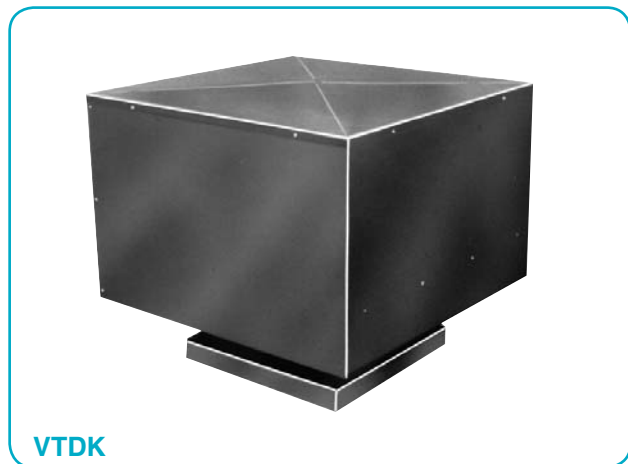


LOW SILHOUETTE CENTRIFUGAL ROOF EXHAUSTERS

LINEAR

The linear appearance of the Model VT provides a clean low profile that blends attractively with many architectural designs. The Model VTDK is direct driven and the Model VTBK is belt driven. Both direct and belt drive fans are available with aluminum or galvanized steel hoods. Maximum exhaust temperature for continuous operation is 150°F.



VTDK

Model VTDK: Direct Drive

The Carnes Model VTDK provides direct drive capability in a well engineered low silhouette design available in capacities from 150 to 4400 CFM. An all aluminum deep spun venturi and isolated motor mounts provide quiet and efficient operation.

Model VTBK: Belt Drive

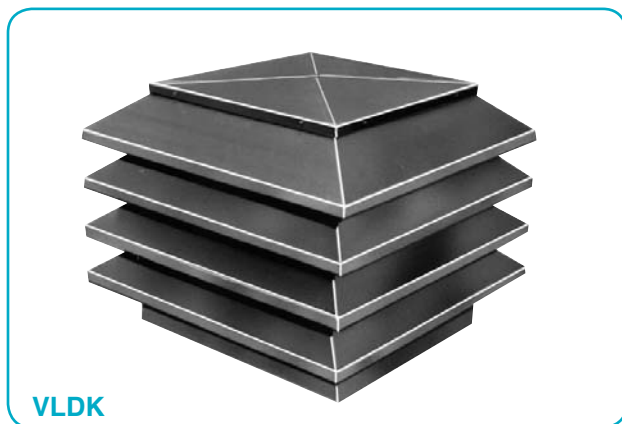
The Model VTBK is available in 13 sizes with capacities from 220 to 38,500 CFM. Units through size 24 feature spark resistant impellers while unit sizes 30 through 54 are available in all welded steel or optional aluminum.

LOUVERED

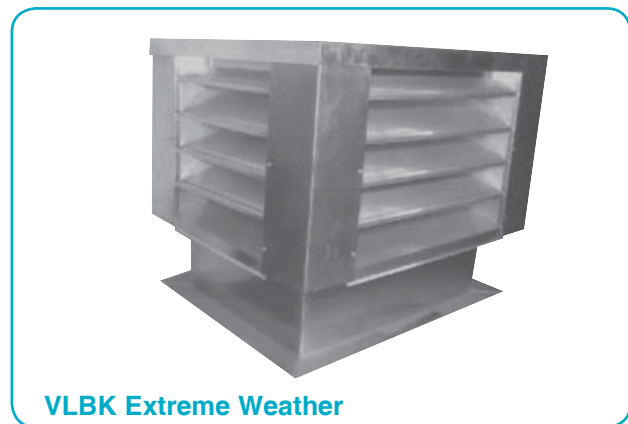
The Model VL features an attractive low silhouette louvered design that will compliment any building. This series features extruded aluminum louvers with mitered and welded corners. Design flexibility is increased by the availability of both belt drive (Model VLBK) and direct drive (Model VLDK) selections. Extreme Weather package is also available in this model, featuring Miami Dade County approved enclosures. Maximum exhaust temperature for continuous operation is 150°F.

Model VLDK: Direct Drive

Carnes louvered direct driven PRV's are available in capacities from 150 to 4400 CFM. Direct drive offers reduced maintenance and increased efficiency. Optional electronic speed control increases flexibility by providing variable performance over an extended range.



VLDK



VLBK Extreme Weather

Model VLBK: Belt Drive

The Model VLBK belt driven PRV's are available in capacities from 220 to 38,500 CFM. Belt driven units feature wide performance capabilities and readily available motor selections. A variable speed motor sheave simplifies final system balancing. Optional Extreme Weather package is available as well.

▼ TYPICAL SPECIFICATIONS

Roof exhaust ventilators shall be of the centrifugal belt or direct driven type. The wheel and spun venturi shall be a centrifugal design of non-sparking construction. For maximum performance and quiet efficient operation, the wheel shall overlap the inlet venturi and have backward inclined median airfoil blades. The wheels shall be dynamically balanced to assure smooth and vibration-free rotation under maximum loading. The complete drive assembly, including the motor and the wheel, shall be mounted on vibration isolators. Motor and drives shall be factory mounted. All fans shall be test run prior to shipment.

VLBK AND VTBK BELT DRIVE SERIES

Model VLBK Only - Hood construction shall be of heavy extruded aluminum louvers with mitered and welded corners. Lid shall be removable. Extreme Weather package consists of heavy extruded aluminum frame and louvers. Louvers are mechanically fastened and welded to jambs on backside of blade.

Model VTBK Only - Hood construction shall be of heavy galvanized steel (alum. optional). Lid shall be removable.

Motors shall be of the heavy-duty type with permanently lubricated, sealed ball bearings. Motors shall be readily accessible for maintenance. Wheel shaft shall be ground, polished, coated with a rust inhibitive finish and mounted in heavy-duty, permanently sealed pillowblock ball bearings which are capable of 200,000 hours of life, average operation. Drives shall be sized at a minimum of 165% of driven horsepower. Drive belts shall be oil-resistant, non-static and be capable of 25,000 hours of life, average operation. Sheaves shall be full machined cast iron or pressed steel, keyed and securely attached to the shafts. Variable pitch motor sheaves shall be standard.

VLDK AND VTDK DIRECT DRIVE SERIES

Model VLDK Only - Hood construction shall be of heavy extruded aluminum louvers with mitered and welded corners. Lid shall be removable for service.

Model VTDK Only - Hood construction shall be of heavy galvanized steel (aluminum optional). Lid shall be removable.

Motors shall be of the heavy-duty type with permanently lubricated, sealed ball bearings. Motors shall be readily accessible for maintenance. Wheels to be furnished with integral fitting for wheel puller.

Motors through 10 HP shall be factory mounted. The motor shall be factory wired to the disconnect junction box and a disconnect switch shall be supplied. Field wiring of motor, disconnect and conduit are to be in accordance with electrical specifications and local codes. Heavy-gauge welded galvanized birdscreen shall be furnished.

Horsepower and noise levels shall not exceed the published values and oversized motors will not be acceptable.

Centrifugal power roof ventilators shall be Carnes Company Model VLBK or VTBK, belt drive, sizes 06 through 54, or Model VLDK or VTDK, direct drive, sizes 06 through 18, as manufactured at Carnes Company of Verona, Wisconsin.

UL OPTION

Models VL and VT are listed to UL Standard 705 and to CSA Standard C22.2 No. 113-12. File Number E27827. UL listing may be optional and must be specified when required.



**POWER
VENTILATOR**

CONSTRUCTION

FAN HOUSING

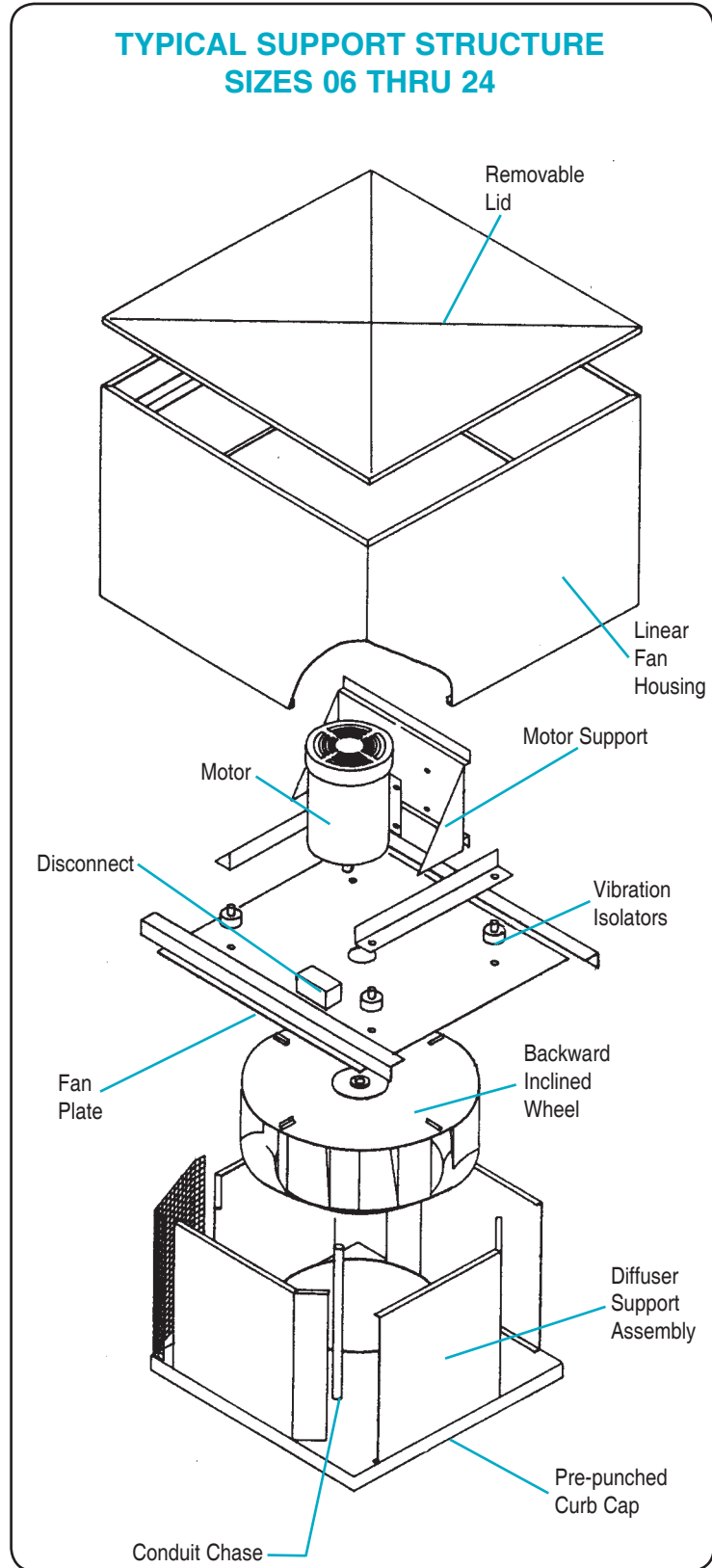
- VL series hoods feature heavy extruded aluminum louvers with mitered and welded corners.
- VT series hoods provide linear appearance constructed of galvanized steel or aluminum.
- Designed for maximum weather protection, windband and diffusers prevent the entrance of inclement weather.
- Easily removable lid utilizes durable threaded fastener retainers.
- Removable lid allows easy access to motor, drives and bearings for maintenance.

MOTOR/ELECTRICAL

- **UL** listing under Standard 705 available as option on most models.
- Motors are **UL** recognized by nationally recognized manufacturers.
- Utility box ship mounted. Safety disconnect and cover plate ship loose for ease of field wiring.
- Motors through 10 HP are factory mounted as standard.

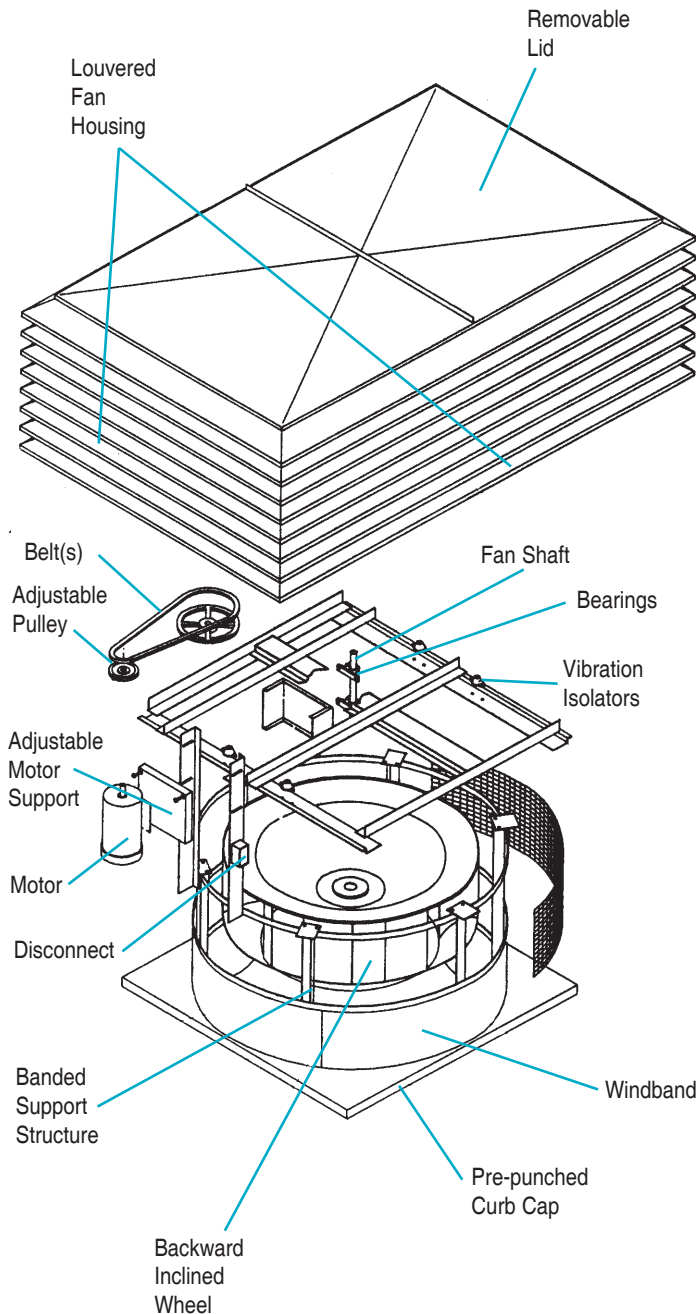
MOTOR SUPPORT ASSEMBLY

- Bolted, heavy-gauge material.
- Easily adjustable belt tension.
- Motor plate accommodates multiple motor frames.
- Isolated from fan plate to reduce vibration and noise transmission.
- Allows horizontal adjustment of wheel.
- Electrically grounded to meet **NEC** and **UL** requirements.



FEATURES

TYPICAL SUPPORT STRUCTURE SIZES 30 THRU 54



BEARINGS/SHAFT

- Dual bearings utilized to properly support the fan shaft.
- Prelubricated sealed, self-aligning.
- Rated at 200,000 hours average operation.
- Polished CRS fan shaft with rust inhibitive coating.
- Eccentric locking collar bearings on fan sizes 06 thru 18.

DRIVES

- Selected for 165% of the motor horsepower.
- Adjustable V-belt drives with oil resistant non-static conducting belts.
- Two belts standard on units 5 HP and larger.
- Factory present fan RPM.
- Adjustable motor sheave allows for final air system balancing.

WHEEL

- Backward inclined wheels constructed of non-corrosive or coated heavy-gauge material. Wheel sizes 6-24 are aluminum, above 24 are steel.
- Self-limiting power characteristics.
- Dynamically balanced and test run in each individual unit.

SUPPORT STRUCTURE

Sizes 06 - 24

- Galvanized or aluminum patented diffuser provides structural integrity and protection against weather entrance.
- Self-sealing diffuser fasteners prevent leakage.

Sizes 30 - 54

- Heavy-gauge coated steel circular bands welded together for structural strength and unit rigidity.
- Aluminum windband provides weather protection and serves as air directional guide.

CURB CAP

- One piece construction with fastened/welded, overlapping corners to ensure strength.
- Pre-punched mounting holes for ease of installation.
- The deep spun venturi is precision matched to the wheel inlet to ensure maximum air flow along with protection from entry of adverse weather elements.

CONSTRUCTION - EXTREME WEATHER

MOTOR SUPPORT ASSEMBLY

- Bolted, heavy-gauge material.
- Easily adjustable to tension belt.
- Motor plate accommodates multiple motor frames.
- Isolated from fan plate to reduce vibration and noise transmission.
- Allows horizontal adjustment on wheel.
- Electrically grounded to meet **NEC** and **UL** requirements.

MOTOR/ELECTRICAL

- **UL** listing under Standard 705 available as option on most models.
- Motors are **UL** recognized by nationally recognized manufacturers.
- Utility box ships mounted. Safety disconnect and cover plate ship loose for ease of field wiring.
- Motors through 10 HP are factory mounted as standard.

BEARING/SHAFT

- Dual bearings utilized to properly support the fan shaft.
- Prelubricated sealed, self-aligning.
- Rated at 200,000 hours average operation.
- Polished CRS fan shaft with rust inhibitive coating.
- Eccentric locking collar bearings on fan sizes 06 thru 18.

DRIVES

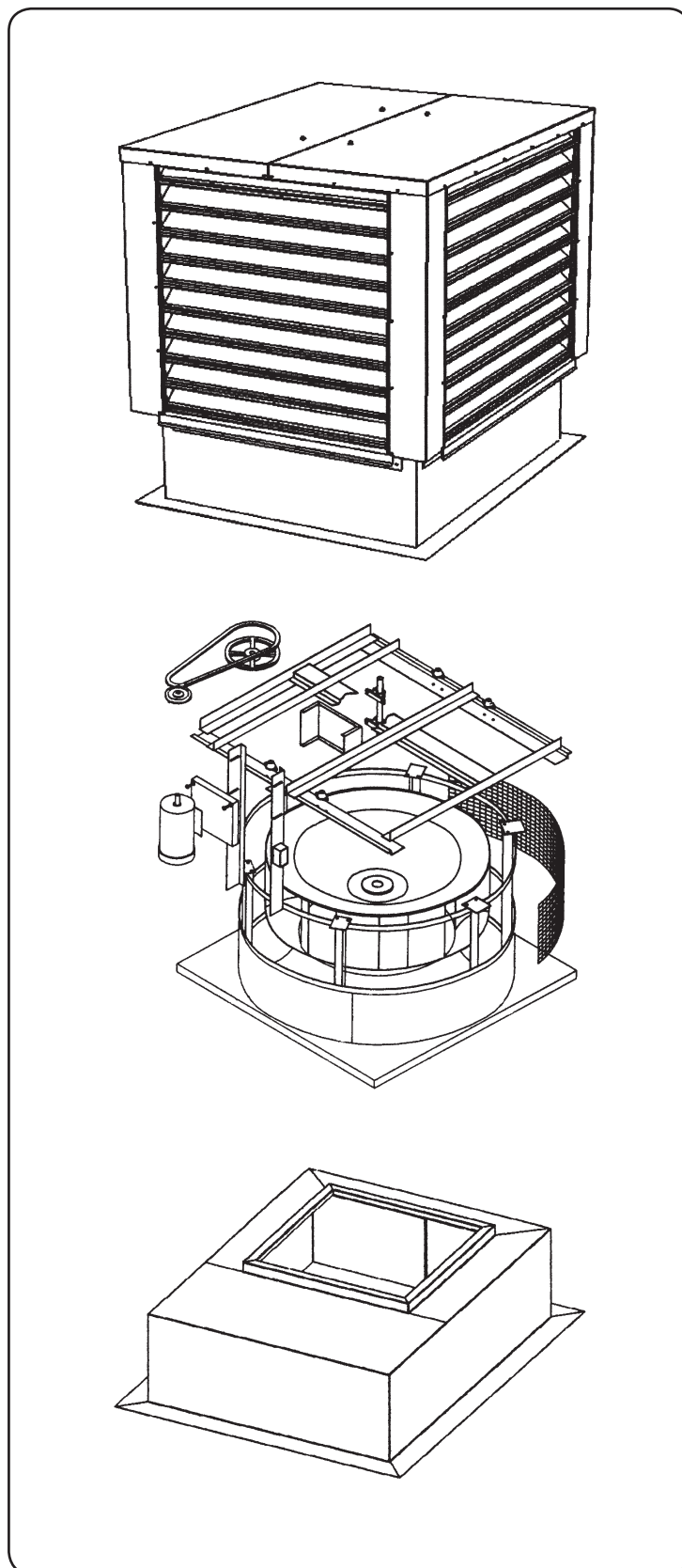
- Selected for 165% of the motor horsepower.
- Adjustable V-belt drives with oil resistant non-static conducting belts.
- Two belts standard on units 5 HP and larger.
- Factory present fan RPM.
- Adjustable motor sheave allows for final air system balancing.

WHEEL

- Backward inclined median airfoil wheels constructed of non-corrosive or coated heavy-gauge material.
- Self-limiting power characteristics.
- Dynamically balanced and test run in each individual unit.

FAN HOUSING

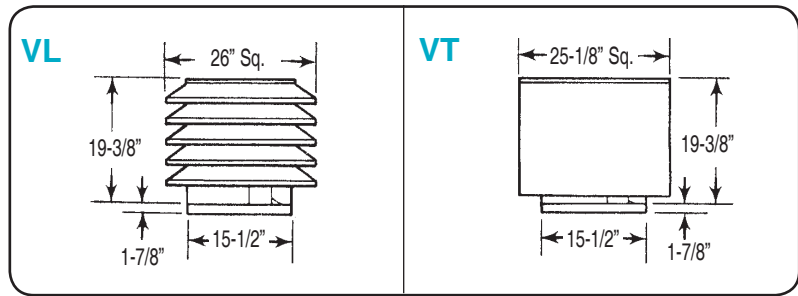
- **Louver Frame:** Heavy-gauge 6"x.125" thick 6063T5 extruded aluminum.
- **Louver Blade:** Drainable design .125" thick 6063T5 extruded aluminum, mechanically fastened and welded to jambs on backside of blade, set on 38° angles (bottom blade opening varies).
- **Roof:** .080" formed aluminum.



Low Silhouette Cent. Roof

VLDK 06 VTDK 06 DIRECT DRIVE

PERFORMANCE DATA



RPM RANGE - Motor HP	RPM	STATIC PRESSURE, INCHES W.G.												
		F3+ 1/20		J2+ 1/8		.000	.125	.250	.375	.500	.625	.750	1.000	1.250
		CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM
SPEED CONTROLLABLE MOTORS**	400	152	.01											
	500	190	.01											
	600	228	.01											
	700	267	.01	122	.01									
	800	305	.01	198	.01									
	900	343	.02	254	.02									
	1000	381	.02	303	.03	182	.03							
	1075 *	409	.03	338	.03	242	.03							
	1100	419	.03	350	.03	260	.04							
	1200	457	.04	393	.04	319	.05	195	.05					
	1300	495	.05	435	.05	373	.06	285	.06					
	1400	533	.06	478	.06	422	.07	352	.07	244	.07			
1500	571	.07	519	.08	469	.08	408	.09	329	.09				
1600 *	609	.09	560	.09	513	.10	461	.10	397	.11	305	.11		
ALL OTHER MOTORS (Non-Speed Controllable) TE, XP, 2 Spd, 230V & All 3 Ph	1140 *	432	.04	347	.04	237	.04							
	1725 *	653	.14	599	.14	541	.14	481	.14	407	.14	319	.14	

DESIGN DATA
 Tip Speed = 2.75 x RPM
 Unit Weight (less Motor) = 45 Lbs.
 Roof Opening = 11" Sq.
 Curb O. D. = 14" Sq.
 Damper Size = 10" Sq.

Performance certified is for installation type A - free inlet, free outlet. Speed (RPM) is nominal. Performance is based on actual speed of test.

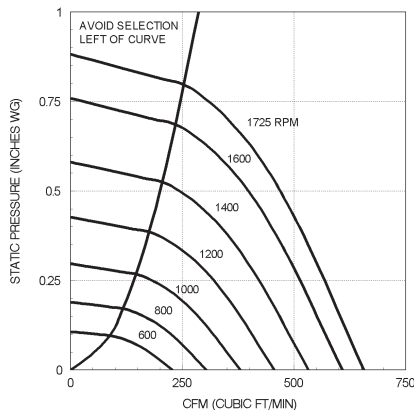
** To be Speed Controllable, motor must have 115/1 ODP. Other voltages and enclosures are non-speed controllable.

- * Base Unit - As run motor speeds.
 - + RPM range capable with solid state speed control.
- Performance ratings do not include the effects of accessories.

The sound power level ratings shown are in decibels, referred to 10⁻¹² watts. Values shown are for inlet L_{wj} sound power levels for installation Type A free inlet, free outlet. Ratings do not include the effects of duct end correction.

The sound ratings shown are loudness values in fan sones at 5 feet (1.5m) in a hemispherical free field. Values shown are for installation Type A, free inlet hemispherical sone levels.

VLDK 06 and VTDK 06 AIR PERFORMANCE

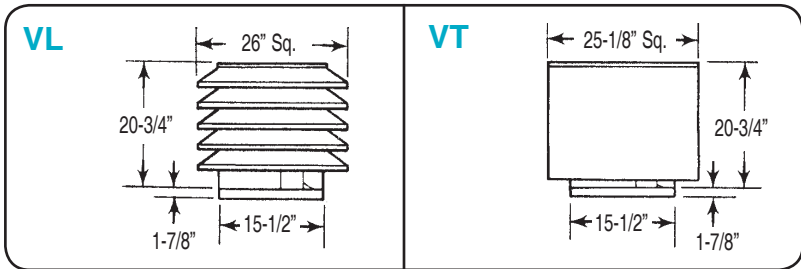


VLDK 06 and VTDK 06 SOUND PERFORMANCE

RPM	SP	SOUND POWER RE 10 ⁻¹² WATTS								LWA
		OCTAVE BANDS								
		1	2	3	4	5	6	7	8	
1075	.000	55	62	53	53	49	50	47	45	57
	.125	54	60	52	53	49	48	45	42	55
	.375	54	60	52	55	51	49	45	41	57
1600	.000	70	69	69	62	61	58	57	55	67
	.250	69	69	68	63	60	57	56	52	66
	.375	69	68	67	62	60	57	55	52	66
	.500	68	68	67	63	61	58	56	52	67
	.625	68	68	67	64	63	59	56	52	67
	.750	68	68	68	64	63	59	56	52	68

VLDK 08 VTDK 08 DIRECT DRIVE

PERFORMANCE DATA



RPM RANGE - Motor HP		RPM	STATIC PRESSURE, INCHES W.G.																			
F3+ 1/20	J2+ 1/8		.000 CFM BHP SONES	.125 CFM BHP SONES	.250 CFM BHP SONES	.375 CFM BHP SONES	.500 CFM BHP SONES	.625 CFM BHP SONES	.750 CFM BHP SONES	1.000 CFM BHP SONES	1.250 CFM BHP SONES											
SPEED CONTROLLABLE MOTORS**		600	315 .01 2.2																			
		675	354 .01 2.6	158 .01 1.2																		
		750	393 .01 3.1	237 .02 1.6																		
		825	433 .02 3.6	295 .02 2.2																		
		900	472 .02 4.1	348 .03 2.7																		
		1000	524 .03 4.8	417 .03 3.5	279 .04 3.2																	
		1075 *	564 .04 5.3	465 .04 4.1	347 .05 3.7																	
		1175	616 .05 6.0	527 .05 5.0	423 .06 4.4	285 .06 4.4																
		1250	656 .06 6.6	573 .06 5.6	476 .07 5.0	369 .07 4.9																
		1325	695 .07 7.2	618 .08 6.3	529 .08 5.6	431 .08 5.4	265 .08 5.5															
		1400	734 .08 7.8	663 .09 6.9	580 .09 6.2	490 .10 6.0	378 .10 6.0															
		1475	773 .10 8.4	707 .10 7.6	629 .11 6.9	544 .11 6.6	453 .12 6.6	276 .11 6.7														
	1550	813 .11 9.0	750 .12 8.2	677 .13 7.6	597 .13 7.2	514 .14 7.1	406 .14 7.2															
	1600 *	839 .12 9.4	778 .13 8.7	708 .14 8.1	633 .14 7.6	553 .15 7.5	464 .15 7.6	249 .14 7.7														
ALL OTHER MOTORS (Non-Speed Controllable) TE, XP, 2 Spd, 230V & All 3 Ph		1140 *	598 .05 5.8	506 .05 4.6	397 .05 4.1	206 .05 4.2																
		1725 *	905 .16 10.5	848 .16 9.8	784 .17 9.2	717 .18 8.7	643 .18 8.6	569 .19 8.5	475 .19 8.7													

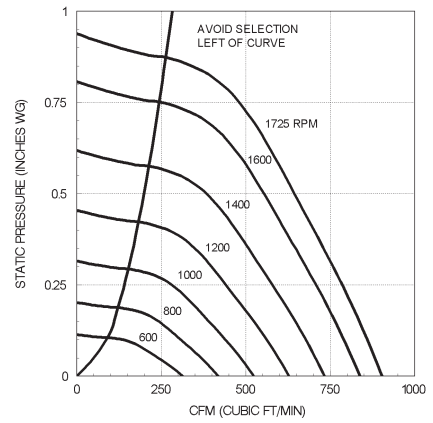
DESIGN DATA
 Tip Speed = 2.75 x RPM
 Unit Weight (less Motor) = 45 Lbs.
 Roof Opening = 11" Sq.
 Curb O. D. = 14" Sq.
 Damper Size = 10" Sq.

Performance certified is for installation type A - free inlet, free outlet. Speed (RPM) is nominal. Performance is based on actual speed of test.
**** To be Speed Controllable, motor must have 115/1 ODP. Other voltages and enclosures are non-speed controllable.**
 * Base Unit - As run motor speeds.
 + RPM range capable with solid state speed control.
 Performance ratings do not include the effects of accessories.

The sound power level ratings shown are in decibels, referred to 10⁻¹² watts. Values shown are for inlet L_{wj} sound power levels for installation Type A free inlet, free outlet. Ratings do not include the effects of duct end correction.

The sound ratings shown are loudness values in fan sones at 5 feet (1.5m) in a hemispherical free field. Values shown are for installation Type A, free inlet hemispherical sone levels.

VLDK 08 and VTDK 08 AIR PERFORMANCE



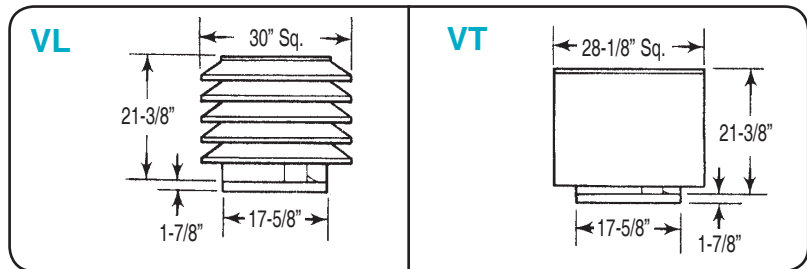
VLDK 08 and VTDK 08 SOUND PERFORMANCE

RPM	SP	SOUND POWER RE 10 ⁻¹² WATTS								LWA
		OCTAVE BANDS								
		1	2	3	4	5	6	7	8	
1075	.000	53	61	53	53	49	49	52	54	59
	.125	54	57	52	53	48	48	48	48	56
	.375	54	59	52	54	51	50	45	41	57
1600	.000	71	68	69	64	60	58	59	61	68
	.250	71	67	67	63	60	57	57	57	66
	.375	71	67	66	63	60	57	56	55	66
	.500	70	67	66	63	61	58	56	54	67
	.625	69	67	67	63	62	59	57	52	67
	.750	69	68	67	63	62	59	57	52	67

Low Silhouette Cent. Roof

VLDK 10 VTDK 10 DIRECT DRIVE

PERFORMANCE DATA



RPM RANGE - Motor HP		RPM	STATIC PRESSURE, INCHES W.G.																							
			.000		.125		.250		.375		.500		.625		.750		1.000		1.250							
F4+	J3+	M2+	P2+		CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP						
1/20	1/8	1/3	1/2																							
SPEED CONTROLLABLE MOTORS**				550	542	.01	317	.02																		
				700	690	.03	547	.04																		
				800	788	.04	666	.05	495	.05																
				825 *	813	.05	694	.05	540	.06																
				900	887	.06	778	.07	660	.08	397	.07														
				975	960	.08	860	.09	755	.10	596	.10														
				1050	1034	.10	941	.11	849	.12	727	.12	492	.12												
				1075 *	1059	.10	968	.11	877	.12	768	.13	570	.13												
				1175	1157	.14	1074	.15	991	.16	901	.17	777	.17	553	.17										
				1275	1256	.17	1179	.19	1103	.20	1026	.21	936	.22	803	.22	568	.21								
				1375	1354	.22	1283	.23	1212	.24	1142	.26	1063	.27	971	.28	835	.27								
				1500	1478	.28	1412	.30	1347	.31	1282	.32	1217	.34	1142	.35	1053	.36	743	.35						
				1575	1551	.33	1489	.34	1427	.36	1365	.37	1304	.38	1236	.40	1163	.41	938	.41	270	.34				
				1625 *	1601	.36	1540	.38	1480	.39	1420	.40	1361	.42	1298	.43	1228	.45	1037	.45	617	.43				
				ALL OTHER MOTORS (Non-Speed Controllable) TE, XP, 2 Spd, 230V & All 3 Ph				1140 *	1123	.12	1037	.13	952	.14	856	.15	718	.16	378	.14						
								1725 *	1699	.43	1642	.45	1586	.46	1529	.48	1473	.49	1416	.51	1354	.52	1205	.54	974	.54

DESIGN DATA
 Tip Speed = 3.27 x RPM
 Unit Weight (less Motor) = 45 Lbs.
 Roof Opening = 11" Sq.
 Curb O. D. = 16" Sq.
 Damper Size = 10" Sq.

Low Silhouette Cent. Roof

Performance certified is for installation type A - free inlet, free outlet. Speed (RPM) is nominal. Performance is based on actual speed of test.

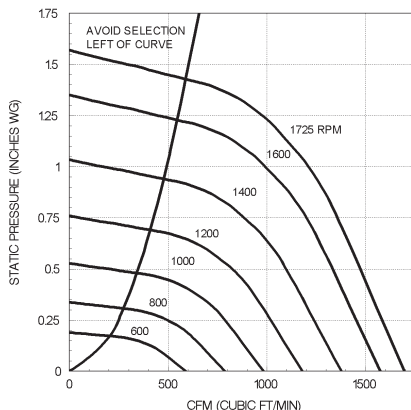
** To be Speed Controllable, motor must have 115/1 ODP. Other voltages and enclosures are non-speed controllable.

- * Base Unit - As run motor speeds.
 - + RPM range capable with solid state speed control.
- Performance ratings do not include the effects of accessories.

The sound power level ratings shown are in decibels, referred to 10⁻¹² watts. Values shown are for inlet L_{wj} sound power levels for installation Type A free inlet, free outlet. Ratings do not include the effects of duct end correction.

The sound ratings shown are loudness values in fan sones at 5 feet (1.5m) in a hemispherical free field. Values shown are for installation Type A, free inlet hemispherical sone levels.

VLDK 10 and VTDK 10 AIR PERFORMANCE



VLDK 10 and VTDK 10 SOUND PERFORMANCE

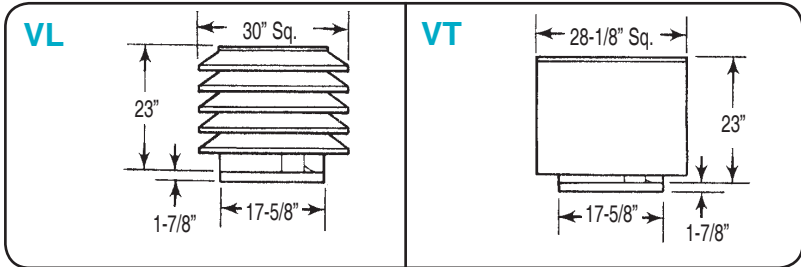
RPM	SP	SOUND POWER RE 10 ⁻¹² WATTS								LWA
		OCTAVE BANDS								
		1	2	3	4	5	6	7	8	
825	.000	53	65	57	51	50	51	44	37	57
	.125	51	62	55	50	48	49	42	35	55
	.375	50	64	52	48	50	51	47	43	57
1075	.000	59	69	67	60	56	57	53	46	64
	.250	57	67	65	58	54	55	50	43	62
	.500	56	67	64	57	55	56	53	48	63
1625	.000	70	72	83	74	66	65	66	59	77
	.500	68	71	80	72	65	63	64	57	75
	1.000	67	70	81	70	64	64	64	59	75

VLDK 12

VTDK 12

DIRECT DRIVE

PERFORMANCE DATA



RPM RANGE - Motor HP					STATIC PRESSURE, INCHES W.G.											
F4+ 1/20	J3+ 1/8	M2+ 1/3	P2+ 1/2	RPM	.000	.125	.250	.375	.500	.625	.750	1.000	1.250			
					CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES		
SPEED CONTROLLABLE MOTORS					550	660 .01 2.0	407 .02 1.7									
					700	840 .03 3.6	680 .03 3.2									
					800	960 .04 4.7	827 .05 4.3	628 .05 4.2								
					825 *	989 .05 5.0	863 .05 4.6	677 .06 4.5								
					900	1079 .06 5.8	967 .07 5.4	814 .07 5.2	513 .07 5.3							
					975	1169 .08 6.6	1067 .09 6.3	937 .09 5.9	759 .10 6.0							
					1050	1259 .10 7.5	1165 .11 7.2	1054 .11 6.9	906 .12 6.8	642 .11 6.9						
					1075 *	1289 .10 7.8	1197 .11 7.5	1090 .12 7.2	951 .13 7.1	741 .13 7.1						
					1175	1409 .14 9.1	1325 .15 8.8	1231 .15 8.5	1117 .16 8.2	974 .17 8.3	723 .16 8.4					
					1275	1529 .17 10.4	1451 .18 10.2	1370 .19 9.9	1274 .21 9.6	1155 .21 9.5	1013 .21 9.8	736 .20 9.8				
					1375	1649 .22 12.3	1577 .23 12.0	1504 .24 11.7	1418 .25 11.4	1319 .26 11.2	1207 .27 11.2	1066 .27 11.3				
					1500	1799 .28 14.8	1733 .30 14.5	1666 .31 14.2	1593 .32 13.9	1512 .33 13.6	1414 .34 13.5	1310 .35 13.6	978 .34 13.8			
					1575	1889 .33 16.4	1826 .34 16.2	1763 .35 15.9	1697 .36 15.6	1619 .38 15.4	1536 .39 15.1	1437 .40 15.2	1206 .40 15.4	267 .26 15.8		
					1625 *	1949 .36 17.5	1888 .37 17.3	1827 .39 17.0	1765 .40 16.8	1690 .41 16.5	1615 .43 16.2	1520 .43 16.2	1305 .44 16.4	814 .40 16.8		
					ALL OTHER MOTORS (Non-Speed Controllable)					1140 *	1367 .13 8.6	1280 .13 8.3	1182 .14 8.0	1060 .15 7.8	905 .15 7.9	500 .13 8.0
TE, XP, 2 Spd, 230V & All 3 Ph					1725 *	2069 .43 19.4	2011 .45 19.2	1954 .46 18.9	1896 .47 18.6	1830 .49 18.4	1759 .50 18.1	1682 .51 17.9	1499 .53 18.1	1247 .52 18.3		

DESIGN DATA
 Tip Speed = 3.27 x RPM
 Unit Weight (less Motor) = 50 Lbs.
 Roof Opening = 13" Sq.
 Curb O. D. = 16" Sq.
 Damper Size = 12" Sq.

Performance certified is for installation type A - free inlet, free outlet. Speed (RPM) is nominal. Performance is based on actual speed of test.

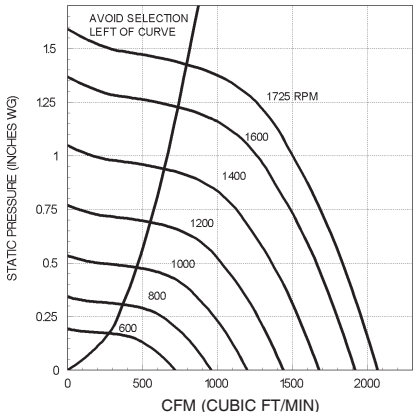
** To be Speed Controllable, motor must have 115/1 ODP. Other voltages and enclosures are non-speed controllable.

* Base Unit - As run motor speeds.
 + RPM range capable with solid state speed control.
 Performance ratings do not include the effects of accessories.

The sound power level ratings shown are in decibels, referred to 10⁻¹² watts. Values shown are for inlet L_{wj} sound power levels for installation Type A free inlet, free outlet. Ratings do not include the effects of duct end correction.

The sound ratings shown are loudness values in fan sones at 5 feet (1.5m) in a hemispherical free field. Values shown are for installation Type A, free inlet hemispherical sone levels.

VLDK 12 and VTDK 12 AIR PERFORMANCE



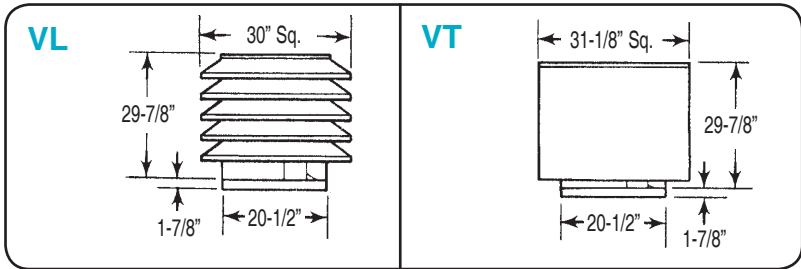
VLDK 12 and VTDK 12 SOUND PERFORMANCE

RPM	SP	SOUND POWER RE 10 ⁻¹² WATTS								
		OCTAVE BANDS								
		1	2	3	4	5	6	7	8	LWA
825	.000	62	67	57	56	56	53	48	43	61
	.125	62	66	55	55	55	52	47	42	59
	.375	64	67	54	54	54	51	47	43	59
1075	.000	69	72	66	63	63	60	55	50	67
	.250	68	72	64	61	61	59	54	49	66
	.500	71	72	63	60	60	58	54	50	65
1625	.000	82	82	85	74	72	71	67	62	80
	.500	81	81	84	72	70	69	66	61	79
	1.000	81	83	84	71	69	68	66	61	79

Low Silhouette Cent. Roof

VLDK 15 VTDK 15 DIRECT DRIVE

PERFORMANCE DATA



RPM RANGE - Motor HP		RPM	STATIC PRESSURE, INCHES W.G.								
K4+ 1/6	M3+ 1/3		.000 CFM BHP SONES	.125 CFM BHP SONES	.250 CFM BHP SONES	.375 CFM BHP SONES	.500 CFM BHP SONES	.625 CFM BHP SONES	.750 CFM BHP SONES	1.000 CFM BHP SONES	1.250 CFM BHP SONES
SPEED CONTROLLABLE MOTORS**		450	1011 .02 2.0	585 .03 1.6							
		500	1124 .03 2.7	786 .04 2.2							
		550	1236 .04 3.5	945 .05 3.0							
		600	1349 .06 4.2	1086 .06 3.8	625 .06 3.6						
		650	1461 .07 5.0	1225 .08 4.5	891 .08 4.3						
		700	1573 .09 5.7	1360 .10 5.2	1086 .10 4.8	251 .06 4.9					
		750	1686 .11 6.4	1493 .12 6.0	1256 .12 5.6	856 .12 5.5					
		800	1798 .13 7.2	1621 .14 6.8	1400 .15 6.5	1109 .14 6.2					
		825 *	1854 .15 7.6	1682 .15 7.3	1471 .16 6.9	1212 .16 6.6	577 .13 6.5				
		875	1967 .17 8.5	1804 .18 8.2	1610 .19 7.8	1393 .19 7.5	1041 .18 7.4				
		925	2079 .21 9.5	1926 .22 9.2	1748 .22 8.8	1557 .23 8.5	1286 .22 8.4	700 .18 8.3			
		975	2191 .24 10.6	2046 .25 10.3	1883 .26 9.9	1701 .26 9.6	1482 .26 9.3	1145 .25 9.3			
		1025	2304 .28 11.7	2165 .29 11.4	2017 .30 11.1	1841 .31 10.7	1661 .31 10.4	1396 .30 10.5	931 .26 10.6		
		1075 *	2416 .32 13.0	2284 .33 12.8	2149 .34 12.5	1981 .35 12.2	1818 .35 11.9	1602 .35 11.7	1294 .34 11.8		
ALL OTHER MOTORS (Non-Speed Controllable) TE, XP, 2 Spd, 230V & All 3 Ph		1140 *	2562 .38 14.9	2438 .40 14.7	2313 .41 14.4	2160 .42 14.1	2004 .42 13.8	1836 .42 13.5	1608 .42 13.6	346 .25 13.6	

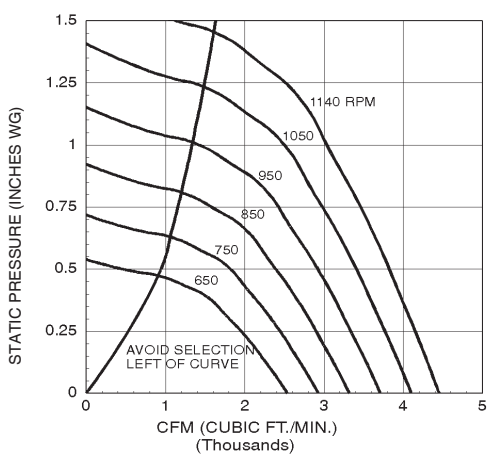
DESIGN DATA
 Tip Speed = 4.06 x RPM
 Unit Weight (less Motor) = 65 Lbs.
 Roof Opening = 16" Sq.
 Curb O. D. = 19" Sq.
 Damper Size = 15" Sq.

Performance certified is for installation type A - free inlet, free outlet. Speed (RPM) is nominal. Performance is based on actual speed of test.
**** To be Speed Controllable, motor must have 115/1 ODP. Other voltages and enclosures are non-speed controllable.**
 * Base Unit - As run motor speeds.
 + RPM range capable with solid state speed control.
 Performance ratings do not include the effects of accessories.

The sound power level ratings shown are in decibels, referred to 10⁻¹² watts. Values shown are for inlet L_{wj} sound power levels for installation Type A free inlet, free outlet. Ratings do not include the effects of duct end correction.

The sound ratings shown are loudness values in fan sones at 5 feet (1.5m) in a hemispherical free field. Values shown are for installation Type A, free inlet hemispherical sone levels.

VLDK 15 and VTDK 15 AIR PERFORMANCE



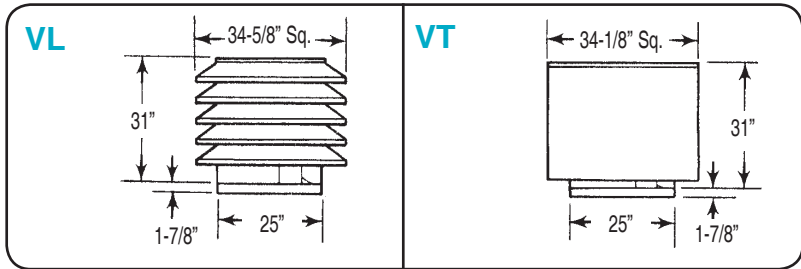
VLDK 15 and VTDK 15 SOUND PERFORMANCE

RPM	SP	SOUND POWER RE 10 ⁻¹² WATTS								
		OCTAVE BANDS								
		1	2	3	4	5	6	7	8	LWA
825	.000	74	71	69	63	61	58	52	45	67
	.125	74	70	68	62	60	57	51	44	66
	.250	74	70	67	61	59	56	50	44	65
	.500	74	71	65	59	58	56	50	43	64
	.750	73	73	64	57	58	57	51	41	64
1075	.000	78	82	79	71	68	66	60	53	75
	.125	78	82	78	70	67	65	60	53	75
	.500	79	81	77	68	65	62	58	52	73
	.750	78	82	77	66	64	62	58	51	73
	1.000	77	82	77	64	64	63	60	57	73

Low Silhouette Cent. Roof

VLDK 18 VTDK 18 DIRECT DRIVE

PERFORMANCE DATA



RPM RANGE - Motor HP		RPM	STATIC PRESSURE, INCHES W.G.														
M4+ 1/3	* R3+ 3/4		.000 CFM BHP SONES	.125 CFM BHP SONES	.250 CFM BHP SONES	.375 CFM BHP SONES	.500 CFM BHP SONES	.625 CFM BHP SONES	.750 CFM BHP SONES	1.000 CFM BHP SONES	1.250 CFM BHP SONES						
SPEED CONTROLLABLE MOTORS**		600	2343 6.7	.14 6.1	2043 5.7	.15 5.5	1683 5.5	.15 5.5	1098 5.5	.14 5.5	DESIGN DATA Tip Speed = 4.94 x RPM Unit Weight (less Motor) = 80 Lbs. Roof Opening = 20-1/2" Sq. Curb O. D. = 23-1/2" Sq. Damper Size = 19" Sq.						
		650	2538 7.8	.18 7.4	2265 7.0	.19 7.0	1949 7.0	.19 7.0	1570 6.8	.19 6.7							
		700	2734 9.2	.22 8.8	2482 10.4	.23 10.4	2208 10.4	.24 10.4	1868 9.9	.23 9.7			1357 8.0				
		750	2929 10.7	.27 10.4	2696 12.1	.28 12.1	2441 11.9	.29 11.9	2143 11.7	.29 11.4			1809 11.4	1101 9.5			
		800	3124 12.4	.33 12.1	2907 12.1	.34 12.1	2670 11.9	.35 11.9	2407 11.7	.36 11.4			2109 11.4	1692 11.2			
		825 *	3222 13.3	.36 13.0	3012 13.0	.37 13.0	2783 12.8	.38 12.8	2537 12.6	.39 12.4			2253 12.4	1940 12.2	1251 12.0		
		875	3417 14.6	.43 14.3	3221 14.3	.45 14.3	3007 14.1	.46 14.1	2787 13.8	.46 13.6			2522 13.6	2243 13.4	1840 13.3		
		925	3612 15.7	.51 15.4	3428 15.4	.53 15.4	3228 15.2	.54 15.2	3020 15.0	.55 14.8			2786 14.8	2533 14.6	2255 14.5	779 14.5	
		975	3807 16.9	.59 16.6	3635 16.6	.61 16.6	3446 16.4	.63 16.4	3249 16.2	.64 15.9			3044 15.9	2802 15.7	2554 15.7	1732 15.8	
		1025	4003 18.1	.69 17.8	3839 17.8	.71 17.8	3661 17.6	.72 17.6	3475 17.4	.74 17.1			3287 17.1	3067 17.0	2839 16.8	2271 17.0	674 17.1
1075 *	4198 19.3	.80 19.0	4042 19.0	.82 19.0	3873 18.8	.83 18.8	3698 18.6	.84 18.4	3519 18.4	3326 18.2	3107 18.1	2646 18.2	1743 18.5				
ALL OTHER MOTORS (NON-SPEED CONTROLLABLE) TE, XP, 2 SPD, 230V, & ALL 3 Ph		1140 *	4452 21	.95 21	4305 21	.97 21	4148 21	.99 20	3985 20	1.00 20	3816 19.9	1.01 19.7	3646 20	1.03 20	3449 20	3033 20	2479 20

Performance certified is for installation type A - free inlet, free outlet. Speed (RPM) is nominal. Performance is based on actual speed of test.

** To be Speed Controllable, motor must have 115/1 ODP. Other voltages and enclosures are non-speed controllable.

* Base Unit - As run motor speeds.

+ RPM range capable with solid state speed control.

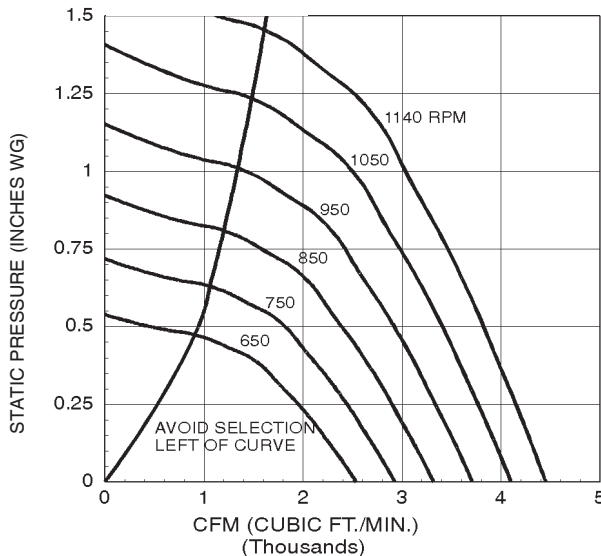
Performance ratings do not include the effects of accessories.

The sound power level ratings shown are in decibels, referred to 10⁻¹² watts. Values shown are for inlet L_{Wj} sound power levels for installation Type A free inlet, free outlet. Ratings do not include the effects of duct end correction.

The sound ratings shown are loudness values in fan sones at 5 feet (1.5m) in a hemispherical free field. Values shown are for installation Type A, free inlet hemispherical sone levels.

*NOTE: R3 motors are specifically designed to operate through the above performance range. The motor will not be damaged or harmed at the higher BHP values.

VLDK 18 and VTDK 18 AIR PERFORMANCE

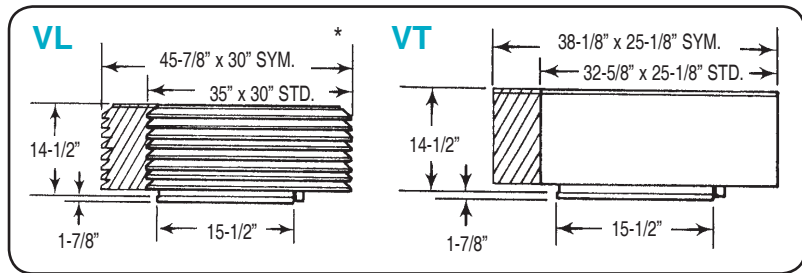


VLDK 18 and VTDK 18 SOUND PERFORMANCE

RPM	SP	SOUND POWER RE 10 ⁻¹² WATTS								LWA
		OCTAVE BANDS								
		1	2	3	4	5	6	7	8	
825	.000	75	84	73	70	67	67	61	52	75
	.125	76	85	73	70	66	66	59	51	74
	.250	76	85	72	69	65	64	58	49	74
	.500	77	85	71	68	63	61	54	46	73
	.750	81	84	71	68	62	59	53	47	72
1075	.000	79	89	84	78	74	73	69	61	82
	.250	79	89	84	77	73	72	67	59	81
	.500	80	89	84	76	72	70	65	57	81
	.750	81	90	83	76	71	68	63	56	80
	1.000	84	90	83	76	71	67	62	55	80

VLBK 06 VTBK 06 BELT DRIVE

PERFORMANCE DATA



RPM Range - Motor HP	RPM	STATIC PRESSURE, INCHES W. G.											
		.000	.125	.250	.375	.500	.625	.750	1.000	1.250	1.500	1.750	2.000
K1 (1/6)		CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES
K2 (1/6)	600	228 .00 1.0											
	700	267 .01 1.5	122 .01 1.3										
K3 (1/6)	800	305 .01 2.2	198 .01 1.8										
	900	343 .02 2.8	254 .02 2.4										
K4 (1/6)	1000	381 .02 3.5	303 .03 3.0	182 .03 3.3									
	1100	419 .03 4.1	350 .03 3.7	260 .04 3.8									
K5 (1/6)	1200	457 .04 4.9	393 .04 4.4	319 .05 4.4	195 .05 4.7								
	1300	495 .05 5.6	435 .05 5.2	373 .06 5.0	285 .06 5.3								
L1 (1/4)	1400	533 .06 6.4	478 .06 6.0	422 .07 5.7	352 .07 5.9	244 .07 6.1							
	1500	571 .07 7.2	519 .08 6.8	469 .08 6.5	408 .09 6.5	329 .09 6.8							
M1 (1/3)	1550	590 .08 7.6	540 .09 7.2	492 .09 6.9	435 .10 6.9	363 .10 7.1	253 .10 7.3						
	1600	609 .09 8.0	560 .09 7.7	513 .10 7.4	461 .10 7.3	397 .11 7.4	305 .11 7.7						
P1 (1/2)	1650	628 .10 8.5	581 .10 8.1	535 .11 7.9	485 .11 7.7	426 .12 7.8	349 .12 8.0						
	1700	647 .11 9.0	601 .11 8.7	556 .12 8.4	509 .12 8.1	453 .13 8.2	383 .13 8.4	280 .13 8.6					
M1 (1/3)	1750	666 .12 9.5	621 .12 9.2	578 .13 8.9	533 .13 8.6	481 .14 8.7	418 .14 8.8	331 .14 9.0					
	1800	685 .13 10.0	642 .13 9.7	599 .14 9.4	557 .15 9.1	509 .15 9.1	451 .15 9.3	376 .16 9.4					
M1 (1/3)	1850	704 .14 10.5	662 .14 10.3	621 .15 10.0	580 .16 9.7	533 .16 9.6	479 .17 9.7	412 .17 9.8					
	1900	724 .15 11.1	682 .16 10.8	642 .16 10.5	603 .17 10.3	558 .17 10.1	507 .18 10.2	446 .18 10.4					
M1 (1/3)	1950	743 .16 11.8	702 .17 11.4	663 .18 11.1	624 .18 10.8	582 .19 10.6	534 .19 10.7	480 .20 10.8	307 .20 11.1				
	2000	762 .18 12.4	722 .18 12.1	684 .19 11.8	646 .20 11.5	606 .20 11.2	561 .21 11.2	510 .21 11.3	364 .21 11.6				
M1 (1/3)	2050	781 .19 12.9	742 .20 12.7	705 .20 12.4	668 .21 12.1	630 .22 11.8	587 .22 11.7	538 .23 11.9	409 .23 12.1				
	2100	800 .20 13.6	762 .21 13.3	725 .22 13.0	689 .22 12.7	653 .23 12.4	612 .24 12.3	565 .24 12.4	450 .25 12.7				
M1 (1/3)	2150	819 .22 14.2	782 .23 13.9	746 .23 13.6	711 .24 13.3	676 .25 13.0	636 .25 12.8	592 .26 12.9	485 .26 13.2	284 .26 13.4			
	2200	838 .23 14.7	801 .24 14.4	767 .25 14.1	732 .26 13.7	699 .26 13.4	660 .27 13.2	621 .27 13.3	519 .28 13.5	368 .28 13.8			
M1 (1/3)	2250	857 .25 15.2	821 .26 14.9	787 .26 14.6	754 .27 14.3	720 .28 14.0	684 .29 13.7	646 .29 13.7	553 .30 14.0	419 .30 14.3			
	2300	876 .27 15.7	841 .28 15.4	808 .28 15.1	775 .29 14.9	742 .30 14.6	708 .30 14.3	670 .31 14.2	583 .32 14.4	464 .32 14.7			
M1 (1/3)	2350	895 .29 16.2	861 .29 15.9	828 .30 15.6	796 .31 15.4	764 .32 15.1	731 .32 14.9	694 .33 14.7	611 .34 14.9	505 .35 15.1	296 .34 15.3		
	2400	914 .31 16.7	880 .31 16.4	849 .32 16.2	817 .33 15.9	785 .34 15.7	754 .34 15.4	718 .35 15.2	639 .36 15.4	539 .37 15.6	390 .37 15.8		
M1 (1/3)	2450	933 .32 17.2	900 .33 16.9	869 .34 16.7	838 .35 16.4	807 .36 16.2	778 .36 16.0	742 .37 15.8	666 .38 15.9	574 .39 16.1	446 .39 16.3		
	2500	952 .34 17.7	920 .35 17.4	889 .36 17.2	859 .37 17.0	828 .38 16.8	798 .39 16.5	766 .39 16.3	693 .40 16.3	607 .41 16.5	491 .42 16.7		

DESIGN DATA

Max BHP = $.027 \times \left[\frac{\text{RPM}}{1000} \right]^3$

Tip Speed = 2.75 x RPM
 Max. Motor Frame Size = 56
 Unit Weight (less motor) = 45 lbs.

Roof Opening = 11" Sq.
 Curb O. D. = 14" Sq.
 Damper Size = 10" Sq.

Performance certified is for installation type A - free inlet, free outlet.
 Performance ratings (bhp) do not include transmission losses.
 Performance ratings do not include the effects of accessories.

The sound ratings shown are loudness values in fan sones at 5 feet (1.5m) in a hemispherical free field. Values shown are for installation type A, free inlet hemispherical sone levels.
 * For Extreme Weather dimensions, please see page 157.

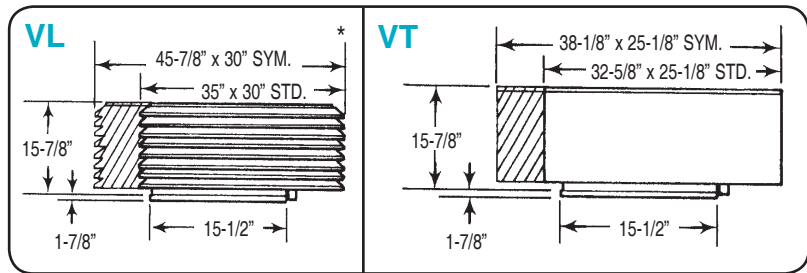
Low Silhouette Cent. Roof

VLBK 08

VTBK 08

BELT DRIVE

PERFORMANCE DATA



RPM Range - Motor HP		STATIC PRESSURE, INCHES W. G.												
K1 (1/6)	RPM	.000	.125	.250	.375	.500	.625	.750	1.000	1.250	1.500	1.750	2.000	
		CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES
K2 (1/6)	650	341 .01 2.5												
	750	393 .01 3.1	237 .02 1.6											
K3 (1/6)	850	446 .02 3.8	313 .02 2.4											
	950	498 .03 4.5	383 .03 3.1	214 .03 2.9										
K4 (1/6)	1050	551 .04 5.2	449 .04 3.9	326 .04 3.5										
	1150	603 .05 5.8	512 .05 4.7	405 .05 4.2	234 .05 4.3									
L1 (1/4)	1250	656 .06 6.6	573 .06 5.6	476 .07 5.0	369 .07 4.9									
	1350	708 .07 7.4	633 .08 6.5	546 .08 5.8	452 .09 5.6	315 .09 5.7								
M1 (1/3)	1450	760 .09 8.2	692 .10 7.4	613 .10 6.7	526 .11 6.4	431 .11 6.4								
	1500	787 .10 8.6	721 .11 7.8	645 .11 7.1	562 .12 6.8	473 .12 6.8	334 .12 6.8							
P1 (1/2)	1550	813 .11 9.0	750 .12 8.2	677 .13 7.6	597 .13 7.2	514 .14 7.1	406 .14 7.2							
	1600	839 .12 9.4	778 .13 8.7	708 .14 8.1	633 .14 7.6	553 .15 7.5	464 .15 7.6	249 .14 7.7						
PI (1/2)	1650	865 .14 9.8	806 .14 9.2	739 .15 8.5	667 .15 8.1	590 .16 8.0	507 .16 8.0	379 .16 8.0						
	1700	891 .15 10.3	834 .16 9.6	769 .16 9.0	700 .17 8.5	626 .17 8.4	548 .18 8.3	447 .18 8.4						
	1750	918 .16 10.7	862 .17 10.0	800 .18 9.5	734 .18 8.9	661 .19 8.8	589 .19 8.7	505 .20 8.9						
	1800	944 .18 11.1	890 .19 10.5	830 .19 9.9	766 .20 9.4	696 .20 9.2	627 .21 9.2	549 .21 9.3						
	1850	970 .19 11.6	917 .20 11.0	860 .21 10.4	798 .21 10.0	732 .22 9.6	663 .23 9.6	590 .23 9.7	296 .22 9.9					
	1900	996 .21 12.0	945 .22 11.5	890 .22 10.9	830 .23 10.4	766 .24 10.1	699 .24 10.0	631 .25 10.1	427 .25 10.4					
	1950	1023 .23 12.5	972 .23 11.9	919 .24 11.4	861 .25 10.9	800 .25 10.6	734 .26 10.5	670 .27 10.5	501 .27 10.9					
	2000	1049 .24 12.9	1000 .25 12.4	949 .26 11.9	892 .27 11.5	834 .27 11.0	770 .28 11.0	707 .29 11.0	558 .29 11.4					
	2050	1075 .26 13.4	1027 .27 12.9	978 .28 12.4	923 .29 12.0	867 .29 11.6	806 .30 11.4	743 .31 11.5	610 .32 11.9					
	2100	1101 .28 13.9	1055 .29 13.4	1007 .30 12.9	953 .31 12.5	899 .32 12.1	840 .32 11.9	779 .33 12.0	652 .34 12.4	428 .33 12.7				
	2150	1127 .30 14.4	1082 .31 13.8	1037 .32 13.4	983 .33 13.0	930 .34 12.6	874 .34 12.3	814 .35 12.4	693 .36 12.8	527 .36 13.2				
	2200	1154 .32 14.8	1109 .33 14.3	1065 .34 13.9	1014 .35 13.5	962 .36 13.1	908 .37 12.8	849 .37 12.8	734 .39 13.2	583 .39 13.6				
	2250	1180 .35 15.3	1136 .36 14.8	1093 .37 14.4	1044 .38 14.0	993 .38 13.7	941 .39 13.3	886 .39 13.3	773 .41 13.6	640 .42 14.0				
	2300	1206 .37 15.8	1164 .38 15.3	1121 .39 14.9	1074 .40 14.5	1024 .41 14.2	974 .42 13.9	920 .42 13.7	808 .44 14.0	688 .44 14.4	468 .44 14.6			
	2350	1232 .40 16.3	1191 .41 15.9	1149 .42 15.4	1103 .43 15.0	1055 .43 14.7	1006 .44 14.4	954 .45 14.2	846 .46 14.4	730 .48 14.8	569 .47 15.1			
	2400	1259 .42 16.8	1218 .43 16.4	1177 .44 16.0	1133 .45 15.6	1085 .46 15.2	1038 .47 14.9	988 .48 14.6	882 .49 14.8	772 .50 15.2	627 .51 15.6			
	2450	1285 .45 17.2	1245 .46 16.9	1205 .47 16.5	1162 .48 16.2	1116 .49 15.8	1069 .50 15.5	1021 .50 15.2	917 .52 15.3	813 .53 15.6	684 .54 16.0	401 .51 16.2		
	2500	1311 .48 17.7	1272 .49 17.4	1233 .50 17.0	1192 .51 16.7	1146 .52 16.4	1100 .53 16.0	1054 .53 15.7	953 .55 15.7	852 .57 16.0	738 .58 16.4	538 .56 16.7		

DESIGN DATA

Max BHP = .037 x $\left[\frac{\text{RPM}}{1000}\right]^3$

Tip Speed = 2.75 x RPM

Max. Motor Frame Size = 56

Unit Weight (less motor) = 45 lbs.

Roof Opening = 11" Sq.

Curb O. D. = 14" Sq.

Damper Size = 10" Sq.

Performance certified is for installation type A - free inlet, free outlet.
 Performance ratings (bhp) do not include transmission losses.
 Performance ratings do not include the effects of accessories.

The sound ratings shown are loudness values in fan sones at 5 feet (1.5m) in a hemispherical free field. Values shown are for installation type A, free inlet hemispherical sone levels.
 * For Extreme Weather dimensions, please see page 157.

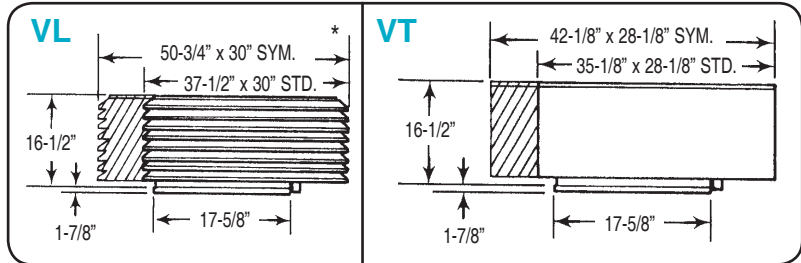
Low Silhouette Cent. Roof

VLBK 10

VTBK 10

BELT DRIVE

PERFORMANCE DATA



RPM Range - Motor HP		STATIC PRESSURE, INCHES W. G.												
K1 (1/6)	RPM	.000	.250	.500	.750	1.000	1.250	1.500	1.750	2.000	2.250	2.500	2.750	
		CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES
K2 (1/6)	650	640 .02 2.3												
	750	739 .04 3.3	372 .04 3.1											
L1 (1/4)	850	837 .05 4.3	582 .07 3.8											
	950	936 .07 5.3	724 .09 4.6											
M1 (1/3)	1050	1034 .10 6.2	849 .12 5.4	492 .12 5.7										
	1150	1133 .13 7.4	963 .15 6.5	735 .16 6.5										
P1 (1/2)	1250	1231 .16 8.6	1075 .19 7.7	901 .21 7.6	423 .19 7.7									
	1350	1330 .21 9.9	1185 .23 9.0	1032 .25 8.7	783 .26 8.8									
R1 (3/4)	1400	1379 .23 10.7	1239 .26 9.7	1095 .28 9.3	886 .29 9.5									
	1450	1428 .26 11.4	1293 .28 10.4	1157 .31 9.9	970 .32 10.1	531 .30 10.3								
S1 (1)	1500	1478 .28 12.1	1347 .31 11.1	1217 .34 10.5	1053 .36 10.8	743 .35 11.0								
	1550	1527 .31 12.9	1401 .34 11.9	1275 .37 11.2	1131 .39 11.4	886 .39 11.6								
T1 (1-1/2)	1600	1576 .34 13.7	1454 .37 12.6	1332 .40 12.0	1196 .43 12.0	989 .43 12.3	447 .39 12.5							
	1650	1625 .38 14.6	1507 .41 13.4	1389 .44 12.8	1259 .47 12.8	1080 .48 13.0	745 .46 13.3							
S1 (1)	1700	1675 .41 15.4	1559 .44 14.3	1445 .47 13.6	1322 .50 13.5	1163 .52 13.8	902 .51 14.0							
	1750	1724 .45 16.1	1612 .48 15.0	1501 .51 14.4	1385 .54 14.1	1246 .57 14.3	1026 .56 14.5	470 .51 14.8						
S1 (1)	1800	1773 .49 16.8	1664 .52 15.6	1556 .55 15.0	1448 .59 14.6	1319 .62 14.8	1131 .62 15.0	795 .58 15.3						
	1850	1822 .53 17.5	1717 .57 16.3	1611 .60 15.6	1506 .63 15.1	1384 .66 15.3	1216 .67 15.5	950 .66 15.8						
S1 (1)	1900	1872 .58 18.1	1769 .61 17.0	1666 .64 16.2	1564 .68 15.6	1447 .71 15.8	1300 .73 16.0	1089 .72 16.2	578 .67 16.4					
	1950	1921 .62 18.7	1820 .66 17.6	1720 .69 16.9	1621 .73 16.3	1511 .76 16.3	1382 .79 16.4	1192 .78 16.6	875 .76 16.8					
T1 (1-1/2)	2000	1970 .67 19.2	1872 .71 18.2	1775 .74 17.4	1677 .78 16.9	1573 .82 16.7	1459 .85 16.9	1287 .85 17.0	1032 .83 17.2	403 .72 17.3				
	2050	2019 .73 19.8	1924 .76 18.8	1829 .80 18.0	1734 .83 17.5	1635 .87 17.2	1523 .90 17.4	1371 .91 17.5	1171 .90 17.6	747 .85 17.8				
T1 (1-1/2)	2100	2069 .78 20	1975 .82 19.4	1882 .85 18.6	1790 .89 18.1	1697 .93 17.7	1587 .96 17.8	1454 .98 18.0	1275 .98 18.1	984 .95 18.2				
	2150	2118 .84 21	2027 .87 20	1936 .91 19.2	1845 .95 18.7	1755 .99 18.2	1651 1.03 18.3	1536 1.05 18.4	1373 1.05 18.5	1140 1.03 18.7	624 .96 18.8			
T1 (1-1/2)	2200	2167 .90 22	2078 .93 21	1989 .97 20	1901 1.01 19.5	1812 1.05 18.9	1714 1.09 18.8	1610 1.13 18.9	1457 1.13 19.0	1270 1.12 19.1	946 1.06 19.2			
	2250	2216 .96 23	2129 1.00 22	2042 1.04 21	1956 1.08 20	1869 1.12 19.7	1776 1.16 19.5	1674 1.19 19.5	1541 1.21 19.6	1373 1.20 19.6	1115 1.18 19.7	545 1.05 19.7		
T1 (1-1/2)	2300	2266 1.02 23	2180 1.06 23	2095 1.10 22	2011 1.15 21	1926 1.19 21	1838 1.23 20	1738 1.27 20	1623 1.29 20	1470 1.29 20	1270 1.27 20	884 1.21 20		
	2350	2315 1.09 24	2232 1.13 23	2148 1.17 23	2065 1.22 22	1983 1.26 22	1900 1.30 21	1802 1.34 21	1705 1.38 21	1555 1.37 21	1381 1.36 21	1107 1.34 21	505 1.18 21	
T1 (1-1/2)	2400	2364 1.16 25	2283 1.21 24	2201 1.25 24	2120 1.29 23	2039 1.33 22	1958 1.38 22	1865 1.42 22	1769 1.46 22	1638 1.46 22	1484 1.46 22	1263 1.44 22	853 1.36 22	
	2450	2413 1.24 26	2333 1.28 25	2254 1.32 24	2174 1.37 24	2095 1.41 23	2015 1.45 23	1927 1.50 23	1834 1.54 23	1721 1.56 23	1577 1.56 23	1400 1.54 23	1114 1.51 23	

DESIGN DATA

Max BHP = .106 x $\left[\frac{\text{RPM}}{1000}\right]^3$

Tip Speed = 3.27 x RPM

Max. Motor Frame Size = 145T

Unit Weight (less motor) = 50 lbs.

Roof Opening = 13" Sq.

Curb O. D. = 16" Sq.

Damper Size = 12" Sq.

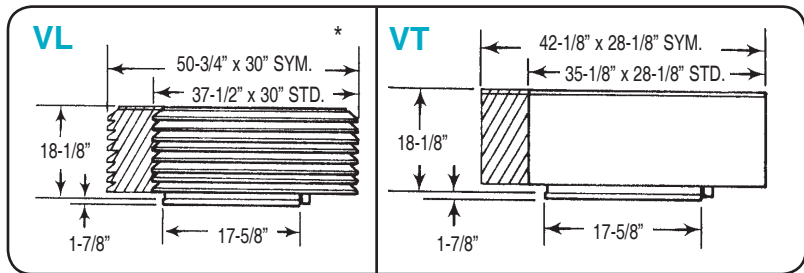
Low Silhouette Cent. Roof

Performance certified is for installation type A - free inlet, free outlet.
 Performance ratings (bhp) do not include transmission losses.
 Performance ratings do not include the effects of accessories.

The sound ratings shown are loudness values in fan sones at 5 feet (1.5m) in a hemispherical free field. Values shown are for installation type A, free inlet hemispherical sone levels.
 * For Extreme Weather dimensions, please see page 157.

VLBK 12 VTBK 12 BELT DRIVE

PERFORMANCE DATA



RPM Range - Motor HP		STATIC PRESSURE, INCHES W. G.											
K1 (1/6)	RPM	.000	.250	.500	.750	1.000	1.250	1.500	1.750	2.000	2.250	2.500	2.750
		CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES
K2 (1/6)	550	685 .02 2.0											
	650	809 .03 3.0											
K3 (1/6)	750	934 .04 4.1	493 .05 3.7										
	850	1058 .06 5.2	756 .07 4.7										
L1 (1/4)	950	1183 .08 6.3	928 .10 5.7										
	1050	1307 .11 7.5	1084 .13 6.9	666 .12 6.9									
M1 (1/3)	1150	1432 .14 8.7	1229 .16 8.1	954 .17 8.0									
	1250	1557 .15 10.0	1371 .21 9.5	1153 .22 9.2	602 .19 9.5								
P1 (1/2)	1350	1681 .23 11.8	1510 .26 11.2	1324 .28 10.8	1023 .28 10.9								
	1450	1806 .29 13.7	1647 .32 13.2	1482 .34 12.7	1268 .35 12.7	737 .30 13.0							
R1 (3/4)	1500	1868 .32 14.8	1714 .35 14.2	1555 .37 13.6	1359 .38 13.6	986 .37 13.8							
	1550	1930 .35 15.9	1781 .38 15.4	1628 .41 14.8	1445 .42 14.7	1158 .42 14.9							
S1 (1)	1600	1992 .39 17.0	1848 .42 16.5	1700 .44 15.9	1531 .46 15.7	1284 .46 15.9	635 .37 16.3						
	1650	2055 .42 18.1	1915 .46 17.6	1772 .48 17.0	1615 .50 16.7	1406 .51 17.0	990 .484 17.2						
T1 (1-1/2)	1700	2117 .46 19.0	1981 .50 18.5	1843 .53 18.0	1698 .55 17.5	1513 .56 17.7	1182 .54 18.0						
	1750	2179 .50 19.7	2048 .54 19.3	1914 .57 18.7	1776 .60 18.2	1600 .61 18.4	1339 .61 18.6	667 .48 19.1					
T1 (1-1/2)	1800	2241 .55 20	2113 .59 20	1984 .62 19.5	1850 .64 19.0	1687 .66 19.0	1463 .66 19.3	1041 .61 19.5					
	1850	2304 .60 21	2179 .63 21	2054 .67 20	1924 .70 19.8	1772 .71 19.7	1585 .72 19.9	1252 .69 20					
T1 (1-1/2)	1900	2366 .65 22	2245 .68 22	2123 .72 21	1996 .75 21	1856 .77 20	1690 .78 21	1424 .77 21	823 .65 21				
	1950	2428 .70 23	2310 .74 22	2192 .78 22	2069 .81 21	1940 .83 21	1778 .84 21	1549 .84 21	1158 .78 22				
T1 (1-1/2)	2000	2490 .75 24	2375 .79 23	2260 .83 23	2140 .86 22	2020 .89 22	1864 .91 22	1671 .91 22	1359 .88 22				
	2050	2553 .81 24	2440 .85 24	2328 .89 24	2212 .93 23	2095 .96 23	1950 .97 23	1792 .99 23	1531 .97 23	1038 .86 23			
T1 (1-1/2)	2100	2615 .87 25	2505 .91 25	2396 .96 25	2283 .99 24	2168 1.02 24	2035 1.04 24	1884 1.06 24	1657 1.05 24	1320 1.00 24			
	2150	2677 .94 26	2570 .98 26	2463 1.02 25	2353 1.06 25	2241 1.09 25	2118 1.12 24	1972 1.13 25	1780 1.13 25	1494 1.10 25	887 .92 26		
T1 (1-1/2)	2200	2739 1.00 27	2635 1.05 27	2530 1.09 26	2423 1.13 26	2314 1.16 26	2202 1.19 25	2058 1.21 25	1902 1.22 26	1660 1.20 26	1249 1.10 26		
	2250	2802 1.07 28	2699 1.12 28	2597 1.16 27	2493 1.20 27	2386 1.24 26	2279 1.27 26	2143 1.29 26	2003 1.30 27	1784 1.29 27	1479 1.24 27	777 1.00 28	
T1 (1-1/2)	2300	2864 1.15 29	2764 1.19 29	2664 1.24 28	2563 1.28 28	2458 1.32 28	2354 1.35 27	2228 1.37 27	2091 1.39 27	1907 1.38 28	1652 1.36 28	1207 1.23 28	
	2350	2926 1.22 30	2828 1.27 30	2730 1.32 29	2632 1.36 29	2530 1.40 29	2427 1.43 28	2312 1.46 28	2178 1.47 28	2028 1.48 29	1802 1.47 29	1483 1.40 29	732 1.10 30
T1 (1-1/2)	2400	2989 1.30 31	2893 1.35 31	2797 1.40 30	2701 1.45 30	2601 1.48 30	2500 1.52 29	2395 1.55 29	2264 1.56 29	2132 1.58 30	1926 1.57 30	1657 1.53 30	1195 1.37 31
	2450	3051 1.38 32	2957 1.43 32	2863 1.48 31	2769 1.53 31	2671 1.57 31	2573 1.61 30	2475 1.64 30	2349 1.66 30	2220 1.68 30	2048 1.68 31	1829 1.66 31	1483 1.56 32

DESIGN DATA

Max BHP = .103 x $\left[\frac{\text{RPM}}{1000} \right]^3$

Tip Speed = 3.27 x RPM

Max. Motor Frame Size = 145T

Unit Weight (less motor) = 50 lbs.

Roof Opening = 13" Sq.

Curb O. D. = 16" Sq.

Damper Size = 12" Sq.

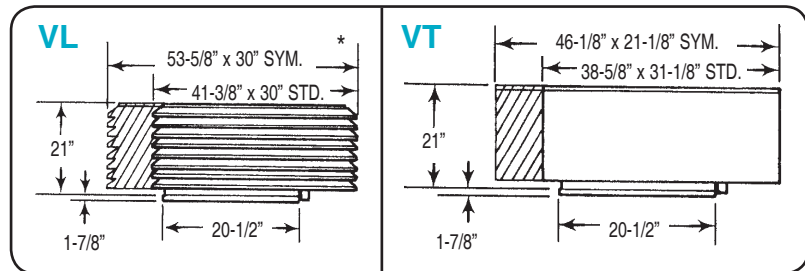
Performance certified is for installation type A - free inlet, free outlet.
Performance ratings (bhp) do not include transmission losses.
Performance ratings do not include the effects of accessories.

The sound ratings shown are loudness values in fan sones at 5 feet (1.5m) in a hemispherical free field. Values shown are for installation type A, free inlet hemispherical sone levels.

* For Extreme Weather dimensions, please see page 157.

VLBK 15 VTBK 15 BELT DRIVE

PERFORMANCE DATA



RPM Range - Motor HP		STATIC PRESSURE, INCHES W. G.												
K1 (1/6)	RPM	.000	.250	.500	.750	1.000	1.250	1.500	1.750	2.000	2.250	2.500	2.750	
		CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES
K2 (1/6)	550	1236 .04 3.5												
	600	1349 .06 4.2	625 .06 3.5											
L1 (1/4)	650	1461 .07 5.0	891 .08 4.2											
	700	1573 .09 5.7	1086 .10 4.7											
M1 (1/3)	750	1686 .11 6.4	1256 .12 5.5											
	800	1798 .13 7.2	1400 .15 6.4											
P1 (1/2)	850	1910 .16 8.0	1540 .17 7.3	893 .17 6.9										
	900	2023 .19 9.0	1679 .21 8.2	1170 .20 7.8										
R1 (3/4)	950	2135 .22 10.0	1816 .24 9.3	1390 .24 8.8										
	1000	2248 .26 11.1	1950 .28 10.4	1572 .29 9.8	528 .20 9.9									
S1 (1)	1050	2360 .30 12.3	2083 .32 11.7	1745 .33 11.0	1147 .32 11.1									
	1100	2472 .35 13.8	2214 .37 13.1	1890 .38 12.5	1423 .37 12.4									
T1 (1-1/2)	1150	2585 .39 15.2	2338 .42 14.6	2032 .43 14.0	1653 .43 13.8	537 .29 13.8								
	1200	2697 .45 16.7	2460 .47 16.1	2172 .49 15.6	1836 .49 15.1	1251 .47 15.2								
V1 (2)	1250	2809 .51 18.2	2582 .53 17.6	2311 .55 17.0	2015 .56 16.5	1545 .54 16.5								
	1300	2922 .57 19.1	2703 .60 18.6	2449 .62 18.1	2178 .63 17.6	1781 .62 17.4	821 .47 17.3							
K1 (1/6)	1350	3034 .64 20	2824 .67 19.6	2585 .69 19.1	2323 .70 18.6	1990 .70 18.4	1448 .67 18.3							
	1400	3147 .71 21	2944 .74 21	2720 .77 20	2465 .78 19.7	2172 .78 19.4	1742 .76 19.3	503 .48 19.2						
L1 (1/4)	1450	3259 .79 22	3063 .82 22	2853 .85 21	2604 .87 21	2351 .87 20	1976 .86 20	1322 .74 20						
	1500	3371 .88 23	3182 .91 23	2985 .94 22	2745 .96 22	2512 .96 21	2190 .96 21	1712 .94 21						
M1 (1/3)	1550	3484 .97 24	3301 1.00 24	3116 1.03 23	2884 1.05 23	2657 1.06 23	2373 1.06 22	1985 1.04 22	1216 .88 22					
	1600	3596 1.06 25	3419 1.10 25	3241 1.13 24	3021 1.15 24	2800 1.17 24	2553 1.17 23	2218 1.16 23	1730 1.12 23					
P1 (1/2)	1650	3708 1.16 26	3536 1.20 26	3364 1.24 25	3157 1.26 25	2941 1.28 25	2729 1.28 25	2424 1.28 24	2023 1.24 24	1155 1.00 24				
	1700	3821 1.27 27	3654 1.31 27	3487 1.35 27	3292 1.37 26	3080 1.39 26	2875 1.40 26	2607 1.40 25	2265 1.38 25	1787 1.34 25				
R1 (3/4)	1750	3933 1.39 28	3771 1.43 28	3609 1.47 28	3426 1.50 28	3219 1.52 27	3019 1.53 27	2787 1.53 27	2495 1.52 27	2082 1.47 26	1223 1.20 26			
	1800	4046 1.51 30	3888 1.55 30	3730 1.59 29	3558 1.62 29	3358 1.64 29	3162 1.66 28	2964 1.66 28	2684 1.66 28	2340 1.63 28	1876 1.58 28	495 .95 28		
S1 (1)	1850	4158 1.64 32	4004 1.68 31	3851 1.72 31	3690 1.76 31	3495 1.78 30	3300 1.80 30	3114 1.81 29	2866 1.81 29	2572 1.79 29	2172 1.73 29	1399 1.47 29		
	1900	4270 1.78 34	4121 1.82 33	3971 1.86 33	3821 1.90 32	3631 1.92 32	3441 1.95 31	3258 1.95 31	3045 1.96 31	2780 1.96 31	2439 1.91 31	1994 1.86 31	772 1.24 31	
T1 (1-1/2)	1950	4383 1.92 36	4237 1.97 35	4092 2.01 35	3946 2.05 34	3766 2.08 34	3581 2.10 34	3402 2.11 33	3222 2.12 33	2963 2.12 33	2672 2.09 33	2289 2.02 33	1633 1.79 33	
	1975	4439 2.00 37	4295 2.04 36	4151 2.08 36	4008 2.13 35	3833 2.15 35	3651 2.18 35	3473 2.19 34	3295 2.20 34	3054 2.20 34	2787 2.19 34	2435 2.13 34	1926 1.94 34	

DESIGN DATA

Max BHP = .285 x $\left[\frac{\text{RPM}}{1000}\right]^3$

Tip Speed = 4.06 x RPM

Max. Motor Frame Size = 182T

Unit Weight (less motor) = 65 lbs.

Roof Opening = 16-1/2" Sq.

Curb O. D. = 19" Sq.

Damper Size = 15" Sq.

Low Silhouette Cent. Roof

Performance certified is for installation type A - free inlet, free outlet.
Performance ratings (bhp) do not include transmission losses.
Performance ratings do not include the effects of accessories.

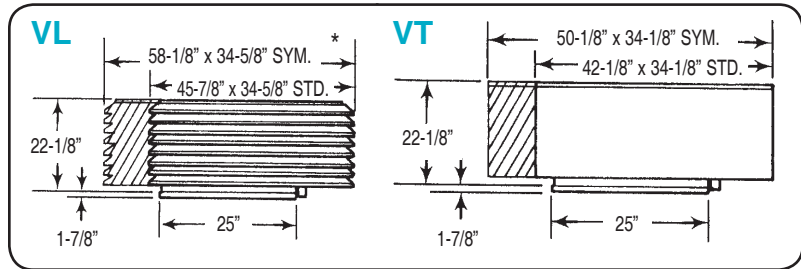
The sound ratings shown are loudness values in fan sones at 5 feet (1.5m) in a hemispherical free field. Values shown are for installation type A, free inlet hemispherical sone levels.
* For Extreme Weather dimensions, please see page 157.

VLBK 18

VTBK 18

BELT DRIVE

PERFORMANCE DATA



RPM Range - Motor HP	RPM	STATIC PRESSURE, INCHES W. G.													
		.000	.250	.500	.750	1.000	1.250	1.500	1.750	2.000	2.250	2.500	2.750		
		CFM SONES	BHP	CFM SONES	BHP	CFM SONES	BHP	CFM SONES	BHP	CFM SONES	BHP	CFM SONES	BHP	CFM SONES	BHP
K1 (1/6)	L1 (1/4)	2130 5.8	.10	1463 4.2	.11										
	M1 (1/3)	2324 7.1	.13	1748 5.1	.15										
P1 (1/2)	650	2517 8.4	.17	2016 6.0	.18	611 6.3	.14								
	700	2711 9.7	.21	2261 7.0	.23	1509 7.2	.23								
R1 (3/4)	750	2905 10.7	.26	2486 9.2	.28	1898 8.0	.29								
	800	3098 11.7	.32	2708 9.2	.34	2203 8.8	.35	888 9.1	.27						
S1 (1)	850	3292 12.7	.38	2926 10.7	.40	2480 9.7	.42	1764 10.1	.40						
	900	3486 13.9	.45	3142 11.6	.48	2750 10.7	.49	2209 11.1	.49						
T1 (1-1/2)	950	3679 15.1	.53	3355 13.0	.56	3012 11.8	.58	2518 12.2	.58	1634 12.5	.52				
	1000	3873 16.4	.62	3565 14.4	.65	3243 13.2	.67	2812 13.3	.68	2229 13.7	.67				
V1 (2)	1050	4067 17.7	.72	3774 15.9	.75	3469 14.6	.77	3087 14.4	.78	2618 14.9	.78	1630 15.3	.68		
	1100	4260 18.1	.83	3981 17.2	.86	3691 16.2	.88	3355 15.4	.90	2926 14.7	.91	2310 14.2	.87		
W1 (3)	1150	4454 19.6	.94	4186 18.7	.98	3911 17.7	1.00	3619 16.9	1.02	3221 16.2	1.04	2776 15.6	1.03	1782 15.1	.89
	1175	4551 20	1.01	4289 19.4	1.04	4020 18.5	1.07	3745 17.6	1.09	3359 17.0	1.10	2933 16.4	1.10	2154 15.8	1.05
V1 (2)	1200	4648 21	1.07	4391 20	1.11	4129 19.3	1.13	3860 18.4	1.16	3497 17.8	1.17	3089 17.2	1.17	2468 16.6	1.12
	1225	4744 22	1.14	4493 21	1.18	4237 20	1.21	3973 19.2	1.23	3632 18.5	1.24	3242 18.0	1.25	2732 17.4	1.23
V1 (2)	1250	4841 23	1.21	4595 22	1.25	4345 21	1.28	4087 20	1.30	3767 19.3	1.32	3393 18.7	1.33	2964 18.2	1.32
	1275	4938 23	1.29	4697 23	1.32	4452 22	1.36	4199 21	1.38	3900 20	1.40	3543 19.5	1.41	3137 19.0	1.40
V1 (2)	1300	5035 24	1.36	4798 23	1.40	4559 23	1.43	4311 22	1.46	4032 21	1.48	3680 20	1.50	3293 19.8	1.49
	1325	5132 25	1.44	4900 24	1.48	4666 23	1.52	4422 22	1.54	4164 22	1.56	3818 21	1.58	3448 21	1.56
V1 (2)	1350	5229 26	1.53	5001 25	1.57	4772 24	1.60	4533 23	1.63	4294 23	1.65	3955 22	1.67	3600 21	1.67
	1375	5325 27	1.61	5102 26	1.65	4878 25	1.69	4643 24	1.72	4408 23	1.74	4090 23	1.76	3752 22	1.77
V1 (2)	1400	5422 28	1.70	5202 27	1.74	4983 26	1.78	4753 25	1.81	4522 24	1.83	4225 24	1.85	3898 23	1.87
	1425	5519 29	1.80	5303 28	1.84	5087 27	1.88	4862 26	1.90	4636 25	1.93	4358 24	1.95	4037 23	1.97
V1 (2)	1450	5616 29	1.89	5404 29	1.93	5192 28	1.97	4971 27	2.00	4749 26	2.03	4490 25	2.05	4175 24	2.07
	1475	5713 30	1.99	5504 30	2.03	5296 29	2.08	5080 28	2.11	4861 27	2.13	4622 26	2.16	4311 25	2.18
V1 (2)	1500	5810 31	2.10	5604 30	2.14	5399 30	2.18	5188 29	2.21	4973 28	2.24	4752 27	2.27	4447 26	2.28
	1525	5906 32	2.20	5705 31	2.25	5503 31	2.29	5296 30	2.32	5084 29	2.35	4872 28	2.38	4582 27	2.40
V1 (2)	1550	6003 33	2.31	5805 32	2.36	5606 31	2.40	5404 30	2.44	5195 29	2.46	4987 28	2.49	4715 27	2.51
	1575	6100 34	2.43	5905 33	2.47	5709 32	2.51	5511 31	2.55	5306 30	2.58	5100 29	2.61	4848 28	2.63

DESIGN DATA

Max BHP = .682 x $\left[\frac{\text{RPM}}{1000}\right]^3$

Tip Speed = 4.94 x RPM
 Max. Motor Frame Size = 184T
 Unit Weight (less motor) = 85 lbs.

Roof Opening = 20-1/2" Sq.
 Curb O. D. = 23-1/2" Sq.
 Damper Size = 19" Sq.

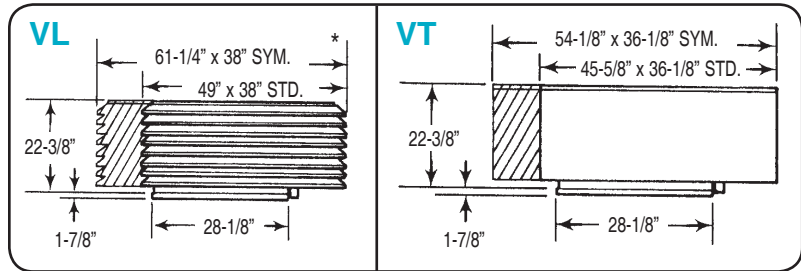
Performance certified is for installation type A - free inlet, free outlet.
 Performance ratings (bhp) do not include transmission losses.
 Performance ratings do not include the effects of accessories.

The sound ratings shown are loudness values in fan sones at 5 feet (1.5m) in a hemispherical free field. Values shown are for installation type A, free inlet hemispherical sone levels.
 * For Extreme Weather dimensions, please see page 157.

Low Silhouette Cent. Roof

VLBK 21 VTBK 21 BELT DRIVE

PERFORMANCE DATA



RPM Range - Motor HP		STATIC PRESSURE, INCHES W. G.												
L1 (1/4)	RPM	.000	.250	.500	.750	1.000	1.250	1.500	1.750	2.000	2.250	2.500	2.750	
		CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES
M1 (1/3)	400	2267 .08 4.3												
	450	2550 .11 5.4	1462 .11 4.7											
	P1 (1/2)	500	2833 .15 6.6	1951 .16 5.8										
		550	3117 .20 7.9	2385 .21 7.2										
	R1 (3/4)	600	3400 .26 9.1	2794 .28 8.5	1599 .25 8.7									
		650	3683 .33 10.4	3133 .35 9.6	2212 .34 9.8									
	S1 (1)	700	3967 .42 11.6	3466 .43 10.9	2697 .44 11.0									
		750	4250 .51 13.1	3792 .53 12.3	3128 .54 12.2	2190 .50 12.5								
	T1 (1-1/2)	800	4533 .62 14.6	4114 .64 13.8	3567 .66 13.5	2750 .64 13.8								
		850	4817 .75 16.1	4431 .77 15.5	3961 .79 15.0	3239 .78 15.1	2284 .71 15.3							
V1 (2)	875	4958 .82 17.0	4585 .84 16.4	4132 .86 16.0	3458 .86 15.9	2652 .81 16.0								
	900	5100 .89 17.9	4737 .91 17.4	4302 .93 16.9	3674 .94 16.8	2923 .90 16.8								
W1 (3)	925	5242 .96 18.7	4888 .98 18.3	4470 1.01 17.9	3886 1.02 17.8	3189 .99 17.8	1906 .84 17.8							
	950	5383 1.04 19.6	5040 1.06 19.2	4637 1.09 18.8	4108 1.11 18.7	3450 1.06 18.7	2549 .99 18.7							
V1 (2)	975	5525 1.13 21	5190 1.15 20	4802 1.18 19.8	4327 1.20 19.6	3683 1.18 19.7	2929 1.12 19.8							
	1000	5667 1.22 22	5340 1.24 21	4967 1.27 21	4543 1.29 21	3903 1.28 21	3201 1.23 21	942 .72 21						
V1 (2)	1025	5808 1.31 22	5490 1.33 22	5131 1.36 22	4741 1.39 22	4120 1.38 22	3468 1.34 22	2468 1.21 22						
	1050	5950 1.41 23	5639 1.43 23	5294 1.46 23	4913 1.49 23	4334 1.49 23	3731 1.41 23	2935 1.36 23						
V1 (2)	1075	6092 1.51 24	5788 1.54 24	5455 1.56 24	5084 1.59 24	4549 1.61 24	3983 1.58 24	3285 1.51 24	716 .78 24					
	1100	6233 1.62 25	5937 1.64 25	5616 1.67 25	5253 1.70 25	4770 1.72 25	4205 1.70 25	3556 1.64 25	2466 1.46 25					
V1 (2)	1125	6375 1.73 27	6085 1.76 26	5777 1.79 26	5421 1.82 26	4989 1.84 26	4424 1.82 26	3822 1.77 27	3030 1.65 27					
	1150	6517 1.85 28	6233 1.88 28	5936 1.90 27	5589 1.94 27	5205 1.97 27	4641 1.95 28	4085 1.86 28	3411 1.83 28	811 .98 28				
V1 (2)	1175	6658 1.97 29	6381 2.00 28	6095 2.03 28	5755 2.06 28	5415 2.10 28	4854 2.09 28	4340 2.06 29	3699 1.98 29	2609 1.78 29				
	1200	6800 2.10 29	6529 2.13 29	6254 2.16 29	5921 2.19 29	5588 2.23 29	5069 2.23 29	4563 2.20 29	3968 2.14 30	3198 2.00 30				
V1 (2)	1225	6942 2.24 30	6676 2.26 30	6408 2.29 30	6085 2.33 30	5759 2.36 30	5290 2.38 30	4782 2.35 30	4233 2.22 30	3580 2.20 31	1169 1.34 31			
	1250	7083 2.38 31	6823 2.41 31	6560 2.43 31	6249 2.47 31	5929 2.50 31	5510 2.52 31	4999 2.51 31	4494 2.40 31	3888 2.38 31	2872 2.16 32			
V1 (2)	1275	7225 2.52 32	6970 2.55 32	6712 2.58 32	6412 2.61 32	6098 2.65 31	5727 2.68 32	5214 2.67 32	4740 2.64 32	4157 2.55 32	3426 2.40 32			
	1300	7367 2.67 33	7117 2.70 33	6864 2.73 33	6574 2.77 32	6267 2.80 32	5942 2.84 32	5427 2.84 33	4962 2.80 33	4424 2.73 33	3807 2.62 33	2177 2.33 33		
V1 (2)	1325	7508 2.83 34	7263 2.86 34	7015 2.89 34	6736 2.93 33	6434 2.96 33	6132 3.00 33	5646 3.01 33	5182 2.98 33	4687 2.84 34	4114 2.83 34	3234 2.62 34		
	1350	7650 2.99 35	7410 3.02 35	7166 3.06 35	6897 3.09 34	6601 3.13 34	6304 3.17 34	5866 3.18 34	5399 3.16 35	4946 3.04 35	4385 3.03 35	3704 2.87 35	1040 1.64 35	

DESIGN DATA

Max BHP = 1.292 x $\left[\frac{\text{RPM}}{1000} \right]^3$

Tip Speed = 5.76 x RPM
 Max. Motor Frame Size = 184T
 Unit Weight (less motor) = 120 lbs.

Roof Opening = 23-1/2" Sq.
 Curb O. D. = 26-1/2" Sq.
 Damper Size = 22" Sq.

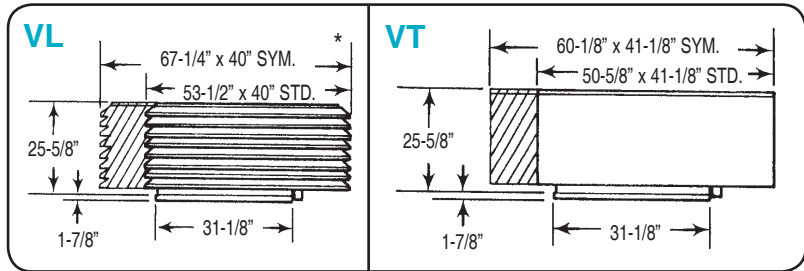
Low Silhouette Cent. Roof

Performance certified is for installation type A - free inlet, free outlet.
 Performance ratings (bhp) do not include transmission losses.
 Performance ratings do not include the effects of accessories.

The sound ratings shown are loudness values in fan sones at 5 feet (1.5m) in a hemispherical free field. Values shown are for installation type A, free inlet hemispherical sone levels.
 * For Extreme Weather dimensions, please see page 157.

VLBK 24 VTBK 24 BELT DRIVE

PERFORMANCE DATA



RPM Range - Motor HP		STATIC PRESSURE, INCHES W. G.																	
M1 (1/3)	P1 (1/2)	RPM	.000	.250	.500	.750	1.000	1.250	1.500	1.750	2.000	2.250	2.500	2.750					
			CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES				
R1 (3/4)	S1 (1)	400	3889 .21 7.0	2542 .21 5.9															
		450	4375 .30 8.5	3277 .31 7.3															
		500	4861 .42 10.6	3938 .42 8.8	1868 .33 8.6														
	T1 (1-1/2)	V1 (2)	550	5347 .55 13.0	4558 .56 11.2	3343 .54 10.7													
			575	5590 .63 14.3	4856 .64 12.5	3738 .64 11.9													
			600	5834 .72 15.5	5151 .73 14.0	4116 .72 13.2													
		W1 (3)	X1 (5)	625	6077 .81 16.8	5442 .82 15.3	4480 .82 14.5	2929 .72 14.4											
				650	6320 .91 17.7	5731 .92 16.4	4817 .92 15.3	3569 .87 15.3											
				675	6563 1.02 18.7	6002 1.03 17.4	5150 1.04 16.2	4125 1.00 16.1											
			Y1 (7-1/2)	V1 (7-1/2)	700	6806 1.14 19.7	6265 1.15 18.3	5477 1.16 17.0	4514 1.15 17.0	2188 .85 16.9									
					725	7049 1.27 21	6527 1.28 19.4	5799 1.29 17.9	4893 1.27 17.8	3480 1.14 17.8									
					750	7292 1.40 22	6787 1.41 21	6110 1.43 18.9	5266 1.41 18.7	4109 1.33 18.6									
Y1 (7-1/2)				V1 (7-1/2)	775	7535 1.55 23	7047 1.56 22	6412 1.57 20	5616 1.57 19.6	4666 1.51 19.6									
					800	7778 1.70 24	7305 1.71 23	6711 1.73 21	5953 1.72 21	5085 1.71 21	3443 1.45 21								
					825	8021 1.87 25	7562 1.88 24	7008 1.89 22	6284 1.89 21	5467 1.89 21	4287 1.75 21								
	Y1 (7-1/2)			V1 (7-1/2)	850	8264 2.04 26	7819 2.05 25	7302 2.07 23	6612 2.07 22	5843 2.05 22	4851 1.96 22								
					875	8507 2.23 27	8075 2.24 26	7594 2.25 25	6936 2.26 23	6213 2.25 23	5383 2.22 23	3702 1.87 23							
					900	8750 2.42 29	8330 2.44 27	7883 2.45 26	7256 2.46 24	6554 2.45 24	5771 2.43 24	4610 2.26 24							
		Y1 (7-1/2)		V1 (7-1/2)	925	8993 2.63 30	8584 2.64 29	8171 2.66 27	7561 2.67 26	6890 2.66 25	6152 2.62 25	5177 2.51 25	2829 1.95 25						
					950	9236 2.85 32	8838 2.86 31	8440 2.88 29	7863 2.89 27	7222 2.89 27	6527 2.86 27	5733 2.78 27	4250 2.28 27						
					975	9479 3.08 33	9091 3.10 32	8703 3.11 31	8163 3.12 29	7550 3.13 28	6898 3.11 28	6153 3.09 28	5046 2.88 28						
			Y1 (7-1/2)	V1 (7-1/2)	1000	9723 3.33 35	9344 3.34 34	8966 3.35 32	8460 3.37 31	7875 3.38 29	7243 3.36 29	6537 3.35 29	5612 3.18 29	3735 2.62 29					
					1025	9966 3.58 37	9596 3.59 36	9227 3.61 34	8755 3.62 32	8197 3.64 31	7580 3.62 31	6916 3.58 31	6168 3.49 31	4913 3.21 31					
					1050	10209 3.85 39	9848 3.86 38	9488 3.88 36	9048 3.89 34	8511 3.91 33	7914 3.90 32	7289 3.87 32	6598 3.85 32	5569 3.62 32	3281 2.87 32				
Y1 (7-1/2)				V1 (7-1/2)	1075	10452 4.13 40	10100 4.15 40	9748 4.16 38	9339 4.17 36	8815 4.19 35	8244 4.19 34	7656 4.17 34	6983 4.16 34	6133 3.97 34	4706 3.54 34				
					1100	10695 4.43 42	10351 4.44 42	10007 4.46 40	9629 4.47 38	9116 4.49 37	8571 4.49 36	7996 4.48 36	7363 4.41 36	6686 4.32 36	5588 4.10 36	2866 3.06 36			
					1125	10938 4.74 44	10601 4.75 44	10265 4.76 41	9917 4.78 39	9415 4.80 38	8895 4.81 38	8333 4.79 38	7737 4.75 38	7092 4.74 38	6163 4.50 38	4542 3.89 38			
	Y1 (7-1/2)			V1 (7-1/2)	1150	11181 5.06 46	10852 5.07 46	10523 5.09 44	10194 5.10 42	9713 5.12 41	9216 5.14 39	8666 5.12 39	8108 5.10 39	7477 5.09 39	6723 4.89 39	5611 4.59 39			
					1175	11424 5.40 49	11102 5.41 48	10780 5.43 46	10458 5.44 45	10008 5.46 43	9528 5.48 42	8997 5.47 41	8459 5.45 41	7857 5.38 41	7239 5.38 41	6251 5.08 41	4510 4.31 41		
					1200	11667 5.75 51	11352 5.76 50	11036 5.78 49	10721 5.79 47	10302 5.81 45	9832 5.83 44	9324 5.83 43	8797 5.81 43	8232 5.76 43	7627 5.76 43	6814 5.51 43	5704 5.13 43		

DESIGN DATA

Max BHP = 3.381 x $\left[\frac{\text{RPM}}{1000}\right]^3$

Tip Speed = 6.68 x RPM

Max. Motor Frame Size = 254T

Unit Weight (less motor) = 145 lbs.

Roof Opening = 26-1/2" Sq.

Curb O. D. = 29-1/2" Sq.

Damper Size = 26" Sq.

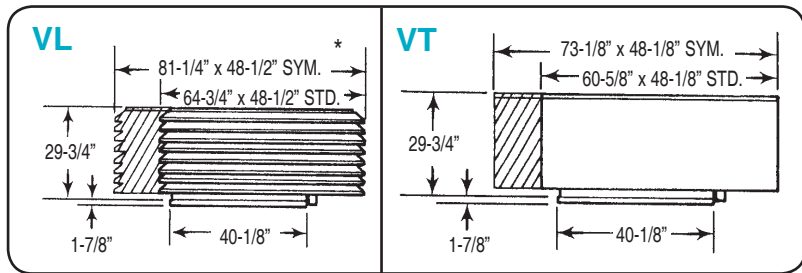
Performance certified is for installation type A - free inlet, free outlet.
Performance ratings (bhp) do not include transmission losses.
Performance ratings do not include the effects of accessories.

The sound ratings shown are loudness values in fan sones at 5 feet (1.5m) in a hemispherical free field. Values shown are for installation type A, free inlet hemispherical sone levels.
* For Extreme Weather dimensions, please see page 157.

Low Silhouette Cent. Roof

VLBK 30 VTBK 30 BELT DRIVE

PERFORMANCE DATA



RPM Range - Motor HP		STATIC PRESSURE, INCHES W. G.												
P1 (1/2)	RPM	.000	.250	.500	.750	1.000	1.250	1.500	1.750	2.000	2.250	2.500	2.750	
		CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES
P2 (1/2)	250	4553 .11 4.0												
	275	5008 .14 4.8												
R1 (3/4)	300	5464 .18 5.7	1207 .12 3.6											
	325	5919 .23 6.6	3353 .27 4.6											
S1 (1)	350	6374 .29 7.5	4274 .35 5.6											
	375	6829 .36 8.4	5037 .44 6.6											
T1 (1-1/2)	400	7285 .44 9.3	5670 .53 7.7											
	425	7740 .52 10.3	6285 .64 8.9	1779 .36 7.0										
V1 (2)	450	8195 .62 11.4	6861 .75 10.2	4264 .67 8.1										
	475	8651 .73 12.8	7401 .87 11.8	5351 .87 9.6										
W1 (3)	500	9106 .85 14.5	7932 1.00 13.3	6204 1.04 11.4										
	525	9561 .99 16.0	8458 1.14 15.0	6982 1.20 13.2	2613 .75 11.3									
X1 (5)	550	10016 1.14 17.5	8977 1.30 16.6	7625 1.39 15.1	5158 1.21 13.0									
	575	10472 1.30 19.2	9492 1.47 18.3	8250 1.58 17.0	6288 1.52 14.9									
Y1 (7-1/2)	600	10927 1.48 21	9995 1.66 20	8864 1.79 19.1	7205 1.78 16.9	2414 1.00 15.4								
	625	11382 1.67 23	10488 1.86 22	9455 2.02 21	7995 2.01 19.0	5384 1.78 17.1								
V1 (7-1/2)	650	11838 1.88 24	10977 2.07 23	9998 2.24 22	8737 2.31 21	6706 2.16 18.6								
	675	12293 2.10 25	11464 2.30 24	10536 2.48 24	9373 2.57 22	7694 2.50 20	3105 1.52 18.8							
V1 (7-1/2)	700	12748 2.34 26	11949 2.55 26	11068 2.74 25	9999 2.86 24	8548 2.83 22	6090 2.51 20							
	725	13203 2.60 28	12432 2.82 27	11595 3.02 26	10615 3.17 25	9334 3.14 23	7428 2.99 22	2132 1.50 21						
V1 (7-1/2)	750	13659 2.88 29	12912 3.11 28	12118 3.32 27	11223 3.50 27	10074 3.54 25	8420 3.41 23	5492 2.83 22						
	775	14114 3.18 30	13392 3.41 30	12637 3.64 29	11788 3.38 28	10712 3.90 26	9314 3.83 25	7136 3.35 23	1673 1.60 23					
V1 (7-1/2)	800	14569 3.50 32	13869 3.74 31	13153 3.97 30	12330 4.17 29	11340 4.27 28	10106 4.20 27	8370 4.05 25	3803 2.58 24					
	825	15025 3.84 33	14346 4.08 32	13665 4.33 31	12867 4.54 31	11959 4.67 30	10883 4.65 28	9357 4.55 27	7020 4.07 26	1515 1.81 26				
V1 (7-1/2)	850	15480 4.20 35	14821 4.45 34	14164 4.71 33	13400 4.92 32	12571 5.10 31	11557 5.15 30	10236 5.06 29	8432 4.63 28	3558 2.89 27				
	875	15935 4.58 36	15295 4.84 35	14657 5.10 34	13929 5.33 34	13176 5.55 33	12191 5.60 32	11028 5.49 30	9474 5.35 29	7106 4.75 28	1603 2.16 28			
V1 (7-1/2)	900	16391 4.98 37	15768 5.25 37	15148 5.52 36	14454 5.76 35	13722 5.99 34	12817 6.08 33	11806 6.03 32	10453 5.96 31	8527 5.35 30	3621 3.36 30			
	925	16846 5.41 39	16240 5.69 38	15636 5.96 37	14976 6.22 36	14624 6.45 36	13435 6.59 35	12504 6.64 34	11276 6.53 33	9714 6.27 32	7330 5.55 31	1899 2.66 31		
V1 (7-1/2)	950	17301 5.86 41	16711 6.14 40	16123 6.43 39	15495 6.70 38	14801 6.93 38	14047 7.12 37	13140 7.18 36	12065 7.04 35	10702 6.94 34	8786 6.20 33	3496 4.02 33		
	975	17756 6.33 44	17181 6.63 43	16609 6.92 42	16010 7.20 41	15335 7.44 40	14652 7.68 39	13768 7.74 38	12841 7.67 36	11612 7.62 36	10059 7.30 35	7723 6.50 34	2369 3.34 34	

DESIGN DATA

Max BHP = 8.403 x $\left[\frac{\text{RPM}}{1000} \right]^3$

Tip Speed = 8.25 x RPM

Max. Motor Frame Size = 254T

Unit Weight (less motor) = 210 lbs.

Roof Opening = 35-1/2" Sq.

Curb O. D. = 38-1/2" Sq.

Damper Size = 34" Sq.

Low Silhouette Cent. Roof

Performance certified is for installation type A - free inlet, free outlet.
Performance ratings (bhp) do not include transmission losses.
Performance ratings do not include the effects of accessories.

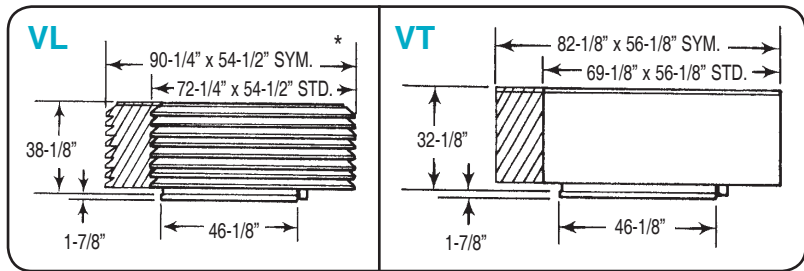
The sound ratings shown are loudness values in fan sones at 5 feet (1.5m) in a hemispherical free field. Values shown are for installation type A, free inlet hemispherical sone levels.
* For Extreme Weather dimensions, please see page 157.

VLBK 36

VTBK 36

BELT DRIVE

PERFORMANCE DATA



RPM Range - Motor HP		STATIC PRESSURE, INCHES W. G.												
R1 (3/4)	RPM	.000	.125	.250	.375	.500	.750	1.000	1.250	1.500	1.750	2.000	2.250	
		CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES
S1 (1)	250	6973 .30 10.7	5785 .32 6.3	2249 .22 3.8										
	270	7530 .37 11.9	6458 .40 7.6	4447 .37 5.1										
T1 (1-1/2)	290	8088 .46 13.0	7096 .49 8.8	5671 .50 6.6										
	310	8646 .57 14.1	7724 .60 10.0	6654 .61 8.1	3273 .45 5.8									
V1 (2)	330	9204 .68 15.2	8344 .71 11.4	7365 .74 9.5	5401 .72 7.2									
	350	9762 .81 16.4	8957 .85 12.8	8060 .88 10.8	6679 .87 8.6	2647 .55 6.9								
W1 (3)	370	10319 .96 17.7	9563 1.00 14.3	8741 1.04 12.2	7695 1.04 10.1	5148 .88 8.3								
	390	10877 1.13 18.9	10159 1.16 15.8	9395 1.21 13.6	8519 1.22 11.8	6833 1.16 9.8								
X1 (5)	410	11435 1.31 20	10752 1.35 17.3	10031 1.39 15.1	9224 1.42 13.7	8014 1.40 11.5								
	430	11993 1.51 22	11341 1.55 18.8	10660 1.60 16.7	9917 1.63 15.4	9024 1.63 13.3	3444 1.06 10.0							
Y1 (7-1/2)	450	12551 1.73 23	11928 1.77 20	11284 1.82 18.2	10599 1.87 17.0	9825 1.88 15.3	5968 1.53 11.6							
	470	13108 1.97 24	12512 2.01 22	11901 2.06 19.7	11261 2.12 18.5	10531 2.13 17.3	7680 1.99 13.5							
C1 (10)	490	13666 2.23 26	13094 2.28 23	12515 2.33 21	11900 2.38 20	11226 2.41 19.2	9178 2.37 15.5	2902 1.28 13.1						
	510	14224 2.52 27	13674 2.56 25	13124 2.61 23	12534 2.67 23	11912 2.72 21	10215 2.70 17.5	5803 2.09 14.7						
C1 (10)	530	14782 2.82 29	14253 2.87 26	13725 2.92 25	13161 2.99 23	12590 3.05 22	11218 3.07 19.5	7995 2.68 16.7						
	550	15340 3.16 30	14830 3.21 28	14321 3.26 26	13784 3.32 25	13237 3.39 24	11993 3.43 22	9561 3.24 18.7	3672 2.00 16.9					
C1 (10)	570	15897 3.51 31	15405 3.57 30	14915 3.62 28	14403 3.68 26	13875 3.75 26	12701 3.81 24	10827 3.74 21	6464 2.92 18.6					
	590	16455 3.90 33	15979 3.95 31	15506 4.01 30	15017 4.07 28	14507 4.14 27	13399 4.22 26	11852 4.19 23	8669 3.65 20					
C1 (10)	610	17013 4.31 34	16553 4.36 33	16095 4.42 31	15629 4.48 30	15135 4.55 29	14090 4.65 28	12855 4.67 25	10363 4.38 22	5154 3.13 21				
	630	17571 4.74 36	17125 4.80 34	16681 4.86 33	16237 4.92 32	15759 5.00 30	14773 5.12 29	13667 5.15 27	11681 5.01 24	7754 4.17 23				
C1 (10)	650	18129 5.21 38	17696 5.27 36	17266 5.33 35	16836 5.39 33	16379 5.47 32	15449 5.62 30	14377 5.65 29	12760 5.58 26	9885 4.97 24	4228 3.26 24			
	670	18686 5.71 39	18267 5.77 38	17850 5.83 36	17433 5.89 35	16995 5.97 34	16096 6.13 32	15079 6.18 30	13773 6.16 28	11470 5.82 26	7110 4.57 25			
C1 (10)	680	18965 5.97 40	18552 6.03 39	18141 6.09 37	17730 6.16 36	17302 6.23 35	16416 6.39 33	15428 6.46 31	14273 6.46 29	12132 6.19 27	8319 5.17 26			
	690	19244 6.23 41	18837 6.30 39	18432 6.36 38	18027 6.43 37	17608 6.50 36	16735 6.66 34	15774 6.74 32	14765 6.78 30	12787 6.58 28	9396 5.61 27	3288 3.17 27		
C1 (10)	700	19523 6.51 42	19121 6.57 40	18722 6.64 39	18323 6.70 38	17913 6.78 37	17053 6.94 35	16119 7.04 33	15124 7.07 31	13359 6.93 29	10458 6.15 27	5294 4.44 27		
	710	19802 6.79 42	19406 6.86 41	19012 6.92 40	18619 6.99 39	18218 7.06 38	17370 7.23 36	16462 7.34 34	15481 7.37 32	13873 7.26 30	11472 7.19 28	6792 5.27 28		
C1 (10)	720	20081 7.08 43	19690 7.15 42	19302 7.22 41	18914 7.28 40	18522 7.35 39	17686 7.52 37	16804 7.65 35	15836 7.68 33	14383 7.61 31	12144 7.17 29	8055 5.84 28		
	730	20360 7.38 44	19974 7.45 43	19592 7.52 42	19209 7.59 41	18825 7.65 40	18001 7.83 37	17144 7.97 36	16190 8.00 34	14889 7.96 32	12808 7.60 30	9227 6.56 29	2975 3.46 29	
C1 (10)	740	20639 7.69 45	20258 7.76 44	19881 7.83 43	19503 7.90 42	19126 7.97 40	18315 8.14 39	17843 8.29 37	16541 8.33 35	15391 8.32 33	13466 8.05 31	10297 7.00 29	5224 5.05 29	
	750	20918 8.00 46	20542 8.07 45	20170 8.14 43	19797 8.21 42	19425 8.29 41	18628 8.46 40	17820 8.63 38	16891 8.67 36	15888 8.69 34	14114 8.51 32	11356 7.62 30	6747 6.01 30	

DESIGN DATA

Max BHP = 20.634 x $\left[\frac{\text{RPM}}{1000}\right]^3$

Tip Speed = 9.62 x RPM

Max. Motor Frame Size = 254T

Unit Weight (less motor) = 335 lbs.

Roof Opening = 41-1/2" Sq.

Curb O. D. = 44-1/2" Sq.

Damper Size = 40" Sq.

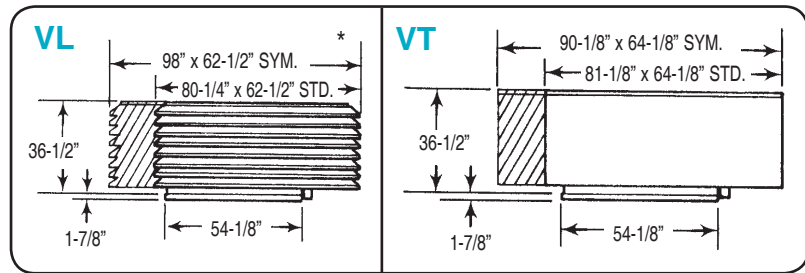
Low Silhouette Cent. Roof

Performance certified is for installation type A - free inlet, free outlet.
 Performance ratings (bhp) do not include transmission losses.
 Performance ratings do not include the effects of accessories.

The sound ratings shown are loudness values in fan sones at 5 feet (1.5m) in a hemispherical free field. Values shown are for installation type A, free inlet hemispherical sone levels.
 * For Extreme Weather dimensions, please see page 157.

VLBK 42 VTBK 42 BELT DRIVE

PERFORMANCE DATA



RPM Range - Motor HP		STATIC PRESSURE, INCHES W. G.												
SI (1)	RPM	.000	.125	.250	.375	.500	.625	.750	1.000	1.250	1.500	1.750	2.000	
		CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES
T1 (1-1/2)	215	8616 .35 6.4	7139 .39 5.6											
	230	9217 .43 7.4	7852 .47 6.5	5515 .46 6.4										
	245	9818 .52 8.4	8552 .57 7.5	7013 .58 7.2										
	260	10420 .62 9.2	9242 .67 8.4	7915 .70 7.9										
	275	11021 .73 10.0	9923 .79 9.1	8673 .83 8.6	5766 .73 8.5									
	290	11622 .85 10.8	10596 .92 10.0	9415 .97 9.4	7721 .95 9.3									
	305	12223 .99 11.6	11247 1.06 10.8	10142 1.12 10.2	9002 1.13 10.0	2105 .58 9.9								
	320	12824 1.15 12.5	11894 1.22 11.7	10856 1.28 11.1	9774 1.30 10.8	7085 1.25 10.7								
	335	13425 1.32 13.4	12537 1.39 12.7	11561 1.46 12.0	10532 1.49 11.6	8927 1.47 11.5								
	350	14026 1.50 14.3	13176 1.58 13.7	12258 1.65 13.0	11277 1.70 12.6	10217 1.71 12.4	4668 1.17 12.4							
V1 (2)	365	14627 1.70 15.4	13811 1.79 14.7	12947 1.86 14.1	12010 1.92 13.7	11056 1.93 13.5	8899 1.84 13.4							
	380	15229 1.92 16.6	14444 2.01 15.9	13630 2.09 15.3	12730 2.15 14.8	11818 2.18 14.6	10455 2.16 14.5	4094 1.35 14.4						
	395	15830 2.16 18.0	15075 2.25 17.3	14308 2.34 16.6	13442 2.40 16.0	12568 2.44 15.8	11686 2.46 15.6	9096 2.38 15.4						
	410	16431 2.41 19.5	15703 2.51 18.8	14980 2.60 18.1	14146 2.67 17.4	13309 2.73 17.1	12459 2.74 16.8	10909 2.69 16.6						
	425	17032 2.69 21	16330 2.79 20	15632 2.88 19.6	14843 2.96 18.9	14038 3.03 18.4	13220 3.05 18.2	12202 3.04 17.9						
	440	17633 2.98 23	16955 3.08 22	16281 3.19 21	15535 3.27 20	14757 3.34 19.8	13971 3.38 19.5	13179 3.39 19.3	5092 2.16 18.8					
	455	18234 3.30 24	17578 3.40 23	16926 3.51 23	16221 3.60 22	15469 3.67 21	14713 3.73 21	13947 3.75 20	10353 3.63 20					
	470	18835 3.64 26	18200 3.74 25	17569 3.85 24	16902 3.95 24	16174 4.03 23	15446 4.10 22	14705 4.12 22	12296 4.04 21					
	485	19436 4.00 28	18821 4.11 27	18210 4.22 26	1579 4.32 25	16873 4.40 25	16168 4.48 24	15454 4.52 24	13598 4.50 23	4310 2.49 23				
	500	20038 4.38 29	19440 4.49 28	18848 4.61 28	18251 4.72 27	17567 4.80 26	16882 4.89 26	16195 4.95 25	14801 4.98 24	10157 4.29 24				
X1 (5)	515	20639 4.78 30	20058 4.90 30	19481 5.02 29	18906 5.14 28	18256 5.23 27	17591 5.31 27	16927 5.40 26	15575 5.44 25	12426 5.16 25				
	530	21240 5.22 31	20676 5.34 31	20114 5.46 30	19566 5.58 29	18940 5.68 29	18295 5.77 28	17649 5.85 27	16339 5.92 27	14143 5.81 26	4260 3.18 26			
	545	21841 5.67 33	21292 5.80 32	20746 5.92 31	20203 6.04 30	19620 6.15 30	18993 6.24 29	18365 6.33 29	17095 6.43 28	15440 6.40 27	10640 5.44 27			
	560	22442 6.15 34	21908 6.28 33	21377 6.41 32	20848 6.54 32	20297 6.66 31	19686 6.75 30	19075 6.84 30	17843 6.96 29	16599 7.00 28	13052 6.80 28			
	575	23043 6.66 35	22523 6.79 34	22006 6.92 34	21491 7.05 33	20970 7.18 32	20375 7.28 32	19779 7.37 31	18584 7.53 30	17373 7.57 30	15004 7.39 29	5118 4.23 29		
	590	23644 7.19 36	23137 7.33 36	22633 7.47 35	22132 7.60 34	21627 7.73 34	21059 7.84 33	20479 7.94 33	19319 8.13 31	18138 8.16 31	16310 8.08 30	11731 6.97 30		
	605	24245 7.76 38	23751 7.90 37	23529 8.03 36	22770 8.17 36	22279 8.31 35	21740 8.43 34	21175 8.53 34	20043 8.73 33	18896 8.79 32	17594 8.80 31	14155 8.58 31		
	620	24847 8.35 39	24364 8.49 38	23884 8.63 38	23404 8.77 37	22927 8.92 36	22418 9.04 36	21866 9.14 35	20762 9.35 34	19646 9.45 33	18522 9.49 33	16112 9.26 32	6542 5.71 32	
	635	25448 8.97 41	24976 9.12 40	24507 9.26 39	24039 9.41 38	23574 9.55 38	23092 9.69 37	22553 9.79 37	21476 10.00 35	20390 10.15 35	19293 10.19 34	17421 10.05 33	13300 8.93 33	
	650	26049 9.62 42	25588 9.77 41	25130 9.92 41	24672 10.07 40	24218 10.21 39	23760 10.36 39	23237 10.47 38	22184 10.69 37	21128 10.88 36	20056 10.91 35	18708 10.89 35	15525 10.34 34	

DESIGN DATA

Max BHP = 39.859 x $\left[\frac{\text{RPM}}{1000}\right]^3$

Tip Speed = 11.26 x RPM

Max. Motor Frame Size = 254T

Unit Weight (less motor) = 515 lbs.

Roof Opening = 49-1/2" Sq.

Curb O. D. = 52-1/2" Sq.

Damper Size = 48" Sq.

Performance certified is for installation type A - free inlet, free outlet.
Performance ratings (bhp) do not include transmission losses.
Performance ratings do not include the effects of accessories.

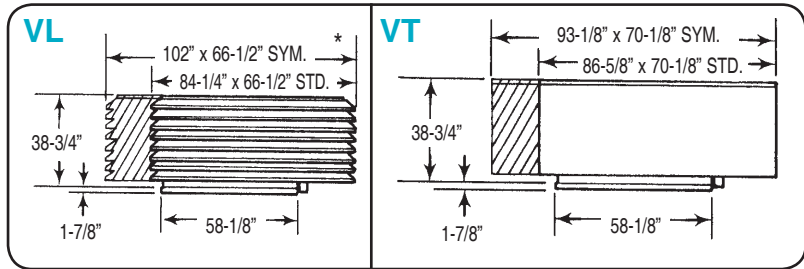
The sound ratings shown are loudness values in fan sones at 5 feet (1.5m) in a hemispherical free field. Values shown are for installation type A, free inlet hemispherical sone levels.

* For Extreme Weather dimensions, please see page 157.

Low Silhouette Cent. Roof

VLBK 48 VTBK 48 BELT DRIVE

PERFORMANCE DATA



RPM Range - Motor HP		STATIC PRESSURE, INCHES W. G.												
T1 (1-1/2)	RPM	.000	.125	.250	.375	.500	.625	.750	1.000	1.250	1.500	1.750	2.000	
		CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES
V1 (2)	200	12803 .49 8.8	10626 .56 6.5	8866 .35 5.1										
	220	14083 .65 10.3	12093 .73 8.1	9553 .74 6.6										
W1 (3)	240	15364 .85 11.9	13527 .93 9.7	11571 .98 8.4	3468 .56 7.9									
	260	16644 1.08 13.7	14937 1.18 11.6	13249 1.24 10.5	10647 1.21 10.0									
X1 (5)	280	17924 1.35 15.7	16328 1.46 14.1	14816 1.53 13.0	12846 1.55 12.4	4743 .93 11.9								
	290	18564 1.50 16.8	17019 1.61 15.4	15557 1.69 14.4	13835 1.73 13.7	10452 1.60 13.2								
Y1 (7-1/2)	300	19205 1.66 18.0	17711 1.78 16.8	16292 1.86 15.8	14687 1.91 15.1	12255 1.85 14.6								
	310	19845 1.83 19.3	18399 1.95 18.2	17020 2.04 17.3	15527 2.10 16.5	13386 2.08 16.0	4518 1.20 15.6							
C1 (10)	320	20485 2.01 21	19084 2.14 19.4	17742 2.24 18.5	16356 2.31 17.8	14476 2.30 17.3	7067 1.54 16.8							
	330	21125 2.21 22	19767 2.34 20	18460 2.44 19.5	17175 2.53 18.8	15547 2.55 18.2	12731 2.41 17.7							
V1 (7-1/2)	340	21765 2.42 22	20447 2.55 21	19172 2.66 21	17927 2.75 19.7	16414 2.78 19.2	14236 2.72 18.7	5056 1.60 18.2						
	350	22405 2.64 24	21125 2.77 22	19880 2.89 21	18671 2.98 21	17261 3.03 20	15340 3.00 19.6	7605 2.00 19.1						
W1 (10)	360	23045 2.87 25	21801 3.01 23	20585 3.13 23	19409 3.23 22	18099 3.29 21	16426 3.29 21	13676 3.11 20						
	370	23686 3.11 26	22474 3.26 25	21285 3.39 24	20142 3.49 23	18927 3.57 22	17483 3.59 22	15322 3.50 21						
X1 (10)	380	24326 3.37 27	23146 3.52 26	21983 3.66 25	20869 3.76 24	19747 3.86 23	18340 3.88 23	16431 3.83 22						
	390	24966 3.65 28	23817 3.80 27	22677 3.94 26	21592 4.05 25	20507 4.16 24	19188 4.19 24	17522 4.17 23	5166 2.34 22					
Y1 (10)	400	25606 3.93 29	24486 4.09 28	23368 4.24 27	22310 4.35 26	21252 4.46 25	20027 4.52 25	18598 4.52 24	7731 2.78 23					
	410	26246 4.24 31	25153 4.40 29	24060 4.55 28	23025 4.67 27	21993 4.78 27	20858 4.86 26	19555 4.88 26	14759 4.51 25					
C1 (15)	420	26886 4.56 32	25819 4.72 30	24752 4.88 29	23736 5.00 29	22728 5.12 28	21681 5.22 27	20408 5.24 27	16567 5.02 26					
	430	27526 4.89 33	26484 5.05 31	25442 5.22 31	24443 5.35 30	23459 5.47 29	22475 5.59 28	21254 5.62 28	18000 5.51 27	2914 2.26 26				
W1 (15)	440	28167 5.24 34	27148 5.41 33	26130 5.58 32	25147 5.72 31	24185 5.84 30	23224 5.96 30	22091 6.01 29	19106 5.94 28	6801 3.49 27				
	450	28807 5.60 36	27811 5.78 35	26815 5.95 33	25848 6.10 32	24908 6.22 32	23968 6.35 31	22920 6.43 30	20197 6.40 29	9352 4.12 29				
X1 (15)	460	29447 5.98 38	28473 6.16 36	27498 6.34 35	26547 6.50 34	25627 6.62 33	24707 6.75 32	23743 6.86 32	21274 6.87 31	16794 6.37 30				
	470	30087 6.38 39	29134 6.57 38	28180 6.75 37	27243 6.91 36	26342 7.04 35	25442 7.17 34	24541 7.30 33	22285 7.36 32	18599 7.05 31				
Y1 (15)	480	30727 6.80 41	29794 6.99 40	28860 7.17 38	27936 7.35 37	27054 7.48 36	26173 7.61 36	25291 7.74 35	23142 7.83 34	20041 7.66 33	6935 4.46 32			
	490	31367 7.23 43	30453 7.42 41	29538 7.61 40	28627 7.80 39	27763 7.93 38	26900 8.07 38	26036 8.20 37	23992 8.32 36	21148 8.20 35	9495 5.11 34			
C1 (20)	500	32008 7.69 44	31111 7.88 43	30215 8.07 42	29319 8.27 41	28470 8.41 40	27623 8.54 39	26777 8.68 39	24834 8.83 38	22243 8.76 37	12014 5.74 36			
	510	32648 8.16 46	31769 8.35 45	30890 8.55 44	30011 8.75 43	29173 8.90 42	28343 9.04 41	27514 9.18 41	25669 9.36 40	23324 9.35 39	19500 8.88 38	4083 4.01 37		
W1 (20)	520	33288 8.64 48	32426 8.85 47	31564 9.05 46	30702 9.25 45	29874 9.41 44	29060 9.55 43	28246 9.69 43	26498 9.92 42	24393 9.96 41	21294 9.67 40	7889 5.74 39		
	530	33928 9.15 50	33082 9.36 49	32237 9.56 48	31391 9.77 47	30573 9.94 46	29774 10.08 46	28976 10.23 45	27321 10.49 44	25304 10.55 43	22419 10.34 42	10446 6.52 41		

DESIGN DATA

Max BHP = 70.891 x $\left[\frac{\text{RPM}}{1000}\right]^3$

Tip Speed = 12.83 x RPM
 Max. Motor Frame Size = 254T
 Unit Weight (less motor) = 505 lbs.

Roof Opening = 53-1/2" Sq.
 Curb O. D. = 56-1/2" Sq.
 Damper Size = 52" Sq.

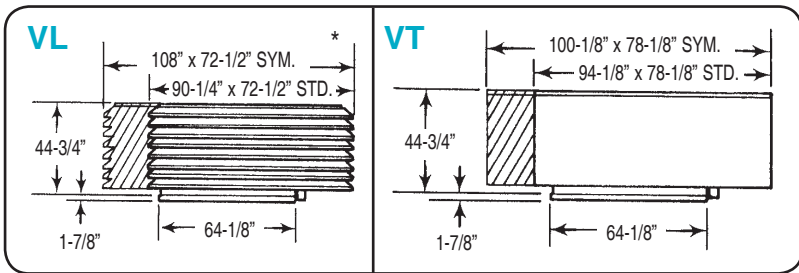
Performance certified is for installation type A - free inlet, free outlet.
 Performance ratings (bhp) do not include transmission losses.
 Performance ratings do not include the effects of accessories.

The sound ratings shown are loudness values in fan sones at 5 feet (1.5m) in a hemispherical free field. Values shown are for installation type A, free inlet hemispherical sone levels.
 * For Extreme Weather dimensions, please see page 157.

Low Silhouette Cent. Roof

VLBK 54 VTBK 54 BELT DRIVE

PERFORMANCE DATA



RPM Range - Motor HP		STATIC PRESSURE, INCHES W. G.												
T1 (1-1/2)	RPM	.000	.125	.250	.375	.500	.625	.750	1.000	1.250	1.500	1.750	2.000	
		CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES
V1 (2)	190	16266 .66 9.0	13719 .74 6.8	10466 .79 6.5										
	200	17122 .77 9.9	14690 .86 7.6	11767 .93 7.1										
	210	17978 .89 10.8	15650 .98 8.5	13024 1.07 7.9										
	220	18834 1.02 11.7	16600 1.11 9.6	14200 1.22 8.6	6821 .90 8.8									
	230	19690 1.16 12.7	17542 1.26 10.8	15333 1.38 9.5	12337 1.40 9.7									
	240	20546 1.32 13.9	18475 1.42 12.1	16445 1.54 10.6	13778 1.60 10.6									
	250	21403 1.49 15.2	19402 1.60 13.4	17540 1.73 11.8	15051 1.81 11.7	5826 1.15 11.6								
	260	22259 1.68 16.5	20323 1.79 14.8	18547 1.92 13.2	16298 2.04 12.8	13239 1.99 12.7								
	270	23115 1.88 17.9	21239 1.99 16.2	19529 2.13 14.7	17455 2.26 14.0	14984 2.28 13.8								
	280	23971 2.10 19.3	22162 2.21 17.8	20501 2.35 16.3	18588 2.49 15.4	16278 2.54 15.1	6741 1.64 14.8							
W1 (3)	290	24827 2.33 21	23081 2.45 19.2	21464 2.59 17.9	19705 2.74 16.8	17546 2.83 16.5	14676 2.76 16.1							
	300	25683 2.58 22	23995 2.70 21	22421 2.85 19.6	20807 3.00 18.4	18792 3.13 17.9	16474 3.12 17.5	4054 1.59 17.2						
	310	26539 2.85 24	24906 2.97 22	23370 3.12 21	21880 3.28 20	19953 3.42 19.5	17808 3.45 18.9	9070 2.43 18.4						
	320	27395 3.13 25	25813 3.26 24	24313 3.41 23	22870 3.58 22	21090 3.72 21	19084 3.80 20	16498 3.73 19.7						
	330	28251 3.44 26	26717 3.57 25	25250 3.72 24	23851 3.89 23	22213 4.05 22	20339 4.16 21	18263 4.16 21						
	340	29107 3.76 28	27618 3.89 26	26183 4.05 25	24824 4.22 24	23322 4.39 23	21550 4.54 22	19560 4.55 22						
	350	29964 4.10 29	28517 4.24 28	27110 4.39 26	25791 4.57 25	24419 4.75 24	22698 4.91 23	20837 4.97 23	6613 2.88 22					
	360	30820 4.46 30	29413 4.60 29	28033 4.76 28	26751 4.94 27	25468 5.13 26	23831 5.29 25	22094 5.41 24	17303 5.22 23					
	370	31676 4.84 31	30307 4.99 30	28953 5.14 29	27705 5.33 28	26457 5.53 27	24952 5.70 26	23324 5.86 26	19140 5.77 24					
	380	32532 5.25 33	31199 5.40 32	29868 5.55 30	28653 5.75 29	27438 5.94 28	26060 6.13 28	24475 6.30 27	20932 6.35 26					
X1 (5)	390	33388 5.67 34	32090 5.83 33	30791 5.98 32	29597 6.18 31	28413 6.38 30	27158 6.58 29	25613 6.75 28	22251 6.87 27	6790 3.85 26				
	400	34244 6.12 36	32978 6.28 34	31712 6.44 33	30535 6.64 32	29381 6.84 31	28226 7.05 30	26739 7.23 30	23534 7.41 29	11603 5.20 27				
	410	35100 6.59 37	33865 6.75 36	32630 6.92 35	31470 7.11 34	30344 7.33 33	29217 7.54 32	27854 7.73 31	24799 7.99 30	20733 7.81 29				
	420	35956 7.09 39	34751 7.25 37	33545 7.42 36	32400 7.61 35	31301 7.83 34	30201 8.05 33	28958 8.26 32	26048 8.59 31	22538 8.52 30				
	425	36384 7.34 40	35193 7.51 38	34001 7.68 37	32864 7.87 36	31777 8.09 35	30691 8.32 34	29507 8.53 33	26667 8.90 32	23429 8.88 31	6285 4.68 31			
	430	36812 7.60 41	35635 7.77 39	34457 7.94 38	33327 8.14 37	32253 8.36 36	31179 8.59 35	30053 8.80 34	27251 9.18 33	24096 9.20 32	8715 5.50 32			
	435	37240 7.87 42	36076 8.04 40	34912 8.22 39	33789 8.41 38	32727 8.64 37	31666 8.86 36	30597 9.09 35	27827 9.47 34	24744 9.53 33	11076 6.29 32			
	440	37668 8.15 43	36518 8.32 41	35367 8.49 40	34250 8.69 39	33201 8.92 38	32151 9.15 37	31102 9.37 36	28400 9.77 34	25389 9.86 33	13642 7.21 33			
	445	38096 8.43 44	36959 8.60 42	35821 8.78 41	34711 8.97 40	33673 9.20 39	32635 9.43 38	31597 9.67 37	28970 10.07 35	26029 10.21 34	21956 9.93 34			
	450	38525 8.72 45	37399 8.89 43	36274 9.07 42	35170 9.26 40	34144 9.49 39	33118 9.73 38	32091 9.96 38	29538 10.37 36	26666 10.56 35	22869 10.34 35			

DESIGN DATA

Max BHP = 115.906 x $\left[\frac{\text{RPM}}{1000} \right]^3$

Tip Speed = 14.40 x RPM
 Max. Motor Frame Size = 254T
 Unit Weight (less motor) = 690 lbs.

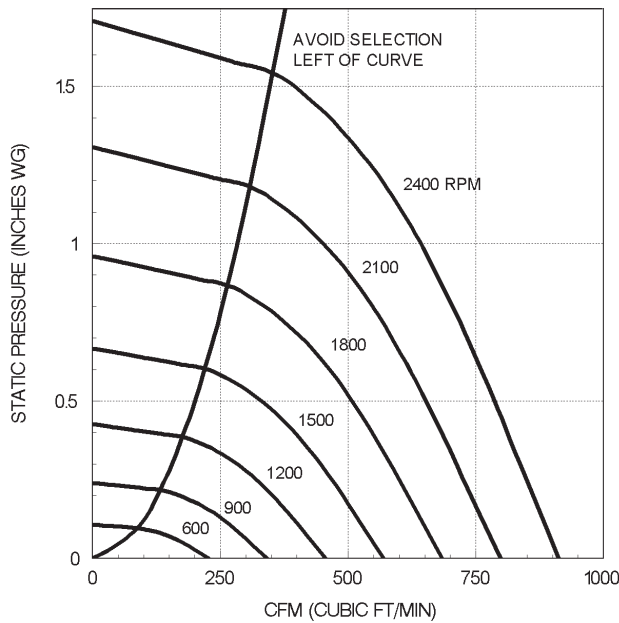
Roof Opening = 59-1/2" Sq.
 Curb O. D. = 62-1/2" Sq.
 Damper Size = 58" Sq.

Low Silhouette Cent. Roof

Performance certified is for installation type A - free inlet, free outlet.
 Performance ratings (bhp) do not include transmission losses.
 Performance ratings do not include the effects of accessories.

The sound ratings shown are loudness values in fan sones at 5 feet (1.5m) in a hemispherical free field. Values shown are for installation type A, free inlet hemispherical sone levels.
 * For Extreme Weather dimensions, please see page 157.

VLBK & VTBK 06
AIR PERFORMANCE



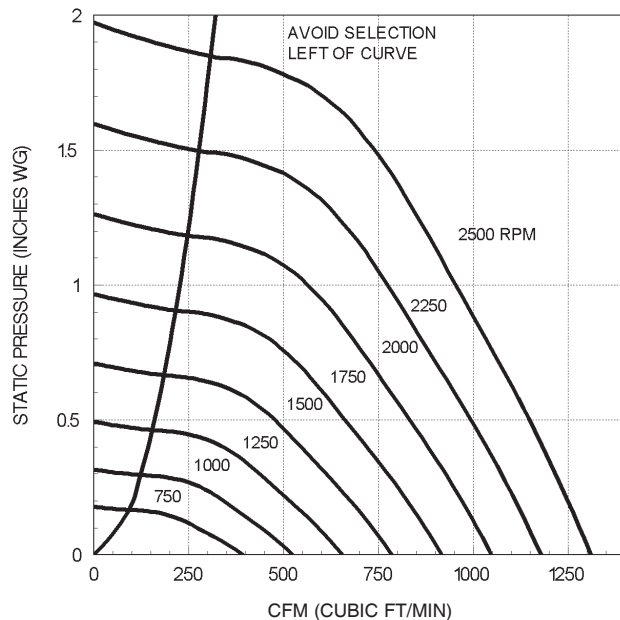
Performance certified is for installation type A - free inlet, free outlet.
Performance ratings (bhp) do not include transmission losses.
Performance ratings do not include the effects of accessories.

VLBK & VTBK 06
SOUND PERFORMANCE

RPM	SP INCH W.G.	SOUND POWER RE 10 ⁻¹² WATTS								
		OCTAVE BANDS								LWA
		1	2	3	4	5	6	7	8	
600	.000	44	38	38	36	37	35	32	30	42
	.125	53	57	50	50	47	46	43	39	53
1000	.000	65	67	64	60	57	55	54	51	64
	.500	63	65	62	61	59	56	53	48	64
1450	.000	75	72	74	66	64	61	60	58	71
	.375	73	71	72	65	64	60	58	55	70
	.750	73	70	72	66	66	62	59	55	71
1800	.000	82	74	80	70	69	64	64	62	76
	.500	79	74	79	69	68	63	62	59	74
	1.000	78	74	78	69	70	65	64	59	75
2100	.000	85	77	83	73	72	66	66	64	78
	.500	82	77	81	72	71	66	65	62	77
	1.000	81	76	81	72	72	67	65	62	77
2300	.000	86	80	84	77	74	69	68	66	80
	.500	84	80	83	76	73	68	67	64	79
	1.000	83	80	82	75	73	69	67	64	79
	1.500	82	79	82	76	75	71	68	64	80

The sound power level ratings shown are in decibels, referred to 10⁻¹² watts. Values shown are for inlet L_{wj} sound power levels for installation Type A free inlet, free outlet. Ratings do not include the effects of duct end correction.

VLBK & VTBK 08
AIR PERFORMANCE



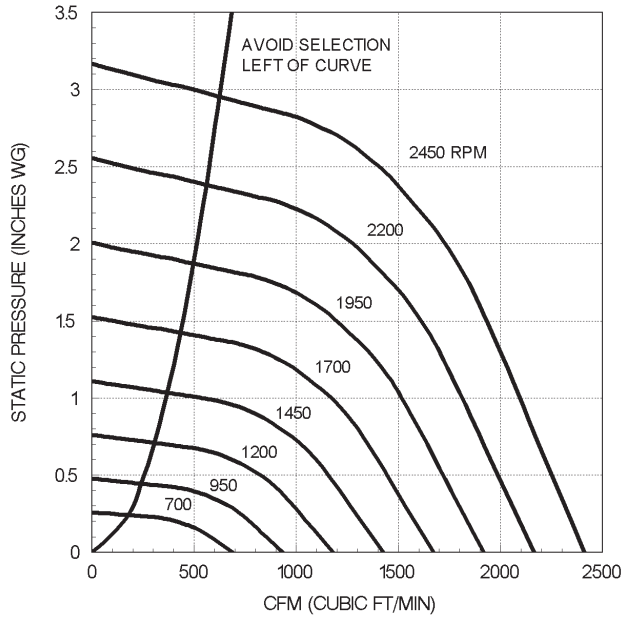
Performance certified is for installation type A - free inlet, free outlet.
Performance ratings (bhp) do not include transmission losses.
Performance ratings do not include the effects of accessories.

VLBK & VTBK 08
SOUND PERFORMANCE

RPM	SP INCH W.G.	SOUND POWER RE 10 ⁻¹² WATTS								
		OCTAVE BANDS								LWA
		1	2	3	4	5	6	7	8	
650	.000	44	41	40	38	38	40	42	44	48
	.250	53	57	51	53	50	49	45	41	56
1050	.000	66	66	65	61	57	56	57	59	65
	.500	65	65	63	61	59	57	54	50	64
1450	.000	76	70	74	67	64	60	61	63	71
	.500	76	70	70	66	64	60	59	58	69
	1.000	74	70	72	66	65	62	60	55	70
1800	.000	84	72	79	71	69	64	64	66	75
	.500	83	73	75	70	68	63	62	62	74
	1.000	81	73	77	69	69	65	64	60	74
2100	.000	87	75	82	74	71	66	66	68	78
	.750	85	77	78	72	71	66	65	63	76
	1.500	83	76	80	72	72	68	67	62	77
2300	.000	88	79	83	77	73	68	68	69	80
	.500	88	80	81	76	73	68	67	67	79
	1.000	87	80	80	75	73	68	67	65	79
	1.750	85	79	82	75	74	70	69	65	79

The sound power level ratings shown are in decibels, referred to 10⁻¹² watts. Values shown are for inlet L_{wj} sound power levels for installation Type A free inlet, free outlet. Ratings do not include the effects of duct end correction.

VLBK & VTBK 10 AIR PERFORMANCE



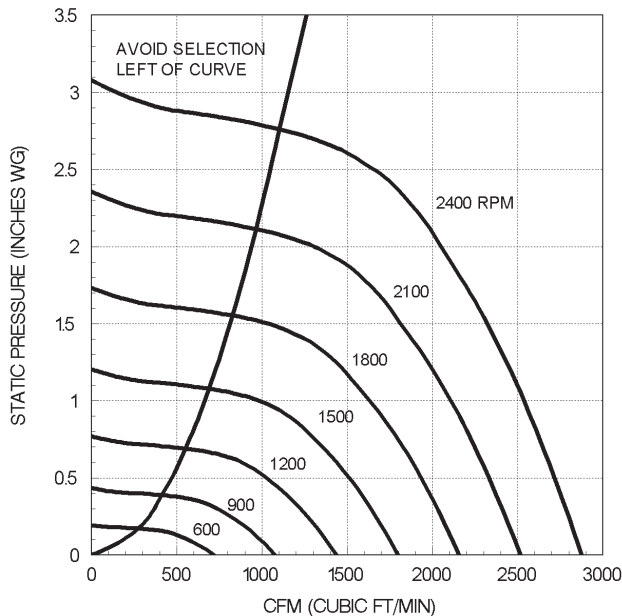
Performance certified is for installation type A - free inlet, free outlet.
Performance ratings (bhp) do not include transmission losses.
Performance ratings do not include the effects of accessories.

VLBK & VTBK 10 SOUND PERFORMANCE

RPM	SP INCH W.G.	SOUND POWER RE 10 ⁻¹² WATTS								
		OCTAVE BANDS								
		1	2	3	4	5	6	7	8	LWA
650	.000	51	56	49	45	45	44	37	30	50
	.500	58	69	66	59	55	57	52	45	64
1050	.000	55	67	63	56	54	55	52	48	62
	.375	66	71	77	69	63	62	61	54	72
	.750	64	69	75	67	61	60	59	52	70
1400	.000	63	69	75	65	61	61	60	55	70
	.625	72	73	85	76	68	66	68	61	80
	1.250	70	72	82	74	67	65	66	59	77
1750	.000	69	71	83	72	66	66	66	62	77
	.500	75	78	87	83	74	71	72	67	84
	1.000	74	77	85	82	73	70	70	66	82
2100	.000	73	76	85	81	73	69	69	65	82
	1.000	72	75	85	80	71	70	70	67	81
	2.000	78	82	89	89	80	75	75	72	88
2450	.000	76	81	86	87	78	73	73	70	86
	1.000	75	80	86	86	77	73	73	71	86
	2.000	74	79	86	86	76	73	73	71	86
	3.000	74	79	86	86	76	73	74	72	86

The sound power level ratings shown are in decibels, referred to 10⁻¹² watts. Values shown are for inlet L_{wj} sound power levels for installation Type A free inlet, free outlet. Ratings do not include the effects of duct end correction.

VLBK & VTBK 12 AIR PERFORMANCE



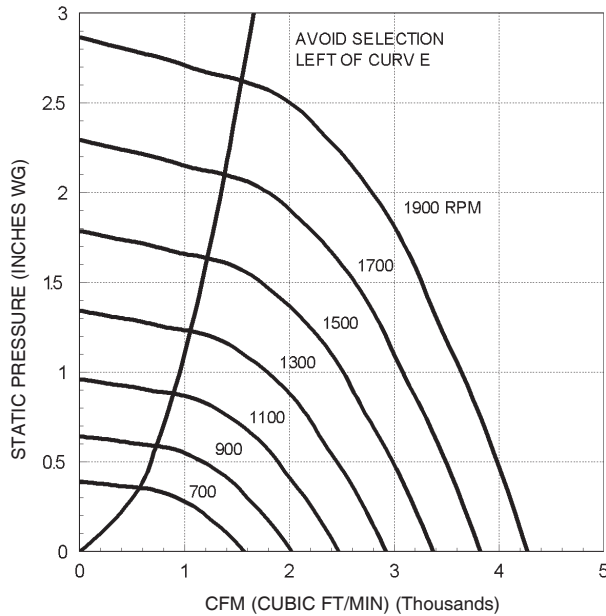
Performance certified is for installation type A - free inlet, free outlet.
Performance ratings (bhp) do not include transmission losses.
Performance ratings do not include the effects of accessories.

VLBK & VTBK 12 SOUND PERFORMANCE

RPM	SP INCH W.G.	SOUND POWER RE 10 ⁻¹² WATTS								
		OCTAVE BANDS								
		1	2	3	4	5	6	7	8	LWA
550	.000	53	48	46	47	46	41	36	31	50
	.500	65	70	61	60	60	57	52	47	64
950	.000	67	69	58	57	57	55	51	46	62
	.375	76	78	76	69	68	66	62	57	74
	.750	75	75	75	67	66	65	61	56	73
1350	.000	76	78	75	66	65	64	60	56	72
	.625	84	84	87	76	74	73	70	64	82
	1.250	82	83	86	74	71	71	68	63	81
1750	.000	83	86	87	73	71	70	68	64	81
	.500	89	88	91	82	78	77	75	70	86
	1.000	88	88	90	81	77	76	74	69	86
2100	.000	87	87	90	80	76	75	73	68	85
	1.000	87	90	90	79	75	75	73	69	85
	2.000	91	92	94	88	82	80	78	74	90
2400	.000	91	92	93	88	81	79	78	73	90
	1.000	90	92	93	87	80	79	77	73	89
	2.000	89	92	93	86	79	78	76	72	89
	2.750	89	94	94	86	79	77	76	72	89

The sound power level ratings shown are in decibels, referred to 10⁻¹² watts. Values shown are for inlet L_{wj} sound power levels for installation Type A free inlet, free outlet. Ratings do not include the effects of duct end correction.

VLBK & VTBK 15
AIR PERFORMANCE



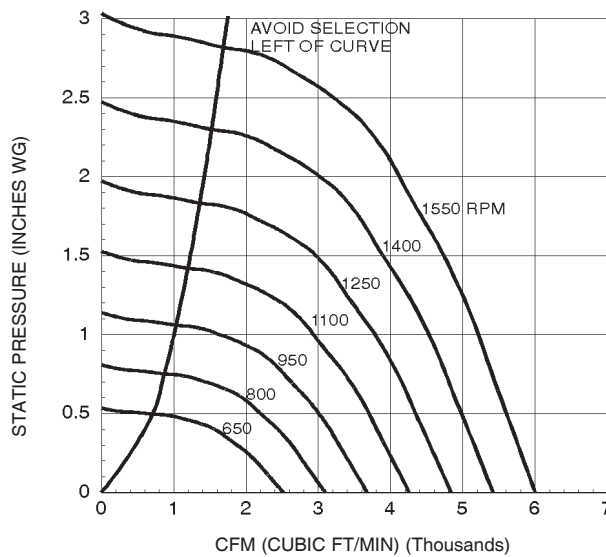
Performance certified is for installation type A - free inlet, free outlet.
Performance ratings (bhp) do not include transmission losses.
Performance ratings do not include the effects of accessories.

VLBK & VTBK 15
SOUND PERFORMANCE

RPM	SP INCH W.G.	SOUND POWER RE 10 ⁻¹² WATTS								
		OCTAVE BANDS								LWA
		1	2	3	4	5	6	7	8	
550	.000	64	62	55	53	51	46	39	32	56
	.750	72	70	65	61	59	55	49	42	64
1000	.000	77	79	76	69	66	64	58	51	73
	.375	78	78	74	67	63	61	56	50	71
	.750	77	79	74	64	63	61	57	49	70
1250	.000	80	89	84	75	71	70	65	58	80
	.750	82	88	82	72	68	66	62	56	78
	1.000	81	88	83	70	68	66	63	56	78
1500	.000	83	92	87	82	76	74	70	64	84
	.750	85	92	86	80	74	72	68	62	83
	1.000	85	92	85	79	74	71	67	62	83
	1.500	84	91	86	78	73	71	68	62	82
1700	.000	85	94	90	86	80	77	74	68	88
	.750	87	94	89	85	78	75	72	67	87
	1.000	87	94	89	85	78	75	72	66	86
	1.500	87	94	88	84	77	74	71	66	86
	2.000	86	94	89	83	76	74	71	66	86

The sound power level ratings shown are in decibels, referred to 10⁻¹² watts. Values shown are for inlet L_{wj} sound power levels for installation Type A free inlet, free outlet. Ratings do not include the effects of duct end correction.

VLBK & VTBK 18
AIR PERFORMANCE



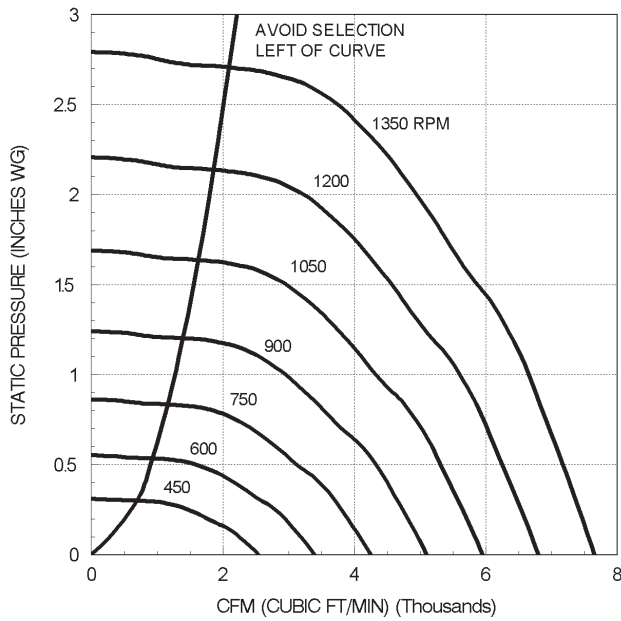
Performance certified is for installation type A - free inlet, free outlet.
Performance ratings (bhp) do not include transmission losses.
Performance ratings do not include the effects of accessories.

VLBK & VTBK 18
SOUND PERFORMANCE

RPM	SP INCH W.G.	SOUND POWER RE 10 ⁻¹² WATTS								
		OCTAVE BANDS								LWA
		1	2	3	4	5	6	7	8	
550	.000	66	65	63	59	60	57	45	37	64
	.625	77	73	72	67	65	68	56	47	73
950	.000	80	80	79	74	71	72	66	55	78
	.500	79	79	77	71	67	64	58	51	74
	1.000	83	80	78	72	67	63	58	52	75
1150	.000	83	86	84	78	75	73	70	65	82
	1.000	82	83	81	75	72	70	67	61	79
	1.500	81	82	79	72	70	70	67	61	77
1350	.000	87	90	90	82	79	77	74	70	87
	1.000	85	88	88	80	77	75	71	66	84
	1.500	85	88	86	79	75	74	71	66	83
	2.000	85	87	85	77	74	74	72	66	82
1500	.000	89	93	94	85	82	80	77	73	90
	1.000	88	91	92	84	80	78	75	70	88
	1.500	87	91	91	83	78	77	74	69	87
	2.000	88	90	90	81	77	77	75	69	86
	2.500	88	90	89	79	76	76	75	69	85

The sound power level ratings shown are in decibels, referred to 10⁻¹² watts. Values shown are for inlet L_{wj} sound power levels for installation Type A free inlet, free outlet. Ratings do not include the effects of duct end correction.

VLBK & VTBK 21 AIR PERFORMANCE



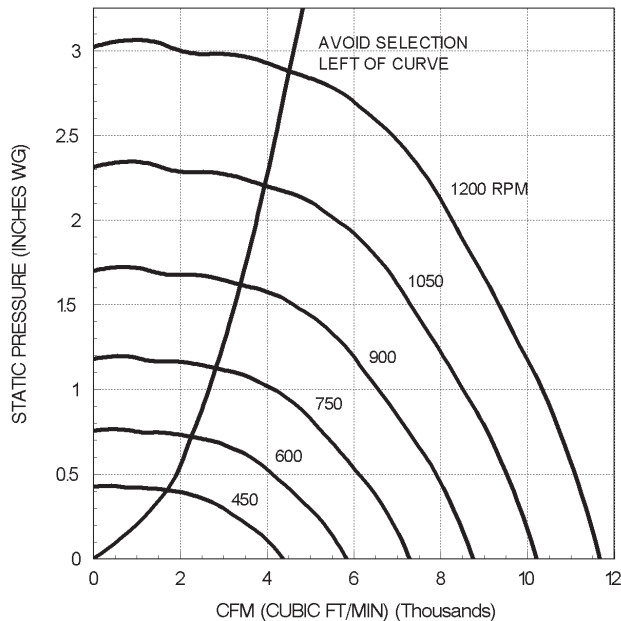
Performance certified is for installation type A - free inlet, free outlet.
Performance ratings (bhp) do not include transmission losses.
Performance ratings do not include the effects of accessories.

VLBK & VTBK 21 SOUND PERFORMANCE

RPM	SP INCH W.G.	SOUND POWER RE 10 ⁻¹² WATTS								
		OCTAVE BANDS								
		1	2	3	4	5	6	7	8	LWA
400	.000	62	61	58	58	55	49	41	38	60
	.500	71	75	68	67	67	62	55	47	71
600	.000	72	78	64	61	63	62	54	44	68
	.500	78	81	78	74	73	70	64	56	78
800	.000	78	82	78	71	70	68	62	55	76
	.750	78	83	78	69	69	69	63	54	76
950	.000	82	85	85	78	77	75	70	62	83
	.750	82	85	85	75	74	73	68	60	81
	1.250	82	87	86	73	72	73	70	60	81
1350	.000	86	88	90	81	80	80	74	67	87
	.750	85	88	91	79	78	77	72	65	86
	1.250	85	89	92	78	76	77	73	65	86
	1.750	85	90	92	77	74	76	75	66	86
1225	.000	88	91	93	85	82	82	78	70	89
	.750	87	90	94	83	81	81	76	69	89
	1.000	87	90	94	83	80	80	75	68	89
	1.500	87	91	95	82	78	79	76	69	89
	2.00	87	92	96	81	77	78	78	69	89

The sound power level ratings shown are in decibels, referred to 10⁻¹² watts. Values shown are for inlet L_{wj} sound power levels for installation Type A free inlet, free outlet. Ratings do not include the effects of duct end correction.

VLBK & VTBK 24 AIR PERFORMANCE



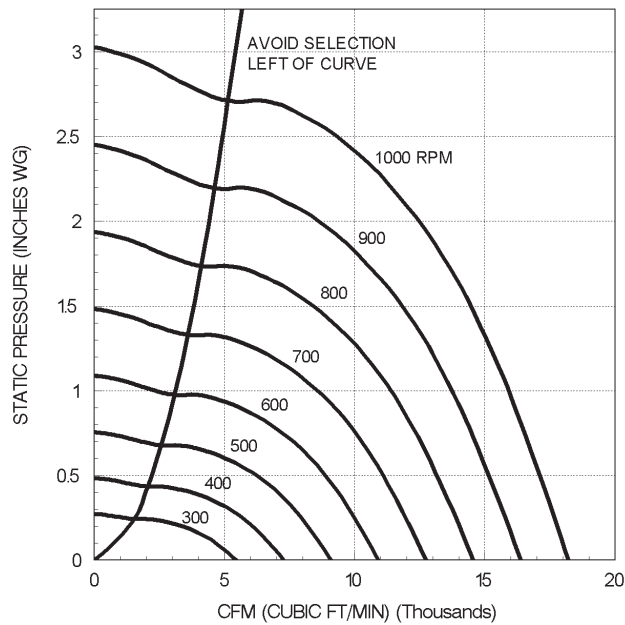
Performance certified is for installation type A - free inlet, free outlet.
Performance ratings (bhp) do not include transmission losses.
Performance ratings do not include the effects of accessories.

VLBK & VTBK 24 SOUND PERFORMANCE

RPM	SP INCH W.G.	SOUND POWER RE 10 ⁻¹² WATTS								
		OCTAVE BANDS								
		1	2	3	4	5	6	7	8	LWA
400	.000	74	71	62	61	61	58	51	44	66
	.000	79	83	73	68	68	67	61	54	74
550	.375	78	80	70	66	67	64	58	52	72
	.625	78	80	69	65	66	64	58	51	71
700	.000	84	90	83	75	73	73	69	61	81
	.500	83	87	79	73	71	71	66	59	78
	.750	84	87	78	72	71	71	66	59	78
	1.000	84	87	78	71	71	71	66	59	78
825	.000	87	93	89	79	76	77	74	67	85
	.500	86	91	86	78	75	76	72	65	83
	.750	87	90	85	77	74	76	71	64	83
	1.000	87	90	84	76	74	75	71	64	82
950	1.250	88	90	84	75	74	75	71	64	82
	.000	90	95	94	83	80	80	78	71	90
	.500	89	94	92	82	79	80	77	70	88
	1.000	89	93	90	81	78	79	75	69	87
	1.500	91	93	90	80	77	79	75	69	86
1.750	92	93	90	79	77	78	75	69	86	

The sound power level ratings shown are in decibels, referred to 10⁻¹² watts. Values shown are for inlet L_{wj} sound power levels for installation Type A free inlet, free outlet. Ratings do not include the effects of duct end correction.

VLBK & VTBK 30
AIR PERFORMANCE



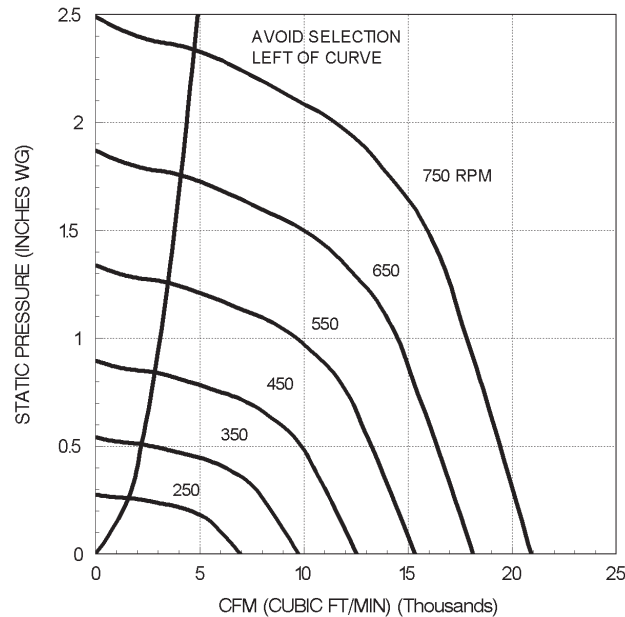
Performance certified is for installation type A - free inlet, free outlet.
Performance ratings (bhp) do not include transmission losses.
Performance ratings do not include the effects of accessories.

VLBK & VTBK 30
SOUND PERFORMANCE

RPM	SP INCH W.G.	SOUND POWER RE 10 ⁻¹² WATTS								
		OCTAVE BANDS								LWA
		1	2	3	4	5	6	7	8	
275	.000	70	61	60	59	54	49	44	39	60
	.375	74	65	59	58	55	53	49	44	61
475	.000	82	82	73	72	70	65	60	55	75
	.375	81	79	70	68	65	61	58	54	71
	.625	81	76	66	64	61	59	55	51	68
600	.000	85	92	81	77	77	72	66	61	81
	.500	84	91	78	74	73	69	65	61	80
	1.000	87	87	74	69	68	65	62	57	75
725	.000	87	96	87	81	82	77	72	67	87
	.500	87	96	85	79	79	75	70	67	85
	1.000	89	94	83	76	76	72	69	65	83
	1.500	93	92	80	73	73	69	67	63	80
825	.000	89	98	92	84	85	81	76	71	90
	.500	89	98	91	83	83	79	74	70	89
	1.000	89	98	90	81	81	77	73	70	87
	1.500	93	96	87	79	77	74	71	67	85
	2.000	95	95	86	77	76	73	70	66	84

The sound power level ratings shown are in decibels, referred to 10⁻¹² watts. Values shown are for inlet L_{wj} sound power levels for installation Type A free inlet, free outlet. Ratings do not include the effects of duct end correction.

VLBK & VTBK 36
AIR PERFORMANCE



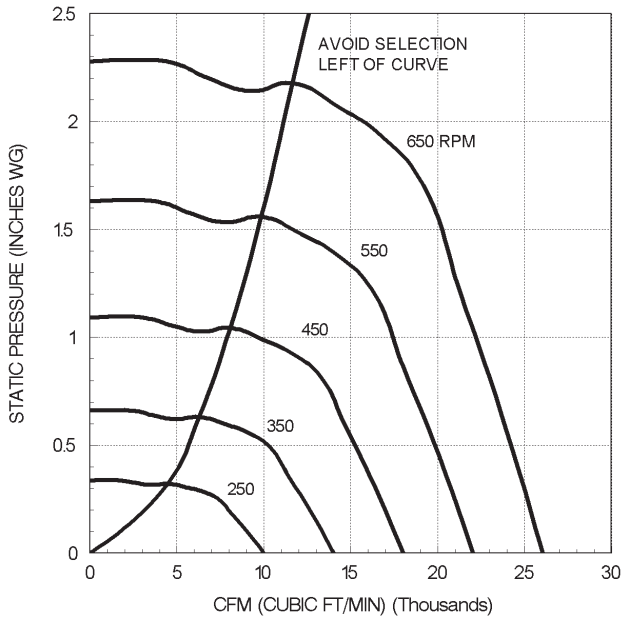
Performance certified is for installation type A - free inlet, free outlet.
Performance ratings (bhp) do not include transmission losses.
Performance ratings do not include the effects of accessories.

VLBK & VTBK 36
SOUND PERFORMANCE

RPM	SP INCH W.G.	SOUND POWER RE 10 ⁻¹² WATTS								
		OCTAVE BANDS								LWA
		1	2	3	4	5	6	7	8	
250	.000	68	65	63	60	59	62	64	65	70
	.500	77	75	72	69	66	68	70	72	76
450	.000	83	82	79	76	72	72	75	77	82
	.375	84	83	76	72	69	70	71	66	78
	.750	83	78	73	69	67	64	61	57	73
550	.000	88	89	84	81	78	76	79	80	86
	.750	89	89	81	76	74	71	75	69	82
	1.250	91	84	78	74	72	68	65	60	78
650	.000	92	94	89	85	82	79	82	84	90
	.750	93	95	88	82	79	76	81	77	88
	1.250	95	93	86	80	77	74	76	71	85
	1.750	98	89	83	78	76	73	69	65	82
750	.000	95	97	93	89	86	82	84	86	93
	.750	95	98	93	87	84	80	83	82	92
	1.250	95	98	92	85	82	79	82	80	91
	1.750	98	96	90	84	81	78	78	75	88
750	2.250	100	94	88	82	80	77	74	69	87

The sound power level ratings shown are in decibels, referred to 10⁻¹² watts. Values shown are for inlet L_{wj} sound power levels for installation Type A free inlet, free outlet. Ratings do not include the effects of duct end correction.

VLBK & VTBK 42 AIR PERFORMANCE



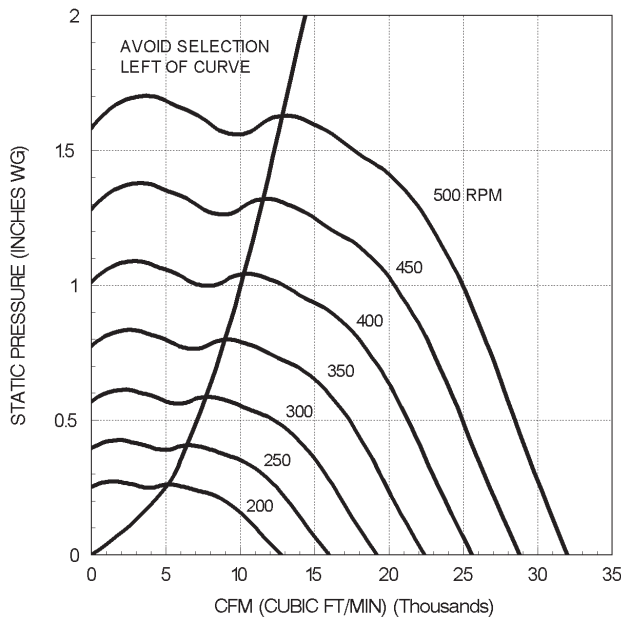
Performance certified is for installation type A - free inlet, free outlet.
Performance ratings (bhp) do not include transmission losses.
Performance ratings do not include the effects of accessories.

VLBK & VTBK 42 SOUND PERFORMANCE

RPM	SP INCH W.G.	SOUND POWER RE 10 ⁻¹² WATTS								LWA
		OCTAVE BANDS								
		1	2	3	4	5	6	7	8	
215	.000	69	67	64	63	58	59	47	34	65
	.375	70	68	67	68	63	60	57	52	69
275	.000	78	80	76	74	70	69	64	52	77
	.250	77	78	74	73	69	67	62	51	75
335	.500	74	75	72	72	69	66	62	56	74
	.000	86	84	81	78	75	72	71	58	81
395	.375	84	82	78	76	75	70	68	57	79
	.750	82	79	76	76	74	70	67	62	79
460	.000	94	89	85	81	80	74	77	64	85
	.375	92	87	83	80	80	73	75	63	84
	.750	91	85	81	79	79	73	73	64	83
525	1.000	90	84	80	79	79	73	71	66	83
	.000	99	92	89	85	84	77	80	70	89
	.500	97	90	87	83	83	76	79	68	88
	.750	96	89	86	82	83	76	78	68	87
525	1.000	96	88	85	82	83	76	76	69	87
	1.250	96	87	83	82	82	77	75	70	86

The sound power level ratings shown are in decibels, referred to 10⁻¹² watts. Values shown are for inlet L_{wj} sound power levels for installation Type A free inlet, free outlet. Ratings do not include the effects of duct end correction.

VLBK & VTBK 48 AIR PERFORMANCE



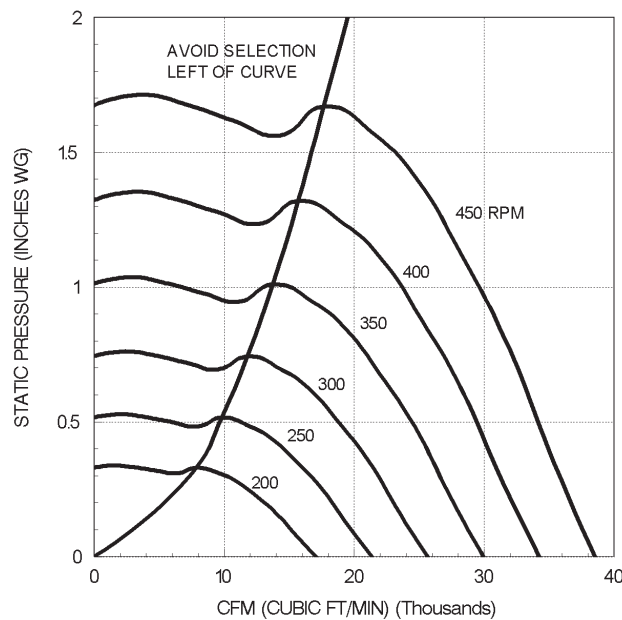
Performance certified is for installation type A - free inlet, free outlet.
Performance ratings (bhp) do not include transmission losses.
Performance ratings do not include the effects of accessories.

VLBK & VTBK 48 SOUND PERFORMANCE

RPM	SP INCH W.G.	SOUND POWER RE 10 ⁻¹² WATTS								LWA
		OCTAVE BANDS								
		1	2	3	4	5	6	7	8	
200	.000	75	70	72	68	62	64	51	37	70
250	.000	84	77	77	74	69	68	60	46	76
	.250	84	75	68	64	62	62	56	45	69
300	.000	91	83	80	79	74	72	67	54	81
	.250	93	81	75	71	68	67	64	52	75
350	.500	93	80	73	68	65	63	59	52	73
	.000	95	88	83	84	79	75	74	60	85
390	.375	97	86	80	74	71	69	70	58	79
	.625	97	86	78	72	70	67	65	57	78
	.000	97	92	85	87	82	77	78	65	88
390	.250	98	91	84	81	78	74	76	63	85
	.500	99	90	83	76	74	71	74	62	82
	.750	99	89	81	75	72	70	69	61	81
430	.000	99	95	88	89	85	79	81	69	91
	.250	100	95	87	85	81	77	79	67	88
	.500	100	94	86	81	78	74	77	66	86
	.750	101	94	85	79	76	73	74	65	84
430	1.000	101	94	84	77	75	72	70	64	83

The sound power level ratings shown are in decibels, referred to 10⁻¹² watts. Values shown are for inlet L_{wj} sound power levels for installation Type A free inlet, free outlet. Ratings do not include the effects of duct end correction.

**VLBK & VTBK 54
AIR PERFORMANCE**



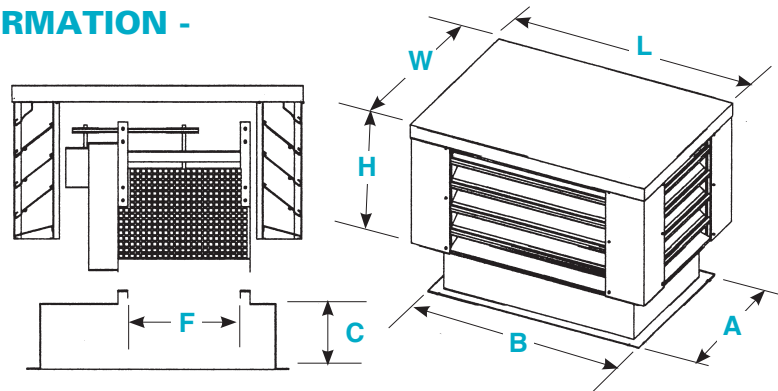
Performance certified is for installation type A - free inlet, free outlet.
Performance ratings (bhp) do not include transmission losses.
Performance ratings do not include the effects of accessories.

**VLBK & VTBK 54
SOUND PERFORMANCE**

RPM	SP INCH W.G.	SOUND POWER RE 10 ⁻¹² WATTS								
		OCTAVE BANDS								LWA
		1	2	3	4	5	6	7	8	
190	.000	79	70	70	68	63	62	56	48	70
230	.000	86	77	74	73	69	66	62	54	75
	.375	83	75	70	66	63	59	56	52	69
260	.000	91	82	77	76	72	69	66	58	78
	.500	88	80	73	69	66	63	59	55	73
290	.000	95	86	79	79	76	71	69	62	81
	.375	94	82	75	71	70	66	63	56	76
	.625	92	83	77	72	69	66	62	58	76
320	.000	98	90	81	81	79	74	72	65	84
	.375	98	85	78	74	73	69	67	60	80
	.750	96	87	79	74	72	68	64	61	79
350	.000	100	93	83	83	81	76	75	68	87
	.500	100	88	80	76	75	71	69	62	81
	1.000	96	90	83	77	74	71	66	64	82
380	.000	101	96	86	85	83	78	77	71	89
	.500	101	93	84	79	78	74	72	65	84
	.750	101	92	84	78	77	73	70	65	84
	1.000	99	93	85	79	76	73	69	65	84

The sound power level ratings shown are in decibels, referred to 10⁻¹² watts. Values shown are for inlet L_{wj} sound power levels for installation Type A free inlet, free outlet. Ratings do not include the effects of duct end correction.

**DIMENSIONAL INFORMATION -
EXTREME WEATHER**



(Dimensions in Inches)

Carnes Fan Model	Penthouses Overall Size					Curb OD				Curb Throat F	
	W	x	L	x	H	A	x	B	x		C
VLBK 06	36	x	41	x	23	27.25	x	32.25	x	C	11.25
VLBK 08	36	x	41	x	23	27.25	x	32.25	x	C	11.25
VLBK 10	36	x	44	x	23	27.25	x	35.25	x	C	13.38
VLBK 12	36	x	44	x	23	27.25	x	35.25	x	C	13.38
VLBK 15	36	x	48	x	26	27.25	x	39.35	x	C	16.25
VLBK 18	47	x	52	x	29	38.25	x	43.25	x	C	20.75
VLBK 21	50	x	61	x	30	41.25	x	52.25	x	C	23.88
VLBK 24	53	x	65	x	34	44.25	x	56.25	x	C	26.88
VLBK 30	61	x	77	x	38	52.25	x	68.25	x	C	35.88
VLBK 36	67	x	84	x	39	58.25	x	75.25	x	C	41.88
VLBK 42	75	x	92	x	43	66.25	x	83.25	x	C	49.88
VLBK 48	79	x	96	x	46	70.25	x	87.25	x	C	53.88
VLBK 54	85	x	102	x	52	76.25	x	93.25	x	C	59.88

Low Silhouette Cent. Roof

Extreme Weather - Miami-Dade County Approved Louvered Penthouses Model VLBK

Volumetric Flow Rate and Static Pressure Loss Performance Data

Dimensions of Penthouses

Square Height (Inches)		Static Pressure Loss (in W.G.)										
		0.008	0.018	0.027	0.037	0.050	0.061	0.074	0.089	0.120	0.180	0.220
		Air Velocity (fpm)										
		200	300	400	500	600	700	800	900	1000	1100	1200
12	12	288	432	576	720	864	1008	1152	1296	1440	1584	1728
	24	672	1008	1344	1680	2016	2352	2688	3024	3360	3696	4032
24	12	656	984	1312	1640	1968	2296	2624	2952	3280	3608	3936
	24	1536	2304	3072	3840	4608	5376	6144	6912	7680	8448	9216
	36	2584	3876	5168	6460	7752	9044	10336	11628	12920	14212	15504
36	12	1024	1536	2048	2560	3072	3584	4096	4608	5120	5632	6144
	24	2408	3612	4816	6020	7224	8428	9632	10836	12040	13244	14448
	36	4040	6060	8080	10100	12120	14140	16160	18180	20200	22220	24240
	48	5360	8040	10720	13400	16080	18760	21440	24120	26800	29480	32160
48	12	1400	2100	2800	3500	4200	4900	5600	6300	7000	7700	8400
	24	3272	4908	6544	8180	9816	11452	13088	14724	16360	17996	19632
	36	5504	8256	11008	13760	16512	19264	22016	24768	27520	30272	33024
	48	7288	10932	14576	18220	21864	25508	29152	32796	36440	40084	43728
	60	9592	14388	19184	23980	28776	33572	38368	43164	47960	52756	57552
60	12	1768	2652	3536	4420	5304	6188	7072	7956	8840	9724	10608
	24	4144	6216	8288	10360	12432	14504	16576	18648	20720	22792	24864
	36	6960	10440	13920	17400	20880	24360	27840	31320	34800	38280	41760
	48	9224	13836	18448	23060	27672	32284	36896	41508	46120	50732	55344
	60	12136	18204	23272	30340	36408	42476	48544	54612	60680	66748	72816
	72	14520	21780	29040	36300	43560	50820	58080	65340	72600	79860	87120
72	12	2136	3204	4272	5340	6408	7476	8544	9612	10680	11748	12816
	24	5008	7512	10016	12520	15024	17528	20032	22536	25040	27544	30048
	36	8424	12636	16848	21060	25272	29484	33696	37908	42120	46332	50544
	48	11160	16740	22320	27900	33480	39060	44640	50220	55800	61380	66960
	60	14680	22020	29360	36700	44040	51380	58720	66060	73400	80740	88080
	72	17560	26340	35120	43900	52680	61460	70240	79020	87800	96580	105360
	84	20952	31428	41904	52380	62856	73332	83808	94284	104760	115236	125712
	96	2512	3768	5024	6280	7536	8792	10048	11304	12560	13816	15072
84	24	5880	8820	11760	14700	17640	20580	23520	26460	29400	32340	35280
	36	9880	14820	19760	24700	29640	34580	39520	44460	49400	54340	59280
	48	13088	19632	26176	32720	39264	45808	52352	58896	65440	71984	78528
	60	17224	25836	34448	43060	51672	60284	68896	77508	86120	94732	103344
	72	20608	30912	41216	51520	61824	72128	82432	92736	103040	113344	123648
	84	24584	36876	49168	61460	73752	86044	98336	110628	122920	135212	147504
	96	2880	4320	5760	7200	8640	10080	11520	12960	14400	15840	17280
	24	6744	10116	13488	16860	20232	23604	26976	30348	33720	37092	40464
96	36	11344	17016	22688	28360	34032	39704	45376	51048	56720	62392	68064
	48	15024	22536	30048	37560	45072	52584	60096	67608	75120	82632	90144
	60	19768	29652	39536	49420	59304	69188	79072	88956	98840	108724	118608
	72	23648	35472	47296	59120	70944	82768	94592	106416	118240	130064	141888
	84	28216	42324	56432	70540	84648	98756	112864	126972	141080	155188	169296

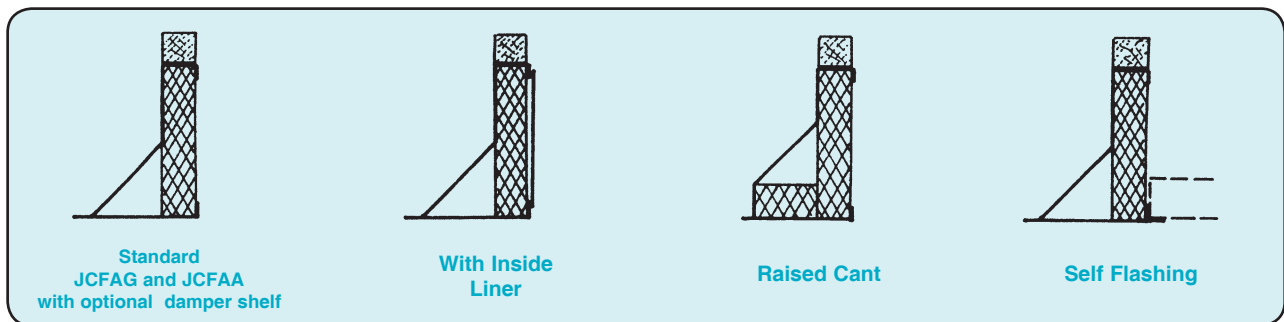
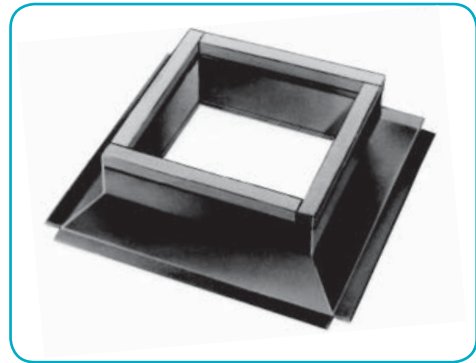
Low Silhouette Cent. Roof

ROOF CURBS

Roof curbs Models JCFAAG galvanized and JCFAA aluminum are of welded construction with 1-1/2" fiberglass insulation and wood nailer. Standard heights are 8" and 12" with custom heights available.

For pitched roofs pitched curbs are available with standard cant for minor slopes (to approximately 2" per ft.) or "self-flashing" wide flange without cant for steeper pitches.

Roof curb modifications include a metal liner to prevent contamination of the insulation, raised cant for use with insulated roof decks and a damper shelf to support a backdraft damper inside the curb.



BACKDRAFT DAMPERS

Carnes Model JDHAA automatic gravity dampers are available to prevent backflow when units are shut down. Damper frames are heavy-duty box type. Blades are aluminum with felt edges and are linked together for quiet operation. A counterbalance spring is adjustable for tension to provide minimum resistance to air flow.

Motorized operation (JDHAM) may be provided by adding the motor pack available for 115/208/230 volt operation. Transformers are available for 460 or 560 volt operation.



Low Silhouette Cent. Roof

APPROVED ANCHORING METHODS

SUBSTRATES, ANCHOR TYPES & SPACING ARE AS FOLLOWS:

A. CONCRETE DECKING

Use 3/8" dia. ITW Red Heat Tru Bolt Wedge Anchors of sufficient length to achieve minimum 3" embedment into concrete, spaced 4-1/2" maximum from each corner and 14-1/2" O.C. maximum.

B. WOOD FRAME DECKING

Use 7/16" dia. Lag Bolts of sufficient length to achieve minimum embedment into wood decking, spaced 4-1/2" maximum from each corner and 10-7/8" O.C. maximum.

C. STEEL GIRDER OR PERLIN WITH METAL DECKING

Use # 12-3 point ITW Buildex Maxiseal screws spaced 4-1/2" maximum from each corner and 4-1/2" O.C. maximum. Use 3/4" FILLET WELDS spaced 4-1/2" from each corner and 12-3/8" O.C. maximum.

ALL ROOFING DETAILS SHALL COMPLY WITH CHAPTER 15 OF THE FLORIDA BUILDING CODE. REFER TO NOA No: 04-1209.01 FOR DETAILS.

OPTIONS

- Hinged Roof
- Insect Screen
- Filters
- Anti-condensate Interior Roof
- Insulated Roof Hood
- Internal Access Ladder

CURB HEIGHTS

In addition to the standard 8" curb, heights are available in even number sizes from 10" to 24".

- Dade County Schools' minimum is 18".

FINISH OPTIONS

- Mill Finish (Standard)
- Kynar Finish *
- Enamel Finish
- Powder Coated

* Available in limited sizes, contact factory for availability.

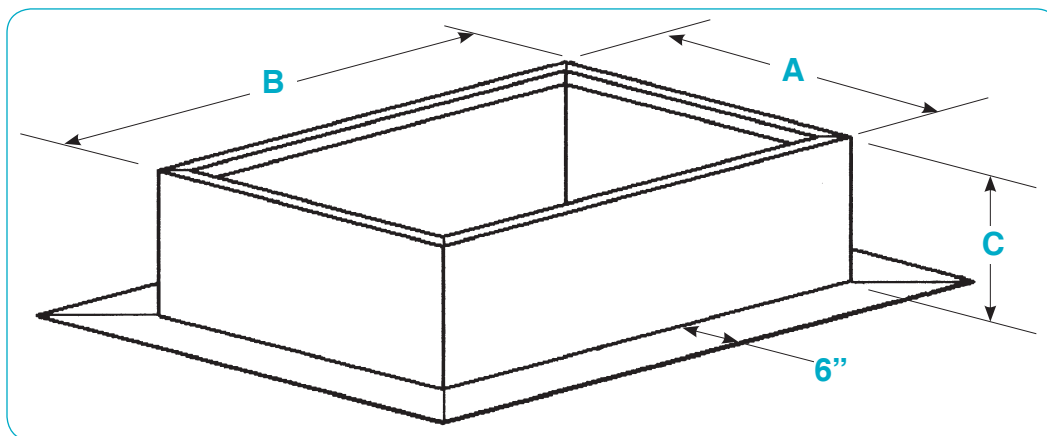
DESIGNED AND APPROVED TO MEET MIAMI DADE TEST STANDARDS

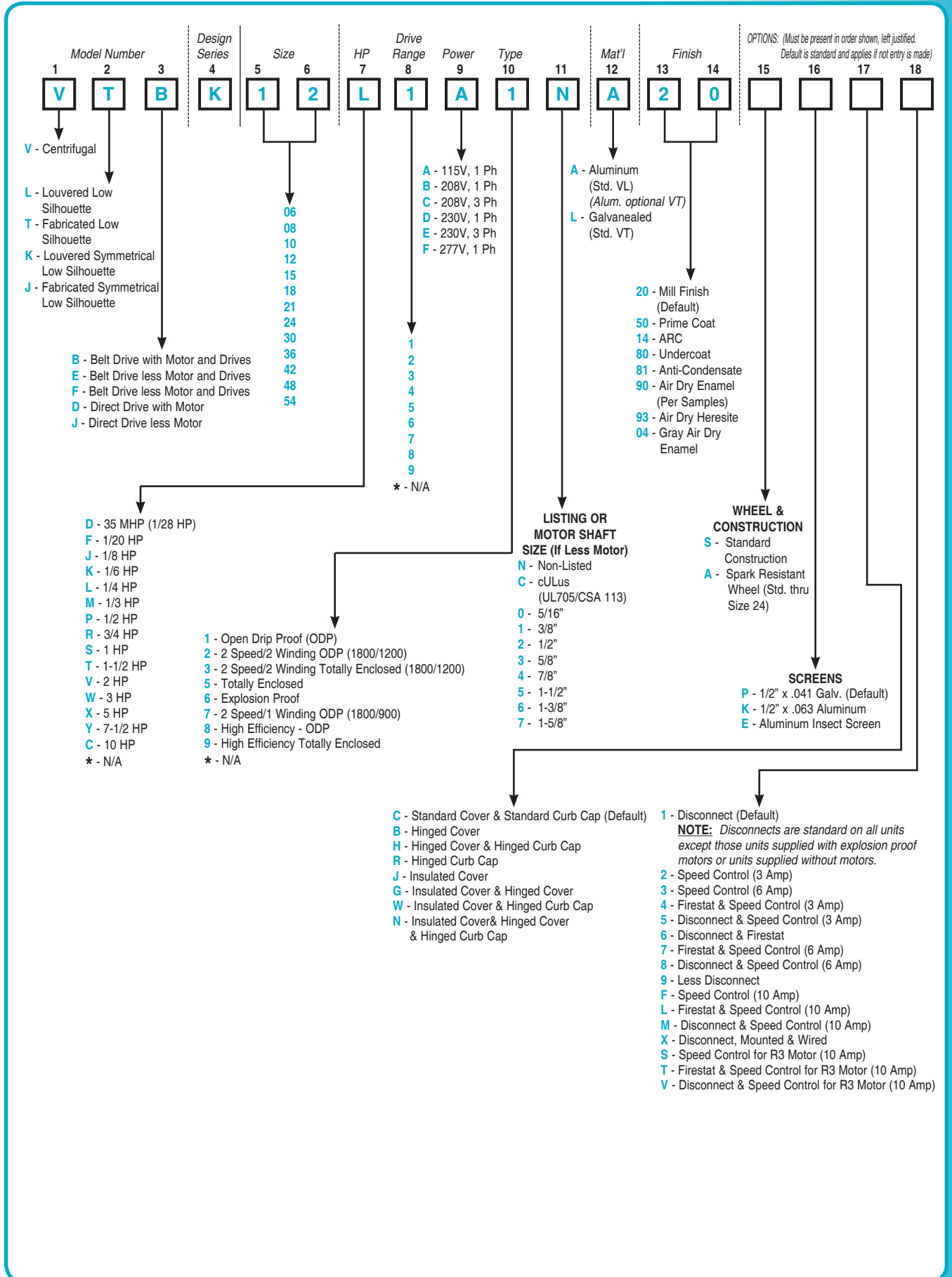
EXTREME WEATHER CURBS - MODEL JCWAG

- Fully welded construction
- 14 gauge (.047) galvanized steel
- 1-1/2" (38) thick 3 lb. density rigid fiberglass insulation
- 6" (152) wide bottom flanges
- 1-1/2" x 1-1/2" (38 x 38) vertical bracing
- Minimum height 8" (206)
- Maximum height 24" (610)

(Dimensions in Inches)

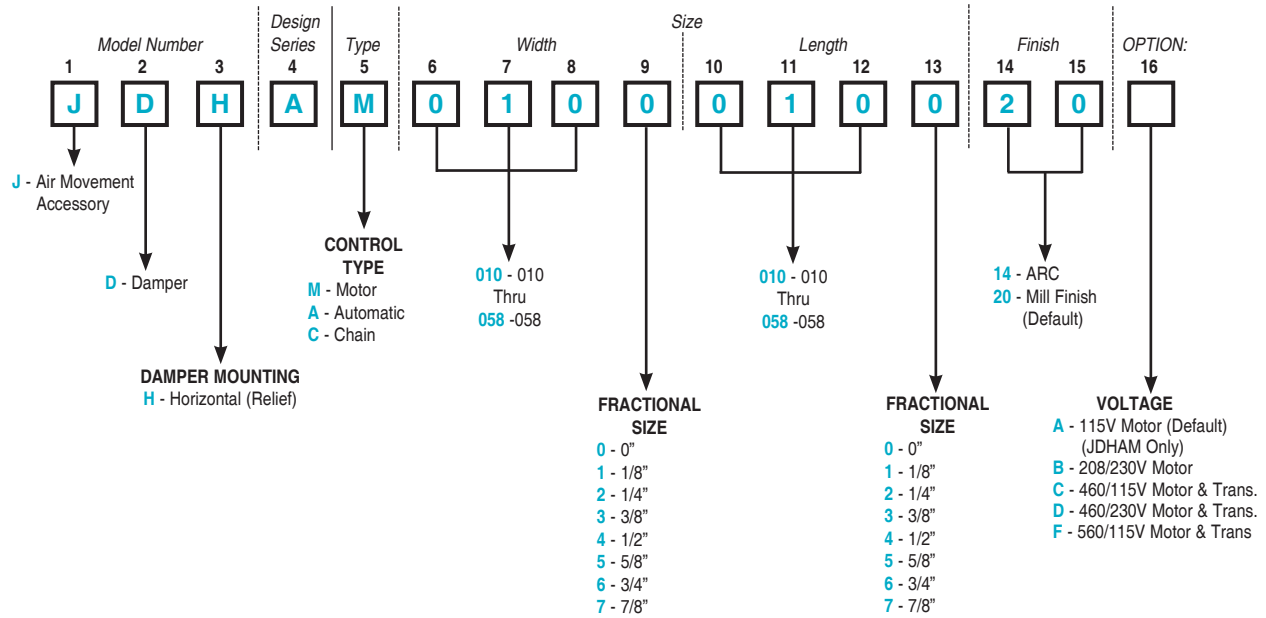
Carnes Fan Model	Curb OD					
	A	x	B	x	C	
VLBK06	27.25	x	32.25	x	C	
VLBK 08	27.25	x	32.25	x	C	
VLBK 10	27.25	x	32.25	x	C	
VLBK 12	27.25	x	32.25	x	C	
VLBK 15	27.25	x	39.25	x	C	
VLBK 18	38.25	x	43.25	x	C	
VLBK 21	41.25	x	52.25	x	C	
VLBK 24	44.25	x	56.25	x	C	
VLBK 30	52.25	x	68.25	x	C	
VLBK 36	58.25	x	75.25	x	C	
VLBK 42	66.25	x	83.25	x	C	
VLBK 48	70.25	x	87.25	x	C	
VLBK 54	76.25	x	93.25	x	C	



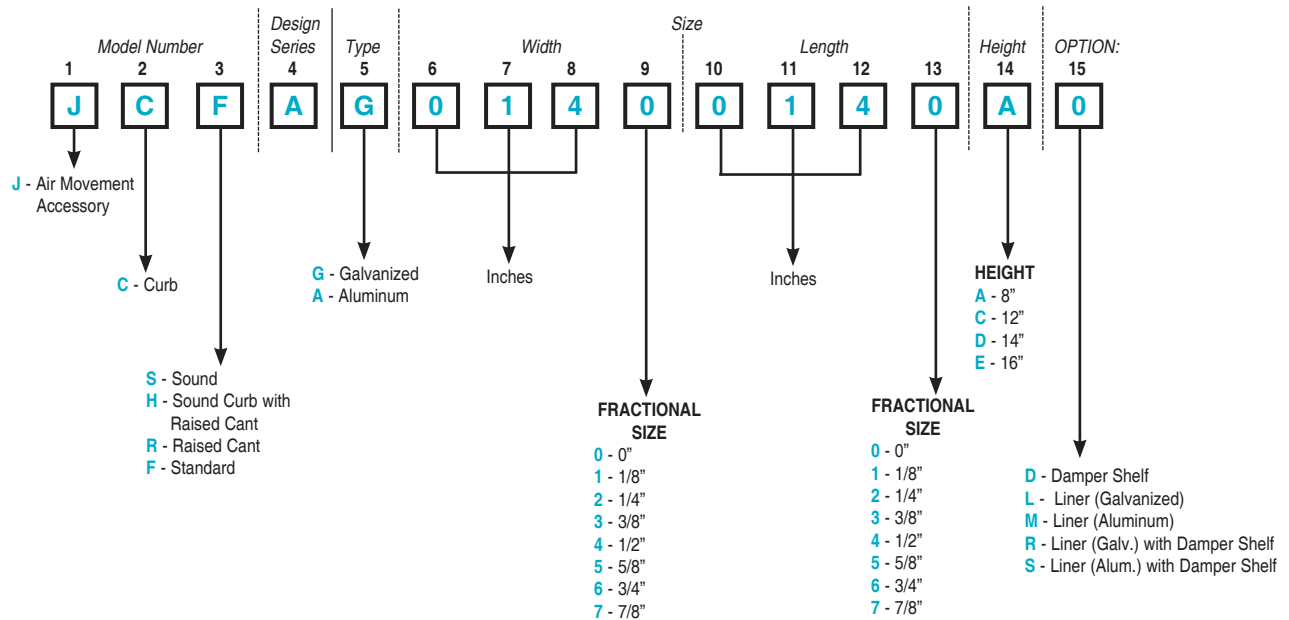


Low Silhouette Cent. Roof

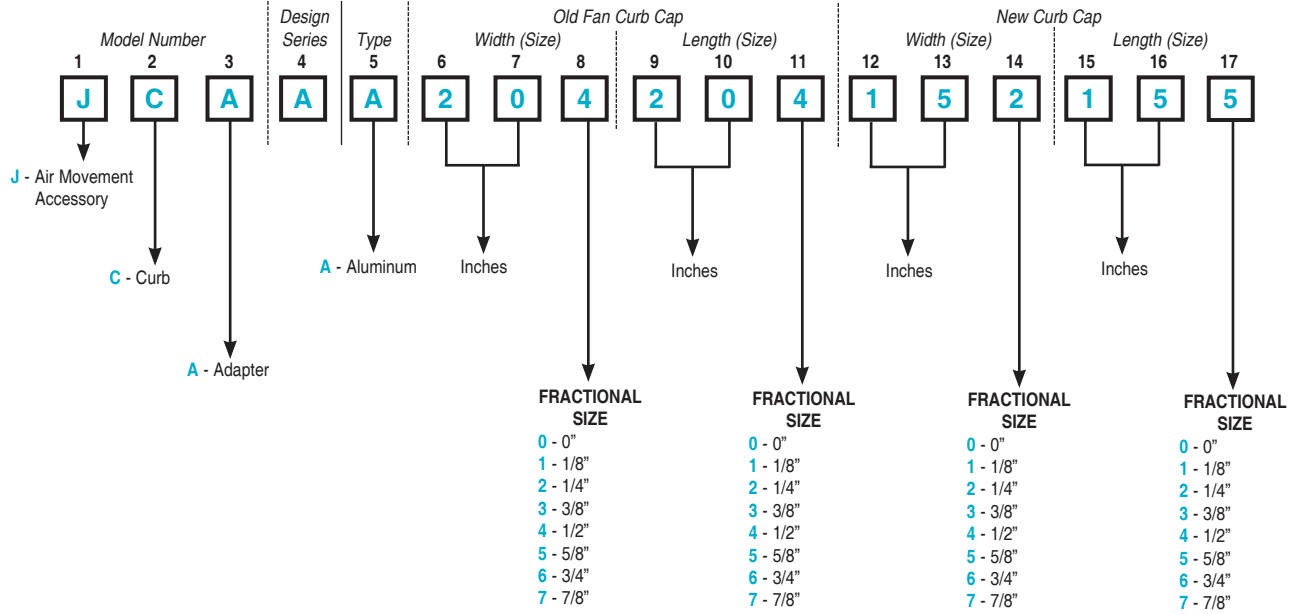
▼ Dampers



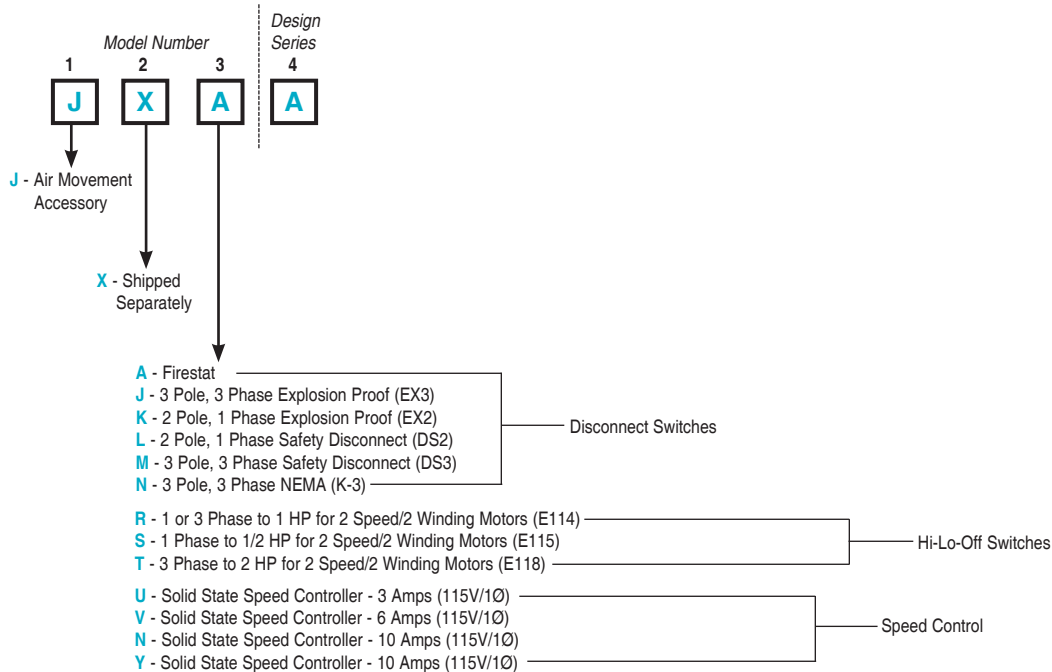
▼ Curbs



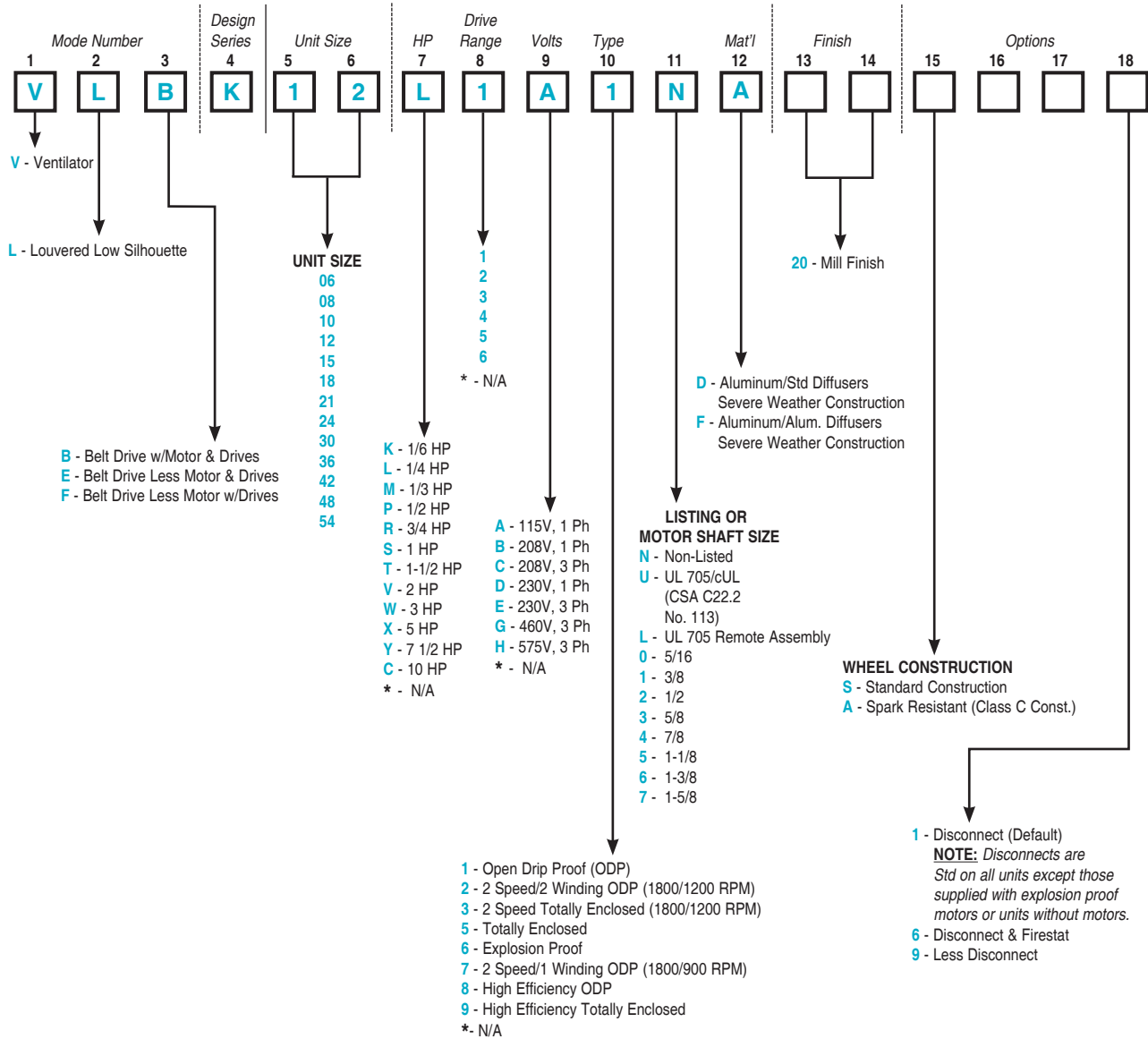
▼ **Curb Cap Adapters**



▼ **Electrical Accessories**

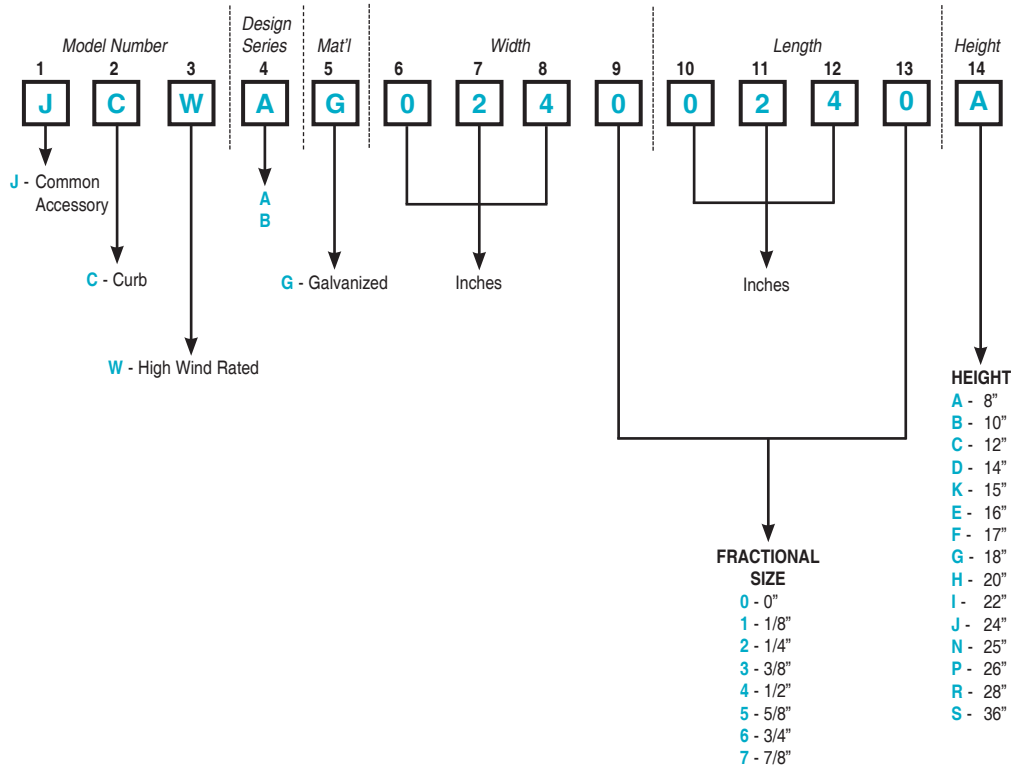
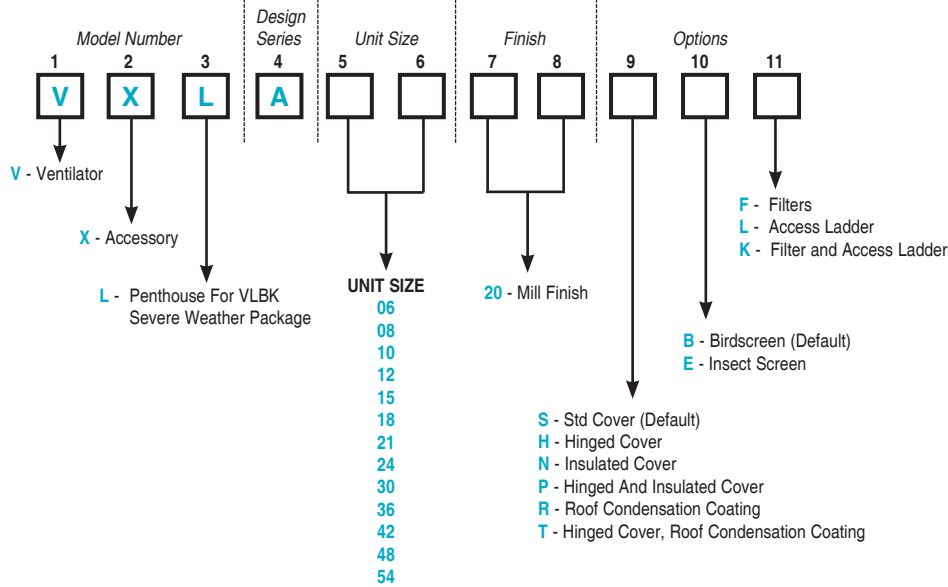


EXTREME WEATHER



Low Silhouette Cent. Roof

EXTREME WEATHER



Low Silhouette Cent. Roof