



**Desiccant Dryer Duplex System  
with Regulators, Safety Relief Valves & Dew Point Sensor  
35 - 200 SCFM**

**SPECIFICATION**

**Duplex System**

The duplex dryer system includes two twin tower desiccant dryers, prefilters, afterfilters, regulators, safety relief valves, and integral purge saving control system within a four-valve bypass arrangement. A dew point sensor and certifier's test port is included in the system, with a CO sensor as an option. All of the above are pre-wired and pre-piped in accordance with the latest edition of NFPA 99, Standard for Healthcare Facilities. The system is completely pre-packaged for easy passage through a standard 34.5" door opening.

**Dryer**

The dryer is a twin tower, pressure swing adsorption, regenerative type.

- Each desiccant dryer is individually sized for NFPA peak calculated demand
- Each dryer is capable of producing a 14°F (-10°C) pressure dew point at 100 psig inlet and 50 psig delivery
- Purge flow is minimized through an integral purge saving control system
- The desiccant is contained within a packed bed canister to prevent excessive downstream dusting
- 441™ transfer valve per dryer with ceramic plate design to achieve tower changeover
- Easy alternation between on line/off line dryers by means of a valved bypass
- The dryer will use up to 15% of the system capacity to purge
- Maximum inlet temperature for dryer is 110°F
- Anodized aluminum blocks with o-ring seals and SAE o-ring fittings to eliminate leak points

**Prefilter**

Fully duplexed prefilters shall be rated for 0.01 micron and capable of removing both aerosols and particulate. The prefilters shall be mounted and pre-piped with automatic float drain and element change indicator.

**Afterfilter**

Fully duplexed afterfilters shall be rated for 1 micron particulate removal. The afterfilters shall be mounted and prepiped with element change indicator.

**Regulator / Safety Relief Valve**

Fully duplexed regulators shall be factory set at 55 PSI with

safety relief valves rated for 75 PSI.

**Dew Point**

The dryer incorporates a dew point transmitter that is a ceramic type sensor with  $\pm 2^\circ$  F system accuracy. The dew point alarm shall be factory set at 36° F (2° C) per NFPA 99. A high dew point condition shall be indicated with visual and audible alarms with isolated contacts for remote alarms.

**Control System**

The control system shall provide for the operator to choose between manual purge and auto purge. When the dryer selector switch is in the "manual" position, the dryer will shift towers every 30 seconds. The off-line tower will regenerate (purge) for 25 seconds then repressurize to line pressure for 5 seconds.

When the dryer selector switch is in the "auto" position, the dew point sensor controls the dryer purge cycle. When the dew point is below the setpoint of -10° C on the dew point sensor, both towers will be at line pressure (equalized). The dryer will switch towers when the dewpoint rises above -10°C.

The control panel shall accept a wide range of input voltages (110V-240V/1/50-60 Hz). The control circuit on dryer is 24V DC.

The control panel contains 2 power supplies and 2 smart relays to operate the dryers, one for each operating unit.

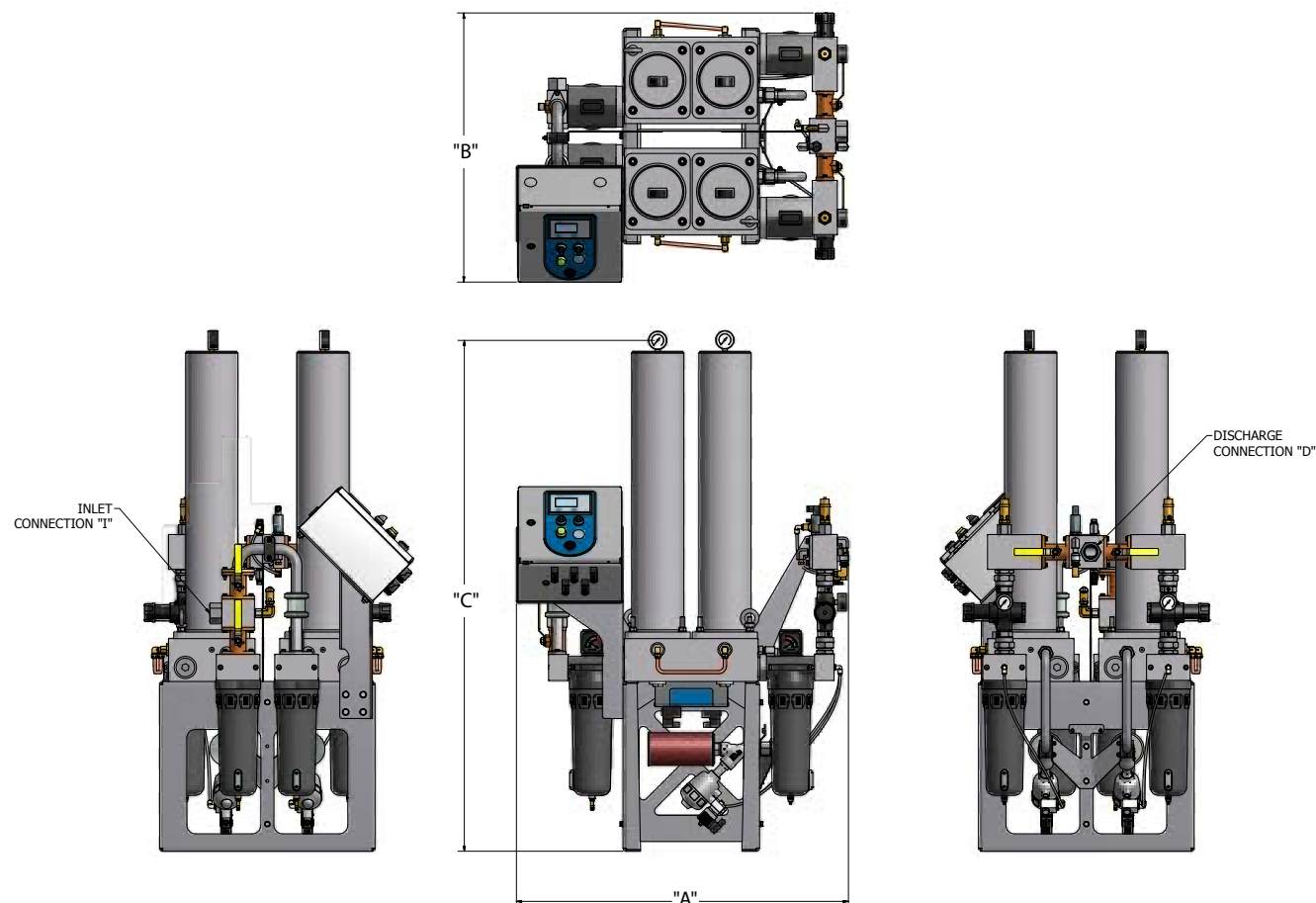
The control panel shall include an LCD text display for dew point. A selector switch to be included for choice of operation of each dryer.

The control panel shall include visual and audible dewpoint and CO alarm notification and dry auxillary contacts for remote alarms.

**Note:**

Not suitable for Liquid Ring applications.

## Standard Configuration



Model	Inlet Flow (SCFM)		Connections (npt)		Dimensions (in.)			Weight (lbs)
	75 psig	100 psig	Inlet (I)	Discharge (D)	A	B	C	
LDD035D-DR	27	35	3/4	3/4	30.50	22.00	39.00	152
LDD055D-DR	44	55	3/4	3/4	30.50	22.00	48.00	167
LDD075D-DR	59	75	1	1	34.50	25.75	46.50	248
LDD105D-DR	82	105	1	1	34.50	25.75	53.00	256
LDD155D-DR	121	155	1-1/4	1-1/4	38.00	31.00	53.50	429
LDD200D-DR	156	200	1-1/4	1-1/4	38.00	31.00	60.00	446

\*Inlet Flow is NFPA capacity (reserve dryer on standby)

## Operating Conditions

Electrical Supply: 110 - 240V/ 1 / 50 - 60 Hz

Minimum Working Pressure: 60 psig

Maximum Working Pressure: 135 psig

Maximum Inlet Temperature: 110°F