

HX180YD

Steels with high yield strength
for cold forming - ultra high strength IF

Material no.	1.0921
according to	DIN EN 10346/ DIN EN 10143

Mechanical properties (transverse)

Yield strength $R_e^{1)}$
180 – 240 MPa

Tensile strength R_m
330 – 390 MPa

Total elongation $A_{80}^{2)}$
≥ 34 %

Hardening exponent n_{90}
≥ 0,18

Anisotropy $r_{90}^{3)}$
≥ 1,7

Available dimensions

Thickness in mm	Width in mm
0,50 – 0,68	900 – 1.590
0,69 – 0,86	900 – 1.750
0,87 – 2,00	900 – 1.850
2,01 – 3,00	900 – 1.600

Surface finish

Thickness ranges

MB	0,50 – 3,00
MC ¹⁾	0,50 – 2,00

1) By agreement

Chemical composition¹⁾

(in percent by weight)

	min.	max.
C		0,010
Si		0,200
Mn		0,700
P		0,060
S		0,025
Ti		0,120
Al		0,100

1) Ti + Nb + V ≤ 0,22%. The addition of Boron is permitted.

The samples for the tensile test are taken at right angles to rolling direction unless the product width is opposed to this.

1) $R_{p0,2}/R_{eL}$

2) Reduced minimum values of elongation are valid for thicknesses ≤ 0,5 mm (minus 4 units) and for thicknesses > 0,5 mm and ≤ 0,7 mm (minus 2 units).

3) A thickness > 1,5 mm reduces the values of e_{r90} about 0,2.