

Material No.: Code:

**1.2363 X100CrMoV5**

DE - Brand:

**P5M**

**Chemical composition:**  
(Typical analysis in %)

C	Cr	Mo	V				
1,00	5,30	1,10	0,25				

**Steel properties:**

Medium alloyed cold work steel with 1% Carbon, high achievable hardness, high through hardenability, good dimensional stability, excellent compressive strength, good toughness, high wear resistance.

**Applications:**

Shear blades, cutting punching stamping, bending tools, form rolls, cold pilger mandrels, moulds for plastic processing, embossing dies.

**Condition of delivery:**

Soft annealed to max. 241 HB

**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
		11,6	12,9	13,2	13,7
Thermal conductivity	$\left[ \frac{\text{W}}{\text{m} \cdot \text{K}} \right]$	20°C	350°C	700°C	
		15,8	26,7	28,9	

**Heat treatment:**

Soft annealing

Temperature	Cooling	Hardness
800 - 840°C	furnace	max. 241 HB

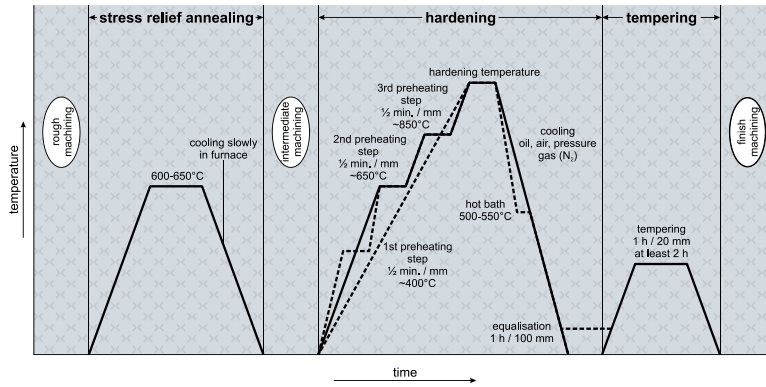
Stress relief annealing

Temperature	Cooling	
600 - 650°C	furnace	

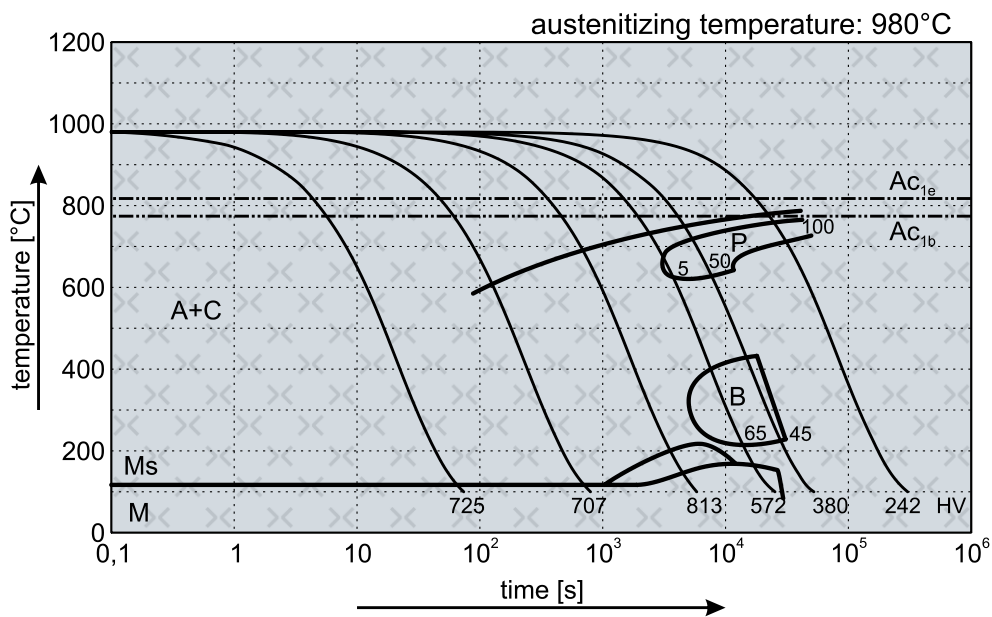
Hardening

Temperature	Cooling	Tempering
950 - 980°C	oil, pressure gas (N <sub>2</sub> ), air or hot bath 500 - 550°C	see tempering diagram

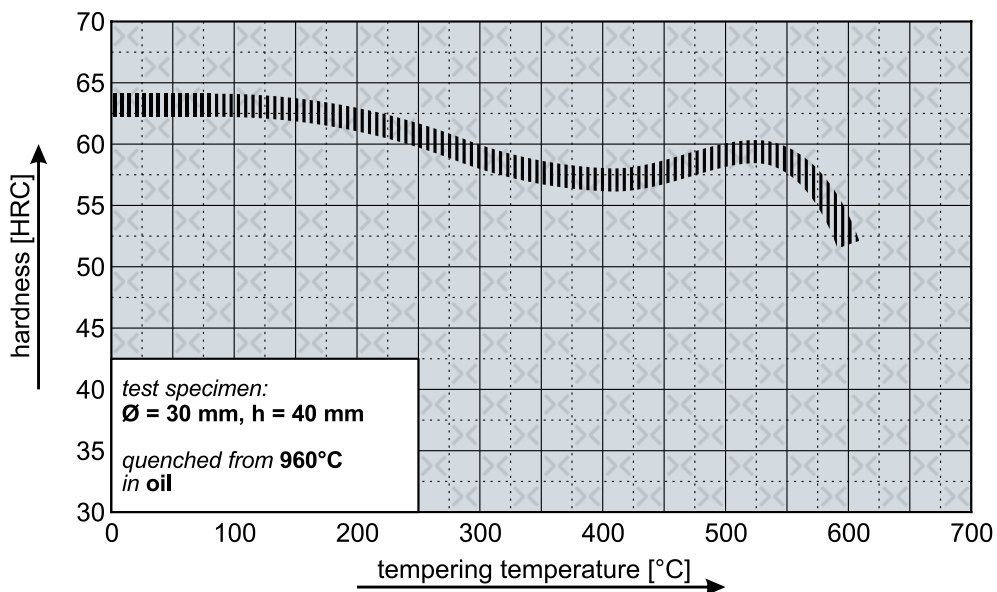
# (1.2363) Thermal Cycle Diagram



## Continuous Cooling Transformation Diagram (CCT)



## Tempering Diagram



Remarks: All technical information is for reference only.