

# Clamping and crimp rings



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for air spring systems of different materials with smooth and profiled cross sections

## Technical specification of welded crimp rings

<b>Performance</b>	<ul style="list-style-type: none"><li>· pressure butt welded</li><li>· weld coining</li><li>· extension of welding area max. 0.4 mm in width and in thickness of material</li></ul>
<b>Materials</b>	<ul style="list-style-type: none"><li>· C4C ref. EN 10263-2</li><li>· tensile 370 MPa ± 40MPa</li><li>· Quality DC according EN 10139 and other materials on request.</li></ul>
<b>Tolerances of material before forming</b>	<ul style="list-style-type: none"><li>· width of material ± 0.15 mm</li><li>· thickness of material ± 0.05 mm</li><li>· radius at rough-rolled edge: 0.5 x thickness + 0.5</li></ul>
<b>Dimension performance of crimp rings</b>	<ul style="list-style-type: none"><li>· ovality (long axis – short axis) max. 1.6 mm (caliper / gage inspection)</li><li>· inner circumference ± 1mm (measurements with Novomter)</li><li>· flatness: inner diameter &lt; 100 mm ø max. 0,5 mm inner diameter &gt; 100 mm ø max. 0,7 mm,</li></ul>
<b>Marking of crimp rings</b>	<ul style="list-style-type: none"><li>· data code stamp inside or outside up to 14 digits</li></ul>
<b>Galvanic coatings</b>	<ul style="list-style-type: none"><li>· guaranteed corrosion resistances at unworked condition</li><li>· surface resistance in build-in condition to be tested at customer</li></ul>

**Attention! At a galvanic coating, a hydrogen embrittlement of material can not be excluded.**

<b>Galvanic surface treatment</b>	<b>Surface resistance after salt spraytest DIN 50021 SS</b>
Zinc thick-film passivated	400 h
Zn Fe transparent (Cr VI-free)	480 h
Zn Ni transparent (Cr VI-free)	720 h

<b>Material- and ring dimensions (mm)</b>	<b>Smallest ring inner diameter (mm)</b>
8 x 3	80
10 x 2	70
10 x 2,5	80
10 x 3	80
10 x 3,5	90
12,5 x 2	80
12,5 x 3	85
15 x 2	80
15 x 3	100
15 x 4	115
15 x 5	130
20 x 5	160

other dimension on request

# Profiled clamping and crimp rings

## Wire dimensions (mm)

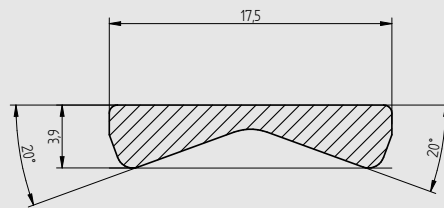
17,5 x 3,9  
 (17,5 ± 0,15)  
 (3,9 ± 0,10)

smallest ring inner diameter  
 120 mm

## Material

C4C / DIN EN 10263-2

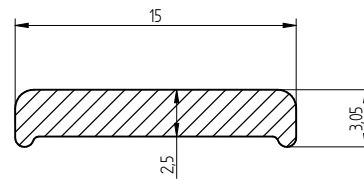
## Drawing



15 x 2,5 x 3,05  
 (15 ± 0,15)  
 (3,05 ± 0,10)

smallest ring inner diameter  
 82 mm

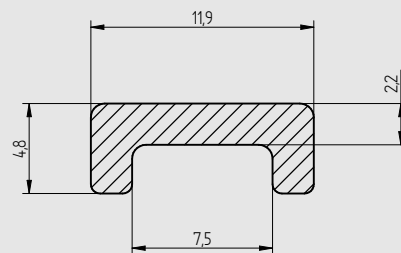
C4C / DIN EN 10263-2  
 (Rm max. 315 MPa)



11,9 x 4,8  
 (11,9 ± 0,15)  
 (4,80 ± 0,15)

smallest ring inner diameter  
 125 mm

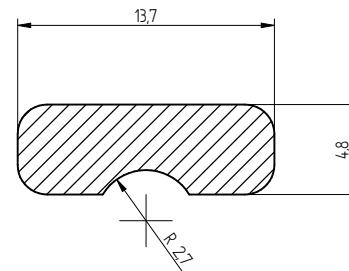
C4C / DIN EN 10263-2



13,7 x 4,8  
 (13,7 ± 0,15)  
 (4,80 ± 0,15)

smallest ring inner diameter  
 135 mm

C4C / DIN EN 10263-2



# Profiled clamping and crimp rings

## Wire dimensions (mm)

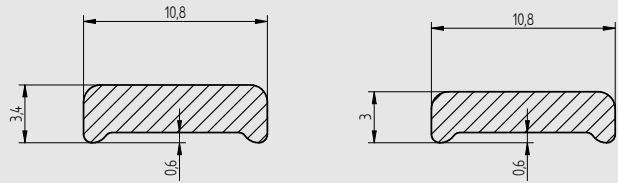
10,8 x 3,4 / 3,0  
 (10,8 ± 0,2)  
 (3,40 / 3,0 ± 0,1)

smallest ring inner diameter  
 100 mm

## Material

DC 01 / annealed  
 DIN EN 10139  
 (Re 150 – 255 N/mm<sup>2</sup>/  
 Rm 250 – 315 N/mm<sup>2</sup>)

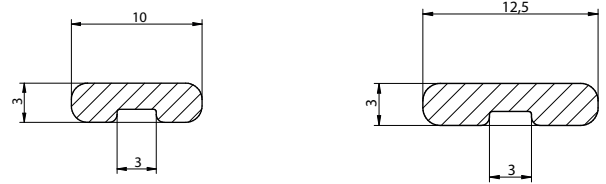
## Drawing



10,0 / 12,5 x 3,0  
 (10,0 / 12,5 ± 0,15)  
 (3,0 ± 0,05)

smallest ring inner diameter  
 90 mm

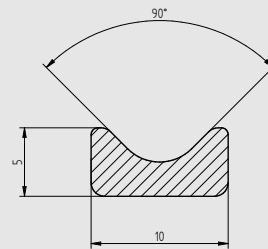
C4C / DIN EN 10263-2



11,9 x 4,8  
 (11,9 ± 0,15)  
 (4,80 ± 0,15)

smallest ring inner diameter  
 110 mm

C4C / DIN EN 10263-2



20,0 x 4,0  
 (20,0 ± 0,2)  
 (4,0 ± 0,1)

smallest ring inner diameter  
 N.N. mm

DC01 / DIN EN 10139  
 Rm 400-500 N/mm<sup>2</sup>

