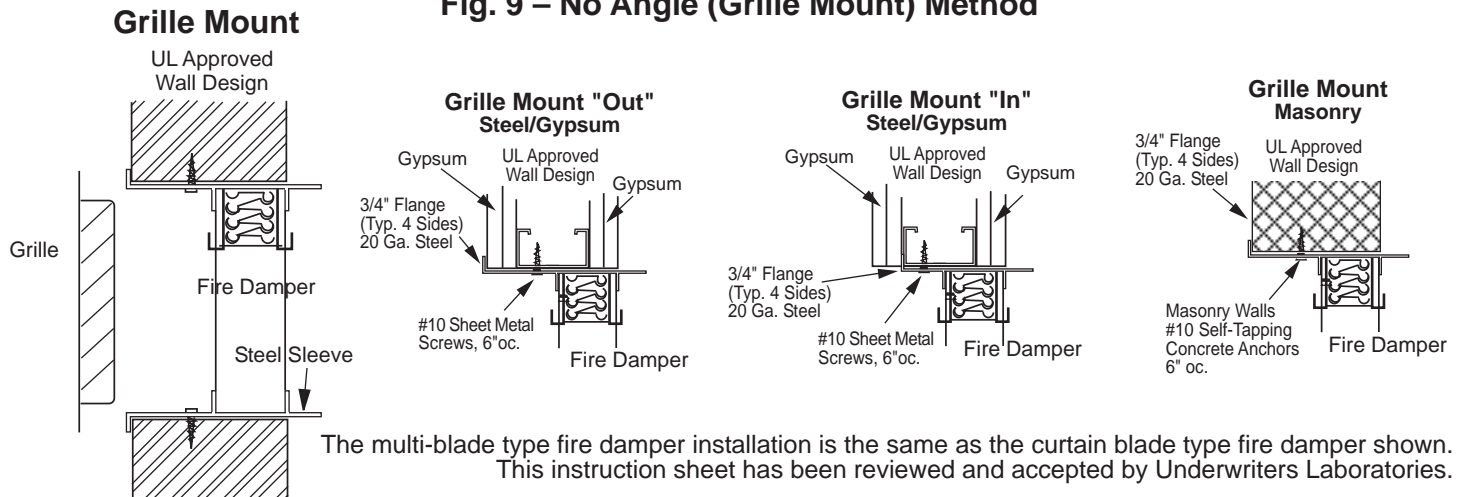


Fig. 9 – No Angle (Grille Mount) Method



Manufacturer's Recommendations

All moving parts of the damper must be inspected and cycled at intervals not greater than every six months and in accordance with the latest edition of NFPA 90A, 92A, local codes and the actuator manufacturer. In addition, fuse links shall be removed and inspected

COMBINATION FIRE / SMOKE DAMPERS			
Quantity	Size	Inventory Number	List Price
	6" X 6"	FSD0606	\$522.00
	8" X 8"	FSD0808	\$522.00
	9" X 9"	FSD0909	\$584.00
	10" X 10"	FSD1010	\$584.00
	12" X 12"	FSD1212	\$584.00
	14" X 14"	FSD1414	\$600.00
	15" X 15"	FSD1515	\$652.00
	16" X 16"	FSD1616	\$652.00
	18" X 18"	FSD1818	\$666.00
	20" X 20"	FSD2020	\$666.00
	21" X 21"	FSD2121	\$712.00
	22" X 22"	FSD2222	\$712.00
	24" X 12"	FSD2412	\$628.00
	24" X 24"	FSD2424	\$716.00



MODEL FSD-3V-S-212 AND MODEL FSD-3V-S-232 COMBINATION FIRE/SMOKE DAMPER (WITH SLEEVE)

U.L. 555 CLASSIFIED 1 1/2 AND 3 HOURS / U.L. 555S CLASSIFIED CLASS II
U.L.C. S112 CLASSIFIED 1 1/2 AND 3 HOURS VERTICAL AND HORIZONTAL MOUNTINGS

U.L. 555S CLASSIFIED
AT 250°F OR 350°F
DEPENDENT UPON
MOTOR/OPERATOR
*SEE MOTOR/OPERATOR SCHEDULE



LISTED AND LABELLED BY:



FEATURES

- The FSD-3V-S-2X2 series Combination Fire/Smoke Dampers have been designed and tested to exceed all U.L., U.L.C. and N.F.P.A. requirements for fire dampers as well as smoke dampers.

- FSD-3V-212 is U.L. 555 and U.L.C. S112 listed and labeled as a 1-1/2 hour fire damper.
- FSD-3V-232 is U.L. 555 and U.L.C. S112 listed and labeled as a 3 hour fire damper.

- U.L. and U.L.C. listed for both vertical and horizontal mountings.

- U.L. 555S / U.L.C. S112.1 listed and labeled as a Leakage Class II rated Smoke Damper with airflow in both directions. Class II provides for a maximum leakage of 20 cfm per sq. ft. at 4.0 inches static pressure. As we are constantly expanding our U.L./U.L.C. listings, we suggest you contact the factory for current information.

- The snap disk is a reusable/resettable heat response device that can be reset after visual inspection of the damper. Also available Model STO/R (single thermostat) and DTO/R (dual thermostat) to provide the fire fighter with complete discretionary control of smoke functions during a fire/smoke emergency. (See STO/R and DTO/R submittal drawings for complete details). Spring return type damper motor controlled by a smoke detector is recommended to provide proper operation in the smoke mode.

- Available are options EGF (Electric Globe Fuse Link) and PFV (Pneumatic Fusible Valve). These options provide visible fuse links with a quick and economical ways to check damper operations while also providing a Systematic Closure Control. Option PFV allows damper operation without the need/cost for an E-P valve and electrical connection at the damper.

- Available optional 3/4" flanged sleeve for grille mounting (see fig.9 of installation instructions). If actuator is to be externally mounted, it is suggested to order flange to be field installed.

Standard Construction:

- Frame:** Roll-formed galvanized steel hat-section with staked corners with integral bracing.
- Blades:** 16 ga. Roll-formed galvanized steel. Minimum width: 4.250" (108 mm) Maximum width: 7.250" (184 mm)
- Bearings:** Bronze Oilite, press-fit into frame.
- Axles:** Square, plated steel.
- Seals:** Pressure sensitive 450°F silicone blade edge seals & flexible metal jamb seals.
- Linkage:** Concealed in frame. Linkage bars are .125" thick plated steel.
- Sleeve:** 16" x 20 ga. standard, other gauges and lengths available.

Heat Responsive Devices:

Snap Disk: 165°F standard, 212°F, 250°F, and 350°F available.

Finish: Mill galvanized.

Sizes: Minimum Size: 6"w x 6"h (203 mm x 203 mm)
Maximum UL Listed Size:
Single Section: 36"w x 48"h (914 mm x 1219 mm)

Multiple Assembly:

108"w X 96"h (2743mm x 2438mm)
3 Hr. Maximum 72"w x 48"h (1829mm x 1219mm)

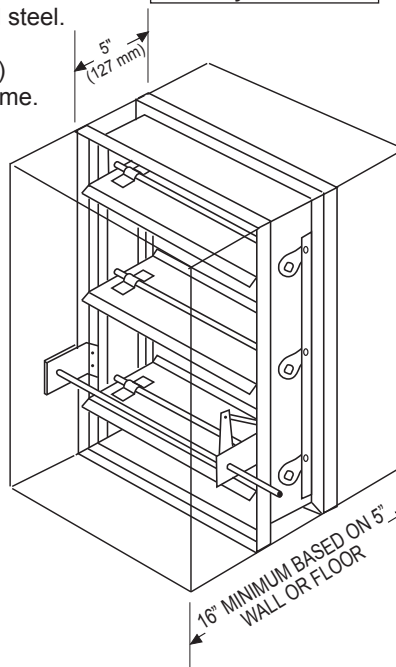
Maximum Velocity: 2000 fpm (10.2 m/s) on sizes

Maximum Pressure: 4" wg (1kPa)

Notes: • Sleeved dampers are furnished approx. same size as given duct dimension, unless otherwise noted.

• Not recommended with blades running vertically.

These Dampers are
UL/ULC Approved for
Use in Dynamic and
Static Systems



PATENTED: U.S. 4,487,214
CDN. 1,165,661
U.K. 2,098,475

Suggested Specification

Combination Fire/Smoke Dampers shall be Model: FSD-3V-S-212 by NCA Manufacturing. Fire/Smoke Dampers shall bear the Underwriters' Laboratories labels for both Fire Dampers and Smoke Dampers. U.L. 555S / U.L.C. S112.1 rating shall be Class II with leakage not to exceed 20 cfm per sq. ft. at 4.0 inches static pressure for any size. Linkage shall be of the concealed type for maximum free area.

Manufacturer's Recommendations

All moving parts of the damper must be inspected and cycled at intervals not greater than every twelve months or in accordance with the latest edition of NFPA 80, 90A, 92A, local codes and the actuator manufacturer. In addition, the damper shall be inspected for corrosion. Dry lubricants are recommended.

Specifications are correct at time of printing. However, as part of our 'continuous improvement program,' we reserve the right to make further improvements without notice.

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Project:

Contractor:

Location:

Address:

Architect:

P.O. Number:

Engineer:

Date:

2/15/2013

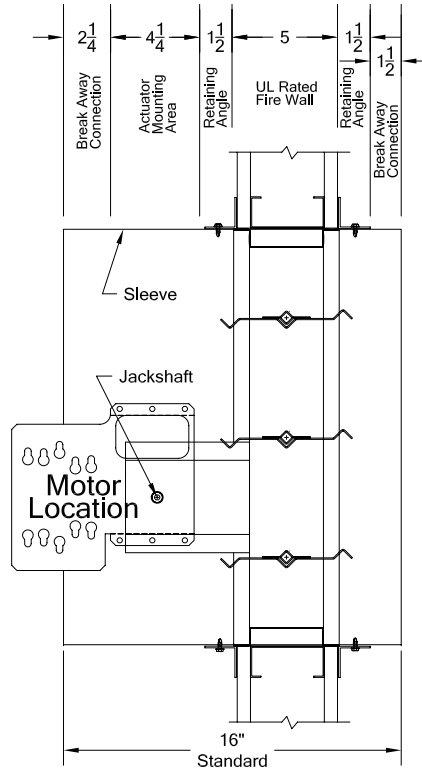
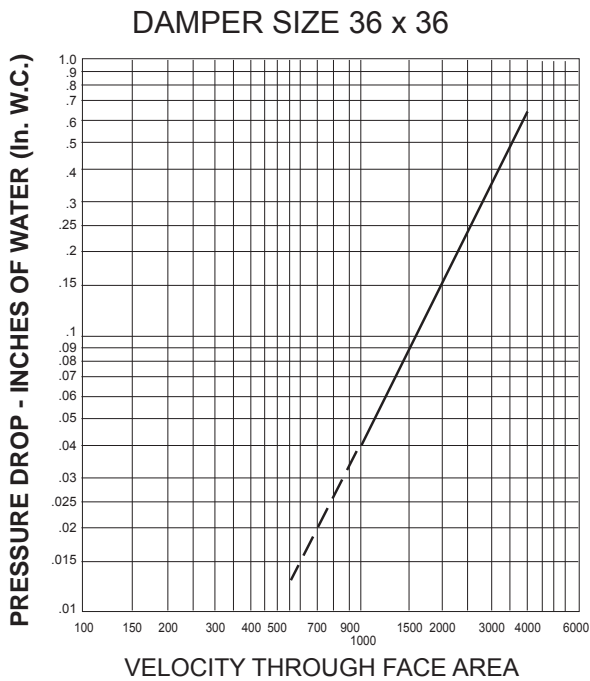


**MODEL FSD-3V-S-212 AND MODEL FSD-3V-S-232
COMBINATION FIRE/SMOKE DAMPER (WITH SLEEVE)**
U.L. 555 CLASSIFIED 1 1/2 AND 3 HOURS / U.L. 555S CLASSIFIED CLASS II
U.L.C. S112 CLASSIFIED 1 1/2 AND 3 HOURS VERTICAL AND HORIZONTAL MOUNTINGS

PERFORMANCE DATA

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Pressure drop testing was done by an independent laboratory to AMCA Standard 500-D, Fig. 5.3 ductwork upstream & downstream.



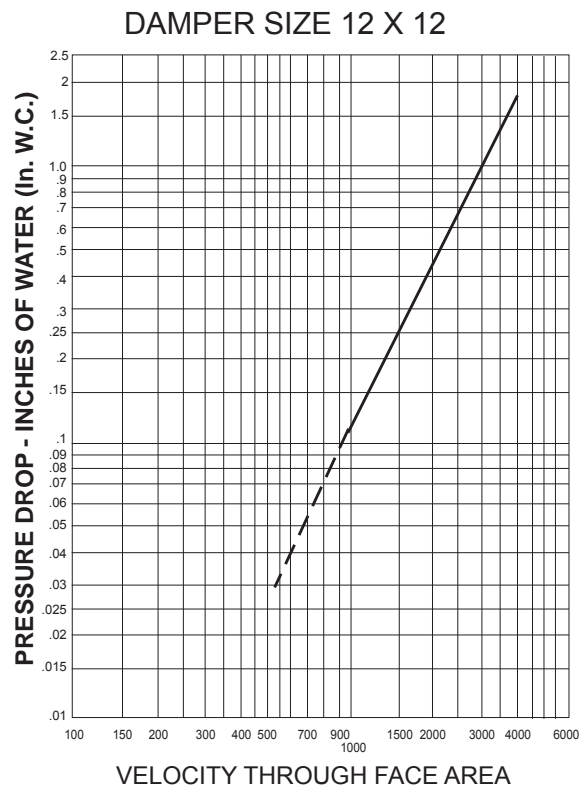
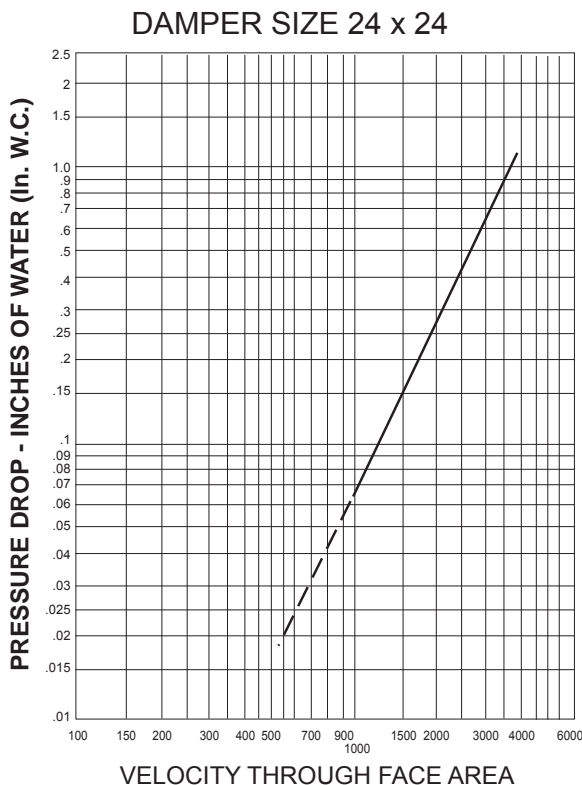
When the actuator is externally mounted and the wall thickness exceeds 5 inches, add 1 inch for each additional inch of wall thickness increased to ensure sleeve length through the penetration.

As standard the actuator is externally installed on the lower right hand half of the damper when viewed from the jack shaft side. The damper may be installed/rotate 180° such the actuator will be located on the upper left. The top of the damper is either side of the frame as long as the blades are running parallel.

When ordering internally mounted actuators, be aware there is a min. height requirement (in some cases the sleeve can be increased to allow for internally mounting).

The entire damper frame does not have to be installed in the plane of the wall of floor. The rule of thumb is with the damper in the closed position, the blade plane should be within the plane of the UL rated wall or floor.

FSD-3V-S-212 - 09-06





COMBINATION FIRE / SMOKE DAMPERS INSTALLATION INSTRUCTIONS



Important General Notes:

When UL is referred to in this document, it represents UL/ULC. This installation instruction applies to Combination Fire/Smoke Dampers (3V, Airfoil, Parallel, Opposed, Single, and Multi-blade types) mounted in the plane of an UL approved fire partition. Combination Fire /Smoke Dampers are approved for use in Static or Dynamic Systems. The dampers are designed for operation in the vertical or horizontal position with blades running horizontal. The dampers are to be installed square and free from twisting or racking. The dampers shall not be compressed or stretched into the opening. Transportation and installation of the dampers shall be handled with the sleeve or frame. Do not lift the damper with the blades or actuator. Special care shall be given to the damper before installation and after to insure it is protected against dirt, weather, mortar and drywall dust, wall texture and paint. Any of these conditions could cause the damper not to operate correctly and void the warranty. Suitable access to inside duct is to be provided for inspection and replacement of parts such as heat response devices and actuators per NFPA 90A and local authority having jurisdiction. The need to seal the damper in the penetration is not required by Underwriters Laboratories. NCA dampers have been tested and approved to be mounted without the use of sealants around the perimeter space between the damper and the penetration. As with all joints, contractor must seal duct-collar connections in the field after installation. NCA Model numbers which are UL approved to utilize this installation are **FSD-3V-211, -212, -231, -232, FSD-AF-211, -212, -231, -232.**

1. Opening Preparation/Clearances:

The fire barrier opening shall be larger than the damper to allow for thermal expansion and ease of installation. When steel stud/gypsum or wood stud/gypsum partitions are being used then refer to Fig. 1-3 for additional information and details.

A. Dampers Assemblies Using 2 Angles Methods (see note 4a) shall be a minimum of 1/8"(3mm) per linear foot (305mm) of height and width of sleeved assembly up to a maximum of 1 1/2"(38mm) and a minimum of 1/4"(6mm). The maximum single section multi-blade damper is 36"x48" (914mmx1219mm) in vertical or horizontal mountings. This method is acceptable for 1 1/2 and 3 hour fire dampers. See Underwriter's Laboratories Listings for maximum multiple assembly sizes.

B. Dampers Assemblies Using 1 Angle Methods (see note 4b) shall be a minimum of 1/8"(3mm) per linear foot (305mm) of height and width of sleeved assembly up to a maximum of 1 1/2"(38mm) and a minimum of 1/4"(6mm). The maximum single section is the same as in A above. The maximum multi-section is 108"w and 108"h up to 36 square feet. This method is acceptable for 1 1/2 hour fire dampers mounted in a masonry/concrete or steel stud/ gypsum wall only.

C. Dampers Assemblies Using No Angles Methods (see note 4c) shall be a minimum of 1/4"(6mm) and a maximum of 1/2"(13mm). The maximum single section is the same as in A above. The maximum multi-section is 42"w x 48"h. This method is acceptable for 1 1/2 hour fire dampers mounted in a masonry/concrete or steel stud/gypsum wall only.

2. Damper Sleeves and Breakaway Connections:

Sleeves shall be of the SAME GAUGE or heavier as the duct to which it is attached, if one of the breakaway connection is used as defined in the SMACNA Fire, Smoke and Radiation Damper Guide for HVAC Systems (Fig. 4-6) and in NFPA 90A. Gauges shall conform to SMACNA or ASHRAE duct standards. Sleeves shall not extend beyond the fire barrier more than 6"(152mm) unless an actuator or factory installed access door is supplied, then the sleeve may extend up to 16"(406mm). Sleeve shall terminate at both sides of wall within dimensions shown. If a rigid connection is used, then the sleeve shall be a minimum of 16 gage for dampers up to 36"(914mm) wide by 24"(610mm) high and 14 gage for dampers exceeding 36"(914mm) wide by 24"(610mm) high.

Round and oval breakaway connections must use either a 4"(102mm) wide draw band or #10 (M5) sheet metal screws spaced equally around the circumference of the duct as follows: 3 screws for duct sizes 22"(559mm) and smaller; 5 screws for duct sizes greater than 22"(559mm) and up to and including 36"(914mm); 8 screws for duct sizes greater than 36"(914mm)). Refer to SMACNA Fire, Smoke and Radiation Damper Guide for HVAC Systems for information on Ductmate, Nexus, Ward, TDC and TDF systems and any additional information (Fig. 5-6). A sleeve may not be required if the damper frame is of sufficient size and shape so the mounting angles can be directly fastened to it.

3. Multi-Section and "Damper to Sleeve" Connections:

Damper shall be secured to the sleeve and to each other (when joined to make multiple damper assemblies) with #10 sheet metal screws, 1/4"(6mm) nut and bolts, 1/4"(6mm) tack welds, 3/16"(5mm) steel rivets, or clinching (toggle) on 6"(152mm) centers. When field assembling multi-sections, a continuous 1/8" (3mm) bead of Dow Corning 999, Dow Corning Silastic 732, Nuflex 302, or GE RTV 108 Sealant shall be applied to the frame joints and where the frame connects to the sleeve. Sealant is required only on one side of the damper. Press the surface of the sealant in place to dispel any air. Note

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Fig. 1: Metal Stud/Gypsum Wall Design

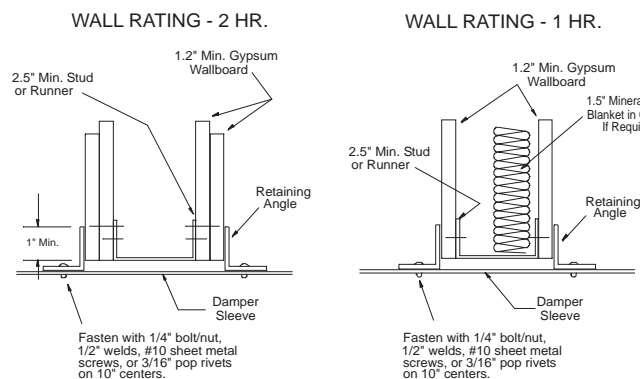


Fig. 2: Wood Stud/Gypsum Wall Design

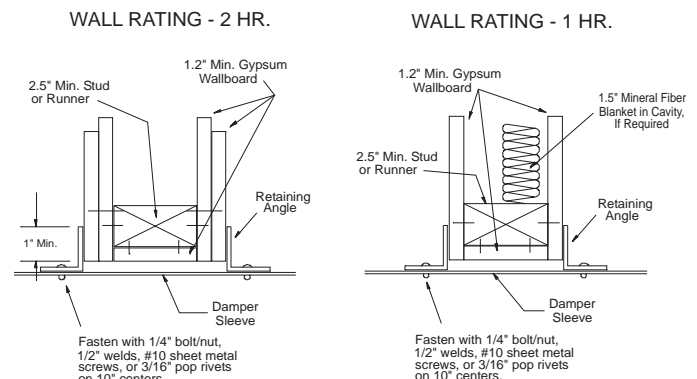
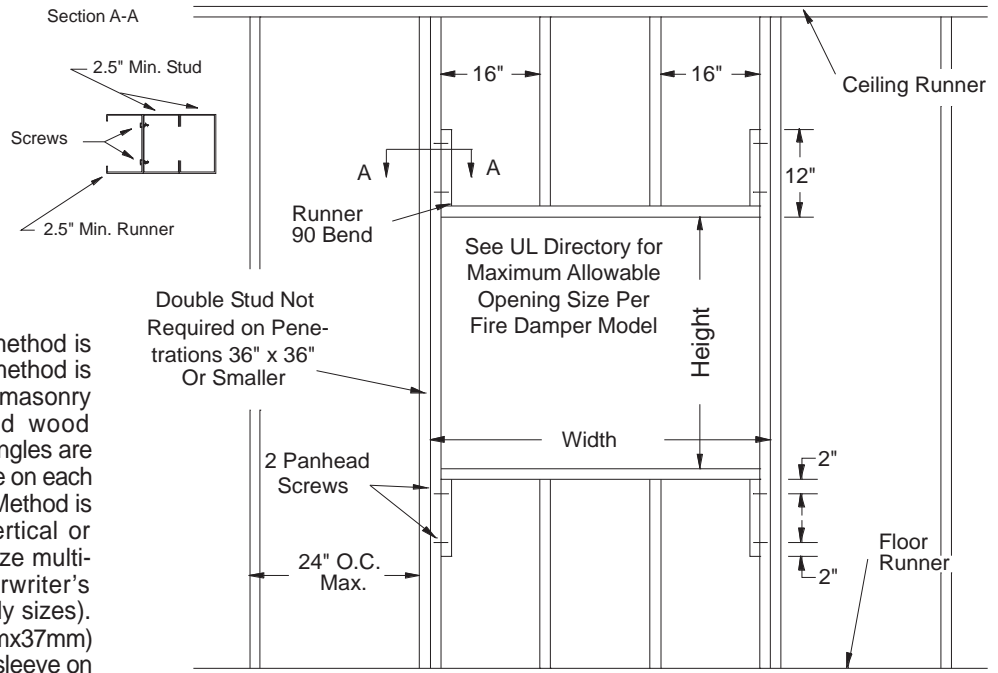


Fig. 3: Metal or Wood Stud Wall

Note: Gypsum panels screwed to all studs and runner flanges, 12" oc maximum surrounding opening. All fasteners are to be UL approved per UL design.



4. Methods of Securing Damper in Opening:

a. Two Angle (Two Sided) Method: This method is the oldest and most commonly used. This method is approved for use in UL approved concrete/masonry partitions, steel stud/gypsum walls, and wood stud/gypsum walls. In this method 2 sets of angles are used to secure the damper in the opening, one on each side of the partition (See Fig. 7). Two Angle Method is approved for 1½ and 3 hour dampers, vertical or horizontal orientation, and any maximum size multi-section UL approved damper (see Underwriter's Laboratories Listings for maximum assembly sizes). Angles shall be a minimum of 1½" x 1½" (37mmx37mm) x 16 gauge. Angles are to be fastened to the sleeve on 6" centers with #10 (M5) sheet metal screws, 3/16" (5mm) steel pop rivets, ½" (13mm) tack welds, or ¼" (6mm) diameter nut and bolts with not more than 2" (51mm) from each end with a minimum of two connections per side/leg. The angles are to overlap the partition a minimum of 1" (25mm). These angles may be of a unit type construction and may or may not be fastened to each other at the corners. When the duct work terminates at the damper or installation prohibits angles from turning out/away from the wall, the retaining angle shall be reversed (leg turned into the opening) providing the size of the opening is increased by an amount equal to twice the combined thickness of the angle and the height of the screw or bolt head to maintain expansion clearances. See note 1A for information on clearances. See Fig. 7 for detailed drawings of installations.

b. One Angle (Single Sided) Method: In this method 1 set of angles are used to secure the damper in the opening. This method is approved for use in UL approved concrete/masonry partitions and steel stud/gypsum walls. Only one side of the fire partition will have the angles installed (see Fig. 8). One Angle Method is approved for 1½ hour dampers only, vertical and horizontal (angles on top side only) orientations, and the maximum size shall be 108" wide or 108" high up to 36 square feet and up to the maximum multi-section UL approved damper size (see Underwriter's Laboratories Listings for maximum assembly sizes). Angle shall be a minimum of 1½" x 1½" (37mmx37mm) by 16 gauge. Angles are to be fastened to the sleeve on 6" centers with #10 (M5) sheet metal screws, 3/16" (5mm) steel pop rivets, ½" (13mm) tack welds, or ¼" (6mm) diameter nut and bolts with not more than 2" (51mm) from each end with a minimum of two connections on each side/leg top and bottom. The angles are also to be fastened to the fire partition with: **in concrete/masonry partitions** with #10 (M5) self-tapping concrete anchors or concrete screws on 6" (152mm) centers and must engage the fire partition a minimum of 1½" (38mm); **in steel stud/gypsum partitions** secure the angles to the partition with #10 (M5) screws long enough to penetrate the J-Runners and E-Stud by a minimum of 3/8" (10mm). Use a minimum of two fasteners per side. The angles are to overlap the partition a minimum of 1" (25mm). These angles may be of a unit type construction and may or may not be fastened to each other at the corners. When the duct work terminates at the damper or installation prohibits angles from turning out/away from the wall, the retaining angle shall be reversed (leg turned into the opening) providing the size of the opening is increased by an amount equal to twice the combined thickness of the angle and the height of the screw or bolt head to maintain expansion clearances. Angles can be placed in front of or behind the drywall attaching directly to the steel studs or masonry. NCA's Frame Retaining Angles (FRA) can be used in place of the angle mentioned above. See note 1B for information on clearances. See Fig. 8 for detailed drawings of installations.

c. No Angle Method: In this method No angles are used to secure the damper in the opening. This method is approved for use in UL approved concrete/masonry partitions and steel stud/gypsum walls. This method uses a minimum ¾" (19mm) flange is on one end of the sleeve. The damper/sleeve assembly is placed in the opening so that the flange rest flush up to the partition, then the fasteners are placed through the sleeve into the partition (see Fig. 9). No Angle Method is approved for 1½ hour dampers only, vertical and horizontal (flange on top side only) orientations, and the maximum size shall be 42" (1067mm) wide by 48" (1219mm) high up to the maximum multi-section UL approved damper size (see Underwriter's Laboratories Listings for maximum assembly sizes). The sleeve flange shall be a minimum of ¾" (19mm) high by 20 gauge steel. If a flange/angle is added, it shall be a minimum of 1" x 1" (25mm x 25mm) by 18 gauge steel and fastened with #10 (M5) bolts or screws, ½" (13mm) welds, or 3/16" (5mm) rivets to the sleeve, at a maximum spacing of 6" (152mm) o.c., not more than 2" (51mm) from each end with a minimum of two fasteners per side. The sleeve is to be fastened to the fire partition with: **in concrete/masonry partitions** with #10 self-tapping concrete anchors or concrete screws on 6" (152mm) centers and must engage the fire partition a minimum of 1½" (38mm); **in steel stud/gypsum partitions** secure the angles to the partition with #10 (M5) screws long enough to penetrate the J-Runners and E-Stud by a minimum of 3/8" (10mm). Use a minimum of two fasteners per side. The sleeve flange can be placed in front of or behind the drywall attaching directly to the steel studs or masonry. Be sure to not stretch the damper when securing it into the partition. Stretching the damper can cause it to bind up and prevent it from operating properly. NCA's Frame Retaining Angles (FRA) can be used in place of the angle mentioned above. See note 1C for information on clearances. See Fig. 9 for detailed drawings of installations.

5. Actuator Connections:

Electrical and/or pneumatic connections to damper actuators should be made in accordance with wiring and piping diagrams developed in compliance with applicable codes, ordinances and regulations. Be sure to check actuator for proper voltage and current draw. Tampering with the actuator's installation or connecting the actuator to an improper voltage and current may void the warranty.



BREAKAWAY CONNECTIONS

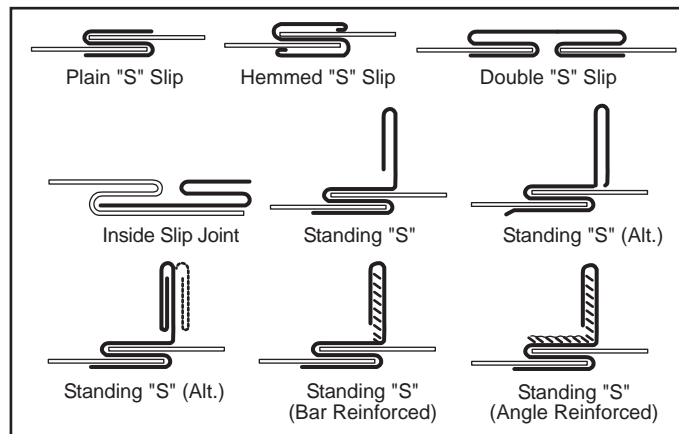
Traditional Breakaway Style Transverse Joints

Transverse joints illustrated at right have always been approved as breakaway connections. SMACNA testing has also approved the following variations as breakaway connections.

- Standing "S" joints can be applied with no. 10 sheetmetal screws (through joint and duct) subject to the following limitations: Maximum 2 screws in each side and in bottom joint.
- Transverse joints illustrated can be applied as top and bottom joints with Drive Slip - side joints in duct heights up to 20 inches. (508 mm)



Fig. 4



Round and Oval Duct Breakaway Connections

Round or flat oval ducts connected to Type R, CR or CO damper collars may use no. 10 sheetmetal screws as follows:

- Ducts to 22" (558 mm) wide (or dia.) and smaller may use 3 screws.
- Ducts larger than 22" (558 mm) wide (or dia.) and up to 36" (914 mm) dia. may use 5 screws.
- Ducts larger than 36" (914 mm) wide (or dia.) may use 8 screws.

NOTE: All breakaway connections described may have duct sealant applied in accordance with SMACNA recommendations.

Manufactured Flanged System Breakaway Connections

Flanged connection systems manufactured by Ductmate, Ward, and Nexus are approved as breakaway connections when installed as illustrated.

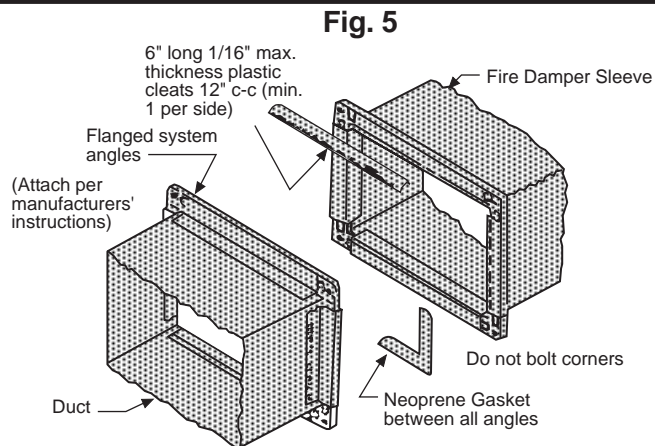
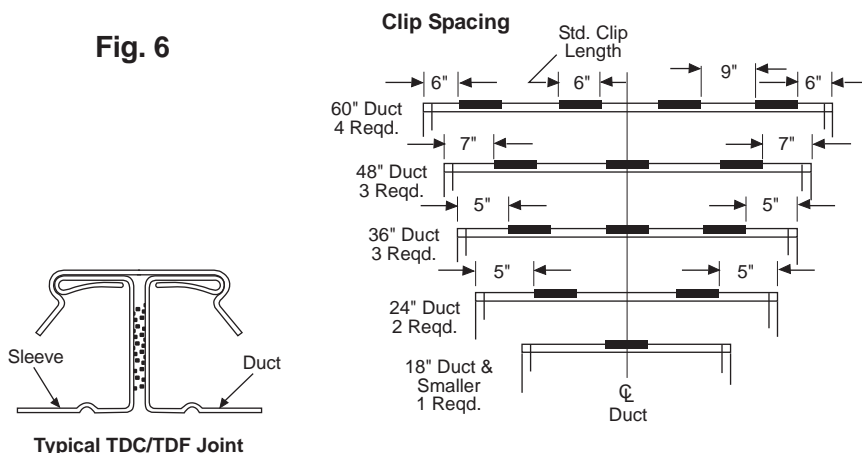


Fig. 5

Proprietary Flange System Breakaway Connections

TDC and TDF systems are approved as breakaway connections when installed as described in the TDC or TDF addendum to the SMACNA Duct Construction Standards except the corners may not be bolted. Standard 6" (152 mm) metal clip may be used with spacing as shown in diagram.

Fig. 6



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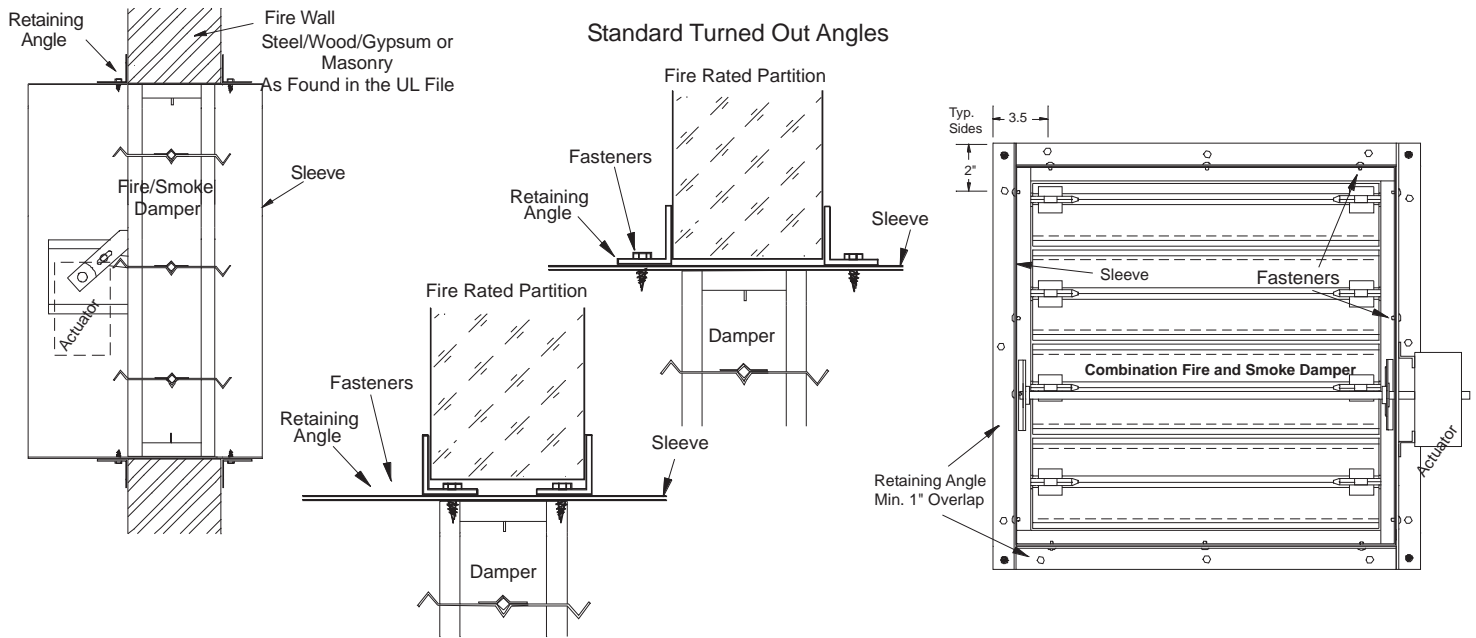


Fig. 8 -- One Angle (Single Sided) Method

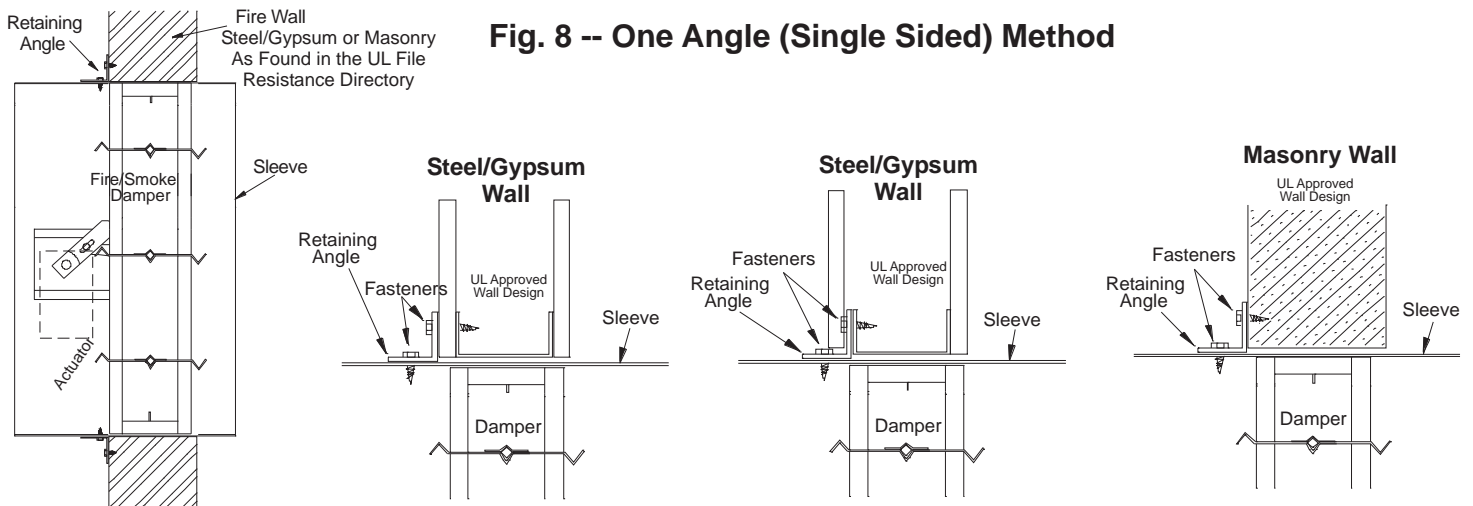
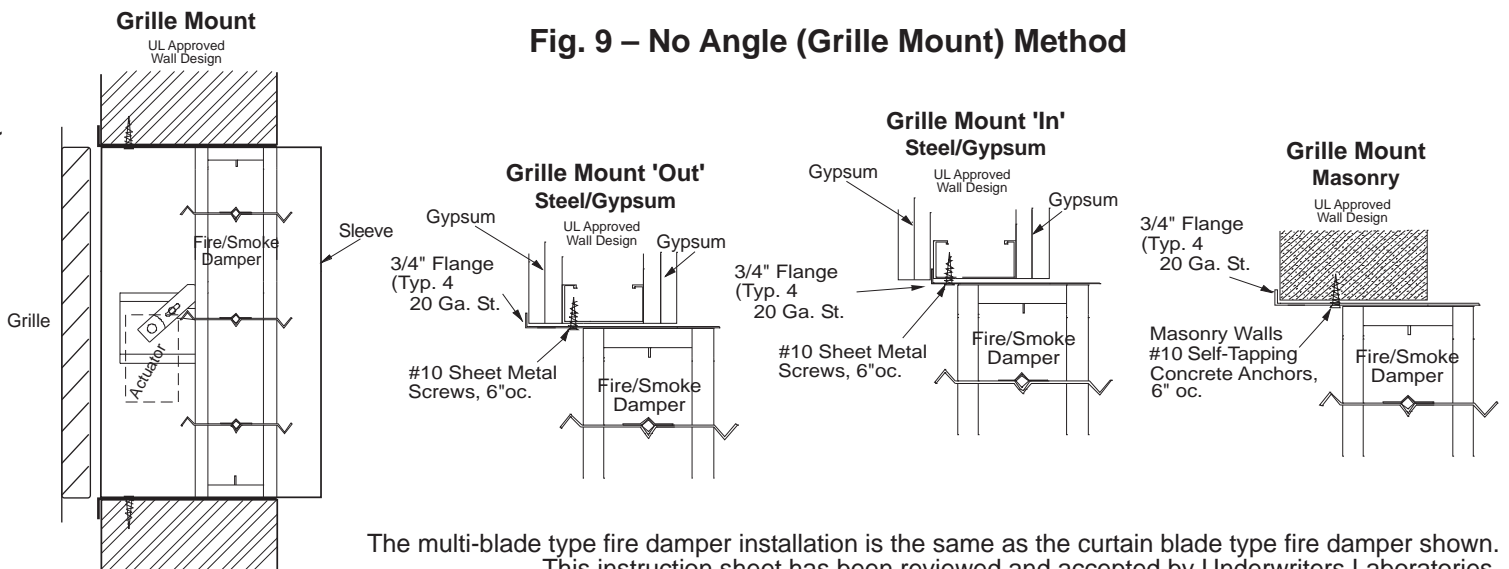


Fig. 9 – No Angle (Grille Mount) Method



The multi-blade type fire damper installation is the same as the curtain blade type fire damper shown. This instruction sheet has been reviewed and accepted by Underwriters Laboratories.

Manufacturer's Recommendations

All moving parts of the damper must be inspected and cycled at intervals not greater than every six months and in accordance with the latest edition of NFPA 90A, 92A, local codes and the actuator manufacturer. In addition, fuse links shall be removed and inspected for

When UL is referred to in this document, it represents UL/ULC.

FSDGENINSTALL - 02-05 (INSTALLATIONFSD)

2/15/2013

ELECTRIC / PNEUMATIC ACTUATORS AND FUSIBLE LINKS			
Quantity	Size	Inventory Number	List Price
	24 VOLT UL RATED ACTUATOR	FSLF24	\$290.00
	120 VOLT UL RATED ACTUATOR	FSLF120	\$280.00
	165 DEGREE FUSIBLE LINK	165 FUSELINK	\$16.00
	212 DEGREE FUSIBLE LINK	212 FUSELINK	\$16.00



Technical Data		FSLF24(-S)(-FC) US, FSLF120(-S)(-FC) US
Power supply		
	FSLF24(-S)(-FC) US	24 VAC \pm 20%, 50/60 Hz
	FSLF120(-S)(-FC) US	120 VAC \pm 10%, 50/60 Hz
Power consumption		
	running	50/60 Hz, 15 VA
	24 VAC holding	50/60 Hz, 3.5 VA
	end stop	50/60 Hz 25 VA
	120 VAC running	50/60 Hz 18 VA
	holding	50/60 Hz 6.5 VA
	end stop	50/60 Hz 27 VA
Fusing*		
	FSLF24	1 amp slow blow
	FSLF120	0.25 amp slow blow
Transformer sizing		
		25 VA per 24 VAC actuator
Electrical connection		
	FSLF24 US	3 ft, 18 ga, 2 color coded leads
	FSLF120 US	3 ft, 18 ga, 3 color coded leads
	FSLF...-S US	3 ft, 18 ga, appliance cable
Overload protection		
		electronic throughout 0 to 95° rotation auto-restart after temporary overload (FSLF120 US grounded enclosure)
Control		
		microprocessor
Angle of rotation		
		95°
Torque		
		30 in-lb [3.5 Nm] minimum from 32°F to 350°F [0°C to 177°C]
Direction of rotation		
	spring	can be selected by CCW/CW mounting
Position indication		
		visual indicator, 0° to 95°
Running time		
	motor	< 15 sec at rated voltage and torque 32°F to +122°F [0°C to +50°C]
	spring	<15 seconds at rated voltage and torque
Humidity		
		5 to 95% RH non-condensing
Ambient temperature		
		32°F to 122°F [0°C to 50°C]
Storage temperature		
		-40°F to 176°F [-40°C to 80°C]
Housing		
		NEMA type 1
Housing material		
		zinc coated steel
Gears		
		permanently lubricated
Agency listings		
		cULus acc. to UL60730-1A/-2-14, CAN/CSA E60730-1, CSA C22.2 No.24-93
Servicing		
		maintenance free
Quality standard		
		ISO 9001
Weight		
	FSLF24(-S) US	3.4 lbs [1.7 kg], (+ 0.3 lbs [+0.14 kg])
	FSLF120(-S) US	4.0 lbs [1.8 kg], (+ 0.3 lbs [+0.14 kg])

FSLF24(-S)(-FC) US, FSLF120(-S)(-FC) US

Auxiliary switch	2 x SPST 0.5 A inductive, 3A resistive @ 120/250VAC, minimum 1 mA @ 5 VDC, .3 A ind, .5A res @ 24VDC, UL listed, 10° and 85°. Double insulated <input type="checkbox"/>
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FSLF24(-S)(-FC) US, FSLF120(-S)(-FC) US

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On/Off, Spring Return, 350°F for Half Hour, 15 Seconds Cycle Time

Application

The type FSLF spring-return actuator is intended for the operation of smoke and combination fire and smoke dampers in ventilation and air-conditioning systems. The actuator will meet requirements of UL555 and UL555S when tested as an assembly with the damper and will meet requirements of UBC for 15 second opening and closing. Square footage of damper operated will depend on make and model and the temperature required.

Operation

Mounting of the actuator to the damper axle shaft or jackshaft is via a cold-weld clamp. Teeth in the clamp and V-bolt dig into the metal of both solid and hollow shafts maintaining a perfect connection. The specially designed clamp will not crush hollow shafts. The bottom end of the actuator is held by an anti-rotation strap or by a stud provided by the damper manufacturer.

The actuator is mounted in its fail safe position with the damper blade(s) closed. Upon applying power, the actuator drives the damper to the open position. The internal spring is tensioned at the same time. If the power supply is interrupted, the spring moves the damper back to its fail-safe position.

SAFETY NOTES

The actuator contains no components which the user can replace or repair. 24 VAC Connect via safety isolating transformer, Class 2 supply.

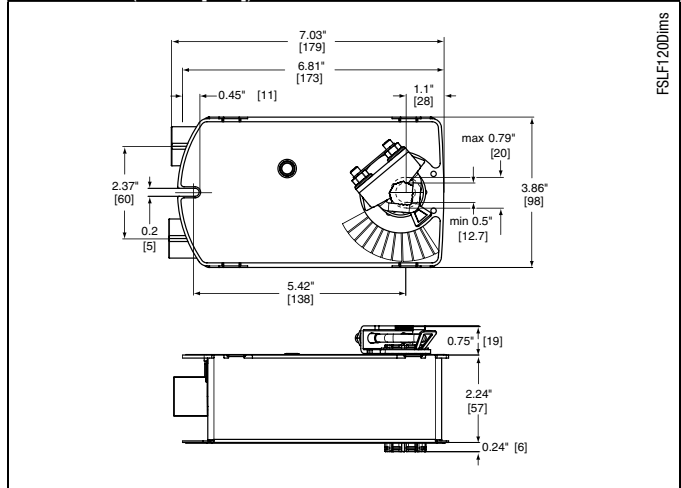
1/2" Threaded Connector

Screw a conduit fitting into the actuator's metal bushing. Jacket the actuator's input wiring with suitable flexible conduit. Properly terminate the conduit in a suitable junction box.

3/8" Flex Connector (-FC models)

Mount the flexible conduit into the actuator's metal bushing by means of the provided screw with a torque of 1.2 Nm. Jacket the actuator's input wiring with suitable flexible conduit. Properly terminate the conduit in a suitable junction box.

Dimensions (Inches [mm])



*Individual Fusing or Breakers are not required by Belimo.

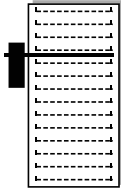
The FSLF24 draws higher peak current when driving against any type of stop. Given the technology of fuses & breakers, this requires the value of fuse or breaker to be increased to avoid nuisance opening or tripping. A 1 amp slow blow should be used for 24VAC. A 0.25 amp slow blow should be used for 120VAC.

FSLF24(-S)(-FC) US, FSLF120(-S)(-FC) US

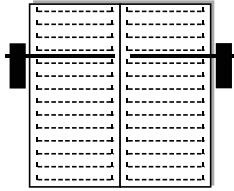
On/Off, Spring Return, 350°F for Half Hour, 15 Seconds Cycle Time

Typical Applications

The typical fire and smoke damper requires from 5-15 in-lb of torque per square foot at 250°F - 350°F under dynamic load (2000 fpm velocity). The FSLF is a single section damper actuator. For the multi section dampers, use the FSNF series. This is a direct coupled actuator. If linkages are needed use the FSNF series.



Single section for one FSLF actuator



Two section for two FSLF actuators

Typical Specification

Smoke Control and Combination Fire and Smoke Control Damper Actuators

All smoke and combination fire and smoke dampers shall be provided with Belimo FSLF, FSNF, or FSAF actuators. No substitutions allowed. Damper and actuator shall have UL555S Listing for 250°F (350°F) and shall comply with UBC if required by local codes. Where proof of closure switches are required, blade switches, actuator auxiliary switches, or proximity switches are allowed.

Replacement Applications

The number one "equal or better" requirement for use as a replacement for obsolete defective motors is the UL555S listing of the Belimo actuator with the damper for the application. The local authority having jurisdiction sets the requirements. In some cases a permit and inspection may be required.

Go to www.belimo.us/firesmoke for a Cross Reference from old damper actuators to Belimo. Extensive retrofit installation instructions are available, along with technical training information.

CAUTION

Caution must be used when replacing failed motors with new Belimo actuators. Many old motors did not have internal springs and depended on external springs on the side of the damper or wrapped around the damper shaft to close the damper. Old motor springs must be removed or disabled. Do not remove fusible link springs if they had only fire and no smoke functions

In some cases, a BAE 165 or equal thermal sensor must be installed.

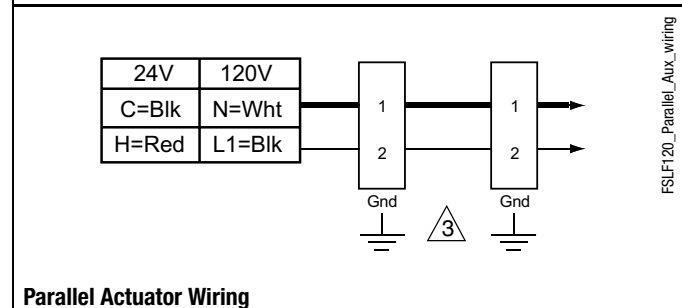
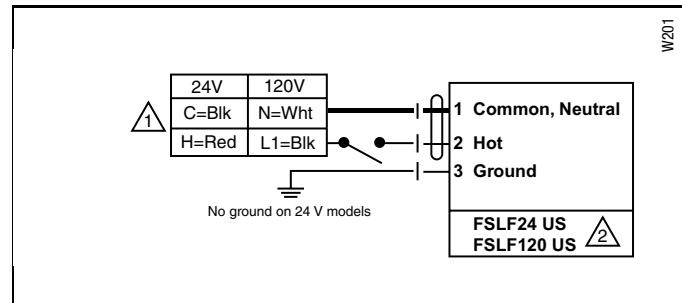
Wiring Diagrams

INSTALLATION NOTES

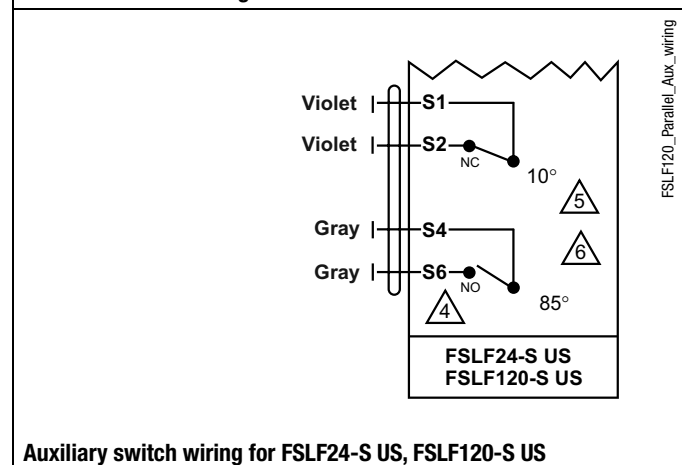
- 1 Provide overload protection and disconnect as required.
- 2 **CAUTION Equipment Damage!**
Actuators may be connected in parallel. Power consumption and input impedance must be observed.
- 3 No ground on 24 V models
- 4 S4 makes to S6 when the actuator is powered open.
- 5 For end position indication, interlock control, fan startup, etc., FSLF24-S US and FSLF120-S US incorporate two built-in auxiliary switches.
- 6 Double insulated

WARNING Live Electrical Components!

During installation, testing, servicing and troubleshooting of this product, it may be necessary to work with live electrical components. Have a qualified licensed electrician or other individual who has been properly trained in handling live electrical components perform these tasks. Failure to follow all electrical safety precautions when exposed to live electrical components could result in death or serious injury.



Parallel Actuator Wiring



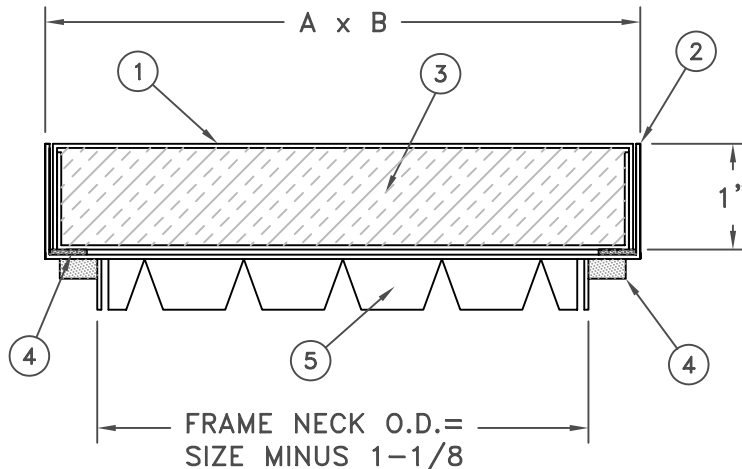
Subject to change. © Belimo Aircontrols (USA), Inc.

GALVINIZED SQUARE HINGED ACCESS DOORS			
Quantity	Size	Inventory Number	List Price
	6" X 6"	ADHD0606	\$30.00
	8" X 8"	ADHD0808	\$34.00
	10" X 10"	ADHD1010	\$38.00
	12" X 12"	ADHD1212	\$42.00
	14" X 14"	ADHD1414	\$58.00
	16" X 16"	ADHD1616	\$60.00
	18" x 18"	ADHD1818	\$68.00
	20" X 20"	ADHD2020	\$78.00
	24" X 24"	ADHD2424	\$96.00

WARD ACCESS DOOR

Cam and Hinge Access Doors
For Flat Single Wall Ductwork

DCM
DHG



SPECIFICATIONS:

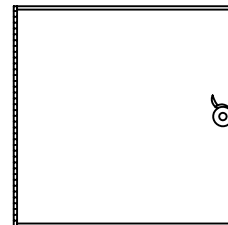
1. Formed 24 gauge metal door
2. Formed 22 gauge metal frame
3. Fiberglass insulation
4. Polyester foam gasket
5. Preformed dovetail tabs

NOTES:

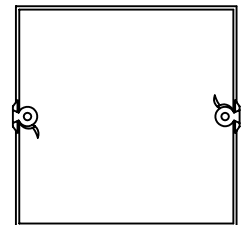
1. Available in galvanized steel. Contact factory for availability of other materials.
2. Available for single wall duct applications.
3. Insulation R-value of 3 (estimate).
4. Tested to 4.5" S.P. with minimal leakage.
5. Reference chart for sizes.

STANDARD SIZES

SIZE	WIDTH A	HEIGHT B	FRAME NECK O.D.	CAMS DCM	CAMS DHG
6x6	6	6	4-7/8 x 4-7/8	2	1
8x8	8	8	6-7/8 x 6-7/8	2	1
10x10	10	10	8-7/8 x 8-7/8	2	1
12x12	12	12	10-7/8 x 10-7/8	2	1
14x14	14	14	12-7/8 x 12-7/8	2	1
16x16	16	16	14-7/8 x 14-7/8	4	2
18x18	18	18	16-7/8 x 16-7/8	4	2
20x20	20	20	18-7/8 x 18-7/8	4	2
24x24	24	24	22-7/8 x 22-7/8	4	2



MODEL DHG
HINGE AND CAM



MODEL DCM
DUAL CAMS

JOB NAME: _____
LOCATION: _____
ARCHITECT: _____
ENGINEER: _____
CONTRACTOR: _____

SUBMITTED BY: _____



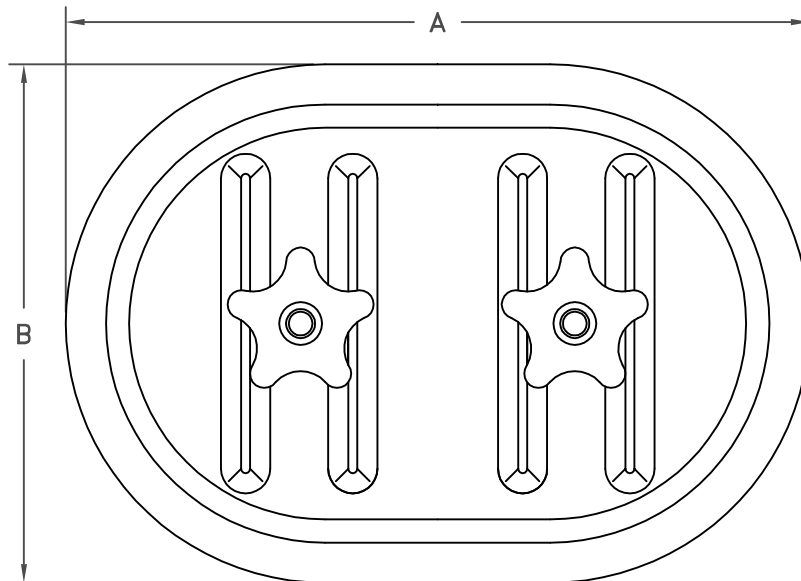
500 E. Eighth Street • Holland, MI 49423
T (800) 466-9374 • F (866) 466-9335 • www.wardind.com

GALVINIZED ROUND COMPRESSION ACCESS DOORS			
Quantity	Size	Inventory Number	List Price
	4" Ø TO 5" Ø (8" X 4")	SMADR04	\$60.00
	6" Ø TO 7" Ø (8" X 4")	SMADR06	\$60.00
	8" Ø TO 9" Ø (8" X 4")	SMADR08	\$60.00
	10" Ø TO 11" Ø (10" X 6")	SMADR10	\$68.00
	12" Ø TO 13" Ø (10" X 6")	SMADR12	\$68.00
	14" Ø TO 15" Ø (10" X 6")	SMADR14	\$68.00
	16" Ø TO 17" Ø (16" X 12")	SMADR16	\$106.00
	18" Ø TO 19" Ø (16" X 12")	SMADR18	\$106.00
	20" Ø TO 21" Ø (16" X 12")	SMADR20	\$106.00

WARD ACCESS DOOR

Sandwich Style Access Door
For Round Single Wall Ductwork

DSA

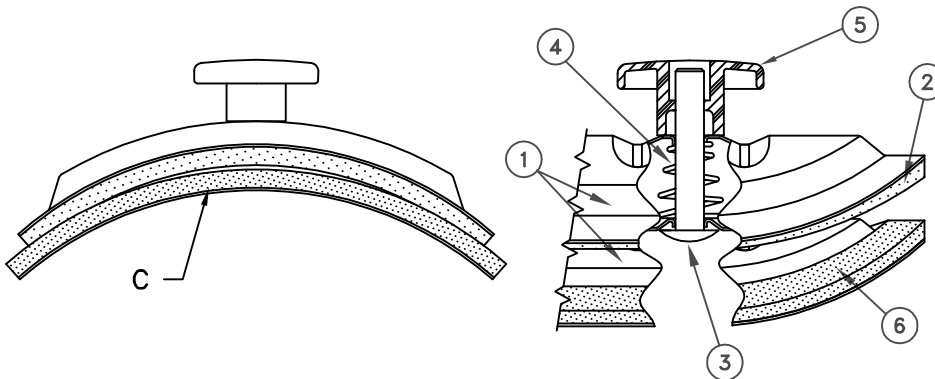


SPECIFICATIONS:

1. Formed 20 gauge metal plates
2. Polyfoam insulation
3. Steel bolt
4. Steel compression springs
5. Polypropylene knobs with threaded metal inserts
6. Closed cell neoprene gasket

NOTES:

1. 10x6 and 16x12 are available in the following materials:
 - Galvanized
 - Stainless Steel
 - Aluminum
2. 8x4 is available in Galvanized
3. Contact factory for availability of other materials.
4. Self adhesive template included for accurate cut-out.
5. Tested to 20" S.P. with minimal leakage.
6. Reference chart for sizes.



DOOR SIZES AVAILABLE					
8 X 4		10 X 6		16 X 12	
A	B	A	B	A	B
8.53	VARIES	10.40	VARIES	16.38	VARIES
C		C		C	
4 - 28		5 - 30		12 - 60	

JOB NAME: _____ LOCATION: _____ ARCHITECT: _____ ENGINEER: _____ CONTRACTOR: _____	SUBMITTED BY: _____
--	---------------------------------



5030 Corporate Exchange Blvd. SE • Grand Rapids, MI 49512
 T (800) 624-8642 • F (800) 972-1421 • www.commercialproductsgroup.com

PIVOT ROD SHEET ROCK ACCESS DOORS			
Quantity	Size	Inventory Number	List Price
	12" X 12"	STYLED1212	\$58.00
	14" X 14"	STYLED1414	\$68.00
	16" X 16"	STYLED1616	\$72.00
	18" X 18"	STYLED1818	\$84.00
	24" X 24"	STYLED2424	\$116.00

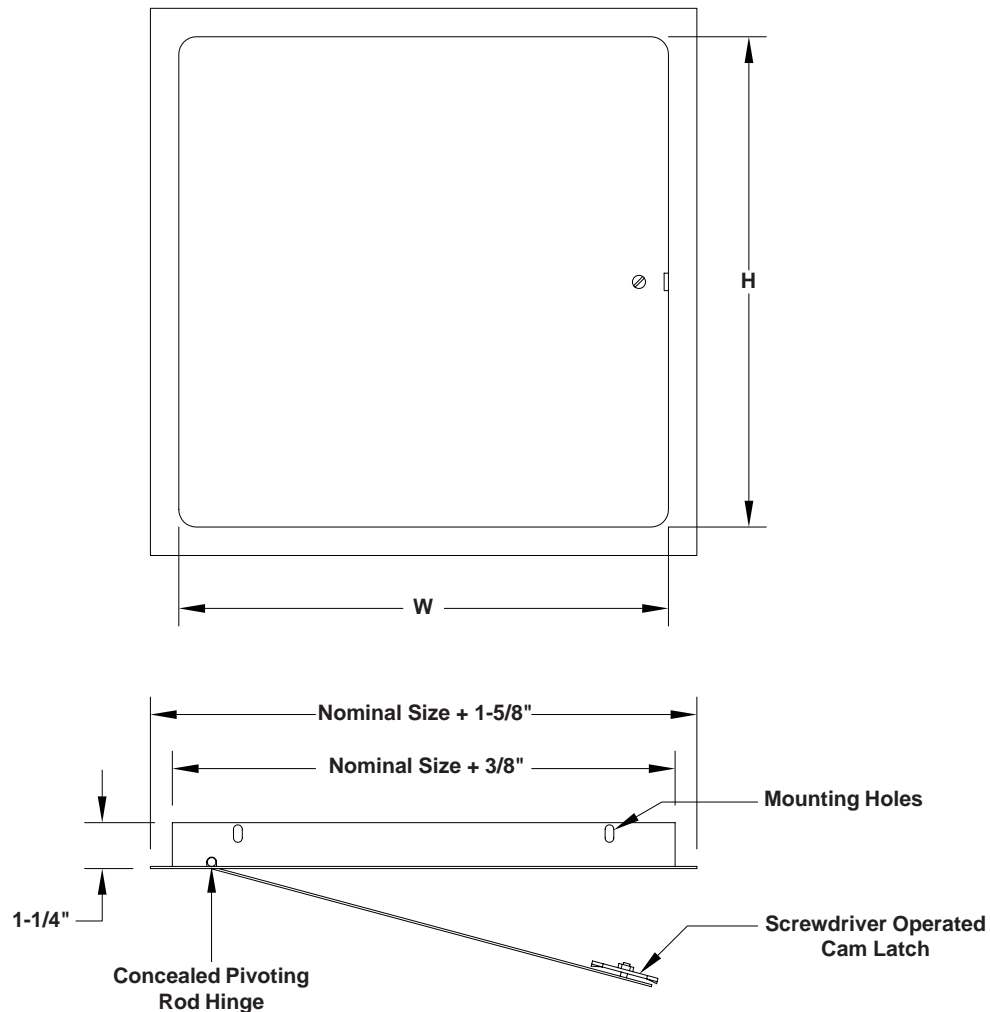
7 STANDARD SIZES

QTY.	DOOR SIZE *		FRAME O.D.		WALL OPENING		No. Of Latches	OPTIONS			
	Width	Height	Width	Height	Width	Height		Allen Key Latch	Cylinder Lock (1 Per Door)	Masonry Anchor Straps	Stainless Steel Construction
	8	8	9-5/8	9-5/8	8-1/2	8-1/2	1				
	10	10	11-5/8	11-5/8	10-1/2	10-1/2	1				
	12	12	13-5/8	13-5/8	12-1/2	12-1/2	1				
	14	14	15-5/8	15-5/8	14-1/2	14-1/2	1				
	16	16	17-5/8	17-5/8	16-1/2	16-1/2	1				
	18	18	19-5/8	19-5/8	18-1/2	18-1/2	3				
	24	24	25-5/8	25-5/8	24-1/2	24-1/2	3				

* Stock door sizes. Other sizes available.

MATERIAL: 16 GA. Galvanized Steel

FINISH: Primer



To maintain KEES' policy of continuous product improvement, we reserve the right to change prices, specifications, ratings or dimensions without notice or obligation.

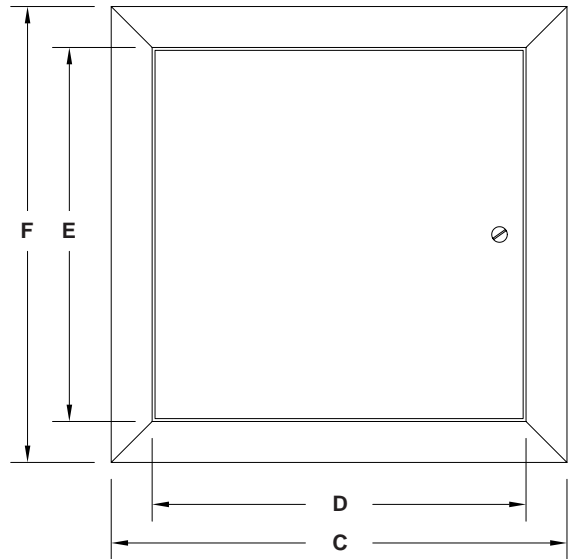
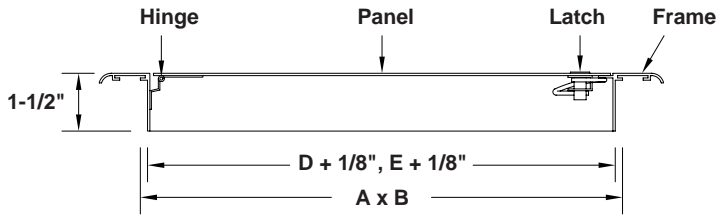
Project		Location	
Engineer			
Architect		Dwg. No.	SD-D
Contractor		Date	06/07

KEES INCORPORATED
 400 S. Industrial Dr. • P.O. Box L
 Elkhart Lake, WI 53020
 Phone: (920) 876-3391
 Fax: (920) 876-3065
 Website: www.kees.com

2/15/2013

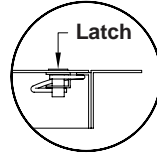
PIANO HINGE SHEET ROCK ACCESS DOORS			
Quantity	Size	Inventory Number	List Price
	12" X 12"	STYLEK12	\$82.00
	14" X 14"	STYLEK14	\$84.00
	18" X 18"	STYLEK18	\$102.00
	24" X 24"	STYLEK24	\$210.00

STYLE "K" ACCESS PANELS



CONSTRUCTION:

- Frame:** .060-6063-T6 Aluminum (Standard)
16 GA. S.S. (Optional)
- Panel:** 14 GA. Galvanealed Steel (Standard)
.080 Alum. (Optional)
14 GA. S.S. (Optional)
- Finish:** Mill
- Latches:** Slot Cam Type (Standard)
Allen Key Cam Type (Optional)
Center Pin Allen Key Tamper Resistant (Optional)
Cylinder Cam Lock (Optional)



OPTIONAL
S.S. Border

NOTE: Hinge Always on "E" Dimension or Height Dimension

Qty.	Nominal Size	Frame Outside Dimension		Wall Opening Size Dimension		No. of Latches	Options	Tag
	D x E	C	F	Dim. A	Dim. B			
	6 x 6	8-5/8	8-5/8	6-3/8	6-3/8	1		
	8 x 8	10-5/8	10-5/8	8-3/8	8-3/8	1		
	10 x 10	12-5/8	12-5/8	10-3/8	10-3/8	1		
	8 x 12	10-5/8	14-5/8	8-3/8	12-3/8	1		
	12 x 12	14-5/8	14-5/8	12-3/8	12-3/8	1		
	10 x 14	12-5/8	16-5/8	10-3/8	14-3/8	1		
	14 x 14	16-5/8	16-5/8	14-3/8	14-3/8	1		
	12 x 16	14-5/8	18-5/8	12-3/8	16-3/8	1		
	16 x 16	18-5/8	18-5/8	16-3/8	16-3/8	1		
	12 x 18	14-5/8	20-5/8	12-3/8	18-3/8	1		
	18 x 18	20-5/8	20-5/8	18-3/8	18-3/8	2		
	16 x 20	18-5/8	22-5/8	16-3/8	20-3/8	2		
	12 x 24	14-5/8	26-5/8	12-3/8	24-3/8	2		
	20 x 24	22-5/8	26-5/8	20-3/8	24-3/8	4		
	24 x 24	26-5/8	26-5/8	24-3/8	24-3/8	4		
	20 x 30	22-5/8	32-5/8	20-3/8	30-3/8	5		
	24 x 30	26-5/8	32-5/8	24-3/8	30-3/8	5		
	30 x 30	32-5/8	32-5/8	30-3/8	30-3/8	5		
	30 x 36	32-5/8	38-5/8	30-3/8	36-3/8	5		
	36 x 36	38-5/8	38-5/8	36-3/8	36-3/8	5		

To maintain KEES' policy of continuous product improvement, we reserve the right to change prices, specifications, ratings or dimensions without notice or obligation.

Project		Location	
Engineer			
Architect		Dwg. No.	SD-K
Contractor		Date	07/05

KEES INCORPORATED
 400 S. Industrial Dr. • P.O. Box L
 Elkhart Lake, WI 53020
 Phone: (920) 876-3391
 Fax: (920) 876-3065
 Website: www.kees.com

2/15/2013

VAV & FAN POWERED BOXES

SECTION 3

VARIABLE AIR VOLUME BOXES			
Quantity	Size	Inventory Number	List Price
	4" Ø (230 MAXIMUM CFM)	LMHS04	\$308.00
	5" Ø (360 MAXIMUM CFM)	LMHS05	\$308.00
	6" Ø (520 MAXIMUM CFM)	LMHS06	\$296.00
	7" Ø (710 MAXIMUM CFM)	LMHS07	\$320.00
	8" Ø (925 MAXIMUM CFM)	LMHS08	\$304.00
	9" Ø (1,200 MAXIMUM CFM)	LMHS09	\$326.00
	10" Ø (1,450 MAXIMUM CFM)	LMHS10	\$316.00
	12" Ø (2,100 MAXIMUM CFM)	LMHS12	\$334.00
	14" Ø (2,900 MAXIMUM CFM)	LMHS14	\$398.00
	16" Ø (3,700 MAXIMUM CFM)	LMHS16	\$420.00

REPLACEMENT CROSS FLOW SENSORS			
Quantity	Size	Inventory Number	List Price
	4" Ø, 5" Ø, & 6" Ø	CFS06	\$80.00
	7" Ø & 8" Ø	CFS08	\$80.00
	9" Ø & 10" Ø	CFS10	\$82.00
	12" Ø	CFS12	\$84.00
	14" Ø	CFS14	\$86.00
	16" Ø	CFS16	\$96.00

ONE ROW HOT WATER COILS			
Quantity	Size	Inventory Number	List Price
	4" Ø, 5" Ø, & 6" Ø (12" X 8")	WC11208	\$90.00
	7" Ø & 8" Ø (12" X 10")	WC11210	\$96.00
	9" Ø & 10" Ø (14" X 12")	WC11412	\$134.00
	12" Ø (16" X 15")	WC11615	\$156.00
	14" Ø (20" X 18")	WC12018	\$188.00
	16" Ø (24" X 18")	WC12418	\$210.00

TWO ROW HOT WATER COILS			
Quantity	Size	Inventory Number	List Price
	4" Ø, 5" Ø, & 6" Ø (12" X 8")	WC21208	\$130.00
	7" Ø & 8" Ø (12" X 10")	WC21210	\$160.00
	9" Ø & 10" Ø (14" X 12")	WC21412	\$190.00
	12" Ø (16" X 15")	WC21615	\$236.00
	14" Ø (20" X 18")	WC22018	\$338.00
	16" Ø (24" X 18")	WC22418	\$374.00

PARALLEL FAN POWERED BOXES			
Quantity	Size	Inventory Number	List Price
	6" Ø (500 NOMINAL CFM / 400 FAN CFM), 115/1	QFV206115	\$1,406.00
	8" Ø (900 NOMINAL CFM / 600 FAN CFM), 115/1	QFV308115	\$1,412.00
	10" Ø (1,400 NOMINAL CFM / 1,050 FAN CFM), 115/1	QFV410115	\$1,468.00
	12" Ø (2,100 NOMINAL CFM / 1,500 FAN CFM), 115/1	QFV512115	\$1,640.00
	14" Ø (2,800 NOMINAL CFM / 1,800 FAN CFM), 115/1	QFV614115	\$1,872.00
	16" Ø (3,700 NOMINAL CFM / 1,800 FAN CFM), 115/1	QFV716115	\$1,986.00
	6" Ø (500 NOMINAL CFM / 400 FAN CFM), 277/1	QFV206277	\$1,406.00
	8" Ø (900 NOMINAL CFM / 600 FAN CFM), 277/1	QFV308277	\$1,412.00
	10" Ø (1,400 NOMINAL CFM / 1,050 FAN CFM), 277/1	QFV410277	\$1,468.00
	12" Ø (2,100 NOMINAL CFM / 1,500 FAN CFM), 277/1	QFV512277	\$1,640.00
	14" Ø (2,800 NOMINAL CFM / 1,800 FAN CFM), 277/1	QFV614277	\$1,872.00
	16" Ø (3,700 NOMINAL CFM / 1,800 FAN CFM), 277/1	QFV716277	\$1,986.00

PNEUMATIC ACTUATORS			
Quantity	Size	Inventory Number	List Price
	1104CNT 11 PNEUMATIC CONTROLLER (AC@COVE	1104CNT	\$190.00
	PNEUMATIC OPERATOR 1104PO	1104PO	\$92.00

TAKEOFFS

SECTION 4

STARTING COLLAR WITHOUT DAMPER BLADE			
Quantity	Size	Inventory Number	List Price
	4" Ø	GST04	\$6.00
	5" Ø	GST05	\$6.00
	6" Ø	GST06	\$6.00
	7" Ø	GST07	\$6.00
	8" Ø	GST08	\$8.00
	9" Ø	GST09	\$8.00
	10" Ø	GST10	\$10.00
	12" Ø	GST12	\$10.00
	14" Ø	GST14	\$12.00
	16" Ø	GST16	\$14.00
	18" Ø	GST18	\$16.00
	20" Ø	GST20	\$16.00

DAMPER BLADE FOR SPIN-IN OR STARTING COLLAR			
Quantity	Size	Inventory Number	List Price
	4" Ø	DA04	\$6.00
	5" Ø	DA05	\$8.00
	6" Ø	DA06	\$8.00
	7" Ø	DA07	\$8.00
	8" Ø	DA08	\$10.00
	9" Ø	DA09	\$12.00
	10" Ø	DA10	\$12.00
	12" Ø	DA12	\$14.00
	14" Ø	DA14	\$14.00
	16" Ø	DA16	\$16.00
	18" Ø	DA18	\$18.00
	20" Ø	DA20	\$20.00

SHEET METAL SPIN-IN WITH DAMPER BLADE			
Quantity	Size	Inventory Number	List Price
	4" Ø	SM6004	\$10.00
	5" Ø	SM6005	\$12.00
	6" Ø	SM6006	\$12.00
	7" Ø	SM6007	\$12.00
	8" Ø	SM6008	\$14.00
	9" Ø	SM6009	\$16.00
	10" Ø	SM6010	\$16.00
	12" Ø	SM6012	\$22.00
	14" Ø	SM6014	\$26.00
	16" Ø	SM6016	\$28.00
	18" Ø	SM6018	\$34.00
	20" Ø	SM6020	\$46.00

1" DUCT BOARD SPIN-IN FITTING WITH DAMPER BLADE			
Quantity	Size	Inventory Number	List Price
	5" Ø	DB005	\$16.00
	6" Ø	DB006	\$14.00
	7" Ø	DB007	\$18.00
	8" Ø	DB008	\$18.00
	9" Ø	DB009	\$26.00
	10" Ø	DB010	\$24.00
	12" Ø	DB012	\$30.00
	14" Ø	DB014	\$38.00
	16" Ø	DB016	\$44.00
	18" Ø	DB018	Call For Pricing
	20" Ø	DB020	Call For Pricing

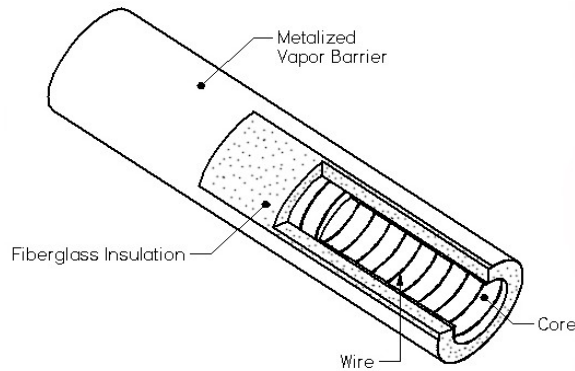
HIGH EFFICIENCY TAKE-OFF WITH DAMPER BLADE			
Quantity	Size	Inventory Number	List Price
	6" Ø	HETTD0626	\$38.00
	7" Ø	HETTD0726	\$46.00
	8" Ø	HETTD0826	\$46.00
	9" Ø	HETTD0926	\$48.00
	10" Ø	HETTD1026	\$48.00
	12" Ø	HETTD1226	\$66.00
	14" Ø	HETTD1426	\$78.00
	16" Ø	HETD16	\$116.00
	18" Ø	HETD18	\$132.00
	20" Ø	HETD20	\$152.00

FLEXIBLE DUCTWORK & ACCESSORIES

SECTION 5

R-6.0 FLEXIBLE DUCT WORK (SILVER OUTER LINING)			
Quantity	Size	Inventory Number	List Price
	6" Ø X 25'	QF700625	\$54.00
	7" Ø X 25'	QF700725	\$56.00
	8" Ø X 25'	QF700825	\$60.00
	9" Ø X 25'	QF700925	\$66.00
	10" Ø X 25'	QF701025	\$74.00
	12" Ø X 25'	QF701225	\$92.00
	14" Ø X 25'	QF701425	\$110.00
	16" Ø X 25'	QF701625	\$130.00
	18" Ø X 25'	QF701825	\$154.00
	20" Ø X 25'	QF702025	\$186.00

SUBMITTAL DRAWING



VAPOR BARRIER

- The Quietflex Rip Stop Silver Jacket Flex Duct has a metalized polyester-vapor barrier with a special "rip stop" scrim reinforcement.
- Vapor Transmission: at or below 0.05 perms

FIBERGLASS

- R4.2, R6 and R8 certified by ETL and the Air Diffusion Council using ASTM C-518 at installed thickness of insulation
- Made of formaldehyde free materials

CORE

- Two layers of film encapsulate a galvanized wire helix
- Rated positive pressure is 10" W.C. and negative pressure is 1/2" W.C. per the UL 181 standard
- Rated maximum air velocity is 6000 FPM

SURFACE BURNING CHARACTERISTICS

- Flame spread: Less than 25
- Smoke developed: Less than 50

OPERATING TEMPERATURE RANGE

- -20 deg F to 180 deg F - Continuous
- -20 deg F to 200 deg F - Intermittent

CONFIGURATIONS

- Diameters available: 3"-10", 12", 14", 16", 18", 20", 22"
- Lengths available: 25 ft

APPROVALS

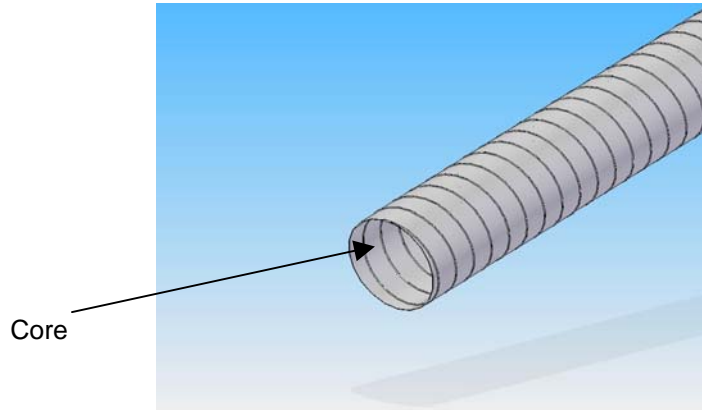
- ETL Listed/Approved to UL 181 Standard
- NFPA standards 90A and 90B
- HUD/FHA standards 515.2.1 Paragraph B
- Meets most federal, state and local codes and standards

Made in the USA

Job Name		Submitter:		Date:	
Location				Class 1 Insulated Flexible Air Duct Metalized Polyester vapor barrier/ Silver jacket QFSD-002-01	
Contractor					
Engineer					
Architect					

UNISULATED FLEXIBLE DUCT WORK			
Quantity	Size	Inventory Number	List Price
	4" Ø X 25'	QFU04	\$16.00
	5" Ø X 25'	QFU05	\$20.00
	6" Ø X 25'	QFU06	\$20.00
	8" Ø X 25'	QFU08	\$26.00
	10" Ø X 25'	QFU10	\$32.00
	12" Ø X 25'	QFU12	\$40.00

SUBMITTAL DRAWING



CORE

- Two layers of film encapsulate a galvanized wire helix
- Rated positive pressure is 10" W.C. and negative pressure is 1/2" W.C. per the UL 181 standard
- Rated maximum air velocity is 6000 FPM

SURFACE BURNING CHARACTERISTICS

- Flame spread: Less than 25
- Smoke developed: Less than 50

OPERATING TEMPERATURE RANGE

- -20 deg F to 180 deg F - Continuous
- -20 deg F to 200 deg F - Intermittent

CONFIGURATIONS

- Diameters available: 4"-10", 12", 14", 16", 18" and 20"
- Lengths available: 25 ft

APPROVALS

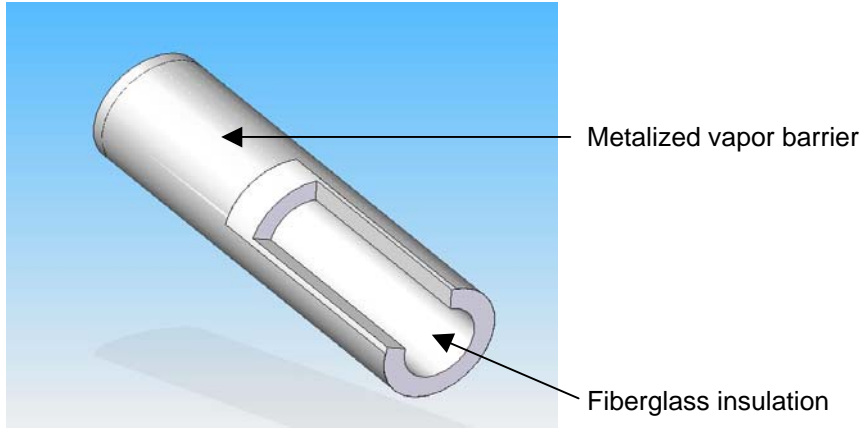
- ETL Listed/Approved to UL 181 Standard
- NFPA standards 90A and 90B
- Meets most federal, state and local codes and standards

Made in the USA

Job Name		Submitter:		Date:	
Location				Class 1 Uninsulated Air Connector	
Contractor					
Engineer					
Architect					
				QFSD-007-01	

R-6.0 INSULATED PIPE SLEEVE (SILVER OUTER LINING)			
Quantity	Size	Inventory Number	List Price
	6" Ø X 25'	QFSS06	\$16.00
	8" Ø X 25'	QFSS08	\$18.00
	10" Ø X 25'	QFSS10	\$22.00
	12" Ø X 25'	QFSS12	\$28.00
	14" Ø X 25'	QFSS14	\$36.00

SUBMITTAL DRAWING



VAPOR BARRIER

- The Quietflex Rip Stop Silver Jacket has a metalized polyester-vapor barrier with a special "rip stop" scrim reinforcement.
- Vapor Transmission: at or below 0.05 perms

FIBERGLASS

- R4.2, R6 and R8 certified by ETL and the Air Diffusion Council using ASTM C-518 at installed thickness of insulation
- Made of formaldehyde free materials

SURFACE BURNING CHARACTERISTICS

- Flame spread: Less than 25
- Smoke developed: Less than 50

OPERATING TEMPERATURE RANGE

- -20 deg F to 180 deg F - Continuous
- -20 deg F to 200 deg F - Intermittent

CONFIGURATIONS

- Diameters available: 4"-10", 12", 14", 16"
- Lengths available: 5 ft

APPROVALS

- Conforms to ASTM E84
- NFPA standards 90A and 90B
- HUD/FHA standards 515.2.1 Paragraph B
- Meets most federal, state and local codes and standards

Made in the USA


Job Name		Submitter:		Date:	
Location				Metalized polyester vapor barrier/ silver jacket sleeve	
Contractor					
Engineer					
Architect					
				QFSD-006-01	

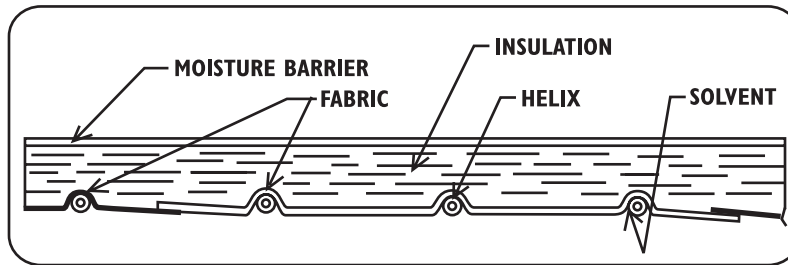
R-8.0 FLEXIBLE DUCT WORK (BLACK OUTER LINING)			
Quantity	Size	Inventory Number	List Price
	6" Ø X 25'	FLEGKM06	\$92.00
	8" Ø X 25'	FLEGKM08	\$108.00
	10" Ø X 25'	FLEGKM10	\$126.00
	12" Ø X 25'	FLEGKM12	\$148.00
	14" Ø X 25'	FLEGKM14	\$172.00
	16" Ø X 25'	FLEGKM16	\$200.00



SUBMITTAL SHEET for Flexible Duct

G-KM Insulated Flexible Air Duct for Environmental Air Handling Systems

CODES/STANDARDS		Listed and labeled by Underwriters' Laboratories, Inc., as a Class I Air Duct, Standard 181. It complies with the latest NFPA Bulletins 90A and 90B. Meets FHA and other U.S. government agency standards. Flame spread: not over 25. Smoke developed: not over 50.												
FABRIC TYPE		Acoustically rated black CPE material.												
INSULATION		1 1/2", .76 lb. minimum density fiberglass blanket.												
EXTERIOR FACING AND VAPOR BARRIER		Polyolefin film, flame resistant.												
THERMAL PERFORMANCE R-VALUE		 <div style="border: 1px solid black; padding: 2px; font-size: 8px;"> ALSO CLASSIFIED BY UNDERWRITERS LABORATORIES, INC.® IN ACCORDANCE WITH ADC FLEXIBLE DUCT PERFORMANCE AND INSTALLATION STANDARDS (1991) USING ASTM C-518 (1991) AT INSTALLED WALL THICKNESS ON FLAT INSULATION ONLY R-4.2 </div>												
VAPOR BARRIER PERMEANCE		.1 Perm per ASTM. Method E96, Procedure A.												
TEMPERATURE RANGE		- 20° F to 250° F.												
SIZES, ID		3	4	5	6	7	8	9	10	12	14	16	18	20
LENGTH (feet)		25 ft.												
INSIDE BEND RADIUS (inches)		3	4	5	6	7	8	9	10	12	14	16	18	20
STEEL WIRE		Coated spring steel wire helix.												
RATED VELOCITY		5000 fpm.												
MAX RATED PRESSURE (inches water column)	POSITIVE	6 inches (3-16 in. dia.) 4 inches (18-20 in. dia.)												
	NEGATIVE	1 inch (4-12 in. dia.) 1/2 inch (14-20 in. dia.)												



JOB _____ LOCATION _____ ENGINEER _____ CONTRACTOR _____ BY _____ TITLE _____ DATE _____	P.O. NO. _____ JOB NO. _____ REPRESENTATIVE _____ BY _____ TITLE _____ DATE _____
Certified Correct	Approved for Construction

THERMAFLEX® – A Division of Flexible Technologies, Inc., a subsidiary of Smiths Group plc.
 Customer Service Departments:
 • 528 Carwellyn Rd. • Abbeville, SC 29620 • 864-459-5441
 • 9101 Perkins St. • Pico Rivera, CA 90660 • 562-801-1634
 • 1040A Jayson Court • Mississauga, Ontario L4W 2V5 • 905-602-9660



R-6.0 FLEXIBLE DUCT WORK (SILVER OUTER LINING)			
Quantity	Size	Inventory Number	List Price
	6" Ø X 25'	FLEMKE06	\$104.00
	8" Ø X 25'	FLEMKE08	\$122.00
	10" Ø X 25'	FLEMKE10	\$148.00
	12" Ø X 25'	FLEMKE12	\$176.00
	14" Ø X 25'	FLEMKE14	\$206.00
	16" Ø X 25'	FLEMKE16	\$238.00



M-KE

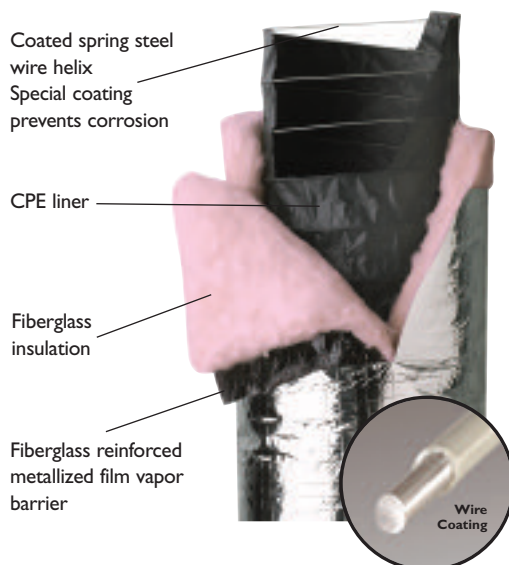
Insulated Acoustical Flexible
Air Duct for All Pressure Systems

APPLICATIONS and ENGINEERING DATA:

Nominal Inside Diameter (inches):	4	5	6	7	8	9	10	12	14	16	18	20	
Length (feet):	25	25	25	25	25	25	25	25	25	25	25	25	
Inside Bend Radius (inches):	4	5	6	7	8	9	10	12	14	16	18	20	
Operating Pressure (inches water column):	Positive = 10 inches (4-12 in. ID) 6 inches (14-16 in. ID) 4 inches (18-20 in. ID)												
	Negative = 1 inch (4-12 in. ID) 1/2 inch (14-20 in. ID)												
Operating Temperature Range (°F):	Minimum = -20						Maximum = 250						
Velocity (feet per minute):	5000												
R-Value:	4.2, 6.0, 8.0												
Surface Burning Characteristics:	Max. Flame Spread = 25						Max. Smoke Developed = 50						
Oxygen Index Ratings:	CPE Core = 3.13						Metallized Jacket = 45.7						
Vapor Transmission Rating (U.S. Perm):	0.05												

Construction and Materials:

CPE duct liner is permanently bonded to a coated spring steel wire helix, also supporting a blanket of fiberglass insulation. Vapor barrier is an outer jacket of fiberglass reinforced metallized film laminate.



Suggested Specification:

Flexible duct for connections between _____ and _____ shall be Thermaflex M-KE air duct Listed by Underwriters Laboratories, Inc., under UL Standard 181 as a Class I flexible air duct and complying with NFPA Standards 90A and 90B. Duct shall be factory made and composed of: a CPE liner duct permanently bonded to a coated spring steel wire helix and supporting a fiberglass insulating blanket. Low permeability outer vapor barrier of fiberglass reinforced film laminate shall complete the composite.

10 Year Warranty:

Thermaflex warrants that all insulated and non-insulated products will be free from defects in materials and factory workmanship for a period of ten years from the date of manufacture. This warranty covers the flexible duct, materials and labor. This warranty applies only to ducts properly installed in accordance to Thermaflex's written installation instructions and under conditions specified in published performance data. Thermaflex shall not be liable to buyer or any third party for any special, secondary, incidental or consequential damages however arising.



FLEXIBLE DUCT ZIP TIE STRAPS			
Quantity	Size	Inventory Number	List Price
	36" LONG (4" Ø TO 10" Ø)	L-36TB	\$0.68
	48" LONG (12" Ø TO 20" Ø)	L-48TB	\$1.08
	TIE STRAP TENSIONING TOOL	TY6	\$102.00

GRILLES, REGISTERS, & DIFFUSERS

SECTION 6

LAY-IN 3 CONE LOUVERED FACE STEP DOWN DIFFUSER			
Quantity	Size	Inventory Number	List Price
	6" Ø, 12" X 12" PANEL	EPL1206	\$42.00
	8" Ø, 12" X 12" PANEL	EPL1208	\$42.00
	6" Ø, 24" X 24" PANEL	EPL2406	\$54.00
	8" Ø, 24" X 24" PANEL	EPL2408	\$54.00
	10" Ø, 24" X 24" PANEL	EPL2410	\$54.00
	12" Ø, 24" X 24" PANEL	EPL2412	\$54.00
	14" Ø, 24" X 24" PANEL	EPL2414	\$54.00

LAY-IN 3 CONE LOUVERED FACE SETP DOWN DIFFUSER WITH DEFLECTOR TAPS			
Quantity	Size	Inventory Number	List Price
	6" Ø, 24" X 24" PANEL	EPLA2406	\$86.00
	8" Ø, 24" X 24" PANEL	EPLA2408	\$86.00
	10" Ø, 24" X 24" PANEL	EPLA2410	\$86.00
	12" Ø, 24" X 24" PANEL	EPLA2412	\$86.00
	14" Ø, 24" X 24" PANEL	EPLA2414	\$86.00

LAY-IN 4 CONE LOUVERED FACE SETP DOWN DIFFUSER			
Quantity	Size	Inventory Number	List Price
	6" Ø, 24" X 24" PANEL	14002406	\$72.00
	8" Ø, 24" X 24" PANEL	14002408	\$72.00
	10" Ø, 24" X 24" PANEL	14002410	\$72.00
	12" Ø, 24" X 24" PANEL	14002412	\$72.00
	14" Ø, 24" X 24" PANEL	14002414	\$72.00

LAY-IN 4 CONE LOUVERED FACE SETP DOWN DIFFUSER WITH DEFLECTOR TAPS			
Quantity	Size	Inventory Number	List Price
	6" Ø, 24" X 24" PANEL	1400A2406	\$102.00
	8" Ø, 24" X 24" PANEL	1400A2408	\$102.00
	10" Ø, 24" X 24" PANEL	1400A2410	\$102.00
	12" Ø, 24" X 24" PANEL	1400A2412	\$102.00
	14" Ø, 24" X 24" PANEL	1400A2414	\$102.00

ROUND RADIAL FAN BLADE TYPE DAMPERS			
Quantity	Size	Inventory Number	List Price
	6" Ø	PRN10006	\$32.00
	8" Ø	PRN10008	\$34.00
	10" Ø	PRN10010	\$34.00
	12" Ø	PRN10012	\$36.00
	14" Ø	PRN10014	\$50.00
	16" Ø	PRN10016	\$70.00
	18" Ø	PRN10018	\$70.00

SURFACE MOUNT LOUVERED FLUSH FACE SINGE WAY DEFLECTION DIFFUSER			
Quantity	Size	Inventory Number	List Price
	6" X 6", 11" X 11" PANEL	SH10606F21	\$42.00
	9" X 9", 14" X 14" PANEL	SH10909F21	\$48.00
	12" X 12", 17" X 17" PANEL	SH11212F21	\$72.00
	15" X 15", 20" X 20" PANEL	SH11515F21	\$72.00
	18" X 18", 23" X 23" PANEL	SH11818F21	\$114.00
	21" X 21", 26" X 26" PANEL	SH12121F21	\$156.00

SURFACE MOUNT LOUVERED FLUSH FACE TWO WAY DEFLECTION DIFFUSER			
Quantity	Size	Inventory Number	List Price
	6" X 6", 11" X 11" PANEL	SH20606F21	\$42.00
	9" X 9", 14" X 14" PANEL	SH20909F21	\$48.00
	12" X 12", 17" X 17" PANEL	SH21212F21	\$72.00
	15" X 15", 20" X 20" PANEL	SH21515F21	\$92.00
	18" X 18", 23" X 23" PANEL	SH21818F21	\$114.00
	21" X 21", 26" X 26" PANEL	SH22121F21	\$156.00

SURFACE MOUNT LOUVERED FLUSH FACE TWO WAY DIAGONAL DEFLECTION DIFFUSER			
Quantity	Size	Inventory Number	List Price
	6" X 6", 11" X 11" PANEL	SHD20606F21	\$42.00
	9" X 9", 14" X 14" PANEL	SHD20909F21	\$48.00
	12" X 12", 17" X 17" PANEL	SHD21212F21	\$72.00
	15" X 15", 20" X 20" PANEL	SHD21515F21	\$92.00
	18" X 18", 23" X 23" PANEL	SHD21818F21	\$114.00
	21" X 21", 26" X 26" PANEL	SHD22121F21	\$202.00

SURFACE MOUNT LOUVERED FLUSH FACE THREE WAY DEFLECTION DIFFUSER			
Quantity	Size	Inventory Number	List Price
	6" X 6", 11" X 11" PANEL	SH30606F21	\$42.00
	9" X 9", 14" X 14" PANEL	SH30909F21	\$48.00
	12" X 12", 17" X 17" PANEL	SH31212F21	\$72.00
	15" X 15", 20" X 20" PANEL	SH31515F21	\$92.00
	18" X 18", 23" X 23" PANEL	SH31818F21	\$114.00
	21" X 21", 26" X 26" PANEL	SH32121F21	\$156.00

SURFACE MOUNT LOUVERED FLUSH FACE FOUR WAY DEFLECTION DIFFUSER			
Quantity	Size	Inventory Number	List Price
	6" X 6", 11" X 11" PANEL	SH40606F21	\$42.00
	9" X 9", 14" X 14" PANEL	SH40909F21	\$48.00
	12" X 12", 17" X 17" PANEL	SH41212F21	\$72.00
	15" X 15", 20" X 20" PANEL	SH41515F21	\$92.00
	18" X 18", 23" X 23" PANEL	SH41818F21	\$114.00
	21" X 21", 26" X 26" PANEL	SH42121F21	\$138.00
	24" X 24", 29" X 29" PANEL	SH42424F21	\$224.00

LAY-IN LOUVERED FLUSH FACE FOUR WAY DEFLECTION DIFFUSER			
Quantity	Size	Inventory Number	List Price
	6" X 6", 24" X 24" PANEL	SH40606F23	\$62.00
	9" X 9", 24" X 24" PANEL	SH40909F23	\$68.00
	12" X 12", 24" X 24" PANEL	SH41212F23	\$98.00
	15" X 15", 24" X 24" PANEL	SH41515F23	\$110.00
	18" X 18", 24" X 24" PANEL	SH41818F23	\$138.00
	21" X 21", 24" X 24" PANEL	SH42121F23	\$156.00

OPPOSED BLADE DAMPER FOR LOUVERED FLUSH FACE DIFFUSER			
Quantity	Size	Inventory Number	List Price
	6" X 6"	AG950606	\$28.00
	9" X 9"	AG950909	\$34.00
	12" X 12"	AG951212	\$42.00
	15" X 15"	AG951515	\$56.00
	18" X 18"	AG951818	\$98.00
	21" X 21"	AG952121	\$124.00
	24" X 24"	AG952424	\$132.00

LAY-IN PERFORATED FACE DIFFUSER			
Quantity	Size	Inventory Number	List Price
	6" X 6", 24" X 24" PANEL	62040606	\$78.00
	8" X 8", 24" X 24" PANEL	62040808	\$78.00
	10" X 10", 24" X 24" PANEL	62041010	\$78.00
	12" X 12", 24" X 24" PANEL	62041212	\$78.00
	14" X 14", 24" X 24" PANEL	62041414	\$78.00
	16" X 16", 24" X 24" PANEL	62041616	\$78.00

LAY-IN PLAQUE ARCHITECTURAL DIFFUSER			
Quantity	Size	Inventory Number	List Price
	6" Ø, 24" X 24" PANEL	PGL06	\$68.00
	8" Ø, 24" X 24" PANEL	PGL08	\$68.00
	10" Ø, 24" X 24" PANEL	PGL10	\$68.00
	12" Ø, 24" X 24" PANEL	PGL12	\$68.00
	14" Ø, 24" X 24" PANEL	PGL14	\$68.00
	15" Ø, 24" X 24" PANEL	PGL15	\$68.00

SURFACE 4 CONE LOUVERED FACE SETP DOWN CIRCULAR DIFFUSER			
Quantity	Size	Inventory Number	List Price
	6" Ø	1606	\$18.00
	8" Ø	1608	\$20.00
	10" Ø	1610	\$32.00
	12" Ø	1612	\$34.00
	14" Ø	1614	\$46.00
	18" Ø	1618	\$126.00

SURFACE 3 CONE LOUVERED FACE SETP DOWN CIRCULAR DIFFUSER			
Quantity	Size	Inventory Number	List Price
	6" Ø	RM106	\$92.00
	8" Ø	RM108	\$102.00
	10" Ø	RM110	\$110.00
	12" Ø	RM112	\$124.00
	14" Ø	RM114	\$166.00
	16" Ø	RM116	\$198.00
	18" Ø	RM118	\$232.00

SLOT DIFFUSER			
Quantity	Size	Inventory Number	List Price
	1 SLOT, 24" LONG, (40-100 CFM)	SLAD0124	\$58.00
	2 SLOT, 24" LONG, (80-200 CFM)	SLAD0224	\$74.00
	3 SLOT, 24" LONG, (120-300 CFM)	SLAD0324	\$98.00
	4 SLOT, 24" LONG, (160-400 CFM)	SLAD0424	\$122.00
	1 SLOT, 48" LONG, (80-200 CFM)	SLAD0148	\$116.00
	2 SLOT, 48" LONG, (160-425 CFM)	SLAD0248	\$150.00
	3 SLOT, 48" LONG, (240-550 CFM)	SLAD0348	\$196.00
	4 SLOT, 48" LONG, (320-800 CFM)	SLAD0448	\$242.00

SURFACE MOUNT END CAPS			
Quantity	Size	Inventory Number	List Price
	1 SLOT	SLAD100FLEC01	\$12.00
	2 SLOT	SLAD100FLEC02	\$12.00
	3 SLOT	SLAD100FLEC03	\$14.00
	4 SLOT	SLAD100FLEC04	\$14.00

SLOT DIFFUSER INSULATED PLENUM			
Quantity	Size	Inventory Number	List Price
	1 SLOT, 24" LONG, 6" Ø NECK (40-100 CFM)	PLEN0124	\$50.00
	2 SLOT, 24" LONG, 8" Ø NECK (80-200 CFM)	PLEN0224	\$56.00
	3 SLOT, 24" LONG, 8" Ø NECK (120-300 CFM)	PLEN0324	\$60.00
	4 SLOT, 24" LONG, 10" Ø NECK (160-400 CFM)	PLEN0424	\$80.00
	1 SLOT, 48" LONG, 8" Ø NECK (80-200 CFM)	PLEN0148	\$70.00
	2 SLOT, 48" LONG, 10" Ø NECK (160-425 CFM)	PLEN0248	\$94.00
	3 SLOT, 48" LONG, 12" Ø NECK (240-550 CFM)	PLEN0348	\$102.00
	4 SLOT, 48" LONG, 12" Ø NECK (320-800 CFM)	PLEN0448	\$112.00

LAY-IN PERFORATED FACE RETURN GRILLE			
Quantity	Size	Inventory Number	List Price
	24" X 12" PANEL	67902412	\$26.00
	24" X 24" PANEL	67902424	\$34.00
	24" X 48" PANEL	67902448	\$54.00

LAY-IN PERFORATED FACE RETURN GRILLE			
Quantity	Size	Inventory Number	List Price
	6" Ø, 24" X 24" PANEL	669006	\$54.00
	8" Ø, 24" X 24" PANEL	669008	\$54.00
	10" Ø, 24" X 24" PANEL	669010	\$54.00
	12" Ø, 24" X 24" PANEL	669012	\$54.00
	14" Ø, 24" X 24" PANEL	669014	\$54.00
	16" Ø, 24" X 24" PANEL	669016	\$54.00

LAY-IN PERFORATED FACE RETURN GRILLE			
Quantity	Size	Inventory Number	List Price
	22" X 10", 24" X 12" PANEL	649024122210	\$60.00
	22" X 22", 24" X 24" PANEL	649024242222	\$58.00
	46" X 22", 48" X 24" PANEL	649048244622	\$102.00

SURFACE MOUNT PERFORATED FACE RETURN GRILLE			
Quantity	Size	Inventory Number	List Price
	6" X 6"	S80P0606	\$22.00
	8" X 8"	S80P0808	\$24.00
	10" X 10"	S80P1010	\$28.00
	12" X 12"	S80P1212	\$30.00
	14" X 14"	S80P1414	\$30.00
	16" X 16"	S80P1616	\$38.00
	18" X 18"	S80P1818	\$56.00
	20" X 20"	S80P2020	\$66.00
	22" X 10"	S80P2210	\$42.00
	22" X 22"	S80P2222	\$80.00
	24" X 12"	S80P2412	\$50.00
	24" X 24"	S80P2424	\$90.00

LAY-IN ALUMINUM EGGCRATE RETURN GRILLE			
Quantity	Size	Inventory Number	List Price
	6" X 6", 24" X 24" PANEL	GC524240606F23	\$72.00
	8" X 8", 24" X 24" PANEL	GC524240808F23	\$68.00
	10" X 10", 24" X 24" PANEL	GC524241010F23	\$72.00
	12" X 12", 24" X 24" PANEL	GC524241212F23	\$78.00
	14" X 14", 24" X 24" PANEL	GC524241414F23	\$84.00
	16" X 16", 24" X 24" PANEL	GC524241616F23	\$90.00
	22" X 10", 24" X 12" PANEL	GC524122210F23	\$52.00
	22" X 22", 24" X 24" PANEL	GC524242222F23	\$92.00
	46" X 22", 48" X 24" PANEL	GC548244622F23	\$218.00

SURFACE MOUNT ALUMINUM EGGCRATE RETURN GRILLE			
Quantity	Size	Inventory Number	List Price
	6" X 6"	GC50606F22	\$32.00
	8" X 8"	GC50808F22	\$32.00
	10" X 10"	GC51010F22	\$36.00
	12" X 12"	GC51212F22	\$40.00
	14" X 14"	GC51414F22	\$44.00
	16" X 16"	GC51616F22	\$62.00
	18" X 18"	GC51818F22	\$72.00
	20" X 20"	GC52020F22	\$84.00
	22" X 10"	GC52210F22	\$52.00
	22" X 22"	GC52222F22	\$94.00
	24" X 12"	GC52412F22	\$64.00
	24" X 24"	GC52424F22	\$116.00

SURFACE MOUNT DOUBLE DEFLECTION SUPPLY REGISTER WITH OPPOSED BLADE DAMPER			
Quantity	Size	Inventory Number	List Price
	8" X 4"	880V0804	\$42.00
	8" X 6"	880V0806	\$44.00
	10" X 4"	880V1004	\$44.00
	10" X 6"	880V1006	\$52.00
	10" X 8"	880V1008	\$54.00
	10" X 10"	880V1010	\$58.00
	12" X 4"	880V1204	\$50.00
	12" X 6"	880V1206	\$56.00
	12" X 8"	880V1208	\$58.00
	12" X 10"	880V1210	\$66.00
	12" X 12"	880V1212	\$72.00
	14" X 6"	880V1406	\$58.00
	14" X 8"	880V1408	\$62.00
	14" X 10"	880V1410	\$72.00
	14" X 12"	880V1412	\$78.00
	14" X 14"	880V1414	\$88.00
	16" X 6"	880V1606	\$62.00
	16" X 8"	880V1608	\$70.00
	16" X 10"	880V1610	\$78.00
	16" X 12"	880V1612	\$88.00
	18" X 4"	880V1804	\$62.00
	18" X 6"	880V1806	\$68.00
	18" X 8"	880V1808	\$76.00
	18" X 10"	880V1810	\$84.00
	18" X 12"	880V1812	\$94.00
	20" X 6"	880V2006	\$70.00
	20" X 8"	880V2008	\$82.00
	20" X 10"	880V2010	\$88.00
	20" X 12"	880V2012	\$102.00
	22" X 8"	880V2208	\$84.00
	24" X 6"	880V2406	\$82.00
	24" X 8"	880V2408	\$90.00
	24" X 10"	880V2410	\$104.00
	24" X 12"	880V2412	\$120.00
	30" X 6"	880V3006	\$98.00
	30" X 8"	880V3008	\$116.00
	30" X 10"	880V3010	\$132.00
	30" X 12"	880V3012	\$146.00
	36" X 6"	880V3606	\$124.00
	36" X 12"	880V3612	\$188.00

LAY-IN SINGLE 45 DEGREE HORIZONTAL BLADE RETURN GRILLE			
Quantity	Size	Inventory Number	List Price
	22" X 10", 24" X 12" PANEL	S80H2210NSH	\$42.00
	22" X 22", 24" X 24" PANEL	S80H2222NSH	\$80.00
	46" X 22", 48" X 24" PANEL	S80H4622NSH	\$168.00

SURFACE MOUNT SINGLE 45 DEGREE HORIZONTAL BLADE RETURN GRILLE			
Quantity	Size	Inventory Number	List Price
	6" X 4"	S80H0604	\$20.00
	6" X 6"	S80H0606	\$24.00
	8" X 4"	S80H0804	\$20.00
	8" X 6"	S80H0806	\$24.00
	8" X 8"	S80H0808	\$26.00
	10" X 4"	S80H1004	\$20.00
	10" X 6"	S80H1006	\$26.00
	10" X 8"	S80H1008	\$28.00
	10" X 10"	S80H1010	\$30.00
	12" X 4"	S80H1204	\$26.00
	12" X 6"	S80H1206	\$28.00
	12" X 8"	S80H1208	\$30.00
	12" X 10"	S80H1210	\$30.00
	12" X 12"	S80H1212	\$32.00
	14" X 6"	S80H1406	\$30.00
	14" X 8"	S80H1408	\$30.00
	14" X 10"	S80H1410	\$32.00
	14" X 14"	S80H1414	\$38.00
	16" X 6"	S80H1606	\$30.00
	16" X 8"	S80H1608	\$32.00
	16" X 10"	S80H1610	\$36.00
	16" X 12"	S80H1612	\$38.00
	16" X 14"	S80H1614	\$42.00
	16" X 16"	S80H1616	\$44.00
	18" X 6"	S80H1806	\$32.00
	18" X 8"	S80H1808	\$36.00
	18" X 10"	S80H1810	\$38.00
	18" X 12"	S80H1812	\$40.00
	18" X 18"	S80H1818	\$40.00
	20" X 8"	S80H2008	\$36.00
	20" X 10"	S80H2010	\$40.00
	20" X 12"	S80H2012	\$42.00
	20" X 14"	S80H2014	\$48.00
	20" X 20"	S80H2020	\$68.00
	22" X 22"	S80H2222	\$80.00
	24" X 8"	S80H2408	\$42.00
	24" X 10"	S80H2410	\$44.00
	24" X 12"	S80H2412	\$48.00
	24" X 16"	S80H2416	\$60.00
	24" X 18"	S80H2418	\$70.00
	24" X 24"	S80H2424	\$94.00
	26" X 12"	S80H2612	\$52.00
	30" X 12"	S80H3012	\$60.00
	30" X 14"	S80H3014	\$70.00
	30" X 16"	S80H3016	\$76.00
	30" X 18"	S80H3018	\$88.00
	36" X 12"	S80H3612	\$74.00
	36" X 18"	S80H3618	\$104.00
	36" X 24"	S80H3624	\$146.00
	48" X 24"	S80H4824	\$192.00

SURFACE MOUNT SINGLE 45 DEGREE HORIZONTAL BLADE RETURN GRILLE WITH OPPOSED BLADE DAMPER			
Quantity	Size	Inventory Number	List Price
	6" X 6"	S80H0606OBD	\$36.00
	8" X 8"	S80H0808OBD	\$40.00
	10" X 10"	S80H1010OBD	\$46.00
	12" X 12"	S80H1212OBD	\$56.00

LAY-IN / SURFACE MOUNT SINGLE 45 DEGREE HORIZONTAL BLADE FILTERED RETURN GRILLE			
Quantity	Size	Inventory Number	List Price
	20" X 20", 24" X 24" PANEL	GFXFCTB2020	\$156.00
	20" X 20" X 1" PLEATED FILTER	20201PF	\$8.00

DOUBLE FLANGE NON VISION DOOR GRILLE			
Quantity	Size	Inventory Number	List Price
	12" X 6"	600A1206	\$96.00
	12" X 12"	600A1212	\$128.00
	18" X 12"	600A1812	\$170.00
	24" X 12"	600A2412	\$222.00
	24" X 18"	600A2418	\$306.00
	24" X 24"	600A2424	\$428.00

RESIDENTIAL FLOOR REGISTERS			
Quantity	Size	Inventory Number	List Price
	10" X 2", WHITE	421102W	\$10.00
	10" X 4", WHITE	421104W	\$12.00
	10" X 4", BROWN	421104B	\$12.00
	10" X 2", BROWN TOE KICK TYPE	420102	\$10.00

RESIDENTIAL FLOOR / CEILING REGISTERS WITH SCREW HOLES			
Quantity	Size	Inventory Number	List Price
	10" X 4", WHITE	661104W	\$14.00

RESIDENTIAL WALL RETURN GRILLES			
Quantity	Size	Inventory Number	List Price
	14" X 6", WHITE	674146W	\$14.00
	24" X 6", WHITE	674246W	\$22.00
	24" X 8", WHITE	674248W	\$28.00
	30" X 6", WHITE	674306W	\$24.00
	30" X 8", WHITE	674308W	\$32.00

LINEAR ALUMINUM BAR FLOOR GRILLE			
Quantity	Size	Inventory Number	List Price
	8" X 4"	LFD0804	\$40.00
	10" X 4"	LFD1004	\$44.00
	10" X 6"	LFD1006	\$58.00
	12" X 4"	LFD1204	\$44.00
	12" X 6"	LFD1206	\$58.00
	14" X 4"	LFD1404	\$52.00
	14" X 6"	LFD1406	\$68.00
	16" X 4"	LFD1604	\$60.00
	16" X 6"	LFD1606	\$76.00
	18" X 4"	LFD1804	\$66.00
	18" X 6"	LFD1806	\$86.00
	20" X 4"	LFD2004	\$74.00
	20" X 6"	LFD2006	\$96.00
	24" X 4"	LFD2404	\$88.00
	24" X 6"	LFD2406	\$114.00
	30" X 4"	LFD3004	\$110.00
	30" X 6"	LFD3006	\$142.00
	36" X 4"	LFD3604	\$132.00
	36" X 6"	LFD3606	\$170.00

OPPOSED BLADE DAMPER FOR LINEAR ALUMINUM BAR FLOOR GRILLE			
Quantity	Size	Inventory Number	List Price
	8" X 4"	ROBD0804	\$22.00
	10" X 4"	ROBD1004	\$22.00
	10" X 6"	ROBD1006	\$26.00
	12" X 4"	ROBD1204	\$24.00
	12" X 6"	ROBD1206	\$28.00
	14" X 4"	ROBD1404	\$26.00
	14" X 6"	ROBD1406	\$32.00
	16" X 4"	ROBD1604	\$28.00
	16" X 6"	ROBD1606	\$34.00
	18" X 4"	ROBD1804	\$34.00
	18" X 6"	ROBD1806	\$34.00
	20" X 4"	ROBD2004	\$34.00
	20" X 6"	ROBD2006	\$38.00
	24" X 4"	ROBD2404	\$38.00
	24" X 6"	ROBD2406	\$40.00
	30" X 4"	ROBD3004	\$46.00
	30" X 6"	ROBD3006	\$50.00
	36" X 4"	ROBD3604	\$54.00
	36" X 6"	ROBD3606	\$62.00

SQUARE TO ROUND BOX			
Quantity	Size	Inventory Number	List Price
	6" X 6" TO 5" Ø	SQ060605	\$16.00
	6" X 6" TO 6" Ø	SQ060606	\$16.00
	8" X 8" TO 6" Ø	SQ080806	\$18.00
	8" X 8" TO 7" Ø	SQ080807	\$18.00
	8" X 8" TO 8" Ø	SQ080808	\$18.00
	9" X 9" TO 6" Ø	SQ090906	\$18.00
	9" X 9" TO 7" Ø	SQ090907	\$18.00
	9" X 9" TO 8" Ø	SQ090908	\$18.00
	9" X 9" TO 9" Ø	SQ090909	\$18.00
	10" X 10" TO 6" Ø	SQ101006	\$18.00
	10" X 10" TO 8" Ø	SQ101008	\$18.00
	10" X 10" TO 9" Ø	SQ101009	\$18.00
	10" X 10" TO 10" Ø	SQ101010	\$18.00
	12" X 12" TO 6" Ø	SQ121206	\$20.00
	12" X 12" TO 8" Ø	SQ121208	\$20.00
	12" X 12" TO 9" Ø	SQ121209	\$20.00
	12" X 12" TO 10" Ø	SQ121210	\$20.00
	12" X 12" TO 12" Ø	SQ121212	\$20.00
	14" X 14" TO 10" Ø	SQ141410	\$22.00
	14" X 14" TO 12" Ø	SQ141412	\$22.00
	14" X 14" TO 14" Ø	SQ141414	\$22.00
	15" X 15" TO 10" Ø	SQ151510	\$24.00
	15" X 15" TO 12" Ø	SQ151512	\$24.00
	15" X 15" TO 14" Ø	SQ151514	\$24.00
	16" X 16" TO 12" Ø	SQ161612	\$24.00
	16" X 16" TO 14" Ø	SQ161614	\$24.00
	16" X 16" TO 16" Ø	SQ161616	\$24.00
	18" X 18" TO 10" Ø	SQ181810	\$28.00
	18" X 18" TO 12" Ø	SQ181812	\$28.00
	18" X 18" TO 14" Ø	SQ181814	\$28.00
	18" X 18" TO 16" Ø	SQ181816	\$28.00
	18" X 18" TO 18" Ø	SQ181818	\$28.00
	20" X 20" TO 12" Ø	SQ202012	\$32.00
	20" X 20" TO 14" Ø	SQ202014	\$32.00
	20" X 20" TO 16" Ø	SQ202016	\$32.00
	20" X 20" TO 18" Ø	SQ202018	\$32.00
	20" X 20" TO 20" Ø	SQ202020	\$32.00
	21" X 21" TO 14" Ø	SQ212114	\$36.00
	21" X 21" TO 16" Ø	SQ212116	\$36.00
	21" X 21" TO 18" Ø	SQ212118	\$36.00
	21" X 21" TO 20" Ø	SQ212120	\$36.00
	22" X 10" TO 6" Ø	SQ221006	\$46.00
	22" X 10" TO 8" Ø	SQ221008	\$46.00
	22" X 10" TO 10" Ø	SQ221010	\$46.00
	22" X 22" TO 6" Ø	SQ222206	\$38.00
	22" X 22" TO 8" Ø	SQ222208	\$38.00
	22" X 22" TO 10" Ø	SQ222210	\$38.00
	22" X 22" TO 12" Ø	SQ222212	\$38.00
	22" X 22" TO 14" Ø	SQ222214	\$38.00
	22" X 22" TO 16" Ø	SQ222216	\$38.00
	22" X 22" TO 18" Ø	SQ222218	\$38.00
	22" X 22" TO 20" Ø	SQ222220	\$38.00
	24" X 12" TO 10" Ø	SQ241210	\$44.00
	24" X 12" TO 12" Ø	SQ241212	\$44.00

8" DEEP SQUARE TO ROUND BOX			
Quantity	Size	Inventory Number	List Price
	6" X 6" TO 6" Ø	SQT8060606	\$32.00
	8" X 8" TO 8" Ø	SQT8080808	\$36.00
	9" X 9" TO 8" Ø	SQT8090908	\$38.00
	9" X 9" TO 9" Ø	SQT8090909	\$38.00
	10" X 10" TO 10" Ø	SQT8101010	\$38.00
	12" X 12" TO 8" Ø	SQT8121208	\$42.00
	12" X 12" TO 10" Ø	SQT8121210	\$42.00
	12" X 12" TO 12" Ø	SQT8121212	\$42.00
	15" X 15" TO 12" Ø	SQT8151512	\$68.00

ALUMINUM LAY-IN TO SURFACE MOUNT ADAPTER			
Quantity	Size	Inventory Number	List Price
	12" X 12"	DONQ1212	\$56.00
	24" X 12"	DONQ2412	\$56.00
	24" X 24"	DONQ2424	\$56.00

EXHAUST FANS & ACCESSORIES

SECTION 7

CEILING MOUNTED EXHAUST FANS			
Quantity	Size	Inventory Number	List Price
	50 CFM, 2.0 SONES	BRO688	\$30.00
	50 CFM @ 1." S.P., 1.5 SONES	BRO670	\$82.00
	80 CFM @ 1." S.P., 2.5 SONES	BRO684	\$128.00
	70 CFM @ 1." S.P., 3.0 SONES	BRO671	\$68.00
	110 CFM @ 1." S.P., 4.0 SONES	BRO676	\$132.00
	100 CFM @ 1." S.P., 1.5 SONES	BRO360	\$100.00
	115 CFM @ 1." S.P., 0.8 SONES	BRL100	\$234.00
	161 CFM @ 1." S.P., 1.4 SONES	BRL150	\$248.00
	214 CFM @ 1." S.P., 1.8 SONES	BRL200	\$292.00
	261 CFM @ 1." S.P., 2.3 SONES	BRL250	\$296.00
	309 CFM @ 1." S.P., 2.9 SONES	BRL300	\$304.00
	442 CFM @ 1." S.P., 2.4 SONES	BRL400	\$464.00
	520 CFM @ 1." S.P., 3.1 SONES	BRL500	\$556.00
	704 CFM @ 1." S.P., 4.6 SONES	BRL700	\$602.00
	905 CFM @ 1." S.P., 4.0 SONES	BRL900	\$702.00
	1526 CFM @ 1." S.P., 8.4 SONES	BRL1500	\$996.00

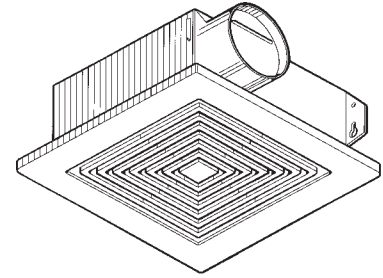
CEILING MOUNTED EXHAUST FANS			
Quantity	Size	Inventory Number	List Price
	5 AMP 115V SPEED CONTROLLER	2727-1	\$60.00
	10 AMP 115V SPEED CONTRLLER	2828-1	\$142.00
	IVORY 3 AMP 115V SPEED CONTROLLER	BR57V	\$58.00
	WHITE 3 AMP 115V SPEED CONTROLLER	BR57W	\$58.00
	IVORY 6 AMP 115V SPEED CONTROLLER	BR72W	\$88.00
	IVORY 6 AMP 115V SPEED CONTROLLER	BR72V	\$88.00
	WHITE 6 AMP 115V SPEED CONTROLLER	BR88	\$30.00
	IVORY 15 MINUTE TIMER	BR61V	\$74.00
	IVORY 60 MINUTE TIMER	BR59V	\$74.00
	IVORY FAN/LIGHT CONTROL WITH OFF DELAY	BR64V	\$138.00
	4" Ø ALUMINUM WALL CAP	BR642	\$34.00
	6" Ø ALUMINUM WALL CAP	BR641	\$80.00
	7" Ø ALUMINUM WALL CAP	BR647	\$90.00
	8" Ø ALUMINUM WALL CAP	BR643	\$100.00
	10" Ø WALL CAP WITH BACKDRAFT DAMPER	BR441	\$122.00
	12" ALUMINUM WALL CAP	BR613	\$108.00
	3¼" X 10" BLACK STEEL WALL CAP	BR639	\$40.00
	3¼" X 10" ALUMINUM WALL CAP	BR649	\$50.00
	7¾" X 12" X 4" BRICK VENT	BRBV12	\$120.00
	3" Ø TO 4" Ø SLOPED ROOF CAP, BLACK	BR636	\$32.00
	6" Ø SLOPED ROOF CAP, BLACK	BR634M	\$68.00
	8" Ø SLOPED ROOF CAP, BLACK	BR634	\$58.00
	8" Ø ALUMINUM SLOPED ROOF CAP	BR644	\$74.00
	1,200 CFM HIGH CAPACITY ROOF CAP, BLACK	BR437	\$190.00
	8" Ø FLAT ROOF CAP	BR611	\$92.00
	8" Ø CURB MOUNTED ROOF CAP	BR611CM	\$108.00
	12" Ø FLAT ROOF CAP	BR612	\$172.00
	12" Ø CURB MOUNTED ROOF CAP	BR612CM	\$182.00
	METAL GRILLE FOR MODEL 360, 361	BR93	\$40.00
	METAL GRILLE FOR MODEL 688, 670, 684, 676	BR88	\$30.00
	METAL GRILLE FOR MODEL L100 ~ L300	BRMG1	\$48.00
	IN-LINE KIT FOR MODEL 360, 361	BR961L	\$40.00
	IN-LINE KIT FOR MODEL L200, L250, L300	BR981L	\$40.00
	IN-LINE KIT FOR MODEL L400, L500, L700	BR982L	\$52.00

	IN-LINE KIT FOR MODEL L900, L1500	BR983L	\$54.00
	VIBRATION HANGERS, QTY OF 4	BRV104	\$128.00
	GREASE FILTER FOR L100 ~ L300	BRLAF1	\$20.00
	GREASE FILTER FOR L400 ~ L500	BRLAF2	\$24.00
	RADIATION DAMPER	BRRD1	\$226.00
	RADIATION DAMPER	BRRD2	\$242.00
	RADIATION DAMPER	BRRD3	\$288.00
	3" Ø TO 4" Ø ADAPTER	BR1BR43	\$2.00
	10" X 3¼" X 2" DUCT	BR411	\$30.00
	10" X 3¼" TO 8" Ø ADAPTER	BR413	\$38.00
	4½" X 18½ TO 10" Ø ADAPTER	BR423	\$68.00
	8" X 12" TO 12" Ø ADAPTER FOR L900 ~ L1500	BRT81212	\$84.00



SPECIFICATION SHEET

**MODELS 688 & 689
CEILING/WALL FANS**



Versatile, high quality ventilators at economy prices.

FEATURES

GRILLE:

- White polymeric - blends well with any decor
- Torsion spring grille mounting - no tools required
- Metal grille kit available - purchase separately

MOTOR:

- Plug-in, permanently lubricated
- Broan-designed polymeric blower wheel
- Snap in/out motor assembly for easy cleaning - no screws to drive or drop

HOUSING:

- Compact, 25 gage galvanized steel - attaches easily to wall or ceiling joists
- Double strength mounting flanges with keyhole slots
- Removable wiring cover - make connections away from tight corners
- No electrical knockout to remove
- Polymeric duct fitting with tapered sleeve for easy, positive duct connection
- Quiet polymeric damper prevents cold backdrafts-no metallic clatter
- U.L. Listed for use over bathtubs and showers when connected to a GFCI protected branch circuit.

CONTROLS DESIGNED FOR USE WITH THESE PRODUCTS (purchase separately):

- Model 59V (Ivory)/59W (White) 60-Minute Time Control
- Model 57V (Ivory)/57W (White) Electronic Variable Speed Control - 3 amp
- Model 69V (Ivory)/69W (White) Single-Function Control

MODEL 1667H: Rough-in housing for Models 1688F and 1689F finish assemblies (packed 6 per carton).

MODEL 1667HMTL: Rough-in housing with metal duct connector for Models 1688F and 1689F finish assemblies (packed 6 per carton).

SPECIFICATIONS

MODEL	VOLTS	AMPS	SONES	CFM	DUCT
688	120	0.9	4.0	50	3" Round
689	120	1.5	5.5	60	3" Round

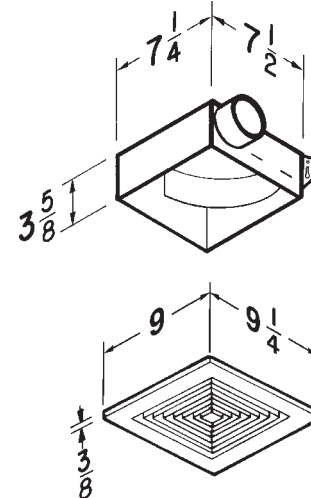
TYPICAL SPECIFICATION

Ventilator shall be Broan Model 688 (Broan Model 689).

Ventilator shall have galvanized steel housing with double-strength mounting flanges. It shall be ducted vertically (horizontally) to a roof cap (wall cap).

Motor assembly shall be removable and permanently lubricated.

Air delivery shall be no less than 50 CFM and sound levels no greater than 4.0 Sones (Model 688), 60 CFM and 5.5 Sones (Models 689). All air and sound ratings shall be certified by HVI. Units shall be U.L. Listed.



HVI-2100 CERTIFIED RATINGS comply with new testing technologies and procedures prescribed by the Home Ventilating Institute, for off-the-shelf products, as they are available to consumers. Product performance is rated at 0.1 in. static pressure, based on tests conducted in AMCA's state-of-the-art test laboratory. Sones are a measure of humanly-perceived loudness, based on laboratory measurements.



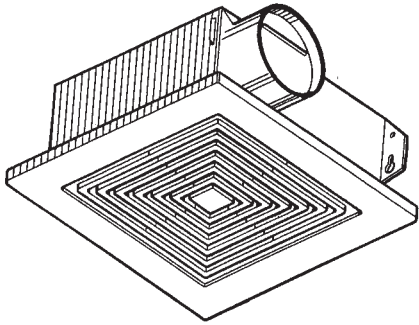
Broan-NuTone LLC, 926 West State Street, Hartford, WI 53027 (1-800-637-1453)

REFERENCE	QTY.	REMARKS	Project
			Location
			Architect
			Engineer
			Contractor
			Submitted by Date



SPECIFICATION SHEET

**MODEL 670
CEILING/WALL FANS**



Simple installation and dependability make this odor and moisture removing fan a real value.

FEATURES

GRILLE:

- White polymeric - blends well with any decor
- Torsion spring grille mounting - no tools required
- Metal grille kit available - (purchase separately)

MOTOR:

- Plug-in, permanently lubricated
- Broan-designed polymeric blower wheel
- Snap in/out motor assembly for easy cleaning - no screws to drive or drop

HOUSING:

- Compact, 25 gage galvanized steel - attaches easily to wall or ceiling joists
- Double strength mounting flanges with keyhole slots
- Removable wiring cover - make connections away from tight corners
- No electrical knockout to remove
- Polymeric duct fitting with tapered sleeve for easy, positive duct connection
- Quiet polymeric damper prevents cold backdrafts - no metallic clatter

Model 1667H: Rough-in housing for 1670F finish assemblies (packed 6 per carton).

- U.L. listed for tub or shower enclosure with GFCI branch wiring

CONTROLS: Designed by Broan for use with this product (purchase separately)

- Model 57V (Ivory)/57W(White) electronic variable speed control
- Model 59V (Ivory)/59W(White) 60-Minute Time Control
- Model 61V/61W 15-Minute Time Control

TYPICAL SPECIFICATION

Ventilator shall be Broan Model 670.

Ventilator shall have galvanized steel housing with double-strength mounting flanges. It shall be ducted vertically (hoirizontally) to a roof cap (wall cap).

Motor assembly shall be removable and permanently lubricated.

Air delivery shall be no less and sound levels no greater than listed. All air and sound ratings shall be certified by AMCA and/or HVI. Units shall be U.L. listed.

"Broan-NuTone LLC certifies that the models shown herein are licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 (and AMCA Publication 311 if sound is also certified) and comply with the requirements of the AMCA Certified Ratings Program."



Broan-NuTone LLC, 926 West State Street, Hartford, WI 53027 (1-800-637-1453)

REFERENCE	QTY.	REMARKS	Project	
			Location	Date
			Architect	
			Engineer	
			Contractor	
			Submitted by	

PERFORMANCE RATINGS - MODEL 670

AMCA LICENSED PERFORMANCE

Model No.	Sones @ 0.0" S.P.	CFM @ Static Pressure (Ps - Inches of H ₂ O)						Total Volts	Watts	Duct RPM	Duct Size
		0.0	0.1	.125	.250	.375	.500				
670	3.4	56	51	50	46	41	32	120	55	1700	3" Round

The performances shown are with inlet grille, backdraft damper and outlet duct. RPM shown is nominal and the performance is based on actual speed of test. The sound ratings shown are loudness values in fan sones at 5' (1.5m) in a hemispherical free field calculated per AMCA Std. 301. Values shown are for installation Type B: free inlet fan sone levels.

SONES

Model Number	HVI Sones @ 0.1" S.P.**	AMCA Sones @ 0.0" S.P.**
670	3.5	3.4

** There is difference between sone values certified by HVI for residential use and by AMCA for commercial/industrial use. Exact comparison of these values is not possible. This difference is mainly due to procedures used to convert measured sound to perceived sound. ANSI S3.4, used by both HVI and AMCA, specifies a procedure for calculating loudness as perceived by a typical listener under specific conditions. HVI establishes values at a distance of 5 feet from the fan in a "spherical free field"; AMCA establishes values at a distance of 5 feet in a "hemispherical free field". HVI and AMCA have different rules for rounding sone values.

AMPS

MODEL NUMBER	AMPS*
670	0.8

*Total Connected Load

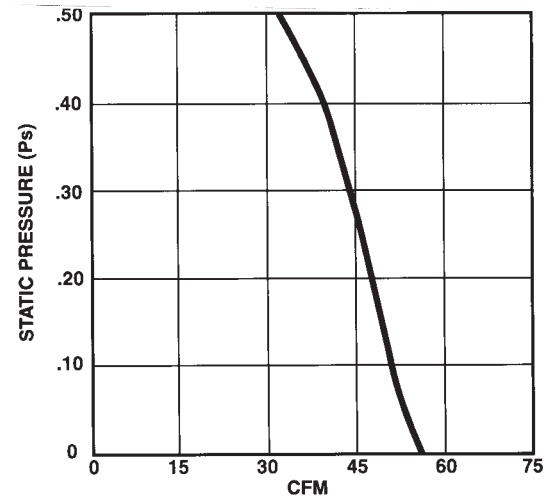


"Broan-NuTone LLC certifies that the models shown herein are licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 (and AMCA Publication 311 if sound is also certified) and comply with the requirements of the AMCA Certified Ratings Program."

HVI PERFORMANCE

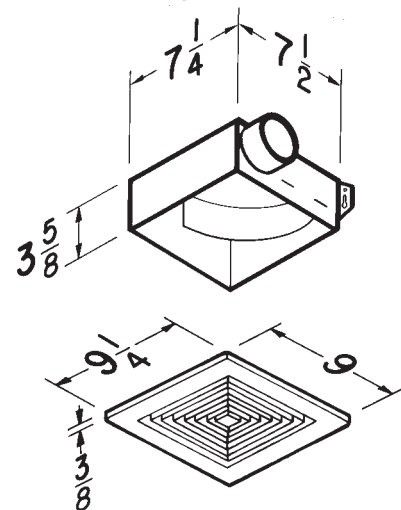
MODEL NUMBER	SONES	CFM @ 0.1" Ps
670	3.5	50

HVI-2100 CERTIFIED RATINGS comply with new testing technologies and procedures prescribed by the Home Ventilating Institute, for off-the-shelf products, as they are available to consumers. Product performance is rated at 0.1 in. static pressure, based on tests conducted in AMCA's state-of-the-art test laboratory. Sones are a measure of humanly-perceived loudness, based on laboratory measurements.



WEIGHT

MODEL NUMBER	SHIPPING WT.
670	4.2 LBS.



BROAN

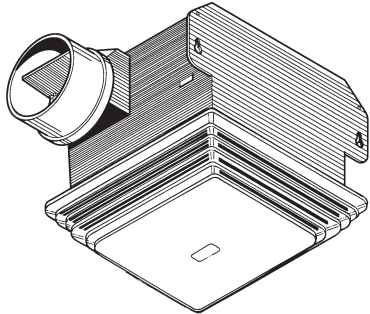
Broan-NuTone LLC, 926 West State Street, Hartford, WI 53027 (1-800-637-1453)

2/15/2013



SPECIFICATION SHEET

**MODEL 684
CEILING/WALL FAN**



Dependable, high performance bathroom ventilation.

FEATURES

GRILLE:

- Attractive grille conceals interior
- Matte white polymeric – blends well with any decor
- Torsion spring grille mounting – no tools required
- White, metal grille kit available (purchase separately)

BLOWER:

- Plug-in, permanently lubricated motor
- Centrifugal blower wheel

HOUSING:

- Rugged, 26-gage galvanized steel construction
- Sturdy key-holed mounting brackets for quick, accurate installation
- Tapered, polymeric duct fitting with built-in backdraft damper for easy, positive duct connection and no metallic clatter

Model 2687H: Rough-in housings for 2684F finish assemblies (packed 4 per carton).

U.L. Listed for use over tubs and showers when connected to a GFCI protected branch circuit

TYPICAL SPECIFICATION

Ventilator shall be Broan Model 684.

Unit shall have galvanized steel housing with dual integral mounting brackets. It shall be ducted to a roof or wall cap.

Blower assembly shall be removable and have a centrifugal blower wheel and permanently lubricated motor.

Air delivery shall be no less and sound level no greater than values listed in the "Performance Ratings" charts on this sheet. Air and sound ratings shall be certified by HVI and AMCA licensed.

Unit shall be U.L. Listed for use over bathtubs and showers when connected to a GFCI protected branch circuit.



Broan-NuTone LLC certifies that the models shown herein are licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 and AMCA Publication 311 and comply with the requirements of the AMCA Certified Ratings Program.



Broan-NuTone LLC Hartford, Wisconsin www.broan.com 800-558-1711

REFERENCE	QTY.	REMARKS	Project	
			Location	Date
			Architect	
			Engineer	
			Contractor	
			Submitted by	

PERFORMANCE RATINGS - MODEL 684

AMCA LICENSED PERFORMANCE

Model No.		Static Pressure (in. wg Ps)					Volts	Total Watts	Nominal RPM	Duct Size
		0.0	0.1	.125	.250	.375				
684	CFM	89	81	80	68	36	120	48	1280	4" Round
	Sones	3.9	3.8	3.8	3.8	3.9				

The performance ratings include the effects of inlet grille and backdraft damper in the airstream. Speed (RPM) shown is nominal. Performance is based on actual speed of test. The sound ratings are loudness values in fan sones at 5' (1.5m) in a hemispherical free field calculated per AMCA Std. 301. Values shown are for Installation Type B: Free inlet fan sone levels. Air performance shown is for Installation Type B: Free inlet, Ducted outlet.

SONES

Model Number	HVI Sones @ 0.1" Ps*	AMCA Sones @ 0.0" Ps*
684	2.5	3.9

* There is difference between sone values certified by HVI for residential use and by AMCA for commercial/industrial use. Exact comparison of these values is not possible. This difference is mainly due to procedures used to convert measured sound to perceived sound. ANSI S3.4, used by both HVI and AMCA, specifies a procedure for calculating loudness as perceived by a typical listener under specific conditions. HVI establishes values at a distance of 5 feet from the fan in a "spherical free field"; AMCA establishes values at a distance of 5 feet in a "hemispherical free field". HVI and AMCA have different rules for rounding sone values.

AMPS

MODEL NUMBER	AMPS
684	0.5



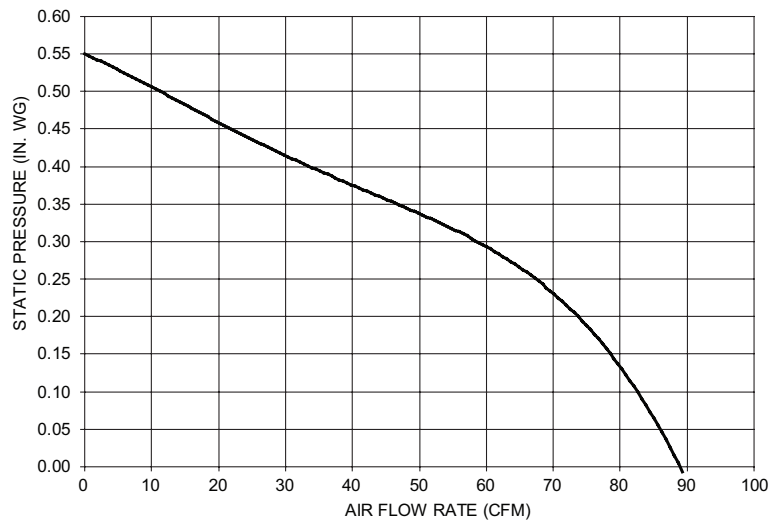
Broan-NuTone LLC certifies that the models shown herein are licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 and AMCA Publication 311 and comply with the requirements of the AMCA Certified Ratings Program.

HVI PERFORMANCE

Model	Static Pressure (Ps)	CFM	Sones
684	0.10	80	2.5
	0.25	68	

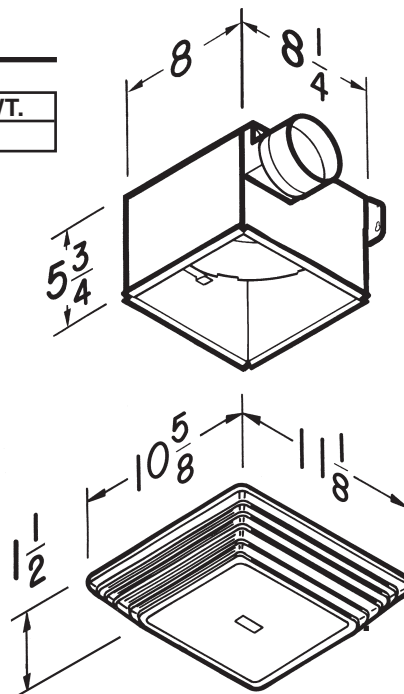


HVI-2100 CERTIFIED RATINGS comply with new testing technologies and procedures prescribed by the Home Ventilating Institute, for off-the-shelf products, as they are available to consumers. Product performance is rated at 0.1 in. static pressure, based on tests conducted in a state-of-the-art test laboratory. Sones are a measure of humanly-perceived loudness, based on laboratory measurements.



WEIGHT

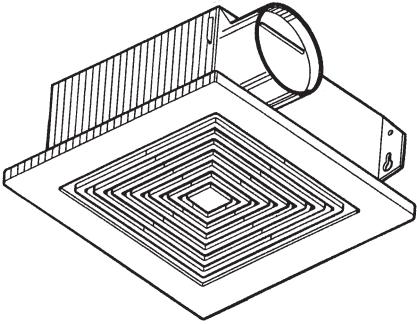
MODEL NO.	SHIPPING WT.
684	8.0 lbs.





SPECIFICATION SHEET

**MODEL 671
CEILING/WALL
FANS**



Simple installation and dependability make this odor and moisture removing fan a real value.

FEATURES

GRILLE:

- White polymeric - blends well with any decor
- Torsion spring grille mounting - no tools required
- Metal grille kit available - (purchase separately)

MOTOR:

- Plug-in, permanently lubricated
- Broan-designed polymeric blower wheel
- Snap in/out motor assembly for easy cleaning - no screws to drive or drop

HOUSING:

- Compact, 25 gage galvanized steel - attaches easily to wall or ceiling joists
- Double strength mounting flanges with keyhole slots
- Removable wiring cover - make connections away from tight corners
- No electrical knockout to remove
- Polymeric duct fitting with tapered sleeve for easy, positive duct connection
- Quiet polymeric damper prevents cold backdrafts - no metallic clutter

Model 1667H: Rough-in housing for 1671F finish assemblies (packed 6 per carton)

- U.L. listed for tub or shower enclosure with GFCI branch wiring

CONTROLS: Designed by Broan for use with this product (purchase separately)

- Model 57V (Ivory)57W (White)
- Electronic Variable Speed Control
- Model 59V/59W 60-Minute Time Control
- Model 61V/61W 15-Minute Time Control

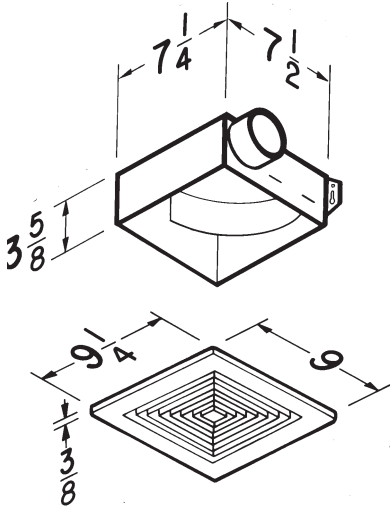
TYPICAL SPECIFICATION

Ventilator shall be Broan Model 671.

Ventilator shall have galvanized steel housing with double-strength mounting flanges. It shall be ducted vertically (horizontally) to a roof cap (wall cap).

Motor assembly shall be removable and permanently lubricated.

Air delivery shall be no less than 70 CFM and sound levels no greater than 6.0 Sones. All air and sound ratings shall be certified by HVI. Units shall be U.L. listed.



SPECIFICATIONS

MODEL	VOLTS	AMPS	CFM	SONES	DUCT
671	120	1.15	70	6.0	3" ROUND



HVI-2100 CERTIFIED RATINGS comply with new testing technologies and procedures prescribed by the Home Ventilating Institute, for off-the-shelf products, as they are available to consumers. Product performance is rated at 0.1 in. static pressure, based on tests conducted in AMCA's state-of-the-art test laboratory. Sones are a measure of humanly-perceived loudness, based on laboratory measurements.



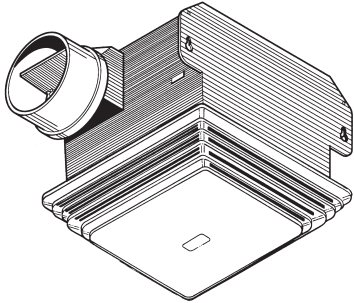
Broan-NuTone LLC, 926 West State Street, Hartford, WI 53027 (1-800-637-1453)

REFERENCE	QTY.	REMARKS	Project
			Location
			Architect
			Engineer
			Contractor
			Submitted by Date



SPECIFICATION SHEET

**MODEL 676
CEILING/WALL FAN**



Dependable, high performance bathroom ventilation.

FEATURES

- GRILLE:**
- Attractive grille conceals interior
 - Matte white polymeric – blends well with any decor
 - Torsion spring grille mounting – no tools required
 - White, metal grille kit available (purchase separately)
- BLOWER:**
- Plug-in, permanently lubricated motor
 - Centrifugal blower wheel
- HOUSING:**
- Rugged, 26-gage galvanized steel construction
 - Sturdy key-holed mounting brackets for quick, accurate installation
 - Tapered, polymeric duct fitting with built-in backdraft damper for easy, positive duct connection and no metallic clatter

Model 2687H: Rough-in housings for 2676F finish assemblies (packed 4 per carton).
U.L. Listed for use over bathtubs and showers when connected to a GFCI protected branch circuit

TYPICAL SPECIFICATION

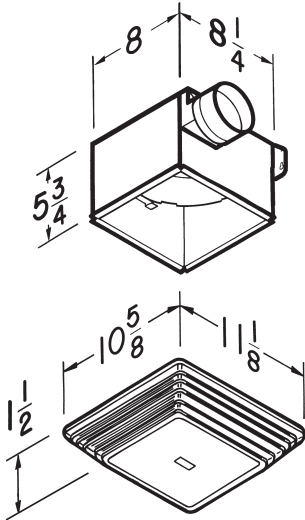
Ventilator shall be Broan Model 676.
Unit shall have a galvanized steel housing with dual integral mounting brackets. It shall be ducted to a roof or wall cap.
Blower assembly shall be removable and have a centrifugal blower wheel and permanently lubricated motor.
Air delivery shall be no less than 110 CFM and sound level no greater than 4.0 Sones. Air and sound ratings shall be certified by HVI.
Unit shall be U.L. Listed for use over bathtubs and showers when connected to a GFCI protected branch circuit.

SPECIFICATIONS

MODEL	VOLTS	AMPS	SONES	CFM	DUCT
676	120	1.3	4.0	110	4" Round



HVI-2100 CERTIFIED RATINGS comply with new testing technologies and procedures prescribed by the Home Ventilating Institute, for off-the-shelf products, as they are available to consumers. Product performance is rated at 0.1 in. static pressure, based on tests conducted in a state-of-the-art test laboratory. Sones are a measure of humanly-perceived loudness, based on laboratory measurements.



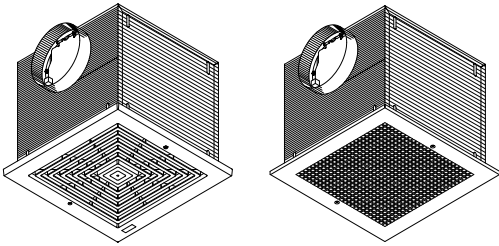
Broan-NuTone LLC Hartford, Wisconsin www.broan.com 800-558-1711

REFERENCE	QTY.	REMARKS	Project	
			Location	Architect
			Engineer	
			Contractor	
			Submitted by	Date



SPECIFICATION SHEET

**LOSONE SELECT®
CEILING MOUNT VENTILATORS
L100 SERIES & L150 SERIES**



Incredibly reliable. Unbelievably quiet. Offering the CFM choices you need at the lowest sound levels in the industry.

FEATURES

GRILLE:

- Conceals interior
- Low profile styling blends with any decor
- White polymeric ("MG" models - metal, finished with white painted enamel)

BLOWER:

- Low RPM for quiet operation
- Resilient anti-vibration mounts
- Dynamically-balanced, polymeric, centrifugal blower wheel for quiet, efficient performance
- Permanently lubricated, thermally protected motor
- Plug-in motor rated at 120 VAC
- Designed for continuous operation

HOUSING:

- Rugged, 20 gauge galvanized steel
- 6" round duct connector
- 1/2" acoustic insulation inside
- May be installed in ceiling or wall (size permitting)
- 8-position mounting brackets for easy installation and greater adaptability to various mounting requirements
- Automatic backdraft damper located within duct connector
- Factory-shipped in horizontal discharge position - easily converted to vertical discharge
- May be installed as an in-line ventilator with addition of accessory kit Model 961L (see "Accessories")

ACCESSORIES (purchase all separately):

- Model 57V (Ivory) / 57W (White) Electronic Variable Speed Control
- Model 59V (Ivory) / 59W (White) 60-Minute Time Control
- Model 61V (Ivory) / 61W (White) 15-Minute Time Control
- Model 71V (Ivory) / 71W (White) 12-Hour Time Control
- Electronic Variable Speed Controls – Model 72V (120 VAC)
- Model 961L In-line Adapter Plate
- Model RD1 Radiation Damper
- Model 80L Electronic Speed Control (Internal)

TYPICAL SPECIFICATION

Ventilator shall be Broan Model L100, (L100MG), (L150), (L150MG).

Ventilator shall have galvanized steel housing insulated with at least 1/2" of acoustic insulation. Housing to have adjustable mounting brackets.

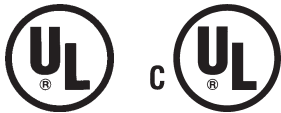
Automatic backdraft damper to be located within duct connector. Duct connector, blower assembly and wiring plate shall be adjustable for either horizontal or vertical installation.

Blower unit shall be removable from housing and will have a polymeric, dynamically balanced centrifugal-type blower wheel. Motor to be permanently lubricated and mounted with resilient anti-vibration mounts. RPM not to exceed number listed for each model.

Air delivery shall be no less and sound levels no greater than listed for each model. All air and sound ratings shall be certified by AMCA. Units to be UL and cUL listed.



"Broan-NuTone LLC certifies that the models shown herein are licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 (and AMCA Publication 311 if sound is also certified) and comply with the requirements of the AMCA Certified Ratings Program"



Models L100 and L150 are UL listed for use over bathtubs and showers when connected to a GFCI-protected branch circuit.

**Broan-NuTone LLC, 926 West State Street, Hartford, Wisconsin 53027 (1-800-637-1453)
Broan-NuTone Canada, 1140 Tristar Drive, Mississauga, Ontario, L5T 1H9 (1-888-882-7626)**

REFERENCE	QTY.	REMARKS	Project
			Location
			Architect
			Engineer
			Contractor
			Submitted by Date

PERFORMANCE RATINGS - LOSONE SELECT® CEILING MOUNT VENTILATORS L100 SERIES & L150 SERIES

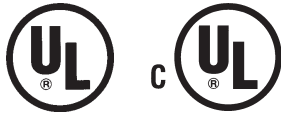
AMCA LICENSED PERFORMANCE

CFM / SONES - AT STATIC PRESSURES (Ps - inches of H ₂ O)																
MODEL NO.	NOMINAL VOLTAGE		0.0" Ps	.10" Ps	.125" Ps	.250" Ps	.375" Ps	.50" Ps	.625" Ps	.750" Ps	.875" Ps	1.0" Ps	NOMINAL RPM	AMPS @ 60 Hz	WATTS	
L100	120 VAC	CFM Hor.	136	115	109	93	80	65	44	12			640	1.1	87	
		SONES Hor.	0.5	0.8	0.9	1.3	1.8	2.3	3.0	3.2						
		CFM Ver.	138	117	112	94	80	67	46	13				650	1.1	87
		SONES Ver.	0.7	0.9	1.0	1.3	1.8	2.2	2.8	3.0						
L100MG	120 VAC	CFM Hor.	144	121	115	97	83	68	46	12			630	1.1	87	
		SONES Hor.	0.5	0.8	0.9	1.2	1.8	2.4	3.0	3.3						
		CFM Ver.	142	119	115	95	80	67	45	13				640	1.1	87
		SONES Ver.	0.5	0.8	0.9	1.4	1.8	2.3	2.9	3.1						
L150	120 VAC	CFM Hor.	181	161	157	141	132	124	114	94	62		710	1.3	100	
		SONES Hor.	1.3	1.4	1.5	2.2	2.6	3.1	3.6	4.1	4.6					
		CFM Ver.	179	163	160	149	142	133	122	105	73	23	750	1.3	100	
		SONES Ver.	1.4	1.6	1.6	2.0	2.5	3.0	3.3	3.6	3.9	4.2				
L150MG	120 VAC	CFM Hor.	184	165	161	148	141	135	126	108	74	19	710	1.3	100	
		SONES Hor.	1.1	1.4	1.4	1.9	2.3	2.8	3.2	3.8	4.1	4.5				
		CFM Ver.	183	165	162	151	143	135	124	107	76	26	725	1.3	100	
		SONES Ver.	1.4	1.6	1.6	2.0	2.5	3.0	3.3	3.6	4.0	4.4				

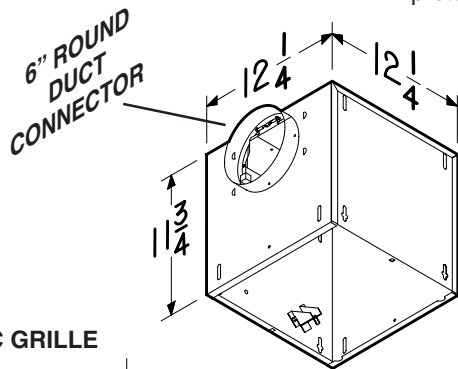
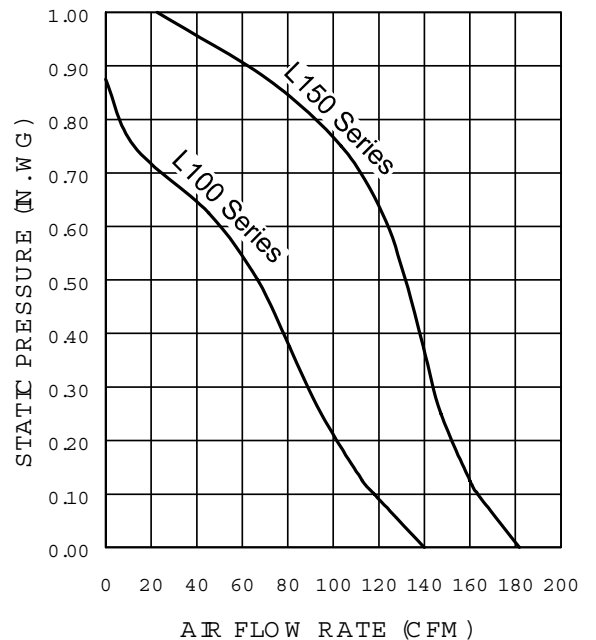
Performance ratings include the effects of inlet grille and backdraft damper in the airstream. Speed (RPM) shown is nominal. Performance is based on actual speed of test. The sound ratings shown are loudness values in fan sones at 5' (1.5m) in a hemispherical free field calculated per AMCA Std. 301. Values shown are for Installation Type B: Free inlet fan sone levels. Performance shown is for Installation Type B: Free inlet, Ducted outlet.



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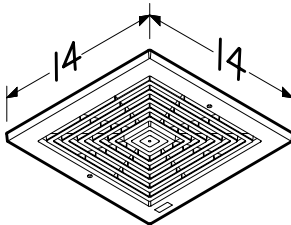


Models L100 and L150 are UL listed for use over bathtubs and showers when connected to a GFCI-protected branch circuit.



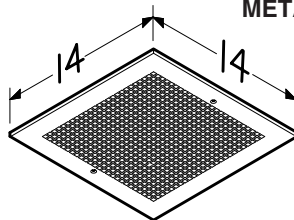
POLYMERIC GRILLE MODELS

L100
L150



METAL GRILLE MODELS

L100MG
L150MG



WEIGHT

MODEL NO.	SHIPPING WT.
L100	22.8 lbs.
L100MG	23.7 lbs.
L150	23.1 lbs.
L150MG	23.7 lbs.

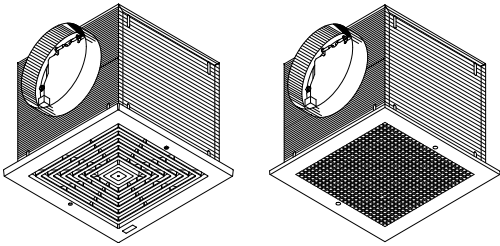


Broan-NuTone LLC, 926 West State Street, Hartford, Wisconsin 53027 (1-800-637-1453)
Broan-NuTone Canada, 1140 Tristar Drive, Mississauga, Ontario, L5T 1H9 (1-888-882-7626)



SPECIFICATION SHEET

**LOSONE SELECT®
CEILING MOUNT VENTILATORS
L200, L250, L300 SERIES, L300KMG**



Incredibly reliable. Unbelievably quiet. Offering the CFM choices you need at the lowest sound levels in the industry.

FEATURES

GRILLE:

- Conceals interior
- Low profile styling blends with any decor
- White polymeric ("MG" models - metal, finished with white painted enamel)

BLOWER:

- Low RPM for quiet operation
- Resilient anti-vibration mounts
- Dynamically-balanced, polymeric, centrifugal blower wheel for quiet, efficient performance (Model L300KMG-metal wheel)
- Permanently lubricated, thermally protected motor
- Plug-in motor rated at 120 VAC
- Designed for continuous operation

HOUSING:

- Rugged, 20 gauge galvanized steel
- 8" round duct connector
- 1/2" acoustic insulation inside (Model L300KMG - no insulation - for kitchen applications)
- May be installed in ceiling or wall (size permitting)
- 8-position mounting brackets for easy installation and greater adaptability to various mounting requirements
- Automatic backdraft damper located within duct connector
- Factory-shipped in horizontal discharge position - easily converted to vertical discharge
- May be installed as an in-line ventilator with addition of accessory kit Model 981L (purchase separately)

ACCESSORIES (purchase all separately):

- Model 57V (Ivory) / 57W (White) 3-Amp, Electronic Variable Speed Control
- Model 59V (Ivory) / 59W (White) 60-Minute Time Control
- Model 61V (Ivory) / 61W (White) 15-Minute Time Control
- Model 71V (Ivory) / 71W (White) 12-Hour Time Control
- 6-Amp, Electronic Variable Speed Controls Model 72V/72W (120 VAC)
- Model 981L In-line Adapter Kit
- Model RD1 Radiation Damper
- Model LAF1 Grease Filter (for Model L300KMG)
- Model 80L Electronic Speed Control (Internal)

TYPICAL SPECIFICATION

Ventilator shall be Broan Model L200, (L200MG), (L250), (L250MG), (L300), (L300KMG).

Ventilator shall have galvanized steel housing insulated with at least 1/2" of acoustic insulation (with no insulation - Model L300KMG). Housing to have adjustable mounting brackets.

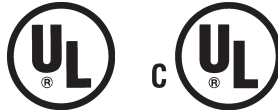
Automatic backdraft damper to be located within duct connector. Duct connector, blower assembly, and wiring plate shall be adjustable for either horizontal or vertical installation.

Blower unit shall be removable from housing and will have a polymeric, dynamically balanced centrifugal-type blower wheel. Motor to be permanently lubricated and mounted with resilient anti-vibration mounts. RPM not to exceed number listed for each model.

Air delivery shall be no less and sound levels no greater than listed for each model. All air and sound ratings shall be certified by AMCA. Units to be UL and cUL listed.



"Broan-NuTone LLC certifies that the models shown herein are licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 (and AMCA Publication 311 if sound is also certified) and comply with the requirements of the AMCA Certified Ratings Program"



Models L200, L250, and L300 are UL listed for use over bathtubs and showers when connected to a GFCI-protected branch circuit.

Broan-NuTone LLC, 926 West State Street, Hartford, Wisconsin 53027 (1-800-637-1453)
Broan-NuTone Canada, 1140 Tristar Drive, Mississauga, Ontario, L5T 1H9 (1-888-882-7626)

REFERENCE	QTY.	REMARKS	Project
			Location
			Architect
			Engineer
			Contractor
			Submitted by Date

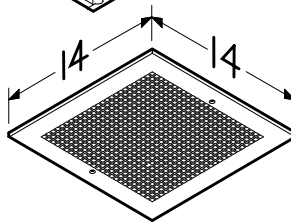
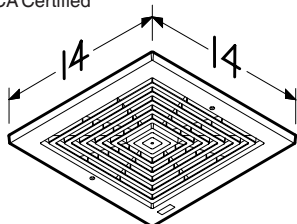
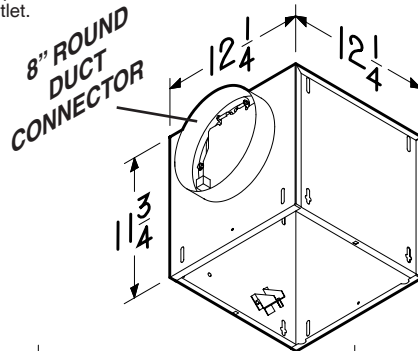
PERFORMANCE RATINGS - LOSONE SELECT® CEILING MOUNT VENTILATORS L200, L250, L300 SERIES, L300KMG

AMCA LICENSED PERFORMANCE

CFM / SONES - AT STATIC PRESSURES (Ps - inches of H ₂ O)															
MODEL NO.	NOMINAL VOLTAGE		0.0" Ps	.10" Ps	.125" Ps	.250" Ps	.375" Ps	.50" Ps	.625" Ps	.750" Ps	.875" Ps	1.0" Ps	NOMINAL RPM	AMPS @60 Hz	WATTS
L200	120 VAC	CFM Hor.	231	214	210	196	186	177	165	144	113	51	740	1.8	127
		SONES Hor.	1.6	1.8	1.7	2.3	2.9	3.5	4.1	4.9	5.3	5.3			
		CFM Ver.	224	210	207	197	187	179	167	144	99	41	760	1.8	127
		SONES Ver.	1.5	1.8	2.0	2.3	2.7	3.4	4.0	4.5	5.1	5.2			
L200MG	120 VAC	CFM Hor.	237	218	215	199	190	180	167	144	108	47	715	1.8	127
		SONES Hor.	1.4	1.8	1.9	2.4	3.0	3.6	4.2	5.1	5.6	5.5			
		CFM Ver.	228	213	209	198	190	182	168	145	105	56	730	1.8	127
		SONES Ver.	1.5	1.7	1.8	2.3	2.8	3.4	4.1	4.6	5.1	5.2			
L250	120 VAC	CFM Hor.	272	261	259	250	242	233	218	201	165	99	830	2.1	166
		SONES Hor.	2.1	2.3	2.2	2.9	3.3	3.9	4.4	4.8	5.5	5.8			
		CFM Ver.	269	261	259	253	248	239	224	203	171	101	860	2.1	166
		SONES Ver.	2.3	2.6	2.7	3.0	3.3	3.7	4.2	4.7	5.4	5.6			
L250MG	120 VAC	CFM Hor.	280	267	265	254	246	238	224	209	172	105	805	2.1	166
		SONES Hor.	2.1	2.5	2.5	2.9	3.4	3.9	4.3	4.6	5.6	5.9			
		CFM Ver.	275	263	262	255	250	241	229	210	178	105	830	2.1	166
		SONES Ver.	2.2	2.6	2.7	3.0	3.4	3.8	4.3	4.8	5.5	5.8			
L300	120 VAC	CFM Hor.	312	309	308	303	296	287	273	254	219	125	905	2.6	212
		SONES Hor.	2.8	2.9	2.9	3.3	3.5	3.9	4.3	4.7	5.1	5.6			
		CFM Ver.	319	314	313	306	299	288	274	251	219	120	940	2.6	212
		SONES Ver.	2.6	2.9	3.0	3.4	3.6	3.9	4.4	4.7	5.0	5.5			
L300MG	120 VAC	CFM Hor.	323	317	316	312	305	298	283	266	235	153	860	2.6	212
		SONES Hor.	3.0	2.8	3.0	3.2	3.5	3.9	4.3	4.8	5.2	5.7			
		CFM Ver.	322	315	314	308	302	292	278	259	227	119	885	2.6	212
		SONES Ver.	2.4	2.7	2.8	3.3	3.5	3.9	4.3	4.7	5.1	5.5			
L300KMG	120 VAC	CFM Hor.	286	279	277	272	268	261	253	241	222	173	790	2.6	212
		SONES Hor.	2.8	3.0	3.1	3.4	3.8	4.4	4.8	5.1	5.5	6.1			
		CFM Ver.	287	280	277	273	266	259	247	231	208	164	815	2.6	212
		SONES Ver.	3.3	3.6	3.7	4.1	4.7	5.2	5.6	6.3	6.8	6.9			

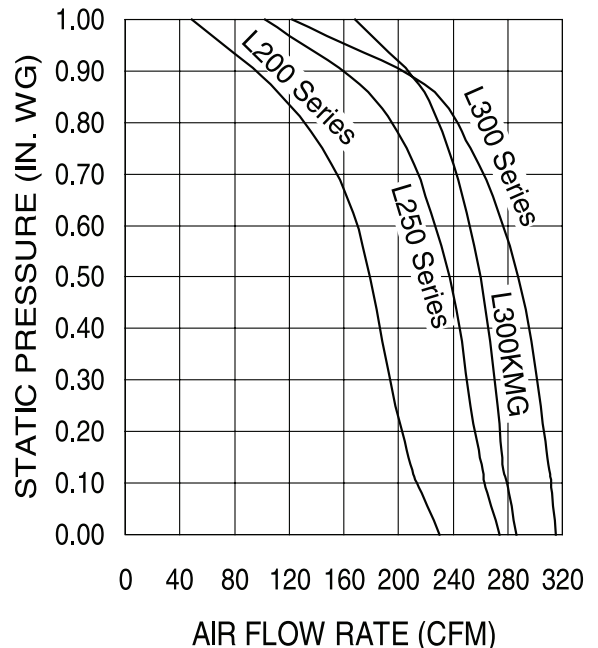
Performance ratings include the effects of inlet grille and backdraft damper in the airstream. Speed (RPM) shown is nominal. Performance is based on actual speed of test. The sound ratings shown are loudness values in fan sones at 5' (1.5m) in a hemispherical free field calculated per AMCA Std. 301. Values shown are for Installation Type B: Free inlet fan some levels. Performance shown is for Installation Type B: Free inlet, Ducted outlet.

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**POLYMERIC GRILLE
MODELS
L200, L250,
L300**

**METAL GRILLE
MODELS
L200MG, L250MG,
L300MG, L300KMG**



WEIGHT

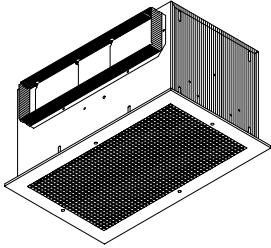
MODEL NO.	SHIPPING WT.
L200	23.0 lbs.
L250, L300	23.1 lbs.
L200MG	23.9 lbs.
L250MG, L300MG	24.0 lbs.
L300KMG	25.2 lbs.





SPECIFICATION SHEET

**LOSONE SELECT®
CEILING MOUNT VENTILATORS
L400, L500, L700 SERIES**



Incredibly reliable. Unbelievably quiet. Offering the CFM choices you need at the lowest sound levels in the industry.

FEATURES

GRILLE:

- Conceals interior
- Low profile styling blends with any decor
- Metal, finished with white painted enamel

BLOWER:

- Low RPM for quiet operation
- Resilient anti-vibration mounts
- Balanced, polymeric, centrifugal blower wheel for quiet, efficient performance (Models L400K & L500K - metal wheels)
- Permanently lubricated, thermally protected motor
- Plug-in motor rated at 120 VAC
- Designed for continuous operation

HOUSING:

- Rugged, 20 gauge galvanized steel
- 4½" x 18½" duct connector
- 1/2" acoustic insulation inside (Models L400K & L500K - no insulation - for kitchen applications)
- May be installed in ceiling or wall (size permitting)
- 8-position mounting brackets for easy installation and greater adaptability to various mounting requirements
- Automatic backdraft damper located within duct connector
- Factory-shipped in horizontal discharge position - easily converted to vertical discharge
- May be installed as an in-line ventilator with addition of accessory kit Model 982L (purchase separately)

ACCESSORIES (purchase all separately):

- Model 57V (Ivory) / 57W (White) 3 amp Electronic Variable Speed Control
- Model 59V (Ivory) / 59W (White) 60-Minute Time Control
- Model 61V (Ivory) / 61W (White) 15-Minute Time Control
- Model 80L Electronic Speed Control (Internal)

ACCESSORIES (continued):

- Model 71V (Ivory) / 71W (White) 12-Hour Time Control
- 6-Amp, Electronic Variable Speed Controls Model 72V/72W (120 VAC)
- Model 423 Transition (4½" x 18½" to 10" round)
- Model RD2 Radiation Damper
- Model LAF2 Grease Filter (for Models L400K & L500K only)

TYPICAL SPECIFICATION

Ventilator shall be Broan Model L400, (L400K), (L500), (L500K), (L700).

Ventilator shall have galvanized steel housing insulated with at least 1/2" of acoustic insulation (with no insulation - Models L400K & L500K). Housing to have adjustable mounting brackets.

Automatic backdraft damper to be located within duct connector. Duct connector, blower assembly, and wiring plate shall be adjustable for either horizontal or vertical installation.

Blower unit shall be removable from housing and will have a polymeric (metal - Models L400K & L500K), balanced centrifugal-type blower wheel. Motor to be permanently lubricated and mounted with resilient anti-vibration mounts. RPM not to exceed number listed for each model.

Air delivery shall be no less and sound levels no greater than listed for each model. All air and sound ratings shall be certified by AMCA. Units to be UL and cUL listed.



"Broan-NuTone LLC certifies that the models shown herein are licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 (and AMCA Publication 311 if sound is also certified) and comply with the requirements of the AMCA Certified Ratings Program"



Broan-NuTone LLC, 926 West State Street, Hartford, Wisconsin 53027 (1-800-637-1453)
Broan-NuTone Canada, 1140 Tristar Drive, Mississauga, Ontario, L5T 1H9 (1-888-882-7626)

REFERENCE	QTY.	REMARKS	Project
			Location
			Architect
			Engineer
			Contractor
			Submitted by Date

PERFORMANCE RATINGS - LOSONE SELECT® CEILING MOUNT VENTILATORS L400, L500, L700 SERIES

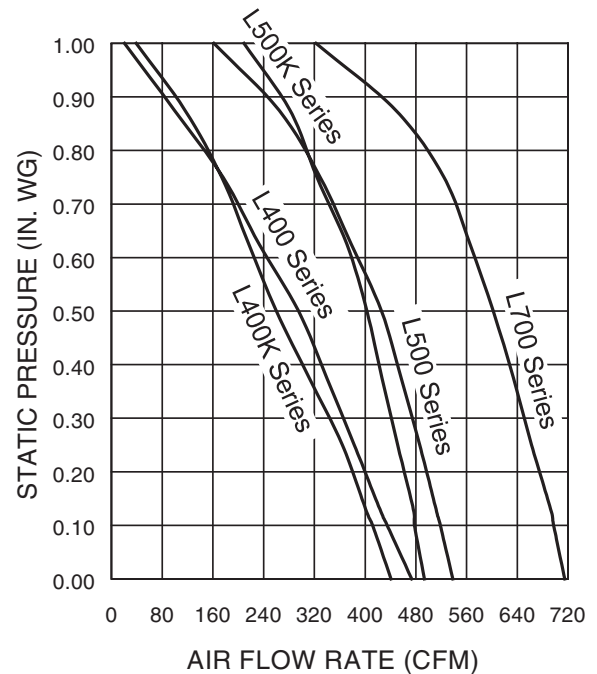
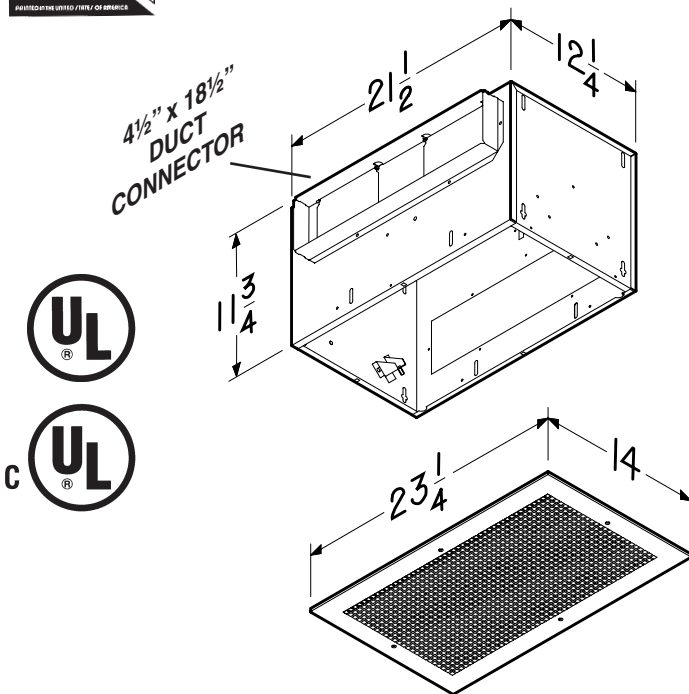
AMCA LICENSED PERFORMANCE

CFM / SONES - AT STATIC PRESSURES (Ps - inches of H ₂ O)															
MODEL NO.	NOMINAL VOLTAGE		0.0" Ps	.10" Ps	.125" Ps	.250" Ps	.375" Ps	.50" Ps	.625" Ps	.750" Ps	.875" Ps	1.0" Ps	NOMINAL RPM	AMPS @60 Hz	WATTS
L400	120 VAC	CFM Hor.	480	442	434	388	344	299	229	182	114	33	735	1.4	146
		SONES Hor.	2.0	2.4	2.3	2.8	3.3	3.8	4.5	4.8	5.4	5.6			
		CFM Ver.	467	428	416	378	335	291	237	170	85	8	755	1.4	146
		SONES Ver.	2.3	2.6	2.6	3.0	3.5	4.0	5.1	5.5	5.7	5.9			
L400K	120 VAC	CFM Hor.	442	415	406	370	330	274	230	191	130	50	675	1.4	146
		SONES Hor.	2.9	3.2	3.3	3.8	4.4	5.3	6.0	6.5	6.8	7.2			
		CFM Ver.	440	409	399	358	294	246	203	157	102	28	680	1.4	146
		SONES Ver.	2.9	3.4	3.3	4.0	5.0	6.1	6.3	6.8	7.1	7.2			
L500	120 VAC	CFM Hor.	538	520	514	491	463	434	389	339	282	186	810	2.2	232
		SONES Hor.	3.0	3.1	3.3	3.6	4.0	4.4	5.0	5.7	6.2	6.7			
		CFM Ver.	539	517	512	481	451	418	367	319	247	137	865	2.2	232
		SONES Ver.	2.9	3.1	3.2	3.4	3.8	4.2	4.8	5.9	6.3	6.4			
L500K	120 VAC	CFM Hor.	506	484	481	460	435	418	389	337	301	231	700	2.2	232
		SONES Hor.	4.3	4.3	4.4	5.0	5.6	6.2	7.0	7.6	8.0	8.3			
		CFM Ver.	481	472	473	443	418	388	353	311	262	187	705	2.2	232
		SONES Ver.	3.6	3.9	4.0	4.5	5.6	6.1	6.7	8.4	8.1	8.6			
L700	120 VAC	CFM Hor.	722	704	701	667	640	607	571	534	453	333	960	2.9	313
		SONES Hor.	4.5	4.6	4.7	4.8	5.0	5.2	5.6	6.2	7.1	7.2			
		CFM Ver.	708	691	687	658	628	597	560	515	444	312	985	2.9	313
		SONES Ver.	5.2	5.0	5.0	5.7	5.8	6.1	6.4	7.4	7.1	7.6			

Performance ratings include the effects of inlet grille and backdraft damper in the airstream. Speed (RPM) shown is nominal. Performance is based on actual speed of test. The sound ratings shown are loudness values in fan sones at 5' (1.5m) in a hemispherical free field calculated per AMCA Std. 301. Values shown are for Installation Type B: Free inlet fan sone levels. Performance shown is for Installation Type B: Free inlet, Ducted outlet.



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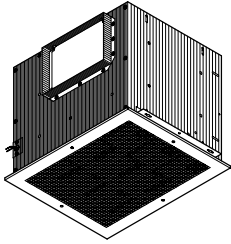
WEIGHT

MODEL NO.	SHIPPING WT.
L400	33.8 lbs.
L500	
L400K, L500K	36.2 lbs.
L700	33.9 lbs.





LOSONE SELECT® CEILING MOUNT VENTILATORS L900 SERIES & L1500 SERIES



Incredibly reliable. Unbelievably quiet. Offering the CFM choices you need at the lowest sound levels in the industry.

FEATURES

GRILLE:

- Conceals interior
- Low profile styling blends with any decor
- Metal, finished with white painted enamel

BLOWER:

- Low RPM for quiet operation
- Resilient anti-vibration mounts
- Dynamically-balanced, polymeric, centrifugal blower wheel for quiet, efficient performance
- Permanently lubricated, thermally protected motor
- Plug-in motor rated at 120 VAC
- Designed for continuous operation

HOUSING:

- Rugged, 20 gauge galvanized steel
- 1/2" acoustic insulation inside
- May be installed in ceiling or wall (size permitting)
- 8-position mounting brackets for easy installation and greater adaptability to various mounting requirements
- Automatic backdraft damper located within duct connector
- Factory-shipped in horizontal discharge position for 8" x 12" ductwork
- May be converted to vertical discharge
- May be installed as an in-line ventilator with addition of accessory kit Model 983L (purchase separately)

ACCESSORIES (purchase all separately):

- Model 57V (Ivory) / 57W (White) Electronic Variable Speed Control
- Model 59V (Ivory) / 59W (White) 60-Minute Time Control
- Model 80L Electronic Speed Control (Internal) (For use with L900 Series only.)

ACCESSORIES (continued):

- Model 61V (Ivory) / 61W (White) 15-Minute Time Control
- Model 71V (Ivory) / 71W (White) 12-Hour Time Control
- 6-Amp, Electronic Variable Speed Controls Model 72V/72W (120 VAC)
- Model T81212 Transition (8" x 12" to 12" round)
- Model RD3 Radiation Damper

TYPICAL SPECIFICATION

Ventilator shall be Broan Model L900, (L1500). Ventilator shall have galvanized steel housing insulated with at least 1/2" of acoustic insulation. Housing to have adjustable mounting brackets. Automatic backdraft damper to be located within duct connector. Duct connector, blower assembly and wiring plate shall be adjustable for either horizontal or vertical installation. Blower unit shall be removable from housing and will have a polymeric, centrifugal-type blower wheel. Motor to be permanently lubricated and mounted with resilient anti-vibration mounts. RPM not to exceed number listed for each model. Air delivery shall be no less and sound levels no greater than listed for each model. All air and sound ratings shall be certified by AMCA. Units to be UL and cUL listed.



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Broan-NuTone Canada, 1140 Tristar Drive, Mississauga, Ontario, L5T 1H9 (1-888-882-7626)

REFERENCE	QTY.	REMARKS	Project
			Location
			Architect
			Engineer
			Contractor
			Submitted by Date

PERFORMANCE RATINGS - LOSONE SELECT® CEILING MOUNT VENTILATORS L900 SERIES & L1500 SERIES

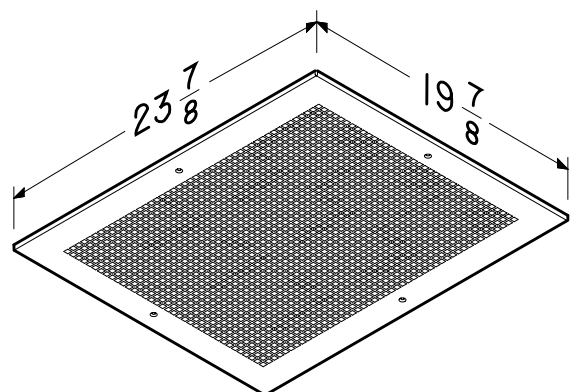
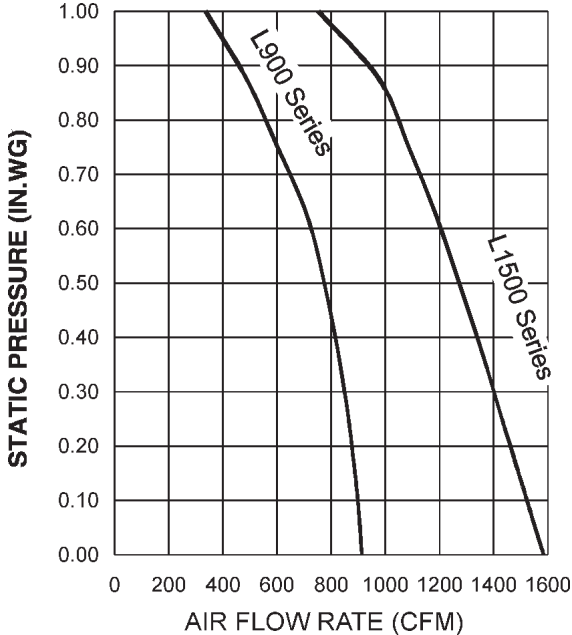
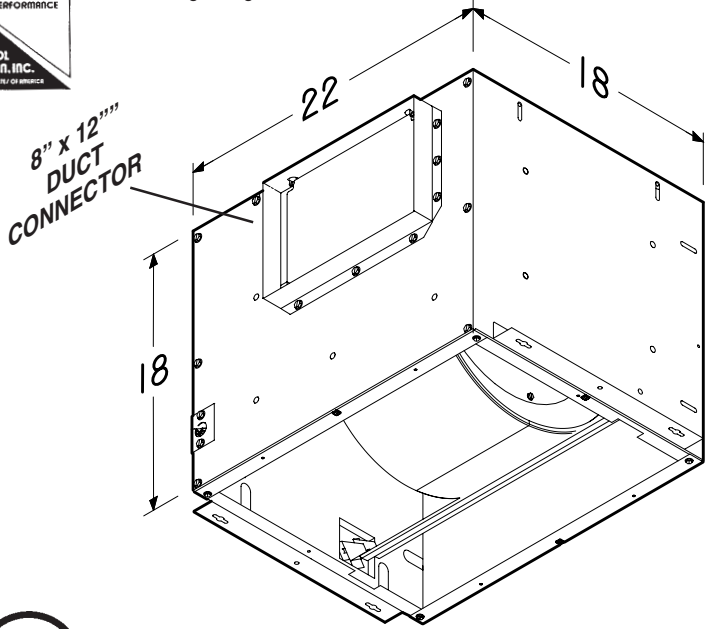
AMCA LICENSED PERFORMANCE

		CFM / SONES - AT STATIC PRESSURES (Ps - inches of H ₂ O)													
MODEL NO.	NOMINAL VOLTAGE		0.0" Ps	.10" Ps	.125" Ps	.250" Ps	.375" Ps	.50" Ps	.625" Ps	.750" Ps	.875" Ps	1.0" Ps	NOMINAL RPM	AMPS @60 Hz	WATTS
L900	120 VAC	CFM Hor.	918	905	901	877	842	793	725	636	536	390	650	3.0	306
		SONES Hor.	3.8	4.0	4.1	4.0	4.2	4.3	4.4	4.9	4.5	5.3			
		CFM Ver.	909	892	885	850	807	756	695	568	440	282			
		SONES Ver.	3.8	3.4	3.4	3.5	3.6	3.7	3.9	4.2	4.3	4.4			
L1500	120 VAC	CFM Hor.	1578	1526	1513	1438	1371	1285	1198	1103	1000	816	955	5.0	468
		SONES Hor.	8.6	8.4	8.4	8.1	7.5	7.0	6.7	6.2	5.8	5.8			
		CFM Ver.	1590	1519	1502	1423	1340	1259	1176	1069	954	689			
		SONES Ver.	8.5	8.4	8.4	8.1	7.9	7.5	7.2	7.1	6.9	6.5			

Performance ratings include the effects of inlet grille and backdraft damper in the airstream. Speed (RPM) shown is nominal. Performance is based on actual speed of test. The sound ratings shown are loudness values in fan sones at 5' (1.5m) in a hemispherical free field calculated per AMCA Std. 301. Values shown are for Installation Type B: Free inlet fan sone levels. Performance shown is for Installation Type B: Free inlet, Ducted outlet.



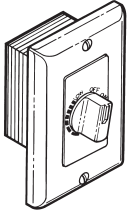
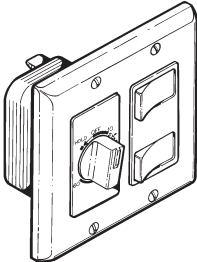
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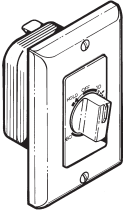
WEIGHT	
MODEL NO.	SHIPPING WT.
L900	64.2 lbs.
L1500	64.3 lbs.



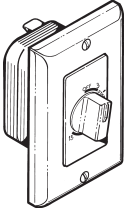
WALL CONTROLS



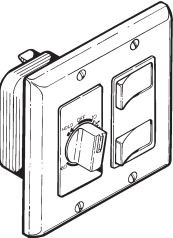
- Model 57V (Ivory), 57W (White)
Electronic Variable Speed Control (3 Amp)**
- Rotary dial for variable selection of fan speed and sound level
 - Positive off position
 - Fits single-gang box
 - Built-in radio noise suppressor
 - 120 VAC, 3.0 Amp capacity
 - For use with all Broan fans within Amp rating except ceiling paddle fans
 - Do not use with impedance protected motor



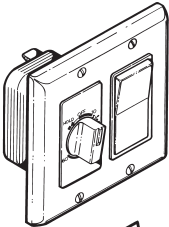
- Model 59V (Ivory), 59W (White)
60-Minute Time Control**
- Operates continuously or for any set period up to 60 minutes
 - Fits single-gang box
 - 120 VAC, 20 Amp or 240 VAC, 10 Amp capacity
 - Also recommended for low voltage (30V Max) applications
 - For use with all Broan fans and heaters within Amp rating



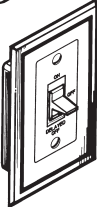
- Model 61V (Ivory), 61W (White)
15-Minute Time Control**
- Operates for any set period up to 15 minutes (no "continuous on" position)
 - Fits single-gang box
 - 120 VAC, 20 Amp or 240 VAC, 10 Amp capacity
 - Also recommended for low voltage (30V Max) applications
 - For use with all Broan fans and heaters within Amp rating



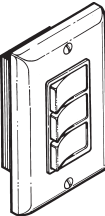
- Model 62V (Ivory), 62W (White)
60-Minute Time Control with Two Rocker Switches**
- Two, independent, 120 VAC, 15 Amp rocker switches (20 Amp Total)
 - Timer operates continuously or for any set period up to 60 minutes
 - Fits two-gang box
 - 120 VAC, 20 Amp or 240 VAC, 10 Amp timer capacity
 - For use with all Broan fans and heaters within Amp rating



- Model 63V (Ivory), 63W (White)
60-Minute Time Control with Rocker Switch**
- One, independent 120 VAC, 15 Amp rocker switch
 - Timer has same features as Model 62V/62W
 - For use with all Broan fans and heaters within Amp rating



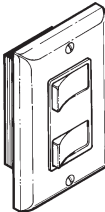
- Model 64V (Ivory), 64W (White)
Fan/Light Control with Off-Delay**
- Fan and light operate together when control is turned on. Fan continues to operate for a set time period (user adjustable from 1-60 minutes) after light is turned off
 - Center position turns fan and light off immediately
 - Can also be used with a fan only
 - Fits single-gang box
 - 120 VAC, 4 Amp (fan) and 4 Amp (light) capacity
 - For use with all Broan fans and fan/lights within Amp rating. Requires both sides of the electrical line (hot & neutral) in the switchbox



- Model 65V (Ivory), 65W (White)
Three-Function Control with Brass Finish Metal Wall Plate**

- Model 66V (Ivory), 66W (White)
Three-Function Control with Plastic Wall Plate**

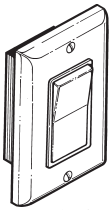
- Model 67V (Ivory), 67W (White)
Three-Function Control with Chrome Finish Metal Wall Plate**
- Three, independent, 120 VAC, 15 Amp rocker switches (20 Amp total)
 - Fits single-gang opening
 - For use with all Broan fans and heaters within Amp rating



- Model 68V (Ivory), 68W (White)
Two-Function Control**
- Two, independent, 120 VAC, 15 Amp rocker switches (20 Amp total)
 - Fits single-gang box
 - For use with all Broan fans and heaters within Amp rating

Broan-NuTone LLC Hartford, Wisconsin www.broan.com 800-558-1711

REFERENCE	QTY.	REMARKS	Project
			Location
			Architect
			Engineer
			Contractor
			Submitted by Date



**Model 69V (Ivory), 69W (White)
Single-Function Control**

- Fits single-gang box
- 120 VAC, 15 Amp
- For use with all Broan fans within Amp rating



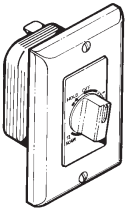
**Model 69VL (Ivory), 69WL (White)
Single-Function Control with Indicator**

- Red light indicates power is on
- Specially designed for use with Broan Solitaire® Ultra Silent™ fans
- Fits single-gang box
- 120 VAC, 20 Amp



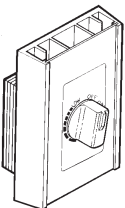
**Model 70TW (White)
Wall Thermostat for Fans**

- Line voltage thermostat automatically activates the ventilator if house temperature rises above the preset comfort setting
- Fits single-gang box
- 125, 250, 277 VAC; 22 Amp capacity
- For use with all Broan fans



**Model 71V (Ivory)
12-Hour Timer**

- Operates continuously or for any set period up to 12 hours
- Fits single-gang box
- 120 VAC, 20 Amp or 240 VAC, 10 Amp capacity
- For use with all Broan fans and heaters within Amp rating

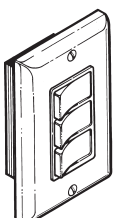


**Model 72V (Ivory), 72W (White)
Electronic Variable Speed Control (6 Amp)**

- Rotary dial for variable selection of fan speed and sound level
- Positive on/off action
- Fits single-gang box
- Built-in radio noise suppressor
- Switched wire included for additional use if desired (120 VAC, 6 Amp)
- For use with all Broan fans within Amp rating except ceiling paddle fans
- Do not use with impedance protected motor

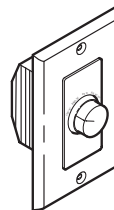
**Model 75V (Ivory)
Electronic Variable Speed Control (6 Amp)**

- 240 VAC, 6 Amp capacity
- For use with Broan Model L3500EXL LoSone® Select™ Cabinet Ventilator
- Other features same as Model 72V



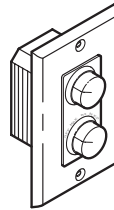
**Model 77DV (Ivory), 77DW (White)
Four-Function Control**

- Specially designed for use with Broan SensAire® and Designer Series fan/lights
- Separate switches control fan (on/off/auto), light (on/off), and night-light (on/off)
- 120 VAC, Amps each rocker = 15, 15, 5 (20 Amp total)
- Fits single-gang opening
- Includes switch function labels



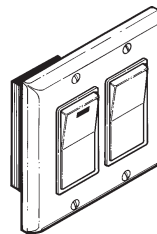
**Model 78V (Ivory), 78W (White)
Ceiling Paddle Fan Speed Control**

- Four-position speed selection
- Fits single-gang box
- 120 VAC, 1.5 Amp
- For use with all Broan ceiling paddle fans



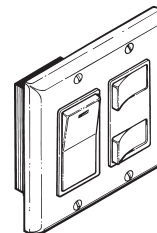
**Model 79V (Ivory), 79W (White)
Ceiling Paddle Fan Speed
and Light Control**

- Four-position speed selection
- Hi-Off-Low light control
- Fits single-gang box
- 120 VAC, 1.5 Amp fan control; 300 watt maximum light
- For use with all Broan ceiling paddle fans and light kits



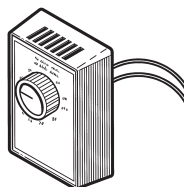
**Model 269VL (Ivory), 269WL (White)
Two-Function Control with Indicator**

- Red light indicates power is on
- Specially designed for use with Broan Solitaire® Ultra Silent™ fans and an auxiliary light source
- Fits two-gang box
- 120 VAC, 20 Amp lighted switch; 120/240/277 VAC, 15 Amp unlighted switch



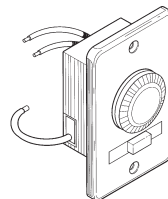
**Model 685VL (Ivory), 685WL (White)
Three-Function Control with Indicator**

- Red light indicates power is on
- Specially designed for use with Broan Solitaire® Ultra Silent™ fans /lights
- Fits two-gang box
- 120 VAC, 20 Amp lighted switch; 120 VAC, 15 Amp each unlighted switch (20 Amp total)



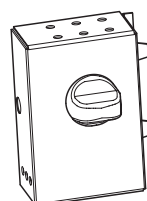
**Model DH100W
Dehumidistat**

- Fits single-gang box
- Variable setting from 20% to 80% relative humidity
- Dual voltage (24V/120V)
- Usage guide included



**Model T24H
24 Hour Programmable Timer**

- Select ON/OFF times in 30 minute increments
- Manual override slide switch
- Fits single-gang box
- Clock input: 120 VAC, 60 HZ
- Output contacts: 15 Amp 1875 Watt Resistive 8 Amp Inductive 1350 Watt Tunsten 1/2 HP motor



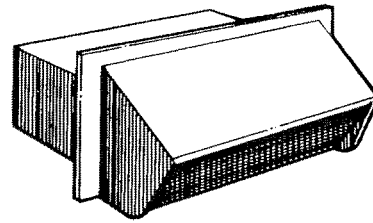
**Model 80L
Electronic Speed Control (Internal)**

- Specially designed for use with Broan LoSone Select® ventilators rated at 3 Amps or less
- Metal housing
- 3 A, 120 VAC, 60 Hz



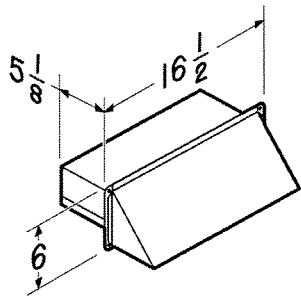
SPECIFICATION SHEET

WALL CAPS



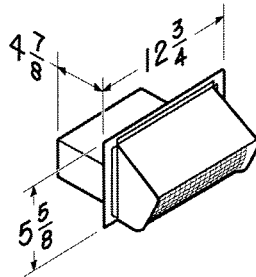
Model WC638

- For 3¼" x 14" duct
- Spring-loaded backdraft damper and bird screen
- 26 GA CRCQ Steel, black finish



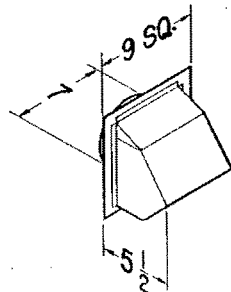
Model 639

- For 3¼" x 10" duct
- Spring-loaded backdraft damper and bird screen
- 24 GA CRCQ Steel, black electrically-bonded epoxy finish



Model 649

- Same features as Model 639
- .025 Aluminum - natural finish

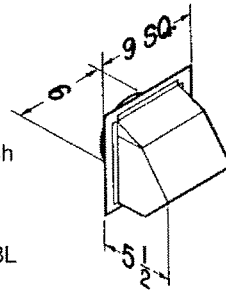


Model 647

- For 7" round duct
- Spring-loaded backdraft damper and bird screen
- .025 Aluminum - natural finish

Model 843BL

- For 6" round duct
- Spring-loaded backdraft damper and bird screen
- 22 GA CRCQ Steel, black electrically-bonded epoxy finish
- Attachment collar 1¼" long



Model 641

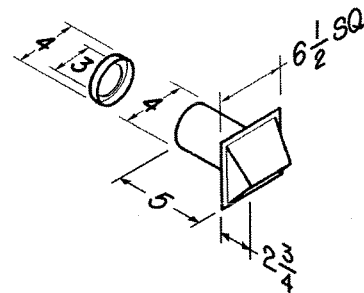
- Same features as Model 843BL
- .025 Aluminum - natural finish

Model 641FA

- Same features as Model 641
- Without backdraft damper
- Intended for make-up air inlet applications

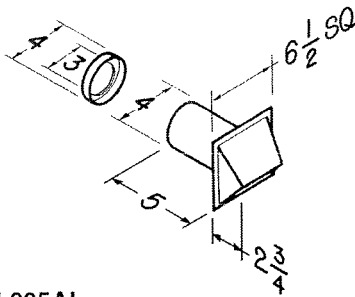
Model 885BL

- For 3" or 4" round duct (4" to 3" transition included)
- Spring-loaded backdraft damper and bird screen
- 24 GA CRCQ Steel, black electrically-bonded epoxy finish



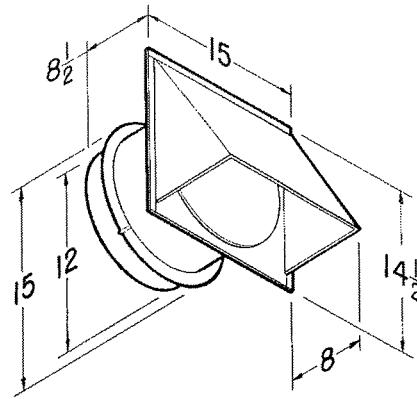
Broan-NuTone LLC Hartford, Wisconsin www.broan.com 800-558-1711

REFERENCE	QTY.	REMARKS	Project	
			Location	
			Architect	
			Engineer	
			Contractor	
			Submitted by	Date



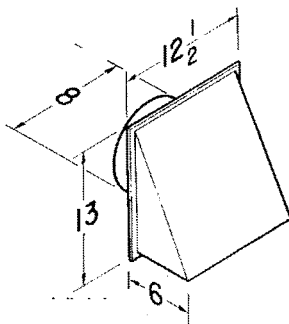
Model 885AL

- For 3" or 4" round duct (4" to 3" transition included)
- Spring-loaded backdraft damper and bird screen
- .025 Aluminum - natural finish



Model 613

- For 12" round duct
- High capacity
- Built-in backdraft damper and bird screen
- .025 Aluminum - natural finish

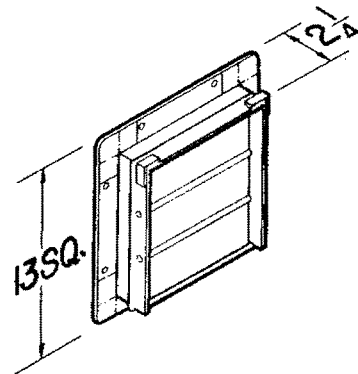


Model 643

- For 8" round duct
- Built-in backdraft damper
- .025 Aluminum - natural finish
- Attachment collar 3-3/8" long

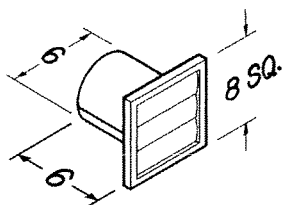
Model 643FA

- Same features as Model 643
- Without backdraft damper
- Intended for make-up air inlet applications



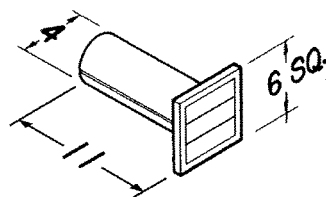
Model 441

- Gravity dampers
- Collar with bird screen for attaching 10" round duct
- 24 GA CRCQ steel construction with aluminum louvers



Model 646

- For 6" round duct
- Polymeric construction - white finish

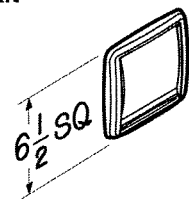


Model 450 Flexible Wall Ducting Kit

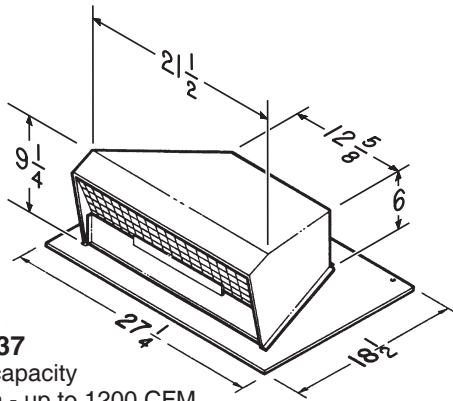
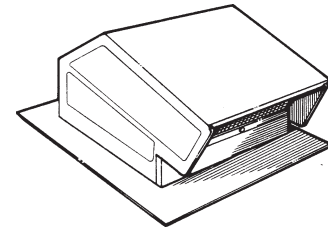
- Includes 5 ft. of 4", flexible, vinyl ducting, 4" diameter metal duct connector, 2 duct clamps, 4" to 3" reducer and a polymeric louvered wall vent

Model WVK2A Flexible Wall Ducting Kit

- Includes 5 ft. of 4", flexible, 2-ply metallic laminate ducting, 10" long 4" diameter metal duct, 2 duct clamps, 4" to 3" reducer, an engineered resin material wall vent, and mounting screws
- Duct conforms to UL181 Class 1 air connector requirements
- Not recommended for dryer venting

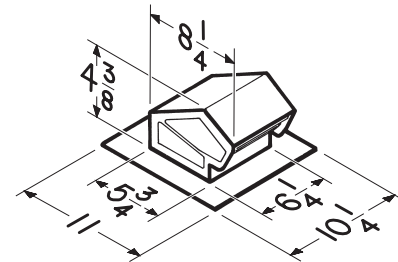


ROOF CAPS



Model 437

- High-capacity design - up to 1200 CFM
- 24 GA. CRCQ steel, black electrically-bonded epoxy finish
- Built-in spring-loaded backdraft damper and bird screen
- For use with High Performance blower system

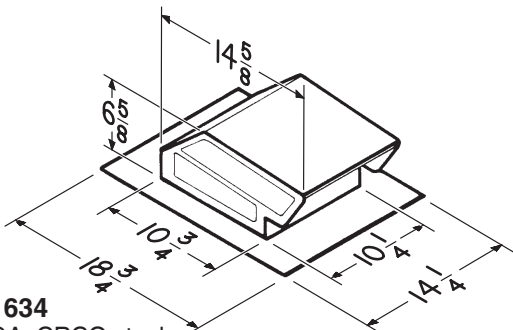


Model 636

- 24 GA. CRCQ steel, black electrically-bonded epoxy finish
- Built-in backdraft damper and bird screen
- For 3" or 4" round duct

Model 636AL

- Same as Model 636 .025 - in Aluminum
- Natural finish



Model 634

- 24 GA. CRCQ steel, black electrically-bonded epoxy finish
- Built-in backdraft damper and bird screen
- For 3 1/4" x 10" or up to 8" round duct

Model 634M

- Same as Model 634 except with 6" round duct collar

Model 644

- Same as Model 634 except .025 aluminum
- Natural finish

Model 443 Flexible Roof Ducting Kit

- Includes 8 ft. of 4", flexible, vinyl ducting, 4" diameter metal duct connector, 2 duct clamps, 4" to 3" reducer and Model 636 Roof Cap

Model RVK1A Flexible Roof Ducting Kit

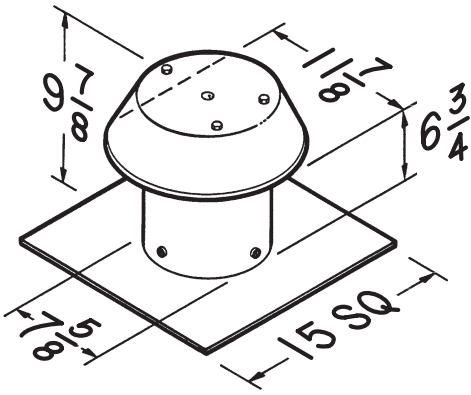
- Includes 8 ft. of 4", flexible, 2-ply metallic laminate ducting, 4" diameter metal duct connector, 2 duct clamps, 4" to 3" reducer and Model 636 Roof Cap
- Duct conforms to UL181 Class 1 air connector requirements
- Not recommended for dryer venting

Broan-NuTone LLC, 926 West State Street, Hartford, WI 53027 (1-800-637-1453)

NuTone, Inc., 4820 Red Bank Road, Cincinnati, OH 45227 (1-800-543-8687)

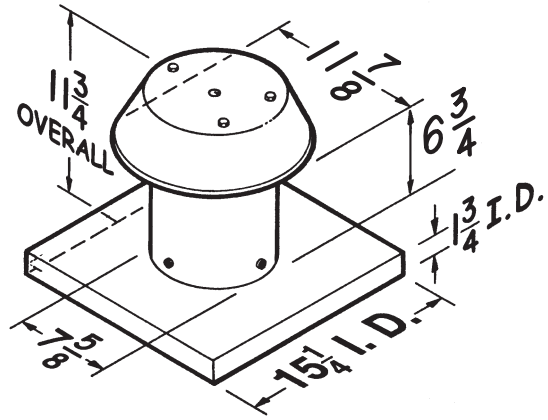
Broan-NuTone Canada, Inc., 1140 Tristar Drive, Mississauga, Ontario, L5T 1H9 (1-888-882-7626)

REFERENCE	QTY.	REMARKS	Project
			Location
			Architect
			Engineer
			Contractor
			Submitted by Date



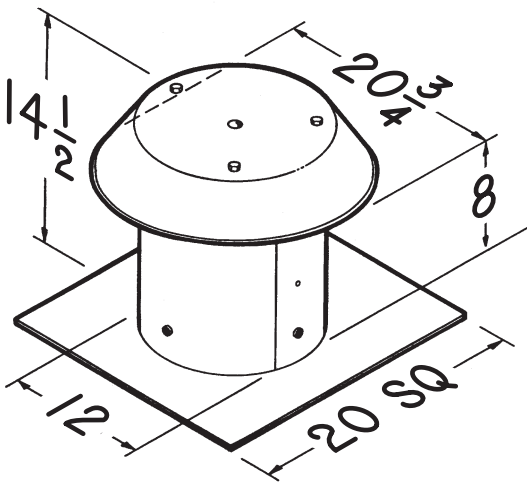
Model 611

- For flat roof installation
- .025 Aluminum - natural finish
- Built-in bird screen
- For up to 8" round duct



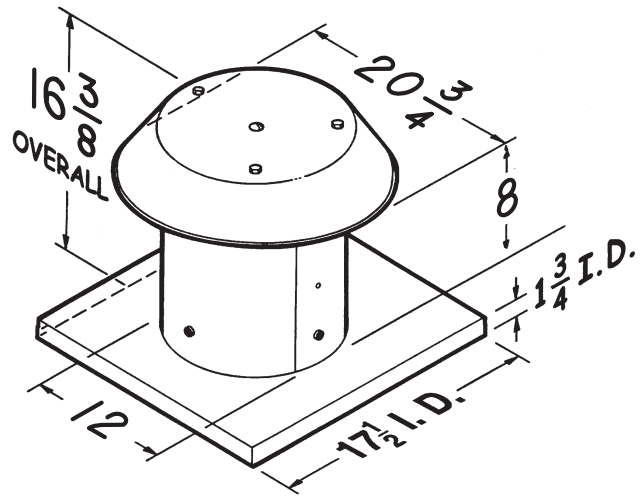
Model 611CM

- For curb mount installation
- Other features same as Model 611



Model 612

- For flat roof installation
- .025 Aluminum - natural finish
- Built-in bird screen
- For up to 12" round duct



Model 612CM

- For curb mount installation
- Other features same as Model 612

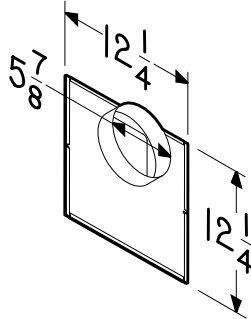
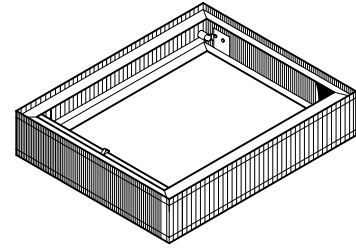
BROAN® NuTone®

Broan-NuTone LLC, 926 West State Street, Hartford, WI 53027 (1-800-637-1453)

NuTone, Inc., 4820 Red Bank Road, Cincinnati, OH 45227 (1-800-543-8687)

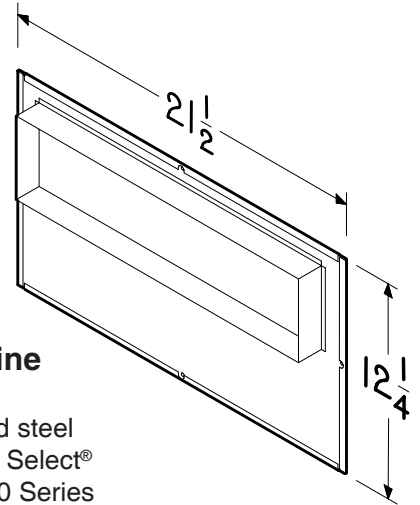
Broan-NuTone Canada, Inc., 1140 Tristar Drive, Mississauga, Ontario, L5T 1H9 (1-888-882-7626)

**LOSONE SELECT®
VENTILATOR
ACCESSORIES**



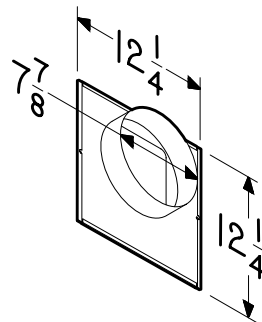
Model 961L In-Line Adapter Kit

- 24 gage galvanized steel
- Fits Broan LoSone Select® L100 & L150 Series 6" round duct intake



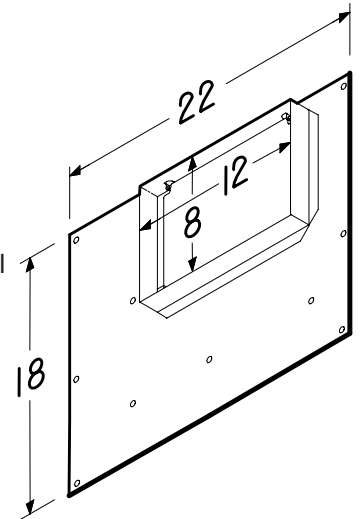
Model 982L In-Line Adapter Kit

- 24 gage galvanized steel
- Fits Broan LoSone Select® L400, L500, & L700 Series 4 1/2" x 18 1/2" duct intake



Model 981L In-Line Adapter Kit

- 24 gage galvanized steel
- Fits Broan LoSone Select® L200, L250, & L300 Series 8" round duct intake

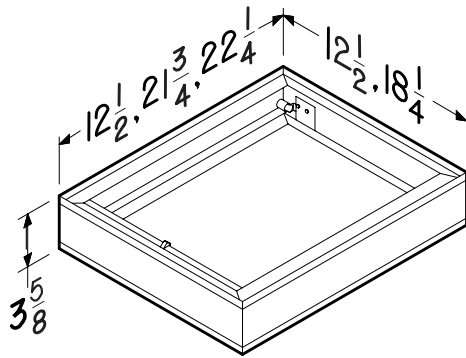


Model 983L In-Line Adapter Kit

- 24 gage galvanized steel
- Fits Broan LoSone Select® L900, L1500 Series 8" x 12" duct intake

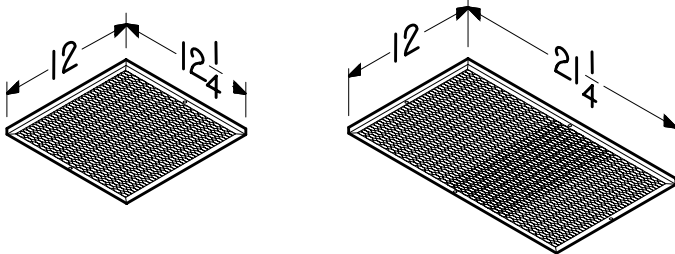
Broan-NuTone LLC, 926 West State Street, Hartford, Wisconsin 53027 (1-800-637-1453)
Broan-NuTone Canada, Inc., 1140 Tristar Drive, Mississauga, Ontario, L5T 1H9 (1-888-882-7626)

REFERENCE	QTY.	REMARKS	Project
			Location
			Architect
			Engineer
			Contractor
			Submitted by Date



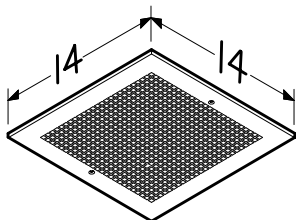
Models RD1, RD2, & RD3 Radiation Dampers

- UL rated for use in 1, 2, or 3 hour fire-rated ceilings
- Galvanized steel frame
- High temperature, non-asbestos, reinforced fiber thermal fabric
- 212°F fusible link
- Stainless steel negator-type closure spring
- RD1 (12½" x 12½") fits Broan LoSone Select® L100, L150, L200, L250, & L300 Series
- RD2 (21¾" x 12½") fits Broan LoSone Select® L400, L500, L700 Series
- RD3 (22¼" x 18¼") fits Broan LoSone Select® L900, L1500 Series



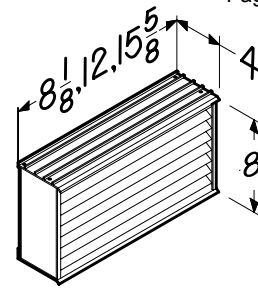
Models LAF1 & LAF2 Grease Filters

- Aluminum mesh filter traps grease and protects motor
- Dishwasher safe
- LAF1 (12" x 12¼") fits Broan LoSone Select® L300KMG
- LAF2 (12" x 21¼") fits Broan LoSone Select® L400K & L500K



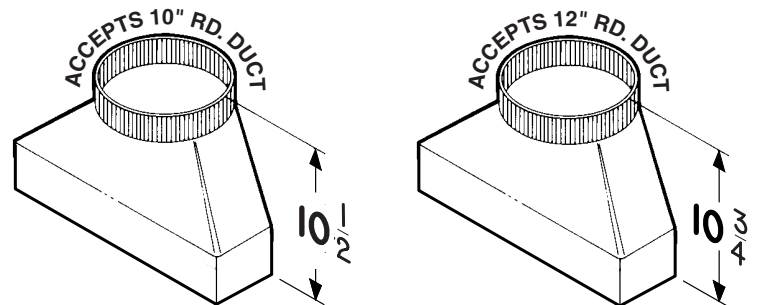
Model MG1 Metal Grille Kit

- 20 gage white enamel painted steel
- Mounting screws included
- Fits Broan LoSone Select® L100, L150, L200, L250, & L300 Series



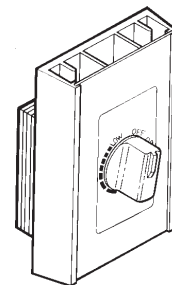
Models BV8, BV12, & BV16 Brick Vents

- Designed for installation in masonry walls
- Anodized aluminum construction
- Built-in aluminum mesh insect screen
- BV8 (8" x 8⅛" x 4")
- BV12 (8" x 12" x 4")
- BV16 (8" x 15⅝" x 4")



Models 423 & T81212 Duct Transitions

- Galvanized steel
- Allows for quick transition to easy-to-obtain-and-install round ducting
- 423 (4½" x 18½" to 10" round) for use with Broan LoSone Select® L400, L500, & L700 Series
- T81212 (not shown) (8" x 12" to 12" round) for use with Broan LoSone Select® L900, L1500 Series



Model 277V

Solid State Electronic Speed Control

- For use with all 277 VAC LoSone Select® Series Ventilators with "C" model number suffix (L100C, L150C, etc.)
- Rotary dial for variable selection of fan speed and sound level
- Positive on/off action
- Fits single-gang box
- Built-in radio noise suppressor
- For use with shaded pole or permanent split capacitor motors up to 6 Amps
- Do not use with impedance protected motor

BROAN

Broan-NuTone LLC, 926 West State Street, Hartford, Wisconsin 53027 (1-800-637-1453)
 Broan-NuTone Canada, Inc., 1140 Tristar Drive, Mississauga, Ontario, L5T 1H9 (1-888-882-7626)
 2/15/2013

DIRECT DRIVE DOWNBLAST CENTRIFUGAL ROOF EXHAUSTER (INCLUDES MOTOR)			
Quantity	Size	Inventory Number	List Price
	118 ~ 295 CFM @ .25", 1/10 HP	RED06S	\$520.00
	417 ~ 705 CFM @ .25", 1/10 HP	RED0810S	\$532.00
	403 ~ 1,246 CFM @ .25", ¼ HP	RED1025S	\$752.00
	708 ~ 1,144 CFM @ .25", ¼ HP	RED1216S	\$1,004.00
	1,231 ~ 2,104 CFM @ .25", ½ HP	RED1250S	\$1,004.00
	1,212 ~ 2540 CFM @ .25", ½ HP	RED1550S	\$1,120.00

DIRECT DRIVE DOWNBLAST CENTRIFUGAL ROOF EXHAUSTER ACCESSORIES			
Quantity	Size	Inventory Number	List Price
	5 AMP 115V SPEED CONTROLLER (RED6 & 8)	2727-1	\$60.00
	10 AMP 115V SPEED CONTRLLER (RED10, 12, & 15)	2828-1	\$142.00
	11" X 11" BACKDRAFT DAMPER (RED6, 8, & 10)	ACP4111111	\$70.00
	18" X 18" BACKDRAFT DAMPER (RED12 & 15)	ACP4111818	\$84.00
	15" X 15" X 14" ROOF CURB (RED6, 8, & 10)	C2SF151514	\$156.00
	22½" X 22½" X 14" ROOF CURB (RED12 & 15)	C2SF22522514	\$224.00

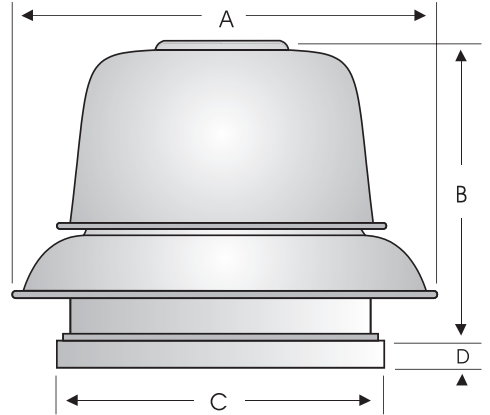


P: 800.961.7370
www.solerpalau-usa.com

MODEL RED CENTRIFUGAL ROOF EXHAUSTER DIRECT DRIVE

FEATURES

- AMCA Air & Sound Licensed
- UL Listed-Standard 705 (optional)
- Aluminum Construction
- Stainless Steel Alloy Exterior Fasteners
- Speed Controllable Motors
- 5 Year Fan Warranty
- 1 Year Motor Warranty
- Aluminum Birdscreen
- Internal Conduit Wiring Chase
- Electrical Disconnect



Standard 705
(optional)

Size	Dimensions (Inches)							Average Ship Wt. (lbs)
	A	B	C	D	E	F	G	
6	21 3/4	12	16 1/2	1 3/4	11	14 3/4	11 3/4	50
8	21 3/4	15 3/4	16 1/2	1 3/4	11	14 3/4	11 3/4	50
10	21 3/4	17 1/4	16 1/2	1 3/4	11	14 3/4	11 3/4	50
12	33 1/8	23 1/2	24	2	18	22 1/4	19 1/4	120
15	33 1/8	23 1/2	24	2	18	22 1/4	19 1/4	124

A - Outside diameter of unit. E - O.D. backdraft damper (box frame type).
 B - Height of unit above top of curb. (MAX") F - Outside dimension of factory built prefab curb.
 C - Inside dimension of square curb cap. G - Recommended roof opening.
 D - Depth of curb mounting flange (Inside dimension of factory built prefab curb)

FAN SPECIFICATIONS									MOTOR SPECIFICATIONS				
Line	Qty.	Model No.	Tag	CFM	SP	Fan RPM	BHP	Sones	HP	Volts	Phase	Hertz	Encl
1													
2													
3													
4													
5													

ACCESSORY ITEMS					1	2	3	4	5	ACCESSORY ITEMS					1	2	3	4	5
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Project: _____ Submitted: _____
 Customer: _____ Approved: _____
 Location: _____

BELT DRIVE DOWNBLAST CENTRIFUGAL ROOF EXHAUSTER (LESS MOTORS, PRICE SEPERATELY)			
Quantity	Size	Inventory Number	List Price
	137 ~ 403 CFM @ .5", REQUIRES 1/4 HP MOTOR	DB06	\$932.00
	312 ~ 900 CFM @ .5", REQUIRES 1/4 HP MOTOR	DB08	\$882.00
	543 ~ 935 CFM @ .5", REQUIRES 1/4 HP MOTOR	DB09	\$882.00
	406 ~ 1,233 CFM @ .5", REQUIRES 1/4 HP MOTOR	DB11	\$882.00
	390 ~ 1,383 CFM @ .5", REQUIRES 1/4 HP MOTOR	DB12	\$1,058.00
	1,065 ~ 1,525 CFM @ .5", REQUIRES 1/4 HP MOTOR	DB14	\$1,094.00
	984 ~ 1,205 CFM @ .5", REQUIRES 1/4 HP MOTOR	DB16	\$1,298.00
	960 ~ 1,066 CFM @ .5", REQUIRES 1/3 HP MOTOR	DB08	\$882.00
	1,008 ~ 1,120 CFM @ .5", REQUIRES 1/3 HP MOTOR	DB09	\$882.00
	1,310 ~ 1,458 CFM @ .5", REQUIRES 1/3 HP MOTOR	DB11	\$882.00
	1,465 ~ 1,603 CFM @ .5", REQUIRES 1/3 HP MOTOR	DB12	\$1,058.00
	1,714 ~ 1,885 CFM @ .5", REQUIRES 1/3 HP MOTOR	DB14	\$1,094.00
	1,484 ~ 1,853 CFM @ .5", REQUIRES 1/3 HP MOTOR	DB16	\$1,298.00
	1,531 ~ 1,873 CFM @ .5", REQUIRES 1/3 HP MOTOR	DB18	\$1,262.00
	1,799 ~ 2,145 CFM @ .5", REQUIRES 1/3 HP MOTOR	DB20	\$1,424.00
	1,544 ~ 1,775 CFM @ .5", REQUIRES 1/2 HP MOTOR	DB11	\$892.00
	1,701 ~ 2,001 CFM @ .5", REQUIRES 1/2 HP MOTOR	DB12	\$1,068.00
	2,044 ~ 2,340 CFM @ .5", REQUIRES 1/2 HP MOTOR	DB14	\$1,104.00
	2,054 ~ 2,623 CFM @ .5", REQUIRES 1/2 HP MOTOR	DB16	\$1,308.00
	2,168 ~ 2,681 CFM @ .5", REQUIRES 1/2 HP MOTOR	DB18	\$1,272.00
	2,490 ~ 3,007 CFM @ .5", REQUIRES 1/2 HP MOTOR	DB20	\$1,434.00
	2,055 ~ 2,614 CFM @ .5", REQUIRES 1/2 HP MOTOR	DB24	\$2,054.00
	2,439 ~ 2,819 CFM @ .5", REQUIRES 3/4 HP MOTOR	DB14	\$1,104.00
	2,932 ~ 3,395 CFM @ .5", REQUIRES 3/4 HP MOTOR	DB16	\$1,308.00
	2,912 ~ 3,351 CFM @ .5", REQUIRES 3/4 HP MOTOR	DB18	\$1,272.00
	3,315 ~ 3,838 CFM @ .5", REQUIRES 3/4 HP MOTOR	DB20	\$1,434.00
	3,296 ~ 4,557 CFM @ .5", REQUIRES 3/4 HP MOTOR	DB24	\$2,054.00
	3,601 ~ 4,743 CFM @ .5", REQUIRES 3/4 HP MOTOR	DB30	\$2,340.00
	3,562 ~ 3,770 CFM @ .5", REQUIRES 1 HP MOTOR	DB18	\$1,272.00
	4,104 ~ 4,562 CFM @ .5", REQUIRES 1 HP MOTOR	DB20	\$1,434.00
	5,117 ~ 5,549 CFM @ .5", REQUIRES 1 HP MOTOR	DB24	\$2,054.00
	5,528 ~ 6,215 CFM @ .5", REQUIRES 1 HP MOTOR	DB30	\$2,340.00
	3,975 ~ 4,569 CFM @ .5", REQUIRES 1½ HP MOTOR	DB18	\$1,272.00
	4,847 ~ 5,280 CFM @ .5", REQUIRES 1½ HP MOTOR	DB20	\$1,434.00
	6,096 ~ 6,968 CFM @ .5", REQUIRES 1½ HP MOTOR	DB24	\$2,054.00
	7,213 ~ 8,030 CFM @ .5", REQUIRES 1½ HP MOTOR	DB30	\$2,340.00
	4,761 ~ 5,139 CFM @ .5", REQUIRES 2 HP MOTOR	DB18	\$1,282.00
	5,521 ~ 5,937 CFM @ .5", REQUIRES 2 HP MOTOR	DB20	\$1,444.00
	7,380 ~ 7,899 CFM @ .5", REQUIRES 2 HP MOTOR	DB24	\$2,064.00
	8,817 ~ 9,469 CFM @ .5", REQUIRES 2 HP MOTOR	DB30	\$2,350.00
	8,182 ~ 9,023 CFM @ .5", REQUIRES 3 HP MOTOR	DB24	\$2,064.00
	10,104 ~ 11,332 CFM @ .5", REQUIRES 3 HP MOTOR	DB30	\$2,350.00
	11,831 ~ 13,871 CFM @ .5", REQUIRES 5 HP MOTOR	DB30	\$2,350.00

BELT DRIVE DOWNBLAST CENTRIFUGAL ROOF EXHAUSTER ACCESSORIES			
Quantity	Size	Inventory Number	List Price
	11" X 11" BACKDRAFT DAMPER (DB6, 8, & 9)	ACP4111111	\$70.00
	18" X 18" BACKDRAFT DAMPER (DB11, 12, 14, & 16)	ACP4111818	\$84.00
	24" X 24" BACKDRAFT DAMPER (DB18, & 20)	ACP4112424	\$122.00
	30" X 30" BACKDRAFT DAMPER (DB24)	ACP4113030	\$162.00
	36" X 36" BACKDRAFT DAMPER (DB30 & 36)	ACP6113636	\$216.00
	48" X 48" BACKDRAFT DAMPER (DB42 & 48)	ACP6114848	\$424.00
	115 VOLT MOTORIZED BACKDRAFT DAMPER KIT	411611	\$224.00

15" X 15" X 14" ROOF CURB (DB6, 8, & 9)	C2SF151514	\$156.00
22½" X 22½" X 14" ROOF CURB (DB11, 12, 14, & 16)	C2SF22522514	\$224.00
28" X 28" X 14" ROOF CURB (DB18 & 20)	C2SF282814	\$248.00
34" X 34" X 14" ROOF CURB (DB24)	C2SF343414	\$272.00
41" X 41" X 14" ROOF CURB (DB30 & 36)	C2SF414114	\$314.00
53½" X 53½" X 14" ROOF CURB (DB42 & 48)	C2SF53553514	\$418.00

OPEN DRIP PROOF ELECTRICAL MOTOR			
Quantity	Size	Inventory Number	List Price
	1/4 HP, 115 VOLT, 1 PHASE	MTR.25HP115/1	\$168.00
	1/4 HP, 208/230 VOLT, 1 PHASE	MTR.25HP230/1	\$250.00
	1/4 HP, 208/230/460 VOLT, 3 PHASE	MTR.25HP460/3	\$406.00
	1/3 HP, 115 VOLT, 1 PHASE	MTR.33HP115/1	\$178.00
	1/3 HP, 208/230 VOLT, 1 PHASE	MTR.33HP230/1	\$400.00
	1/3 HP, 208/230 VOLT, 1 PHASE	MTR.33HP460/3	\$248.00
	1/2 HP, 115 VOLT, 1 PHASE	MTR.5HP115/1	\$220.00
	1/2 HP, 208/230 VOLT, 1 PHASE	MTR.5HP230/1	\$430.00
	1/2 HP, 208/230/460 VOLT, 3 PHASE	MTR.5HP460/3	\$420.00
	3/4 HP, 115 VOLT, 1 PHASE	MTR.75HP115/1	\$406.00
	3/4 HP, 208/230 VOLT, 1 PHASE	MTR.75HP230/1	\$376.00
	3/4 HP, 208/230/460 VOLT, 3 PHASE	MTR.75HP230/1	\$400.00
	1 HP, 115/208/230 VOLT, 1 PHASE	MTR1HP230/1	\$512.00
	1 HP, 208/230/460 VOLT, 3 PHASE	MTR1HP460/3	\$364.00
	1½ HP, 115/208/230 VOLT, 1 PHASE	MTR1.5HP230/1	\$612.00
	1½ HP, 208/230/460 VOLT, 3 PHASE	MTR1.5HP460/3	\$480.00
	2 HP, 115/208/230 VOLT, 1 PHASE	MTR2HP230/1	\$512.00
	2 HP, 208/230/460 VOLT, 3 PHASE	MTR2HP460/3	\$488.00
	3 HP, 208/230/460 VOLT, 3 PHASE	MTR3HP460/3	\$650.00
	5 HP, 208/230/460 VOLT, 3 PHASE	MTR5HP460/3	\$514.00

MODEL DB

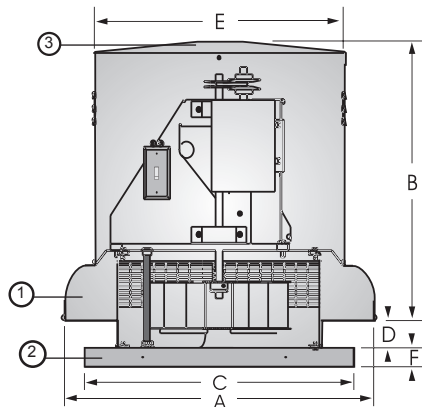
BELT DRIVE CENTRIFUGAL ROOF EXHAUSTER

STANDARD CONSTRUCTION FEATURES

- All aluminum exterior construction.
- Stainless steel exterior fasteners.
- Ventilated motor compartment.
- Prepunched curb cap with welded corners.
- Aluminum nonoverloading wheel.
- Adjustable V-Belt drive.
- Motor & drive factory mounted (except 182T and larger).
- Mounted service disconnect (except 2 speed and XP motors).
- Pillow block ball bearings (L50 = 200k with lube fittings).
- Internal wiring chase.
- Aluminum birdscreen and windband.
- Neoprene vibration isolators.
- AMCA Certified Air and Sound Performance.



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SIZE	DIMENSIONS (IN.)								Damper OD	MIN. METAL THICKNESS (ALUM.)			AVG. SHIP WT. LBS.
	A	B	C	D	E	F	G	H		SKIRT ①	CURB CAP ②	LID COVER ③	
6-8-9	20 1/2	17 1/2	16 1/2	3 1/2	16 1/8	1 3/4	14 3/4	11 1/2	11	.063	.050	.050	80
11	28 3/8	23	24	3 1/2	22 1/2	2	22 1/4	19 1/2	18	.080	.080	.050	130
12	28 3/8	23	24	3 1/2	22 1/2	2	22 1/4	19 1/2	18	.080	.080	.050	130
14	28 3/8	23	24	3 1/2	22 1/2	2	22 1/4	19 1/2	18	.080	.080	.050	140
16	32 1/4	24	24	6	26 1/4	2 1/2	22 1/4	19 1/2	18	.080	.080	.050	145
18	32 1/4	24	29 1/2	4 1/2	26 1/4	2 1/2	27 3/4	24 3/4	24	.090	.080	.050	160
20	36 3/4	24 1/2	29 1/2	4 1/2	26 1/4	2 1/2	27 3/4	24 3/4	24	.090	.080	.050	215
24	41 1/4	26 1/2	35 3/4	8 1/2	30	2 1/2	33 3/4	30 3/4	30	.090	.080	.050	290
30	58 3/8	37	42 1/2	5 1/2	41	2 1/2	40 3/4	37 3/4	36	.100	.090	.050	465
36	58 3/8	37	42 1/2	10	41	2 1/2	40 3/4	37 3/4	36	.100	.090	.050	475
42	73	40 1/2	55	10	54 5/8	2 1/2	53 1/4	50 1/4	48	.100	.090	.050	700
48	73	40 1/2	55	13	54 5/8	2 1/2	53 1/4	50 1/4	48	.100	.090	.050	830

A - Skirt OD (Dia). E - Motor cover OD (Dia).
 B - Height. F - Curb cap flange.
 C - Curb cap OD. G - Recommended roof curb OD (allows 3/4" for flashing).
 D - Skirt height. H - Recommended roof opening.

DIMENSIONS REPRESENT GENERAL CONSTRUCTION AND MAY VARY SLIGHTLY. CONTACT FACTORY FOR CERTIFIED DRAWINGS.

FAN SPECIFICATIONS									MOTOR SPECIFICATIONS				
Line	Qty.	Model No.	Tag	CFM	SP	Fan RPM	BHP	Sones	HP	Volts	Phase	Hertz	Encl
1													
2													
3													
4													
5													

ACCESSORY ITEMS	1	2	3	4	5	ACCESSORY ITEMS	1	2	3	4	5
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Subject to change unless approved in submittal by Soler & Palau USA
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2/15/2013

BELT DRIVE UPBLAST CENTRIFUGAL ROOF EXHAUSTER (LESS MOTORS, PRICE SEPERATELY)			
Quantity	Size	Inventory Number	List Price
	221 ~ 918 CFM @ .5", REQUIRES 1/4 HP MOTOR	TXB08	\$1,064.00
	242 ~ 983 CFM @ .5", REQUIRES 1/4 HP MOTOR	TXB10	\$1,070.00
	466 ~ 1,201 CFM @ .5", REQUIRES 1/4 HP MOTOR	TXB12	\$1,194.00
	944 ~ 1,458 CFM @ .5", REQUIRES 1/4 HP MOTOR	TXB15	\$1,632.00
	1,476 ~ 1,693 CFM @ .5", REQUIRES 1/4 HP MOTOR	TXB18	\$1,906.00
	947 ~ 1,034 CFM @ .5", REQUIRES 1/3 HP MOTOR	TXB08	\$1,064.00
	1,066 ~ 1,133 CFM @ .5", REQUIRES 1/3 HP MOTOR	TXB10	\$1,070.00
	1,245 ~ 1,378 CFM @ .5", REQUIRES 1/3 HP MOTOR	TXB12	\$1,194.00
	1,574 ~ 1,774 CFM @ .5", REQUIRES 1/3 HP MOTOR	TXB15	\$1,632.00
	1,817 ~ 2,120 CFM @ .5", REQUIRES 1/3 HP MOTOR	TXB18	\$1,906.00
	1,660 ~ 2,087 CFM @ .5", REQUIRES 1/3 HP MOTOR	TXB20	\$2,052.00
	1,185 ~ 1,428 CFM @ .5", REQUIRES 1/2 HP MOTOR	TXB10	\$1,080.00
	1,448 ~ 1,659 CFM @ .5", REQUIRES 1/2 HP MOTOR	TXB12	\$1,204.00
	1,891 ~ 2,223 CFM @ .5", REQUIRES 1/2 HP MOTOR	TXB15	\$1,642.00
	2,271 ~ 2,696 CFM @ .5", REQUIRES 1/2 HP MOTOR	TXB18	\$1,916.00
	2,407 ~ 3,054 CFM @ .5", REQUIRES 1/2 HP MOTOR	TXB20	\$2,062.00
	1,738 ~ 1,961 CFM @ .5", REQUIRES 3/4 HP MOTOR	TXB12	\$1,204.00
	2,343 ~ 2,690 CFM @ .5", REQUIRES 3/4 HP MOTOR	TXB15	\$1,642.00
	2,809 ~ 3,288 CFM @ .5", REQUIRES 3/4 HP MOTOR	TXB18	\$1,916.00
	3,250 ~ 3,784 CFM @ .5", REQUIRES 3/4 HP MOTOR	TXB20	\$2,062.00
	2,791 ~ 3,075 CFM @ .5", REQUIRES 1 HP MOTOR	TXB15	\$1,642.00
	3,478 ~ 3,808 CFM @ .5", REQUIRES 1 HP MOTOR	TXB18	\$1,916.00
	3,984 ~ 4,436 CFM @ .5", REQUIRES 1 HP MOTOR	TXB20	\$2,062.00
	3,330 ~ 3,593 CFM @ .5", REQUIRES 1½ HP MOTOR	TXB15	\$1,642.00
	4,009 ~ 4,406 CFM @ .5", REQUIRES 1½ HP MOTOR	TXB18	\$1,916.00
	4,656 ~ 5,300 CFM @ .5", REQUIRES 1½ HP MOTOR	TXB20	\$2,062.00
	4,602 ~ 4,991 CFM @ .5", REQUIRES 2 HP MOTOR	TXB18	\$1,926.00
	5,510 ~ 5,957 CFM @ .5", REQUIRES 2 HP MOTOR	TXB20	\$2,072.00

BELT DRIVE DOWNBLAST CENTRIFUGAL ROOF EXHAUSTER ACCESSORIES			
Quantity	Size	Inventory Number	List Price
	15" X 15" X 14" ROOF CURB (TXB8 & 10)	C2SF151514	\$156.00
	22½" X 22½" X 14" ROOF CURB (TXB12 & 15)	C2SF22522514	\$224.00
	28" X 28" X 14" ROOF CURB (TXB18 & 20)	C2SF282814	\$248.00
	34" X 34" X 14" ROOF CURB (TXB24)	C2SF343414	\$272.00
	41" X 41" X 14" ROOF CURB (TXB30 & 36)	C2SF414114	\$314.00
	53½" X 53½" X 14" ROOF CURB (TXB42 & 48)	C2SF53553514	\$418.00
	15" X 15" X 8" VENTED EXT. (TXB8 & 10)	BVCE06810	\$166.00
	22½" X 22½" X 8" VENTED EXT. (TXB12 & 15)	BVCE06810	\$166.00
	28" X 28" X 8" VENTED EXT. (TXB18 & 20)	BVCE06810	\$166.00
	34" X 34" X 8" VENTED EXT. (TXB24)	BVCE06810	\$166.00
	41" X 41" X 8" VENTED EXT. (TXB30 & 36)	BVCE06810	\$166.00
	53½" X 53½" X 8" VENTED EXT. (TXB42 & 48)	BVCE06810	\$166.00

OPEN DRIP PROOF ELECTRICAL MOTOR			
Quantity	Size	Inventory Number	List Price
	1/4 HP, 115 VOLT, 1 PHASE	MTR.25HP115/1	\$168.00
	1/4 HP, 208/230 VOLT, 1 PHASE	MTR.25HP230/1	\$250.00
	1/4 HP, 208/230/460 VOLT, 3 PHASE	MTR.25HP460/3	\$406.00
	1/3 HP, 115 VOLT, 1 PHASE	MTR.33HP115/1	\$178.00
	1/3 HP, 208/230 VOLT, 1 PHASE	MTR.33HP230/1	\$400.00
	1/3 HP, 208/230 VOLT, 1 PHASE	MTR.33HP460/3	\$248.00
	1/2 HP, 115 VOLT, 1 PHASE	MTR.5HP115/1	\$220.00

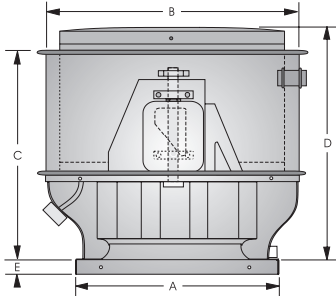
	1/2 HP, 208/230 VOLT, 1 PHASE	MTR.5HP230/1	\$430.00
	1/2 HP, 208/230/460 VOLT, 3 PHASE	MTR.5HP460/3	\$420.00
	3/4 HP, 115 VOLT, 1 PHASE	MTR.75HP115/1	\$406.00
	3/4 HP, 208/230 VOLT, 1 PHASE	MTR.75HP230/1	\$376.00
	3/4 HP, 208/230/460 VOLT, 3 PHASE	MTR.75HP230/1	\$400.00
	1 HP, 115/208/230 VOLT, 1 PHASE	MTR1HP230/1	\$512.00
	1 HP, 208/230/460 VOLT, 3 PHASE	MTR1HP460/3	\$364.00
	1½ HP, 115/208/230 VOLT, 1 PHASE	MTR1.5HP230/1	\$612.00
	1½ HP, 208/230/460 VOLT, 3 PHASE	MTR1.5HP460/3	\$480.00
	2 HP, 115/208/230 VOLT, 1 PHASE	MTR2HP230/1	\$512.00
	2 HP, 208/230/460 VOLT, 3 PHASE	MTR2HP460/3	\$488.00
	3 HP, 208/230/460 VOLT, 3 PHASE	MTR3HP460/3	\$650.00
	5 HP, 208/230/460 VOLT, 3 PHASE	MTR5HP460/3	\$514.00

MODEL TXB-RHUL

UL762 LISTED RESTAURANT BELT DRIVE CENTRIFUGAL UPBLAST ROOF EXHAUSTER



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SIZE	DIMENSIONS (IN.)							AVG. SHIP WT. (LBS)
	A	B	C	D	E	F	G	
8	16 1/2	24	24	27	1 3/4	11 3/4	14 3/4	69
10	16 1/2	27	26	29	1 3/4	11 3/4	14 3/4	69
12/15/16	24	31 1/2	26	29	2 1/2	19 1/4	22 1/4	93
18/20	29 1/2	37 3/4	28 1/2	32	2 1/2	24 3/4	27 3/4	120
24	35 1/2	47 1/4	31 1/2	42	2 1/2	30 3/4	33 3/4	245
30	42 1/2	56 3/4	41	45	2 1/2	37 3/4	40 3/4	365
36	42 1/2	66	44	48	2 1/2	37 3/4	40 3/4	365
42	55	72 1/2	48	52	2 1/2	50 1/4	53 1/4	385
48	55	78 3/4	52	56	2 1/2	50 1/4	53 1/4	490

A - Inside dimension of square curb cap.
 B - Outside diameter of unit.
 C - Height of exhaust opening above curb cap.
 D - Height of unit above top of curb.
 E - Depth of curb mounting flange.
 F - Recommended roof opening.
 G - Outside dimension of factory built prefabricated curb.
 (Inside dimension of factory built prefabricated curb.)



OPTIONAL
(Must be specified)

cULus 705
cULus 762 (Grease)

SIZE	METAL GAUGES				
	WIND BAND	MOTOR COVER	SHROUD	BASE	
				STD/UL	RHUL
8/10	.050	.050	.063	.063	16GA
12/15/16	.050	.050	.063	.063	16GA
18/20	.050	.050	.080	.080	16GA
24	.050	.050	.100	.080	16GA
30	.050	.050	.100	.090	16GA
36	.050	.050	.090	.090	16GA
42	.050	.050	.090	.100	N/A
48	.050	.050	.090	.100	N/A

FAN FEATURES

- AMCA Air and Sound Licensed
- UL 705 listed
- UL 762 listed for Grease Removal
- Rainproof Electrical Box with Wiring Chase
- Heavy-Gauge Aluminum Construction
- Nonoverloading Aluminum Backward Inclined Wheel
- Drives Sized for a Minimum of 150% of Motor Horsepower
- 1 Year Fan and Motor Warranty
- Heavy-Duty 200,000 Hour Rated Pillow Block Bearings
- Single Piece Deep Spun Inlet with Welded Corners

FAN SPECIFICATIONS									MOTOR SPECIFICATIONS				
Line	Qty.	Model No.	Tag	CFM	SP	Fan RPM	BHP	Sones	HP	Volts	Phase	Hertz	Encl
1													
2													
3													
4													
5													

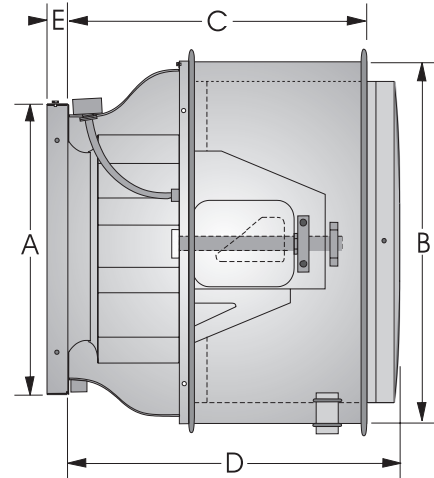
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Project: _____ Submitted: _____
 Customer: _____ Approved: _____
 Location: _____

MODEL TXBW BELT DRIVE CENTRIFUGAL SIDEWALL MOUNT EXHAUSTER



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cULus 705
cULus 762 (Grease)

SIZE	DIMENSIONS (IN.)						AVG. SHIP WT. (LBS)	METAL GAUGES				
	A	B	C	D	E	F		WIND BAND	MOTOR COVER	SHROUD	BASE	
											STD/UL	RHUL
8	16-1/2	24	24	27	1-3/4	16	69	.050	.050	.063	.063	16GA
10	16-1/2	27	26	29	1-3/4	16	69	.050	.050	.063	.063	16GA
12/15/16	24	31-1/2	26	29	2-1/2	23-1/2	93	.050	.050	.063	.063	16GA
18/20	29-1/2	37-3/4	28	32	2-1/2	29	120	.050	.050	.063	.080	16GA
24	35-1/2	47-1/4	33-1/2	41	2-1/2	35	245	.050	.050	.100	.080	16GA

A - Inside dimension of fan base.
B - Outside diameter of windband.
C - Length of shroud and windband.
D - Length of fan with motor cover.
E - Depth of mounting flange.
F - Recommended wall opening.

NOTE: Unit comes with disconnect and birdscreen.
UL 762 grease unit does not have birdscreen.

FAN SPECIFICATIONS									MOTOR SPECIFICATIONS				
Line	Qty.	Model No.	Tag	CFM	SP	Fan RPM	BHP	Sones	HP	Volts	Phase	Hertz	Encl
1													
2													
3													
4													
5													

ACCESSORY ITEMS	1	2	3	4	5	ACCESSORY ITEMS	1	2	3	4	5
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<input type="checkbox"/>						<input type="checkbox"/>					

Project: _____ Submitted: _____
 Customer: _____ Approved: _____
 Location: _____

BOOSTER INLINE FAN			
Quantity	Size	Inventory Number	List Price
	240 CFM, 120/1	CSR06	\$70.00
	420 CFM, 120/1	CSR08	\$84.00
	650 CFM, 120/1	CSR10	\$112.00
	1,150 CFM, 120/1	CSR12	\$158.00
	1,500 CFM, 120/1	CSR14	\$166.00

DRYER BOOSTER FAN			
Quantity	Size	Inventory Number	List Price
	4 EDGE DRYER BOOSTER FAN WITH SWITCH	DBF-110	\$430.00
	LINT TRAP	DBLT-4	\$88.00

MIXED FLOW INLINE FAN			
Quantity	Size	Inventory Number	List Price
	48 / 90 CFM @ .25", 4" Ø DUCT DIAMETER	TD100X	\$184.00
	73 / 133 CFM @ .25", 5" Ø DUCT DIAMETER	TD125	\$206.00
	163 / 250 CFM @ .25", 6" Ø DUCT DIAMETER	TD150	\$270.00
	373 / 458 CFM @ .25", 8" Ø DUCT DIAMETER	TD200	\$330.00
	418 / 680 CFM @ .25", 10" Ø DUCT DIAMETER	TD250	\$540.00



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 Jacksonville, Florida 32217
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 www.solerpalau-usa.com

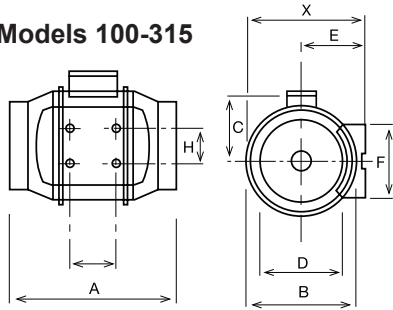
MODEL TD-MIXVENT

(For High Air Flow to Pressure Ratio Applications Minimum Space)

Dimensions inches/mm

Model	X	A	B	C	D	E	F	G	H
TD-100	5 15/16 151	9 1/8 232	5 7/16 138	3 3/4 96	3 7/8 98	3 1/4 82	3 3/4 95	1 7/8 48	2 1/16 52
TD-100x	7 3/8 188	11 15/16 303	6 15/16 176	4 1/2 115	3 13/16 97	3 15/16 100	3 9/16 90	3 1/8 80	2 3/8 60
TD-125	7 3/8 188	10 3/16 258	6 15/16 176	4 1/2 115	4 13/16 123	3 15/16 100	3 9/16 90	3 1/8 80	2 3/8 60
TD-150	8 3/8 212	11 5/8 295	7 7/8 200	5 127	5 13/16 147	4 7/16 112	5 1/8 130	3 1/8 80	2 3/8 60
TD-200	9 3/16 233	11 7/8 302	8 9/16 217	5 9/16 141	7 13/16 198	4 7/8 124	5 1/2 140	3 15/16 100	3 11/16 94
TD-250	11 7/16 291	15 3/16 386	10 11/16 272	7 9/16 192	9 3/4 248	6 1/8 155	6 5/8 168	5 11/16 145	5 1/2 140
TD-315	14 356	17 11/16 450	13 1/4 336	8 13/16 224	12 5/16 312	7 3/8 188	8 1/4 210	7 3/16 182	7 178

Models 100-315



FAN DATA					
Fan No.	Qty.	Model No.	CFM	SP	RPM

For more information contact us at www.solerpalau-usa.com or 1.800.961.7370 for additional submittal drawings.

Soler & Palau will not be responsible for fabrication changes or errors resulting from customer use of a non-current submittal drawing.

MOTOR DATA					
AMPS	RPM	VOLTS	PH	HZ	ENCLOSURE

ACCESSORIES	1	2	3	4	5	REMARKS

PROJECT: _____ CONTRACTOR: _____
 LOCATION: _____ REVISION DATE: _____
 FORM NO.: _____ SUBMITTED BY: _____ DATE: _____
 ENGINEER: _____ APPROVED BY: _____ DATE: _____



BELT DRIVE SQUARE INLINE EXHAUST FAN (LESS MOTORS, PRICE SEPERATELY)			
Quantity	Size	Inventory Number	List Price
	331 ~ 719 CFM @ .5", REQUIRES 1/4 HP MOTOR	SQB08	\$1,786.00
	557 ~ 988 CFM @ .5", REQUIRES 1/4 HP MOTOR	SQB10	\$1,718.00
	806 ~ 1,312 CFM @ .5", REQUIRES 1/4 HP MOTOR	SQB12	\$1,994.00
	1,269 ~ 1,548 CFM @ .5", REQUIRES 1/4 HP MOTOR	SQB15	\$2,162.00
	752 ~ 861 CFM @ .5", REQUIRES 1/3 HP MOTOR	SQB08	\$1,786.00
	1,042 ~ 1,148 CFM @ .5", REQUIRES 1/3 HP MOTOR	SQB10	\$1,718.00
	1,445 ~ 1,558 CFM @ .5", REQUIRES 1/3 HP MOTOR	SQB12	\$1,994.00
	1,684 ~ 1,904 CFM @ .5", REQUIRES 1/3 HP MOTOR	SQB15	\$2,162.00
	891 ~ 1,039 CFM @ .5", REQUIRES 1/2 HP MOTOR	SQB08	\$1,796.00
	1,200 ~ 1,401 CFM @ .5", REQUIRES 1/2 HP MOTOR	SQB10	\$1,728.00
	1,667 ~ 1,973 CFM @ .5", REQUIRES 1/2 HP MOTOR	SQB12	\$2,004.00
	2,038 ~ 2,324 CFM @ .5", REQUIRES 1/2 HP MOTOR	SQB15	\$2,172.00
	1,126 ~ 1,212 CFM @ .5", REQUIRES 3/4 HP MOTOR	SQB08	\$1,796.00
	1,451 ~ 1,669 CFM @ .5", REQUIRES 3/4 HP MOTOR	SQB10	\$1,728.00
	2,070 ~ 2,356 CFM @ .5", REQUIRES 3/4 HP MOTOR	SQB12	\$2,004.00
	2,476 ~ 2,787 CFM @ .5", REQUIRES 3/4 HP MOTOR	SQB15	\$2,172.00
	1,740 ~ 1,882 CFM @ .5", REQUIRES 1 HP MOTOR	SQB10	\$1,738.00
	2,402 ~ 2,678 CFM @ .5", REQUIRES 1 HP MOTOR	SQB12	\$2,014.00
	2,973 ~ 3,196 CFM @ .5", REQUIRES 1 HP MOTOR	SQB15	\$2,182.00
	2,768 ~ 3,169 CFM @ .5", REQUIRES 1½ HP MOTOR	SQB12	\$2,014.00
	3,274 ~ 3,724 CFM @ .5", REQUIRES 1½ HP MOTOR	SQB15	\$2,182.00
	3,749 ~ 4,168 CFM @ .5", REQUIRES 2 HP MOTOR	SQB15	\$2,182.00

OPEN DRIP PROOF ELECTRICAL MOTOR			
Quantity	Size	Inventory Number	List Price
	1/4 HP, 115 VOLT, 1 PHASE	MTR.25HP115/1	\$168.00
	1/4 HP, 208/230 VOLT, 1 PHASE	MTR.25HP230/1	\$250.00
	1/4 HP, 208/230/460 VOLT, 3 PHASE	MTR.25HP460/3	\$406.00
	1/3 HP, 115 VOLT, 1 PHASE	MTR.33HP115/1	\$178.00
	1/3 HP, 208/230 VOLT, 1 PHASE	MTR.33HP230/1	\$400.00
	1/3 HP, 208/230 VOLT, 1 PHASE	MTR.33HP460/3	\$248.00
	1/2 HP, 115 VOLT, 1 PHASE	MTR.5HP115/1	\$220.00
	1/2 HP, 208/230 VOLT, 1 PHASE	MTR.5HP230/1	\$430.00
	1/2 HP, 208/230/460 VOLT, 3 PHASE	MTR.5HP460/3	\$420.00
	3/4 HP, 115 VOLT, 1 PHASE	MTR.75HP115/1	\$406.00
	3/4 HP, 208/230 VOLT, 1 PHASE	MTR.75HP230/1	\$376.00
	3/4 HP, 208/230/460 VOLT, 3 PHASE	MTR.75HP230/1	\$400.00
	1 HP, 115/208/230 VOLT, 1 PHASE	MTR1HP230/1	\$512.00
	1 HP, 208/230/460 VOLT, 3 PHASE	MTR1HP460/3	\$364.00
	1½ HP, 115/208/230 VOLT, 1 PHASE	MTR1.5HP230/1	\$612.00
	1½ HP, 208/230/460 VOLT, 3 PHASE	MTR1.5HP460/3	\$480.00
	2 HP, 115/208/230 VOLT, 1 PHASE	MTR2HP230/1	\$512.00
	2 HP, 208/230/460 VOLT, 3 PHASE	MTR2HP460/3	\$488.00

MODEL SQB

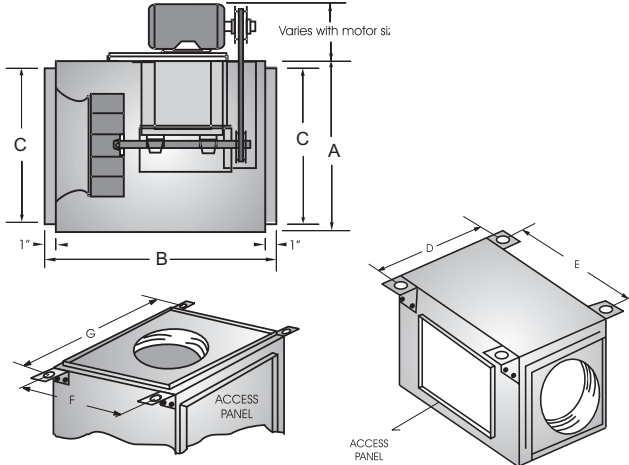
SQUARE INLINE BELT DRIVE DUCT FAN



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STANDARD FEATURES

- Non-overloading, backwardly inclined wheel.
- Spark resistant wheel on all sizes.
- Safety disconnect standard for all motors except two speed and explosion proof (shipped loose).
- Housing corrosion resistant galvanized steel.
- Heavy duty internal support structure.
- Integral duct flanges.
- UL 705 label for Electrical Safety & Reliability.



NOTE: Optional Mounting Brackets may be mounted on sides or ends of unit for floor, ceiling or vertical mounting.
(ARRANGE FOR BEST USE OF ACCESS PANELS)



SIZE	STANDARD DIMENSIONS (IN.)						
	A	B	C	D	E	F	G
7 & 8	15	23	11 7/8	18 1/2	19	13	19 3/4
10	17	23	13 7/8	20 1/2	19	15	21 3/4
12	21	23	17 7/8	24 1/2	19	19	25 3/4
15	24	28	21 7/8	27 1/2	24	22	28 3/4
18	28	30	23 7/8	31 1/2	26	26	32 3/4
20	32	34	27 7/8	35 1/2	30	30	36 3/4
24	39	38	34 7/8	42 1/2	34	37	43 3/4
30	44	40	39 7/8	47 1/2	36	42	48 3/4
36	52	45	47 7/8	55 1/2	41	50	56 3/4
42	58	53	53 7/8	61 1/2	49	56	62 3/4

SIZE	STANDARD MATERIAL & THICKNESS				AVG SHIP WT (LBS)	INLET OR OUTLET AREA
	GALV HOUSING GAUGE	VENTURI INLET	SHAFT DIA. (CRS)	STD WHEEL		
7 & 8	18	18	5/8	Alum	75	1.0 Sq Ft
10	18	18	5/8	Alum	85	1.36 Sq Ft
12	18	18	3/4	Alum	95	2.25 Sq Ft
15	18	18	3/4	Alum	145	3.36 Sq Ft
18	18	18	1	Alum	190	4.0 Sq Ft
20	18	18	1	Alum	220	5.45 Sq Ft
24	18	18	1 or 1 3/16	Alum	320	8.5 Sq Ft
30	16	16	1 or 1 1/2	Alum	420	11.1 Sq Ft
36	16	16	1 3/16 or 1 1/2	Alum	600	16.0 Sq Ft
42	16	16	1 1/2	Alum	725	20.25 Sq Ft

FAN SPECIFICATIONS									MOTOR SPECIFICATIONS				
Line	Qty.	Model No.	Tag	CFM	SP	Fan RPM	BHP	Sones	HP	Volts	Phase	Hertz	Encl
1													
2													
3													
4													
5													

ACCESSORY ITEMS					1	2	3	4	5	ACCESSORY ITEMS					1	2	3	4	5
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<input type="checkbox"/>										<input type="checkbox"/>									
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Project: _____ Submitted: _____
 Customer: _____ Approved: _____
 Location: _____

BELT DRIVE UTILITY SET EXHAUST FAN (LESS MOTORS, PRICE SEPERATELY)			
Quantity	Size	Inventory Number	List Price
	499 ~ 1,030 CFM @ .5", REQUIRES 1/4 HP MOTOR	CM10	\$2,424.00
	778 ~ 1,264 CFM @ .5", REQUIRES 1/4 HP MOTOR	CM12	\$2,508.00
	960 ~ 1,440 CFM @ .5", REQUIRES 1/4 HP MOTOR	CM14	\$2,684.00
	1,192 ~ 1,490 CFM @ .5", REQUIRES 1/4 HP MOTOR	CM16	\$2,966.00
	1,504 ~ 1,786 CFM @ .5", REQUIRES 1/4 HP MOTOR	CM18	\$3,490.00
	1,061 ~ 1,155 CFM @ .5", REQUIRES 1/3 HP MOTOR	CM10	\$2,424.00
	1,312 ~ 1,458 CFM @ .5", REQUIRES 1/3 HP MOTOR	CM12	\$2,508.00
	1,500 ~ 1,620 CFM @ .5", REQUIRES 1/3 HP MOTOR	CM14	\$2,684.00
	1,639 ~ 1,788 CFM @ .5", REQUIRES 1/3 HP MOTOR	CM16	\$2,966.00
	1,880 ~ 1,974 CFM @ .5", REQUIRES 1/3 HP MOTOR	CM18	\$3,490.00
	1,186 ~ 1,373 CFM @ .5", REQUIRES 1/2 HP MOTOR	CM10	\$2,434.00
	1,507 ~ 1,798 CFM @ .5", REQUIRES 1/2 HP MOTOR	CM12	\$2,518.00
	1,680 ~ 1,980 CFM @ .5", REQUIRES 1/2 HP MOTOR	CM14	\$2,694.00
	1,863 ~ 2,235 CFM @ .5", REQUIRES 1/2 HP MOTOR	CM16	\$2,976.00
	2,162 ~ 2,538 CFM @ .5", REQUIRES 1/2 HP MOTOR	CM18	\$3,500.00
	1,405 ~ 1,623 CFM @ .5", REQUIRES 3/4 HP MOTOR	CM10	\$2,434.00
	1,847 ~ 2,138 CFM @ .5", REQUIRES 3/4 HP MOTOR	CM12	\$2,518.00
	2,040 ~ 2,400 CFM @ .5", REQUIRES 3/4 HP MOTOR	CM14	\$2,694.00
	2,310 ~ 2,682 CFM @ .5", REQUIRES 3/4 HP MOTOR	CM16	\$2,976.00
	2,632 ~ 3,102 CFM @ .5", REQUIRES 3/4 HP MOTOR	CM18	\$3,500.00
	2,187 ~ 2,381 CFM @ .5", REQUIRES 1 HP MOTOR	CM12	\$2,528.00
	2,460 ~ 2,700 CFM @ .5", REQUIRES 1 HP MOTOR	CM14	\$2,704.00
	2,757 ~ 3,055 CFM @ .5", REQUIRES 1 HP MOTOR	CM16	\$2,986.00
	3,196 ~ 3,384 CFM @ .5", REQUIRES 1 HP MOTOR	CM18	\$3,510.00
	2,430 ~ 2,770 CFM @ .5", REQUIRES 1½ HP MOTOR	CM12	\$2,528.00
	2,760 ~ 3,120 CFM @ .5", REQUIRES 1½ HP MOTOR	CM14	\$2,704.00
	3,129 ~ 3,576 CFM @ .5", REQUIRES 1½ HP MOTOR	CM16	\$2,986.00
	3,196 ~ 4,136 CFM @ .5", REQUIRES 1½ HP MOTOR	CM18	\$3,510.00
	2,819 ~ 3,110 CFM @ .5", REQUIRES 2 HP MOTOR	CM12	\$2,528.00
	3,180 ~ 3,480 CFM @ .5", REQUIRES 2 HP MOTOR	CM14	\$2,704.00
	3,651 ~ 4,023 CFM @ .5", REQUIRES 2 HP MOTOR	CM16	\$2,986.00
	4,324 ~ 4,700 CFM @ .5", REQUIRES 2 HP MOTOR	CM18	\$3,510.00
	3,540 ~ 4,080 CFM @ .5", REQUIRES 3 HP MOTOR	CM14	\$2,714.00
	4,098 ~ 4,694 CFM @ .5", REQUIRES 3 HP MOTOR	CM16	\$2,996.00
	4,794 ~ 5,452 CFM @ .5", REQUIRES 3 HP MOTOR	CM18	\$3,520.00
	5,546 ~ 6,486 CFM @ .5", REQUIRES 5 HP MOTOR	CM18	\$3,520.00

OPEN DRIP PROOF ELECTRICAL MOTOR			
Quantity	Size	Inventory Number	List Price
	1/4 HP, 115 VOLT, 1 PHASE	MTR.25HP115/1	\$168.00
	1/4 HP, 208/230 VOLT, 1 PHASE	MTR.25HP230/1	\$250.00
	1/4 HP, 208/230/460 VOLT, 3 PHASE	MTR.25HP460/3	\$406.00
	1/3 HP, 115 VOLT, 1 PHASE	MTR.33HP115/1	\$178.00
	1/3 HP, 208/230 VOLT, 1 PHASE	MTR.33HP230/1	\$400.00
	1/3 HP, 208/230 VOLT, 1 PHASE	MTR.33HP460/3	\$248.00
	1/2 HP, 115 VOLT, 1 PHASE	MTR.5HP115/1	\$220.00
	1/2 HP, 208/230 VOLT, 1 PHASE	MTR.5HP230/1	\$430.00
	1/2 HP, 208/230/460 VOLT, 3 PHASE	MTR.5HP460/3	\$420.00
	3/4 HP, 115 VOLT, 1 PHASE	MTR.75HP115/1	\$406.00
	3/4 HP, 208/230 VOLT, 1 PHASE	MTR.75HP230/1	\$376.00
	3/4 HP, 208/230/460 VOLT, 3 PHASE	MTR.75HP230/1	\$400.00
	1 HP, 115/208/230 VOLT, 1 PHASE	MTR1HP230/1	\$512.00
	1 HP, 208/230/460 VOLT, 3 PHASE	MTR1HP460/3	\$364.00

	1½ HP, 115/208/230 VOLT, 1 PHASE	MTR1.5HP230/1	\$612.00
	1½ HP, 208/230/460 VOLT, 3 PHASE	MTR1.5HP460/3	\$480.00
	2 HP, 115/208/230 VOLT, 1 PHASE	MTR2HP230/1	\$512.00
	2 HP, 208/230/460 VOLT, 3 PHASE	MTR2HP460/3	\$488.00
	3 HP, 208/230/460 VOLT, 3 PHASE	MTR3HP460/3	\$650.00
	5 HP, 208/230/460 VOLT, 3 PHASE	MTR5HP460/3	\$514.00



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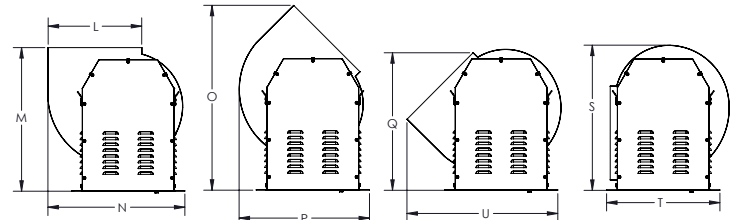
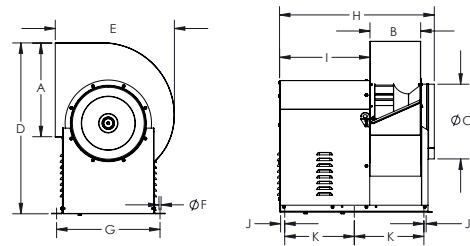
MODEL CM

BELT DRIVEN VENT SET

SWSI Arrangement #10, Class I Construction, Nonoverloading B.I. Wheel



Except CM 10



NOTES:

1. Outlet flange is optional for all sizes.
2. Unit rotatable to all positions: 45°, 90°, 270°, 315°, & 360°. "CW" rotation is shown: "CCW" rotation is similar but opposite.

Model	A	B	C	D	E	F	G	H	I	J	K
10	12-5/8	7-1/16	9-13/16	23-7/8	17-3/16	1/2	16-7/8	25-3/8	15-1/2	1	10-13/16
12	15-7/8	8-3/4	12-3/8	29-3/16	21-3/8	1/2	19-5/8	28-11/16	17-1/16	1	12-1/2
14	17-7/8	9-3/4	14	32-3/4	22-3/4	1/2	19-5/8	30-3/4	17-13/16	1	13-5/16
16	19-15/16	10-13/16	15-3/4	36-3/4	25-1/4	1/2	21-7/8	31-9/16	17-15/16	1	13-7/8
18	22-3/8	12-1/8	17-11/16	40-7/8	28-7/16	1/2	24-3/4	36-15/16	21-9/16	1	16-5/8
20	25-1/8	13-9/16	19-11/16	44-7/8	31-5/16	1/2	27-7/16	38-7/16	21-9/16	1	17-7/16
22	28-1/8	15-3/16	22-1/16	49-3/8	34-15/16	1/2	29-7/8	40-1/8	21-5/8	1	18-1/4
24	31-1/2	17-1/16	24-13/16	57-1/8	39-1/8	1/2	33-1/4	41-15/16	21-5/8	1	19-1/8
27	35-3/8	18-7/8	27-15/16	59	44	1/2	35-1/8	50-1/8	27-1/8	4	19-13/16
30	39-5/8	21	31-1/2	64	49-1/4	1/2	39-7/16	53-13/16	28-11/16	2	23-5/8
36	44-1/2	23-7/16	35-7/16	71-7/8	55-1/4	1/2	44-5/8	54-15/16	27-5/16	2	24-3/16

Model	L	M	N	O	P	Q	S	T	U
10	12-3/4	21-5/8	20	25-7/8	19-3/8	21-5/8	20-3/8	18-7/8	22-7/8
12	16	26	24-1/4	32-1/2	23-1/8	24-3/4	24-7/8	21-7/8	27-1/2
14	18	28	25-7/8	35-5/8	24-5/8	27	28-1/4	23-1/4	29-3/8
16	20	31-1/8	29-1/4	39-7/8	27-5/8	29-7/8	31-3/8	26	32-1/4
18	22-1/2	34-3/8	32-3/4	44-1/8	38-1/4	33-3/4	34-3/4	29-1/4	36-7/8
20	25-1/4	37-1/2	36-1/8	48-3/8	34-1/4	37-1/8	38-1/8	32-3/8	40-1/2
22	28-1/4	41	40-1/8	53-1/4	37-3/4	40-3/4	42	35-3/4	45-3/8
24	31-5/8	45-7/8	44-5/8	59-3/4	42-1/8	45-1/2	47	39-7/8	50-3/4
27	35-1/2	55-5/8	50-5/8	71-1/2	46-1/8	54-7/8	57-1/4	44	57-1/2
30	39-3/4	62-3/8	57-1/8	80-1/8	51-1/4	62-1/2	63-1/4	49-1/4	61-1/4
36	44-3/4	70-1/2	64-3/8	89-3/4	57-1/2	70-5/8	70-5/8	55-1/4	72-3/8

FAN SPECIFICATIONS									MOTOR SPECIFICATIONS				
Line	Qty.	Model No.	Tag	CFM	SP	Fan RPM	BHP	Sones	HP	Volts	Phase	Hertz	Encl
1													
2													
3													
4													

ACCESSORY ITEMS					ACCESSORY ITEMS						
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Subject to change unless approved in submittal by Soler & Palau
CM_Submittal_SPCanada



FLOOR MOUNTED CORK/RUBBER ISOLATION PADS			
Quantity	Size	Inventory Number	List Price
	2" X 2" X 1", CORK/RUBBER PAD	CORKPADS	\$0.84
	2" X 2" X ¾", RUBBER PAD	RP2275	\$1.00

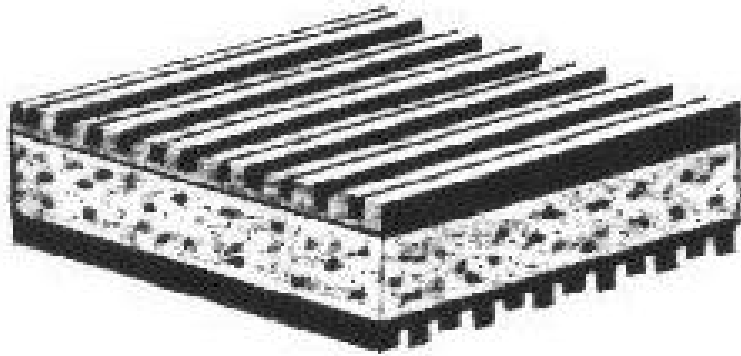
FLOOR MOUNTED NEOPRENE ISOLATOR			
Quantity	Size	Inventory Number	List Price
	1 ~ 30 POUND LOAD	NIFM1	\$10.00
	31 ~ 40 POUND LOAD	NIFM2	\$10.00
	41 ~ 70 POUND LOAD	NIFM3	\$10.00
	71 ~ 115 POUND LOAD	NIFM4	\$10.00
	116 ~ 130 POUND LOAD	NIFM5	\$12.00
	131 ~ 165 POUND LOAD	NIFM6	\$12.00
	166 ~ 235 POUND LOAD	NIFM7	\$12.00
	236 ~ 375 POUND LOAD	NIFM8	\$12.00
	376 ~ 400 POUND LOAD	NIFM9	\$14.00
	401 ~ 500 POUND LOAD	NIFM10	\$14.00

FLOOR MOUNTED 2" OPEN SPRING ISOLATOR			
Quantity	Size	Inventory Number	List Price
	1 ~ 80 POUND LOAD	SIFM1	\$66.00
	81 ~ 160 POUND LOAD	SIFM2	\$66.00
	161 ~ 310 POUND LOAD	SIFM3	\$66.00
	311 ~ 410 POUND LOAD	SIFM4	\$66.00
	411 ~ 595 POUND LOAD	SIFM5	\$66.00
	596 ~ 647 POUND LOAD	SIFM6	\$80.00
	648 ~ 1190 POUND LOAD	SIFM7	\$66.00

VIBRATION MANAGEMENT CORPORATION

3532-A EAST TC JESTER , BROOKWOOD BUSINESS PARK , HOUSTON , TEXAS 77018 , U.S.A

INTERNET ADDRESS: www.vimco.biz



MODEL	SIZE (inches)
CRMP 181801	18" x 18" x 1"
CRMP 121201	12" x 12" x 1"
CRMP 080801	8" x 8" x 1"
CRMP 060601	6" x 6" x 1"
CRMP 040401	4" x 4" x 1"
CRMP 030301	3" x 3" x 1"
CRMP 020201	2" x 2" x 1"
CRMP 181802	18" x 18" x 2"
CRMP 121202	12" x 12" x 2"
CRMP 080802	8" x 8" x 2"
CRMP 060602	6" x 6" x 2"
CRMP 040402	4" x 4" x 2"
CRMP 030302	3" x 3" x 2"
CRMP 020202	2" x 2" x 2"
CRMP SSSSSS	SPECIAL (contact factory)

APPLICATION

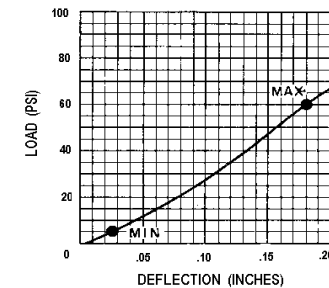
- * Wherever bolting is to be avoided and minor, non-critical vibration conditions exist. (pumps, motors, airconditioning units, generators etc.)
- * Recommended for acoustic problem applications.

NOTES

1. Material: Special Rubber + Low-Density Cork + Special Rubber
2. Maximum loading: 60 lbs/sq.in.
3. Working range: 15 to 55 lbs/sq.in.

FEATURES

- * Alternate High-Low Rib construction.
- * Excellent sound attenuation capability.
- * No bolting required.
- * Simple field installation.



Notes / Remarks :

Project :
Client :
Consultant :
Representative :

Title :

CRMP
Cork-Rubber Mounting Pad

Drawing no.
S-2200.01

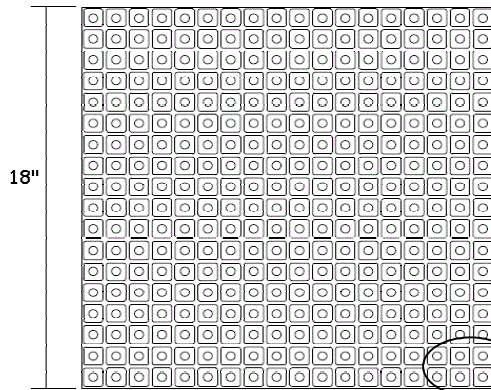
2/15/2013 **Rev. 1**

VIBRATION MANAGEMENT CORPORATION

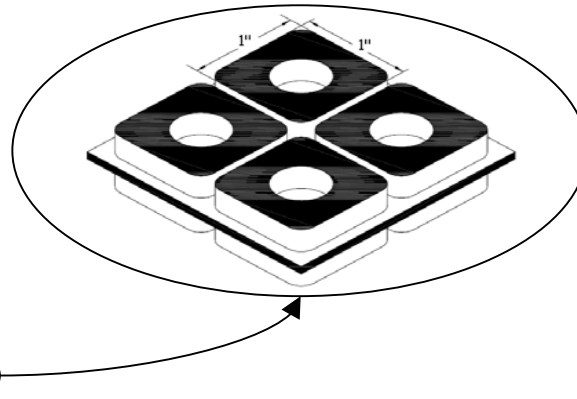
3532-A EAST TC JESTER , BROOKWOOD BUSINESS PARK , HOUSTON , TEXAS 77018 , U.S.A

INTERNET ADDRESS: www.vimco.biz

Plan view



Expanded Iso view



MODEL	SIZE (inches)
ECRMP 181834	18" x 18" x 3/4"
ECRMP 121234	12" x 12" x 3/4"
ECRMP 101034	10" x 10" x 3/4"
ECRMP 080834	8" x 8" x 3/4"
ECRMP 060634	6" x 6" x 3/4"
ECRMP 040434	4" x 4" x 3/4"
ECRMP 030334	3" x 3" x 3/4"
ECRMP 020234	2" x 2" x 3/4"
ECRMP 010134	1" x 1" x 3/4"
ECRMP SSSS34	SPECIAL (contact factory)

APPLICATION

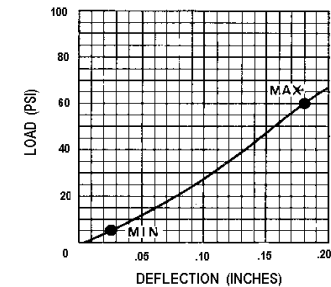
* Wherever bolting is to be avoided and minor, non-critical vibration conditions exist. (pumps, motors, airconditioning units, generators etc.)

NOTES

1. Material: High quality ozone and water resistant 55 duro elastomer blend
2. Maximum loading: 60 lbs/sq.in.
3. Working range: 15 to 55 lbs/sq.in.

FEATURES

- * "Waffle pad" design with inbuilt suction cups.
- * "Easy-Cut" (by hand!) design allows flexibility of pad size to suit job site requirements.
- * No bolting required.
- * Simple field installation.
- * New 1" modules offer greater versatility to cut to exact size requirements to match equipment base e.g. 2"x2", 3"x3", 2"x5" size pads etc.



Notes / Remarks :

Project :
Client :
Consultant :
Representative :

Title :

ECRMP
Easy-Cut Rubber
Mounting Pad

Drawing no.
S-2200.21

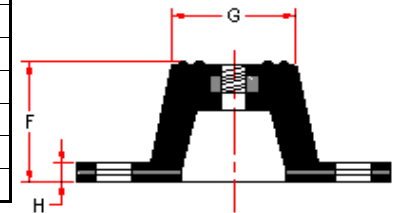
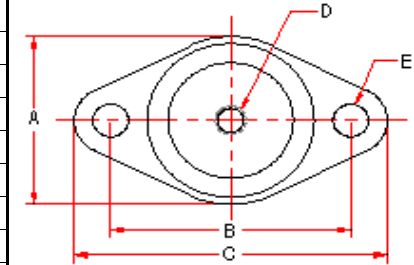
2/15/2013 **Rev. 3**

VIBRATION MANAGEMENT CORPORATION

3532-A EAST TC JESTER , BROOKWOOD BUSINESS PARK , HOUSTON , TEXAS 77018 , U.S.A

INTERNET ADDRESS: www.vimco.biz

ISOLATOR MODEL	MAX. LOAD (lbs)	DEFLECTION (inches)	ISOLATOR DIMENSIONS (inches)								COLOR
			A	B	C	D	E	F	G	H	
FMD-A-1	30	1/2	1 3/4	2 3/8	3 1/8	5/16	11/32	1 1/4	1 3/8	3/16	BLUE
FMD-A-2	40	1/2	1 3/4	2 3/8	3 1/8	5/16	11/32	1 1/4	1 3/8	3/16	RED
FMD-A-3	70	1/2	1 3/4	2 3/8	3 1/8	5/16	11/32	1 1/4	1 3/8	3/16	GREEN
FMD-A-4	115	1/2	1 3/4	2 3/8	3 1/8	5/16	11/32	1 1/4	1 3/8	3/16	BLACK
FMD-B-1	130	1/2	2 3/8	3	3 7/8	3/8	11/32	1 3/4	1 3/4	7/32	BLUE
FMD-B-2	165	1/2	2 3/8	3	3 7/8	3/8	11/32	1 3/4	1 3/4	7/32	RED
FMD-B-3	235	1/2	2 3/8	3	3 7/8	3/8	11/32	1 3/4	1 3/4	7/32	GREEN
FMD-B-4	375	1/2	2 3/8	3	3 7/8	3/8	11/32	1 3/4	1 3/4	7/32	BLACK
FMD-E-1	200	1/2	2 3/8	3 1/8	4	3/8	1/2	2	1 3/4	1/4	BLUE
FMD-E-2	300	1/2	2 3/8	3 1/8	4	3/8	1/2	2	1 3/4	1/4	RED
FMD-E-3	400	1/2	2 3/8	3 1/8	4	3/8	1/2	2	1 3/4	1/4	GREEN
FMD-E-4	500	1/2	2 3/8	3 1/8	4	3/8	1/2	2	1 3/4	1/4	BLACK
FMD-F-1	750	1/2	3 5/8	4 3/4	5 7/8	1/2	9/16	3 1/2	2 3/4	3/8	BLUE
FMD-F-2	1000	1/2	3 5/8	4 3/4	5 7/8	1/2	9/16	3 1/2	2 3/4	3/8	RED
FMD-F-3	1500	1/2	3 5/8	4 3/4	5 7/8	1/2	9/16	3 1/2	2 3/4	3/8	GREEN
FMD-F-4	2200	1/2	3 5/8	4 3/4	5 7/8	1/2	9/16	3 1/2	2 3/4	3/8	BLACK



N.T.S.

NOTES

- Models FMD-E and FMD-F have rectangular bases.

FEATURES

- * Anti-skid top and bottom surfaces.
- * Mounting holes furnished as standard
- * Embedded steel plates for uniform loading.
- * Oil + water resistant
- * High deflection, low natural frequency
- * Elements color-coded for easy field verification (*Color coding can be by 'dot' or 'complete element'*)

Notes / Remarks :

Project :
Client :
Consultant :
Representative :

Title :

FMD
Rubber-In-Shear Mount
(Double deflection)

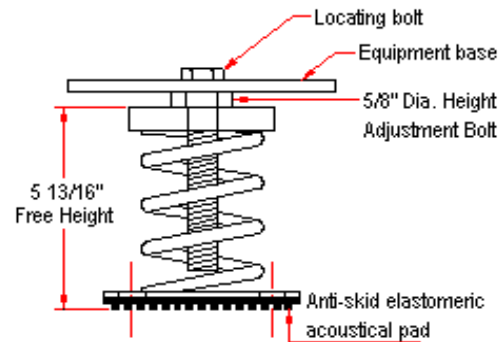
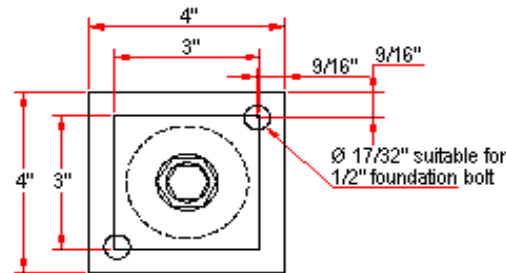
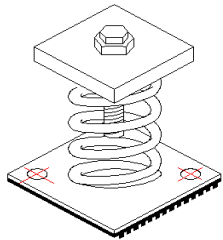
Drawing no.
S-2225.01

2/15/2013 Rev. 3

VIBRATION MANAGEMENT CORPORATION

3532-A EAST TC JESTER , BROOKWOOD BUSINESS PARK , HOUSTON , TEXAS 77018 , U.S.A

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N.T.S.

ISOLATOR MODEL	RATED LOAD (lbs)	SOLID LOAD (lbs)
OSM-1-140	66	100
OSM-1-141	133	200
OSM-1-142	250	375
OSM-1-143	333	500
OSM-1-144	476	714
OSM-1-147	953	1430
OSM-1-148A	1261	1892
OSM-1-140-146B	460	690
OSM-1-141-146B	518	778
OSM-1-142-146B	650	976
OSM-1-143-146B	733	1100
OSM-1-144-146B	876	1314
OSM-1-147-146B	1353	2030
OSM-1-148A-146B	1661	2492

FEATURES

- * Welded construction
- * Anti-skid elastomeric acoustical pad
- * Built-in leveling device
- * Mounting holes furnished as standard
- * Galvanized finish
- * High deflection, low natural frequency
- * Spring elements color-coded for easy field verification

NOTES

1. Isolators have a min. operating Kx/Ky ratio of 1.0
2. Springs have 50% additional travel to solid beyond rated load.
3. Isolators should be selected in the range of -30% to +25% of rated load.
4. Consult spring chart for isolator performance data.

Notes / Remarks :

Project :	
Client :	
Consultant :	
Representative :	

Title : **OSM-1**
Free-standing Spring Mount
Welded Construction
(2" deflection)

Drawing no.
S-2050.11
 2/15/2013
Rev. 2

HANGING NEOPRENE ISOLATOR			
Quantity	Size	Inventory Number	List Price
	1 ~ 30 POUND LOAD	NIH1	\$10.00
	31 ~ 40 POUND LOAD	NIH2	\$10.00
	41 ~ 70 POUND LOAD	NIH3	\$10.00
	71 ~ 120 POUND LOAD	NIH4	\$10.00
	121 ~ 165 POUND LOAD	NIH5	\$34.00
	166 ~ 235 POUND LOAD	NIH6	\$34.00

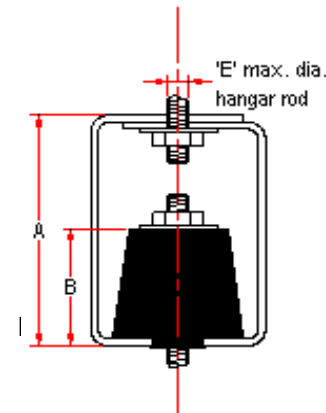
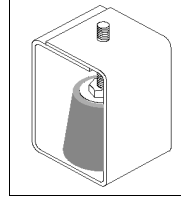
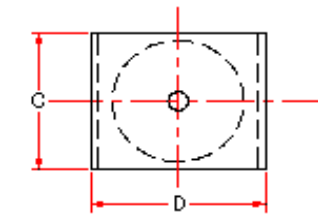
HANGING 2" SPRING ISOLATOR			
Quantity	Size	Inventory Number	List Price
	1 ~ 80 POUND LOAD	SIH1	\$68.00
	81 ~ 160 POUND LOAD	SIH2	\$68.00
	161 ~ 310 POUND LOAD	SIH3	\$68.00
	311 ~ 410 POUND LOAD	SIH4	\$68.00
	411 ~ 595 POUND LOAD	SIH5	\$68.00

VIBRATION MANAGEMENT CORPORATION

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ISOLATOR MODEL	MAX. LOAD (lbs)	DEFLECTION (inches)	ISOLATOR DIMENSIONS (inches)					COLOR
			A	B	C	D	E	
HND-A-1	30	2/5	3	1 3/8	2	2 1/4	3/8	BLUE
HND-A-2	40	2/5	3	1 3/8	2	2 1/4	3/8	RED
HND-A-3	70	2/5	3	1 3/8	2	2 1/4	3/8	GREEN
HND-A-4	115	2/5	3	1 3/8	2	2 1/4	3/8	BLACK
HND-B-1	165	1/2	4 1/2	1 7/8	2 1/4	3	1/2	BLUE
HND-B-2	235	1/2	4 1/2	1 7/8	2 1/4	3	1/2	RED
HND-B-3	375	1/2	4 1/2	1 7/8	2 1/4	3	1/2	GREEN
HND-B-4	545	1/2	4 1/2	1 7/8	2 1/4	3	1/2	BLACK
HND-C-3	745	1/2	6	3 1/8	3 1/2	4	1/2	GREEN
HND-C-4	1245	1/2	6	3 1/8	3 1/2	4	1/2	BLACK
HND-D-2	2240	1/2	6	3 1/8	4	4 1/2	5/8	RED
HND-D-3	3000	1/2	6	3 1/8	4	4 1/2	5/8	GREEN
HND-D-4	4000	1/2	6	3 1/8	4	4 1/2	5/8	BLACK



NOTES

1. Nuts, washer & rods by others.
2. Do not exceed maximum load by more than 5%

FEATURES

- * Element incorporates projected collar to prevent metal to metal contact between rod and bracket.
- * Embedded steel plates for uniform loading.
- * Oil + water resistant element
- * High deflection, low natural frequency
- * Elements color-coded for easy field verification (*Color coding can be by 'dot' or 'complete element'*)

Notes / Remarks :

Project :
Client :
Consultant :
Representative :

Title :

HND
Rubber-In-Shear Hanger
(Double deflection)

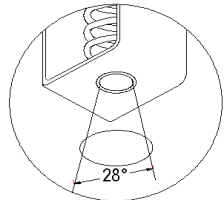
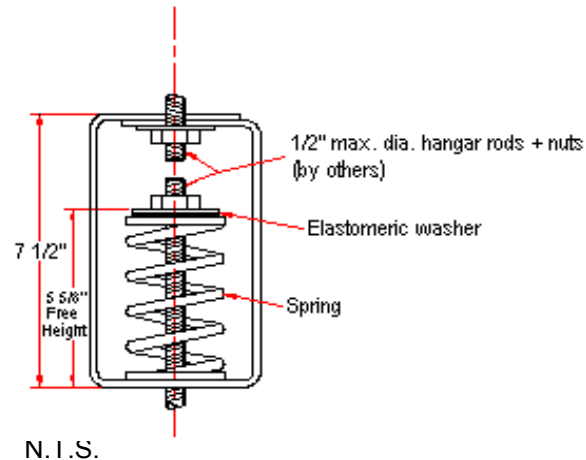
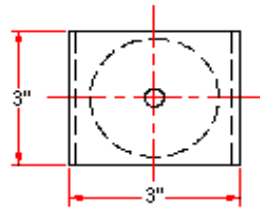
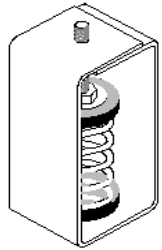
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S-2300.01

2/15/2013 Rev. 0

VIBRATION MANAGEMENT CORPORATION

3532-A EAST TC JESTER , BROOKWOOD BUSINESS PARK , HOUSTON , TEXAS 77018 , U.S.A

INTERNET ADDRESS: www.vimco.biz



Not applicable with booster springs

ISOLATOR MODEL	RATED LOAD (lbs)	SOLID LOAD (lbs)
HSB-140	66	100
HSB-141	133	200
HSB-142	250	375
HSB-143	333	500
HSB-144	476	714
HSB-147	953	1430
HSB-148A	1261	1892
HSB-140-146B	460	690
HSB-141-146B	518	778
HSB-142-146B	650	976
HSB-143-146B	733	1100
HSB-144-146B	876	1314
HSB-147-146B	1353	2030
HSB-148A-146B	1661	2492

FEATURES

- * Spring elements color-coded for easy field verification
- * High deflection, low natural frequency
- * Load distribution steel washer

NOTES

1. Springs have 50% additional travel to solid beyond rated load.
2. Isolators should be selected in the range of -30% to +25% of rated load.
3. Consult spring chart for isolator performance data.
4. Nuts, washers & rods by others.

Notes / Remarks :

Project :
Client :
Consultant :
Representative :

Title :

HSB
Spring Hanger
(2" deflection)

Drawing no.
S-2100.11

2/15/2013 Rev. 1