Technical Datasheet
ETG® 88/100

28.06.23 Rev. N°1

Product range

ETG® steels are available in various categories, finishes and sizes:

Steel category	Processes	Size range [mm]	Tolerance
ETG® 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® 100 round	drawn	≥ 6,0 – ≤ 64,0	h11
		> 64,0 – ≤ 70.8	h12
	ground	≥ 6,0 – ≤ 70,8	≥ IT6
ETG® 88 hexagonal	drawn	SW 13 – 27	h11

- Bar lengths: 3 - 6,5 m
- Colour coding: ETG® 88 white end face, ETG® 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® 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® 88	ETG® 100
Dimensions		Ø	mm	5,0 – 114,3	6,0 – 70,8
Proof stress	drawn	$R_{p0,2}$	N/mm²	≥ 685	≥ 865
	ground		N/mm²	≥ 630	≥ 800
Tensile strength		$R_{p0,2}$	N/mm²	800 – 950	960 – 1100
Ultimate elongation		A_5	%	≥ 7	≥ 6
Reduction of area		Z	%	ap. 30	ap. 20
Elastic modulus			N/mm²	ap. 200 000	ap. 200 000

Tensile strength (transverse)	R_m	N/mm²	ca. 600	ca. 720
Hardness				
HRC			ca. 28	ca. 32
HB 30			ca. 280	ca. 320
Lateral shear strength	τ_s	N/mm²	ca. 510	ca. 590
Torsional shear strength	τ_t	N/mm²	ca. 440	ca. 540
Notched impact energy	AV_{RT}	J	ca. 25	ca. 10

Dynamic

Tension/compression	σ_w	N/mm²	ca. 350	ca. 370
Pulsating	σ_{sch}	N/mm²	ca. 250	ca. 270
Reverse bending	σ_{bw}	N/mm²	ca. 390	ca. 420
Torsional reversal	τ_{tw}	N/mm²	ca. 195	ca. 225
Torsional pulsating	τ_{sch}	N/mm²	ca. 345	ca. 390

For further info on our product range of tool steel, stainless steel and Engineering steel please visit www.swisssteelgroup.com

Discover our Green Steel portfolio on www.swissgreensteel.com

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