



Hoffman  Hoffman

2022 Stock Catalog and Price List

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HOFFMAN & HOFFMAN, INC.

www.hoffman-hoffman.com

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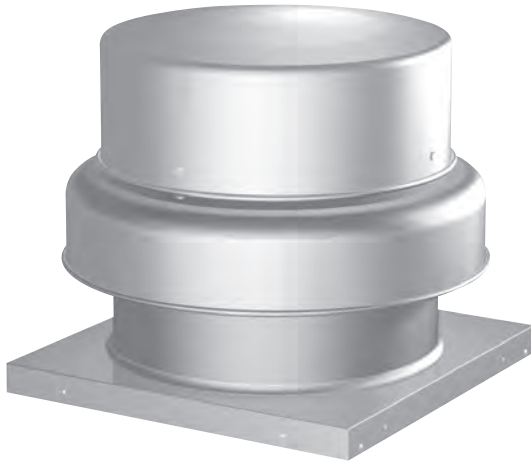
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CENTRIFUGAL DIRECT DRIVE ROOF EXHAUSTERS



MODEL G

Model G direct drive exhausters are designed for roof mounted applications exhausting relatively clean and cool air. They feature a spun aluminum housing, a non-overloading backward inclined wheel and positive motor cooling. Model G fans are licensed to bear the AMCA Certified Ratings Seals for air and sound performance and are UL listed.

CONSTRUCTION FEATURES

- Spun aluminum hood and galvanized steel frame.
- Easily removable cover for access to motor.
- Disconnect switch (standard).
- Motors located out of airstream and cooled by ambient air.
- Thermal overload protection.
- Vibration isolation for motor and wheel assembly.
- Three-speed motors standard on Model G-060 through G-095; field wired for either 1050, 1300 or 1550 RPM.
- Wire mesh birdscreen.

ACCESSORIES

- Roof curbs – 12” high. See page 10.
- Backdraft damper, Model 100. See page 22.
- Speed controls. See page 24.

STOCK NOTES

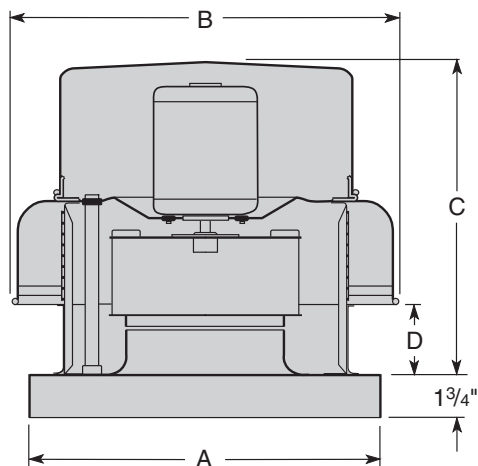
- Units are stocked with 115/60/1 motors.
- All G units can be used with a speed control.
- Models G-060 through G-095 can be shipped UPS.
- **Vari-Green® motor - 80% turndown, 85% efficient.** Available on select sizes.

DIMENSIONAL DATA

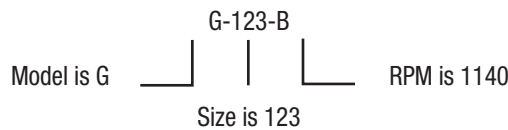
Model	A	B	*C	D	100 Damper	Roof Opening
G-060, 070	17	19 ³ / ₈	12 ¹ / ₈	3	8 x 8	10 ¹ / ₂ x 10 ¹ / ₂
G-080, 090, 095	17	21 ³ / ₄	14 ⁵ / ₈	4	10 x 10	12 ¹ / ₂ x 12 ¹ / ₂
G-099, 103, 123, 133	19	24 ³ / ₈	23 ³ / ₄	4 ³ / ₈	12 x 12	14 ¹ / ₂ x 14 ¹ / ₂
G-143	22	28 ³ / ₈	23 ³ / ₄	4 ³ / ₈	16 x 16	18 ¹ / ₂ x 18 ¹ / ₂

*May vary depending upon motor size.

The table below lists model designation suffixes for motor horsepower and fan RPM.



For direct drive units, the model number designates the model type, size and motor/fan RPM.



Direct Drive	
Suffix	Fan RPM
A	1725
B	1140
C	860
D	1550
G	1300
E	1050

Prices subject to change without notice. All shipments are FOB Hoffman Warehouse, freight prepaid and added to invoice.



PERFORMANCE DATA AND PRICING MODEL G



FANS / DAMPERS / CURBS

VARIABLE SPEED DRIVES & STARTERS

REGISTERS / GRILLES / DIFFUSERS / TRANSITIONS

VAN TERMINALS / HOT WATER COILS

DAMPERS / LOUVERS / ACCESS DOORS / ACTUATORS

FLEXIBLE DUCT / SNAP LOCK & ACC.

SPIRAL PIPE & ACCESSORIES

ELECTRIC HEATERS / FILTERS & ACCESSORIES

VIBRATION ISOLATION

STEAM SPECIALTIES

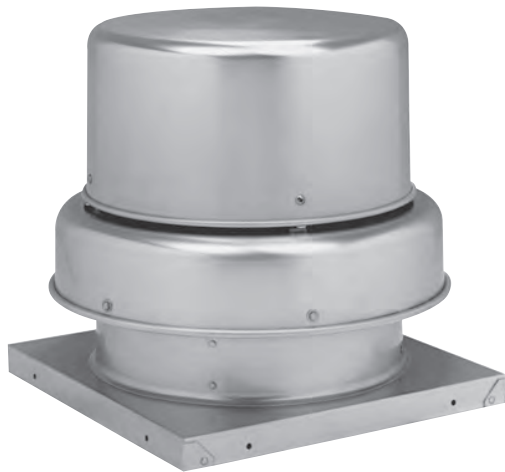
MODEL	RPM	TS	STATIC PRESSURE IN INCHES OF W.G. / CAPACITY (CFM)												Price Each	12" Curb		100 Damper				
			0.000		0.100		0.125		0.250		0.375		0.500			0.625		Size	ADD	Size	ADD	
			Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP		Sone	BHP					
G-060 1/60 HP 3 Speed	E	1050	2234	138		90		73								\$351	17	\$70	8 x 8	\$47		
				1.9	.004	1.7	.005	1.7	.005													
	G	1300	2765	170		135		125														
				2.9	.008	2.6	.009	2.5	.009													
	D	1550	3297	203		173		166		120												
				4.3	.013	3.9	.014	3.9	.014	3.9	.016											
G-070 1/30 HP 3 Speed	E	1050	2234	253		196		179							\$351	17	\$70	8 x 8	\$47			
				2.5	.007	1.7	.008	1.5	.008													
	G	1300	2765	314		268		257		171												
				4.1	.013	3.4	.015	3.2	.015	2.7	.015											
	D	1550	3297	374		337		327		274		190										
				5.6	.002	5.3	.024	5.2	.024	4.7	.026	4.2	.025									
G-080 1/20 HP 3 Speed	E	1050	2990	335		268		249		134					\$390	17	\$70	10 x 10	\$51			
				3.8	.012	3.6	.015	3.6	.016	3.5	.017											
	G	1300	3701	415		361		348		272		175										
				5.4	.022	5.4	.026	5.4	.027	5.4	.032	5.4	.033									
	D	1550	4413	495		450		439		379		314		238								
				7.3	.038	7.4	.042	7.4	.044	7.4	.050	7.4	.055	7.4						.057		
G-090 1/15 HP 3 Speed	E	1050	2990	520		441		420		292					\$390	17	\$70	10 x 10	\$51			
				3.8	.014	3.7	.019	3.7	.020	3.6	.024											
	G	1300	3701	644		580		565		478		373										
				5.4	.027	5.4	.033	5.4	.034	5.5	.041	5.5	.045									
	D	1550	4413	768		713		701		633		557		472						338		
				7.5	.046	7.4	.053	7.4	.055	7.4	.063	7.4	.070	7.4						.076	7.4	.074
G-095 1/8 HP 3 Speed	E	1050	2990	717		605		570		389					\$390	17	\$70	10 x 10	\$51			
				4.9	.029	4.6	.034	4.6	.035	4.5	.037											
	G	1300	3701	888		801		780		640		493		184								
				7.4	.056	6.8	.061	6.8	.063	6.5	.069	6.4	.071	6.4						.049		
	D	1550	4413	1059		986		969		863		745		623						474		
				9.6	.095	9.4	.101	9.4	.103	9.1	.111	8.2	.117	8.0						.120	8.0	.114
G-095-VG6X 1/6 HP	1725	5052	1179		1114		1098		1013		903		800		688		\$635	17	\$70	10 x 10	\$51	
G-099-VG4X 1/4 HP	1725	5052	1307		1280		1250		1192		1135		1076		1013		\$879	19	\$75	12 x 12	\$53	
			13.6	.23	13.6	.23	13.5	.23	13.4	.24	13.2	.24	12.9	.25	12.6	.25						
G-103-B 1/6 HP	1140	3320	966		900		883		805		702		507			\$627	19	\$75	12 x 12	\$53		
			6.6	.07	6.1	.07	6.0	.08	5.7	.09	5.1	.09	4.1	.08								
G-103-A 1/4 HP	1725	5024	1483		1450		1427		1374		1321		1274		1219		\$657	19	\$75	12 x 12	\$53	
			12.5	.26	12.4	.27	12.1	.27	11.7	.28	11.5	.29	11.3	.30	10.6	.31						
G-103-VG4X 1/4 HP	1725	5052	1462		1425		1405		1351		1298		1250		1193		\$919	19	\$75	12 x 12	\$53	
			12.2	.25	12.2	.25	11.9	.26	11.5	.27	11.2	.28	10.9	.29	10.3	.29						
G-123-B 1/6 HP	1140	3898	1383		1325		1300		1213		1112		993		831		\$629	19	\$75	12 x 12	\$53	
			8.4	.12	8.4	.12	8.4	.13	8.4	.14	8.1	.14	7.9	.14	7.8	.14						
G-123-A 1/2 HP	1725	5899	2093		2050		2038		1984		1928		1871		1810		\$709	19	\$75	12 x 12	\$53	
			17.4	.40	17.3	.42	17.2	.42	17.0	.44	16.8	.45	16.7	.46	16.7	.47						
G-123-VG5X 1/2 HP	1725	5052	2093		2052		2038		1984		1928		1871		1810		\$1000	19	\$75	12 x 12	\$53	
			17.4	.40	17.4	.40	17.2	.42	17.0	.44	16.8	.45	16.7	.46	16.4	.47						
G-133-B 1/6 HP	1140	3917	1618		1560		1535		1444		1340		1211		1031		\$717	19	\$75	12 x 12	\$53	
			10.0	.15	9.9	.15	9.8	.16	9.6	.16	9.2	.17	8.8	.17	8.5	.17						
G-143-B 1/3 HP	1140	4365	2115		2050		2008		1905		1792		1660		1488		\$941	22	\$82	16 x 16	\$61	
			11.0	.28	10.9	.30	10.9	.30	10.4	.31	10.4	.31	9.4	.31	10.4	.29						
G-143-VG7X 3/4 HP	1550	5935	2875		2830		2797		2719		2644		2566		2487		\$1181	22	\$82	16 x 16	\$61	
			17.7	.71	17.7	.71	18.0	.73	17.4	.74	17.2	.76	16.8	.77	15.0	.78						
Model 5W (6 Amp) – Solid State Speed Control																		\$44				
Damper Motor Pack MP100 120/60/1V																		\$89				

Performance shown is for Model G without ducts.



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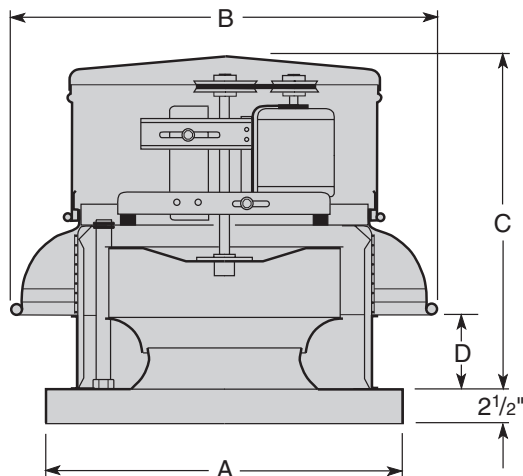
CENTRIFUGAL BELT DRIVE ROOF EXHAUSTERS



DIMENSIONAL DATA

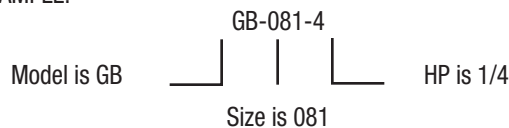
Model	A	B	*C	D	100 Damper	Roof Opening
GB-071, 081	19	24 ³ / ₈	23 ³ / ₄	4 ³ / ₈	12 x 12	14 ¹ / ₂ x 14 ¹ / ₂
GB-101, 121	19	24 ³ / ₈	23 ³ / ₄	4 ³ / ₈	12 x 12	14 ¹ / ₂ x 14 ¹ / ₂
GB-131	19	28 ³ / ₈	23 ³ / ₄	4	12 x 12	14 ¹ / ₂ x 14 ¹ / ₂
GB-141, 161	22	28 ³ / ₈	23 ³ / ₄	4	16 x 16	18 ¹ / ₂ x 18 ¹ / ₂
GB-180, 200	30	35 ¹ / ₂	28	5 ¹ / ₂	18 x 18	20 ¹ / ₂ x 20 ¹ / ₂
GB-240	34	42 ³ / ₄	31 ¹ / ₂	5 ¹ / ₂	24 x 24	26 ¹ / ₂ x 26 ¹ / ₂
GB-300	40	50	36	8 ¹ / ₄	30 x 30	32 ¹ / ₂ x 32 ¹ / ₂

*May vary depending upon motor size.



For direct drive units, the model number designates the model type, size and motor/fan RPM.

EXAMPLE:



MODEL GB

Model GB belt drive exhausters are designed for roof mounted applications exhausting relatively clean air. They feature a spun aluminum housing and a non-overloading backward inclined wheel. Motors are located out of the airstream with positive cooling by ambient air. Model GB fans are licensed to bear the AMCA Certified Ratings Seals for air and sound performance and are UL listed.

CONSTRUCTION FEATURES

- Spun aluminum hood, aluminum wheel and galvanized steel frame.
- Easily removable cover for access to motor.
- Disconnect switch (standard).
- Vibration isolation for entire motor and drive assembly.
- Motors located out of airstream and cooled by ambient air.
- Rigid wire birdscreen.
- Thermal overload protection 1/4 HP through 3/4 HP single phase **(Greensboro stock only).**

ACCESSORIES

- Roof curbs – 12” high. See page 10.
- Backdraft damper, Model 100. See page 22.
- Magnetic starters. See page 25.

STOCK NOTES

- Motors 1/4 HP, 1PH are 115/60/1.
- Motors 1/3 & 1/2 HP, 1PH are 115/208-230/60/1 and wired for 115 volts.
- Motors 3/4 HP, 1PH are 115/208-230/60/1 and wired for 208-230 volts.
- Motors 3/4 HP, 3PH and larger are 208-230/460/60 are wired for 208-230 volts.
- **Motors are constant speed, open drip proof. (Contact your salesman for other styles.)**
- Units are shipped preset for maximum RPM and are adjustable.
- Units are also stocked less motor and drive for maximum flexibility. **(QD stock only.)**

The table below lists model designation suffixes for motor horsepower and fan RPM.

Belt Drive			
Suffix	Motor HP	Suffix	Motor HP
4	1/4	10	1
3	1/3	15	1-1/2
5	1/2	20	2
7	3/4	30	3

PERFORMANCE DATA AND PRICING

MODEL GB



FANS / DAMPERS / CURBS

VARIABLE SPEED DRIVES & STARTERS

REGISTERS / GRILLES / DIFFUSERS / TRANSITIONS

VAN TERMINALS / HOT WATER COILS

DAMPERS / LOUVERS / ACCESS DOORS / ACTUATORS

FLEXIBLE DUCT / SNAP LOCK & ACC.

SPIRAL PIPE & ACCESSORIES

ELECTRIC HEATERS / FILTERS & ACCESSORIES

VIBRATION ISOLATION

STEAM SPECIALTIES

MODEL	HP	PH	RPM	STATIC PRESSURE IN INCHES OF W.G. / CAPACITY (CFM)												Price Each	12" Roof Curb		100 Damper		Starters		
				0.000		0.125		0.250		0.375		0.500		0.625			Size	ADD	Model	ADD	STD	W/DIS	
				Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP								
GB-071-4	1/4	1	1725	376		353		339		316		297		273		\$685	19	\$75	12 x 12	\$53		\$164	
				11.1	0.13	11.0	0.13	11.0	0.13	10.6	0.13	10.3	0.13	10.0	0.13								
GB-081-4	1/4	1	1725	864		821		793		756		719		679		\$685	19	\$75	12 x 12	\$53		\$164	
				12.5	0.17	12.3	0.17	12.1	0.18	11.9	0.18	11.5	0.18	11.2	0.19								
GB-101-4	1/4	1	1400	1187		1100		1052		990		909		810		\$707	19	\$75	12 x 12	\$53		\$164	
				8.9	.12	8.5	.13	8.1	.14	7.8	.15	7.6	.16	7.4	.16								
GB-121-4	1/4	1	1395	1692		1625		1557		1484		1404		1315		\$763	19	\$75	12 x 12	\$53		\$164	
				12.5	0.21	12.4	0.23	12.3	0.24	12.2	0.25	12.0	0.26	11.7	0.26								
QD GB-131-4	1/4	1	1315	1866		1794		1718		1637		1545		1435		\$977	19	\$75	12 x 12	\$53		\$164	
				13.2	0.22	12.8	0.23	12.5	0.24	12.1	0.25	11.7	0.26	11.2	0.26								
QD GB-131-5	1/2	1	1685	2391		2335		2279		2219		2158		2020		\$1046	19	\$75	12 x 12	\$53		\$164	
				16.9	0.47	16.6	0.48	16.3	0.50	16.0	0.51	15.7	0.52	15.4	0.53								
GB-141-4	1/4	1	860	1595		1457		1304		1085						\$807							
				7.1	0.12	7.1	0.13	6.7	0.13	6.1	0.13												
GB-141-3	1/3	1	1140	2115		2008		1905		1800		1660		1488		\$846	22	\$82	16 x 16	\$61		\$164	
				11.4	0.31	11.3	0.32	10.8	0.33	10.3	0.33	9.9	0.34	9.3	0.34								
GB-141-5	1/2	1	1360	2523		2433		2347		2259		2166		2062		\$860							
				14.6	0.48	14.3	0.50	13.9	0.51	13.5	0.52	13.1	0.52	12.7	0.52								
QD GB-161-5	1/2	1	1140	3367		3094		3072		2922		2761		2587		\$1233	22	\$82	16 x 16	\$61		\$164	
				15.3	0.48	14.7	0.50	14.1	0.52	13.8	0.53	13.5	0.53	13.0	0.53								
GB-180-4	1/4	1	730	2839		2667		2469		2213		1882				\$1078						\$164	
				7.4	0.26	7.1	0.15	6.5	0.17	5.8	0.17												
GB-180-3	1/3	1	810	3150		2997		2832		2624		2375		2053		\$1117						\$164	
				8.8	0.35	8.3	0.31	8.0	0.33	7.3	0.35	7.6	0.35	7.2	0.34								
GB-180-5	1/2	1	940	3655		3527		3388		3234		3052		2844		\$1132	30	\$114	18 x 18	\$78		\$164	
				12.7	0.55	12.4	0.47	12.1	0.49	11.3	0.52	10.4	0.54	10.0	0.55								
GB-180-7	3/4	1	1055	4102		3989		3867		3742		3596		3432		\$1211							
				16.2	0.77	15.7	0.67	14.9	0.68	14.4	0.72	14.0	0.74	13.5	0.76								
QD GB-180-10	1	3	1185	4608		4507		4401		4290		4179		4046		\$1724						\$565	\$784
				19.0	0.91	18.4	0.94	17.8	0.96	17.4	0.98	17.1	1.03	16.7	1.05								
QD GB-200-5	1/2	1	770	4261		4013		3744		3477		3141		2643		\$1496						\$164	
				12.1	0.52	11.0	0.53	10.7	0.55	10.2	0.55	9.8	0.55	9.3	0.52								
QD GB-200-7	3/4	1	860	4759		4548		4289		4068		3811		3504		\$1597							
				14.1	0.73	13.3	0.74	12.9	0.75	12.4	0.77	11.8	0.77	11.4	0.77								
QD GB-200-10	1	3	965	5340		5157		4927		4720		4520		4285		\$1778	30	\$114	18 x 18	\$78		\$565	\$784
				16.7	1.03	16.0	1.04	15.4	1.05	15.0	1.08	14.5	1.09	14.1	1.09								
QD GB-200-15	1 1/2	3	1090	6032		5870		5682		5473		5301		5124		\$1807							
				20	1.49	19.6	1.50	18.9	1.51	18.4	1.52	18.1	1.56	17.8	1.56								
QD GB-240-10	1	3	730	6702		6427		6158		5861		5507		5077		\$2188							
				15.8	0.96	15.0	1.01	14.3	1.05	13.8	1.05	13.4	1.06	13.1	1.06								
QD GB-240-15	1 1/2	3	825	7575		7331		7092		6844		6574		6261		\$2217	34	\$130	24 x 24	\$139	\$565	\$784	
				19.7	1.39	18.6	1.44	17.7	1.49	17.2	1.51	16.8	1.52	16.4	1.54								
QD GB-240-20	2	3	910	8355		8134		7916		7700		7467		7215		\$2255							
				24	1.86	23	1.92	21	1.97	21	2.02	21	2.03	20	2.05								
QD GB-300-7	3/4	1	475	7694		7197		6616		5955		5095				\$2589						\$164	
				11.4	0.72	10.6	0.75	9.6	0.77	8.8	0.77	8.1	0.74										
QD GB-300-10	1	3	530	8585		8149		7640		7094		6456		5668		\$2770							
				13.4	1.00	12.9	1.03	12.2	1.06	11.5	1.07	10.7	1.07	10.0	1.03								
QD GB-300-15	1 1/2	3	600	9719		9334		8907		8446		7952		7388		\$2799	40	\$154	30 x 30	\$176		\$565	\$784
				15.9	1.45	15.4	1.49	14.9	1.52	14.3	1.54	13.8	1.55	13.2	1.55								
QD GB-300-20	2	3	665	10772		10424		10060		9648		9228		8773		\$2837							
				18.8	1.97	18.2	2.02	17.7	2.06	17.2	2.10	16.8	2.11	16.3	2.12								
QD GB-300-30	3	3	760	12311		12007		11704		11357		10997		10629		\$3144							
				23.0	2.94	22.0	3.00	21.0	3.05	21.0	3.09	21.0	3.13	20.0	3.14								

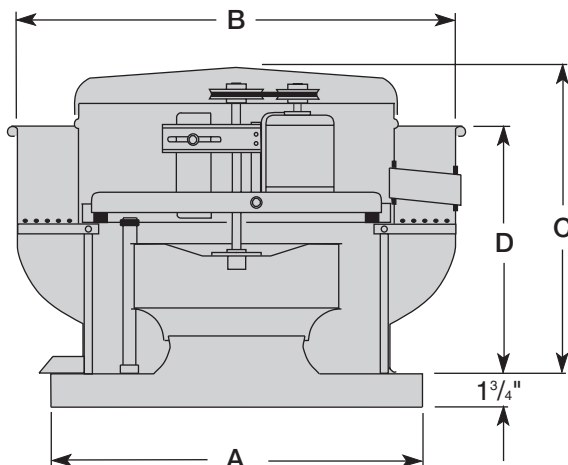
QD - Orders received in Greensboro warehouse by 11:00 a.m. EASTERN TIME will normally ship within 24 hours. Call TOLL-FREE: 1-800-334-0254.

BELT DRIVEN CENTRIFUGAL UPBLAST ROOF EXHAUSTERS



DIMENSIONAL DATA

Model	A	B	C	D	100 Damper	Roof Opening
CUBE-101-121	19	24 ⁷ / ₈	28 ¹ / ₄	17 ³ / ₈	12 x 12	14 ¹ / ₂ x 14 ¹ / ₂
CUBE-141	22	28 ⁷ / ₈	29 ³ / ₄	19 ³ / ₈	16 x 16	18 ¹ / ₂ x 18 ¹ / ₂
CUBE-161	22	28 ⁷ / ₈	29 ³ / ₄	19 ³ / ₈	16 x 16	18 ¹ / ₂ x 18 ¹ / ₂
CUBE-180	30	35 ³ / ₈	28 ⁵ / ₈	21	18 x 18	20 ¹ / ₂ x 20 ¹ / ₂
CUBE-200	30	35 ³ / ₈	28 ⁵ / ₈	21	18 x 18	20 ¹ / ₂ x 20 ¹ / ₂
CUBE-240	34	42 ³ / ₄	33 ⁷ / ₈	25 ¹ / ₂	24 x 24	26 ¹ / ₂ x 26 ¹ / ₂
CUBE-300	40	50	36	29	30 x 30	32 ¹ / ₂ x 32 ¹ / ₂



MODEL CUBE

Model CUBE exhausters are designed for roof-mounted restaurant and commercial applications, exhausting dirty or grease laden air up and away from the roof line. All fans are UL 762 listed for restaurant applications and for operation with air temperatures up to 300°F. Model CUBE fans are licensed to bear the AMCA Certified Ratings Seals for air and sound performance and are UL listed.

CONSTRUCTION FEATURES

UL 762 Listed for Restaurant Applications

- Spun aluminum hood, aluminum wheel and galvanized steel frame.
- Easily removable cover for access to motor.
- Disconnect switch (standard).
- Vibration isolation for entire motor and drive assembly.
- Thermal overload protection 1/4 HP through 3/4 HP single phase.
- Motors located out of airstream and cooled by ambient air.

ACCESSORIES

- Prefab roof curbs - 12" high. See page 10.
- Birdscreen kit.
- Magnetic starters. See page 25.
- Grease trap kit - attaches to drain trough to collect grease.
- Backdraft damper, Model 100. (Not for use in grease applications) See page 22.
- Available from factory with coated wheels for heavy cooking applications.

STOCK NOTES

- Motors 1/4 HP, 1PH are 115/60/1.
- Motors 1/3 & 1/2 HP, 1PH are 115/208-230/60/1 and wired for 115 volts.
- Motors 3/4 HP, 1PH are 115/208-230/60/1 and are wired for 208-230 volts.
- Motors 3/4 HP, 3PH and larger are 208-230/460/60 are wired for 208-230 volts.
- **Motors are constant speed, open drip proof. (Contact your salesman for other styles.)**
- Units are stocked less motor and drive for maximum flexibility. (QD Stock Only)
- **Vari-Green® motor - 80% turndown, 85% efficient.** Available on select sizes.



PERFORMANCE DATA AND PRICING MODEL CUBE



FANS / DAMPERS /
CURBS

VARIABLE SPEED
DRIVES & STARTERS

REGISTERS / GRILLES /
DIFFUSERS / TRANSITIONS

VAN TERMINALS /
HOT WATER COILS

DAMPERS / LOUVERS /
ACCESS DOORS / ACTUATORS

FLEXIBLE DUCT /
SNAP LOCK & ACC.

SPIRAL PIPE
& ACCESSORIES

ELECTRIC HEATERS /
FILTERS & ACCESSORIES

VIBRATION ISOLATION

STEAM SPECIALTIES

MODEL	HP	PH	RPM	STATIC PRESSURE IN INCHES OF W.G. / CAPACITY (CFM)												Price Each	Bird Screen	12" Roof Curb			*100 Damper			Starters	
				0.000		0.125		0.250		0.375		0.500		0.625				ADD	Size	ADD	Size	ADD	STD	W/DIS	
				Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP										
CUBE-101-4	1/4	1	1660	1413	1364	1313	1251	1189	1125							\$979	\$37	19	\$75	12 x 12	\$53		\$164		
QD CUBE-121-4	1/4	1	1410	12.6 0.21	12.2 0.22	11.19 0.23	11.5 0.24	11.1 0.25	10.7 0.26	1665	1595	1528	1463	1398	1315	\$1289									
QD CUBE-121-3	1/3	1	1545	11.1 0.21	11.6 0.22	12.2 0.23	12.5 0.24	12.6 0.25	12.7 0.26	1824	1760	1699	1639	1580	1518	\$1338	\$37	19	\$75	12 x 12	\$53		\$164		
QD CUBE-121-5	1/2	1	1725	12.8 0.28	13.4 0.29	14.0 0.30	14.5 0.31	14.7 0.32	14.8 0.33	2037	1979	1923	1869	1816	1763	\$1357									
CUBE-141-4	1/4	1	1105	15.6 0.39	16.1 0.40	16.7 0.41	17.3 0.43	17.9 0.44	18.2 0.45	2001	1905	1793	1667	1515	1318	\$1155									
CUBE-141-3	1/3	1	1210	10.9 0.23	10.8 0.24	10.6 0.25	10.3 0.26	10.0 0.26	9.9 0.26	2192	2106	2006	1896	1773	1628	\$1196	\$41	22	\$82	16 x 16	\$61		\$164		
CUBE-141-5	1/2	1	1390	12.2 0.30	12.2 0.31	11.7 0.32	11.6 0.33	11.2 0.34	11.0 0.34	2518	2445	2362	2271	2174	2068	\$1200									
CUBE-141-7	3/4	1	1595	14.9 0.45	14.7 0.47	14.2 0.48	13.2 0.50	12.9 0.51	12.5 0.51	2889	2826	2757	2683	2602	2517	\$1284									
QD CUBE-161-5	1/2	1	1110	20.0 0.69	19.0 0.70	18.5 0.72	19.5 0.74	16.1 0.75	14.2 0.76	3191	3072	2941	2796	2641	2475	\$1550									
CUBE-161-7	3/4	1	1170	15.0 0.47	14.6 0.51	14.2 0.53	13.8 0.53	13.5 0.54	13.1 0.53	3363	3250	3129	2994	2848	2697	\$1650	\$41	22	\$82	16 x 16	\$61		\$164		
QD CUBE-161-7	3/4	3	1265	16.3 0.55	15.9 0.59	15.4 0.61	15.0 0.62	14.7 0.62	14.3 0.63	3636	3532	3425	3301	3172	3035	\$1686						\$565	\$784		
QD CUBE-180-4	1/4	1	745	18.5 0.70	18.1 0.74	17.7 0.77	17.2 0.78	16.8 0.79	16.5 0.79	2815	2616	2448	2143	1763		\$1638									
QD CUBE-180-3	1/3	1	820	9.2 0.22	8.6 0.24	8.1 0.26	7.4 0.26	7.1 0.25		3098	2915	2759	2525	2257	1867	\$1687									
QD CUBE-180-5	1/2	1	940	11.2 0.30	10.4 0.32	10.0 0.34	9.5 0.35	9.0 0.34	8.5 0.32	3551	3388	3243	3115	2879	2654	\$1706	\$71	30	\$114	18 x 18	\$78		\$164		
QD CUBE-180-7	3/4	3	1075	13.8 0.45	13.5 0.47	13.1 0.49	12.9 0.52	12.4 0.52	12.0 0.52	4061	3919	3786	3666	3554	3345	\$1807									
QD CUBE-180-10	1	3	1185	16.5 0.67	16.2 0.70	15.8 0.73	15.7 0.75	15.5 0.78	15.1 0.78	4477	4348	4224	4108	4005	3903	\$1989						\$565	\$784		
QD CUBE-200-3	1/3	1	665	18.5 0.90	17.9 0.93	17.1 0.96	16.8 0.99	16.5 1.01	16.3 1.04	3740	4321	3096	2699	2073		\$1860									
QD CUBE-200-5	1/2	1	760	9.4 0.33	8.83 0.34	8.1 0.35	7.5 0.35	7.0 0.33		4275	3993	3718	3413	3048	2518	\$1879								\$164	
QD CUBE-200-7	3/4	3	875	12.1 0.49	11.7 0.51	10.9 0.52	10.1 0.52	9.4 0.51	9.0 0.50	4922	4676	4439	4192	3922	3626	\$1980									
QD CUBE-200-10	1	3	960	16.3 0.75	16.3 0.77	15.2 0.78	14.7 0.79	13.5 0.79	12.9 0.79	5400	5175	4958	4742	4508	4254	\$2161	\$71	30	\$114	18 x 18	\$78		\$164		
QD CUBE-200-15	1 1/2	3	1100	18.7 0.98	18.4 1.01	17.7 1.03	17.0 1.04	16.4 1.04	15.6 1.04	6187	5991	5798	5610	5421	5217	\$2190						\$565	\$784		
QD CUBE-200-20	2	3	1210	23.0 1.48	23.0 1.51	23.0 1.53	22.0 1.55	21.0 1.57	21.0 1.57	6806	6628	6451	6279	6108	5932	\$2228									
QD CUBE-240-5	1/2	1	585	25 1.97	24 2.00	23 2.03	23 2.05	22 2.07	22 2.09	5303	4960	4540	4093	3565		\$2427								\$164	
QD CUBE-240-7	3/4	3	670	11.5 0.46	10.5 0.49	9.5 0.51	8.8 0.52	8.4 0.51		6074	5762	5461	5052	4659	4202	\$2528									
QD CUBE-240-10	1	3	735	14.3 0.69	13.4 0.74	12.8 0.76	12.2 0.78	11.5 0.79	11.0 0.78	6663	6370	6133	5764	5409	5037	\$2709	N/A	34	\$130	24 x 24	\$139		\$164		
QD CUBE-240-15	1 1/2	3	845	16.6 0.92	15.9 0.97	15.5 0.99	15.1 1.01	14.6 1.03	13.9 1.04	7660	7399	7184	6947	6615	6304	\$2738						\$565	\$784		
QD CUBE-240-20	2	3	930	19.6 1.39	19.0 1.46	18.6 1.49	18.2 1.51	17.6 1.54	17.0 1.56	8431	8194	7985	7798	7536	7233	\$2776									
QD CUBE-300-10	1	3	530	24.0 1.86	23.0 1.93	23.0 1.98	22.0 2.00	22.0 2.03	21.0 2.06	8625	8231	7772	7245	6636	5879	\$3311									
QD CUBE-300-15	1 1/2	3	605	13.3 0.90	12.7 0.95	12.2 1.00	11.7 1.03	12.2 1.05	10.2 1.04	9845	9500	9127	8705	8226	7708	\$3340									
QD CUBE-300-20	2	3	665	17.0 1.34	16.4 1.40	15.7 1.46	15.2 1.51	14.8 1.54	14.3 1.56	10822	10508	10193	9808	9411	8968	\$3378	N/A	40	\$154	30 x 30	\$176	\$565	\$784		
QD CUBE-300-30	3	3	765	20.0 1.77	19.7 1.85	18.6 1.92	18.0 1.97	17.5 2.02	17.1 2.05	12449	12176	11904	11607	11273	10939	\$3684									
Grease Containers – Model 475538													\$147												
Damper Motor Pack MP 100/120/60/1V													\$89												

*Damper not for use in kitchen applications.

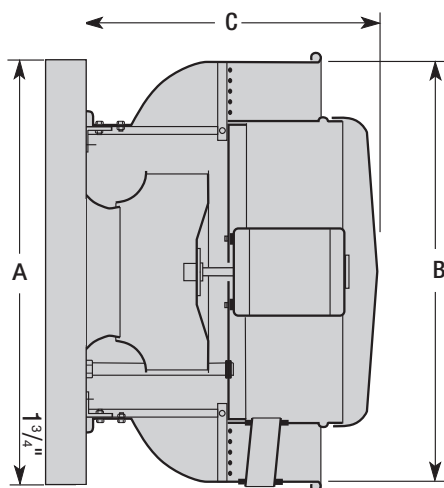
QD - Orders received in Greensboro warehouse by 11:00 a.m. EASTERN TIME will normally ship within 24 hours. Call TOLL-FREE: 1-800-334-0254.

DIRECT DRIVE CENTRIFUGAL EXHAUST FANS



DIMENSIONAL DATA

Model	A	B	C	Damper	Opening
CUE-070	17	18 ³ / ₈	13 ¹ / ₂	8 x 8	10 ¹ / ₂ x 10 ¹ / ₂
CUE-080, 090	19	21	13 ³ / ₈	10 x 10	12 ¹ / ₂ x 12 ¹ / ₂
CUE-095	19	21	15 ¹ / ₄	10 x 10	12 ¹ / ₂ x 12 ¹ / ₂
CUE-101, 121	19	24 ⁷ / ₈	28 ¹ / ₄	12 x 12	14 ¹ / ₂ x 14 ¹ / ₂
CUE-141	22	28 ⁷ / ₈	29 ³ / ₄	16 x 16	18 ¹ / ₂ x 18 ¹ / ₂



MODEL CUE

Model CUE is a direct drive fan designed for roof or wall mounting where the exhaust air is directed away from the mounting surface. Constructed of a single piece, continuously wedged housing, this fan is used for exhausting contaminated or grease laden air.

CONSTRUCTION FEATURES

- Spun aluminum hood and galvanized steel frame.
- Easily removable cover for access to motor.
- Disconnect switch (standard).
- Vibration isolation for entire motor and drive assembly.
- Thermal overload protection.
- Motors located out of airstream and cooled by ambient air.
- Models CUE-070 through CUE-095 are equipped with 3-speed motors, field wired for either 1050, 1300 or 1550 RPM.

ACCESSORIES

- Prefab roof curbs – 12" high. See page 10.
- Magnetic starters. See page 25.
- Grease trap kit – attaches to drain trough to collect grease.
- Backdraft damper. (Not for use in grease applications) See page 22-23.
- Speed controls. See page 24.

STOCK NOTES

- **Model CUE**
- Models 070-095 are UL 705 listed.
- Models 101-141 are UL 762 listed.
- Motors are 115/60/1
- Models CUE-070 through CUE-095 can be shipped by UPS.
- **Vari-Green® motor - 80% turndown, 85% efficient.** Available on select sizes.



PERFORMANCE DATA AND PRICING MODEL CUE



MODEL	RPM	STATIC PRESSURE IN INCHES OF W.G. / CAPACITY (CFM)														Price Each	Wall Bracket	Roof Curb		330 WALL DAMPER		100 ROOF DAMPER										
		0.000		0.100		0.125		0.250		0.375		0.500		0.625				Size	ADD	Size	ADD	Size	ADD									
		Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP																	
CUE-070 1/30 HP	E	1050	250		193		171										\$392	\$47	17	\$70	8 x 8	\$62	8 x 8	\$47								
			2.5	.007	1.7	.008	1.5	.008																								
	G	1300	309		267		255		152																							
			4.1	.013	3.4	.015	3.2	.015	2.7	.013																						
	D	1550	369		334		325		269		160																					
			5.6	.023	.53	.025	5.2	.025	4.7	.026	4.2	.021																				
CUE-080 1/20 HP	E	1050	325		265		247		133								\$456	\$48	19	\$75	10 x 10	\$68	10 x 10	\$51								
			3.8	.012	3.6	.014	3.6	.015	3.5	.016																						
	G	1300	403		355		343		272		173																					
			5.4	.022	5.4	.025	5.4	.026	5.4	.031	5.4	.031																				
	D	1550	480		441		431		376		314		235																			
			7.3	.037	7.4	.041	7.4	.042	7.4	.047	7.4	.053	7.4	.054																		
CUE-090 1/15 HP	E	1050	549		470		451		306								\$456	\$48	19	\$75	10 x 10	\$68	10 x 10	\$51								
			3.8	.019	3.7	.023	3.7	.024	3.6	.027																						
	G	1300	680		616		600		517		391																					
			5.4	.035	5.4	.041	5.4	.042	5.5	.048	5.5	.052																				
	D	1550	811		757		744		677		604		501		347																	
			7.5	.060	7.4	.066	7.4	.068	7.4	.076	7.4	.083	7.4	.088	7.4	.084																
CUE-095 1/8 HP	E	1050	711		603		570		381								\$467	\$48	19	\$75	10 x 10	\$68	10 x 10	\$51								
			4.9	.032	4.6	.036	4.6	.037	4.5	.037																						
	G	1300	880		797		774		641		484		199																			
			7.4	.061	6.9	.066	6.8	.067	6.5	.072	6.4	.071	6.4	.054																		
	D	1550	1049		983		964		861		747		616		442																	
			9.6	.103	9.4	.109	9.4	.111	9.1	.117	8.2	.121	8.0	.121	8.0	.106																
CUE-095-VG6X 1/6 HP	1725	1167		1108		1093		1005		905		802		680			\$736	\$48	19	\$75	10 x 10	\$68	10 x 10	\$51								
		11.3	.14	11.1	.15	11.0	.15	10.5	.16	9.9	.17	9.8	.17	9.6	.17																	
CUE-101-VG4G 1/4 HP	1725	1468		1440		1422		1373		1315		1255				\$1102	\$48	19	\$75	12 x 12	\$73	12 x 12	\$53									
		13.3	.24	13.0	.25	12.9	.26	11.5	.27	12.0	.28	11.7	.29																			
CUE-121-VG5G 1/2 HP	1725	2037		2000		1979		1923		1869		1816		1763			\$1175	\$48	19	\$75	12 x 12	\$73	12 x 12	\$53								
		15.6	.39	15.8	.39	16.1	.40	16.7	.41	17.3	.43	17.9	.44	18.2	.45																	
CUE-141-VG7G 3/4 HP	1550	2888		2765		2743		2671		2594		2509				\$1402	\$52	22	\$82	16 x 16	\$86	16 x 16	\$61									
		18.7	.63	18.2	.63	17.8	.64	17.5	.66	17.7	.68	14.9	.69																			
Model 5W (6 Amp) Solid State Speed Controller (070-095)																\$44																

Performance shown is for Model CUE without ducts.
Damper not for use in kitchen applications.

FANS / DAMPERS /
CURBS

VARIABLE SPEED
DRIVES & STARTERS

REGISTERS / GRILLES /
DIFFUSERS / TRANSITIONS

VAN TERMINALS /
HOT WATER COILS

DAMPERS / LOUVERS /
ACCESS DOORS / ACTUATORS

FLEXIBLE DUCT /
SNAP LOCK & ACC.

SPIRAL PIPE
& ACCESSORIES

ELECTRIC HEATERS /
FILTERS & ACCESSORIES

VIBRATION ISOLATION

STEAM SPECIALTIES



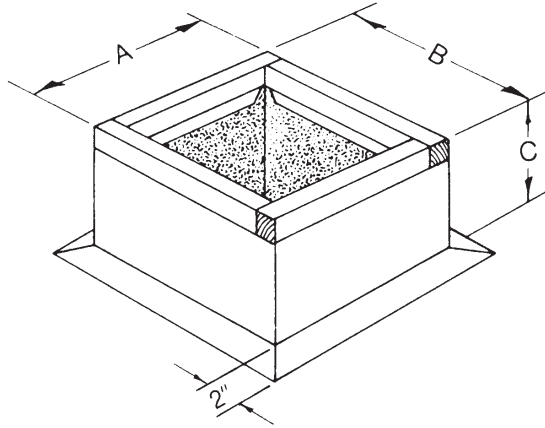
Prices subject to change without notice. All shipments are FOB Hoffman Warehouse, freight prepaid and added to invoice.

CURBS, RAILS AND ADAPTERS



STRAIGHT ROOF CURBS

Curbs are 12" high and are constructed of 18 gauge galvanized steel with welded seams. They have 1-1/2" thick, 3lb density rigid fiberglass insulation, 2" flashing strip and factory installed treated wood nailer strip.

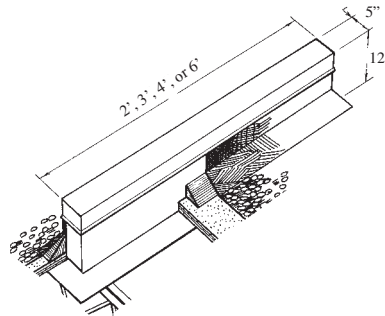


*Curb sizes 30 thru 58 must ship Motor Freight.

Curb Model	A	B	C	Maximum Load (lbs)	Price Each
12	12	12	12	1000	\$61
15	13 1/2	13 1/2	12	1000	\$65
17	15 1/2	15 1/2	12	1000	\$70
19	17 1/2	17 1/2	12	1000	\$75
22	20 1/2	20 1/2	12	1200	\$82
24	22 1/2	22 1/2	12	1200	\$90
26	24 1/2	24 1/2	12	1200	\$98
*30	28 1/2	28 1/2	12	1330	\$114
*34	32 1/2	32 1/2	12	1470	\$130
*40	38 1/2	38 1/2	12	1600	\$154
*46	44 1/2	44 1/2	12	1730	\$178
*52	50 1/2	50 1/2	12	1870	\$202
*58	56 1/2	56 1/2	12	2000	\$227

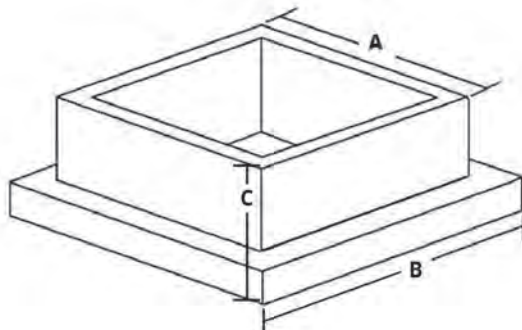
EQUIPMENT RAILS 12" TALL – NO CANT SURFACE MOUNT STYLE

The equipment rail construction is all welded unitized, 18 gauge galvanized steel shell and base, wood nailer, and flashing cap of 20 gauge galvanized steel.



Length	Price Each
2'	\$67
3'	\$100
4'	\$133
*6'	\$200

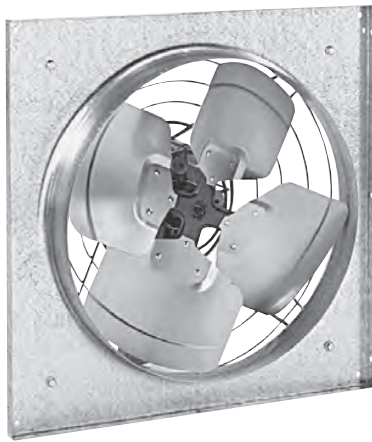
*Must ship Motor Freight.



CURB ADAPTERS

Model	A	B	C	Price Each
850616	17	19	7	\$129
850618	19	22	7	\$140
823055	22	26	7	\$162

DIRECT DRIVE SIDEWALL PROPELLER FANS



MODEL SE1

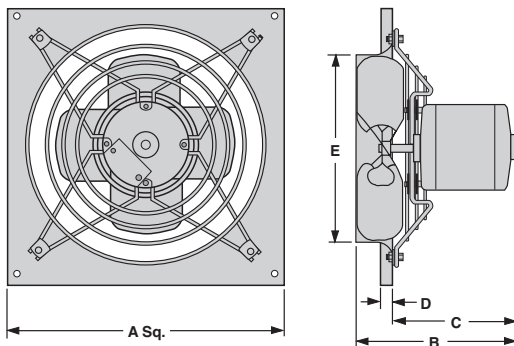
- Direct drive sidewall design.
- Motor is constant speed, totally enclosed, U.L. labeled.
- Neoprene motor mounts.
- Designed for relatively clean air and low pressure applications.
- Sizes SE1-8 thru SE1-12 include motor side guard.

PERFORMANCE DATA AND PRICES

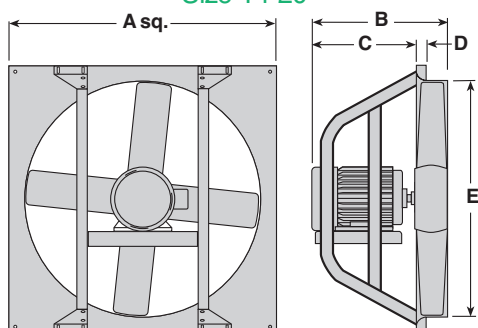
Model	HP	RPM	STATIC PRESSURE/CFM				Price Each	320 DAMPER		WALL HOUSING ADD
			0.000	0.100	0.125	0.250		Size	ADD	
SE1-8-440-D	1/25	1550	459	351	307	167	\$301	10 x 10	\$76	\$198
SE1-10-440-D	1/12	1550	924	800	763	624	\$310	12 x 12	\$82	\$198
SE1-12-432-D	1/8	1550	1449	1309	1271	1042	\$343	14 x 14	\$89	\$201
SE1-14-440-B	1/6	1160	1604	1406	1350	908	\$590	16 x 16	\$102	\$204
SE1-16-426-B	1/6	1160	2235	2058	2012	1710	\$607	18 x 18	\$108	\$215
SE1-18-429-B	1/4	1160	3238	2987	2908	2434	\$682	20 x 20	\$134	\$225
SE1-20-428-B	1/3	1160	4227	4030	3974	3621	\$784	22 x 22	\$163	\$234

Performance ratings are AMCA certified
 For additional performance data, see Greenheck Catalog SB/S-1

Size 8-12



Size 14-20



DIMENSIONAL DATA

Model	A	B	C	D	E	Damper
SE1-8-440-D	13 1/8	7	5	1	8 3/8	10 x 10
SE1-10-440-D	15 1/8	8 3/4	5	1	10 3/8	12 x 12
SE1-12-432-D	18 1/8	10 3/4	8 1/4	1	12 3/8	14 x 14
SE1-14-440-B	20 1/8	11 1/4	8 1/2	1	14 3/8	16 x 16
SE1-16-426-B	22 1/8	11 3/4	8 7/8	1	16 3/8	18 x 18
SE1-18-429-B	24 1/8	14	10 7/8	1	18 3/8	20 x 20
SE1-20-428-B	26 1/8	15	11	1	20 1/2	22 x 22

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FANS / DAMPERS /
 CURBS

VARIABLE SPEED
 DRIVES & STARTERS

REGISTERS / GRILLES /
 DIFFUSERS / TRANSITIONS

VAN TERMINALS /
 HOT WATER COILS

DAMPERS / LOUVERS /
 ACCESS DOORS / ACTUATORS

FLEXIBLE DUCT /
 SMOKELOCK & ACC.

SPIRAL PIPE
 & ACCESSORIES

ELECTRIC HEATERS /
 FILTERS & ACCESSORIES

VIBRATION ISOLATION

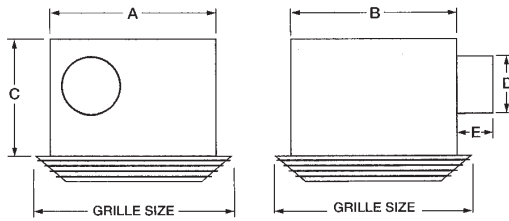
STEAM SPECIALTIES

MODEL SP DOWNSIZE CEILING EXHAUST FANS



MODEL SP6

By Broan



Model SP-6 ceiling exhaust fans have steel housings, high strength polymer grilles with torsion springs for secure fit, integral backdraft dampers, and motors that are permanently lubricated, shaded pole with built in overload protection. A plug-in disconnect is provided inside the housing. Model SP-6 features adjustable steel mounting brackets and forward curved wheels.

DIMENSIONAL DATA

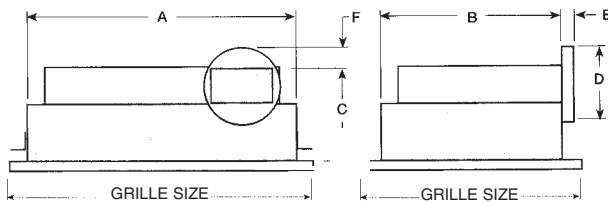
Model	A	B	C	D	E	Grille Size	Wt.
SP-6	9 ¹ / ₄	10	5 ³ / ₄	4	3 ³ / ₈	12 x 11 ³ / ₈	8

For complete dimensional information, see submittal drawings.

PERFORMANCE DATA

Model	RPM	AMP	Watts (Input)	CFM/STATIC PRESSURE IN INCHES OF W.G.						Price Each
				0.000	0.100	0.125	0.250	0.375	0.500	
SP-6	1280	0.40	43	CFM	80	80	77	67	59	\$113
				Sones	2.0	2.0	2.3	2.6	2.9	

MODEL SP-B50 - B200



Models SP-B50 - B200 features corrosion resistant galvanized steel fan housing & scroll, white high impact polystyrene grille with two attachment screws, and a forward curved fan wheel that is dynamically balanced for vibration free operation. Motors are 115/60/1 with built in thermal overload protection. Angle mounting brackets can be adjusted to any typical ceiling material thickness.



DIMENSIONAL DATA

Model	A	B	*C	D	E	Std Grille	Decorative Grille	Unit Wt.
B50, 70, 80	13 ⁷ / ₈	11 ¹ / ₂	7	6	1 ¹ / ₄	14 ⁷ / ₈ x 13 ¹ / ₄	15 ¹ / ₄ sq.	9
B90, 110, 150, 200	13 ⁷ / ₈	11 ¹ / ₂	7	6	1 ¹ / ₄	14 ⁷ / ₈ x 13 ¹ / ₄	15 ¹ / ₄ sq.	10

For complete dimensional information, see submittal drawings.

PERFORMANCE DATA

Model	RPM	AMP	Watts (Input)	CFM/STATIC PRESSURE IN INCHES OF W.G.									Price Each	
				0.000	0.100	0.125	0.250	0.375	0.500	0.625	0.750	1.000		
SP-B50	625	0.50	37.8	CFM	67	54	51	40	29					\$95
				Sones	1.2	1.4	1.4	2.0	3.0					
SP-B70	675	0.16	17.1	CFM	89	75	71	54	35					\$108
				Sones	0.8	0.8	0.9	1.4	2.0					
SP-B80	900	0.16	18.6	CFM	94	81	77	62	46					\$108
				Sones	0.8	0.9	0.9	1.3	2.0					
SP-B90	700	0.18	21.1	CFM	104	92	89	72	57					\$108
				Sones	1.0	1.0	1.0	1.5	2.0					
SP-B110	950	1.14	80.2	CFM	133	114	110	97	95	94	91	85	50	\$121
				Sones	1.5	1.5	1.5	2.0	2.0	2.0	3.0	3.5	4.5	
SP-B150	1050	1.70	128	CFM	160	156	155	154	152	149	147	138	92	\$160
				Sones	2.5	2.5	2.5	3.0	3.5	3.5	4.0	4.5	5.0	
SP-B200	1100	2.20	172	CFM	197	195	194	191	187	184	181	166	128	\$160
				Sones	3.5	4.0	4.0	4.5	4.5	5.0	5.0	5.5	5.5	
Model 5W (6 Amp) Solid State Speed Controller (SP-6, SP-B50 - B-200, SP-A50 - A900)											\$44			
Model 10W (10 Amp) Solid State Speed Controller (SP-A1050 - A1550)											\$84			

Performance shown is for Model SP exhaust for installation type B: Free Inlet, Ducted outlet. Performance ratings include the effects of an inlet grille and backdraft damper in the airstream. Speed (RPM) shown is nominal. Performance is based on actual speed of test.

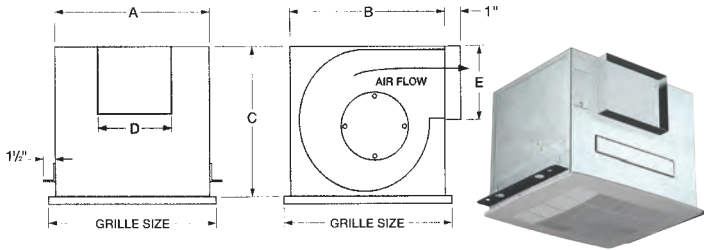
The sound ratings shown are loudness values in fan sones at 5 ft. (1.5 m) in a hemispherical free field calculated per AMCA Standard 301. Values are for installation type B: free inlet sone levels. The AMCA Certified Ratings Sound Seal applies to sone ratings only.

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MODEL SP CEILING EXHAUST FANS



Model SP ceiling exhaust fans are whisper quiet centrifugal fans for offices, toilets and general ventilation. Housings are corrosion resistant galvanized steel with an interior lined with sound absorbing insulation for quiet operation. Grilles are white and attach to fan housing with two screws. Grilles for sizes A50-A390 are made of high impact polystyrene. Grilles for sizes A410-A1550 are constructed of aluminum coated with baked enamel. Fan wheels are double width forward curved centrifugal type in a single scroll for A50-A780. A900-A1550 have twin double width forward curved wheels in separate scrolls driven by a single motor. All wheels are dynamically balanced for vibration-free operation. Motors are 115/60/1 with built in thermal overload protection, sized to match fan loads and mounted on vibration isolators. The electrical access cover located on the housing exterior permits external wiring without removing the power assembly, saving installation time and cost.

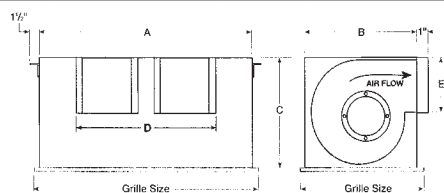


DIMENSIONAL DATA MODEL SPA110-A780

Model	A	B	C	D	E	Grille Size	Unit Wt.
A50, 70, 90	13 ³ / ₄	10 ⁵ / ₈	9		6	14 ⁷ / ₈ x 13 ¹ / ₄	12
A110, 125, 190	13 ³ / ₄	10 ⁵ / ₈	9	8	6	14 ⁷ / ₈ x 13 ¹ / ₄	17
A200, 250, 290, 390	14	11 ⁷ / ₈	11 ¹ / ₄	8	8	14 ⁷ / ₈ x 13 ¹ / ₄	24
A410, 510	18	14 ³ / ₈	14 ¹ / ₂	8	8	19 ⁹ / ₈ x 16 ³ / ₈	31
A700	23 ⁵ / ₈	11 ⁵ / ₈	11 ⁵ / ₈	19 ¹ / ₂	8	25 ¹ / ₈ x 13 ¹ / ₂	34
A710, 780	18	14 ³ / ₈	14 ¹ / ₂	10	8	19 ⁹ / ₈ x 16 ³ / ₈	34

PERFORMANCE DATA

Model	RPM	AMP	Watts (Input)	CFM/STATIC PRESSURE IN INCHES OF W.G.											Price Each	
				0.000	0.100	0.125	0.250	0.375	0.500	0.625	0.750	0.875	1.000			
SP-A50	790	0.33	25.9	CFM	89	66	61	31								\$165
				Sones	0.4	0.6	0.6	0.9								
SP-A70	790	0.14	15.6	CFM	88	74	71	54								\$175
				Sones	0.3	0.3	0.3	0.3								
SP-A90	870	0.14	16.9	CFM	114	101	98	80								\$178
				Sones	0.3	0.3	0.3	0.4								
SP-A110	950	0.16	19.4	CFM	130	119	115	98								\$178
				Sones	0.3	0.3	0.3	0.5								
SP-A125	1010	0.19	23	CFM	144	130	127	109								\$228
				Sones	0.4	0.4	0.4	0.6								
SP-A190	1400	0.45	54.2	CFM	229	214	210	186	156							\$238
				Sones	2.5	2.1	2.1	1.8	1.6							
SP-A200	900	0.47	56.1	CFM	267	246	242	224	199	162	109	68				\$238
				Sones	2.0	2.0	2.0	2.5	3.0	3.5	4.0	4.5				
SP-A250	1000	0.56	67	CFM	294	274	271	250	230	201	147	92				\$238
				Sones	2.5	2.5	2.5	3.0	3.5	4.0	5.0	5.0				
SP-A290	1050	0.72	80.7	CFM	315	293	287	257	231	207	175	124				\$265
				Sones	2.5	2.5	2.5	3.0	3.0	3.5	3.5	4.5				
SP-A390	1350	1.34	135	CFM	410	395	391	368	345	325	307	279				\$280
				Sones	4.5	4.5	4.5	4.5	5.0	5.0	5.5	5.5				
SP-A410	1000	1.74	121	CFM	443	413	405	351	306							\$298
				Sones	3.5	3.0	3.0	3.0	3.5							
SP-A510	1070	3.30	224	CFM	557	512	501	439	392	325						\$362
				Sones	5.0	4.5	4.5	4.5	4.5	4.0						
SP-A700	1100	3.20	350	CFM	757	730	723	700	679	649	613	560	494	396		\$443
				Sones	5.0	5.0	5.0	5.5	5.5	6.0	6.0	6.5	6.5	6.5		
SP-A710	1080	4.40	285	CFM	752	714	701	653	588	486	320					\$453
				Sones	6.0	6.0	6.0	6.0	6.0	5.5	5.5					
SP-A780	1600	3.30	348	CFM	812	782	775	741	704	665	625	581				\$453
				Sones	8.5	8.5	8.5	8.0	8.0	8.0	8.0	8.0				



DIMENSIONAL DATA MODEL SPA900-A1550

Model	A	B	C	D	E	Grille Size	Wt.
A900-A1550	23 ³ / ₄	14 ³ / ₈	14 ¹ / ₂	17 ⁷ / ₁₆	8	25 x 16 ³ / ₈	56

PERFORMANCE DATA

Model	RPM	AMP	Watts (Input)	CFM/STATIC PRESSURE IN INCHES OF W.G.								Price Each		
				0.000	0.100	0.125	0.250	0.375	0.500	0.625	0.750			
SP-A900	950	4.00	285	CFM	955	907	896	841	773	701				\$662
				Sones	4.0	5.0	5.0	5.0	5.0	5.0				
SP-A1050	1095	6.30	420	CFM	1125	1059	1043	964	885	796	662			\$662
				Sones	6.0	6.0	6.0	6.0	5.5	5.5	5.5			
SP-A1410	1450	7.40	786	CFM	1455	1415	1404	1353	1307	1262	1218	1174		\$662
				Sones	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	
SP-A1550	1610	8.60	818	CFM	1607	1558	1558	1506	1449	1407	1369	1323		\$732
				Sones	10.5	10.0	10.0	10.0	10.0	10.5	11.5	13.0		

Performance shown is for Model SP exhaust for installation type B: Free Inlet, Ducted outlet. Performance ratings include the effects of an 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 ft. (1.5 m) in a hemispherical free field calculated per AMCA Standard 301. Values are for installation type B: free inlet sone levels. The AMCA Certified Ratings Sound Seal applies to sone ratings only.

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FANS / DAMPERS / CAPS

VARIABLE SPEED DRIVES & STARTERS

REGISTERS / GRILLES / DIFFUSERS / TRANSITIONS

VAN TERMINALS / HOT WATER COILS

DAMPERS / LOUVERS / ACCESS DOORS / ACTUATORS

FLEXIBLE DUCT / SNAPLOCK & ACC.

SPIRAL PIPE & ACCESSORIES

ELECTRIC HEATERS / FILTERS & ACCESSORIES

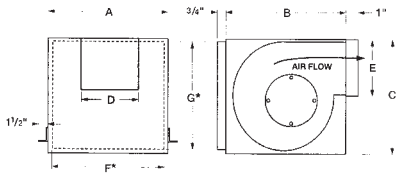
VIBRATION ISOLATION

STEAM SPECIALTIES

MODEL CSP INLINE CABINET FANS



The Model CSP fan is designed for inline discharge, intake and air boosting applications with a duct system. The fan housing is constructed of corrosion resistant galvanized steel lined with sound absorbing insulation for quiet operation. Removable bottom housing panel allows easy access to the power assembly for inspection or service. Angle mounting brackets can be adjusted to any typical ceiling material thickness. Outlet duct connection with integral backdraft damper can be converted from horizontal to vertical discharge. Fan scroll is constructed of galvanized steel. Fan wheels are double width forward curved centrifugal type for CSP A-110-A780. CSP A900-A1550 have twin double width forward curved wheels in separate scrolls driven by a single motor. All wheels are dynamically balanced for vibration free operation. Motors for CSP A110-A1550 are 115/60/1. Motors are sized to match fan loads and mounted on vibration isolators. Power assemblies can be easily unplugged and removed for inspection or service.



CSP A110-A780



CSP B110-B200

DIMENSIONAL DATA

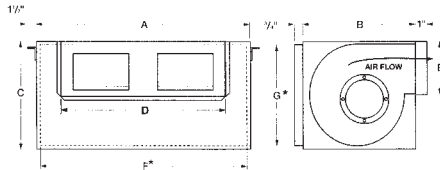
MODEL CSP B110-A780

Model	A	B	C	Outlet		Inlet		Wt.
				D	E	F	G	
B110, 150, 200	13 ⁷ / ₈	11 ¹ / ₂	7	6	1 ¹ / ₄	13 ¹ / ₂	3 ³ / ₄	10
A110, 125, 190	12 ⁷ / ₈	10 ⁹ / ₈	9	8	6	12	9 ¹ / ₄	16
A200, 250, 290, 390	14	11 ⁷ / ₈	11 ¹ / ₄	8	8	12 ⁷ / ₈	10	23
A410, 510	18	14 ⁹ / ₈	14 ¹ / ₂	8	8	16 ⁷ / ₈	13 ³ / ₄	36
A700	23 ⁵ / ₈	11 ⁵ / ₈	11 ⁵ / ₈	19 ¹ / ₂	8	22 ⁵ / ₈	10 ¹ / ₂	34
A710, 780	18	14 ⁹ / ₈	14 ¹ / ₂	10	8	16 ⁷ / ₈	13 ³ / ₄	36

*Inlet Dimensions **Optional Discharge Position
For complete dimensional information, see submittal drawings.

PERFORMANCE DATA

Model	RPM	AMP	Watts (Input)	CFM/STATIC PRESSURE IN INCHES OF W.G.										Price Each		
				0.000	0.100	0.125	0.250	0.375	0.500	0.625	0.750	0.875	1.000			
CSP-B110	950	1.14	80	CFM	103	100	100	98								\$127
				Sones	1.5	1.5	1.5	2.0								
CSP-B150	1050	1.7	129	CFM	151	150	149	148								\$142
				Sones	2.0	2.0	2.0	2.0								
CSP-B200	1100	2.2	173	CFM	186	184	184	182								\$159
				Sones	3.0	3.0	3.0	3.0								
CSP-A110	950	0.62	20	CFM	124	112	110	102	77							\$202
				Sones	0.8	0.8	0.8	0.9	0.9							
CSP-A125	1100	0.63	33	CFM	138	126	124	114	91							\$202
				Sones	1.1	1.1	1.1	1.0	1.2							
CSP-A190	1400	1.10	55	CFM	215	202	198	180	159	121						\$238
				Sones	2.0	1.5	2.0	2.0	2.5	2.5						
CSP-A200	900	0.43	58	CFM	254	231	226	203	178	145	109	70				\$240
				Sones	0.6	0.4	0.5	0.9	1.0	1.3	1.5	1.5				
CSP-A250	1000	0.79	67	CFM	266	246	241	221	205	187	165	132				\$240
				Sones	0.9	1.0	1.0	2.0	2.5	3.0	2.5	2.5				
CSP-A290	1050	0.71	102	CFM	318	299	292	265	248	229	201	144				\$265
				Sones	1.1	1.2	1.3	2.0	2.5	3.5	3.0	3.0				
CSP-A390	1350	1.33	161	CFM	412	400	397	382	363	339	324	309				\$280
				Sones	2.0	2.0	2.0	2.5	3.0	4.0	4.5	4.5				
CSP-A410	1000	1.87	132	CFM	447	441	403	364	317	217						\$298
				Sones	1.5	1.5	1.5	2.0	2.0	2.0						
CSP-A510	1070	3.11	218	CFM	545	514	506	464	405	324						\$362
				Sones	2.5	2.0	2.0	2.0	2.0	2.5						
CSP-A700	1100	3.20	352	CFM	766	755	752	739	726	702	678	635	549	418		\$443
				Sones	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.5	2.5	4.0		
CSP-A710	1080	4.40	333	CFM	737	698	688	635	567	475	334					\$453
				Sones	2.5	2.5	2.5	2.5	2.0	2.0						
CSP-A780	1600	3.77	496	CFM	813	784	777	742	707	672	638	603	567	527		\$453
				Sones	3.0	3.0	3.0	3.0	3.0	2.0	3.0	3.0				



DIMENSIONAL DATA

MODEL CSP A900-A1550

Model	A	B	C	D	E	F	G	Wt.
900, 1050, 1410, 1550	23 ³ / ₄	14 ³ / ₈	14 ¹ / ₂	18 ³ / ₄	8	22 ⁵ / ₈	13 ¹ / ₄	59

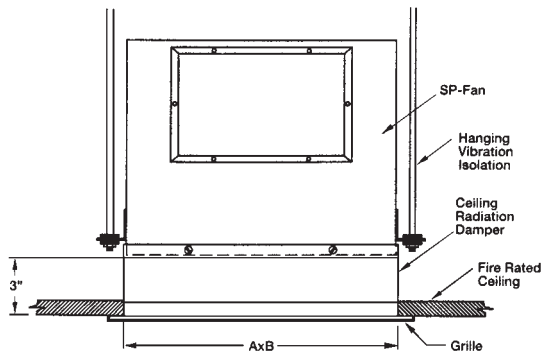
*Inlet Dimensions **Optional Discharge Position
For complete dimensional information, see submittal drawings.

PERFORMANCE DATA

Model	RPM	AMP	Watts (Input)	CFM/STATIC PRESSURE IN INCHES OF W.G.										Price Each		
				0.000	0.100	0.125	0.250	0.375	0.500	0.625	0.750	0.875	1.000			
CSP-A900	950	4.87	335	CFM	908	852	841	782	715	631						\$662
				Sones	1.4	1.4	1.4	2.0	2.5	3.0						
CSP-A1050	1095	6.65	469	CFM	1182	1110	1093	1013	922	832	743					\$662
				Sones	2.5	2.5	2.5	2.5	2.5	2.5						
CSP-A1410	1450	7.80	871	CFM	1584	1543	1533	1483	1439	1395	1345	1293	1238	1181		\$662
				Sones	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	4.0	4.0		
CSP-A1550	1610	8.32	913	CFM	1672	1618	1604	1543	1484	1427	1367	1307	1240	1172		\$732
				Sones	5.0	4.5	4.5	4.5	4.5	4.0	4.0	4.5	4.5	4.5		
			Model 5W (6 Amp) Solid State Speed Controller (CSP-B110 - B200, CSP-A110 - A900)											\$44		
			Model 10W (10 Amp) Solid State Speed Controller (CSP-A1050 - A1550)											\$84		

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SP AND CSP ACCESSORIES



CEILING RADIATION DAMPER

National Fire Protection Association (NFPA) Standard 90A requires that openings in fire rated ceiling/floor assemblies must be protected by appropriately rated ceiling radiation dampers.

As a result, many local codes require that fans installed in fire rated ceilings must also be protected by dampers which are insulated against both heat and flame.

The Greenheck SP (60 Series) ceiling radiation damper option protects fire rated ceilings and effectively blocks the spread of heat and flames through the building's ventilation system. This damper is U.L. Classified, rated at three to four hours fire resistance, and is available for SP fan sizes 50 through 1550. Its non-asbestos, ceramic blanket provides the required thermal barrier for fire rated ceilings while also protecting both the fan and the ductwork. The ceramic blanket stows compactly against the damper frame to permit maximum free area and eliminate performance losses.

Once the accumulation of heat in the airstream reaches the temperature limits of the fusible link, the closure mechanism is activated. Stainless steel closure springs draw the ceramic blanket securely over the damper opening. Standard fusible links activate at air temperatures of 165°F. Other links are available.

The galvanized steel frame of the ceiling radiation damper is sized to match the Model SP housing. This design saves space by allowing the damper to mount directly beneath the fan. The damper adds approximately 3" in height to the combined installation.

DIMENSIONAL DATA

SP Model	CRD Size	A	B	Material Gauge	Price Each
A50-A190	310	13 ¹ / ₂	11 ¹ / ₈	22	\$69
B50-B-200 A200-A390	320	14 ³ / ₈	12 ¹ / ₄	22	\$74
A410-A510 A710-A780	350	18 ⁷ / ₁₆	14 ¹⁵ / ₁₆	22	\$104

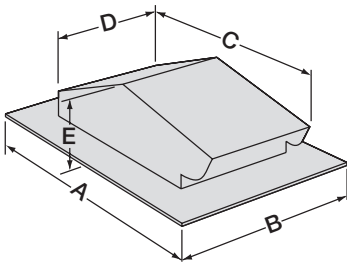
TERMS



- CFM – Cubic Feet Per Minute. A measure of air flow quantity.
- SP – Static Pressure. Resistance to airflow measured in inches of water column.
- Sone – A measure of loudness. One sone can be approximated as the loudness of a quiet refrigerator at a distance of 5 feet. Sones follow a linear scale, that is, 10 sones are twice as loud as 5 sones.
- BHP – Brake Horsepower. A measure of power consumption. Used to determine the proper motor horsepower and wiring.
- HP – Horsepower. Measure of a motor's power output. Used to indicate a fan's motor size.

- RPM – Revolutions Per Minute. Measure of fan speed.
- TS – Tip Speed. The speed of the tip of a fan wheel or prop measured in feet per minute.
- AMCA – Air Movement and Control Association. A nationally recognized association which establishes standards for fan testing and performance ratings. Certifies air volume and sound ratings.
- U.L. – Underwriters Laboratories. An organization which establishes and operates product safety certification programs and tests products for safety.

SP AND CSP DISCHARGE ACCESSORIES

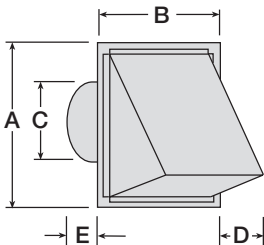


MODEL RJ
Pitched Roof Cap

- Steel construction with black enamel finish
- Integral flashing flange
- Built in birdscreen and damper

Model	For use with sizes	A	B	C	D	E	Throat Dia.	Price Each
RJ-4	B50-B80	11	9 ¹ / ₄	8 ¹ / ₄	5 ⁵ / ₁₆	4 ¹ / ₂	4 in. Dia.	\$36
RJ-6x9	B90-B200 A50-A390	18 ³ / ₄	14 ¹ / ₄	14 ¹ / ₂	10 ³ / ₈	6 ¹ / ₂	6 x 9	\$43
RJ-10x10	A410-A1050	18 ¹ / ₂	27 ¹ / ₂	15 ³ / ₄	23 ³ / ₈	9 ¹ / ₂	10 x 10	\$97

All dimensions in inches.

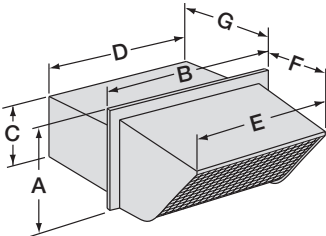


MODEL WC & SDWVA
(Rounded Connection)
Hooded Wall Cap

- Aluminum construction-Aluminum finish
- For outside wall applications
- Built in damper
- Bird screen (not available on WC-4)

Model	For use with sizes	A	B	C	D	E	Price Each
WC-4	B50-B80	6 ¹ / ₂	6	4	2 ³ / ₄	5	\$28
WC-6	B90-B200 A50-A190	8	8	6	4 ¹ / ₈	5	\$34
WC-8	A200-A510	11	11	8	5 ¹ / ₈	3 ¹ / ₂	\$53
SDWVA-10	10" Round	13 ¹ / ₂	13	10	7	8 ¹ / ₂	\$62
SDWVA-12	12" Round	14 ¹ / ₂	14	12	9	8 ¹ / ₂	\$73

All dimensions in inches.

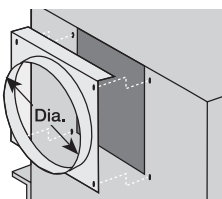


MODEL WC (Rectangular Connection)
Hooded Wall Cap

- Steel construction with black enamel finish
- For outside wall applications
- Built in damper
- Built in birdscreen and damper

Model	For use with sizes	A	B	C	D	E	F	G	Price Each
WC-10x3	50-290	5 ¹ / ₂	12 ³ / ₄	3 ¹ / ₂	10 ¹ / ₄	11 ¹ / ₈	4 ¹ / ₄	5	\$32
WC-8x8	200-510	10 ¹ / ₄	10 ¹ / ₄	8 ¹ / ₄	8 ¹ / ₄	8 ¹ / ₄	6 ³ / ₄	5	\$59
WC-18x8	700-1550	10 ¹ / ₄	20 ¹ / ₄	8 ¹ / ₄	18 ¹ / ₄	18 ¹ / ₄	6 ³ / ₄	5	\$115

All dimensions in inches.



MODEL RDC
Round Duct Connector

- Replaces the standard square discharge duct connector and damper
- Uses existing mounting holes
- Galvanized steel construction
- RDC-8 **does not** include a damper

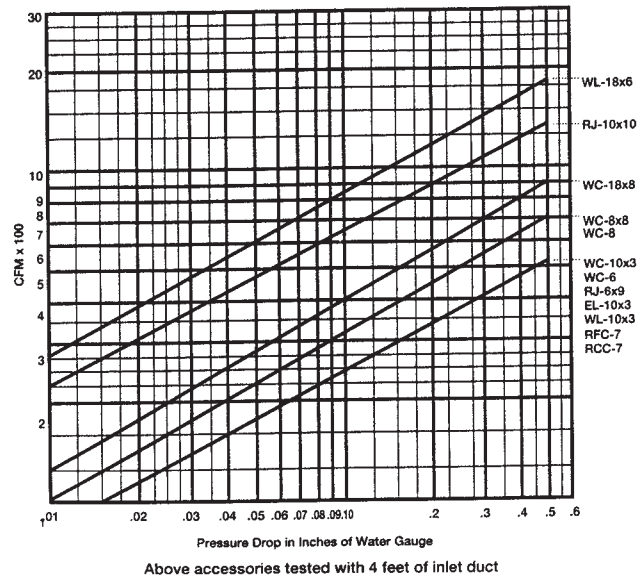
Model	For use with sizes	Dia.	Price Each
RDC-6	A110-A190	6	\$21
RDC-8	A200-A510	8	\$27

All dimensions in inches.

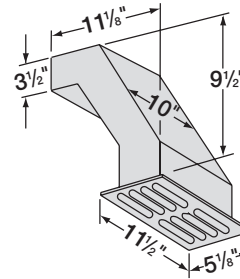
Prices subject to change without notice. All shipments are FOB Hoffman Warehouse, freight prepaid and added to invoice.

ACCESSORY PRESSURE DROPS

The chart below can be used with all of the discharge accessories shown on these two pages. Specific pressure drop values for these accessories must be included in total system calculations for proper fan selection.



Above accessories tested with 4 feet of inlet duct



MODEL EL - 10X3
Elbow Discharge with Grille

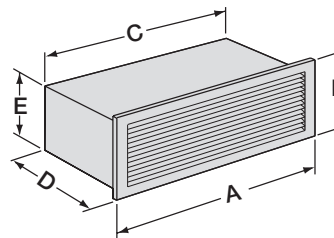
- Designed for installation under roof eaves
- Painted steel louvered grille
- Built in damper
- For SP-C/SP-B/SP-A sizes 50-290
- For CSP-B/CSP-A sizes 110-290

Model	For use with sizes	Price Each
EL-10x3	50-290	\$50

All dimensions in inches.

MODEL WL
Wall Louvered Discharge

- Anodized aluminum grille
- Built in damper
- Not recommended for exterior applications exposed to severe weather conditions. An external wall louver is recommended for such applications.



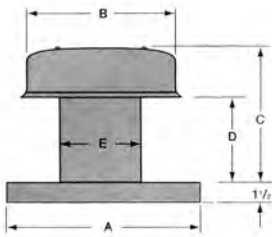
Model	For use with sizes	A	B	C	D	E	Price Each
WL-10x3	50-290	12	5 ¹ / ₄	10	7 ³ / ₄	3 ¹ / ₂	\$151
WL-18x6	390-1550	19 ³ / ₄	8	18	9	6	\$204

All dimensions in inches.

SP AND CSP ACCESSORIES



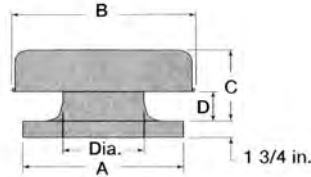
ROOF DISCHARGE ACCESSORIES



MODEL RCC-7

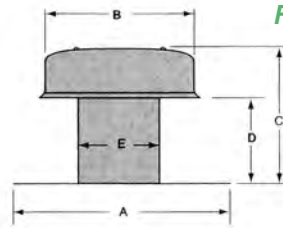
- Weathertight aluminum construction
- Integral birdscreen
- Built in curb cap
- Requires roof curb

CURB CAP



MODEL GRS

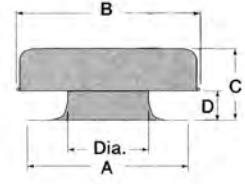
- All aluminum exterior construction
- Galvanized steel internal supports
- Integral birdscreen
- Built in curb cap
- Requires roof curb



MODEL RFC-7

- Weathertight aluminum construction
- Integral birdscreen
- Built in flashing flange

FLASHING FLANGE



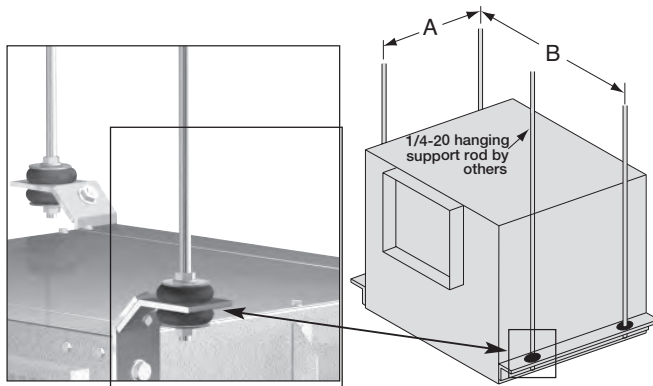
MODEL GRSF

- All aluminum exterior construction
- Galvanized steel internal supports
- Integral birdscreen
- Built in flashing flange

WITH CURB CAP							
Model	For use with sizes	A	B	C	D	Throat Dia.	Price Each
RCC-7	50-390	15	12	10	6 ³ / ₈	7	\$120
GRS-8	50-390	19	20 ¹ / ₂	7 ¹ / ₄	1 ¹ / ₂	8 ¹ / ₄	\$154
GRS-10	410-710	19	20 ¹ / ₂	7 ³ / ₄	2	10 ¹ / ₄	\$169
GRS-12	780-1050	22	29	10	3 ¹ / ₂	12 ¹ / ₄	\$178
GRS-16	1410-2150	26	29	11	4 ¹ / ₄	16 ⁵ / ₁₆	\$253
GRS-20	3600	30	35 ¹ / ₂	11 ¹ / ₄	3 ³ / ₄	20 ⁵ / ₁₆	\$313

WITH FLASHING FLANGE							
Model	For use with sizes	A	B	C	D	Throat Dia.	Price Each
RFC-7	50-390	18	12	10	6 ³ / ₈	7	\$111
GRSF-8	50-390	23	20 ¹ / ₂	7 ¹ / ₄	1 ¹ / ₂	8 ¹ / ₄	\$144
GRSF-10	410-710	23	20 ¹ / ₂	7 ³ / ₄	2	10 ¹ / ₄	\$159
GRSF-12	780-1050	26	29	10	3 ¹ / ₂	12 ¹ / ₄	\$168
GRSF-16	1410-2150	30	29	11	4 ¹ / ₄	16 ⁵ / ₁₆	\$236
GRSF-20	3600	34	35 ¹ / ₂	11 ¹ / ₄	3 ³ / ₄	20 ⁵ / ₁₆	\$294

HANGING VIBRATION ISOLATORS



Vibration isolator kits are available for suspended installations. Kits include all hardware necessary to mount one unit, with the exception of 1/4-20 threaded rod to be supplied by others. Fan mounting brackets include prepunched mounting holes for ease of installation.

SP/CSP Size	A	B	Price Each
B50-B200	4 ¹ / ₂	15 ⁵ / ₈	\$24
A50-A190	5 ¹ / ₂	14 ⁵ / ₈	\$24
A200-A390	6 ³ / ₄	15 ¹ / ₂	\$24
A410, A510 A710, A780	9 ¹ / ₄	19 ⁵ / ₈	\$24
A700	5 ¹ / ₂	25 ¹ / ₈	\$24
A900-A1050 A1410-A1550	9 ¹ / ₄	25 ³ / ₈	\$24

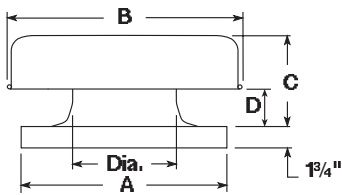
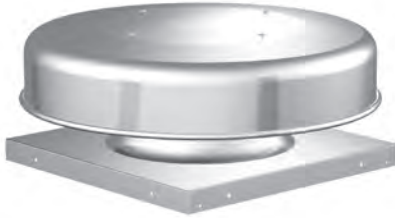
All dimensions in inches.

ROOF VENTILATORS



MODEL GRS GRAVITY INTAKE/RELIEF VENTILATOR

Model GRS is an aluminum ventilator designed to be used as an intake or relief unit on natural gravity or positive pressure systems. The GRS appearance blends with other Greenheck products and, with its low silhouette, avoids the problem of detracting from architectural aesthetics.



DIMENSIONAL DATA AND PRICES

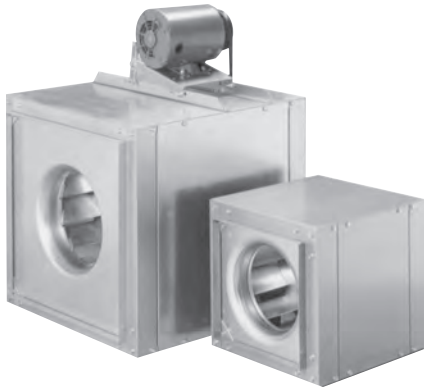
MODEL	A	B	C	D	Throat Dia.	Throat area (FT ²)	Price Each	12" Roof Curb		100 Damper Relief		410 Damper Intake	
								Model	ADD	Size	ADD	Size	ADD
GRS-8	19	20 1/2	7 1/4	1 1/2	8 1/4	0.37	\$154	19	\$75	8 x 8	\$47	8 x 8	\$86
GRS-10	19	20 1/2	7 3/4	2	10 1/4	0.57	\$169	19	\$75	10 x 10	\$51	10 x 10	\$87
GRS-12	22	29	10	3 1/2	12 1/4	0.82	\$178	22	\$82	12 x 12	\$53	12 x 12	\$87
GRS-15	22	29	10	3 1/2	14 1/4	1.12	\$244	22	\$82	16 x 16	\$61	16 x 16	\$113
GRS-16	26	29	11	4 1/4	16 5/16	1.45	\$253	26	\$98	16 x 16	\$61	16 x 16	\$113
GRS-18	30	35 1/2	7 3/4	1 3/4	20 1/4	1.83	\$304	30	\$114	18 x 18	\$78	18 x 18	\$137
GRS-20	30	35 1/2	11 1/4	3 3/4	20 5/16	2.25	\$313	30	\$114	18 x 18	\$78	18 x 18	\$137
GRS-24	34	38 1/4	11	4	24 1/2	3.24	\$463	34	\$130	24 x 24	\$139	24 x 24	\$162

General Ventilation Design Ventilation Rates for Acceptable Indoor Air Quality

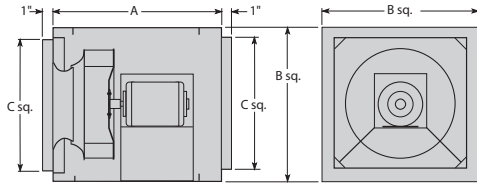
Space	Outdoor Air Required (CFM/person)	Occupancy (People/1000 ft ²)	Space	Outdoor Air Required (CFM/person)	Occupancy (People/1000 ft ²)
Auditoriums	15	150	Laboratories	20	30
Ballrooms/Discos	25	100	Libraries	15	20
Bars	30	100	Medical Procedure Rooms	15	20
Beauty Shops	25	25	Office Spaces	20	7
Classrooms	15	50	Pharmacies	15	20
Conference Rooms	20	50	Photo Studios	15	10
Correctional Facility Cells	20	20	Physical Therapy	15	20
Dormitory Sleeping Rooms	15	20	Restaurant Dining Areas	20	70
Dry Cleaners	30	30	Retail Facilities	15	20
Gambling Casinos	30	120	Smoking Lounges	60	70
Game Rooms	25	70	Sporting Spectator Areas	15	150
Hardware Stores	15	8	Supermarkets	15	8
Hospital Operating Rooms	30	20	Theaters	15	150
Hospital Patient Rooms	25	10			

*Adapted from ASHRAE Standard 62-1989 "Ventilation for Acceptable Indoor Air Quality".

INLINE CENTRIFUGAL FANS

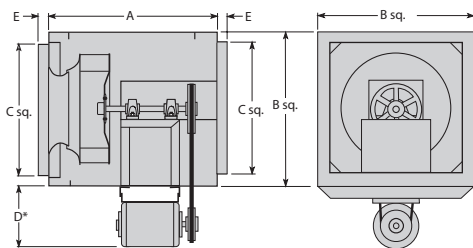


MODEL SQ DIRECT DRIVE DIMENSIONS



Unit Size	A	B	C	E
SQ 80-95	16	15	11 ⁷ / ₈	1
SQ 100	21	17	13 ⁷ / ₈	1
SQ 120	21	19	15 ⁷ / ₈	1

MODEL BSQ BELT DRIVE DIMENSIONS



Unit Size	A	B	C	D*	E
BSQ 70-80-90	21	17 ¹ / ₈	13 ⁷ / ₈	9	1
BSQ 100	21	17 ¹ / ₈	13 ⁷ / ₈	9	1
BSQ 120	21	19 ¹ / ₈	15 ⁷ / ₈	9	1
BSQ 140	22	23 ¹ / ₈	19 ⁷ / ₈	9	1
BSQ 160	26	26 ¹ / ₈	22 ⁷ / ₈	11	1
BSQ 180	28	27 ¹ / ₈	23 ⁷ / ₈	11	1 ¹ / ₂

*Varies with motor size.

MODEL SQ AND BSQ

Model SQ and BSQ inline duct fans are designed for intake, exhaust, return or makeup air systems that require high efficiency, mounting versatility, low sound levels and ease of service. The square, compact housing design permits mounting in any position, whether horizontal, vertical or at any angle. Two removable panels provide access for service. Models SQ and BSQ are licensed to bear the AMCA Certified Ratings Seals for sound and air performance. BSQ models with motors mounted and all SQ sizes are UL listed.

CONSTRUCTION FEATURES

- Galvanized steel housing.
- Two removable service panels.
- Formed collars for duct connection at inlet and outlet.
- Flexible motor leads and combination junction box and disconnect switch (standard).
- BSQ motors, bearings and drives are mounted out of the airstream and are cooled by ambient air.

STOCK NOTES

• Model SQ Direct Drive

SQ motors are 115/60/1. All fans can be used with a speed control and offer thermal overload protection.

SQ-90 and 95 are equipped with 3-speed motors, field wired for either 1050, 1300 or 1500 RPM and can be shipped UPS.

SQ-90 and 95 are constant speed, totally enclosed. SQ100 are constant speed, open drip proof. (Contact your salesman for other styles.)

• Vari-Green® motor - 80% turndown, 85% efficient.

Available on select sizes.

• Model BSQ Belt Drive

Motors 1/4 HP are 115/60/1.

Motors 1/3 & 1/2 HP, 1 PH are 115/208-230/60/1 and wired for 115 volts. Motors 1 HP, 3 PH and larger are 208-230/460/60/3 are wired for 208-230 volts.

BSQ motors are constant speed, open drip proof. (Contact your salesman for other styles.)

Units are shipped preset for maximum RPM and are adjustable. BSQ sizes 70 through 90 are stocked with motors mounted and HP ratings as cataloged.

BSQ sizes 100, 120, 140, 160, 180 are stocked less motors and drives. See page 21.

Specify fan RPM, motor HP, voltage and phase required. Motor and drive will be shipped separate for field installation.



FANS / DAMPERS /
GRILLS

VARIABLE SPEED
DRIVES & STARTERS

REGISTERS / GRILLES /
DIFFUSERS / TRANSITIONS

VAN TERMINALS /
HOT WATER COILS

DAMPERS / LOUVERS /
ACCESS DOORS / ACTUATORS

FLEXIBLE DUCT /
SNAP LOCK & ACC.

SPIRAL PIPE
& ACCESSORIES

ELECTRIC HEATERS /
FILTERS & ACCESSORIES

VIBRATION ISOLATION

STEAM SPECIALTIES

PERFORMANCE DATA AND PRICING MODEL SQ



MODEL	HP	RPM	TS	Max. BHP	STATIC PRESSURE IN INCHES OF W.G. / CAPACITY (CFM)							Price Each	330 Damper		
					0.000	0.100	0.125	0.250	0.375	0.500	0.625		Size	ADD	
					Sones	Sones	Sones	Sones	Sones	Sones	Sones				
SQ-80-VG6X		1/6	1725	4412	.055	503	461	451	405	350	294	\$1007	12 x 12	\$73	
						8.4	8.5	8.6	8.6	8.6	8.7				
SQ-90	E	1/50	1050	2989	.020	500	399	369	188			\$594	12 x 12	\$73	
						4.0	3.9	3.9	4.1						
	G	1/25	1300	3701	.040	619	539	519	397	245					
						5.4	5.4	5.4	5.5	5.6					
	D	1/10	1550	4412	.068	738	673	654	564	457	334				
						7.6	7.5	7.5	7.4	7.4	7.4				
SQ-95	E	1/30	1050	2989	.031	623	507	475	274			\$594	12 x 12	\$73	
						4.9	4.5	4.5	4.5						
	G	1/15	1300	3701	.059	771	684	659	522	352					
						7.6	6.8	6.7	6.4	6.4					
	D	1/8	1550	4412	.100	919	852	829	720	603	461				276
						9.6	9.4	9.3	8.7	8.1	7.6				7.1
SQ-95-VG6X	1/6	1725	5050	.100	1024	1000	948	850	751	641	507	\$1051	12 x 12	\$73	
					11.3	11.1	11.0	10.6	10.1	9.8	9.2				
SQ-100-A	1/4	1725	5052	.250	1454	1413	1402	1349	1292	1227	1156	\$851	14 x 14	\$79	
					13.1	12.5	12.4	11.9	11.5	11.1	10.7				
SQ-120-VG5X	1/2	1725	5927	.41	1948	1897	1883	1818	1754	1692	1628	\$1479	16 x 16	\$86	
					14.7	14.4	14.1	13.8	13.6	13.5	13.5				
BAS 1P Magnetic Starter											W/DIS - \$164				
Hanging Rubber Vibration Isolator Kit (HVI-250)											\$74				
Base Rubber Vibration Isolator Kit (BVI-250)											\$101				
Mounting Brackets (800201)											\$47				
Model 5W (6 Amp) Solid State Speed Control (thru Size 100)											\$44				

SQ & BSQ ACCESSORIES



Prices subject to change without notice. All shipments are FOB Hoffman Warehouse, freight prepaid and added to invoice.

BSQ PERFORMANCE DATA - MOTORS & DRIVES FACTORY MOUNTED



MODEL	HP	RPM	Sones @ 1/4" SP	STATIC PRESSURE IN INCHES OF W.G. / CAPACITY (CFM)														Price Each	330 Damper	
				0.125		0.250		0.375		0.500		0.625		0.750		1.000			Size	ADD
				CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP			
QD BSQ-70-4 (1 Phase)	1/4	1730	16.1	349	0.18	323	0.18	293	0.17	260	0.17	227	0.17	192	0.16	112	0.15	\$1412	12 x 12	\$77
		1970	19.1	404	0.26	383	0.26	358	0.26	330	0.26	301	0.25	272	0.25	211	0.24			
QD BSQ-80-4 (1 Phase)	1/4	1580	14.6	610	0.16	570	0.17	526	0.17	477	0.17	420	0.17	362	0.16			\$1438	12 x 12	\$77
		1835	17.0	720	0.25	687	0.26	651	0.26	614	0.26	571	0.26	525	0.26	425	0.25			
QD BSQ-90-4 (1 Phase)	1/4	1440	12.2	805	0.15	741	0.16	669	0.16	588	0.16	480	0.15					\$1442	12 x 12	\$77
		1695	15.8	965	0.25	914	0.25	858	0.26	798	0.26	730	0.26	654	0.25					

BSQ PERFORMANCE DATA - MOTORS & DRIVES FIELD MOUNTED



MODEL	HP	PH	RPM	Sones @ 1/4" SP	STATIC PRESSURE IN INCHES OF W.G. / CAPACITY (CFM)														Price Each	330 Damper		Starters		
					0.125		0.250		0.375		0.500		0.625		0.750		1.000			Size	ADD	STD	W/DIS	
					CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP						
QD BSQ-100	1/4	1	1610	15	1266	0.25	1207	0.26	1149	0.26	1089	0.26	1004	0.26	917	0.26			14 x 14	\$96		\$164		
	1/3	1	1765	16.3	1398	0.32	1345	0.33	1292	0.34	1240	0.34	1179	0.34	1101	0.34	924	0.34						\$164
	1	3	2555	26	2065	0.96	2028	0.98	1991	0.99	1954	1.01	1917	1.02	1880	1.03	1809	1.05					\$565	\$784
QD BSQ-120-4 (1 Phase)	1/4		1210	9.2	1283	0.17	1192	0.17	1098	0.18	992	0.18	860	0.18					\$1533	16 x 16	\$104	\$565	\$164	
			1370	11.0	1475	0.24	1395	0.25	1315	0.26	1230	0.26	1135	0.26	1025	0.26								
QD BSQ-140	1	3	1710	18	3160	0.95	3096	0.97	3029	0.98	2954	0.99	2879	1.00	2800	1.02	2637	1.05	\$1930	20 x 20	\$127	\$565	\$784	
	1 1/2	3	1960	24	3640	1.42	3584	1.44	3528	1.46	3469	1.48	3403	1.49	3338	1.50	3201	1.53						
	2	3	2135	29	3974	1.83	3923	1.85	3871	1.88	3820	1.90	3763	1.92	3703	1.93	3583	1.95						
QD BSQ-160	1	3	1390	17.5	3920	0.90	3827	0.93	3734	0.95	3637	0.97	3525	1.00	3412	1.02	3157	1.05	\$2225	23 x 23	\$154	\$565	\$784	
	1 1/2	3	1590	22	4509	1.34	4428	1.37	4346	1.41	4265	1.43	4184	1.45	4085	1.48	3887	1.53						
	2	3	1750	27	4978	1.78	4904	1.81	4831	1.85	4757	1.88	4683	1.91	4609	1.93	4431	1.99						
	3	3	2000	38	5709	2.64	5645	2.68	5580	2.72	5516	2.77	5451	2.81	5386	2.83	5256	2.89						
QD BSQ-180	1	3	1140	16.1	4544	0.94	4407	0.96	4264	0.99	4122	1.00	3944	1.03	3755	1.04	3282	1.04	\$2234	24 x 24	\$154	\$565	\$784	
	1 1/2	3	1310	19.6	5259	1.41	5445	1.44	5020	1.47	4896	1.50	4771	1.52	4629	1.54	4301	1.58						
	2	3	1440	23	5802	1.87	5698	1.90	5589	1.93	5476	1.96	5363	1.99	5250	2.01	4979	2.07						
	3	3	1645	28	6656	2.78	6565	2.81	6474	2.84	6376	2.88	6277	2.92	6178	2.95	5980	3.01						

ACCESSORIES



DESCRIPTION	Fan Size	Price Each
Hanging Rubber Vibration Isolator Kit HVI-250	BSQ 70-140	\$94
Hanging Rubber Vibration Isolator Kit HVI-440	BSQ 160-180	\$135
Base Rubber Vibration Isolator Kit BVI-250	BSQ 70-140	\$128
Base Rubber Vibration Isolator Kit BVI-440	BSQ 160-180	\$169
Mounting Bracket 800201	SQ & BSQ	\$60

QD - Orders received in Greensboro warehouse by 11:00 a.m. EASTERN TIME will normally ship within 24 hours. Call TOLL-FREE: 1-800-334-0254.

Prices subject to change without notice. All shipments are FOB Hoffman Warehouse, freight prepaid and added to invoice.

FANS / DAMPERS /
CPRS

VARIABLE SPEED
DRIVES & STARTERS

REGISTERS / GRILLES /
DIFFUSERS / TRANSITIONS

VAN TERMINALS /
HOT WATER COILS

DAMPERS / LOUVERS /
ACCESS DOORS / ACTUATORS

FLEXIBLE DUCT /
SNAPLOCK & ACC.

SPIRAL PIPE
& ACCESSORIES

ELECTRIC HEATERS /
FILTERS & ACCESSORIES

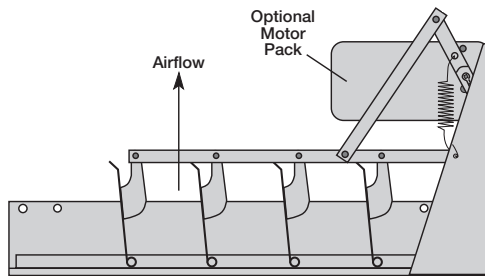
VIBRATION ISOLATION

STEAM SPECIALTIES

BACKDRAFT DAMPERS



All dampers feature a frame constructed of heavy gauge galvanized steel with prepunched mounting holes for ease of installation. Blades are fabricated with vinyl on the closing edge. Each blade pivots on nylon bushings to assure quiet and smooth operation. Optional 120V motor packs are available for field mounting.



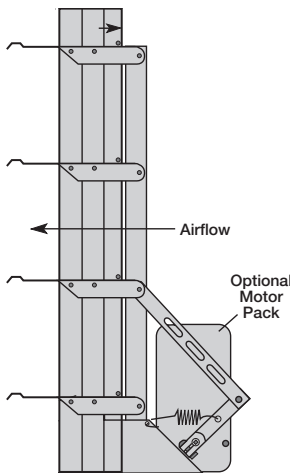
Damper Size Sq.	Price Each	Add Motor Pack
8 x 8	\$47	\$89
10 x 10	\$51	\$89
12 x 12	\$53	\$89
16 x 16	\$61	\$89
18 x 18	\$78	\$89
24 x 24	\$139	\$89
30 x 30	\$176	\$89

QD

Motor Pack is MP100/120/60/1V

MODEL 100

- Model 100 dampers are designed for use with all Greenheck roof mounted exhaust fans.
- Sizes 12 through 30 are spring assisted to aid in initial opening on gravity operated models.
- Sizes 8 through 30 can be shipped UPS.



Damper Size Sq.	Price Each	Add Motor Pack
10 x 10	\$76	\$171
12 x 12	\$82	\$171
14 x 14	\$89	\$171
16 x 16	\$102	\$171
18 x 18	\$108	\$171
20 x 20	\$134	\$171
22 x 22	\$163	\$171

Motor Pack is MP300/120/60/1V

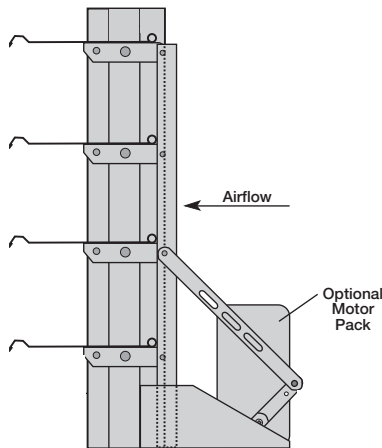
MODEL 320

- Model 320 dampers are designed for use with Greenheck sidewall propeller fans.
- A tie bar is added to assure uniform blade opening and to counter balance the weight of the blade assembly allowing the damper to open fully at minimal airflow.
- **NOTE: 320 is exhaust only.** Sizes 10 through 22 can be shipped UPS.

QD - Orders received in Greensboro warehouse by 11:00 a.m. EASTERN TIME will normally ship within 24 hours. Call TOLL-FREE: 1-800-334-0254.

Prices subject to change without notice. All shipments are FOB Hoffman Warehouse, freight prepaid and added to invoice.

BACKDRAFT DAMPERS

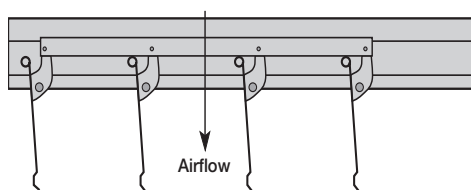


Damper Size Sq.	Price Each	Add Motor Pack
8 x 8	\$62	\$171
9 x 9	\$68	\$171
10 x 10	\$68	\$171
12 x 12	\$73	\$171
14 x 14	\$79	\$171
16 x 16	\$86	\$171
QD 18 x 18	\$127	\$171
QD 20 x 20	\$127	\$171
QD 23 x 23	\$154	\$171
QD 24 x 24	\$154	\$171

Motor Pack is MP300/120/60/1V

MODEL 330

- Model 330 dampers have been designed for application with Greenheck's SQ in-line fans and when a no flange damper is required. A balanced design affords minimal resistance to airflow.
- Sizes 8 through 24 can be shipped UPS.



Damper Size Sq.	Price Each
8 x 8	\$86
10 x 10	\$87
12 x 12	\$87
16 x 16	\$113
18 x 18	\$137
24 x 24	\$162

MODEL 410

- Model 410 non-motorized dampers are designed for use with Greenheck's model RSF and GRS supply fans, and Fabra Hoods.
- All sizes can be shipped UPS.

NOTE: Actual damper size is 1/16" smaller than nominal size.

QD - Orders received in Greensboro warehouse by 11:00 a.m. EASTERN TIME will normally ship within 24 hours. Call TOLL-FREE: 1-800-334-0254.

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FANS / DAMPERS /
CURBS

VARIABLE SPEED
DRIVES & STARTERS

REGISTERS / GRILLES /
DIFFUSERS / TRANSITIONS

VAN TERMINALS /
HOT WATER COILS

DAMPERS / LOUVERS /
ACCESS DOORS / ACTUATORS

FLEXIBLE DUCT /
SNAPLOCK & ACC.

SPIRAL PIPE
& ACCESSORIES

ELECTRIC HEATERS /
FILTERS & ACCESSORIES

VIBRATION ISOLATION

STEAM SPECIALTIES

ELECTRICAL ACCESSORIES



FAN SPEED CONTROL

Speed controls are available in two models for use with shaded pole and open permanent split capacitor motors in 115 volt single phase only.



Model 5W – For applications up to 6.0 AMPS. Requires 2 x 4 handy box by others.
Price Each: \$44.00

Model 10W – For applications up to 10.0 AMPS. Requires 2 x 4 handy box by others.
Price Each: \$84.00



Model 867008–Vari Green Remote Dial Retrofit Kit. Requires 2 x 4 handy box by others.
Price Each: \$256.00

TIME DELAY SWITCH



MODEL GTD
The Model GTD Time Delay Switch is available for keeping a fan or light operating for an extended period of time after the initiating switch has been turned off. The GTD assembly consists of a single pole, single throw switch, a timer and a cover plate.
Price Each: \$106.00

THERMOSTAT ETD9STS



Wall-mounted line voltage thermostat is designed for on/off control in cooling or heating applications. Recommended for fan and unit heater applications only. U.L. listed. Requires standard handy box (not included).

Temperature Range: 50 - 90 F
Electrical Rating:
22 amps @ 125/277 VAC
3/4 hp @125 VAC, 1-1/2 hp @ 277 VAC
Price Each: \$27.00



MANUAL STARTER SWITCH

Manual motor starting switches are available in three models. All models are U.L. Listed, HP rated, specification grade and feature neoprene rockers for quiet operation. Model MS-16 includes a pilot light. All models require a handy box by others.

Speeds	Model	HP	Volts	PH	Price
1	MS-1	1/2	120	1	\$7
1	MS-16 w/pl	1/2	120	1	\$28
1	MS-4	2	200/277	1	\$16

DISCONNECT SWITCHES



For safety in servicing fans not equipped with factory mounted disconnects, switches are available in seven models. Each model includes a switch assembly, handy box and cover plate.

Weatherproof Disconnect Switches in NEMA rated waterproof boxes for positive electrical shutoff and safety in servicing fans. NEMA 3R toggle style switch models are listed below.

Model	HP	Volts	PH	Price
STANDARD				
NITS -1	up to 1/2	120	1	\$9
NITS -2	3/4 to 1	120	1	\$12
NITS -3	1-1/2 to 2	120	1	\$35
NITS -4	1/4 to 2	200/277	1	\$16
NITS -6	up to 7-1/2	230/460	3	\$47
WEATHERPROOF				
N3RTS-1	1/4 to 2	120	1	\$87
N3RTS-6	up to 7-1/2	230/460	3	\$93

MAGNETIC STARTERS



MODEL BAS1/MSAC

- UL Listed
- HOA Keypad
- BAS Compatible
- Fireman's Override
- Type 1 Enclosures

ADJUSTABLE OVERLOAD - SINGLE PHASE W/DISCONNECT

Model	Price Each	120V	230V
BAS 1P	\$164	0.1 - 1 HP	0.1 - 1 HP

ELECTRONIC OVERLOAD - NEMA 1 ENCLOSURES

Model	Price Each	Three Phase			NEMA Size
		208V	230V	460V	
MSAC-1-9/J-40	\$565	2 HP	2 HP	5 HP	00
MSAC-1-18/J-40	\$600	5 HP	7.5 HP	10 HP	0
MSAC-1-32/J-40	\$634	7.5 HP	10 HP	20 HP	1

ELECTRONIC OVERLOAD W/DISCONNECT - NEMA 1 ENCLOSURES

Model	Price Each	Three Phase			NEMA Size
		208V	230V	460V	
MSAC-1-9/J-G2.5-40	\$784	.5 HP	.5 HP	1 HP	00
MSAC-1-9/J-G4-40	\$784	.75 HP	.75 HP	2 HP	00
MSAC-1-9/J-G6-40	\$784	1 HP	1.5 HP	3 HP	00
MSAC-1-18/J-G8-40	\$819	2 HP	2 HP	5 HP	0
MSAC-1-18/J-G13-40	\$819	3 HP	3 HP	7.5 HP	0
MSAC-1-18/J-G17-40	\$819	3 HP	5 HP	10 HP	0
MSAC-1-32/J-G26-40	\$831	7.5 HP	7.5 HP	15 HP	1
MSAC-1-32/J-G32-40	\$831	7.5 HP	10 HP	20 HP	1

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FANS / DAMPERS / CURBS

VARIABLE SPEED DRIVES & STARTERS

REGISTERS / GRILLES / DIFFUSERS / TRANSITIONS

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DAMPERS / LOUVERS / ACCESS DOORS / ACTUATORS

FLEXIBLE DUCT / SNAP-LOCK & ACC.

SPIRAL PIPE & ACCESSORIES

ELECTRIC HEATERS / FILTERS & ACCESSORIES

VIBRATION ISOLATION

STEAM SPECIALTIES

AC DRIVES

By ABB

Power and productivity
for a better world™



MODEL ACH580 - 208 VOLT

- UL Listed
- HVAC Designed
- Full Graphic Display
- Type 1 Enclosures

MODEL: ACH580-01-BASE DRIVE

MODEL	HP	VOLTAGE	PH	AMPS	FRAME
ACH580-01-10A6-2	3	208	3	10.6	R1
ACH580-01-017A-2	5	208	3	16.7	R1
ACH580-01-024A-2	7.5	208	3	24.2	R2
ACH580-01-031A-2	10	208	3	30.8	R2
ACH580-01-046A-2	15	208	3	46.2	R3
ACH-AP-H	Control Panel for All ACH580 Drives				

Contact your local salesperson for pricing.

MODEL: ACH580-VCR-W/ ELECTRONIC BYPASS & SERVICE SWITCH

MODEL	HP	VOLTAGE	PH	AMPS	FRAME
ACH580-VCR-10A6-2+F267	3	208	3	10.6	R1
ACH580-VCR-017A-2+F267	5	208	3	16.7	R1
ACH580-VCR-024A-2+F267	7.5	208	3	24.2	R2
ACH580-VCR-031A-2+F267	10	208	3	30.8	R2
ACH580-VCR-046A-2+F267	15	208	3	46.2	R3
ACH-AP-H	Control Panel for All ACH580 Drives				

Contact your local salesperson for pricing.

Please note: To extend your factory one (1) year warranty to a two (2) year warranty, Check, Test and Start is required by an authorized ABB specialist. Please contact your local salesperson for more information.



AC DRIVES

By ABB

Power and productivity
for a better world™



MODEL ACH580 - 460 VOLT

- UL Listed
- HVAC Designed
- Full Graphic Display
- Type 1 Enclosures

MODEL: ACH580-01-BASE DRIVE					
MODEL	HP	VOLTAGE	PH	AMPS	FRAME
ACH580-01-03A0-4	1.5	460	3	3.0	R1
ACH580-01-04A8-4	3	460	3	4.8	R1
ACH580-01-07A6-4	5	460	3	7.6	R1
ACH580-01-012A-4	7.5	460	3	12	R1
ACH580-01-014A-4	10	460	3	14	R2
ACH580-01-023A-4	15	460	3	23	R2
ACH580-01-027A-4	20	460	3	27	R3
ACH580-01-034A-4	25	460	3	34	R3
ACH580-01-044A-4	30	460	3	44	R3
ACH580-01-052A-4	40	460	3	52	R4
ACH580-01-065A-4	50	460	3	65	R4
ACH-AP-H	Control Panel for All ACH580 Drives				

Contact your local salesperson for pricing.



MODEL: ACH580-VCR-W/ ELECTRONIC BYPASS & SERVICE SWITCH					
MODEL	HP	VOLTAGE	PH	AMPS	FRAME
ACH580-VCR-04A8-4+F267	3	460	3	4.8	R1
ACH580-VCR-07A6-4+F267	5	460	3	7.6	R1
ACH580-VCR-012A-4+F267	7.5	460	3	12	R1
ACH580-VCR-014A-4+F267	10	460	3	14	R2
ACH580-VCR-023A-4+F267	15	460	3	23	R2
ACH580-VCR-027A-4+F267	20	460	3	27	R3
ACH580-VCR-034A-4+F267	25	460	3	34	R3
ACH580-VCR-044A-4+F267	30	460	3	44	R3
ACH580-VCR-052A-4+F267	40	460	3	52	R4
ACH580-VCR-065A-4+F267	50	460	3	65	R4
ACH-AP-H	Control Panel for All ACH580 Drives				

Contact your local salesperson for pricing.

Please note: To extend your factory one (1) year warranty to a two (2) year warranty, Check, Test and Start is required by an authorized ABB specialist. Please contact your local salesperson for more information.

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FANS / DAMPERS /
CURBS

VARIABLE SPEED
DRIVES & STARTERS

REGISTERS / GRILLES /
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VAN TERMINALS /
HOT WATER COILS

DAMPERS / LOUVERS /
ACCESS DOORS / ACTUATORS

FLEXIBLE DUCT /
SNAP LOCK & ACC.

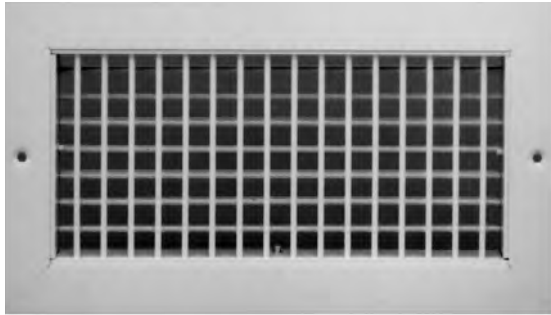
SPRAL PIPE
& ACCESSORIES

ELECTRIC HEATERS /
FILTERS & ACCESSORIES

VIBRATION ISOLATION

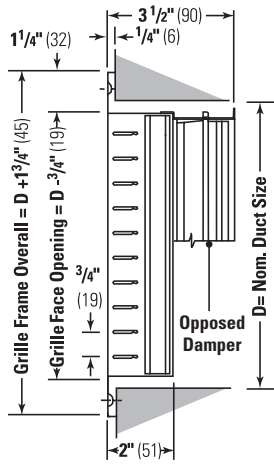
STEAM SPECIALTIES

SUPPLY REGISTERS



MODEL 620D & MODEL 520D

- Surface Mount
- Double deflection design for full side spread and drop control
- Model 620D is manufactured from corrosion resistant extruded aluminum with an aluminum (B15) powder coat finish. Includes rollformed steel opposed blade damper
- Model 520D is manufactured from stamped steel components with a white (B12) powder coat finish. Includes rollformed steel opposed blade damper.
- Individually adjustable semi-airfoil blades
- Vertical front blades
- Outer frames with corner inserts for hairline mitered seams on larger sizes



W x H	Nominal CFM*	Aluminum (B15) Price Each	Steel (B12) Price Each	W x H	Nominal CFM*	Aluminum (B15) Price Each	Steel (B12) Price Each	W x H	Nominal CFM*	Aluminum (B15) Price Each	Steel (B12) Price Each
8 x 4	180	\$45	\$40	16 x 10	720	\$94	\$76	24 x 10	1300	\$117	\$100
8 x 6	260	\$51	\$46	18 x 6	480	\$79	\$66	24 x 12	1440	\$130	\$111
10 x 4	220	\$51	\$46	18 x 8	720	\$89	\$71	24 x 16	1720	\$158	\$133
10 x 6	340	\$58	\$46	18 x 10	855	\$100	\$80	30 x 8	1200	\$135	\$121
12 x 4	260	\$57	\$49	18 x 12	1070	\$111	\$91	30 x 10	1400	\$155	\$131
12 x 6	390	\$64	\$51	20 x 6	550	\$87	\$70	30 x 12	1800	\$173	\$150
12 x 8	480	\$72	\$60	20 x 8	750	\$98	\$79	30 x 16	2180	\$209	\$185
14 x 6	370	\$68	\$57	20 x 10	945	\$104	\$85	36 x 8	1440	\$159	\$133
14 x 8	550	\$77	\$63	20 x 12	1045	\$113	\$94	36 x 12	1950	\$198	\$170
16 x 6	415	\$76	\$60	24 x 6	750	\$95	\$76	36 x 16	2530	\$243	\$209
16 x 8	650	\$87	\$70	24 x 8	945	\$111	\$91	36 x 18	3000	\$266	\$233

*Columbia Stock Steel (B12) Only.

*Performance based on a sound level of approximately NC 30. For more specific performance information, consult your Hoffman & Hoffman representative or visit www.price-hvac.com

Touchup Paint.....\$23.00
12 oz aerosol can (White or Aluminum)

RETURN GRILLES AND REGISTERS



FANS / DAMPERS / CURBS

VARIABLE SPEED DRIVES & STARTERS

REGISTERS / GRILLES / DIFFUSERS / TRANSITIONS

VAN TERMINALS / HOT WATER COILS

DAMPERS / LOUVERS / ACCESS DOORS / ACTUATORS

FLEXIBLE DUCT / SNAP-LOCK & ACC.

SPIRAL PIPE & ACCESSORIES

ELECTRIC HEATERS / FILTERS & ACCESSORIES

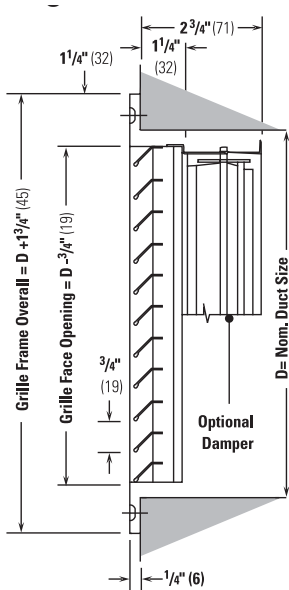
VIBRATION ISOLATION

STEAM SPECIALTIES



MODELS 630, 530, 630D, 530D

- Surface Mount
- Model 630 is constructed of extruded aluminum with an aluminum (B15) powder coat finish
- Model 530 is manufactured from rollformed steel components with a white (B12) powder coat finish
- Deflecting vanes are curved and set at 45°
- Horizontal front vanes
- Outer frames with corner inserts for hairline mitered seams on larger sizes
- Model 630D and 530D furnished with opposed blade damper



MODEL 630D & MODEL 530D

W x H	Nominal CFM*	Aluminum (B15) Price Each	Steel (B12) Price Each
6 x 6	125	\$47	\$39
8 x 8	235	\$52	\$39
10 x 10	370	\$60	\$46
12 x 12	400	\$67	\$51

W x H	Nominal CFM*	Aluminum (B15) Price Each	Steel (B12) Price Each	W x H	Nominal CFM*	Aluminum (B15) Price Each	Steel (B12) Price Each	W x H	Nominal CFM*	Aluminum (B15) Price Each	Steel (B12) Price Each
6 x 6	125	\$35	\$25	14 x 14	710	\$54	\$40	24 x 18	1400	\$88	\$57
8 x 8	235	\$37	\$25	16 x 8	490	\$47	\$36	24 x 24	1700	\$105	\$70
10 x 6	240	\$37	\$25	16 x 10	550	\$53	\$39	30 x 12	1100	\$87	\$60
10 x 8	280	\$40	\$29	16 x 16	960	\$67	\$45	30 x 24	2150	\$130	\$91
10 x 10	370	\$42	\$32	18 x 12	805	\$58	\$43	30 x 30	3000	\$153	\$104
12 x 6	250	\$39	\$29	18 x 18	1000	\$74	\$51	36 x 18	2150	\$124	\$90
12 x 8	375	\$42	\$29	20 x 20	1300	\$84	\$56	36 x 24	2800	\$146	\$99
12 x 12	550	\$47	\$36	22 x 22	1600	\$93	\$63	36 x 30	3000	\$170	\$114
14 x 6	280	\$40	\$29	24 x 8	710	\$58	\$43	36 x 36	3600	\$192	\$131
14 x 8	420	\$42	\$32	24 x 12	925	\$70	\$46	48 x 24	3300	\$224	\$167

*Columbia Stock Steel (B12) Only.

*Performance based on a sound level of approximately NC 30. For more specific performance information, consult your Hoffman & Hoffman representative or visit www.price-hvac.com

Touchup Paint.....\$23.00
12 oz aerosol can (White or Aluminum)

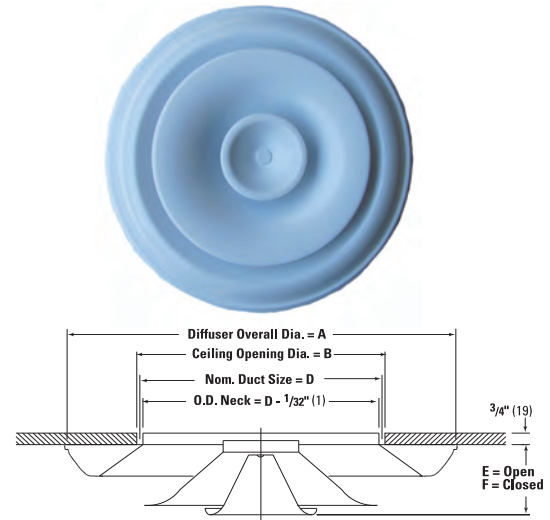
MISCELLANEOUS AIR DISTRIBUTION PRODUCTS



MODEL RCDE

- Steel construction with a white (B12) powder coat finish
- Two position adjustment
- Easily adjustable without requiring special tools

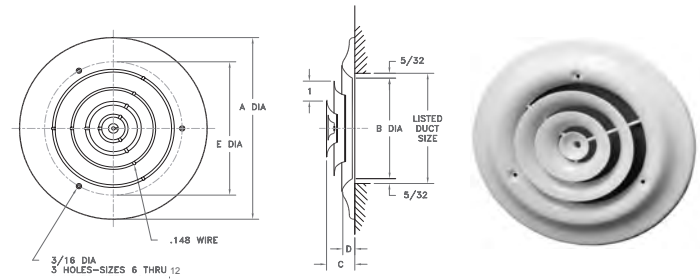
Size	Nominal CFM	Price Each	A	B	D	E	F
6	200	\$99	11 1/8	6 1/2	6	1 3/4	1 1/8
8	280	\$104	14 3/4	8 1/2	8	2 1/8	1 1/2
10	490	\$113	18 1/4	10 1/2	10	2 7/8	2 1/8
12	705	\$125	22	12 1/2	12	3 1/8	2 3/8



MODEL 16 ROUND CEILING DIFFUSER

- Steel construction with a white (B12) powder coat finish
- Low cost design
- Optional duct ring or damper
- Ideal for residential, apartment, light commercial applications

Size	Nominal CFM*	Grille Price Each	Duct Ring Price Each	Damper/w Duct Ring
6	135	\$20	\$15	\$26
8	225	\$22	\$17	\$26
10	345	\$28	\$21	\$32
12	500	\$37	\$27	\$44



Size	A DIA	B DIA	C	D	E DIA
6	9 - 15/16	5 - 11/16	1 - 3/64	11/16	6 - 1/2
8	11 - 15/16	7 - 11/16	1 - 7/32	11/16	8 - 1/2
10	13 - 15/16	9 - 11/16	1 - 25/64	11/16	10 - 1/2
12	15 - 15/16	11 - 11/16	1 - 9/16	11/16	12 - 1/2

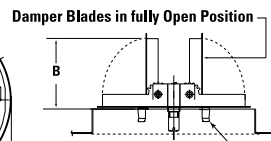
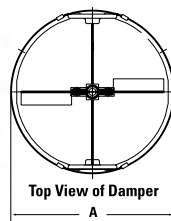
VOLUME CONTROL DAMPERS

- Model VCR8E butterfly style, steel construction
- Model VCR9 radial shutter style, steel construction, low profile for flex duct installations
- Sizes match Price diffusers

Size	VCR8E	VCR9
6	\$17	\$19
8	\$19	\$20
10	\$19	\$23
12	\$20	\$25
14	\$31	\$36



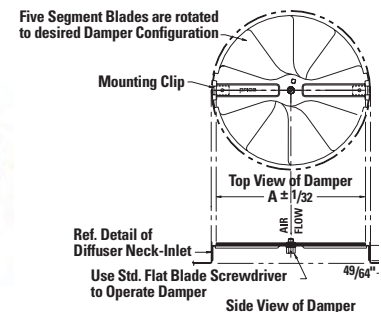
Model VCR8E



Damper end plate c/w integral spring tabs for press-on fit to neck inlet of diffuser.



Model VCR9



*Performance based on a sound level of approximately NC 30. For more specific performance information, consult your Hoffman & Hoffman representative or visit www.price-hvac.com

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PERFORATED STEEL CEILING DIFFUSERS



FANS / DAMPERS / CURBS

VARIABLE SPEED DRIVES & STARTERS

REGISTERS / GRILLES / DIFFUSERS / TRANSITIONS

VAN TERMINALS / HOT WATER COILS

DAMPERS / LOUVERS / ACCESS DOORS / ACTUATORS

FLEXIBLE DUCT / SNAP LOCK & ACC.

SPIRAL PIPE & ACCESSORIES

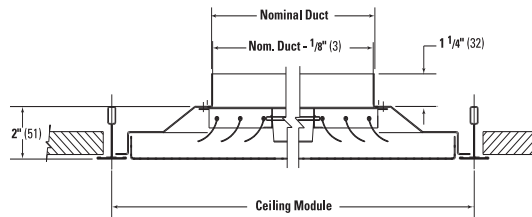
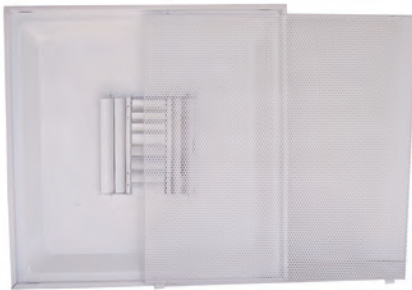
ELECTRIC HEATERS / FILTERS & ACCESSORIES

VIBRATION ISOLATION

STEAM SPECIALTIES

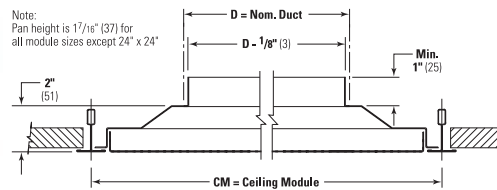
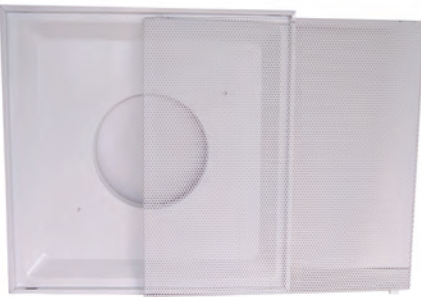
MODEL PDC TEE-BAR LAY-IN SUPPLY

- All steel construction with a white (B12) powder coat finish
- Flush mounting in 24 x 24 lay-in tee-bar ceilings
- Approved for use in fire rated ceilings
- Four-way, adjustable pattern controllers
- Hinged, removable perforated face
- One piece plenum with one inch integrally drawn inlet collar
- Matching Model PDDR returns in stock
- Optional control damper. See page 30.



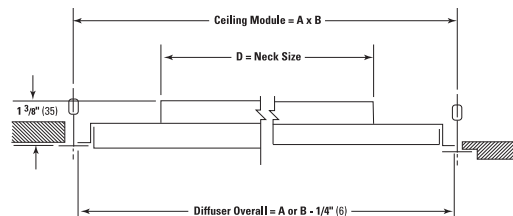
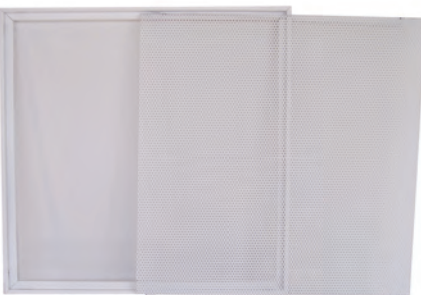
MODEL PDC SUPPLY ROUND NECK

Neck Size	Nominal CFM*	Price Each
6	160	\$66
8	275	\$66
10	390	\$73
12	550	\$73
14	675	\$80
16	875	\$85



MODEL PDDR RETURN ROUND NECK

Neck Size	Nominal CFM*	Price Each
6	130	\$49
8	240	\$49
10	375	\$49
12	525	\$49
14	700	\$49
16	800	\$65



MODEL PDDR RETURN SQUARE NECK

Neck Size	Panel Size	Nominal CFM*	Price Each
22 x 22	24 x 24	2200	\$46
10 x 10	12 x 12	425	\$39

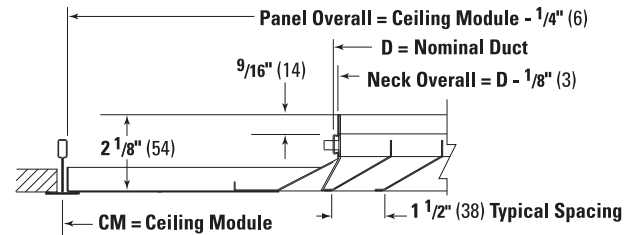
*Nominal CFM based on a sound level of approximately NC 30. For more specific performance information, consult your Hoffman & Hoffman representative or visit www.price-hvac.com

LOUVER FACED CEILING DIFFUSERS



MODEL SMD-TB TEE-BAR LAY-IN

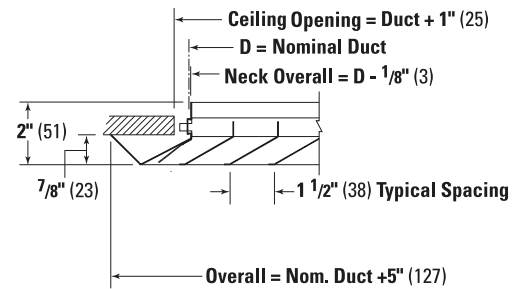
- All steel construction with a white (B12) powder coat finish
- Flush mounting in 24 x 24 lay-in tee-bar ceiling
- Four-way pattern cores with miter-cut corners
- Spring-loaded snap-out core
- Optional snap-in opposed blade damper



Neck Size	Nominal CFM*	SMD-D-TB (with damper) Price Each	SMD-TB (less damper) Price Each	Neck Size	Nominal CFM*	SMD-D-TB (with damper) Price Each	SMD-TB (less damper) Price Each
6 x 6	200	\$73	\$65	15 x 15	900	\$130	\$110
9 x 9	400	\$87	\$73	18 x 18	1200	\$131	\$111
12 x 12	600	\$107	\$91				

MODEL SMD SURFACE MOUNT

- All steel construction with a white (B12) powder coat finish
- Surface mounting
- Four-way pattern cores with miter-cut corners
- Spring-loaded snap-out core
- Optional snap-in opposed blade damper



Neck Size	Nominal CFM*	SMD-D (with damper) Price Each	SMD (less damper) Price Each	Neck Size	Nominal CFM*	SMD-D (with damper) Price Each	SMD (less damper) Price Each
6 x 6	200	\$56	\$48	15 x 15	900	\$111	\$91
9 x 9	400	\$70	\$56	18 x 18	1200	\$139	\$113
12 x 12	600	\$90	\$73				

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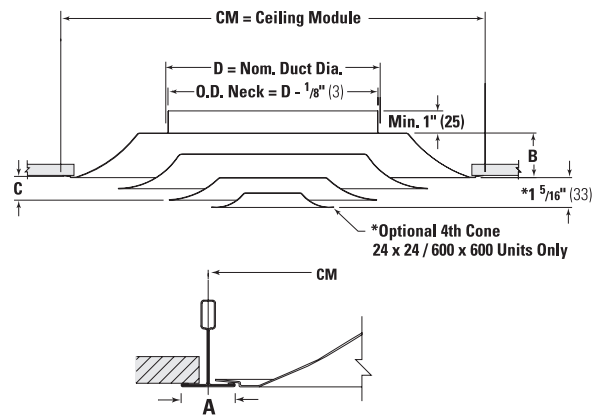
LOUVER FACED CEILING DIFFUSERS



MODEL SCD TEE-BAR LAY-IN

- All steel construction with a white (B12) powder coat finish
- Flush mounting in lay-in tee-bar ceilings
- Four-way pattern, removable cones
- Optional control damper. See page 30.
- Center buttoned opening for damper adjustment
- Optional cosmetic center cone

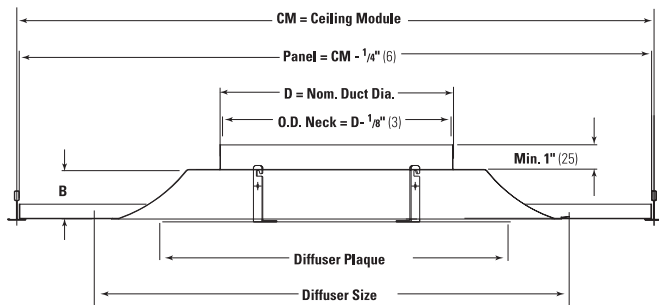
Neck Size	Panel Size	Nominal CFM*	Price Each
6	24 x 24	250	\$76
8	24 x 24	400	\$76
10	24 x 24	575	\$76
12	24 x 24	775	\$76
14	24 x 24	975	\$76
6	12 x 12	235	\$53
8	12 x 12	350	\$53
AFI (R6) Insulation Blanket	12 x 12		\$16
AFI (R6) Insulation Blanket	24 x 24		\$17
Center Cone		—	\$14



MODEL SPD TEE-BAR LAY-IN

- All steel construction with a white (B12) powder coat finish
- Flush mounting in lay-in tee-bar ceilings
- Face panel is easily installed and removed without special tools
- Satisfies both architectural appeal and engineering performance criteria

Neck Size	Panel Size	Nominal CFM*	Price Each
6	24 x 24	250	\$70
8	24 x 24	375	\$70
10	24 x 24	545	\$70
12	24 x 24	725	\$70
14	24 x 24	950	\$70
6	12 x 12	235	\$53
8	12 x 12	350	\$53
AFI (R6) Insulation Blanket	12 x 12		\$16
AFI (R6) Insulation Blanket	24 x 24		\$17



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FANS / DAMPERS / CURBS

VARIABLE SPEED DRIVES & STARTERS

REGISTERS / GRILLS / DIFFUSERS / TRANSITIONS

VAN TERMINALS / HOT WATER COILS

DAMPERS / LOUVERS / ACCESS DOORS / ACTUATORS

FLEXIBLE DUCT / SNAPLOOK & ACC.

SPIRAL PIPE & ACCESSORIES

ELECTRIC HEATERS / FILTERS & ACCESSORIES

VIBRATION ISOLATION

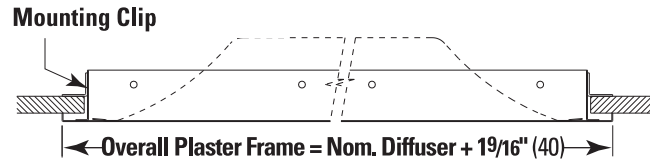
STEAM SPECIALTIES

MISCELLANEOUS AIR DISTRIBUTION PRODUCTS



MODEL SPF MOUNTING FRAME

- Allows easy installation of lay-in diffusers in plaster or gypsum ceilings
- Steel construction with a white (B12) powder coat finish
- All necessary mounting hardware

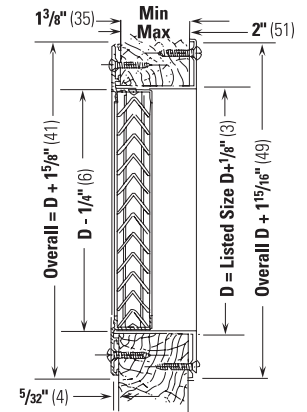


Size	Price Each
12 x 12	\$39
24 x 12	\$43
24 x 24	\$49



MODEL ATG DOOR GRILLE

- Extruded aluminum construction with 70° blades
- Inverted vee blades prevent clear line of sight
- Finished on both sides for door
- Fits doors or partitions as thin as 1-3/8 inch
- Aluminum (B15) powder coat finish



Auxiliary Frame Assembly

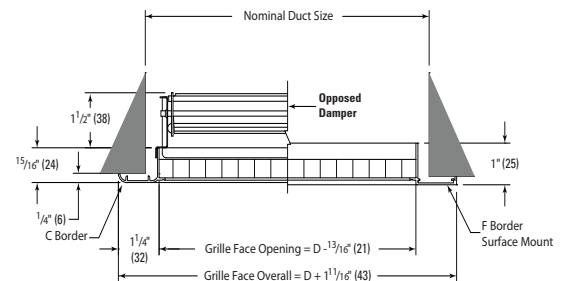
Size	Nominal CFM*	Price Each
12 x 12	250	\$87
18 x 12	350	\$99
18 x 18	500	\$139
24 x 24	700	\$223



MODEL 80D CUBE CORE REGISTER

- Aluminum "egg crate" type 1/2 inch cube core for surface mounting
- Includes opposed blade damper
- White (B12) powder coat finish

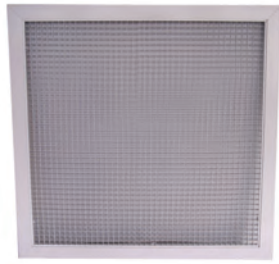
Size	Nominal CFM*	Price Each
6 x 6	225	\$40
8 x 8	400	\$43
10 x 10	650	\$51
12 x 12	900	\$59
14 x 14	1150	\$76



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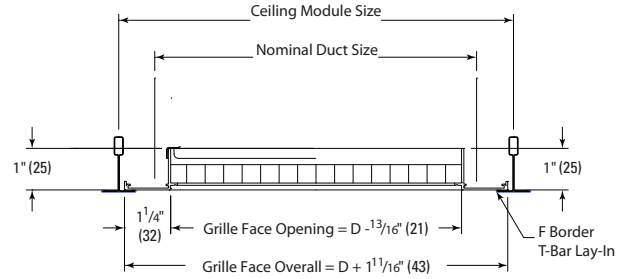
MISCELLANEOUS AIR DISTRIBUTION PRODUCTS **PRICE**[®]



MODEL 80 CUBE CORE RETURN GRILLE

- Aluminum “egg crate” type 1/2 in. cube core for tee-bar lay-in ceilings
- White (B12) powder coat finish

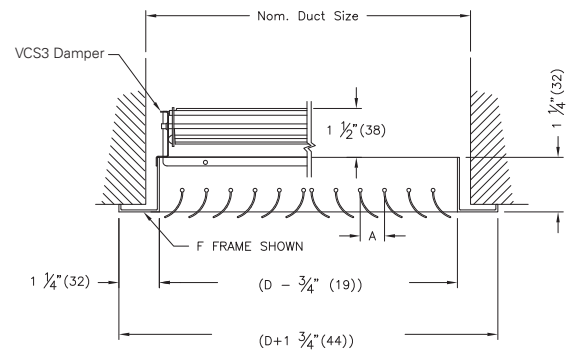
Neck Size	Panel Size	Nominal CFM*	Price Each
22 x 10	24 x 12	1500	\$46
22 x 22	24 x 24	2700	\$79
46 x 22	48 x 24	4000	\$172



MODEL SCVD SUPPLY REGISTERS

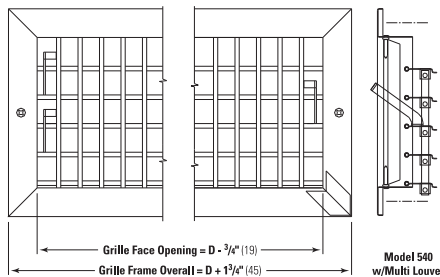
- Surface Mount
- Four-way ceiling supply register
- All steel construction
- Curved blades and opposed blade damper
- White (B12) powder coat finish

Size	Nominal CFM*	Price Each	Size	Nominal CFM*	Price Each
6 x 6	130	\$56	10 x 10	350	\$71
8 x 8	225	\$57	12 x 12	450	\$80



MODEL 540 SUPPLY GRILLES

- Surface Mount
- Economical steel construction
- Single deflection
- Multi-shutter damper
- White (B12) powder coat finish



Size	Nominal CFM*	Price Each
10 x 4	375	\$26
12 x 4	415	\$29
10 x 6	500	\$31
12 x 6	550	\$32
12 x 8	700	\$36
14 x 8	800	\$37
16 x 8	900	\$39

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FANS / DAMPERS / CURBS

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DAMPERS / LOUVERS / ACCESS DOORS / ACTUATORS

FLEXIBLE DUCT / SNAP LOCK & ACC.

SPIRAL PIPE & ACCESSORIES

ELECTRIC HEATERS / FILTERS & ACCESSORIES

VIBRATION ISOLATION

STEAM SPECIALTIES

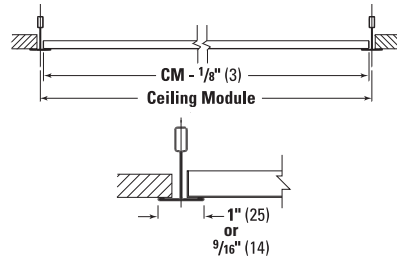
MISCELLANEOUS RETURN GRILLES



MODEL PFRF PERFORATED PANEL

- Matches PDC/PDDR series diffusers
- Tee-Bar Lay-In
- All steel construction with a white (B12) powder coat finish
- Turned-up edges, no frame

PFRF

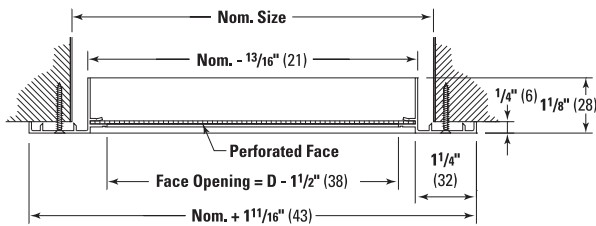


Panel Size	Nominal CFM*	Price Each
24 x 12	575	\$20
24 x 24	2550	\$29



MODEL 10A SURFACE MOUNT RETURN

- Aluminum core construction
- White (B12) powder coat finish
- Surface mounting



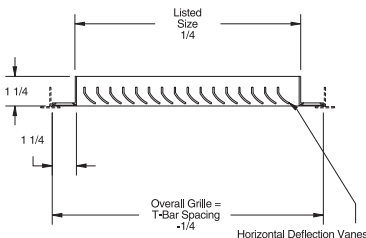
Neck Size	Overall Face Size	Nominal CFM*	Price Each
6 x 6	7 11/16 x 7 11/16	185	\$39
8 x 8	8 11/16 x 8 11/16	275	\$43
10 x 10	11 11/16 x 11 11/16	425	\$51
12 x 12	13 11/16 x 13 11/16	635	\$59
14 x 14	15 11/16 x 15 11/16	830	\$71
16 x 16	17 11/16 x 17 11/16	1125	\$80
18 x 18	19 11/16 x 19 11/16	1450	\$90



MODEL 630-TB ALUMINUM RETURN

MODEL 530-TB STEEL RETURN

- Tee-Bar Lay-In
- Available in steel or aluminum, white (B12) powder coat finish
- Fixed horizontal bars set at 45°



Neck Size	Panel Size	Nominal CFM*	Aluminum (B12) Price Each	Steel (B12) Price Each
22 x 10	24 x 12	800	\$51	\$43
22 x 22	24 x 24	1600	\$81	\$63
22 x 46	24 x 48	2750	\$166	\$138

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FILTER GRILLES



FANS / DAMPERS / CURBS

VARIABLE SPEED DRIVES & STARTERS

REGISTERS / GRILLES / DIFFUSERS / TRANSITIONS

VAN TERMINALS / HOT WATER COILS

DAMPERS / LOUVERS / ACCESS DOORS / ACTUATORS

FLEXIBLE DUCT / SNAP LOCK & ACC.

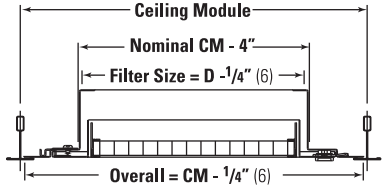
SPIRAL PIPE & ACCESSORIES

ELECTRIC HEATERS / FILTERS & ACCESSORIES

VIBRATION ISOLATION

STEAM SPECIALTIES

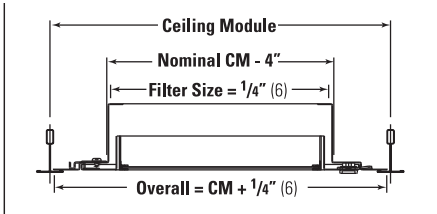
MODEL 80FF CUBE CORE LAY-IN TEE-BAR



- Egg crate face with 1/2" cube core design
- 80% free area
- Aluminum grid with a white (B12) powder coat finish

Neck Size	Panel Size	Nominal CFM*	Price with Filter
20 x 20	24 x 24	2400	\$138

MODEL 10FF PERFORATED FACE LAY-IN



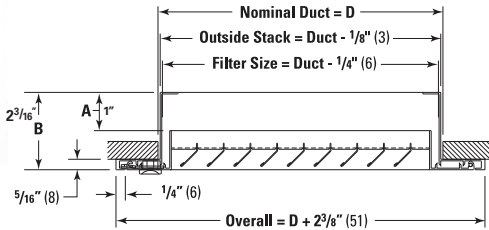
- Perforated face for lay-in ceilings
- Steel construction with a white (B12) powder coat finish
- Hinged core and latches for easy cleaning

Neck Size	Panel Size	Nominal CFM*	Price with Filter
20 x 20	24 x 24	2000	\$110

MODEL 630FF SURFACE MOUNT

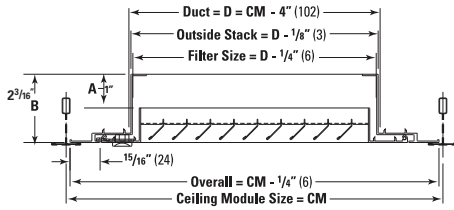


- Extruded aluminum frame with a white (B12) powder coat finish
- 45° blades
- Hinged core and latches for easy filter cleaning



Filter Size	Neck Size	Nominal CFM*	Price with Filter
12 x 12	12 ³ / ₈ x 12 ³ / ₈	575	\$79
20 x 20	20 ³ / ₈ x 20 ³ / ₈	1400	\$125
24 x 12	24 ³ / ₈ x 12 ³ / ₈	1000	\$111
24 x 24	24 ³ / ₈ x 24 ³ / ₈	1800	\$151

MODEL 630FF-TB LAY-IN



- Similar to 630FF above but for tee-bar lay-in ceilings
- Extruded aluminum frame with a white (B12) powder coat finish
- 45° blades
- Hinged core and latches for easy filter change
- Continuous frame without screw holes

Neck Size	Panel Size	Nominal CFM*	Price with Filter
20 x 20	24 x 24	1400	\$133
20 x 44	24 x 48	3000	\$229

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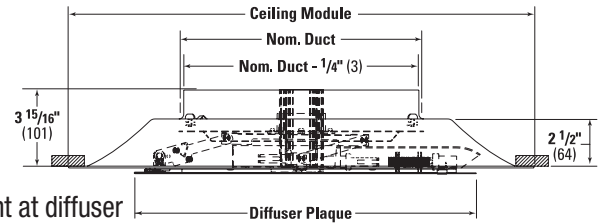
MISCELLANEOUS AIR DISTRIBUTION PRODUCTS



VARITHERM® MODEL VPD-HC

The Price Varitherm® is a thermally powered self-modulating diffuser featuring a specialized linkage design for optimal zone temperature control in a stand-alone package. The Varitherm® VPD-HC is available for heating and cooling modes with an automatic heating/cooling changeover.

- Designed for tee bar lay-in ceilings
- Steel backpan, faceplate and linkage for strength and durability
- Minimum airflow adjustment at diffuser
- Forced open made for system balancing
- Manual temperature set point adjustment at diffuser
- Hinged plaque with powerful magnetic closure
- White (B12) powder coat finish

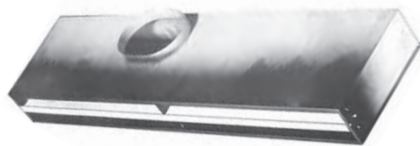
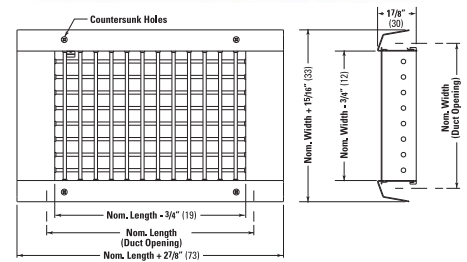


MODEL SDG SPIRAL GRILLE

- Surface mount
- Model SDG is constructed of galvanized steel (mill finish)
- Integral gasket seals grille tightly to duct
- Built in extractor to allow accurate balancing

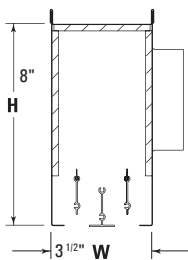
Inlet Size	Nominal CFM*	Noise Criteria	VPD-HC Price Each
8"	300	30	\$458
10"	400	30	\$458
12"	500	30	\$458

W X H	Min/Max Pipe Size	Nominal CFM	Price Each	W X H	Min/Max Pipe Size	Nominal CFM	Price Each
10 x 4	8/24	250	\$99	16 x 6	14/24	500	\$123
10 x 6	14/24	350	\$104	18 x 6	14/24	550	\$129
12 x 4	8/24	300	\$101	18 x 8	20/24	800	\$134
14 x 6	14/24	450	\$115	20 x 6	14/24	600	\$134
16 x 4	8/24	350	\$114	20 x 8	20/24	850	\$140
20 x 4	8/24	450	\$123	24 x 6	14/24	700	\$159
24 x 4	8/24	550	\$139	24 x 8	20/24	900	\$166



MODEL TBDI475 SLOT DIFFUSERS

- Designed for tee bar lay-in ceilings
- Adjustable air pattern controllers with 3/4 in. slots
- Internally insulated with neoprene coated fiberglass insulation



Length	A Width	Inlet	# of Slots	Nominal CFM*	Price Each
24"	3 1/2"	8" flat oval	2	160	\$111
48"	3 1/2"	8" flat oval	2	225	\$149
48"	3 1/2"	10" flat oval	2	275	\$149

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MISCELLANEOUS AIR DISTRIBUTION PRODUCTS



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DAMPERS / LOUVERS / ACCESS DOORS / ACTUATORS

FLEXIBLE DUCT / SNAP LOCK & ACC.

SPIRAL PIPE & ACCESSORIES

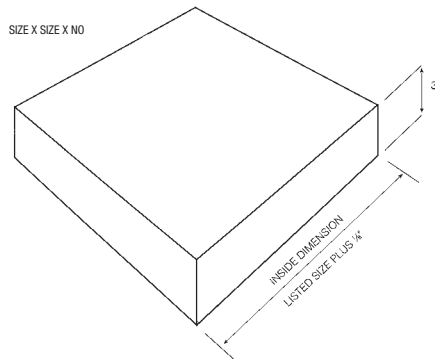
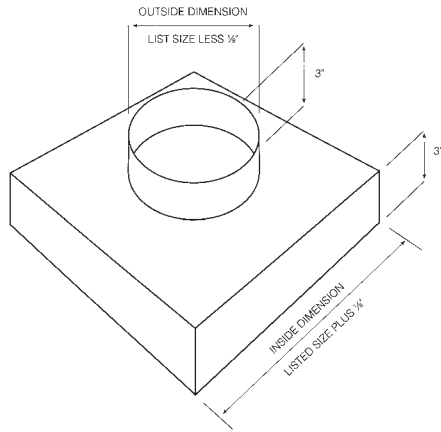
ELECTRIC HEATERS / FILTERS & ACCESSORIES

VIBRATION ISOLATION

STEAM SPECIALTIES

MODEL F3S0 SQUARE-TO-ROUND ADAPTERS

- Constructed of 26 ga. galvanized steel
- Open square corners

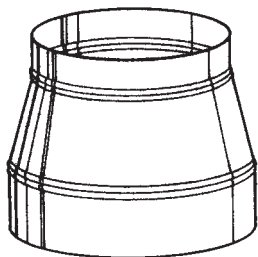


Size	Price Each	Size	Price Each	Size	Price Each
6 x 6 x 5	\$9	12 x 12 x 12	\$13	20 x 20 x 14	\$24
6 x 6 x 6	\$9	15 x 15 x 10	\$16	20 x 20 x 16	\$24
8 x 8 x 6	\$10	15 x 15 x 12	\$16	20 x 20 x 18	\$24
8 x 8 x 7	\$10	15 x 15 x 14	\$16	*21 x 21 x N0	\$20
8 x 8 x 8	\$10	16 x 16 x 14	\$19	*22 x 22 x N0	\$21
9 x 9 x 6	\$11	18 x 18 x 12	\$21	22 x 22 x 6	\$26
9 x 9 x 7	\$11	18 x 18 x 14	\$21	22 x 22 x 8	\$26
9 x 9 x 8	\$11	18 x 18 x 16	\$21	22 x 22 x 10	\$26
9 x 9 x 9	\$11	18 x 18 x 18	\$21	22 x 22 x 12	\$26
10 x 10 x 8	\$12	*20 x 20 x N0	\$20	22 x 22 x 14	\$26
10 x 10 x 9	\$12	20 x 20 x 6	\$24	22 x 22 x 16	\$26
10 x 10 x 10	\$12	20 x 20 x 8	\$24	22 x 22 x 18	\$26
12 x 12 x 8	\$13	20 x 20 x 10	\$24		
12 x 12 x 10	\$13	20 x 20 x 12	\$24		

*Square box with no openings.

CONCENTRIC REDUCERS

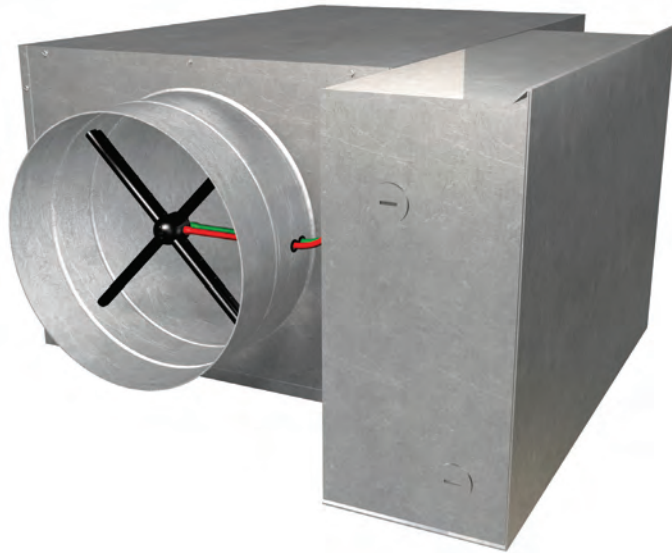
- Galvanized steel construction
- Used to connect flexible duct to round neck diffusers



Size	Price Each	Size	Price Each
6" x 4"	\$8	10" x 9"	\$11
6" x 5"	\$8	12" x 8"	\$11
8" x 6"	\$9	12" x 10"	\$11
8" x 7"	\$9	14" x 10"	\$17
10" x 8"	\$11	14" x 12"	\$17

SINGLE DUCT VARIABLE VOLUME TERMINALS

CONTROLS BY OTHERS



Control Terminals are designed for use in low, medium or high pressure variable air volume, single duct systems.

This throttling-type terminal incorporates a single damper blade which operates through a 90° arc, providing throttling capability in all positions.

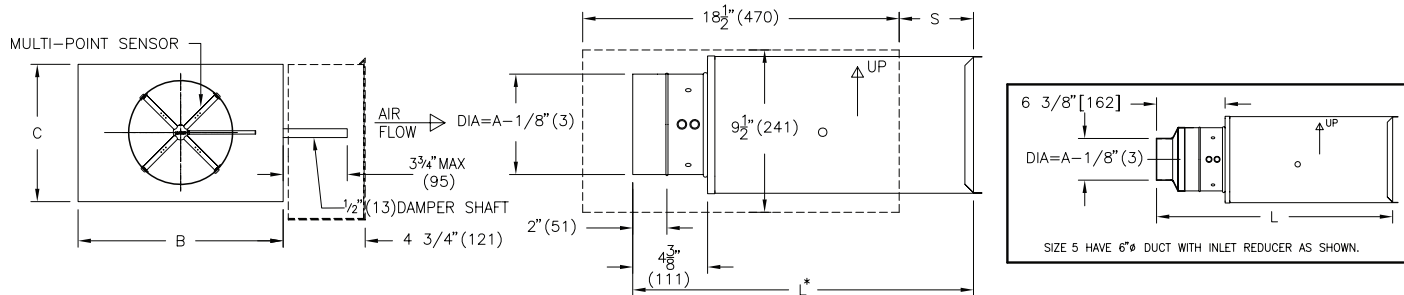
Controls by Others terminal incorporates many unique features. Most of these standard features are expensive options for other manufacturers. The Controls By Others incorporates the Patented FlowStar airflow sensor along with a Nema 1 enclosure and 120-volt transformer.

PERFORMANCE DATA AND PRICING

Size	Nom. CFM	Min. PS	*Controls by Others Each
5	250	.01	\$277
6	400	.08	\$277
8	600	.04	\$312
10	1100	.05	\$336
12	1800	.07	\$351
14	2300	.07	\$418

*Terminal provided with controls enclosure (no controls) and 120V transformer.

CONTROLS BY OTHERS



UNIT SIZE	IMPERIAL UNITS inches				
	OUTLET		INLET	LENGTH	
	B	C	A	L	S
5	12	8	5	22 1/8	3 13/16
6			6		
8	12	10	8	20 1/8	
10	14	12 1/2	10		
12	16	15	12		
14	20	17 1/2	14	23 5/8	

Prices subject to change without notice. All shipments are FOB Hoffman Warehouse, freight prepaid and added to invoice.

SINGLE DUCT VARIABLE VOLUME TERMINALS

Hot Water Coils



Part Number	Description	Price Each
WCSXV1R-5,6	1-Row Hot Water Coil with 1/2" O.D.Sweat Connection for 5" & 6" VAV Boxes	\$89
WCSXV1R-8	1-Row Hot Water Coil with 1/2" O.D.Sweat Connection for 8" VAV Boxes	\$89
WCSXV1R-10	1-Row Hot Water Coil with 1/2" O.D.Sweat Connection for 10" VAV Boxes	\$109
WCSXV1R-12	1-Row Hot Water Coil with 1/2" O.D.Sweat Connection for 12" VAV Boxes	\$148
WCSXV1R-14	1-Row Hot Water Coil with 1/2" O.D.Sweat Connection for 14" VAV Boxes	\$178
WCSXV2R-5,6	2-Row Hot Water Coil with 7/8" O.D.Sweat Connection for 5" & 6" VAV Boxes	\$119
WCSXV2R-8	2-Row Hot Water Coil with 7/8" O.D.Sweat Connection for 8" VAV Boxes	\$127
WCSXV2R-10	2-Row Hot Water Coil with 7/8" O.D.Sweat Connection for 10" VAV Boxes	\$161
WCSXV2R-12	2-Row Hot Water Coil with 7/8" O.D.Sweat Connection for 12" VAV Boxes	\$204
WCSXV2R-14	2-Row Hot Water Coil with 7/8" O.D.Sweat Connection for 14" VAV Boxes	\$285

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FANS / DAMPERS /
CURBS

VARIABLE SPEED
DRIVES & STARTERS

REGISTERS / GRILLES /
DIFFUSERS / TRANSITIONS

VAV TERMINALS /
HOT WATER COILS

DAMPERS / LOUVERS /
ACCESS DOORS / ACTUATORS

FLEXIBLE DUCT /
SNAPLOCK & ACC.

SPRAL PIPE
& ACCESSORIES

ELECTRIC HEATERS /
FILTERS & ACCESSORIES

VIBRATION ISOLATION

STEAM SPECIALTIES

BALANCING DAMPERS

RUSKIN®
www.ruskin.com

MODEL MD-25/35 MANUAL BALANCING DAMPER



- 22 ga. galvanized steel construction
- 3/8 in. square plated steel shaft
- Includes hand quadrant and 2 in. standoff mounting bracket

Model	Size W x H	Price Each	Model	Size W x H	Price Each
MD-25	12 x 6	\$49	MD-25	24 x 12	\$69
MD-25	12 x 8	\$53	MD-35	14 x 14	\$94
MD-25	12 x 10	\$53	MD-35	18 x 18	\$120
MD-25	12 x 12	\$55	MD-35	24 x 18	\$125
MD-25	18 x 12	\$62	MD-35	24 x 24	\$140

MODEL MDRS-25 ROUND MANUAL BALANCING DAMPER



- 20 ga. galvanized construction
- Factory-mounted stand-off with locking hand quadrant
- Designed for spiral duct balancing applications
- Seal becomes part of ductwork

Model	Size	Frame Length	Price Each
MDRS-25	6	6"	\$44
MDRS-25	8	6"	\$48
MDRS-25	10	6"	\$50
MDRS-25	12	6"	\$53
MDRS-25	14	6"	\$56

Prices subject to change without notice. All shipments are FOB Hoffman Warehouse, freight prepaid and added to invoice.

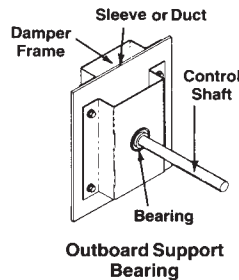
CONTROL DAMPERS

RUSKIN®
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MODEL CD-36 LOW LEAKAGE CONTROL DAMPER

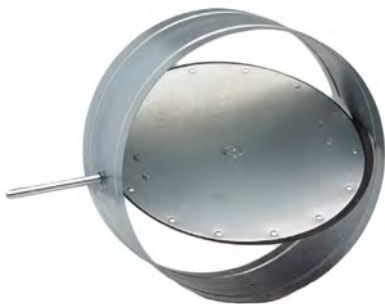


- 16 ga. galvanized steel construction, 6 in. opposed blades
- EPDM blade seals, metal compression jamb seals
- Includes outboard support bearing and control shaft
- Actuator or hand quadrant sold separately



Size W x H	Price Each	Size W x H	Price Each
12 x 12	\$119	30 x 24	\$237
18 x 12	\$130	36 x 24	\$247
24 x 12	\$137	30 x 30	\$297
14 x 14	\$146	36 x 36	\$346
18 x 18	\$188	42 x 42	\$441
24 x 18	\$194	48 x 48	\$494
24 x 24	\$218	Hand Quadrant (HQR050)	\$10

MODEL CDRS-25 ROUND LOW LEAKAGE CONTROL DAMPER



- Easily installs in spiral duct
- Polyethylene blade seal ensures low leakage
- Frame constructed of 20 ga. galvanized steel



Model	Size	Frame Length	Price Each
CDRS-25	6	6"	\$87
CDRS-25	8	6"	\$91
CDRS-25	10	6"	\$96
CDRS-25	12	6"	\$100
CDRS-25	14	6"	\$105
Hand Quadrant (HQR050)			\$10
2" Stand-off			\$5

FANS / DAMPERS / CURBS

VARIABLE SPEED DRIVES & STARTERS

REGISTERS / GRILLES / DIFFUSERS / TRANSITIONS

VAV TERMINALS / HOT WATER COILS

DAMPERS / DOVERS / ACCESS DOORS / ACTUATORS

FLEXIBLE DUCT / SNAPLOOK & ACC.

SPIRAL PIPE & ACCESSORIES

ELECTRIC HEATERS / FILTERS & ACCESSORIES

VIBRATION ISOLATION

STEAM SPECIALTIES

DAMPER ACTUATORS



BELIMO DIRECT MOUNT ACTUATORS

- 24V/120V, 2 position, spring return
- For use on standard or low leakage dampers
- Graduated position indicator and auxiliary SPDT switch
- Direct mount on damper shaft; can be set for CW or CCW rotation
- Internal closure spring provides consistent closure torque

Model	Voltage	Max. Damper Size	Price Each
TFB-24-S	24V	4.5 FT ²	\$195
TFB-120-S	120V	4.5 FT ²	\$221
LF-24-S	24V	8 FT ²	\$231
LF-120-S	120V	8 FT ²	\$253
NFBUP-S	24V - 240V	15 FT ²	\$324
AFBUP-S	24V - 240V	33 FT ²	\$381

SMOKE DETECTORS



D4120
Smoke Detector



RTS151 Remote
Test Station



APA151
Annunciator



RTS2

SYSTEM SENSOR MODEL D4120

- Duct-mounted design
- Samples airstream for early detection of smoke in HVAC systems
- Includes exhaust tube
- Please select sampling tube from accessory listing below
- Price Each **\$137.00**

Accessory	Description	Price Each
RTS151	Remote Test Station for testing remotely located smoke detector	\$37
APA151	Piezo Annunciator, audible signal appliance for alarm service, red alarm LED, green power LED, audible alarm	\$30
RTS2	Multi-signaling Duct Accessory with Audible Alarm	\$91
AOS	Add on strobe for RTS2	\$45
DST-1.5	Sampling Tube, 1 1/2 ft.	\$7
DST-3	Sampling Tube, 3 ft.	\$10
DST-5	Sampling Tube, 5 ft.	\$12

Prices subject to change without notice. All shipments are FOB Hoffman Warehouse, freight prepaid and added to invoice.

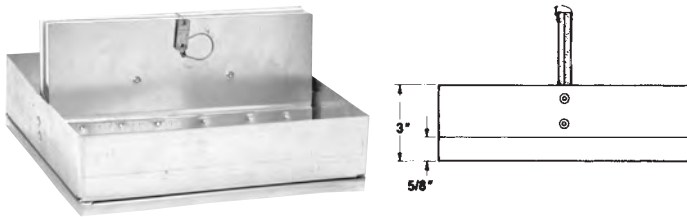
CEILING RADIATION DAMPERS



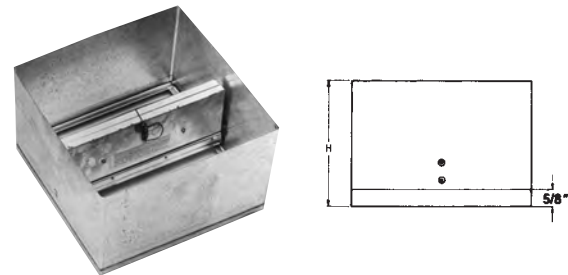
MODEL CFD CEILING RADIATION DAMPER

- UL classified radiation dampers
- 22 ga. galvanized blades with UL insulation
- 20 ga. galvanized frame

STANDARD FRAME



EXTENDED FRAME



Model	Size*	Price Each
CFD3.5	6 x 6	\$35
CFD3.5	8 x 8	\$39
CFD2	9 x 9	\$45
CFD3.5	10 x 4	\$40
CFD3.5	10 x 6	\$42
CFD2	10 x 10	\$45
CFD2	12 x 6	\$40
CFD2	12 x 12	\$54
CFD2	15 x 15	\$67
CFD2	18 x 18	\$72
CFD4	21 x 21	\$102
CFD4	22 x 22	\$102
CFD4	24 x 24	\$109

*Standard Frames – deduct 1/4 inch

Model	Size*	Ext. Frame Height (H)	Price Each
CFD3.5	6 x 6	6"	\$41
CFD3.5	8 x 8	6"	\$45
CFD2	9 x 9	6"	\$53
CFD2	10 x 10	6"	\$53
CFD2	12 x 12	8"	\$63
CFD2	15 x 15	8"	\$79
CFD2	18 x 18	8"	\$84
CFD4	21 x 21	8"	\$119
CFD4	22 x 22	8"	\$119

*Extended Frames are actual size.

MODEL CFDR ROUND CEILING RADIATION DAMPER



- UL 555 classified radiation dampers
- Designed for use with round neck diffusers
- Frame and blades are 20 ga. galvanized steel
- Stocked with extended frame only, actual size shown

Model	Size*	Frame Height	Price Each	Model	Size*	Frame Height	Price Each
CFDR3.5	6"	6 1/2"	\$43	CFDR2	12"	6 1/2"	\$63
CFDR3.5	8"	6 1/2"	\$46	CFDR2	14"	6 1/2"	\$70
CFDR3.5	10"	6 1/2"	\$50	CFDR2	16"	11 1/2"	\$79

Add for 24" x 24" insulation blanket (required by some codes for lay-in ceiling applications).
 Blankets are cut in the field to fit the diffuser neck. **\$20.00 each**
 Detailed drawings and installation instructions available at www.ruskin.com

FANS / DAMPERS / CURBS

VARIABLE SPEED DRIVES & STARTERS

REGISTERS / GRILLES / DIFFUSERS / TRANSITIONS

VAV TERMINALS / HOT WATER COILS

DAMPERS / DAMPERS / ACCESS DOORS / ACTUATORS

FLEXIBLE DUCT / SNAP LOCK & ACC.

SPRINKLER PIPE & ACCESSORIES

ELECTRIC HEATERS / FILTERS & ACCESSORIES

VIBRATION ISOLATION

STEAM SPECIALTIES

FIRE DAMPERS

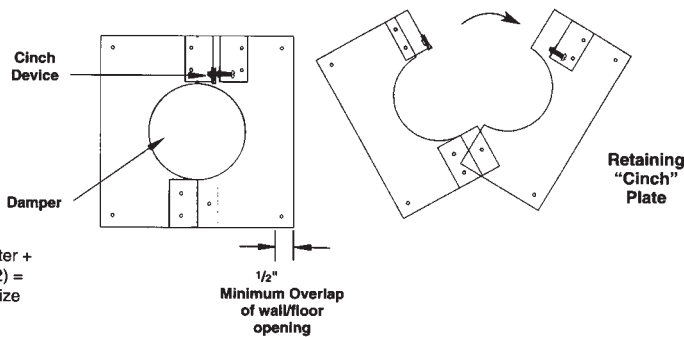
RUSKIN®
www.ruskin.com



MODEL FDR25 ROUND FIRE DAMPER

- UL 555 classified damper with 1½ hour rating
- Approved for use in 2 hour fire partitions
- Galvanized steel construction, 212°F fusible link
- Retaining cinch plates and extended duct connections for adjustable installation
- Low pressure drop
- Vertical and horizontal closure spring operation for assured closure under air flow (fans on) in HVAC systems

RETAINING "CINCH" PLATE

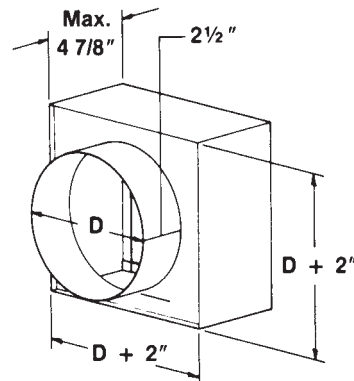


Collar Diameter (in.)	Sleeve Length	Price Each
6	14"	\$89
8	14"	\$102
10	14"	\$110
12	14"	\$119
14	14"	\$129
16	14"	\$140

Type FDR25 dampers are furnished 1/8 in. smaller than given collar dimensions.

MODEL IBD2R/HV ROUND FIRE DAMPER

- Similar to IBD2A, except it includes a round duct attachment collar
- 1½ hour rating for use in 2 hour rated partitions, 212°F fusible link
- Stocked dampers have closure spring and latches for horizontal or vertical installations
- Damper housings are square with 2½ in. deep round collars
- Recommended for low pressure and low velocity applications only



Collar Diameter (in.)	Housing Size (in.)	Price Each
6	8 x 8	\$67
8	10 x 10	\$73
10	12 x 12	\$84
12	14 x 14	\$91
14	16 x 16	\$120

Type IBD2R dampers are furnished 1/4 in. smaller than given duct and collar dimensions.

Detailed drawings and installation instructions available at www.ruskin.com

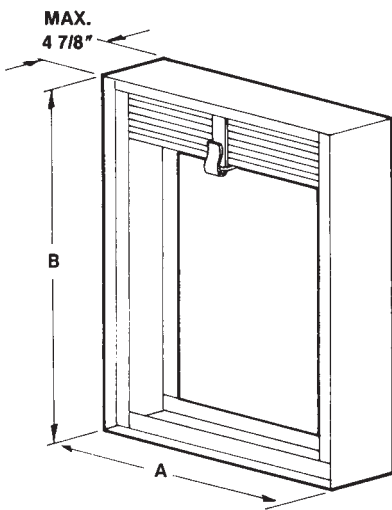
FIRE DAMPERS



MODEL IBD2A/HV RECTANGULAR FIRE DAMPER



- Curtain style fire damper with 1½ hour UL rating
- Approved for use in 2 hour fire partitions
- Galvanized steel construction, 212°F fusible link
- Stocked dampers have closure spring and latches for horizontal and vertical installations



Size A x B	Price Each	Size A x B	Price Each
6 x 6	\$26	12 x 12	\$34
8 x 6	\$26	14 x 12	\$43
10 x 6	\$26	16 x 12	\$43
12 x 6	\$26	18 x 12	\$47
14 x 6	\$33	20 x 12	\$50
8 x 8	\$29	24 x 12	\$50
10 x 8	\$29	14 x 14	\$48
12 x 8	\$29	16 x 14	\$48
14 x 8	\$34	18 x 14	\$52
16 x 8	\$34	20 x 14	\$57
18 x 8	\$40	24 x 14	\$57
20 x 8	\$45	16 x 16	\$48
10 x 10	\$33	20 x 16	\$57
12 x 10	\$33	24 x 16	\$57
14 x 10	\$40	18 x 18	\$59
16 x 10	\$40	24 x 18	\$65
18 x 10	\$45	20 x 20	\$69
20 x 10	\$48	24 x 24	\$69

Note: Type IBD2A dampers are furnished 1/4" smaller than given duct dimensions.

***More Sizes and styles available.
See page 48.**

Detailed drawings and installation instructions available at www.ruskin.com

FANS / DAMPERS / CURBS

VARIABLE SPEED DRIVES & STARTERS

REGISTERS / GRILLES / DIFFUSERS / TRANSITIONS

VAV TERMINALS / HOT WATER COILS

DAMPERS / OVERS / ACCESS DOORS / ACTUATORS

FLEXIBLE DUCT / SNAPLOOK & ACC.

SPRAL PIPE & ACCESSORIES

ELECTRIC HEATERS / FILTERS & ACCESSORIES

VIBRATION ISOLATION

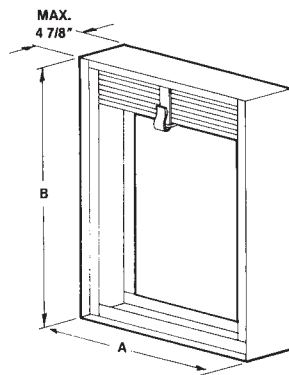
STEAM SPECIALTIES

FIRE DAMPERS—QUICK SHIP—24 HOURS

RUSKIN®
www.ruskin.com

MODEL IBD2A AND IBD2B RECTANGULAR FIRE DAMPER

- Ships in 24 hours if order received in Greensboro by 11:00 a.m. Eastern time (Not Guaranteed)
- Please allow 3 days for delivery
- 1½ hour rating — for use in 2 hour rated partitions
- Changes or cancellation cost 100% of order value.
- Other sizes available



Model IBD2A

MODEL IBD2A & IBD2B VERTICAL PRICING

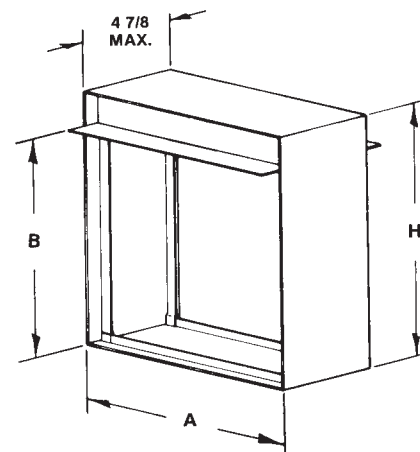
Style B prices are in bold print.

		WIDTH IN INCHES											
		12	16	20	24	28	32	36	40	44	48		
HEIGHT IN INCHES	6	36	46	60	60	68	75	78	82	87	92	6	
	45	57	74	74	84	93	96	102	108	114			
	8	41	48	63	63	73	78	82	90	92	97	8	
	51	60	78	78	90	96	102	111	114	119			
	10	46	56	68	68	78	80	87	92	97	101	10	
	57	69	84	84	96	99	108	114	119	125			
	12	48	60	70	70	80	85	90	97	101	109	12	
	60	74	87	87	99	105	111	119	125	134			
	16	58	68	80	80	90	94	99	106	113	121	16	
	72	84	99	99	111	117	122	131	140	149			
	20	68	82	97	97	109	116	124	131	140	150	20	
	84	102	119	119	134	143	153	162	173	185			
	24	68	82	97	97	109	116	124	131	140	150	24	
	84	102	119	119	134	143	153	162	173	185			
	28	75	87	109	109	116	133	145	155	164	176	28	
	93	108	134	134	143	164	179	191	203	218			
32	80	92	113	113	128	150	167	179	191	203	32		
99	114	140	140	159	185	206	221	236	251				
36	85	97	121	121	140	167	189	203	217	232	36		
105	119	149	149	173	206	233	251	268	286				
40	90	101	128	128	150	179	203	217	232	247	40		
111	125	159	159	185	221	251	268	286	305				
44	94	109	136	136	162	191	217	232	247	261	44		
117	134	167	167	200	236	268	286	305	322				
48	101	116	145	145	174	203	232	247	261	275	48		
125	143	179	179	215	251	286	305	322	340				

MODEL IBD2A & IBD2B HORIZONTAL PRICING

Style B prices are in bold print.

		WIDTH IN INCHES											
		12	16	20	24	28	32	36	40	44	48		
HEIGHT IN INCHES	6	54	68	89	89	100	111	114	121	128	135	6	
	62	78	103	103	116	128	132	141	149	157			
	8	61	71	93	93	107	114	121	132	135	142	8	
	70	82	108	108	124	132	141	153	157	165			
	10	68	82	100	100	114	118	128	135	142	149	10	
	78	95	116	116	132	136	149	157	165	173			
	12	71	89	104	104	118	125	132	142	149	160	12	
	82	103	120	120	136	145	153	165	173	185			
	16	85	100	118	118	132	139	146	156	167	177	16	
	99	116	136	136	153	161	169	181	194	206			
	20	100	121	142	142	160	170	182	192	206	220	20	
	116	141	165	165	185	198	211	223	239	256			
	24	100	121	142	142	160	170	182	192	206	220	24	
	116	141	165	165	185	198	211	223	239	256			
	28	111	128	160	160	170	196	213	227	241	259	28	
	128	149	185	185	198	227	247	264	280	300			
32	118	135	167	167	189	220	245	263	281	299	32		
136	157	194	194	219	256	284	305	326	346				
36	125	142	177	177	206	245	277	299	320	341	36		
145	165	206	206	239	284	322	346	371	395				
40	132	149	189	189	220	263	299	320	341	363	40		
153	173	219	219	256	305	346	371	395	421				
44	139	160	199	199	238	281	320	341	363	384	44		
161	185	231	231	276	326	371	395	421	445				
48	149	170	213	213	255	299	341	363	384	405	48		
173	198	247	247	296	346	395	421	445	470				



Model IBD2B

Available in Dynamic
Consult your Hoffman & Hoffman Salesperson for pricing

Detailed drawings and installation instructions available at www.ruskin.com

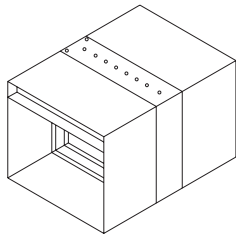
Prices subject to change without notice. All shipments are FOB Hoffman Warehouse, freight prepaid and added to invoice.

FIRE DAMPERS—QUICK SHIP—24 HOURS

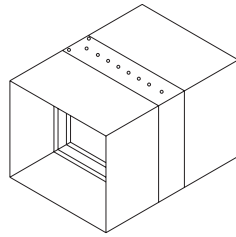
RUSKIN®
www.ruskin.com

MODEL IBD20A & B INTEGRAL SLEEVE FIRE DAMPER

- No additional sleeve needed in most installations
- 1½ hour rating for 2 hour rated fire partitions
- Galvanized steel construction
- UL listed 165°F fuse link standard. 212°F and 285°F fuse links available
- Available with springs and latches for horizontal or vertical installation (specify when ordering)
- Ships in 24 hours if order received in Greensboro by 11:00 a.m. Eastern time (Not Guaranteed)
- Please allow 3 days for delivery
- Changes or cancellation cost 100% of order value.
- Other sizes available



Model IBD20B



Model IBD20A

IBD20/STYLE A AND B HORIZONTAL PRICES

Style B prices are in bold print.

		WIDTH IN INCHES										
		12	16	20	24	28	32	36	40	44		
HEIGHT IN INCHES	6	77	97	128	128	144	159	164	174	185	6	
	86	108	142	142	160	177	183	194	205	6		
	8	87	102	134	134	154	164	174	190	195	8	
	97	114	149	149	171	183	194	211	216	8		
	10	97	118	144	144	164	169	185	195	205	10	
	108	131	160	160	183	188	205	216	228	10		
	12	102	128	149	149	169	180	190	205	215	12	
	114	142	166	166	188	199	211	228	239	12		
	16	123	144	169	169	190	200	210	225	240	16	
	136	160	188	188	211	222	233	250	267	16		
	20	144	174	205	205	230	245	262	277	297	20	
160	194	228	228	256	273	291	308	330	20			
24	144	174	205	205	230	245	262	277	297	24		
160	194	228	228	256	273	291	308	330	24			
28	159	185	230	230	245	282	307	327	348	28		
177	205	256	256	273	313	341	364	386	28			
32	169	195	240	240	272	317	353	378	405	32		
188	216	267	267	302	353	392	420	450	32			
36	180	205	255	255	297	353	400	430	460	36		
199	228	284	284	330	392	444	478	511	36			
40	190	215	272	272	317	378	430	460	491	40		
211	239	302	302	353	420	478	511	545	40			
44	200	230	287	287	343	405	460	491	522	44		
222	256	319	319	381	450	511	545	580	44			

Available in Dynamic

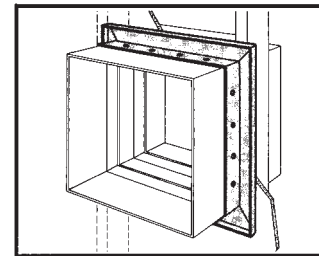
Consult your Hoffman & Hoffman Salesperson for pricing

Prices subject to change without notice. All shipments are FOB Hoffman Warehouse, freight prepaid and added to invoice.

IBD20/STYLE A AND B VERTICAL PRICES

Style B prices are in bold print.

		WIDTH IN INCHES										
		12	16	20	24	28	32	36	40	44		
HEIGHT IN INCHES	6	60	76	99	99	112	124	128	136	144	6	
	69	87	114	114	128	142	146	155	164	6		
	8	68	80	104	104	120	128	136	148	151	8	
	78	91	119	119	137	146	155	169	173	8		
	10	76	91	112	112	128	132	144	151	159	10	
	87	105	128	128	146	151	164	173	182	10		
	12	80	99	116	116	132	140	148	159	167	12	
	91	114	133	133	151	160	169	182	191	12		
	16	95	112	132	132	148	155	163	175	187	16	
	109	128	151	151	169	178	187	200	214	16		
	20	112	136	159	159	179	191	204	215	231	20	
128	155	182	182	205	218	233	246	264	20			
24	112	136	159	159	179	191	204	215	231	24		
128	155	182	182	205	218	233	246	264	24			
28	124	144	179	179	191	219	239	255	270	28		
142	164	205	205	218	251	273	291	309	28			
32	132	151	187	187	211	247	274	294	315	32		
151	173	214	214	242	282	314	336	360	32			
36	140	159	199	199	231	274	311	334	358	36		
160	182	227	227	264	314	355	382	409	36			
40	148	167	211	211	247	294	334	358	382	40		
169	191	242	242	282	336	382	409	436	40			
44	155	179	223	223	266	315	358	382	406	44		
178	205	255	255	305	360	409	436	464	44			



PICTURE FRAME MOUNTING ANGLES

- Makes damper installation quick and easy
- Proven savings in labor cost
- Precut and punched to fit damper exactly
- Add 50% to cost of damper
- Detailed drawings and installation instructions available at www.ruskin.com

FANS / DAMPERS / CURBS

VARIABLE SPEED DRIVES & STARTERS

REGISTERS / GRILLES / DIFFUSERS / TRANSITIONS

VAN TERMINALS / HOT WATER COILS

DAMPERS / DOVERS / ACCESS DOORS / ACTUATORS

FLEXIBLE DUCT / SNAPLOOK & ACC.

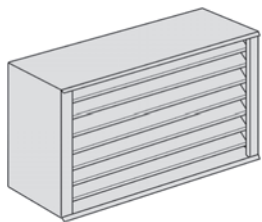
SPRAL PIPE & ACCESSORIES

ELECTRIC HEATERS / FILTERS & ACCESSORIES

VIBRATION ISOLATION

STEAM SPECIALTIES

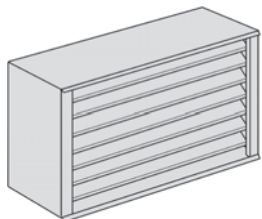
BRICK VENTS



MODEL LBV CAST ALUMINUM BRICK VENT

- 4 in. deep
- Cast aluminum, load bearing construction
- Includes water stop and insect screen

Model	Size	Price Each
LBV88	8 x 7 3/4	\$109
LBV168	16 x 7 3/4	\$121



MODEL EX EXTRUDED ALUMINUM BRICK VENT

- 4 in. deep
- Extruded aluminum, load bearing construction
- Clear anodized finish
- Includes water stop and insect screen

Model	Size	Price Each
EX808	8 1/8 x 7 3/4	\$80
EX128	12 x 7 3/4	\$94
EX157	15 5/8 x 7 3/4	\$110



MODEL FL FLANGED EXTRUDED ALUMINUM BRICK VENT

- 1 - 1/2 in. deep with 1 in. flange
- Extruded aluminum, non-load bearing construction
- Includes water stop, storm drip blade and insect screen

Model	Size	Price Each
FL808	8 1/8 x 7 3/4	\$80
FL128	12 x 7 3/4	\$94
FL1212	12 x 11 3/4	\$124
FL157	15 5/8 x 7 3/4	\$110

STATIONARY ALUMINUM LOUVERS



FANS / DAMPERS / CURBS

VARIABLE SPEED DRIVES & STARTERS

REGISTERS / GRILLES / DIFFUSERS / TRANSITIONS

VAV TERMINALS / HOT WATER COILS

DAMPERS / LOUVERS / ACCESS DOORS / ACTUATORS

FLEXIBLE DUCT / SNAP LOCK & ACC.

SPRAL PIPE & ACCESSORIES

ELECTRIC HEATERS / FILTERS & ACCESSORIES

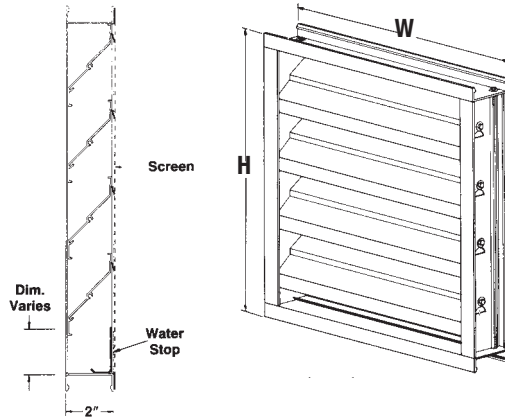
VIBRATION ISOLATION

STEAM SPECIALTIES

MODEL ELF211 THINLINE STATIONARY LOUVER



- Extruded aluminum construction
- 2 in. deep, .060 in. channel frame and blades
- Expanded aluminum birdscreen (on inside)
- Standard mill finish
- More sizes available on 72 hr. shipment. See page 52.
- Flanged frames available on 72 hr. shipment. See page 52.



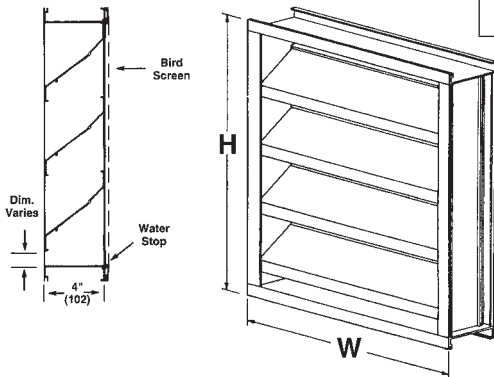
Size W x H	Free Area (Ft ²)	Price Each
12 x 12	0.26	\$124
18 x 12	0.45	\$140
24 x 12	0.76	\$153

MODEL GFL800D STATIONARY LOUVER



- Extruded aluminum construction
- 4 in. deep, .080 in. channel frame with caulking slots
- Blades are .080 in., drainable
- Expanded aluminum birdscreen (on inside)
- Standard mill finish
- More sizes available on 72 hr. shipment. See page 53.
- Flanged frames available on 72 hr. shipment. See page 53.

Size W x H	Free Area (Ft ²)	Price Each	Size W x H	Free Area (Ft ²)	Price Each
18 x 18	0.67	\$170	30 x 30	2.59	\$355
24 x 18	0.93	\$194	36 x 30	3.15	\$394
24 x 24	1.49	\$214	36 x 36	3.85	\$427
30 x 24	1.90	\$235	42 x 42	5.18	\$523
36 x 24	2.31	\$259	48 x 48	7.10	\$621



NOTES — ALL LOUVERS:

- Screen adds 1/2 in. to depth.
- All louvers furnished 1/4 in. smaller than nominal opening size shown.

LOUVERS – 72 HOUR SHIPMENT

RUSKIN®
www.ruskin.com

MODEL ELF211, 2" DEEP LOUVERS AVAILABLE FOR SHIPMENT FROM THE FACTORY IN 72 HOURS.

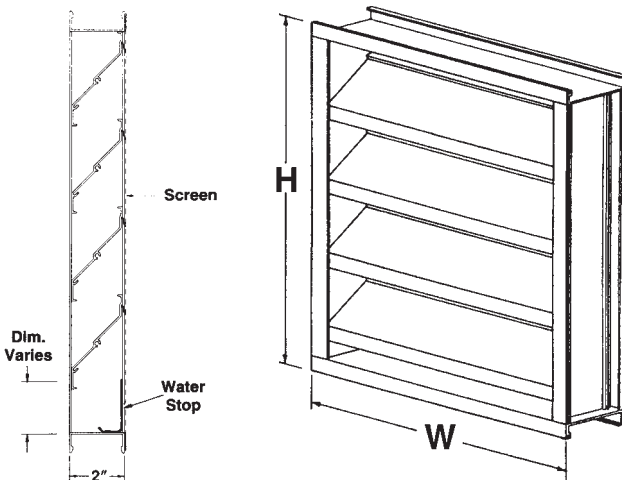
- Orders must be placed by 10:30 a.m. for 72 hour shipment
- Orders over \$2,000.00 may take longer than 72 hours
- Please allow 5 days for delivery

Price Matrix

		WIDTH IN INCHES									
		12	18	24	30	36	42	48	54	60	
HEIGHT IN INCHES	12	180	203	223	244	264	282	307	394	422	12
	16	203	226	251	277	300	325	358	460	495	16
	20	223	251	282	313	343	368	407	526	566	20
	24	239	274	310	345	381	414	457	589	637	24
	28	328	378	429	480	528	584	642	655	709	28
	32	348	409	467	521	576	637	703	716	782	32
	36	376	437	503	564	627	688	764	782	851	36
	40	401	472	538	604	673	742	823	845	919	40
	44	407	488	554	660	698	767	853	906	990	44
	48	442	515	591	668	747	820	911	967	1059	48
	52	470	551	632	714	800	876	975	1031	1125	52
56	503	589	668	759	853	932	1036	1092	1186	56	
60	533	624	714	805	899	990	1092	1155	1254	60	

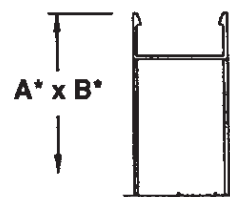
ORDERING INSTRUCTIONS

SCREEN: front rear bird insect
 FRAME: box front flange
 SIZE: width ___ height ___ actual size deduct 1/4"

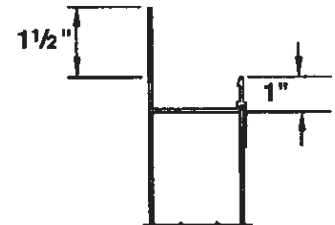


FRAME CONSTRUCTION

Box frame or Flanged (Front or Rear)



Standard (Box)



Integral Flange

For performance call your Hoffman & Hoffman Salesperson or consult www.ruskin.com

Prices subject to change without notice. All shipments are FOB Hoffman Warehouse, freight prepaid and added to invoice.

LOUVERS – 72 HOUR SHIPMENT



MODEL GFL800D, 4" DEEP LOUVERS AVAILABLE FOR SHIPMENT FROM THE FACTORY IN 72 HOURS.

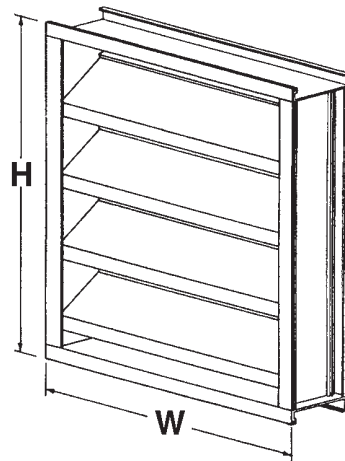
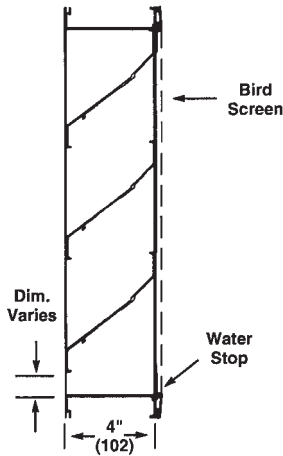
- Orders must be placed by 10:30 a.m. for 72 hour shipment
- Orders over \$2,000.00 may take longer than 72 hours
- Please allow 5 days for delivery

Price Matrix

		WIDTH IN INCHES									
		12	18	24	30	36	42	48	54	60	
HEIGHT IN INCHES	12	147	160	178	195	211	226	247	313	338	12
	16	160	180	198	221	241	256	284	363	394	16
	20	178	198	226	249	272	295	322	419	449	20
	24	190	219	249	274	302	330	363	467	505	24
	28	259	300	343	381	419	462	510	521	564	28
	32	277	325	371	414	460	505	559	569	622	32
	36	297	348	399	447	497	546	607	622	676	36
	40	320	376	429	480	536	589	653	670	731	40
	44	322	388	442	495	556	609	678	721	787	44
	48	350	409	470	530	594	650	724	769	841	48
	52	374	439	501	566	637	693	775	818	891	52
	56	399	467	530	602	678	739	823	869	939	56
60	424	495	566	640	714	787	869	917	993	60	

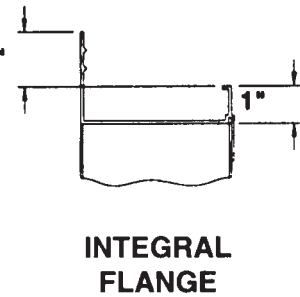
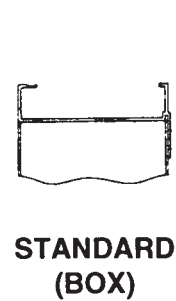
ORDERING INSTRUCTIONS

SCREEN: front rear bird insect
 FRAME: box front flange
 SIZE: width ___ height ___ actual size deduct 1/4"



FRAME CONSTRUCTION

Box frame or Flanged (Front or Rear)



For performance call your Hoffman & Hoffman Salesperson or consult www.ruskin.com

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FANS / DAMPERS / CURBS

VARIABLE SPEED DRIVES & STARTERS

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VAV TERMINALS / HOT WATER COILS

DAMPERS / LOUVERS / ACCESS DOORS / ACTUATORS

FLEXIBLE DUCT / SNAPLOOK & ACC.

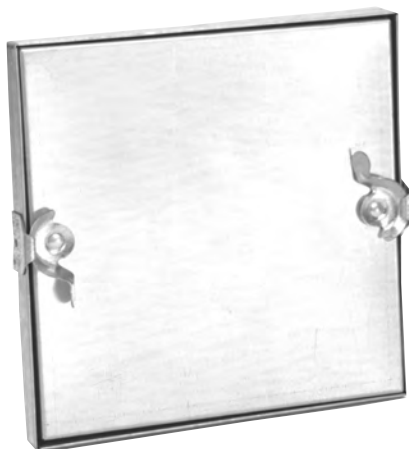
SPRAL PIPE & ACCESSORIES

ELECTRIC HEATERS / FILTERS & ACCESSORIES

VIBRATION ISOLATION

STEAM SPECIALTIES

ACCESS DOORS



MODEL ADC-14 CAM-TYPE ACCESS DOOR

- 24 ga. galvanized steel construction
- 1/2 in. insulation board, aluminum foil faced
- Neoprene gasket and cam locks for tight closure
- Starter tab for easy installation

Nominal Size	Price Each	Nominal Size	Price Each
6" x 6"	\$12	14" x 14"	\$22
8" x 8"	\$13	16" x 16"	\$26
10" x 10"	\$15	18" x 18"	\$30
12" x 12"	\$17	24" x 24"	\$45



MODEL ADH-14 HINGED ACCESS DOOR

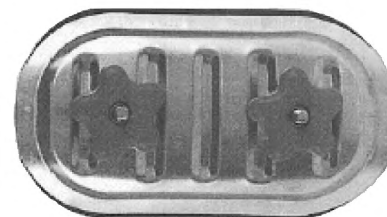
- 24 ga. galvanized steel construction
- 1/2 inch insulation board, aluminum foil faced
- Neoprene gasket and cam locks for tight closure
- Starter tab for easy installation

Nominal Size	Price Each	Nominal Size	Price Each
6" x 6"	\$12	14" x 14"	\$22
8" x 8"	\$13	16" x 16"	\$26
10" x 10"	\$15	18" x 18"	\$30
12" x 12"	\$17	24" x 24"	\$45

MODEL RADI ROUND SPIRAL ACCESS DOOR

- Insulated construction with neoprene gaskets
- Synthetic knobs with metal threaded inserts for ease of turning and prevention of thread stripping
- No need for tools to open

Duct Size (in.)	Opening Size (in.)	Door Size (in.)	Price Each
6	3 x 7	4 x 8	\$71
8-10	3 x 7	4 x 8	\$71
12-14	7 x 11	8 x 12	\$93
16-18	7 x 11	8 x 12	\$93
20-24	11 x 15	12 x 16	\$131



Prices subject to change without notice. All shipments are FOB Hoffman Warehouse, freight prepaid and added to invoice.

ACCESS PANELS



STYLE K ACCESS PANEL

- For use in ceilings, masonry and dry walls
- Convenient access to plumbing, heating and electrical systems
- Aluminum frame, 14 ga. steel panel

Door Size	Wall Opening	Overall Size	Depth	Price Each
8 x 8	8 3/8 x 8 3/8	10 5/8 x 10 5/8	1 1/2"	\$56
12 x 12	12 3/8 x 12 3/8	14 5/8 x 14 5/8	1 1/2"	\$70
18 x 18	18 3/8 x 18 3/8	20 5/8 x 20 5/8	1 1/2"	\$86
24 x 24	24 3/8 x 24 3/8	26 5/8 x 26 5/8	1 1/2"	\$167



STYLE AP-FR FIRE-RATED ACCESS PANEL

- For use in fire-rated walls and ceilings
- Provided with masonry anchors, concealed hinges, turn knob or flush key hole
- 16 ga. steel frame, 20 ga. steel panel

Door Size	Wall Opening	Overall Size	Depth	Price Each
8 x 8	8 3/8 x 8 3/8	10 x 10	2 9/16"	\$167
12 x 12	12 3/8 x 12 3/8	14 x 14	2 9/16"	\$173
18 x 18	18 3/8 x 18 3/8	20 x 20	2 9/16"	\$222
24 x 24	24 3/8 x 24 3/8	26 x 26	2 9/16"	\$272



STYLE AHD ACCESS PANEL

- For all surface types
- 16 ga. cold rolled steel
- Screwdriver operated cam latch

Door Size	Wall Opening	Overall Size	Depth	Price Each
8 x 8	8 1/4 x 8 1/4	10 x 10	1 1/2"	\$38
12 x 12	12 1/4 x 12 1/4	14 x 14	1 1/2"	\$43
18 x 18	18 1/4 x 18 1/4	20 x 20	1 1/2"	\$65
24 x 24	24 1/4 x 24 1/4	26 x 26	1 1/2"	\$95

FLEXIBLE DUCT By Flexmaster

SUPERIOR QUALITY • MECHANICAL JOINED WITHOUT ADHESIVES



TYPE 1MR6 – INSULATED ACOUSTIC

A factory insulated, fully lined duct for use in low and medium pressure air distribution systems. The inner core is constructed of an **acoustic** material which allows sound waves to penetrate and be absorbed by the insulation. Solid mechanical union of fabric and corrosion resistant **galvanized steel** spiral helix creates an extraordinary durable seam. Thermally insulated to an R Value of 6.0 and supplied with a reinforced metalized protective barrier. Manufactured in 25' lengths and compressed for easy handling. **Working pressure: +10" w.g.**



Inside Dimension Inches	Price per 25' Length	Inside Dimension Inches	Price per 25' Length
6	\$89	14	\$180
8	\$108	16	\$215
10	\$126	18	\$264
12	\$149		
NS300 – 1-3/4 IN X 300 FT HANGING NOVA STRAP.....\$22			

TYPE 3MR6 – HIGH PRESSURE – INSULATED

A factory insulated, fully lined duct for use in high pressure air distribution systems. The core is fabricated of a trilaminate of aluminum foil, fiberglass and aluminized polyester mechanically locked into a corrosion resistant **galvanized steel** spiral helix. Thermally insulated to an R Value of 6.0 and supplied with a reinforced metalized protective barrier. Manufactured in 25' lengths and compressed for easy handling. **Working pressure: +20" w.g.**



Inside Dimension Inches	Price per 25' Length	Inside Dimension Inches	Price per 25' Length
6	\$137	12	\$232
8	\$165	14	\$272
10	\$198	16	\$324
NS300 – 1-3/4 IN X 300 FT HANGING NOVA STRAP.....\$22			

TYPE 3NI – HIGH PRESSURE – UNINSULATED

An uninsulated flexible duct suitable for high pressure systems. Type 3NI is constructed of a coated fiberglass fabric mechanically interlocked by a corrosion resistant **galvanized steel** spiral helix on the outside of the fabric. **Working pressure: +20" w.g.**



Inside Dimension Inches	Price per 25' Length	Inside Dimension Inches	Price per 25' Length
6	\$52	12	\$91
8	\$64	14	\$98
10	\$78		
NS300 – 1-3/4 IN X 300 FT HANGING NOVA STRAP.....\$22			

Prices subject to change without notice. All shipments are FOB Hoffman Warehouse, freight prepaid and added to invoice.

FLEXIBLE DUCT by JP Lamborn



FANS / DAMPERS / CURBS

VARIABLE SPEED DRIVES & STARTERS

REGISTERS / GRILLES / DIFFUSERS / TRANSITIONS

VAV TERMINALS / HOT WATER COILS

DAMPERS / LOUVERS / ACCESS DOORS / ACTUATORS

FLEXIBLE DUCT / SNAPLOOK & ACC.

SPIRAL PIPE & ACCESSORIES

ELECTRIC HEATERS / FILTERS & ACCESSORIES

VIBRATION ISOLATION

STEAM SPECIALTIES



TYPE MHP25R6 INSULATED DUCT

Flexible duct is constructed with a spring steel wire helix, encapsulated in a 2-ply, air-tight inner core. Extra-thick insulation with a thermal value of R6 encompasses the core and a metalized, reinforced vapor barrier surrounds the entire duct. Positive pressure: 6" W.G. (4"-12") 4" W.G. (14"-20"). Negative pressure: 1" W.G. (4"-10") 1/2" W.G. (12"-20").

Inside Dimension Inches	Price per 25' Length	Inside Dimension Inches	Price per 25' Length
6	\$50	14	\$111
8	\$59	16	\$128
10	\$74	18	\$147
12	\$92	20	\$181
NS300 - 1 3/4 in x 300 ft Hanging NOVA Strap.....\$22			



TYPE MHP25R8 INSULATED DUCT

Flexible duct is constructed with a spring steel wire helix, encapsulated in a 2-ply, air-tight inner core. Extra-thick insulation with a thermal value of R8 encompasses the core and a metalized, reinforced vapor barrier surrounds the entire duct. Positive pressure: 6" W.G. (4"-12") 4" W.G. (14"-20"). Negative pressure: 1" W.G. (4"-10") 1/2" W.G. (12"-20").

Inside Dimension Inches	Price per 25' Length	Inside Dimension Inches	Price per 25' Length
6	\$66	12	\$119
8	\$80	14	\$137
10	\$96	16	\$165
NS300 - 1 3/4 in x 300 ft Hanging NOVA Strap.....\$22			

Prices subject to change without notice. All shipments are FOB Hoffman Warehouse, freight prepaid and added to invoice.

FLEXMASTER STICK-ON FITTINGS



TYPE FLD-B03-SOG STICK-ON FITTING



- Round takeoff to sheet metal duct
- Quality adhesive backing for quick mounting
- Neoprene sponge gasket for low leakage
- Includes damper and hand quadrant with 2" build out
- 3/8" steel shaft
- Galvanized steel construction

FLD-B03 Size	Diameter	Length	Price Each
6	5 7/8	7	\$14
8	7 7/8	7	\$16
10	9 7/8	7	\$18
12	11 7/8	7	\$22
14	13 7/8	7	\$24
16	15 7/8	7	\$30
18	17 7/8	7	\$41

TYPE FLDE-B03-SOG STICK-ON FITTING



- Round takeoff to sheet metal duct
- Quality adhesive backing for quick mounting
- Neoprene sponge gasket for low leakage
- Includes damper, hand quadrant with 2" build out and 45° extractor
- 3/8" steel shaft
- Galvanized steel construction

FLDE-B03 Size	Diameter	Length	Price Each
6	5 7/8	7	\$19
8	7 7/8	7	\$22
10	9 7/8	7	\$25
12	11 7/8	7	\$29
14	13 7/8	7	\$31
16	15 7/8	7	\$38
18	17 7/8	7	\$51

TYPE STOD-D-B03 SIDE TAKEOFF FITTING



- For use on sheet metal duct
- Aerodynamic design improves performance
- Prepunched holes and adhesive coated gasket
- Includes damper and hand quadrant with 2" build out
- 3/8" steel shaft
- Galvanized steel construction

STOD -B03 Size	Diameter	Length	Rectangle Opening	Price Each
6	5 7/8	13	5 x 9	\$26
8	7 7/8	13	6 x 12	\$30
10	9 7/8	13	8 x 14	\$35
12	11 7/8	13	10 x 16	\$42
14	13 7/8	13	12 x 18	\$49
16	15 7/8	13	14 x 20	\$57

SNAPLOCK PIPE AND ACCESSORIES



SNAPLOCK PIPE

Size	Description	Price Each
4	4" 5FT 26 GA	\$16
6	6" 5FT 26 GA	\$20
8	8" 5FT 26 GA	\$26
10	10" 5FT 26 GA	\$31
12	12" 5FT 26 GA	\$38
14	14" 5FT 26 GA	\$46



90° ADJUSTABLE ELBOWS

Size	Description	Price Each
4	4" 26 GA Elbow	\$6
6	6" 26 GA Elbow	\$6
8	8" 26 GA Elbow	\$9
10	10" 26 GA Elbow	\$13
12	12" 26 GA Elbow	\$16
14	14" 26 GA Elbow	\$22



END CAPS

Size	Description	Price Each
4	4" 28 GA End Cap	\$8
6	6" 28 GA End Cap	\$9
8	8" 28 GA End Cap	\$10
10	10" 28 GA End Cap	\$12
12	12" 28 GA End Cap	\$15
14	14" 28 GA End Cap	\$16

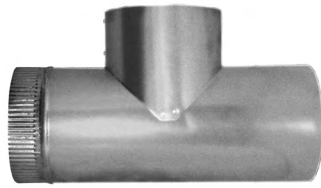


TAKEOFFS

Model	Size	Description	Price Each
ATD	4	4" Takeoff with Damper	\$14
ATD	6	6" Takeoff with Damper	\$12
ATD	8	8" Takeoff with Damper	\$14
ATD	10	10" Takeoff with Damper	\$21
ATD	12	12" Takeoff with Damper	\$28
ATD	14	14" Takeoff with Damper	\$32
ATSD	4	4" Takeoff with Damper & Scoop	\$23
ATSD	6	6" Takeoff with Damper & Scoop	\$23
ATSD	8	8" Takeoff with Damper & Scoop	\$25
ATSD	10	10" Takeoff with Damper & Scoop	\$33
ATSD	12	12" Takeoff with Damper & Scoop	\$45
ATSD	14	14" Takeoff with Damper & Scoop	\$57

Prices subject to change without notice. All shipments are FOB Hoffman Warehouse, freight prepaid and added to invoice.

SNAPLOCK PIPE ACCESSORIES



TEES

Size	Description	Price Each
4	4" 26 GA Tee	\$30
6	6" 26 GA Tee	\$33
8	8" 26 GA Tee	\$42
10	10" 26 GA Tee	\$48
12	12" 26 GA Tee	\$49
14	14" 26 GA Tee	\$54



WYES

Size	Description	Price Each
4	4" 28 GA Wye	\$21
6	6" 28 GA Wye	\$21
8	8" 28 GA Wye	\$21
10	10" 28 GA Wye	\$26
12	12" 28 GA Wye	\$40
14	14" 28 GA Wye	\$54

AIR-TITE STICK-ON SADDLE



- Round takeoff to round metal duct
- Polyethylene cross-linked fire retardant gasket
- 1 1/2" gasket and flange
- 26 gauge galvanized construction
- Includes damper and hand quadrant

Size	Fits Duct Sizes	Price Each
4	8-20	\$13
6	10-20	\$13
8	12-16	\$16
10	12-18	\$26
12	16-20	\$30
14	16-22	\$36

ACCESSORIES



Model	Description	Price Each
SUPERSEAL 1	UL 181-B 1 Gallon Duct Sealant	\$29
BB2	2 Inch Bristle Brush	\$2
BB3	3 Inch Bristle Brush	\$2
PPT10X1/2	Pro Point Screw (1000 Per Bucket)	\$42
PPT10X3/4	Pro Point Screw (1000 Per Bucket)	\$42
PPT10X1	Pro Point Screw (1000 Per Bucket)	\$43
DCL516	2 5/8" Long Chuck For 5/16" Hex Head	\$10

Prices subject to change without notice. All shipments are FOB Hoffman Warehouse, freight prepaid and added to invoice.

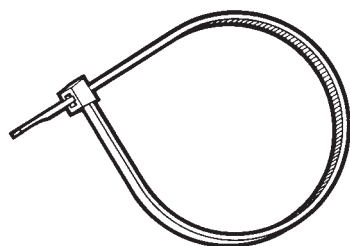
CLAMPS AND TOOLS



STAINLESS STEEL CLAMPS

- Worm drive, swivel action
- Suitable for high or low pressure, insulated or uninsulated

Diameter	Price Each	Diameter	Price Each
4-5"	\$2.10	12"	\$3.55
6"	\$2.30	14"	\$3.90
8-9"	\$2.85	16"	\$4.15
10"	\$3.10	18"	\$4.50
		20"	\$4.70



NYLON CLAMPS

- Self-locking, 175 lb. tensile strength
- 36 in. cone; join 2 together for larger diameters
- Clamps are releasable until applied with tensioning tool

Price Each for 1 - 299	Price Each for 300 - 499	Price Each for 500 - up
\$.45	\$.44	\$.43



MODEL DIT-2 TENSIONING TOOL

- Heavy duty construction
- Mechanical advantage assures tight clamping action

Model	Price Each
DIT-2	\$75

TAPE AND SEALANTS



DUCT TAPE

- PC857 Duct Tape UL 181-B-FX 82P4
- AF100-A HVAC Foil Tape UL 181-A-P/B-FX

Model	W x L	Price Each
PC857-2	2" x 60 yards	\$23
PC857-3	3" x 60 yards	\$34
AF100-A-2.5	2.5" x 60 yards	\$27



MASTIC TAPE

- SF686 Mastic Tape UL 181-B-FX

Model	W x L	Price Each
SF686-2	2" x 100 ft.	\$42
SF686-3	3" x 100 ft.	\$56



DYN-O-WRAP

- Durable and puncture resistant
- Self-adhesive inner surface
- Excellent for ductwork
- Easily removable without leaving residue

Model	Description	Price Each
DW24-200	24 inch DYN-O-WRAP	\$39

PIPE PORTAL SYSTEMS

FANS / DAMPERS / CURBS

VARIABLE SPEED DRIVES & STARTERS

REGISTERS / GRILLES / DIFFUSERS / TRANSITIONS

VAN TERMINALS / HOT WATER COILS

DAMPERS / LOUVERS / ACCESS DOORS / ACTUATORS

FLEXIBLE DUCT / SNAPOLOK & ACC.

SPIRAL PIPE & ACCESSORIES

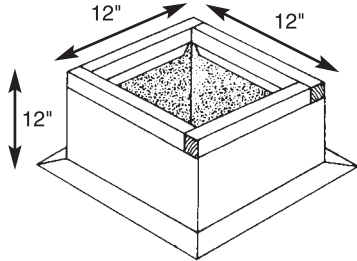
ELECTRIC HEATERS / FILTERS & ACCESSORIES

VIBRATION ISOLATION

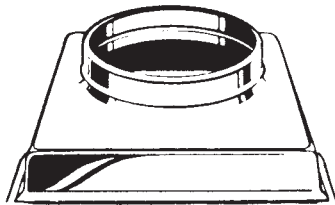
STEAM SPECIALTIES

PIPE FLASHING SYSTEM

This system is designed to allow both vertical and horizontal pipe movement, yet provides a maintenance free permanent installation which accommodates pipe sizes of 3/8" to 6". The system is offered in three parts: roof curb, curb cover, and rubber cap (1-pipe or 4-pipe). The curb cover is molded from ABS plastic with a laminated acrylic coating, which gives high resistance to both ozone and ultraviolet exposure. The caps are compression molded of EPDM rubber with conical shaped steps on the nipple for a taut weatherproof seal around the pipe. Caps include stainless steel clamps for added pipe seal protection.



Model RC-12

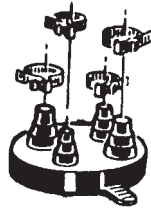


Model CC

Model	Price Each
RC-12 Curb	\$61
CC Curb Cover	\$79



C-126



C-212



C-481

Cap Model	Accommodates Pipe Sizes	Price Each
C-126 (1 pipe)	Single pipe 2" thru 6"	\$75
C-212 (4 pipe)	Two pipes 3/8" thru 1" Two pipes 1" thru 2"	\$75
C-481 (4 pipe)	Four pipes 3/8" thru 1"	\$75

SELF-FLASHING SYSTEM

Alumi-Flash for hot applied roof systems. In some installations, the Alumi-Flash may be used in lieu of a curb. The 8" diameter top accepts any of the rubber caps. Construction is spun aluminum.



Alumi-Flash

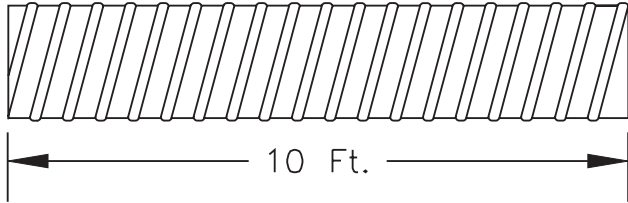
Model	Price Each
Alumi-Flash	\$91

SELF-SEALING SPIRAL PIPE AND FITTINGS

By Eastern Sheet Metal

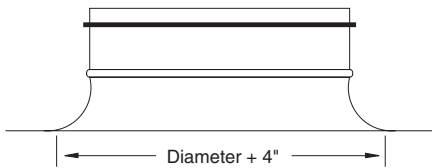


- Single wall spiral duct
- All fittings have factory installed gaskets
- Galvanized steel construction (ASTMA 527)
- Prices **DO NOT** include freight



STRAIGHT PIPE 10 FT. LENGTHS

Part Number	Duct Diameter	Wt. Each (lbs.)	Ga.	Price Per 10 Ft. Length
ESSP3	3	8.1	26	\$30
ESSP4	4	10.8	26	\$39
ESSP5	5	13.5	26	\$47
ESSP6	6	16.2	26	\$56
ESSP8	8	21.6	26	\$73
ESSP10	10	27.0	26	\$91
ESSP12	12	32.4	26	\$108
ESSP14	14	37.8	26	\$126
ESSP16	16	43.2	26	\$143
ESSP18	18	48.6	26	\$160
ESSP20	20	54.0	26	\$177
ESSP22	22	59.4	26	\$194
ESSP24	24	64.8	26	\$215



BELLMOUTH

Part Number	Duct Diameter	Wt. Each (lbs.)	Ga.	Price Each
PBT4	4	0.4	26	\$31
PBT5	5	0.5	26	\$31
PBT6	6	0.6	26	\$33
PBT8	8	0.8	26	\$36
PBT10	10	1.1	26	\$41
PBT12	12	1.3	26	\$42
PBT14	14	2.6	26	\$82
PBT16	16	2.9	26	\$96
PBT18	18	3.3	26	\$109
PBT20	20	3.5	24	\$122
PBT22	22	3.9	24	\$142
PBT24	24	4.2	24	\$151

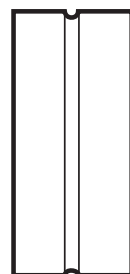
SELF-SEALING SPIRAL PIPE FITTINGS

By Eastern Sheet Metal



PIPE COUPLING

Part Number	Duct Diameter	Wt. Each (lbs.)	Ga.	Price Each
PCPT3	3	0.3	26	\$16
PCPT4	4	0.4	26	\$16
PCPT5	5	0.5	26	\$17
PCPT6	6	0.5	26	\$17
PCPT8	8	0.7	26	\$18
PCPT10	10	0.9	26	\$19
PCPT12	12	1.1	26	\$20
PCPT14	14	1.3	26	\$21
PCPT16	16	1.4	26	\$22
PCPT18	18	1.6	26	\$22
PCPT20	20	2.3	24	\$28
PCPT22	22	2.5	24	\$29
PCPT24	24	2.7	24	\$30



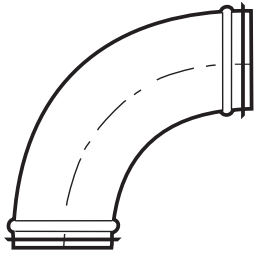
FITTING COUPLING

Part Number	Duct Diameter	Wt. Each (lbs.)	Ga.	Price Each
FCPT3	3	0.3	26	\$4
FCPT4	4	0.4	26	\$4
FCPT5	5	0.5	26	\$4
FCPT6	6	0.5	26	\$5
FCPT8	8	0.7	26	\$5
FCPT10	10	0.9	26	\$6
FCPT12	12	1.1	26	\$7
FCPT14	14	1.3	26	\$7
FCPT16	16	1.4	26	\$8
FCPT18	18	1.6	26	\$8
FCPT20	20	2.3	24	\$14
FCPT22	22	2.5	24	\$15
FCPT24	24	2.7	24	\$15

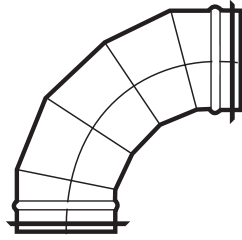
Prices subject to change without notice. All shipments are FOB Hoffman Warehouse, freight prepaid and added to invoice.

SELF-SEALING SPIRAL PIPE FITTINGS

By Eastern Sheet Metal



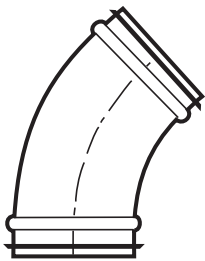
Thru 12 in.



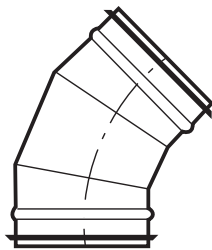
Above 12 in.

90 DEGREE ELBOW

Part Number	Duct Diameter	Wt. Each (lbs.)	Ga.	Price Each
PE90T3	3	1.1	26	\$45
PE90T4	4	1.7	26	\$48
PE90T5	5	2.5	26	\$53
PE90T6	6	3.4	26	\$61
PE90T8	8	5.5	26	\$74
PE90T10	10	8.2	26	\$98
PE90T12	12	11.1	26	\$119
E90T14	14	12.0	26	\$135
E90T16	16	15.3	26	\$155
E90T18	18	19.1	26	\$191
E90T20	20	29.7	24	\$248
E90T22	22	42.9	24	\$284
E90T24	24	50.0	24	\$335



Thru 12 in.



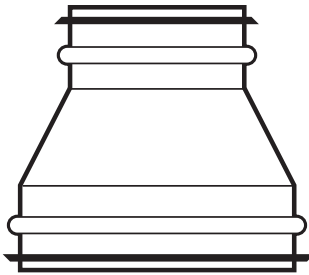
Above 12 in.

45 DEG. ELBOW

Part Number	Duct Diameter	Wt. Each (lbs.)	Ga.	Price Each
PE45T3	3	0.6	26	\$41
PE45T4	4	1.0	26	\$42
PE45T5	5	1.4	26	\$45
PE45T6	6	1.8	26	\$49
PE45T8	8	3.0	26	\$56
PE45T10	10	4.4	26	\$69
PE45T12	12	6.0	26	\$78
E45T14	14	6.6	26	\$84
E45T16	16	8.4	26	\$94
E45T18	18	10.3	26	\$108
E45T20	20	16.0	24	\$139
E45T22	22	19.0	24	\$158
E45T24	24	22.3	24	\$172

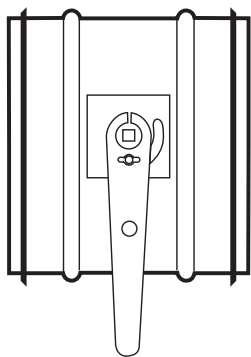
SELF-SEALING SPIRAL PIPE FITTINGS

By Eastern Sheet Metal



CONCENTRIC REDUCER

Part Number	Duct Diameter	Wt. Each (lbs.)	Ga.	Price Each
PRDT43	4 to 3	0.4	26	\$31
PRDT53	5 to 3	0.6	26	\$31
PRDT54	5 to 4	0.6	26	\$31
PRDT64	6 to 4	0.9	26	\$33
PRDT65	6 to 5	0.8	26	\$33
PRDT86	8 to 6	1.4	26	\$37
PRDT106	10 to 6	2.0	26	\$41
PRDT108	10 to 8	1.8	26	\$42
PRDT128	12 to 8	2.5	26	\$45
PRDT1210	12 to 10	2.2	26	\$45
RDT148	14 to 8	4.9	26	\$78
RDT1410	14 to 10	4.7	26	\$80
RDT1412	14 to 12	4.9	26	\$83
RDT1610	16 to 10	5.7	26	\$86
RDT1612	16 to 12	5.4	26	\$87
RDT1614	16 to 14	5.7	26	\$90
RDT1812	18 to 12	6.5	26	\$93
RDT1814	18 to 14	6.1	26	\$93
RDT1816	18 to 16	6.4	26	\$96
RDT2014	20 to 14	9.4	24	\$110
RDT2016	20 to 16	8.7	24	\$111
RDT2018	20 to 18	9.2	24	\$113
RDT2216	22 to 16	10.4	24	\$117
RDT2218	22 to 18	9.7	24	\$118
RDT2220	22 to 20	10.1	24	\$124
RDT2418	24 to 18	11.5	24	\$126
RDT2420	24 to 20	10.7	24	\$128
RDT2422	24 to 22	10.9	24	\$131



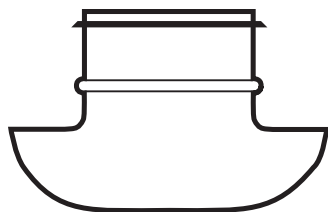
MODEL DT ROUND SPIRAL DAMPER

- 22 ga. galvanized construction
- Factory-mounted stand-off with locking hand quadrant
- Designed for spiral duct balancing applications
- Seal becomes part of ductwork

Part Number	Duct Diameter	Wt. Each (lbs.)	Ga.	Price Each
DT6	6	2.1	22	\$58
DT8	8	2.5	22	\$62
DT10	10	2.9	22	\$67
DT12	12	3.4	22	\$71
DT14	14	3.8	22	\$75

SELF-SEALING SPIRAL PIPE FITTINGS

By Eastern Sheet Metal



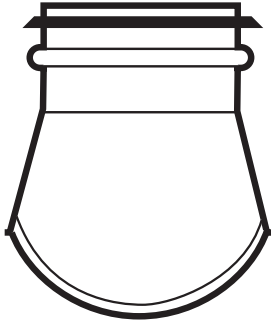
PRESSED TAP

Part Number	Tap Diameter	Duct Diameter	Wt. Each (lbs.)	Ga.	Price Each
PFTCT44	4	4	0.4	26	\$25
PFTCT46	4	6	0.4	26	\$25
PFTCT48	4	8	0.4	26	\$25
PFTCT410	4	10	0.5	26	\$25
PFTCT412	4	12	0.5	26	\$25
PFTCT66	6	6	0.8	26	\$27
PFTCT68	6	8	0.8	26	\$27
PFTCT610	6	10	0.8	26	\$27
PFTCT612	6	12	0.8	26	\$27
PFTCT614	6	14	0.8	26	\$27
PFTCT616	6	16	0.8	26	\$27
PFTCT88	8	8	1.2	26	\$31
PFTCT810	8	10	1.2	26	\$31
PFTCT812	8	12	1.2	26	\$31
PFTCT814	8	14	1.2	26	\$31
PFTCT816	8	16	1.2	26	\$31
PFTCT818	8	18	1.2	26	\$31
PFTCT820	8	20	1.2	24	\$31
PFTCT822	8	22	1.2	24	\$31
PFTCT824	8	24	2.1	24	\$31
PFTCT1010	10	10	2.1	26	\$39
PFTCT1012	10	12	2.1	26	\$39
PFTCT1014	10	14	2.1	26	\$39
PFTCT1016	10	16	2.1	26	\$39
PFTCT1018	10	18	2.1	26	\$39
PFTCT1020	10	20	2.1	24	\$39
PFTCT1022	10	22	2.1	24	\$39
PFTCT1024	10	24	2.1	24	\$39
PFTCT1212	12	12	2.7	26	\$42
PFTCT1214	12	14	2.7	26	\$42
PFTCT1216	12	16	2.7	26	\$42
PFTCT1218	12	18	2.7	26	\$42
PFTCT1220	12	20	2.7	24	\$42
PFTCT1222	12	22	2.7	24	\$42
PFTCT1224	12	24	2.7	24	\$42

Prices subject to change without notice. All shipments are FOB Hoffman Warehouse, freight prepaid and added to invoice.

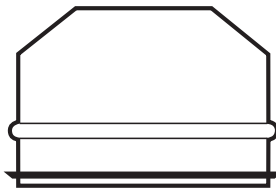
SELF-SEALING SPIRAL PIPE FITTINGS

By Eastern Sheet Metal

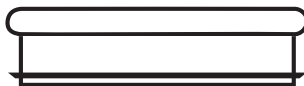


CONICAL TAP

Part Number	Tap Diameter	Duct Diameter	Wt. Each (lbs.)	Ga.	Price Each
FTCT1414	14	14	11.5	26	\$50
FTCT1416	14	16	12.7	26	\$50
FTCT1418	14	18	13.9	26	\$50
FTCT1420	14	20	19.3	24	\$50
FTCT1422	14	22	20.8	24	\$50
FTCT1424	14	24	22.4	24	\$50
FTCT1616	16	16	13.8	26	\$53
FTCT1618	16	18	15.1	26	\$53
FTCT1620	16	20	20.9	24	\$53
FTCT1622	16	22	22.5	24	\$53
FTCT1624	16	24	24.2	24	\$53
FTCT1818	18	18	16.2	26	\$57
FTCT1820	18	20	22.5	24	\$57
FTCT1822	18	22	24.3	24	\$57
FTCT1824	18	24	26.0	24	\$57



Thru 12 in.



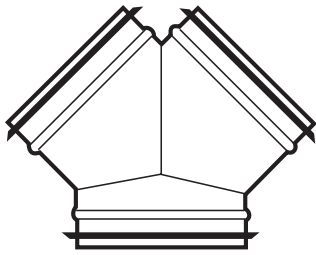
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END CAP

Part Number	Duct Diameter	Wt. Each (lbs.)	Ga.	Price Each
PECT3	3	0.3	26	\$32
PECT4	4	0.4	26	\$32
PECT5	5	0.6	26	\$35
PECT6	6	0.7	26	\$35
PECT8	8	1.0	26	\$37
PECT10	10	1.4	26	\$47
PECT12	12	1.8	26	\$47
ECT14	14	2.6	26	\$56
ECT16	16	3.1	26	\$61
ECT18	18	3.7	26	\$65
ECT20	20	5.5	24	\$74
ECT22	22	6.4	24	\$80
ECT24	24	7.3	24	\$86

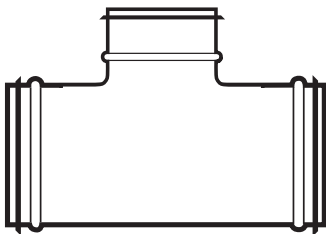
SELF-SEALING SPIRAL PIPE FITTINGS

By Eastern Sheet Metal



Y-BRANCH

Part Number	Duct Diameter	Wt. Each (lbs.)	Ga.	Price Each
YT3	3	1.6	26	\$72
YT4	4	2.4	26	\$78
YT5	5	3.3	26	\$86
YT6	6	4.4	26	\$93
YT8	8	6.8	26	\$111
YT10	10	9.8	26	\$132
YT12	12	13.3	26	\$153
YT14	14	17.4	26	\$177
YT16	16	22.0	26	\$201
YT18	18	27.1	26	\$227
YT20	20	41.7	24	\$287
YT22	22	49.5	24	\$324
YT24	24	58.0	24	\$375



TEE

Part Number	Duct Diameter	Wt. Each (lbs.)	Ga.	Price Each
TT3	3x3x3	1.4	26	\$50
TT4	4x4x4	2	26	\$52
TT5	5x5x5	3	26	\$56
TT6	6x6x6	3.2	26	\$59
TT8	8x8x8	4.5	26	\$67
TT10	10x10x10	6	26	\$75
TT12	12x12x12	7.8	26	\$86
TT14	14x14x14	9.6	26	\$98
TT16	16x16x16	11.7	26	\$108
TT18	18x18x18	13.9	26	\$119
TT20	20x20x20	20.8	24	\$170
TT22	22x22x22	24.1	24	\$184
TT24	24x24x24	27.6	24	\$199

SPIRAL HANGING SYSTEMS

GRIPPLE HANGING SYSTEMS

Gripple hangers incorporate a length of pre-cut cable with a pre-fabricated end fixing for maximum speed, efficiency and safety.

GRIPPLE



Gripple Lock



XP Loop Hanger



Duct Trapeze Loop Hanger



Cutter



Tensioning Tool

Part Number	Description	Length	* Price Per Hanger
HF02-5	Loop Hanger Size 2 100 lbs	5 ft	\$9
HF02-10	Loop Hanger Size 2 100 lbs	10 ft	\$11
HF02-15	Loop Hanger Size 2 100 lbs	15 ft	\$12
HF02-20	Loop Hanger Size 2 100 lbs	20 ft	\$14
HF02-30	Loop Hanger Size 2 100 lbs	30 ft	\$18
HF03-5	Loop Hanger Size 3 200 lbs	5 ft	\$11
HF03-10	Loop Hanger Size 3 200 lbs	10 ft	\$13
HF03-15	Loop Hanger Size 3 200 lbs	15 ft	\$15
HF03-20	Loop Hanger Size 3 200 lbs	20 ft	\$17
HF03-30	Loop Hanger Size 3 200 lbs	30 ft	\$21
XP02-10	Loop Hanger Size 2 100 lbs with Button	10 ft	\$12
XP02-20	Loop Hanger Size 2 100 lbs with Button	20 ft	\$15
DT2-LG-10	Duct Trapeze Loop Hanger 100 lbs	10 ft	\$12
DT2-LG-15	Duct Trapeze Loop Hanger 100 lbs	15 ft	\$14
DT2-LG-20	Duct Trapeze Loop Hanger 100 lbs	20 ft	\$15
DT2-LG-30	Duct Trapeze Loop Hanger 100 lbs	30 ft	\$19
HF-SG-3/8-NO 2	Stud Hanger Size 2 100 lbs	10 ft	\$11
HF-SG-3/8-NO 2	Stud Hanger Size 2 100 lbs	15 ft	\$13
HF-SG-3/8-NO 3	Stud Hanger Size 3 200 lbs	10 ft	\$13
HF-SG-3/8-NO 3	Stud Hanger Size 3 200 lbs	15 ft	\$16
HF-SG-3/8-NO 3	Stud Hanger Size 3 200 lbs	30 ft	\$22
Cutter	Wire Rope Cutter		\$38
TOOL-4-5BX	Tensioning Tool		\$129

*** Cable Kits Sold 10 Per Bag (Minimum Purchase 1 Bag)**

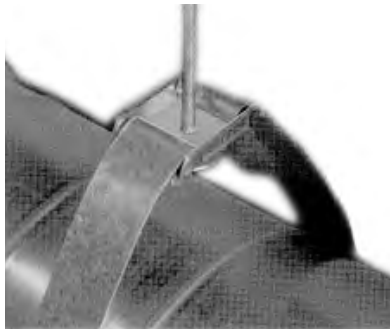
SPIRAL HANGING SYSTEMS AND BLAST GATES

DYNA-TITE CABLE SYSTEM



The Dyna-Tite CL23 cable lock and wire rope system is the newest, fastest, and most reliable way to secure ductwork and equipment. With this system the height of the unit can be adjusted without any tools. Galvanized construction.

Part Number	Description	Load Range	Price Each
CL12	Cable Lock	WC3	\$4
CL18	Cable Lock	WC4	\$7
CL23	Cable Lock	WC6	\$10
KV12	Bracket Assembly with CL12	WC3	\$5
WC3	3/32" Wire Rope 500 Ft. Roll	150 lb	\$225
WC4	1/8" Wire Rope 500 Ft. Roll	250 lb	\$253
WC6	3/16" Wire Rope 250 Ft. Roll	640 lb	\$300



STRAPPING SYSTEM

With this system the steel strap is hand bent into the bracket which is self loading. Can be used with 5/16" - 3/8" rod.

Part Number	Description	Load Range	Price Each
Strapping	1" Width 20 ga. 100 ft.	320 lb	\$58
Bracket	Accepts 5/16" - 3/8" Rod	660 lb	\$3



BLAST GATES

The standard FULL cut off is an aluminum cast housing to which collars have been "screwed". The screw is then ground off on the inside to keep it out of the air stream.

Part Number	Description	Price
C1032	3" Blast Gate	\$14
C1042	4" Blast Gate	\$15
C1062	6" Blast Gate	\$22
C1082	8" Blast Gate	\$37
C10102	10" Blast Gate	\$87
C10122	12" Blast Gate	\$93

ELECTRIC HEATERS

By Markel



MARKEL SERIES 5100 UNIT HEATERS

Heaters are for vertical or horizontal mounting and include shock-proof finned tubular heating elements with built-in thermal cut-outs, individually adjustable outlet louvers and totally enclosed, permanently lubricated fan motors. Motors and line power supply are same voltage. Outward drawn discharge venturi enhances air flow. No disconnect.



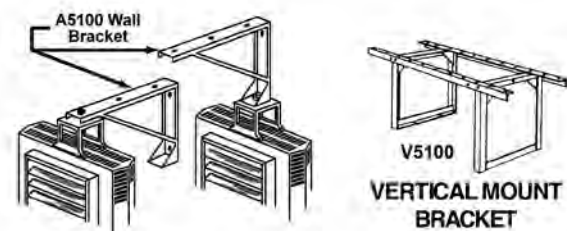
Model	KW	BTUH (000)	Heater Voltage	Control ⁽¹⁾ Voltage	Phase ⁽²⁾	Price Each
HF2B5103	2.5/3.3	8.5/11.2	208/240	208/240	3/1	\$725
HF2B5105	3.7/5.0	12.8/17.1	208/240	208/240	3/1	\$758
HF2B5107CA1	5.6/7.5	19.2/25.6	208/240	24	3/1	\$1167
HF2B5110CA1	7.5/10.0	25.6/34.1	208/240	24	3/1	\$1286
G1G5103	3.3	11.2	277	277	1	\$725
G1G5105	5.0	17.1	277	277	1	\$758
P3P5103CA1	3.3	11.2	480	24	3	\$924
P3P5105CA1	5.0	17.1	480	24	3	\$1002
P3P5107CA1	7.5	25.6	480	24	3	\$1258
P3P5110CA1	10.0	34.1	480	24	3	\$1333
P3P5115CA1	15.0	51.2	480	24	3	\$2151
P3P5120CA1	20.0	68.3	480	24	3	\$2841

Notes:

- (1) 24-volt control units are supplied with low voltage control transformer and contactor.
 (2) Single or three-phase wiring on dual phase units is field interchangeable.

ACCESSORIES

Model	Description	For Use With:	Price Each
A5105	Horizontal Mounting Bracket	3.3 & 5.0 KW Heaters	\$105
A5120	Horizontal Mounting Bracket	7.5 - 20 KW Heaters	\$120
V5105	Vertical Mounting Bracket	3.3 - 5.0 KW Heaters	\$202
V5120	Vertical Mounting Bracket	7.5 - 20 KW Heaters	\$250
T5100	Field installed internal t'stat	for all except HF2B5103, 05 3 ph	\$125
T5102	Field installed internal t'stat	HF2B5103, 05 3 ph	\$169
TW1512	HD line voltage wall t'stat	3 phase heaters	\$198
S2022H10AB	Line voltage wall t'stat	1 phase heaters	\$34
RK120EAA	Low voltage wall t'stat	24V control units	\$19
DCS202/5100	Power Disconnect Switch	2 Pole; 20 AMP; 120-277 VAC	\$138
DCS403/5100	Power Disconnect Switch	3 Pole; 40 AMP; 120-600 VAC	\$331
DCS603/5100	Power Disconnect Switch	3 Pole; 60 AMP; 600 VAC	\$453



MARKEL FAN FORCED ELECTRIC WALL HEATERS

Heavy duty heaters include finned tubular heating elements and tamper-proof grille with built-in overheat protection disconnect and thermostat. Rough-in dimensions are 14 3/16" wide x 19 15/16" high and 4" deep. Heater and wall box are packed and shipped together. Optional sleeve available for surface mounting.



Model	KW	BTUH	Voltage/Phase	Price Each
E3323	1.5	5120	120/1	\$628
HF3323	1.125/1.5	3840/5120	208/240/1	\$639
HF3324	1.5/2.0	5120/6284	208/240/1	\$639
HF3325	2.25/3.0	7763/10,350	208/240/1	\$639
HF3326	3.0/4.0	10,350/13,800	208/240/1	\$639
G3324	2.0	6284	277/1	\$638
G3325	3.0	10,350	277/1	\$638
G3326	4.0	13,800	277/1	\$638

ACCESSORIES

Model	Description	Price Each
3320EX33	Surface Mounting Sleeve	\$91
3310	Rough-In Box For Advance Installation	\$100

Prices subject to change without notice. All shipments are FOB Hoffman Warehouse, freight prepaid and added to invoice.

FANS / DAMPERS / CURBS

VARIABLE SPEED DRIVES & STARTERS

REGISTERS / GRILLES / DIFFUSERS / TRANSITIONS

VAN TERMINALS / HOT WATER COILS

DAMPERS / LOUVERS / ACCESS DOORS / ACTUATORS

FLEXIBLE DUCT / SNAP LOCK & ACC.

SPIRAL PIPE & ACCESSORIES

ELECTRIC HEATERS / FILTERS & ACCESSORIES

VIBRATION ISOLATION

STEAM SPECIALTIES

AIR FILTRATION



PLEATED PREFILTERS

- Pleated design increases dust holding capacity
- Extended replacement intervals
- Increases service life of secondary filters

DIMENSIONAL DATA AND PRICES

Nominal Size	Actual Size	Filters Per Case	Price Each
20 x 20 x 1	19 1/2 x 19 1/2 x 3/4	12	\$5
16 x 20 x 2	15 1/2 x 19 1/2 x 1 3/4	12	\$5
20 x 20 x 2	19 1/2 x 19 1/2 x 1 3/4	12	\$5
16 x 25 x 2	16 1/2 x 24 1/2 x 1 3/4	12	\$5
20 x 25 x 2	19 1/2 x 24 1/2 x 1 3/4	12	\$6
12 x 24 x 2	11 3/8 x 23 3/8 x 1 3/4	12	\$4
24 x 24 x 2	23 3/8 x 23 3/8 x 1 3/4	12	\$7
12 x 24 x 4	11 3/8 x 23 3/8 x 3 3/4	12	\$7
24 x 24 x 4	23 3/8 x 23 3/8 x 3 3/4	6	\$12



DIMENSIONAL DATA AND PRICES

Model	Nominal Size	Actual Size	Filters Per Case	Price Each
95PH	12 x 24 x 12	11 3/8 x 23 3/8 x 11 1/2	2	\$68
95PH	24 x 24 x 12	23 3/8 x 23 3/8 x 11 1/2	1	\$97

FILTER MEDIA ROLLS

Nominal Size	Description	Price Each
24 X 90 X 3/4	Merv 7 Filter Media Roll	\$77
36 X 90 X 3/4	Merv 7 Filter Media Roll	\$112
60 X 90 X 1	Merv 8 Filter Media Roll	\$207

FILTER FRAMES AND FASTENERS



- Universal holding frame accommodates wide range of filter sizes and types
- Variety of fasteners enables use with 1", 2" and 4" panel filters
- Galvanized construction
- Also accepts 6" and 12" deep cartridge filters

Frame Size	Price Each
12 x 24	\$33
24 x 24	\$37

Fastener Model No.	Upstream or Downstream	Fastener Used to Secure	Qty. Required per Filter	Price Each
CC611	Up or Down	1" or 2" deep filter	4	\$1
WF611	Up or Down	4" deep filter	4	\$2
PFC-2	Up	2" deep 30% as a prefilter to a cartridge (no header)	4	\$1
PFC-4	Up	4" deep 30% as a prefilter to a cartridge (no header)	4	\$1
PCA-2	Up or Down	2" deep filter	4	\$2
PCA-3	Up or Down	2" deep 30% as a prefilter to a cartridge	4	\$2
PCA-4	Up or Down	4" deep filter	4	\$2
PCA-5	Up or Down	4" deep 30% as a prefilter to a cartridge	4	\$2
12611	Up or Down	12" cartridge without prefilter	4	\$5

MAGNEHELIC PRESSURE GAUGES



DWYER SERIES 2000 MAGNEHELIC GAUGES

- 1/8" NPT plugs for duplicate pressure taps
- Includes rubber tubing adapters, flush mounting lugs and necessary screws
- Use accessory A-605 to convert for use as air filter gauge

Model No.	Range	Price Each
2001	0 - 1.0"	\$99
2002	0 - 2.0"	\$99
2006	0 - 6.0"	\$99
A-605	N/A	\$62

MANOMETERS



DWYER MARK II MOLDED PLASTIC MANOMETER

- Includes 8 ft. flexible, double column, plastic tubing, 2 connector fittings for 1/8" pipe thread, mounting screws, 3/4 oz. gauge oil

Model	Description	Price Each
Manometer No. 25	Range .05 - 3"	\$59
A-310A	3-way vent valve (2 per gauge)	\$29
A-101	Red Gauge Oil, .826 sp. gr.	\$13

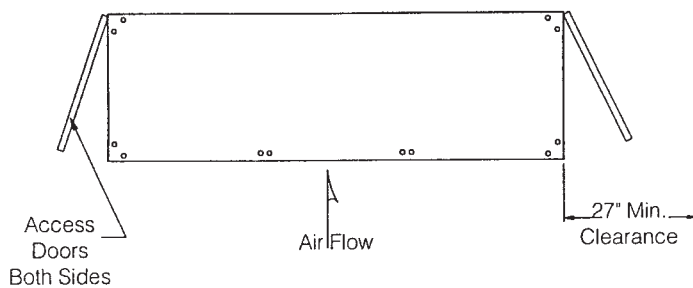
SIDE ACCESS FILTER HOUSINGS



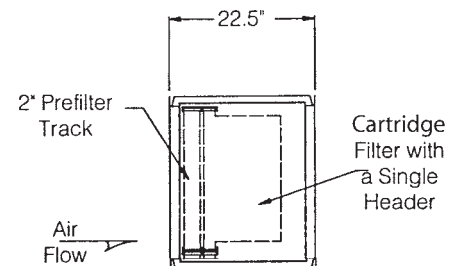
- Unprecedented versatility and ease of maintenance
- Two stage filtration using pleated pre-filters and high efficiency rigid filters
- Constructed of durable 16 ga. galvanized construction for indoor or outdoor installation
- Pressure capability up to 3 in. WG positive or negative
- Access doors on both sides of housing for filter changeout from either side
- Fully gasketed doors and tracks
- Housing can accommodate both 6 in. cartridge filters (not stocked) and 12 in. cartridge filters (stocked)
- Filters slide into tracks. No need for holding frames or fasteners

DIMENSIONAL DATA AND PRICES

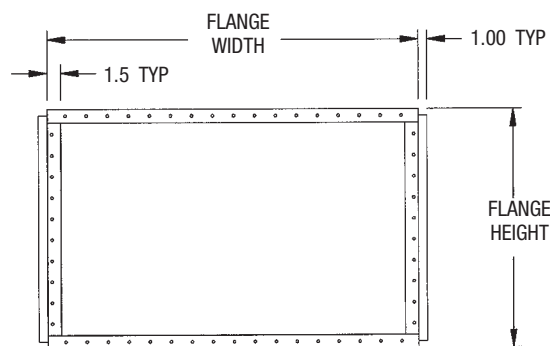
Model	Actual Size	Prefilters Required Per Unit	Cartridge Filters Required Per Unit	Price Each	STOCK
1 x 1	23 ³ / ₈ "W x 27 ¹ / ₄ "H	(1) - 24 x 24 x 2	(1) - 24 x 24 x 12	\$828	G
1 x 2	46 ³ / ₄ "W x 27 ¹ / ₄ "H	(2) - 24 x 24 x 2	(2) - 24 x 24 x 12	\$1133	G



TOP VIEW



SIDE VIEW



FRONT VIEW

VIBRATION MOUNTINGS

FANS / DAMPERS / CURBS

VARIABLE SPEED DRIVES & STARTERS

REGISTERS / GRILLES / DIFFUSERS / TRANSITIONS

VAN TERMINALS / HOT WATER COILS

DAMPERS / LOUVERS / ACCESS DOORS / ACTUATORS

FLEXIBLE DUCT / SNAP LOCK & ACC.

SPIRAL PIPE & ACCESSORIES

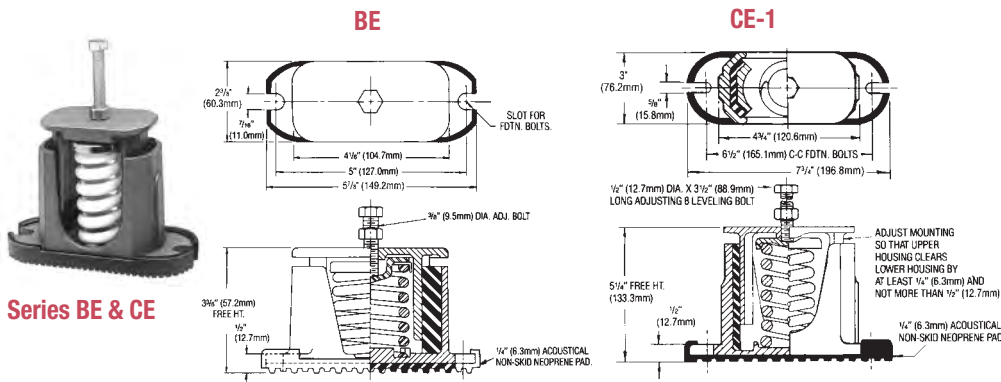
ELECTRIC HEATERS / FILTERS & ACCESSORIES

VIBRATION ISOLATION

STEAM SPECIALTIES

STEEL SPRING MOUNTINGS

- Types **BE & CE-1** are single spring mountings including enclosed cast housings and external adjustment bolt

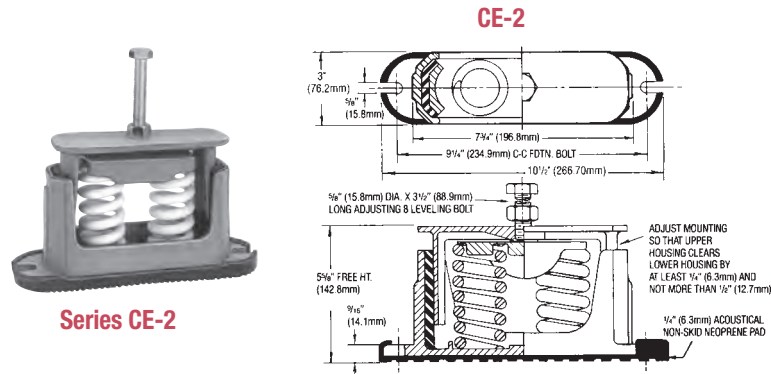


Series BE & CE

Type	Spring Size	Price Each
BE	C50-C370	\$61
CE-1	D120-D510	\$84
CE-1	D675-D1360	\$92

Note: See Spring Chart on page 78 for maximum load.

- Type **CE-2** mounts include two springs and maximum load is two times values in chart for a single spring

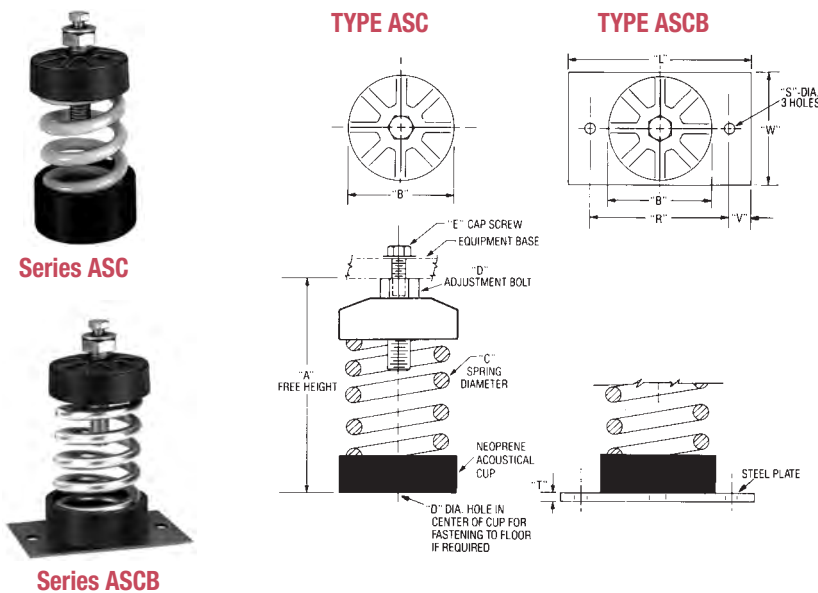


Series CE-2

Type	Spring Size	Price Each
CE-2	D510	\$123
CE-2	D675-D1360	\$139

Note: See Spring Chart on page 78 for maximum load.

- Type **ASC** is a free-standing, laterally stable spring mounting with built-in leveling bolt.
- The **ASCB** mount is similar to the ASC above except the bottom cup is bonded to a 4 1/2 x 2 1/2 steel plate.



Series ASC

Series ASCB

Type	Spring Size	Price Each
ASC	C50-C370	\$38
ASCB	C50-C370	\$46

Note: See Spring Chart on Page 78 for maximum load.

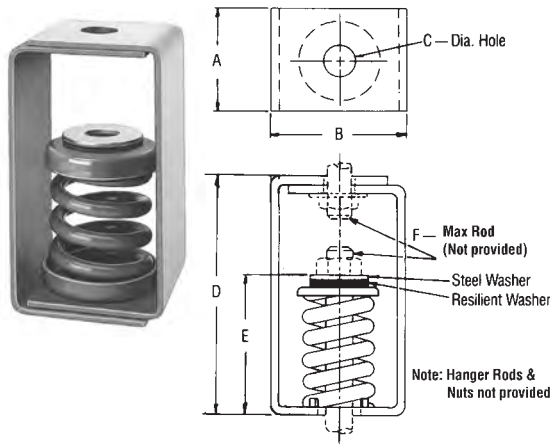
ASC & ASCB Dimensions: in. (mm)

A	B	C	D	E	
4 1/2" (114.3)	2 3/8" (60.3)	2" (50.8)	5/8" (16.0)	3/8" (9.5)	
L	W	T	R	S	V
4 1/2" (114.3)	2 1/2" (63.5)	1/8" (3.18)	3 1/2" (89.0)	7/16" (11.2)	1/2" (12.7)

VIBRATION MOUNTINGS

MODEL HS SPRING-FLEX HANGERS

Type **HS** hangers incorporate a steel spring in series with a neoprene noise isolation washer. The **HS-1D** housings are 7" high and can accommodate up to 3/4" diameter hanger rods. The **HS-1B** housings (assembled) are 4 1/2" high and accommodate up to 3/8" diameter hanger rods. All other **HS-1C** housings are 5 1/2" high and can accommodate up to 5/8" diameter rods.



HS Dimensions: in. (mm)

TYPE & SIZE	A	B	C	D	E	F
HS-1B-B20-B85	2 1/4" (57.5)	2 3/4" (69.8)	9/16" (14.2)	4 1/2" (114.3)	2 3/4" (69.8)	3/8" (9.5)
HS-1C-C50-C370	2 1/4" (57.5)	3" (76.2)	13/16" (20.6)	5 1/2" (139.7)	2 15/16" (76.0)	5/8" (15.8)
HS-1D-D120-D1360	3" (76.2)	3 1/4" (76.2)	1 1/4" (31.75)	7" (177.8)	4 3/8" (114.0)	3/4" (19.0)

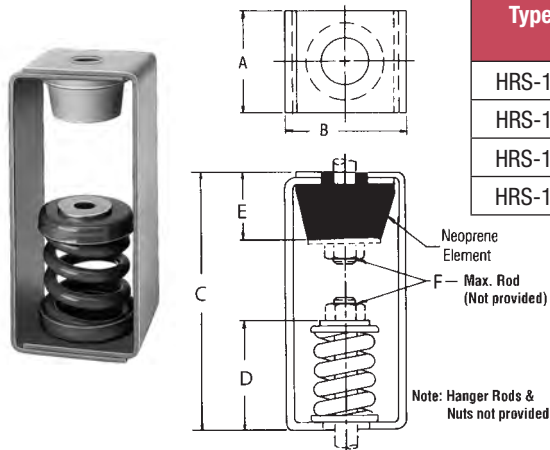
Type	Spring Size	Price Each
HS-1B	B20-B85	\$20
HS-1C	C50-C370	\$30
HS-1D	D120-D510	\$40
HS-1D	D675-D1360	\$48

UNIVERSAL SPRING CHART

Spring Number	Spring Color	Size	Max Load Lbs.
T1B-20	Blue	2 1/2"	20
T1B-35	Black	2 1/2"	35
T1B-50	Red	2 1/2"	50
T1B-70	Green	2 1/2"	70
T1B-85	Gray	2 1/2"	85
T1C-50	Blue	2 3/4"	50
T1C-100	Tan	2 3/4"	100
T1C-150	Red	2 3/4"	150
T1C-250	Black	2 3/4"	250
T1C-370	Yellow	2 3/4"	370
T1D-120	Black	4"	120
T1D-175	Blue	4"	175
T1D-250	Yellow	4"	250
T1D-340	Red	4"	340
T1D-510	Black	4"	510
T1D-675	Purple	4"	675
T1D-900	Green	4"	900
T1D-1200	Gray	4"	1200
T1D-1360	White	4"	1360

MODEL HRS SPRING-FLEX HANGERS

Type **HRS** hangers combine a steel spring with a neoprene hanger element. The spring isolates low frequency mechanical vibration and the neoprene element provides excellent sound attenuation. **HRS-1D** housings are 10" high and can accommodate up to 3/4" hanger rods. **HRS-1B** housings (assembled) are 5 1/4" high and accommodate up to 3/8" diameter rods. All other **HRS-1C** housings are 7" high and can accommodate up to 5/8" diameter rods.



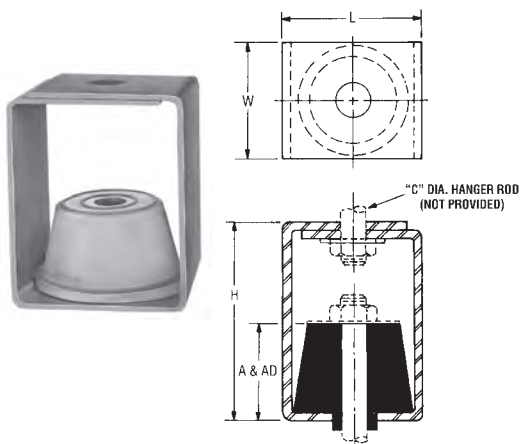
Type	Spring Size	Price Each
HRS-1B	B20-B85	\$30
HRS-1C	C50-C370	\$56
HRS-1D	D120-D510	\$78
HRS-1D	D675-D1360	\$86

HRS Dimensions: in. (mm)

TYPE & SIZE	A	B	C	D	E	F
HRS-1B-B20-B85	2 1/4" (57.5)	2 3/4" (69.8)	5 1/4" (133.3)	2 7/8" (73.0)	1 5/16" (23.8)	3/8" (9.5)
HRS-1C-C50-C370	3" (76.2)	3 1/4" (95.2)	7" (177.8)	3" (76.2)	1 11/16" (47.8)	5/8" (15.8)
HRS-1D-D120-D1360	3" (76.2)	3 3/4" (95.2)	10" (254.0)	4 3/8" (111.0)	2 1/8" (53.9)	3/4" (19.0)

VIBRATION MOUNTINGS

NEOPRENE-IN-SHEAR HANGERS

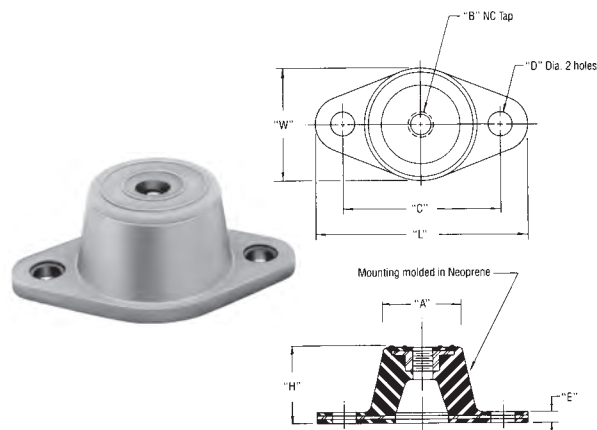


Type	Max Load Blue	Max Load Black	Max Load Red	Max Load Green	Price Each
HR-A	35 lbs	45 lbs	75 lbs	120 lbs	\$12
HR-B	—	170 lbs	240 lbs	380 lbs	\$34

HR Dimensions: in. (mm)

Type	L	W	H	A*	AD*	C
HR-A	2 1/4" (57.2)	2" (50.8)	3" (76.2)	1 1/8" (28.6)	1 3/8" (35.0)	3/8" (9.6)
HR-B	3" (76.2)	2 1/4" (57.2)	4 1/2" (114.3)	1 3/8" (35.0)	1 7/8" (47.8)	5/8" (16.0)

NEOPRENE-IN-SHEAR MOUNTINGS

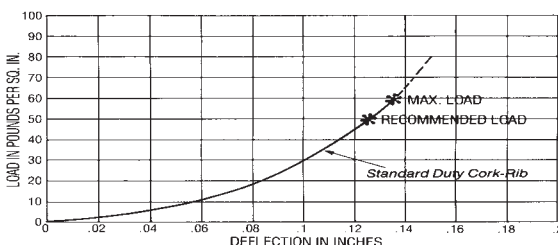


Type	Max Load Blue	Max Load Black	Max Load Red	Max Load Green	Max Load Gray	Price Each
R-1	35 lbs	45 lbs	70 lbs	120 lbs	—	\$19
R-2	135 lbs	170 lbs	240 lbs	380 lbs	—	\$21
R-3	—	250 lbs	525 lbs	750 lbs	1100 lbs	\$49

R Dimensions: in. (mm)

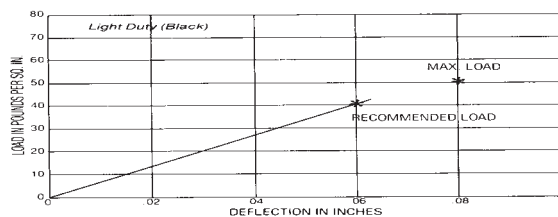
Type	L	W	H	A	B	C	D	E
R-1	3 1/8" (79.4)	1 3/4" (44.4)	1" (25.4)	1 1/4" (31.7)	5/16" (8.0)	2 3/8" (60.4)	1 1/32" (8.8)	3/16" (4.8)
R-2	3 7/8" (98.6)	2 3/8" (60.4)	1 1/4" (31.7)	1 3/4" (44.4)	3/8" (9.6)	3" (76.2)	1 1/32" (8.8)	7/32" (5.6)
R-3	5 1/2" (139.7)	3 3/8" (85.8)	1 3/4" (44.4)	2 1/2" (63.5)	1/2" (12.7)	4 1/8" (104.8)	9/16" (14.4)	1/4" (6.3)

ELASTOMERIC & SHEAR-FLEX PADS



ELASTOMERIC PADS

Size	Price Each
18" x 18" x 1"	\$172
6" x 6" x 1"	\$19
4" x 4" x 1"	\$9
2" x 2" x 1"	\$2



SHEAR-FLEX PADS

Size	Price Each
18" x 18" x 3/8"	\$100

Prices subject to change without notice. All shipments are FOB Hoffman Warehouse, freight prepaid and added to invoice.

SPIRAX SARCO PRESSURE REDUCING VALVES

25 SERIES PILOT & TEMPERATURE OPERATED REGULATORS

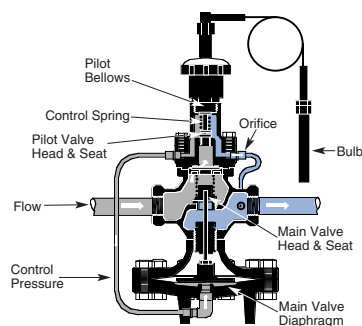
Efficient, reliable and accurate, no other regulator contains as many quality features as the 25 Series. Whether it is used for regulating temperatures, pressure, or both, it is responsive and exact. Designed with the user in mind, it is more versatile than any regulator available to the industry.



PRESSURE PILOT

Pressure Pilot Type	Downstream Pressure	Price Each
25-P Yellow	3-30 psig	\$637
25-P Blue	20-100 psig	\$637
25-P Red	80-250 psig	\$637

HOW THE 25T PILOT REGULATOR WORKS



The Spirax Sarco pilot operated temperature regulator works by converting the process temperature to a force which is balanced by the control spring. This modulates a small valve head over a seat (the pilot). The flow through this seat is directed in turn to the main valve diaphragm, where it modulates the main valve.

In order to achieve the most stable operating condition, the sensing bulb must be immersed entirely in the sensed medium. This allows the liquid in the bulb to expand through the capillary tubing into the bellows and throttles the pilot valve. This settles the pilot valve, allowing constant flow across the main diaphragm.

When process temperature rises, the pilot valve closes, and pressure is released from the main valve diaphragm through the control orifice to close the main valve. Any variations in temperature will immediately be sensed on the bulb, which will act to adjust the position of the pilot and main valve, ensuring a constant process temperature.

HOW TO ORDER

When ordering a Spirax Sarco 25T temperature regulator, include all of the following:

- Valve size by nominal pipe/flange size
- Body material of cast iron or cast steel
- Type of sensor - 25T for thermostatic regulation
- Style of thermostatic bulb
- Length of capillary tubing
- Temperature adjustment range
- Maximum steam supply pressure. Specify low pressure pilot when inlet pressure for flanged size is 15 psig or below
- Intended application

For example: Spirax Sarco 1" Cast Iron Temperature Regulator, Type 25T-2 with 8 feet of tubing, temperature range of 120° to 180°F, 75 psig steam, for storage water heater.



MAIN VALVE

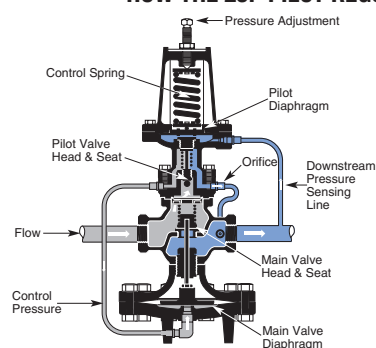
Main Valve Type	Size	Price Each
25	1/2"	\$945
	3/4"	\$1028
	1"	\$1157
	1 1/4"	\$1415
	1 1/2"	\$1745
	2"	\$2249



TEMPERATURE PILOT

Temperature Pilot Type	Temperature Range	Price Each
T2	100-160°F	\$1503
	120-180°F	\$1503
	160-220°F	\$1503

HOW THE 25P PILOT REGULATOR WORKS



The Spirax Sarco pilot operated pressure regulator works by balancing the downstream pressure against a control spring. This modulates a small valve head over a seat (the pilot). The flow through this seat is directed, in turn, to the main valve diaphragm, where it modulates the main valve.

In order to achieve the most stable operating condition, an external pressure sensing line must be used. This allows downstream pressure to feed back to the underside of the diaphragm, balancing the spring force, causing the pilot valve to throttle. This settles the pilot valve, allowing a constant flow across the main diaphragm. This ensures that the main valve is also settled to give a stable downstream pressure.

When downstream pressure rises, the pilot valve closes, and pressure is released from the main valve diaphragm through the control orifice, to close the main valve. Any variations in load or pressure will immediately be sensed on the pilot diaphragm, which will act to adjust the position of the main valve, ensuring a constant downstream pressure.

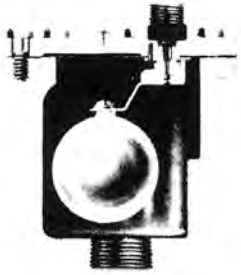
HOW TO ORDER

When ordering a Spirax Sarco 25P regulator, include all of the following:

- Valve size and connection type
- Body material, e.g. cast iron
- Set range for downstream pressure
- Steam supply pressure

For example: Spirax Sarco 1" Cast Iron Pressure Regulator, Type 25P for 150 psig inlet pressure, yellow spring for 3 to 30 psig reduced pressure, for 15 psig process heating.

SPIRAX SARCO MISCELLANEOUS EQUIPMENT



TYPE 13WS AIR ELIMINATORS

Type 13WS air eliminators are for water heating and cooling systems. The body is cast iron; the float mechanism, float, valve and seat are stainless steel.

Size	Price Each
3/4"	\$242



TYPE IT PIPELINE STRAINERS

Type IT cast iron screwed strainers are for steam, gasses or liquids. Heavy-duty body is cast-iron reinforced with external rib for maximum strength. Standard screen is 20 mesh type 304 stainless steel

Size	Price Each	Size	Price Each
3/8"	\$50	1 1/4"	\$68
1/2"	\$42	1 1/2"	\$80
3/4"	\$44	2"	\$126
1"	\$52		

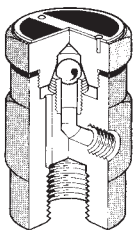


TYPE T-202 and TYPE VS-204 THERMOSTATIC AIR VENTS

Type T-202 has brass body and stainless steel internal parts.

Type VS-204 has cast iron body and stainless steel internal parts.

Type	Size	Price Each
T-202	3/8"	\$216
VS-204	1/2"	\$329



TYPE VB14 and VB21 VACUUM BREAKER

The VB14 and VB21 are designed to admit air to condensing vapor (steam) or liquid systems where vacuum formation may inhibit system drainage or operation.

Type	Size	Price Each
VB14-Brass	1/2"	\$185
VB21-Stainless	1/2"	\$369

Please call the Greensboro warehouse or your Hoffman & Hoffman salesman for information on any non-stocked sizes or other Sarco products. Factory shipments for most items is less than two weeks.

Prices subject to change without notice. All shipments are FOB Hoffman Warehouse, freight prepaid and added to invoice.

FANS / DAMPERS /
CURBS

VARIABLE SPEED
DRIVES & STARTERS

REGISTERS / GRILLES /
DIFFUSERS / TRANSITIONS

VAN TERMINALS /
HOT WATER COILS

DAMPERS / LOUVERS /
ACCESS DOORS / ACTUATORS

FLEXIBLE DUCT /
SNAP LOCK & ACC.

SPIRAL PIPE
& ACCESSORIES

ELECTRIC HEATERS /
FILTERS & ACCESSORIES

VIBRATION ISOLATION

STEAM SPECIALTIES

SPIRAX SARCO STEAM TRAPS



TYPE TD-52 THERMO-DYNAMIC STEAM TRAPS

Type TD-52 steam traps are all stainless steel and having only one moving part and are designed with a rugged simplicity providing efficiency and reliability unsurpassed in any steam trap of its type.

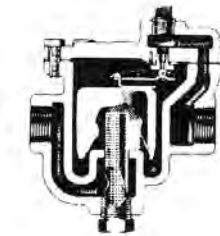
Size	Price Each
3/8"	\$269
1/2"	\$398
3/4"	\$509
1"	\$687



TYPE F & T FLOAT AND THERMOSTATIC STEAM TRAPS

Type F & T traps provide immediate and continuous discharge of condensate, air and non-condensables from a steam system as soon as they reach the trap.

Type	Size	Price Each	Type	Size	Price Each	Type	Size	Price Each
FT-15	3/4"	\$273	FT-30	3/4"	\$340	FT-75	1"	\$522
FT-15	1"	\$338	FT-30	1"	\$370	FT-75	1 1/4"	\$799
FT-15	1 1/4"	\$411	FT-30	1 1/2"	\$705	FT-75	1 1/2"	\$808
FT-15	1 1/2"	\$581	FT-30	2"	\$1227	FT-125	3/4"	\$467
FT-15	2"	\$1098	FT-75	3/4"	\$463	FT-125	1"	\$522



TYPE B INVERTED BUCKET STEAM TRAPS

Type B traps provide high discharge capacities and quick action, made possible by the use of large valves and the Sarco Camlift mechanism.

Type	Size	Price Each
B1-H-125	3/4"	\$190
B2-125	3/4"	\$399



TYPE FA FLOAT OPERATED DRAIN TRAPS

Type FA traps provide an automatic and continuous discharge which modulates with the liquid flow to efficiently remove condensate, or any unwanted liquid, from a compressed air or other pressurized gas system.

Type	Size	Price Each
FA-150	3/4"	\$399

Please call the Greensboro warehouse or your Hoffman & Hoffman salesman for information on any non-stocked sizes or other Sarco products. Factory shipments for most items is less than two weeks.



TERMS AND CONDITIONS

8/20

"H&H" shall mean Hoffman & Hoffman, Inc., and its officers, employees, and agents. "Buyer" shall mean the person or entity entering into this Agreement with H&H to purchase goods and/or services.

1. Controlling Terms & Conditions: This Agreement, upon Buyer's acceptance, is limited to the terms and conditions stated herein, despite any additional or conflicting terms and conditions contained in any purchase order, any other document presented by Buyer, or any contract document between Buyer and any third-party (i.e. an owner, other contractor, etc.), all of which additional or conflicting terms are hereby rejected by H&H. No waiver of, or modification to, these Terms and Conditions shall be valid unless made in writing and signed by an authorized representative of H&H. H&H salespeople are not authorized to waive or modify any Terms and Conditions. The terms of any written proposal / quote made by H&H ("proposal") and these Terms and Conditions shall constitute the entire agreement of the parties. H&H rejects any revision of, addition to, or deletion of any term in this Agreement not specifically accepted by an authorized representative of H&H in writing.

2. Acceptance: Any H&H proposal expires if not accepted by Buyer within thirty (30) days from the date of the proposal. Prices are firm after acceptance provided the Buyer releases the order for production by written notice to H&H within sixty (60) days of placing the order. Otherwise, prices are subject to escalation. Typographical and clerical errors in quotations, orders and acknowledgments are subject to correction. Buyer is deemed to have accepted any H&H proposal to purchase goods or services, including these Terms and Conditions, when Buyer either (a) receives and retains an acknowledgement from H&H without written objection within ten (10) days, (b) accepts delivery of all or any part of the goods ordered, (c) provides to H&H delivery dates, shipping instructions, or other instructions evidencing acceptance, or (d) otherwise executes or assents to any proposal or these Terms and Conditions. If Buyer accepts any proposal, without the addition of any other terms and conditions or any other Buyer modification, Buyer's order shall be deemed acceptance of the proposal subject solely to H&H's terms and conditions. If Buyer's order is expressly conditioned upon H&H's acceptance or assent to terms and/or conditions other than those stated herein, return or acknowledgment of such order by H&H with H&H's Terms and Conditions attached or referenced serves as H&H's notice of objection to, and rejection of, Buyer's terms and as H&H's counter-offer to provide goods or services in accordance with the H&H proposal and H&H's Terms and Conditions. If thereafter Buyer does not reject or object in writing to H&H within ten (10) days by written notice to Legal@hoffman-hoffman.com, H&H's counter-offer will be deemed accepted by Buyer. In any event, Buyer's acceptance of all or any part of any goods ordered will constitute Buyer's acceptance of H&H's proposal subject to H&H's Terms and Conditions.

3. Terms of Payment / Taxes: Payment is due net thirty (30) days from the date of each H&H invoice to Buyer. Interest at the rate of 1 1/2% per month (or the highest interest rate allowed by applicable law, if lower) may be charged after the 30-day period until payment is received. H&H accepts credit card payments. If Buyer chooses to pay by credit card, Buyer is subject to an additional convenience fee of 3.0% of the total amount paid by credit card. Buyer shall pay all costs of collection incurred by H&H including, but not limited to, reasonable attorneys' fees, collection fees, and court costs. H&H may suspend all further services and transactions (regardless of their status) without liability if Buyer's account is more than thirty (30) days past due or if Buyer's credit, in the sole judgment of H&H, is impaired at any time. Partial invoices may be submitted for any portion of completed work and/or delivered materials. While risk of loss passes to Buyer, Seller will have a purchase-money security interest in all goods (including any accessories and substitutions) purchased under this Agreement to secure payment in full of all amounts due H&H, and the underlying proposal, together with these Terms and Conditions, form a security agreement (as defined by the UCC.) Buyer shall keep all goods purchased under this Agreement free of all taxes and encumbrances, shall not remove said goods from their original installation point and shall not assign or transfer any interest in said goods until all payments due H&H have been made. The purchase-money security interest granted herein attaches upon H&H's acceptance or acknowledgment of this Agreement and Buyer's receipt of said goods, but prior to installation. Buyer will have no rights to set off against any amounts which become payable to H&H under this Agreement or otherwise. Notwithstanding any Buyer form or document to the contrary, H&H shall not release any rights to make a lien and/or bond claim, or other claim for damages, in connection with goods purchased or services provided until H&H has obtained payment in full for such goods or services and any damages. Furthermore, Buyer is responsible to pay in full for the goods or services provided by H&H regardless of whether such goods or services are funded for Buyer pursuant to any extraneous contract and/or by an applicable project owner or contractor. Unless otherwise agreed by H&H in writing, Buyer shall pay to H&H, in addition to the contract price, all sales, use, excise, privilege or other taxes imposed by any local, state or federal taxing authority payable in connection with the goods or services furnished.

4. Shipments / Claims: All shipments of goods are at Buyer's risk, f.o.b. factory, or if shipped from another location, f.o.b. point of shipment, with charges either allowed, added to invoice, or collected as noted. Any claims for damage or shortage or loss in transit must be filed by Buyer against the applicable carrier. If requested, H&H will reasonably assist the Buyer when making its claim for damages and/or losses while in transit. Claims against factory shortages will not be considered unless made within sixty (60) days after Buyer's receipt of the goods.

5. Approval: H&H shall not be liable in any way should any third party (such as a project architect, engineer, owner, etc.) fail to accept or approve equipment ordered by Buyer. H&H cannot guarantee to meet or equal specifications written around another make of equipment different than that purchased by Buyer.

6. Warranties and Liability: Upon condition that H&H receives payment in full for all amounts owed, H&H extends to Buyer the manufacturer's warranty (a copy of which is available upon request), and manufacturer's warranty is in lieu of any warranties contained in any applicable project contract, conditions, plans, or specifications. H&H ITSELF MAKES NO OTHER WARRANTIES, EXPRESS OR IMPLIED, AS TO ANY MATTER WHATSOEVER, INCLUDING, WITHOUT LIMITATION, THE CONDITION OF THE EQUIPMENT, ITS MERCHANTABILITY, IMPLIED WARRANTIES OF DESIGN OR FITNESS FOR A PARTICULAR PURPOSE. H&H SHALL HAVE NO LIABILITY FOR ANY DIRECT DAMAGES BY REASON OF FAILURE OF THE EQUIPMENT TO OPERATE OR FAULTY OPERATION OR MISUSE OF THE EQUIPMENT, AND UNDER NO CIRCUMSTANCES SHALL H&H BE LIABLE TO BUYER OR TO ANY THIRD PARTY FOR ANY INDIRECT, INCIDENTAL, CONSEQUENTIAL, SPECIAL, PUNITIVE, EXEMPLARY OR LIQUIDATED DAMAGES OR LOSSES, INCLUDING BUT NOT LIMITED TO, LOSS OF USE, INCOME, PROFIT OR PRODUCTION, LOST DATA, SPOILAGE, DELAY, OR INCREASED COST OF OPERATION. SAID EXCLUSIONS APPLY EVEN IF H&H HAS BEEN ADVISED OF SUCH POSSIBLE DAMAGES OR IF SUCH POSSIBLE DAMAGES WERE REASONABLY FORESEEABLE. Buyer acknowledges that H&H is not responsible for the design of goods or services purchased and did not participate in any project design in connection with such goods or services.

7. Limitation of Remedy: H&H shall have no liability for any damage caused by negligence, accident, misuse, improper storage, improper installation, improper service, maintenance or operation of equipment by Buyer or any third party. To the extent H&H is liable to Buyer under any legal theory (whether under warranty, negligence, strict liability or contract), Buyer's sole and exclusive remedy is limited to one of the following, which H&H shall elect in its sole and absolute discretion: (a) repair or replacement of purchased equipment or its parts by H&H or its duly authorized representative or (b) refund of the purchase price. In no event shall H&H's liability exceed the purchase price paid by Buyer under this Agreement, and Buyer waives all other remedies at law or in equity. Furthermore, Buyer waives any claim with respect to quantity or quality of goods or services purchased, unless Buyer notifies H&H in writing within ten (10) days of the date Buyer discovered, or by reasonable inspection should have discovered, the basis for such claim. Under no event shall H&H owe any duty or have any obligation whatsoever to any customer or client of Buyer or to any other third party.

8. Hazards: H&H is not responsible for the identification, detection, abatement, encapsulation or removal of hazardous substances, such as (without limitation) asbestos, products or materials containing asbestos, mold, fungi, mildew, or bacteria. At all times now and in the future, H&H takes no responsibility for and makes no representations or warranties concerning any existing or future hazardous substance or condition (i.e. mold) or the remedy or prevention thereof. Furthermore, Buyer has a duty to alert H&H of any known or likely potential hazards at any project site where H&H's representatives and affiliates may be present in connection with this Agreement.

9. Indemnification / Insurance: To the fullest extent permitted by law, Buyer shall indemnify, hold harmless and defend H&H and its officers, employees and agents from and against all claims, demands, liabilities, suits, judgments, awards, or expenses of any kind (including reasonable attorneys' fees and costs incurred defending such claims or demands, regardless of whether they result in legal action or are prosecuted to final judgment or award), which result or arise from Buyer's purchase, installation, or use of goods or services provided by H&H. Buyer shall indemnify H&H against, without limitation, liability arising from any acts or omissions whether deemed negligent, accidental or intentional, which is caused, in part, by the active or passive negligence or other fault of H&H. To the fullest extent permitted by law, the obligations of defense and indemnification set forth herein shall be binding upon Buyer no matter what the nature of the claim asserted may be (whether it be for negligence, warranty, strict liability, or otherwise) and shall be binding even if H&H is alleged or proven to have acted negligently; provided, however, that Buyer shall have no obligation to provide indemnification to H&H if the claim asserted arises in negligence and is finally adjudicated to have arisen solely from the negligence of H&H. Buyer shall also indemnify and hold harmless H&H from all liability for taxes owing in connection with Buyer's purchase of goods or services. The obligations and rights to indemnify herein shall not negate, abridge or reduce other such rights or obligations under law. This Agreement does not require Buyer to indemnify H&H for H&H's own negligent or intentional acts or omissions to the extent that doing so would violate applicable law. Buyer and H&H jointly authorize and request any court or arbitrator considering the enforceability of this paragraph to re-write this paragraph so that it requires Buyer to defend, indemnify, and hold H&H harmless to the fullest extent permitted by applicable law. Upon written request of Buyer, H&H shall only be required to name Buyer as an additional insured to the coverage types listed on H&H's standard Certificate of Insurance (available upon request). In no event does H&H waive any rights of subrogation.

10. Claims Resolution / Governing Law: Unless H&H elects otherwise, all claims and disputes between Buyer and H&H arising out of or relating to performance of any agreement or breach thereof must be decided by binding arbitration in accordance with the Construction Industry Arbitration rules of the American Arbitration Association (AAA). Demand for Arbitration must be filed in the regional office of the AAA closest to Greensboro, North Carolina, and the filing party must serve such Notice upon the other party in accordance with AAA rules. The procedural and substantive law of the State of North Carolina must apply in and to all arbitration proceedings, and Greensboro, North Carolina, is designated as the sole and exclusive venue for such proceedings. Any award arising from such proceedings shall be final and binding upon the parties and enforceable in accordance with the Federal Arbitration Act. H&H and Buyer agree that their transactions involve interstate commerce. This Agreement shall be governed by and construed solely in accordance with the laws of the State of North Carolina, without regard to principles of conflicts of laws. H&H shall have the sole and exclusive right, at H&H's sole and absolute discretion, to waive the arbitration provision and to elect to litigate any claim or dispute in a court of appropriate jurisdiction. Unless H&H elects another court of appropriate jurisdiction in H&H's sole and absolute discretion, the state courts located in Greensboro, Guilford County, North Carolina, shall be the sole and exclusive forum for any litigation between H&H and Buyer. Buyer consents to the jurisdiction of the state and federal courts located in Greensboro, Guilford County, North Carolina.

11. Delays / Penalties / Force Majeure: Delivery dates are approximate and not guaranteed. In no event and under no circumstances whatsoever will H&H be liable for any damages or expenses caused by any failure or delay in making delivery of goods or in performing services hereunder. No penalty clause or liquidated damages of any kind (for delays or otherwise) apply to H&H unless pre-approved in writing by an H&H officer. Furthermore, in no event and under no circumstances whatsoever will H&H be liable under this Agreement for any event of force majeure, or an event or cause beyond H&H's reasonable control.

12. Cancellations / Returns: If an order is canceled through no fault of H&H, the Buyer shall reimburse H&H for all expenses, costs, damages and losses (including lost profits) incurred by H&H in connection with the order and its cancellation. Goods may not be returned except by written permission of a representative of H&H, and when so returned, shall be subject to handling and transportation charges. No warehouse goods returned after 90 days.

13. Equal Employment Opportunity / Affirmative Action Clause: H&H and Buyer shall abide by the requirements of 41 CFR 60-1.4(a), 60-300.5(a) and 60-741.5(a). These regulations prohibit discrimination against qualified individuals based on their status as protected veterans or individuals with disabilities and prohibit discrimination against all individuals based on their race, color, religion, sex, sexual orientation, gender identity or national origin. Moreover, these regulations require that covered prime contractors and subcontractors take affirmative action to employ and advance in employment individuals without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, disability or veteran status.

14. Government Contracts / Disadvantaged Business Entities: If Buyer's purchase of goods or services is in any way connected to any federal, state, or local government project, which implicates or utilizes any Small, Minority or Disadvantaged Business incentives or qualifications (or other similar laws or regulations), Buyer represents and certifies to H&H that Buyer is performing a commercially useful function on such project.

15. Trust Funds: Buyer agrees that all funds Buyer receives that result from the labor, materials, and/or equipment furnished by H&H will be considered "Trust Funds." Buyer will hold all Trust Funds in trust for the sole and exclusive benefit of H&H. Buyer will segregate Trust Funds from other funds. Buyer will account for all Trust Funds and deliver all Trust Funds to H&H. Buyer will not use Trust Funds for any purpose other than paying H&H.

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Warehouse Stock Equipment Orders

Call 800-334-0254 or 336-252-1710/1723

Fax to 336-252-1703

Email to warehouse@hoffman-hoffman.com

Replacement HVAC Equipment Parts

Call 800-332-2295 or 336-252-1707/1708

Fax to 336-252-1734

Email to parts@hoffman-hoffman.com

