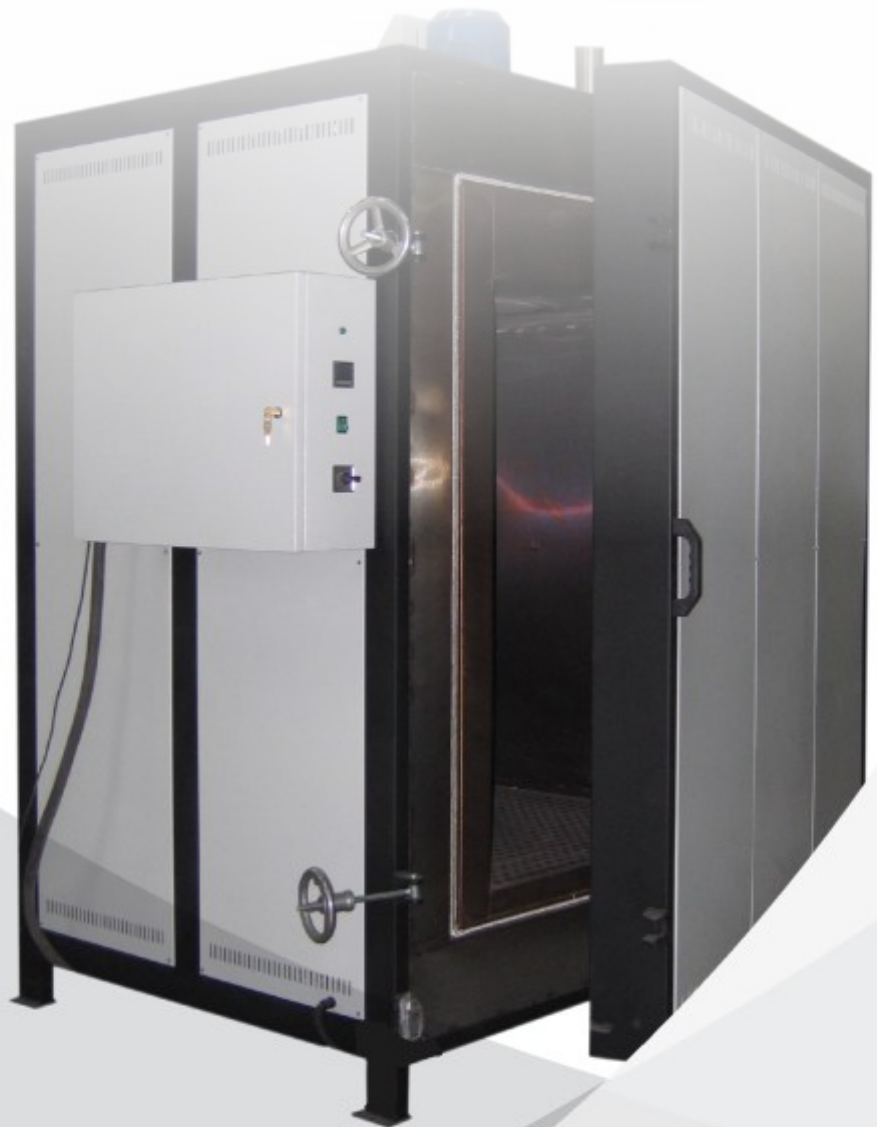


# *Thermal processing equipment for industries*



**SNOL**

*Customized for your hot innovations*

SNOL department has been producing heat treatment equipment for laboratory and industrial applications since 1960. SNOL department belongs to JSC Umega group which is the largest metal processing company in Baltic States, having more than 700 employees. The company pays particular attention to the product development by using advanced technologies and scientific progresses in order to meet individual user needs. Highly qualified personnel and premium materials result in high quality, reliability, and durability of our manufactured products.

SNOL exports 90% of its production. Nowadays, our customers' satisfaction resulted the grow of sales and SNOL brand awareness in more than 40 countries, not only in European markets but also in our new regions like Asia, Middle East, Africa, North and South America.

## Main products lines:

- Laboratory Furnaces
- Laboratory Ovens
- Industrial Furnaces
- Industrial Ovens
- Custom-built Furnaces and Ovens
- Thermal insulation materials
- Storage constructions (Shelving systems and Pallet racks)

## SNOL advantages:

- Made by European standards – SNOL products bear CE mark and company's Quality Management System is certified by Bureau Veritas Quality International in compliance with ISO 9001:2008 / LST EN ISO 9001:2008 standards.
- One of the biggest manufacturer in the world reaching more than 4000 units per year
- Reliability - we pay specific attention to products functionality and features
- Our professional engineers team are ready to offer solutions for your Hot innovations
- Short lead time - we keep our most popular in stock and 90% of our production is built in house
- Durability – Customers have been using SNOL products for more than 50 years



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# 1. Low-temperature electric ovens

## 1.1 Chamber ovens with induced air circulation

### 1.1.1 Chamber ovens up to 350 °C

Universal industrial electric furnaces / ovens with induced air circulation are suitable for various materials curing, primary heating, and other thermal treatment processes up to 350 °C. Ovens can be applied in electronics, plastics, metal, and other branches of industry. The application of induced air circulation ensures an even temperature distribution throughout the chamber and enhances high-quality and fast heat treatment process.

#### Base model

- Induced horizontal or vertical air circulation
- Adjustable air supply / extraction
- The chamber made of mild or stainless steel
- Tightly sealed door opens to the right
- Microprocessor heating controller (see page 14)
- Protection against overheating
- Fitted with standard shelves, 2 pcs.
- High-quality and environmentally friendly thermal insulation material
- Low power consumption
- Short heating / cooling time
- High level of accuracy
- Exterior painted with powder paint (RAL 7035), black case
- 1 year guarantee

#### Optional equipment

- Door opens to the left
- Additional shelves
- Reinforced shelves
- Reinforced bottom
- Automatic air vent control
- Digital timer
- Data recorder
- Connection to computer via RS-232/RS-485/USB
- Calibration and maintenance of temperature measurement system
- Stainless steel furnace exterior
- Furnace mounting platform
- Additional 1 year guarantee



SNOL 420/350

Model	Capacity l	T <sub>max</sub> °C	Chamber dimensions, mm			Overall dimensions*, mm			Power kW	Voltage V	Weight kg	Air circulation	
			Width	Depth	Height	Width	Length	Height				Vertical	Horizontal
<b>Up to 250 °C</b>													
SNOL 24/200	24	200	300	410	200	540	705	560	1	230	17	○	●
SNOL 44/200	44	200	450	380	240	600	670	560	2	230	40	○	●
SNOL 410/200	410	200	530	400	1600	1200	900	2220	9	400	350	○	●
SNOL 485/200	485	200	660	555	1340	1240	1070	1790	6	400	400	○	●
SNOL 580/200	580	200	800	800	900	1300	1150	1650	12	400	435	●	○
SNOL 970/200	970	200	900	900	1200	1290	1860	1650	12	400	500	○	●
SNOL 1300/200	1300	200	700	1300	1300	1500	1950	2350	20	400	900	●	○
SNOL 1400/200	1400	200	1100	840	1600	1950	1500	2500	25	400	900	●	○
SNOL 1700/200	1700	200	690	1370	1800	1500	1900	2880	22	400	1050	●	○
SNOL 510/250	510	250	770	450	1720	1565	910	2580	7,5	400	620	●	○
SNOL 2160/250	2160	250	1200	1800	1000	2200	2404	1990	44	400	2500	●	○
<b>300-350 °C</b>													
SNOL 75/300	75	300	800	560	260	1230	1200	850	7	400	210	○	●
SNOL 245/300	245	300	1000	720	355	1600	1050	965	7	400	200	●	○
SNOL 500/300	500	300	1000	1000	500	1250	1370	1100	18	400	620	○	●
SNOL 3045/300	3045	300	1470	1500	1860	2440	1910	2900	38	400	1700	●	○
SNOL 120/350	120	350	555	555	400	1290	1000	1165	6	400	200	●	○
SNOL 140/350	140	350	390	900	390	925	1370	685	8	230	160	○	●
SNOL 180/350	180	350	555	555	605	1290	1000	1370	6	400	250	●	○
SNOL 420/350	420	350	750	750	750	1200	1350	1250	6	400	250	○	●
SNOL 970/350	970	350	900	900	1200	1730	1420	2300	23	400	900	●	○
SNOL 6480/350	6480	350	1850	2000	1800	2400	3100	3000	120	400	6000	●	○

\* Overall dimensions can be adjusted

Note: Chamber dimensions can be adjusted subject to customer requirements when ordering

# 1. Low-temperature electric ovens

## 1.1.2 Chamber ovens up to 400 - 600 °C

Universal industrial electric ovens with induced air circulation are suitable for various materials curing, aging, annealing, stress relieving, normalising, and other thermal treatment processes up to 400 - 600 °C. Ovens can be applied in electronics, plastics, metal, and other branches of industry. The application of induced air circulation ensures an even temperature distribution throughout the chamber and enhances high-quality and fast heat treatment process.

### Base model

- Induced horizontal or vertical air circulation
- Adjustable air supply / extraction
- Chamber made of stainless steel
- Tightly sealed doors are opened to the right
- Microprocessor heating controller (see page 14)
- Protection against overheating
- Fitted with standard shelves, 2 pcs.
- High-quality and environmentally friendly thermal insulation material
- Low power consumption
- Short heating / cooling time
- High level of accuracy
- Exterior painted with powder paint (RAL 7035), black case
- 1 year guarantee

### Optional equipment

- Door opens to the left
- Additional shelves
- Reinforced shelves
- Reinforced bottom
- Automatic air vent control
- Digital timer
- Data recorder
- Connection to computer via RS-232/RS-485/USB
- Calibration and maintenance of temperature measurement system
- Stainless steel oven exterior
- Furnace mounting platform
- Additional 1 year guarantee



SNOL 73/600

Model	Capacity l	T <sub>max</sub> °C	Chamber dimensions, mm			Overall dimensions*, mm			Power kW	Voltage V	Weight kg	Air circulation	
			Width	Depth	Height	Width	Length	Height				Vertical	Horizontal
<b>400 °C</b>													
SNOL 140/400	140	400	390	900	390	1140	1700	1050	8	400	120	○	●
SNOL 180/400	180	400	555	555	605	1300	950	1150	6	400	250	●	○
SNOL 400/400	400	400	700	700	800	1560	1540	1400	20	400	650	○	●
SNOL 557/400	557	400	850	735	900	1580	1490	1840	14	400	530	●	○
SNOL 735/400	735	400	830	750	1490	1480	1490	2400	35	400	1070	●	○
SNOL 1730/400	1730	400	1200	1200	1200	2030	1800	2550	60	400	1620	●	○
<b>600 °C</b>													
SNOL 30/600	30	600	300	450	250	1050	960	1150	6	400	250	●	○
SNOL 73/600	73	600	450	650	250	1150	1195	1600	8	400	400	●	○
SNOL 180/600	180	600	560	560	610	1300	1110	1500	10	400	270	●	○
SNOL 290/600	290	600	600	800	600	1820	1990	2200	20	400	630	●	○
SNOL 300/600	300	600	750	850	390	1355	1400	1745	20	400	420	●	○
SNOL 360/600	360	600	600	700	850	1250	1300	2400	12	400	600	●	○
SNOL 970/600	970	600	900	900	1200	1730	1420	2300	25	400	900	●	○
SNOL 1500/600	1500	600	1000	1500	1000	1820	2050	2240	30	400	1250	●	○
SNOL 1800/600	1800	600	1000	1030	2000	2000	2100	2550	32	400	1750	○	●

\* Overall dimensions can be adjusted

Note: Chamber dimensions can be adjusted subject to customer requirements when ordering

# 1. Low-temperature electric ovens

## 1.2 Ovens with a removable hearth up to 600 °C

Ovens with a removable hearth for a more comfortable loading are used for thermal processing of various overall materials up to 600 °C. Ovens are suitable for curing, primary heating, annealing, stress relieving, normalising, hardening, and other thermal treatment processes. Ovens may be applied in electronics, plastics, metal, glass, and other branches of industry. The application of induced air circulation ensures an even temperature distribution throughout the chamber and enhances high-quality and fast heat treatment process.

### Base model

- Manually removable hearth rails
- Induced horizontal or vertical air circulation
- Adjustable air supply / extraction
- The chamber made of mild or stainless steel for ovens up to 350 °C
- Chamber made of stainless steel for ovens above 350 °C
- Tightly sealed doors are opened to the right
- Protection against overheating
- Microprocessor heating controller (see page 14)
- High-quality and environmentally friendly thermal insulation material
- Low power consumption
- Short heating / cooling time
- High level of accuracy
- Exterior painted with powder paint (RAL 7035), black case
- 1 year guarantee



### Optional equipment

- Electromechanically removable hearth rails
- Door opens to the left
- Rack with shelves
- Automatic air vent control
- Digital timer
- Data recorder
- Connection to computer via RS-232/RS-485/USB
- Calibration and maintenance of temperature measurement system
- Stainless steel oven exterior
- Additional 1 year guarantee



Model	Capacity l	T <sub>max</sub> °C	Chamber dimensions, mm			Overall dimensions*, mm			Power kW	Voltage V	Weight kg	Air circulation	
			Width	Depth	Height	Width	Length**	Height				Vertical	Horizontal
<b>Up to 250 °C</b>													
SNOL 2000/150	2000	150	1250	1450	1100	2405	4355	2410	28	400	1650	•	○
SNOL 730/200	730	200	900	900	900	1550	3350	1500	12	400	300	○	•
SNOL 2160/200	2160	200	1200	1800	1000	2200	2300	2100	44	400	2500	•	○
SNOL 10800/200	10800	200	1800	3000	2000	2460	9300	3300	50	400	6000	•	○
<b>300-350 °C</b>													
SNOL 730/350	730	350	900	900	900	1850	4100	2150	12	400	700	•	○
SNOL 730/350	730	350	900	900	900	1930	3900	2150	35	400	1400	•	○
<b>400-600 °C</b>													
SNOL 730/600	730	600	900	900	900	1930	2120	2120	35	400	1400	•	○
SNOL 2000/600	2000	600	1250	1450	1100	2405	4355	2410	65	400	1620	•	○

\* Overall dimensions can be adjusted

\*\* Dimension with removed hearth

Note: Chamber dimensions can be adjusted subject to customer requirements when ordering



## 2. High-temperature electric furnaces

### 2.1 Chamber furnaces

High-accuracy industrial electric furnaces are suitable for hardening, stress relieving, normalising, and other thermal treatment processes up to 1300 °C. Furnaces are fitted with several door opening positions and equipped with ceramic or heat resistant steel hearth plates. Vents are provided in all products for removal of escaping gas or smoke during the thermal treatment process. The furnaces can be applied in metal, and other branches of industry.

#### Base model

- The chamber is made of thermal insulating blocks and bricks
- Replaceable heating elements on ceramic tubes or in channels
- Tightly sealed doors are opened to the right
- Vent on the top
- Microprocessor heating controller (see page 14)
- Protection against overheating
- Ceramic hearth plates
- High-quality and environmentally friendly thermal insulation material
- Low power consumption
- Short heating time
- High level of accuracy
- Exterior painted with powder paint (RAL 7035), black case
- 1 year guarantee

#### Optional equipment

- Door opens to the left
- Manual door lifting
- Electromechanical door lifting
- Turning platform for load transfer
- Reinforced bottom
- Heat resistant metal hearth plate up to 1150 °C
- Digital timer
- Data recorder
- Connection to computer via RS-232/RS-485/USB
- Calibration and maintenance of temperature measurement system
- Additional 1 year guarantee



SNOL 165/1200

Model	Capacity l	T <sub>max</sub> °C	Chamber dimensions, mm			Overall dimensions*, mm			Power kW	Voltage V	Weight kg
			Width	Depth	Height **	Width	Length	Height			
<b>1100 °C</b>											
SNOL 70/1100	70	1100	510	550	350	1200	1210	1510	15	400	480
SNOL 450/1100	450	1100	600	750	1000	1500	1360	1800	30	400	850
SNOL 510/1100	510	1100	810	1500	480	1860	2160	1890	43	400	1270
SNOL 720/1100	720	1100	1000	1600	450	2060	2420	2050	50	400	1500
<b>1200 °C</b>											
SNOL 56/1200	56	1200	470	430	380	1300	1100	1400	10	400	340
SNOL 80/1200	80	1200	430	870	300	1400	1695	1600	15	400	735
SNOL 80/1200	80	1200	430	420	510	1230	1070	1640	10	400	350
SNOL 98/1200	98	1200	460	700	350	1400	1700	1800	21	400	980
SNOL 100/1200	100	1200	720	760	250	1570	1340	1500	21	400	500
SNOL 120/1200	120	1200	630	930	300	1670	1700	1640	20	400	705
SNOL 165/1200	165	1200	560	850	360	1800	1700	1800	25	400	830
SNOL 185/1200	185	1200	500	830	500	1100	1500	1640	37	400	600
SNOL 250/1200	250	1200	510	1000	530	1500	1900	1800	31	400	600
SNOL 288/1200	288	1200	620	1200	420	1800	2200	2000	31	400	1150
SNOL 360/1200	360	1200	620	1200	500	1800	2100	1800	36	400	1150
SNOL 430/1200	430	1200	620	1200	600	1700	2100	2000	36	400	1150
SNOL 510/1200	510	1200	810	1500	480	1860	2160	1750	43	400	1270
SNOL 540/1200	540	1200	970	1200	530	2057	2360	1800	50	400	1650
SNOL 610/1200	610	1200	900	1200	550	1700	2000	1700	50	400	1750
SNOL 1024/1200	1024	1200	980	1800	800	1820	2800	2200	75	400	2560
<b>1300 °C</b>											
SNOL 56/1300	56	1300	470	430	380	1300	1100	1400	7	400	340
SNOL 72/1300	72	1300	450	600	300	1355	1610	1500	15	400	570
SNOL 120/1300	120	1300	630	930	300	1670	1700	1640	20	400	705
SNOL 128/1300	128	1300	460	820	410	1430	1640	1800	20	400	600
SNOL 360/1300	360	1300	620	1230	510	1770	2110	1980	36	400	1150
SNOL 450/1300	450	1300	600	750	1000	1520	1400	1800	30	400	850

\* Overall dimensions can be adjusted

\*\* Dimension without hearth plate

Note: Chamber dimensions can be adjusted subject to customer requirements when ordering

## 2. High-temperature electric furnaces

### 2.2 Chamber furnaces with a removable hearth

Firm structured furnaces with a removable hearth for a more comfortable loading are used for thermal processing of various types of materials up to 1300 °C. The furnaces are suitable for hardening, stress relieving, normalising, and other thermal treatment processes. The furnaces may be applied in metal and other branches of industry.

#### Base model

- Manually removable hearth rails
- Replaceable heating elements on ceramic tubes
- The chamber is made of thermal insulating blocks and bricks
- Tightly sealed door opens to the right
- Controlled vents on the top of the furnace
- Microprocessor heating controller (see page 14)
- Protection against overheating
- Ceramic hearth plates
- High-quality and environmentally friendly thermal insulation material
- Low power consumption
- Short heating time
- High level of accuracy
- Exterior painted with powder paint (RAL 7035), black case
- 1 year guarantee



SNOL 3500/1200

#### Optional equipment

- Electromechanically removable hearth rails
- Door opens to the left
- Electromechanical door lifting
- Heat resistant metal hearth plate up to 1150 °C
- Digital timer
- Data recorder
- Calibration and maintenance of temperature measurement system
- Connection to computer via RS-232/RS-485/USB
- Additional 1 year guarantee



Model	Capacity l	T <sub>max</sub> °C	Chamber dimensions, mm			Overall dimensions*, mm			Power kW	Voltage V	Weight kg
			Width	Depth	Height **	Width	Length***	Height			
<b>Up to 1100 °C</b>											
SNOL 1440/900	1400	900	1000	1600	1000	2000	6700	2600	120	400	3500
SNOL 3500/1100	3500	1100	1440	2500	1000	2400	8600	2600	120	400	4500
<b>1200 °C</b>											
SNOL 1470/1200	1470	1200	980	1500	1000	2000	6500	2400	95	400	2100
SNOL 3500/1200	3500	1200	1440	2500	1000	2400	8600	2600	120	400	3500
<b>1300 °C</b>											
SNOL 1700/1300	1700	1300	960	1900	940	1720	6900	1900	110	400	3200
SNOL 2200/1300	2200	1300	1000	2450	1000	2400	8500	2400	70	400	4100
SNOL 3500/1300	3500	1300	1440	2500	1000	2400	8600	2600	120	400	4500
SNOL 6100/1300	6100	1300	1500	3000	1200	2800	12000	2600	110	400	5200

\* Overall dimensions can be adjusted

\*\* Dimension be hearth plates

\*\*\* Dimension with removed hearth

Note: Chamber dimensions can be adjusted subject to customer requirements when ordering



# 3. Other thermal processing equipment

## 3.1 Crucible melting furnaces

High temperature furnaces are suitable for melting aluminium, zinc, copper, bronze, and other base metals. Metal melting is carried out in crucibles; an emergency release for molten material is designed at the furnace bottom through the mounted ceramic tube.

### Base model

- The chamber is made of thermal insulating blocks and bricks
- Manually sealed lid
- Heating elements in channels on ceramic tubes
- Crucible heating throughout all the dimension
- An emergency load release at the furnace bottom
- Microprocessor heating controller (see page 14)
- Protection against overheating
- High-quality and environmentally friendly thermal insulation material
- Low power consumption
- Short heating time

- High level of accuracy
- Exterior painted with heat resistant paints
- 1 year guarantee

### Optional equipment

- Crucible
- Digital timer
- Data recorder
- Connection to computer via RS-232/RS-485/USB
- Calibration and maintenance of temperature measurement system
- Additional 1 year guarantee



SNOL 110/1100

Model	Capacity l	T <sub>max</sub> °C	Chamber dimensions, mm		Overall dimensions*, mm			Power kW	Voltage V	Weight kg
			Diameter	Height	Width	Length	Height			
SNOL 110/1100	110	1100	660	700	1350	1340	1700	30	400	910

\* Overall dimensions can be adjusted

Note: Chamber dimensions can be adjusted subject to customer requirements when ordering.

## 3.2 Hardening tanks

Quenching tank is designed for metal components hardening. It is suitable for various cooling agents. It can be fitted with the turning platform for the raw material transfer from the hardening furnace to the quenching tank.

### Base model

- Pneumatic unloading and lifting mechanism
- Vertical load transfer during cooling process
- Tank interior is made of stainless steel
- Exterior painted with powder paint (RAL 7035), black case

### Optional equipment

- Turning platform for load transfer



SNOL 1000/-

Model	Capacity l	Chamber dimensions, mm			Overall dimensions*, mm			Weight kg
		Width	Depth	Height	Width	Length	Height	
SNOL 1000/-	1000	1345	1060	840	1630	1460	1070	320

\* Overall dimensions can be adjusted

Note : Tank dimensions can be adjusted subject to customer requirements when ordering

## 4. Customized thermal processing equipment designed to customer specification

The company designs and manufactures specialised technologically advanced thermal processing equipment of varying complexity based on customers' requirements. A highly qualified professional team with many years experience in thermal processing equipment design and manufacturing, is capable of producing tailor-made technical solutions for project implementation and ensures high quality and reliability of the unit.

### 4.1 Shaft electric furnace SNOL 600/900

#### Purpose

For metal components carbonisation (cementation) and hardening processes in oxidation and reduction environment

**Operating temperature** – up to 900 °C

**Capacity** – 600 l

#### Product features

- Induced air circulation
- Adjustable carbonisation agent concentration in the chamber
- Automatic furnace lid opening
- Double sealing
- Retort and diffuser are made of heat-resistant stainless steel
- Additional heating element control



### 4.2 Shaft electric furnace SNOL 40/1000

#### Purpose

For thermal treatment of metal barrels

**Operating temperature** – up to 1000 °C

**Capacity** – 40 l

#### Product features

- Load is suspended on the furnace lid
- Adjustable load lifting and lowering speed
- Automatic furnace lid opening by means of rotating device
- The furnace chamber is protected by the heat-resistant stainless steel panels
- Additional heating element control



## 4. Customized thermal processing equipment designed to customer specification

### 4.3 Conveyor-type furnace SNOL 500/100

#### Purpose

For metal products curing after washing process

**Operating temperature** – up to 100 °C

**Productivity** – 3000 kg/h

#### Product features

- Induced air circulation
- Separate zones for adjustable temperature configurations, heating and cooling
- Belt-conveyor with adjustable uniform speed
- Stainless steel tube
- Automatic control system



### 4.4 Conveyor-type furnace SNOL 840/1000

#### Purpose

For solid ingots annealing

**Operating temperature** – up to 1000 °C

**Productivity** – 400 - 630 kg/h

#### Product features

- Adjustable uniform conveyor speed (2.5 – 6.0 m/h)
- Roller conveyor, made of heat-resistant stainless steel
- Additional heating element control



## 4. Customized thermal processing equipment designed to customer specification

### 4.5 Chamber furnace for explosive environment SNOL 1560/200

#### Purpose

For electric motor stator drying after varnishing process

**Operating temperature** up to 200 °C

**Capacity** – 1,5 m<sup>3</sup>

#### Product features

- Conforms to EN1539 requirements
- Adjustable airflow volume in the chamber
- Additional chamber temperature distribution control
- Electrical appliances and fittings for operation in environments
- The control panel in a separate non-explosive room
- The chamber is made of stainless steel
- Special load transportation trolleys



### 4.6 Chamber furnace SNOL 590/1500 with a removable hearth

#### Purpose

For technical ceramic industry

**Operating temperature** up to 1500 °C

**Capacity** – 590 l

#### Product features

- Electromechanical hearth removal
- Load protection against overheating
- Additional heating element control





## 4. Customized thermal processing equipment designed to customer specification

### 4.7 Furnace for lamination of sails SNOL 15840/150

#### Purpose

For sailing boat sails lamination

**Operating temperature** – up to 150 °C

**Capacity** – 16 m<sup>3</sup>

#### Product features

- Induced air circulation
- Horizontal airflow
- Controlled cooling process
- Pulling-out load transportation device
- Vacuum pump connector



### 4.8 Varnishing tank SNOL 370/20

#### Purpose

For protective polishing of electric motor stator windings

**Operating temperature** – up to 20 °C

**Capacity** – 370 l

#### Product features

- Made of stainless steel
- Loading on the retort
- Loaded retort is lifted or lowered electromechanically, by ensuring uniform linear speed
- Operating vapour extraction ventilation



### 4.9 Diffusion furnace chamber

#### Purpose

Diffusion furnace heater used in semiconductor industry

**Operating temperature** up to 1300 °C

#### Product features

- Design and manufacture for customized thermal treatment installations





# 5. Control devices

## 5.1 Temperature controllers

SNOL products are equipped with high-precision digital microprocessor Omron or Eurotherm temperature controllers fitted with self-tuning and manual PID settings. Temperature measurement is supported by thermocouple. The customer can select a basic or programmable temperature controller, which offers up to 32 programming segments (rate of temperature rise or decrease control, maintenance of preset temperature, automatic shutdown). A wide range of devices allows to select the most appropriate controller for your process.

Omron E5CC



Omron E5CC-T



Eurotherm 3208



Eurotherm 3216



Model	Programmable	Number of programs	Number of steps in program	Computer port	Control method		Control signal		
					PID	ON/OFF	Type		Numbers of outputs
							Relay	Voltage 12VDC	
Omron E5CC	O	1*	2						4
Omron E5CC-T		8	32						3
Eurotherm 3208		5	8						2
Eurotherm 3216	O	1*	2	O					2

\* Basic 2-stage software

## 5.2 Touch screen Omron E5CN-HT V1.1\_EN

Omron E5CN-HT V1.1\_EN is touch screen panel for programming and controlling processes of furnaces. The main purpose of the device is to relieve, simplify and broaden control of the furnaces. This device also has representation of process data in graphics – text format on the display. The main window shows necessary data of working parameters, auxiliary windows are for observing processes in graphic format in live or remote data.

### Main features:

- Full and clear controlling of temperature controller
- Controlling mode choice: programmable task graph or main work with constant temperature
- Multiple language entry (ability to install necessary language)
- Data collection and export to computer via USB (e.g. Microsoft Excel format).



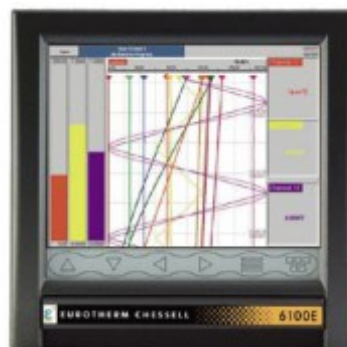
## 5. Control devices

### 5.3 Data recorder Eurotherm 6100E

Data recorder Eurotherm 6100 E is ideal for basic visualisation and recording requirements. The 6100E has a full color display and utilises touch screen technology for clear and intuitive configuration and operation. It further supports a USB port as standard to enable the use of a mouse, keyboard or bar code scanner. Data can be moved manually or automatically archived to multiple locations: removable media, network servers or the Eurotherm Review database on a PC. The recorder can easily be integrated into a larger system and data files can be transferred across the network.

#### Main features:

- Advanced data security and archiving
- 5.5", 1/4 VGA, Color touch screen display
- Designed for network and stand alone use
- FTP client and server
- Live, remote data viewing and configuration
- 125ms parallel sampling.



### 5.4 Computer software SNOL 12 V.1

SNOL 12 V.1 is computer software for data recording, viewing and configuring the temperature controller running your thermal treatment process. The software is designed for Windows operating system. Computer software allows simply run, review and display charts on thermal process temperatures and other settings.

#### Main features:

- Up to 128 controllers connection
- Supports up to 4 computer ports
- Control of device parameters and programs via computer
- Live, remote data viewing and configuration
- Graphical representation of the data
- Data export to Microsoft Excel format
- Ability to observe the process in a distance by internet
- Connections RS-232 and RS-485.
- Multiple language entry (ability to install necessary language).



### 5.5 Timer Galaxy

The main function of the timer is remote start of the furnace. The timer works in real-time. During the operation, the output contact of the timer is operated according to the settings of the dial-switches. However, at all time it is possible to manually override this operation for each channel individually.

#### Main features:

- Start and stop 24 hour / 7 day oven operation
- Stores up to 20 programs with up to 10 ON and 10 OFF events/day
- Manual 3-way override
- 16 Amp, 277 VAC resistive SPDT output contacts
- Reserve carryover: 3 years (Non-replaceable battery)
- Manual Daylight Time Changeover
- 3 languages option
- Available only with Omron devices.



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