

# Seal Bore Packers

## Extreme Service Permanent Packer

### The ES Extreme Service Permanent Production Packer

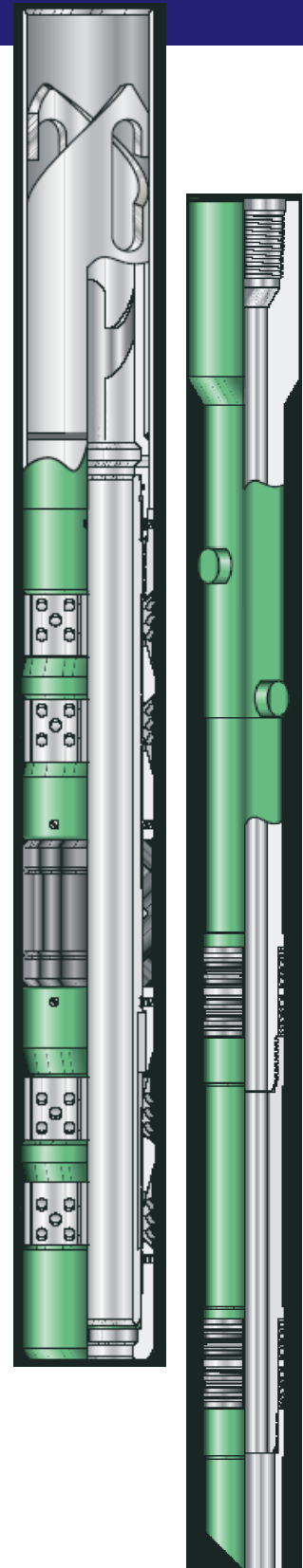
The ES Seal Assembly is "service matched" to today's deeper, hotter well environments. The ES Packer is designed to withstand full differential pressure with the seal assembly latched into the packer bore. The 450° F. Temperature rating insures suitability with operating conditions in deeper wells. The ES provides a unique slip arrangement, utilizing dual upper and lower slips and cones to more effectively distribute pressure induced forces into the supporting casing. Each set of slips is one-piece construction with inserts strategically positioned to provide maximum packer retention under extreme loads. The lower slips are secured to the packer mandrel through a threaded connection to avoid damage while the packer is going into the hole.

The ES packing element design incorporates positive anti-extrusion components to eliminate element extrusion under pressure and temperature extremes. Non-elastomer sealing mechanisms at threaded connections insure maximum pressure performance. A large bore through the mandrel and a complete line of accessories make the ES packer an excellent choice for high-flow production applications or situations demanding high volume sand fracs.

### ES Seal Assembly

The ES Seal Assembly is a matched performance design accessory for the ES packer. This seal assembly features a jay lug locking system capable of withstanding the loads induced by the full pressure capability of the ES packer. The jay lug lock, combined with an autojay packer top provides easy seal assembly stabbing and facilitates space out of the production tubing string. A half turn to the right, at the packer, quickly releases the seal assembly.

ES Seal Assembly seal units are full performance seals rated for 450° F at 15,000 psi pressure conditions. A full range of elastomers is available for special wellbore conditions and fluids. Additional seal units can be added when the packer is run with seal bore extensions below the packer mandrel. A half-mule shoe, bottom guide aids in stabbing.



# Seal Bore Packers

## Extreme Service Permanent Packer

### ES Seal Assembly Features:

- 15,000 psi differential pressure capability at 450° F
- One-piece, tandem slip and cone configuration for maximum holding power
- Lower slips secured to packer mandrel with a threaded connection
- Non-elastomeric sealing mechanism for threaded connections
- Full line of accessory equipment for completion flexibility
- Can be set hydraulically

### Full performance rated at 15,000 psi at 450° F

- 110,000 psi minimum yield alloy steel mandrel is standard
- Locator threaded to match tubing connection
- Full selection of seal materials match performance with well bore fluids
- Integral jay lugs on seal assembly mandrel
- Auto-jay latch for easy stabbing and retrieval
- Half turn, right hand release or on wireline

CASING				PACKER			SEAL ASSEMBLY		KNOCK OUT PLUG	ADAPTER KIT	SETTING TOOL	
O.D. (in)	WEIGHT (ppf)	MIN. (in)	MAX. (in)	SIZE	MAX O.D. (in.)	SEAL BORE (in.)	SIZE	MIN BORE THRU SEALS (in.)			BAKER E-4	HYDRAULIC
4 1/2	9.5-135	3.795	4.090	37-26	3.750	2.688	26-18	1.807	26	37-26	Size 10	2 3/8 Tool
5	15-208	4.029	4.408	39-26	3.960	2.688	26-18	1.807	26	37-26	Size 10	2 3/8 Tool
5	11.5-13	4.369	4.670	42-26	4.250	2.688	26-18	1.807	26	37-26	Size 10	2 3/8 Tool
5 1/2	20-23	4.545	4.811	44-26	4.500	3.000	30-21	2.125	30	45-30	Size 20	2 7/8 Tool
5 1/2	20-23	4.545	4.811	44-30	4.500	3.000	30-21	2.125	30	45-30	Size 20	2 7/8 Tool
5 1/2	13.5-17	4.767	5.044	45-26	4.641	3.000	30-21	2.125	30	45-30	Size 20	2 7/8 Tool
5 1/2	13.5-17	4.767	5.044	45-30	4.641	3.000	30-21	2.125	30	45-30	Size 20	2 7/8 Tool
7	32-38	5.875	6.094	56-32	5.687	4.000	40-28	2.875	40	56-40	Size 20	2 7/8 Tool
7	32-38	5.875	6.094	56-40	5.687	4.000	40-28	2.875	40	56-40	Size 20	2 7/8 Tool
7	26-32	6.095	6.276	58-32	5.875	4.000	40-28	2.875	40	56-40	Size 20	2 7/8 Tool
7	26-32	6.095	6.276	58-40	5.875	4.000	40-28	2.875	40	56-40	Size 20	2 7/8 Tool
7	17-23	6.456	6.765	61-32	6.187	4.000	40-28	2.875	40	56-40	Size 20	2 7/8 Tool
7	17-23	6.456	6.765	61-40	6.187	4.000	40-28	2.875	40	56-40	Size 20	2 7/8 Tool
7 5/8	33.7-453	6.456	6.765	61-32	6.187	4.000	40-28	2.875	40	56-40	Size 20	2 7/8 Tool
7 5/8	33.7-453	6.456	6.765	61-40	6.187	4.000	40-28	2.875	40	56-40	Size 20	2 7/8 Tool
7 5/8	24-39	6.706	7.025	63-32	6.375	4.000	40-28	2.875	40	56-40	Size 20	2 7/8 Tool
7 5/8	24-39	6.706	7.025	63-40	6.375	4.000	40-28	2.875	40	56-40	Size 20	2 7/8 Tool
9 5/8	40-584	8.279	8.968	82-60	8.218	6.000	60-42	4.25	60	82-60	Size 20	2 7/8 Tool
9 5/8	36.47	8.525	9.050	84-60	8.438	6.000	60-42	4.25	60	82-60	Size 20	2 7/8 Tool

