

3.3 Technical data overview

Table 3-5: Technical data

	R-210 Rotavapor without display	R-215 Rotavapor with display	B-491 Heating bath	B-495 Heating bath
Glass assemblies	A, V, C, S, E, CR, BY			
Dimensions (W x H x D)	550 x 575 x 415 mm		285 x 240 x 300 mm	310 x 230 x 320 mm
Weight	16 – 18 kg (depending on the glass assembly)		4 kg	5 kg
Connection voltage	100 – 240 V ± 10%		100 – 120 V or 220 – 240 V ± 10%	
Mains connection	3-pole (P, N, E) via power cord		3-pole (P, N, E) via power cord	
Frequency	50 / 60 Hz		50 / 60 Hz	
Heating power			1300 W	
Power consumption	max. 60 W		max. 1700 W	
Installation category	II		II	
Degree of protection	IP21		IP21	
Pollution degree	2		2	
Rotation speed range	20 – 280 rpm			
Flask size	50 – 4000 ml		up to 4000 ml	up to 5000 ml
Max. flask content	3 kg			
Temperature control range			20 °C – 180 °C	20 °C – 95 °C
Display	Rotation speed / vapor temperature		Set / actual temperature	
Temperature accuracy			± 3 °C	
Environmental conditions	for indoor use only			
Temperature	5 – 40 °C			
Altitude	up to 2000 m			
Humidity	maximum relative humidity 80% for temperatures up to 31 °C, and then linearly decreasing to 50% at 40 °C			
Bath content			4 l	5 l
Vacuum tightness of system with 1 l evaporating and 1 l receiving flask	5 mbar per 3 minutes at a pressure of < 10 mbar			
Temperature resistance P+G	ca. -70 °C – 60 °C			
Temperature resistance P+G low temperature	-80 °C – 50 °C			
Temperature resistance protective shield	< 160 °C			

3.4 Solvent table

Table 3-6: Solvent table

Solvent	Formula	Molar mass in g / mol	Evaporation energy in J / g	Boiling point at 1013 mbar	Density in g / cm ³	Vacuum in mbar for boiling point at 40 °C
Acetone	CH ₃ H ₆ O	58.1	553	56	0.790	556
n-amylalcohol, n-pentanol	C ₅ H ₁₂ O	88.1	595	37	0.814	11
Benzene	C ₆ H ₆	78.1	548	80	0.877	236
n-butanol	C ₄ H ₁₀ O	74.1	620	118	0.810	25
tert. butanol (2-methyl-2-propanol)	C ₄ H ₁₀ O	74.1	590	82	0.789	130
Chlorobenzene	C ₆ H ₅ Cl	112.6	377	132	1.106	36
Chloroform	CHCl ₃	119.4	264	62	1.483	474
Cyclohexane	C ₆ H ₁₂	84.0	389	81	0.779	235
Diethylether	C ₄ H ₁₀ O	74.0	389	35	0.714	atmospheric
1,2-dichloroethane	C ₂ H ₄ Cl ₂	99.0	335	84	1.235	210
1,2-dichloroethylene (cis)	C ₂ H ₂ Cl ₂	97.0	322	60	1.284	479
1,2-dichloroethylene (trans)	C ₂ H ₂ Cl ₂	97.0	314	48	1.257	751
Diisopropyl ether	C ₆ H ₁₄ O	102.0	318	68	0.724	375
Dioxane	C ₄ H ₈ O ₂	88.1	406	101	1.034	107
DMF (dimethyl-formamide)	C ₃ H ₇ NO	73.1		153	0.949	11
Acetic acid	C ₂ H ₄ O ₂	60.0	695	118	1.049	44
Ethanol	C ₂ H ₆ O	46.0	879	79	0.789	175
Ethylacetate	C ₄ H ₈ O ₂	88.1	394	77	0.900	240
Heptane	C ₇ H ₁₆	100.2	373	98	0.684	120
Hexane	C ₆ H ₁₄	86.2	368	69	0.660	360
Isopropylalcohol	C ₃ H ₈ O	60.1	699	82	0.786	137
Isoamylalcohol (3-methyl-1-butanol)	C ₅ H ₁₂ O	88.1	595	129	0.809	14
Methylethylketone	C ₄ H ₈ O	72.1	473	80	0.805	243
Methanol	CH ₃ O	32.0	1227	65	0.791	337
Methylene chloride, dichloromethane	CH ₂ Cl ₂	84.9	373	40	1.327	atmospheric
Pentane	C ₅ H ₁₂	72.1	381	36	0.626	atmospheric
n-propylalcohol	C ₃ H ₈ O	60.1	787	97	0.804	67
Pentachloroethane	C ₂ HCl ₅	202.3	201	162	1.680	13
1,1,2,2-tetra-chloroethane	C ₂ H ₂ Cl ₄	167.9	247	146	1.595	20
Tetrachlorocarbon	CCl ₄	153.8	226	77	1.594	271
1,1,1-trichloroethane	C ₂ H ₃ Cl ₃	133.4	251	74	1.339	300
Tetra-chloro-ethylene	C ₂ Cl ₄	165.8	234	121	1.623	53
THF (tetrahydrofuran)	C ₄ H ₈ O	72.1		67	0.889	374
Toluene	C ₇ H ₈	92.2	427	111	0.867	77
Trichloroethylene	C ₂ HCl ₃	131.3	264	87	1.464	183
Water	H ₂ O	18.0	2261	100	1.000	72
Xylene (mixture)	C ₈ H ₁₀	106.2	389			25
o-xylene	C ₈ H ₁₀	106.2		144	0.880	
m-xylene	C ₈ H ₁₀	106.2		139	0.864	
p-xylene	C ₈ H ₁₀	106.2		138	0.861	