

55NiCrMoV7

All

General Information

55 NiCr MoV7 is an alloyed Quench and Tempering steel used in many tool like applications where there is need for high hardness and mechanical strength combined with good toughness.

BQ-Steel®

BQ-Steel® is a bearing quality clean steel optimized for fatigue strength and is also ideal for new design solutions outside the bearing industry.

Similar designations

55 NCDV 7, L6, 1.2714, UNS T61206

Chemical composition

| Variant | Cast | Weldability | | C % | Si % | Mn % | P % | S % | Cr % | Ni % | Mo % | V % |
|---------|------|-------------------------|-----|------|------|------|-------|-------|------|------|------|-------|
| 696R | IC | CEV 1.71 _{max} | Min | 0.52 | 0.20 | 0.70 | - | - | 1.10 | 1.50 | 0.45 | 0.080 |
| | | Pcm 0.74 _{max} | Max | 0.56 | 0.40 | 0.90 | 0.025 | 0.005 | 1.30 | 1.80 | 0.55 | 0.120 |

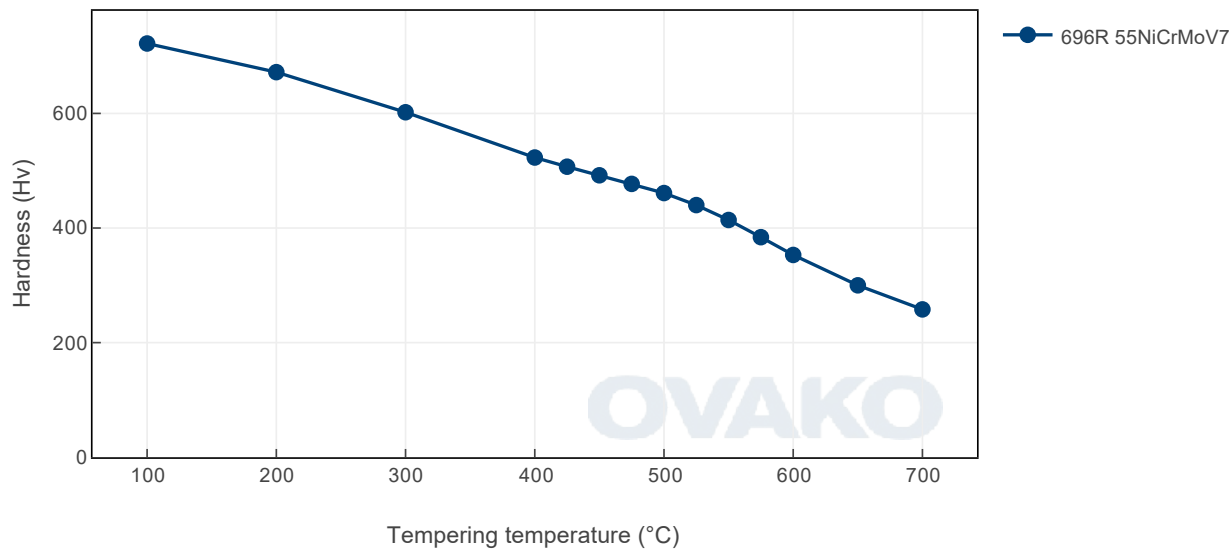
Transformation
temperatures

| | Temperature °C |
|-----|----------------|
| MS | 237 |
| AC1 | 716 |
| AC3 | 772 |

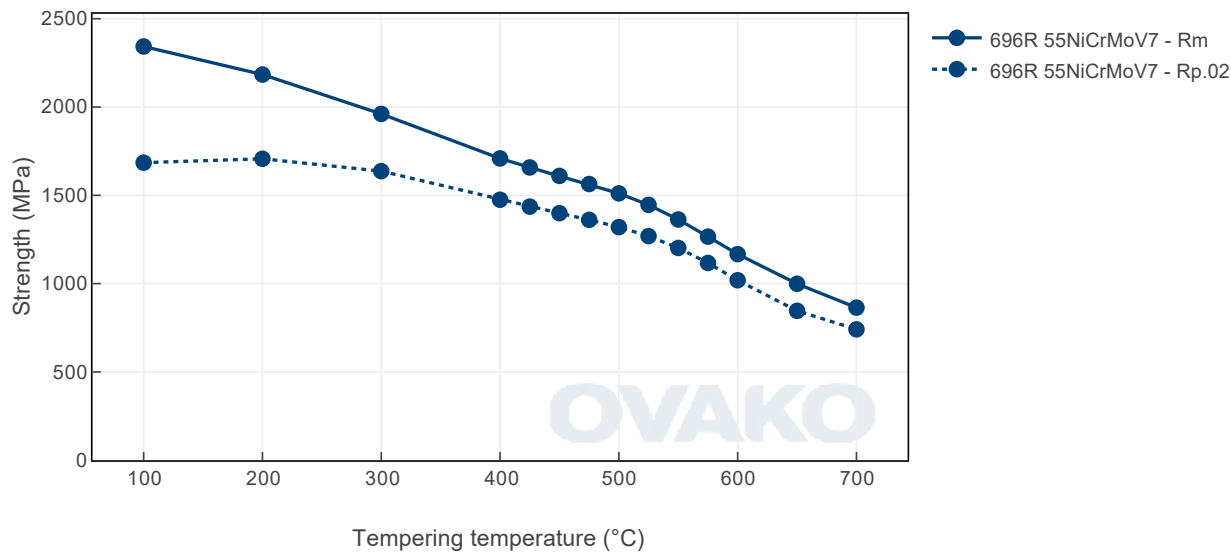
Heat Treatment Guide generated Graphs

The following graphs are generated from a theoretical model. For further info see the Heat treatment guide module. Select a specific grade version for individual display.

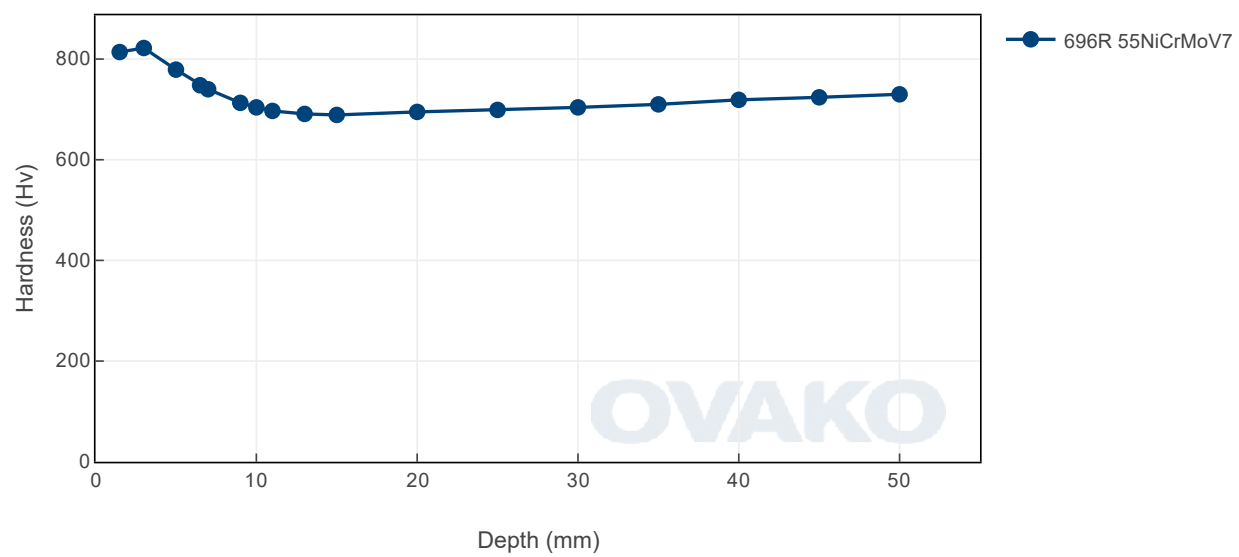
Tempering Diagram (hardness)



Tempering Diagram (strength)



Jominy



SUSTAINABILITY-ENVIRONMENTAL IMPACT DATA

At Ovako sustainability and reduction of our environmental impact is a major focus in everything we do.

Further information is found [here](#).

| Steel works | Hofors | Smedjebacken | Imatra |
|----------------------|--------|--------------|--------|
| CO ₂ e/kg | 120 | 62 | 76 |

To get the full picture of our products environmental impact we have to look at all of our CO₂ emission sources.

Not only the steel work Scope 1-2 itself, but all operations downstream in our production, heating and heat treatment furnaces etc (full scope 1-2) as well as all the emission from input material, eg. alloys, scope 3.

| Steel Grade | Format | Condition ⓘ | Scope 1-3 (CO ₂ e kg /1000 kg steel) | Climate compensated Net emission = Scope 3 (CO ₂ e kg /1000 kg steel) Scope 1 - 2 = 0 (compensated) |
|-------------|-----------|-------------|---|--|
| 696R | Round bar | +AR | 893 | 494 |
| 696R | Round bar | +N | 899 | 498 |
| 696R | Tube,wall | +AR | 932 | 531 |
| 696R | Tube,wall | +N | 934 | 531 |

All above data are to be seen as typical values for the specified format and condition. Detailed information about your specific product please contact your sales contact.

Other properties (typical values)

| Youngs module (GPa) | Poisson's ratio (-) | Shear module (GPa) | Density (kg/m ³) |
|-------------------------------|---|--|--|
| 210 | 0.3 | 80 | 7800 |
| Average CTE 20-300°C (µm/m°K) | Specific heat capacity 50/100°C (J/kg °K) | Thermal conductivity Ambient temperature (W/m°K) | Electrical resistivity Ambient temperature (µΩm) |
| 12 | 460 - 480 | 40 - 45 | 0.20 - 0.25 |

Contact us

Would you like to know more about our offers? Don't hesitate to contact us:

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Via telephone: +46 8 622 1300

For more detailed information please visit <http://www.ovako.com/en/Contact-Ovako/>

Disclaimer

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