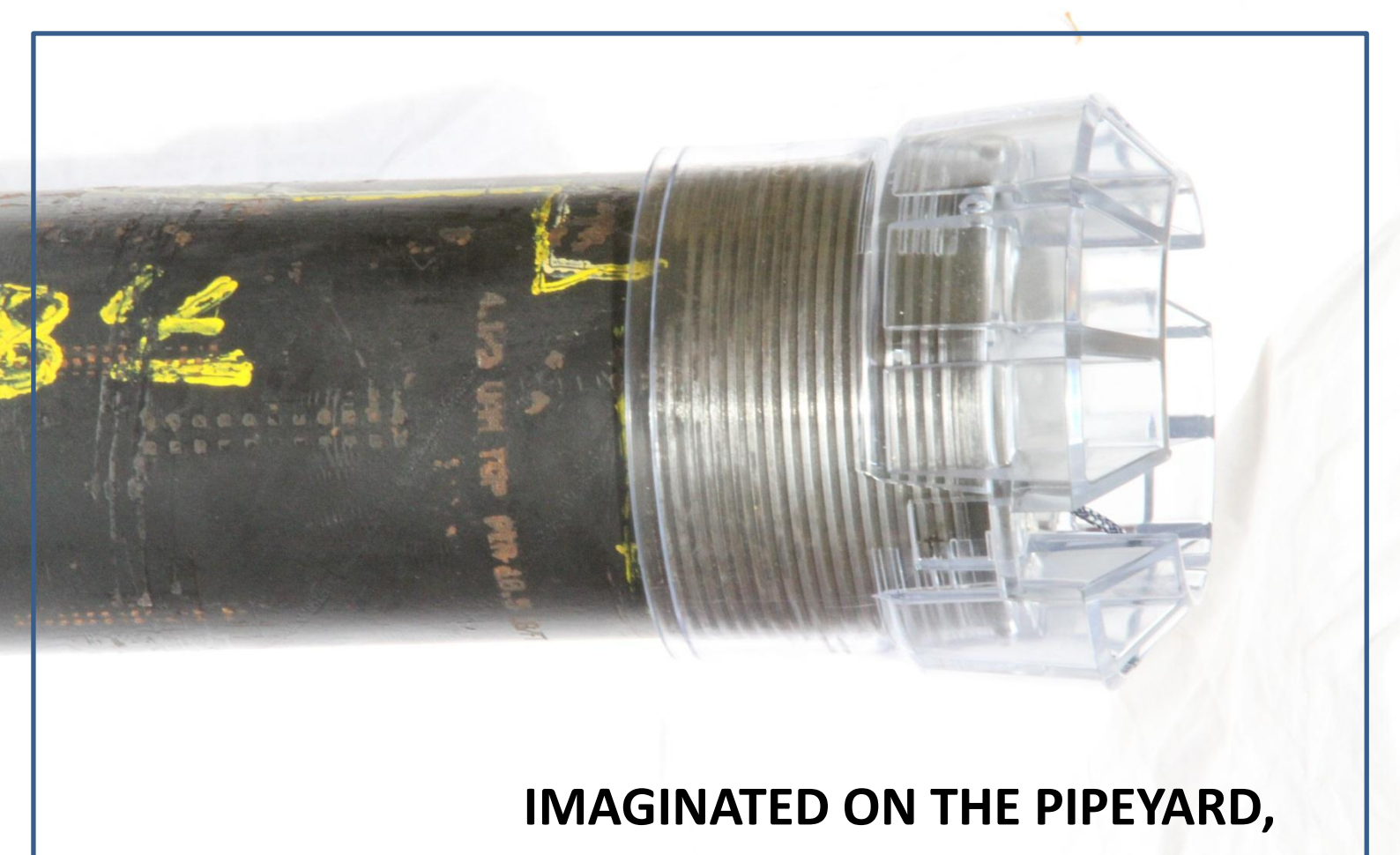




PREMIUMPROTECTOR

**Imaginated on the pipeyard,
To serve the drillers**

RELIABLE, RIG-READY.



IMAGINATED ON THE PIPEYARD, TO SERVE THE DRILLERS

This innovating solution for the oil and gas industry will help the drillers by making the pipe preparation **easier**.

With Premium Protectors, the pipes will keep their protectors until they get to the **rig floor**.

Premium Protectors were designed after listening carefully to field engineers' and meeting their needs.

This **patented innovation** is dedicated to grease-free connections, and are already being produced.

The traditional methods of preparing oil pipes is harsh : Heavy handling, protectors removal, storage grease removal on both pipes and protectors, internal diameter control "Drift", length measurement and thread inspection, running compound application and protectors re-screwed on.

RIG-READY

The **new way** of preparing pipes with Premium Protector :

Grease-free connections will eliminate the need for grease - both for removal and replacement.

Premium Protectors make the job **easier**.

The **waterproof seal** is guaranteed. The surface lubricant of the grease-free pipe remains intact after Premium Protector removal.

Visual inspection of the connection is simple thanks to the **see through quality**.

The pipe can be drifted without removing the protector thanks to the removable end cap.

Data (such as pipe length) can be read and shared and the pipe can always be traced & tracked, thanks to its **RFID chip**. It is resistant to dirt and extreme weather conditions.

Therefore the pipe can keep their Premium Protector **until the rig floor**, where they can be unscrewed in **3 turns** only.





RELIABLE

Premium Protectors' **simple design** guarantees its reliability.

Premium Protectors are made of an **energy absorbing material** which handles physical constraints by bending itself (without snapping). Its characteristics exceed the A.P.I. standard requirements. With as little as 3 threads, the protector still passes the pulling out test.

Screwing and unscrewing is **quick** and **easy**. No more than three turns are needed.

Premium Protectors can be fitted with all tightening tools: Impact wrench, chain wrench, jaw wrench or a single bar.

A reliable tightening is guaranteed thanks to the progressive torque increases & decreases.

In conclusion, with Premium Protectors the pipes keep their protectors **until the rig floor** simplifying enormously pipe preparation. They are **RIG-READY!**

PREMIUM PROTECTOR technical data sheet

Range n°2: > 3' ½ to 8' ¾

Premium Protectors are available in open end driftable and close end driftable (with caps)

Mechanical properties

	Values	Details						
Axial impact test resistance	<table border="1"> <tr> <td>+ 66°C</td><td>+ 21°C</td><td>- 46°C</td></tr> <tr> <td>1 627 J</td><td>1 627 J</td><td>814 J</td></tr> </table>	+ 66°C	+ 21°C	- 46°C	1 627 J	1 627 J	814 J	API 5CT
+ 66°C	+ 21°C	- 46°C						
1 627 J	1 627 J	814 J						
Angular impact test resistance	<table border="1"> <tr> <td>814 J</td><td>814 J</td><td>407 J</td></tr> </table>	814 J	814 J	407 J	API 5CT			
814 J	814 J	407 J						
Stripping test (on pin end)	Validated for all the range	API 5CT						
Torque and vibration tests	900r/min _ 8,4mm _ 1M cycle	API 5CT						

Material properties

	Values	Details						
Dimensional stability	<table border="1"> <tr> <td>+ 66°C</td><td>+ 21°C</td><td>- 46°C</td></tr> <tr> <td colspan="3">Validated</td></tr> </table>	+ 66°C	+ 21°C	- 46°C	Validated			API 5CT
+ 66°C	+ 21°C	- 46°C						
Validated								
Corrosion test	35°C _ 1 000 h	API 5CT						

Specific properties

	Values	Details
Sealing	+ 66°C	Internal method
	+ 21°C	
	30 min	
Visual inspection	Without unscrewing protector	Internal method
RFID	Logistic & Quality data included	Internal method

Environmental properties

Re-usable Recyclable	Fully supported by PREMIUM PROTECTOR
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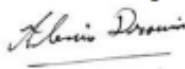
Customer requirement

Please contact us to adapt protectors according to your requirements

Written by :
Thomas CHARRUE
Technical Manager



Approved by :
Alexis DROUIN
General Manager

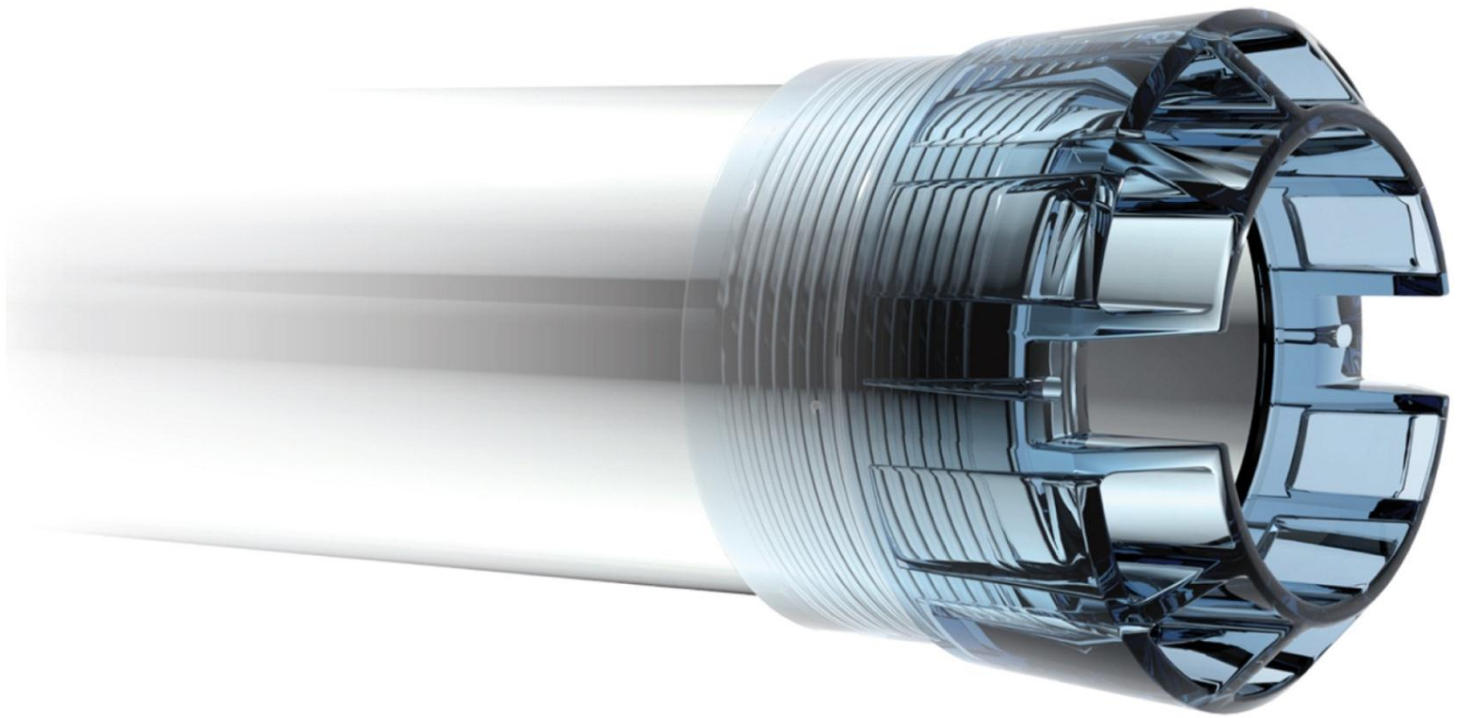


2011/02/02, Rev 1



PREMIUM PROTECTOR

RELIABLE, RIG-READY.



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Premium Protector® is a registered trademark – SIRET 523 810 950 00015