# FREUDENBERG-NCC



## LSU Style STD (Short)





## Applications



- earth moving equipment
- forklifts
- agricultural equipment
- tailgate lifts
- mobile arms
- injection molding
- standard hydraulics

#### Applications

Material 2093				
Max. Pressure	5000 PSI/34.5 Mpa			
Typ. Pressure	3000 PSI/20.5 Mpa			
Max. Temperature	220°F/104°C			
Typ. Temperature	180°F/82°C			
Min. Temperature	-65°F/-54°C			
Max. Speed	100 ft/min / 1.5 ft/s			
Typ. Speed	100 ft/min / 1.5 ft/s			
Material 2053				
Max. Pressure	5000 PSI/34.5 Mpa			
Typ. Pressure	3000 PSI/20.5 Mpa			
Max. Temperature	275°F/135°C			
Typ. Temperature	180°F/82°C			
Min. Temperature	-65°F/-54°C			
Max. Speed	100 ft/min / 1.5ft/s			
Typ. Speed	100 ft/min / 1.5ft/s			
Material 9250				
Max. Pressure	6000 PSI/41 Mpa			
Typ. Pressure	3000 PSI/ 20.5 Mpa			
Max. Temperature	300°F/149°C			
Typ. Temperature	220°F/104°C			
Min. Temperature	-65°F/-54°C			
Max. Speed	150 ft/min / 2.5 ft/s			
Typ. Speed	100 ft/min / 1.5 ft/s			
Material 6865				
Min/Max. Temperature -115°F/-82°C to 250/121°C				
Material Nitrile/Buna (NBR)				

#### Features & Benefits

The Standard LSU design has non-beveled lips for minimum friction and a square cross section (nominal length is equal to nominal radial width). Available in 1/8" to 5/8" cross sections.

- designs employ o-ring like energizers to assure uniform, positive lip contact for excellent low and high pressure rod and piston sealing applications
- designs retrofit existing seal grooves, no need to change hardware
- offers a range of seal and energizer material combinations to meet a wide range of temperature and pressure requirements, as well as resistance to wear and extrusion

Seal Material		
Compound	Availability	
<u>2093</u>	Standard Stocked	
<u>2053</u>	Standard - Non-Stocked	
<u>9250</u>	Standard - Non-Stocked	
<u>6865</u>	Non Standard	
<u>3102</u>	Non Standard	
<u>3202</u>	Non Standard	
<u>3302</u>	Non Standard	
Compound	Energizer Material	
<u>N (3101)</u>	Standard Stocked	
<u>E (3201)</u>	Standard - Non-Stocked	
<u>V (3301)</u>	Standard - Non-Stocked	
<u>U (6865)</u>	Standard - Non-Stocked	
S/ Stainless Steel Spring	Non Standard	

### **Design Reference**

#### Surface Finish

**Materials** 

For more information on surface finish and conditions, <u>click here.</u>

Roughness Depth

R<sub>max</sub>

Min/Max. Temperature	-40°F/-40°C to 250°F/121°C		
Material EPDM *			
Min/Max. Temperature	-65°F/-54°C to 300°F/149°C		
Material 6865			
Min/Max. Temperature	-20°F/-29°C to 400°F/204°C		

\* Ethylene Propylene (EPDM) is not to be used in petroleum based fluids.

### Installation

For complete Installation Instructions, click here.

Sliding surface	≤ 16µi
Bottom of groove	≤ 32µi
Sides of groove	≤ 32µi

#### Gap dimension

The largest gap dimension appearing in operation on the non-pressurized side of the seal is decisive for sealing function. See: <u>Gap</u> widths and fits.

#### (S) Gap Width

The values in the diagram below relate to the recommended maximum permissible radial clearance that can appear at any point on the circumference of the seal heel. Data shown is representative of our most commonly requested material 2093. For data at higher temperatures and other materials, contact Freudenberg-NOK.

