

Lasting Values



Split Flow Air Dryer (No Purge Loss)

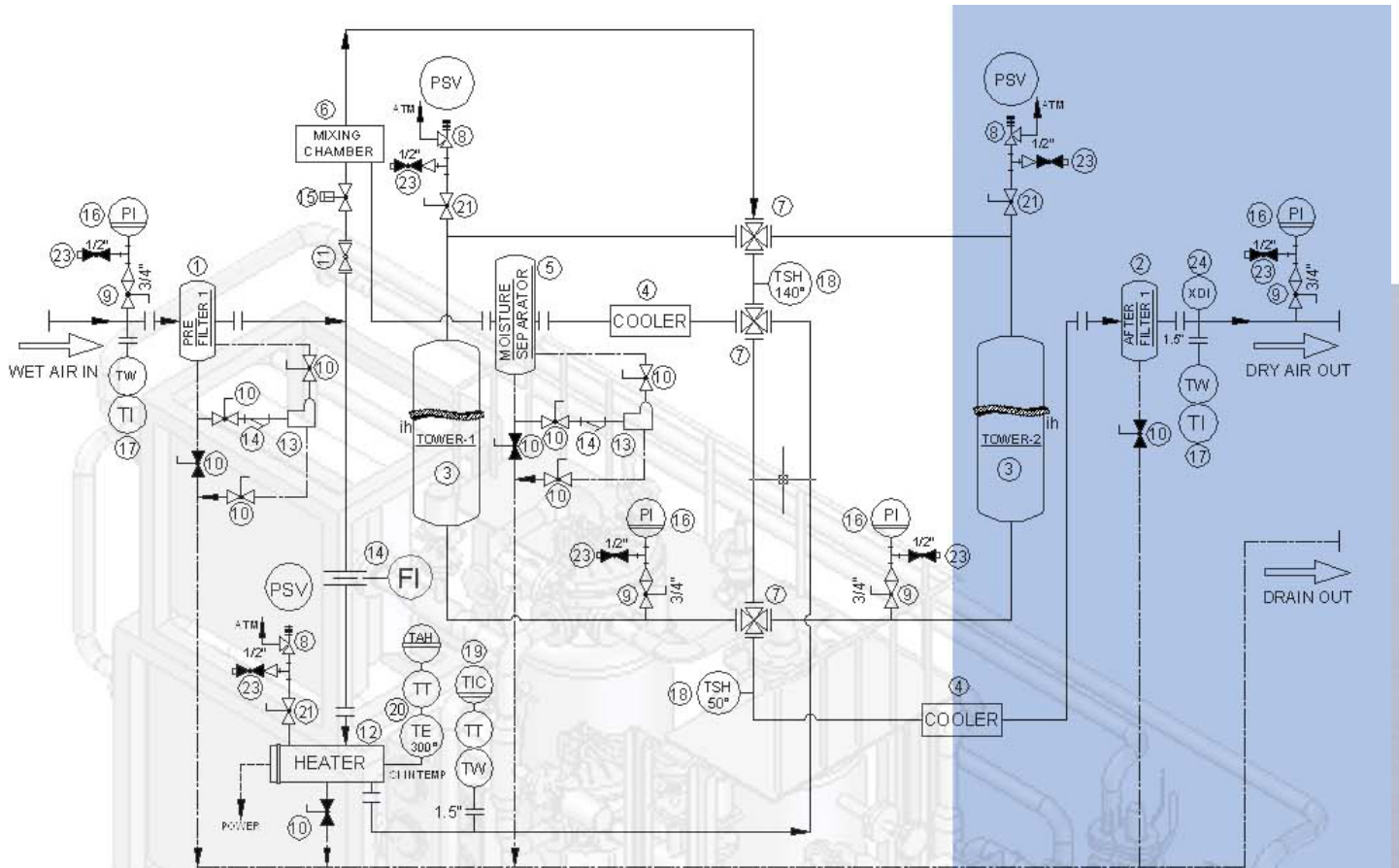


Heated Desiccant Dryer - DS

- Solution provider for Onshore and Offshore Applications
- Dewpoint better than -40°C



Split Flow Dryer



11.	GLOBE VALVE	1 NO
10.	BALL VALVE - DRAIN	10 NOS
9.	BALL VALVE 3/4"	4 NOS
8.	PRESSURE SAFETY VALVE	3 NOS
7.	4/2 WAY SLEEVED PLUG VALVE ACTUATOR OPERATED	3 NOS
6.	MIXING CHAMBER	1 NO
5.	MOISTURE SEPARATOR	1 NO
4.	COOLER	2 NOS
3.	ADSORBER VESSEL	2 NOS
2.	AFTER FILTER	1 NO
1.	PREFILTER	1 NO
S.NO	DESCRIPTION	QTY

BILL OF MATERIAL

24.	DEWPOINT INDICATOR(OPTIONAL)	1 NO
23.	GLOBE VALVE-1/2"	7 NOS
21.	BALL VALVE - PSV	3 NOS
20.	TEMPERATURE ELEMENT	1 NO
19.	TEMPERATURE INDICATOR CONTROLLER	1 NO
18.	TEMPERATURE SWITCH HIGH	2 NOS
17.	TEMPERATURE INDICATOR	2 NOS
16.	PRESSURE INDICATOR	4 NOS
15.	2/2 WAY BALL VALVE ACTUATOR OPERATED	1 NO
14.	FLOW INDICATOR	1 NO
13.	CONTINUOUS DRAIN VALVE	2 NOS
12.	HEATER	1 NO

DS Series Specifications

Model	Inlet Flow		End Connection	Power Heater KW
	cfm	cu.m/min		
DS 500	500	14.16	2½" NB	17
DS 1000	1000	28.32	4" NB	30
DS 1500	1500	42.48	6" NB	44
DS 2000	2000	56.64	6" NB	65
DS 3000	3000	84.96	6" NB	96
DS 4000	4000	113.28	8" NB	128

Designed for Air Inlet Pressure 7 kg/cm²

Designed for Air Inlet Temperature 38°C

Designed for Ambient Temperature 35°C

Desiccant : Activated alumina with adsorption capacity 14%

Principle of Operation

The Split Flow Dryer works on the Principle of Thermal Swing. The desiccant adsorbs moisture from the compressed air to deliver dry air. The desiccant bed saturates over a period of time. The saturated bed is regenerated by heating with split hot air using a Heater. Since the temperature of the bed swings between the compressed air temperature and the regeneration temperature, it is called Thermal swing type.

Working Principle

The split flow dryers are used in order to avoid the purge loss as in the case of other dryers. The inlet air is split in a suitable ratio and the split air is used for regeneration. After regeneration the split air combines at a stage before adsorption so that there is no purge loss. The inlet air is split into two in a suitable ratio. One portion of that air is passed through a heater and then through the tower to be regenerated. The hot air carries the moisture

adsorbed by the desiccant during drying. It then passes through an after cooler and a moisture separator by means of a 4/2 way valve. This air is then mixed with the inlet air at a stage and is passed through the tower in which the drying process is carried out. The dry air is finally let out after adsorption. The adsorption of moisture by activated alumina will not be effective at elevated temperatures. So the heated bed should be cooled before the drying starts in that particular tower. But if heated bed is cooled using inlet wet air, Dew point spike will occur. So heated bed should be cooled using Dry Air. For this purpose, at cooling cycle first 100% inlet air is dried through another tower. After that heated bed is cooled effectively using 100% ongoing dry air. It then passes through the another after cooler before it is let out. Since the regeneration air is not let out as a waste, there is no purge loss in this type of dryers. Once when the cycle is completed, the position of the valves are changed so that the regeneration process is shifted to another tower where drying was performed previously. The P & I drawing of Split Flow Dryers can be referred for better understanding.

Salient Features

- No purge loss
- Low dew point
- Low pressure drop
- Low energy cost for given dew point
- Compact
- Ready to use
- Reliable design & components
- Available to various standards
- Dew point based tower changeover controls
- Low total cost of ownership
- Extensive operation & maintenance manuals

Local Panel Interface

- Flow indication
- Low Flow Alarm
- Heater failure alarm
- Inlet Valve change over failure
- Emergency stop
- Tower function status
- System On/Off condition
- Heater On/Off
- Alarm Reset
- Dewpoint Indicator (Optional)
- Dew Point Alarm (Optional)

Central Control Room Interface

- Heater failure
- Run
- Trip
- High Moisture Level Content (Optional)
- High Moisture Level Alarm (Optional)

Applications



Manufacturing Facility



Our Presence



Trident Pneumatics Pvt Ltd

5/232, K.N.G. Pudur Road, Coimbatore - 641 108, India.
Ph : +91-422-2400492 Fax : +91-422-2401376

Trident Pneumatics Pvt Ltd

Shanghai, China.

Trident Pneumatics Sdn Bhd

Selangor, Malaysia.

e-mail : sales@tridentpneumatics.com Website : www.tridentpneumatics.com

Sales & Service Outlets

Ahmedabad 98259 26342	Baroda 98795 16299	Bangalore 98450 93322	Chennai 98400 97782	Delhi 98113 10726	Hyderabad 98854 45321	Kolkatta 24071900	Mumbai 25434551	Pune 27471877
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Our Other Range of Products

- Timer based Auto Drain Valve
- Level Sensing Auto Drain Valve
- Submicron Filter
- Moisture Separator
- Desiccant Dryer (Heated)
- Desiccant Dryer (Heatless)

