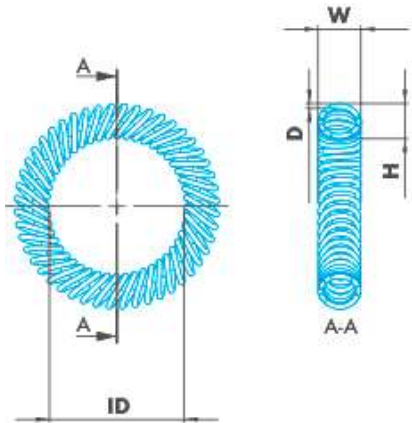


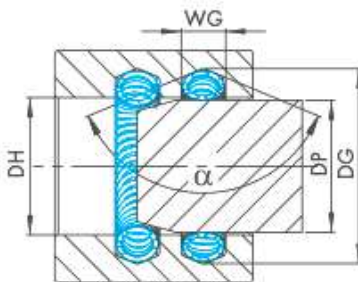
# SPECIFICATION

## 1. DIMENSION

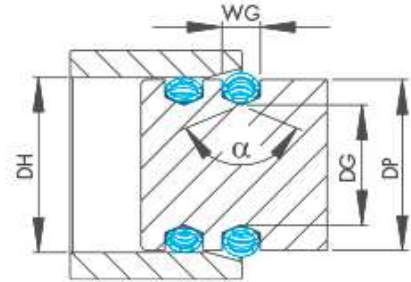
### DIMENSIONS



### HOUSING-MOUNTED DESIGN



### PISTON-MOUNTED DESIGN



## PRODUCT DIMENSIONS (EXAMPLES)

We develop your individual Contact Element with dimensions according to your requirements. Please chose your dimensions using the BAUMANN inquiry form. The table shows some common examples:

<b>D</b>	<b>H</b>	<b>W</b>	<b>ID</b>	<b>No. of coils</b>
0.2 mm	1.2 mm	1.4 mm	3 - 15 mm	35 - 150
0.3 mm	1.7 mm	2.0 mm	5 - 25 mm	35 - 150
0.4 mm	3.0 mm	3.6 mm	6 - 30 mm	35 - 150
0.5 mm	4.1 mm	5.0 mm	8 - 35 mm	35 - 150
0.6 mm	4.8 mm	5.6 mm	10 - 35 mm	35 - 120
0.8 mm	6.0 mm	7.3 mm	15 - 100 mm	35 - 250
1.0 mm	7.5 mm	9.0 mm	20 - 200 mm	35 - 400
1.3 mm	9.0 mm	10.9 mm	25 - 250 mm	35 - 400
1.5 mm	10.5 mm	12.7 mm	30 - 350 mm	35 - 450
2.0 mm	15.0 mm	17.5 mm	35 - 500 mm	35 - 500

## 2. WIRE MATERIAL

We produce BAUMANN Contact Elements using the following wire material:

- Copper alloys (see below table)
- Stainless steel alloys (, X10CrNi18-8, X10CrNi18-8 plated, X2CrNiMo17-12-2, etc)
- Others

If you require other wire materials, please indicate your requirement in the BAUMANN inquiry form or get in contact with us.

## CuCr1Zr combines high electrical and thermal conductivity with good strength

### Data sheet for CuCr1Zr

Chemical Composition <sup>1)</sup>	
Cr	0.5-1.2%
Zr	0.03-0.3%
Cu	balance

Material Designation	
EN	CuCr1Zr, CW106C
UNS	C18200
DIN <sup>2)</sup>	CuCrZr, 2.1293
BS <sup>2)</sup>	CC102
NF <sup>2)</sup>	not standardized

Physical Properties <sup>3)</sup>		
Electrical conductivity	MS/m	≥43
	% IACS	≥74
Thermal conductivity	W/(m*K)	>320
Thermal expansion coefficient (0-300°C)	10 <sup>-6</sup> /K	17.6
Density	g/cm <sup>3</sup>	8.92
Modulus of elasticity	kN/mm <sup>2</sup>	130
Melting range	°C	1070-1080

1) Reference values in % by weight according to EN 12163 2) Former national standards  
 3) Reference values at room temperature; 1 GPa = 1kN/mm<sup>2</sup>; 1 MS/m = 1 m/Ω \* mm<sup>2</sup>)

BAUMANN Group

1

## CuCrAgFeTiSi has similar properties as CuCr1Zr but slightly higher electrical conductivity

### Data sheet for CuCrAgFeTiSi

Chemical Composition <sup>1)</sup>	
Cr	0.5%
Ag	0.1%
Fe	0.08%
Ti	0.06%
Si	0.03%
Cu	balance

Material Designation	
Olin Brass	Alloy C
DIN <sup>2)</sup>	not standardized
EN	not standardized
UNS	C 18080

Physical Properties <sup>3)</sup>		
Electrical conductivity	MS/m	46
	% IACS	80
Thermal conductivity	W/(m*K)	320
Density	g/cm <sup>3</sup>	8.92
Modulus of elasticity	GPa	140
Melting range	°C	1080-1100

1) Reference values in % by weight according to EN 12163 2) Former national standards  
 3) Reference values at room temperature; 1 GPa = 1kN/mm<sup>2</sup>; 1 MS/m = 1 m/Ω \* mm<sup>2</sup>)

BAUMANN Group

2

## 3. COATINGS

Most of our Contact Elements are silver-plated. Depending on your requirements, we offer a wide range of coatings. Please choose your coating using the BAUMANN inquiry form.

### Silver

Silver is the best conductive element and applied broadly in electronics and electrical applications. Silver is used whenever excellent conductivity and high abrasion resistance are necessary.

### Gold

Gold plating is a very common surface treatment in electronics to increase contact behavior and corrosion resistance; no other coating is as resistant towards corrosion with good connectivity at the same time. Gold-plated material is additionally well solderable.

### Zinc

Galvanized zinc is smoother than hot-dip zinc layers and looks similar to a chrome-plated surface. Zinc provides excellent protection against corrosion. With subsequent passivation steps, zinc coatings can be provided in blue, yellow, black and olive.

### Copper

Copper as the second-best conductive material can be applied to improve conductivity or protect the base material from corrosion. Copper layers can also be applied to improve adhesion between the base material and final coating.

### Tin

Tin has a decorative, silver-white appearance, and is well solderable, ductile and corrosion-resistant. Due to its purity, non-toxicity and neutral taste, it is applied broadly in the food industry. Tin also improves connectivity due to its softness.

### Nickel

Nickel is one of the most important electrodeposited metals due to its outstanding chemical and mechanical properties. Nickel-plated surfaces are high in gloss, and have increased corrosion resistance and excellent ductility (ability to smooth out surfaces).

