

| novapress BASIC  |                   |                    |           |     |                    |       |                                    |       |  |                         |                                   |                |      |    |
|--|-------------------|--------------------|-----------|-----|--------------------|-------|------------------------------------|-------|--|-------------------------|-----------------------------------|----------------|------|----|
| Gasket characteristics according to:   |                   |                    |           |     |                    |       |                                    |       |  |                         |                                   |                |      |    |
| DIN 28090 part 1<br>(DIN E 2505 - part 2)  |                   |                    |           |     |                    |       | AD - memo B 7<br>DIN V 2505 (1/86) |       | ASME-CODE  |                         |                                   |                |      |    |
| SOFT GASKET-MATERIAL   |                   |                    |           |     |                    |       |                                    |       |  |                         |                                   |                |      |    |
| gasket material  | thickness<br>(hd) | fitting conditions |           | m   | working conditions |       |                                    |       | notes<br>in relation to:<br>S <sub>VU</sub><br>∅ 50 x 90 | initial load<br>ko x kd | working order<br>k <sub>1</sub> * | m              | y    | y  |
|  |                   | ∅ 50 x 90          | ∅ 55 x 75 |     | 20°C               | 100°C | 200°C                              | 300°C |  |                         |                                   |                |      |    |
| novapress BASIC  | 1,0               | <10                | 360       | 1,3 | 360                | 70    | 45                                 | 30    | bd : hd = 20 : 1   | 10 x bd                 | 1,3 x bd                          | 2,5            | 1450 | 10 |
|  | 1,5               | 11                 | 240       | 1,3 | 240                | 55    | 35                                 | 20    | bd : hd = 13,3 : 1                                       | 11 x bd                 | 1,3 x bd                          | 2,5            | 1595 | 11 |
|  | 2,0               | 12                 | 180       | 1,3 | 180                | 40    | 25                                 | 10    | bd : hd = 10 : 1   | 12 x bd                 | 1,3 x bd                          | 2,5            | 1740 | 12 |
|  | 3,0               | 12                 | 120       | 1,3 | 120                | 30    | 15                                 | 5     | bd : hd = 6,7 : 1  | 12 x bd                 | 1,3 x bd                          | 2,5            | 1740 | 12 |
| internal pressure: 16 bar  | 1,0               | 11                 | 360       | 1,3 | 360                | 70    | 45                                 | 30    | bd : hd = 20 : 1   | 11 x bd                 | 1,3 x bd                          | 2,5            | 1595 | 11 |
|  | 1,5               | 15                 | 240       | 1,3 | 240                | 55    | 35                                 | 20    | bd : hd = 13,3 : 1                                       | 15 x bd                 | 1,3 x bd                          | 2,5            | 2175 | 15 |
|  | 2,0               | 17                 | 180       | 1,3 | 180                | 40    | 25                                 | 10    | bd : hd = 10 : 1   | 17 x bd                 | 1,3 x bd                          | 2,5            | 2465 | 17 |
|  | 3,0               | 17                 | 120       | 1,3 | 120                | 30    | 15                                 | 5     | bd : hd = 6,7 : 1  | 17 x bd                 | 1,3 x bd                          | 2,5            | 2465 | 17 |
| internal pressure: 25 bar  | 1,0               | 15                 | 360       | 1,3 | 360                | 70    | 45                                 | 30    | bd : hd = 20 : 1   | 15 x bd                 | 1,3 x bd                          | 2,5            | 2175 | 15 |
|  | 1,5               | 20                 | 240       | 1,3 | 240                | 55    | 35                                 | 20    | bd : hd = 13,3 : 1                                       | 20 x bd                 | 1,3 x bd                          | 2,5            | 2900 | 20 |
|  | 2,0               | 22                 | 180       | 1,3 | 180                | 40    | 25                                 | 10    | bd : hd = 10 : 1   | 22 x bd                 | 1,3 x bd                          | 2,5            | 3190 | 22 |
|  | 3,0               | 22                 | 120       | 1,3 | 120                | 30    | 15                                 | 5     | bd : hd = 6,7 : 1  | 22 x bd                 | 1,3 x bd                          | 2,5            | 3190 | 22 |
| internal pressure: 40 bar  | 1,0               | 22                 | 360       | 1,3 | 360                | 70    | 45                                 | 30    | bd : hd = 20 : 1   | 22 x bd                 | 1,3 x bd                          | 2,5            | 3190 | 22 |
|  | 1,5               | 25                 | 240       | 1,3 | 240                | 55    | 35                                 | 20    | bd : hd = 13,3 : 1                                       | 25 x bd                 | 1,3 x bd                          | 2,5            | 3625 | 25 |
|  | 2,0               | 27                 | 180       | 1,3 | 180                | 40    | 25                                 | 10    | bd : hd = 10 : 1   | 27 x bd                 | 1,3 x bd                          | 2,5            | 3915 | 27 |
|  | 3,0               | 27                 | 120       | 1,3 | 120                | 30    | 15                                 | 5     | bd : hd = 6,7 : 1  | 27 x bd                 | 1,3 x bd                          | 2,5            | 3915 | 27 |
| <b>General notes regarding the m factor:</b>   |                   |                    |           |     |                    |       |                                    |       |  |                         | NKO                               | March 03/V-4.0 |      |    |
| For calculating acc. To DIN V 2505 (01/86) the following can be chosen:<br>k <sub>1</sub> = 1.3 x bd or m = 1.3  |                   |                    |           |     |                    |       |                                    |       |  |                         |                                   |                |      |    |
| The values m = 1.3 to 2,5 (DIN 28090-1) take into account the different demands on tightness classes, but not any flange irregularities.   |                   |                    |           |     |                    |       |                                    |       |  |                         |                                   |                |      |    |
| <p>The <b>m-factor</b> is a value to describe the minimum surface pressure under operating conditions S<sub>VUL</sub>.</p> <p>Up to now there is no definite test specification for it. The procedure acc. to DIN 28090-1 is controversial.</p> <p>The m factor can be looked at in different ways and depends on the following:</p> <ul style="list-style-type: none"> <li>*tightness class</li> <li>*temperature</li> <li>*surface pressure in the installed state</li> </ul> <p>Within the Brite EuRam research project m factors of approx. 1,3 - 2,5 were found as averages for <b>fiber reinforced rubber bounded gaskets</b>.</p> <p>It is for the user to calculate with a different factor. (e.g. m = 2)</p> <p>bd: compressed width of gasket<br/>hd: thickness</p> <p><b>S<sub>VU</sub>:</b> permeability to gas (0,1mg N<sub>2</sub>/s*m) (» 1 ml/min) is measured on samples with a dimension of 90 x 50 x 2 mm according to DIN 28090 part 1</p> <p>Please note: Recommended peak-to-valley height of sealing surfaces:( R<sub>z</sub>): 50 - 100 µm.<br/>Basis for determination for data is DIN 28090 part 1</p> |                   |                    |           |     |                    |       |                                    |       |  |                         |                                   |                |      |    |
| $ko \times kd = S_{VU} \times bd$<br>$k_1 = m \times bd$<br><b>for liquids:</b><br>calculation with 50% of the value   |                   |                    |           |     |                    |       |                                    |       |  |                         |                                   |                |      |    |