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Stauff ACT (anti-  
corrosion  
technology)  
Clamps



# ... the solution



**ACT** CLAMP  
anti **corrosion** technology

STAUFF<sup>®</sup> ACT Clamps are an innovatively designed solution for the installation of pipework where anti corrosion properties are paramount. It's design, based on the tried and tested STAUFF clamp, offers installation time reduction and long term cost savings due to extended service intervals.

## Standards

Compliant with Norwegian  
offshore standard  
Norsok Z-CR-010

NORSOK standard Z-CR-010 which states:

Tubing clamps shall be made of non-corrosive material, stainless steel AISI 316 or flame retardant plastic. Galvanic corrosion between tubing and tubing support system shall be avoided. The tubing clamp shall, when installed, not allow for water/sea water to be accumulated between tubing clamp and tubing, this is to avoid crevice corrosion.

Instrument tubing should be supported to field trays with tubing clamps approximately every 600mm for tubing sizes less than 25mm outside diameter.

Tubing sizes above 25mm outside diameter shall as a minimum have support every 1.5m.

# Construction

Plastic: PPV0  
Rubber: ACE

Constructed using PP-V0 plastic and ACE (Anti Corrosion Elastomer) rubber compounds, STAUFF® ACT Clamp is not only in compliance with NORSOK Z-CR-010: conforming to the fire retardant material element (V0-UL94 material), but also offers UV stability and resistance against rain, seawater and oil.

The base materials, construction and conformity to NORSOK standards allows the STAUFF® ACT Clamp to be used in SUB-SEA and TOP-SIDE environments.

Manufactured to DIN 3015 Standard.

# Installation

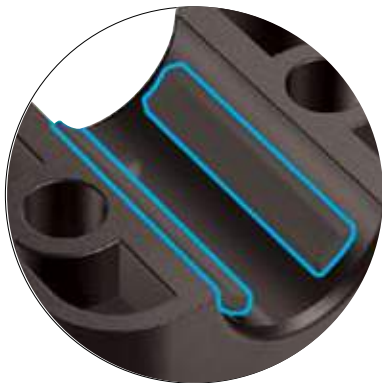
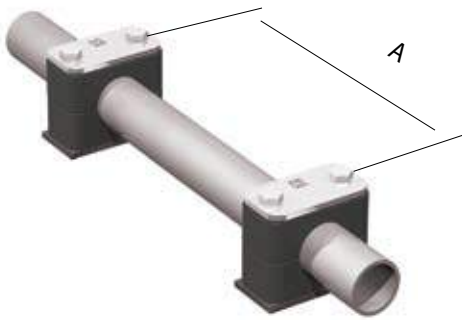


Illustration purposes only:  
the rubber strips may differ slightly in colour from that shown.

When the correct torque settings are applied STAUFF® ACT Clamp ensures no accumulation of sea water between itself and the tube. This is achieved by geometrically designed rubber strips in direct contact with the tubing, the dynamics of these strips also create drainage channels to aid dispersal of water.





A = 600mm tube size < 25mm  
1500mm tube size > 25mm



# The complete clamp

In order to conform with Norsok standard Z-CR-010, correct spacing of clamps must be observed.

## Pipe Bends

Pipe bends should be supported by STAUFF<sup>®</sup> ACT Clamps as close to the bends as possible. Furthermore, it is recommended to design these clamps as fixed point clamps.

## Connections / Couplings

The first clamp should be placed directly next to the connector / coupling. This protects the connector / coupling from vibrations.

## Valves

If valves are incorporated in the pipelines, it is recommended that support is provided in front of and behind these valves.

To ensure performance of STAUFF<sup>®</sup> ACT Clamp; weld plates, cover plates, bolts, rail nuts, etc must be manufactured from stainless steel.

All metal parts are available ex stock from STAUFF<sup>®</sup> in two stainless steel qualities:

### Stainless Steel V2A

1.4301 / 1.4305 (AISI 304 / 303)

Material code: W4

### Stainless Steel V4A

1.4401 / 1.4571 (AISI 316 / 316 Ti)

Material code: W5

# Credibility

Independently tested  
in laboratory and  
offshore conditions



Alicona Infinite Focus Microscope

Throughout its development the STAUFF® ACT Clamp has been subject to stringent testing at our in-house facilities in Werdohl, Germany.

In order to ensure credibility of the product, the development process has also involved independent testing. To achieve this the services of Sheffield Hallam University, Centre for Corrosion Technology have been utilized, applying advanced techniques with equipment such as Alicona Infinite Focus Microscope (as illustrated left).

In a controlled laboratory environment, a salt spray test has been applied to various clamp configurations holding 316 stainless steel tubing (Report no. 12:10:200B).

Independent field test samples, based on a rig in the Dutch sector of the North Sea, have also been assessed at the Sheffield Hallam University facility (Report no. 12:10:200).

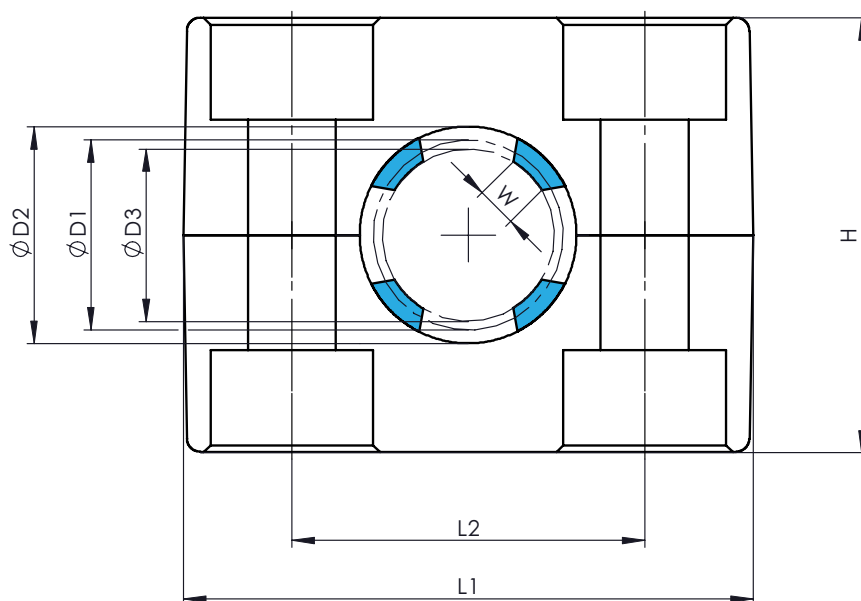
Both independent tests have recorded positive results in favour of the attributes of the new clamp. Full details of these are available upon request.



One of the test samples prepared for the North Sea rig.



# Dimensions



**ACT** CLAMP  
anti**corrosion** technology

Available in standard sizes 6,4mm to 25,4mm  
(Other sizes & configurations available on request)

Group	Order codes	Tube Ø D1		D2	D3	W	L1	L2	H	Width
		mm	inches							
1A	106,4A ACT	6,4	1/4	7,1	5,6	1,5	37	20	26	30
	109,5A ACT	9,5	3/8	10,5	8,3	2,3				
	110A ACT	10		11,1	8,8	2,4				
	112A ACT	12		13,3	10,5	2,8				
2	212,7 ACT	12,7	1/2	14,1	11	3	42	26	32	30
	214 ACT	14		15,6	12,3	3,2				
	218 ACT	18		20	16,3	3,8				
3	319 ACT	19	3/4	21,1	17,3	4	50	33	35,5	30
	320 ACT	20		22,2	18,3	4,1				
	321,3 ACT	21,3		23,7	19,6	4,2				
	325,4 ACT	25,4	1	28,2	23,7	4,5				





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