Material No.: 1.2767 Code: 45NiCrMo16

DE - Brand: VNC4

Chemical composition:
(Typical analysis in %)

C	Cr	Mo	Ni				
0,45	1,40	0,25	4,00				

Steel properties:

Nickel alloyed cold work tool steel, good through-hardenability, good polishability, excellent toughness.

Applications:

shredder knives, cutting tools for thick materials, casing, plastic moulds, cutting and bending tools, shear knives for cutting scrap and billets.

Condition of delivery:

Soft annealed to max. 285 HB

Physical properties:

	$\left[\frac{10^{-6} \cdot m}{m \cdot K}\right]$	20-100°C	20-200°C	20-300°C	20-400°C
Thermal expansion coefficient		11,5	12,3	12,8	13,1

	$\left[\frac{W}{m \cdot K}\right]$	20°C	150°C	300°C
Thermal conductivity		32,9	34,6	35,1

Heat treatment:

Soft annealing

Temperature	Cooling	Hardness
610 - 650°C	furnace	max. 285 HB

Stress relief annealing

Temperature	Cooling	
600 - 650°C	furnace	

Hardening

Temperature	Cooling	Tempering
840 - 870°C	oil, pressure gas (N_2), air or hot bath 180 - 220°C	see tempering diagram

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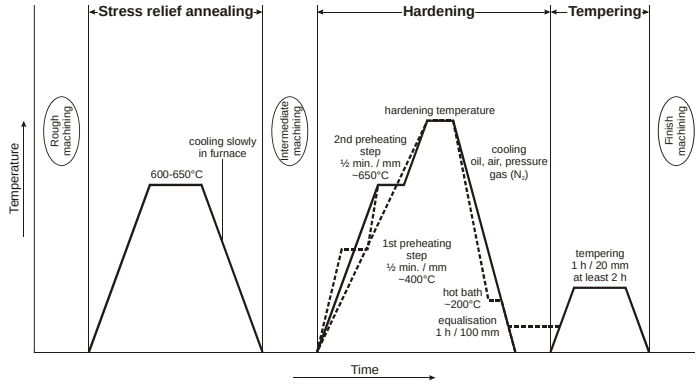
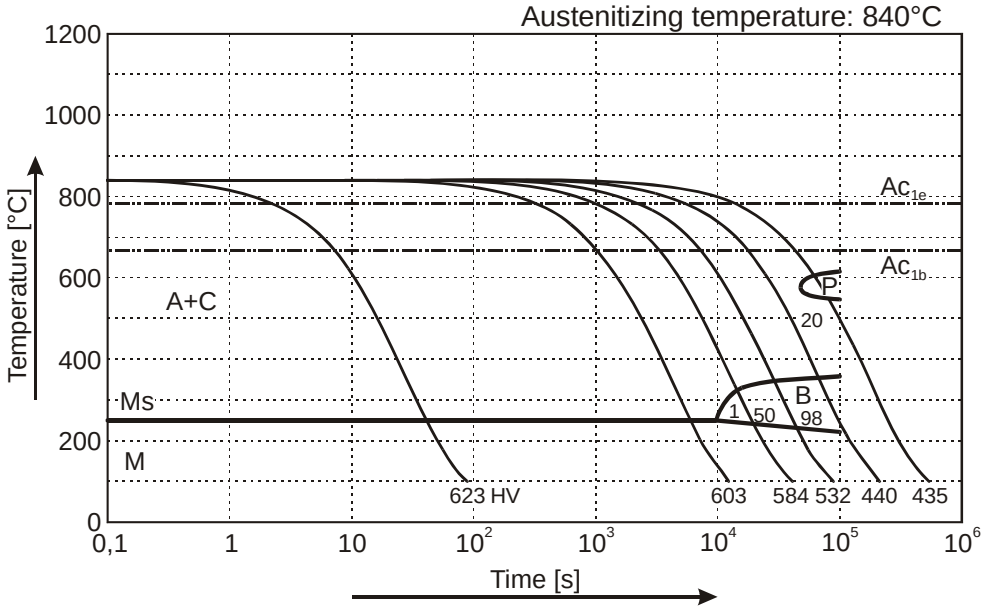
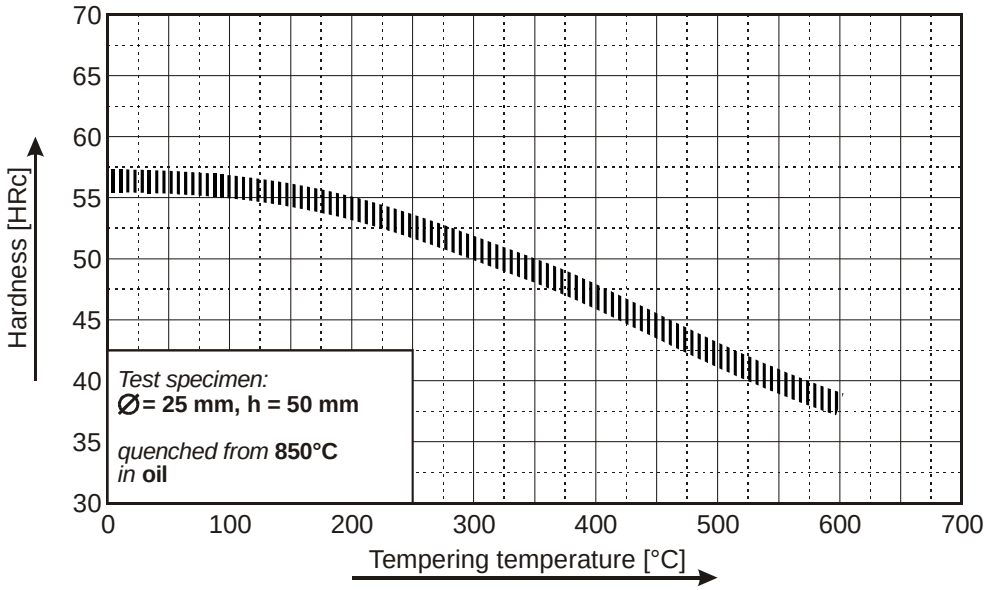
(1.2767) Thermal Cycle Diagram



Continuous Cooling Transformation Diagram (CCT)



Tempering Diagram



Remarks: All technical information is for reference only.