

Compressed Air & Gas Drying and Filtration Equipment

STYL AIR

SHL Series Heaterless Desiccant Dryers

StylAir SHL model dryers are heaterless, twin-tower, regenerative desiccant dryers designed to remove water vapor from compressed air and gas streams to a pressure dewpoint of -40°F and lower.

Heaterless (pressure-swing adsorption) dryers are preferred for their simple, reliable design and low initial cost. A continuous flow of dry air or gas is provided to eliminate moisture and contaminants found in all air and gas systems.



Standard Features

- -40°F line pressure dewpoint
- ASME Code desiccant vessels*
- NEMA 10 minute cycle, fully automatic operation
- Adjustable timer cycle for lower dewpoints*
- Fail safe operation. Continuous flow on loss of power or control air
- Non-lubricated valves
- Tower pressure gauges on all models
- Gradual repressurization for long desiccant life
- ASME relief valve on outlet manifold
- Full charge of desiccant
- Heavy duty angle and channel support base*
- NEMA 4 electrical construction
- Cycle Failure Alarm*
- 120V/1Ph/60Hz operation - 200w max
- On-Off switch with Power On light*
- LED pilot lights

*Floor mounted models

Optional Features

- -70°F to -100°F line pressure dewpoint
- Purge Rate Flowmeter - included on larger models
- NEMA 4X, 7 electrics
- Entrainment Separators
- Coalescing Prefilters
- Afterfilters
- Mounted filters, manual bypasses
- Dewpoint monitors and alarms
- Color change dewpoint indicator
- Temperature gauges
- Steam jet ejector for vacuum purge
- Special designs available for flows to 30,000 SCFM and pressures to 5000 PSIG
- Construction for corrosive environments, explosive process gases, off-shore installations
- Full pneumatic controls - for hazardous locations or where electrical power is not available
- Optional voltages - 12 or 24 VDC; 110-220V/50hz
- **Exclusive Demand System for Heaterless Dryers**

StylAir Heaterless Regenerative Desiccant Dryers

The StylAir regenerative desiccant dryer is a fully automatic unit designed to dry compressed air or gas to meet or exceed the customer's requirements. The dryer consists of dual drying chambers which are alternately cycled through drying and regeneration cycles. One chamber is drying air at all times.

The wet, compressed process air flows through one drying tower where water vapor is adsorbed into the desiccant - an inert, hygroscopic material with an enormous surface to mass ratio. The off-stream drying tower is regenerated by taking a small amount of the dried process air (purge) and passing it through its bed at low (atmospheric) pressure. The moisture trapped in the desiccant is released and is carried off by the purge flow and exhausted to atmosphere.

Conservative Tower Sizing - Designed for Optimum Performance and Long Desiccant Life

- Low upflow velocities - < 60 fpm
- Long contact times - 5 sec or more
- Controlled blowdown and repressurization

Rugged, Reliable Industrial Controls

- UL components from controllers to terminal boards to provide that extra measure of safety
- High style NEMA 4/IP65 enclosures
- Microprocessor/PLC based controls provide real diagnostic info

Proven high reliability valving

- Designed for air dryer service
- Non-lubricated, high cycle design
- Easy maintenance
- Only dry, filtered pilot air is used for actuated valves

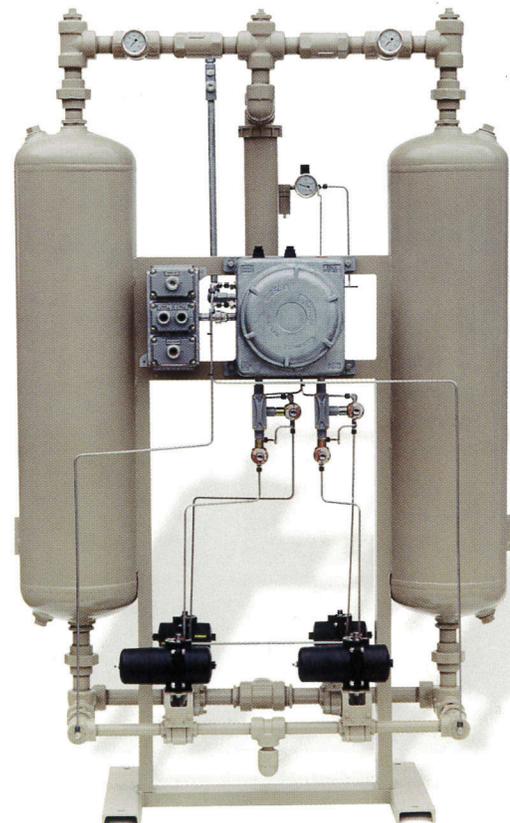
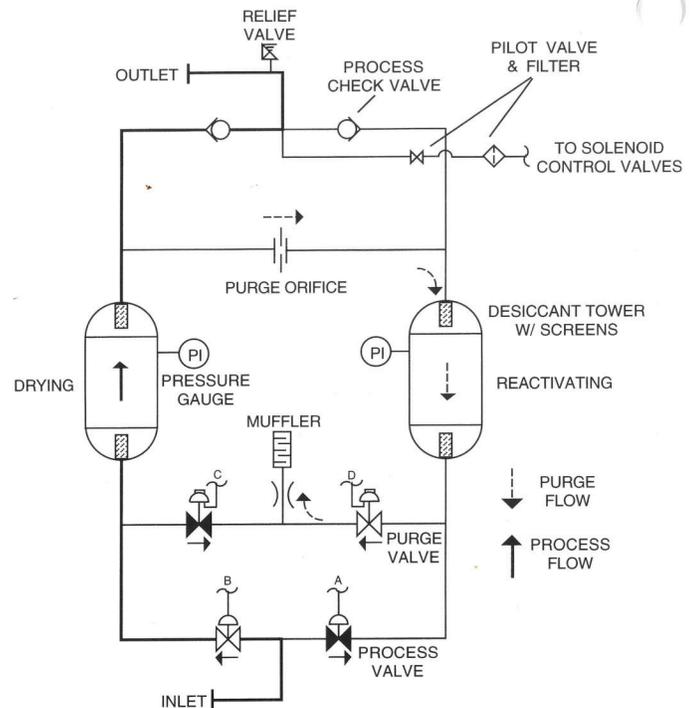
ASME code designed and stamped drying towers on all floor models

SS Desiccant Support/Flow Distributors

- Practically indestructible wedge-wire design prevents collapse or tearing; are cleanable and reusable (floor models)
- High strength welded screen on wall models

Separate desiccant fill and drain ports on all models (exc SHL-A02 and SHL-A025)

Standard corrosion resistant acrylic coating protects for years in adverse environments

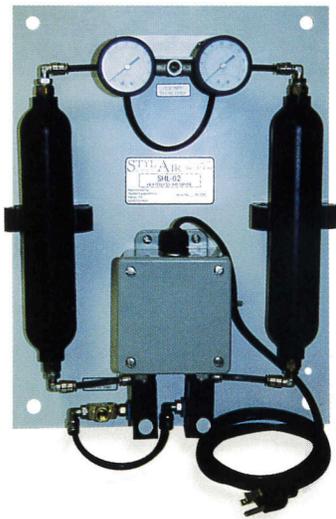
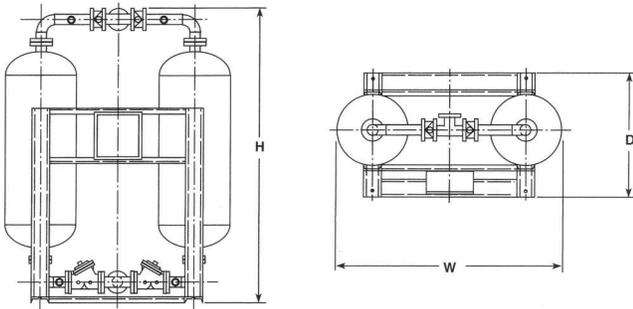


Hazardous Location Dryers

Specifications
SHL Series

MAXIMUM FLOW CAPACITIES (SCFM)

Model SHL-	80 PSIG		90 PSIG		100 PSIG		110 PSIG		120 PSIG		Conn. Size	App. Dims. W x D x H	App. Wgt.
	100°F	120°F	100°F	120°F	100°F	120°F	100°F	120°F	100°F	120°F			
A02	0.8	0.8	0.9	0.9	1.0	1.0	1.1	1.0	1.2	1.1	1/8"	13 x 5 x 17	16 lbs.
A025	1.7	1.6	1.8	1.8	2.0	1.9	2.2	2.1	2.3	2.3	1/4"	13 x 5 x 17	18 lbs.
A02L	4.1	4.0	4.6	4.4	5.0	4.8	5.4	5.2	5.9	5.7	1/4"	21 x 7 x 34	30 lbs.
A03	12	12	14	13	15	14	16	16	18	17	1/2"	21 x 7 x 46	55 lbs.
A06W	29	28	32	31	35	34	38	37	41	40	1/2"	27 x 8 x 46	80 lbs.
A06F	66	64	73	71	80	77	87	84	94	91	3/4"	28 x 16 x 83	290 lbs.
A08	111	108	123	119	135	130	147	142	159	153	1"	34 x 18 x 82	475 lbs.
A10	132	128	146	141	160	154	174	168	188	181	1"	36 x 20 x 70	550 lbs.
A10L	182	175	201	194	220	212	239	231	258	249	1-1/2"	40 x 20 x 90	650 lbs.
A12	264	255	292	282	320	309	348	336	376	363	1-1/2"	52 x 20 x 90	780 lbs.
A14	363	351	402	388	440	425	478	462	517	499	1-1/2"	54 x 20 x 90	950 lbs.
A16	479	462	529	511	580	560	631	609	681	658	2"	56 x 22 x 96	1150 lbs.
A18	611	590	675	652	740	714	805	777	869	839	2"	56 x 30 x 96	1500 lbs.
A20	743	717	822	793	900	869	978	945	1057	1020	3" Flgd.	72 x 38 x 96	1900 lbs.
A24	1073	1036	1187	1146	1300	1255	1413	1365	1527	1474	3" Flgd.	76 x 42 x 96	2200 lbs.
A30-3	1321	1275	1461	1410	1600	1545	1739	1680	1879	1814	3" Flgd.	88 x 48 x 92	3700 lbs.
A30-4	1693	1634	1871	1807	2050	1979	2229	2152	2407	2324	4" Flgd.	88 x 48 x 108	4500 lbs.
A36-4	2460	2376	2720	2626	2980	2877	3240	3128	3500	3379	4" Flgd.	100 x 58 x 116	6000 lbs.
A36-6	2460	2376	2720	2626	2980	2877	3240	3128	3500	3379	6" Flgd.	100 x 58 x 116	6500 lbs.
A42	3303	3189	3651	3525	4000	3862	4349	4199	4697	4535	6" Flgd.	134 x 52 x 118	7600 lbs.
A48	4211	4066	4655	4495	5100	4924	5545	5353	5989	5783	6" Flgd.	140 x 60 x 118	9500 lbs.



1 SCFM Wall Mount Dryer



2000 SCFM Process Dryer

StylAir OA20-5 Demand System for Heaterless Dryers

Our exclusive OA20-5 Demand System for Heaterless Dryers is the most effective and reliable **purge saver** system on the market.

A heaterless dryer uses only a superficial amount of the usable desiccant capacity. During normal operation the desiccant surface is barely wetted. By placing a dewpoint sensor downstream of the dryer (as some do), the desiccant has to become saturated before the sensor can see a rise in dewpoint. Once the desiccant is saturated, it cannot be regenerated by pressure swing desorption. The dryer may "track" the setting of the dewpoint monitor, but it does not yield any purge savings.

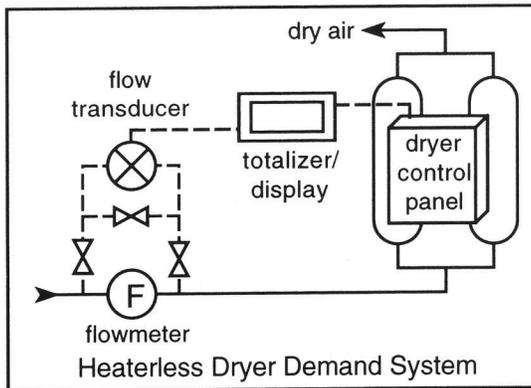
Sensors (dewpoint and temperature) placed **in** the desiccant bed are also not effective in reducing purge. The mass transfer zone within the bed is a dynamic entity. Depending on the actual conditions, this zone moves up and down the bed. With the sensors (or sensing sample points) at a fixed location within the bed, they cannot follow the activity of the bed. Over time, the bed ages or can become contaminated with normal oil and condensate carryover from most compressors - even with good filtration, it's going to occur. When this happens, the mass transfer zone

simply moves up the bed leaving the sensor in the saturated desiccant. The sensor remains wet and no savings can be realized.

StylAir's unique OA20-5 Demand System for Heaterless Dryers monitors the mass flow through the dryer. Purge savings are directly related to the actual usage of the dryer. When a regen cycle begins, the off-stream tower depressurizes and then is purged using full purge flow; it then repressurizes and waits in standby for the next drying cycle. The current on-stream tower will remain on stream until a mass of air equivalent to full design flow for five minutes passes through it. For example, if a dryer is running at 50% flow, then it will remain on stream for ten minutes - twice the normal drying cycle. During this extended drying time, the off-stream tower uses no purge. The **average** purge loss is reduced by 50%. This system is effective, reliable and produces real savings.

Our rugged flow transducer monitors a very low differential pressure to measure flowrate, however, it can tolerate full line pressure differential in either direction without damage or needing to be recalibrated. The flow computer used to totalize the throughput is protected by a NEMA 4 bezel. The standard display simply reads the % of total flow which has passed through the on stream tower during the drying cycle.

A strong selling point for our demand system is that it requires no operator interaction. There is no set-up required. The only extra control provided is a selector switch to switch from demand operation to program operation. Note: in the program mode, the display will continue to monitor total flow through the dryer. When switchover occurs at the end of the programmed 5-minute cycle, the display will show the accumulated flow and then be reset to "0". By monitoring a few cycles, the operator can get a feel of what the actual average air usage is for the plant.



Dewpoint Monitors



Support/Flow Distributors

STYL AIR

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and Filtration Equipment

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