



BRENCO® BEARING SEAL OPTIONS

Proven performance in the world's toughest operating environments

DDL® BEARING SEALS

- ▶ Amsted Rail's standard seal design over the past 20 years
- ▶ Ideal for customers looking for reliability and who are less concerned about seal torque

ST-212 BEARING SEALS

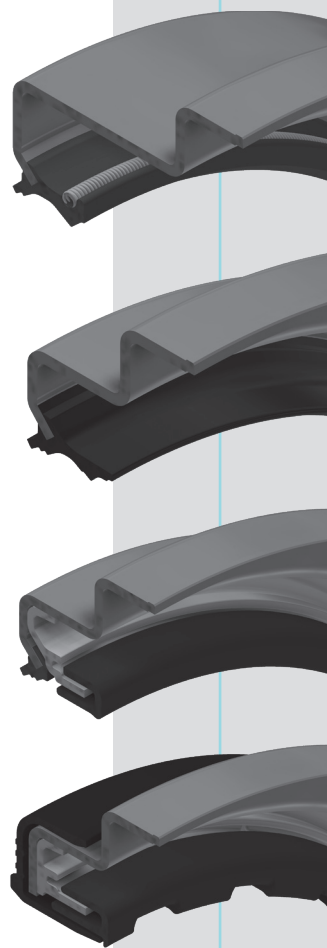
- ▶ Introduced in 1995
- ▶ Lower torque with little to no grease purge

EFFICIENCY PLUS® BEARING SEALS

- ▶ Introduced in 2006
- ▶ Low-torque labyrinth seal design helps avoid grease purge
- ▶ Amsted Rail's lowest torque and temperature seal until the Tru-Guard

TRU-GUARD® BEARING SEALS

- ▶ Received AAR unconditional approval for Class E, F, & G Tru-Guard seals in 2024
- ▶ True non-contact, virtually zero-torque seal design
- ▶ Guards bearing from ingress of contaminants, lowers bearing operating temperature, and helps avoid grease purge



BEARING SEAL PERFORMANCE FEATURES

SEAL OPTION		PERFORMANCE FEATURE				
PN CODE	NAME	GREASE RETENTION	CONTAMINANT EXCLUSION	SEAL TORQUE/ TEMPERATURE		NON-VERIFIED REMOVAL PREVENTION
				DURING BREAK-IN	AFTER BREAK-IN	
ST	DDL® (Double Dust Lip)	Good	Good	Acceptable	Acceptable	Acceptable
B	ST-212	Acceptable	Good	Acceptable	Good	Good
G	Efficiency Plus® (EP)	Exceptional	Acceptable	Good	Excellent	Good
K	Tru-Guard®	Exceptional	Exceptional	Exceptional	Exceptional	Exceptional

AMSTED RAIL, THE GLOBAL LEADER IN FULLY INTEGRATED FREIGHT CAR SYSTEMS FOR THE HEAVY HAUL RAIL MARKET.

Amsted Rail is the world’s leading provider of undercarriage and end-of-car railcar components, with facilities spanning six continents. Through our state-of-the-art manufacturing processes, Amsted Rail has been redefining industry standards for innovation and technology since 1877, providing our customers worldwide with unmatched performance and reliability for the long haul.

To learn more, visit www.amstedrail.com.

