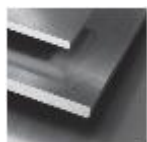


## Steel grade

Material No. / Werkstoff-Nr.	PREMIUM 1.2714+QT
Description	55NiCrMoV7
AISI/SAE	L6+QT
Search for alternatives in the ABRAMS STEEL GUIDE®	<a href="http://www.steel-guide.eu/alternatives/L6QT">www.steel-guide.eu/alternatives/L6QT</a>

## Specifications



€co-Präz® [€co]  
L: 500 mm



Round steel [RS]  
black  
L: 500 mm  
L: 1.000 mm

## Chemical composition AISI/SAE L6+QT (reference value %)

C	Si	Mn	P	S	Cr	Mo	Ni	V
0,5 - 0,6	0,1 - 0,4	0,6 - 0,9	0 - 0,03	0 - 0,03	0,8 - 1,2	0,35 - 0,55	1,5 - 1,8	0,05 - 0,15

## Physical properties

Hardness (delivery condition)	max. 400 HB, tempered					
Tensile strength $R_m$ (as received condition)	approx. 1.350 N/mm <sup>2</sup>					
Working hardness	max. 54 HRC					
Thermal expansion coefficient $10^{-6}m/(m \cdot K)$	20 - 100°C	20 - 200°C	20 - 300°C	20 - 400°C	20 - 500°C	20 - 600°C
	12,2	13,0	13,3	13,7	14,2	14,4
Thermal conductivity $W/(m \cdot K)$	20°C	350°C	700°C			
	36,0	38,0	35,0			

## Technical properties

Hot work steel that can be used for a wide range of applications. With good through-hardenability, tempering resistance, toughness, pressure and heat resistance.

## Applications

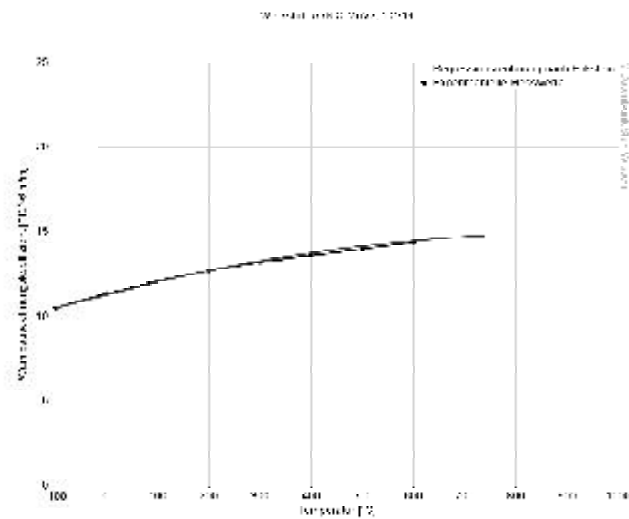
Forging dies, slides, punch heads, extruding stamps, press tools, hot shear knives, extrusion press tools, die holders, support tools, tool holders, pressure plates, armoured die plates.



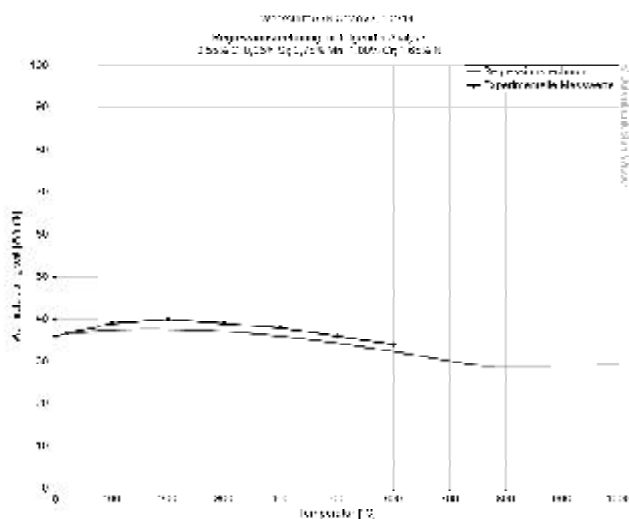
## Heat treatment

Soft annealing	Temperature	Cooling		Hardness					
	650 - 700°C	Furnace		max. 400 HB					
Stress relief annealing	Temperature	Cooling							
	600 - 650°C	Furnace							
Hardening	Temperature	Quenching in			Hardness after quenching				
	830 - 870°C 860 - 900°C	Oil Air			58 HRC 56 HRC				
Tempering	100°C	200°C	300°C	400°C	450°C	500°C	550°C	600°C	650°C
	Oil	57 HRC	54 HRC	52 HRC	49 HRC	47 HRC	46 HRC	43 HRC	38 HRC
Air	55 HRC	52 HRC	50 HRC	47 HRC	45 HRC	43 HRC	40 HRC	36 HRC	32 HRC

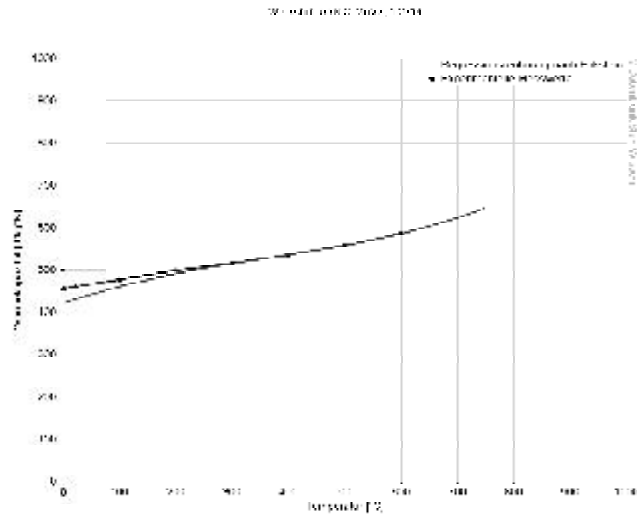
## Thermal expansion coefficient diagram



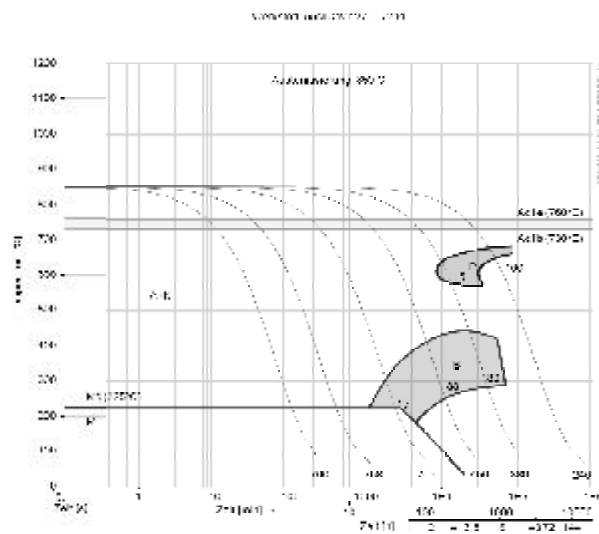
## Thermal conductivity diagram



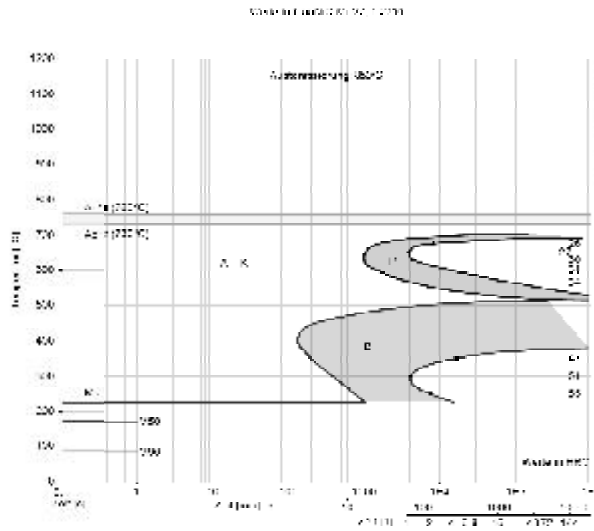
**Thermal capacity diagram**



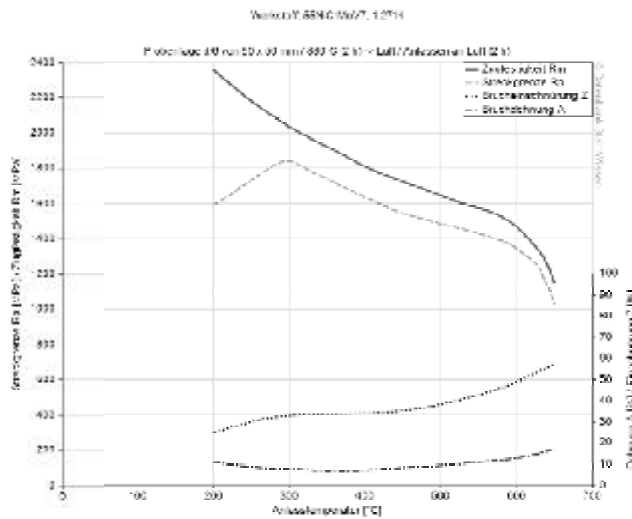
**Continuous ZTU-diagram**



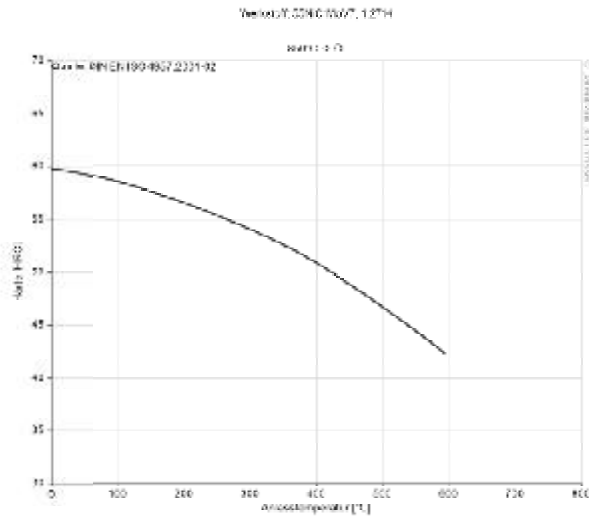
## Isothermal ZTU-diagram



## Hardening and tempering diagram



Tempering diagram



The data shown here is to be used only as an indication of the statistics, thus we accept no liability.  
Diagrams are taken from Datenbank StahlWissen Dr. Sommer Werkstofftechnik  
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