Water Cooled Air Chiller

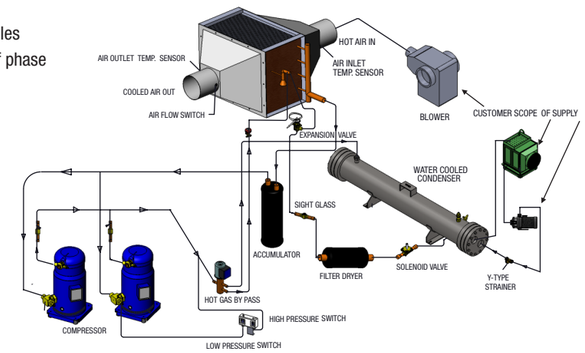
ACW - Series

Advantages

- Water Cooled Air Chiller is used to supply cooled air to air ring of blown film extrusion line. Cooling of air with the help of direct expansion of refrigerant saves energy compared to conventional water chiller plus heat exchanger system
- Water Cooled Air Chillers provide consistent air temperature irrespective of ambient condition which is very essential for processing of plastics on blown film lines
- ACW series chillers have cooling capacity of 8 TR to 45 TR with operating temperature of 5°C to 20°C in ambient air temperature of up to 40°C
- Compact in size which reduces foot print up to 25% compared to conventional water chiller plus heat exchanger system

Unique Features

- Energy efficient & reliable scroll compressor with hermetically sealed suction gas cooled motor
- Each model is equipped with PLC based control platform. Control features include 2 line 16 character LCD display, onboard fault indication with audio alarm
- Accurate temperature control with the help of modulating hot gas bypass valve
- Intelligent program to save energy for dual compressor chiller circuit (ACW 40, ACW 55 & ACW 80) specifically for part load application
- Display of set value and actual value on the screen
- Display of return air temperature on screen
- Scroll and function buttons allow you to navigate the chiller's control platform
- Neatly organized internal component layout
- Proven component supplier i.e Copeland, Danfoss, Siemens, Emerson, IFM have been chosen for ultimate reliability and availability
- All chillers are factory tested under load prior to shipment
- Shell & Tube Condenser - high surface area with externally finned copper tube
- Finned & Tube Evaporator – high surface area due to internally grooved copper tube, generously sized for industrial environment and tested to 300 PSIG with lower pressure drop
- RTD temperature sensors yield higher precision and repeatability than thermocouples
- Three phase monitor protects against unit damage due to phase reversal or loss of phase



Options

- Refrigerant pressure gauges
- Eco friendly refrigerant – R407c
- Air filter at the inlet of evaporator
- Condensing pressure regulator
- Regulates flow of water coming from cooling tower depending upon the condensing pressure
- SCADA communication

Technical Specifications

Model	ACW 15	ACW 20	ACW 25	ACW 30	ACW 40	ACW 45	ACW 55	ACW 80
Nominal Cooling Capacity KW (TR)*	29 (8.4)	37 (10.5)	47.6 (13.75)	55.5 (15.75)	74 (21)	97 (27.5)	111 (31.56)	150 (42.6)
At Air Outlet Temperature °C	15							
Design Air Flow Rate m³/hr	2000	2550	3250	3800	5000	6500	7500	10250
And Ambient Temperature °C	40							
Control Range °C	Plus (+) 5 up to Plus (+) 20							
Cooling Circuit								
Cooling Agent	R22							
No. of Compressor	2							
No. of Gas Circuit	1							
Compressor Power	3 x 2	3.87 x 2	5.14 x 2	5.55 x 2	6.56 x 2	9 x 2	10.2 x 2	14.5 x 2
Process Air Data								
Maximum Air Flow Rate m³/hr	2000	2550	3250	3800	5000	6500	7500	10250
Minimum Air Flow Rate m³/hr	1020		1300	1500	2000		3000	4100
Pressure Drop of Air Through Evaporator Pa	110		150		165		250	350
Air Connection IN / OUT mm	200						250	300
Air Temperature IN / OUT °C	40 / 15							
Relative Humidity %	40							
Electrical Power Supply	415V, 50 Hz, 3 phase							
Control Voltage	24V DC							
Total Connected Load KW	6	7.75	10.28	11.1	13.12	18	20.4	29
Cooling Tower Water Requirement for Condenser								
Flow Rate LPM	160 - 180		200 - 220		250 - 270		320 - 350	425 - 475
Pressure Bar	2.5 - 3.5							
Main Dimensions (mm)								
D x W x H	2000 x 1250 x 1750				2250 x 1250 x 2050			2650 x 1930 x 2375
Weight Kg.	700		800		900		1100	1500
Color	Black RAL 9005 / Siemens Grey RAL 7032							

- *Nominal cooling capacity based at 15°C leaving air temperature, 40°C ambient air temperature @ 40% R.H and 30°C water from cooling tower.
- Water cooled air chiller require good quality of water from cooling tower. Ph value: 8.5 to 9.5 and hardness < 50 ppm.

All specifications are subject to change without prior notice.

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