

# DEL series Electric INFRARED & HOT AIR Tunnel dryer

# Printex<sup>UE</sup>



- Belt width  
61 - 152 cm (24" - 60")

DEL series electric dryer is affordable multitask tunnel dryer. With its segmental chamber design provides choice of productivity speeds. The choice of belt widths (24" - 60") 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 100 mm insulated walls, efficient IR ceramics and segmental design. Exhaust of fumes is gravitation type, while it do not affect 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 height 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.

#### HOT AIR 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 INFRARED & HOT AIR Tunnel dryer

# Printex<sup>UE</sup>

## STANDARD FEATURES

### HEATING ELEMENTS

- Ceramic heating elements with wave length 3.3 um suited for plastisol 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.
- The heat segments can be disassembled quickly into basic elements enabling installation through narrow doors or through 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 plastisols on temperature sensitive substrates as paper. This we achieve using unique feature of simultaneous IR emission with substrate cooling.

### SMART DESIGN

- Smart design do not cost more in manufacturing and gives all advantages of having efficient and multifunctional dryer

### 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

### CONVEYOR SYSTEM

- Build of heat resistant Fibreglas 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

### CONTROL INTERFACE

- Control interface consists of PID temperature regulator
- 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

### WARRANTY & SERVICE

- 2 year warranty
- service agreement on special conditions

### OPTIONS

- 3 color light tower for dryer stage signalization
- customized heat chamber and inlet / outlet
- UV heat chamber
- LCD signalization for air circulation blowing flow

	DEL-24 series			DEL-38 series			DEL-48 series		DEL-60 series
Belt Width	61 cm (24")			96 cm (38")			122 cm (48")		152 cm (60")
MODELS	2479(A)	2499(A)	24158(A)	3879(A)	3899(A)	38158(A)	4899(A)	48158(A)	24158(A)
Electrical requirements 400 VAC, 3 PH	8.8 kW	10.5 kW	17 kW	13.5 kW	16 kW	27 kW	20.5 kW	33.5 kW	40 kW
Heat chamber length	200 cm	250 cm	2 x 200 cm	200 cm	250 cm	2 x 200 cm	250 cm	2 x 200 cm	2 x 200 cm
Inlet / Outlet length	50 cm / 50 cm	50 cm / 50 cm	75 cm / 75 cm	50 cm / 50 cm	50 cm / 50 cm	75 cm / 75 cm	95 cm / 95 cm	120 cm / 120 cm	120 cm / 120 cm
Overall length	300 cm	350 cm	550 cm	300 cm	350 cm	550 cm	440 cm	640 cm	640 cm
Shipping weight	420 kg	480 kg	750 kg	520 kg	600 kg	920 kg	730 kg	1180 kg	1330 kg
Air circulation	Heat insulated motor, adjustable flow			Heat insulated motor, adjustable flow			Heat insulated motor, adjustable flow		Heat insulated motor, adjustable flow