Close-in painting capability with optimal coverage, greater operating flexibility and improved paint savings in a wide range of finishing applications.

The production-proven Nordson RA-20 rotary atomizer delivers painting efficiency and superior finishing quality and operating safety for a wide range of finishing applications. Unlike conventional painting bells, the patented RA-20 has no minimum sparking distance. As a result, it can be positioned close to parts for optimal coverage and minimal overspray.

In addition, the fine atomization and soft spray apply thin, controllable film builds with minimal paint bounceback. The RA-20 delivers superior finish quality in a safer, more productive and cost-efficient painting operation.

The RA-20 rotary atomizer’s superior performance and reliability are due to a combination of advanced features. These include vector air for superior pattern shaping, long-life air-bearing turbine design, innovative electrostatic charging system and a proprietary composite cup.

Close-in painting for superior performance.
The close-in painting capability of the RA-20 delivers superior penetration into part contours and recesses. The RA-20 provides stronger electrostatic attraction for more complete parts coverage and reduced touch-up requirements for unmatched finish quality. And overspray is reduced substantially for significant paint savings.

Excellent spray-pattern control.
The RA-20 rotary atomizer uses vector air to control pattern shaping, rather than by shaping air from the cup. Elimination of shaping-air holes that can plug with paint reduces rejects, and speeds maintenance and cleaning. In addition, different cup sizes can be easily changed to meet spray pattern requirements.

With the RA-20, spray patterns can be adjusted from eight to 42 inches wide, depending on the coating material used. This allows for application of a precise amount of paint with minimal overspray with less paint waste and lower clean-up costs.
Spray a variety of coating materials.
The versatile RA-20 applies exceptionally fine finishes with a wide variety of coatings. Even if different coatings are sprayed on the same line, the RA-20 controls can automatically adjust to the correct spray parameters.
The RA-20 sprays a wide range of coatings, including:
- solvent-based
- waterbornes
- waterborne emulsions
- high-solids
- two-component materials
- metallics
- 100-percent-solids liquid coatings
The RA-20 can also accommodate varying coating viscosities and formulations.

Air-bearing turbine ensures reliability.
An advanced air-bearing turbine design of the RA-20 provides long turbine life and reliable performance in today’s most demanding painting environments. Since the turbine rides on a thin cushion of air, there are no bearings to wear out.
The turbine speed sensor uses fiber-optic cables and magnetic pick-up, which provides superior resolution and reliability. In addition, turbine-speed drops are minimal between spray and no-spray conditions, which enhances finish quality. This is particularly important with systems that employ automatic triggering systems.

Safety and savings.
The RA-20 is FM-listed as “non-incendiary,” which contributes to the safest possible painting system operation. It is also FM-approved for use with electrostatic waterborne coating systems when used with the Nordson Iso-Flo® HD voltage block. And, the RA-20 meets the stringent safety requirements of NFPA-33, CE and CSA.
Since the RA-20 cannot generate a fire-producing spark, there is no minimum spraying distance and no need for expensive spark-anticipation devices.

Patented atomizing cup design for operating versatility.
Patented Nordson RA-20 atomizing cups are available in several sizes and styles to optimize atomizer performance based on coating type, part profile and finish requirements. The composite construction of the RA-20 cup contributes to the non-sparking design, and is actually more durable than conventional metal cups. The RA-20 atomizing cup will not chip, crack or lose its shape under normal use.
Three edge styles are available to deliver performance benefits for specific types of coatings:
- **Finned cup** – delivers excellent atomization and finish quality across the widest range of paints and coatings.
- **Smooth cup** – a more suitable choice for thicker coatings such as emulsions and most water-reducible coatings.
- **MicroFin™ cup** – typically provides finer atomization for higher viscosity coatings.
Nordson also offers a pattern control kit for hard-to-atomize coatings for better pattern size control. As part of the kit a special cup/nozzle/distributor is required.
Several distributors, including a standard, emulsion and high performance, are also available to provide excellent coating results with a variety of coating materials in a wide range of spray applications.
RA-20 rotary atomizer controllers: A plus for total paint system efficiency.

Nordson rotary atomizer controllers are an effective way to enhance the efficiency of a finishing system. From simple spray controls to sophisticated custom-designed systems, Nordson controls can automatically adjust spray patterns, paint flow and turbine speed based on part configuration.

Choice of power supplies for operating flexibility.

The RA-20’s external electrostatic charging system provides up to 115 kV charging voltage, but does not generate or store enough electrical energy to harm an operator or ignite solvent materials. The RA-20 is also available with an internal power supply (IPS). The IPS version features lightweight, flexible low-voltage cables that experience less wear in robotic applications.

Easy retrofit to existing painting systems.

With minimum production downtime, existing painting systems can be easily and cost-effectively retrofitted with the RA-20 rotary atomizer, electrostatic power unit, cable, controls and interfacing hardware for all the benefits of the RA-20 rotary atomizer.

Commitment to Customer Satisfaction.

At Nordson, we are committed to helping industry become more productive. ISO certification of Nordson facilities and operations attests to excellence in our systems and enhances our ability to provide better quality products and services to our customers. In addition, our exclusive Package of Values® backs every Nordson product and system. The Nordson Package of Values, which includes production testing, application engineering, installation assistance and operator training, is your assurance of satisfaction.

Call Nordson today for more information on how the RA-20 rotary atomizer’s superior performance can help you stay a generation ahead of your competition.

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RA-20 Specifications

Dimensions
Length*: 16.88 in. (428 mm)
Diameter*: 6.44 in. (164 mm)

Weight*
Cable version: 10.36 lbs (4.7 kg)
IPS version: 11.68 lbs (5.3 kg)
Waterborne version: 9.7 lbs (4.4 kg)

Fluid Pressure and Flow
Fluid pressure: 5 - 100 psi (0.34 - 7 bar)
Flow rate, maximum: 50 oz/min at 100 psi
(1500 cc/min at 7 bar)
130 centipoise material at 100 psi
(7 bar), 0.080 orifice: 750 cc/mm

Turbine Speed
40,000 RPM max
(continuous operation) for 2 1/2” cup
45,000 RPM max
(continuous operation) for 2” cup
50,000 RPM max
(continuous operation) for 1 1/2” cup

Air Pressure
Bearing air pressure
Minimum: 70 psi (4.8 bar)
Recommended: 80 – 100 psi (5.5 – 7 bar)
Brake air pressure: Plant supply pressure

Air Consumption
Bearing air:
2.5 scfm at 80 psi
(70 l/min at 5.5 bar)
Turbine air (unloaded): 10 scfm (283 l/min)
at 40,000 rpm
Vector air:
9 scfm at 40 psi (254 l/min at 2.7 bar)
18 scfm at 80 psi (510 l/min at 5.5 bar)

Spray Pattern Size
8 to 42 in. (203 to 609 mm)**

Air Quality
Clean and dry, with 99% of 0.1 micron contaminants removed.

Optional Speed Readout
Magnetic pickup, fiber-optic transmission

Electrostatic Voltage
Internal power supply: 100 kV max
EPS-9 and IFC-100 cable: 115 kV max

*without mounting stem
**Pattern size is dependent on fluid pressure, turbine speed, material viscosity, and many other variables.

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