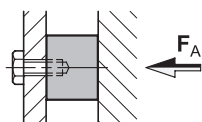


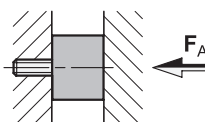
## GN 352 / GN 452

Federkennwerte  
für 40 Shore bei axialer,  
statischer Druckbelastung

### Form E



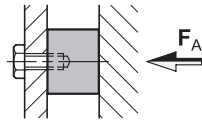
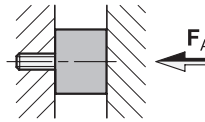
### Form S



| $d_1$ | h  | Federate $\approx$<br>in N/mm | max. Last<br>$F_A$ in N | max. Weg<br>in mm | Federate $\approx$<br>in N/mm | max. Last<br>$F_A$ in N | max. Weg<br>in mm |
|-------|----|-------------------------------|-------------------------|-------------------|-------------------------------|-------------------------|-------------------|
| 8     | 8  | 17                            | 33                      | 2                 | 17                            | 33                      | 2                 |
| 8     | 13 | 13                            | 41                      | 3,25              | 10                            | 33                      | 3,25              |
| 10    | 10 | 21                            | 53                      | 2,5               | 21                            | 53                      | 2,5               |
| 10    | 15 | 18                            | 69                      | 3,75              | 18                            | 69                      | 3,75              |
| 10    | 20 | -                             | -                       | -                 | 11                            | 54                      | 5                 |
| 15    | 10 | -                             | -                       | -                 | 55                            | 110                     | 2                 |
| 15    | 15 | 37                            | 140                     | 3,75              | 37                            | 140                     | 3,75              |
| 15    | 20 | 27                            | 135                     | 5                 | 27                            | 135                     | 5                 |
| 15    | 30 | -                             | -                       | -                 | 17                            | 125                     | 7,5               |
| 20    | 8  | -                             | -                       | -                 | 280                           | 560                     | 2                 |
| 20    | 10 | -                             | -                       | -                 | 155                           | 390                     | 2,5               |
| 20    | 15 | 77                            | 290                     | 3,75              | 77                            | 290                     | 3,75              |
| 20    | 20 | 52                            | 260                     | 5                 | 52                            | 260                     | 5                 |
| 20    | 25 | 43                            | 270                     | 6,25              | 43                            | 270                     | 6,25              |
| 20    | 30 | 31                            | 235                     | 7,5               | 31                            | 235                     | 7,5               |
| 25    | 15 | 129                           | 485                     | 3,75              | 129                           | 485                     | 3,75              |
| 25    | 20 | 83                            | 415                     | 5                 | 83                            | 415                     | 5                 |
| 25    | 25 | 81,5                          | 510                     | 6,25              | 65,5                          | 410                     | 6,25              |
| 25    | 30 | 39                            | 290                     | 7,5               | 39                            | 290                     | 7,5               |
| 30    | 15 | 199                           | 745                     | 3,75              | 199                           | 745                     | 3,75              |
| 30    | 20 | 113                           | 565                     | 5                 | 113                           | 565                     | 5                 |
| 30    | 25 | -                             | -                       | -                 | 92                            | 575                     | 6,25              |
| 30    | 30 | 80                            | 600                     | 7,5               | 80                            | 600                     | 7,5               |
| 30    | 40 | 55                            | 550                     | 10                | 55                            | 550                     | 10                |
| 40    | 20 | 240                           | 1200                    | 5                 | 240                           | 1200                    | 5                 |
| 40    | 25 | -                             | -                       | -                 | 187                           | 1170                    | 6,25              |
| 40    | 30 | 152                           | 1140                    | 7,5               | 152                           | 1140                    | 7,5               |
| 40    | 35 | -                             | -                       | -                 | 107                           | 940                     | 8,75              |
| 40    | 38 | -                             | -                       | -                 | 102                           | 970                     | 9,5               |
| 40    | 40 | 100                           | 995                     | 10                | 100                           | 995                     | 10                |
| 40    | 45 | -                             | -                       | -                 | 90,5                          | 1020                    | 11,25             |
| 40    | 50 | 73                            | 911                     | 12,5              | -                             | -                       | -                 |
| 50    | 20 | 536                           | 2680                    | 5                 | 536                           | 2680                    | 5                 |
| 50    | 25 | -                             | -                       | -                 | 273,5                         | 1710                    | 6,25              |
| 50    | 30 | 243                           | 1820                    | 7,5               | 243                           | 1820                    | 7,5               |
| 50    | 35 | 175                           | 1530                    | 8,75              | 187                           | 1640                    | 8,75              |
| 50    | 40 | 143                           | 1430                    | 10                | 143                           | 1430                    | 10                |
| 50    | 45 | 149                           | 1678                    | 11,25             | 142                           | 1600                    | 11,25             |
| 50    | 50 | 110                           | 1370                    | 12,5              | 110                           | 1370                    | 12,5              |
| 60    | 20 | -                             | -                       | -                 | 376                           | 1880                    | 5                 |
| 60    | 25 | -                             | -                       | -                 | 403                           | 2520                    | 6,25              |
| 60    | 30 | 429                           | 3220                    | 7,5               | -                             | -                       | -                 |
| 60    | 36 | -                             | -                       | -                 | 275,5                         | 2480                    | 9                 |
| 60    | 40 | 260                           | 2600                    | 10                | 260                           | 2600                    | 10                |
| 60    | 45 | -                             | -                       | -                 | 151                           | 1699                    | 11,25             |
| 60    | 50 | 179                           | 2240                    | 12,5              | -                             | -                       | -                 |
| 60    | 60 | -                             | -                       | -                 | 169                           | 2530                    | 15                |
| 70    | 30 | 657                           | 4930                    | 7,5               | 657                           | 4930                    | 7,5               |
| 70    | 35 | -                             | -                       | -                 | 356,5                         | 3120                    | 8,75              |
| 70    | 40 | 385                           | 3850                    | 10                | 385                           | 3850                    | 10                |

**GN 352 / GN 452**

Federkennwerte  
für 40 Shore bei axialer,  
statischer Druckbelastung

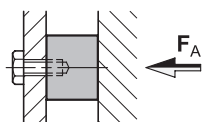
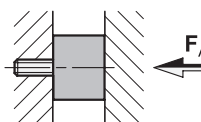
**Form E****Form S**

| $d_1$ | h  | Federate $\approx$<br>in N/mm | max. Last<br>$F_A$ in N | max. Weg<br>in mm | Federate $\approx$<br>in N/mm | max. Last<br>$F_A$ in N | max. Weg<br>in mm |
|-------|----|-------------------------------|-------------------------|-------------------|-------------------------------|-------------------------|-------------------|
| 70    | 45 | 310                           | 3490                    | 11,25             | -                             | -                       | -                 |
| 70    | 50 | -                             | -                       | -                 | 293                           | 3660                    | 12,5              |
| 70    | 55 | 241                           | 3320                    | 13,75             | 241                           | 3320                    | 13,75             |
| 70    | 70 | -                             | -                       | -                 | 182                           | 3180                    | 17,5              |
| 75    | 25 | -                             | -                       | -                 | 1050                          | 6560                    | 6,25              |
| 75    | 30 | 805                           | 6000                    | 7,5               | -                             | -                       | -                 |
| 75    | 40 | 501                           | 5010                    | 10                | 501                           | 5010                    | 10                |
| 75    | 50 | 318                           | 3970                    | 12,5              | 318                           | 3970                    | 12,5              |
| 75    | 55 | 277                           | 3810                    | 13,75             | -                             | -                       | -                 |
| 80    | 30 | -                             | -                       | -                 | 696                           | 5220                    | 7,5               |
| 80    | 40 | -                             | -                       | -                 | 536                           | 5360                    | 10                |
| 80    | 80 | -                             | -                       | -                 | 217,5                         | 4350                    | 20                |
| 100   | 40 | 943                           | 9430                    | 10                | 943                           | 9430                    | 10                |
| 100   | 50 | 665                           | 8320                    | 12,5              | 665                           | 8320                    | 12,5              |
| 100   | 55 | 531                           | 7300                    | 13,75             | -                             | -                       | -                 |
| 100   | 60 | 496                           | 7440                    | 15                | 496                           | 7440                    | 15                |
| 125   | 55 | 1543                          | 21220                   | 13,75             | 1433                          | 19700                   | 13,75             |
| 125   | 75 | 998                           | 18720                   | 18,75             | 939                           | 17600                   | 18,75             |



**GN 352 / GN 452**

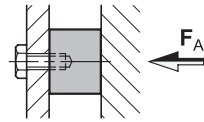
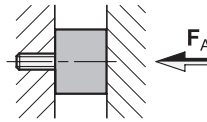
Federkennwerte  
für 55 Shore bei axialer,  
statischer Druckbelastung

**Form E****Form S**

| $d_1$ | h  | Federhärte $\approx$<br>in N/mm | max. Last<br>$F_A$ in N | max. Weg<br>in mm | Federhärte $\approx$<br>in N/mm | max. Last<br>$F_A$ in N | max. Weg<br>in mm |
|-------|----|---------------------------------|-------------------------|-------------------|---------------------------------|-------------------------|-------------------|
| 8     | 8  | 28                              | 55                      | 2                 | 28                              | 55                      | 2                 |
| 8     | 13 | 16                              | 51                      | 3,25              | 16                              | 51                      | 3,25              |
| 10    | 10 | 35                              | 88                      | 2,5               | 35                              | 88                      | 2,5               |
| 10    | 15 | 25                              | 92                      | 3,75              | 25                              | 92                      | 3,75              |
| 10    | 20 | -                               | -                       | -                 | 19                              | 95                      | 5                 |
| 15    | 10 | -                               | -                       | -                 | 85                              | 170                     | 2                 |
| 15    | 15 | 69                              | 260                     | 3,75              | 69                              | 260                     | 3,75              |
| 15    | 20 | 45                              | 225                     | 5                 | 45                              | 225                     | 5                 |
| 15    | 30 | -                               | -                       | -                 | 35                              | 260                     | 7,5               |
| 20    | 8  | -                               | -                       | -                 | 330                             | 660                     | 2                 |
| 20    | 10 | -                               | -                       | -                 | 258                             | 645                     | 2,5               |
| 20    | 15 | 125                             | 470                     | 3,75              | 125                             | 470                     | 3,75              |
| 20    | 20 | 73                              | 365                     | 5                 | 73                              | 365                     | 5                 |
| 20    | 25 | 63                              | 395                     | 6,25              | 63                              | 395                     | 6,25              |
| 20    | 30 | 56                              | 420                     | 7,5               | 56                              | 420                     | 7,5               |
| 25    | 15 | 212                             | 795                     | 3,75              | 212                             | 795                     | 3,75              |
| 25    | 20 | 116                             | 580                     | 5                 | 116                             | 580                     | 5                 |
| 25    | 25 | 141                             | 880                     | 6,25              | 107                             | 670                     | 6,25              |
| 25    | 30 | 79                              | 590                     | 7,5               | 79                              | 590                     | 7,5               |
| 30    | 15 | 272                             | 1020                    | 3,75              | 272                             | 1020                    | 3,75              |
| 30    | 20 | 202                             | 1010                    | 5                 | 202                             | 1010                    | 5                 |
| 30    | 25 | -                               | -                       | -                 | 165                             | 1030                    | 6,25              |
| 30    | 30 | 104                             | 780                     | 7,5               | 104                             | 780                     | 7,5               |
| 30    | 40 | 78                              | 780                     | 10                | 60                              | 597                     | 10                |
| 40    | 20 | 500                             | 2500                    | 5                 | 500                             | 2500                    | 5                 |
| 40    | 25 | -                               | -                       | -                 | 266                             | 1660                    | 6,25              |
| 40    | 30 | 197                             | 1480                    | 7,5               | 197                             | 1480                    | 7,5               |
| 40    | 35 | -                               | -                       | -                 | 184                             | 1610                    | 8,75              |
| 40    | 38 | -                               | -                       | -                 | 175                             | 1660                    | 9,5               |
| 40    | 40 | 140                             | 1400                    | 10                | 140                             | 1400                    | 10                |
| 40    | 45 | -                               | -                       | -                 | 151                             | 1700                    | 11,25             |
| 40    | 50 | 145,5                           | 1820                    | 12,50             | -                               | -                       | -                 |
| 50    | 20 | 692                             | 3460                    | 5                 | 692                             | 3460                    | 5                 |
| 50    | 25 | -                               | -                       | -                 | 387                             | 2420                    | 6,25              |
| 50    | 30 | 336                             | 2520                    | 7,5               | 336                             | 2520                    | 7,5               |
| 50    | 35 | 323                             | 2830                    | 8,75              | 302                             | 2640                    | 8,75              |
| 50    | 40 | 276                             | 2760                    | 10                | 276                             | 2760                    | 10                |
| 50    | 45 | 236                             | 2660                    | 11,25             | 232                             | 2610                    | 11,25             |
| 50    | 50 | 216                             | 2700                    | 12,5              | 216                             | 2700                    | 12,5              |
| 60    | 20 | -                               | -                       | -                 | 770                             | 3850                    | 5                 |
| 60    | 25 | -                               | -                       | -                 | 709                             | 4430                    | 6,25              |
| 60    | 30 | 716                             | 5370                    | 7,5               | -                               | -                       | -                 |
| 60    | 36 | -                               | -                       | -                 | 441                             | 3970                    | 9                 |
| 60    | 40 | 354                             | 3540                    | 10                | 354                             | 3540                    | 10                |
| 60    | 45 | -                               | -                       | -                 | 355                             | 3990                    | 11,25             |
| 60    | 50 | 264                             | 3300                    | 12,5              | -                               | -                       | -                 |
| 60    | 60 | -                               | -                       | -                 | 232                             | 3480                    | 15                |
| 70    | 30 | 956                             | 7170                    | 7,5               | 956                             | 7170                    | 7,5               |
| 70    | 35 | -                               | -                       | -                 | 854                             | 7470                    | 8,75              |
| 70    | 40 | 628                             | 6280                    | 10                | 628                             | 6280                    | 10                |

**GN 352 / GN 452**

Federkennwerte  
für 55 Shore bei axialer,  
statischer Druckbelastung

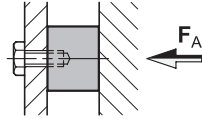
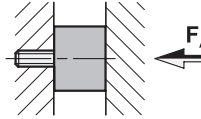
**Form E****Form S**

| $d_1$ | h  | Federate $\approx$<br>in N/mm | max. Last<br>$F_A$ in N | max. Weg<br>in mm | Federate $\approx$<br>in N/mm | max. Last<br>$F_A$ in N | max. Weg<br>in mm |
|-------|----|-------------------------------|-------------------------|-------------------|-------------------------------|-------------------------|-------------------|
| 70    | 45 | 521                           | 5860                    | 11,25             | -                             | -                       | -                 |
| 70    | 50 | -                             | -                       | -                 | 496                           | 6200                    | 12,50             |
| 70    | 55 | 420                           | 5770                    | 13,75             | 420                           | 5770                    | 13,75             |
| 70    | 70 | -                             | -                       | -                 | 393                           | 6870                    | 17,50             |
| 75    | 25 | 247                           | 1545                    | 6,25              | 1546                          | 9660                    | 6,25              |
| 75    | 30 | 1052                          | 7890                    | 7,5               | -                             | -                       | -                 |
| 75    | 40 | 668                           | 6680                    | 10                | 668                           | 6680                    | 10                |
| 75    | 50 | 446                           | 5570                    | 12,5              | 446                           | 5570                    | 12,5              |
| 75    | 55 | 455                           | 6260                    | 13,75             | -                             | -                       | -                 |
| 80    | 30 | -                             | -                       | -                 | 1349                          | 10120                   | 7,5               |
| 80    | 40 | -                             | -                       | -                 | 891                           | 8910                    | 10                |
| 80    | 80 | -                             | -                       | -                 | 372                           | 7440                    | 20                |
| 100   | 40 | 1211                          | 12110                   | 10                | 1211                          | 12110                   | 10                |
| 100   | 50 | 1123                          | 14040                   | 12,5              | 1123                          | 14040                   | 12,5              |
| 100   | 55 | 912                           | 12540                   | 13,75             | -                             | -                       | -                 |
| 100   | 60 | 863                           | 12950                   | 15                | 863                           | 12950                   | 15                |
| 125   | 55 | 1795                          | 23790                   | 13,25             | 1795                          | 23790                   | 13,25             |
| 125   | 75 | 1073                          | 20120                   | 18,75             | 1073                          | 20120                   | 18,75             |



**GN 352 / GN 452**

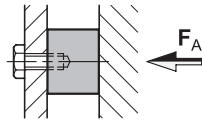
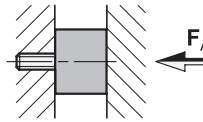
Federkennwerte  
für 70 Shore bei axialer,  
statischer Druckbelastung

**Form E****Form S**

| $d_1$ | h  | Federhärte $\approx$<br>in N/mm | max. Last<br>$F_A$ in N | max. Weg<br>in mm | Federhärte $\approx$<br>in N/mm | max. Last<br>$F_A$ in N | max. Weg<br>in mm |
|-------|----|---------------------------------|-------------------------|-------------------|---------------------------------|-------------------------|-------------------|
| 8     | 8  | 71                              | 141                     | 2                 | 71                              | 141                     | 2                 |
| 8     | 13 | 34                              | 110                     | 3,25              | 31                              | 99,5                    | 3,25              |
| 10    | 10 | 86                              | 215                     | 2,5               | 86                              | 217                     | 2,5               |
| 10    | 15 | 47                              | 175                     | 3,75              | 47                              | 175                     | 3,75              |
| 10    | 20 | -                               | -                       | -                 | 33                              | 164,5                   | 5                 |
| 15    | 10 | -                               | -                       | -                 | 205                             | 410                     | 2                 |
| 15    | 15 | 103                             | 385                     | 3,75              | 103                             | 385                     | 3,75              |
| 15    | 20 | 118                             | 590                     | 5                 | 118                             | 590                     | 5                 |
| 15    | 30 | -                               | -                       | -                 | 52                              | 390                     | 7,5               |
| 20    | 8  | -                               | -                       | -                 | 960                             | 1920                    | 2                 |
| 20    | 10 | -                               | -                       | -                 | 376                             | 940                     | 2,5               |
| 20    | 15 | 188                             | 705                     | 3,75              | 188                             | 705                     | 3,75              |
| 20    | 20 | 162                             | 810                     | 5                 | 162                             | 810                     | 5                 |
| 20    | 25 | 169                             | 1055                    | 6,25              | 169                             | 1055                    | 6,25              |
| 20    | 30 | 113                             | 850                     | 7,5               | 113                             | 850                     | 7,5               |
| 25    | 15 | 435                             | 1630                    | 3,75              | 435                             | 1630                    | 3,75              |
| 25    | 20 | 276                             | 1380                    | 5                 | 276                             | 1380                    | 5                 |
| 25    | 25 | 243                             | 1520                    | 6,25              | 237                             | 1480                    | 6,25              |
| 25    | 30 | 159                             | 1190                    | 7,5               | 159                             | 1190                    | 7,5               |
| 30    | 15 | 696                             | 2610                    | 3,75              | 696                             | 2610                    | 3,75              |
| 30    | 20 | 376                             | 1880                    | 5                 | 376                             | 1880                    | 5                 |
| 30    | 25 | -                               | -                       | -                 | 255                             | 1590                    | 6,25              |
| 30    | 30 | 216                             | 1620                    | 7,5               | 216                             | 1620                    | 7,5               |
| 30    | 40 | 179                             | 1785                    | 10                | 179                             | 1785                    | 10                |
| 40    | 20 | 950                             | 4750                    | 5                 | 950                             | 4750                    | 5                 |
| 40    | 25 | -                               | -                       | -                 | 661                             | 4130                    | 6,25              |
| 40    | 30 | 377                             | 2830                    | 7,5               | 377                             | 2830                    | 7,5               |
| 40    | 35 | -                               | -                       | -                 | 326                             | 2850                    | 8,75              |
| 40    | 38 | -                               | -                       | -                 | 308                             | 2930                    | 9,5               |
| 40    | 40 | 315                             | 3150                    | 10                | 315                             | 3150                    | 10                |
| 40    | 45 | -                               | -                       | -                 | 251,5                           | 2830                    | 11,25             |
| 40    | 50 | 240                             | 3000                    | 12,5              | -                               | -                       | -                 |
| 50    | 20 | 1490                            | 7450                    | 5                 | 1490                            | 7450                    | 5                 |
| 50    | 25 | -                               | -                       | -                 | 923                             | 5770                    | 6,25              |
| 50    | 30 | 723                             | 5420                    | 7,5               | 723                             | 5420                    | 7,5               |
| 50    | 35 | 514                             | 4500                    | 8,75              | 689                             | 6030                    | 8,75              |
| 50    | 40 | 495                             | 4950                    | 10                | 495                             | 4950                    | 10                |
| 50    | 45 | 467                             | 5250                    | 11,25             | 425                             | 4780                    | 11,25             |
| 50    | 50 | 335                             | 4190                    | 12,5              | 335                             | 4190                    | 12,5              |
| 60    | 20 | -                               | -                       | -                 | 2400                            | 11990                   | 5                 |
| 60    | 25 | -                               | -                       | -                 | 408                             | 2550                    | 6,25              |
| 60    | 30 | 1224                            | 9180                    | 7,5               | -                               | -                       | -                 |
| 60    | 36 | -                               | -                       | -                 | 311                             | 2800                    | 9                 |
| 60    | 40 | 464                             | 4640                    | 10                | 464                             | 4640                    | 10                |
| 60    | 45 | -                               | -                       | -                 | 218                             | 2450                    | 11,25             |
| 60    | 50 | 579                             | 7240                    | 12,5              | -                               | -                       | -                 |
| 60    | 60 | -                               | -                       | -                 | 541                             | 8110                    | 15                |
| 70    | 30 | 1743                            | 13070                   | 7,5               | 1743                            | 13070                   | 7,5               |
| 70    | 35 | -                               | -                       | -                 | 1126                            | 9850                    | 8,75              |
| 70    | 40 | 1528                            | 15280                   | 10                | 1528                            | 15280                   | 10                |

**GN 352 / GN 452**

Federkennwerte  
für 70 Shore bei axialer,  
statischer Druckbelastung

**Form E****Form S**

| $d_1$ | h  | Federate $\approx$<br>in N/mm | max. Last<br>$F_A$ in N | max. Weg<br>in mm | Federate $\approx$<br>in N/mm | max. Last<br>$F_A$ in N | max. Weg<br>in mm |
|-------|----|-------------------------------|-------------------------|-------------------|-------------------------------|-------------------------|-------------------|
| 70    | 45 | 1078                          | 12130                   | 11,25             | -                             | -                       | -                 |
| 70    | 50 | -                             | -                       | -                 | 894                           | 11170                   | 12,5              |
| 70    | 55 | 692                           | 9510                    | 13,75             | 692                           | 9510                    | 13,75             |
| 70    | 70 | -                             | -                       | -                 | 763                           | 13360                   | 17,5              |
| 75    | 25 | 3325                          | 20780                   | 6,25              | 3325                          | 20780                   | 6,25              |
| 75    | 30 | 2012                          | 15090                   | 7,5               | -                             | -                       | -                 |
| 75    | 40 | 917                           | 9170                    | 10                | 917                           | 9170                    | 10                |
| 75    | 50 | 1084                          | 13550                   | 12,5              | 1084                          | 13550                   | 12,5              |
| 75    | 55 | 684                           | 9400                    | 13,75             | -                             | -                       | -                 |
| 80    | 30 | -                             | -                       | -                 | 2479                          | 18590                   | 7,5               |
| 80    | 40 | -                             | -                       | -                 | 1762                          | 17620                   | 10                |
| 80    | 80 | -                             | -                       | -                 | 819,5                         | 16390                   | 20                |
| 100   | 40 | 2419                          | 24190                   | 10                | 2419                          | 24190                   | 10                |
| 100   | 50 | 1832                          | 22900                   | 12,5              | 1832                          | 22900                   | 12,5              |
| 100   | 55 | 1806,5                        | 24840                   | 13,75             | -                             | -                       | -                 |
| 100   | 60 | 1430                          | 21450                   | 15                | 1430                          | 21450                   | 15                |
| 125   | 55 | 1972                          | 22190                   | 11,25             | 1972                          | 22190                   | 11,25             |
| 125   | 75 | 1340                          | 23780                   | 17,75             | 1340                          | 23780                   | 17,75             |

