Hydril GX™ 13-10 HNBR

Packing Element

Genuine Hydril Elastomer: Designed to perform in today's extreme environments

Product description

The heart of every annular blowout preventer (ABOP) is its packing unit and Hydril Elastomers have been the market leader ever since we pioneered ABOPs over 70 years ago. But time didn't stand still; and neither did we. We proudly present our latest achievement, the introduction of our HNBR-based ABOP packing unit.

Key features

We have developed a new HNBR Long Lasting packing unit with a focus on features critical to hostile wellbore environments such as:

- Increased H2S ratings
- Improved wear resistance at continuously elevated temperatures
- Improved fatigue performance

API 16A 4th Edition PR2 qualification has been completed for the GX 13-10 geometry, with other sizes and styles coming soon. HNBR packing units are made to replace NBR packing units currently available.

Engineering Summary Data

Product:	GX 13-10
Bore (inches)	13 5/8"
Working pressure (psi)	0 to 10,000
Hydraulic operating pressure (psi)	0 to 3,000
Complete Shutoff (CSO)	No
Material	HNBR (Baker Hughes ST1001)
Temperature Rating (°F) Extended Hold Cold and Continuous Hot - in progress	200F for 7.5 hours 180F for 8.0 hours
Packer weight	570 lbs
API 16A status	4th Ed., PR2
Packing unit part number	3112570-H1

Qualification Data for GX 13-10 HNBR Field Assessment Packing Unit

This packing unit was developed for rapid field trial assessment to solve an operational issue occuring the Middle East region. This design will undergo full API 16A PR2 qualifcation testing following the field assessment with Saudi Aramco.

The results depicted below have been acquired through qualification testing in the workshop environment and do not necessarily represent the same conditions occuring in the field. Furthermore packing unit properties may slightly vary due to the dynamic elastomer vulcanization process.

As packing units experience wear resulting from normal use, performance may not meet like-new results.

Elastomer Details (NACE TM0187)	
H2S rating	2.5% @ 180F
CO2 rating	5%

Fatigue	
5" mandrel	51 cycles at 74F

Drift	Size	Temp	Time	Status
After 8 hour hold	13-5/8"	74F	30 Mins	Pass

Initial Closing Pressure (psi)		
Mandrel Size	Wellbore Pressure 0	Wellbore Pressure 10,000
5"	1082	929
3-1/2"	1500	1500
2-7/8"	1500	1500

Operational Information	Supporting Document
Preservation & storage	CAL19-007
Installation & operation	
Inspection & mainentance	

Additional Operational Pressures (psi)	
Stripping closing*	750
Maximum opening	3000

*May vary based on field condition and packer wear