



SMART BAND

*"The
Strongest
Plastic Band & Buckle Clamping
System in the World"*

32mm (1 1/4") Smart Band® PA11GF vs CRA Strapping Solutions



Smart Band® has been designed to provide a direct alternative to the widely used CRA Strapping solutions currently in the marketplace today.

We believe that not only does Smart Band® match the performance of the CRA alternatives it provides a number of distinct and important benefits.

These include:

Low Price:

Smart Band® provides cost savings on CRA alternatives

Stable Price:

Smart Band® raw materials are not exposed to large price fluctuations

Long Life:

Smart Band® is made from Nylon 11 which has been proven to survive for extensive periods of time in the harsh offshore & subsea environments

Strength:

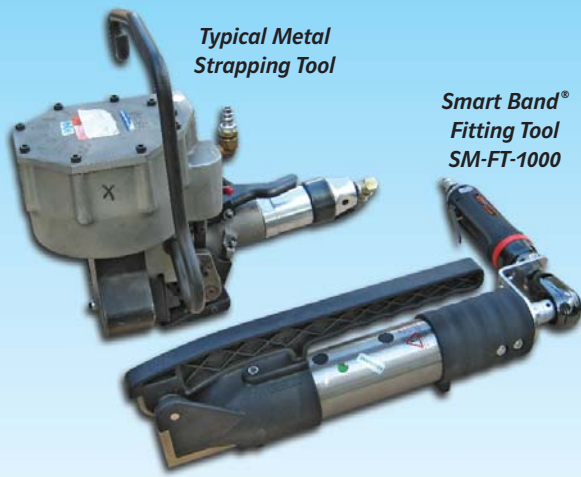
Similar performance to CRA alternatives

Retention Force:

Smart Band® can be tightened to a higher retention force than CRA alternatives

Safety:

With no sharp edges the use of Smart Band® and installation tooling significantly decreases the risk of injury during installation.



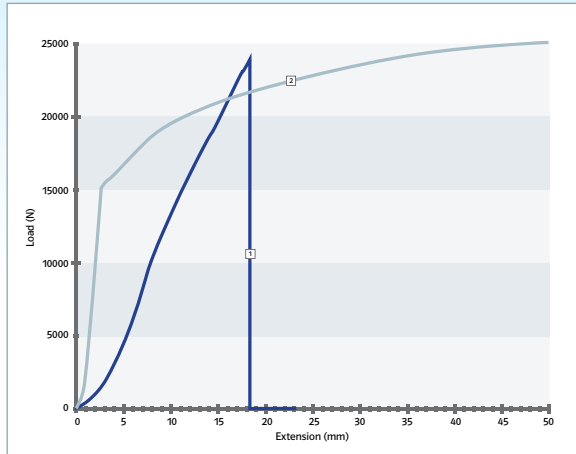
Typical Metal Strapping Tool

Smart Band® Fitting Tool SM-FT-1000

Band Fitting Tension

Using existing pneumatic tooling, the Smart Band® 32mm PA11GF can be tightened to a 30% higher system force than Nickel Alloy 625.

Banding	Fitting Tool	Tool Weight	Retention Force
		(kg)	(N)
SmartBand® 32mm PA11GF	SM-FT-1000	4.0	>8000
Nickel Alloy 625	Typical Metal Strapping Tool	12.9	6200

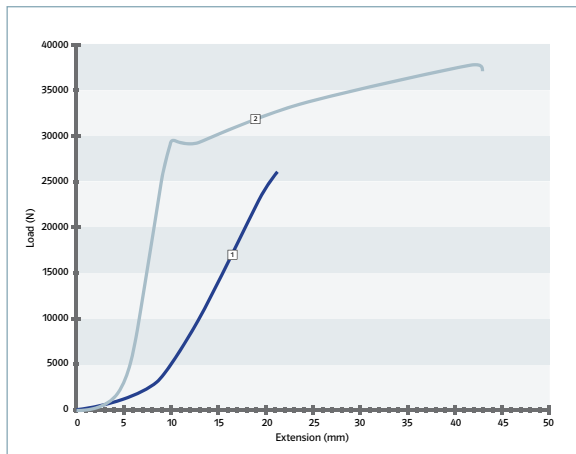


Straight Band Tensile Test

In this test, a length of band is gripped at either end and pulled at a speed of 20mm (0.8inch)/min until failure. At the point of yield, Smart Band® 32mm PA11GF band is 46% stronger than Nickel Alloy 625.

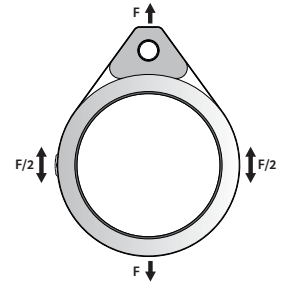


Banding	Yield	Breaking Force
	(N)	(N)
1 SmartBand® 32mm PA11GF	22,700	22,700
2 Nickel Alloy 625	15,500	25,250

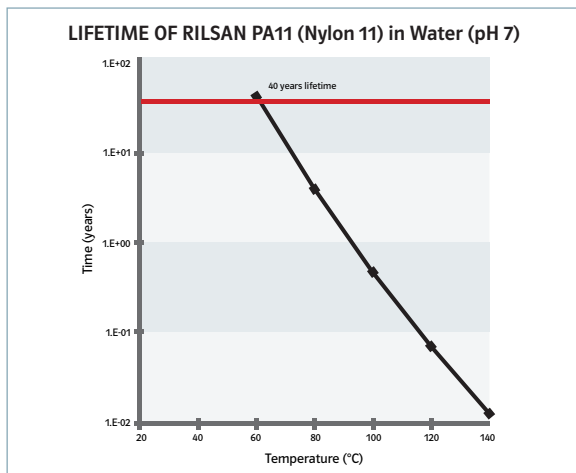


System Tensile Test

In this test, the band and buckle is assembled as a system and placed around two mandrels, with the buckle located on a 300mm radius. The two mandrels are pulled apart at a speed of 20mm (0.8inch)/min until the system fails. At the point of yield, the Smart Band® 32mm PA11GF system is 14% weaker than Nickel Alloy 625.



Banding	Yield	Breaking Force
	(N)	(N)
1 SmartBand® 32mm PA11GF	25,200	25,200
2 Nickel Alloy 625	29,450	37,850



Life in Sea Water

One of the main benefits of using Nylon 11 in offshore applications is the very low degradation due to water and a whole variety of petrochemicals – Track records since Nylon 11 was first introduced over 50 years ago show extremely high resistance to a whole variety of offshore chemical environments.

The graph opposite gives the half life of the polymer plotted against time and temperature in water. It should be noted that sea water is less aggressive than pure water, because of the alkalinity produced by the salts in solution.

For more information, please see our Banding Products Technical Booklet at www.hclfasteners.co.uk