

### Water chiller with FREE-COOLING

Air cooled  
Outdoor installation  
Capacity from 520 to 1523 kW

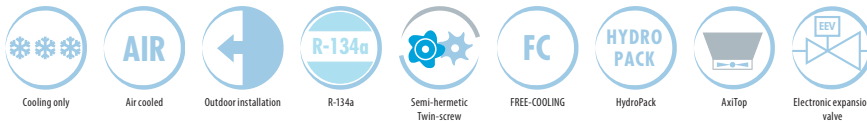
# SCREWLine<sup>3</sup> FC

The **SCREWLine<sup>3</sup> FREE-COOLING** enables high-level savings on the management costs of the system in applications which also require cooled water during the cold season such as industrial processes, data centres, telecommunications, technological applications and shopping centres.

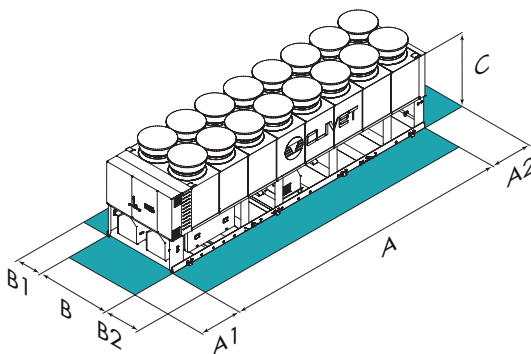
- ▶ **SIGNIFICANT ENERGY SAVINGS** - When the fresh air temperature is lower than the return water temperature of the system, the FREE-COOLING system recovers coolness from the external setting and reduces compressor operations until they are completely stilled. In this way the requested cooling capacity is supplied at no cost.
- ▶ **EVEN IN GLYCOL FREE VERSION** - Does not require the addition of an antifreeze substance in the hydraulic circuit used. Therefore, it is particularly suitable for large-sized systems and wherever laws and regulations limit the use of antifreeze substances inside buildings.
- ▶ **CONTINUOUS CAPACITY CONTROL** - The continuous capacity control allows for a quick adjustment of the system's load and therefore an accurate control of the chilled water temperature with an exceptionally wide operating range.
- ▶ **EFFICIENT AND RELIABLE TECHNOLOGY** - SCREWLine<sup>3</sup> employs the new generation dual screw compressors, electronic expansion valves, shell and tube evaporator and fans with innovative AxiTop diffusers with kinetic energy recovery.



### functions and features



### dimensions and clearances



Size - WDAT-SL3 FC		200.2	210.2	220.2	240.2	260.2	280.2	320.2	340.2	360.2	400.2	440.2	500.2	540.2	580.2
SC-FCD-EXC A - Length	mm	5316	5316	6468	6468	6468	7265	7265	8241	8241	9217	9217	11166	11166	11166
SC-FCD-EXC B - Width	mm	2246	2246	2246	2246	2246	2246	2246	2246	2246	2246	2246	2246	2246	2246
SC-FCD-EXC C - Height	mm	2668	2668	2668	2668	2668	2668	2668	2668	2668	2668	2668	2668	2668	2668
SC-FCD-EXC A1	mm	1535	1535	1535	1535	1535	1535	1535	1535	1535	1535	1535	1535	1535	1535
SC-FCD-EXC A2	mm	700	700	700	700	700	700	700	700	700	700	700	700	700	700
SC-FCD-EXC B1	mm	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
SC-FCD-EXC B2	mm	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
SC-FCD-EXC Operating weight	kg	6102	6134	7214	7255	7344	8112	8163	9213	9710	11012	11074	12035	12169	12245

The above mentioned data are referred to standard units for the constructive configurations indicated. For all the other configurations, refer to the relative Technical Bulletin.

SC-FCD-EXC Compressors soundproofing (SC)-Direct FREE-COOLING-Excellence

CAUTION! For trouble-free operation of the unit it is essential to maintain the safety distances indicated by the green areas.

## versions and configurations

### LOW TEMPERATURE:

- ▶ - Low temperature: not required (Standard)
- ▶ **B** Water low temperature

### VERSION:

- ▶ **EXC** Excellence (Standard)

### ENERGY RECOVERY:

- ▶ - Energy recovery: not required (Standard)
- ▶ **D** Partial energy recovery

### ACOUSTIC CONFIGURATION:

- ▶ **SC** Acoustic configuration with compressor soundproofing (Standard)
- ▶ **EN** Extremely low noise acoustic configuration (sizes 200.2÷500.2)

### FREE-COOLING:

- ▶ **FCD** Direct FREE-COOLING (Standard)
- ▶ **FCI** No-glycol FREE-COOLING

### EXTERNAL SECTION FAN CONSUMPTION REDUCTION:

- ▶ **CREFP** Device for fan consumption reduction of the external section at variable speed (phase-cutting) (standard in the SC acoustic config.)
- ▶ **CREFB** Device for fan consumption reduction of the external section, ECOBREEZE type (standard in the EN acoustic config.)

### TYPE FAN EXTERNAL SECTION:

- ▶ **AXIX** High efficiency diffuser for axial fan - AxiTop (Standard)
- ▶ **NAXI** High efficiency diffuser for axial fan - AxiTop: not required

## technical data

Size - WDAT-SL3 FC			200.2	210.2	220.2	240.2	260.2	280.2	320.2	340.2	360.2	400.2	440.2	500.2	540.2	580.2
<b>FREE-COOLING OFF</b>																
SC-EXC	Cooling capacity	(1) kW	520	557	579	624	685	746	825	900	961	1049	1164	1311	1409	1523
SC-EXC	Total power input	(1) kW	144	155	163	175	194	211	236	248	270	297	338	369	406	441
SC-EXC	EER at full load	(1) -	3,61	3,59	3,55	3,56	3,53	3,53	3,50	3,62	3,56	3,53	3,44	3,55	3,47	3,45
SC-EXC	SEER	(5) -	4,10	4,10	4,11	4,11	4,10	4,10	4,11	4,11	4,10	4,18	4,14	4,11	4,11	4,11
<b>DIRECT FREE-COOLING ON</b>																
SC-EXC	Cooling capacity	(2) kW	403	411	519	527	536	649	663	684	695	814	835	1066	1080	1093
SC-EXC	Total power input	(2) kW	13,0	13,0	16,0	16,0	16,0	19,0	20,0	22,0	23,0	25,0	26,0	31,0	32,0	32,0
SC-EXC	EER at full load	(2) -	31,1	31,4	32,6	32,8	33,0	33,8	33,8	30,5	30,5	32,0	32,2	34,0	34,1	33,8
SC-EXC	Refrigeration circuits	Nr	2													
SC-EXC	No. of compressors	Nr	2													
SC-EXC	Type of compressors	(3) -	DSW													
SC-EXC	Standard power supply	V	400/3~50													
SC-EXC	Sound pressure level	(4) dB(A)	77	77	77	77	77	77	77	78	79	80	82	82	83	83
EN-EXC	Sound pressure level	(4) dB(A)	73	73	73	73	73	72	73	74	74	76	78	78	-	-

### Notes

- (1) Data referred to the following conditions: internal exchanger water = 15/10 °C; glycol 30%; entering external exchanger air temperature 30°C
- (2) Free-Cooling only data (compressors OFF) referred to the following conditions: internal exchanger water temperature = 15 / 10°C; entering external exchanger air temperature = 2°C D.B./1°C W.B.; glycol 30%
- (3) DSW = twin-screw compressor
- (4) Sound levels refer to full load units, in test nominal conditions. The sound pressure level refers to 1 m. from the standard unit outer surface operating in open field. Measurements are carried out according to the UNI EN ISO 9614-2 standard, in compliance with the EUROVENT 8/1 certification. Data referred to the following conditions: Internal exchanger water = 12/7°C; Entering external exchanger air temperature 35°C
- (5) Data calculated according to the EN 14825:2016 Regulation
- SC-EXC Compressors soundproofing (SC)-Excellence  
EN-EXC Super-silenced (EN)-Excellence

## accessories

- ▶ **2PM** Hydropack load side with 2 pumps
- ▶ **3PM** Hydropack load side with 3 pumps
- ▶ **CSVX** Couple of manually operated shut-off valves
- ▶ **CCCA** Copper / aluminium condenser coil with acrylic lining
- ▶ **CCCA1** Condenser coil with Aluminium Energy Guard DCC treatment
- ▶ **AMMX** Spring antivibration mounts
- ▶ **PGCC** Finned coil protection grilles and compressor compartment
- ▶ **PGCCH** Anti-hail protection grilles
- ▶ **CONTA2** Energy meter
- ▶ **RCMRX** Remote control via microprocessor control
- ▶ **PSX** Mains power supply
- ▶ **CMSC9** Serial communication module for Modbus supervisor
- ▶ **CMSC10** Serial communication module for LonWorks supervisor
- ▶ **CMSC11** Serial communication module for BACnet-IP supervisor
- ▶ **SCP4** Set-point compensation with 0-10 V signal
- ▶ **SPC2** Set-point compensation with outdoor air temperature probe
- ▶ **SPC1** Set point compensation with 4-20 mA signal
- ▶ **ECS** ECOSHARE function for the automatic management of a group of units
- ▶ **PFCP** Power factor correction capacitors (cosφ > 0.9)
- ▶ **SFSTR2** Progressive compressor start-up device
- ▶ **CBS** Overload circuit breakers
- ▶ **WOGLEY** Unit supplied without glycol solution (FCI only)

### Key to symbols and notes

- Accessories separately supplied

For compatibility between the various accessories, please refer to the dedicated Technical Bulletin or our website in the Systems and Products section.