

# REFRIGERATED COMPRESSED AIR DRYERS

Cycling; Non-Cycling



# LEGENDARY SULLAIR PRODUCTS

Since 1965, Sullair air compressors have been known for their Reliability, Durability and Performance. The legacy continues now as Hitachi Global Air Power — featuring the legendary Sullair product line. Together, two titans in the industry bring experience, engineering and expertise for every compressed air need.

## RELIABILITY

Customers who work with Sullair compressors have found intangibles make all the difference—things like trust, confidence and peace of mind. They go to work every day having full faith in their equipment, as well as the knowledge they have access to true compressor experts ready to support them every step of the way.

### **DURABILITY**

Hitachi Global Air Power represents the collective strength of more than 150 years of compressor experience and the legendary durability of Sullair products. In shops and factories all around the world, our products have withstood the test of time, running consistently today as they did on day one.

### **PERFORMANCE**

Our vision for success is two-fold: produce clean, quality air for the job at hand, and provide cost-effective solutions for now and the long term. With high standards of efficiency for our compressors, we are committed to customer performance—especially in applications where air purity is critical.

The Hitachi Global Air Power network of engineering and quality experts continues to build next-generation, environment-forward compressed air solutions to meet the demands of today's hard-working customers.

"WE SELECTED SULLAIR BECAUSE OF THEIR REPUTATION. IT'S BUILT WELL, DELIVERS, AND IS DEPENDABLE ..."

- BRIAN THIEL, GHOSTFISH BREWING COMPANY

# THE IMPORTANCE OF CLEAN, DRY COMPRESSED AIR

Water jeopardizes everything you want your compressed air system to do. Failure to remove water ruins product and fouls process. That's why it is vital to have a reliable air treatment system in place to help protect your equipment and your operations.

Sullair Refrigerated Air Dryers reliably remove harmful moisture and contaminants from compressed air, helping protect your compressed air system, machinery and downstream tools.

#### How?

- 1. Saturated compressed air enters the system and is precooled in the air/air heat exchanger.
- 2. Then, the precooled air moves downstream through the air/refrigerant heat exchanger, where it's chilled to a set dewpoint, causing condensate to separate from the air.
- To reliably prevent separated droplets from re-entering the airstream, condensate collects in a large reservoir with subsequent recirculation where flow velocity is significantly reduced.
- **4.** Accumulated condensate is then discharged from the dryer via drain.

The dried, cool process air passes back through the heat exchanger to be reheated and help prevent condensation outside of the downstream distribution piping.

#### Non-Cycling

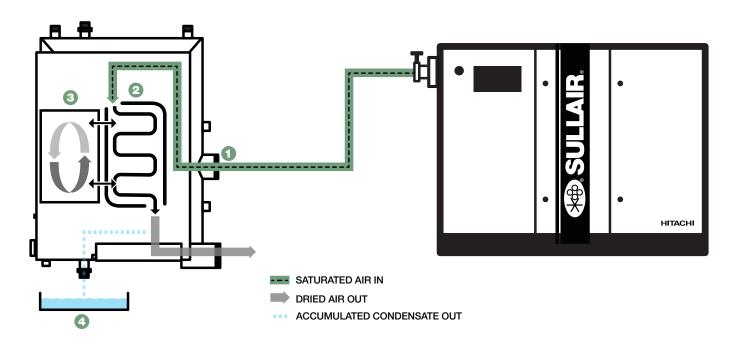
#### Ideal for running at full capacity

- Maintains constant energy consumption no matter flow or air demand.
- Hot gas bypass maintains a stable dew point in varying operating conditions and controls refrigerant amount circulating.

#### Cycling

#### Ideal for operations with variable flow rates

 The refrigeration circuit runs intermittently—cycling on and off based on the heat load. This helps to increase energy efficiency and match supply to demand.



# SRN NON-CYCLING REFRIGERATED DRYERS (10-6000 cfm)

IDEAL FOR RUNNING AT FULL CAPACITY







#### SRN Models 10-250 cfm

- All-In-One Aluminum Heat Exchanger designed for energy efficiency, low pressure drop and sustainability
  - Low Pressure Drop— < 2 psid on average
  - Large air/air heat exchanger to precool incoming air
  - Cross-section of flow channels
  - Refrigeration circuit designed to help minimize the volume of refrigerant used
  - High-efficiency stainless steel demister for stable dewpoint in all operating conditions
- Designed for easy serviceability with a compact footprint
- Digital controller
- Timer drain

#### SRN Models 325-6000 cfm

- All-In-One Aluminum Heat Exchanger designed for energy efficiency, low pressure drop and sustainability
  - Low Pressure Drop— < 2 psid on average
  - Large air/air heat exchanger to precool incoming air
  - Cross-section of flow channels
  - Refrigeration circuit designed to help minimize the volume of refrigerant used
  - High-efficiency stainless steel demister for stable dewpoint in all operating conditions
- Scroll compressor for lower noise levels, longer life and increased energy efficiency
- Designed for easy serviceability with a compact footprint
- Digital LED controller with remote connectivity
- Zero loss electric drain

#### Models 1400 cfm and up feature:

- Electronic hot gas bypass and innovative microchannel condensers for lower pressure drop, increased energy efficiency and reduced refrigerant usage up to 40%
- Variable speed fans

#### Models 2000 cfm and up feature:

 Inlet/outlet connections on both sides for easy installation and banking multiple units

# SRD CYCLING REFRIGERATED DRYERS (75-6000 cfm)

## IDEAL FOR OPERATIONS WITH VARIABLE FLOW RATES







#### SRD Models 75-250 cfm

- All-In-One Aluminum Heat Exchanger designed for energy efficiency, low pressure drop and sustainability
  - Low Pressure Drop— < 2 psid on average
  - Large air/air heat exchanger to precool incoming air
  - Cross-section of flow channels
  - Refrigeration circuit designed to help minimize the volume of refrigerant used
  - High-efficiency stainless steel demister for stable dewpoint in all operating conditions
- Energy-saving cycling technology to match supply to demand at partial loads while maintaining a stable dewpoint
- Designed for easy serviceability with a compact footprint
- Digital controller
- Zero loss float drain



MINI TOUCH SCREEN CONTROLLER Available on SRD models 700 - 1000 cfm

Easy-to-read access to performance and maintenance data including key operational indicators and alarms, temperature probes, pressure probes, alarm history, service reminders and more!



LARGE TOUCH SCREEN CONTROLLER Available on SRD models 1400 - 6000 cfm

Large display for access to same performance and maintenance data as the Mini Touch Screen Controller plus loT connection and additional energy, maintenance and data trending screens.

#### SRD Models 325-6000 cfm

- All-In-One Aluminum Heat Exchanger designed for energy efficiency, low pressure drop and sustainability
  - Low Pressure Drop— < 2 psid on average
  - Large air/air heat exchanger to precool incoming air
  - Cross-section of flow channels
  - Refrigeration circuit designed to help minimize the volume of refrigerant used
  - High-efficiency stainless steel demister for stable dewpoint in all operating conditions
- Energy-saving cycling technology to match supply to demand at partial loads while maintaining a stable dewpoint
- Scroll compressor for lower noise levels, longer life and increased energy efficiency
- Designed for easy serviceability with a compact footprint
- Zero loss electric drain
- Digital LED controller with remote connectivity
  - Models 700 cfm and up feature a touch screen controller

#### Models 1400 cfm and up feature:

- Electronic hot gas bypass and innovative microchannel condensers for lower pressure drop, increased energy efficiency and reduced refrigerant usage up to 40%
- Variable speed fans

#### Models 2000 cfm and up feature:

 Inlet/outlet connections on both sides for easy installation and banking multiple units

Sullair Refrigerated Compressed Air Dryers feature a 2-year bumper-to-bumper warranty.\*

# **TECHNICAL SPECIFICATIONS**

# **SRN SERIES**

#### NON-CYCLING REFRIGERATED DRYERS

#### FREQUENCY: 60 Hz

| Model #  | Flow Rate<br>(cfm) | Operating<br>Voltage(s) | Connection Size<br>(NPT) | Pressure Drop<br>(psid) | Power Consumption<br>Load (kW) | Height<br>(in) | Width<br>(in) | Depth<br>(in) | Weight<br>(lbs) |
|----------|--------------------|-------------------------|--------------------------|-------------------------|--------------------------------|----------------|---------------|---------------|-----------------|
| SRN-10   | 10                 | A                       | 1/2"                     | 0.31                    | 0.18                           | 21.45          | 11.8          | 16.85         | 53              |
| SRN-15   | 15                 | А                       | 1/2"                     | 1.15                    | 0.19                           | 21.45          | 11.8          | 16.85         | 53              |
| SRN-25   | 25                 | A                       | 1/2"                     | 1.65                    | 0.21                           | 21.45          | 11.8          | 16.85         | 55              |
| SRN-35   | 35                 | А                       | 3/4"                     | 1.1                     | 0.2                            | 23.86          | 13            | 22.76         | 77              |
| SRN-50   | 50                 | А                       | 3/4"                     | 2.11                    | 0.22                           | 23.86          | 13            | 22.76         | 79              |
| SRN-75   | 75                 | A,B                     | 1"                       | 1.22                    | 0.41                           | 26.57          | 15.76         | 25.91         | 101             |
| SRN-100  | 100                | A,B                     | 1"                       | 2.04                    | 0.43                           | 26.57          | 15.76         | 26.91         | 101             |
| SRN-125  | 125                | A,B                     | 1"                       | 3.05                    | 0.43                           | 26.57          | 15.76         | 27.91         | 104             |
| SRN-150  | 150                | A,B                     | 1 1/2"                   | 1.71                    | 0.59                           | 26.57          | 15.76         | 28.91         | 117             |
| SRN-175  | 175                | A,B                     | 1 1/2"                   | 2.25                    | 0.73                           | 26.57          | 15.76         | 29.91         | 121             |
| SRN-200  | 200                | В                       | 1 1/2"                   | 1.32                    | 1.04                           | 33.1           | 17.42         | 30.63         | 176             |
| SRN-250  | 250                | В                       | 1 1/2"                   | 1.99                    | 1.06                           | 33.1           | 17.42         | 30.63         | 176             |
| SRN-325  | 325                | C,D                     | 2"                       | 1                       | 2.27                           | 53.7           | 27.7          | 45.3          | 452             |
| SRN-400  | 400                | C,D                     | 2"                       | 1.48                    | 2.27                           | 53.7           | 27.7          | 45.3          | 452             |
| SRN-500  | 500                | C,D                     | 2"                       | 1.55                    | 2.39                           | 53.7           | 27.7          | 45.3          | 463             |
| SRN-700  | 700                | C,D                     | 3"                       | 1.08                    | 2.78                           | 55.5           | 27.7          | 45.3          | 573             |
| SRN-800  | 800                | C,D                     | 3"                       | 1.46                    | 3.22                           | 55.5           | 27.7          | 45.3          | 578             |
| SRN-1000 | 1000               | C,D                     | 3"                       | 2.2                     | 4.2                            | 55.5           | 27.7          | 45.3          | 582             |
| SRN-1400 | 1400               | C,D                     | 4"                       | 1.81                    | 4.45                           | 80.9           | 38.3          | 50.7          | 838             |
| SRN-1600 | 1600               | C,D                     | 4"                       | 1.85                    | 6.46                           | 80.9           | 38.3          | 50.7          | 926             |
| SRN-2000 | 2000               | C,D                     | 6"                       | 1.53                    | 9.18                           | 80.9           | 47.4          | 77.7          | 1609            |
| SRN-2400 | 2400               | C,D                     | 6"                       | 2.01                    | 13.1                           | 80.9           | 47.4          | 77.7          | 1698            |
| SRN-3000 | 3000               | C,D                     | 6"                       | 1.64                    | 13.43                          | 80.9           | 47.4          | 77.7          | 1874            |
| SRN-3800 | 3800               | C,D                     | 6"                       | 2.51                    | 13.43                          | 80.9           | 47.4          | 77.7          | 1874            |
| SRN-5000 | 5000               | C,D                     | 8"                       | 2.76                    | 15.25                          | 80.3           | 59.7          | 99.6          | 2359            |
| SRN-6000 | 6000               | C,D                     | 8"                       | 3                       | 18.4                           | 80.3           | 59.7          | 99.6          | 2668            |

|                        | CAPACITY CORRECTION FACTORS FOR DIFFERING OPERATING PRESSURE |      |      |      |      |     |      |      |      |      |      |      |      |  |
|------------------------|--|------|------|------|------|-----|------|------|------|------|------|------|------|--|
| Operating Pressure psi | 45   | 60   | 70   | 80   | 90   | 100 | 115  | 130  | 145  | 160  | 175  | 190  | 203  |  |
| Correction Factor      | 1.44   | 1.24 | 1.16 | 1.09 | 1.03 | 1   | 0.96 | 0.93 | 0.91 | 0.88 | 0.87 | 0.85 | 0.85 |  |

|  | CAPACITY CORRECTION FACTORS FOR DIFFERING AMBIENT AIR TEMPERATURES |      |      |      |     |      |      |      |  |  |  |  |  |  |
|--|--|------|------|------|-----|------|------|------|--|--|--|--|--|--|
| Ambient Air Temperature ${}^{\circ}\!\mathit{F}$ | 60   | 70   | 80   | 90   | 100 | 110  | 120  | 122  |  |  |  |  |  |  |
| Correction Factor                                | 0.96   | 0.96 | 0.96 | 0.97 | 1   | 1.08 | 1.24 | 1.28 |  |  |  |  |  |  |

|  | CAPACITY CORRECTION FACTORS FOR DIFFERING INLET AIR TEMPERATURES |      |      |      |     |      |      |      |     |      |  |  |  |
|--|--|------|------|------|-----|------|------|------|-----|------|--|--|--|
| Inlet Air Temperature ${}^{\circ}\!\mathit{F}$ | 80   | 85   | 90   | 95   | 100 | 110  | 120  | 130  | 140 | 149  |  |  |  |
| Correction Factor                              | 0.64   | 0.68 | 0.77 | 0.87 | 1   | 1.28 | 1.62 | 2.24 | 2.5 | 2.81 |  |  |  |

#### Air Flow Capacity = Operating Pressure x Inlet Air Temperature

.01

Required pre-filtration  $\mu m$ Recommended post-filtration  $\mu m$ ASME/CRN-listed heat exchangers (varies by model and province) Certified to UL/CSA Standards **Operating Voltages** 

A 115V/1Ph

B 230V/1Ph

C 460V/3Ph D 575V/3Ph Standard outlet pressure dew point  ${}^\circ\!F$ ISO 8573-1:2010 Air Quality Class Max inlet air temperature °F Min/max ambient temperature °F Max inlet pressure psi (SRN 10-175)

Max inlet pressure psi (SRN 200-6000) MODBUS RTU communication enabled (SRD 325 - 6000)\*

37-45 Class 4-5 149

41/122 232 203

# **TECHNICAL SPECIFICATIONS**

# **SRD SERIES**

#### CYCLING REFRIGERATED DRYERS

#### FREQUENCY: 60 Hz

| TIEQUENOTI OU TIE |                    |                         |                          |                         |                                |                |               |               |                 |  |  |  |
|-------------------|--------------------|-------------------------|--------------------------|-------------------------|--------------------------------|----------------|---------------|---------------|-----------------|--|--|--|
| Model #           | Flow Rate<br>(cfm) | Operating<br>Voltage(s) | Connection Size<br>(NPT) | Pressure Drop<br>(psid) | Power Consumption<br>Load (kW) | Height<br>(in) | Width<br>(in) | Depth<br>(in) | Weight<br>(lbs) |  |  |  |
| SRD-75            | 75                 | А                       | 1"                       | 1.22                    | 0.41                           | 26.57          | 15.76         | 25.91         | 101             |  |  |  |
| SRD-100           | 100                | А                       | 1"                       | 2.04                    | 0.43                           | 26.57          | 15.76         | 26.91         | 101             |  |  |  |
| SRD-125           | 125                | A                       | 1"                       | 3.05                    | 0.43                           | 26.57          | 15.76         | 27.91         | 104             |  |  |  |
| SRD-150           | 150                | А                       | 1 ½"                     | 1.71                    | 0.59                           | 26.57          | 15.76         | 28.91         | 117             |  |  |  |
| SRD-175           | 175                | A,B                     | 1 ½"                     | 2.25                    | 0.73                           | 26.57          | 15.76         | 29.91         | 121             |  |  |  |
| SRD-200           | 200                | В                       | 1 ½"                     | 1.32                    | 1.04                           | 33.1           | 17.42         | 30.63         | 176             |  |  |  |
| SRD-250           | 250                | В                       | 1 ½"                     | 1.99                    | 1.06                           | 33.1           | 17.42         | 30.63         | 176             |  |  |  |
| SRD-325           | 325                | C,D                     | 2"                       | 1                       | 2.27                           | 53.7           | 27.7          | 45.3          | 452             |  |  |  |
| SRD-400           | 400                | C,D                     | 2"                       | 1.48                    | 2.27                           | 53.7           | 27.7          | 45.3          | 452             |  |  |  |
| SRD-500           | 500                | C,D                     | 2"                       | 1.55                    | 2.39                           | 53.7           | 27.7          | 45.3          | 463             |  |  |  |
| SRD-700           | 700                | C,D                     | 3"                       | 1.08                    | 2.78                           | 55.5           | 27.7          | 45.3          | 573             |  |  |  |
| SRD-800           | 800                | C,D                     | 3"                       | 1.46                    | 3.22                           | 55.5           | 27.7          | 45.3          | 578             |  |  |  |
| SRD-1000          | 1000               | C,D                     | 3"                       | 2.2                     | 4.2                            | 55.5           | 27.7          | 45.3          | 582             |  |  |  |
| SRD-1400          | 1400               | C,D                     | 4"                       | 1.81                    | 4.45                           | 80.9           | 38.3          | 50.7          | 838             |  |  |  |
| SRD-1600          | 1600               | C,D                     | 4"                       | 1.85                    | 6.46                           | 80.9           | 38.3          | 50.7          | 926             |  |  |  |
| SRD-2000          | 2000               | C,D                     | 6"                       | 1.53                    | 9.18                           | 80.9           | 47.4          | 77.7          | 1609            |  |  |  |
| SRD-2400          | 2400               | C,D                     | 6"                       | 2.01                    | 13.1                           | 80.9           | 47.4          | 77.7          | 1698            |  |  |  |
| SRD-3000          | 3000               | C,D                     | 6"                       | 1.64                    | 13.43                          | 80.9           | 47.4          | 77.7          | 1874            |  |  |  |
| SRD-3800          | 3800               | C,D                     | 6"                       | 2.51                    | 13.43                          | 80.9           | 47.4          | 77.7          | 1874            |  |  |  |
| SRD-5000          | 5000               | C,D                     | 8"                       | 2.76                    | 15.25                          | 80.3           | 59.7          | 99.6          | 2359            |  |  |  |
| SRD-6000          | 6000               | C,D                     | 8"                       | 3                       | 18.4                           | 80.3           | 59.7          | 99.6          | 2668            |  |  |  |

|                        |      |      | CAPACITY | CORRECTIO | N FACTORS | FOR DIFFER | ING OPERAT | ING PRESSU | RE   |      |      |      |      |
|------------------------|------|------|----------|-----------|-----------|------------|------------|------------|------|------|------|------|------|
| Operating Pressure psi | 45   | 60   | 70       | 80        | 90        | 100        | 115        | 130        | 145  | 160  | 175  | 190  | 203  |
| Correction Factor      | 1.44 | 1.24 | 1.16     | 1.09      | 1.03      | 1          | 0.96       | 0.93       | 0.91 | 0.88 | 0.87 | 0.85 | 0.85 |

| CAPACITY CORRECTION FACTORS FOR DIFFERING AMBIENT AIR TEMPERATURES |      |      |      |      |     |      |      |      |  |  |  |  |
|--|------|------|------|------|-----|------|------|------|--|--|--|--|
| Ambient Air Temperature ${}^{\circ}\!\mathit{F}$                   | 60   | 70   | 80   | 90   | 100 | 110  | 120  | 122  |  |  |  |  |
| <b>Correction Factor</b>   | 0.96 | 0.96 | 0.96 | 0.97 | 1   | 1.08 | 1.24 | 1.28 |  |  |  |  |

|  | CAPACITY CORRECTION FACTORS FOR DIFFERING INLET AIR TEMPERATURES |      |      |      |     |      |      |      |     |      |  |  |  |  |
|--|--|------|------|------|-----|------|------|------|-----|------|--|--|--|--|
| Inlet Air Temperature ${}^{\circ}\!\mathit{F}$ | 80   | 85   | 90   | 95   | 100 | 110  | 120  | 130  | 140 | 149  |  |  |  |  |
| Correction Factor                              | 0.64   | 0.68 | 0.77 | 0.87 | 1   | 1.28 | 1.62 | 2.24 | 2.5 | 2.81 |  |  |  |  |

#### Air Flow Capacity = Operating Pressure x Inlet Air Temperature

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Required pre-filtration  $\mu m$ Recommended post-filtration  $\mu m$ ASME/CRN-listed heat exchangers (varies by model and province) Certified to UL/CSA Standards

**Operating Voltages** 

A 115V/1Ph B 230V/1Ph

C 460V/3Ph

D 575V/3Ph

Standard outlet pressure dew point  $^{\circ}F$  ISO 8573-1:2010 Air Quality Class Max inlet air temperature  $^{\circ}F$  Min/max ambient temperature  $^{\circ}F$  Max inlet pressure psi (SRN 10-175) Max inlet pressure psi (SRN 200-6000) MODBUS RTU communication enabled (SRD 325 - 6000)\*

37–45 Class 4–5 149 41/122 232 203

#### FOR MORE INFORMATION, CONTACT YOUR LOCAL AUTHORIZED SULLAIR DISTRIBUTOR.



