

Cam-Action Indexing Plungers 612 Made from Steel

Material: Steel, burnished, cam-action indexing plunger precision turned and nitrided. Cap: Plastic Thermoplast (polyamide) black, matt finish.

Note: cam-action indexing plungers are used if the plunger pin sometimes needs to be retracted, i.e. must not stick out. Turning the indexing plunger by 180° causes the plunger pin to retract. There is a notched catch to ensure the plunger can be locked in both positions.

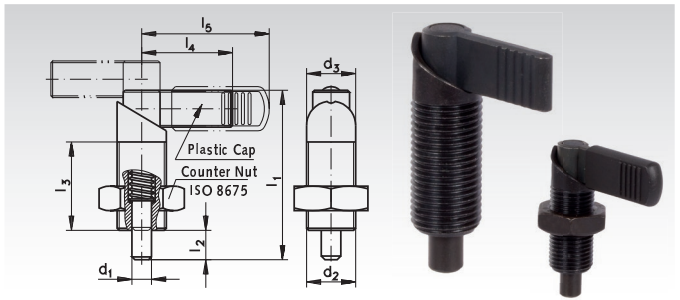
Version A: without counter nut, without plastic cap.

Version B: without counter nut, with plastic cap.

Version AK: with counter nut, without plastic cap.

Version BK: with counter nut, with plastic cap.

Ordering Details: e.g.: Product No. 666 773 00, Indexing Plunger 612, Version A, 5 mm



| Product No. Version A | Product No. Version B | Product No. Version AK | Product No. Version BK | -0,02/-0,04 d ₁ mm | d ₂ mm | d ₃ mm | l ₁ mm | l ₂ mm | l ₃ +1,5 mm | l ₄ mm | l ₅ mm | Spring Load* | | Weight g |
|--------------------------|--------------------------|---------------------------|---------------------------|-------------------------------------|----------------------|----------------------|----------------------|----------------------|---------------------------|----------------------|----------------------|--------------|----------|-------------|
| | | | | | | | | | | | | Initial N | End N | |
| 666 773 00 | 666 783 00 | 666 873 00 | 666 883 00 | 5 | M12 x 1,5 | 12 | 47 | 8 | 26 | 26 | 32 | 9 | 21 | 39 |
| 666 774 00 | 666 784 00 | 666 874 00 | 666 884 00 | 6 | M12 x 1,5 | 12 | 47 | 8 | 26 | 26 | 32 | 9 | 21 | 39 |
| 666 775 00 | 666 785 00 | 666 875 00 | 666 885 00 | 6 | M16 x 1,5 | 16 | 56 | 10 | 30 | 32 | 42 | 12 | 32 | 59 |
| 666 776 00 | 666 786 00 | 666 876 00 | 666 886 00 | 8 | M12 x 1,5 | 12 | 47 | 8 | 26 | 26 | 32 | 9 | 21 | 39 |
| 666 777 00 | 666 787 00 | 666 877 00 | 666 887 00 | 8 | M16 x 1,5 | 16 | 56 | 10 | 30 | 32 | 42 | 12 | 32 | 79 |
| 666 778 00 | 666 788 00 | 666 878 00 | 666 888 00 | 8 | M20 x 1,5 | 20 | 69 | 12 | 36 | 37 | 52 | 21 | 57 | 115 |
| 666 779 00 | 666 789 00 | 666 879 00 | 666 889 00 | 10 | M16 x 1,5 | 16 | 56 | 10 | 30 | 32 | 42 | 12 | 32 | 64 |
| 666 780 00 | 666 790 00 | 666 880 00 | 666 890 00 | 10 | M20 x 1,5 | 20 | 69 | 12 | 36 | 37 | 52 | 21 | 57 | 119 |
| 666 782 00 | 666 792 00 | 666 882 00 | 666 892 00 | 12 | M20 x 1,5 | 20 | 69 | 12 | 36 | 37 | 52 | 21 | 57 | 125 |

* Statistical average.

Cam-Action Indexing Plungers 612 Stainless Steel

Material: Stainless steel 1.4305/1.4404. Tension spring: 1.4310. Plunger pin ground.



Cap: Plastic Thermoplast (polyamide) black, matt finish.

Note: cam-action indexing plungers are used if the plunger pin sometimes needs to be retracted, i.e. must not stick out. Turning the indexing plunger by 180° causes the plunger pin to retract. There is a notched catch to ensure the plunger can be locked in both positions.

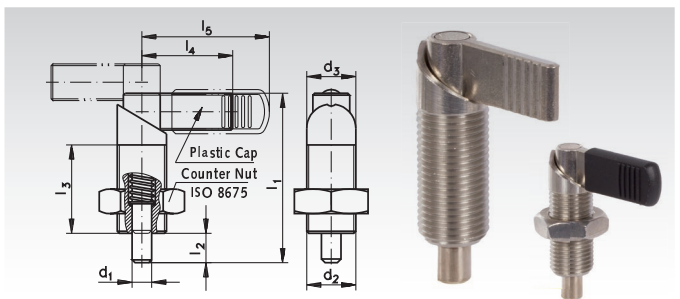
Version A-N: without counter nut, without plastic cap.

Version B-N: without counter nut, with plastic cap.

Version AK-N: with counter nut, without plastic cap.

Version BK-N: with counter nut, with plastic cap.

Ordering Details: e.g.: Product No. 666 997 73, Indexing Plunger 612, Version A-N, 5 mm



| Product No. Version A-N | Product No. Version B-N | Product No. Version AK | Product No. Version BK-N | -0,02/-0,04 d ₁ mm | d ₂ mm | d ₃ mm | l ₁ mm | l ₂ mm | l ₃ mm | l ₄ mm | l ₅ mm | Spring Load* | | Weight g |
|----------------------------|----------------------------|---------------------------|-----------------------------|-------------------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|--------------|----------|-------------|
| | | | | | | | | | | | | Initial N | End N | |
| 666 997 73 | 666 997 83 | 666 998 73 | 666 998 83 | 5 | M12 x 1,5 | 12 | 47 | 8 | 26 | 26 | 32 | 9 | 21 | 39 |
| 666 997 74 | 666 997 84 | 666 998 74 | 666 998 84 | 6 | M12 x 1,5 | 12 | 47 | 8 | 26 | 26 | 32 | 9 | 21 | 39 |
| 666 997 75 | 666 997 85 | 666 998 75 | 666 998 85 | 6 | M16 x 1,5 | 16 | 56 | 10 | 30 | 32 | 42 | 12 | 32 | 59 |
| 666 997 76 | 666 997 86 | 666 998 76 | 666 998 86 | 8 | M12 x 1,5 | 12 | 47 | 8 | 26 | 26 | 32 | 9 | 21 | 39 |
| 666 997 77 | 666 997 87 | 666 998 77 | 666 998 87 | 8 | M16 x 1,5 | 16 | 56 | 10 | 30 | 32 | 42 | 12 | 32 | 79 |
| 666 997 78 | 666 997 88 | 666 998 78 | 666 998 88 | 8 | M20 x 1,5 | 20 | 69 | 12 | 36 | 37 | 52 | 21 | 57 | 115 |
| 666 997 79 | 666 997 89 | 666 998 79 | 666 998 89 | 10 | M16 x 1,5 | 16 | 56 | 10 | 30 | 32 | 42 | 12 | 32 | 64 |
| 666 997 80 | 666 997 90 | 666 998 80 | 666 998 90 | 10 | M20 x 1,5 | 20 | 69 | 12 | 36 | 37 | 52 | 21 | 57 | 119 |
| 666 997 82 | 666 997 92 | 666 998 82 | 666 998 92 | 12 | M20 x 1,5 | 20 | 69 | 12 | 36 | 37 | 52 | 21 | 57 | 125 |

* Statistical average.

Loctite thread locking and bonding products page 811.

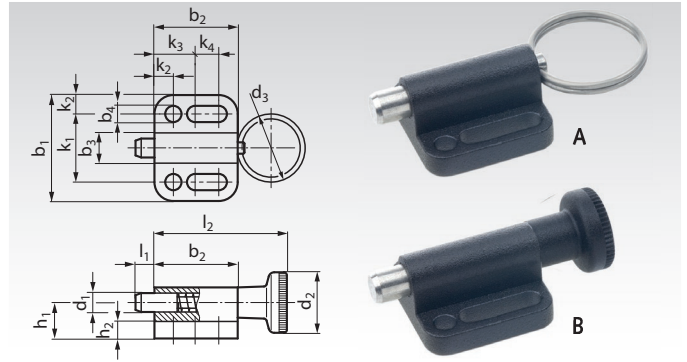
Indexing Plungers 417, without Rest Position

Material: Housing zinc die-cast, plastic coated black, textured finish. Plunger pin: Stainless steel 1.4305. Spring and lifting ring (type A): Stainless steel 1.4310. Knob (type B): Plastic (Polyamide PA) black, matt finish, not removable.

Indexing Plungers without rest position are used where, on releasing the knob or lifting ring, the plunger pin should be returned to its initial position by the spring force.

Type A: without rest position, with lifting ring.

Type B: without rest position, with knob.



Ordering Details: e.g.: Product No. 666 680 04, Indexing Plunger 417 type A, 4mm

| Product No. | Type | d ₁ mm | d ₂ mm | d ₃ mm | b ₁ mm | b ₂ mm | b ₃ mm | b ₄ mm | h ₁ mm | h ₂ mm | k ₁ mm | k ₂ mm | k ₃ mm | k ₄ mm | l ₁ mm | l ₂ mm | Spring Load* | | Weight g |
|-------------|------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|--------------|----------|-------------|
| | | | | | | | | | | | | | | | | | Initial N | End N | |
| 666 680 04 | A | 4 | - | 14 | 22 | 16,5 | 6 | 3,3 | 7,0 | 4 | 14 | 4 | 8 | 4,5 | 4 | - | 3 | 12 | 11 |
| 666 680 05 | A | 5 | - | 18 | 28 | 22 | 8 | 4,3 | 9,5 | 4,5 | 18 | 5 | 10 | 7 | 5 | - | 5 | 24 | 22 |
| 666 680 06 | A | 6 | - | 24 | 32 | 27,5 | 10 | 5,4 | 10,5 | 5 | 21 | 5,5 | 12 | 10 | 6 | - | 5 | 21 | 36 |
| 666 680 08 | A | 8 | - | 30 | 34 | 33 | 12 | 5,4 | 12,5 | 6 | 23 | 5,5 | 12 | 15,5 | 8 | - | 6 | 22 | 58 |
| 666 680 10 | A | 10 | - | 30 | 39 | 35 | 14,5 | 6,5 | 14,5 | 6 | 27 | 6 | 15 | 13,5 | 10 | - | 4 | 25 | 83 |
| 666 681 04 | B | 4 | 12 | - | 22 | 16,5 | 6 | 3,3 | 7,0 | 4 | 14 | 4 | 8 | 4,5 | 4 | 26,5 | 3 | 12 | 11 |
| 666 681 05 | B | 5 | 16 | - | 28 | 22 | 8 | 4,3 | 9,5 | 4,5 | 18 | 5 | 10 | 7 | 5 | 35 | 5 | 24 | 22 |
| 666 681 06 | B | 6 | 18 | - | 32 | 27,5 | 10 | 5,4 | 10,5 | 5 | 21 | 5,5 | 12 | 10 | 6 | 43 | 5 | 21 | 37 |
| 666 681 08 | B | 8 | 21 | - | 34 | 33 | 12 | 5,4 | 12,5 | 6 | 23 | 5,5 | 12 | 15,5 | 8 | 51 | 6 | 22 | 59 |
| 666 681 10 | B | 10 | 25 | - | 39 | 35 | 14,5 | 6,5 | 14,5 | 6 | 27 | 6 | 15 | 13,5 | 10 | 57,5 | 4 | 25 | 90 |

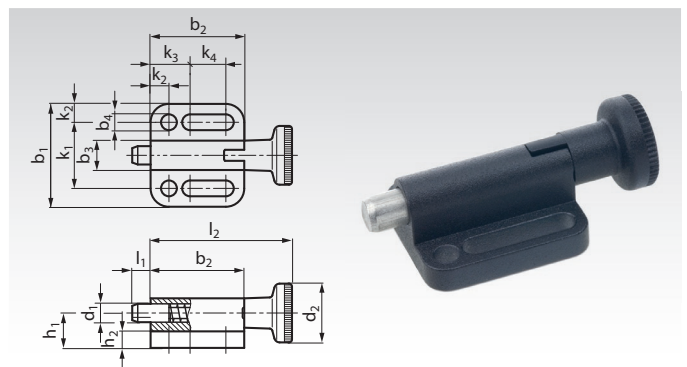
* Statistical average.

Indexing Plungers 417, with Rest Position

Material: Housing zinc die-cast, plastic coated black, textured finish. Plunger pin: Stainless steel 1.4305. Spring: Stainless steel 1.4310. Knob: Plastic (Polyamide PA) black, matt finish, not removable.

Indexing Plungers with rest position are used where the pin has to remain in retracted position. To achieve this, the knob is rotated by 90 degrees after being retracted. A notched catch stops the locked-in knob from returning to its initial position accidentally or due to vibration.

Type C: with rest position, with knob.



Ordering Details: e.g.: Product No. 666 682 04, Indexing Plunger 417 type C, 4mm

| Product No. | Type | d ₁ mm | d ₂ mm | b ₁ mm | b ₂ mm | b ₃ mm | b ₄ mm | h ₁ mm | h ₂ mm | k ₁ mm | k ₂ mm | k ₃ mm | k ₄ mm | l ₁ mm | l ₂ mm | Spring Load* | | Weight g |
|-------------|------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|--------------|----------|-------------|
| | | | | | | | | | | | | | | | | Initial N | End N | |
| 666 682 04 | C | 4 | 12 | 22 | 19 | 6 | 3,3 | 7 | 4 | 14 | 4 | 8 | 7 | 4 | 29 | 3 | 12 | 10 |
| 666 682 05 | C | 5 | 16 | 28 | 25,5 | 8 | 4,3 | 9,5 | 4,5 | 18 | 5 | 10 | 10,5 | 5 | 38,5 | 5 | 24 | 25 |
| 666 682 06 | C | 6 | 18 | 32 | 30,5 | 10 | 5,4 | 10,5 | 5 | 21 | 5,5 | 12 | 13 | 6 | 46 | 5 | 21 | 41 |
| 666 682 08 | C | 8 | 21 | 34 | 37,5 | 12 | 5,4 | 12,5 | 6 | 23 | 5,5 | 12 | 20 | 8 | 55,5 | 6 | 22 | 66 |
| 666 682 10 | C | 10 | 25 | 39 | 40 | 14,5 | 6,5 | 14,5 | 6 | 27 | 6 | 15 | 18,5 | 10 | 62,5 | 4 | 25 | 98 |

* Statistical average.

Indexing Plungers 717, Steel and Stainless Steel, without Rest Position

Material Standard Version: Body zinc plated, blue passivated.

Material Stainless Version: Body stainless steel 1.4305.

Both versions: Plunger pin stainless steel 1.4305. Spring and lifting ring (type A/K) stainless steel 1.4310. Knob (type B/BK) plastic (Polyamide PA) black, matt finish, not removable.



Indexing plungers 717 are reasonably priced, with small dimensions, for applications where high precision indexing is not required.

Indexing Plungers without rest position are used where, on releasing the knob or lifting ring, the plunger pin should be returned to its initial position by the spring force.

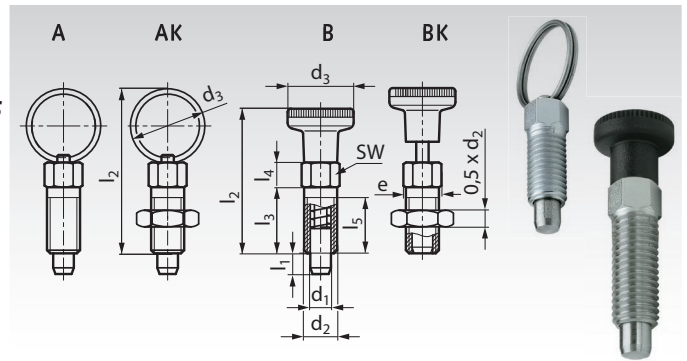
During assembly, do not exceed the fastening torque TA.

Type A: without rest position, with lifting ring, without counter nut.

Type AK: without rest position, with lifting ring, with counter nut.

Type B: without rest position, with knob, without counter nut.

Type BK: without rest position, with knob, with counter nut.



Type A: without rest position, with lifting ring, without counter nut.

Type AK: without rest position, with lifting ring, with counter nut.

Type B: without rest position, with knob, without counter nut.

Type BK: without rest position, with knob, with counter nut.

Ordering Details: e.g.: Product No. 666 717 01, Indexing Plunger 717 type A, 3mm

| Product No. Standard | Product No. Stainless | Type | d ₁ mm | l ₁ min. mm | d ₂ mm | d ₃ mm | e mm | l ₂ max. mm | l ₃ mm | l ₄ mm | l ₅ mm | sw mm | T _A ** Nm | Spring Load* | | Weight g |
|----------------------|-----------------------|------|-------------------|------------------------|-------------------|-------------------|------|------------------------|-------------------|-------------------|-------------------|-------|----------------------|--------------|-------|----------|
| | | | | | | | | | | | | | | Initial N | End N | |
| 666 717 01 | 666 718 01 | A | 3 | 3,5 | M6 | 14 | 6,9 | 30,5 | 12 | 4,5 | 10 | 6 | 2 | 3 | 12 | 3,5 |
| 666 717 02 | 666 718 02 | A | 3 | 3,5 | M6 x 0,75 | 14 | 6,9 | 30,5 | 12 | 4,5 | 10 | 6 | 3 | 3 | 12 | 3,6 |
| 666 717 03 | 666 718 03 | A | 4 | 4 | M6 | 14 | 6,9 | 30,5 | 12 | 4,5 | 10 | 6 | 2 | 3 | 12 | 4 |
| 666 717 04 | 666 718 04 | A | 4 | 4,5 | M8 x 1 | 18 | 9,2 | 40 | 16 | 6 | 13,5 | 8 | 8 | 5 | 24 | 8,4 |
| 666 717 05 | 666 718 05 | A | 5 | 5 | M8 | 18 | 9,2 | 40 | 16 | 6 | 13,5 | 8 | 7 | 5 | 24 | 8 |
| 666 717 06 | 666 718 06 | A | 5 | 5 | M8 x 1 | 18 | 9,2 | 40 | 16 | 6 | 13,5 | 8 | 7 | 5 | 24 | 13 |
| 666 717 07 | 666 718 07 | A | 5 | 5 | M10 x 1 | 18 | 11,5 | 40 | 16 | 6 | 13,5 | 10 | 22 | 5 | 24 | 12,8 |
| 666 717 08 | 666 718 08 | A | 6 | 6 | M10 | 24 | 11,5 | 51,5 | 20 | 7,5 | 17 | 10 | 15 | 5 | 21 | 17 |
| 666 717 09 | 666 718 09 | A | 6 | 6 | M12 x 1,5 | 24 | 13,8 | 63 | 24 | 9 | 20,5 | 12 | 38 | 5 | 21 | 23 |
| 666 717 10 | 666 718 10 | A | 8 | 8 | M12 | 30 | 13,8 | 63 | 24 | 9 | 20,5 | 12 | 20 | 6 | 22 | 30 |
| 666 717 11 | 666 718 11 | A | 8 | 8 | M12 x 1,5 | 30 | 13,8 | 63 | 24 | 9 | 20,5 | 12 | 20 | 6 | 22 | 30 |
| 666 717 12 | 666 718 12 | A | 8 | 8 | M16 x 1,5 | 30 | 19,6 | 63 | 24 | 9 | 20,5 | 17 | 80 | 6 | 22 | 54 |
| 666 717 13 | 666 718 13 | A | 10 | 10 | M16 x 1,5 | 30 | 19,6 | 65 | 26 | 9 | 22,5 | 17 | 80 | 4 | 27 | 55 |
| 666 717 14 | 666 718 14 | AK | 3 | 3,5 | M6 | 14 | 6,9 | 30,5 | 12 | 4,5 | 10 | 6 | 2 | 3 | 12 | 3 |
| 666 717 15 | 666 718 15 | AK | 3 | 3,5 | M6 x 0,75 | 14 | 6,9 | 30,5 | 12 | 4,5 | 10 | 6 | 3 | 3 | 12 | 3,4 |
| 666 717 16 | 666 718 16 | AK | 4 | 4 | M6 | 14 | 6,9 | 30,5 | 12 | 4,5 | 10 | 6 | 2 | 3 | 12 | 5 |
| 666 717 17 | 666 718 17 | AK | 4 | 4,5 | M8 x 1 | 18 | 9,2 | 40 | 16 | 6 | 13,5 | 8 | 8 | 5 | 24 | 10 |
| 666 717 18 | 666 718 18 | AK | 5 | 5 | M8 | 18 | 9,2 | 40 | 16 | 6 | 13,5 | 8 | 7 | 5 | 24 | 11 |
| 666 717 19 | 666 718 19 | AK | 5 | 5 | M8 x 1 | 18 | 9,2 | 40 | 16 | 6 | 13,5 | 8 | 7 | 5 | 24 | 13 |
| 666 717 20 | 666 718 20 | AK | 5 | 5 | M10 x 1 | 18 | 11,5 | 40 | 16 | 6 | 13,5 | 10 | 22 | 5 | 24 | 18 |
| 666 717 21 | 666 718 21 | AK | 6 | 6 | M10 | 24 | 11,5 | 51,5 | 20 | 7,5 | 17 | 10 | 15 | 5 | 21 | 22 |
| 666 717 22 | 666 718 22 | AK | 6 | 6 | M12 x 1,5 | 24 | 13,8 | 63 | 24 | 9 | 20,5 | 12 | 38 | 5 | 21 | 30 |
| 666 717 23 | 666 718 23 | AK | 8 | 8 | M12 | 30 | 13,8 | 63 | 24 | 9 | 20,5 | 12 | 20 | 6 | 22 | 39 |
| 666 717 24 | 666 718 24 | AK | 8 | 8 | M12 x 1,5 | 30 | 13,8 | 63 | 24 | 9 | 20,5 | 12 | 20 | 6 | 22 | 39 |
| 666 717 25 | 666 718 25 | AK | 8 | 8 | M16 x 1,5 | 30 | 19,6 | 63 | 24 | 9 | 20,5 | 17 | 80 | 6 | 22 | 70 |
| 666 717 26 | 666 718 26 | AK | 10 | 10 | M16 x 1,5 | 30 | 19,6 | 65 | 26 | 9 | 22,5 | 17 | 80 | 4 | 27 | 80 |
| 666 717 27 | 666 718 27 | B | 3 | 3,5 | M6 | 12 | 6,9 | 26,5 | 12 | 4,5 | 10 | 6 | 2 | 3 | 12 | 3 |
| 666 717 28 | 666 718 28 | B | 3 | 3,5 | M6 x 0,75 | 12 | 6,9 | 26,5 | 12 | 4,5 | 10 | 6 | 3 | 3 | 12 | 3,8 |
| 666 717 29 | 666 718 29 | B | 4 | 4 | M6 | 12 | 6,9 | 26,5 | 12 | 4,5 | 10 | 6 | 2 | 3 | 12 | 3,9 |
| 666 717 30 | 666 718 30 | B | 4 | 4,5 | M8 x 1 | 16 | 9,2 | 35 | 16 | 6 | 13,5 | 8 | 8 | 5 | 24 | 9 |
| 666 717 31 | 666 718 31 | B | 5 | 5 | M8 | 16 | 9,2 | 35 | 16 | 6 | 13,5 | 8 | 7 | 5 | 24 | 9 |
| 666 717 32 | 666 718 32 | B | 5 | 5 | M8 x 1 | 16 | 9,2 | 35 | 16 | 6 | 13,5 | 8 | 7 | 5 | 24 | 9,3 |
| 666 717 33 | 666 718 33 | B | 5 | 5 | M10 x 1 | 18 | 11,5 | 37,5 | 16 | 6 | 13,5 | 10 | 22 | 5 | 24 | 14 |
| 666 717 34 | 666 718 34 | B | 6 | 6 | M10 | 18 | 11,5 | 43 | 20 | 7,5 | 17 | 10 | 15 | 5 | 21 | 18 |
| 666 717 35 | 666 718 35 | B | 6 | 6 | M12 x 1,5 | 21 | 13,8 | 46 | 20 | 7,5 | 16,5 | 12 | 38 | 5 | 21 | 26 |
| 666 717 36 | 666 718 36 | B | 8 | 8 | M12 | 21 | 13,8 | 51 | 24 | 9 | 20,5 | 12 | 20 | 6 | 22 | 31 |
| 666 717 37 | 666 718 37 | B | 8 | 8 | M12 x 1,5 | 21 | 13,8 | 51 | 24 | 9 | 20,5 | 12 | 20 | 6 | 22 | 31 |
| 666 717 38 | 666 718 38 | B | 8 | 8 | M16 x 1,5 | 25 | 19,6 | 55,5 | 24 | 9 | 20,5 | 17 | 80 | 6 | 22 | 54 |
| 666 717 39 | 666 718 39 | B | 10 | 10 | M16 x 1,5 | 25 | 19,6 | 57,5 | 26 | 9 | 22,5 | 17 | 80 | 4 | 27 | 18 |
| 666 717 40 | 666 718 40 | BK | 3 | 3,5 | M6 | 12 | 6,9 | 26,5 | 12 | 4,5 | 10 | 6 | 2 | 3 | 12 | 5 |
| 666 717 41 | 666 718 41 | BK | 3 | 3,5 | M6 x 0,75 | 12 | 6,9 | 26,5 | 12 | 4,5 | 10 | 6 | 3 | 3 | 12 | 5,3 |
| 666 717 42 | 666 718 42 | BK | 4 | 4 | M6 | 12 | 6,9 | 26,5 | 12 | 4,5 | 10 | 6 | 2 | 3 | 12 | 5 |
| 666 717 43 | 666 718 43 | BK | 4 | 4,5 | M8 x 1 | 16 | 9,2 | 35 | 16 | 6 | 13,5 | 8 | 8 | 5 | 24 | 10 |
| 666 717 44 | 666 718 44 | BK | 5 | 5 | M8 | 16 | 9,2 | 35 | 16 | 6 | 13,5 | 8 | 7 | 5 | 24 | 12 |
| 666 717 45 | 666 718 45 | BK | 5 | 5 | M8 x 1 | 16 | 9,2 | 35 | 16 | 6 | 13,5 | 8 | 7 | 5 | 24 | 12 |
| 666 717 46 | 666 718 46 | BK | 5 | 5 | M10 x 1 | 18 | 11,5 | 37,5 | 16 | 6 | 13,5 | 10 | 22 | 5 | 24 | 20 |
| 666 717 47 | 666 718 47 | BK | 6 | 6 | M10 | 18 | 11,5 | 43 | 20 | 7,5 | 17 | 10 | 15 | 5 | 21 | 23 |
| 666 717 48 | 666 718 48 | BK | 6 | 6 | M12 x 1,5 | 21 | 13,8 | 46 | 20 | 7,5 | 16,5 | 12 | 38 | 5 | 21 | 35 |
| 666 717 49 | 666 718 49 | BK | 8 | 8 | M12 | 21 | 13,8 | 51 | 24 | 9 | 20,5 | 12 | 20 | 6 | 22 | 40 |
| 666 717 50 | 666 718 50 | BK | 8 | 8 | M12 x 1,5 | 21 | 13,8 | 51 | 24 | 9 | 20,5 | 12 | 20 | 6 | 22 | 40 |
| 666 717 51 | 666 718 51 | BK | 8 | 8 | M16 x 1,5 | 25 | 19,6 | 55,5 | 24 | 9 | 20,5 | 17 | 80 | 6 | 22 | 70 |
| 666 717 52 | 666 718 52 | BK | 10 | 10 | M16 x 1,5 | 25 | 19,6 | 57,5 | 26 | 9 | 22,5 | 17 | 80 | 4 | 27 | 76 |

* Statistical average.

** Fastening torque during assembly.

Indexing Plungers 717, Steel and Stainless Steel, with Rest Position

Material Standard Version: Body zinc plated, blue passivated.

Material Stainless Version: Body stainless steel 1.4305.

Both versions: Plunger pin stainless steel 1.4305. Spring stainless steel 1.4310. Knob (type B/BK) plastic (Polyamide PA) black, matt finish, not removable.

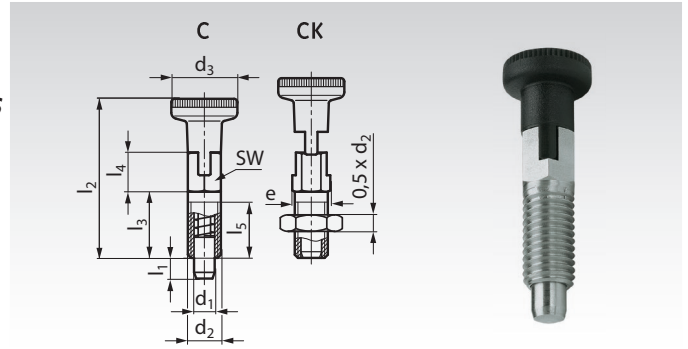


Indexing plungers 717 are reasonably priced, with small dimensions, for applications where high precision indexing is not required.

Indexing Plungers with rest position are used where the pin has to remain in retracted position. To achieve this, the knob is rotated by 90 degrees after being retracted. A notched catch stops the locked-in knob from returning to its initial position accidentally or due to vibration.

Type C: with rest position, with knob, without counter nut.

Type CK: with rest position, with knob ring, with counter nut.



Type C: with rest position, with knob, without counter nut.
Type CK: with rest position, with knob, with counter nut.

Ordering Details: e.g.: Product No. 666 717 53, Indexing Plunger 717 type C, 3mm

| Product No. Standard | Product No. Stainless | Type | d ₁ mm | l _{1 min.} mm | d ₂ mm | d ₃ mm | e mm | l _{2 max.} mm | l ₃ mm | l ₄ mm | l ₅ mm | sw mm | T _A ** Nm | Spring Load* | | Weight g |
|----------------------|-----------------------|------|-------------------|------------------------|-------------------|-------------------|------|------------------------|-------------------|-------------------|-------------------|-------|----------------------|--------------|-------|----------|
| | | | | | | | | | | | | | | Initial N | End N | |
| 666 717 53 | 666 718 53 | C | 3 | 3,5 | M6 | 12 | 6,9 | 29 | 12 | 7 | 10 | 6 | 2 | 3 | 12 | 4 |
| 666 717 54 | 666 718 54 | C | 3 | 3,5 | M6 x 0,75 | 12 | 6,9 | 29 | 12 | 7 | 10 | 6 | 3 | 3 | 12 | 4 |
| 666 717 55 | 666 718 55 | C | 4 | 4 | M6 | 12 | 6,9 | 29 | 12 | 7 | 10 | 6 | 2 | 3 | 12 | 4 |
| 666 717 56 | 666 718 56 | C | 4 | 4,5 | M8 x 1 | 16 | 9,2 | 38,5 | 16 | 9,5 | 13,5 | 8 | 8 | 5 | 24 | 10 |
| 666 717 57 | 666 718 57 | C | 5 | 5 | M8 | 16 | 9,2 | 38,5 | 16 | 9,5 | 13,5 | 8 | 7 | 5 | 24 | 10 |
| 666 717 58 | 666 718 58 | C | 5 | 5 | M8 x 1 | 16 | 9,2 | 38,5 | 16 | 9,5 | 13,5 | 8 | 7 | 5 | 24 | 10 |
| 666 717 59 | 666 718 59 | C | 5 | 5 | M10 x 1 | 18 | 11,5 | 41 | 16 | 10 | 13,5 | 10 | 22 | 5 | 24 | 16 |
| 666 717 60 | 666 718 60 | C | 6 | 6 | M10 | 18 | 11,5 | 46 | 20 | 10,5 | 17 | 10 | 15 | 5 | 21 | 19 |
| 666 717 61 | 666 718 61 | C | 6 | 6 | M12 x 1,5 | 21 | 13,8 | 49 | 20 | 11 | 16,5 | 12 | 38 | 5 | 21 | 27 |
| 666 717 62 | 666 718 62 | C | 8 | 8 | M12 | 21 | 13,8 | 55,5 | 24 | 13,5 | 20,5 | 12 | 20 | 6 | 22 | 34 |
| 666 717 63 | 666 718 63 | C | 8 | 8 | M12 x 1,5 | 21 | 13,8 | 55,5 | 24 | 13,5 | 20,5 | 12 | 20 | 6 | 22 | 57 |
| 666 717 64 | 666 718 64 | C | 8 | 8 | M16 x 1,5 | 25 | 19,6 | 60 | 24 | 13,5 | 20,5 | 17 | 80 | 6 | 22 | 60 |
| 666 717 65 | 666 718 65 | C | 10 | 10 | M16 x 1,5 | 25 | 19,6 | 62,5 | 26 | 14 | 22,5 | 17 | 80 | 4 | 27 | 66 |
| 666 717 66 | 666 718 66 | CK | 3 | 3,5 | M6 | 12 | 6,9 | 29 | 12 | 7 | 10 | 6 | 2 | 3 | 12 | 17 |
| 666 717 67 | 666 718 67 | CK | 3 | 3,5 | M6 x 0,75 | 12 | 6,9 | 29 | 12 | 7 | 10 | 6 | 3 | 3 | 12 | 6 |
| 666 717 68 | 666 718 68 | CK | 4 | 4 | M6 | 12 | 6,9 | 29 | 12 | 7 | 10 | 6 | 2 | 3 | 12 | 5 |
| 666 717 69 | 666 718 69 | CK | 4 | 4,5 | M8 x 1 | 16 | 9,2 | 38,5 | 16 | 9,5 | 13,5 | 8 | 8 | 5 | 24 | 20 |
| 666 717 70 | 666 718 70 | CK | 5 | 5 | M8 | 16 | 9,2 | 38,5 | 16 | 9,5 | 13,5 | 8 | 7 | 5 | 24 | 13 |
| 666 717 71 | 666 718 71 | CK | 5 | 5 | M8 x 1 | 16 | 9,2 | 38,5 | 16 | 9,5 | 13,5 | 8 | 7 | 5 | 24 | 13 |
| 666 717 72 | 666 718 72 | CK | 5 | 5 | M10 x 1 | 18 | 11,5 | 41 | 16 | 10 | 13,5 | 10 | 22 | 5 | 24 | 20 |
| 666 717 73 | 666 718 73 | CK | 6 | 6 | M10 | 18 | 11,5 | 46 | 20 | 10,5 | 17 | 10 | 15 | 5 | 21 | 24 |
| 666 717 74 | 666 718 74 | CK | 6 | 6 | M12 x 1,5 | 21 | 13,8 | 49 | 20 | 11 | 16,5 | 12 | 38 | 5 | 21 | 20 |
| 666 717 75 | 666 718 75 | CK | 8 | 8 | M12 | 21 | 13,8 | 55,5 | 24 | 13,5 | 20,5 | 12 | 20 | 6 | 22 | 44 |
| 666 717 76 | 666 718 76 | CK | 8 | 8 | M12 x 1,5 | 21 | 13,8 | 55,5 | 24 | 13,5 | 20,5 | 12 | 20 | 6 | 22 | 57 |
| 666 717 77 | 666 718 77 | CK | 8 | 8 | M16 x 1,5 | 25 | 19,6 | 60 | 24 | 13,5 | 20,5 | 17 | 80 | 6 | 22 | 79 |
| 666 717 78 | 666 718 78 | CK | 10 | 10 | M16 x 1,5 | 25 | 19,6 | 62,5 | 26 | 14 | 22,5 | 17 | 80 | 4 | 27 | 84 |

* Statistical average.

** Fastening torque during assembly.

Indexing Plungers 817, Steel and Stainless Steel

Material Steel Version: Steel burnished. Plunger pin: Hardened.
Material Stainless Steel Version: Stainless steel 1.4305. Plunger pin nickel plated. Knob: Plastic Thermoplast (polyamide) black, matt finish, cannot be disassembled.

Indexing plunger 817 offer the following advantages:

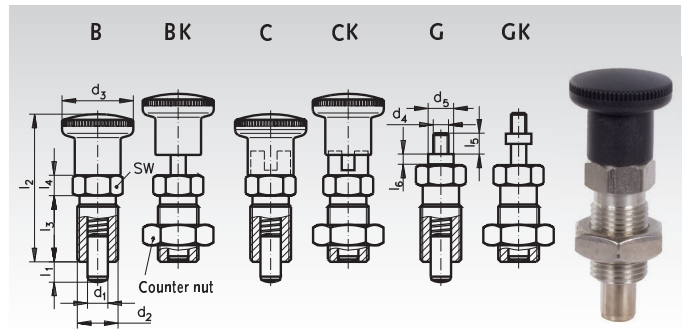
- small outer dimensions.
- most of the release mechanism (version C/CK) is covered.
- defined thread length by an undercut at the end of the thread (version G/GK).



Version B/BK with knob, without notched catch, this version is used where, on releasing the knob, the plunger pin should be returned to its initial position by the spring force.

Version C/CK with knob, is used if the plunger pin has to remain in retracted position. To achieve this, the knob is rotated by 90 degrees after being retracted. A notched catch stops the locked-in knob from returning to its initial position accidentally or due to vibration.

Version G/GK with threaded plunger end, for applications where a special knob to customer's request is required or where the plunger pin is not shifted manually.



- Version B: with knob, without counter nut.
- Version BK: with knob, with counter nut.
- Version C: with indexing knob, without counter nut.
- Version CK: with indexing knob, with counter nut.
- Version G: with threaded bolt, without counter nut.
- Version GK: with threaded bolt, with counter nut.

| Product No. Steel | Product No. Stainless Steel | Version | -0.02/-0.04 | | d ₂ mm | d ₃ mm | d ₄ mm | d ₅ mm | l ₂ mm | l ₃ mm | l ₄ mm | l ₅ mm | l ₆ mm | SW mm | Spring Load* | | Weight g |
|----------------------|--------------------------------|---------|----------------------|---------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------|--------------|----------|-------------|
| | | | d ₁ mm | l ₁ min. mm | | | | | | | | | | | Initial N | End N | |
| 666 684 00 | 666 996 84 | B | 4 | 4 | M8x1 | 16 | - | - | 35 | 16 | 5 | - | - | 10 | 4,0 | 12,0 | 11,0 |
| 666 685 00 | 666 996 85 | B | 5 | 5 | M10x1 | 19 | - | - | 40 | 18 | 6 | - | - | 12 | 5,0 | 15,0 | 18,0 |
| 666 686 00 | 666 996 86 | B | 6 | 6 | M12x1,5 | 23 | - | - | 48 | 22 | 6 | - | - | 14 | 6,0 | 19,0 | 29,0 |
| 666 687 00 | 666 996 87 | B | 8 | 8 | M16x1,5 | 28 | - | - | 58 | 26 | 8 | - | - | 17 | 8,5 | 26,0 | 63,0 |
| 666 690 00 | 666 996 90 | B | 10 | 12 | M16x1,5 | 28 | - | - | 58 | 26 | 8 | - | - | 17 | 9,5 | 38,0 | 64,0 |
| 666 694 00 | 666 996 94 | BK | 4 | 4 | M8x1 | 16 | - | - | 35 | 16 | 5 | - | - | 10 | 4,0 | 12,0 | 13,8 |
| 666 695 00 | 666 996 95 | BK | 5 | 5 | M10x1 | 19 | - | - | 40 | 18 | 6 | - | - | 12 | 5,0 | 15,0 | 25,0 |
| 666 696 00 | 666 996 96 | BK | 6 | 6 | M12x1,5 | 23 | - | - | 48 | 22 | 6 | - | - | 14 | 6,0 | 19,0 | 39,0 |
| 666 698 00 | 666 996 98 | BK | 8 | 8 | M16x1,5 | 28 | - | - | 58 | 26 | 8 | - | - | 17 | 8,5 | 26,0 | 83,0 |
| 666 700 00 | 666 997 00 | BK | 10 | 12 | M16x1,5 | 28 | - | - | 58 | 26 | 8 | - | - | 17 | 9,5 | 38,0 | 79,8 |
| 666 704 00 | 666 997 04 | C | 4 | 4 | M8x1 | 16 | - | - | 35 | 16 | 5 | - | - | 10 | 4,0 | 12,0 | 13,0 |
| 666 705 00 | 666 997 05 | C | 5 | 5 | M10x1 | 19 | - | - | 40 | 18 | 6 | - | - | 12 | 5,0 | 15,0 | 21,0 |
| 666 706 00 | 666 997 06 | C | 6 | 6 | M12x1,5 | 23 | - | - | 48 | 22 | 6 | - | - | 14 | 6,0 | 19,0 | 33,0 |
| 666 708 00 | 666 997 08 | C | 8 | 8 | M16x1,5 | 28 | - | - | 58 | 26 | 8 | - | - | 17 | 8,5 | 26,0 | 66,5 |
| 666 710 00 | 666 997 10 | C | 10 | 12 | M16x1,5 | 28 | - | - | 58 | 26 | 8 | - | - | 17 | 9,5 | 38,0 | 69,6 |
| 666 714 00 | 666 997 14 | CK | 4 | 4 | M8x1 | 16 | - | - | 35 | 16 | 5 | - | - | 10 | 4,0 | 12,0 | 15,8 |
| 666 715 00 | 666 997 15 | CK | 5 | 5 | M10x1 | 19 | - | - | 40 | 18 | 6 | - | - | 12 | 5,0 | 15,0 | 28,0 |
| 666 716 00 | 666 997 16 | CK | 6 | 6 | M12x1,5 | 23 | - | - | 48 | 22 | 6 | - | - | 14 | 6,0 | 19,0 | 43,0 |
| 666 718 00 | 666 997 18 | CK | 8 | 8 | M16x1,5 | 28 | - | - | 58 | 26 | 8 | - | - | 17 | 8,5 | 26,0 | 86,5 |
| 666 720 00 | 666 997 20 | CK | 10 | 12 | M16x1,5 | 28 | - | - | 58 | 26 | 8 | - | - | 17 | 9,5 | 38,0 | 85,0 |
| 666 734 00 | 666 997 34 | G | 4 | 4 | M8x1 | - | M3 | 7 | - | 16 | 5 | 4,5 | 2,5 | 10 | 4,0 | 12,0 | 9,8 |
| 666 735 00 | 666 997 35 | G | 5 | 5 | M10x1 | - | M4 | 8 | - | 18 | 6 | 5,5 | 3,0 | 12 | 5,0 | 15,0 | 15,8 |
| 666 736 00 | 666 997 36 | G | 6 | 6 | M12x1,5 | - | M5 | 9 | - | 22 | 6 | 7,0 | 3,5 | 14 | 6,0 | 19,0 | 25,3 |
| 666 738 00 | 666 997 38 | G | 8 | 8 | M16x1,5 | - | M6 | 10 | - | 26 | 8 | 8,5 | 4,0 | 17 | 8,5 | 26,0 | 53,9 |
| 666 740 00 | 666 997 40 | G | 10 | 12 | M16x1,5 | - | M6 | 10 | - | 26 | 8 | 8,5 | 4,0 | 17 | 9,5 | 38,0 | 55,6 |
| 666 744 00 | 666 997 44 | GK | 4 | 4 | M8x1 | - | M3 | 7 | - | 16 | 5 | 4,5 | 2,5 | 10 | 4,0 | 12,0 | 12,7 |
| 666 745 00 | 666 997 45 | GK | 5 | 5 | M10x1 | - | M4 | 8 | - | 18 | 6 | 5,5 | 3,0 | 12 | 5,0 | 15,0 | 22,8 |
| 666 746 00 | 666 997 46 | GK | 6 | 6 | M12x1,5 | - | M5 | 9 | - | 22 | 6 | 7,0 | 3,5 | 14 | 6,0 | 19,0 | 35,3 |
| 666 748 00 | 666 997 48 | GK | 8 | 8 | M16x1,5 | - | M6 | 10 | - | 26 | 8 | 8,5 | 4,0 | 17 | 8,5 | 26,0 | 73,9 |
| 666 750 00 | 666 997 50 | GK | 10 | 12 | M16x1,5 | - | M6 | 10 | - | 26 | 8 | 8,5 | 4,0 | 17 | 9,5 | 38,0 | 75,6 |

* Statistical average.

Steel Versions:



Stainless Steel Versions:



Control Knobs 726.1

Material:

Aluminium, black anodised finish, scale (version S) and arrow (version A): white, engraved with laser precision. Knob cover disk: light- grey plastic. Collet/hexagon nut: brass. Stainless steel set screw: DIN 916 with Allen screw and serrated end.

Type A: with arrow.

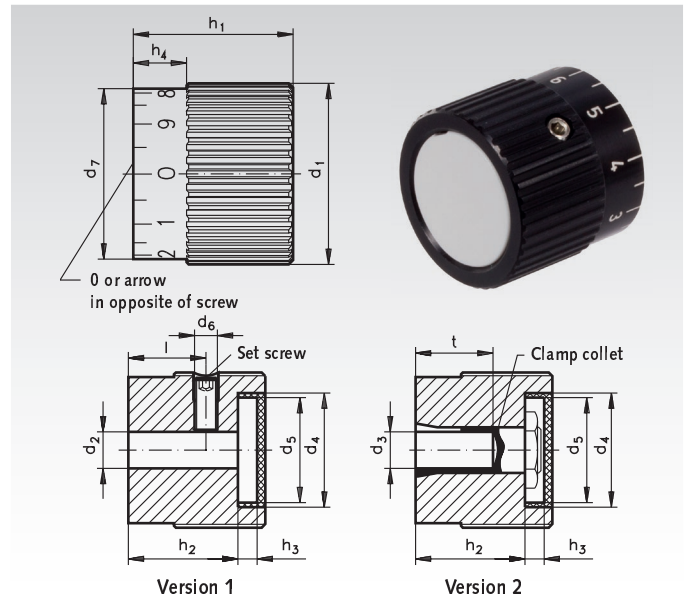
Type B: neutral, without arrow or grading.

Type S: with scale 0...9, 20 graduations.

Version 1: with set screw (bore d_2).

Version 2: with collet (bore d_3).

When mounting, the cover is pressed in by hand, for demounting it can be lifted up at the slot using a screwdriver. The collet version allows easy "adjustment" of the knobs and offers completely secure mounting on the shaft. Scale or arrow are fully abrasion proof and easy to read, as the engraving makes the aluminium coloured figures and numbers stand out against the black, anodised surface. Besides the standard scale (Version S) these knobs can be supplied with any scale desired (on request).



Ordering Details: e.g.: Product No. 660 701 22, Control Knob Vers. 1, Version A, 22 mm

| Product No. Version 1 | Product No. Version 2 | Type | d_1 mm | d_2^{H8} mm | d_3 mm | d_4 mm | d_5 mm | d_6 mm | d_7 mm | h_1 mm | h_2 mm | h_3 mm | h_4 mm | l mm | t mm | Weight in g | |
|--------------------------|--------------------------|------|-------------|------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|---------|---------|-------------|---------|
| | | | | | | | | | | | | | | | | Vers. 1 | Vers. 2 |
| 660 701 22 | - | A | 22 | 5 | - | 16 | 14 | M4 | 20 | 22 | 16 | 4,3 | 8 | 12,5 | - | 17 | - |
| 660 701 27 | 660 705 27 | A | 27 | 6 | 6 | 20 | 18 | M4 | 25 | 26 | 20 | 4,3 | 9 | 14 | 14 | 32 | 37 |
| 660 701 34 | 660 705 34 | A | 34 | 8 | 8 | 25 | 23 | M5 | 32 | 30 | 24 | 4,2 | 10 | 15 | 17 | 58 | 65 |
| 660 701 42 | 660 705 42 | A | 42 | 10 | 10 | 32 | 30 | M5 | 40 | 34 | 28 | 4,0 | 11 | 16 | 20 | 103 | 112 |
| 660 702 22 | - | B | 22 | 5 | - | 16 | 14 | M4 | 20 | 22 | 16 | 4,3 | 8 | 12,5 | - | 17 | - |
| 660 702 27 | 660 706 27 | B | 27 | 6 | 6 | 20 | 18 | M4 | 25 | 26 | 20 | 4,3 | 9 | 14 | 14 | 32 | 37 |
| 660 702 34 | 660 706 34 | B | 34 | 8 | 8 | 25 | 23 | M5 | 32 | 30 | 24 | 4,2 | 10 | 15 | 17 | 58 | 65 |
| 660 702 42 | 660 706 42 | B | 42 | 10 | 10 | 32 | 30 | M5 | 40 | 34 | 28 | 4,0 | 11 | 16 | 20 | 103 | 112 |
| 660 703 22 | - | S | 22 | 5 | - | 16 | 14 | M4 | 20 | 22 | 16 | 4,3 | 8 | 12,5 | - | 17 | - |
| 660 703 27 | 660 707 27 | S | 27 | 6 | 6 | 20 | 18 | M4 | 25 | 26 | 20 | 4,3 | 9 | 14 | 14 | 32 | 37 |
| 660 703 34 | 660 707 34 | S | 34 | 8 | 8 | 25 | 23 | M5 | 32 | 30 | 24 | 4,2 | 10 | 15 | 17 | 58 | 65 |
| 660 703 42 | 660 707 42 | S | 42 | 10 | 10 | 32 | 30 | M5 | 40 | 34 | 28 | 4,0 | 11 | 16 | 20 | 103 | 112 |



Type A: with arrow.



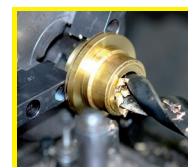
Type B: neutral, without arrow or grading.



Type S: with scale 0...9, 20 graduations.

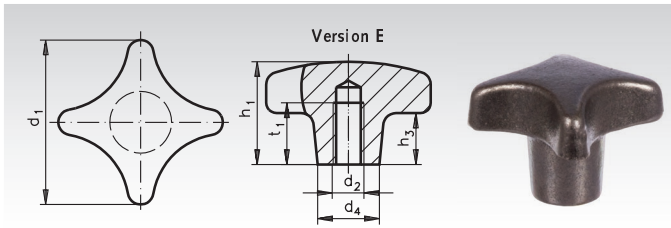


Version 1: with set screw (bore d_2).
Version 2: with collet (bore d_3).



**Reworking within
24h-service possible.
Custom made parts
on request.**

Star Knobs DIN 6335 GG

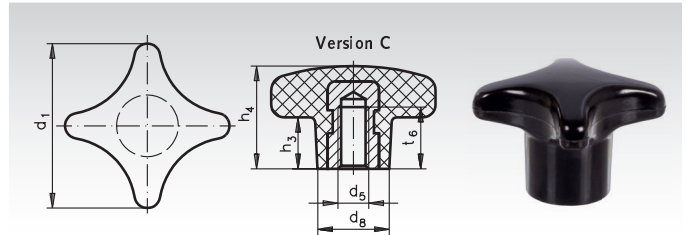


Material: Grey cast iron.
Type E = with tapped blind hole.

Ordering Details: e.g.: Product No. 660 232 00, Star Knobs DIN 6335 GG, Vers. E 32 mm

| Product No. Type E | d ₁ mm | d ₂ mm | d ₄ mm | h ₁ mm | h ₃ mm | t ₁ mm | Weight g |
|-----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|-------------|
| 660 232 00 | 32 | M6 | 12 | 21 | 10 | 12 | 30 |
| 660 240 00 | 40 | M8 | 14 | 26 | 14 | 15 | 49 |
| 660 250 00 | 50 | M10 | 18 | 34 | 20 | 18 | 105 |
| 660 263 00 | 63 | M12 | 20 | 42 | 25 | 22 | 170 |
| 660 280 00 | 80 | M16 | 25 | 52 | 30 | 28 | 350 |
| 660 298 00 | 100 | M20 | 32 | 65 | 38 | 36 | 715 |

Star Knobs Similar to DIN 6335 Pr



Material: Plastic PF31, black, glossy finish.
Type K = with press-fitted threaded bush made from brass.

Ordering Details: e.g.: Product No. 660 520 00, Star Knobs DIN 6335 Pr, Vers. K 20 mm

| Product No. Type K | d ₁ mm | d ₅ mm | d ₈ mm | h ₃ mm | h ₄ mm | t _{6 min} mm | Weight g |
|-----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|--------------------------|-------------|
| 660 520 00 | 20 | M4 | 10 | 6 | 13 | 6,5 | 3 |
| 660 525 00 | 25 | M5 | 13 | 8 | 17 | 9,5 | 7 |
| 660 532 00 | 32 | M6 | 14 | 10 | 20 | 12 | 10 |
| 660 540 00 | 40 | M8 | 18 | 14 | 26 | 14 | 19 |
| 660 550 00 | 50 | M10 | 22 | 18 | 32 | 18 | 35 |
| 660 563 00* | 63 | M12 | 26 | 22 | 40 | 22 | 65 |
| 660 580 00* | 80 | M16 | 34 | 29 | 53 | 30 | 137 |

* With threaded bush made from steel.

Star Knobs with Axial Bearing

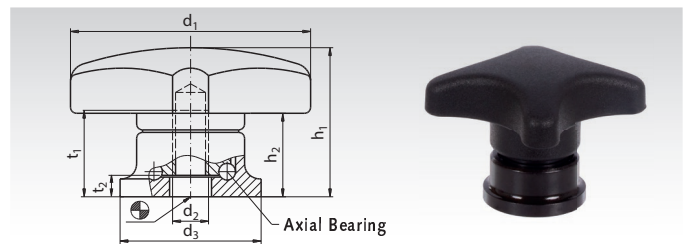
Material: Grip: Thermoplast (PA).
 Insert: Heat-treated steel nitrided, burnished.

The advantages of the axial bearing:

- double clamping force with same lever size, by reducing the surface friction.
- Less wear on the component due to fixed locating face.
- Little settling due to higher pre-tensioning force of the bolt or thread.

Ordering Details: e.g.: Product No. 660 640 00, Star Knob with Axial Bearing, Ø 40 mm

| Product No. | d ₁ mm | d ₂ mm | d ₃ mm | h ₁ mm | h ₂ mm | t ₁ mm | t ₂ mm | Weight g |
|-------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|-------------|
| 660 640 00 | 40 | M6 | 24 | 27 | 15 | 12,5 | 5 | 45 |
| 660 650 00 | 50 | M8 | 25 | 34 | 22,5 | 14 | 4,2 | 68 |
| 660 663 00 | 63 | M10 | 30 | 41 | 26,5 | 18 | 5,4 | 111 |
| 660 680 00 | 80 | M12 | 35 | 54 | 34 | 26,5 | 6,6 | 218 |



Star Knob Screws with Axial Bearing

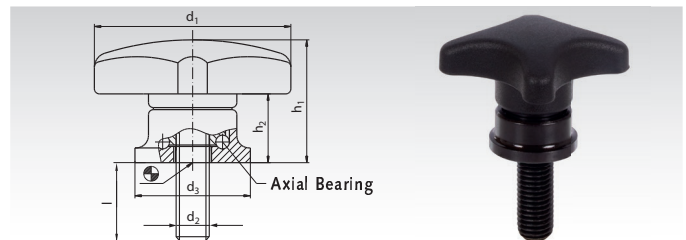
Material: Grip: Thermoplast (PA).
 Insert: Heat-treated steel nitrided, burnished.
 Screw: Steel tensile strength 8.8, burnished.

The advantages of the axial bearing:

- double clamping force with same lever size, by reducing the surface friction.
- Less wear on the component due to fixed locating face.
- Little settling due to higher pre-tensioning force.

Ordering Details: e.g.: Product No. 660 640 01, Star Knob Screw with Axial Bearing, Ø 40mm, M6 x 15mm

| Product No. | d ₁ mm | d ₂ mm | l mm | d ₃ mm | h ₁ mm | h ₂ mm | Weight g |
|-------------|----------------------|----------------------|---------|----------------------|----------------------|----------------------|-------------|
| 660 640 01 | 40 | M6 | 15 | 24 | 27 | 15 | 50 |
| 660 640 02 | 40 | M6 | 25 | 24 | 27 | 15 | 52 |
| 660 650 01 | 50 | M8 | 20 | 25 | 34 | 22,5 | 81 |
| 660 650 02 | 50 | M8 | 35 | 25 | 34 | 22,5 | 86 |
| 660 663 01 | 63 | M10 | 30 | 30 | 41 | 26,5 | 137 |
| 660 663 02 | 63 | M10 | 40 | 30 | 41 | 26,5 | 142 |
| 660 680 01 | 80 | M12 | 30 | 35 | 54 | 34 | 258 |
| 660 680 02 | 80 | M12 | 50 | 35 | 54 | 34 | 276 |

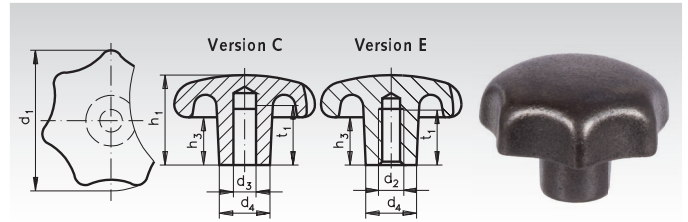


Star Knobs DIN 6336 GG

Material: Grey cast iron.

Version C = with blind hole d_3^{H7}

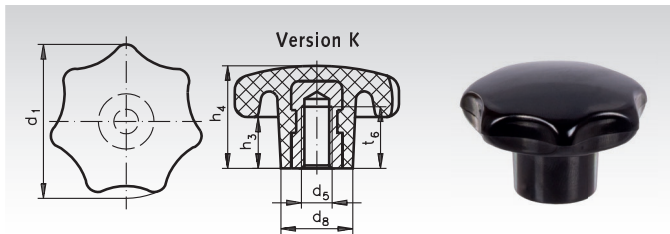
Version E = with tapped blind hole d_2



Ordering Details: e.g.: Product No. 661 132 00, Star Knob DIN 6336 GG, Vers. C 32 mm

| Product No. Vers. C | Product No. Vers. E | d_1 mm | d_2 mm | d_3^{H7} mm | d_4 mm | h_1 mm | h_3 mm | t_1 mm | Weight Vers. C g | Weight Vers. E g |
|------------------------|------------------------|-------------|-------------|------------------|-------------|-------------|-------------|-------------|------------------------|------------------------|
| 661 132 00 | 661 232 00 | 32 | M6 | 6 | 12 | 20 | 10 | 12 | 47 | 49 |
| 661 140 00 | 661 240 00 | 40 | M8 | 8 | 14 | 25 | 13 | 15 | 70 | 70 |
| 661 150 00 | 661 250 00 | 50 | M10 | 10 | 18 | 32 | 17 | 18 | 145 | 148 |
| 661 163 00 | 661 263 00 | 63 | M12 | 12 | 20 | 40 | 21 | 22 | 246 | 254 |
| 661 180 00 | 661 280 00 | 80 | M16 | 16 | 25 | 50 | 25 | 28 | 542 | 542 |

Star Knobs Similar to DIN 6336 Pr



Material: Plastic PF31, black, glossy finish.

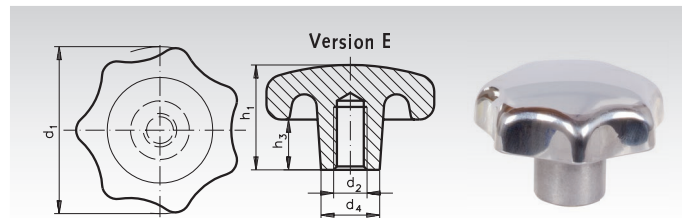
Version K = with threaded bush of zinc-plated steel.

Ordering Details: e.g.: Product No. 661 520 00, Star Knob DIN 6336 Pr, Vers. K 20 mm

| Product No. Vers. K | d_1 mm | d_5 mm | d_8 mm | h_3 mm | h_4 mm | $t_{6 \text{ min}}$ mm | Weight g |
|------------------------|-------------|-------------|-------------|-------------|-------------|---------------------------|-------------|
| 661 520 00* | 20 | M4* | 10 | 7 | 13 | 6,5 | 3 |
| 661 525 00 | 25 | M5 | 12 | 8 | 16 | 9,5 | 7 |
| 661 532 00 | 32 | M6 | 14 | 9 | 20 | 12 | 11 |
| 661 540 00 | 40 | M8 | 18 | 13 | 26 | 14 | 26 |
| 661 550 00 | 50 | M10 | 22 | 17 | 33 | 18 | 44 |
| 661 563 00 | 63 | M10 | 25 | 21 | 42 | 18 | 83 |
| 661 564 00 | 63 | M12 | 25 | 21 | 42 | 22 | 83 |
| 661 580 00 | 80 | M12 | 35 | 22 | 50 | 22 | 158 |

* With threaded bush made from brass.

Star Knobs Similar to DIN 6336 AL



Material: GKAlSi7Cu3, polished.

Version E = with tapped blind hole.

Ordering Details: e.g.: Product No. 661 740 00, Star Knob DIN 6336 EL, Vers. E 40 mm

| Product No. Vers. E | d_1 mm | d_2 mm | h_1 mm | h_3 mm | d_4 mm | Weight g |
|------------------------|-------------|-------------|-------------|-------------|-------------|-------------|
| 661 740 00 | 40 | M8 | 26 | 13 | 14 | 35 |
| 661 750 00 | 50 | M10 | 34 | 17 | 18 | 65 |
| 661 763 00 | 63 | M12 | 42 | 21 | 20 | 100 |
| 661 780 00 | 80 | M16 | 52 | 25 | 25 | 220 |

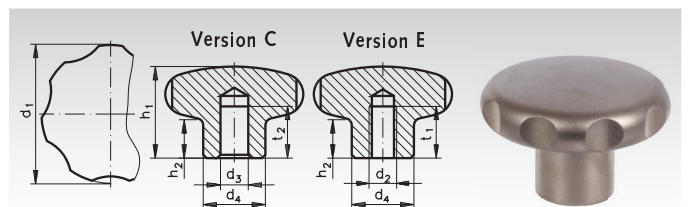
Star Knobs 5335 Stainless Steel

Material: Stainless steel 1.4305, blasted, matt finish.

Version C = with blind hole d_3^{H7}

Version E = with tapped blind hole d_2

Especially suited for the food-processing machinery industry, with smooth and enclosed areas.



Ordering Details: e.g.: Product No. 661 993 21, Star Knob Stainless Steel, Cast, 40 mm

| Product No. Vers. C | Product No. Vers. E | d_1 mm | Thread d_2 mm | Bore d_3 mm | d_4 mm | h_1 mm | h_2 mm | $t_{2 \text{ min. (C)}}$ mm | $t_{1 \text{ min. (E)}}$ mm | Weight g |
|------------------------|------------------------|-------------|--------------------|------------------|-------------|-------------|-------------|--------------------------------|--------------------------------|-------------|
| - | 661 993 30 | 40 | M6 | - | 18 | 30,5 | 15 | - | 12 | 150 |
| 661 993 21 | 661 993 31 | 40 | M8 | 8 | 18 | 30,5 | 15 | 15 | 12 | 125 |
| - | 661 993 32 | 50 | M8 | - | 21 | 34,0 | 17 | - | 15 | 240 |
| 661 993 23 | 661 993 33 | 50 | M10 | 10 | 21 | 34,0 | 17 | 18 | 15 | 208 |
| - | 661 993 34 | 60 | M10 | - | 25 | 39,0 | 18 | - | 18 | 370 |
| 661 993 25 | 661 993 35 | 60 | M12 | 12 | 25 | 39,0 | 18 | 22 | 22 | 365 |

Star Knobs 5334 Stainless Steel

Material: Stainless steel 1.4301. Grip drawn from stainless-steel sheet. Hub butt-welded on, blasted, matt finish.

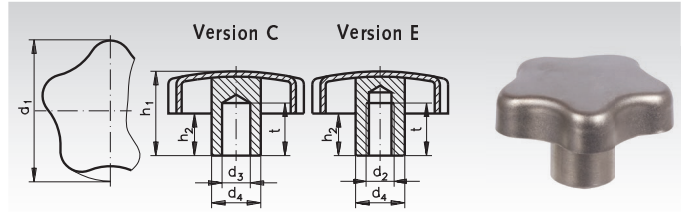


Version C = with blind hole d_3^{H7}

Version E = with tapped blind hole d_2

Refined and cost-saving manufacturing techniques led to this cost-efficient stainless steel-version.

Ordering Details: e.g.: Product No. 661 993 01, Star Knob Stainless Steel, Drawn, 40 mm



| Product No. Vers. C | Product No. Vers. E | d_1 mm | Thread d_2 mm | Bore d_3^{H7} mm | d_4 mm | h_1 mm | h_2 mm | t min. mm | Weight g |
|------------------------|------------------------|-------------|--------------------|-----------------------|-------------|-------------|-------------|--------------|-------------|
| 661 993 01 | 661 993 11 | 40 | M8 | 8 | 14 | 24 | 12 | 15 | 37 |
| 661 993 03 | 661 993 13 | 50 | M10 | 10 | 18 | 31 | 17,5 | 18 | 65 |
| 661 993 05 | 661 993 15 | 60 | M12 | 12 | 20 | 39 | 21 | 22 | 107 |

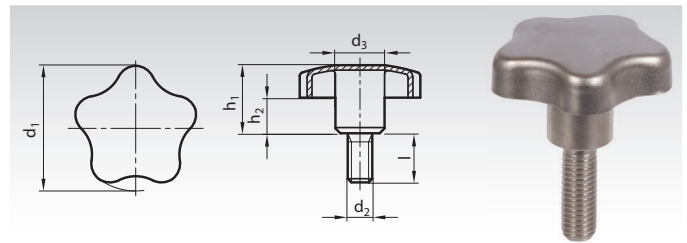
Star Knob Screws 5334 Stainless Steel

Material: Stainless steel 1.4301. Grip drawn from stainless-steel sheet. Hub butt-welded on, blasted, matt finish.



Refined and cost-saving manufacturing techniques led to this cost-efficient stainless steel-version.

Ordering Details: e.g.: Product No. 661 993 01, Star Knob Screw Stainless Steel, 40 mm



| Product No. | d_1 mm | d_2 mm | l mm | d_3 mm | h_1 mm | h_2 mm | Weight g |
|-------------|-------------|-------------|---------|-------------|-------------|-------------|-------------|
| 661 993 41 | 40 | M8 | 20 | 14 | 24 | 12 | 50 |
| 661 993 42 | 40 | M8 | 30 | 14 | 24 | 12 | 55 |
| 661 993 43 | 40 | M8 | 40 | 14 | 24 | 12 | 57 |
| 661 993 44 | 50 | M10 | 20 | 18 | 30 | 16,5 | 91 |
| 661 993 45 | 50 | M10 | 30 | 18 | 30 | 16,5 | 97 |
| 661 993 46 | 50 | M10 | 40 | 18 | 30 | 16,5 | 101 |
| 661 993 47 | 60 | M12 | 30 | 20 | 37,5 | 20 | 155 |
| 661 993 48 | 60 | M12 | 40 | 20 | 37,5 | 20 | 162 |
| 661 993 49 | 60 | M12 | 50 | 20 | 37,5 | 20 | 170 |



Reworking within
24h-service possible.
Custom made parts
on request.

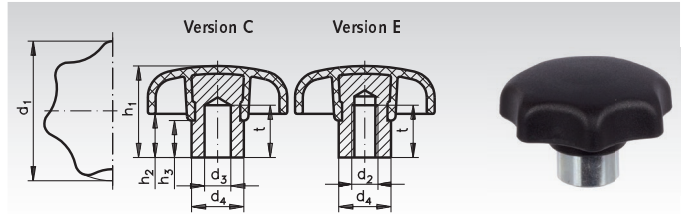
Star Knobs Similar to DIN 6336, Thermoplast

Material: Plastic Thermoplast (Polyamide), impact resistant, black, matt finish. Bush: Steel, zinc-plated, chromated blue.

Version C = with blind hole d_3^{H7}

Version E = with tapped blind hole d_2

The full diameter of the contact surface is made from Steel. The protruding steel bush allows a perfect cross-pin connection.



Ordering Details: e.g.: Product No. 661 332 00, Star Knob Thermoplast, 32 mm

| Product No. Vers. C | Product No. Vers. E | d_1 mm | Vers. C d_3 mm | Vers. E d_2 mm | d_4 mm | h_1 mm | h_2 mm | h_3 mm | t min. mm | Weight g |
|------------------------|------------------------|-------------|------------------------|------------------------|-------------|-------------|-------------|-------------|--------------|-------------|
| 661 332 00 | 661 332 01 | 32 | 6 | M6 | 12 | 20 | 10 | 8,5 | 12 | 15 |
| 661 340 00 | 661 340 01 | 40 | 8 | M8 | 14 | 26 | 13 | 10 | 14 | 25 |
| 661 350 00 | 661 350 01 | 50 | 10 | M10 | 18 | 32 | 17 | 10 | 18 | 53 |
| 661 363 00 | 661 363 01 | 63 | 12 | M12 | 20 | 40 | 21 | 14 | 22 | 85 |
| 661 380 00 | 661 380 01 | 80 | 16 | M16 | 25 | 52 | 27 | 15 | 30 | 195 |

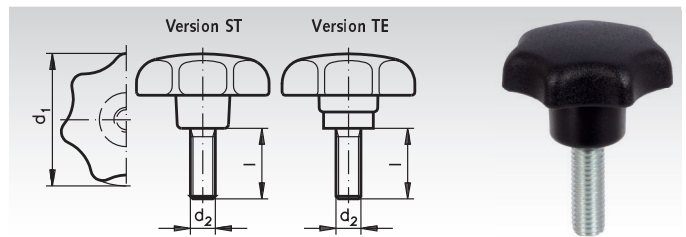
Star Knob Screws Similar to DIN 6336

Material: Plastic Thermoplast (Polyamide). Threaded bolt: steel, zinc-plated, chromated blue.

Version ST = grip part fully made from plastic with moulded-in threaded bolt.

Version TE = grip part with moulded-in protruding steel hub (steel hub and threaded bolt made from one part, turned).

Ordering Details: e.g.: Product No. 661 825 10, Star Knob screw Thermoplast, 25 mm



Version ST

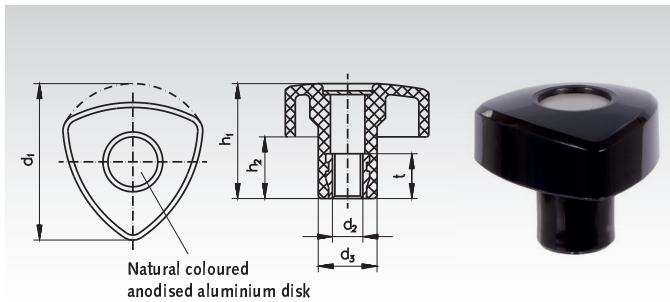
| Product No. Vers. ST | Product No. Vers. TE | d_1 mm | d_2 mm | l mm | Weight g |
|-------------------------|-------------------------|-------------|-------------|---------|-------------|
| 661 825 10 | - | 25 | M5 | 10 | 5 |
| 661 825 15 | - | 25 | M5 | 15 | 7 |
| 661 825 20 | - | 25 | M5 | 20 | 8 |
| 661 832 10 | - | 32 | M6 | 10 | 10 |
| 661 832 16 | 661 932 16 | 32 | M6 | 16 | 11 |
| 661 832 20 | 661 932 20 | 32 | M6 | 20 | 12 |
| 661 832 25 | 661 932 25 | 32 | M6 | 25 | 13 |
| 661 840 16 | 661 940 16 | 40 | M8 | 16 | 21 |
| 661 840 20 | 661 940 20 | 40 | M8 | 20 | 22 |
| 661 840 25 | 661 940 25 | 40 | M8 | 25 | 24 |
| 661 840 30 | 661 940 30 | 40 | M8 | 30 | 26 |
| 661 850 20 | - | 50 | M10 | 20 | 43 |
| 661 850 25 | 661 950 25 | 50 | M10 | 25 | 45 |
| 661 850 30 | 661 950 30 | 50 | M10 | 30 | 48 |
| 661 850 45 | 661 950 45 | 50 | M10 | 45 | 58 |
| 661 863 20 | - | 63 | M12 | 20 | 79 |
| 661 863 30 | 661 963 30 | 63 | M12 | 30 | 91 |
| 661 863 40 | 661 963 40 | 63 | M12 | 40 | 105 |
| 661 863 60 | 661 963 60 | 63 | M12 | 60 | 115 |

Version TE



Reworking within
24h-service possible.
Custom made parts
on request.

Triangular Knobs, Made from Thermoplast



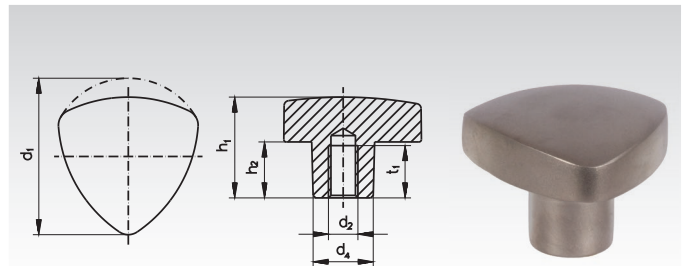
Material: Thermoplast (Polyamide PA),
black glossy finish, brass bush.

Very elegant and easy to grip.

Ordering Details: e.g.: Product No. 661 632 11, Triangular Knob, 32mm, M5

| Product No. | d ₁ mm | d ₂ mm | d ₃ mm | h ₁ mm | h ₂ mm | t mm | Weight g |
|-------------|----------------------|----------------------|----------------------|----------------------|----------------------|---------|-------------|
| 661 632 11 | 32 | M5 | 14 | 26 | 16 | 10 | 7 |
| 661 632 12 | 32 | M6 | 14 | 26 | 16 | 12 | 9 |
| 661 640 11 | 40 | M6 | 16 | 30 | 17 | 12 | 11 |
| 661 640 12 | 40 | M8 | 16 | 30 | 17 | 14 | 13 |
| 661 650 11 | 50 | M8 | 19 | 35 | 19 | 14 | 18 |
| 661 650 12 | 50 | M10 | 19 | 35 | 19 | 16 | 22 |
| 661 660 11 | 60 | M10 | 22 | 41 | 22 | 16 | 30 |
| 661 660 12 | 60 | M12 | 22 | 41 | 22 | 18 | 32 |

Triangular Knobs, Made from Stainless Steel



Material: Stainless steel 1.4308, matt blasted.

Elegant, easy to grip and clean.
For comparably high torque transmission.



Ordering Details: e.g.: Product No. 661 996 31, Triangular Knob stainless, 32mm, M5

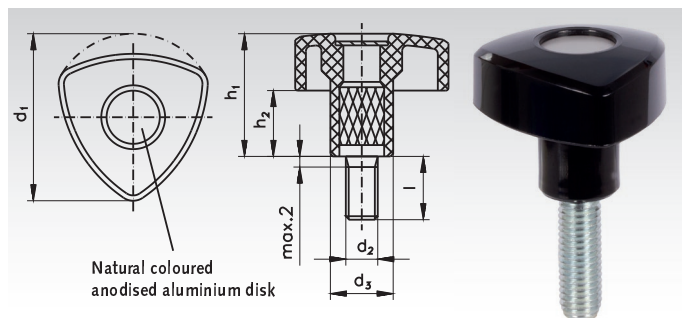
| Product No. | d ₁ mm | d ₂ mm | d ₄ mm | h ₁ mm | h ₂ mm | t mm | Weight g |
|-------------|----------------------|----------------------|----------------------|----------------------|----------------------|---------|-------------|
| 661 996 31 | 32 | M5 | 12 | 21 | 12 | 10 | 62 |
| 661 996 32 | 32 | M6 | 12 | 21 | 12 | 10 | 60 |
| 661 996 41 | 40 | M6 | 14 | 26 | 14 | 12 | 103 |
| 661 996 42 | 40 | M8 | 14 | 26 | 14 | 12 | 100 |
| 661 996 51 | 50 | M8 | 18 | 33 | 19 | 15 | 160 |
| 661 996 52 | 50 | M10 | 18 | 33 | 19 | 15 | 155 |
| 661 996 61 | 60 | M10 | 20 | 41 | 23 | 18 | 295 |
| 661 996 62 | 60 | M12 | 20 | 41 | 23 | 18 | 290 |

Triangular Knob screws, Made from Thermoplast

Material: Thermoplast (Polyamide PA),
black glossy finish.
Grub screw, zinc-plated steel, chromated.

Very elegant and easy to grip.

Ordering Details: e.g.: Product No. 661 632 13, Triangular Knob screw, 32mm, M5



| Product No. | d ₁ mm | d ₂ mm | l mm | h ₁ mm | h ₂ mm | d ₃ mm | Weight g |
|-------------|----------------------|----------------------|---------|----------------------|----------------------|----------------------|-------------|
| 661 632 13 | 32 | M5 | 10 | 26 | 16 | 14 | 9 |
| 661 632 14 | 32 | M5 | 20 | 26 | 16 | 14 | 10 |
| 661 632 15 | 32 | M5 | 40 | 26 | 16 | 14 | 13 |
| 661 632 16 | 32 | M6 | 10 | 26 | 16 | 14 | 10 |
| 661 632 17 | 32 | M6 | 20 | 26 | 16 | 14 | 13 |
| 661 632 18 | 32 | M6 | 40 | 26 | 16 | 14 | 15 |
| 661 640 13 | 40 | M6 | 10 | 30 | 17 | 16 | 14 |
| 661 640 14 | 40 | M6 | 20 | 30 | 17 | 16 | 15 |
| 661 640 15 | 40 | M6 | 40 | 30 | 17 | 16 | 19 |
| 661 640 16 | 40 | M8 | 16 | 30 | 17 | 16 | 19 |
| 661 640 17 | 40 | M8 | 30 | 30 | 17 | 16 | 25 |
| 661 640 18 | 40 | M8 | 50 | 30 | 17 | 16 | 30 |
| 661 650 13 | 50 | M8 | 16 | 35 | 19 | 19 | 28 |
| 661 650 14 | 50 | M8 | 30 | 35 | 19 | 19 | 32 |
| 661 650 15 | 50 | M8 | 50 | 35 | 19 | 19 | 37 |
| 661 650 16 | 50 | M10 | 20 | 35 | 19 | 19 | 35 |
| 661 650 17 | 50 | M10 | 30 | 35 | 19 | 19 | 40 |
| 661 650 18 | 50 | M10 | 50 | 35 | 19 | 19 | 50 |
| 661 660 13 | 60 | M10 | 20 | 41 | 22 | 22 | 42 |
| 661 660 14 | 60 | M10 | 30 | 41 | 22 | 22 | 48 |
| 661 660 15 | 60 | M10 | 50 | 41 | 22 | 22 | 60 |
| 661 660 16 | 60 | M12 | 20 | 41 | 22 | 22 | 57 |
| 661 660 17 | 60 | M12 | 30 | 41 | 22 | 22 | 65 |
| 661 660 18 | 60 | M12 | 50 | 41 | 22 | 22 | 80 |

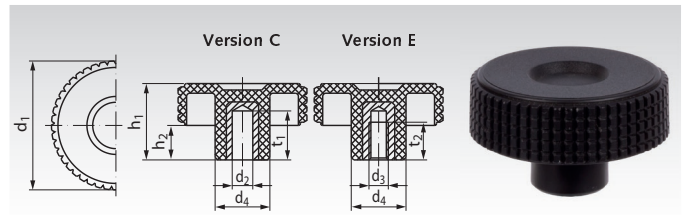
Knurled Knobs, Made from Thermoplast

Material: Thermoplast (Polypropylene PP) reinforced, impact resistant, black, matt, brass bush.

Version C = with blind hole d_2^{H9}

Version E = with threaded blind hole d_3

Special surface (contact points as a quadratic truncated pyramid) for maximum torque without uncomfortable stress on the skin.



Ordering Details: e.g.: Product No. 661 632 01, Knurled Knob, Thermoplast, 32 mm, M5

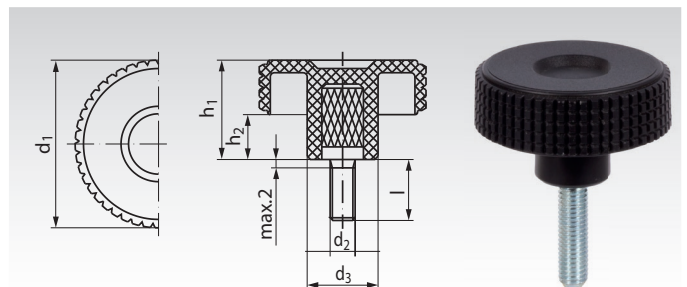
| Product No. Version C | Product No. Version E | d_1 mm | Version C d_2^{H9} mm | Version E d_3 mm | d_4 mm | h_1 mm | h_2 mm | t_1 min. mm | t_2 mm | Weight g |
|--------------------------|--------------------------|-------------|-------------------------------|--------------------------|-------------|-------------|-------------|------------------|-------------|-------------|
| — | 661 632 01 | 32 | — | M5 | 15 | 22 | 9 | — | 10 | 11 |
| — | 661 632 02 | 32 | — | M6 | 15 | 22 | 9 | — | 12 | 16 |
| 661 640 00 | 661 640 01 | 40 | 6 | M6 | 17 | 24 | 11 | 14 | 12 | 20 |
| — | 661 640 02 | 40 | — | M8 | 17 | 24 | 11 | — | 13 | 21 |
| 661 650 00 | 661 650 01 | 50 | 8 | M8 | 20 | 30 | 13,5 | 20 | 20 | 42 |
| — | 661 650 02 | 50 | — | M10 | 20 | 30 | 13,5 | — | 18 | 32 |
| 661 660 00 | 661 660 01 | 60 | 10 | M10 | 23 | 35 | 15 | 25 | 20 | 46 |
| — | 661 660 02 | 60 | — | M12 | 23 | 35 | 15 | — | 20 | 54 |
| — | 661 670 01 | 70 | — | M12 | 24 | 38 | 18,5 | — | 20 | 65 |
| — | 661 670 02 | 70 | — | M14 | 24 | 38 | 18,5 | — | 20 | 73 |

Knurled Knob Screws, Made from Thermoplast

Material: Thermoplast (Polypropylene PP) reinforced, impact resistant, black, matt.

Grub screw, zinc-plated steel, chromated.

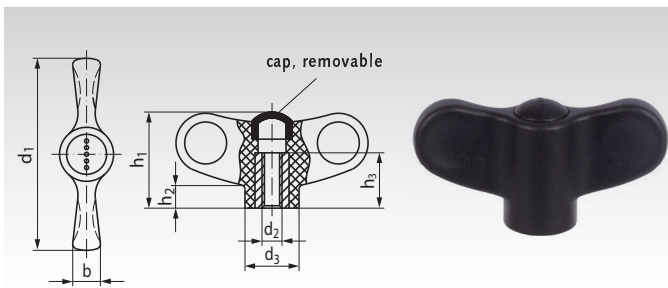
Special surface (contact points as a quadratic truncated pyramid) for maximum torque without uncomfortable stress on the skin.



Ordering Details: e.g.: Product No. 661 632 03, Knurled Knob, Thermoplast, 32 mm

| Product No. | d_1 mm | d_2 mm | l mm | h_1 mm | h_2 mm | d_3 mm | Weight g |
|-------------|-------------|-------------|---------|-------------|-------------|-------------|-------------|
| 661 632 03 | 32 | M5 | 10 | 22 | 9 | 15 | 12 |
| 661 632 04 | 32 | M5 | 20 | 22 | 9 | 15 | 13 |
| 661 632 05 | 32 | M5 | 40 | 22 | 9 | 15 | 15 |
| 661 632 06 | 32 | M6 | 10 | 22 | 9 | 15 | 13 |
| 661 632 07 | 32 | M6 | 20 | 22 | 9 | 15 | 15 |
| 661 632 08 | 32 | M6 | 40 | 22 | 9 | 15 | 18 |
| 661 640 03 | 40 | M6 | 10 | 24 | 11 | 17 | 16 |
| 661 640 04 | 40 | M6 | 20 | 24 | 11 | 17 | 18 |
| 661 640 05 | 40 | M6 | 40 | 24 | 11 | 17 | 22 |
| 661 640 06 | 40 | M8 | 16 | 24 | 11 | 17 | 24 |
| 661 640 07 | 40 | M8 | 30 | 24 | 11 | 17 | 28 |
| 661 640 08 | 40 | M8 | 50 | 24 | 11 | 17 | 34 |
| 661 650 03 | 50 | M8 | 16 | 30 | 13,5 | 20 | 34 |
| 661 650 04 | 50 | M8 | 30 | 30 | 13,5 | 20 | 36 |
| 661 650 05 | 50 | M8 | 50 | 30 | 13,5 | 20 | 42 |
| 661 650 06 | 50 | M10 | 20 | 30 | 13,5 | 20 | 40 |
| 661 650 07 | 50 | M10 | 30 | 30 | 13,5 | 20 | 45 |
| 661 650 08 | 50 | M10 | 50 | 30 | 13,5 | 20 | 55 |
| 661 660 03 | 60 | M10 | 20 | 35 | 15 | 23 | 54 |
| 661 660 04 | 60 | M10 | 30 | 35 | 15 | 23 | 59 |
| 661 660 05 | 60 | M10 | 50 | 35 | 15 | 23 | 69 |
| 661 660 06 | 60 | M12 | 20 | 35 | 15 | 23 | 66 |
| 661 660 07 | 60 | M12 | 30 | 35 | 15 | 23 | 74 |
| 661 660 08 | 60 | M12 | 50 | 35 | 15 | 23 | 90 |
| 661 670 03 | 70 | M12 | 30 | 38 | 18,5 | 24 | 85 |
| 661 670 04 | 70 | M12 | 50 | 38 | 18,5 | 24 | 100 |

Wing nuts, Made from Thermoplast



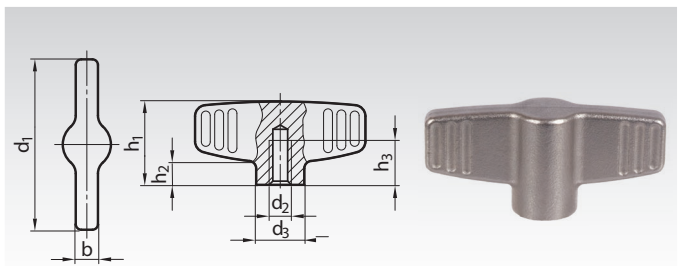
Material: Thermoplast (Polyamide PA),
glass-fibre reinforced, black matt, brass bush.

With indents for large, easy to grip contact surfaces.
For relatively high tightening torques.

Ordering Details: e.g.: Product No. 661 748 01, Wing Nut, Thermoplast, 48mm, M5

| Product No. | d ₁ mm | d ₂ mm | h ₁ mm | h ₂ mm | h ₃ mm | b mm | d ₃ mm | Weight g |
|-------------|----------------------|----------------------|----------------------|----------------------|----------------------|---------|----------------------|-------------|
| 661 748 01 | 48 | M5 | 24 | 5,5 | 12 | 7 | 13,5 | 10 |
| 661 748 02 | 48 | M6 | 24 | 5,5 | 12 | 7 | 13,5 | 9 |
| 661 755 01 | 55 | M6 | 28 | 6,5 | 18 | 8 | 16 | 20 |
| 661 755 02 | 55 | M8 | 28 | 6,5 | 18 | 8 | 16 | 19 |
| 661 770 01 | 70 | M8 | 36 | 8 | 20 | 10 | 20 | 32 |
| 661 770 02 | 70 | M10 | 36 | 8 | 20 | 10 | 20 | 34 |

Wing Nuts, made from Stainless Steel



Material: Stainless steel 1.4308,
Precision cast, matt blasted.

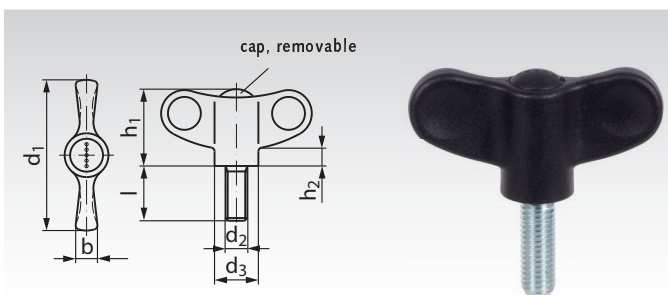
With indents for large, easy to grip contact surfaces.
For high tightening torques. Easy to clean.



Ordering Details: e.g.: Product No. 661 997 41, Wing Nut stainless, 46mm, M6

| Product No. | d ₁ mm | d ₂ mm | h ₁ mm | h _{2 ca.} mm | h _{3 min.} mm | b mm | d ₃ mm | Weight g |
|-------------|----------------------|----------------------|----------------------|--------------------------|---------------------------|---------|----------------------|-------------|
| 661 997 41 | 46 | M6 | 22,5 | 5,5 | 12 | 6 | 13 | 38 |
| 661 997 42 | 46 | M8 | 22,5 | 5,5 | 15 | 6 | 13 | 36 |
| 661 997 51 | 58 | M8 | 26,5 | 6,5 | 15 | 7 | 16 | 70 |
| 661 997 52 | 58 | M10 | 26,5 | 6,5 | 18 | 7 | 16 | 65 |

Wing screws, Made from Thermoplast



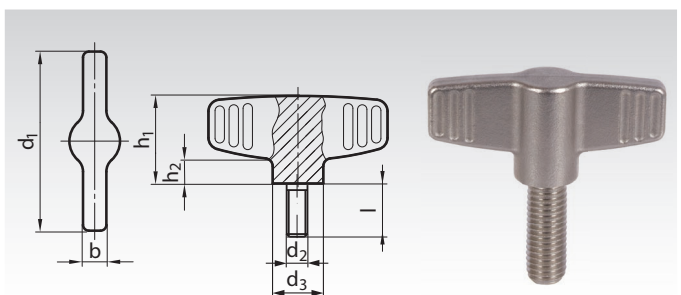
Material: Thermoplast (Polyamide PA),
glass-fibre reinforced, black matt.
Grub screw, zinc-plated steel, chromated.

With indents for large, easy to grip contact surfaces.
For relatively high tightening torques.

Ordering Details: e.g.: Product No. 661 748 03, Wing Screw, Thermoplast, 48mm, M5

| Product No. | d ₁ mm | d ₂ mm | l mm | h ₁ mm | h ₂ mm | b mm | d ₃ mm | Weight g |
|-------------|----------------------|----------------------|---------|----------------------|----------------------|---------|----------------------|-------------|
| 661 748 03 | 48 | M5 | 16 | 24 | 5,5 | 7 | 13,5 | 10 |
| 661 748 04 | 48 | M5 | 20 | 24 | 5,5 | 7 | 13,5 | 12 |
| 661 748 05 | 48 | M6 | 20 | 24 | 5,5 | 7 | 13,5 | 15 |
| 661 748 06 | 48 | M6 | 30 | 24 | 5,5 | 7 | 13,5 | 15 |
| 661 748 07 | 48 | M6 | 40 | 24 | 5,5 | 7 | 13,5 | 17 |
| 661 755 03 | 55 | M8 | 20 | 28 | 6,5 | 8 | 16 | 22 |
| 661 755 04 | 55 | M8 | 30 | 28 | 6,5 | 8 | 16 | 25 |
| 661 755 05 | 55 | M8 | 40 | 28 | 6,5 | 8 | 16 | 29 |
| 661 755 06 | 55 | M10 | 20 | 28 | 6,5 | 8 | 16 | 30 |
| 661 755 07 | 55 | M10 | 30 | 28 | 6,5 | 8 | 16 | 34 |
| 661 755 08 | 55 | M10 | 40 | 28 | 6,5 | 8 | 16 | 38 |
| 661 770 03 | 70 | M8 | 20 | 36 | 8 | 10 | 20 | 35 |
| 661 770 04 | 70 | M8 | 30 | 36 | 8 | 10 | 20 | 38 |
| 661 770 05 | 70 | M10 | 20 | 36 | 8 | 10 | 20 | 41 |
| 661 770 06 | 70 | M10 | 30 | 36 | 8 | 10 | 20 | 45 |
| 661 770 07 | 70 | M10 | 40 | 36 | 8 | 10 | 20 | 49 |

Wing screws, Made from Stainless Steel



Material: Stainless steel 1.4308,
Precision cast, matt blasted.

With indents for large, easy to grip contact surfaces.
For high tightening torques. Easy to clean.



Ordering Details: e.g.: Product No. 661 997 61, Wing Screw stainless, 46mm, M6 x 16

| Product No. | d ₁ mm | d ₂ mm | l mm | h ₁ mm | h ₂ mm | b mm | d ₃ mm | Weight g |
|-------------|----------------------|----------------------|---------|----------------------|----------------------|---------|----------------------|-------------|
| 661 997 61 | 46 | M6 | 16 | 22,5 | 6 | 6 | 13 | 40 |
| 661 997 62 | 46 | M6 | 20 | 22,5 | 6 | 6 | 13 | 41 |
| 661 997 63 | 46 | M6 | 25 | 22,5 | 6 | 6 | 13 | 42 |
| 661 997 64 | 46 | M8 | 16 | 22,5 | 6 | 6 | 13 | 60 |
| 661 997 65 | 46 | M8 | 20 | 22,5 | 6 | 6 | 13 | 61 |
| 661 997 66 | 46 | M8 | 25 | 22,5 | 6 | 6 | 13 | 62 |
| 661 997 67 | 58 | M8 | 20 | 26,5 | 7 | 7 | 16 | 83 |
| 661 997 68 | 58 | M8 | 25 | 26,5 | 7 | 7 | 16 | 84 |
| 661 997 69 | 58 | M8 | 30 | 26,5 | 7 | 7 | 16 | 85 |
| 661 997 70 | 58 | M10 | 20 | 26,5 | 7 | 7 | 16 | 80 |
| 661 997 71 | 58 | M10 | 25 | 26,5 | 7 | 7 | 16 | 83 |
| 661 997 72 | 58 | M10 | 30 | 26,5 | 7 | 7 | 16 | 85 |

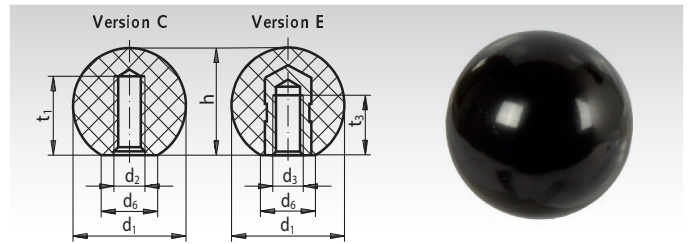
Ball Knobs DIN 319 PF

Material: Plastic PF31 (phenolic resin), black, high-gloss finish.

Version C: With compression-moulded thread.

Version E: With threaded bush of zinc-plated steel.

*M4 threaded bush made from brass.



Ordering Details: e.g.: Product No. 664 016 00, Ball Knob DIN 319 PF, Version C, 16 mm

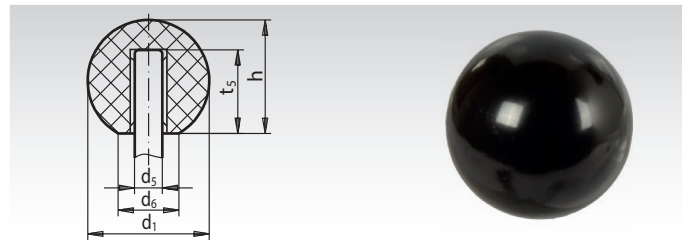
| Product No. Version C | Product No. Version E | d ₁ mm | d ₂ mm | d ₃ mm | h mm | d ₆ mm | t ₁ min. mm | t ₃ min. mm | Weight in g Version C | Weight in g Version E |
|--------------------------|--------------------------|----------------------|----------------------|----------------------|---------|----------------------|---------------------------|---------------------------|--------------------------|--------------------------|
| 664 016 00 | 664 116 00* | 16 | M4 | M4* | 15 | 8 | 6 | 6 | 2,8 | 3,4 |
| 664 020 00 | 664 120 00 | 20 | M5 | M5 | 18 | 12 | 7,5 | 7,5 | 5,2 | 8,1 |
| 664 025 00 | 664 125 00 | 25 | M6 | M6 | 22,5 | 15 | 9 | 9 | 9,9 | 13,6 |
| 664 032 00 | 664 132 00 | 32 | M8 | M8 | 29 | 18 | 12 | 12 | 20,8 | 30,2 |
| 664 040 00 | 664 140 00 | 40 | M10 | M10 | 37 | 22 | 15 | 15 | 42,7 | 54,5 |
| 664 045 00 | - | 45** | M10 | M10 | 44 | 17 | 15 | 18 | 62,0 | - |
| 664 050 00 | 664 150 00 | 50 | M12 | M12 | 46 | 28 | 18 | 18 | 85,4 | 106,4 |

** Size 45 is not part of the DIN.

Ball Knobs DIN 319 PF, Version L with Tolerance Ring

Material: Plastic PF31 (phenolic resin), black, high-gloss finish.

Shaft d₅ is not included in the delivery.



Ordering Details: e.g.: Product No. 664 216 00, Ball Knob DIN 319 PF Version L, 16 mm

| Product No. Version L | d ₁ mm | d ₅ ^{h9} mm | d ₆ mm | h mm | t ₅ mm | Weight g |
|--------------------------|----------------------|------------------------------------|----------------------|---------|----------------------|-------------|
| 664 216 00 | 16 | 4 | 8 | 15 | 11 | 2,5 |
| 664 220 00 | 20 | 5 | 12 | 18 | 13 | 5 |
| 664 225 00 | 25 | 6 | 15 | 22,5 | 16 | 10,3 |
| 664 226 00 | 25 | 8 | 15 | 22,5 | 15 | 9,9 |
| 664 232 00 | 32 | 8 | 18 | 29 | 15 | 22,5 |
| 664 233 00 | 32 | 10 | 18 | 29 | 20 | 20 |
| 664 240 00 | 40 | 10 | 22 | 37 | 20 | 42 |
| 664 241 00 | 40 | 12 | 22 | 37 | 23 | 40 |
| 664 250 00 | 50 | 16 | 28 | 46 | 23 | 82 |

Ball Knobs DIN 319 Version C, Steel, Stainless Steel and Aluminium

Material: Steel, polished.

Stainless steel 1.4305, matt blasted.

Aluminium, polished.



Ball knobs with dimensions according to DIN 319, made from metal.



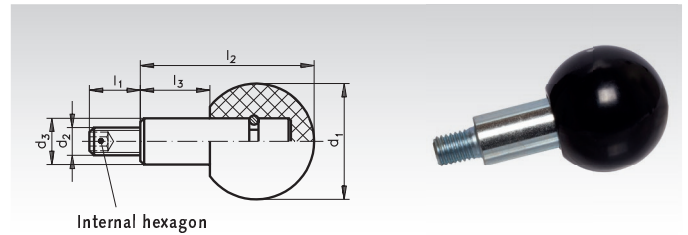
Ordering Details: e.g.: Product No. 664 416 00, Ball Knob DIN 319 Version C, Steel, 16mm

| Product No. Steel | Product No. Stainless Steel | Product No. Aluminium | d ₁ mm | d ₂ mm | d ₆ mm | h mm | t ₁ min. mm | Weight in g Steel | Weight in g Stainless | Weight in g Aluminium |
|----------------------|--------------------------------|--------------------------|----------------------|----------------------|----------------------|---------|---------------------------|----------------------|--------------------------|--------------------------|
| 664 416 00 | 664 994 16 | 664 664 16 | 16 | M4 | 8 | 15 | 6 | 15 | 15 | 6 |
| 664 420 00 | 664 994 20 | 664 664 20 | 20 | M5 | 12 | 18 | 7,5 | 26 | 26 | 11 |
| 664 425 00 | 664 994 25 | 664 664 25 | 25 | M6 | 15 | 22,5 | 9 | 59 | 59 | 21 |
| 664 432 00 | 664 994 32 | 664 664 32 | 32 | M8 | 18 | 29 | 12 | 116 | 116 | 43 |
| 664 440 00 | 664 994 40 | 664 664 40 | 40 | M10 | 22 | 37 | 15 | 235 | 235 | 85 |
| 664 450 00 | - | 664 664 50 | 50 | M12 | 28 | 46 | 18 | 475 | 475 | 169 |

Revolving Ball Knobs 3192 with gear lever handle

Material: Duroplast PF31, black, glossy finish.
Bolt: Steel, zinc plated.

Use: Instead of revolving handles, e.g. for handwheels and hand cranks. Revolving ball knobs have the same connecting dimensions as handles DIN 39 and DIN 98 page 548.

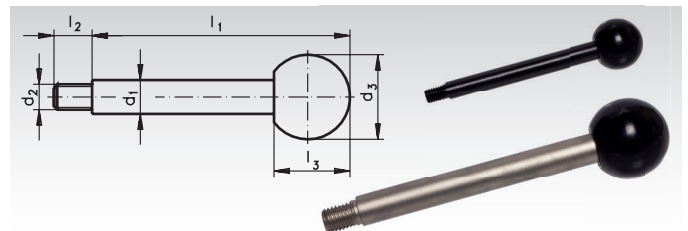


Ordering Details: e.g.: Product No. 664 525 00, Revolving Ball Knob 3192, 25 mm

| Product No. | d ₁ mm | d ₂ mm | d ₃ mm | l ₁ mm | l ₂ mm | l ₃ mm | Weight g |
|-------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|-------------|
| 664 525 00 | 25 | M6 | 10 | 11 | 37,5 | 15 | 28 |
| 664 532 00 | 32 | M8 | 13 | 13 | 48 | 19 | 62 |
| 664 540 00 | 40 | M10 | 16 | 14 | 61 | 24 | 117 |
| 664 550 00 | 50 | M12 | 20 | 21 | 78 | 31 | 237 |

Gear Lever Handles 209 with Ball Knob DIN 319, Steel, Burnished or Stainless

Material: Steel burnished or stainless steel 1.4305 matt.
Ball knob plastic Duroplast PF31, black, glossy finish.

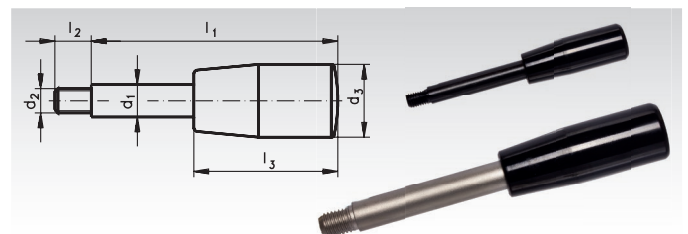


Ordering Details: e.g.: Product No. 666 006 00, Handle 209 St, 8 mm

| Product No. Steel | Product No. Stainless Steel | d ₁ mm | d ₂ mm | d ₃ mm | l ₁ mm | l ₂ mm | l ₃ mm | Weight g |
|----------------------|--------------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|-------------|
| 666 006 00 | 666 990 06 | 8 | M6 | 20 | 80 | 9 | 18 | 36 |
| 666 007 00 | 666 990 07 | 8 | M6 | 20 | 100 | 9 | 18 | 40 |
| 666 008 00 | 666 990 08 | 10 | M8 | 25 | 100 | 11 | 22,5 | 63 |
| 666 009 00 | 666 990 09 | 10 | M8 | 25 | 125 | 11 | 22,5 | 78 |
| 666 010 00 | 666 990 10 | 12 | M10 | 32 | 125 | 14 | 29 | 123 |
| 666 011 00 | 666 990 11 | 12 | M10 | 32 | 160 | 14 | 29 | 154 |
| 666 012 00 | 666 990 12 | 14 | M12 | 35 | 160 | 16 | 32,5 | 202 |
| 666 013 00 | 666 990 13 | 14 | M12 | 35 | 200 | 16 | 32,5 | 250 |
| 666 014 00 | - | 16 | M14 | 40 | 200 | 18 | 37 | 331 |
| 666 015 00 | - | 16 | M14 | 40 | 250 | 18 | 37 | 410 |

Gear Lever Handles 209 with Cylindrical Grip, Steel, Burnished or Stainless

Material: Steel burnished or stainless steel 1.4305 matt.
Cylindrical knob: Plastic Duroplast PF31, black, glossy finish.



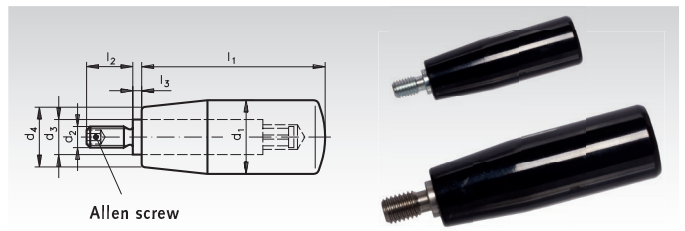
Ordering Details: e.g.: Product No. 666 106 00, Handle 209 with Cylindrical Grip, M6

| Product No. Steel | Product No. Stainless Steel | d ₁ mm | d ₂ mm | d ₃ mm | l ₁ mm | l ₂ mm | l ₃ mm | Weight g |
|----------------------|--------------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|-------------|
| 666 106 00 | 666 991 06 | 8 | M6 | 18 | 80 | 9 | 40 | 33 |
| 666 107 00 | 666 991 07 | 8 | M6 | 18 | 100 | 9 | 40 | 44 |
| 666 108 00 | 666 991 08 | 10 | M8 | 21 | 100 | 11 | 50 | 62 |
| 666 109 00 | 666 991 09 | 10 | M8 | 21 | 125 | 11 | 50 | 78 |
| 666 110 00 | 666 991 10 | 12 | M10 | 23 | 125 | 14 | 65 | 103 |
| 666 111 00 | 666 991 11 | 12 | M10 | 23 | 160 | 14 | 65 | 133 |
| 666 112 00 | 666 991 12 | 14 | M12 | 26 | 160 | 16 | 80 | 168 |
| 666 113 00 | 666 991 13 | 14 | M12 | 26 | 200 | 16 | 80 | 216 |
| 666 114 00 | - | 16 | M14 | 28 | 200 | 18 | 90 | 273 |
| 666 115 00 | - | 16 | M14 | 28 | 250 | 18 | 90 | 352 |

Revolving Cylindrical Handles 598

Material:
Version K: Duroplast PF31, black, glossy finish.
 Spindle: Steel, zinc-plated.
Version N: Duroplast PF31, black, glossy finish.
 Spindle: Stainless steel 1.4305.

Modern design.



Ordering Details: e.g.: Product No. 663 418 00, Handle 598, Version K, 18 mm

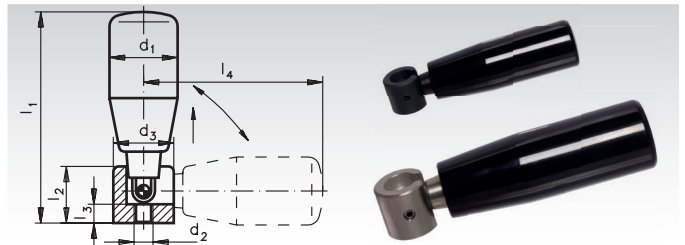
| Product No. Vers. K | Product No. Vers. N | d ₁ mm | d ₂ mm | d ₃ mm | d ₄ mm | l ₁ mm | l ₂ mm | l ₃ mm | Weight in g | |
|------------------------|------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|-------------|---------|
| | | | | | | | | | Vers. K | Vers. N |
| 663 418 00 | 663 518 00 | 18 | M6 | 10 | 15 | 40 | 12 | 2,5 | 29 | 29 |
| 663 421 00 | 663 521 00 | 21 | M6 | 10 | 17 | 50 | 13 | 2,5 | 42 | 42 |
| 663 422 00 | - | 22 | M6 | 10 | 18 | 56 | 13 | 2,5 | 47 | - |
| 663 423 00 | 663 523 00 | 23 | M8 | 13 | 19 | 65 | 14 | 2,5 | 79 | 79 |
| 663 426 00 | 663 526 00 | 26 | M10 | 13 | 21 | 80 | 16 | 2,5 | 109 | 109 |
| 663 428 00 | 663 528 00 | 28 | M10 | 13 | 22 | 90 | 16 | 2,5 | 125 | 125 |
| 663 431 00 | 663 531 00 | 31 | M12 | 14 | 25 | 102 | 20 | 2,5 | 175 | 175 |

Retractable Handles NG

Material:
Version K: Duroplast PF31, black, glossy finish.
 Folding mechanism: Steel, burnished.
Version N: Duroplast PF31, black, glossy finish.
 Folding mechanism: Stainless steel 1.4305.



Use: When the handle must at times not stick out. The handle is pulled out of its taper seating and then tilted. A compression spring locks the handle in both end positions. All handles are revolving (type 598).



Ordering Details: e.g.: Product No. 663 200 00, Retractable Handle NG, Version K, 21 mm

| Product No. Vers. K | Product No. Vers. N | d ₁ mm | d ₂ mm | d ₃ mm | l ₁ mm | l ₂ mm | l _{3-0,5} mm | l ₄ mm | Weight |
|------------------------|------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|--------------------------|----------------------|--------|
| | | | | | | | | | g |
| 663 200 00 | - | 21 | M5 | 16 | 67 | 15,0 | 5 | 62 | 58 |
| 663 201 00 | 663 992 01 | 26 | M6 | 20 | 102 | 19,5 | 6 | 95 | 134 |
| 663 202 00 | 663 992 02 | 28 | M8 | 26 | 118 | 26,0 | 10 | 106 | 214 |

Cylindrical Knobs, Press-On Type

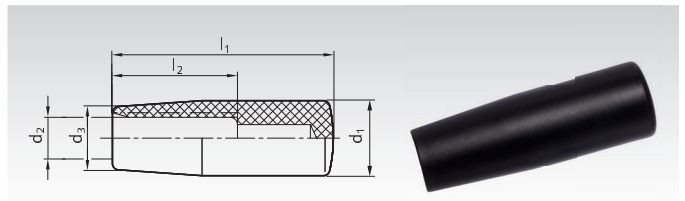
Material: Thermoplast (Polypropylene PP), impact resistant, black, matt finish.

These knobs do not require a thread at the shaft.

During mounting, easy blows with a soft hammer are sufficient to drive the knob into place. The shaft end with tolerance h9 should be slightly rounded or chamfered (30°). The knob is quickly mounted and sits absolute vibration-tight.

Temperature resistant up to 80°C.

Ordering Details: e.g.: Product No. 662 201 18, Cylindrical Knob, 18 mm

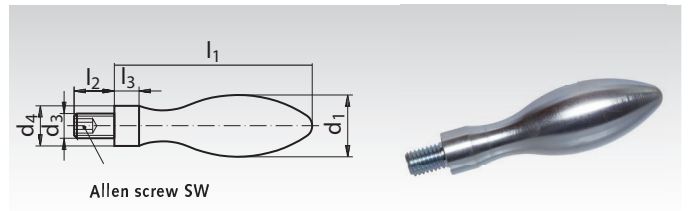


| Product No. | d ₁ mm | d ₂ mm | d ₃ mm | l ₁ mm | l _{2 min.} mm | Weight g |
|-------------|----------------------|----------------------|----------------------|----------------------|---------------------------|-------------|
| 662 202 18 | 18 | 8 | 15 | 40 | 28 | 7 |
| 662 202 21 | 21 | 10 | 17 | 50 | 35 | 10 |
| 662 202 23 | 23 | 10 | 19 | 65 | 45 | 17 |
| 662 202 26 | 26 | 12 | 21 | 80 | 50 | 25 |
| 662 202 28 | 28 | 15 | 22 | 90 | 60 | 33 |

Fixed Handles DIN 39 St

Material: Steel, zinc-plated.

Version E = with threaded bolt and Allen screw.



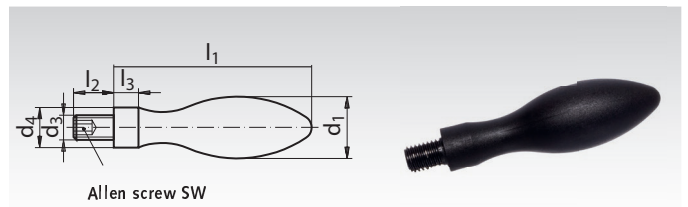
Ordering Details: e.g.: Product No. 662 110 00, Grip DIN 39 St, Vers. E 10 mm

| Product No. Vers. E | d ₁ mm | d ₃ mm | d ₄ ^{H13} mm | l ₁ mm | l ₂ mm | l ₃ mm | SW mm | Weight g |
|------------------------|----------------------|----------------------|-------------------------------------|----------------------|----------------------|----------------------|----------|-------------|
| 662 110 00 | 10 | M4 | 7 | 32 | 7 | 4 | - | 11 |
| 662 113 00 | 13 | M5 | 8 | 40 | 9 | 5 | - | 24 |
| 662 116 00 | 16 | M6 | 10 | 50 | 11 | 7 | 3 | 45 |
| 662 120 00 | 20 | M8 | 13 | 64 | 13 | 8 | 4 | 91 |
| 662 125 00 | 25 | M10 | 16 | 80 | 14 | 10 | 5 | 177 |
| 662 132 00 | 32 | M12 | 20 | 100 | 21 | 13 | 6 | 360 |
| 662 136 00 | 36 | M16 | 22 | 112 | 26 | 14 | 8 | 526 |

Fixed Handles DIN 39 Pr

Material: Plastic Thermoplast (Polyamide), black, matt finish.

Version E = with threaded bolt and Allen screw.



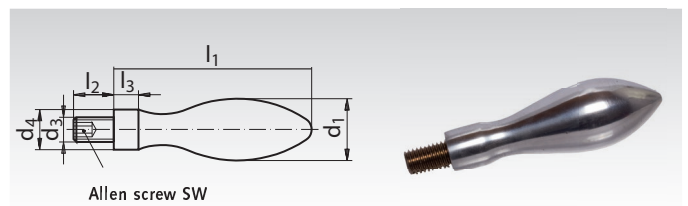
Ordering Details: e.g.: Product No. 662 220 00, Grip DIN 39 Pr, Version E 20 mm

| Product No. Vers. E | d ₁ mm | d ₃ mm | d ₄ ^{H13} mm | l ₁ mm | l ₂ mm | l ₃ mm | SW mm | Weight g |
|------------------------|----------------------|----------------------|-------------------------------------|----------------------|----------------------|----------------------|----------|-------------|
| 662 220 00 | 20 | M8 | 13 | 64 | 13 | 8 | 4 | 25 |
| 662 225 00 | 25 | M10 | 16 | 80 | 14 | 10 | 5 | 50 |
| 662 232 00 | 32 | M12 | 20 | 100 | 21 | 13 | 6 | 100 |

Fixed Handles DIN 39 AL

Material: Aluminium polished.

Version E = with moulded-in threaded bolt and Allen screw.



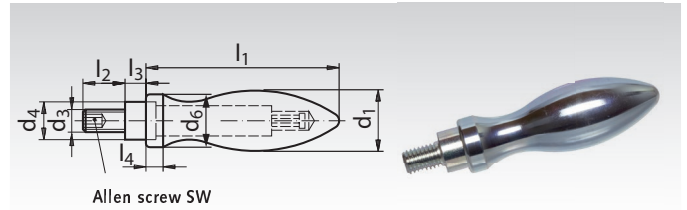
Ordering Details: e.g.: Product No. 662 316 00, Grip DIN 39 AL, Version E 16 mm

| Product No. Vers. E | d ₁ mm | d ₃ mm | d ₄ ^{H13} mm | l ₁ mm | l ₂ mm | l ₃ mm | SW mm | Weight g |
|------------------------|----------------------|----------------------|-------------------------------------|----------------------|----------------------|----------------------|----------|-------------|
| 662 316 00 | 16 | M6 | 10 | 50 | 13 | 7 | 3 | 20 |
| 662 320 00 | 20 | M8 | 13 | 64 | 13 | 8 | 4 | 35 |
| 662 325 00 | 25 | M10 | 16 | 80 | 20 | 12 | 5 | 85 |
| 662 332 00 | 32 | M12 | 20 | 100 | 25 | 16 | 6 | 150 |
| 662 336 00 | 36 | M16 | 22 | 112 | 28 | 16 | 8 | 210 |

Revolving Handles DIN 98 St

Material: Steel, zinc-plated.

Version E = with threaded spindle and Allen screw.



Ordering Details: z.B.: Product No.. 663 116 00, Grip DIN 98 St, Vers. E 16 mm

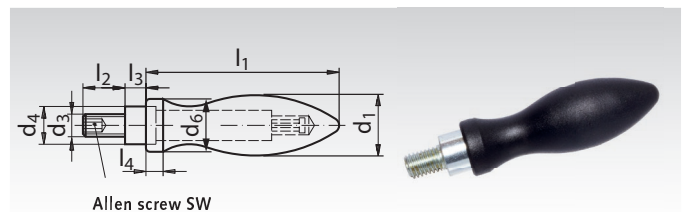
| Product No. Vers. E | d ₁ mm | d ₃ mm | d ₄ ^{H13} mm | d ₆ mm | l ₁ mm | l ₂ mm | l ₃ mm | l ₄ mm | SW mm | Weight g |
|------------------------|----------------------|----------------------|-------------------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------|-------------|
| 663 116 00 | 16 | M6 | 10 | 14 | 49 | 11 | 5,5 | 5 | 3 | 55 |
| 663 120 00 | 20 | M8 | 13 | 18 | 61 | 13 | 6 | 6 | 4 | 104 |
| 663 125 00 | 25 | M10 | 16 | 21 | 75 | 14 | 8 | 6,5 | 5 | 187 |
| 663 132 00 | 32 | M12 | 20 | 26 | 95 | 21 | 10,5 | 8 | 6 | 387 |
| 663 136 00 | 36 | M16 | 22 | 29 | 106 | 26 | 11 | 9 | 8 | 541 |

Revolving Handles DIN 98 Pr

Material: Plastic Thermoplast (Polyamide), black, matt finish.

Version E = with threaded spindle and Allen screw.

Spindle: Steel, zinc-plated.



Ordering Details: e.g.: Product No. 663 216 00, Grip DIN 98 Pr, Vers. E 16 mm

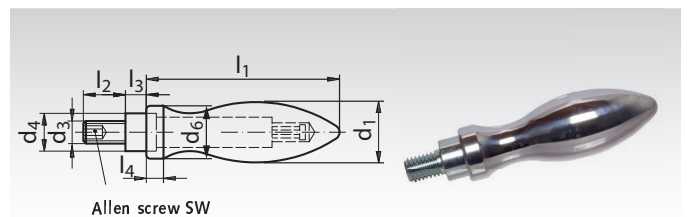
| Product No. Vers. E | d ₁ mm | d ₃ mm | d ₄ ^{H13} mm | d ₆ mm | l ₁ mm | l ₂ mm | l ₃ mm | l ₄ mm | SW mm | Weight g |
|------------------------|----------------------|----------------------|-------------------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------|-------------|
| 663 216 00 | 16 | M6 | 10 | 14 | 49 | 11 | 5,5 | 5 | 3 | 21 |
| 663 220 00 | 20 | M8 | 13 | 18 | 61 | 13 | 6 | 6 | 4 | 45 |
| 663 225 00 | 25 | M10 | 16 | 21 | 75 | 14 | 8 | 6,5 | 5 | 71 |
| 663 232 00 | 32 | M12 | 20 | 26 | 95 | 21 | 10,5 | 8 | 6 | 144 |

Revolving Handles DIN 98 AL

Material: Aluminium polished.

Version E = with threaded spindle and Allen screw.

Spindle Steel, zinc-plated.



Ordering Details: e.g.: Product No. 663 316 00, Grip DIN 98 AL, Vers. E 16 mm

| Product No. Vers. E | d ₁ mm | d ₃ mm | d ₄ ^{H13} mm | d ₆ mm | l ₁ mm | l ₂ mm | l ₃ mm | l ₄ mm | SW mm | Weight g |
|------------------------|----------------------|----------------------|-------------------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------|-------------|
| 663 316 00 | 16 | M6 | 10 | 14 | 49 | 11 | 5,5 | 5 | 3 | 20 |
| 663 320 00 | 20 | M8 | 13 | 18 | 61 | 13 | 6 | 6 | 4 | 35 |
| 663 325 00 | 25 | M10 | 16 | 21 | 75 | 14 | 8 | 6,5 | 5 | 85 |
| 663 332 00 | 32 | M12 | 20 | 26 | 95 | 21 | 10,5 | 8 | 6 | 150 |
| 663 336 00 | 36 | M16 | 22 | 29 | 106 | 26 | 11 | 9 | 8 | 210 |