

**SNOL**

*Customized for Your hot innovations*

**Laboratorie Ovne**



**Kemi og Maskinløsninger**

# *Thermal processing equipment for laboratories*



**SNOL**

*Customized for your hot innovations*



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# 1. High temperature electric furnaces

## 1.1 Muffle furnaces with fiber-insulated chambers

High accuracy laboratory electric furnaces with fiber-insulated chambers, that are designed for hardening, loosening, normalising and other thermal processing up to a temperature of 1100 °C or 1300 °C. The furnaces include ceramic hearth plates. To eliminate gasses or smoke that are released during thermal processing, ventilation hole and an exhaust system may be additionally installed in the products. The furnaces are an excellent fit for scientific laboratories, educational institutions, medicine and industry.

SNOL 8,2/1100 LZM01



SNOL 6,7/1300 LSM01



SNOL 8,2/1100 LHM01



### Basic model

- One-piece chamber made of vacuumed ceramic fiber
- Heating elements are embedded in vacuum formed fiber (on models up to 1100 °C)
- Heating elements exposed on ceramic tubes (on models up to 1300 °C)
- Microprocessor-controlled thermoregulator (see page 14)
- Ceramic hearth plates
- High-quality, ecological thermal insulation material
- Low electric power consumption
- Short heating up/cooling down period
- High degree of accuracy
- Exterior painted with powder coating (RAL 7035)
- 1 year guarantee

### Options

- Process observation window (Ø 35 mm) up to 1100 °C
- Fan-assisted chimney for air extraction
- Additional ceramic hearth plates
- Buzzer
- Digital timer
- Protection against overheating
- Data recorder
- RS232/RS-485/USB interface and PC software
- Calibration of temperature measurement system
- Table for supporting the furnace
- Protective gas atmosphere
- Gas box up to 1100 °C
- Metal tray
- Additional 1 year guarantee

Model	Vol., l	Tmax, °C	Chamber dimensions, mm			Overall dimension, mm			Power, kW	Voltage, V	Weight, kg	Door opening		
			Width	Length	Height	Width	Length	Height				upwards	sideways	downwards
<b>Up to 1100°C</b>														
SNOL 3/1100 LHM01	3	1100	125	200	115	340	470	430	1,7	230	18	●	○	○
SNOL 8,2/1100 LHM01	8,2	1100	200	300	133	440	620	510	1,8	230	28	●	○	○
SNOL 8,2/1100 LSM01	8,2	1100	200	300	133	440	560	510	1,8	230	28	○	●	○
SNOL 8,2/1100 LZM01	8,2	1100	200	300	133	440	560	510	1,8	230	28	○	○	●
SNOL 13/1100 LHM01	13	1100	225	360	180	500	700	550	1,8	230	38	●	○	○
SNOL 22/1100 LHM01	22	1100	275	500	155	600	890	610	3	230	58	●	○	○
SNOL 39/1100 LHM01	39	1100	315	515	225	649	899	739	6	300	74	●	○	○
<b>Up to 1300°C</b>														
SNOL 6,7/1300 LSM01	6,7	1300	160	295	133	440	550	540	2,4	230	35	○	●	○
SNOL 6,7/1300 LHM01	6,7	1300	160	295	133	440	550	540	2,4	230	35	●	○	○
SNOL 9/1300 LHM01	9	1300	170	300	160	500	700	550	2,4	230	38	●	○	○



# 1. High temperature electric furnaces

## 1.2 Chamber furnaces with fiber-insulated chambers

Highly accurate laboratory electric furnaces with chambers made of thermal insulation fiber plates. The products are designed for hardening, loosening, normalising and other thermal processing up to temperature of 1600 °C. To eliminate gasses or smoke that are released during thermal processing, ventilation hole and an exhaust system may be supplementally installed in the products. The furnaces are an excellent fit for scientific laboratories, educational institutions, medicine and industry.

### Basic model

- Chamber made of ceramic fiber thermal insulation plates
- Vacuumized heating elements (up to 1100 °C)
- Heating elements in grooves (up to 1200 °C)
- Heating elements on tubes (up to 1300 °C)
- Exposed heat strips (up to 1600 °C)
- Microprocessor-controlled thermoregulator (see page 14)
- Ceramic hearth plates
- High-quality, ecological thermal insulation material
- Low electric power consumption
- Short heating up period
- High degree of accuracy
- Exterior painted with powder coating (RAL 7035)
- 1 year guarantee

### Options

- Process observation window (Ø 35 mm) up to 1100 °C
- Fan-assisted chimney for forced air extraction
- Additional ceramic bottom plates
- Buzzer
- Digital timer
- Protection against overheating
- Data recorder
- RS232/RS-485/USB interface
- Calibration of temperature measurement system
- Table for supporting the furnace
- Protective gas atmosphere
- Gas box up to 1100 °C
- Metal tray

SNOL 30/1300 LSF01



SNOL 80/1100 LSF01



SNOL 40/1200 LSF01



SNOL 8/1600 LSF01



SNOL 30/1100 LSF01



Model	Vol., l	Tmax, °C	Chamber dimensions, mm			Overall dimension, mm			Power, kW	Voltage, V	Weight, kg	Door opening		
			Width	Lenght	Height	Width	Lenght	Height				upwards	sideways	downwards
<b>Up to 1100°C</b>														
SNOL 30/1100 LSF01	30	1100	300	450	300	640	800	830	3,4	230	100	○	●	○
SNOL 80/1100 LSF01	80	1100	300	450	600	740	880	1250	5,4	400	135	○	●	○
<b>Up to 1200°C</b>														
SNOL 40/1200 LSF01	40	1200	290	420	290	640	800	830	3,4	230	100	○	●	○
<b>Up to 1300°C</b>														
SNOL 30/1300 LSF01	30	1300	200	450	290	640	870	830	4,6	230	120	○	●	○
<b>Up to 1600°C</b>														
SNOL 8/1600 LSF01	8	1600	150	300	150	620	620	1420	8	400	170	○	●	○

# 1. High temperature electric furnaces

## 1.3 Furnaces with ceramic chambers

Highly accurate laboratory electric furnaces with solid ceramic chambers. The products are designed for hardening, loosening, normalising and other thermal processing to a temperature of 1300 °C. The furnaces include ceramic bottom plates. To eliminate gasses or smoke that are released during thermal processing, ventilation hole and an exhaust system may be supplementally installed in the products. The furnaces are an excellent fit for scientific laboratories, educational institutions, medicine and industry.

LSC01 SNOL 7,2/1100



SNOL 7,2/900 LSC01



### Basic model

- Solid ceramic chamber
- Partially exposed heating elements (in 1100 °C max. and 1300 °C max. models)
- Enclosed heating elements (in 900 °C max and 1200 °C max. models)
- Microprocessor-controlled thermoregulator (see page 14)
- Ceramic hearth plates
- High-quality, ecological thermal insulation material
- Low electric power consumption
- High temperature inertness
- High degree of accuracy
- Exterior painted with powder coating (RAL 7035)
- 1 year guarantee

### Options

- Process observation window (Ø 35 mm) up to 1100 °C
- Fan-assisted chimney for forced air extraction
- Additional ceramic hearth plates
- Buzzer
- Digital timer
- Protection against overheating
- Data recorder
- RS232/RS-485/USB interface
- Calibration of temperature measurement system
- Table for supporting the furnace
- Additional 1 year guarantee

Model	Vol., l	Tmax, °C	Chamber dimensions, mm			Overall dimension, mm			Power, kW	Voltage, V	Weight, kg	Door opening		
			Width	Length	Height	Width	Length	Height				upwards	sideways	downwards
<b>Up to 900°C</b>														
SNOL 4/900 LSC01	4	900	120	295	100	440	560	500	3,7	230	55	○	●	○
SNOL 7,2/900 LSC01	7,2	900	200	300	130	440	575	540	3,3	230	50	○	●	○
SNOL 12/900 LSC01	12	900	210	300	180	560	700	740	4,5	230	120	○	●	○
SNOL 15/900 LSC01	15	900	210	410	160	560	800	740	6	400	130	○	●	○
<b>Up to 1100°C</b>														
SNOL 4/1100 LSC01	4	1100	120	295	100	440	560	500	3,7	230	55	○	●	○
SNOL 7,2/1100 LSC01	7,2	1100	200	300	130	440	575	540	3,3	230	50	○	●	○
SNOL 12/1100 LSC01	12	1100	210	300	180	560	700	740	4,5	230	120	○	●	○
SNOL 15/1100 LSC01	15	1100	210	410	160	560	800	740	6	400	130	○	●	○
<b>Up to 1200°C</b>														
SNOL 4/1200 LSC01	4	1200	120	295	100	440	560	500	3,7	230	55	○	●	○
SNOL 7,2/1200 LSC01	7,2	1200	200	300	130	580	750	690	3,5	230	104	○	●	○
SNOL 12/1200 LSC01	12	1200	210	300	180	560	700	740	4,5	230	120	○	●	○
SNOL 15/1200 LSC01	15	1200	210	410	160	560	800	740	6	400	130	○	●	○
<b>Up to 1300°C</b>														
SNOL 4/1300 LSC01	4	1300	120	295	100	440	560	500	3,7	230	55	○	●	○
SNOL 7,2/1300 LSC01	7,2	1300	200	300	130	580	750	690	3,5	230	104	○	●	○
SNOL 12/1300 LSC01	12	1300	210	300	180	560	700	740	4,5	230	120	○	●	○
SNOL 15/1300 LSC01	15	1300	210	410	160	560	800	740	6	400	130	○	●	○



## 2. Other thermal processing equipment

### 2.1 Ashing furnaces

SNOL ashing furnaces are designed for ashing and burn off processes. Fan-assisted chimney permits to eliminate smokes from chamber during process time. Ashing process is possible with several types of furnaces: muffle furnace, fiber-insulated chamber furnaces and ceramic chamber furnaces. Ashing process is available in temperature scale of 900-1300°C. Chamber capacities various from 3 to 40 liters.

#### Basic model

- Fan-assisted chimney for smoke and humidity extraction
- Continuous air change in the chamber
- Microprocessor – controlled thermoregulator (see page 14)
- High quality, ecological thermal insulation material
- Low electric power consumption
- Short heating up/cooling down period
- High degree of accuracy
- Exterior painted with powder coating (RAL 7035)
- 1 year guarantee.

#### Options

- Process observation window (Ø35mm) up to 1100 °C
- Additional ceramic hearth plates
- Buzzer
- Protection against overheating
- Data recorder
- RS232/RS-485/USB interface
- Calibration of temperature measurement system
- Additional 1 year guarantee



Model	Tmax, °C	Chamber	Chamber dimension, mm			Overall dimension, mm			Power, kW	Voltage, V	Weight, kg
			Width	Depth	Height	Width	Length	Height			
<b>Up to 900°C</b>											
SNOL 4/900 LSC21	900	ceramic	120	295	100	440	560	500	3,7	230	55
SNOL 7,2/900 LSC21	900	ceramic	200	300	130	440	575	540	3,3	230	50
SNOL 12/900 LSC21	900	ceramic	210	300	180	560	700	740	4,5	230	120
SNOL 15/900 LSC21	900	ceramic	210	410	160	560	800	740	6	400	130
<b>Up to 1100°C</b>											
SNOL 3/1100 LHM21	1100	muffle	125	200	115	340	470	430	1,7	230	18
SNOL 4/1100 LSC21	1100	ceramic	120	295	100	440	560	500	3,7	230	55
SNOL 7,2/1100 LSC21	1100	ceramic	200	300	130	440	575	540	3,3	230	50
SNOL 8,2/1100 LHM21	1100	muffle	200	300	133	440	560	510	1,8	230	28
SNOL 12/1100 LSC21	1100	ceramic	210	300	180	560	700	740	4,5	230	120
SNOL 13/1100 LHM21	1100	muffle	225	360	180	500	700	550	1,8	230	38
SNOL 15/1100 LSC21	1100	ceramic	210	410	160	560	800	740	6	400	130
SNOL 22/1100 LHM21	1100	muffle	275	500	155	600	890	610	3	230	58
SNOL 30/1100 LSF21	1100	muffle	300	450	300	640	800	830	3,4	230	100
SNOL 39/1100 LHM21	1100	muffle	315	515	225	649	899	739	6	300	74
<b>Up to 1200°C</b>											
SNOL 4/1200 LSC21	1200	ceramic	120	295	100	440	560	500	3,7	230	55
SNOL 7,2/1200 LSC21	1200	ceramic	200	300	130	580	750	690	4	230	104
SNOL 12/1200 LSC21	1200	ceramic	210	300	180	560	700	740	4,5	230	120
SNOL 15/1200 LSC21	1200	ceramic	210	410	160	560	800	740	6	400	130
SNOL 40/1200 LSF21	1200	muffle	290	420	290	640	800	830	3,4	230	100
<b>Up to 1300°C</b>											
SNOL 6,7/1300 LSM21	1300	muffle	160	295	133	440	550	540	2,4	230	35
SNOL 4/1300 LSC21	1300	ceramic	120	295	100	440	560	500	3,7	230	55
SNOL 7,2/1300 LSC21	1300	ceramic	200	300	130	580	750	690	4	230	104
SNOL 12/1300 LSC21	1300	ceramic	210	300	180	560	700	740	4,5	230	120
SNOL 15/1300 LSC21	1300	ceramic	210	410	160	560	800	740	6	400	130
SNOL 30/1300 LSF21	1300	muffle	200	450	290	640	870	830	4,6	230	120

## 2. Other thermal processing equipment

### 2.2 Tube ovens

High temperature horizontal tube furnaces designed for thermal processing up to a temperature of 1250 °C. The products can be used in scientific laboratories, educational institutions, medicine and industry.

#### Basic model

#### SNOL 0.2/1250LXC04

- Ceramic tube chamber
- Microprocessor-controlled thermoregulator (see page 14)
- High-quality, ecological thermal insulation material
- Low electric power consumption
- Short heating up/cooling down period
- High degree of accuracy
- Exterior painted with powder coating (RAL 7035)
- 1 year guarantee

#### Options

- Buzzer
- Digital timer
- Protection against overheating
- Data recorder
- RS232/RS-485/USB interface
- Calibration of temperature measurement system
- Table for supporting the furnace
- Additional 1 year guarantee



Model	Vol., l	Tmax, °C	Chamber dimension, mm		Overall dimension, mm			Power, kW	Voltage, V	Weight, kg
			Diameter	Length	W	L	H			
SNOL 0,2/1250 LXC04	0,2	1250	35	190	500	550	525	3,7	230	38
SNOL 0,3/1250 LXC04	0,25	1250	40	190	500	550	525	3,7	230	38
SNOL 0,4/1250 LXC04	0,35	1250	48	190	500	550	525	3,7	230	38
SNOL 0,5/1250 LXC04	0,5	1250	58	190	500	550	525	3,7	230	38

### 2.3 Protective atmosphere ovens

SNOL 78/300-1 is protective atmosphere oven, designed for protection of oxidation process of various metals in up to 300°C temperature. The product can be used in scientific laboratories, educational institutions, medicine and industry.

#### Basic model

- Hermetic chamber
- Chamber made of stainless steel
- Available gas: nitrogen, argon.
- Flow-meter installed
- Reducer
- Microprocessor-controlled thermoregulator (see page 14)
- High-quality, ecological thermal insulation material
- Low electric power consumption
- High degree of accuracy
- Exterior painted with powder coating (RAL 7035)
- 1 year guarantee.



SNOL 78/300-1 LSN01

Model	Vol., l	Tmax, °C	Chamber dimension, mm			Overall dimension, mm			Power, kW	Voltage, V	Weight, kg
			Width	Depth	Height	Width	Length	Height			
SNOL 78/300-1	78	300	410	390	420	720	765	720	2,0	230	52





## 2. Other thermal processing equipment

### 2.4 Shaft furnaces

Top-loading (shaft) low and high temperature electric laboratory furnaces are designed for drying, preliminary heating, hardening, loosening, normalising and other thermal processing up to temperature of 900 °C. The furnaces are an excellent fit for scientific laboratories, educational institutions, medicine and industry.

#### Basic model

- Chamber made of stainless steel (SNOL 75/600 LHN02)
- Solid ceramic chamber (SNOL 10/900 LC02)
- Enclosed heating elements
- Doors open from the top
- 14) Microprocessor – controlled thermoregulator (see page
- Ceramic hearth plates
- High quality, ecological thermal insulation material
- Low electric power consumption
- High temperature inertness
- High degree of accuracy
- Exterior painted with powder coating (RAL 7035)
- 1 year guarantee

#### Options

- Reinforced bottom (SNOL 75/600 LHN02)
- Additional ceramic hearth plates (SNOL 10/900 LC02)
- Buzzer
- Digital timer
- Protection against overheating
- Data recorder
- RS232/RS-485/USB interface
- Calibration of temperature measurement system
- Table for supporting the furnace
- Additional 1 year guarantee

#### SNOL 10/900 LXC02



#### SNOL 75/600 LHN02



Model	Vol., l	Tmax, °C	Chamber dimension, mm			Overall dimension, mm			Power, kW	Voltage, V	Weight, kg
			Width	Depth	Height	Width	Length	Height			
SNOL 10/900 LXC02	10	900	150	150	450	860	750	800	4,5	230	120
SNOL 75/600 LHN02	75	550	340	390	550	870	660	850	6	400	100

## 3. Low temperature electric ovens

### 3.1 Chamber ovens

#### 3.1.1. Chamber ovens up to 300 °C

Laboratory ovens that are designed for the thermal processing of materials up to a temperature of 300 °C. Used for such processes as drying, heating, thermal testing and aging in an air environment. Forced air circulation allows a homogenous temperature distribution to be achieved during all processes, which ensures optimal results.

SNOL 60/300 LSN11



SNOL 220/300 LSN11



#### Basic model

- Forced horizontal air circulation
- Valve control of air extraction (operated via front panel)
- Chamber made of stainless steel
- Hermetically closed doors
- Microprocessor – controlled thermoregulator (see page 14)
- Protection against overheating
- Includes standard shelves 3pcs (except SNOL 20/300)
- High quality, ecological thermal insulation material
- Low electric power consumption
- Short heating up/cooling down period
- High degree of accuracy
- Exterior painted with powder coating (RAL 7035)
- 2 years guarantee

#### Options

- Fan speed controller and buzzer
- Additional shelves
- Reinforced shelves
- Metal tray
- Table for supporting the furnace
- Process observation window
- Digital timer
- RS232/RS-485/USB interface
- Calibration of temperature measurement system

Model	Vol., l	Tmax, °C	Chamber dimension, mm			Overall dimension, mm			Power, kW	Voltage, V	Weight, kg	Air flow	Number of shelves		Chamber material	
			Width	Depth	Height	Width	Length	Height					sets	max	Stainless steel	Mild steel
<b>Up to 300 °C</b>																
SNOL 20/300 LSN11	20	300	240	280	340	460	680	640	1	230	34	●	2	5	●	○
SNOL 60/300 LSN11	60	300	380	380	420	600	760	720	2	230	50	●	3	7	●	○
SNOL 120/300 LSN11	120	300	550	400	580	750	780	880	2,2	230	70	●	3	7	●	○
SNOL 220/300 LSN11	220	300	730	500	620	930	880	915	4	230	102	●	3	7	●	○
SNOL 420/300 LSN11	420	300	1000	500	860	1200	930	1200	6,2	400	155	●	3	7	●	○

# 3. Low temperature electric ovens

## 3.1 Chamber ovens

### 3.1.2. Chamber ovens up to 350 °C

Economical low temperature electric ovens that are designed for the thermal processing of various materials and parts up to a temperature of 350 °C. The product can be used in scientific laboratories, educational institutions, medicine and industry.

SNOL 67/350 LSN01



SNOL 58/350 LSP11



#### Basic model

- Natural or forced horizontal air circulation
- Regulated air intake and extraction
- Chamber made of mild or stainless steel
- Hermetically closed doors
- Microprocessor – controlled thermoregulator (see page 14)
- Includes standard shelves 3pcs
- High quality, ecological thermal insulation material
- Low electric power consumption
- Short heating up/cooling down period
- High degree of accuracy
- Exterior painted with powder coating (RAL 7035)
- 1 years guarantee

#### Options

- Additional shelves
- Reinforced shelves
- Metal tray
- Digital timer
- Buzzer
- Protection against overheating
- Data recorder
- RS232/RS-485/USB interface
- Calibration of temperature measurement system
- Furnace exterior made of stainless steel
- Table for supporting the furnace
- Additional 1 year guarantee

Model	Vol., l	Tmax, °C	Chamber dimension, mm			Overall dimension, mm				Voltage, V	Weight, kg	Air flow	Number of shelves		Chamber material	
			Width	Depth	Height	Width	Length	Height					sets	max	Stainless steel	Mild steel
<b>Up to 350 °C</b>																
SNOL 58/350 LSN11	58	350	390	380	360	685	675	615	2	230	40	●	3	7	●	○
SNOL 58/350 LSP11	58	350	390	380	360	685	675	615	2	230	40	●	3	7	○	●
SNOL 67/350 LSN01	67	350	390	445	390	685	625	615	2	230	40	○	3	7	●	○
SNOL 67/350 LSP01	67	350	390	445	390	685	625	615	2	230	40	○	3	7	○	●

# 3. Low temperature electric ovens

## 3.1 Chamber ovens

### 3.1.1. Chamber ovens up to 200 °C

Economical low temperature electric ovens that are designed for the thermal processing of various materials and parts up to a temperature of 200 °C. The products can be used in scientific laboratories, educational institutions, medicine and industry. Optional forced air circulation (only in model SNOL 200/200) assures an even temperature distribution throughout the chamber and high quality thermal processing occurs quickly.

**SNOL 24/200 LSP01**



**SNOL 200/200 LSN11**



#### Basic model

- Chamber made of mild steel or stainless steel
- Natural or forced air circulation
- Hermetically sealed doors
- Microprocessor temperature controller (see page 14)
- Includes standard shelves
- High-quality, ecological thermal insulation material
- Low electric power consumption for increased energy efficiency
- Short heating up/cooling down period
- High degree of accuracy
- Exterior painted with powder coating (RAL 7035)
- 1 year guarantee

#### Options

- Additional standard shelves
- Reinforced shelves
- Metal tray
- Reinforced bottom
- Digital timer
- Fan speed controller (for ovens with forced air circulation)
- Buzzer
- Over-temperature protection
- Data recorder
- RS232/RS-485/USB interface
- Calibration of temperature measurement system
- Oven exterior made of stainless steel
- Stand for supporting the oven
- Additional 1 year guarantee

Model	Vol., l	T max °C	Chamber dimensions, mm			Overall dimensions*, mm			Power, kW	Voltage, V	Weight, kg	Air flow	Number of shelves		Chamber material	
			Width	Length	Height	Width	Length	Height					sets	max	Stainless steel	Mild steel
<b>Up to 200 °C</b>																
SNOL 24/200 LSP01	24	200	300	380	200	400	515	410	1	230	17	○	2	2	○	●
SNOL 200/200 LSP11	200	200	710	610	460	1040	780	775	2	230	77	●	2	5	○	●
SNOL 200/200 LSN11	200	200	710	610	460	1040	780	775	2	230	77	●	2	5	●	○



# 3. Low temperature electric ovens

## 3.2 Multi-chamber ovens

Multi-chamber low temperature electric ovens that are designed for the thermal processing, drying, preliminary heating and other thermal processes of various materials and parts up to a temperature of 200 °C. The products can be used in scientific laboratories, educational institutions, medicine and industry. Forced air circulation allows a homogenous temperature distribution to be delivered during all processes, which ensures optimal results.

**SNOL 4x80/200 LSN18**



**SNOL 2x240/200 LSN11**



**Basic model**

- Chamber made of mild steel or stainless steel
- Natural or forced air circulation
- Hermetically sealed doors
- Microprocessor temperature controller (see page 14)
- Includes standard shelves
- High-quality, ecological thermal insulation material
- Low electric power consumption for increased energy efficiency
- Short heating up/cooling down period
- High degree of accuracy
- Exterior painted with powder coating (RAL 7035)
- 1 year guarantee

**Options**

- Additional standard shelves
- Reinforced shelves
- Metal tray
- Reinforced bottom
- Digital timer
- Fan speed controller (for ovens with forced air circulation)
- Buzzer
- Over-temperature protection
- Data recorder
- RS232/RS-485/USB interface
- Calibration of temperature measurement system
- Oven exterior made of stainless steel
- Stand for supporting the oven
- Additional 1 year guarantee

Model	Vol., l	Tmax, °C	Chamber dimension, mm			Overall dimension, mm			Voltage, V	Weight, kg	Air flow	Number of shelves		Chamber material		
			Width	Depth	Height	Width	Length	Height				sets	max	Stainless steel	Mild steel	
SNOL 4x80/200 LSP18	4x80	200	500	400	500	1910	1950	925	18	400	440	●	1x4	7x4	○	●
SNOL 4x80/200 LSN18	4x80	200	500	400	500	1910	1950	925	18	400	440	●	1x4	7x4	●	○
SNOL 2x240/200 LSP11	2x240	200	500	400	1200	1500	960	1715	24	400	450	●	2x2	7x2	○	●
SNOL 2x240/200 LSN11	2x240	200	500	400	1200	1500	960	1715	24	400	450	●	2x2	7x2	●	○

## 4. Control devices

### 4.1 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



Eurotherm 3216



Eurotherm 3504



Omron E5CC-T



Eurotherm 3208



Eurotherm Nanodac



Model	Programmable	Number of programs	Number of steps in program	Computer port	Control method		Control signal		
					PID	ON/OFF	Type		Numbers of auxiliary outputs
							Relay	Voltage	
Omron E5CC	○	1	2	●	●	●	●	●	3
Omron E5CC-T	●	8	32	●	●	●	●	●	3
Omron E5CN-H	○	1	2	●	●	●	●	●	2
Omron E5CN-HT	●	8	32	●	●	●	●	●	2
Eurotherm 3216	○	1	8	●	●	●	●	●	2
Eurotherm 3208	●	5	8	●	●	●	●	●	3
Eurotherm 3508	●	50	50	●	●	●	●	●	2
Eurotherm 3504	●	50	50	●	●	●	●	●	5
Eurotherm Nanodac	●	100	25	●	●	●	●	●	5
Eurotherm E+PLC100 *	●	-	-	●	●	●	●	●	4

\* Pid controller, recorder and PLC in one – designed for elaborate control algorithms.

### 4.2 Touch screen Omron E5CN-HTV1.1\_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).



### 4.3 Over temperature protection

This is an optional protection, which as the name implies, will shut down the power supply if the temperature inside the chamber reaches a certain/ set temperature level.

**Options:**

- Protection of the unit -Temperature monitoring relay - works as over temperature detector and shuts down the power as set temperature is reached. Non-adjustable (max. temperature is preset)
- Protection of the charge - Indicator and alarm unit Eurotherm 3216 - offers accurate indication and alarming of temperature and process measurements. Over temperature furnace limits, are implemented using relay output channels. Maximum temperature can be adjusted.

### 4.4 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.



### 4.5 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).



### 4.6 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.



# Du har emnerne som skal afgrates. *Vi har løsningerne!*



***Kom med dine emner  
til vores Test-center.***

I fællesskab finder vi den rette  
brugbare løsning til opgaven.

*Har du spørgsmål er du velkommen til at kontakte vores industri konsulenter*

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