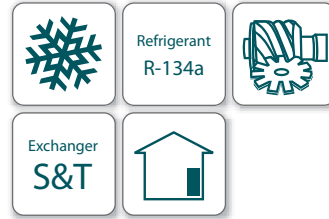


# Ecoplus

## WATER COOLED CHILLER WITH SCREW COMPRESSORS



Cooling capacity: 166 kW ÷ 604 kW



### GENERAL CHARACTERISTICS

- Stepless capacity control
- Independent circuit for each compressor
- Frame 3200 single-screw compressors; Star-Delta standard start
- Direct expansion shell and tube evaporator with single pass; shell and tube plates made of carbon steel; high efficiency copper tubes; insulation made of closed cells material; victaulic water connections
- R134a refrigerant
- Shell and tube condensers; one per each circuit; shell and tube plates made of carbon steel; high efficiency copper tubes; GAS water connections
- Micro Tech III controller compatible with BMS

### VERSIONEN

#### EFFICIENCY

SE Standard efficiency	EER up to 4,00 ESEER up to 5,33
XE High efficiency	EER up to 4,73 ESEER up to 6,31
ME Condenserless	EER up to 3,70

#### NOISE LEVELS:

ST Standard noise	69,7 ÷ 71,1 dB(A)
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### STANDARD OPTIONS

- Evaporator victaulic kit
- Evaporator water side design pressure 10 bar
- Condenser water side design pressure 16 bar
- Suction line shut-off valve
- Wye Delta Starter (Y-Δ)
- Double Set Point
- Phase Monitor
- High pressure side manometers
- Hour run meter
- General fault contactor
- Set-Point reset, demand limit and alarm from external device
- Electronic expansion device

### OPTIONS ON REQUEST

- Total heat recovery
- Partial heat recovery
- Soft starter
- Heat pump version
- Brine version
- Compressor thermal relays
- Under / overvoltage control
- Energy meter
- Capacitors cosφ 0.9
- Current limit - display
- Condenser double flanges kit
- 20 mm evaporator insulation
- 20mm condenser insulation
- Cu-ni 90-10 condenser tubes
- Evaporator flow switch
- Condenser flow switch
- Fork-lift kit
- Rubber anti vibration mount
- Sound proof system
- Double pressure relief valve with diverter

# Ecoplus

## WATER COOLED CHILLER WITH SCREW COMPRESSORS

### TECHNICAL DATA Ecoplus SE ST - cooling only

Ecoplus SE ST		050.1	060.1	073.1	080.1	100.2	110.2	120.2	133.2	146.2	165.2
Cooling Capacity <sup>1</sup>	kW	166	201	253	280	334	372	403	448	494	556
Unit power input <sup>1</sup>	kW	42,2	50,6	64,9	75,3	84,3	93,0	101	115	129	150
EER	--	3,93	3,97	3,90	3,72	3,96	4,00	3,97	3,89	3,83	3,70
ESEER	--	5,00	5,04	4,95	4,72	5,28	5,33	5,29	5,19	5,10	4,93
Sound Pressure <sup>2</sup>	dB(A)	69,7	69,7	69,7	69,7	71,7	71,7	71,7	71,7	71,7	71,7
Compressor	Type	Semi-hermetic single screw compressor									
Quantity	No.	1	1	1	1	2	2	2	2	2	2
Minimum capacity	%	25	25	25	25	12,5	12,5	12,5	12,5	12,5	12,5
Refrigerant	Type	R-134a									
N. of circuits	No.	1	1	1	1	1	1	1	1	1	1
Evaporator	Type	Single Pass Shell&Tube									
Quantity	No.	1	1	1	1	1	1	1	1	1	1
Water volume	l	60	56	123	123	118	113	113	173	168	168
Nominal Water pressure drop	kPa	48	69	43	53	64	63	72	54	54	68
Water connections size	mm	88,9	88,9	114,3	114,3	114,3	114,3	114,3	139,7	139,7	139,7
Condenser	Type	Shell and Single Pass Shell&Tube									
Quantity	No.	1	1	1	1	2	2	2	2	2	2
Water volume	l	13	15	15	15	26	28	30	30	30	30
Nominal Water pressure drop	kPa	39	41	63	77	40	41	41	57	60	75
Water connections size	"	5"	5"	5"	5"	5"	5"	5"	5"	5"	5"
Standard voltage	V/ph/Hz	400V / 3ph / 50Hz									

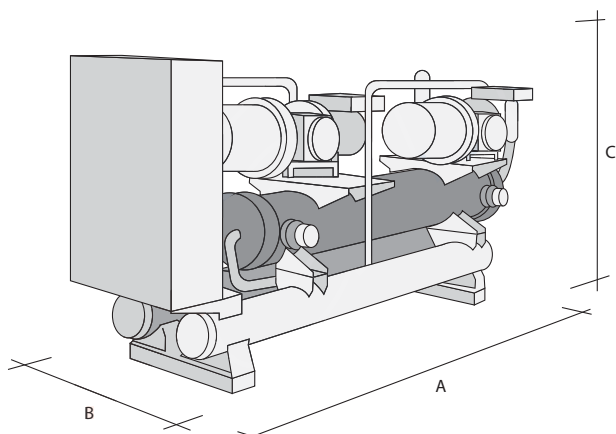
#### NOTES:

(1) 12/7°C entering/leaving evaporator water temperature; 30/35°C entering/leaving condenser water temperature

(2) At 1 m, according to ISO 3744, at free field semispherical conditions

Weight and dimensions		050.1	060.1	073.1	080.1	100.2	110.2	120.2	133.2	146.2	165.2
Shipping weight	kg	1393	1410	1503	1503	2687	2687	2702	2757	2762	2762
Operating weight	kg	1470	1480	1650	1650	2840	2840	2860	2970	2970	2970
(A) Length	mm	3435	3435	3435	3435	4305	4305	4305	4305	4305	4305
(B) Width	mm	920	920	920	920	860	860	860	860	860	860
(C) Height	mm	1860	1860	1860	1860	1880	1880	1880	1880	1880	1880

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# Ecoplus

## WATER COOLED CHILLER WITH SCREW COMPRESSORS

### TECHNICAL DATA Ecoplus XE ST - cooling only

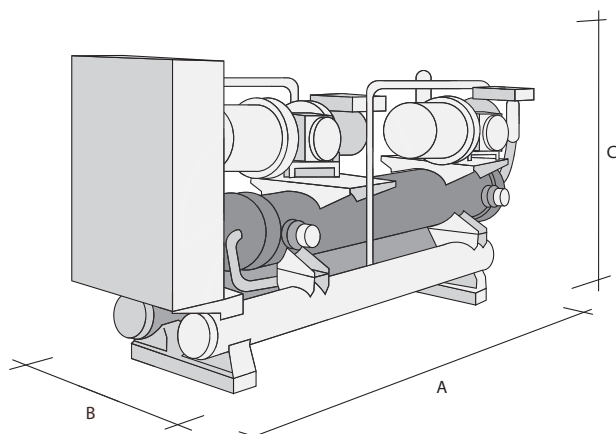
Ecoplus XE ST		050.1	060.1	073.01	080.1	100.2	110.2	120.2	133.2	146.2	165.2
Cooling Capacity <sup>1</sup>	kW	186	223	277	307	366	408	444	496	541	604
Unit Power Input <sup>1</sup>	kW	39,7	48,1	59,4	71,4	79,2	87,2	95,1	105	115	137
EER	--	4,70	4,64	4,66	4,30	4,62	4,68	4,67	4,73	4,72	4,39
ESEER	--	5,97	5,90	5,92	5,46	6,15	6,24	6,23	6,31	6,30	5,85
Sound Pressure Level <sup>2</sup>	dB(A)	69,7	69,7	69,7	69,7	71,7	71,7	71,7	71,7	71,7	71,7
Compressor	Type	McQuay Single Screw									
Quantity	Nr	1	1	1	1	2	2	2	2	2	2
Minimum Capacity	%	25	25	25	25	12,5	12,5	12,5	12,5	12,5	12,5
Refrigerant	Type	R-134a									
Circuits Number	Nr	1	1	1	1	1	1	1	1	1	1
Evaporator	Type	Shell and Tube - Direct Expansion									
Quantity	Nr	1	1	1	1	1	1	1	1	1	1
Water Volume	l	125	120	110	110	170	285	285	280	280	280
Pressure Drop	kPa	25	35	35	44	30	24	28	39	46	57
Water Connections Size	mm	114,3	114,3	114,3	114,3	139,7	168,3	168,3	168,3	168,3	168,3
Condenser	Type	Shell and Tube									
Quantity	Nr	1	1	1	1	2	2	2	2	2	2
Water Volume	l	22	25	25	25	44	47	50	59	68	68
Pressure Drop	kPa	17	20	25	28	17	17	17	16	15	19
Water Connections Size	--	5"	5"	5"	5"	5"	5"	5"	5"	5"	5"
Standard Voltage	V/ph/Hz	400V / 3ph / 50Hz									

**NOTES:**

- (1) 12/7°C entering/leaving evaporator water temperature; 30/35°C entering/leaving condenser water temperature.
- (2) At 1m, according to ISO 3744, at free field semispherical conditions.

Weight and dimensions		050.1	060.1	073.01	080.1	100.2	110.2	120.2	133.2	146.2	165.2
Shipping weight	kg	1650	1665	1680	1680	2800	2945	2955	2975	2990	2990
Operating weight	kg	1800	1810	1820	1820	3020	3280	3290	3315	3340	3340
(A) Length	mm	3435	3435	3435	3435	4305	4305	4305	4305	4305	4305
(B) Width	mm	920	920	920	920	860	860	860	860	860	860
(C) Height	mm	1860	1860	1860	1860	1880	1880	1880	1880	1880	1880

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# Ecoplus

## WATER COOLED CHILLER WITH SCREW COMPRESSORS

### TECHNICAL DATA Ecoplus ME ST - cooling only

Ecoplus ME ST		050.1	060.1	073.1	080.1	100.2	110.2	120.2	133.2	146.2	165.2
Cooling Capacity <sup>1</sup>	kW	161	189	244	270	316	352	381	428	476	526
Unit power input <sup>1</sup>	kW	45,4	54,3	65,9	74,6	90,6	99,7	109	120	132	148
EER	--	3,54	3,48	3,70	3,62	3,48	3,53	3,51	3,57	3,62	3,55
Sound Pressure <sup>2</sup>	dB(A)	69,7	69,7	69,7	69,7	71,7	71,7	71,7	71,7	71,7	71,7
Compressor	Type	Semi-hermetic single screw compressor									
Quantity	No.	1	1	1	1	2	2	2	2	2	2
Minimum capacity	%	25	25	25	25	12,5	12,5	12,5	12,5	12,5	12,5
Refrigerant	Type	R-134a									
N. of circuits	No.	1	1	1	1	1	1	1	1	1	1
Evaporator	Type	Single Pass Shell&Tube									
Quantity	No.	1	1	1	1	1	1	1	1	1	1
Water volume	l	60	56	123	123	118	113	113	173	168	168
Nominal Water pressure drop	kPa	44	60	41	49	57	56	64	50	51	61
Water connections size	mm	88,9	88,9	114,3	114,3	114,3	114,3	114,3	139,7	139,7	139,7
Liquid connections Inlet	mm	42,0	42,0	42,0	42,0	42,0	42,0	42,0	42,0	42,0	42,0
Gas Discharge connections Outlet	mm	67,0	67,0	67,0	67,0	67,0	67,0	67,0	67,0	67,0	67,0
Standard voltage	V/ph/Hz	400V / 3ph / 50Hz									

**NOTES:**

- (1) 12/7°C entering/leaving evaporator water temperature; 45°C saturated discharge temperature at the compressor
- (2) At 1m, according to ISO 3744, at free field semispherical conditions

Weight and dimensions		050.1	060.1	073.1	080.1	100.2	110.2	120.2	133.2	146.2	165.2
Shipping weight	kg	1280	1280	1398	1398	2442	2446	2446	2501	2506	2506
Operating weight	kg	1337	1337	1516	1516	2560	2560	2560	2670	2670	2670
(A) Length	mm	3700	3700	3700	3700	4400	4400	4400	4400	4400	4400
(B) Width	mm	1000	1000	1000	1000	1100	1100	1100	1100	1100	1100
(C) Height	mm	1860	1860	1860	1860	1942	1942	1942	1942	1942	1942

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