

# Encore<sup>®</sup> Angled Spray Extensions

## Description

Encore<sup>®</sup> angled spray extensions are available in 45, 60, and 90 degree versions. They are designed to be used on Encore and Encore HD automatic powder spray guns, allowing powder to be sprayed at varying angles to the gun mounting orientation.

The extensions use the nozzle, nozzle nut, and electrode support from the gun being utilized, and will accept all Encore flat spray and conical spray nozzles.

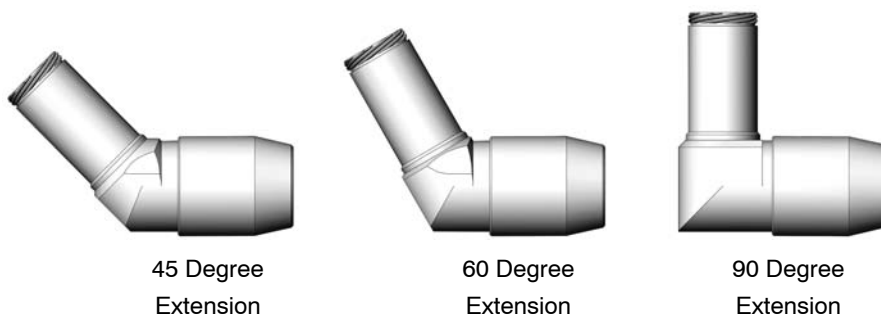


Figure 1 Encore Angled Spray Extensions

Dimensions

See Table 1 for dimensions of the Encore HD spray guns referenced in Figure 2.

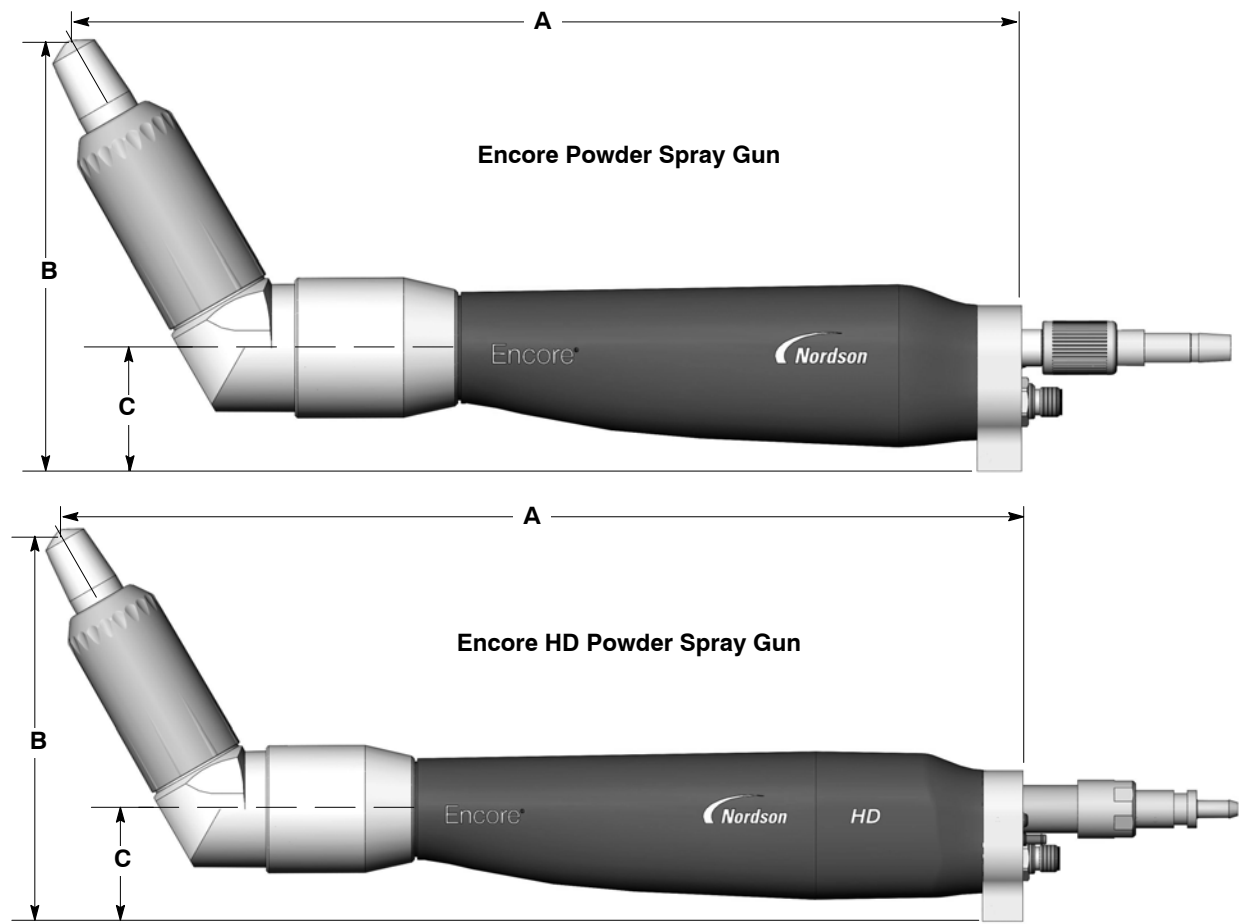


Figure 2    Encore and Encore HD Spray Guns with Encore Angled Spray Extension (60 Degree Extension Shown)

Table 1   Encore and Encore HD Spray Gun Dimensions with Encore Angled Spray Extensions Installed						
Angle	Encore Bar Mount			Encore HD Bar Mount		
	A	B	C	A	B	C
45	414 mm (16.29 in.)	149 mm (5.86 in.)	50 mm (1.97 in.)	456 mm (17.96 in.)	149 mm (5.86 in.)	50 mm (1.97 in.)
60	386 mm (15.21 in.)	174 mm (6.84 in.)	50 mm (1.97 in.)	429 mm (16.88 in.)	174 mm (6.84 in.)	50 mm (1.97 in.)
90	322 mm (12.69 in.)	199 mm (7.83 in.)	50 mm (1.97 in.)	365 mm (14.36 in.)	199 mm (7.83 in.)	50 mm (1.97 in.)

# Installation



**WARNING:** Allow only qualified personnel to perform the following tasks. Follow the safety instructions in this document and all other related documentation.

**NOTE:** The 90 degree spray extension is shown in the following illustrations. Follow the same instructions for the 45 and 60 degree extensions.

1. If the gun is in use, purge it before installing the extension.
2. See Figure 3. If using a conical nozzle, first remove the deflector (4). Unscrew the nozzle nut (1) and remove it. Next, remove the nozzle (2) and the electrode holder (3) from the spray gun.

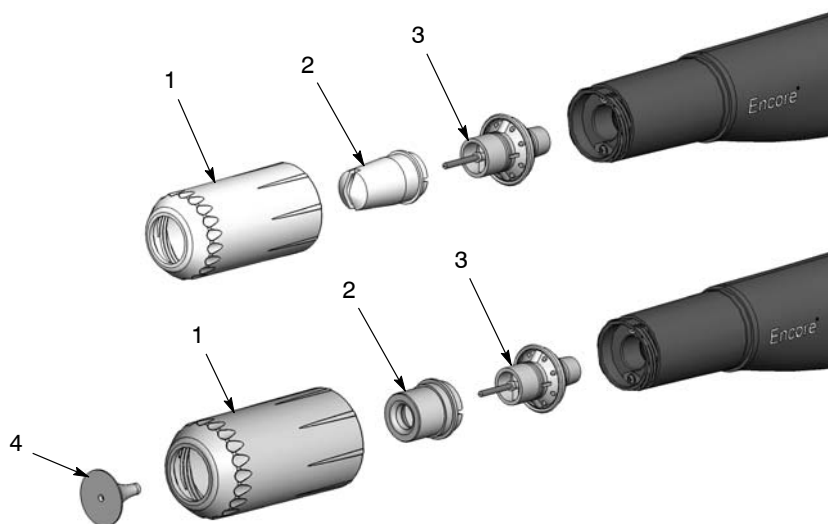


Figure 3 Removing Flat or Conical Nozzles from the Spray Gun

1. Nozzle nut
4. Deflector

2. Nozzle

3. Electrode holder

## Installation *(contd)*

3. See Figure 4. Unscrew the body nut (5) from the extension (7). Pull the retainer nut (6) out of the extension.

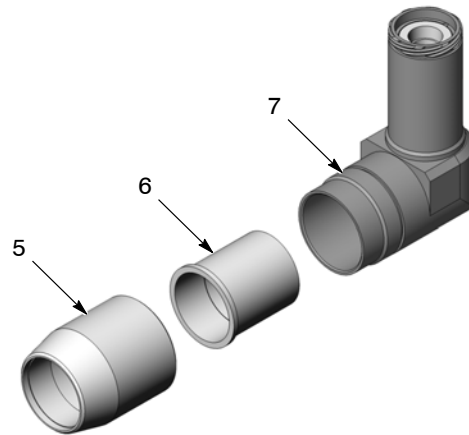


Figure 4 Removing Body and Retainer Nut

5. Body nut

6. Retainer nut

7. Extension

4. See Figure 5. Slide the body nut (5) over the end of the spray gun (8). Thread the retainer nut (6) onto the front of the spray gun, using the spanner wrench (9) included with the extension. With the retainer nut installed, the body nut should spin freely when rotated.

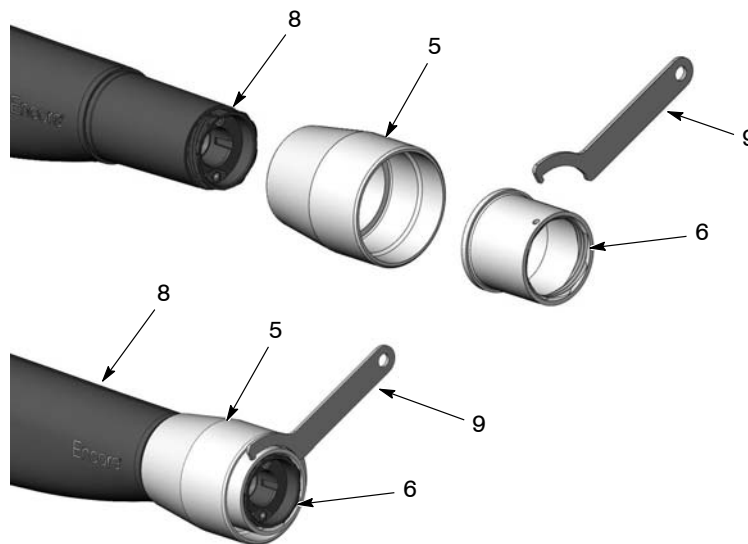


Figure 5 Installing the Body and Retainer Nuts onto the Spray Gun

5. Body nut

8. Spray gun

9. Spanner wrench

6. Retainer nut

5. See Figure 6. Install the extension (7) onto the gun, orient it as desired, then thread the body nut (5) onto the extension. Hand-tighten the nut.

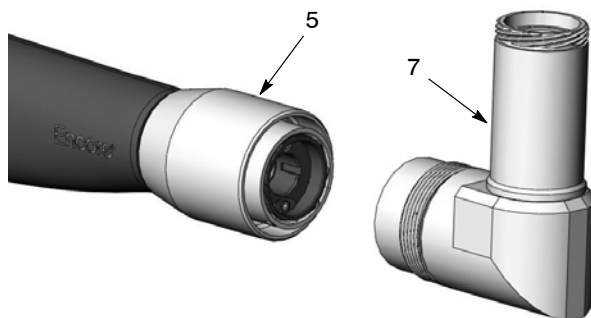


Figure 6 Installing the Extension on the Spray Gun

5. Body nut

7. Extension

6. See Figure 7. Install the electrode holder (3), nozzle (2), and nozzle nut (1) onto the extension. If using a flat spray nozzle, orient the nozzle as desired before tightening the nozzle nut hand-tight. If using a conical nozzle, install the deflector (4) over the electrode holder after tightening the nozzle nut.

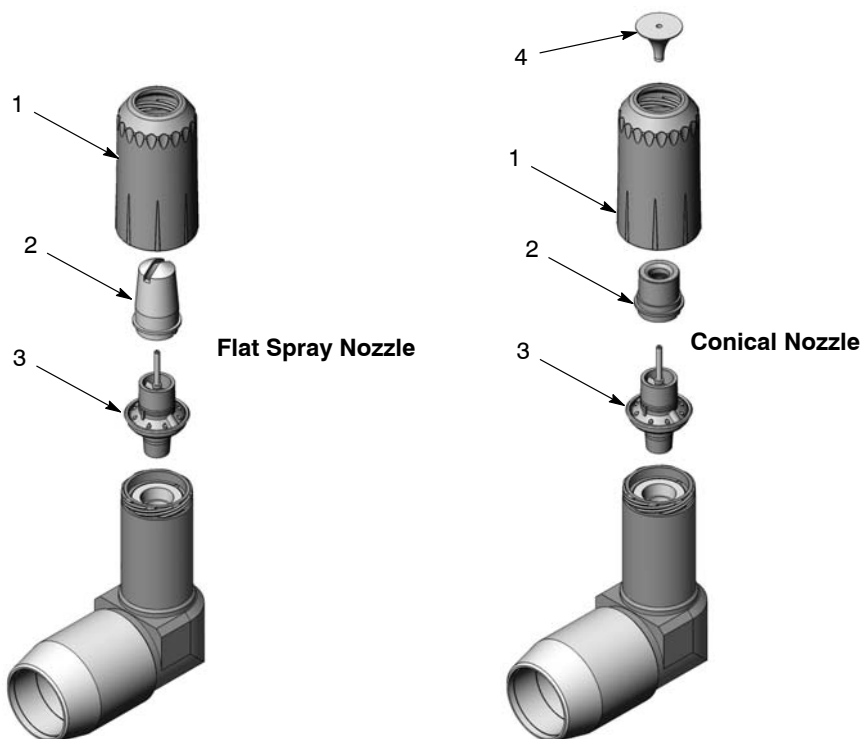


Figure 7 Installing Electrode Holder and Nozzle on the Extension

1. Nozzle nut  
2. Nozzle

3. Electrode holder

4. Deflector

## Repair

Two service kits are available: a powder body kit, and an extension body kit. In addition, you can also order individual service parts.



**CAUTION:** When repairing the spray extension, replace any parts with carbon tracking or pin holes.

## Removal

1. If the gun is in use, purge it before removing the extension.
2. See Figure 7. Remove the nozzle and electrode holder from the extension.
3. See Figure 6. Unscrew the body nut and remove the extension from the spray gun.
4. Unless the body nut or retainer nut need to be replaced, you can leave them attached to the spray gun. If they must be replaced, remove the retainer nut from the spray gun with the spanner wrench as shown in Figure 5.

## Disassembly

1. See Figure 8. Pull the powder tube (1) out of the gun end of the extension.
2. Pull the powder body (3) up and out of the nozzle end of the extension.

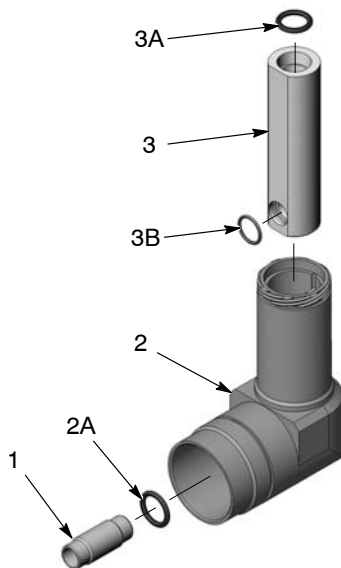


Figure 8 Exploded View of Extension Assembly

- |                   |                |            |
|-------------------|----------------|------------|
| 1. Powder tube    | 2A. O-ring     | 3A. O-ring |
| 2. Extension body | 3. Powder body | 3B. O-ring |

## ***Cleaning and Inspection***

**NOTE:** The O-rings shown in Figure 8 are included in the extension body and powder body service kits. If replacing either component, there is no need to remove the O-rings.

1. Clean the extension parts with low-pressure compressed air and a clean, soft cloth. Remove any impact-fused powder with a plastic or wooden tool. Do not scratch powder contact surfaces; powder will build up and impact fuse on scratches.



**CAUTION:** If necessary, remove the O-rings and clean the parts with a cloth dampened with isopropyl alcohol. Do not immerse the parts in alcohol, or allow the O-rings to come in contact with alcohol. Do not use any other solvents.

2. Replace any O-rings that are damaged or swollen.
3. Replace any parts that are damaged or show signs of carbon tracking or pin holing.

## ***Assembly***

1. See Figure 8. If replacing the extension body, make sure the O-ring (2A) is installed in the groove in the gun end of the new body before proceeding.
2. If replacing the powder body, make sure the two O-rings (3A, 3B) are installed in the new body before proceeding. Slide the powder body into the extension body, with the pin in the powder body aligned with the slot in the extension body.
3. Install the powder tube into the gun end of the extension body, and press it in with a finger until it bottoms out.

## ***Installation***

1. See Figure 6. Install the extension body onto the gun, orient it as desired, and thread the body nut onto the extension. Hand-tighten the nut.
2. When positioning the gun in the spray booth, the spray extension body should maintain a minimum distance of 8 in. (203 mm) to any grounded component for optimal performance and service life.

## Continuity and Resistance Check

See Figure 9.

If the powder being sprayed is not charging properly, check the continuity and resistance of the high voltage path, from the electrode ring in the gun end of the extension to the electrode, with a 500 volt megohm meter.

The reading should be less than 19–22 megohms. If it is not, disassemble the extension and make sure that all parts are undamaged.

The round brass contact in the end of the voltage multiplier must be up against the electrode ring in the extension, and the wire in the nozzle end of the extension must contact the electrode ring in the electrode holder to complete the high voltage path.

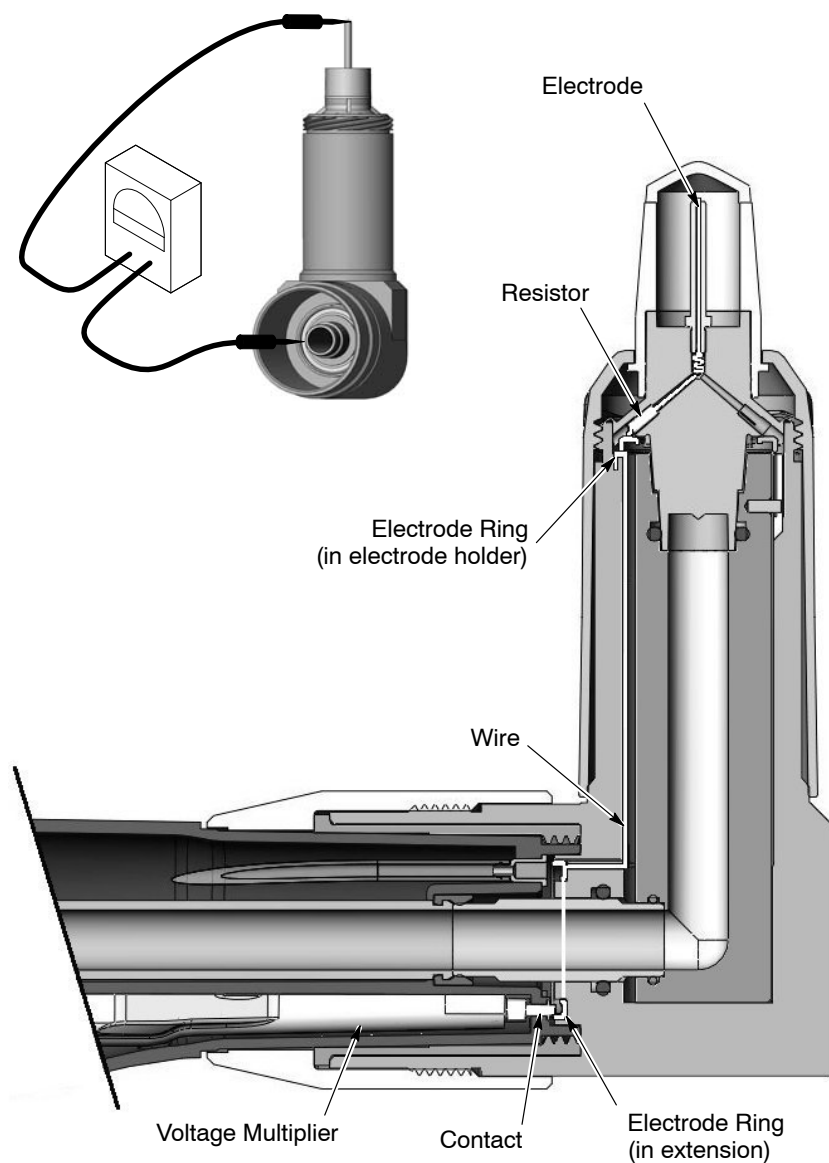


Figure 10 Continuity and Resistance Check



## Parts

For parts and technical support, call the Industrial Coating Systems Customer Support Center at (800) 433-9319 or contact your local Nordson representative.

See Figure 11.

Item	Part	Part	Part	Description	Quantity	Note
—	1605703			Extension, spray, 45 degree, Encore	1	
—		1605614		Extension, spray, 60 degree, Encore	1	
—			1604084	Extension, spray, 90 degree, Encore	1	
1	1604085	1604085	1604085	• Nut, body, extension, Encore	1	
2	1604086	1604086	1604086	• Nut, retainer, extension, Encore	1	
3	1605611	1605611	1604088	• Tube, powder, extension, Encore	1	
4	-----	-----	-----	• Body, extension, auto, Encore	1	A
4A	940163	940163	941144	• O-ring	1	A
5	-----	-----	-----	• Body, powder, auto, Encore	1	B
5A	1604111	1604111	1604111	• O-ring, silicone, 14 mm ID x 1.5 mm wide	1	B
5B	941131	941131	941131	• O-ring, silicone, 0.563 x 0.750 x 0.094 in.	1	B
NS	1605705	1605617	1604132	• Service kit, extension body		
NS	1605704	1605616	1604131	• Service kit, powder body		
NS	1604112	1604112	1604112	• Wrench, spanner	1	C
NOTE A: Included in Service kit, extension body. B: Included in Service kit, powder body. C: Included with spray extension assemblies.						

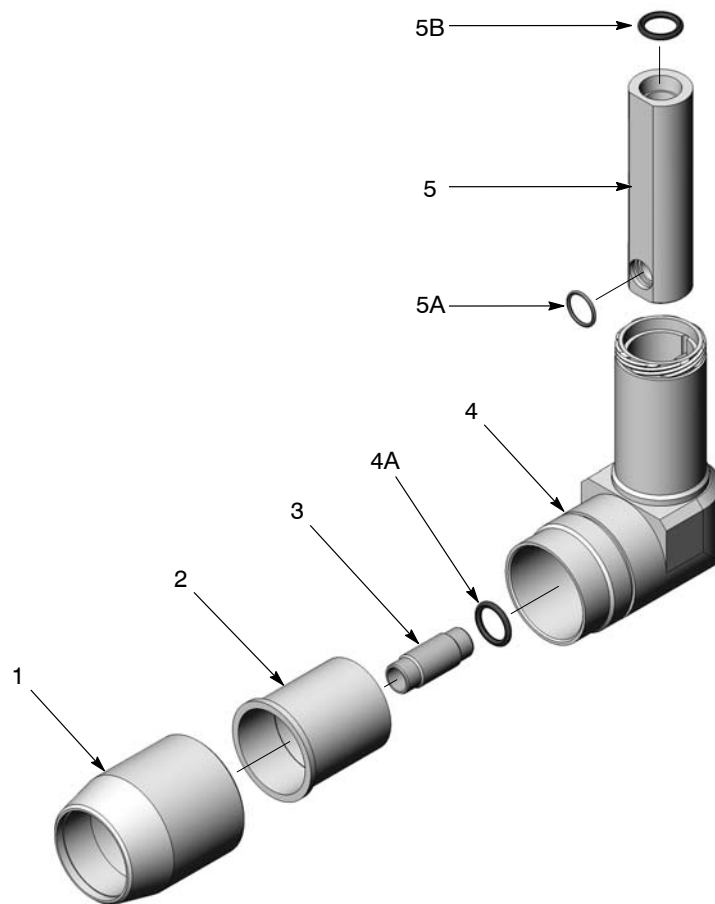


Figure 11 Continuity and Resistance Check

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