



DE - Brand:

Special Steel

CP8E

Chemical composition: (Typical analysis in %)

C	Cr	Mo	V				
0,85	7,70	1,50	2,30				

Steel properties:

Cold work tool steel with high V-content, good secondary and through hardenability, good toughness, dimensionally stable.

Applications:

Shear knives, cutting tools, straightening-, pressure- and profiling rolls with high toughness requirements.

Condition of delivery:

Soft annealed to max. 240 HB

Physical properties:

Thermal expansion coefficient	$\left[\frac{10^{-6} \cdot \text{m}}{\text{m} \cdot \text{K}} \right]$	$\frac{20-100^{\circ}\text{C}}{11,3}$	$\frac{20-200^{\circ}\text{C}}{11,7}$	$\frac{20-300^{\circ}\text{C}}{12,0}$	$\frac{20-400^{\circ}\text{C}}{12,2}$
Thermal conductivity	$\left[\frac{\text{W}}{\text{m} \cdot \text{K}} \right]$	$\frac{20^{\circ}\text{C}}{24,8}$			

Heat treatment:

Soft annealing

Temperature	Cooling	Hardness
800 - 840°C	furnace	max. 240 HB

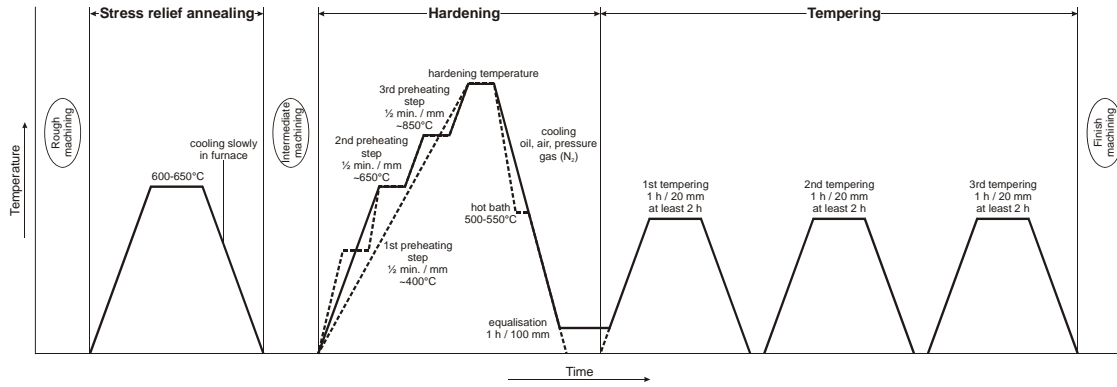
Stress relief annealing

Temperature	Cooling	
600 - 650°C	furnace	

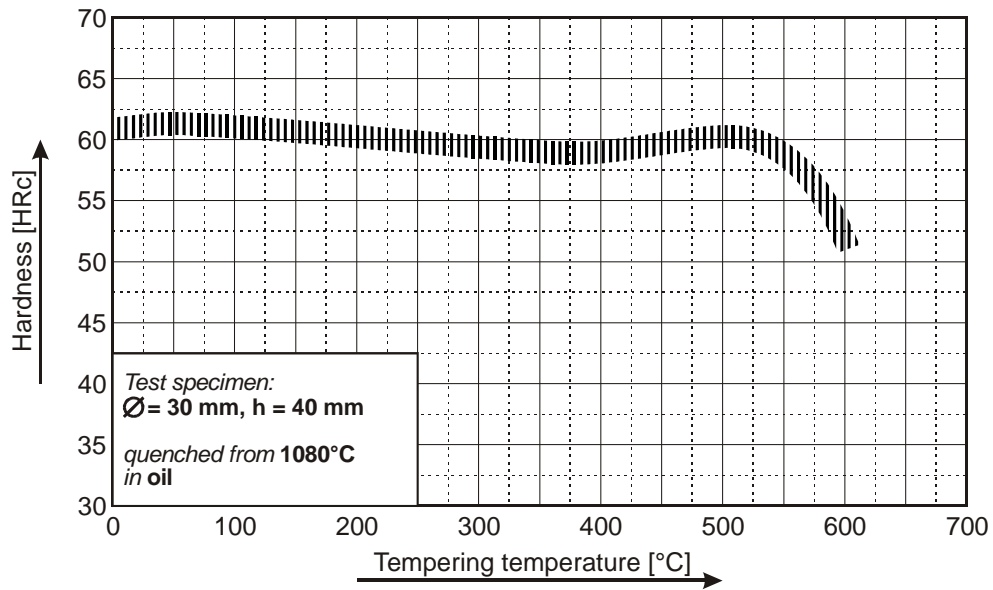
Hardening

Temperature	Cooling	Tempering
1070 - 1090°C	oil, pressure gas (N ₂), air or hot bath 500 - 550°C	see tempering diagram

(CP8E) Thermal Cycle Diagram



Tempering Diagram



Remarks: All technical information is for reference only.