

Desiccant Air Dryers

HSHD series

Hankison's HSHD Series Desiccant Air Dryers protect moisture sensitive applications requiring low pressure dew points.

- Delivers dew points of ISO 8573-1:2010 Class 1 (-70°C) and Class 2 (-40°C) with flow rates of 12 to 68 m³/h.
- Critical applications include labs, hospitals, pharmaceutical manufacturing and other high-tech installations.
- Base mounting brackets.
- Constructed primarily of aluminum components.
- Ships fully assembled ready for installation.
- Factory charged with premium desiccant in an easy-to-replace bag.
- A filtration kit consisting of a coalescing pre-filter and particulate after-filter protect the dryer and downstream equipment for optimal performance and durability.
- Halon-free wiring.
- Consistent outlet pressure dew points.
- Minimum purge air usage saves energy - reduced 3,5% from prior models.
- Desiccant bed sized to prevent fluidization and slow/complete regeneration to prevent desiccant aging.
- Heavy duty internal exhaust muffler for quiet operation.
- Non-lubricated, soft-seated control valves for reliable operation.
- Flexible installation with multiple inlet and outlet options.
- Large flow diameters for optimal delta-p - reduced 20% from prior models.
- Selectable pressure dewpoint performance for maximum application flexibility.

Options available:

- PDP-sensor kit for dewpoint controlled operation (dewpoint reading).
- Wall mounting kit.



	Inlet & Purge Flows		Inlet/Outlet Connections	Dimensions			Purge Flow	
	-40°C*	-70°C**		H	W	D	Average	Maximum
Model	m³/h	m³/h		mm	mm	mm	m³/h	m³/h
HSHD 7	12	8	PT 1/2"	494	346	168,5	2,3	2,70
HSHD 13	22	15	PT 1/2"	666	346	168,5	4,5	5,05
HSHD 18	31	20	PT 1/2"	884	346	168,5	5,7	6,46
HSHD 21	36	23,5	PT 1/2"	1101	346	168,5	7,2	8,05
HSHD 27	46	30,5	PT 3/4"	994	386	188,5	8,3	9,21
HSHD 40	68	45,5	PT 3/4"	1244	386	188,5	15	16,12

* Related to: +35°C compressed air inlet; 7 bar(g) operating pressure; pressure dew point -40°C

** Related to: +35°C compressed air inlet; 7 bar(g) operating pressure; pressure dew point -70°C

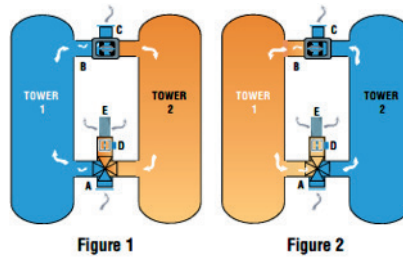
Specification		
Pressure dewpoint	Class 2 (-40°C)	
	Class 1 (-70°C)	
Working Pressure	min	4 barg
	max	15 barg
Inlet Air Temp	min	2°C
	max	50°C
Ambient Air Temp	min	2°C
	max	50°C
Air Pressure Drop	min	0.10 bar
	max	0.20 bar

How it works

Figure 1. Compressed air enters the dryer and is directed to Tower 1 by valve (A), and then to the dryer outlet through shuttle valve (B).

A portion of the dried air is throttled to near atmospheric pressure by means of orifice (C). This extremely dry, low pressure air flows through and regenerates the desiccant in Tower 2 and is exhausted through purge/repressurization valve (D) and exhaust muffler (E) to atmosphere. After a set time, the automatic solid state timer closes purge/repressurization valve (D) allowing Tower 2 to repressurize slowly. At the end of 2 minutes, valve (A) shifts and purge/repressurization valve (D) reopens.

Figure 2. The main air flow is now dried by Tower 2 while Tower 1 is being regenerated.



Inlet Pressure												
Working Pressure (bar)	4	5	6	7	8	9	10	11	12	13	14	15
K _p	0,40	0,75	0,77	1,00	1,13	1,25	1,38	1,38	1,50	1,56	1,61	1,67

Air Inlet Temperature								
Inlet Temperature C°	30	35	38	40	45	50	55	60
K _{Tin} (DTP = -40°C / PDP = -40°F)	1,07	1,07	1	0,93	0,82	0,72	-	-
K _{Tin} (DTP = -70°C / PDP = -94°F)	1,20	1,00	-	-	-	-	-	-

Purge air development at different inlet pressure conditions	≤ 10 bar(g) / 145 psig											
	Purge: 3 Min. / 20 Sec. {-40°C DTP}						Purge: 2 Min. / 20 Sec. {-40°C DTP}					
Working Pressure (bar)	Purge: 1 Min. / 20 Sek. {-70°C DTP}											
K _{Purge} (DTP = -40°C / PDP = -40°F)	4	5	6	7	8	9	10	11	12	13	14	15
K _{Purge} (DTP = -70°C / PDP = -94°F)	0,63	0,75	0,88	1,00	1,13	1,25	1,38	1,09	1,19	1,28	1,37	1,46
K _{Purge} (Max Purge)	0,63	0,75	0,88	1,00	1,13	1,25	1,38	1,09	1,19	1,28	1,37	1,46



Industrial Technologies & Services ATS Moers GmbH
 Konrad-Zuse-Strasse 25
 47445 Moers, Germany
 Tel.: +49 (0) 28 41 / 8 19-0 | Fax: +49 (0) 28 41 / 8 19 83
 E-Mail: insidesales_moers@spxflow.com