

NITROGEN-PAC M SERIES

**REFRIGERATED DRYERS
 IRD SERIES**

Description

The UNITED Fire Systems IRD Series refrigerated dryers are used to remove moisture from compressed air sent to a NITROGEN-PAC M Series sprinkler corrosion inhibiting system nitrogen generator module. Use of an IRD Series dryer ensures that the air sent to the generator module is temperature and moisture conditioned to suit the operating characteristics of the membrane within the generator module.

Graphical Interface

The dryers are equipped with a state-of-the-art graphical interface to make all control and programming functions intuitive and easy. Refer to Figure 1.



| DISPLAY | DESCRIPTION |
|---------|--------------------------------------|
| | the unit is ON with low load |
| | the unit is ON with normal load |
| | the unit is ON with normal-high load |
| | the unit is ON with high load |

| LED | STATUS | DESCRIPTION |
|-----|----------|----------------------------|
| | ON | Compressor energized |
| | Blinking | Programming mode activated |
| | ON | Condensate drain energized |
| | ON | Speed of the fan = 100% |
| | Blinking | Speed of the fan < 100% |
| | OFF | Fan not running |

Ordering Information

| Part Number | Capacity (SCFM) | Voltage (VAC) / Phase |
|--------------|-----------------|-----------------------|
| IRD-07-115-1 | 7 | 115 / 1 |
| IRD-11-115-1 | 11 | 115 / 1 |
| IRD-15-115-1 | 15 | 115 / 1 |
| IRD-25-115-1 | 25 | 115 / 1 |
| IRD-32-115-1 | 32 | 115 / 1 |
| IRD-42-115-1 | 42 | 115 / 1 |

Notes

- See Page 2 of 2 for additional specifications.
- Consult NITROGEN-PAC™ M Series Equipment Selection Guide for method to choose proper capacity dryer.
- Contact UNITED Fire Systems for custom dryers available with higher capacity and / or different voltages.

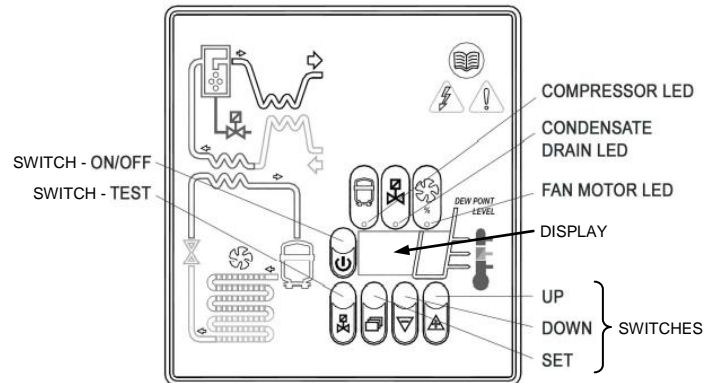


Figure 1 – Graphical Interface

Model IRD Includes:

- Refrigerated Dryer
- Refrigerant Charge
- Power Cord with Plug
- Graphic Interface
- Electronic Drain Valve
- Dry Contact for Remote Signal

UNITED FIRE SYSTEMS

Division of United Fire Protection Corporation
 1 MARK ROAD
 KENILWORTH, NJ 07033 USA
 PHONE: 908-688-0300 FAX: 908-688-0218
 www.unitedfiresystems.net

This literature is provided for informational purposes only. United Fire Protection Corporation assumes no responsibility for the product's suitability for a particular application. The product must be properly applied to perform as intended.

NITROGEN-PAC M SERIES

REFRIGERATED DRYERS IRD SERIES

Specifications

| Model | IRD-07-115-1 | IRD-11-115-1 | IRD-15-115-1 | IRD-25-115-1 | IRD-32-115-1 | IRD-42-115-1 |
|--------------------------------|---------------------|--------------|--------------|--------------|--------------|--------------|
| Rated Capacity* (SCFM**) | 7 | 11 | 15 | 25 | 32 | 42 |
| Pressure Drop* (PSID***) | 0.2 | 0.5 | 0.2 | 0.5 | 0.6 | 1.2 |
| Voltage (VAC) | 115 | 115 | 115 | 115 | 115 | 115 |
| Frequency (Hz) | 60 | 60 | 60 | 60 | 60 | 60 |
| Phase | 1 | 1 | 1 | 1 | 1 | 1 |
| Compressor Motor Power (HP) | 0.10 | 0.10 | 0.10 | 0.16 | 0.33 | 0.33 |
| Compressor Motor Power (W) | 160 | 160 | 160 | 210 | 370 | 370 |
| Motor Full Load Current (A) | 2.3 | 2.3 | 2.3 | 3.0 | 5.3 | 5.3 |
| Motor Locked Rotor Current (A) | 18 | 18 | 18 | 23 | 35 | 35 |
| Dryer Total Current Draw (A) | 2.8 | 2.8 | 2.8 | 3.6 | 6.0 | 6.0 |
| Length (in) | 16 | 16 | 16 | 18 | 18 | 18 |
| Width (in) | 12 | 12 | 12 | 16 | 16 | 16 |
| Height (in) | 16 | 16 | 16 | 18 | 18 | 18 |
| Weight (lbs) | 40 | 40 | 40 | 60 | 62 | 62 |
| Inlet Connection (NPT Female) | 3/8" | 3/8" | 3/8" | 1/2" | 1/2" | 1/2" |
| Outlet Connection (NPT Female) | 3/8" | 3/8" | 3/8" | 1/2" | 1/2" | 1/2" |
| Drain Connection | 1/4" Polymer Tubing | | | | | |
| Max Air Inlet Temperature (°F) | 140 | | | | | |
| Min Ambient Temperature (°F) | 36 | | | | | |
| Max Ambient Temperature (°F) | 122 | | | | | |
| Max Inlet Pressure (PSIG) | 203 | | | | | |
| Refrigerant | R-134a | | | | | |

*Conditions for capacity and pressure drop rating = Inlet pressure 100 PSIG; inlet temperature 100 °F; ambient temperature 100 °F
 **SCFM = standard cubic feet per minute
 ***PSID = pounds per square inch differential

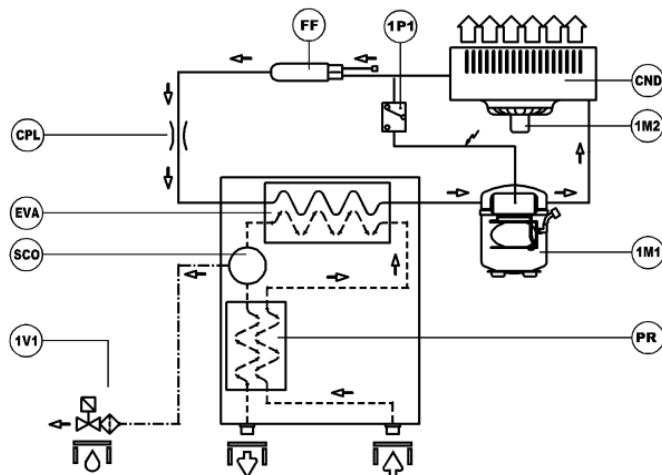


Figure 2 – Mechanical Schematic

| LEGEND FOR FIGURE 2 | | |
|---------------------|--|--------------------------------|
| 1M1 | | Refrigerant compressor |
| 1M2 | | Fan motor |
| 1P1 | | High pressure switch |
| 1V1 | | Solenoid drain valve |
| CND | | Condenser |
| CPL | | Capillary tube |
| EVA | | Evaporator |
| FF | | Filter |
| PR | | Air-to-air heat exchanger |
| SCO | | Condensate separator |
| Solid line | | Refrigerant circuit |
| Dotted line | | Air path |
| Broken line | | Water drainage |
| Line as shown | | Internal electrical connection |

UNITED FIRE SYSTEMS

Division of United Fire Protection Corporation
1 MARK ROAD

KENILWORTH, NJ 07033 USA

PHONE: 908-688-0300 FAX: 908-688-0218

www.unitedfiresystems.net

This literature is provided for informational purposes only. United Fire Protection Corporation assumes no responsibility for the product's suitability for a particular application. The product must be properly applied to perform as intended.