

TELLUSTM

Pioneering one piece HVAC plant for
air handling, cooling, heating and hot tap water



The next indoor climate revolution!

Every commercial building has a need for fresh air, cooling, heating and tap water. Now all of this is available in one single modular system product – TELLUS by Swegon.

TELLUS is a complete HVAC and energy plant that can be placed indoors or outdoors.

TELLUS produces and distributes all the tempered air, cooling energy, heating energy and hot tap water needed. The integration of all modules guarantees optimum control and interactive dynamic energy recovery. TELLUS is most space efficient and is delivered with a warranty of 5 years. The unit produces demand controlled acclimatised air, heating and cooling at the same time and independent of each other. TELLUS is self supporting in all regions between 35°C warm climates to -20°C polar climates.

Highest comfort and energy efficiency

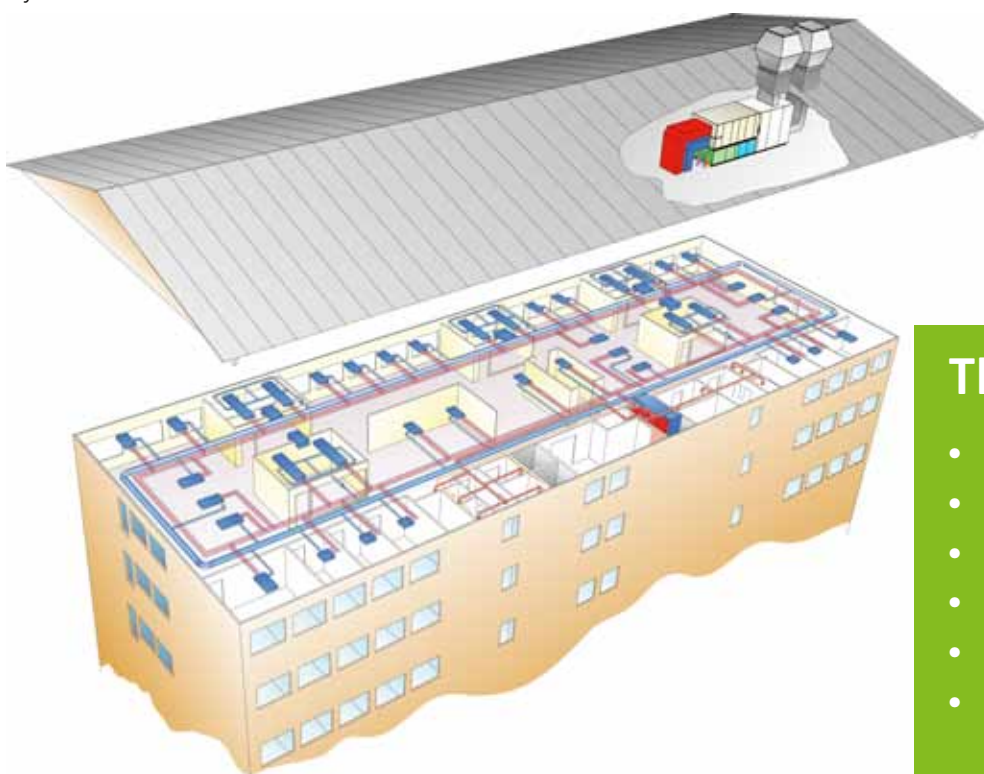
There are no demarcation lines and the user does not have to deal with the complexity of a regular HVAC system. TELLUS integrated design minimises the need of energy supplied to the building by demand controlled ventilation and water (temperatures and flows). The energy that is still needed will hereafter be produced in the most efficient way, e.g. by energy recovery in multiple steps. TELLUS will log the needed external energy and the ratio to the supplied energy is the M-value that shows optimum efficiency.

Easy to select and install

TELLUS joins five trades in one product: Ventilation, controls, cooling, heating and manual plumbing.

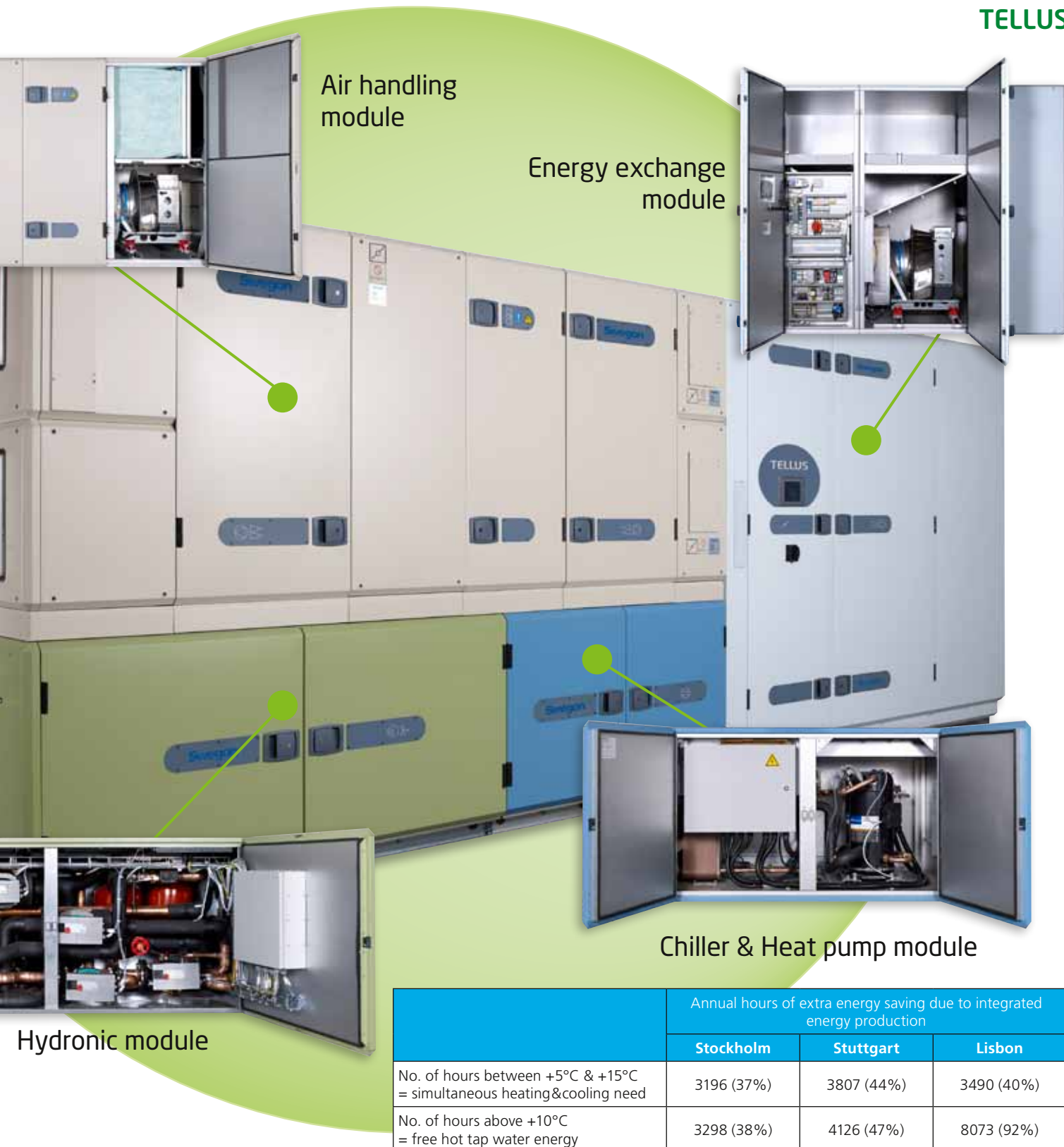
TELLUS is easy to install and connect due to the possibilities of 1 or 4 part deliveries. Even modular delivery in multiple pieces that fit through doors is possible.

You can choose TELLUS in a left- or right-handed version. All the necessary pipes to and from the building are connected on the short side of the hydronic module; hot water pipes for climate beams or radiators, cold water pipes for climate beams and also the pipes for the hot tap water. All necessary hot and cold water tanks, shunts, valves and dampers are included in the unit. The tap water tank of needed volume is an accessory and can be placed anywhere nearby but fully controlled by TELLUS. An optional, external heat source can easily be integrated by the standard connections on TELLUS.



The major benefits

- One installer/One supplier
- Quick installation/Compact
- Reliability/Easy maintenance
- Highest energy savings
- Controls for optimization
- Easy selection tools



	Annual hours of extra energy saving due to integrated energy production		
	Stockholm	Stuttgart	Lisbon
No. of hours between +5°C & +15°C = simultaneous heating&cooling need	3196 (37%)	3807 (44%)	3490 (40%)
No. of hours above +10°C = free hot tap water energy	3298 (38%)	4126 (47%)	8073 (92%)

Energy efficiency beyond the expected – This is how it works

Only an integrated system is capable of optimizing system performance. TELLUS facilitates this in a compact and modular way.

The outdoor air is heated or cooled with a high efficient rotary heat exchanger and then if necessary cooled or heated even more. This extra energy is provided by the chiller&heat pump module through the demand controlled hydronic module. The energy for this is facilitated by the energy exchange module. The fan power of the energy

exchange module will be reduced by 25–50% due to the recycling of exhaust air volume. In winter time the exhaust air is used to raise the temperature in the energy exchange module and in the cold tank.

Supplied air volume and tempered cold, hot and tap water are also demand controlled. During the periods of the year when there is a simultaneous heating and cooling need, the smaller amount is produced with recycled energy only, just like the tap water during the whole cooling season.

Technical data and selection help

TELLUS sizes are based on the required cooling amount of a project (40, 60, 80 kW). The first TELLUS series will hence be suitable for commercial buildings&floors of ca. 750 – 2000 m².

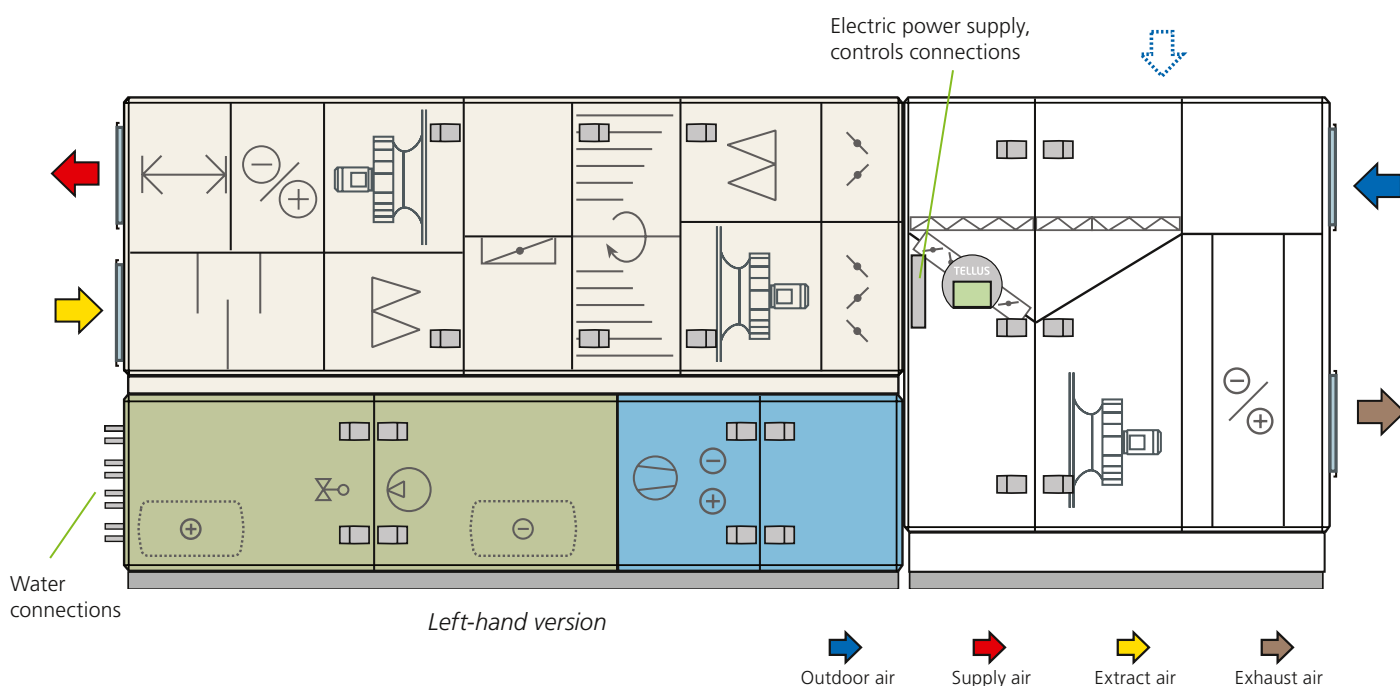
The amount of required acclimatised fresh air, hot cold and hot tap water can be chosen with great flexibility thanks to the modular concept.

TELLUS is extremely suitable for systems with climate beams due to it's optimization functions. Typically 20–40% of heating&cooling energy will be used to acclimatise the fresh air, 60–80% for the room devices.

One hot water tank and one cold water tank of 500 l each are included, a connection and controls for charging an external tap water tank are integrated.



Tellus is always sold with start-up, commissioning and 5 years warranty.



Size	Cooling capacity kW	Heating capacity kW	Min. airflow m ³ /s (m ³ /h)	Nominal airflow m ³ /s (m ³ /h)	Max. airflow m ³ /s (m ³ /h)	Power supply	Refrigerant filling kg	M-value ¹		
								Without (with) tap water		
								+25°C	+10°C	–5°C
40**	38-44	22	0,2 (720)	0,8 (2 800)	2,1 (7 500)	3-phase, 400V, 35A	5,5	4 (9)	10 (16)	8 (8)
60*	57-66	33	0,2 (720)	1,2 (4 250)	3,0 (10 800)	3-phase, 400V, 50A	8	4,2 (9,1)	10,4 (16)	7,9 (7,9)
80**	74-88	44	0,2 (720)	1,6 (5 670)	4,4 (15 800)	3-phase, 400V, 63A	11	4 (9)	10 (16)	8 (8)

1) Annual energy ratio of all supplied heating and cooling kW/external energy kW, for different outdoor temperatures, without and with the production of tap water

Size	Length mm	Width mm	Height, mm				Weight with liquids kg	Weight without liquids kg
			Depending on max air volume m³/s (m³/h)					
			1,5 (5 400)	2,1 (7 500)	3,0 (10 800)	4,4 (15 800)		
40**	5775	1850	2345	2445	–	–	3310	2300
60*	6165	1850	2345	2445	2645	–	3820	2800
80**	7065	2250	2345	2445	2645	2945	4330	3300

*) Preliminary data; first delivery November 2012

**) Indicative data; first delivery 2013