



CARBONTECH

SPITZE HP CLAMP

Our comprehensive global product lines offer suitable solutions on new construction and maintenance projects for tough and demanding environments.

Our reputable products are tested, validated, field proven and backed by a team of global professionals.

SPITZE HP CLAMP

EMERGENCY ONLINE LEAK REPAIR SYSTEM

» PRODUCT OVERVIEW

The Spitze HP clamp is engineered and manufactured generally in accordance with ASME VIII Div 1 for the temporary repair of live high-pressure leaks without having to shut down or isolate the system. The low-profile standoff height of the clamp is intended for a composite overwrap using any of the Revowrap systems for long terms repairs. The Spitze HP clamp is resistant to the harsh chemical environment prevalent in the oil, gas and petrochemical industries.

The Spitze HP clamp is engineered to operate in working temperatures up to 200°C and has a pressure rating of, dependant of clamp size, up to 200 Bar with a maximum application pressure of, dependant of clamp size and defect/hole size, up to 150 Bar. Please refer to the maximum and minimum service temperatures of the various Spitze bungs as illustrated in the SPITZE BUNG column below. The installation of the Spitze HP clamp is non-invasive and may be applied to live piping systems without shutting down for the repair on hole sizes up to 25mm Diameter. Spitze HP clamp may be applied to piping sizes up to 56", and may be installed on most substrates and is suitable for sub sea application on special request.



SPITZE HP CLAMP

PRODUCT PERFORMANCE INDICATORS

Maximum Design Temperature	200°C (up to 315°C on special request)
Maximum Design Pressure	Up to 200 Bar (Dependent on clamp size - Consult with Carbontech Engineering for high pressure application)
Min/Max Application Temperature	Refer to Spitze bung column
Maximum Application Pressure	Up to 150 Bar (Dependent on clamp size - Consult with Carbontech Engineering for high pressure application)
Minimum Allowable Operating Temperature	-20°C (-46°C on special request)
Installation Time	10 Minutes
Minimum Pipe Diameter	½ Inch
Maximum Pipe Diameter	56 Inch [larger sizes available on request]
Shelf Life	No limitation if stored correctly
Repair Lifespan	5 Year Design - Extendable
Maximum Defect Diameter	Up to 25mm (Dependent on operating pressure)
Sub sea Application	Available on special request
Man Power Required Per Installation	One
Applications	Circular Defects on: Elbows, Straight-line, Welds

SPITZE CLAMP DESIGN DATA

Design Code	Generally in accordance with ASME VIII Division 1:2023		
Clamp Materials	Spec Compliant:	Carbon Steel - SA516 GR 70N	Stainless Steel - SA240M GR 316L
	Non-Spec Compliant:	Mild Steel - EN9	
Bolt Material	Spec Compliant:	SA193 GR B7	SA 193 GR B8
	Non-Spec Compliant:	ISO 898-1 Class 12.9	
Bung Material/s	Fluorosilicone, Silicone, EPDM, Viton		

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» PRESSURE TEST PERFORMANCE

The Spitze HP clamp is designed and manufactured generally in accordance to ASME VIII with a pressure rating of 200 Bar. Achievable working pressures are defect diameter and shape dependant. Please see pressure and defect parameters below. Please note that this table is for reference only and is based on live leak test data conducted in ambient temperatures in a workshop environment. Site Risk assessments to be completed before installation of the SPITZE HP Clamp.

APPLICATION OF THE CROWN AND PRONE BUNGS

Crown Bung Application	Pitted/uneven surface defects	Girth Welds
Prone Bung Application	Smooth/Even Surface defects	



**Example of
Prone Bung**



**Example of
Crown Bung**



Viton Bung
Shore A Hardness
A60 Stainless steel
backing plate



EPDM Bung
Shore A Hardness
A50 Stainless steel
backing plate



Fluorosilicone
Shore A Hardness
A60 Stainless steel
backing plate



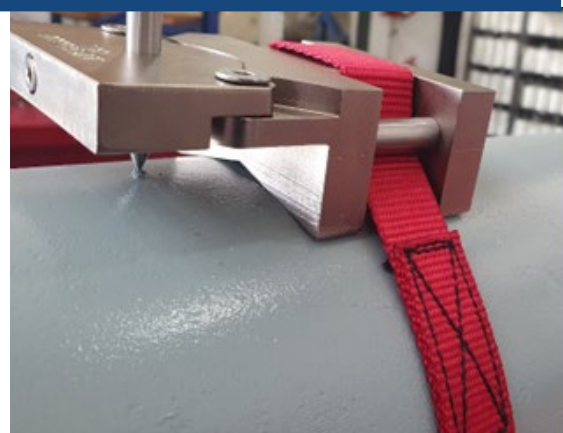
Silicone Bung
Shore A Hardness
A50 Stainless steel
backing plate



ALIGNMENT TOOL FOR ACCURATE PLACEMENT OF THE SPITZE CLAMP OVER THE DEFECT

SPITZE CLAMP ALIGNMENT TOOL DATA

Design Code	N/A
Clamp Materials	Carbon Steel - S355 GR J2 N or EN 9 (BS 970 GR 070M55)
Bolt Material	ISO 898-1 Class 12.9
Pipe Ranges	Universal system for all pipe sizes
Clamp Coating	Nickel Plated
Maximum Application Temperature	250°C



SPITZE HP CLAMP

» ADVANTAGES

- Fast, Non-invasive repair - doesn't require hot work
- Repairs done live - no unplanned downtime
- High Pressure - High Temperature
- Resistant to Harsh chemicals

» USES

- Illegal Hot Taps
- Cracks
- Weld Anomalies

» INDUSTRIES

- Oil and Gas facilities
- Petrochemical plants
- Chemical plants
- Sub Sea
- Transmission Pipelines



THE CARBONTECH INNOVATIVE PRODUCT RANGE

Revowrap 80	High performance quad-axial glass and carbon fibre pipe wrap system used with ambient temperature 2-part epoxy system.
Revowrap 110	High performance carbon fibre pipe wrap system used with an high temperature 2-part epoxy system.
Revowrap 185	High performance carbon fibre pipe wrap system used with ultra high temperature 2-part epoxy system.
Revoshield 124	High performance fibre glass coating system used with super strength 2-part epoxy system.
Revowrap 175 Putty	Medium viscosity high compression strength putty used for the profiling of Revowrap® systems.
Revostrap	A 20 second leak repair system for low to medium pressure.
Revomat	An intelligent post cure system for high temperature wrap systems.
SPITZE Clamp	Temporary repair of live high-pressure leaks without having to shut down or isolate the system.



CARBONTECH

The place chemistry, engineering and global expertise are brought together to drive progressive innovation in advanced composite technologies for the emergency repair of critical assets **"There is nothing generic about us"** we don't just sell pipe wraps; we provide accurate engineering backing to deliver tailored solutions.

Sound and responsible engineering is the basis on which we build our company, products and services. It is the core to our success and it is the foundation on which we have engineered and manufactured our innovative and **bespoke** products.

We strive by a zero-failure philosophy and warrant our engineered composite solutions are tested, proven and validated. We vow to provide dependable, responsible and accurate information regarding the capabilities of our systems.

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