

BENEFITS

Nord-Lock SC-washers secure bolted joints exposed to severe vibration, dynamic loads, shock loads or thermal movement.

- Secures bolted joints in structural steelwork
- Designed and approved for use with HV and HR bolting assemblies
- Locking function not affected by lubrication
- High corrosion resistance (minimum 1,000 hours in salt spray test according to ISO 9227) corresponds to C4 high or C5 medium according to ISO 12944-6
- Designed to withstand temperatures between -50°C and 150°C.
- CE marked (ETA-19/0813, ETA-20/0010)
- Quick to install and removable with standard tools
- Traceability due to laser marking

APPLICATIONS

Nord-Lock SC-washers can easily replace a standard plain washer as well as a chamfered washer to prevent the bolt from rotating loose. The SC-washers are suitable for a wide variety of applications across the construction and bridge-building industry.

They are safe to use with high-strength structural bolting assemblies for preloading and are confirmed for HV assemblies by the European Technical Assessment ETA-20/0010 issued by the German Institute for Construction Technology (DIBt).

WANT TO LEARN MORE?

Ask your Nord-Lock representative for case studies and details on how our products can secure your challenging joints. Find your local Nord-Lock representative and contact us today to arrange a visit: www.nord-lock.com/contact

TESTED AND CERTIFIED

Nord-Lock SC-washers have been rigorously tested and approved by independent institutes as well as certification authorities. They are safe to use with high-strength structural bolting assemblies for preloading and are confirmed for HR and HV assemblies by the European Technical Assessment ETA-20/0010 issued by the German Institute for Construction Technology (DIBt).

SC-washers are safe to use in non-preloaded structural bolting assemblies according to EN 15048 and confirmed by the ETA-19/0813 issued by the DIBt.



NORD-LOCK GROUP

Nord-Lock Group is a global leader in bolting and engineering solutions. Our innovative technologies and industry-leading expertise secures millions of critical applications across the globe.

Our brands are all at the forefront of their respective technologies: Nord-Lock® wedge-locking washers, Superbolt® mechanical tensioners, Boltight® hydraulic tensioners, Expander® System pivot pins, and Energy Bolting safety-critical fasteners.

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NORD-LOCK
GROUP

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NORD-LOCK® STEEL CONSTRUCTION WASHERS

DESIGNED FOR STEEL CONSTRUCTION



NORD-LOCK®
PART OF THE NORD-LOCK GROUP

THE CHALLENGE

DEMANDING CONDITIONS IN STEEL CONSTRUCTION JOINTS

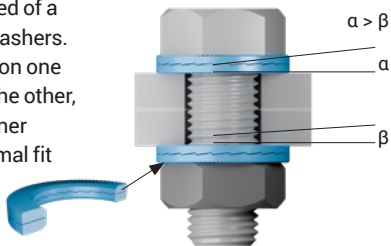
Bolted joints in steel structures are exposed to dynamic forces and environmental influences that can lead to loosening and loss of preload, compromising structural integrity and safety. At the same time, compliance with industry standards requires reliable locking solutions.

- Vibration and dynamic loads from wind, traffic, and machinery
- Thermal expansion and contraction due to environmental changes
- Slip and settlement in large structural interfaces
- Surface conditions such as coatings or corrosion protection
- Preloaded and non-preloaded bolting assemblies (HV, HR, SB)
- Safety-critical applications requiring compliance with EN standards
- Risk of self-loosening leading to structural failure

THE SOLUTION

HOW NORD-LOCK STEEL CONSTRUCTION WASHERS WORK

The solution is composed of a pair of wedge-locking washers. Each washer has cams on one side and serrations on the other, with chamfers on the inner diameter to ensure optimal fit with HR and HV bolts. When tightened, the serrations embed into



the mating surfaces. Because the cam angle (α) is greater than the thread pitch (β), a wedge effect is created. As a result, preload is maintained and loosening is prevented. The double-sided chamfers also eliminate the risk of incorrect installation.

WHAT DO STANDARDS SAY?

EN 1090-2

bolted joints [...] subjected to significant vibration [...] shall use a locking method

EN 1993-1-8

bolted connections which are additionally subjected to shock loads or considerable loads of vibrations, shall be secured against self-loosening

EUROPEAN TECHNICAL ASSESSMENT ETA-19/0813

Nord-Lock washer for non-preloaded bolting assemblies

Items and sizes	Material
NL6 – NL48 NL6sp – NL36sp NL12SC – NL36SC	Low alloyed steel 1.7182
NL6ss – NL48ss NL6spss – NL30spss	Stainless Steel 1.4404
NL6ss-254 – NL39ss-254 NL6spss-254 – NL27spss-254	Stainless Steel 1.4547

EUROPEAN TECHNICAL ASSESSMENT ETA-20/0010

Nord-Lock SC washer for preloaded bolting assemblies

Items and sizes	Material
NL12SC – NL36SC	Low alloyed steel 1.7182

