

**THE POWER
TO ADHERE**

**Revolutionary Technology
for Powerful Adhesion
or Bonding on 3-D Parts**

3DTTM

THE POWER TO ADHERE

The Widest Range of Applications



PolyDyne™ is the most versatile and efficient system in 3DT's product line. It is specifically suited for use in high-speed printing, assembly, extrusion and coating lines.

Treatment from the interior surface of needle hubs to large bumpers and wide foam material is possible.

PolyDyne allows the application of Corona treatment to the exact part needed and increases adhesive properties regardless of shape.

The system features generator, high-voltage transformer(s) and a custom-designed treating station with electrode assembly to meet your specific requirements.

Our Solutions Are Inline With Your Needs

- An innovative frequency-matching system allows the generator, transformer and electrode systems to self-adjust and operate concurrently.
- Every unit is value-engineered with an enclosure to protect the operator from the high-voltage and offers provisions for safe ozone exhaust.
- It provides optimum efficient Corona treatment for high-speed production lines.



3DT's Philosophy:

3DT offers you system solutions including single-source design, manufacturing, installation and service, regardless of size or scope of the project. We combine our many years of experience with the most sophisticated and versatile generator and transformer technology in the marketplace. The result is a unique approach to your needs and requirements. Our solutions range from simple semi-automatic to complete fully-automatic systems integrated into your production line. Our systems and equipment are productively at work around the globe, serving customers in industries just like yours.



For Maximum Flexibility and Performance

MultiDyne™ is especially suited for treatment of smaller areas prior to pad/screen printing, gluing or coating.

The system can be incorporated into existing or new production lines or part of a stand-alone workstation.

Each system is furnished as a complete set of standard components, including a generator with high-voltage transformer(s), air supply system and treating head(s).

Treatment on surfaces adjacent to metal inserts or areas held in a metal fixture is easily accomplished with the flexibility of the MultiDyne system.

The MultiDyne system is available with single or multiple treating heads.



The MultiDyne Advantage:

- The generator supplies power to the high-voltage transformer(s) which then directly supply the treating head(s), resulting in low-frequency Corona discharge.
- Standard treating heads deliver treatment to unlimited lengths of material in widths up to 2.5" (65mm) per head.
- MultiDyne is available with 1 to 16 treating heads.
- Flat and complex 3-dimensional surfaces alike are treatable with the flexibility of the MultiDyne system.



The Ability to Treat Thick Materials

3DT's innovative approach to Corona Treatment goes beyond 3-dimensional parts. Our advanced designs allow quality treatment of thick materials like corrugated plastic boards and foam stock. These materials have been historically difficult – if not impossible – to treat. Now, our systems not only give you the ability to treat these materials, but to do it in a high-performance, highly efficient manner.



For Your Flexibility in Corona Treatment

FlexiDyne™ is a compact, self-contained floor model Corona treating system that is capable of treating most 3-dimensional plastic parts. Any non-metallic items that will fit through FlexiDyne's 6" wide and 2" high opening can receive uniform Corona treating of all exposed areas without any set-up changes. The FlexiDyne system is ideal for treatment of petri dishes, multi-well plates, eye lenses, headlight housings, speakers... virtually the majority of applications. FlexiDyne can be operated as a stand-alone workstation or integrated into existing or new production lines.

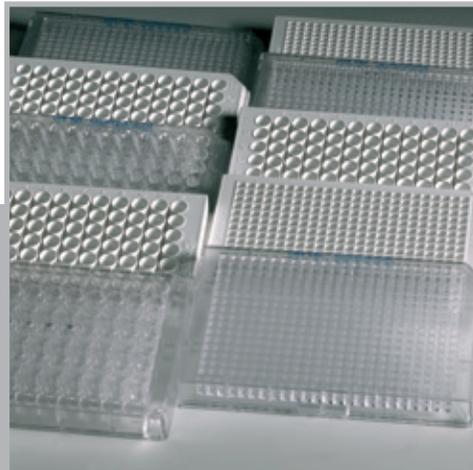
The FlexiDyne Advantage:

- Enhances pad printing, screen printing, coating, metalizing and tissue culture growth
- Treats different sizes and shapes without set-up changes
- No special placement of parts on conveyor belt required
- Minimal energy consumption
- Quality repeatability and uniform treatment
- Line-speeds of up to 15 feet per minute



The Solution:

While polymers – particularly materials like polyethylene and polypropylene – offer many beneficial properties that make them an essential part of your business, poor "wettability" creates limitations when it comes to designing for these materials. 3DT's series of Corona treating equipment solves this problem by increasing surface tension to provide powerful adhesion for your printing, bonding, coating or wetting application.



Surface Treatment of Empty Containers

Taking unique advantage of open-air Corona discharge directed to the surface requiring treatment, 3DT's self-contained BottleDyne™ pretreating systems set new standards for Corona technology. It's now possible to in-line Corona-treat virtually any extrusion or injection blow-molded container at line speeds of up to 7,000 parts per hour.

Treatment is done delicately, quickly and efficiently, without any damage to the surface being treated and without any adverse effect on the molding, printing or labeling process.

The state-of-the-art self-contained floor model systems are designed for easy installation into molding, printing and filling lines or can be used as stand-alone workstations.



The BottleDyne advantages:

- Treatment of cylindrical, rounded oval, rectangular and square containers
- Line speeds up to 7,000 parts per hour
- Treating levels up to 70 mN/m (dyne/cm) depending on the application
- Compact inline and maintenance-friendly designs with one easy to clean or change electrode assembly
- No damage to the treated surface
- Open air Corona discharge, directed to the surface requiring treatment, for high treating levels, even on polypropylene containers
- Easily installed into molding, printing and filling lines or used as a stand alone work-station
- No open flame and no heat developments to contaminate the work environment or to increase insurance premiums

In Addition...

All equipment and systems from 3DT are designed and manufactured at our plant located in Germantown, Wisconsin, USA.



Surface Treatment of Catheter Tubing



The TubeDyne™ Corona Treating System is designed for outside treatment of catheter tube ends.

Any tubing up to 0.375" in diameter, with or without metal inserts, can be placed in the holding fixture and receive uniform Corona treatment at a length of approximately 2.00".

TubeDyne is a compact, self-contained tabletop Corona Treating System including integrated generator, transformer, electrode assembly, holding fixture and ozone filter.

The system is PLC-controlled and features an operator console with a human machine interface (HMI), including: monochrome touch screen with status menu, run time log, service hour log and alarm/trouble-shooting screen.

The TubeDyne advantage:

- Self-contained compact tabletop system
- Enhances bonding of housing to catheter tube ends
- Powerful repeatable and uniform treatment
- Treats up to 0.375" in diameter without set-up changes



Advanced Technology

3DT, a leader in 3-dimensional treating systems, takes Corona treating a giant leap into the future. 3DT's broad program of Corona Treating Systems gives you the ability to treat virtually any 3-dimensional polymer surface regardless of shape, with superior quality results.



Advanced Surface Treating for Automotive Sealing Systems

PlasmaDyne™ generates an in-air shockproof plasma beam to uniformly treat surfaces for the adhesion of flocking glue, coatings or laminates. Uniquely designed to give you the ability to easily treat elastomer molded and extruded products – even those with grooves, small cavities and other hard-to-reach areas – PlasmaDyne allows you to work at line speeds up to 100 feet per minute. Plus it provides consistent treatment, even if the profile deviates from close proximity to the treating head. PlasmaDyne helps improve productivity while producing the highest quality bonding.

The PlasmaDyne Advantages:

- Self-contained floor model system easily integrates into new or existing extrusion lines
- Compactly-designed treating head and an all-in-one utility tube
- User-friendly, requires minimal maintenance, produces no ozone and eliminates the risk of high-voltage shocks
- Delivers a powerful surface treatment within a proximity of 1" or less from your profile
- Treating heads are all-metal and extremely durable



Providing Innovative Solutions

3DT is dedicated to offering new and better solutions. For years now, we've been the driving force behind technological innovation.

We have engineered the most versatile series of equipment to serve your needs and requirements.

We've effectively solved problems and improved efficiency for customers all over the world.

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