

Screw Chiller
(Air Cooled Water Chiller)



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Cooling Capacity from 30 TR to 128 TR
Energy Efficient Central Chilling Plant.

Provide chilled fluid for industrial application from a central location with the Conair Air Cooled A-SK series central chillers.

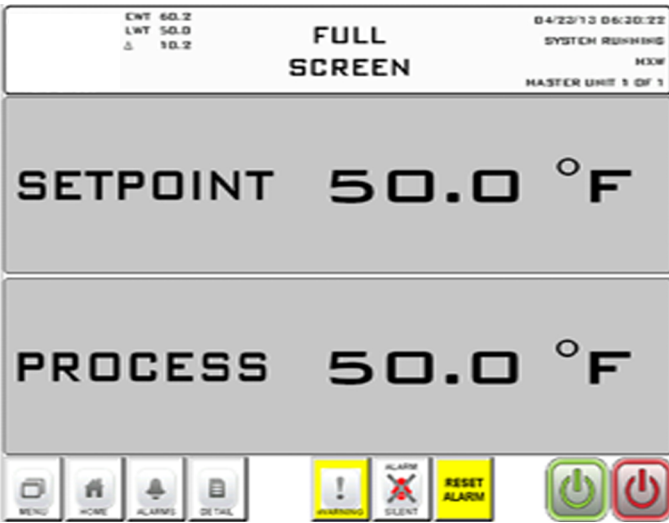
Simple design of screw compressors provide both full load and part load efficiencies unmatched in the industry, and results in lower energy costs when compared to reciprocating compressors.

Unique Features

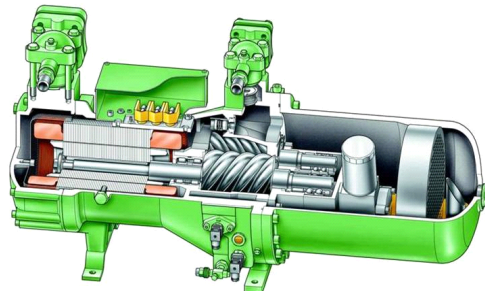
- Rugged compressor design with only four moving parts eliminating the need for pistons, connecting rod, wrist pins and valves. Less moving parts means less internal friction and greater efficiency
- Semi hermitic screw compressors with two shaft designs with suction and discharge solder connection, integrated check valve, integrated pressure relief valves, flanged on oil separator, oil heater, oil filter and oil sight glass
- All chilled water contact surfaces are non ferrous for protection against corrosion. All wetted surfaces are stainless steel, copper or other non ferrous material
- Small unit size, factory wired, easy lifting procedure, easy start up logic
- Stainless steel shell & tube evaporator with seamless internally finned copper tubes for higher surface area
- Strainer protects the evaporator from solid contaminations in the process water
- Flow switch is used to detect flow loss for safety of evaporator when return water flow is low
- Electronic expansion valve is used to regulate the flow of refrigerant in the evaporator as per the load of system to maintain the suction superheat
- Finned and Tube Heat Exchanger with internally grooved imported copper tubes having higher surface area suitable for High Ambient condition

- Removable cartridge type filter dryer to ensure moisture free system and quick change features
- Sight glass indicates the status of dry or moist system
- Pressure switch protects the compressor against low and high pressure
- Monitoring of suction and discharge refrigerant pressures
- Antifreeze protection to safe guard the evaporator & compressor against low temperature
- Option of eco friendly refrigerant (R134a) also available
- Helical screw design results in part load performance
- Only four moving parts when compared to reciprocating compressors; there are no pistons, connecting rods, suction and discharge valves or mechanical oil pump
- Latest heat transfer technology results in increased condenser and evaporator tube efficiency
- Reduced rotor clearance results in reduced leakage between the high and low pressure cavities during compression
- Resistant to liquid slugging this compressor design can handle amounts of liquid refrigerant that would severely damage a reciprocating compressor

- Use of multiple Proportional Integral Derivative (PID) temperature control loops ensures consistent reliability, stability, and efficient operation by instantly reacting to fluctuations in system loads
- FULL Screen Display – a simplified view of Chiller with larger display of SETPOINT and PROCESS temperatures that can be seen from a distance provides a quick glance to validate the operation
- Clear language text display and graphic representation of unit components provides quick and easy understanding of unit operation
- Control on no. of ON / OFF cycle of compressor
- Controls and maintains stable and reliable operation of the chiller through use of an extensive array of sensors, actuators, relays, switches, and control algorithms
- User friendly screen for operator
- Common locations for most adjustment or settings
- Detailed description for each setting
- Process supply water above high temperature alarm set point
- Process supply water below low temperature alarm set point
- Status banner of start-up and shut-down sequences
- Compressor ON / OFF cycle control



A-SK Series



Semi-hermetic Compact Screw Compressors

Technical Specifications

Model	A40-SK-PT	AE40-SK-PT (R134a)	A50-SK-PT	AE50-SK-PT (R134a)	A60-SK-PT	AE60-SK-PT (R134a)	A80-SK-PT	AE80-SK-PT (R134a)	A100-SK-PT	AE100-SK-PT (R134a)	A125-SK-PT
Performance Characteristics											
Nominal Capacity * KW (TR)	134.8 (38.3)	118 (33.56)	169 (48)	153.6 (43.7)	219 (62.2)	205 (58)	297 (84.4)	250 (71)	338 (96)	300 (85.3)	450 (128)
Compressor Quantity / KW	1 / 42.8	1 / 32.4	1 / 53.1	1 / 40.05	1 / 69.9	1 / 56.5	1 / 88.8	1 / 70.6	1 / 101.2	1 / 78.8	1 / 132.9
Max. Power Input KW / Max. Current Amp-Comp	52 / 86	34 / 58	65 / 108	56 / 108	88 / 144		102 / 170	96 / 162	112 / 180	110 / 182	150 / 246
Refrigerant	R22	R134a	R22	R134a	R22	R134a	R22	R134a	R22	R134a	R22
Standard Evaporator Pump / Process Pump KW	5.5	4	5.5		7.5						
Maximum Flow to Evaporator / Process LPM	480	380	480		880		960		1600		
Maximum Pressure Bar	5.6	5.3	5.6		4.5		4.8		2.8		
Water Reservoir Capacity Liters	400		600	400	900		1200				
Fan Quantity x Fan KW	2 x 1.84	2 x 2.33	3 x 2.63				6 x 2.63		6 x 2.33		8 x 1.84
Dimension W x D x H (mm) - Main Unit											
W - Width	1800				2100		2210				
D - Depth	3150		3710		4450		5150			7214	
H - Height	2300		2250		2520		2310				
Process Connections											
Process Connections Inlet / Outlet – BSP - Inch	2 1/2"	2"	2 1/2"		3"	2 1/2"	3"		4"		
Weight Kg											
Installed (NET)	2100		2600		2850		4200			4960	
Voltage	415V, 50 Hz, 3 Phase										
Connected Load KW	61.18	42.66	78.39	69.39	103.39		125.28	119.28	133.48	131.48	172.22
Control Voltage	24V DC										
Control Range in Degree Celsius	Plus (+) 8 to Plus (+) 25										
Utility	Require treated water with PH value in between 7.5 to 8.5, Hardness less than 50 PPM, Electric Conductivity <10-30 µS / cm²										
Color	Black RAL 9005 / Siemens Grey RAL 7032										

All specifications are subject to change without prior notice. *Nominal capacity based at leaving water temperature of 15°C and ambient temperature of 40°C.

Joint Venture with The Conair Group, USA
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(An ISO 9001:2015 Certified Organization)

Nu-Vu Conair Pvt. Ltd.
Plot No. 147, 148 & 154, Devraj Industrial Park, Piplaj-Pirana Road, Piplaj, Ahmedabad - 382405, Gujarat, India
+91 79 2970 8147 | +91 97129 28201, +91 90990 76206
marketingindia@conairgroup.com | www.conairgroup.com/india
www.facebook.com/nuvuconair