Atlas Copco

Oil-sealed rotary screw vacuum pumps GVS 630-4800, 365-3000 cfm







Sustainable Productivity



Reliable general vacuum for critical applications

Atlas Copco, the industry leader in compressed air solutions, has transferred its highly efficient and ultra-reliable screw compression technology to vacuum applications. The result is the GVS 630-4800 series of oil-sealed rotary screw vacuum pumps. Providing up to 3,000 cfm of vacuum pumping performance across six models, the GVS series is ideal for critical applications in printing, electronics, plastics, packaging, woodworking, bottling, canning and similar exacting industries.

Robust technology

The GVS 630-4800 combine a technologically advanced screw design with robust and highly regarded oil-sealed rotary technology to produce a state-of-the-art, market-leading product.





High reliability

In the GVS 630-4800 range of vacuum pumps, industry-leading screw technology meets many years of vacuum know-how. Add a conservative approach to machine speed and you have all the benefits of Atlas Copco's screw element, including inherent reliability, optimal efficiency and life cycle costs.

Outstanding efficiency & ease of use

GVS rotary screw vacuum pumps outperform many other vacuum technologies in their operating pressure range. They are available ready to use, with all the options you need, and supported by the best know-how.



Optimum vacuum control

All GVS 630-4800 vacuum pumps are fitted with a modulating vacuum control valve at the pump inlet as standard. An additional vacuum control device is therefore unnecessary, unless the vacuum levels at particular points of use need to be varied. Many other common vacuum technologies utilize 'air bleed' to control vacuum level with the additional function of maintaining mechanical integrity in low flow conditions. This is not necessary with Atlas Copco's screw technology, leading to optimum energy savings.

MODULATING VALVE FITTED DIRECTLY TO PUMP INLET

The valve's position is controlled to provide accurate set point control within an adjustable pressure band, which can be narrow or wide. The main benefits include:

- Precise matching of delivered capacity to the actual demand.
- Minimal fluctuations in system vacuum level.
- Reduced wear and maintenance, as a result of fewer stops/starts.



SIGNIFICANT ENERGY SAVINGS

When the GVS 630-4800 vacuum pump is delivering performance greater than that required by the process, significant energy savings can be achieved. With other technologies, this excess capacity is normally wasted by 'bleeding off' or running at a slightly higher vacuum level than is needed. The GVS 630-4800 save energy in falling demand conditions by progressively lowering the pressure level at the pump inlet to below that experienced at the process. This happens automatically without the need to adjust machine settings. It also suppresses unnecessary stops/starts whilst catering for continuous fluctuations in demand, thereby minimizing wear. The result is longer life and less maintenance.



Control valve

State-of-the-art, reliable vacuum technology

1

Slow screw speed

- Ensuring that GVS 630-4800 vacuum pumps are extremely quiet – from 71 dB(A) – so they can be located alongside your machine in areas where people work.
- Guaranteeing high reliability and extreme durability.

2

Generously matched motors

GVS 630-4800 vacuum pumps are durable, highly reliable and fitted with generously rated motors making them last a lifetime.

3

Innovative porting

- Optimizing performance when cycling from atmospheric pressure to the operating vacuum level.
- Preventing internal and efficiency sapping backpressures during operation close to atmospheric pressure. The result is fast response to process changes.

4 Lift-out panels

Eliminating the need for swing-out doors, saving valuable space.

5

Sound-insulated canopy

- Reducing sound levels to as low as 71 dB(A).
- Enhancing the appearance of the vacuum pump.





Modulating valve fitted directly to pump inlet

- · Allowing delivered performance to be matched to actual demand.
- · Minimizing fluctuations in system vacuum level.
- Reducing wear and maintenance, as a result of fewer stops/starts.

7

6

Adjustable oil thermostat

- Preventing condensed water vapor from contaminating the oil reservoir, even in demanding conditions.
- Consistent and continuous performance during humid duties with minimal impact on component lifetime within the oil circuit.

8

Highly efficient oil mist separator

- Easily replaceable cartridge type element sized to minimize back-pressure and optimizing the delivered performance.
- Ensuring long operating life with a minimum number of service interventions.
- Allowing operation close to atmospheric pressure, without the consequences often found when excessive optimization takes place.



Flow charts (air-cooled / water-cooled)



WORKING PRINCIPLE

As the rotors turn, air is drawn into the rotor housing through the inlet port. Air is then trapped as the inlet port is closed off. As rotation continues, the air is conveyed to the discharge side and forced out of the discharge port. Oil is present within the twin screw stage to lubricate, seal and cool the wetted parts. This oil is separated from the air within the oil mist separator before being discharged to the atmosphere. The compression cycle of a rotary vacuum pump is a continuous process and is therefore relatively pulsation free.



The oil mist separator (eliminator) has the function of retaining oil within the vacuum pump oil reservoir and allowing the evacuated air to be cleanly and safely discharged to the atmosphere. The process takes place in a number of stages which firstly separate out the 'heavier' oil components, by cyclonic separation, then pre-filtration and finally coalescence. Here small droplets and mists are combined into large droplets which fall by gravity back to the oil reservoir.

TECHNICAL SPECIFICATIONS GVS 630-4800

MODEL	Maximum shaft power				Pumping speed		Ultimate pressure		Inlet connector	Dimensions (L x W x H)			Weight
60 Hz version	Air-c	ooled	Water	-cooled	cfm	m³/h	in-HgV	Torr	NPT	inches		lbs	
GVS 630	11.8	hр 15.8	KVV 11.8	hр 15.8	365	620	29.9	0.5	4"	78	48	58.5	3103
GVS 1000	24.2	32.5	24.2	32.5	550	934	29.9	0.5	4"	78	48	58.5	3136
GVS 1200	36.6	49.1	36.6	49.1	730	1240	29.9	0.5	5"	78	48	58.5	3516
GVS 1600	47.7	64.0	47.7	64.0	980	1665	29.9	0.5	5"	96	56	73	5470
GVS 2500	67.8	90.9	67.8	90.9	1500	2549	29.9	0.5	8"	108	60	85	7826
GVS 4800	138.8	186.2	138.8	186.2	3000	5097	29.9	0.5	8"	120	76	96	10001

AVAILABLE OPTIONS

- Audible/Visual Low Vacuum Alarm Auxiliary Contacts - Overload and HAT Power Failure Auto Restart 200 Volt (not available on GVS1600 through 4800) Two-Unit Lead/Lag Control
- Auto Demand Control

PERFORMANCE CURVES



Pump performance measured at the inlet pressure and 68°F. Accuracy is +/- 10%.



Driven by innovation

With almost 140 years of innovation and experience, Atlas Copco delivers the products and services to help maximize your company's efficiency and productivity. As a global industry leader, we are dedicated to offering high air quality at the lowest possible cost of ownership. Through continuous advancements, we strive to safeguard your bottom line and bring you peace of mind.

Local interaction



Atlas Copco Compressors LLC is part of the CompressorTechnique Business Area, and its headquarters are located in Rock Hill, SC. The company manufactures, markets, and services oil-free and oil-injected stationary air compressors, air treatment equipment, and air management systems, including local manufacturing of select products. In each of the past five years, Atlas Copco Compressors has continually increased investments in new U.S. facilities with major manufacturing, production, and distribution facilities located in Texas, North Carolina and South Carolina. Across all of our different business types and brands, Atlas Copco employs approximately 4,000 people in the U.S.



Committed to sustainability

In 2012, Atlas Copco AB was named one of the Top 100 Sustainable Companies in the World for the sixth year, and since 2011 has been recognized by Forbes, Thomson-Reuters and Newsweek, among others, for our commitment to innovation and sustainability. All Atlas Copco Compressors facilities in the United States are triple certified to ISO 14001, ISO 9001 and OHSAS 18001; a set of standards to protect the environment, ensure product quality, and promote our employees' health and occupational safety.

