

23 – 27 – 35 HD Series

Armor Single Barrier Rupture Disc® Tool

Protecting Your "Assets"

The Armor Single Barrier Rupture Disc Tool[®] is engineered and enhanced to create a pressure barrier in a live well between the well bore and the completion tubing strings (BHA).

This Armor Single Barrier Rupture Disc Tool[®] can be installed strategically in multiple locations in the tool string during live well control operations (Snubbing).

The Armor Single Barrier Rupture Disc Tool[®] can also work in conjunction with other downhole tools during live well workovers and completions. Examples: TCP Assemblies, Fishing assemblies, Packers, etc.

Once the tubing string is at your required depth, the Armor Rupture Disc[®] can be removed by simply overcoming differential pressure within the tubing string.

(See data sheet for Rupturing differentials)

Features & Benefits

- Designed Specifically for live well control (Snubbing)
- Available in 5k, 10k & 15K pressure ratings
- All Rupture Disc Tools[®] are manufactured with L-80 material (Sour Service Rated)
- Anti-Rotation set screws prevent threads from disengaging during downhole tool retrieval (packers, bridge plugs).
- New Body Torque through capability (See spec sheet for allowed torque)
- Patented Rupture Disc[®] with Bore ID separation groove & shatter pattern
- New and Improved Lo-Hi pressure seal engaging design (Patent Pending)
- All Single Barrier Rupture Disc Tools[®] are pressure tested, charted and serialized for full traceability
- Special Clearance design available while maintaining Engineered ratings
- Eliminates wire line operations while running in highly deviated wells
- Eliminates accidental plug release, increasing safety during well control operations
- Eliminates excess wire line operations due to miss runs, debris (sand) etc.
- ✓ Approved for single & dual barrier applications (Snubbing IRP 15 Plug Matrix)
- Customers can special order any size, material, threads, coatings & special hardenings
- ISO Compliant

Recommended Handling & Running Procedures

- 1. Insure the Rupture Disc Tool is transported from the Manufacture to the End-User location in "Safe Trip Package".
- 2. Equalize the outer side of the BHA in a slow consistent manner
- **3.** Apply fluid equivalent to ½ joint above the Rupture Disc[®]. Fluid cushion can protect the Rupture Disc[®] from objects that may accidently drop down the inner bore

NOT FOLLOWING THE OUT LINE RECOMMENDATIONS COULD RESULT IN PRODUCT FAILURE Rev-18 Nov 2018





Armor Single Barrier Rupture Disc® Tool

TOOL DESCRIPTION	TOOL O.D. Standard Clearance inch (mm)	TOOL O.D. Special Clearance inch (mm)	TOOL I.D. inch (mm)	CONCAVE SIDE psi (mpa) Rupturing differential	CONVEX SIDE psi (mpa) Disc Rating
2-3/8 (60.3)*	3.063 (77.8)	2.90 (73.66)	1.905 (48.4)	500 (3447)	5,000 (34.5)*
2-3/8 (60.3)*	3.063 (77.8)	2.90 (73.66)	1.905 (48.4)	750 (5171)	10,000 (68.9)*
2-3/8 (60.3)**	3.063 (77.8)	2.90 (73.66)	1.905 (48.4)	1,000 (6894)	15,000 (103.4)**
2-7/8 (73.0)*	3.66 (92.96)	3.46 (87.88)	2.45 (62.2)	500 (3447)	5,000 (34.5)*
2-7/8 (73.0)*	3.66 (92.96)	3.46 (87.88)	2.45 (62.2)	750 (5171)	10,000 (68.9)*
2-7/8 (73.0)**	3.66 (92.96)	3.46 (87.88)	2.45 (62.2)	1,000 (6894)	15,000 (103.4)**
3-1/2 (88.9)*	4.475 (113.66)	4.18 (106.2)	3.00 (76.2)	500 (3447)	5,000 (34.5)*
3-1/2 (88.9)*	4.475 (113.66)	4.18 (106.2)	3.00 (76.2)	750 (5171)	10,000 (68.9)*
3-1/2 (88.9)**	4.475 (113.66)	4.18 (106.2)	3.00 (76.2)	1,000 (6894)	15,000 (103.4)**

*Denotes L 80 (NACE – Sour Service) Material and ** Denotes P110 (Non-Sour Service) Material required to meet Engineered Tool Burst Rating

Single Barrier Rupture Disc Tool [®] Standard Body Specifications

DESCRIPTION	2-3/8 (60.3mm)		2-7/8 (73.0mm)		3-1/2 (88.9mm)	
Maximum OD	3.063 in	77.8 mm	3.66 in	93.6 mm	4.475 in	113.66 mm
Maximum ID	1.905 in	48.39 mm	2.45 in	62.23 mm	3.00 in	76.20 mm
Overall Length	11.465 in	290.98 mm	11.492 in	291.89 mm	12.932 in	328.47 mm
Pressure Options	5,000 psi (34.45 Mpa)* 10,000 psi (68.9 Mpa)* 15,000psi (103.35 Mpa)**				/ipa)**	
Min & Max Temp.	-40 c (-40 F) 160c (320 F) with Teflon & HNBR (Sour Service) seals.					
	Temperature rated seals above 160c (320 F) can be supplied upon request					
Tensile Strength*	141 200 lbs	62.808 daN	170 000 lbs	75 650 daN	239 000lbs	106.355daN
Tensile Strength**	194 100 lbs	86.340 daN	234 000 lbs	104 130 daN	329 000lbs	146.405daN
Internal Yield Pressure*	13 900 psi	95.84 Mpa	14 500 psi	99.97 Mpa	15 200 psi	104.80 Mpa
Internal Yield Pressure**	19 200 psi	132.38 Mpa	19 900 psi	137.20 Mpa	20 900 psi	144.10 Mpa
Collapse Pressure*	12 700psi	87.56 Mpa	13 200 psi	91.01 Mpa	11 400 psi	78.60 Mpa
Collapse Pressure**	17 500 psi	120.66 Mpa	18 100 psi	124.79 Mpa	15 200 psi	104.80 Mpa
Torque Through Body Specs-L80	Must not exceed 2593 ft-lbs		Must not exceed 4606 ft-lbs		Must not exceed 7715 ft-lbs	
Connection BxP	2-3/8 in (60.3mm) EUE		2-7/8 in (73mm) EUE		3-1/2 in (88.9mm) EUE	
Material/Metal*	L80 Nace*	L80 Nace*	L80 Nace*	L80 Nace*	L80 Nace*	L80 Nace*
Material/Metal**	P110**	P110**	P110**	P110**	P110**	P110**

Single Barrier Rupture Disc Tool® Special Clearance (SC) Specifications

Description	SC 2-3/8 (60.3mm)		SC 2-7/8 (73.0mm)		SC 3-1/2 (88.9mm)	
Maximum OD	2.90in	73.66 mm	3.46 in	87.88 mm	4.187 in	106.35 mm
Maximum ID	1.905in	48.39 mm	2.45 in	62.23 mm	3.00 in	76.20 mm
Overall Length	11.465in	290.98 mm	11.492 in	328.89 in	12.932 in	328.47 mm
Pressure Options	5,000 psi (34.45 Mpa)* 10,000 psi (68.9 Mpa)* 15,000psi (103.35 Mpa)**				Лра)**	
Min & Max Temp.	-40 c (-40 F) 160 C (320 F) with Teflon & HNBR (Sour Service) seals.					
	Temperature rated seals above 160c (320 F) can be supplied upon request					
Tensile Strength*	81 200 lbs	36.120 daN	122 000 lbs	54.290 daN	199 000 lbs	88.599 daN
Tensile Strength**	111 700 lbs	49.687 daN	168 000 lbs	74.760 daN	273 700 lbs	121.796 daN
Internal Yield Pressure*	13 900 psi	95.84 Mpa	14 500 psi	99.97 Mpa	15 200 psi	104.80 Mpa
Internal Yield Pressure**	19 200 psi	132.38 Mpa	19 900 psi	137.20 Mpa	20 900 psi	144.10 Mpa
Collapse Pressure*	8 600 psi	59.29 Mpa	9 200 psi	63.431 daN	10 600 psi	73.08 Mpa
Collapse Pressure**	10 700 psi	73.77 Mpa	11 600 psi	79.979 daN	14 600 psi	100.66 Mpa
Torque Through Body Specs-L80	Must not exceed 1367 ft-lbs		Must not exceed 2759 ft-lbs		Must not exceed 3372 ft-lbs	
Connection BxP	SC2-3/8 in (60.3mm) EUE		SC 2-7/8 in (73 mm) EUE		3-1/2 in (88.9mm) EUE	
Material/Metal*	L80 NACE*	L80 NACE*	L80 NACE*	L80 NACE*	L80 NACE*	L80 NACE*
Material/Metal**	P110**	P110**	P110**	P110**	P110**	P110**