

## Rotary Screw Vacuum Pumps ASV/BSV/CSV Series

With the world-renowned SIGMA PROFILE 

Capacities from 4.75 to 15.70 m<sup>3</sup>/min – 99 % final vacuum, 10 mbar (a)



# ASV / BSV / CSV Series

## KAESER rotary screw vacuum pump packages

Every KAESER rotary screw vacuum airend is equipped with energy-saving SIGMA PROFILE rotors. Components manufactured to the highest standards and precision aligned roller-bearings ensure long service life with maximum reliability. Single-stage vacuum generation with liquid injection provides optimum cooling, lubrication and sealing of the rotors.

### Powerful, efficient, quiet

As the most efficient way to achieve a given drive power, KAESER use large, low speed rotary screw vacuum airends. This ensures that the specific power is always within the optimal range. Using a flexible V-belt drive with automatic belt-tensioning, airend speed is precisely matched to suit the specific airend installed in the pump package. Low-speed operation brings additional advantages, such as extended service life of all associated components and enables exceptionally quiet performance.

### Effective cooling air flow system

The effective cooling air flow system guarantees sufficient power reserves even at high ambient temperatures. The air flow system is specially designed to draw cooling air in slowly and helps reduce sound levels to an absolute minimum.

### Gas ballast unit

The gas ballast unit enhances water vapour tolerance and prevents vapour from condensing in the pump production chamber, thereby enhancing reliable pump operation.

### Ready to run

KAESER rotary screw vacuum pumps are delivered completely ready for connection. These convenient systems therefore significantly reduce the work and costs required for planning, installation, certification, documentation and commissioning.



### Premium efficiency: IE3 motors

Long before the use of IE3 motors becomes mandatory in the EU on the 1st of January 2015, users can already enjoy the benefits that these premium efficiency motors have to offer by choosing KAESER rotary screw vacuum pumps.

# The complete solution for vacuum production

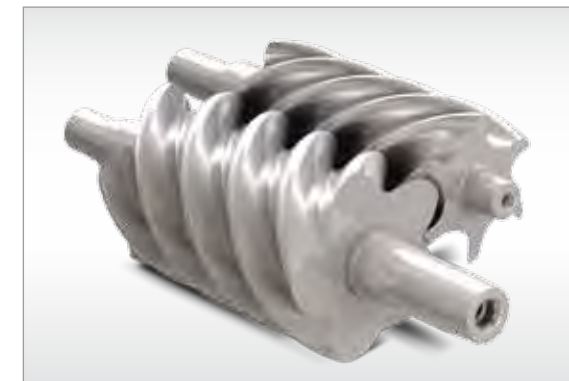


Fig.: ASV 60



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## Long-term efficiency and economy



### SIGMA PROFILE airend

At the heart of every KAESER vacuum system lies a meticulously engineered airend featuring KAESER's energy-saving SIGMA PROFILE rotors. They are housed in a strong casing with durable bearings and the entire unit is Made in Germany.



### Premium efficiency IE3 motors

IE3 drive motors are characterised by their superior performance and lower losses compared with conventional drive motors. Because they consume significantly less energy, they also enhance overall system efficiency.



### SIGMA CONTROL 2

The SIGMA CONTROL 2 ensures efficient control and system monitoring. The large display and RFID reader enables effective communication and maximum security. Multiple interfaces offer exceptional flexibility, whilst the SD card slot makes updates quick and easy.



### Service-friendly

KAESER vacuum pumps feature doors on the top and sides to provide excellent maintenance access; the rear panel can also be removed. These systems can be installed against a wall and long maintenance intervals enhance cost-effective operation.

## Equipment

### Vacuum airend

KAESER vacuum airend with high performance SIGMA PROFILE rotors; V-belt drive with automatic tensioning; inlet valve controlled by a solenoid valve; cooling oil pump (gear type pump); intake air temperature up to +45 °C.

### Electric motor

Premium Efficiency IE3, IP 55 protection (ASV series: IP 54), Iso F, 400 V, 3 Ph, 50 Hz.

### Cooling

Air-cooled aluminium fluid cooler designed for ambient temperatures up to +40 °C.

### Cooling fluid circuit

Thermostatic valve, bypass and full-flow microfilter with replaceable insert; combined fluid reservoir and separator

tank with pressure relief valve, multi-stage separator cartridge; fluid level sight glass; drain valve and hose; quick-release couplings for measuring pressure drop across the separator cartridge.

### Design and construction

Compact enclosure mounted on a solid base frame equipped with anti-vibration mounts; high quality powder-coated surfaces; mineral wool soundproof lining; lift-up and side-opening access doors; replaceable cooling air filter; vacuum airend and motor on antivibration mounts; flexible pipe connections; fully guarded belt drive and fan; vacuum filter for intake line with contamination indicator; infinite control of inlet valve via partial-load controller; changeover to Dual control mode possible; gas ballast unit for enhanced water vapour tolerance.

### Control cabinet

IP 54, 230 V control voltage, direct motor start-up; motor overload protection relay.

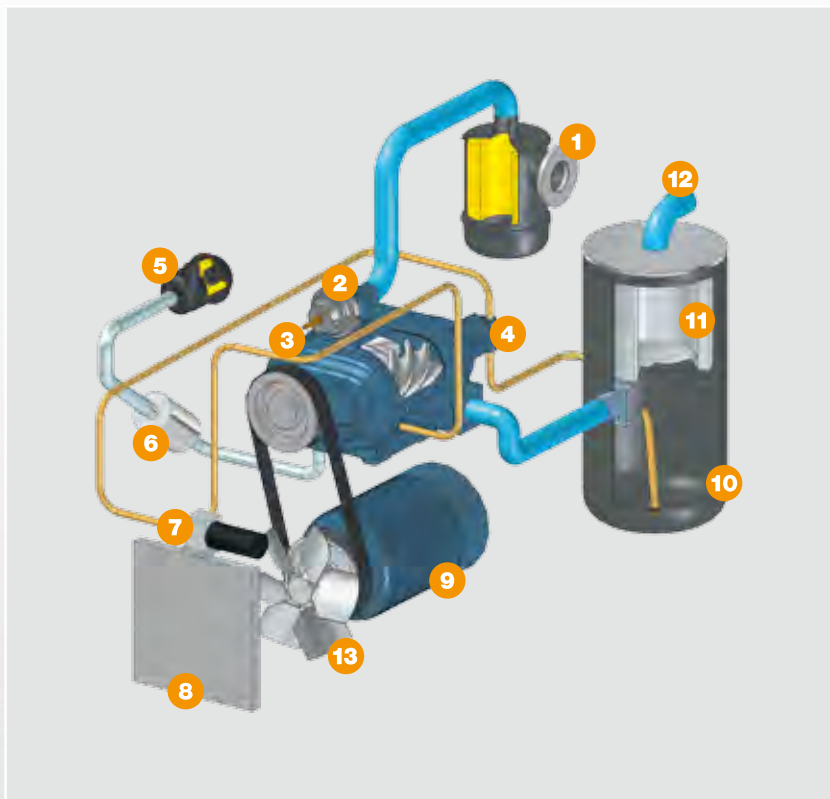
### SIGMA CONTROL 2

“Traffic light” LED indicators show operational status at a glance, plain text display, 30 selectable languages, soft-touch keys with icons, fully automated monitoring and control. Selection of Dual, Vario and Partial Load control as standard. Interfaces: Ethernet; additional optional communication modules for: Profibus DP, Modbus, Profinet and Devicenet. SD-card slot for data-logging and updates. RFID reader, web server.

## Technical Specifications

Model	Capacity in m <sup>3</sup> /min at inlet pressure of 700 mbar (a)  m <sup>3</sup> /min	Max. vacuum		Rated motor power  kW	Inlet port size	Discharge port size	Dimensions  W x D x H	Weight  kg
		%	mbar (a)					
ASV 40	4.75	99	10	7.5	DN 65	G 1½	1695x861x1075	460
ASV 60	6.85	99	10	11	DN 65	G 1½	1695x861x1075	470
BSV 80	8.4	99	10	15	G 4	G 2	2065x986x1382	640
BSV 100	10.4	99	10	18.5	G 4	G 2	2065x986x1382	720
CSV 125	13.1	99	10	22	DN 100/PN16	G 3	2310x1216x1450	1375
CSV 150	15.7	99	10	30	DN 100/PN16	G 3	2310x1216x1450	1550

## General design



### Standard version

- 1 Intake filter
- 2 Inlet valve (vacuum controller)
- 3 Air end
- 4 Cooling oil pump (gear type pump)
- 5 Gas ballast air filter
- 6 Gas ballast silencer
- 7 Thermostatic valve with oil filter
- 8 Oil cooler
- 9 Drive motor
- 10 Oil separator tank
- 11 Oil separator cartridge
- 12 Exhaust air
- 13 Fan

## Views

Front view	Rear view	View from left	View from right	3-D view
<b>ASV</b>				
<b>BSV</b>				
<b>CSV</b>				



# KAESER – The world is our home

As one of the world's largest manufacturers of rotary screw compressors, KAESER KOMPRESSOREN is represented throughout the world by a comprehensive network of branches, subsidiary companies and authorised partners in over 100 countries.

With innovative products and services, KAESER KOMPRESSOREN's experienced consultants and engineers help customers to enhance their competitive edge by working in close partnership to develop progressive system concepts that continuously push the boundaries of performance and compressed air efficiency. Moreover, the decades of knowledge and expertise from this industry-leading system provider are made available to each and every customer via the Kaeser group's global computer network.

These advantages, coupled with KAESER's worldwide service organisation, ensure that all products operate at the peak of their performance at all times and provide maximum availability.



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