



DUST COVERS

Dust covers protect systems from environmental contaminants and extend the life of critical joints over the lifetime of a vehicle. Freudenberg Sealing Technologies manufactures a variety of dust covers as part of its boots portfolio in Shelbyville, Indiana, and Berlin, Germany.

Dust covers protect shaft joints, CV joints, ball studs and steering linkages, among other systems. They can be filled with lubricants, or can be used dry and enable tilting and turning. These boots/covers articulate with the shaft or linkage as the application is exercised protecting the critical joint at all deflections/movements.

VALUES FOR THE CUSTOMER

Freudenberg Sealing Technologies dust covers come in a variety of designs to meet multiple customer and application requirements.

- Available with or without clips
- Available with an integrated ring in the throat area, in the bottom area, or in both areas
- Produced with double convoluted dust covers and integrated rings at the throat and bottom



FEATURES AND BENEFITS

Types of rubber dust covers—single convoluted boots

	Rubber-only dust covers (with external clip rings)		Reinforced dust covers (reinforced connections do not need external clip rings)		
	Throat without clip	Throat and bottom with clip	Throat reinforced with L-ring	Bottom reinforced with spring ring	Throat and bottom reinforced
Advantages	<ul style="list-style-type: none"> No corrosion of the clip Constant tensile on the sealing area Less parts to buy 	<ul style="list-style-type: none"> Proven and reliable solution Cheap boot 	<ul style="list-style-type: none"> Endless closed ring, no sharp edges No corrosion of the ring Constant tensile on the sealing area Always round, no deformation Less parts to purchase Easy to assemble, less machinery Tilting angle max. 25° 	<ul style="list-style-type: none"> Endless closed ring, no sharp edges No corrosion of the ring Constant tensile on the sealing area Always round, no deformation Less parts to purchase Easy to assemble, less machinery The joint manufacturing is easier Less scrap on the assembly line Tilting angle max. 25° 	<ul style="list-style-type: none"> Endless closed ring, no sharp edges No corrosion of the ring Constant tensile on the sealing area Always round, no deformation Less parts to purchase Easy to assemble, less machinery The joint manufacturing is easier Less scrap on the assembly line Tilting angle max. 25°
Problems	<ul style="list-style-type: none"> Radial force in sealing area only from rubber tension Only for small working angles (max. 10°) 	<ul style="list-style-type: none"> Complex mounting process Corrosion and loss of the clip possible The boot wall can be damaged by sharp edges of the clip Sealing area can be damaged when assembling Tilting angle max. 20° 			<ul style="list-style-type: none"> Core diameter limited by spring ring A large throat diameter results in an almost cylindrical boot shape which may lead to irregular folding in the mounting process. Solutions: double convoluted boot or blown single convoluted boot

Types of rubber dust covers—double convoluted boots

	Rubber-only dust covers (with external clip rings)		Reinforced dust covers (reinforced connections do not need external clip rings)		
	Throat without clip	Throat and bottom with clip	Throat reinforced with L-ring	Bottom reinforced with spring ring	Throat and bottom reinforced
Advantages		<ul style="list-style-type: none"> Proven and reliable solution Cheap boot Tilting angle max. 30° 	<ul style="list-style-type: none"> Endless closed ring, no sharp edges No corrosion of the ring Constant tensile on the sealing area Always round, no deformation Less parts to purchase Easy to assemble, less machinery Tilting angle max. 30° 	<ul style="list-style-type: none"> Endless closed ring, no sharp edges No corrosion of the ring Constant tensile on the sealing area Always round, no deformation Less parts to purchase Easy to assemble, less machinery The joint manufacturing is easier Less scrap on the assembly line Tilting angle max. 30° 	<ul style="list-style-type: none"> Endless closed ring, no sharp edges No corrosion of the ring Constant tensile on the sealing area Always round, no deformation Less parts to purchase Easy to assemble, less machinery The joint manufacturing is easier Less scrap on the assembly line Tilting angle max. 30°
Problems	<ul style="list-style-type: none"> Complex mounting process Corrosion and loss of the clip possible The boot wall can be damaged by sharp edges of the clip Sealing area can be damaged when assembling 				<ul style="list-style-type: none"> Core diameter limited by spring ring

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