GS-Retain Ring Flange System

The Original GS-Retain Ring Flange System provides a fast and easy method of connect pipes. Connections are made with the highest quality and reliability, completely leak-free with high joint integrity, while still being cost efficient. The GS-Retain Ring Flange System allows piping systems with workings pressures of up to 690 bar to be assembled without welding. The wide range of flanged fittings includes tees, elbows and threaded adaptors in a pipe size range from 26 to 355 mm.

The bonded seal between pipe faces ensures tight sealing when tightening the screws.

GS-Hydro is the world's leading supplier of complete non-welded piping solutions, with numerous benefits for a wide range of demanding applications.
The GS-Retain Ring Flange System is approved by the following classification companies:

- DNV  Det Norske Veritas
- LR    Lloyd’s Register of Shipping
- GL    Germanischer Lloyd
- ABS   American Bureau of Shipping
- BV    Bureau Veritas
- RINA  Registro Italiano Navale Group
- MRS   Russian Maritime Register of Shipping
- NKK   Nippon Kaiji Kyokai
- CCS   China Classification Society

Piping systems according to other standards are also possible by request.

GS-Retain Ring Flange System (technical data):

<table>
<thead>
<tr>
<th></th>
<th>SAE 3000</th>
<th>SAE 6000</th>
<th>ISO 6164</th>
</tr>
</thead>
<tbody>
<tr>
<td>pressure* [bar]</td>
<td>210–350</td>
<td>420</td>
<td>210–690</td>
</tr>
<tr>
<td>size, pipe</td>
<td>26x6–97x12</td>
<td>26x6–66x8.5</td>
<td>60.3x11.04–355.6x41.4</td>
</tr>
<tr>
<td>size, flange</td>
<td>1/2” – 3”</td>
<td>1/2” – 2”</td>
<td>2” – 12”</td>
</tr>
<tr>
<td>material, pipe</td>
<td>carbon steel, stainless steel, duplex, super duplex, titanium (materials having elongation above 20 %)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>material, flange</td>
<td>electric zined carbon steel, hot dip galvanized carbon steel, stainless steel or titanium</td>
<td></td>
<td></td>
</tr>
<tr>
<td>material, seal</td>
<td>NBR, Viton</td>
<td></td>
<td></td>
</tr>
<tr>
<td>material, retain ring</td>
<td>stainless steel</td>
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</tbody>
</table>

*) Maximum pressure depending on media
Numerous application possibilities

The GS-Retain Ring Flange System is used in a broad range of high pressure piping applications, in a wide variety of industries ranging from marine and offshore to different land-based industries.

Within the Marine Industry the GS-Retain Ring Flange System is used extensively for hydraulic and other piping systems, where the reliability and inherent cleanliness, fast installation times and flexible engineering bring major time and cost benefits.

The GS-Retain Ring Flange System is utilized within the Offshore Industry for hydraulic, mud, cement, high pressure water and other high pressure piping systems. High quality, quick assembly, and no "hot work" allow for safe and cost effective installation compared to conventional welding on oil drilling platforms.

The GS-Retain Ring Flange System is utilized by a wide variety of Land-based industries, for instance in metals & mining, wood & forestry and in many demanding testing facilities for its flexibility, precision, inherent cleanliness and reliability.
GS-Hydro is the world’s leading supplier of innovative, non-welded piping solutions for hydraulic, and other – both low and high pressure – applications with high demands on quality, reliability and cleanliness. Global GS-Hydro network helps customers to grow their business by offering high quality products and comprehensive services.