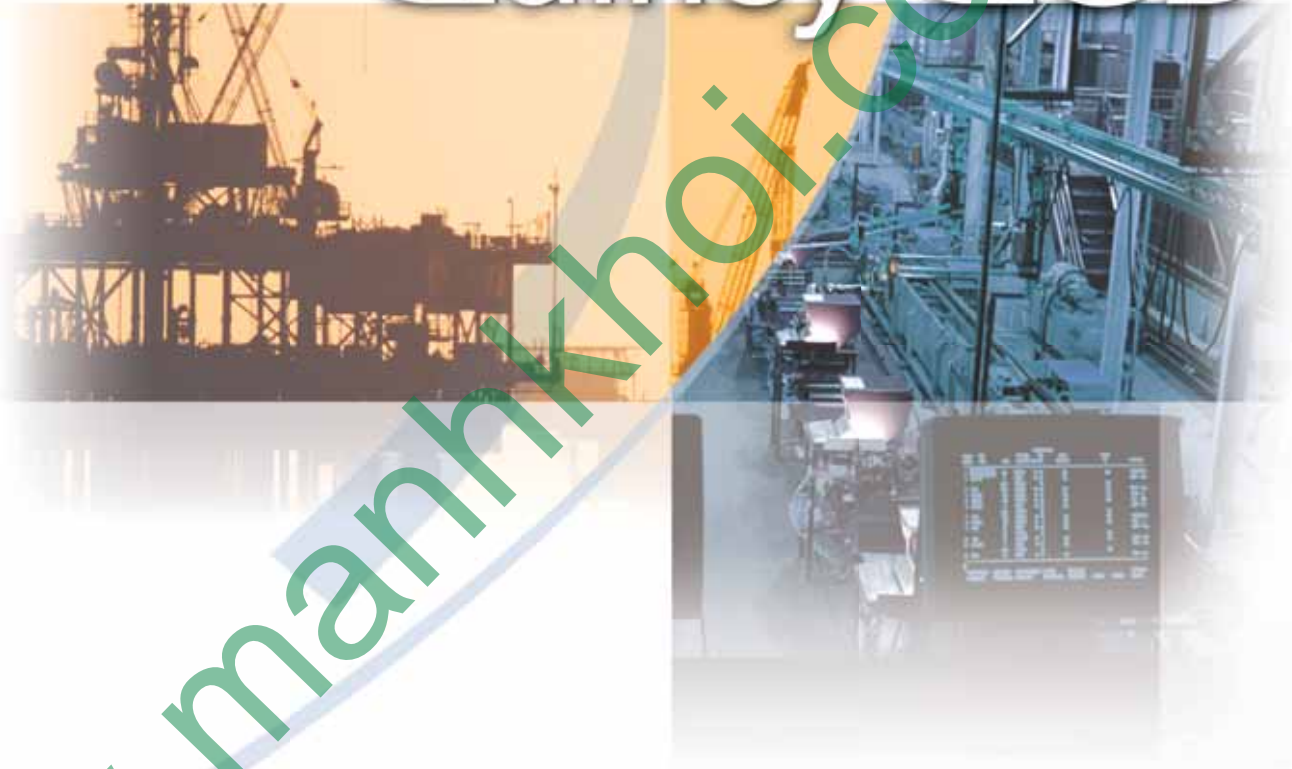




Performance You Demand. Reliability You Trust.

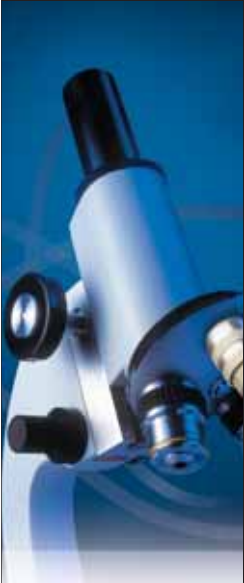
# Quincy QGD



**QUINCY QGD SERIES**  
**Rotary Screw Air Compressors**  
**110-160kW**

**0905246783(Mr. Long)**

## QUINCY QGD 110-160kW



### THE SCIENCE OF COMPRESSED AIR

Quincy QGD – The more competitive technology in the world

- Superior Energy Savings Capability
- High Reliability
- Quiet Operation
- Able To Satisfy Your Air Demand Requirements



### QUINCY'S COMMITMENT TO EFFICIENT & COMPETITIVE INDUSTRY

Since 1920, Quincy Compressor has continuously strived to provide the industry with a competitive advantage. The new range of direct drive Quincy QGD compressors is representative of our promise to deliver a product that enhances efficiency and productivity. Advanced research, refined production technology and cutting edge design philosophies have led to Quincy Compressor to become the partner of choice of various industries to add value to their business.

### QUIET OPERATION

The QGD series is aesthetically designed for the global market. With an integrated one – piece baseplate, installation is simple and convenient. The centrifugal fan cooling system is quiet and efficient. A totally enclosed design using purpose-suited sound absorption material lowers operating sound levels to the lower.

Optimized system design fully considers air circulation within the enclosure and the temperature field distribution, hence effectively controlling the temperature rise within the enclosure.

### HIGHER BENEFIT-COST RATIO

When considering benefit-cost ratio, it is necessary to consider total operating costs - not just the initial investment. The QGD series boasts not just low energy consumption but also gives savings on maintenance time and costs. The Quincy Compressor airend is designed for 100,000 hours service life and this promises long compressor life coupled with superior performance



### NASA Partner

"...we are very satisfied with the performance and reliability of Quincy air compressors. These units are highly efficient and deliver the clean, dry air essential for Space Shuttle launch support."

- Ronald L. Dorff  
Supervisor, Pneumatic System  
Lockheed Space Operation Company

Quincy Compressor—compressed air supplier of NASA

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High Efficiency Centrifugal Fan  
Optimum Efficiency  
Silent Operation

Oversized "suction type" cooler ensure reliable operation in ambient temperatures as high as 46 °C with an aftercooler approach as low as 8 °C.



PLC intelligent control provides a rugged and reliable platform.



Wye-Delta reduced voltage starter uses all Siemens components.

Efficient and reliable airend with standard 2-year warranty and 5-year warranty as an option. Direct drive with no transmission losses. Flange connected motor and airend for permanent shaft alignment.



All new air/fluid separation system with modular design lowers oil carryover to as low as 3 ppm.

Use together with the QuinSyn complete line of synthetic fluids for effective cooling. QuinSyn fluids have rated life of up to 8000 hours.



Quincy high efficiency glass microfibre fluid filter provides absolute protection to the airend

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## QUINCY QGD 110-160kW



### ENGINEERED DURABILITY

As you might expect, Quincy's oversized rotors allow for oversized bearings – more than 56% larger than most competitors. But more importantly, the Quincy QGD features an exclusive Triplex bearing arrangement. The superior “three bearing” arrangement is designed to deliver over 100,000 hours of operation, far exceeding the average life expectancy of competing compressors.

Standard IP54  
Frame Motor

Axial Flow Inlet

Positive Closure  
Inlet Valve

Quincy's Oversized Triplex Bearings

Quincy Triplex Bearings

Competitors' Bearings

Triple Lip Shaft Seal with  
Scavenge Back to Airend

Triplex  
Bearings

Quincy's Triplex Bearings are over 56% larger than most competitors, delivering over 100,000 hours of operation.

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## LARGER ROTORS TURNING SLOWER

### Airend Durability:

Rotor diameter, length and speed determine the acfm that can be produced. Logically, this means that a smaller airend with smaller rotors must turn faster than a larger airend with larger rotors to produce the same acfm.

Quincy's Oversized Rotor

Competitor's Rotor



Quincy's oversized rotors are 62% larger and ensure more acfm per bhp and reduce power consumption

High-efficiency, Large Rotor Design

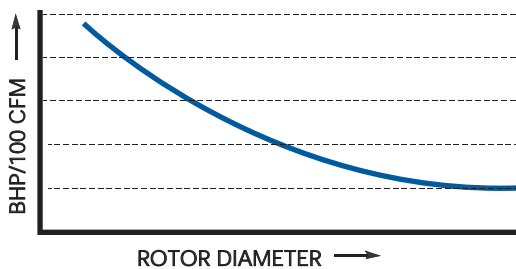


### Airend Efficiency:

Larger rotors turning slower produce more acfm per brake horsepower. Typically, the clearance between rotors is known as the "leakage path" is known as the "leakage path." Smaller rotors have a much greater "leakage path" than larger rotors. In addition, the faster the rotors are turning, the greater the drag coefficient. Combined with gear or belt friction, these smaller airend inefficiencies add up to increased power consumption.

The airend is the most expensive component of your compressor to replace and it determines a majority of your operating costs. The bottom-line – the Quincy QGD oversized airend can save you thousands of dollars in maintenance and energy costs.

Larger Rotor/Greater Efficiency



As rotor diameter size increases, brake horsepower per 100 acfm requirements generally decline.

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## QUINCY QGD 110-160kW

### PLC INTELLIGENT CONTROL

The Quincy QGD series comes with a PLC intelligent control system. Using the SIEMENS S7 series industrial PLC, it is a control platform you can trust to provide reliable operation under the harshest of industrial ambient conditions. The PLC intelligent control comes with a LCD display, has a user-friendly interface and is easy to operate.

The PLC intelligent control provides different capacity control mode options for higher efficiency: auto-dual control, continuous run control and network control.

In the auto-dual mode, when the pressure rises above the full load pressure setting, the compressor starts to modulate in response to system demand. If pressure continues to rise above the unload pressure setting, the compressor unloads and a shutdown timer will start. If there is no system demand for a preset waiting period, the compressor will shut down the main drive motor and, on air-cooled units, the fan motor. The compressor goes into a "stand-by" mode to conserve energy and continues to monitor system pressure. As soon as the system pressure drops, the controls will react by restarting the compressor.

In the continuous run mode, the compressor will load, unload and modulate according to system demand, but the compressor does not enter the "stand-by" mode and shut down. This control method prevents excessive restarting and extends the motor life in certain applications.

Network mode can operate up to 6 units of QGD in a single network. Each compressor is working in the standard auto-dual mode and coordinating with one another to satisfy system demand according to load requirements. Each compressor starts/stops, hence entering or leaving the network sequentially according to its preset network ID. PLC intelligent control provides a powerful and comprehensive control capability and is your full time preventive maintenance, compressed air and energy manager for your production facility:

- Logic control of dryer is possible
- Wye-Delta reduced voltage starter
- Compressor capacity control options
- Multiple machine network control ID assigned
- System date and time display
- Total running and loaded hours of operation display
- Operating pressure and temperature display
- Time to service programmed and display
- Fault alarm displays
- Auto-dual control with shutdown timer and programmed shutdown
- Auto restart with programmed time delay
- Fault alarm log registers timings and errors
- Operating and alarm parameters specified and password protected



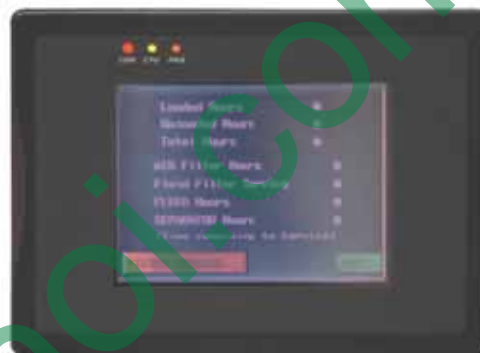
Standard industrial PLC means it is expandable and easy for the QGD to communicate with your plant's network. The PLC control supports Profibus protocol and is able to communicate with your DCS system via the Profibus-DP communication module, hence integrating the compressor controls into your DCS system for remote monitoring.

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## ENHANCED PLC INTELLIGENT CONTROL SYSTEM WITH TOUCHSCREEN DISPLAY OPTION

The Quincy QGD offers a larger capacity and higher speed PLC intelligent control system as an option. Using the same SIEMENS S7 series of industrial PLC control platform, it utilizes a more powerful CPU and is equipped with a 6" full-colour touchscreen display. This control option provides even greater control and monitoring in addition to the standard PLC functions:

- Pressure and temperature historical graphs
- 4 different language options: English, Chinese, French and Spanish
- Operate up to 16 machines in the network mode
- Multiple network sequence design and options



## LOW OIL CARRYOVER IN HIGH QUALITY COMPRESSED AIR

The latest separation technique in air fluid separation systems. Modular construction and multiple-separator design provide a larger surface area for air flow. The compressed air undergoes centrifugal and gravity effects before passing through the separator. The remaining oil carryover is as low as 3ppm. All connecting pipes are designed to the sides of the air/fluid reservoir to facilitate the changing of the separator elements without having to disconnect any pipe work-it is ergonomically designed for ease of maintenance.



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## QUINCY QGD 110-160kW



### EXTRA PRESSURE BY DESIGN

Every detail of the Quincy QGD has been refined for maximum efficiency and dependability. A one-piece, cast inlet housing allows intake air to enter axially to the rotors. The Quincy QGD axial flow inlet actually improves compressor efficiency by five to seven percent over traditional radial flow designs.



The Quincy QGD has the unique feature that results in maximum efficiency related to displacement. Air is drawn into an inlet chamber ahead of the rotors, causing the air to enter the rotor housing in an axial direction for more efficient compression.

### INLET FILTER ELEMENT (PATENTED TECHNOLOGY)

The patented POWERCORE inlet filter element removes particles down to 3 microns with 99.9% efficiency. Low pressure drop across the filter effectively lowers sound levels, avoids suction temperature rise and increases overall compressor efficiency. Maintenance change-out of filter element is simple and convenient.



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## SAE O-RING FITTINGS

We've designed the Quincy QGD with far fewer potential leak points than other compressors in its class. One such feature is the modular design of airend. Another is the use of SAE-O ring fittings on all fluid pipe joints over 1/4" in diameter. These connections are superior to standard pipe fittings, and are used extensively for trouble-free installation and operation in the hydraulic and fluid power industries.



## OPTIMISED DESIGN, EFFECTIVE SOUND ATTENUATION

**Acoustical Enclosure** A totally enclosed acoustical compressor enclosure design utilizing purpose-suited sound adsorbing materials allow for sound control to the lower levels. The air inlet and motor cooling air inlet are installed with silencers which decrease air inlet sound levels and blocks the noise transmissions. Directly pulling in fresh air from outside the enclosure allows for air to enter more efficiently and improves the cooling of the motor. Optimized system air flow and temperature field distribution effectively control the temperature rise within the enclosure.

**Centrifugal fan** The QGD series uses a centrifugal fan that is designed more energy efficient and quiet. This centrifugal fan design is superior to the typical blade fan because it requires less power to operate and produce higher static pressure. Fresh air is pulled into the compressor through the aftercooler for more efficient cooling. The overall effect is that compressor efficiency is raised and operating costs is lowered. This innovative component also creates far less noise than a standard fan. In addition to the optimized ventilation design, operating sound levels are low. Also designing the discharge of the air through the top of the compressor facilitates ducting for hot air discharge or energy recovery installations.



**Effectively Reduces Vibration** The airend and motor are fitted to the compressor baseplate with flexible vibration isolators. This effectively reduces vibration transmissions, hence lowering noise levels. The air/fluid reservoir is also fitted to the base with rubber pads to cut down the noise transmissions from air movement within the reservoir through the base of the compressor.

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## QUINCY QGD 110-160kW



### ROYAL BLUE WARRANTY

When it comes to reliability, everyone is making the same promise. But when it comes to keeping the promise, Quincy Compressor stands alone. This is why we have introduced our exclusive optional 5-year airend warranty that covers both parts and labor. Reliability is about confidence, performance, and trust –every day. Our warranty program is how we’re keeping our promise of Royal Blue Reliability for the next five years.



### QUINSYN® FLUIDS

Quincy's complete line of synthetic fluids are blended specifically for Quincy's rotary screw compressors. Quincy offers the following fluids as factory fill.

**QuinSyn-Plus®** is a blended PAO/Ester fluid that is highly varnish resistant and is completely demulsible with water. QuinSyn-Plus has excellent natural lubricity and has a low carry-over rate. QuinSyn-plus is a standard factory fill fluid and offers the following benefits:

1. Varnish-free operation
2. High viscosity index
3. Excellent corrosion protection
4. Water holding capability
5. Efficient cooling

**QuinSyn-PG®** is a blended Polyalklene Glycol/Ester fluid that is biodegradable.

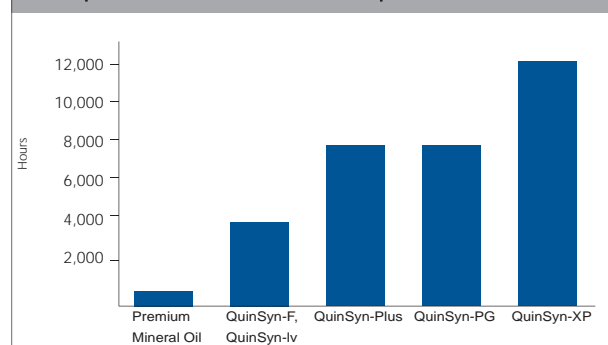
**QuinSyn-F®** is a food grade fluid that can be factory filled at no extra charge. QuinSyn-F is designed for application that have incidental contact with food products.



**QuinSyn IV®** is a blended synthetic fluid designed for operating in areas of high ambient temperatures and/or contamination. It uses a PAO base stock to provide excellent lubricating qualities, but is blended to be economically changed on a more frequent basis when contaminant loads are high.

**QuinSyn-XP®** is a special POE synthetic fluid designed to operate under the harshest of conditions; pressures over 175 psig and fluid temperatures over 225°F. It has a rated life of 12,000 hours at 100 psig and 8,000 hours at 200 psig.

Expected fluid life at normal operation conditions



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## STANDARD QUALITY FEATURES DELIVER VALUABLE BENEFITS

- Asymmetrical rotor profile
- Triplex discharge bearings
- Triple-lip shaft seal system with scavenge line
- Axial flow inlet housing
- Direct drive with flexible coupling
- Flange connected airend and motor for permanent shaft alignment
- 380 volt @ 50 Hz, IP54 motor
- Wye-delta reduced voltage starter
- Heavy-duty steel-based frame, totally enclosed, low sound acoustical enclosure
- Positive closure inlet modulation valve
- Patented technology – POWERCORE – inlet filter element
- Full flow spin-on fluid filter
- 3 stage high efficiency air/fluid separation system
- Air cooled fluid cooler and aftercooler
- Moisture separator with automatic and manual drains
- Centrifugal fan – quiet operation and effective cooling
- PLC intelligent control system, auto-dual/continuous run/network (6 machines)
- QuinSyn-Plus® long life synthetic compressor fluid

## PROTECTIVE DEVICES

- Emergency stop button
- Dual probe, high air/fluid temperature shutdown system
- High pressure shutdown
- High pressure relief valve
- Safety fluid fill cap
- Control line filter

## OPTIONS

- Water cooled fluid cooler and aftercooler
- 6" touchscreen PLC intelligent control system, network up to 16 compressors

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# QUINCY QGD 110-160kW



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## Quincy QGD 110-160kW Technical Data

Model	QGD110	QGD132	QGD160
<b>Motor Power</b>			
kW	110	132	160
<b>Capacity</b>			
m <sup>3</sup> /min @ 7bar	21.5	25.5	31.0
m <sup>3</sup> /min @ 8bar	21.3	25.3	30.9
m <sup>3</sup> /min @ 10bar	17.5	21.8	25.4
<b>Rotor Diameter</b>			
mm@ 7bar & 8bar	255	255	255
mm@ 10bar	204	255	255
<b>Dimension</b>			
Length (mm)	2740	2990	2990
Width (mm)	1800	1900	1900
Height (mm)	1888	1888	1888
<b>Weight</b>			
kg	3000	3200	3500

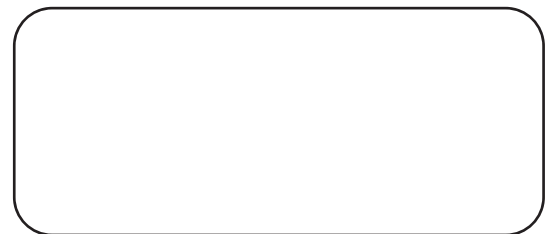
Note: Capacity rated in accordance with GB3853 (Annex C to ISO 1217)

## See how Quincy Compressor can work for you:

### Quincy Compressor SEA Site Office

Address: 26, Jalan Anggerik Mokara  
 31/47 Kota Kemuning  
 Seksyen 31, 40460,  
 Shah Alam, Selangor, Malaysia  
 Tel : + 60 3 5123 8888  
 Fax : + 60 3 5123 8939

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