

# VH, WH, PET

## Технические характеристики

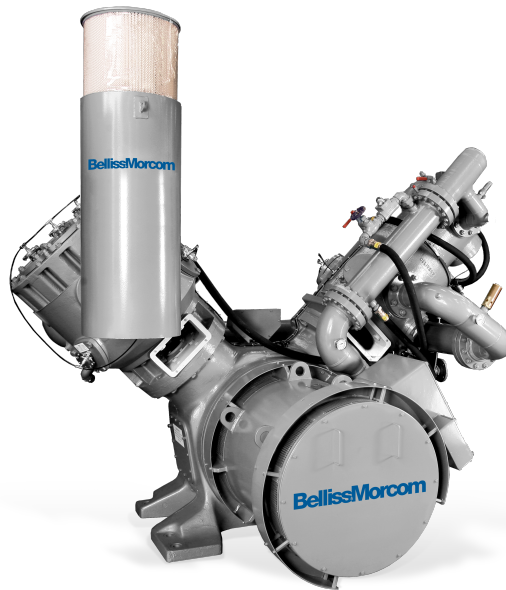
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## Belliss & Morcom VH Compressors Range

Belliss & Morcom's VH series is engineered for maximum efficiency and reliability. Featuring our revolutionary shaftless motors, the VH series ensures high performance, efficient operation, and unrivalled reliability; helping you to minimize operating costs without compromising productivity.

Featuring a compact and robust design, the VH series are dynamically balanced, removing the need for special foundations and structures; whilst the plug-and-play design streamlines installation, allowing operators to get up and running quickly. Backed by our global team of sales and service experts, as well as our BellissXtra ultimate protection program, the VH series provides total peace of mind.

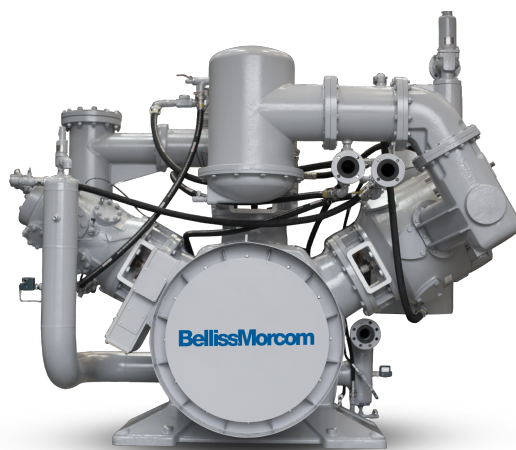
### Features/Benefits

- Shaftless Motor
- Robust, compact design
- 0-50-100% Capacity Control
- Simple plug-and-play installation
- Low TCO
- 8,000 hour major service intervals
- Backed by our BellissXtra ultimate protection program

# Specifications

## VH range

- Max Working pressure = VH7/9 = 42barg & VH12/15/18/21/25 = 45barg
- Max Capacity @ 40barg = 420m<sup>3</sup>/hr to 1500m<sup>3</sup>/hr
- Shaft Power = 75kW's to 251 kW's



## Belliss & Morcom WH Compressors Range

Belliss & Morcom's WH series of high pressure compressors provides the highest performance and lowest TCO possible. Featuring a unique shaftless motor, the WH series provides zero drive losses, while simplifying maintenance by removing the need to tension belts and replace couplings; lowering the total cost of ownership of the compressor.

Using double acting cylinders and a "W" design, the WH series provides maximum efficiency and output, with variable flow control, whilst maintaining a compact, space saving footprint. The simple, dynamically balanced plug-and-play design ensure that the WH series is simple to install without the need for any special foundations or structures.

### Features/Benefits

- Shaftless Motor
- Robust, compact design
- 0-50-100% Capacity Control
- Simple plug-and-play installation
- Low TCO
- 8,000 hours major service intervals
- Backed by our BellissXtra ultimate protection program

## Specifications

### **WH range**

- Max Working pressure 45barg
- Max Capacity @ 40 barg = 1680m<sup>3</sup>/hr to 3200m<sup>3</sup>/hr
- Shaft Power = 265kW's to 518kW's

# Belliss and Morcom - Unique WH Design

The unique Belliss & Morcom W design means each compression stage runs on its own cylinder line. This gives you an extra layer of reliability and efficiency. So whatever your system size and output, capacity control can be achieved in the most cost effective way possible.

## WH Series

Belliss & Morcom PET Range Performance Data

Model			WH28	WH29	WH35	WH40	WH45	WH50
Specifications	50 Hz Data	Capacity FAD (m³/hr/cfm)	1691 / 995	1811 / 1066	2133 / 1255	2315 / 1363	2717 / 1599	3220 / 1895
		Shaft Power (kW/HP)	239 / 321	250 / 335	306 / 410	325 / 436	405 / 543	468 / 628
		Speed (rpm)	735	735	735	735	735	735
	60 Hz Data	Capacity FAD (m³/hr/cfm)	1633 / 961	1749 / 1029	2060 / 1212	2236 / 1316	2625 / 1545	3110 / 1830
		Shaft Power (kW/HP)	231 / 310	241 / 323	296 / 397	314 / 421	391 / 524	452 / 606
		Speed (rpm)	710	710	710	710	710	710

Catalogue data for 30 barg. Designed for up to 45 barg running pressure

# Belliss and Morcom - Unique VH Design

The VH Series is a 3 stage, oil free, water cooled compressor designed for the PET bottle blowing industry. It offers a neatly arranged compressor system which provides maximum oil free air capacity in the smallest available footprint.

The VH Range is also available as a complete package including all essential ancillary items such as starter control panels with PLC logic systems, energy efficient motors, air dryer, air receiver, filters and optional cooling systems to suit all site conditions.

## VH Series

Belliss & Morcom PET Range Performance Data

Model			VH7	VH9	VH12	VH15	VH18	VH21	VH25
Specifications	50 Hz Data	Capacity FAD (m <sup>3</sup> /hr/cfm)	423 / 249	584 / 344	734 / 432	922 / 543	1123 / 661	1411 / 830	1510 / 889
		Shaft Power (kW/HP)	70 / 94	94 / 126	108 / 145	135 / 181	172 / 231	211 / 283	224 / 300
		Speed (rpm)	735	985	585	735	585	735	735
	60 Hz Data	Capacity FAD (m <sup>3</sup> /hr/cfm)	409 / 241	522 / 307	734 / 432	891 / 524	1123 / 661	1363 / 802	1459 / 859
		Shaft Power (kW/HP)	68 / 91	84 / 113	108 / 145	130 / 174	172 / 231	204 / 274	216 / 290
		Speed (rpm)	710	880	585	710	585	710	710

Catalogue data for 30 barg. Designed for up to 45 barg running pressure

# Belliss & Morcom - Shaftless Motors

## The Bottom Line on Drive Efficiency

How would you like to save up to \$50,000 per compressor every year for your PET bottling plant? With Belliss & Morcom, you can.

PET bottle blowing is an energy intensive process. Therefore, when it comes to the compressors powering your bottle blowing machines, you want to be sure that the technology you're using is as efficient as possible.

To eradicate the inefficiencies of using traditional drive systems for PET compressors, our Belliss & Morcom range use shaftless motor technology – but what is a shaftless motor?

With a shaftless motor the rotor is connected directly to the compressor crankshaft, transmitting 100% of the motors output power directly into the compressors running gear. This is an innovative, straightforward solution resulting in fewer wearing parts and reduced machine footprint – but what are the financial benefits to this innovation?

## Motor Performance

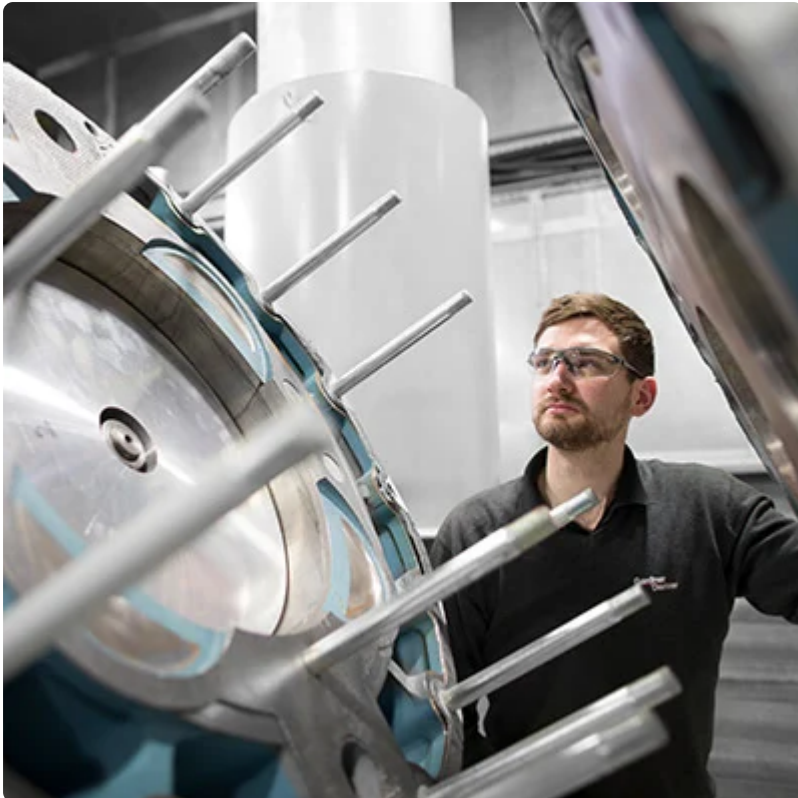
The first area to consider is the transfer of power from the compressor motor. Even the smallest issues here can have a large impact on energy consumption. For example, a single 500 kW PET compressor may cost over \$400,000 a year to run\*. However, even a 1% loss of efficiency on the drive system can add over \$4,000 in energy costs.

Many conventional compressors use inefficient belt drive systems, which operate with inefficiencies of between 5-7%. This can rise to as much as 12% after belt wear and friction losses, depending on the maintenance schedule that a plant has in place.

As a result, a drive belt drive system could be costing you as much as \$50,000 per compressor every year in wasted energy!



To overcome this issue, many customers are specifying a Belliss & Morcom compressor with our unique shaftless motor technology. This reduces absorbed power and eliminates any losses that would be experienced by a belt drive system. All Belliss & Morcom compressors rated above 110 kW are offered with shaftless motor technology as standard, ensuring all of the motor's output power is transferred directly into the compressor's running gear, with zero degradation over the equipment's lifetime.



## Maintenance schedules

The next challenge is maintenance, which most operators view as a necessary evil. Nevertheless, businesses have become increasingly wary of purchasing a compressor for a low upfront capital cost, only to find maintenance issues arise further down the line and any initial capital purchase savings are lost to unscheduled repairs.

This is not an issue with our shaftless motor technology, which requires no maintenance. All the standard maintenance practices that drive belt systems demand, such as belt tensioning, replacement, motor alignment and coupling checks, are eliminated with shaftless motor technology.

## The Bottom Line

Throughout the 40 years we have been supplying the PET market, the savings available from both improved motor performance and reduced maintenance have been proven to have a considerable impact on both operational efficiency and your bottom line.

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