



GRANIT
QUALITY PARTS



DOUBLE FINGER

PRODUCT BENCHMARK

CUSTOMER INFORMATION

DOUBLE FINGER 6"

The GRANIT double finger with part number 525379720 was compared with a comparable product from an original manufacturer and another brand.

COMPARISON OF FEATURES

- » Material testing
- » Hardness test
- » Dimensional and form testing

INTERNAL TEST REPORT NO. 2020-0799-04

This product comparison was carried out by the GRANIT PARTS in-house laboratory.

TEST RESULTS

MATERIAL TESTING

This test provides information about the materials used. Choosing the right material is crucial to ensuring the resistance and hardenability of the double fingers.

- All three manufacturers use different materials, all of which are suitable for manufacturing double fingers.
- They are often used for open die forging.
- Thanks to the material's high chromium content of around 0.5%, the parts from GRANIT and the original manufacturer boast very high tensile strength and corrosion resistance, plus a long service life.
- In contrast, the double finger from the other brand has a chromium content of just 0.12%.

	GRANIT	Original manufacturer	Brand
Material designation	38Cr2	C55	C45
Material number	1.7003	1.0535	1.0503

- Due to the higher chromium content in the parts from GRANIT and the original manufacturer, a longer service life can be expected than with the part from the other brand.
- The basic choice of material is correct for all manufacturers.

HARDNESS TEST

For this test the double fingers are divided into functional samples. The main focus is on the cutting edges. The parts from all manufacturers have the same hardening zone and hardness values from 58.8 HRC to 60.1 HRC. The hardness values can be described as equivalent, and are within a normal tolerance range for hardening.

- All three manufacturers are familiar with the correct heat treatment and manufacturing process.
- Failure due to manufacturing problems is unlikely with these double fingers.

DIMENSIONAL AND FORM TESTING

The purpose of this test is to verify the manufacturing accuracy. Only double fingers that are aligned correctly are able to offer high cutting quality.

- In terms of practical assembly method, all three manufacturers can be regarded as equivalent.
- None of the double fingers have different geometries that would prevent the blade from gliding smoothly. Dimensional and form testing did not reveal any differences. Functional impairment is therefore unlikely.
- All manufacturers demonstrate a good production standard in this test.

CONCLUSION

- The production quality of GRANIT double fingers is consistently high.
- Thanks to the chromium content matching that of the original manufacturer and the identical hardness values, the cutting edges of the double finger from GRANIT boast the same level of quality as OE parts.
- The product qualification established in GRANIT's own laboratory results in consistently high product safety.
- GRANIT's high level of expertise in the field of materialography enables a significant transfer of knowledge to the manufacturers.
- At GRANIT, high quality standards aren't left to chance.

