FS Type Micro Spray Gun

Patent Pending

Based On Aerodynamic Engineering

Tool Less precision spray gun makes a decomposition assembly possible without a tool easily.

The maintenance in those without a tool is possible.

The FS type micro spray gun has no tool, a decomposition assembly is easily possible for it, and cleaning and washing are easy for it. The part mark to constitute are 20 or less points, and are epoch-making highly efficient spray gun which does not need tools, such as a driver and a wrench.

Possible in adjustment of the amount of very small flow late at easy operation.

Usually, although coating condition is determined by coating liquid pressure, nozzle size, and coating time as for spray gun, The gun can adjust coating adjustment of the slight quantity from 0.2 g/min in the adjustment ring valve travel of a needle.

Coating diversity demanded is realized easily.

The FS type micro spray gun can dispense small amount of material from 0.2g/min. The gun can be mounted to precision 3-axis (X,Y, and Z) robots or high-speed rotary spray machines to make excellent thin films. Film thickness can easily be adjusted between 0.1 μm and 20 μm. A small area of 8 cm2 can be coated. Also, using gun movers, substrates such as large glasses, or substrates width up to 2m can be coated.

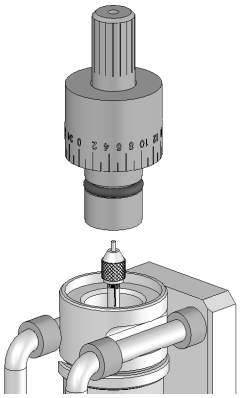
Air Energy

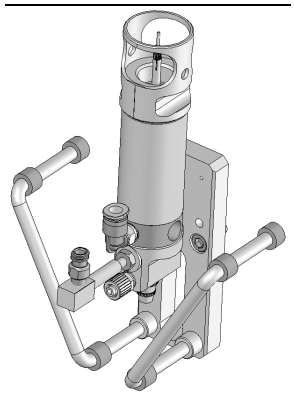
Air management is key to material efficiency and part coverage.

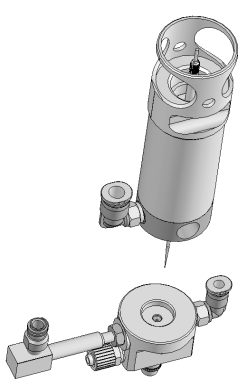
The nozzle used with the fine swirl spray gun is adjustable so that it can produce excellent atomizing ability and high transfer efficiency.

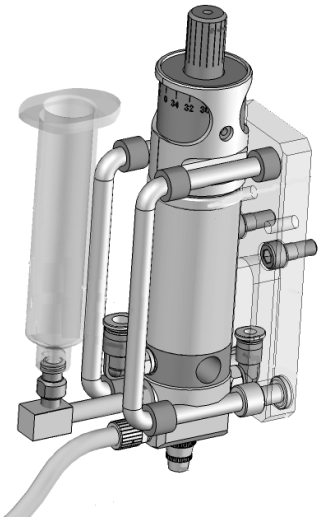
The gun can coat uniformly material containing fillers which sediments easily.

Since there is a circulation circuit to a discharge nozzle, uniform circulation also of the liquid material of large sedimentation thing content of specific gravity is carried out. Discharge can be carried out that the clog of liquid does not arise. In addition, circulation circuit structure to recommend is prepared by filler size and distribution.



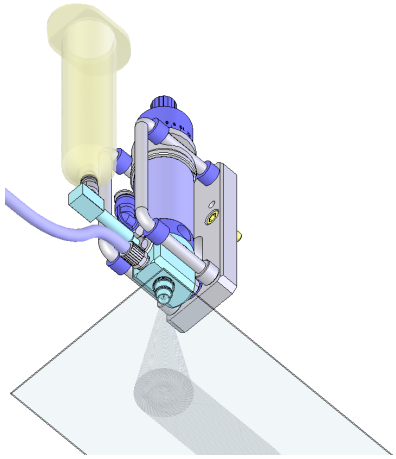






Feature:

- It is precision spray gun in which decomposition and an assembly are possible, without using a driver and a spanner.
- The material including filler does not have a clog, either and can be sprayed best.
- Abundant atomization units are prepared.
- Film thickness can be adjusted between 0.1μm and 20μm.
- A small area of 3-8cm2 can be coated.
- Small amount of coating material (e.g. 5 cc) can be dispensed.
- Narrow coating pattern width of 2-10mm can be achievable.



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FS Type Micro Spray Gun Specifications

Specifications:

1. Operating air:
   (1) Gun operating pressure: 0.3 Mpa - 0.4 Mpa
   (2) Atomizing air pressure: 0.02 Mpa - 0.40 Mpa
   (4) Nitrogen or air usage: 10 NL/min. - 200 NL/Min.

2. Material
   SUS303, Heat treatment SUS (or Non-electrolytic plating B) and Teflon, Perflo

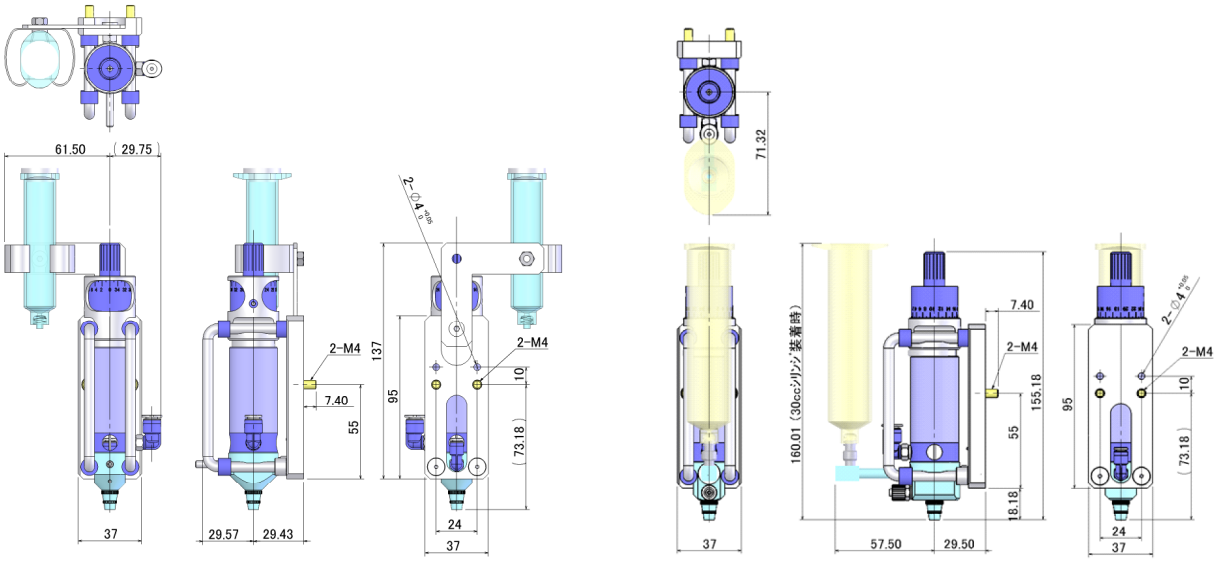
3.Flow rate
   1 g / min. - 10 g / min. (* Flow rate varies depending on the viscosity of the coating material used.)

4.Coating pattern width
   3 mm - 40 mm (can be changed by adjusting pattern air pressure)

Atomizing Method:

The nozzle bore is less than 1.0mm or less.The needle tip, which serves as a valve controlling material dispensing, is connected to the nozzle, with a sharp angle less than 10 degrees. The opening degree of the needle is adjustable by 10 μm for ultra-fine dispensing. The valve is designed to secure flow rate reproducibility and produce constant dispensing.

Moreover, micro atomized liquid particle size after a spray is further made detailed by making static electricity impress from the rear of the needle of the gun depending on liquid material.(Option)



Non Circulation Type　　Circulation Type

Dimensions (syringe type)

A type　　B type

The liquid contact portion of the cyclical form spray gun

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