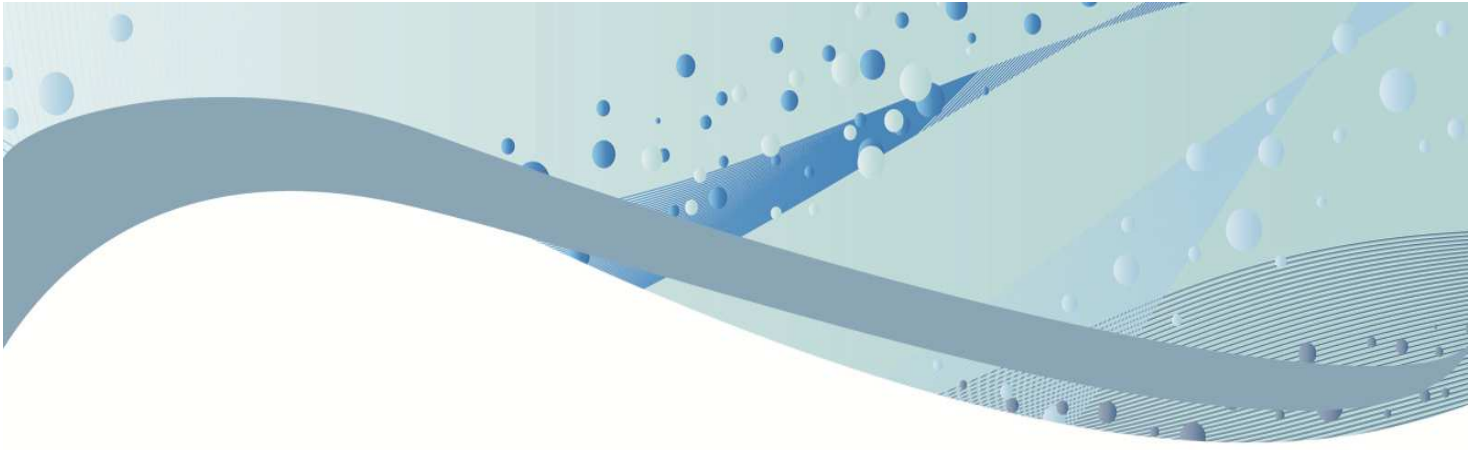




5Pascal

**FREEZE DRYER,
OVEN
AND PUMPS FOR
CHEMICAL AND
BIOLOGICAL
LABORATORY**



Freeze dryers

- Laboratory freeze dryer 5
- Lio 8 Special 9
- Pilot freeze dryer 11-13
- LioSmart 15
 - Lio Smart 50
 - Lio Smart 100
 - Lio Smart 200
- EcoLio line 19
 - EcoLio line 2000
 - EcoLio line 4000
 - EcoLio line 6000
 - EcoLio line 8000
 - EcoLio line 10000
- ProLio line 22
 - ProLio line 2000
 - ProLio line 4000
 - ProLio line 6000
 - ProLio line 8000
 - ProLio line 10000

Vacuum Ovens

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Due to a continuous policy of product developments and improvements, specification and technical data are liable to change

LABORATORY FREEZE DRYER

Condenser capacity 5 kg

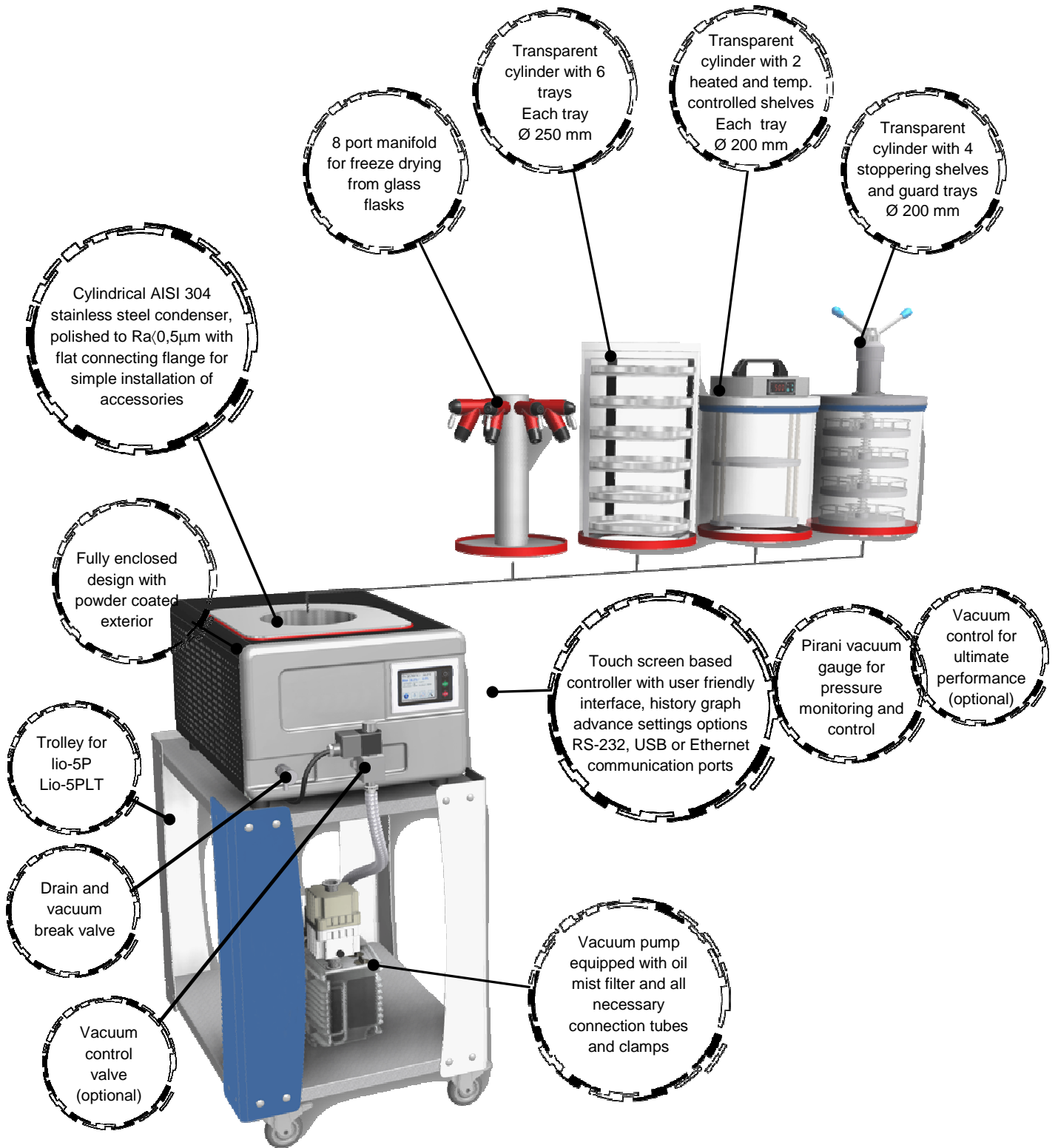
-55°C for water solutions

-100°C for low freezing point solvents



Refined solution for laboratory and R&D freeze drying:

- Preservation of bacteria and viruses
 - Vegetables & fruits (Strawberry, Figs, Beans...)
 - Dairy product (milk, starter cultures, yogurts, probiotics, ice-cream,...)
 - Fish & meat
 - Research
 - Floral



Cylindrical AISI 304 stainless steel condenser, polished to Ra(0,5µm with flat connecting flange for simple installation of accessories

8 port manifold for freeze drying from glass flasks

Transparent cylinder with 6 trays
Each tray Ø 250 mm

Transparent cylinder with 2 heated and temp. controlled shelves
Each tray Ø 200 mm

Transparent cylinder with 4 stoppering shelves and guard trays
Ø 200 mm

Fully enclosed design with powder coated exterior

Trolley for lio-5P Lio-5PLT

Touch screen based controller with user friendly interface, history graph advance settings options RS-232, USB or Ethernet communication ports

Pirani vacuum gauge for pressure monitoring and control

Vacuum control for ultimate performance (optional)

Drain and vacuum break valve

Vacuum pump equipped with oil mist filter and all necessary connection tubes and clamps

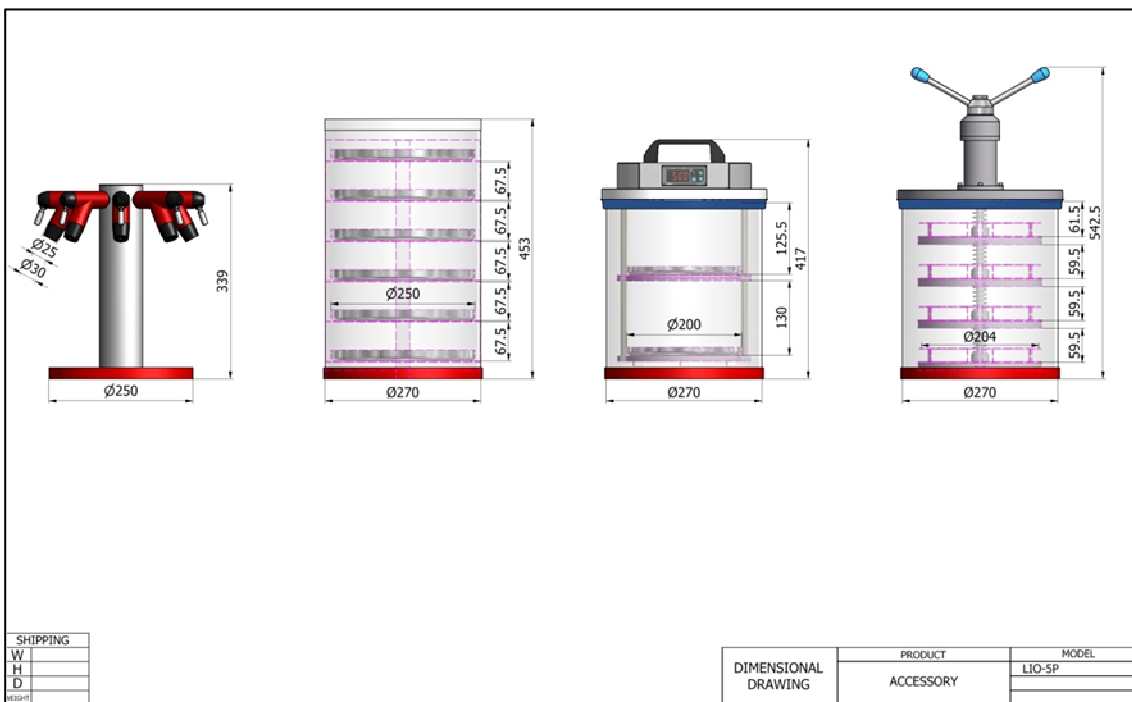
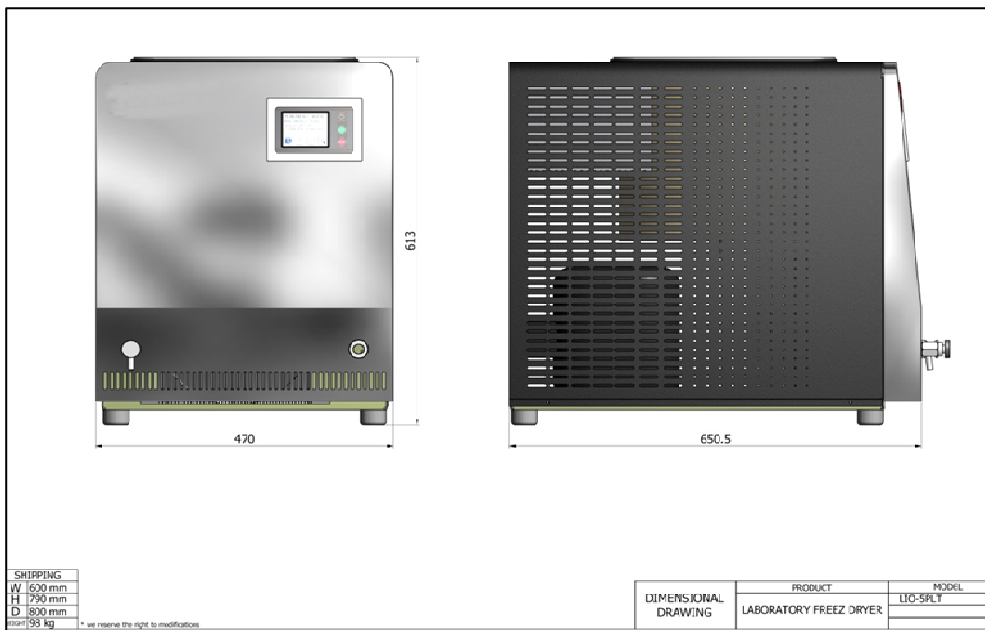
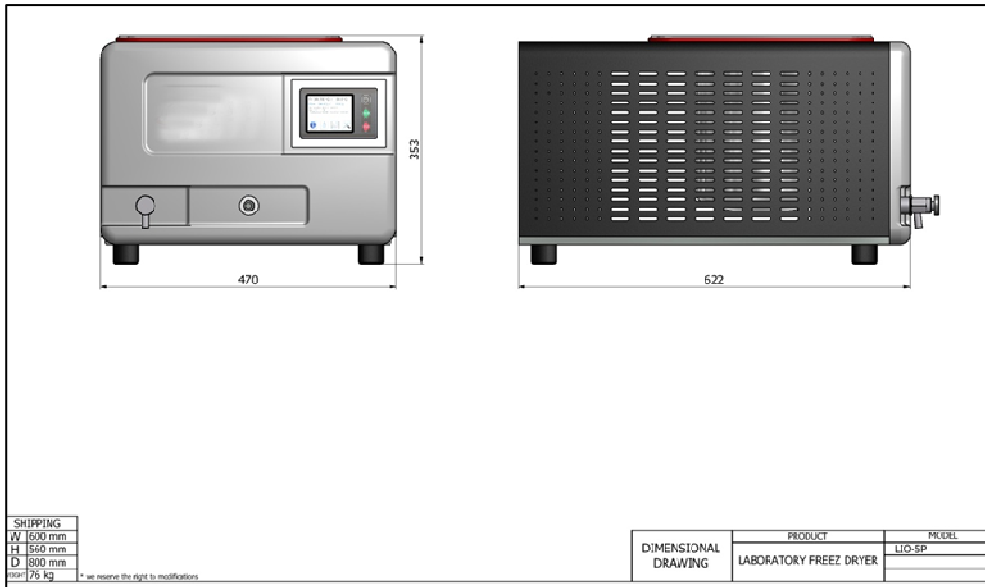
Vacuum control valve (optional)

Technical data:

	LIO-5 P	LIO-5 PLT
External dimensions (WxHxD) in mm	470 x 353 x 622	470 x 650 x 613
Condenser temperature (°C)	-55	-100
Condenser capacity	2,3 kg / 24 h 5 kg / total	2,3 kg / 24 h 5 kg / total
Condenser volume (L)	7,2	7,2
Temperature measuring range (°C)	-120....+100	-120....+100
Temperature display resolution (°C)	0.1	0.1
Temperature display unites	°C or °F	°C or °F
Vacuum measuring range (mbar)	0.001...100	0.001...100
Vacuum display resolution (mbar)	0.001	0.001
Vacuum display unites	mbar or kPa or mmHg	mbar or kPa or mmHg
Power supply	230V 50/60Hz	230V 50/60Hz
Wattage (W)	350	800
Interface	RS 232 USB (accessory)	RS 232 USB (accessory)
Noise (dBA) @ 1 m distance	<50	<50
Weight (kg)	48	75

Ordering information and accessories:

Description	Part no.
Freeze dryer Lio-5P (-55°C)	LIO5P0000DGT
Freeze dryer Lio-5PLT (-100 °C)	LIO5P0000DGTLT
8 port manifold for freeze drying from glass flasks	5PA-LIO5P-001
Transparent cylinder with 6 trays each tray Ø 250 mm	5PA-LIO5P-001
Transparent cylinder with 2 heated and temperature controlled shelves each tray Ø 200 mm	5PA-LIO5P-002
Transparent cylinder with 4 stoppering shelves and guard trays Ø 200 mm	5PA-LIO5P-003
Vacuum control	5PA-LIO5P-004
Vacuum pump with oil mist filter and connecting tube and clamps (RV-5)	5PA-LIO5P-005
Trolley for Lio-5P or Lio-5PLT	5PA-LIO5P-006
Software for Monitoring & History	5PA-LIO5P-007
USB interface	5PA-LIO5P-008
Ethernet interface	5PA-LIO5P-009
Dry pump - Option 1	5PA-LIO5P-PUMP1
Dry pump - Option 2	5PA-LIO5P-PUMP2



	LIO8 SPECIAL
Capacity	
Useable shelf surface area m ²	0,18
Number of 23mm vials	600
Volume of bulk material at 20mm thickness / l	3,6
Condenser ice capacity Kg	8
Characteristics	
Dimensions of shelves	
Width mm	300
Depth mm	300
Number of shelves (excluding radiation plate)	2 + 1
Shelf spacing (max) mm	50
With stoppering device closable to /mm	35 all models
Shelf temperature	max °C + 60 all models
	min °C - 40 all models
With low temperature option	min °C - 50 all models
Condenser temperatures °C	- 50 all models
With low temperature option	- 80 all models
Vacuum pumping speed m3h-1	9.5
Dry pump option	10
Services	
Power consumption	
3 phase, 50/60Hz, 220/380/460V	kW 4
With low temperature option	kW 7
Controller with 10 programs standard	400
Shelf Guard standard	
Options	
Stoppering	all models
Manifold with 8 valves	all models
Weight	900

Ordering information and accessories:

Description	Part no.
LIO8 SPECIAL	5PA-LIO8
Freeze dryer Lio-5PLT (-100 °C)	5PA-LIO8LT
8 port manifold for freeze drying from glass flasks	5PA-LIO8-001
Transparent cylinder with 6 trays each tray Ø 250 mm	5PA-LIO8-002
Transparent cylinder with 2 heated and temperature controlled shelves each tray Ø 200 mm	5PA-LIO8-003
Transparent cylinder with 4 stoppering shelves and guard trays Ø 200 mm	5PA-LIO8-004
Vacuum control	5PA-LIO8-005
Vacuum pump with oil mist filter and connecting tube and clamps (RV-5)	5PA-LIO8-006
Trolley for Lio-5P or Lio-5PLT	5PA-LIO8-007
Software for Monitoring & History	5PA-LIO8-008
USB interface	5PA-LIO8-009
Ethernet interface	5PA-LIO8-010
Dry pump - Option 1	5PA-LIO8-PUMP1
Dry pump - Option 2	5PA-LIO8-PUMP2

PILOT FREEZE DRYER LIO1000P LIO2000P

Condenser capacity 6 kg
-55°C for water solutions
-100°C for low freezing point solvents

Refined solution for laboratory and R&D freeze drying:

- Preservation of bacteria and viruses
 - Vegetables & fruits
(Strawberry, Figs, Beans...)
 - Dairy product
(milk, starter cultures, yogurts, probiotics, ice-cream,...)
 - Fish & meat
 - Research
 - Floral



Technical data:

	LIO1000P	LIO2000P
External dimensions (WxHxD) in mm	880 x 1500 x 750	880 x 1500 x 750
Condenser temperature (°C)	- 55	- 55
Condenser capacity	6 kg / total	6 kg / total
Condenser volume (m2)	0,1	0,2
Shelf dimensions (mm)	310 x 310 x 20	310 x 310 x 20
Shelf interdistance (mm)	125	75
Number of shelves	1	2
Shelf temperature range (°C)	- 40 ÷ + 40	- 40 ÷ + 40
Temperature measuring range (°C)	- 60 ÷ + 100	- 60 ÷ + 100
Temperature display resolution (°C)	0.1	0.1
Temperature display unites	°C or °F	°C or °F
Pressure measuring range (mbar)	0.001÷ 100	0.001÷ 100
Vacuum display unites	mbar or kPa or mmHg	mbar or kPa or mmHg
Power supply Voltage	230V 50/60Hz	230V 50/60Hz
Wattage (W)	2,4	2,6
Interface	RS 232 USB (accessory)	RS 232 USB (accessory)
Weight (kg)	250	270

Ordering information and accessories:

Description	Part no.
Basic Unit Lio1000P	5PA-LIO1000
Basic Unit Lio2000P	5PA-LIO2000
Stoppering Lio1000P	5PA-1000-001
Stoppering Lio2000P	5PA-2000-001
50 Programs Controller Lio1000P	5PA-1000-002
50 Programs Controller Lio2000P	5PA-2000-002
Dry pump Option Lio1000P	5PA-1000-PUMP1
Dry pump Option Lio2000P	5PA-2000-PUMP2

PILOT FREEZE DRYER LIO4000P

LIO8000P

Condenser capacity 16 kg
-55°C for water solutions
-100°C for low freezing point solvents

Refined solution for laboratory and R&D freeze drying:

- Preservation of bacteria and viruses
 - Vegetables & fruits
(Strawberry, Figs, Beans...)
 - Dairy product
(milk, starter cultures, yogurts, probiotics, ice-cream,...)
 - Fish & meat
 - Research
 - Floral

Technical data:

	LIO4000P	LIO8000P
External dimensions (WxHxD) in mm	1400 x 1530 x 1140	1400 x 1530 x 1140
Condenser temperature (°C)	- 55	- 55
Condenser capacity	16 kg / total	16 kg / total
Condenser volume (m2)	0,455	0,91
Shelf dimensions (mm)	650 x 700 x 20	650 x 700 x 20
Shelf interdistance (mm)	160	80
Number of shelves	1	2
Shelf temperature range (°C)	- 40 ÷ + 40	- 40 ÷ + 40
Temperature measuring range (°C)	- 60 ÷ + 100	- 60 ÷ + 100
Temperature display resolution (°C)	0.1	0.1
Temperature display unites	°C or °F	°C or °F
Pressure measuring range (mbar)	0.001÷ 100	0.001÷ 100
Vacuum display unites	mbar or kPa or mmHg	mbar or kPa or mmHg
Power supply Voltage	380V 3ph 50/60Hz	380V 3ph 50/60Hz
Wattage (kW)	3,6	4
Interface	RS 232 USB (accessory)	RS 232 USB (accessory)
Weight (kg)	370	400

Ordering information and accessories:

Description	Part no.
Basic Unit Lio4000P	5PA-LIO4000
Basic Unit Lio8000P	5PA-LIO8000
Stoppering Lio4000P	5PA-4000-001
Stoppering Lio8000P	5PA-8000-002
50 Programs Controller Lio4000P	5PA-4000-002
50 Programs Controller Lio8000P	5PA-8000-002
Dry pump Option Lio4000P	5PA-4000-PUMP1
Dry pump Option Lio8000P	5PA-8000-PUMP2

LIOSMART

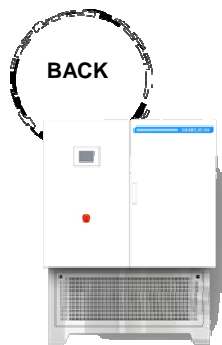
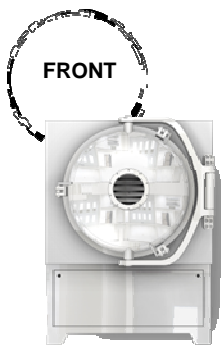
Refined solution for rapid and repeatable freeze drying of:

- Dairy products (milk, starter cultures, yogurts, probiotics, ice-cream,...)
- Vegetables & fruits (Strawberry, Figs, Beans,...)
- Fish & meat
- Floral
- Research



Options:

- Selectable number of shelves
- Variety of tray options
- Variety of vacuum pump options
- Stand alone or clean room wall installation



Design:

In all points of product and process design our main goal is to deliver ultimate tool for reliable, repeatable, rapid and risk free Freezedrying. Achieving above mentioned with state of the art design & manufacture technology, brand name components, smart and innovative answers to process & product requirements.

Chamber:

Silindrical shape of the main chamber delivers number of benefits. Such as economical, weight reduction enough space to install high capacity shelves and condenser coils all in a very compact and proven design. Chamber door hinged in a way to ensure full accessibility for loading and unloading with smart quick locking handles. Also equipped with observation window for visual product monitoring through entire process. Main chamber seal made of high resistance profile food grade silicone seal.

Shelves:

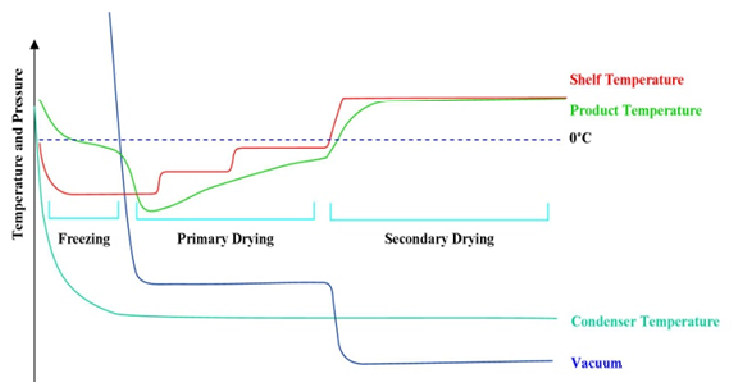
Highest attention on superb shelf surface flatness and temperature uniformity, these 2 parameters ensuring rapid and homogeneous freezedrying through the entire shelf surface. Temperature uniformity across each and all shelves is delivered with closed loop thermal fluid easily covering temperatures from -40°C...+70°C. Shelf system is modular allowing assembly of minimum 2 but even up to 10 shelves. At max capacity still giving 50 mm of distance between shelves for ergonomic loading and unloading. Shelf system is also designed for quick and simple removal from the chamber. This way cleaning between product replacement becomes stressless and fast operation.

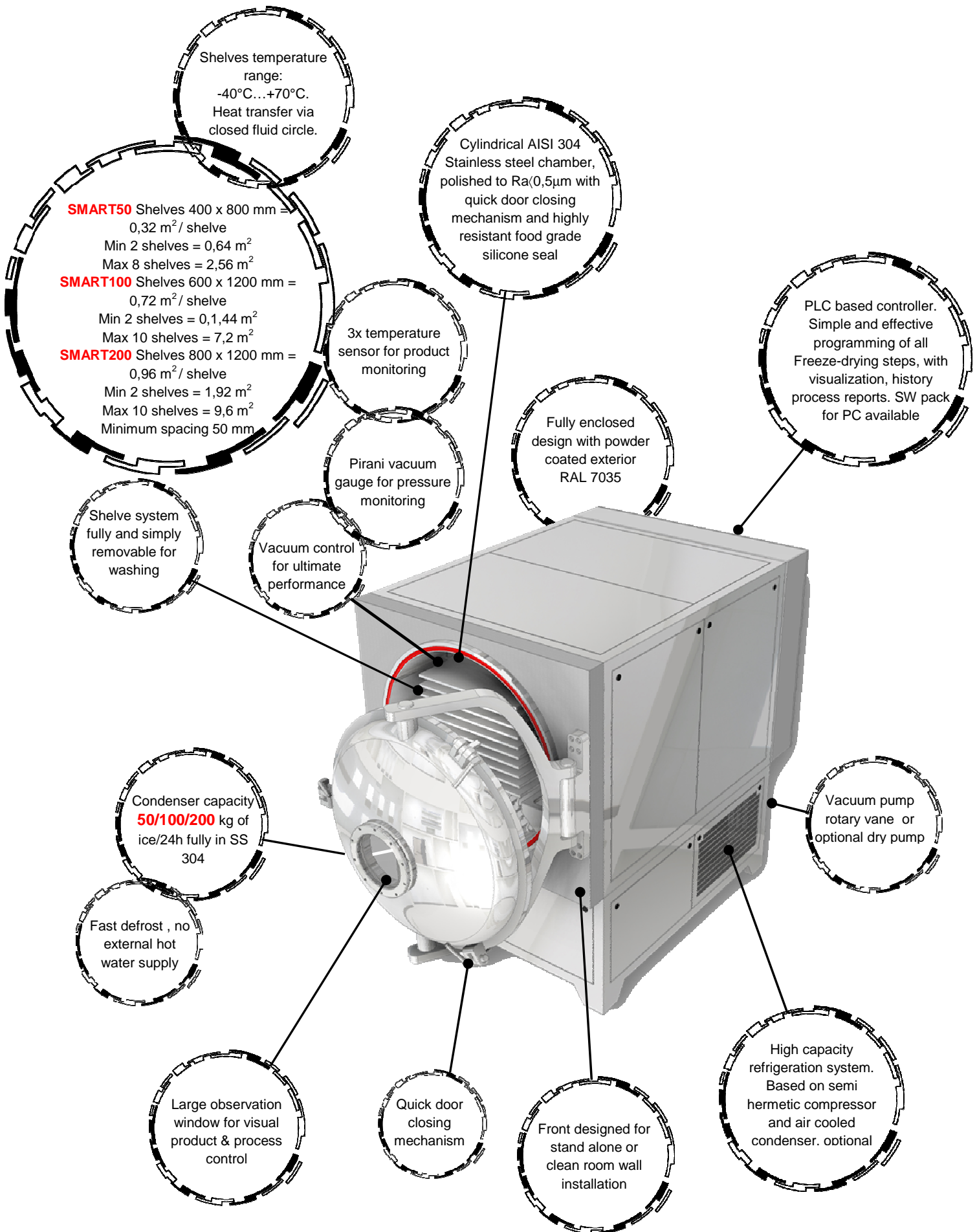
Condenser:

High capacity condenser with maximum load of 100 kg of ice in 24 hours is more than sufficient. Refrigeration system designed to maintain the condenser temperature down to -50°C. However it is also important to deliver quick melt down/defrost. Here our system delivers hybrid defrost via reversible cooling/heating loop while using hot reverse condensate flow. Giving most energy efficient and quick results without need of external hot water supply.

Control:

PLC based control system offering user friendly and understandable programming of all parameters for each freezedrying step. Open storage for 10 different product cycles. Large display also showing full system visualization with all measured values, history trends of all measured values, self diagnosis and PC communication ability.





	LIOSMART50	LIOSMART100	LIOSMART200
Exterior dimensions (WxDxH)	1200 x 1600 x 1800 mm	1400 x 1800 x 1900 mm	1600 x 2200 x 2000 mm
Chamber dimensions	Ø800 x 1000 mm	Ø1000 x 1300 mm	Ø1200 x 1300 mm
Shelve dimension	400 x 800 mm	600 x 1200 mm	800 x 1200 mm
Number of shelves	Min 2 Max 8	Min 2 Max 10	Min 2 Max 10
Total shelve area	0,64m ² @ 2 shelves 2,56 m ² @ 8 shelves	1,44m ² @ 2 shelves 7,2 m ² @ 10 shelves	1,92m ² @ 2 shelves 9,6 m ² @ 10 shelves
Shelve spacing	50mm @ 8 shelves	50mm @ 10 shelves	50mm @ 10 shelves
Shelve temperature range	-40°C....+70°C	-40°C....+70°C	-40°C....+70°C
Shelve cooling down rate	+20 to -20 less than 60 min	+20 to -20 less than 60 min	+20 to -20 less than 60 min
Condenser capacity	50 kg ice / 24 h	100 kg ice / 24 h	200 kg ice / 24 h
Condenser temperature	-50°C	-50°C	-50°C
Chamber,shelves,condenser material	AISI 304 Ra < 05µm	AISI 304 Ra < 05µm	AISI 304 Ra < 05µm
Vacuum	Capacity 40 m3 / h Rotarv vane or dry pump	Capacity 80 m3 / h Rotarv vane or dry pump	Capacity 120 m3 / h Rotary vane or dry pump
Power supply	3 x 400 V 50 Hz, 10 kW	3 x 400 V 50 Hz, 15 kW	3 x 400 V 50 Hz, 28 kW

Ordering information and accessories:

Description	Part no.
Basic Unit LIOSMART50	5PA-SMART50
Basic Unit LIOSMART100	5PA-SMART100
Basic Unit LIOSMART200	5PA-SMART200
Dry pump Option LIOSMART50	5PA-SMART50-PUMP
Dry pump Option LIOSMART100	5PA-SMART100-PUMP
Dry pump Option LIOSMART200	5PA-SMART200-PUMP

ECOLIO & PROLIO

LINE

ECOLIO line Direct expansion & Alluminium Shelves	2000	4000	6000
Capacity			
Useable shelf surface area m ²	0,2	0,4	0,6
Number of 23mm vials	300	750	1000
Volume of bulk material at 20mm thickness / l	4	8	12
Condenser ice capacity Kg	8	12	16
Characteristics			
Dimensions of shelves			
Width mm	450	450	450
Depth mm	450	450	450
Number of shelves (excluding radiation plate)	1	2	3
Shelf spacing (max) mm	80	80	80
With stoppering device closable to /mm	35 all models		
Shelf temperature max °C	+ 50 all models		
min °C	- 45 all models		
With low temperature option min °C	- 55 all models		
Condenser temperatures °C	- 55 all models		
With low temperature option	- 80 all models		
Vacuum pumping speed m3h-1	9.5	14.3	14.3
Dry pump option	10	15	15
Services			
Power consumption			
3 phase, 50/60Hz, 220/380/460V	kW 4	kW 4	kW 6
With low temperature option	kW 7	kW 7	kW 7.5
Cooling water flow rate at +20°C lh-1	400	400	1000
With low temperature option lh-1	1400	1400	1400
Controller with 10 programs standard			
Shelf Guard standard			
Options			
Stoppering	all models		
Controller with 50 programs	all models		
VHP for biodecontamination	all models		
Compressed air bar	4-6 all models		
Weight	900	1000	1200

Ordering information and accessories:

Description	Part no.
Basic Unit ECOLIO2000	5PA-ECO2000
Basic Unit ECOLIO4000	5PA-ECO4000
Basic Unit ECOLIO6000	5PA-ECO6000
Basic Unit ECOLIO8000	5PA-ECO8000
Basic Unit ECOLIO10000	5PA-ECO10000
Basic Unit ECOLIO2000 LT – Low Temperature Version	5PA-ECO2000-LT
Basic Unit ECOLIO4000 LT – Low Temperature Version	5PA-ECO4000-LT
Basic Unit ECOLIO6000 LT – Low Temperature Version	5PA-ECO6000-LT
Basic Unit ECOLIO8000 LT – Low Temperature Version	5PA-ECO8000-LT
Basic Unit ECOLIO10000 LT – Low Temperature Version	5PA-ECO10000-LT
Stoppering Device ECOLIO2000	5PA-ECO2000-001
Stoppering Device ECOLIO4000	5PA-ECO4000-001

8000	10000
0,8	1,2
1500	2000
16,2	24
32	32
450	450
450	450
4	6
80	80
35 all models	
+ 50 all models	
- 45 all models	
- 55 all models	
- 55 all models	
- 80 all models	
20.5	28
35	35
kW 9	kW 10
kW 14.3	kW 14.3
1700	2000
1400	2800
4-6 all models	
1400	1700

Description	Part no.
Stoppering Device ECOLIO6000	5PA-ECO6000-001
Stoppering Device ECOLIO8000	5PA-ECO8000-001
Stoppering Device ECOLIO10000	5PA-ECO10000-001
50 Programs Controller ECOLIO2000/ECOLIO4000/ ECOLIO6000/ ECOLIO8000/ ECOLIO10000	5PA-ECO-002
VPH for biodecontamination ECOLIO2000/ECOLIO4000/ ECOLIO6000/ ECOLIO8000/ ECOLIO10000	5PA-ECO-003
Dry pump Option ECOLIO2000/ECOLIO4000	5PA-ECO-PUMP1
Dry pump Option ECOLIO6000	5PA-ECO-PUMP2
Dry pump Option ECOLIO8000/10000	5PA-ECO-PUMP3

PROLIO	2000	4000	6000
Capacity			
Useable shelf surface area m ²	2,0	4,0	6,0
Number of 23mm vials	300	750	1000
Volume of bulk material at 20mm thickness / l	4	8	12
Condenser ice capacity Kg	8	12	16
Characteristics			
Dimensions of shelves			
Width mm	450	450	450
Depth mm	450	450	450
Number of shelves (excluding radiation plate)	1	2	3
Shelf spacing (max) mm	80	80	80
With stoppering device closable to /mm	35 all models		
Shelf temperature max °C	+ 50 all models		
min °C	- 45 all models		
With low temperature option min °C	- 55 all models		
Condenser temperatures °C	- 60 all models		
With low temperature option	- 80 all models		
Vacuum pumping speed m3h-1	9.5	14.3	14.3
Dry pump option	10	15	15
Services			
Power consumption 3 phase, 50/60Hz, 220/380/460V	kW 4	kW 4	kW 6
With low temperature option	kW 7	kW 7	kW 7.5
Cooling water flow rate at +20°C lh-1	400	400	1000
With low temperature option lh-1	1400	1400	1400
PLC Controller with Touchscreen 10"			
Stainless Steel 316 Chamber and Condenser Shelves			
Shelf Guard standard			
Options			
Scada			
PLC Controller Touchscreen 12" with sinoptic			
Stoppering			
VPH for biodecontamination			
Clean Room Version			
Compressed air bar	4-6 all models		
Weight	900	1000	1200

Ordering information and accessories:

Description	Part no.
Basic Unit PROLIO2000	5PA-PRO2000
Basic Unit PROLIO4000	5PA-PRO4000
Basic Unit PROLIO6000	5PA-PRO6000
Basic Unit PROLIO8000	5PA-PRO8000
Basic Unit PROLIO10000	5PA-PRO10000
Basic Unit PROLIO2000 LT – Low Temperature Version	5PA-PRO2000-LT
Basic Unit PROLIO4000 LT – Low Temperature Version	5PA-PRO4000-LT
Basic Unit PROLIO6000 LT – Low Temperature Version	5PA-PRO6000-LT
Basic Unit PROLIO8000 LT – Low Temperature Version	5PA-PRO8000-LT
Basic Unit PROLIO10000 LT – Low Temperature Version	5PA-PRO10000-LT
Scada PROLIO2000/PROLIO4000/PROLIO6000/PROLIO8000/PROLIO10000	5PA-PRO-003
PLC Controller Touchscreen 12" with synoptic PROLIO2000/PROLIO4000/PROLIO6000/PROLIO8000/PROLIO10000	5PA-PRO-004

8000	10000
8,1	1,2
1500	2000
16,2	24
32	32
450	450
450	450
4	6
80	80
35 all models	
+ 50 all models	
- 45 all models	
- 55 all models	
- 55 all models	
- 80 all models	
20.5	28
35	35
kW 9 kW 14.3	kW 10 kW 14.3
1700	2000
1400	2800
4-6 all models	
1400	1700

Description	Part no.
Stoppering Device PROLIO2000	5PA-PRO2000-001
Stoppering Device PROLIO4000	5PA-PRO4000-001
Stoppering Device PROLIO6000	5PA-PRO6000-001
Stoppering Device PROLIO8000	5PA-PRO8000-001
Stoppering Device PROLIO10000	5PA-PRO10000-001
VPH for biodecontamination PROLIO2000/PROLIO4000/PROLIO6000/PROLIO8000/ PROLIO10000	5PA-PRO-005
Clean Room Version PROLIO2000	5PA-PRO2000-002
Clean Room Version PROLIO4000	5PA-PRO4000-002
Clean Room Version PROLIO6000	5PA-PRO6000-002
Clean Room Version PROLIO8000	5PA-PRO8000-002
Clean Room Version PROLIO10000	5PA-PRO10000-002
Dry pump Option PROLIO2000/PROLIO4000	5PA-PRO-PUMP001
Dry pump Option PROLIO6000	5PA-PRO-PUMP001
Dry pump Option PROLIO8000/PROLIO10000	5PA-PRO-PUMP003

VACUUM OVEN

VS-25SC

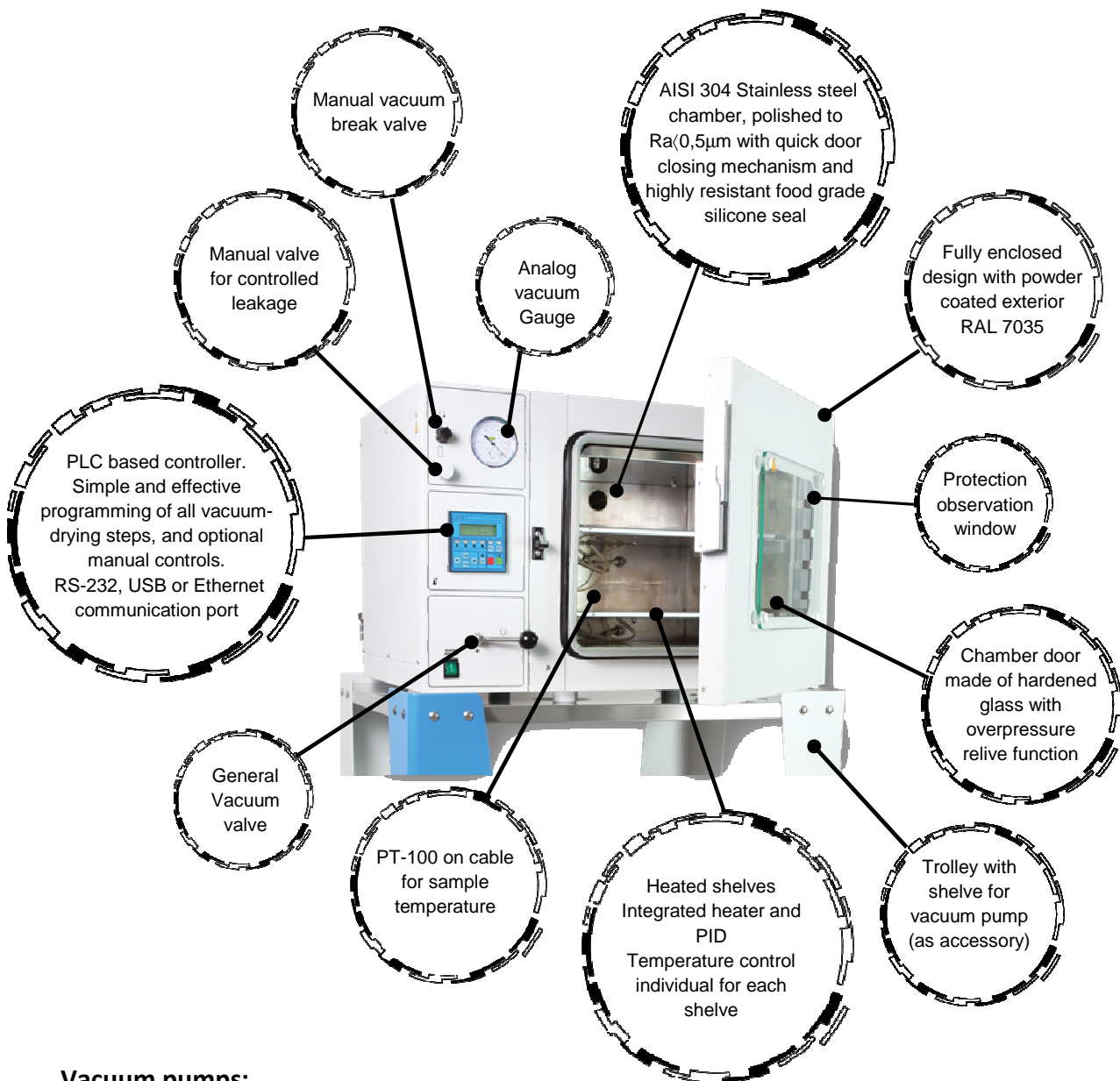
VS-50SC

VS-130SC

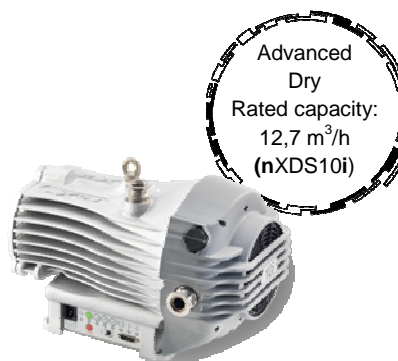
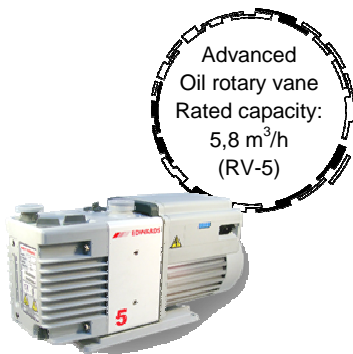
Drying in vacuum down to 1 mbar with heated shelves:

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





Vacuum pumps:

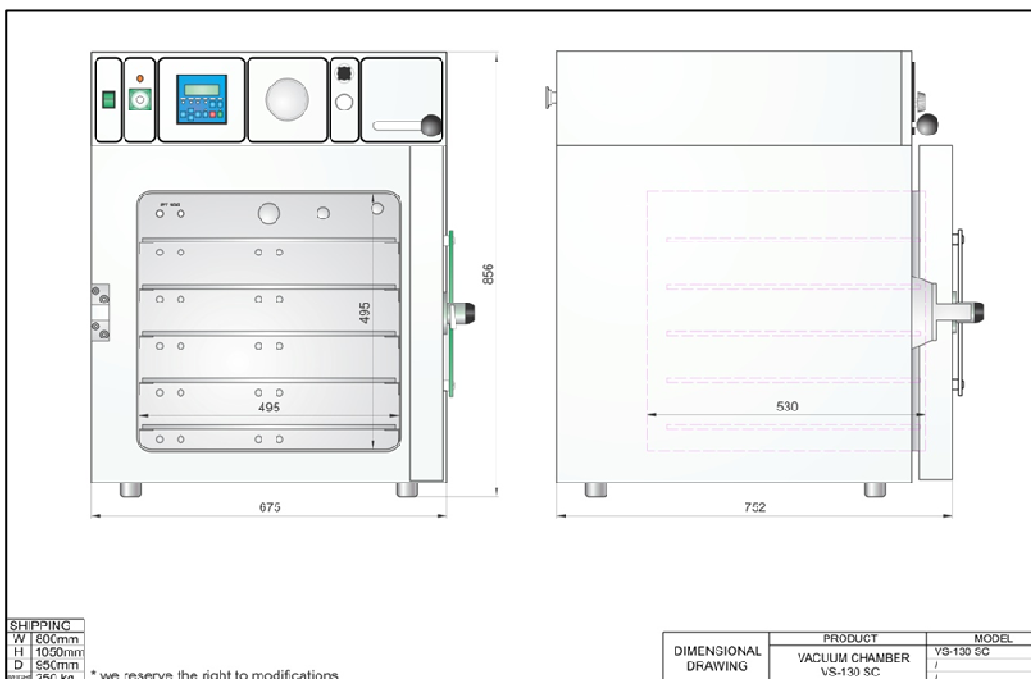
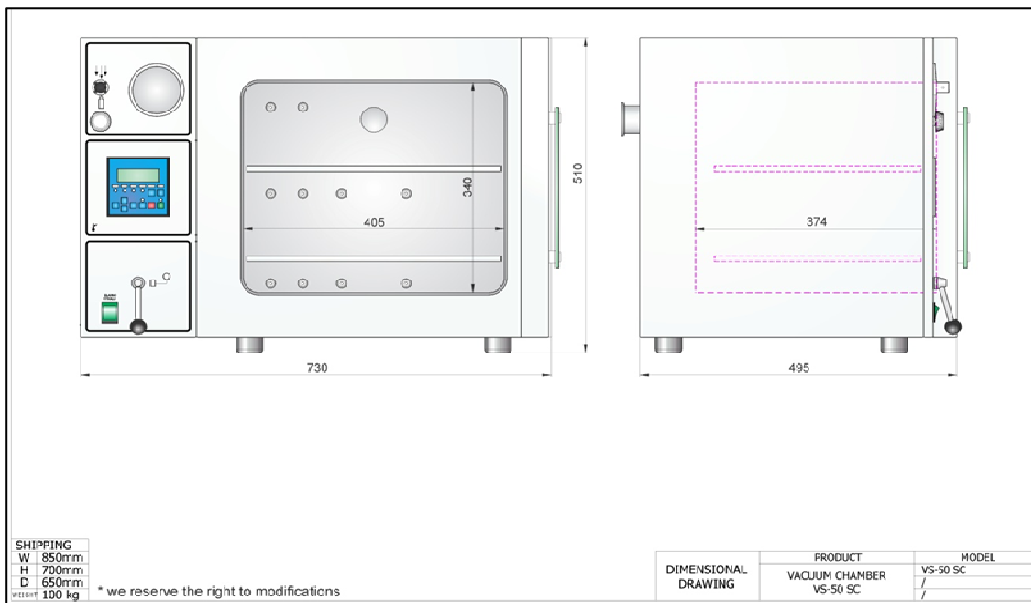
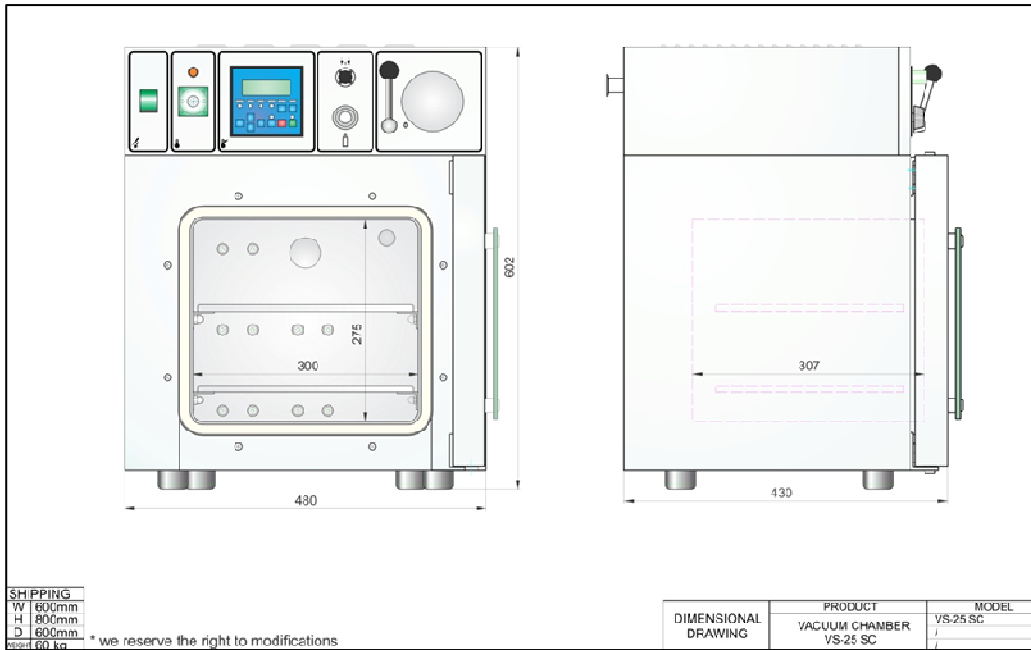


Technical data:

	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

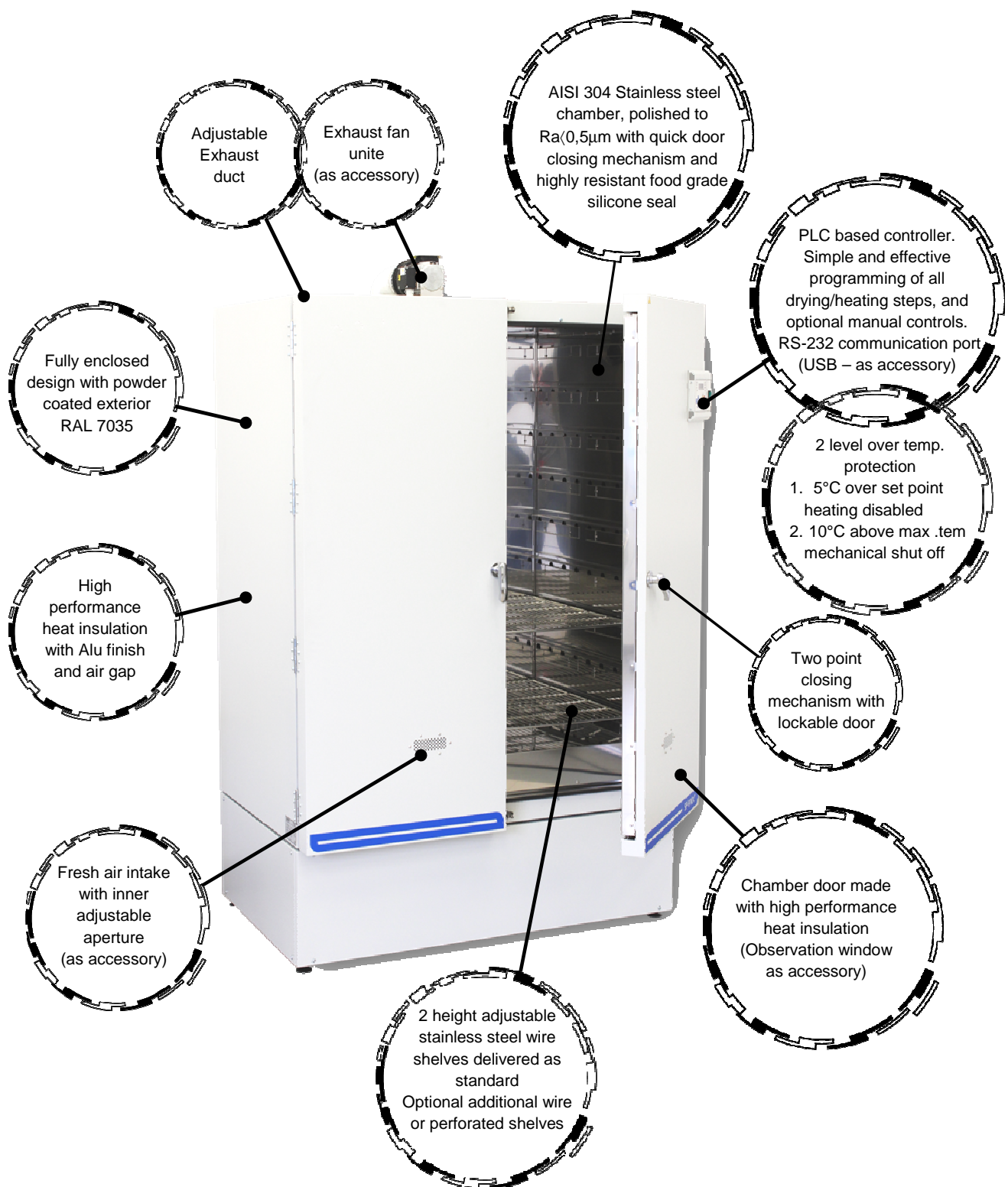
SP-910 C

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

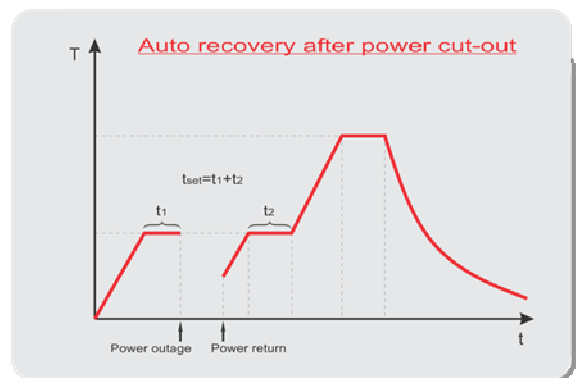
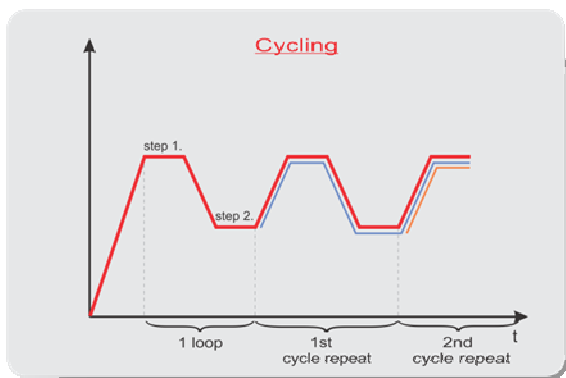
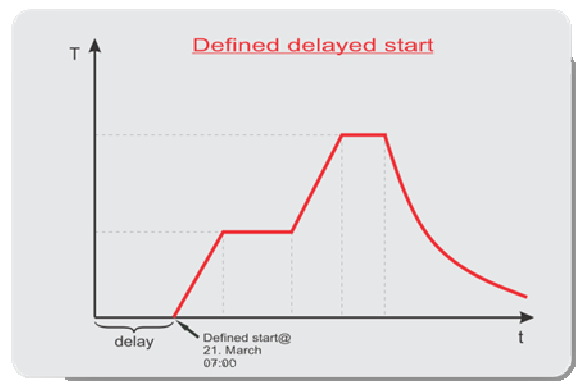
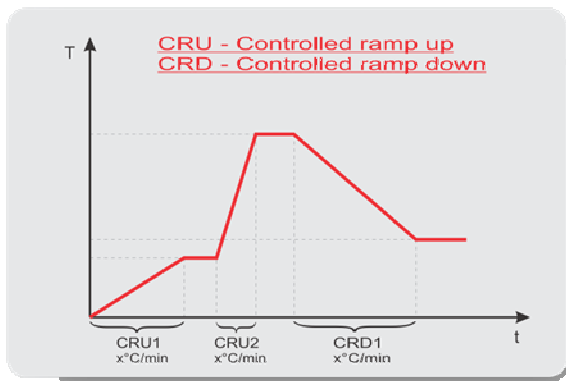
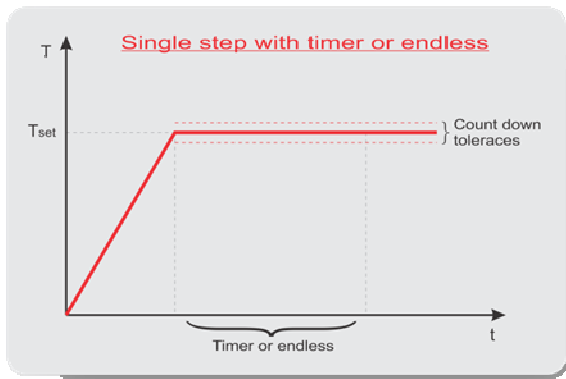
Two point closing mechanism with lockable door

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:

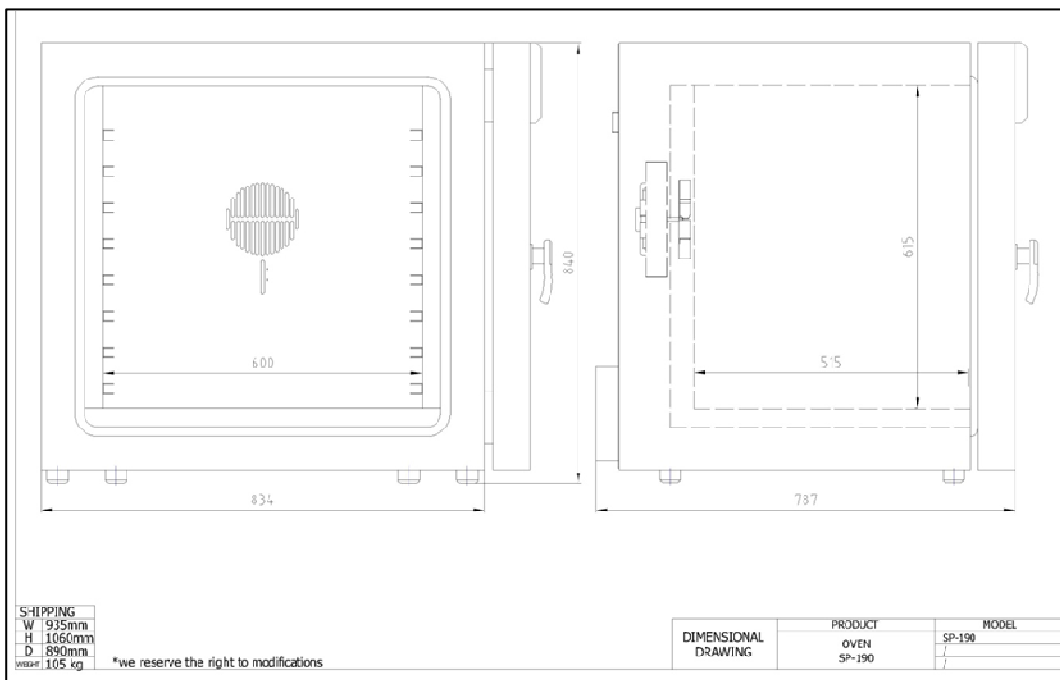
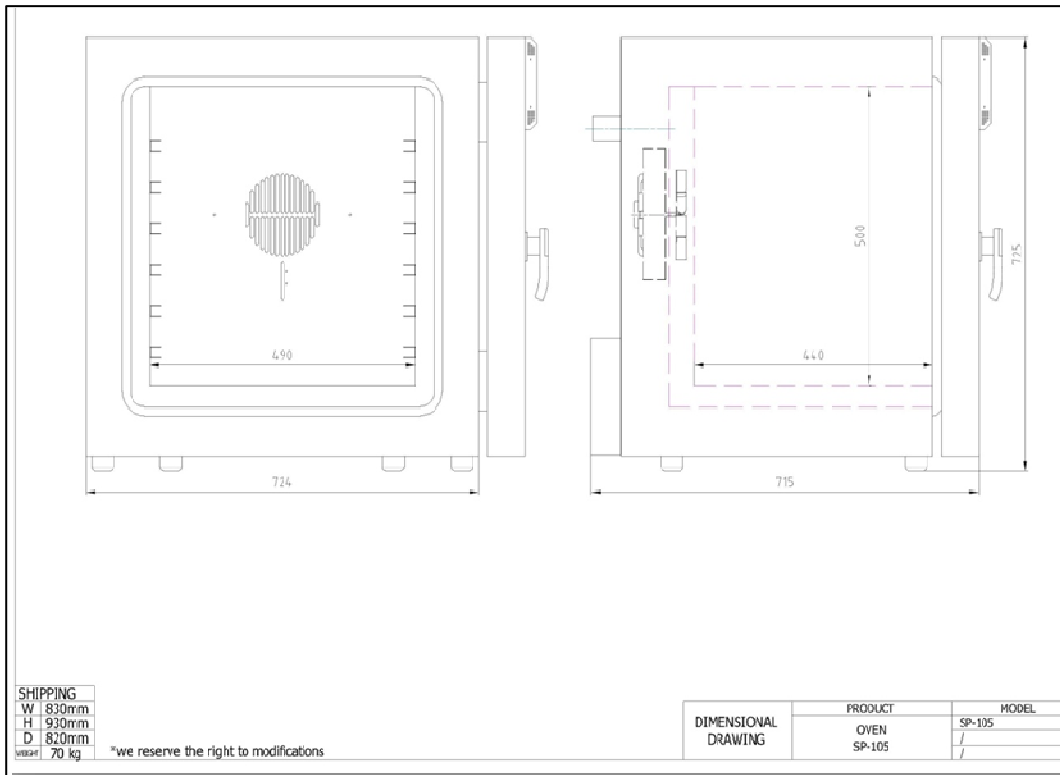
	SP-55 C	SP-105 C	SP-190 C
External dimensions (WxHxD) in mm	510 x 535 x 575	725 x 725 x 715	835 x 840 x 790
Internal dimensions (WxHxD) in mm	400 x 400 x 345	490 x 500 x 440	600 x 615 x 515
Volume (L)	55	107	190
Temperature range (°C)	T _{ambient} +5...300	T _{ambient} +5...300	T _{ambient} +5...300
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

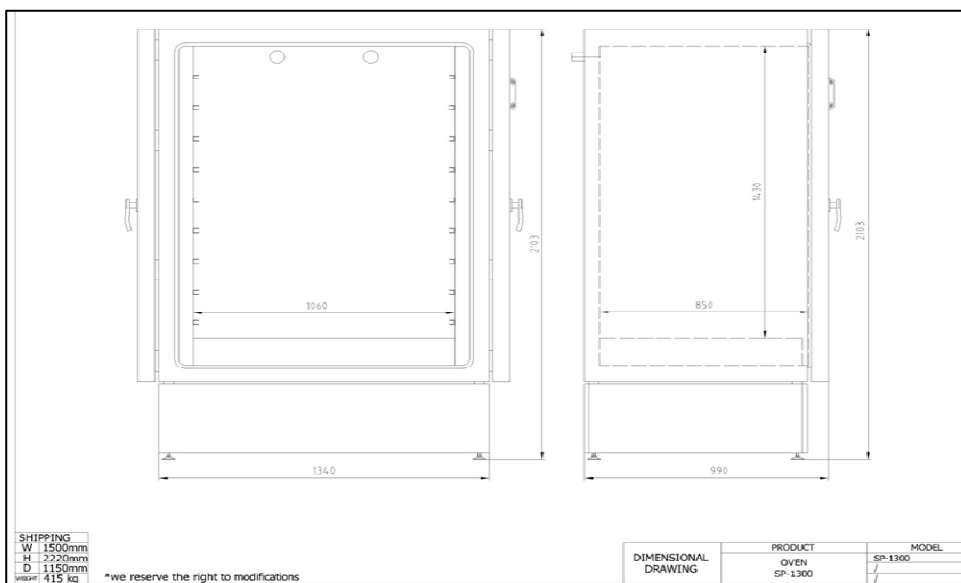
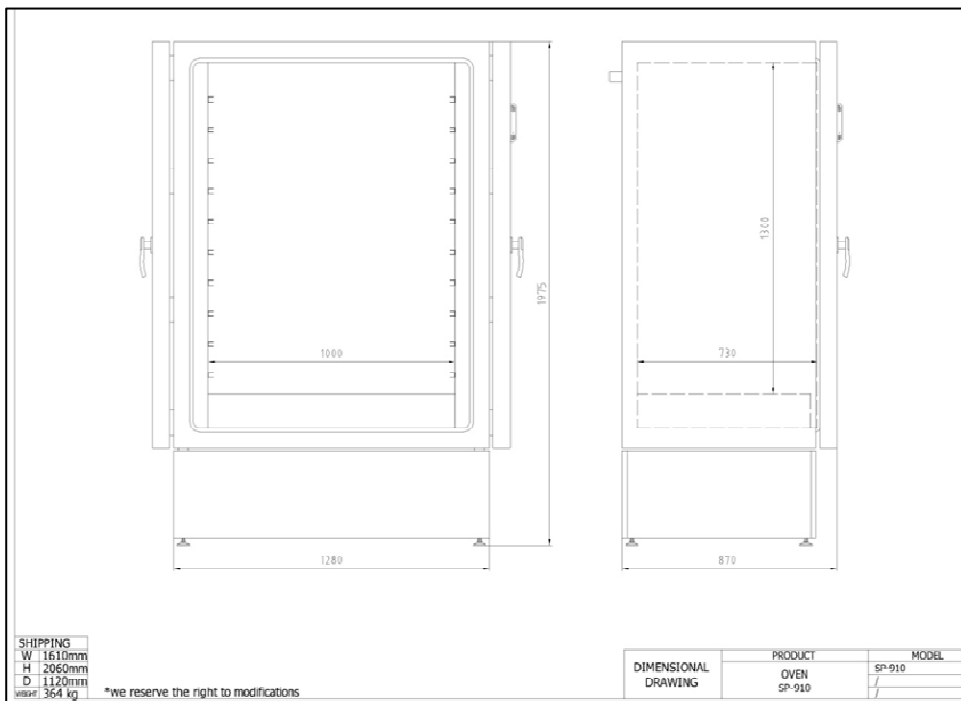
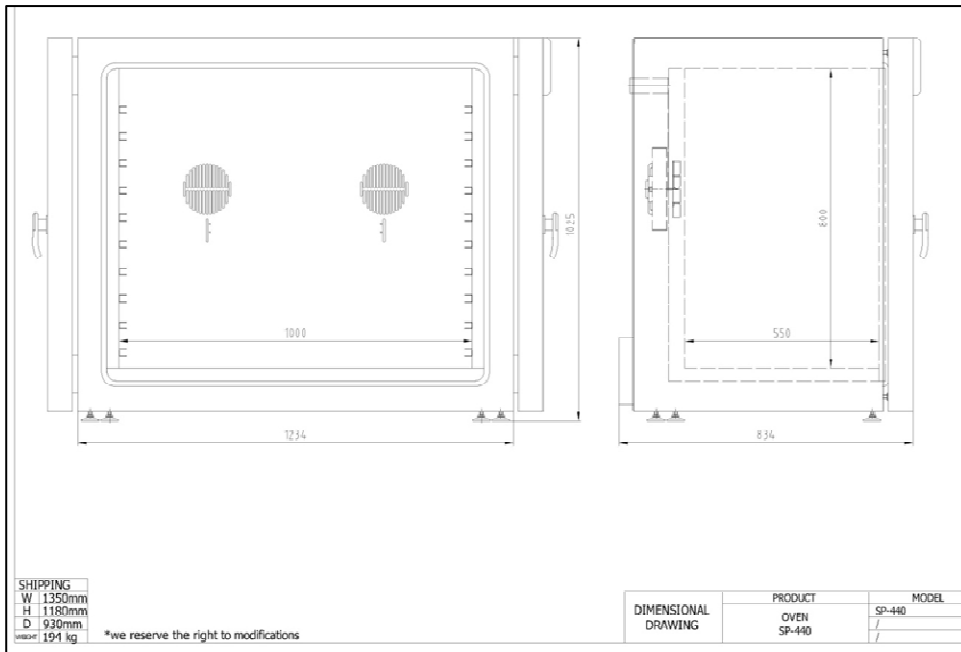
Ordering information and accessories:

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

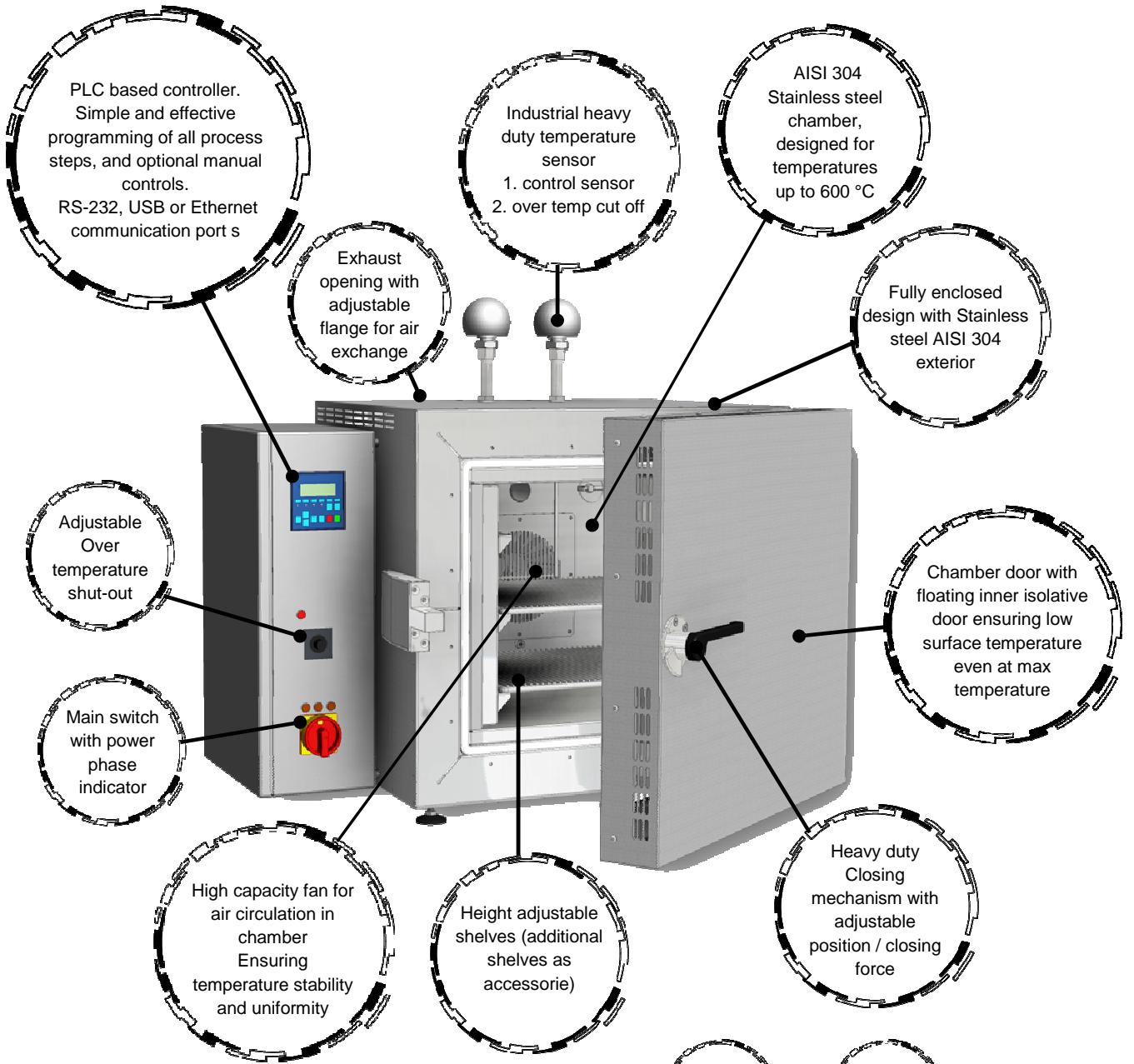
SP - 420 C FIRE

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

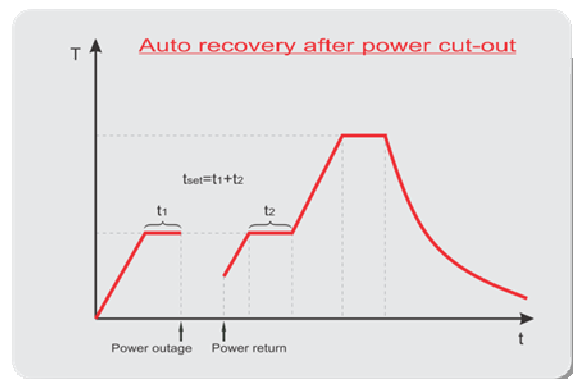
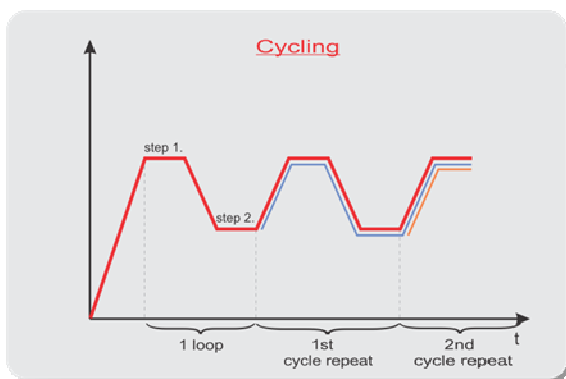
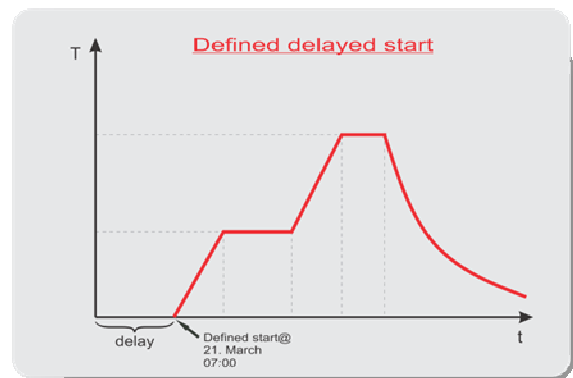
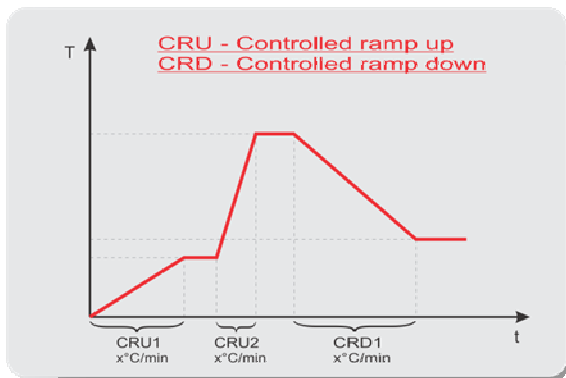
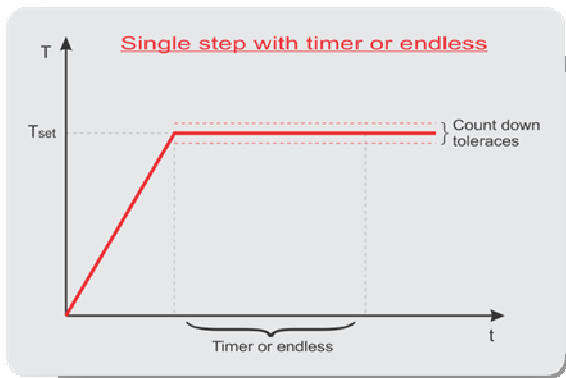




Exhaust fan unite combo:



Controller functions:

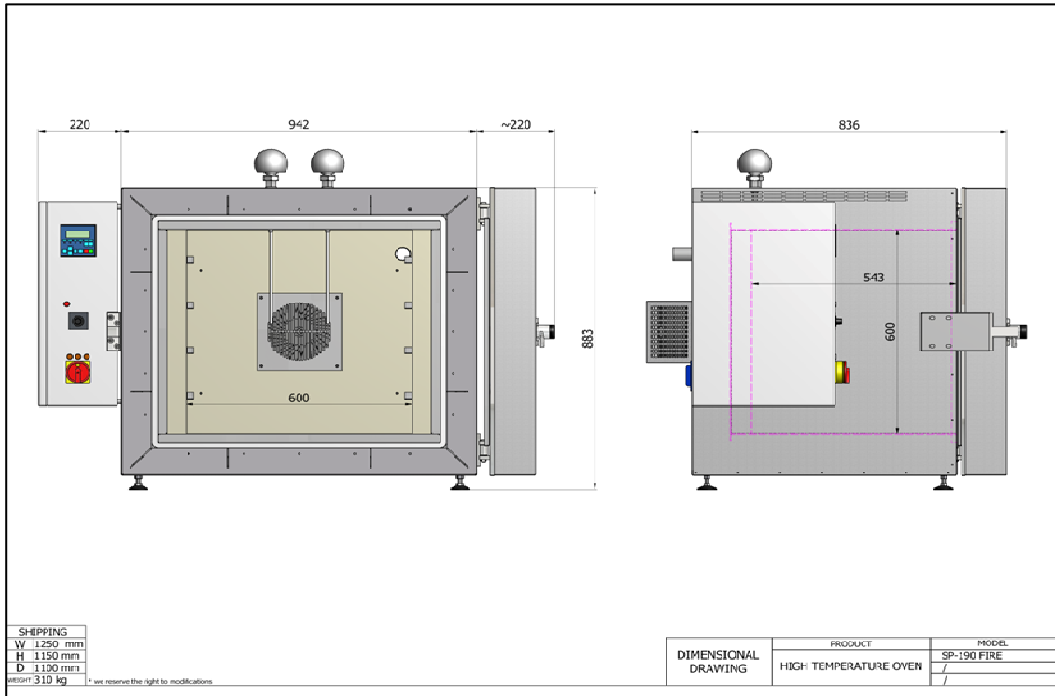
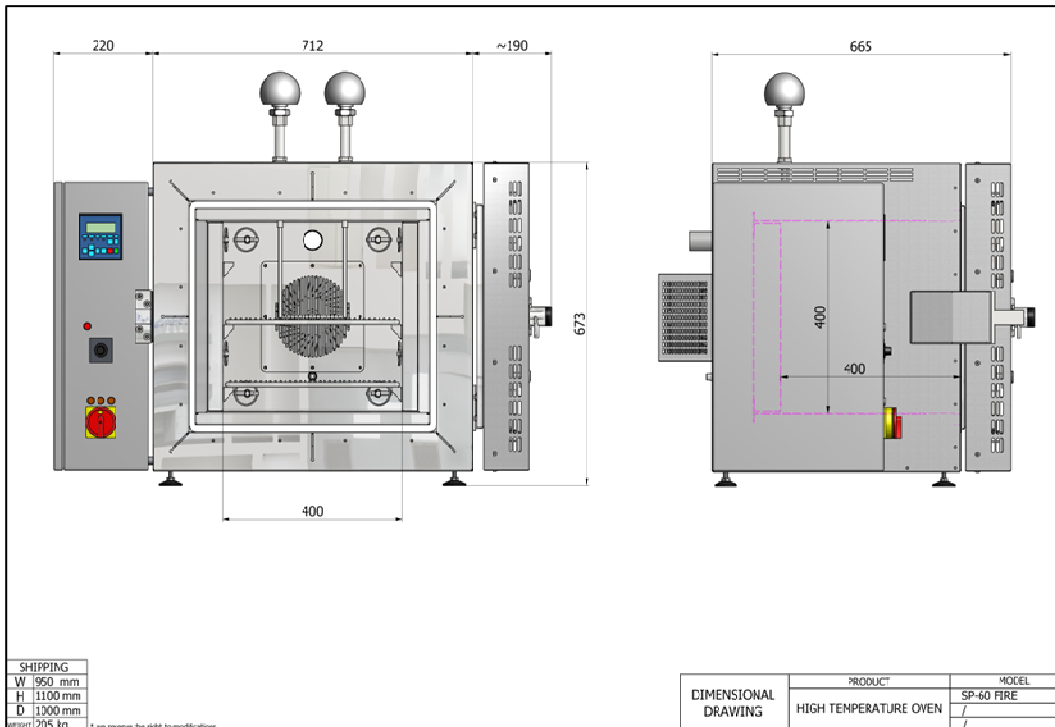


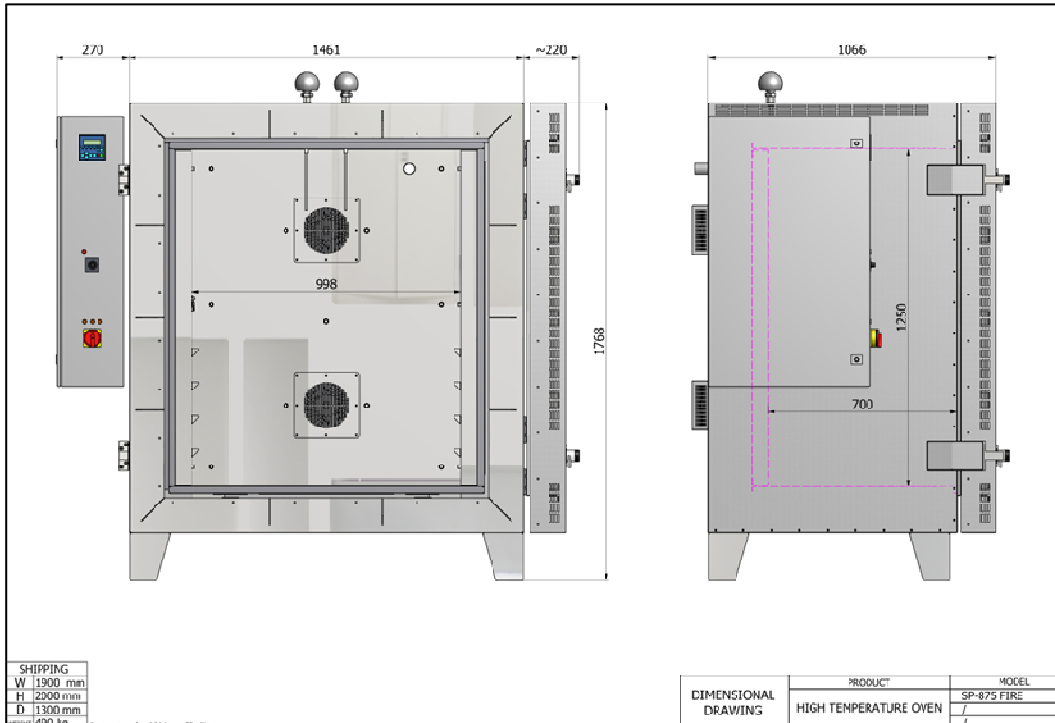
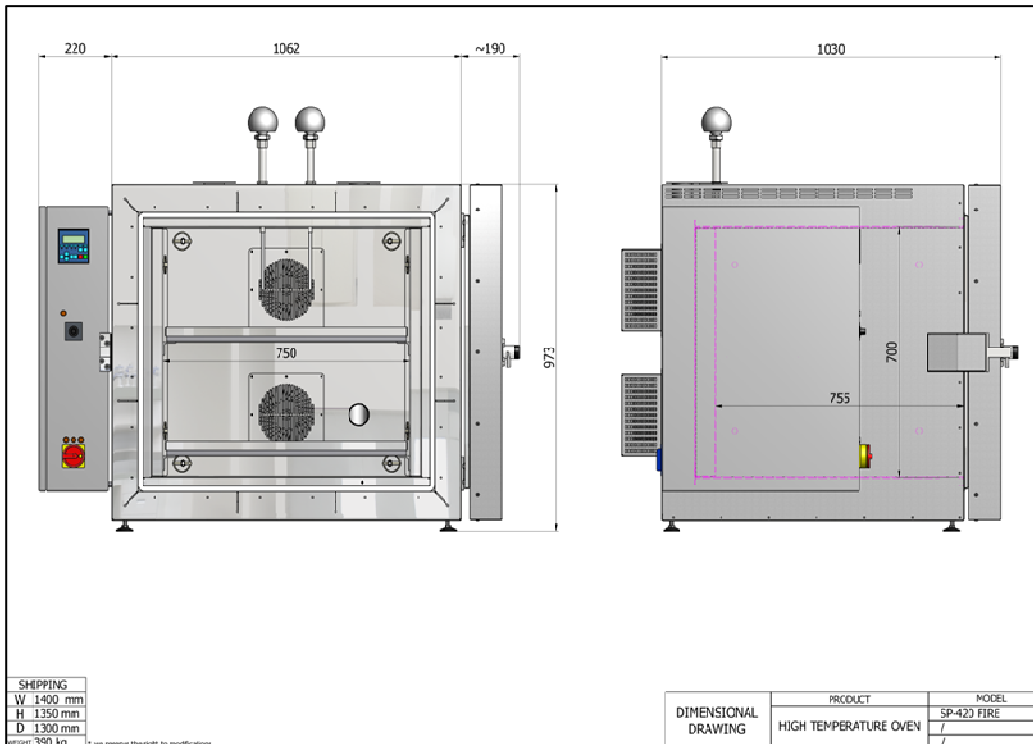
Technical data:

	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





TEMPERATURE CHAMBER

(+5°C ... +180°C)

TK-50 CK

TK-105 CK

TK-190 CK

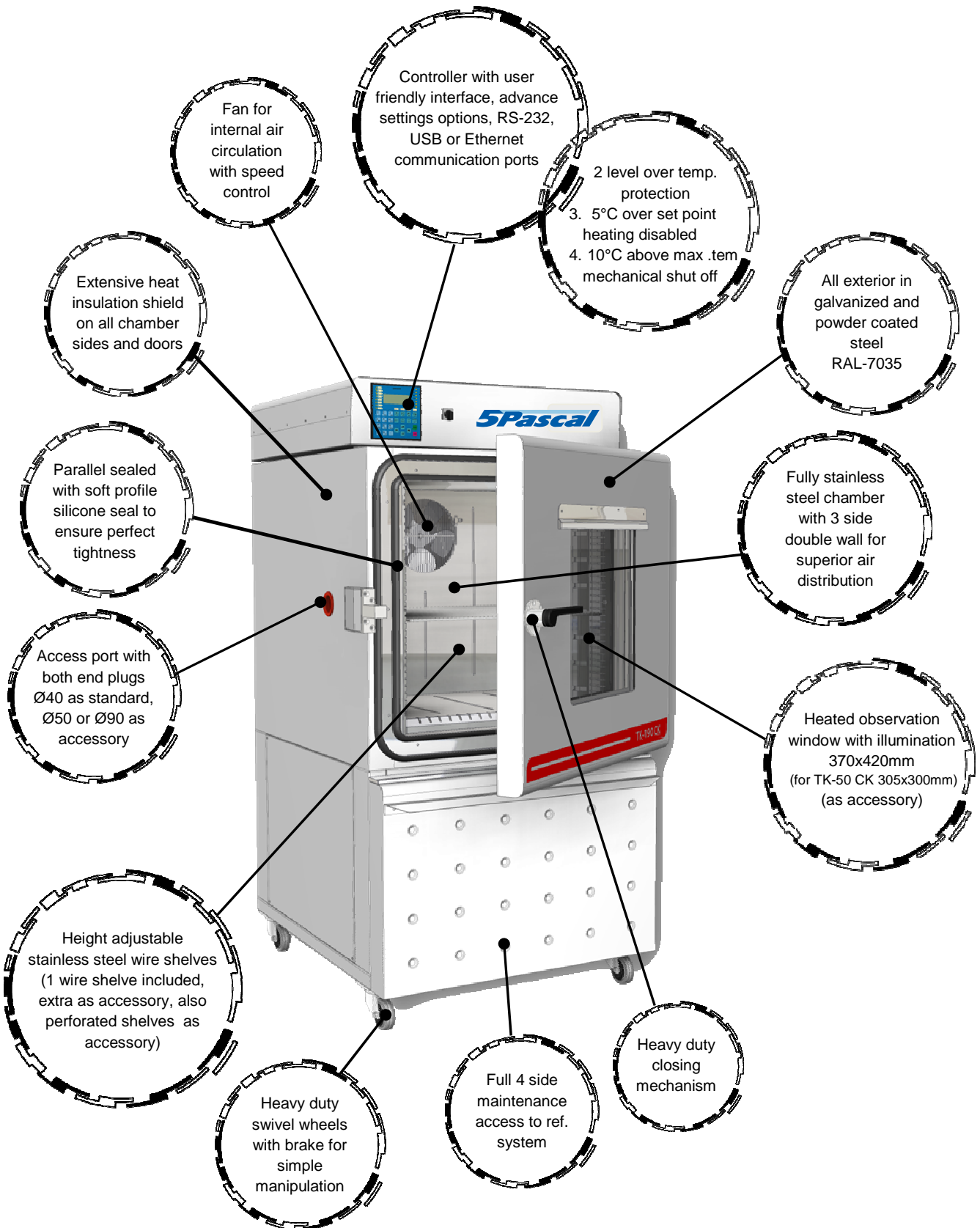
TK-340 CK

TK-500 CK

TK-1000 CK

- Material temperature resistance and product testing
 - Maintaining superior temperature stability
 - Sample conditioning prior to other tests
 - Data loggers and sensors calibration
 - Temperature controlled test polygon
 - World class metrology performance
 - Accelerated ageing
 - Stress tests





Fan for internal air circulation with speed control

Controller with user friendly interface, advance settings options, RS-232, USB or Ethernet communication ports

2 level over temp. protection
 3. 5°C over set point heating disabled
 4. 10°C above max .tem mechanical shut off

All exterior in galvanized and powder coated steel RAL-7035

Extensive heat insulation shield on all chamber sides and doors

Fully stainless steel chamber with 3 side double wall for superior air distribution

Parallel sealed with soft profile silicone seal to ensure perfect tightness

Heated observation window with illumination 370x420mm (for TK-50 CK 305x300mm) (as accessory)

Access port with both end plugs Ø40 as standard, Ø50 or Ø90 as accessory

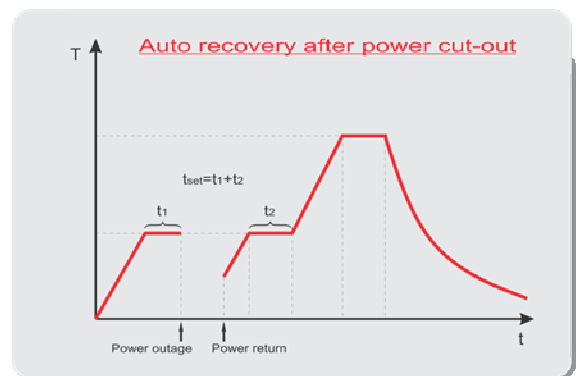
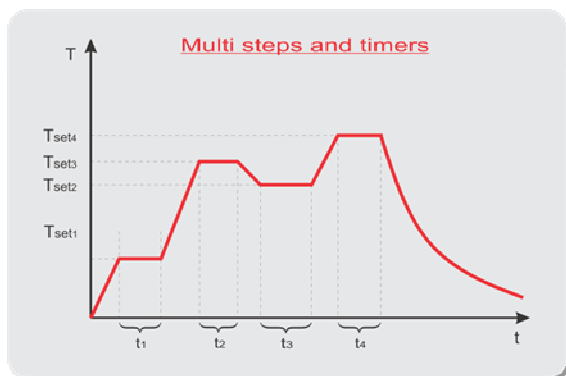
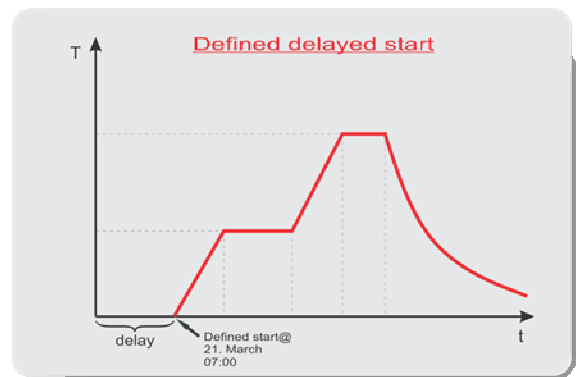
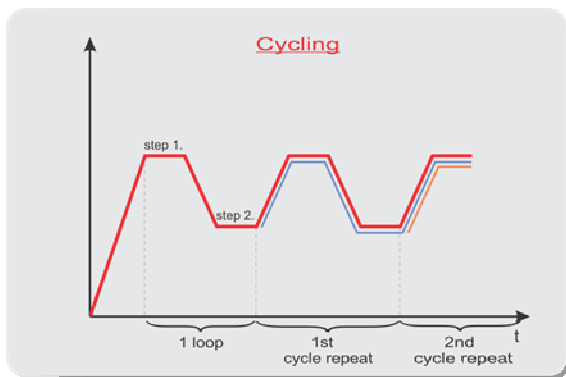
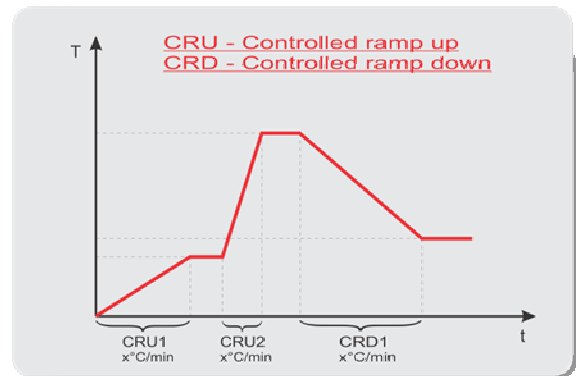
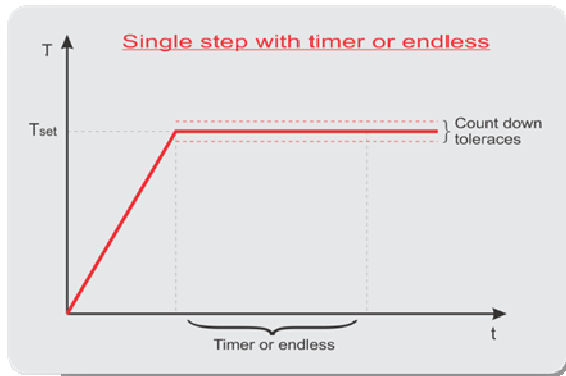
Height adjustable stainless steel wire shelves (1 wire shelf included, extra as accessory, also perforated shelves as accessory)

Heavy duty swivel wheels with brake for simple manipulation

Full 4 side maintenance access to ref. system

Heavy duty closing mechanism

Controller functions:



Technical data:

	TK-50 CK	TK-105 CK	TK-190 CK
External dimensions (WxHxD) in mm	570 x 1035 x 645	725 x 1560 x 845	834 x 1675 x 930
Internal dimensions (WxHxD) in mm	400 x 375 x 350	490 x 498 x 430	600 x 610 x 510
Volume (L)	~ 50	~ 105	~ 190
Temperature range (°C)	+5 ...+180	+5 ...+180	+5 ...+180
Heat up rate (°C/min) EN 60068-3-5	7,0	3,0	2,7
Cool down rate (°C/min) EN 60068-3-5	2,1	6,4	2,7
Temperature display resolution (°C)	0.1	0.1	0.1
Temperature set resolution (°C)	0.1	0.1	0.1
Temperature stability (°C)	±0,05°C @ 50°C ±0,05°C @ 90°C ±0,1°C @ 180°C	±0,08°C @ 50°C ±0,1°C @ 90°C ±0,1°C @ 180°C	±0,08°C @ 50°C ±0,1°C @ 90°C ±0,1°C @ 180°C
Temperature uniformity (°C)	±0,4°C @ 50°C ±0,4°C @ 90°C ±1,5°C @ 180°C	±0,3°C @ 50°C ±0,3°C @ 90°C ±1,5°C @ 180°C	±0,6°C @ 50°C ±0,4°C @ 90°C ±1,5°C @ 180°C
Temperature control	PID	PID	PID
Power supply	230V 50/60Hz	230V 50/60Hz	230V 50/60Hz
Wattage (W)	1700	2600	2600
Interface	RS 232 (USB or Ethernet as accessory)	RS 232 (USB or Ethernet as accessory)	RS 232 (USB or Ethernet as accessory)
Shelve	1 (max 6)	1 (max 6)	1 (max 8)
Shelve capacity (kg)	25	35	35
Max capacity (kg)	30	60	80
Access port (mm)	Ø 40 standard, (Ø 50, Ø 90 as accessory)	Ø 40 standard, (Ø 50, Ø 90 as accessory)	Ø 40 standard, (Ø 50, Ø 90 as accessory)
Noise (dBA) @ 1 m distance	58	58	58
Weight (kg)	125	238	278

Ordering information and accessories:

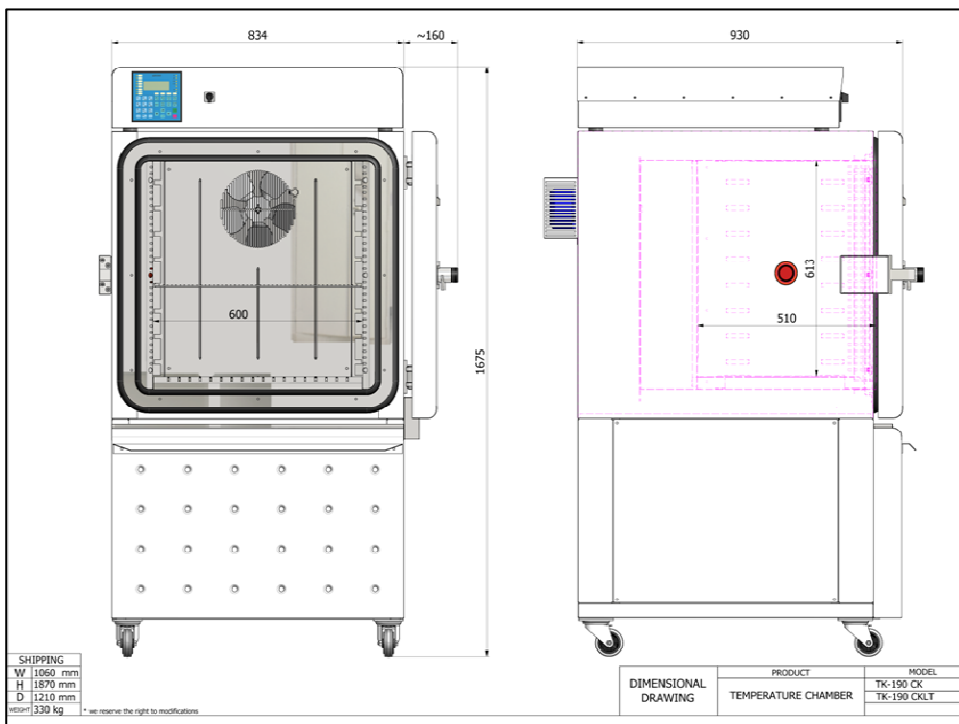
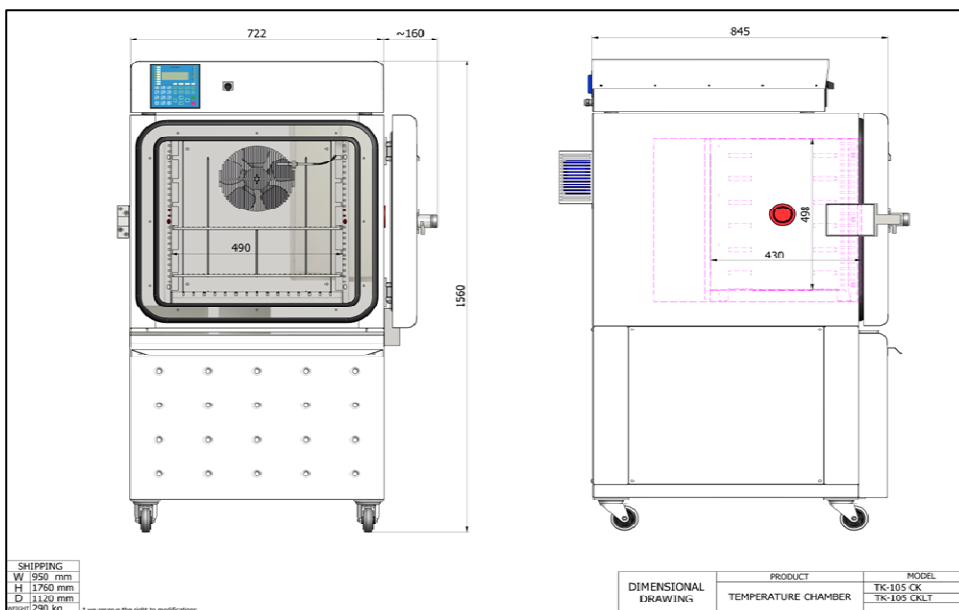
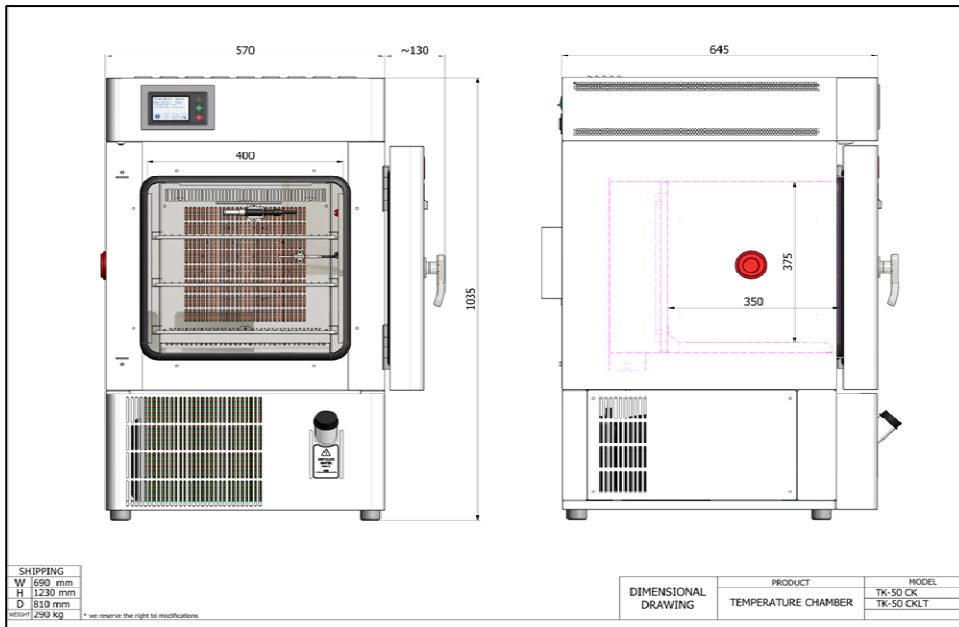
Description	Part no.
Temperature chamber TK-50 CK	1759
Temperature chamber TK-105 CK	2509
Temperature chamber TK-190 CK	2512
Temperature chamber TK-340 CK	2515
Temperature chamber TK-500 CK	1745
Temperature chamber TK-1000 CK	2518
Shelve wire TK-50 CK	1766
Shelve wire TK-105 CK	951
Shelve wire TK-190 CK	953
Shelve wire TK-340 CK	956
Shelve wire TK-500 CK	958
Shelve wire TK-1000 CK	960
Shelve perforated TK-50 CK	1765
Shelve perforated TK-105 CK	1726
Shelve perforated TK-190 CK	1728

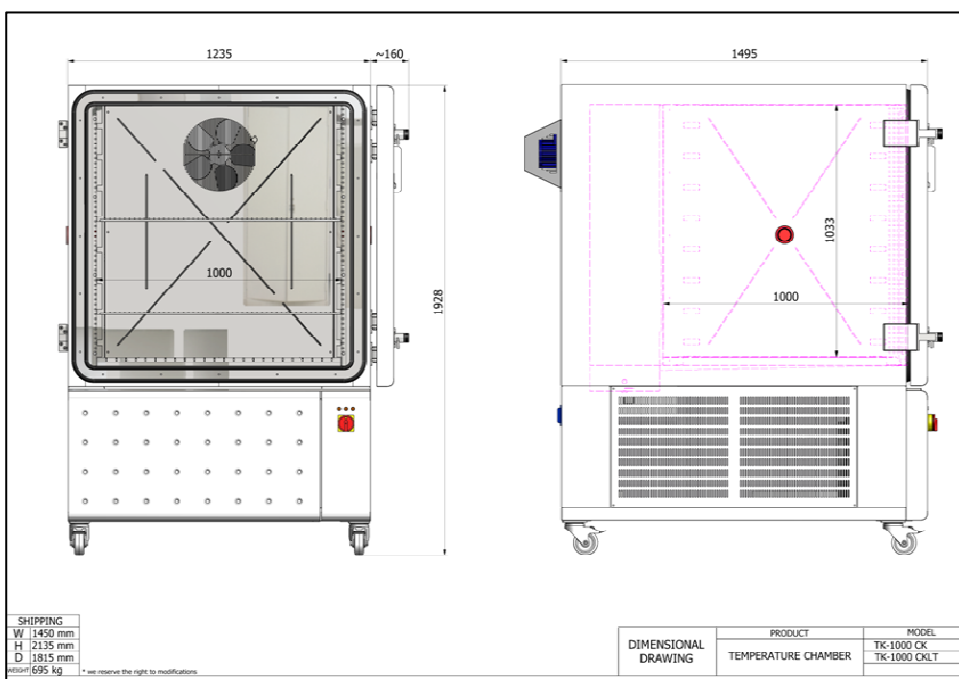
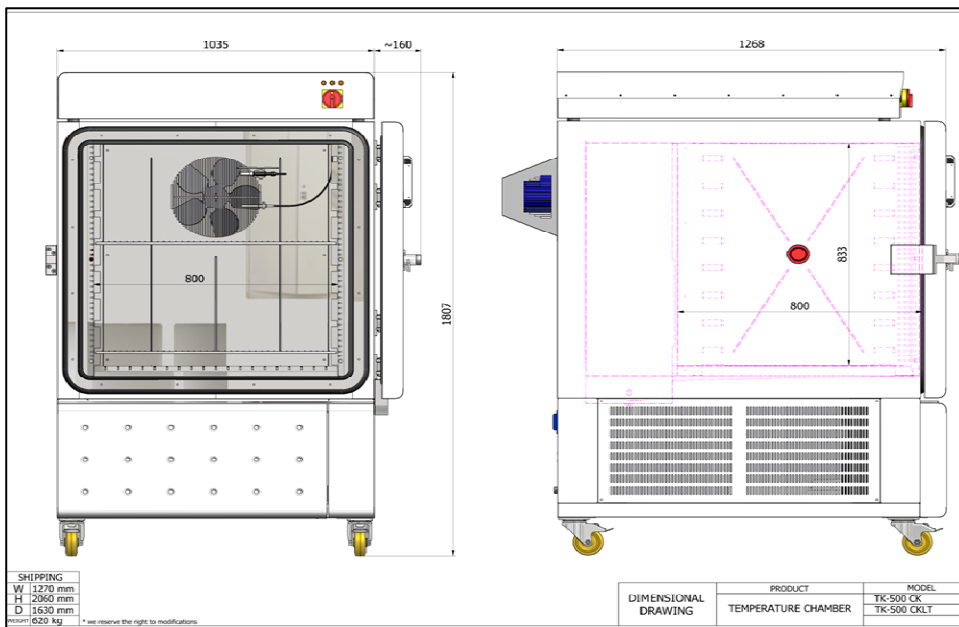
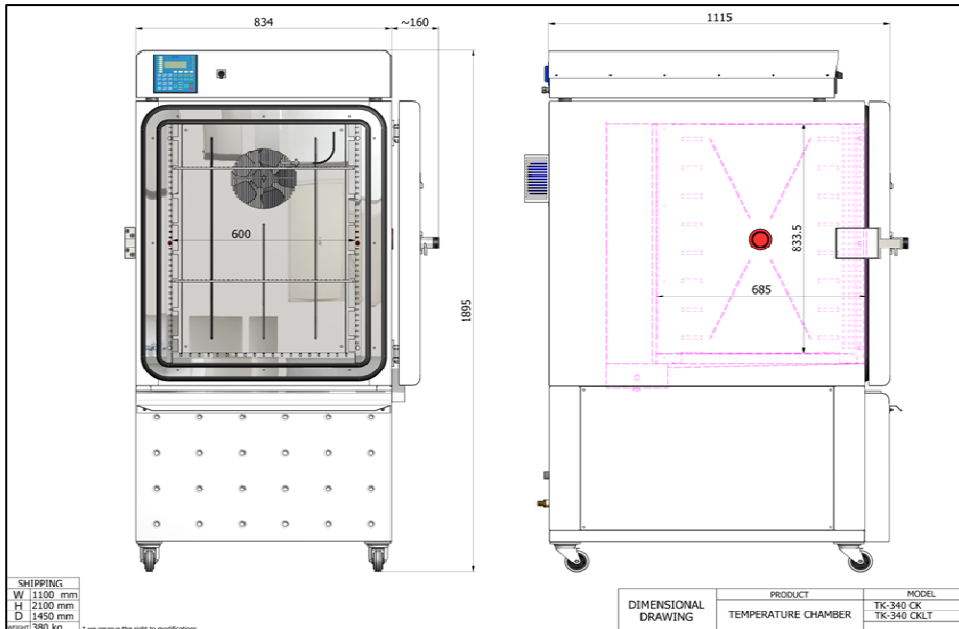
Technical data:

	TK-340 CK	TK-500 CK	TK-1000 CK
External dimensions (WxHxD) in mm	835 x 1895 x 1115	1035 x 1810 x 1270	1235 x 1930 x 1495
Internal dimensions (WxHxD) in mm	600 x 830 x 685	800 x 800 x 800	1000 x 1000 x 1000
Volume (L)	~ 340	~ 500	~ 1000
Temperature range (°C)	+5 ...+180	+5 ...+180	+5 ...+180
Heat up rate (°C/min) EN 60068-3-5	1,4	3,5	3,8
Cool down rate (°C/min) EN 60068-3-5	1,8	1,8	1,6
Temperature display resolution (°C)	0.1	0.1	0.1
Temperature set resolution (°C)	0.1	0.1	0.1
Temperature stability (°C)	±0,08°C @ 50°C ±0,1°C @ 90°C ±0,1°C @ 180°C	±0,06°C @ 50°C ±0,1°C @ 90°C ±0,1°C @ 180°C	±0,05°C @ 50°C ±0,1°C @ 90°C ±0,1°C @ 180°C
Temperature uniformity (°C)	±0,34°C @ 50°C ±0,41°C @ 90°C ±1,5°C @ 180°C	±0,3°C @ 50°C ±0,4°C @ 90°C ±1,0°C @ 180°C	±0,4°C @ 50°C ±0,5°C @ 90°C ±1,0°C @ 180°C
Temperature control	PID	PID	PID
Power supply	230V 50/60Hz	3x400V 50/60Hz	3x400V 50/60Hz
Wattage (W)	2600	8000	9000
Interface	RS 232 (USB or Ethernet as accessory)	RS 232 (USB or Ethernet as accessory)	RS 232 (USB or Ethernet as accessory)
Shelve	1 (max 8)	1 (max 8)	1 (max 8)
Shelve capacity (kg)	35	50	50
Max capacity (kg)	100	150	200
Access port (mm)	Ø 40 standard, (Ø 50, Ø 90 as accessory)	Ø 40 standard, (Ø 50, Ø 90 as accessory)	Ø 40 standard, (Ø 50, Ø 90 as accessory)
Noise (dBA) @ 1 m distance	58	58	58
Weight (kg)	324	435	604

Ordering information and accessories:

Description	Part no.
Shelve perforated TK-340 CK	957
Shelve perforated TK-500 CK	959
Shelve perforated TK-1000 CK	961
Access Port w. Plug Ø 40 mm right	2629
Access Port w. Plug Ø 50 mm right	608
Access Port w. Plug Ø 90 mm right	1731
Observation window with illumination 370x420mm (TK-105 CK, TK-190 CK, TK-340 CK, TK-500 CK, TK-1000 CK)	252
Observation window with illumination 305x300mm (TK-50 CK)	2637
Trolley for TK-50 CK	1764
USB interface	1466
Ethernet interface	1716
RedEye TK Tool (Software Monitoring & History)	1663
Password protection	1718
Evaluation report	1719





TEMPERATURE CHAMBER

(-40°C ... +180°C)

TK-50 CKLT

TK-105 CKLT

TK-190 CKLT

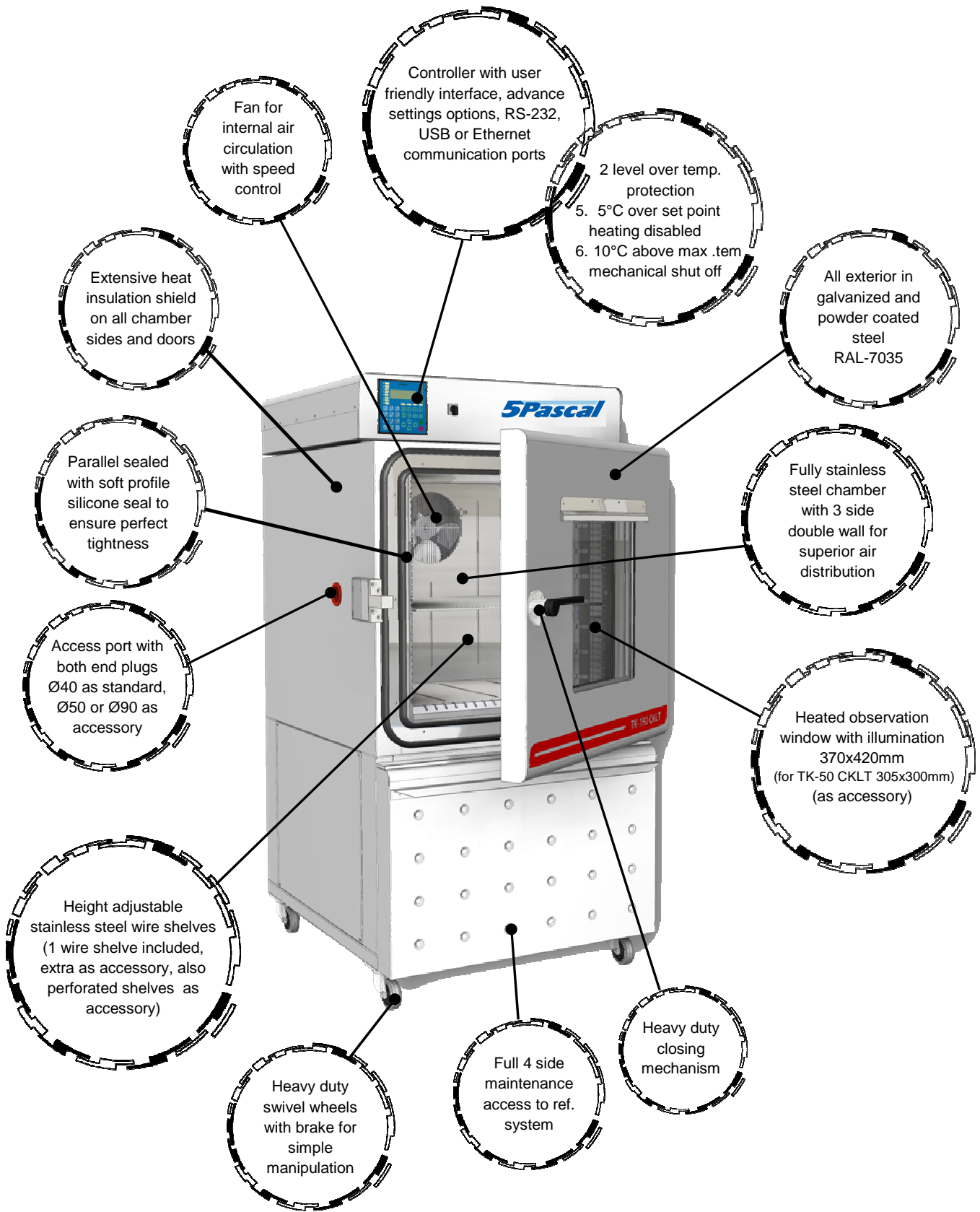
TK-340 CKLT

TK-500 CKLT

TK-1000 CKLT

- Material temperature resistance and product testing
 - Maintaining superior temperature stability
 - Sample conditioning prior to other tests
 - Data loggers and sensors calibration
 - Temperature controlled test polygon
 - World class metrology performance
 - Accelerated ageing
 - Stress tests





Fan for internal air circulation with speed control

Controller with user friendly interface, advance settings options, RS-232, USB or Ethernet communication ports

2 level over temp. protection
 5. 5°C over set point heating disabled
 6. 10°C above max .tem mechanical shut off

All exterior in galvanized and powder coated steel RAL-7035

Extensive heat insulation shield on all chamber sides and doors

Parallel sealed with soft profile silicone seal to ensure perfect tightness

Fully stainless steel chamber with 3 side double wall for superior air distribution

Access port with both end plugs Ø40 as standard, Ø50 or Ø90 as accessory

Heated observation window with illumination 370x420mm (for TK-50 CKLT 305x300mm) (as accessory)

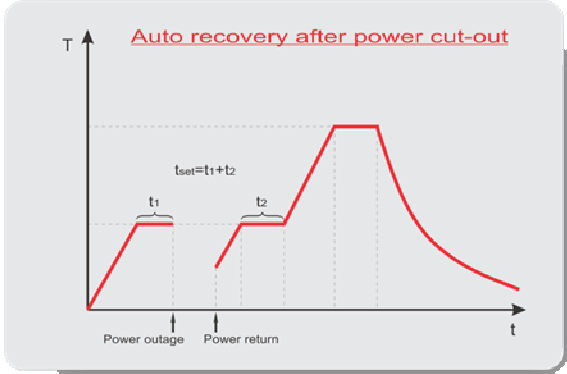
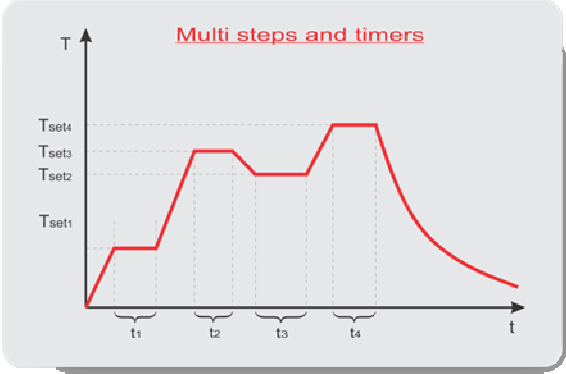
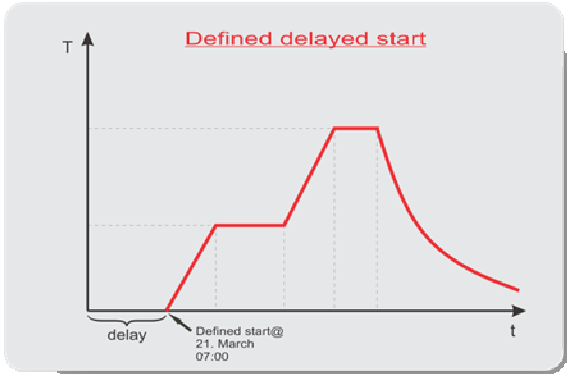
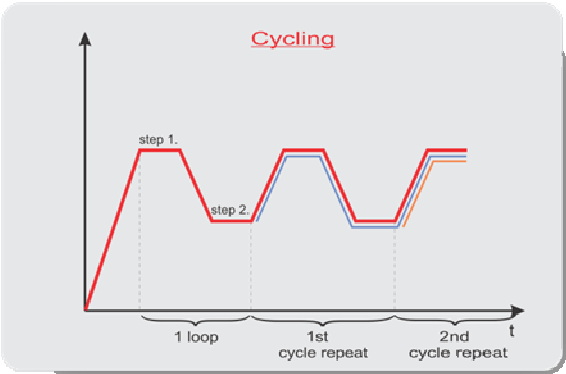
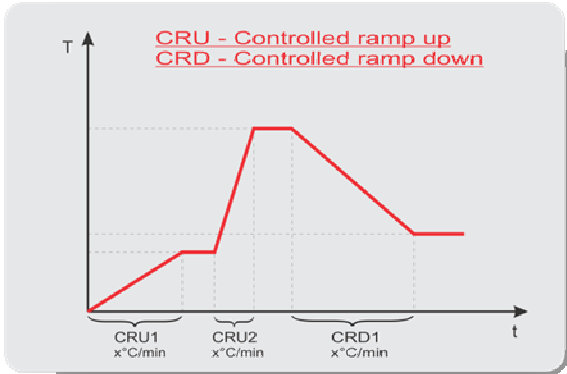
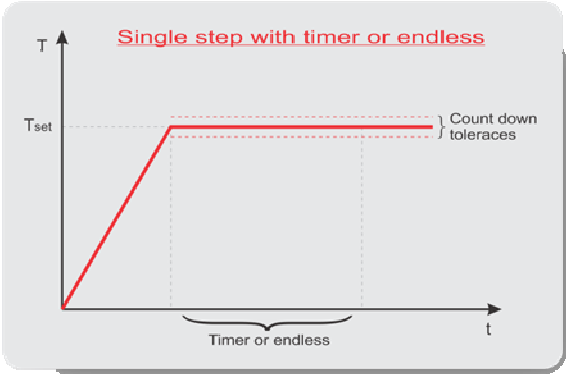
Height adjustable stainless steel wire shelves (1 wire shelve included, extra as accessory, also perforated shelves as accessory)

Heavy duty swivel wheels with brake for simple manipulation

Full 4 side maintenance access to ref. system

Heavy duty closing mechanism

Controller functions:



Technical data:

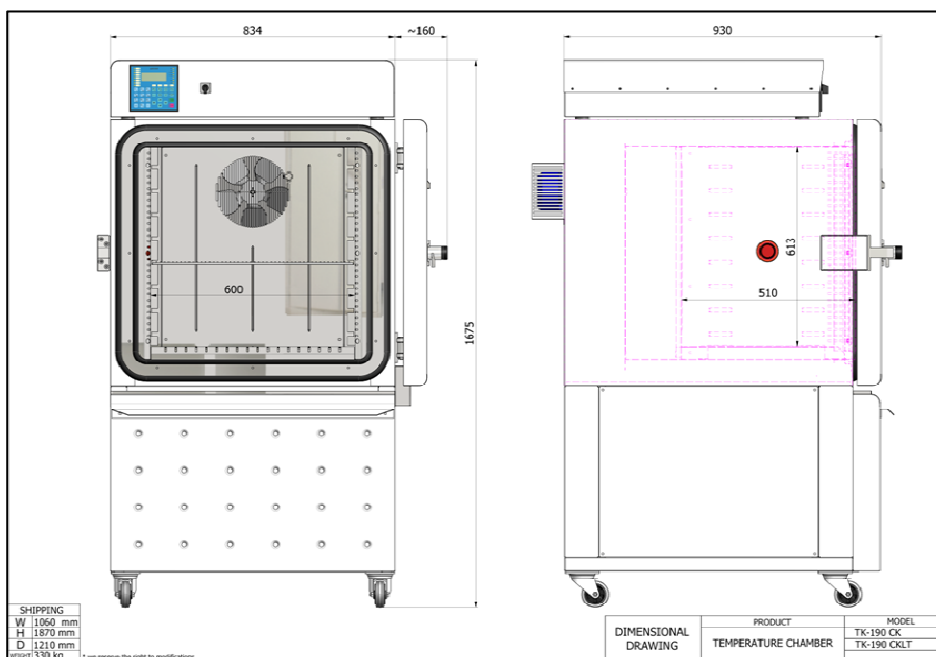
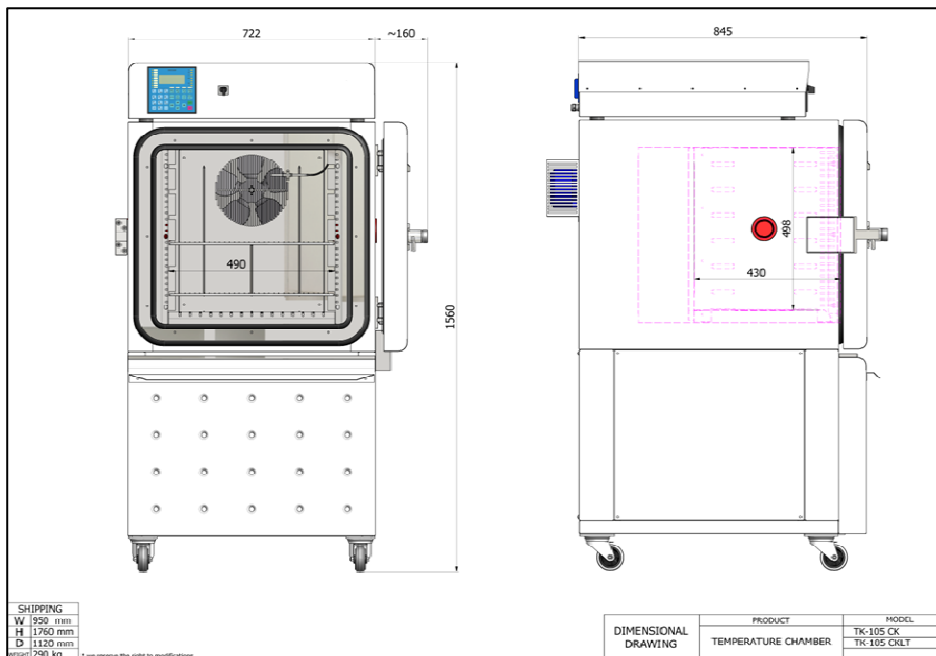
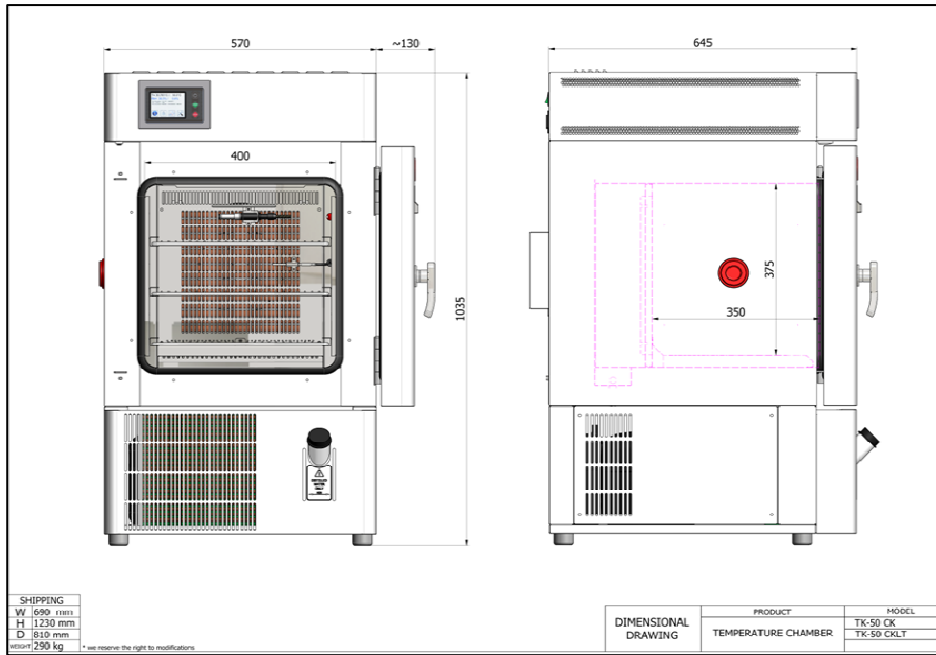
	TK-50 CKLT	TK-105 CKLT	TK-190 CKLT
External dimensions (WxHxD) in mm	570 x 1035 x 645	725 x 1560 x 845	834 x 1675 x 930
Internal dimensions (WxHxD) in mm	400 x 375 x 350	490 x 498 x 430	600 x 610 x 510
Volume (L)	~ 50	~ 105	~ 190
Temperature range (°C)	-40 ...+180	-40 ...+180	-40 ...+180
Heat up rate (°C/min)EN 60068-3-5	5,3	3,0	1,7
Cool down rate (°C/min)EN 60068-3-5	2,1	1,7	3,2
Temperature display resolution (°C)	0.1	0.1	0.1
Temperature set resolution (°C)	0.1	0.1	0.1
Temperature stability (°C)	±0,2°C @ -40°C ±0,05°C @ 50°C ±0,05°C @ 90°C ±0,1°C @ 180°C	±0,4°C @ -40°C ±0,08°C @ 50°C ±0,1°C @ 90°C ±0,1°C @ 180°C	±0,5°C @ -40°C ±0,08°C @ 50°C ±0,1°C @ 90°C ±0,1°C @ 180°C
Temperature uniformity (°C)	±2,2°C @ -40°C ±0,4°C @ 50°C ±0,4°C @ 90°C ±1,5°C @ 180°C	±1,5°C @ -40°C ±0,3°C @ 50°C ±0,3°C @ 90°C ±1,5°C @ 180°C	±1,5°C @ -40°C ±0,6°C @ 50°C ±0,4°C @ 90°C ±1,5°C @ 180°C
Temperature control	PID	PID	PID
Power supply	230V 50/60Hz	230V 50/60Hz	230V 50/60Hz
Wattage (W)	1700	2600	2600
Interface	RS 232 (USB or Ethernet as accessory)	RS 232 (USB or Ethernet as accessory)	RS 232 (USB or Ethernet as accessory)
Shelve	1 (max 6)	1 (max 6)	1 (max 8)
Shelve capacity (kg)	25	35	35
Max capacity (kg)	30	60	80
Access port (mm)	∅ 40 standard, (∅ 50, ∅ 90 as accessory)	∅ 40 standard, (∅ 50, ∅ 90 as accessory)	∅ 40 standard, (∅ 50, ∅ 90 as accessory)
Noise (dBA) @ 1 m distance	58	58	60
Weight (kg)	125	238	278

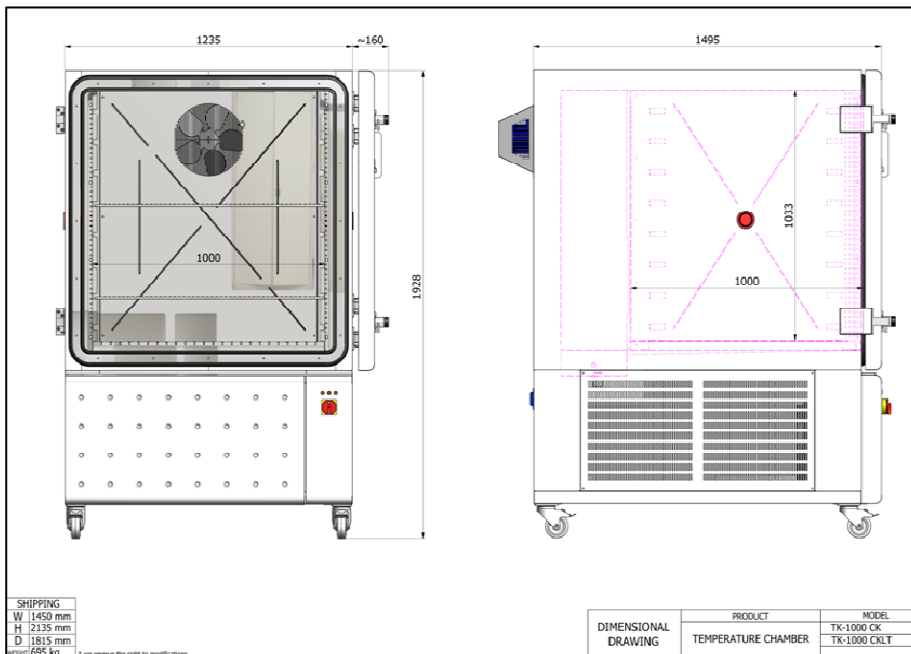
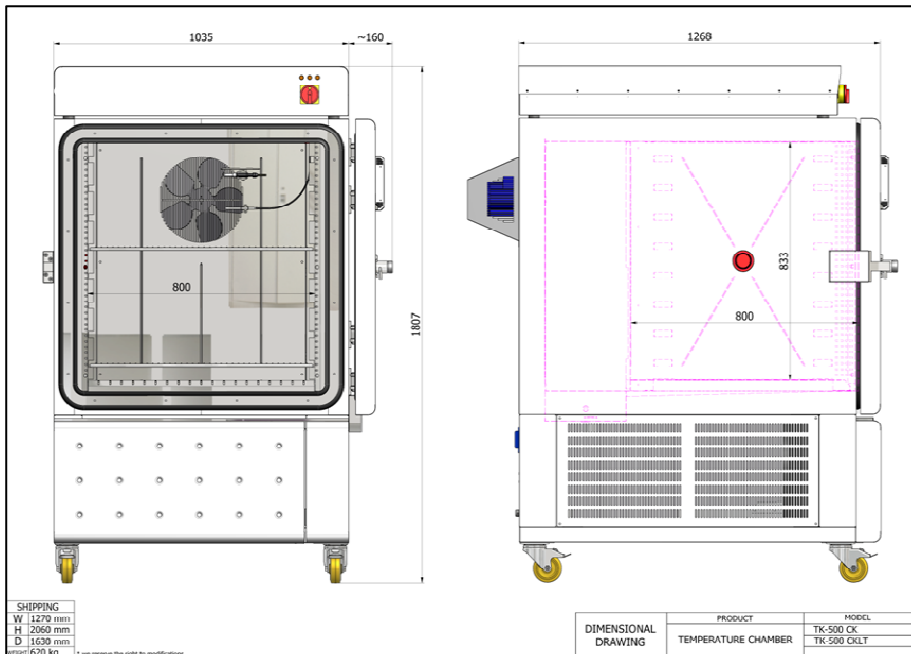
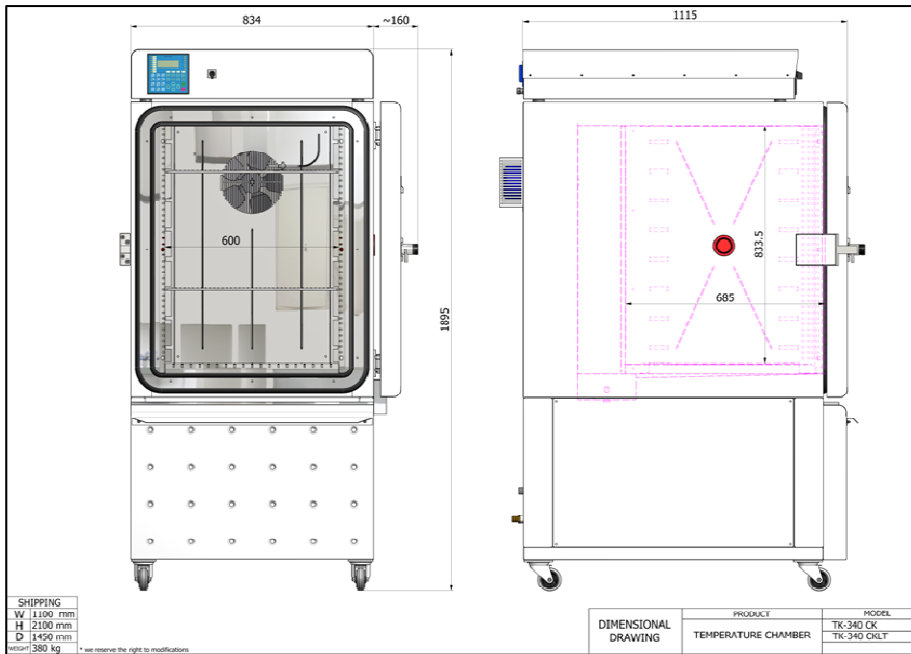
Ordering information and accessories:

Description	Part no.
Temperature chamber TK-50 CKLT	1760
Temperature chamber TK-105 CKLT	2510
Temperature chamber TK-190 CKLT	2513
Temperature chamber TK-340 CKLT	2516
Temperature chamber TK-500 CKLT	1746
Temperature chamber TK-1000 CKLT	2519
Shelve wire TK-50 CKLT	1766
Shelve wire TK-105 CKLT	951
Shelve wire TK-190 CKLT	953
Shelve wire TK-340 CKLT	956
Shelve wire TK-500 CKLT	958
Shelve wire TK-1000 CKLT	960
Shelve perforated TK-50 CKLT	1765
Shelve perforated TK-105 CKLT	1726

	TK-340 CKLT	TK-500 CKLT	TK-1000 CKLT
External dimensions (WxHxD) in mm	835 x 1895 x 1115	1035 x 1810 x 1270	1235 x 1930 x 1495
Internal dimensions (WxHxD) in mm	600 x 830 x 685	800 x 800 x 800	1000 x 1000 x 1000
Volume (L)	~ 340	~ 500	~ 1000
Temperature range (°C)	-40 ...+180	-40 ...+180	-40 ...+180
Heat up rate (°C/min)EN 60068-3-5	2,4	3,0	3,0
Cool down rate (°C/min)EN 60068-3-5	2,1	1,2	1,8
Temperature display resolution (°C)	0.001	0.001	0.001
Temperature set resolution (°C)	0.1	0.1	0.1
Temperature stability (°C)	±0,5°C @ -40°C ±0,08°C @ 50°C ±0,1°C @ 90°C ±0,1°C @ 180°C	±0,5°C @ -40°C ±0,06°C @ 50°C ±0,1°C @ 90°C ±0,1°C @ 180°C	±0,5°C @ -40°C ±0,05°C @ 50°C ±0,1°C @ 90°C ±0,1°C @ 180°C
Temperature uniformity (°C)	±1,5°C @ -40°C ±0,34°C @ 50°C ±0,41°C @ 90°C ±1,5°C @ 180°C	±0,5°C @ -40°C ±0,3°C @ 50°C ±0,4°C @ 90°C ±1,0°C @ 180°C	±0,5°C @ -40°C ±0,4°C @ 50°C ±0,5°C @ 90°C ±1,0°C @ 180°C
Temperature control	PID	PID	PID
Power supply	230V 50/60Hz	3x400V 50/60Hz	3x400V 50/60Hz
Wattage (W)	2600	8000	9000
Interface	RS 232 (USB or Ethernet as accessory)	RS 232 (USB or Ethernet as accessory)	RS 232 (USB or Ethernet as accessory)
Shelve	1 (max 8)	1 (max 8)	1 (max 8)
Shelve capacity (kg)	35	50	50
Max capacity (kg)	100	150	200
Access port (mm)	∅ 40 standard, (∅ 50, ∅ 90 as accessory)	∅ 40 standard, (∅ 50, ∅ 90 as accessory)	∅ 40 standard, (∅ 50, ∅ 90 as accessory)
Noise (dBA) @ 1 m distance	60	62	65
Weight (kg)	324	435	604

Description	Part no.
Shelve perforated TK-190 CKLT	1728
Shelve perforated TK-340 CKLT	957
Shelve perforated TK-500 CKLT	959
Shelve perforated TK-1000 CKLT	961
Access Port w. Plug ∅ 40 mm right	2629
Access Port w. Plug ∅ 50 mm right	608
Access Port w. Plug ∅ 90 mm right	1731
Observation window with illumination 370x420mm (TK-105 CKLT, TK-190 CKLT, TK-340 CKLT, TK-500 CKLT, TK-1000 CKLT)	252
Observation window with illumination 305x300mm (TK-50 CKLT)	2637
Trolley for TK-50 CKLT	1764
USB interface	1466
Ethernet interface	1716
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WATER DISTILLER

DV-4

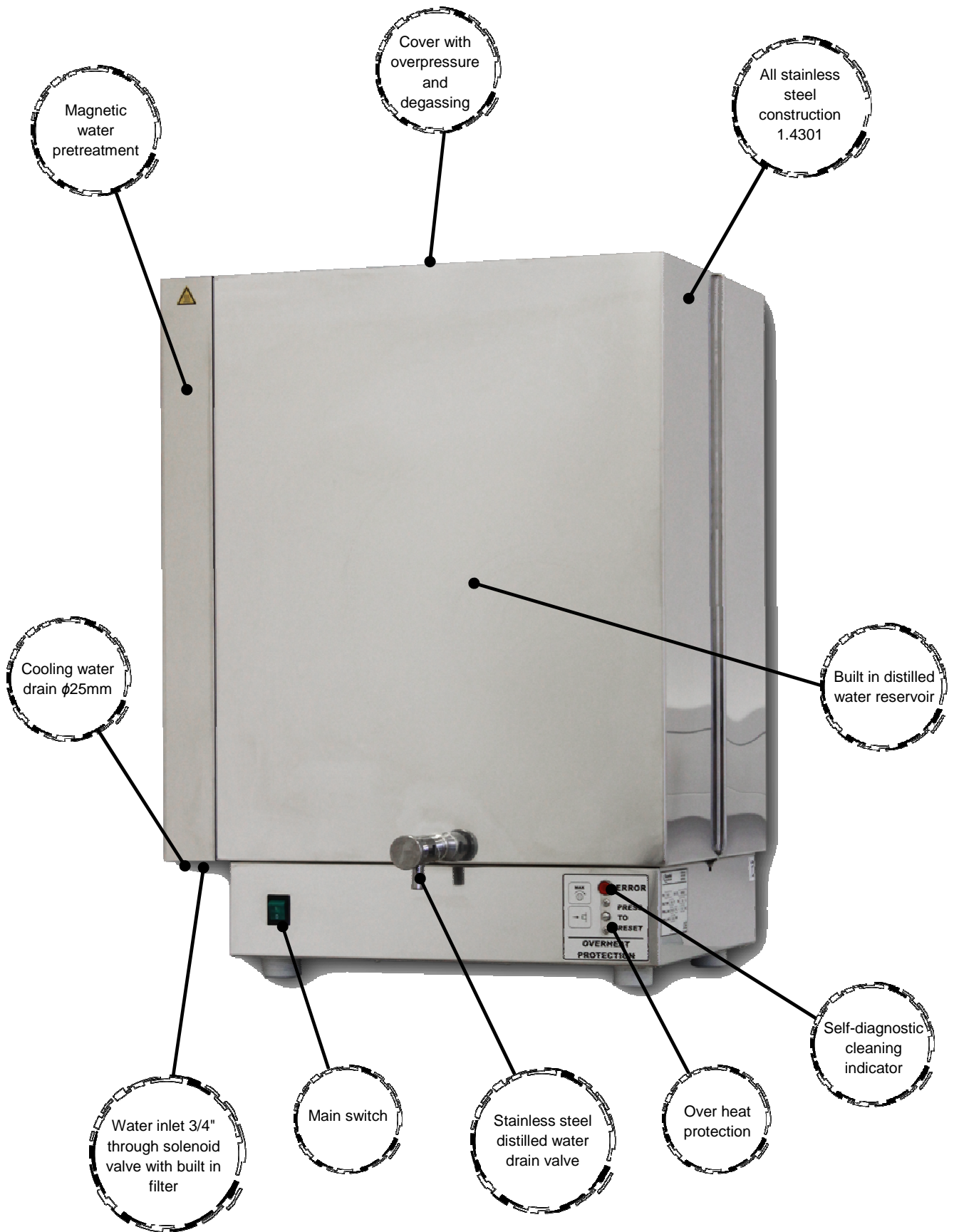
DV-8

DV-20

Classic Distillation Technology:

- Increased energy efficiency by distillation of heated cooling water
- Self-diagnostic cleaning indicator
- Built in distilled water reservoir
- Automatic minimal water level
- Simple and affective cleaning
 - Wall or tabletop installation
 - Stainless steel construction
 - Stainless steel heaters
 - Automatic operation



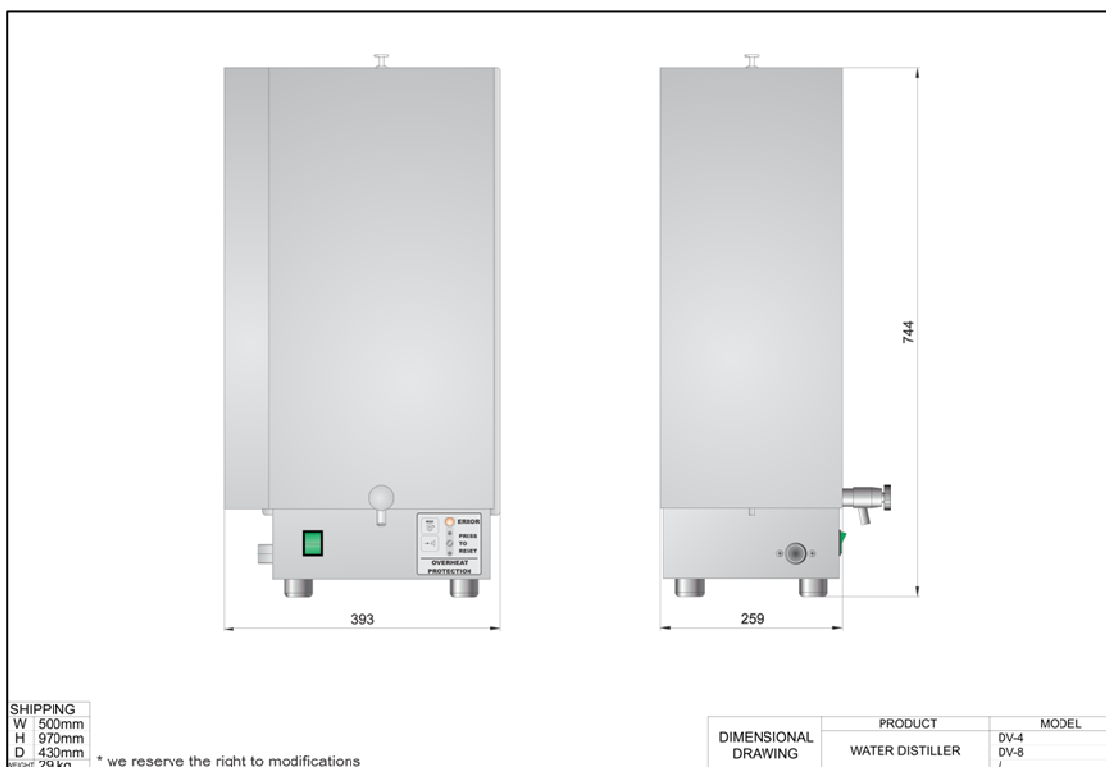


Technical data:

	DV-4	DV-8	DV-20
External dimensions (WxHxD) in mm	400 x 740 x 270	400 x 740 x 270	580 x 740 x 385
Capacity	4L/h	8L/h	20L/h
Volume (L)	25	25	50
Wattage (W)	3000	6000	15000
Voltage	230V / 50Hz	3 x 400V / 50Hz	3 x 400V / 50Hz
Cooling water consumption	40 L/h	64 L/h	160 L/h
Water conductivity (after distillation)	2-5 µS/cm	2-5 µS/cm	2-5 µS/cm
Distilled water tank	16L	16L	40L
Weight (kg)	28 kg	29 kg	43 kg
Water inlet	3/4"	3/4"	3/4"
Water drain	φ25mm	φ25mm	φ25mm
Distilled water drain	φ10mm	φ10mm	φ10mm

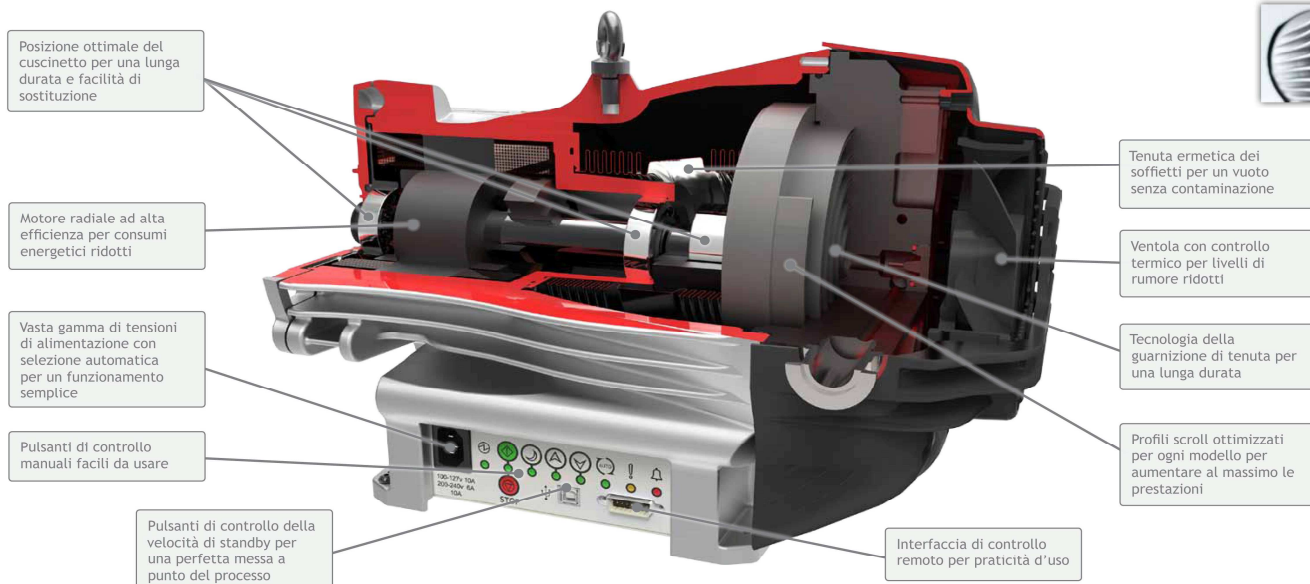
Ordering information and accessories:

Description	Part no.
Water distiller DV-4	1805
Water distiller DV-8	1801
Water distiller DV-20	1802
Water inlet hose 3/4" thread both ends	1854
Drain hose φ25mm L=2m	1855
Wall console DV-4, DV-8	1803
Wall console DV-20	1804
Water pre-filter	1856
Spears heater for DV-4	1852
Spears heater for DV-8	1850
Spears heater for DV-20	1853



POMPE SCROLL nXDS

Vista di sezione della nXDS che illustra le caratteristiche principali



SPECIFICHE					
Modello standard	nXDS6i	nXDS10i	nXDS15i	nXDS20i	nXDS35i
Codice articolo	A73501983	A73601983	A73701983	A73801983	A73601983
Modello versione chimica	nXDS6i-C	nXDS10i-C	nXDS15i-C	nXDS20i-C	nXDS35i-C
Codice articolo	A73502983	A73602983	A73702983	A73802983	A73602983
Portata volumetrica	133,3l/m 6,8m ³ /h	211,7l/m 12,7m ³ /h	285l/m 17,1m ³ /h	467l/m 28m ³ /h	717l/m 43m ³ /h
Velocità di pompaggio al picco	103,3l/m 6,2m ³ /h	190l/m 11,4m ³ /h	252l/m 15,1m ³ /h	367l/m 22m ³ /h	583l/m 35m ³ /h
Vuoto finale	0,020mbar	0,007mbar	0,007mbar	0,03mbar	0,010mbar
Velocità di rotazione	1800 rpm	1800 rpm	1800 rpm	1800 rpm	1750 rpm
Velocità di rotazione minima (in stand-by)	1200rpm	1200rpm	1200rpm	1200rpm	----
Controllo di velocità (% della velocità di rotazione)	1%	1%	1%	1%	----
Velocità di pompaggio alla minima velocità rotazionale	68,3l/m 4,1m ³ /h	125l/m 7,5m ³ /h	165l/m 9,9m ³ /h	167l/m 10m ³ /h	----
Massima pressione continua di ingresso	200 mbar	200 mbar	200 mbar	50mbar	----
Motore 1 ph	260 W	280 W	300 W	260 W	520 W
Connettore 1ph	IECEN60320 C13	IECEN60320 C13	IECEN60320 C13	IECEN60320 C13	IECEN60320 C19
Fusibili raccomandati	10A,250Vac rms	10A,250Vac rms	10A,250Vac rms	10A,250Vac rms	10A,250Vac rms
Peso	26,2 kg	25,8 kg	25,2 kg	26,6 kg	48 kg
Flangia di ingresso	NW25	NW25	NW25	NW25	NW40
Flangia di scarico	NW25	NW25	NW25	NW25	NW25
Rumorosità	52 Db(A)	52 Db(A)	52 Db(A)	52 Db(A)	57 Db(A)
Vibrazione alla flangia di ingresso	<4.5 mms-1 (rms)	<4.5 mms-1 (rms)	<4.5 mms-1 (rms)	<4.5 mms-1 (rms)	<4.5 mms-1 (rms)
Leakage (statico)	<1x10-6 mbarls-1	<1x10-6 mbarls-1	<1x10-6 mbarls-1	<1x10-6 mbarls-1	<1x10-6 mbarls-1
Temperatura ambiente	10 -40 °C	10 -40 °C	10 -40 °C	10 -40 °C	10 -40 °C

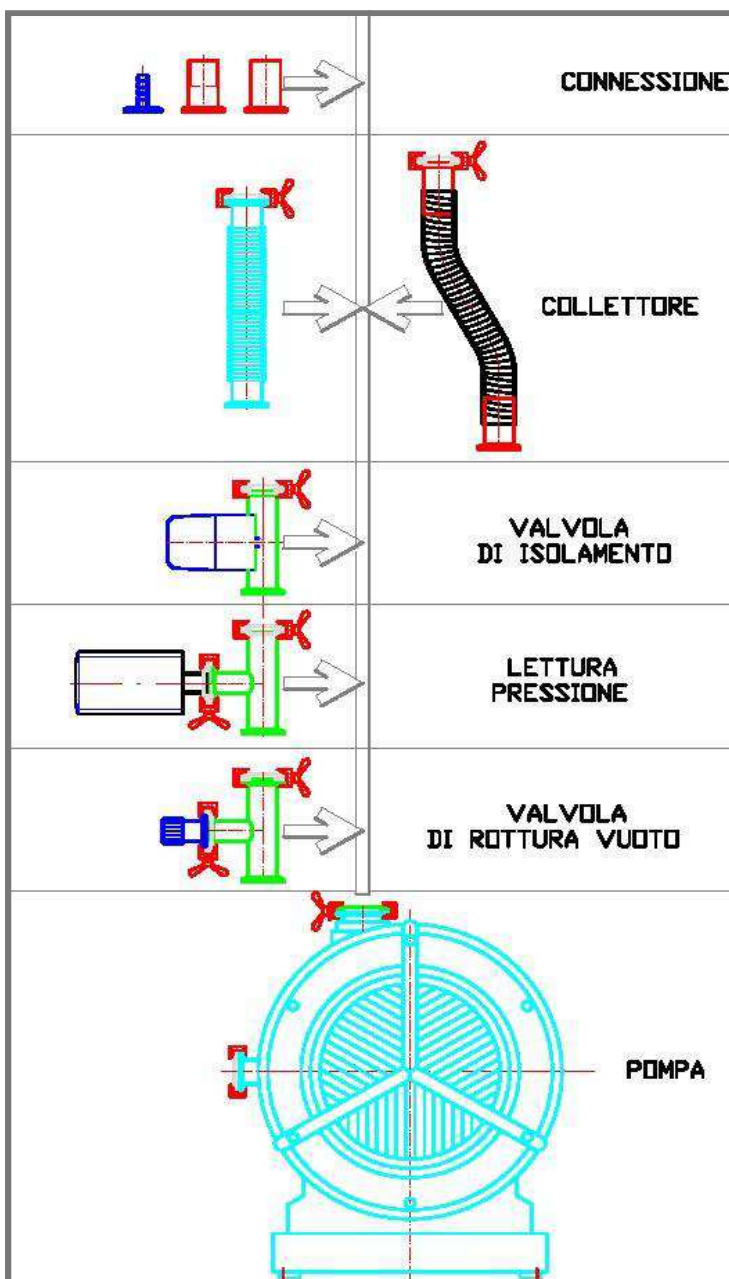
Con capacità di pompaggio eccezionali, prestazioni di vuoto limite straordinarie e caratteristiche di design all'avanguardia, la nXDS è la pompa a secco con le migliori prestazioni del settore.

La nXDS è fino a 20 volte più silenziosa rispetto ad ogni altra pompa. Le sue funzioni di "controllo intelligente" e i lunghi intervalli di assistenza, fino a cinque anni, i bassi costi di utilizzo, rendono questa piccola pompa a secco ideale per ogni tipo di pompaggio.

- Le tecnologie avanzate, della forma a spirale ed il tipo di tenuta, garantiscono le migliori prestazioni di vuoto per pompa a secco.
- Funzionamento silenzioso <52 dB(A), impatto ambientale minimo
- Funzioni di controllo intelligente e facili da usare
- Intervallo di assistenza fino a cinque anni per bassi costi di utilizzo
- Tenuta ermetica per garantire un pompaggio senza contatto con parti lubrificate
- La serie nXDS include pompe con portata 6, 10, 15, 20 e 35 m³h⁻¹

APPLICAZIONI

- EVAPORATORI ROTANTI
- STUFE DA VUOTO
- FILTRAZIONI
- GEL DRYER
- LIOFILIZZATORI
- CONCENTRATORI
- ESSICCATORI
- APPLICAZIONI GENERICHE IN VUOTO
- CAMERE E LINEE DA VUOTO
- SPETTROMETRI DI MASSA
- APPARECCHIATURE ANALITICHE



ACCESSORI

cavo elettrico da 2 m senza spina
cavo elettrico da 2 m senza Nord Europa

A50508000

A50506000



Silenziatore
Parti ricambio silenziatore
TIP SEALS KIT Nxd6/10/20
TIP SEALS KIT Nxd35

A50597000

A50597800

A72601805

A73001801



POMPE ROTATIVE A BAGNO D'OLIO

Un prodotto ormai consolidato, da sempre utilizzato nei laboratori, le nostre pompe da vuoto rotative hanno la possibilità di selezionare due modi operativi diversi:

Alte Prestazioni nel pompaggio di condensabili

Alto Vuoto

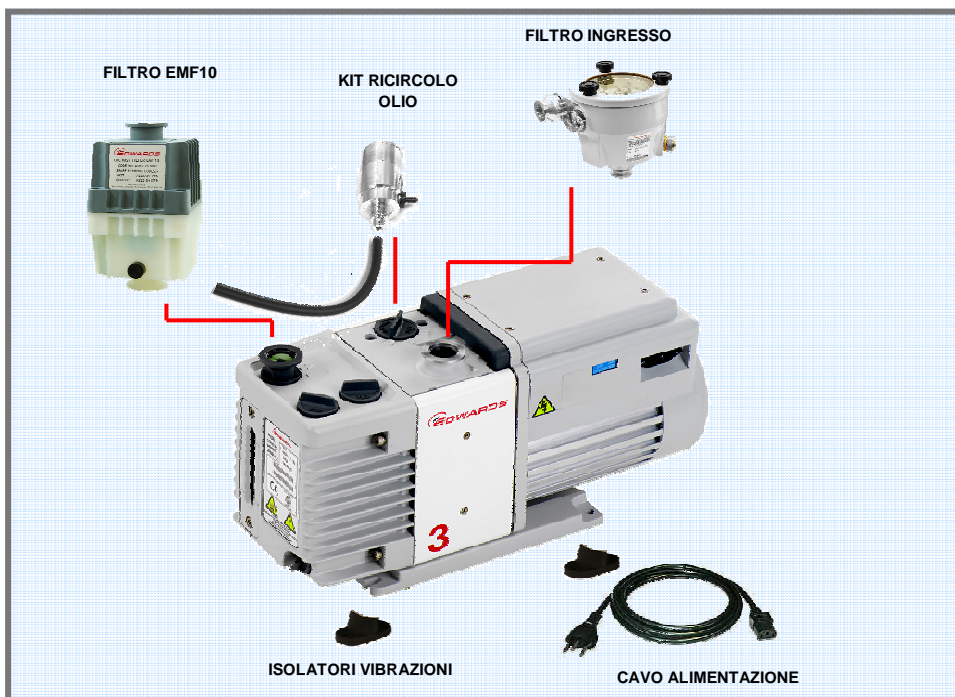
La doppia modalità permette all'utente di configurare facilmente l'unità e pompare elevati carichi di gas condensabili.

In entrambi i casi, con o senza gas ballast, le nostre pompe hanno la capacità di raggiungere ottimi valori di vuoto finale.

Silenziosissime: solo 48 dB e di facile installazione.



SPECIFICHE					
Modello standard	RV3	RV5	RV8	RV12	E2M28
Codice articolo	A65201903	A65301903	A65401903	A65501903	a37317984
Portata volumetrica	61,7 l/m	96,7 l/m	162,7 l/m	237 l/m	537 l/m
	3,7 m ³ /h	5,8 m ³ /h	9,7 m ³ /h	14,2 m ³ /h	32,2 m ³ /h
Vuoto finale	0,002 mbar	0,002 mbar	0,002 mbar	0,002 mbar	0,001 mbar
Vuoto finale con gas ballast posizione I	0,03 mbar	0,03 mbar	0,03 mbar	0,03 mbar	0,015 mbar
Vuoto finale con gas ballast posizione II	0,12 mbar	0,1 mbar	0,06 mbar	0,06 mbar	-
Velocità di rotazione	1500 rpm	1500 rpm	1500 rpm	1500 rpm	1440 rpm
Massima pressione continua per vapore acqueo di ingresso	80 mbar	50 mbar	38 mbar	32 mbar	30 mbar
Motore 1 ph	250 W	250 W	450 W	450 W	750 W
Connettore 1ph	IEC EN60320 C13	IEC EN60320 C13	IEC EN60320 C13	IEC EN60320 C13	IEC EN60320 C19
Olio consigliato	Ultragrade 19	Ultragrade 19	Ultragrade 19	Ultragrade 19	Ultragrade 19
Peso	25 kg	25 kg	28 kg	29 kg	40 kg
Flangia di ingresso	NW25	NW25	NW25	NW25	NW25
Flangia di scarico	NW25	NW25	NW25	NW25	Nozzle 15 mm external Ø removable from 3/4 in BSP tapped hole
Rumorosità	48 Db(A)	48 Db(A)	48 Db(A)	48 Db(A)	57 Db(A)
Temperatura ambiente	12 -40 °C	12 -40 °C	12 -40 °C	12 -40 °C	13 -40 °C



- ### APPLICAZIONI
- STUFE / FORNI DA VUOTO
 - FILTRAZIONI
 - ESSICCATORI
 - LIOFILIZZATORI
 - CONCENTRATORI
 - ESSICCATORI
 - APPLICAZIONI GENERICHE IN VUOTO
 - CAMERE E LINEE DA VUOTO
 - SPETTROMETRI DI MASSA
 - APPARECCHIATURE ANALITICHE

ACCESSORI & RICAMBI

North European plug	A50506000
No plug	A50508000

Filtro olio in uscita - EMF10 (RV3/5/8)	A46226000	
Filtro olio in uscita - EMF20 (RV12/E2M28)	A46229000	

Olio Ultragrade 19, 1 lt. Bottiglia	H11025015	
Fomblin YVAC 06/6 1kg (532 ml)	H11301019	

ITC20K - Filtro ingresso agenti chimici aggressivi	A44410000	
ITF20K - Filtro ingresso polveri	A44215000	
ITO20K - Filtro Catchpot	A44110000	

Kit Manutenzione guarnizioni	A65201131	
Disponibili anche kit di palette e kit di Manutenzione completa		

ALTRI ACCESSORI

Kit ricircolo olio (no gas ballast)	A50420000	
Regolatore gas ballast	A50523000	
Isolatori per vibrazioni	A24801404	

Box insonorizzante 110-120V	NRD317000	
Box insonorizzante 200-240V	NRD318000	

POMPE A MEMBRANA

Modello	Codice	Numero Teste / Stadi	Portata m ³ /h	Portata l/m	Vuoto Limite mbar	Conessioni ingresso - uscita	Tubo Diam. Interno mm	Scarico NPT	Rumore siltà db(A)	Potenza motore W	Protezione motore IP	Peso Kg	Dimensioni (LxPxX)
MP 060 E	411121	2/1	0,6	10	60	DN6/8/ Silenziatore	6 / 8	- (-)	42	20	20	2,3	11,5x16,5x14,5
MPC 060 E	412121	2/1	0,6	10	60	DN6/8/ Silenziatore	6 / 8	- (-)	42	20	20	2,3	11,5x16,5x14,5
MP 055 Z	411422	2/2	0,5	8	5	DN 8	8	- (1/8)	44	68	42	6,25	23,5x14x27,7
MPC 055 Z	412422	2/2	0,5	8	5	DN 8	8	- (1/8)	44	68	42	6,3	23,5x14x27,7
MP 105 E	411421	2/1	0,9	15	60	DN 8	8	1/8(1/8)	44	68	42	6,25	23,5x14x27,7
MPC 105 E	412421	2/1	0,9	15	60	DN 8	8	/8(1/8)	44	68	42	6,3	23,5x14x27,7
MP 101 Z	411522	2/2	1,0	16,7	8	DN 8	8	/4(1/4)	45	60	54	6,5	19,5x23,5x14,5
MPC 101 Z	412522	2/2	1,0	16,7	8	DN 8	8	/4(1/4)	45	60	54	6,5	19,5x23,5x14,5
MP 101 V	411544	4/4	1,0	16,7	1	DN 8	8	1/4(1/4)	45	90	54	10,3	20x26x15
MPC 105 T	412443	4/3	1,2	20	2	DN 8	8	- (-)	44	68	42	7,5	23,5x14x32,7
MP 201 T	411543	4/3	2,0	33	2	DN 8	8	1/4(1/4)	45	90	54	10,3	20x26x15
MPC 201 T	412543	4/3	2,0	33	2	DN 8	8	1/4(1/4)	45	90	54	10,3	20x26x15
MP 301 E	411711	1/1	2,3	38	75	DN 8	8	- (-)	45	180	54	8,9	26x16,2x25,2
MPC 301 E	412711	1/1	2,3	38	75	DN 8	8	- (-)	45	180	54	8,9	26x16,2x25,2
MP 301 Z	411722	2/2	2,3	38	8	DN 8	8	- (-)	45	180	54	11,2	23x26,5x16,9
MPC 301 Z	412722	2/2	2,3	38	8	DN 8	8	- (-)	45	180	54	11,2	23x26,5x16,9
MP 301 V	411744	4/4	2,3	38	1	DN16KF/ DN 8	Portagomma disponibile	- (-)	45	370	54	18,3	23x38x16,9
MPC 301 Z ef Ecoflex	412922	2/2	2,6	43	8	DN 8	8	- (-)	44	200	54	15,5	26x31x19
MP 601 E	411721	2/1	3,8	63	75	DN 8	8	- (1/4)	45	180	54	11,2	23x26,5x16,9
MPC 601 E	412721	2/1	3,8	63	75	DN 8	8	- (1/4)	45	180	54	11,2	23x26,5x16,9
MP 601 T	411743	4/3	4,5	75	2	DN16KF/ DN 8	Portagomma disponibile	---	45	370	54	18,3	23x38x16,9
MPC 601 T	412743	4/3	4,5	75	2	DN 8	8	- (1/4)	45	370	54	18,3	23x38x16,9
MPC 601 T ef	412943	4/3	4,9	81	2	DN 8	8	- (1/4)	44	390	54	22,6	26x42x19
MP 901 Z	411742	4/2	6,8	113	8	DN16KF/ DN 8	Portagomma disponibile	---	45	370	54	18,3	23x38x16,9
MPC 901 Z	412742	4/2	6,8	113	8	DN 8	8	- (-)	45	370	54	18,3	23x38x16,9
MP 1201 E	411741	4/1	8,3	138	75	DN16KF/ DN 8	Portagomma disponibile	---	45	370	54	18,3	23x38x16,9
MPC 1201 E	412741	4/1	8,3	138	75	DN 8	8	- (1/4)	45	370	54	18,3	23x38x16,9
MP 1201 T	411783	8/3	8,3	135	2	DN16KF	Portagomma disponibile	---	47	370/440	54	32,8	54x30x24
MPC 1201 T	412783	8/3	8,3	135	2	DN16KF	Portagomma disponibile	1/4(1/4)	48	370/440	54	32,8	54x30x24
MPC 1201 T ef	412983	8/3	8,3	138	2	DN16KF	Portagomma disponibile	1/4(1/4)	47	370	54	34	54x30x24
MP 1801 Z	411782	8/2	12	201	8	DN16KF	Portagomma disponibile	---	47	370/440	54	32,8	54x30x24
MPC 1801 Z	412782	8/2	12	201	8	DN16KF	Portagomma disponibile	1/4(1/4)	48	370/440	54	32,8	54x30x24
MP 2401 E	411781	8/1	15,5	258	75	DN16KF	Portagomma disponibile	---	47	370/440	54	32,8	54x30x24
MPC 2401 E	412781	8/1	15,5	258	75	DN16KF	Portagomma disponibile	1/4(1/4)	48	370/440	54	32,8	54x30x24

APPLICAZIONI

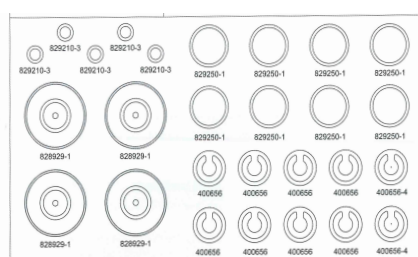
- EVAPORATORI ROTANTI
- STUFE DA VUOTO
- FILTRAZIONI IN VUOTO
- APPLICAZIONI GENERALI IN VUOTO
- GEL DRYER
- CONCENTRATORI VUOTO
- DISTILLAZIONE / EVAPORAZIONE
- ESSICCAZIONE/DEGASAGGIO
- ESTRAZIONE IN FASE SOLIDA
- CAMPIONATURA ARIA/GAS
- TECNOLOGIE ANALITICHE



NOTA: Ogni pompa è già provvista di pulsante ON / OFF, interruttore termico interno di protezione per il motore spento, maniglia per il trasporto e piedini di isolamento delle vibrazioni.

RICAMBI

Kit ricambi pompe diaframma standard, chimiche e sistemi LVS comprensivi di diaframma, valvole e oring



For Pump Model	KIT No.
MP / MPR 060 E, 030 Z, biovac 060	402031
MP / MPC 055Z, 105 E, biovac 106	402045
MPC 105 T	402044
MP / MPC 101 Z, 201 E	402008
MP / MPC 201 T, MP 101 V	402015
MP / MPC 301 E	402046
MP / MPC 301 Z, 601 E, 301 Z ef	402041
MP / MPC 601 T, 901 Z, 1201 E, MP 301 V	402042
MPC 301 Zp Ex	402038
MPC 601 Tp Ex	402039
HBP 101	402035

EVAPORATORI ROTANTI

La gamma di evaporatori con sistema di controllo della velocità offrono:

Velocità di processo

Fino al 40% dell'aumento nella velocità di evaporazione

Operazioni in ambiente silenzioso

Fino a 2 mbar di vuoto finale

Una libreria di solventi già presenti nel software

Display multi-funzionale e multi-lingue

APPLICAZIONI

- STUFE / FORNI DA VUOTO
- FILTRAZIONI
- ESSICCATORI
- CONCENTRATORI
- ESSICCATORI
- APPLICAZIONI GENERICHE IN VUOTO
- CAMERE E LINEE DA VUOTO
- APPARECCHIATURE ANALITICHE

MODELLI



LVS 110 Z



LVS 210 T



LVS 300 Z



LVS 301 Z



LVS 311 Z



LVS 320 Z



LVS 310 Z ef



LVS 601 T



LVS 610 T



LVS 1210 T



Portata m3/h	Portata L/min	Vuoto limite mbar	Controllo Manuale del vuoto	Controllo vuoto on/off	Controllo vuoto Ecoflex	Modello	Peso (Kg)	Dimensioni	Numero connessioni regolate manualmente	Numero connessioni regolate automaticamente	Con sensore capsula	Con controllore digitale 521
1.02	20	2			✓	LVS 105 T - 10 ef	9,5	25x26x43.5		1		✓
1.0	16.7	8	✓			LVS 101 Z w/gauge	11,6	35x32x44	1		✓	
				✓		LVS 110 Z	12,7	"		1		✓
2.0	33	2	✓			LVS 201 T	15,0	35x32x44	1			
			✓			LVS 201 T w/gauge	15,3		1		✓	
				✓		LVS 210 T	15,7			1		✓
2.2	36	2			✓	LVS 210 T ef	19,0	35x32x44		1		✓
2.3	38	8				LVS 300 Z	16,1	35x32x44				
			✓			LVS 301 Z	16,0		1			
			✓			LVS 301 Z w/gauge	16,3		1		✓	
			✓			LVS 302 Z	16,7		2			
				✓		LVS 310 Z	17,8			1		✓
			✓	✓		LVS 311 Z	18,1		1	1		✓
				✓		LVS 320 Z	18,4			2		
2.6	43	8			✓	LVS 310 Z ef	19,9	35x32x44		1		✓
4.5	75	2				LVS 600 T	23,2	35x32x44				
			✓			LVS 601 T	23,1		1			
			✓			LVS 601 T w/gauge	23,5		1		✓	
			✓			LVS 602 T	23,9		2			
				✓		LVS 610 T	24,4			1		✓
			✓	✓		LVS 611 T	25,0		1	1		✓
				✓		LVS 620 T	25,3			2		
4.9	81	2			✓	LVS 610 T ef	26,8	35x32x44		1		✓
8.3	138	2		✓		LVS 1210 T	36,3	54x33x46		1		✓
9.1	151	2			✓	LVS 1210 T ef	37,1	54x33x46		1		✓



DISTILLATORI AUTOREGOLANTI



MPC105 T- Configurazione Base

Opzionale:
Regolatore
vuoto

OPPURE



LVS 105 T- Configurazione



Ogni Rodist digitale è fornito completo di:

- Controllore di processo
- Bagno termostatico
- Tubo evaporante NS/32
- Tenute
- Gruppo condensatore verticale, pallone evaporazione 1000 ml e pallone ricevitore 1000 ml con protezione antiriflesso
- Morsetti di serraggio

Modello	ROdist Digital
Tipo raffreddamento	Verticale
Superficie raffreddamento cm ²	1.200
Dimensione beuta da (ml)	50-3000
Capacità massima beuta (Kg)	2
Velocità rpm	20-280
Display	Digitale
Rotazione destra/sinistra / intervallo operazione	Sì
Partenza "dolce"	Sì
Angolo testa aggiustabile	0 - 45°
Controllo vuoto integrato	No

Riscaldamento Bagno

Tipo riscaldamento bagno	Acqua/Olio
Range temperatura °C	RT-180°
Potenza riscaldamento W	1.300
Display temperatura	Digitale
Accuratezza K	1
Controllo deviazione K	± 1
Interfaccia RS232	Sì
Peso Kg	18-20
Dimensioni (LxPxX)	50x41x30

ACCESSORI

Condensatore verticale con collettore e valvola per distillazione a riflusso - superficie raffreddamento 1.200 cm ²	112570-11	
Condensatore a ghiaccio -superficie raffreddamento 620 cm ²	112570-10	

Coperchio di protezione per il riscaldamento bagno	112570-01	
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Regolatore vuoto	700459
Trappola liquidi	700460
Unità recupero solvente	700462



La pompa di servizio HBP101 garantisce un processo di distillazione completamente automatico.

La distillazione è considerabilmente migliore e più corretta di quella ottenuta utilizzando un sistema con pompa a diaframma e valvola a solenoide, sia regolata manualmente sia con regolazione continua.

Il sistema HBP101 regola automaticamente il valore di vuoto della pompa in funzione del flusso di solvente (della sua tensione di vapore)

Caratteristiche:

Distillazione automatica al 100%

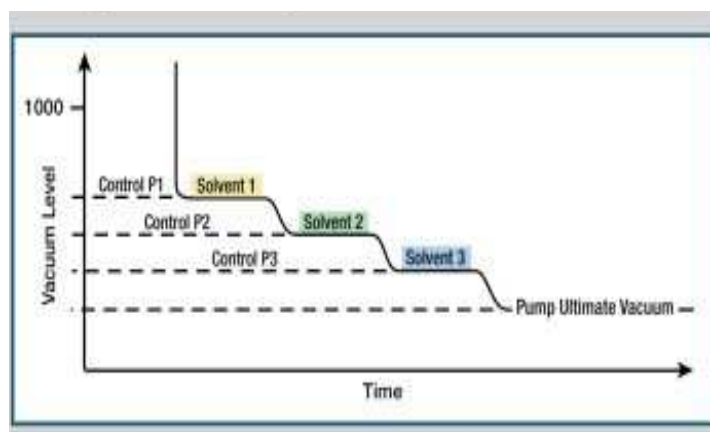
Pallone ricevitore di solvente a pressione atmosferica

Facile connessione ai più comuni evaporatori rotanti

Modello	HBP 101
N. stadi / teste	02 - 02
Portata m ³ /h	2,3
Portata L/min	38
Vuoto Limite mbar	15
Connessioni ingresso/uscita	DN 8
Tubo necessario Diam. Interno mm	8
Rumorosità dB(A)	42
Potenza motore W	200
Tipo protezione motore IP	54
Peso Kg	18,8
Dimensioni (LxPxA)	31x27x49



- Distillazione di sistemi multipli di solventi
- Impostazione automatica del vuoto per ogni frazione solvente
- Distilla qualsiasi miscela/volume di solvente senza conoscerne la composizione



Tutto in un unico pacchetto: RODist digital, HBP 101, adattatore di vetro, sensore di vuoto e tubo di aspirazione.



Pacchetto avanzato per una rapida ed automatica estrazione della maggior parte dei solventi più comuni senza programmazione.

ACCESSORI

Adattatore per evaporatore rotante 50/70 in vetro borosilicato con due connettori flessibili per sensore di vuoto e collegamento tubo di aspirazione.



Connettore flessibile DN8 per il riempimento. Codice 700181

STAZIONE DI ASPIRAZIONE/FILTRAZIONE



Biovac 060



Biovac 106



2511C-75



2515C-75

Modello	Biovac 060 - Preciso	Biovac 106 - Compatto	2511 - Economico	2515 - Alta portata
Portata m3/h	0,6	0,7	0,5	1,7
Portata l/m	10	15	9,2	28
Vuoto Limite mbar	150	100	292	93
Velocità aspirazione liquidi ml/s	21	25	15	45
Rumorosità db(A)	44	45	45	46
Peso Kg.	2,8	8	2,6	6
Dimensioni LxPxAltezza	17,5x27,5x45	35,5x14,5x27,7	28x21x25,5	37,5x21x25,5
Adattatori autoclavabili e tubi	✓	✓	✓	✓
Microfiltro idrofobico	✓	✓	✓	✓
Controllo vuoto e sensori	---	---	✓	✓
Attacco rapido	✓	✓	---	---
Automatic flow stop	✓	✓	✓	✓
Interruttore on/off a pedale	---	Option	Option	Option
Porta pipette portatile	✓	✓	Option	Option
Contenitore vetro (Lt)	1	2	---	---
Contenitore plastica (Lt)	---	---	1,2	1,2

ACCESSORI

Set pipetta portatile (per tutti i modelli)

112524-3

Gruppo motore per il funzionamento simultaneo di due pipette

112524-4



Contenitori ricambio Vetro Biovac 060

828840-3

Contenitori ricambio Vetro Biovac 106

828840

Contenitori ricambio Plastica 2511, 2515

1475k-20



Interruttore on/off a pedale Biovac 106

112529

Interruttore on/off a pedale 2511C-75, 2515C-75

1430C

Interruttore on/off a pedale 2511B-75, 2515B-75, 2511C-76, 2515C-76

1430B



Microfiltro idrofobico Biovac 060 e 106

828840-2



Tappo filtro Biovac 060 e 106

112566-10



BAGNI DI CALIBRAZIONE

Bagni di calibrazione al top delle prestazioni metrologiche con funzionamento intuitivo e flessibile. Scelta tra da dieci modelli con quattro volumi diversi, ognuno con 2 o 3 diversi intervalli di temperatura. Dimensioni contenute con possibilità di personalizzazioni e disponibilità di accessori. Questi bagni di calibrazione sono unità ideali per la calibrazione di sensori di temperatura, di trasmettitori o anche per sistemi di temperatura completi.

Volumi	Modello	Temperature	Stabilità ed Uniformità
Compatto Temperature Standard	OB-7/2	+40°C..250°C	migliore di $\pm 0,007^\circ\text{C}$
Compatto Basse Temperature	OB-7-2LT	-40°C....130°C	migliore di $\pm 0,007^\circ\text{C}$
Compatto Ultra basse temperature	OB-7-ULT	-90°C....130°C	migliore di $\pm 0,007^\circ\text{C}$
Medio Temperature standard	OB-22/2	+40°C..250°C	migliore di $\pm 0,007^\circ\text{C}$
Medio Basse Temperature	OB-22-2LT	-40°C....130°C	migliore di $\pm 0,007^\circ\text{C}$
Medio Ultra Basse Temperature	OB-22-ULT	-90°C....130°C	migliore di $\pm 0,007^\circ\text{C}$
Grande Temperature Standard	OB-50/2	+5°C.. 50°C	migliore di $\pm 0,005^\circ\text{C}$
Grande Basse Temperature	OB-50-2LT	-40°C....130°C	migliore di $\pm 0,005^\circ\text{C}$
Compatto a Cavità Blackbody Temperature Standard	OB-15/2	+40°C..130°C	migliore di $\pm 0,007^\circ\text{C}$
Compatto con Cavità Blackbody Temperature Basse	OB-15-2LT	-20°C....130°C	migliore di $\pm 0,007^\circ\text{C}$



PROGETTAZIONE. CAMERE E LINEE DA VUOTO, IMPIANTI CUSTOM E SPECIALI



CINQUEPASCAL risponde alle esigenze del mercato realizzando gruppi di pompaggio dedicati ed impianti in vuoto adeguati alle necessità dei clienti.



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