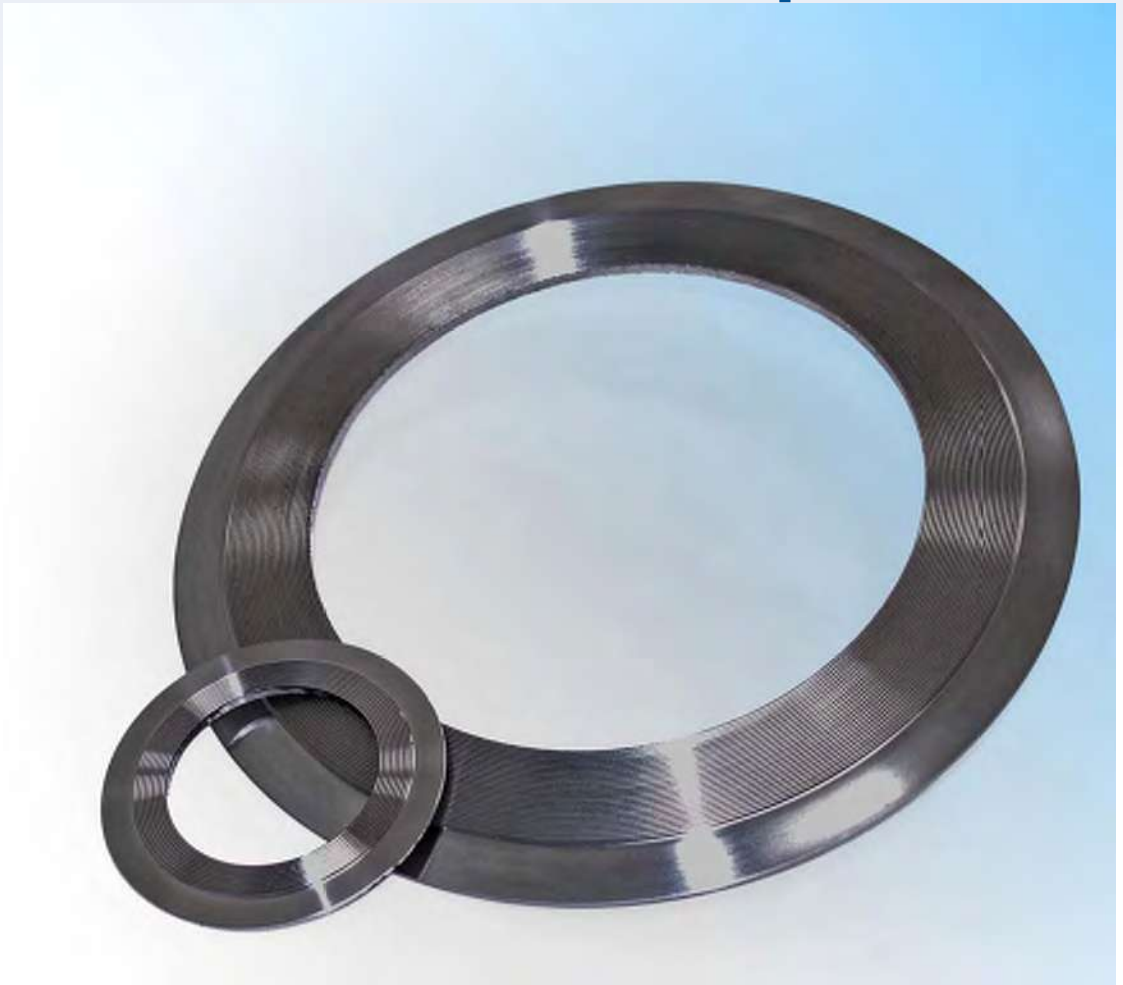
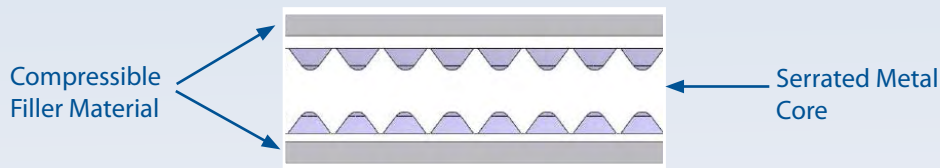


# Maxiprofile

Metallic



The Klinger Maxiprofile is a composite gasket which utilises a serrated metal core with a soft facing material. The metal core is machined on each contact face with concentric serrations which provide high pressure areas, ensuring that the soft coating flows into any imperfections in the flange even at relatively low bolt loads. The result is a gasket which combines the benefits of soft cut materials with the advantages of seal integrity associated with metallic gaskets.



Expanded graphite is the most common facing material used for Maxiprofile gaskets. However, other materials can be used, such as PTFE for chemically aggressive duties or mica for high temperature duties.

| Facing Material    | Maximum Temperature |
|--------------------|---------------------|
| Graphite           | 550°C               |
| PTFE               | 260°C               |
| Mica               | 1000°C              |
| KLINGERSIL® C-4430 | 250°C               |

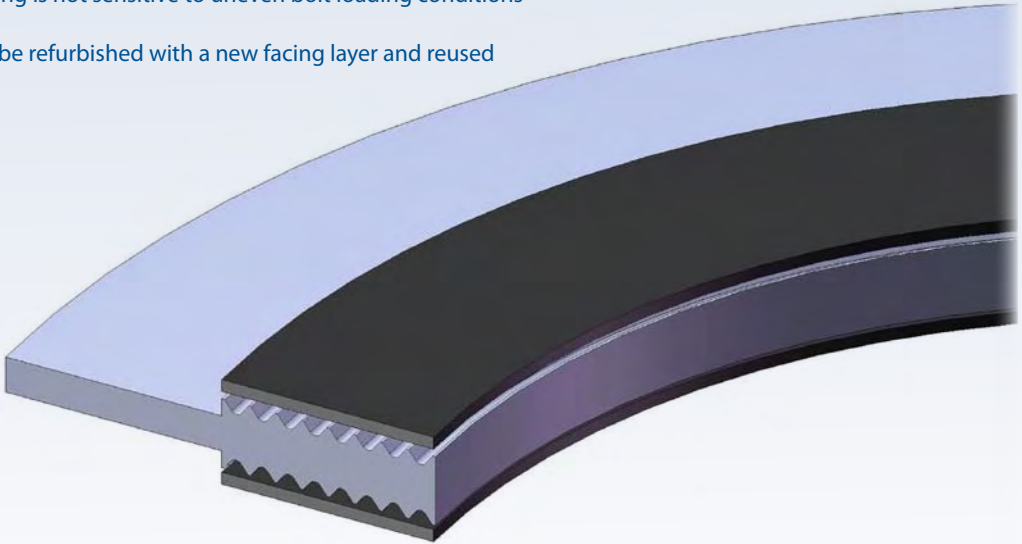
Maxiprofile gaskets can also be manufactured from a range of core materials according to media compatibility and temperature considerations.

| Core Material        | Maximum Temperature |
|----------------------|---------------------|
| 316L Stainless Steel | 800°C               |
| 304 Stainless Steel  | 650°C               |
| Duplex UN S31803     | 800°C               |
| 347 Stainless Steel  | 870°C               |
| 321 Stainless Steel  | 870°C               |
| Monel 400            | 800°C               |
| Nickel 200           | 600°C               |
| Titanium Gr 2        | 500°C               |
| Hastelloy B-2/B-3    | 700°C               |
| Hastelloy C-276      | 700°C               |

| Core Material  | Maximum Temperature |
|----------------|---------------------|
| Inconel 600    | 1000°C              |
| Inconel 625    | 1000°C              |
| Incoloy 825    | 600°C               |
| Zirconium      | 500°C               |
| Super Duplex   | 600°C               |
| 254 SMO        | 600°C               |
| Titanium Gr7   | 500°C               |
| Hastelloy C-22 | 700°C               |
| Hastelloy G-31 | 800°C               |
| Alloy 20       | 600°C               |

**General Properties of Maxiprofile Gaskets:**

- A wide range of seating stresses under which the seal is effected and maintained
- Can be used when there is insufficient bolt load to seal conventional gasket materials
- Easy to handle and fit
- Suitable for a wide range of operating conditions
- The soft facing layer prevents damage to the mating flange
- Sealing is not sensitive to uneven bolt loading conditions
- Can be refurbished with a new facing layer and reused



Metallic

**Applications of Maxiprofile Gaskets:**

- Heat exchanger and vessel applications
- High and low temperatures
- Pressures of up to 250 bar
- Low bolt loads
- Narrow flange widths
- Damaged flanges

**Core Design**

Standard core design is parallel which offers the advantage of even stress distribution across the gasket face. Convex Maxiprofiles are also available which have a reduced depth of grooves towards the profile centre. This type of profile ensures a high seating stress in the middle of the profile and is effective for low bolt load applications.



## Klinger Maxiprofile Type 109

### Applications:

- Used for a wide range of applications including steam, oil, hydrocarbon and can also be tailored to suit more aggressive chemicals
- Used for applications requiring a high-integrity seal such as chlorine
- Especially suited to use in heat exchangers

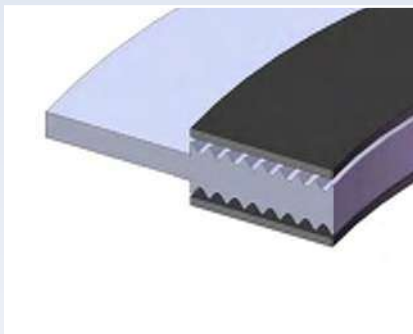
### Typical Properties:

- High pressure gasket with a wide seating stress range
- Excellent tightness even at low bolt loads
- Reusable metallic core can be refaced after service
- Available facings include: Graphite, PTFE, KLINGERSIL and Soft-chem

### Typical Specifications:

|                    |   |
|--------------------|---|
| Core material :    | 316L - 3.0, 4.0, 5.0mm  |
| Facing material:   | Graphite - 0.5mm  |
| Facing density:    | 1 g/cm <sup>3</sup> (alternative 0.7g/cm <sup>3</sup> )                                       |
| Max. temperature : | 550°C   |
| Max. pressure      | >400 bar  |
| Suitability        | For flanges to ASME B16.5, DIN standards and BS 10, can also be manufactured in custom sizes. |

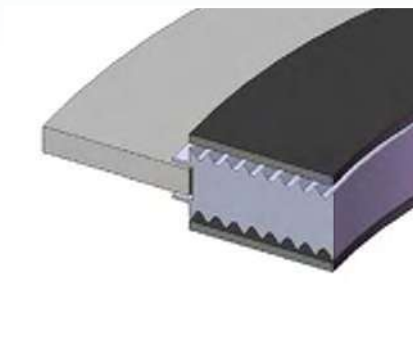
| Style:     | Description:  |
|------------|---|
| LA 1       | Lateral profiled joint with guide ring for raised and flat face applications  |
| LA 2       | Lateral profiled joint without guide ring for male and female, tongue and groove and grooved flanges                                      |
| LA 3       | Lateral profiled joint with floating guide ring for raised and flat face applications   |
| CA1, 2 & 3 | Convex profiled joints in the same style as LA 1, 2 and 3. The convex profile is designed to assist sealing in low bolt load applications |



Maxiprofile LA 1



Maxiprofile LA 2



Maxiprofile LA 3

Metallic cores are available in a wide range of metallic materials shown on page 62.

**Klinger Maxitherm**

**Applications:**

- Designed for use at high temperatures and to create a seal at low bolt loads.
- Especially suited to use in heat exchangers

**Typical Properties:**

- High pressure gasket with a wide seating stress range
- Excellent tightness even at low bolt loads
- Reusable metallic core can be refaced with mica after service

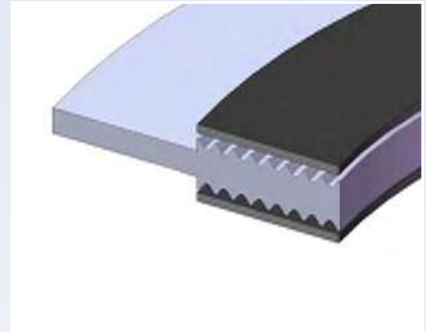
**Typical Specifications:**

|                    |   |
|--------------------|---|
| Core material :    | Inconel 600 - 3.0, 4.0 or 5.0mm   |
| Facing material:   | Mica - 0.5mm  |
| Facing density:    | 1 g/cm <sup>3</sup> (alternative 0.7g/cm <sup>3</sup> )                                       |
| Max. temperature : | 900°C.  |
| Max. pressure      | >40 bar.  |
| Suitability        | For flanges to ASME B16.5, DIN standards and BS 10, can also be manufactured in custom sizes. |

**Style:**

**Description:**

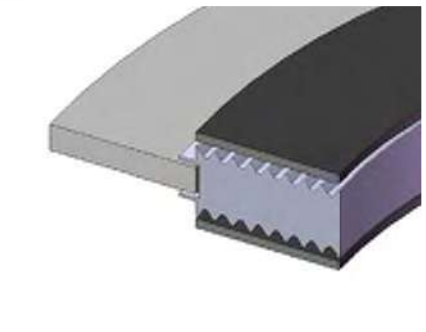
|            |  |
|------------|--|
| LA 1       | Lateral profiled joint with guide ring for raised and flat face applications.  |
| LA 2       | Lateral profiled joint without guide ring for male and female, tongue and groove and grooved flanges.                                      |
| LA 3       | Lateral profiled joint with floating guide ring for raised and flat face applications.   |
| CA1, 2 & 3 | Convex profiled joints in the same style as LA 1, 2 and 3. The convex profile is designed to assist sealing in low bolt load applications. |



Maxiprofile LA 1



Maxiprofile LA 2



Maxiprofile LA 3

Metallic cores are available in a wide range of materials shown on page 62.

Metallic



# Dimensions for Maxiprofile Gaskets

Metallic



## Dimensions to suit ANSI Standard Flanges

### Class 150 ASME B16.20

| Nominal Size | Dimensions (mm) | Nominal Size | Dimensions (mm) | Nominal Size | Dimensions (mm) |
|--------------|-----------------|--------------|-----------------|--------------|-----------------|
| 1/2"         | 48 x 33 x 23    | 3 "          | 137 x 124 x 98  | 14 "         | 451 x 410 x 372 |
| 3/4"         | 57 x 40 x 29    | 4 "          | 175 x 154 x 124 | 16 "         | 514 x 467 x 422 |
| 1 "          | 67 x 48 x 37    | 5 "          | 197 x 183 x 151 | 18 "         | 549 x 530 x 479 |
| 1 1/4"       | 76 x 60 x 44    | 6 "          | 222 x 213 x 178 | 20 "         | 606 x 581 x 530 |
| 1 1/2"       | 86 x 70 x 52    | 8 "          | 279 x 267 x 229 | 24 "         | 718 x 683 x 632 |
| 2 "          | 105 x 89 x 70   | 10 "         | 340 x 321 x 283 |              |                 |
| 2 1/2"       | 124 x 102 x 83  | 12 "         | 410 x 378 x 340 |              |                 |

### Class 300 ASME B16.20

| Nominal Size | Dimensions (mm) | Nominal Size | Dimensions (mm) | Nominal Size | Dimensions (mm) |
|--------------|-----------------|--------------|-----------------|--------------|-----------------|
| 1/2"         | 54 x 33 x 23    | 3 "          | 149 x 124 x 98  | 14 "         | 486 x 410 x 372 |
| 3/4"         | 67 x 40 x 29    | 4 "          | 181 x 154 x 124 | 16 "         | 540 x 467 x 422 |
| 1 "          | 73 x 48 x 37    | 5 "          | 216 x 183 x 151 | 18 "         | 597 x 530 x 479 |
| 1 1/4"       | 83 x 60 x 44    | 6 "          | 251 x 213 x 178 | 20 "         | 654 x 581 x 530 |
| 1 1/2"       | 95 x 70 x 52    | 8 "          | 308 x 267 x 229 | 24 "         | 775 x 683 x 632 |
| 2 "          | 111 x 89 x 70   | 10 "         | 362 x 321 x 283 |              |                 |
| 2 1/2"       | 130 x 102 x 83  | 12 "         | 422 x 378 x 340 |              |                 |

### Class 600 ASME B16.20

| Nominal Size | Dimensions (mm) | Nominal Size | Dimensions (mm) | Nominal Size | Dimensions (mm) |
|--------------|-----------------|--------------|-----------------|--------------|-----------------|
| 1/2"         | 54 x 33 x 23    | 3 "          | 149 x 124 x 98  | 14 "         | 492 x 410 x 372 |
| 3/4"         | 67 x 40 x 29    | 4 "          | 194 x 154 x 124 | 16 "         | 565 x 467 x 422 |
| 1 "          | 73 x 48 x 37    | 5 "          | 241 x 183 x 151 | 18 "         | 613 x 530 x 479 |
| 1 1/4"       | 83 x 60 x 44    | 6 "          | 267 x 213 x 178 | 20 "         | 683 x 581 x 530 |
| 1 1/2"       | 95 x 70 x 52    | 8 "          | 321 x 267 x 229 | 24 "         | 791 x 683 x 632 |
| 2 "          | 111 x 89 x 70   | 10 "         | 400 x 321 x 283 |              |                 |
| 2 1/2"       | 130 x 102 x 83  | 12 "         | 457 x 378 x 340 |              |                 |

### Class 900 ASME B16.20

| Nominal Size | Dimensions (mm) | Nominal Size | Dimensions (mm) | Nominal Size | Dimensions (mm) |
|--------------|-----------------|--------------|-----------------|--------------|-----------------|
| 1/2"         | 64 x 33 x 23    | 3 "          | 168 x 124 x 98  | 14 "         | 521 x 410 x 372 |
| 3/4"         | 70 x 40 x 29    | 4 "          | 206 x 154 x 124 | 16 "         | 575 x 467 x 422 |
| 1 "          | 79 x 48 x 37    | 5 "          | 248 x 183 x 151 | 18 "         | 638 x 530 x 479 |
| 1 1/4"       | 89 x 60 x 44    | 6 "          | 289 x 213 x 178 | 20 "         | 699 x 581 x 530 |
| 1 1/2"       | 98 x 70 x 52    | 8 "          | 359 x 267 x 229 | 24 "         | 838 x 683 x 632 |
| 2 "          | 143 x 89 x 70   | 10 "         | 435 x 321 x 283 |              |                 |
| 2 1/2"       | 165 x 102 x 83  | 12 "         | 498 x 378 x 340 |              |                 |

### Class 1500 ASME B16.20

| Nominal Size | Dimensions (mm) | Nominal Size | Dimensions (mm) | Nominal Size | Dimensions (mm) |
|--------------|-----------------|--------------|-----------------|--------------|-----------------|
| 1/2"         | 64 x 33 x 23    | 3 "          | 175 x 124 x 98  | 14 "         | 578 x 410 x 372 |
| 3/4"         | 70 x 40 x 29    | 4 "          | 210 x 154 x 124 | 16 "         | 641 x 467 x 422 |
| 1 "          | 79 x 48 x 37    | 5 "          | 254 x 183 x 151 | 18 "         | 705 x 530 x 479 |
| 1 1/4"       | 89 x 60 x 44    | 6 "          | 283 x 213 x 178 | 20 "         | 756 x 581 x 530 |
| 1 1/2"       | 98 x 70 x 52    | 8 "          | 352 x 267 x 229 | 24 "         | 902 x 683 x 632 |
| 2 "          | 143 x 89 x 70   | 10 "         | 435 x 321 x 283 |              |                 |
| 2 1/2"       | 165 x 102 x 83  | 12 "         | 521 x 378 x 340 |              |                 |



**Dimensions to suit ANSI Standard Flanges**

**Class 2500 ASME B16.20**

| Nominal Size | Dimensions (mm) | Nominal Size | Dimensions (mm) | Nominal Size | Dimensions (mm) |
|--------------|-----------------|--------------|-----------------|--------------|-----------------|
| 1/2"         | 70 x 33 x 23    | 2 "          | 146 x 89 x 70   | 6 "          | 318 x 213 x 178 |
| 3/4"         | 76 x 40 x 29    | 2.1/2"       | 168 x 102 x 83  | 8 "          | 387 x 267 x 229 |
| 1 "          | 86 x 48 x 37    | 3 "          | 197 x 124 x 98  | 10 "         | 476 x 321 x 283 |
| 1.1/4"       | 105 x 60 x 44   | 4 "          | 235 x 154 x 124 | 12 "         | 550 x 378 x 340 |
| 1.1/2"       | 118 x 70 x 52   | 5 "          | 279 x 183 x 151 |              |                 |

**Dimensions to suit DIN standard flanges**

**PN10**

| Nominal Size | Dimensions (mm) | Nominal Size | Dimensions (mm) | Nominal Size | Dimensions (mm) |
|--------------|-----------------|--------------|-----------------|--------------|-----------------|
| 10           | 46 x 36 x 22    | 65           | 127 x 100 x 81  | 300          | 377 x 340 x 320 |
| 15           | 51 x 42 x 26    | 80           | 142 x 115 x 95  | 350          | 437 x 395 x 375 |
| 20           | 61 x 47 x 31    | 100          | 162 x 138 x 118 | 400          | 488 x 450 x 426 |
| 25           | 71 x 52 x 36    | 125          | 192 x 162 x 142 | 500          | 593 x 560 x 530 |
| 32           | 82 x 62 x 46    | 150          | 217 x 190 x 170 | 600          | 695 x 664 x 630 |
| 40           | 92 x 69 x 53    | 200          | 272 x 240 x 220 |              |                 |
| 50           | 107 x 81 x 65   | 250          | 327 x 290 x 270 |              |                 |

**PN16**

| Nominal Size | Dimensions (mm) | Nominal Size | Dimensions (mm) | Nominal Size | Dimensions (mm) |
|--------------|-----------------|--------------|-----------------|--------------|-----------------|
| 10           | 46 x 36 x 22    | 65           | 127 x 100 x 81  | 300          | 383 x 340 x 320 |
| 15           | 51 x 42 x 26    | 80           | 142 x 115 x 95  | 350          | 443 x 395 x 375 |
| 20           | 61 x 47 x 31    | 100          | 162 x 138 x 118 | 400          | 495 x 450 x 426 |
| 25           | 71 x 52 x 36    | 125          | 192 x 162 x 142 | 500          | 617 x 560 x 530 |
| 32           | 82 x 62 x 46    | 150          | 217 x 190 x 170 | 600          | 734 x 664 x 630 |
| 40           | 92 x 69 x 53    | 200          | 272 x 240 x 220 |              |                 |
| 50           | 107 x 81 x 65   | 250          | 328 x 290 x 270 |              |                 |

**PN25**

| Nominal Size | Dimensions (mm) | Nominal Size | Dimensions (mm) | Nominal Size | Dimensions (mm) |
|--------------|-----------------|--------------|-----------------|--------------|-----------------|
| 10           | 46 x 36 x 22    | 65           | 127 x 100 x 81  | 300          | 400 x 340 x 320 |
| 15           | 51 x 42 x 26    | 80           | 142 x 115 x 95  | 350          | 457 x 395 x 375 |
| 20           | 61 x 47 x 31    | 100          | 162 x 138 x 118 | 400          | 514 x 450 x 426 |
| 25           | 71 x 52 x 36    | 125          | 193 x 162 x 142 | 500          | 624 x 560 x 530 |
| 32           | 82 x 62 x 46    | 150          | 223 x 190 x 170 | 600          | 731 x 664 x 630 |
| 40           | 92 x 69 x 53    | 200          | 283 x 240 x 220 |              |                 |
| 50           | 107 x 81 x 65   | 250          | 340 x 290 x 270 |              |                 |

**PN40**

| Nominal Size | Dimensions (mm) | Nominal Size | Dimensions (mm) | Nominal Size | Dimensions (mm) |
|--------------|-----------------|--------------|-----------------|--------------|-----------------|
| 10           | 46 x 36 x 22    | 65           | 127 x 100 x 81  | 300          | 417 x 340 x 320 |
| 15           | 51 x 42 x 26    | 80           | 142 x 115 x 95  | 350          | 474 x 395 x 375 |
| 20           | 61 x 47 x 31    | 100          | 162 x 138 x 118 | 400          | 546 x 450 x 426 |
| 25           | 71 x 52 x 36    | 125          | 193 x 162 x 142 | 500          | 628 x 560 x 530 |
| 32           | 82 x 62 x 46    | 150          | 223 x 190 x 170 | 600          | 747 x 664 x 630 |
| 40           | 92 x 69 x 53    | 200          | 290 x 240 x 220 |              |                 |
| 50           | 107 x 81 x 65   | 250          | 352 x 290 x 270 |              |                 |

Metallic

## Dimensions to suit DIN standard flanges

### PN64

| Nominal Size | Dimensions (mm) | Nominal Size | Dimensions (mm) | Nominal Size | Dimensions (mm) |
|--------------|-----------------|--------------|-----------------|--------------|-----------------|
| 10           | 56 x 36 x 22    | 65           | 137 x 100 x 81  | 300          | 424 x 356 x 320 |
| 15           | 61 x 42 x 26    | 80           | 147 x 115 x 95  | 350          | 486 x 415 x 375 |
| 20           | 74 x 47 x 31    | 100          | 162 x 138 x 118 | 400          | 543 x 474 x 426 |
| 25           | 82 x 52 x 36    | 125          | 210 x 162 x 142 | 500          | 657 x 588 x 530 |
| 32           | 90 x 62 x 46    | 150          | 247 x 190 x 170 | 600          | 764 x 700 x 630 |
| 40           | 102 x 69 x 53   | 200          | 309 x 248 x 220 |              |                 |
| 50           | 112 x 81 x 65   | 250          | 364 x 300 x 270 |              |                 |

### PN100

| Nominal Size | Dimensions (mm) | Nominal Size | Dimensions (mm) | Nominal Size | Dimensions (mm) |
|--------------|-----------------|--------------|-----------------|--------------|-----------------|
| 10           | 56 x 36 x 22    | 40           | 102 x 69 x 53   | 125          | 217 x 162 x 142 |
| 15           | 61 x 42 x 26    | 50           | 118 x 81 x 65   | 150          | 257 x 190 x 170 |
| 20           | 74 x 47 x 31    | 65           | 143 x 100 x 81  | 200          | 324 x 248 x 220 |
| 25           | 82 x 52 x 36    | 80           | 153 x 115 x 95  | 250          | 391 x 300 x 270 |
| 32           | 90 x 62 x 46    | 100          | 180 x 138 x 118 | 300          | 458 x 356 x 320 |

### PN160

| Nominal Size | Dimensions (mm) | Nominal Size | Dimensions (mm) | Nominal Size | Dimensions (mm) |
|--------------|-----------------|--------------|-----------------|--------------|-----------------|
| 10           | 56 x 36 x 22    | 40           | 102 x 69 x 53   | 125          | 217 x 162 x 142 |
| 15           | 61 x 42 x 26    | 50           | 118 x 81 x 65   | 150          | 257 x 190 x 170 |
| 20           | 74 x 47 x 31    | 65           | 143 x 100 x 81  | 200          | 324 x 248 x 220 |
| 25           | 82 x 52 x 36    | 80           | 153 x 115 x 95  |              |                 |
| 32           | 90 x 62 x 46    | 100          | 180 x 138 x 118 |              |                 |

### PN250

| Nominal Size | Dimensions (mm) | Nominal Size | Dimensions (mm) | Nominal Size | Dimensions (mm) |
|--------------|-----------------|--------------|-----------------|--------------|-----------------|
| 10           | 67 x 36 x 22    | 25           | 82 x 52 x 36    | 50           | 123 x 87 x 65   |
| 15           | 72 x 42 x 26    | 32           | 100 x 66 x 46   |              |                 |
| 20           | 79 x 47 x 31    | 40           | 108 x 73 x 53   |              |                 |