

# HEATLESS AIR DRYERS

## WORKING PRINCIPAL

Heatless Air Dryer often referred as pressure swing adsorption dryer, The compressed air is passed through a Coalescing type Pre filter. Here dust particles, water and oil coalesce and removed from the stream. Then the air is passed through a pressure vessel with two "towers" filled with a media such as activated alumina, molecular sieve or other Desiccant material. This desiccant material attracts the water from the compressed air via adsorption. As the water clings to the desiccant, the desiccant "bed" becomes saturated. The dryer is timed to switch towers based on a standard cycle, once this cycle completes some compressed air from the system is used to "purge" The duty of the desiccant is to bring the pressure dew point of the compressed air to a level in which the water will no longer condense. A standard dew point that is expected by a Heatless Air Dryer is  $-40^{\circ}\text{C}$  ( $-40^{\circ}\text{F}$ ), required dew point is dependant on application and  $-70^{\circ}\text{C}$  required in some applications



## TECHINICAL SPECIFICATION

### HEATLESS AIR DRYERS (YLHD SERIES)

| Model    | Capacity | Working Pressure kg/cm <sup>2</sup> | Connections BSP | Power Supply w/ph | Overall Dimensions in mm |     |     | Approx Weight (Kgs.) |
|----------|----------|-------------------------------------|-----------------|-------------------|--------------------------|-----|-----|----------------------|
|          |          |                                     |                 |                   | H                        | L   | D   |                      |
| YLHD- 05 | 05       | 12                                  | 1/2"            | 220/1             | 570                      | 240 | 100 | 12                   |
| YLHD- 10 | 10       | 12                                  | 1/2"            | 220/1             | 670                      | 240 | 100 | 15                   |
| YLHD- 20 | 20       | 12                                  | 1/2"            | 220/1             | 990                      | 240 | 100 | 20                   |
| YLHD- 30 | 30       | 12                                  | 1/2"            | 220/1             | 900                      | 350 | 350 | 30                   |
| YLHD- 40 | 40       | 12                                  | 1/2"            | 220/1             | 1100                     | 350 | 350 | 35                   |
| YLHD- 70 | 70       | 12                                  | 3/4"            | 220/1             | 1530                     | 590 | 590 | 100                  |
| YLHD-100 | 100      | 12                                  | 1"              | 220/1             | 1650                     | 800 | 800 | 130                  |

## APPLICATION

- Automobile Industry,
- Beverages Industry
- Spray Painting
- Hospitals
- Tools Room
- Powder Coating Plants
- General Instrumentations
- Pharmaceutical Industry and Many More

## SALIENT FEATURES

- Proven Trouble
- All aluminum rust-free construction
- Easy and flexible installation
- Simple maintenance
- Compact & Lightweight
- Outlet air quality according to ISO 8573-1, Table 3, Class 2

## SPECIFICATIONS

|                               |   |
|-------------------------------|---|
| Working Pressure Range        | 4 to 12 Bar                                 |
| Working Temperature Range     | $5^{\circ}\text{C}$ to $45^{\circ}\text{C}$ |
| Pre filter (Coalescing Type)  | 0.1 Micron                                  |
| Post Filter (in built -2 Nos) | 20 Micron                                   |
| Purge loss                    | 08 to 10%                                   |
| Atmospheric Dew Point         | $-40^{\circ}\text{C}$                       |
| Desiccant                     | Active Alumina Balls                        |
| Voltage Range                 | 230 V/ 1Ph/50 Hz                            |

## SCHEMATIC DIAGRAM

