Test Panel Spraying Applicator

AUTOSPRAY 481

testing equipment for quality management

ERICHSEN
since 1910

Technical Description

Mobility

Explosion-proof

Purpose and Application

The **AUTOSPRAY 481, Type APL 1.2**, enables the even application of coating substances by means of a flow cup spray gun.

It is recommended that the equipment be set up in front of an appropriate spray booth with extraction facility or a similar equipment. The max. height of the water trough should not exceed an above-ground height of 750 mm. The exact dimensions of the spray booth and water trough should be specified when ordering.

The **AUTOSPRAY 481** is an easy-to-use, low-maintenance machine. Its compact design and twin braked castors make it highly suitable for mobile use and can even pass through doors with a clearance of up to 800 mm in width.

Optionally the **AUTOSPRAY APL 1.2** can be equipped with quick-change system for one-way flow cups, which allows a comfortable, clean and fast color change.

Design and Function

The **AUTOSPRAY 481, Type APL 1.2**, consists of a self-contained stainless steel cabinet assembly which is easy to clean and also provides excellent resistance to high humidity.

Because both the switch gear cabinet containing the pneumatic/electric control elements and electric wiring and the motor compartment have a pressurized enclosure, the Model 481 spray applicator for test panels is explosion-proof.

The explosion protection is certified by TÜV Rheinland (German technical surveillance association).
The **AUTOSPRAY APL 1.2** is therefore suitable for use in potentially explosive atmospheres. If required, further components can be easily integrated into the pressurized switch-cabinet, without adversely affecting the explosion-proof properties of the AUTOSPRAY 481.

Since all connections are of the plug-in type, transportation for maintenance purposes is simplified and the spray booth can remain in operation.

The control unit not only allows the use of fixed-programmed spraying parameters such as step sizes, horizontal and vertical stroke speeds, number of spraying strokes and exhaust air times; by altering the settings it is possible to adapt to practically all conceivable requirements of coating technology (e.g. applying a paint wedge). As a result, reproducible coating structures can be generated at any time.

The assymetrical layout of the operating panel ensures easy access to the test pieces which have been or are to be been coated, even in smaller spray stands.

The **AUTOSPRAY 481** is pre-fitted to enable the use of one or two automatic flow cup spray guns which can be individually pre-selected. Because there is no screen involved, a uniform air flow in the stand can circulate around the sprayers.
Airless guns can also be integrated as an option.
The gun holder is designed in such a way that the height and angle of the sprayer position can be readjusted. The spray gun operates at an angle of 90° to the test panel. The machine can be supplied complete with spray gun on request.

The adjustable test panel holder makes it possible to vary the distance between the spray gun and the testing surface.

Changing the test panel holders is a simple matter – and the use of either magnetic fixing devices (secure, rotatable, with flow edge) or suction cups is possible.

Front Panel – APL 1.2

Special Features

The stroke mechanism is driven by integrated 3-phase a.c. motors by way of frequency converter. This ensures:

- a uniform speed during the entire spraying stroke,
- avoidance of the pulsation to be expected from, e.g. a pneumatic stroke mechanism,
- smooth starting and stopping ramp due to adjustable frequency converter. As a result, the components are subjected to a minimum of wear,
- minimum noise level,
- high production rate with minimum time and effort for maintenance,
- speed of spraying frame adjustable 0.2 up to 1.0 m/s,
- vertical and horizontal spraying range adjustment.

Supply of compressed air for control air and spray gun air:

- Large-dimension air supply connection (3/4") for the spray gun with additional upstream controller which filters out fluctuations in the main feed line. The result is a uniform supply of compressed air and an optimal specific output.
- Short distances: The air hoses inside the machine are as short as possible to avoid pressure losses.
- Large-diameter supply hoses (8 mm ID) to the spray guns.

Additional structural advantages:

- The **AUTOSPRAY 481** is equipped with 4 braked castors. It is therefore fully mobile and can fit through standard doors with a width of 800 mm.
- It can be set up opposite a spray booth with extraction facilities and a water trough of up to 750 mm over-floor height.
- The arm with the test panel mounting is located inside the spray booth ensuring direct extraction of the paint mist and avoiding mist development in the laboratory.
- Complete housing in stainless steel.
- Small build (easy operation).
- Almost infinitely variable adjustment of the gun speed by means of a button potentiometer.

The automatic spray applicator is ready for use and trial-run upon delivery. No additional installation work is necessary.

- As a result of individual TÜV inspections in compliance with ATEX, no further on-site acceptance tests are necessary.

Optional supplies:

- Test panel holder with suction cups for smooth, compact surfaces.
- Fittings for adding a second spray gun.
- Separate nozzle and horn air control (only with appropriate pistols).
- Airless gun and associated pump.
- Quick-purge cleaning system for flow cups.
- Modified width or gun stroke possible on request (if very narrow cab or wide workpieces)
- Further options on request

Coating methods:

- Surface application in cycle
- Wedge application

Preselectable parameters:

- Variable gun speed
- Number of spraying strokes: 1 - 4
- Selection spray guns 1 or 2 (option)
- 4 adjustable grid increments (vertical workpiece down movement)
- Horizontal spraying range
- Spray gun air pressure
- Exhauster times adjustable from 0 - 3600 s

Technical Data

Dimensions (excl. spray gun):
approx. 1450 x 1500 x 800 (H x W x D)

Size of test panels:	max. 600 x 400 mm
Test panel material:	steel
Test panel mounting:	magnets, 6 pieces
Spraying stroke, horizontal	max. 800 mm
Spraying stroke, vertical:	max. 660 mm
Spray gun stroke speed:	0.2 – 1.0 m/s, steplessly variable and reproducible
Workpiece feed rate:	min. 20 mm grid (freely adjustable)
Spray gun / test panel distance:	200 - 400 mm (mechanically adjustable)
Operating voltage:	230 V AC, 50 Hz
Electr. connected load:	0.35 kW
Compressed air supply:	6 - 10 bar
Compressed air consumption during operation, excl. air for spray gun:	approx. 1.8 m³/h
Compressed air consumption cabinet purging	approx. 18 m³/h
Purging time:	approx.15 min
Air quality:	DTP <3 °C filtered oil-free

Explosion Protection Standards

DIN EN 50016 / VDE 0170/ 0171, Part 3

ATEX Ⓔx II 2G T4 / ATEX Ⓔx II 3G T4

Order Information	
Order No.	**Product Description**
04810251	**Test Panel Spraying Applicator AUTOSPRAY 481, APL 1.2 (excl. spray gun)**
04810351	**Test Panel Spraying Applicator AUTOSPRAY 481, APL 1.2 (excl. spray gun) but with simplified ignition protection for ATEX-Zone 2**

Necessary Accessories	
Order No.	**Product Description**
04811352	Laboratory spray gun - model "Oerter", based SATAjet 3000 ROB B RP
04811552	Paint spray gun - model 'ECCO 60 AS“
04810352	Laboratory spray gun - Type SATA LP 90 MSB
Accessories	
04810552	Extension for operation with 2 flow cup spray guns
04811752	Extension for operation with one automatic flow cup spray gun
04811852	Extension for operation with two automatic flow cup spray guns
04810852	Test panel support

Further details obtainable from Price List 481/E.

Subject to technical modifications.
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ISO 9001 BUREAU VERITAS Certification