

DESCRIPTION**A-HPSP, A-193 – Hydraulic Set Permanent, Seal Bore Packer**

The A-HPSP Hydraulic Set Permanent Seal Bole Packer is a hydro-Set Retainer Production designed to withstand high full differential pressure while the seal assembly is latched into the packer. Packer runs and set on a single trip with the completion tubing string and incorporates maximum strength, uniformity of setting pressure, and standardization of materials.

The hydraulic setting mechanism makes the Packer particularly suitable for use in highly deviated wells. Careful choice of materials for components, which are exposed to the well fluids, enables the packer to be used in a wide range of operating conditions.

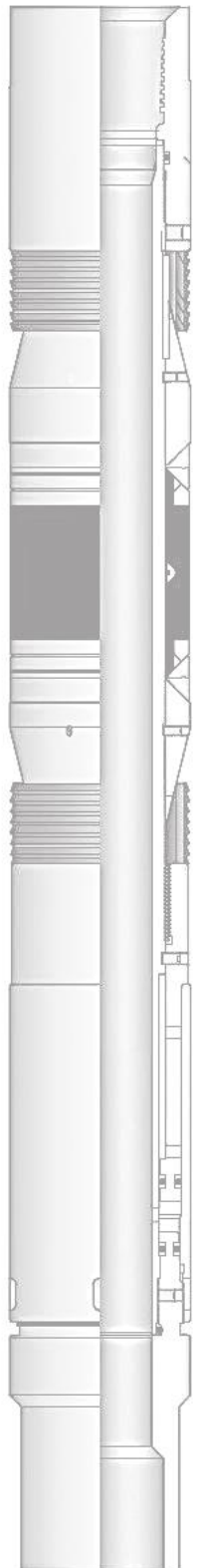
The Packer is equipped with two sets of upper and lower slips and cones which ensure effective pressure induced force distribution into the casing.

FEATURES & BENEFITS

- Solid, slim-lined construction and a packing element system which resists swab-off. This permits a fast run-in (when compared with earlier models of permanent packers) without fear of impact damage or premature setting, yet packs off securely and permanently when the packer is set
- Two opposed sets of full circle, full strength slips ensure that the packer will stay where it is set
- Interlocked, expandable metal back-up rings contact the casing and create a positive barrier to packing element extrusion
- Setting requires no rotation or reciprocation, thereby eliminating the problems of spacing out, landing etc.
- The Packer is normally run with the Anchor Seal Assembly for single trip installation, however, the packer may be run with a Setting Tool
- All O-Ring which separate casing and annulus pressures, are supported by back-up rings to improve long term seal integrity
- Top sub can be furnished with equivalent tubing connection to connect tubing directly with packer
- Packer designed to withstand pressure differentials up to 10,000 psi
- Bottom guide furnished as standard, allowing the attachment of a seal bore extension, mill-out extension or other equipment below the packer. A blank bottom guide can be furnished
- All alloy materials within the packer are suitable for H₂S service
- Can be furnished with Kalrez O-Ring for severely corrosive environments
- Body & Guide (components in flow paths) can be furnished in customer's choice of material
- Fluid displacement is possible after well is flanged up and prior to setting the packer
- Setting sequence of packer may be controlled to start at 1,500 psi
- Slip and Cone designed for enhanced load distribution

APPLICATIONS

- High Flow Production wells.
- High Pressure and Temperature applications.
- High Volume fracking applications.



HYDRAULIC SET PERMANENT SEAL BORE PACKER

Available in sizes for various casing sizes for their respective weight ranges with varying standard or exotic material and elastomers including seal system based on compatibility with the well environment and application requirement. In addition, packers are furnished with required all accessories e.g. locator tubing seal assembly, anchor latch tubing seal assembly, seal bore extensions, mill-out extension etc. with different end connections (Standard API EUE or NUE or premium), to meet customer's requirements.

Also available in dual bore and large bore versions for different casing sizes ranges.

SPECIFICATION GUIDE

Casing				Packer			Seal Assembly	
OD	Weight	ID Range		Size	OD	Seal Bore	Size	Bore Thru Seals
		Min	Max					in. mm
in. mm	lb/ft	in. mm	in. mm		in. mm	in. mm		in. mm
5 127,00	15-21	4.125 104,78	4.436 112,67	32-19	3.968 100,79	1.968 49,99	21-19	1.312 33,32
							20-19	0.984 24,99
5.1/2 139,70	13-17	4.812 122,22	5.044 128,12	44-25	4.500 114,30	2.500 63,50	20-25	1.865 47,3
6.5/8 168,28	17-32	5.675 144,15	6.135 155,83	82-32	5.468 138,89	3.250 82,55	80-32 OR 81-32	2.406 61.11 OR 1.990 50,55
	17-20	6.049 153,64	6.456 163,98	84-32	5.687 144,45			
7 177,80	32-38	5.675 144,15	6.135 155,83	82-32	5.468 138,89			
	20-32	6.049 153,64	6.456 163,98	84-32	5.687 144,45			
7.5/8 193,68	33.7-39	6.456 163,98	6.765 171,83	88-32	6.187 157,15			
	24-33.7	6.625 168,28	7.025 178,44	92-32	6.375 161,93			
8.5/8 219,08	24-36	7.812 198.42	8.150 207,01	128-40	7.500 190,50	4.000 101,60	80/120-40	3.000 76,20
9.5/8 244,48	32.3-58.4	8.435 214.25	9.001 228.83	194-32	8.125 206.38	3.250 82,55	80-32	2.406 61,11
				194-47			81-32	1.990 50,55
							190-47	3.00 76,20
							191-47	2.500 63,50
					4.750 120.65	192-47	3.875 98,43	

Additional sizes with weight ranges are available as required.

HYDRAULIC SET PERMANENT SEAL BORE PACKER

SPECIFICATION GUIDE (Dual Seal bore)

Casing			Packer												
OD		Weight lb/ft	Size	OD		Upper Sealing Bore					Lower Sealing Bore				
in.	mm			in.	mm	Seal Bore		Seal Assembly	Min Bore Thru Seals		Seal Bore		Seal Assembly	Min Bore Thru Seals	
						in.	mm	Size	in.	mm	in.	mm	Size	in.	mm
5	127.0	15-21	32-30 x 19	3.968	100.7	3.000	76.2	20-30	2.390	60.7	1.968	49.9	20-19	.984	24.9
													21-19	1.312	33.3
5-1/2	139.7	13-17	44-32 x 25	4.500	114.3	3.250	82.5	40-32	2.500	63.5	2.500	63.5	20-25	1.865	47.3
6-5/8	168.2	17-32	82-40 x 32	5.468	138.8	4.000	101.3	80-40	3.250	82.5	3.250	82.5	80-32	2.406	61.1
		17-20	84-40 x 32	5.687	144.4										
7	177.8	32-44	82-40 x 32	5.468	138.8	4.000	101.3	80-40	3.250	82.5	3.250	82.5	80-32	2.406	61.1
		20-32	84-40 x 32	5.687	144.4										
		17-20	88-40 x 32	6.187	157.1										
7-5/8	193.6	33.7-39	88-40 x 32	6.187	157.1	4.000	101.3	80-40	3.250	82.5	3.250	82.5	80-32	2.406	61.1
		24-39	92-40 x 32	6.375	161.9										
7-3/4	196.9	46.1-48.6	88-40 x 32	6.187	157.1	4.000	101.3	80-40	3.250	82.5	3.250	82.5	80-32	2.406	61.1
8-5/8	219.0	24-36	128-47 x 40	7.500	190.5	4.750	120.6	81-47	3.875	98.4	4.000	101.6	80/120-40	3.000	76.2
9-5/8	244.4	32.3-58.4	194-60 x 47	8.125	206.3	6.000	152.4	190-60	4.875	123.8	4.750	120.6	191-47	2.500	63.5
			190-47										3.000	76.2	
			192-47										3.875	98.4	
			194-60 x 48										4.895	124.3	-
9-7/8	250.1	62.8	194-60 x 47	8.125	206.3	6.000	152.4	190-60	4.875	123.8	4.750	120.6	191-47	2.500	63.5
			190-47										3.000	76.2	
			192-47										3.875	98.4	
			194-60 x 48										4.895	124.3	-

SPECIFICATION GUIDE (Large Dual Seal bore)

Casing			Packer																
OD		Weight lb/ft	Size	OD		Upper Sealing Bore					Lower Sealing Bore								
in.	mm			in.	mm	Seal Bore		Seal Assembly	Min Bore Thru Seals		Seal Bore		Seal Assembly	Min Bore Thru Seals					
						in.	mm	Size	in.	mm	in.	mm	Size	in.	mm				
5-1/2	139.7	20-23	43-36 x 27	4.450	113.0	3.625	92.0	43-36	2.780	70.6	2.780	70.6	-	-	-				
6-5/8	168.2	17	85-47 x 38	5.875	149.2	4.750	120.6	81-47	3.875	98.4	3.875	98.4	120-38	2.500	63.5				
7	177.8	26-29	85-48 x 4.145	5.875	149.2	4.875	123.8	80-48	4.125	104.7	4.125	104.7	-	-	-				
7-5/8	193.6	24-33.7	91-47 x 38	6.500	165.1	4.750	120.6	81-47	3.875	98.4	3.885	98.6	120-38	2.500	63.5				
8-5/8	219.0	24-36	128-60 x 47	7.500	190.5	6.000	152.4	190-60	4.875	123.8	4.750	120.6	190-47	3.000	76.2				
9-5/8	244.4	47-58.4	194-73 x 60	8.250	209.5	7.375	187.3	190-73	6.000	152.4	6.000	152.4	190-60	4.875	123.8				
			194-73 x 6.059					190-73	6.059	153.8	6.059	153.8	-	-	-				
			194-40 x 32					8.125	206.3	4.000	101.6	80-40	3.250	82.5	3.250	82.5	80-32	2.406	61.1
			194-47 x 44							4.750	120.6	81-47	3.875	98.4	4.400	111.7	80-44	3.500	88.9
9-7/8	250.1	62.8	194-73 x 60	8.250	209.5	7.375	187.3	190-73	6.000	152.4	6.000	152.4	190-60	4.875	123.8				
			194-73 x 6.059					190-73	6.059	153.8	6.059	153.8	-	-	-				
			194-40 x 32					8.125	206.3	4.000	101.6	80-40	3.250	82.5	3.250	82.5	80-32	2.406	61.1
			194-47 x 44							4.750	120.6	81-47	3.875	98.4	4.400	111.7	80-44	3.500	88.9
10-3/4	273.0	32.75-60.7	214-73 x 60	9.437	239.7	7.375	187.3	190-73	6.000	152.4	6.000	152.4	190-60	4.875	123.8				

Additional sizes with weight ranges are available as required.