NUPI INDUSTRIE ITALIANE S.p.A.

ENVIRONMENTAL PRODUCT DECLARATION

Product names:

POLYPROPYLENE SPIGOT AND SOCKET FITTINGS TYPE NIRON, NIRON BETA AND POLYSYSTEM

Site Plants:

Busto Arsizio (VA)

in compliance with ISO 14025 and EN 15804+A2:2019

Program Operator	EPDItaly
Publisher	EPDItaly

Declaration Number	2026PCPPSPSK
Registration Number	EPDITALY1359

Issue Date	15/09/2026
Valid to	15/09/2031





General information

EPD OWNER:	Nupi Industrie Italiane S.p.A., Piazza San Marco n. 1, 20121 – Milano (MI) Italy
PLANT INVOLVED in the declaration:	Busto Arsizio: Via Stefano Ferrario n. 8 - 21052 Busto Arsizio (VA), Italy
SCOPE OF APPLICATION:	This Environmental Product Declaration (EPD) is valid for NIRON AND POLYSYSTEM spigot and socket fittings made of polypropylene. The production plant involved is the one located in Busto Arsizio (BA). The type of declaration is related to an average fitting product. The life cycle assessment is representative for the product introduced in the declaration for the given system boundaries.
PROGRAM OPERATOR:	EPDITALY, via Gaetano De Castillia 10, 20124 Milano, Italia.
INDIPENDENT CHECK:	This declaration has been developed referring to EPDItaly, following the General Programme Instruction; further information and the document itself are available at: www.epditaly.it. EPD document valid within the following geographical area: Italy and other countries according to sales market conditions. CEN standard EN 15804 served as the core PCR (PCR ICMQ-001/15 rev.3.2; 03/11/2025). PCR review was conducted by Daniele Pace. Contact via info@epditaly.it Independent verification of the declaration and data, according to EN ISO 14025:2010. Third party verifier: ICMQ SpA, via De Castillia, 10 20124 Milano (www.icmq.it) ☐EPD process certification (Internal)☑ EPD verification (External) ***Accredited by: Accredia***
CPC CODE:	3632 - Tubes, pipes and hoses, and fittings therefor, of plastics
CORPORATE CONTACT:	info@nupinet.com
TECHNICAL SUPPORT:	Sphera https://www.sphera.com
COMPARABILITY:	Environmental product declarations published within the same product category, but from different programs, may not be comparable. In particular, EPDs of construction products may not be comparable if they do not comply with EN 15804+A2.

ACCOUNTABILITY:	Nupi Industrie Italiane S.p.A relieves EPDItaly from any non-compliance with environmental legislation. The EPD owner will be responsible for the information and supporting evidence; EPDItaly declines all responsibility for the manufacturer's information, data and results of the life cycle assessment.
REFERENCE DOCUMENT:	This declaration has been developed following the EPDItaly Program Regulations and Annexes of EPDItaly, available at www.epditaly.it.
PRODUCT CATEGORY RULES (PCR):	PCR ICMQ-001/15 rev.3.2 – 03/11/2025 EN 15804+A2:2019 is the framework reference for PCRs. EN 16904:2025
EPD PROJECT REPORT	2026_08_12_SP e SK medio

Company

OUR MISSION – FOR OVER 50 YEARS

Cutting edge solutions for any kind of installation

The primary goal of Nupi Industrie Italiane S.p.A. corporate strategy is not only the production of systems that meet performance requirements and comply with the use for which they are intended, but above all general customer satisfaction. Producing better and faster are goals that technology makes more and more compatible.

In 2022, Nupi Industrie Italiane S.p.A. celebrated its 50th anniversary! In October 2015, it took over from Nupigeco S.p.A., founded in October 2008 from the merger of NUPI S.p.A. and GECO System S.p.A., to form a single large company. Combining their many years of experience and constant growth, the two firms decided to create a new flexible and advanced company, ready to play its role to satisfy the demands of the market whilst being environmentally astute.

The goal was to combine the expertise in the development and production of piping systems for plumbing, industrial applications, gas, irrigation and heating, with the experience in the production of polymer spigot and socket fittings specifically dedicated to oil, chemical and petrochemical fields.







Management System and Certifications

Nupi Industrie Italiane S.p.A. submits its management and production systems to external audits performed by third party certification bodies.
Audit frequency depends on the procedure established by the specific standard and by each certification body. Nupi Industrie Italiane S.p.A. is certified in compliance with the standards for quality (EN ISO 9001), environment (EN ISO 14001) and Health and Safety of workers (ISO 45001).
Thanks to the synergy between the phases of research, production, quality control and after-sales service, the company obtained several international quality company and product certifications.

UNI EN ISO 9001
UNI EN ISO 14001
ISO 45001



MANAGMENT QUALITY UNI EN ISO 9001:2015

POLICY ENVIRONMENTAL UNI EN ISO 14001:2015

SAFETY AT WORK UNI ISO 45001:2018

Product Certifications

The company leadership is based on these solid foundations in a competitive and high technology industry such as plastics processing. A record that NUPI Industrie Italiane S.p.A. maintains thanks to high quality products and constant attention to customers' needs through an efficient after-sales service, a precise and timely technical assistance and installers' training.
NUPI products are of high quality, complying with regulations and conforming to the most stringent standards and certifications schemes. The full updated list is available on the website: www.nupiindustrieitaliane.com.

EPD Goal and scope

The entire life cycle of the product is considered (Type of EPD: cradle to grave and module D) and the modules described below are declared in this EPD:

*Modules **A1-A3** include those processes that provide energy and material input for the system (A1), transport up to the factory gate of the plant (A2), manufacturing processes as well as waste processing and emissions to air (A3).*

*Module **A4** includes the transport from the production site to the customer or to the point of installation of the products.*

*Module **A5** considers all fitting systems installation steps (negligible), the installation is done inside building mainly manually performed or with a minimum energy plus packaging waste processing (recycling, incineration, disposal). Credits from energy substitution are declared in module D. During this phase, a specific leftover has been considered.*

*Module **B1** considers the use of the installed product. During the use of plastic piping systems, a scenario of zero impact is considered.*

*Module **B2** includes the maintenance of the product. A scenario of zero impact is considered.*

*Modules **B3-B4-B5** are related to the repair, replacement and refurbishment of the products. If the products are properly installed no repair, replacement or refurbishment processes are necessary. A scenario of zero impact is then considered.*

*Module **C1** considers deconstruction, including dismantling or demolition of the product from the building.*
For products installed inside buildings a scenario of zero impact is considered.

*Module **C2** considers transportation of the discarded piping system to a recycling or disposal process.*

*Module **C3** considers waste processing for products sorting, recycling and incineration.*

*Module **C4** includes all waste disposal processes, including pre-treatment and management of the disposal site.*

*Module **D** includes benefits from all net flows in the end-of-life stage that leave the product boundary system after having passed the end-of-waste stage. Benefits from packaging incineration (electricity and thermal energy) are declared within module D.*

PRODUCT STAGE			CONSTRUCTION PROCESS STAGE		USE STAGE							END OF LIFE STAGE				BENEFITS AND LOADS BEYOND THE SYSTEM BOUNDARIES
Raw material supply	Transport	Manufacturing	Transport from the gate to the site	Assembly	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	De-construction demolition	Transport	Waste processing	Disposal	Reuse- Recovery- Recycling- potential
A1	**A2**	**A3**	**A4**	**A5**	**B1**	**B2**	**B3**	**B4**	**B5**	**B6**	**B7**	**C1**	**C2**	**C3**	**C4**	**D**
X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

X = modules included in the study

The emission factor for the electricity used in A3 is 0.199 KgCO2eq/kWh.

According to the PCR ICMQ-001/15 rev. 3.2 this EPD is a “cradle to grave and module D” Type. it is an average EPD for the product NIRON AND POLYSYSTEM multilayer pipes with fiberglass produced in NUPI INDUSTRIE ITALIANE S.p.A. plant located in Castel Guelfo (BO). All data refer to the 2024 production and sales.

All manufacturing activities and packaging/auxiliary’s production are in module A3, while energy production and input materials are in A1. Transport to clients (A4) is included together with end-of-life scenarios (benefits and loads included according to D module).

The declaration is a Type 3 EPD (product EPD based on a qualified LCA-Tool) according to /REGULATIONS OF THE EPDItaly PROGRAMME 6/.

Geographical validity: EU+GLO

Time Representativeness: The primary data cover a period of 12 months, reference 2024.

Database: MLC Database 2024.2

NUPI LCA Tool v.5 25.01.2025: The LCA model is created using the Sphera LCA for Expert (previously GaBi Professional) Software system for life cycle engineering, developed by Sphera. The /MANAGED LCA CONTENT (GABI DATABASES)/ provides the life cycle inventory data for several of the raw and process materials obtained from the background system.

EPD realized by means of a validated algorithm:
In 2019 NUPI Industrie Italiane S.p.A. implemented and certified a Process for EPD generation by using an algorithm that has been validated and certified by ICMQ S.p.A., in agreement with EPDItaly’s requirements. The process is based on an automatic data collection from different manufacturing plants that have been integrated, verified and validated in compliance with internal procedures. The validated algorithm allows the automatic calculation of the indicators reported into the current EPD coming from an LCA model implemented into the NUPI LCA process tool.
In 2025, after the five years period of validity, the NUPI LCA tool has been updated and validated by ICMQ S.p.A. The LCA tool enables the creation of partly verified LCA results for pipes, fittings and piping systems produced by NUPI.

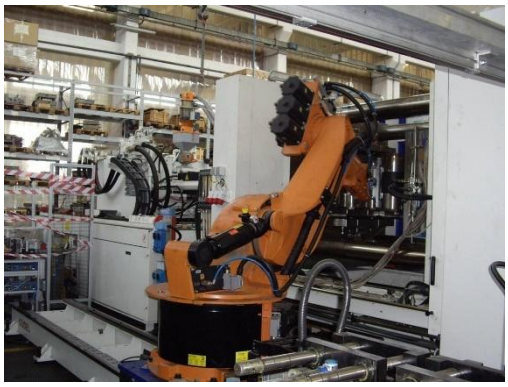
Product description

Detailed product description

POLYSYSTEM, NIRON and NIRON BETA spigot and socket fittings are polypropylene random copolymer (PP-R and PP-RCT) products manufactured by Nupi Industrie Italiane S.p.A. for the conveyance of hot and cold water and other technical fluids in building services and industrial applications. The spigot and socket fittings are produced in a range of diameters and pressure classes and are designed for use in plumbing, heating, cooling and HVAC systems. POLYPROPYLENE spigot and socket fittings are joined by thermal fusion, creating homogeneous and leak-tight connections. The products are manufactured in accordance with the applicable requirements of EN ISO 15874 and related product specifications.

Production processes description

FITTINGS INJECTION MOULDING (Busto Arsizio)



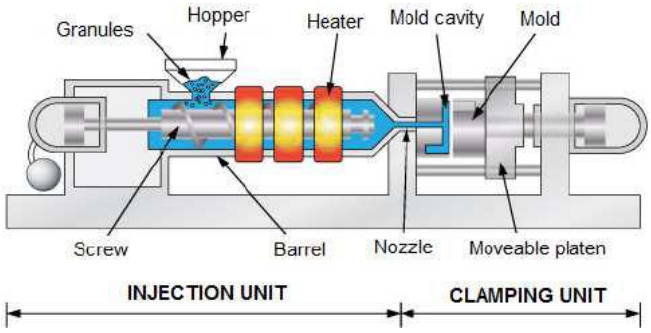


Figure 1 Injection Molding process

Equipment to mould fittings consists of a mould and an injection moulding press. The mould is a split metal block that is machined to form a part shaped cavity in the block. Hollows in the part are created by core pins shaped into the part cavity. The moulded part is created by filling the cavity in the mould block through a filling port, called a gate.

The injection moulding press has two parts; a press to open and close the mould block, and an injection extruder to inject material into the mould block cavity. The injection extruder is similar to a conventional extruder except that, in addition to rotating, the extruder screw also moves lengthwise in the barrel. Injection moulding is a cyclical process. The mould block is closed and the extruder barrel is moved into contact with the mould gate. The screw is rotated and then drawn back, filling the barrel ahead of the screw with material. Screw rotation is stopped, and the screw is rammed forward, injecting molten material into the mould cavity under high pressure. The part in the mould block is cooled by water circulating through the mould block. When the part has solidified, the extruder barrel and mould core pins are retracted, the mould is opened, and the part is ejected.

Niron&Polysystem spigot and socket fittings are designed to fully exploit the characteristics of the materials used to make them and offer high performance standards that allow them to be used both for plumbing and heating systems. The table below, an excerpt from Standard EN ISO 15874, demonstrates the fields of use and the corresponding operating pressures and temperatures guaranteed for this system.

PP-R

	APPLICATION CLASSES								P_D					
	1	2	4	5	1	2	4	5			10	8	6	4
P_D	S				SDR				S	SDR	ALLOWABLE CLASSES			
4	5	5	5	3,2	11	11	11	7,4	2,5	6	1&4	2	5	5
6	5	3,2	5	3,2	11	7,4	11	7,4	3,2	7,4	2)	1&4	2	5
8	3,2	2,5	3,2	-	7,4	6	7,4	1)	5	11	2)	2)	1&4	1&2&4
10	2,5	-	2,5	-	6	1)	6	1)						

PP-RCT

	APPLICATION CLASSES								P_D					
	1	2	4	5	1	2	4	5			10	8	6	4
P_D	S				SDR				S	SDR	ALLOWABLE CLASSES			
4	8	8	8	5	17	17	17	11	3,2	7,4	1&2&4	5	5	5
6	5	5	5	4	11	11	11	9	4	9	2)	1,2,4	5	5
8	4	4	4	3,2	9	9	9	7,4	5	11	2)	2)	1&2&4	5
10	3,2	3,2	3,2	1)	7,4	7,4	7,4	1)	8	17	2)	2)	2)	1&2&4

1) Series/SDR not available in the NIRON piping range.

2) Application class not covered by this Series/SDR.

Example: A PP-RCT, SDR7,4, Series 3,2 pipe can be used in application classes 1,2 and 4 with a design pressure of 10 bar and in class 5 with a design pressure of 8 bar.

Service Conditions - Application classes as per EN ISO 15874 and ISO 10508

PROPERTIES	TEST METHOD	VALUES AT +23°C	UNIT OF MEASURE
Volumic mass	ISO 1183	**0,898**	g/cm^3
Yield strength	ISO 527	**23**	N/mm^2
Elongation at break	ISO 527	**> 50**	%
Modulus of elasticity	ISO 527	**850**	N/mm^2
Melt flow index MFI 190/5	ISO 1133	**0,5**	g/10 min
Heat conductivity (λ)	DIN 52612	**0,24**	W/mk
Linear thermal expansion coefficient	VDE 0304	**$1,5 \times 10^{-4}$**	K^{-1}
Melting point	DIN 53736b2	**150 - 154**	°C
Impact strength (Charpy)			
+23°C	ISO 179/1 e A	**no break**	KJ/m^2
-30°C	ISO 179/1 e A	**50**	KJ/m^2
Volumic strength	IEC 93	**$>10^{15}$**	Ω cm
Dielectric strength	IEC 243/1	**75**	KV/mm
Dielectric loss factor	DIN 53483	**$< 5 \times 10^{-4}$**	
Fire resistance	DIN 4102	**B2**	

Physical properties Niron and Polysystem PP material

Spigot and socket fittings are classified as Class 1, 2 or 5 in compliance with EN ISO 15874 Table 1 in combination with the dedicated Design Pressure given by the fitting SDR.

Base materials/ancillary materials in the functional/declared unit

Material	SP&SK Fittings
Polypropylene granulate	100%
TOTAL	100%

The product does not contain substances included in the "Candidate list of substances of very high concern (SVHC) for authorization" in a percentage greater than 0.1% in weight/weight.

Description of functional/declared unit

In this EPD an average fitting is considered. The fitting diameters range considered in the data collection includes a size range from DN 20 to DN 355, type couplers, (90° and 45°) elbows, (equal and reduced) tees and reducers, stub ends, socket fusion saddles. The complete list is in Annex I. The raw material used can be PP-R or PP-RCT.

It has been considered a declared unit of 1 kg of NIRON, NIRON BETA AND POLYSYSTEM spigot and socket fittings.

The declared unit's packaging includes 0,038 kg/kg of wooden pallets, 0,072 kg/kg card boxes and 0,008 kg/kg of polyethylene bags and stretch films.

Reference service life (RSL)

NIRON AND POLYSYSTEM spigot and socket fittings are regarded as having 50 years RSL independent of their material.

Products Distribution

Polypropylene spigot and socket fittings the packaging consists in plastic bags, wooden pallets and cardboard boxes.

Installation

According to PCR EN 16904 installation of the product was considered to be negligible, as it is done manually in the building or with a minimum energy. Environmental impacts from waste packaging materials (A5) and release of biogenic carbon dioxide from wood pallets and cardboard boxes was considered. The impacts of material production, its processing and its disposal as installation waste are also included. Packaging treatment scenarios are based on Eurostat data for Europe.

No emissions are generated during installation and plastic spigot and socket fittings installations do not cause health or environmental hazards.

End of Life

After the demolition and deconstruction phase, the EU EOL as per MFA JRC 2025 (2024 data) scenario for Polypropylene materials has been chosen (45.5 % incineration, 39.3% landfill and 15.2% recycling).

For transport from the installation site to the treatment site (C2), the considered distances (as per EN 16904) were:

- incineration = 150 km
- recycling = 500 km
- landfilling = 50 km

LCA results – Environmental impacts per declared unit

The tables below show the environmental impacts results of 1 kg of NIRON, NIRON BETA AND POLYSYSTEM spigot and socket fittings.

Additional environmental impact indicators have been calculated and included in the project report but are not declared according to /EN 15804+A2:2019/ chapter 7.2.3.2.

CORE ENVIRONMENTAL IMPACT INDICATORS												
	A1	**A2**	**A3**	**A1-A3**	**A4**	**A5**	**B1-B7**	**C1**	**C2**	**C3**	**C4**	**D**
GWP - total [kg CO_2 eq.]	2,45E+00	2,18E-01	9,81E-01	3,65E+00	2,73E-01	2,26E-01	0,00E+00	0,00E+00	1,54E-02	1,47E+00	1,14E-02	-9,62E-01
GWP- fossil [kg CO_2 eq.]	2,44E+00	2,14E-01	1,14E+00	3,79E+00	2,73E-01	1,50E-02	0,00E+00	0,00E+00	1,54E-02	1,47E+00	1,13E-02	-9,58E-01
GWP - biogenic [kg CO_2 eq.]	9,21E-03	6,24E-04	-1,56E-01	-1,46E-01	2,49E-04	2,11E-01	0,00E+00	0,00E+00	1,41E-05	2,56E-04	3,47E-05	-3,80E-03
GWP - LULUC [kg CO_2 eq.]	3,17E-04	3,64E-03	6,53E-04	4,61E-03	3,06E-05	3,19E-06	0,00E+00	0,00E+00	1,99E-06	1,01E-05	4,16E-05	-9,11E-05
ODP [kg CFC-11 eq.]	2,32E-11	3,19E-14	5,23E-13	2,38E-11	3,18E-14	1,59E-14	0,00E+00	0,00E+00	1,92E-15	5,31E-13	3,73E-14	-6,25E-12
AP [mol of H+ eq.]	4,57E-03	3,25E-04	5,45E-04	5,44E-03	2,33E-03	1,88E-05	0,00E+00	0,00E+00	2,08E-05	1,96E-04	6,76E-05	-1,23E-03
EP - freshwater [kg P eq.]	2,49E-06	9,25E-07	1,48E-06	4,90E-06	7,21E-08	1,33E-07	0,00E+00	0,00E+00	4,05E-09	1,70E-07	6,48E-06	-1,38E-06
EP - marine [kg N eq.]	1,48E-03	1,22E-04	2,44E-04	1,85E-03	1,01E-03	7,34E-06	0,00E+00	0,00E+00	8,21E-06	4,43E-05	1,46E-05	-3,87E-04
EP - terrestrial [mol of N eq.]	1,60E-02	1,44E-03	2,58E-03	2,00E-02	1,10E-02	7,61E-05	0,00E+00	0,00E+00	9,21E-05	8,20E-04	1,60E-04	-4,16E-03
POCP [kg NMVOC eq.]	6,16E-03	3,23E-04	7,26E-04	7,21E-03	2,32E-03	2,94E-05	0,00E+00	0,00E+00	2,25E-05	1,28E-04	4,66E-05	-1,34E-03
ADPe [kg Sb eq.]*	2,69E-06	1,89E-08	2,80E-07	2,99E-06	7,08E-09	3,36E-10	0,00E+00	0,00E+00	4,13E-10	9,31E-09	7,51E-10	-7,61E-08
ADPf [MJ]*	9,31E+01	2,85E+00	2,03E+00	9,80E+01	3,56E+00	6,51E-02	0,00E+00	0,00E+00	2,05E-01	7,05E-01	1,91E-01	-2,16E+01
WDP [m^3 world equiv.]*	3,63E-01	3,35E-03	2,14E-01	5,80E-01	6,52E-04	4,44E-03	0,00E+00	0,00E+00	3,86E-05	1,38E-01	1,46E-03	-1,18E-01

Caption: GWP - total = global warming potential; GWP - fossil = global warming potential (fossil fuel only); GWP - biogenic = global warming potential (biogenic); GWP - luluc = global warming potential (land use only); ODP = ozone depletion; AP = acidification terrestrial and freshwater; EP - freshwater = eutrophication potential (freshwater); EP - marine = eutrophication potential (marine); EP- terrestrial = eutrophication potential (terrestrial); POCP = photochemical ozone formation; ADPE = abiotic depletion potential (element), ADPF = abiotic depletion potential (fossil) WDP = water scarcity.

*The results of this environmental impact indicator shall be used with care as the uncertainties on these results are high or as there is limited experienced with the indicator according to EN 15804+A2:2019 chapter 7.2.3.2.

LCA results – Resource use per declared unit

RESOURCE USE												
	A1	A2	A3	A1-A3	A4	A5	B1-B7	C1	C2	C3	C4	D
PERE [MJ]	1,51E+01	2,46E-01	7,26E-01	1,61E+01	2,47E-02	3,11E-01	0,00E+00	0,00E+00	1,50E-03	3,27E-01	2,89E-02	-4,18E+00
PERM [MJ]	0,00E+00	0,00E+00	1,86E+00	1,86E+00	0,00E+00	-3,00E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT [MJ]	1,51E+01	2,46E-01	2,59E+00	1,79E+01	2,47E-02	1,08E-02	0,00E+00	0,00E+00	1,50E-03	3,27E-01	2,89E-02	-4,18E+00
PENRE [MJ]	4,81E+01	2,85E+00	1,64E+00	5,26E+01	3,56E+00	2,06E-01	0,00E+00	0,00E+00	2,05E-01	2,12E+01	1,91E-01	-2,16E+01
PENRM [MJ]	4,50E+01	0,00E+00	3,82E-01	4,54E+01	0,00E+00	-1,41E-01	0,00E+00	0,00E+00	0,00E+00	-2,05E+01	0,00E+00	0,00E+00
PENRT [MJ]	9,31E+01	2,85E+00	2,03E+00	9,80E+01	3,56E+00	6,51E-02	0,00E+00	0,00E+00	2,05E-01	7,05E-01	1,91E-01	-2,16E+01
SM [kg]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,43E-01
RSF [MJ]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
NRSF [MJ]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
FW [m³]	9,61E-03	2,74E-04	5,48E-03	1,54E-02	2,74E-05	1,07E-04	0,00E+00	0,00E+00	1,64E-06	3,34E-03	4,37E-05	-4,15E-03

Caption: 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 resources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Use of net fresh water

LCA results – Output flows and waste categories per declared unit

WASTE CATEGORIES AND OUTPUT FLOWS												
	A1	**A2**	**A3**	**A1-A3**	**A4**	**A5**	**B1-B7**	**C1**	**C2**	**C3**	**C4**	**D**
HWD [kg]	6,86E-08	1,09E-10	5,05E-08	1,19E-07	1,26E-10	4,13E-10	0,00E+00	0,00E+00	7,44E-12	1,83E-08	4,72E-11	-8,53E-09
NHWD [kg]	2,20E-02	4,66E-04	1,99E-02	4,24E-02	3,66E-04	1,60E-02	0,00E+00	0,00E+00	2,13E-05	1,14E-02	3,83E-01	-7,98E-03
RWD [kg]	6,06E-04	5,20E-06	6,16E-05	6,73E-04	5,41E-06	2,05E-06	0,00E+00	0,00E+00	3,26E-07	7,95E-05	2,69E-06	-9,06E-04
EEE [MJ]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
EET [MJ]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	6,28E-02	0,00E+00	0,00E+00	0,00E+00	1,49E-01	0,00E+00	0,00E+00
CRU [kg]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
MER [kg]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	7,16E-02	0,00E+00	0,00E+00	0,00E+00	2,97E+00	0,00E+00	0,00E+00
MFR [kg]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,08E-01	0,00E+00	0,00E+00	0,00E+00	5,28E+00	0,00E+00	0,00E+00

.Caption: HWD = Hazardous waste disposed; NHWD = Non-hazardous waste disposed; RWD = Radioactive waste disposed; CRU = Components for re-use; MFR = Materials for recycling; MER = Materials for energy recovery; EEE = Exported electrical energy; EET = Exported thermal energy

Biogenic carbon content of product and packaging	
Biogenic carbon content in product [kg]	0,00E+00
Biogenic carbon content in packaging [kg]	4,51E-02

Assumptions and approximations

Where possible, a conservative approach has been adopted, overestimating burdens to prove irrelevance. In other cases, proxy data were selected based on scientific experience, in order to improve the accuracy of the model. Where it was not possible to know the precise composition of materials in the supply chain (due to commercial or industrial confidential suppliers' reasons or due to missing datasets), these have been approximated with LCIs of similar materials, estimated by the combination of available dataset or reconstructed with literature data.

1. Where potential benefits from energy recovery in A5 and C modules are considered, for rest of world countries (other than Europe) these are calculated based on the European grid mix.
2. Wastes deriving from extraordinary maintenance activities have not been considered.
3. Some components produced by third party companies come to NUPI with their own packaging. This packaging is not accounted for in this study.
4. In case of CCHP system in place as electricity is produced only for internal use, no electricity is sent to national grid.
5. Internal transports between production sites have not been considered
6. A European scenario has been considered for end of life scenarios.

Cut off criteria

EN 15804+A2:2019 requires that where there are data gaps or insufficient input data for a unit process the cut-off criteria shall be 1% of renewable and non-renewable primary energy usage and 1% of the total mass of this unit process. It can be concluded that the total sum of neglected material flows does not exceed 5% of mass, energy or environmental relevance. On the other hand, impacts generated from the machinery and facilities itself are neglected. This is in accordance with ISO14040/44 (2006).

In this study, the only aspects that have been omitted are the polyamide strips for packaging as they are <1% of their respective unit processes.

Data quality

The data quality can be considered as good. The LCA model has been checked and most relevant flows were considered. Technological, geographical and temporal representativeness is good.

Examination period

Primary data collected in the context of this study refer to 2024.

Allocation of background data

In general, the allocation principles used in standard Sphera LCA for Expert (previously GaBi Professional) datasets are explained within Sphera LCA for Expert (GaBi)-Documentation (MANAGED LCA CONTENT (GABI DATABASES)).

- **Module A1** includes the manufacture of primary materials which are required for the spigot and socket fittings manufacturing. The datasets for the primary basic materials already include their upstream process. The energy demand is also considered.
- **Module A2** includes the transports of the basic materials to the spigot and socket fittings producer. Fuel use is also included in the transport sub-plans. Truck-trailer, Euro 6 A-C, 20 - 28t gross weight / 12.4t payload capacity, Container ship, 5,000 to 200,000 dwt payload capacity, deep sea and Rail transport cargo - average, average train, gross tonne weight 1,000t / 726t payload capacity are used as standard processes in the model.
- **Module A3** includes the production of spigot and socket fittings, auxiliaries and packaging materials. In this module are also considered emissions to air, production of wastes and their treatment (such activities refer to NUPI Industrie Italiane S.p.A. direct activities. Primary data have been used for (such as injection moulding for spigot and socket fittings production and emissions/wastes).

- **Module A4** takes into account the transport to the final customer/distributor or construction site. The distribution scenario is taken from an internal survey and shown below:

Means of transport	GaBi transport dataset	Weighted Average distance [km]
Truck	Truck, Euro 5, > 32 t/ 27% utilization factor 26 t truck max load	900,58
Ship	Average ship, 5000-200000 dwt payload capacity/ deep sea	2267,10

- **Module C1** (Deconstruction / demolition)- As generic scenario for the demolition of piping system, it is considered that it is mainly demolished together with the construction of the building. During the demolition of a building a significant amount of energy is used. This energy is mainly used to break inert waste streams, such as concrete and brick, and only a very little, insignificant part could be allocated to the product. Therefore, the impact of the deconstruction/demolition stage allocated to the product can be considered as zero.
- **Module C2, C3** (sorting, recycling and incineration with energy recovery) and C4 (landfilling) consider the end of life scenarios of the product, considering all components. The percentages to the given scenarios have been taken from MFA JRC 2025 (2024 data) as shown below:

  - 45.5 % incineration, 39.3% landfill, 15,2% recycling typical for products made of PP.

  For transport from the installation site to the treatment site, reference can be made to the document /TEPPFA EOL SCENARIO/ where it is stated that:
  • incineration = 150 km
  • recycling = 500 km
  • landfilling = 50 km

Module D consists of loads and benefits beyond the system boundaries.

Other additional environmental information

Emissions to indoor air:

No direct emissions at the building site. Nupi Industrie Italiane S.p.A confirms that the NIRON AND POLYSYSTEM spigot and socket fittings do not contain any substances mentioned on the REACH-list.

Emissions to soil and water:

No direct emissions at the building site. Nupi Industrie Italiane S.p.A confirms that NIRON AND POLYSYSTEM spigot and socket fittings do not contain any substances mentioned on the REACH-list.

Annex I - Products specific weight table

Item Code	Description	Weight (kg/pc)
03NC45110	45° ELBOW Ø110	0,94
03NC45125	45° ELBOW Ø125	1,36
03NC4516	45° ELBOW Ø16	0,01
03NC4520	45° ELBOW Ø20	0,02
03NC4525	45° ELBOW Ø25	0,02
03NC4532	45° ELBOW Ø32	0,04
03NC4540	45° ELBOW Ø40	0,07
03NC4550	45° ELBOW Ø50	0,12
03NC4563	45° ELBOW Ø63	0,21
03NC4575	45° ELBOW Ø75	0,43
03NC4590	45° ELBOW Ø90	0,63
03NCC110	END CAP Ø110	0,58
03NCC11011M	END CAP Ø110 SDR11 - SPIGOT	0,42
03NCC125	END CAP Ø125	0,88
03NCC12511M	END CAP Ø125 SDR11 - SPIGOT	0,58
03NCC16	END CAP Ø16	0,01
03NCC16011M	END CAP Ø160 SDR11 - SPIGOT	1,14
03NCC16017M	END CAP Ø160 SDR17- SPIGOT	0,94
03NCC20	END CAP Ø20	0,01
03NCC20011M	END CAP Ø200 SDR11 - SPIGOT	2,14
03NCC20017M	END CAP Ø200 SDR17- SPIGOT	1,50
03NCC25	END CAP Ø25	0,02
03NCC32	END CAP Ø32	0,04
03NCC40	END CAP Ø40	0,05
03NCC50	END CAP Ø50	0,07
03NCC63	END CAP Ø63	0,15
03NCC6311M	END CAP Ø63 SDR11 - SPIGOT	0,10
03NCC75	END CAP Ø75	0,24

Item Code	Description	Weight (kg/pc)
27NR31516011MMB	SDR 11 - REDUCER Ø315-160 -	10,85
27NR31516017MMB	SDR 17 - MALE REDUCER Ø315-160 -	4,27
27NR31516073MMB	SDR 7,3 - REDUCER Ø315-160	16,39
27NR31520011MMB	SDR 11 - REDUCER Ø315-200 -	11,65
27NR31520017MMB	SDR 17 - MALE REDUCER Ø315-200 -	7,18
27NR31520073MMB	SDR 7,3 - REDUCER Ø315-200	18,28
27NR31525011MMB	SDR 11 - REDUCER Ø315-250 -	13,41
27NR31525017MMB	SDR 17 - MALE REDUCER Ø315-250 -	7,92
27NR31525073MMB	SDR 7,3 - REDUCER Ø315-250	20,19
27NR3152509MMB	SDR 9 - REDUCER Ø315-200	17,15
27NR2520	REDUCING Ø25-20	0,02
27NR3220	REDUCING Ø32-20	0,02
27NR3225	REDUCING Ø32-25	0,02
27NR35520011MMB	SDR 11 - REDUCER Ø355-200 -	14,68
27NR35520017MMB	SDR 17 - MALE REDUCER Ø355-200 -	9,93
27NR35525011MMB	SDR 11 - REDUCER Ø355-250 -	17,51
27NR35525017MMB	SDR 17 - MALE REDUCER Ø355-250 -	11,01
27NR35531511MMB	SDR 11 - REDUCER Ø355-315 -	22,60
27NR35531517MMB	SDR 17 - MALE REDUCER Ø355-315 -	12,24
27NR4020	REDUCING Ø40-20	0,03
27NR4025	REDUCING Ø40-25	0,03
27NR4032	REDUCING Ø40-32	0,04
27NR45031517MMB	SDR 17 - MALE REDUCER Ø450-315 -	15,94
27NR45040017MMB	SDR 17 - MALE REDUCER Ø450-400 -	16,50
27NR5020	REDUCING Ø50-20	0,05
27NR5025	REDUCING Ø50-25	0,05
27NR5032	REDUCING Ø50-32	0,06
27NR5040	REDUCING Ø50-40	0,06

03NCC7511M	END CAP Ø75 SDR11 - SPIGOT	0,15
03NCC90	END CAP Ø90	0,37
03NCC9011M	END CAP Ø90 SDR11 - SPIGOT	0,25
03NCMF4520	MALE/FEMALE 45°ELBOW Ø20	0,02
03NCMF4525	MALE/FEMALE 45°ELBOW Ø25	0,03
03NCR402020	REDUCED CROSS Ø40-20-20-40	0,10
03NCR402525	REDUCED CROSS Ø40-25-25-40	0,08
03NCROSS25	CROSS Ø25	0,04
03NCROSS20	CROSS Ø20	0,03
03NCTV20	ELBOW THREE OUTLETS Ø20	0,02
03NG110	90° ELBOW Ø110	1,28
03NG125	90° ELBOW Ø125	2,05
03NG16	90° ELBOW Ø16	0,01
03NG20	90° ELBOW Ø20	0,02
03NG25	90° ELBOW Ø25	0,03
03NG32	90° ELBOW Ø32	0,06
03NG40	90° ELBOW Ø40	0,10
03NG50	90° ELBOW Ø50	0,18
03NG63	90° ELBOW Ø63	0,33
03NG75	90° ELBOW Ø75	0,47
03NG90	90° ELBOW Ø90	0,86
03NGMF20	MALE/FEMALE 90° ELBOW Ø20	0,02
03NGMF25	MALE/FEMALE 90° ELBOW Ø25	0,03
03NGMF32	MALE/FEMALE 90° ELBOW Ø32	0,06
03NGMF40	MALE/FEMALE 90° ELBOW Ø40	0,10
03NGS20160200	WELDING SADDLE Ø160-200X20	0,02
03NGS20250315	WELDING SADDLE Ø250-315X20	0,01
03NGS20355630	WELDING SADDLE Ø355-630X20	0,01
03NGS2040	WELDING SADDLE Ø40X20	0,01
03NGS2050	WELDING SADDLE Ø50X20	0,01
03NGS206375	WELDING SADDLE Ø63-75X20	0,01
03NGS2090110125	WELDING SADDLE Ø90-110-125X20	0,02
03NGS25160200	WELDING SADDLE Ø160-200X25	0,01
03NGS25250315	WELDING SADDLE Ø250-315X25	0,01
03NGS25355630	WELDING SADDLE Ø355-630X25	0,01
03NGS2540	WELDING SADDLE Ø40X25	0,00
03NGS2550	WELDING SADDLE Ø50X25	0,01

27NR6325	REDUCING Ø63-25	0,08
27NR6332	REDUCING Ø63-32	0,08
27NR6340	REDUCING Ø63-40	0,09
27NR634011MM	SDR 11 - REDUCER Ø63-40	0,10
27NR634073MM	SDR 7,3 - REDUCER Ø63-40	0,14
27NR63409MM	SDR 9 - REDUCER Ø63-40	0,12
27NR6350	REDUCING Ø63-50	0,12
27NR635011MM	SDR 11 - REDUCER Ø63-50	0,13
27NR635073MM	SDR 7,3 - REDUCER Ø63-50	0,15
27NR63509MM	SDR 9 - REDUCER Ø63-50	0,13
27NR7520	REDUCING Ø75-20	0,18
27NR7525	REDUCING Ø75-25	0,13
27NR7532	REDUCING Ø75-32	0,13
27NR7540	REDUCING Ø75-40	0,13
27NR754011MM	SDR 11 - REDUCER Ø75-40	0,16
27NR7550	REDUCING Ø75-50	0,13
27NR755011MM	SDR 11 - REDUCER Ø75-50	0,18
27NR7563	REDUCING Ø75-63	0,19
27NR756311MM	SDR 11 - REDUCER Ø75-63	0,23
27NR756317MM	SDR 17 - REDUCER Ø75-63	0,16
27NR9050	REDUCING Ø90-50	0,19
27NR905011MM	SDR 11 - REDUCER Ø90-50	0,25
27NR905017MM	SDR 17 - REDUCER Ø90-50	0,22
27NR9063	REDUCING Ø90-63	0,25
27NR906311MM	SDR 11 - REDUCER Ø90-63	0,26
27NR906317MM	SDR 17 - REDUCER Ø90-63	0,21
27NR906373MM	SDR 7,3 - REDUCER Ø90-63	0,32
27NR90639MM	SDR 9 - REDUCER Ø90-63	0,31
27NR9075	REDUCING Ø90-75	0,23
27NR907511MM	SDR 11 - REDUCER Ø90-75	0,33
27NR907517MM	SDR 17 - REDUCER Ø90-75	0,24
27NR907573MM	SDR 7,3 - REDUCER Ø90-75	0,41
27NR90759MM	SDR 9 - REDUCER Ø90-75	0,35
27NRCC16011073MM	SDR 7,4 - REDUCER Ø160-110 -	0,73
27NRCC1601109MM	SDR 9 - REDUCER Ø160-110 -	0,70
27NRCC16012573MM	SDR 7,4 - REDUCER Ø160-125 -	0,72
27NRCC1601259MM	SDR 9 - REDUCER Ø160-125 -	0,67

03NGS256375	WELDING SADDLE Ø63-75X25	0,01
03NGS2590110125	WELDING SADDLE Ø90-110-125X25	0,01
03NGS32160200	WELDING SADDLE Ø160-200X32	0,03
03NGS32250315	WELDING SADDLE Ø250-315X32	0,03
03NGS32355630	WELDING SADDLE Ø355-630X32	0,03
03NGS326375	WELDING SADDLE Ø63-75X32	0,06
03NGS3290110125	WELDING SADDLE Ø90-110-125X32	0,03
03NGS40110	WELDING SADDLE Ø110X40	0,05
03NGS40125	WELDING SADDLE Ø125X40	0,05
03NGS40160200	WELDING SADDLE Ø160-200X40	0,04
03NGS40250315	WELDING SADDLE Ø250-315X40	0,04
03NGS40355630	WELDING SADDLE Ø355-630X40	0,04
03NGS4090	WELDING SADDLE Ø90X40	0,04
03NGS50110	WELDING SADDLE Ø110X50	0,09
03NGS50125	WELDING SADDLE Ø125X50	0,09
03NGS50160	WELDING SADDLE Ø160X50	0,09
03NGS50200	WELDING SADDLE Ø200X50	0,09
03NGS50250	WELDING SADDLE Ø250X50	0,08
03NGS50315	WELDING SADDLE Ø315X50	0,09
03NGS50355450	WELDING SADDLE Ø355-450X50	0,08
03NGS50500630	WELDING SADDLE Ø500-630X50	0,08
03NGS5090	WELDING SADDLE Ø90X50	0,09
03NGS63110	WELDING SADDLE Ø110X63	0,16
03NGS63125	WELDING SADDLE Ø125X63	0,16
03NGS63160	WELDING SADDLE Ø160X63	0,15
03NGS63200	WELDING SADDLE Ø200X63	0,15
03NGS63250	WELDING SADDLE Ø250X63	0,15
03NGS63315	WELDING SADDLE Ø315X63	0,15
03NGS63355450	WELDING SADDLE Ø355-450X63	0,14
03NMAN110	SOCKET Ø110	0,78
03NMAN125	SOCKET Ø125	0,90
03NMAN16	SOCKET Ø16	0,01
03NMAN20	SOCKET Ø20	0,01
03NMAN25	SOCKET Ø25	0,02
03NMAN32	SOCKET Ø32	0,04
03NMAN40	SOCKET Ø40	0,06
03NMAN50	SOCKET Ø50	0,11

27NRCC1609073MM	SDR 7,4 - REDUCER Ø160-90 -	0,74
27NRCC160909MM	SDR 9 - REDUCER Ø160-90 -	0,72
27NRCC20011011MM	SDR 11 - REDUCER Ø200-110 -	1,07
27NRCC2001109MM	SDR 9 - REDUCER Ø200-110 -	1,16
27NRCC20012511MM	SDR 11 - REDUCER Ø200-125 -	1,14
27NRCC20012573MM	SDR 7,4 - REDUCER Ø200-125 -	0,12
27NRCC2001259MM	SDR 9 - REDUCER Ø200-125 -	1,32
27NRCC20016011MM	SDR 11 - REDUCER Ø200-160 -	1,19
27NRCC20016073MM	SDR 7,4 - REDUCER Ø200-160 -	1,64
27NRCC2001609MM	SDR 9 - REDUCER Ø200-160 -	1,40
27NRCC25012511MM	SDR 11 - REDUCER Ø250-125 -	1,67
27NRCC25012517MM	SDR 17 - REDUCER Ø250-125 -	1,26
27NRCC25012573MM	SDR 7,4 - REDUCER Ø250-125 -	2,13
27NRCC2501259MM	SDR 9 - REDUCER Ø250-125 -	1,95
27NRCC25016011MM	SDR 11 - REDUCER Ø250-160 -	1,78
27NRCC25016017MM	SDR 17 - REDUCER Ø250-160 -	1,50
27NRCC25016073MM	SDR 7,4 - REDUCER Ø250-160 -	2,04
27NRCC25020011MM	SDR 11 - REDUCER Ø250-200 -	1,96
27NRCC25020017MM	SDR 17 - REDUCER Ø250-200 -	1,51
27NRCC25020073MM	SDR 7,4 - REDUCER Ø250-200 -	1,90
27NRCC2502009MM	SDR 9 - REDUCER Ø250-200 -	1,70
27NRCC31512511MM	SDR 11 - REDUCER Ø315-125 -	3,17
27NRCC31516011MM	SDR 11 - REDUCER Ø315-160 -	3,09
27NRCC31512517MM	SDR 17 - REDUCER Ø315-125 -	2,58
27NRCC31516017MM	SDR 17 - REDUCER Ø315-160 -	2,43
27NRCC31516073MM	SDR 7,4 - REDUCER Ø315-160 -	4,36
27NRCC3151609MM	SDR 9 - REDUCER Ø315-160 -	4,13
27NRCC31520011MM	SDR 11 - REDUCER Ø315-200 -	3,13
27NRCC31520017MM	SDR 17 - REDUCER Ø315-200 -	2,35
27NRCC31520073MM	SDR 7,4 - REDUCER Ø315-200 -	4,17
27NRCC3152009MM	SDR 9 - REDUCER Ø315-200 -	3,87
27NRCC31525011MM	SDR 11 - REDUCER Ø315-250 -	3,17
27NRCC31525017MM	SDR 17 - REDUCER Ø315-250 -	2,22
27NRCC31525073MM	SDR 7,4 - REDUCER Ø315-250 -	3,92
27NRCC3152509MM	SDR 9 - REDUCER Ø315-250 -	3,47
27NRCC35520011MM	SDR 11 - REDUCER Ø355-200 -	6,21
27NRCC35520017MM	SDR 17 - REDUCER Ø355-200 -	5,18

03NMAN63	SOCKET Ø63	0,18
03NMAN75	SOCKET Ø75	0,24
03NMAN90	SOCKET Ø90	0,29
03NR11063	REDUCING Ø110-63	0,35
03NR11075	REDUCING Ø110-75	0,36
03NR11090	REDUCING Ø110-90	0,25
03NR125110	REDUCING Ø125-110	0,58
03NR12590	REDUCING Ø125-90	0,69
03NR2016	REDUCING Ø20-16	0,01
03NR2516	REDUCING Ø25-16	0,02
03NR2520	REDUCING Ø25-20	0,02
03NR3220	REDUCING Ø32-20	0,02
03NR3225	REDUCING Ø32-25	0,02
03NR4020	REDUCING Ø40-20	0,03
03NR4025	REDUCING Ø40-25	0,03
03NR4032	REDUCING Ø40-32	0,04
03NR5020	REDUCING Ø50-20	0,05
03NR5025	REDUCING Ø50-25	0,05
03NR5032	REDUCING Ø50-32	0,06
03NR5040	REDUCING Ø50-40	0,06
03NR6325	REDUCING Ø63-25	0,08
03NR6332	REDUCING Ø63-32	0,09
03NR6340	REDUCING Ø63-40	0,09
03NR6350	REDUCING Ø63-50	0,12
03NR7520	REDUCING Ø75-20	0,13
03NR7525	REDUCING Ø75-25	0,13
03NR7532	REDUCING Ø75-32	0,12
03NR7540	REDUCING Ø75-40	0,13
03NR7550	REDUCING Ø75-50	0,13
03NR7563	REDUCING Ø75-63	0,19
03NR9063	REDUCING Ø90-63	0,25
03NR9075	REDUCING Ø90-75	0,23
03NSOFF20	COMPACT CROSSOVER F/F Ø20	0,05
03NSOFF25	COMPACT CROSSOVER F/F Ø25	0,09
03NSOFM20	COMPACT CROSSOVER M/F Ø20	0,05
03NSOFM25	COMPACT CROSSOVER M/F Ø25	0,05
03NSOR20	CROSSOVER PIPE Ø20	0,08

27NRCC35525011MM	SDR 11 - REDUCER Ø355-250 -	4,25
27NRCC35525017MM	SDR 17 - REDUCER Ø355-250 -	3,41
27NRCC35531511MM	SDR 11 - REDUCER Ø355-315 -	3,29
27NRCC35531517MM	SDR 17 - REDUCER Ø355-315 -	3,29
27NRCC40012511MM	SDR 11 - REDUCER Ø400-125 -	4,74
27NRCC40020011MM	SDR 11 - REDUCER Ø400-200 -	7,50
27NRCC40025011MM	SDR 11 - REDUCER Ø400-250 -	5,53
27NRCC40025017MM	SDR 17 - REDUCER Ø400-250 -	4,13
27NRCC40031511MM	SDR 11 - REDUCER Ø400-315 -	5,76
27NRCC40031517MM	SDR 17 - REDUCER Ø400-315 -	4,21
27NRCC40035511MM	SDR 11 - REDUCER Ø400-355 -	5,58
27NRCC40035517MM	SDR 17 - REDUCER Ø400-355 -	4,06
27NRCC45025011MM	SDR 11 - REDUCER Ø450-250 -	8,14
27NRCC45031511MM	SDR 11 - REDUCER Ø450-315 -	7,25
27NRCC45031517MM	SDR 17 - REDUCER Ø450-315 -	5,50
27NRCC45035511MM	SDR 11 - REDUCER Ø450-355 -	6,39
27NRCC45035517MM	SDR 17 - REDUCER Ø450-355 -	5,00
27NRCC45040011MM	SDR 11 - REDUCER Ø450-400 -	5,67
27NRCC45040017MM	SDR 17 - REDUCER Ø450-400 -	4,14
27NRCC50031517MM	SDR 17 - REDUCER Ø500-315 -	7,25
27NRCC50031511MM	SDR 11 - REDUCER Ø500-315 -	9,74
27NRCC50035511MM	SDR 11 - REDUCER Ø500-355 -	8,50
27NRCC50035517MM	SDR 17 - REDUCER Ø500-355 -	6,65
27NRCC50040011MM	SDR 11 - REDUCER Ø500-400 -	9,59
27NRCC50040017MM	SDR 17 - REDUCER Ø500-400 -	7,14
27NRCC50045011MM	SDR 11 - REDUCER Ø500-450 -	6,90
27NRCC50045017MM	SDR 17 - REDUCER Ø500-450 -	16,98
27NRCC56045017MM	SDR 17 - REDUCER Ø560-450 -	7,77
27NRCC56050017MM	SDR 17 - REDUCER Ø560-500 -	6,62
27NRCC63045017MM	SDR 17 - REDUCER Ø630-450 -	12,90
27NRCC63050017MM	SDR 17 - REDUCER Ø630-500 -	11,59
27NRCC63056017MM	SDR 17 - REDUCER Ø630-560 -	9,90
27NSOFF20	COMPACT CROSS OVER F/F Ø20	0,04
27NSOFF25	COMPACT CROSS OVER F/F Ø25	0,10
27NSOFM20	COMPACT CROSS OVER F/M Ø20	0,05
27NSOFM25	COMPACT CROSS OVER F/M Ø25	0,07
27NSOR20	CROSS OVER PIPE Ø20	0,08

03NSOR25	CROSSOVER PIPE Ø25	0,12
03NSOR32	CROSSOVER PIPE Ø32	0,19
03NT110	90° TEE Ø110	1,53
03NT125	90° TEE Ø125	2,65
03NT16	90° TEE Ø16	0,02
03NT20	90° TEE Ø20	0,03
03NT25	90° TEE Ø25	0,04
03NT32	90° TEE Ø32	0,08
03NT40	90° TEE Ø40	0,13
03NT50	90° TEE Ø50	0,23
03NT63	90° TEE Ø63	0,40
03NT75	90° TEE Ø75	0,58
03NT90	90° TEE Ø90°	1,03
03NTR11063110	REDUCED TEE Ø110X63X110	1,42
03NTR11075110	REDUCED TEE Ø110X75X110	1,46
03NTR11090110	REDUCED TEE Ø110X90X110	1,47
03NTR11315110M315	MALE REDUCER TEE Ø315X110X315 SDR11	10,90
03NTR11315125M315	MALE REDUCER TEE Ø315X125X315 SDR11	11,39
03NTR11355125M355	MALE REDUCER TEE Ø355X125X355 SDR11	18,29
03NTR125110125	REDUCED TEEØ125X110X125	2,54
03NTR12575125	REDUCED TEEØ125X75X125	2,58
03NTR12590125	REDUCED TEEØ125X90X125	2,33
03NTR162016	REDUCED TEEØ16X20X16	0,03
03NTR17315125M315	MALE REDUCER TEE Ø315X125X315 SDR17	9,70
03NTR17355125M355	MALE REDUCER TEE Ø355X125X355 SDR17	11,20
03NTR17400160M400	MALE REDUCER TEE Ø400X160X400 SDR17	16,42
03NTR201616	REDUCED TEE Ø20X16X16	0,03
03NTR201620	REDUCED TEE Ø20X16X20	0,03
03NTR202016	REDUCED TEE Ø20X20X16	0,03
03NTR251625	REDUCED TEE Ø25X16X25	0,04
03NTR252020	REDUCED TEE Ø25X20X20	0,04
03NTR252025	REDUCED TEE Ø25X20X25	0,04
03NTR252520	REDUCED TEE Ø25X25X20	0,04
03NTR253225	REDUCED TEE Ø25X32X25	0,10
03NTR322020	REDUCED TEE Ø32X20X20	0,08
03NTR322025	REDUCED TEE Ø32X20X25	0,10
03NTR322032	REDUCED TEE Ø32X20X32	0,07

27NSOR25	CROSS OVER PIPE Ø25	0,12
27NSOR32	CROSS OVER PIPE Ø32	0,19
27NT110	TEE Ø110	1,53
27NT11110MM	SDR 11 - TEE Ø110	1,52
27NT11125MM	SDR 11 - TEE Ø125	2,26
27NT11160MM	SDR 11 - TEE Ø160	4,11
27NT11200MM	SDR 11 - TEE Ø200	7,22
27NT11250MM	SDR 11 - TEE Ø250	12,06
27NT11315MM	SDR 11 - TEE Ø315	24,90
27NT11355MM	SDR 11 - TEE Ø355	34,00
27NT1163MM	SDR 11 - TEE Ø63	0,42
27NT1175MM	SDR 11 - TEE Ø75	0,63
27NT1190MM	SDR 11 - TEE Ø90	0,94
27NT125	TEE Ø125	2,65
27NT17110MM	SDR 17 - TEE Ø110	1,26
27NT17125MM	SDR 17 - TEE Ø125	2,20
27NT17160MM	SDR 17 - TEE Ø160	3,09
27NT17200MM	SDR 17 - TEE Ø200	5,33
27NT17250MM	SDR 17 - TEE Ø250	10,09
27NT17315MM	SDR 17 - TEE Ø315	18,50
27NT17355MM	SDR 17 - TEE Ø355	28,10
27NT1763MM	SDR 17 - TEE Ø63	0,38
27NT1775MM	SDR 17 - TEE Ø75	0,49
27NT1790MM	SDR 17 - TEE Ø90	0,72
27NT20	TEE Ø20	0,03
27NT25	TEE Ø25	0,04
27NT32	TEE Ø32	0,08
27NT40	TEE Ø40	0,13
27NT50	TEE Ø50	0,23
27NT63	TEE Ø63	0,39
27NT73110MM	SDR 7,4 - TEE Ø110	2,94
27NT73125MM	SDR 7,4 - TEE Ø125	2,91
27NT73160MM	SDR 7,4 - TEE Ø160	6,06
27NT73200MM	SDR 7,4 - TEE Ø200	9,94
27NT7363MM	SDR 7,4 - TEE Ø63	0,52
27NT7375MM	SDR 7,4 - TEE Ø75	0,78
27NT7390MM	SDR 7,4 - TEE Ø90	1,36

03NTR322525	REDUCED TEE Ø32X25X25	0,08
03NTR322532	REDUCED TEE Ø32X25X32	0,07
03NTR323225	REDUCED TEE Ø32X32X25	0,09
03NTR402040	REDUCED TEE Ø40X20X40	0,09
03NTR402540	REDUCED TEE Ø40X25X40	0,08
03NTR403240	REDUCED TEE Ø40X32X40	0,13
03NTR502050	REDUCED TEE Ø50X20X50	0,16
03NTR502550	REDUCED TEE Ø50X25X50	0,15
03NTR503250	REDUCED TEE Ø50X32X50	0,14
03NTR504050	REDUCED TEE Ø50X40X50	0,23
03NTR632563	REDUCED TEE Ø63X25X63	0,24
03NTR633263	REDUCED TEE Ø63X32X63	0,25
03NTR634063	REDUCED TEE Ø63X40X63	0,28
03NTR635063	REDUCED TEE Ø63X50X63	0,35
03NTR753275	REDUCED TEE Ø75X32X75	0,60
03NTR754075	REDUCED TEE Ø75X32X75	0,64
03NTR755075	REDUCED TEE Ø75X32X75	0,58
03NTR756375	REDUCED TEE Ø75X63X75	0,58
03NTR905090	REDUCED TEE Ø90X50X90	0,79
03NTR906390	REDUCED TEE Ø90X63X90	0,99
03NTR907590	REDUCED TEE Ø90X75X90	1,03
27NC45110	45° ELBOW Ø110	0,94
27NC4511110MM	45° ELBOW Ø110 SDR11	0,88
27NC4511125MM	45° ELBOW Ø125 SDR11	1,21
27NC4511160MM	45° ELBOW Ø160 SDR11	1,98
27NC4511200MM	45° ELBOW Ø200 SDR11	4,39
27NC4511250MM	45° ELBOW Ø250 SDR11	7,42
27NC4511315MM	45° ELBOW Ø315 SDR11	14,26
27NC451163MM	45° ELBOW Ø63 SDR11	0,22
27NC451175MM	45° ELBOW Ø75 SDR11	0,36
27NC451190MM	45° ELBOW Ø90 SDR11	0,59
27NC45125	45° ELBOW Ø125	1,36
27NC4517110MM	45° ELBOW Ø110 SDR17	1,32
27NC4517125MM	45° ELBOW Ø125 SDR17	0,78
27NC4517160MM	45° ELBOW Ø160 SDR17	1,71
27NC4517200MM	45° ELBOW Ø200 SDR17	3,59
27NC4517250MM	45° ELBOW Ø250 SDR17	5,88

27NT75	TEE Ø75	0,57
27NT90	TEE Ø90	1,04
27NT9110MM	SDR 9 - TEE Ø110	2,80
27NT9125MM	SDR 9 - TEE Ø125	2,91
27NT9160MM	SDR 9 - TEE Ø160	5,27
27NT9200MM	SDR 9 - TEE Ø200	9,85
27NT963MM	SDR 9 - TEE Ø63	0,49
27NT990MM	SDR 9 - TEE Ø90	1,04
27NTR11063110	REDUCING TEE Ø110X63X110	1,42
27NTR11075110	REDUCING TEE Ø110X75X110	1,52
27NTR11090110	REDUCING TEE Ø110X90X110	1,47
27NTR11315160M315	SDR 11 - REDUCING TEE Ø315X160X315	15,50
27NTR11315200M315	SDR 11 - REDUCING TEE Ø315X200X315	17,02
27NTR11315250M315	SDR 11 - REDUCING TEE Ø315X250X315	22,70
27NTR11355110M355	SDR 11 - REDUCING TEE Ø355X110X355	8,88
27NTR11355125M355	SDR 11 - REDUCING TEE Ø355X125X355	14,97
27NTR11355160M355	SDR 11 - REDUCING TEE Ø355X160X355	13,30
27NTR11355200M355	SDR 11 - REDUCING TEE Ø355X200X355	21,20
27NTR11355250M355	SDR 11 - REDUCING TEE Ø355X250X355	24,89
27NTR11355315M355	SDR 11 - REDUCING TEE Ø355X3158X355	30,55
27NTR1135563M355	SDR 11 - REDUCING TEE Ø355X63X355	7,82
27NTR1135575M355	SDR 11 - REDUCING TEE Ø355X75X355	8,09
27NTR1135590M355	SDR 11 - REDUCING TEE Ø355X90X355	8,32
27NTR11400160M400	SDR 11 - REDUCING TEE Ø400X160X400	26,90
27NTR11400200M400	SDR 11 - REDUCING TEE Ø400X200X400	29,61
27NTR11400250M400	SDR 11 - REDUCING TEE Ø400X250X400	33,33
27NTR11400315M400	SDR 11 - REDUCING TEE Ø400X315X400	39,11
27NTR11400355M400	SDR 11 - REDUCING TEE Ø400X315X400	43,00
27NTR11450160M450	SDR 11 - REDUCING TEE Ø450X160X450	35,16
27NTR11450250M450	SDR 11 - REDUCING TEE Ø450X250X450	39,53
27NTR11450315M450	SDR 11 - REDUCING TEE Ø450X315X450	48,00
27NTR11450355M450	SDR 11 - REDUCING TEE Ø450X355X450	48,86
27NTR11500160M500	SDR 11 - REDUCING TEE Ø500X160X500	45,50
27NTR11500250M500	SDR 11 - REDUCING TEE Ø500X250X500	33,33
27NTR11500315M500	SDR 11 - REDUCING TEE Ø500X315X500	39,11
27NTR11500355M500	SDR 11 - REDUCING TEE Ø500X355X500	64,73
27NTR11500400M500	SDR 11 - REDUCING TEE Ø500X400X500	67,75

27NC4517315MM	45° ELBOW Ø315 SDR17	12,86
27NC451763MM	45° ELBOW Ø63 SDR17	0,20
27NC451775MM	45° ELBOW Ø75 SDR17	0,28
27NC451790MM	45° ELBOW Ø90 SDR17	0,43
27NC4520	45° ELBOW Ø20	0,02
27NC4525	45° ELBOW Ø25	0,02
27NC4532	45° ELBOW Ø32	0,04
27NC4540	45° ELBOW Ø40	0,08
27NC4550	45° ELBOW Ø50	0,12
27NC4563	45° ELBOW Ø63	0,19
27NC4573110MM	45° ELBOW Ø110 SDR7,4	1,09
27NC4573125MM	45° ELBOW Ø125 SDR7,4	1,46
27NC4573160MM	45° ELBOW Ø160 SDR7,4	3,17
27NC4573200MM	45° ELBOW Ø200 SDR7,4	5,68
27NC457363MM	45° ELBOW Ø63 SDR7,4	0,28
27NC457375MM	45° ELBOW Ø75 SDR7,4	0,45
27NC457390MM	45° ELBOW Ø90 SDR7,4	0,72
27NC4575	45° ELBOW Ø75	0,42
27NC4590	45° ELBOW Ø90	0,61
27NC459110MM	45° ELBOW Ø110 SDR 9	0,95
27NC459125MM	45° ELBOW Ø125 SDR 9	1,32
27NC459160MM	45° ELBOW Ø160 SDR 9	2,95
27NC459200MM	45° ELBOW Ø200 SDR 9	5,57
27NC45963MM	45° ELBOW Ø63 SDR 9	0,23
27NC45975MM	45° ELBOW Ø75 SDR 9	0,45
27NC45990MM	45° ELBOW Ø90 SDR 9	0,72
27NC45MF20	45° ELBOW M/F Ø20	0,02
27NC45MF25	45° ELBOW M/F Ø25	0,02
27NC45MF32	45° ELBOW M/F Ø32	0,05
27NCART31511	SDR 11 - STUB END Ø315	6,27
27NCART31517	WELDING STUB END M/M Ø315 SDR17	4,07
27NCART35511MB	SDR 11 - STUB END Ø355	16,10
27NCART35517MB	SDR 17 - STUB END Ø355	10,35
27NCART40011MB	SDR 11 - STUB END Ø400	15,80
27NCART40017MB	SDR 17 - STUB END Ø400	11,18
27NCART56017MB	SDR 17 - STUB END Ø560	29,47
27NCC110	END CAP Ø110	0,62

27NTR11500450M500	SDR 11 - REDUCING TEE Ø500X450X500	87,25
27NTR125110125	REDUCING TEE Ø125X110X125	2,68
27NTR12563125	REDUCING TEE Ø125X3X125	2,40
27NTR12575125	REDUCING TEE Ø125X75X125	2,42
27NTR12590125	REDUCING TEE Ø125X90X125	2,33
27NTR17315250M315	SDR 17 - REDUCING TEE Ø315X250X315	13,25
27NTR1731575M315	SDR 17 - REDUCING TEE Ø315X75X315	8,00
27NTR17355110M355	SDR 17 - REDUCING TEE Ø355X110X355	11,48
27NTR17355125M355	SDR 17 - REDUCING TEE Ø355X125X355	6,34
27NTR17355160M355	SDR 17 - REDUCING TEE Ø355X160X355	23,00
27NTR17355200M355	SDR 17 - REDUCING TEE Ø355X200X355	15,14
27NTR17355250M355	SDR 17 - REDUCING TEE Ø355X250X355	19,12
27NTR1735563M355	SDR 17 - REDUCING TEE Ø355X63X355	5,24
27NTR1735575M355	SDR 17 - REDUCING TEE Ø355X75X355	10,61
27NTR1735590M355	SDR 17 - REDUCING TEE Ø355X90X355	10,75
27NTR17400125M400	SDR 17 - REDUCING TEE Ø400X125X400	17,25
27NTR17400160M400	SDR 17 - REDUCING TEE Ø400X160X400	16,42
27NTR17400200M400	SDR 17 - REDUCING TEE Ø400X200X400	18,35
27NTR17400250M400	SDR 17 - REDUCING TEE Ø400X250X400	21,00
27NTR17400315M400	SDR 17 - REDUCING TEE Ø400X315X400	28,00
27NTR17400355M400	SDR 17 - REDUCING TEE Ø400X355X400	29,48
27NTR1740090M400	SDR 17 - REDUCING TEE Ø400X90X400	15,69
27NTR17450160M450	SDR 17 - REDUCING TEE Ø450X160X450	24,40
27NTR17450315M450	SDR 17 - REDUCING TEE Ø450X315X450	34,20
27NTR17450355M450	SDR 17 - REDUCING TEE Ø450X355X450	35,27
27NTR17450400M450	SDR 17 - REDUCING TEE Ø450X400X450	39,00
27NTR1745063M450	SDR 17 - REDUCING TEE Ø450X63X450	21,25
27NTR17500160M500	SDR 17 - REDUCING TEE Ø500X160X500	28,73
27NTR17500200M500	SDR 17 - REDUCING TEE Ø500X200X500	29,66
27NTR17500250M500	SDR 17 - REDUCING TEE Ø500X250X500	33,09
27NTR17500315M500	SDR 17 - REDUCING TEE Ø500X315X500	42,20
27NTR17500355M500	SDR 17 - REDUCING TEE Ø500X355X500	45,25
27NTR17500400M500	SDR 17 - REDUCING TEE Ø500X400X500	50,40
27NTR17500450M500	SDR 17 - REDUCING TEE Ø500X450X500	54,92
27NTR17560110M560	SDR 17 - REDUCING TEE Ø560X110X560	35,34
27NTR17560125M560	SDR 17 - REDUCING TEE Ø560X125X560	18,92
27NTR17560160M560	SDR 17 - REDUCING TEE Ø560X160X560	39,01

27NCC11011M	SDR 11 - END CAP Ø110	0,42
27NCC11017M	SDR 17 - END CAP Ø110	0,39
27NCC11073M	SDR 7,4 - END CAP Ø110	0,51
27NCC125	END CAP Ø125	0,83
27NCC12511M	SDR 11 - END CAP Ø125	0,63
27NCC12517M	SDR 17 - END CAP Ø125	0,45
27NCC12573M	SDR 7,4 - END CAP Ø125	0,69
27NCC16011M	SDR 11 - END CAP Ø160	1,20
27NCC16017M	SDR 17 - END CAP Ø160	0,84
27NCC16073MS	SDR 7,4 - END CAP Ø160 -	0,72
27NCC20	END CAP Ø20	0,01
27NCC20011M	SDR 11 - END CAP Ø200	2,14
27NCC20017M	SDR 17 - END CAP Ø200	1,50
27NCC20073MB	SDR 7,4 - END CAP Ø200 -	3,37
27NCC20073MS	SDR 7,4 - END CAP Ø200 -	1,18
27NCC25	END CAP Ø25	0,02
27NCC25011MB	SDR 11 - END CAP Ø250 -	4,95
27NCC25011MS	SDR 11 - END CAP Ø250 -	1,85
27NCC25017MB	SDR 17 - END CAP Ø250 -	3,80
27NCC25017MS	SDR 17 - END CAP Ø250 -	1,88
27NCC25073MB	SDR 7,4 - END CAP Ø250 -	7,83
27NCC25073MS	SDR 7,4 - END CAP Ø250 -	2,70
27NCC2509MS	SDR 9 - END CAP Ø250 -	2,92
27NCC31511MB	SDR 11 - END CAP Ø315 -	8,14
27NCC31511MS	SDR 11 - END CAP Ø315 -	3,21
27NCC31517MB	SDR 17 - END CAP Ø315 -	3,97
27NCC31517MS	SDR 17 - END CAP Ø315 -	2,99
27NCC31573MB	SDR 7,4 - END CAP Ø315 -	15,61
27NCC31573MS	SDR 7,4 - END CAP Ø315 -	4,78
27NCC3159MS	SDR 9 - END CAP Ø315 -	4,64
27NCC32	END CAP Ø32	0,04
27NCC35511MS	SDR 11 - END CAP Ø355 -	4,24
27NCC35517MS	SDR 17 - END CAP Ø355 -	4,32
27NCC3559MS	SDR 9 - END CAP Ø355 -	6,01
27NCC40	END CAP Ø40	0,05
27NCC40011MS	SDR 11 - END CAP Ø400 -	19,75
27NCC40017MB	SDR 17 - END CAP Ø400 -	13,30

27NTR17560200M560	SDR 17 - REDUCING TEE Ø560X200X560	35,63
27NTR17560250M560	SDR 17 - REDUCING TEE Ø560X250X560	46,10
27NTR17560315M560	SDR 17 - REDUCING TEE Ø560X315X560	51,00
27NTR17560355M560	SDR 17 - REDUCING TEE Ø560X355X560	55,12
27NTR17560400M560	SDR 17 - REDUCING TEE Ø560X400X560	52,24
27NTR17560450M560	SDR 17 - REDUCING TEE Ø560X450X560	75,00
27NTR1756063M560	SDR 17 - REDUCING TEE Ø560X63X560	16,71
27NTR1756075M560	SDR 17 - REDUCING TEE Ø560X75X560	17,15
27NTR1756090M560	SDR 17 - REDUCING TEE Ø560X90X560	17,49
27NTR17630200M630	SDR 17 - REDUCING TEE Ø630X200X630	51,25
27NTR17630250M630	SDR 17 - REDUCING TEE Ø630X250X630	59,40
27NTR17630315M630	SDR 17 - REDUCING TEE Ø630X315X630	65,50
27NTR17630355M630	SDR 17 - REDUCING TEE Ø630X355X630	69,20
27NTR17630400M630	SDR 17 - REDUCING TEE Ø630X400X630	76,50
27NTR17630450M630	SDR 17 - REDUCING TEE Ø630X450X630	87,68
27NTR17630500M630	SDR 17 - REDUCING TEE Ø630X500X630	88,53
27NTR17630560M630	SDR 17 - REDUCING TEE Ø630X560X630	94,00
27NTR252020	REDUCING TEE Ø25X20X20	0,04
27NTR252025	REDUCING TEE Ø25X20X25	0,04
27NTR252520	REDUCING TEE Ø25X25X20	0,04
27NTR253225	REDUCING TEE Ø25X32X25	0,10
27NTR322020	REDUCING TEE Ø32X20X20	0,06
27NTR322025	REDUCING TEE Ø32X20X25	0,07
27NTR322032	REDUCING TEE Ø32X20X32	0,07
27NTR322525	REDUCING TEE Ø32X25X25	0,08
27NTR322532	REDUCING TEE Ø32X25X32	0,07
27NTR323225	REDUCING TEE Ø32X32X25	0,09
27NTR402040	REDUCING TEE Ø40X20X40	0,09
27NTR402540	REDUCING TEE Ø40X25X40	0,09
27NTR403240	REDUCING TEE Ø40X32X40	0,13
27NTR502050	REDUCING TEE Ø50X20X50	0,16
27NTR502550	REDUCING TEE Ø50X25X50	0,16
27NTR503250	REDUCING TEE Ø50X32X50	0,14
27NTR504050	REDUCING TEE Ø50X40X50	0,23
27NTR632063	REDUCING TEE Ø63X20X63	0,35
27NTR632563	REDUCING TEE Ø63X25X63	0,29
27NTR633263	REDUCING TEE Ø63X32X63	0,27

27NCC40017MS	SDR 17 - END CAP Ø400 -	6,39
27NCC45011MS	SDR 11 - END CAP Ø450 -	9,25
27NCC45017MS	SDR 17 - END CAP Ø450 -	9,00
27NCC50	END CAP Ø50	0,07
27NCC50011MS	SDR 11 - END CAP Ø500 -	19,75
27NCC50017MS	SDR 17 - END CAP Ø500 -	11,23
27NCC63	END CAP Ø63	0,15
27NCC63017MS	SDR 17 - END CAP Ø630 -	18,80
27NCC6311M	SDR 11 - END CAP Ø63	0,11
27NCC6317M	SDR 17 - END CAP Ø63	0,09
27NCC6373M	SDR 7,4 - END CAP Ø63	0,12
27NCC75	END CAP Ø75	0,29
27NCC7511M	SDR 11 - END CAP Ø75	0,17
27NCC7517M	SDR 17 - END CAP Ø75	0,14
27NCC7573M	SDR 7,4 - END CAP Ø75	0,23
27NCC90	END CAP Ø90	0,34
27NCC9011M	SDR 11 - END CAP Ø90	0,28
27NCC9017M	SDR 17 - END CAP Ø90	0,20
27NCC9073M	SDR 7,4 - END CAP Ø90	0,30
27NCR402525	REDUCING CROSS Ø40-25-25-40	0,09
27NCRT11011	SDR 11 - STUB END Ø110	0,56
27NCRT11017	SDR 17 - STUB END Ø110	0,48
27NCRT11073	SDR 7,4 - STUB END Ø110	0,74
27NCRT1109	SDR 9 - STUB END Ø110	0,66
27NCRT12511	SDR 11 - STUB END Ø125	0,67
27NCRT12511A5	STUB END Ø125 ANSI 5" - SDR 7,4	1,11
27NCRT12517	SDR 17 - STUB END Ø125	0,52
27NCRT12517A5	SDR 17 - STUB END Ø125	0,89
27NCRT12573	SDR 7,4 - STUB END Ø125	0,96
27NCRT12573A5	STUB END Ø125 ANSI 5" - SDR 7,4	1,24
27NCRT1259A5	SDR 9 - STUB END Ø125	1,16
27NCRT1259	SDR 9 - STUB END Ø125	0,82
27NCRT16011	SDR 11 - STUB END Ø160	1,38
27NCRT16017	SDR 17 - STUB END Ø160	1,06
27NCRT16073	SDR 7,4 - STUB END Ø160	1,85
27NCRT1609	SDR 9 - STUB END Ø160	1,61
27NCRT20011	SDR 11 - STUB END Ø200	3,22

27NTR634063	REDUCING TEE Ø63X40X63	0,25
27NTR635063	REDUCING TEE Ø63X50X63	0,35
27NTR73160110M160	SDR 7,4 - REDUCING TEE Ø160X110X160	4,00
27NTR73160125M160	SDR 7,4 - REDUCING TEE Ø160X125X160	4,38
27NTR7316090M160	SDR 7,4 - REDUCING TEE Ø160X90X160	3,55
27NTR73200110M200	SDR 7,4 - REDUCING TEE Ø200X110X200	6,35
27NTR7320063M200	SDR 7,4 - REDUCING TEE Ø200X63X200	5,08
27NTR7320075M200	SDR 7,4 - REDUCING TEE Ø200X75X200	5,34
27NTR73250110M250	SDR 7,4 - REDUCING TEE Ø250X110X250	11,48
27NTR73250160M250	SDR 7,4 - REDUCING TEE Ø250X160X250	13,43
27NTR73250200M250	SDR 7,4 - REDUCING TEE Ø250X200X250	15,00
27NTR73315110M315	SDR 7,4 - REDUCING TEE Ø315X110X315	18,67
27NTR73315160M315	SDR 7,4 - REDUCING TEE Ø315X160X315	22,69
27NTR73315200M315	SDR 7,4 - REDUCING TEE Ø315X200X315	25,28
27NTR73315250M315	SDR 7,4 - REDUCING TEE Ø315X250X315	28,16
27NTR753275	REDUCING TEE Ø75X32X75	0,61
27NTR754075	REDUCING TEE Ø75X40X75	0,63
27NTR755075	REDUCING TEE Ø75X50X75	0,50
27NTR756375	REDUCING TEE Ø75X63X75	0,57
27NTR905090	REDUCING TEE Ø90X50X90	0,90
27NTR906390	REDUCING TEE Ø90X63X90	0,99
27NTR907590	REDUCING TEE Ø90X75X90	1,00
27NTR9160110M160	SDR 9 - REDUCING TEE Ø160X110X160	3,67
27NTR916063M160	SDR 9 - REDUCING TEE Ø160X63X160	2,56
27NTR916075M160	SDR 9 - REDUCING TEE Ø160X75X160	2,75
27NTR916090M160	SDR 9 - REDUCING TEE Ø160X90X160	3,05
27NTR9200110M200	SDR 9 - REDUCING TEE Ø200X110X200	5,39
27NTR9200125M200	SDR 9 - REDUCING TEE Ø200X125X200	6,04
27NTR9200160M200	SDR 9 - REDUCING TEE Ø200X160X200	7,71
27NTR920063M200	SDR 9 - REDUCING TEE Ø200X63X200	4,40
27NTR920075M200	SDR 9 - REDUCING TEE Ø200X75X200	4,67
27NTR920090M200	SDR 9 - REDUCING TEE Ø200X90X200	4,90
27NTR9250110M250	SDR 9 - REDUCING TEE Ø250X110X250	8,98
27NTR9250125M250	SDR 9 - REDUCING TEE Ø250X125X250	9,38
27NTR9250160M250	SDR 9 - REDUCING TEE Ø250X160X250	12,00
27NTR925063M250	SDR 9 - REDUCING TEE Ø250X635X250	7,52
27NTR925075M250	SDR 9 - REDUCING TEE Ø250X750X250	7,85

27NCRT20017	SDR 17 - STUB END Ø200	2,03
27NCRT20073	SDR 7,4 - STUB END Ø200	3,52
27NCRT2009	SDR 9 - STUB END Ø200	3,21
27NCRT25011	SDR 11 - STUB END Ø250	4,42
27NCRT25017	SDR 17 - STUB END Ø250	2,76
27NCRT25073	SDR 7,4 - STUB END Ø250	5,28
27NCRT2509	SDR 9 - STUB END Ø250	4,76
27NCART3159	SDR 9 - STUB END Ø315	7,81
27NCRT3159	SDR 9 - STUB END Ø315	7,71
27NCRT3273	SDR 7,4 - STUB END Ø32	0,06
27NCRT329	SDR 9 - STUB END Ø32	0,05
27NCRT4011	SDR 11 - STUB END Ø40	0,00
27NCRT4073	SDR 73 - STUB END Ø40	0,08
27NCRT409	SDR 9 - STUB END Ø40	0,08
27NCRT5011	SDR 11 - STUB END Ø50	0,13
27NCRT5073	SDR 73 - STUB END Ø50	0,16
27NCRT509	SDR 9 - STUB END Ø50	0,15
27NCRT6311	SDR 11 - STUB END Ø63	0,27
27NCRT6317	SDR 17 - STUB END Ø63	0,17
27NCRT6373	SDR 73 - STUB END Ø63	0,27
27NCRT7511	SDR 11 - STUB END Ø75	0,27
27NCRT7517	SDR 17 - STUB END Ø75	0,23
27NCRT7573	SDR 75 - STUB END Ø75	0,35
27NCRT639	SDR 9 - STUB END Ø63	0,21
27NCRT759	SDR 9 - STUB END Ø75	0,30
27NCRT9011	SDR 11 - STUB END Ø90	0,37
27NCRT9017	SDR 17 - STUB END Ø90	0,40
27NCRT9073	SDR 73 - STUB END Ø90	0,46
27NCRT909	SDR 9 - STUB END Ø90	0,42
27NG110	90° ELBOW Ø110	1,28
27NG125	90° ELBOW Ø125	2,05
27NG20	90° ELBOW Ø20	0,02
27NG25	90° ELBOW Ø25	0,03
27NG32	90° ELBOW Ø32	0,06
27NG40	90° ELBOW Ø40	0,10
27NG50	90° ELBOW Ø50	0,19
27NG63	90° ELBOW Ø63	0,33

27NTR925090M250	SDR 9 - REDUCING TEE Ø250X90X250	8,26
27NTR9315110M315	SDR 9 - REDUCING TEE Ø315X110X315	15,46
27NTR9315125M315	SDR 9 - REDUCING TEE Ø315X125X315	16,36
27NTR9315160M315	SDR 9 - REDUCING TEE Ø315X160X315	18,41
27NTR9315200M315	SDR 9 - REDUCING TEE Ø315X200X315	20,52
27NTR931563M315	SDR 9 - REDUCING TEE Ø315X63X315	13,62
27NTR931575M315	SDR 9 - REDUCING TEE Ø315X75X315	14,13
27NTR931590M315	SDR 9 - REDUCING TEE Ø315X90X315	14,53
27NTR9355110M355	SDR 9 - REDUCING TEE Ø355X110X355	20,12
27NTR9355125M355	SDR 9 - REDUCING TEE Ø355X125X355	21,12
27NTR9355160M355	SDR 9 - REDUCING TEE Ø355X160X355	23,53
27NTR9355200M355	SDR 9 - REDUCING TEE Ø355X200X355	25,78
27NTR9355250M355	SDR 9 - REDUCING TEE Ø355X250X355	29,39
27NTR935563M355	SDR 9 - REDUCING TEE Ø355X63X355	17,84
27NTR935575M355	SDR 9 - REDUCING TEE Ø355X75X355	18,49
27NTR935590M355	SDR 9 - REDUCING TEE Ø355X90X355	18,98
27NTRS1111040MM	SDR11 - REDUCING TEE 90° Ø110X40X110	1,21
27NTRS1111050MM	SDR11 - REDUCING TEE 90° Ø110X50X110	1,23
27NTRS1111063MM	SDR11 - REDUCING TEE 90° Ø110X63X110	1,32
27NTRS1111075MM	SDR11 - REDUCING TEE 90° Ø110X75X110	1,20
27NTRS1111090MM	SDR11 - REDUCING TEE 90° Ø110X90X110	1,40
27NTRS11125110MM	SDR11 - REDUCING TEE 90° Ø125X110X125	2,10
27NTRS1112550MM	SDR11 - REDUCING TEE 90° Ø125X50X125	1,67
27NTRS1112563MM	SDR11 - REDUCING TEE 90° Ø125X63X125	1,81
27NTRS1112575MM	SDR11 - REDUCING TEE 90° Ø125X75X125	1,88
27NTRS1112590MM	SDR11 - REDUCING TEE 90° Ø125X90X125	1,96
27NTRS11160110MM	SDR11 - REDUCING TEE 90° Ø160X110X160	3,32
27NTRS11160125MM	SDR11 - REDUCING TEE 90° Ø160X125X160	3,40
27NTRS1116063MM	SDR11 - REDUCING TEE 90° Ø160X63X160	3,08
27NTRS1116075MM	SDR11 - REDUCING TEE 90° Ø160X75X160	2,85
27NTRS1116090MM	SDR11 - REDUCING TEE 90° Ø160X90X160	3,22
27NTRS11200110MM	SDR11 - REDUCING TEE 90° Ø200X110X200	6,17
27NTRS11200125MM	SDR11 - REDUCING TEE 90° Ø200X125X200	6,10
27NTRS11200160MM	SDR11 - REDUCING TEE 90° Ø200X160X200	5,63
27NTRS1120063MM	SDR11 - REDUCING TEE 90° Ø200X63X200	5,93
27NTRS1120075MM	SDR11 - REDUCING TEE 90° Ø200X75X200	5,87
27NTRS1120090MM	SDR11 - REDUCING TEE 90° Ø200X90X200	5,30

27NG75	90° ELBOW Ø75	0,46
27NG90	90° ELBOW Ø90	0,80
27NG9011110MM	SDR 11 - 90° ELBOW Ø110	1,03
27NG9011125MM	SDR 11 - 90° ELBOW Ø125	2,17
27NG9011160MM	SDR 11 - 90° ELBOW Ø160	3,14
27NG9011200MM	SDR 11 - 90° ELBOW Ø200	5,38
27NG9011250MM	SDR 11 - 90° ELBOW Ø250	10,19
27NG9011315MM	SDR 11 - 90° ELBOW Ø315	18,90
27NG901163MM	SDR 11 - 90° ELBOW Ø63	0,29
27NG901175MM	SDR 11 - 90° ELBOW Ø75	0,46
27NG901190MM	SDR 11 - 90° ELBOW Ø90	0,68
27NG9017110MM	SDR 17 - 90° ELBOW Ø110	0,81
27NG9017125MM	SDR 17 - 90° ELBOW Ø125	1,24
27NG9017160MM	SDR 17 - 90° ELBOW Ø160	2,34
27NG9017200MM	SDR 17 - 90° ELBOW Ø200	4,28
27NG9017250MM	SDR 17 - 90° ELBOW Ø250	7,01
27NG901763MM	SDR 17 - 90° ELBOW Ø63	0,27
27NG901775MM	SDR 17 - 90° ELBOW Ø75	0,76
27NG901790MM	SDR 17 - 90° ELBOW Ø90	0,54
27NG9073110MM	SDR 7,4 - 90° ELBOW Ø110	1,54
27NG9073125MM	SDR 7,4 - 90° ELBOW Ø125	2,08
27NG9073160MM	SDR 7,4 - 90° ELBOW Ø160	4,16
27NG9073200MM	SDR 7,4 - 90° ELBOW Ø200	7,04
27NG907363MM	SDR 7,4 - 90° ELBOW Ø63	0,37
27NG907375MM	SDR 7,4 - 90° ELBOW Ø75	0,57
27NG907390MM	SDR 7,4 - 90° ELBOW Ø90	0,98
27NG909110MM	SDR 9 - 90° ELBOW Ø110	1,45
27NG909125MM	SDR 9 - 90° ELBOW Ø125	2,01
27NG909160MM	SDR 9 - 90° ELBOW Ø160	4,12
27NG909200MM	SDR 9 - 90° ELBOW Ø200	6,98
27NG909250MMB	SDR 9 - 90° ELBOW Ø250	21,00
27NG90963MM	SDR 9 - 90° ELBOW Ø63	0,34
27NG90975MM	SDR 9 - 90° ELBOW Ø75	0,54
27NG90990MM	SDR 9 - 90° ELBOW Ø90	0,88
27NGMF20	MALE/FEMALE 90° ELBOW Ø20	0,01
27NGMF25	MALE/FEMALE 90° ELBOW Ø25	0,03
27NGMF32	MALE/FEMALE 90° ELBOW Ø32	0,05

27NTRS11250110MM	SDR11 - REDUCING TEE 90° Ø250X110X250	9,85
27NTRS11250125MM	SDR11 - REDUCING TEE 90° Ø250X125X250	8,95
27NTRS11250160MM	SDR11 - REDUCING TEE 90° Ø250X160X250	9,22
27NTRS11250200MM	SDR11 - REDUCING TEE 90° Ø250X200X250	9,47
27NTRS1125090MM	SDR11 - REDUCING TEE 90° Ø250X90X250	8,77
27NTRS1131590MM	SDR11 - REDUCING TEE 90° Ø315X90X315	20,50
27NTRS11315110MM	SDR11 - REDUCING TEE 90° Ø315X110X315	21,30
27NTRS11315125MM	SDR11 - REDUCING TEE 90° Ø315X125X315	9,22
27NTRS11315160MM	SDR11 - REDUCING TEE 90° Ø315X160X315	9,47
27NTRS11315200MM	SDR11 - REDUCING TEE 90° Ø315X200X315	8,77
27NTRS11315250MM	SDR11 - REDUCING TEE 90° Ø315X250X315	22,70
27NTRS119040MM	SDR11 - REDUCING TEE 90° Ø90X40X90	0,65
27NTRS119050MM	SDR11 - REDUCING TEE 90° Ø90X50X90	0,75
27NTRS119063MM	SDR11 - REDUCING TEE 90° Ø90X63X90	0,76
27NTRS119075MM	SDR11 - REDUCING TEE 90° Ø90X75X90	0,92
27NTRS1711040MM	SDR17 - REDUCING TEE 90° Ø110X40X110	1,09
27NTRS1711050MM	SDR17 - REDUCING TEE 90° Ø110X50X110	1,13
27NTRS1711063MM	SDR17 - REDUCING TEE 90° Ø110X63X110	1,17
27NTRS1711075MM	SDR17 - REDUCING TEE 90° Ø110X75X110	1,07
27NTRS1711090MM	SDR17 - REDUCING TEE 90° Ø110X90X110	1,31
27NTRS17125110MM	SDR17 - REDUCING TEE 90° Ø125X110X125	2,00
27NTRS1712550MM	SDR17 - REDUCING TEE 90° Ø125X50X125	1,83
27NTRS1712563MM	SDR17 - REDUCING TEE 90° Ø125X63X125	1,70
27NTRS1712575MM	SDR17 - REDUCING TEE 90° Ø125X75X125	1,77
27NTRS1712590MM	SDR17 - REDUCING TEE 90° Ø125X90X125	1,83
27NTRS17160110MM	SDR17 - REDUCING TEE 90° Ø160X110X160	3,00
27NTRS17160125MM	SDR17 - REDUCING TEE 90° Ø160X125X160	3,15
27NTRS1716063MM	SDR17 - REDUCING TEE 90° Ø160X63X160	2,83
27NTRS1716075MM	SDR17 - REDUCING TEE 90° Ø160X75X160	2,80
27NTRS1716090MM	SDR17 - REDUCING TEE 90° Ø160X90X160	2,92
27NTRS17200110MM	SDR17 - REDUCING TEE 90° Ø200X110X200	6,17
27NTRS17200125MM	SDR17 - REDUCING TEE 90° Ø200X125X200	5,97
27NTRS17200160MM	SDR17 - REDUCING TEE 90° Ø200X160X200	5,38
27NTRS1720063MM	SDR17 - REDUCING TEE 90° Ø200X63X200	5,93
27NTRS1720075MM	SDR17 - REDUCING TEE 90° Ø200X75X200	3,84
27NTRS1720090MM	SDR17 - REDUCING TEE 90° Ø200X90X200	6,08
27NTRS17250110MM	SDR17 - REDUCING TEE 90° Ø250X110X250	8,40

27NGMF40	MALE/FEMALE 90° ELBOW Ø40	0,10
27NGS110200	WELDING SADDLE Ø200/110	0,92
27NGS110250	WELDING SADDLE Ø250/110	0,88
27NGS110315	WELDING SADDLE Ø315/110	0,84
27NGS110355400	WELDING SADDLE Ø355÷400/110	0,82
27NGS110450500	WELDING SADDLE Ø450÷500/110	0,80
27NGS110560630	WELDING SADDLE Ø560÷630/110	0,79
27NGS125200	WELDING SADDLE Ø200/125	0,98
27NGS125250	WELDING SADDLE Ø250/125	0,93
27NGS125315	WELDING SADDLE Ø315/125	0,89
27NGS125355400	WELDING SADDLE Ø355÷400/125	0,87
27NGS125450500	WELDING SADDLE Ø450÷500/125	0,85
27NGS125560630	WELDING SADDLE Ø560÷630/125	0,83
27NGS20160200	WELDING SADDLE Ø160-200/20	0,01
27NGS20250315	WELDING SADDLE Ø250-315/20	0,01
27NGS20355630	WELDING SADDLE Ø355÷630/20	0,01
27NGS2040	WELDING SADDLE Ø40/20	0,01
27NGS2050	WELDING SADDLE Ø50/20	0,01
27NGS206375	WELDING SADDLE Ø63-75/20	0,01
27NGS2090110125	WELDING SADDLE Ø90-110-125/20	0,01
27NGS25160200	WELDING SADDLE Ø160-200/25	0,01
27NGS25250315	WELDING SADDLE Ø250-315/25	0,01
27NGS25355630	WELDING SADDLE Ø355÷630/25	0,01
27NGS2540	WELDING SADDLE Ø40/25	0,01
27NGS2550	WELDING SADDLE Ø50/25	0,01
27NGS256375	WELDING SADDLE Ø63-75/25	0,01
27NGS2590110125	WELDING SADDLE Ø90-110-125/25	0,01
27NGS32160200	WELDING SADDLE Ø160-200/32	0,02
27NGS32250315	WELDING SADDLE Ø250-315/32	0,03
27NGS32355630	WELDING SADDLE Ø355÷630/32	0,03
27NGS326375	WELDING SADDLE Ø63-75/32	0,03
27NGS3290110125	WELDING SADDLE Ø90-110-125/32	0,03
27NGS40110	WELDING SADDLE Ø110/40	0,05
27NGS40125	WELDING SADDLE Ø125/40	0,04
27NGS40160200	WELDING SADDLE Ø160-200/40	0,04
27NGS40250315	WELDING SADDLE Ø250-315/40	0,04
27NGS40355630	WELDING SADDLE Ø355÷630/40	0,04

27NTRS17250125MM	SDR17 - REDUCING TEE 90° Ø250X125X250	7,75
27NTRS17250160MM	SDR17 - REDUCING TEE 90° Ø250X160X250	8,50
27NTRS17250200MM	SDR17 - REDUCING TEE 90° Ø250X200X250	8,44
27NTRS1731575MM	SDR17 - REDUCIN TEE 90° Ø315X75X315	19,46
27NTRS1731590MM	SDR17 - REDUCIN TEE 90° Ø315X90X315	20,81
27NTRS17315110MM	SDR17 - REDUCIN TEE 90° Ø315X110X315	20,82
27NTRS17315125MM	SDR17 - REDUCIN TEE 90° Ø315X125X315	8,70
27NTRS17315160MM	SDR17 - REDUCIN TEE 90° Ø315X160X315	21,14
27NTRS17315200MM	SDR17 - REDUCIN TEE 90° Ø315X200X315	15,37
27NTRS17315250MM	SDR17 - REDUCIN TEE 90° Ø315X250X315	22,24
27NTRS1725090MM	SDR17 - REDUCING TEE 90° Ø250X90X250	7,89
27NTRS179040MM	SDR17 - REDUCING TEE 90° Ø90X40X90	0,73
27NTRS179050MM	SDR17 - REDUCING TEE 90° Ø90X50X90	0,70
27NTRS179063MM	SDR17 - REDUCING TEE 90° Ø90X63X90	0,69
27NTRS179075MM	SDR17 - REDUCING TEE 90° Ø90X75X90	0,70
16V6015	COMPACT CROSSOVER F/F Ø20	0,05
16V6015A	COMPACT CROSSOVER F/F Ø25	0,09
16V6025	COMPACT CROSSOVER M/F Ø20	0,05
16V6025A	COMPACT CROSSOVER M/F Ø25	0,09
16V6102	COUPLING Ø20	0,01
16V6103	COUPLING Ø25	0,02
16V6104	COUPLING Ø32	0,04
16V6105	COUPLING Ø40	0,06
16V6106	COUPLING Ø50	0,11
16V6107	COUPLING Ø63	0,18
16V6108	COUPLING Ø75	0,24
16V6109	COUPLING Ø90	0,29
16V6110	COUPLING Ø110	0,81
16V6111	COUPLING Ø125	0,85
16V6202	90° ELBOW Ø20	0,02
16V6203	90° ELBOW Ø25	0,03
16V6204	90° ELBOW Ø32	0,06
16V6205	90° ELBOW Ø40	0,10
16V6206	90° ELBOW Ø50	0,15
16V6207	90° ELBOW Ø63	0,31
16V6208	90° ELBOW Ø75	0,44
16V6209	90° ELBOW Ø90	0,81

27NGS4090	WELDING SADDLE Ø90/40	0,05
27NGS50110	WELDING SADDLE Ø110/50	0,09
27NGS50125	WELDING SADDLE Ø125/50	0,09
27NGS50160	WELDING SADDLE Ø160/50	0,09
27NGS50200	WELDING SADDLE Ø200/50	0,08
27NGS50250	WELDING SADDLE Ø250/50	0,08
27NGS50315	WELDING SADDLE Ø315/50	0,08
27NGS50355450	WELDING SADDLE Ø355÷450/50	0,08
27NGS50500630	WELDING SADDLE Ø500÷630/50	0,08
27NGS5090	WELDING SADDLE Ø90/50	0,09
27NGS63110	WELDING SADDLE Ø110/63	0,16
27NGS63125	WELDING SADDLE Ø125/63	0,16
27NGS63160	WELDING SADDLE Ø160/63	0,15
27NGS63200	WELDING SADDLE Ø200/63	0,15
27NGS63250	WELDING SADDLE Ø250/63	0,15
27NGS63315	WELDING SADDLE Ø315/63	0,15
27NGS63355450	WELDING SADDLE Ø355÷450/63	0,14
27NGS63500630	WELDING SADDLE Ø500÷630/63	0,14
27NGS75160	WELDING SADDLE Ø160/75	0,19
27NGS75200	WELDING SADDLE Ø200/75	0,19
27NGS75250	WELDING SADDLE Ø250/75	0,19
27NGS75315	WELDING SADDLE Ø315/75	0,18
27NGS75355450	WELDING SADDLE Ø355÷450/75	0,18
27NGS75500630	WELDING SADDLE Ø500÷630/75	0,18
27NGS90160	WELDING SADDLE Ø160/90	0,32
27NGS90200	WELDING SADDLE Ø200/90	0,30
27NGS90250	WELDING SADDLE Ø250/90	0,29
27NGS90315	WELDING SADDLE Ø315/90	0,29
27NGS90355450	WELDING SADDLE Ø355÷450/90	0,28
27NGS90500630	WELDING SADDLE Ø500÷630/90	0,27
27NMAN110	COUPLING Ø110	0,83
27NMAN125	COUPLING Ø125	0,90
27NMAN20	COUPLING Ø20	0,01
27NMAN25	COUPLING Ø25	0,02
27NMAN32	COUPLING Ø32	0,04
27NMAN40	COUPLING Ø40	0,06
27NMAN50	COUPLING Ø50	0,11

16V6210	90° ELBOW Ø110	1,27
16V6210A	90° ELBOW Ø125	2,05
16V6212	MALE/FEMALE 90° ELBOW Ø20	0,02
16V6213	MALE/FEMALE 90° ELBOW Ø25	0,03
16V6302	45° ELBOW Ø20	0,02
16V6303	45° ELBOW Ø25	0,02
16V6304	45° ELBOW Ø32	0,04
16V6305	45° ELBOW Ø40	0,06
16V6306	45° ELBOW Ø50	0,13
16V6307	45° ELBOW Ø63	0,21
16V6308	45° ELBOW Ø75	0,43
16V6309	45° ELBOW Ø90	0,63
16V6310	45° ELBOW Ø110	1,06
16V6310A	45° ELBOW Ø125	1,42
16V6402	90° TEE Ø20	0,02
16V6403	90° TEE Ø25	0,04
16V6404	90° TEE Ø32	0,08
16V6405	90° TEE Ø40	0,13
16V6406	90° TEE Ø50	0,22
16V6407	90° TEE Ø63	0,39
16V6408	90° TEE Ø75	0,55
16V6408A	90° TEE Ø90	1,10
16V6408B	90° TEE Ø110	1,53
16V6408E	90° TEE Ø125	2,65
16V6411	REDUCED TEE Ø25X25X20	0,04
16V6412	REDUCED TEE Ø25X20X20	0,05
16V6413	REDUCED TEE Ø25X20X25	0,04
16V6414	REDUCED TEE Ø32X20X32	0,06
16V6415	REDUCED TEE Ø32X20X25	0,07
16V6416	REDUCED TEE Ø32X25X32	0,07
16V6417	REDUCED TEE Ø32X32X25	0,09
16V6418	REDUCED TEE Ø40X20X40	0,09
16V6419	REDUCED TEE Ø40X25X40	0,08
16V6419A	REDUCED TEE Ø40X32X40	0,14
16V6420	REDUCED TEE Ø50X20X50	0,17
16V6421	REDUCED TEE Ø50X25X50	0,16
16V6422	REDUCED TEE Ø50X32X50	0,15

27NMAN63	COUPLING Ø63	0,17
27NMAN75	COUPLING Ø75	0,23
27NMAN90	COUPLING Ø90	0,26
27NR11063	REDUCING Ø110-63	0,36
27NR1106311MM	SDR 11 - REDUCER Ø110-63	0,43
27NR1106317MM	SDR 17 - REDUCER Ø110-63	0,34
27NR1106373MM	SDR 7,3 - REDUCER Ø110-63	0,53
27NR110639MM	SDR 9 - REDUCER Ø110-63	0,60
27NR11075	REDUCING Ø110-75	0,38
27NR1107511MM	SDR 11 - REDUCER Ø110-75	0,47
27NR1107517MM	SDR 17 - REDUCER Ø110-75	0,40
27NR1107573MM	SDR 7,3 - REDUCER Ø110-75	0,50
27NR110759MM	SDR 9 - REDUCER Ø110-75	0,47
27NR11090	REDUCING Ø110-90	0,70
27NR1109011MM	SDR 11 - REDUCER Ø110-90	0,47
27NR1109017MM	SDR 17 - REDUCER Ø110-90	0,38
27NR1109073MM	SDR 7,3 - REDUCER Ø110-90	0,67
27NR110909MM	SDR 9 - REDUCER Ø110-90	0,57
27NR125110	REDUCING Ø125-110	0,67
27NR12511011MM	SDR 11 - REDUCER Ø125-110	0,73
27NR12511017MM	SDR 17 - REDUCER Ø125-110	0,58
27NR1256373MM	SDR 7,3 - REDUCER Ø125-63	0,46
27NR125639MM	SDR 9 - REDUCER Ø125-63	0,75
27NR1257511MM	SDR 11 - REDUCER Ø125-75	0,65
27NR1257517MM	SDR 17 - REDUCER Ø125-75	0,57
27NR12590	REDUCING Ø125-90	0,75
27NR1259011MM	SDR 11 - REDUCER Ø125-90	0,62
27NR1259017MM	SDR 17 - REDUCER Ø125-90	0,65
27NR16011011MM	SDR 11 - REDUCER Ø160-110	1,29
27NR16011017MM	SDR 17 - REDUCER Ø160-110	0,92
27NR16011073MMB	SDR 7,3 - REDUCER Ø160-110	2,98
27NR1601109MMB	SDR 9 - REDUCER Ø160-110	2,38
27NR16012511MM	SDR 11 - REDUCER Ø160-125	1,29
27NR16012517MM	SDR 17 - REDUCER Ø160-125	1,00
27NR16012573MMB	SDR 7,3 - REDUCER Ø160-125	3,21
27NR1601259MMB	SDR 9 - REDUCER Ø160-125	2,73
27NR1609011MM	SDR 11 - REDUCER Ø160-90	1,19

16V6423	REDUCED TEE Ø50X40X50	0,23
16V6424	REDUCED TEE Ø63X32X63	0,24
16V6424A	REDUCED TEE Ø63X25X63	0,28
16V6425	REDUCED TEE Ø63X40X63	0,23
16V6426	REDUCED TEE Ø63X50X63	0,36
16V6427	REDUCED TEE Ø75X63X75	0,57
16V6427A	REDUCED TEE Ø75X32X75	0,60
16V6427B	REDUCED TEE Ø75X40X75	0,55
16V6427C	REDUCED TEE Ø75X50X75	0,57
16V6428	REDUCED TEE Ø90X63X90	0,93
16V6429	REDUCED TEE Ø90X75X90	1,00
16V6429A	REDUCED TEE Ø110X63X110	1,42
16V6430	REDUCED TEE Ø110X75X110	1,52
16V6431	REDUCED TEE Ø110X90X110	1,47
16V6433	REDUCED TEE Ø125X90X125	2,33
16V6434	REDUCED TEE Ø125X110X125	2,68
16V6503	REDUCING SOCKET Ø25-20	0,02
16V6504	REDUCING SOCKET Ø32-20	0,02
16V6505	REDUCING SOCKET Ø32-25	0,02
16V6506	REDUCING SOCKET Ø40-20	0,03
16V6507	REDUCING SOCKET Ø40-25	0,03
16V6508	REDUCING SOCKET Ø40-32	0,04
16V6509	REDUCING SOCKET Ø50-20	0,05
16V6510	REDUCING SOCKET Ø50-25	0,05
16V6511	REDUCING SOCKET Ø50-32	0,06
16V6512	REDUCING SOCKET Ø50-40	0,06
16V6513	REDUCING SOCKET Ø63-25	0,08
16V6514	REDUCING SOCKET Ø63-32	0,08
16V6515	REDUCING SOCKET Ø63-40	0,10
16V6516	REDUCING SOCKET Ø63-50	0,11
16V6517	REDUCING SOCKET Ø75-20	0,13
16V6518	REDUCING SOCKET Ø75-25	0,13
16V6519	REDUCING SOCKET Ø75-32	0,12
16V6520	REDUCING SOCKET Ø75-40	0,13
16V6521	REDUCING SOCKET Ø75-50	0,13
16V6522	REDUCING SOCKET Ø75-63	0,19
16V6523	REDUCING SOCKET Ø90-75	0,21

27NR1609017MM	SDR 17 - REDUCER Ø160-90	0,85
27NR1609073MMB	SDR 7,3 - REDUCER Ø160-90	2,75
27NR160909MMB	SDR 9 - REDUCER Ø160-90	2,20
27NR20012573MMB	SDR 7,3 - REDUCER Ø200-125	4,74
27NR2001259MMB	SDR 9 - REDUCER Ø200-125	3,96
27NR20016011MM	SDR 11 - REDUCER Ø200-160	2,18
27NR20016017MM	SDR 17 - REDUCER Ø200-160	1,56
27NR20016073MMB	SDR 7,3 - REDUCER Ø200-160	5,35
27NR2001609MMB	SDR 9 - REDUCER Ø200-160	4,50
27NR25016011MMB	SDR 11 - REDUCER Ø250-160 -	6,46
27NR25016017MMB	SDR 17 - MALE REDUCER Ø250-160 -	4,25
27NR25016073MMB	SDR 7,3 - REDUCER Ø250-160	9,30
27NR2501609MMB	SDR 9 - REDUCER Ø250-160	6,77
27NR25020011MMB	SDR 11 - REDUCER Ø250-200 -	6,90
27NR25020017MMB	SDR 17 - MALE REDUCER Ø250-200 -	5,05
27NR25020073MMB	SDR 7,3 - REDUCER Ø250-200	11,13
27NR2502009MMB	SDR 9 - REDUCER Ø250-200	7,35

16V6523A	REDUCING SOCKET Ø90-63	0,33
16V6524	REDUCING SOCKET Ø110-63	0,35
16V6525	REDUCING SOCKET Ø110-75	0,35
16V6526	REDUCING SOCKET Ø110-90	0,33
16V6528	REDUCING SOCKET Ø125-90	0,75
16V6529	REDUCING SOCKET Ø125-110	0,68
16V6602	END CAP Ø20	0,01
16V6603	END CAP Ø25	0,02
16V6604	END CAP Ø32	0,04
16V6605	END CAP Ø40	0,05
16V6606	END CAP Ø50	0,07
16V6607	END CAP Ø63	0,15
16V6608	END CAP Ø75	0,25
16V6609	END CAP Ø90	0,36
16V6610	END CAP Ø110	0,59
16V6611	END CAP Ø125	0,89
16V7155	STUB END Ø90 WITHOUT GASKET	0,25
16V7156	STUB END Ø110 WITHOUT GASKET	0,48
16V7157	STUB END Ø125 WITHOUT GASKET	0,48

References

ISO 14040: Environmental management - Life cycle assessment - Principles and framework.

ISO 14044: Environmental Management – Life Cycle Assessment – Requirements and Guidelines.

ISO 14025: Environmental labels and declarations - Type III environmental declarations - Principles and procedures.

EN 15804+A2:2019: Sustainability of construction works -Environmental Product Declarations - Core rules for the product category of construction products.

MANAGED LCA CONTENT (GABI DATABASES) - Life cycle assessment database, by Sphera Solutions GmbH, Leinfelden-Echterdingen, 2024.2 https://sphera.com/life-cycle-assessment-lca-database/

SPHERA LCA FOR EXPERT (GABI) - Life cycle assessment software (version 10), by Sphera Solutions GmbH, Leinfelden-Echterdingen, 2024 https://sphera.com/life-cycle-assessment-lca-software/

UNI EN 16904:2025 – Plastics piping systems inside the building structure - Environmental product.

declarations - Product category rules complementary to EN 15804.

PCR-ICMQ-001-15_Rev-3.2; 03/11/2025– PCR for construction products.

REGULATIONS OF THE EPDItaly PROGRAMME V.6.

EN 15941 - Sustainability of construction works - Data quality for environmental assessment of products and construction work - Selection and use of data.

CEN/TR 16970:2016 - Sustainability of construction works - Guidance for the implementation of EN 15804.

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