

THE HIDDEN FORCE OF MOTION

 **MARCEGAGLIA**
PLATES

STEELS FOR QUENCHING AND CASE-HARDENING



Marcegaglia Plates heavy plates for quenching & tempering and case-hardening applications are designed to ensure strength, hardness and toughness, even under high loads, wear and repeated stress.

Developed for highly stressed mechanical applications, our solutions are suitable for manufacturing components where precision, durability and reliability are essential requirements.

Steels for quenching and tempering

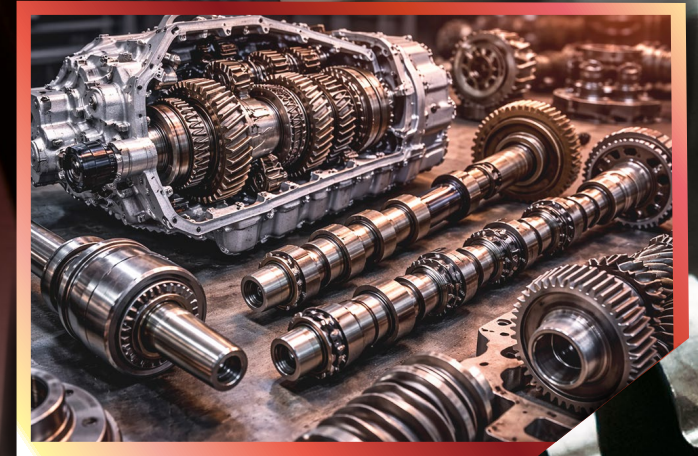
Steels for quenching and tempering are used when the design requires high mechanical strength and good machinability, combined with stable behavior after quenching and tempering.

Non-alloy grades such as C40, C45 and C45E represent versatile solutions for a wide range of mechanical applications, while alloy steels such as 42CrMo4, 41Cr4 and 25CrMo4 are suitable for more highly stressed components thanks to their greater hardenability and strength.

Steels for case-hardening

Steels for case-hardening are characterized by low carbon content and the ability, after treatment, to develop a highly wear-resistant surface combined with a ductile and tough core.

Grades 16MnCr5 and 20MnCr5 are particularly suitable for gears, pinions and components subject to contact and friction, where a combination of surface hardness and internal strength is required.



Applications

- gears and pinions
- shafts and transmission elements
- connecting rods, pins and tie rods
- wear-resistant components

Features

- high mechanical strength
- excellent wear resistance
- good machinability
- reliability after heat treatment

Standards and range

Our heavy plates are available according to:

- EN 683-1 / -2 / -3

GRADES AND MANUFACTURING STANDARDS

MANUFACTURING STANDARD	PRODUCT DESIGNATION	GRADE
EN 683-1	Non-alloy quenched steels	C40, C45 (+A/+N/+S), C45E (+N/+S)
EN 683-2	Alloy quenched steels	42CrMo4 (+A/+N/+S), 41Cr4 (+A/+N) 25CrMo4 (+A/+N)
EN 683-3	Case-hardening steels	16MnCr5 (+A/+N/+S) 20MnCr5 (+A/+N/+S)
AISI	Non-alloy quenched steels	AISI 1045
SAE	Non-alloy quenched steels	SAE 1040, SAE 1045

(*) Available with CE marking

PRODUCTION RANGE

Min. thickness	7*
Max. thickness	250**
Min. width	1,000
Max. width	3,020/3,000***
Min. length	2,000
Max. length	21,000
Max. plate weight	24,000

(*) Customized sizes feasible and subject to mill approval

(**) CE marking extension up to 200 mm

(***) Natural edges / Cut edges

Our solutions ensure **precision, durability and continuity of performance**, contributing to the manufacture of reliable mechanical components even under the most demanding service conditions.

MARCEGAGLIA **PLATES**

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***CONTACT US TO RECEIVE SUPPORT IN
SELECTING THE HEAVY PLATES BEST
SUITED TO YOUR PROJECT.***

