

RoboDry



Passion
for BODYSHOPS
TECHNOLOGY
PROCESS and
LAYOUT



SOLUTIONS FOR COLLISION INDUSTRY

ROBODRY

The RoboDry robot is designed to dry every part of a vehicle that has been painted as well as individual parts on stands. It is normally installed inside a spray booth for drying waterborne/solvent basecoat and clear coats.

The machine is composed of one overhead crane and three groups of radiant panels. This allows it to dry paint using its radiant waves on every side of the vehicle as well parts on stands. The horizontal group of radiant panels moves automatically up and down to meet the correct distance as well as the shape of the vehicle and spare parts. It moves the radiant panels along the length of the spray booth spreading out DryTronic waves at a 180° angle to the surface of the painted vehicle.

The RoboDry can dry every part of the vehicle that has been painted including bumpers installed because the horizontal panels can follow the profile of the vehicle and rotate 360°, always staying horizontal to the car's profile.

The RoboDry robot has a built-in database of formulas for drying any automotive paint manufacturer's waterborne/solvent basecoat and clear coat systems. The technician selects the brand and paint system to be applied. The robot then automatically manages the drying treatment

for distance, color, paint thickness and climate. The automatic adjustment and control of the treatment are based on a built-in laser that constantly reads the quality of the drying process.

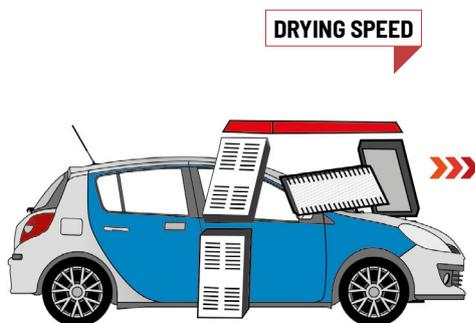
In new projects, Symach normally installs one RoboDry inside a FixLine SprayTron (only one booth), for waterborne/solvent basecoat and clear coat.

The RoboDry robot dries every brand of paint, primer and body filler. The drying speed is around 80 cm 32 inches per minute. For example, it dries the length of a vehicle's door in less than two minutes, or a paint job of 3-4 panels in 8-10 minutes.

One of the many advantages is the cost for drying, considering that the RoboDry consumes approximately 10% of the gas of a normal spray booth.

The efficiency of one painter using one RoboDry is 8-10 paint cycles per day. This includes painting and drying. This is possible only when the masking and unmasking of vehicles takes place in the stalls outside the spray booth. For this reason, we recommend installing the RoboDry only in a spray booth with side pneumatic doors and rails with a CarMover for pushing vehicles in and out of the booth, which takes only a few seconds.

DRYING PERFORMANCE



Dries a door in 1 minute and 30 seconds

The RoboDry dries approximately four times faster than other spray booths on the market. It dries the paint as it moves along the surface of the vehicle. The drying time is measured in centimeters or feet per minute.

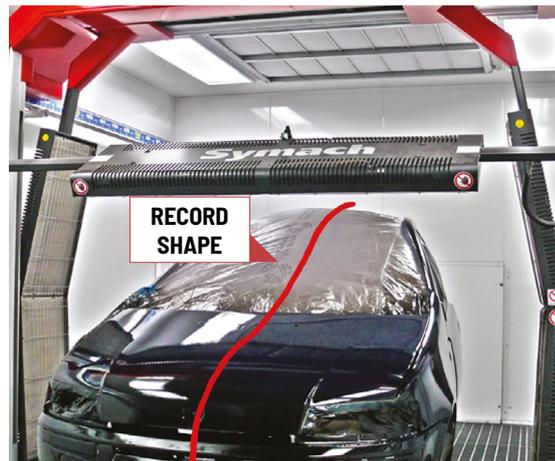
Depending if the technician uses the hardener - fast, standard or slow - the drying time is: **Sealer** / from 100 cm or 39" per minute, to 90 cm or 35" per minute. **Waterborne** / from 120 cm or 47" per minute, to 80 cm or 32" per minute. **Clear** / from 90 cm or 35" per minute, to 60 cm to 24" per minute.

THE COMPUTER



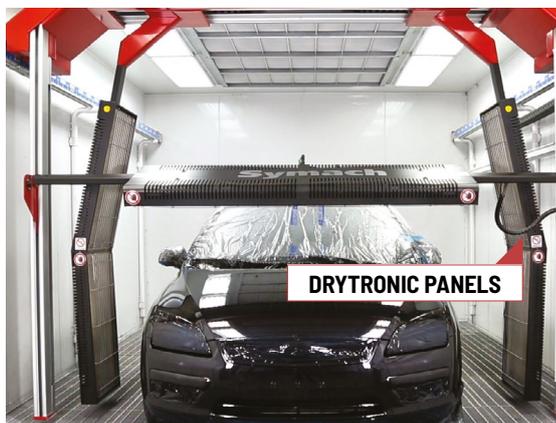
The RoboDry has a multi-language keyboard and a display located on the tower outside the spray booth. The painter can choose to enter a different start and finish point of drying for every DryTronic group of radiant panels. The painter selects the brand and paint type applied. The computer has predefined drying formulas for all paint types. The robot automatically determines the speed, temperature and distance from the surface; however, the system can be modified for special situations. The software automatically manages the "Drying Quality Control" during all phases of drying treatment, adjusting the intensity and quantity of the DryTronic waves to properly meet the parameter of the drying formula for perfect drying. The RoboDry automatically reads the profile of the vehicle using a scanner that is located on the overhead crane. It then uses this profile during drying treatment to perform the drying properly in every part of the vehicle.

AUTOMATIC SCANNER



The scanner performs a preliminary scan of the vehicle or part to be dried. This system acquires and stores the object shape, which will be used to keep the horizontal lamp unit parallel to and at the proper distance from the painted surface as it moves around the object during the drying cycle. As a result, RoboDry can dry vehicles and objects of any shape and size. The horizontal DryTronic panels automatically adjust to the shape of the vehicle and remain parallel to and at the proper distance from the surface. They can move around objects of any shape and dry vertical, sloping or horizontal surfaces perfectly.

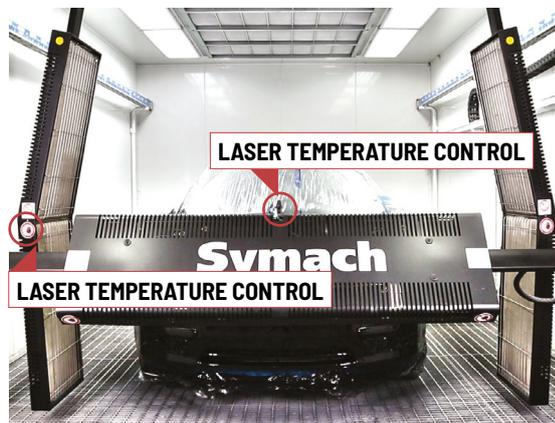
THE DRYTRONIC PANELS



The DryTronic lamp can run on LPG or natural gas with no difference in performance. The three groups of DryTronic radiant panels can be used independently or together depending on the surface of the painted vehicle. The DryTronic radiant panels generate energy using a catalytic chemical reaction (not with fire and combustion). This reaction is achieved by using a catalyzer, which breaks down the gas molecule and separates hydrogen from carbon. The carbon is not used; instead, when the hydrogen reaches the lamp's outer surface and comes into contact with oxygen, it generates electromagnetic waves. Symach's patented technology manages the wave's length and adjusts to the exact wave's range. This allows it to dry paint in 30-50 seconds.

> More information is available in the technology catalog.

LASER DRYING CONTROL



Every group of DryTronic radiant panels has an LDC (Laser Drying Control) for dynamic drying control. The laser reads the quality of drying then transmits the data to the computer, which then modifies the quantity of electromagnetic waves to meet the correct drying needs if necessary.

The drying treatment is always influenced by the distance of the lamp from the vehicle, the thickness of paint applied, the color of paint, the type of substrate material and differences in climate. For all these reasons, the LDC automatically adjusts the intensity of the radiant waves to meet the correct quality of drying.

THE OVERHEAD CRANE

The overhead crane of the RoboDry is the support of the three groups of DryTronic radiant panels. It moves along the spray booth supported by two aluminum rails. Inside the overhead crane, there is an electric engine that moves the robot. In addition to the electric engine, it also houses the gas and air systems.



ROBODRY TECHNICAL DATA

MEASURES AND DATA

Booth width	min 3,90 m max 4,50 m	min 12.7 ft max 14.7 ft
Booth length	min 7,00 m max 10,00 m	min 22.9 ft max 32.8 ft
Booth height	min 2,70 m	min 8.8 ft
Weight	350 kg	771.6 lb
Maximum size of objects that can be painted (LxWxH)	2 x 6 x 2 m	6.5 x 19.6 x 6.5 ft
Standard warranty	12 months	

COMPRESSED AIR

Line pressure	8 bar	116 PSI
Connection tube size	6x8 øix øe mm	5/16"

APPROVAL

Europe	EU: CE - ATEX II 3 G X
Australia	Compliant to Australian safety standards AS/NZS 4114.1:2003 - AS 3814.1:2009
North America	cETLus Listed - Intertek 5000803 ISO 9001

GAS

No. of panels	6	
1 panel		
Dimensions	500 x 930 mm	20 x 37"
Power output	16 kW	55,000 BTU/h
Hourly consumption LPG (G31) at 12 mbar	1,24 kg/h	2.73 lb/h
Hourly consumption Natural Gas (G20) at 12 mbar	1,66 m³/h	0,98 CFM
Catalyst life	5.000 h - 30.000 drying cycles	

CONTROL BOX

Computer	PC embedded
Touch screen	15"
Supply voltage	480 V~ - 400 V~ - 230 V~ (3 Ph)
Frequency	50/60 Hz
Controls voltage	24 V~
Installed power (power input during first 3':30")	11,3 kW



AUSTRALIAN
AS/NZS

Symach

SOLUTIONS FOR COLLISION INDUSTRY

Via Bazzane 69, 40012 Calderara di Reno (BO), Italy
info@symach.com - ph: +39 (0)51 96 31 61



www.symach.com