

Material No.: Code:

1.2767 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-hardening, 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

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
	11,5	12,3	12,8	13,1

Thermal conductivity

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

Heat treatment

Soft annealing

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

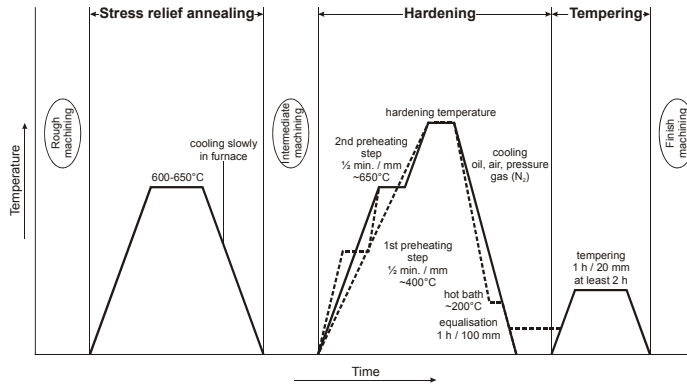
Stress relief annealing

Temperature	Cooling	
600 - 650°C	furnace	

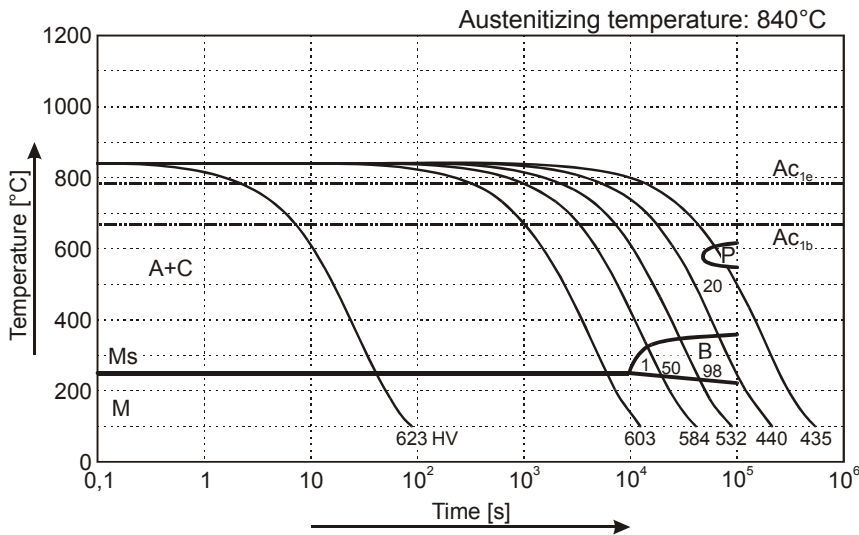
Hardening

Temperature	Cooling	Tempering
840 - 870°C	oil, pressure gas (N ₂), air or hot bath 180 - 220°C	see tempering diagram

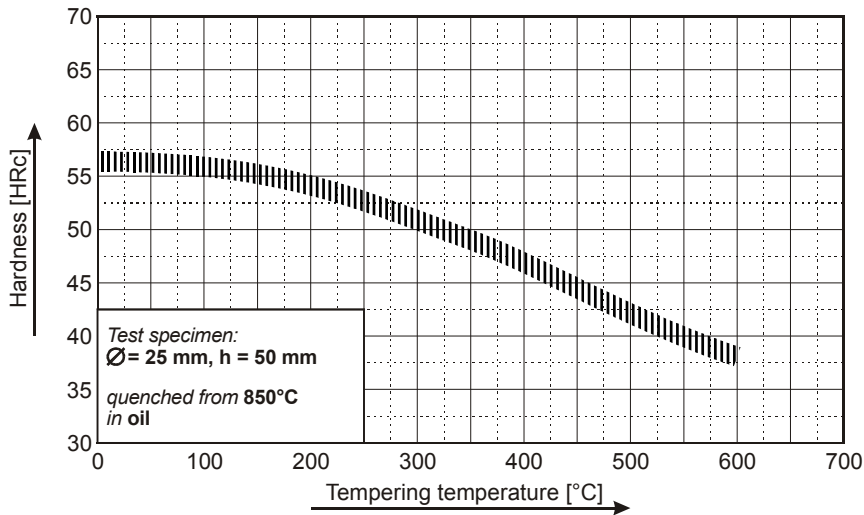
(1.2767) Thermal Cycle Diagram



Continuous Cooling Transformation Diagram (CCT)



Tempering Diagram



Remarks: All technical information is for reference only.