

Dry-Heat Vacuum Oven



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VACUCELL EVO Dry-Heat Vacuum Oven

Assuring Your Quality

Pharmaceutical Removal of solvents from powders and chemicals

Research & Laboratory

Drying combustible substances

and powders



Chemistry Drying-off solvents from granules, compounds and powders

Aerospace / Automotive Testing of materials durability, component drying-off solvents, drying seals and ageing

> Industrial **Testing of Components & Materials**







The Vacucell EVO vacuum direct heat drying oven is ideal for temperature sensitive, easily decomposable or oxidative materials, which must be dried in a very careful process under vacuum. The Vacucell EVO is also used for drying off solvents from chemicals and powders. As well complex components with inaccessible spaces are dried quickly and effectively using the patented Servotherm Heat transfer shelves. The oven is designed to be connected to a central vacuum source or can be equipped with a vacuum pump such as the BMT Vacustation for a complete stand-alone system (stacked unit pictured left)

Vacuum EVO Dry-Heat Oven

Chamber Volumes 22 (.8), 55 (2), 111 (4) liters (ft3) Working temperature 5°C above ambient up to 200°C Optional temperature up to 300°C Chamber AISI 316 Stainless steel **Door window** in both Vacuum chamber & Vacustation Integrated duct for sensors etc. (40 mm) **Inert gas** connection **Needle valve** for fine dosing Pressure resistant inner chamber Door designed with safety VENTIFLEX glass Smart Door Handle with 4 point locking

Servotherm -Patented Heat Transfer System

Fast and uniform heat transfer to the media under any pressure conditions. A key element of our simple but intelligent direct heat design is that the entire chamber is heated by powerful elements fixed to the exterior of the chamber. Heat is conducted from the entire chamber to the chamber brackets, then to the precisely milled aluminum shelves (stainless steel optional). Heat is then passed to the media. A benefit of the Vacucell EVO 316 AISI stainless steel chamber is the shelf brackets are removable allowing for the easy cleaning and sterilization of the entire chamber.



EVO Control Panel



- LCD touch screen with graphic interface with fuzzy logic microprocessor ensures no temperature overshooting during the heating process.
- up to 100 programs of up to 100 segments of varying loads and parameters
- yearly data logger in graphic and CSV
- on and off line data export
- password protected against unauthorized use
- SD memory card for data storage
- RS 232 and USB host for printer or PC
 - digital Class 3 safety thermostat
- delayed heating start & stop function
- programming temperature ramps & cycles
- acoustic and visual alarms

Options

- 300°C temperature
- stainless steel shelves and brackets
- digital vacuum control 0.1-1100mbr
- flexible temperature sensors, PT-100
- IQ/OQ protocols
- programmable inner socket 115V
- inner chamber light
- temperature verification 9point
- DLL data interface with external systems
- Vacustation cabinet for vacuum pump
- chemical resistant vacuum pump with inlet separator and exhaust condenser
- WarmComm communication software
- BMS relay alarm contact
- AISI 304 or 316 stainless steel exterior
- RS232 Ethernet converter
- vacuum pump capacities (Vacuubrand)... 2m3/h, 7mba 3.4m3/h, 1.5mba

Press wolm col 22 55 111 International chamber, statisticational press with mm 340 4400 540 External dimensions (including door and handle, fore) Height mm 500 4300 4300 Package dimensions (including door and handle, fore) Height mm 500 500 500 Package dimensions (including door and handle, fore) Height mm 700 500			VACUCELL [®] EVO (VU EVO) 22, 55, 11	1			
Internal space - chamber, statilizes steel DN 1.4301 (ASI 316 Ti) width mm 340 400 540 DN 1.4301 (ASI 316 Ti) appth mm 0.00 320 410 External dimensions (including door and handle, foet) width mm 550 650 650 Package - dimensions (including door and handle, foet) width mm 780 990 990 Package - dimensions (including door and handle, foet) width mm 780 890 980 Package - dimensions (three layer carton) width nm 780 890 980 Verget met cca kg 68 101 133 gross cca kg 68 101 133 gross cca kg 68 101 150 Shelves forage area mm 240 25 24 Number of outer metal doors fora shelf kg 20 25 25 External doot fora shelf kg 20 25 26 25 </td <td>5ir</td> <td>Technical data</td> <td>volume</td> <td>cca l</td> <td>22</td> <td>55</td> <td>111</td>	5ir	Technical data	volume	cca l	22	55	111
Display (bit 20 ft) (notuding door and handle, feet) depth mm 2400 320 440 Kernal dimensions (including door and handle, feet) Meth mm 500 560 650 Package – dimensions (including door and handle, feet) Meth mm 730 980 980 Package – dimensions (three-layer carton) Meth mm 770 870 870 Package – dimensions (three-layer carton) meth 1290 <td>1</td> <td>Internal space - chamber, stainless steel</td> <td>width</td> <td>mm</td> <td>340</td> <td>400</td> <td>540</td>	1	Internal space - chamber, stainless steel	width	mm	340	400	540
heightmm300430480External dimensions (Including door not handle, feet)widthmm560560650Package – dimensions (three-layer carton)widthmm570980980Package – dimensions (three-layer carton)widthmm7708820880Package – dimensions (three-layer carton)widthmm7708820880Weightnetcca kg68101133Package – dimensions (three-layer carton)netcca kg68101133Shelvesforsforscca kg68101130Shelvesstandar depulpmentpsc.7222Shelvesstandar depulpmentpsc.7404040min. distance between screensmm480404040storage areamm280x/36340x/36480x/36Maximal loadfor a sheftkg202525Number of outer metal doorspsc.111Protective systemmasimum poverW80012001800Protective systemfran Strabove ambientfor C223Image divisions acc. to INI 2880 from working temperaturefran Strabove ambientfor G223Image divisions acc. to INI 2880 from working temperature (Aracks, pressure 5-10in space at100°Ca*C567Image division		DIN 1.4301 (ADI 310 II)	depth	mm	260	320	410
Extensions (including door and handle, feet) width depth mm 560 620 760 Package – dimensions (three-layer carton) width mm 730 980 980 Package – dimensions (three-layer carton) width mm 730 980 980 Weight mm 730 980 980 980 Weight mm 730 980 980 880 1290 12290 1290 480/38 56 56 304/296 480/38 56 56 760 56 56 56 56 56 56 56 56 56 56 56 56 56 56 </td <td></td> <td></td> <td>height</td> <td>mm</td> <td>300</td> <td>430</td> <td>480</td>			height	mm	300	430	480
Including door and handle, feet) depth mm 500 560 650 Package - dimensions height mm 780 980 980 (hree-layer carton) depth mm 780 980 980 Weight mm 720 820 820 820 Weight mm 100 1230 1230 1230 Melight (incl. palette) mm 100 123 1230 Shelves shelves max 80 117 150 Maximal load net cas kg 80 117 150 Maximal load for a cheff max No. 50 8 9 Maximal load for a cheff kg 20 25 25 Number of outer metal doors psc. 1 1 1 Protective system max Sof00 Az 1 15 115 Protective system in space 200°C 1°C 250 250 250		External dimensions (including door and handle, feet)	width	mm	560	620	760
heightmm780980980Package - dimensions (three-layer carton)widthmm780980980(three-layer carton)depthmm720820820Weightnetcc kg68101133protectgrosscca kg68101133Shelvesmax.No.589shelvesmax.No.589functional dequipmentpsc.22min. distance between screensmm280-235340-26Maximal loadfor a shelfkg2025total inside of devicekg354565Number of outer metal doorsmains 50/60 Hzv115115Protective systemmains 50/60 Hzv115115115Protective systemin space at J00°C±°C250250250Temp- deviations acc. to DN 12 280 from working temperature (1 racks, pressure 5-10 mbinin space at J00°C±°C101011Temp. deviations acc. to DN 12 880 from working temperature (1 racks, pressure 5-10 mbinin space at J00°C±°C18230250250Temp. deviations acc. to DN 12 880 from working temperature (1 racks, pressure 5-10 mbinin space at J00°C±°C18130110110Temp. deviations acc. to DN 12 880 from working temperature (1 racks, pressure 5-10 mbinin space at J00°C±°C18230450500Temp. devia			depth	mm	500	560	650
width mm 730 990 990 (three-layer carton) depth mm 720 820 820 Weight net cca kg 68 101 133 Shelves gross cca kg 68 101 133 Shelves max.No. 5 8 9 standard equipment pc. 2 2 2 min. distance between screens mm 400 400 400 Maximal load for a sheff kg 35 45 65 Number of outer metal doors main sol(0 fiz v 11 1 Electrical data mains sol(0 fiz v 115 115 115 Protective system mains Sol(0 fiz v 115 115 115 Temp. deviations acc. to DN 12 880 from working temperature for sorts obse ambient to ^C 250 250 250 Temp. deviations acc. to DN 12 880 from working temperature for sorts obse sorts obse ambient to ^C 25 6 <t< td=""><td></td><td>height</td><td>mm</td><td>780</td><td>910</td><td>960</td></t<>			height	mm	780	910	960
depth mm 720 820 820 Weight net cca kg 6.8 1.01 1.230 Weight net cca kg 6.8 1.01 1.33 Shelves cca kg 8.0 1.17 1.50 Shelves max. No. 5 8.8 9 Tandard equipment pc. 2 2 2 Maxindre devizen screens mm 4.04 4.04 4.04 Maxindre devizen screens mm 2.80×2.36 340×2.96 4.80×3.86 Maxindre devizen screens mm 2.80×2.36 340×2.96 4.80×3.86 Maxindre devizen screens mm 2.80×2.36 340×2.96 4.80×3.86 Maxindre devizen kg kg 2.0 2.5 2.5 Number of outer metal doors maximum power wd 4.00 1.0 1 Protective system maximum power wd 4.0°C 2.20 1.800 Temperature data inspace at100°C 4.°C		Package – dimensions (three-layer carton)	width	mm	730	980	980
height (incl. paiette) mm 1090 1290 1290 Weight net cca kg 68 101 133 gross cca kg 68 101 133 Shelves max. No. 5 8 9 standard equipment psc. 2 2 2 min. distance between screens mm 40 40 40 Maximal load for a sheff kg 350 25 25 Number of outer metal doors for a sheff kg 35 45 65 Number of outer metal doors maximu power psc. 1 1 1 Forective system maximu power V 800 115 115 Protective system forn 5°C above ambient to °C 250 250 250 Temp. deviations acc. to DIN 12 880 from working temperature (Al racks, pressure 5-10 in space a100°C ± °C 2 2 3 Temp. deviations acc. to DIN 12 880 from working temperature (stainless racks, pressure 5-10 mbar			depth	mm	720	820	820
weight net cca kg 68 101 133 Shelves cca kg 80 117 150 Shelves max. No. 5 8 9 standard equipment psc. 2 2 2 min. distance between screens mm 40 40 40 Maximal load for a shelf kg 35 45 65 Number of outer metal doors psc. 1 1 1 Electrical data maximum power W 800 1000 1800 Protective system maximum power W 800 1000 1800 Temp. deviations acc. to DIN 12 880 from working temperature (Al racks, pressure 5-10 in space at100°C 2°C 2 2 3 ** in space at100°C 2°C 1 1 1 1 Temp. deviations acc. to DIN 12 880 from working temperature (Al racks, pressure 5-10 in space at100°C 2°C 5 6 7 In time 2°C 0,4			height (incl. palette)	mm	1090	1290	1290
gross cca kg 80 117 150 Shelves max. No. 5 8 9 standard equipment psc. 2 2 2 min. distance between screens mm 400 40 40 Maximal load for a shelf kg 20 25 25 Maximal load for a shelf kg 30 45 65 Number of outer metal doors kg 35 45 65 Number of outer metal doors kg 1 1 1 Flectrical dat maximum power W 800 1200 1800 Temperature data maximum power W 800 1200 1800 Temp. deviations acc. to DIN 12 880 from working temperature (14 racks, pressure 5-1 in space at100°C 1 °C 25 6 7 10 mbar)** for space at200°C 2 °C 10 10 11 1 Temp. deviations acc. to DIN 12 880 from working temperature (14 racks, pressure 5-10 mbar) in time		Weight	net	cca kg	68	101	133
Shelves max. No. 5 8 9 standard equipment psc. 2 2 2 min. distance between screens mm 40 40 40 Maximal load for a shelf kg 20 25 25 Number of outer metal doors kg 35 45 65 Number of outer metal doors psc. 1 1 1 Electrical data maximum power W 800 1200 1800 mains 50/60 Hz V 115 115 115 Protective system in space at100°C ±°C 25 6 7 Temp, deviations acc. to DIN 12 880 from working temperature (stainless racks, pressure 5-10 mbar) ** in space at200°C ±°C 0.4 0.4 0.4 ** Image at 200°C ±°C 1.6 1.1 1.1 1.1 in space at 200°C ±°C 0.4 0.4 0.4 0.4 Temp, deviations acc. to DIN 12 880 from working temperature (stainless racks, pressure 5-10 mbar <t< td=""><td></td><td>gross</td><td>cca kg</td><td>80</td><td>117</td><td>150</td></t<>			gross	cca kg	80	117	150
standard equipment psc. 2 2 2 min. distance between screens mm 40 40 40 Maximal load for a shelf kg 20 25 25 Mumber of outer metal doors kg 35 45 65 Number of outer metal doors kg 35 45 65 Number of outer metal doors maximum power W 800 1200 1800 Protective system maximum power W 800 115 115 Protective system in space at00°C ±°C 2 2 3 Working temperature data in space at100°C ±°C 2 2 3 Image at 200°C ±°C 0.4 0.4 0.4 Temp, deviations acc. to DIN 12 880 from working temperature (stainless racks, pressure 5-10 mbar) in space at200°C ±°C 0.4 0.4 0.4 Time of rise onto 98% voltage 230 V up to temp. 100°C ±°C 0.4 0.4 110 110 110 1		Shelves	shelves	max. No.	5	8	9
min. distance between screens mm 40 40 40 storage area mm 280×236 340×296 480×386 Maximal load for a shelf kg 20 25 25 Number of outer metal doors kg 35 45 65 Number of outer metal doors psc. 1 1 1 Electrical data maximum power W 800 1200 1800 Protective system w 800 1200 1920 1920 1920 Temperature data from 5°C above ambient to °C 250 250 250 Temp, deviations acc. to DN 12 880 from working temperature (Al racks, pressure 5-10 mbar) in space at100°C ± °C 2 3 3 ** in time ± °C 0.4 0.4 0.4 Temp, deviations acc. to DN 12 880 from working temperature (stainless racks, pressure 5-10 mbar in space at200°C ± °C 18 23 * Time of rise onto 98% voltage 230 V up to temp. 100°C min 60			standard equipment	psc.	2	2	2
storage area mm 280-236 340-296 480-386 Maximal load for a shelf kg 20 25 25 Number of outer metal doors for a shelf kg 35 45 65 Number of outer metal doors maximum power psc. 1 1 1 Electrical data maximum power W 800 1220 1800 Protective system inspool of l/2 V 115 115 115 Protective system in space at100°C ± °C 250 250 250 Temp. deviations acc. to DIN 12 880 from working temperature (AI racks, pressure 5-10 mbar) in space at100°C ± °C 2 2 3 in space at200°C ± °C 0.4 0.4 0.4 0.4 Temp. deviations acc. to DIN 12 880 from working temperature (stainless racks, pressure 5-10 mbar) in space at200°C ± °C 0.5 1 1 in space at200°C ± °C 0.4 0.4 0.4 0.4 0.4 - AI racks, pressure 5-10 mbar			min. distance between screens	mm	40	40	40
Maximal load for a shelf kg 20 25 25 Number of outer metal doors kg 35 45 65 Number of outer metal doors psc. 1 1 1 Electrical data maximum power W 800 1200 1800 Protective system maximum power W 800 1200 1920 1920 Protective system maximum power V 115 115 115 Protective system inspace 30/60 Hz V 115 115 115 Temperature data in space at100°C ± °C 250 250 250 Temp. deviations acc. to DIN 12 880 from working temperature (Al racks, pressure 5-10 mbar) in space at200°C ± °C 0,4 0,4 0,4 temperature (stainless racks, pressure 5-10 mbar) in space at200°C ± °C 10 10 11 remo of rise onto 98% voltage 230 V up to temp. 100°C min 60 65 110 - stainless racks, press racks, press 5-10 mbar up to te			storage area	mm	280×236	340×296	480×386
total inside of device kg 35 45 65 Number of outer metal doors psc. 1 1 1 Electrical data maximum power W 800 1200 1800 Protective system W 800 115 115 115 Protective system From S°C above ambient to °C 250 250 250 Temperature data from S°C above ambient to °C 2 2 3 Working temperature (Al racks, pressure 5-10 mbar)** in space at100°C ±°C 2 2 3 in space at200°C ±°C 0.4 0.4 0.4 Temp. deviations acc. to DIN 12.880 from working temperature (stainless racks, pressure 5-10 mbar) in space at200°C ±°C 10 10 11 Time of rise onto 98% voltage 230 V up to temp.100°C min 60 65 110 -Al racks, pressure 5-10 mbar up to temp.200°C min 80 86 130 Time of rise onto 98% voltage 230 V up to temp.200°C min <t< td=""><td></td><td>Maximal load</td><td>for a shelf</td><td>kg</td><td>20</td><td>25</td><td>25</td></t<>		Maximal load	for a shelf	kg	20	25	25
Number of outer metal doors psc. 1 1 1 Electrical data maximum power W 800 1200 1800 mains 50/60 Hz V 115 115 115 115 Protective system IP20 IP20 IP20 IP20 IP20 Temperature data from 5°C above ambient to °C 250 250 250 Temp. deviations acc. to DIN 12 880 from working temperature (Al racks, pressure 5-10 mbar) ** in space at100°C ± °C 0,4 0,4 0,4 Temp. deviations acc. to DIN 12 880 from working temperature (stainless racks, pressure 5-10 mbar) in space at100°C ± °C 10 10 11 ** in space at200°C ± °C 188 23 * ** in space at200°C ± °C 10 10 11 Time of rise onto 98% voltage 230 V up to temp. 100°C min 60 65 110 -Al racks, pressure 5-10 mbar up to temp. 200°C min 130 140 170 -stainless racks, press 5-10 mb			total inside of device	kg	35	45	65
Electrical data maximum power W 800 1200 1800 Protective system v 115 115 115 115 Protective system IP20 IP20 IP20 IP20 IP20 Temperature data from 5°C above ambient to °C 250 250 250 Temp. deviations acc. to DIN 12 880 from working temperature (Al racks, pressure 5-10 mbar) ** in space at100°C ± °C 0.4 0.4 0.4 Temp. deviations acc. to DIN 12 880 from working temperature (stainless racks, pressure 5-10 mbar) in space at100°C ± °C 0.4 0.4 0.4 Temp. deviations acc. to DIN 12 880 from working temperature (stainless racks, pressure 5-10 mbar) in space at100°C ± °C 10 10 11 ** in space at200°C ± °C 18 23 * ** in time ± °C 0.5 1 1 Time of rise onto 98% voltage 230 V up to temp. 100°C min 60 65 110 - Al racks, press 5-10 mbar up to temp. 200°C min 130		Number of outer metal doors		psc.	1	1	1
mains 50/60 Hz V 115 115 115 Protective system IP20 IP20 IP20 IP20 Temperature data Working temperature from 5°C above ambient to °C 250 250 250 Temp. deviations acc. to DIN 12 880 from working temperature (AI racks, pressure 5-10 mbar) in space at 200°C ± °C 2 2 3 In space at 200°C ± °C 0.4 0.4 0.4 0.4 Temp. deviations acc. to DIN 12 880 from working temperature (stainless racks, pressure 5-10 mbar) in space at 200°C ± °C 10 10 11 Temp. deviations acc. to DIN 12 880 from working temperature (stainless racks, pressure 5-10 mbar) in space at 200°C ± °C 18 23 * ** in time ± °C 0.5 1 1 Image at 200°C min 60 65 110 ** up to temp. 100°C min 80 86 130 Time of rise onto 98% voltage 230 V up to temp. 200°C min 130 140 170		Electrical data	maximum power	W	800	1200	1800
Protective system IP20 IP20 IP20 IP20 Temperature data Morking temperature from 5°C above ambient to °C 250 250 250 Temp. deviations acc. to DIN 12 880 from working temperature (AI racks, pressure 5-10 mbar) ** in space at100°C ± °C 2 2 3 In mace at 200°C ± °C 0,4 0,4 0,4 0,4 Temp. deviations acc. to DIN 12 880 from working temperature (stainless racks, pressure 5-10 mbar) in space at00°C ± °C 10 10 11 in space at200°C ± °C 18 23 * ** in space at200°C ± °C 18 23 * ** in space at200°C ± °C 18 23 * ** in time ± °C 0,5 1 1 Time of rise onto 98% voltage 230 V up to temp. 100°C min 80 86 130 - stainless racks, press 5-10 mbar up to temp. 200°C min 130 140 170 - stainless racks, press 5-10 mbar			mains 50/60 Hz	V	115	115	115
Temperature data to °C 250 250 250 Temp. deviations acc. to DIN 12 880 from working temperature (AI racks, pressure 5- 10 mbar) ** in space at 200°C ± °C 2 2 3 Temp. deviations acc. to DIN 12 880 from working temperature (AI racks, pressure 5- 10 mbar) ** in space at 200°C ± °C 0 0.4 0.4 0.4 Temp. deviations acc. to DIN 12 880 from working temperature (stainless racks, pressure 5-10 mbar) ** in space at 200°C ± °C 10 10 11 Time of rise onto 98% voltage 230 V - AI racks, pressure 5-10 mbar up to temp. 100°C min 60 65 110 Time of rise onto 98% voltage 230 V - stainless racks, press 5-10 mbar up to temp. 200°C min 80 86 130 Time of rise onto 98% voltage 230 V - stainless racks, press 5-10 mbar up to temp. 200°C min 130 140 170 Heat emission at 200°C win 130 520 750 Vacuum connection vacuum connector DN mm (KF) 16 16 16 max. attainable vacuum mbar <5·10-3		Protective system	I		IP20	IP20	IP20
Working temperature from 5°C above ambient to °C 250 250 250 Temp. deviations acc. to DIN 12 880 from working temperature (AI racks, pressure 5- 10 mbar) ** in space at 200°C ± °C 2 3 In mace ± °C 5 6 7 in time ± °C 0.4 0.4 0.4 Temp. deviations acc. to DIN 12 880 from working temperature (stainless racks, pressure 5-10 mbar) in space at 200°C ± °C 10 10 11 in space at 200°C ± °C 0.5 1 1 1 in space at 200°C ± °C 0.5 1 1 in space at 200°C ± °C 18 23 * ** in time ± °C 0.5 1 1 Time of rise onto 98% voltage 230 V up to temp. 100°C min 80 86 130 up to temp. 200°C min 130 140 170 -stainless racks, press 5-10 mbar at 100°C min 130 220 Heat emission at 200°C <t< td=""><td></td><td colspan="6">Temperature data</td></t<>		Temperature data					
Temp. deviations acc. to DIN 12 880 from working temperature (AI racks, pressure 5- 10 mbar) ** in space at100°C ± °C 2 2 3 In space at200°C ± °C 5 6 7 in time ± °C 0.4 0.4 0.4 Temp. deviations acc. to DIN 12 880 from working temperature (stainless racks, pressure 5-10 mbar) in space at100°C ± °C 10 10 11 in space at200°C ± °C 0.5 1 1 in space at200°C min 60 65 100 - Al racks, pressure 5-10 mbar up to temp. 100°C min 80 86 130 Time of rise onto 98% voltage 230 V up to temp. 200°C min 130 140 170 - stainless racks, press 5-10 mbar at 100°C min		Working temperature	from 5°C above ambient	to °C	250	250	250
working temperature (AI racks, pressure 5-10 mbar) ** in space at 200°C \pm °C 5 6 7 In me \pm °C 0,4 0,4 0,4 0,4 0,4 Temp. deviations acc. to DIN 12 880 from working temperature (stainless racks, pressure 5-10 mbar) in space at 100°C \pm °C 10 10 11 in space at 200°C \pm °C 18 23 * ** in time \pm °C 0,5 1 1 Imme of rise onto 98% voltage 230 V up to temp. 100°C min 60 65 110 - AI racks, pressure 5-10 mbar up to temp. 200°C min 130 140 170 - stainless racks, press 5-10 mbar up to temp. 200°C min 130 140 170 - stainless racks, press 5-10 mbar up to temp. 200°C min 130 140 170 - stainless racks, press 5-10 mbar at 100°C wo temp. 200°C min 150 260 370 - dat emission at 200°C W 150 260 370 <td< td=""><td></td><td rowspan="3">Temp. deviations acc. to DIN 12 880 from working temperature (Al racks, pressure 5- 10 mbar) **</td><td>in space at 100°C</td><td>±°C</td><td>2</td><td>2</td><td>3</td></td<>		Temp. deviations acc. to DIN 12 880 from working temperature (Al racks, pressure 5- 10 mbar) **	in space at 100°C	±°C	2	2	3
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$			in space at 200°C	± °C	5	6	7
Temp. deviations acc. to DIN 12 880 from working temperature (stainless racks, pressure 5-10 mbar) in space at 100°C \pm °C 10 11 in space at 200°C \pm °C 18 23 * Time of rise onto 98% voltage 230 V \pm °C 0,5 1 1 - Al racks, pressure 5-10 mbar up to temp. 100°C min 60 65 110 - Al racks, pressure 5-10 mbar up to temp. 200°C min 80 86 130 Time of rise onto 98% voltage 230 V up to temp. 200°C min 130 140 170 - stainless racks, press 5-10 mbar up to temp. 200°C min 130 140 170 - stainless racks, press 5-10 mbar up to temp. 200°C min 170 180 220 Heat emission at 100°C wu to temp. 200°C win 150 260 370 Vacuum connection vacuum connector W 300 520 750 Vacuum connection vacuum connector DN mm (KF) 16 16 16 max. attainable			in time	± °C	0,4	0,4	0,4
temperature (stainless racks, pressure 5-10 mbar) in space at 200°C ± °C 18 23 * 'in time ± °C 0,5 1 1 Time of rise onto 98% voltage 230 V up to temp. 100°C min 60 65 110 - Al racks, pressure 5-10 mbar up to temp. 200°C min 80 86 130 Time of rise onto 98% voltage 230 V up to temp. 200°C min 130 140 170 - stainless racks, press 5-10 mbar up to temp. 200°C min 130 140 170 - stainless racks, press 5-10 mbar up to temp. 200°C min 130 140 170 - stainless racks, press 5-10 mbar up to temp. 200°C min 130 140 170 - stainless racks, press 5-10 mbar at 100°C wo 150 260 370 - stainless racks, press 5-10 mbar at 200°C W 300 520 750 Vacuum connection vacuum connector NN mm (KF) 16 16 16 max. attainable vacuum <td></td> <td rowspan="3">Temp. deviations acc. to DIN 12 880 from working temperature (stainless racks, pressure 5-10 mbar) **</td> <td>in space at 100°C</td> <td>± °C</td> <td>10</td> <td>10</td> <td>11</td>		Temp. deviations acc. to DIN 12 880 from working temperature (stainless racks, pressure 5-10 mbar) **	in space at 100°C	± °C	10	10	11
** in time \pm °C 0,5 1 1 Time of rise onto 98% voltage 230 V up to temp. 100°C min 60 65 110 - Al racks, pressure 5-10 mbar up to temp. 200°C min 80 86 130 Time of rise onto 98% voltage 230 V up to temp. 200°C min 130 140 170 - stainless racks, press 5-10 mbar up to temp. 200°C min 130 140 170 - stainless racks, press 5-10 mbar up to temp. 200°C min 170 180 220 Heat emission at 100°C wp to temp. 200°C min 170 180 220 Vacuum connection at 200°C W 300 520 750 Vacuum connection vacuum connector DN mm (KF) 16 16 16 max. attainable vacuum mbar.l.s-1 <5·10-4			in space at 200°C	±°C	18	23	*
Time of rise onto 98% voltage 230 V up to temp. 100°C min 60 65 110 - Al racks, pressure 5-10 mbar up to temp. 200°C min 80 86 130 Time of rise onto 98% voltage 230 V up to temp. 100°C min 130 140 170 - stainless racks, press 5-10 mbar up to temp. 200°C min 170 180 220 Heat emission at 100°C win 150 260 370 At 200°C W 300 520 750 Vacuum connection vacuum connector DN mm (KF) 16 16 max. attainable vacuum mbar.l.s-1 <5·10-3			in time	±°C	0,5	1	1
- Al racks, pressure 5-10 mbar up to temp. 200°C min 80 86 130 Time of rise onto 98% voltage 230 V up to temp. 100°C min 130 140 170 - stainless racks, press 5-10 mbar up to temp. 200°C min 170 180 220 Heat emission at 100°C wV 150 260 370 At 200°C W 300 520 750 Vacuum connection vacuum connector DN mm (KF) 16 16 max. attainable vacuum mbar <5·10-3		Time of rise onto 98% voltage 230 V – Al racks, pressure 5-10 mbar	up to temp. 100°C	min	60	65	110
Time of rise onto 98% voltage 230 V up to temp. 100°C min 130 140 170 - stainless racks, press 5-10 mbar up to temp. 200°C min 170 180 220 Heat emission at 100°C W 150 260 370 At 200°C W 300 520 750 Vacuum connection vacuum connector DN mm (KF) 16 16 max. attainable vacuum mbar.l.s-1 <5·10-3			up to temp. 200°C	min	80	86	130
- stainless racks, press 5-10 mbar up to temp. 200°C min 170 180 220 Heat emission at 100°C w 150 260 370 at 200°C w 300 520 750 Vacuum connection vacuum connector DN mm (KF) 16 16 16 max. attainable vacuum mbar <5·10-4		Time of rise onto 98% voltage 230 V – stainless racks, press 5-10 mbar	up to temp. 100°C	min	130	140	170
Heat emission at 100°C W 150 260 370 Heat emission at 200°C W 300 520 750 Vacuum connection vacuum connector DN mm (KF) 16 16 16 max. attainable vacuum mbar <5·10-4			up to temp. 200°C	min	170	180	220
International at 200°C W 300 520 750 Vacuum connection vacuum connector DN mm (KF) 16 16 16 max. attainable vacuum mbar <5·10-4		Heat emission	at 100°C	w	150	260	370
Vacuum connection vacuum connector DN mm (KF) 16 16 16 max. attainable vacuum mbar <5·10-4			at 200°C	W	300	520	750
max. attainable vacuum mbar <5·10-4 <5·10-4 <5·10-4 chamber leakage mbar.l.s-1 <5·10-3		Vacuum connection	vacuum connector	DN mm (KF)	16	16	16
Image: chamber leakage mbar.l.s-1 <5·10-3 <5·10-3 <5·10-3 Measuring access port DN mm (KF) 40 40 40 Connection (including hose terminal 212 mm) for inert gas or air DN mm (KF) 16 16			max. attainable vacuum	mbar	<5.10-4	<5.10-4	<5.10-4
Measuring access port DN mm (KF) 40 40 40 Connection (including hose terminal 212 mm) for inert gas or air DN mm (KF) 16 16			chamber leakage	mbar.l.s-1	<5.10-3	<5.10-3	<5.10-3
Connection (including hose terminal 212 mm) for inert gas or air DN mm (KF) 16 16 16		Measuring access port		DN mm (KF)	40	40	40
		Connection (including hose terminal 2 12 mm)	for inert gas or air	DN mm (KF)	16	16	16

Note: All technical data is related to 22°C ambient temperature and +/- 10% voltage swing (if not specified)

- * Not measured
- ** Heat transfer to samples on the shelves under vacuum is performed through shelf leads. This is why the above stated temperature variations apply to temperature on shelf surfaces. The measuring sensors must be in perfect heat-conductive contact with the shelf surface. Samples placed on the shelves must also be in perfect contact with the shelves. The temperature of the samples depends primarily on their physical characteristics and on contact with the shelf.
- The values may differ depending on specific changes in the media parameters.
- Change in the design and make reserved