# FAQs

**Questions and answers about R. STAHL's digital nameplate**

**What is the main purpose of rating plates?**

Rating plates are used as a central source of information for identifying and documenting products and machines in the process industry. They make clear identification possible through details such as the manufacturer's name, model and serial number, provide technical specifications for safe operation, document compliance with industrial standards, and help with machine maintenance and inspections.

**What are the drawbacks of traditional rating plates compared to digital nameplates?**

Traditional rating plates are static, are only visible when you are near them, and the amount of information they contain or space they can take up is limited. However, the number of details they need to provide is constantly increasing. In contrast to this, digital nameplates allow global access to the relevant product or machine data and make it easier to document changes over the life cycle of the components and systems, making them perfect for the industrial Internet of Things (IIoT).

**What is a digital nameplate and what specific benefits does it offer for the process industry?**

A digital nameplate according to IEC 61406 is a QR, 2D data matrix codes or RFID tag which clearly identifies an asset (component or system). This identification takes the form of a link which calls up the corresponding digital twin at R. STAHL. The digital identifier is used to provide up-to-date information in multiple languages all over the world. This makes systems more efficient and reliable, simplifies maintenance planning, makes it easier to comply with safety and environmental regulations, and allows extensive access to all relevant documents.

**How does the combination of digital nameplates and asset administration shells help solve problems in industry?**

In conjunction with asset administration shells (AAS according to IEC 63278-1), digital nameplates greatly improve access to and management of product data, an issue which is frequently encountered in industry. These technologies make it possible to access relevant information and documentation relating to a system, machine or component at any time and anywhere in the world. The asset administration shell is a central data model which promotes interoperability between different systems and makes it simple to integrate data for example into ERP or asset management systems.

**What specifications is R. STAHL's digital nameplate based on?**

The specifications for R. STAHL's digital nameplate are based on IEC 61406 (formerly DIN SPEC 91406), which governs the marking and access to the product's digital twin.

**What technical requirements need to be met in order to use digital nameplates?**

A smartphone or tablet with integrated camera and Internet connection are required to be able to access the information contained in a digital nameplate. These devices make it possible to scan QR, 2D data matrix codes or RFID tags which are integrated in the digital nameplates. The information that is provided when these codes are scanned often contains links to detailed product data and documentation on the manufacturer's platform and the product's serial number.

**What applications has R. STAHL's digital twin platform already been used for?**

1. Automatically informing customers about firmware updates

2. Remote access making it easier for service staff to find product details

3. Automatically creating pre-filled returns forms

4. Serving digital maintenance instructions for components, machines and systems

5. Providing all documents/certificates for audits and customs processing

6. Identifying successor products if service is required

**What role do asset administration shells play in the context of the digital nameplate?**

Asset administration shells are standardised, structured XML data models. They can be used as the basis for digital engineering and accompany a product throughout its entire life cycle as a digital product passport. They assist with efficient data transfer along the entire value chain, improve document management and, in the case of smart products, allow communication between machines according to the principles of the industrial Internet of Things (IIOT).

**What are the benefits of digital twins based on the asset administration shell?**

The term "digital twin" has multiple meanings. It is often understood as a simulation model which is created and provided in specific formats. There are considerable differences between these and digital twins based on an asset administration shell. The Industrial Digital Twin Association (IDTA) is instrumental in the continuous development of asset administration shells. The aim of the IDTA is to establish asset administration shells and develop submodels. Asset administration shells set themselves apart as data models thanks to their interoperability. By using classifications, e.g. ECLASS, all information can be easily imported into software environments, such as an ERP or asset management system.

**According to the Ecodesign for Sustainable Products Regulation (ESPR) of the European Union, what does the DPP entail in the context of the digital nameplate?**

According to the specifications from the ESPR, the DPP entails the provision of a digital product passport, which contains a great deal of information about the environmental impact (including the carbon footprint) and the sustainability of the products in order to increase transparency, improve energy efficiency, promote a circular economy, facilitate repairs and make recycling possible.

**Why is the European Commission calling for a digital product passport (DPP)?**

The European Commission is calling for the digital product passport (DPP) as part of efforts to strengthen the circular economy and support sustainable production and consumption models. The DPP is intended to provide a wealth of information about the service life of products, including their composition, origin and recyclability, as well as details of the materials used, production processes, energy consumption and environmental footprint. Other key requirements include:

* Transparency: Ensuring clarity with regard to product information.
* Accessibility: Enabling access to the data for all stakeholders.
* Standardisation: Developing standardised formats for ensuring interoperability.
* Security and data protection: Protection of saved data and privacy.
* Updatability: The passport can be adapted in line with product changes.
* Proof of sustainability: Documentation of compliance with environmental standards.

**How are the DPP and ESPR linked?**

The new ESPR is intended to replace the existing Ecodesign Directive and applies to all physical products. Its aim is to promote ecological sustainability through improved design and production. The DPP plays a key role by providing detailed product information which helps ensure that the product is used sustainably and recycled. This information allows users to make sound decisions which contribute towards sustainability and therefore implement the principles of the ESPR in practice.

For more information, see. <https://r-stahl.com/digitaltwin>



**Company background:**

For more than 90 years, R. STAHL has been setting trends in the field of safety solutions for hazardous areas. The Waldenburg-based company is one of the world's leading suppliers of explosion-protected components and systems. Its portfolio includes products for automation, control and distribution, installation, operation and monitoring, lighting, signaling and alerting. Customer-specific explosion-protected system solutions are fast becoming one of R. STAHL's specialities. The perfect combination of compatible products can be enhanced with an extensive range of services, including consultation, project and technical engineering, and training as required. The innumerable technological innovations coupled with a growing list of patents to its name bear testament to the company's product development expertise. With international certification and approvals, R. STAHL's products can be used all over the world.

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