

9 Technical data

9.1 Power supply

Power connection	100 V – 130 V ± 10 %, 50 Hz – 60 Hz 220 V – 240 V ± 10 %, 50 Hz – 60 Hz
Power consumption	Maximum 200 W
Overvoltage category	II
Degree of pollution	2
Protection class	I

9.2 Weight/dimensions

Width	20.6 cm (8.1 in)
Depth	30.4 cm (12.0 in)
Height	13.6 cm (5.4 in)
Weight	6.3 kg (13.9 lb)

9.3 Ambient conditions

Environment	For indoor use only
Ambient temperature	5 °C – 40 °C
Relative humidity	10 % – 90 %, non-condensing
Atmospheric pressure	79.5 kPa – 106 kPa

9.4 Application parameters

9.4.1 Temperature control

Temperature control range	1 °C – 100 °C, can be set in increments of 1 °C Minimum: 15 °C (± 2 °C) below the ambient temperature Maximum: 100 °C	
Temperature accuracy	Set temperature 20 °C – 45 °C	Set temperature < 20 °C or > 45 °C
SmartBlock 1.5 mL	± 0.5 °C	± 1.0 °C
Temperature homogeneity	In the range of 20 °C – 45 °C max. ± 0.5 °C for all positions of the thermoblock	
Heating rate*	6.0 °C/min The change of temperature in filled tubes is slower.	

Cooling rate*	if the set temperature is above the ambient temperature	if the set temperature is between ambient temperature and 15 °C below ambient temperature
	2.5 °C/min	0.5 °C/min – 0.8 °C/min

*Heating rate and cooling rate can be throttled.

The heating and cooling rates listed only apply if the SmartBlock is being operated with no ThermoTop or SmartExtender.

9.4.2 Mixing

Thermoblock	Mixing frequency
	can be set in increments of 50 rpm
SmartBlock <i>0.5 mL</i>	300 rpm – 2 000 rpm
SmartBlock <i>1.5 mL</i>	300 rpm – 2 000 rpm
SmartBlock <i>2.0 mL</i>	300 rpm – 2 000 rpm
SmartBlock <i>5.0 mL</i>	300 rpm – 1 000 rpm
SmartBlock <i>12 mm</i>	300 rpm – 2 000 rpm
SmartBlock <i>cryo</i>	300 rpm – 2 000 rpm
SmartBlock <i>15 mL</i>	300 rpm – 1 000 rpm
SmartBlock <i>50 mL</i>	300 rpm – 1 000 rpm
SmartBlock <i>plates</i> with deepwell plates and temperature control up to 80 °C with deepwell plates and temperature control from 80 °C	300 rpm – 3 000 rpm 300 rpm – 2 000 rpm 300 rpm – 1 000 rpm
SmartBlock <i>PCR 96</i>	300 rpm – 2 000 rpm
SmartBlock <i>PCR 384</i>	300 rpm – 3 000 rpm
SmartBlock <i>DWP 500</i>	300 rpm – 1 600 rpm
SmartBlock <i>DWP 1000</i>	300 rpm – 1 600 rpm