

# Smart<sup>®</sup> Tie



Smart<sup>®</sup> Tie incorporates the High Strength Tooth Feature of the Smart<sup>®</sup> Band Hybrid and Compact and creates the strongest Polymer Cable Tie in the World.

Smart<sup>®</sup> Tie is a patented heavy duty polymer tie wrap, able to withstand system loads in excess of 1200kgf.\* It has the advantage of being manufactured from a range of high temperature polymers, giving it superior chemical and temperature resistance up to 175°C\*.

Lightweight and very easy to use the Smart<sup>®</sup> Tie has become the ideal downhole cable tie solution and compatibility with the Smart<sup>®</sup> Protector provides a complete solution for many down-hole applications. The Smart<sup>®</sup> Tie is also used widely in offshore applications such as Cable Protection and can be manufactured from long-life Nylon 12.

\*Depending on material choice.

## Key Features

- High temperature resistance up to 175°C (347°F)
- High strength up to 1223kgf (2695lbf)
- Safe and very easy to fit
- High speed installation
- 100% recyclable
- Non-corrosive
- Long life materials
- Suitable for divers

20mm (3/4 inch)

32mm (1 1/4 inch)



## Performance & Material

System			Max System Strength		Min Diameter		Max Temp Resistance*		Longevity*	Gas Resistance	
Dimensions		Material	kgf	lbf	mm	in	°C	°F		CBM Coal Seam Gas	H <sub>2</sub> S Sour Gas
mm	in										
20	3/4	Polyketone	565	1220	60	2.36	125	257	Long Term	Good	Good
		Nylon 12	414	911	60	2.36	100	212	Long Term	Fair	Fair
		PPS	514	1130	60	2.36	175	347	Long Term	Very Good	Very Good
32	1 1/4	Polyketone	1270	2800	60	2.36	125	257	Long Term	Good	Good
		Nylon 12	984	2169	60	2.36	100	212	Long Term	Fair	Fair
		PPS	1223	2695	60	2.36	175	347	Long Term	Very Good	Very Good

\*Life expectancy is dependant on the working temperature. Refer to the Smart Products Technical Booklet for Downhole Use



## Dimensions, Part Numbers & Packaging

System			Band Dimensions						
Dimensions		HCL Part No	Maximum Length		Band Width		Band Thickness	Head Width	Head Height
mm	in		mm	in	mm	in	mm/in	mm/in	mm/in
20	3/4	ST-20-600	620.0	24.41	20	0.79	3.6/0.14	35.0/1.38	12.0/0.47
		ST-20-750	770.0	30.31					
32	1 1/4	ST-32-550	573.0	22.56	32	1.26	4.6/0.18	50.0/1.97	20.0/0.79
		ST-32-850	873.0	34.37					



## Tool Options & Retention

System			Min Retention*			Speed of Installation	Tool Type	Tension Control
Dimensions		Tool	N	kgf	lbf			
mm	in							
20	3/4	SM-FT-1000-20ST	1500	153	337	20 secs	Manual	Torque Wrench
		SM-FT-2000-19	1500	153	337	10 secs	Manual	Hand
		SM-FT-3000-20ST	1500	153	337	5 secs	Pneumatic	Air Regulator
32	1 1/4	SM-FT-1000-32ST	4000	408	899	20 secs	Manual	Torque Wrench
		SM-FT-2000-32	3700	377	832	10 secs	Manual	Hand
		SM-FT-3000-32ST	4000	408	899	5 secs	Pneumatic	Air Regulator

\*Values may be lower depending on materials chosen please refer to Technical Booklets for more information.