

Wall Mount Desiccant Air Dryers

DHW SERIES 7 to 50 scfm (12 to 85 nm³/h)









Optimal System Protection

Hankison's DHW Series Wall Mount Desiccant Air Dryers protect moisture sensitive applications requiring low pressure dew points. Delivers dew points of ISO 8573-1: 2010 Class 1 (-100°F, -73°C) and Class 2 (-40°F, -40°C) with flow rates of 7 to 50 scfm (12 to 85 nm³/h). Critical applications include labs, hospitals, pharmaceutical manufacturing and other high-tech installations.

Technology at a Glance

- Consistent outlet pressure dew points
- Slow and
- Minimum purge air usage saves energy
- Desiccant beds sized to prevent fluidization plus slow and complete regeneration prevents desiccant aging
- Heavy duty purge exhaust muffler for quiet operation
- Non-lubricated, soft seated control valves promotes reliable operation

Supreme Craftsmanship

Furnished in cabinet for easy wall mounting

- Fully assembled, piped and wired eases installation
- Shipped with desiccant charge
- Six foot (1.8 m) cord set standard

Front mounted control panel

- Power on light
- Tower indicator lights
- On-off switch

Highly accurate solid state timer

- Standard 4 minute cycle time delivers ISO Quality Class 2 pressure dew point
- Flow deration delivers ISO Quality Class 1 pressure dew point

Optional NGF Series filter packages

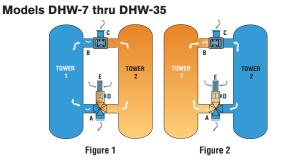
- Grade HF coalescing prefilter captures oil down to 0.008 mg/m³
- Grade PF afterfilter removes solids 1.0 micron and larger

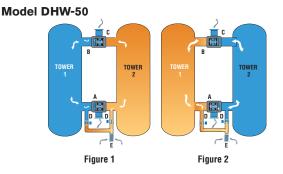
Product Specifications

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.





DHW Series Product Specifications

Model	Inlet Flow Capacity			Inlet/Outlet		Weight				
	-40°F (-40°C)		-100°F (-70°C)		Connections	н	w	D		
	scfm	nm³/h	scfm	nm³/h	in		in		lbs	
DHW-7	7	12	5	9	1/2" NPT	30.5	17.52	6.69	55	
DHW-13	13	22	10	17	1/2" NPT	30.5	17.52	6.69	60	
DHW-20	20	34	16	27	1/2" NPT	30.5	17.52	6.69	71	
DHW-25	25	43	20	34	1/2" NPT	31.6	24.37	8.54	93	
DHW-30	30	51	24	41	1/2" NPT	31.6	24.37	8.54	93	
DHW-35	35	60	28	48	1/2" NPT	31.6	24.37	8.54	99	
DHW-50	50	85	40	68	3/4"NPT	43.3	24.37	8.54	132	

Capacity Correction Factors

To determine maximum inlet flow at pressures other than 100 psig (6.7 barg), multiply inlet flow from Table 1 by the multiplier from Table 2 that corresponds to system pressure at inlet of dryer.

To determine purge flow at inlet pressures other than 100 psig (6.7 barg), multiply purge flow at 100 psig (6.7 barg) from Table 1 by the multiplier from Table 3 that corresponds to system pressure at inlet of dryer. To determine outlet flow capacity, subtract purge flow from inlet flow.

Table 1 - Inlet & Purge flows @ 100 psig (6.7 barg)

Model	Inlet Flo	Purge Flow ² scfm (nm ³ /h)							
	-40°F (-40°C) -40°C -100°F (-73°C) -73°C				Aver	age	Maximum		
DHW-7	7.3	12	5.6	9.5	1.5	2.5	2.0	3.4	
DHW-13	13	22	10	17	2.7	4.6	3.7	6.3	
DHW-20	20	34	16	27	4.2	7.1	5.5	9.3	
DHW-25	25	42	20	34	5.1	8.7	6.8	12	
DHW-30	30	51	24	41	6.2	11	8.2	14	
DHW-35	35	59	28	48	7.2	12	9.6	16	
DHW-50	50	85	40	68	10.2	17	13.6	23	

1 Inlet flows are established in accordance with CAGI (Compressed Air and Gas Institute) standard ADF-200, Dual Stage Regenerative Desiccant Compressed Air Dryers - Methods for Testing and Rating. Conditions for rating dryers are: inlet pressure - 100 psig (6.7 barg); inlet temperature - saturated at 100°F (38°C).

2 Average Purge Flow is the total amount of air used to purge and repressurize off-stream towers averaged over the cycle time. Maximum Purge Flow is the flow rate through the off-stream tower during that portion of the cycle the purge/ repressurization valve is open.

Table 2

Inlet	psig	50	70	90	100	110	120	130	150
Pressure	barg	3.5	4.9	6.3	7.0	7.7	8.4	9.1	10.5
Multiplier		0.31	0.54	0.83	1.00	1.09	1.17	1.26	1.44

Table 3

Inlet p	sig	50	70	90	100	110	120	130	150
Pressure b	arg	3.5	4.9	6.3	7.0	7.7	8.4	9.1	10.5
Multiplier		0.55	0.73	0.91	1.00	1.09	1.17	1.26	1.44



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