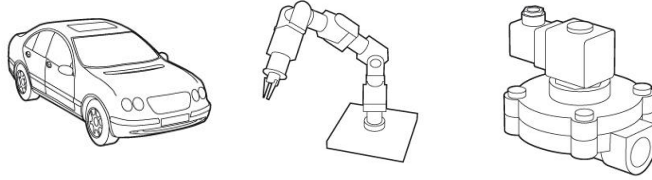


Ergste® 1.4105IM Automotive Data Sheet & Automation Technology | Precision Wire



Zapp is Certified to ISO 9001 | IATF 16949



Categorization

- Ferritic, corrosion resistant steel
- DIN EN 10088-3
- AISI 430F

Typical Applications

Ergste® 1.4105IM is mainly used in solenoid valves for pneumatic, hydraulic and HVAC applications.

Processing and Usage Properties

Ergste® 1.4105IM (similar to X6CrMoS17) is a stainless free cutting steel with good soft magnetic properties. It is designed for the volume production of precision turned parts. It is resistant in water, steam and other less aggressive media. If welding is necessary, plasma- or laser welding should be preferred. The steel is suitable for cold forming operations within certain limits.

For improved properties in selective cases we recommend the following Ergste® grades:

Cold Heading

Ergste® 1.4003IA
Ergste® 1.4016IM

Corrosion Resistance

Ergste® 1.4113IM

Machinability

Ergste® 1.4005IA

Magnetic Properties

Ergste® 1.4005IA
Ergste® 1.4105IL

Weldability

Ergste® 1.4511IA

Typical Analysis*

C	Si	Mn	S	Cr	Mo
≤ 0.05	≤ 1.0	≤ 1.25	0.2-0.35	16.0-18.0	0.20 - 0.60

* weight percentage/approximate value

Mechanical and Physical Properties

Tensile strength (soft annealed)	350 - 550 [MPa]
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Magnetic Properties of Round Bars*

∅ 6 - 25 mm

Coercitive strength	H _c ≤ 280 [A/m]
Maximum relative permeability	μ _{max} ≥ 1,000
Saturation polarization	J _s ≥ 1.55 [T]
Remanence	B _r 0.5 - 1.1 [T]
Specific el. resistance	ρ ≥ 0.62 [μΩm]

* Profiles and other sizes may differ. These values represent our standard properties. Improved properties are possible but must be agreed upon.

Delivery Forms*

Round bars	Annealed, ground
Profiles	Annealed, straightened

* Crack tested according to DIN EN 10277-1, Table 1 Surface class 1-4, US-Testing: KSR (FBH) 0.7 mm or better on request

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Further information regarding our products and locations are available in our image brochure and under www.zapp.com

The illustrations, drawings, dimensional and weight data and other information included in this data sheet are intended only for the purposes of describing our products and represent non-binding average values. They do not constitute quality data, nor can they be used as the basis for any guarantee of quality or durability. The applications presented serve only as illustrations and can be construed neither as quality data nor as a guarantee in relation to the suitability of the material. This cannot substitute for comprehensive consultation on the selection of our products and on their use in a specific application. The brochure is not subject to change control.

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