

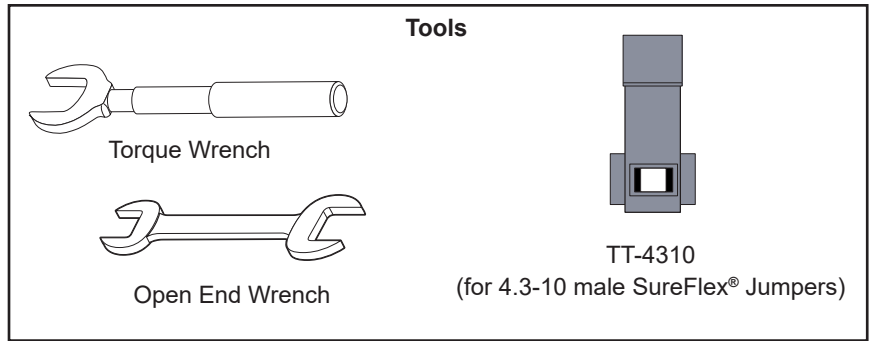
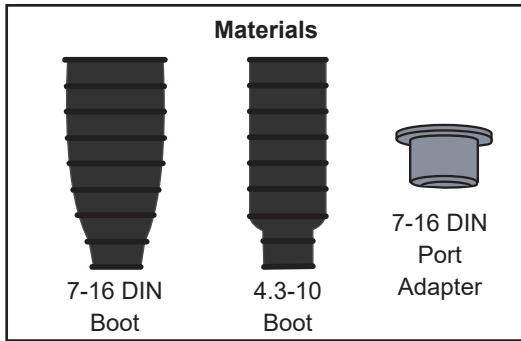
## HELIAX® SureGuard Version 2.0 Weatherproofing System for 1/4", 3/8" and 1/2" SureFlex® Jumpers

For 7-16 DIN Male Connectors, 4.3-10 Male Connectors, 4.1-9.5 Mini-DIN Male Connectors, NEX10 Male Connectors to Female Antenna or Device Ports, U.S. Patent 9,216,530 and other patents pending

SureGuard Version 2.0 Weatherproofing boots are designed for installation on smooth cylindrical surfaces. Do not install boot on female device port machined flats or other irregular surfaces. Installation on such surfaces may compromise sealing effectiveness. If 7-16 DIN female device port is threaded along entire surface, a HSG-M29-ADPT-L threaded device port adapter is required.

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CommScope Infrastructure Academy offers installation training.



CABLE SIZE	CABLE TYPE	INTERFACE TYPE	DEVICE PORT DIAMETER
1/2 in	LDF4	7-16 DIN	19.30 - 26.50 mm (0.76 - 1.043 in)
1/2 in	FSJ4	7-16 DIN	19.30 - 26.50 mm (0.76 - 1.043 in)
1/2 in	LDF4	4.3-10 and 4.1-9.5 Mini-DIN	16- 24.50 mm (0.630 - 0.965 in)
1/2 in	FSJ4	4.3-10	16- 24.50 mm (0.630 - 0.965 in)
3/8 in	FSJ2	4.3-10	16- 24.50 mm (0.630 - 0.965 in)
3/8 in	LSF2	4.3-10 NEX10	16- 24.50 mm (0.630 - 0.965 in) Min 8.8 mm (Min 0.347 in)
1/4 in	FSJ1	4.3-10 NEX10	16- 24.50 mm (0.630 - 0.965 in) Min 8.8 mm (Min 0.347 in)



Scan for Installation video's

PORT ADAPTER	DESCRIPTION	PORT
HSG-M29-ADPT-L	7-16 DIN female device with threads along the entire port will not seal properly without a thread adapter (sold separately, kits of 10)	M29 Thread

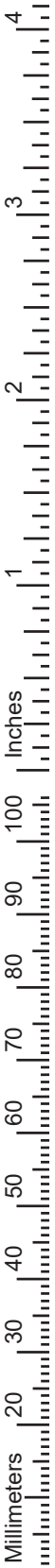
TOOL PART NUMBER	DESCRIPTION
TW-4310	Torque wrench for coupling torque of 4.3-10 connectors, 22 mm opening
244377	Torque wrench for coupling torque of 7-16 DIN connectors, 1-1/4 in opening
TT-4310	Tightening tool for 4.3-10 connectors
TW-N10	Torque Wrench for coupling torque of Nex10 connectors, 11 mm opening

**Installation temperature range**  
-40 °C to +65 °C  
(-40 °F to +149 °F)

**1** Route and form the jumper assembly with HELIAX® SureGuard weatherproofing system installed prior to attaching the coupling nuts. Make sure that the boot is approximately 102 mm (4 in) below the bottom of the molded portion of the jumper.

**2** If component has a fully threaded 7-16 DIN female port you must first thread a port adapter with the lip on top onto the device in a clockwise direction (**be sure not to cross-thread**). Adapter does not need to be threaded to the base of component, it needs to allow the DIN male coupling nut to be torqued to specification without obstruction.

HSG-M29-ADPT-L



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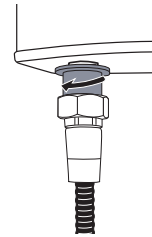
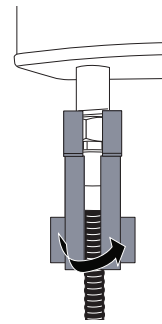
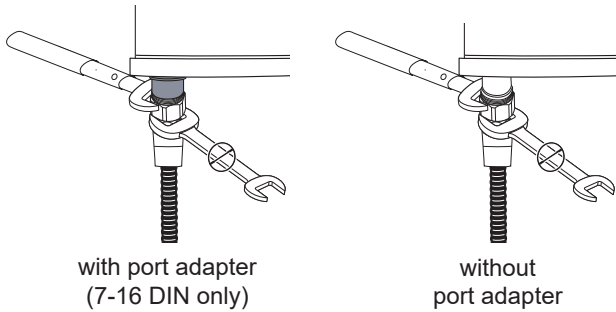
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**3** Torque the connection using the appropriate wrenches or tool.

7-16 DIN male connector: 25-30 N•m (18-22 ft-lb)  
 4.3-10 male connector: 5-8 N•m (4-6 ft-lb)  
 4.1-9.5 male connector: 10-15 N•m (7-11 ft-lb)  
 NEX10 male connector: 4-5 N•m (35-44 in-lb)

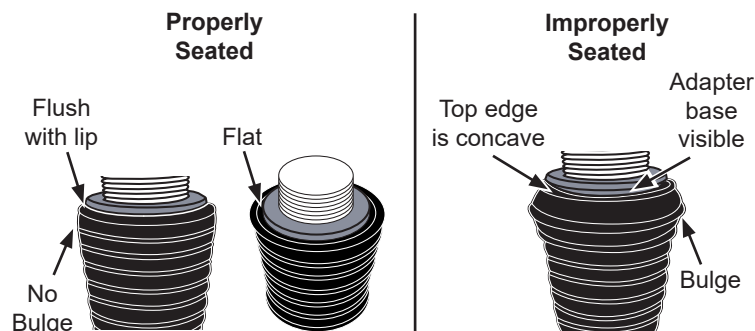
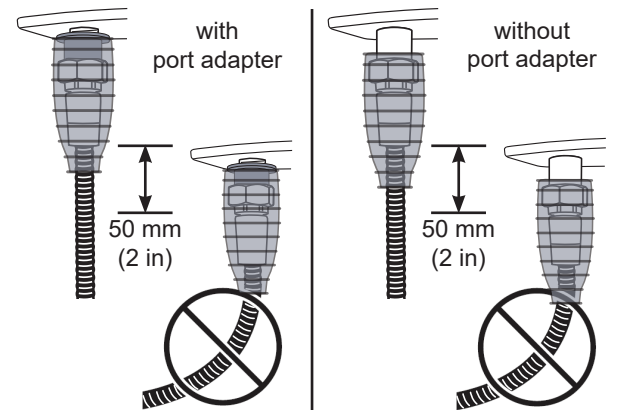
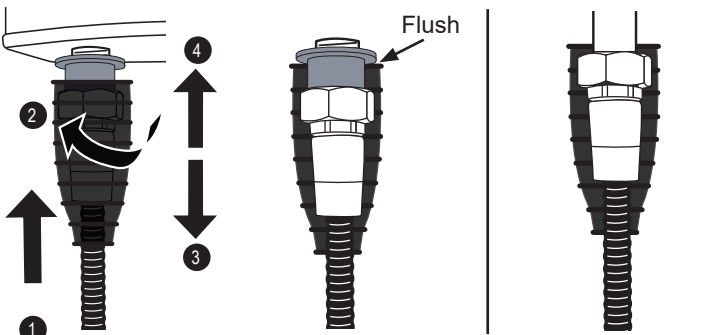
4.3-10 male SureFlex® Jumpers only

**4** If a port adapter is installed, thread to the 7-16 DIN male coupling nut in a counter-clockwise direction. Adapter needs only to make slight contact with 7-16 DIN male coupling nut.



**5** Push **1** and twist **2** the boot **counter-clockwise** over the male coupling nut and adapter. Pull down slightly **3** and push back up **4** to flatten the top of the boot. The boot **MUST** look like Properly Seated illustrations below. For smooth ports push and twist the boot **counter-clockwise** over the male coupling nut.

**6** Do not hold the connector and bend the cable directly behind it, rather hold the cable 50 mm (2 in) adjacent to the connector to keep stress from the cable / connector junction.



Do not allow sharp objects to come in contact with the boot. They can cause damage that would impact the boots performance.



Be careful during final routing to avoid placing unwanted stress on the assembly

### CommScope

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