

ENERGY

kW 9 - 15 - 22 - 30 - 37 - 45 - 55 - 75

90 - 110 - 160 - 200 - 250

bar 7,5 - 10 - 13



Broadbent

 **Air compressors**

ROTARY SCREW
COMPRESSORS



ENERGY Series

Direct driven variable speed rotary screw compressors

ENERGY Series variable speed screw compressors allows for power savings on average between 30%-40% over conventional controlled compressors. ENERGY Series allows for an air supply with minimal peaks, in doing so supplying only the air required for production minimising service costs and operating costs. Designed to operate in the harshest working conditions 24 hours per day, the ENERGY Series controller is able to control up to 6 units from one common control panel. All ENERGY Series is equipped as standard with power filters, harmonising the incoming voltage and protecting the inverter and compressor components from surges.

CONTROLLER

The advanced computer controller allows for the ENERGY Series to be interfaced with up to 6 compressors. The controller allows for the compressor to be individually programmed to meet specific site requirements, in doing so minimising operating costs. Simple controls allows the unit to advise maintenance intervals and diagnose faults.



VARIABLE SPEED DRIVE

The inverter and controller ensure for precise control of pressures and volume of the compressor by monitoring production requirements and varying the compressor output and speed without the use of an encoder.

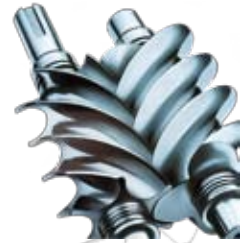
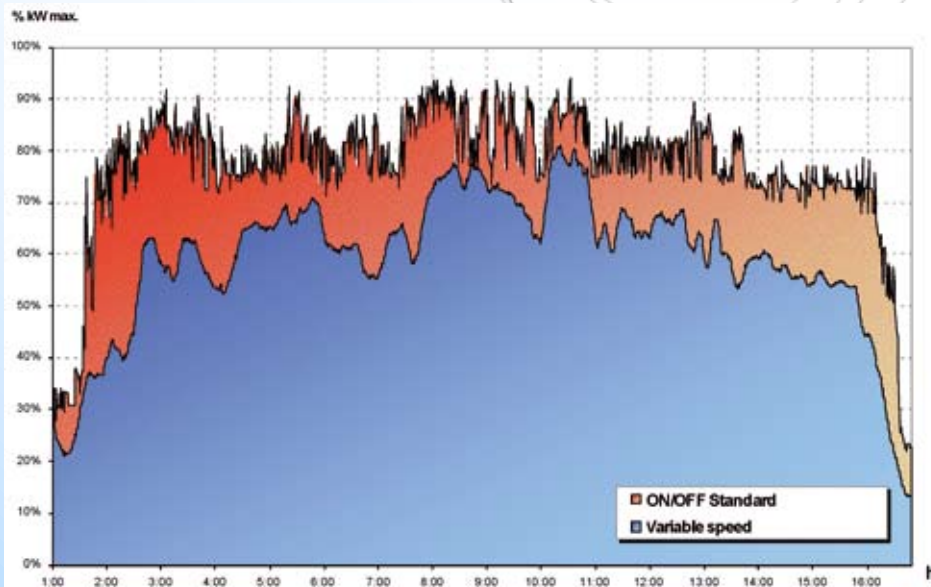
- ° Motor starting torque of up to 200%
- ° Accurate torque control
- ° Torque response time of 1-2 ms
- ° Main motor protection and cooling fan protection
- ° Direct response air volume to motor speed
- ° Air pressure adjustable from 6 to 10 Bar (13 Bar on request)
- ° Air supply monitoring and adjusting from 25% to 100% of load

HIGH EFFICIENCY MOTOR

- ° Variable speed driving motor IP 55, Class F
- ° High efficiency motor.
- ° Low service factor on the main drive motor

ENERGY CONSUMPTION COMPARISON

Input power fluctuation during working time



AIR END

German built isometric air end
Quality components
Prolonged operating life

HIGH EFFICIENCY DRIVE SYSTEM

The air end is directly driven by the electric motor by means of a flexible coupling with an efficiency up to 99,9% .

AIR COOLING

Oversized combined air/oil cooler
Low discharge temperatures
Thermostatically controlled cooling fan
Low outlet temperatures
Low compression temperatures
Extended coolant operating life

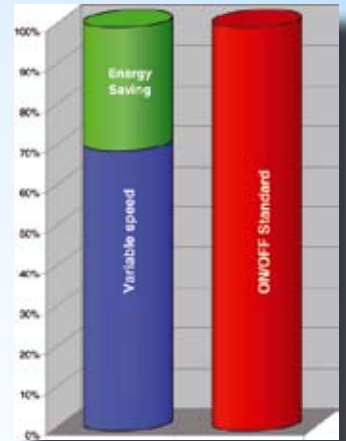


ENERGY Series

VARIABLE SPEED DRIVE

The initial capital outlay of any air compressor represents on average a small percentage of the total cost of operating the compressor over its operating life. The absorbed power of any compressor represents the highest cost of the unit over its operating life.

Compressed air, if incorrectly used, is one of the most expensive forms of services any production facility will operate. The installation of an Energy Series variable speed compressor will on average reduce running costs by between 30% - 40% if fitted with a conventional motor or a permanent magnets motor.



Advantages of operating a variable speed compressor, standard or permanent magnets motor

- Regulation of the speed of the motor to match constantly the plant air demand
- Provides a constant air pressure selectable to any value between 6 and 10 Bar (13 Bar on demand)
- Soft start reduces current peaks and allows for additional energy savings
- Air output constantly varying between 25% and 100% of the compressor total capacity

Suction electrofan

2 stages, 2 micron air filter

Easily inspectable air-oil radiator

3 stages air-oil separator

Inverter

Oil filter

Highly efficient condensate separator

Air intake valve

German made isometric air end

High efficiency variable speed driving motor

Safety ground wire

Robust base



European made for Australia

ENERGY Series

Model	Max Pressure		F.A.D.				Power [kW-Hp] nom.	Noise lev. dB(A)	Weight Kg	Dimensions LxWxH (mm)
	bar max	Psig max	[m ³ /min] MIN/MAX		[CFM] MIN/MAX					
ENERGY 9 - 7,5	7,5	109	0,4	1,45	14	51	9 - 12	64	200	1160x597x1034
ENERGY 9 - 10	10	145	0,4	1,23	14	43				
ENERGY 9 - 13	13	145	0,4	0,98	14	35				
ENERGY 15 - 7,5	7,5	109	0,4	2,1	14	74	15 - 20	65	250	1160x597x1034
ENERGY 15 - 10	10	145	0,4	1,9	14	67				
ENERGY 15 - 13	13	145	0,3	1,5	11	53				
ENERGY 16 - 7,5	7,5	109	0,5	2,4	18	85	15 - 20	69	365	1070x750x1092
ENERGY 16 - 10	10	145	0,5	2,1	18	74				
ENERGY 16 - 13	13	145	0,5	1,6	18	57				
ENERGY 22 - 7,5	7,5	115	0,8	3,50	28	124	22 - 30	69	395	1070x750x1092
ENERGY 22 - 10	10	145	0,7	3,05	25	108				
ENERGY 22 - 13	13	175	0,6	2,6	21	92				
ENERGY 30 - 7,5	7,5	109	1,0	4,63	35	164	30 - 40	69	615	1400x800x1500
ENERGY 30 - 10	10	145	1,0	4,15	35	147				
ENERGY 30 - 13	13	175	0,9	3,60	32	127				
ENERGY 37 - 7,5	7,5	109	1,3	5,60	46	198	37 - 50	69	635	1400x800x1500
ENERGY 37 - 10	10	145	1,2	5,00	42	177				
ENERGY 37 - 13	13	175	1,0	4,50	35	159				
ENERGY 45 - 7,5	7,5	109	1,8	7,4	63	261	45 - 60	73	1000	1804x1100x1772
ENERGY 45 - 10	10	145	1,9	6,2	67	219				
ENERGY 45 - 13	13	175	1,4	5,5	49	194				
ENERGY 55 - 7,5	7,5	109	1,8	9,1	63	321	55 - 75	73	1100	1804x1100x1772
ENERGY 55 - 10	10	145	2,1	8,2	74	290				
ENERGY 55 - 13	13	175	1,9	6,2	67	219				
ENERGY 75 - 7,5	7,5	109	2,4	12,1	85	427	75 - 100	73	1300	1804x1100x1772
ENERGY 75 - 10	10	145	2,9	10,6	103	374				
ENERGY 75 - 13	13	175	2,1	8,9	74	314				
ENERGY 90 - 7,5	7,5	109	2,1	15,2	74	537	90 - 125	74	1940	2380x1300x1780
ENERGY 90 - 10	10	145	2,1	13,4	74	473				
ENERGY 90 - 13	13	175	2,9	10,6	103	374				
ENERGY 110 - 7,5	7,5	109	3,4	18,5	121	653	110 - 150	75	2860	2900x1550x2150
ENERGY 110 - 10	10	145	4,5	15,9	169	561				
ENERGY 110 - 13	13	175	4,5	13,5	160	477				
ENERGY 150 - 7,5	7,5	109	3,4	25,6	121	904	160 - 220	75	3150	2900x1550x2150
ENERGY 150 - 10	10	145	5,8	22,9	206	809				
ENERGY 150 - 13	13	175	6,5	19,4	231	685				
ENERGY 200 - 7,5	7,5	109	8,3	33,5	294	1183	200 - 270	76	4350	3300x2100x2155
ENERGY 200 - 10	10	145	9,5	28,5	337	1006				
ENERGY 200 - 13	13	175	7,4	24,6	262	869				
ENERGY 250 - 7,5	7,5	109	10,1	42,1	358	1487	250 - 340	76	4550	3300x2100x2155
ENERGY 250 - 10	10	145	10,6	35,7	376	1261				
ENERGY 250 - 13	13	175	8,6	30,6	305	1081				

The air flow rates have been measured at the following working pressures:
 7 bar for mod. 7.5 bar - 9.5 bar for mod. 10 bar - 12.5 bar for mod. 13 bar
 The data and performances were recorded in accordance with standard ISO 1217. The sound level was measured in accordance with PNEURO/CAI standards.

Technical specifications subject to change without notice - Broadbent - Cod. 900632 Rev.00 - 07/2010

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