

WELLBORE SERVICE TOOLS | RETRIEVABLE TOOLS

CHAMP® V 15K non-rotational retrievable packer

Ideal for deepwater, extended-reach applications

FEATURES & BENEFITS

- Easily operated in extended-reach or highly-deviated wellbores
- No rotation required to set the packer
- Locked in the “run in hole” position until the hydrostatic pressure at a pre-determined depth is reached or annulus pressure is applied
- Easily relocated to multiple zones during a single-trip for treating, testing, or squeezing
- Concentric bypass enables a larger bypass flow area with positive circulation below packer and tailpipe
- Rated up to 15,000 psi (103.42 MPa working pressure with a temperature rating of up to 400°F (204.4°C)

Overview

The CHAMP® V 15K non-rotational packer is ideal for deepwater, extended-reach situations where getting enough torque downhole to manipulate the toolstring can be a major challenge. It is made up of a hookwall retrievable packer with a concentric bypass and a continuous indexing J-slot.

The CHAMP V 15K non-rotational packer is constructed with higher grade materials, and all elastomers are supported with backup rings. The J-slot enables the packer to be run in the casing, set, and unset without applying any rotation to the workstring. The packer can cycle from the run-in-hole position to the set and pull-out-of-hole positions simply by lifting or lowering the drillpipe or tubing in the wellbore.

Each assembly includes an indexing J-slot mechanism, mechanical slips, packer elements, hydraulic slips, and a concentric bypass. Round, piston-type slips are used in the hydraulic-holddown mechanism to help prevent the tool from being pumped up the hole. It also contains additional holddown mechanisms to help keep it in place because of the higher loads.

A J-slot position locking mechanism keeps the packer in the run-in-hole configuration until the required depth is reached and the locking mechanism is deactivated. The position locking mechanism is deactivated by the use of a rupture disk, which is set to rupture at a pre-determined pressure. The deactivation pressure can be either wellbore hydrostatic at a certain depth or pump pressure applied to the annulus at surface.

The locking mechanism enables the packer to be run on jointed pipe without cycling through the positions in the J-slot as each joint of pipe is being made up at the surface.



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The concentric bypass enables fluids to circulate around the bottom of the tool when it is removed from or moved uphole in the wellbore. Therefore, circulation as the packer assembly is passed through tight spots where packer elements may unintentionally achieve a temporary seal remains uninterrupted. The bypass valve is also designed to be pressure balanced with applied pressure. This prevents unintentional opening of the bypass during treatment applications.

CHAMP® V 15K non-rotational retrievable packer technical specifications

CASING SIZE	PACKER OD	PACKER ID	NOM. CASING WEIGHT	MIN. CASING ID	MAX. CASING ID	LENGTH	TENSILE RATING*	TEMP. RATING	WORKING PRESSURE*	ABSOLUTE PRESSURE	BURST PRESSURE*		COLLAPSE RATING*	
											OPEN ENDED	BULL PLUGGED	OPEN ENDED	BULL PLUGGED
IN.	IN. (MM)	IN. (MM)	LB/FT	IN. (MM)	IN. (MM)	IN. (MM)	LB (KG)	F° (C°)	PSI (BAR)	PSI (BAR)	PSI (BAR)		PSI (BAR)	
7	5.75 (146.1)	2.00 (50.8)	29-35	6.004 (152.5)	6.184 (157.1)	163.84 (4,162)	150,000 (68,038)	400 (204.4)	15,000 (1,034)	25,000 (1,724)	16,217 (1,118)	12,603 (869)	15,000 (1,034)	11,839 (816)
7 5/8	6.62 (161.8)	2.25 (57.2)	29.7-39	6.625 (168.3)	6.875 (174.6)	163.54 (4,154)	150,000 (68,038)	400 (204.4)	15,000 (1,034)	25,000 (1,724)	15,000 (1,034)	11,000 (758)	15,000 (1,034)	12,000 (827)
9 5/8	8.165 (207.4)	3.00 (76.2)	47-61.1	8.231 (209.1)	8.681 (220.5)	174.66 (4,436)	340,000 (154,221)	400 (204.4)	15,000 (1,034)	25,000 (1,724)	15,000 (1,034)	15,000 (1,034)	15,000 (1,034)	15,000 (1,034)
9 7/8	8.165 (207.4)	3.00 (76.2)	62.8	8.480 (215.4)	8.632 (219.3)	174.66 (4,436)	340,000 (154,221)	400 (204.4)	15,000 (1,034)	25,000 (1,724)	15,000 (1,034)	15,000 (1,034)	15,000 (1,034)	15,000 (1,034)
10 3/4 HW	8.165 (207.4)	3.00 (76.2)	91.2-109	8.434 (214.2)	9.032 (229.4)	174.66 (4,436)	340,000 (154,221)	400 (204.4)	15,000 (1,034)	25,000 (1,724)	15,000 (1,034)	15,000 (1,034)	15,000 (1,034)	15,000 (1,034)

Note: Although other sizes may be available, these sizes are the most common.

* The values of tensile, burst, and collapse strength are calculated with new tool conditions, Lame’s formulas with von Mises’ Distortion Energy Theory for burst and collapse strength, and stress area calculations for tensile strength. These ratings are guidelines only. For more information, consult your local Halliburton representative.

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