

# Inflatable Straddle Acidizing Packer (ISAP)

Product Family H35003

## Applications

- Acid stimulation treatments
- Chemical treatments
- Water shut off
- Inhibitor placement
- Screen / ICD washing
- Scale dissolving
- Leak testing / Hole hunting
- Pressure testing

## Features and benefits

- Inflatable packing element allows large expansion ratios so the tool can be set below the production tubing
- Adjustable straddle spacing ensures pin point placement of treatment fluids
- Dual inflatable elements designed to maintain fluids at required interval
- No rotation required making it ideal for coiled tubing operations
- Built in Injection Control Valve enables the tools to function in low fluid level or bottom hole pressure wells while maintaining control over expensive treatment fluids
- Lower drain valve allows for equalization and full deflation of inflatable elements.

The **thru tubing inflatable straddle acidizing packer (ISAP™)** is designed to allow the operator to precisely inject acid or chemical treatments into a short section of the formation. This feature eliminates the use of other less effective methods used in the past for selective placement of treating fluids, such as ball sealers or chemical diverters. The ISAP is designed to run primarily on coiled-tubing work strings, thus the tool operates within the safe tension, set-down and pressure limits of the coiled tubing.

The tool requires only a slight amount of tension and no set-down weight for operation. This makes the tool ideal for horizontal or highly deviated wellbore applications. Utilizing coiled-tubing conveyance allows the ISAP to be run in a live well condition, eliminating the need for killing the well prior to running the tool. This prevents possible formation damage due to heavy weight kill fluid in the well.

The ISAP system has been designed from the coiled-tubing connector on down to provide overall system compatibility, and also allow safe coiled tubing operations. As with all inflatable systems, Baker Hughes recommends using only specialized designed equipment in the ISAP tool string to guarantee system compatibility.



Size – Tool OD (in.)	2.13	2.50	3.00	3.38
Chassis OD (in.) (mm)	2.13 (54)			
Inflatable Element Length (in.) (ft)	48.00 (4.00)			
*Tool Length (in.) (ft)	401.40 (33.45)			
Minimum spacing between elements (in.) (ft)	96.36 (8.03)			
Maximum spacing between elements (in.) (ft)	480 (40.00)			
Maximum recommended flow rate though tool (bpm) (gpm)	1.50 (63) with 2.13 in. Chassis 4.00 (168) with 3.00 in. Chassis			
Maximum Temperature Rating (°F) (°C)	300 (149)			
**Maximum Pressure Rating (psi) (bar)	6,000 (414)	6,500 (448)		
Maximum Expansion ID (in.) (mm)	5.90 (150)	6.27 (159)	6.70 (170)	6.94 (176)
Maximum Restriction to pass through (in.) (mm)	2.19 (56)	2.56 (65)	3.06 (78)	3.44 (87)
Service	Standard, Acid or H <sub>2</sub> S			

\* Length of complete ISAP tool string (from top of PCBPV to bottom guide) with minimum spacing between elements

\*\*This pressure is rated at minimal expansion. Pressure ratings decrease as element expansion increases.

Hole size element is to be set in (in./mm)														
Element OD (in./mm)	ID	2.50 (64)	3.00 (76)	3.50 (89)	4.00 (102)	4.50 (114)	5.00 (127)	5.50 (140)	6.00 (152)	6.27 (159)	6.50 (165)	6.70 (170)	6.94 (176)	
Maximum applied differential pressure (psi/bar)														
Maximum temperature (°F/°C)														
2.13 (54.1)	psi	6,000	6,000	6,000	5,000	3,650	3,000	2,500	2,000					
	bar	(414)	(414)	(414)	(345)	(252)	(207)	(172)	(138)					
	°F	300	300	300	300	300	300	300	300					
	°C	(149)	(149)	(149)	(149)	(149)	(149)	(149)	(149)	(149)				
2.50 (63.5)	psi		6,500	6,500	6,500	5,600	4,500	3,700	3,000	2,850				
	bar		(448)	(448)	(448)	(386)	(310)	(255)	(207)	(197)				
	°F		300	300	300	300	300	300	300	300				
	°C		(149)	(149)	(149)	(149)	(149)	(149)	(149)	(149)	(149)			
3.00 (76.2)	psi			6,500	6,500	6,500	5,700	4,650	4,000	3,500	3,200	3,000		
	bar			(448)	(448)	(448)	(393)	(321)	(276)	(241)	(221)	(207)		
	°F			300	300	300	300	300	300	300	300	300		
	°C			(149)	(149)	(149)	(149)	(149)	(149)	(149)	(149)	(149)	(149)	
3.38 (85.9)	psi				6,500	6,500	6,500	6,500	6,500	6,500	4,000	3,650	3,400	
	bar				(448)	(448)	(448)	(448)	(448)	(448)	(276)	(252)	(234)	
	°F				300	300	300	300	300	300	300	300	300	
	°C				(149)	(149)	(149)	(149)	(149)	(149)	(149)	(149)	(149)	