

Quality  
According to standards  
Number

90MnCrV8  
EN ISO 4957 : 2002  
1.2842



**Chemical composition**

C% max	Si% max	Mn% max	P% max	S% max	Cr% max
0.85-0.95	0.10-0.40	1.80-2.20	0.03	0.03	0.20-0.50
	Mo% max	Ni% max	V% max		
	-	-	0.05-0.20		

**Temperature ①°C**

Hot-forming	Quenching	Tempering	Stress-relieving	Soft annealing
1050-850	790-820 oil, polymer or salt bath	+T (180-220 calm air)	after machining & before quenching 650 furnace cooling to 320, then air	700 calm air
	200-250 °C	minimum 2 cycles		(HB max 229)

**Mechanical properties**

Tempering table after quenching at 790°C in oil

<b>HB</b>	739	722	706	668	654	595
<b>HRC</b>	65	64	63	62	60	57
<b>R N/mm2</b>						2240
Tempering at °C	50	100	150	200	250	300
<b>Thermal Expansion</b>	10 <sup>-6</sup> . K <sup>-1</sup>		11.5	12	12.2	12.5
<b>Modulus of elasticity long.</b>	GP a		210			
<b>Modulus of elasticity tang.</b>	GP a		80			
<b>Specific heat capacity</b>	J/(kg.K)		460			
<b>Thermal conductivity</b>	W/(m.K)		30			
<b>Density</b>	kg/dm3		7.85			
<b>Specific electric resistivity</b>	ohm.mm2/m		0.35			
<b>Electrical conductivity</b>	Siemens.m/mm2		2.85			
<b>°C</b>		20	100	200	300	400