

Material No.: Code:
1.4122 X39CrMo17-1

DE - Brand:
HC17M

Chemical composition:
 (Typical analysis in %)

C	Cr	Mo					
0,39	16,50	1,10					

Steel properties: Stainless martensitic steel.

Applications: Fittings, surgical cutting tools, pump and compressor parts, polymer processing.

Condition of delivery: a) Soft annealed to max. 280 HB
 b) Quenched and tempered

Physical properties:

Thermal expansion coefficient	$\left[\frac{10^{-6} \cdot \text{m}}{\text{m} \cdot \text{K}} \right]$	20-100°C	20-200°C	20-300°C	20-400°C
		10,3	10,8	11,2	11,6
Thermal conductivity	$\left[\frac{\text{W}}{\text{m} \cdot \text{K}} \right]$	20°C			
		16,0			

Heat treatment:

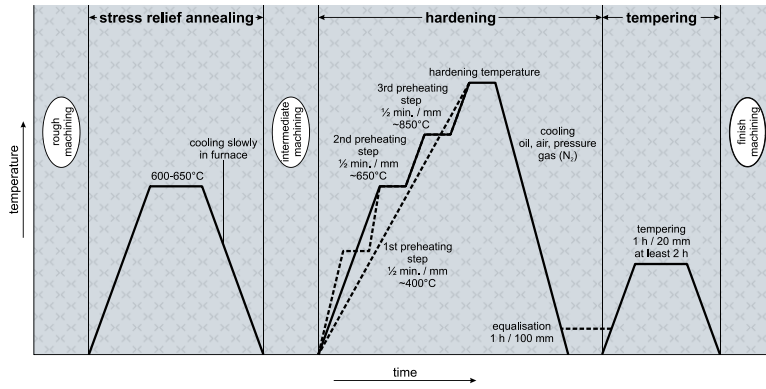
Soft annealing	Temperature	Cooling	Hardness
	750 - 850°C	furnace, air	max. 280 HB

Hardening	Temperature	Cooling	Tempering
	980 - 1060°C	oil, pressure gas (N ₂) or air	see tempering diagram

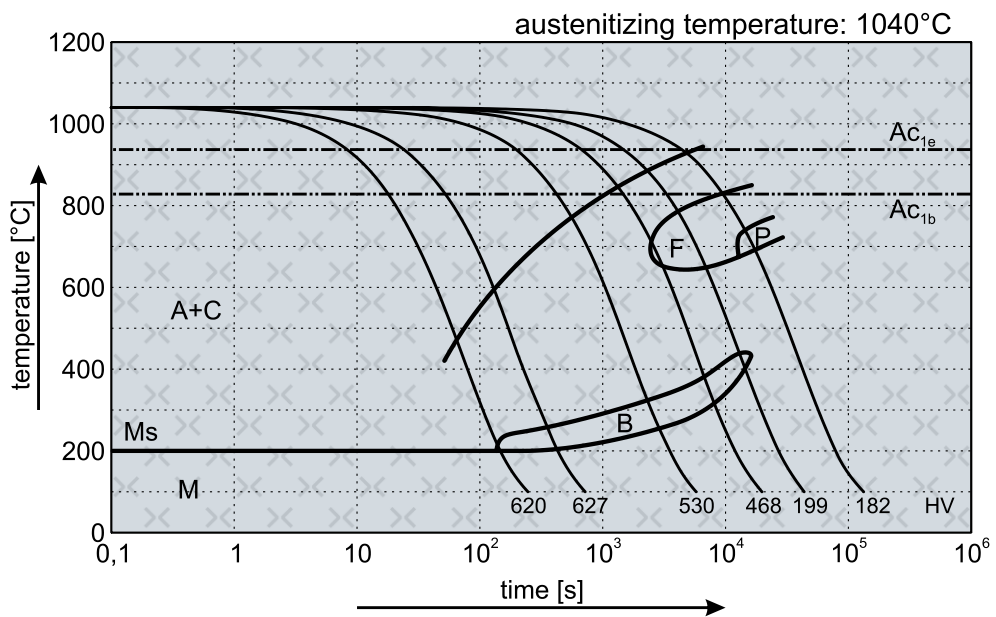
Mechanical properties in quenched and tempered condition (DIN EN 10088-3:2014-12)

	QT 750	
	≤ 60	>60 - 160
Diameter d [mm]	≤ 60	>60 - 160
0,2% Proof strength R_{p0,2} [N/mm²]	min. 550	min. 550
Tensile strength R_m [N/mm²]	750 - 950	750 - 950
Elongation A [%]	L: min. 12	L: min. 12
Toughness CVN [J]	L: min. 20	L: min. 14

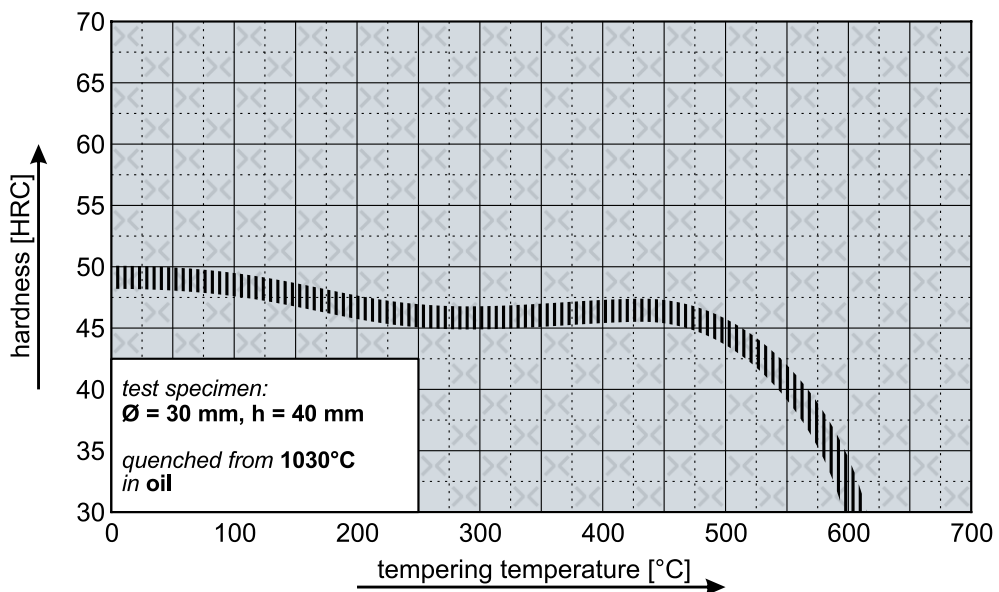
(1.4122) Thermal Cycle Diagram



Continuous Cooling Transformation Diagram (CCT)



Tempering Diagram



Remarks: All technical information is for reference only.