

# Rotary Screw Vacuum Pumps



# Rotary Screw Vacuum Pumps

Quincy QSV Series Variable Speed | 7.5 HP to 50 HP

# The Quincy QSV Series Vacuum Pumps for All Applications

QSV Series – Industrial, variable speed, vacuum pumps

- Power: 7.5 - 50HP
- Capacity: 230 - 1120CFM
- Minimum inlet pressure: 29.9"HgV
- Steady, reliable system vacuum
- The whole package with electric control system

## Typical QSV Applications

### Holding, Lifting, and Moving Applications:

- Pick and place – especially electronics
- Board testing
- Pneumatic conveying
- Printing and binding
- Envelope manufacture
- General packaging
- Woodworking



### Forming and Shaping Applications:

- Plastics (e.g. bath tubs, shower trays, white goods internals)
- Packaging materials (e.g. thermoformed parts)
- Glass items such as bottles and windscreens
- Wood/lamination.



### Preserving Applications:

- Meat packaging (flat, vacuum packs, controlled atmosphere packaging)
- Poultry packaging
- Modified atmosphere packaging
- Canning
- Freeze drying



### When a Clean Environment is Essential:

- Heat treatment, nitriding and metallurgy
- Altitude simulation
- Drying and general evacuation duties
- Coating
- Surgical suction
- Laboratory systems



## Quincy Helps You Do More – For Less.

Quincy Compressor is your headquarters for high-quality, reliable vacuum pump units that are the product of nearly 100 years of unrivaled industry expertise. Quincy vacuum pumps are used by companies across the United States and around the world due to their uncompromising reliable and unbeatable performance. They're also backed by superior 24-hour service and support from our extensive worldwide distributor network. There are various Quincy vacuum pump models to choose from, ensuring you'll be able to find the right one for your applications.



# QSV Rotary Screw Vacuum Pumps

## Quincy Compressor: A Leader in Industrial Vacuum Technology

- Innovators of rotary screw vacuum technology
- Developed the modulating vacuum inlet valve
- Introduced the era of efficient, long-life vacuum pumps for industrial applications

## Vacuum Technology for Tough Applications

Industrial vacuum applications require tough, efficient vacuum pumps that can withstand the strenuous pressures of these intense working environments. There are many compelling reasons to consider using Quincy's QSV series rotary screw vacuum technology:

### Reason #1 - Efficiency.

Compare delivered ACFM per input horsepower to any other design and you will find that Quincy rotary screw vacuum pumps outperform all industry standards.

### Reason #2 - Life Cycle.

QSV vacuum products are designed with compressor duty bearings in a compressor service aircend. This translates into extended product life and lower cost of ownership.

### Reason #3 - Controls.

Get the best energy savings available through our AirLogic® controller, Variable Speed Drive, and the dual function modulating valve. Total control and superior value.

### Reason #4 - Packaging.

These vacuum pump packages are supplied standard with full electricals, inlet filtration, base frame and controls. Connect to the system, plug it in and go.

## The Winning Combination

Quincy's technology offers all these advantages in one package and is supported with a strong service and support network. As a vacuum pump user, you benefit from the combination of powerful features and unparalleled support.



# QSV Rotary Screw Vacuum Pumps



## Robust Canopy Features "Hot-Cool" Zones

The QSV Series features a canopy with a "hot-cool" design. It isolates all heat producing and temperature critical components (motor, oil separator, vacuum pump) from all other components. As cool running means higher reliability, this feature extends the lifetime of electronic components and leads to a longer Mean Time Before Maintenance (MTBM).



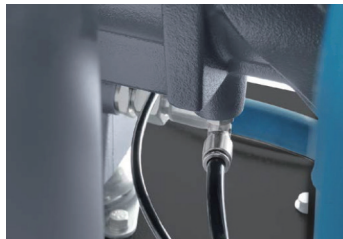
## Vacuum Pump

- Highly efficient oil-sealed rotary screw
- Outstanding performance
- Robust design
- Pump life is significantly longer than screw compressors and vane pumps



## Optimal Flexibility

A unique water handling capability provides you with the versatility and flexibility you need to tackle humidity applications.



## Easy, Fast Installation Saves Time

- Space-saving – The QSV Series has one of the smallest footprints on the market: no larger than the footprint of a standard pallet
- Everything you need is delivered in a single, neat enclosure
- Plug-and-play installation



## Long-Lasting Components

The oil separator is designed for highly efficient oil coalescing with ultra low back pressure, which means less energy consumption. This contributes to a long oil separator life which is double that of a comparable oil-sealed vane vacuum pump. Another contribution to oil separator life is the patented design that prevents the filtration media to be overloaded, so they last much longer. This is great news for your maintenance budget.



## Energy Savings

VSD and set-point control – not normally features of vacuum pumps – lead to significant energy savings. Set-point control allows you to optimize the energy you use to maintain your process vacuum level and thereby optimize your process efficiency and performance. The minimum flow will be delivered to match your required vacuum level or speed – nothing is wasted!

## High Efficiency Cuts Costs

These vacuum pumps consume approximately 50% less energy than alternative technologies. They are among the most energy-efficient oil-lubricated vacuum pumps on the market in the capacity range where some other technologies (e.g. oil sealed vane) start to become inefficient mechanically and cost wise (typically >175CFM) and expensive in terms of Capital Expense.

## Outstanding, Unmatched Benefits

The QSV Series offers a very low noise level among vacuum pumps available on the market today. Energy recovery leads to minimal hot air in the workplace – avoiding the usual problem of hot air in air-conditioned production environments. Its market-leading oil retention means that the quality of the exhausted air is optimal, which contributes to employee well-being (as this air is often breathed). The end result is a significantly cleaner working environment.

## Airlogic® MONITORING SYSTEM

Airlogic® is a state-of-the-art monitoring system for your vacuum pumps. It is simple and comprehensive, and leads to energy savings. It can also integrate your plant management system thanks to a remote monitoring option.

### Easy to Use

- 3.5-inch high-definition color display with clear pictograms, 32 language settings
- Additional LED indicator for service
- Graphical display of key parameters (day, week, month)

### Comprehensive

You get all the information for the everyday management of your vacuum pump, as well as the alarms, safety shutdowns and maintenance:

- Monitoring: Vacuum pump operating status, recording of running/stopped hours, programmable timers, temperature/pressure read-outs, set point control and other settings.
- Safety: Warning indications, fault and shutdown indications.
- Service: Service operations, remote control (optional).

### Plant Management System

Airlogic® installed on different vacuum pumps can be monitored in cascade. Remote monitoring can be added as an option (Modbus and Profibus protocols).



### Optional Intelligent Monitoring System

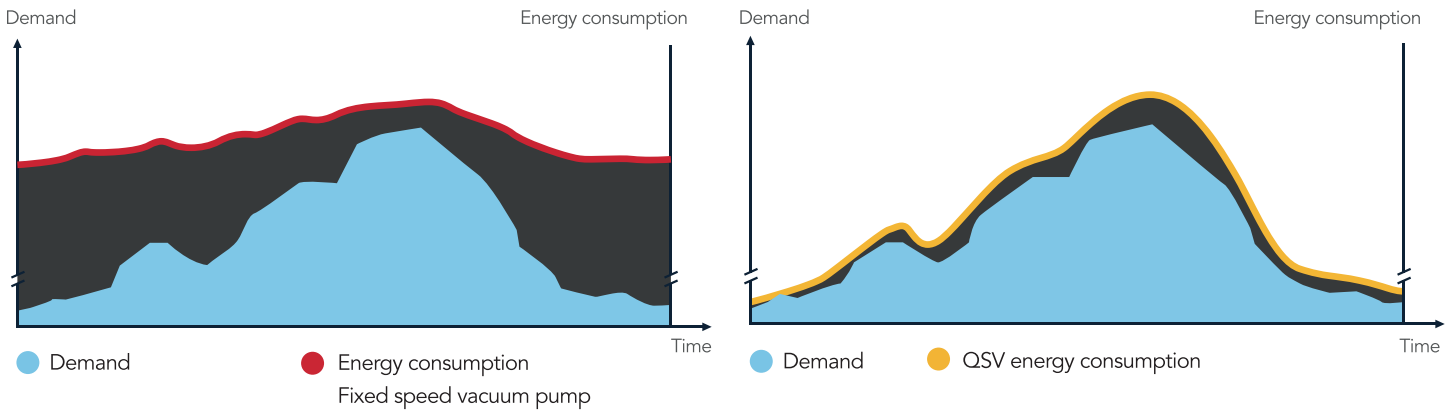
Airlogic® is a flexible solution for data monitoring. It's easy to install and customize and user-friendly. Central vacuum systems and individual machines are connected to your engineering team. ICONS brings system relevant data to your mobile phone, smartphone and PC. Whenever you have access to the Internet, it is possible to display the information you need; from machine alarms and faults to visualized representations of demand and load for your complete site vacuum installations. This allows you to respond quickly to changing circumstances. Service calls can be efficiently planned and production losses minimized. ICONS is flexible and delivers as much or as little info as you choose.

### Features (Internet Connection Required)

- Web portal: Event overview of the last 30 days, access to service data and monthly status report by email
- Logging + download service data for the last 30 days (Excel, Word, PDF)
- Requirement of machine-related services (service, spare parts) directly via web portal
- SMS/email notification (service, failures and warnings)
- Online trend graph showing: status display

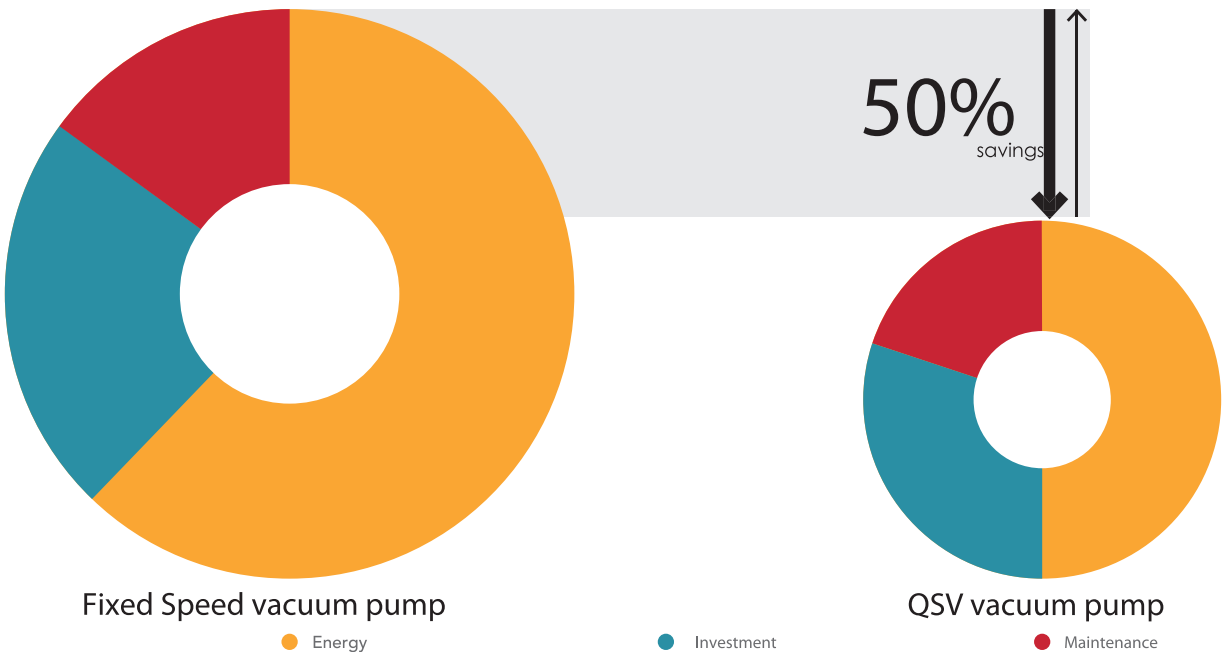
## QSV for 50% Average Energy Savings

In almost every production environment, the need for vacuum fluctuates depending on different factors such as the time of day, week or even month. Extensive measurements and studies of demand profiles show that there are many substantial variants with regards to the demand.



## Why Quincy Variable Speed Drive Technology?

- On average 50% energy savings with an extensive flow range (20-100%)
- Graphic controller controls the motor speed and high-efficiency frequency inverter
- Eliminates peak current penalty during start-up of stop-start machines
- EMC Compliance to directives (2004/108/EG)



\* Based on measurement performed with the EQ+ energy audit tool.

## Numerous Configurations to Match Your Application

### Standard



This machine focuses on delivering the exact performance you demand, at the minimum possible lifecycle cost. Ideal for applications where you need to maintain set vacuum level (a set point).

### Humid



Suitable for high water content duties, for applications such as plastics, clay molding, drying pipelines, salad cooling, freeze drying etc.

### Boost



This fast evacuation version enables faster cycle times – meaning more production. It's ideal for meat, cheese and chicken packaging, as well as cooling, freeze drying and general vessel evacuation applications.

Boost version for fast cycling machines are available in 205-430 and 750-930 sizes and come with upgraded motors



## QSV 205-1100 Technical Data

| Model    | Power (HP) | Nominal Capacity (CFM) | Min. Pressure (HgV) | Fluid Capacity (Gal.) | Noise (dBA) | Permissible Ambient Temperature Range °F | Inlet Connection Size | Outlet Connection Size | Dimensions  |            |             | Weight (lbs.) | Boost Option |
|----------|------------|------------------------|---------------------|-----------------------|-------------|--|-----------------------|------------------------|-------------|------------|-------------|---------------|--------------|
|          |            |                        |                     |                       |             |  |                       |                        | Length (in) | Width (in) | Height (in) |               |              |
| QSV-205  | 7.5        | 240                    | 29.9"               | 4.2                   | 51-65       | 32-115                                   | 3" Flange             | *2 1/2" NPT            | 50"         | 37"        | 43"         | 1225          | Y            |
| QSV-345  | 10         | 330                    | 29.9"               | 4.2                   | 51-68       | 32-115                                   | 3" Flange             | *2 1/2" NPT            | 50"         | 37"        | 43"         | 1225          | Y            |
| QSV-430  | 15         | 430                    | 29.9"               | 4.2                   | 51-73       | 32-115                                   | 3" Flange             | *2 1/2" NPT            | 50"         | 37"        | 43"         | 1250          | Y            |
| QSV-530  | 20         | 510                    | 29.9"               | 4.2                   | 51-76       | 32-115                                   | 3" Flange             | *2 1/2" NPT            | 50"         | 37"        | 43"         | 1270          | N            |
| QSV-750  | 30         | 765                    | 29.9"               | 10.5                  | 65-75       | 32-115                                   | 6" Flange             | 3 1/2" Flange          | 56"         | 63"        | 58"         | 2410          | Y            |
| QSV-930  | 40         | 940                    | 29.9"               | 10.5                  | 65-79       | 32-115                                   | 6" Flange             | 3 1/2" Flange          | 56"         | 63"        | 58"         | 2410          | Y            |
| QSV-1100 | 50         | 1120                   | 29.9"               | 10.5                  | 65-80       | 32-115                                   | 6" Flange             | 3 1/2" Flange          | 56"         | 63"        | 58"         | 2450          | N            |

ISO21360-2:2012

Multiple pump controllers and other essential vacuum accessories are available as options or accessories.

Electrical/canopy specification: 380/460V 50/60Hz IP54 canopy CSA/UL.

\*Adapter required. Available upon request at no charge.

Available fluids include Synthetic and food grade.



# Ask us about all of Quincy's profit-boosting, uptime solutions!



## Volume & weight

| From \ To       | cm <sup>3</sup>     | m <sup>3</sup>       | ft <sup>3</sup>         | litre | g    | lb     | kg    |
|-----------------|---------------------|----------------------|-------------------------|-------|------|--------|-------|
| cm <sup>3</sup> | 1                   | 1 x 10 <sup>-6</sup> | 3.53 x 10 <sup>-5</sup> | 0.001 |      |        |       |
| m <sup>3</sup>  | 1 x 10 <sup>6</sup> | 1                    | 35.3                    | 1000  |      |        |       |
| ft <sup>3</sup> | 28317               | 0.283                | 1                       | 28.32 |      |        |       |
| litre           | 1000                | 0.001                | 0.0353                  | 1     |      |        |       |
| g               |                     |                      |                         |       | 1    | 0.0022 | 0.001 |
| lb              |                     |                      |                         |       | 454  | 1      | 0.454 |
| kg              |                     |                      |                         |       | 1000 | 2.205  | 1     |

## Unit conversions – pumping speed

| From \ To         | m <sup>3</sup> /h     | l/s                    | m <sup>3</sup> /s       | l/min                 | cfm                     |
|-------------------|-----------------------|------------------------|-------------------------|-----------------------|-------------------------|
| m <sup>3</sup> /h | 1                     | 0.278                  | 2,78 x 10 <sup>-4</sup> | 16.67                 | 0.589                   |
| l/s               | 3,6                   | 1                      | 1,0 x 10 <sup>-3</sup>  | 60                    | 2,12                    |
| m <sup>3</sup> /s | 3,6 x 10 <sup>3</sup> | 1,0 x 10 <sup>3</sup>  | 1                       | 6,0 x 10 <sup>4</sup> | 2,12 x 10 <sup>3</sup>  |
| l/min             | 6,0 x 10 <sup>2</sup> | 1,67 x 10 <sup>2</sup> | 1,67 x 10 <sup>-5</sup> | 1                     | 3,53 x 10 <sup>-2</sup> |
| cfm               | 1,70                  | 0,472                  | 4,71 x 10 <sup>-4</sup> | 28.32                 | 1                       |



Performance You Demand. Reliability You Trust.™

701 N. Dobson Avenue | Bay Minette, AL 36507  
 Phone 251.937.5900 | Fax 251.937.0872  
 Email: info@quincycompressor.com | QuincyCompressor.com

## Atmosphere

