Telstar *DLF Series*

Vertical Laminar Flow Bench

High quality

Reliable performance

Advanced safety features

User-friendly control panel

Ergonomic design

Easy to clean

Product protection

Telstar DLF Series

Telstar DLF Series is a high quality vertical laminar flow workbench range for handling non-hazardous materials that require a clean working environment.

- *High quality*
- *Reliable performance*
- *Ergonomic design*

- *Easy to clean*
- *User-friendly control panel*
- *Advanced safety features*

International safety standards

DLF Series is designed and manufactured in order to achieve a working area that meets the ISO 14644-1 (Class 5) , GMP Annex 1 (Class A)*, PIC's and equivalent standards.
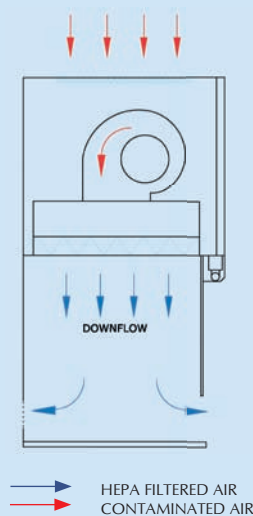
Applications

Its applications are in the field of pharmaceutical industry, biotechnology, pharmacies, hospitals, university laboratories, tissue culture and electronic laboratories.

Available sizes

DLF Series is standard available in sizes 3, 4, 5 and 6 ft width (90, 120, 150 and 180 cm).

DLF Series

DOWNFLOW

HEPA FILTERED AIR
CONTAMINATED AIR

Basic principle

HEPA filtered vertical laminar airflow (downflow) creates an ISO 14644-1 (Class 5) / GMP Annex 1 (Class A)* work area and prevents ambient air entering the work area, ensures product protection.

* Former Class 100 according Federal Standard 209E

Features & benefits

General features

- Microprocessor flow control
- Control panel with alarms and parameters
- HEPA filter H14 (efficiency of 99,995 % MPPS)
- Pre-filter G4 (efficiency of 90 % Am)
- Epoxy coated steel in- and exterior (1,5 - 2 mm)
- Stainless Steel worktop
- Sliding window (safety glass)

Advanced safety features

- HEPA filter surface covers complete work area
  No dead corners and a laminar flow in the entire working area
- Smooth interior for efficient and easy cleaning
- Automatic compensation of air velocity caused by HEPA-filter clogging
- Two redundant microprocessors (fail-safe synchronization)
- UV light safety control: FL light will be switched off when UV light is switched on
- Gas valve safety control: Gas can only be switched on when the cabinet indicates safe work mode.
  If the cabinet is switched off or shows an alarm, the gas will automatically be switched off

Special application

DLF PCR Series is designed to perform PCR (polymerase chain reactions) processes in a clean working environment.

Additional features

DLF PCR Series is standard equipped with:

- Stainless Steel interior
- UV light
- Aperture cover

UV light denaturates nucleic acids contaminants.

Options & Accessories

The available options and accessories make this cabinet adaptable to many applications. Together with the flexibility and expertise of our engineering department, this cabinet is suitable to customise to customer specific requirements.

Control panel with alarms and parameters

- Green light indicates safe work mode
- Red light indicates alarm (visual and audible) for:
  - Airflow (high/low)
- Switch for work mode (on/off) **
- Switch for stand-by mode (on/off)
- Switch for UV light (on/off) **
- Switch for FL light (on/off)
- Switch for power socket (on/off) **
- Switch for gas valve (on/off)
- English, Spanish, French, German and Dutch language

- Real-time clock
- Total running hours for fan, FL, UV
- Pin code to prevent unauthorised usage
- RS 232 and RS 485 connection
- Volt free contact for forwarding alarms to building management systems
- Volt free contact(s) which can be used to switch on/off an external system
- Prepared for control of disinfection options

*** Also controllable by programmable clock (on/off) or timer (off)*

Technical Specifications

TYPE	DLF 360	DLF 460	DLF 560	DLF 660
Part numbers	P0027360	P0027460	P0027560	P0027660
TYPE	**DLF/PCR 360**	**DLF/PCR 460**	**DLF/PCR 560**	**DLF/PCR 660**
Part numbers	P0024360	P0024460	P0024560	P0024660
DIMENSIONS				
Exterior dimensions WxDxH (mm)	985 x 740 x 1360	1290 x 740 x 1360	1595 x 740 x 1360	1900 x 740 x 1360
Interior dimensions WxDxH (mm)	885 x 600 x 685	1190 x 600 x 685	1495 x 600 x 685	1800 x 600 x 685
Height with support frame (mm) [1]	2140 / 2240	2140 / 2240	2140 / 2240	2140 / 2240
Aperture H (mm) [2]	165 / 375	165 / 375	165 / 375	165 / 375
Weight (kg)	140	170	200	230
PERFORMANCES				
Downflow velocity (m/s)	0,35	0,35	0,35	0,35
Sound level (dBA)	< 58	< 58	< 58	< 58
Power consumption (W) [3]	236 / 382	258 / 428	276 / 474	297 / 518
Light intensity (lux)	> 800	> 800	> 800	> 800
ELECTRICS				
Electrical connection (V)/(Hz)	230 / 50	230 / 50	230 / 50	230 / 50
FILTERS				
Pre-filter (EN 779)	G4	G4	G4	G4
Downflow HEPA-Filter (EN 1822)	H14	H14	H14	H14
STANDARDS (build according to)				
ISO Class 5	Yes	Yes	Yes	Yes
GMP Class A	Yes	Yes	Yes	Yes
2006/42/EC	Yes	Yes	Yes	Yes
2004/108/EC	Yes	Yes	Yes	Yes
2006/95/EC	Yes	Yes	Yes	Yes
EN 61010-01	Yes	Yes	Yes	Yes

[1] Support frame with working height 800 mm / 900 mm
[2] Work mode / maximum
[3] Stand-by mode and light off / work mode and light on

Options & Accessories

- Support frame (fixed, electrical adjustable, etc)
- Taps (natural gas, vacuum, O_2, N_2, etc)
- Electrical socket(s)
- Stainless Steel bar with (6 or 8) hooks
- FAT / SAT / IQ / OQ
- Stainless Steel interior *
- UV light *
- Aperture cover *

  * Standard included in **DLF-PCR Series**

Telstar
Life Science solutions

ISO 9001: Certified Company

BR-DLF-EN-0613c / Telstar reserves the right to improvements and specification changes without notice