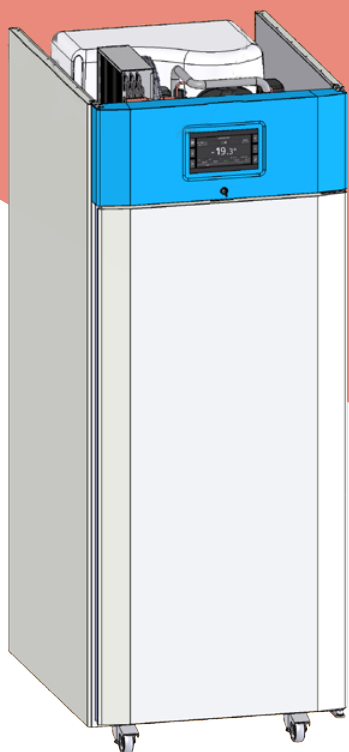# scala
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Slimline
Laboratory refrigerators and freezers

Why Slimline?

What do you require from a laboratory refrigerator or freezer?
For most lab technicians, there are 3 important pillars: safety, stability and data.

What do we mean by safety? The reason you store your samples at a certain temperature is that you want to keep these samples for future use (weeks, months or even years from now). For this reason we added some features to the Slimline series;

A door lock, so no unauthorized person can get to your samples. A high and low temperature alarm, door-open alarm and power failure alarm to make sure if anything is wrong, you get notified in time. Alarm connections (NO/NC/COM) and sensor throughput in the backwall, to make sure these alarms are heard anywhere, anytime. These features are seen on other brands as well. There is one great feature we added to the Slimline series: the mono-block refrigeration system. If a technical failure would occur, anybody with limited technical background is able to replace the mono-block refrigeration system within minutes, this way all technical components are replaced. The only tool you need is a screwdriver. Which means: no need for back-up freezers and no expensive repairs during out of business hours.

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And what about stability?
If you are looking for a laboratory refrigerator or freezer it probably means your samples need a very stable temperature. Did you know temperature differences in your normal household refrigerator can differ up to 8°C or more? In other words: if you would put the setpoint on 5°C, your milk, cheese or meat on the top shelve can be +9°C and the products stored on the lower shelve +2°C. We keep the temperature within 1°C everywhere in the cabinet.

And last but not least: data.
More important than ever it is to have the data of your samples temperature during storage. What has been the temperature of your sample during the last week, month or even year? What kind of alarms did you get? Has the temperature ever been too high, and if so; for 5 minutes or 6 hours or more?

With the touch-screen controller on the Slimline you can see and export temperature graphs, see the alarm history in the log book and control the limits of the alarms. The data can be exported by the USB port on the front panel to make sure you can secure the data anywhere you want.

LABORATORY REFRIGERATORS AND FREEZERS

The Slimline laboratory refrigerator and freezer series offer a wide range of configurations, ranging from routine laboratory applications up to high demanding storage protocols for blood banking, vaccine, DNA and biomedical sample storage. Temperature ranges which are available:

- LR serie + 1ºC / + 8ºC
- LF serie -15ºC / -25ºC

All temperature configurations offer forced air circulation by internal fans to ensure superior temperature uniformity and fast temperature recovery. Our line is available in several storage capacities:

- 600 liter (single door upright)
- 1300 liter (double door upright)

Monoblock

The heart and soul of your Slimline. All the internal 'organs' in one easy to remove block. If any technical problem should occur; your technician can simply replace

this block with a new one within 15 minutes. This way we minimalize down time to almost zero.

UltraSafe® temperature
The philosophy behind our Slimline Refrigerator and Freezer line is to offer the safest environment for your products by using our UltraSafe® temperature control system in combination with circulating forced air and our unique monoblock refrigeration system.

Design and production takes place in our modern facility in Ede, The Netherlands and CE certificate is available for these products.

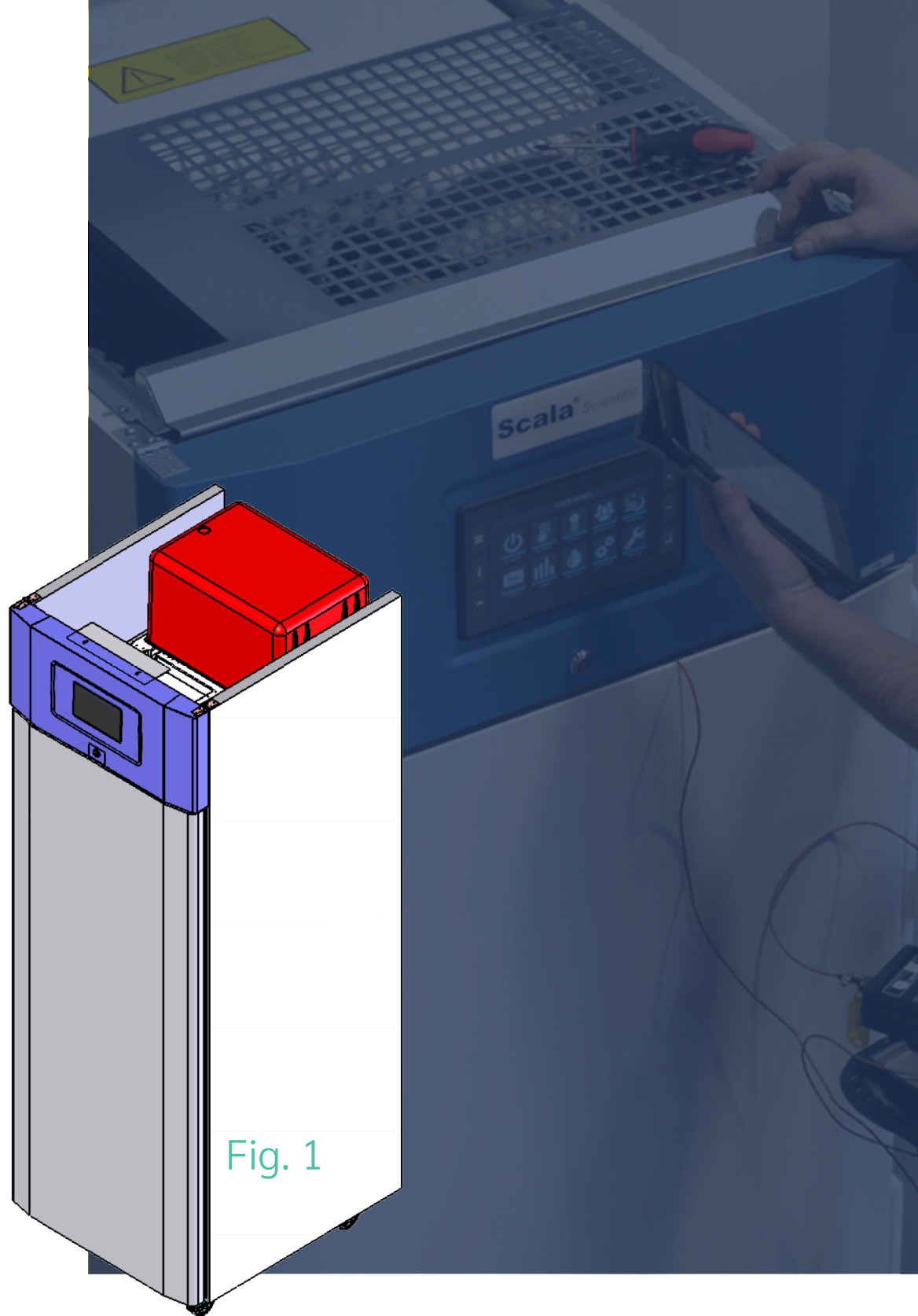"The monoblock is the heart and soul of your Slimline. All the internal 'organs' in one easy to remove block. "

Fig. 1

MAIN FEATURES

» Scala Monoblock (red block in Fig. 1)

» Standard natural refrigerant (R290)

» Standard stainless steel interior

» Touch-screen display / controller

» LED interior lighting

» Adjustable temperature set points

» High/low temperature alarm and power failure alarm

» Date, time, alarm buzzer

» Dry contact for remote alarm

» Door open alarm

» Battery backup (72h)

» Chamber with rounded corners for easy cleaning

» Auto switch-off fan when door opens

» 60 mm of CFC-free polyurethane foam insulation

» Standard fitted with heavy duty casters, for easy transportation (lockable)

» Flexible storage: you can mix drawers, grids and shelves in one cabinet without any internal modifications.

SPECIFICATIONS FREEZERS

Model	LF700	LF1400
Capacity	600 liter	1300 liter
Doors	1 solid door	2 solid doors
Door locks	1	2
Air circulation	Forced air circulation by inner fan	
Temperature range	-15ºC to -25ºC (factory set on -20ºC)	
Temperature precision	+/- 0.5ºC	
Temperature stability	+/- 1 ºC	
Temperature uniformity	+/- 2ºC	
Microprocessor	Adjustable set-point, high/low alarm (audible, visual and remote alarm)	
Ext. dimensions W x D x H in mm	710 x 807 x 2018	1420 x 807 x 2018
Int. dimenions W x D x H in mm	590 x 675 x 1470	1300 x 675 x 1470
Shelves	3 adjustable grids (max. 16)	6 adjustable grids (max. 32)
Cabinet material	Stainless steel inside	
Insulation	60 mm non-CFC Foamed polyurethane	

SPECIFICATIONS REFRIGERATORS

Model	LR700(G)	LR1400(G)
Capacity	600 liter	1300 liter
Doors	1 solid door (G for glass door)	2 solid doors (G for glass doors)
Door locks	1	2
Air circulation	Forced air circulation by inner fan	
Temperature range	+1ºC to +8ºC (factory set on +4ºC)	
Temperature precision	+/- 0.5ºC	
Temperature stability	+/- 1 ºC	
Temperature uniformity	+/- 2ºC	
Microprocessor	Adjustable set-point, high/low alarm (audible, visual and remote alarm)	
Ext. dimensions W x D x H in mm	LR700: 710 x 807 x 1998 LR700G: 710 x 845 x 1998	LR1400: 1420 x 807 x 1998 LR1400G: 1420 x 845 x 1998
Int. dimenions W x D x H in mm	590 x 675 x 1470	1300 x 675 x 1470
Shelves	3 adjustable grids	6 adjustable grids
Cabinet material	Stainless steel inside	
Insulation	60 mm non-CFC Foamed polyurethane	

"

"Superior temperature uniformity and fast temperature recovery."

SLIMLINE ACCESSORIES

ST100
Sample throughput with hole (18 mm inner diameter) with stopper

PS050
Vapour proof power socket (single)

PS100
Vapour proof power socket (double)

IQOQ200
IQ/OQ protocol package Slimline series

GR150
Additional grid (including pair of guides) Maximum 16 grids in 700 series and 32 grids in 1400 series

SSPP150
Stainless steel perforated shelve (including pair of guides). Maximum 16 shelves in 700 series and 32 shelves in 1400 series

DR150
Stainless steel roll-our drawer (including pair of guides). Maximum 8 drawers in 700 series and 16 drawers in 1400 series

DV44
Flexible divider kit for DR150 drawer Creating 4 compartments with 2 flexible dividers each

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in service