



## Stainless Steel GX40CrSi28 (1.4776)

GX40CrSi28 is one type ferritic heat resistant stainless steel casting grade in casting standard of EN 10295, with the EN number 1.4776. Same EN 1.4776 also be defined as GX40CrSi29 in standard of DIN 17465.

### Casting Methods in Casting Quality Industrial:

- Sand Casting
- Investment Casting (Lost Wax Casting, Precision Casting)

### Equivalent Stainless Steel Grade: [www.castingquality.com](http://www.castingquality.com)

America: ASTM A608 Grade HC30

America: ASTM A297 Grade HC ( Type 28 Chromium)

Japan: JIS G5122 Grade SCH 2X2

China: GB/T 8492 Grade ZG40Cr28Si2

### Reference Casting Standards:

EN 10295 Heat resistant steel castings.

DIN 17465 Heat resistant steel castings

### GX40CrSi28 (EN 1.4776) Physical Properties:

Density: 7.5-7.6 kgs/dm<sup>3</sup>

Specific heat: 500 J(kg-k) at 20 °C

Thermal conductivity: 18.8 W/(m-K) at 20 °C

21.0 W/(m-K) at 100 °C

Thermal expansion: 11.5 10<sup>-6</sup>k<sup>-1</sup> from 20°C up to 400°C

14 10<sup>-6</sup>k<sup>-1</sup> from 20°C up to 800°C

16 10<sup>-6</sup>k<sup>-1</sup> from 20°C up to 1000°C

### GX40CrSi28 (EN 1.4776) Chemistry Property:

Casting Standard	EN10295	DIN 17465
Stainless Steel Grade	<b>GX40CrSi28</b>	<b>GX40CrSi29</b>
EN Number	1.4776	1.4776
Carbon	0.30-0.50	0.30-0.45
Manganese (max)	<b>1.00</b>	<b>0.5-1.0</b>
Silicon	1.00-2.50	1.00-2.50
Sulfur (max)	0.030	0.030
Phosphorus ( max)	<b>0.040</b>	<b>0.035</b>
Chromium	<b>27.0-30.0</b>	<b>27.0-30</b>
Nickel ( max)	<b>0.10</b>	-
Molybdenum (max)	0.50	-
W (max)	0.2	-





Nb (max)	0.20	-
V (max)	0.08	-
Cu (max)	0.20	-
Co (max)	0.50	-

### GX40CrSi28 (EN 1.4776) Heat treatment process:

As-cast condition (no heat treatment).

Castings may be supplied in annealed condition (800-850°C) in which cases a maximum hardness values may be agreed.

### GX40CrSi28 (EN 1.4776) Stainless Steel Mechanical Property [www.castingquality.com](http://www.castingquality.com)

Stainless Steel Casting Grade			Heat Treatment		Hardness	Test At room temperature		
Standard	Name	Number	Symbol	Annealed		Tensile Test, min		
					HB30	Rp0.2 MPa	Rm MPa	A %
EN10295	<b>GX40CrSi28</b>	1.4776	-	As-cast condition	-	-	-	-
DIN 17465	<b>GX40CrSi29</b>	1.4776	-	As-cast condition	-	-	-	-

The hardness of GX40CrSi28 will be less than 320HBW in annealed condition.

Creep properties:1% creep limit in N/mm2.

Stainless Steel Casting Grade			600°C			700°C			800°C			900°C		
			σr		σ1 %	σr		σ1 %	σr		σ1 %	σr		σ1 %
Standard	Name	Number	100	1000	10000	100	1000	10000	100	1000	10000	100	1000	10000
EN10295	<b>GX40CrSi28</b>	1.4776	-	40	26	25	21	11	-	-	5	8	6.5	1.5
DIN 17465	<b>GX40CrSi29</b>	1.4776	-	-	26	-	-	11	-	-	5	-	-	1.5

### GX40CrSi28 (EN 1.4776) Welding Conditions:

In DIN 17465, the covered electrode is type of 30 or 29.9; Wire or rod is X8Cr30 (1.4773) or X10CrNi30-9(1.4337). Preheated at temperature 700-800° C, the casting after welding (post weld heat treatment) should be slow cooling in furnace.



### GX40CrSi28 (EN 1.4776) Maximum use temperatures: 1150 °C

### GX40CrSi28 (EN 1.4776) Typical Casting Application:

- Rollers and grating.
- Furnace, burner beds for garbage incinerators.
- Heat Exchanger System.
- Cement Industry



As a professional manufacturer in China, We Casting Quality focus on Metal Parts OEM industry, and provide solutions and services in Metal Casting field as following:

1. **Sand Casting**
2. **Investment Casting, Lost Wax process**
3. **Shell Casting**
4. **Lost Form Casting**
5. **CNC Machining**
6. **CAD Design**
7. **Tools/Mold Design**

## Material Supplied

- Cast Iron Castings (Grey Iron, Malleable Iron, Ductile Iron)
- Carbon Steel and Alloy Steel Castings
- Stainless Steel and Duplex Stainless Steel Castings
- Aluminum Castings
- Bronze and Brass Castings
- Titanium and Cobalt Alloy Castings

## What We Can Do

### ➤ Design Ability

Our engineers will help you to improve the designs based on casting technology, then The simulation software will be processed to verify the casting pouring system. Pro/E, Solidworks, AutoCAD and ProCast are available in Casting Quality Industrial.

### ➤ Saving Cost

Some manufacture processes may lead high cost. We will analyses the designs and advise the suitable methods to our customers. The best solution will be adopted.

### ➤ Quality Control

From the raw material selecting to bulk production processing, all procedures can follow PPAP program if necessary. The certificates will be provided including chemistry, hardness, mechanical property or NDT testing.

### ➤ Production Capacity

The max iron/steel castings can reach 30tons in weight, meanwhile the minus casting is around 1gram only.

We also have prototyping and 3D scanning ability for sample plan.

### ➤ Logistic Service

The products will be delivered directly to customer's workshop, which will save plenty of work for clients.

**Contact with Us Immediately:**

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