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

This device consists of a valve which stops (completely or partially) the oil flow when downward speed exceeds the preset value. This device ensures a deceleration lower than $g_n$ (9.81 m/s²).

These 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 [cm²]
  \[ N_{vc} = \] 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 1 - area for single ram jacks

<table>
<thead>
<tr>
<th>ram</th>
<th>HL 55</th>
<th>HL 65</th>
<th>HL 75</th>
</tr>
</thead>
<tbody>
<tr>
<td>A [cm²]</td>
<td>28.26</td>
<td>38.46</td>
<td>50.24</td>
</tr>
<tr>
<td>ram</td>
<td>50</td>
<td>60</td>
<td>70</td>
</tr>
<tr>
<td>A [cm²]</td>
<td>19.63</td>
<td>28.27</td>
<td>38.48</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 [cm²]</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>33.25</td>
<td>44.04</td>
<td>66.63</td>
<td>88.83</td>
<td>132.27</td>
<td>176.15</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 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 [cm²]</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>45.95</td>
<td>65.50</td>
<td>88.59</td>
<td>115.22</td>
<td>*****</td>
</tr>
<tr>
<td>-4Y (4 stages)</td>
<td>56.32</td>
<td>77.64</td>
<td>102.50</td>
<td>*****</td>
<td>*****</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 Xo (valve completely closed).
- Read on the diagram for valve setting the quote X with respect to the tripping flow and to the valve dimension (es: VC 3006/B 1"1/4; Qi = 150 l/min; X = 9mm)
- Screw out the adjustment screw to obtain the requested quote X + Xo.

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 this 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.

(*) not certified
INSTRUCTION FOR RUPTURE VALVE SETTING

RUPTURE VALVE AND DISTRIBUTOR "3010"

DIAGRAM FOR VC3006 ADJUSTMENT

tripping flow [l/min]

dimension x [mm]

1"  1"1/4  1"1/2  2"  2"1/2