

# TCW B2

## HOT AND COLD WATER GENERATOR FOR HYDRAULIC TEST BENCHES

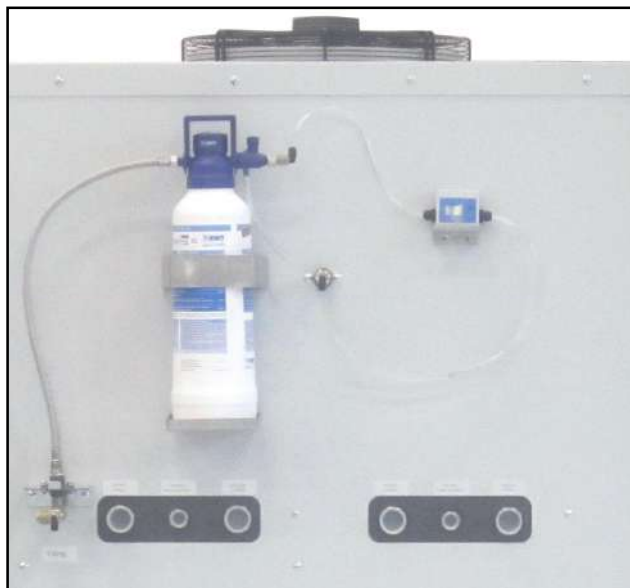


### **Applications:**

*The TCW device allows the user to constantly feed with hot and cold water the hydraulic test benches both for laboratory use and for production lines*

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### Applications

The **TCW** group allows the user to feed constantly with hot and cold water the hydraulic test benches for both laboratory and production applications.

The generators are made up of two independent plants used to produce and store hot and cold water (possibility of recovering return mixed water).

The refrigeration circuit uses a silenced airtight SCROLL type compressor that allows a high power efficiency, lower electric consumption and lower noise. SCROOL compressor reduces the risk of valves failure, high frequency failure in other compressor type.

The cooling plant consist in a forced air condenser with fans controlled by inverter, an external tank heat exchanger, an air-mixing pump and an expansion device with thermostatic valve with by-pass on hot gas. The heating plant consists of three heating elements and one water circulator.

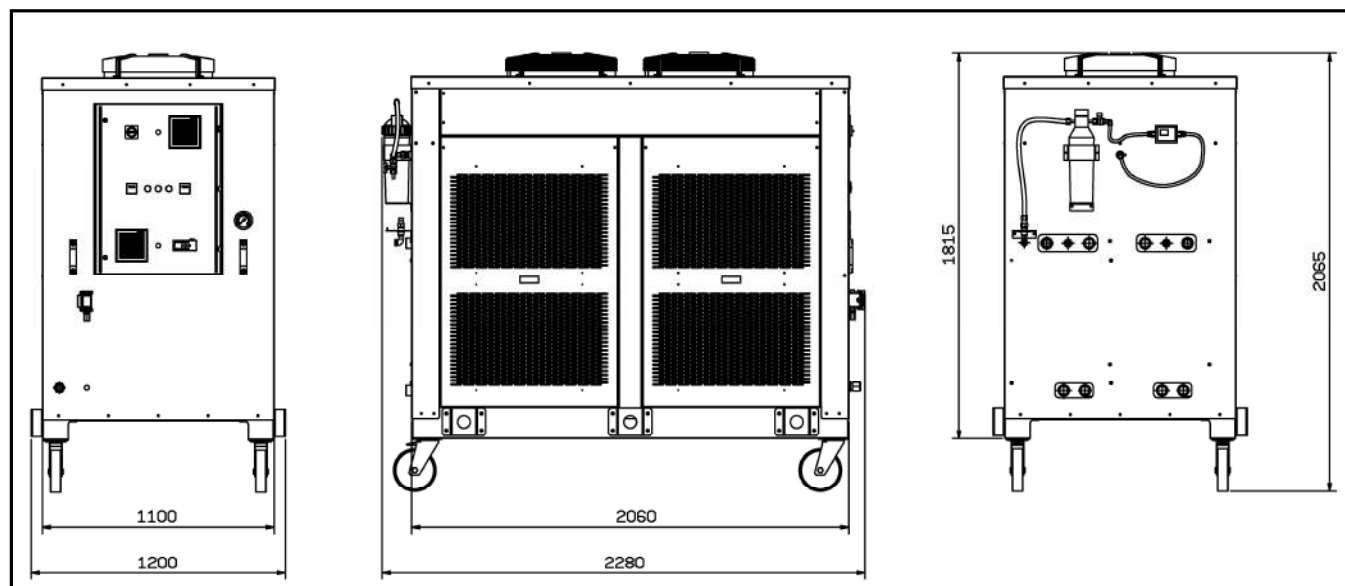
The **TCW** group works with closed circuit. The test water is recovered and put again in the tanks where it is heated and cooled again at the temperatures needed for the test.

### Advantages in comparison to a traditional fixed plant

- **Total recovery of water** used for the tests: consumption is limited to the first filling and topping up needed to compensate losses due to evaporation or drain. It is suggested weekly or monthly replacement of water according to the operating condition.
- **Possibility to use the test bench without supply from waterworks.**
- **High energy saving** when TCW is connected to our test benches equipped with a device for the differentiated water recovery. Water coming from the benches is separately conveyed to the tanks inside TCW according to the temperature measured on the drain of the device under test.
- **Constant supply water temperatures** with consequent precise repeatability of tests (in optimal conditions and continuous service stability is higher than  $\pm 0,8$  °C).
- **High usage flexibility:** working temperatures can be modified both upward and downward in short times with gradients higher than 1 °C/min.
- **Reduced starting transitory time:** the plant is operating in one hour with a water starting temperature equal to 25 °C.
- **Constant monitoring of internal tank temperatures.**
- **Easy installation** with no need for buildings, gas feeding and fume discharge. The external hydraulic plant only needs to be fed from the water network in order to fill the tanks and the discharge collector to void tanks.
- **Autonomous installation:** it is possible to install at 10 m from the test bench.
- **Ease to move:** it has got rotating wheels with emergency brake.

### TCW B2

Electric power:	36 Kw
Power supply:	400 V - 50 Hz
Total absorption:	58 A
Cooling power:	23 kW
Cooling fluid:	R410A
Heating power:	24 kW (8 + 8 + 8 kW)
Tanks capacity:	300 + 300 L
Adjustment range:	Hot water: 40÷95 °C Cold water: 5÷25 °C
Stability:	$\pm 0,5$ °C
Maximum flow-rate:	20 L/min
Noise level:	75 dB
Axial fan flow-rate:	10000 m <sup>3</sup> /h
Ambient temperature:	-10÷45 °C
Size (mm):	2300 x 1200 x (h) 2050
Weight (empty):	~ 680 kg



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### CERTIFICATION:

All the instruments are supplied with final testing, stability and accuracy certification traceable to Accredia standards.