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Environmental Product Declaration (EPD)

Nature. Sustainability. Responsibility

We can only achieve our goals for protecting the Earth through joint action

The challenges of the past few years have made efforts to achieve sustainability as a principle of action for the use of resources a central issue in our society. The sustainability debate has long since moved beyond the energy transition and CO2 reduction. In addition to the already omnipresent issues such as global warming and environmental pollution, wars and conflicts are also leading to an artificially created shortage of certain raw materials and call for innovative ideas.
and concepts to reduce dependencies in the future.

Most recently, the pandemic has clearly shown how important it is to make businesses and the economy more resilient and hard-wearing, which has brought the issue of sustainability into even sharper focus. This is about a responsible and future-oriented awareness that encompasses the way we live and work, as well as our actions towards other people, but also towards our planet.

Only by helping each other and working together for sustainable action can we succeed in securing our existence in the long term.
Economic progress is also not possible without joint sustainable action.
Consequently, the idea of integral sustainability is a visionary approach that embraces the „Culture of Embracement“ and challenges us to consider all possibilities, to leave no one behind and to strive for cooperation and mutual support.

“Only in a world that comes as close as possible to the optimum of the circular economy will long-term growth and prosperity be possible for us and our children.”

(Dieter Klauß, Company owner)

EPD Environmental Product Declaration

Already during product development we pay attention to a high recyclability and also look for environmentally friendly production processes when selecting our producers.
It is important to us that our A-suppliers are certified according to the international environmental management standard ISO 14001. Furthermore, our producers are required to refrain from using substances that are hazardous to the environment or health.
With the introduction of the EPD („Environmental Product Declaration“), we are focusing on a further type III environmental labelling of our products.

An EPD is a document that contains data on the environmental performance or impact of a specific product or building material during its lifetime. The data is presented in a standardised way and enables an informed comparison of different products or materials in terms of CO2 consumption in the construction industry, to select the most sustainable option and reduce CO2 emissions.
As a rule, EPD labels are valid for five years and are based on relevant standards (ISO 14040 / 14044, ISO 14025, EN 15804 or ISO 21930).

It is important to look at the different life stages of a product in order to make an informed statement about how sustainable the product is.
If, for example, the aspect of production is considered separately, it may be that a product appears to be particularly sustainable at first glance. However, if the total lifetime of the product is very limited or if recycling or reuse is not possible, the product may not be sustainable. If this is not possible, the product as a whole must be rated as not very sustainable. For this reason, the EPD contains information on several life cycle phases.

EPDs help to achieve EPD and LCA points in the following certification systems: LEED, BREEAM and others.

LCA points =
life cycle analysis

LEED = (Leadership in Energy and Environ- mental Design) is an internationally recognised certification system for ecological building.
It certifies through independent third parties that a building has been built and designed in an environmentally friendly way.

BREEAM = BREEAM stands for Building Research Establishment Environmental Assessment Method and is the oldest and most widely used certification system for sustainable building. It was developed in Great Britain in 1990.

An EPD shows the environmental impact of a product throughout its life cycle.

The product life cycle

In each EPD, the system boundaries of the individual life phases are defined. There are five phases in total; these are marked with letters and contain some sub-factors.

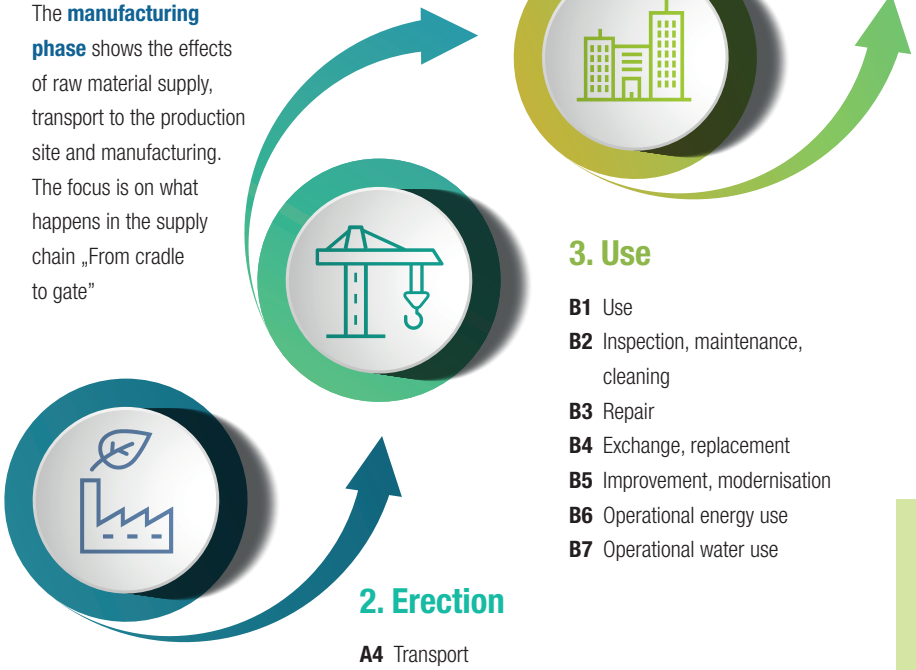
The **demolition / disposal phase** includes the effects of dismantling or demolition, transport for waste recovery and any operations of recovery or disposal.

The EPD provides information on the reuse, recovery and recycling potential.

The **use phase** covers the environmental impact over the period in which the product is used. These include emissions during use, maintenance, expected repairs or replacements as well as operational energy and water consumption.

The **erection phase** begins when the material leaves the production site and is brought to the place where it will be installed. It shows the effects of transporting it there and the construction process on site.

The **manufacturing phase** shows the effects of raw material supply, transport to the production site and manufacturing. The focus is on what happens in the supply chain „From cradle to gate"



1. Manufacturing

A1 Raw material supply
A2 Transport
A3 Production

2. Erection

A4 Transport
A5 Construction / Installation

3. Use

B1 Use
B2 Inspection, maintenance, cleaning
B3 Repair
B4 Exchange, replacement
B5 Improvement, modernisation
B6 Operational energy use
B7 Operational water use

4. Disposal

C1 Demolition
C2 Transport
C3 Waste management
C4 Landfill

5. Recycling

Credits and loads outside the system boundaries

D Reuse / recovery / recycling potential

An EPD contains data on the environmental impact of a building material; at each stage of the product life cycle.




siFramo

siFramo is a multifunctional mounting system for all load ranges, through which unrestricted three- dimensional connection options can be realised. The closed siFramo profile is characterised by high torsional rigidity. The adaptation is reliably secured by a stepless and from fit. The assembly of siFramo is carried out by means of thread-forming screws. Due to the non-cutting, precisely fitting work hardening of the nut thread, the screw develops a form fit. The screw connections in the threads formed in this way can be loosened again and reused.

The EPD labelling of siFramo considers two different scenarios:

1. Recycling
All siFramo parts are dismantled and prepared for recycling or melting down. Only 2% of the steel scrap is not recycled and is therefore stored in a landfill. After melting down, the steel can be used to produce new primary steel components, which may contain various high recycled content. Likewise, the steel recovered from the siFramo-parts can be used to produce secondary steel. The focus of sustainability in this scenario is particularly on the disposal phase (C).

2. Reuse
The siFramo system has a modular design and can be reused as long as no material loss or structural damage can be detected (e.g. corrosion damage). The product can thus be dismantled at its former place of use, transported to its new place of use and reassembled there. During reassembly, a scrap rate of approx. 10% is assumed, as the profiles are cut to size for the new application. The steel that is not reused is accordingly melted down as in scenario 1 (recycling) and used for the production of new steel components. This scenario opens up new perspectives in terms of sustainability. The manufacturing phase (A) can be replaced by the reuse scenario. These measures enable us to reduce the greenhouse gas potential and to make an active contribution to the sustainability of our company.

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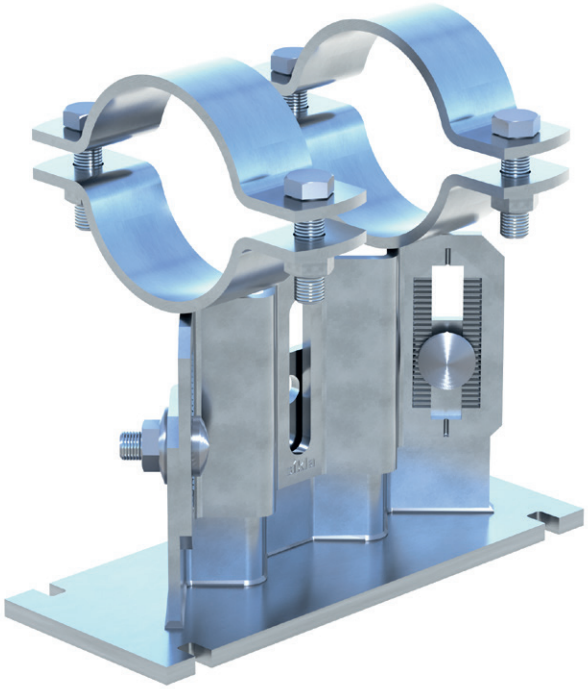

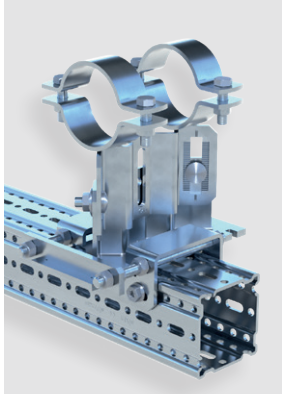

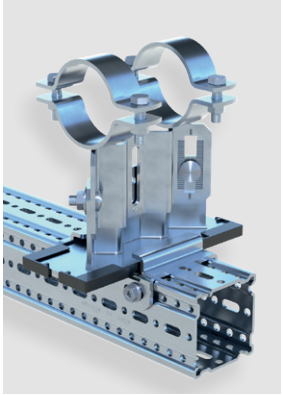

Simotec Pipe Shoes

The Simotec Pipe Shoe offers a wide range of applications thanks to the seamless clamping ranges (14 mm to 610 mm) and the coverage of the temperature ranges from -20°C to 300°C.

The EPD labelling of the Pipe Shoe considers two different scenarios:

1. Recycling

All Pipe Shoes are dismantled and sorted according to recyclable material (plastic and steel). The plastic parts are either incinerated for energy purposes or stored in a landfill. Only 2% of the steel scrap is not recycled and is therefore also stored in a landfill. After melting down, the steel recovered from the pipe shoes can be used for the production of secondary steel and, to a certain extent, for the production of primary steel.

2. Reuse

With exception of the plastic sliding plate, Simotec Pipe Shoes can be reused without loss of material. After disassembly, the plastic parts are disposed of, while all steel components can be transported to the new location and reassembled there. Reused Pipe Shoes can replace or reduce the production of new pipe supports.
This scenario opens up new perspectives in terms of sustainability. The manufacturing phase (A) can be replaced by the reuse scenario.
These measures enable us to reduce the greenhouse gas potential and make an active contribution to sustainability.

Our Earth needs mindful action from everyone, everywhere. Because many small steps in many small places can change the face of the world.

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