## puteus (

## waigr in motion



Validity date August 2023

## puteus 尽

## How to find us? How to reach us?

Phone: +49-(o) 2151-9952-0 • Fax: +49-(o)2151-9952-99 • e-mail: info@puteus.de


## Contact:

Management

Management Assistance
Sales Manager
Sales Department, Germany
Sales Department, Export
Customer Service and order processing
Accounting Department
Import/Export customs clearance
Prefix:
+49(0)2151...
Hans de Gruyter Purchasing/Finance

## Distribution

Peter de Gruyter 9952-42 9952-45

9952-42
9952-45
9952-50 9952-55
9952-52 9952-55
9952-60 9952-55
9952-12 9952-15
9952-22 9952-24
9952-23 9952-24

## E-Mail

h-degruyter@puteus.de
p-degruyter@puteus.de
b-brender@puteus.de verkauf@puteus.de verkauf@puteus.de export@puteus.de vertrieb@puteus.de finanzen@puteus.de finanzen@puteus.de

Puteus GmbH , a manufacturing and distributing company, was founded in 1979 by the parents of the present share holders. Puteus experienced a rapid development - from a supplier for products of the gardening and irrigation sector to a large range of the heating, plumbing- and garden components.


The company is based in Tönisvorst


The high-bay warehouse

...we supply individually and promptly.

0ur modern warehouse with a capacity of 10.000 pallets and a picking area for further 3.000 pallets allows short delivery times.
n addition to our standard product range we also design and manufacture lots of OEM products for the sanitary and heating industries in production sites spread all over the world. Many of our products meet the different requirements and regulations, e.g. DVGW, PA-certificates, KIWA, ACS or SVGW.

Qualified employees in all areas of the company use their skills to satisfy your individual needs - from the standard fitting to the construction of customer-specific items.
n our German production sites we own different production lines, electroplating and modern robot plants, tool- and mould making as well as turnery and metalwork departments.

The owner-managed family company puteus GmbH was the starting point for a group of companies of, today, about 250 employees. It has set itself the target of combining optimal quality and service and -at the same time- responding flexibly and promptly to the changes in the market. We are distinguished both by continuous development of knowledge and quality improvements of our products that are in the interest of our customers as well as commitment and curiosity for what is new and feasible.

...or wishes smaller packing units ...


Ready for shipment.

## puteus (®)

## These following companies also belong to the de Gruyter-Stach-Group


$\rightarrow$ Schlösser Armaturen GmbH \& Co. KG
Im Dohm 3 | D-57462 Olpe
Phone: +49-27 61-607-0 | Fax: +49-27 61-607-10
E-Mail: info@schloesser-armaturen.de
Commercial register entry:
AG Siegen | HRA 8076 | UST-IDNR DE 814779086 | Sitz Olpe
CEO: Henning de Gruyter | Olaf Stach
Water and heating connection valves bib taps - appliance connection fittings heating fittings - water meters state-certified calibration unit for water meters


Exclusive sanitary taps and mixers


Exclusive sanitary taps and mixers
Grünlandweg 11 | D-58640 Iserlohn
Phone: +49-23 71-90 90-0 | Fax: +49-23 71-90 90-99
E-Mail: info@heinrichschulte.com
Commercial register entry:
AG Iserlohn | HRA 2276
UST-IDNR DE 233202839 | Sitz Iserlohn
CEO: Henning de Gruyter | Olaf Stach

Heinrich Schulte GmbH \& Co. KG
Giesestrasse 30 | D-58636 Iserlohn Phone: +49-23 71-90 90-0 | Fax: +49-23 71-90 90-99 E-Mail: info@heinrichschulte.com
Commercial register entry:
AG Iserlohn | HRA 2276
UST-IDNR DE 233202839 | Sitz Iserlohn
CEO: Henning de Gruyter | Olaf Stach

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Table of contents

Brass fittings: bright and chrome plated Page 6


Malleable iron fittings: galvanized and black


## Steel sockets and steel pipes

Page 48


Barrel nipples: galvanized and black


Table of contents
Brass connections, fittings + unions Page 52


## Brass compression fittings

Page 57


Compression fittings of polypropylene
Page 60


Compression fittings of brass for corrugated pipes
Page 63


## puteus (P)

## Fittings made of brass

Material according to drinking water ordinance 50930-6, hot-pressed, thread to DIN EN ISO 228-1

Double nipple


Both sides male threaded, hot-pressed

| Item-No.: <br> plain | Item-No.: chro.-plat. | Connection: male x male | Threadlength: t | Length: <br> L | Wrench size: SW | Packing unit: |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 344084 | - | 1/8" | 7 | 18 | 10 | 50/2000 |
| 344091 | - | 1/4" | 8 | 20 | 14 | 25/1000 |
| 344107 | 354106 | 3/8" | 9 | 22 | 17 | 50/800 |
| 344114 | 354113 | 1/2" | 10 | 24 | 21 | 50/500 |
| 344121 | 354120 | 3/4" | 11 | 26 | 27 | 15/240 |
| 344138 | - | $1{ }^{\prime \prime}$ | 12 | 29 | 34 | 15/180 |
| 344145 | - | $1^{1 / 4}{ }^{\prime \prime}$ | 15,5 | 37 | 42 | 10/ 150 |
| 344152 | - | $1^{1 / 2}{ }^{\prime \prime}$ | 17 | 38 | 48 | 10/ 70 |
| 344169 | - | 2" | 18 | 48 | 60 | 1/ 36 |
| 344176 | - | $2^{1 / 2 "}$ | 22 | 50 | 76 | 1/ 36 |
| 34418-10948 | - | 3 " | 25 | 56 | 93 | 2/ 32 |
| 344190 | - | 4" | 25 | 64 | 125 | 1/ 12 |

## Double nipple, reduced



Both sides male threaded, hot-pressed

| Item-No.: <br> plain | Item-No.: chro.-plat. | Connection: male x male | Thre t1 | length: t2 | Length: <br> L | W.s.: SW | Packing unit: |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 344183 | - | $1 / 8{ }^{\prime \prime} \times 1 / 4^{\prime \prime}$ | 9 | 8 | 21 | 17 | 50/1200 |
| 344282 | - | $1 / 8$ " $\times 3 / 8$ " | 10 | 9 | 23 | 17 | 50/700 |
| 344206 | - | $1 / 4^{\prime \prime} \times 3 / 8$ " | 10 | 9 | 23 | 17 | 50/700 |
| 344299 | - | 1/4" $4^{\prime \prime} 1 / 2^{\prime \prime}$ | 10 | 9 | 23 | 21 | 25/500 |
| 344213 | 354212 | $3 / 8{ }^{\prime \prime} \times 1 / 2^{\prime \prime}$ | 10 | 9 | 23 | 21 | 25/600 |
| 344275 | 354274 | $3 / 8^{\prime \prime} \times 3 / 4^{\prime \prime}$ | 10 | 9 | 24 | 27 | 25/500 |
| 344220 | 354229 | $1 / 2^{\prime \prime} \times 3 / 4^{\prime \prime}$ | 10,5 | 10,5 | 26 | 27 | 25/300 |
| 348778 | - | $1 / 2^{\prime \prime} \times 1$ " | 12 | 10,5 | 28 | 34 | 25/200 |
| 344237 | - | $3 / 4^{\prime \prime} \times 1^{\prime \prime}$ | 12 | 11 | 28 | 34 | 10/ 150 |
| 348709 | - | $3 / 4^{\prime \prime} \times 11 / 4^{\prime \prime}$ | 15 | 10 | 35 | 42 | 10/ 150 |
| 344244 | - | $1^{\prime \prime} \times 11 / 4^{\prime \prime}$ | 14 | 12 | 32 | 42 | 10/ 100 |
| 348716 | - | $1^{\prime \prime} \times 11 / 2^{\prime \prime}$ | 18 | 13 | 39 | 50 | 10/ 70 |
| 344251 | - | $1^{1 / 4 "} \times 1{ }^{1 / 2 "}$ | 18 | 14 | 38 | 48 | 10/ 80 |
| 344268 | - | $11 / 2^{\prime \prime} \times 2$ " | 18 | 14 | 44 | 60 | 1/ 48 |
| 348723 | - | $2^{\prime \prime} \times 21 / 2^{\prime \prime}$ | 22 | 22 | 54 | 80 | 1/ 54 |
| 348730 | - | 2" $\times 3$ " | 20 | 22 | 52 | 89 | 1/ 18 |
| 348747 | - | $21 / 2^{\prime \prime} \times 3$ " | 30 | 27 | 67 | 89 | 1/ 30 |
| 34428-10948 | - | $3^{\prime \prime} \times 4^{\prime \prime}$ | 25 | 25 | 50 | - | 2/ 12 |

Female thread $x$ male thread, female thread with flat seal, including seals made of NBR, hot-pressed

| Item-No.: <br> plain | Item-No.: chro.-plat. | Connection: <br> female x male | Threadlength: |  | Length: <br> L | Wr.size: <br> SW | Pack. unit: |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 344305 | - | $1 / 4^{\prime \prime} \times 3 / 8^{\prime \prime}$ | 11 | 10 | 24 | 17 | 50/1000 |
| 344312 | - | $3 / 8^{\prime \prime} \times 1 / 2^{\prime \prime}$ | 12 | 10 | 25 | 21 | 20/400 |
| 344329 | 354328 | $1 / 2^{\prime \prime} \times 3 / 4^{\prime \prime}$ | 10,5 | 11 | 25 | 27 | 15/300 |
| 344336 | - | $3 / 4^{\prime \prime} \times 1^{\prime \prime}$ | 12 | 11 | 26 | 33 | 15/ 150 |
| 344343 | - | 1 " $\mathrm{X} 11 / 4$ " | 14 | 12 | 30 | 41 | 10/ 200 |
| 344350 | - | $11 / 4$ " $\times 11 / 2^{\prime \prime}$ | 18 | 17 | 43 | 47 | 10/ 100 |
| 344367 | - | $11 / 2{ }^{\prime \prime} \times 2$ " | 20 | 19 | 46 | 60 | 1/ 60 |



## Double nipple, reduced

Male thread x female thread, female thread with flat seal, including seals made of NBR, hot-pressed

| Item-No.: <br> plain | Item-No.: chro.-plat. | Connection: male $x$ female | Threadlength: |  | Length: L | Wr.size: SW | Pack. unit: |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 344404 | - | $1 / 4^{\prime \prime} \times 3 / 8^{\prime \prime}$ | 9 | 10 | 22 | 21 | 50/500 |
| 344411 | 354410 | $3 / 8{ }^{\prime \prime} \times 1 / 2^{\prime \prime}$ | 11 | 10 | 25 | 25 | 20/300 |
| 344428 | 354427 | $1 / 2^{\prime \prime} \times 3 / 4^{\prime \prime}$ | 10 | 10 | 23 | 29,7 | 20/300 |
| 344435 | - | $3 / 4^{\prime \prime} \times 1^{\prime \prime}$ | 11 | 11 | 26 | 36 | 15/150 |
| 344442 | - | 1 " $\times 11 / 4$ " | 12 | 12 | 29 | 45 | 10/100 |
| 344459 | - | $1^{1 / 4 "} 4^{\prime \prime} \times 1 / 1 / 2^{\prime \prime}$ | 14 | 20 | 38 | 55 | 10/ 70 |
| 344466 | - | $1^{1 / 2 "} \times 2$ " | 18 | 21 | 43 | 70 | 10/ 60 |



Socket

| Item-No.: <br> plain | Item-No.: chro.-plat. | Connection: | Length: <br> L | $\varnothing$ d1 | Packing unit: |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 344688 | 354687 | 1/8" | 16 | 13,8 | 50/1000 |
| 344695 | 354694 | 1/4" | 18 | 18 | 50/900 |
| 344602 | 354601 | 3/8" | 24 | 23 | 20/400 |
| 344619 | 354618 | 1/2" | 25,5 | 26,8 | 15/300 |
| 344626 | 354625 | 3/4" | 29 | 34 | 10/ 200 |
| 344632 | - | $1{ }^{\prime \prime}$ | 30,5 | 41 | 10/ 100 |
| 344640 | - | $11 / 4^{\prime \prime}$ | 36 | 51 | 10/ 80 |
| 344657 | - | $11 / 2^{\prime \prime}$ | 40,1 | 58 | 5/ 60 |
| 344664 | - | 2" | 43 | 69 | 5/ 50 |



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## Socket, reduced



Both sides female threaded, hot-pressed

| Item-No.: <br> plain | Item-No.: <br> chro.-plat. |  | Connection: | Length: |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Packing unit: |  |  |  |  |  |  |
| 344701 | 354700 | $1 / 4^{\prime \prime} \times 3 / 8^{\prime \prime}$ | 23 | 23 | 18 | $25 / 450$ |
| 344787 | 354786 | $3 / 8^{\prime \prime} \times 1 / 2^{\prime \prime}$ | 27 | 27 | 23 | $20 / 300$ |
| 344725 | 354724 | $1 / 2^{\prime \prime} \times 3 / 4^{\prime \prime}$ | 27 | 34 | 27 | $10 / 200$ |
| 344794 | 354793 | $1 / 2^{\prime \prime} \times 1^{\prime \prime}$ | 40 | 41,5 | 27,5 | $10 / 100$ |
| 344732 | 354731 | $3 / 4^{\prime \prime} \times 1^{\prime \prime}$ | 37,5 | 41,5 | 34 | $10 / 100$ |
| 344770 | - | $3 / 4^{\prime \prime} \times 1^{1 / 4} \mathbf{l}^{\prime \prime}$ | 40 | 51 | 34 | $10 / 120$ |
| 344749 | 354748 | $1^{\prime \prime} \times 1^{1 / 4^{\prime \prime}}$ | 43 | 51 | 41,5 | $10 / 80$ |

## Socket, with external hexagon



Cap


Female thread, hot-pressed

| Item-No.: <br> plain | Item-No.: <br> nickel plat. | Connection: | Thread- <br> length: | Length: <br> L | Wrench <br> size: <br> SW | Packing unit: |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| - | S-467 | $1 / 8^{\prime \prime}$ | 15 | 15 | 13 | $100 / 2500$ |
| - | S-468 | $1 / 4^{\prime \prime}$ | 22 | 22 | 17 | $50 / 1000$ |
| - | S-699 | $3 / 8^{\prime \prime}$ | 22 | 22 | 22 | $25 / 600$ |
| - | S-469 | $1 / 2^{\prime \prime}$ | 26 | 26 | 27 | $25 / 350$ |
| - | S-769 | $3 / 4^{\prime \prime}$ | 34 | 34 | 32 | $25 / 200$ |

External hexagon, male thread, hot-pressed
$\left.\left.\begin{array}{|l|l|l|l|l|l|l|}\hline \begin{array}{l}\text { Item-No.: }\end{array} & \begin{array}{l}\text { Item-No.: } \\ \text { chro. plat. }\end{array} & \text { Connection: } \\ \text { male }\end{array} \quad \begin{array}{l}\text { Thread- } \\ \text { length: }\end{array}\right) ~ \begin{array}{l}\text { Length: } \\ \text { L }\end{array} \begin{array}{l}\text { Wrench } \\ \text { size: } \\ \text { SW }\end{array}\right)$

Male thread x female thread, hot-pressed

| Item-No.: plain | Item-No.: chro.-plat. | Connection: male $x$ female | Threadlength: |  | Length <br> L | W.s.: <br> SW | Pack. unit: |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 344497 | - | $1 / 4^{\prime \prime} \times 1 / 8^{\prime \prime}$ | 7 | 11 | 11 | 14 | 100/2000 |
| 344589 | - | $3 / 8$ " $\times 1 / 8{ }^{\prime \prime}$ | 10 | 15 | 15 | 17 | 50/1000 |
| 344503 | 354502 | $3 / 8^{\prime \prime} \times 1 / 4^{\prime \prime}$ | 10 | 15 | 15 | 17 | 100/1200 |
| 344510 | 354519 | $1 / 2^{\prime \prime} \times 3 / 8{ }^{\prime \prime}$ | 12 | 16 | 16 | 21 | 25/600 |
| S-3761 | - | 1/2" $\times 3 / 8$ " | 12 | 18 | 18 | 24 | 50/500 |
| 344596 | - | $1 / 2^{\prime \prime} \times 1 / 4^{\prime \prime}$ | 12 | 16 | 16 | 21 | 25/ 600 |
| S-3760 | - | $1 / 2^{\prime \prime} \times 1 / 4^{\prime \prime}$ | 12 | 18 | 18 | 24 | 50/400 |
| 344572 | 354571 | $3 / 4^{\prime \prime} \times 3 / 8{ }^{\prime \prime}$ | 13 | 19 | 19 | 27 | 25/300 |
| 344527 | 354526 | $3 / 4^{\prime \prime} \times 1 / 2^{\prime \prime}$ | 13 | 18 | 18 | 27 | 25/500 |
| 346835 | - | 1 " $\times 3 / 8$ " | 14 | 14 | 21 | 34 | 10/ 150 |
| 344473 | 354472 | $1^{\prime \prime} \times 1 / 2^{\prime \prime}$ | 14 | 14 | 22 | 34 | 25/ 150 |
| 344534 | 354533 | 1" $\times 3 / 4$ " | 13 | 19 | 19 | 34 | 25/ 250 |
| 346842 | - | $11 / 4 " \times 3 / 4^{\prime \prime}$ | 20 | 16 | 31 | 44 | 10/ 80 |
| 344541 | - | $11 / 4 " \times 1$ " | 15 | 22 | 22 | 42 | 10/ 150 |
| 346859 | - | $11 / 2^{\prime \prime} \times 3 / 4^{\prime \prime}$ | 16 | 19 | 25 | 50 | 10/ 120 |
| 346866 | - | $11 / 2^{\prime \prime} \times 1{ }^{\prime \prime}$ | 16 | 18 | 25 | 50 | -/ 80 |
| 344558 | - | $11 / 2^{\prime \prime} \times 11 / 4^{\prime \prime}$ | 13 | 23 | 23 | 50 | 10/ 160 |
| 346873 | - | 2" $\mathrm{x}^{\prime \prime}$ | 17 | 20 | 26,5 | 60 | -/ 40 |
| 344480 | - | $2^{\prime \prime} \times 11 / 4 "$ | 17 | 18 | 26,5 | 60 | 10/ 50 |
| 344565 | - | 2" $\times 11 / 2$ " | 18 | 26,5 | 26,5 | 60 | 5/ 50 |
| 344381 | - | $21 / 2^{\prime \prime} \times 2$ " | 22 | 32 | 32 | 78 | 1/ 44 |
| 346880 | - | $3^{\prime \prime} \times 2^{\prime \prime}$ | 23 | 26,5 | 36 | 90 | 1/ 36 |
| 344398 | - | $3^{\prime \prime} \times 21 / 2^{\prime \prime}$ | 23 | 36 | 36 | 93 | 1/ 36 |

Bushing


Brass plug
External hexagon, hot-pressed

| Item-No.: | Item-No.: | Connection: | Thread- <br> length: | Length: | Wrench <br> size: <br> LW | Packing unit: |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| plain | chro. plat. | male | L |  |  |  |
| 340017 | - | $1 / 8^{\prime \prime}$ | 7 | 12 | 13 | $100 / 1300$ |
| 340024 | - | $1 / 4^{\prime \prime}$ | 7 | 12 | 14 | $100 / 1500$ |
| 340031 | - | $3 / 8^{\prime \prime}$ | 9 | 15 | 17 | $50 / 1250$ |
| 340048 | - | $1 / 2^{\prime \prime}$ | 9 | 15 | 21 | $50 / 1200$ |
| 340055 | - | $3 / 4^{\prime \prime}$ | 11 | 18,5 | 27 | $25 / 300$ |
| 340062 | - | $1^{\prime \prime}$ | 12 | 20 | 34 | $25 / 150$ |



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## Brass plug



## Tee



## Tee, reduced



Square head, with collar, hot-pressed

| Item-No.: | Item-No.: | Connection: | Thread- <br> length: <br> thro. plat. | male | Length: | Wrench <br> size: <br> SW |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 344909 | 354908 | $3 / 8^{\prime \prime}$ | 8 | 15,5 | 12 | Packing unit: |
| 344916 | 354915 | $1 / 2^{\prime \prime}$ | 8,5 | 17,5 | 12 | $50 / 600$ |
| 344923 | 354922 | $3 / 4^{\prime \prime}$ | 8,5 | 17,5 | 14 | $20 / 400$ |
| 344930 | 354939 | 1 " | 13 | 22,5 | 17 | $25 / 200$ |
| 344947 | - | $11 / 4^{\prime \prime}$ | 13 | 23 | 19 | $10 / 150$ |
| 344954 | - | $1 \frac{1}{2 \prime \prime}$ | 13 | 26 | 22 | $10 / 100$ |
| 344961 | - | 2 " | 14 | 28 | 24 | $10 / 70$ |

All sides female threaded, hot-pressed

| Item-No.: <br> plain | Item-No.: chro. plat. | Connect.: <br> female | Threadlength: t |  | L2 | $\varnothing$ d1 | Pack. unit: |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| S-1821 | - | 1/8" | 9,5 | 31 | 15,75 | 14,5 | 10/120 |
| 346095 | - | 1/4" | 13 | 35 | 16,5 | 21 | 25/250 |
| 346002 | 356001 | 3/8" | 12 | 48 | 24,5 | 21 | 10/180 |
| 346019 | 356018 | 1/2" | 13 | 51 | 27,25 | 28,5 | 10/100 |
| 346026 | 356025 | 3/4" | 14 | 61 | 30,4 | 30,7 | 10/80 |
| 346033 | 356032 | $1{ }^{\prime \prime}$ | 18 | 75 | 34,5 | 40 | 5/ 50 |
| 346040 | - | $1^{1 / 4}{ }^{\prime \prime}$ | 19 | 89 | 44 | 50 | 5/ 30 |
| 346057 | - | $11 / 2^{\prime \prime}$ | 21 | 95 | 47 | 58 | 1/ 30 |
| 346064 | - | $2{ }^{\prime \prime}$ | 20 | 101 | 50,5 | 69 | 1/ 16 |

All sides female threaded, hot-pressed

| Item-No.: | Item-No.: | Connection: | Thread- <br> length: | Length: |  |  | Pack. unit: |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| plain | chro.plat. | female | t | L1 | L 2 | $\varnothing \mathrm{~d} 1$ |  |
| 346712 | - | $1 / 2^{\prime \prime} \times 3 / 8^{\prime \prime} \times 1 / 2^{\prime \prime}$ | 13 | 44 | 22 | 28,5 | $25 / 180$ |
| 346729 | - | $3 / 4^{\prime \prime} \times 1 / 2^{\prime \prime} \times 3 / 4^{\prime \prime}$ | 16 | 53,5 | 27,4 | 33,2 | $10 / 100$ |
| 346736 | - | $1^{\prime \prime} \times 3 / 4^{\prime \prime} \times 1^{\prime \prime}$ | 18 | 68 | 32 | 40 | $10 / 70$ |
| 346781 | - | $3 / 4^{\prime \prime} \times 3 / 4^{\prime \prime} \times 1 / 2^{\prime \prime}$ | 15 | 59 | 29,4 | 33,2 | $10 / 80$ |

External hexagon, hot-pressed

| Item-No.: <br> plain | Item-No.: | Connection: | Length: | Wrenchsize: | Packing unit: |
| :--- | :--- | :--- | :--- | :--- | :--- |
| 346132 | - | $1 / 8^{\prime \prime}$ | 4,5 | 14 | $100 / 3200$ |
| 346149 | - | $1 / 4^{\prime \prime}$ | 5 | 17 | $100 / 3200$ |
| 346156 | - | $3 / 8^{\prime \prime}$ | 5 | 25 | $-/ 1100$ |
| $34615-$ SW19 6 | - | $3 / 8^{\prime \prime}$ | 5 | 19 | $-/-$ |
| 520754 | - | $1 / 2^{\prime \prime}$ | 5 | 27 | $-/ 1100$ |
| 346163 | - | $3 / 4^{\prime \prime}$ | 6 | 32 | $50 / 800$ |
| 346170 | - | 1 L1 | 8 | 38 | $-/ 500$ |
| 346101 | - | $11 / 4^{\prime \prime}$ | 7 | 50 | $50 / 500$ |
| 346194 | - | $11 / 2^{\prime \prime}$ | 7 | 56 | $50 / 400$ |

Locknut


Both sides female threaded, hot-pressed

| Item-No.: <br> plain | Item-No.: chro.plat. | Connection: female | Threadlength: | Length <br> L | $\varnothing \mathrm{d} 1$ | Packing unit: |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| S-1699 | - | 1/8" | 10 | 15 | 14 | 25/300 |
| 346293 | - | 1/4" | 10 | 18,5 | 21 | 50/400 |
| 346200 | 356209 | 3/8" | 11 | 21,5 | 23 | 10/200 |
| 346217 | 356216 | 1/2" | 13 | 25,25 | 27,5 | 25/100 |
| 346224 | 356223 | 3/4" | 16 | 28,75 | 35,5 | 10/ 120 |
| 346231 | 356230 | $1{ }^{\prime \prime}$ | 18 | 33,5 | 41 | 10/ 70 |
| 346248 | - | $1^{1 / 4 "}$ | 19 | 46,5 | 51 | 5/ 50 |
| 346255 | - | $11 / 2^{\prime \prime}$ | 21 | 57 | 58 | 5/ 30 |
| 346262 | - | 2" | 23 | 58,5 | 71 | 1/ 20 |

Female thread x male thread, hot-pressed

Item-No.: Item-No.: Conn.: Threadlength: Length:
Packing unit:

| plain | chro. plat. fxm | mt 1 | ft 2 | L 1 | L 2 | $\varnothing \mathrm{~d} 1$ | $\varnothing \mathrm{~d} 2$ |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 346491 | - | $1 / 4^{\prime \prime}$ | 9 | 9 | 25 | 34,5 | 18 | 21 | $50 / 300$ |
| 346408 | 356407 | $3 / 8$ " | 10 | 11 | 25,75 | 29,25 | 22,5 | 23,5 | $25 / 250$ |
| 346415 | 356414 | $1 / 2^{\prime \prime}$ | 11 | 13 | 30,35 | 30,75 | 25,5 | 27,5 | $10 / 120$ |
| 346422 | 356421 | $3 / 4^{\prime \prime}$ | 14 | 16 | 38,5 | 38,5 | 32 | 34 | $10 / 100$ |
| 346439 | 356438 | 1 1" | 15 | 19 | 44 | 44 | 38 | 40 | $10 / 60$ |
| 346446 | - | $11 / 4^{\prime \prime}$ | 18 | 19 | 53 | 57 | 47 | 50 | $5 / 40$ |
| 346453 | - | $11 / 2^{\prime \prime}$ | 21 | 21 | 57 | 62 | 53 | 58 | $5 / 30$ |
| 346460 | - | 2 " | 22 | 23 | 70 | 76 | 66 | 70 | $1 / 16$ |
| 346484 |  | 3 " | 27 | 27 | 95 | 95 | 100 | 100 | $-/-$ |

Elbow (90 ${ }^{\circ}$ )
Elbow ( $90^{\circ}$ )


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## Elbow (90 ${ }^{\circ}$ )



Both sides male threaded, hot-pressed

| Item-No.: <br> plain | Item-No.: <br> chro. plat. | Connection: | Thread- <br> length: | Length: |  | Packing unit: |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 346507 | 356506 | $3 / 8^{\prime \prime}$ | 10 | 30 | 22,5 | $25 / 250$ |
| 346514 | 356513 | $1 / 2^{\prime \prime}$ | 10,5 | 30,75 | 26,5 | $25 / 150$ |
| 346521 | 356520 | $3 / 4^{\prime \prime}$ | 14 | 38,5 | 32 | $10 / 100$ |
| 346538 | - | 1 省 | 15 | 43 | 38 | $10 / 70$ |

## Elbow ( $45^{\circ}$ )



Male thread x female thread, hot-pressed

| Item-No.: | Item-No.: | Conn.: | Threadlength: |  |  | Length: |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |

## Elbow ( $45^{\circ}$ )



Female thread x female thread, hot-pressed

| Item-No.: <br> plain | Item-No.: chro. plat. | Conn.: $\mathrm{fxf}$ | Threadlength: | Length: |  | $\varnothing \mathrm{d} 1$ | Packing unit: |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 347800 | - | 3/8" | 12 | 20 | 20 | 26 | -/- |
| 347817 | - | 1/2" | 14 | 22 | 22 | 28 | -/200 |
| 347825 | - | 3/4" | 14 | 25 | 25 | 35 | 10/120 |

## Wall bracket ( $\mathbf{9 0}^{\circ}$ )

Female thread $x$ female thread, hot-pressed

| Item-No.: | Item-No.: | Conn.: | Thread- <br> length: | Length: |  |  | Packing unit: |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| plain | chro. plat. | fxf |  | L1 | L2 | $\varnothing \mathrm{d} 1$ |  |
| 347917 | 357916 | $1 / 2^{\prime \prime}$ | 11 | 22 | 19 | 26 | $10 / 160$ |



Wall bracket ( $90^{\circ}$ )
Female thread x female thread, hot-pressed

| Item-No.: | Item-No.: | Conn.: | Thread- <br> length: | Length: |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| plain | chro. plat. | fxf |  | L1 | L2 | $\varnothing \mathrm{d} 1$ |  |
| 347924 | - | $3 / 4^{\prime \prime}$ | 12 | 23,7 | 25,5 | 31,5 | $10 / 100$ |



Wall plate ( $\mathbf{9 0}^{\circ}$ )
Female thread x female thread, hot-pressed, horizontal passage

| Item-No.: | Item-No.: | Conn.: | Thread- <br> length: | Length: |  |  | Packing unit: |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| plain | chro. plat. |  |  | L | $\varnothing$ | Wrench <br> size: |  |
| S-4106 | - | G1/2" |  | 32 | 49 | 26 | $-/ 180$ |



## puteus (P)

## Cross fitting, $90^{\circ}$



Female thread, hot-pressed

| Item-No.: <br> plain | Item-No.: chro. plat. | Connection: <br> female | Threadlength: | Length: <br> L | $\varnothing$ d1 | Packing unit: |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 348013 | - | 1/2" | 15 | 28,5 | 24 | 10/120 |
| 348037 | - | $1^{\prime \prime}$ | 18 | 37,5 | 38 | -/- |



## Y-connector



Nominal diameter $1 / 2^{\prime \prime}, 2 \times$ male threads, $1 \times$ female thread, without seal

| Item-No.: | Item-No.: | Connection: | Thread- <br> length: | Length: |  | Packing unit: |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| plain | chro. plat. | f/m | t1 | L1 | L2 |  |
| 349928 | 359927 | $3 / 4^{\prime \prime}$ | 9 | 36 | 37 | $10 / 150$ |



## T-piece with union nut



Plain brass, $f \times \mathrm{m} \times \mathrm{f}$, snap ring stainless steel

| Item-No.: | Connec.: $F \times M(1) \times M(2)$ | Threadlength: $\mathrm{t} 1 \mathrm{IG} / \mathrm{t} 2 \mathrm{AG}$ | Length: <br> L | Wrench size: SW | Packing unit: |
| :---: | :---: | :---: | :---: | :---: | :---: |
| S-3412 | G1"xG3/4"x G ${ }^{\prime \prime}$ | 16/10 | 60 | 37 | -/- |



Tank connector

| Incl. lock nut and NBR-thread |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Item-No.: | Connection: | NW-spout: | Wrench size: | Packing unit: |
| S-385-11463-N | F $1^{\prime \prime} \times \mathrm{M} 1^{\prime \prime}$ | 25 mm | 38 | 5/40 |
| Replacement seal |  |  |  |  |
| S-385-Dichtung | $34 \times 50 \times 3 \mathrm{~mm}$ |  |  | -/- |
| S-385-Körper | only body, M $1^{\prime \prime}$ | 25 mm |  | 5/40 |
| S-385-Mutter | F ${ }^{\prime \prime}$, $\varnothing_{55 \times 10,5 \mathrm{~mm}}$ |  | 38 |  |



Tank connector (market model)

| Item-No.: | Connection: | NW-spout: | Wrench size SW: | Packing unit: |
| :---: | :---: | :---: | :---: | :---: |
| S-3213 | f $1^{\prime \prime} \times \mathrm{m} 1^{\prime \prime}$ | 25 mm | 37 | 5/40 |
| Replacement seal |  |  |  |  |
| S-3222-1/2-D | $33 \times 29 \times \varnothing_{11} \mathrm{~mm}$ |  |  |  |



## Compression fitting

SBR-thread with textile insert

| Item-No.: | Connection: | Length L: | H: | Packing unit: |
| :--- | :--- | :--- | :--- | :--- |
| S-3222-1/2 | $22 \mathrm{~mm} \times \mathrm{G}_{1} / 2^{\prime \prime}$ | $52,5 \mathrm{~mm}$ | 44 | $-/ 90$ |



## puteus (P)

## S-connector



S-connector nipple, nickel plated, extension $12,5 \mathrm{~mm}, 3 / 4^{\prime \prime} \mathrm{m} \times 1 / 2^{\prime \prime} \mathrm{m}$, wrench size 16

| Item-No.: | Item-No.: | Connection: | Threadlength: |  |  | Length:Wrench <br> size: <br> plain | chro. plat. |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |$\quad$ Pack. unit:



## Plug with slotted screw



Plug, plain brass with slotted screw chrome-plated

| Item-No.: | Item-No.: | Connection: male | Threadlength: | Length: <br> L | Wrench size: <br> SW: | Packing unit: |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 346187 | - | 3/8" | 10 | 20 | 9 | 25/1000 |
| 346118 | - | 1/2" | 11 | 21 | 9 | 50/500 |
| 346125 | - | 3/4" | 14 | 26 | 12 | 25/500 |
| Accessories: Protective plastic cap |  |  |  |  |  |  |
| 34611-Kappe |  | universal |  |  |  | 500/10000 |
| Closing plug, plain brass with slotted screw chrome-plated + protective plastic cap |  |  |  |  |  |  |
| 34618-11325 |  | 3/8" | 10 | 20 | 9 | 25/1000 |
| 34611-11325 |  | 1/2" | 11 | 21 | 9 | 25/800 |
| 34612-11325 |  | 3/4" | 14 | 26 | 12 | 25/500 |

## Compression fittings for copper pipes

Material in accordance with DIN 50960-6, operating temperature max. $90^{\circ} \mathrm{C}$, operating pressure max. 10 bar.
Important note: compression fittings are for single use only!
T-branch piece
T-piece with extension and two high tensile brass cone compression fittings with length compensation, chrome plated

| Item-No.: | Connection: | Leaving: | Packing <br> unit: |
| :--- | :--- | :--- | :--- |
| 522673 | $3 / 8^{\prime \prime}$ | $3 / 8^{\prime \prime} \times 10 \mathrm{~mm}$ | $25 / 100$ |



T-branch piece

| Item-No.: | Connection: | Leaving: | Packing unit: |
| :---: | :---: | :---: | :---: |
| 52267-3/8" | 3/8" | 3/8" $\times 10 \mathrm{~mm}$ | 25/150 |



| T-piece female/male with a compression fitting, chrome plated |  |  |  |
| :---: | :---: | :---: | :---: |
| Item-No.: | Connection: | Leaving: | Packing unit: |
| 524639 | $1 / 2^{\prime \prime} \times 1 / 2^{\prime \prime}$ | $3 / 8^{\prime \prime} \times 10 \mathrm{~mm}$ | 10/200 |
| 524646 | 1/2" $\mathbf{1}^{\text {1/2" }}$ | $1 / 2^{\prime \prime} \times 12 \mathrm{~mm}$ | 10/200 |



T-branch piece


T-branch piece
T-piece with $3 \times$ compression fittings, chrome plated

| Item-No.: | Connection: | Packing <br> unit: |
| :--- | :--- | :--- |
| 524707 | $3 / 8$ " $\times 8 \mathrm{~mm}$ | $10 / 200$ |
| 524714 | $3 / 8^{\prime \prime} \times 10 \mathrm{~mm}$ | $10 / 200$ |
| 524721 | $1 / 2^{\prime \prime} \times 12 \mathrm{~mm}$ | $10 / 160$ |



## puteus 尽

## Compression fitting, loose



Compression fitting, loose


## Single compression fitting



## Single compression fitting



## Double compression fitting



## Double compression fitting



Compression fitting without length compensation, chrome-plated

| Item-No.: | Connection: | Packing unit: |
| :--- | :--- | :--- |
| 524509 | $3 / 8^{\prime \prime} \times 8 \mathrm{~mm}$ | $25 / 1000$ |
| 524516 | $3 / 8^{\prime \prime} \times 10 \mathrm{~mm}$ | $25 / 1000$ |
| 524523 | $3 / 8^{\prime \prime} \times 12 \mathrm{~mm}$ | $25 / 1000$ |
| $52450-1 / 2^{\prime \prime}$ | $1 / 2^{\prime \prime} \times 8 \mathrm{~mm}$ | $25 / 1000$ |
| $52451-1 / 2^{\prime \prime}$ | $1 / 2^{\prime \prime} \times 10 \mathrm{~mm}$ | $25 / 1000$ |
| $52452-1 / 2^{\prime \prime}$ | $1 / 2^{\prime \prime} \times 12 \mathrm{~mm}$ | $25 / 1000$ |

Compression fitting with length compensation, chrome-plated

| Item-No.: | Connection: | Packing unit: |
| :--- | :--- | :--- |
| 52451-lang | $3 / 8^{\prime \prime} \times 10 \mathrm{~mm}$ | $150 / 750$ |

On nipple, chrome-plated

| Item-No.: | Connection: $\mathrm{m} \times \mathrm{m} \times \varnothing$ | Packing unit: |
| :--- | :--- | :--- |
| 524943 | $3 / 8^{\prime \prime} \times 3 / 8^{\prime \prime} \times 8 \mathrm{~mm}$ | $25 / 250$ |
| 524950 | $3 / 8^{\prime \prime} \times 3 / 8^{\prime \prime} \times 10 \mathrm{~mm}$ | $25 / 250$ |
| 524974 | $1 / 2^{\prime \prime} \times 1 / 2^{\prime \prime} \times 10 \mathrm{~mm}$ | $25 / 200$ |
| 524967 | $1 / 2^{\prime \prime} \times 1 / 2^{\prime \prime} \times 12 \mathrm{~mm}$ | $25 / 200$ |

On reducing nipple, chrome-plated

| Item-No.: | Connection: $\mathrm{m} \times \mathrm{m} \times \varnothing$ | Packing unit: |
| :--- | :--- | :--- |
| 524981 | $3 / 4^{\prime \prime} \times 3 / 8^{\prime \prime} \times 10 \mathrm{~mm}$ | $25 /-$ |

Chrome-plated

| Item-No.: | Connection: $\mathrm{m} \times \mathrm{m} \times \varnothing$ | Packing unit: |
| :--- | :--- | :--- |
| 524905 | $3 / 8^{\prime \prime} \times 3 / 8^{\prime \prime} \times 8 \mathrm{~mm}$ | $25 / 250$ |
| 524912 | $3 / 8^{\prime \prime} \times 3 / 8^{\prime \prime} \times 10 \mathrm{~mm}$ | $25 / 250$ |
| $52491-12 \mathrm{~mm}$ | $3 / 8^{\prime \prime} \times 3 / 8^{\prime \prime} \times 12 \mathrm{~mm}$ | $25 / 250$ |
| 524929 | $1 / 2^{\prime \prime} \times 1 / 2^{\prime \prime} \times 12 \mathrm{~mm}$ | $25 / 250$ |

Reduced, chrome-plated

| Item-No.: | Connection: $\mathrm{m} \times \mathrm{m} \times \varnothing$ | Packing unit: |
| :--- | :--- | :--- |
| 524936 | $3 / 8^{\prime \prime} \times 10 \mathrm{~mm} \times 3 / 8^{\prime \prime} \times 8 \mathrm{~mm}$ | $25 / 400$ |
| 524998 | $1 / 2^{\prime \prime} \times 12 \mathrm{~mm} \times 3 / 8^{\prime \prime} \times 10 \mathrm{~mm}$ | $50 / 700$ |

On nipple with female thread, chrome-plated

| Item-No.: | Connection: $\mathrm{fxm} \times \varnothing$ | Packing unit: |
| :--- | :--- | :--- |
| $52495-$ IG | $3 / 8^{\prime \prime} \times 3 / 8^{\prime \prime} \times 10 \mathrm{~mm}$ | $50 / 500$ |
| $52499-$ IG | $1 / 2^{\prime \prime} \times 3 / 8^{\prime \prime} \times 10 \mathrm{~mm}$ | $25 / 300$ |

Elbow male/male with single compression fitting, chrome-plated

| Item-No.: | Connection: $\mathrm{m} \times \mathrm{m} \times \varnothing$ | Packing unit: |
| :--- | :--- | :--- |
| 524868 | $3 / 8^{\prime \prime} \times 3 / 8^{\prime \prime} \times 10 \mathrm{~mm}$ | $25 / 300$ |
| $52486-1 / 2^{\prime \prime}$ | $1 / 2^{\prime \prime} \times 1 / 2^{\prime \prime} \times 10 \mathrm{~mm}$ | $10 / 250$ |
| 524875 | $1 / 2^{\prime \prime} \times 1 / 2^{\prime \prime} \times 12 \mathrm{~mm}$ | $25 / 150$ |

Elbow male/male with two compression fittings, chrome-plated

| Item-No.: | Connection: $m \times m \times \varnothing$ | Packing unit: |
| :--- | :--- | :--- |
| 524806 | $3 / 8^{\prime \prime} \times 3 / 8^{\prime \prime} \times 8 \mathrm{~mm}$ | $25 / 400$ |
| 524813 | $3 / 8^{\prime \prime} \times 3 / 8^{\prime \prime} \times 10 \mathrm{~mm}$ | $25 / 400$ |
| $52487-11001$ | $1 / 2^{\prime \prime} \times 1 / 2^{\prime \prime} \times 12 \mathrm{~mm}$ | $25 /-$ |

Elbow female/male with compression fitting, chrome-plated

| Item-No.: | Connection: $\mathrm{f} \times \mathrm{m} \times \varnothing$ | Packing unit: |
| :--- | :--- | :--- |
| 524837 | $1 / 2^{\prime \prime} \times 3 / 8^{\prime \prime} \times 10 \mathrm{~mm}$ | $10 / 150$ |

(
other end chrome plated other end, chrome-plated

| Item-No.: | Connection: $\mathrm{fx} \mathrm{m} \mathrm{x} \varnothing$ | Packing unit: |
| :--- | :--- | :--- |
| 524899 | $3 / 8^{\prime \prime} \times 3 / 8^{\prime \prime} \times 10 \mathrm{~mm}$ | $10 / 250$ |

Wall plate elbow, without compression fitting, chrome-plated

| Item-No.: | Connection: $\mathrm{f} \times \mathrm{m} \times \varnothing$ | Packing unit: |
| :--- | :--- | :--- |
| 524660 | $1 / 2^{\prime \prime} \times 3 / 8^{\prime \prime} \times 12,5 \mathrm{~mm}$ | $10 / 120$ |
| 524677 | $1 / 2^{\prime \prime} \times 1 / 2^{\prime \prime} \times 12,5 \mathrm{~mm}$ | $15 / 180$ |

Compression fitting


Elbow with one compression fitting


Elbow with two compression fittings


Elbow with one compression fitting


Elbow with one compression fitting


Wall plate elbow


## puteus 尽

Wall plate elbow


Wall plate elbow, with one compression fitting, chrome-plated

| Item-No.: | Connection: $\mathrm{fxm} \times \varnothing$ | Packing unit: |
| :--- | :--- | :--- |
| 524615 | $1 / 2^{\prime \prime} \times 3 / 8^{\prime \prime} \times 10 \mathrm{~mm}$ | $10 / 100$ |
| 524622 | $1 / 2^{\prime \prime} \times 1 / 2^{\prime \prime} \times 12 \mathrm{~mm}$ | $10 / 150$ |



## Accessories for compression fittings



Clamping ring for brass compression fittings, series 524 xx , chrome-plated

| Item-No.: | Connection: | Packing unit: |
| :--- | :--- | :--- |
| 524554 | $3 / 8 " \times 8 \mathrm{~mm}$ | $1000 / 15000$ |
| 524561 | $3 / 8 " \times 10 \mathrm{~mm}$ | $1000 / 15000$ |



Wall plate elbow


Wall plate elbow, brass plain, with one compression fitting

| Item-No.: | Connection: $\mathrm{fxm} \mathrm{\times} \mathrm{\varnothing}$ | Packing unit: |
| :--- | :--- | :--- |
| 348815 | $1 / 2^{\prime \prime} \times 1 / 2^{\prime \prime} \times 16 \mathrm{~mm}$ | $25 / 150$ |

Wall box easy with Euro adapter connection, female thread/male thread, housing polypropylene with talc, fitting brass, screws stainless steel

| Item-No.: | Connection: | Length: |  | Packing <br> unit: |
| :--- | :--- | :--- | :--- | :--- |
|  L  H |  |  |  |  |
| Seplacement gasket | 95 | 63 | $-/ 72$ |  |
| S-2828-Dichtung | $\varnothing_{12} \times \varnothing^{\prime \prime}$ |  |  |  |



Wall box
Wall box double with Euro adapter connection, female thread/male thread, housing polypropylene with talc, fitting brass, screws stainless steel

| Item-No.: | Connection: | Length: |  | Packing <br> unit: |
| :--- | :--- | :--- | :--- | :--- |
| S-2829 | $1 / 2^{\prime \prime} \times 3 / 4^{\prime \prime}$ | 132 | H |  |



Bending spring

| Bending spring for compound pipe, galvanized steel |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: |
| Item-No.: Connection: Length: Packing <br> unit: <br> S inside/outside L H  <br> S-2928-16 $16,7 / 20,85$ 500 $1 / 40$ |  |  |  |  |



## puteus 尽

## Adapter fitting



Brass chrome-plated

| Item-No.: | Connection: | Thread length: f | m | Length <br> L | $\varnothing$ d1 | Packing unit: |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 356308 | M 22/1" $f \times 1 / 2^{\prime \prime} \mathrm{m}$ | 5,5 | 8,5 | 16 | 24 | 50/1000 |
| 356315 | M 22/1"fx $3 / 4^{\prime \prime} \mathrm{m}$ | 6 | 9,5 | 16 | 26 | 50/500 |



| Item-No.: | Connection: | Thread length: <br> m | f | $\begin{aligned} & \text { Length } \\ & \text { L } \end{aligned}$ | $\varnothing$ d1 | Packing unit: |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 356322 | M 22/1" m x 1/2" f | 2,5 | 7,5 | 13 | 24 | 50/1000 |
| 356339 | M 22/1" m x 3/4" f | 6,5 | 8,5 | 16,5 | 29 | 50/700 |



| Item-No.: | Connection: | Length: | Packing <br> unit: |
| :--- | :--- | :--- | :--- |
| 356346 | $M 22 / 1^{\prime \prime} \mathrm{f} \times 3 / 4^{\prime \prime} \mathrm{mx} \times 1 / 2^{\text {" }} \mathrm{f}$ | 10 | $50 / 2000$ |



| Item-No.: | Connection: | Threadlength: <br> m <br> m |  | Length: |  | Packing <br> unit: |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 356353 | $\mathrm{M} 24 / 1^{\prime \prime} \mathrm{m} \times 3 / 4 \mathrm{~m}$ | 4,5 | 7 | 18,5 | 27 | $50 / 400$ |



| $\begin{array}{l}\text { Item-No.: }\end{array}$ | Connection: | $\begin{array}{l}\text { Threadlength: } \\ \text { m } \\ \begin{array}{l}\text { with } \\ \text { sealing }\end{array}\end{array}$ |  |  | Length |
| :--- | :--- | :--- | :--- | :--- | :--- | \(\left.\begin{array}{l}Packing <br>

unit:\end{array}\right]\)

## Seals

| Item-No.: | for item: | Connection: | Item-No.: | for item: | Connection: |
| :--- | :--- | :--- | :--- | :--- | :--- |
| 35630/31-Dichtung | $35630 / 31$ | $21 \times 15 \times 1,5 \mathrm{~mm}$ | $35633 / 38 / 39$-Dichtung | $35633 / 38 / 39$ | $24 \times 16 \times 2,5 \mathrm{~mm}$ |
| 35632 -Dichtung | 35632 | $18,5 \times 15 \times 2 \mathrm{~mm}$ | 35636 -Dichtung | 35636 | $21 \times 15 \times 2,5 \mathrm{~mm}$ |
| 35635 -Dichtung | 35635 | $22 \times 17 \times 1,5 \mathrm{~mm}$ |  |  |  |

## Adapter fitting

| Item-No.: | Connection: | Threadlength: |  | Length: |  | Packing unit: |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | male | female | L | $\varnothing \mathrm{d} 1$ |  |
| 356384 | 1/2" m x 3/4"f | 10 | 9,5 | 20 | 29 | 50/600 |




Adapter fitting
Brass chrome-plated, corded or with external hexagon, with sealing

| Item-No.: | Connection: | Threadlength: |  |  | Length: |  | Wrench- <br> size: | Packing <br> unit: |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
|  |  |  | m | f | L | $\varnothing$ d1 | SW: |  |



## puteus (P)

## Y-connector



## Tee



## Y-connector



Brass polished chrome-plated, $2 \times$ female, $1 \times$ male thread

| Item-No.: | Item-No.: | Connec.: | Thread- <br> length: | Length: |  | Packing unit: |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| plain | chrom. plat. |  | t1 | L1 | L2 |  |
| - | 359910 | $1 / 2^{\prime \prime}$ | 12 | 42 | 32 | $10 / 120$ |

Brass, polished chrome-plated, $1 / 2^{\prime \prime}$ male $\times 1 / 2^{\prime \prime}$ female $\times 1 / 2^{\prime \prime}$ female thread

| Item-No.: <br> chrome-plated | Connection: | Threadlength: |  | Length: | Packing <br> unit: |
| :--- | :--- | :--- | :--- | :--- | :--- |
| 359972 | $\mathrm{~m} \mathrm{t1}$ | f | L |  |  |

$3 \times 3 / 8^{\prime \prime}$ female thread

| Item-No.: <br> plain | Item-No.: | Connec.: | Thread- <br> length: <br> chrom. plat. |  | Length: | Packing unit: |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| t1 | L1 | L2 |  |  |  |  |
| S-1828 | - | $3 / 8^{\prime \prime}$ | 16 | 39 | 30 | $10 / 150$ |

## Extension, reduced

Adapter fitting

| Item-No.: <br> plain | Item-No.: | Connection: | Threadlength: |  | Length: |  | Wre.- <br> size: | Packing <br> unit: |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 346378 | 356377 | $1 / 2^{\prime \prime} \mathrm{f} \times 3 / 8^{\prime \prime} \mathrm{m}$ | 14 | 10 | 29 | 25,5 | 11 | $20 / 300$ |
| 346903 | 356902 | $3 / 4^{\prime \prime} \mathrm{f} \times 1 / 2^{\prime \prime} \mathrm{m}$ | 13 | 11 | 30 | 31,5 | 12 | $20 / 180$ |
| 346919 | 356910 | $3 / 4^{\prime \prime} \mathrm{f} \times 3 / 8^{\prime \prime} \mathrm{m}$ | 14 | 10 | 29 | 32 | 11 | $20 / 240$ |



Brass pipe
With internal polygon, on both sides tapered male thread according to EN10226-1/ISO7-1


| Länge: | $\begin{aligned} & \text { R3/8" } \\ & \text { SW } 10 \\ & \text { blank } \end{aligned}$ | $\begin{aligned} & \text { R3/8" } \\ & \text { SW } 10 \\ & \text { verchromt } \end{aligned}$ | $\begin{aligned} & \text { R1/2" } \\ & \text { SW } 12 \\ & \text { blank } \end{aligned}$ | R1/2" <br> SW 12 verchromt | $\begin{aligned} & \text { R3/4" } \\ & \text { SW 17 } \\ & \text { blank } \end{aligned}$ | $\begin{aligned} & \text { R3/4" } \\ & \text { SW } 17 \\ & \text { verchromt } \end{aligned}$ | R1" <br> SW 22 blank | $\mathrm{R}_{1}{ }^{\prime \prime}$ <br> SW 22 verchromt | VE: |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 30 mm | 292101 | 292156 | 292118 | 292163 | 292125 | 292170 | 292132 | 292187 | -/10 |
| 40 mm | 292200 | 292255 | 292217 | 292262 | 292224 | 292279 | 292231 | 292286 | -/10 |
| 50 mm | 292309 | 292354 | 292316 | 292361 | 292323 | 292378 | 292330 | 292385 | -/10 |
| 60 mm | 292408 | 292453 | 292415 | 292460 | 292422 | 292477 | 292439 | 292484 | -/10 |
| 80 mm | 292507 | 292552 | 292514 | 292569 | 292521 | 292576 | 292538 | 292583 | -/10 |
| 100 mm | 292606 | 292651 | 292613 | 292668 | 292620 | 292675 | 292637 | 292682 | -/10 |
| 120 mm | 292705 | 292750 | 292712 | 292767 | 292720 | 292774 | 292835 | 292781 | -/10 |
| 130 mm | - | - | - | - | - | - | 292934 | - | -/10 |
| 150 mm | 292804 | 292859 | 292811 | 292866 | 292828 | 292873 | - | 292880 | -/10 |
| 200 mm | 292903 | 292958 | 292910 | 292965 | 292927 | 292972 | - | 292989 | -/10 |

## puteus 官

## Tap extension



Plain brass or chrome-plated brass, according to DIN 3523


| Con.: <br> L mm | plain <br> G3/8" | chr. pla. G3/8" | Packing unit: | plain G1/2" | chr. pla. G1/2" | Packing unit: | plain <br> G3/4" | chr. pla. G3/4" | Packing unit: | plain G1" | chr. pla. G1" | Packing unit: |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 10 | 348109 | 358104 | 10 | 348112 | 358 | 10/400 | 34 | 358128 | 0 |  | - | - |
| 15 | 34 | 35 | 10/ | 34 | 358 | 10 | 3 | 358 | 00 |  | - | - |
| 20 | 348 | 358 | 10 | 348 | 35 | 10 | 348228 | 358227 | 10/150 | 348235 | 358234 | 10/100 |
| 25 | 348259 | 358258 | 10/ | 348 | 3582 | 10/200 | 348273 | 358272 | 10/150 | 348280 | 358289 | 10/100 |
| 30 | 348303 | 358302 | 10/250 | 348 | 358319 | 10/150 | 348327 | 358326 | 10/150 | 348334 | 358333 | 10/ 50 |
| 35 | 348358 | - | 10/200 | 34 |  | 10/100 | 348372 |  | 10/100 |  |  |  |
| 40 | 348402 | 358401 | 10/20 | 34 | 358418 | 10/150 | 348426 | 358425 | 10/100 | 348433 | 358432 | 10/100 |
| 45 | 348457 | - | 10 | 34 | 358463 | 5/100 | 348471 | 358470 | 5/ 50 | - | - | - |
| 50 | 348 | 358500 | 5/150 | 348 | 358517 | 5/100 | 348525 | 358524 | 5/50 | 348549 | 358548 | 5/ 50 |
| 60 | 348556 | - | 5/100 | 348563 | - | 5/100 | 348570 | - | 5/ 50 | - | - | - |
| 65 | 348600 | 358609 | 5/100 | 348617 | 358616 | 5/100 | 348624 | 358623 | 5/ 50 | - | - | - |
| 80 | 348655 | 358654 | 5/100 | 348662 | 358661 | 5/ 50 | 348679 | 358678 | 5/ 50 | - | - | - |
| 100 | 348594 | 358593 | 5/ 50 | 348587 | 358586 | 5/ 50 | 348686 | - | 5/ 50 | 348648 | 358647 | 5/ 30 |



Straight screw fitting, chrome-plated and polished, with screw rosette

| Item-No.: | Connection: | Packing unit: |
| :--- | :--- | :--- |
| 357107 | $3 / 8^{\prime \prime} \times 1 / 2^{\prime \prime} \times 55 \mathrm{~mm}$ | $18 / 216$ |
| 357114 | $1 / 2^{\prime \prime} \times 1 / 2^{\prime \prime} \times 55 \mathrm{~mm}$ | $18 / 162$ |
| 357121 | $1 / 2^{\prime \prime} \times 1 / 2^{\prime \prime} \times 65 \mathrm{~mm}$ | $-/-$ |
| 357138 | $1 / 2^{\prime \prime} \times 3 / 4^{\prime \prime} \times 60 \mathrm{~mm}$ | $12 / 120$ |

Screw fitting


Eccentric screw fitting, 5 mm , chrome-plated and polished, with push-on rosette

Item-No.: Connection:
Packing unit:
357237 1/2" $\times 1 / 2^{\prime \prime} \times 63 \mathrm{~mm} \quad 20 / 80$
357244 1/2" $\times 3 / 4^{\prime \prime} \times 68 \mathrm{~mm} \quad 20 / 80$


Screw fitting


Eccentric screw fitting, 17 mm , chrome-plated and polished, with push-on rosette

| Item-No.: | Connection: | Packing unit: |
| :--- | :--- | :--- |
| 357282 | $3 / 8^{\prime \prime} \times 1 / 2^{\prime \prime} \times 68 \mathrm{~mm}$ | $1 / 60$ |
| 357299 | $1 / 2^{\prime \prime} \times 1 / 2^{\prime \prime} \times 68 \mathrm{~mm}$ | $1 / 60$ |
| 357305 | $1 / 2^{\prime \prime} \times 3 / 4^{\prime \prime} \times 68 \mathrm{~mm}$ | $1 / 60$ |



Screw fitting


Eccentric screw fitting, 30 mm , chrome-plated and polished, with screw rosette

Screw fitting

Item-No.: Connection: Packing unit:

| 357176 | $3 / 8^{\prime \prime} \times 1 / 2^{\prime \prime} \times 65 \mathrm{~mm}$ | $12 / 120$ |
| :--- | :--- | :--- |
| 357183 | $1 / 2^{\prime \prime} \times 1 / 2^{\prime \prime} \times 65 \mathrm{~mm}$ | $14 / 112$ |
| 357190 | $1 / 2^{\prime \prime} \times 3 / 4^{\prime \prime} \times 68 \mathrm{~mm}$ | $12 / 96$ |



## puteus 尽

## Screw fitting



Straight screw fitting, chrome-plated and polished, with pushon rosette

| Item-No.: | Connection: | Packing unit: |
| :--- | :--- | :--- |
| 357145 | $3 / 8^{\prime \prime} \times 1 / 2^{\prime \prime} \times 62 \mathrm{~mm}$ | $10 / 60$ |
| 357152 | $1 / 2^{\prime \prime} \times 1 / 2^{\prime \prime} \times 62 \mathrm{~mm}$ | $10 / 60$ |
| 357169 | $1 / 2^{\prime \prime} \times 3 / 4^{\prime \prime} \times 65 \mathrm{~mm}$ | $10 / 60$ |

## Screw fitting



Eccentric screw fitting, 5 mm , chrome-plated and polished, with push-on rosette

| Art.-Nr.: | Abm.: | VE: |
| :--- | :--- | :--- |
| 357206 | $3 / 8^{\prime \prime} \times 1 / 2^{\prime \prime} \times 62 \mathrm{~mm}$ | $20 / 80$ |
| 357213 | $1 / 2^{\prime \prime} \times 1 / 2^{\prime \prime} \times 62 \mathrm{~mm}$ | $20 / 80$ |
| 357220 | $1 / 2^{\prime \prime} \times 3 / 4^{\prime \prime} \times 65 \mathrm{~mm}$ | $20 / 80$ |

## Screw fitting



Eccentric screw fitting, 17 mm , chrome-plated and polished, with push-on rosette

| Item-No.: | Connection: | Packing unit: |
| :--- | :--- | :--- |
| 357251 | $3 / 8^{\prime \prime} \times 1 / 2^{\prime \prime} \times 82 \mathrm{~mm}$ | $1 / 60$ |
| 357268 | $1 / 2^{\prime \prime} \times 1 / 2^{\prime \prime} \times 82 \mathrm{~mm}$ | $1 / 60$ |
| 357275 | $1 / 2^{\prime \prime} \times 3 / 4^{\prime \prime} \times 85 \mathrm{~mm}$ | $1 / 60$ |

## Screw fitting



Straight screw fitting, 17 mm , chrome-plated and polished, with screw rosette

| Item-No.: | Connection: | Packing unit: |
| :--- | :--- | :--- |
| 357381 | $1 / 2^{\prime \prime} \times 1 / 2^{\prime \prime} \times 72 \mathrm{~mm}$ | $10 / 60$ |
| 357398 | $1 / 2^{\prime \prime} \times 3 / 4^{\prime \prime} \times 75 \mathrm{~mm}$ | $10 / 60$ |

## Replacement gaskets for connecting couplings

AFM 34, KTW-certified, $18 \times 10 \times 2 \mathrm{~mm}$ (1/2")
Item-No. seal: for Item-No.:

| $35710-A F M$ | 35710 | 35711 | 35712 | 35714 | 35715 | 35717 | 35718 | 35720 | 35721 | 35723 | 35725 | 35726 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
|  | 35728 | 35729 | 35739 |  |  |  |  |  |  |  |  |  |

Novapress 260 or equivalent, $24 \times 14 \times 3 \mathrm{~mm}$

| WS-551-Dtg-3mm | 35713 | 35716 | 35719 | 35722 | 35724 | 35727 | 35730 | 35739 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |

Malleable galvanized fittings according to DIN EN 10242, design symbol A, material according to DIN EN 1562 (EN-GJMB-350-10), threads according to ISO 7.1, connection thread to DIN EN ISO 228-1, max. $0^{\circ}-120^{\circ} \mathrm{C} 25 \mathrm{bar}, 120^{\circ}-300^{\circ} \mathrm{C} 20$ bar

Long bend (1), ISO G 4
Female thread x male thread, long, $90^{\circ}$

| Item-No.: <br> zinc plated | Item-No.: <br> black | Connec.: | Threadlength: |  | Length: |  | Packing unit: |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | f | m | L1 | L2 |  |
| 400001 | 40000-S | 1/4" | 10 | 13 | 40 | 36 | 10/400 |
| 400100 | 40010-S | 3/8" | 10 | 12 | 48 | 42 | 10/280 |
| 400117 | 40011-S | 1/2" | 13 | 15 | 55 | 48 | 10/180 |
| 400124 | 40012-S | 3/4" | 15 | 18 | 69 | 60 | 10/ 80 |
| 400131 | 40013-S | 1 " | 17 | 20 | 85 | 75 | 10/ 50 |
| 400148 | 40014-S | $11 / 4 "$ | 19 | 22 | 105 | 95 | 10/ 30 |
| 400155 | 40015-S | $11 / 2^{\prime \prime}$ | 20 | 22 | 116 | 105 | 5/ 20 |
| 400162 | 40016-S | 2" | 23 | 26 | 140 | 130 | 1/ 10 |
| 400179 | 40017-S | $2^{1 / 2}{ }^{\prime \prime}$ | 27 | 30 | 176 | 165 | 1/ 4 |
| 400186 | 40018-S | 3 " | 30 | 33 | 205 | 190 | 1/ 3 |
| 400193 | 40019-S | 4" | 37 | 45 | 240 | 258 | 1/ 4 |



Short bend (1a), ISO D 4



## puteus (P)

## Long bend (2), ISO G 1



Female thread x female thread, long, $90^{\circ}$

| Item-No.: <br> zinc plated | Item-No.: <br> black | Connec.: | ThreadLength: | Length: <br> L | Packing unit: |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 400209 | 40020-S | 3/8" | - | - | 10/200 |
| 400216 | 40021-S | 1/2" | 13 | 55 | 10/150 |
| 400223 | 40022-S | 3/4" | 15 | 69 | 10/80 |
| 400230 | 40023-S | $1{ }^{\prime \prime}$ | 17 | 85 | 10/ 40 |
| 400247 | 40024-S | $11 / 4 "$ | 19 | 105 | 10/ 25 |
| 400254 | 40025-S | $11 / 2^{\prime \prime}$ | 20 | 116 | 5/ 15 |
| 400261 | 40026-S | 2" | 24 | 140 | 1/ 8 |
| 400278 | 40027-S | $2^{1 / 2 "}$ | 27 | 176 | 1/ 4 |
| 400285 | 40028-S | $3{ }^{\prime \prime}$ | 30 | 205 | 1/ 2 |
| 400292 | 40029-S | $4 "$ | - | - | 1/ 3 |

Short bend (2a), ISO D 1


Female thread x female thread, short, $90^{\circ}$

| Item-No.: <br> zinc plated | Item-No.: <br> black | Connec.: | Thread- <br> Length: | Length: <br> L | Packing unit: |
| :--- | :--- | :--- | :--- | :--- | :--- |
| 401213 | $40121-S$ | $1 / 2^{\prime \prime}$ | 13 | 45 | $10 / 180$ |
| 401220 | $40122-S$ | $3 / 4^{\prime \prime}$ | 15 | 50 | $10 / 100$ |
| 401237 | $40123-S$ | $1^{\prime \prime}$ | 17 | 63 | $10 / 50$ |
| 401244 | $40124-S$ | $11^{1 / 4}$ | 19 | 76 | $10 / 30$ |
| 401251 | $40125-S$ | $11^{\prime \prime} 2^{\prime \prime}$ | 19 | 85 | $1 / 20$ |
| 401268 | $40126-S$ | $2^{\prime \prime}$ | 24 | 102 | $1 / 14$ |

Long bend (3), ISO G 8

|  | Item-No.: <br> zinc plated | Item-No.: <br> black | Connec.: | ThreadLength: | Length: <br> L | Packing unit: |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 400308 | 40030-S | 3/8" | 12 | 42 | -/- |
|  | 400315 | 40031-S | 1/2" | 15 | 48 | 10/250 |
|  | 400322 | 40032-S | 3/4" | 18 | 60 | 10/120 |
|  | 400339 | 40033-S | $1{ }^{\prime \prime}$ | 20 | 75 | 10/ 50 |
|  | 400346 | 40034-S | $11 / 4 "$ | 22 | 95 | 10/ 40 |
|  | 400353 | 40035-S | $11 / 2^{\prime \prime}$ | 22 | 105 | 1/ 20 |
|  | 400360 | 40036-S | 2" | 24 | 130 | -/ 3 |
|  | 400377 | 40037-S | $2^{1 / 2 "}$ | 29 | 165 | 1/ 5 |
|  | 400384 | 40038-S | 31 | 35 | 190 | 1/ 1 |
|  | 400391 | 40039-S | 4" | 37 | 245 | 1/ 1 |

Female thread x male thread, long, $45^{\circ}$

| Item-No.: | Item-No.: | Conn.: | Threadlength: |  | Length: |  | Packing unit: |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| zinc plated | black |  | f | m | L1 | L2 |  |
| 404009 | $40400-S$ | $3 / 8 "$ | 12 | 13 | 25 | 31 | $10 / 300$ |
| 404016 | $40401-S$ | $1 / 2^{\prime \prime}$ | 13 | 15 | 30 | 36 | $10 / 200$ |
| 404023 | $40402-S$ | $3 / 4^{\prime \prime}$ | 15 | 18 | 36 | 43 | $10 / 120$ |
| 404030 | $40403-S$ | 1 1" | 17 | 20 | 42 | 51 | $10 / 50$ |
| 404047 | $40404-S$ | $11 / 4^{\prime \prime}$ | 19 | 22 | 54 | 64 | $10 / 40$ |
| 404054 | $40405-S$ | $11 / 2^{\prime \prime}$ | 19 | 22 | 58 | 68 | $10 / 30$ |
| 404061 | $40406-S$ | 2 " | 24 | 27 | 70 | 81 | $10 /$ |
| 404078 | $40407-S$ | $21 / 2^{\prime \prime}$ | 27 | 29 | 86 | 99 | $1 /$ |
| 404085 | $40408-S$ | $3 "$ | 30 | 35 | 100 | 113 | $1 /$ |



## Long bend $45^{\circ}$ (41), ISO G1

Female thread x female thread, long, $45^{\circ}$

| Item-No.: <br> zinc plated | Item-No.: <br> black | Connection: | Threadlength: | Length: <br> L | Packing unit: |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 404108 | 40410-S | 3/8" | 12 | 32 | 10/300 |
| 404115 | 40411-S | 1/2" | 13 | 36 | 10/180 |
| 404122 | 40412-S | 3/4" | 15 | 43 | 10/ 110 |
| 404130 | 40413-S | 1 " | 17 | 51 | 10/ 40 |
| 404146 | 40414-S | $11 / 4 "$ | 19 | 64 | 10/ 30 |
| 404153 | 40415-S | $11 / 2^{\prime \prime}$ | 20 | 68 | -/ 65 |
| 404160 | 40416-S | $2{ }^{\prime \prime}$ | 24 | 81 | -/ 35 |



Crossover (85)
Female thread x female thread

| Item-No.: <br> zinc plated | Item-No.: <br> black | Connection: | Threadlength: | Length: <br> L1 <br> L2 |  | Packing unit: |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 408519 | 40851-S | 1/2" | 13 | 91 | 28,5 | 10/100 |
| 408526 | 40852-S | 3/4" | 15 | 108 | 41 | 10/ 60 |



## puteus 尽

## Elbow (90), ISO A 1



Female thread x female thread, $90^{\circ}$

| Item-No.: <br> zinc plated | Item-No.: <br> black | Connection: | Threadlength: | Length: <br> L | Packing unit: |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 408991 | 40899-S | 1/4" | - | 21 | 10/500 |
| 409004 | 40900-S | 3/8" | 10 | 25 | 10/350 |
| 409011 | 40901-S | 1/2" | 13 | 28 | 10/250 |
| 409028 | 40902-S | 3/4" | 15 | 33 | 10/140 |
| 409035 | 40903-S | $1^{\prime \prime}$ | 17 | 38 | 10/80 |
| 409042 | 40904-S | $11 / 4 "$ | 19 | 45 | 10/ 40 |
| 409059 | 40905-S | $11 / 2^{\prime \prime}$ | 19 | 50 | 10/30 |
| 409066 | 40906-S | 2" | 24 | 58 | 5/ 20 |
| 409172 | 40917-S | $2^{1 / 21}$ | 28 | 69 | 1/ 10 |
| 409189 | 40918-S | 3" | 28 | 78 | 1/ 8 |
| 409196 | 40919-S | 4" | 30 | 96 | 1/ 8 |

Elbow reducing (90 R), ISO A 1
Female thread x female thread, reduced, $90^{\circ}$


Elbow (92), ISO A 4


| Item-No.: <br> zinc plated | Item-No.: <br> black | Connection: <br> $f_{1} \quad f_{2}$ | Threadlength: |  | Length: |  | Packing unit: |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | f1 | f2 | L1 | L2 |  |
| 409110 | 40911-S | $1 / 2^{\prime \prime} \times 3 / 8^{\prime \prime}$ | 13 | 10 | 26 | 26 | 10/260 |
| 409080 | 40908-S | $3 / 4^{\prime \prime} \times 1 / 2^{\prime \prime}$ | 15 | 13 | 30 | 31 | 10/160 |
| 409073 | 40907-S | $1^{\prime \prime} \times 1 / 2^{\prime \prime}$ | 18 | 15 | 30 | 31 | 10/100 |
| 409097 | 40909-S | $1^{\prime \prime} \times 3 / 4^{\prime \prime}$ | 17 | 15 | 35 | 36 | 10/100 |
| 408984 | 40898-S | $11 / 4 " \times 3 / 4^{\prime \prime}$ | 19 | 24 | 50 | 64 | 10/60 |
| 409141 | 40914-S | $11 / 4 " \mathrm{x} 1^{\prime \prime}$ | 19 | 17 | 40 | 42 | 10/ 50 |
| 409158 | 40915-S | $11 / 2^{\prime \prime} \times 1{ }^{\prime \prime}$ | 19 | 17 | 42 | 46 | 10/ 40 |
| 409356 | 40935-S | $1^{1 / 2} 2^{\prime \prime} \times 11 / 4^{\prime \prime}$ | 17,5 | 22 | 44,5 | 62 | 10/30 |
| 409363 | 40936-S | $2^{\prime \prime} \times 11 / 2^{\prime \prime}$ | - | - | - | - | 10/30 |

Female thread x male thread, $90^{\circ}$

| Item-No.: <br> zinc plated | Item-No.: <br> black | Connec.: | Threadlength: |  | Length: |  | Packing unit: |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | IG | AG | L1 | L2 |  |
| 409295 | 40929-S | 1/4" | 10 | 13 | 21 | 28 | 10/700 |
| 409202 | 40920-S | 3/8" | 11 | 12 | 25 | 32 | 10/350 |
| 409219 | 40921-S | 1/2" | 13 | 15 | 28 | 37 | 10/250 |
| 409226 | 40922-S | 3/4" | 15 | 18 | 33 | 43 | 10/140 |
| 409233 | 40923-S | 1 " | 17 | 20 | 38 | 52 | 10/ 80 |
| 409240 | 40924-S | $11 / 4 "$ | 19 | 22 | 45 | 60 | 10/ 40 |
| 409257 | 40925-S | $11 / 2^{\prime \prime}$ | 19 | 22 | 50 | 65 | 10/ 30 |
| 409264 | 40926-S | 2" | 24 | 28 | 58 | 74 | 6/ 18 |
| 409271 | 40927-S | $21 / 2^{\prime \prime}$ | 27 | 29 | 69 | 88 | 1/30 |
| 409288 | 40928-S | 3 " | 30 | 35 | 78 | 98 | 1/ 8 |

Female thread $x$ male thread, reduced, $90^{\circ}$

| 409332 | $40933-S$ | $1^{\prime \prime} \times 3 / 4^{\prime \prime}$ | 17 | 18 | 34 | 45 | $10 / 100$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |

## Union elbow (95), ISO UA 1

Female thread x female thread, flat seat, without seal

| Item-No.: | Item-No.: | Connec.: | Thread- <br> length: | Length: |  | Wrench size: |  | Packing <br> unit: |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| zinc plated | black |  |  |  |  |  |  |  |



Union elbow (96), ISO UA 11
Female thread x female thread, taper seat

| Item-No.: <br> zinc plated | Item-No.: <br> black | Connec.: | Threadlength: | Length: |  | Wrench size: |  | Packing unit: |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | L1 | L2 | SW1 | SW2 |  |
| 40960 o | 40960-S | 3/8" | - | - | - | - | - | 10/120 |
| 409615 | 40961-S | 1/2" | 13 | 58 | 28 | 27 | 45 | 10/80 |
| 409622 | 40962-S | 3/4" | 15 | 62 | 33 | 32 | 50 | 10/60 |
| 409639 | 40963-S | $1^{\prime \prime}$ | 17 | 72 | 38 | 38 | 55 | 10/ 40 |
| 409646 | 40964-S | $11 / 4 "$ | 19 | 82 | 45 | 48 | 70 | 10/ 20 |
| 409653 | 40965-S | $11 / 2^{\prime \prime}$ | 19 | 90 | 50 | 55 | 75 | 5/ 15 |
| 409660 | 40966-S | 2" | 24 | 100 | 58 | 65 | 90 | 1/ 8 |
| 409677 | 40967-S | $2^{1 / 2}{ }^{\prime \prime}$ | 28 | 116 | 76 | 87 | 110 | 1/ 1 |
| 409684 | 40968-S | 3 ' | 34 | 128 | 68 | 100 | 127 | 1/ 1 |



## Union elbow (97), ISO UA 2

Female thread x male thread, flat seat, without seal

| Item-No.: <br> zinc plated | Item-No.: <br> black | Connec.: | Threadlength: | Length: |  | Wrench size: |  | Packing unit: |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | L2 | SW1 | SW2 |  |
| 409714 | 40971-S | 1/2" | 13 | 76 | 28 | 27 | 45 | 10/70 |
| 409721 | 40972-S | 3/4" | 15 | 82 | 33 | 32 | 50 | 10/50 |
| 409738 | 40973-S | $1{ }^{\prime \prime}$ | 17 | 94 | 38 | 38 | 55 | 10/30 |
| 409745 | 40974-S | $11 / 4^{\prime \prime}$ | 19 | 107 | 45 | 48 | 70 | 10/20 |
| 409752 | 40975-S | $11 / 2^{\prime \prime}$ | 19 | 115 | 50 | 55 | 75 | 5/15 |
| 409769 | 40976-S | $2{ }^{\prime \prime}$ | 24 | 128 | 58 | 65 | 90 | 1/ 6 |



## puteus 尽

## Union elbow (98), ISO UA 12



Female thread x male thread, taper seat

| Item-No.: <br> zinc plated | Item-No.: <br> black | Connec.: | Threadlength: | Length: |  | Wrench size: |  | Packing unit: |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | L1 | L2 | SW1 | SW2 |  |
| 409806 | 40980-S | 3/8" | - | - | - | - | - | 10/80 |
| 409813 | 40981-S | 1/2" | 13 | 76 | 28 | 27 | 45 | 10/70 |
| 409820 | 40982-S | 3/4" | 15 | 82 | 33 | 32 | 50 | 10/50 |
| 409837 | 40983-S | $1^{\prime \prime}$ | 17 | 94 | 38 | 38 | 55 | 10/30 |
| 409844 | 40984-S | $11 / 4^{\prime \prime}$ | 19 | 107 | 45 | 48 | 69 | 10/20 |
| 409851 | 40985-S | $11 / 2^{\prime \prime}$ | 19 | 115 | 50 | 55 | 69 | 5/18 |
| 409868 | 40986-S | 2" | 24 | 128 | 58 | 65 | 90 | 1/8 |
| 409875 | 40987-S | $2^{1 / 2 "}$ |  |  |  |  |  | 1/ 1 |
| 409882 | 40988-S | 3 " | 32 | 154 | 65 | 98 | 125 |  |

## Elbow $45^{\circ}$ (120), ISO A 1



Female thread x female thread, $45^{\circ}$

| Item-No.: <br> zinc plated | Item-No.: <br> black | Connec.: | Thread- <br> length: | Length: <br> L | Packing unit: |
| :--- | :--- | :--- | :--- | :--- | :--- |
| 412011 | $41201-S$ | $1 / 2^{\prime \prime}$ | 13 | 22 | $10 / 250$ |
| 412028 | $41202-S$ | $3 / 4^{\prime \prime}$ | 15 | 25 | $10 / 150$ |
| 412035 | $41203-S$ | $1 "$ | 17 | 28 | $10 / 80$ |
| 412042 | $41204-S$ | $11^{\prime \prime}$ | 19 | 41 | $-/ 50$ |
| 412059 | $41205-S$ | $11 / 2^{\prime \prime}$ | 20 | 45 | $-/ 30$ |
| 412066 | $41206-S$ | $2 "$ | 25 | 51 | $5 / 20$ |

Elbow $45^{\circ}$ (121), ISO A 4


Female thread x male thread, $45^{\circ}$

|  |  | Connec.: | Threadlength: |  | Length: |  | Packing unit: |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| zinc plated | black |  | f | m | L1 | L2 |  |
| 412110 | 41211-S | 1/2" | 13 | 15 | 28 | 22 | 10/250 |
| 412127 | 41212-S | 3/4" | 15 | 18 | 32 | 25 | 10/160 |
| 412134 | 41213-S | $1{ }^{\prime \prime}$ | 17 | 20 | 37 | 28 | 10/100 |
| 412141 | - | $11 / 4^{\prime \prime}$ | 19 | 19 | 43 | 33 | 5/ 40 |
| 412158 | 41215-S | $11 / 2^{\prime \prime}$ | 20 | 19 | 46 | 36 | 5/ 40 |
| 412165 | 41216-S | $2{ }^{\prime \prime}$ | 23 | 24 | 55 | 43 | -/ 24 |


| Item-No.: <br> zinc plated | Item-No.: <br> black | Connection: female thread | Threadlength: | Length: <br> L | Packing unit: |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 412998 | 41299-S | 1/4" | 10 | 21 | 10/300 |
| 413001 | 41300-S | 3/8" | 10 | 25 | 10/250 |
| 413018 | 41301-S | 1/2" | 13 | 28 | 10/150 |
| 413025 | 41302-S | 3/4" | 15 | 33 | 10/80 |
| 413032 | 41303-S | $1^{\prime \prime}$ | 17 | 38 | 10/ 50 |
| 413049 | 41304-S | $11 / 4^{\prime \prime}$ | 19 | 45 | 5/ 30 |
| 413056 | 41305-S | $11 / 2^{\prime \prime}$ | 19 | 50 | 5/ 20 |
| 413063 | 41306-S | 2" | 24 | 58 | 5/ 15 |
| 413070 | 41307-S | $21 / 2^{\prime \prime}$ | 27 | 69 | 1/ 10 |
| 413087 | 41308-S | $3{ }^{\prime \prime}$ | 30 | 78 | 1/ 6 |
| 413094 | 41309-S | $4 "$ | 38 | 96 | 1/ 6 |

Tee equal (130), ISO B 1

$90^{\circ}$, reduced, female thread

| Item-No.: | Item-No.: | Connection: | Thread- <br> length: | Length: <br> zinc plated <br> black | A $\times$ B $\times$ C |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| unit: |  |  |  |  |  |  |



## puteus 尽

Cross fitting $90^{\circ}$ (180), ISO C 1


Item-No.:
zinc plated
417906

418006
418013
418020
418037
418044
418051
418068
418129
418136
$4 \times$ female thread

| Item-No.: <br> black | Connection: | Threadlength: | Length: <br> L | Packing unit: |
| :---: | :---: | :---: | :---: | :---: |
| 41790-S | 1/4" | 12 | 21 | 10/100 |
| 41800-S | 3/8" | 13 | 25 | 10/150 |
| 41801-S | 1/2" | 13 | 28 | 10/100 |
| 41802-S | 3/4" | 15 | 33 | 10/ 60 |
| 41803-S | $1^{\prime \prime}$ | 17 | 38 | 10/ 40 |
| 41804-S | $11 / 4 "$ | 19 | 45 | 5/ 20 |
| 41805-S | $11 / 2^{\prime \prime}$ | 19 | 50 | 15/ 20 |
| 41806-S | 2" | 24 | 58 | 10/ 10 |
| 41812-S | 3/4" $\times 1 / 2^{\prime \prime}$ | 13 | 23 | 10/80 |
| 41813-S | $1^{\prime \prime} \times 1 / 2^{\prime \prime}$ | 14 | 32 | 10/ 40 |

## Side outlet elbow (221), ISO Za 1


$3 \times$ female thread

| Item-No.: <br> zinc plated | Item-No.: <br> black | Connection: | Thread- <br> length: | Length: | Packing unit: |
| :--- | :--- | :--- | :--- | :--- | :--- |
| 422119 | $42211-S$ | $1 / 2^{\prime \prime}$ | 13 | 28 | $10 / 140$ |
| 422126 | $42212-S$ | $3 / 4^{\prime \prime}$ | 15 | 33 | $10 / 80$ |
| 422133 | - | $1^{\prime \prime}$ | 18 | 35 | $10 / 60$ |



## Tee with side outlet (223)


$90^{\circ}$, female threaded, equal

| Item-No.: <br> zinc plated | Item-No.: <br> black | Connection: | Threadlength: L1 | Length: L2 | Packing unit: |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 422317 | - | 1/2" | - | - | 10/100 |
| 422324 | - | 3/4" | - | - | 10/ 60 |
| 422331 | - | $1^{\prime \prime}$ | - | - | 10/ 50 |

## Reducing socket (240), ISO M 2

Female thread x female thread

| Item-No.: <br> zinc plated | Item-No.: <br> black | Connection: <br> $\mathrm{f}_{1} \mathrm{f} 2$ | Threadlength: |  | Length: <br> L | Packing unit: |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | $\mathrm{f}_{1}$ | f2 |  |  |
| 423994 | 42399-S | $3 / 8{ }^{\prime \prime} \times 1 / 4^{\prime \prime}$ | 10 | 10 | 30 | 10/400 |
| 424007 | 42400-S | 1/2" $\times 1 / 4^{\prime \prime}$ | 13 | 10 | 36 | 10/300 |
| 424014 | 42401-S | $1 / 2^{\prime \prime} \times 3 / 8^{\prime \prime}$ | 12 | 11 | 36 | 10/350 |
| 423987 | 42398-S | $3 / 4^{\prime \prime} \times 3 / 8^{\prime \prime}$ | 15 | 10 | 39 | 10/250 |
| 424021 | 42402-S | $3 / 4^{\prime \prime} \times 1 / 2^{\prime \prime}$ | 15 | 13 | 39 | 10/240 |
| 423932 | 42393-S | $1{ }^{\prime \prime} \times 1 / 2$ " | 17 | 13 | 45 | 10/220 |
| 424038 | 42403-S | $1^{\prime \prime} \times 3 / 4^{\prime \prime}$ | 17 | 15 | 45 | 10/140 |
| 423970 | 42397-S | $1^{1 / 4} 4^{\prime \prime} \times 1 / 2^{\prime \prime}$ | 19 | 13 | 50 | 10/80 |
| 423949 | 42394-S | $11 / 4^{\prime \prime} \times 3 / 4^{\prime \prime}$ | 19 | 15 | 50 | 10/80 |
| 424045 | 42404-S | $11 / 4{ }^{\prime \prime} \times 1$ " | 19 | 17 | 50 | 10/80 |
| 423963 | 42396-S | $11 / 2^{\prime \prime} \times 3 / 4^{\prime \prime}$ | 19 | 15 | 55 | 10/ 60 |
| 423956 | 42395-S | $11 / 2^{\prime \prime} \times 1$ " | 19 | 17 | 55 | 10/ 60 |
| 424052 | 42405-S | $11 / 2^{\prime \prime} \times 11 / 4^{\prime \prime}$ | 19 | 19 | 55 | 10/ 60 |
| 423925 | 42392-S | 2" 1 $^{\prime \prime}$ | 24 | 17 | 65 | -/ 35 |
| 423918 | 42391-S | $2^{\prime \prime} \times 11 / 4$ " | 24 | 19 | 65 | 10/30 |
| 424069 | 42406-S | $2^{\prime \prime} \times 11 / 2^{\prime \prime}$ | 22 | 21 | 65 | 10/30 |
| 423901 | 42390-S | $2^{1 / 2} 2^{\prime \prime} \times 2^{\prime \prime}$ | 27 | 24 | 74 | 1/ 24 |



## puteus (P)

## Bushing (241), ISO N 4



Male thread x female thread
Item-No.: Item-No.: Connection: Threadlength: Length: Wrench Packing

| zinc plat. | black | $m \quad f$ | m (t) | $f$ | L | SW |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 424106 | 42410-S | $3 / 8{ }^{\prime \prime} \times 1 / 4^{\prime \prime}$ | 14 | 10 | 20 | 19 | 10/900 |
| 424304 | 42430-S | $1 / 2^{\prime \prime} \times 1 / 4^{\prime \prime}$ | 17 | 12 | 25 | 23 | 10/800 |
| 424113 | 42411-S | $1 / 2^{\prime \prime} \times 3 / 8^{\prime \prime}$ | 16 | 13 | 24 | 22 | 10/500 |
| 424335 | 42433-S | $3 / 4^{\prime \prime} \times 1 / 4^{\prime \prime}$ | 16 | 10 | 25 | 31 | 10/300 |
| 424229 | 42422-S | $3 / 4^{\prime \prime} \times 3 / 8^{\prime \prime}$ | 17 | 13 | 26 | 30 | 10/300 |
| 424120 | 42412-S | $3 / 4^{\prime \prime} \times 1 / 2^{\prime \prime}$ | 17 | 13 | 26 | 30 | 10/350 |
| 424328 | 42432-S | $1^{\prime \prime} \times 3 / 8{ }^{\prime \prime}$ | 19 | 12 | 30 | 39 | 10/200 |
| 424236 | 42423-S | 1" $\times 1 / 2^{\prime \prime}$ | 19 | 13 | 29 | 36 | 10/200 |
| 424137 | 42413-S | $1^{\prime \prime} \times 3 / 4^{\prime \prime}$ | 19 | 15 | 29 | 36 | 10/240 |
| 424342 | 42434-S | $1^{1 / 4 " \times 1 / 2 "}$ | 22 | 13 | 31 | 46 | 10/100 |
| 424243 | 42424-S | $1^{1 / 4 " \times 3 / 4 " ~}$ | 20 | 15 | 31 | 46 | 5/120 |
| 424144 | 42414-S | $11 / 4{ }^{\prime \prime} \times 1$ " | 21,5 | 17 | 31 | 46 | 5/150 |
| 424359 | 42435-S | $1^{1 / 2 "} \times 1 / 2^{\prime \prime}$ | 23 | 13 | 33 | 52 | 10/120 |
| 424366 | 42436-S | $1^{1 / 2 "} 2^{\prime \prime} \times 3 / 4^{\prime \prime}$ | 21 | 15 | 31 | 55 | 5/80 |
| 424250 | 42425-S | $11 / 2^{\prime \prime} \times 1$ " | 22 | 16 | 33 | 51 | 5/90 |
| 424151 | 42415-S | $1^{1 / 2 "} \times 1{ }^{1 / 4}{ }^{\prime \prime}$ | 21,5 | 19 | 31 | 50 | 10/100 |
| 424373 | 42437-S | 2" $\times 1 / 2^{\prime \prime}$ | 25 | 14 | 47 | 68 | 10/ 50 |
| 424380 | 42438-S | 2" $1^{\prime \prime}$ | 24 | 16 | 36 | 67 | 5/ 50 |
| 424175 | 42417-S | $2^{\prime \prime} \times 11 / 4^{\prime \prime}$ | 24 | 19 | 35 | 65 | 5/ 55 |
| 424168 | 42416-S | $2^{\prime \prime} \times 11 / 2^{\prime \prime}$ | 26 | 19 | 35 | 65 | 10/ 60 |
| 424397 | 42439-S | $21 / 2^{\prime \prime} \times 11 / 4^{\prime \prime}$ | 29 | 20 | 55 | 54 | 10/ 40 |
| 424403 | 42440-S | $21 / 2^{\prime \prime} \times 11 / 2^{\prime \prime}$ | 28 | 20 | 42 | 81 | 1/ 40 |
| 424410 | 42441-S | $21 / 2 " ~_{1 / 2} \times{ }^{\prime \prime}$ | 27 | 24 | 41 | 81 | 10/ 40 |
| 424427 | 42442-S | $3^{\prime \prime} \times 2$ " | 30 | 26 | 46 | 96 | 1/ 20 |
| 424465 | 42446-S | $3^{\prime \prime} \times 21 / 2^{\prime \prime}$ | 30 | 26 | 43 | 96 | 1/ 30 |
| 424472 | 42447-S | $4^{\prime \prime} \times 3$ " | 33 | 26 | 51 | 122 | 1/ 18 |

Reducing nipple (245), ISO N 8
Male thread x male thread, with hexagon

| Item-No.: <br> zinc plat. | Item-No.: <br> black | Connection: $m \times m$ | Threadlength: |  | Length: <br> L | Wrench size: SW | Packing unit: |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 424571 | 42457-S | $3 / 8^{\prime \prime} \times 1 / 4^{\prime \prime}$ | 11 | 10 | 38 | 19 | 10/500 |
| 424502 | 42450-S | $1 / 2^{\prime \prime} \times 1 / 4^{\prime \prime}$ | 16 | 14 | 43 | 23 | 10/360 |
| 424519 | 42451-S | $1 / 2^{\prime \prime} \times 3 / 8^{\prime \prime}$ | 13 | 11 | 44 | 26 | 10/360 |
| 424588 | 42458-S | $3 / 4^{\prime \prime} \times 3 / 8^{\prime \prime}$ | 20 | 14 | 48 | 34 | 10/190 |
| 424526 | 42452-S | 3/4" $\times 1 / 2^{\prime \prime}$ | 13 | 13 | 47 | 30 | 10/230 |
| 424434 | 42443-S | $1^{\prime \prime} \times 1 / 2^{\prime \prime}$ | 17 | 13 | 53 | 36 | 10/150 |
| 424533 | 42453-S | $1^{\prime \prime} \times 3 / 4^{\prime \prime}$ | 17 | 13 | 53 | 36 | 10/130 |
| 424595 | 42459-S | $1^{1 / 4} 4^{\prime \prime} \times 1 / 2^{\prime \prime}$ | 24 | 18 | 58 | 46 | 10/ 90 |
| 424441 | 42444-S | $11 / 4^{\prime \prime} \times 3 / 4^{\prime \prime}$ | 18 | 13 | 57 | 46 | 10/ 80 |
| 424540 | 42454-S | $1^{1 / 4 " \times 1 "}$ | 18 | 17 | 57 | 48 | 10/ 70 |
| 424601 | 42460-S | $1^{1 / 2 "} 2^{\prime \prime} \times 3 / 4^{\prime \prime}$ | 26 | 20 | 60 | 51 | 10/ 90 |
| 424458 | 42445-S | $11 / 2^{\prime \prime} \times 1^{\prime \prime}$ | 21 | 17 | 59 | 56 | 10/ 60 |
| 424557 | 42455-S | $11 / 2^{\prime \prime} \times 1{ }^{1 / 4} 4^{\prime \prime}$ | 21 | 18 | 59 | 56 | 10/ 60 |
| 424489 | - | $2^{\prime \prime} \times 3 / 4^{\prime \prime}$ | - | - | - | - | -/- |
| 424618 | 42461-S | $2^{\prime \prime} \times 1{ }^{1 / 4}{ }^{\prime \prime}$ | 24 | 18 | 68 | 65 | 10/ 40 |
| 424564 | 42456-S | $2^{\prime \prime} \times 1$ 1/2" | 24 | 21 | 68 | 65 | 10/ 40 |
| 424700 | - | $2^{1 / 2 \prime}{ }^{\prime \prime} \times 2^{\prime \prime}$ | 27 | 24 | 80 | - | -/ 25 |



Reducing socket (246), ISO M 4
Female thread x male thread

| Item-No.: <br> zinc plated | Item-No.: <br> black | Connection.: f x m | Threadlength: |  | Length: <br> L | Packing unit: |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | ft 2 | m t1 |  |  |
| 424717 | 42471-S | $3 / 8^{\prime \prime} \times 1 / 4^{\prime \prime}$ | 10 | 14 | 35 | 10/700 |
| 424724 | 42472-S | 1/2" $2^{\prime \prime} 1 / 4^{\prime \prime}$ | 13 | 12 | 43 | 10/350 |
| 424649 | 42464-S | $1 / 2^{\prime \prime} \times 3 / 8$ " | 13 | 10 | 43 | 10/350 |
| 424731 | 42473-S | $3 / 4^{\prime \prime} \times 3 / 8{ }^{\prime \prime}$ | 15 | 12 | 48 | 10/210 |
| 424625 | 42462-S | $3 / 4^{\prime \prime} \times 1 / 2^{\prime \prime}$ | 15 | 13 | 48 | 10/210 |
| 424656 | 42465-S | $1^{\prime \prime} \times 1 / 2^{\prime \prime}$ | 17 | 13 | 55 | 10/140 |
| 424632 | 42463-S | $1^{\prime \prime} \times 3 / 4^{\prime \prime}$ | 17 | 15 | 55 | 10/120 |
| 424748 | 42474-S | $11 / 4^{\prime \prime} \times 3 / 4^{\prime \prime}$ | 19 | 17 | 60 | 10/100 |
| 424663 | 42466-S | $11^{1 / 4} \times 1{ }^{\prime \prime}$ | 19 | 17 | 60 | 10/80 |
| 424670 | 42467-S | $11 / 2^{\prime \prime} \times 1{ }^{\prime \prime}$ | 19 | 17 | 63 | 10/ 60 |
| 424687 | 42468-S | $11 / 2^{\prime \prime} \times 11 / 4^{\prime \prime}$ | 21 | 19 | 63 | 10/ 60 |
| 424694 | 42469-S | $2^{\prime \prime} \times 11 / 2^{\prime \prime}$ | 23 | 19 | 70 | 10/ 50 |
| 424779 | - | $21 / 2^{\prime \prime} \times 2$ " | 30 | 27 | 74 | 5/ 20 |



## puteus (®)

Socket (270), ISO M 2


| Item-No.: <br> zinc plated | Item-No.: <br> black | Connection: | Threadlength: | Length: |  | Packing unit: |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 426995 | 42699-S | 1/4" | 10 | 27 | 22 | 10/600 |
| 427008 | 42700-S | 3/8" | 10 | 30 | 25 | 10/400 |
| 427015 | 42701-S | 1/2" | 13 | 36 | 30 | 10/210 |
| 427022 | 42702-S | 3/4" | 15 | 39 | 36 | 10/220 |
| 427039 | 42703-S | 1 " | 17 | 45 | 44 | 10/120 |
| 427046 | 42704-S | $11 / 4^{\prime \prime}$ | 19 | 50 | 53 | 10/ 60 |
| 427053 | 42705-S | $1^{1 / 2 "}$ | 19 | 55 | 60 | 10/50 |
| 427060 | 42706-S | 2" | 20 | 65 | 74 | 5/ 25 |
| 427077 | 42707-S | $2^{1 / 2 "}$ | 27 | 74 | 91 | 1/ 24 |
| 427084 | 42708-S | 3" | 30 | 80 | 105 | 1/ 15 |
| 427091 | 42709-S | 4" | 36 | 94 | 135 | -/ 17 |

## Socket (271), ISO M 2 R-L



Female thread x female thread, with right and left hand thread

| Item-No.: <br> zinc plated | Item-No.: | Connection: | Thread- <br> length: | Length: |  | Packing unit: |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 427114 | black |  |  | L | $\varnothing \mathrm{d} 1$ |  |
| 427121 | - | $1 / 2^{\prime \prime}$ | 13 | 36 | 30 | $10 / 340$ |
| 427138 | - | $3 / 4^{\prime \prime}$ | 15 | 39 | 36 | $10 / 220$ |

Nipple (280), ISO N 8


Male thread x male thread, with hexagon

| Item-No.: zinc plated | Item-No.: <br> black | Connection: | Threadlength: | Length: <br> L | Wrench size: SW | Packing unit: |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 427916 | 42791-S | 1/4" | 10 | 36 | 19 | 10/600 |
| 428005 | 42800-S | 3/8" | 11 | 38 | 22 | 10/500 |
| 428012 | 42801-S | 1/2" | 15 | 44 | 27 | 10/350 |
| 428029 | 42802-S | 3/4" | 18 | 47 | 32 | 10/220 |
| 428036 | 42803-S | $1{ }^{\prime \prime}$ | 20 | 53 | 41 | 10/ 130 |
| 428043 | 42804-S | $1^{1 / 4}{ }^{\prime \prime}$ | 22 | 57 | 50 | 10/ 70 |
| 428050 | 42805-S | $11 / 2^{\prime \prime}$ | 21 | 59 | 55 | 5/ 50 |
| 428067 | 42806-S | 2" | 20 | 68 | 63 | 5/ 25 |
| 428074 | 42807-S | $2^{1 / 2}{ }^{\prime \prime}$ | 27 | 75 | 85 | 10/ 20 |
| 428081 | 42808-S | 3" | 30 | 83 | 100 | 1/ 22 |
| 428098 | 42809-S | $4 "$ | 36 | 95 | 130 | 1/ 20 |

with border

| Item-No.: <br> zinc plated | Item-No.: <br> black | Connection: <br> male | Threadlength: t | Length: <br> L | Wrench size: SW | Packing unit: |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 428906 | 42890-S | 1/4" | 10 | 22 | 8 | 10/1000 | 4 |
| 429002 | 42900-S | 3/8" | 11,5 | 24 | 10 | 10/700 |  |
| 429019 | 42901-S | 1/2" | 13 | 26 | 11 | 10/350 |  |
| 429026 | 42902-S | 3/4" | 14,5 | 32 | 17 | 10/ 250 |  |
| 429033 | 42903-S | 1 " | 17 | 36 | 19 | 10/ 170 |  |
| 429040 | 42904-S | $11 / 4 "$ | 21 | 39 | 22 | 10/ 100 | L |
| 429057 | 42905-S | $11 / 2^{\prime \prime}$ | 23 | 41 | 22 | 10/ 80 | 长 $\uparrow$ |
| 429064 | 42906-S | 2" | 26 | 48 | 27 | 10/ 50 |  |
| 429071 | 42907-S | $2^{1 / 2 "}$ | 30 | 54 | 32 | 1/ 34 |  |
| 429088 | 42908-S | 3" | 34 | 60 | 36 | 1/ 24 |  |
| 429095 | 42909-S | $4{ }^{\prime \prime}$ | 40 | 70 | 41 | 1/ 12 |  |

without border
Plug, plain (291), ISO T 8

| Item-No.: <br> zinc plated | Item-No.: <br> black | Connection: male | Threadlength: t | Length: <br> L | Wrench size: SW | Packing unit: |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 429170 | 42917-S | 1/8" | - | - | - | 10/5400 |
| 429187 | 42918-S | 1/4" | - | - | - | 10/3600 |
| 429101 | 42910-S | 3/8" | 15 | 24 | 10 | 10/1000 |
| 429118 | 42911-S | 1/2" | 16 | 26 | 11 | 10/800 |
| 429125 | 42912-S | 3/4" | 21 | 32 | 17 | 10/ 400 |
| 429132 | 42913-S | $1^{\prime \prime}$ | 25 | 36 | 19 | 10/ 250 |
| 429149 | 42914-S | $11 / 4^{\prime \prime}$ | 28 | 39 | 22 | 10/ 160 |
| 429156 | 42915-S | $11 / 2^{\prime \prime}$ | 30 | 41 | 22 | 10/ 130 |
| 429163 | 42916-S | $2{ }^{\prime \prime}$ | 34 | 48 | 27 | 10/ 60 |


not beaded, $\leq 1$ " hexagonal, $\geq 1$ " octagonal

| Item-No.: <br> zinc plated | Item-No.: <br> black | Connection: <br> female | Threadlength: t | Length: <br> L | Wrench size: SW | Packing unit: |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 430206 | 43020-S | 1/4" | - | - | - | 10/800 |
| 430008 | 43000-S | 3/8" | 11 | 17 | 22 | 10/660 |
| 430015 | 43001-S | 1/2" | 13 | 19 | 26 | 10/400 |
| 430022 | 43002-S | 3/4" | 15 | 22 | 32 | 10/250 |
| 430039 | 43003-S | $1{ }^{\prime \prime}$ | 17 | 24 | 39 | 10/130 |
| 430046 | 43004-S | $11 / 4 "$ | 20 | 27 | 48 | 10/100 |
| 430053 | 43005-S | $11 / 2^{\prime \prime}$ | 20 | 27 | 54 | 10/ 90 |
| 430060 | 43006-S | 2" | 24 | 32 | 66 | 10/ 50 |
| 430077 | 43007-S | $2^{1 / 2 "}$ | 26 | 35 | 84 | 5/ 40 |
| 430084 | 43008-S | 3" | 28 | 38 | 96 | 1/ 28 |
| 430091 | 43009-S | 4" | 35 | 46 | 124 | 1/ 12 |

Cap (300), ISO T 1


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## Cap (301)



## beaded

| Item-No.: <br> zinc plated | Item-No.: <br> black | Connection: female | Threadlength: t | Length: <br> L | Wrench size: <br> SW | Packing unit: |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 430213 | 43021-S | 1/4" | - | - | - | 10/1800 |
| 430107 | 43010-S | 3/8" | 11 | 17 | 22 | 10/800 |
| 430114 | 43011-S | 1/2" | 13 | 19 | 26 | 10/800 |
| 430121 | 43012-S | 3/4" | 15 | 22 | 32 | 10/ 400 |
| 430138 | 43013-S | $1^{\prime \prime}$ | 17 | 24 | 39 | 10/ 250 |
| 430145 | 43014-S | $11 / 4^{\prime \prime}$ | 20 | 27 | 48 | 10/ 100 |
| 430152 | 43015-S | $11 / 2^{\prime \prime}$ | 20 | 27 | 54 | 10/ 90 |
| 430169 | 43016-S | 2" | 24 | 32 | 66 | 10/ 70 |
| 430176 | 43017-S | $2^{1 / 2 "}$ | 26 | 35 | 84 | 5/ 40 |
| 430183 | 43018-S | 3" | 28 | 38 | 96 | 1/ 1 |
| 430190 | 43019-S | 4" | - | - | - | 1/ 1 |

## Lock nut (310), ISO P 4



Union (330), ISO U 1


Female thread x female thread, flat seat, without seal

| Item-No.: <br> zinc plat. | Item-No.: <br> zinc plat.+seal | Item-No.: <br> black | Conn.: | Threadlength: t | Length: <br> L | Wrenchsize: |  | Packing unit: |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 433016 | 43301-D | 43301-S | 1/2" | 14 | 48 | 42 | 26 | 10/80 |
| 433023 | 43302-D | 43302-S | 3/4" | 16 | 52 | 50 | 32 | 10/70 |
| 433030 | 43303-D | 43303-S | $1{ }^{\prime \prime}$ | 20 | 58 | 55 | 38 | 10/60 |
| 433047 | 43304-D | 43304-S | $1^{1 / 4}{ }^{\prime \prime}$ | 18 | 65 | 69 | 49 | 5/35 |
| 433054 | 43305-D | 43305-S | $11 / 2^{\prime \prime}$ | 70 | 70 | 72 | 53 | 10/25 |
| 433061 | 43306-D | 43306-S | 2" | 78 | 78 | 90 | 68 | 5/ 20 |
| 433078 | 43307-D | 43307-S | $2^{1 / 21}$ | 85 | 85 | 110 | 85 | 1/ 12 |
| 433085 | 43308-D | 43308-S | 3 " | 95 | 95 | 128 | 98 | 1/ 7 |

Female thread x male thread, flat seat, without seal

| Item-No.: | Item-No.: | Item-No.: | Con.: | Thread length: |  | Length |  | Wrench- <br> size: | Packing <br> unit: |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| zinc pla. | zinc plat.+seal | black |  | Ft1 | M t2 | L | SW1 | SW2 |  |



Union (340), ISO U 11

| Item-No.: <br> zinc plat. | Item-No.: | Clack |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |



Union nut (341), ISO U 12
Female thread x male thread, taper seat

| Item-No.: zinc plat. | Item-No.: <br> black | Conn.: | Threadlength: |  | Length: <br> L | Wrench size: |  | Packing unit: |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Ft1 | M t2 |  | SW1 | SW2 |  |
| 434105 | 43410-S | 3/8" | 15,5 | 16 | 58 | 36 | 22 | 10/150 |
| 434112 | 43411-S | 1/2" | 14,5 | 17 | 66 | 45 | 27 | 10/ 80 |
| 434129 | 43412-S | 3/4" | 15,5 | 20 | 72 | 50 | 32 | 10/ 70 |
| 434136 | 43413-S | $1{ }^{\prime \prime}$ | 18 | 22 | 80 | 55 | 39 | 10/ 40 |
| 434143 | 43414-S | $1^{1 / 4}{ }^{\prime \prime}$ | 20,5 | 26 | 90 | 69 | 47 | 5/ 25 |
| 434150 | 43415-S | $11 / 2^{\prime \prime}$ | 25 | 28 | 95 | 75 | 55 | 10/ 20 |
| 434167 | 43416-S | 2" | 26 | 27 | 106 | 90 | 65 | 5/ 10 |
| 434174 | 43417-S | $2^{1 / 2 "}$ | 27 | 39 | 118 | 90 | 85 | -/ 9 |
| 434181 | 43418-S | $3{ }^{\prime \prime}$ | - | - | - | - | - | -/ 6 |



## Union for pumps made of malleable iron



Malleable iron, black, consisting of two union ends, 2 union nuts and 2 NBR seals, temperature range: $<70^{\circ} \mathrm{C}$

| Item-No.: <br> black | Connection: | Thread- <br> length: | Length: <br> L | Wrench- <br> size: <br> SW | Pack. <br> unit: |
| :--- | :--- | :--- | :--- | :--- | :--- |
| $43502-2$ | $3 / 4^{\prime \prime}$ Connection, $1^{1 / 4 "}$ union nut | 18 | 35 | 50 | $1 / 75$ |
| $43503-2$ | $1^{\prime \prime}$ Connection, $1 \frac{1}{2 \prime}$ union nut | 20 | 39 | 55 | $1 / 40$ |
| $43504-2$ | $1^{1 / 4} 4^{\prime \prime}$ Connection, $2^{\prime \prime}$ union nut | 22,9 | 47,6 | 70 | $1 / 35$ |



## Union for pumps made of brass



Consisting of: 2 union nuts, 2 union ends and 2 seals, PN 10, temperature range: $-10^{\circ} \mathrm{C}$ to $+110^{\circ} \mathrm{C}$

| Item-No.: | Connection: | Thread- <br> length: | Length: <br> L | Wrench- <br> size: <br> SW | Pack. <br> unit: |
| :--- | :--- | :--- | :--- | :--- | :--- |
| 346934 | $1^{\prime \prime}$ Connection, $11 / 2^{\prime \prime}$ union nut | 20 | 38 | 52 | $-/ 25$ |

## Union made of brass with nut



Plain brass, 3-pieces, with nut and O-ring, metal sealing, male thread $x$ female thread

| Item-No.: | Connection: $M / F$ | Threadlength: M/F | Length: <br> L | Wrenchsize: SW1/SW2 | Pack. unit: |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 337000 | $\mathrm{G}_{3} / 8^{\prime \prime}$ connection, $\mathrm{G}_{3} / 8^{\prime \prime}$, nut | 10/8 | 41 | 25/20 | 25/100 |
| 337017 | G1/2" connection, $\mathrm{G}_{1 / 2}{ }^{\prime \prime}$, nut | 12/12 | 49 | 30/25 | 25/100 |
| 337024 | G3/4" connection, G3/4", nut | 13/11 | 54 | 38/30 | 25/75 |
| 337031 | G1" connection, G1", nut | 15/12 | 60 | 47/37 | 10/50 |
| 337048 | G11/4" connection, G1 1/4", nut | 15/16 | 71 | 53/48 | 5/50 |

The items of the brass union nuts are not tested for compatibility with other market models.

## Union made of brass with nut, angle form

Plain brass, 3-pieces, angle form, with nut and 0-ring, metal sealing, male thread xfe male thread

| Item-No.: | Connection: | Thread- <br> length: <br> M/F | Length: | Wrench- <br> size: <br> SW1/SW2 | Pack. <br> unit: |
| :--- | :--- | :--- | :--- | :--- | :--- |
| 337055 | G3/8" connection, G3/8", nut | $10 / 9$ | 46 | $25 / 21$ | $25 / 100$ |
| 337062 | G1/2" connection, G1/2", nut | $12 / 10$ | 53 | $30 / 25$ | $25 / 100$ |
| 337079 | G3/4" connection, G3/4", nut | $12 / 11,5$ | 62,5 | $37 / 31$ | $15 / 75$ |
| 337086 | G1" connection, G1", nut | $12 / 11,5$ | 70 | $46 / 37$ | $5 / 50$ |
| 337093 | G1 1 $_{1 / 4}$ " connection, G1 1/4", nut | $16 / 18$ | 83,5 | $53 / 48$ | $5 / 50$ |

The items of the brass union nuts are not tested for compatibility with other market models.


Union made of brass with nut
Plain brass, with nut and 0-ring, metal sealing, female thread $x$ female thread

| Item-No.: | Connection: | Thread- <br> length: <br> F/F | Length: | Wrench- <br> size: <br> SW1/SW2 | Pack. <br> unit: |
| :--- | :--- | :--- | :--- | :--- | :--- |
| 337116 | G1/2" connection, G1/2" nut | $12 / 12$ | 38,4 | $37,5 / 25$ | -/- |
| 337123 | $\mathrm{G} 3^{2} / 4^{\prime \prime}$ connection, G3/4" nut | $11 / 11$ | 36,8 | $47 / 30$ | $-/-$ |
| 337130 | $\mathrm{G}_{1}$ " connection, G1" nut | $12 / 12$ | 38,8 | $52 / 37$ | $-/-$ |

The items of the brass union nuts are not tested for compatibility with other market models.


## Bracket elbow (471)




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## Extension socket (529a)



Socket with female thread and male thread

| Item-No.: <br> zinc plated | Item-No.: <br> black | Connection: | Thread- <br> length: | Length: | Packing unit: |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 452918 | - | $1 / 2^{\prime \prime}$ | 13 | - | 43 | $10 / 300$ |
| 452925 | - | $3 / 4^{\prime \prime}$ | 15 | - | 48 | $10 / 180$ |



## Sealing tape



## $12 \mathrm{~m} \times 12 \mathrm{~mm} \times 0,075 \mathrm{~mm}$, material PTFE

| Item-No.: | Packing unit: |
| :--- | :--- |
| 290107 | $50 / 1000$ |

## Hemp yarn-Mazzoni


approx. 200 g

| Wrapping: | Item-No.: | Packing unit: |
| :--- | :--- | :--- |
| loose | 290169 | $10 / 250$ |
| packed for self-service | 290152 | $10 / 100$ |

## Spare gaskets, according to DIN EN 10242

| Item-No.: | Connection: |  | Packing unit: |
| :--- | :--- | :--- | :--- |
| 490118 | $1 / 2^{\prime \prime}$ | $30 \times 21 \times 2 \mathrm{~mm}$ | $10 / 100$ |
| 490019 | $1 / 2^{\prime \prime}$ | $34 \times 24 \times 2 \mathrm{~mm}$ | $10 / 100$ |
| 490125 |  | $31,5 \times 26 \times 2 \mathrm{~mm}$ | $10 / 100$ |
| 490026 | $3 / 4^{\prime \prime}$ | $38 \times 27 \times 2 \mathrm{~mm}$ | $10 / 100$ |
| 490132 |  | $29 \times 22 \times 2 \mathrm{~mm}$ | $10 / 100$ |
| 490033 | $1^{\prime \prime}$ | $44 \times 32 \times 2 \mathrm{~mm}$ | $10 / 100$ |
| 490040 | $1 \frac{1}{2 \prime \prime}$ | $55 \times 42 \times 2 \mathrm{~mm}$ | $10 / 100$ |
| 490057 | $1 \frac{1}{2 \prime \prime}$ | $62 \times 46 \times 2 \mathrm{~mm}$ | $10 / 100$ |
| 490064 | $2^{\prime \prime}$ | $78 \times 60 \times 2 \mathrm{~mm}$ | $10 / 100$ |

For flat-sealing screw connections (Nr. 330/331/95/97), except for Item-No. 49011, 49012 and 49013. Synthetic fibers bonded with NBR. Suitable for oils, water, steam, gases, salt solutions, fuels, alcohols, weak organic and inorganic acids, hydrocarbons, lubricants and refrigerants. DIN-DVGW/SVGW-certificates. BAM-, HTB- and KTW- tested.

## Steel pipes

According to DIN EN 10255 Class M (DIN 2440), zinc plated/black, both sides male threaded, without socket


Length:

3/8" $1 / 2^{\prime \prime} 1 / 2^{\prime \prime}$
zinc plat. zinc plat. black

| 350 mm | - | 201011 | 254017 |
| :---: | :--- | :--- | :--- |
| 400 mm | 201202 | 201110 | 254116 |
| 450 mm | - | 201219 | 254215 |
| 500 mm | 202001 | 202018 | 256011 |
| 550 mm | - | 201318 | 254314 |
| 600 mm | 202100 | 202117 | 256110 |
| 650 mm | - | 201417 | 254413 |
| 700 mm | - | 201516 | 254512 |
| 750 mm | - | 201615 | 254611 |
| 800 mm | 202209 | 202216 | 256219 |
| 850 mm | - | 201714 | 254710 |
| 900 mm | - | 201813 | 254819 |
| 950 mm | - | 201912 | 254918 |
| 1000 mm | 203008 | 203015 | 256318 |
| 1050 mm | - | 203114 | 255113 |
| 1100 mm | - | 203213 | 255212 |
| 1150 mm | - | 203312 | 255311 |
| 1200 mm | - | 203411 | 255410 |
| 1500 mm | 204005 | 204012 | - |
| 2000 mm | 205002 | 205019 | - |

$3 / 4^{\prime \prime} \quad 3 / 4^{\prime \prime}$
zinc plat. black

| 200120 | 254024 | - | - | - | - | $10 /-$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 201127 | 254123 | 201134 | 201141 | - | - | $10 /-$ |

201226254222 -
202025256028202032202049 -

201325254321 -

| 202124 | 256127 | 202131 | 202148 |
| :--- | :--- | :--- | :--- |

201424254420 -
201523254529
201622254628
202223256226
201721254727
$201820 \quad 254826 \quad 201837$
201929254925
203022256325
203121255120
203220255229

203329255328
203428255427
204029 -
205026 -

Packing unit:

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Steel socket, both sides chamfered


Zinc plated, extra strong, ideal for well construction, according to DIN 2448

| Item-No.: | Connec.: | Thread- <br> length: | Length: | $\varnothing$ | Packing unit: |
| :--- | :--- | :--- | :--- | :--- | :--- |
| 220241 | $1^{1 / 4 "}$ | 47 | 47 | 50 | $10 / 100$ |



## Steel socket (half length)



According to EN 10241 (DIN 2986), one-sided chamfered

| Item-No.: <br> zinc plated | Item-No.: <br> black | Conn.: | Nominal <br> diameter | Thread- <br> length: | Length: | $\varnothing$ | Packing <br> unit: |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| - | 219719 | $1 / 2^{\prime \prime}$ |  | 15 | 15 | 26,6 | $-/ 1000$ |
| - | 219726 | $3 / 4^{\prime \prime}$ |  | 17 | 17 | 31,8 | $-/ 600$ |
| - | 219733 | $1^{\prime \prime}$ |  | 20 | 20 | 39,5 | $-/ 320$ |
| - | 219757 | $11 / 2^{\prime \prime}$ |  | 22 | 22 | 54,5 | $-/ 160$ |

Steel socket (16)


According to EN 10241 (DIN 2986)

| Item-No.: <br> zinc plated | Item-No.: <br> black | Conn.: | Nominal <br> diameter | Thread- <br> length: | Length: | $\varnothing$ | Packing <br> unit: |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| - | 219894 | $1 / 4^{\prime \prime}$ | 8 | 25 | 25 | 18,5 | $-/ 700$ |
| 220005 | 219900 | $3 / 8^{\prime \prime}$ | 10 | 26 | 26 | 21,3 | $-/ 600$ |
| 220012 | 219917 | $1 / 2^{\prime \prime}$ | 15 | 34 | 34 | 26,6 | $-/ 500$ |
| 220029 | 219924 | $3 / 4^{\prime \prime}$ | 20 | 36 | 36 | 31,8 | $-/ 300$ |
| 220036 | 219931 | $1^{\prime \prime}$ | 25 | 43 | 43 | 39,5 | $-/ 160$ |
| 220043 | 219948 | $1^{1 / 4 "}$ | 32 | 48 | 48 | 48,3 | $-/ 120$ |
| 220050 | 219955 | $1^{1 / 2 \prime}$ | 40 | 48 | 48 | 54,5 | $-/ 80$ |
| 220067 | 219962 | $2^{\prime \prime}$ | 50 | 56 | 56 | 66,2 | $-/ 50$ |
| 220074 | 219979 | $2^{1 / 2 \prime}$ | 65 | 65 | 65 | 82 | $-/ 33$ |
| 220081 | 219986 | $3^{\prime \prime}$ | 80 | 71 | 71 | 95 | $-/ 24$ |
| 220098 | 219993 | $4^{\prime \prime}$ | 100 | 83 | 83 | 121,4 | $-/ 12$ |

## Long sleeve socket

Steel, black, both sides threaded according to ISO 7

| Item-No.: | Connection: | Length: L | Packing unit: |
| :--- | :--- | :--- | :--- |
| 219320 | $1 / 2^{\prime \prime}$ | 60 mm | $-/ 280$ |
| 219344 | $1 / 2^{\prime \prime}$ | 80 mm | $-/ 200$ |
| 219368 | $1 / 2^{\prime \prime}$ | 100 mm | $-/ 160$ |



Connecting tube


Connecting tube
Polyamide, black, both sides male threaded

| Item-No.: | Connection: | Length: L | Packing unit: |
| :--- | :--- | :--- | :--- |
| S-3082-2 | G3/4" | 110 mm PA6 | $-/ 80$ |
| S-3084-2 | G1" | 130 mm PA6 | $-/ 80$ |



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| Con.: <br> Length <br> mm | 1/4" <br> Item-No. | Pack. unit: bag/ carton | 3/8" <br> Item-No. | Pack. unit: bag/ carton | 1/2" <br> Item-No. | Pack. unit: bag/ carton | 3/4" <br> Item-No. | Pack. unit: bag/ carton | 1" <br> Item-No. | Pack. unit: bag/ carton | $11 / 4^{\prime \prime}$ <br> Item-No. | Pack. unit: bag/ carton |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 30 | - | - | 240003 | -/- | 240010 | 10/400 | 240027 | -/- | 240034 | 10/200 | - |  |
| 40 | 240492 | 10/640 | 240409 | 10/500 | 240119 | 10/300 | 240126 | 10/200 | 240133 | 10/150 | 240140 | 10/120 |
| 50 | - | - | 240508 | -/- | 240218 | 10/240 | 240225 | 10/160 | 240232 | -/- | 240249 | 90 |
| 60 | 240690 | -/- | 240607 | 10/280 | 240317 | 10/ 210 | 240324 | 10/140 | 240638 | 10/120 | 240348 | 80 |
| 70 | - | - | - | - | 241116 | -/- | 240928 | -/- | 241734 | -/- | 4 | -/- |
| 80 | 2408 | 10 | 240805 | 10/380 | 240416 | 10/ 160 | 240423 | 10/110 | 240836 | 10/80 | 240843 | 80 |
| 90 | - | - | 240706 | -/ | 240911 | -/- | 241123 | -/- | 241031 | -/- | 240942 | 60 |
| 100 | 241093 | 10/500 | 241000 | 10/500 | 240515 | 10/130 | 240522 | 10/90 | 240539 | 10/60 | 240546 | 10/ 50 |
| 110 | - | - | 241109 | -/- | 241215 | -/- | 241222 | -/- | 241130 | -/- | 241147 | -/- |
| 120 | 241291 | -/- | 241208 | -/- | 241314 | 10/ 110 | 241321 | 10/ 70 | 241239 | 10/80 | 241246 | 10/ 50 |
| 140 | - | - | 241406 | -/- | 241512 | -/- | 241529 | -/- | 241437 | -/- | 241741 | -/- |
| 150 | 241598 | -/- | 241505 | -/- | 240614 | 10/ 90 | 240621 | 10/120 | 241536 | -/ 78 | 241543 | 10/ 45 |
| 160 | - | - | - | - | 241611 | -/- | 241628 | -/- | 241635 | -/- | 241642 | -/- |
| 180 | - | - | - | - | 240812 | 10/ 70 | 241420 | 10/100 | 241833 | -/ 72 | 241840 | -/ 10 |
| 190 | - | - | - | - | - | - | - | - | 241932 | -/ 72 | 241949 | 10/ 70 |
| 200 | 242090 | -/- | 242007 | 10/90 | 240713 | 10/90 | 240720 | 10/ 40 | 240737 | 10/30 | 242045 | 10/ 20 |
| 220 | - | - | - | - | - | - | - | - | 242236 | 10/120 |  | - |
| 250 | - | - | - | - | 241413 | 10/120 | 240829 | 10/ 70 | 242533 | -/ 45 | 241444 | -/ 10 |
| 300 | 201097 | -/- | 201004 | -/- | 201103 | 10/100 | 201028 | 10/ 60 | 201035 | -/ 40 | 201042 | -/ 20 |


| Con.: <br> Length <br> mm | 1/4" <br> Item-No. | Pack. unit: bag/ carton | 3/8" <br> Item-No. | Pack. unit: bag/ carton | 1/2" <br> Item-No. | Pack. unit: bag/ carton | 3/4" <br> Item-No. | Pack. unit: bag/ carton | $1^{1 "}$ <br> Item-No. | Pack. unit: bag/ carton | 11/4" <br> Item-No. | Pack. unit: bag/ carton |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 30 | - | - | 250002 | -/- | 250019 | -/- | 250026 | -/- | 250033 | -/- | - | - |
| 40 | 250491 | 10/640 | 250408 | -/- | 250118 | 10/500 | 250125 | 10/380 | 250132 | 10/180 | 250149 | 10/120 |
| 50 | - | - | 250507 | -/- | 250217 | -/- | 250224 | -/- | 250231 | -/- | 250248 | -/- |
| 60 | 250699 | -/- | 250606 | -/- | 250316 | 10/360 | 250323 | 10/200 | 250637 | 10/120 | 250347 | -/ 10 |
| 70 | - | - | - | - | 251112 | -/- | 250927 | /- | 251733 | -/- | 250743 | -/- |
| 80 | 250897 | 10/400 | 250804 | -/- | 250415 | 10/250 | 250422 | 10/200 | 250835 | 10/120 | 250842 | 10/80 |
| 90 | - | - | 250705 | -/ | 250910 | -/- | 251122 | -/- | 251030 | -/- | 250941 | -/- |
| 100 | 251092 | 10/500 | 251009 | 10/500 | 250514 | 10/260 | 250521 | 10/170 | 250538 | 10/120 | 250545 | 10/70 |
| 110 | - | - | 251108 | -/- | 251214 | -/- | 251221 | -/- | 251139 | -/- | 251146 | -/- |
| 120 | 251290 | -/- | 251207 | -/ | 251313 | 10/230 | 251320 | 10/140 | 251238 | 10/80 | 251245 | 10/ 50 |
| 140 | - | - | 251405 | -/- | 251511 | -/- | 251528 | -/- | 251436 | -/- | 251740 | -/- |
| 150 | 251597 | -/- | 251504 | -/- | 250613 | 10/200 | 250620 | 10/120 | 251535 | 10/40 | 251542 | 10/ 45 |
| 160 | - | - | - | - | 251610 | -/- | 251627 | -/- | 251634 | -/- | 251641 | -/- |
| 180 | - | - | - | - | 250811 | -/ 10 | 251429 | 10/100 | 251832 | 10/ 72 | 251849 | -/ 10 |
| 190 | - | - | - | - | - | - |  | - | 251931 | 10/ 72 | 251948 | 10/70 |
| 200 | 252099 | -/- | 252006 | -/- | 250712 | 10/120 | 250729 | 10/85 | 250736 | 10/ 55 | 252044 | -/ 32 |
| 220 | - | - | - | - | - | - | - | - | 252235 | 10/120 |  | - |
| 250 | - | - | - | - | 251412 | 10/120 | 250828 | 10/ 70 | 252532 | 10/ 45 | 251443 | -/ 10 |
| 300 | 253096 | -/- | 253003 | -/- | 253010 | 10/100 | 253027 | 10/ 60 | 253034 | 10/ 40 | 253041 | -/ 20 |


| 11/2" <br> Item-No. | Pack. unit: bag/ carton | 2" <br> Item-No. | Pack. unit: bag/ carton | $2 \text { 1/2" }$ <br> Item-No. | Pack. unit: bag/ carton | $3^{\prime \prime}$ <br> Item-No. | Pack. unit: bag/ carton | 4" <br> Item-No. | Pack. unit: bag/ carton |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| - | - | - | - | - | - | - | - | - | - |
| 240454 | -/168 | 240461 | -/- | - | - | - | - | - | - |
| 240058 | -/- | 240560 | -/- | - | - | - | - | - | - |
| 240652 | -/- | 240669 | -/- | 240676 | -/- | 240683 | -/- | 241697 | -/- |
| 240751 | -/- | 240768 | -/- | - | - | - | - |  | - |
| 240850 | -/ 64 | 240867 | 10/40 | 240874 | -/- | 240881 | -/- | 242298 | -/- |
| 240959 | -/- | 240966 | -/- | - | - | - | - | - | - |
| 241055 | -/- | 241062 | 10/30 | 241079 | 10/10 | 241086 | 10/20 | 242397 | -/- |
| 241154 | -/- | 241161 | -/- | - | -/- | - | -/- |  | -/- |
| 241253 | -/ 40 | 241260 | -/ 30 | 241277 | -/- | 241284 | -/- | 242496 | -/- |
| 241451 | -/- | 241468 | -/ | - | -/- | 241482 | -/- | - | -/- |
| 241550 | 10/30 | 241567 | 10/20 | 241574 | -/- | 241581 | 10/10 | 242694 | -/- |
| 241659 | -/- | 241666 | -/ | - | -/- | 241680 | -/- | - | -/- |
| 241857 | -/- | 241864 | -/ | 241871 | -/- | 241888 | -/- | 242793 | -/- |
| - | - | 241963 | -/- | - | - | - | - | - | - |
| 242052 | -/ 28 | 242069 | 10/ 10 | 242076 | -/- | 242083 | -/ 8 | 242199 | -/4 |
| - | - | - | - | - | - | - | - | - | - |
| 242557 | -/ 24 | 242564 | -/- | 242571 | -/- | 242588 | -/- | 242892 | -/- |
| 201059 | -/ 24 | 201066 | -/- | 201073 | -/- | 201080 | -/- | 201196 | -/- |



According to EN 10241, zinc plated


According to EN 10241, black

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## Water meter screw connections made of brass

## Water meter screw according to the drinking water ordinance



Brass hot-pressed, plain or chrome-plated, union nut with sealing eye, connecting piece with external thread, with sealing

| Item-No.: <br> plain | Item-No.: chrome plated | Socket: <br> M | Union nut: <br> F | Length: L | Packing unit: |
| :---: | :---: | :---: | :---: | :---: | :---: |
| WS-551-b-11780 | WS-551-a-11780 | R1/2" | G3/4" | 45 | -/ 100 |
| WS-562-b-1178o | WS-562-a-11780 | R3/4" | G1" | 58 | -/ 100 |
| WS-664-b-11780 | - | R1" | G 1 1/4" | 70 | 2/50 |
| WS-665-11780 | - | R1 ${ }^{1 / 4 "}$ | G1 1/2" | 71 | 0/ 25 |
| WS-666-b-1178o | - | R1 $1 / 2^{\prime \prime}$ | G2" | 82,5 | o/ 25 |
| as above, but without sealing |  |  |  |  |  |
| WS-551-b-11780-OD | WS-551-a-11780-OD | R1/2" | G3/4" | 45 | 0/100 |
| WS-562-b-11780-OD | WS-562-a-11780-OD | R3/4" | G1" | 58 | 0/100 |
| WS-664-b-1178o-OD | - | R1" | G1 $1 / 4^{\prime \prime}$ | 60 | 0/ 50 |
| WS-665-11780-OD | - | R1 ${ }^{1 / 4}{ }^{\prime \prime}$ | G $11 / 2^{\prime \prime}$ | 71 | o/ 25 |
| WS-666-b-1178o-OD | - | R1 $1^{1 / 2}{ }^{\prime \prime}$ | G 2 " | 82,5 | o/ 25 |
| WS-667-b-G-N | - | R2" | G $211 / 2$ " | 75 | -/- |
| Union nut loose, with sealing (without illustration) |  |  |  |  |  |
| WS-685-b-Mutter | - | - | G3/4" | 13,5 | -/700 |
| WS-686-b-Mutter | - | - | G1" | 18 | -/400 |
| WS-664-b-Mutter | - | - | G1 1/4" | 20 | -/200 |

Male threaded connecting piece, without sealing (without illustration)

| WS-685-b-Tülle | - | $R 1 / 2^{\prime \prime}$ | - | 39,5 | $-/ 500$ |
| :--- | :--- | :--- | :--- | :--- | :--- |
| WS-686-b-Tülle | - | $R_{3} / 4^{\prime \prime}$ | - | 48 | $-/ 250$ |
| WS-664-b-Tülle | - | $R_{1}{ }^{\prime \prime}$ | - | 56 | $-/ 140$ |

Water meter screw according to the drinking water ordinance, reduced


Brass hot-pressed, plain, union nut with sealing eye, connecting piece with external thread, with sealing

| Item-No.: <br> plain | Socket: | Union nut: | Length: | Wrench size: | Packing unit: |
| :--- | :--- | :--- | :--- | :--- | :--- |
| WS-2159 (with <br> fuse ring) | R1/2" | G1/2" | 45 | L |  |
| WS-1555-b-11780 | R3/4" | G3/4" | 61,5 | 30 | $1 / 150$ |
| WS-1556-b-11780 | R1" | G1" | 60,5 | 38 | $1 / 100$ |

## Water meter screw according to the drinking water ordinance

Brass hot-pressed, plain, without sealing, with drain connection G 1/4", wrench size 36

| Item-No.: | Drain connec.: | Socket: | Union nut: | Length: | Packing unit: |
| :--- | :--- | :--- | :--- | :--- | :--- |
| plain | F | M | F | L |  |
| WS-3265-OD | G1/4" | R3/4" | G1" $^{\prime \prime}$ | 67 | -/- |



## Water meter screw according to the drinking water ordinance

Brass hot-pressed, plain, without sealing, with locking ring and sealing eye

| Item-No.: | Item-No.: <br> chrome <br> plated | Socket: | M | Union nut: | Length: |
| :--- | :--- | :--- | :--- | :--- | :--- | Packing unit:



Screw connection with union nut
Chrome-plated, with AFM sealing, F/M

| Item-No.: | Dim.: | Length: L | Wrench size: | Packing unit: |
| :---: | :---: | :---: | :---: | :---: |
| S-3381 | G1 $1 / 4^{\prime \prime} \times \mathrm{G} 1^{1 / 4} 4^{\prime \prime}$ | 50,5 | 46,5 | 10/50 |
| S-3382 | G2" x G 2" | 56 | 65 | 5/30 |



## puteus 尽

Water meter screw according to the drinking water ordinance


Brass hot-pressed, plain, without seal

| Item-No.: | Item-No.: <br> chrome <br> plated | Socket: | M | Union nut: | Length: |
| :--- | :--- | :--- | :--- | :--- | :--- | Packing unit: $|$| Flain |
| :--- |



## AFM gaskets



Spare parts water seals AFM 34 (DVGW/KTW W-270, SVGW, ÖVGW), temperature up to $200^{\circ} \mathrm{C}$ at 25 bar

| Item-No.: | Connection: | Size: | Packing unit: |
| :--- | :--- | :--- | :--- |
| WS-551-AFM | $16,9 \times 23,7 \times 2 \mathrm{~mm}$ | $3 / 4^{\prime \prime}$ | $-/-$ |
| WS-562-AFM | $23,2 \times 29,8 \times 2 \mathrm{~mm}$ | $1^{\prime \prime}$ | $-/ 5000$ |
| WS-1556-AFM | $23,0 \times 28,0 \times 2 \mathrm{~mm}$ | $1^{\prime \prime}$ | $-/ 5000$ |
| WS-664-AFM | $29,2 \times 38,0 \times 2 \mathrm{~mm}$ | $1^{11 / 4^{\prime \prime}}$ | $-/-$ |
| WS-665-AFM | $32,0 \times 44,0 \times 2 \mathrm{~mm}$ | $1^{11 / 2^{\prime \prime}}$ | $-/-$ |
| WS-666-AFM | $43,4 \times 55,0 \times 2 \mathrm{~mm}$ | $2^{\prime \prime}$ | $-/-$ |
| WS-667-AFM | - | $21 / 2^{\prime \prime}$ | $-/-$ |

Screw connection with injection point / connection M 10x1


Plain brass, union nut with sealing eye

| Item-No.: <br> plain | Connection: <br> socket M | Union nut: | Length: | Packing <br> unit: |
| :--- | :--- | :--- | :--- | :--- |
| WS-1475-b | R1" |  | L |  |



## Screw connection with solder connection

| Plain brass, union nut with sealing eye, with sealing |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- |
| Item-No.: <br> plain | Connection: <br> solder socket | Union nut: | Length: | Packing unit: |
| WS-563 | 15 mm | $\mathrm{G} 3 / 4^{\prime \prime}$ | L |  |
| WS-564 | 18 mm | $\mathrm{G} 3 / 4^{\prime \prime}$ | 22 | $-/ 100$ |
| WS-565 | 22 mm | G 1 " | 22 | $20 / 500$ |



## Screw connection for washstand meters

Brass chrome-plated, union nut with sealing eye

| Item-No.: | Connection: | Union nut: | Length: | Packing <br> unit: |
| :--- | :--- | :--- | :--- | :--- |
| WS-568-11780 <br> (with sealing) | Srew connection outlet: <br> Compression nut 3/4" $x 10 \mathrm{~mm}$ | $\mathrm{G} 3 / 4^{\prime \prime}$ | 34 | $-/ 80$ |
| WS-569 (with- <br> out sealing) | Srew connection inlet: <br> Female thread 3/8" | $\mathrm{G3} / 4^{\prime \prime}$ | 29,5 | $-/ 100$ |
| WS-570 | Set consisting of: <br> WS-568-11780 + WS-569 |  |  | $10 / 500$ |



## puteus (P)

## Screw connection for tap water meter



| Item-No.: | Connection: | suitable for: outlet valves size | Length: L | Packing unit: |
| :---: | :---: | :---: | :---: | :---: |
| WS-566 | G3/4"x ${ }^{\prime \prime}$ /4" | 1/2" | 47 | -/100 |
| $\begin{aligned} & \text { WS-566-1178o } \\ & \text { (with AFM sealing) } \end{aligned}$ | G3/4"x G3/4" | 1/2" | 47 | -/100 |
| WS-567 (without sealing) | G3/4" $\times$ G ${ }^{\prime \prime}$ | 3/4" | 49 | -/100 |

## Compression fittings, brass, for PE-pipes

Compression fittings for plastic pipes (HDPE and LDPE) in sizes from 1/2 "x 20 mm to $3^{" x} 90 \mathrm{~mm}$. Suitable for piping systems underground or above ground level for fixed or mobile installation. For conveying potable water, waste water and other liquid media.

Material: brass (MS 58)
maximum operating pressure: 16 bar
operating temperature: $\quad-20^{\circ} \mathrm{C}$ to $+120^{\circ} \mathrm{C}$
application range: Gas approved, tested according to
 DIN DVGW V 114 W
Consisting of housing, for example female thread, O-ring, pressure ring, clamping ring and screws (nut).
For the medium gas a gas sleeve or a support tube must be used in addition.


## Straight form, with male thread and union nut

| Item-No.: | Female thread: Size | PE-pipe- <br> Size | PE-pipeoutside $\varnothing$ | Packing unit: |
| :---: | :---: | :---: | :---: | :---: |
| 345111 | G1/2" | 1/2" | 20 mm | 20/320 |
| 345128 | G3/4" | 3/4" | 25 mm | 15/240 |
| 345135 | G1" | $1^{\prime \prime}$ | 32 mm | 12/120 |
| 345142 | G $11 / 4$ " | $11 / 4 "$ | 40 mm | 6/ 60 |
| 345159 | G1 1/2" | $11 / 2^{\prime \prime}$ | 50 mm | 4/ 72 |
| 345166 | G2" | 2" | 63 mm | 2/ 38 |

Elbow, with two union nuts

| Item-No.: | Female thread: | PE-pipe- |  |
| :--- | :--- | :--- | :--- |
|  | Size | Size | PE-pipe- |
| 345715 | $1 / 2^{\prime \prime}$ | 20 mm | outside $\varnothing$ |
| 345722 | $3 / 4^{\prime \prime}$ | 25 mm | $12 / 216$ |
| 345739 | $1^{\prime \prime}$ | 32 mm | $10 / 100$ |
| 345746 | $1^{11 / 4^{\prime \prime}}$ | 40 mm | $6 / 78$ |
| 345753 | $1^{1 / 2 \prime \prime}$ | 50 mm | $4 / 48$ |
| 345760 | $2^{\prime \prime}$ | 63 mm | $2 / 36$ |



## puteus 尽

Elbow, with female thread and union nut

|  | Item-No.: | Female threadsize | PE-pipe- <br> size | PE-pipe- <br> outside $\varnothing$ | Packing unit: |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | 345210 | G1/2" | 1/2" | 20 mm | 15/240 |
|  | 345227 | G3/4" | 3/4" | 25 mm | 12/192 |
|  | 345234 | G1" | 1 " | 32 mm | 8/104 |
|  | 345241 | G1 1/4" | $11 /{ }^{\prime \prime}$ | 40 mm | 6/72 |
|  | 345258 | G1 1/2" | $11 / 2^{\prime \prime}$ | 50 mm | 4/48 |

Elbow, with male thread and union nut

|  | Item-No.: | Male threadsize | PE-pipe- <br> size | PE-pipe- <br> outside $\varnothing$ | Packing unit: |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | 345319 | G1/2" | 1/2" | 20 mm | 15/240 |
|  | 345326 | G3/4" | 3/4" | 25 mm | 12/120 |
|  | 345333 | G1" | 1 " | 32 mm | 8/80 |
|  | 345340 | G1 1/4" | $1^{1 / 4}{ }^{\prime \prime}$ | 40 mm | 6/ 72 |
|  | 345357 | G1 1/2" | $11 / 2^{\prime \prime}$ | 50 mm | 4/ 48 |
|  | 345364 | 2" | 2" | 63 mm | 2/38 |

Elbow, with female thread union nut and wall fixation


| Item-No.: | Female thread- <br> size | PE-pipe- <br> size | PE-pipe- <br> outside $\varnothing$ | Packing unit: |
| :--- | :--- | :--- | :--- | :--- |
| 345418 | G1/2" | $1 / 2^{\prime \prime}$ | 20 mm | $15 / 150$ |
| 345425 | G3/4" | $3 / 4^{\prime \prime}$ | 25 mm | $12 / 156$ |
| 345432 | G1" | $1^{\prime \prime}$ | 32 mm | $8 / 64$ |

## T-piece, with three union nuts



## T-piece, with female thread and two union nuts

| Item-No.: | Female threadsize | PE-pipe- <br> size | PE-pipeoutside $\varnothing$ | Packing unit: |
| :---: | :---: | :---: | :---: | :---: |
| 345517 | G1/2" | 1/2" | 20 mm | 8/192 |
| 345524 | G3/4" | 3/4" | 25 mm | 6/96 |
| 345531 | G1" | $1{ }^{\prime \prime}$ | 32 mm | 4/72 |
| 345548 | G1 1/4" | $11 / 4^{\prime \prime}$ | 40 mm | 4/36 |
| 345555 | G1 1/2" | $11 / 2^{\prime \prime}$ | 50 mm | 2/ 26 |



Straight short form, with two union nuts

| Item-No.: | PE-pipe- <br> size | PE-pipe- <br> outside $\varnothing$ | Packing unit: |
| :--- | :--- | :--- | :--- |
| 345814 | $1 / 2^{\prime \prime}$ | 20 mm |  |
| 345821 | $3 / 4^{\prime \prime}$ | 25 mm | $12 / 192$ |
| 345838 | $1^{\prime \prime}$ | 32 mm | $10 / 160$ |
| 345845 | $1^{1 / 4 \prime}$ | 40 mm | $8 / 104$ |
| 345852 | $1^{1 / 2 \prime \prime}$ | 50 mm | $4 / 80$ |
| 345807 | $2^{\prime \prime}$ | 63 mm | $2 / 48$ |



Straight long form, with two union nuts

| Item-No.: | PE-pipe- <br> size | PE-pipe- <br> outside $\varnothing$ | Packing unit: |
| :--- | :--- | :--- | :--- |
| 345869 | $1^{\prime \prime}$ | 32 mm |  |
| 345876 | $1^{1 / 4 "}$ | 40 mm | $6 / 72$ |
| 345883 | $11 / 2^{\prime \prime}$ | 50 mm | $4 / 36$ |
| 345890 | $2^{\prime \prime}$ | 63 mm | $2 / 36$ |



Sealing set for PE pipe compression fittings

| Item-No.: | PE-pipe- <br> size | PE-pipe- <br> outside $\varnothing$ | Packing unit: |
| :--- | :--- | :--- | :--- |
| 345913 | $1 / 2^{\prime \prime}$ | 20 mm | $-/ 100$ |
| 345920 | $3 / 4^{\prime \prime}$ | 25 mm | $-/ 75$ |
| 345937 | $1^{\prime \prime}$ | 32 mm | $-/ 50$ |
| 345944 | $1^{1 / 4 \prime}$ | 40 mm | $-/ 30$ |

## puteus 色

## Supporting ferrule



Stainless steel, necessary for the use with the medium gas, only for PE pipe compression fittings made of brass

| Item-No.: | PE-pipe-size | Packing unit: |
| :--- | :--- | :--- |
| 345005 | $1 / 2^{\prime \prime}$ | $-/ 100$ |
| 345104 | $3 / 4^{\prime \prime}$ | $-/ 75$ |
| 345203 | $1^{\prime \prime}$ | $-/ 50$ |
| 345302 | $1^{\prime \prime} 4^{\prime \prime}$ | $-/ 30$ |

## Compression fittings, polypropylene, for PE-pipes

Material: PP maximum operating pressure: operating temperature : application range : Irrigation and spray irrigation, not suitable for gas or compressed air. Consisting of housing, for example female thread, 0 -ring, pressure ring, clamping ring and union nut.

Straight form, with two union nuts


| Item-No.: | Female thread- <br> size | PE-pipe- <br> outside $\varnothing$ | Packing unit: |
| :--- | :--- | :--- | :--- |
| 355813 | $1 / 2^{\prime \prime}$ | 20 mm | $50 / 300$ |
| 355820 | $3 / 4^{\prime \prime}$ | 25 mm | $50 / 200$ |
| 355837 | $1^{\prime \prime}$ | 32 mm | $50 / 150$ |
| 355844 | $1^{1 / 4 \prime}$ | 40 mm | $-/ 90$ |
| 355851 | $1^{1 / 2 \prime \prime}$ | 50 mm | $-/ 50$ |
| 355868 | $2^{\prime \prime}$ | 63 mm | $-/ 30$ |

## Straight form, with female thread and union nut

|  | Item-No.: | Female threadsize | PE-pipe- <br> size | PE-pipeoutside $\varnothing$ | Packing unit: |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | 355011 | 1/2" | 1/2" | 20 mm | 50/350 |
|  | 355028 | 3/4" | 3/4" | 25 mm | 50/350 |
|  | 355035 | 1 " | 1 " | 32 mm | 50/200 |
|  | 355042 | $1^{1 / 4}{ }^{\prime \prime}$ | $1^{1 / 4}{ }^{\prime \prime}$ | 40 mm | -/ 125 |
|  | 355059 | $11 / 2^{\prime \prime}$ | $11 / 2^{\prime \prime}$ | 50 mm | -/ 75 |
|  | 355066 | 2" | 2" | 63 mm | -/ 65 |

## Straight form, with male thread and union nut

| Item-No.: | Male thread- <br> size | PE-pipe- <br> size | PE-pipe- <br> outside $\varnothing$ | Packing unit: |
| :--- | :--- | :--- | :--- | :--- |
| 355110 | $1 / 2^{\prime \prime}$ | $1 / 2^{\prime \prime}$ | 20 mm | $50 / 550$ |
| 355127 | $3 / 4^{\prime \prime}$ | $3 / 4^{\prime \prime}$ | 25 mm | $50 / 350$ |
| 355134 | $1^{\prime \prime}$ | $1^{\prime \prime}$ | 32 mm | $50 / 200$ |
| 355141 | $1^{1 / 2 "}$ | $1^{1 / 2 "}$ | 40 mm | $-/ 130$ |
| 355158 | $1^{\prime \prime} / 2^{\prime \prime}$ | $1^{1 / 2 \prime}$ | 50 mm | $-/ 80$ |
| 355165 | $2^{\prime \prime}$ | $2^{\prime \prime}$ | 63 mm | $-/ 45$ |



Elbow, with two union nuts

| Item-No.: | PE-pipe- <br> size | PE-pipe- <br> outside $\varnothing$ | Packing unit: |
| :--- | :--- | :--- | :--- |
| 355717 | $1 / 2^{\prime \prime}$ | 20 mm | $50 / 250$ |
| 355721 | $3 / 4^{\prime \prime}$ | 25 mm | $50 / 200$ |
| 355738 | $1^{\prime \prime}$ | 32 mm | $-/ 50$ |
| 355745 | $1^{11 / 4 "}$ | 40 mm | $-/ 70$ |
| 355752 | $1^{1} 1 / 2^{\prime \prime}$ | 50 mm | $-/ 40$ |
| 355769 | $2^{\prime \prime}$ | 63 mm | $-/ 23$ |




Elbow, with male thread and union nut

| Item-No.: | Male threadsize | PE-pipesize | PE-pipeoutside Ø | Packing unit: |
| :---: | :---: | :---: | :---: | :---: |
| 355318 | 1/2" | 1/2" | 20 mm | 50/450 |
| 355325 | 3/4" | 3/4" | 25 mm | 50/300 |
| 355332 | $1{ }^{\prime \prime}$ | $1{ }^{\prime \prime}$ | 32 mm | 50/150 |
| 355349 | $1^{1 / 4}{ }^{\prime \prime}$ | $1^{1 / 4 "}$ | 40 mm | -/ 120 |
| 355356 | $11 / 2^{\prime \prime}$ | $1^{1 / 2 "}$ | 50 mm | -/ 60 |
| 355363 | 2" | 2" | 63 mm | -/ 35 |



## puteus 色

## T-piece, with three union nuts



| Item-No.: | PE-pipe- <br> size | PE-pipe- <br> outside $\varnothing$ | Packing unit: |
| :--- | :--- | :--- | :--- |
| 355660 | $1 / 2^{\prime \prime}$ | 20 mm | $50 / 150$ |
| 355677 | $3 / 4^{\prime \prime}$ | 25 mm | $50 / 150$ |
| 355684 | $1^{\prime \prime}$ | 32 mm | $-/ 80$ |
| 355691 | $11 / 4^{\prime \prime}$ | 40 mm | $-/ 45$ |
| 355592 | $11 / 2^{\prime \prime}$ | 50 mm | $-/ 25$ |
| 355608 | $2^{\prime \prime}$ | 63 mm | $-/ 14$ |

T-piece, with female thread and two union nuts

|  | Item-No.: | Female threadsize | PE-pipe- <br> size | PE-pipe- <br> outside $\varnothing$ | Packing unit: |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | 355516 | 1/2" | 1/2" | 20 mm | 20/240 |
|  | 355523 | 3/4" | 3/4" | 25 mm | 10/150 |
|  | 355530 | 1 " | 1 " | 32 mm | 50/100 |
|  | 355547 | $11 /{ }^{11}$ | $11 / 4^{\prime \prime}$ | 40 mm | -/ 60 |
|  | 355554 | $11 / 2^{\prime \prime}$ | $11 / 2^{\prime \prime}$ | 50 mm | -/ 33 |
|  | 355561 | 2" | 2" | 63 mm | -/ 20 |
|  | 355509 | 3/4" | 1 " | 32 mm | -/ 100 |

## T-piece, with male thread and two union nuts



| Item-No.: | Male thread- <br> size | PE-pipe- <br> size | PE-pipe- <br> outside $\varnothing$ | Packing unit: |
| :--- | :--- | :--- | :--- | :--- |
| 355417 | $1 / 2^{\prime \prime}$ | $1 / 2^{\prime \prime}$ | 20 mm | $50 / 200$ |
| 355424 | $3 / 4^{\prime \prime}$ | $3 / 4^{\prime \prime}$ | 25 mm | $50 / 150$ |
| 355431 | $1^{\prime \prime}$ | $1^{\prime \prime}$ | 32 mm | $-/ 100$ |
| 355448 | $1^{1 / 4 \prime}$ | $1^{1 / 4^{\prime \prime}}$ | 40 mm | $-/ 50$ |
| 355455 | $1^{11 / 2^{\prime \prime}}$ | $1^{1 / 2^{\prime \prime}}$ | 50 mm | $-/ 30$ |
| 355462 | $2^{\prime \prime}$ | $2^{\prime \prime}$ | 63 mm | $-/ 18$ |

# Brass fittings for solar corrugated stainless steel pipes material: CW617N, surface: plain 

Screw connection with male thread

Corrugated screw connection with male thread, metal sealing, safety clamps with teeth, with red plastic protection cap

| Item-No.: | Connection: | Packing unit: |
| :--- | ---: | :--- |
| 363214 | $1 / 2^{\prime \prime} \times$ DN 12 | $-/ 50$ |
| 363221 | R1/2" $\times$ DN 16 | $-/ 50$ |
| 363238 | R3/4" $\times$ DN 16 | $-/ 50$ |
| 363245 | R3/4" $\times$ DN 20 | $-/ 50$ |
| 363252 | R1" $\times$ DN 20 | $-/ 50$ |



Screw connection with female thread
Corrugated screw connection with female thread, metal sealing, safety clamps with teeth, with red plastic protection cap

| Item-No.: | Connection: | Packing unit: |
| :--- | :--- | :--- |
| 363115 | $1 / 2^{\prime \prime} \times$ DN 12 | $-/ 100$ |
| 363122 | $\operatorname{Rp} 1 / 2^{\prime \prime} \times$ DN 16 | $-/ 100$ |
| 363139 | $\operatorname{Rp} 3 / 4^{\prime \prime} \times$ DN 16 | $-/ 50$ |
| 363146 | $\operatorname{Rp} 3 / 4^{\prime \prime} \times$ DN 20 | $-/ 50$ |
| 363153 | Rp 1" $\times$ DN 20 | $-/ 50$ |

Screw connection for copper pipe
For connection with corrugated tube/copper pipe, safety clamps with teeth, with red plastic protection cap

| Item-No.: | Connection: | Packing unit: |
| :--- | :--- | :--- |
| 363313 | $15 \mathrm{~mm} \times$ DN 16 | $-/ 50$ |
| 363320 | $18 \mathrm{~mm} \times$ DN 16 | $-/ 50$ |
| 363337 | $18 \mathrm{~mm} \times$ DN 20 | $-/ 50$ |
| 363344 | $22 \mathrm{~mm} \times$ DN 20 | $-/ 50$ |
| 363351 | $22 \mathrm{~mm} \times$ DN 16 | $-/ 50$ |



Screw connection (coupling)
Corrugated screw connection (coupling), metal sealing, safety clamps with teeth, with red plastic protection cap

| Item-No.: | Connection: | Packing unit: |
| :--- | :--- | :--- |
| 363016 | DN $16 \times$ DN 16 | $-/ 50$ |
| 363023 | DN $20 \times$ DN 20 | $-/ 50$ |



## Brass fittings for solar corrugated stainless steel pipes material: CW617N, surface: plain

Connecting piece


Metal sealing, safety clamps with teeth, with red plastic protection cap

| Item-No.: | Connection: | Packing unit: |
| :--- | :--- | :--- |
| 363436 | $22 \mathrm{~mm} \times$ DN 16 | $-/ 100$ |
| 363450 | $22 \mathrm{~mm} \times$ DN 20 | $-/ 50$ |

Connecting piece


Socket with smooth spout, hexagonal

| Item-No.: | Connection: | Packing unit: |
| :--- | :--- | :--- |
| 363719 | $\mathrm{G}_{3} / 4^{\prime \prime} \times 18 / 22 \mathrm{~mm}$ | $-/ 250$ |
| 363726 | $\mathrm{G}_{1}{ }^{\prime \prime} \times 18 / 22 \mathrm{~mm}$ | $25 / 150$ |

## Nipple male thread / male thread



Nipple with male thread/male thread, delivery without 0-ring

| Item-No.: | Connection: | Packing unit: |
| :--- | :--- | :--- |
| 363733 | $\mathrm{G} 3^{\prime} / 4^{\prime \prime} \times$ G3/4" $\mathrm{L}=27 \mathrm{~mm}$ | $25 / 350$ |

## Bushing



With male thread/female thread for flat-sealing connections

| Item-No.: | Connection: | Packing unit: |
| :---: | :---: | :---: |
| 36350-3/4 | G3/4"x ${ }^{\text {c }}$ / $2^{\prime \prime}$ | -/250 |
| 36350-1 | G1"x ${ }^{\prime \prime}$ / $4^{\prime \prime}$ | -/ 175 |
| 36350-11/4 | G $1^{1 / 4} \mathbf{4}^{\prime \prime} \times \mathrm{G} 1^{\prime \prime}$ | -/ 80 |

## Brass fittings for solar corrugated stainless steel pipes

 material: CW617N, surface: plainBushing
With male thread/female thread, metal sealing (conical thread)

| Item-No.: | Connection: | Packing unit: |
| :---: | :---: | :---: |
| 36351-3/4 | G3/4"xRp 1/2" | -/350 |
| 36351-1 | G1" $\times$ Rp 3/4" | -/200 |
| 36351-1/4 | G $1^{1 / 4}{ }^{\prime \prime} \times \mathrm{xpp} 1^{\prime \prime}$ | -/ 80 |
| 36351-1¹/2 | G $1^{1 / 2} 2^{\prime \prime} \times \operatorname{Rp} 1^{1} / 4^{\prime \prime}$ | -/100 |



Socket nipple
With male thread/female thread, with enlarged wrench flat

| Item-No.: | Connection: | Packing unit: |
| :---: | :---: | :---: |
| 36352-1/2 | G1/2" $\times$ Rp 1/2" | -/350 |
| 36352-3/4 | G3/4"xRp 3/4" | -/200 |
| 36352-1 | G $1^{\prime \prime} \times \mathrm{Rp} 1^{\prime \prime}$ | -/120 |
| 36352-11/4 | G $11 / 4$ " $\times$ Rp $11 / 4^{\prime \prime}$ | -/ 90 |



Hexagon double nipple
Item-No.:
Connection:
Pack. unit:
With male thread/male thread, cylindrical thread, flat sealing

| $36353-3 / 4$ | G3/4"x G 1/2" | 10/200 |
| :---: | :---: | :---: |
| 36353-1 | G1" G3/4" $^{\prime \prime}$ | -/ 110 |
| 36353-1/4 | G11/4" ${ }^{\prime \prime}$ G $1^{\prime \prime}$ | -/ 50 |
| 36353-11/2 | G $1^{1} / 2^{\prime \prime} \times \mathrm{XG} 11 / 4^{\prime \prime}$ | -/ 50 |

With male thread/male thread, reduced thread, conical sealing

| 36354-3/4 | G3/4"x $\mathrm{R}_{1} / 2^{\prime \prime}$ | -/200 |
| :---: | :---: | :---: |
| 36354-1 | G1" $\mathrm{R}^{\prime \prime}$ / $4^{\prime \prime}$ | -/ 80 |
| 36354-1¹/4 | G $1^{1 / 4}{ }^{\prime \prime} \times \mathrm{R} 1^{\prime \prime}$ | -/ 50 |
| 36354-1¹/2 | G $1^{1} / 2^{\prime \prime} \times \mathrm{R} 1^{1 / 4} 4^{\prime \prime}$ | -/ 50 |

G = cylindrical
$\mathbf{R}=$ conical
puteus GmbH terms and conditions for contracting, delivery, and payment

## Section 1 General

1. These general conditions of sale apply to all present and future business re lations with companies, legal persons governed by public law, and separate estates under public law with respect to deliveries and other services including work orders and the delivery of non-fungible items.
2. The buyer's purchasing terms will not be recognized even if puteus GmbH does not explicitly object to them upon becoming aware of them or after receipt unless puteus GmbH explicitly approves of their validity in writing.

## Section 2 Offerings

1. Offerings from puteus GmbH are non-binding and subject to availability.
2. The right to make reasonable technical changes in the form, color, and/or weight of offerings is reserved.

## Section 3 Shipping

1. Shipping, including free delivery, is at the buyer's own risk. Selection of the routing is hereby ceded to puteus GmbH . The buyer will bear the shipping costs unless an agreement to the contrary has been made in writing.
2. Transportation insurance will only be obtained upon written request by the buyer and at the buyer's expense. Any damages incurred in transit are to be immediately reported to the carrier and to puteus GmbH .
3. If items should be delivered in returnable containers, then the containers are to be emptied of residues upon receipt and promptly returned carriage paid. Loss or damage of re-use packaging will be at the buyer's expense if the buyer is responsible.
4. Non-returnable packaging will not be accepted by puteus GmbH and must be disposed of by the customer and the customer's expense.
5. Returnable containers that are not explicitly included in the price or the in voice amount will only be made available on loan. They will remain the property of puteus GmbH.

## Section 4 Passage of risk

The risk of accidental loss or accidental impairment of products will pass to the buyer upon delivery or, in the event of sale by dispatch, with the handing over of the item to the shipper, carrier, or other person or institution designated to execute the act of shipping.

## Section 5 Delivery/acceptance

1. Delivery periods are approximate. They are subject to timely receipt of supplies. If puteus GmbH does not adhere to agreed delivery periods, then the buyer is to set an appropriate subsequent delivery period of at least three weeks for puteus GmbH in writing starting upon receipt of the new deadline by puteus GmbH . The buyer will be entitled to withdraw upon expiration of the subsequent deadline. puteus GmbH will be authorized to make subsequent delivery until a written declaration of withdrawal has been received.
2. In the event of force majeure, industrial action, or other faultless stoppages that last longer than one week, the delivery or acceptance period will be extended by the duration of the hindrance up to a maximum of five weeks in addition to a subsequent-delivery period. The extension will only come into effect if the reason for the hindrance is promptly reported to the other party as soon as it has been observed that the aforementioned period cannot be complied with.
3. Partial deliveries are permissible.
4. In the event that the buyer should default in taking delivery, puteus GmbH will be authorized, after setting a five-day grace period, to invoice the buyer as of the time that the product was provided or to withdraw from the agreement or to demand compensation for damages at its own discretion. Storage of products that are not accepted by the buyer will be at the buyer's own risk and will take storage costs into account.
Section 6 Sample materials
5. Samples will be delivered at cost. In the absence of any agreement to the contrary, samples that have been loaned to the buyer by puteus GmbH will remain our property.
6. In consideration of technical or material-dependent deviations in production, samples are not considered samples in the meaning of Section 454 of the German Civil Code (BGB)

## Section 7 Prices

1. puteus GmbH prices are net prices and do not include statutory value-added tax.
2. If there should be a period of more than four months between the conclusion of the agreement and delivery, then the puteus GmbH prices as of the day of delivery will apply. This will not apply if delivery has been delayed due to the fault of puteus GmbH.

## Section 8 Payment

1. puteus GmbH invoices will be issued on the day of delivery or provision of the product. Payment will be due in full within 30 days of the invoice date. In the event of payment within eight days of the invoice date, puteus GmbH will grant a cash discount of $2 \%$ of the remaining invoice amount after any trade discounts have been deducted.
2. Upon payment after the due date, puteus GmbH will calculate an interest rate of an additional $8 \%$ above the base rate. Both puteus GmbH and the buyer will be at liberty to present evidence of greater or lesser damage.
3. The credit balance may only be adjusted based on claims that are uncontested or that have been determined without further legal recourse. The same applies to withholding due invoice amounts unless the counterclaim is based on the same statutory relationship.
4. puteus GmbH will not be obligated to make further deliveries on the basis of any current contracts until due invoice amounts have been paid in full, including interest. If after a contract has been concluded it should become apparent that puteus GmbH's pecuniary claim is in jeopardy due to the buyer's insolvency or if the buyer should be in default on a significant payment amount or if other circumstances should arise indicating that the buyer's solvency has significantly deteriorated, then the rights according to Section 321 of the German Civil Code (BGB) will accrue to puteus GmbH . puteus GmbH will then also be authorized to accelerate all claims that are not yet due based on the current business relationship with the buyer
5. The supplier is entitled to assign his receivables against buyers to a third party.
6. The buyer is obliged to reimburse any fees, costs and expenses in connection with any successful legal prosecution against him outside Germany.

## Section 9 Liability for defects

1. Obvious defects or other objections with respect to the delivery item - including the absence of guaranteed or warranted qualities - are to be promptly reported to puteus GmbH in writing no later than 14 days after receipt of the delivery item.
2. puteus GmbH assumes no liability for deviations in quality, color, size, (specific) weight, or equipment that might arise in the course of normal business practice, are minimal, or are unavoidable. Application-specific verbal and written consultation from puteus GmbH - including from puteus GmbH 's vendors - will not exempt the buyer from responsibility to examine delivered products for their intended purpose.
3. No objections to obvious defects will be accepted after the product has begun to be processed.
4. Upon receipt of valid notice of defect within the prescribed time limit, puteus GmbH may choose to eliminate the defect or deliver a non-defective product (supplementary performance) at its own discretion. In the event that puteus GmbH should fail or refuse to execute supplementary performance, the buyer may withdraw from the agreement or reduce the purchase price after an appropriate period has unsuccessfully elapsed. If the defect is insignificant or if the product has already been sold, processed, or altered, then the buyer will only be entitled to a reduction of payment.
Section 10 General limitation of liability, statute of limitations, and right of recourse
5. puteus GmbH , including its management and other auxiliary persons, will be liable for violations of contractual or non-contractual obligations, particularly due to impossibility, delay, fault in preparing the contract, or tort, only in the event of wrongful intent or gross negligence and only with respect to damages that are typical of the contract and that are foreseeable at the time that the contract is concluded. For the remainder, liability on the part of puteus GmbH is also excluded for damages caused by defects and consequential damages.
6. These restrictions will not apply to culpable violation of essential contractual obligations that jeopardize the purpose of the contract; in the event of culpably induced harm to life, body, or health; if and to the extent that puteus GmbH has guaranteed the state of the purchased item or has assumed a pro curement risk; nor in cases of compulsory liability according to the German Product Liability Law. This will have no effect on regulations concerning the burden of proof.
7. In the absence of any agreement to the contrary, the statutory limit on contractual claims against puteus GmbH that accrue to the buyer by reason of and in connection with product delivery will be one year after delivery of the product. This term will not apply to products that are used for a construction in a manner that is in keeping with their conventional use. This will have no effect on puteus GmbH's liability arising from intentional or grossly negligent breaches of obligation or culpably induced harm to life, body, or health.
8. The buyer's right of recovery in accordance with Section 478 of the German Civil Code (BGB) against puteus GmbH is restricted to the statutory scope of warranty claims that are invoked against the buyer by a third party and assumes that the buyer has fulfilled its obligation to puteus GmbH to give notice of defects in accordance with Section 377 of the BGB

## Section 11 Reservation of ownership

1. Delivered products will remain the property of puteus GmbH until all claims as of the moment that the contract was concluded have been paid in full regardless of the legal basis for the claims. This will apply even if payments for particularly specified claims have been made. Neither the suspension of individual claims in a current account nor the balancing of accounts and acknowledgment thereof will affect the reservation of ownership.
2. If the reserved product that was delivered to the buyer should be machined or processed by the buyer, the machining or processing by the buyer will be executed by the buyer for puteus GmbH without any obligations accruing to puteus GmbH. If the delivery item is connected to, mixed with, or combined with items that do not belong to puteus GmbH , then puteus GmbH will be come the co-owner of the total item in accordance with statutory provisions. If the buyer should acquire sole ownership of the new item, then it hereby transfers co-ownership of the items connected to it to puteus GmbH in proportion to the value of the delivery item at the time that the connection was made.
3. If the buyer should sell the reserved product individually or in conjunction with a product that does not belong to puteus GmbH , then the buyer hereby assigns the claims resulting from the resale to puteus GmbH in the amount of the value of the reserved product with all ancillary rights and claims that accrue in lieu of the reserved product. If the resold product is co-owned by
puteus GmbH , then the claim assignment will extend to the amount that cor responds to puteus GmbH 's share of the co-ownership. puteus GmbH hereby accepts these assignments. Incorporation of the reserved product into built structures will also be considered a sale.
4. The buyer is hereby authorized to collect on claims arising from resale. This collection authorization will become void if it should be revoked by puteus GmbH no later than the moment of a default on payment, non-payment of a bill, or petitioning for the initiation of bankruptcy proceedings. puteus GmbH will only invoke its right to revocation if, after the conclusion of the agreement, it becomes apparent that puteus GmbH's pecuniary claim arising from this or from another agreement with the buyer is in jeopardy due to the buyer's insolvency. Upon request by puteus GmbH , the buyer will be obligated to immediately inform its own buyer of the assignment to puteus GmbH and to promptly transfer to puteus GmbH the documents necessary for collection, in particular the buyer must transfer to puteus GmbH a precise summary of its claims with the name and mailing address of its own buyer and must pro vide puteus GmbH with all the information necessary to assert the assigned claims. The buyer hereby authorizes puteus GmbH to inform the secondary buyer of the assignment and to collect on the claims immediately upon default on a payment or deterioration of its financial circumstances. puteus GmbH will have the right to demand that the legal validity of the assigned claims be examined by a representative based on the buyer's accounting. The buyer must provide puteus GmbH with a summary of the reserved products that are still on hand.
5. If the buyer should act in breach of contract, and particularly in the event of a default on payment, puteus GmbH will be authorized to withdraw the delivery item after giving formal notice and setting a time limit and the buyer will be obligated to return it. Neither assertion of the reservation of ownership nor seizure of the delivery item by puteus GmbH will be considered withdrawal from the agreement.
6. The buyer is hereby authorized and empowered to resell, use, or incorporate the reserved product only in the conventional and proper course of business and only on the understanding that claims that have been assigned in accor dance with the provisions above will in fact proceed to puteus GmbH . The buyer is not authorized to otherwise transfer the reserved product. The buyer may not pledge the reserved product nor transfer ownership as collateral. The buyer's authorization in accordance with the first sentence of this paragraph will not apply in the event of impending or already established insolvency or in the event of other essential deterioration of its financial circumstances.
7. The buyer must both promptly inform puteus GmbH of enforcement measures undertaken by third parties with respect to the delivery item with reserved ownership or the claims assigned to us and deliver the documents necessary to challenge the enforcement.
8. If the value of the total collateral granted to puteus GmbH should exceed puteus GmbH 's claims by more than $20 \%$, then puteus GmbH will be obligated and prepared to return or release to the buyer the collateral granted to puteus GmbH to the extent that it exceeds the agreed coverage limit.
Section 12 Blanket orders and call orders
9. If an on-call purchase is agreed with the buyer, then payment for outstanding deliveries will be due automatically upon expiry of the on-call term. The buyer will then be obligated to call for the outstanding deliveries and to pay the agreed purchase price as paid for the transfer of the property. With respect to any individual installment, in addition to fulfillment, puteus GmbH will have the right to demand compensation for pecuniary detriment or to proceed in accordance with Section 323 of the German Civil Code (BGB).
10. If the buyer should fail to call for the agreed deliveries within the agreed oncall term, then puteus GmbH will have the right to otherwise utilize the products without fixing a time limit. The same will apply if the buyer should file for bankruptcy within the on-call term and/or become insolvent.

## Section 13 Price clause

puteus GmbH hereby reserves the right to reasonably change its prices for all orders - including on-call orders and call-off contracts - that, either contractually or at the buyer's request, are delivered more than three months after the order was placed if costs should decline or increase after the contract was concluded, particularly due to wage increases or changes in the cost of materials. The orderer will be provided with evidence of such changes upon request.

## Section 14 Proprietary rights, tools, models, and illustrations

1. If items are delivered based on illustrations or other details provided by the buyer, then it will be the buyer's responsibility to ensure their accuracy and that no third party proprietary rights are violated. The buyer must indemnify puteus GmbH against any claims by a holder of proprietary rights.
2. puteus GmbH may invoice for molds, models, tools, and equipment that are required for the ordered product. They will remain property of puteus GmbH even if puteus GmbH manufactured them on behalf of the buyer and/or has paid the buyer in whole or in part. This will apply even if they were manufactured according to special instructions from the buyer, which uses them exclusively for deliveries to the orderer, as long as it fulfills its commitment and payment obligations and the business relationship persists.
3. If no parts are reordered two years after the last production, then puteus GmbH , after giving appropriate notice to the buyer and after a period of six weeks from receipt of notice by the buyer, will have the right to scrap or otherwise utilize the molds, models, tools, and manufactured equipment.
4. If the buyer should file for bankruptcy, puteus GmbH will be authorized to scrap or otherwise utilize the molds, models, tools, or manufactured equipment before two years have expired and without notifying the buyer in advance.

## Section 15 Return of catalog products

Catalog products may only be returned due to product redelivery according to prior agreement and are to be undertaken freely. $30 \%$ of the handling costs will be deducted from any credit entries for re-saleable products.
Section 16 Place of fulfillment/legal venue

1. The place of fulfillment for all claims arising from the contractual relationship will be puteus GmbH's principle place of business.
2. For all present and future claims arising from the business relationship, including bills and checks receivable, the legal venue will be puteus GmbH's corporate headquarters. This will apply even if the buyer has no legal venue in Germany or if the buyer's domicile or usual residence is unknown at the time when proceedings are instituted. puteus GmbH will also be authorized to bring an action at the buyer's principle place of business.
3. The laws of the Federal Republic of Germany will apply. The terms of the United Nations Convention on Contracts for the International Sale of Goods will not apply.
4. If particular terms of the agreement with the client, including these General Terms and Conditions, should be or become legally inoperable in whole or in part, the validity of the remaining terms will be wholly or partially unaffected. The wholly or partially inoperable provision will be replaced by a provision whose commercial outcome approximates that of the inoperable term as closely as possible.
puteus GmbH, Lenenweg 6, D-47918 Tönisvorst
Version: August 2023

## TECHNICAL INFORMATION

## Size and weight

Unless otherwise stated, all dimensions are in millimeters ( mm ) and weights are in grams (g).
$\mathrm{PN}=$ nominal pressure in bars 1 bar $10 \mathrm{~N} / \mathrm{cm}^{2} \Rightarrow \mathrm{ca} .10 \mathrm{~m}$ column of water
DN $=$ nominal diameter in inches or $\mathrm{mm} 1^{\prime \prime}=25,4 \mathrm{~mm} \Rightarrow$ ca. 25 mm
Nominal pressure is the maximum applicable pressure at the standard temperature, which, unless otherwise stated, is $20^{\circ} \mathrm{C}$.
Nominal diameter is the excess pressure when all operational conditions are taken into consideration, including pressure surges. It depends on the operating temperature, the medium, the size of the component/valve, and, where applicable, the type of seal.
There are legal provisions or regulations that apply to certain areas of application and that take precedence over the guidelines provided in this catalog.

## Medium

The details presented in this catalog with respect to pressure and temperature conditions refer to water.
Suitability for gases, oils, or glycolic or other media should be investigated in light of the operating pressure and operating temperature. Our applicability information may not be applied to media or operating conditions other than those that have been approved without our clearance.

## Custom models

If there are no articles in our standard program that are suitable for your needs, we can also create custom models upon request. For this, we would need a detailed letter of inquiry with the corresponding number of units as well as drawings or sample parts.

## Installation instructions

## A)Screw thread

Connection dimensions and screw thread of complementary proportions must always be selected.
The screw thread should not be too strongly sealed with hemp or sealing tape, which is to say that after the hemp has been applied, the crest of the thread must still be visible. Sealing the thread too strongly will increase the pressure in the component. Over time, that pressure can cause cracks.

To avoid causing damage during installation, the components should be conventionally screwed in with the appropriate, customary tools, without ex cessive force and without lever extension.
Self-sealing valves must not be sealed further with hemp or sealing tape. The corresponding mating thread must be of sufficient length (min. 12 mm ). Where applicable, components are only to be installed on the spanner flats provided for that purpose by means of a suitable spanner/pliers. Our pro ducts must be installed without tension in due consideration for the information above. Alignment, e.g., of connections that we provide by means of heating appliances, is prohibited because this can also cause tension cracks and secondary damage later on.
Where applicable, connecting different metals or alloys can cause corrosion, for which puteus GmbH cannot be held liable (e.g., connections between brass and stainless steel or copper with zinc-plated metals). These characteristics are to be checked before our products are installed.
The components' pressure and sealing are to be carefully tested after installation. Where applicable, the installation instructions that are enclosed with the components are to be observed when doing so.
B) Gate valve

After disassembly/repairs/maintenance work, the upper section is only to be reassembled with a raised sealing wedge. Do not damage sealing surfaces/key seats. Sealing wedges cannot be replaced.

## C) Socket slide valve

These must only be installed in closed position. Key seats must not be damaged by screwing in pipes by force.
D) Ball valves

To ensure operability, for example, only set ball valves on very low static and dynamic power. Where applicable, the component should be supported by appropriate measures (e.g., pipe clamps or similar). The torque to be applied to the ball valve must only be applied to the spanner flats at the end that is being screwed in, otherwise there is a risk that the ball valve could be unsealed or cracked. Likewise, bodies and ball valve screwing components must not be screwed against one another. Doing so would also cause leaks and/or the risk of breakage.
E) Pipe and hose connections

According to DIN EN 1717 pipe and hose connections for devices that contain non-potable water (e.g. washing machines) must be connected to a water intake using a backflow preventer to avoid any backflow of polluted water into the potable water line.

## Recommendations for the use of ball valves

1. General information

Ball valves serve as shut-off valves for pressurized media. The manufacturer's information on flow media, operating pressure and temperature range must be respected. Using other than approved media may shorten the ball valve's lifespan or lead to a failure of the ball valve.
The installation may only be carried out in systems with equal pressures. Any possible pressure surges due to the quick-lock system must be taken into account as these may damage the piping system. The valve can be opened and closed by a $90^{\circ}$ turn of the lever, intermediate positions of the lever are not allowed during the operating condition.
Ball valves should be stored in a dry place, free of dirt and without direct sunlight.
2. Installation and removal instructions

Ball valves may only be used in compliance with the requirements for their intended use. The installation must be carried out stress-free and with appropriate tools in a pressure less state only by qualified and trained staff. Do not turn the ball valve forcibly and do not use it to align the pipeline. The ball valve must be checked for damage before installation. Plumbing lines must be rinsed before first commissioning after maintenance and repairs.
Do not clamp the ball valve too tightly in a vise or something similar for pre-assembly in order to avoid damage and stress cracks on the body. According to the general installation instructions you must not seal the threads with too much hemp. The tips of the threads must remain visible. When in stalling the ball valve only use the designated spanner flat at the installation side to apply the counter-torque. Never apply the wrench to the body or to the side opposite of the installation side. Do not exceed the recommended tightening torque, any existing sensor plugs must be tightened to 15 Nm . The handle must not be used as a mounting lever.
The use of quarter-turn ball taps is only allowed with free outflow to avoid a backflow of sewage into the pipeline. Quarter-turn ball taps are not suitable for the use in domestic water-pipe systems or as device connection taps. It is necessary to carry out functional and leak tests after installing and before the ball valve is put into operation for the first time.
3. Commissioning

Operating conditions and installation works must be checked again before commissioning. Notice: Due to a long-term storage or long downtimes the release torque may be much higher than the usual turning moment.
Before initial start-up or putting into operation after maintenance work the pipeline has to be deaerated. In case of pressure surges air bubbles may cause explosions or damages to the piping system. Therefore the pressure should only be slowly increased.
Ball valves at the end of a pipeline must be sealed professionally with a blind flange to avoid the valve being forcibly teared off. Caution! Danger!
The ball valve may not be operated with a tool that shall serve to increase the leverage (e.g. hammer, pliers, extension tubes etc.)
4. Maintenance and inspection

Depending on the assembly situation, ball valves have to be drained before the first frost sets in as well as before cleaning works. When emptying the valve the handle should be in a 45-degree-position to make sure that the dead space may be emptied, too. Tests for tightness, functionality and damages should be carried out regularly. Depending on the operating situation this should be done in shorter time intervals. During long periods of disuse the ball valve should be put into operation every few months to guarantee proper functioning.
Defective or corroded valves or valves that do not work properly must be replaced during maintenance work. Replacement and removal may only be carried out by qualified personnel whilst the pipeline is not under pressure.
5. Warnings

The manufacturer will not accept any liability for deficiencies caused by assembly errors, improper handling, the use of impermissible media or not allowed operating situations as well as for damages due to normal wear and tear.
Ball valves may not be used as throttle valves! They may only be used in a fully opened or closed situation to avoid damages to seals in the spherical area. Depending on the operating situation the ball valve's body can get very warm. Caution!
Legal health and safety regulations, national rules and technical rules and standards for certain operating and mounting situations have to be observed. Viscous fluids or hardenable media as well as certain chemical substances may impede the funcion or make it impossible. Please refer to the manufacturer's information.
Polluted or sandy media may cause damages to the seals. In case of neglecting the given information on working pressure or working temperature leaks may occur or the ball valve may tear apart. Caution!
(as of August 2023)

## Further Information:

Unless otherwise indicated or unless they are provided with drain plugs that are used to empty the valve before the frost season, no valves (taps, check valves, foot valves, gate valves, ball valves, etc.) are frost-resistant.
Our ball valves, valves and fittings have to be installed without mechanical tension. They must not be used for adjusting pipings.
Chrome plated surfaces, e.g., on bathroom fixtures or device connector valves, are sensitive to lime-dissolving agents, acidic cleaners, and all types of
abrasives. These surfaces must only be cleaned with clear water and a soft cloth (leather).
Our pumps, wall and standing fountains are provided with a protective coating for transport purposes by the manufacturer. This first layer of paint is not considered to be a permanent corrosion protection or optical coating.
We offer no guarantee for wearing parts in the event of corrosion or malfunction due to very hard water or contaminated water lines (e.g., with respect to sealing or mixing jets) or due to improper assembly; chemical or mechanical events during transportation, storage, connection, repair, or use; or improper handling of products.
We provide the statutory guarantee for defects in our products that arise due to material or manufacturing defects or through normal use. Defects due to non-observance of the information above are excluded from that guarantee.
Previous documents cease to be valid upon publication of the catalog. Our catalog serves exclusively as a basis for wholesale, industrial, and technical information and work. It is not a sales document.
Returns are only permitted based on prior written agreement; this particularly applies to custom production. Return deliveries that are not prepaid will not be accepted.
Recommendations for the handling of hoses
A number of factors can have an impact on how long the hose lasts:

- application
- medium
- abrasion
- storage etc.

Therefore it is not possible to give a general information about the durability of a hose. The end user should regularly check the hose for leaks and replace it if necessary.
The rubber compound can change its characteristics over time because of its chemical properties. This process can be accelerated by improper use of the hose or other influences. Therefore we give the following recommendations:

## Storage

1. Avoid long storage periods! Otherwise, a check is important at the 1 st use.
2. Ideally you should store the hose at a temperature between $+10^{\circ} \mathrm{C}$ and $+25^{\circ} \mathrm{C}$. Temperatures of less than $0^{\circ} \mathrm{C}$ or more than $+40^{\circ} \mathrm{C}$ will damage the hose. Keep the hose away from all sources of heat! Avoid dry air as well as high air humidity!
3. No direct solar radiation or aggressive artificial light!
4. Airflow and ozone can ruin the material. Do not store near electric motors, high-voltage units etc. because of the danger of sparks or electrostatic charge or uncontrolled heating of eventually mounted metal couplings.
5. Different substances can affect the material of the hose. Therefore please avoid any contacts with: solvents, fuels, acids, disinfectants, wood preservers, volatile or organic chemical substances or mixtures. Manganese, iron, copper and copper alloys may affect some kinds of rubber mixtures.
6. Store loosely rolled and stress-free to avoid compressing the tube. Coiled hose should be stored in a horizontal position. Do not pile up and pay attention to the weight to avoid any deformations! If given by the supplier, please note the minimum bend radii to prevent kinks.
7. Check the hose for suitability and proper seat of mounted couplings before delivery or resale.
8. Clean the hose before re-storage (please check suitability of the cleaning agent !). This applies particularly in case of the use of chemical, explosive or abrasive materials. Checks for reusability are essential.

## Use

1. Hoses should only be used in accordance to their intended purpose. The misuse -e.g. as towing rope- is not allowed.
2. Before using the hose you have to check its suitability with regard to its characteristics, type or size.
3. Exercise due diligence when transporting the hose. The hose may not be exposed to severe shocks or tensile forces across rough surfaces. Avoid twisting, kinks and knots.
4. Please note the mentioned operating pressures! If checking the hose for leaks, the pressure in a hose free of air bubbles must only be increased gradually until the maximum pressure is reached.
5. The hose has been developed to channel liquids which are approved by the manufacturer. This does not give the permission to immerse the hose in the liquids.
6. Please note the ambient temperature and the maximum operating temperature which depend on the medium. Keep hose line away from sources of heat!
7. The material of the hose must be resistant to all media used. Check this before use. Changes in the concentration of media, period of use or temperature may cause changes in the suitability and chemical resistance of the hose.
8. Varying degrees of abrasion may occur depending on the kind of medium used or pulling the hose across different surfaces. Therefore you have to control the wear and tear of the tube regularly.
9. Make sure that installed hoses and hose connections are protected against impurities to avoid a contamination of hose and medium; particularly when used with drinking water.
10. Do not install hose lines on driveways or rather protect them against running over. If necessary, use hose bridges or the like.
11. Mounted hose fittings or spray nozzles should not be used as end or shut-off valves as they are not constructed for that purpose. Do not expose them to a permanent water pressure to prevent the valve/nozzles from being torn off and/or avoid bursting of the hose. After finishing work the water supply to the hose has to be shut off.

## Assembly and commissioning of hose lines in technical fields

Please note:

1. When using hoses fitted with connectors, ensure that they are the correct length. An extension through the use of several connecting hoses is not permissible.
2. Before putting a hose line into operation please check if it is in accordance with eligible regulations and directives, e.g. the instructions of the Trade Association Too2, $\S \S 14$ and 15; the Industrial Safety Regulation (BetrSichV) or the Technical Rules for operating safety (TRBS).
3. Do not use a hose line if there are any visible damages!
4. Hose lines with given inspection intervals may not be used when the inspection date has expired. After repair or modification the hose line must be checked.
5. The hose line must be cleaned before putting it into operation. Do not forget to check the suitability of the cleaning agent!
6. With regard to electrostatic discharge the following instructions have to be observed: TRBS 2153 ("Avoiding of ignition hazards due to electrostatic charges")
7. The hose line must be cleaned when changing from one to another flow medium to avoid a possible chemical reaction or contamination of the new medium.
8. For special applications or construction projects, it is essential to comply with the manufacturer's instructions.

## Disposal

Please follow local regulations if you want to dispose hose materials and/or hose fittings.
Legal information: According to the Drinking Water Ordinance [esp. §§ 3 and 17], every tapping point of water that is not intended for human use must be permanently marked with a notice "no drinking water" and safeguarded against inappropriate use!
Tapping systems for non-drinking water that are installed in the household in addition to the drinking water supply system must be reported to the health authority!
Specifications and illustrations as well as descriptions and packing units are non-binding. They are purely informational and no legal obligation may be derived from them.
We reserve the right to make technical and formal changes in the interest of further technical development or that are necessary for financial reasons. Alterations and additions are made continuously.
We assume no liability for any printing errors or divergent illustrations. In the event of erroneous size information, the figures at the start of printing will no longer apply.

| Conversion table inch/millimetre |  |  |  |
| :---: | :---: | :---: | :---: |
| inch fractional value | mm metric | inch fractional value | mm metric |
| 1/8" | 3,175 mm | $13 / 4{ }^{\prime \prime}$ | $44,450 \mathrm{~mm}$ |
| 1/4" | 6,350 mm | 2" | $50,800 \mathrm{~mm}$ |
| 3/8" | 9,525 mm | $2^{1 / 4 "}$ | $57,150 \mathrm{~mm}$ |
| 1/2" | $12,700 \mathrm{~mm}$ | $2^{1 / 2 "}$ | $63,500 \mathrm{~mm}$ |
| 5/8" | 15,875 mm | $2^{3 / 4}$ | 69,850 mm |
| 3/4" | 19,050 mm | 3" | 76,200 mm |
| 7/8" | 22,225 mm | $3^{1 / 4}{ }^{\prime \prime}$ | 82,550 mm |
| $1{ }^{\prime \prime}$ | $25,400 \mathrm{~mm}$ | $3^{1 / 2 "}$ | $88,900 \mathrm{~mm}$ |
| $1^{1 / 4}{ }^{\prime \prime}$ | $31,750 \mathrm{~mm}$ | $3^{3 / 4}$ | 95,250 mm |
| $11 / 2^{\prime \prime}$ | $38,100 \mathrm{~mm}$ | $4{ }^{11}$ | 101,600 mm |

## puteus (®)

## We keep an eye on our qualities:

Both our quality and environmental management system have been certified on the standard basis DIN EN 9001 (Nov. 2015) and DIN EN 14001 (Nov.2015). We face the challenge to guarantee highest qualities for our products and services. All raw materials and external products are checked for quality and suitability. Our own products are tested on a random basis during the production processes, final leaking and material tests are performed.
Our products meet several requirements, such as DVGW, SVGW, KTW, noise class tests (PA-Nr.), ACS and are also complying with binding DIN standards in respect to dimensions or noise behaviour.
With regard to the brass alloy puteus valves, fittings and the seals we use are in full compliance with the amended requirements of the drinking water ordinance. Long before the reference date in April 2017 we made sure that the regulations of the valuation basis of the Federal Environmental Agency (UBA) were implemented. These regulations apply to metallic materials which may get in contact with drinking water. They also include the list of materials that are in accordance with the drinking water hygiene (known as the "UBA Positive List"). On the basis of these standards our quality management has also been certified for the process to comply with the nickel values for valves, fittings and other components in drinking water under the terms of the drinking water regulations and recommendations of the Federal Environmental Agency.
Therefore we can ensure a high product quality for our customers because of our high qua-
 and other liquids

Asszert 882-1.1119 This Certificate is valid until: 26.04.202 882-1/19en Cenficate-Register-No.


## Our packaging and labelling proposals

## Four-colour cartons - version 1 -

with Euro-standard-holes, colour prints and product descriptions on the front-side, pictographs and installation dimensions on the back, top and bottom. Items that are available in carton packaging can be found in our catalogue. The item numbers are marked with an additional "-K".

## Four-colour cartons - version 2 -

Promotional four-colour cartons with product photos and descriptions.


## Labels with EAN-barcodes

Nearly all articles can be labelled with EAN-codes. The self-adhesive and tear-resistant labels contain a product description, barcode and EAN-code.
The complete EAN-code consists of:
4012167 + item-no. + verification digit
(without "-E" or other extensions).

## Self-service cards

These cards can be used for certain products of the irrigation sector. The cards are printed with article descriptions, sizes and EAN-codes.

## Polybags

We offer customized polybags for single products. Each polybag can be printed according to your wishes.



Other catalogs to our range:


