

## Digital set calorimetry with the glass jacket for 3 experiments

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### Function and Applications

Whether demonstrating Hess's law or determining calorific values of solids, gases or solid substances. Everything is possible with this set: easily and safely!

The core component is the PHYWE glass jacket with its calorimeter insert and gas combustion lance. The glass jacket protects the teacher or student from possible injury hazards, but also the special glass parts from the experimenter, so you can enjoy working with the quality items for a long time. Combined with the Cobra SMARTsense sensors, the glassware provides a real-time record of any temperature change.

### Benefits

- All components for 3 experiments in one convenient set (consumables also available as a set, see "Accessories")
- Real-time data acquisition through state-of-the-art data loggers
- Safe experiments due to the glass jacket system
- Easy to set up
- High quality components
- No black box: the pupils and students can observe all processes

### Equipment and Technical Data

- The equipment set consists of all components necessary for the experiments
- The consumables are available in a separate set
- 2x Cobra SMARTsense - Thermocouple (Bluetooth + USB): measuring range: -200°C ... 1200°C; resolution: 0.4°C; sampling rate: 10 Hz
- The matching immersion probes (13615-05) are part of the scope of delivery

## Scope of delivery

Barrel base expert	02004-00	1
Support base DEMO	02007-55	1
Support rod, stainless steel, different lengths	02031-00	2
Support rod, stainless steel, different lengths	02032-00	1
Combustion lance for gases	02613-00	1
Glass jacket	02615-00	1
Calorimeter insert for glass jacket	02615-01	1
Water jet pump, plastic	02728-00	1
Magnet, d = 10 mm, l = 200 mm	06311-00	1
Cobra SMARTsense Thermocouple - Sensor for measuring temperature -200 ... +1200 °C (Bluetooth + USB)	12938-01	2
Immersion probe NiCr-Ni, teflon, 300 °C	13615-05	2
Butane burner, Labogaz 206 type	32178-00	1
Mortar with pestle, 150 ml, porcelain	32604-00	1
Glass tube cutter	33185-00	1
Crucible tongs, 200 mm, stainless steel	33600-00	1
Funnel, glass, top dia. 50 mm	34457-00	1
Round bottom flask, 100ml, GL 25/12	MAU-27100001	1
Funnel for gas generator, 50 ml, GL18	MAU-27222500	1
Test tube, 180x22 mm, PN19	MAU-17080101	1
Test tube GL25/8, w.hose connec.	MAU-27221000	1
Pasteur pipettes, 250 pcs	36590-00	1
Graduated beaker, 1000 ml, plastic (PP)	36640-00	1
Glass tubes, right-angled	MAU-10030701	1
Stopcock, 3-way, t-shaped, glass	36731-00	1
Retort stand, h = 750 mm	37694-00	1
Right angle boss-head clamp	37697-00	6

Universal clamp	37715-01	7
Reducing valve f.oxygen	33482-00	1
Fine control valve	33499-00	1
Test tube holder, up to d 22mm	38823-00	1
Rubber stopper, without hole	39255-00	1
Rub.stop.d=38/31mm,1 hole 15mm	39260-19	1
Rubber caps, 10 pcs	39275-03	1
Safety gas tubing, DVGW, sold by metre	39281-10	1
Rubber hose	39282-00	5
Silicone tubing, inner diameter 3 mm	39296-00	3
Gasometer 1000 ml	40461-00	1
Tweezers, straight, blunt, 200 mm	40955-00	1
Hose clip f.12-20 diameter tube	40995-00	2
Hose clip, diam. 8-16 mm, 1 pc.	40996-02	4
Closure caps,10, GL18	41220-00	1
Pinchcock, width 15 mm	43631-15	1
Closure caps,10, GL18	41220-00	1
Pinchcock, width 15 mm	43631-15	1
Commercial weight, 500 g	44096-50	1
Commercial weight, 1000 g	44096-70	1
Glass tube,diam 10mm l 300 mm	MAU-16074510	1
Beaker, Boro, high-form	46025-00	1
Magnetic stirring bar 30 mm, cylindrical	46299-02	1
Techn. magnifier, 10x, d:23mm	64598-00	1
Scissors, straight, 180 mm	64798-00	1
Weather monitor, 6 lines LCD	87997-10	1
U-tube with lateral connector, GL 25	MAU-27229500	1
Table stand for 2 l steel cylinders	41774-00	1
Wrench for steel cylinders	40322-00	1

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Protective glasses, green	39317-00	1
measureLAB, multi-user license	14580-61	1

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### Necessary accessories

Precision Balance, Sartorius, 620 g : 1 mg 49311-99