

U501 [water cooled]

Technical data sheet

CFC / HCFC free:	yes
Climate class:	SN
Ambient temperature range °C (°F):	from +10 to +32 (from 50 to 89.6)
Max. relative humidity:	75%
Voltage V:	230
Frequency Hz:	50
Fuse Amp:	20
Power W:	2000
Running current A:	10
Energy consumption Kwh/24h:	11.3
Heat ejection Kcal/h:	404 [149]
Running time %:	51
Noise level dB(A) (in 1m height +1m distance):	57
Accu data / function time:	12V -7.0 AH / 48 hours
Defrosting technique:	manual
Compressor manufacturer:	Embraco / Embraco
Compressor type:	NT2210U / NT2210U
Cooling capacity W (ASHRAE):	1180
Capillary tube, inner diam x length mm (inch):	1.24 x 3200 (0.049 x 125.98) / 1.24 x 3500 (0.049 x 137.79)
Refrigerant type:	R290 / R170
Refrigerant quantity g (oz):	150 (5.29) / 85 (3)
Door insulation mm (inch):	65 to 82 (2.56 to 3.23) with 20mm VIP, not heated
Cabinet insulation mm (inch):	77 to 82 (3.03 to 3.23) with 20-30mm VIP
K value W/m²xK at 20°C (68°F):	N/A
Hold over time h at °C (°F):	1.3 from -80 to -60°C (from -112 to -76°F), @20°C (68°F)
Net volume l (cu ft):	577 (20.377)
Gross volume l (cu ft):	598 (21.118)
Internal width mm (inch):	590 (23.23)
Internal depth mm (inch):	713 (28.07)
Internal height mm (inch):	1370 (53.94)
External width mm (inch):	845 (33.27)
External depth mm (inch):	1039 (40.91)
External height mm (inch):	1988 (78.27)
Net weight with standard equipment kg (lbs):	276 (608.48)
EMC directive:	2014/30/EU
Low voltage directive:	2014/35/EU
GS certificate:	no
Medical device directive:	93/42/EEC, Class IIa
GMP-clean room classification:	class ISO5/EC GMP A
ATEX-categorie III, zone 2, interior:	no

Subject to changes without prior notice !

Revision: 07.02.2019

Measurement conditions:

Setpoint -80°C (-112°F) @ +20°C (68°F) ambient temperature, unless otherwise stated
All appliances without load

U501 [water cooled]

Technical data sheet

CFC / HCFC free:	yes
Climate class:	SN
Ambient temperature range °C (°F):	from +10 to +32 (from 50 to 89.6)
Max. relative humidity:	75%
Voltage V:	220
Frequency Hz:	60
Fuse Amp:	20
Power W:	2000
Running current A:	10
Energy consumption Kwh/24h:	12.5
Heat ejection Kcal/h:	433 [160]
Running time %:	47
Noise level dB(A) (in 1m height +1m distance):	58
Accu data / function time:	12V -7.0 AH / 48 hours
Defrosting technique:	manual
Compressor manufacturer:	Embraco / Embraco
Compressor type:	NT2210UV / NT2210UV
Cooling capacity W (ASHRAE):	1282
Capillary tube, inner diam x length mm (inch):	1.24 x 3200 (0.049 x 125.98) / 1.24 x 3500 (0.049 x 137.79)
Refrigerant type:	R290 / R170
Refrigerant quantity g (oz):	150 (5.29) / 85 (3)
Door insulation mm (inch):	65 to 82 (2.56 to 3.23) with 20mm VIP, not heated
Cabinet insulation mm (inch):	77 to 82 (3.03 to 3.23) with 20-30mm VIP
K value W/m²xK at 20°C (68°F):	N/A
Hold over time h at °C (°F):	1.4 from -82 to -60°C (from -115.6 to -76°F), @25°C (77°F)
Net volume l (cu ft):	577 (20.377)
Gross volume l (cu ft):	598 (21.118)
Internal width mm (inch):	590 (23.23)
Internal depth mm (inch):	713 (28.07)
Internal height mm (inch):	1370 (53.94)
External width mm (inch):	845 (33.27)
External depth mm (inch):	1039 (40.91)
External height mm (inch):	1988 (78.27)
Net weight with standard equipment kg (lbs):	276 (608.48)
EMC directive:	not applicable
Low voltage directive:	not applicable
GS certificate:	no
Medical device directive:	not applicable
GMP-clean room classification:	class ISO5/EC GMP A
ATEX-categorie III, zone 2, interior:	no

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Revision: 07.02.2019

Measurement conditions:

Setpoint -82°C (-115.6°F) @ +25°C (77°F) ambient temperature, unless otherwise stated
All appliances without load

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Material and equipment

Material specifications

Inner body material:	stainless steel - 1.4301
Outer body material:	DX51D + Z100, with a white/grey coating
Inner door material:	stainless steel - 1.4301
Outer door material:	DX51D + Z100, with a white/grey coating
Wire shelf material:	not available
Drawer material:	not available
Shuttle rack material:	stainless steel

Equipment

<i>Standard equipment inside:</i>	
3 stainless steel tin sheets	
Lots of shelves, recommend / maximum:	3 / 3
Lots of drawers, recommend / maximum:	not available
Lots of shuttle racks per shelf, maximum:	4
Door hinge standard / option:	right / left
Light:	not available
Castors:	4 castors with integrated feet
Water cooling:	as option
External unit:	not available
Recorder as option, range / sensor type:	from -100 to -50°C (from -148 to -58°F) / PT1000
Recorder sensor measuring accuracy:	at +25°C ± 0,5°C (at 77°F ± 32.9°F)
Recorder sensor reference body:	100ml DOW coming 200-5CST (silicon oil)
PT100 sensor additional as option:	yes, type class B, 3-wire
PT100 sensor measuring accuracy:	at +25°C ± 0,2°C (at 77°F ± 32.4°F)
PT100 sensor reference body:	100ml DOW coming 200-5CST (silicon oil)
Packing standard / option:	EPS corners, plastic foil and wooden palette / -

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Electronic data sheet

Electronic type:	Premium electronic
RS 485:	not available
°B Connected monitoring software:	Option
Data transmission:	standard
Wireless data transmission:	not available
Display range °C (°F):	-99.0°C to +99.0°C (-146°F to 210°F)
Display indication step K:	0.1
Preset set point °C (°F):	-82 (-116)
Set point range °C (°F):	from -86 to -40 (from -123 to -40)
Set point adjustable step K:	0.1
Temperature distribution acc. to FDX 15-140 K:	12
Preset warm alarm °C (°F):	-77 (-107)
Preset cold alarm °C (°F):	-87 (-125)
Alarm adjustable step K:	0.1
Min alarm difference to set point K:	5.0
Alarm indication:	optically + acoustically
Remote alarm relais:	change-over switch
Remote alarm relais output:	temperature and system error
Additional remote alarm:	yes as standard: powerfail, system fault and door alarm
Regulation sensor type:	PT1000 2-WIRE 1/3DIN CL.B
Regulation sensor measuring accuracy:	at -80 to 180°C ± 0,2°C (at -112 to 356°F ± 35.6°F)
Display sensor type:	PT1000 2-WIRE 1/3DIN CL.B
Display sensor measuring accuracy:	at -80 to 180°C ± 0,2°C (at -112 to 356°F ± 35.6°F)
Display sensor reference body:	100ml DOW corning 200-5CST (silicon oil)
Safety thermostat at °C (°F) / type:	not available
Safety thermostat measuring accuracy:	not available
Evaporator sensor type:	PT1000 2-WIRE CL.B
Evaporator sensor measuring accuracy:	at -80 to 180°C ± 0,6°C (at -112 to 356°F ± 33.1°F)
Ambient temp sensor as option, type:	PT1000 2-WIRE CL.B
Ambient temp sensor measuring accuracy:	at -80 to 180°C ± 0,6°C (at -112 to 356°F ± 33.1°F)