sümer®

DESICCANT AIR DRYER

- Low Energy Consumption
- Long Life
- Smart Algorithm

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HYGCEN GERMANY · SZUTEST NOTIFIED BODY 2195 · kiwa Partner for progress · CE 2195 · ISO 13485 · ISO 14001 · ISO 9001

About us

SÜMER was established in 1981 in Ankara to prove services in the medical device sector. It has aimed advancement since the day of its establishment both in medical, industrial and defense field by also taking growth and compliance with the contemporary technologies and protecting the environmental conditions. Our manufacturing takes place in an area of 25.000 m2 in Ankara Organized Industrial Zone, Türkiye.

SÜMER is following innovations through its research and development department and with its strong infrastructure.

SÜMER is strictly following the “Quality Management” principles and rules from the design of the products to the after-sale servicing.

SÜMER has been currently certificated for compliance with ISO 9001 quality management system, ISO 13485 medical device quality management system certificate and ISO 14001 environment management system certificate and with product certificates under MDD 93/42/EEC Medical Devices Directive, CE and PED 2014/68/EU Pressurized Equipment certificates.

SUMER possesses the following certificates;
CE Certificates under the following directives:

- ISO 9001,
- ISO 13485,
- ISO 14001 Quality Management System,
- MDD 93/42/EEC Medical Devices,
- PED 2014/68/EU Pressurized Equipment

Our Vision

To make SÜMER a global brand in the field.

Our Mission

Our main task is to create designs with competition power in the global sense by taking the priorities of the sector into consideration and being respectful to the environment and people and giving the priority to the wishes and expectations of customers, and also to produce innovative technological products by meeting all the national and international legal requirements.

Our Basic Values

- We are bound up with the Ethical Rules,
- We are people-oriented,
- We respect environment,
- We are creative,
- We are customer-oriented,
- We are innovative,
- We are pro-active,
- We believe in the team spirit.

AIRFRESH – The Desiccant Dryer

Compressed air is almost always 100% saturated. When it cools, the moisture will condense, causing damage to the air system. Untreated air with excessive moisture can cause corrosion in pipes and premature failure of pneumatic equipment. A dry compressed air system is essential to maintain the reliability of production processes.

SÜMER's desiccant dryers produce dry compressed air from -40 °C to -70 °C Celsius pressure dew point in a reliable and energy efficient way while protecting your systems and processes. First, air is compressed up to 7-13 bars with the help of compressors. Filtration takes place thereafter to filter out the condensed water, remaining particles, aerosol and oil which is in the pressurized air stream. Finally, air is supplied into the PSA tanks to remove the moisture in the air.

PSA unit consists two tanks filled with Activated Alumina and Zeolites. Each column undergoes cyclic sequence of pressurization, drying and exhaust cycles for continuous flow. Wet air passes directly through the desiccant which adsorbs the moisture. However, the desiccant has a finite capacity for adsorbing moisture, therefore it must be dried out (regenerated). To do this, the tower containing saturated desiccant medium is depressurized and the accumulated water is driven off.

Key Features of AIRFRESH

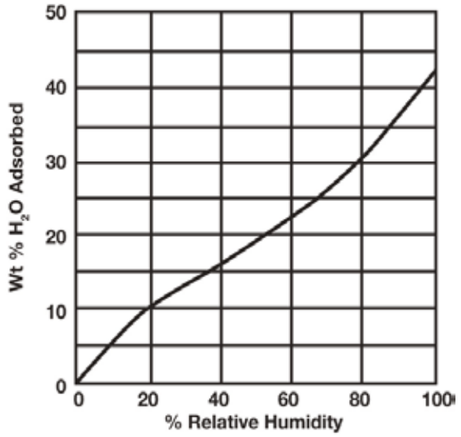
- Fully Automatic 24/7
- Real time trends of process parameters
- Visual recommended service maintenance reminders
- Algorithm against electricity cuts-off (dew point does not drop after electricity cut)
- Smart Algorithm (Dryer automatically adjusts its timing depending on the set dew-point)
- No air loss when there is no air demand
- Can be controlled remotely via its dry contact
- Can send alarm conditions via its dry contact
- Can send start signal via its dry contact
- Highest packing density of activated alumina and zeolites
- Uniform flow distribution design to maximize activated alumina and zeolites life
- Medical/Industrial Grade Air Filtration
- German BASF Activated Alumina
- Galvanized (Std.) or Stainless-Steel piping (Opt.)
- Real Time Monitoring
- Recording Capabilities and Data Logging
- Multi-level secured access for supervisory control
- Top quality SMC or OMAL VIP valves
- 4-inch Siemens Touch Panel
- User Friendly Interface
- Multi language

System Configuration

- Compressor
- Water Separator
- Filter Set (particulate - 1 micron and oil filter – 0.01 micron)
- Desiccant Dryer
- After Filter (dust filter – 1 micron)
- Air Tank

BASF Activated Alumina Properties

Typical Physical Properties	7x14 Tyler Mesh (2.0 mm)	1/8" (3.2 mm)	3/16" (4.7 mm)	1/4" (6.4 mm)
Surface Area, m^2/g	360	350	340	320
Total Pore Volume, cc/g	0.5	0.5	0.5	0.5
Packed Bulk Density, lbs/ft^3 (kg/m^3)	48 (769)	48 (769)	48 (769)	48 (769)
Crush Strenght, lbs (kg)	11 (5)	30 (14)	55 (25)	70 (32)
Abrasion Loss, wt %	0.1	0.1	0.1	0.1



Capacities

Capacity may slightly change under different environmental conditions and during the life time of the desiccant dryer. Performance at 20 ºC and 1 bar atmospheric conditions for -40ºC Celsius Pressure Dew Point

Dryer Type	L/s	m3/min	Power
AIRFRESH - 50	55	3,3	110V-230V / 50-60 Hz
AIRFRESH - 60	67	4,0	110V-230V / 50-60 Hz
AIRFRESH - 75	83	5,0	110V-230V / 50-60 Hz
AIRFRESH - 100	110	6,7	110V-230V / 50-60 Hz
AIRFRESH - 125	140	8,4	110V-230V / 50-60 Hz
AIRFRESH - 150	167	10,0	110V-230V / 50-60 Hz
AIRFRESH - 200	222	13,3	110V-230V / 50-60 Hz
AIRFRESH - 225	250	15,0	110V-230V / 50-60 Hz
AIRFRESH - 250	278	16,7	110V-230V / 50-60 Hz
AIRFRESH - 300	333	20,0	110V-230V / 50-60 Hz
AIRFRESH - 350	380	23,0	110V-230V / 50-60 Hz
AIRFRESH - 400	445	26,5	110V-230V / 50-60 Hz
AIRFRESH - 500	555	33,3	110V-230V / 50-60 Hz
AIRFRESH - 600	667	40,0	110V-230V / 50-60 Hz
AIRFRESH - 750	833	50,0	110V-230V / 50-60 Hz
AIRFRESH - 1000	1110	67,0	110V-230V / 50-60 Hz
AIRFRESH - 1250	1390	84,0	110V-230V / 50-60 Hz
AIRFRESH - 1500	1667	100,0	110V-230V / 50-60 Hz

Correction Factors

CORRECTION FACTORS FOR DIFFERENT OPERATING PRESSURES

BAR(G)	4	5	6	7	8	9	10	11	12	13
Correction Factor	0,60	0,74	0,86	1,00	1,10	1,20	1,30	1,35	1,40	1,46

CORRECTION FACTORS FOR DIFFERENT INLET TEMPERATURES

Temperature (ºC)	25	30	35	40	45	50

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