

D5IM – D34IM

MODULAR DESICCANT DRYERS

3-20 scfm

Point of Manufacture – Newcastle, UK

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Revision 1

MODULAR DESICCANT STANDARD CONSTRUCTION

Standard Construction

The Ingersoll Rand Modular dryer series is a product based on advanced aluminum extrusion technology to produce a twin tower desiccant dryer having typically half the size and weight of conventional designs.

The dryer consists of high tensile extruded aluminum columns containing twin chambers each filled with desiccant cartridges. The modular design eliminates the need for complex valves and interconnecting piping.

The extruded aluminum columns are fastened together using common top and bottom manifolds.

The desiccant cartridges are constructed with loose fill desiccant being poured into the aluminum drawn tubing using the “snow storm filling” technique. This ensures a maximum packing density which will result in a consistent dew point performance.

A purge air silencer is housed within the dryer lower bottom enclosure. This ensures a low operating noise level.

Inlet Valve	All Models The simple and compact design has a minimum of moving parts, the use of first class materials and the thorough testing program ensures proven total reliability and an extremely long lifetime.
Silencer	All Models Through the design of these dryers, noise reduction takes place in two stages prior to exiting the dryer. Air flows through the regeneration valve then into a high quality water retarded silencer. Shock waves created when exhausting compressed air to atmosphere are broken up, without unacceptable build in back pressure.

Noise Level	All Models The noise levels quoted on the Engineering sheets are LEQ values. The LEQ value is a standard industrial method of averaging the sound level which varies with time. In this case the time period is over one complete cycle.
Desiccant	All Models All the models of the Ingersoll Rand Modular adsorption dryer range use molecular sieve. The adsorption is based on the affinity of the desiccant material towards the water vapor. Aspects like adsorption capacity, strength, contact time, maximum inlet temperature, standard required pressure dew point; etc makes molecular sieve the best choice for this type of adsorption dryer.
Check Valves	All Models There are two check valves situated in the cartridge twist insert heads, both screwed within the top head of the dryer. The head is made from high tensile aluminum
Electrical Supply	All Models Supplied as standard with the following supply. 230V/1ph/50Hz (voltage tolerance +/- 10%) or 115V/1ph/60Hz (+/- 10%) controller.
Electrical Enclosure	All Models IP66 (NEMA 4) overall rating is standard on these units.
Filtration	All Models High efficiency coalescing pre-filter and dust after-filter are integral to the dryer. ISO Class 3.2.2 can be achieved.

Construction	All Models The base is an injection molding using a flame retardant (VO rated) ABS material. Pipe connections All models are equipped with inlet /outlet connections. 3/8" BSP threaded connections are used for 50 Hz units and 3/8" NPT for the 60 Hz units.
Packaging	All Models The packaging is a heavy industrial rigid cardboard box, utilizing foam inserts to fill excess areas for models D5IM – D14IM and wooden crate with inserts to hold dryer in place for models D25IM – D34IM.

Material Specification

Dryer Columns

Material: High tensile aluminum alloy

Process: Extruded

Finish: Alocrom and dry powder epoxy painted

Paint Specification

The Ingersoll Rand Modular range of adsorption dryers has the following surface treatment:
Alocrom 1200 followed by an epoxy powder coating.
Alocrom is a rapid non-electrolytic dip process which forms a protective coating.
Alocrom 1200 is approved to DEF STAN 03-18 certificate number 031801 and to MIL-C-5541.
Outside the UK the process is known as alodine 1200; alocrom and alodine 1200 are chemically identical.
Epoxy powder coating is applied with a dry film thickness (DFT) of between 50 - 150 microns.
Conveyor oven curing of all components in accordance with manufacturing procedure MP 26.