



HV01

Hard chrome plated barsteel TiRun 280X/20MnV6 en C45E

General

Hard chrome plated barsteel TiRun 280X/20MnV6 and C45E.

The bar is ready to use and has a diameter tolerance of f7.

The thickness of the chrome layer is minimum 20 µm; sizes <20 mm.

Minimum 15 µm. The surface roughness (Ra) is maximum 0,2 µm (cut-off 0,8 mm).

The surface hardness is minimum 800HV.

The X added to the 280 grade is giving clearly higher mechanical properties for the sizes 25 - 80 mm.

The hard chrome plated bars will be mainly used as pistonrods for hydraulic and pneumatic cylinders. In an aggressive environment, like the process industry, in the mining industry, along the shore, on the roads and in the offshore-industry, one could use chrome plated stainless steel bars or nickel chrome plated bars.

Corresponding norms

DIN 17MnV6 20MnV6

AFNOR 18MnV5

Mechanical properties

	Diameter in mm / 280 X		20MnV6 or equal		C45E
	25 - 80	(80) - 125	<25	25 - 200	
Yieldstrength Reh min.N/mm ²	520	440	540	440	280
Tensilestrength Rm N/mm ²	650-800	600-750	min. 640	600-750	590-740
Elongation (A5) min. %	19	19	7	19	16
Hardness abt. HB	200-240	180-230	min. 195	180-230	180-225
Impacttest -27J(-20°C)	yes	no	no	no	no

Chemical analysis 280X / 20MnV6

	C%	Si%	Mn%	P≤%	S≤%	V%
min.	0,15	0,10	1,30			0,06
max.	0,23	0,50	1,75	0,035	0,035	0,20

Out of roundness

Maximum 1/2 of the diameter tolerance

Straightness

Diameter < 30 mm: maximum deviation 0,3 mm per 1,0 m

Diameter > 30 mm: maximum deviation 0,2 mm per 1,0 m

Weldability

Excellent

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