

### Product range

ETG<sup>®</sup> steels are available in various categories, finishes and sizes:

Steel category	Processes	Size range [mm]	Tolerance
ETG <sup>®</sup> 88 round	drawn	≥ 5,0 – ≤ 20,5	h9
		> 20,5 – ≤ 64,0	h11
		> 64,0 – ≤ 114,3	h12
	ground	≥ 5,0 – ≤ 100,0	≥ IT6
ETG <sup>®</sup> 100 round	drawn	≥ 6,0 – ≤ 64,0	h11
		> 64,0 – ≤ 70,8	h12
	ground	≥ 6,0 – ≤ 70,8	≥ IT6
ETG <sup>®</sup> 88 hexagonal	drawn	SW 13 – 27	h11

- Bar lengths: 3 - 6,5 m
- Colour coding: ETG<sup>®</sup> 88 white end face, ETG<sup>®</sup> 100 gold end face
- Bright-turned and bright-turned/ground to special order
- Regular sizes are available from stock
- 100% eddy current tested acc. to surface class 3 of EN 10277-1
- Other categories to meet special requirements (e.g. mechanical properties) are available to special order.

### Chemical composition (ETG<sup>®</sup> 88/100, analysis by mass in %)

Element	C	Si	Mn	P	S
min.	0,42	0,10	1,35		0,24
max.	0,48	0,30	1,65	0,04	0,33

The analysis corresponds to SAE1144 and 44SMn28 (1.0762).  
Piece analysis and melt analysis may vary according to EN 10087, table 2.

### Mechanical properties (Typical values)

Static			ETG <sup>®</sup> 88	ETG <sup>®</sup> 100
Dimensions	Ø	mm	5,0 – 114,3	6,0 – 70,8
Proof stress	drawn	R <sub>p0,2</sub>	≥ 685	≥ 865
	ground		≥ 630	≥ 800
Tensile strength	R <sub>p0,2</sub>	N/mm <sup>2</sup>	800 – 950	960 – 1100
Ultimate elongation	A <sub>5</sub>	%	≥ 7	≥ 6
Reduction of area	Z	%	ap. 30	ap. 20
Elastic modulus		N/mm <sup>2</sup>	ap. 200 000	ap. 200 000

Tensile strength (transverse)	$R_m$	N/mm <sup>2</sup>	ca. 600	ca. 720
Hardness				
HRC			ca. 28	ca. 32
HB 30			ca. 280	ca. 320
Lateral shear strength	$T_s$	N/mm <sup>2</sup>	ca. 510	ca. 590
Torsional shear strength	$T_t$	N/mm <sup>2</sup>	ca. 440	ca. 540
Notched impact energy	$AV_{RT}$	J	ca. 25	ca. 10

### Dynamic

Tension/compression	$\sigma_w$	N/mm <sup>2</sup>	ca. 350	ca. 370
Pulsating	$\sigma_{sch}$	N/mm <sup>2</sup>	ca. 250	ca. 270
Reverse bending	$\sigma_{bw}$	N/mm <sup>2</sup>	ca. 390	ca. 420
Torsional reversal	$T_{tw}$	N/mm <sup>2</sup>	ca. 195	ca. 225
Torsional pulsating	$T_{sch}$	N/mm <sup>2</sup>	ca. 345	ca. 390

For further info on our product range of tool steel, stainless steel and Engineering steel please visit [www.swisssteelgroup.com](http://www.swisssteelgroup.com)

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