

MICROBIOLOGICAL INCUBATORS SERIES 6000

The right choice for your application



For all applications

Heraeus® microbiological incubators from Kendro Laboratory Products have been developed in co-operation with quality-conscious users. With modern technology and a broad range of equipment variations. These units are suitable for routine uses as well as demanding research projects.

First class quality

Each Heraeus® microbiological incubator is built with superior quality for precision and reliability. Quality materials are used, well thought-out design, and construction for reliable processing.

Field-tested

In biotechnology, medicine, botany, zoology or in the pharmaceutical, plastics, cosmetics, food, electronics or optics industries – these microbiological incubators offer superior solutions for all applications.

ALL YOUR NEEDS MET



Six models suitable for countless applications up to 70 °C.

6420



6060

6030

Convincing advantages

Our microbiological incubators have an interior volume from 30 to 750 litres and a range of applications up to 70 °C.

They can be customized to meet the needs and requirements of their users.

In addition to the basic models there are numerous options, which allow you to choose the right equipment for your application.

Practically designed

The internal casings and fittings are made of corrosion-free stainless steel.

All surfaces are easy-to-clean and disinfect. The continuously adjustable throttle valve for fresh and exhaust air regulation effectively protects against the formation of contamination prone condensate.

Precise temperatures

The instruments are designed for a temperature range of 5 °C above ambient temperature to maximum 70 °C. Thanks to the Kelvitron® microprocessor regulated automatic control with PID response and integrated error recognition, precise temperature regulation is guaranteed. Short heating-up times and a reduction of temperature-overshoot, dangerous for living organisms, are also ensured.

Safety first

These GS-tested Series 6000 microbiological incubators are equipped with many safety features in order to protect samples, operating personnel, the environment and the equipment itself. The independent adjustable temperature limit controller with optical alarm regulates the temperature automatically. All models have tilt-proof shelves with pull-out limiters.

STANDARD – INCLUDED

IT'S YOUR CHOICE

Why pay extra for your special requirements?

With Heraeus® Series 6000, many extras come standard.

And if you need more – options are available to you.

Throttle valve for smooth adjustment of used air

- Variation of rate of air change



PROCESS
CONTROL

Kelvitron®

Microprocessor temperature controller

- Accurate digital display of the set point or actual reading
- PD/PID control response for rapid heating, minimum overshoot and low control deviation
- Simple to operate
- Moisture protection with soft touch keypad



TEMPERATURE
DOCUMENTATION

RS 232 interface for Kelvitron® (fitted on the rear panel)

- Documentation of existing temperatures
- Software available as an accessory

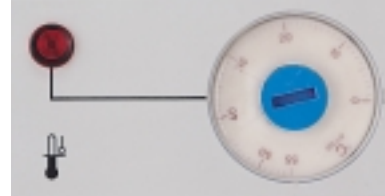


TEMPERATURE CONTROLLER

Adjustable temperature limit controller

Safety Class 3.1 (upper temperature limit protection), completely independent of the temperature controller

- Automatically takes over the temperature control if the upper temperature limit set by the operator is exceeded

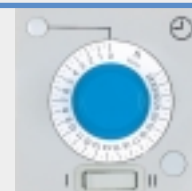


UPPER TEMPERATURE
LIMIT PROTECTION

24-hour timer

for switching the oven on and off

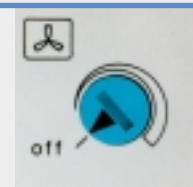
- 24-hour timer (20 h at 60 Hz)
- Pre-heating the oven for the next day
- Timed shutdown of the heating and ventilation without manual intervention



TIMED
OPERATION

Speed setting for the air-circulation fan (only on UB 6420 and UB 6760)

- Speed continuously variable (20 – 100%)



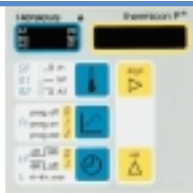
AIR CIRCULA-
TION MODE

OPTIONS – WHEN YOU NEED MORE



Connection facility for an external temperature recorder
for measuring with Pt 100 temperature sensor, connection via DIN 41524 plug connection

- Documentation of oven temperature
- Sensor permanently installed



Thermicon® P temperature controller

Specification as for Kelvitron® plus:

- Temperature program with max. 9 segments
- Integral timer for switching the drying oven on or off, up to maximum 99 hours 59 min.
- Sensor breakage indicator



Eurotherm 2404/P4 temperature controller

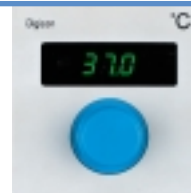
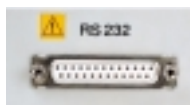
Microprocessor regulated program controller with PID control response

- Accurate process control using four freely-stored temperature programs of 16 segments each

Alternatively selectable:

RS 232 or RS 422/485 interface

- External temperature recording or control via PC
- Connection via Sub-D connector



Digicon® S temperature controller with analog interface

- Accurate digital display of the set points or actual readings
- PD/PID control response for rapid heating, minimum overshoot and low control deviation
- External settings 0 ... 20 mA
- External temperature recording 0 ... 10 V
- Connection via DIN 41524 connector



Adjustable upper and lower temperature limit controller

Safety Class 3.3 (upper/lower temperature limit protection), independent of the temperature controller

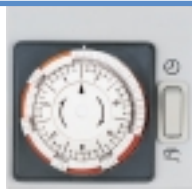
- Automatically takes over the temperature control as soon as the temperature range set by the operator is exceeded in either direction.



Daily program timer (24 hour)

for automatic repetition of an on-off cycle over a period of one day

- Shortest switching interval 15 min.
- 90 hour power reserve in the event of a power failure



Weekly program timer (168 hour)

for automatic repetition of an on-off cycle over a period of seven days

- Shortest switching interval 2 hours
- 90 hour power reserve in the event of a power failure



Digital weekly program timer

with digital display for free programming or for basic program, e.g. "On" at 6 a.m. and "Off" at 10 p.m.

- Shortest switching interval 10 min.
- 16 hour power back-up in the event of a power failure

EXACTLY THE RIGHT CHOICE



Forced-air incubators
UB 6420, UB 6760

Homogeneous temperature distribution

Some incubators described in this brochure are also available as forced-air incubators (see technical data p.9). The fan ensures a very consistent inside temperature distribution for clearly better results. Thanks to short recovery times, the fan also guarantees a fast regeneration of the atmosphere inside the incubator, even if the doors are frequently opened. The result: especially temperature-sensitive samples can be safely protected and optimally incubated.

Range of applications

Heraeus® forced-air incubators are suitable for demanding incubation processes, as well as gentle thermal processes, such as warm storage or simple drying at lower temperatures. Bear in mind that forced-air incubators are particularly suitable for applications with closed culture plates and vessels, as this minimizes drying-out.

Standard features

- Microprocessor controller with digital display
- Throttle valve for optimal adjustment of fresh and exhaust air
- Adjustable temperature limit controller (upper temperature limit safety class 3.1) for protection of samples, incubator and surroundings



Function Line incubators
B 6, B 12 und B 20

User friendly and effective

In order to achieve a high degree of effectiveness, the Function Line generation of products concentrates on the most important features.

Available in three models with internal volumes of 73, 131 and 233 litres, they have been practically designed, are easy-to-clean and excellent value for money.

Range of applications

In biological and microbiological laboratories, as well as in quality assurance within the pharmaceutical, cosmetics, veterinary research and food industries.

Standard features

- Microprocessor controller with digital display
- Adjustable temperature limit controller (upper temperature limit safety class 3.1) for safe protection of samples, incubator and surroundings



Function Line incubators
UB 6, UB 12 und UB 20

Homogeneity and accuracy

The Function Line forced-air incubators consist of three models. The supply of fresh air can be defined and adjusted according to your application. Excellent temperature distribution guarantees a high level of reproducibility of results. The temperature accuracy is $\pm 0.4\text{ }^{\circ}\text{C}$ at an internal temperature of $37\text{ }^{\circ}\text{C}$.

Range of applications

Ideal for applications up to $70\text{ }^{\circ}\text{C}$, which demand very small temperature deviations. An optimal temperature distribution is achieved with the forced-air system. Please bear in mind that drying-out of cultures can be avoided by using closed vessels.

Standard features

- Microprocessor controller with digital display
- Adjustable temperature limit controller (upper temperature limit safety class 3.1) for safe protection of samples, incubator and surroundings
- Throttle valve for optimal adjustment of fresh and exhaust air



Incubator B 6200 R with bottle turning device

Precise and economical

The patented, extractable roller inserts can be adjusted to different bottle sizes and diameters. Up to three levels of bottle rotating devices can be fitted. Chamber and bottle turning device form separate functional units, in order to allow the incubator to be used for standard incubation and culturing tasks without the internal fittings.

Range of applications

In vitro production of cells and antibodies in rotating cultures.

Standard features

- Glass inner-door for observing cultures without disturbing the inside atmosphere
- Microprocessor controller with digital display
- Separately adjustable temperature limit controller as upper temperature limit protection



Compact Incubator B 15

Small and handy

The B 15 can be placed directly on the work-bench thanks to its space-saving size with an internal volume of 15 litres.

Range of applications

Designed for use in medical diagnostics, in the area of hygiene (e.g. food and environmental hygiene) for warm storage of culture vessels and media, as well as for drying at low temperatures.

Standard features

- Resettable upper temperature limit protection with optical alarm
- Removable tray



Low temperature incubator BK 600

Highest level of operating comfort

With the BK 600 particular attention has been paid to operating comfort. The operating panel has an easily readable digital temperature display even from a distance, and provides additional status readings for cooling, heating and alarm.

Range of applications

Ideal for incubating micro-organisms, as well as for storing cosmetics and drugs.

Standard features

- Program routine for time-dependent control of experimental set-ups (energy saving 3-point controller)
- Microprocessor control



Low temperature incubator BK 6160

Protects samples from drying out

The inner atmosphere can not become dehumidified at the evaporator, the coldest part of the BK 6160, since it has no direct contact to the work space.

Range of applications

Apart from microbiological tests (e.g. BOD), this low temperature incubator is suitable for tests at room temperature, e.g. in microbiological quality control.

Standard features

- Microprocessor controlled 3-point regulator
- Adjustable temperature limit controller (upper temperature limit safety class 3.1) for safe protection of samples, incubator and surroundings



Hybridization Incubators HERAhybrid 6 and 12

Reliable and safe

The exact microprocessor control ensures reliable hybridization and safe results. The low spatial requirements of these incubators helps to achieve an optimal use of available space.

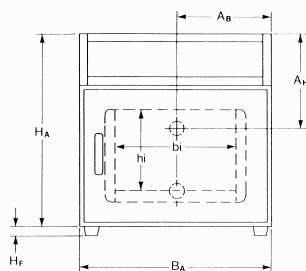
Range of applications

Ideal for applications in biomedical research, in medical diagnostics and forensic biology.

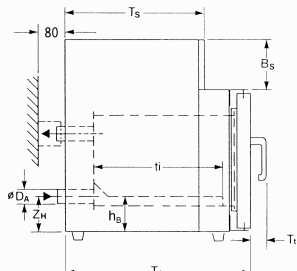
Standard features

- Microprocessor control

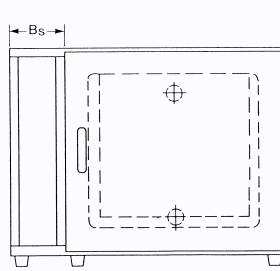
TECHNICAL DRAWINGS



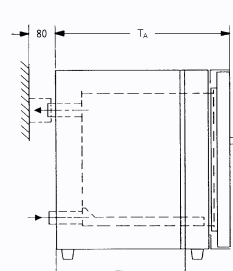
Front view
Models 6030, 6420, 6760



Side view

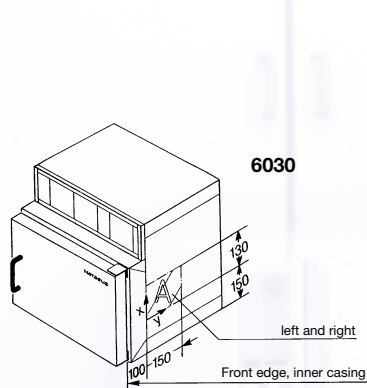


Front view
Models 6060, 6120, 6200

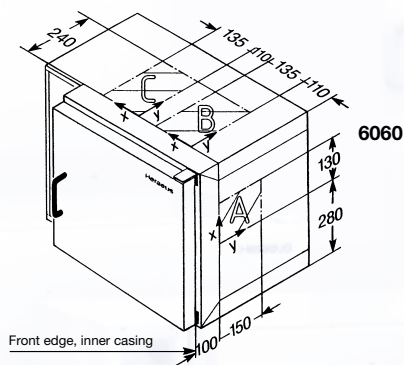


Side view

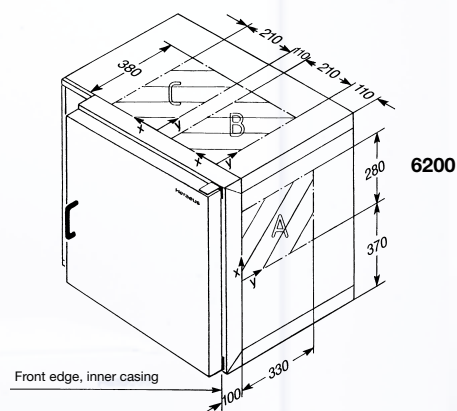
OPTIONAL POSITIONING OF ACCESS PORTS [mm]



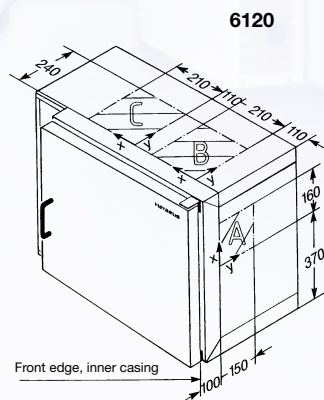
6030



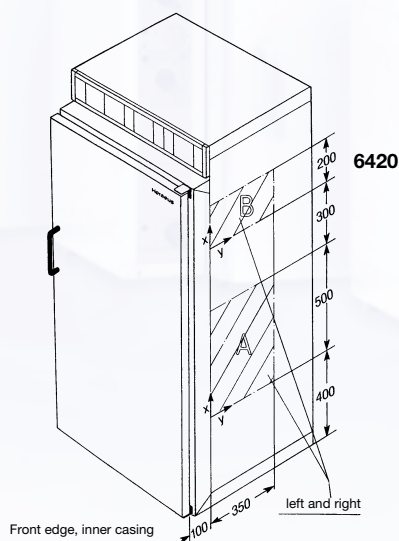
6060



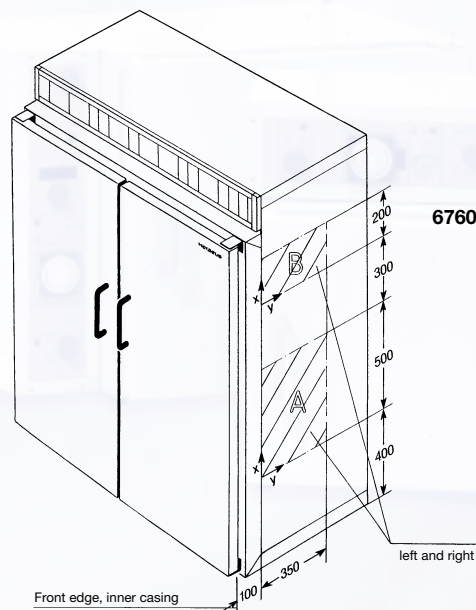
6200



6120



6420



6760

TECHNICAL DATA

Incubators			B 6030	B 6060	B 6120	B 6200	B/UB 6420	B/UB 6760	B 6200 R
Dimensions			see page 8 (Technical drawings)						
Outer casing	mm	T _A	535	535	535	715	715	715	715
	inch		21.1	21.1	21.1	28.1	28.1	28.1	28.1
		B _A	552	744	895	895	744	1200	895
			21.7	29.3	35.2	35.2	29.3	47.2	35.2
		H _A	552	552	696	816	1707	1707	816
			21.7	21.7	27.4	32.1	67.2	67.2	32.1
Height feet/roller	mm	H _F	24	24	24	24	106	106	24
	inch		0.9	0.9	0.9	0.9	4.2	4.2	0.9
Depth, door handle	mm	T _I	50	50	50	50	50	50	50
	inch		2.0	2.0	2.0	2.0	2.0	2.0	2.0
Width, control box	mm	B _S	149	149	149	149	149	149	149
	inch		6.0	6.0	6.0	6.0	6.0	6.0	6.0
Depth, control box	mm	T _S	400	400	400	580	580	580	580
	inch		15.7	15.7	15.7	22.8	22.8	22.8	22.8
External diameter									
Fresh/exhaust air connections	D _A		40	40	40	40	40	40	40
Inner casing									
Total volume	l		30	57	107	196	409/376	751/689	196
Internal dimensions	mm	t _i	370	370	370	550	550/522	550/522	550
	inch		14.6	14.6	14.6	21.7	21.7/20.6	21.7/20.6	21.7
		b _i	352	403	554	554	544	1000	554
			13.9	15.9	21.8	21.8	21.4	39.4	21.8
		h _i	231	380	524	644	1366/1319	1366/1319	524
			9.1	15.0	20.6	25.4	53.8/51.9	53.8/51.9	20.6
		h _B	100	100	100	100	100	100	100
			3.9	3.9	3.9	3.9	3.9	3.9	3.9
		A _B	276	302	377	377	372	600	377
			10.9	11.9	14.8	14.8	14.6	23.6	14.8
		A _H	273	124	124	134	371	371	124
			10.7	4.9	4.9	5.3	14.6	14.6	4.9
		Z _H	100	100	100	109	109	109	100
			3.9	3.9	3.9	4.3	4.3	4.3	3.9
Shelves									
Standard number			1	2	2	2	2	2	–
Max. number possible			4	9	14	18	39	39	3
Dimensions, B-ovens (WxD)	mm		336x365	387x365	538x365	538x545	528x541	984x541	538x545
	inch		13.2x14.4	15.2x14.4	21.2x14.4	21.2x21.5	20.8x21.3	38.7x21.3	21.2x21.5
Dimensions, UB-ovens (WxD)	mm		–	–	–	–	528x513	984x513	–
	inch		–	–	–	–	20.8x20.2	38.7x20.2	–
Weights									
Empty weight	kg/lbs		41/90	52/115	69/152	96/212	157/346	239/527	96/212
Temperature									
Temperature range ¹⁾	°C		70	70	70	70	70	70	50
Spatial temperature deviation ²⁾	± °C at 37 °C		0.9	0.8	1.0	0.9	1.4/0.6	1.5/1.0	–
Temp. deviation over time	± °C		≤ 0.5	≤ 0.5	≤ 0.5	≤ 0.5	≤ 0.5	≤ 0.5	–
Heating-up time²⁾									
to 98 % of 37 °C	min		25	30	50	50	70/40	75/45	–
with microprocessor controller									
Recovery time³⁾									
to 98 % of initial value at 37 °C	min		10	5	10	10	15/5	10/5	–
Max. flow of circulating air									
(fan capacity)	m ³ /min		–	–	–	–	5.9	6.2	–
Electrical Data									
Rated voltage (50/60 Hz) ⁴⁾	V		230~	230~	230~	230~	230~	230~	230~
Rated power	kW		0.23	0.38	0.38	0.55	0.78/0.90	1.17/1.20	0.54
Heat emission at 37 °C	Wh/h		19	25	35	42	71	104	42
Speed	rpm		–	–	–	–	–	–	ca. 0.1 – 6
Bottle diameter	mm		–	–	–	–	–	–	ca. 30 – 500
	inch								1.2 – 20.0 (also suitable for drums)
Roller length	mm/inch		–	–	–	–	–	–	300/11.8 (+60/2.4 for bottleneck)

¹⁾ Control range T: electronic controller from T_A +5 °C to 70 °C; control range UB: electronic controller from T_A +10 °C to 70 °C; T_A = Ambient Temperature

²⁾ The values stated apply to the unloaded oven in conjunction with wire mesh trays (measurement according to DIN 12880, Part 2), air flap closed

³⁾ Door open for 30 s, ⁴⁾ Other voltages on request

ORDER NUMBERS

STANDARD MODELS	Models	6030	6060	6120	6200	6420	6760
Volume of work space (I)	B	30	57	107	196	409	751
Order No.		51015278	51015279	51015280	51015192	51015281	51015282
Volume of work space (I)	UB	–	–	–	–	409	751
Order No.						51015294	51015295

OPTIONS	Models	6030	6060	6120	6200	6420	6760
Temperature controller ¹⁾							
Thermicon® P		51900206	51900207	51900207	51900207	51900208	51900208
Digicon® S with analog interface		51900051	51900052	51900052	51900052	51900053	51900053
Eurotherm 2404/P4 with RS 232 interface		51900297	51900297	51900297	51900297	51900297	51900297
Eurotherm 2404/P4 with RS 422/485 interface		51900298	51900298	51900298	51900298	51900298	51900298
Temperature regulation							
Adjustable upper and lower temperature limit controller		51900165	51900166	51900166	51900166	51900220	51900220
Temperature sensor ¹⁾							
Pt 100 – connection for external temperature recorder		51900222	51900215	51900215	51900215	51900230	51900230
Timers ¹⁾							
Daily program timer		51900231	51900234	51900234	51900234	51900159	51900159
Weekly program timer		51900007	51900008	51900008	51900008	51900007	51900007
Digital weekly program timer		51900161	51900162	51900162	51900162	51900161	51900161
Inner casing version with conditional gas-tightness							
with inert gas connection/with throttle valve		51900122	51900123	51900124	51900125	on request	on request
Door version							
Left-hinged door		50027652	50027652	50027652	50027652	–	–
Lockable door		51900060	51900060	51900060	51900060	51900060	51900060
Connection for central monitoring		51900233	51900235	51900235	51900235	51900063	51900063

¹⁾ Only one option out of this group possible

ACCESSORIES	Models	6030	6060	6120	6200	6420	6760
Access ports							
(Standard access port in the middle of the appropriate inner casing wall. Other positions possible on request as in drawing page 8)							
Top ¹⁾ ø 23 mm (0.9 inch)		–	50049348	50049348	50049348	–	–
Right-hand side wall ²⁾ ø 18 mm (0.7 inch)		50049349	50049349	50049349	50049349	50049349	50049349
Left-hand side wall ø 18 mm (0.7 inch)		50049350	–	–	–	50049350	50049350
Top ø 58 mm (2.3 inch)		–	50049351	50049351	50049351	–	–
Right-hand side wall ²⁾ ø 53 mm (2.1 inch)		50049352	50049352	50049352	50049352	50049352	50049352
Left-hand side wall ø 53 mm (2.1 inch)		50049353	–	–	–	50049353	50049353
Power access ports with 10 measuring terminals		50027659	50027659	50027659	50027659	50027659	50027659
(Terminals located at the side)							
Stainless steel perforated shelf							
with 2 shelf supports B		50029487	50029488	50029489	50029490	50029491	50029492
with 2 shelf supports UB		–	–	–	–	50044617	50044618
Stacking frame		–	50027660	50027661	50027661	–	–
Four height-adjustable feet		50010923	50010923	50010923	50010923	–	–
Fine fresh-air filter							
for connection to fresh-air connectors		50030850	50030850	50030850	50030850	50030850	50030850
Support frame							
780 mm (30.7 inch) high		–	50029890	50029596	50029597	–	–
300 mm (11.8 inch) high		–	50031349	50034303	50031348	–	–

¹⁾ Access port displaced 100 mm (3.9 inch) away from the centre to the left

²⁾ with B 6060 and B 6120 access ports displaced 50 mm (2.0 inch) upwards from the centre

THE FAX NUMBER FOR MORE INFORMATION

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Just mark what you are interested in and fax this page to us

or give us a call at +49 (6184) 90-6940.

We will send you the brochures in return.

☐ **Function Line incubators**
B/UB 6, B/UB 12 und B/UB 20

☐ **Compact incubator B 15**

☐ **Low temperature incubator BK 6160**

☐ **Low temperature incubator BK 600**

☐ **Hybridization incubators**
HERAhybrid 6 and 12



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Your application

Title

Name/First name

Position

Institute/Department

Company/University/Clinic

Street

City/Zip Code

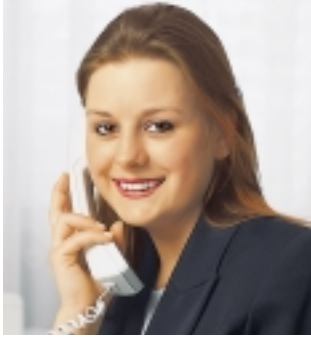
Laboratory dealer

Phone

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e-mail

MORE THAN YOU EXPECT – OUR SERVICE



Our service:
A reassuring feeling

Individual

Many people talk about service – Kendro Laboratory Products brings this to life. You will notice this in the quality of our advice, which is individually geared towards your needs. Our solutions are exactly tailored to your specific needs.

We will be there for you before, during and after your purchase.

You will find us as a partner who quickly and competently assists in all matters, to include:

- calibration
- reference measurement
- application advice
- repairs
- exchange of spare parts

Other services are available on request.

For more detailed information please contact your local partner. The Kendro Service Team: a good feeling to know that this partner is at your side.

Your Sales Contact

For Ordering or Technical Information

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