

# Calibration and Reference Blocks, Adjusting Standards, Couplants and Corrosion Inhibitors



## ECHOGRAPH / ECHOMETER

Accessories and Tools for Ultrasonic Testing

# KARL DEUTSCH

# ECHOGRAPH / ECHOMETER

## Accessories and tools for ultrasonic testing

### Calibration blocks



Calibration block no. 1



Calibration block no. 2

The calibration blocks are indispensable for the adjustment and check of ultrasonic instruments:

- Calibration block 1 acc. to EN ISO 2400 (formerly EN 12223)
- Calibration block 2 acc. to DIN EN ISO 7963 (formerly EN 27963)

Also, these calibration blocks are useful for exercises performed to get familiarized with ultrasonic testing. They are delivered in a stable wooden case or a synthetic leather bag.

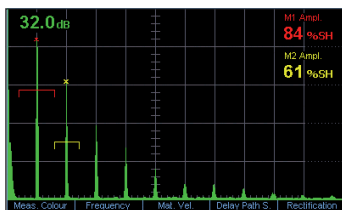
#### Order numbers

Calibration block no. 1	1703.001
Calibration block no. 2	1702.001

### Adjusting standards



Adjusting standards with echo sequences of 50 mm and 100 mm



Uniform echo sequence with adjusting standard (example)

Adjusting standards are useful tools for daily verification of the time-base adjustment and for the check of linearity and sensitivity of the ultrasonic instrument.

The adjusting standard is connected like a single element transducer to the transmitter socket of any ultrasonic instrument and provides an echo sequence of at least 10 clearly separated short ultrasonic pulses in distances of 50 or 100 mm steel ( $c_L = 5920$  m/s), depending on model.

The adjusting standards come with a cable of 1.2 m length and a Lemo 1 plug type.

#### Order numbers

Standard with 50 mm echo sequence	1842.001
Standard with 100 mm echo sequence	1842.002

### Step wedge



Step wedge

Useful tool for adjustment and instrument check with wall thickness measurement:

- Step wedge 2 – 25 mm (steel) with following steps:  
2, 4, 8, 12, 16, 25 mm  $\pm$  0.05 mm  
Contact surface of the steps: 20 x 20 mm<sup>2</sup>
- Step wedge 2 – 10 mm (steel) with following steps:  
2, 5, 10 mm  $\pm$  0.05 mm  
Contact surface of the steps: 15 x 25 mm<sup>2</sup>

#### Order numbers

Step wedge 2 – 25 mm	1713.001
Step wedge 2 – 10 mm	1713.002

## Ultrasonic couplant



Various package sizes for ECHOTRACE:  
Indispensable for manual contact testing



For large quantities barrels of 200 l are  
provided



ECHOTRACE high temperature couplant  
for the inspection on hot surfaces



ECHOFLUID is especially suited for  
higher test frequencies and for wall  
thickness measurement

The couplant **ECHOTRACE** is a water-based gel with ideal ultrasonic properties and achieves better acoustic coupling compared to e.g. oil, grease or water. It contains anticorrosives, is dermatologically neutral and non-inflammable.

**ECHOTRACE** is non-drip and well-suited for overhead applications.

**ECHOTRACE** is free of silicone and nitrite. It is non-aggressive, so also painted surfaces and plastics can be inspected without concern.

**ECHOTRACE** can be removed with water and leaves no residues. The permissible temperature range covers 0 °C to +80 °C.

### Order numbers

ECHOTRACE tube 100 ml	9000.004
ECHOTRACE bottle 500 ml	9000.003
ECHOTRACE bucket 3 l	9000.001
ECHOTRACE cubitainer 5 l	9000.002
ECHOTRACE barrel 200 l	9000.006

The special couplant **ECHOTRACE HT** is a temperature-resistant grease based on silicone oil enabling measurements on objects with surface temperatures between -40 °C and 290 °C.

### Order number

ECHOTRACE HT tube 100 g	9000.005
-------------------------	----------

**ECHOFLUID** is an odourless liquid with a viscosity similar to oil. However, it provides better coupling compared to other liquids. **ECHOFLUID** is recommended especially for higher sound frequencies and wall thickness measurements. It can be removed residue-free, provides excellent corrosion protection and is skin-friendly.

### Order numbers

ECHOFLUID bottle 0,1 l	9004.001
ECHOFLUID bottle 1 l	9004.002
ECHOFLUID cubitainer 10 l	9004.003
ECHOFLUID barrel 200 l	9004.005

# ECHOGRAPH / ECHOMETER

## Accessories and tools for ultrasonic testing

### Corrosion inhibitors



Package examples for ECHOKOR



If large quantities are needed ECHOKOR and ECHOKOR LF are also available in 200 l barrels.

Water is an ideal couplant, however, it causes corrosion of test objects and test equipment.

The couplant additive **ECHOKOR** protects bare iron and steel surfaces against the attack of neutral and alkaline water and temporarily against atmospheric corrosion.

It also protects non-ferrous metals like copper and brass. Common corrosion protectors reduce the service life of UT probes considerably. Long-term tests, however, show that the use of **ECHOKOR** does not damage **ECHOGRAPH** immersion and test system probes, if used with normal concentrations.

**ECHOKOR** is added in concentrations of 1 up to 2.5 Vol. %. It dissolves easily in water and attacks neither skin nor probes.

**ECHOKOR LF** is a low-foam anti-corrosion additive and is therefore well-suited for couplant circulation.

**ECHOKOR** and **ECHOKOR LF** are indispensable for manual and automatic ultrasonic testing when employing either puddle, immersion or squirter technique.

#### Order numbers

ECHOKOR bottle 1 l	9027.001
ECHOKOR cubitainer 5 l	9027.002
ECHOKOR barrel 200 l	9027.003
ECHOKOR LF cubitainer 5 l	9028.002
ECHOKOR LF barrel 200 l	9028.003

### Technical and material safety data sheets (MSDS)



For the chemical products **ECHOTRACE**, **ECHOTRACE HT**, **ECHOFLUID**, **ECHOKOR** and **ECHOKOR LF** detailed technical information sheets and MSDS are available.

The most recent versions can be downloaded from our homepage ([www.karldeutsch.de](http://www.karldeutsch.de)) under the topic Downloads » Chemical Products.

**KARL DEUTSCH** Prüf- und Messgeräatebau GmbH + Co KG  
Otto-Hausmann-Ring 101 · 42115 Wuppertal · Germany  
Phone (+49 -202) 7192-0 · Fax (+49 -202) 7149 32  
[info@karldeutsch.de](mailto:info@karldeutsch.de) · [www.karldeutsch.de](http://www.karldeutsch.de)

DIN EN ISO  
9001  
certified

# KARL DEUTSCH