Rohrbogen AG

From straight to spectacular

Environmental Product Declaration

Based on ISO 14025:2006 for:

Butt weld fittings produced in Radom

from

Rohrbogen Sp z o.o.

Programme:	European EPD Tool
Programme operator:	RP Group AG
EPD registration number:	R-P-0002
Publication date:	2024-04-21
Valid until:	2029-04-21

**An EPD should provide current information and may be updated if conditions change.*



Rohrbogen AG
Wasenstrasse 13
4133 Pratteln

Tel. 061 826 55 11
info@rohrbogen.ch
rohrbogen.ch

CHE-101.967.425 MWST
DE142302131
PL7962985089

Accountabilities for PCR, LCA and independent verification
Product Category Rules (PCR)
PCR: *Basic iron or steel products & Special Steels, except construction products, 2015:03, Version 2.0. UN CPC 412.*
PCR review was conducted by: *The Technical Committee of the International EPD® System. A full list of members available on www.environdec.com. The review panel may be contacted via info@environdec.com. Chair of the PCR review: Hudai Kara*
Life Cycle Assessment (LCA)
LCA accountability: *Rohrbogen Sp z o.o.*
Data verification
Verification of the declaration and data, comparable to ISO 14025:2006, via: ☒ EPD verification by individual verifier Verifier: *Jonathan Schaffner, RP Group AG* 

The EPD owner has the sole ownership, liability, and responsibility for the EPD.

EPDs within the same product category but registered in different EPD programmes may not be comparable.

Company Information:

Owner of the EPD: Rohrbogen SP z o.o.

Description of the Organisation:

Rohrbogen – From Straight to Spectacular

Since 1936 we are producing high-quality stainless steel components for worldwide export. We are committed to provide our customers with the highest quality in products for a wide range of applications. With an extensive range of products and grades backed by a first class technical support and development services. We have 2 production sides in Poland & Switzerland.

Customer Applications:

Our products are used in a wide range of industries:

- Water & Waste Management
- Chemical Industry
- Pharmaceutical
- Semiconductor
- Flow Management
- Sensor technology
- Marine Systems
- Construction
- Energy Solutions

We reach these markets due to our partnership with important stockholders

Safety and Quality

Our personal is our most important asset and we are committed to continuously develop our staff and our management. The safety across all production sides is assured by our extensive safety control program developed by our internal safety groups. We're committed to providing the highest possible quality for our customers. Our products are known to be the best product in the market.

Sustainability

Our environmental focus is paramount to our business strategy. Compared to others we are doing well in the industry. To safeguard our future we are always improving our processes.

Our commitment means reducing waste and carbon levels throughout our supply chain, from the raw materials over energy consumption to optimized transportation.

Product-related or management system-related certifications:
ISO 9001, PED 23014/68/EU, AD 200-Merkblatt W0, DNV, ASME BPE, 3A

Name and Location of the production side: Rohrbogen Sp z o.o., Radom

Product Information:

Product name: Butt weld fittings produced in Radom

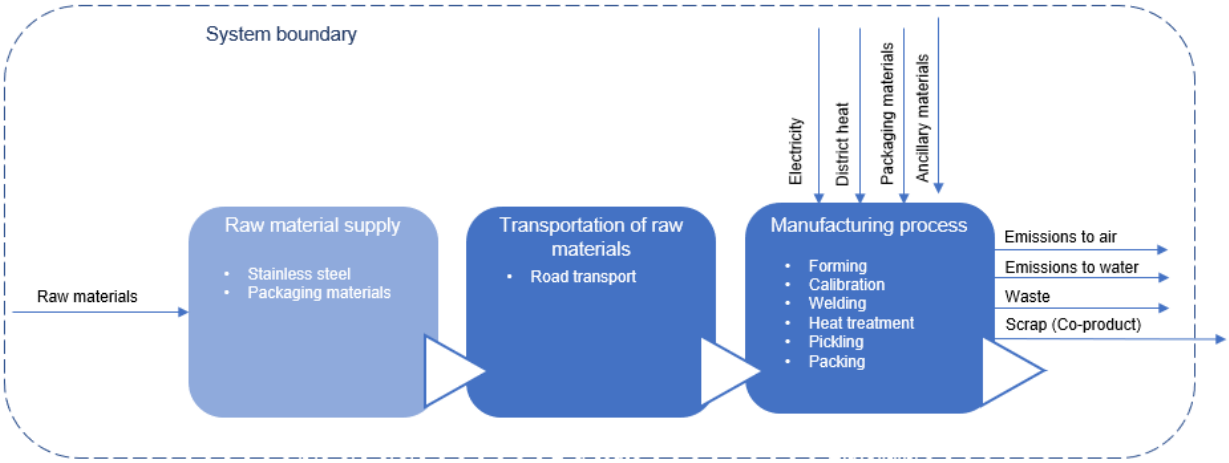
Product identification: Manufactured according to EN10253-3 / EN10253-4 / EN10374 / ASTM B16.9

Product description: Butt weld fittings for pressure corrosion applications
UN CPC Code: Group 412, Class 4129
Geographical scope: Poland

LCA Information

Functional unit / declared unit: 1Kg of butt weld Fittings at the manufacturer gate.
Reference service life: N/A
Time representativeness: The date is collected from year 2024. The database data are from 2022. The stainless steel LCI data is from 2019
Database(s) used:
The used stainless steel LCI data in this study Is published by the European Steel Association. EUROFER provides European average LCI Data for stainless steel products
System diagram: See figure below
Description of System boundaries: Cradle to gate
LCA practitioner: Rohrbogen AG

Excluded lifecycle stages: Transportation to Retail, use stage and end-of-life stages are excluded
More information:
Cut-off rule: 1% cut-off rule was applied for input flows in the inventory. Cut-off allocation of waste burdens and benefits in accordance with the polluter pays principle as stipulated in the PCR
Allocation: Steel scrap produced in module A3 is treated as co-product and environmental impacts are allocated for it based on physical properties, and therefore mass-based product allocation is applied.



Content declaration

Product

Materials / chemical Substances	Weight, KG	%	Environmental / hazardous properties
Iron	0.711	71.1%	-
Chromium	0.175	17.5%	-
Nickel	0.098	9.8%	-
Molybdenum	0.013	1.3%	-
Titanium	0.001	0.1%	--
Others	0.003	0.3%	-
Total	1	100%	-

All the stainless steel raw materials used by Rohrbogen AG in the manufacturing of its products do not contain substances of very high concern (SVHC) as defined and listed per Article 57 and 59 (ECHA candidate list) of the REACH Regulation. There are no Annex XIV substances in the stainless steels used that would require authorization. Additionally, all used stainless steel comply with the restrictions in Annex CVII of the REACH Regulation.

Packaging

Distribution packaging: Wood, corrugated board box, packaging film and paper are used to protect the product. Where possible product is shipped in reusable containers that are circulated with the customer and all subcontractors.

Recycled material

Provenience of recycled materials (pre-consumer or post-consumer) in the product: The product contains on average 85% of post-consumer material.

Environmental performance

Potential environmental impact

Parameter		Unit	Upstream	Core	Downstream	Total
Global warming potential (GWP)	Fossil	kg CO_2 eq.	2.78E+00	4.36E-01	INA	3.22E+00
	Biogenic	kg CO_2 eq.	1.65E-01	8.95E-02	INA	2.55E-01
	Land use and land transformation	kg CO_2 eq.	7.30E-03	2.30E-04	INA	7.53E-03
	Total	kg CO_2 eq.	2.95E+00	5.35E-01	INA	3.49E+00
Acidification potential (AP)		kg mol H^+ eq.	2.68E-02	1.23E-03	INA	2.92E-02
Eutrophication potential (EP)	Aquatic freshwater	kg P eq.	1.53E-04	4.12E-05	INA	1.94E-04
	Aquatic marine	kg N eq.	3.10E-03	1.90E-04	INA	2.84E-03
	Aquatic terrestrial	mol N eq-	3.70E-02	3.05E-03	INA	4.05E-02
Photochemical oxidant creation potential (POCP)		kg NMVOC eq.	9.30E-03	7.71E-04	INA	1.01E-02
Ozone layer depletion (ODP)		kg CFC 11 eq.	3.61E-08	8.43E-09	INA	4.45E-08
Abiotic depletion potential (ADP)	Metals and minerals	kg Sb eq.	3.01E-04	3.13E-06	INA	3.04E-04
	Fossil resources	MJ	4.23E+01	5.1E+00	INA	4.74E+01
Water deprivation potential (WDP)		m^3 world eq.	1.19E+02	1.81E-01	INA	1.19E+02

Use of resources

Parameter		Unit	Upstream	Core	Downstream	Total
Primary energy resources - Renewable	Use as energy carrier	MJ, new calorific value	5.23E+03	1.508E+02	INA	5.38E+03
	Used as raw materials	MJ, new calorific value	0.00E+00	0.00E+00	INA	0.00E+00
	Total	MJ, new calorific value	4.39E+03	1.508E+03	INA	5.81E+03
Primary energy resources – Non-renewable	Use as energy carrier	MJ, new calorific value	3.57E+04	1.51E+03	INA	3.68E+04
	Used as raw materials	MJ, new calorific value	0.00E+00	1.70E+02	INA	1.70E+02
	Total	MJ, new calorific value -	2.57E+04	1.68E+03	INA	2.74E+04
Secondary material		kg	7.31E+02	0.00E+00	INA	7.31E+02
Renewable secondary fuels		MJ, new calorific value	0.00E+00	0.00E+00	INA	0.00E+00
Non-renewable secondary fuels		MJ, new calorific value	0.00E+00	0.00E+00	INA	0.00E+00
Net use of fresh water		m^3	1.13E+04	8.21E+01	INA	1.14E+04

Waste production and output flows (optional)

Waste production

Parameter	Unit	Upstream	Core	Downstream	Total
Hazardous waste disposed	kg	0	0	INA	0
Non-hazardous waste disposed	kg	0	0	INA	0
Radioactive waste disposed	kg	0	0	INA	0

Output flows

Parameter	Unit	Upstream	Core	Downstream	Total
Components for reuse	kg	0	0	INA	0
Material for recycling	kg	0	115320	INA	115320
Materials for energy recovery	kg	0	0	INA	0
Exported energy, electricity	MJ	0	0	INA	0
Exported energy, thermal	MJ	0	0	INA	0

References

General Programme Instructions of the International EPD® System. Version 3.01.

EUROFER. Life Cycle Inventory (LCI) data. Available at: https://www.eurofer.eu/issues/environment/lifecycle-assessement-lca/life-cycle-inventory-lci-data/

International EPD System: PCR 2015:03 Basic iron or steel products & special steels, except construction steel products. Version 2.0. 28 pages