

Thermoreactors for COD and all other thermal digestions

Thermoreactors are required for the determination of COD, total nitrogen or total phosphorous as well as electroplating. Due to the high reaction temperature over a defined time, the complete digestion of the sample is guaranteed. There are also three crack sets available for the sample digestion: Crack Set 10 (Model 14687, 100 digestions) and Crack Set 10-C (Model 14688, 25 cuvettes) for heavy metals, as well as Crack Set 20 for total nitrogen (Model 14963, 90 determinations).

The most important temperatures and digestion times are stored in the programs in each of the WTW Thermoreactors: there are eight easily selectable programs available. In addition, thermoreactors CR 3200 and CR 4200 also offer, alongside the eight set programs, the option of storing a further eight custom programs. The bores are suitable for cuvettes with an outer diameter of 16 mm.

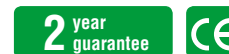
CR 2200

If you have to carry out routine tasks in water analysis with smaller sample amounts, the CR 2200 is perfect for you: 12 sample cuvettes can be unlocked here with 8 programs at 100, 120, 148 and 150°C.



CR 3200

The CR 3200 has 2x12 cuvette slots, all of which can be opened with the same program. The CR 3200 also allows for eight custom programs with free selection of temperature up to 170 °C.



CR 4200

If you need to carry out several measurements at the same time, the CR 4200 is the right choice: using the two separately controlled thermo blocks for each 12 cuvettes, here, for example, you can carry out measurements for COD (148 °C) and total-N (120 °C) at the same time. 8 user-defined programs up to 170 °C are also possible



TFK CR Temperature Probe for quality assurance

The external TFK CR Temperature Probe (order no. 250100) is available as test equipment for the CR 3200 and CR 4200 models. The temperature probe can be inserted into the thermo reactor instead of a sample and provides the target and actual values determined either via a printer or via the PC.

It is therefore possible to monitor the digestion temperature and document it.



Quick digestion for COD

There are various programs in accordance with international standards for the COD digestion. Due to many user requests, a quick digestion is also available for 20 minutes at 148 °C, as this time period has been proven to be sufficient in practice in communal wastewater operations.

All devices have relevant timer functions. There will be a display on all thermoreactors when the reaction temperature is reached.

Safety measures

All thermoreactors have optimal heat transfer between the heat block and cuvette, and have a high level of safety. An integrated safety cover provides protection in the case of a potential cuvette break. On the heat block surface, a cover prevents the heat block being touched.

Application scopes and technical data: Thermoreactors

Application scope	CR 2200	CR 3200	CR 4200
Routine measurements	●	●	●
Wastewater	●	●	●
Specialist tasks in wastewater	–	●	●
Different programs in parallel	–	–	●
Number of samples, max.	1 x 12	2 x 12, same program	2 x 12, different programs
8 saved programs incl. COD quick digestion	100 °C 30 min, 60 min 120 °C with 30 min, 60 min, 120 min, 148 °C 120 min, 20 min, 150 °C 120 min	100 °C 30 min, 60 min 120 °C with 30 min, 60 min, 120 min, 148 °C 120 min, 20 min, 150 °C 120 min	100 °C 30 min, 60 min 120 °C with 30 min, 60 min, 120 min, 148 °C 120 min, 20 min, 150 °C 120 min
Custom programs	–	8 freely selectable 25-170 °C	8 freely selectable 25-170 °C
Control accuracy	±1 °C ±1 digit		
Protection class	I (as per DIN VDE 0700 Part 1/11.90)		
Device safety	EN 61010, UL 3101, CAN/CSA C22.2-1010; EN 61010-2-010, IEC-CAN/CSA C22.2-1010.2.010		
Dimensions	B: 256 mm H: 185 mm (closed) 290 mm (open) D: 315 mm		

Order information: Thermoreactors

Model	Description	Order No.
CR 2200	Reactor (230 VAC with Euro plug*) for COD and other chemical developments Suitable for the reception of 2x12 reaction cuvettes	1P21-1
CR 3200	Universal reactor (230 VAC with Euro plug*) for COD and other chemical developments Suitable for the reception of 2x12 reaction cuvettes	1P22-1
CR 4200	Universal reactor (230 VAC with Euro plug*) for COD and other chemical developments Suitable for the reception of 2x12 reaction cuvettes Two separately controllable heat zones.	1P23-1

For accessories & cables, see price list or www.WTW.com

*) other power plugs available