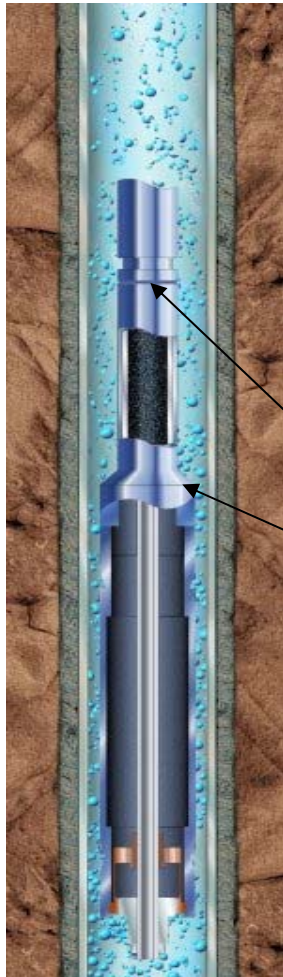


X-Span

Multi Dimensional Seal



Running in Hole

- ♦ **X-Span Patch can be conveyed on:**
 - E-line
 - Tubing
 - Drill Pipe
 - Coil Tubing Slickline
 - Snub Pipe

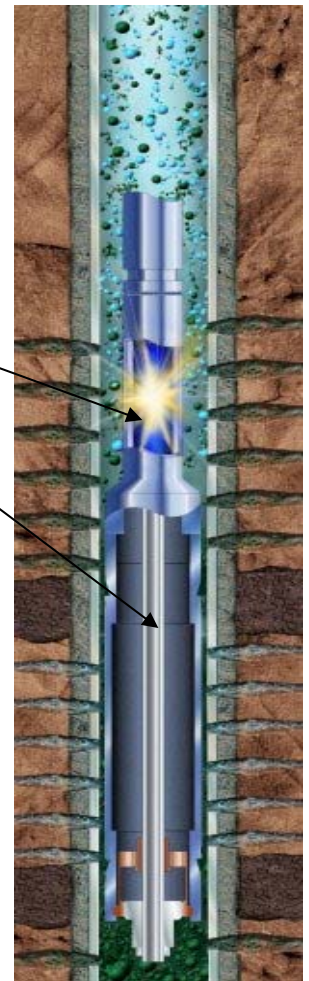
- ♦ **Setting Tool can be set:**
 - Explosively
 - Hydraulically ($\geq 7''$ Casing)

Explosive Setting Tool

Setting Sleeve

Explosive Setting Tool

Connecting Rods



Setting the Patch

- ♦ **Setting Tool is Initiated:**
 - Electrically
 - Mechanically
 - Bar Drop
 - Intelligent Firing System
 - Hydraulically
 - Ball Seat or Positive Pressure

X-Span

Multi Dimensional Seal



Shearing the Collet

- ♦ Connecting rods are pulled upward
- ♦ Collet is sheared once X-Span Patch is fully engaged

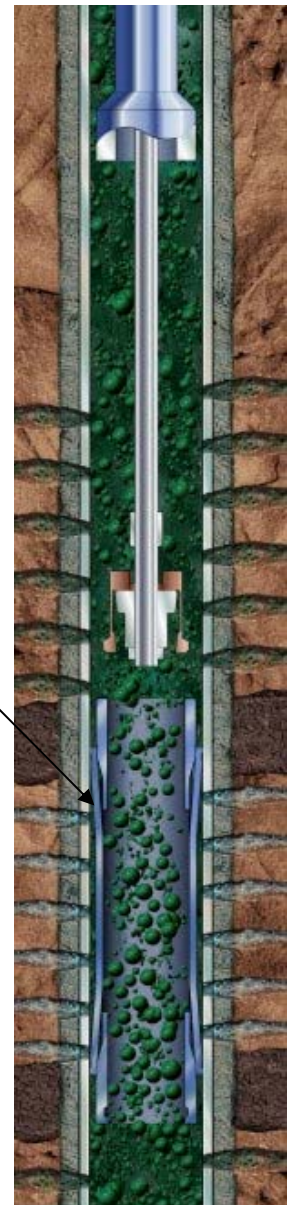
Connecting Rods

Collet Assembly

X-Span Patch Securely in Place

Pulling Out of the Hole

- ♦ Once collet is sheared, the setting tool is pulled out of the hole
- ♦ X-Span Patch is securely in place



X-Span

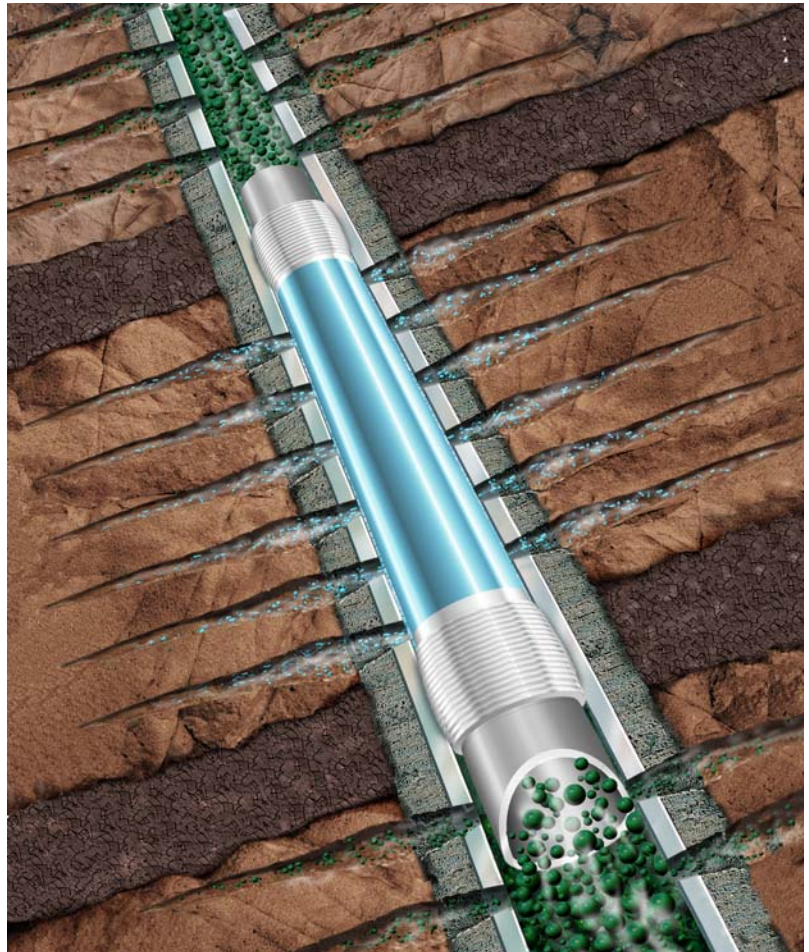
Multi Dimensional Seal

Advantages

- ♦ Metal to metal primary seal
- ♦ Highest pressure ratings
- ♦ Custom Patches
- ♦ Premium Alloys

Application

- ♦ Zonal isolation (Water Shutoff)
- ♦ Leaks
 - Collar
 - Liner Tops
- ♦ Corroded tubing or casing
- ♦ Hang-Offs / Profile Nipples
- ♦ Gravel Packs / Sump Packers
- ♦ Polished Bore Receptacles
- ♦ Horizontal applications
- ♦ Hostile environment applications
- ♦ Geothermal applications





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X-Span

Tubing Patch Specifications

Tubing Patch Specifications					
TUBING O.D. (in)	TUBING I.D. (in)	PATCH O.D. (in)	PATCH I.D. (in)	BURST (psi)	COLLAPSE (psi)
2-3/8	1.995	1.812	1.437	6,380	7,850
2-7/8	2.259	2.062	1.625	5,780	7,100
2-7/8	2.323	2.125	1.750	5,440	6,690
2-7/8	2.441	2.250	1.875	6,110	6,410
3-1/2	2.750	2.580	2.125	5,390	5,660
3-1/2	2.992	2.812	2.375	4,900	5,250
3-1/2	3.068	2.875	2.375	4,900	5,290
4-1/2	3.920	3.780	3.375	4,000	4,990
4-1/2	3.958	3.800	3.375	4,000	4,990
4-1/2	4.000	3.800	3.375	4,000	4,990
4-1/2	4.090	3.875	3.375	4,000	4,990



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X-Span

Casing Patch Specifications

Casing Patch Specifications					
TUBING O.D. (in)	TUBING I.D. (in)	PATCH O.D. (in)	PATCH I.D. (in)	BURST (psi)	COLLAPSE (psi)
5	4.276	4.080	3.500	4,590	5,740
5	4.408	4.188	3.500	4,590	5,740
5-1/2	4.670	4.520	4.000	4,080	5,130
5-1/2	4.778	4.600	4.000	4,080	5,130
5-1/2	4.892	4.700	4.000	4,080	5,130
5-1/2	4.950	4.790	4.250	3,870	4,840
5-1/2	5.044	4.857	4.250	3,870	4,840
6-5/8	5.791	5.600	5.000	3,340	4,180
6-5/8	5.921	5.687	5.000	3,340	4,180
6-5/8	6.049	5.850	5.250	3,200	3,990
7	5.920	5.687	5.000	3,340	4,180
7	6.004	5.850	5.250	3,200	3,990
7	6.094	5.930	5.250	3,200	3,990
7	6.184	6.028	5.500	3,060	3,830
7	6.276	6.110	5.500	3,060	3,830
7	6.366	6.160	5.500	3,060	3,830
7	6.456	6.281	5.750	2,940	3,680
7	6.538	6.355	5.750	2,940	3,680
7-5/8	6.625	6.438	5.750	2,940	3,680
7-5/8	6.765	6.593	6.000	2,825	3,535
7-5/8	6.875	6.687	6.000	2,825	3,535
7-5/8	6.696	6.781	6.250	2,720	3,410
7-5/8	7.025	6.835	6.250	2,720	3,410
8-5/8	7.511	7.328	6.500	4,180	4,420
8-5/8	7.625	7.438	6.500	4,180	4,420
8-5/8	7.725	7.531	6.750	3,630	3,360
8-5/8	7.825	7.625	6.750	3,630	3,360
8-5/8	7.921	7.687	6.750	3,630	3,360
8-5/8	8.017	7.781	7.000	3,910	4,135
8-5/8	8.097	7.844	7.000	3,910	4,135
9-5/8	8.535	8.285	7.500	3,670	3,880
9-5/8	8.681	8.500	7.750	3,560	3,760
9-5/8	8.755	8.500	7.750	3,560	3,760
9-5/8	8.835	8.625	7.750	3,560	3,760
9-5/8	8.921	8.671	7.750	3,560	3,760