



# *Nirvana Variable Speed Drive Rotary Screw Compressors*

5.5-30 kW

*Reliability*

*Efficiency*

*Productivity*





"We may be a smaller business, but I can still measure efficiency, and see the value of year on year savings."

"I insist on getting the best buy for me and my company."

"I need an Air Compressor that performs reliably, even in the toughest conditions."

"It's more than just the equipment. I want to deal with people who are dedicated to providing me with total service."

"I need a convenient, easy-to-use system that can GROW with my business."



# *Nirvana*

*Integration Redefined*



*The Next Generation of Compressed Air*

# Nirvana, The Right Air, On Demand...

## Nirvana Delivers

- Maximum operating flexibility to meet your individual site needs
- Total Air System (TAS) in one package
- World class sound level, as low as only 65 dB(A)
- High quality filtered and dried discharge air
- Lowest power consumption at start-up, full-load, and part-load conditions
- Up to 35% energy savings
- Inherent reliability through elimination of parts wear and simplicity of design



### Nirvana 15-30 kW

Tank mounted variable speed drive rotary air compressor with total air system option.

## Featuring

- Innovative component integration
- Innovative IntelliDrive scalability
- Preliminary diagnostics
- Expanded user control interface
- Improved VSD capacity regulation reliability
- Improved acoustic engineering

### Nirvana 5.5-11 kW

Fully enclosed variable speed drive rotary air compressor unit.



## Performance by Design

Nirvana is the only compressor that has the ability to grow with your business and be a true partner in productivity and product quality.

Nirvana incorporates smart package integration and state-of-the-art IntelliDrive technology to provide the right air on demand.

# Powered by IntelliDrive

## IntelliDrive Features

- High-efficiency induction motor
- Integrated Variable Speed Drive (VSD) with speed control
- Virtual gear set providing flexible power and pressure ranges
- Leading control and protection
- Soft starting eliminates drive stress

## IntelliKey

The IntelliDrive System allows for scalability when you need to increase the demands of your business.

By means of a simple upgrade, your Nirvana 5.5-30 kW can grow without having to upgrade to a new compressor.

## Economy of Use

Nirvana saves you money by lowering your operating cost. These savings will continue to be delivered to your bottom line, year after year.

## Best Efficiency at Part-load

When operating at part-load, the performance is top in class. The variable speed IntelliDrive avoids load cycling and maintains a steady state of operation, reducing operating and maintenance costs.

## Soft Start Lowers Your Operating Cost

The gentle start cycle of the IntelliDrive increases the service life, meaning that frequent stop and restart cycles are permitted, without the risk of over-heating.

## Multiple Machine Operation

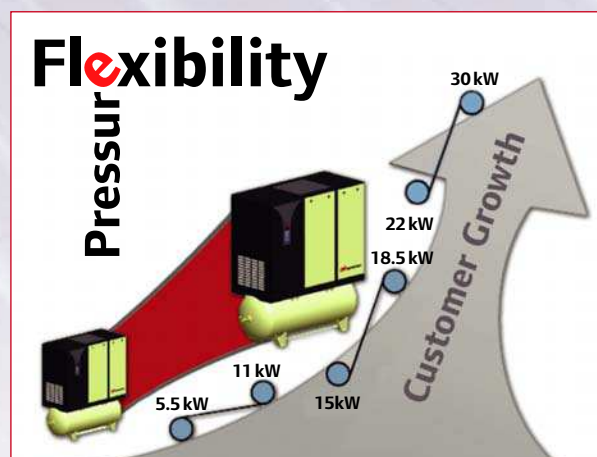
When operating as a pressure trim machine, the power savings achieved by a single compressor is multiplied by additional savings achieved over the full installation.

## High Full-load Operating Efficiency

Class-leading performance achieved by state-of-the-art airend design and manufacturing processes, coupled with the reduction of internal losses, means that Nirvana delivers benchmark full-load performance.



**IntelliDrive**  
Integrated Variable Speed Drive (VSD) power system (15-30kW model pictured above)



**Scalability**  
The Nirvana 5.5-30 kW air compressor grows with the demands and success of your business.



# The Nirvana TAS Package...

## A Single Simple Solution

The Nirvana TAS comprises of all the required components for a complete air system in one package.



## Features

- Modular design for ease of maintenance
- Cycling dryer
- Dryer bypass
- Integrated coalescing and particulate filters
- Electronic drain valve
- Receiver tank mounted

# "Integration Redefined"

**Coalescing and Particle Filters**



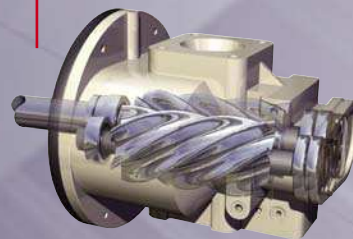
**IntelliDrive**



**Compressed Air Storage**



**Airend**



**Enclosed Rotary Compressor**



**Cycling Refrigerated Dryer**



# *Integrated Variable Speed Drive...*

## **VSD Controlled Capacity Regulation**

Responding to fluctuation in your system demand and maintaining a close controlled system pressure, Nirvana automatically adjusts its compressed air output to achieve the highest efficiency for your operation.

This avoids wasted energy caused by excessive pressure band or unloaded running, allowing you to:

- Achieve higher productivity from your air system
- Maintain optimum performance from the equipment you operate
- Save up to 35% energy cost

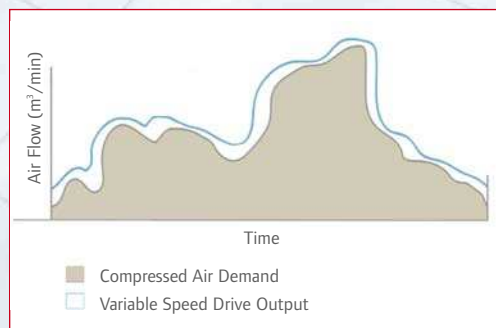




# Technology in a 5.5-30 kW Compressor

## Variable Speed Drive Benefit

*"Cruise control for your compressed air system"*



Nirvana control is delivered by a variable speed drive. The Nirvana 5.5-30 kW VSD maintains a close controlled system pressure, automatically adjusting its output to achieve the highest efficiency for your operation.

This avoids wasted energy caused by excessive pressure band or unloaded running.

## Growth-aligned to Your Demand

*"The compressor with 'virtual gears' that can grow with you"*

Nirvana will operate effectively, maintaining a stable pressure between maximum capacity at full power down to as little as 30% of its output before turning off. It is also the only compressor that allows the owner to upgrade the drive to the next largest kilowatt.



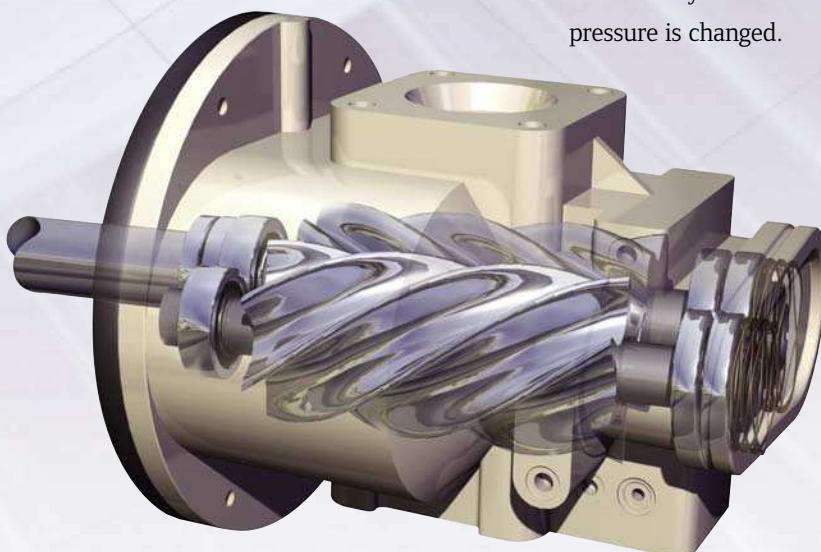
**5.5 kW can be upgraded to 7.5 kW or 11 kW**

**15 kW can be upgraded to 18.5 kW**

**22 kW can be upgraded to 30 kW**

The Nirvana 15-30 kW compressor also allows the user to pick the optimal operating pressure between 4.5-10.4 bar(g) in one standard machine.

The Nirvana 5.5-11 kW compressor utilises an Intellikey to maximise performance when pressure is changed.



# Intellisys™ Microprocessor Controller



**Nirvana 15-30kW**  
Integrated VSD and  
compressor user interface.

## Single Control for ease of use

New enhanced Nirvana diagnostics work with a direct drive technology for a high efficiency output, helping you save money with cost vs. energy.

The Nirvana Control System offers single-point control and access to your compressed air system. With the improved overall diagnostic capabilities to pinpoint service needs, it is almost like having a built-in service technician!

Ingersoll Rand designed Nirvana to simplify your servicing. Your air solutions provider will recommend the most cost effective maintenance program, to ensure trouble-free operation.

## These Additional Diagnostic Enhancements Make the Nirvana 5.5-30 kW More...

### Reliable

Utilise VSD technology to maximise up-time and minimise wear and tear of continuous operation.

### Safe

On-board PORO (Power Outage Restart Option) allow one resume function at a restore point of last optimal mode of operation in the event of a restored external power failure.

### Dependable

Keep track of scheduled maintenance intervals based on simple or more complex scheduling.

### Flexible

Integrate to a separate Ingersoll Rand sequencer to run and control multiple air compressor units both simultaneously or at intervals.

### Modern

Advanced serial communications ports can be used for end-user monitoring and allow control from a remote location. (15-30kW only)



**Nirvana 5.5-11kW**  
Integrated user interface  
and maintenance indicator.

## The Nirvana 15-30 kW Intellisys™ Microprocessor Control Features:

- Pressure diagnostics
- Monitoring critical air-pressure points within the system
- Unit temperature
- Alarm logging
- Real-time bar(g)—target pressure vs. actual levels of use
- Change in air pressure
- Control set pressure
- Schedule on/off time
- Allows easy navigation
- Three levels of alarm cycles to help you respond

## The Nirvana 5.5-11kW Integrated Multi-function Display and Control Features:

- Package discharge pressure
- Total hours run
- Maintenance timer
- Time of day
- Fault indicator
- Bar graph indicating service %
- “Get Parts” indication at 20%
- Flashing LED at 10% remain
- Continuous warning if service is overdue



# Nirvana TAS Air Quality



## Nirvana Total Air System Contains Integrated Dual Filtration

Incorporating both high-efficiency coalescing and particulate filters provides protection from the effects of oil and ingested particles on air and product quality. The filters are easily replaced as needed via the convenient front access panel.

## Nirvana Integrated Refrigerated Dryer

Drying compressed air removes moisture that can cause rust and corrosion in your compressed air system piping, which can lead to inadequate tool lubrication, and damage to finishing processes, and product quality.

The unique Nirvana integrated refrigerated dryer uses energy efficient cycling technology to provide unparalleled reliability and energy savings.



## Additional Important Air Quality Components

### Electronic Drain Valve

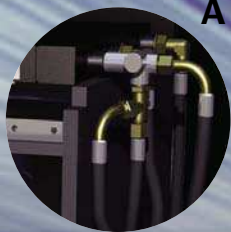
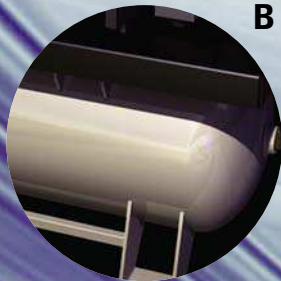
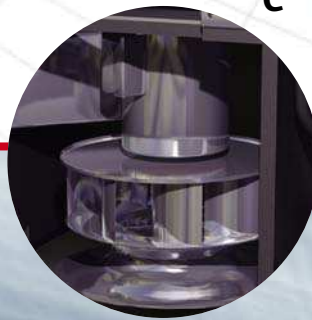
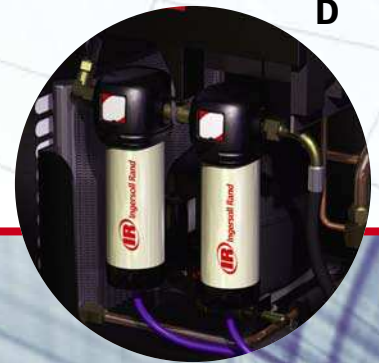
Ensuring reliability in removing water removed by the after-cooler dryer and filters.

### Dryer Bypass

The bypass assures your Nirvana compressor's continuous operation if a problem ever occurs within the dryer.



| Feature               | ISO Class | Distinction            |
|-----------------------|-----------|------------------------|
| GP Particulate Filter | Class     | Filtration             |
| Oil                   | 3         | 0.5 mg/m <sup>3</sup>  |
| Particulate           | 3         | 1 micron               |
| HE Coalescing Filter  | Class     | Filtration             |
| Oil                   | 1         | 0.01 mg/m <sup>3</sup> |
| Particulate           | 2         | 0.01 micron            |

**A****B****C****D**

# Nirvana

*Delivering Value Through Integration and Technology*

The standard market compressor package includes a form of variable speed drive and an on-board refrigerated dryer. Only Ingersoll Rand offers a Total Air System in the 5.5-30 kW range. The Nirvana 5.5-30 kW TAS unit comes STANDARD with the following INCLUDED features:

**A Refrigerated Dryer Bypass**

- Productivity and reliability through continuous operation

**B Integrated Receiver Tank**

- Floor space and installation time savings

**C Blower Technology**

- Quiet operation (as low as 65 dB(A)) for environmental and workplace concerns

**D Integrated Coalescing and Particulate Filtration**

- Increases air quality for a better finished product

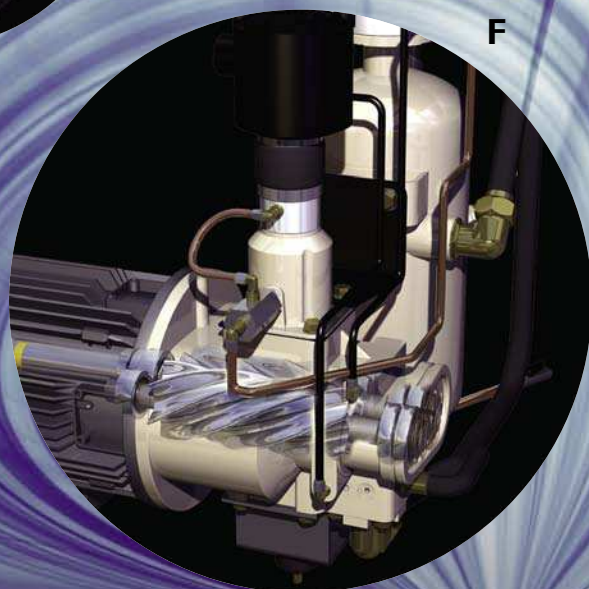
**E Energy Efficient Cycling Refrigerated Air Dryer**

- Reliability of operation and energy savings

**F Direct-Coupled Motor/Airend Configuration**

- Compact design for additional reliability and reduced maintenance cost





### Model Reference

### Nirvana Performance Data<sup>1</sup>

| 5.5-11 kW / 7.5-15 hp                  |            | Nominal Power |     | Delivered Pressure Range |        | Min. Capacity       |     | Max. Capacity       |     |
|--|------------|---------------|-----|--------------------------|--------|---------------------|-----|---------------------|-----|
| 50 Hz                                  | 60 Hz      | kW            | hp  | bar(g)                   | psi(g) | m <sup>3</sup> /min | cfm | m <sup>3</sup> /min | cfm |
| IRN5K-8                                | IRN7H-100  | 5.5           | 7.5 | 8.0                      | 115    | 0.48                | 17  | 0.88                | 31  |
| IRN5K-10                               | IRN7H-130  | 5.5           | 7.5 | 10.4                     | 150    | 0.62                | 22  | 0.74                | 26  |
| IRN7K-8                                | IRN10H-100 | 7.5           | 10  | 8.0                      | 115    | 0.48                | 17  | 1.19                | 42  |
| IRN7K-10                               | IRN10H-130 | 7.5           | 10  | 10.4                     | 150    | 0.62                | 22  | 0.99                | 35  |
| IRN7K-14                               | IRN10H-200 | 7.5           | 10  | 13.8                     | 200    | 0.66                | 23  | 0.71                | 25  |
| IRN11K-8                               | IRN15H-100 | 11.0          | 15  | 8.0                      | 115    | 0.48                | 17  | 1.70                | 60  |
| IRN11K-10                              | IRN15H-130 | 11.0          | 15  | 10.4                     | 150    | 0.62                | 27  | 1.45                | 51  |
| IRN11K-14                              | IRN15H-200 | 11.0          | 15  | 13.8                     | 200    | 0.66                | 23  | 1.13                | 40  |
| <b>15-30 kW / 20-40 hp<sup>2</sup></b> |            |               |     |                          |        |                     |     |                     |     |
| IRN15K                                 | IRN20H     | 15.0          | 20  | 4.5-10.4                 | 65-150 | 1.16                | 41  | 2.46                | 87  |
| IRN18K                                 | IRN25H     | 18.5          | 25  | 4.5-10.4                 | 65-150 | 1.16                | 41  | 3.06                | 108 |
| IRN22K                                 | IRN30H     | 22.0          | 30  | 4.5-10.4                 | 65-150 | 1.16                | 41  | 3.68                | 130 |
| IRN30K                                 | IRN40H     | 30.0          | 40  | 4.5-10.4                 | 65-150 | 1.16                | 41  | 4.56                | 161 |

Maximum Capacity Tested in Accordance with ISO 1217 1996 Annex C. <sup>1</sup> Performance is based on Non-TAS models. <sup>2</sup> Maximum Capacity is based on 8 barg (115 psig).

### Nirvana Dimensions 5.5-11 kW / 7.5-15 hp

|                    | Length |      | Width |      | Height |      | Weight |      |
|--------------------|--------|------|-------|------|--------|------|--------|------|
|                    | mm     | inch | mm    | inch | mm     | inch | kg     | lbs. |
| Baseplate Unit     | 1315   | 51.8 | 731   | 28.8 | 835    | 32.9 | 350    | 780  |
| 80 Gal Receiver    | 1349   | 53.1 | 731   | 28.8 | 1460   | 57.5 | 472    | 1040 |
| 120 Gal Receiver   | 1897   | 74.7 | 731   | 28.8 | 1460   | 57.5 | 487    | 1072 |
| 272 Litre Receiver | 1311   | 51.6 | 731   | 28.8 | 1460   | 57.5 | 458    | 1008 |
| 500 Litre Receiver | 2059   | 81.1 | 731   | 28.8 | 1460   | 57.5 | 513    | 1129 |

### 15-30 kW / 20-40 hp<sup>1</sup>

|                    |      |      |     |      |      |      |     |      |
|--------------------|------|------|-----|------|------|------|-----|------|
| Baseplate Unit     | 1630 | 64.2 | 724 | 28.5 | 1418 | 55.8 | 612 | 1350 |
| 120 Gal Receiver   | 1857 | 73.1 | 724 | 28.5 | 2043 | 80.0 | 780 | 1720 |
| 240 Gal Receiver   | 2339 | 92.1 | 762 | 30.0 | 2219 | 87.3 | 858 | 1891 |
| 500 Litre Receiver | 2060 | 81.1 | 724 | 28.5 | 2053 | 81.0 | 804 | 1772 |
| 750 Litre Receiver | 2156 | 84.9 | 750 | 29.5 | 2196 | 86.0 | 858 | 1891 |

80, 120 & 240 Gal receivers manufactured to ASME VIII Class I 272, 500 & 750 Litre receivers manufactured to EN 87-404.

Total Air Systems (TAS) and Standard units have the same dimensions.

<sup>1</sup> 15 kW (20 hp) and 18 kW (25 hp) are 140mm (5.5 inches) less on the height dimension.

# *Global Reach...*



## *Efficiency, Reliability, Productivity, Environment, Health and Safety*



Ingersoll Rand provides its products and services directly or through distributors to customers in close to 200 countries.

Ingersoll Rand focuses on providing innovation to increase your productivity and profitability. Expect more with Ingersoll Rand. We are your total solutions provider.

Ingersoll Rand employs approximately 40,000 people with 19,000 in the United States and 21,000 in other nations.

We maintain offices, warehouse, and repair centres throughout the world.



# Unsurpassed Local Customer Support

## Long Term Value

There is more to value than simply price. The commitment of many thousands of dedicated compressed air specialists, either directly employed or members of a select market channel partnership, mean that friendly Ingersoll Rand support is close at hand. In addition to parts availability, qualified on-site service is available globally.



## UltraCare.....helping you to maintain a healthy business.

A lot can (and will,) happen in the life of a compressed air system. With ever increasing demands for machine availability in today's industries, reducing production losses due to unplanned maintenance and downtime is essential.

That is why we offer UltraCare. A responsive, flexible, preventative maintenance program, designed to provide Ingersoll Rand authorised maintenance to ensure increased system reliability. UltraCare helps to eliminate unexpected downtime and costly repairs.



## Ultra Coolant™

Save costs with the advanced synthetic compressor coolant which is supplied as standard. Ingersoll Rand Ultra Coolant reduces friction and wear, has a long operating life, has simple condensate separation characteristics and is biodegradable.

*The best overall value is getting the most out of your investment. Ingersoll Rand customer support teams will help you protect your investment.*



Ingersoll Rand Industrial Technologies provides products, services and solutions that enhance our customers' energy efficiency, productivity and operations. Our diverse and innovative products range from complete compressed air systems, tools and pumps to material and fluid handling systems and environmentally friendly microturbines. We also enhance productivity through solutions created by Club Car®, the global leader in golf and utility vehicles for businesses and individuals.

[www.ingersollrandproducts.com](http://www.ingersollrandproducts.com)

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