



RRP Liner Assembly for Extended Liner Rotation

It is an accepted fact that rotating the liner improves the chances for successful cementing. The TIW RRP Liner Assembly* permits rotation of the liner after setting the hanger and disengaging the setting tool. This allows for liner rotation to condition the hole while circulating and continued liner rotation during cementing. The RRP Assembly delivers an excellent cement bond and maximum protection against channeling.

Instead of a conventional unsealed ball bearing, the RRP Assembly features a specially designed journal bearing. Designed specifically for downhole use, this special bearing effectively accommodates even the heaviest and longest liners. The unique design makes it impervious to potential contamination by drilling fluids and effluents.

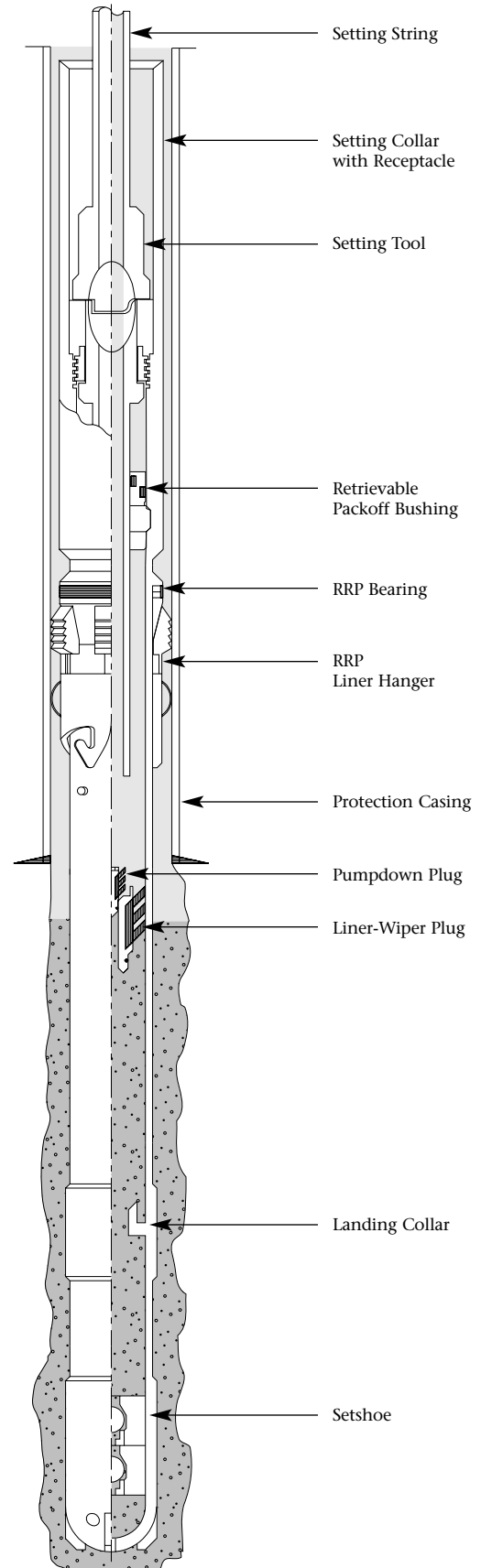
The internal connections of the setting tool and setting collar exceed the maximum allowable torque requirements of the liner connections themselves.

This assembly allows the operator to simultaneously rotate and/or reciprocate the liner prior to setting the hanger. Once the hole is properly conditioned, the operator can set the hanger, release the setting tool and resume rotation during cementing.

Setting Assembly

The RRP Liner Setting Assembly is available with either a mechanical-set hanger (RRP Liner Hanger) or with a hydraulic-set hanger (RRP Hydro-Hanger). It consists of:

- Setshoe
- Landing collar
- RRP Liner Hanger or Hydro-Hanger with journal bearing assembly
- Retrievable packoff bushing
- Rotating setting collar with receptacle
- Liner-wiper plug
- Pumpdown plug
- Rotating setting tool
- Cementing manifold with swivel



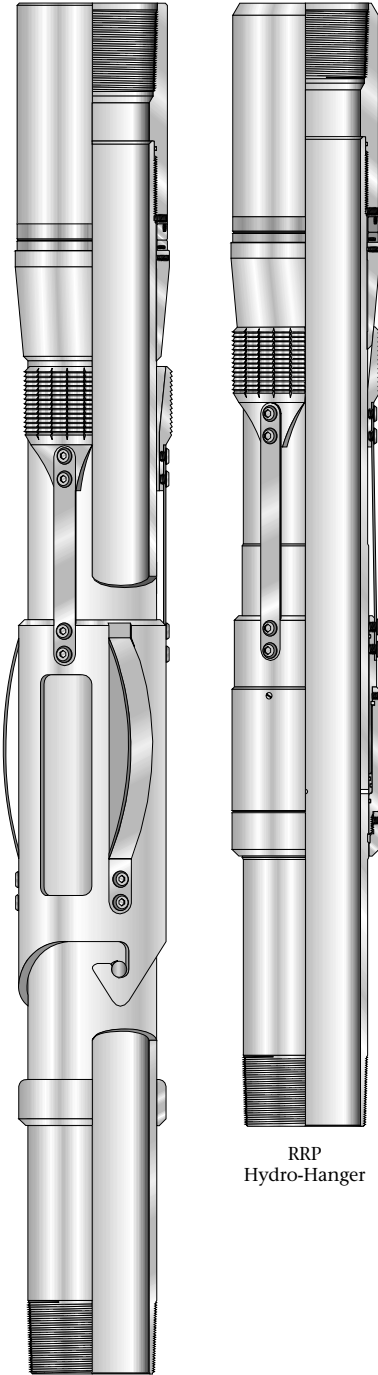
RRP Equipment Specifications

RRP Liner Hanger Specifications

LINER SIZE		CASING SIZE				MAX. BODY	
O.D.		O.D.		WEIGHT RANGE		O.D.	
In.	Mm.	In.	Mm.	Lb./Ft.	Kg./M.	In.	Mm.
4½	114.3	7	177.8	20.0-35.0	29.8-52.1	5¾	146.05
4½	114.3	7½	193.7	20.0-39.0	29.8-58.1	6¼	158.75
5	127.0	7	177.8	20.0-35.0	29.8-52.1	5¾	146.05
5	127.0	7½	193.7	20.0-39.0	29.8-58.1	6⅝	160.34
5½	139.7	7½	193.7	26.4-39.0	39.3-58.1	6⅞	163.50
7	177.8	9½	224.5	29.3-53.5	43.6-79.6	8¾	207.96
7½	193.7	10¾	273.1	40.5-65.7	60.3-97.8	9¼	234.95

RRP Hydro-Hanger Specifications

LINER SIZE		CASING SIZE				MAX. BODY	
O.D.		O.D.		WEIGHT RANGE		O.D.	
In.	Mm.	In.	Mm.	Lb./Ft.	Kg./M.	In.	Mm.
4½	114.3	7	177.8	20.0-26.0	29.8-38.7	6	152.4
4½	114.3	7	177.8	26.0-32.0	38.7-47.6	5⅞	147.6
4½	114.3	7	177.8	32.0-38.0	47.6-56.6	5⅝	142.9
5	127.0	7	177.8	20.0-26.0	29.8-38.7	6	152.4
5	127.0	7	177.8	26.0-32.0	38.7-47.6	5⅝	149.3
5	127.0	7	177.8	32.0-38.0	47.6-56.6	5¾	146.1
5	127.0	7½	193.7	20.0-26.4	29.8-39.3	6⅝	168.3
5	127.0	7½	193.7	26.4-33.7	39.3-50.2	6⅞	163.5
5	127.0	7½	193.7	33.7-39.0	50.2-58.1	6⅞	160.3
5½	139.7	7½	193.7	26.4-33.7	39.3-50.2	6½	165.1
5½	139.7	7½	193.7	33.7-39.0	50.2-58.1	6½	165.1
7	177.8	9½	224.5	29.3-40.0	43.6-59.5	8½	215.9
7	177.8	9½	224.5	36.0-47.0	53.6-69.9	8¾	212.7
7	177.8	9½	224.5	43.5-53.5	64.7-79.6	8¼	209.6
7	177.8	9½	224.5	58.0	86.3	8⅝	206.4
7½	193.7	10¾	273.1	43.5-53.5	64.7-79.6	9⅞	236.5
7½	193.7	10¾	273.1	53.5-60.7	79.6-90.4	9⅞	233.4
7½	193.7	10¾	273.1	60.7-65.7	90.4-97.8	9½	231.8



RRP Liner Hanger

RRP Hydro-Hanger