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 \( g_n = 9.81 \text{ m/s}^2 \).

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 \([\text{cm}^2]\)
  - \( N_{vc} \) = number of jack connected to the rupture valve
  - \( c_m \) = reeving ratio (1 for direct installation 1:1, 2 for indirect installation 2:1)

- Remove the cap from the adjusting screw and untight the locking nut.
- Screw the adjustment screw in to stop and measure the quote \( X_0 \) (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; \( Q_i = 150 \text{ l/min}; X = 9\text{mm} \)).
- Screw out the adjustment screw to obtain the requested quote \( X + X_0 \).

**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

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**Table 1 - area for single ram jacks**

<table>
<thead>
<tr>
<th>ram</th>
<th>HL 45</th>
<th>HL 55</th>
<th>HL 65</th>
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<tbody>
<tr>
<td>( A ) [\text{cm}^2]</td>
<td>15.90</td>
<td>23.76</td>
<td>33.18</td>
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</table>

<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>140</th>
<th>150</th>
<th>180</th>
<th>200</th>
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<tbody>
<tr>
<td>( A ) [\text{cm}^2]</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>153.94</td>
<td>176.71</td>
<td>254.47</td>
<td>314.16</td>
<td>444.88</td>
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**Table 2 - equivalent area for telescopic jacks with hydraulic synchronization**

<table>
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<tr>
<th>jack type</th>
<th>T42</th>
<th>T50</th>
<th>T63</th>
<th>T70</th>
<th>T85</th>
<th>T100</th>
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<tr>
<td>C2 (2 stages)</td>
<td>21.14</td>
<td>29.40</td>
<td>44.22</td>
<td>59.59</td>
<td>84.94</td>
<td>117.61</td>
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<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>
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**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>
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<tbody>
<tr>
<td>-2N, Y (2 stages)</td>
<td>36.76</td>
<td>54.55</td>
<td>75.87</td>
<td>100.73</td>
<td>129.12</td>
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<tr>
<td>-3Y (3 stages)</td>
<td>45.95</td>
<td>65.50</td>
<td>88.59</td>
<td>115.22</td>
<td>*****</td>
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<tr>
<td>-4Y (4 stages)</td>
<td>56.32</td>
<td>77.64</td>
<td>102.50</td>
<td>*****</td>
<td>*****</td>
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INSTRUCTION FOR RUPTURE VALVE SETTING

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INSTRUCTION FOR RUPTURE VALVE SETTING

RUPTURE VALVE AND DISTRIBUTOR "3010"

DIAGRAM FOR VC3006 ADJUSTMENT

tripping flow [l/min]

dimension x [mm]

GMV
DIAGRAM FOR VC3006 3/4” ADJUSTMENT

cap
adjusting screw
locking nut

ball shut off valve
vertical or horizontal cut let

1/2"

Tripping flow [l/min]

Dimension x [mm]

INSTRUCTION FOR RUPTURE VALVE SETTING

table : 06.005
date : 19/01/1998
revision : C 22/05/2006
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