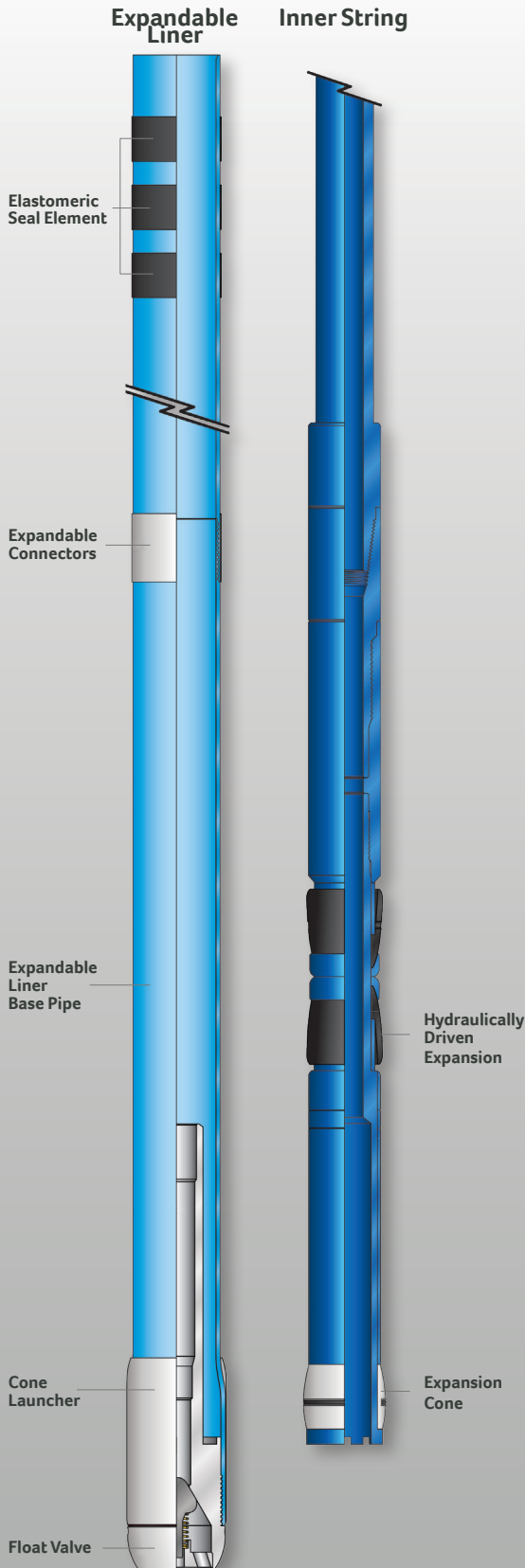


Outer Core – ReLine DL



When drilling and low pressure, thief, or trouble zones are encountered, the ReLine DL system enables the operator to isolate the interval with an expandable liner.

This provides a significant ID advantage when compared to a conventional liner string, enabling passage of optimised bit, casing & completion designs, and ultimately maximizing production.

The ReLine DL system is a bottom-up expansion design which uses hydraulic pressure to drive the expansion cone from the bottom of the liner to the top.

The system allows for cementing operations prior to expansion and facilitates a fully testable, anchored liner tie back into the previous shoe, ensuring life of well integrity with the added value of optimised wellbore diameter.

Primary elastomeric seal elements can be incorporated to the DL system in conjunction with swellable elastomers to provide instantaneous high-pressure liner to rock isolation at the launcher, and zonal isolation of the open hole where required

FEATURES

- Extensive size range
- Hydraulic bottom-up expansion
- Optimised RIH OD & post expansion ID
- Proprietary e2m expandable connection
- Debris tolerant running tool design
- High anchoring loads both in cased hole & open hole
- Multiple premium elastomers provide added assurance of life of well integrity in cased hole

BENEFITS

- Low ECD during RIH & circulation due to optimised pre-expansion OD
- Cement through & wash down capable prior to expansion
- Rotatable to assist with liner placement and cementing operations
- Deployable through milled windows for side-tracks & multi-laterals
- Running tool design enables flexibility in liner length
- Hydraulically driven expansion process reduces the overpull requirements of the rig

APPLICATIONS

- Expandable liner
- Shoe extension liner
- Loss zone isolation
- Gas cap / water isolation
- Infill wells
- Side-tracks
- Standalone Open Hole Patch

CORE PRODUCT SYNERGIES

- ADS (Activated Drilling Scraper) – facilitates ability to clean cased hole setting area of ReLine DL post drilling of shoe extension



SPECIFICATIONS

Parent Casing					Pre-Expanded Running Specifications				Expanded Geometry				Expanded Performance		
OD [in]	Weight [lb/ft]	Wall Thickness [in]	ID [in]	Nominal Drift [in]	OD [in]	Maximum RIH OD [in]	Wall Thickness [in]	DLS Limit [°/100]	OD [in]	Nominal Drift [in]	Special Drift [in]	Expansion Ratio [%]	Internal Yield Pressure [psi]	Collapse Pressure [psi]	Material Grade
13.625	88.2	0.625	12.375	12.219	10.750	12.092	0.350	12	12.068	11.432	11.372	14.3	3,933	910	MTX-60
13.375	77.0	0.550	12.275	12.119	10.750	12.092	0.350	12	12.068	11.432	11.372	13.8	3,933	910	MTX-60
13.375	72.0	0.514	12.347	12.191	10.750	12.164	0.350	12	12.142	11.510	11.450	14.5	3,913	870	MTX-60
13.375	68.0	0.480	12.415	12.259	10.750	12.232	0.350	12	12.212	11.583	11.523	15.3	3,895	840	MTX-60
13.375	61.0	0.430	12.515	12.359	10.750	12.432	0.350	12	12.212	11.583	11.523	15.3	3,895	840	MTX-60
13.375	54.5	0.380	12.615	12.459	10.750	12.432	0.350	12	12.417	11.798	11.738	17.4	3,840	760	MTX-60
11.875	71.8	0.582	10.711	10.555	9.625	10.525	0.352	14	10.474	9.817	9.757	10.0	4,529	1,490	MTX-60
11.750	65.0	0.534	10.682	10.526	9.625	10.480	0.352	14	10.444	9.785	9.725	9.7	4,539	1,510	MTX-60
10.750	65.7	0.595	9.560	9.404	8.625	9.342	0.417	15	9.267	8.483	8.423	8.9	6,050	2,880	MTX-60
10.750	60.7	0.545	9.660	9.504	8.625	9.402	0.571	15	9.373	8.316	8.256	11.1	8,226	5,420	MTX-60
10.750	60.7	0.545	9.660	9.504	8.625	9.442	0.417	15	9.371	8.594	8.534	10.3	6,000	2,720	MTX-60
9.875	62.8	0.625	8.625	8.469	7.625	8.349	0.375	17	8.330	7.635	7.575	11.1	6,078	2,770	MTX-60
9.625	53.5	0.545	8.535	8.379	7.625	8.349	0.430	17	8.260	7.458	7.398	10.2	7,019	3,990	MTX-60
9.625	47.0	0.472	8.681	8.525	7.625	8.402	0.430	17	8.411	7.624	7.564	12.7	6,921	3,690	MTX-60
9.625	43.5	0.435	8.755	8.599	7.625	8.402	0.430	17	8.488	7.708	7.648	13.9	6,872	3,530	MTX-60
9.625	40.0	0.395	8.835	8.679	7.625	8.649	0.430	17	8.572	7.799	7.739	15.3	6,817	3,370	MTX-60
9.625	36.0	0.352	8.921	8.765	7.625	8.735	0.430	17	8.661	7.897	7.837	16.7	6,758	3,200	MTX-60
9.625	53.5	0.545	8.535	8.379	7.625	8.349	0.375	17	8.330	7.635	7.575	11.1	6,078	2,770	MTX-60
9.625	47.0	0.472	8.681	8.525	7.625	8.495	0.375	17	8.480	7.797	7.737	13.4	5,994	2,550	MTX-60
9.625	43.5	0.435	8.755	8.599	7.625	8.569	0.375	17	8.556	7.879	7.819	14.6	5,951	2,470	MTX-60
9.625	40.0	0.395	8.835	8.679	7.625	8.649	0.375	17	8.639	7.968	7.908	15.9	5,903	2,380	MTX-60
9.625	36.0	0.352	8.921	8.765	7.625	8.735	0.375	17	8.727	8.064	8.004	17.3	5,852	2,280	MTX-60
8.625	63.5	0.750	7.125	6.969	6.000	6.939	0.324	24	6.867	6.295	6.235	17.6	6,428	2,760	MTX-60
7.625	55.3	0.750	6.125	6.000	5.500	5.970	0.304	26	5.917	5.346	5.286	9.3	6,914	3,940	MTX-60

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2. All values calculated at ambient temperature unless otherwise noted.

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SPECIFICATIONS

Parent Casing					Pre-Expanded Running Specifications				Expanded Geometry				Expanded Performance		
OD [in]	Weight [lb/ft]	Wall Thickness [in]	ID [in]	Nominal Drift [in]	OD [in]	Maximum RIH OD [in]	Wall Thickness [in]	DLS Limit [°/100]	OD [in]	Nominal Drift [in]	Special Drift [in]	Expansion Ratio [%]	Internal Yield Pressure [psi]	Collapse Pressure [psi]	Material Grade
7.625	51.2	0.687	6.251	6.126	5.500	6.096	0.304	26	6.048	5.489	5.429	12.2	6,800	3,570	MTX-60
7.625	47.1	0.625	6.375	6.250	5.500	6.220	0.304	26	6.177	5.630	5.570	15.1	6,686	3,230	MTX-60
7.625	39.0	0.500	6.625	6.500	6.000	6.470	0.324	24	6.415	5.804	5.750	8.4	6,784	3,840	MTX-60
7.625	33.7	0.430	6.765	6.640	6.000	6.610	0.324	24	6.561	5.962	5.902	11.4	6,672	3,480	MTX-60
7.625	29.7	0.375	6.875	6.750	6.000	6.720	0.324	24	6.675	6.086	6.026	13.7	6,582	3,200	MTX-60
7.000	38.0	0.540	5.920	5.795	5.500	5.765	0.361	26	5.748	5.054	4.994	5.8	8,383	6,140	MTX-60
7.000	35.0	0.498	6.004	5.879	5.500	5.849	0.361	26	5.835	5.151	5.091	7.8	8,298	5,820	MTX-60
7.000	32.0	0.453	6.094	5.969	5.500	5.939	0.361	26	5.928	5.254	5.194	10.0	8,205	5,500	MTX-60
7.000	29.0	0.408	6.184	6.059	5.500	6.029	0.361	26	6.021	5.358	5.298	12.1	8,110	5,180	MTX-60
7.000	26.0	0.362	6.276	6.151	5.500	6.121	0.361	26	6.117	5.464	5.404	14.4	8,010	4,870	MTX-60
7.000	23.0	0.317	6.366	6.241	5.500	6.211	0.361	26	6.210	5.567	5.507	16.5	7,911	4,580	MTX-60
7.000	20.0	0.272	6.456	6.331	5.500	6.301	0.361	26	6.303	5.671	5.611	18.7	7,811	4,290	MTX-60
7.000	38.0	0.540	5.920	5.795	5.500	5.765	0.304	26	5.703	5.114	5.054	4.5	7,092	4,570	MTX-60
7.000	35.0	0.498	6.004	5.879	5.500	5.849	0.304	26	5.791	5.209	5.149	6.5	7,020	4,310	MTX-60
7.000	32.0	0.453	6.094	5.969	5.500	5.939	0.304	26	5.884	5.311	5.251	8.6	6,941	4,030	MTX-60
7.000	29.0	0.408	6.184	6.059	5.500	6.029	0.304	26	5.978	5.413	5.353	10.7	6,861	3,770	MTX-60
7.000	26.0	0.362	6.276	6.151	5.500	6.121	0.304	26	6.074	5.518	5.458	12.8	6,777	3,500	MTX-60
7.000	23.0	0.317	6.366	6.241	5.500	6.211	0.304	26	6.168	5.620	5.560	14.9	6,695	3,250	MTX-60
7.000	20.0	0.272	6.456	6.331	5.500	6.301	0.304	26	6.262	5.722	5.662	17.0	6,610	3,010	MTX-60
6.625	24.0	0.352	5.921	5.796	5.500	5.766	0.304	26	5.704	5.115	5.055	4.6	7,091	4,570	MTX-60
5.750	19.7	0.335	5.080	4.955	4.500	4.924	0.250	31	4.829	4.359	4.299	9.0	6,961	4,020	MTX-60
5.750	18.1	0.304	5.142	5.017	4.500	4.987	0.250	31	4.895	4.431	4.371	10.8	6,892	3,800	MTX-60
5.750	16.5	0.276	5.198	5.073	4.500	5.042	0.250	31	4.955	4.496	4.436	12.4	6,828	3,590	MTX-60

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