



ENVIRONMENTAL PRODUCT DECLARATION

EPD OF MULTIPLE PRODUCTS, BASED ON A REPRESENTATIVE PRODUCT

Programme: **The International EPD® System**, www.environdec.com

Programme operator: **EPD International AB**

EPD registration number: **EPD-IES-0017168**

Publication date: **2024-11-25**

Valid until: **2029-11-25**

In accordance with
ISO 14025:2006 and
EN 15804:2012+A2:2019/AC:2021 for:
**PRESSFITTING SYSTEM
MADE IN CARBON STEEL GALVANIZED**

from
Raccorderie Metalliche SpA



THE INTERNATIONAL EPD® SYSTEM



steelPRES®



RACCORDERIE METALLICHE

General Information

Programme information

Programme The International EPD® System

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Accountabilities for PCR, LCA and independent, third-party verification

Product Category Rules (PCR)

CEN standard EN 15804 serves as the Core Product Category Rules (PCR)

Product Category Rules (PCR): PCR 2019:14 Construction products (EN 15804+A2) (1.3.4)

PCR review was conducted by: The Technical Committee of the International EPD® System. Review chair: No chair appointed-

Contact via the Secretariat www.environdec.com/contact

Life Cycle Assessment (LCA)

LCA accountability: MADE HSE S.r.l.

Third-party verification

Independent third-party verification of the declaration and data, according to ISO 14025:2006, via:

☒ EPD verification by accredited certification body

Third-party verification: Bureau Veritas Italia S.p.A. is an approved certification body accountable for the third-party verification

The certification body is accredited by: Accredia – accreditation number 0009VV

Procedure for follow-up of data during EPD validity involves third party verifier:

☒ Yes ☐ No

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, or not compliant with EN 15804, may not be comparable. For two EPDs to be comparable, they must be based on the same PCR (including the same version number) or be based on fully-aligned PCRs or versions of PCRs; cover products with identical functions, technical performances and use (e.g. identical declared/functional units); have equivalent system boundaries and descriptions of data; apply equivalent data quality requirements, methods of data collection, and allocation methods; apply identical cut-off rules and impact assessment methods (including the same version of characterisation factors); have equivalent content declarations; and be valid at the time of comparison. For further information about comparability, see EN 15804 and ISO 14025.



Company information

Owner of the EPD:

Raccorderie Metalliche S.p.A.
Sabbionetana Street, 59 – 46010
Campitello – Mantova (MN)

Contact:

To obtain more information about this product declaration and / or its configurations, the following references are available:

Mail: info@racmet.com

Phone: 0376 96001

Description of the organisation:

Since 1970, Raccorderie Metalliche is a leading manufacturer in the European civil & industrial plumbing sector landscape. Since 2014 we are present in the shipbuilding sector and the only one in the market being in a position to offer pressfitting systems, steel wastewater systems, welding fittings, threaded fittings and fastening systems, at the same time.

Every day, more than 400 employees are committed to fulfil Raccorderie Metalliche's mission.

«We constantly offer innovative solutions in terms of both product and process and take the use of fitting systems into particular consideration; these solutions allow fitters to work rapidly, safely and suitably.»

Raccorderie Metalliche has two production plants in Italy, extending over an area of more than 93.000 sq. m, as well as 3 branch offices in foreign Countries (Germany, France and Spain) ensuring the distribution of our products in more than 60 countries of the world.

Product-related or management system-related certifications:

- Quality management system compliant with the requirements of the standard ISO 9001:2015 (certificate n° CERT-00317-94-AQ-MIL-SINCERT issued by DNV Business Assurance Italy S.r.l.);
- Environmental management system compliant with the requirements of the standard ISO 14001:2015 (certificate n° 90476-2010-AE-ITA-SINCERT issued by DNV Business Assurance Italy S.r.l.);
- Health and safety management system compliant with the requirements of the standard ISO 45001:2018 (certificate n° 10000457222-MSC-ACCREDIA-ITA issued by DNV Business Assurance Italy S.r.l.);
- Energy Management System compliant with the requirements of the standard ISO 50001:2018 (certificate n° C602883 issued by DNV Business Assurance Italy S.r.l.).

Name and location of production site(s):

- Strada Sabbionetana, 59 – 46010 Campitello di Marcaria (MN);
- Str. Montanara Sud, 126, 46010 – Pilastro di Marcaria (MN).

Product information

Product name: Pressfitting system made in carbon steel galvanized

Product identification: steelPRES

Product description: steelPRES is the Pressfitting system by Raccorderie Metalliche in carbon steel developed for any closed-circuit applications where it is not necessary to use stainless steel, which it is to be considered a valuable cost-effective alternative. The **steelPRES** product range consists of pipes, fittings and installation materials. The range of **steelPRES** pipes and fittings is approved by many certified international institutions. 9 certifications, obtained by Raccorderie Metalliche on the **steelPRES** product, confirm quality and reliability for applications such as heating, cooling, compressed air and fire protection. The range of pipes in carbon steel according to the UNI EN 10305-3 standard consists of welded, bordered and calibrated pipes in three different configurations:

- Externally galvanized;
- Externally galvanized and covered in polypropylene (1 mm thick);
- Internally and externally galvanised in sendzimir.

Fittings are made in unbounded E195 steel, galvanized with a zinc layer (to increase protection against external corrosion) and fitted with a "M-shaped" profile toroidal chamber, optimized thanks to the 25 year research experience. Any fitting is factory mounted, with an EPDM O-Ring, with a profile at the end of production. Pipes and joints are available from Ø12 to 108 mm.

Why chose **steelPRES**:

- A wide range of fittings and pipes Ø 12-108 mm, E195 (fittings) and UNI EN 10305-3 (pipes);
- A wide range of seamless Tees, by Raccorderie Metalliche;
- A wide range of reliable joints, fitting the Raccorderie Metalliche O-Ring;
- More than 14,000 square meters available for the products;
- A wide range of approved pressing machines to be used for the **steelPRES** system;
- A solution with the best quality-price ratio in terms of products and services;
- 100% Italian know-how.

Products and services are developed to solve at best the different installation problems and issues, aiming at quality, safety and speed. Carbon steel is the best solution where stainless steel features are not demanded and where a cost-effective product is required. The use of **steelPRES** by Raccorderie Metalliche is suitable to make civil and industrial plumbing and sanitation closed loops for heating and cooling, compressed air installations. O-Rings can be used between -20 and +120°C, minimum pressure 16bar providing for quality and safety as well.

The products represent by this declaration are:

- Pipe inside/outside galvanized;
- 45° elbow FF;
- 45° elbow MF;
- 90° elbow FF;
- 90° elbow MF;
- Equal tee;
- Reducing tee;
- Branch tee female;
- coupling;
- Slip coupling;
- Stop end;
- Male adapter;
- Reducer;
- Pipe bridge;
- 90° elbow tube MM;
- Adaptor flange.

The results refer to the company's representative product, i.e. "steelpress elbow 90° FF Ø 28": it's the product most marketed by the company and which best represents the pressfitting process.

UN CPC code: 4128 - Tubes, pipes and hollow profiles of steel.

Geographical scope: Europe

LCA information

Functional unit / declared unit: 1 kg of pressfitting system

Reference service life: It isn't possible to quantify the exact useful life as much also depends on their future use. However, it is specified that upon reaching the end of the product can be recycled and reused again to generate other raw materials.

Time representativeness: The data used is representative of the year 2023

Database(s) and LCA software used: Ecoinvent database v.3.10 – March 2024, Software SimaPro rel. 9.6.0.0

Description of system boundaries:

The study is from Cradle to gate with options, modules C1–C4 and module D (A1–A3 + A5 + C + D).

Modules A1–A3 include material procurement processes (raw and auxiliary materials) as well as manufacturing processes.

Module A5 is considered partially and includes the the biogenic CO₂ emissions deriving from the packaging material.

Modules C1–C4 consider the uninstallation, transport, sorting and disposal of components deriving from the end-of-life operations. These operations are not directly controllable by the company: in this regard, literature data relating to the construction sector are therefore used. It is considered:

- an average consumption of diesel equivalent to 0.046 MJ for each kilogram of demolished material;
- an average distance of 80 km to transport the material to the recovery center;
- an average consumption of electricity of 0.028 kW for each kilogram of waste subjected to sorting operations at the delivery center.

Module D considers steel intended for recycling resulting from the demolition process of the product after its use and after being delivered to the waste treatment center.

Method use

The methodology chosen to evaluate the potential environmental impacts used in this study is the method “EN15804 + A2 (adapted for SimaPro substances) EF 3.1 normalization and weighting set – v.1.01” relating to construction products. For the calculation of the environmental impact relating to the GWP–GHG indicator, the method “IPPC 2021 GWP 100a – v.1.03” is used.

Allocation rules

Data for which it was not possible to refer only to the single product (e.g. some auxiliary materials, some energy consumption), were allocated on a mass basis.

Cut-off rules and exclusions

The criterion chosen for the initial inclusion of inputs and outputs is based on the definition of a cut-off level of 1%, in terms of environmental relevance. This means that a process can be ignored if it is responsible for less than 1% of the total impact. Also excluded from the study are:

- Staff mobility between home and work;
- Indirect activities (e.g. research and development activities);
- Staff business travels;
- Water discharges;
- Maintenance.

Percentage variation of each environmental impact indicator, aggregate over all included modules (from A to C) between the value minimum and maximum of the included products

Impact category	AP	EP-marine	EP-fresh-water	EP-terrestrial	ODP	POCP	ADP-fossil	ADP-minerals&metals	WDP
Variations [%]	11%	9%	10%	9%	56%	10%	19%	7%*	14%

**The percentage excludes the "pipe inside/outside galvanised" products for which a maximum deviation of 192% occurs for this impact category only.*

The variations are attributable to any peculiarities of the raw material as well as process requirements for the production of some products.



Description of the Production Cycle of pressfitting system in carbon steel

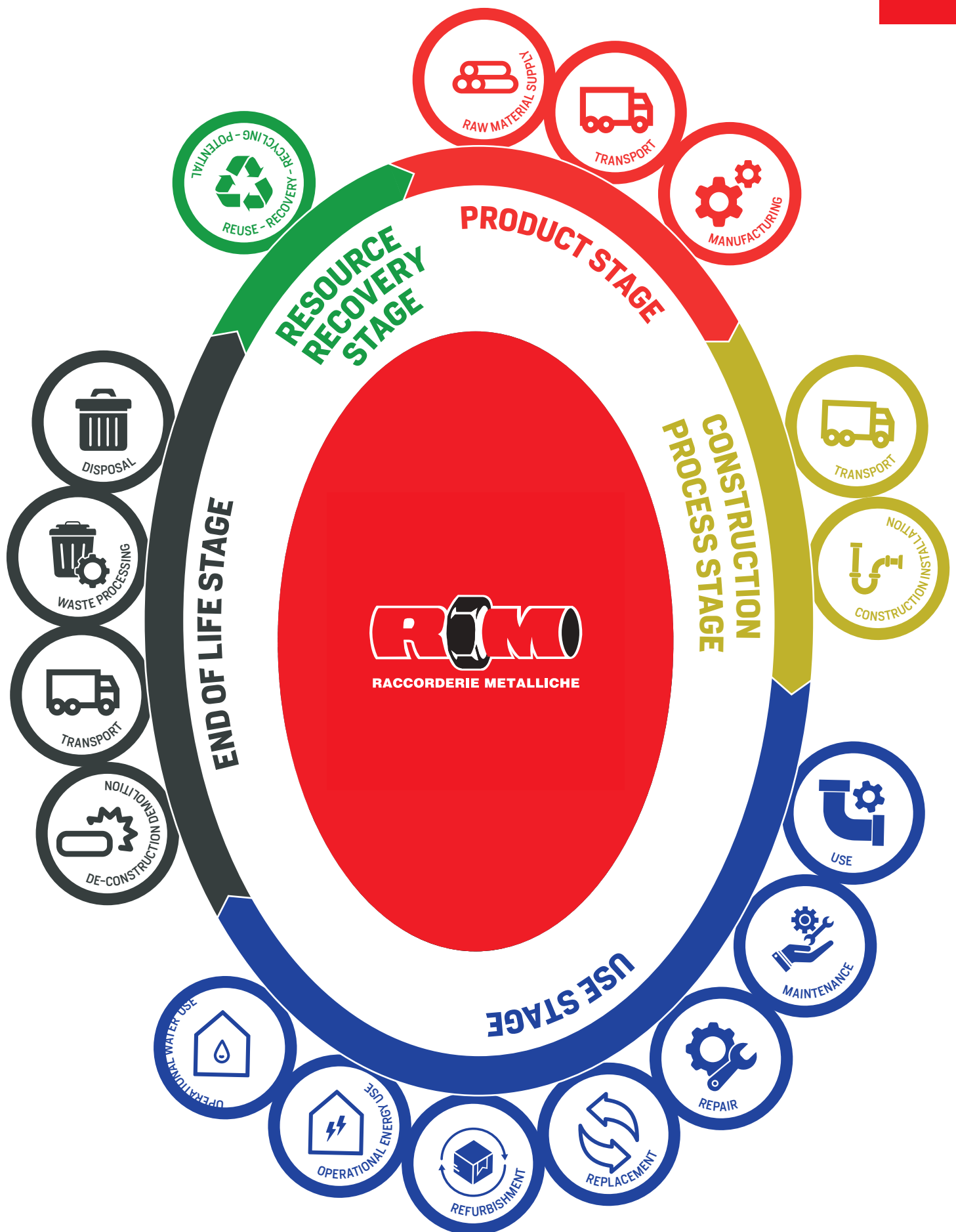
The manufacturing flow for steelPRES fittings is divided in steps, which gradually allow a press fitting to be shaped, typically starting from a pipe. The manufacturing process is certified by the main international bodies, in the civil, industrial, and naval fields. The production equipment is designed internally by RM technical & robotics department and fabricated internally utilizing the latest generation of machine tools.

Manufacturing phases:

- 1. PIPE CUTTING.** Using laser cutting machines, stainless steel and carbon steel pipes and rods are cut to make the specific pieces by article code.
- 2. BENDING.** Subsequently, if the fitting to be construct is a curve, the pieces are bent through automatic bending machines; each piece of pipe are bent according to the angle required as per the approved drawing.
- 3. COLD DEFORMATION.** To shape the press fitting profile are utilised different methods of cold elongation of the pipes. This is the most critical step as the proper functioning of the fitting depends on it.
- 4. WELDING.** For some types of fittings, it is necessary to have an additional manufacturing process to weld the body of the fittings to a specific part, previously prepared. For instance, to produce equal Tees, or reducing Tees, a hole on the main body must be drilled, then welded together with a second piece to create the Tee-shape.
The welding is carried out through an automated TIG welding process with filler material.
This process is certified by the leading international bodies and is subject to periodic auditing.
All welded fittings are subjected to testing, to identify any porosity, avoid leakages and guarantee the highest possible quality.
- 5. GALVANIZING.** At the end of mechanical processing, carbon steel fittings must be cleaned from oil residues and galvanized, through an electrolytic process that protect its surface and at the same time give it a shiny appearance.
- 6. O-RING INSTALLATION.** O-rings are assembled utilizing automatic lines, composed by a combination of machine tools and robots, where the required O-ring is inserted into the fitting, according to the application for which the fittings are intended. In this phase fittings are also marked according to the product specifications.
- 7. PACKAGING.** Fittings are packed in bags then in carton boxes according to the specific internal requirements (each type of items has its own minimum bags and box standard quantity).

Product information, certifications and technical data are available on the packaging to ensure batch traceability.





PRODUCTION CYCLE



1º PHASE

Pipe Cutting

using laser cutting machines, stainless steel and carbon steel pipes and rods are cut to make the specific pieces by article code.



2º PHASE

Bending

if the fitting to be construct is a curve, the pieces are bent through automatic bending machines; each piece of pipe are bent according to the angle required as per the approved drawing.



3º PHASE

Cold Deformation

To shape the press fitting profile are utilised different methods of cold elongation of the pipes.

This is the most critical step as the proper functioning of the fitting depends on it.



4º PHASE

Welding

For some types of fittings, it is necessary to have an additional manufacturing process to weld the body of the fittings to a specific part, previously prepared. For instance, to produce equal Tees, or reducing Tees, a hole on the main body must be drilled, then welded together with a second piece to create the Tee-shape. The welding is carried out through an automated TIG welding process with filler material. This process is certified by the leading international bodies and is subject to periodic auditing. All welded fittings are subjected to testing, to identify any porosity, avoid leakages and guarantee the highest possible quality.



5º PHASE

Galvanizing

At the end of mechanical processing, carbon steel fittings must be cleaned from oil residues and galvanized, through an electrolytic process that protect its surface and at the same time give it a shiny appearance.



6º PHASE

O-ring Installation

O-rings are assembled utilizing automatic lines, composed by a combination of machine tools and robots, where the required O-ring is inserted into the fitting, according to the application for which the fittings are intended. In this phase fittings are also marked according to the product specifications.



7º FASE

Packaging

Fittings are packed in bags then in carton boxes according to the specific internal requirements (each type of items has its own minimum bags and box standard quantity).



Modules declared, geographical scope, share of specific data (in GWP-GHG results) and data variation (in GWP-GHG results):

	Product stage			Construction process stage		Use stage							End of life stage				Resource recovery stage
	Raw material supply	Transport	Manufacturing	Transport	Construction installation	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	De-construction demolition	Transport	Waste processing	Disposal	Reuse-Recovery-Recycling-potential
Module	A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Modules declared	X	X	X	ND	X	ND	ND	ND	ND	ND	ND	ND	X	X	X	X	X
Geography	GLO	GLO	IT	-	-	-	-	-	-	-	-	-	EU	EU	EU	EU	EU
Specific data	> 80%			-	-	-	-	-	-	-	-	-	-	-	-	-	-
Variations – product	-5.2% ÷ +11.7%*			-	-	-	-	-	-	-	-	-	-	-	-	-	-
Variation – site	< 10%			-	-	-	-	-	-	-	-	-	-	-	-	-	-

X = Module considered / ND = Module not declared / GLO = Global / IT = Italy / EU = Europe

* Range of the GWP-GHG indicator for modules A1-A3. The range is reported from the configuration with the lowest impact and the one with the highest impact respect the representative product.



Content information

PRODUCT COMPONENTS	WEIGHT, KG	POST-CONSUMER MATERIAL, WEIGHT-%	BIOGENIC MATERIAL, WEIGHT-% AND KG C/KG
Carbon steel galvanised	0,995	20,6	-
EPDM (O-Ring)	0,005	-	-
TOTAL	1	-	-
PACKAGING MATERIALS	WEIGHT, KG	WEIGHT-% (VERSUS THE PRODUCT)	WEIGHT BIOGENIC CARBON, KG C/KG
Polyethylene bag	0,03	0,3 %	-
Cardboard	0,001	0,1 %	0,000837
Wood	0,087	8,7 %	0,154
TOTAL	0,092	-	-

The product doesn't contain SVHC Substances of Very High Concern covered by ECHA's Candidate List in concentrations greater than 0.1% by mass.

Content information

Electricity information

The electricity used in the manufacturing process of module A3 accounts less than 30% of the GWP-GHG results of modules A1-A3 and the impact of electricity use in the manufactory phases is 0.550 kg CO₂ eq/kWh (value resulting from the modelling of the Italian Residual Electricity Mix).

Results of the environmental performance indicators

The following tables show the values of the environmental impact indicators for the declared unit, i.e. 1 kg of pressfitting system.

We do not recommend using the results of modules A1-A3 without considering the results obtained from modules C.

The results of the estimated impact are only relative statements, which do not indicate the end point of the various impact categories, the exceedance of threshold values, safety margins and/or risks.

The values in the following tables refer to the company's representative product, i.e. "steelpres 90° FF elbow Ø 28".

To obtain the indicators for a specific piece, simply multiply the chosen indicator by the weight of the piece shown in the table in the "Other Information" paragraph.

Mandatory impact category indicators according to EN 15804

RESULTS PER FUNCTIONAL OR DECLARED UNIT																
Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP-fossil	kgCO ₂ eq.	3,81E+00	ND	0,00E+00	ND	ND	ND	ND	ND	ND	ND	4,61E-03	1,55E-02	1,83E-02	6,25E-04	-1,86E+00
GWP-bio-genic	kgCO ₂ eq.	-1,58E-01	ND	1,55E-01	ND	ND	ND	ND	ND	ND	ND	5,04E-07	1,06E-05	2,39E-04	8,62E-08	-1,64E-03
GWP-luluc	kgCO ₂ eq.	2,31E-03	ND	0,00E+00	ND	ND	ND	ND	ND	ND	ND	4,00E-07	5,06E-06	1,43E-06	3,22E-07	-9,01E-04
GWP-total	kgCO ₂ eq.	3,66E+00	ND	1,55E-01	ND	ND	ND	ND	ND	ND	ND	4,61E-03	1,55E-02	1,85E-02	6,26E-04	-1,86E+00
ODP	kgCFC11eq.	8,61E-08	ND	0,00E+00	ND	ND	ND	ND	ND	ND	ND	7,05E-11	3,08E-10	3,83E-10	1,81E-11	-8,93E-09
AP	molH ⁺ eq.	1,94E-02	ND	0,00E+00	ND	ND	ND	ND	ND	ND	ND	4,16E-05	4,84E-05	4,76E-05	4,43E-06	-7,81E-03
EP-fresh-water	kgPeq.	1,23E-03	ND	0,00E+00	ND	ND	ND	ND	ND	ND	ND	1,35E-07	1,03E-06	2,32E-06	5,19E-08	-7,62E-04
EP-marine	kgNeq.	5,50E-03	ND	0,00E+00	ND	ND	ND	ND	ND	ND	ND	1,93E-05	1,63E-05	9,49E-06	1,69E-06	-1,76E-03
EP-terrestrial	molNeq.	5,89E-02	ND	0,00E+00	ND	ND	ND	ND	ND	ND	ND	2,11E-04	1,78E-04	1,00E-04	1,84E-05	-1,81E-02
POCP	kgNMVOCeq.	2,12E-02	ND	0,00E+00	ND	ND	ND	ND	ND	ND	ND	6,30E-05	7,59E-05	4,59E-05	6,60E-06	-6,07E-03
ADP-mine-rals&me-tals*	kgSbeq.	2,19E-05	ND	0,00E+00	ND	ND	ND	ND	ND	ND	ND	1,64E-09	4,95E-08	7,65E-09	9,77E-10	-1,25E-05
ADP-fos-sil*	MJ	4,71E+01	ND	0,00E+00	ND	ND	ND	ND	ND	ND	ND	6,03E-02	2,17E-01	2,71E-01	1,53E-02	-1,90E+01
WDP*	m ₃	9,01E-01	ND	0,00E+00	ND	ND	ND	ND	ND	ND	ND	1,31E-04	8,91E-04	4,60E-03	6,70E-04	-3,51E-01
Acronyms	GWP-fossil = Global Warming Potential fossil fuels; GWP-biogenic = Global Warming Potential biogenic; GWP-luluc = Global Warming Potential land use and land use change; ODP = Depletion potential of the stratospheric ozone layer; AP = Acidification potential, Accumulated Exceedance; EP-freshwater = Eutrophication potential, fraction of nutrients reaching freshwater end compartment; EP-marine = Eutrophication potential, fraction of nutrients reaching marine end compartment; EP-terrestrial = Eutrophication potential, Accumulated Exceedance; POCP = Formation potential of tropospheric ozone; ADP-minerals&metals = Abiotic depletion potential for non-fossil resources; ADP-fossil = Abiotic depletion for fossil resources potential; WDP = Water (user) deprivation potential, deprivation-weighted water consumption															

*** DISCLAIMER:**

The results of this environmental impact indicator shall be used with care as the uncertainties of these results are high or as there is limited experience with the indicator.

Additional mandatory and voluntary impact category indicators

RESULTS PER FUNCTIONAL OR DECLARED UNIT																
Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP-GHG ¹	kgCO ₂ eq.	3,82E+00	ND	0,00E+00	ND	ND	ND	ND	ND	ND	ND	4,61E-03	1,55E-02	1,83E-02	6,26E-04	-1,86E+00

¹ This indicator accounts for all greenhouse gases except biogenic carbon dioxide uptake and emissions and biogenic carbon stored in the product. As such, the indicator is identical to GWP-total except that the CF for biogenic CO₂ is set to zero.

Resource use indicators

RESULTS PER FUNCTIONAL OR DECLARED UNIT																
Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
PERE	MJ	7,57E+00	ND	0,00E+00	ND	ND	ND	ND	ND	ND	ND	4,50E-04	4,63E-03	7,17E-03	1,87E-04	-2,11E+00
PERM	MJ	0,00E+00	ND	0,00E+00	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT	MJ	7,57E+00	ND	0,00E+00	ND	ND	ND	ND	ND	ND	ND	4,50E-04	4,63E-03	7,17E-03	1,87E-04	-2,11E+00
PENRE	MJ	4,76E+01	ND	0,00E+00	ND	ND	ND	ND	ND	ND	ND	5,93E-02	2,15E-01	2,82E-01	1,52E-02	-2,35E+01
PENRM	MJ	0,00E+00	ND	0,00E+00	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRT	MJ	4,76E+01	ND	0,00E+00	ND	ND	ND	ND	ND	ND	ND	5,93E-02	2,15E-01	2,82E-01	1,52E-02	-2,35E+01
SM	kg	1,45E-02	ND	0,00E+00	ND	ND	ND	ND	ND	ND	ND	2,54E-05	9,23E-05	3,31E-05	3,81E-06	-3,22E-01
RSF	MJ	0,00E+00	ND	0,00E+00	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
NRSF	MJ	0,00E+00	ND	0,00E+00	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
FW	m ³	6,61E-03	ND	0,00E+00	ND	ND	ND	ND	ND	ND	ND	4,25E-06	3,24E-05	5,85E-05	1,59E-05	-2,06E-02
Acronyms	PERE = Use of renewable primary energy excluding renewable primary energy resources used as raw materials; PERM = Use of renewable primary energy resources used as raw materials; PERT = Total use of renewable primary energy resources; PENRE = Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials; PENRM = Use of non-renewable primary energy resources used as raw materials; PENRT = Total use of non-renewable primary energy re-sources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Use of net fresh water															

Waste indicators

RESULTS PER FUNCTIONAL OR DECLARED UNIT																
Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Hazardous waste disposed	kg	4,00E-02	ND	0,00E+00	ND	ND	ND	ND	ND	ND	ND	4,17E-05	3,57E-04	1,03E-04	1,73E-05	-1,04E-01
Non-hazardous waste disposed	kg	2,39E-01	ND	0,00E+00	ND	ND	ND	ND	ND	ND	ND	1,80E-04	2,12E-02	5,12E-03	1,70E-04	-6,78E-01
Radioactive waste disposed	kg	1,66E-04	ND	0,00E+00	ND	ND	ND	ND	ND	ND	ND	7,01E-08	7,50E-07	1,95E-06	2,52E-08	-1,43E-04

Output flow indicators

RESULTS PER FUNCTIONAL OR DECLARED UNIT																
Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Components for re-use	kg	0,00E+00	ND	0,00E+00	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Material for recycling	kg	3,46E-02	ND	0,00E+00	ND	ND	ND	ND	ND	ND	ND	4,18E-05	9,59E-05	4,09E-05	6,19E-06	-8,85E-01
Materials for energy recovery	kg	0,00E+00	ND	0,00E+00	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, electricity	MJ	0,00E+00	ND	0,00E+00	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, thermal	MJ	0,00E+00	ND	0,00E+00	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00



Additional environmental information

SUSTAINABILITY STRATEGY

Analysis of the main aspects

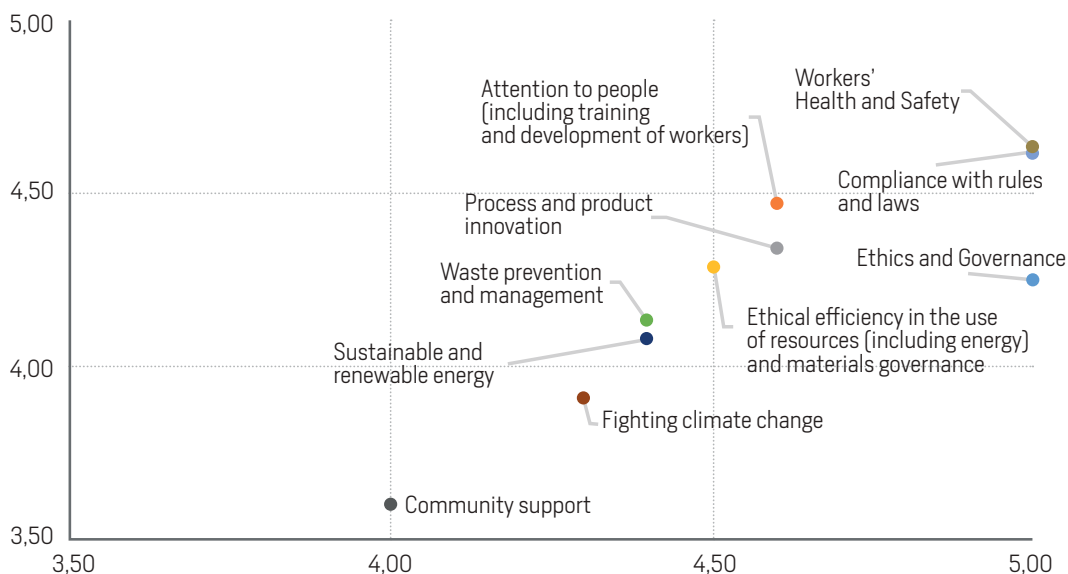
The material aspects, on which Raccorderie Metalliche has focused its attention, both with reference to sustainability reporting and the definition of the strategic intervention plan, have been identified through a process of analysis of company activities, relations with stakeholders and the context in which the company operates, in order to identify the main aspects of impact, actual and potential.

Specifically, the identification of the material aspects derives from a progressive process of:

- Verification of the company's positioning with respect to the relevant issues of sustainability and social responsibility, benchmarked to comparable national and international operators, subjected of a specific study conducted in 2021 by the SDA Bocconi School of Management;
- Dialogue with the owners and top management, aimed at refining the identified issues, also by contextualizing them with respect to company activities;
- Interaction with some categories of key stakeholders, such as operators and financial partners, particularly interested in some specific aspects of concerns;
- Administration of a survey questionnaire to the main internal and external stakeholders (employees, customers, suppliers), aimed at collecting precise indications regarding the relevance of the topics.

The combination of the results obtained from the assessments was used to construct the materiality matrix, shown below, which identifies the issues considered "material" by Raccorderie Metalliche and on which the contents of this document will focus. In particular, the materiality matrix shows the relevance of each material topic for Raccorderie Metalliche on the horizontal axis, and the relevance of the same for the stakeholders on the vertical axis.

The materiality matrix shows the most relevant topics such as "*Compliance with standards and laws*", "*Ethics and governance*", "*Workers' health and safety*" and "*Process and product innovation*". The material topics are consistent with the sustainability plan, demonstrating Raccorderie Metalliche strong commitment to listening to its stakeholders.



SUSTAINABILITY PLAN

The plan is organized according to the following guidelines:

- Medium-term, periodically evaluated, updated, and integrated based on the progressive achievement of objectives and a continuous improvement approach;
- Alignment with the most recent international and national trends, on the fight against climate change and the reduction of GHG emissions (greenhouse gas), energy efficiency, circularity, fight against inequalities, promotion of equal opportunities, safeguarding of people's health and well-being, creation and diffusion of sustainable value;
- Definition of qualitative and quantitative objectives, targets and KPIs, aimed at the continuous monitoring of the efforts and initiatives implemented.



These SDGs have been integrated into the sustainability plan and broken down into objectives, targets and KPIs. The sustainability strategy sets out Raccorderie Metalliche commitments to sustainable development.



SUSTAINABILITY STRATEGY AND PILLARS OF THE SUSTAINABILITY PLAN

Alignment SDG



Strategy & Pillars of the Sustainability Plan

Sustainability Governance

Raccorderie Metalliche adopts the highest principles of responsibility and transparency, inspired by the most UpToDate standards and best practices. In terms of sustainable development, the Company directs its initiatives according to the objectives of the United Nations 2030 Agenda.

Material Aspects

- Ethics & Governance
- Respect of Rules & Regulations
- Innovation of processes & products
- Sustainable & Renewable Energy
- Community service
- Health, Safety & Well-being of stakeholders
- People Oriented
- Attention to the Environment



People

Raccorderie Metalliche recognizes human development, well-being, and people's safety as a key element. For this reason, it is committed to ensure the professional and intellectual growth of all its employees and collaborators, ensure the well-being and safety in the workplace, and in all relationships.



Planet

Raccorderie Metalliche considers sustainable development as key element of its strategies, paying attention to all the environmental aspects associated with its activities.

Specific aspects of concern are energy efficiency, emissions reduction, efficient use of natural resources, process and product.



Prosperity

Raccorderie Metalliche conscious of its role in the community, committed towards the generation of shared value for employees, suppliers, customers, shareholders, and the society, through the creation of well-being and prosperity for a more equal and inclusive society, directly or indirectly supporting the social fabric and vitality of the community in which it operates.

Stakeholders

- Customers
- Employees
- Suppliers
- Community & Territory
- Natural Environment
- Certifications Bodies
- Banks & Financial Providers
- Central & Local Public Administration
- Shareholders

The Governance of Sustainability

ETHIC CODE

Raccorderie Metalliche has adopted a Code of Ethics since October 2013, sensitive to the need to comply in its corporate mission with the highest ethical-social principles.

The Code of Ethics, identified as a founding component of the Company's organizational model and internal control and risk management system, is placed upstream of the entire Corporate Governance system and represents the company's charter of values, becoming the corpus of principles which inspire the actions of the members of the corporate bodies, management, commercial partners, as well as internal and external stakeholders.

The Code of Ethics therefore constitutes a tool through which Raccorderie Metalliche directs its business activities based on the following values: entrepreneurship and innovation, social commitment, tradition and experience, courage and credibility, ethics, legality, transparency, fairness, honesty.

MODEL OF ORGANISATION, MANAGEMENT AND CONTROL

In 2015 Raccorderie Metalliche introduce the Organisation, Management and Control Model (MOGC) in compliance with the Legislative Decree No. 231 of 8/06/2001.

The Legislative Decree 231/2001 introduces for the first time into the corporate system the notion of "administrative" liability of the Associative Entity for crimes committed to its advantage by directors, "top management", employees or collaborators. Raccorderie Metalliche guarantees maximum professional responsibility by strictly observing ethical and social standards.

SYSTEM AND PRODUCTS CERTIFICATIONS

ISO 9001:2015 QUALITY MANAGEMENT SYSTEM

Since 1994, date of the first ISO:9001 certification, Raccorderie Metalliche has applied procedures within its organization to eliminate waste, be more competitive and create value for customers. This philosophy requires the whole company to be active in continuous improvements and controls on products quality, which had allowed the creation of high-quality standard.

ISO 14001:2015 ENVIRONMENTAL MANAGEMENT SYSTEM

Environmental issues are managed by Raccorderie Metalliche in compliance with the international standard ISO 14001:2015, through the implementation of an Integrated Management System for the Environment and Work Safety certified according to the international reference standard.

ISO 45001:2018 HEALTH AND SAFETY MANAGEMENT SYSTEM

Raccorderie Metalliche has adopted the ISO 45001:2018 standard to make all activities on the health and safety in the workplace formalized. The certification attests the commitment of the company to create and sustain a system able to guarantee an adequate control regarding the safety and health of employees and to protect them from possible dangers.

ISO 50001:2018 ENERGY MANAGEMENT SYSTEM

With ISO 50001 Raccorderie Metalliche completes the integrated management system which includes the 4 relevant ISO certifications: QUALITY – SAFETY – ENVIRONMENT – ENERGY. The objective of the ISO 50001 standard is in fact to allow organizations to create and maintain an Energy Management System (EMS) that allows them to continuously improve their energy performance. ISO 50001 specifies the requirements that an energy management system (ENMS/SGE) must have, enabling an organization to have a systematic approach for continuous improvement of its energy performance, also taking legal obligations into account.

Respect for the Environment

Raccorderie Metalliche operates with a view to eco-compatible growth also through the adoption of technologies and production methods that allow to reduce the environmental impact of its activities.

To increase its energy self-sufficiency, to contribute to the reduction of greenhouse gas emissions, the Company has installed a 3,501 kWp photovoltaic system covering the roofs of its production site in Campitello di Marcaria.

In this way the company will be able to independently produce approximately 20%-25% of its energy directly from a clean and renewable source. This plant has been productive since 5 December 2022 and produced 32,788 kWh in 25 days, thus bringing the value of renewable electricity to 2.0% of the company's needs. This photovoltaic system manufactured with certified crystalline silicon modules, fire resistance and installed only on the roof portions not subject to shading.

As per design the installation included:

- Screens for displaying the electricity produced, the instantaneous power of the system and the CO₂ emissions avoided;
- Monitor for viewing the synoptic of the monitoring system;
- Solarimeters connected to the system monitoring system for the continuous measurement and storing of irradiation values;
- Installation monitoring system connected online able to timely reporting any malfunctions
- Seven cars charging stations.





Other Information

PRODUCT TABLE



316/005

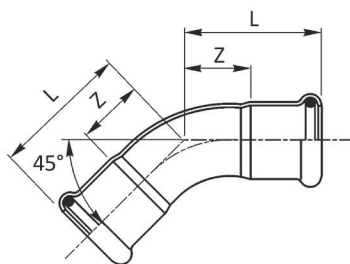
ZINCATO ESTERNAMENTE

- OUTSIDE GALVANIZED
- AUSSEN VERZINKT
- GALVANISÉS EXTÉRIEUR
- GALVANIZADO EXTERIOR

NORM: EN 10305-3

Mat. Nr.: 1.0215 (E 220 CR2S4) L=6 m

CODE	Description	Weight [kg/m]
316012005	steelPRES pipe 12x1,2 out galvanized	0,32
316015005	steelPRES pipe 15x1,2 out galvanized	0,41
316018005	steelPRES pipe 18x1,2 out galvanized	0,50
316022005	steelPRES pipe 22x1,5 out galvanized	0,82
316028005	steelPRES pipe 28x1,5 out galvanized	1,05
316035005	steelPRES pipe 35x1,5 out galvanized	1,32
316042005	steelPRES pipe 42x1,5 out galvanized	1,62
316054005	steelPRES pipe 54x1,5 out galvanized	2,10
316076005	steelPRES pipe 76,1x2 out galvanized	3,65
316088005	steelPRES pipe 88,9x2 out galvanized	4,29
316108005	steelPRES pipe 108x2 out galvanized	5,23
316022002	steelPRES pipe 22x1,5 i/o galvanized	0,82
316028002	steelPRES pipe 28x1,5 i/o galvanized	1,05
316035002	steelPRES pipe 35x1,5 i/o galvanized	1,32
316042002	steelPRES pipe 42x1,5 i/o galvanized	1,62
316054002	steelPRES pipe 54x1,5 i/o galvanized	2,10
316076000	steelPRES pipe 76,1x2 i/o galvanized	3,65
316088000	steelPRES pipe 88,9x2 i/o galvanized	4,29
316108000	steelPRES pipe 108x2 i/o galvanized	5,23



381/450

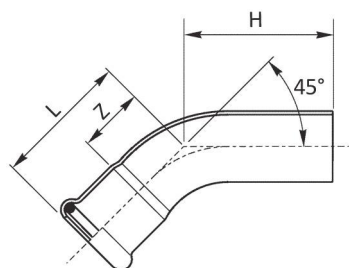
CURVA 45° FF

- 45° ELBOW FF
- BOGEN 45° II
- COUDE FF 45°
- CURVA 45° HH

MATERIAL: E 195 - 1.0034

O-RING: EPDM nero - black - Schwarz - noir - negro

CODE	Description	Weight [kg]
381015450	steelPRES elbow 45° ff ø 15	0,037
381018450	steelPRES elbow 45° ff ø 18	0,037
381022450	steelPRES elbow 45° ff ø 22	0,059
381028450	steelPRES elbow 45° ff ø 28	0,087
381035450	steelPRES elbow 45° ff ø 35	0,124
381042450	steelPRES elbow 45° ff ø 42	0,175
381054450	steelPRES elbow 45° ff ø 54	0,282
381076450	steelPRES elbow 45° ff ø 76,1	0,91
381088450	steelPRES elbow 45° ff ø 88,9	1,125
381108450	steelPRES elbow 45° ff ø 108	1,62



381/451

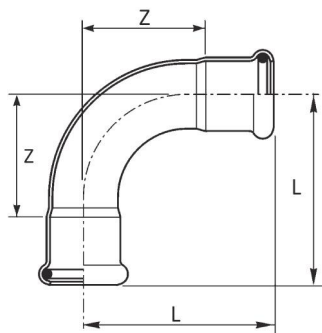
CURVA 45° MF

- 45° ELBOW MF
- BOGEN 45° IA
- COUDE MF 45°
- CURVA 45° HM

MATERIAL: E 195 - 1.0034

O-RING: EPDM nero - black - Schwarz - noir - negro

CODE	Description	Weight [kg]
381015451	steelPRES elbow 45° mf ø 15	0,039
381018451	steelPRES elbow 45° mf ø 18	0,046
381022451	steelPRES elbow 45° mf ø 22	0,06
381028451	steelPRES elbow 45° mf ø 28	0,088
381035451	steelPRES elbow 45° mf ø 35	0,135
381042451	steelPRES elbow 45° mf ø 42	0,196
381054451	steelPRES elbow 45° mf ø 54	0,3
381076451	steelPRES elbow 45° mf ø 76,1	0,87
381088451	steelPRES elbow 45° mf ø 88,9	1,365
381108451	steelPRES elbow 45° mf ø 108	1,922



381/900

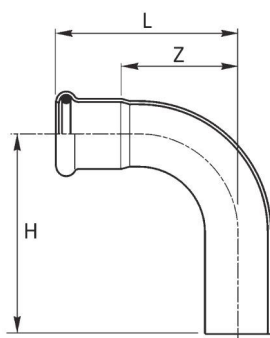
CURVA 90° FF

- 90° ELBOW FF
- BOGEN 90° II
- COUDE FF 90°
- CURVA 90° HH

MATERIAL: E 195 - 1.0034

O-RING: EPDM nero - black - Schwarz - noir - negro

CODE	Description	Weight [kg]
381012900	steelPRES elbow 90° ff ø 12	0,042
381015900	steelPRES elbow 90° ff ø 15	0,044
381018900	steelPRES elbow 90° ff ø 18	0,055
381022900	steelPRES elbow 90° ff ø 22	0,073
381028900	steelPRES elbow 90° ff ø 28	0,109
381035900	steelPRES elbow 90° ff ø 35	0,156
381042900	steelPRES elbow 90° ff ø 42	0,231
381054900	steelPRES elbow 90° ff ø 54	0,369
381076900	steelPRES elbow 90° ff ø 76,1	1,15
381088900	steelPRES elbow 90° ff ø 88,9	1,56
381108900	steelPRES elbow 90° ff ø 108	2,25



381/901

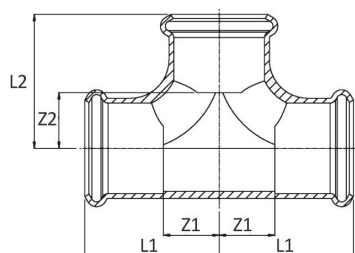
CURVA 90° MF

- 90° ELBOW MF
- BOGEN 90° IA
- COUDE MF 90°
- CURVA 90° HM

MATERIAL: E 195 - 1.0034

O-RING: EPDM nero - black - Schwarz - noir - negro

CODE	Description	Weight [kg]
381012901	steelPRES elbow 90° mf ø 12	0,046
381015901	steelPRES elbow 90° mf ø 15	0,044
381018901	steelPRES elbow 90° mf ø 18	0,056
381022901	steelPRES elbow 90° mf ø 22	0,077
381028901	steelPRES elbow 90° mf ø 28	0,113
381035901	steelPRES elbow 90° mf ø 35	0,174
381042901	steelPRES elbow 90° mf ø 42	0,235
381054901	steelPRES elbow 90° mf ø 54	0,385
381076901	steelPRES elbow 90° mf ø 76,1	1,155
381088901	steelPRES elbow 90° mf ø 88,9	1,585
381108901	steelPRES elbow 90° mf ø 108	2,155
385308015	steelPRES w. plate 90° mf 3/8"x15	0,09



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“T”

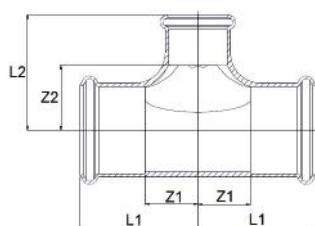
- EQUAL TEE
- T-STÜCK
- TÉ ÉGAL
- TE IGUAL HHH

MATERIAL: E 195 - 1.0034

O-RING: EPDM nero - black - Schwarz - noir - negro

CODE	Description	Weight [kg]
382012000	steelPRES equal tee ø 12	0,048
382015000	steelPRES equal tee ø 15	0,072
382018000	steelPRES equal tee ø 18	0,085
382022000	steelPRES equal tee ø 22	0,116
382028000	steelPRES equal tee ø 28	0,173
382035000	steelPRES equal tee ø 35	0,24
382042000	steelPRES equal tee ø 42	0,337
382054000	steelPRES equal tee ø 54	0,473
382076000	steelPRES equal tee ø 76,1	1,275
382088000	steelPRES equal tee ø 88,9	1,535
382108000	steelPRES equal tee ø 108	2,115





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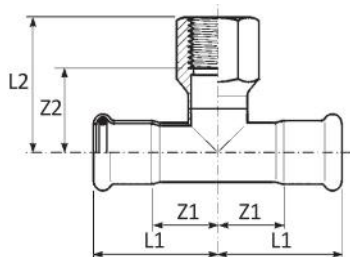
"T" RIDOTTO

- REDUCING TEE
- T-STÜCK MIT REDUZIERTEM ABGANG
- TÉ RÉDUIT
- TE REDUCIDA HHH

MATERIAL: E 195 - 1.0034

O-RING: EPDM nero - black - Schwarz - noir - negro

CODE	Description	Weight [kg]
392015012	steelPRES tee 15x12x15	0,064
392018012	steelPRES tee 18x12x18	0,072
392018015	steelPRES tee 18x15x18	0,083
392022012	steelPRES tee 22x12x22	0,094
392022015	steelPRES tee 22x15x22	0,11
392022018	steelPRES tee 22x18x22	0,112
392028015	steelPRES tee 28x15x28	0,146
392028018	steelPRES tee 28x18x28	0,15
392028022	steelPRES tee 28x22x28	0,155
392035015	steelPRES tee 35x15x35	0,205
392035018	steelPRES tee 35x18x35	0,191
392035022	steelPRES tee 35x22x35	0,207
392035028	steelPRES tee 35x28x35	0,213
392042022	steelPRES tee 42x22x42	0,285
392042028	steelPRES tee 42x28x42	0,295
392042035	steelPRES tee 42x35x42	0,311
392054022	steelPRES tee 54x22x54	0,42
392054028	steelPRES tee 54x28x54	0,432
392054035	steelPRES tee 54x35x54	0,443
392054042	steelPRES tee 54x42x54	0,461
392076022	steelPRES tee 76,1x22x76,1	0,995
392076028	steelPRES tee 76,1x28x76,1	1,015
392076035	steelPRES tee 76,1x35x76,1	1,025
392076042	steelPRES tee 76,1x42x76,1	1,045
392076054	steelPRES tee 76,1x54x76,1	1,065
392088028	steelPRES tee 88,9x28x88,9	1,365
392088035	steelPRES tee 88,9x35x88,9	1,395
392088042	steelPRES tee 88,9x42x88,9	1,425
392088054	steelPRES tee 88,9x54x88,9	1,455
392088076	steelPRES tee 88,9x76,1x88,9	1,485
392108028	steelPRES tee 108x28x108	1,815
392108035	steelPRES tee 108x35x108	1,845
392108042	steelPRES tee 108x42x108	1,875
392108054	steelPRES tee 108x54x108	1,905
392108076	steelPRES tee 108x76,1x108	1,935
392108088	steelPRES tee 108x88,9x108	1,965



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"T" CON DERIVAZIONE FILETTO F

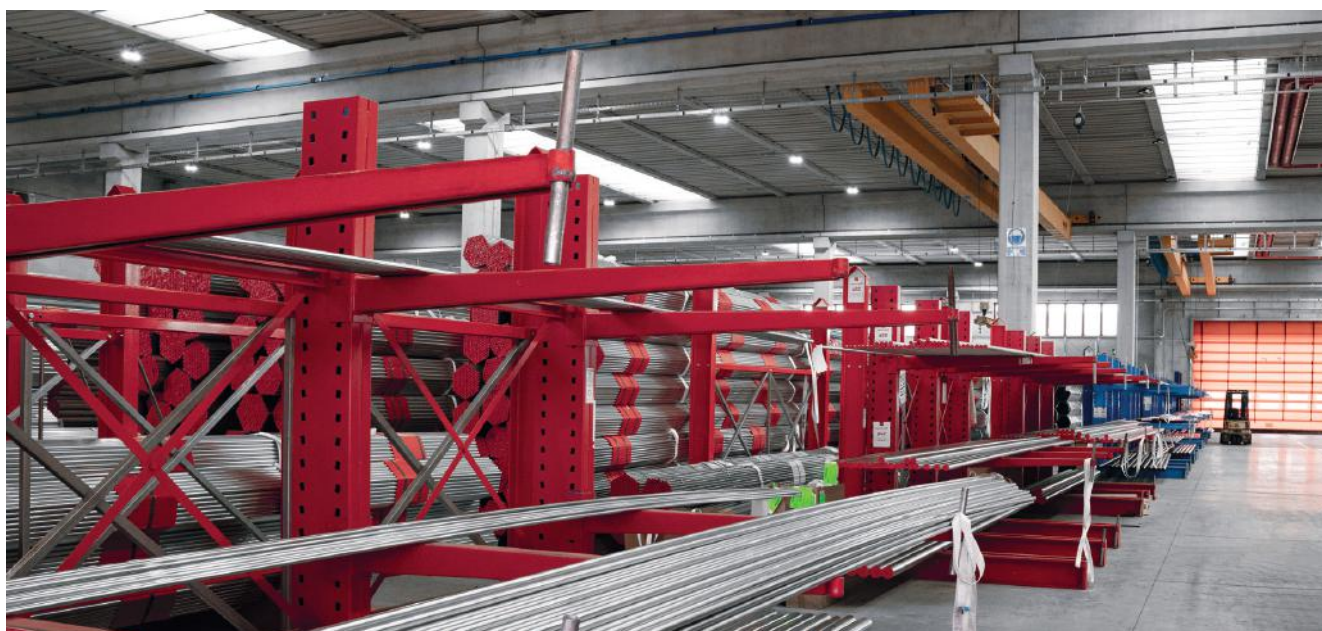
- BRANCH TEE FEMALE BSP OUTLET
- T-STÜCK MIT ABGANG IG
- TÉ MIXTE AVEC FILETAGE F
- TE HEMBRA ROSCADA

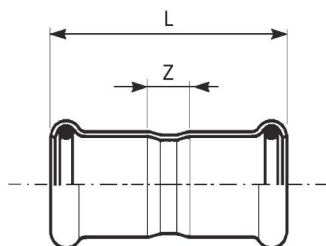
MATERIAL: E 195 - 1.0034

O-RING: EPDM nero - black - Schwarz - noir - negro

THREAD: EN 10226-1 (ex ISO 7/1)

CODE	Description	Weight [kg]
389102015	steelPRES tee f 1/2"x15	0,072
389102018	steelPRES tee f 1/2"x18	0,091
389102022	steelPRES tee f 1/2"x22	0,128
389304022	steelPRES tee f 3/4"x22	0,133
389102028	steelPRES tee f 1/2"x28	0,158
389304028	steelPRES tee f 3/4"x28	0,161
389100028	steelPRES tee f 1"x28	0,246
389102035	steelPRES tee f 1/2"x35	0,2
389304035	steelPRES tee f 3/4"x35	0,191
389100035	steelPRES tee f 1"x35	0,25
389102042	steelPRES tee f 1/2"x42	0,255
389304042	steelPRES tee f 3/4"x42	0,255
389102054	steelPRES tee f 1/2"x54	0,3
389304054	steelPRES tee f 3/4"x54	0,353
389100054	steelPRES tee f 1"x54	0,441
389102076	steelPRES tee f 1/2"x76,1	1,04
389304076	steelPRES tee f 3/4"x76,1	1,04
389102088	steelPRES tee f 1/2"x88,9	1,255
389304088	steelPRES tee f 3/4"x88,9	1,255
389102108	steelPRES tee f 1/2"x108	1,7
389304108	steelPRES tee f 3/4"x108	1,7





383/000

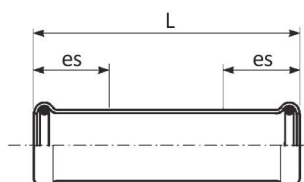
MANICOTTO

- COUPLING
- MUFFE
- MANCHON
- MANGUITO HH

MATERIAL: E 195 - 1.0034

O-RING: EPDM nero - black - Schwarz - noir - negro

CODE	Description	Weight [kg]
383012000	steelPRES coupling ø 12	0,025
383015000	steelPRES coupling ø 15	0,033
383018000	steelPRES coupling ø 18	0,04
383022000	steelPRES coupling ø 22	0,052
383028000	steelPRES coupling ø 28	0,069
383035000	steelPRES coupling ø 35	0,09
383042000	steelPRES coupling ø 42	0,127
383054000	steelPRES coupling ø 54	0,189
383076000	steelPRES coupling ø 76,1	0,635
383088000	steelPRES coupling ø 88,9	0,765
383108000	steelPRES coupling ø 108	1,17



383/001

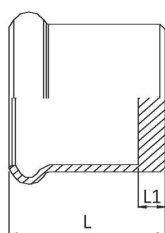
MANICOTTO PASSANTE

- SLIP COUPLING
- SCHIEBEMUFFE
- MANCHON LONG
- MANGUITO SIN TOPE

MATERIAL: E 195 - 1.0034

O-RING: EPDM nero - black - Schwarz - noir - negro

CODE	Description	Weight [kg]
383012001	steelPRES slip coupling ø 12	0,042
383015001	steelPRES slip coupling ø 15	0,055
383018001	steelPRES slip coupling ø 18	0,059
383022001	steelPRES slip coupling ø 22	0,081
383028001	steelPRES slip coupling ø 28	0,111
383035001	steelPRES slip coupling ø 35	0,15
383042001	steelPRES slip coupling ø 42	0,213
383054001	steelPRES slip coupling ø 54	0,314
383076001	steelPRES slip coupling ø 76,1	0,94
383088001	steelPRES slip coupling ø 88,9	1,24
383108001	steelPRES slip coupling ø 108	1,835



383/003

TAPPO DI CHIUSURA

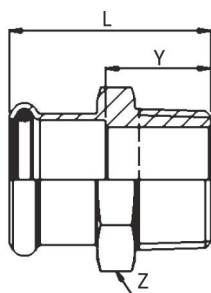
- STOP END
- VERSCHLUSSKAPPE
- BOUCHON D'OBTURATION
- TAPÓN

MATERIAL: E 195 - 1.0034

O-RING: EPDM nero - black - Schwarz - noir - negro

CODE	Description	Weight [kg]
383012003	steelPRES stop end ø 12	0,021
383015003	steelPRES stop end ø 15	0,028
383018003	steelPRES stop end ø 18	0,03
383022003	steelPRES stop end ø 22	0,04
383028003	steelPRES stop end ø 28	0,057
383035003	steelPRES stop end ø 35	0,08
383042003	steelPRES stop end ø 42	0,115
383054003	steelPRES stop end ø 54	0,177
383076003	steelPRES stop end ø 76,1	0,54
383088003	steelPRES stop end ø 88,9	0,73
383108003	steelPRES stop end ø 108	0,935





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MANICOTTO MISTO FILETTO M

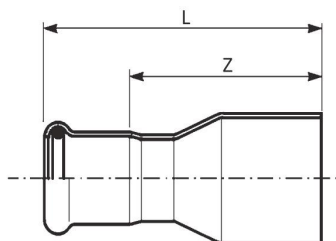
- MALE ADAPTER
- ÜBERGANGSSTÜCK MIT AG
- RACCORD AVEC FILETAGE MALE
- UNIÓN MACHO

MATERIAL: E 195 - 1.0034

O-RING: EPDM nero - black - Schwarz - noir - negro

THREAD: EN 10226-1 (ex ISO 7/1)

CODE	Description	Weight [kg]
387308012	steelPRES adapter m 3/8"x12	0,041
387308015	steelPRES adapter m 3/8"x15	0,058
387102015	steelPRES adapter m 1/2"x15	0,065
387304015	steelPRES adapter m 3/4"x15	0,078
387102018	steelPRES adapter m 1/2"x18	0,072
387304018	steelPRES adapter m 3/4"x18	0,107
387102022	steelPRES adapter m 1/2"x22	0,06
387304022	steelPRES adapter m 3/4"x22	0,093
387100022	steelPRES adapter m 1"x22	0,154
387304028	steelPRES adapter m 3/4"x28	0,114
387100028	steelPRES adapter m 1"x28	0,116
387114028	steelPRES adapter m 1"1/4x28	0,195
387100035	steelPRES adapter m 1"x35	0,169
387114035	steelPRES adapter m 1"1/4x35	0,205
387112035	steelPRES adapter m 1"1/2x35	0,22
387112042	steelPRES adapter m 1"1/2x42	0,25
387200054	steelPRES adapter m 2"x54	0,356
387212076	steelPRES adapter m 2"1/2x76,1	0,752
387300088	steelPRES adapter m 3"x88,9	1,191
387400108	steelPRES adapter m 4"x108	1,802
390102012	steelPRES adapter f 1/2"x12	0,055
390308015	steelPRES adapter f 3/8"x15	0,048
390102015	steelPRES adapter f 1/2"x15	0,06
390304015	steelPRES adapter f 3/4"x15	0,078
390102018	steelPRES adapter f 1/2"x18	0,06
390304018	steelPRES adapter f 3/4"x18	0,078
390102022	steelPRES adapter f 1/2"x22	0,096
390304022	steelPRES adapter f 3/4"x22	0,081
390100022	steelPRES adapter f 1"x22	0,147
390102028	steelPRES adapter f 1/2"x28	0,155
390304028	steelPRES adapter f 3/4"x28	0,132
390100028	steelPRES adapter f 1"x28	0,147
390100035	steelPRES adapter f 1"x35	0,218
390114035	steelPRES adapter f 1"1/4x35	0,154
390112042	steelPRES adapter f 1"1/2x42	0,245
390200054	steelPRES adapter f 2"x54	0,329



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RIDUZIONE MF

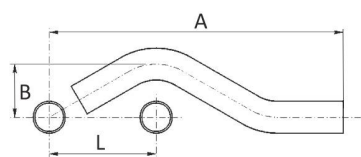
- REDUCER
- REDUZIERSTÜCK
- REDUCTION
- REDUCCIÓN MH

MATERIAL: E 195 - 1.0034

O-RING: EPDM nero - black - Schwarz - noir - negro

CODE	Description	Weight [kg]
391015012	steelPRES reducer 15x12	0,029
391018012	steelPRES reducer 18x12	0,032
391018015	steelPRES reducer 18x15	0,036
391022012	steelPRES reducer 22x12	0,041
391022015	steelPRES reducer 22x15	0,045
391022018	steelPRES reducer 22x18	0,048
391028015	steelPRES reducer 28x15	0,05
391028018	steelPRES reducer 28x18	0,062
391028022	steelPRES reducer 28x22	0,059
391035022	steelPRES reducer 35x22	0,089
391035028	steelPRES reducer 35x28	0,091
391042022	steelPRES reducer 42x22	0,12
391042028	steelPRES reducer 42x28	0,127
391042035	steelPRES reducer 42x35	0,13
391054022	steelPRES reducer 54x22	0,192
391054028	steelPRES reducer 54x28	0,155
391054035	steelPRES reducer 54x35	0,189
391054042	steelPRES reducer 54x42	0,205
391076042	steelPRES reducer 76,1x42	0,506
391076054	steelPRES reducer 76,1x54	0,517
391088054	steelPRES reducer 88,9x54	0,667
391088076	steelPRES reducer 88,9x76,1	0,792
391108076	steelPRES reducer 108x76,1	0,983
391108088	steelPRES reducer 108x88,9	1,079





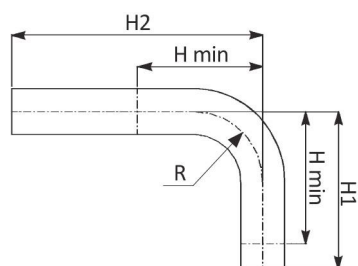
379

"S" DI SCAVALCAMENTO MM

- PIPE BRIDGE
- SPRUNGBOGEN
- "S" DE CHEVAUCHEMENT MALE
- "S" DE SUPERPOSICIÓN MM

MATERIAL: E 195 - 1.0034

CODE	Description	Weight [kg]
379012000	steelPRES pipe bridge de 12	0,01
379015000	steelPRES pipe bridge de 15	0,014
379018000	steelPRES pipe bridge de 18	0,017
379022000	steelPRES pipe bridge de 22	0,029
379028000	steelPRES pipe bridge de 28	0,044



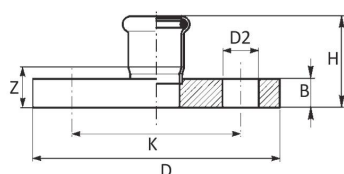
394/900

TUBO CURVO 90°

- 90° ELBOW MM
- PASSBOGEN 90°
- COUDE D'AJUSTEMENT 90°
- TUBO RICURVO 90° MM

MATERIAL: E 195 - 1.0034

CODE	Description	Weight [kg]
394015900	steelPRES elbow 90° ø 15	0,087
394018900	steelPRES elbow 90° ø 18	0,105
394022900	steelPRES elbow 90° ø 22	0,13
394028900	steelPRES elbow 90° ø 28	0,197
394035900	steelPRES elbow 90° ø 35	0,372
394042900	steelPRES elbow 90° ø 42	0,578
394054900	steelPRES elbow 90° ø 54	1,114
394028300	steelPRES elbow 30° ø 28	0,179
394035300	steelPRES elbow 30° ø 35	0,366
394042300	steelPRES elbow 30° ø 42	0,553
394054300	steelPRES elbow 30° ø 54	0,888
394028150	steelPRES elbow 15° ø 28	0,176
394035150	steelPRES elbow 15° ø 35	0,364
394042150	steelPRES elbow 15° ø 42	0,551
394054150	steelPRES elbow 15° ø 54	0,876



393/002

MANICOTTO FLANGIATO

- ADAPTOR FLANGE
- ÜBERGANGSFLANSCH
- BRIDE DE RACCORDEMENT
- BRIDA ADAPTADOR

MATERIAL: E 195 - 1.0034

O-RING: EPDM nero - black - Schwarz - noir - negro

PN 6

CODE	Description	Weight [kg]
393015002	steelPRES adaptor flange ø 15 pn6	0,434
393018002	steelPRES adaptor flange ø 18 pn6	0,431
393022002	steelPRES adaptor flange ø 22 pn6	0,636
393028002	steelPRES adaptor flange ø 28 pn6	0,784
393035002	steelPRES adaptor flange ø 35 pn6	1,259
393042002	steelPRES adaptor flange ø 42 pn6	1,472
393054002	steelPRES adaptor flange ø 54 pn6	1,657
393076002	steelPRES adaptor flange ø 76,1 pn6	1,849
393088002	steelPRES adaptor flange ø 88,9 pn6	2,879
393108002	steelPRES adaptor flange ø 108 pn6	3,488
393015000	steelPRES adaptor flange ø 15 pn16	0,578
393018000	steelPRES adaptor flange ø 18 pn16	0,572
393022000	steelPRES adaptor flange ø 22 pn16	0,754
393028000	steelPRES adaptor flange ø 28 pn16	1,094
393035000	steelPRES adaptor flange ø 35 pn16	1,672
393042000	steelPRES adaptor flange ø 42 pn16	1,988
393054000	steelPRES adaptor flange ø 54 pn16	2,666
393076000	steelPRES adaptor flange ø 76,1 pn16	2,994
393088000	steelPRES adaptor flange ø 88,9 pn16	3,861
393108000	steelPRES adaptor flange ø 108 pn16	4,623



References

- General Programme Instructions of the International EPD® System. Version 5.0.0;
- PCR 2019:14 – Version 1.3.4 "Construction products";
- Ecoinvent database v.3.10 – March 2024;
- UNI EN ISO 14025: 2010 'Environmental labels and declarations – Type III environmental declarations – Principles and procedures';
- UNI EN ISO 14040: 2021 "Environmental management – Life cycle assessment – Principles and framework";
- UNI EN ISO 14044:2021 'Environmental management – Life cycle assessment – Requirements and guidelines';
- UNI EN ISO 15804:2021 'Sustainability of construction – Environmental product declarations – Development framework rules per product category';
- European Residual Mixes 2023 Association of Issuing Bodies "European Residual Mixes Results of the calculation of Residual Mixes for the calendar year 2023" – version 1.0, 2024-05-30;
- "Metal Recycling Factsheet" – EuRIC AISBL – Recycling: Bridging Circular Economy & Climate Policy – February 2020.





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THE INTERNATIONAL EPD® SYSTEM

