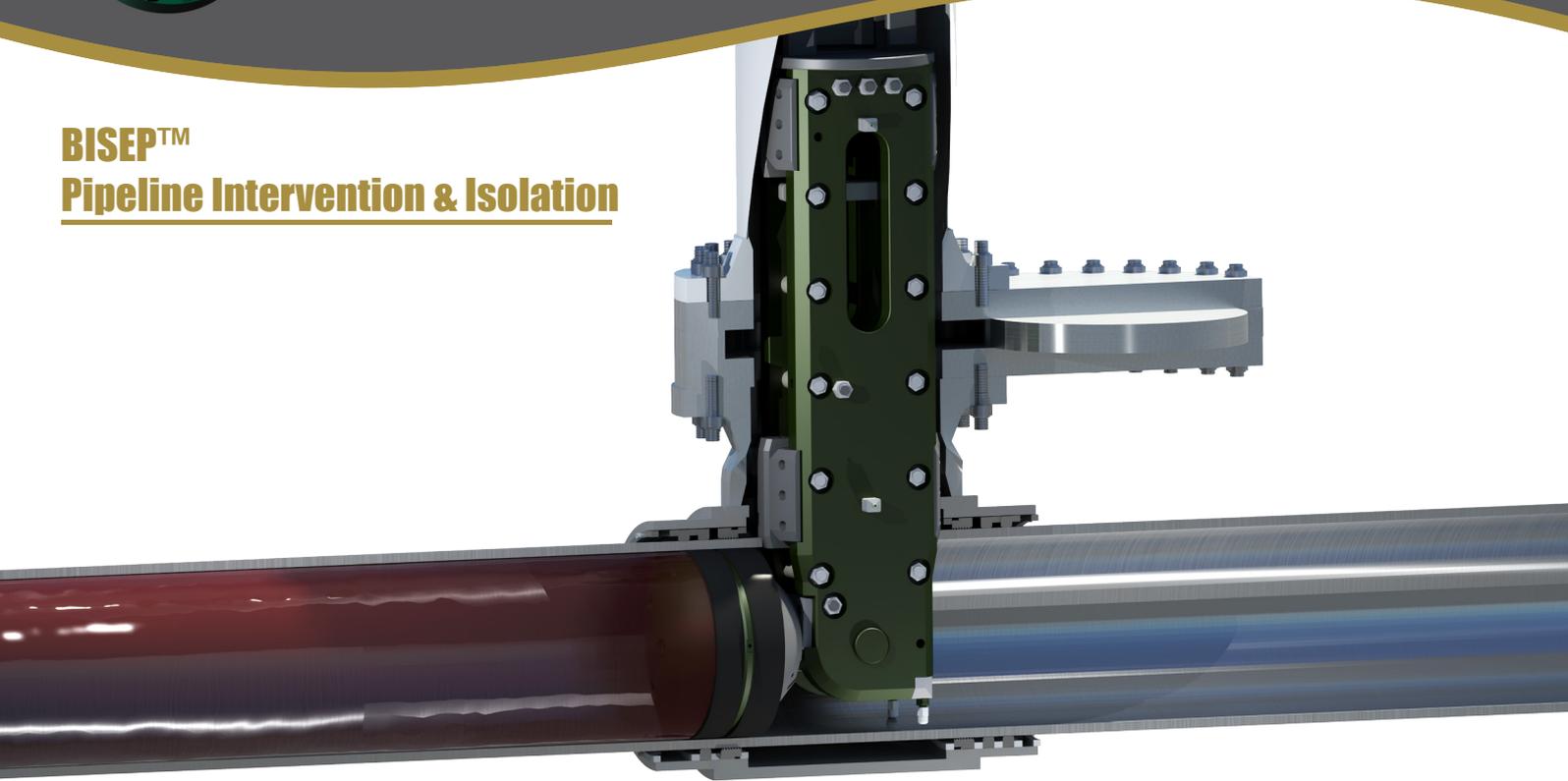




BISEP™ **Pipeline Intervention & Isolation**



Pipeline intervention and isolation can be achieved using STATS patented BISEP™. The BISEP™ range provides double block and bleed isolation deployed through a single full bore branch or hot tap penetration.

This high integrity isolation is provided by a spherical dual seal plug which is deployed from a pressure competent launcher through an isolation valve and rotated towards the flow of pressure to be isolated.

The spherical head houses twin compression seals and provides a facility to bleed and monitor the intermediate annulus creating a zero energy zone. The seal annulus port proves and monitors the seal integrity before and during intervention work. The BISEP™ head utilises the same compression seal technology as our Tecno Plug™ isolation tools.

The seals are activated by a hydraulic cylinder inside the plug which compresses the seals. The resultant radial expansion pushes the seals out to seal against the pipe bore. Further application of hydraulic pressure generates a rubber pressure in the seal elements which allows the annulus between the seals to be pressure tested. Line pressure acting against the tool pressure head maintains seal pressure creating a fail-safe feature providing actuation independent of the hydraulic system. The ejection load resistance is provided by the tool's deployment head.

Once the BISEP™ is deployed and set in position the pipeline or valve maintenance / repair can take place safely and efficiently.

Applications

- Pipeline / launcher valve installation or replacement
- Pipeline / Riser inspection, repair, replacement or decommissioning
- Rerouting of process flow
- Mid-line pipeline repair due to anchor drags or a dropped object on the pipeline
- Isolate pressure vessels
- Water or gas injection line isolation
- Isolation of pipeline end manifolds, pipeline end terminals, subsea manifolds or skids for repair, upgrade or replacement



BISEP™ - Pipeline Intervention & Isolation

Operator Benefits

Fully verifiable Double Block & Bleed isolation through a single intervention point:

- Dramatically increases safety over traditional line stop technology
- Single operation significantly reduces costs (Single fitting, welding, inspection, scaffolding, crane and excavation costs)
- Single operation significantly reduces workscope timescales, resulting in reduced shutdown time
- Single fitting allows installation in restricted access piping
- Reduced inspection / quality control / hot work permits (single fitting)
- BISEP™ technology complies with operator double block and bleed requirements
- Minimised production disruption on interconnected pipeline networks during valve repairs or tie-ins

Key Features

- Annulus bleed port proves and monitors the seal integrity before and during any intervention work
- Isolation integrity monitored through annulus, hydraulic set circuit and body vents continuously
- Design provides axial restraint through bearing on dual clevis plates (no single point failure)
- Seal annulus bleed provides a Zero Energy Zone
- Dual compression seals are more compliant and have a far higher success rate than traditional cup seals particularly in pitted pipework
- Self-Energisation of seals maintains isolation integrity independent of hydraulic control circuit
- Negates the need for additional hot taps for bleed function
- Can accommodate reinstatement pressure test against the rear of the set BISEP™
- BISEP™ isolation installed upstream of fitting, maintaining fitting in safe zone during workscope
- BISEP™ launcher ported to facilitate venting, purging and flushing of isolated section
- Can be deployed through conventional equal tee, clamp or branch
- Size range: 3"- 36". Pressure range: up to 150 Bar / 2175 psi
- Design allows for deployment into flow conditions (engineering assessment required)



BISEP™ deployed into test pipe



BISEP™ housed in launcher

STATS can provide operators a full turnkey service, supplying permanent or temporary tie-in clamps (mechanical or welded fitting) with a branch diameter and angle to suit application, along with STATS patented dual seal slab valves and hot tapping services. Once the BISEP™ is recovered, STATS can provide a completion plug to provide permanent isolation to the branch off-take and enable the removal of the slab valve allowing a blind flange to be fitted to the tie-in clamp.



BISEP™ - Data

BISEP™ Nominal Diameter	BISEP™ Seal Outside Diameter	Pipe Inside Diameter (Min-Max)
3"	67mm (2.6")	74-83mm (2.9-3.3")
4"	94mm (3.7")	97-102mm (3.8-4.0")
6"	175mm (6.9")	193-203mm (7.6-8.0")
8"	185mm (7.3")	188-205mm (7.4-8.1")
10"	225mm (8.9")	226-245mm (8.9-9.6")
10"	252mm (9.5")	243-262mm (9.6-10.3")
12"	262mm (9.9")	262-280mm (10.3-11.0")
12"	276mm (10.9")	277-299mm (10.9-11.8")
12"	294mm (11.6")	296-317mm (11.7-12.5")
14"	313mm (12.3")	317-338mm (12.5-13.7")
14"	323mm (12.7")	327-348mm (12.9-13.7")
16"	346mm (13.6")	349-376mm (13.7-14.8")
16"	362mm (14.3")	365-392mm (14.4-15.4")
18"	372mm (14.6")	376-404mm (14.8-15.9")
18"	397mm (15.6")	404-432mm (15.9-17.0")
20"	419mm (16.5")	427-454mm (16.8-17.9")
20"	445mm (17.5")	455-482mm (17.9-19.0")
22"	470mm (18.5")	481-507mm (18.9-20.0")
22"	496mm (19.5")	509-536mm (20.0-21.1")
24"	521mm (20.5")	535-561mm (21.1-22.1")
24"	547mm (21.5")	558-592mm (22.0-23.3")
26"	572mm (22.5")	584-617mm (23.0-24.3")
26"	598mm (23.5")	612-648mm (24.1-25.5")
28"	623mm (24.5")	639-673mm (25.2-26.5")
28"	648mm (25.5")	662-698mm (26.1-27.5")
30"	673mm (26.5")	692-723mm (27.2-28.5")
30"	699mm (27.5")	716-749mm (28.2-29.5")
32"	724mm (28.5")	746-774mm (29.4-30.5")
34"	775mm (30.5")	800-825mm (31.5-32.5")
36"	801mm (31.5")	824-851mm (32.4-33.5")
36"	826mm (32.5")	853-876mm (33.6-34.5")

Sizes may vary due to integration with other products

All data correct at time of publication