

# D25IT to D170IT (60hz) High Temperature Dryer

## Scope of Supply

### Operating Conditions

The D25IT to D170IT dryers are designed to operate in ambient conditions of 35°F/2°C to 122°F/50°C. The maximum operating pressure is 203 psig/14 barg. The maximum inlet temperature of all dryers is 200°F/94°C. The nominal design point is 102 psig/7 barg, 150°F/66°C inlet temperature and 95°F/35°C ambient temperature. The appropriate re-rate factors must be applied for all off design conditions.

### Refrigeration System

All dryers use a direct expansion refrigeration circuit. A fully hermetic reciprocating compressor using R-134A is supplied. A capillary tube is used on all models.

Dew point performance is accurately controlled adjusting the condenser fan speed.

### Control System

A full feature electronic control system ensures proper dryer operation. Individual alarms are provided for high and low dew point and probe failure. The control board is equipped with a dry contact for common alarm. Alarm history is available for review. The condensate set points can be adjusted on the panel. A visual display is used to indicate dryer load condition. Three LED's are provided to indicate compressor, drain and condenser fan status.

An energy saving mode will shut the dryer off during periods of low demand.

### Aftercooler

An aftercooler is provided to reduce the incoming air temperature prior to the precooler/reheater. The aftercooler is constructed of aluminum finned tubes.

### Coalescing Filter

A coalescing style filter is provided to remove oil and moisture downstream of the aftercooler. The filter has a 1 micron rating for particulates and provides a maximum remaining oil content of 0.5 mg/m<sup>3</sup> @ 21°C.

### Heat Exchanger

Each dryer uses an aluminum plate heat exchanger. The heat exchanger contains three main sections. The precooler/reheater section cools the warm incoming air with cold air leaving the evaporator section. The evaporator section is an air to refrigerant heat exchanger that cools the compressed air to the desired dew point temperature. Finally, an integral moisture separator removes the condensed liquid from the system. The separator utilizes a stainless steel demister to ensure maximum efficiency under all operating conditions.

### Condenser

An aircooled refrigerant condenser is standard on all models. The cooling air is forced through the condenser (aluminum

finned tubes) by a variable speed fan.

### Electrical

All models are designed for 115/1/60 incoming power. These models use a standard electrical plug for easy installation. All models have a NEMA12 electrical rating.

### Enclosure

Each dryer is enclosed in high quality fabricated sheet metal panels. The panels are finished with a baked on powder paint coating. The panels are easily removed to allow access to the internal components.

### Drain

All models are equipped with an electronic solenoid drain valve. The operating parameters (frequency and duration) are easily adjusted on the dryer control panel. A strainer is installed to ensure trouble free operation.

### Testing

Each dryer shall undergo a complete refrigerant leak check and working test.

### Packaging

The dryer will ship in a plastic wrap with a cardboard box mounted on a wooden skid.