



## ORDERING INFORMATION

ORDER NO.	INSTRUMENTS	
2016-0100	HeatPlate	Professional heater thermoblock (RT to 99°C)
2016-0110	ColdPlate	Professional heater-cooler thermoblock (-10 to 99°C, 25 K below RT)
2016-0111	ColdPlate slim	Professional heater-cooler thermoblock, low construction (-10 to 99°C, 25 K below RT)
<b>SHAKER</b>		
2016-0015	BioShake D30	3.0 mm orbital shaker (200 - 2,000 rpm, orbit 3.0 mm)
2016-0025	BioShake D30 elm	3.0 mm orbital shaker with ELM (200 - 2,000 rpm, orbit 3.0 mm)
2016-0016	BioShake 3000	Universal orbital shaker (200 - 3,000 rpm, orbit 2.0 mm)
2016-0017	BioShake 3000 elm	High-End microplate shaker with ELM (200 - 3,000 rpm, orbit 2.0 mm)
2016-0018	BioShake 3000 elm DWP	Ideal shaker for heavy deep well plates with ELM (200 - 3,000 rpm, orbit 2.0 mm)
2016-0022	BioShake 5000 elm	384/1536 well plate shaker with ELM (200 - 5,000 rpm, orbit 1.2 mm)
<b>THERMOSHAKE</b>		
2016-0519	BioShake D30-T	3.0 mm orbital thermoshaker (RT to 99 °C, 200 - 2,000 rpm, orbit 3.0 mm)
2016-0518	BioShake D30-T elm	3.0 mm orbital thermoshaker with ELM (RT to 99 °C, 200 - 2,000 rpm, orbit 3.0 mm)
2016-0516	BioShake 3000-T	Universal Thermoshaker (RT to 99°C, 200 - 3,000 rpm, orbit 2.0 mm)
2016-0517	BioShake 3000-T elm	High-End Microplate Thermoshaker with ELM (RT to 99 °C, 200 - 3,000 rpm, orbit 2.0 mm)
2016-0600	BioShake Q1 2.0mm	Professional heater-cooler shaker (-20 to 99.9°C, 24 K below RT, 200 - 3,000 rpm, orbit 2.0 mm)
2016-0601	BioShake Q1 3.0mm	Professional heater-cooler shaker (-20 to 99.9°C, 24 K below RT, 200 - 2,000 rpm, orbit 3.0 mm)
2016-0602	BioShake Q1 1.2mm	384/1536 heater-cooler shaker (-20 to 99.9°C, 24 K below RT, 200 - 5,000 rpm, orbit 1.2 mm)
2016-0620	BioShake Q2 3.0mm	Vials/Tubes heater-cooler shaker (-20 to 99.9°C, 24 K below RT, 200 - 2,000 rpm, orbit 3.0 mm)

### 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.

#### Legal Notices & Trademarks

QINSTRUMENTS is owner of numerous patents worldwide. Please respect our intellectual property.

WO2008135565, US8323588, EP2144716: Sample handling device for and methods of handling a sample  
 WO2011113858, US9126162, EP2547431: Positioning unit for a functional unit  
 WO2013113847, US10052598, EP2809436: Cog-based mechanism for generating an orbital shaking motion  
 WO2013113849, US9371889, EP2809435: Mechanism for generating an orbital motion or a rotation motion by inverting a drive direction of a drive unit  
 WO2014207243, US20160368003, EP3013480: Application-specific sample processing by modules surrounding a rotor mechanism for sample mixing and sample separation  
 WO02022128814A1: Laboratory apparatus comprising a fixing mechanism for fixing a slide  
 WO02022128809A2: Laboratory apparatus comprising a mixing mechanism for mixing a medium of a slide

Please notify us in writing, by email or mail to our designated agent, if you believe that a user has infringed our intellectual property rights.  
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 Technical specifications are subject to change without notice.



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## LAB AUTOMATION PRODUCT PORTFOLIO AT THE GLANCE

**QIN'STRUMENTS**   
A BICO COMPANY

QINSTRUMENTS GmbH  
Loebstedter Strasse 101  
07749 Jena . Germany

tel +49 3641 55430  
email info@QInstruments.com

www.QInstruments.com

TECHNICAL SPECIFICATIONS



	BioShake D30	BioShake D30 elm	BioShake 3000	BioShake 3000 elm	BioShake 3000 elm DWP	BioShake 5000 elm	HeatPlate	ColdPlate	ColdPlate slim	BioShake D30-T	BioShake D30-T elm	BioShake 3000-T	BioShake 3000-T elm	BioShake Q1 2.0mm	BioShake Q1 3.0mm	BioShake Q1 1.2mm	BioShake Q2 3.0mm
Part no.	2016-0015	2016-0025	2016-0016	2016-0017	2016-0018	2016-0022	2016-0100	2016-0110	2016-0111	2016-0519	2016-0518	2016-0516	2016-0517	2016-0600	2016-0601	2016-0602	2016-0620
Adapter necessary	optional	-	optional	-	-	-	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Vials / Tubes	yes	-	yes	-	-	-	yes	yes	yes	yes	-	yes	-	yes	yes	-	yes
24/48/96 well Microplates	yes	yes	yes	yes	yes	-	yes	yes	yes	-	yes	yes	yes	yes	yes	-	-
Deep well plates / Reservoirs	-	yes	-	-	yes	-	yes	yes	yes	-	yes	yes	yes	yes	yes	-	-
384/1536 well plates	-	-	-	-	-	yes	yes	yes	yes	-	-	-	-	-	-	yes	-
Max. Mixing frequency [rpm]	2000 rpm	2000 rpm	3000 rpm	3000 rpm	3000 rpm	5000 rpm	-	-	-	2000 rpm	2000 rpm	3000 rpm	3000 rpm	3000 rpm	2000 rpm	5000 rpm	2000 rpm
Mixing orbit [mm]	3.0 mm	3.0 mm	2.0 mm	2.0 mm	2.0 mm	1.2 mm	-	-	-	3.0 mm	3.0 mm	2.0 mm	2.0 mm	2.0 mm	3.0 mm	1.2 mm	3.0 mm
Speed setting resolution	1 rpm						-	-	-	1 rpm				1 rpm			
Mixing regulation accuracy	± 25 rpm						-	-	-	± 25 rpm				± 25 rpm			
Zero Position	± 0.1 mm						-	-	-	± 0.1 mm				± 0.1 mm			
ELM mechanism	-	yes	-	yes	yes	yes	-	-	-	-	yes	-	yes	yes	yes	yes	-
ELM accuracy	-	± 0.1 mm	-	± 0.1 mm	± 0.1 mm	± 0.1 mm	-	-	-	-	± 0.1 mm	-	± 0.1 mm	± 0.1 mm	± 0.1 mm	± 0.1 mm	-
Heating option	-	-	-	-	-	-	heating	heating	heating	heating				heating			
Cooling option	-	-	-	-	-	-	-	cooling	-	-				cooling			
Temperature setting	-	-	-	-	-	-	RT - 99 °C	-20 °C to 99 °C	RT to 99 °C				-20 °C to 99.9 °C / 0.1 °C increment				
Temperature speed above RT	-	-	-	-	-	-	7 K/min	12 K/min	7 K/min				16 K/min heating / 12 K/min cooling				
Temperature speed below RT	-	-	-	-	-	-	-	3-6 K/min	-				12 K/min heating / 3 K/min cooling				
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																
Operating Voltages	24 VDC input . I <sub>max</sub> : 4.5 A . P <sub>eff</sub> (max): 85 Watt . P <sub>max</sub> : 108 Watt																
External power supply	External power supply 24 VDC 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																
Environment operating range	+15 °C to 32 °C (10-80 % max. relative humidity, non condensing)																
Dimensions WxD [mm]	142x99	142x99	142x99	142x99	142x99	142x99	142x99	142x99	235x99	142x99	142x99	142x99	142x99	142x99	142x99	142x99	142x99
Dimensions Height [mm]	60,75	55.35	60,75	55.35	55.35	55.35	62.7	79	45.5	62.7	60.45	62.7	60.45	97,7	97.7	97.7	97.7
Weight [kg]	1.5	1.6	1.5	1.6	1.6	1.6	1.3	1.4	1.4	1.75	1.75	1.75	1.75	1.65	1.65	1.65	1.65