

TENSION FORCE INDICATOR

TFI – Tension Force Indicator

- With the TFI, you can verify the pre-tensioning force that is actually attainable
- Verifies that up to 60% fewer lashing straps can be used
- For fixed and adjustable ends
- Very easy to read thanks to signal colour



Achieve the maximum pre-tensioning force in a cost-effective and precise manner.



The TFI – Tension Force Indicator

Normally, when determining the pre-tensioning force, additional electronic devices are used. These are very accurate, but also expensive. More than ten years ago, SpanSet developed a unique mechanical aid – the Tension Force Indicator. The TFI reliably shows the pre-tensioning force that has been achieved – to do so, it is installed directly on the tensioning device. Well-protected and extremely easy to read! Many of our products have already been fitted with TFIs as standard, meaning that expensive measurements are now a thing of the past.

Achieve the maximum pre-tensioning force in a verifiable manner with the TFI

The TFI helps you to make the best possible use of your lashing straps, achieving maximum performance. The pre-tensioning force display makes it simple for you to measure the pre-tensioning force applied and to provide evidence of this with no problems in the event of a check. The two jaws of the TFI close when tension is added.

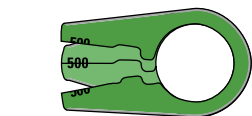
Once the full pre-tensioning force has been reached, the jaws are pressed together (form fit). In this way, you can prove the pre-tensioning force applied in the system quickly and directly. If the lashing strap loses tension during the journey, the jaws of the TFI will not be fully closed, indicating that re-tensioning is necessary in the event of doubt.

The Tension Force Indicator, designed for 50mm-lashing straps, is available in different versions, with 500 (green), 750 (red) and 1,000 (yellow) daN/STF pre-tensioning displays, tailored to the relevant lashing systems. As the TFI design uses signal colours, it also makes it easier to read the pre-tensioning force in poor light conditions.

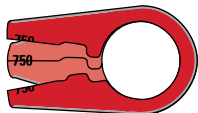
Additional use of TFI at adjustable end

In addition to the TFI at the fixed end, the TFI can also be used at the adjustable end. For this, there is an adaptor available for the TFI which can be integrated into the current end fittings. In addition, SpanSet has specially designed a delta hook to which the TFI can easily be attached. This results in an additional cost saving, as no adaptor is then required. Alongside the even higher verifiable pre-tensioning force, the K-factor (1.5) is no longer significant, as a lashing force can also be proven at the adjustable end. In addition to your own safety, the unique TFI guarantees the necessary traceability for the authorities and is also listed as a system component in the GS test descriptions. This means that not only does the Tension Force Indicator from SpanSet ensure greater cost-effectiveness, it also guarantees greater safety when using lashing systems.

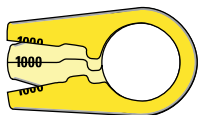
SpanSet – Certified Safety



1: TFI 500 daN



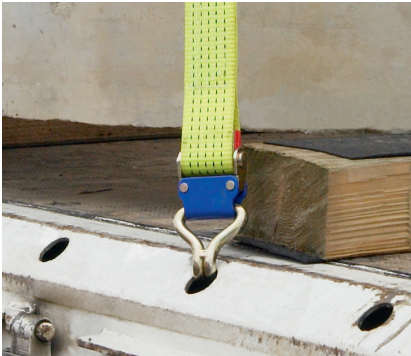
2: TFI 750 daN



3: TFI 1.000 daN

ANTI BELT-SLIP AND TENSION FORCE INDICATOR

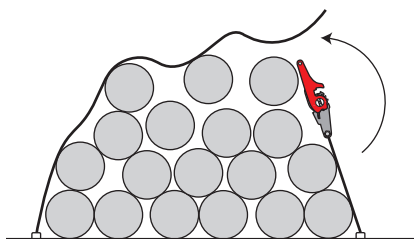
ABS, TFI and adjustable end TFI



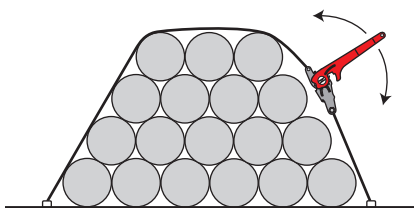
- TFI optional on all 50 mm strap ratchets
- Indicates actual pre-tension
- Adjustable end compatible with several end fittings

“Anti-Belt-Slip” procedure (ABS)

The ratchet is opened, the tension releases spontaneously, and the load gets out of control: anyone who has experienced this knows how important ABS is. It means you have complete control even during release. The ABS system lets you release the pre-tension force in small steps. This gives you the opportunity to use a forklift truck to straighten up any loads that threaten to tip and are leaning into the strap, helping prevent damage and accidents.



Without ABS



With ABS

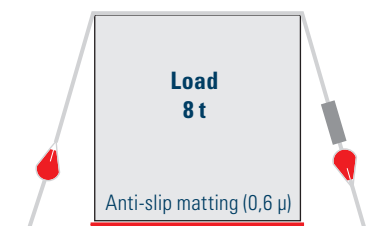
Be certain of the right tension

When it comes to pre-tensioning forces in your lashing strap system, you need to be smart with your calculations. According to EN 12195-1, you may normally only take into account the STF value of the fixed end and 50% of the pretensioning force of the fixed end for the adjustable end. However, if you can prove that a greater pre-tensioning force is achieved, you can take into account this force. So if you can prove 750 daN on both the fixed end and the adjustable end, for example, you can include this 1,500 daN total pre-tension force in your calculations.

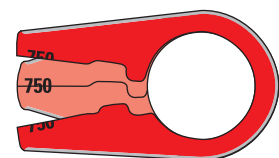
We have developed a unique aid that quickly and reliably shows you the pre-tensioning force applied: the patented **TFI (Tension Force Indicator)**. It states the pre-tensioning force actually achieved directly at the ratchet and at the adjustable end: in steps of 250, 500 and max. 750 daN.

With optimum pre-tensioning, you will thus achieve a load security that can be proven, which will stand up to inspection by police checks, and at the same time reduce the number of lashing items required. So for each load, you'll save on lashing equipment and time.

ErgoABS ratchet with TFI at adjustable end and ratchet end



1. Total pre-tensioning force necessary: 2,626 daN
2. TFI-Displays at ratchet and adjustable ends read 2 x “750” = 1,500 daN
3. You need: 2 x Ergo ABS with a pre-tensioning force of 1,500 daN = 3,000 daN



Tension Force Indicator