




General
Engineering
Steel

BOXHOLM STÅL

Providing special steel solutions



STEEL SS-EN 10277-2 SS-EN 10277-5		S235JRG2C + C	S355J2G3C + C	E295GC + C	C35E + C	
DESCRIPTION		Mild steel Fine grained	Mild steel Fine grained	Carbon steel	Carbon steel Fine grained	
Replacing	BS DIN	040-060A10-12 St 37-2 K	St 52-3 K	St 50-2 K	080M36 Ck 35 K	
Dimensions	 mm	5 - 100	5 - 100	5 - 80	5 - 80	
Tolerance	ISO	h9	h9	h9	h9	
Dimensions	 mm			19 - 55	19 - 55	
Tolerance	ISO			h11	h11	
Width	 mm	20 - 100				
Thickness	mm	5 - 50				
Tolerance	ISO	h11				
Chemical composition	%C	max 0,17	max 0,20		0,32 - 0,39	
	%Si	0,15 - 0,30	0,15 - 0,30		max 0,40	
	%Mn	max 1,40	max 1,60		0,50 - 0,80	
	%P	max 0,045	max 0,035	max 0,045	max 0,035	
	%S	0,020 - 0,045	0,020 - 0,035	max 0,045	max 0,035	
Mechanical properties	Tensile strength	$\geq 5 \leq 10$ mm $> 10 \leq 16$ mm	470 - 840 ($\pm 10\%$) ¹ 420 - 710 ($\pm 10\%$) ¹	650 - 950 600 - 880	650 - 950 600 - 900	650 - 1000 600 - 950
	Rm (N/mm ²)	$> 16 \leq 40$ mm $> 40 \leq 63$ mm $> 63 \leq 100$ mm	390 - 690 ($\pm 10\%$) ¹ 380 - 630 ($\pm 10\%$) ¹ 340 - 600 ($\pm 10\%$) ¹	550 - 850 520 - 770 490 - 740	550 - 850 520 - 770 470 - 740	580 - 880 550 - 840 520 - 800
	Yield point	$\geq 5 \leq 10$ mm $> 10 \leq 16$ mm	355 (-10%) ¹ 300 (-10%) ¹	520 450	510 420	510 420
	Rp 0,2 (N/mm ²)	$> 16 \leq 40$ mm $> 40 \leq 63$ mm min $> 63 \leq 100$ mm	260 (-10%) ¹ 235 (-10%) ¹ 215 (-10%) ¹	350 335 315	320 300 255	320 300 270
	Elongation A5 (%)	$\geq 5 \leq 10$ mm $> 10 \leq 16$ mm min $> 16 \leq 40$ mm $> 40 \leq 63$ mm $> 63 \leq 100$ mm	8 9 10 11 11	6 7 8 9 9	6 7 8 9 9	6 7 8 9 9
	Hardness HB5/750 approx	$\geq 5 \leq 10$ mm $> 10 \leq 16$ mm $> 16 \leq 40$ mm $> 40 \leq 63$ mm $> 63 \leq 100$ mm	160 - 245 160 - 230 155 - 220 150 - 210 140 - 200	180 - 260 180 - 250 170 - 240 160 - 230 150 - 220	190 - 270 190 - 260 185 - 250 180 - 240 175 - 230	210 - 290 200 - 280 195 - 260 180 - 240 175 - 230

1) For flats

Form of delivery

Stocklengths

Rounds	5 - 7 mm	3 m
	8 - 10 mm	4 m
	11 - 100 mm	6 m

Hexagons	3 m
Flats and squares approx.	3,5 m

Straightness (SS EN 10278 B.1.2)

Rounds	0,5 mm/m
Hexagons and squares	1 mm/m
Flats	1,5 mm/m

Surface finish

The arithmetical mean deviation Ra for cold drawn steel bars is max 10 µm. Normally it does not exceed 5 µm.

Surface class

SS-EN 10277-1 class 2 for rounds, hexagons and squares.
SS-EN 10277-1 class 1 for flats.

Quality control - Quality assurance

Quality control can include crack detection, ultrasonic testing, testing of mechanical properties and chemical composition. The quality system of Boxholm Stål AB is certified according to ISO-TS 16949 and SS-EN ISO 9001.

Data given in this leaflet may be changed without notice.

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