



TEMPERATURE and HUMIDITY TEST CHAMBERS



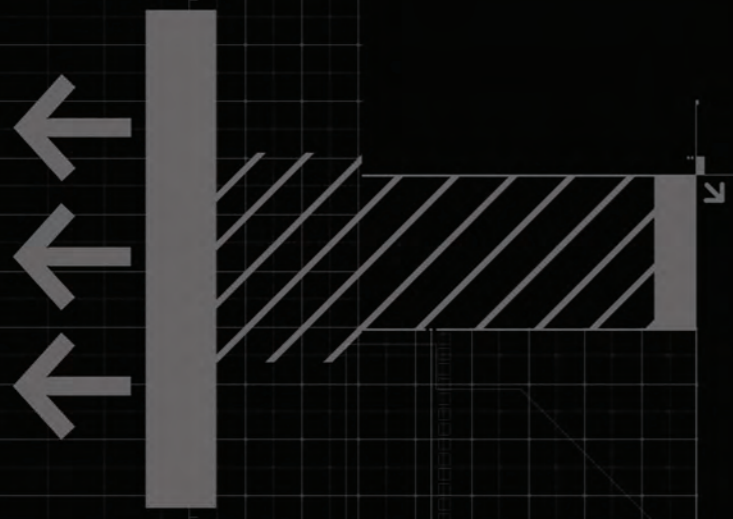
Flight No.	Destination	Schedule	Hall	Type
LH 456	London/Heathrow	1810	B	321
LH 585	Hannover	1810	A	320
LH 511	Köln/Bonn	1815	A	320
LH 833	Düsseldorf	1815	A	735
LH 253	Berlin/Tegel	1820	A	321
FU 546	Nizza	1830	D	CRJ
LO 354	Warschau	1830	D	EM4
OS 116	Wien	1835	A	736
SR 557	Zürich	1835	D	320
LH 227	Frankfurt/Main	1840	A	313
OU 437	Zagreb	1840	B	320
LH 8564	Strasbourg	1845	A	DH3
LH 5515	Dortmund	1845	A	DH3
LH 947	Düsseldorf	1845	A	321
LH 521	Hamburg	1845	A	320
LH 3600	Oslo	1850	B	735
LH 5194	Helsinki	1850	B	142
DI 7020	Berlin/Tegel	1850	D	733
LH 1061	Nürnberg	1850	A	AT5
LH 925	Bremen	1850	A	319
LH 9659	Paderb./Lippst.	1850	A	DH3
DI 7186	Köln/Bonn	1855	D	733
DI 7096	Düsseldorf	1855	D	733
LH 4514	Birmingham	1855	B	142
LH 972	Manchester/Manbr.	1855	A	733
LH 4542	Manchester	1855	B	142
LH 5176	Leipzig / Halle	1855	A	F50
LH 3672	Zürich	1900	B	F50
LH 4160	Paris/CDG	1900	A	735
LH 5922	Marseille	1900	A	CRJ
LH 4432	Brüssel	1900	A	735
LH 5760	Nizza	1900	A	CRJ
ZN 034	Graz	1900	A	J31
LH 5896	Amsterdam	1900	A	142
IB 3531	Madrid	1905	D	320
LH 3212	Prag	1905	B	F50
LH 5676	Warschau	1905	B	CRJ
LH 4530	London/Heathrow	1910	B	733
LH 3832	Bologna-Neapel	1910	A	733
LH 5384	Wien	1910	A	DRJ
LH 5686	Turin	1910	A	142
LH 5366	Genf	1910	B	146
LH 5894	Florenz	1910	A	142
LH 882	Dresden	1910	A	733
LH 3954	Mailand/Malpensa	1910	A	733
DI 1747	Stuttgart	1915	A	735
LH 2448	Göteborg	1915	B	CRJ
LH 5812	Lyon	1915	A	CRJ
LH 882	Hannover	1915	A	733
LH 933	Köln/Bonn	1915	A	320
LH 3046	Stockholm/ARN	1915	B	319
LH 2205	Berlin/Tegel	1915	A	321
LH 4312	Madrid	1920	A	733
LH 3818	Rom	1920	A	733
LH 3456	Istanbul	1920	B	319
LH 4308	Barcelona	1920	A	733
LH 3420	Athen	1920	A	320
LH 887	Hamburg	1925	A	320
LH 979	Düsseldorf	1925	A	733
EN 2688	Triest	1930	A	AT5
EN 2648	Brüssel	1930	D	735
EN 2687	Verona	1935	A	AT5
EN 2687	Venedig	1935	A	AT5
MS 688	Kairo	1935	C	320
FC 607	Erfurt	1935	A	D38
SK 664	Kopenhagen	1940	B	M80
EN 2681	Genua	1945	A	AT3
EN 2677	Pisa	1945	A	AT3
EN 2705	Mailand/Bergamo	1945	A	AT3
EAE 108	Mönchengladbach	1945	A	AT3
EN 9193	Ancona	1945	A	AT5
LH 214	Berlin/Tegel	1945	A	733
DI 7114	Hamburg	1955	D	733
LH 273	Frankfurt/Main	1955	A	AB6
DI 4609	Berlin/Tegel	1955	D	733
KL 1798	Amsterdam	2000	D	F70

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Should it be necessary, useful or without undermining any model's essential features, technical and stylistic characteristics are subject to be changed without manufacturer's previous notice. Pictures don't necessarily show product in standard version.



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lways in the forefront of innovation and research, has developed a new line of equipment: the Stability Test Chambers in three capacities 450 liters, 700 liters and 1400 liters.

Stability chambers models are available to control temperature only or both temperature and humidity.

frimed stability chambers are ideal for ICH Q1A stability testing, shelf life, package testing, accelerated aging for a variety of applications including Pharmaceutical Products/Packaging; Medical Products/Packaging; Personal Care Products; Consumer Products and Research. All stability chambers meet the ICH Q1A pharmaceutical stability guidelines for a variety of storage conditions: Long Term: 2-8°C, 25°C/60% RH, 25°C/40% RH, 30°C/35% RH or 30°C/65% RH

Intermediate: 30°C/65% RH

Accelerated: 40°C/75% RH, 25°C/60% RH



main features

- External structure in hot-dip galvanised steel, anti-corrosion treated and white PVC film coated.
- Stainless steel internal structure with solid perforated shelves.
- Insulation of 60mm (450lt) and 80mm (700 and 1400lt) obtained by injection of high density ecological polyurethane CFC-free foam for excellent product preservation and best energy saving.

ENVIRONMENT FRIENDLY REFRIGERANT GAS **NATURAL GAS R290** 

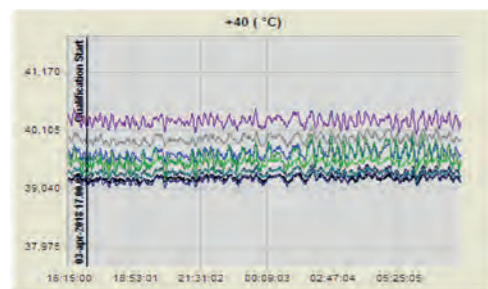
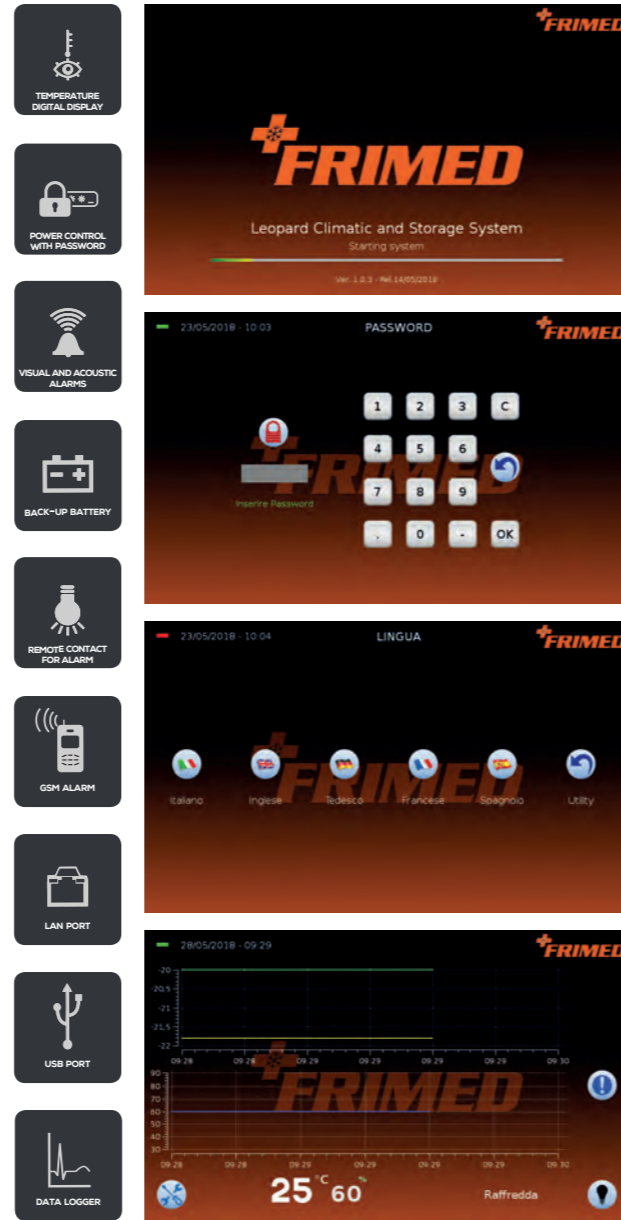
- CFC-free R404a gas is used in all compressors of **Frimed** models. In addition we also offer compressors with natural gas R290 on all our models.
- Self-closing solid door with removable magnetic gasket on four sides for perfect closing. Right hand opening or left hand on request.
- Separate inner doors to ensure optimal temperature and humidity conditions. **(optional)**
- Lock with key to use the appliance under supervision.
- LED light with automatic switch at door opening. Manual switch on control panel.
- Water tank with automatic and manual water supply of demineralized water. **(optional)**
- Vapor humidification system.
- Capacitive humidity sensor.
- Side port hole Ø 50mm.
- Audible and visual alarms including high-low temperature/humidity and open door.



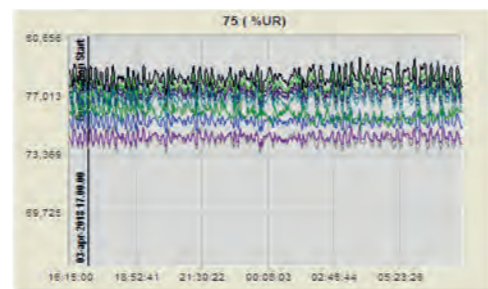


control panel

- Micro processor PID control panel with color touchscreen 9".
- Real time temperature/humidity graph.
- Setting and visualization with 0,1 resolution.
- Slot SD card for storage data.
- Password protected power switch and setting.
- Safety thermostat.
- Visual and audible alarms.
- Easy-to-use program.
- Interfaces: USB device, Modbus, and Ethernet.
- Back-up Battery to show temperature on display and to manage the alarm system in case of power failure. (optional)
- Remote contact (dry, volt-free) to connect the equipment to an external alarm.
- GSM module to send SMS alarms messages to mobile phones showing date, time, cabinet temperature and type of alarm. Possibility to send SMS messages from mobile phone to check correct functioning of equipment.
- LAN port to connect one or more appliances via Ethernet on PC to monitor working state.
- USB port to download temperature data and alarms and to upgrade or reset the appliance
- Data logger to record temperatures and alarms. Download data on USB pen drive



excellent temperature uniformity



excellent humidity uniformity



technical data



MODEL	PH45	PH70	PH140
Temp. range (°C)	+10 to +60	+10 to +60	+10 to +60
Humidity range (°C)	20 to 90	20 to 90	20 to 90
Dew point (°C)	+5..+50	+5..+50	+5..+50
T Stability (°C)	± 1	± 1	± 1
UR Stability (%)	± 3..5	± 3..5	± 3..5
Volume (liters)	450	700	1400
Ext. dim. l x p x h mm	700x1000x1730	700x1000x1990	1400x1000x1990
Int. dim. l x p x h mm	580x670x1200	580x670x1500	1280x670x1500
Power absorption (kW)	1,6	1,6	1,8
ACCESSORIES			
Stainless steel shelf	3	4	8
4 one way wheels	✓	✓	✓
Water tank	optional	optional	optional
1 Port hole Ø 50mm	1	1	2
3 Inner glass door	optional	optional	optional
Safety thermostat	optional	optional	optional
Backup battery	optional	optional	optional
LAN port	optional	optional	optional

MODEL	PT45	PT70	PT140
Temp. range (°C)	+10 to +60	+10 to +60	+10 to +60
T Stability (°C)	± 1	± 1	± 1
Volume (liters)	450	700	1400
Ext. dim. l x p x h mm	700x1000x1730	700x1000x1990	1400x1000x1990
Int. dim. l x p x h mm	580x670x1200	580x670x1500	1280x670x1500
Power absorption (kW)	0,8	0,8	1,2
ACCESSORIES			
Stainless steel shelf	3	4	8
4 one way wheels	✓	✓	✓
1 Port hole Ø 50mm	1	1	2
3 Inner glass door	optional	optional	optional
Safety thermostat	optional	optional	optional
Backup battery	optional	optional	optional
LAN port	optional	optional	optional