CompAir

CHT DRYERS

HIGH TEMPERATURE REFRIGERATED AIR DRYERS 20 - 350 SCFM

CRN APPROVED

ULTIMATE ENERGY SAVING TECHNOLOGY

THE SOLUTION TO A PROBLEM

Compressed air is an effective and reliable source of power which is used in many operations and processes in industry. However, compressed air does have some inherent problems, which if not treated properly, can create significant problems.

Problem 1

During the compression process, air becomes contaminated with water, dirt, metal particles and oil. These contaminants combine to form an abrasive and clogging agent in your compressed air line. Use of contaminated compressed air can result in prematurely worn pneumatic machinery; blocked valves and orifices; spoiled spray paint application; and corroded piping systems.

Problem 2

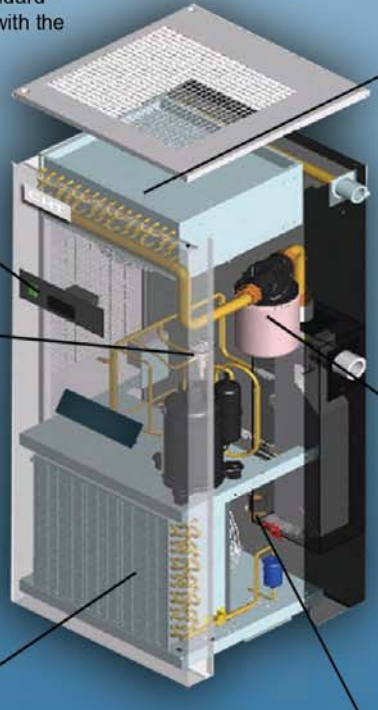
Traditionally, the solution to contaminated compressed air problems has been the use of various compressed air treatment products, installed downstream of the air compressor. These may include an aftercooler with moisture separator to remove bulk liquid; coalescing filters to trap oil and dirt; and a refrigeration dryer to condense any remaining saturated water. The problem in many cases is that there is insufficient space in the compressor room to properly fit the various compressed air treatment components. In addition, numerous inter-connecting pipe connections are required, increasing the risk of leaks.

The Solution

The solution to both these problems is an all-in-one compressed air purifying package designed and manufactured by a company with extensive knowledge and experience. The CHT series dryers are reliable, high efficiency compressed air purifying units that provide cool, clean and dry compressed air in one simple-to-install package. One inlet and outlet air connection and one electrical power hook-up are all that's required. The system provides a pressure dewpoint of +3C to + 7C (+ 37F TO + 45F) at 100 psig working pressure. Since most production processes operate at temperatures well above these levels, your compressed air will be clean and dry at all times.

CHT HIGH TEMPERATURE DRYERS

CONTROL PANEL
The CHT dryer operation is controlled by our own custom design DMC controller. The DMC 14 controller incorporates a digital dew point readout selectable in degrees F and C scale. As a standard feature the controller also displays a visual alarm condition with the built in capability to send a remote alarm signal.



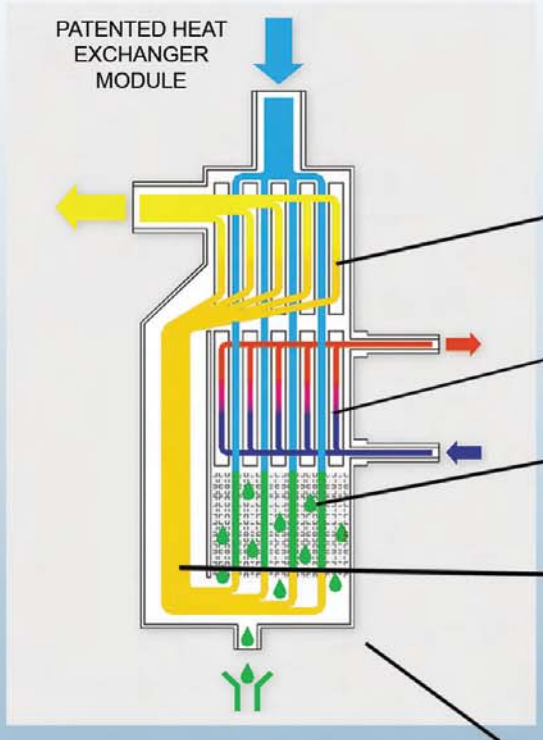
AFTERCOOLER
The CHT dryers are designed with a built in aftercooler to pre-cool the air entering the dryer. The cooler is constructed of copper tubes and aluminum fins. The first four models utilize a split coil which combines the condenser coil and the aftercooler coil to conserve space. All other models have an independent cooler and fan motor.

HOT-GAS BY-PASS VALVE
All CHT dryers are fitted with a new stainless steel hot gas by-pass valve that underwent years of development This valve is designed to prevent freezing and provide a constant dew point. Since this diaphragm valve is controlled by temperature and pressure, the accuracy of operation is unmatched in the industry. The valve is set during final factory testing and no further adjustments are required.

PRE-FILTER/MOISTURE SEPARATOR
In order to insure clean dry air to the dryer a 3 micron pre-filter moisture separator with drain is installed as standard.

CONDENSER COIL
All CHT dryer condenser coils are generously sized in order to ensure maximum performance in extreme summer ambient conditions found in all compressor rooms.

CONDENSATE DRAIN
CHT dryers are all fitted with reliable timed electric drains. A drain is installed on the evaporator and another on the pre-filter/moisture separator.



ALU-DRY HEAT EXCHANGER MODULE

The patented air-to-air and air-to-refrigerant heat exchangers and the demister type condensate separator are housed in a uniquely designed vertical module.

Maximum heat transfer is achieved in the air-to-air heat exchanger cross flow design.

The large surface areas coupled with the cross flow of the refrigerant exchanger ensure no liquid is returned to the refrigeration compresser.

The maintenance free separator is located in the heat exchanger module.This highly efficient coalescing separator provides superior moisture separation.

The large cross-section flow channel results in low velocities, producing low-pressure drop and reduced energy costs.

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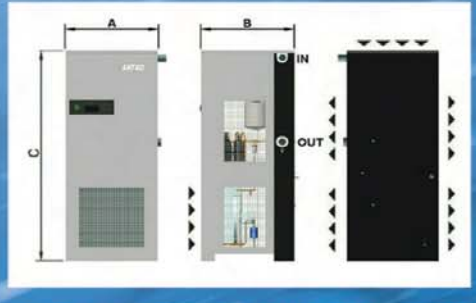
FEATURES AND BENEFITS

- Built-in independent air-cooled aftercooler on CHT 75 and up
- R134a/R404a environmentally friendly refrigerant
- Conforms to CSA standards/Entela approved
- Fully hermetically sealed refrigerant compressor includes thermal overload protection and anti-vibration mountings
- Robust heavy gauge steel construction with overspecified fastening devices
- Independent thermally protected cooling fans for the aftercooler and the condenser
- High efficiency moisture separator for evaporator
- CRN approved
- High efficiency spin on pre-filter/moisture separator for the dryer aftercooler is included and fitted as standard
- Easily removable access panels
- Timed electric drain on evaporator and moisture separator
- Powder paint coated finish
- Electronic controls complete with LED readout is standard on all models
- Compact space-saving design
- Suitable for high inlet air temperature or high ambient air temperature
- Neat and easily serviceable layout of components

CHT HIGH TEMPERATURE DRYER TECHNICAL DATA

MODEL	FLOW RATE SCFM	POWER SUPPLY	REFRIG.	PIPE SIZE	WEIGHT (lbs)	DIMENSIONS IN INCHES		
						A	B	C
CHT 20U	20	115/1/60	R134a	1/2" NPT	82	16.75	16.33	25.39
CHT 30U	30	115/1/60	R134a	1/2" NPT	88	16.75	16.33	25.39
CHT 40U	40	115/1/60	R134a	1/2" NPT	90	16.75	16.33	25.39
CHT 50U	50	115/1/60	R134a	1/2" NPT	93	16.75	16.33	25.39
CHT 75U	75	115/1/60	R134a	1" NPT	112	16.00	18.30	44.50
CHT 100U	100	230/1/60	R134a	1 1/4" NPT	134	20.10	20.25	51.96
CHT 150U	150	230/1/60	R404a	1 1/4" NPT	146	20.10	20.25	51.96
CHT 200U	200	230/1/60	R404a	1 1/2" NPT	165	22.00	23.34	55.11
CHT 250U	250	230/1/60	R404a	1 1/2" NPT	185	22.00	23.34	55.11
CHT 300U	300	2301/60	R404a	2" NPT	291	27.87	30.51	59.17
CHT 350U	350	230/1/60	R404a	2" NPT	304	27.87	30.51	59.17



Compressed air treated with CHT dryer series guarantees high quality standards, conforming to ISO 8573.1, class 5 for residual humidity and class 3 for maximum concentration of solid contaminants.

CORRECTION FACTOR FOR OPERATING CHANGES							
Inlet air pressure	barg	4	5	7	8	10	12
Factor		0.77	0.85	1.00	1.06	1.15	1.21

CORRECTION FACTOR FOR AMBIENT TEMPERATURE CHANGES							
Ambient temperature	°C	25	30	32	35	40	46
Factor		1.10	1.03	1.00	0.95	0.88	0.83

CORRECTION FACTOR FOR INLET AIR TEMPERATURE CHANGES						
Inlet air temperature	°C	60	70	80	90	100
Factor		1.22	1.12	1.00	0.86	0.80

Performance is based on free air delivered by the compressor (at 100 F at 14.7 psig) and at the following operating conditions:

Inlet air temperature.....82C (180F)

Ambient temperature.....45C (113F)

Working pressure.....7 bar (psig)

Pressure dew point.....3 to 7C (37.4 to 45F)

Maximum working pressure.....12 bar (174psig)

Maximum inlet air temperature.....100C (212F)

Maximum ambient.....46C (115F)

HIGHER TEMPERATURE DRYERS AVAILABLE UPON REQUEST.

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