

# SCHMOLZ + BICKENBACH

Comprehensive range of  
tool steel solutions







## Our star products dedicated to the most stringent markets

### Cold works:

- » CRYODUR® 2990 the innovative steel for sheet metal working
- » CRYODUR® 2767 with high hardenability and toughness, highly suitable for polishing, texturing and EDM machining
- » CRYODUR® 2746 the special steel for cold-shear blades, particularly for cutting scrap

### Hot works:

- » FX-XTRA® Versatile forging die material for both shallow and deep impressions. Excellent high temperature properties make this a true workhorse
- » THERMODUR® E 40 K Superclean effectively slows down formation of hot cracks for light metal die casting
- » THERMODUR® E 38 K Superclean with excellent toughness and low susceptibility to hot cracking
- » PRESS-DIE® precipitation hardened alloy with excellent resistance to heat checking
- » CX® excellent ductility and toughness for warm and near-net shape forgings; ram and sow blocks
- » THERMODUR® 2383 Supercool for press hardening with excellent thermal conductivity

### High Speed Steel:

- » RAPIDUR® 3343 the best choice for all metal-cutting tools
- » RAPIDUR® 3207 High-speed steel of superlative performance combining optimal cutting-edge retention, high-temperature strength and toughness

### Plastic mold:

- » MLQ® / SF-2000™ LQ an excellent material for Photo-Etching & Texturing. The VAR or ESR process eliminates nearly all segregation
- » FORMADUR® 400 Superclean an ESR remelted mould steel with excellent polishability and texturing properties
- » MD™ Xtra / SF-2050™ mould steels for maximum hardenability in large plastic injections moulds
- » CORROPLAST® the corrosion-resistant steel with best machinability
- » CORROPLAST® FM ultimate corrosion-resistant steel with excellent machinability
- » FORMADUR® PH X Superclean stainless steel that sets polishability standards
- » 420Q a superior product for molding vinyl base or other corrosive plastics. It can be used for injection, compression and transfer molding

### Powder metallurgy:

- » Fe-, Ni- and Co-Basis
- » PM-Steel, especially cold work and high speed tool steels
- » Powder for additive manufacture, “3D-printing”
- » Ferro-Titanit® metal matrix composite with titanium carbides for high wear resistance

### Special products:

- » Open die casting
- » Aluminum die casting
- » Aluminum extrusion
- » Plastic mold
- » Glass mold
- » Mandrel bars
- » Cold rolls



## SCHMOLZ + BICKENBACH Group

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SCHMOLZ + BICKENBACH is a leading global producer of special long steel with operations around the world. The independent Group has an integrated business model built around the Divisions Production and Sales & Services which allow SCHMOLZ + BICKENBACH to leverage strategic and operational synergies.

**Production – specialized steelmaking, forging and rolling plants in Europe and North America; drawing mills, bright steel production and heat treatment in northern and western Europe and Turkey.**

Our Production Division encompasses the business units Deutsche Edelstahlwerke, Finkl Steel, Steeltec, Swiss Steel and Ugitech, operating a total of nine state-of-the-art steelmaking plants in Canada, France, Germany, Switzerland and the USA. The steel plants complement each other in terms of formats and qualities, covering the entire spectrum for special long steel. Besides the three main product groups – tool steel, engineering steel and stainless steel – the range includes special steel products. Characteristics such as close dimensional tolerance, strength and surface quality are precisely matched to our customer's brief.

**Sales & Services – a reliable global partner in steel consulting, processing and supply**

We combine our sales activities within our Sales & Services Division, and guarantee the consistent and reliable supply and end-to-end customer solutions worldwide with around 70 distribution and service branches in more than 30 countries. These include technical consulting and downstream processes as sawing, milling and hardening, heat treatment as well as supply chain management. We pursue the goal of offering our customers global access to our products and services – with excellent quality standards and first-class service.

Such a service approach based on our state-of-the-art product range leads to long lasting relations with our customers who value us as partner in their development. We count around 100 grades in tool steel in our offering. Contact us for any special need you require in your development and your innovation process.

# Our tool steel grades and dimension range

- » We offer more than 100 grades dedicated to the most specific applications. We are covering all the tool steel families: cold works, hot works, high speed steel, plastic molds, powder metal steel and of wide range of special products.
- » Thanks to our state of the art Research and Development centers, we also work in collaboration with our customers to develop new products for special steel needs.

SEL	AISI	Deutsche Edelstahlwerke	Finkl Steel	Pressure die casting	Light metal Extrusion	Forging	Glass products	Tube manufacturing	Press-hardening
<b>HOT WORKS</b>									
1.2083	420	Formadur <sup>®</sup> 2083 Superclean	420Q				•••		
		Thermodur <sup>®</sup> E 38 K Superclean		••••	•••	•••			
		Thermodur <sup>®</sup> E 40 K Superclean		••••	••••	•••			
1.2342	~H13	Thermodur <sup>®</sup> 2342 EFS						••••	
1.2343	H11	Thermodur <sup>®</sup> 2343 EFS	ShelleX	•	•••	•••	•	•••	
1.2343	H11	Thermodur <sup>®</sup> 2343 Superclean		•••	•••	•••	•		
1.2344	H13	Thermodur <sup>®</sup> 2344 EFS	DC	•	•••	•••	•	•••	
1.2344	H13	Thermodur <sup>®</sup> 2344 Superclean		•••	•••	•••	•		
1.2365	H10	Thermodur <sup>®</sup> 2365 EFS			•	•••			
1.2367		Thermodur <sup>®</sup> 2367 EFS	ShellDie	•	•••	•••	•		•••
1.2367		Thermodur <sup>®</sup> 2367 Superclean	SUPERDIE	•••	•••	••••	•		
1.2383		Thermodur <sup>®</sup> 2383 Superclean		••			••		••••
1.2714	~L6	Thermodur <sup>®</sup> 2714	FX, Durodi, 2714		••	••••			
1.2740		Thermodur 2740						••••	
		Thermodur 2999 Superclean		•••		•••	•		••
			PressDie			••••			
			WF			••••			
			CX			•••			

SEL	AISI	Deutsche Edelstahlwerke	Finkl Steel	Injection molds	Compression molds	Plastic Extrusion	Blow molds	Large molds	Mold frames	Extruders
<b>PLASTIC MOLD</b>										
1.2083	420	Formadur <sup>®</sup> 2083	420M	•	•	••	•			
1.2083	420	Formadur <sup>®</sup> 2083 Superclean	420LQ	••••		•				
1.2085	420FM	Formadur <sup>®</sup> 2085	420MB		•				•••	
1.2311	P20	Formadur <sup>®</sup> 2311	2311	•••	•••	•••	••	••	•	
1.2312	P20+S	Formadur <sup>®</sup> 2312	2312, COREBLOC		•			•	•••	
1.2316	420mod	Formadur <sup>®</sup> 2316	2316	•••	••	••••	••	••		••
1.2331	4140	Formadur <sup>®</sup> 2331	HOLDER-BLOC						•	
1.2343	H11	Thermodur <sup>®</sup> 2343 EFS	ShelleX	•••	••	•		•		•••
1.2343	H11	Thermodur <sup>®</sup> 2343 Superclean		••••	••	•		••		
1.2344	H13	Thermodur <sup>®</sup> 2344 EFS	DC	••	••	•		•		•••
1.2344	H13	Thermodur <sup>®</sup> 2344 Superclean		•••	••	•		••		
1.2357	S7	Cryodur <sup>®</sup> 2357	DRX	••	••					•••
1.2738	P20+Ni	Formadur <sup>®</sup> 2738	MD, SF2000	•••	•••	•••	••	••••	•	
			Hi-Hard P-20, SF 2050							
		Formadur <sup>®</sup> 2891								•••
		Cryodur <sup>®</sup> 2990		••	••					••
		Formadur <sup>®</sup> PH 42 Superclean		••••	••	••	••			

SEL	AISI	Deutsche Edelstahlwerke	Finkl Steel	Injection moulds	Compression moulds	Plastic Extrusion	Blow moulds	Large moulds	Mould frames	Extruders
		Formadur® PH X Superclean	Mar-X	●●●●	●	●●●●	●●●			
		Formadur® 320	MD, SF-2000	●●●	●●●	●●●	●●	●●●●	●	
		Formadur® 400	SF-2000HH	●●●	●●●●	●●●	●●	●●●●		
		Formadur® 400 Superclean	SF-2000HHLQ	●●●●	●●	●●●	●●	●●●		
	P20mod		MD Xtra, SF-2050	●●●●	●●●●	●	●●	●●●●		●●
		Corroplast®			●				●●●●	
		Corroplast® FM			●				●●●●	

SEL	AISI	Deutsche Edelstahlwerke	Finkl Steel	Cutting Punching Shearing	Coining Pressing Bending	Rolling	Folding Guiding	Machining	Tool holder	Tools
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**COLD WORK**

1.2067		Cryodur® 2067		●	●	●●	●			●
1.2210		Cryodur® 2210						●		●●
1.2242		Cryodur® 2242								●●●
1.2321		Cryodur® 2321				●●●●				
1.2327		Cryodur® 2327				●●●				
1.2357	S7	Cryodur® 2357	DRX	●	●●●					●
1.2360		Cryodur® 2360		●●	●●	●●●				
1.2362		Cryodur® 2362				●●●				
1.2363	A2	Cryodur® 2363		●●	●●●	●				
1.2379	D2	Cryodur® 2379		●●●●	●●●	●●●				
1.2436	~D6	Cryodur® 2436		●●●	●●●	●●				
1.2510	O1	Cryodur® 2510		●●	●●		●●			
1.2550	~S1	Cryodur® 2550		●●	●●●		●●		●	●●
1.2721		Cryodur® 2721		●●	●●●				●	
1.2746		Cryodur® 2746		●●●						
1.2767	6F3	Cryodur® 2767	2767	●●●	●●●●					●
1.2826	S4	Cryodur® 2826					●		●●●	●
1.2842	O2	Cryodur® 2842		●●	●●		●●●●			
		Cryodur® 2990		●●●●	●●●	●●●				
1.3207		Rapidur® 3207						●●●●		
1.3243		Rapidur® 3243						●●●		
1.3247		Rapidur® 3247						●●●●		
1.3343	M2	Rapidur® 3343		●●●●	●●●●	●●●		●●●		

Ingots, Continous casting, Semi-finished	Hot rolled bars	Forged products
<p><b>Ingots:</b> 0,6 - 58T</p> <p><b>Continuous casting:</b></p> <p>138 mm 150 mm 205 mm 245 mm</p> <p>475 x 340 mm</p> <p><b>Semi-finished products:</b></p> <p>50 - 320 mm, rising in 1 mm increments</p>	<p>7 - 250 mm    50 - 160 mm</p> <p>Width: 80 - 150 mm Thickness: 24 - 160 mm Width/thickness ratio: 10:1 max.</p> <p>Ferro-Titanit®, various sizes according to customer requirements</p>	<p>Open die forgings, rotationally symmetrical forgings forged to shape on request up to 50 t single-piece weight</p> <p>65 - 1100 mm 50 - 750 mm</p> <p>Single piece weight up to 50 t</p>
<p><b>Sheets, plates</b></p> <p>Width: up to 2 000 mm Thickness: 2 - 205 mm</p> <p><b>Wire rod / drawn wire</b></p> <p>Wire rod: 5,5 - 30 mm</p>	<p><b>Bright steel</b></p> <p>0,8 - 130 2 - 60 mm 2 - 18 mm</p> <p>In bars of 2 to 130 mm In coils of 0,8 to 22 mm</p>	<p><b>Pre-machining</b></p> <p>Pre-machined parts, moulds, dies and frames, turned parts according to customer specification</p> <p>Cold rolls: 20 - 750 mm ø</p> <p>Mandrels, ø up to 365 mm length up to 28 m</p>

We have more than 100 grades in our offering, feel free to contact your local expert for any special requirement. Depending alloy, limitations for maximal dimensions are possible

## SCHMOLZ + BICKENBACH GROUP

**Production**

Deutsche Edelstahlwerke  
 Finkl Steel  
 Steeltec  
 Swiss Steel  
 Ugitech

**Sales & Services**

SCHMOLZ + BICKENBACH International  
 More than 70 locations  
 in over 30 countries worldwide

Divisions:

📍 Sales & Services 🏭 Production

## Sales & Services International

From semi-finished products to ready-to-use components at your door, worldwide.

**1300** employees

**70** locations

**5** continents

**30** countries

Our range of local services includes:

- » Local supply chain services
- » Just in time deliveries
- » Cutting, machining, chamfering
- » Technical support



# Your local contact worldwide

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