



Product datasheet

Essa® DO-Series Drying Ovens

The Essa® Drying Ovens Models DO1 and DO2 are robust, high-capacity, electrically-heated ovens from FLS.

Benefits

- **Improved quality:** stainless steel lining reduces corrosion, minimising sample contamination. The steel drying trolleys are powder-coated (rather than galvanised) thus avoiding possible zinc contamination.
- **Increased productivity:** uniform and optimised drying is provided by a stainless steel recirculating fan and dampening valves.
- **Ergonomically designed trolley:** fitted with heavy duty, large diameter steel wheels and wire mesh shelves.
- **Improved thermal efficiency:** insulated walls, 5 mm steel plate floor, and positive door closure and sealing minimise energy loss.
- **Personal safety:** robust door latch has an internal release so an operator cannot be locked inside.
- **Longer frame life:** internal lining fixed using stainless steel blind rivets prevents moisture transfer.

Robust and user-friendly

Two options to suit your sample loads

The well proven, electrically-heated Essa® Drying Ovens are tailored for application and specific loads. They come in two sizes:

- **DO1:** is a robust and user-friendly oven with a single wheel-in/wheel-out trolley.
- **DO2:** is a functional and reliable oven that holds two wheel-in/wheel-out trolleys.

Each oven is supplied with one or two wheeled trolleys incorporating a number of heavy duty powder-coated wire mesh racks to carry the samples to be dried.

Advantages of using a trolley oven

- **Reduced operational costs:** a trolley-type oven saves energy and time.
- **Fast drying times, reduced fuel costs and less spillage of hot air into the work environment:** quick oven loading and unloading ensures minimal heat is lost from the oven.
- **Improved worker health and safety:** the wheeled trolley provides excellent sample mobility. There is no need to lift samples manually around the laboratory.

Strong and reliable

The Essa® DO Series Drying Ovens have been specifically engineered to withstand the corrosive environment inherently created within them, due to the combination of high temperature, moisture and an often chemically-active atmosphere created by the drying process. The oven construction is of stainless steel-lined interior with fibre glass insulation; powder-coated exterior; and heavy duty steel, powder-coated trolleys and racks. The stainless steel lining reduces corrosion, minimising sample contamination. The digital temperature control provides precise and accurate control of drying temperature, which can be critical for geochemistry applications.

Cost-efficient operation

The Essa® Drying Ovens are designed for maximum value and durability. A trolley-type oven saves energy and time, thereby reducing operational costs. Additionally, quick oven loading and unloading ensures minimal heat is lost, reducing spillage of hot air into the work environment. There's increased productivity due to uniform and optimised drying, which is provided by a stainless steel recirculating fan and dampening valves. Longer element life is another feature because of the automated oven temperature control plus a separate thermocouple and mechanical thermostat circuit.

Advanced safety features

All door latches have an internal release so operators cannot be locked inside. Each oven is factory set with an operating temperature range of 105° C to 120° C controlled by the thermocouple. The internal temperature can be read through the window in the control box door. Should the oven reach an overload situation for any reason, such as a burnt-out motor, the elements will be turned off and a yellow light on the control box will illuminate. This will effectively turn off the oven.

There is a vent on the top panel of the oven with a handle to open and close the vent, positioned at the top of the same side as the control box. The vent should be opened when the oven reaches operating temperature to allow moisture to escape as part of the process of drying the samples.

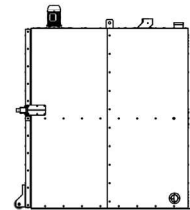
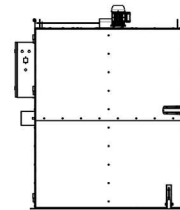
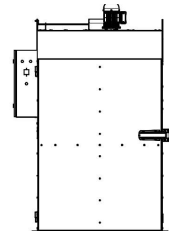
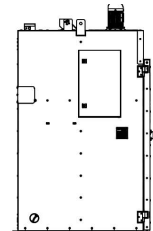
The wheeled trolley provides excellent sample mobility and there is no need to lift samples manually around the laboratory. Ergonomically designed, the trolley is fitted with heavy duty, large diameter steel wheels and wire mesh shelves.





1. Corrosion resistant stainless steel lining fastened with blind rivets ensuring tight joints and minimal moisture transfer.
2. Guard rails protect the oven lining from trolley impact.
3. Internal door latch prevents operator being accidentally locked inside the oven.
4. Support wheel on the DO2 oven door prevents sagging and aids in opening and closing.
5. Stainless steel air recirculation fan.
6. The adjustable air vent aids the operator to control mix of fresh and moist exhaust air within the oven.
7. Two air inlet vents allow fresh air to flow inside the oven.
8. Heavy duty stainless steel base.

Specifications		
	DO1	DO2
Internal Volume	1.8m ³	4.6 m ³
Number of Trolleys	1	2
Trolley Dimensions (W x D x H)	0.87 m x 0.87 m x 1.33 m	0.60 m x 1.40 m x 1.62 m
Shelves per trolley	6	9
Total Shelf Area Per Oven	4.54 m ²	15.12 m ²
3 Phase Power Requirement	10 kW	10 kW
Air Circulation	Stainless Steel Centrifugal Fan	Stainless Steel Centrifugal Fan
Construction	Corrosion Resistant Stainless Steel Interior, Glass Fibre Insulation, Powder-coated Exterior	Corrosion Resistant Stainless Steel Interior, Glass Fibre Insulation, Powder-coated Exterior
Recommended Operating Temperature	105°C	105°C
Recommended Max Operating Temperature	120°C	120°C
Thermocouple	Type K	Type K
Elements	3 x 3 kW	3 x 3 kW
Internal Dimensions (W x D x H)	1.0 m x 1.0 m x 1.8 m	1.5 m x 1.6 m x 1.9 m
External Dimension (W x D x H)	1.4 m x 1.3 m x 2.1 m	1.9 m x 1.9 m x 2.2 m



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