

VACUUM OVEN

VS-25SC

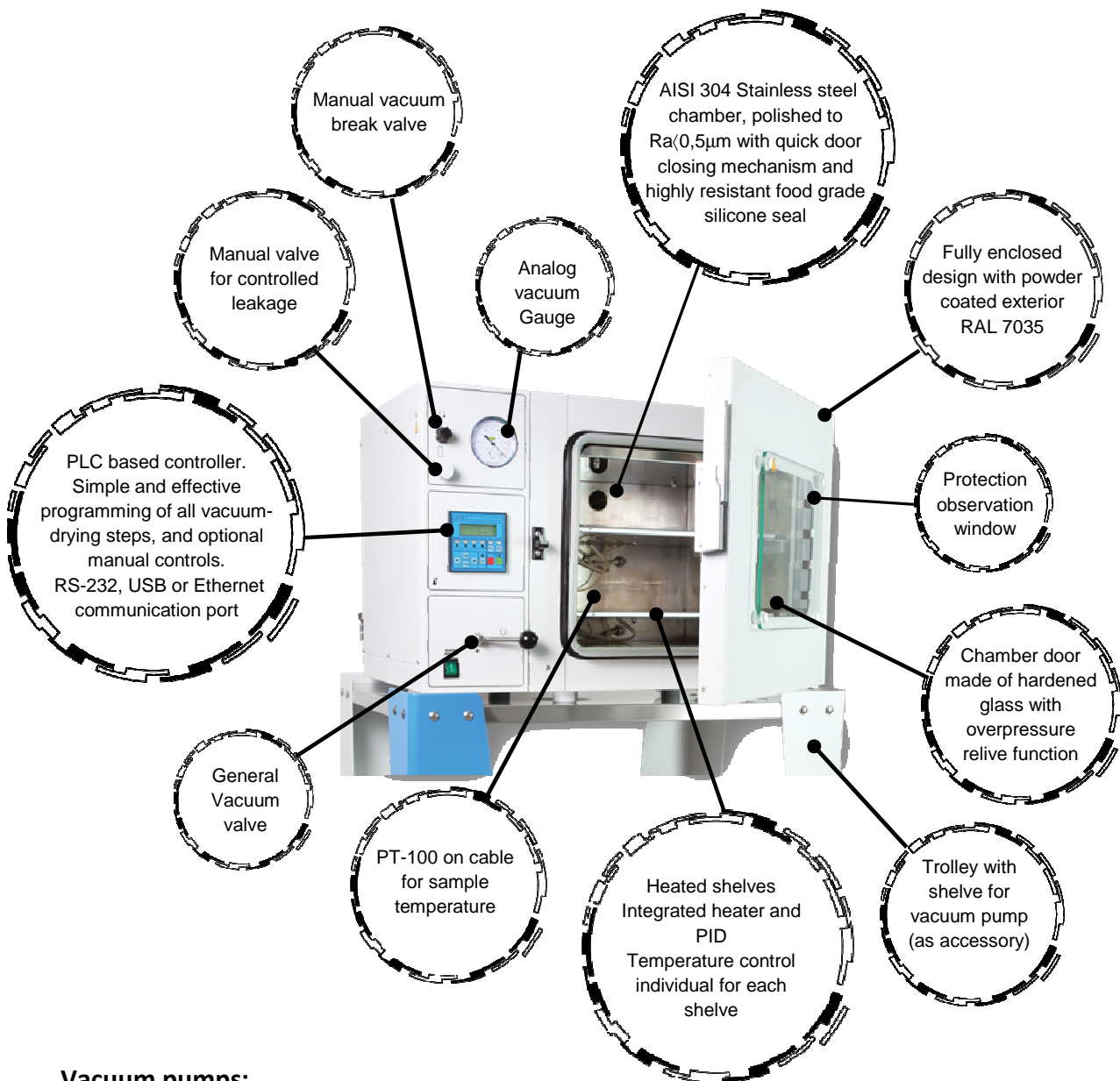
VS-50SC

VS-130SC

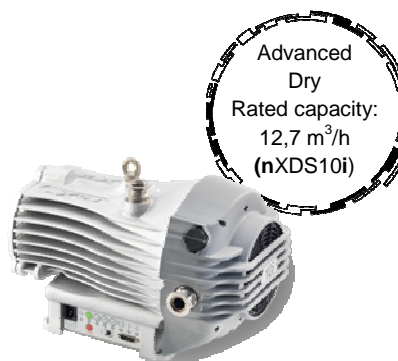
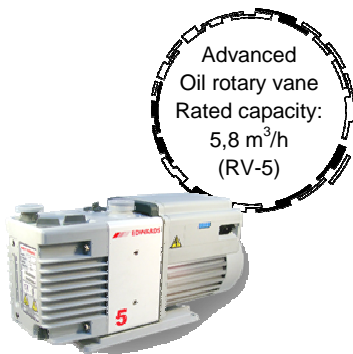
Drying in vacuum down to 1 mbar with heated shelves:

- Determination of vacuum drying process parameters
 - Low temperature evaporation
 - Drying curves determination
 - Dry mass determination
 - Pilot vacuum drying





Vacuum pumps:

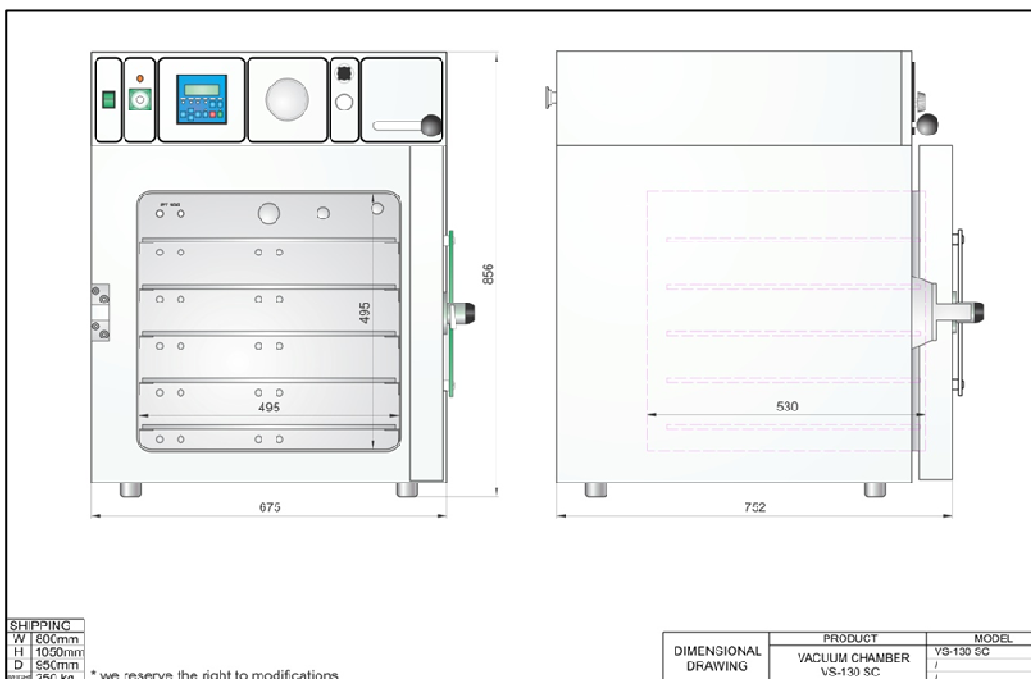
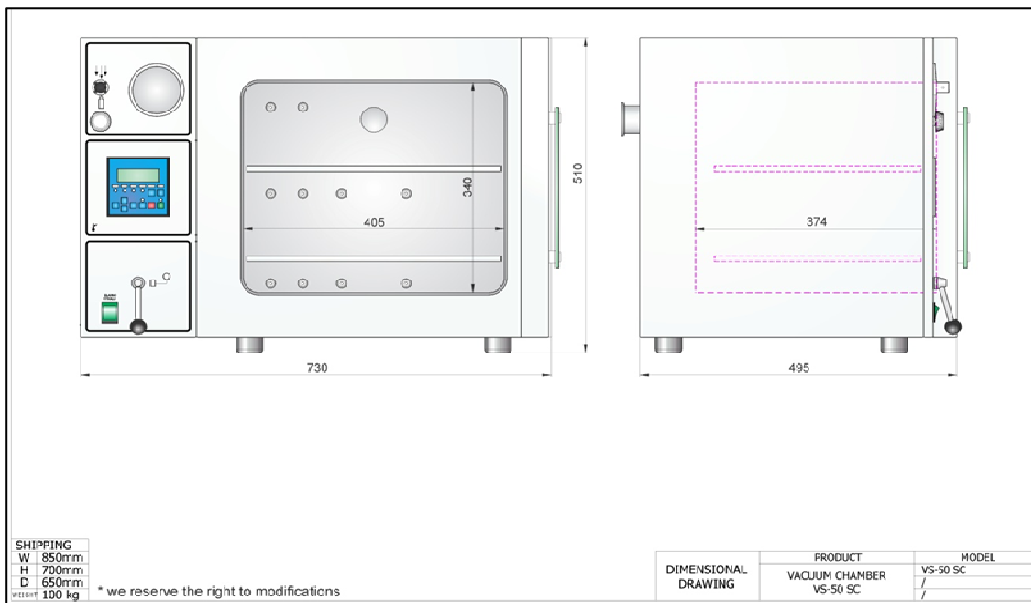
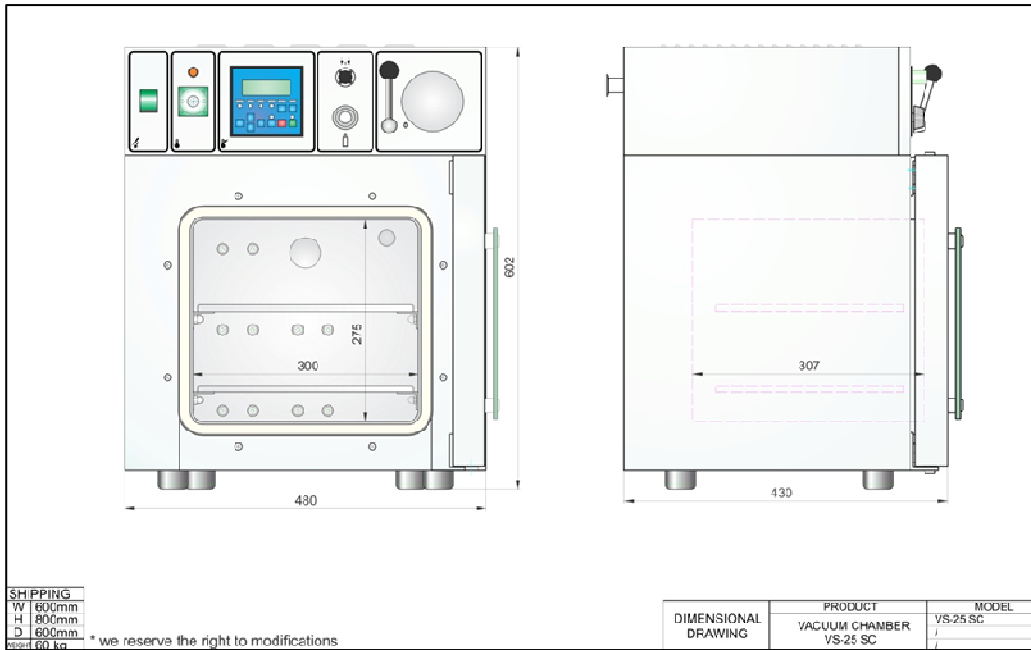


Technical data:

	VS-25 SC	VS-50 SC	VS-130 SC
External dimensions (WxHxD) in mm	480 x 602 x 430	730 x 510 x 495	67 x 856 x 725
Internal dimensions (WxHxD) inmm	300 x 275 x 307	405 x 340 x 370	495 x 495 x 530
Volume (L)	25	50	130
Temperature range (°C)	T _{ambient}200°C	T _{ambient}200°C	T _{ambient}200°C
Temperature display resolution (°C)	0,1	0,1	0,1
Temperature set resolution (°C)	0,1	0,1	0,1
Temperature stability (°C)	0,1	0,1	0,1
Temperature uniformity (°C)	± 0,4°C @ 60°C ± 0,7°C @ 100°C ± 0,8°C @ 150°C	± 0,7°C @ 60°C ± 0,8°C @ 100°C ± 1,1°C @ 150°C	± 0,5°C @ 60°C ± 0,6°C @ 100°C ± 1,6°C @ 150°C
Shelve	2	2	5
Shelve dimension (mm)	280 x 245	400 x 320	480 x 480
Shelve inter-distance (mm)	~80	~100	~70
Heat-up rate	~ 2 °C / min	~ 2 °C / min	~ 2 °C / min
Temperature control	PID	PID	PID
Power supply	230V ; 50 Hz	230V ; 50 Hz	3 x 400V ; 50 Hz
Wattage (W)	2000	2500	5000
Interface	RS 232 or USB or Ethernet	RS 232 or USB or Ethernet	RS 232 or USB or Ethernet
Access port (standard)	NW-40	NW-40	NW-40
Noise (dBA) @ 1 m distance	NA	NA	NA
Weight (kg)	53	98	236

Ordering information and accessories:

Description	Part no.
Vacuum oven VS-25 SC	202
Vacuum oven VS-50 SC	204
Vacuum oven VS-130 SC	208
Vacuum pump advanced oil rotary vane 5,8m ³ /h (RV-5)	1705
Vacuum pump advanced dry 12,7m ³ /h (nXDS10i)	2626
USB interface	1466
VS Software Monitoring & History	1663
Evaluation report	1719
Trolley for VS-25 SC	2617
Trolley for VS-50 SC	2618
Trolley for VS-130 SC	2619



PERFORMANCE OVEN (300°C)

SP-55 C

SP-105 C

SP-190 C

SP-440 C

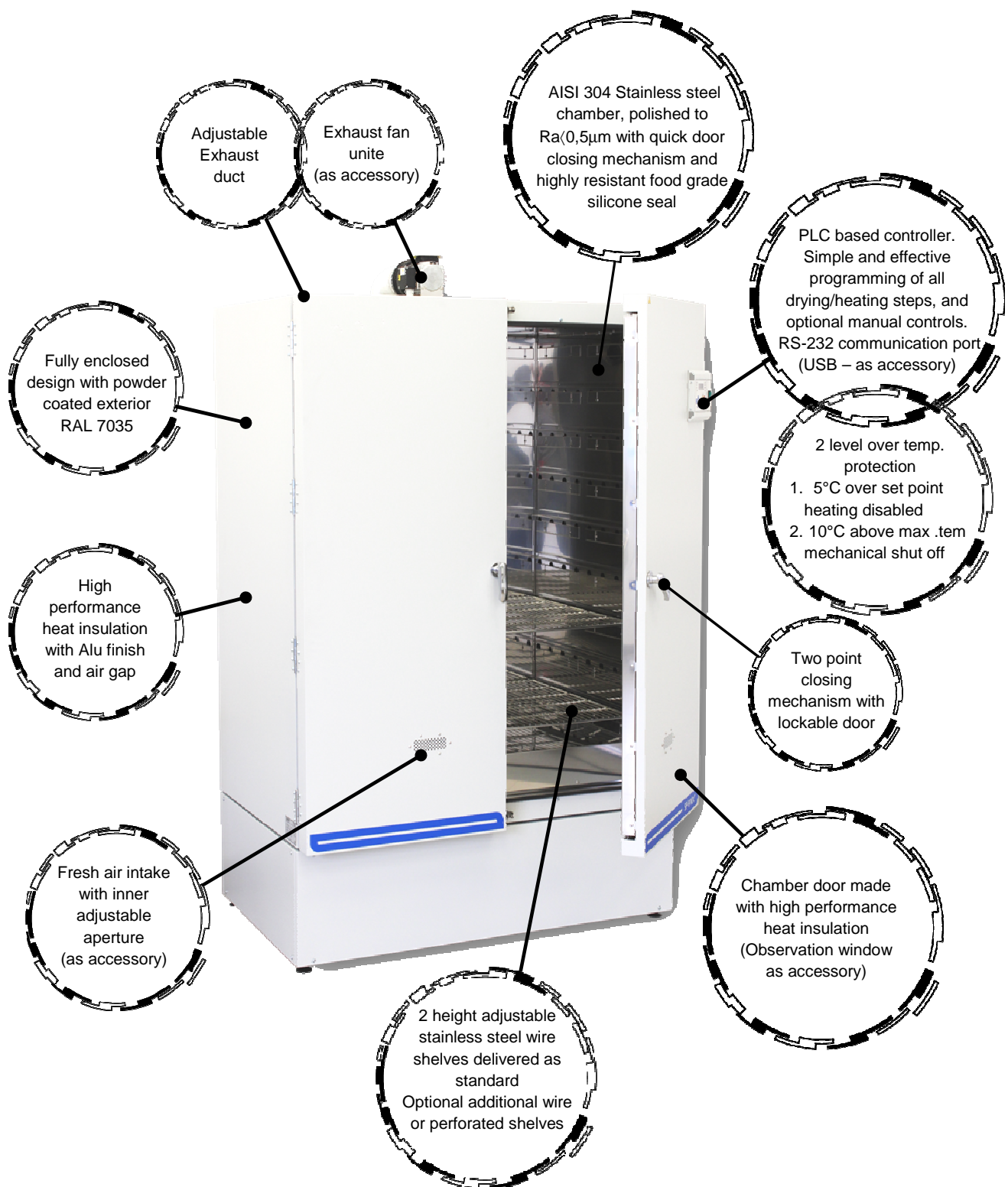
SP-910 C

SP-1300 C

Drying, heat treatment, surface treatment, curing all at precise temperature:

- Pilot & research hot air drying
 - Drying after washing
 - Material preheating
 - Hot air sterilization
 - Tooling preheating
 - Fills curing





Adjustable Exhaust duct

Exhaust fan unite (as accessory)

AISI 304 Stainless steel chamber, polished to Ra(0,5µm with quick door closing mechanism and highly resistant food grade silicone seal

PLC based controller. Simple and effective programming of all drying/heating steps, and optional manual controls. RS-232 communication port (USB – as accessory)

Fully enclosed design with powder coated exterior RAL 7035

2 level over temp. protection
1. 5°C over set point heating disabled
2. 10°C above max .tem mechanical shut off

High performance heat insulation with Alu finish and air gap

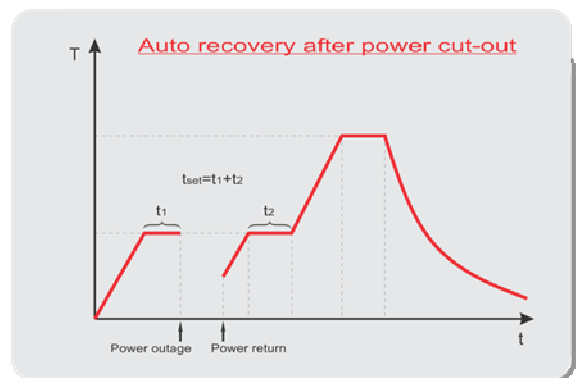
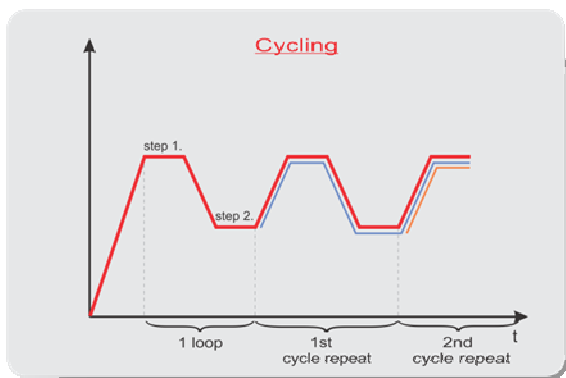
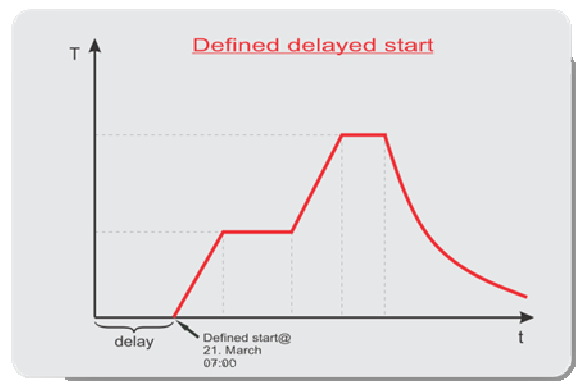
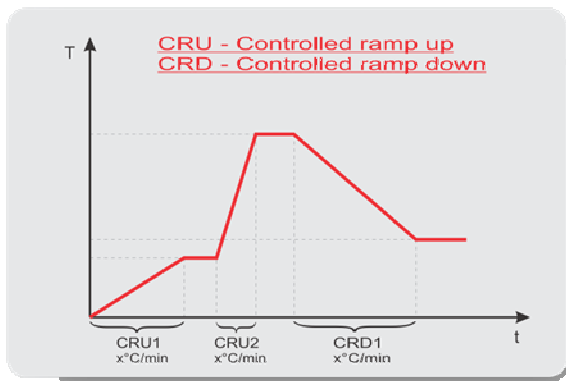
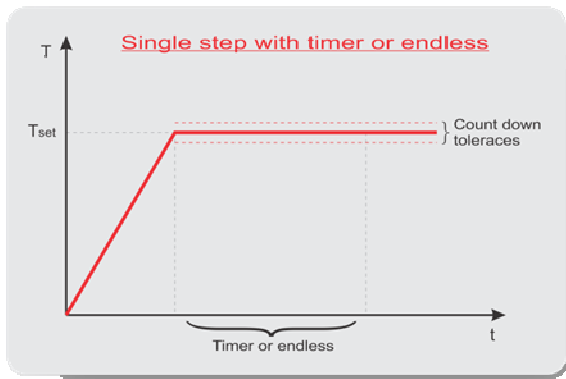
Two point closing mechanism with lockable door

Fresh air intake with inner adjustable aperture (as accessory)

Chamber door made with high performance heat insulation (Observation window as accessory)

2 height adjustable stainless steel wire shelves delivered as standard
Optional additional wire or perforated shelves

Controller functions:



Technical data:

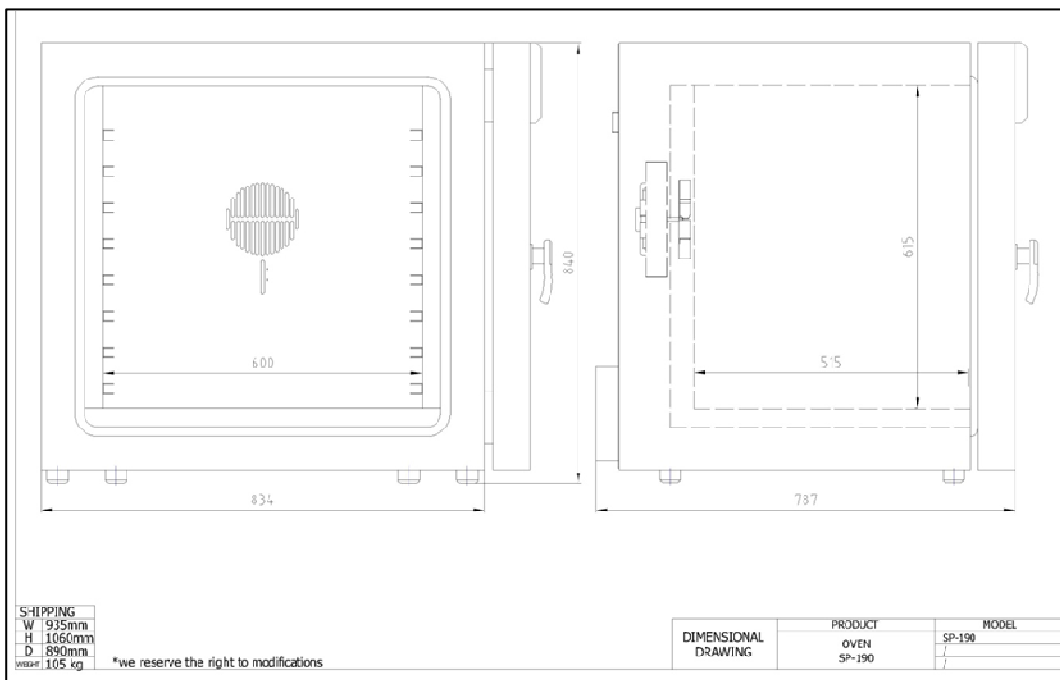
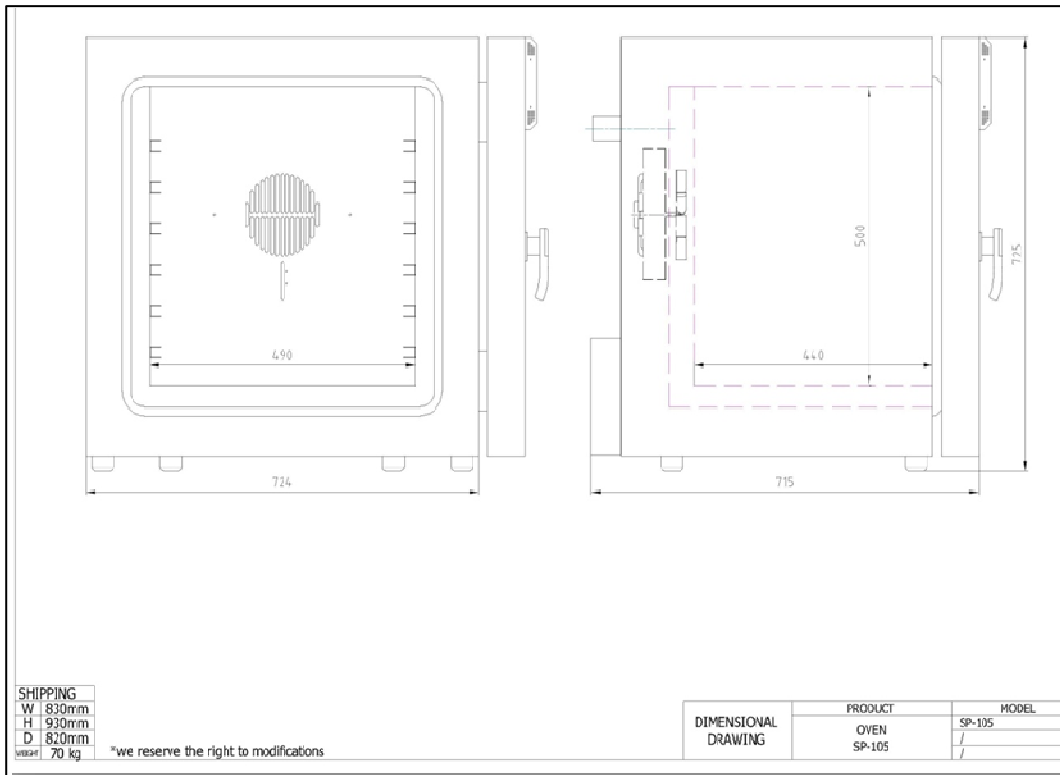
	SP-55 C	SP-105 C	SP-190 C
External dimensions (WxHxD) in mm	510 x 535 x 575	725 x 725 x 715	835 x 840 x 790
Internal dimensions (WxHxD) in mm	400 x 400 x 345	490 x 500 x 440	600 x 615 x 515
Volume (L)	55	107	190
Temperature range (°C)	T _{ambient} +5...300	T _{ambient} +5...300	T _{ambient} +5...300
Temperature display resolution (°C)	0,1	0,1	0,1
Temperature set resolution (°C)	0,1	0,1	0,1
Temperature stability (°C)	±0,1	±0,1	±0,1
Temperature uniformity (°C)	± 0.5 @ 60°C ± 0.9 @ 100°C ± 1.9 @ 200°C	± 0.3 @ 60°C ± 0.7 @ 100°C ± 1.7 @ 200°C	± 0.3 @ 60°C ± 0.7 @ 100°C ± 1.0 @ 200°C
Shelves	2	2	2
Max no of shelves	4	6	8
Shelve capacity (kg)	20	25	30
Max capacity (kg)	40	55	80
Heat-up rate (°C/min)	5,8	5,6	4,6
Temperature control	PID	PID	PID
Power supply	230V, 50Hz	230V, 50Hz	230V, 50Hz
Wattage (W)	1600	1700	2300
Interface	RS-232	RS-232	RS-232
Access port (mm) (as accessory)	∅40, ∅50, ∅90	∅40, ∅50, ∅90	∅40, ∅50, ∅90
Exhaust duct (mm)	∅40	∅40	∅40
Noise (dBA) @ 1 m distance	30	30	30
Weight (kg)	33	67	82

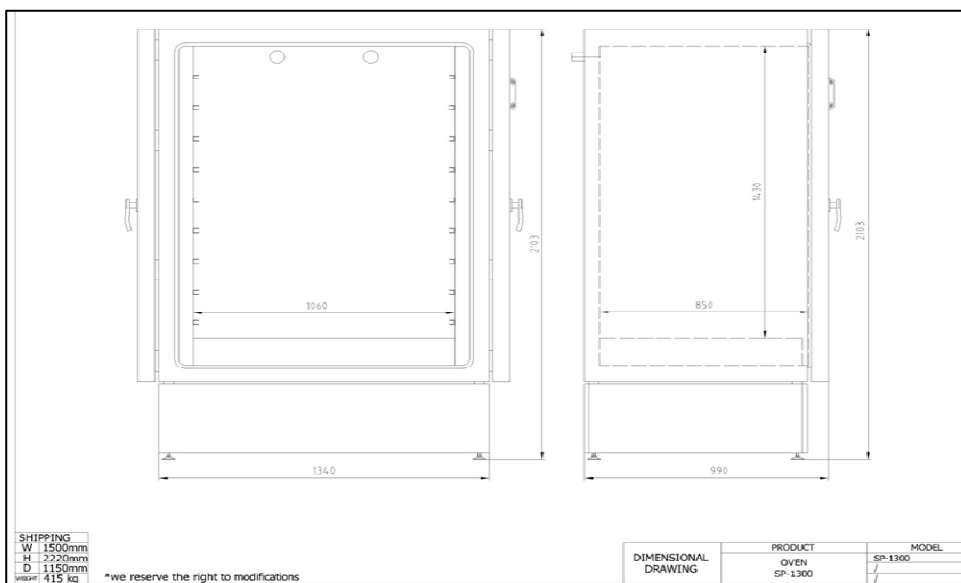
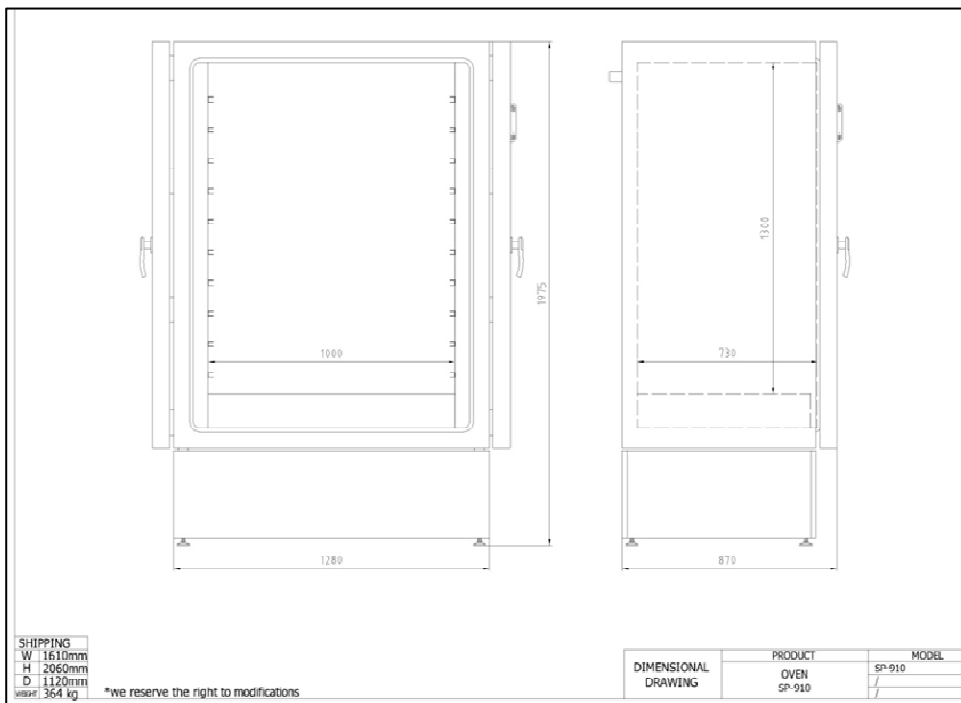
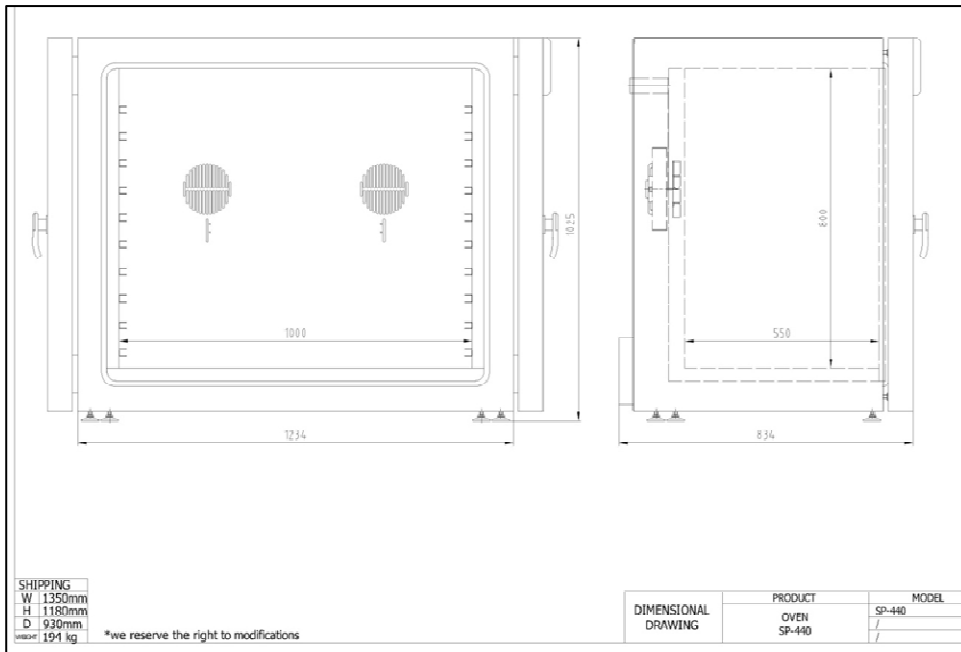
Ordering information and accessories:

Description	Part no.
Oven SP-55 C	341
Oven SP-105 C	306
Oven SP-190 C	310
Oven SP-440 C	320
Oven SP-910 C	324
Oven SP-1300 C	328
Wire shelve SP-55 C	359
Wire shelve SP-105 C	35
Wire shelve SP-190 C	468
Wire shelve SP-440 C	355
Wire shelve SP-910 C	356
Wire shelve SP-1300 C	357
Perforated shelve SP-55 C	2627
Perforated shelve SP-105 C	370
Perforated shelve SP-190 C	2628
Perforated shelve SP-440 C	380
Perforated shelve SP-910 C	376
Perforated shelve SP-1300 C	378

SP-440 C	SP-910 C	SP-1300 C
1235 X 1025 x 835	1280 x 1975 x 870	1340 x 2105 x 990
1000 x 800 x 550	1000 x 1300 x 730	1060 x 1430 x 850
440	949	1288
T _{ambient} +5...300	T _{ambient} +5...300	T _{ambient} +5...300
0,1	0,1	0,1
0,1	0,1	0,1
±0,1	±0,1	±0,1
± 0.3 @ 60°C ± 0.7 @ 100°C ± 1.6 @ 200°C	± 1.3 @ 60°C ± 1.7 @ 100°C ± 3.5 @ 200°C	± 1.3 @ 60°C ± 1.7 @ 100°C ± 3.5 @ 200°C
2	2	2
10	10	10
40	45	45
90	130	130
4,7	4,3	5,8
PID	PID	PID
230V,50Hz	3x400V,50Hz	3x400V,50Hz
3700	9500	10500
RS-232	RS-232	RS-232
Ø40, Ø50, Ø90	Ø40, Ø50, Ø90	Ø40, Ø50, Ø90
Ø40	2 x Ø60	2 x Ø60
34	64	64
179	328	385

Description	Part no.
Perforated shelf SP-440 C	380
Perforated shelf SP-910 C	376
Perforated shelf SP-1300 C	378
Access port Ø40 mm (left side if not specified at order)	2629
Access port Ø50 mm (left side if not specified at order)	608
Access port Ø90 mm (left t side if not specified at order)	1731
USB interface	1466
SP Software Monitoring & History	1663
Evaluation report (10 points, 3 temperatures)	1719
Trolley for SP-55 C	2624
Trolley for SP-105 C	2625
Trolley for SP-190 C	2622
Trolley for SP-440 C	2626
Exhaust fan for SP-55 C&SP-105 C&SP-190 C&SP-440 C	2630
Exhaust fan for SP-910 C&SP-1300 C	2631
Fresh air intake with inner adjustable aperture	2632
Observation window with inner light (190 mm x 190 mm)	252





HIGH TEMPERATURE OVEN (600°C)

SP - 60 C FIRE

SP - 190 C FIRE

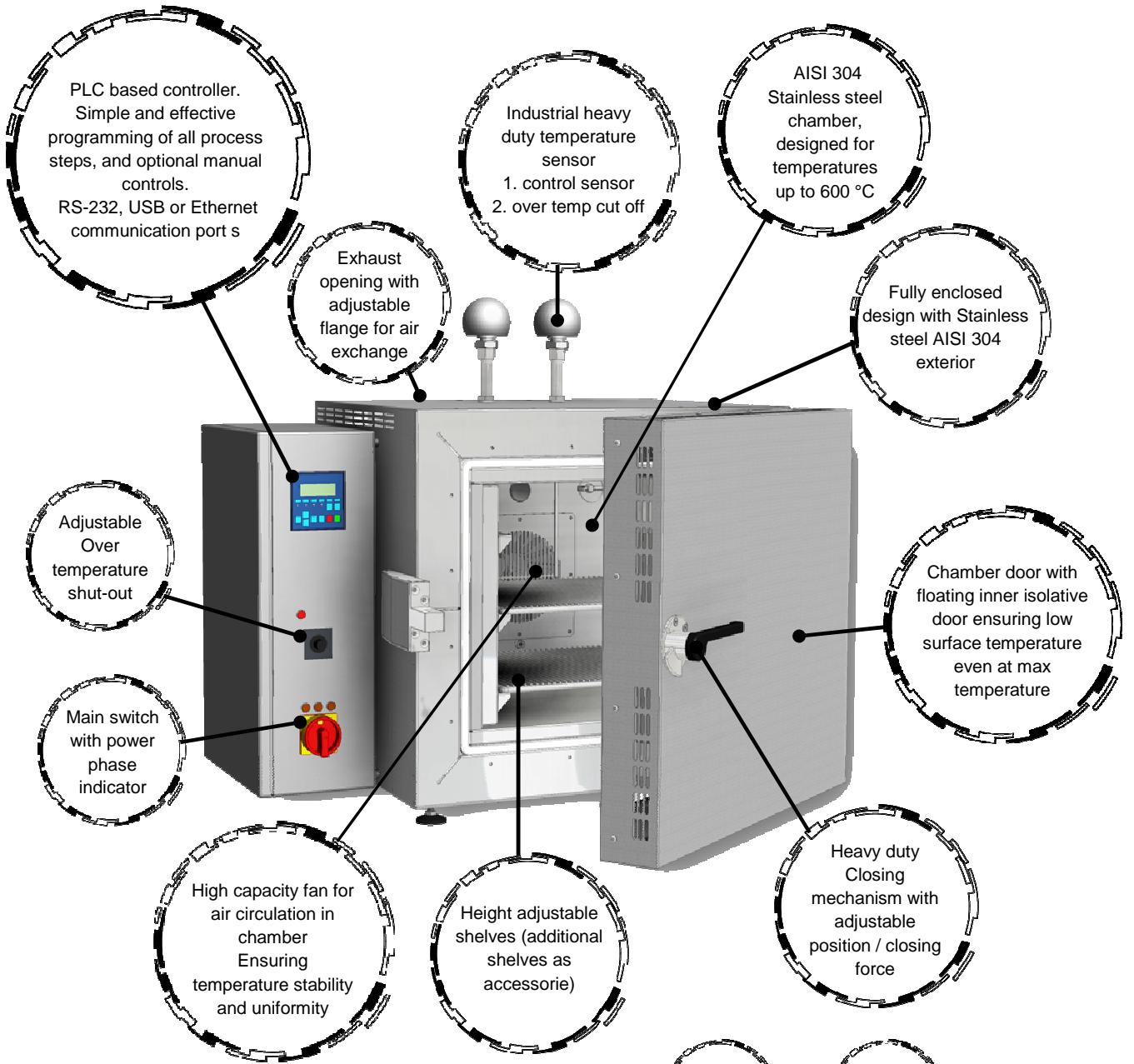
SP - 420 C FIRE

SP - 875 C FIRE

Heat treatment, surface treatment, curing all at precise temperature:

- Heat treatment for stress release
- Heat treatment for sintering
- High temperature drying
 - Molds preheating
 - Fills curing

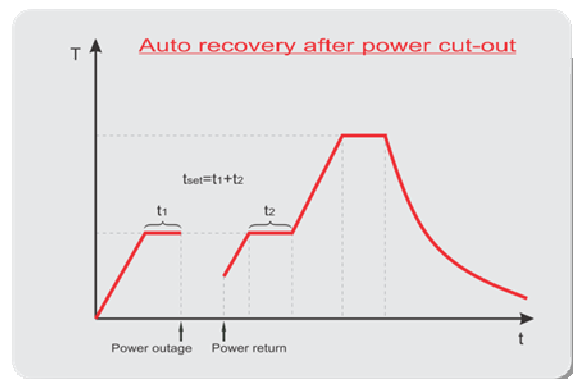
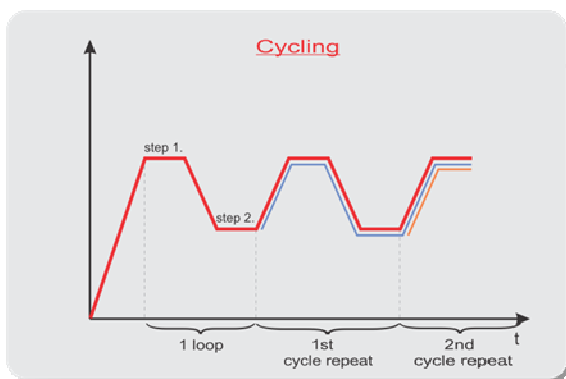
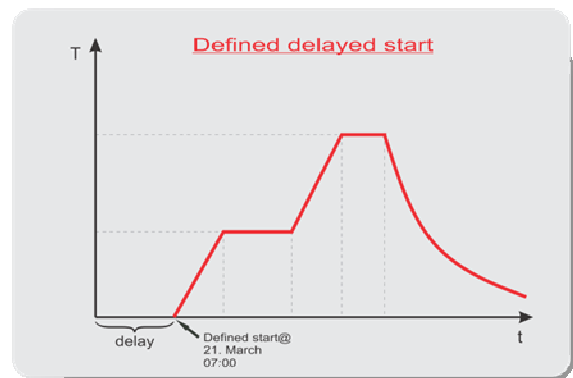
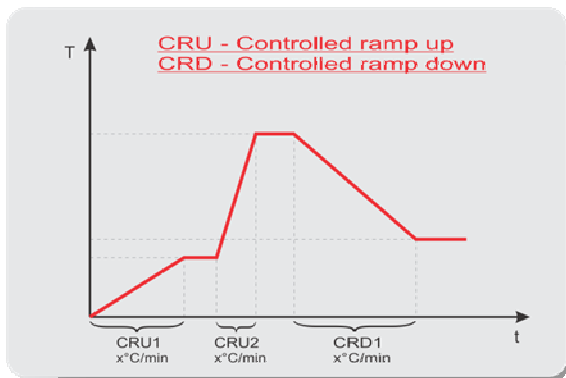
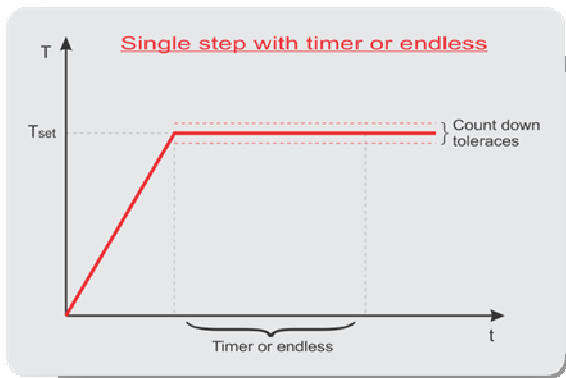




Exhaust fan unite combo:



Controller functions:



Technical data:

	SP - 60 C FIRE	SP - 190 C FIRE	SP - 420 C FIRE	SP - 875 C FIRE
External dimensions (WxHxD) in mm	712 x 673 x 655	942 x 883 x 836	1062x973x1030	1461 x 1768 x1066
Internal dimensions (WxHxD) in mm	400 x 400 x 400	600 x 600 x 543	750 x 700 x 755	998 x 1250 x 700
Volume (L)	64	190	400	875
Temperature range (°C)	T _{ambient} +10...600	T _{ambient} +10...600	T _{ambient} +10...600	T _{ambient} +10...600
Temperature display resolution (°C)	0,1	0,1	0,1	0,1
Temperature set resolution (°C)	1	1	1	1
Temperature stability (°C)	±0,5°C@200°C ±0,5°C@350°C ±1,0°C@500°C	±1,0°C@200°C ±1,0°C@350°C ±1,0°C@500°C	±1,0°C@200°C ±1,0°C@350°C ±1,0°C@500°C	±1,0°C@200°C ±1,0°C@350°C ±1,0°C@500°C
Shelves	2 (max 3)	2 (max 4)	2 (max 4)	2 (max 8)
Shelve capacity (kg)	25	30	50	50
Max capacity (kg)	50	100	300	400
Exhaust (mm)	Ø40	Ø40	2 x Ø40	2 x Ø40
Heat-up rate	10°C / min	10°C / min	7°C / min	5°C / min
Temperature control	PID	PID	PID	PID
Power supply	3x400V,50Hz (230V,50Hz-optional)	3x400V,50Hz	3x400V,50Hz	3x400V,50Hz
Wattage (W)	6300 (3200)	9000	18000	18000
Interface	RS-232 (USB, Ethernet as accessory)	RS-232 (USB, Ethernet as accessory)	RS-232 (USB, Ethernet as accessory)	RS-232 (USB, Ethernet as accessory)
Access port (mm)	Ø40	Ø40	Ø40	Ø40
Noise (dBA) @ 1 m distance	64	64	65	65
Weight (kg)	~185	~270	~390	~480

Ordering information and accessories:

Description	Part no.
High temperature oven SP – 60 C FIRE	332
High temperature oven SP – 190 C FIRE	330
High temperature oven SP – 420 C FIRE	479
High temperature oven SP – 875 C FIRE	2547
Additional wire shelve for SP – 60 C FIRE	467
Additional wire shelve for SP – 190 C FIRE	468
Additional wire shelve for SP – 420 C FIRE	377
Additional wire shelve for SP – 875 C FIRE	2620
Exhaust fan unite combo. Combination with controlled intake and exhaust QS flaps and local fume hood above doors. *see photo below	63
USB interface	1466
PC Software for Monitoring & History	1663
Evaluation report	1719
Trolley for SP – 60 C FIRE	2621
Trolley for SP – 190 C FIRE	2622
Trolley for SP – 420 C FIRE	2623

