



# *Nirvana Variable Speed Drive, Rotary Screw Air Compressors*

*7.5-40 hp (5.5-30 kW)*



*Innovation*

*Reliability*

*Efficiency*

"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."

Customer Service  
Variable Speed Drive  
Scalability  
Air Pressure  
Energy Efficiency  
Enhanced Diagnostics

# Nirvana

Integration Redefined



Scalable  
Enhanced  
Energy Efficiency  
Nirvana  
Total Air System  
Enhanced  
Variable Speed

*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, 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

## Featuring

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



### Nirvana 20-40 hp

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

### Nirvana 7.5-15 hp

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 firmware upgrade, your Nirvana 7.5-40 hp 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.

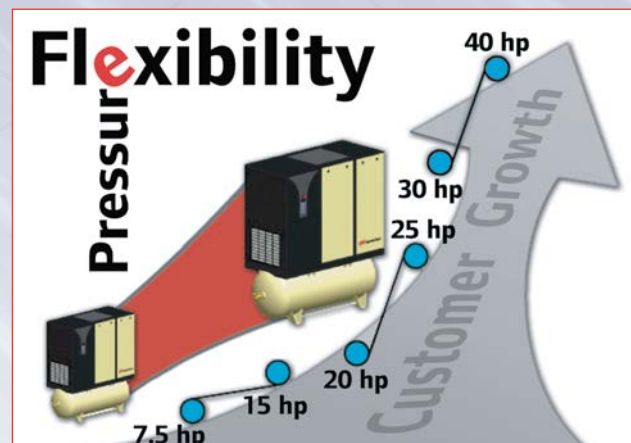
## High Full-load Operating Efficiency

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. (20-40 hp model pictured above)



### Scalability

The Nirvana 7.5-40 hp 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”

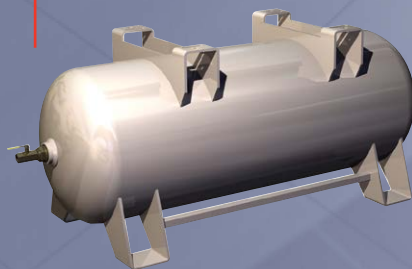
**Coalescing and Particle Filters**



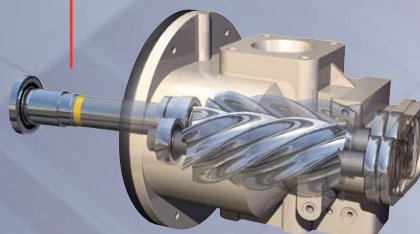
**IntelliDrive**



**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

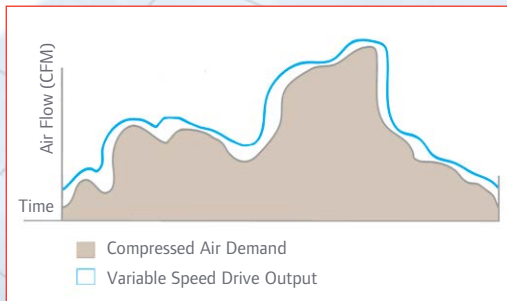




# Technology in a 7.5-40 hp Compressor

## Variable Speed Drive Benefit

*"Cruise control for your compressed air system"*



Nirvana control is delivered by a variable speed drive. The Nirvana 7.5-40 hp 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 horsepower.

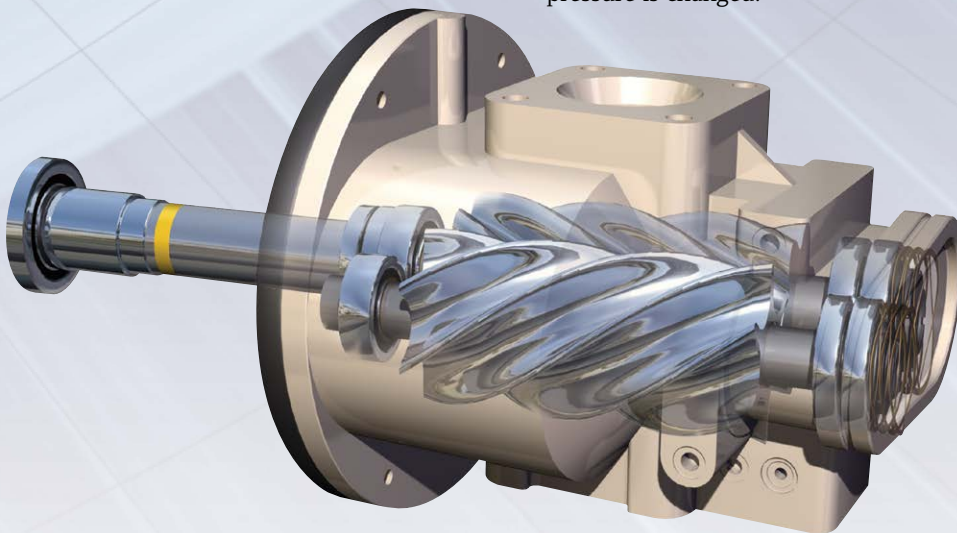
**7.5 hp can be upgraded to 10 hp or 15 hp**

**20 hp can be upgraded to 25 hp**

**30 hp can be upgraded to 40 hp**

The Nirvana 20-40 hp compressor also allows the user to pick the optimal operating pressure between 65-150 psig in one standard machine.

The Nirvana 7.5-15 hp compressor utilizes an IntelliKey to maximize performance when pressure is changed.



# Intellisys™ Microprocessor Controller



**Nirvana 20-40 hp**  
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 7.5-40 hp More...

### Reliable

Utilize VSD technology to maximize up-time and minimize 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. (20-40 hp only)



**Nirvana 7.5-15 hp**  
Integrated user interface and maintenance indicator.

## The Nirvana 20-40 hp Intellisys Microprocessor Control Features

- Pressure diagnostics
- Monitoring critical air-pressure points within the system
- Unit temperature
- Alarm logging
- Real-time PSI—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 7.5-15 hp 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

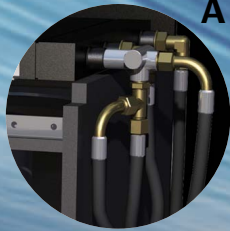
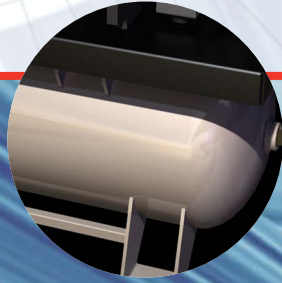
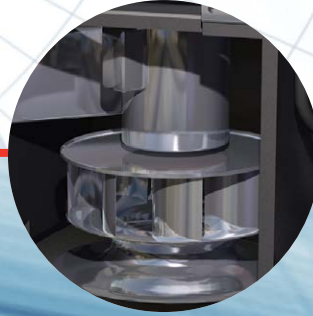
Ensuring reliability in removing water removed by the after-cooler dryer and filters.

### Dryer Bypass

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



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

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

# Nirvana

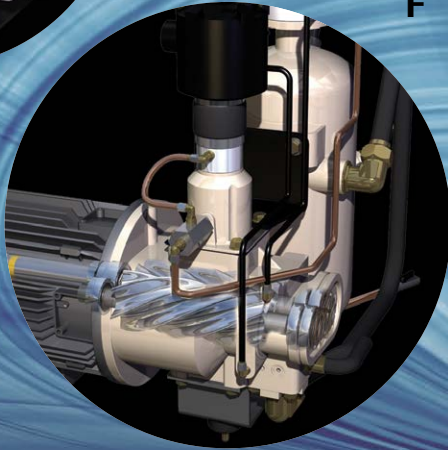
*Delivering Value Through Integration and Technology*

The standard market compressor package includes a form of variable frequency drive and an on-board refrigerated dryer. Only Ingersoll Rand offers a Total Air System in the 7.5-40 hp range. The Nirvana 7.5-40 hp 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



**E**



**F**



**Model Reference**

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

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

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 115 psig (8 barg)

**Nirvana Dimensions**

7.5-15 hp / 5.5-11 kW	Length		Width		Height		Weight	
	inch	mm	inch	mm	inch	mm	lbs.	kg
Baseplate Unit	51.8	1315	28.8	731	32.9	835	780	350
80 Gal. Receiver	53.1	1349	28.8	731	57.5	1460	1040	472
120 Gal. Receiver	74.7	1897	28.8	731	57.5	1460	1072	487
272 Litre Receiver	51.6	1311	28.8	731	57.5	1460	1008	458
500 Litre Receiver	81.1	2059	28.8	731	57.5	1460	1129	513
20-40 hp / 15-30 kW <sup>1</sup>								
Baseplate Unit	64.2	1630	28.5	724	55.8	1418	1350	612
120 Gal. Receiver	73.1	1857	28.5	724	80.0	2043	1720	780
240 Gal. Receiver	92.1	2339	30.0	762	87.3	2219	1891	858
500 Litre Receiver	81.1	2060	28.5	724	81.0	2053	1772	804
750 Litre Receiver	84.9	2156	29.5	750	86.0	2196	1891	858

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

# Global Reach, Local Service

**No matter where your facility is located,** Ingersoll Rand is committed to serving you 24 hours a day, seven days a week. Our worldwide network of certified, factory-trained technicians and engineers are a phone call away — ready to support you with innovative and cost-effective service solutions that will keep you running at peak performance.



PackageCare is a service contract designed to help customers get the most out of their air system investment. Whether it's Ingersoll Rand equipment or a competitor's, a new compressor or used, with PackageCare customers get hassle-free system reliability, backed by the most comprehensive service program in the industry. We're the only OEM in the industry offering this type of service coverage.



**PackageCare™**



## Count on Ingersoll Rand for All Your Air System Requirements



### Air Quality

- Filtration
- Dryers
- Point-of-use air treatment
- Air sampling test kits
- Dew point meters



### Environmental

- Condensate management
- Lubricants
- Water filtration



### Installation

- SimplAir piping system
- Fusible disconnects
- Intelliflow system pressure control
- Drains



### Maintenance

- Hard parts
- Consumables
- PM contracts



### Power Management

- Variable speed drives
- Line reactors
- System controllers
- Safety switches



### Energy Efficiency

- System air pressure controllers
- Automated air system controls
- No-loss drains
- System audits



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