FORTUNA

ALMOST Rocket Science



Clean Air Cabinet

Vertical Laminar Flow Cabinet

SCANLAF

FORTUNA

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Advanced design for a clean working environment
In your daily work with the Fortuna, you will experience the advantages of clean air technology at its best. The Fortuna is a clean air cabinet with vertical laminar air flow, designed for the ultimate product protection due its unique laminarity. ScanLaf calls Fortuna "Star of the Universe" - and gives you technology "beyond rocket science".

Operator comfort

High angled front window allows easy supervision of the samples and work area also giving an ergonomically correct working position when seated. With side windows, glare free rear wall and easy visibility of the surroundings ensuring a comfortable working environment. Diffused laminator technology allows shadow free light distribution throughout the chamber with light adjustment of 0-2000 Lux illumination.
The provision of non restrictive air flow using digital fans which are easy to adjust precisely, with diffuser technology giving true laminar flow ensures deviations of less than 10%. High capacity HEPA-filters of 11 cm allows lowest noise level of less than 52 dB(A) - generally every 3 dB(A) reduction leads to half noise.

Ultra clean environment

The use of 11 cm high HEPA-filters, EN 1822 with efficiency at 99.999% against 0.3 µm particle allows a clean sterile work chamber environment. The high HEPA-filter gives a longer life time, reduces noise and energy consumption. ULPA filters U-15 are also available with efficiency at 99.9999% against 0.3 µm particle - mainly for use in the electronics industry. The unique diffuser technology - gives turbulence free air flow obtaining laminarity better than ±10%.

Running costs

Digital Technology gives the benefits of low energy consumption at 0.7 Amp. Having strong fan(s), equates to a less restricted construction and allows the use of 11 cm deep HEPA-filters. The low volume cabinet construction saves unnecessary movement of expensive air - prolonging the life of HEPA-filters and blowers. Combining the low energy consumption with the low energy transmission to the work chamber, this gives temperature increase of less than 1 °C - thus lowering evaporation rates from samples and saves on expensive air conditioning of the room.

Slim, compact design

A slim compact design, total depth of less than 80 cm, allows easy installation and relocation without any need for disassembly. The low cabinet height allows the operator to select either positioning on the laboratory bench or location on a support stand - the sloping top allows for an unrestricted air intake, negating extended room height requirements. Fortuna is only 2.0 meter high with work position of 75 cm when located on a support stand

Designed for most applications

The cabinets versatility of design allows for weighing applications inside the work chamber, weighing to 4-5 decimals and with an anti-vibration platen down to 6 decimals.

Operator comfort



Ultra clean environment



Running costs



Slim design



Designed for most applications



The cabinet can be used for fermenters, robotic applications etc., as the table top can be lowered and the depth of the cabinet increased. Standard built-in options of heated and/or cooled table tops and microscopes makes the cabinet today's preferred choice for IVF applications. A built-in UV-light on the back wall with timer function and working aperture closure plate makes the cabinet ideally suitable for PCR work.
Other applications for the Fortuna cabinet include microelectronics (with ULPA-filters), contact and optical lens production, servicing of sensitive instruments and plant tissue culture or microbiology.

Service
All service operations and adjustments are performed from the front of the cabinet. Including exchange of HEPA-filters, exchange or adjustment of circuit boards and sensors. All alarms and fan speeds changes are adjusted from the microprocessor control panel Includes DOP valves.

Cleanroom design
The cabinet is designed for easy cleaning inside with corners radiused and contoured. Externally the cabinet is constructed on a box design concept with no screws and knobs, for easy cleaning. If required the cabinet can be wall mounted, saving valuable floor space.

Airflow pattern
The Fortuna cabinet utilizes a revolutionary new design of digital fans with 110 mm deep HEPA filters. This allows for lower noise levels, better air distribution and longer filter life. When used together with our unique laminator technology the down-flow air is better balanced and more uniform ensuring superior product protection under a turbulence free, laminar flow air atmosphere.
The work surfaces anti-vibration characteristics also improves operator comfort. Noise levels are further reduced and filter life extended by having the down-flow speed set at 0.32m/s ±10% (min 0.32 m/s) compared to others at 0.40m/s ±20% (min 0.32m/s).
The digital blower system is controlled directly and precisely from the microprocessor. This improves velocity control and ensures the monitoring and warning of any malfunctions.
The cabinet can easily be adjusted from the service mode by authorized personnel. Down flow speeds can be adjusted from 0.20 m/s up to 0.70 m/s.

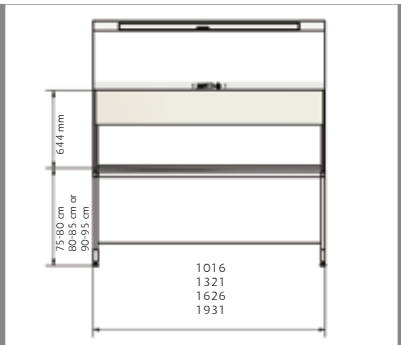
Eye Level control panel
All cabinet functions can be viewed from either a seated or standing position without interruption of work procedures. The control panel includes functions for reduced speed, re-setable hour counter, light and UV-timer, pressure drop alarm or optional down flow speed alarms. Service access is protected via a key pad code. The digital blower system and alarm settings are precisely controlled via the microprocessor giving excellent airflow performance.

Compact
Being only 690 mm deep, the cabinet can easily be transported through 800 mm doorways. The compact design also saves on valuable laboratory space. The cabinet is available in 4 sizes 900, 1200, 1500 and 1800 working widths. Multiple Fortuna cabinets can be built together giving for example a 2100 cm unit (900 + 1200) or (1200 + 1800) to give a 3000 cm width cabinet, This makes the Fortuna a flexible and versatile working enclosure.

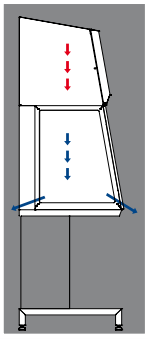
Cleanroom design



Compact design



Airflow pattern



Compact

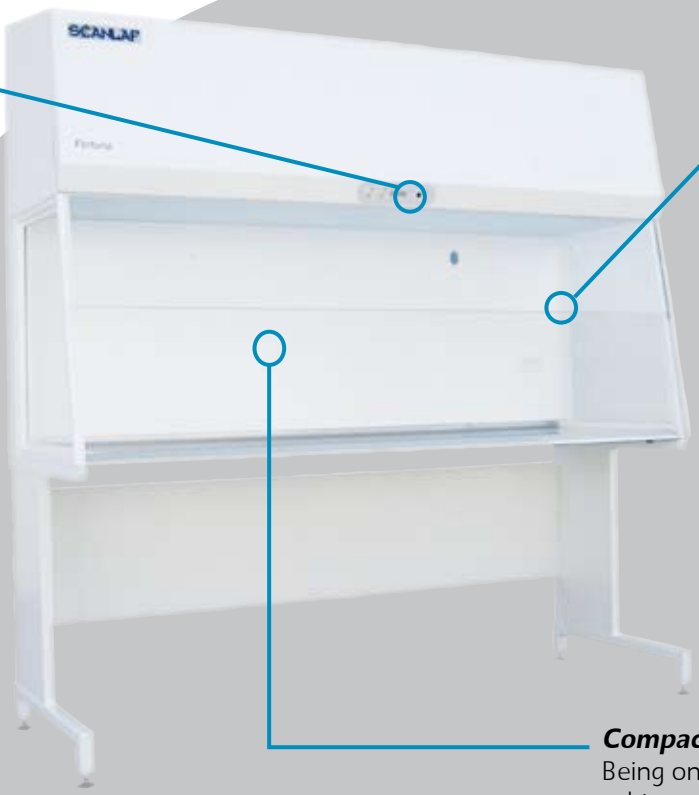


Microprocessor cont



High work opening.
The normal work opening is fixed at 35 cm high for best operator comfort and avoids intrusions of air from the room even at low air flow speeds.
Alternative 55 cm opening is available to give access to "high" equipments or glassware that you may use inside the cabinet. Horizontal flow cabinets have been the preferred choice for many years but now with a high work opening of 55 cm available, the Fortuna gives true clean air flow all around any equipment placed inside the cabinet.
No air flow directly into the face of the operator, lower noise levels and better lighting conditions make the Fortuna the "better choice" option.

Microprocessor control
Digitally controlled fans give very precise settings of fan speed and also allow precise direct setting of the fan speed and gives up to 75% more power compared to similar analogue units. The noise levels are much lower - the energy consumption correspondingly lower. Pressostat measurement is standard. Pressure measurement is an indirect measurement and can therefore be used as an indicator of any HEPA filter blockage. Air flow meter can be used as an option for the direct control of the down flow air. If required, an Air Flow meter option can be provided for the direct control of the down flow air with speeds being directly indicated for easy read out. Energy saving reduced air speed gives fast and easy start up of the cabinet and maintains the cabinet being used or is unattended.



Eye Level control panel
All cabinet functions can be viewed from either a seated or standing position without interruption of your working procedures. The panel includes functions for reduced speed, resetable hour counter, light intensity adjustment, UV light timer, downflow alarms and service access. The fans are precisely, digitally controlled by the microprocessor giving excellent continuous performance.

High work opening.
The normal work opening is fixed at 350 mm. Some applications require other working heights or access to the work area for cleaning or placement of equipment. For these applications, fixed heights up to 550 mm or electrically operated sliding windows or manual hinged windows are available as options

Compact
Being only 690 mm deep, the cabinet can easily be transported through 800 mm doorways. The compact design also saves on valuable laboratory space. The cabinet is available in 4 sizes: 900, 1200, 1500 and 1800 mm working widths.

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Accessories

A wide accessory program is available and the modular design allows for the fitting of microscopes, heated/cooled work tops, waste systems, freeze dryers etc.

Product	
9.000.023.000	Fortuna 900
9.000.020.000	Fortuna 1200
9.000.022.000	Fortuna 1500
9.000.021.000	Fortuna 1800
Accessories	
Table tops	Please select a table top type
9.000.020.001	Stainless Steel table top for Fortuna 900
9.000.020.002	Stainless Steel table top for Fortuna 1200
9.000.020.003	Stainless Steel table top for Fortuna 1500
9.000.020.004	Stainless Steel table top for Fortuna 1800
9.000.020.005	Melamine table top for Fortuna 900
9.000.020.006	Melamine table top for Fortuna 1200
9.000.020.007	Melamine table top for Fortuna 1500
9.000.020.008	Melamine table top for Fortuna 1800
9.000.025.050	Increased internal work height from effective 64 cm to 80 cm
Support stand	Please select the stand for required work height
9.000.020.151	Adjustable support stand 76-80 cm 900
9.000.020.152	Adjustable support stand 76-80 cm 1200
9.000.020.153	Adjustable support stand 76-80 cm 1500
9.000.020.154	Adjustable support stand 76-80 cm 1800
9.000.020.011	Adjustable support stand 80-85 cm 900
9.000.020.012	Adjustable support stand 80-85 cm 1200
9.000.020.013	Adjustable support stand 80-85 cm 1500
9.000.020.014	Adjustable support stand 80-85 cm 1800
9.000.020.161	Adjustable support stand 90-95 cm 900
9.000.020.162	Adjustable support stand 90-95 cm 1200
9.000.020.163	Adjustable support stand 90-95 cm 1500
9.000.020.164	Adjustable support stand 90-95 cm 1800
9.000.020.101	Electrical elevation stand 75-105 cm 900
9.000.020.102	Electrical elevation stand 75-105 cm 1200
9.000.020.103	Electrical elevation stand 75-105 cm 1500
9.000.020.104	Electrical elevation stand 75-105 cm 1800
Valves	Please select window type with location left/right for each
9.000.020.106	Window in toughened glass no holes
9.000.020.109	Window in toughened glass with 3 hole for valves Fortuna
9.000.020.110	Window in toughened glass with 1 holes for valves Fortuna
9.001.020.014	Adjustable support stand 75-80 cm M1800
9.000.020.015	Valve, gas
9.000.020.016	Valve, vacuum
9.000.020.017	Valve, carbon dioxide
9.000.020.018	Valve, nitrogen
9.000.020.019	Valve, pressurised air
9.000.020.020	Valve, oxygen
9.000.020.030	Gas resetable solenoid valve - please add to gas-valve

UV-light	
9.000.020.117	UV-light mounted on the backwall with timer
9.000.025.010	Alu Front closing plate for Fortuna 900 avoids radiation form UV to the room
9.000.025.011	Alu Front closing plate for Fortuna 1200 avoids radiation form UV to the room
9.000.025.110	Alu Front closing plate for Fortuna 1500 avoids radiation form UV to the room
9.000.025.111	Alu Front closing plate for Fortuna 1800 avoids radiation form UV to the room
Charcoal option	**Mounted on air inlet making VOC free environment**
9.000.025.012	Charcoal filter and kit, Fortuna 900 and 1200
9.000.025.013	Charcoal filter and kit, Fortuna 1200 and 1800
9.000.025.014	Charcoal Prefilter for Fortuna 900-1200
9.000.025.015	Charcoal Prefilter for Fortuna 1500-1800 set of 2 for 1
9.000.025.016	Main Charcoalfilter Fortuna 900-1200
9.000.025.017	Main Charcoalfilter Fortuna 1500-1800 setof 2 for one
El-outlets	**Mounted in the cabinet - no minimum ordering required**
9.000.020.021	Electric outlet, single Danish left
9.000.020.022	Electric outlet, single German left
9.000.020.023	Electric outlet, single British left
9.000.020.024	Electric outlet, single French left
9.000.020.025	Electric outlet, single Swiss left
9.000.020.026	Electric outlet, single US left
9.000.020.027	Electric outlet right side mounting as left side
Window	**Fixed safety glass window of 35 cm is delivered as standard. Please order alternatives:**
9.000.020.100	Fixed front window with 55 cm opening
9.001.020.201	Hinged window with 35 cm opening F-900
9.001.020.202	Hinged front window in safety glass allow 35 cm op F-1200
9.001.020.203	Hinged front window in safety glass allow 35 cm op F-1500
9.001.020.204	Hinged front window in safety glass allow 35 cm op F-1800
ULPA filters	If ULPA filter is required instead of HEPA filter
9.000.050.600	ULPA filter for F-900
9.000.050.601	ULPA filter for F-1200
9.000.050.602	ULPA filter for F-1500
9.000.050.603	ULPA filter for F-1800
Microprocessor	
9.001.020.127	USB port for communication and with computer inclusive software package in Excell
9.001.020.114	Minhelic mounted on the backwall for guidance of safety
9.001.000.087	Pir-sensor - turns automaticaly to full speed and light upon any movement
9.000.050.325	Flow sensor for air speed control

Other accessories	
9.001.020.126	Zink 325 x 325 x 200 in st. steel with water tap specify left or right
9.000.025.001	IV-Bar mounted in the back wall
9.001.020.112	LAF-LCD Screen 19 inches with magnetic mounting 2,5 m cables
9.001.020.124	4 Castors lockable for mounting on support stands
9.001.020.125	Heated platen zone system 300 x 450 mm with circulator and practical shelf
9.001.000.088	Bunsen Burner with foot switch



UV light



El operated stand



Gas valve



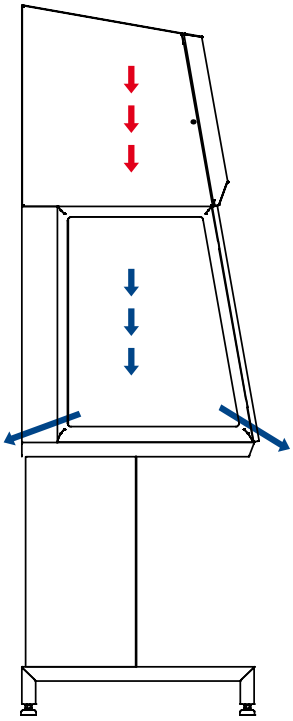
Bunsen burner with foot switch



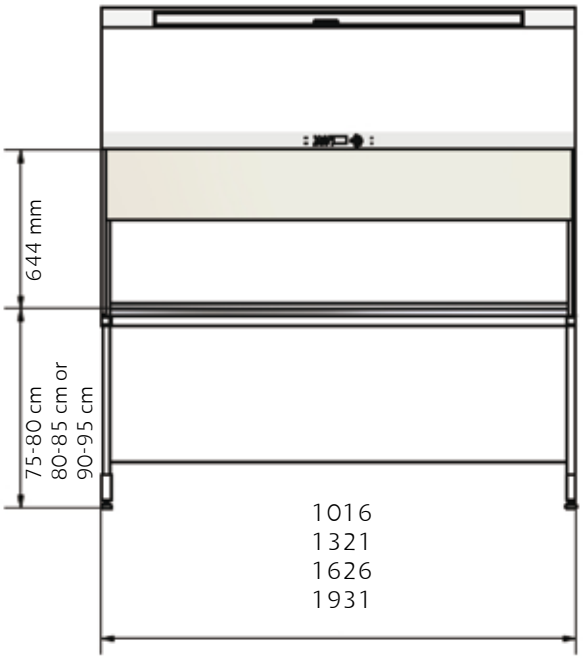
Window allowing 55 cm work opening



Moveable screen mounted on magnet



True laminar air flow pattern of the Fortuna. Red indicating inflow air and blue indicating the clean air.



Size information relating to the Fortuna models of 0.9; 1.2; 1.5 and 1.8 metre width cabinets.

Technical specifications:

Model	Unit	F-900	F-1200	F-1500	F-1800
Cataloque no.		20698998	20698298	20698598	20698898
External dimensions (DxWxH)	mm	686x1031x1335	686x1331x1335	686x1631x1335	686x1931x1335
Working chamber, dimensions (DxWxH)	mm	564x900x636	564x1200x636	564x1500x636	564x1800x636
Working height	m	0.75-1.10 in 2.50 rooms			
Front opening, fixed	mm	350 optional 550			
Air velocity, vertical flow	m/s	0,30 (adjustable 0.10-0.70)			
Air velocity, deviation	±%	10			
Down flow rate	m^3/h	500	650	810	975
Noise level, ISO 6081	dB(A)	<52	<52	<53	<53
Light intensity variable	Lux	0-2000			
HEPA filters, EN 1822		Efficiency is 99.999% against 0.3 µm particle H-14 size 99.995% in MPPS			
Voltage/frequency	V/Hz	220-240/50-60 or 110-120/50-60			
Negative pressure champer		Yes			
Clean room box design		Yes			
Power consumption	W	300	300	400	500
Fuses	A	10			
Window material		Hardened safety glass			
Cabinet material		Polyester coated steel/AISI 304 Stainless steel			
Net weight	kg	150	170	190	210
Shipping volume	m^3	2.2	2.9	3.2	4.1