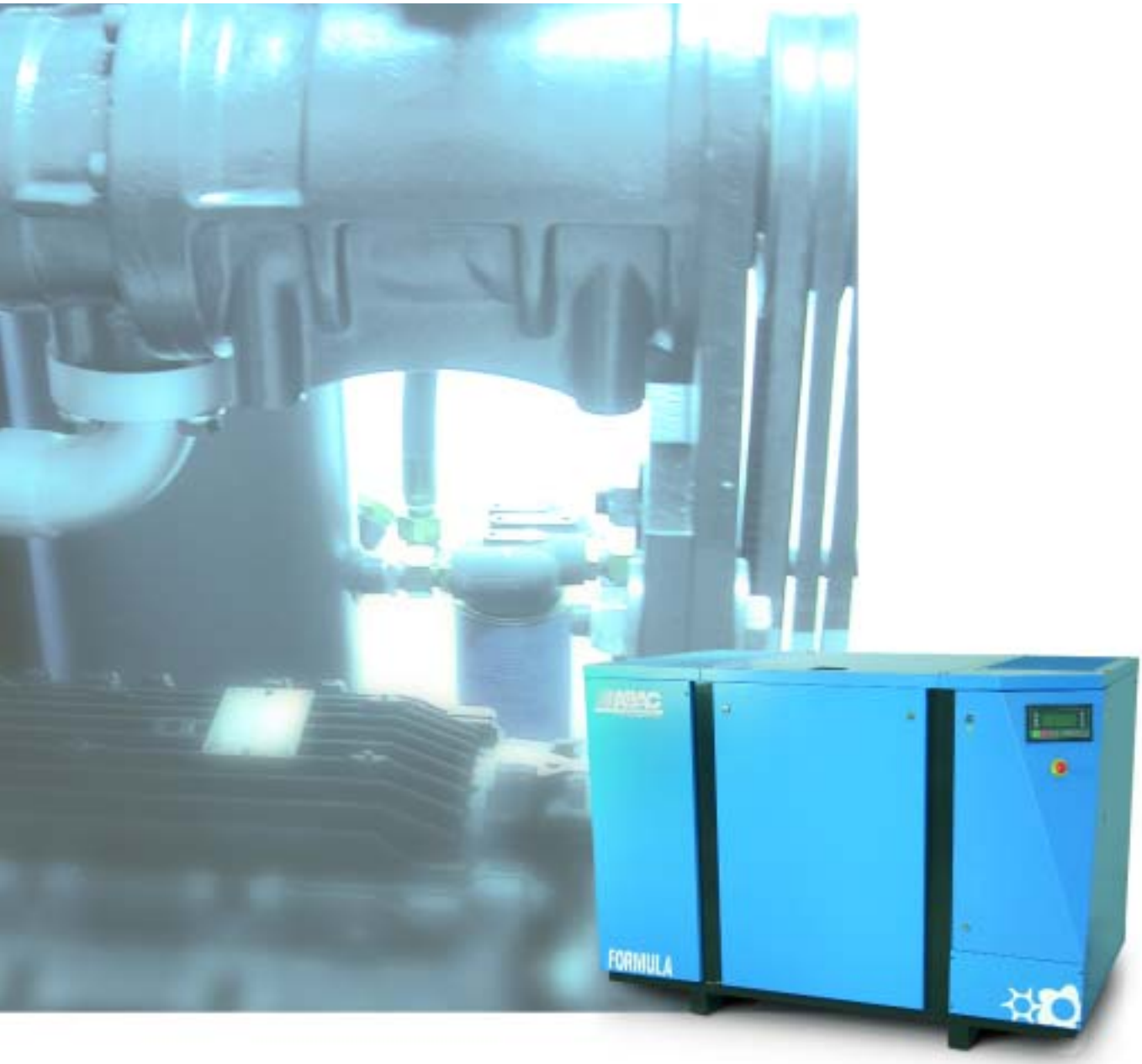
ABAC
AIR COMPRESSORS



FORMULA

Rotary screw compressors

kW 30 - 37 - 45 - 55 - 75 - 90
bar 8 - 10 - 13

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 +
Air dryer =
FORMULA.E

Compressor with +
Direct drive +
and variable speed =
FORMULA.DI

Compressor with +
Air dryer +
Direct drive +
and variable speed =
FORMULA.EDI

The range

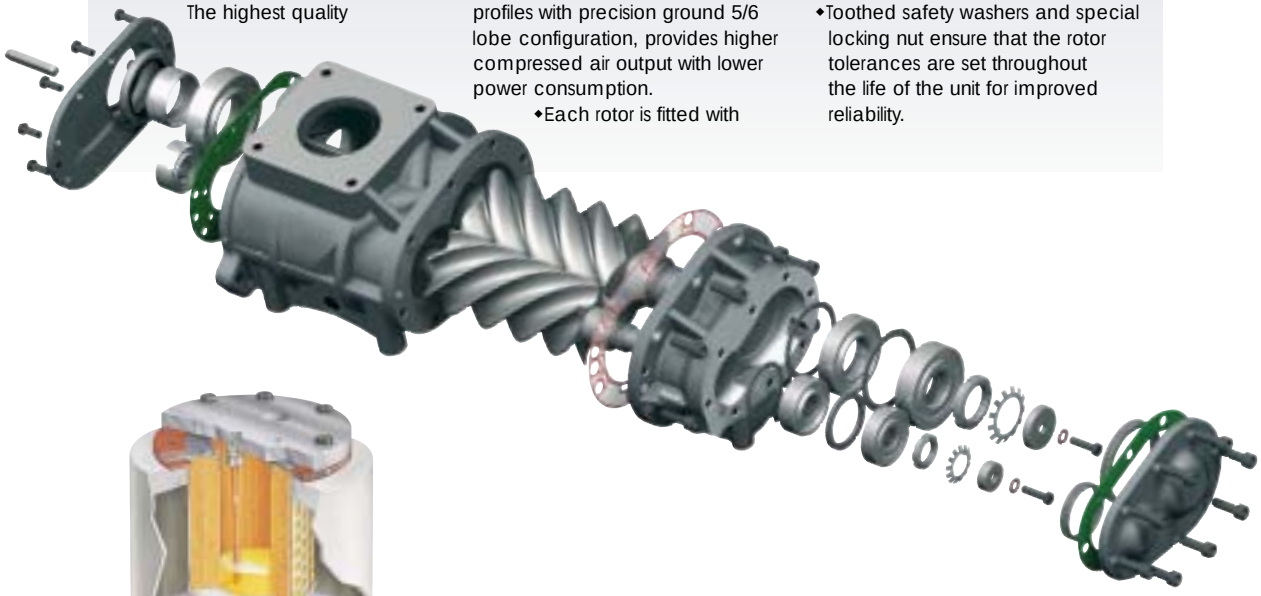
The Formula series is available in a wide capacity range from 30 to 90 kW.

The sum of technology

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 allowinga 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.



Air/oil separation

The FORMULA compressor benefits from a very efficient air/oil separation facility.
Two stages of primary separation and a further two stages of filtration result in very high quality compressed air with oil carry over inferior to 3 mg/m3.
In addition low pressure losses are achieved resulting from a larger capacity reservoir and a greater filter cartridge surface area.

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

The advantages

Accessibility

The FORMULA compressor is fitted with easily removable front, top and back panels. The careful positioning of the normal service components within one area of the cabinet provides ease of maintenance and therefore minimum downtime. The top and rear panels can be removed easily to facilitate convenient all-round service access to the machines internal components.

Cooling

When designing this family of machines, great attention was paid to providing a ventilation and heat exchange system able to guarantee excellent cooling even in the harshest environmental conditions. This goal was achieved using efficient, high capacity cooling fans and by over sizing the cooling air intake and discharge ducts.

Electrical panel

The electrical panel has been housed in a dedicated cabinet, completely separate from the other mechanical parts of the compressor. This facility provides improved safety and protects the electrical components from dust and higher temperatures, providing a long service life and complete reliability.

Integral compressed air dryer

All machines up to 45 kW can be equipped with a built-in refrigerant dryer controlled by the compressors main MC2 controller. The compact arrangement to the dryer allows for fewer connections resulting in lower pressure losses and a much more convenient installation compared to a normal system, due to the reduction in the number of components and connections needed.

Low power consumption

The FORMULA compressor is equipped with a simple ON load/OFF load intake valve. When the compressor reaches its maximum exercise pressure it will start its timed off load operation and it will automatically stop in case of no further air demand.

Design and technology

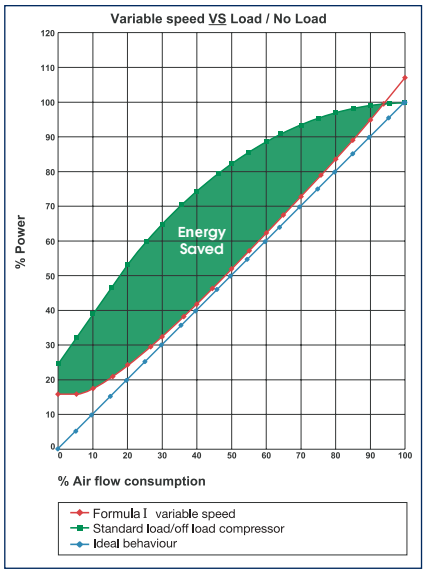
1. Air end TriAB 84/TriAB 115
2. Electric motor IP54
3. MC2 controller
4. Star Delta starter IP54
5. Thermostatic valve
6. Direct fan
7. Air intake filter
8. Air/oil separator vessel
9. Oil filter
10. Air intake valve
11. Pre-filter panel
12. Air/oil cooler
13. Minimum pressure and check valve

Variable speed version

Variable speed version

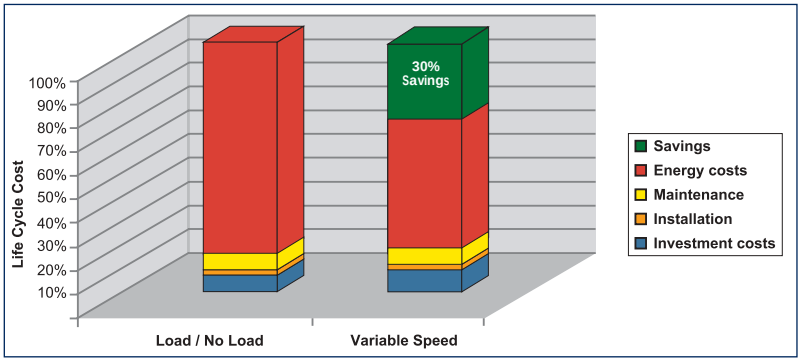
The FORMULA.I version with advanced high efficiency vectorial frequency inverter offers many advantages over normal air compressors.

- 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 wasteage.
- 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.



Value over a period of 5 years

Direct drive transmission

The FORMULA.DI version with direct drive power transmission between the motor and the compressor air end guarantees maximum reliability. The dynamic balancing of the connection coupling and of the rotor of the electrical motor promotes vibration-free operation. The inverter that controls the motor speed allows a continuous adjustment to the compressor speed and therefore the amount of compressed air generated. The compressed air produced is therefore in line with the requirements of the system only, avoiding wastage and providing dramatic energy savings.

Radial fan

With its outstanding performance and compact dimensions, the radial fan fitted on all direct drive machines guarantees a constant flow of the required cooling air inside the machine, combined with low noise.

Technical data

FORMULA - FORMULA.E V-Belt drive

Model	Pressure bar	Pressure psi	Capacity m³min	Capacity CFM	Motor Power kW/Hp	Air end type	Noise dB(A)	Dimensions mm Lenght x Width x Height	Weight Kg
FORMULA 30•	8	116	4,70	166,0	30/40	TriAB 84	72	2020 x 1140 x 1420	770
	10	145	4,35	153,6					
	13	188	3,80	134,2					
FORMULA 37•	8	116	6,08	214,7	37/50	TriAB 84	72	2020 x 1140 x 1420	770
	10	145	5,50	194,2					
	13	188	4,60	162,4					
FORMULA 45•	8	116	8,07	285,0	45/60	TriAB 84	73	2020 x 1140 x 1420	780
	10	145	7,00	247,2					
	13	188	5,40	190,7					
FORMULA 55	8	116	9,30	328,4	55/75	TriAB 115	72	2010 x 1465 x 1810	1850
	10	145	8,50	300,1					
	13	188	6,90	243,6					
FORMULA 75	8	116	12,30	434,3	75/100	TriAB 115	72	2010 x 1465 x 1810	2000
	10	145	11,10	391,9					
	13	188	10,00	353,1					
FORMULA 90	8	116	14,20	501,4	90/125	TriAB 115	74	2010 x 1465 x 1810	2100
	10	145	13,10	462,6					
	13	188	11,40	402,5					

Technical data may vary without notice

FORMULA.DI - FORMULA.EDI Variable speed - Direct drive

Model	Pressure bar	Pressure psi	Capacity* m³min Min	Capacity* m³min Max	Capacity* CFM Min	Capacity* CFM Max	Motor Power kW/Hp	Air end type	Noise dB(A)	Dimensions mm Lenght x Width x Height	Weight Kg
FORMULA.DI 37•	6-13	85-188	0,80-5,90		28,2-208,3		37/50	TriAB 84	72	2020 x 1140 x 1420	830
FORMULA.DI 75	6-13	85-188	1,70-11,90		60,0-420,2		75/100	TriAB 115	72	2010 x 1465 x 1810	2100

* 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

• Version with air dryer (optional) dimensions: 2320 x 1140 x 1420 mm

weight: FORMULA.E 880 Kg
FORMULA.EDI 930Kg

SPARE PARTS

8234190	Filter kit FORMULA 30 - 37 - 45 kW 8-10 bar
8234191	Filter kit FORMULA 55 kW 8-10 bar
8234192	Filter kit FORMULA 75 kW 8-10 bar
8234193	Filter kit FORMULA 90 kW 8-10 bar
9280026	Mineral coolant BLU FORMULA 10 l.
9280027	Mineral coolant BLU FORMULA 20 l.
9280029	Synthetic coolant DURALUBE 46 10 l.
9280030	Synthetic coolant 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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e-mail: service@abac.it

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.

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 o 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

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Distributor

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