




Product range

Steel category	Processes	Size range [mm]	Tolerance	Identification colors front
HSX [®] 110	drawn round	10 – 45	h11	 traffic orange
HSX [®] 130	drawn round	17 – 55	h11	 ruby red
HSX [®] Z12	peeled round	18 – 62	h11	 traffic violet

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Chemical composition (cast analysis in percentage by mass)

Element	C	Si	Mn	S	Cr	Mo
HSX [®] 110	0,39	0,75	1,40	0,035		
HSX [®] 130	0,18	1,20	1,60	0,15	1,20	0,30
HSX [®] Z12	0,18	1,20	1,60	0,15	1,20	0,30

Mechanical properties (typical values)

Static				HSX [®] 110	HSX [®] 130	HSX [®] Z12
Yield strength	R _{p0,2}	N/mm ²	min.	950	1200	800
	R _m	N/mm ²	min.	1050	1250	950
Tensile strength		N/mm ²	max.	1200	1400	1200
Elongation at break	A ₅	%	min.	8	6	12
Hardness						
HRC				ap. 35	ap. 42	ap. 31
HB				ap. 330	ap. 395	ap. 300
Notched bar impact work	A _{VRT}	J	ca.	10	20	40
	A _{V-20°C}	J	ca.	8	16	20
Dynamic						
Tension/compression	σ _w	N/mm ²		ap. 485	ap. 545	ap. 485
Pulsating	σ _{Sch}	N/mm ²		ap. 385	ap. 445	ap. 385
Reverse bending	σ _{BW}	N/mm ²		ap. 515	ap. 585	ap. 525

The fatigue strength values were determined on smooth specimens.

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

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Discover our Green Steel portfolio on www.swissgreensteel.com

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