

Refrigeration Dryer

HHD - SERIES

BENEFITS AND FEATURES

- Lower energy consumption
- Corrosion-free air circuit, made of copper and stainless steel
- Powder-coated housing
- Unique heat-exchanger technology



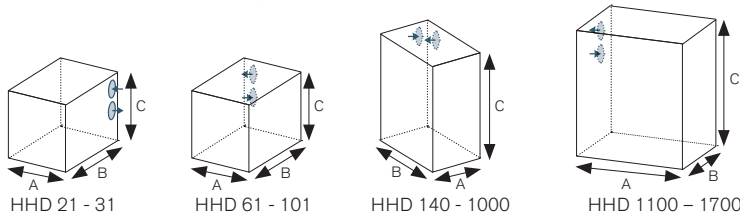
Technical Data	HHD 21	HHD 31	HHD 61 – 101	HHD 140 – 1000	HHD 1100 – 1700
Inlet / Outlet	Right		Back	Right: In, back: out	Left
Bypass			○		
Aircooling			●		
Water cooling			–		○
Heat exchanger	Copper piping			Stainless steel plates (copper welded)	
IP rating			IP23		IP44
Dew point indication			Analogue gauge		
Potential free alarm contact			–		●
Float drain	●		–		–
Time-controlled condensate drain	–		●		–
Electronic level controlled drain	–		○		●

	HHD 21 – HHD 160	HHD 240 – HHD 1000	HHD 1100 – 1300	HHD 1700
Refrigerant	R-134a	R 407C	R-134a	R-407A

General Data	
Medium	Compressed Air
Housing	Steel
Colour - Top Panel	RAL 5015 (blue), powder-coated
Colour - Housing	Grey, powder-coated
Location	Indoors

Model	Flow Rate*	Connection	Dimensions			Weight	el. Connection	Power Consumption	
			A	B	C				
			mm			kg	V/Ph/Hz	kW	
HHD 21	20	R 3/8"	344	320	390	15	230/1/50 230/1/60	0.24	
HHD 31	30					19			
HHD 61	60					29			
HHD 81	80	R 3/4"	368	419	575	41			0.34
HHD 101	100					500			523
HHD 140	140	R 1"	393	891	601	50	230/1/50	0.58	
HHD 160	160					53		0.60	
HHD 240	240					58		0.87	
HHD 315	315	R 2"	483	1.011	761	72		1.10	
HHD 360	360					78		1.30	
HHD 470	470					86	1.48		
HHD 580	580					100	1.90		
HHD 680	680					112	2.45		
HHD 820	820					134	2.55		
HHD 1000	1,000					155	2.70		
HHD 1100	1,100	R 2 1/2"	1.129	857	1.510	314	400/3/50	2.55	
HHD 1300	1,300					327	460/3/60	2.95	
HHD 1700	1,700	R 3"	1.131			354		5.70	

* ISO 7183, based on the intake volume of the compressor at +20°C and 1 bar (a), operating pressure 7 bar (g), inlet temperature +35°C, ambient or cooling water temperature +25°C, pressure dew point +3°C
 Technical data and specification are subject to change without prior notice



Design Data*	Min.	Nom.	Max.	
Operating pressure	2 bar (g)	7 bar (g)	16 bar (g)	10 bar (g)
Inlet temperature	+4 °C	+35 °C	+50 °C	+55 °C
Ambient temperature	HHD 21 – 101	+25 °C	+50 °C	+55 °C
	HHD 140 – 1000		+45 °C	+50 °C
	HHD 1100 – 1700		+45 °C	+45 °C

* The following correction factors need to be used to select the correct unit for other operating conditions.
 Hankison® refrigerant compressed air dryers are best used with a Hankison® SF pre-filter and a HF after-filter.

Correction factors for different operating pressures in bar (g) (F ₁)																
bar (g)	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
HHD 21 – 101		0.84	0.90	0.93	0.97	1.00	1.02	1.04	1.06	1.07	1.08	1.09	1.10	1.10	1.11	
HHD 140 – 1000		0.79	0.87	0.92	0.96	1.00	1.03	1.07	1.10	1.13	1.16	1.18	1.21	1.22	1.24	
HHD 1100 – 1700	0.68					1.00								1.24	1.27	

Correction factors for different inlet temperatures in °C (F ₂)				
°C	+35	+40	+45	+49
HHD 21 – 101	1.00	0.86	0.75	0.63
HHD 140 – 1000	1.00			
HHD 1100 – 1700	1.00	0.85	0.71	0.63

Correction factors for different ambient temperatures in °C (F ₃)					
°C	+25	+30	+35	+40	+43
HHD 21 – 101	1.00	1.00	1.00	1.00	1.00
HHD 140 – 1000	1.00	0.92	0.85	0.80	
HHD 1100 – 1700	1.00	0.94	0.89	0.83	0.78

Selection example		Calculation
Compressor capacity (V ₁)	550 m ³ /h	$V_2 = \frac{V_1}{F_1 \cdot F_2 \cdot F_3} = \frac{550}{1.1 \cdot 0.71 \cdot 0.92} = 765 \text{ m}^3/\text{h}$
Operating pressure (F ₁)	10 bar (g)	
Inlet temperature (F ₂)	+45 °C	
Ambient temperature (F ₃)	+30 °C	
V ₂	Required dryer capacity	Selection: HHD 820

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