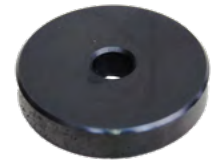


## Reference Block Type 1 according to EN ISO 9934-2

### Use to check the performance of MPI materials

Use our Reference Block Type 1 (EN-ISO 9934-2, also known as MTU Test Block No. 3) to test the concentration of your magnetic powder suspensions, to ensure optimal error indication while carrying out magnetic particle inspection.



The disc is used to check the performance and sensitivity of the magnetic particle materials, to allow you to assess the material degradation and/or bath contamination.

#### Construction of the Reference Block

The test piece is produced as a disc with a diameter of 50 mm and a thickness of 10 mm. A drilled hole with a diameter of 10 mm is located at the centre of the block. This drilling hole serves as support of a magnetising mandrel, for which a magnetising field strength of 24 A/cm is required within the test piece.

The test piece is constructed of an alloy consisting of steel and vanadium. This construction ensures that, once magnetised, the reference block will retain its optimum performance as a reference block for crack indications without the need for further magnetisation.

#### Crack Pattern

The crack indications that are present on both surfaces of the reference block are produced by specific grinding and have a size of 0.1 - 1.0  $\mu\text{m}$ . Each reference block has a unique crack pattern.

Unlike test pieces with reproduceable crack widths, our reference block type 1 has 'net-shaped' crack indications which are designed to mimic 'naturally grown' cracks. These are directly comparable with cracks produced during typical manufacturing processes.

#### PART NUMBER

135012 (also known under its previous part number: 026T042)

#### INSTRUCTIONS FOR USE

Before using the test piece, ensure it is free from dust, oil and other repellent materials. If necessary, clean with our SKC-S cleaner.

Ensure that the magnetic particle suspension is adequately mixed for at least 5 minutes prior to its application to the reference block.

Spray the reference block on both sides with the magnetic particle suspension. The spraying time should match the cycle time preselected on the magnetic particle inspection test unit, to ensure that it reflects the test process.

After spraying the block, place it vertically onto an absorbent cloth so any surplus liquid can run off, then inspect the crack pattern.

Each reference block is supplied with a certificate which contains reference photographs showing the test results that were obtained on both sides of the block. These tests were carried out in accordance with EN-ISO 9934-2 using our 601.1 magnetic powder (average particle size: 5.0  $\mu\text{m}$ ). Compare the test results that you have obtained with these indications.

After the visual test, clean the reference block with SKC-S. Magnetic powder residue left on the surface for any length of time may lead to permanent indications being shown.