Robobell 925

Unique Atomizer Technology

The Atomizer for Today's Robotics Application

The Robobell Internal Charge is a high efficiency rotary atomizer designed for today's robotic production. Its intended application is coating complex surfaces with solvent borne paint. Its range of application goes from exterior car body to complex car bumper painting. This is an internal charge atomizer; the high voltage charge is applied to the paint on the bell cup before atomization.

Compact and Light Design

This atomizer was specifically designed to work with a robot. At only 5.5 kilograms (12 pounds) it can be fitted to practically any robot. The atomizer body diameter is 85 mm (3.375 inches). The atomizer head has a 60 degrees bend. The very slim and compact shape of the atomizer allows easy access in hard to paint areas, such as door jams or engine compartment.

Metabell, Metallic Effect With High TE

The Metabell function combines the high TE (**T**ransfer **E**fficiency) of a rotary atomizer with the metallic effect of a conventional spray gun. This new unique feature allows for second coat base coat solvent borne application of metallic paint. It also opens the door to an innovative single coat base coat concept. Achieving the high quality metallic finishing is accomplished by controlling the particle colliding energy. Shaping air ring, bell cup and application parameters are the cornerstones of the Metabell application.

Robot-Atomizer Process Partners

Combining high performance atomizers with high performance robots makes for an impressive production tool. The high performance of the robot opens the door to new paint methods. The atomizer can move around on the body surface without any escaping point, the robot can keep or increase the speed when changing direction. The high performance atomizer will withstand the high acceleration forces generated by the robot.

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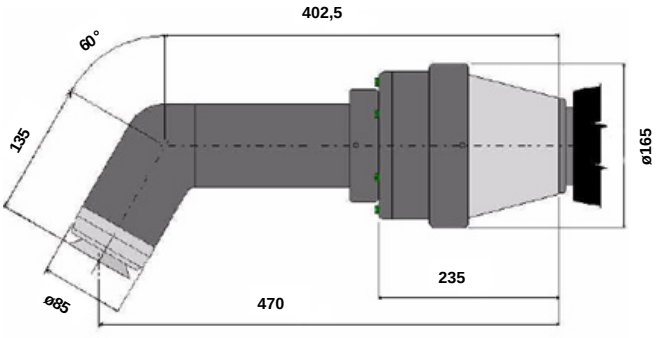
TECHNICAL DATA, ROBOBELL 925

SPECIFICATIONS & DIMENSIONS



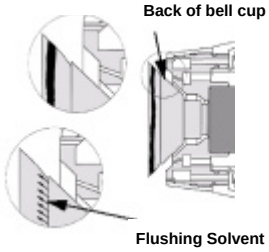
Weight	5,5 kg (with a valve unit including Trigger, Dump and Solvent Valves)
Length	470 mm (60° angled)
Shaping Air Ring	Standard or metabell
Bell cup diameter	30, 50 & 70 mm serrated edge bell cup
BOC	Bell Outside Cleaning function
Pack-in cascade	- 90 KV
High Voltage	90 kV internal high voltage supply
High Voltage Current	Max 150 micro ampere
Paint Fluid Flow Rate	Max 400 cc/min for OD70, OD50 Bell Max 300 cc/min for OD30 Bell
Cleaning Solvent	Max flush 10-15 cc/sec in 2-3 sec Max flush 25 cc/sec in 2-3 sec for BOC
Shaping Air consumption	Max 700 Nl/min at ROBOBELL inlet pressure of 290 kPa
Bearing Air consumption	Max 50 Nl/sec at ROBOBELL inlet pressure of 490 kPa Operating Pressure 490 – 780 kPa (5 - 8 kgf/cm2)
Turbine Air consumption	Max 360 Nl/min at ROBOBELL inlet pressure of 440 kPa
Break Air consumption	Max 50 Nl/min at ROBOBELL inlet pressure of 590 kPa
Rotation Speed	Max 60000rpm (6283rad/s) for OD30 BELL Max 45000rpm (4713rad/s) for OD50 BELL Max 35000rpm (3666rad/s) for OD70 BELL

T-valve, TD-valve, Double TD-vale and Multi-valve

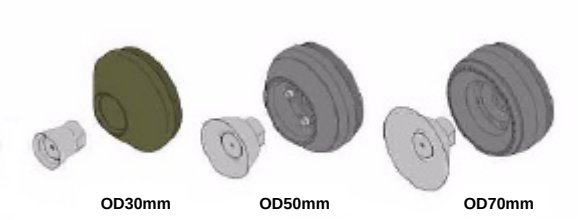
BELL OUTSIDE CLEANING

Bell Outside Cleaning (BOC) automatically flushes contamination of the back of the bell cup rim caused by painting and spray booth conditions by supplying flushing solvent from the back of the bell cup.

Example of BOC function on ABB Atomizer



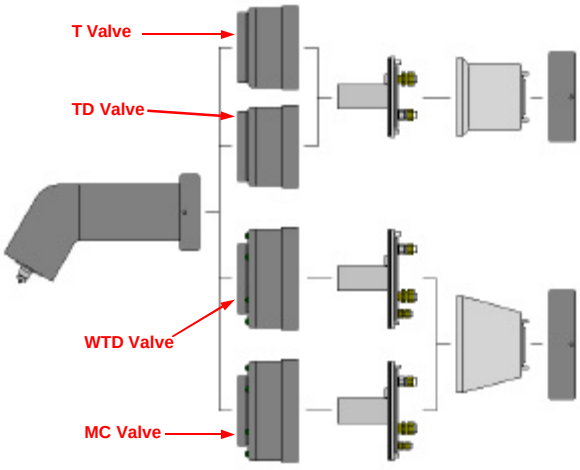
BELL CUP, SHAPING AIR RING & PROBE



Bell cup and shaping air ring are determined depending on painting condition. Firstly bell cup should be determined, then shaping air ring should be selected. Probe could prevent contamination. SA Ring with a probe for contamination prevention is available as an optional part.

MODULAR DESIGN

The atomizer is mounted with a quick release manifold. The atomizer can then be replaced in a matter of seconds. A compact valve block is placed between the atomizer and the robot wrist adaptor. The valve block is also mounted by means of a quick release manifold. The valve block comes in various configurations. It can consist of a typical paint trigger valve and dump valve or it can contain a quick A-B color changer or a 7 colors color changer. The atomizer construction is optimized for easy maintenance and repair. Main components like the high voltage cascade or air motor are a one-piece replacement.



Data and dimensions may be changed without notice.

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