DEL series Electric IR&HOT AIR Tunnel dryer





DEL series electric dryer is affordable multitask tunnel dryer. With its segmental chamber design provides choice of productivity capacities. The choice of belt widths (24" - 72") determines the max. curing element size. Compact transportation package foot print lowers transport cost and provides easy floor access.

Conveyor belt system driven by AC gear reducer controlled with frequency converter drive. Belt speed is readable on LCD display. Remote belt speed adjustment possibility.

Temperature true-on belt reading, PID temperature regulator control, independent heat chambers power supply and temperature settings.

Low energy consumption is assured with 150 mm insulated walls, efficient IR ceramics and segmental design. Adjustable flow exhaust of fumes assures temperature stability in heat chamber. Hot air adjustable flow with thermal insulated drive provides great flexibility in curing.

ANY INK ON ANY SUBSTRATE CURING with DEL series tunnel dryer.

As DEL series tunnel dryer combines 3 way of heating transmission it becomes universal for many substrates and ink types. In general DEL's series dryer can work in 3 modes:

IR MODE explanation

While Ceramic Infra Red heat elements provide heat as IR radiation transmitted directly into curing substrate. We benefit from IR radiation with low heat losses spread into surrounding air in heat chamber. We can also fit our transmitted wave length into the requirements of specific ink. Common mistake made by other manufactures is use of hight adjustment for IR elements. The reference point for temperature sensing is lost in such situation and calibration must be done for each height level separately.

HOTAIR MODE explanation

Hot air is necessary for proper water and solvent ink curing. The flow amount and temperature is crucial in this process. The air flow is transmitting energy from Ceramic panels IR radiation into convection of HOT AIR. For this mode the temperature sensor will need offset for proper readings according to IR MODE.

MIX OF HOT AIR + IR MODE explanation

In this mode we combine IR radiation with HOT AIR convection. By reducing air flow amount we keep IR ceramic panels in higher temperature providing IR radiation. However we have also hot air low flow amount blowing. This configuration might be used for transfer paper printed with plastisol ink curing. While substrate is highly temperature sensitive and ink demands certain energy amount absorption to be cured.

DEL series Electric IR&HOT AIR Tunnel dryer



technologu on uour side

STANDARD FEATURES

HEATING ELEMENTS

·Ceramic heating elements with wave length 3.3 um suited for plastizol inks curing while operated with nominal power

· With even power density across belt width and low maintenance cost

HEAT MANAGEMENT

- · IR combined with adjustable flow HOT AIR provides full control over IR radiation, amount of convection flow and temperature
- · We offer much more sophisticated curing process than just temperature setting

SEGMENTAL EXPANDABLE DESIGN

- · All heat chambers are made of 2 or 2.5 meter length segments. Mostly used are 1 or 2 heat segments depending of productivity needed.
- \cdot The heat segments can be disassembled quickly into basic elements enabling installation throw narrow doors or throw staircase

AIR CIRCULATION

- · Air circulation with adjustable flow, sucking air leaving heat chamber and guiding it evenly to the conveyor belt
- · Air is spreading around ceramic elements exchanging heat with it
- · Blower motor is temperature isolated

MULTISUBSTRATE & MULTINK CURING

DEL series dryer provide wide range substrate and ink drying. Plastisol ink, Water base ink, solvent inks, Substrates can be textile, plastic, paper foil and $other\ also temperature\ sensitive\ materials.\ With\ this\ very\ specific\ feature\ it\ is\ possible\ curing\ high\ power\ density\ demanding\ inks\ like\ plast is\ ols\ on\ power\ density\ demanding\ inks\ like\ plast\ is\ ols\ on\ power\ density\ demanding\ inks\ like\ plast\ is\ ols\ on\ power\ density\ demanding\ inks\ plast\ is\ ols\ on\ power\ density\ demanding\ power\ density\ demanding\$ temperature sensitive substrates as paper. This we achieve using unique feature of simultaneous IR emission with substrate cooling.

 $\cdot Smart design do \, not \, cost \, more \, in \, manufacturing \, and \, gives \, all \, advantages \, of \, having \, efficient \, and \, multifunctional \, dryer \, drye$

TEMPERATURE STABILITY

· As described above temperature might mean different things for different curing process. Good understanding of this knowledge will help in curing process. Whatever MODE we work with DEL-series dryer it stays temperature and power density stable.

ENERGY EFFICIENCY

- · 100 mm insulated walls
- ·adjustable in/out shutters
- · reflective inside material for IR low penetration
- · adjustable exhaust chimney for low fumes losses

CONTROL INTERFACE

- · Control interface consists of PID temperature regulator
- $\cdot belt\, speed\, regulation\, with\, LCD\, visualization$
- · air circulation with flow adjustment
- · heating ON/OFF switch
- · LED power light signalization
- · E-STOP, ON/OFF Buttons in standard

CONVEYOR SYSTEM

- · Build of heat resistant Fiberglas Teflon coated heavy duty belt
- · Driven by direct-on shaft AC reducer controlled with frequency converter
- · Its truly industrial drive with LCD display speed display
- · Both direction operation

WARRANTY & SERVICE

- · 2 year warrantv
- · service agreement on special conditions

OPTIONS

- · 3 color light tower for dryer stage signalization
- · customized heat chamber and inlet / outlet
- · UV heat chamber

	DEL-24 series		DEL-38 series						
Belt Width	61 cm (24")		96 cm (38")						
MODELS	2479A	2499A	3879A	3899A	38114A	38158A	38198A		
Electrical requirements 400 VAC, 3 PH	8.8 kW, 32A plug	10.5 kW, 32A plug	13.5 kW, 32A plug	16 kW, 32A plug	19 kW, 32A plug	27 kW, 2 x 32A plug	32 kW, 2 x 32A plug		
Heat chamber length	200 cm	250 cm	200 cm	250 cm	290 cm	2 x 200 cm	2 x 250 cm		
Inlet / Outlet length	50 / 50 cm	50 / 50 cm	65 / 65 cm	65 / 65 cm	90 / 90 cm	90 / 90 cm	90 / 90 cm		
Overall length	300 cm	350 cm	390 cm	440 cm	530 cm	640 cm	740 cm		
Shipping weight	420 kg	480 kg	650 kg	850 kg	980 kg	1350 kg	1500 kg		
Air circulation	Heat insulated motor, adjustable flow								

		DEL-4	8 series	DEL-60 series					
Belt Width		122 cn	1 (48")	152 cm (60")					
MODELS	4899A	48114A	48158A	48198A	60114A	60158A	60198A		
Electrical requirements 400 VAC, 3 PH	20 kW, 32A plug	23 kW, 32A plug	33 kW, 2 x 32A plug	40 kW, 2 x 32A plug	28 kW, 63A plug	40 kW, 2 x 32A plug	48 kW, 2 x 63A plug		
Heat chamber length	250 cm	290 cm	2 x 200 cm	2 x 250 cm	290 cm	2 x 200 cm	2 x 250 cm		
Inlet / Outlet length	90 / 90 cm	90 / 90 cm	90 cm / 90 cm	90 cm / 90 cm	90 / 90 cm	90 cm / 90 cm	90 cm / 90 cm		
Overall length	490 cm	530 cm	640 cm	740 cm	530 cm	640 cm	740 cm		
Shipping weight	1000 kg	1080 kg	1500 kg	1700 kg	1180 kg	1650 kg	1900 kg		
Air circulation	Heat insulated motor, adjustable flow								