



*Oil-free, high and low pressure
Air Compressors*



Total Cost of Ownership (TCO)
We deliver proven solutions

VITO: the “smart” compressor for blow molding PET and PLA bottles

SIAD Macchine Impianti: a SIAD Group engineering company

The SIAD S.p.A. Group’s engineering section comes under SIAD Macchine Impianti S.p.A. Its many activities range from plant (reciprocating compressors for all types

of gases, air separation units, ASUs, and natural gas liquefiers) global and ongoing management of support services.

VITO: the range of highly energy-efficient PET compressors

VITO is an innovative range of oil-free air compression units for blowing PET and PLA bottles. It is the result of SIAD’s extensive knowledge and careful research, which has allowed it to reach a new level in the world of oil-free, reciprocating air compressors for the Food&Beverage, Cosmetic, Chemical and Pharmaceutical sectors.

The efficiency of VITO compressors results in greater productivity for its customers, thanks to the optimal management of activities related to the compressor throughout its lifespan.

Our history

- 1927 SIAD S.p.A. was founded: the first piston compressor is built, which is also the first oil-free compressor ever made;
- 1953 the SIAD compressor and ASU design office is separated and the company SIAD Macchine Impianti S.p.A. is established;
- 1980 in parallel with the process compressor business, an oil-free range of air compressors was created, specifically dedicated to the Food&Beverage sector;
- 2014 the VITO range is launched, setting new standards for Food&Beverage compressors.



VALUE INNOVATION TECHNOLOGY OPTIMISATION

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EFFICIENCY

The lowest specific consumption

SAFETY AND RELIABILITY

8,000 hours of continuous operation

FLEXIBILITY

Modularity of the components

GLOBAL STANDARD

According to the main standards: CE, PED, ASME, EAC, GB, ISO, etc.

LOW MAINTENANCE COSTS

Operating and maintenance ergonomics

SUSTAINABILITY

Reduction in weight and volume.
Eco-friendly

High and low pressure compression lines

A complete range for all application sectors

The VITO high pressure range is available with a wide range of flow rates from 100 m³/h (59 cfm) to 6,000 m³/h (3,534 cfm).

The VITO LP low-pressure range is instead available in flow rates from 600 m³/h (353 cfm) to 2,100 m³/h (1,237 cfm).



Water and carbonated drinks



Juices, tea and sports drinks



Milk and dairy products



Beer, lager, cider and wine



Edible oil



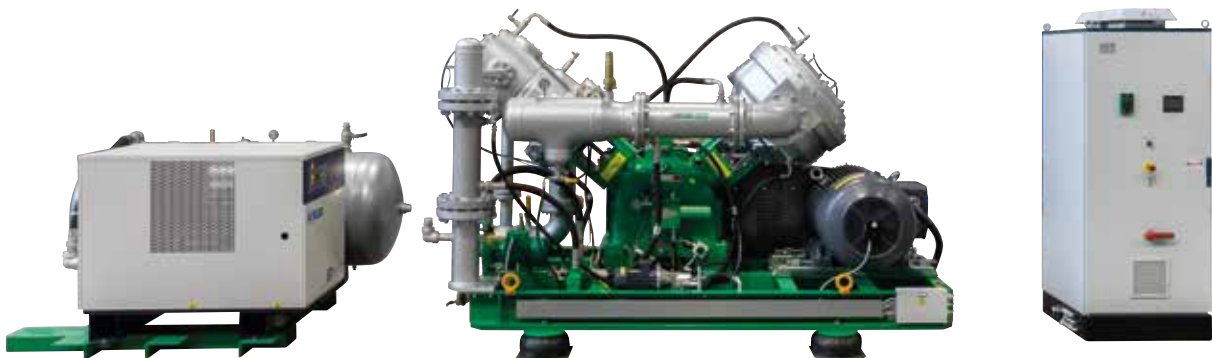
Pharmaceutical industry, Chemicals and Cosmetics

Compression line

The complete supply of a compression line includes:

- air treatment skid (composed of air storage tank, drying unit and outlet air filters, the latter on request);
- compressor pre-assembled skid;
- control panel;
- cooling unit.

**COMPRESSOR
READY FOR
DELIVERY
IN 3 WEEKS!**



AIR TREATMENT SKID
drying unit, tank and outlet
air filters

**SKID
COMPRESSOR**

**CONTROL
PANEL**

+ COOLING UNIT

Partial supplies can also be ordered

The technical details that make the difference

SUCTION FILTER

- Provided with a silencing stage to reduce noise
- With nanotechnological coating to guarantee minimum pressure drops, durability and easy cleaning

FLUID DYNAMICS

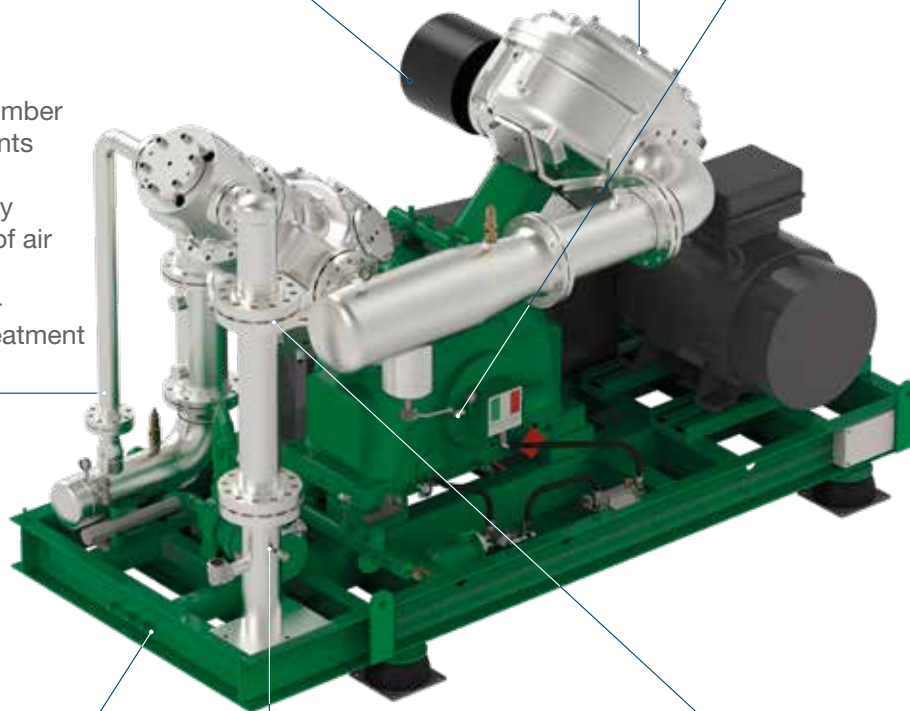
- Full-port suction and delivery valves
- Ducts inside cylinders specifically designed to eliminate pressure losses

MECHANICAL VIBRATION

- Optimized distribution of static weights and dynamic loads
- Reduction of moving masses

PIPING

- Minimum number of components and welds
- Better rigidity
- Low speed of air in pipes
- Internal anti-corrosive treatment



WEIGHT

- Simplified metal structures and piping
- Reduced transport and packaging costs
- Easy repositioning in case of revised installation layout

CONDENSATE SEPARATORS

- Gravity (and not cyclonic) separation process
- Reliable and efficient internal anti-corrosive treatment

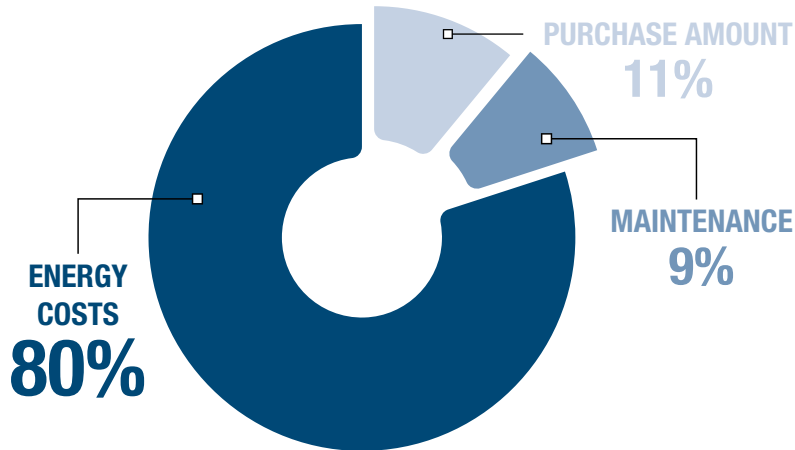
HEAT EXCHANGERS

- Customized heat exchangers for each specific application
- High heat exchange efficiency

MATERIALS CERTIFIED IN ACCORDANCE WITH THE ASME, EAC, GB, and ISO STANDARDS

Total Cost of Ownership (TCO): this is how we handle it

Total life cycle cost*



* 10-year operation of a 42 bar oil-free air compressor

Energy efficiency

Since its launch on the market, the VITO has marked the beginning of a “new era” in the world of air compression for blow molding machines; a qualitative leap, offering greater efficiency together with a reduction in energy costs. In particular, in the case of a VITO frame M compressor, the energy consumption is decreased by 16%.



Heat exchanger tube with turbulator inside



Low maintenance costs

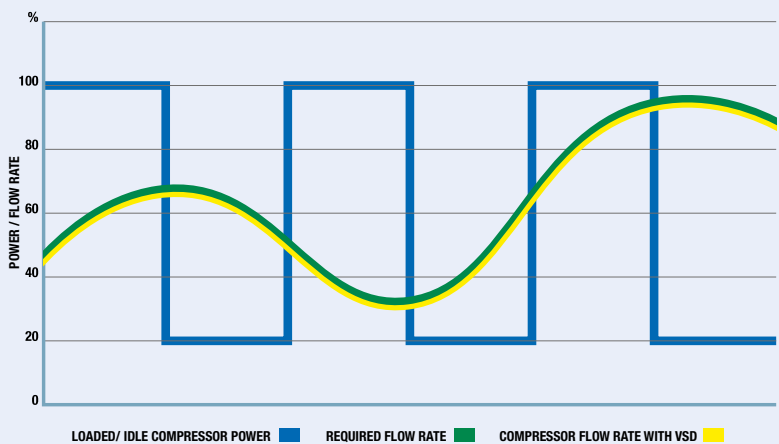
The VITO is the compressor with extensive maintenance intervals: the first intervention must be made at 8,000 hours, thanks to the new design where the moving masses are optimally balanced and the gas speed is reduced. Its ergonomics allow rapid interventions, while the absence of vibrations allows the installation on simple, vibration dampers. The compressor is designed for use in combination with remote control systems - **Industry 4.0**.



Energy saving: here are our options

VSD (Variable Speed Drive)

Optimization of energy consumption with VSD



With an inverter, which regulates the frequency of the electric power supply, the compressor motor operates at variable speeds. Thanks to this, excellent energy savings are obtained.

Advantages

- Power surges are prevented when the motor is started
- The line flow rate is automatically adjusted
- Operation is continuous and no longer intermittent
- The regulation of the speed (and therefore of the flow) is continuous and in the range 30% -100%.

Combining the 0-50-100% and VSD solutions further expands the possibility of modulating the flow rate of the compressor, thus taking advantage of the benefits of the two systems.

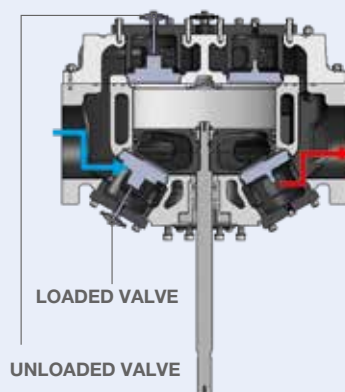
0-50-100%: Modulation of the flow rate

If the request for compressed air decreases, the 0-50-100% device works by excluding the upper effect of the first stage cylinder, by means of pneumatic valve unloaders, and therefore obtains a flow rate equal to 50% of the nominal value. Excluding both effects (upper and lower) of the first stage cylinder, the flow rate is deleted (0%).

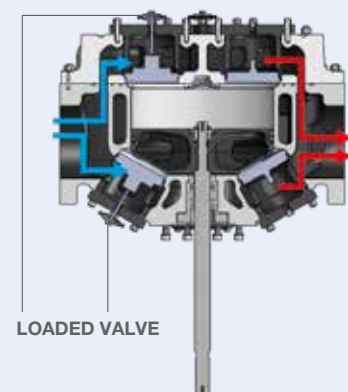
Advantages

- Automatic reduction of flow rate and electrical consumption
- Reduction in the number of control valves and increased reliability of the compressor
- Optimization of flow rate regulation.

50% operation at half load



100% operation at full load



Energy saving: here are our options

Optimized consumption: Energy Saving Pack

To implement the best solution, it is necessary to know precisely the actual use of the compressor in order to study and define the most efficient working method for the system.

The Energy Saving Pack includes an analysis of the energy consumption (energy audit) which can be followed by a corrective proposal for the installation of a control panel or a control panel with a VSD.

The main control panel can manage up to 8 compressors simultaneously. The panel constantly calculates the total compressed air flow rate and the consumption of electrical energy and makes it possible to adapt the compressor's work to the requested changes in real time.



Advantages

- Energy saving and also flexibility with respect to different bottle volumes in production
- Increased flow rate with the same energy consumption
- Easy system management
- Improved reliability-less wear thanks to less "idle" operation
- Less maintenance - reduction of management costs
- Guarantee of optimal use of all installed compressors.

Compressed air recovery

The system allows the recovery of compressed air from the blow molder, with a consequent reduction in energy consumption for compression. It can be easily installed on existing compressors.

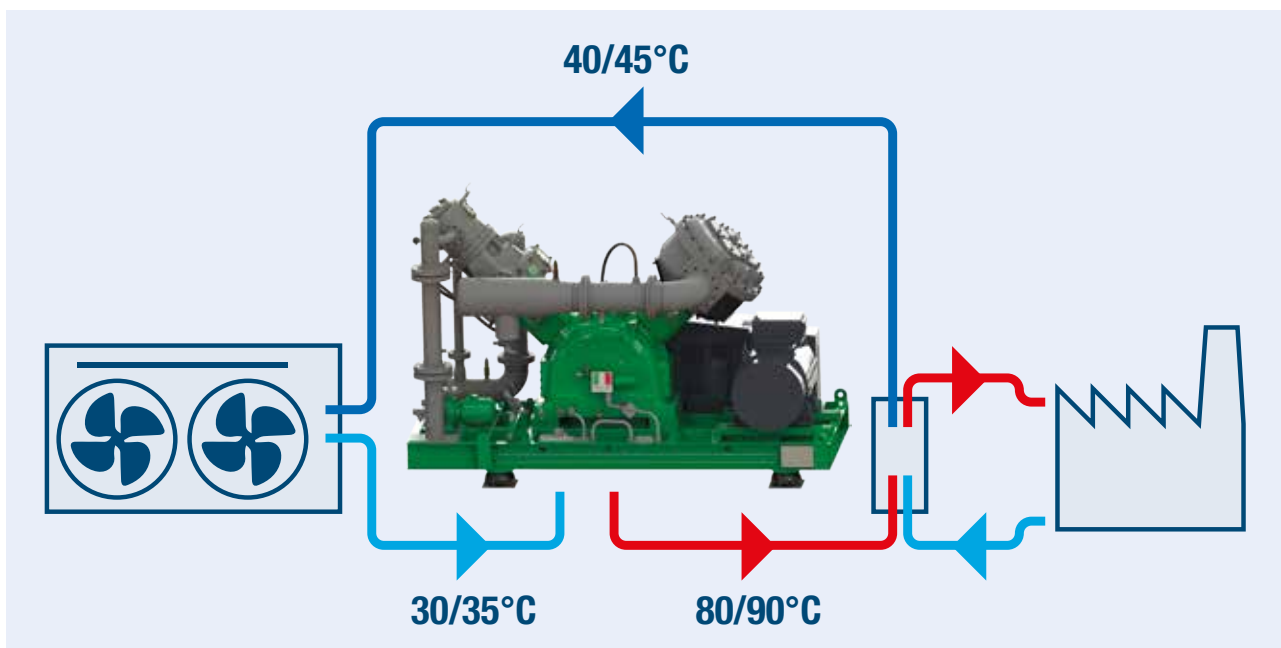


Heat recovery

The thermal energy produced by the compressor can be recovered for different purposes at the customer's plant (heating

and auxiliary systems). Depending on the compressor model, the thermal power recovery is between 30% and 80% of the

compressor power and water can be supplied at a temperature up to 90°C.



Product range

High pressure compressors



HIGH PRESSURE - 40 bar (g)

Model	FAD Capacity [m³/h]	FAD Capacity [cfm]	Installed power [kW]
VITO 100	100	59	22
VITO 120	120	71	22
VITO 150	150	88	30
VITO 180	180	106	37
VITO 200	200	118	45
VITO 280	280	165	55
VITO 400	400	236	75
VITO 420	420	247	75
VITO 480	480	283	90
VITO 550	550	324	90
VITO 580	580	342	110
VITO 690	690	406	110
VITO 820	820	483	132
VITO 970	970	571	160
VITO 1210	1210	713	200
VITO 1330	1330	783	220
VITO 1520	1520	895	250
VITO 1720	1720	1013	280

HIGH PRESSURE - 40 bar (g)			
Model	FAD Capacity [m³/h]	FAD Capacity [cfm]	Installed power [kW]
VITO 1920	1920	1131	315
VITO 2200	2200	1296	355
VITO 2420	2420	1425	400
VITO 2660	2660	1567	440
VITO 2700	2700	1590	450
VITO 3040	3040	1791	500
VITO 3300	3300	1944	560
VITO 3440	3440	2026	560
VITO 3700	3700	2179	560
VITO 3840	3840	2262	630
VITO 4100	4100	2415	630
VITO 4600	4600	2709	710
VITO 5100	5100	3004	800
VITO 6000	6000	3534	900

Flexibility

The VITO compressor is “smart” even in its design: the VITO range has been designed to be modular, in fact with a single frame it is possible to have a wide range of flow rates.

This allows the compressor to be readjusted in case the end user decides to assign it to a production requirement different to the initial one. In fact, within certain parameters,

it is possible to increase or decrease the flow of compressed air produced with only a modification of the compressor motor plus other minor details.



Product range

Low pressure compressors



LOW PRESSURE				
Model	Pressure (barG)	FAD Capacity [m³/h]	FAD Capacity [cfm]	Installed power [kW]
VITO LP 600	8	600	353	90
	10	600	353	90
	13	600	353	90
VITO LP 800	8	800	471	110
	10	800	471	110
	13	800	471	110
VITO LP 1000	8	1000	589	132
	10	1000	589	132
	13	1000	589	160
VITO LP 1200	8	1200	707	110
	10	1200	707	132
	13	1200	707	132
VITO LP 1350	8	1350	795	132
	10	1350	795	132
	13	1350	795	160
VITO LP 1500	8	1500	884	160
	10	1500	884	160
	13	1500	884	160
VITO LP 1700	8	1700	1001	160
	10	1700	1001	200
	13	1700	1001	200
VITO LP 1900	8	1900	1119	200
	10	1900	1119	200
	13	1900	1119	220
VITO LP 2100	8	2100	1237	220
	10	2100	1237	250
	13	2100	1237	250

Sales and Service network

Technical support: a complete range of services

To reduce operating costs and to maintain our compressors in conditions of maximum efficiency, SIAD Machine Impianti offers clients a complete range of services.



Activities

- Commissioning and start-up
- On site assistance
- Original spare parts
- Maintenance contracts
- Monitoring and diagnostics
- Engineering
- Modernization and Revamping
- Training for technicians

Technical support: near you, wherever you are

3

DISTRIBUTION CENTRES

Europe / Middle East / Asia

5

SERVICE CENTERS TOTALLY OWNED WITH A SPARE PARTS WAREHOUSE

Latin America / Europe / Russia, Middle East / Asia

OVER 30

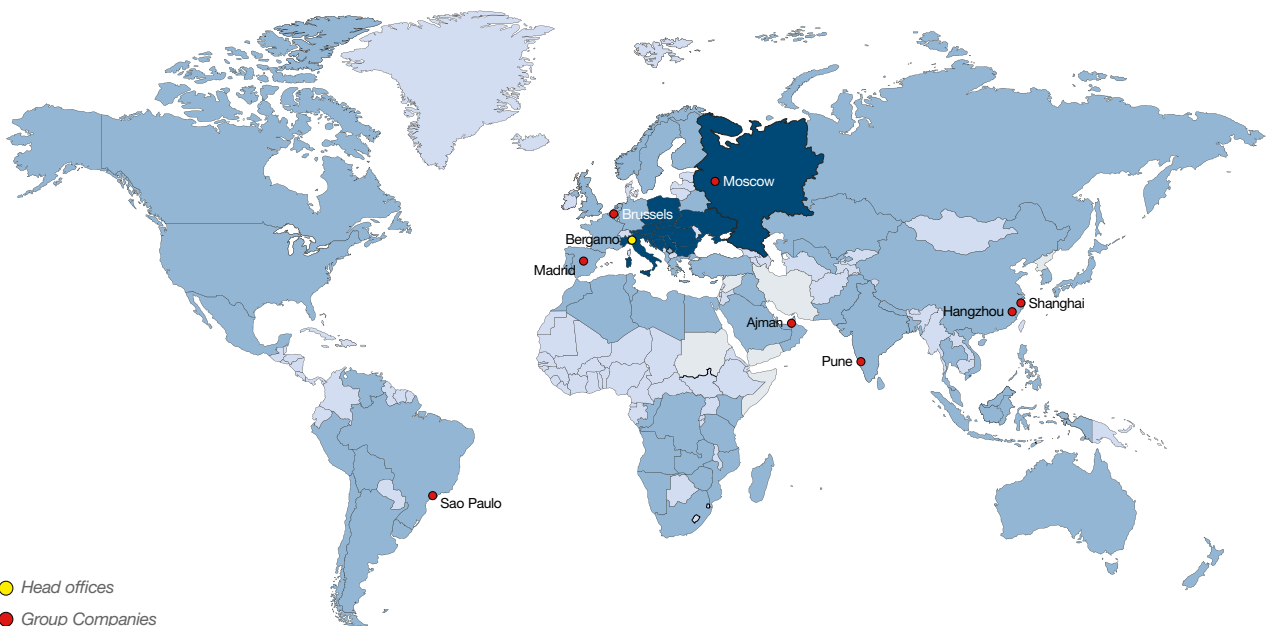
CERTIFIED SERVICE CENTRES

in the 5 continents managed by qualified technicians

OVER 100

SPECIALIZED AND CERTIFIED ENGINEERS

ready to assist immediately



- Head offices
- Group Companies of the Engineering Section

■ Areas with full involvement by the Engineering and Gas Sections

■ Areas with full involvement by the Engineering Section

■ Areas with plant installations plus servicing by the Engineering Section

The SIAD Group

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Technical gases



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Healthcare

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