

# Glas

## Glass



Floatglas mit 4 Bohrungen  
Float glass with 4 drill holes

## Floatglas

### Float glass

Floatglas wird in einem Produktionsverfahren hergestellt, bei dem die flüssige Glasschmelze in einem kontinuierlichen Prozess auf ein Bad aus flüssigem Zinn geleitet wird. Dort treibt es auf der Oberfläche (englisch „float“-treiben) und breitet sich wie ein Film gleichmäßig aus. Der anschließende Ziehprozess der bereits zähflüssigen Glasschmelze bestimmt die Glasdicken. Abschließend wird es vollständig abgekühlt und in Tafeln geschnitten. Floatglas ist das Basisglas zu sogenannten vorgespannten Gläsern und Verbundgläsern.

Float glass is produced in a production process in which the molten glass is passed in a continuous process onto a bath of liquid tin. There it drifts (floats) on the surface and spreads out like a film evenly. The subsequent drawing process of the already viscous glass melt determines the glass thicknesses. Finally, it is completely cooled down and cut into sheets. Float glass is the basic glass to so-called pre-stressed glasses and composite glasses.

Floatglas ohne Bohrungen

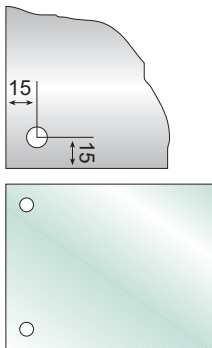
Float glass without drill holes



| Art.-Nr. | Format mm<br>Breite x Höhe  | Ø mm | Bohrabstand mm         |
|----------|-----------------------------|------|------------------------|
| Art. No. | Format mm<br>Width x Height | Ø mm | Drill Hole Distance mm |
| 200.103  | 150 x 150 x 4               | -    | -                      |

## Floatglas mit 2 Bohrungen

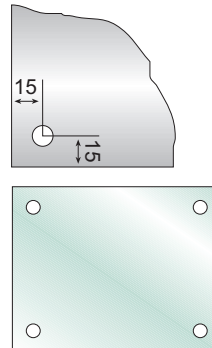
Float glass with 2 drill holes



| Art.-Nr.  | Format mm<br>Breite x Höhe x Stärke | Ø mm  | Bohrabstand mm         |
|-----------|-------------------------------------|-------|------------------------|
| Art. No.  | Format mm<br>Width x Height x Th.   | Ø mm  | Drill Hole Distance mm |
| 200.003   | 150 x 150 x 4                       | 10    | 15 / 15                |
| 200.006   | 100 x 200 x 4                       | 10    | 15 / 15                |
| 200.007   | 130 x 200 x 4                       | 10    | 15 / 15                |
| 200.008   | 150 x 200 x 4                       | 10    | 15 / 15                |
| 200.009   | 120 x 200 x 4                       | 10    | 15 / 15                |
| 200.010   | 120 x 120 x 4                       | 10    | 15 / 15                |
| 200.012   | 130 x 180 x 4                       | 10    | 15 / 15                |
| 200.013   | 100 x 150 x 4                       | 10    | 15 / 15                |
| 200.013.A | 150 x 100 x 4                       | 10    | 15 / 15                |
| 200.014   | 190 x 190 x 4                       | 10    | 15 / 15                |
| 200.016   | 210 x 210 x 4                       | 10    | 15 / 15                |
| 200.017   | 125 x 245 x 4                       | 10    | 15 / 15                |
| 200.019   | 110 x 150 x 4                       | 10    | 15 / 15                |
| 200.021   | 160 x 160 x 4                       | 10    | 15 / 15                |
| 200.022   | 140 x 210 x 4                       | 10    | 15 / 15                |
| 200.026   | 100 x 160 x 4                       | 10    | 15 / 15                |
| 200.027   | 250 x 180 x 4                       | 10    | 15 / 15                |
| 200.029   | 100 x 170 x 4                       | 10    | 15 / 15                |
| 200.029.A | 170 x 100 x 4                       | 10    | 15 / 15                |
| 200.037   | 357 x 080 x 4                       | 10    | 15 / 15                |
| 200.051   | 297 x 150 x 4                       | 10 mm | 15 / 15                |

## Floatglas mit 4 Bohrungen

Float glass with 4 drill holes



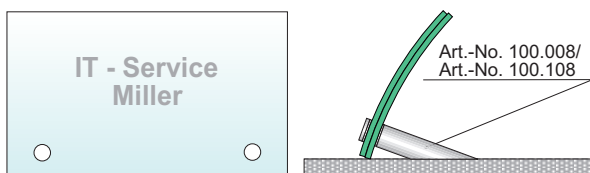
| Art.-Nr. | Format mm<br>Breite x Höhe x Stärke | Ø mm | Bohrabstand mm         |
|----------|-------------------------------------|------|------------------------|
| Art. No. | Format mm<br>Width x Height x Th.   | Ø mm | Drill Hole Distance mm |
| 200.310  | 120x120x4                           | 10   | 15 / 15                |
| 200.314  | 190x190x4                           | 10   | 15 / 15                |
| 200.315  | 150x210x4 (DIN A 5)                 | 10   | 15 / 15                |
| 200.316  | 210x210x4                           | 10   | 15 / 15                |
| 200.327  | 180x250x4                           | 10   | 15 / 15                |
| 200.329  | 100x170x4                           | 10   | 15 / 15                |
| 200.333  | 200x300x4                           | 10   | 15 / 15                |
| 200.352  | 420x200x4                           | 10   | 15 / 15                |
| 200.353  | 420x250x4                           | 10   | 15 / 15                |

# Glas

## Glass

### Konvexes Floatglas mit 2 Bohrungen

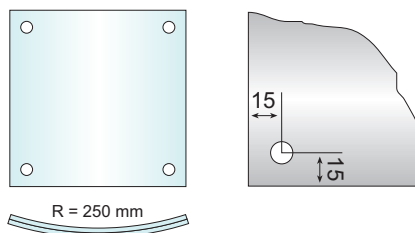
Convex float glass with 2 drill holes



Art.-No. 212.004.B

### Konvexes Floatglas 4-Loch

Convex float glass with 4 drill holes



| Art.-Nr.  | Format mm<br>Breite x Höhe x Stärke | Ø mm | Bohrabstand mm         |
|-----------|-------------------------------------|------|------------------------|
| Art. No.  | Format mm<br>Width x Height x Th.   | Ø mm | Drill Hole distance mm |
| 212.004.H | 100 x 170 x 4                       | 10   | 16 / 21                |
| 212.004.B | 170 x 100 x 4                       | 10   | 21 / 16                |

| Art.-Nr.  | Format mm<br>Breite x Höhe x Stärke | Ø mm | Bohrabstand mm         |
|-----------|-------------------------------------|------|------------------------|
| Art. No.  | Format mm<br>Width x Height x Th.   | Ø mm | Drill Hole distance mm |
| 210.303.Q | 150 x 150 x 4                       | 10   | 15 / 15                |
| 210.315.H | 150 x 210 x 4 (DIN A 5)             | 10   | 15 / 15                |
| 210.316.Q | 210 x 210 x 4                       | 10   | 15 / 15                |
| 210.317.Q | 250 x 250 x 4                       | 10   | 15 / 15                |
| 210.320.H | 210 x 297 x 4 (DIN A 4)             | 10   | 15 / 15                |
| 210.320.B | 297 x 210 x 4 (DIN A 4)             | 10   | 15 / 15                |
| 210.350.H | 297 x 420 x 4 (DIN A 3)             | 10   | 15 / 15                |



## Thermisch gehärtetes Glas Tempered glass

Thermisch gehärtetes Glas ist zunächst ganz normales Floatglas. Dieses wird im nächsten Produktionsschritt gehärtet („thermisch vorgespannt“). Dafür wird es in einem speziellen Ofen erhitzt und dann schnell abgekühlt. Dabei kühlt das Glas an der Oberfläche schneller ab als in der Mitte und bekommt dabei eine innere Spannung, welche die Biegefestigkeit deutlich erhöht. Auch die Schlagfestigkeit, Kratzfestigkeit und Temperaturwechselbeständigkeit erhöhen sich. Bei Bruch zerfallen thermisch gehärtete Glastafeln in kleine, stumpfkantige Stücke, sodass die Verletzungsgefahr deutlich reduziert wird.

ESG Glas (Einscheibensicherheitsglas) ist durch einen Stempel gekennzeichnet, welcher Angaben zum Hersteller und die Nummer der Norm DIN 12150 enthalten muss.

Tempered glass is initially normal float glass. It is tempered in the next production step („thermally pre-stressed“). For this, it is heat treated in a special oven and then cooled down rapidly. The glass cools down at the surface faster than in the middle and thereby acquires an internal stress, which significantly increases the bending strength. The impact resistance, scratch resistance and thermal shock resistance are also increased. When broken, tempered glass panels fracture into small blunt-edged pieces, so that the risk of injury is significantly reduced.

ESG glass is marked by a stamp, which must contain information on the manufacturer and the number of the DIN 12150 standard.

### Thermisch gehärtetes Glas ohne Bohrungen

#### Tempered glass without drill holes

| Art.-Nr. | Format mm<br>Breite x Höhe x Stärke | Ø mm | Bohrabstand mm         |
|----------|-------------------------------------|------|------------------------|
| Art. No. | Format mm<br>Width x Height x Th.   | Ø mm | Drill Hole distance mm |
| 250.103  | 150 x 150 x 4                       | -    | -                      |
| 250.108  | 150 x 200 x 4                       | -    | -                      |
| 250.113  | 100 x 150 x 4                       | -    | -                      |
| 250.115  | 150 x 210 x 4                       | -    | -                      |
| 250.120  | 210 x 297 x 4 (DIN A4)              | -    | -                      |
| 250.150  | 297 x 420 x 4 (DIN A3)              | -    | -                      |
| 250.151  | 150 x 297 x 4                       | -    | -                      |
| 250.154  | 420 x 594 x 4 (DIN A2)              | -    | -                      |
| 250.172  | 841 x 594 x 4 (DIN A1)              | -    | -                      |



### Thermisch gehärtetes Glas mit 2 Bohrungen

#### Tempered glass with 2 drill holes

| Art.-Nr.  | Format mm<br>Breite x Höhe x Stärke | Ø mm | Bohrabstand mm         |
|-----------|-------------------------------------|------|------------------------|
| Art. No.  | Format mm<br>Width x Height x Th.   | Ø mm | Drill Hole distance mm |
| 250.001   | 100 x 100 x 4                       | 10   | 15 / 15                |
| 250.002   | 130 x 130 x 4                       | 10   | 15 / 15                |
| 250.003   | 150 x 150 x 4                       | 10   | 15 / 15                |
| 250.004   | 180 x 180 x 4                       | 10   | 15 / 15                |
| 250.005   | 200 x 200 x 4                       | 10   | 15 / 15                |
| 250.006   | 100 x 200 x 4                       | 10   | 15 / 15                |
| 250.007   | 130 x 200 x 4                       | 10   | 15 / 15                |
| 250.008   | 150 x 200 x 4                       | 10   | 15 / 15                |
| 250.009   | 120 x 200 x 4                       | 10   | 15 / 15                |
| 250.010   | 120 x 120 x 4                       | 10   | 15 / 15                |
| 250.011   | 155 x 080 x 4                       | 10   | 15 / 15                |
| 250.012   | 130 x 180 x 4                       | 10   | 15 / 15                |
| 250.013   | 100 x 150 x 4                       | 10   | 15 / 15                |
| 250.013.A | 150 x 100 x 4                       | 10   | 15 / 15                |
| 250.015   | 150 x 210 x 4 (DIN A5)              | 10   | 15 / 15                |
| 250.016   | 210 x 210 x 4                       | 10   | 15 / 15                |
| 250.017   | 125 x 245 x 4                       | 10   | 15 / 15                |
| 250.018   | 115 x 170 x 4                       | 10   | 15 / 15                |
| 250.020   | 210 x 297 x 4 (DIN A4)              | 10   | 15 / 15                |
| 250.021   | 160 x 160 x 4                       | 10   | 15 / 15                |
| 250.024   | 130 x 160 x 4                       | 10   | 15 / 15                |
| 250.025   | 170 x 170 x 4                       | 10   | 15 / 15                |
| 250.026   | 100 x 160 x 4                       | 10   | 15 / 15                |
| 250.027   | 250 x 180 x 4                       | 10   | 15 / 15                |
| 250.029   | 100 x 170 x 4                       | 10   | 15 / 15                |
| 250.029.A | 170 x 100 x 4                       | 10   | 15 / 15                |
| 250.032   | 125 x 125 x 4                       | 10   | 15 / 15                |

# Glas

## Glass

### Thermisch gehärtetes Glas mit 2 Bohrungen

Tempered glass with 2 drill holes

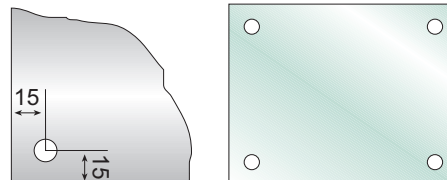


| Art.-Nr.   | Format mm<br>Breite x Höhe x Stärke | Ø mm | Bohrabstand mm         |
|------------|-------------------------------------|------|------------------------|
| Art. No.   | Format mm<br>Width x Height x Th.   | Ø mm | Drill Hole distance mm |
| 250.034.6  | 150 x 070 x 4                       | 6    | 16 / 16                |
| 250.035.6  | 200 x 070 x 4                       | 6    | 25 / 16                |
| 250.051    | 297 x 150 x 4                       | 10   | 15 / 15                |
| 250.055.10 | 450 x 150 x 5                       | 10   | 20 / 15                |
| 250.056.10 | 450 x 180 x 5                       | 10   | 20 / 15                |
| 250.058.10 | 450 x 105 x 5                       | 10   | 20 / 15                |
| 250.060.10 | 600 x 150 x 5                       | 10   | 20 / 15                |
| 250.063.10 | 600 x 300 x 5                       | 10   | 20 / 15                |
| 250.076.10 | 750 x 150 x 5                       | 10   | 20 / 15                |
| 250.077.10 | 750 x 200 x 5                       | 10   | 20 / 15                |
| 250.078.10 | 750 x 250 x 5                       | 10   | 20 / 15                |
| 250.091.10 | 900 x 180 x 5                       | 10   | 20 / 15                |
| 250.463.10 | 600 x 300 x 4                       | 10   | 20 / 15                |
| 258.004.10 | 180 x 180 x 8                       | 10   | 15 / 15                |



### Thermisch gehärtetes Glas mit 4 Bohrungen

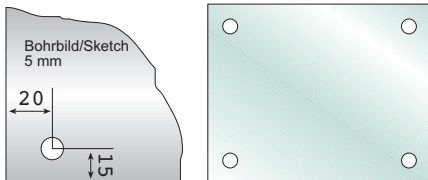
Tempered glass with 4 drill holes



| Art.-Nr.   | Format mm<br>Breite x Höhe x Stärke | Ø mm | Bohrabstand mm         |
|------------|-------------------------------------|------|------------------------|
| Art. No.   | Format mm<br>Width x Height x Th.   | Ø mm | Drill Hole distance mm |
| 250.301    | 100 x 100 x 4                       | 10   | 15 / 15                |
| 250.302    | 130 x 130 x 4                       | 10   | 15 / 15                |
| 250.303    | 150 x 150 x 4                       | 10   | 15 / 15                |
| 250.304    | 180 x 180 x 4                       | 10   | 15 / 15                |
| 250.305    | 200 x 200 x 4                       | 10   | 15 / 15                |
| 250.306    | 100 x 200 x 4                       | 10   | 15 / 15                |
| 250.307    | 130 x 200 x 4                       | 10   | 15 / 15                |
| 250.308    | 150 x 200 x 4                       | 10   | 15 / 15                |
| 250.309    | 120 x 200 x 4                       | 10   | 15 / 15                |
| 250.310    | 120 x 120 x 4                       | 10   | 15 / 15                |
| 250.313    | 100 x 150 x 4                       | 10   | 15 / 15                |
| 250.315    | 150 x 210 x 4 (DIN A 5)             | 10   | 15 / 15                |
| 250.316    | 210 x 210 x 4                       | 10   | 15 / 15                |
| 250.317    | 125 x 245 x 4                       | 10   | 15 / 15                |
| 250.318    | 115 x 170 x 4                       | 10   | 15 / 15                |
| 250.320    | 210 x 297 x 4 (DIN A 4)             | 10   | 15 / 15                |
| 250.321    | 160 x 160 x 4                       | 10   | 15 / 15                |
| 250.322    | 140 x 210 x 4                       | 10   | 15 / 15                |
| 250.324    | 130 x 160 x 4                       | 10   | 15 / 15                |
| 250.325    | 170 x 170 x 4                       | 10   | 15 / 15                |
| 250.326    | 100 x 160 x 4                       | 10   | 15 / 15                |
| 250.327    | 180 x 250 x 4                       | 10   | 15 / 15                |
| 250.328    | 150 x 180 x 4                       | 10   | 15 / 15                |
| 250.332    | 125 x 125 x 4                       | 10   | 15 / 15                |
| 250.333    | 200 x 300 x 4                       | 10   | 15 / 15                |
| 250.338    | 420 x 100 x 4                       | 10   | 15 / 15                |
| 250.339    | 420 x 150 x 4                       | 10   | 15 / 15                |
| 250.345    | 250 x 250 x 4                       | 10   | 15 / 15                |
| 250.350    | 297 x 420 x 4 (DIN A 3)             | 10   | 15 / 15                |
| 250.351    | 300 x 150 x 4                       | 10   | 15 / 15                |
| 250.352    | 420 x 200 x 4                       | 10   | 15 / 15                |
| 250.353    | 420 x 250 x 4                       | 10   | 15 / 15                |
| 250.631    | 120 x 180 x 4                       | 10   | 15 / 15                |
| 250.331.10 | 297 x 297 x 4                       | 10   | 15 / 15                |
| 250.340.10 | 400 x 400 x 4                       | 10   | 15 / 15                |
| 250.341.10 | 480 x 360 x 4                       | 10   | 20 / 15                |
| 250.354.10 | 420 x 594 x 5 (DIN A 2)             | 10   | 20 / 15                |
| 250.354.13 | 420 x 594 x 5 (DIN A 2)             | 13   | 20 / 15                |
| 250.355.10 | 450 x 150 x 5                       | 10   | 20 / 15                |
| 250.356.10 | 450 x 180 x 5                       | 10   | 20 / 15                |
| 250.357.10 | 450 x 230 x 5                       | 10   | 15 / 15                |
| 250.358.10 | 450 x 105 x 5                       | 10   | 20 / 15                |
| 250.359.10 | 450 x 450 x 5                       | 10   | 20 / 15                |

## Thermisch gehärtetes Glas 4-Loch

Tempered glass with 4 drill holes



| Art.-Nr.   | Format mm<br>Breite x Höhe x Stärke | Ø mm | Bohrabstand mm         |
|------------|-------------------------------------|------|------------------------|
| Art. No.   | Format mm<br>Width x Height x Th.   | Ø mm | Drill Hole distance mm |
| 250.360.10 | 600 x 150 x 5                       | 10   | 15 / 15                |
| 250.361.10 | 600 x 210 x 5                       | 10   | 15 / 15                |
| 250.362.10 | 600 x 450 x 5                       | 10   | 15 / 15                |
| 250.363.10 | 600 x 300 x 5                       | 10   | 15 / 15                |
| 250.365.10 | 630 x 297 x 5                       | 10   | 15 / 15                |
| 250.366.10 | 630 x 450 x 5                       | 10   | 15 / 15                |
| 250.367.10 | 600 x 600 x 5                       | 10   | 15 / 15                |
| 250.367.13 | 600 x 600 x 5                       | 13   | 15 / 15                |
| 250.368.10 | 600 x 250 x 5                       | 10   | 20 / 15                |
| 250.369.10 | 250 x 380 x 4                       | 10   | 15 / 15                |
| 250.370.10 | 600 x 400 x 5                       | 10   | 20 / 15                |
| 250.371.10 | 500 x 200 x 5                       | 10   | 26 / 21                |
| 250.376.10 | 750 x 150 x 5                       | 10   | 20 / 15                |
| 250.378.10 | 750 x 250 x 5                       | 10   | 20 / 15                |
| 250.379.10 | 600 x 650 x 5                       | 10   | 20 / 15                |
| 250.381.10 | 600 x 180 x 5                       | 10   | 20 / 15                |
| 250.385.10 | 500 x 500 x 5                       | 10   | 20 / 15                |
| 250.385.13 | 500 x 500 x 5                       | 13   | 20 / 15                |
| 250.387.10 | 500 x 400 x 5                       | 10   | 20 / 15                |
| 250.388.10 | 500 x 300 x 5                       | 10   | 20 / 15                |
| 250.390.10 | 900 x 150 x 5                       | 10   | 20 / 15                |
| 250.391.10 | 900 x 180 x 5                       | 10   | 20 / 15                |
| 258.320.10 | 210 x 297 x 8 (DINA 4)              | 10   | 20 / 25                |
| 258.330.10 | 300 x 300 x 8                       | 10   | 20 / 25                |
| 258.350.10 | 297 x 420 x 8 (DINA 3)              | 10   | 20 / 25                |
| 258.351.10 | 300 x 150 x 8                       | 10   | 20 / 25                |
| 258.354.10 | 420 x 594 x 8 (DINA 2)              | 10   | 20 / 25                |
| 258.388.10 | 500 x 300 x 8                       | 10   | 20 / 20                |
| 258.389.10 | 400 x 100 x 8                       | 10   | 20 / 25                |
| 258.392.10 | 400 x 200 x 8                       | 10   | 20 / 25                |
| 258.393.10 | 500 x 125 x 8                       | 10   | 20 / 25                |
| 258.395.10 | 500 x 225 x 8                       | 10   | 20 / 25                |
| 258.396.10 | 500 x 350 x 8                       | 10   | 20 / 25                |

## Thermisch gehärtetes Glas 6-Loch

Tempered glass with 6 drill holes



| Art.-Nr.   | Format mm<br>Breite x Höhe x Stärke | Ø  | Bohrabstand         |
|------------|-------------------------------------|----|---------------------|
| Art. No.   | Format mm<br>Width x Height x Th.   | Ø  | Drill Hole distance |
| 250.342.10 | 550 x 350 x 5                       | 10 | 20 / 15             |
| 250.364.10 | 500 x 1000 x 5                      | 10 | 20 / 15             |
| 250.364.13 | 500 x 1000 x 5                      | 13 | 20 / 15             |
| 250.372.10 | 594 x 840 x 5 (DINA 1)              | 10 | 20 / 15             |
| 250.372.13 | 594 x 840 x 5 (DINA 1)              | 13 | 20 / 15             |
| 250.373.10 | 750 x 500 x 5                       | 10 | 20 / 15             |
| 250.373.13 | 750 x 500 x 5                       | 13 | 20 / 15             |
| 250.374.10 | 750 x 750 x 5                       | 13 | 20 / 15             |
| 250.374.13 | 750 x 750 x 5                       | 13 | 20 / 15             |
| 250.375.13 | 750 x 1000 x 5                      | 13 | 20 / 15             |
| 250.380.10 | 800 x 400 x 5                       | 10 | 20 / 15             |
| 250.380.13 | 800 x 400 x 5                       | 13 | 20 / 15             |
| 250.382.13 | 800 x 600 x 5                       | 13 | 20 / 15             |
| 250.383.13 | 800 x 500 x 5                       | 13 | 20 / 15             |
| 250.384.13 | 850 x 600 x 5                       | 13 | 20 / 15             |

## Thermisch gehärtetes Glas 8-Loch

Tempered glass with 8 drill holes

| Art.-Nr.   | Format mm<br>Breite x Höhe x Stärke | Ø mm | Bohrabstand mm         |
|------------|-------------------------------------|------|------------------------|
| Art. No.   | Format mm<br>Width x Height x Th.   | Ø mm | Drill Hole distance mm |
| 250.386.13 | 840 x 840 x 5                       | 13   | 20 / 20 / 420          |

# Einleger und Befestigungsmaterial

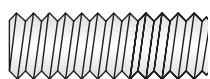
## Labeling Inserts and Mounting Material

### Innensechskant-Gewindestäbe

#### Hexagon Socket Threaded Rods

#### Innensechskant-Gewindestift

#### Hexagon socket grub screw

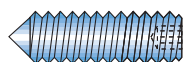


| Art.-Nr. | Ø mm | Länge mm  | Schlüsselweite | Material              |
|----------|------|-----------|----------------|-----------------------|
| Art. No. | Ø mm | Length mm | Wrench size    | Material              |
| 400.220  | 5    | 5         | 2,5            | ABS weiß<br>ABS white |
| 400.221  | 4    | 5         | 2,0            | ABS weiß<br>ABS white |
| 400.240  | 6    | 8         | 3,0            | ABS weiß<br>ABS white |

Kunststoff Innensechskant-Gewinde Stift, DIN 913 ohne Spitze  
Plastic hexagon socket grub screw, DIN 913 without tip

#### Innensechskant-Gewindestift M3/M4

#### Hexagon socket grub screw M3/M4



| Art.-Nr. | Ø mm | Länge mm  | Schlüsselweite | Material                     |
|----------|------|-----------|----------------|------------------------------|
| Art. No. | Ø mm | Length mm | Wrench size    | Material                     |
| 400.650  | 4    | 5         | 2,0            | Edelstahl<br>Stainless steel |
| 400.651  | 4    | 7         | 2,0            | Edelstahl<br>Stainless steel |
| 400.656  | 4    | 4         | 2,0            | Edelstahl<br>Stainless steel |

Edelstahl Innensechskant-Gewindestift M4, DIN 914 mit Spitze  
Stainless steel hexagon socket grub screw M4, DIN 914 with tip