

	Unit	ISF1-Z Basic (SMZ1500) ISF1-ZC Basic* (SMZ1500C)	ISF1-Z EcoDew® (SMZ1502) ISF1-ZC EcoDew® (SMZ1502C)	ISF1-Z Peltier (SMZ1501P) ISF1-ZC Peltier* (SMZ1501PC)
Temperature Control				
Cooling	yes/no	no	no	yes
Temp. minimum	°C	RT + 10	RT + 10	RT - 5
Temp. maximum	°C	80 (60 with CO ₂ control)	80 (60 with CO ₂ control)	50
Setting, digital	°C	0.1	0.1	0.1
Temperature distribution at 37°C / 85% r.H.	± °C	< 0.20	< 0.20	< 0.20
Power of heating	W	800 (resistance)	800 (resistance)	384 (peltier)
Power of cooling	W	-	-	approx. 150 (peltier)
Principle of temp. sensor	type	Pt-100	Pt-100	Pt-100
Gas circulation	m³ / h	570	570	380
Humidity Control				
Humidity max. at 25 - 55 °C	% r. H.	-	85	-
Humidity min. at 25 - 55 °C	% r. H.	-	depends on temperature (70 - 80%)	-
Setting, digital	% r. H.	-	1	-
Accuracy absolute	± % r. H.	-	2	-
Power of waterbath heater	W	-	180	-
Power of door and frame heater	W	-	140	-
Water refill		-	automatic	-
Principle of hum. sensor	type	-	capacitive	-
Principle of hum. control	type	-	evaporation & recondensation	-
CO₂ Control*				
CO ₂ max.	%	20	20	20
CO ₂ min.	%	0	0	0
Setting, digital	%	0.1	0.1	0.1
Accuracy absolute	± %	0.40 at 5 % CO ₂	0.40 at 5 % CO ₂	0.40 at 5 % CO ₂
Temperature range	°C	up to 60	up to 60	up to 60
CO ₂ supply	bar	max. 2 bar overpressure	max. 2 bar overpressure	max. 2 bar overpressure
Principle of sensor	type	Infrared	Infrared	Infrared
Shaking Control				
Motor	type	direct drive	direct drive	direct drive
Shaking diameter (user-adjustable, all incl.)	mm	3 / 6 / 9 / 12.5 / 19 / 25 / 50 / 70 (0 - 70 mm, stepless)	3 / 6 / 9 / 12.5 / 19 / 25 / 50 / 70 (0 - 70 mm, stepless)	3 / 6 / 9 / 12.5 / 19 / 25 / 50 / 70 (0 - 70 mm, stepless)
Shaking motion	type	orbital	orbital	orbital
Shaking frequency range at 12.5 mm	rpm	0 / 20 - 500 (700 HS***, on request)	0 / 20 - 500 (700 HS***, on request)	0 / 20 - 500 (700 HS***)
Shaking frequency range at 25 mm	rpm	0 / 20 - 400 (550 HS***, on request)	0 / 20 - 400 (550 HS***, on request)	0 / 20 - 400 (550 HS***)
Shaking frequency range at 50 mm	rpm	0 / 20 - 300 (400 HS***)	0 / 20 - 300 (400 HS***)	0 / 20 - 300 (400 HS***)
Shaking frequency range at 70 mm	rpm	0 / 20 - 250 (300 HS***)	0 / 20 - 250 (300 HS***)	0 / 20 - 250 (300 HS***)
Tray size max.	mm	F (800 × 420 mm)	F (800 × 420 mm)	F (800 × 420 mm)
Loading max.	kg	25 (up to 60**)	25 (up to 60**)	25 (up to 60**)
Setting, digital	rpm	≤ 800 rpm = ± 0.5 U/min > 800 rpm = ± 1.0 U/min	≤ 800 rpm = ± 0.5 U/min > 800 rpm = ± 1.0 U/min	≤ 800 rpm = ± 0.5 U/min > 800 rpm = ± 1.0 U/min
Accuracy absolute	± rpm	0,5	0,5	0,5
Timer	s:h	1 s - 999 h	1 s - 999 h	1 s - 999 h
Acceleration		controlled	controlled	controlled
Active brake		adjustable	adjustable	adjustable
Stop on position		yes	yes	yes
Power of standard motor (EM-Z / EM-Z (HP/HS))	W	70 / 140	70 / 140	70 / 140
General				
Power consumption typical	W	approx. 220	approx. 230	approx. 250
Power consumption max.	W	approx. 1000	approx. 1000	approx. 1000
Incubation gas volume	L	378	378	366
Weight	kg	200	202	210
Illumination	type	LED	LED	LED
Operation menu MMI		DE, FR, EN, IT, ES	DE, FR, EN, IT, ES	DE, FR, EN, IT, ES
Operation menu Insight		EN	EN	EN
Interface, standard		CAN-Bus	CAN-Bus	CAN-Bus
Interface, optional		USB, Ethernet, digital, analogue	USB, Ethernet, digital, analogue	USB, Ethernet, digital, analogue
Ambient temperature	°C	10 - 35	10 - 35	10 - 35
Cable feedthrough port	mm	40	40	40
Dimensions (L x D x H)	mm	1288 x 859 x 771	1288 x 917 x 771	1288 x 887 x 771
Material incubation chamber		stainless steel	stainless steel	stainless steel
Material outer chamber		painted stainless steel	painted stainless steel	painted stainless steel
Useful height above shaker tray	mm	449	449	449
Door glass and frame		-	heated	-

ISF1-Z Peltier with humidity control (SMZ1503P) ISF1-ZC Peltier* with humidity control (SMZ1503PC)	ISF1-Z Compressor (SMZ1501) ISF1-ZC Compressor* (SMZ1501C)	ISF1-Z Compressor with humidity control (SMZ1503) ISF1-ZC Compressor* with humidity control (SMZ1503C)
yes	yes	yes
RT - 5	3 (at RT above 25°C, RT -22)	3 (at RT above 25°C, RT -22)
60	80 (60 with CO ₂ control)	80 (60 with CO ₂ control)
0.1	0.1	0.1
< 0.20	< 0.30	< 0.25
384 (peltier)	800 (resistance)	800 (resistance)
approx. 150 (peltier)	approx. 1 cooling 125 / 2 coolings 307	approx. 1 cooling 125 / 2 coolings 307
Pt-100	Pt-100	Pt-100
380	570	570
85	-	85 (up to 40 °C!)
50	-	approx. 70 (up to 40 °C!)
1	-	1
2	-	2
180	-	180
140	-	140
automatic	-	automatic
capacitive	-	capacitive
evaporation & recondensation	-	evaporation & recondensation
20	20	20
0	0	0
0.1	0.1	0.1
0.40 at 5% CO ₂	0.40 at 5% CO ₂	0.40 at 5% CO ₂
up to 60	up to 60	up to 60
max. 2 bar overpressure	max. 2 bar overpressure	max. 2 bar overpressure
Infrared	Infrared	Infrared
direct drive	direct drive	direct drive
3/6/9/12.5/19/25/50/70 (0-70 mm, stepless)	3/6/9/12.5/19/25/50/70 (0-70 mm, stepless)	3/6/9/12.5/19/25/50/70 (0-70 mm, stepless)
orbital	orbital	orbital
0/20-500 (700 HS***)	0/20-500 (700 HS***)	0/20-500 (700 HS***)
0/20-400 (550 HS***)	0/20-400 (550 HS***)	0/20-400 (550 HS***)
0/20-300 (400 HS***)	0/20-300 (400 HS***)	0/20-300 (400 HS***)
0/20-250 (300 HS***)	0/20-250 (300 HS***)	0/20-250 (300 HS***)
F (800 × 420 mm)	F (800 × 420 mm)	F (800 × 420 mm)
25 (up to 60**)	25 (up to 60**)	25 (up to 60**)
1 ≤ 800 rpm = ± 0.5 U/min > 800 rpm = ± 1.0 U/min	≤ 800 rpm = ± 0.5 U/min > 800 rpm = ± 1.0 U/min	≤ 800 rpm = ± 0.5 U/min > 800 rpm = ± 1.0 U/min
0,5	0,5	0,5
1 s - 999 h	1 s - 999 h	1 s - 999 h
controlled	controlled	controlled
adjustable	adjustable	adjustable
yes	yes	yes
70/140	70/140	70/140
approx. 250	approx. 250	approx. 250
approx. 1000	approx. 1000	approx. 1000
366	372	372
210	225	225
LED	LED	LED
DE, FR, EN, IT, ES	DE, FR, EN, IT, ES	DE, FR, EN, IT, ES
EN	EN	EN
CAN-Bus	CAN-Bus	CAN-Bus
USB, Ethernet, digital, analogue	USB, Ethernet, digital, analogue	USB, Ethernet, digital, analogue
10-35	10-35	10-35
40	40	40
1288 x 887 x 771	1288 x 859 x 771	1288 x 859 x 771
stainless steel	stainless steel	stainless steel
painted stainless steel	painted stainless steel	painted stainless steel
449	449	449
heated	-	heated