



**Compact, connected and  
reliable unleash high  
performance for your  
business**

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## **FORMULA M 55-75 & FORMULA MI 55-75**



# Introducing the new FORMULA M & FORMULA MI screw compressor

**Experience its exceptional  
performance and reliability today.**

**Connectivity and optimisation drive  
superior performance.**

Introducing our new range of compressors, proudly embodying the increased performance and reliability that the ABAC brand is known for.

With advanced connectivity and intuitive controls, these compressors bring intelligence, ease of use, and valuable insights to your operations.

By harnessing these features, you can effectively reduce operating costs and boost productivity, all while tailoring the compressor to your specific situation and needs.

**Are you ready to explore and  
experience the exceptional  
performance of our new compressors?**



## Key Differentiators

Through meticulous optimisation of each component, we proudly present our most innovative compressor, delivering unparalleled performance and cutting-edge technology.

### // 1. Introducing the latest screw elements technology

- They offer exceptional performance and efficiency, surpassing expectations.
- Improved rotor profile minimises pressure losses for enhanced efficiency.
- Designed and manufactured in-house at our facilities in Belgium, ensuring meticulous craftsmanship and quality control throughout the production process.

### // 2. Infographic controller

- Featuring an intuitive full-colour graphical display with a touchscreen interface, providing a user-friendly and visually engaging experience.
- Equipped with integrated connectivity, enabling energy optimisation and facilitating cost savings through advanced monitoring and control capabilities.
- Designed in-house, ensuring meticulous attention to detail and tailored specifications for optimal performance and quality.

### // 3. Casted oil separator vessel

- The integrated minimum pressure valve (MPV) eliminates the risk of leakage, providing a reliable and secure operation.
- Designed for optimal oil separation and low oil carryover. Engineered for optimal oil separation, minimising oil carryover and ensuring superior performance.

### // 4. Quality filtration

- Safeguards internal components and prolongs the overall service life of the system.
- Durable air/oil/oil separator filters designed for heavy-duty usage, offering an extended lifetime and a low total cost of ownership.



### // 5. Separate coolers

- Separate oil and air coolers provide quality cooling and extended cooler lifespan.
- The system incorporates gliding rails, enabling effortless and secure removal for maintenance or servicing purposes.
- The system provides easy access for cleaning, allowing for convenient and hassle-free maintenance operations.
- Integrated water separation ensures dry and clean air output for coolers used on machines with integrated dryers.



## Key Features



### New air end

- The compression element is meticulously designed in-house, working in tandem with an IE4 efficiency motor. This synergistic combination delivers remarkable performance, reduces compression temperature, and ensures exceptional reliability. The result is an optimised system that operates efficiently while maintaining high levels of performance and dependability.
- Thanks to its superior component design, the system is engineered to thrive in environments with high ambient temperatures, capable of operating reliably and efficiently in temperatures up to 46°C.

## Comparison

### FORMULA M – FIXED SPEED

Built for long duty cycles and continuous operation

Gear Driven

ES4000Swipe with an intuitive user interface

Superior technology compared to belt drive thanks to in-house air end design and gearbox

### FORMULA MI – VARIABLE SPEED

Ideal for highly efficient operation during fluctuating air demand

Direct Driven - Permanent Magnet Motor (iPM)

Advanced ES4000T\* touchscreen controller maximizes performance and efficiency

Energy savings of up to 45% compared to fixed-speed

## iPM for major energy savings

Energy takes up more than 70% of the cost of owning and operating a compressor. ABAC's iPM technology was developed to give you significant energy savings. While traditional compressors only have one speed (100% on), iPM compressors adjust their motor speed to follow the fluctuating air demand that most production environments have.

As a result, the new FORMULA MI delivers energy savings of up to 45%. That means you can earn back the extra cost of the FORMULA MI 55-75kW (compared to a fixed-speed unit) in just 1 year.

How's that for an easy decision?



\* ES4000Touch available as option for FS



### High-efficiency motor

- The system boasts an impressive IE4 Super Premium efficiency class, indicating its exceptional energy efficiency and reduced power consumption. This high-efficiency rating translates to cost savings and environmental benefits.
- With IP66 protection, the system is effectively shielded against the ingress of dust particles, ensuring reliable and uninterrupted operation even in dusty environments.



### Easy installation and service

- Easily removable panels and quick access to all service parts guarantee effortless maintenance.
- Low maintenance costs.



### Infographic controller

- The system is designed to be intuitive and user-friendly, ensuring a seamless and straightforward user experience.
- Gain remote and real-time insights into the performance of your compressed air system, allowing you to monitor its operation and performance conveniently from anywhere, at any time.
- Maintain precise control by regulating pressure within programmable limits, ensuring optimal operating conditions and performance.
- Incorporated programmed shutdown alarms provide added protection to the unit by triggering timely shutdowns in case of potential risks or critical conditions, safeguarding the equipment from damage.
- Equipped with a programmed service interval meter, the system automatically notifies the customer when maintenance is due, ensuring timely servicing and reducing the risk of overlooked service requirements.

## New FORMULA MI 55-75

### State-of-the-art engineering

- ✓ High efficiency credit to its direct drive, IE4 permanent magnet motor and high turn-down ratio
- ✓ High reliability resulting from its oil cooling and class H motor windings
- ✓ Easy maintenance and low downtime thanks to the new drivetrain coupling system

## Full insight into your compressor system with the ES4000 controller

**The ES4000S model offers an intuitive user interface with easily recognisable symbols, ensuring effortless navigation. For a more advanced user experience, we recommend the ES4000T, equipped with a cutting-edge 4.3" full-colour touchscreen display, providing a state-of-the-art interface.**

Moreover, the ES4000S & ES4000T models elevate user convenience to the next level. With their built-in connectivity feature, you can monitor your compressor's service status remotely, in real-time, from anywhere, enhancing the reliability of your overall operations.

Strategic service interventions can be scheduled proactively, minimising production downtime by detecting and addressing potential issues before they escalate into operational setbacks.



# Performance data

## FIXED SPEED - FORMULA M 55-75

Model	Max. working pressure	Free air delivery @ reference conditions			Motor power		Noise level	Weight	Compressed air output STD diameter
		bar(g)	m³/h	l/min	cfm	kW			
<b>FORMULA M 55</b>	7,5	617	10277	363	55	75	71	1123	2 1/2"
	8,5	580	9670	341	55	75	71	1123	2 1/2"
	10	520	8666	306	55	75	71	1123	2 1/2"
<b>FORMULA M 75</b>	7,5	793	13208	466	75	100	73	1189	2 1/2"
	8,5	768	12802	452	75	100	73	1189	2 1/2"
	10	709	11810	417	75	100	73	1189	2 1/2"

## VARIABLE SPEED - FORMULA MI 55-75

Model	Working pressure	Min. Free air delivery @ 7Bar			Max. Free air delivery @ 7Bar			Motor power		Noise level	Weight	Compressed air output STD diameter
		bar(g)	m³/h	l/min	cfm	m³/h	l/min	cfm	kW			
<b>FORMULA MI 55</b>	4-10	101	1686	59	645	10756	380	55	75	73	966	2 1/2"
<b>FORMULA MI 75</b>	4-10	97	1612	57	772	12863	454	75	100	73	995	2 1/2"

## Dimensions

Length	Width	Height
mm	mm	mm
2135	1221	1804



# Built-in options

## Air Quality



### Incorporated water separation drains

To facilitate effective condensate drainage.

### Tropical thermostatic valve

Designed for optimal performance in hot and humid environments.

### Freeze protection

Ensures a consistent oil temperature within the oil container to prevent condensation.

## Energy Saving



### Integrated energy recovery

Harnesses up to 75% of the thermal energy generated during the compression process, enabling its utilisation for water heating in boilers, showers, and more.

### Central compressor control

Incorporates advanced multi-compressor control technology, allowing seamless coordination and optimisation of up to 6 compressors. This intelligent system effectively minimises system pressure and reduces overall energy consumption.

## A range of options

// Integrated Energy Recovery

// Oil - 8000h oil synthetic

// Water Separation drain - Electronic

// Expansion Module

// Upgrade to Touch

// Prefilter Kit

// Power duct fan - AC

// Oil preheater = freeze protection

// Oil - 4000h oil food grade

// ECO2i

// ECO4i

// ECO6i

// Tropical Thermostat



**Air. Anytime. Anywhere.**

**Reliability and excellent  
performance for your business  
FORMULA M 55-75  
& FORMULA MI 55-75**

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**Contact your local ABAC representative now**

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