

ECS – Evaporative Condensed Screw Chillers



	ECS-100	ECS-125	ECS-150	ECS-175	ECS-200	ECS-225	ECS-250	ECS-275	ECS-300
Refrigeration Capacity (Btu/Hr.) 44° F LWT 54° F EWT 78° F Wet Bulb	1,264,320	1,503,120	1,851,720	2,110,320	2,486,640	2,706,960	3,049,440	3,391,920	3,734,280
Tonnage	105	125	155	175	207	225	255	283	312
Compressor Type	Hanbell Screw	Hanbell Screw	Hanbell Screw	Hanbell Screw	Hanbell Screw	Hanbell Screw	Hanbell Screw	Hanbell Screw	Hanbell Screw
Compressor HP	(1) 50HP (1) 60HP	(1) 60HP (1) 70HP	(1) 70HP (1) 90HP	(2) 90HP	(2) 100HP	(2) 110HP	(1) 110HP (1) 140HP	(2) 140HP	(1) 140HP (1) 170HP
Chilled Water Flow Rate based on 44° F LWT (gpm@ 40psi)	252.0	299.0	369.0	421.0	496.0	539.5	608.0	676.0	
Dimensions (in/cm)	Consult factory								
Length									
Width									
Height									
Shipping Weight (lbs.)	Consult factory								
Electrical Rating									
FLA @ 230-3-60	Consult factory								
FLA @ 460-3-60	190.4	221.2	265.4	306.4	400.7	409.2	450.8	495.8	529.0
Connection Sizes									
Chilled Water Connection (in/cm)	4"	4"	4"	5"	5"	5"	6"	6"	6"
Lifting Eyes	standard	standard	standard	standard	standard	standard	standard	standard	standard
ΔP Unit (psi)	5.3	5.7	8.6	8.5	9.1	8.6	5.6	5.8	7.6
EER	14.10	14.36	14.71	14.55	14.84	15.11	14.07	13.51	14.051

Options:
5kW space heater
Sound dampening insulation
Heat tracing
Condenser freeze protection
HSS Package (pump/air control system package)
Standby process pump and standby condenser recirculation pump
Condenser water treatment system
Communications BACnet (Building Automation Control)
High Temperature Alarm
Low Temperature Alarm
Special Color Paint

1 ton = 12,000 btu/hr.

Basic Construction



CONSTRUCTION

Frame	Heavy gauge carbon steel base. Welded frame construction.
Finish	Primed & Painted with Acrylic Enamel
Lifting Eyes	Included for ease of lifting chiller to high elevations

COMPRESSOR

Compressor Type	Screw Compressors
Unloading	Infinite control to 25%
Features	Motor winding protection, pressure relief valve, crank case heater, double wall rotor housing, three-stage oil separator, automatic start unloading, phase sequence control, oil sight glass, pressure relief valve.

EVAPORATOR

Type	Direct expansion – Shell & tube design
Construction	Carbon steel shell with copper tubes, removable heads
Insulation	Closed cell foam
Fluid Pressure Drop	<4 psig (typical)

CONDENSER

Type	Shell & tube Design
Construction	Carbon steel shell with copper tubes, removable heads
Design Air Temp	85°F
Head Pressure Control	Condenser water regulating valve

ELECTRICAL CONTROLS

Rating	Nema 4 rated enclosure	
Controller	MCS Microprocessor Controller	
	Long-life LED indicators	
Protections	Freeze stat protection	Low-flow cutout
	Motor overload protection	Time delay low pressure cutout
	High pressure cutout	Motor starters
	Low Oil Pressure Switch	

REFRIGERATION SPECIALTIES

Thermal expansion valve	Removable filter dryer
High pressure relief valve	Sight glass with moisture indicator
Liquid line solenoid valve	Discharge/suction line service valve

ECS TYPICAL PIPING LAYOUT

