

HEATLESS COMPRESSED AIR DRYER



Sumesh Petroleum Pvt.Ltd. (Formerly Sumesh Petroleum) are the manufacturers of complete range of Heatless Compressed Air Dryer system for moisture removal in air, These Compressed air dryers are designed for transformer Drying application. These air dryer are specially **designed to suit the transformer application** with additional refrigeration air dryer, auto drain valve, carbon filter, after filter and fine filter of 0.1 m.

Through our research and development we are able to design the air dryer for the atmospheric condition of India where the average ambient temperature is quite high through out the year. The dryer is designed and sized keeping in mind the criticality and sensitivity of the transformers to the moisture.

Following is a brief description of the working of these compressed air dryers.

A Heatless compressed air dryer is the desiccant type air dryer for achieving a dew point of **-70°C or better.**

PROCESS: Incoming Compressed air is dried with refrigeration dryer then it passes through carbon filter, pre filter passes through the slide piston valve assembly and is directed towards absorber chamber I where the compressed air passes through the high quality of desiccant. Compressed Air drying takes place by adsorption. Dry Compressed air from absorber chamber I then passes through the Check valve assembly and then through the after-filter to the transformer.

While Compressed air is being drying in chamber I the desiccant in chamber II where the desiccant has been wetted in the previous cycle is being simultaneously regenerated. The chamber II is depressurized to atmosphere through the purge valve in the downward direction. A portion of the dry compressed air passes through the needle valve / orifice plate through the desiccant and flushes out the absorbed moisture.

When the regeneration is complete, the purge valve is closed and the tower is slowly repressurised to line pressure for a smooth changeover. Efficient dew point of **-70°C or better** can be achieved through effective drying system comprising of refrigeration dryer and heatless air dryer.

For continuous measurement of the quality of the air **online digital dew point meter** can be provided on request.



Sumesh Petroleum Pvt. Ltd.
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An ISO 9001:2015 Certified Company

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