

DATA CENTER

INDUSTRIAL

SERVICES

TSS

CLASS A CHILLERS AND HEAT PUMPS AIR CONDENSED WITH SCROLL COMPRESSORS

120.3–265.2 kW



 MULTI-PROTOCOL COMMUNICATION INTERFACE	 SCROLL COMPRESSORS	 AXIAL FANS	 CORROSION RESISTANT MATERIAL
 A2L READY	 LOW GWP REFRIGERANT	 CLASS A	 SHELL AND TUBE HEAT EXCHANGER



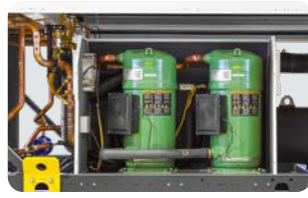
The new TSS range chillers and heat pumps are air/water units in energy class A for both cooling and heating, available for use with R410A refrigerant or, in the "A2L" version, with low environmental impact R454B refrigerant. The TSS range is designed **to manage the conditioning of industrial plants and thermal loads in technological applications where 24/7 system reliability is required.** The TSS range uses latest-generation Scroll compressors, shell and tube water heat exchangers optimised for use with **high pressure refrigerants** (R410A/R454B) and axial fans suitable for outdoor installation.

- 3 different soundproofing setups available: Standard, Low Noise and Super Low Noise
- Electric control panel with IP55 protection rating
- High power density units in both chiller and heat pump modes
- Radial EC motor fans (optional)
- Electrically controlled expansion valve
- Easy accessibility thanks to the optimisation of the internal space
- Programmable microprocessor control with proprietary software
- Compliance with ERP regulations



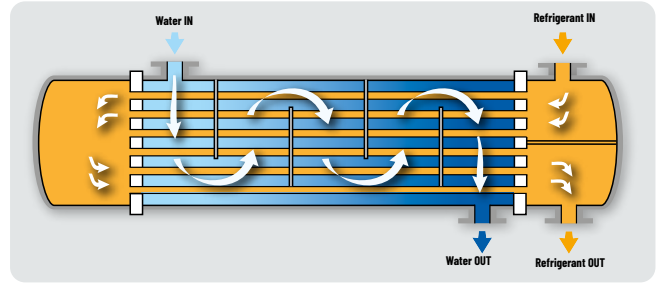
Acoustic comfort

Three different soundproofing setups are available: the most suitable one will depend on the importance of noise containment in the overall plant layout. Adopted technical solutions include fan speed control, the use of anti-vibration devices on the refrigerating circuit, compartmentalisation of compressors and pumping kits in a box internally lined with soundproofing material.



Maximised energy efficiency

The units of the TSS range belong to the **energy efficiency class A**, both in the chilling only version and in the heat pump version. This is thanks to a careful selection of internal components, which also includes the adoption of **innovative high efficiency Scroll compressors with direct start, permanent magnet motor technology**. The high modulation range guaranteed by the multi-Scroll technology allows cooling/heating requirements **to be met at any time, minimising energy waste and increasing seasonal efficiency**.



Reliability: shell and tube

The use of shell and tube heat exchangers with exchange water flow on the shell side implies **a lower risk of blocking the flow** due to exchanger clogging compared to units with plate heat exchangers. This is thanks to the **larger throughsections**, the exchanged power being the same. Additionally, the dual-pass heat exchanger **ensures high heat exchange efficiency** both in "chiller" and in "heat pump" modes, with lower consumption figures for the user.



TSS		114	124	144	164	194	214	244
VERSIONE CS - Cooling: User water values 12/7°C, 35°C outside air, 40% U.R.								
Cooling capacity	kW	120.3	130.2	152.4	164.9	190.2	225.7	251.4
Total absorbed power	kW	34	36.2	43.6	47.5	56	71.1	80
EER		3.54	3.59	3.5	3.47	3.4	3.17	3.14
SEER		4.95	4.83	4.86	4.98	4.97	4.9	4.78
SEPR		5.66	5.7	5.7	5.82	5.86	5.7	5.74
VERSIONE HS - Heating: User water values 40/45°C, 7°C outside air, 89% U.R.								
Thermal power	kW	123.9	130.8	149.9	163.1	186.9	227.5	265.2
Total absorbed power	kW	34.1	36.2	42.5	46.8	53.4	65.1	75.4
COP		3.63	3.61	3.53	3.49	3.5	3.49	3.52
SCOP		3.95	3.85	3.86	3.93	4.05	4.18	4.24
Sound power	dB(A)	83	84	86	86	87	88	89
Sound power [Low noise]	dB(A)	80	81	83	83	84	85	86
Sound power [Super Low noise]	dB(A)	78	80	82	82	84	84	85
Dimensions [LxHxD]	mm	3540x1735x1183		3540x1846x1653		3540x2330x1653		4206x2330x1653

Also available with 60 Hz power supply | Data declared with use of R410A refrigerant