

ENERGY EFFICIENT VENTILATORS

HVAC fact sheet

START SAVING NOW — with low-cost, easy to control, electronically commutated motor (ECM) on Dayton power roof ventilators. Dayton's Variable-Speed Motors blend technology, controllability and energy efficiency into a low maintenance package that is changing the way the industry designs, specifies and operates air movement equipment. Electronic commutation uses electronic circuitry to control the motor's functions:

- New consolidated motor can be easily changed from the potentiometer dial adjustment to the 0-10 Vdc adjustment simply by purchasing the remote dial speed control Sku No. 43Y140.
- Solid state circuitry controls the output of power and the speed of rotation. Internal circuitry converts AC power to DC voltage for increased efficiencies and full controllability of speed.
- Optional speed control kit (Sku No. 43Y140) is designed to maximize the efficiency of ventilation systems, manually control up to four variable-speed exhaust ventilators from one remote location.

VARIABLE-SPEED EXHAUST VENTILATORS

Dayton variable speed ventilators allow up to 80% useable turndown and eliminates the need for a speed control. These units are available in the following configurations:

- Upblast Roof-Mount (See page 2)
(Sku Nos. 5DVR2-5DVR4, 48C178-48C182)
- Upblast Wall-Mount (See page 2)
(Sku Nos. 6KWH9, 6KWJ0, 6KWJ1, 48C183-48C187)
- Downblast Roof-Mount (See page 2)
(Sku Nos. 5DVT2-5DVT4, 48C188-48C190 and 48C192)



5DVT2
Variable-Speed Ventilators

VARIABLE-SPEED POWER PACK REPLACEMENT

Convert your existing Dayton centrifugal upblast exhaust ventilator to an energy efficient exhaust ventilator with a variable-speed UL recognized EC motor. Completely assembled motor pack allows quick and easy installation. Includes potentiometer dial on motor, support pan and aluminum backward-inclined wheel. Optional speed control kit is available (Sku No. 43Y140).

- Upblast Roof-Mount (See page 3)
- Upblast Wall-Mount (See page 4)

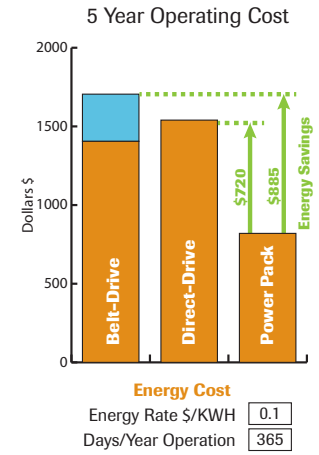
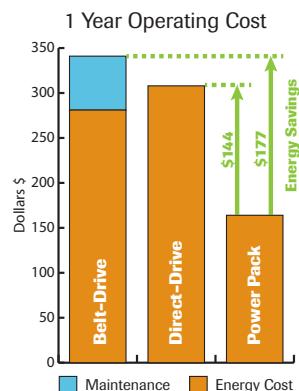


16D517
Variable-Speed Power Pack

24 HOUR ENERGY SAVINGS ANALYSIS

BELT-DRIVE 5DVL4 - 1/2 HP		DIRECT-DRIVE 5DVP8 - 1/2 HP		VARIABLE-SPEED* 48C180/16D518 - 1/2 HP	
Operating Point (1725) 8 Hours/Day					
Watts	497	Watts	415	Watts	341
RPM	1743	RPM	1733	RPM	1744
Operating Cost (1140) 16 Hours/Day					
Watts	232	Watts	320	Watts	111
RPM	1164	RPM	1158	RPM	1167
Yearly Operating Cost Results					
\$/Year	281	\$/Year	308	\$/Year	164
Maintenance	60	Maintenance	0	Maintenance	0
341 - \$164 = \$ Savings	177	\$308 - \$164 = \$ Savings	144		

Ventilators running at same rpm and producing the exact same cfm. *Variable-Speed Ventilator or powerpack.



ENERGY EFFICIENT VENTILATORS AND POWER PACKS

Features

- Electronically commutated motor (ECM) technology
- Variable speed motor, RPM range 300 - 1725
- Direct-Drive, no belts or pulleys to maintain
- Potentiometer dial pre-mounted on motor to control speed, optional speed control kit can be purchased separately
- Motor runs quieter and cooler
- 80% motor turn down capability

Benefits

- Energy savings of 40 to 50%
- No belt or pulley maintenance required
- Flexibility to adjust motor speed (fan airflow) based on your facilities needs - just turn dial on motor or purchase speed control kit
- Quieter environment for workers
- Increases motor life due to lower running temperature

VARIABLE-SPEED EXHAUST VENTILATOR PERFORMANCE

SKU NO.		VOLTS 60HZ	SPEED CONTROL	WHEEL DIA. (IN.)	FAN HP	FAN RPM	MAX BHP	SONES @ .250" SP	CFM AIR DELIVERY @STATIC PRESSURE SHOWN						
ROOF MOUNT	WALL MOUNT								.000"	.125"	.250"	.375"	.500"	.750"	1.00"
DIRECT-DRIVE UPBLAST															
48C178	48C183	115	43Y140	8-1/4	1/6	860	0.01	—	235	95	—	—	—	—	—
						1140	0.02	—	312	222	—	—	—	—	—
						1725	0.06	6.1	472	4113	355	289	289	199	—
48C179	48C184	115	43Y140	11	1/6	860	0.02	—	450	324	—	—	—	—	—
						1140	0.04	4.6	596	505	395	—	—	—	—
						1725	0.12	9.4	903	842	782	722	652	420	—
5DVR2	6KWH9	115	43Y140	11	1/4	860	0.04	0.6	732	625	481	—	—	—	—
						1140	0.09	6.5	970	897	806	707	—	—	—
						1725	0.29	12.5	1468	1422	1373	1315	1255	1129	970
48C180	48C185	115	43Y140	12-1/2	1/2	860	0.06	5.6	1015	905	781	581	—	—	—
						1140	0.14	8.2	1346	1261	1180	1091	981	—	—
						1725	0.48	16.7	2037	1979	1923	1869	1816	1710	1571
48C181	48C186	115	43Y140	13-1/4	3/4	860	0.08	7.7	1180	1057	914	675	—	—	—
						1140	0.17	11.8	1564	1471	1379	1280	1144	—	—
						1725	0.60	18.4	2366	2305	2244	2183	2122	1994	1838
5DVR3	6KWJ0	115	43Y140	14-3/4	3/4	1050	0.22	9.8	1902	1800	1680	1540	1372	—	—
						1300	0.43	12.8	2355	2277	2186	2086	1979	1717	1269
						1550	0.72	17.5	2808	2743	2671	2594	2509	2329	2110
5DVR4	6KWJ1	115	43Y140	16-1/2	3/4	550	0.07	—	1581	1303	—	—	—	—	—
						860	0.25	9.9	2472	2315	2156	1918	1680	—	—
						1140	0.58	14.8	3277	3161	3035	2896	2745	2421	1983
48C182	48C187	115	43Y140	18-1/2	1	745	0.26	8.1	2815	2617	2448	2143	1763	—	—
						860	0.40	11.1	3249	3074	2922	2732	2474	—	—
						1000	0.63	14.7	3778	3625	3486	3362	3190	2738	—
DIRECT-DRIVE DOWNBLAST															
48C188	—	115	43Y140	8-1/4	1/6	860	860	—	326	208	—	—	—	—	—
						1140	1140	4.5	432	349	247	314	—	—	—
						1725	1725	9.3	654	602	544	486	237	222	—
48C189	—	115	43Y140	8-1/4	1/6	860	860	—	426	298	—	—	—	—	—
						1140	1140	4.6	565	474	367	—	—	—	—
						1725	1725	9.4	855	794	735	671	600	406	—
5DVT2	—	115	43Y140	11	1/4	860	0.04	2.9	729	623	473	—	—	—	—
						1140	0.09	5.7	966	883	805	702	507	—	—
						1725	0.31	11.7	1462	1405	1351	1298	1250	1126	955
5DVT3	—	115	43Y140	13-1/4	1/2	860	0.06	5.2	1043	932	796	580	—	—	—
						1140	0.14	8.4	1383	1300	1213	1112	993	—	—
						1725	0.50	17.0	2093	2038	1984	1928	1871	1743	1600
48C190	—	115	43Y140	13-3/4	3/4	860	0.07	6.3	1221	1106	962	727	—	—	—
						1140	0.17	9.6	1618	1535	1444	1340	1211	—	—
						1725	0.60	16.7	2448	2393	2338	2281	2220	2089	1935
5DVT4	—	115	43Y140	14-3/4	3/4	1050	0.24	9.0	1948	1833	1719	1590	1418	—	—
						1300	0.46	12.9	2412	2318	2228	2135	2033	1777	1355
						1550	0.79	17.4	2875	2797	2719	2644	2566	2396	2191
48C192	—	115	43Y140	18-1/2	1	730	0.26	7.2	2839	2668	2469	2213	1882	—	—
						810	0.35	8.7	3150	2997	2832	2624	2375	—	—
						900	0.48	10.9	3500	3364	3219	3052	2858	2347	—

Performance certified is for installation type A: Free inlet, Free outlet. Performance ratings include the effects of a birdscreen in the airstream. The sound ratings shown are loudness values in fan sones at 5 ft. (1.5 m) in a hemispherical free field calculated per AMCA Standard 301. Values shown are for installation type A: Free inlet hemispherical sone levels.



ROOF – VARIABLE-SPEED POWER PACK REPLACEMENT PERFORMANCE

MY EXISTING FAN SKU NO.	RPM	SONES @ .250" SP @ 5FT.	CFM AIR DELIVERY @ STATIC PRESSURE SHOWN						POWER PACK REPLACEMENT					
			.000"	.125"	.250"	.500"	1.00"	1.50"	VOLTS 60HZ	MOTOR HP	RPM FAN RANGE	FULL LOAD AMPS	SPEED CONTROL	SKU NO.
DIRECT-DRIVE VENTILATORS			POWER PACK REPLACEMENT											
4HZ36	1140	8.3	780	656	502	—	—	—	115	1/4	300-1725	3.9	43Y140	48C155
4HZ37	1725	13.0	1180	1094	1017	824	—	—						16D517
4HZ40	1140	6.5	970	897	806	—	—	—	115	1/4	300-1725	3.9	43Y140	16D518
4HZ41	1725	12.5	1468	1422	1373	1255	970	—						16D519
5DVP8	1725	16.7	2037	1979	1923	1816	1571	1176	115	1/2	300-1725	6.2	43Y140	16D520
4HZ44	860	7.7	1180	1057	914	—	—	—						16D521
4HZ45	1725	18.4	2366	2305	2244	2122	1838	1365	115	3/4	300-1725	10.1	43Y140	16D522
4HZ48	860	7.1	1558	1427	1264	—	—	—						16D523
4HZ49	1140	11.0	2065	1973	1864	1605	—	—	115	3/4	300-1550	10.1	43Y140	16D524
4HZ52	860	9.9	2472	2315	2126	1680	—	—						16D525
4HZ53	1140	14.8	3277	3161	3035	2745	1983	—	115	1	300-1300	12.4	43Y140	48C156
4HZ56	860	11.1	3249	3074	2922	2474	—	—						48C157
BELT-DRIVE VENTILATORS			POWER PACK REPLACEMENT											
4YY13	1140	8.3	780	656	502	—	—	—	115	1/4	300-1725	3.9	43Y140	48C155
4YY13, 1MBE6	1725	13.0	1180	1094	1017	824	—	—						16D517
16D522, 4YY14	1660	12.0	1413	1365	1313	1189	861	—	115	1/2	300-1725	6.2	43Y140	16D518
16D523, 5DVL4	1410 1545 1725	12.2 14.0 16.7	1665 1824 2037	1595 1760 1979	1528 1699 1923	1398 1580 1816	965 1262 1571	— — 1176						16D519
4YY15	1305 1435	13.9 15.1	1790 1968	1709 1895	1629 1822	1458 1671	— 1198	— —	115	3/4	300-1725	10.1	43Y140	16D520
4YY15, 1MBE8	1645	17.4	2256	2192	2128	2001	1684	—						16D521
4YY16, 16D524	1105 1210	10.6 11.7	2001 2192	1906 2106	1793 2006	1515 1773	— —	— —	115	3/4	300-1550	10.1	43Y140	16D522
4YY16, 16D524, 3ATT8	1390	14.2	2518	2445	2362	2174	1643	—						16D523
4YY16, 16D524, 5PV06	1595	18.5	2889	2826	2757	2602	2225	1568	115	3/4	300-1300	10.1	43Y140	16D524
4YY17, 16D525	875 965 1110	10.1 11.5 14.2	2515 2774 3191	2362 2637 3072	2177 2477 2941	1744 2109 2641	— — 1770	— — —						16D525
4YY17, 16D525, 3ATU2	1265	17.7	3636	3532	3426	3172	2583	—	115	3/4	300-1300	10.1	43Y140	16D526
4YY17, 16D525, 1MBE9	1390	21.0	3996	3901	3806	3584	3078	2394						16D527
4YY17, 16D525	875 965 1110	10.1 11.5 14.2	2515 2774 3191	2362 2637 3072	2177 2477 2941	1744 2109 2641	— — 1770	— — —	115	1	300-1300	12.4	43Y140	48C156
4YY17, 16D525, 3ATU2	1265	17.7	3636	3532	3426	3172	2583	—						48C157
4YY17, 16D525, 1MBE9	1390	21.0	3996	3901	3806	3584	3078	2394	115	1	300-1000	12.4	43Y140	48C158
4YY18	745 820 940	8.1 10.0 13.1	2815 3098 3551	2617 2916 3389	2448 2759 3243	1763 2257 2879	— — —	— — —						48C159
4YY18, 3ATU4	1075	15.8	4061	3919	3786	3554	2652	—	115	1	300-750	12.4	43Y140	48C160
4YY19	605 665 760	6.7 8.1 10.9	3403 3740 4275	3054 3422 3994	2675 3096 3718	— 2073 3048	— — —	— — —						48C161

IMPORTANT: Customer should check existing fan speed to ensure performance of the power pack at the maximum speed shown is acceptable. Power Pack performance and use is specifically for Single-Phase, 60Hz, 115 Volt motors. Customer should check existing motor to ensure Power Pack compatibility.



WALL – VARIABLE-SPEED POWER PACK REPLACEMENT PERFORMANCE

MY EXISTING FAN SKU NO.	RPM	SONES @ .250" SP @ 5FT.	CFM AIR DELIVERY @ STATIC PRESSURE SHOWN						POWER PACK					
			.000"	.125"	.250"	.500"	1.00"	1.50"	VOLTS 60HZ	MOTOR HP	RPM FAN RANGE	FULL LOAD AMPS	SPEED CONTROL	SKU NO.
DIRECT-DRIVE VENTILATORS			POWER PACK REPLACEMENT											
4HZ38	1140	8.3	780	656	502	—	—	—	115	1/4	300-1725	3.9	43Y140	48C155
4HZ39	1725	13.0	1180	1094	1017	824	—	—	115	1/4	300-1725	3.9	43Y140	16D517
4HZ42	1140	6.5	970	897	806	—	—							
4HZ43	1725	12.5	1468	1422	1373	1255	970	—	115	1/2	300-1725	6.2	43Y140	16D518
5DVP9	1725	16.7	2037	1979	1923	1816	1571	1176						
4HZ46	860	7.7	1180	1057	914	—	—	—	115	3/4	300-1725	10.1	43Y140	16D519
4HZ47	1725	18.4	2366	2305	2244	2122	1838	1365						
4HZ50	860	7.1	1558	1427	1264	—	—	—	115	3/4	300-1550	10.1	43Y140	16D520
4HZ51	1140	11.0	2065	1973	1864	1605	—	—						
4HZ54	860	9.9	2472	2315	2126	1680	—	—	115	3/4	300-1300	10.1	43Y140	16D521
4HZ55	1140	14.8	3277	3161	3035	2745	1983	—	115	1	300-1300	12.4	43Y140	48C156
4HZ58	860	11.1	3249	3074	2922	2474	—	—	115	1	300-1000	12.4	43Y140	48C157
BELT-DRIVE VENTILATORS			POWER PACK REPLACEMENT											
5DVL5	1140	8.3	780	656	502	—	—	—	115	1/4	300-1725	3.9	43Y140	48C155
	1725	13.0	1180	1094	1017	824	—	—						
5DVL6	1660	12.0	1413	1365	1313	1189	861	—	115	1/4	300-1725	3.9	43Y140	16D517
5DVL7	1410	12.2	1665	1595	1528	1398	965	—	115	1/2	300-1725	6.2	43Y140	16D518
	1545	14.0	1824	1760	1699	1580	1262	—						
	1725	16.7	2037	1979	1923	1816	1571	1176						
5DVL8	1305	13.9	1790	1709	1629	1458	—	—	115	3/4	300-1725	10.1	43Y140	16D519
	1435	15.1	1968	1895	1822	1671	1198	—						
	1645	17.4	2256	2192	2128	2001	1684	—						
5DVL9	1105	10.6	2001	1906	1793	1515	—	—	115	3/4	300-1550	10.1	43Y140	16D520
	1210	11.7	2192	2106	2006	1773	—	—						
	1390	14.2	2518	2445	2362	2174	1643	—						
	1595	18.5	2889	2826	2757	2602	2225	1568						
5DVN0	875	10.1	2515	2362	2177	1744	—	—	115	3/4	300-1300	10.1	43Y140	16D521
	965	11.5	2774	2637	2477	2109	—	—						
	1110	14.2	3191	3072	2941	2641	1770	—						
	1265	17.7	3636	3532	3426	3172	2583	—						
	1390	21.0	3996	3901	3806	3584	3078	2394						
5DVN1	745	8.1	2815	2617	2448	1763	—	—	115	1	300-1000	12.4	43Y140	48C157
	820	10.0	3098	2916	2759	2257	—	—						
	940	13.1	3551	3389	3243	2879	—	—						
	1075	15.8	4061	3919	3786	3554	2652	—						
5DVN2	605	6.7	3403	3054	2675	—	—	—	115	1	300-750	12.4	43Y140	48C158
	665	8.1	3740	3422	3096	2073	—	—						
	760	10.9	4275	3994	3718	3048	—	—						

IMPORTANT: Customer should check existing fan speed to ensure performance of the power pack at the maximum speed shown is acceptable. Power Pack performance and use is specifically for Single-Phase, 60Hz, 115 Volt motors. Customer should check existing motor to ensure Power Pack compatibility.

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