



FORMULA

Rotary screw compressors

kW 5,5 - 7,5 - 11 - 15 - 18,5 - 22
bar 8 - 10 - 13 - 15



FORMULA

Total modularity

The FORMULA range in line with its name, has been designed to allow a choice of complete configurations, for example:

Basic compressor

=

FORMULA

Compressor with
Inverter

+
=

FORMULA.I

Compressor with
Integrated air dryer

+
=

FORMULA.E

Compressor with
Integrated air dryer
Inverter

+
+
=

FORMULA.EI



The sum of technology

MC2 Controller

Latest generation microprocessor based multi-controller, with easy to use menu driven operation with backlit display, message box and fault log, special functions and emergency warning.



The MC2 controller also features:
Optional hardware expansion
Ability to interface with other compressors using the optional interface card.

Daily and/or weekly operational programming of up to 4 compressors allowing start/stop switching and sequencing control.

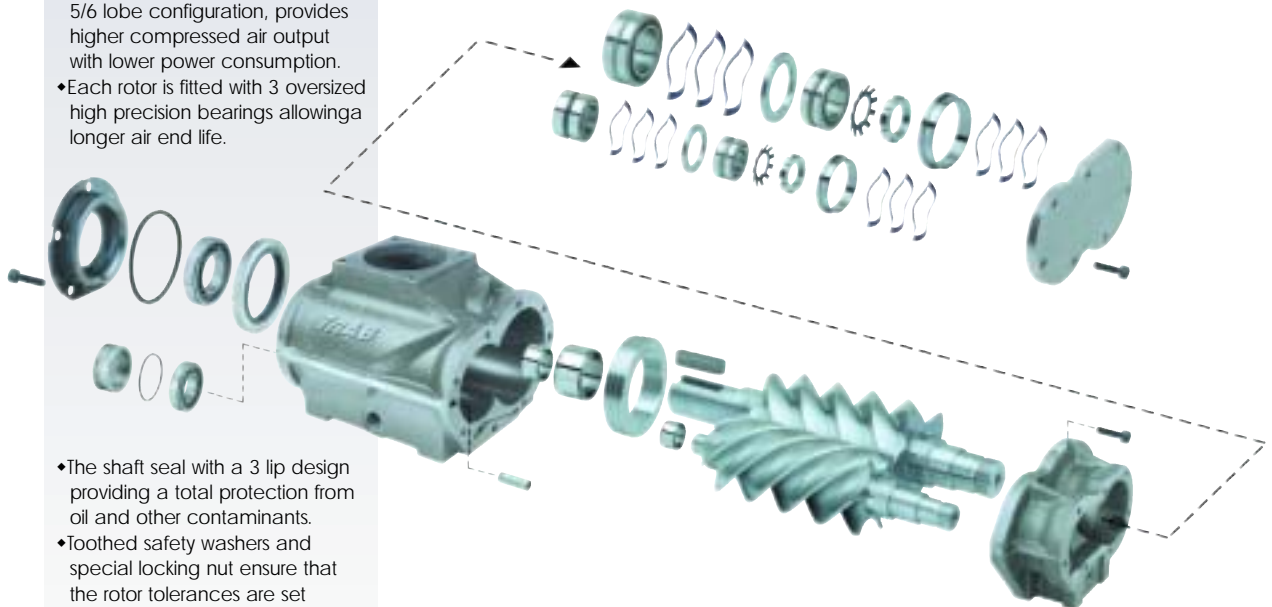
- ◆ Remote control
- ◆ Auto-restart
- ◆ Programmed routine maintenance
- ◆ Diagnostic functions with fault log



TriAB Air ends

The ABAC screw compressors are fitted with the unique TriAB air ends that are designed and built exclusively at the ABAC factories, which are certified to ISO 9001. The highest quality standards are strictly adhered to throughout the manufacturing process ensuring constantly high quality.

- ◆ Highly developed, asymmetric rotor profiles with precision ground 5/6 lobe configuration, provides higher compressed air output with lower power consumption.
- ◆ Each rotor is fitted with 3 oversized high precision bearings allowing a longer air end life.



- ◆ The shaft seal with a 3 lip design providing a total protection from oil and other contaminants.
- ◆ Toothed safety washers and special locking nut ensure that the rotor tolerances are set throughout the life of the unit for improved reliability.

Compressed air treatment

All FORMULA compressors are fitted with a built in air treatment package comprising refrigerant dryer with R134A gas, pre-filter, final-filter and modular condensate drain. The operation of the dryer and condensate drains is conveniently controlled by the compressors main MC2 controller this provides for efficient dew point control of 3°C and allows the fridge compressor to cycle efficiently. The FORMULA is fitted with both pre and final high efficiency filtration

resulting in particles, oil and water droplets being removed before entering the compressed air system. The compressed air produced therefore is extremely clean and dry and suitable for use in applications in various industries. For added convenience all the various condensate drain points are connected to a common manifold which is then connected to a single condensate outlet which can be easily piped to a suitable collection facility.

The advantages



Simple maintenance and reduced costs

The ideal positioning of all service items along with the simple and quick access and the use of spin on oil filter and separator allow service work to be carried out quickly and safely. The extended service intervals help to reduce costs further.



Accessibility

In the design of the FORMULA series a good deal of consideration was given to providing accessibility and ease of maintenance. All standard service components have been positioned at the front of the compressor thus allowing immediate accessibility by simply removing the front panel.



High quality air

The FORMULA compressor provides high quality compressed air in line with key environmental objectives. The unique internal design of the vertical air/oil separator vessel coupled with the high efficiency separator cartridge allows very clean compressed air to be provided at outlet. Oil content within the delivered compressed air is less than 3 mg. per cubic metre. A large capacity delivery hose made with robust stainless steel ensures low losses and improved reliability.

Air cooling

The greater air flow generated by the electric fan provides for very efficient cooling even during continuous use and in higher ambient temperatures. This combined with the use of oversized air and oil heat exchangers allow the FORMULA compressor to operate at very low temperatures, resulting in a longer life to both the machine and all components including the lubricant.



Low noise levels - Automatic belt adjustment



The main components such as the motor and air end are mounted onto a sturdy base plate which is supported by large anti vibration dampers that absorb the vibration and reduce noise levels. The cabinet on the FORMULA has been acoustically engineered so as to reduce noise levels entering the environment significantly.

The entire FORMULA range features an automatic transmission belt tensioning system. This ensures a longer life to the belts and improved power transmission and therefore lower energy costs. The design of the new system also allows simple and quick replacement to the belts when required.

Efficient air Inlet filtration

One of the most important factors in achieving increased performance and a longer service life with all rotary screw compressors is the quality of the inlet air. With this in mind, the FORMULA range features a two stage air filtration system; air enters through a cabinet pre-filter panel, which helps to keep the internal components of the compressor clean, as well as maintaining optimum cooling efficiency. The second stage of filtration occurs as the air flows through a highly efficient air suction filter, this ensures that the air entering the compressor element is cleaned efficiently, thus providing a considerably longer service life to the whole compressor.



Design and technology

- | | | |
|--|---------------------------------|-------------------------------------|
| 1 Air end TriAB 51/TriAB 69 | 6 Frequency Inverter (optional) | 11 Intake valve |
| 2 Electric motor IP54 | 7 Electric fan | 12 Pre-filter panel |
| 3 MC2 controller | 8 Intake filter | 13 Air/oil cooler |
| 4 Star Delta starter IP54 | 9 Oil separator filter | 14 Automatic belt tensioner |
| 5 Refrigerant air dryer with pre-filter and final filter and demister filter | 10 Oil filter | 15 Minimum pressure and check valve |



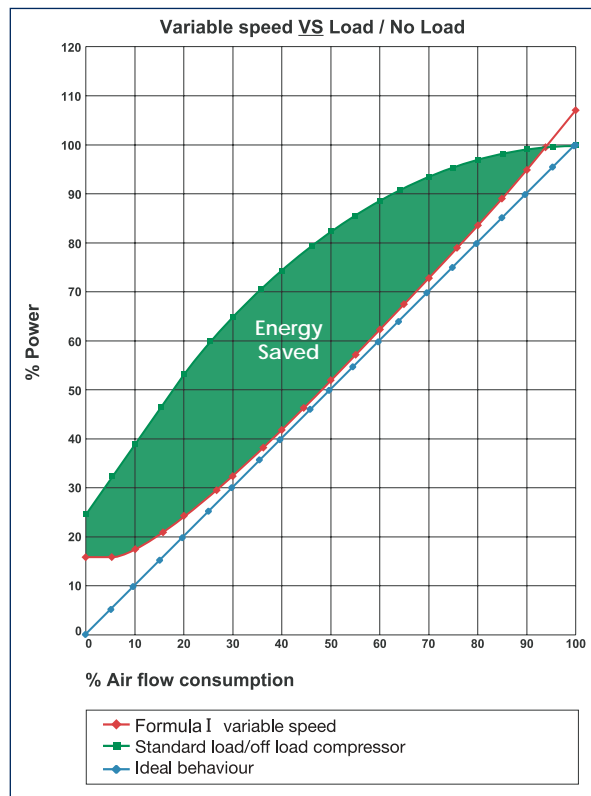
Variable speed version

Variable speed version

The Formula I version with advanced high efficiency vectorial frequency inverter offers many advantages over normal air compressors.

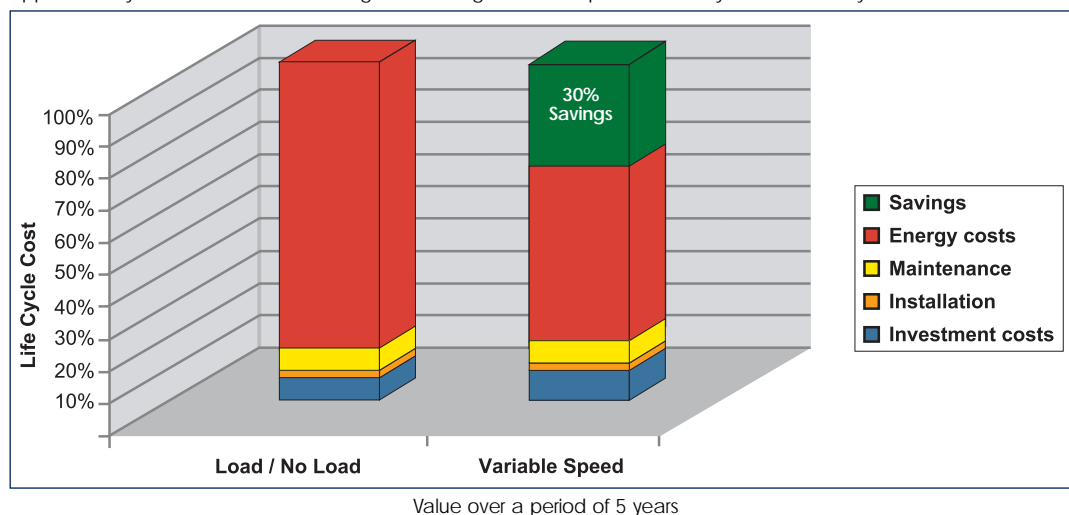
- Provides a constant air pressure selectable to any value between 6 and 13 bar.

- The compressed air generated precisely matches the demands of the system with no wastage.
- Soft start reduces current surges providing further energy savings
- Constantly varying output between 25% and 100% capacity.



The solid state high quality frequency inverter is housed in the ideal position within the main starter enclosure. The cabinet and cables are fully protected to provide electromagnetic screening to stringent EC directives. A safety cut out switch is located on the door of the enclosure providing additional safety.

Approximately 80% of the cost of owning and running an air compressor over 5 years is electricity.



Technical data

FORMULA - FORMULA.E

Model	Pressure bar psi		Capacity m³/min CFM		Motor Power kW/HP	Air end type	Noise dB(A)	Dimensions mm Length x Width x Height	Weight Kg
FORMULA 5,5	8	116	0,78	27,5	5,5/7,5	TriAB 51	64	1030 x 615 x 1045	270
	10	145	0,69	24,4					
	13	188	0,54	19,1					
	15	218	0,40	14,1					
FORMULA 7,5	8	116	1,20	42,4	7,5/10	TriAB 51	66	1030 x 615 x 1045	275
	10	145	1,04	36,7					
	13	188	0,80	28,2					
	15	218	0,64	22,6					
FORMULA 11	8	116	1,65	58,3	11/15	TriAB 51	69	1030 x 615 x 1045	280
	10	145	1,40	49,4					
	13	188	1,17	41,3					
	15	218	0,95	33,5					
FORMULA 15/51	8	116	2,01	71,0	15/20	TriAB 51	70	1030 x 615 x 1045	285
	10	145	1,72	60,7					
	13	188	1,49	52,6					
	15	218	1,16	41,0					
FORMULA 15/69	8	116	2,32	81,9	15/20	TriAB 69	66	1030 x 615 x 1045	295
	10	145	1,93	68,1					
	13	188	1,62	57,2					
	15	218	1,30	45,9					
FORMULA 18,5	8	116	2,82	99,6	18,5/25	TriAB 69	68	1800 x 710 x 1170	480
	10	145	2,50	88,3					
	13	188	2,10	74,2					
	15	218	1,64	57,9					
FORMULA 22	8	116	3,32	117,2	22/30	TriAB 69	69	1800 x 710 x 1170	480
	10	145	2,95	104,2					
	13	188	2,50	88,3					
	15	218	1,93	68,1					

Technical data may vary without notice

FORMULA.I - FORMULA.EI

Model	Pressure		Capacity*				Motor Power kW/HP	Air end type	Noise dB(A)	Dimensions mm Lenght x Width x Height	Weight Kg
	bar	psi	m³/min Min Max		CFM Min Max						
FORMULA.I 11	6-13	85-188	0,44-1,65		15,5-58,3		11/15	TriAB 51	69	1030 x 615 x 1045	300
FORMULA.I 22	6-13	85-188	0,92-3,32		32,5-117,2		22/30	TriAB 69	69	1800 x 710 x 1170	500

* Min/max free air delivery values for variable speed refer to 8 bar

WORKING CONDITIONS:
- Intake air pressure 1 bar
- Air temperature at intake 20°C
- FAD as per ISO 1217
- Sound levels as per ISO 3744



SPARE PARTS

8234149	Complete filters kit FORMULA 5,5-7,5 Kw 8-10 bar
8234167	Complete filters kit FORMULA 5,5-7,5 Kw 13-15 bar
8234150	Complete filters kit FORMULA 11-15/51 Kw 8-10-13-15 bar
8234168	Complete filters kit FORMULA 15-69 Kw 8-10-13-15 bar
8234151	Complete filters kit FORMULA 18,5 -22 Kw 8-10-13-15 bar
9280025	Mineral refrigerant fluid BLU FORMULA 5 l.
9280026	Mineral refrigerant fluid BLU FORMULA 10 l.
9280027	Mineral refrigerant fluid BLU FORMULA 20 l.
9280028	Synthetic refrigerant fluid DURALUBE 46 5 l.
9280029	Synthetic refrigerant fluid DURALUBE 46 10 l.
9280030	Synthetic refrigerant fluid DURALUBE 46 20 l.

CUSTOMER SERVICE

A full product support package is available to all of our customers throughout the world. Qualified technical advice and support is provided in strategic locations and in all major countries. Advice on installation, selection, additional equipment, maintenance management and environmental issues is available on request.

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ABAC air compressors are manufactured in compliance with:
98/37/CE machinery Directive;
87/404/CE simple pressure vessels Directive;
73/23/CE low voltage Directive;
89/336/CE electromagnetic compatibility;
2000/14/CE noise level.



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ABAC product range



ROTARY SCREW COMPRESSORS

From 2.2 to 200 kW (from 3,0 to 270 Hp),
from 8 to 15 bar

VARIABLE SPEED VERSION

From 11 to 75 kW (from 15 to 100 Hp),
from 6 to 13 bar



PISTON COMPRESSORS

- ♦ Direct drive oilfree and lubricated from 1,5 to 3 Hp, up to 100 liter air receiver, working pressure from 1 to 10 bar
- ♦ Belt driven, lubricated, single stage, two stage from 2 to 25 Hp, from 27 to 1000 liter air receiver, max pressure 15 bar
- ♦ Silenced, belt driven, single stage, two stage from 2 to 10 hp, up to 500 liter air receiver, working pressure from 1 to 11 bar



COMPRESSED AIR TREATMENT

- ♦ Refrigeration dryer from 16 to 6.000 m³/h
- ♦ Oil filters from 3 to 0,01 micron and carbon filter from 400 to 60.000 l/min
- ♦ Cyclonic separators from 30 to 1.200 m³/h
- ♦ Oil-water separators from 120 to 1.800 m³/h
- ♦ Air receiver from 100 to 5.000 liter



PNEUMATIC TOOLS

Full range of professional air tools for automotive, building, mechanical, wood working, nailing and stapling

Distributor