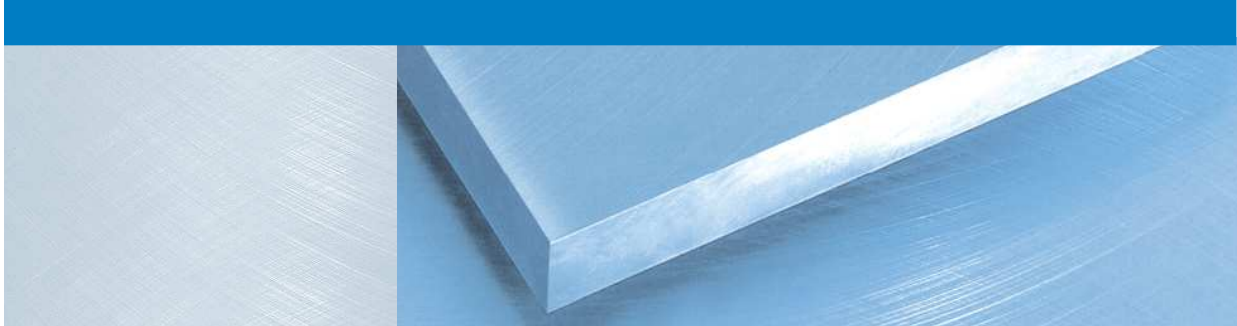


# HABA C-Stahl

1.1191 / C45E+N

**Unalloyed tempering steel**  
Milled plates cut to size



## Finishes

### Thickness

milled  $\leq Ra3.2$  (N8)  
tolerance  $\pm 0.2$  mm

### Parallelism

$\leq 0.1$  mm

### Evenness

$\leq 0.3$  mm

### Length/width

Ra6.3-12.5  
cut with a precision circular saw

### HABA standard tolerance

nominal size  $+0.8/+0.3$  mm

### Customer-specific tolerance

within a tolerance field of 0.5 mm

### Surface refinement

All metallic and non-metallic  
coatings

We also manufacture rolled and  
grinded blanks on request as  
well as special thicknesses and  
tolerances.

## Technical specifications

### Tensile strength

$R_m$  560-620 (N/mm<sup>2</sup>)

### Yield strength

$R_e$  275-340 (N/mm<sup>2</sup>)

### Breaking strain ( $L_0 = 5 d_0$ )

$A_5$  14-16 %

### Impact energy

$A_V$  (J)  $\geq 25$

### Brinellhärte

(HB 30) 175-210

### Density

7.85 kg/dm<sup>3</sup>

### E-module

$\sim 210$  kN/mm<sup>2</sup>

### Thermal conductivity coefficient

(W/mK) 35-45

### Thermal expansion coefficient

(10<sup>-6</sup>/K) 11-14

## Chemical composition

C 0.42-0.50 % S  $\leq 0.035$  %

Si  $\leq 0.40$  % Cr  $\leq 0.40$  %

Mn 0.50-0.80 % Mo  $\leq 0.10$  %

P  $\leq 0.035$  % Ni  $\leq 0.40$  %

(Cr + Mo + Ni)  $\leq 0.63$  %

## Material in use

Apparatus construction  
Special purpose machinery  
Jig manufacturing  
Mechanical engineering  
Toolmaking  
Mould construction  
Plant construction

## Applications

Base plates  
Table tops  
Tools  
Rack gears  
Machined and engineered parts  
of all kinds  
Jigs  
Setting jigs

## Properties

good machinability  
good dimensional stability  
high impact resistance  
limited weldability  
hardenable: flame and  
inductive hardening  
nitriding

