3DT APPLICATION NOTES

TubeDyne: Catheter and Medical Tubing w/ enclosure

PURPOSE

Catheter material and medical tubing made of Pebax, PP, PE, and Nylon often lack sufficient surface tension for proper bonding of adhesives and printing inks. TubeDyne gently, yet powerfully treats medical tube ends for a permanent bond to other tubing, housings and surgical instruments utilizing plasma treatment.

Carefully controlled in-air plasma alters the surface energy of the tubing causing it to 'wet-out' or accept adhesives and ink with a powerful bond.

EQUIPMENT

TubeDyne's compact, self contained table-top treating system includes an integrated generator, transformer, electrode assembly, safety enclosure for tubing with conductive wire and ozone filter.

The PLC base control system includes a human/machine Interface (HMI) with a back lit display and programmable, monochrome touch screen featuring: status menu, run time log, service hour log, and an alarm / troubleshooting menu.

SOLUTION

3DT's TubeDyne Treating System is designed for outside treatment of the catheter tube ends. Any non-conductive and semi-conductive tubing up to .25" (6mm) in diameter can be placed in the holding fixture and receive uniform plasma treatment at a length of approximately 2.00" (50mm). After placing the tubing in the fixture, the operator presses the two-hand safety switches and the tubing is treated with a controlled amount of treatment to provide consistent treatment levels.

Before and after TubeDyne treatment. Note how the dyne solution wets-out after treatment.

The versatile TubeDyne system treats diameters up to 0.25" (6mm) without any set-up changes.

TubeDyne produces consistent, 360 degree treatment of tube ends resulting in powerful bonding. The use of a recipe-based control system assures uniform, repeatable treatment results even on semi-conductive parts.

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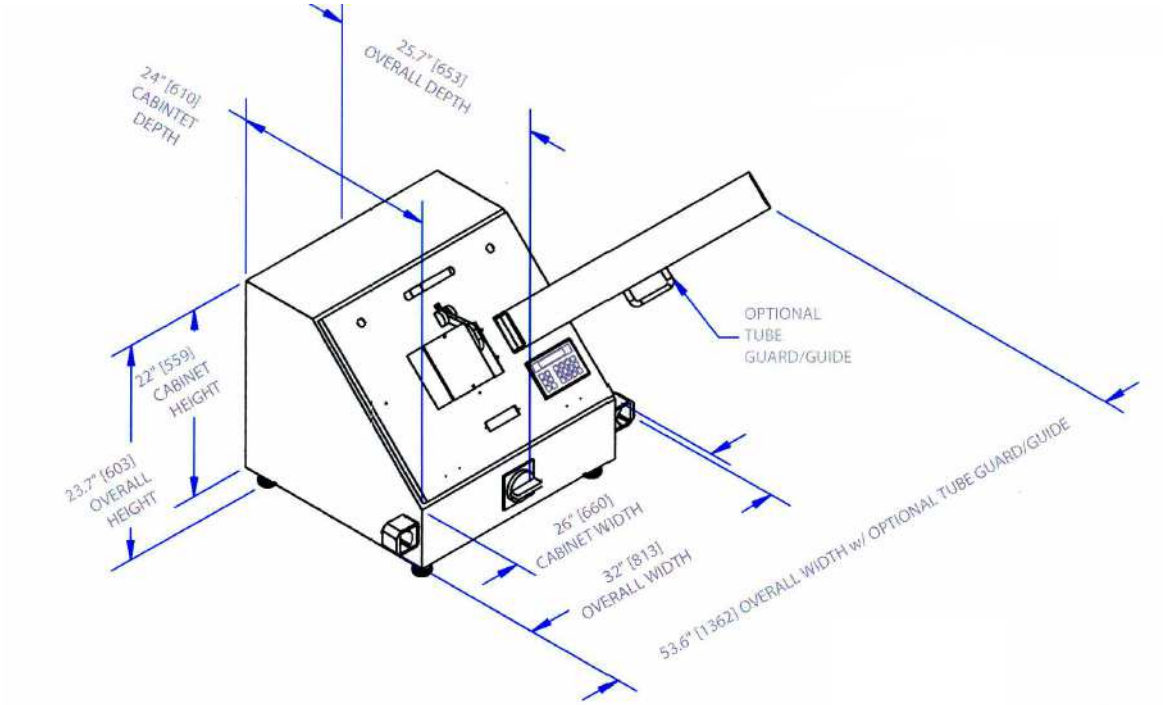
TubeDyne: Catheter and Medical Tubing

with safety enclosure for tubing with conductive wire



Model:	TubeDyne
Part #:	10031-57
Number of Heads:	1
Power Output:	800 Watts
Voltage at Electrode:	2 × 12 kV
Input Voltage:	120 or 240 VAC +/- 10%
Frequency:	50 / 60 Hz.
Phase:	Single
Full Load Amperage (FLA):	8.6 A
Line Fuse:	15 A
Ambient Temperature Range:	+ 5°C to +40°C
Relative Humidity (Non-Condensing):	20% - 50% at 40°C
Maximum Altitude:	6560 feet above Sea Level (7500m)
Noise Emissions:	66dB(A) in Stand-By 78dB (A) During Operation
Weight (Net):	220 lbs.
Shipping Weight:	319 lbs.
Dimensions (WxDxH):	54”x26”x24”
Height Variation:	Adjustable Leveling Feet
Compressed Air:	30 psi Minimum
Exhaust Nipple Dimension:	3 1/2” O.D.
Minimum Exhaust Flow:	50CFM (85m^3/h)
Exhaust Minimum Static Pressure:	1” W.C. (2.49 hPa)

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