

LABORATORY Furnaces



UP TO 1700°C



Standard Chamber Furnaces

LSCF Series:

LSCF Series of Standard Chamber Furnaces covers a temperature range from 1100°C to 1600°C. The LSCF Series are front loading and are easy to operate. They are supplemented with low thermal mass insulation to maintain the temperature inside as well as keep the outer case cool. Typical application includes melting, thermal ageing, ceramics sintering, metal heat treatment chemical decomposition, thermal shock testing etc.



Features:

- Front loading provides easy operation.
- Element change is very easy and economic.
- Open wire based models.
- Low thermal mass insulation.
- Kanthal gobler series (Silicon Carbide Heating Elements) installed for series starting from 1400°C.
- PID/User programmable controls.
- Chamber exhaust vent.

Technical Specifications & Ordering Information :

Model No.	Max. Temp (°C)	Const. Temp (°C)	Time Adjustment below 100°C to max. (mins)	Inner Dimension (H x W x D) cm	Inner Vol (L)	Max Power (KW)	Outer Dimension (H x W x D) cm	Phase	Catalog No.
LSCF-100A	1100	1050	35	18 x 21 x 20	7.50	2.0	65 x 55 x 58	1	09370101
LSCF-100B	1100	1050	40	23 x 22 x 30	15.00	4.0	72 x 56 x 67	1	09370102
LSCF-100C	1100	1050	55	28 x 28 x 38	28.00	4.0	79 x 59 x 70	1	09370103
LSCF-200	1150	1100	90	11 x 21 x 28	6.50	2.7	65 x 55 x 58	1	09370104
LSCF-300A	1200	1150	35	14 x 20 x 25	7.30	2.0	65 x 55 x 58	1	09370105
LSCF-300B	1200	1150	50	20 x 20 x 30	12.00	4.4	72 x 56 x 67	1	09370106
LSCF-300C	1200	1150	65	23 x 23 x 35	18.00	6.0	79 x 59 x 70	3	09370107
LSCF-300D	1200	1150	85	28 x 28 x 35	27.40	7.5	79 x 59 x 70	3	09370108
LSCF-400A	1300	1250	50	18 x 20 x 25	9.00	4.0	72 x 56 x 67	1	09370109
LSCF-400B	1300	1250	65	23 x 23 x 30	15.00	4.0	72 x 56 x 67	1	09370110
LSCF-400C	1300	1250	90	27 x 27 x 35	24.60	6.0	79 x 59 x 70	3	09370111
LSCF-500A	1400	1400	60	18 x 20 x 25	9.00	4.0	72 x 56 x 67	1	09370112
LSCF-500B	1400	1400	135	27 x 25 x 48	32.50	12.0	77 x 60 x 75	3	09370113
LSCF-600A	1500	1450	90	18 x 20 x 25	9.00	5.2	72 x 56 x 67	3	09370114
LSCF-600B	1500	1450	75	22 x 22 x 31	15.00	9.0	77 x 60 x 75	3	09370115
LSCF-600C	1500	1450	155	27 x 25 x 44	29.70	12.0	77 x 60 x 75	3	09370116
LSCF-700A	1600	1550	70	17 x 17 x 24	6.90	5.3	72 x 56 x 67	3	09370117
LSCF-700B	1600	1550	90	22 x 22 x 31	15.00	10.0	77 x 60 x 75	3	09370118
LSCF-700C	1600	1550	155	26 x 25 x 46	27.30	12.5	77 x 60 x 75	3	09370119

Standard Tube Furnace

LSTF Series:

LSTF Series of Standard Tube furnaces of various tube diameters and heated wavelength are available. The range of temperature in these tube furnaces is extended to 1600°C with application of Kanthal wire and silicon carbide heating elements. Outer case has attractive epoxy powder paint and outer mesh covers maintains a cooler skin for maximum operator safety.

LSTF Model of furnace is used only for carbon and sulphur Analysis. Over temperature alarm relay employ SiC heating elements.



Features:

- Variable tube diameters and heated wavelength are available.
- Kanthal VE Type silicon carbide heating elements.
- Over temperature alarm relay with SiC heating element.
- Mullite or recrystallized alumina body.
- Epoxy powder paint.
- Available both in horizontal and vertical modes.
- Heat shields to minimize heat loss.
- Optional consumables include gas tight end fittings of Ni/Cr steel.

Technical Specifications & Ordering Information :

Model No.	Max. Temp (°C)	Const. Temp (°C)	Heated Length (mm)	Max Power (KW)	Tube Dimension (ID x Length)	External Dimension (H x W x D) cm	Net Wt. (Kg)	Phase	Catalog No.
LSTF-100A	1200	1150	250	1.60	20 x 500	51 x 34 x 63	22	1	09370201
LSTF-100B	1200	1150	400	1.80	20 x 500	51 x 34 x 63	22	1	09370202
LSTF-100C	1200	1150	450	1.80	38 x 750	51 x 34 x 63	24	1	09370203
LSTF-100D	1200	1150	250	2.20	50 x 750	51 x 34 x 63	27	1	09370204
LSTF-100E	1200	1150	600	3.00	75 x 750	60 x 41 x 72	51	1	09370205
LSTF-100F	1200	1150	700	3.50	105 x 800	60 x 41 x 72	58	1	09370206
LSTF-100G	1200	1150	900	4.00	105 x 1000	60 x 41 x 92	63	1	09370207
LSTF-200A	1400	1400	180	3.45	38 x 750	51 x 34 x 63	37	2	09370208
LSTF-200B	1400	1400	250	4.00	50 x 750	51 x 34 x 63	42	2	09370209
LSTF-200C	1400	1400	450	4.50	75 x 750	60 x 41 x 72	58	2	09370210
LSTF-200D	1400	1400	610	5.20	50 x 1000	60 x 41 x 92	51	2	09370211
LSTF-200E	1400	1400	610	5.50	75 x 1000	60 x 41 x 92	63	2	09370212
LSTF-300A	1500	1500	180	3.60	38 x 750	60 x 41 x 72	48	3	09370213
LSTF-300B	1500	1500	250	3.10	50 x 750	60 x 41 x 72	51	3	09370214
LSTF-300C	1500	1500	450	6.00	75 x 750	60 x 41 x 72	63	3	09370215
LSTF-300D	1500	1500	610	6.25	75 x 1000	60 x 41 x 92	68	3	09370216
LSTF-400A	1600	1580	250	4.50	50 x 800	60 x 41 x 72	48	3	09370217
LSTF-400B	1600	1580	450	6.00	75 x 750	60 x 41 x 72	63	3	09370218
LSTF-500	1325	1300	180	210	30 x 38 x 50	50 x 200	10	1	09370219

Split, Modular and Precision Furnaces

LSMF Series:

LSMF Series Modular precision furnaces can also be to achieve a wider and stable heating zone of $\pm 0.50^{\circ}\text{C}$. Although standard range is similar diverse controller range can be applied with a combination of master and slave programs.

Precision 3 Zone Furnaces has Kanthal Series Heating Modules work tubes that are easily changeable whenever necessary. Precision Zone Tube furnace LSMF Series provides extra stability and temperature uniformity over a longer heated length. They are exceptionally designed for special applications.

LSMF Series of Split furnaces are exceptionally easy to operate with a tube or a reactor as well as any inline heating with temperature stability. Heating in split furnaces is done via wire coils embedded in ceramic fibre.



Features:

- Temperature uniformity over a longer heated Length.
- Sufficient provision of space for tube heating, reactor, & inline heating.
- Kanthal fibre modules.
- Availability of both horizontal and vertical modules.
- Work tubes are easily changeable.
- Can be modified as 3-Zone furnace-to provide wider heated range and to create temperature gradient.
- All controller range can be applied along with master & slave programmable combinations.

Technical Specifications & Ordering Information :

Model No.	Max. Temp.($^{\circ}\text{C}$)	Const. Temp.($^{\circ}\text{C}$)	Bore Size/ Tube Size (mm)	Heated Length (mm)	Uniform Length (mm)	External Dimension (H x W x L) cm	Approx. Wt. (Kg)	Max Power (KW)	Phase	Catalog No.
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MODULAR FURNACES

LSMF-100A	1100	1050	100	500	400	51 x 34 x 700	32	1.3	1	09370301
LSMF-100B	1100	1050	150	500	400	51 x 34 x 950	41	1.9	1	09370302
LSMF-100C	1100	1050	200	500	400	60 x 41 x 700	44	2.5	1	09370303

PRECISION ZONE FURNACES

LSMF-200A	1200	1150	38 x 750	500	400	51 x 34 x 700	28	2.0	1	09370304
LSMF-200B	1200	1150	50 x 1000	700	600	51 x 34 x 950	38	3.5	1	09370305
LSMF-200C	1200	1150	75 x 1000	700	600	60 x 41 x 750	35	3.5	3	09370306
LSMF-200D	1200	1150	75 x 1000	900	700	60 x 41 x 950	48	4.5	3	09370307

SPLIT FURNACES

LSMF-300A	1100	1050	70	500	-	-	-	1.8	-	09370308
LSMF-300B	1100	1050	70	250	-	-	-	2.7	-	09370309
LSMF-300C	1100	1050	100	250	-	-	-	2.6	-	09370310
LSMF-300D	1100	1050	200	500	-	-	-	1.9	-	09370311
LSMF-300E	1100	1050	300	400	-	-	-	3.8	-	09370312

High Temperature Furnaces

LHCF & LHTF Series:

High Temperature Furnaces series cover the requirements for 1700°C. For this series of 4-10 litres capacity, powerful MOSi_2 heating elements of Kanthal Origin placed at sides of chamber are employed together with very high grade insulation. These furnaces give extremely good heat insulation, keeping the outer case cool. Vertical and manual lifting door has a safety switch to cut off power while open. Such furnaces are specifically applicable for sintering processes in ceramic and material research.



Features:

- Covers temperature range Up to 1700°C.
- MOSi_2 heating elements of Kanthal Origin.
- Double skin construction & high grade Insulation.
- Vertical and manual lifting door.
- Safety switch for power cut off when door is open.
- Alarm relay for power cut off.

Technical Specifications & Ordering Information :

Model No.	Max. Temp. (°C)	Const. Temp. (°C)	Max Power (KW)	Inner Dimension (H x W x D) cm	Outer Dimension (H x W x D) cm	Useful Vol. (L)	Volts	Heated Length (mm)	Phase	Catalog No.
HIGH TEMPERATURE CHAMBER FURNACES										
LHCF-100A	1700	1650	2.9	18 x 15 x 18	57.5 x 78.5 x 52	4.0	400	-	2	09370401
LHCF-100B	1700	1650	4.8	25 x 18 x 18	60.5 x 81.5 x 59	8.1	400	-	2	09370402
LHCF-100C	1700	1650	5.9	26 x 18 x 22	60.5 x 85.5 x 60	10.2	400	-	2	09370403
HIGH TEMPERATURE TUBE FURNACES										
LHTF-100A	1700	1650	2.5	50 ID x 800L	70 x 46 x 46	-	400	200	2	09370404
LHTF-100B	1700	1650	3.3	38 ID x 900 L	70 x 46 x 56	-	400	300	2	09370405
LHTF-100C	1700	1650	3.3	75 ID x 900 L	70 x 46 x 56	-	400	300	2	09370406
LHTF-100D	1700	1650	4.1	50 ID x 1000 L	70 x 46 x 66	-	400	400	2	09370407
LHTF-100E	1700	1650	4.1	75 ID x 1000 L	70 x 46 x 66	-	400	400	2	09370408

Elevator Furnaces

LLEF Series:

LLEF Series of Elevator Furnaces are purposely designed to satisfy the needs for bottom loading and quick discharge requirements. Basic usage of this type of furnaces is for glaze fritting or glass melting. In fact any test that asks for quick removal of samples from furnace. Gas feed-in and various applications of gas controlled atmospheres are possible if an inverted Crucible is applied over the sample.



Features:

- All Models are bench top.
- These types of furnaces are for Glaze fritting or glass melting.
- A wide range of temperature from 1100°C to 1700°C.

Technical Specifications & Ordering Information :

Model No.	Temp. (°C)	Inner Dimension Ø X H (mm)	Useful Vol. (L)	Approx. Power (KW)	Volts	Phase	Catalog No.
LLEF-100A	1100	100 x 250	8	1.5	220	1	09370501
LLEF-100B	1400	150 x 250	8	4.0	220	1	09370502
LLEF-100C	1600	150 x 250	8	4.8	380/220	3	09370503
LLEF-100D	1700	150 x 250	8	4.8	400	2	09370504

Ceramic Furnaces

LLCF Series:

LLCF Series of Ceramic Furnaces are applicable for ceramic firing. It also has programmed or standard PID control as per requirement. The efficiency of LLCF Series of Ceramic Furnaces is undoubtedly promising to meet all the demands of ceramic related work.



Features:

- Range upto 10m³ for ceramic firing applications.
- Standard PID controller/programming.
- Available upto 1000 liters.

Technical Specifications & Ordering Information :

Model No.	Max. Temp. (°C)	Kiln Car	Inner Dimension (H x W x D) cm	Outer Dimension (H x W x L) cm	Inner Volume (L)	Max Power (KW)	Amps / Phase	Phase	Catalog No.
LLCF-100A	1200	Not Available	40 x 35 x 35	67 x 64 x 74	50	4.0	18	1	09370601
LLCF-100B	1200	Not Available	50 x 40 x 50	110 x 74 x 93	100	7.0	11	3	09370602
LLCF-100C	1200	Not Available	70 x 40 x 50	135 x 75 x 95	140	8.0	12	3	09370603
LLCF-100D	1200	Not Available	80 x 45 x 55	150 x 83 x 95	210	12.0	18	3	09370604
LLCF-100E	1200	Not Available	75 x 50 x 80	130 x 83 x 110	300	18.0	27	3	09370605
LLCF-100F	1200	Not Available	73 x 75 x 75	135 x 112 x 120	394	21.0	32	3	09370606
LLCF-100G	1200	Not Available	80 x 80 x 80	138 x 134 x 125	500	24.0	36	3	09370607
LLCF-100H	1200	Not Available	85 x 90 x 125	140 x 147 x 170	1000	33.0	50	3	09370608

Glass Fusion Furnaces

LGFF Series:

There are several observation ports where the operator can manage faster cooling as well as observing the stage of fusion. All models have a stand frame on wheels for easy moving. There are also gas struts to enable easy lid opening.

Features:

- Top heated furnaces.
- Maximum temperature homogeneity.
- Easily movable.
- Gas struts for easy lid opening.
- Hydraulic lift machine employed for custom made higher volumes.



Technical Specifications & Ordering Information :

Model No.	Temp. (°C)	Inner Dimension (W x H x D) cm	Useful Volume (L)	Approx. Power (KW)	Phase	Catalog No.
LGFF-100A	950	50 x 40 x 50	100	8.0	1	09370701
LGFF-100B	950	70 x 40 x 50	140	10.0	3	09370702
LGFF-100C	950	90 x 40 x 50	180	10.0	3	09370703
LGFF-100D	950	110 x 40 x 60	260	12.0	3	09370704
LGFF-100E	950	120 x 40 x 70	340	15.0	3	09370705
LGFF-100F	950	150 x 40 x 70	420	18.0	3	09370706
LGFF-100G	950	200 x 40 x 60	480	18.0	3	09370707
LGFF-100H	950	200 x 40 x 70	560	22.0	3	09370708

Muffle Furnace

Features:

- Heavy-duty molded ceramic fiber insulation.
- Microprocessor-based PID control, 3 programs (pattern) and 16 segments for ramp (up and down) and dwell(timed hold) temperature control.
- Kanthal-A1 heating element on all four sides of chamber for maximum heat transfer and chamber uniformity.



Technical Specifications & Ordering Information :

Model	LHMF 100A	LHMF 100B	LHMF 100C	LHMF 100D	LHMF 100E	
Chamber Volume (L)	3.0	4.5	12	14	27	
Temperature	Heating Type	Embedded heater from 4 side				
	Range	Up to 1200°C (Normal operating temp. is under 1000°C)				
	Accuracy	± 5.0°C at 800°C				
	Uniformity	± 10.0°C at 800°C				
Safety Device	Temperature	None				
	Electrical	Electrical Leakage Breaker				
Dimension (W x D x H) mm	Inner	130 x 250 x 90	150 x 300 x 100	200 x 300 x 200	250 x 350 x 160	300 x 300 x 300
	Outer	375 x 475 x 495	425 x 570 x 505	550 x 635 x 650	550 x 635 x 650	5800 x 5950 x 1720
Material	Insulation	Vacuum molded ceramic coating				
	External	Steel IT with epoxy powder coating				
	Inner door	Front door with molded ceramic fiber insulation				
Catalog No.	09150101	09150102	09150103	09150104	09150105	

Temperature Control System



Technical Specifications & Ordering Information :

Model No.	Dimension (mm)	Display	Specs.	Alarm	Programming	Number of segments
LDC-1010	48 x 48	Dual	PID	Yes	N/A	None
LDC-1020	96 x 48	Dual	PID	Yes	Ramp rate definition	1 Step
L-100	96 x 48	Dual	PID	Yes	Yes	4 Steps
LUDC-2500	96 x 96	Dual	PID	Yes	Yes	12 Steps
LDC-1040	96 x 96	Dual	PID	Yes	Yes	2 x 8 Steps
LDCP-100	96 x 96	Dual	PID	Yes	Yes	8 x 16 Steps



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