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# THERMOPLASTIC/PE1000

## Strong connections for thermoplastics using of PE1000 example



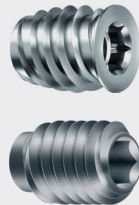
### Secure hold. Ideal for:

- Chemical industry
- Packaging technology
- Transport technology
- Civil engineering
- Conveying technology

### RAMPA®-Inserts Type: SKD330

&

### RAMPA®-Inserts Type: SK330



- Wide range of applications
- Automatic alignment by 3 support points
- Guaranteed straight assembling
- Hub for simplified assembling
- Up to 2.5 times faster than conventional insertss
- Maximum load capacity utilization of the assembling area
- Patented 3-start thread contour

### RAMPA®-Inserts Type: SKD30



- Wide range of applications
- Hub for simplified assembling
- High load capacity utilization of the assembling area
- Patented 1-start thread contour

### RAMPA®-Inserts Type: ES

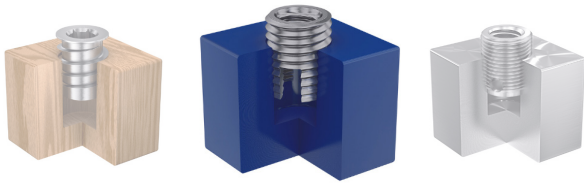


- For materials with high strength/density
- Also for thin-walled applications
- Conical hub
- Cutting slot
- Wide variety of materials, including in stainless steel

### RAMPA®-Inserts Type: BAN/BAV



- For materials with high strength/density
- Also for thin-walled applications
- Conical hub
- Cutting holes
- Wide variety of materials, including in stainless steel

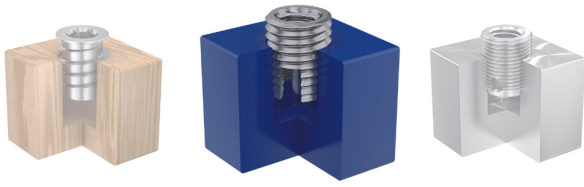


# THERMOPLASTIC/PE1000

## Strong connections for thermoplastics using of PE1000 example

|  | SKD330,<br>SK330 | SKD30 | ES | BAN/BAV |
|--|------------------|-------|----|---------|
| High processing speed                    | ++               | +     | -  | -       |
| Separate drive for assembling            | ++               | ++    | -  | -       |
| Supports vertical assembling             | ++               | +     | 0  | 0       |
| Disassembly possible                     | +                | +     | -  | -       |
| Stainless steel in standard assortment   | 0                | 0     | +  | +       |
| Patented                                 | ✓                | ✓     | 0  | 0       |
| Material compaction through displacement | ++               | +     | 0  | 0       |
| Low tension assembling                   | -                | -     | ++ | ++      |
| For thin-walled components               | 0                | 0     | ++ | ++      |
| Chipless mounting                        | +                | +     | -  | -       |
| Stock goods                              | ++               | ++    | ++ | ++      |
| Fully automated assembling               | ++               | ++    | +  | +       |

Legend: ++ Very strong, + Strong, - Weak, 0 Not present



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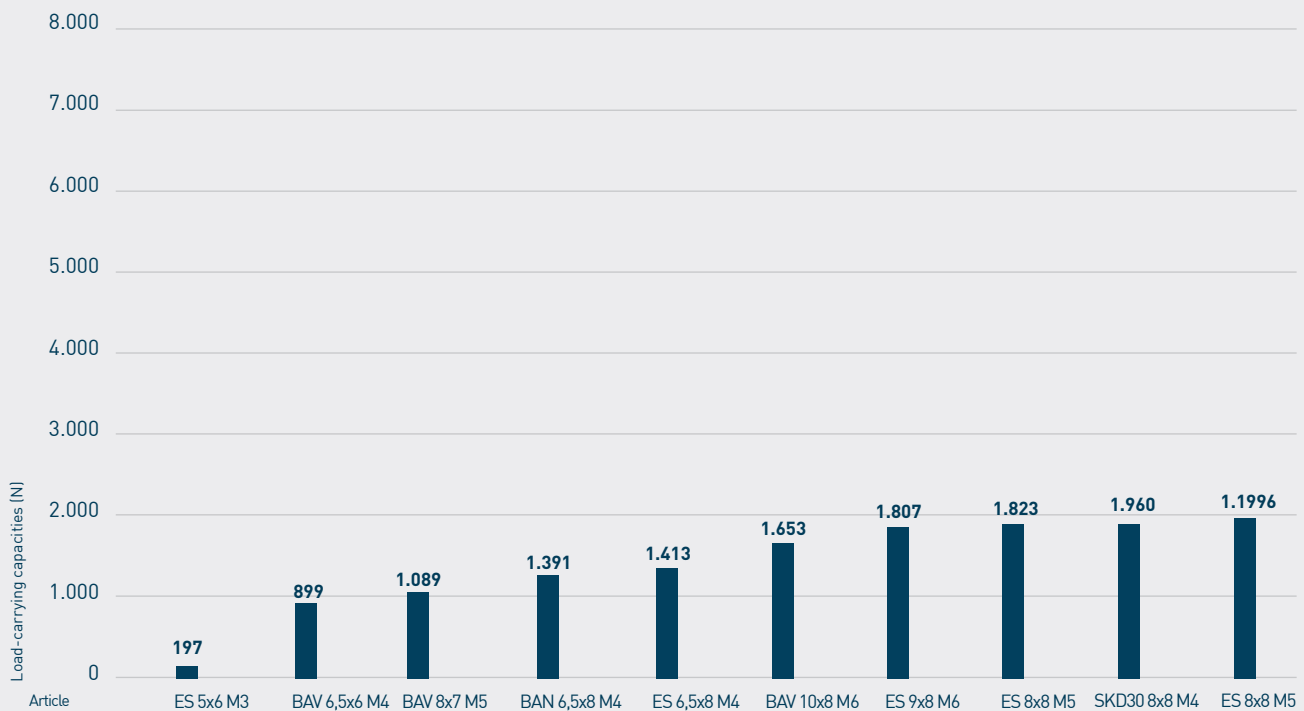
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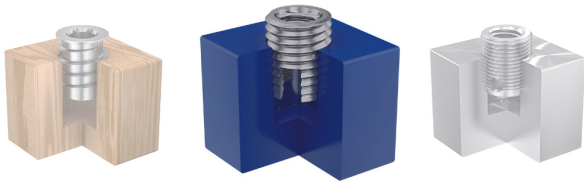
## Strong connections for thermoplastics using of PE1000 example

### Load-carrying capacities

material thickness 10mm



\* The reference load-carrying capacities mentioned before might vary in individual cases due to different mechanical properties depending on the material used.



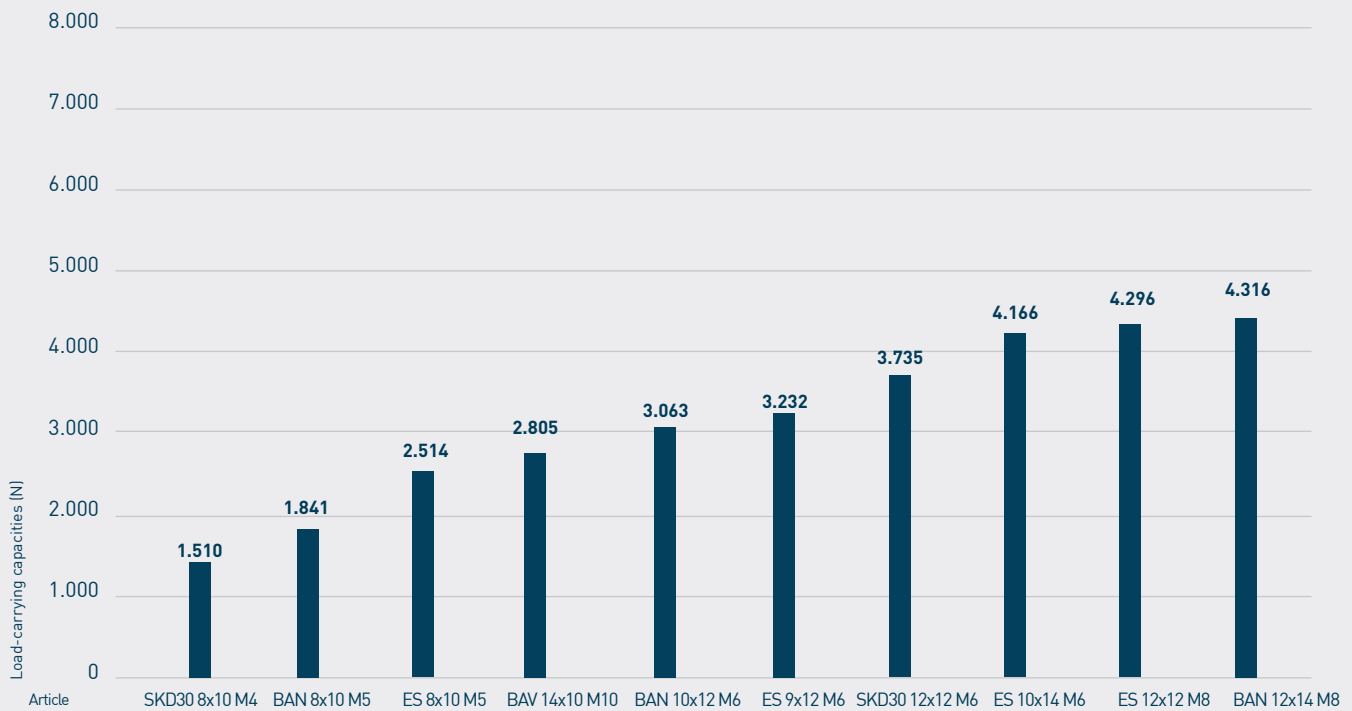
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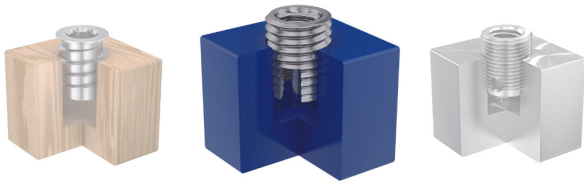
# THERMOPLASTIC/PE1000

## Strong connections for thermoplastics using of PE1000 example

### Load-carrying capacities material thickness 15mm



\* The reference load-carrying capacities mentioned before might vary in individual cases due to different mechanical properties depending on the material used.

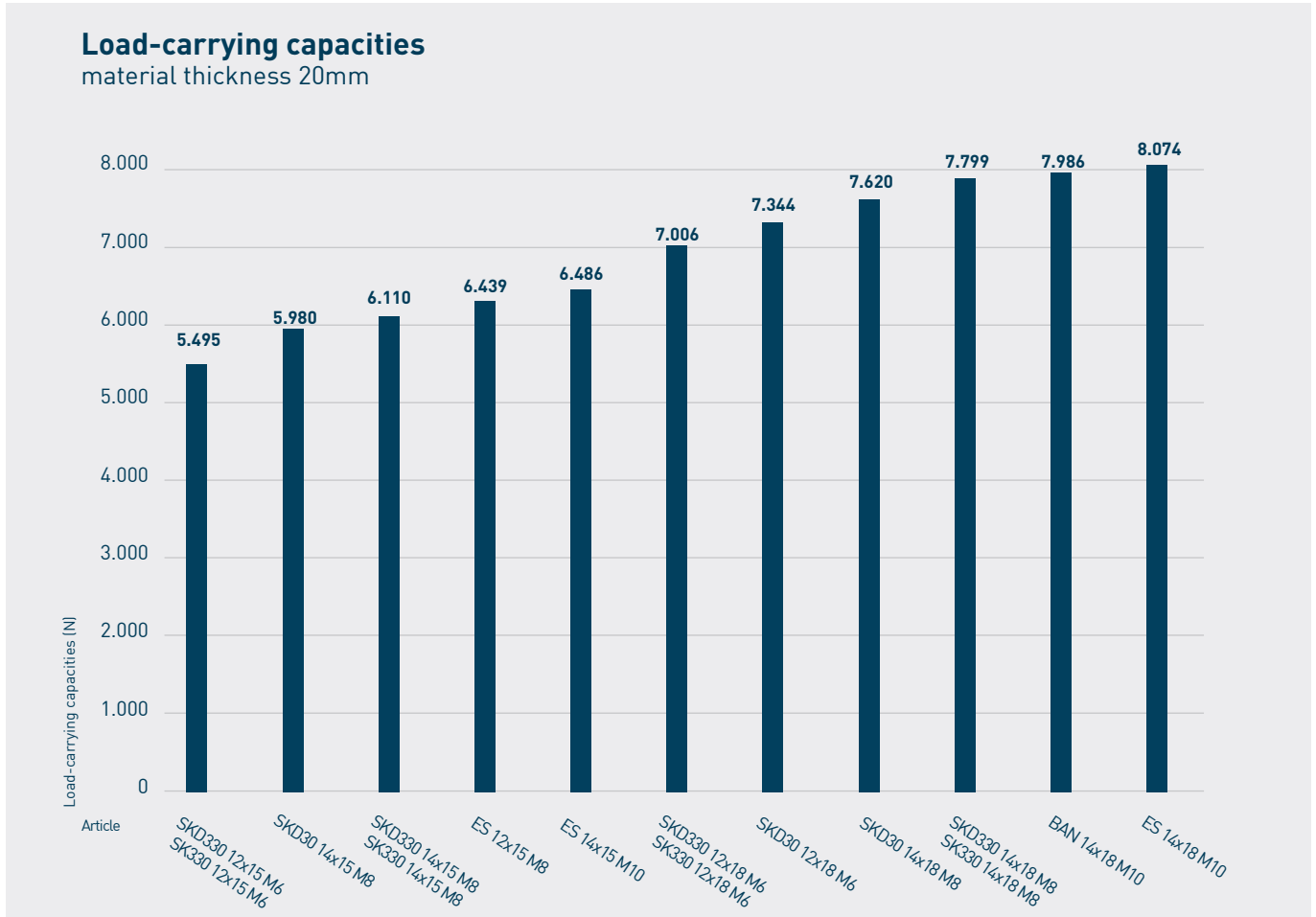


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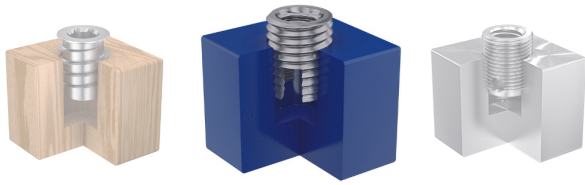
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# THERMOPLASTIC/PE1000

## Strong connections for thermoplastics using of PE1000 example



\* The reference load-carrying capacities mentioned before might vary in individual cases due to different mechanical properties depending on the material used.



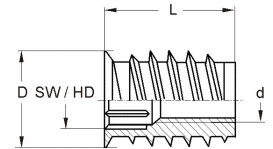
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# THERMOPLASTIC/PE1000

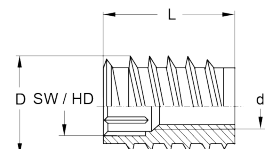
The suitable inserts for thermoplastics / PE1000

RAMPA®-Inserts | Type: SKD330



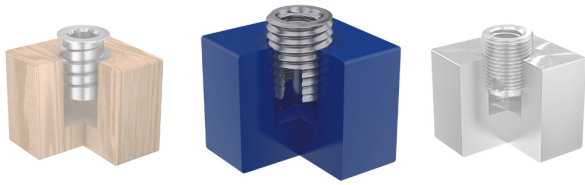
| Art. No.  | Outer-Ø D (mm) | Length L (mm) | Threadsize d (mm) | Hex Drive | Pre-Drill Ø (mm) | steel zinc-plated |
|-----------|----------------|---------------|-------------------|-----------|------------------|-------------------|
| 420615001 | 12             | 15            | M6                | 6         | 10,0 - 10,5      | ✓                 |
| 420618001 | 12             | 18            | M6                | 6         | 10,0 - 10,5      | ✓                 |
| 420855001 | 14             | 15            | M8                | 8         | 12,0 - 12,5      | ✓                 |
| 420858001 | 14             | 18            | M8                | 8         | 12,0 - 12,5      | ✓                 |
| 420814001 | 16             | 14            | M8                | 8         | 14               | ✓                 |
| 420818001 | 16             | 18            | M8                | 8         | 14               | ✓                 |
| 420823001 | 16             | 23            | M8                | 8         | 14               | ✓                 |
| 420120001 | 18,5           | 20            | M10               | 10        | 16,5             | ✓                 |
| 420125001 | 18,5           | 25            | M10               | 10        | 16,5             | ✓                 |

RAMPA®-Inserts | Type: SK330



| Art. No.  | Outer-Ø D (mm) | Length L (mm) | Threadsize d (mm) | Hex Drive | Pre-Drill Ø (mm) | steel zinc-plated |
|-----------|----------------|---------------|-------------------|-----------|------------------|-------------------|
| 040615001 | 12             | 15            | M6                | 6         | 10,0 - 10,5      | ✓                 |
| 040618001 | 12             | 18            | M6                | 6         | 10,0 - 10,5      | ✓                 |
| 040620001 | 12             | 20            | M6                | 6         | 10,0             | ✓                 |
| 040855001 | 14             | 15            | M8                | 8         | 12,0 - 12,5      | ✓                 |
| 040858001 | 14             | 18            | M8                | 8         | 12,0 - 12,5      | ✓                 |
| 040830001 | 16             | 30            | M8                | 8         | 14,0             | ✓                 |
| 04012007  | 18,5           | 20            | M10               | 10        | 16,5             | ✓                 |

\*1 We hereby inform you according to Article 33 - REACH, that this article contains the following substance identified as SVHC:  
Lead (Pb); CAS: 7439-92-1 Date of Admission: 27.06.2018



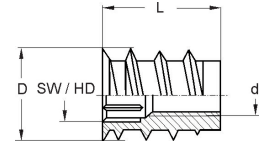
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# THERMOPLASTIC/PE1000

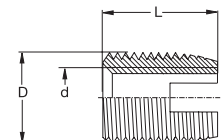
The suitable inserts for thermoplastics / PE1000

RAMPA®-Inserts | Type: SKD30



| Art. No.  | Outer-Ø D (mm) | Length L (mm) | Threadsize d (mm) | Hex Drive | Pre-Drill Ø (mm) | steel zinc-plated |
|-----------|----------------|---------------|-------------------|-----------|------------------|-------------------|
| 439408001 | 8              | 8             | M4                | 4         | 7,0              | ✓                 |
| 439410001 | 8              | 10            | M4                | 4         | 7,0              | ✓                 |
| 439412001 | 8              | 12            | M4                | 4         | 7,0              | ✓                 |
| 439512001 | 10             | 12            | M5                | 5         | 9,0              | ✓                 |
| 439612001 | 12             | 12            | M6                | 6         | 10,0 - 10,5      | ✓                 |
| 439615001 | 12             | 15            | M6                | 6         | 10,0 - 10,5      | ✓                 |
| 439618001 | 12             | 18            | M6                | 6         | 10,0 - 10,5      | ✓                 |
| 439855001 | 14             | 15            | M8                | 8         | 12,0 - 12,5      | ✓                 |
| 439858001 | 14             | 18            | M8                | 8         | 12,0 - 12,5      | ✓                 |

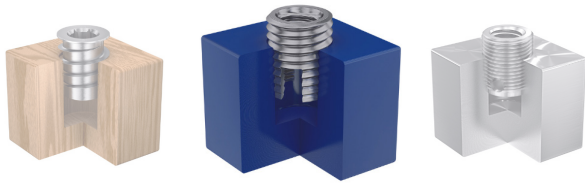
RAMPA®-Inserts | Type: ES



| Art. No. | Outer-Ø D (mm) | Length L (mm) | Thread-size d (mm) | Steel yellow zinc-plated | Steel hardened yellow | Steel hardened blue zinc-plated | Brass plain* | Stainless steel* 1.4305 | Stainless steel* 1.4571 |
|----------|----------------|---------------|--------------------|--------------------------|-----------------------|---------------------------------|--------------|-------------------------|-------------------------|
| 009256__ | 4,5 x 0,5      | 6             | M2,5               |                          | ✓                     | ✓                               |              |                         |                         |
| 009306__ | 5 x 0,5        | 6             | M3                 | ✓                        | ✓                     | ✓                               | ✓            | ✓                       |                         |
| 009308__ | 6 x 0,75       | 8             | M3,5               |                          | ✓                     | ✓                               |              |                         |                         |
| 009408__ | 6,5 x 0,75     | 8             | M4                 | ✓                        | ✓                     | ✓                               | ✓            | ✓                       | ✓                       |
| 009508__ | 8 x 1          | 8             | M5                 | ✓                        | ✓                     | ✓                               | ✓            |                         |                         |
| 009510__ | 8 x 1          | 10            | M5                 | ✓                        | ✓                     | ✓                               | ✓            | ✓                       | ✓                       |
| 009608__ | 9 x 1          | 8             | M6                 | ✓                        | ✓                     | ✓                               | ✓            |                         |                         |
| 009610__ | 9 x 1          | 10            | M6                 | ✓                        | ✓                     | ✓                               | ✓            |                         |                         |
| 009612__ | 9 x 1          | 12            | M6                 | ✓                        | ✓                     | ✓                               | ✓            | ✓                       |                         |

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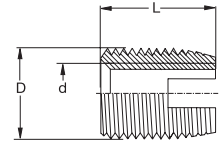
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# THERMOPLASTIC/PE1000

The suitable inserts for thermoplastics / PE1000

RAMPA®-Inserts | Type: ES



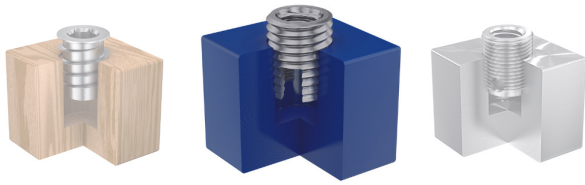
| Art. No. | Outer-Ø D (mm) | Length L (mm) | Thread-size d (mm) | Steel yellow zinc-plated | Steel hardened yellow | Steel hardened blue zinc-plated | Brass plain* | Stainless steel* 1.4305 | Stainless steel* 1.4571 |
|----------|----------------|---------------|--------------------|--------------------------|-----------------------|---------------------------------|--------------|-------------------------|-------------------------|
| 009614__ | 10 x 1,5       | 14            | M6                 | ✓                        | ✓                     | ✓                               | ✓            | ✓                       | ✓                       |
| 009812__ | 12 x 1,5       | 12            | M8                 | ✓                        | ✓                     | ✓                               | ✓            |                         |                         |
| 009815__ | 12 x 1,5       | 15            | M8                 | ✓                        | ✓                     | ✓                               | ✓            | ✓                       | ✓                       |
| 009916__ | 14 x 1,5       | 15            | M10                | ✓                        | ✓                     | ✓                               | ✓            |                         |                         |
| 009918__ | 14 x 1,5       | 18            | M10                | ✓                        | ✓                     | ✓                               | ✓            | ✓                       | ✓                       |
| 009926__ | 16 x 1,5       | 18            | M10                | ✓                        | ✓                     | ✓                               |              |                         |                         |
| 009922__ | 16 x 1,5       | 22            | M12                | ✓                        | ✓                     | ✓                               | ✓            | ✓                       | ✓                       |
| 009924__ | 18 x 1,5       | 24            | M14                |                          | ✓                     |                                 |              | ✓                       |                         |
| 009952__ | 20 x 1,5       | 22            | M16                | ✓                        | ✓                     | ✓                               |              | ✓                       | ✓                       |
| 009207__ | 26 x 1,5       | 27            | M20                |                          | ✓                     | ✓                               |              | ✓                       | ✓                       |
| 009240__ | 30 x 1,5       | 30            | M24                |                          | ✓                     | ✓                               |              |                         |                         |

↑ Please complete

|     |     |     |    |    |    |
|-----|-----|-----|----|----|----|
| 002 | 005 | 061 | 01 | 03 | 07 |
|-----|-----|-----|----|----|----|

\*1 We hereby inform you according to Article 33 - REACH, that this article contains the following substance identified as SVHC:  
Lead (Pb); CAS: 7439-92-1 Date of Admission: 27.06.2018





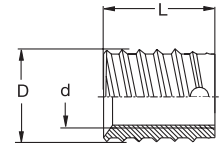
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# THERMOPLASTIC/PE1000

The suitable inserts for thermoplastics / PE1000

RAMPA®-Inserts | Type: BAN/BAV

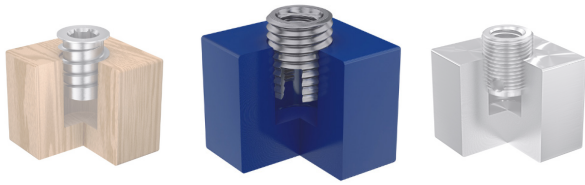


| Art. No. | Type | Outer-Ø<br>D (mm) | Length<br>L (mm) | Threadsize<br>d (mm) | Steel<br>hardened<br>yellow<br>zinc-plated | Steel<br>hardened<br>blue<br>zinc-plated | Stainless<br>steel*<br>1.4305 | Stainless<br>steel*<br>1.4571 |
|----------|------|-------------------|------------------|----------------------|--|--|-------------------------------|-------------------------------|
| 013406__ | BAV  | 6,5 x 0,8         | 6                | M4                   | ✓  | ✓  | ✓                             | ✓                             |
| 014408__ | BAN  | 6,5 x 0,8         | 8                | M4                   | ✓  | ✓  | ✓                             | ✓                             |
| 013507__ | BAV  | 8 x 1             | 7                | M5                   | ✓  | ✓  | ✓                             | ✓                             |
| 014510__ | BAN  | 8 x 1             | 10               | M5                   | ✓  | ✓  | ✓                             | ✓                             |
| 013608__ | BAV  | 10 x 1,25         | 8                | M6                   | ✓  | ✓  | ✓                             | ✓                             |
| 014612__ | BAN  | 10 x 1,25         | 12               | M6                   | ✓  | ✓  | ✓                             | ✓                             |
| 013809__ | BAV  | 12 x 1,5          | 9                | M8                   | ✓  | ✓  | ✓                             | ✓                             |
| 014814__ | BAN  | 12 x 1,5          | 14               | M8                   | ✓  | ✓  | ✓                             | ✓                             |
| 013100__ | BAV  | 14 x 1,5          | 10               | M10                  | ✓  | ✓  | ✓                             | ✓                             |
| 014108__ | BAN  | 14 x 1,5          | 18               | M10                  | ✓  | ✓  | ✓                             | ✓                             |
| 013122__ | BAV  | 16 x 1,75         | 12               | M12                  | ✓  | ✓  |                               |                               |
| 014123__ | BAN  | 16 x 1,75         | 22               | M12                  | ✓  | ✓  |                               |                               |
| 013144__ | BAV  | 18 x 2            | 14               | M14                  | ✓  |  |                               |                               |

↑ Please complete

|     |     |    |    |
|-----|-----|----|----|
| 005 | 061 | 03 | 07 |
|-----|-----|----|----|

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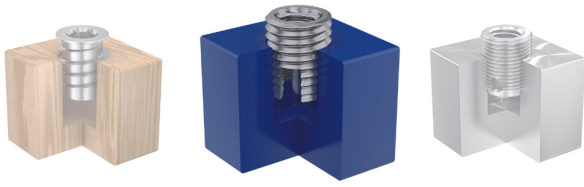
# THERMOPLASTIC/PE1000

## Assembling instructions RAMPA®-Inserts | Type: SKD330, SKD30, ES, BAN/BAV

| Art. No. | Type   | Outer-Ø<br>D (mm) | Length<br>L (mm) | Threadsize<br>d (mm) | Pre-Drill<br>Ø (mm) | Assembling<br>torque (Nm) | Load-carrying<br>capacities (N) |
|----------|--------|-------------------|------------------|----------------------|---------------------|---------------------------|---------------------------------|
| 420615__ | SKD330 | 12                | 15               | M6                   | 10,5                | 5,0                       | 5495                            |
| 420618__ | SKD330 | 12                | 18               | M6                   | 10,5                | 6,5                       | 7006                            |
| 420855__ | SKD330 | 14                | 15               | M8                   | 12,5                | 7,0                       | 6110                            |
| 420858__ | SKD330 | 14                | 18               | M8                   | 12,5                | 8,0                       | 7799                            |
| 040615__ | SK330  | 12                | 15               | M6                   | 10,5                | 5,0                       | 5495                            |
| 040618__ | SK330  | 12                | 18               | M6                   | 10,5                | 6,5                       | 7006                            |
| 040620__ | SK330  | 12                | 30               | M6                   | 10,5                | X                         | X                               |
| 040855__ | SK330  | 14                | 15               | M8                   | 12,5                | 7,0                       | 6110                            |
| 040858__ | SK330  | 14                | 18               | M8                   | 12,5                | 8,0                       | 7799                            |
| 040830__ | SK330  | 16                | 30               | M8                   | 14,5                | X                         | X                               |
| 04012__  | SK330  | 18,5              | 20               | M10                  | 16,5                | X                         | X                               |
| 439408__ | SKD30  | 8                 | 8                | M4                   | 7,0                 | 2,5                       | 5700                            |
| 439410__ | SKD30  | 8                 | 10               | M4                   | 7,0                 | 3,0                       | 7525                            |
| 439612__ | SKD30  | 12                | 12               | M6                   | 10,5                | 3,0                       | 3735                            |
| 439618__ | SKD30  | 12                | 18               | M6                   | 10,5                | 4,5                       | 7344                            |
| 439855__ | SKD30  | 14                | 15               | M8                   | 12,5                | 4,5                       | 5980                            |
| 439858__ | SKD30  | 14                | 18               | M8                   | 12,5                | 5,6                       | 7620                            |
| 009614__ | ES     | 10,0 x 1,5        | 14               | M6                   | 8,5                 | 2,5                       | 4166                            |
| 009812__ | ES     | 12,0 x 1,5        | 12               | M8                   | 10,5                | 4,5                       | 4296                            |
| 009815__ | ES     | 12,0 x 1,5        | 15               | M8                   | 10,5                | 6,0                       | 6439                            |
| 009916__ | ES     | 14,0 x 1,5        | 15               | M10                  | 12,5                | 6,5                       | 6486                            |
| 009918__ | ES     | 14,0 x 1,5        | 18               | M10                  | 12,5                | 7,0                       | 8074                            |
| 009306__ | ES     | 5,0 x 0,5         | 6                | M3                   | 4,5                 | 0,3                       | 197                             |
| 009408__ | ES     | 6,5 x 0,75        | 8                | M4                   | 5,8                 | 1,0                       | 1413                            |
| 009510__ | ES     | 8,0 x 1,0         | 10               | M5                   | 7                   | 2,0                       | 2514                            |
| 009508__ | ES     | 8,0 x 1,0         | 8                | M5                   | 7                   | 1,8                       | 1823                            |
| 009612__ | ES     | 9,0 x 1,0         | 12               | M6                   | 8                   | 2,0                       | 3232                            |
| 009608__ | ES     | 9,0 x 1,0         | 8                | M6                   | 8                   | 1,7                       | 1807                            |

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# THERMOPLASTIC/PE1000

## Assembling instructions RAMPA®-Inserts | Type: SKD330, SKD30, ES, BAN/BAV

| Art. No. | Type | Outer-Ø D (mm) | Length L (mm) | Threadsize d (mm) | Pre-Drill Ø (mm) | Assembling torque (Nm) | Load-carrying capacities (N) |
|----------|------|----------------|---------------|-------------------|------------------|------------------------|------------------------------|
| 013608__ | BAV  | 10,0 x 1,25    | 8             | M6                | 9,5              | 1,7                    | 1653                         |
| 013809__ | BAV  | 12,0 x 1,5     | 9             | M8                | 11               | 2,5                    | 1996                         |
| 013100__ | BAV  | 14,0 x 1,5     | 10            | M10               | 13               | 4,5                    | 2805                         |
| 013406__ | BAV  | 6,5 x 0,8      | 6             | M4                | 6                | 0,3                    | 889                          |
| 013507__ | BAV  | 8,0 x 1,0      | 7             | M5                | 7,5              | 0,8                    | 1089                         |
| 014612__ | BAN  | 10,0 x 1,25    | 12            | M6                | 9,5              | 2,0                    | 3063                         |
| 014814__ | BAN  | 12,0 x 1,5     | 14            | M8                | 11               | 4,5                    | 4316                         |
| 014108__ | BAN  | 14,0 x 1,5     | 18            | M10               | 13               | 8,0                    | 7986                         |
| 014408__ | BAN  | 6,5 x 0,8      | 8             | M4                | 6                | 0,8                    | 1391                         |
| 014510__ | BAN  | 8,0 x 1,0      | 10            | M5                | 7,5              | 1,0                    | 1841                         |

### Recommended RAMPA® assembling tools:

Driver | Type 515  
Hexagonal shank



Driver | Type 504  
DIN 3126 E11.2  
Hexagonal shank



Driver | Type 506  
DIN 3126 E6.3  
Hexagonal shank

