



an EnPro Industries company

QSV Series Vacuums



# QSV Rotary Screw Vacuum Pumps



QUINCY QSV SERIES  
ROTARY SCREW VACUUM PUMPS  
7.5 HP TO 200 HP

## QSV ROTARY SCREW VACUUM PUMPS

### QUINCY COMPRESSOR: THE LEADER IN INDUSTRIAL VACUUM TECHNOLOGY

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

### NO OTHER VACUUM TECHNOLOGY CAN COMPARE

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 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 airend. This translates into extended product life and lower cost of ownership.

**REASON #3 – CONTROLS.** The modulating inlet valve provides a dual function. One, to protect site vacuum level and two, energy savings. Both these functions translate into dollar savings.

**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.



Quincy QSV-25

### THE WINNING COMBINATION

No other technology offers all these advantages in one package and no other technology is supported with as strong a service and support network. As a vacuum pump user, you benefit from the combination of powerful features and unparalleled support.

### PUMPS FOR ALL APPLICATIONS

The Quincy QSV rotary screw vacuum pump family includes the QSVB, QSV and QSVI series all designed to meet your specific application.

- QSVB Series – Simple, belt drive available from 7.5 to 25 HP.
- QSV Series – Direct drive, modular design with a compact footprint available in 25 HP or 40 HP.
- QSVI Series – Industrial, direct drive, slow turning pump available from 25 to 200 HP.

## THE QUINCY QSV SERIES VACUUM PUMPS – 7.5 HP TO 200 HP

### VERSATILITY

- Delivered Capacity: 155 ACFM to 3,000 ACFM
- Full Capacity From Atmospheric Pressure to Maximum Vacuum
- Attainable Base Vacuum Level of 29.9" HgV (0.5 torr)
- 400,000 Hour Airend Design Life
- Operational Savings on Water Consumption

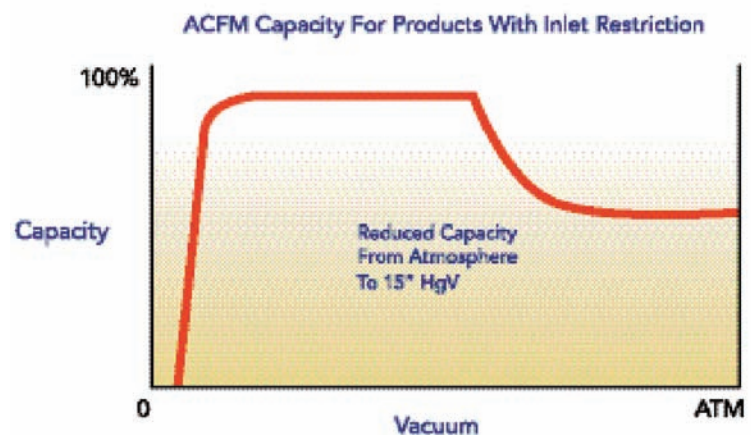
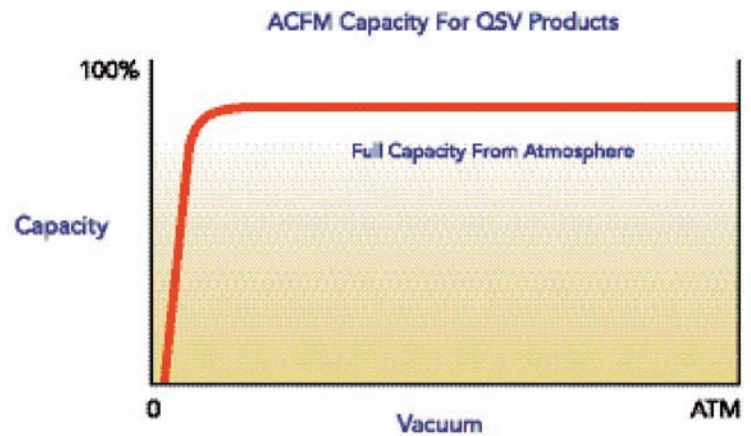
### NO RESTRICTIONS ON INLET VOLUME FOR PUMPDOWN

Special airend porting on QSV products allows for full delivered capacity from atmospheric pressure to full vacuum. This means better protection for your system from sudden demand events.

Competitive models utilize inlet restrictions that decrease the available capacity during system pumpdown. If system vacuum suddenly falls, other vacuum pumps have to protect themselves from over powering the drive motor. QSV products protect your system by maintaining full flow at any vacuum level.

### NO SEAL WATER REQUIREMENTS

QSV products all come standard as air-cooled machines and utilize no seal-water flow for normal operation. This means that you save money on water consumption and sewer charges. Note that there are additional savings on cooling tower operation if tower water is used.



## QSV ROTARY SCREW VACUUM PUMPS

### QSVB SERIES: 7.5 HP TO 25 HP

- Leader In Energy Savings
- 155 ACFM to 371 ACFM
- Belt Drive, Air-Cooled
- Completely Packaged Systems

### SMALLER AND JUST AS TOUGH

The QSVB series vacuum pumps weigh in on performance on the same scale as the QSVI series. Rugged and efficient, these vacuum pumps fit perfectly in smaller applications that require lower volume flows but also require the long-life characteristics of Quincy rotary screw vacuum pumps.

### HIGH VACUUM CAPABILITY

The powerful QSVB vacuum pumps are capable of attaining base vacuum levels of 29.9" HgV (0.5 torr). This allows installation in just about any rough vacuum application where there is a need for steady, continuous vacuum. The QSVB is also an excellent choice for cyclic applications where parts are processed in batches. Just like the QSVI series, there is full volumetric capacity available from atmospheric pressure to the required vacuum level.



Quincy QSVB-25

### PRESSURE LUBRICATION SYSTEM

All Quincy rotary screw vacuum pumps utilize a pressurized lubrication/sealing system to ensure positive lubricant flow under any condition. Lubricant is pumped via an external fluid pump driven off the female rotor. There is no need for an additional motor driven oil pump in this smart design.





## VACUUM TECHNICAL SPECIFICATIONS

### QSVI SERIES - ROTARY SCREW VACUUM PUMPS

Model	QSV 25	QSV 40	QSVI 25	QSVI 40	QSVI 50	QSVI 75	QSVI 100	QSVI 200
Nominal Capacity acfm	365	550	365	550	730	980	1500	3000
Horsepower	25	40	25	40	50	75	100	200
" HgV (Torr)	29.9 (0.5)							
Inlet Connection	4		4	5			8	
Dimensions in (mm)	70 x 44 x 46 (1780 x 1120 x 1170)		78 x 48 x 59 (1980 x 1220 x 1500)			96 x 56 x 73 (2440x1420x1850)	108 x 60 x 85 (2740x1525x2160)	120 x 76 x 96 (3050x1930x2440)
Weight lb (kg)	2300 (1045)	2400 (1090)	2360 (1075)	2434 (1100)	2434 (1100)	3975 (1800)	6300 (2865)	8100 (3685)



Quincy QSVI-40

### QSVB SERIES - ROTARY SCREW VACUUM PUMPS

Model	QSVB 7.5	QSVB 10	QSVB 15	QSVB 20	QSVB 25
Nominal Capacity acfm	155	196	265	319	371
Horsepower	7.5	10	15	20	25
" HgV (Torr)	29.9 (0.5)				
Inlet Connection	3				
Dimensions in (mm)	65 x 34 x 46 (1650 x 865 x 1170)				
Weight lb (kg)	960 (435)		980 (445)		



Quincy QSVB-25

## TYPICAL QSV APPLICATIONS

**Medical/Dental:** Hospital Central Systems, Surgical Suction, Laboratory Central Systems.

**Printing and Paper:** Book Binding, Newspaper, Magazines, Printing and Labeling Systems, Degassing Adhesives.

**Woodworking:** CNC Cutting and Routing, Loading/Unloading Systems.

**Rubber and Plastics:** PVC Pipe Manufacture, Plastic Thermoforming, Extruders, Mold Degassing, Material Handling.

**Food Processing:** Poultry Processing, Coffee, Packaging, Cheese Processing, Vacuum Cooling of Produce.

**Meat Packing:** Vacuum Packing of Fresh Meat, Filling and Sealing Machinery.

**R&D Systems:** Central Laboratory Vacuum, Vacuum Drying and Distillation Systems.

**Electronics:** Conveying, Picking and Placing Components, Circuit Board Manufacture, Central Vacuum Systems.

**Pharmaceutical:** Degassing of Pastes and Powders, Vacuum Filling, Suction Filtering.

**Material Handling:** Automatic Test Equipment, Material Pick and Place, Bulk Material Transfer, Vacuum Conveying.

Please call our factory engineering staff if you have specialty applications not listed here. We can do custom packages and modifications to existing products to meet stringent application requirements.



## QSV ROTARY SCREW VACUUM PUMPS

### QSV & QSVI SERIES: 25 HP TO 200 HP

- Leader In Energy Savings
- 365 ACFM to 3,000 ACFM
- Direct Drive, Air-Cooled
- Completely Packaged System

### LARGE VACUUM CAPACITY FOR LARGE APPLICATIONS

All Quincy direct drive vacuum pumps are designed to deliver enough volumetric capacity to meet the biggest applications. These vacuum pumps are the flagships of the Quincy vacuum product. Each vacuum pump is a stand-alone system that automatically adjusts delivered flow with the required demand capacity.

### CONTINUOUS OPERATION

Every Quincy QSV series pump is designed to run continuously over the course of its lifetime. Vacuum airends are designed with the same tapered roller bearings as heavy duty compressor airends making long service life a natural outcome. If applications require load/no load operation or on/off controls, the QSV can be modified to accommodate those systems.

### EFFICIENT SEPARATION SYSTEM

All Quincy vacuum pumps utilize a high-tech sealant/lubricant to seal the compression chambers within the vacuum airend, to lubricate mechanical bearings and to provide cooling and heat rejection. Discharge air that has been entrained with lubricant passes through a multi-stage separation system to clean the air discharge from each vacuum pump. The ratio of media surface area to volume flow is the highest in the industry.

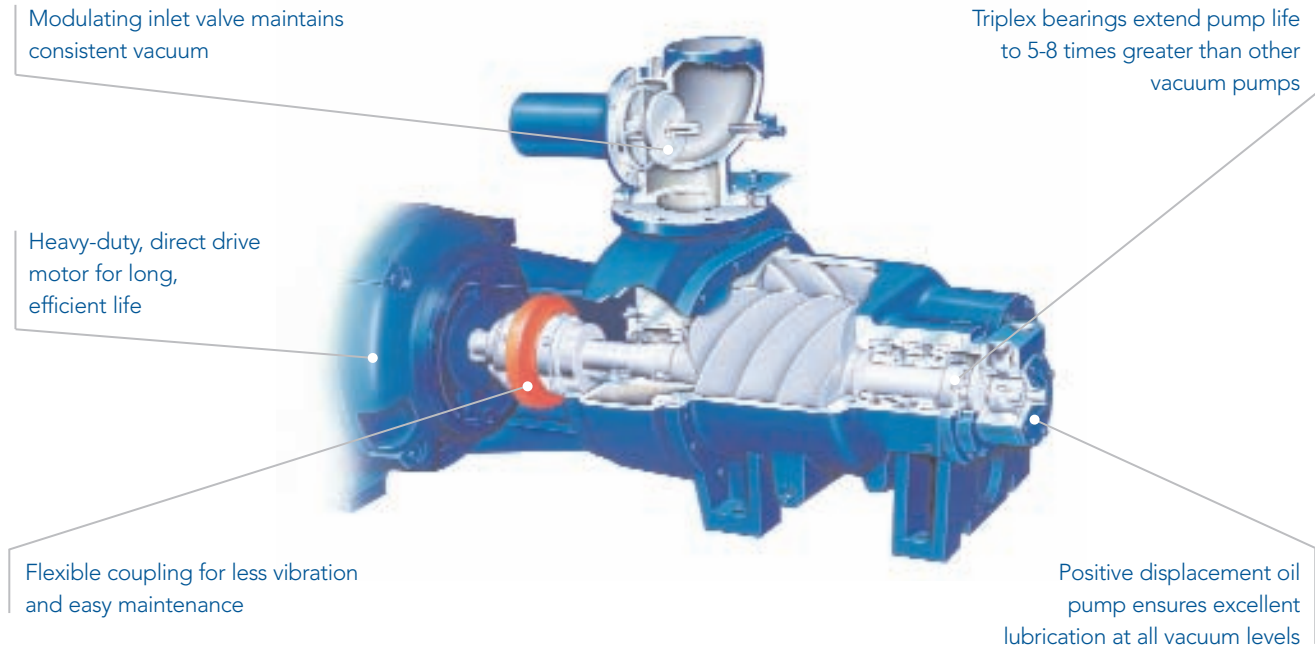


Quincy QSVI-40

### HEAVY DUTY INLET FILTRATION

In any given application, byproducts from the process will eventually make their way to the vacuum pump. All QSV products are supplied with a heavy-duty inlet filtration system to separate particulate contamination prior to the inlet of the vacuum pump. All inlet filter elements are designed for easy cleaning or changing when servicing is required. Five micron element ratings are standard on all QSVI products.

## INDUSTRIAL CLASS QSVI SERIES VACUUM PUMPS

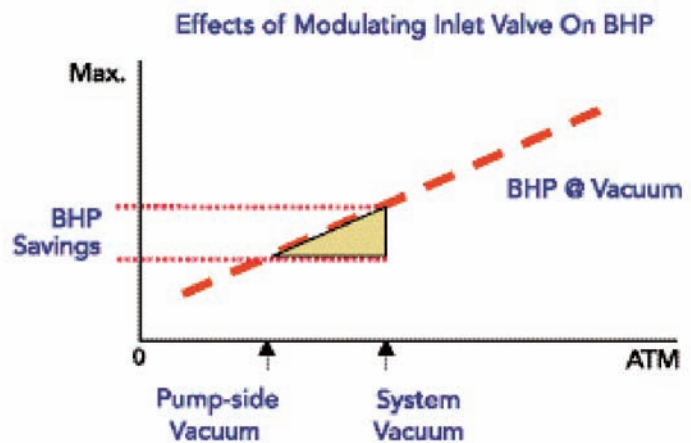


### MODULATING INLET VALVE

All QSV vacuum pumps are supplied with modulating inlet valves as standard. A modulating inlet valve allows for precise process control by keeping the supply vacuum level constantly within tolerance. This means that you do not need any additional vacuum level control.

An additional benefit to the modulating inlet valve is energy savings. As demand decreases, the modulating inlet valve closes and pump-side vacuum level increases. As pump-side vacuum increases, motor brake horsepower decreases allowing for energy savings. This control system works far better than using a vacuum breaker or allowing the system vacuum level to increase without control.

The modulating inlet valve is completely field adjustable so you can easily change your vacuum level with changing system or application demands. If an application requires no control at all, the inlet valve controls can be set to allow for maximum vacuum level.



## QSV ROTARY SCREW VACUUM PUMPS



an EnPro Industries company



### QSV STANDARD EQUIPMENT

- Positive Flow Lubrication/Seal Liquid Pump
- UL Listed Control Panel
- Modulating Inlet Valve
- Magnetic Motor Starter
- Full Flow, 12 Micron Filter and Strainer
- NEMA Motor, 3-Phase, 460 Volt
- Temperature Regulating Valve
- Air-Cooled or Water-Cooled
- Fluid Level Sight Glass
- Separator Pressure Indicator
- Quin-Syn Lubricant
- Temperature, Vacuum and % Capacity Guages
- Filter Element Indicators
- High Temperature Shutdown System

### OPTIONAL EQUIPMENT

- Power Failure Restart Module
- Auto Dual Control
- 200, 230 or 575 Volt Operation
- 50 Hz, 380 Volt Service
- NEMA 4 or NEMA 12 Control Panel
- TEFC Motors
- Premium Efficiency Motors
- Sound Enclosures
- Remote Coolers
- Remote Filtration Packages
- Standard Vacuum Accessories
- Customized Packages

### ACCESSORIES

Quincy supplies many of the accessories that are used to compliment a QSV vacuum pump installation including:

- Inlet Filtration Packages
- Vacuum Receivers
- Check Valves and Ball Valves
- Oil Mist Exhaust Filters
- Vacuum Gauges
- Centrifugal Separators
- Multiple Vacuum Pump Controllers

701 N. Dobson Avenue  
Bay Minette, AL 36507  
Phone 217.222.7700  
Fax 251.937.7182

Email:  
info@quincycompressor.com

©2007 Quincy Compressor an EnPro Industries company  
All rights reserved. Litho in U.S.A. (QSV-002 04/07)





## *Technical Data Sheet: QSVB 15*

### **General Specifications**

Drive Motor .....	15 HP
Drive System .....	Belt
Inlet Capacity .....	265 ACFM
Maximum Operating Pressure (Continuous) .....	10" HgV (506 torr)
Minimum Operating Pressure (Continuous) .....	29.9" HgV (.5 torr)
Base Pressure .....	29.9" HgV (.5 torr)
Maximum Ambient Temperature .....	110 degrees F.
Minimum Ambient Temperature .....	32 degrees F.
Inlet Connection .....	3" NPT
Discharge Connection .....	2" NPT
Rotor Diameter .....	127.5 mm
Rotor Length .....	217 mm
Rotor Speed - Male .....	4,825 RPM
Rotor Speed - Female .....	3,216 RPM
Tip Speed .....	32.2 meters/sec.
Maximum Safe Speed .....	7,500 RPM
Intake Male Bearings .....	Cylindrical Roller Bearings (x 1)
Discharge Male Bearings .....	Tapered Roller Bearings (x 2)
Intake Female Bearings .....	Cylindrical Roller Bearings (x 1)
Discharge Female Bearings .....	Tapered Roller Bearings (x 2)
Displacement at Operating Speed .....	291.2 CFM
Volumetric Efficiency .....	91.0%

### **Electrical Data**

Full Load Package BHP (Air Cooled) .....	14.6 BHP
Package Electrical Consumption - Air .....	12.3 KW
Full Load Package BHP (Water Cooled) .....	14.3 BHP
Package Electrical Consumption - Water .....	12.0 KW
Drive Motor Service Factor .....	1.15
Drive Motor Speed (Nominal) .....	3,600 RPM
Specific Power - Air Cooled .....	5.5 BHP/100
Specific Power - Water Cooled .....	5.4 BHP/100
Typical Standard Motor Efficiency .....	88.5%
Typical High Efficiency Motor .....	89.5%
Typical Premium Efficiency Motor .....	91%



# Quincy Rotary Screw Sales Manual

## **Lubrication System**

Method of Lubrication .....	Pump
Lubricant Flow .....	5.0 GPM
Total Oil Capacity .....	6.5 Gallons
Reservoir Capacity .....	5.3 Gallons
Reservoir Volume .....	2.6 Cubic Feet
Normal Discharge Temperature .....	200 Degrees F.
HAT Shutdown Temperature .....	250 Degrees F.
Lubricant Carryover Rate (unloaded) .....	2 PPM
Standard Lubricant .....	Quin-Syn

## **Air Cooled Data**

Maximum Heat Rejection .....	403 BTU/min.
Cooling Fan Static Pressure .....	0.3" wc
Fan RPM .....	3,600
Fan Flow .....	1,360 CFM

## **Water Cooled Data**

Water Flow - 50 degree F. ....	1.5 gal./min.
Water Flow - 70 degree F. ....	2.2 gal./min.
Water Flow - 90 degree F. ....	3.0 gal./min.
Maximum Water Delta T @ 50 degree F. ....	32.2 degrees F.
Recommended Water Pressure .....	100 psig
Typical Water Cooler Pressure Drop .....	7 psi
Water Connections .....	1/2" NPT

## **Sound Level**

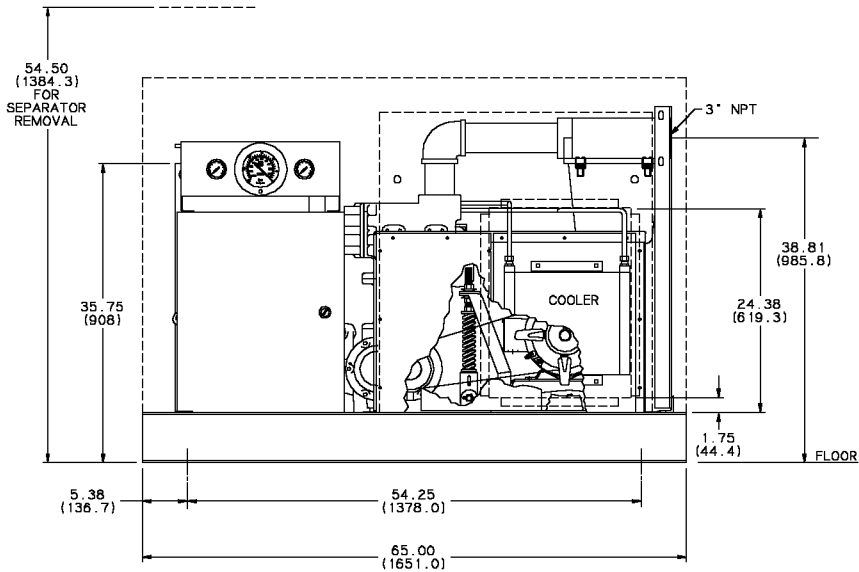
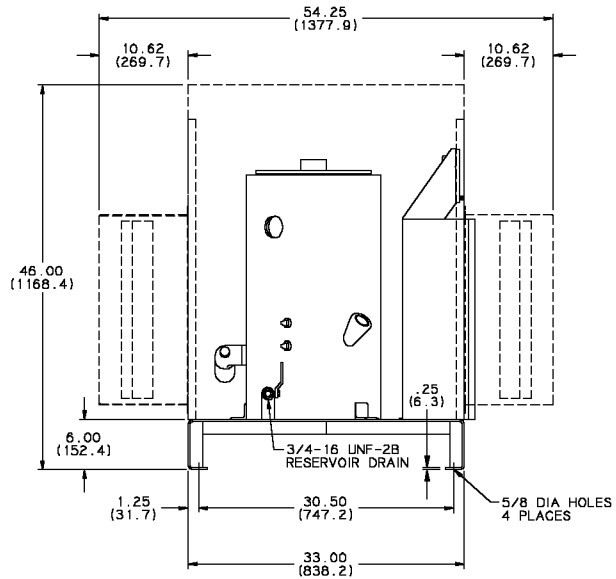
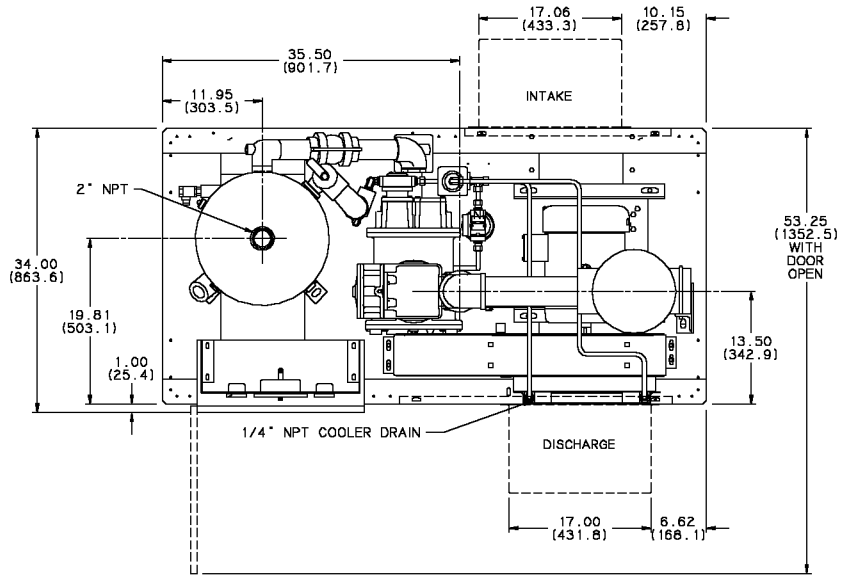
Unenclosed - Air .....	87 dBA
Unenclosed - Water .....	87 dBA
Standard Enclosure - Air .....	85 dBA
Standard Enclosure - Water .....	84 dBA
Low Sound Enclosure - Air .....	78 dBA

## **Maximum Dimensions**

Length .....	65"
Width .....	34"
Height .....	46"
Weight .....	960 lbs.



- NOTES-UNLESS OTHERWISE SPECIFIED:  
 1) ALLOW 4 FT CLEARANCE AROUND UNIT FOR ACCESS AND FREE AIR CIRCULATION.  
 2) ALL TOP DIMENSIONS ARE IN INCHES.  
 3) DIMENSIONS IN PARENTHESIS ARE IN MILLIMETERS.  
 4) ALL DIMENSIONS ±0.25 EXCLUDING PIPING WHICH IS SUBJECT TO COMPONENT TOLERANCE AND THREAD ENGAGEMENT.  
 5) THE SCREW VACUUM PUMP MUST BE PROTECTED FROM LIQUIDS, SOLIDS, AND ABRASIVE POWDERS. IT IS THE CUSTOMERS RESPONSIBILITY TO PROVIDE ADEQUATE FILTRATION AND SEPARATION TO PREVENT THESE CONTAMINANTS FROM ENTERING THE VACUUM PUMP INLET. FAILURE TO PROVIDE ADEQUATE PROTECTION WILL SHORTEN VACUUM PUMP LIFE. CONTACT YOUR AUTHORIZED QUINCY DISTRIBUTOR FOR FILTER AND SEPARATOR RECOMMENDATIONS.



THIS MATERIAL IS CONFIDENTIAL AND CONTAINS PROPRIETARY INFORMATION AND OTHER RIGHTS WHICH ARE THE SOLE AND EXCLUSIVE PROPERTY OF QUINCY COMPRESSOR. PERMISSION OF THIS COMPANY, OR ITS SUCCESSORS, IS REQUIRED TO REPRODUCE OR TRANSMIT THIS INFORMATION IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT THE PRIOR WRITTEN CONSENT OF AN OFFICER OF QUINCY COMPRESSOR.

NAME	DATE	Quincy Compressor 2011 Whiting Dr. Quincy, Illinois 62451
DR. M. ALITREY	9/98	
CK. M. ALITREY	9/98	
APPD. H. MORSE	9/98	
REV. NO.	MODEL	GSVB 7.5-15 A/C (VERSION G)
6023-77	5/01	
FILE DATE	DWG NO.	143215
5/14/01		