aalberts integrated piping systems

VSH XPress Copper

12 - 28 mm

Environmental Product Declaration

in accordance with
ISO 14044, ISO 14040 and EN 15804

EN EPD

1 general information

1.1 note on this document

The original document was written in English, all other versions are a translation of the original document.

1.2 declaration holder

Aalberts integrated piping systems B.V.
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Aalberts integrated piping systems develops the most advanced integrated piping systems for distribution and control of liquids and gases. These systems are used in various markets such as industry, utility and residential construction. We offer fully integrated piping systems in valve, connection, fastening and piping technology. In close cooperation with our customers, we build the perfect integrated piping system that meets all their requirements. Our piping systems are easy to specify, install, check and maintain, saving you considerable time on preparation and installation. We meet the highest quality and industry standards required in our markets. The Aalberts integrated systems production locations mentioned in this document, Hilversum and Zeewolde, are certified acc. ISO 9001, ISO 14001 and ISO 45001.

1.3 declared Product

This document applies to the VSH XPress Copper fittings listed in the appendix -chapter 6- of this document. Articles with brass components are not covered in this declaration. A VSH XPress Copper bend 90° FF 22, article number 4800334, has been used as a reference article.

1.4 LCA standards

This EPD is generated according to the following standards and requirements of: NEN-EN ISO 14040 [1], NEN-EN ISO 14044 [2], NEN-EN ISO 14025 [3] and EN15804+A2:2019 [4]

1.5 calculation method

LCA standard:	EN15804+A2 (2019)
Database:	Worldwide - Ecoinvent v 3.8 Cut-Off
PCR:	CEN standard 15804 serves as the Core PCR

1.6 statement comparability EPD

EPDs within the same product category but from different programs may not be comparable. EPDs of construction products may not be comparable if they do not comply with the requirements in EN15804. EPD data may not be comparable if the datasets used are not developed in accordance with EN15804 and if the background systems are not based on the same database.

1.7 verification statement

This EPD is a preliminary self-declared version and is in the process of getting externally verified.

1.8 EPD details

Version:	1.0
Date of issue:	01/09/2024
Author of LCA:	Fabian Bruns
Production data:	2023
EPD created with:	LCA software Ecochain Helix | version 4.3.1

Hilversum, September 2024
Aalberts integrated piping systems B.V.

Roland Voermans
COO

2 product

2.1 description and application purpose

VSH XPress Copper is a complete piping system suitable for a wide variety of applications, from drinking water, heating and solar installations to cooling water and compressed air systems. The VSH XPress Copper range consists of press fittings and pressing tools. The VSH XPress Copper fittings are pressed with jaws and slings with M-profile and are available from 12 up to and including 108 mm.

- VSH XPress Copper fittings are made of CU-DHP copper or bronze CC499K (Rg5).
- VSH XPress Copper can be used with copper pipes in accordance with EN 1057 R220/R250/R290.

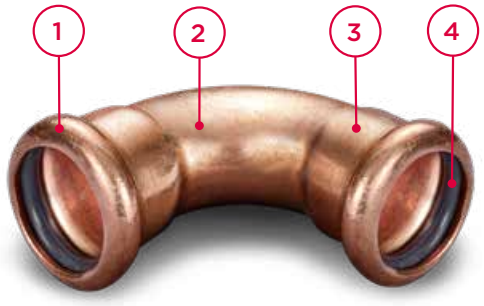
The o-ring has decisive influence on the performance of the system in different applications, with different media and parameters. Depending on the application, different o-rings can be inserted in the fittings:

- EPDM (Ethylene Propylene Diene Monomer / black) – standard
- FPM (Fluoroelastomer / green) – for use in specific applications

The VSH XPress Copper LBP function on fittings up to 54 mm is achieved using a LBP function in the material itself (o-ring bead). The LBP function on the VSH XPress Copper is created by a triangle shaped o-ring bead, which will leak as long as the joint has not been pressed. Fittings with a Leak Before Pressed function have the advantage that connections which have not been pressed will leak water or testing gas during pressure testing, causing the test pressure to drop. When the test is done with water, the leakage will show around the unpressed connection.

2.2 VSH XPress Copper fittings

VSH XPress Copper fittings are produced in our modern, automated factories in France and Hungary. The VSH XPress Copper product range includes fittings and tools. VSH XPress fittings are compatible with various press tool brands. Use our online tool selector to find the right tool for the right material. During the pressing process, bead, socket and tube are deformed to form a leak-tight and mechanically strong, permanent connection.



1. fitting bead
2. fitting body
3. insertion socket
4. o-ring

2.3 product composition

The reference article, VSH XPress Copper 90° bend FF 22, article number 4800334, consists of the following raw materials:

copper:	88 gram
elastomers:	1.5 gram
Total circa:	90 gram

2.4 range and conversion factors

The life cycle assessment results in chapter 4 can be converted to other articles listed in the appendix of this document. This can be done by multiplying the results with the conversion factor for a specific product. For products and their corresponding conversion factors, see the appendix -chapter 6-.

3 life cycle assessment scope

3.1 System boundaries

This EPD can be regarded as a Cradle-to-Gate with options, A4-A5, C1-C4 and D. The following phases are considered not relevant for this product range: B.

3.2 Process flowchart

A simplified overview of the VSH XPress Copper production process flow:

3.3 data quality

For module A1, specific data for product compositions as provided by the manufacturer are used. For module A2, transportation data of the raw materials used to the production site was collected. For module A3, energy consumption and waste production data was collected for production year 2023. The used background processes are derived from Worldwide - Ecoinvent v 3.8 Cut-Off.

3.4 allocation

Allocation was carried out in accordance with the provisions of the EN15804. All manufacturing inputs (energy and auxiliary materials) were measured and assessed.

3.5 cut-off criteria

All relevant inputs and outputs - like emissions, energy and materials - have been taken into account in this LCA. In accordance with EN15804, the total neglected input flows per module does not exceed 5% of energy usage and mass.

3.6 assumptions and background information

A1-A3: For the raw material supply 100% of the materials on the bill of materials were modelled using data from suppliers when available or otherwise from the Ecoinvent database. Also included were copper waste and ancillary materials like water, lubrication oil, bags and cardboard boxes.
VSH XPress Copper 12 - 28 mm products are manufactured in the factory of Aalberts integrated piping systems located in Saint-Denis-de-l'Hôtel, France. Specific transport distances of materials to Aalberts integrated piping systems from materials suppliers were used. Class Euro5 trucks are used as the main means of transport and were used for calculation.
This factory makes use of the national electricity mix for manufacturing the VSH XPress Copper products. Therefore the national electricity mix France was used for calculating the electricity consumption.
A4-A5: Transport from the factory in Saint-Denis-de-l'Hôtel to the warehouse in Zeewolde is done by Aalberts integrated piping systems and logistical partners. The main means of transport is by Class Euro5 trucks or better performing engine. The transportation distance is calculated at 632 km. Transportation to customers within Europe is done by logistical partners. The main means of transport in Europe is by Class Euro5 trucks or better performing engine. The average transportation distance is calculated at 662 km.
The installation is done by use of a press tool which uses a considered negligible amount of energy.
B1-B7: A VSH XPress Copper fitting is designed for a lifetime of 50+ years of service. It does not need any maintenance, repair, replacement or refurbishment and has no operational water or energy use during its lifetime. This module was therefore not assessed (ND).
C1-C4: The piping system is assumed to be stripped as a whole from a building in the demolition process by means of diesel powered machines. The diesel modelled for the demolition process is 0.001 L/Kg of a VSH XPress Copper fitting.
The following transport distances were used; 50 km for waste separation, 100 km for recycling and 150 km for incineration or landfill by means of unspecified lorry truck.
For building materials the values from the Nationale Milieu Database were used [5] and for the cardboard packaging the confederation of European paper industries [6] value was used to calculate the amount of material that went for recycling, landfill and incineration.

material	recycling rate	incineration	landfill
copper	95%	-	5%
copper production waste	100%	-	-
EPDM o-ring	-	80%	20%
packaging foil	-	80%	20%
packaging box	70,5%	29,5%	-

D: Recycling rates described in Module C were used to calculate the benefits and loads beyond the system in module D.

4 life cycle assessment results

The table below shows the results of VSH XPress Copper Elbow 90 (2 x press), diameter 22 mm according to EN15804+A2 (2019)

impact category	unit	A1	A2	A3	A1-A3	A4	C1	C2	C3	C4	D	total
climate change (EN15804+A2)	kg CO_2 eq	0.219	0.011	0.01	0.24	0.019	2.934E-4	6.043E-4	5.078E-3	0.01	-0.133	**0.143**
climate change - fossil	kg CO_2 eq	0.223	0.011	0.01	0.244	0.019	2.933E-4	6.038E-4	4.725E-3	4.874E-3	-0.138	**0.135**
climate change - biogenic (EN15804+A2)	kg CO_2 eq	-4.471E-3	1.021E-5	1.276E-4	-4.333E-3	1.731E-5	8.158E-8	2.787E-7	3.433E-4	5.606E-3	5.856E-3	**7.490E-3**
climate change - land use and LU change (EN15804+A2)	kg CO_2 eq	4.198E-4	4.454E-6	7.456E-6	4.317E-4	7.556E-6	2.312E-8	2.212E-7	1.025E-5	5.263E-7	-7.014E-5	**3.801E-4**
ozone depletion	kg CFC11 eq	2.545E-8	2.625E-9	2.676E-9	3.075E-8	4.453E-9	6.335E-11	1.333E-10	1.972E-10	2.877E-10	-1.105E-8	**2.483E-8**
acidification	mol H+ eq	6.875E-3	4.603E-5	6.480E-5	6.986E-3	7.809E-5	3.068E-6	3.502E-6	2.968E-5	9.336E-6	-6.226E-3	**8.832E-4**
eutrophication, freshwater	kg P eq	5.851E-5	7.953E-8	2.980E-7	5.889E-5	1.349E-7	1.068E-9	6.091E-9	5.338E-8	1.526E-8	-4.859E-5	**1.052E-5**
eutrophication, marine	kg N eq	6.853E-4	1.373E-5	1.007E-5	7.091E-4	2.328E-5	1.354E-6	1.234E-6	1.058E-5	3.565E-6	-4.952E-4	**2.539E-4**
eutrophication, terrestrial	mol N eq	0.01	1.515E-4	1.094E-4	0.01	2.571E-4	1.486E-5	1.360E-5	1.140E-4	3.813E-5	-8.904E-3	**1.941E-3**
photochemical ozone formation	kg NMVOC eq	2.285E-3	4.641E-5	9.135E-5	2.423E-3	7.873E-5	4.086E-6	3.884E-6	3.641E-5	1.060E-5	-1.953E-3	**6.028E-4**
resource use, minerals and metals	kg Sb eq	1.111E-4	3.945E-8	2.949E-7	1.115E-4	6.691E-8	4.499E-10	1.530E-8	2.775E-8	3.134E-8	-1.042E-4	**7.458E-6**
resource use, fossils	MJ	3.474	0.172	1.02	4.665	0.291	4.037E-3	9.106E-3	0.062	0.021	-1.771	**3.282**
water use	m^3 depriv.	0.149	5.136E-4	7.927E-3	0.158	8.712E-4	5.407E-6	3.257E-5	3.167E-4	2.432E-4	-0.124	**0.035**
particulate matter	disease inc.	2.574E-8	9.761E-10	4.005E-10	2.712E-8	1.656E-9	8.117E-11	5.422E-11	4.501E-10	1.295E-10	-2.192E-8	**7.566E-9**
Ionising radiation	kBq U-235 eq	0.015	7.446E-4	9.206E-3	0.025	1.263E-3	1.730E-5	3.815E-5	7.140E-5	8.267E-5	-8.595E-3	**0.017**
ecotoxicity, freshwater	CTUe	118.868	0.134	0.365	119.367	0.227	2.434E-3	8.120E-3	0.083	0.034	-111.302	**8.419**
human toxicity, cancer	CTUh	2.594E-9	4.334E-12	9.700E-12	2.608E-9	7.353E-12	8.504E-14	2.634E-13	2.729E-12	1.344E-12	-2.439E-9	**1.802E-10**
human toxicity, non-cancer	CTUh	1.869E-7	1.404E-10	2.411E-10	1.873E-7	2.381E-10	2.089E-12	8.882E-12	6.429E-11	5.137E-11	-1.775E-7	**1.018E-8**
land use	Pt	3.239	0.118	0.061	3.418	0.2	5.166E-4	7.900E-3	0.043	0.019	-1.884	**1.805**
use of renewable primary energy excluding renewable primary energy resources used as raw materials	MJ	0.114	2.417E-3	0.072	0.189	4.101E-3	0	0	1.130E-3	2.833E-4	7.007E-3	**0.202**
use of renewable primary energy resources used as raw materials	MJ	0.038	0	0	0.038	0	2.184E-5	1.140E-4	1.140E-4	5.960E-5	-0.598	**-0.559**
total use of renewable primary energy resources	MJ	0.882	2.417E-3	0.072	0.957	4.101E-3	2.184E-5	1.140E-4	1.244E-3	3.429E-4	-0.591	**0.372**
use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials	MJ	0.223	0.182	1.037	1.442	0.309	0	0	0.056	0.021	0.063	**1.891**
use of non-renewable primary energy resources used as raw materials	MJ	0.141	0	0	0.141	0	4.287E-3	9.668E-3	9.668E-3	1.122E-3	-1.947	**-1.782**
total use of non-renewable primary energy resources	MJ	3.704	0.182	1.037	4.923	0.309	4.287E-3	9.668E-3	0.066	0.022	-1.884	**3.45**
total energy	MJ	0.466	0.185	1.109	1.76	0.313	4.309E-3	9.782E-3	0.067	0.023	-2.475	**-0.298**
use of secondary material	kg	0.047	0	0	0.047	0	0	0	0	0	0	**0.047**
use of renewable secondary fuels	MJ	0	0	0	0	0	0	0	0	0	0	**0**
use of non-renewable secondary fuels	MJ	0	0	0	0	0	0	0	0	0	0	**0**
use of net fresh water	m^3	3.984E-3	1.912E-5	3.880E-4	4.392E-3	3.243E-5	2.078E-7	1.109E-6	1.268E-5	9.357E-6	-3.117E-3	**1.330E-3**

impact category	unit	A1	A2	A3	A1-A3	A4	C1	C2	C3	C4	D	total
hazardous waste disposed	kg.	4.120E-6	4.480E-7	6.031E-7	5.171E-6	7.599E-7	1.100E-8	2.308E-8	3.503E-7	5.674E-8	-1.977E-6	**4.396E-6**
non-hazardous waste disposed	kg	0.124	8.821E-3	1.542E-3	0.134	0.015	4.780E-6	5.776E-4	3.191E-3	6.148E-3	-0.106	**0.053**
radioactive waste disposed	kg	1.572E-5	1.160E-6	1.220E-5	2.908E-5	1.968E-6	2.803E-8	5.980E-8	8.172E-8	1.273E-7	-7.917E-6	**2.343E-5**
components for re-use	kg	0	0	0	0	0	0	0	0	0	0	**0**
materials for recycling	kg	0	0	0	0	0	0	0	0	0	0	**0**
materials for energy recovery	kg	0	0	0	0	0	0	0	0	0	0	**0**
exported energy	MJ	0	0	0	0	0	0	0	0	0	0	**0**
exported energy thermic	MJ	4.174E-3	0	0	4.174E-3	0	0	0	0	0	0	**4.174E-3**
exported energy electric	MJ	2.424E-3	0	0	2.424E-3	0	0	0	0	0	0	**2.424E-3**

5 References

1. ISO 14040: Environmental management - Life cycle assessment – Principles and Framework', International Organization for Standardization, ISO14040:2006
2. ISO 14044: Environmental management - Life cycle assessment - Requirements and guidelines', International Organization for Standardization, ISO14044:2006
3. ISO 14025: Environmental labels and declarations -- Type III environmental declarations -- Principles and procedures', International Organization for Standardization, ISO14025:2006
4. NEN-EN 15804:2012+A2:2019: Sustainability of construction works - Environmental product declarations - Core rules for the product category of construction products',
NEN-EN 15804:2012+A2:2019
5. Forfaitaire waarden (mei 2024): forfaitaire waarden voor verwerking-scenario's einde leven behorende bij: Bepalingsmethode milieuprestatie bouwwerken, https://milieudatabase.nl/nl/milieuprestatie/bepalingsmethode
6. the paper value chain reached a 70.5% recycling rate in 2022': CEPI press release 31 july 2023, https://www.cepi.org/wp-content/uploads/2023/07/EPRC-press-release_moniroting-report-2022_FINAL_31072023.pdf

6 appendix

The life cycle assessment results listed in chapter 4 can be converted to the other sales articles listed using the conversion factor in accordance with the following tables.

7270	straight coupling (2 x press)	
article no.	**dimensions**	**conversion factor**
4800004	12	0,30
4800015	15	0,40
4800026	18	0,48
4800037	22	0,61
4800048	28	0,80
4800059	35	1,08
4800061	42	1,73
4800070	54	2,60

7270	slip coupling (2 x press)	
article no.	**dimensions**	**conversion factor**
4800125	15	0,68
4800136	18	0,83
4800147	22	1,03
4800158	28	1,40

7002A	bend 90° (2 x press)	
article no.	**dimensions**	**conversion factor**
4800301	12	0,39
4800312	15	0,56
4800323	18	0,78
4800334	22	1,00
4800345	28	1,49

7002R	bend 90° reduced (2 x press)	
article no.	**dimensions**	**conversion factor**
4804987	22 x 15	0,90

7001A	bend 90° (press x male)	
article no.	**dimensions**	**conversion factor**
4800422	12 x Ø12	0,40
4800433	15 x Ø15	0,55
4800444	18 x Ø18	0,73
4800455	22 x Ø22	0,96
4800466	28 x Ø28	1,46

7041	bend 45° (2 x press)	
article no.	**dimensions**	**conversion factor**
4800543	12	0,31
4800554	15	0,49
4800565	18	0,64
4800576	22	0,81
4800587	28	1,18

7040	bend 45° (press x male)	
article no.	**dimensions**	**conversion factor**
4800664	12 x Ø12	0,34
4800675	15 x Ø15	0,48
4800686	18 x Ø18	0,60
4800697	22 x Ø22	0,85
4800708	28 x Ø28	1,23

7005	90° bend (2 x male)	
article no.	**dimensions**	**conversion factor**
4805504	15	1,25
4805526	22	1,70
4805537	28	2,41

7085	crossover (2 x press)	
article no.	**dimensions**	**conversion factor**
4800818	15	1,18
4800829	18	1,16
4800831	22	2,09

7086	crossover (press x male)	
article no.	**dimensions**	**conversion factor**
4800840	15 x Ø15	0,85
4800851	18 x Ø18	1,10
4800862	22 x Ø22	1,56

7087	crossover (2 x male)	
article no.	**dimensions**	**conversion factor**
4800785	1Ø15	0,88
4800796	Ø18	1,09
4800807	Ø22	1,46

7130	tee (3 x press)	
article no.	**dimensions**	**conversion factor**
4801599	12	0,78
4801601	15	0,99
4801610	18	1,24
4801621	22	1,65
4801632	28	2,29

7125	tee reduced (3 x press)	
article no.	**dimensions**	**conversion factor**
4801720	15 x 12 x 15	1,03
4801764	18 x 12 x 18	1,16
4801786	18 x 15 x 18	1,21
4805671	22 x 12 x 22	1,75
4801821	22 x 15 x 22	1,24
4801852	22 x 18 x 22	1,30
4805713	28 x 12 x 28	2,20
4801885	28 x 15 x 28	1,46
4801907	28 x 18 x 28	1,49
4801929	28 x 22 x 28	1,50

7126	tee reduced (3 x press)	
article no.	**dimensions**	**conversion factor**
4801731	15 x 15 x 12	0,99
4801797	18 x 18 x 15	1,20
4801863	22 x 22 x 15	1,68
4801874	22 x 22 x 18	1,71
4801931	28 x 28 x 22	1,58
4805405	28 x 28 x 15	1,58

7127	tee reduced (3 x press)	
article no.	**dimensions**	**conversion factor**
4801711	15 x 12 x 12	1,04
4801775	18 x 15 x 15	1,26
4801808	22 x 15 x 15	1,70
4801819	22 x 15 x 18	1,53
4801830	22 x 18 x 15	1,61
4801841	22 x 18 x 18	1,69
4801896	28 x 18 x 22	2,18
4801918	28 x 22 x 22	1,61
4805438	28 x 15 x 22	2,28

7128	tee reduced (3 x press)	
article no.	**dimensions**	**conversion factor**
4801742	15 x 18 x 15	1,14
4801753	15 x 22 x 15	1,36
4802050	22 x 28 x 22	2,38
4805669	12 x 15 x 12	0,99

6130G	tee famle branch (press x female thread x press)	
article no.	**dimensions**	**conversion factor**
4802151	12 x Rp½" x 12	1,33
4802160	15 x Rp½" x 15	1,16
4802171	18 x Rp½" x 18	1,70
4802182	22 x Rp½" x 22	1,68
4802193	22 x Rp¾" x 22	1,94
4802204	28 x Rp½" x 28	2,66
4802215	28 x Rp¾" x 28	2,91

7240	reducer (2 x press)	
article no.	**dimensions**	**conversion factor**
4805581	15 x 12	0,38
4805658	16 x 15	0,44
4805592	22 x 15	0,60
4805603	28 x 22	0,84
4805647	28 x 15	0,89

7243	reducer (male x press)	
article no.	**dimensions**	**conversion factor**
4802259	Ø15 x 12	0,35
4802261	Ø18 x 12	3,25
4802270	Ø18 x 15	0,38
4802281	Ø22 x 15	0,44
4802292	Ø22 x 18	0,49
4802303	Ø28 x 15	0,66
4802314	Ø28 x 18	0,70
4802325	Ø28 x 22	0,73

6243G	straight connector (press x male thread)	
article no.	**dimensions**	**conversion factor**
4801038	12 x R⅜"	0,40
4801049	12 x R½"	0,63
4801051	15 x R⅜"	0,44
4801060	15 x R½"	0,58
4801071	15 x R¾"	0,78
4801082	18 x R½"	0,63
4801093	18 x R¾"	0,90
4801104	22 x R½"	1,01
4801115	22 x R¾"	0,93
4801126	22 x R1"	1,18
4801137	28 x R¾"	1,19
4801148	28 x R1"	1,34
4801159	28 x R1¼"	1,90

6270G	straight connector (press x female thread)	
article no.	**dimensions**	**conversion factor**
4801269	12 x Rp⅜"	0,34
4801271	12 x Rp½"	0,53
4801280	15 x Rp⅜"	0,40
4801291	15 x Rp½"	0,58
4801302	15 x Rp¾"	0,76
4801313	18 x Rp½"	0,63
4801324	18 x Rp¾"	0,79
4801335	22 x Rp½"	1,08
4801346	22 x Rp¾"	0,50
4801357	22 x Rp1"	1,16
4801368	28 x Rp¾"	1,55
4801379	28 x Rp1"	1,20
4801381	28 x Rp1¼"	1,78

6246G	straight connector (male x female thread)	
article no.	**dimensions**	**conversion factor**
4803117	15 x Rp½"	0,55
4803128	18 x Rp½"	0,59
4803139	18 x Rp¾"	0,75
4803141	22 x Rp½"	0,66
4803150	22 x Rp¾"	0,84
4803161	28 x Rp¾"	1,13
4803172	28 x Rp1"	1,20

6280G	straight connector (male x male thread)	
article no.	**dimensions**	**conversion factor**
4803251	15 x R½"	0,69
4803260	18 x R½"	0,51
4803271	18 x R¾"	1,10
4803282	22 x R½"	0,85
4803293	22 x R¾"	0,98
4803304	28 x R1"	1,45

6092G	bend 90° (press x male thread)	
article no.	**dimensions**	**conversion factor**
4800939	12 x R½"	0,84
4800941	15 x R⅜"	0,85
4800950	15 x R½"	0,96
4800961	18 x R½"	1,20
4800972	18 x R¾"	1,29
4800983	22 x R¾"	1,70
4800994	28 x R1"	3,11

6090G	**angle adapter 90° (press x female thread)**	
article no.	**dimensions**	**conversion factor**
4801478	12 x Rp⅜"	0,80
4801489	12 x Rp½"	0,88
4801491	15 x Rp⅜"	0,88
4801500	15 x Rp½"	1,23
4805570	15 x Rp¾"	1,38
4801511	18 x Rp½"	1,16
4801522	18 x Rp¾"	1,54
4801533	22 x Rp½"	1,65
4801544	22 x Rp¾"	1,45
4801555	28 x Rp1	2,63

6096G	**angle adapter 90° (press x female thread)**	
article no.	**dimensions**	**conversion factor**
4802831	12 x Rp½"	1,96
4802842	15 x Rp½"	2,16
4802853	18 x Rp½"	2,21
4802864	18 x Rp¾"	3,24
4802875	22 x Rp¾"	3,35
4802886	22 x Rp1"	3,99
4802897	28 x Rp1"	5,51

6330G	**straight union (press x female thread)**	
article no.	**dimensions**	**conversion factor**
4802721	12 x Rp½"	1,16
4802732	15 x Rp½"	1,31
4802743	15 x Rp¾"	1,65
4802754	18 x Rp½"	1,35
4802765	18 x Rp¾"	1,98
4802776	22 x Rp¾"	2,30
4802787	22 x Rp1"	2,65
4805559	28 x Rp¾"	3,38
4802798	28 x Rp1"	3,35

6331G	**straight union (press x male thread)**	
article no.	**dimensions**	**conversion factor**
4802578	12 x R⅜"	1,68
4802589	12 x R½"	1,55
4802591	15 x R½"	1,79
4802600	15 x R¾"	1,81
4802611	18 x R½"	1,98
4802622	18 x R¾"	2,05
4802633	22 x R½"	2,61
4802644	22 x R¾"	2,86
4802655	22 x R1"	2,95
4805561	28 x R¾"	4,13
4802666	28 x R1"	3,80

6330	**straight union (2 x press)**	
article no.	**dimensions**	**conversion factor**
4803348	15	1,76
4803359	18	1,75
4803361	22	2,60
4803370	28	4,09

6359	**coupling with nut (press x female thread)**	
article no.	**dimensions**	**conversion factor**
4800235	15 x G¾"	0,89
4800246	18 x G¾"	1,03
4800257	22 x G1"	1,34
4800268	28 x G1¼"	2,14

6472G	**wall plate 90° (press x female thread)**	
article no.	**dimensions**	**conversion factor**
4800873	12 x Rp½"	1,13
4800884	15 x Rp½"	1,13
4800895	18 x Rp½"	1,46
4800906	22 x Rp¾"	1,73

6472L	**wall plate 90° long (press x female thread)**	
article no.	**dimensions**	**conversion factor**
4800917	15 x Rp½"	2,08

7264	**wallplate u-type, looped (2 x press x female thread)**	
article no.	**dimensions**	**conversion factor**
123459706	15 x Rp½" x 15	2,09
123459707	22 x Rp½" x 22	2,88

6490	**double wallplate (press x female thread)**	
article no.	**dimensions**	**conversion factor**
4807506	12 x Rp⅜	4,56
4807517	15 x Rp½	4,44

7301	**stop end (1 x press)**	
article no.	**dimensions**	**conversion factor**
4805702	12	0,19
4802941	15	0,25
4802952	18	0,25
4802963	22	0,41
4802974	28	0,55

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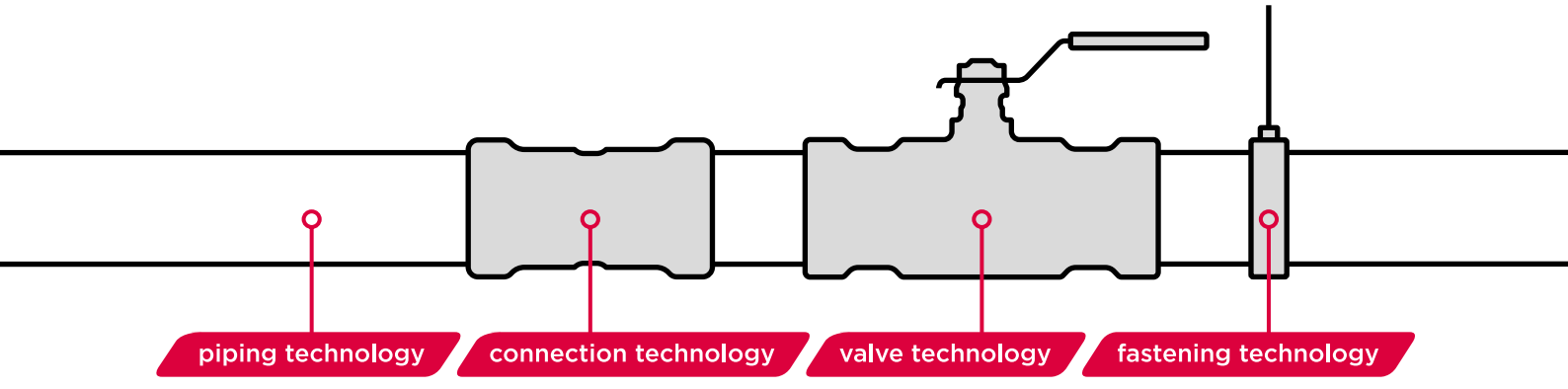

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