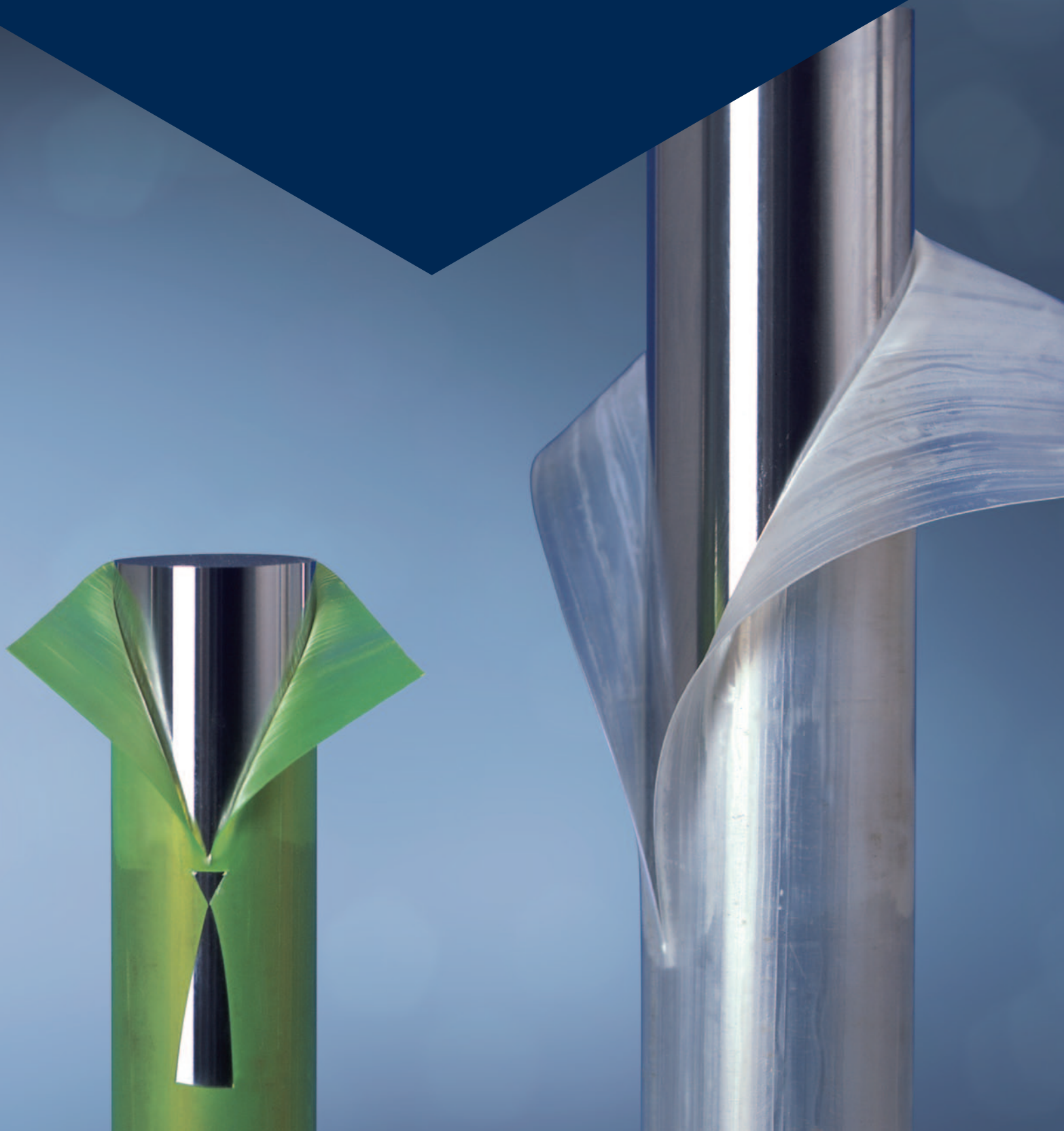


**UGICHROM®**

Hard chromiumplating expertise



**UGITECH**

Providing special steel solutions





It all begins with steel: the steel that you as our customer need to be successful in your market. Steel in a certain quality.

You need a reliable supply, in very small or very large quantities, with precise, consistent reproducible quality, and you need it quickly. Mostly just-in-time. Delivery delays or failures are not an option.

*Steel featuring the widest array of properties: highly ductile and yet ultra-strong for the plastics industry. Exceedingly corrosion-resistant for offshore plants. Or able to withstand extreme dynamic stresses for engine components.*

**Welcome to SCHMOLZ + BICKENBACH.  
We offer the solution. All the time.**

An ambitious claim. We live up to it because we are more than “just” a company that produces steel. At the heart of Europe, we produce what our customers need for success in hard-fought markets: integrated solutions in high-quality steel. A corporate concept that is unique in the industry based on the three pillars of production, processing, and distribution+services, enables us to operate along the entire value creation chain and in any processing depth required, as a solution provider, a technology driver – and, above all, a reliable and quality-conscious global partner for our customers.

Nevertheless, size, performance capability and a global presence are not ends in themselves. Like everything we do, these serve constantly to expand and strengthen our position as a provider of solutions in steel, expertise and services from a single source. Wherever you are. Whatever you need – we are the solution. This is our mission and how we see ourselves.



## SCHMOLZ + BICKENBACH GROUP

PRODUCTION	PROCESSING	WORLD WIDE DISTRIBUTION+SERVICES		
Deutsche Edelstahlwerke GmbH Germany	SCHMOLZ + BICKENBACH Blankstahl GmbH Germany	SCHMOLZ + BICKENBACH Distributions GmbH	Günther + Schramm GmbH Germany	SCHMOLZ + BICKENBACH International GmbH
Ugitech S.A. France	Steeltec AG Switzerland	SCHMOLZ + BICKENBACH Distributions GmbH Germany	Dr. Wilhelm Mertens GmbH Germany	SCHMOLZ + BICKENBACH Australia Pty. Ltd. Australia
Swiss Steel AG Switzerland	Boxholm Stål AB Sweden	SCHMOLZ + BICKENBACH Europe GmbH	SCHMOLZ + BICKENBACH Acciai Speciali S.r.l. Italy	SCHMOLZ + BICKENBACH do Brasil Ltda. Brazil
A. Finkl & Sons Co. USA	SCHMOLZ + BICKENBACH A/S Denmark	SCHMOLZ + BICKENBACH Austria GmbH Austria	SCHMOLZ + BICKENBACH Baltic SIA Latvia	SCHMOLZ + BICKENBACH Canada Inc. Canada
Sorel Forge Co. Canada	SCHMOLZ + BICKENBACH Çelik A.S. Turkey	SCHMOLZ + BICKENBACH Belgium Belgium	SCHMOLZ + BICKENBACH Baltic UAB Lithuania	SCHMOLZ + BICKENBACH Middle East FZCO Dubai (UAE)
	Ugitech Italia srl. Italy	SCHMOLZ + BICKENBACH s.r.o. Czech Republic	SCHMOLZ + BICKENBACH B.V. Netherlands	SCHMOLZ + BICKENBACH Hong Kong Co. Ltd. Hong Kong
	Sprint Metal Edelstahlziehereien GmbH Germany	SCHMOLZ + BICKENBACH Baltic OÜ Estonia	SCHMOLZ + BICKENBACH Polska Sp. z o.o. Poland	SCHMOLZ + BICKENBACH (Hong Kong) Trading Ltd. Hong Kong
		SCHMOLZ + BICKENBACH Oy Finland	SCHMOLZ + BICKENBACH Portugal S.A. Portugal	SCHMOLZ + BICKENBACH INDIA Pvt. Ltd. India
		SCHMOLZ + BICKENBACH France S.A.S. France	SCHMOLZ + BICKENBACH Romania Srl Romania	SCHMOLZ + BICKENBACH Malaysia Sdn. Bhd. Malaysia
		SCHMOLZ + BICKENBACH UK Ltd. Great Britain	SCHMOLZ + BICKENBACH Russia OOO Russia	SCHMOLZ + BICKENBACH Mexico S.A. de C.V. Mexico
		SCHMOLZ + BICKENBACH Magyarország Kft. Hungary	SCHMOLZ + BICKENBACH Slovakia s.r.o. Slovakia	SCHMOLZ + BICKENBACH Singapore Pte. Ltd. Singapore
		SCHMOLZ + BICKENBACH Inox srl. Italy	SCHMOLZ + BICKENBACH Ibérica S.A. Spain	SCHMOLZ + BICKENBACH South Africa (Pty.) Ltd. South Africa
				SCHMOLZ + BICKENBACH USA Inc. USA

## Quality and Innovation at the service of its customers

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As a world leader in the manufacture of long stainless steel products, Ugitech has been providing solutions to satisfy his customers' most rigorous requirements for almost 100 years, thanks to his own integrated Research Centre.

As an international reference for the production of precision bars for cylinder rods, we bring our experience in technology, quality, innovation and services to develop constantly solutions that meet our customers' needs.

### **What are the advantages of UGICHROM®?**

- Low friction coefficient
- High resistance to wear
- Increased corrosion resistance
- Micro-cracked chromium guarantees excellent performance under extreme conditions of service
- Improved machinability (up to +20 % of productivity)
- High mechanical properties
- High precision geometrical and dimensional properties

### **UGICHROM®**

The choice for performance.

Why choose UGICHROM® grades?

UGICHROM® is the result of combining the high efficiency of micro-cracking chromium plating with the technology of the most advanced bars.

### **Customised services...**

Ugitech makes specialised services available to its chromium-plated bar customers:

- Technical assistance for development
- Availability of the Ugine Research Centre
- Product customisation





## UGICHROM® Range

UGICHROM® Grades	Digital steel designation	Symbolic designation	American and other standards	Mechanical properties	
				RM	RP 0.2

### EN 10088-3 Martensitic

4021	1.4021	X20Cr13	420	800/950	>600
4028	1.4028	X30Cr13	420	850/1000	>650
4057	1.4057	X17CrNi16-2	431	900/1050	>700
4418	1.4418	X4CrNiMo16-5-1		900/1100	>700
4542	1.4542	X5CrNiCuNb16-4	630	930/1100	>725

### EN 10088-3 Austenitic

4305	1.4305	X8CrNiS18-9	303	>500	>190
4307	1.4307	X2CrNi18-9	304(L)	>450	>175
4404	1.4404	X2CrNiMo17-12-2	316(L)	>500	>200
4571	1.4571	X6CrNiMo17-12-2	316Ti	>500	>200

### EN 10088-3 Duplex

4460	1.4460	X3CrNiMo17-5-2	329	620/880	>460
4462	1.4462	X2CrNiMoN22-5-3	F51	650/880	>450
4507	1.4507	X2CrNiMoCu25-6-3	52N+	760/890	>550

### EN 10088-3 New stainless steel solutions

4362	1.4362	X2CrNiN23-4	35N	650/880	>430
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Depending on your specific needs, we will also develop new stainless steel chromium-plated solutions for you...

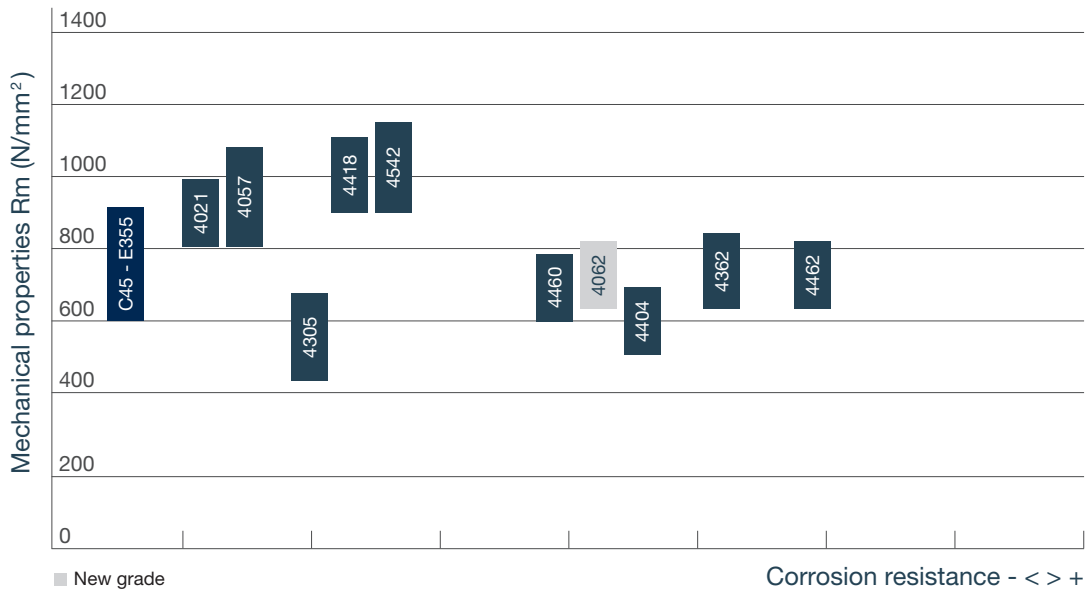


### UGICHROM® properties

Properties	Stainless steel standard product
Sizes	Ø 12 to 110 mm
Diameter tolerance	Iso f7
Bar length Ø 12 to 19.5 mm	2900 mm +200/-0
Bar length Ø 20 to 130 mm	5800 mm -0/+ 700 mm
Roundness	< 1/2 f7 Iso
Straightness (to EN 10278)	< 0.5 mm/ml
Roughness	Ra < 0.2 µm
Chromium structure	Microcracked
Chromium thickness Ø 12 to 19.5 mm	18 µm +/-3
Chromium thickness Ø 20 to 130 mm	25 µm +/-5
Hardness	900 HV 0.1 mm

Un-chromium-plated part on 80 mm at each side.

## Mechanical properties corrosion resistance



## Packaging

The UGICHROM® range offers a choice of packaging that is appropriate for the protection and deployment of the products:

- Extruded plastic sleeve . . . . . Ø 12 to 110 mm
- Individual recyclable cardboard tube . . . . . Ø 14 to 130 mm
- No individual packing in layers, with or without separators
- Possibility of ink-jet marking on the plastic sleeve along the entire length of the bar

## The essential solution to numerous high-performance applications

- Offshore
- Nuclear
- River navigation
- Maritime: cylinders for engine manoeuvring, etc
- Wind power: cylinders used for the axial rotation of wind turbine blades
- Aeronautics
- Road haulage: truck tail lifts, etc.
- Food industry
- etc.



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