

ALL-TAG's QHP*

Quality High Performance
Triple resonator AM labels

**3rd Party
Testing Results**

* PREVIOUSLY NAMED NST3



Test conducted by
IDH*, Germany

Institut für Distributions-
und Handelslogistik des
Vereins zur Förderung
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*LONG-FORM IDH LAB RESULTS AVAILABLE UPON REQUEST

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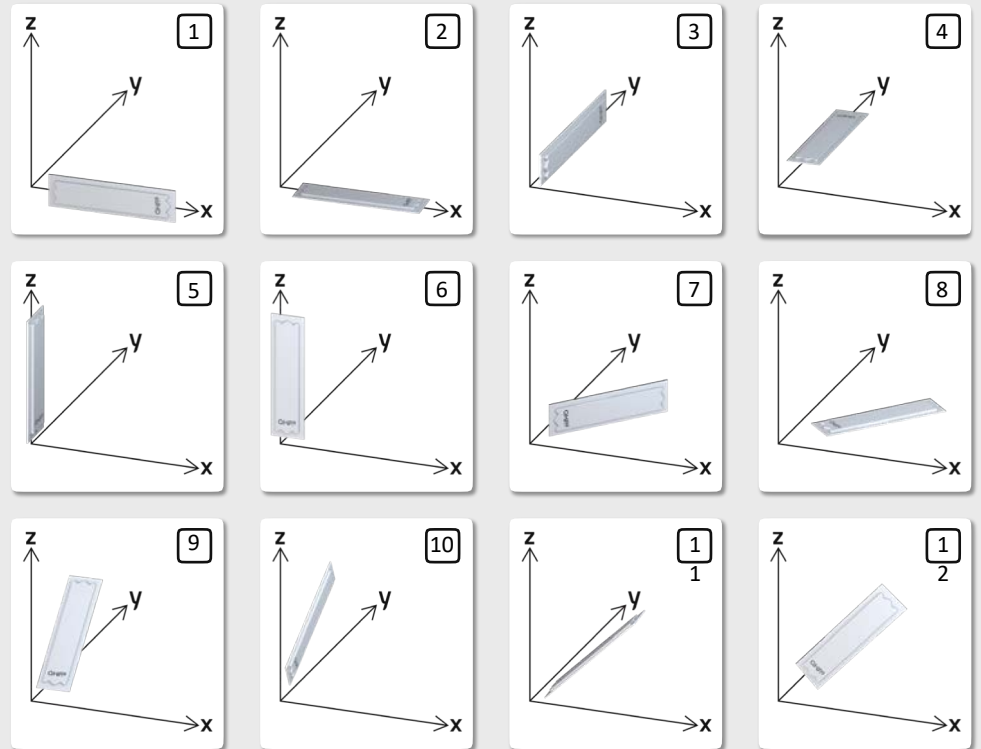
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1. Detection test in accordance with VDI 4470 page 1

1.1 Test with an artificial product 1.1.1 Task and experimental setup

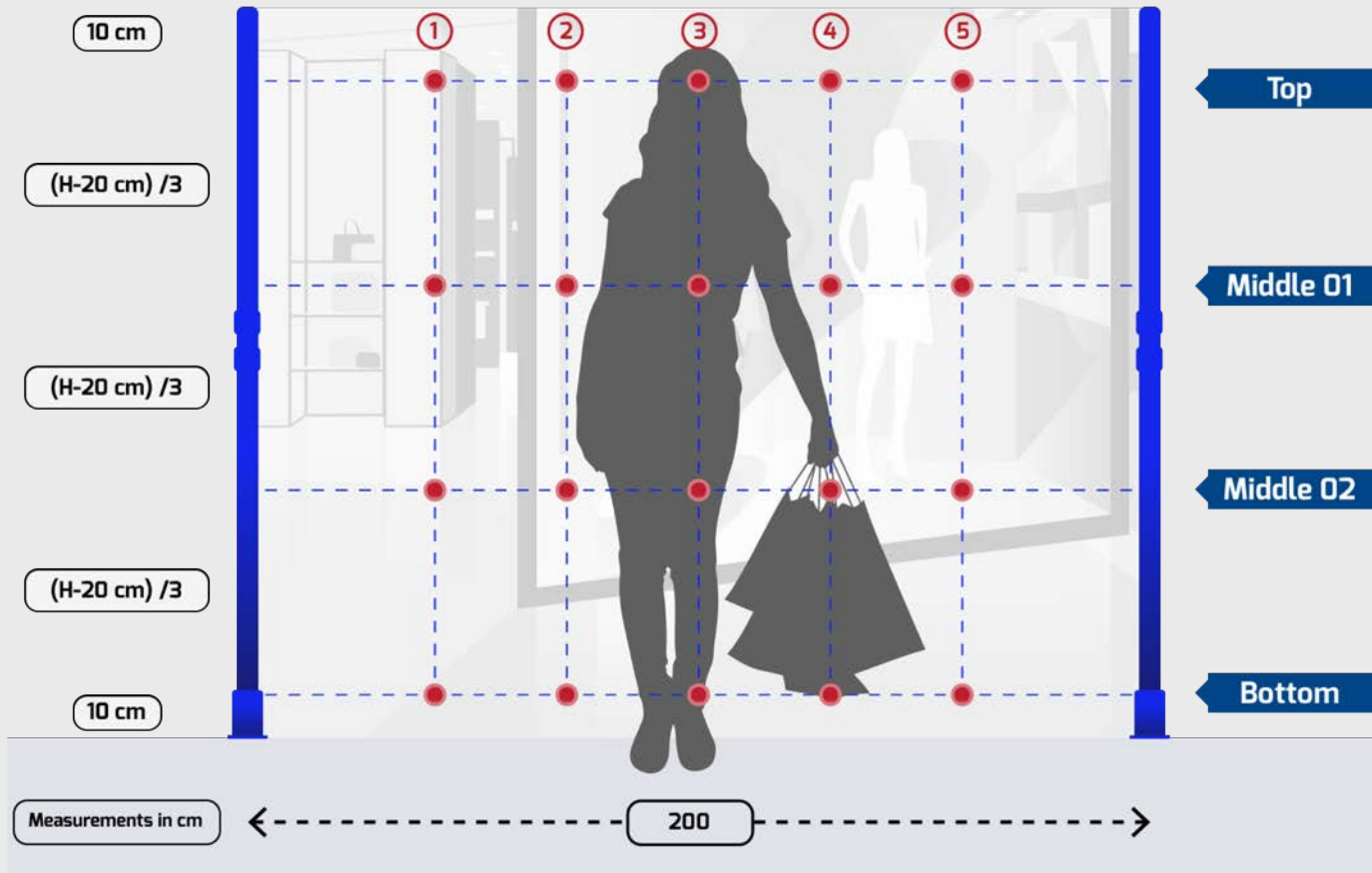
The objective of this test is to determine the detection field factor (DFF) of one type AM tag¹ in accordance with VDI 4470 page 1. The test includes an examination in 12 different positions (see figure 1), whereby 20 reference points are defined corresponding to a gate width of 2 m (see figure 2), so that a total of $12 \cdot 20 \cdot 3 = 720$ passages for each test results with 3 attempts per position. For this purpose, 10 tags are selected at random from the security tags made available by the customer for test purposes and tested in each case in an AM standard gate².

PARALLEL AND DIAGONAL POSITIONS OF THE ARTIFICIAL PRODUCT



Reference points for determining the Distance Field Factor

FIG 1 using ADT Pro Max EAS Antennas



Evaluation according to the reference points

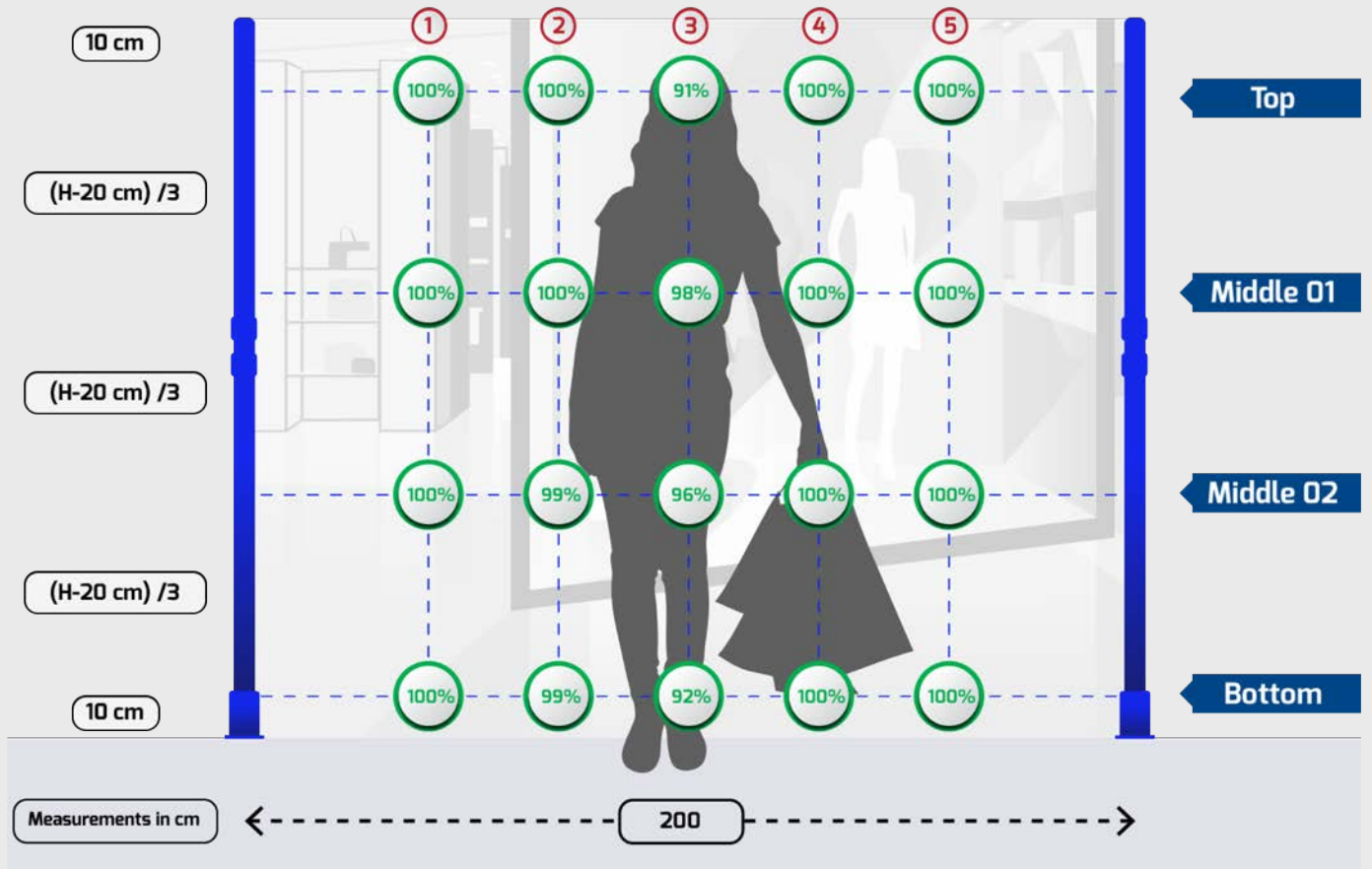
Average

98% 100% 99% 96% 98%

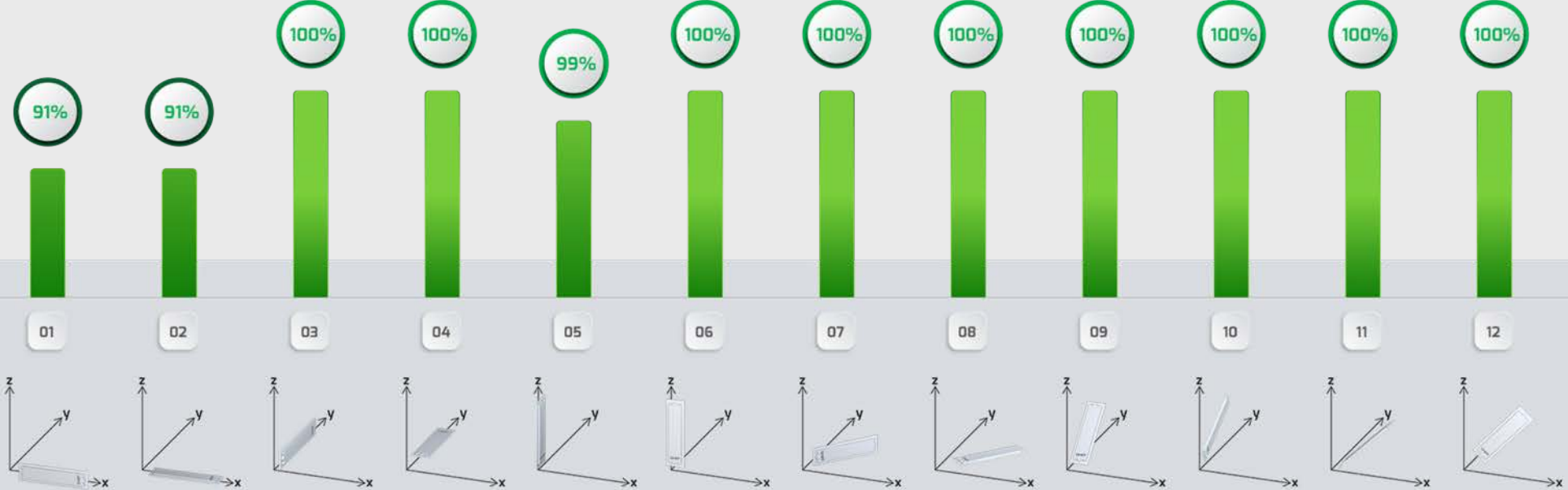
In all instances, the detection field factors are above the detection rate required by commerce of 85 % in accordance with VDI 4471 page 1.

The average is 98 % for the label type NST3T.

FIG 2



EVALUATION ACCORDING TO THE PARALLEL AND DIAGONAL POSITIONS

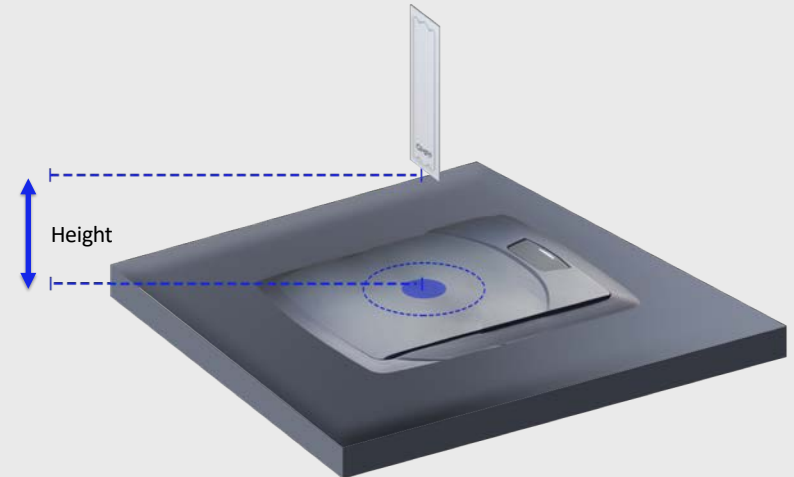


2. Deactivation test in accordance with VDI 4470 Page 2

2.1 Task and experimental setup

The objective of this test is the examination of the correct deactivation and the deactivation height in accordance with VDI 4470 page 2. The deactivator is fitted on the table board of a cash desk. For the test, 100 tags of each type made available by the customer are selected at random and checked for their functional reliability prior to deactivation. Subsequently, the tags are moved vertically towards the deactivator from above and their deactivation height is documented. A successful deactivation is indicated by an acoustic signal. Subsequently, the tags are checked for any reactivation after 5 minutes, 30 minutes and 60 minutes. Here the tags are not, however, mechanically loaded.

Deactivator: Pro Max Deactivator



2.2 DEACTIVATION TEST RESULTS

	Deactivation height [cm]		
Median deactivation	18.03		
Standard deviation	0.87		

TAG	Reactivation after		
	5 min.	30 min.	60 min.
QHP	0 %	0 %	0 %

The average deactivation height during the test was 18.03 cm.
There have been no reactivations or partial deactivations observed.