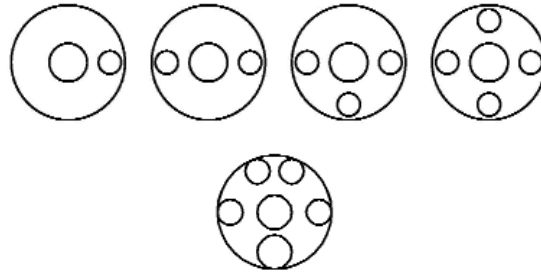
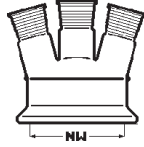


# Deckel DN 60 (Laborflansch) für Reaktionsgefäße



## Einbaumaße

|                         |            |
|-------------------------|------------|
| Mittelhals KF 15/3      | 85/100 mm  |
| Mittelhals NS 14        | 95/110 mm  |
| Mittelhals NS 19        | 100/115 mm |
| Mittelhals NS 29        | 105/120 mm |
| Seitenhals gerade NS 14 | 75/110 mm  |



## Artikelnummern

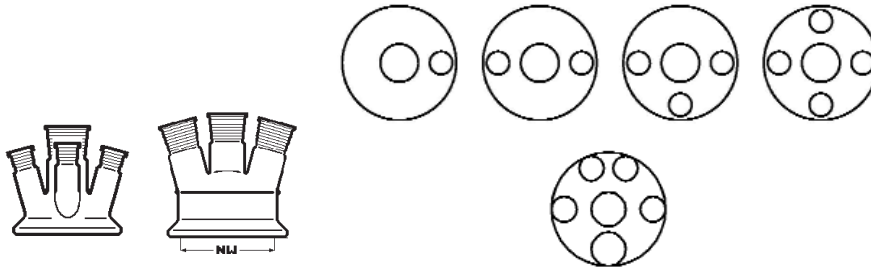
| Mittelhals  | Seitenhals<br>3:00<br>15° schräg | Seitenhals<br>6:00<br>15° schräg | Seitenhals<br>9:00<br>gerade (5°) | Seitenhals<br>12:00<br>15° schräg | flache Form                  | hohe Form   |            |
|-------------|----------------------------------|----------------------------------|-----------------------------------|-----------------------------------|------------------------------|-------------|------------|
| NS 14       |                                  |                                  |                                   |                                   | 3101111000                   | 3102111000  |            |
| NS 14       | NS 14                            |                                  |                                   |                                   | 3101211101                   | 3102211101  |            |
| NS 14       | NS 14                            |                                  | NS 14 (15°)                       |                                   | 3101311101                   | 3102311101  |            |
| NS 14       | NS 14                            |                                  | NS 14                             | NS 14                             | 3101411101                   | 3102411101  |            |
| NS 14       | NS 14                            | NS 14                            | NS 14                             | NS 14                             | 3101511101                   | 3102511101  |            |
| NS 14       | NS 19                            | NS 14                            | NS 14                             | NS 14                             | 3101518101                   | 3102518101  |            |
| NS 19       | NS 14                            |                                  |                                   |                                   | 3101121000                   | 3102121000  |            |
| NS 19       | NS 14                            |                                  |                                   |                                   | 3101221101                   | 3102221101  |            |
| NS 19       | NS 14                            |                                  | NS 14                             |                                   | 3101321101                   | 3102321101  |            |
| NS 19       | NS 14                            | NS 14                            | NS 14                             |                                   | 3101421101                   | 3102421101  |            |
| NS 19       | NS 14                            | NS 14                            | NS 14                             | NS 14                             | 3101521101                   | 3102521101  |            |
| NS 29       |                                  |                                  |                                   |                                   | 3101141000                   | 3102141000  |            |
| NS 29       | NS 14                            |                                  |                                   |                                   | 3101241101                   | 3102241101  |            |
| NS 29       | NS 14                            |                                  | NS 14 (15°)                       |                                   | 3101341101                   | 3102341101  |            |
| NS 29       | NS 14                            |                                  | NS 14                             | NS 14                             | 3101441101                   | 3102441101  |            |
| Center neck | side neck<br>1:00                | side neck<br>3:00<br>gerade      | side neck<br>6:00<br>15° schräg   | side neck<br>9:00<br>gerade       | side neck<br>11:00<br>gerade | flache Form | hohe Form  |
| NS 14       | GL14                             | NS 14                            | NS 14                             | NS 14                             | GL14                         | 3101611101  | 3102611101 |
| NS 19       | GL14                             | NS 14                            | NS 14                             | NS 14                             | GL14                         | 3101621101  | 3102621101 |

\*R = Rodaviss (Hülsenschliffe mit Gewinde für Sicherungsmutter)

# Deckel DN 100 (Laborflansch) für Reaktionsgefäße

## Einbaumaße

|                         |            |
|-------------------------|------------|
| Mittelhals KF 15/3      | 85/105 mm  |
| Mittelhals NS 29        | 105/115 mm |
| Mittelhals NS 45        | 115/125 mm |
| Seitenhals gerade NS 14 | 90/105 mm  |
| Seitenhals gerade NS 29 | 105/115 mm |



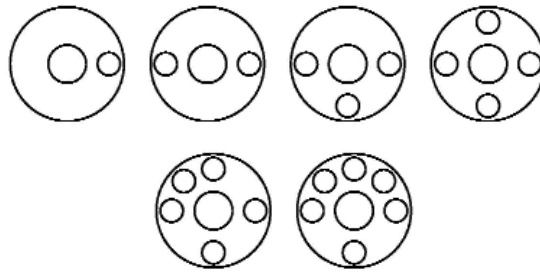
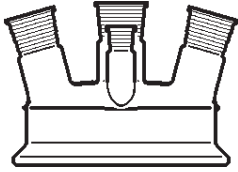
| Mittelhals   | Seitenhals<br>3:00<br>15° schräg | Seitenhals<br>6:00<br>15° schräg | Seitenhals<br>9:00<br>gerade | Seitenhals<br>12:00<br>15° schräg | flache Form  | hohe Form    |
|--------------|----------------------------------|----------------------------------|------------------------------|-----------------------------------|--------------|--------------|
| NS 14,5      |                                  |                                  |                              |                                   | 311111000    | 311211000    |
| NS 24        |                                  |                                  |                              |                                   | 3111131000   | 3112131000   |
| NS 29        |                                  |                                  |                              |                                   | 3111141000   | 3112141000   |
| NS 45        |                                  |                                  |                              |                                   | 3111161000   | 3112161000   |
| KF 15/3      |                                  |                                  |                              |                                   | 3111172000   | 3112172000   |
| KF 25/3      |                                  |                                  |                              |                                   | 3111182000   | 3112182000   |
| Ventil 10 mm |                                  |                                  |                              |                                   | 31111V10GL18 | 31121V10GL18 |
| Ventil 16 mm |                                  |                                  |                              |                                   | 31111V16GL25 | 31121V16GL25 |
| Ventil 20 mm |                                  |                                  |                              |                                   | 31111V20GL32 | 31121V20GL32 |
| NS 29        | NS 29                            |                                  |                              |                                   | 3111241130   | 3112241130   |
| KF 15/3      | KF 15/3                          |                                  |                              |                                   | 3111272110   | 3112272110   |
| KF 25/3      | KF 15/3                          |                                  |                              |                                   | 3111282110   | 3112282110   |
| NS 29        | NS 29                            |                                  | NS 29 (15°)                  |                                   | 3111341130   | 3112341130   |
| NS 45        | NS 29                            |                                  | NS 29 (15°)                  |                                   | 3111361130   | 3112361130   |
| KF 15/3      | KF 15/3                          |                                  | KF 15/3 (15°)                |                                   | 3111372110   | 3112372110   |
| KF 25/3      | KF 15/3                          |                                  | KF 15/3 (15°)                |                                   | 3111382110   | 3112382110   |
| NS 29        | NS 29                            | NS 29                            | NS 14,5                      |                                   | 3111441130   | 3112441130   |
| NS 29R       | NS 29R                           | NS 29R                           | NS 14R                       |                                   | 3111448130   | 3112448130   |
| NS 45        | NS 29                            | NS 29                            | NS 14,5                      |                                   | 3111461130   | 3112461130   |
| KF 25/3      | NS 29                            | NS 29                            | NS 14,5                      |                                   | 3111481130   | 3112481130   |
| NS 29        | NS 29                            | NS 29                            | NS 29                        |                                   | 3111441131   | 3112441131   |
| NS 29        | NS 24                            | NS 24                            | NS 24                        |                                   | 3111441135   | 3112441135   |
| NS 29        | NS 24                            | NS 24                            | NS 14,5                      |                                   | 3111441136   | 3112441136   |
| NS 29R       | NS 29R                           | NS 29R                           | NS 29R                       |                                   | 3111448131   | 3112448131   |
| NS 29        | NS 29                            | NS 29                            | NS 14,5                      | NS 29                             | 3111541130   | 3112541130   |
| NS 29R       | NS 29R                           | NS 19R                           | NS 29R                       | NS 29R                            | 3111548132   | 3112548132   |
| NS 29        | NS 29                            | NS 29                            | NS 29                        | NS 29                             | 3111541131   | 3112541131   |

| Mittelhals | Seitenhals<br>1:00<br>15° schräg | Seitenhals<br>3:00<br>15° schräg | Seitenhals<br>6:00<br>15° schräg | Seitenhals<br>9:00<br>15° schräg | Seitenhals<br>11:00<br>gerade | flache Form | hohe Form  |
|------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|-------------------------------|-------------|------------|
| NS 29      | GL18                             | NS 29                            | NS 29                            | NS 19                            | GL18                          | 3111641130  | 3112641130 |
| NS 29      | GL18                             | NS 29                            | NS 29                            | NS 29                            | GL18                          | 3111641131  | 3112641131 |
| NS 29      | GL25                             | NS 29                            | NS 29                            | NS 19                            | GL18                          | 3111641132  | 3112641132 |
| NS 29      | GL25                             | NS 29                            | NS 29                            | NS 29                            | GL18                          | 3111641133  | 3112641133 |
| NS 29R     | GL18                             | NS 29R                           | NS 29R                           | NS 19R                           | GL18                          | 3111648130  | 3112648130 |
| NS 29R     | GL18                             | NS 29R                           | NS 29R                           | NS 29R                           | GL18                          | 3111648131  | 3112648131 |
| NS 29R     | GL25                             | NS 29R                           | NS 29R                           | NS 19R                           | GL18                          | 3111648132  | 3112648132 |
| NS 29R     | GL25                             | NS 29R                           | NS 29R                           | NS 29R                           | GL18                          | 3111648133  | 3112648133 |

\*R = Rodaviss (Hülsenschliffe mit Gewinde für Sicherungsmutter)

# Deckel LF 120

## Laborflansch DN 120



### Einbaumaße

|                         |        |
|-------------------------|--------|
| Mittelhals KF 15/3      | 110 mm |
| Mittelhals NS 29        | 130 mm |
| Mittelhals NS 45        | 140 mm |
| Seitenhals gerade NS 14 | 120 mm |
| Seitenhals gerade NS 29 | 105 mm |

| DN  | Mittelhals             | Seitenhals<br>3:00<br>15° schräg | Seitenhals<br>6:00<br>15° schräg | Seitenhals<br>9:00<br>gerade | Seitenhals<br>12:00<br>15° schräg | Bestellnummer<br>hohe Form |
|-----|------------------------|----------------------------------|----------------------------------|------------------------------|-----------------------------------|----------------------------|
| 120 | KF 15/3                | ---                              | ---                              | ---                          | ---                               | 3122172000                 |
| 120 | KF 15/3                | KF 15/3                          | ---                              | ---                          | ---                               | 3122272101                 |
| 120 | KF 15/3                | KF 15/3                          | ---                              | KF 15/3 (15°)                | ---                               | 3122372101                 |
| 120 | NS 29                  | ---                              | ---                              | ---                          | ---                               | 3122141000                 |
| 120 | NS 45                  | ---                              | ---                              | ---                          | ---                               | 3122161000                 |
| 120 | Ventil 10 mm mit GL 18 |                                  |                                  |                              |                                   | 31221V10GL18               |
| 120 | Ventil 16 mm mit GL 25 |                                  |                                  |                              |                                   | 31221V16GL25               |
| 120 | Ventil 20 mm mit GL 32 |                                  |                                  |                              |                                   | 31221V20GL32               |
| 120 | NS 29                  | NS 29                            | ---                              | ---                          | ---                               | 3122241130                 |
| 120 | NS 45                  | NS 29                            | ---                              | ---                          | ---                               | 3122261130                 |
| 120 | NS 29                  | NS 29                            | ---                              | NS 29 (15°)                  | ---                               | 3122341130                 |
| 120 | NS 45                  | NS 29                            | ---                              | NS 29 (15°)                  | ---                               | 3122361130                 |
| 120 | NS 45                  | NS 45                            | ---                              | NS 29 (15°)                  | ---                               | 3122361150                 |
| 120 | NS 29                  | NS 29                            | NS 29                            | NS 14                        | ---                               | 3122441130                 |
| 120 | NS 45                  | NS 29                            | NS 29                            | NS 14                        | ---                               | 3122461130                 |
| 120 | NS 29                  | NS 29                            | NS 29                            | NS 29                        | ---                               | 3122441131                 |
| 120 | NS 45                  | NS 29                            | NS 29                            | NS 29                        | ---                               | 3122461131                 |
| 120 | NS 29                  | NS 29                            | NS 29                            | NS 14                        | NS 29                             | 3122541130                 |
| 120 | NS 45                  | NS 29                            | NS 29                            | NS14                         | NS 29                             | 3122561130                 |
| 120 | NS 29                  | NS 29                            | NS 29                            | NS 29                        | NS 29                             | 3122541131                 |
| 120 | NS 45                  | NS 29                            | NS 29                            | NS 29                        | NS 29                             | 3122561131                 |
| 120 | NS 45                  | NS 45                            | NS 29                            | NS 29                        | NS 29 (gerade)                    | 3122561150                 |

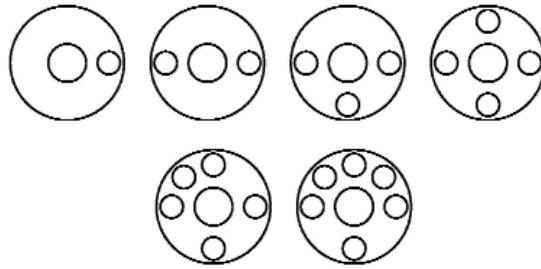
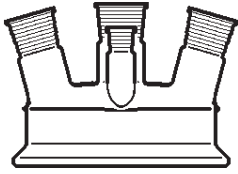
| DN                | Mittelhals | Seitenhals<br>1:30<br>15° schräg | Seitenhals<br>3:00<br>15° schräg | Seitenhals<br>6:00<br>15° schräg | Seitenhals<br>9:00<br>gerade | Seitenhals<br>10:30<br>15° schräg | Seitenhals<br>12:00<br>gerade | Bestellnummer<br>hohe Form |
|-------------------|------------|----------------------------------|----------------------------------|----------------------------------|------------------------------|-----------------------------------|-------------------------------|----------------------------|
| 120               | NS 29R*    |                                  | NS 29R*                          | NS 29R*                          | NS 29R*                      |                                   | NS 29R*                       | 3122548131                 |
| 120               | NS 29R*    | ---                              | NS 29R*                          | NS 29R*                          | NS 29R*                      | GL 18                             | GL 25                         | 3122648130                 |
| 120               | NS 29R*    | GL 18                            | NS 29R*                          | NS 29R*                          | NS 29R*                      | GL 18                             | GL 25                         | 3122748130                 |
| 120               | NS 29R*    | GL 18                            | NS 45R*                          | NS 29R*                          | NS 29R*                      | GL 18                             | GL 25                         | 3122748150                 |
| <b>30° schräg</b> |            |                                  |                                  |                                  |                              |                                   |                               |                            |
| 120               | NS 29R*    | ---                              | NS 29R*                          | NS 29R*                          | NS 29R*                      | GL 18                             | GL 25                         | 3122648330                 |
| 120               | NS 29R*    | ---                              | NS 45R*                          | NS 29R*                          | NS 29R*                      | GL 18                             | GL 25                         | 3122648350                 |
| 120               | NS 29R*    | ---                              | S 41 Rot.**                      | NS 29R*                          | NS 29R*                      | GL 18                             | GL 25                         | 3122649370                 |
| 120               | NS 29R*    | ---                              | S 64 Rot.**                      | NS 29R*                          | NS 29R*                      | GL 18                             | GL 25                         | 3122649380                 |
| 120               | NS 29R*    | GL 18                            | NS 29R*                          | NS 29R*                          | NS 29R*                      | GL 18                             | GL 25                         | 3122748330                 |
| 120               | NS 29R*    | GL 18                            | NS 45R*                          | NS 29R*                          | NS 29R*                      | GL 18                             | GL 25                         | 3122748350                 |
| 120               | NS 29R*    | GL 18                            | S 41 Rot.**                      | NS 29R*                          | NS 29R*                      | GL 18                             | GL 25                         | 3122749370                 |
| 120               | NS 29R*    | GL 18                            | S 64 Rot.**                      | NS 29R*                          | NS 29R*                      | GL 18                             | GL 25                         | 3122749380                 |

\*R = Rodaviss (Hülsenschliffe mit Gewinde für Sicherungsmutter)

\*\*Rot = Rotulex (ungeschliffene Kugelschliffe mit O-Ring Abdichtung)

# Deckel LF 150

## Laborflansch DN 150



### Einbaumaße

|                         |        |
|-------------------------|--------|
| Mittelhals KF 15/3      | 115 mm |
| Mittelhals KF 25/3      | 125 mm |
| Mittelhals NS 29        | 135 mm |
| Mittelhals NS 45        | 145 mm |
| Seitenhals gerade NS 14 | 120 mm |
| Seitenhals gerade NS 29 | 130 mm |



| DN | Mittelhals | Seitenhals<br>3:00<br>15° schräg | Seitenhals<br>6:00<br>15° schräg | Seitenhals<br>9:00<br>gerade | Seitenhals<br>12:00<br>15° schräg | Bestellnummer<br>hohe Form |
|----|------------|----------------------------------|----------------------------------|------------------------------|-----------------------------------|----------------------------|
|----|------------|----------------------------------|----------------------------------|------------------------------|-----------------------------------|----------------------------|

|     |         |         |       |               |       |            |
|-----|---------|---------|-------|---------------|-------|------------|
| 150 | KF 15/3 | ---     | ---   | ---           | ---   | 3132172000 |
| 150 | KF 15/3 | KF 15/3 | ---   | ---           | ---   | 3132272101 |
| 150 | KF 15/3 | KF 15/3 | ---   | KF 15/3 (15°) | ---   | 3132372101 |
| 150 | KF 25/3 | ---     | ---   | ---           | ---   | 3132182000 |
| 150 | KF 25/3 | KF 15/3 | ---   | ---           | ---   | 3132282101 |
| 150 | KF 25/3 | KF 15/3 | ---   | KF 15/3 (15°) | ---   | 3132382101 |
| 150 | NS 29   | ---     | ---   | ---           | ---   | 3132141000 |
| 150 | NS 29   | NS 29   | ---   | ---           | ---   | 3132241130 |
| 150 | NS 29   | NS 29   | ---   | NS 29 (15°)   | ---   | 3132341130 |
| 150 | NS 29   | NS 29   | NS 29 | NS 14         | ---   | 3132441130 |
| 150 | NS 29   | NS 29   | NS 29 | NS 29         | ---   | 3132441131 |
| 150 | NS 29   | NS 29   | NS 29 | NS 14         | NS 29 | 3132541130 |
| 150 | NS 29   | NS 29   | NS 29 | NS 29         | NS 29 | 3132541131 |
| 150 | NS 45   | ---     | ---   | ---           | ---   | 3132161000 |
| 150 | NS 45   | NS 29   | ---   | ---           | ---   | 3132261130 |
| 150 | NS 45   | NS 29   | ---   | NS 29 (15°)   | ---   | 3132361130 |
| 150 | NS 45   | NS 45   | ---   | NS 29 (15°)   | ---   | 3132361150 |
| 150 | NS 45   | NS 29   | NS 29 | NS 14         | ---   | 3132461130 |
| 150 | NS 45   | NS 29   | NS 29 | NS 29         | ---   | 3132461131 |
| 150 | NS 45   | NS 45   | NS 29 | NS 29         | ---   | 3132461150 |
| 150 | NS 45   | NS 29   | NS 29 | NS 14         | NS 29 | 3132561130 |
| 150 | NS 45   | NS 29   | NS 29 | NS 29         | NS 29 | 3132561131 |
| 150 | NS 45   | NS 45   | NS 29 | NS 29         | NS 29 | 3132561150 |

| DN | Mittelhals | Seitenhals<br>1:30<br>15° schräg | Seitenhals<br>3:00<br>15° schräg | Seitenhals<br>6:00<br>15° schräg | Seitenhals<br>9:00<br>gerade | Seitenhals<br>10:30<br>15° schräg | Seitenhals<br>12:00<br>gerade | Bestellnummer<br>hohe Form |
|----|------------|----------------------------------|----------------------------------|----------------------------------|------------------------------|-----------------------------------|-------------------------------|----------------------------|
|----|------------|----------------------------------|----------------------------------|----------------------------------|------------------------------|-----------------------------------|-------------------------------|----------------------------|

|     |         |       |         |         |         |       |       |            |
|-----|---------|-------|---------|---------|---------|-------|-------|------------|
| 150 | NS 45R* | ---   | NS 29R* | NS 29R* | NS 29R* | GL 18 | GL 25 | 3132668130 |
| 150 | NS 45R* | ---   | NS 45R* | NS 29R* | NS 29R* | GL 18 | GL 25 | 3132668150 |
| 150 | NS 45R* | GL 18 | NS 29R* | NS 29R* | NS 29R* | GL 18 | GL 25 | 3132768130 |
| 150 | NS 45R* | GL 18 | NS 45R* | NS 29R* | NS 29R* | GL 18 | GL 25 | 3132768150 |

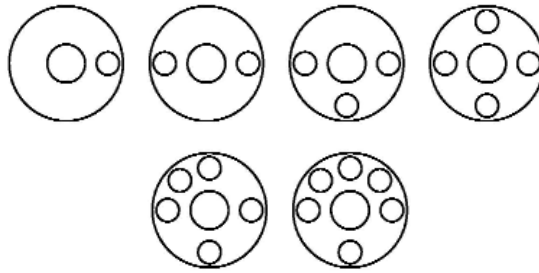
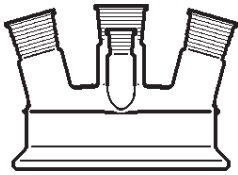
### 30° schräg

|     |         |       |             |         |         |       |       |            |
|-----|---------|-------|-------------|---------|---------|-------|-------|------------|
| 150 | NS 45R* | ---   | NS 29R*     | NS 29R* | NS 29R* | GL 18 | GL 25 | 3132668330 |
| 150 | NS 45R* | ---   | NS 45R*     | NS 29R* | NS 29R* | GL 18 | GL 25 | 3132668350 |
| 150 | NS 45R* | ---   | S 41 Rot.** | NS 29R* | NS 29R* | GL 18 | GL 25 | 3132669370 |
| 150 | NS 45R* | ---   | S 64 Rot.** | NS 29R* | NS 29R* | GL 18 | GL 25 | 3132669380 |
| 150 | NS 45R* | GL 18 | NS 29R*     | NS 29R* | NS 29R* | GL 18 | GL 25 | 3132768330 |
| 150 | NS 45R* | GL 18 | NS 45R*     | NS 29R* | NS 29R* | GL 18 | GL 25 | 3132768350 |
| 150 | NS 45R* | GL 18 | S 41 Rot.** | NS 29R* | NS 29R* | GL 18 | GL 25 | 3132769370 |
| 150 | NS 45R* | GL 18 | S 64 Rot.** | NS 29R* | NS 29R* | GL 18 | GL 25 | 3132769380 |

\*R = Rodaviss (Hülsenschliffe mit Gewinde für Sicherungsmutter)

\*\*Rot = Rotulex (ungeschliffene Kugelschliffe mit O-Ring Abdichtung)

# Deckel LF 200 Laborflansch DN 200



## Einbaumaße

|                         |        |
|-------------------------|--------|
| Mittelhals KF 15/3      | 135 mm |
| Mittelhals KF 25/3      | 145 mm |
| Mittelhals NS 29        | 155 mm |
| Mittelhals NS 45        | 165 mm |
| Seitenhals gerade NS 14 | 135 mm |
| Seitenhals gerade NS 29 | 145 mm |



| DN  | Mittelhals | Seitenhals<br>3:00<br>15° schräg | Seitenhals<br>6:00<br>15° schräg | Seitenhals<br>9:00<br>gerade | Seitenhals<br>12:00<br>15° schräg | Bestellnummer<br>hohe Form |
|-----|------------|----------------------------------|----------------------------------|------------------------------|-----------------------------------|----------------------------|
| 200 | KF 15/3    | ---                              | ---                              | ---                          | ---                               | 3142172000                 |
| 200 | KF 15/3    | KF 15/3                          | ---                              | ---                          | ---                               | 3142272101                 |
| 200 | KF 15/3    | KF 15/3                          | ---                              | KF 15/3 (15°)                | ---                               | 3142372101                 |
| 200 | KF 25/3    | ---                              | ---                              | ---                          | ---                               | 3142182000                 |
| 200 | KF 25/3    | KF 15/3                          | ---                              | ---                          | ---                               | 3142282101                 |
| 200 | KF 25/3    | KF 15/3                          | ---                              | KF 15/3 (15°)                | ---                               | 3142382101                 |
| 200 | NS 45      | ---                              | ---                              | ---                          | ---                               | 3142161000                 |
| 200 | NS 45      | NS 29                            | ---                              | ---                          | ---                               | 3142261130                 |
| 200 | NS 45      | NS 29                            | ---                              | NS 29 (15°)                  | ---                               | 3142361130                 |
| 200 | NS 45      | NS 45                            | ---                              | NS 29 (15°)                  | ---                               | 3142361150                 |
| 200 | NS 45      | NS 29                            | NS 29                            | NS 14                        | ---                               | 3142461130                 |
| 200 | NS 45      | NS 29                            | NS 29                            | NS 29                        | ---                               | 3142461131                 |
| 200 | NS 45      | NS 45                            | NS 29                            | NS 29                        | ---                               | 3142461150                 |
| 200 | NS 45      | NS 29                            | NS 29                            | NS 14                        | NS 29                             | 3142561130                 |
| 200 | NS 45      | NS 29                            | NS 29                            | NS 29                        | NS 29                             | 3142561131                 |
| 200 | NS 45      | NS 45                            | NS 29                            | NS 29                        | NS 29                             | 3142561150                 |

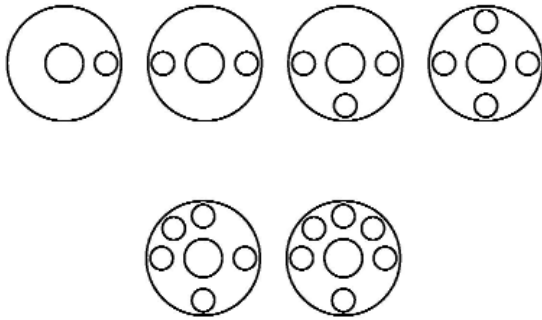
  

| DN                    | Mittelhals | Seitenhals<br>1:30<br>gerade | Seitenhals<br>3:00<br>15° schräg | Seitenhals<br>6:00<br>15° schräg | Seitenhals<br>9:00<br>gerade | Seitenhals<br>10:30<br>gerade | Seitenhals<br>12:00<br>gerade | Bestellnummer<br>hohe Form |
|-----------------------|------------|------------------------------|----------------------------------|----------------------------------|------------------------------|-------------------------------|-------------------------------|----------------------------|
| 200                   | NS 45R*    | ---                          | NS 29R*                          | NS 45R*                          | NS 29R*                      | NS 29R*                       | NS 29R*                       | 3142668130                 |
| 200                   | NS 45R*    | ---                          | NS 45R*                          | NS 45R*                          | NS 29R*                      | NS 29R*                       | NS 29R*                       | 3142668150                 |
| 200                   | NS 45R*    | NS 29R*                      | NS 29R*                          | NS 45R*                          | NS 29R*                      | NS 29R*                       | NS 29R*                       | 3142768130                 |
| 200                   | NS 45R*    | NS 29R*                      | NS 45R*                          | NS 45R*                          | NS 29R*                      | NS 29R*                       | NS 29R*                       | 3142768150                 |
| <b>30° schräg</b>     |            |                              |                                  |                                  |                              |                               |                               |                            |
| 200                   | NS 45R*    | ---                          | NS 29R*                          | NS 45R*                          | NS 29R*                      | NS 29R*                       | NS 29R*                       | 3142668330                 |
| 200                   | NS 45R*    | ---                          | NS 45R*                          | NS 45R*                          | NS 29R*                      | NS 29R*                       | NS 29R*                       | 31426683500                |
| 200                   | KF 40/3    | ---                          | NS 45R*                          | NS 45R*                          | NS 29R*                      | NS 29R*                       | NS 29R*                       | 3142698350                 |
| 200                   | NS 45R*    | NS 29R*                      | NS 29R*                          | NS 45R*                          | NS 29R*                      | NS 29R*                       | NS 29R*                       | 3142768330                 |
| 200                   | NS 45R*    | NS 29R*                      | NS 45R*                          | NS 45R*                          | NS 29R*                      | NS 29R*                       | NS 29R*                       | 3142768350                 |
| 200                   | KF 40/     | NS 29R*                      | NS 45R*                          | NS 45R*                          | NS 29R*                      | NS 29R*                       | NS 29R*                       | 3142798350                 |
| <b>S-Form, gerade</b> |            |                              |                                  |                                  |                              |                               |                               |                            |
| 200                   | NS 45R*    | ---                          | S 41 Rot.-S**                    | NS 45R*                          | NS 29R*                      | NS 29R*                       | NS 29R*                       | 3142669370                 |
| 200                   | NS 45R*    | ---                          | S 64 Rot.-S**                    | NS 45R*                          | NS 29R*                      | NS 29R*                       | NS 29R*                       | 314266938                  |
| 200                   | KF 40/3    | ---                          | S 64 Rot.-S**                    | NS 45R*                          | NS 29R*                      | NS 29R*                       | NS 29R*                       | 3142699380                 |
| 200                   | NS 45R*    | NS 29R*                      | S 41 Rot.-S**                    | NS 45R*                          | NS 29R*                      | NS 29R*                       | NS 29R*                       | 3142769370                 |
| 200                   | NS 45R*    | NS 29R*                      | S 64 Rot.-S**                    | NS 45R*                          | NS 29R*                      | NS 29R*                       | NS 29R*                       | 3142769380                 |
| 200                   | NS 45R*    | NS 29R*                      | S 64 Rot.-S**                    | NS 45R*                          | NS 29R*                      | NS 29R*                       | NS 29R*                       | 3142769380                 |
| 200                   | KF 40/3    | NS 29R*                      | S 64 Rot.-S**                    | NS 45R*                          | NS 29R*                      | NS 29R*                       | NS 29R*                       | 3142799380                 |
| 200                   | NS 45R*    | ---                          | S 64 Rot.-S**                    | LF 60***                         | NS 29R*                      | NS 29R*                       | NS 29R*                       | 3142668380                 |
| 200                   | KF 40/3    | ---                          | S 64 Rot.-S**                    | LF 60***                         | NS 29R*                      | NS 29R*                       | NS 29R*                       | 3142699381                 |
| 200                   | KF 40/3    | NS 29R                       | S 64 Rot.-S**                    | LF 60***                         | NS 29R*                      | NS 29R*                       | NS 29R*                       | 3142799380                 |

\*R = Rodaviss (Hülsenschliffe mit Gewinde für Sicherungsmutter)  
\*\*\*LF = Laborflansch mit 45° Schulter

\*\*Rot.-S = Rotulex (ungeschliffene Kugelschliffe mit O-Ring Abdichtung)  
S-Form, gerade, axial versetzt.

# Deckel KF 300 Techflansch DN 300



## Einbaumaße

|                         |        |
|-------------------------|--------|
| Mittelhals KF 15/3      | 175 mm |
| Mittelhals KF 25/3      | 185 mm |
| Mittelhals KF 40/3      | 205 mm |
| Mittelhals NS 29        | 195 mm |
| Mittelhals NS 45        | 205 mm |
| Seitenhals gerade NS 14 | 175 mm |
| Seitenhals gerade NS 29 | 185 mm |
| Seitenhals gerade NS 45 | 200 mm |
| Seitenhals gerade KF 15 | 165 mm |
| Seitenhals gerade KF 25 | 190 mm |
| Seitenhals gerade KF 40 | 200 mm |

| DN  | Mittelhals | Seitenhals<br>3:00<br>15° schräg | Seitenhals<br>6:00<br>15° schräg | Seitenhals<br>9:00<br>gerade | Seitenhals<br>12:00<br>15° schräg | Bestellnummer<br>hohe Form |
|-----|------------|----------------------------------|----------------------------------|------------------------------|-----------------------------------|----------------------------|
| 300 | KF 15/3    | ---                              | ---                              | ---                          | ---                               | 3162132000                 |
| 300 | KF 15/3    | KF 15/3                          | ---                              | ---                          | ---                               | 3162232101                 |
| 300 | KF 15/3    | KF 15/3                          | ---                              | KF 15/3 (15°)                | ---                               | 3162332101                 |
| 300 | KF 25/3    | ---                              | ---                              | ---                          | ---                               | 3162142000                 |
| 300 | KF 25/3    | KF 25/3                          | ---                              | ---                          | ---                               | 3162242101                 |
| 300 | KF 25/3    | KF 25/3                          | ---                              | KF 25/3 (15°)                | ---                               | 3162342101                 |
| 300 | KF40/3     | KF25/3                           | KF 25/3                          | KF 25/3 (15°)                | KF 25/3                           | 3162552110                 |
| 300 | NS 45R*    | NS 45R*                          | ---                              | NS 29R*                      | ---                               | 3162328120                 |
| 300 | NS 45R*    | NS 45R*                          | NS 29R*                          | NS 29R*                      | ---                               | 3162428120                 |
| 300 | NS 45R*    | NS 45R*                          | NS 29R*                          | NS 29R*                      | NS 29R*                           | 3162528120                 |

| DN  | Mittelhals | Seitenhals<br>1:30<br>gerade | Seitenhals<br>3:00<br>15° schräg | Seitenhals<br>6:00<br>20° schräg | Seitenhals<br>9:00<br>gerade | Seitenhals<br>10:30<br>gerade | Seitenhals<br>12:00<br>gerade | Bestellnummer<br>hohe Form |
|-----|------------|------------------------------|----------------------------------|----------------------------------|------------------------------|-------------------------------|-------------------------------|----------------------------|
| 300 | NS 45R*    | ---                          | NS 45R*                          | LF 100                           | NS 29R*                      | NS 29R*                       | NS 29R*                       | 3162628120                 |
| 300 | NS 45R*    | NS 29R*                      | NS 45R*                          | LF 100                           | NS 29R*                      | NS 29R*                       | NS 29R*                       | 3162728120                 |

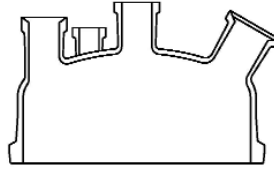
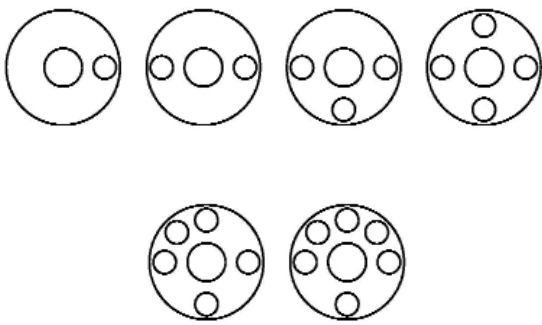
|     |         | 30° schräg |         | 20° schräg |         |         |         |            |
|-----|---------|------------|---------|------------|---------|---------|---------|------------|
| 300 | NS 45R* | ---        | NS 45R* | LF 100***  | NS 29R* | NS 29R* | NS 45R* | 3162628322 |
| 300 | KF 40/3 | ---        | NS 45R* | LF 100***  | NS 29R* | NS 29R* | NS 45R* | 3162658322 |
| 300 | NS 45R* | NS 29R*    | NS 45R* | LF 100***  | NS 29R* | NS 29R* | NS 45R* | 3162728322 |
| 300 | KF 40/3 | NS 29R*    | NS 45R* | LF 100***  | NS 29R* | NS 29R* | NS 45R* | 3162758322 |
| 300 | KF 40/3 | ---        | KF 40/2 | LF 100***  | KF 15/3 | KF 15/3 | KF 40/2 | 3162652320 |
| 300 | KF 40/3 | ---        | KF 40/2 | LF 100***  | KF 25/3 | KF 25/3 | KF 40/2 | 3162652321 |
| 300 | KF 40/3 | ---        | KF 50/2 | LF 100***  | KF 15/3 | KF 15/3 | KF 40/2 | 3162652340 |
| 300 | KF 40/3 | ---        | KF 50/2 | LF 100***  | KF 25/3 | KF 25/3 | KF 40/2 | 3162652341 |
| 300 | KF 40/3 | KF 15/3    | KF 40/2 | LF 100***  | KF 15/3 | KF 15/3 | KF 40/2 | 3162752320 |
| 300 | KF 40/3 | KF 25/3    | KF 40/2 | LF 100***  | KF 25/3 | KF 25/3 | KF 40/2 | 3162752321 |
| 300 | KF 40/3 | KF 15/3    | KF 50/2 | LF 100***  | KF 15/3 | KF 15/3 | KF 40/2 | 3162752340 |
| 300 | KF 40/3 | KF 25/3    | KF 50/2 | LF 100***  | KF 25/3 | KF 25/3 | KF 40/2 | 3162752341 |
| 300 | KF 40/3 | KF 25/3    | KF 50/2 | LF 100***  | KF 40/2 | KF 25/3 | KF 40/2 | 3162752342 |

| S-Form, gerade 20° schräg |         |         |              |           |         |         |         |            |
|---------------------------|---------|---------|--------------|-----------|---------|---------|---------|------------|
| 300                       | NS 45R* | ---     | S 64 Rot.**  | LF 100*** | NS 29R* | NS 29R* | NS 45R* | 3162622542 |
| 300                       | NS 45R* | NS 29R* | S 64 Rot.**  | LF 100*** | NS 29R* | NS 29R* | NS 45R* | 3162722542 |
| 300                       | KF 40/3 | ---     | S 64 Rot.**  | LF 100*** | NS 29R* | NS 29R* | NS 45R* | 3162652542 |
| 300                       | KF 40/3 | NS 29R* | S 64 Rot.**  | LF 100*** | NS 29R* | NS 29R* | NS 45R* | 3162752542 |
| 300                       | KF 40/3 | ---     | KF40/2 S**** | LF 100*** | KF 15/3 | KF 15/3 | KF 40/2 | 3162652520 |
| 300                       | KF 40/3 | ---     | KF40/2 S**** | LF 100*** | KF 25/3 | KF 25/3 | KF 40/2 | 3162652521 |
| 300                       | KF 40/3 | ---     | KF50/2 S**** | LF 100*** | KF 15/3 | KF 15/3 | KF 40/2 | 3162652540 |
| 300                       | KF 40/3 | ---     | KF50/2 S**** | LF 100*** | KF 25/3 | KF 25/3 | KF 40/2 | 3162652541 |
| 300                       | KF 40/3 | KF 15/3 | KF40/2 S**** | LF 100*** | KF 15/3 | KF 15/3 | KF 40/2 | 3162752520 |
| 300                       | KF 40/3 | KF 25/3 | KF40/2 S**** | LF 100*** | KF 25/3 | KF 25/3 | KF 40/2 | 3162752521 |
| 300                       | KF 40/3 | KF 15/3 | KF50/2 S**** | LF 100*** | KF 15/3 | KF 15/3 | KF 40/2 | 3162752540 |
| 300                       | KF 40/3 | KF 25/3 | KF50/2 S**** | LF 100*** | KF 25/3 | KF 25/3 | KF 40/2 | 3162752541 |
| 300                       | KF 40/3 | KF 25/3 | KF50/2 S**** | LF 100*** | KF 40/2 | KF 25/3 | KF 40/2 | 3162752542 |

\*R = Rodaviss (Hülsenschliffe mit Gewinde für Sicherungsmutter) \*\*Rot = Rotulex (ungeschliffene Kugelschliffe mit O-Ring Abdichtung) S-Form  
 \*\*\*LF = Laborflansch mit 45° Schulter S\*\*\*\* = S-Forn, gerade, axial versetzt.

# Deckel KF 400

## Techflansch DN 400



| Einbaumaße              | Höhe   |
|-------------------------|--------|
| Mittelhals KF 15/3      | 220 mm |
| Mittelhals KF 25/3      | 230 mm |
| Mittelhals KF 40/3      | 250 mm |
| Mittelhals KF 80/3      | 250 mm |
| Seitenhals gerade KF 15 | 185 mm |
| Seitenhals gerade KF 25 | 200 mm |
| Seitenhals gerade KF 40 | 225 mm |
| Seitenhals gerade KF 80 | 235 mm |

| DN  | Mittelhals | Seitenhals<br>3:00<br>15° schräg | Seitenhals<br>6:00<br>15° schräg | Seitenhals<br>9:00<br>15° schräg | Seitenhals<br>12:00<br>gerade | Bestellnummer<br>hohe Form |  |
|-----|------------|----------------------------------|----------------------------------|----------------------------------|-------------------------------|----------------------------|--|
| 400 | KF 25/3    | ---                              | ---                              | ---                              | ---                           | 3172142000                 |  |
| 400 | KF 25/3    | KF 25/3                          | ---                              | ---                              | ---                           | 3172242111                 |  |
| 400 | KF 25/3    | KF 25/3                          | ---                              | KF 25/3                          | ---                           | 3172342111                 |  |
| 400 | KF40/3     | KF25/3                           | KF 25/3                          | KF 25/3                          | KF 25/3                       | 3172552111                 |  |

| DN  | Mittelhals | Seitenhals<br>1:30<br>gerade | Seitenhals<br>3:00<br>30° schräg | Seitenhals<br>6:00<br>20° schräg | Seitenhals<br>9:00<br>gerade | Seitenhals<br>10:30<br>gerade | Seitenhals<br>12:00<br>gerade | Bestellnummer<br>hohe Form |
|-----|------------|------------------------------|----------------------------------|----------------------------------|------------------------------|-------------------------------|-------------------------------|----------------------------|
| 400 | KF 40/3    | ---                          | KF 50/2                          | LF 120***                        | KF 15/3                      | KF 15/3                       | KF 40/2                       | 3172652340                 |
| 400 | KF 40/3    | ---                          | KF 50/2                          | LF 120***                        | KF 25/3                      | KF 25/3                       | KF 40/2                       | 3172652341                 |
| 400 | KF 40/3    | KF 15/3                      | KF 50/2                          | LF 120***                        | KF 15/3                      | KF 15/3                       | KF 40/2                       | 3172752340                 |
| 400 | KF 40/3    | KF 25/3                      | KF 50/2                          | LF 120***                        | KF 25/3                      | KF 25/3                       | KF 40/2                       | 3172752341                 |
| 400 | KF 40/3    | KF 25/3                      | KF 50/2                          | LF 120***                        | KF 40/2                      | KF 25/3                       | KF 40/2                       | 3172752342                 |
| 400 | KF 80/3    | ---                          | KF 50/2                          | LF 100***                        | KF 15/3                      | KF 15/3                       | KF 40/2                       | 3172672340                 |
| 400 | KF 80/3    | ---                          | KF 50/2                          | LF 100***                        | KF 25/3                      | KF 25/3                       | KF 40/2                       | 3172672341                 |
| 400 | KF 80/3    | ---                          | KF 80/2                          | LF 100***                        | KF 15/3                      | KF 15/3                       | KF 40/2                       | 3172672360                 |
| 400 | KF 80/3    | ---                          | KF 80/2                          | LF 100***                        | KF 25/3                      | KF 25/3                       | KF 40/2                       | 3172672361                 |
| 400 | KF 80/3    | KF 15/3                      | KF 50/2                          | LF 100***                        | KF 15/3                      | KF 15/3                       | KF 40/2                       | 3172772340                 |
| 400 | KF 80/3    | KF 25/3                      | KF 50/2                          | LF 100***                        | KF 25/3                      | KF 25/3                       | KF 40/2                       | 3172772341                 |
| 400 | KF 80/3    | KF 25/3                      | KF 50/2                          | LF 100***                        | KF 40/2                      | KF 25/3                       | KF 40/2                       | 3172772342                 |
| 400 | KF 80/3    | KF 15/3                      | KF 80/2                          | LF 100***                        | KF 15/3                      | KF 15/3                       | KF 40/2                       | 3172772360                 |
| 400 | KF 80/3    | KF 25/3                      | KF 80/2                          | LF 100***                        | KF 25/3                      | KF 25/3                       | KF 40/2                       | 3172772361                 |
| 400 | KF 80/3    | KF 25/3                      | KF 80/2                          | LF 100***                        | KF 40/2                      | KF 25/3                       | KF 40/2                       | 3172772362                 |

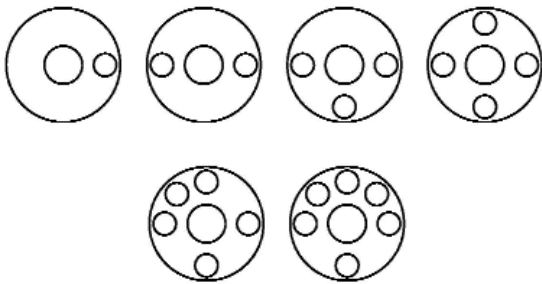
| S-Form, gerade |         |         |               |           |         |         |         |            |
|----------------|---------|---------|---------------|-----------|---------|---------|---------|------------|
| 400            | KF 40/3 | ---     | KF 50/2 S**** | LF 120*** | KF 15/3 | KF 15/3 | KF 40/2 | 3172652540 |
| 400            | KF 40/3 | ---     | KF 50/2 S**** | LF 120*** | KF 25/3 | KF 25/3 | KF 40/2 | 3172652541 |
| 400            | KF 40/3 | KF 15/3 | KF 50/2 S**** | LF 120*** | KF 15/3 | KF 15/3 | KF 40/2 | 3172752540 |
| 400            | KF 40/3 | KF 25/3 | KF 50/2 S**** | LF 120*** | KF 25/3 | KF 25/3 | KF 40/2 | 3172752541 |
| 400            | KF 40/3 | KF 25/3 | KF 50/2 S**** | LF 120*** | KF 40/2 | KF 25/3 | KF 40/2 | 3172752542 |
| 400            | KF 80/3 | ---     | KF 50/2 S**** | LF 100*** | KF 15/3 | KF 15/3 | KF 40/2 | 3172672540 |
| 400            | KF 80/3 | ---     | KF 50/2 S**** | LF 100*** | KF 25/3 | KF 25/3 | KF 40/2 | 3172672541 |
| 400            | KF 80/3 | ---     | KF 80/2 S**** | LF 100*** | KF 15/3 | KF 15/3 | KF 40/2 | 3172672560 |
| 400            | KF 80/3 | ---     | KF 80/2 S**** | LF 100*** | KF 25/3 | KF 25/3 | KF 40/2 | 3172672561 |
| 400            | KF 80/3 | KF 15/3 | KF 50/2 S**** | LF 100*** | KF 15/3 | KF 15/3 | KF 40/2 | 3172772540 |
| 400            | KF 80/3 | KF 25/3 | KF 50/2 S**** | LF 100*** | KF 25/3 | KF 25/3 | KF 40/2 | 3172772541 |
| 400            | KF 80/3 | KF 25/3 | KF 50/2 S**** | LF 100*** | KF 40/2 | KF 25/3 | KF 40/2 | 3172772542 |
| 400            | KF 80/3 | KF 15/3 | KF 80/2 S**** | LF 100*** | KF 15/3 | KF 15/3 | KF 40/2 | 3172772560 |
| 400            | KF 80/3 | KF 25/3 | KF 80/2 S**** | LF 100*** | KF 25/3 | KF 25/3 | KF 40/2 | 3172772561 |
| 400            | KF 80/3 | KF 25/3 | KF 80/2 S**** | LF 100*** | KF 40/2 | KF 25/3 | KF 40/2 | 3172772562 |

\*R = Rodaviss (Hülsenschliffe mit Gewinde für Sicherungsmutter)  
 \*\*\*LF = Laborflansch mit 45° Schulter

S\*\*\*\* = S-Form, gerade, axial versetzt.

# Deckel KF 450

## Techflansch DN 450



| Einbaumaße              | Höhe   |
|-------------------------|--------|
| Mittelhals KF 25/3      | 235 mm |
| Mittelhals KF 40/3      | 255 mm |
| Mittelhals KF 80/3      | 255 mm |
| Seitenhals gerade KF 15 | 180 mm |
| Seitenhals gerade KF 25 | 190 mm |
| Seitenhals gerade KF 40 | 225 mm |
| Seitenhals gerade KF 80 | 235 mm |

| DN  | Mittelhals | Seitenhals<br>3:00<br>15° schräg | Seitenhals<br>6:00<br>15° schräg | Seitenhals<br>9:00<br>15° schräg | Seitenhals<br>12:00<br>gerade | Bestellnummer<br>hohe Form |
|-----|------------|----------------------------------|----------------------------------|----------------------------------|-------------------------------|----------------------------|
| 450 | KF 25/3    | ---                              | ---                              | ---                              | ---                           | 3182142000                 |
| 450 | KF 25/3    | KF 25/3                          | ---                              | ---                              | ---                           | 3182242110                 |
| 450 | KF 25/3    | KF 25/3                          | ---                              | KF 25/3                          | ---                           | 3182342110                 |
| 450 | KF40/3     | KF25/3                           | KF 25/3                          | KF 25/3                          | KF 25/3                       | 3182552110                 |

| DN  | Mittelhals | Seitenhals<br>1:30<br>gerade | Seitenhals<br>3:00<br>30° schräg | Seitenhals<br>6:00<br>20° schräg | Seitenhals<br>9:00<br>gerade | Seitenhals<br>10:30<br>gerade | Seitenhals<br>12:00<br>gerade | Bestellnummer<br>hohe Form |
|-----|------------|------------------------------|----------------------------------|----------------------------------|------------------------------|-------------------------------|-------------------------------|----------------------------|
| 450 | KF 80/3    | ---                          | KF 50/2                          | LF 120***                        | KF 15/3                      | KF 15/3                       | KF 40/2                       | 3182672340                 |
| 450 | KF 80/3    | ---                          | KF 50/2                          | LF 120***                        | KF 25/3                      | KF 25/3                       | KF 40/2                       | 3182672341                 |
| 450 | KF 80/3    | ---                          | KF 80/2                          | LF 120***                        | KF 15/3                      | KF 15/3                       | KF 40/2                       | 3182672360                 |
| 450 | KF 80/3    | ---                          | KF 80/2                          | LF 120***                        | KF 25/3                      | KF 25/3                       | KF 40/2                       | 3182672361                 |
| 450 | KF 80/3    | KF 15/3                      | KF 50/2                          | LF 120***                        | KF 15/3                      | KF 15/3                       | KF 40/2                       | 3182772340                 |
| 450 | KF 80/3    | KF 25/3                      | KF 50/2                          | LF 120***                        | KF 25/3                      | KF 25/3                       | KF 40/2                       | 3182772341                 |
| 450 | KF 80/3    | KF 25/3                      | KF 50/2                          | LF 120***                        | KF 40/2                      | KF 25/3                       | KF 40/2                       | 3182772342                 |
| 450 | KF 80/3    | KF 15/3                      | KF 80/2                          | LF 120***                        | KF 15/3                      | KF 15/3                       | KF 40/2                       | 3182772360                 |
| 450 | KF 80/3    | KF 25/3                      | KF 80/2                          | LF 120***                        | KF 25/3                      | KF 25/3                       | KF 40/2                       | 3182772361                 |
| 450 | KF 80/3    | KF 25/3                      | KF 80/2                          | LF 120***                        | KF 40/2                      | KF 25/3                       | KF 40/2                       | 3182772362                 |

### S-Form, gerade

|     |         |         |               |           |         |         |         |            |
|-----|---------|---------|---------------|-----------|---------|---------|---------|------------|
| 450 | KF 80/3 | ---     | KF 50/2 S**** | LF 120*** | KF 15/3 | KF 15/3 | KF 40/2 | 3182672540 |
| 450 | KF 80/3 | ---     | KF 50/2 S**** | LF 120*** | KF 25/3 | KF 25/3 | KF 40/2 | 3182672541 |
| 450 | KF 80/3 | ---     | KF 80/2 S**** | LF 120*** | KF 15/3 | KF 15/3 | KF 40/2 | 3182672560 |
| 450 | KF 80/3 | ---     | KF 80/2 S**** | LF 120*** | KF 25/3 | KF 25/3 | KF 40/2 | 3182672561 |
| 450 | KF 80/3 | KF 15/3 | KF 50/2 S**** | LF 120*** | KF 15/3 | KF 15/3 | KF 40/2 | 3182772540 |
| 450 | KF 80/3 | KF 25/3 | KF 50/2 S**** | LF 120*** | KF 25/3 | KF 25/3 | KF 40/2 | 3182772541 |
| 450 | KF 80/3 | KF 25/3 | KF 50/2 S**** | LF 120*** | KF 40/2 | KF 25/3 | KF 40/2 | 3182772542 |
| 450 | KF 80/3 | KF 15/3 | KF 80/2 S**** | LF 120*** | KF 15/3 | KF 15/3 | KF 40/2 | 3182772560 |
| 450 | KF 80/3 | KF 25/3 | KF 80/2 S**** | LF 120*** | KF 25/3 | KF 25/3 | KF 40/2 | 3182772561 |
| 450 | KF 80/3 | KF 25/3 | KF 80/2 S**** | LF 120*** | KF 40/2 | KF 25/3 | KF 40/2 | 3182772562 |

\*R = Rodaviss (Hülsenschliffe mit Gewinde für Sicherungsmutter)  
 \*\*\*LF = Laborflansch mit 45° Schulter

S\*\*\*\* = S-Forn, gerade, axial versetzt.