Natgraph
EQUIPMENT SOLUTIONS

ULTRA-VIOLET SCREENPRINTING | FORCED AIR STENCIL EXPOSURE | INFRA-RED DRYING TECHNOLOGY

Drying Solutions Centre

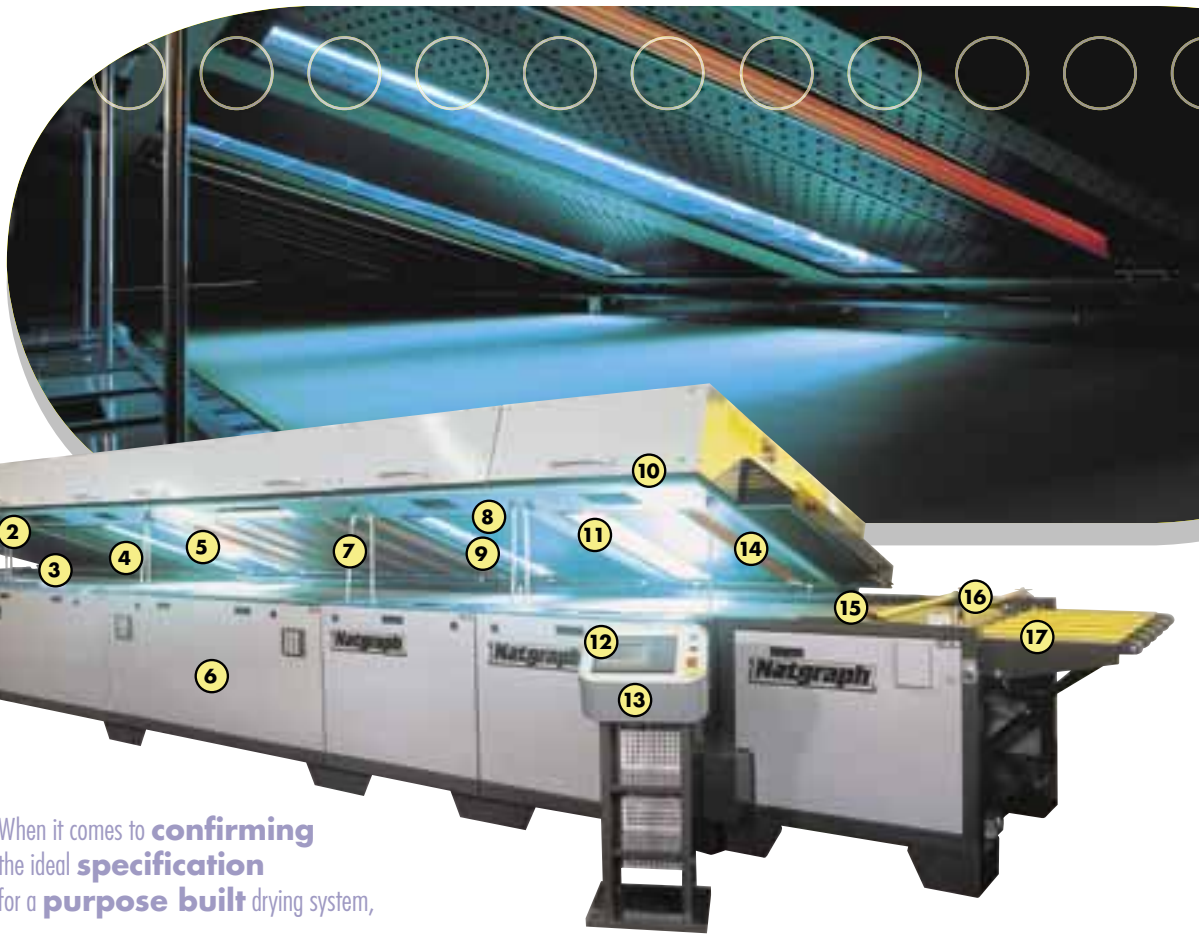
stencil processing

screen printing

air force

ultra violet

infra red



When it comes to **confirming** the ideal **specification** for a **purpose built** drying system,

1 **Refrigerated cooling module** with external hot gas bypass system, connected to an industrial refrigeration plant
2 **Ambient cooling system** with variable speed operation
3 **Split belt between the drying and cooling sections** with stainless steel, cross-over bridge
4 **200°C variable speed, Forced Air module** with individually selectable, Medium Wave Infra Red lamps in stainless steel, vented and focused reflectors
5 **UV combination module** with two separate, single lamphouses and interchangeable reflectors for semi focused or high intensity operation
6 **Balanced vacuum system** throughout the dryer
7 **Pneumatic lifting hoods** for easy access
8 **Pre UV Forced Air system** for drying water based UV inks
9 **Twin lamp high intensity** Gallium UV lamp module
10 **External cladding system** for high thermal efficiency
11 **Twin lamp high** intensity Mercury Vapour UV lamp module
12 **Full PLC control system** for all aspects of the dryer's functions, with data logging of all controllable parameters and job memory capability
13 **Internal modem** for remote diagnostics
14 **Infra Red system** with Thyristor Control on a percentage basis
15 **Variable speed vacuum** hold-down system on the inlet and outlet
16 **Intelligent UV** control system
17 **Pneumatically operated drop down inlet**

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Member SGIA

The Natgraph Drying Solutions Centre

The Drying Solutions Centre at Natgraph's premises

To arrive at the optimum drying system for a particular application, there must be a knowledge of the process as well as an understanding of the effects of different types of energy on surface coatings.

If the drying process can be quantified and costed accurately, the benefits in terms of energy efficiency, valuable production floorspace and increased output, can deliver a very short term pay-back.

Test, Test & Test again

Knowledge of the drying process should ideally involve trials using the exact substrates, ink types, ink colours, mesh sizes and production speeds used in applying surface coatings. The only way to ensure the correct drying system is to Test, Test and Test again!

Five years ago, Natgraph installed its first dedicated test dryer within the factory.

This investment coupled with a vast range of data gathering equipment brought recognition to Natgraph as the premier manufacturer of industrial conveyorised dryers in Europe and probably world-wide.

Meeting the challenge

As the industry continued to develop, the demand for precise data accumulation and analysis became greater.

Therefore, Natgraph decided to invest still further in the ultimate test dryer, the centrepiece of a dedicated 'Drying Solutions Centre' at their premises in Nottingham.

This dryer employs every type of drying technology Natgraph has ever manufactured, featuring forced air evaporation, high temperature cross-linking and UV curing with the opportunity for combinations of all three.

Be in total control

Furthermore, it has the ability to control each of the technologies individually to extreme levels so that a potential customers precise production conditions can be created. A new state-of-the-art screen printing machine has also been installed alongside to enable precise surface coating thicknesses to be applied.

The dryer has a PLC control system with colour graphic interface unit (MMI), as well as inverter drive on all the fan motors so the air velocity (speed) at the substrates surface can be altered. The belt speed is controllable from 0.1m to 60m per minute, via a feedback loop.Finally, a pneumatic drop down inlet and TV camera monitoring of the substrate delivery completes the picture.

Demand from customers and suppliers

Visitors from around the world have already made great use of this unique testing facility to gain knowledge of their existing and proposed drying processes.

Substrates from 80 micron polyester through to 24mm thick glass have been successfully put through the dryer to confirm the optimum technology required to dry a screenprinted coating or image on its surface. The coatings themselves have varied in thickness from just 15 to 250 microns, with production speeds from 300mm to 65m per minute being achieved depending upon the process.

Only through rigorous testing of a drying process can knowledge be gained. Now Natgraph have the facilities to confirm that knowledge with you and for you.

Call 0115 979 5800 to arrange a visit to the Drying Solutions Centre.

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