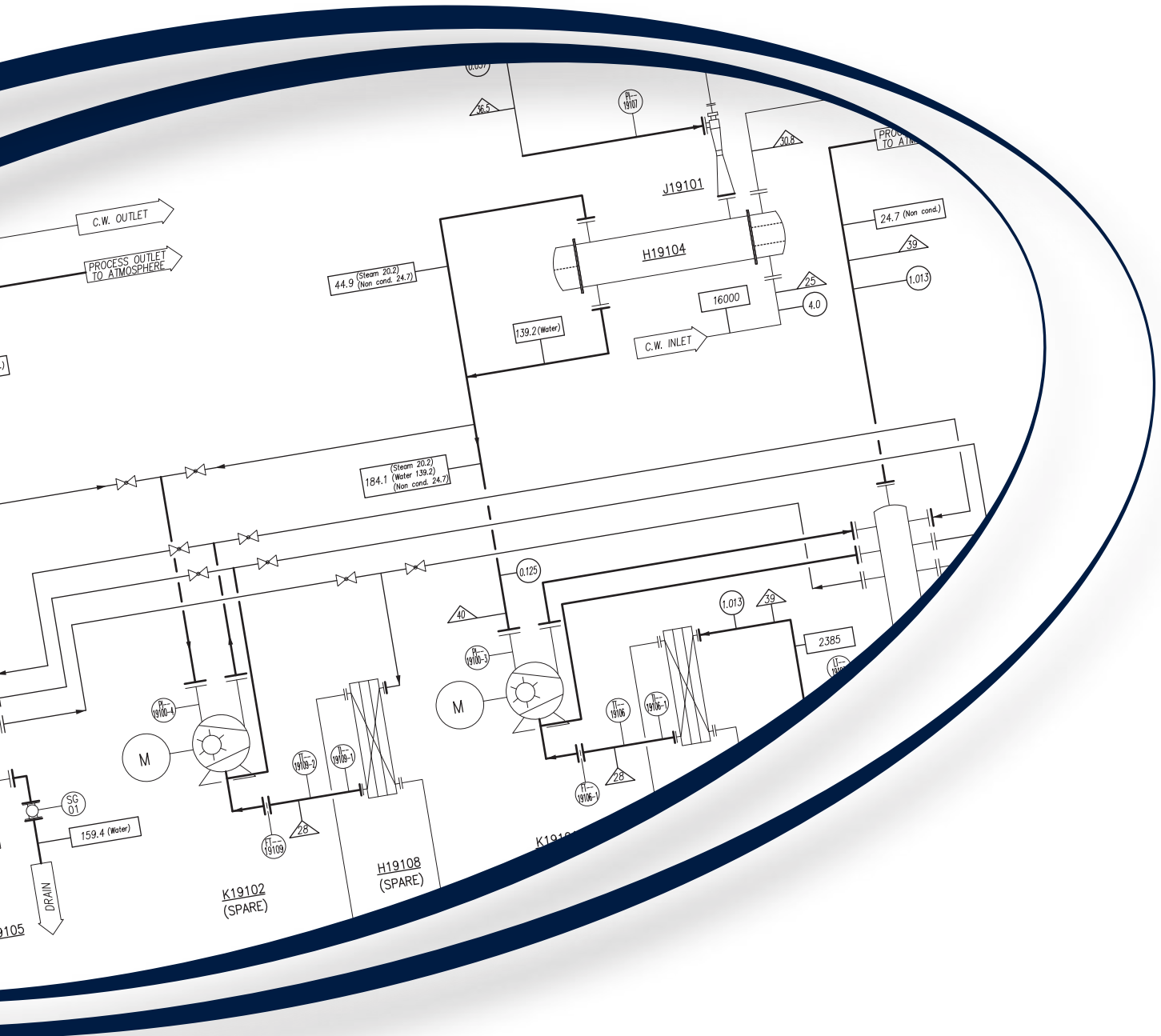




# Vacuum Technologies

A Unit of ASCO POMPE



# Vacuum Pumps & Systems



*ASCO VACUUM is an Italian Company specialized in the design, production and supply of pumps and systems dedicated to air & gas handling. ASCO VACUUM team, with more than thirty years' experience in vacuum applications, is able to propose a wide range of solutions for most industrial duties including both standard products and customized engineered systems designed to fulfill client technical requirements in terms of performance and international construction standards.*



*ASCO VACUUM is a Unit of ASCO POMPE, a company founded in 1956, which in more than 60 years of activity has established itself as a primary and successful supplier of pumps and solutions for most of the applications related to the fluid handling. The synergic connection between the two companies allows both to increase their competence, strength and dynamism to achieve new goals within the global market*

*ASCO VACUUM wants to be an innovative manufacturer, supplier and also a present and competent partner able to guide customers in the various stages of cooperation focusing to the most efficient and effective path. The great variety of applications and environments of the gas handling sector require experience and flexibility that are the two main strengths and guidelines of ASCO VACUUM team.*



*The current program is based on different technologies in order to cover most industrial needs in terms of flowrate and compression ratio. Our products are designed, developed and manufactured according to the highest quality standards in line with ASCO business milestone.*



*ASCO VACUUM has the know-how and capability to design and manufacture customized products and engineered package systems. A multidisciplinary team is available to drive customers toward the best reliable and efficient solutions.*



*We provide aftersales service for our pumps and systems and technical consultancy for vacuum applications. Our service engineers are qualified to support customers directly on site for commissioning and maintenance activities.*



**ISO** VACUUM  
 Excellence In Gas Handling

**APPLICATIONS**

**INDEX**

<p><b>Pag 4</b>  <i>Side Channel Blowers</i></p>	
<p><b>Pag 5</b>  <i>Rotary Vane Pumps</i></p>	
<p><b>Pag 6</b>  <i>Liquid Ring Pumps</i></p>	
<p><b>Pag 7</b>  <i>Dry Screw Pumps</i></p>	
<p><b>Pag 8/9</b>  <i>Engineered Systems</i></p>	
<p><b>Pag 10/11</b>  <i>Service &amp; Quality</i></p>	



AVCX SERIES. Wide range of side channel compressors and exhausters to suit most industrial needs in air handling. Working principle based on the lateral ducts, the blowers can operate as exhauster or compressor. Full die-cast aluminum construction combined with latest machining technology to ensure high performance and high reliability.

Motor design allows for variable frequency drive to grant the right demand and maximum operating flexibility.



### ONE IMPELLER



Flowrate: from 40 to 1.370 m<sup>3</sup>/h



Vacuum: from -60 to -340 mbar



Pressure: from 70 to 480 mbar



Motor: 1ph or 3ph



Noise level: from 46 to 71 dBA



### TWO IMPELLERS



Flowrate: from 47 to 2.050 m<sup>3</sup>/h



Vacuum: from -200 to -500 mbar



Pressure: from 240 to 820 mbar



Motor: 1ph or 3ph



Noise level: from 58 to 84 dBA



### THREE IMPELLERS



Flowrate: from 170 to 740 m<sup>3</sup>/h



Vacuum: from -600 to -730 mbar



Pressure: from 640 to 1.050 mbar



Motor: 3ph



Noise level: from 69 to 78 dBA



AVPL SERIES



Oil rotary vane vacuum pumps of AVPL series are extremely compact thanks to the integrated motor and transmission, making them the ideal choice for compact installations. They are equipped with extremely resistant blades that ensure long life. Specially designed oil filters ensure excellent oil separation by removing even the smallest oil droplets from the exhaust air.



Flowrate: from 3 to 300 m<sup>3</sup>/h



Vacuum: 10 mbar or down to 0,5 mbar



Motor: 1ph (till 2,2 kW) or 3ph



Installed power: 0,11 to 7,5 kW



AVPS SERIES



Dry-operated rotary vane vacuum pumps. Designed to operate completely dry without periodic maintenance. Can be used as vacuum pumps, as compressors, or to produce vacuum and pressure simultaneously as a suction/pressure unit.



Flowrate: from 3,5 to 45 m<sup>3</sup>/h



Vacuum: 150 mbar



Pressure: from 640 to 1.050 mbar



Motor: 1ph or 3ph



Installed power: 0,25 to 1,3 kW (1,7 for 1ph)





Wide range of liquid ring vacuum pumps designed to meet most severe process conditions, available in different constructions and materials, capable to achieve 33 mbar abs. at reference conditions, are the right choice to handle contaminated, corrosive or explosive gas mixtures including vapors and liquid carry over.

No internal metal to metal contact, isothermal compression, robust design, versatile and oil-free operation are the main features contributing to high reliability standards.

Use as compressor up to 2 bar g, possible by selecting the correct motor size.



**AVM - AVL Single stage**  
*monoblock and lantern version*



Flowrate: from 5 to 475 m<sup>3</sup>/h



Installed power: 0,75 to 15 kW



Vacuum: down to 33 mbar



Noise level: 78 dBA max.



Pressure: up to 2 bar g.



**AVA Single stage**  
*bareshaft version*



Flowrate: from 400 to 45.000 m<sup>3</sup>/h



Vacuum: from 33 mbar to 180 mbar



Pressure: up to 2 bar g.



Installed power: 15 to 1.000 kW



**AVD - AVDL Two stage**  
*bareshaft and lantern version*



Flowrate: from 50 to 1.800 m<sup>3</sup>/h



Vacuum: down to 33 mbar



Installed power: 3,0 to 55,0 kW








Noise level: 80 dBA max.



AVDS series consists in dry screw vacuum pumps designed to operate at very deep vacuum capable to achieve 0,05 mbar or deeper if combined with a booster pump.

The new patented hybrid screw design ensures higher efficiency due to lower temperature and less power consumption.

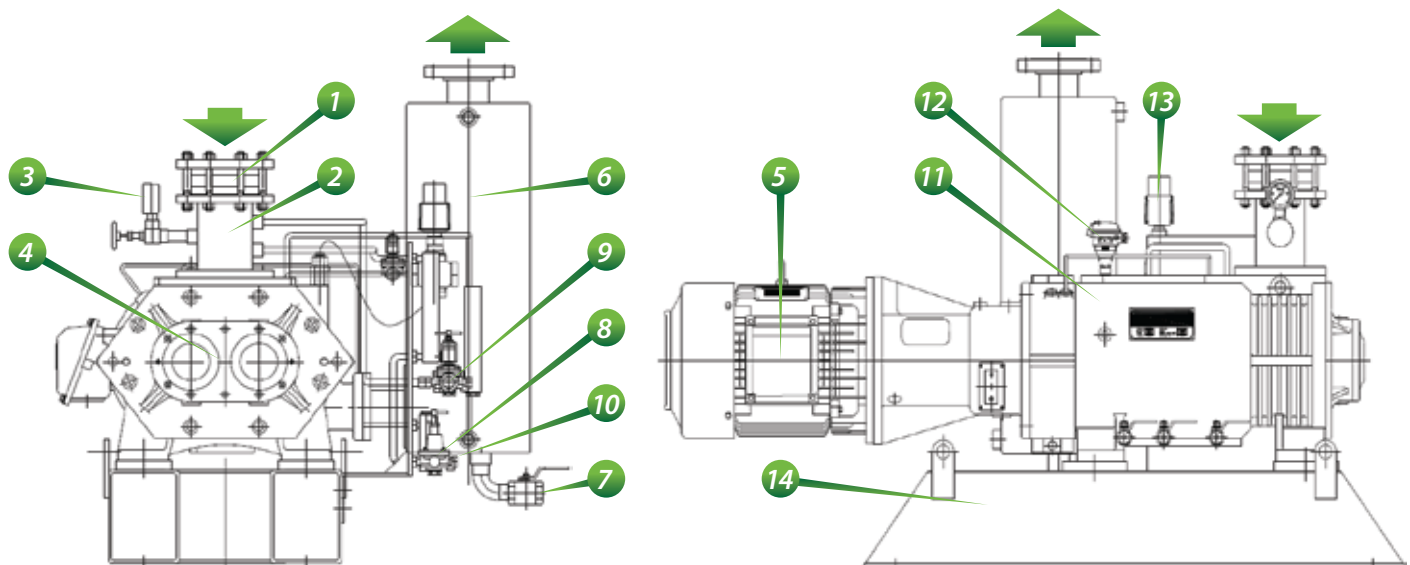
Different type of coatings protect the internals from corrosion caused by aggressive gas mixture and vapors typical of the process industry, chemical, pharmaceutical and petrochemical applications.

-  Models: 6
-  Flowrate: from 50 to 3.000 m<sup>3</sup>/h
-  Vacuum: down to 0,05 mbar (possible deeper with a booster pump)
-  Coatings: PEEK or Ni + PEEK
-  Installed power: 2,2 to 55,0 kW



Normally the pump set is supplied complete of accessories to grant a correct and safe operation.

Typically the accessories are as follows:



- 1. Non-return valve
- 2. Suction port
- 3. Pressure gauge
- 4. Vacuum pump
- 5. Motor

- 6. Exhaust silencer
- 7. Exhaust silencer drain valve
- 8. Seal purge system
- 9. Inlet purge system
- 10. Solvent flush system

- 11. Gas ballast port
- 12. TE (Temperature Element)
- 13. TCV (Thermostatic Control Valve)
- 14. Base frame

ASCO VACUUM is specialized in engineered systems which is the business area that covers all tailor made solutions to meet specific customer needs in terms of performance or of construction.

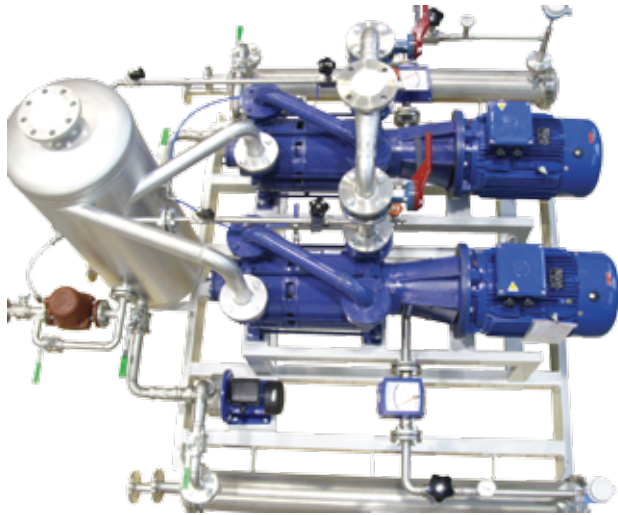
Counting on its highly skilled multidisciplinary team made by mechanical and electrical specialists coordinated by the project managers, ASCO VACUUM is capable to design and manufacture package units according to most stringent International standards and EPC's specifications.

The systems are built in our qualified workshop where all manufacturing steps take place from assembling to final packing including testing and inspections activities foreseen by the quality assurance.

All operations are held in compliance with ISO 9001:2008 and ISO 18001.



### **LIQUID RING VACUUM PUMP SYSTEMS & CENTRALIZED UNITS**



Liquid ring vacuum pump systems designed to meet most needs of vacuum of the industry. Developed with one or more pumps acting in parallel depending on the specific needs, the systems are equipped with dedicated equipment for service liquid cooling and recirculation including instrumentation and devices for control and full remote automatic operation including control panel with PLC and VFD. Units for hazardous area, on request.



**Flowrate: from 50 m<sup>3</sup>/h up**



**Vacuum: down to 33 mbar**



### **HEAVY DUTY & API 681 LIQUID RING VACUUM PUMPS & SYSTEMS**



Liquid ring vacuum pumps and systems meeting API 681 standards for chemical and petrochemical applications.

Suitable for heavy duties, are available in different exotic materials with single or double cartridge API 682 cartridge mechanical seals. Package design standards in line with most stringent project specifications and quality requirements.



**Flowrate: from 500 to 10.000 m<sup>3</sup>/h**



**Vacuum: down to 100 mbar**





## LIQUID RING PUMP CONDENSER EXHAUSTERS



Liquid ring vacuum pump systems specifically designed for power generation consisting in main condenser air extraction units and condenser water box priming units. The systems are designed to perform both the hogging/priming duty but also the holding duty. In many cases the pump is assisted by a first stage gas or steam ejector in order to improve the pump performance to the various condenser loads. Asco Vacuum team has significant experience in geothermal applications.



Flowrate: from 50 m<sup>3</sup>/h up



Vacuum: down to 33 mbar



## HYBRID SYSTEMS

Hybrid systems represent the engineering excellence in designing process vacuum systems based on the combination of two or more different technologies in order to achieve the required performance with the most reliable and efficient solution.



## LIQUID RING PUMP HYBRID SYSTEMS



The liquid ring vacuum pump as primary pump grants a great flexibility when combined to one or more ejector stages or to mechanical boosters due to its great ability to handle condensing vapors. Furthermore, the isothermal compression working principle of the liquid ring pump makes it less sensitive to any process fluctuation which may occur and impact on the interstage pressure.



## DRY SCREW VACUUM PUMP SYSTEMS



Mechanical boosters combined to a dry screw vacuum pumps give the possibility to reach a much deeper end vacuum or to increase the suction flowrate of the system.

*ASCO VACUUM is available to provide you the most effective solution.*





## FIELD SERVICE & ASSISTANCE

ASCO Service guarantees full support at site during commissioning, start up, maintenance programs, spare parts supply, upgrades and any need Customer might have after delivery.

ASCO Engineers on request can follow and supervise activities related to connections, control system integration, site acceptance and performance testing.

We believe that the true wealth of a company is customer satisfaction.

This has led to the creation of a department-oriented to customer service even if the need is on the other side of the planet.

With after-sales service, we will take care of the customer as well as the products that carry the nameplate of ASCO. The division consists of experienced staff, oriented to follow the customer once the product has been installed on field. The main activities involving the division are:

- Pre-commissioning
- Commissioning
- Start-up
- O&M

For all these listed activities, there is experienced personnel ready to travel in Italy as well as in any other country of the world.





## QUALITY STANDARDS

ASCO organization complies to ISO-9001-2008 standard, as certified by notified body DNV and ISO 18001:2007.

Welders are certified according ASME or EN standard.

All systems are fully tested for mechanical and process performances, before shipment.

When products must comply to European regulation and/or required by Customers, CE stamp is provided according ATEX, PED and Machine directives,

ASCO products complies also with CU-TR (ex GOST) requirements for installation in Custom Union territory (ex CSI countries)

