Blue Whale
ISP (Inflatable Service Packer)
Specifically engineered for the heavy demands of deepwater environments

Engineered to provide reliable wellbore isolation in deepwater drilling applications while reducing well-construction costs

Before now, zone isolation in large-diameter casing and open holes offshore required a broad spectrum of packers, procedures, and secondary tools of a specific size and configuration for each job. Blue Whale™ ISP replaces a collection of tools with a single, simple tool that provides reliable operation in a range of casing or open-hole IDs from 7 in. to 36 in. Blue Whale ISP reduces rig time, storage requirements, and transportation costs, which lowers total well-construction and intervention costs.

Blue Whale ISP is far more robust than ordinary inflatable packers. It is the only ISP engineered specifically for large-diameter applications that are most common to deepwater environments. Blue Whale ISP technology is based on the Baker Hughes Inflatable PIP (Production Injection Packer), the world’s first and most widely used inflatable packer.

A single tool for reliable sealing in all casing and open-hole sizes up to 36 inches

Blue Whale ISP answers the need for a single tool that will flawlessly seal a wide range of casing and open-hole sizes in critical, deepwater applications. On deepwater rigs operating offshore, where rig time, space, and transportation are expensive, this unmatched range of capability in a single tool makes Blue Whale ISP an easy decision.

Cuts rig time, storage requirements, and transportation costs

On a deepwater rig, it can pay for itself quickly. The tool is designed to be handled with standard rig handling tools found offshore including “Iron Roughneck”-type power tools for making and breaking connections.

Because Blue Whale ISP is so flexible, it reduces the number of special-purpose tools that have to be stored onboard. And it greatly increases the chances that the tool you need in unexpected situations will be there and not in a warehouse hundreds of miles away.

Convertibility offers you more options in one tool

A wide range of available accessory tools can be run with Blue Whale ISP to perform many remedial operations in large-diameter holes. You can convert Blue Whale ISP into a permanent or retrievable bridge plug, a service packer, or a permanent cement retainer in cased or open hole. Some typical applications for Blue Whale ISP include using it as:

- A service packer to perform a test in a large-OD casing when the operator cannot get a good shoe test. The tool isolates the shoe from the liner hanger to determine which is leaking. If the shoe is leaking, then squeeze operations can commence.
- A retrievable bridge plug acting as a secondary barrier below a subsea wellhead restriction in an offshore, pre-drilled well. The well is temporarily abandoned after the completion liner is set. When it is re-entered after the completion platform is brought to location, the plug is removed and the completion run.
- A permanent cement retainer in an open hole plug-back and kickoff. Using BlueWhale ISP with its Cement Retainer Kit and inexpensive tailpipe, a cement balance plug is first spotted in the open hole. The BHA is picked up and the ISP is set. The run-in string is then released from the permanent cement retainer, and a cement plug is placed on top. The hard cement is tagged and an open-hole sidetrack drilled.

Specifically engineered for the heavy demands of deepwater environments
Simple design, proven technology, high reliability
Blue Whale ISP technology is based on the Baker Hughes Inflatable PIP (Production Injection Packer), the world’s first inflatable packer and the pioneer of all inflatable service tools. An elegantly simple design with few parts provides flawless performance in critical applications. The high expansion properties of the inflatable element of the Blue Whale ISP allow greater than 200% expansion for passing through and setting below wellbore restrictions. The large contact area of Blue Whale ISP’s inflatable sealing element provides reliable anchoring and sealing in wellbore conditions where traditional mechanical service tools will not, such as soft formations, older and deteriorated casing, and fiberglass casing. It inflates with most drilling fluids and pump pressure. Tubing weight is not required to set the tool.

A true, heavy-duty ISP
As a tool run on large-diameter drillpipe and engineered specifically for deepwater offshore applications, Blue Whale ISP supersedes all other inflatable packers that claim to be “heavy duty.” Tensile and torque strength, connections, tong spacing, sealing element, you name it – Blue Whale ISP is unlike ordinary inflatable packers.

Features
- Components have much higher tensile and torque strength than ordinary ISPs.
- 3 1/2 IF end connections with a minimum 12 in. of tong area simplify rig-up and rig-down on location.
- Inflatable element length is 103.25 in. for larger seal area and greater anchoring capabilities.
- Thru-tubing style poppet valve and Delayed Opening Valve (DOV) are integral to the design to enhance reliability and performance.
- Shear-pinned bottom sub and bottom guide prevent the sealing element from “wadding up” when running through tight restrictions and long, horizontal laterals.
- Inflation and deflation areas have been maximized to reduce the chance of blockage during deflation.
- All metal components of the chassis are NACE-approved for H₂S service.
INFLATEDesign custom software – a key component of Blue Whale ISP
Baker Hughes’ proprietary INFLATEDesign software gives you a powerful operational advantage – the ability to precisely define the performance envelope of Blue Whale ISP in a given application. Guesswork is eliminated. INFLATEDesign assists with every stage of the job: information gathering, engineering, execution, and post-job reporting. INFLATEDesign can be used to quickly and easily consult with Baker Hughes inflatable systems experts onshore. This combination is a unique and valuable component of Blue Whale ISP.

Baker Hughes service – the most important part of every tool we make
Almost everyone involved in oilfield operations has seen how world-class service can make the difference in challenging situations. It is this kind of service that comes with every tool we manufacture. Baker Hughes’ unmatched resources and global reach has made the difference many times. This service stands behind Blue Whale ISP and every other tool we make.
Blue Whale ISP sample applications

**Inflatable service packer for shoe test and squeeze**

1. Set Packer, Test Shoe
2. Spot Cement to Tool
3. Squeeze Cement
4. Reverse Out

**Retrievable bridge plug (RBP) in open hole**

1. Set RBP, Spot Sand Plug
2. Close Pipe Rams, Squeeze Cement
3. Drill Cement, Circulate Out Sand
4. Equalize, Release, and Retrieve RBP
Retrievable bridge plug (RBP) in cased hole

1. Set RBP, disconnect
2. Pull drilling riser and sub-sea BOP
3. Run production riser
4. Equalize, release, and retrieve RBP

Inflatable service packer for hole hunting

1. Set Packer in Riser, Test Annulus Above
2. Run Packer Through Restriction, Set Packer, Test Annulus Above
3. Set Packer in Casing/Liner, Test Annulus Above
4. Release Packer, Reverse Out