

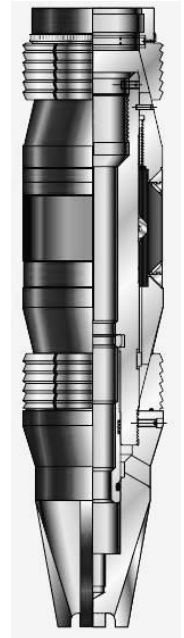


## Mechanical Tubing Set Cement Retainer

**Mechanical Tubing Set Cement Retainer (CR)** are used for secondary cementing operations. These drillable retainers set securely in any hardness casing. A ratchet lock ring stores the setting force in the retainer. The one piece packing element and metal back up rings combine for a superior seal. The case hardened, one piece slips virtually eliminate premature setting, yet can be easily drilled out. They are available for 4 1/2" through 16" casing.

### Features

- 1) Compact, easy running
- 2) Should set with Mechanical Setting Tool
- 3) Sets securely in most hardness casing
- 4) Ratchet lock rings secure dynamic setting force
- 5) One piece packing element and rocker action metal back up rings combine for a superior seal
- 6) Pressure balanced sleeve valve is opened and closed by tubing manipulation from the surface for better control



Mechanical Tubing Set Cement Retainer								
Casing OD	Casing Wt.	Setting Range		Tool OD	Setting Tool	Release Force	Setting Adaptor Kit	Seal Nipple
(in)	(lbs/ft)	Min(in)	Max(in)	(in)	/	(lbs)	/	/
4 1/2	9.5-16.6	3.826	4.09	3.59	MTST-21	33000		
5	11.5-20.8	4.156	4.56	3.93				
5 1/2	13-23	4.58	5.044	4.31				
5 3/4	14-26	4.89	5.29	4.7	MTST-23	50000	Not Required	Not Required
6 5/8	17-32	5.595	6.135	5.37	MTST-24			
7	17-35	6.004	6.538	5.68	MTST-25			
7 5/8	20-39	6.625	7.125	6.31	MTST-26			
8 5/8	24-49	7.511	8.097	7.12	MTST-27			
9 5/8	29.3-58.4	8.435	9.063	8.12	MTST-28			
10 3/4	32.75-60.7	9.66	10.192	9.43	MTST-29			
11 3/4	38-60	10.772	11.15	10.43	MTST-30			
11 3/4	60-83	10.192	10.772	9.94	MTST-31			
13 3/8	48-80.7	12.175	12.715	11.88	MTST-32			
16	65-118	14.576	15.25	14.12	MTST-33			