

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

**Balma**

**MODULO**



# MODULO



## Versatility

The MODULO range is available either mounted on a 270 or 500 liters air receiver, results extremely compact and easy to manoeuvre. Supplied complete, including lubricant, it is ready for its installation to a suitable power supply and air system.

## Total modularity

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

Basic compressor =

**MODULO**

Compressor with  
Integrated air dryer + =

**MODULO.E**

Compressor with +  
Integrated air dryer +  
Air receiver =

**MODULO.ES**

Compressor with +  
Integrated air dryer +  
Air receiver +  
Inverter =

**MODULO.ESI**

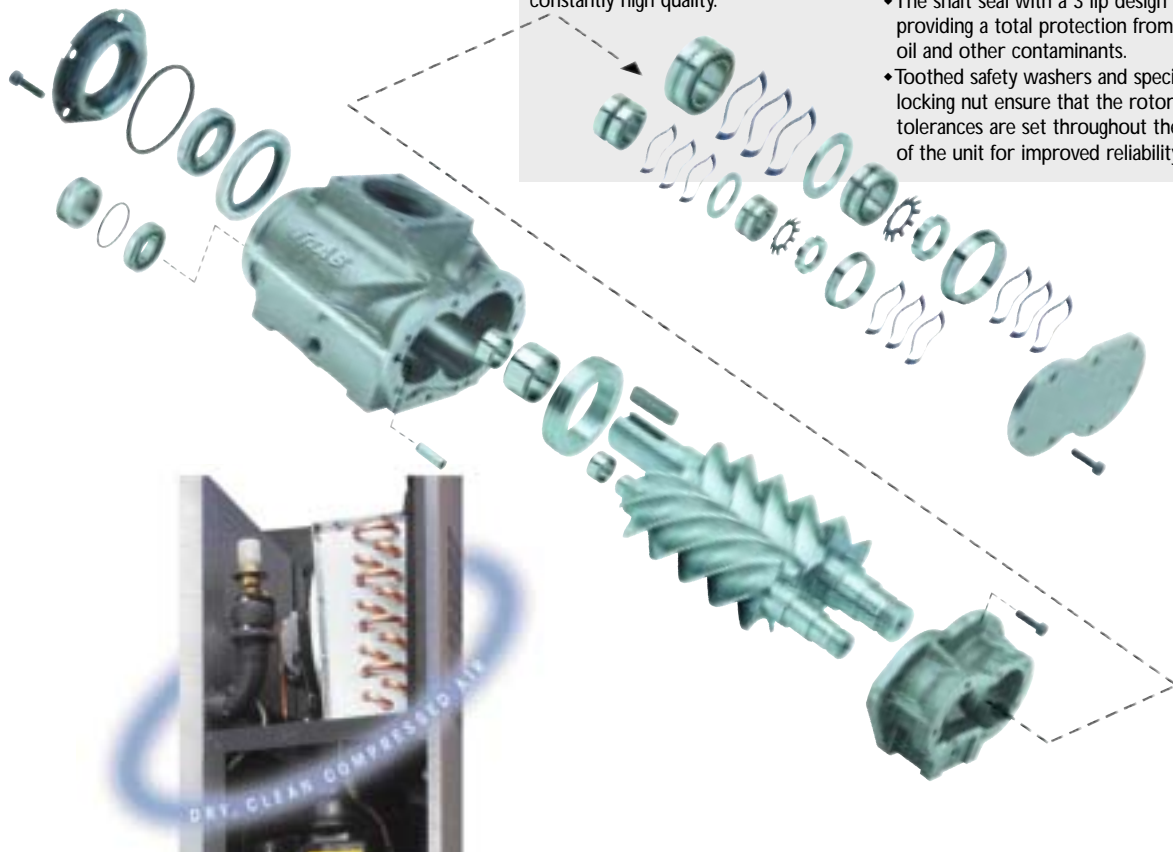
# The sum of technology

## TriAB Air ends

The BALMA screw compressors are fitted with the unique TriAB air ends that are designed and built exclusively in our 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 MODULO 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 MODULO 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.

## 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



## 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 MODULO 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 MODULO 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 MODULO compressor to operate at very low temperatures, resulting in a longer life to both the machine and all components including the lubricant.



## 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 MODULO 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.



## 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 MODULO has been acoustically engineered so as to reduce noise levels entering the environment significantly.

The entire MODULO 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.

# Design and technology



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

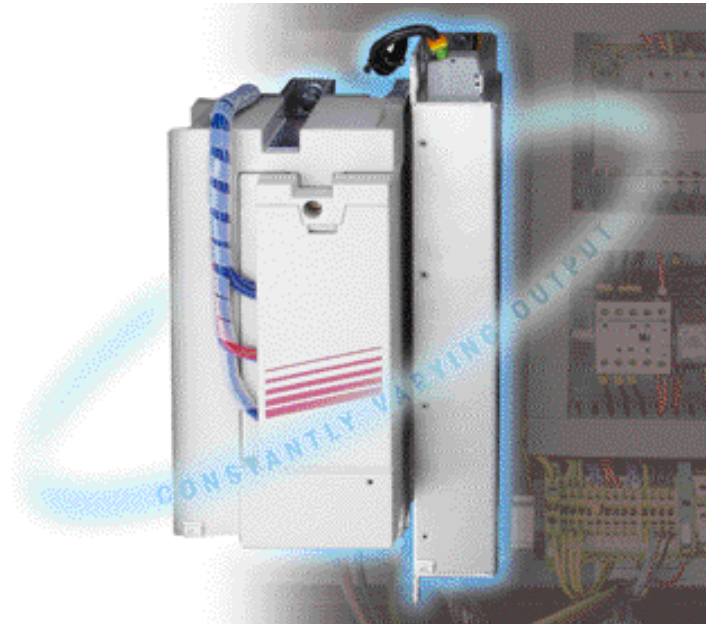
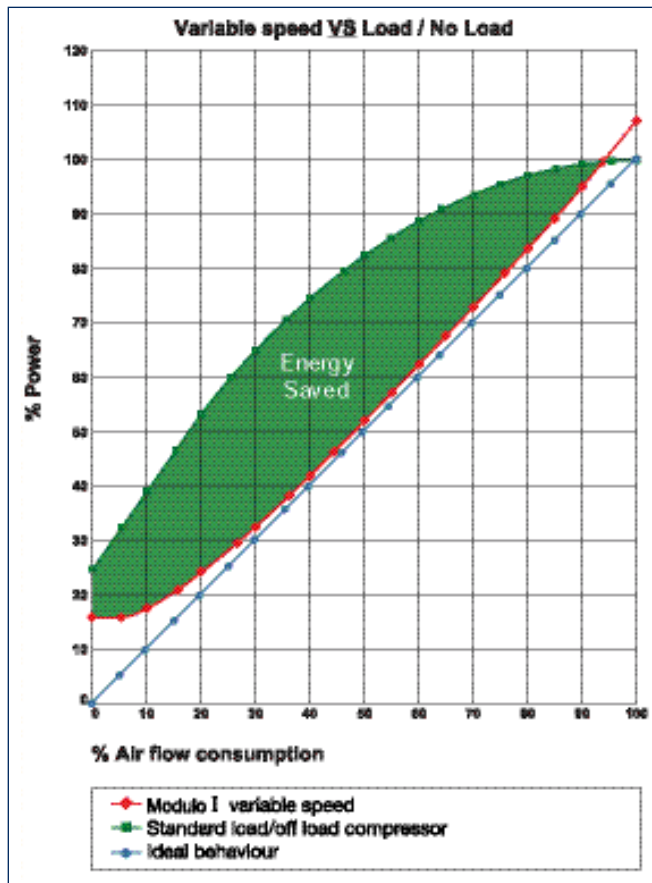
# Variable speed version

## Variable speed version

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

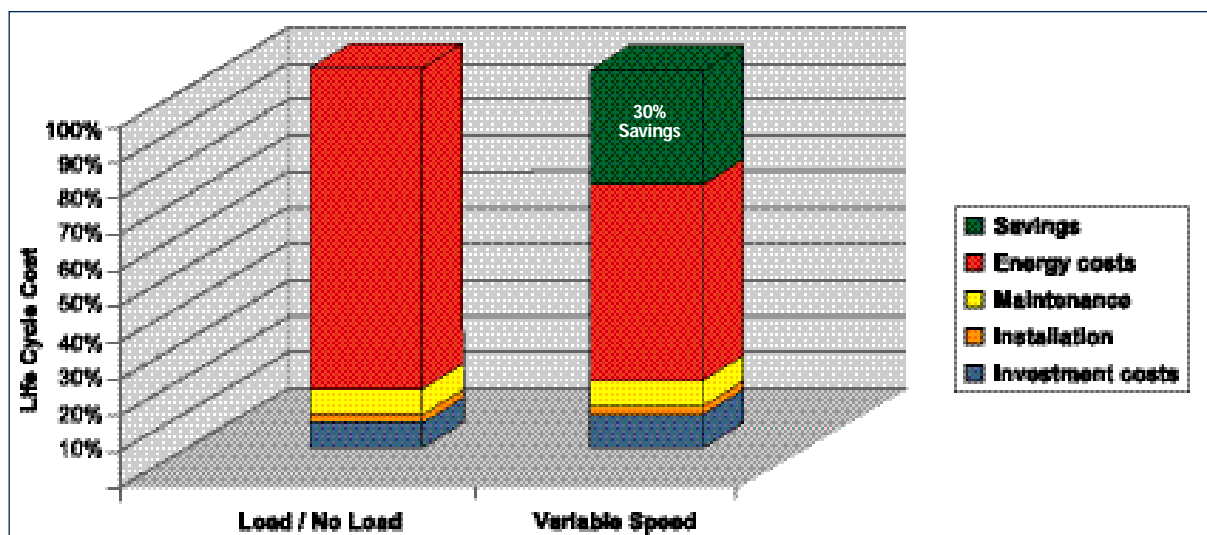
- Provides a constant air pressure selectable to any value between 6 and 13 bar.

- 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.



Value over a period of 5 years

# Technical data

## MODULO - MODULO.E - MODULO.ES

Model	Pressure		Capacity		Motor Power kW/HP	Air end type	Noise dB(A)	Dimensions mm Length x Width x Height	Weight Kg
	bar	psi	m <sup>3</sup> /min	CFM					
MODULO 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					
MODULO 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					
MODULO 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					
MODULO 15/51*	8	116	2,01	81,0	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					
MODULO 15/69*	8	116	2,32	71,9	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					
MODULO 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					
MODULO 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

## MODULO.I - MODULO.EI - MODULO.ESI

Model	Pressure		Capacity*				Motor Power kW/HP	Air end type	Noise dB(A)	Dimensions mm Length x Width x Height	Weight Kg
	bar	psi	m <sup>3</sup> /min		CFM						
			Min	Max	Min	Max					
MODULO.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
MODULO.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

### For MODULO.ES - MODULO.ESI

• Available on air receivers of:	270 lt.	Dim. (1180 x 615 x 1645)
	500 lt.	Dim. (1960 x 615 x 1645)
•• Available on air receiver of:	500 lt.	Dim. (1960 x 615 x 1645)



## SPARE PARTS

Code	Description
8234162	Complete filters kit MODULO 5,5-7,5 Kw 8-10 bar
8234169	Complete filters kit MODULO 5,5-7,5 Kw 13-15 bar
8234163	Complete filters kit MODULO 11-15/51 Kw 8-10-13-15 bar
8234170	Complete filters kit MODULO 15-69 Kw 8-10-13 bar
8234164	Complete filters kit MODULO 18,5 -22 Kw 8-10-13-15 bar
9280031	Mineral refrigerant fluid BLU MODULO 5 l.
9280032	Mineral refrigerant fluid BLU MODULO 10 l.
9280033	Mineral refrigerant fluid BLU MODULO 20 l.
9280034	Synthetic refrigerant fluid MODULO SYNT 46 5 l.
9280035	Synthetic refrigerant fluid MODULO SYNT 46 10 l.
9280036	Synthetic refrigerant fluid MODULO SYNT 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.  
Tel. +39 0119246479  
Fax: +39 0119246455  
e-mail: service@abac.it



BALMA 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.

## BALMA 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 m<sup>3</sup>/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 m<sup>3</sup>/h
- Oil-water separators from 120 to 1.800 m<sup>3</sup>/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

Produced by:



**Abac aria compressa S.p.A.**  
via Einaudi, 6  
10070 Robassomero (To) Italy  
Tel. +39 0119246400  
Fax +39 0119241096  
e-mail: abac@abac.it  
www.abac.it



[www.balma.com](http://www.balma.com)

Distributor

