

HOT-ROLLED STRIP BAR

General-purpose hot-rolled strip bar

General-purpose strip bar	GOST 103-76
Steel grade chemical composition	GOST 380-94, GOST 1050-88, GOST 4543-71, GOST 14959-79
Technical requirements for mechanical properties	GOST 535-88, GOST 1050-88, GOST 4543-71, GOST 14959-79
Conventional accuracy of rolling	

Range of products

Standard (TU)	Steel grades	Thickness, mm	Tolerances for thickness, mm	Width, mm	for width, mm
For general-purpose and hot stamping strips					
GOST 1050-88	08, 10, 15, 20, 25, 30, 35, 40, 45, 50, 55, 60	4-6 incl.	+0.3 -0.5	11-60	+0.5 -1.0
		Over 6 to16	+0.2 -0.5	63, 65	+0.5 -1.3
				70	+0.5 -1.4
For cold stamping					
GOST 4543-71	15H-50H, 15G-50G, 18HGT, 25HGT, 30HGT	5	±0.2	11-36	±0.4
		6-12	±0.3		
		14, 16	+0.3 -0.4		
		18	±0.4		
GOST 1050-88	08, 10, 15, 20, 25, 30, 35, 40, 45, 50, 55, 60	10	+0.2 -0.5	50	+0.5 -1.0
GOST 535-88	St0, St3ps, St3sp, St4ps, St4sp, St5ps, St5sp, St6ps, St6ps	36	+0.2 -1.6	110	+1.0 -2.2
DIN 17100	St37-2, St44-2, RSt52-3	16	+0.2 -0.5	70	+0.5 -1.4
		40	+0.2 -1.6	120	+1.1 -2.4
TU 14-105-539-90	40G1RT	36	+0.1 -1.6	107	+1.5 -0.5

As agreed with a customer, strips of other dimensions may be manufactured, too.

Strip bar length is as follows, depending on application:

standard length from 4 m to 10 m (up to 12 m at a customer's request),

length multiple to the standard one,

nonstandard length from 4 m to 12 m.

Length tolerances for strips of standard length or that multiple to the standard one should not exceed:

+50 mm for strip length over 4 m to 6 m,

+70 mm for strip length over 6 m.

Corner rounding – off should not exceed 0.2% of thickness, but be not more than 3 mm.

Strip camber should not exceed 0.5% of strip length.

Hot-rolled rectangular-section strip bar according to TU 14-105-539-90

Steel grade 40G1RT.

Field of application: manufacture of tractor caterpillars by hot stamping.

Range of products

Thickness, mm	Width, mm	Cross-sectional area, mm ²	Theoretical mass per one running meter, kg
36	108	3888	30.52
	107	3852	30.24
	110	3960	31.09

Chemical composition

Fraction of total mass, %									
C	Si	Mn	P max	S max	Cr max	Ni max	Cu max	B max	Ti
0.37-0.45	0.17-0.37	0.85-1.15	0.030	0.030	0.3	0.3	0.3	0.002	0.015-0.03

Mechanical properties

Yield point, MPa (kg/mm ²)	Ultimate strength, MPa (kg/mm ²)	Relative elongation, %	Relative reduction of area, %	Impact strength, J/cm ² (kgf/cm ²)
550 (55)	700 (70)	15	45	98 (10)

Mechanical properties at normal temperature are determined on test specimens made from heat treated blanks with circle diameter or square side equal to 25 mm.