ORDERING INFORMATION

Order no.	Instruments	
2016-0600	BioShake Q1	*Professional heater-cooler shaker (-20 to 99.9°C, 24 K below RT, 200-3,000 rpm, **2.0 mm orbit**)*
2016-0601	BioShake Q1|3.0mm	*Professional heater-cooler shaker (-20 to 99.9°C, 24 K below RT, 200-3,000 rpm, **3.0 mm orbit**)*

Order no.	Adapter plates
	Thermo adapter for microplates & PCR plates
2016-1021	Adapter for microplate . Flat bottom standard
2016-1022	Adapter for microplate . Flat bottom High Base
2016-1024	Adapter for microplate . Flat bottom Low Base
2016-1032	Adapter for microplate . 96 well round bottom, type 2
2016-1041	Adapter for PCR Plate . 96 well . Eppendorf twin.tec®
2016-1051	Adapter for PCR Plate . 384 well . Eppendorf twin.tec®
	Thermo adapter for deep well & storage plates
2016-1121	Adapter for Deep Well Plate . Eppendorf® 96/1000 µl
2016-1131	Adapter for Deep Well Plate . Eppendorf® 96/500 µl
2016-1141	Adapter for Deep Well Plate . BRAND® 96/1100 µl U-bottom
2016-1151	Adapter for Deep Well Plate . NUNC® & Axygen® 96/2000 µl
2016-1161	Adapter for Deep Well Plate . Axygen® 96/0.6 ml V-bottom
2016-1171	Adapter for Storage Plate . Abgene® 96/2.2 ml MARK II square well
2016-1172	Adapter for Storage Plate . Abgene® & HJ-Bioanalytik® 96/0.8-1.2 ml round well
2016-1181	Adapter for Mega Block . Sarstedt® 96/2.2 ml
2016-1201	Adapter for Storage Plate . Corning® 96/320 µl V-bottom
2016-1211	Adapter for Masterblock . Greiner® 96/1.0 ml U-bottom
	Thermo adapter for centrifuge tubes with conical shape
2016-1061	Adapter for tubes . 24x 2.0 ml or 15x 0.5 ml
2016-1062	Adapter for tubes . 24x 1.5 ml or 15x 0.5 ml
2016-1063	Adapter for tubes . 40x 0.5 ml or 28x 0.2 ml
2016-1064	Adapter for tubes . 96x 0.2 ml
	Thermo adapter for FALCON® tubes
2016-1093	Adapter for 4x 50 ml FALCON® tubes
2016-1094	Adapter for 12x 15 ml FALCON® tubes
	Thermo adapter for tubes/vials with cylindrical shape
2016-1067	Adapter for lysis tubes . 35x 0.5-2.0 ml Ø 10.2 mm
2016-1069	Adapter for glass vials . 35x 2.0 ml Ø 10.8 mm
2016-1071	Adapter for glass vials . 35x 2.0 ml Ø 12 mm
2016-1072	Adapter for glass vials . 20x 4.0 ml Ø 15 mm
2016-1073	Adapter for glass vials . 20x 4.0 ml Ø 17 mm
2016-1074	Adapter for glass vials . 20x 6.0 ml Ø 19 mm

Made in Germany

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QINSTRUMENTS
A BICO COMPANY

BioShake Q1®

PROFESSIONAL HEATER-COOLER SHAKER

Recommended for fast mixing & cooling steps in range of -20 up to 99.9°C

HIGHLIGHTS

- **Cooling** & **Heating** & **Mixing** in one unit
- Fast mixing from **200** up to **3,000 rpm**
- Fully adjustable between **-20°** to **99.9**°C
- Temperature range **24 K below RT**, max: 99 °C
- **Cooling/Heating speed 12 K/min** above RT
- Wide range of perfected thermo adapters
- Plate locking **ELM**
- **First-class** aluminium housing
- Easy installation & simple start-up
- 2 years full warranty

PATENTED PATENTED PATENTED

Order no. 2016-0600

A scientific innovation for laboratories

QINSTRUMENTS presents the BioShake Q1. An all-in-one mixing device that combines proven shaking capabilities with the added functionality of heating and active cooling. Exchangeable adapters allow optimal thermal transfer and precise fit for labware such as microplates, tubes, vials, and reservoirs. The Adapters are mounted via a single-point connection to ensure quick exchanges.

Open design allows a robot to transfer your labware to the BioShake Q1 smoothly. The integrated ELM, edge locking mechanism, holds the plate tight on an exact zero position for robot interaction or liquid handling steps. A simple command set allows you to control hardware and sensors easily. The process parameters are constantly managed and read out.

It enhances reaction and mixing by reducing cycle times while maintaining cells or keeping beads in suspension.

Gentle mixing of samples by the planar orbital motion

German-designed and manufactured BioShake Q1 offers an ultra-efficient, 2-dimensional shaking axis so that samples mix completely in a fraction of the time of competing systems. The mixing orbit is always constant. Fully adjustable between 200 and 3,000 rpm, well beyond the speeds of most other brands, it guarantees fast, splatter-free mixing for tubes, glass vials or across an entire 96-well microplate. The BioShake Q1 is a direct-connect shaker that ensures consistent orbital movement, irrespective of payload, acceleration or frequency.

Homogeneous and accurate temperature control

Fully adjustable between -20°C and 99.9°C and well beyond the cooling & heating accuracies of most other brands, BioShake Q1 guarantees excellent temperature control. The system quickly heats from ambient temperature up to 99 °C with precise temperature uniformity. The built-in Peltier cooling technology offers a space-saving solution to cool down to 24 Kelvin below room temperature actively. BioShake Q1 is the ideal device to set and maintain temperatures accurately.

Unique design meets HIGH-END technology

The unique and efficient design combined with the most compact housing result in beautiful and well-defined laboratory equipment. Therefore, the first-class finished aluminium housing gives BioShake Q1 its essential functionality. It provides high security and device stability and ensures a long service life.

TECHNICAL SPECIFICATIONS

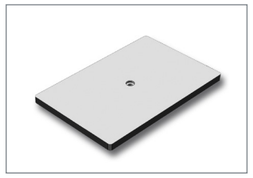
SAMPLE	Microplates	All 24-, 48-, 96-, 384-well plates of round-well, deep-well, v-well and square-well shape All microplates according SBS format . Supported microplate flange heights: 2.5 mm, 4.0 mm and 6.1 mm
	Standard tubes	0.2 ..... 2.0 ml standard microcentrifuge tubes
	Glass vials	0.5 ..... 6.0 ml vials with cylindrical shape
MIXING	Mixing frequency	200 up to 3,000 rpm
	Mixing orbit	Constant 2.0 mm * as standard, art no. 2016-0600, BioShake Q1 Constant 3.0 mm * as special, art no. 2016-0601, BioShake Q1 | 3.0mm
	Speed setting resolution	1 rpm Linear increments
	Mixing regulation accuracy	± 25 rpm
	Zero Position	Locked zero position, adjustable within 1 - 4 sec, accuracy ± 0.1 mm
ELM	ELM open modus	Plate locking open, ready for free handling with robot gripper
	ELM closed modus	Plate locking closed, strong diagonal centered fixation, locked position with accuracy ± 0.1 mm
TEMPERATURE	Temperature range	-20°C to 99.9°C . up to 24 Kelvin under room temperature (depend on the used thermo adapter)
	Temperature setting	Adjustable from -20°C to 99.9°C . 0.1°C increment
	Temperature sensor accuracy	± 0.2°C (maximum) from -10°C to +85°C . ± 0.25°C (maximum) from -20°C to +100°C
	Temperature unifomity	± 1.0°C at 4°C . ± 0.5°C at 15°C . ± 0.5°C at 40°C . ± 1.0°C at 90°C
	Cooling/Heating speed above RT	ca. 16 K/min Heating -> 5.0 min from 25°C to 95°C ca. 12 K/min Cooling -> 6.5 min from 95°C to 25°C (depend on the used thermo adapter)
	Cooling/Heating speed below RT	ca. 12 K/min Heating -> 2.2 min from 4°C to 25°C ca. 3 K/min Cooling -> 7.0 min from 25°C to 4°C (depend on the used thermo adapter)
DEVICE CONTROL	Electronic control board	Completely accommodated in the smallest housing . Non external controller or components
	Controller	Micro controller (32-Bit-ARM-Cortex-M4-Prozessor)
	Operation control	Remote controlled
	User interface	RS232 interface . USB via DIGITUS DA-70156 USB-Seriell Adapters . USB via MOXA USB-to-Serial Hub
	Status & alarm	LED in corner area . GREEN = ok . RED = alarm . BLUE = booting . YELLOW = no communication
ELECTRICAL	Operating Voltages	24 VDC input . Imax: 4.5 A . Peff: 85 Watt . Pmax: 108 Watt
	External power supply	External power supply 24VDC 120W (CE/UL/CSA approved, 85-264 VAC, 47-63 Hz, IEC/EN60320-1 C14)
	24 V DC connection	Prewired cable, length 2 m, barrel connector ID 2.5 x OD 5.5 mm
	RS-232 interface	Prewired cable, length 2 m, with RS-232 plug-in connector
PROPERTIES	Environment operating range	+15°C to 32°C (10-80 % max. relative humidity, non condensing)
	Dimensions WxDxH	142 mm x 99 mm x 87.5 mm (without adapter) . 142 mm x 99 mm x 97.7 mm (top edge of ELM pins)
	Weight	1.65 kg (3.637 lbs)
	Housing Material	Aluminum anodized, black

Free delivery worldwide | 2 years full warranty | Expert support

CHANGEABLE THERMO ADAPTER PLATES

A variety of standardized thermo adapter plates

For all automation units QInstruments offers high precision adapter plates to allow a perfect fit for all kinds of standard tubes, vials, microplates and other different disposables. The adapter plates are optimized for an excellent heat transfer to the disposables and enhance the uniformity over all wells and the heat up or cool down time. The exchange of adapter plates can be performed very easily within one minute.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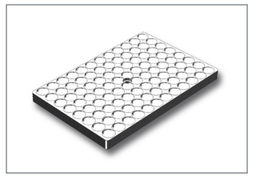
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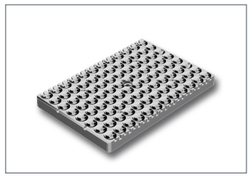
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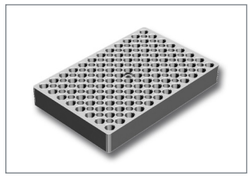
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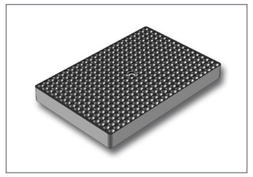
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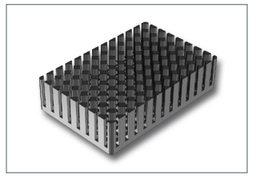
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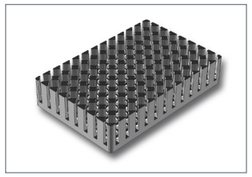
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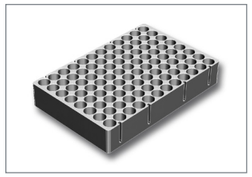
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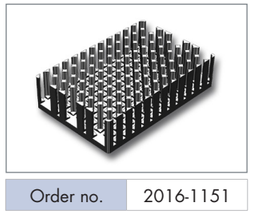
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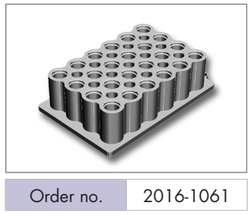
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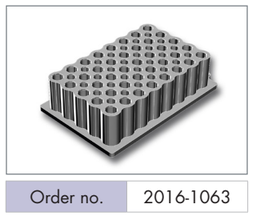
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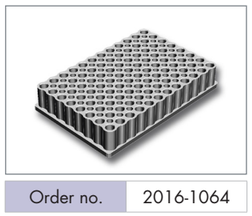
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Order no. 2016-1073


Order no. 2016-1074

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