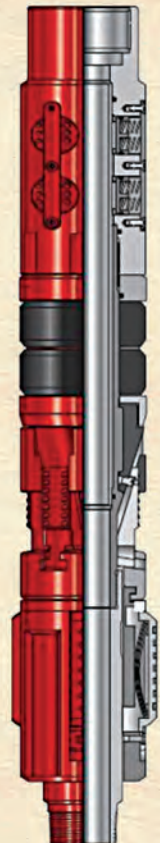




# Test, Squeeze Services (RTTS)

The RTTS™ packer is a full-opening, hookwall packer used for testing, treating, and squeeze cementing operations. In most cases, the tool runs with a circulating valve assembly.

The packer body includes a J-slot mechanism, mechanical slips, packer elements, and hydraulic slips. Large, heavy-duty slips in the hydraulic holddown mechanism help prevent the tool from being pumped up the hole. Drag springs operate the J-slot mechanism on  $\leq 3\ 1/2$ -in. (88.9-mm) packer bodies, while larger packer sizes  $\geq 4$ -in. (101.6 mm) use drag blocks. Automatic J-slot sleeves are standard equipment on all packer bodies.



## Features and Benefits

- The full-opening design of the packer mandrel bore allows large volumes of fluid to pump through the tool. Tubing-type guns and other wireline tools can be run through the packer.
- The packer can be set and relocated as many times as necessary with simple tubing manipulation.
- Tungsten carbide slips provide greater holding ability and improved wear resistance in high-strength casing. Pressure through the tubing activates the slips in the hydraulic holddown mechanism.

Casing Size, in.	Packer OD, in.	Packer ID, in	Nominal Casing wt. lb/ft	Min Casing ID, in.	Maximum Casing ID, in	Tensile Strength, LB.	Burst Rate, psi	Collapse Rate, psi
5	4.25	1.8	11.5-13	4.494	4.67	84,700	12,900	9,800
	4.06	1.8	15-18	4.276	4.408	84,700	10,800	9,800
7	5.65	2.37	17-38	5.92	6.538	158,200	15,300	10,100
9-5/8	8.15	3.75	29.3-53.5	8.535	9.063	444,600	13,500	10,100
	7.8	3	40-71.8	8.125	8.835	237,200	14,000	9,700
13-13/8	11.94	3.75	48-72	12.347	12.715	651,300	12,500	10,700
	11.5	3.75	72-98	11.937	12.347	651,300	12,500	10,700
	14.18	3.75	75-109	14.688	15.124	651,300	8,900	6,000
18-5/8	16.87	3.75	78-118	17.336	17.855	651,300	8,900	6,400
20	17.87	3.75	94-133	18.73	19.124	651,300	8,900	6,400
	17.25	3.75	169-204	18	18.376	651,300	8,900	5,400





## Circulating Valve

The circulating valve is a locked-open/locked-closed valve that serves as both a circulating valve and bypass. The clearance between the packer (or any hookwall packer) and the casing ID is relatively small. To reduce the effect of fluid-swabbing action when the tool is run in or pulled out of the hole, a packer bypass is generally used.

### Features and Benefits

- The valve can be locked closed when the packer is unset to reverse fluid around the bottom of the packer.
- The tool's full opening allows tubing type guns and other wireline equipment to pass.

**Circulating Valve Specifications**

Size in.	OD, in.	ID, in.	Connections	Tensile Rate lb	Burst Rate psi	Collapse Rate psi
4 1/2- 5	3.6	1.8	2 3/8 EU	85,000	10,100	10,700
5 1/2- 6 5/8	4.18	1.99	2 3/8 EU	150,700	10,000	14,200
7-7 5/8	4.87	2.44	2 7/8 EU	148,800	10,000	10,100
9 5/8- 13 3/8	6.12	3	4 1/2 IF TJ	311,400	10,500	10,100



## Safety Joint

The safety joint is an optional emergency back off device. The safety joint releases the work string and tools above the packer if the packer becomes stuck during operations. The design of the safety joint makes unintentional operation difficult.

### Features and Benefits

- Positive sequence of operation helps prevent premature release.
- Tools above it can be retrieved when string is stuck.

**Safety Joint Specifications**

Size in.	OD in.	ID in.	Connection	Tensile Rate Lb.	Burst Rate psi	Collapse Rate psi
5 1/2- 6 5/8	4.06	2	2 3/8 EU	127,400	10,200	13,000
7-7 5/8	5	2.44	2 7/8 EU	148,800	12,300	10,900
8 5/8- 13 3/8	6.12	3.12	4 1/2 IF TJ	271,900	13,800	10,400

