

TAM

Single Set Inflatable Retrievable Packers

- Sets with pressure only
No tubing rotation required
- Ideal for horizontal applications
- Sets in casing or open hole
- Runs on tubing, coil tubing,
drill pipe, or wireline
- Packer, Bridge Plug,
Scab Liner Applications



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General Description

The TAM Single Set product line enhances the advantages of the inflatable packer element with a positive sealing mechanism that requires only hydraulic pressure to set the packer. As pipe movement is not required to set the tool, it is ideal for slick line, electric line and coiled tubing conveyed operations. It is also widely utilized for work string applications in highly deviated and horizontal wells.

The product line consists of the Single Set, Full Bore/Setting Head, Retrievable Plug and Retrievable Scab liner tools as well as a variety of accessories to release from the packer, control flow through the tool and re-latch for retrieval.

All Single Set products are capable of a single set when run into the well and can be released for retrieval.

Superior Setting Mechanism Field Proven Reliability

Unlike traditional inflatable packer setting mechanisms, TAM Single Set tools do not rely on a check valve to retain inflation pressure. Oftentimes, debris can be caught in a check valve impairing the bubble tight seal, causing the packer to deflate.

The TAM Single Set tools utilize a pressure actuated sliding sleeve with redundant seals that wipe any debris from the sealing surfaces when setting the packer. When the setting sleeve slides over the packer inflation ports, pressure is locked in the packer element. The setting superiority of the TAM Single Set product line has been proven in over 20 years of field applications.

Inflation Elements

TAM offers four (4) types of inflatable elements to satisfy the wide range of application requirements, in vertical, horizontal, cased or open hole, 3:1 expansion capability and up to 500° deg. F operating temperature. For specific element data and application analysis refer to the TAM Element Selection Brochure.



Ask your TAM representative or visit our website for a copy of our element selection guide.

Simple Setting Procedure

Once the tool has been run to the desired depth, a ball or dart is pumped to a seat in the tool, diverting pressure applied to the work string into the inflation chamber. Shear pin settings, determined prior to running into the well, define the pressure at which the tool is locked in the set position.

Once the desired setting pressure is achieved by applying pressure to the work string, the set sleeve shifts down, closing the tool bypass and locking the tool in the inflated position. Differential pressure can be applied from either side of the packer without releasing the tool.

Flexible Configuration for Varying Applications

TAM Single Set products are the “work horse” of the tool line and can be easily configured to allow use in a wide variety of applications from single packers for Production, Treating or Squeezing and temporary or permanent Bridge Plugs. Multiple packers can be configured as Scab Liners for selective production control.

Depending on type, tools can be configured to run and retrieve using work string, coiled tubing, electric wireline or slick line.

Each product provides various features that optimize the success of each application.

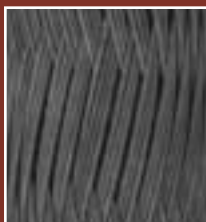
The Full Bore/Setting Head (FB-SH) tool provides the largest ID of any comparable tool OD in the industry and therefore is the typical selection for use in Scab Liner applications to modify a well's production flow profile.

The Setting Head can be adapted to a releasable/retrievable Casing Annulus Packer.

The Retrievable Plug (RP) tool is specifically designed as a through-tubing Bridge Plug to run and retrieve using electric wireline or slick line. The RP can be run on coil or work string in highly deviated wells or in conjunction with a Tractor on wireline.

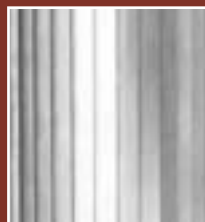
The Retrievable Scab (RS) tool provides a large ID and can be run in sections to allow installation of a long length assembly into a well with surface tubing pressure. This tool is also configured to run and/or retrieve on work string, coil or wireline.

Optional Element Inflation Styles



Weave Type Element (IE)

- Multi-set applications
- Seldom leaves rubber in the hole
- Can set in perforations, slots or fractures



Slat type Element

- High temperature capability
- Up to 3:1 expansion ratio
- Exposed slats function as slips



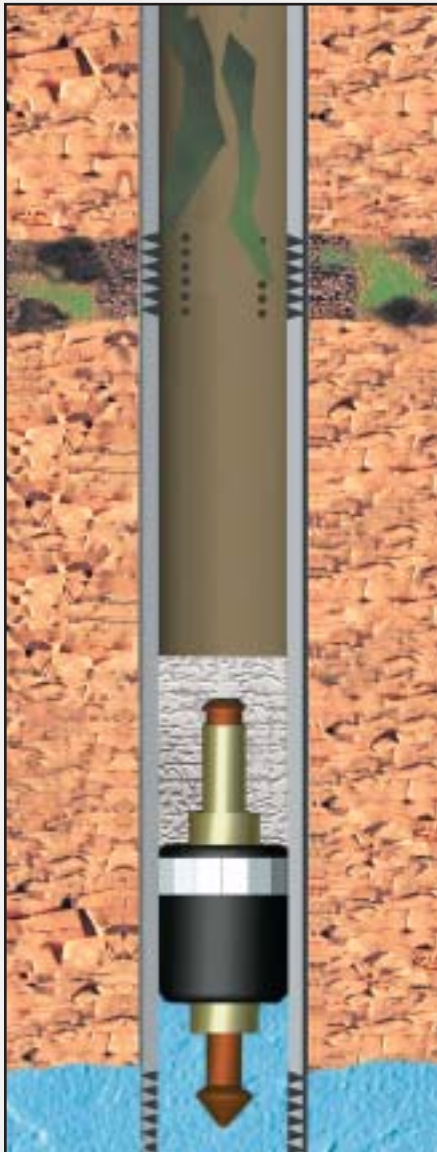
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Single Set Applications–Vertical

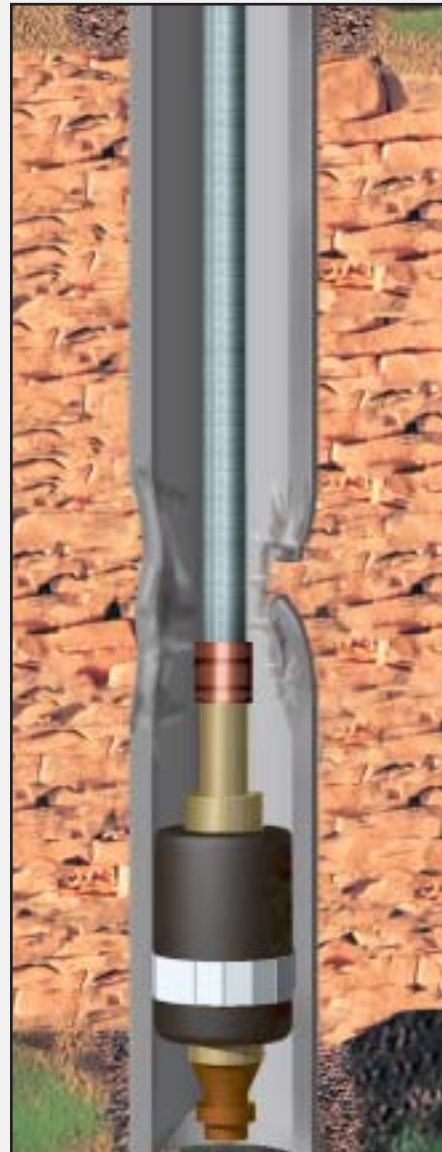
Problem: Lower perforations producing excess water

Solution: Run Inflatable Bridge Plug on slick line set above lower zone
Dump Bail cement on top of plug



Problem: Collapsed casing
Well requires production packer

Solution: Run Inflatable Single Set production packer and set below damaged or collapsed casing





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Single Set Applications–Vertical

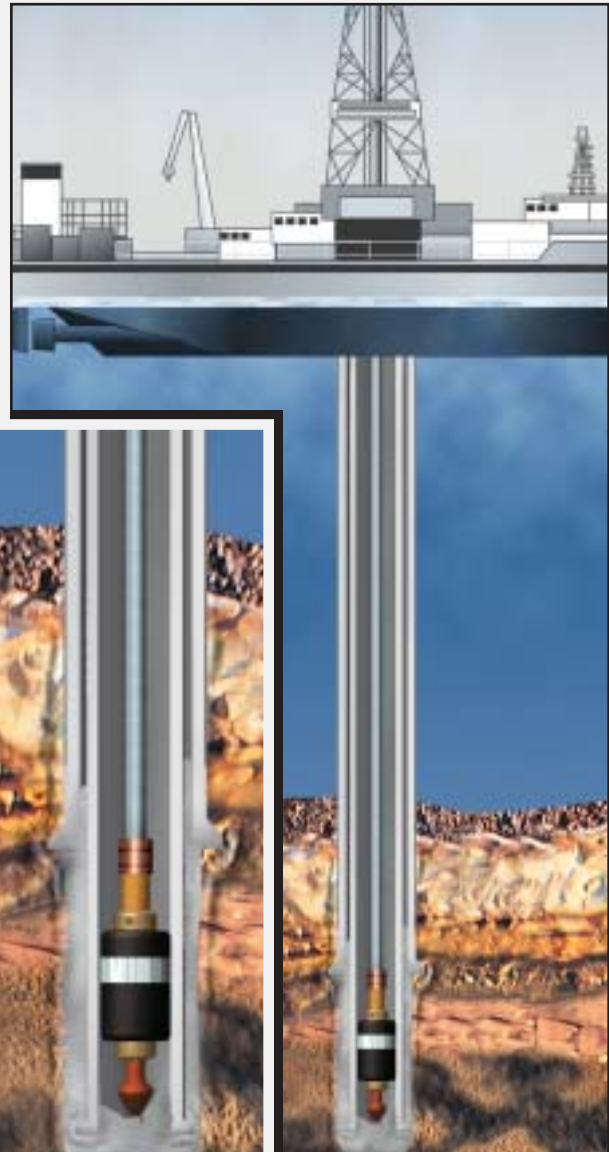
Problem: Lower perforations producing excess water
Requires squeezing

Solution: Run Inflatable Single Set packer on coiled tubing and set above lower perforations
Squeeze as required



Problem: Shoe requires squeeze in large OD or odd sized casing in deep water drilling program

Solution: Run Inflatable Single Set on drill pipe and set near casing shoe
Squeeze cement as required





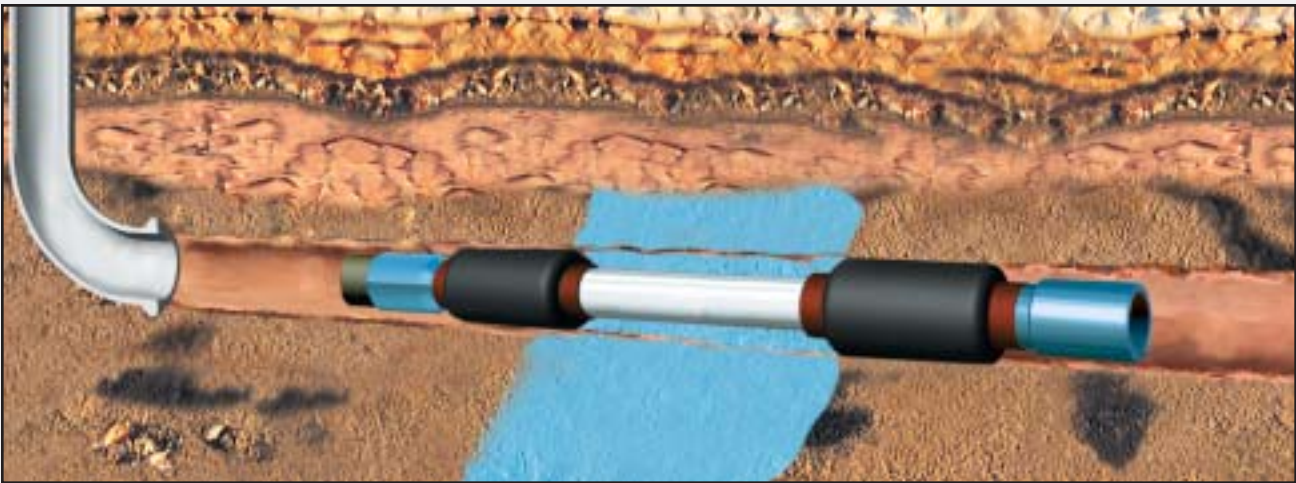
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Single Set Applications–Horizontal

Problem: Excess water production from middle of horizontal well

Solution: Run Inflatable Scab Liner and set across water producing section



Problem: Need to protect first lateral while drilling additional lateral

Solution: Run Inflatable Single Set as Bridge Plug and set near exit point of first lateral
Retrieve packer after drilling additional lateral

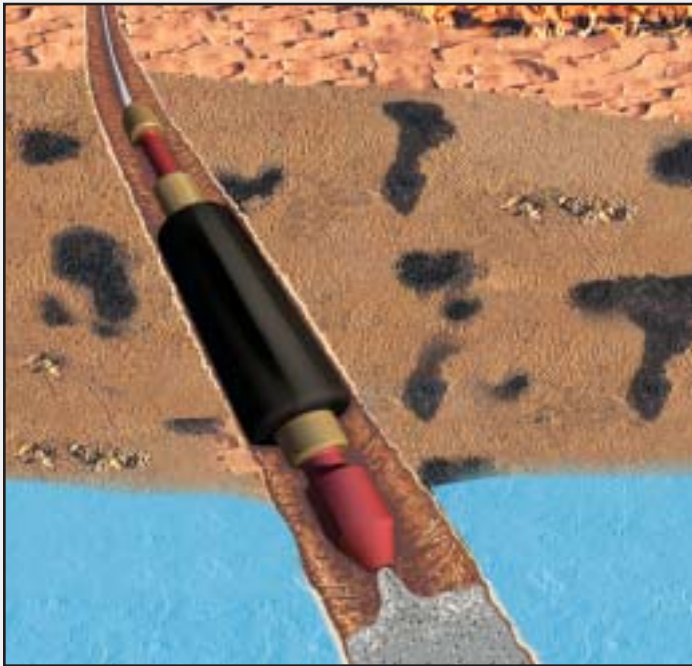




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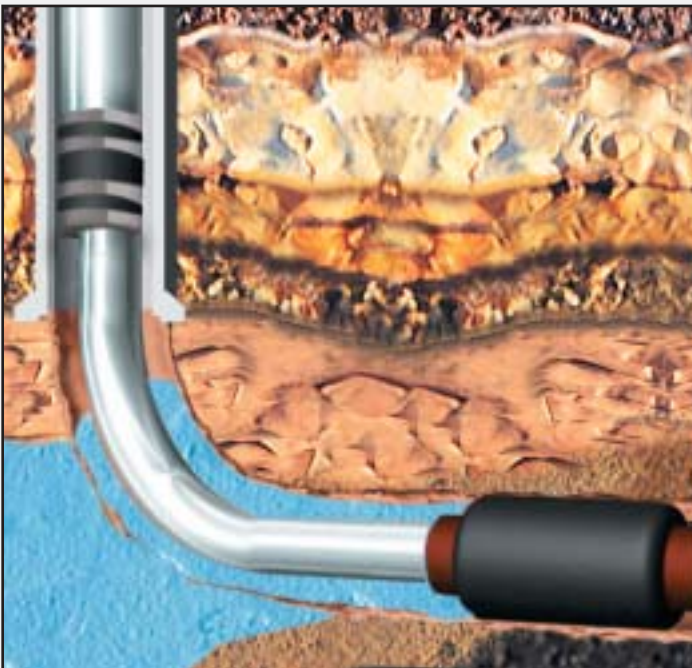
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Single Set Applications–Horizontal



Problem: Excess water production from toe of horizontal well

Solution: Run Inflatable Bridge Plug and set above toe of lateral, or run Inflatable Packer and squeeze cement if desired



Problem: Heel of lateral requires isolation due to excessive gas (or water) production

Solution: Run Inflatable Single Set below hydraulic set production packer

TAM Single Set Inflatable Packers



Tool Sizes and Configurations

Tool OD		Tool Type	Minimum ID		Available Release Mechanisms			Run On	
(in)	(mm)		(in)	(mm)	Rotate	Pull	Ball	Work String	Wireline
1.69	42.9	SS	0.48	12.2		X	X	X	
2.13	54.1	SS	0.88	22.4		X	X	X	
2.13	54.1	RP	0.53	13.5		X		X	X
2.13	54.1	RS	0.88	22.4		X		X	X
2.56	65.0	RS	1.25	31.8		X		X	X
2.63	66.8	SS	0.94	23.9		X		X	
3.44	87.4	SS	1.21	30.7	X	X		X	
3.50	88.9	RP	0.53	13.5		X		X	X
3.53	89.7	RP	0.53	13.5		X		X	X
3.63	92.2	SH	1.99	50.5	X	X		X	
3.88	98.6	SS	1.88	47.8	X			X	
4.13	104.9	SH	2.45	62.2	X	X		X	
4.25	108.0	SS	1.82	46.2	X			X	
4.63	117.6	SS	2.28	57.9	X			X	
4.63	117.6	SH	2.95	74.9	X	X		X	
7.00	177.8	SS	1.82	46.2	X		X	X	

Multiple-Release Options

TAM Single Set tools can be released in a variety of methods depending on tool size. Releasing Mechanisms include rotation, straight pull and ball seat. The chart above defines the optional release mechanism available by tool size.

TAM International products are available through authorized agents and manufacturing representatives worldwide.

For a complete listing visit our website at www.tamintl.com



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