

# ISOTEST® Phantom-Grounding

## Grounding collar made of special conductive rubber



The grounding collar or a special grounding film is used if a conductive connection with the object to be tested is not possible. The grounding collar is also recommended in case of bad-conducting or extremely dry soil. Made of special carbon infused rubber the grounding collar represents a form of *capacitive grounding* – better known as "*phantom grounding*". Within the frame of high voltage testing of insulating coatings this grounding method is only possible *while applying pulse voltage*. Wrapped around the pipe to be tested in the fitting size and tightened, one side of the collar is connected to the soil (grounding cable with grounding rod) and the other side is connected to the testing device.

### Advantages

In contrast to other grounding methods (by means of 1. a ground cable or 2. a trailing ground) the grounding collar offers the possibility – even without direct contact to the non-insulated part of the test object – to ensure a sufficient grounding. This third very flexible grounding method is exclusively possible with pulse voltage (as applied with the ISOTEST®) or AC voltages. Grounding collars cannot be used in combination with DC-voltage units!

### Functioning

How does this capacitive grounding method function? – A short excursion into the electronic technology.

Two conductive surfaces (for example the pipe and the grounding collar made of conductive rubber) that are separated by an insulating layer (corrosion protection coating), may get electrically in contact when applying impulse voltage. In this way voltage compensation is possible between the steel pipe and the grounded grounding collar.

In the event of a flashover caused by a holiday or a crack the transferred electrical voltage is discharged by means of the grounding collar. Hence the grounding collar ensures a safe and reliable test!

Part-No.	Type	NPS mm	NPS inch
0174401020	Type 1 for pipes	DN 100 - 200	4 - 8
0174402040	Type 2 for pipes	DN 200 - 400	8 - 16
0174403060	Type 3 for pipes	DN 300 - 600	12 - 24
0174450100	Type 4 for pipes	DN 500 - 1000	20 - 40
0174410140	Type 5 for pipes	DN 1000 - 1400	40 - 56