

20Cr2* All

General Information

20Cr2* is a carburizing steel with good toughness and high fatigue strength. Equivalent to the US Standard grade 4118.

126H is a Bearing Steel Quality (BQ) variant.

** Designation followed by "*" is not an official EN standard grade but named according to the rules in EN 10027.*

BQ-Steel®

BQ-Steel® is a bearing quality clean steel optimized for fatigue strength and is also ideal for new design solutions outside the bearing industry.

Similar designations

4118H

Chemical composition

Variant	Cast	Weldability		C %	Si %	Mn %	P %	S %	Cr %	Ni %	Mo %	V %
126H	IC	CEV 0.59 _{max}	Min	0.18	0.20	0.70	-	-	0.40	-	0.08	-
		Pcm 0.36 _{max}	Max	0.23	0.35	0.90	0.025	0.015	0.60	0.25	0.15	0.100

Mechanical Properties

Variant	Condition	Format	Dimension [mm]	Hardness
126H	+AR	Tube,wall	7 < 23	190 HB typical

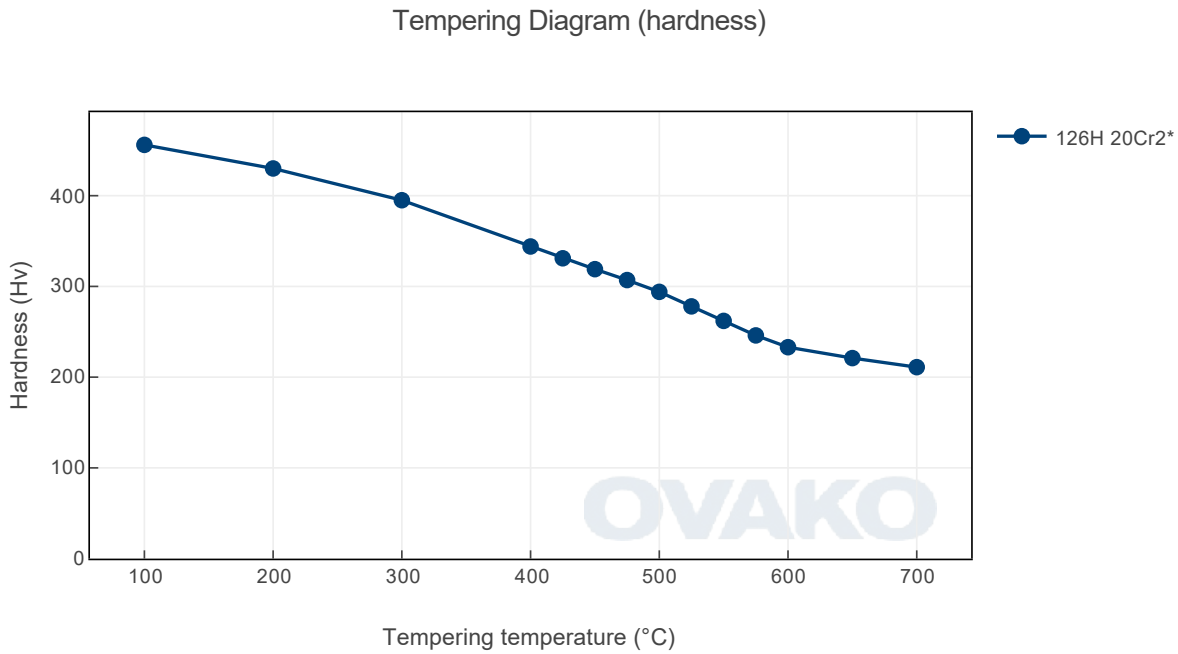
$Rp_{0.2}$ * R_{eh} , ** R_{el}

Transformation
temperatures

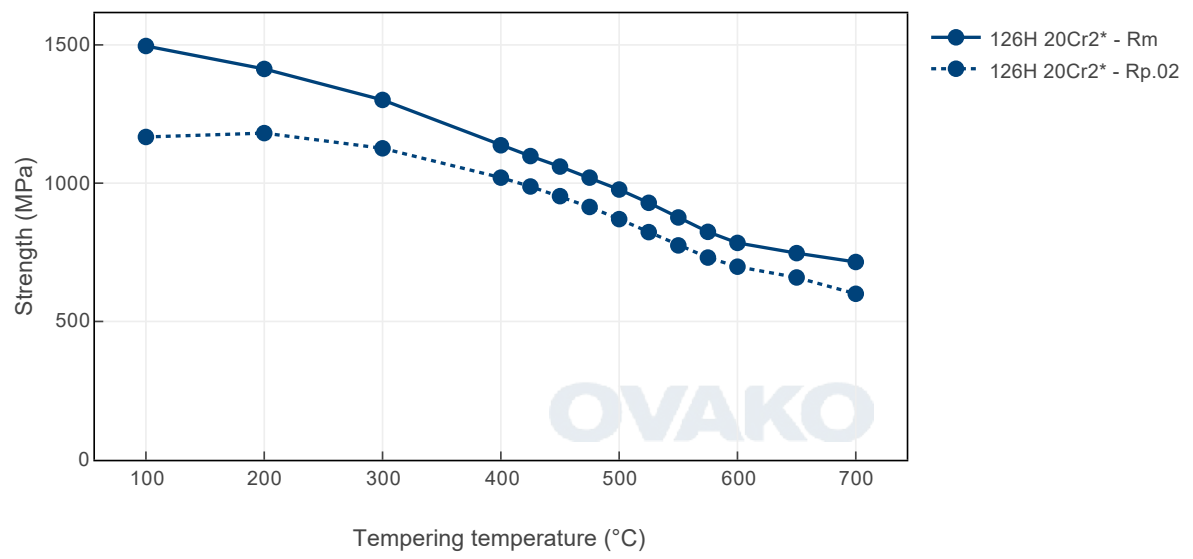
	Temperature °C
MS	421
AC1	730
AC3	818

Heat Treatment Guide generated Graphs

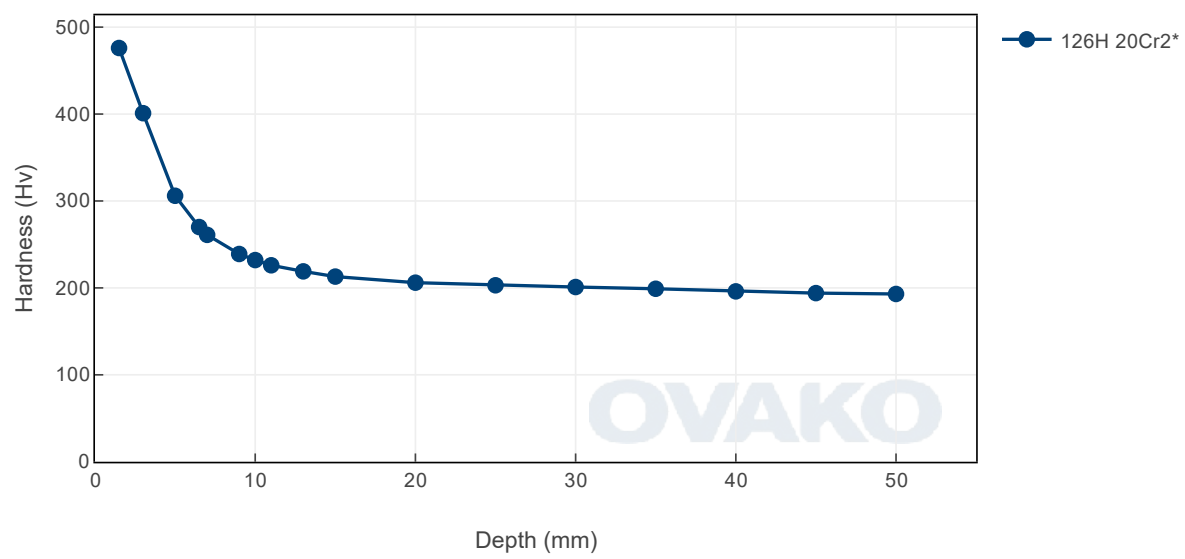
The following graphs are generated from a theoretical model. For further info see the Heat treatment guide module. Select a specific grade version for individual display.



Tempering Diagram (strength)



Jominy



Steel cleanliness

Micro inclusions									Macro inclusions	
Applied standard	ASTM E45								Applied standard	ISO 3763 (Blue fracture)
Sampling	ASTM A295								Sampling	Statistical testing on billets
Maximum average	A		B		C		D		Limits	< 2,5 mm/dm ²
limits	Th	He	Th	He	Th	He	Th	He		
	2,0	1,5	0,8	0,1	0	0	0,5	0,4		

SUSTAINABILITY-ENVIRONMENTAL IMPACT DATA

At Ovako sustainability and reduction of our environmental impact is a major focus in everything we do.

Further information is found [here](#).

Steel works	Hofors	Smedjebacken	Imatra
CO ₂ e/kg	120	62	76

To get the full picture of our products environmental impact we have to look at all of our CO₂ emission sources.

Not only the steel work Scope 1-2 itself, but all operations downstream in our production, heating and heat treatment furnaces etc (full scope 1-2) as well as all the emission from input material, eg. alloys, scope 3.

Steel Grade	Format	Condition ⓘ	Scope 1-3 (CO ₂ e kg /1000 kg steel)	Climate compensated Net emission = Scope 3 (CO ₂ e kg /1000 kg steel) Scope 1 - 2 = 0 (compensated)
126H	Round bar	+AR	600	201
126H	Round bar	+SA	605	204
126H	Tube,wall	+AR	622	224
126H	Tube,wall	+SA	624	226

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Other properties (typical values)

Youngs module (GPa)	Poisson´s ratio (-)	Shear module (GPa)	Density (kg/m ³)
210	0.3	80	7800
Average CTE 20-300°C (µm/m°K)	Specific heat capacity 50/100°C (J/kg °K)	Thermal conductivity Ambient temperature (W/m°K)	Electrical resistivity Ambient temperature (µΩm)
12	460 - 480	40 - 45	0.20 - 0.25

Contact us

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For more detailed information please visit <http://www.ovako.com/en/Contact-Ovako/>

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