Breech-Lock Presentation

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BREECH-LOCK versus Conventional
Outside appearance

Design Pressure	: 190 barg
Design Temperature	: 380 °C
Shell ID	: 915 mm
Bolts Diameter	: 1-1/8”

Design Pressure	: 200 barg
Design Temperature	: 200 °C
Shell ID	: 900 mm
Bolts Diameter	: 3-¼”

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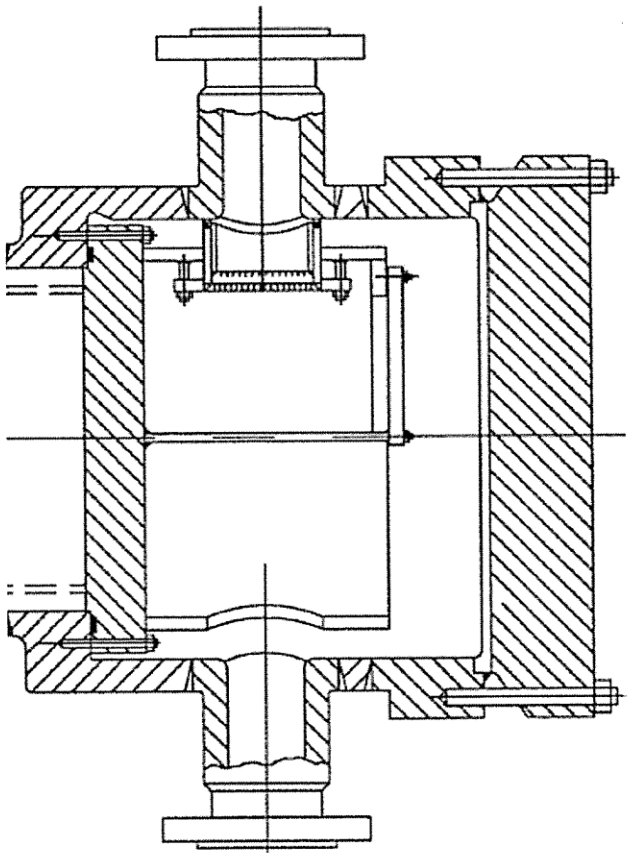
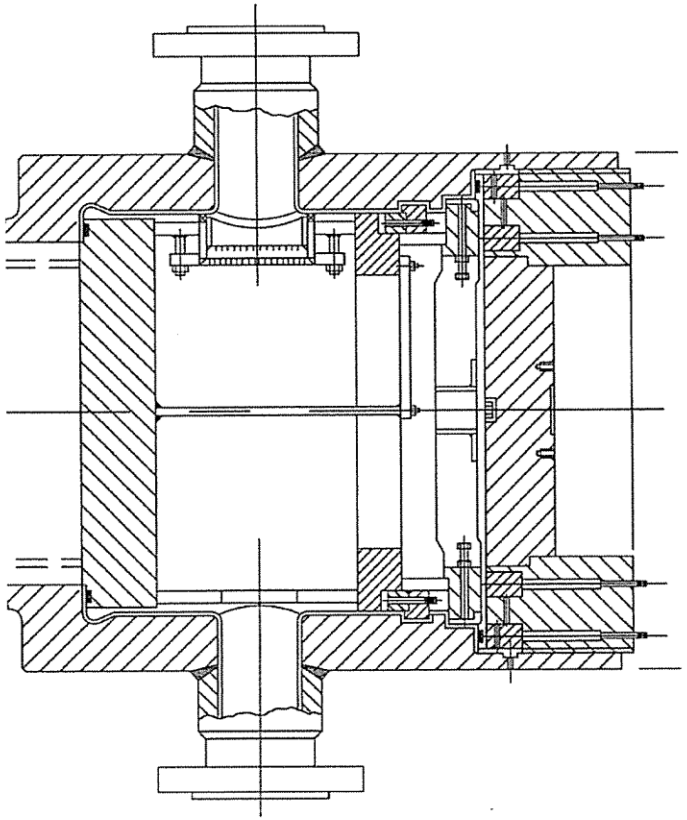
CONVENTIONAL BOLTED-IN vs BREECH LOCK





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BREECH-LOCK : Short Story

- The Breech-Lock closure was invented in 1960 by Standard Oil Co. of California and the first Breech-Lock was put in operation in 1966.
- Since then, thousands of Breech-Lock have been manufactured and put in service. Breech-Lock design is nowadays fully accepted and is considered a safe and proven technology
- Breech-Lock finds applications in refinery units operating at high pressure and temperature with hydrogen rich streams such as Hydrocrackers.
- The Breech-Lock concept can be employed in any type of service where high pressure is involved.
- We have installations in marine and polyethylene plants.

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BREECH-LOCK : Applications

Having a very reliable and tight type of sealing and being maintenance friendly, the Breech Lock type closure finds its most suitable applications in plants where High Pressure is present.

Fields where Breech Lock closures can be used are:

- Hydrocrackers and Hydrotreaters (these are by far the most common applications)
- Gas Compression (on-shore, off-shore and marine)
- Whenever high pressure is present and/or frequent opening of the joint is required.

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BREECH-LOCK - Concept

- The pressure load which tends to open the joint is entirely adsorbed by the channel threads.
- The channel cover bolts are therefore designed only to seat the channel gasket and for this reason are small.
- The gaskets used at the tubesheet and at the channel cover joints can be spiral wound or kamprofile type.
- The channel cover bolts circle is coincident with the gasket diameter, therefore the channel cover is not subject to additional bending moment exerted by the bolts.
- The channel cover is therefore thinner and lighter than the one of an exchanger with a conventional closure.
- There are no threaded holes in the channel forgings as in a conventional type of exchanger.

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BREECH-LOCK - Advantages

- In case of leakage, it is possible to seat the internal gasket with the unit in operation.
- There is no need to cut any part during the dismantling of the closure.
- There is no need to weld any part during the closing of the equipment.
- There is no need of a bolts tensioner during the dismantling or the closing of the equipment (bolts work in compression in the Breech-Lock concept).
- Maintenance is quicker and requires less specialized personnel than in the case of a conventional equipment.
  The Breech-Lock closure is maintenance friendly.

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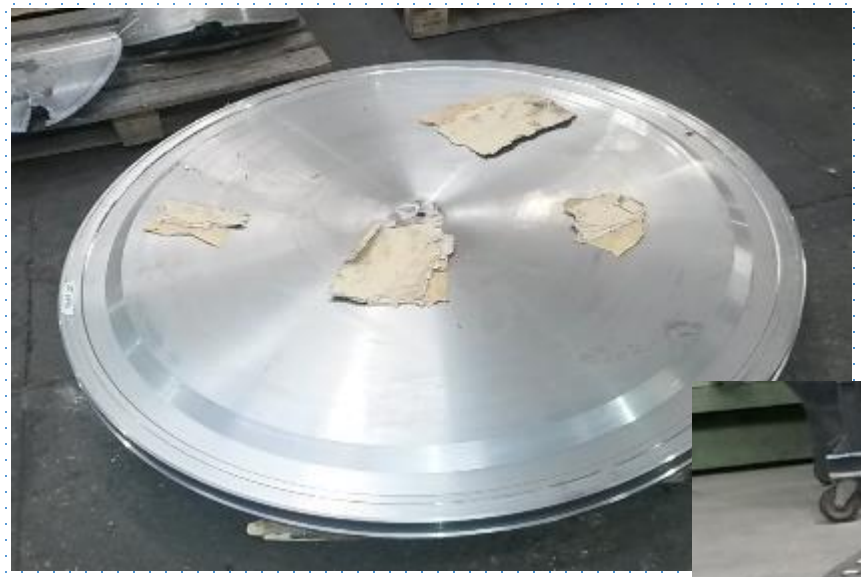
BREECH-LOCK Threaded Rings & Covers

BREECH-LOCK Internals



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BREECH-LOCK Compressor Aftercoolers

Design Pressure over 330 Barg

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BREECH-LOCK for CTCI for CPC - Taiwan

Shell Diameter 1800 mm

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BREECH-LOCK H/H Type

BREECH-LOCK H/L Type - CTCI for CPC - Taiwan

Any Question?

Please contact us at sales@villascambiatori.com
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THANK YOU!