



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 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 term 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 from -46°C to 315°C and has a pressure rating of up to 200 Bar with a maximum application pressure of 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.



SPITZE HP CLAMP

PRODUCT PERFORMANCE INDICATORS

Maximum Design Temperature	315°C of the clamp section
Maximum Design Pressure	Up to 200 Bar
Min/Max Application Temperature	Refer to Spitze bung column
Maximum Application Pressure	150 Bar
Minimum Allowable Operating Temperature	-46°C
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	25mm
Sub sea Application	Available
Man Power Required Per Installation	One
Applications	Elbows, Straight-line, Welds

SPITZE CLAMP DESIGN DATA

Design Code	ASME VIII Division 1:2023 Compliant
Clamp Materials	Carbon Steel - SA516 GR 70N Mild Steel - EN9 Stainless Steel - SA240M - GR 316L
Bolt Material	SA193 GR B7 / SF568 GR 12.9 / SA320 GR L7M
Bung Material/s	Fluorosilicone, Silicone, EPDM, Viton

SPITZE BUNG TEMPERATURE SELECTION

Viton Bung @ 204°C	Indefinite
Viton Bung @ 232°C	3000 Hours
Viton Bung @ 260°C	1000 Hours
Viton Bung @ 287°C	240 Hours
Viton Bung @ 315°C	48 Hours
Viton Bung minimum operating temperature	-45°C
EPDM Bung @ 80°C	Indefinite
EPDM Bung @ 100°C	1000 Hours
EPDM Bung @ 150°C	48 Hours
Viton Bung minimum operating temperature	-50°C
Fluorosilicone Bung @ 204°C	Indefinite
Fluorosilicone @ 232°C	3000 Hours
Fluorosilicone Bung minimum operating temperature	-65°C
Silicone Bung @ 150°C	Indefinite
Silicone Bung @ 200°C	10 000 Hours
Silicone Bung @ 220°C	1000 Hours
Silicone Bung @ 250°C	48 Hours
Silicone Bung minimum operating temperature	-60°C



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

SPITZE HP CLAMP

» PRESSURE TEST PERFORMANCE

The Spitze HP clamp is designed and manufactured 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.

THROUGH WALL DEFECT SIZE	DEFECT ON WELD - WELD STANDOFF HEIGHT 3.5MM	DEFECT ON STRAIGHT-LINE	DEFECT ON ELBOW	DEFECT ON CORRODED STRAIGHT-LINE
0-3mm	120 Bar	150 Bar	120 Bar	120 Bar
4-7mm	110 Bar	145 Bar	120 Bar	100 Bar
8-12mm	90 Bar	130 Bar	100 Bar	80 Bar
12-16mm	No Data	120 Bar	No Data	No Data
16-20mm	No Data	100 Bar	No Data	No Data
20-25mm	No Data	90 Bar	No Data	No Data

APPLICATION OF THE CROWN AND PRONE BUNGS

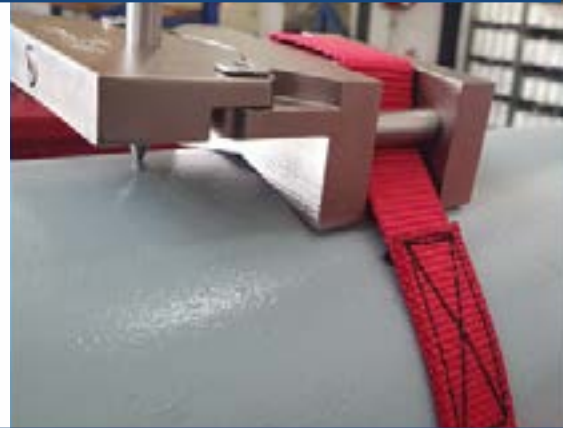
Crown Bung Application	Pitted/uneven surface defects	Girth Welds
Prone Bung Application	Smooth/Even Surface defects	



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

SPITZE CLAMP ALIGNMENT TOOL DATA

Design Code	N/A
Clamp Materials	Mild Steel - EN9
Bolt Material	SF568 GR 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.
Revowrap 225	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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