

# PerfoCor®

## STAINLESS STEEL

PerfoCor is a special martensitic stainless steel with Cobalt, Molybdenum and Vanadium additives that can be hardened to very high values. With its high Chromium content and added alloying elements, it provides very high wear resistance and high toughness, as well as corrosion resistance.

### APPLICATION AREAS OF PERFOCOR

- Cutting tools for which corrosion resistance is required
- Surgical cutting tools
- Knives used in the food industry
- Roller bearings for which corrosion resistance is required
- Plastic extrusion screws
- Tin lid sealing rolls used in the food industry
- Piston and valve pins found in refrigerator compressors

C%	Cr%	Mo%	V%	Co%	Others
1,05	17,50	1,20	0,10	1,50	+

### ADVANTAGES OF PERFOCOR

#### ▪ High hardness values.

PerfoCor is one of the stainless steel grades that can reach the highest hardness values. After heat treatment, it reaches 60 HRC hardness values.

#### ▪ High wear resistance.

In addition to the high hardness values it has achieved, PerfoCor shows very high wear resistance with alloying elements such as Molybdenum, Cobalt and Vanadium that increase the wear resistance.

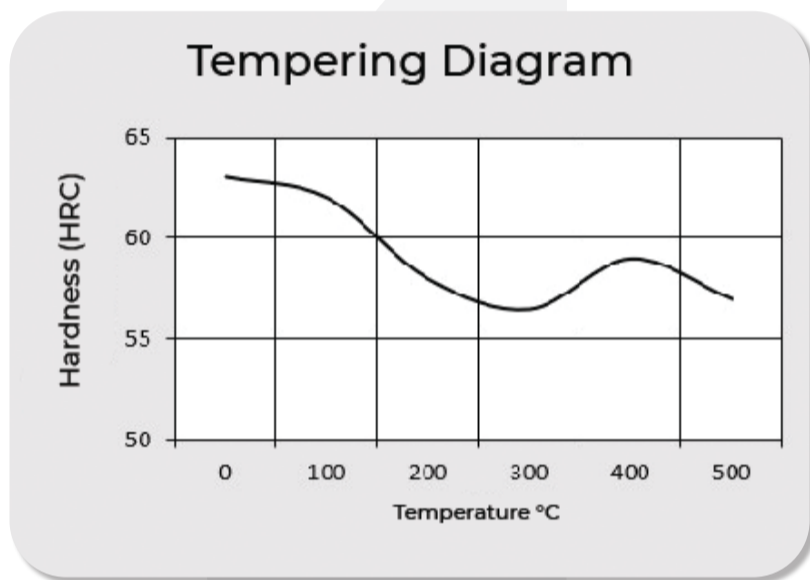
#### ▪ High dimensional stability during heat treatment.

Thanks to its high dimensional stability during heat treatment, PerfoCor greatly reduces labor after heat treatment.



### HEAT TREATMENT PROCESS OF PERFOCOR

	Temperature (°C)	Cooling
Annealing	800 - 850	Furnace, air
Hardening	1030 - 1080	Oil, Furnace
Tempering	See tempering diagrams	Air



### PHYSICAL PROPERTIES OF PERFOCOR

#### Thermal Expansion

Temperature	20°C	100°C	200°C	300°C	400°C	500°C
$\times 10^{-6} / K$	10,4	10,4	10,8	11,2	11,6	11,9

#### Young's Modulus

Temperature	20°C	100°C	200°C	300°C	400°C
GPa	223	217	209	201	192

#### Specific Heat

Temperature	20°C
J/kg.K	430

#### Thermal Conductivity

Temperature	20°C
W/m.K	430