RUPTURE VALVE VC 3006 - types A, B, C, E, G, R

This device consists of a valve which stops (completely or partially) the oil flow when downward speed exceeds the preset value. This device ensure a deceleration lower than \( g_n \) (9,81 \( \text{m/s}^2 \)).

This valves are designed and manufactured to a safety factor greater than 1,7 with respect to the proof stress (non-proportional elongation) calculated on a pressure 2,3 times the maximum static one (45 bar).

SETTING OF THE RUPTURE VALVE:
- Calculate the tripping flow with the following formula:

\[
Q_i = \frac{(V_d \cdot 1,3) \cdot 6 \cdot A \cdot N_{vc}}{c_m}
\]

where:

- \( Q_i \) = maximum tripping flow of the valve [l/min]
- \( V_d \) = rated downward speed of the car [m/s]
- \( A \) = ram area [cm\(^2\)]
- \( N_{vc} \) = number of jack connected to the rupture valve
- \( c_m \) = reeving ratio (1 for direct installation 1:1, 2 for indirect installation 2:1)

<table>
<thead>
<tr>
<th>ram</th>
<th>50</th>
<th>60</th>
<th>70</th>
<th>80</th>
<th>90</th>
<th>100</th>
<th>110</th>
<th>120</th>
<th>130</th>
<th>150</th>
<th>180</th>
<th>200</th>
<th>238</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>19,63</td>
<td>28,27</td>
<td>38,48</td>
<td>50,27</td>
<td>63,62</td>
<td>78,54</td>
<td>95,03</td>
<td>113,10</td>
<td>132,73</td>
<td>176,71</td>
<td>254,47</td>
<td>314,16</td>
<td>444,88</td>
</tr>
</tbody>
</table>

Table 2 - equivalent area for telescopic jacks with hydraulic synchronization

<table>
<thead>
<tr>
<th>jack type</th>
<th>T42</th>
<th>T50</th>
<th>T63</th>
<th>T70</th>
<th>T85</th>
<th>T100</th>
</tr>
</thead>
<tbody>
<tr>
<td>C2 (2 stages)</td>
<td>A [cm(^2)]</td>
<td>21,14</td>
<td>29,40</td>
<td>44,22</td>
<td>59,59</td>
<td>84,94</td>
</tr>
<tr>
<td>C3 (3 stages)</td>
<td>A [cm(^2)]</td>
<td>33,25</td>
<td>44,04</td>
<td>66,63</td>
<td>88,83</td>
<td>132,73</td>
</tr>
</tbody>
</table>

Table 3 - equivalent area for telescopic jacks with mechanical synchronization (by chains)

<table>
<thead>
<tr>
<th>jack type</th>
<th>(TCS/EC 45)</th>
<th>TCS/EC 60</th>
<th>TCS/EC 75</th>
<th>TCS/EC 90</th>
<th>TCS/EC 105</th>
<th>TCS/EC 120</th>
</tr>
</thead>
<tbody>
<tr>
<td>-2N, Y (2 stages)</td>
<td>A [cm(^2)]</td>
<td>(22,50)</td>
<td>36,76</td>
<td>54,55</td>
<td>75,87</td>
<td>100,73</td>
</tr>
<tr>
<td>-3Y (3 stages)</td>
<td>A [cm(^2)]</td>
<td>(29,93)</td>
<td>45,95</td>
<td>65,50</td>
<td>88,59</td>
<td>115,22</td>
</tr>
</tbody>
</table>

- Remove the cap from the adjusting screw and untight the locking nut.
- Screw the adjustment screw in to stop and measure the quote \( X_o \) (valve completely closed).
- Read on the diagram for valve setting the quote \( X \) with respect to the tripping flow and to the valve dimension (e.g.: VC 3006/B 1"1/4; \( Q_i = 150 \text{l/min}; X = 9\text{mm} \))
- Screw out the adjustment screw to obtain the requested quote \( X + X_o \)

CHECKING OF THE RUPTURE VALVE:
- Call the car with full load to the top floor.
- Tight screw #5 to stop and call the lift back to the bottom floor.
- When the lift reaches the downward speed according the tripping flow, the rupture valve closes and the car stops.
In case of rupture valve with by-pass, the car will continue to descend with low speed. If the valve does not close it is necessary to re-adjust it:
- Untight the locking nut and screw in the adjustment screw one turn.
- Call the lift to the top floor and then back to the bottom floor.
- Repeat these operation until the valve closes.
- Screw out #5 to stop and be sure the valve does not trip during a normal down travel.

IMPORTANT!!!
Once the check is done re-assemble the cap on the adjusting screw.

INSTRUCTION FOR RUPTURE VALVE SETTING

Data sheet: 06.005 - 1/2
Date: 14.01.1998
RUPTURE VALVE AND DISTRIBUTOR "3010"

Table of quote "Xo" (indicative) according to the valve size

<table>
<thead>
<tr>
<th>valve size</th>
<th>1&quot;</th>
<th>1&quot; 1/4</th>
<th>1&quot; 1/2</th>
<th>2&quot;</th>
<th>2&quot; 1/2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Xo [mm]</td>
<td>13,5</td>
<td>14</td>
<td>13,5</td>
<td>11,0</td>
<td>22,0</td>
</tr>
</tbody>
</table>

DIAGRAM FOR VC 3006 ADJUSTMENT