

## German deposit system

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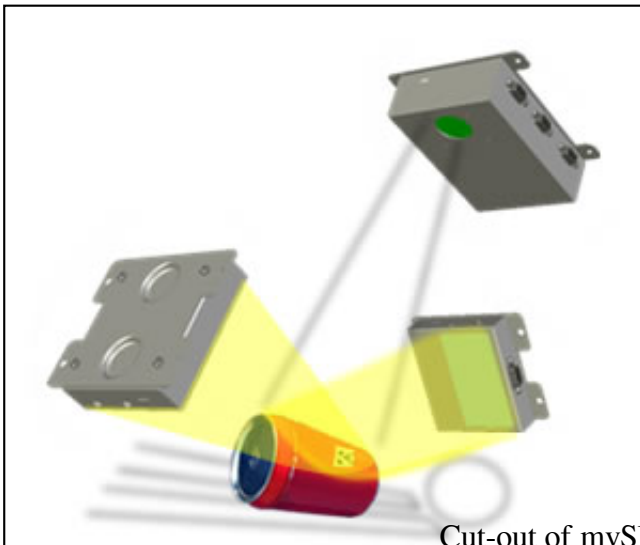
Deposit logo

### History German deposit system

Since 1991 with the "Verordnung über die Vermeidung von Verwertung von Verpackungsabfällen" (order to avoid and recycle packaging waste) of then environment minister Klaus Töpfer the foundation stone of the today's deposite system was laid. As a result of this order, since 1.1.2003 there is a deposit on beverage packagings. After some disputes by court and interim isolated applications the Deutsche Pfandsystem GmbH (German deposit system, in short DPG) was founded in June 2005 which was consigned to create a consistent Germany-wide deposit system until 1.5.2006.

Since 2004 only a barcode helped to indentify disposable beverages packagings. So that the traders can differ between packagings of the German deposit system and foreign packagings as a further indentifier a new deposit logo was introduced by the DPG. With this logo the traders are secure from deposit fraud trials. With reverse vending machines and industrial image processing and these security marks it is possible to classify beverages packagings without manpower.

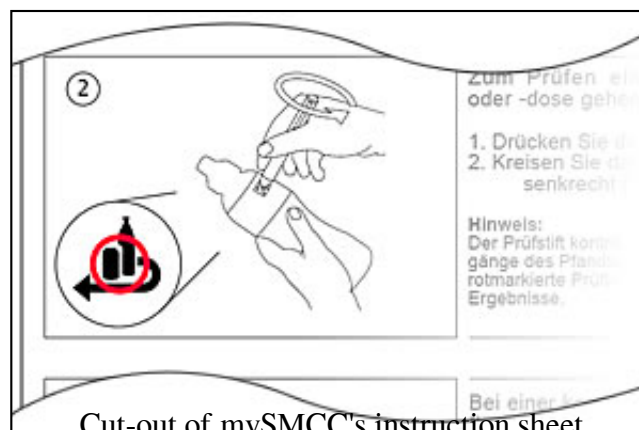
### mvSMR - retrofitting logo reading system



Cut-out of mvSMR's data sheet

In November 2005, after the short-dated change of the security procedure, the developing time was right short. So the manufactures of reverse vending machines needed support from experienced image processing companies like MATRIX VISION GmbH. In a little while, MATRIX VISION developed a modular and retrofitting system which is based on the proven [mvBlueLYNX](#) technology. The **Security Mark Reader mvSMR** as the camera unit features two essential advantages: the intelligent camera can process the acquired images in the camera directly and it can control the different exposures of the lamps to recognize the deposit logo. A retrofitting with the mvSMR and a firmware update suffice to update the reverse vending machines. The mvSMR can be found in majority of reverse vending machines as well as in some counting centers Germany-wide.

### mvSMCC - logo verification pen



Cut-out of mvSMCC's instruction sheet

As a further result of this project MATRIX VISION's Security Mark Color Checker was developed, short mvSMCC. Since the implementation of the consistent deposit system in Germany, tricksters had tried to come into deposit money with counterfeit deposit logos illegally. For this purpose major trade chains have reverse vending machines, which verify the deposit logo additionally. Meanwhile for owners of smaller kiosk or petrol station the expense is too high. .

Here a cost-efficient, small and easy to use solution was needed. MATRIX VISION developed a compact optical verification system in the form of a ball pen. With its size of 135mm length and 13mm diameter, this pen verifies authenticity of the deposit logo based on the changeover of the color.