

ZDHHT Series

High Inlet Temperature Refrigeration Dryers



Clean, dry compressed air is as vitally important to a small manufacturing company as it is to the largest of production facilities. Parker domnick hunter has designed a dedicated line of high inlet temperature (up to 200°F (93°C)) refrigeration dryers for these smaller, critical applications. The ZDHHT High Inlet Temperature Refrigeration Air Dryer eliminates the need for a separate aftercooler, moisture separator and particulate filter. It is ideal for body shops, paint booths or wherever a high inlet air temperature dryer is required.

With its advanced 5 in 1 drying system, the need for additional piping and separate aftercooler is eliminated in existing applications resulting in lower pressure drop thereby saving you money. Incorporated within each ZDHHT dryer is an aftercooler, 3.0 micron filter, condensate separator, precooler/reheater and evaporator.



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Benefits:

- R134a environmentally friendly refrigerant with no planned phase out date.
- Energy efficient, low running costs. Air to air heat exchanger reduces overall size of refrigeration circuit by up to 60%. Zero air loss float drain saves air. Saving Air - Saves Energy - Saves Money
- No condensation on downstream piping. Air to air heat exchanger raises outlet air temperature eliminating condensation that can occur on chilled piping in humid conditions.
- Eliminates need for separate aftercooler, pre-filter and moisture separator. These components are already built into the dryer, offering an all-in-one, easy to install package.
- Suited for placement after reciprocating type air compressor when clean, dry air is required.



ENGINEERING YOUR SUCCESS.

Product Selection

Model	Pipe Size	Nominal Flow (scfm)			Primary Voltages	Absorbed Power at 50°F (10°C) (KW)	Annual Maintenance Kit	Dimensions in (mm)			Weight lbs (kg)
		41°F (5°C)	50°F (10°C)	59°F (15°C)				A	B	C	
ZDHHT 15	3/8" NPT-F	12.3	15.0	18.1	115V1ph/60Hz	0.26	473344	17.7 (450)	32.0 (813)	9.8 (249)	55 (25)
ZDHHT 25	1/2" NPT-F	19.6	25.0	31.7	115V1ph/60Hz	0.34	473345	23.6 (600)	39.0 (990)	11.1 (282)	93 (42)
ZDHHT 35	1/2" NPT-F	28.2	35.0	42.7	115V1ph/60Hz	0.34	473345	23.6 (600)	39.0 (990)	11.1 (282)	95 (43)
ZDHHT 50	3/4" NPT-F	40.0	50.1	60.6	115V1ph/60Hz	0.70	473345	27.6 (700)	47.7 (1212)	13.9 (352)	134 (61)
ZDHHT 75	3/4" NPT-F	62.0	75.0	89.2	115V1ph/60Hz	0.88	473346	27.6 (700)	47.7 (1212)	13.9 (352)	154 (70)
ZDHHT 100	1/2" NPT-F	83.9	100.0	116.8	115V1ph/60Hz	1.22	473346	27.6 (700)	47.7 (1212)	13.9 (352)	161 (73)

Maximum ambient temperature	115°F (46°C)
Maximum inlet temperature	200°F (93°C)
Maximum inlet pressure	232 psi g (16 bar g)
Electrical supply	115V/1ph/60Hz
Refrigerant:	R134a

*Capacities are based upon:

Ambient temperature:	95°F (35°C)
Inlet temperature:	180°F (82°C)
Working pressure:	125 psi g (8.5 bar g)



Air Flow Correction Factors

Capacity correction factors to be used when operating conditions differ from those shown above. To obtain dryer capacity at new conditions multiply nominal capacity* x C1 x C2 x C3 x C4.

Ambient Temperature (C1)

°F	60	70	80	90	95	100	110	115
°C	16	21	27	32	35	38	43	46
Factor	1.93	1.67	1.38	1.12	1.00	0.89	0.69	0.61

Inlet Temperature (C2)

°F	90	100	110	120	130	140	150	160	170	180	190	200	220	230	250
°C	32	38	43	49	54	60	66	71	77	82	88	93	104	110	121
Factor	1.31	1.27	1.23	1.19	1.15	1.11	1.06	1.03	1.01	1.00	0.99	0.98	0.97	0.96	0.94

Inlet Pressure (C3)

psi g	50	60	70	80	90	100	120	125	135	150	160	170	180	190	200	210	220	232
bar g	3.5	4.1	4.8	5.5	6.2	6.9	8.3	8.6	9.3	10.3	11.0	11.7	12.4	13.1	13.8	14.5	15.2	16.0
Factor	0.78	0.83	0.87	0.90	0.93	0.95	0.99	1.00	1.01	1.04	1.05	1.06	1.07	1.08	1.08	1.10	1.12	1.13

Dewpoint (C4)

°F	38	42	46	50	56	60	66	70
°C	3	6	8	10	13	16	19	21
Factor	0.62	0.84	0.92	1.00	1.13	1.22	1.37	1.47