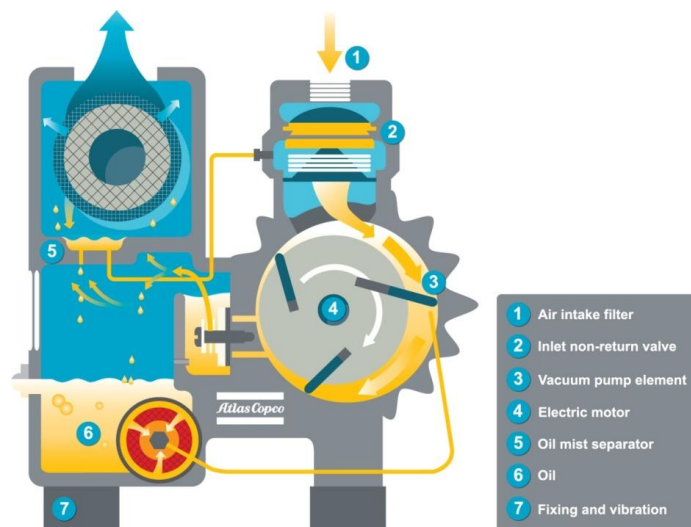


GVS ROTARY VANE VACUUM PUMPS

The GVS 470A and GVS 630A are a range of v-belt driven compact rotary vane vacuum pumps, single stage, oil sealed and air cooled. They have an integrated oil separator with coalescing filter, oil filter and oil return line. They feature a low pressure drop inlet non-return valve to protect the machine and system against counter-rotation. They also incorporate guided vanes to reduce the travel run, and hence the wear and tear, on the vanes during start-up, along with a comb lubrication arrangement providing multi-point distribution of its oil resulting in a uniform oil temperature gradient across its stator.



Excellence by Design



Key Features

1. Air intake filter

Heavy duty, air inlet filter with washable polyester element. Premium filtration efficiency: 99.95% for particles above 5 micron; designed specifically for vacuum applications due to its optimized pressure drop.

2. Inlet non-return valve

The inlet non-return valve protects the vacuum pump against counter rotation in the event of the pump stopping without the prior venting of the point of use. The device also protects *back sucking* of oil from the vacuum pump. This assembly is located within the inlet housing, which also contains an inlet protection screen; an additional protection device located downstream of the inlet filter.

3. Vacuum pump element

The key components within the element (or stage) have been optimized for efficient vacuum pumping at the lowest possible power consumption and optimal operating temperature. These 3 elements drastically influence the life cycle costs for vacuum pumps, notwithstanding the effects of product carryover. We have simultaneously rationalized some key design features so that these general vacuum (GVSA) units achieve the desired performance profile over the operating range of ambient to the ultimate pressure. This includes optimization of:

- The surface finish of the vane slots and cylinder.
- Vane material selected for optimal lifetime while also considering noise and heat generation.
- Clearances, sealing, compression ratio etc.

4. Electric motor

Motors have been selected to provide maximum flexibility. The motors for the GVS 470A/630A are available in 3 phase (e.g. 230V/460V, 60Hz) and are cUL/UL approved.

5. Oil mist separator (air/oil separator vessel)

Mounted directly onto the vacuum pump element, this vital, optimized and innovative device utilizes multi step separation with minimal pressure drop. The final step of oil separation is facilitated by an ultra-fine oil coalescing filter which maximizes oil retention, thereby making it possible to locate these vacuum pumps close to the point of use. The oil is circulated around the vacuum pump by the vacuum that is generated within the element.

6. Oil selection

The oil used within a vacuum pump is critical for longevity, performance and life cycle costs. Achieving optimal temperature quickly and then maintaining that temperature is a critical design point. The standard lubricant is full synthetic oil which is available commercially and as a fully tested and approved Atlas Copco lubricant (within service kits/separate containers). Atlas Copco provides the pump filled with oil from the factory.

7. Fixing and vibration

The GVS-A range of vacuum pumps has low levels of vibration and does not need fixing down in normal circumstances, such as static installations. However, we supply all our machines with anti-vibration mounts as standard to allow our vacuum products to be built into machinery or

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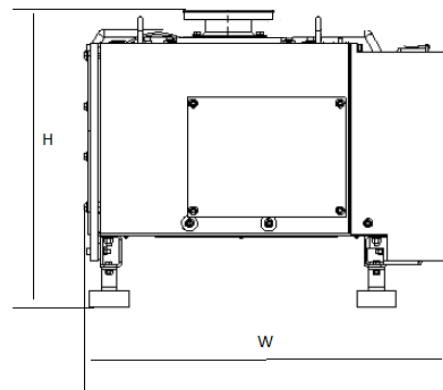
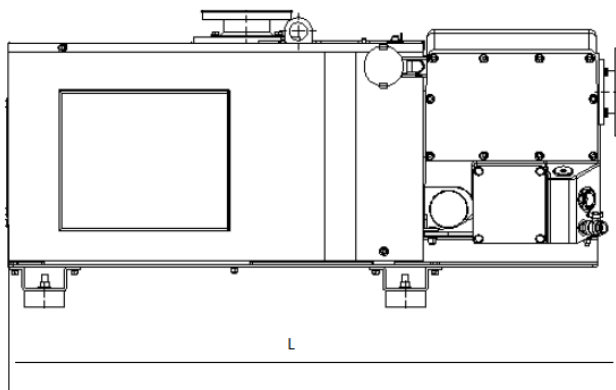
fixed in position. This is achieved by utilizing the (4) M16x14 tapped holes that are provided on the underside of the pump for mounting purposes. The upper side is fixed to the vacuum pump.

8. Gas ballast valve

A gas ballast valve is fitted as standard to optimize the pumps ability to handle water vapor. An air intake filter is also provided for protection in both humid and dry applications. These features deliver high reliability through a rugged and robust design.

Specifications

	GVS470A	GVS630A
Nominal Pumping Speed (ACFM/m³/hr)	336/570	494/840
Vacuum level ("Hg(V)/mbar(A))	29.91/0.1	29.91/0.1
Motor Power (HP/KW)	15/11	25/18.5
Ambient Temperature (°F/°C)	32 to 104°F/0 to 40°C	32 to 104°F/0 to 40°C
Inlet connection (in)	3" NPT	4" ANSI
Weight (lb/kg)	2	2
Dimensions (in/mm) L*W*H	51" * 34" * 25"/1295 * 863 * 635	61" * 35" * 30"/1549 * 889 * 762



GVS470-630A

Pumping Speed vs Pressure

