

Solid metals. Fine solutions.

**Casting and Forging** Short-circuit, copper rings









### **ZOLLERN**

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## **Copper rings.** For electric motors.

ZOLLERN offers seamlessly rolled and forged copper rings for industry and traction motors with high component quality and short lead times

#### Produced in a modern ring-rolling mill

- Near net shape, seamlessly rolled rings
- First-class surface quality

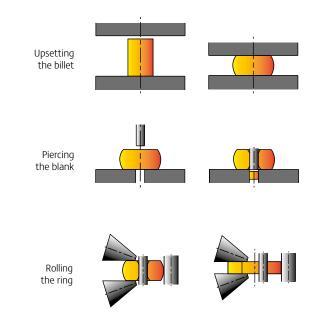
#### **ZOLLERN** supplies

- Short-circuit rings, slip rings, short-circuit rods; for larger rotors
- Cap rings made from high-stability copper alloys; for fast-running rotors
- Seamlessly rolled and forged rings in pure CuCr1Zr copper
- · Slip rings in CuNi2Si
- Rings with external diameters from 200 mm to 2,500 mm

#### **ZOLLERN** also offers

- Large series and small volumes from 2 to 10 rings
- Rings in pre-processed and fully finished condition
- Destructive and non-destructive testing

# **Modern process.** Ring rolling.



Material	Standard	Minimum values of tensile			Hard- ness	Electrical conduct.
		Rp <sub>0,2</sub> N/mm²	Rm N/mm²	A <sub>5</sub> %	НВ	MS/m
Cu-HCP SE-Cu	CW021A 2.0070	=> 40	=> 200	=> 35	=> 45	=> 57
Cu-OFE OF-Cu	CW009A 2.0040	=> 40	=> 200	=> 35	=> 45	=> 58
CuCr1Zr CCZr	CW106C 2.1293	=> 270	=> 360	=> 15	=> 110	=> 45
CuNi2Si NSB	~CW111C 2.0855	=> 320	=> 420	=> 12	=> 140	11 -16
CuAl10Ni5Fe EBz	CW307G 2.0966	=> 330	=> 700	=> 15	=> 170	4 - 6
CuAl10Ni6Fe6 EBz-OE	~ CW307G	=> 440	=> 740	=> 12	=> 205	4 - 6
CuNI14Al3F1 NB1	2.1504	=> 540	=> 740	=> 10	=> 210	4 - 6