The use of cooled packing cases can cause many problems in service and during reconditioning. Upgrading to CPI polymer alloy packing rings can allow customers to remove the packing cooling system from their reciprocating compressors.

In lubricated conditions, using CPI 192 material packing rings will eliminate the need for packing case cooling if the discharge pressure is under 150 Bar (2175 psi). In non-lubricated conditions, CPI can eliminate the packing case cooling if the discharge pressure is under 50 Bar (725 psi) by using our range of polymer alloy materials such as CPI 184 material seal rings with CPI 192 material back-up rings.

Note that API 618 recommends much lower pressure criteria. CPI has good non cooled experience with its polymer alloy materials which have proven to be consistently reliable when compared to the conservative API 618 standard recommendations.

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**ELIMINATING COOLING FROM PACKING CASES**

![Packing case with cooling](image1.png)

![Packing case without cooling](image2.png)

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Non cooled pressure limits

API recommendation vs CPI experience

<table>
<thead>
<tr>
<th>Discharge Pressure</th>
<th>Lube</th>
<th>Non Lube</th>
</tr>
</thead>
<tbody>
<tr>
<td>300 bar</td>
<td>CPI</td>
<td>API</td>
</tr>
<tr>
<td>200 bar</td>
<td>CPI</td>
<td>API</td>
</tr>
<tr>
<td>100 bar</td>
<td>CPI</td>
<td>API</td>
</tr>
<tr>
<td>0 bar</td>
<td>CPI</td>
<td>API</td>
</tr>
</tbody>
</table>

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