









4 Fittings

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.



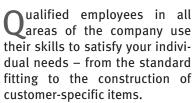
The company is based in Tönisvorst



The high-bay warehouse

Our modern warehouse with a capacity of 10.000 pallets and a picking area for further 3.000 pallets allows short delivery times.

In 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.



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.



Whether the customer orders full pallet units ...



... or wishes smaller packing units ...

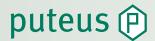


... we supply individually and promptly.





Ready for shipment.



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



► 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 814 779 086 | 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



► Heinrich Schulte GmbH & Co. KG

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Commercial register entry: AG Iserlohn | HRA 2276 UST-IDNR DE 233 202 839 | Sitz Iserlohn CEO: Henning de Gruyter | Olaf Stach

Exclusive sanitary taps and mixers



► 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 233 202 839 | Sitz Iserlohn CEO: Henning de Gruyter | Olaf Stach

Exclusive sanitary taps and mixers

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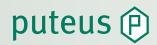


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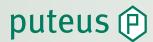


Compression fittings of brass for corrugated pipes

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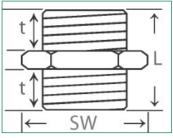


Fittings made of brass

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

Double nipple



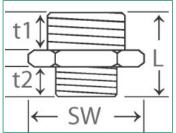


Both sides male threaded, hot-pressed

Item-No.:	Item-No.:	Connection:	Thread- length:	Length:	Wrench size:	Packing unit:
plain	chroplat.	male x male	t	L	SW	
34408 4	-	1/8"	7	18	10	50/2000
34409 1	-	1/4"	8	20	14	25/1000
34410 7	35410 6	3/8"	9	22	17	50/ 800
34411 4	35411 3	1/2"	10	24	21	50/ 500
34412 1	35412 0	3/4"	11	26	27	15/ 240
34413 8	-	1"	12	29	34	15/ 180
34414 5	-	1 1/4"	15,5	37	42	10/ 150
34415 2	-	1 1/2"	17	38	48	10/ 70
34416 9	-	2"	18	48	60	1/ 36
34417 6	-	2 1/2"	22	50	76	1/ 36
34418-10948	-	3"	25	56	93	2/ 32
34419 0	-	4"	25	64	125	1/ 12

Double nipple, reduced





Both sides male threaded, hot-pressed

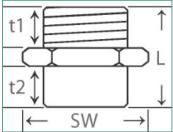
Item-No.:	Item-No.:	Connection:	Thread	llength:	Length:	W.s.:	Packing unit:
plain	chroplat.	male x male	t1	t2	L	SW	
34418 3	-	1/8" x 1/4"	9	8	21	17	50/1200
34428 2	-	1/8" x 3/8"	10	9	23	17	50/ 700
34420 6	-	1/4" x 3/8"	10	9	23	17	50/ 700
34429 9	-	1/4" X 1/2"	10	9	23	21	25/ 500
344213	354212	3/8" x 1/2"	10	9	23	21	25/ 600
34427 5	35427 4	3/8" x 3/4"	10	9	24	27	25/ 500
34422 0	35422 9	1/2" x 3/4"	10,5	10,5	26	27	25/ 300
34877 8	-	1/2" X 1"	12	10,5	28	34	25/ 200
34875	-	1/2" X 1 ½"	16	10,5	34	43	-/ -
344237	-	3/4" x 1"	12	11	28	34	10/ 150
34870 9	-	3/4" x 1 ½"	15	10	35	42	10/ 150
34424 4	-	1" X 1 1/4"	14	12	32	42	10/ 100
34871 6	-	1" X 1 ½"	18	13	39	50	10/ 70
34425 1	-	1 ½" X 1 ½"	18	14	38	48	10/ 80
344268	-	1 ½" X 2"	18	14	44	60	1/ 48
34872 3	-	2" X 2 ½"	22	22	54	80	1/ 54
34873 0	-	2" X 3"	20	22	52	89	1/ 18
348747	-	2 ½" X 3"	30	27	67	89	1/ 30
34428-10948	-	3" x 4"	25	25	50	-	2/ 12

Double nipple, reduced

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

Item-No.:	Item-No.:	Connection:	Threadlength:		Length:	Wr.size:	Pack. unit:
plain	chroplat.	female x male	t1	t2	L	SW	
34430 5	-	1/4" x 3/8"	11	10	24	17	50/1000
34431 2	-	3/8" x 1/2"	12	10	25	21	20/ 400
34432 9	35432 8	1/2" x 3/4"	10,5	11	25	27	15/ 300
34433 6	-	3/4" x 1"	12	11	26	33	15/ 150
344343	-	1" X 1 1/4"	14	12	30	41	10/ 200
34435 0	-	1 ½" X 1 ½"	18	17	43	47	10/ 100
344367	-	1 ½" X 2"	20	19	46	60	1/ 60



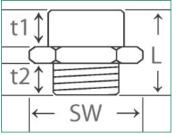


Double nipple, reduced

 $\label{eq:male_problem} \textbf{Male thread x female thread, female thread with flat seal, including seals made of NBR, hot-pressed$

Item-No.:	Item-No.:	Connection:	Threadle	ngth:	Length:	Wr.size:	Pack. unit:
plain	chroplat.	male x female	t1	t2	L	SW	
34440 4	-	1/4" x 3/8"	9	10	22	21	50/500
344411	35441 0	3/8" x 1/2"	11	10	25	25	20/300
344428	354427	1/2" x 3/4"	10	10	23	29,7	20/300
34443 5	-	3/4" x 1"	11	11	26	36	15/ 150
34444 2	-	1" X 1 1/4"	12	12	29	45	10/ 100
34445 9	-	1 ½" X 1 ½"	14	20	38	55	10/ 70
34446 6	-	1 ½" X 2"	18	21	43	70	10/ 60



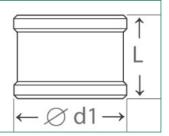


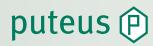
Socket

Female thread, hot-pressed

Item-No.:	Item-No.:	Connection:	Length:		Packing unit:
plain	chroplat.		L	Ø d1	
344688	35468 7	1/8"	16	13,8	50/1000
34469 5	35469 4	1/4"	18	18	50/ 900
34460 2	35460 1	3/8"	24	23	20/ 400
344619	354618	1/2"	25,5	26,8	15/ 300
34462 6	35462 5	3/4"	29	34	10/ 200
34463 2	-	1"	30,5	41	10/ 100
34464 0	-	1 1/4"	36	51	10/ 80
344657	-	1 1/2"	40,1	58	5/ 60
34466 4	-	2"	43	69	5/ 50







Socket, reduced



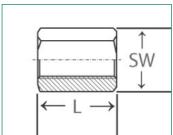


Both sides female threaded, hot-pressed

Item-No.:	Item-No.:	Connection:	Length:			Packing unit:
plain	chroplat.		L	Ø d1	Ø d2	
34470 1	35470 0	1/4" x 3/8"	23	23	18	25/450
34478 7	35478 6	3/8" x 1/2"	27	27	23	20/300
34472 5	35472 4	1/2" x 3/4"	27	34	27	10/200
34479 4	35479 3	1/2" X 1"	40	41,5	27,5	10/100
34473 2	35473 1	3/4" x 1"	37,5	41,5	34	10/100
34477 0	-	3/4" X 1 ½"	40	51	34	10/120
34474 9	35474 8	1" X 1 1/4"	43	51	41,5	10/ 80

Socket, with external hexagon



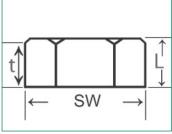


Female thread, hot-pressed

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

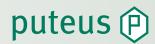
Cap





External hexagon, male thread, hot-pressed

Item-No.:	Item-No.:	Connection:	Thread- length:	Length:	Wrench size:	Packing unit:
plain	chro. plat.	male		L	SW	
344888	-	1/8"	8	10	12,9	100/2400
34489 3	-	1/4"	8	10	15,9	50/1500
34480 o	35480 9	3/8"	8	10,5	18,5	50/1200
344817	35481 6	1/2"	9	12	23	50/ 700
34482 4	35482 3	3/4"	12	14	29	50/ 400
34483 1	35483 0	1"	12,5	15	38	25/ 200
344848	354847	1 1/4"	14	17	46	25/ 150
34485 5	-	1 1/2"	16	19,5	53	10/ 150
34486 2	-	2"	17	19,5	64	10/ 90

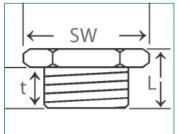


Male thread x female thread, hot-pressed

Item-No.: Item-No.: Connection: Threadlength: Length W.s.: Pack. unit: plain chro.-plat. male x female m f L SW 1/4" x 1/8" 11 100/2000 344497 7 11 14 3/8" x 1/8" 50/1000 34458 9 10 15 15 17 3/8" x 1/4" 100/1200 34450 3 35450 2 10 15 15 17 1/2" x 3/8" 12 25/ 600 34451 0 16 16 354519 21 1/2" x 3/8" S-3761 12 18 18 24 50/ 500 1/2" X 1/4" 16 16 25/ 600 344596 12 21 1/2" X 1/4" 50/ 400 S-3760 12 18 18 24 3/4" x 3/8" 34457 2 35457 1 13 19 19 27 25/ 300 3/4" x 1/2" 344527 354526 18 18 25/ 500 13 27 346835 1" x 3/8" 14 14 21 34 10/ 150 1" X 1/2" 344473 35447 2 14 22 25/ 150 14 34 1" x 3/4" 354533 25/ 250 34453 4 13 19 19 34 34684 2 1 1/4" x 3/4" 20 16 31 44 10/ 80 34454 1 1 1/4" X 1" 15 22 22 10/ 150 42 1 ½" X 3/4" 346859 16 10/ 120 19 25 50 346866 1 ½" X 1" -16 18 -/ 80 25 50 1 ½" X 1 ¼" 10/ 160 344558 13 23 23 50 346873 2" X 1" 17 20 26,5 60 -/ 40 2" X 1 ½" 34448 o 18 26,5 60 17 10/ 50 2" X 1 ½" 50 34456 5 18 26,5 26,5 60 5/ 2 ½" X 2" 34438 1 22 32 32 78 1/ 44 34688 o 3" X 2" 23 26,5 36 1/ 36 90 3" X 2 ½" 36 344398 23 36 36 1/ 93

Bushing



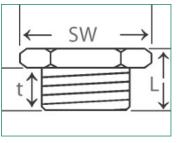


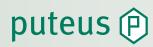
Brass plug

External hexagon, hot-pressed

Item-No.:	Item-No.:	Connection:	Thread- length:	Length:	Wrench size:	Packing unit:
plain	chro. plat.	male	t	L	SW	
340017	-	1/8"	7	12	13	100/1300
34002 4	-	1/4"	7	12	14	100/1500
34003 1	-	3/8"	9	15	17	50/1250
34004 8	-	1/2"	9	15	21	50/1200
34005 5	-	3/4"	11	18,5	27	25/ 300
34006 2	-	1"	12	20	34	25/ 150

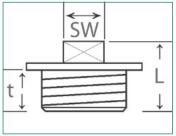






Brass plug



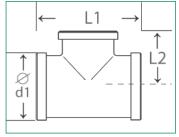


Square head, with collar, hot-pressed

Item-No.:	Item-No.:	Connection:	Thread- length:	Length:	Wrench size:	Packing unit:
plain	chro. plat.	male	t	L	SW	
34490 9	35490 8	3/8"	8	15,5	12	50/800
34491 6	354915	1/2"	8,5	17,5	12	50/600
34492 3	35492 2	3/4"	8,5	17,5	14	20/400
34493 0	35493 9	1"	13	22,5	17	25/200
344947	-	1 1/4"	13	23	19	10/ 150
34495 4	-	1 1/2"	13	26	22	10/100
34496 1	-	2"	14	28	24	10/ 70

Tee



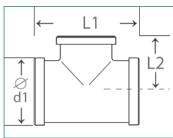


All sides female threaded, hot-pressed

Item-No.:	Item-No.:	Connect.:	Thread- length:	Length:			Pack. unit:
plain	chro. plat.	female	t	L1	L2	Ø d1	
S-1821	-	1/8"	9,5	31	15,75	14,5	10/120
34609 5	-	1/4"	13	35	16,5	21	25/250
34600 2	35600 1	3/8"	12	48	24,5	21	10/180
346019	356018	1/2"	13	51	27,25	28,5	10/100
34602 6	35602 5	3/4"	14	61	30,4	30,7	10/ 80
346033	35603 2	1"	18	75	34,5	40	5/ 50
34604 0	-	1 1/4"	19	89	44	50	5/ 30
346057	-	1 1/2"	21	95	47	58	1/ 30
34606 4	-	2"	20	101	50,5	69	1/ 16

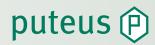
Tee, reduced





All sides female threaded, hot-pressed

Item-No.:	Item-No.:	Connection:	Thread- length:	Length:			Pack. unit:
plain	chro.plat.	female	t	L1	L2	Ø d1	
34671 2	-	1/2" x 3/8" x 1/2"	13	44	22	28,5	25/180
34672 9	-	3/4" x 1/2" x 3/4"	16	53,5	27,4	33,2	10/100
34673 6	-	1" x 3/4" x 1"	18	68	32	40	10/ 70
34678 1	-	3/4" x 3/4" x 1/2"	15	59	29,4	33,2	10/ 80

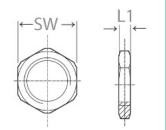


Locknut

External hexagon, hot-pressed

Item-No.:	Item-No.:	Connection:	Length:	Wrenchsize:	Packing unit:
plain	chro.plat.	female	L1	SW:	
34613 2	-	1/8"	4,5	14	100/3200
34614 9	-	1/4"	5	17	100/3200
34615 6	-	3/8"	5	25	-/ 1100
34615-SW19 6	-	3/8"	5	19	-/-
52075 4	-	1/2"	5	27	-/ 1100
34616 3	-	3/4"	6	32	50/ 800
34617 0	-	1"	8	38	-/ 500
34610 1	-	1 1/4"	7	50	50/ 500
34619 4	-	1 1/2"	7	56	50/ 400



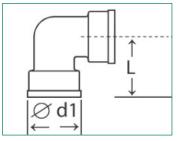


Elbow (90°)

Both sides female threaded, hot-pressed

Item-No.:	Item-No.:	Connection:	Thread- length:	Length:		Packing unit:
plain	chro.plat.	female		L	Ø d1	
S-1699	-	1/8"	10	15	14	25/300
346293	-	1/4"	10	18,5	21	50/400
34620 0	35620 9	3/8"	11	21,5	23	10/200
346217	356216	1/2"	13	25,25	27,5	25/100
34622 4	356223	3/4"	16	28,75	35,5	10/120
346231	35623 0	1"	18	33,5	41	10/ 70
346248	-	1 1/4"	19	46,5	51	5/ 50
34625 5	-	1 1/2"	21	57	58	5/ 30
34626 2	-	2"	23	58,5	71	1/ 20



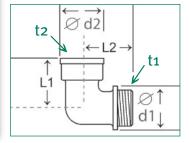


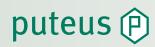
Elbow (90°)

Female thread x male thread, hot-pressed

Item-No.:	Item-No.:	Conn.:	Thread	llength:	Length	:			Packing unit:
plain	chro. plat.	f x m	m tı	f t2	L1	L2	Ø d1	Ø d2	
34649 1	-	1/4"	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"	11	13	30,35	30,75	25,5	27,5	10/120
34642 2	35642 1	3/4"	14	16	38,5	38,5	32	34	10/100
34643 9	356438	1"	15	19	44	44	38	40	10/ 60
346446	-	1 1/4"	18	19	53	57	47	50	5/ 40
34645 3	-	1 1/2"	21	21	57	62	53	58	5/ 30
34646 o	-	2"	22	23	70	76	66	70	1/ 16
34648 4		3"	27	27	95	95	100	100	-/-

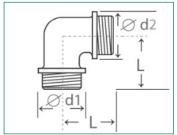






Elbow (90°)



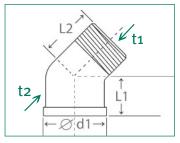


Both sides male threaded, hot-pressed

Item-No.:	Item-No.:	Connection:	Thread- length:	Length:		Packing unit:
plain	chro. plat.	male x male		L	Ø d1	
346507	35650 6	3/8"	10	30	22,5	25/250
34651 4	356513	1/2"	10,5	30,75	26,5	25/150
34652 1	35652 0	3/4"	14	38,5	32	10/100
346538	-	1"	15	43	38	10/ 70

Elbow (45°)



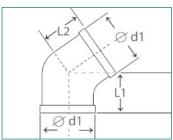


Male thread x female thread, hot-pressed

Item-No.:	Item-No.:	Conn.:	Threadlength:		Length:			Packing unit:
plain	chro. plat.	m x f	m t1	f t2	L1	L2	Ø d1	
34770 2	-	3/8"	10	12	20	22	26	25/250
34771 9	-	1/2"	12	14	22	25,5	28	25/240
34772 6	-	3/4"	12	14	25	32	35	10/120
34773 3	-	1"	15	18	26,5	32	41	-/ 70
347788	-	3"	29,5	27	60	60	100	1/ 6

Elbow (45°)





Female thread x female thread, hot-pressed

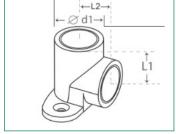
Item-No.:	Item-No.:	Conn.:	Thread- length:	Length:			Packing unit:
plain	chro. plat.	fxf		L1	L2	Ø d1	
34780 0	-	3/8"	12	20	20	26	-/-
347817	-	1/2"	14	22	22	28	-/200
34782 5	-	3/4"	14	25	25	35	10/120

Female thread x female thread, hot-pressed

Item-No.:	Item-No.:	Conn.:	Thread- length:	Length:			Packing unit:
plain	chro. plat.	fxf		L1	L2	Ø d1	
347917	35791 6	1/2"	11	22	19	26	10/160

Wall bracket (90°)



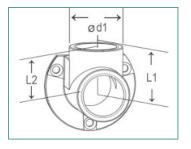


Wall bracket (90°)

Female thread x female thread, hot-pressed

Item-No.:	Item-No.:	Conn.:	Thread- length:	Length:			Packing unit:
plain	chro. plat.	fxf		L1	L2	Ø d1	
34792 4	-	3/4"	12	23,7	25,5	31,5	10/100



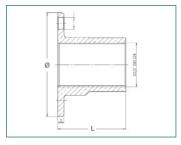


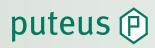
Wall plate (90°)

Female thread x female thread, hot-pressed, horizontal passage

Item-No.:	Item-No.:	Conn.:	Thread- length:	Length:			Packing unit:
plain	chro. plat.			L	Ø	Wrench size:	
S-4106	-	G 1/2"		32	49	26	-/180







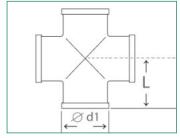
Cross fitting, 90°





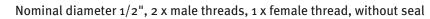
Female	thread.	hot-pressed
1 Ciliate	uncau,	not presseu

Item-No.:	Item-No.:	Connection:	Thread- length:	Length:		Packing unit:
plain	chro. plat.	female		L	Ø d1	
348013	-	1/2"	15	28,5	24	10/120
348037	-	1"	18	37,5	38	-/-

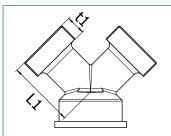


Y-connector





Item-No.:	Item-No.:	Connection:	Threadlength:	Length:	Packing unit:
plain	chro. plat.	f/m	t1	L ₁	
34992 8	359927	3/4"	9	26	10/150
349997	35999 6	3/4"	9	32	-/-

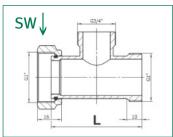


T-piece with union nut





Item-No.:	Connec.:	Thread- length:	Length:	Wrench size:	Packing unit:
	F x M (1) x M (2)	t1 IG/t2 AG	L	SW	
S-3412	G1" x G3/4" x G1"	16/10	60	37	-/-

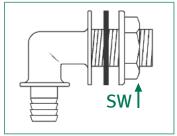


Tank connector

Incl. lock nut and NBR-thread

Item-No.:	Connection:	NW-spout:	Wrench size:	Packing unit:
S-385-11463-N	F 1" x M 1"	25 mm	38	5/40
Replacement seal				
S-385-Dichtung	34 x 50 x 3 mm			-/-
S-385-Körper	only body, M 1"	25 mm		5/40
S-385-Mutter	F 1", Ø 55 x 10,5 mm		38	



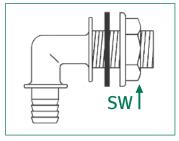


Tank connector (market model)

Incl. lock nut and NBR-thread

Item-No.:	Connection:	NW-spout:	Wrench size SW:	Packing unit:
S-3213	f 1" x m 1"	25 mm	37	5/40
Replacement seal				
S-3222-1/2-D	33 x 29 x Ø 11 mm			



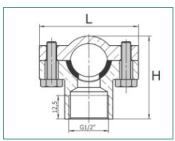


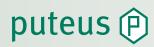
Compression fitting

SBR-thread with textile insert

Item-No.:	Connection:	Length L:	H:	Packing unit:
S-3222-1/2	22 mm x G 1/2"	52,5 mm	44	-/90



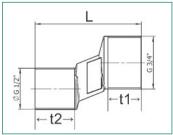




S-connector

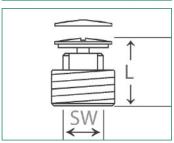


S-connector nipple, nickel plated, extension 12,5 mm, 3/4" m x 1/2" m, wrench size 16							
Item-No.:	Item-No.:	Connection:	Threadl	ength:	Length:	Wrench size:	Pack. unit:
plain	chro. plat.		t1	t2	L	SW:	
-	35610 0	3/4" m x 1/2" m	16	19	51	16	25/200



Plug with slotted screw





Plug, plain brass with slotted screw chrome-plated

Item-No.:	Item-No.:	Connection:	Thread- length:	Length:	Wrench size:	Packing unit:
		male		L	SW:	
34618 7	-	3/8"	10	20	9	25/1000
34611 8	-	1/2"	11	21	9	50/ 500
34612 5	-	3/4"	14	26	12	25/ 500
Accessories: Pro	tective plast	ic cap				
34611-Kappe		universal				500/10000
Closing plug, pla	in brass witl	n slotted screw	chrome-p	lated + p	rotective	e 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

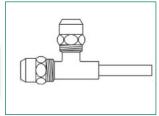
Material in accordance with DIN 50960-6, operating temperature max. 90°C, operating pressure max. 10 bar.

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 unit:
522673	3/8"	3/8" x 10 mm	25/100

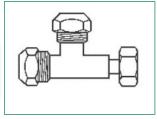




T-branch piece

T-piece with union nut and two high tensile brass cone compression fittings with length compensation, chrome plated

Item-No.:	Connection:	Leaving:	Packing unit:
52267-3/8"	3/8"	3/8" x 10 mm	25/150

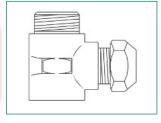




T-branch piece

T-piece female/male with a compression fitting, chrome plated

Item-No.:	Connection:	Leaving:	Packing unit:
52463 9	1/2" X 1/2"	3/8" x 10 mm	10/200
52464 6	1/2" X 1/2"	1/2" X 12 mm	10/200

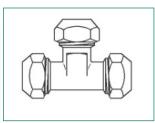




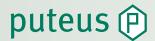
T-branch piece

T-piece with 3 x compression fittings, chrome plated

Item-No.:	Connection:	Packing unit:
52470 7	3/8" x 8 mm	10/200
52471 4	3/8" x 10 mm	10/200
52472 1	1/2" X 12 mm	10/160

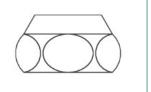






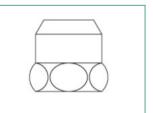
Compression fitting, loose





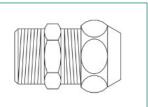
Compression fitting, loose





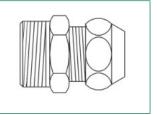
Single compression fitting





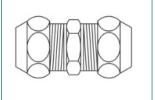
Single compression fitting





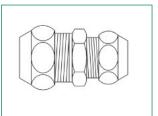
Double compression fitting





Double compression fitting





Compression fitting without length compensation, chrome-plated

Item-No.:	Connection:	Packing unit:
52450 9	3/8" x 8 mm	25/1000
52451 6	3/8" x 10 mm	25/1000
52452 3	3/8" x 12 mm	25/1000
52450-1/2"	1/2" x 8 mm	25/1000
52451-1/2"	1/2" X 10 mm	25/1000
52452-1/2"	1/2" X 12 mm	25/1000

Compression fitting with length compensation, chrome-plated

Item-No.:	Connection:	Packing unit:
52451-lang	3/8" x 10 mm	150/750

On nipple, chrome-plated

Item-No.:	Connection: m x m x Ø	Packing unit:
524943	3/8" x 3/8" x 8 mm	25/250
52495 0	3/8" x 3/8" x 10 mm	25/250
52497 4	1/2" X 1/2" X 10 mm	25/200
524967	1/2" X 1/2" X 12 mm	25/200

On reducing nipple, chrome-plated

Item-No.:	Connection: m x m x Ø	Packing unit:
52498 1	3/4" x 3/8" x 10 mm	25/-

Chrome-plated

Item-No.:	Connection: mxmxØ	Packing unit:
52490 5	3/8" x 3/8" x 8 mm	25/250
52491 2	3/8" x 3/8" x 10 mm	25/250
52491-12 mm	3/8" x 3/8" x 12 mm	25/250
52492 9	1/2" X 1/2" X 12 mm	25/250

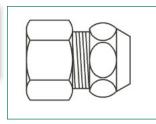
Reduced, chrome-plated

Item-No.:	Connection: m x m x Ø	Packing unit:
524936	3/8" x 10 mm x 3/8" x 8 mm	25/400
52499 8	1/2" x 12 mm x 3/8" x 10 mm	50/700

On nipple with female thread, chrome-plated

Item-No.:	Connection: fxmxØ	Packing unit:
52495-IG	3/8" x 3/8" x 10 mm	50/500
52499-IG	1/2" x 3/8" x 10 mm	25/300

Compression fitting

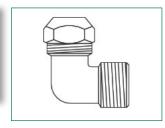




Elbow male/male with single compression fitting, chrome-plated

Item-No.:	Connection: m x m x Ø	Packing unit:
524868	3/8" x 3/8" x 10 mm	25/300
52486-1/2"	1/2" X 1/2" X 10 mm	10/250
52487 5	1/2" X 1/2" X 12 mm	25/150

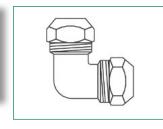
Elbow with one compression fitting





Item-No.:	Connection: m x m x Ø	Packing unit:
52480 6	3/8" x 3/8" x 8 mm	25/400
524813	3/8" x 3/8" x 10 mm	25/400
52487-11001	1/2" X 1/2" X 12 mm	25/-

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

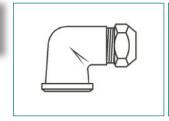




Elbow female/male with compression fitting, chrome-plated

Item-No.:	Connection: $f x m x \emptyset$	Packing unit:
524837	1/2" x 3/8" x 10 mm	10/150

Elbow with one compression fitting

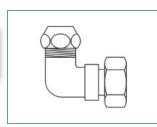




Elbow, rotable, union nut at one and compression fitting at the other end, chrome-plated

Item-No.:	Connection: fxmxØ	Packing unit:
52489 9	3/8" x 3/8" x 10 mm	10/250

Elbow with one compression fitting

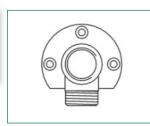




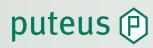
Wall plate elbow, without compression fitting, chrome-plated

Item-No.:	Connection: fxmxØ	Packing unit:
52466 0	1/2" x 3/8" x 12,5 mm	10/120
524677	1/2" X 1/2" X 12,5 mm	15/180

Wall plate elbow





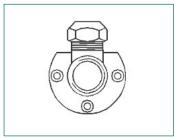


Wall plate elbow



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

Item-No.:	Connection: fxmxØ	Packing unit:
524615	1/2" x 3/8" x 10 mm	10/100
52462 2	1/2" X 1/2" X 12 mm	10/150



Accessories for compression fittings



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

Item-No.:	Connection:	Packing unit:
52455 4	3/8" x 8 mm	1000/15000
52456 1	3/8" x 10 mm	1000/15000

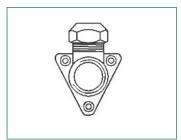


Wall plate elbow



Wall plate elbow, brass plain, with one compression fitting

Item-No.:	Connection: fxmxØ	Packing unit:
34881 5	1/2" X 1/2" X 16 mm	25/150

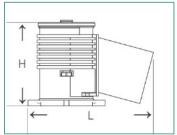


Wall box

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 unit:			
		L	Н				
S-2828	1/2" x 3/4"	95	63	-/72			
Replacement gasket							
S-2828-Dichtung	Ø12 x Ø37 x 25,5 mm			50/450			



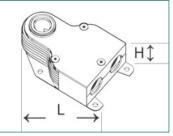


Wall box

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 unit:
		L	Н	
S-2829	1/2" X 3/4"	132	40,5	-/54



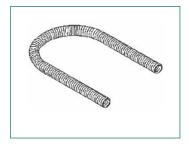


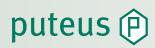
Bending spring

Bending spring for compound pipe, galvanized steel

Item-No.:	Connection:	Length:		Packing unit:
	\varnothing inside/outside	L	Н	
S-2928-16	16,7 / 20,85	500		1/40
S-2928-20	20,6 / 24,6	500		1/34

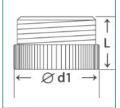






Adapter fitting

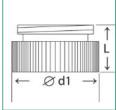




Brass chrome-plated

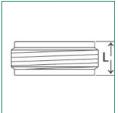
Item-No.:	Connection:	Thread- length:		Length		Packing unit:
		f	m	L	Ø d1	
356308	M 22/1" f x 1/2" m	5,5	8,5	16	24	50/1000
356315	M 22/1" f x 3/4" m	6	9,5	16	26	50/ 500





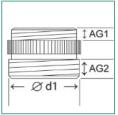
Item-No.:	Connection:	Thread- length:				Packing unit:
		m	f	L	Ø d1	
35632 2	M 22/1" m x 1/2" f	2,5	7,5	13	24	50/1000
35633 9	M 22/1" m x 3/4" f	6,5	8,5	16,5	29	50/ 700





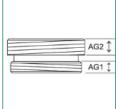
Item-No.:	Connection:	Length:	Packing unit:
35634 6	M 22/1" f x 3/4" m x 1/2" f	10	50/2000





Item-No.:	Connection:	Threadlength: m m		Length:		Packing unit:
		AG1	AG2	L	Ø d1	
356353	M 24/1" m x 3/4 m	4,5	7	18,5	27	50/400





	Connection:	Threadlength: m m		Length	Packing unit:
with sealing		AG1	AG2	L	
35636 0	M 24/1" m x M 22/1 m	4	3,5	9,5	50/1000

Seals

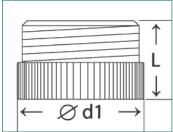
Item-No.:	for item:	Connection:	Item-No.:	for item:	Connection:
35630/31-Dichtung	35630/31	21 X 15 X 1,5 mm	35633/38/39-Dichtung	35633/38/39	24 x 16 x 2,5 mm
35632-Dichtung	35632	18,5 x 15 x 2 mm	35636-Dichtung	35636	21 X 15 X 2,5 mm
35635-Dichtung	35635	22 X 17 X 1,5 mm			

Adapter fitting

Brass chrome-plated, knurled, with sealing

Item-No.:	Connection:	Threadlength:		readlength: Length:		Packing unit:
		male	female	L	Ø d1	
35638 4	1/2" m x 3/4" f	10	9,5	20	29	50/600



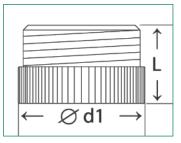


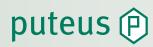
Adapter fitting

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

Item-No.:	Connection:	Threadlength:		: Length:		Wrench- size:	Packing unit:
		m	f	L	Ø d1	SW:	
35639 1	1" f x 3/4" m	10	10	22	38	-	25/250
35432-40748	1/2" f x 3/4" m	8	8	17	26	23	50/800

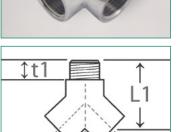






Y-connector



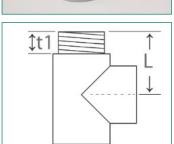


Brass polished chrome-plated, 2 x female, 1 x male thread

Item-No.:	Item-No.:	Connec.:	Thread- length:	Length:		Packing unit:
plain	chrom. plat.		t1	L1	L2	
-	35991 0	1/2"	12	42	32	10/120

Tee



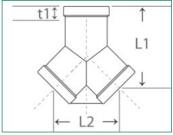


Brass, polished chrome-plated, 1/2" male x 1/2" female x 1/2" female thread

Item-No.:	Connection:	Threadlength:		Length:	Packing unit:
chrome-plated		m tı	f	L	
35997 2	1/2"	10	15	28	10/120

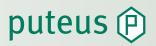
Y-connector





3 x 3/8" female thread

Item-No.:	Item-No.:	Connec.:	Thread- length:	Length:		Packing unit:
plain	chrom. plat.		t1	L1	L2	
S-1828	-	3/8"	16	39	30	10/150

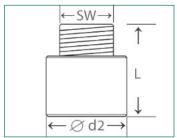


Adapter fitting

Item-No.:	Item-No.:	Connection:	Threadl	ength:	Length	1:	Wre size:	Packing unit:
plain	chro. pla.		f	m	f/m	Ø d2	SW	
346378	356377	1/2" f x 3/8" m	14	10	29	25,5	11	20/300
34690 3	35690 2	3/4" f x 1/2" m	13	11	30	31,5	12	20/180
346919	35691 0	3/4" f x 3/8" m	14	10	29	32	11	20/240

Extension, reduced

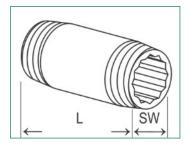




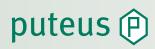
Brass pipe

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





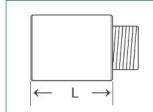
	R3/8"	R3/8"	R1/2"	R1/2"	R3/4"	R3/4"	R1"	R1"	
Länge:	SW 10 blank	SW 10 verchromt	SW 12 blank	SW 12 verchromt	SW 17 blank	SW 17 verchromt	SW 22 blank	SW 22 verchromt	VE:
30 mm	29210 1	29215 6	292118	29216 3	29212 5	29217 0	29213 2	29218 7	-/10
40 mm	29220 0	29225 5	292217	29226 2	29222 4	29227 9	292231	292286	-/10
50 mm	29230 9	29235 4	292316	29236 1	29232 3	292378	29233 0	29238 5	-/10
60 mm	292408	29245 3	292415	29246 0	29242 2	292477	29243 9	29248 4	-/10
80 mm	292507	29255 2	292514	29256 9	29252 1	29257 6	292538	29258 3	-/10
100 mm	292606	29265 1	292613	292668	29262 0	292675	292637	29268 2	-/10
120 mm	29270 5	29275 0	29271 2	29276 7	29272 0	29277 4	292835	29278 1	-/10
130 mm	-	-	-	-	-	-	29293 4	-	-/10
150 mm	29280 4	29285 9	292811	292866	292828	292873	-	29288 0	-/10
200 mm	29290 3	292958	292910	29296 5	292927	29297 2	-	29298 9	-/10



Tap extension



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



Con.:	plain	chr. pla.	Packing unit:									
L mm	G3/8"	G3/8"		G 1/2"	G 1/2"		G3/4"	G3/4"		G 1"	G 1"	
10	34810 9	35810 4	10/500	34811 2	35811 1	10/400	34812 9	35812 8	10/200	-	-	
15	34815 0	35815 9	10/500	34816 7	35816 6	10/300	34817 4	35817 3	10/200	-	-	-
20	348204	35820 3	10/400	348211	358210	10/250	348228	358227	10/150	34823 5	35823 4	10/100
25	34825 9	35825 8	10/300	34826 6	35826 5	10/200	348273	35827 2	10/150	34828 0	35828 9	10/100
30	34830 3	35830 2	10/250	348310	35831 9	10/150	348327	35832 6	10/150	34833 4	358333	10/ 50
35	348358	-	10/200	34836 5	-	10/100	34837 2	-	10/100	-	-	-
40	34840 2	35840 1	10/200	348419	358418	10/150	34842 6	35842 5	10/100	348433	35843 2	10/100
45	348457	-	10/150	34846 4	35846 3	5/100	348471	35847 0	5/ 50	-	-	-
50	34850 1	35850 o	5/ 150	348518	358517	5/100	34852 5	35852 4	5/ 50	34854 9	358548	5/ 50
60	34855 6	-	5/100	34856 3	-	5/100	34857 0	-	5/ 50	-	-	-
65	34860 o	35860 9	5/100	348617	358616	5/100	34862 4	35862 3	5/ 50	-	-	-
80	34865 5	35865 4	5/100	34866 2	35866 1	5/ 50	34867 9	358678	5/ 50	-	-	-
100	34859 4	358593	5/ 50	348587	35858 6	5/ 50	348686	-	5/ 50	348648	358647	5/ 30

Fittings, model SUISSE, with SVGW-certification



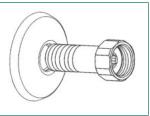
Straight screw fitting, chrome-plated and polished, with screw rosette

SVGW
SSIGE

Screw fitting

Item-No.:	Connection:	Packing unit:
35710 7	3/8" x 1/2" x 55 mm	18/216
35711 4	1/2" X 1/2" X 55 mm	18/162
35712 1	1/2" x 1/2" x 65 mm	-/-
35713 8	1/2" x 3/4" x 60 mm	12/120



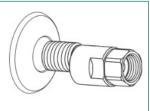


Eccentric screw fitting, 5 mm, chrome-plated and polished, with push-on rosette

Item-No.:	Connection:	Packing unit:
35723 7	1/2" x 1/2" x 63 mm	20/80
35724 4	1/2" x 3/4" x 68 mm	20/80





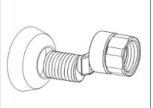


Eccentric screw fitting, 17 mm, chrome-plated and polished, with push-on rosette

Item-No.:	Connection:	Packing unit:
35728 2	3/8" x 1/2" x 68 mm	1/60
35729 9	1/2" x 1/2" x 68 mm	1/60
35730 5	1/2" x 3/4" x 68 mm	1/60

Screw fitting



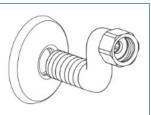


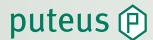
Eccentric screw fitting, 30 mm, chrome-plated and polished, with screw rosette

Item-No.:	Connection:	Packing unit:
35717 6	3/8" x 1/2" x 65 mm	12/120
35718 3	1/2" x 1/2" x 65 mm	14/112
35719 0	1/2" x 3/4" x 68 mm	12/96

Screw fitting

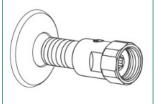






Screw fitting



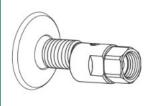


Straight screw fitting, chrome-plated and polished, with pushon rosette

Item-No.:	Connection:	Packing unit:
35714 5	3/8" x 1/2" x 62 mm	10/60
35715 2	1/2" X 1/2" X 62 mm	10/60
35716 9	1/2" x 3/4" x 65 mm	10/60

Screw fitting



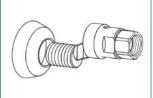


Eccentric screw fitting, 5 mm, chrome-plated and polished, with push-on rosette

ArtNr.:	Abm.:	VE:
35720 6	3/8" x 1/2" x 62 mm	20/80
35721 3	1/2" X 1/2" X 62 mm	20/80
35722 0	1/2" x 3/4" x 65 mm	20/80

Screw fitting



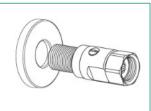


Eccentric screw fitting, 17 mm, chrome-plated and polished, with push-on rosette

Item-No.:	Connection:	Packing unit:
35725 1	3/8" x 1/2" x 82 mm	1/60
357268	1/2" X 1/2" X 82 mm	1/60
35727 5	1/2" x 3/4" x 85 mm	1/60

Screw fitting





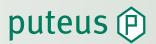
Straight screw fitting, 17 mm, chrome-plated and polished, with screw rosette

Item-No.:	Connection:	Packing unit:
35738 1	1/2" X 1/2" X 72 mm	10/60
35739 8	1/2" x 3/4" x 75 mm	10/60

Replacement gaskets for connecting couplings

AFM 34, KTW-certified, 18 x 10 x 2 mm (1/2")

Item-No. seal:	for Item	n-No.:										
35710-AFM	35710	35711	35712	35714	35715	35717	35718	35720	35721	35723	35725	35726
	35728	35729	35739									
Novapress 260 or	equivale	nt, 24 x	14 x 3 mr	n								
WS-551-Dtg-3mm	35713	35716	35719	35722	35724	35727	35730	35739				



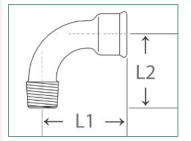
Malleable galvanized fittings according to DIN EN 10242, design symbol A, material according to DIN EN 1562 (EN-GJMB-350-10), threads according to ISO 7.1, connection thread to DIN EN ISO 228-1, max. 0° - 120° C 25 bar, 120° - 300° C 20 bar

Long bend (1), ISO G 4

Female thread x male thread, long, 90°

Item-No.:	Item-No.:	Connec.:	Threadle	ngth:	Length:		Packing unit:
zinc plated	black		f	m	L1	L2	
400001	40000-S	1/4"	10	13	40	36	10/400
40010 0	40010-S	3/8"	10	12	48	42	10/280
400117	40011-S	1/2"	13	15	55	48	10/180
40012 4	40012-S	3/4"	15	18	69	60	10/ 80
40013 1	40013-S	1"	17	20	85	75	10/ 50
400148	40014-S	1 1/4"	19	22	105	95	10/ 30
40015 5	40015-S	1 1/2"	20	22	116	105	5/ 20
40016 2	40016-S	2"	23	26	140	130	1/ 10
40017 9	40017-S	2 1/2"	27	30	176	165	1/ 4
40018 6	40018-S	3"	30	33	205	190	1/ 3
40019 3	40019-S	4"	37	45	240	258	1/ 4



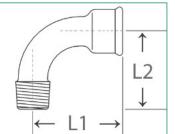


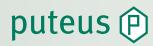
Short bend (1a), ISO D 4

Female thread x male thread, short, 90°

Item-No.:	Item-No.:	Connec.:	Threadlength:		Length:	Packing unit:
zinc plated	black		f	m	L	
40111 4	40111-S	1/2"	13	15	45	10/200
40112 1	40112-S	3/4"	15	18	50	10/120
40113 8	40113-S	1"	17	20	63	10/ 60
40114 5	40114-S	1 1/4"	-	-	76	10/ 35
40115 2	40115-S	1 1/2"	20	21	85	10/ 20
40116 9	40116-S	2"	-	-	102	-/ 18

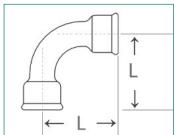






Long bend (2), ISO G 1



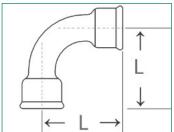


Fomala	throad	v famale	throad	long, 90°
remate	tilleau.	x reiliale	: umeau,	long, 90°

Item-No.:	Item-No.:	Connec.:	Thread- Length:	Length:	Packing unit:
zinc plated	black			L	
40020 9	40020-S	3/8"	-	-	10/200
400216	40021-S	1/2"	13	55	10/150
400223	40022-S	3/4"	15	69	10/ 80
40023 0	40023-S	1"	17	85	10/ 40
400247	40024-S	1 1/4"	19	105	1/ 25
40025 4	40025-S	1 1/2"	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"	30	205	1/ 2
40029 2	40029-S	4"	-	-	1/ 3

Short bend (2a), ISO D 1



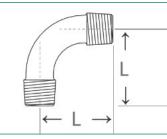


Female thread x female thread, short, 90°

Item-No.:	Item-No.:	Connec.:	Thread- Length:	Length:	Packing unit:
zinc plated	black			L	
40121 3	40121-S	1/2"	13	45	10/180
40122 0	40122-S	3/4"	15	50	10/100
40123 7	40123-S	1"	17	63	10/ 50
40124 4	40124-S	1 1/4"	19	76	10/ 30
40125 1	40125-S	1 1/2"	19	85	1/ 20
40126 8	40126-S	2"	24	102	1/ 14

Long bend (3), ISO G 8





Male thread x male thread, long, 90°

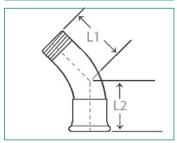
Item-No.:	Item-No.:	Connec.:	Thread- Length:	Length:	Packing unit:
zinc plated	black			L	
400308	40030-S	3/8"	12	42	-/-
400315	40031-S	1/2"	15	48	10/250
40032 2	40032-S	3/4"	18	60	10/120
40033 9	40033-S	1"	20	75	10/ 50
40034 6	40034-S	1 1/4"	22	95	10/ 40
40035 3	40035-S	1 1/2"	22	105	1/ 20
40036 0	40036-S	2"	24	130	-/ 3
400377	40037-S	2 1/2"	29	165	1/ 5
40038 4	40038-S	3"	35	190	1/ 1
40039 1	40039-S	4"	37	245	1/ 1

Long bend 45° (40), ISO G4

Female thread x male thread, long, 45°

Item-No.:	Item-No.:	Conn.:	Threadlength:		Length:		Packing unit:
zinc plated	black		f	m	L1	L2	
40399	40399-S	1/4"					10/300
40400 9	40400-S	3/8"	12	13	25	31	10/300
404016	40401-S	1/2"	13	15	30	36	10/200
40402 3	40402-S	3/4"	15	18	36	43	10/120
40403 0	40403-S	1"	17	20	42	51	10/ 50
404047	40404-S	1 1/4"	19	22	54	64	10/ 40
40405 4	40405-S	1 1/2"	19	22	58	68	10/ 30
40406 1	40406-S	2"	24	27	70	81	10/ 15
404078	40407-S	2 1/2"	27	29	86	99	1/ 10
40408 5	40408-S	3"	30	35	100	113	1/ 5



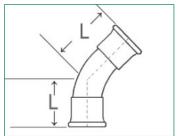


Long bend 45° (41), ISO G1

Female thread x female thread, long, 45°

Item-No.:	Item-No.:	Connection:	Thread- length:	Length:	Packing unit:
zinc plated	black			L	
40410 8	40410-S	3/8"	12	32	10/300
40411 5	40411-S	1/2"	13	36	10/180
40412 2	40412-S	3/4"	15	43	10/ 110
40413 0	40413-S	1"	17	51	10/ 40
40414 6	40414-S	1 1/4"	19	64	10/ 30
40415 3	40415-S	1 1/2"	20	68	-/ 65
40416 0	40416-S	2"	24	81	-/ 35



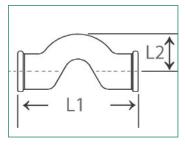


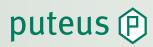
Crossover (85)

Female thread x female thread

Item-No.:	Item-No.:	Connection:	Thread- length:	Length:		Packing unit:
zinc plated	black			L1	L2	
408519	40851-S	1/2"	13	91	28,5	10/100
40852 6	40852-S	3/4"	15	108	41	10/ 60

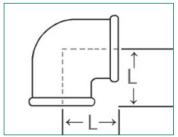






Elbow (90), ISO A 1

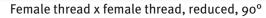




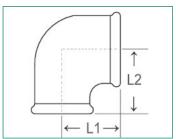
Female thread x female thread, 90°

Item-No.:	Item-No.:	Connection:	Threadlength:	Length:	Packing unit:
zinc plated	black			L	
40899 1	40899-S	1/4"	-	21	10/500
40900 4	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"	17	38	10/ 80
40904 2	40904-S	1 1/4"	19	45	10/ 40
40905 9	40905-S	1 1/2"	19	50	10/ 30
40906 6	40906-S	2"	24	58	5/ 20
40917 2	40917-S	2 1/2"	28	69	1/ 10
40918 9	40918-S	3"	28	78	1/ 8
40919 6	40919-S	4"	30	96	1/ 8

Elbow reducing (90 R), ISO A 1





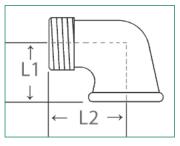


Item-No.:	Item-No.:	Connection:	Threadle	ength:	Length:	:	Packing unit:
zinc plated	black	f1 f2	f1	f2	L1	L2	
40911 0	40911-S	1/2" x 3/8"	13	10	26	26	10/260
40908 0	40908-S	3/4" x 1/2"	15	13	30	31	10/160
409073	40907-S	1" X 1/2"	18	15	30	31	10/100
409097	40909-S	1" x 3/4"	17	15	35	36	10/100
40898 4	40898-S	1 ½" x 3/4"	19	24	50	64	10/ 60
40914 1	40914-S	1 ½" X 1"	19	17	40	42	10/ 50
40915 8	40915-S	1 ½" X 1"	19	17	42	46	10/ 40
40935 6	40935-S	1 ½" X 1 ¼"	17,5	22	44,5	62	10/ 30
40936 3	40936-S	2" X 1 ½"	-	-	-	-	10/ 30

Female thread x male thread, 90°

Elbow (92), ISO A 4





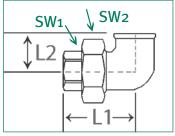
Item-No.:	Item-No.:	Connec.:	Threadle	ngth:	Length:		Packing unit:
zinc plated	black		IG	AG	L1	L2	
409295	40929-S	1/4"	10	13	21	28	10/700
40920 2	40920-S	3/8"	11	12	25	32	10/350
40921 9	40921-S	1/2"	13	15	28	37	10/250
40922 6	40922-S	3/4"	15	18	33	43	10/140
409233	40923-S	1"	17	20	38	52	10/ 80
40924 0	40924-S	1 1/4"	19	22	45	60	10/ 40
409257	40925-S	1 1/2"	19	22	50	65	10/ 30
40926 4	40926-S	2"	24	28	58	74	6/ 18
40927 1	40927-S	2 1/2"	27	29	69	88	1/ 30
409288	40928-S	3"	30	35	78	98	1/ 8
Female threa	ad x male threa	ad, reduce o	i , 90°				
40933 2	40933-S	1" x 3/4"	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- length:	Length:		Wrench size:		Packing unit:
zinc plated	black			L1	L2	SW1	SW2	
409516	40951-S	1/2"	13	58	28	27	45	10/80
40952 3	40952-S	3/4"	15	62	33	32	50	10/60
40953 0	40953-S	1"	17	72	38	39	55	10/40
409547	40954-S	1 1/4"	19	82	45	47	69	10/20
40955 4	40955-S	1 1/2"	20	87	50	54	75	1/ 25
40956 1	40956-S	2"	25	90	65	67	92	1/ 8



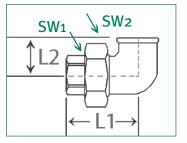


Union elbow (96), ISO UA 11

Female thread x female thread, taper seat

Item-No.:	Item-No.:	Connec.:	Thread- length:	Length		Wrenc	h size:	Packing unit:
zinc plated	black			L1	L2	SW1	SW2	
40960 0	40960-S	3/8"	-	-	-	-	-	10/120
409615	40961-S	1/2"	13	58	28	27	45	10/80
40962 2	40962-S	3/4"	15	62	33	32	50	10/60
409639	40963-S	1"	17	72	38	38	55	10/40
409646	40964-S	1 1/4"	19	82	45	48	70	10/ 20
40965 3	40965-S	1 1/2"	19	90	50	55	75	5/ 15
40966 0	40966-S	2"	24	100	58	65	90	1/ 8
409677	40967-S	2 1/2"	28	116	76	87	110	1/ 1
40968 4	40968-S	3"	34	128	68	100	127	1/ 1



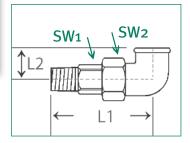


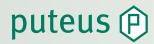
Union elbow (97), ISO UA 2

Female thread x male thread, flat seat, without seal

Item-No.:	Item-No.:	Connec.:	Thread-length:	Length:		Wrench size:		Packing unit:
zinc plated	black			L1	L2	SW1	SW2	
40971 4	40971-S	1/2"	13	76	28	27	45	10/70
40972 1	40972-S	3/4"	15	82	33	32	50	10/50
40973 8	40973-S	1"	17	94	38	38	55	10/30
40974 5	40974-S	1 1/4"	19	107	45	48	70	10/20
40975 2	40975-S	1 1/2"	19	115	50	55	75	5/ 15
40976 9	40976-S	2"	24	128	58	65	90	1/ 6

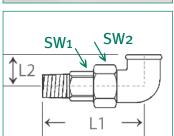






Union elbow (98), ISO UA 12



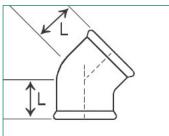


Female thread x male thread, taper seat

Item-No.:	Item-No.:	Connec.:	Thread- length:	Length		Wrenc	h size:	Packing unit:
zinc plated	black			L1	L2	SW1	SW2	
40980 6	40980-S	3/8"	-	-	-	-	-	10/80
409813	40981-S	1/2"	13	76	28	27	45	10/70
40982 0	40982-S	3/4"	15	82	33	32	50	10/50
409837	40983-S	1"	17	94	38	38	55	10/30
409844	40984-S	1 1/4"	19	107	45	48	69	10/20
40985 1	40985-S	1 1/2"	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
40988 2	40988-S	3"	32	154	65	98	125	1/ 1

Elbow 45° (120), ISO A 1



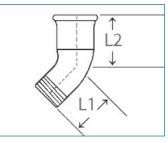


Female thread x female thread, 45°

Item-No.:	Item-No.:	Connec.:	Thread- length:	Length:	Packing unit:
zinc plated	black			L	
412011	41201-S	1/2"	13	22	10/250
41202 8	41202-S	3/4"	15	25	10/ 150
41203 5	41203-S	1"	17	28	10/ 80
41204 2	41204-S	1 1/4"	19	41	-/ 50
41205 9	41205-S	1 1/2"	20	45	-/ 30
41206 6	41206-S	2"	25	51	5/ 20

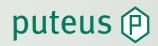
Elbow 45° (121), ISO A 4





Female thread x male thread, 45°

Item-No.:	Item-No.:	Connec.:	Threadlength:		Length	:	Packing unit:
zinc plated	black		f	m	L1	L2	
41211 0	41211-S	1/2"	13	15	28	22	10/250
41212 7	41212-S	3/4"	15	18	32	25	10/160
41213 4	41213-S	1"	17	20	37	28	10/100
41214 1	-	1 1/4"	19	19	43	33	5/ 40
41215 8	41215-S	1 1/2"	20	19	46	36	5/ 40
41216 5	41216-S	2"	23	24	55	43	-/ 24

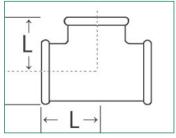


90°, female thread

Tee equal (130), ISO B 1

Item-No.:	Item-No.:	Connection:	Thread- length:	Length:	Packing unit:
zinc plated	black	female thread		L	
41299 8	41299-S	1/4"	10	21	10/300
41300 1	41300-S	3/8"	10	25	10/250
413018	41301-S	1/2"	13	28	10/150
41302 5	41302-S	3/4"	15	33	10/ 80
41303 2	41303-S	1"	17	38	10/ 50
41304 9	41304-S	1 1/4"	19	45	5/ 30
41305 6	41305-S	1 1/2"	19	50	5/ 20
41306 3	41306-S	2"	24	58	4/ 12
41307 0	41307-S	2 1/2"	27	69	1/ 10
41308 7	41308-S	3"	30	78	1/ 6
41309 4	41309-S	4"	38	96	1/ 6



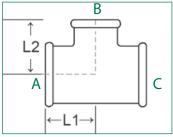


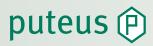
90°, reduced, female thread

Tee reducing (130 R), ISO B 1

Item-No.:	Item-No.:	Connection:	Thread- length:	Length:		Packing unit:
zinc plated	black	AxBxC		L1	L2	
41344 5	41344-S	1/2" x 3/8" x 3/8"	12	26	27	10/120
41310 0	41310-S	1/2" x 3/8" x 1/2"	13	26	26	10/150
41345 2	41345-S	1/2" x 1/2" x 3/8"	21	44	50	10/180
41320 9	-	1/2" X 3/4" X 1/2"	14	30	30	10/120
41311 7	41311-S	3/4" x 3/8" x 3/4"	15	28	28	10/120
41340 7	41340-S	3/4" x 1/2" x 1/2"	15	27	27	10/100
41312 4	41312-S	3/4" x 1/2" x 3/4"	15	30	31	10/120
41341 4	41341-S	3/4" x 3/4" x 1/2"	15/13	33	33	10/ 90
41343 8	41343-S	3/4" x 1" x 3/4"	16	34	36	10/ 60
41323 0	41323-S	1" X 1/2" X 1"	17	32	34	10/60
41313 1	41313-S	1" X 3/4" X 1"	17	35	36	10/60
41342 1	41342-S	1" X 1" X 3/4"	16	34	37	10/60
41317 9	41317-S	1 1/4" X 1/2" X 1 1/4"	19	34	38	5/ 50
413247	41324-S	1 ½" X 3/4" X 1 ½"	19	36	41	5/ 40
41314 8	41314-S	1 1/4" X 1" X 1 1/4"	19	40	42	5/ 30
41318 6	41318-S	1 ½" X 1/2" X 1 ½"	19	36	42	10/ 30
41319 3	41319-S	1 ½" X 3/4" X 1 ½"	19	38	44	-/ 30
41316 2	41316-S	1 ½" X 1" X 1 ½"	19	42	46	5/ 30
41315 5	41315-S	1 ½" X 1 ¼" X 1 ½"	19	46	48	10/ 20
41327 8	41327-S	2" X 1/2" X 2"	24	38	48	-/ 20
41325 4	41325-S	2" x 3/4" x 2"	19	34	38	10/ 20
41326 1	41326-S	2" X 1" X 2"	24	44	52	5/ 20
41328 5	41328-S	2" X 1 1/4" X 2"	24	48	54	-/ 20
41329 2	41329-S	2" X 1 ½" X 2"	24	52	55	1/ 15
41330 8	41330-S	3" x 2" x 3"	30	64	73	1/ 6



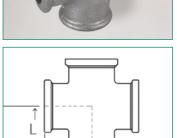




Cross fitting 90° (180), ISO C 1

4 x female thread





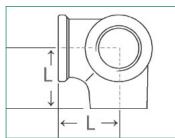
Item-No.:	Item-No.:	Connection:	Thread- length:	Length:	Packing unit:
zinc plated	black			L	
41790 6	41790-S	1/4"	12	21	10/100
41800 6	41800-S	3/8"	13	25	10/150
41801 3	41801-S	1/2"	13	28	10/100
41802 0	41802-S	3/4"	15	33	10/ 60
418037	41803-S	1"	17	38	10/ 40
41804 4	41804-S	1 1/4"	19	45	5/ 20
41805 1	41805-S	1 1/2"	19	50	15/ 20
41806 8	41806-S	2"	24	58	10/ 10
41812 9	41812-S	3/4" x 1/2"	13	23	10/ 80
41813 6	41813-S	1" X 1/2"	14	32	10/ 40

Side outlet elbow (221), ISO Za 1



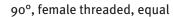


Item-No.:	Item-No.:	Connection:	Thread- length:	Length:	Packing unit:
zinc plated	black			L	
42211 9	42211-S	1/2"	13	28	10/140
42212 6	42212-S	3/4"	15	33	10/ 80
42213 3	-	1"	18	35	10/ 60

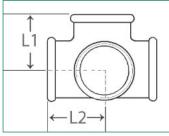


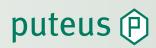
Tee with side outlet (223)





Item-No.:	Item-No.:	Connection:	Thread- length:	Length:	Packing unit:
zinc plated	black		L1	L2	
422317	-	1/2"	-	-	10/100
42232 4	-	3/4"	-	-	10/ 60
42233 1	-	1"	-	-	10/ 50



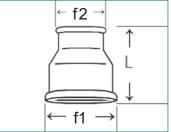


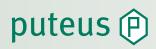
Reducing socket (240), ISO M 2

Female thread x female thread

Item-No.:	Item-No.:	Connection:	Threadle	ngth:	Length:	Packing unit:
zinc plated	black	f1 f2	f1	f2	L	
42399 4	42399-S	3/8" x 1/4"	10	10	30	10/400
424007	42400-S	1/2" X 1/4"	13	10	36	10/300
424014	42401-S	1/2" x 3/8"	12	11	36	10/350
423987	42398-S	3/4" x 3/8"	15	10	39	10/250
424021	42402-S	3/4" x 1/2"	15	13	39	10/220
42393 2	42393-S	1" X 1/2"	17	13	45	10/140
424038	42403-S	1" X 3/4"	17	15	45	10/140
42397 0	42397-S	1 ½" X 1/2"	19	13	50	10/ 80
42394 9	42394-S	1 ½" x 3/4"	19	15	50	10/ 80
424045	42404-S	1 1/4" X 1"	19	17	50	10/ 80
42396 3	42396-S	1 ½" X 3/4"	19	15	55	10/ 60
42395 6	42395-S	1 ½" X 1"	19	17	55	10/ 60
42405 2	42405-S	1 ½" X 1 ¼"	19	19	55	10/ 60
42392 5	42392-S	2" X 1"	24	17	65	-/ 35
423918	42391-S	2" X 1 ½"	24	19	65	10/ 30
42406 9	42406-S	2" X 1 ½"	22	21	65	10/ 30
42390 1	42390-S	2 ½" X 2"	27	24	74	1/ 24

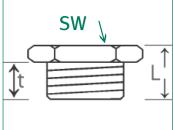






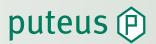
Bushing (241), ISO N 4





Male thread x female thread

Item-No.:	Item-No.:	Connection:	Threadle	ngth:	Length:	Wrench size:	Packing unit:
zinc plat.	black	m f	m (t)	f	L	SW	
42410 6	42410-S	3/8" x 1/4"	14	10	20	19	10/900
42430 4	42430-S	1/2" X 1/4"	17	12	25	23	10/800
42411 3	42411-S	1/2" x 3/8"	16	13	24	22	10/500
42433 5	42433-S	3/4" x 1/4"	16	10	25	31	10/300
42422 9	42422-S	3/4" x 3/8"	17	13	26	30	10/300
42412 0	42412-S	3/4" x 1/2"	17	13	26	30	10/350
424328	42432-S	1" x 3/8"	19	12	30	39	10/200
424236	42423-S	1" X 1/2"	19	13	29	36	10/200
424137	42413-S	1" x 3/4"	19	15	29	36	10/240
42434 2	42434-S	1 ½" X 1/2"	22	13	31	46	10/100
424243	42424-S	1 ½" x 3/4"	20	15	31	46	5/120
42414 4	42414-S	1 1/4" X 1"	21,5	17	31	46	5/ 150
42435 9	42435-S	1 ½" X 1/2"	23	13	33	52	10/120
42436 6	42436-S	1 ½" X 3/4"	21	15	31	55	5/ 80
42425 0	42425-S	1 ½" X 1"	22	16	33	51	5/ 90
42415 1	42415-S	1 ½" X 1 ¼"	21,5	19	31	50	10/100
424373	42437-S	2" X 1/2"	25	14	47	68	10/ 50
42438 0	42438-S	2" X 1"	24	16	36	67	5/ 50
424175	42417-S	2" X 1 1/4"	24	19	35	65	5/ 55
424168	42416-S	2" X 1 ½"	26	19	35	65	10/ 60
424397	42439-S	2 ½" X 1 ¼"	29	20	55	54	10/ 40
424403	42440-S	2 ½" X 1 ½"	28	20	42	81	1/ 40
424410	42441-S	2 ½" X 2"	27	24	41	81	10/ 40
424427	42442-S	3" X 2"	30	26	46	96	1/ 20
42446 5	42446-S	3" X 2 ½"	30	26	43	96	1/ 30
42447 2	42447-S	4" x 3"	33	26	51	122	1/ 18

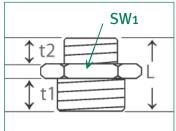


Reducing nipple (245), ISO N 8

Male thread x male thread, with hexagon

Item-No.:	Item-No.:	Connection:	Threadle	ngth:	Length:	Wrench size:	Packing unit:
zinc plat.	black	m x m	t1	t2	L	SW	
42457 1	42457-S	3/8" x 1/4"	11	10	38	19	10/500
42450 2	42450-S	1/2" X 1/4"	16	14	43	23	10/360
424519	42451-S	1/2" x 3/8"	13	11	44	26	10/360
424588	42458-S	3/4" x 3/8"	20	14	48	34	10/190
42452 6	42452-S	3/4" x 1/2"	13	13	47	30	10/230
42443 4	42443-S	1" X 1/2"	17	13	53	36	10/150
424533	42453-S	1" x 3/4"	17	13	53	36	10/130
42459 5	42459-S	1 ½" X 1/2"	24	18	58	46	10/ 90
42444 1	42444-S	1 ½" x 3/4"	18	13	57	46	10/ 80
42454 0	42454-S	1 1/4" X 1"	18	17	57	48	10/ 70
42460 1	42460-S	1 ½" X 3/4"	26	20	60	51	10/ 90
424458	42445-S	1 ½" X 1"	21	17	59	56	10/ 60
424557	42455-S	1 ½" X 1 ¼"	21	18	59	56	10/ 60
42448 9	-	2" x 3/4"	-	-	-	-	-/-
424618	42461-S	2" X 1 1/4"	24	18	68	65	10/ 40
42456 4	42456-S	2" X 1 ½"	24	21	68	65	10/ 40
42470 0	-	2 ½" X 2"	27	24	80	-	-/ 25



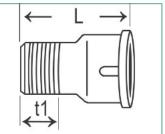


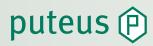
Reducing socket (246), ISO M 4

Female thread x male thread

Item-No.:	Item-No.:	Connection.:	Threadle	ngth:	Length:	Packing unit:
zinc plated	black	f x m	ft2	m t1	L	
424717	42471-S	3/8" x 1/4"	10	14	35	10/700
42472 4	42472-S	1/2" X 1/4"	13	12	43	10/350
42464 9	42464-S	1/2" x 3/8"	13	10	43	10/350
42473 1	42473-S	3/4" x 3/8"	15	12	48	10/210
42462 5	42462-S	3/4" x 1/2"	15	13	48	10/210
42465 6	42465-S	1" X 1/2"	17	13	55	10/140
42463 2	42463-S	1" x 3/4"	17	15	55	10/120
42474 8	42474-S	1 ½" X 3/4"	19	17	60	10/100
42466 3	42466-S	1 ½" X 1"	19	17	60	10/ 80
42467 0	42467-S	1 ½" X 1"	19	17	63	10/ 60
424687	42468-S	1 ½" X 1 ¼"	21	19	63	10/ 60
42469 4	42469-S	2" X 1 ½"	23	19	70	10/ 50
42477 9	-	2 ½" X 2"	30	27	74	5/ 20

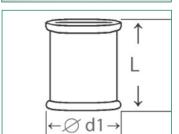






Socket (270), ISO M 2 Female thread x female thread



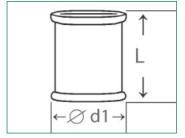


Item-No.:	Item-No.:	Connection:	Thread- length:	Length:		Packing unit:
zinc plated	black			L	Ø d1	
42699 5	42699-S	1/4"	10	27	22	10/600
42700 8	42700-S	3/8"	10	30	25	10/400
42701 5	42701-S	1/2"	13	36	30	10/210
42702 2	42702-S	3/4"	15	39	36	10/220
42703 9	42703-S	1"	17	45	44	10/120
42704 6	42704-S	1 1/4"	19	50	53	10/ 60
42705 3	42705-S	1 1/2"	19	55	60	10/ 50
42706 0	42706-S	2"	20	65	74	5/ 25
427077	42707-S	2 1/2"	27	74	91	1/ 24
42708 4	42708-S	3"	30	80	105	1/ 15
42709 1	42709-S	4"	36	94	135	1/ 17

Socket (271), ISO M 2 R-L





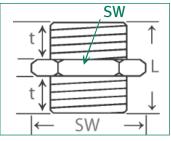


Female thread x female thread, with right and left hand thread

Item-No.:	Item-No.:	Connection:	Thread- length:	Length:		Packing unit:
zinc plated	black			L	Ø d1	
42711 4	-	1/2"	13	36	30	10/340
42712 1	-	3/4"	15	39	36	10/220
42713 8	-	1"	17	45	44	10/120

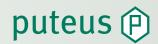
Nipple (280), ISO N 8





Male thread x male thread, with hexagon

Item-No.:	Item-No.:	Connection:	Thread- length:	Length:	Wrench size:	Packing unit:
zinc plated	black			L	SW	
42791 6	42791-S	1/4"	10	36	19	10/600
42800 5	42800-S	3/8"	11	38	22	10/500
42801 2	42801-S	1/2"	15	44	27	10/350
42802 9	42802-S	3/4"	18	47	32	10/220
42803 6	42803-S	1"	20	53	41	10/130
428043	42804-S	1 1/4"	22	57	50	10/ 70
42805 0	42805-S	1 1/2"	21	59	55	5/ 50
428067	42806-S	2"	20	68	63	5/ 25
42807 4	42807-S	2 1/2"	27	75	85	10/ 20
42808 1	42808-S	3"	30	83	100	1/ 22
428098	42809-S	4"	36	95	130	1/ 20

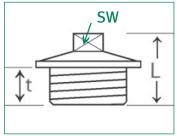


with border

Plug, beaded (290), ISO T 9

Item-No.:	Item-No.:	Connection:	Thread- length:	Length:	Wrench size:	Packing unit:
zinc plated	black	male	t	L	SW	
42890 6	42890-S	1/4"	10	22	8	10/1000
42900 2	42900-S	3/8"	11,5	24	10	10/ 700
429019	42901-S	1/2"	13	26	11	10/ 350
42902 6	42902-S	3/4"	14,5	32	17	10/ 250
42903 3	42903-S	1"	17	36	19	10/ 170
42904 0	42904-S	1 1/4"	21	39	22	10/ 100
429057	42905-S	1 1/2"	23	41	22	10/ 80
42906 4	42906-S	2"	26	48	27	10/ 50
42907 1	42907-S	2 1/2"	30	54	32	1/ 34
42908 8	42908-S	3"	34	60	36	1/ 24
42909 5	42909-S	4"	40	70	41	1/ 12



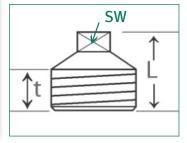


Plug, plain (291), ISO T 8

without border

Item-No.:	Item-No.:	Connection:	Thread- length:	Length:	Wrench size:	Packing unit:
zinc plated	black	male	t	L	SW	
42917 0	42917-S	1/8"	-	-	-	10/5400
42918 7	42918-S	1/4"	-	-	-	10/3600
42910 1	42910-S	3/8"	15	24	10	10/1000
42911 8	42911-S	1/2"	16	26	11	10/ 800
42912 5	42912-S	3/4"	21	32	17	10/ 400
42913 2	42913-S	1"	25	36	19	10/ 250
42914 9	42914-S	1 1/4"	28	39	22	10/ 160
42915 6	42915-S	1 1/2"	30	41	22	10/ 130
42916 3	42916-S	2"	34	48	27	10/ 60



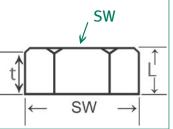


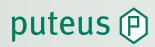
not beaded, \leq 1" hexagonal, \geq 1" octagonal

Item-No.:	Item-No.:	Connection:	Thread- length:	Length:	Wrench size:	Packing unit:
zinc plated	black	female	t	L	SW	
43020 6	43020-S	1/4"	-	-	-	10/800
43000 8	43000-S	3/8"	11	17	22	10/660
43001 5	43001-S	1/2"	13	19	26	10/400
43002 2	43002-S	3/4"	15	22	32	10/250
43003 9	43003-S	1"	17	24	39	10/130
43004 6	43004-S	1 1/4"	20	27	48	10/100
43005 3	43005-S	1 1/2"	20	27	54	10/ 90
43006 0	43006-S	2"	24	32	66	10/ 50
430077	43007-S	2 1/2"	26	35	84	5/ 40
43008 4	43008-S	3"	28	38	96	1/ 28
43009 1	43009-S	4"	35	46	124	1/ 12

Cap (300), ISO T 1

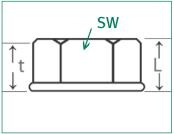






Cap (301)





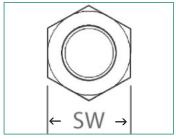
beaded

Item-No.:	Item-No.:	Connection:	Thread- length:	Length:	Wrench size:	Packing unit:
zinc plated	black	female	t	L	SW	
43021 3	43021-S	1/4"	-	-	-	10/1800
43010 7	43010-S	3/8"	11	17	22	10/ 800
43011 4	43011-S	1/2"	13	19	26	10/ 800
43012 1	43012-S	3/4"	15	22	32	10/ 400
43013 8	43013-S	1"	17	24	39	10/ 250
43014 5	43014-S	1 1/4"	20	27	48	10/ 100
43015 2	43015-S	1 1/2"	20	27	54	10/ 90
43016 9	43016-S	2"	24	32	66	10/ 70
43017 6	43017-S	2 1/2"	26	35	84	5/ 40
43018 3	43018-S	3"	28	38	96	1/ 1
43019 0	43019-S	4"	-	-	-	1/ 1

Lock nut (310), ISO P 4

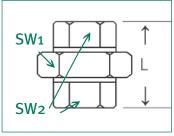


Item-No.:	Item-No.:	Connection:	Thread- length:	Length:	Wrench size:	Packing unit:
zinc plated	black	female	t	L	SW	
43101 2	43101-S	1/2"	8	8	32	10/700
43102 9	43102-S	3/4"	9	9	36	10/300
43103 6	-	1"	10	10	45	10/350
43104 3	43104-S	1 1/4"	-	-	-	10/250



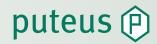
Union (330), ISO U 1





Female thread x female thread, flat seat, without seal

Item-No.:	Item-No.:	Item-No.:	Conn.:	Thread- length:	Length:	Wrenchsize:		Packing unit:
zinc plat.	zinc plat.+seal	black		t	L	SW1	SW2	
433016	43301-D	43301-S	1/2"	14	48	42	26	10/80
43302 3	43302-D	43302-S	3/4"	16	52	50	32	10/70
43303 0	43303-D	43303-S	1"	20	58	55	38	10/60
433047	43304-D	43304-S	1 1/4"	18	65	69	49	5/ 35
43305 4	43305-D	43305-S	1 1/2"	70	70	72	53	5/ 25
43306 1	43306-D	43306-S	2"	78	78	90	68	5/ 20
433078	43307-D	43307-S	2 1/2"	85	85	110	85	1/ 12
43308 5	43308-D	43308-S	3"	95	95	128	98	1/ 7

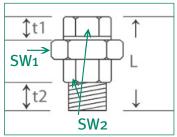


Female thread x male thread, flat seat, without seal

Item-No.:	Item-No.:	Item-No.:	Con.:	Thread	length:	Length	Wren	ch-	Packing unit:
zinc pla.	zinc plat.+seal	black		F t1	M t2	L	SW1	SW2	
43311 5	43311-D	43311-S	1/2"	15	17	66	41	24	10/90
43312 2	43312-D	43312-S	3/4"	15	20	72	50	32	10/60
43313 9	43313-D	43313-S	1"	16	21	80	55	39	10/50
43314 6	43314-D	43314-S	1 1/4"	19	26	90	69	47	10/30
43315 3	43315-D	43315-S	1 1/2"	24	25	95	75	55	4/20
43316 0	43316-D	43316-S	2"	25	29	106	90	65	1/ 10

Union (331), ISO U 2



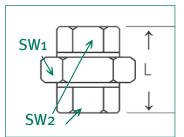


Female thread x female thread, taper seat

Item-No.:	Item-No.:	Conn.:	Thread- length:	Length:	Wrenc	hsize:	Packing unit:
zinc plat.	black			L	SW1	SW2	
43400 6	43400-S	3/8"	12	45	38	22	10/150
434013	43401-S	1/2"	13	48	45	27	10/80
43402 0	43402-S	3/4"	15/20	52	50	32	10/ 70
434037	43403-S	1"	17/20	58	55	38	10/60
43404 4	43404-S	1 1/4"	17/20	65	70	47	10/ 40
43405 1	43405-S	1 1/2"	19/20	70	74	54	5/ 25
434068	43406-S	2"	24/20	78	90	66	5/ 15
434075	43407-S	2 1/2"	27/27	85	110		1/ 8
43408 2	43408-S	3"	30/30	95	130	96	1/ 7
43409 9	43409-S	4"	45/45	109	153	126	1/ 1

Union (340), ISO U 11



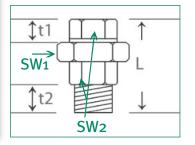


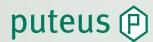
Union nut (341), ISO U 12

Female thread x male thread, taper seat

Item-No.:	Item-No.:	Conn.:	Threadlength:		Length:	Wrench size:		Packing unit:
zinc plat.	black		F t1	M t2	L	SW1	SW2	
43410 5	43410-S	3/8"	15,5	16	58	36	22	10/150
43411 2	43411-S	1/2"	14,5	17	66	45	27	10/ 80
43412 9	43412-S	3/4"	15,5	20	72	50	32	10/ 70
43413 6	43413-S	1"	18	22	80	55	39	10/ 40
43414 3	43414-S	1 1/4"	20,5	26	90	69	47	5/ 25
43415 0	43415-S	1 1/2"	25	28	95	75	55	10/ 20
43416 7	43416-S	2"	26	27	106	90	65	5/ 10
43417 4	43417-S	2 1/2"	27	39	118	90	85	-/ 9
43418 1	43418-S	3"	-	-	-	-	-	-/ 6

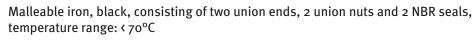


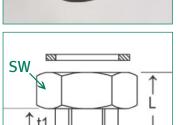




Union for pumps made of malleable iron







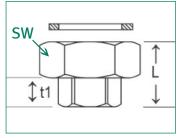
Item-No.:	Connection:	Thread- length:	Length:	Wrench- size:	Pack. unit:
black			L	SW	
43502-2	3/4" Connection, 1 1/4" union nut	18	35	50	1/75
43503-2	1" Connection, 1 $\frac{1}{2}$ " union nut	20	39	55	1/40
43504-2	1 $\frac{1}{4}$ " Connection, 2" union nut	22,9	47,6	70	1/35

Union for pumps made of brass



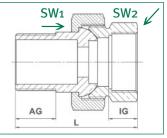
Consisting of: 2 union nuts, 2 union ends and 2 seals, PN 10, temperature range: - 10° C to + 110° C

Item-No.:	Connection:	Thread- length:	Length:	Wrench- size: SW	Pack. unit:
34693 4	1" Connection, 1 ½" union nut	20	38	52	-/25



Union made of brass with nut





Plain brass, 3-pieces, with nut and **metal sealing**, male thread x female thread

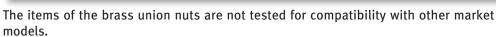
Item-No.:	Connection:	Thread- length:	Length:	Wrench- size:	Pack. unit:
	M/F	M/F	L	SW1/SW2	
33700 0	G ₃ /8" connection, G ₃ /8", nut	10/8	41	25/20	20/200
337017	G _{1/2} " connection, G _{1/2} ", nut	12/12	49	30/25	15/150
33702 4	G ₃ / ₄ " connection, G ₃ / ₄ ", nut	13/11	54	38/30	10/100
33703 1	G1" connection, G1", nut	15/12	60	47/37	8/ 48
337048	G1 1/4" connection, G1 1/4", nut	15/16	71	53/48	8/ 32

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

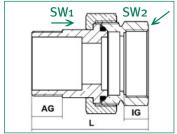
Union made of brass with nut

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

Item- No.:	Connection: M/F	Thread- length: M/F	Length:	Wrench- size: SW1/SW2	Pack. unit:
33723 9	G1" connection, G1", nut	15/12	60	47/37	-/-
33725 3	G1½" connection, G1½", nut	20/15	75	66/54	-/-







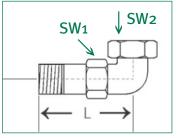
Union made of brass with nut, angle form

Plain brass, 3-pieces, angle form, with nut, metal sealing, male thread x female thread

Item-No.:	Connection: M/F	Thread- length: M/F	Length:	Wrench- size: SW1/SW2	Pack. unit:
33705 5	G ₃ /8" connection, G ₃ /8", nut	10/9	46	25/21	15/150
33706 2	G1/2" connection, G1/2", nut	12/10	53	30/25	10/100
33707 9	G 3/4" connection, G 3/4", nut	12/11,5	62,5	37/31	10/ 50
33708 6	G1" connection, G1", nut	12/11,5	70	46/37	8/ 32
33709 3	G1 1/4" connection, G1 1/4", nut	16/18	83,5	53/48	1/30

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





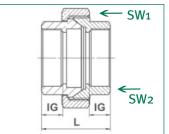
Union made of brass with nut

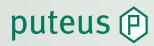
Plain brass, with nut, metal sealing, female thread x female thread

Item-No.:	Connection: F/F	Thread- length: F/F	Length:	Wrench- size: SW1/SW2	Pack. unit:
33711 6	G _{1/2} " connection, G _{1/2} " nut	12/12	38,4	37,5/25	-/-
33712 3	G ₃ / ₄ " connection, G ₃ / ₄ " nut	11/11	36,8	47/30	-/-
33713 0	G1" 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)





\longleftrightarrow							
		\leftrightarrow					
↑ PL2							

Female thread x female thread

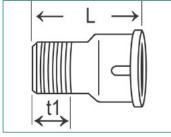
Item-No.:	Item-No.:	Connection:	Thread- length:	Length:		Packing unit:
zinc plated	black			L	L2	
44711 2	44711-S	1/2"	13	46	26	10/80
44712 9	44712-S	3/4"	15	52	33	10/50
44713 6	44713-S	1"	20	61	40	10/50

Extension socket (529a)



Socket with female thread and male thread

Item-No.:	Item-No.:	Connection:	Thread- length:		Length:	Packing unit:
zinc plated	black		t1	t2	L	
452918	-	1/2"	13	-	43	10/300
45292 5	-	3/4"	15	-	48	10/180



Sealing tape



12 m x 12 mm x 0,075 mm, material PTFE

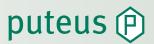
Item-No.:	Packing unit:
29010 7	50/1000

Hemp yarn-Mazzoni



approx. 200 g

Wrapping:	Item-No.:	Packing unit:
loose	29016 9	10/250
packed for self-service	29015 2	10/100



Spare gaskets, according to DIN EN 10242

Item-No.:	Connection:		Packing unit:
49011 8	1/2"	30 X 21 X 2 mm	10/100
490019	1/2"	34 X 24 X 2 mm	10/100
49012 5		31,5 x 26 x 2 mm	10/100
49002 6	3/4"	38 x 27 x 2 mm	10/100
49013 2		29 X 22 X 2 MM	10/100
490033	1"	44 x 32 x 2 mm	10/100
49004 0	1 1/4"	55 X 42 X 2 mm	10/100
490057	1 1/2"	62 x 46 x 2 mm	10/100
49006 4	2"	78 x 60 x 2 mm	10/100



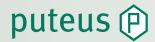
For flat-sealing screw connections (Nr. 330/331/95/97), except for Item-No. 49011, 49012 and 49013. Synthetic fibers bonded with NBR. Suitable for oils, water, steam, gases, salt solutions, fuels, alcohols, weak organic and inorganic acids, hydrocarbons, lubricants and refrigerants. DIN-DVGW/SVGW-certificates. 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:	Item-No.:	Item-No.:	Item-No.:	Item-No.:	Item-No.:	Item-No.:	Item-No.:	Item-No.:	Item-No.:	
	3/8"	1/2"	1/2"	3/4"	3/4"	1"	1 1/4"	11/2"	2"	unit:
	zinc plat.	zinc plat.	black	zinc plat.	black	zinc plat.	zinc plat.	zinc plat.	zinc plat.	
350 mm	_	201011	254017	20012 0	25402 4	-	-	-	-	10/-
400 mm	20120 2	20111 0	25411 6	20112 7	25412 3	20113 4	20114 1	-	_	10/-
450 mm	-	20121 9	254215	20122 6	25422 2	-	-	-	-	10/-
500 mm	20200 1	202018	256011	202025	256028	20203 2	202049	-	-	10/-
550 mm	-	20131 8	254314	20132 5	25432 1	-	-	-	-	10/-
600 mm	20210 0	20211 7	25611 0	20212 4	25612 7	20213 1	202148	_	_	10/-
650 mm	-	201417	254413	20142 4	25442 0	-	-	-	-	10/-
700 mm	-	20151 6	25451 2	20152 3	25452 9	20153 0	-	_	_	10/-
750 mm	-	201615	254611	20162 2	254628	-	-	-	-	10/-
800 mm	20220 9	202216	256219	20222 3	25622 6	20223 0	202247	_	_	10/-
850 mm	-	20171 4	25471 0	20172 1	25472 7	-	-	-	-	10/-
900 mm	-	20181 3	254819	20182 0	25482 6	201837	-	_	_	10/-
950 mm	-	20191 2	254918	20192 9	25492 5	-	-	-	-	10/-
1000 mm	203008	203015	256318	20302 2	25632 5	20303 9	20304 6	203053	20306 0	10/-
1050 mm	-	20311 4	25511 3	20312 1	25512 0	-	-	-	-	10/-
1100 mm	_	203213	25521 2	20322 0	25522 9	-	-	-	_	10/-
1150 mm	-	20331 2	25531 1	20332 9	25532 8	-	-	-	-	10/-
1200 mm	_	203411	25541 0	203428	25542 7	-	-	-	-	10/-
1500 mm	20400 5	204012	-	20402 9	-	20403 6	204043	20405 0	204067	10/-
2000 mm	20500 2	205019	-	20502 6	-	205033	20504 0	205057	20506 4	10/-

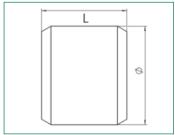


Steel socket, both sides chamfered



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

Item-No.:	Connec.:	Thread- length:	Length:	Ø	Packing unit:
22024 1	1 1/4"	47	47	50	10/100

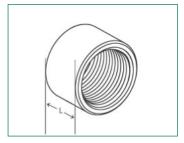


Steel socket (half length)

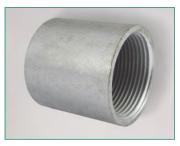


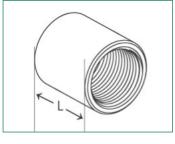
According to EN 10241 (DIN 2986), one-sided chamfered

Item-No.:	Item-No.:	Conn.:	Nominal diameter	Thread- length:	Length:	Ø	Packing unit:
zinc plated	black						
-	21971 9	1/2"		15	15	26,6	-/1000
-	21972 6	3/4"		17	17	31,8	-/ 600
-	21973 3	1"		20	20	39,5	-/ 320
-	21975 7	1 1/2"		22	22	54,5	-/ 160



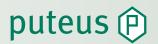
Steel socket (16)





According to EN 10241 (DIN 2986)

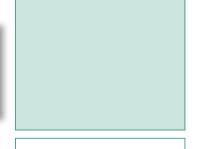
Item-No.:	Item-No.:	Conn.:	Nominal diameter	Thread- length:	Length:	Ø	Packing unit:
zinc plated	black						
-	21989 4	1/4"	8	25	25	18,5	-/700
22000 5	21990 0	3/8"	10	26	26	21,3	-/600
220012	219917	1/2"	15	34	34	26,6	-/500
22002 9	21992 4	3/4"	20	36	36	31,8	-/300
220036	21993 1	1"	25	43	43	39,5	-/160
22004 3	219948	1 1/4"	32	48	48	48,3	-/ 120
22005 0	21995 5	1 1/2"	40	48	48	54,5	-/ 80
220067	21996 2	2"	50	56	56	66,2	-/ 50
22007 4	21997 9	2 1/2"	65	65	65	82	-/ 33
22008 1	21998 6	3"	80	71	71	95	-/ 24
22009 8	21999 3	4"	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:
21932 0	1/2"	60 mm	-/280
21934 4	1/2"	8o mm	-/200
21936 8	1/2"	100 mm	-/160

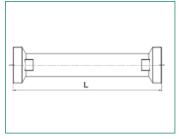


Connecting tube

Plain brass, CW 617 N, both sides male threaded

Item-No.:	Connection:	Length: L	Packing unit:
S-2592-81	G3/4"	81 mm	-/200
S-2593-111	G3/4"	111 mm	-/ 150
S-2593-131	G3/4"	131 mm	-/150
S-2593-131-1"	G 1"	131 mm	-/ 150



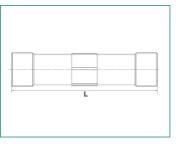


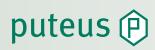
Connecting tube

Polyamide, black, both sides male threaded

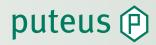
Item-No.:	Connection:	Length: L	Packing unit:
S-3082-2	G3/4"	110 mm PA6	-/80
S-3084-2	G1"	130 mm PA6	-/80







Con.:	1/4"	Pack. unit: bag/	3/8"	Pack. unit: bag/	1/2"	Pack. unit: bag/	3/4"	Pack. unit: bag/	1"	Pack. unit: bag/	1 1/4"	Pack. unit: bag/
Length mm	Item-No.	carton	Item-No.	carton	Item-No.	carton	Item-No.	carton	Item-No.	carton	Item-No.	carton
30	-	-	24000 3	-/-	240010	10/400	240027	-/-	24003 4		-	-
40	24049 2	10/640	24040 9	10/500	24011 9	10/300	24012 6	10/200	24013 3	10/150	24014 0	10/120
50	-	-	24050 8	-/-	240218	10/240	24022 5	10/160	24023 2	-/-	240249	
60	24069 0	-/-	240607	10/280	240317	10/210	24032 4	10/140	240638	10/120	240348	10/80
70	-	-	-	-	24111 6	-/-	240928	-/-	24173 4	-/-	24074 4	-/-
80	240898	10/400	24080 5	10/380	240416	10/160	24042 3	10/110	240836	10/80	240843	
90	-	-	24070 6	-/-	240911	-/-	24112 3	-/-	241031	-/-	24094 2	
100	24109 3	10/500	24100 0	10/500	240515	10/130	24052 2	10/ 90	240539	10/ 60	24054 6	10/ 50
110	-	-	24110 9	-/-	24121 5	-/-	24122 2	-/-	24113 0	-/-	24114 7	-/-
120	24129 1	-/-	24120 8	-/-	24131 4	10/110	24132 1	10/ 70	24123 9	10/ 80	24124 6	10/ 50
140	-	-	24140 6	-/-	24151 2	-/-	24152 9	-/-	241437	-/-	24174 1	-/-
150	241598	-/-	24150 5	-/-	240614	10/ 90	240621	10/120	24153 6	-/ 78	24154 3	10/ 45
160	-	-	-	-	241611	-/-	241628	-/-	241635	-/-	24164 2	-/-
180	-	-	-	-	240812	10/ 70	24142 0	10/100	241833	-/ 72	24184 0	-/ 10
190	-	-	-	-	-	-	-	-	24193 2	-/ 72	24194 9	10/ 70
200	24209 0	-/-	242007	10/ 90	240713	10/ 90	24072 0	10/ 40	240737	10/30	242045	10/ 20
220	-	-	-	-	-	-	-	-	242236	10/120	-	-
250	-	-	-	-	24141 3	10/120	240829	10/ 70	242533	-/ 45	24144 4	-/ 10
300	20109 7	-/-	20100 4	-/-	20110 3	10/100	20102 8	10/60	20103 5	-/ 40	20104 2	-/ 20
Con.: Length	1/4" Item-No.	Pack. unit: bag/	3/8" Item-No.	Pack. unit: bag/	1/2" Item-No.	Pack. unit: bag/	3/4" Item-No.	Pack. unit: bag/	1" Item-No.	Pack. unit: bag/	11/4" Item-No.	Pack. unit: bag/
Length mm	1/4" Item-No.	unit:	Item-No.	unit: bag/ carton	Item-No.	unit: bag/ carton	Item-No.	unit: bag/ carton	Item-No.	unit: bag/ carton	11/4" Item-No.	unit:
Length mm	Item-No.	unit: bag/ carton	Item-No. 25000 2	unit: bag/ carton -/-	Item-No. 25001 9	unit: bag/ carton	Item-No. 25002 6	unit: bag/ carton -/-	Item-No.	unit: bag/ carton -/-	Item-No.	unit: bag/ carton
Length mm 30 40		unit: bag/	Item-No. 25000 2 25040 8	unit: bag/ carton -/-	Item-No. 25001 9 25011 8	unit: bag/ carton -/- 10/500	Item-No. 25002 6 25012 5	unit: bag/ carton -/- 10/380	Item-No. 25003 3 25013 2	unit: bag/ carton -/- 10/180	Item-No 25014 9	unit: bag/ carton - 10/120
Length mm 30 40 50	Item-No 25049 1	unit: bag/ carton - 10/640	Item-No. 25000 2 25040 8 25050 7	unit: bag/ carton -/- -/-	Item-No. 25001 9 25011 8 25021 7	unit: bag/ carton -/- 10/500	Item-No. 25002 6 25012 5 25022 4	unit: bag/ carton -/- 10/380 -/-	Item-No. 25003 3 25013 2 25023 1	unit: bag/ carton -/- 10/180 -/-	Item-No 25014 9 25024 8	unit: bag/ carton - 10/120
Length mm 30 40 50 60	Item-No 25049 1 - 25069 9	unit: bag/ carton - 10/640 - -/-	Item-No. 25000 2 25040 8 25050 7 25060 6	unit: bag/ carton -/- -/- -/-	Item-No. 25001 9 25011 8 25021 7 25031 6	unit: bag/ carton -/- 10/500 -/- 10/360	Item-No. 25002 6 25012 5 25022 4 25032 3	unit: bag/ carton -/- 10/380 -/- 10/200	ltem-No. 25003 3 25013 2 25023 1 25063 7	unit: bag/ carton -/- 10/180 -/- 10/120	ltem-No 25014 9 25024 8 25034 7	unit: bag/ carton - 10/120 -/- -/ 10
Length mm 30 40 50 60 70	Item-No 25049 1 - 25069 9	unit: bag/ carton - 10/640 - -/-	Item-No. 25000 2 25040 8 25050 7 25060 6	unit: bag/ carton -/- -/- -/-	Item-No. 25001 9 25011 8 25021 7 25031 6 25111 2	unit: bag/ carton -/- 10/500 -/- 10/360	Item-No. 25002 6 25012 5 25022 4 25032 3 25092 7	unit: bag/ carton -/- 10/380 -/- 10/200	Item-No. 25003 3 25013 2 25023 1 25063 7 25173 3	unit: bag/ carton -/- 10/180 -/- 10/120 -/-	ltem-No 25014 9 25024 8 25034 7 25074 3	unit: bag/ carton - 10/120 -/- -/ 10
Length mm 30 40 50 60 70 80	Item-No 25049 1 - 25069 9 - 25089 7	unit: bag/ carton - 10/640 - -/- - 10/400	Item-No. 25000 2 25040 8 25050 7 25060 6 - 25080 4	unit: bag/carton -//////-	Item-No. 25001 9 25011 8 25021 7 25031 6 25111 2 25041 5	unit: bag/ carton -/- 10/500 -/- 10/360 -/- 10/250	Item-No. 25002 6 25012 5 25022 4 25032 3 25092 7 25042 2	unit: bag/ carton -/- 10/380 -/- 10/200 /-	ltem-No. 25003 3 25013 2 25023 1 25063 7 25173 3 25083 5	unit: bag/ carton -/- 10/180 -/- 10/120 -/-	- 25014 9 25024 8 25034 7 25074 3 25084 2	unit: bag/ carton - 10/120 -/- -/ 10 -/- 10/ 80
Length mm 30 40 50 60 70 80	Item-No 25049 1 - 25069 9 - 25089 7	unit: bag/ carton - 10/640 - -/- - 10/400	Item-No. 25000 2 25040 8 25050 7 25060 6 - 25080 4 25070 5	unit: bag/carton -///////-	Item-No. 25001 9 25011 8 25021 7 25031 6 25111 2 25041 5 25091 0	unit: bag/ carton -/- 10/500 -/- 10/360 -/- 10/250	Item-No. 25002 6 25012 5 25022 4 25032 3 25092 7 25042 2 25112 2	unit: bag/ carton -/- 10/380 -/- 10/200 /- 10/200	Item-No. 25003 3 25013 2 25023 1 25063 7 25173 3 25083 5 25103 0	unit: bag/carton -/- 10/180 -/- 10/120 -/- 10/120 -/-	ltem-No 25014 9 25024 8 25034 7 25074 3 25084 2 25094 1	unit: bag/ carton - 10/120 -/- -/ 10 -/- 10/ 80 -/-
Length mm 30 40 50 60 70 80 90	Item-No 25049 1 - 25069 9 - 25089 7	unit: bag/ carton - 10/640 - -/- - 10/400	Item-No. 25000 2 25040 8 25050 7 25060 6 - 25080 4 25070 5 25100 9	unit: bag/carton -/////- 10/500	Item-No. 25001 9 25011 8 25021 7 25031 6 25111 2 25041 5 25091 0 25051 4	unit: bag/carton -/- 10/500 -/- 10/360 -/- 10/250 -/- 10/260	Item-No. 25002 6 25012 5 25022 4 25032 3 25092 7 25042 2 25112 2 25052 1	unit: bag/ carton -/- 10/380 -/- 10/200 /- 10/200 -/- 10/170	Item-No. 25003 3 25013 2 25023 1 25063 7 25173 3 25083 5 25103 0 25053 8	unit: bag/carton -/- 10/180 -/- 10/120 -/- 10/120 -/- 10/120	- 25014 9 25024 8 25034 7 25074 3 25084 2 25094 1 25054 5	unit: bag/ carton - 10/120 -/- -/ 10 -/- 10/ 80 -/-
Length mm 30 40 50 60 70 80 90 100	Item-No 25049 1 - 25069 9 - 25089 7 - 25109 2	unit: bag/ carton - 10/640/ 10/400 - 10/500	Item-No. 25000 2 25040 8 25050 7 25060 6 - 25080 4 25070 5 25100 9 25110 8	unit: bag/carton -//////////	Item-No. 25001 9 25011 8 25021 7 25031 6 25111 2 25041 5 25091 0 25051 4 25121 4	unit: bag/carton -/- 10/500 -/- 10/360 -/- 10/250 -/- 10/260 -/-	Item-No. 25002 6 25012 5 25022 4 25032 3 25092 7 25042 2 25112 2 25052 1 25122 1	unit: bag/carton -/- 10/380 -/- 10/200 /- 10/200 -/- 10/170 -/-	Item-No. 25003 3 25013 2 25023 1 25063 7 25173 3 25083 5 25103 0 25053 8 25113 9	unit: bag/carton -/- 10/180 -/- 10/120 -/- 10/120 -/- 10/120 -/-	ltem-No 25014 9 25024 8 25034 7 25074 3 25084 2 25094 1 25054 5 25114 6	unit: bag/ carton - 10/120 -/- -/ 10 -/- 10/ 80 -/- 10/ 70
Length mm 30 40 50 60 70 80 90 100 110	Item-No 25049 1 - 25069 9 - 25089 7 - 25109 2 - 25129 0	unit: bag/ carton - 10/640/ 10/400 - 10/500/-	Item-No. 25000 2 25040 8 25050 7 25060 6 - 25080 4 25070 5 25100 9 25110 8 25120 7	unit: bag/carton -/////- 10/500 -/-	Item-No. 25001 9 25011 8 25021 7 25031 6 25111 2 25041 5 25091 0 25051 4 25121 4 25131 3	unit: bag/carton -/- 10/500 -/- 10/360 -/- 10/250 -/- 10/260 -/- 10/230	Item-No. 25002 6 25012 5 25022 4 25032 3 25092 7 25042 2 25112 2 25052 1 25122 1 25132 0	unit: bag/carton -/- 10/380 -/- 10/200 /- 10/200 -/- 10/170 -/- 10/140	Item-No. 25003 3 25013 2 25023 1 25063 7 25173 3 25083 5 25103 0 25053 8 25113 9 25123 8	unit: bag/carton -/- 10/180 -/- 10/120 -/- 10/120 -/- 10/120 -/- 10/120	1tem-No 25014 9 25024 8 25034 7 25074 3 25084 2 25094 1 25054 5 25114 6 25124 5	unit: bag/ carton - 10/120 -/- -/- 10 10/ 80 -/- 10/ 70 -/- 10/ 50
Length mm 30 40 50 60 70 80 90 100 110 120 140	Item-No 25049 1 - 25069 9 - 25089 7 - 25109 2 - 25129 0 -	unit: bag/ carton - 10/640/ 10/500/	Item-No. 25000 2 25040 8 25050 7 25060 6 - 25080 4 25070 5 25100 9 25110 8 25120 7 25140 5	unit: bag/carton -////////- 10/500 -//-	Item-No. 25001 9 25011 8 25021 7 25031 6 25111 2 25041 5 25091 0 25051 4 25121 4 25131 3 25151 1	unit: bag/carton -/- 10/500 -/- 10/360 -/- 10/250 -/- 10/260 -/- 10/230 -/-	Item-No. 25002 6 25012 5 25022 4 25032 3 25092 7 25042 2 25112 2 25052 1 25122 1 25132 0 25152 8	unit: bag/carton -/- 10/380 -/- 10/200 /- 10/200 -/- 10/140 -/-	Item-No. 25003 3 25013 2 25023 1 25063 7 25173 3 25083 5 25103 0 25053 8 25113 9 25123 8 25143 6	unit: bag/carton -/- 10/180 -/- 10/120 -/- 10/120 -/- 10/120 -/- 10/120 -/-	ltem-No 25014 9 25024 8 25034 7 25074 3 25084 2 25094 1 25054 5 25114 6 25124 5 25174 0	unit: bag/ carton - 10/120 -// 10 -/- 10/ 80 -/- 10/ 70 -/- 10/ 50 -/-
Length mm 30 40 50 60 70 80 90 100 110 120 140 150	Item-No 25049 1 - 25069 9 - 25089 7 - 25109 2 - 25129 0 - 25159 7	unit: bag/ carton - 10/640/ 10/400 - 10/500/-	Item-No. 25000 2 25040 8 25050 7 25060 6 - 25080 4 25070 5 25100 9 25110 8 25120 7	unit: bag/carton -/////- 10/500 -///-	Item-No. 25001 9 25011 8 25021 7 25031 6 25111 2 25041 5 25091 0 25051 4 25121 4 25131 3 25151 1 25061 3	unit: bag/carton -/- 10/500 -/- 10/360 -/- 10/250 -/- 10/260 -/- 10/230 -/- 10/200	Item-No. 25002 6 25012 5 25022 4 25032 3 25092 7 25042 2 25112 2 25052 1 25122 1 25132 0 25152 8 25062 0	unit: bag/carton -/- 10/380 -/- 10/200 /- 10/200 -/- 10/170 -/- 10/140 -/- 10/120	Item-No. 25003 3 25013 2 25023 1 25063 7 25173 3 25083 5 25103 0 25053 8 25113 9 25123 8 25143 6 25153 5	unit: bag/carton -/- 10/180 -/- 10/120 -/- 10/120 -/- 10/120 -/- 10/ 80 -/- 10/ 40	1tem-No 25014 9 25024 8 25034 7 25074 3 25084 2 25094 1 25054 5 25114 6 25124 5 25174 0 25154 2	unit: bag/ carton - 10/120 -// 10 -/- 10/ 80 -/- 10/ 70 -/- 10/ 50 -/- 10/ 45
Length mm 30 40 50 60 70 80 90 100 110 120 140 150 160	Item-No 25049 1 - 25069 9 - 25089 7 - 25109 2 - 25129 0 -	unit: bag/carton - 10/640/ 10/400////-	Item-No. 25000 2 25040 8 25050 7 25060 6 - 25080 4 25070 5 25100 9 25110 8 25120 7 25140 5	unit: bag/carton -/////- 10/500 -///-	Item-No. 25001 9 25011 8 25021 7 25031 6 25111 2 25041 5 25091 0 25051 4 25121 4 25131 3 25151 1 25061 3	unit: bag/carton -/- 10/500 -/- 10/360 -/- 10/250 -/- 10/260 -/- 10/230 -/- 10/200	Item-No. 25002 6 25012 5 25022 4 25032 3 25092 7 25042 2 25112 2 25052 1 25122 1 25132 0 25152 8 25062 0 25162 7	unit: bag/ carton -/- 10/380 -/- 10/200 /- 10/200 -/- 10/170 -/- 10/140 -/- 10/120 -/-	Item-No. 25003 3 25013 2 25023 1 25063 7 25173 3 25083 5 25103 0 25053 8 25113 9 25123 8 25143 6 25153 5 25163 4	unit: bag/carton -/- 10/180 -/- 10/120 -/- 10/120 -/- 10/120 -/- 10/ 80 -/- 10/ 40 -/-	ltem-No 25014 9 25024 8 25034 7 25074 3 25084 2 25094 1 25054 5 25114 6 25124 5 25174 0 25154 2 25164 1	unit: bag/ carton - 10/120 -// 10 -/- 10/ 80 -/- 10/ 70 -/- 10/ 50 -/- 10/ 45 -/-
Length mm 30 40 50 60 70 80 90 100 110 120 140 150 160 180	Item-No 25049 1 - 25069 9 - 25089 7 - 25109 2 - 25129 0 - 25159 7	unit: bag/carton - 10/640/ 10/500/	Item-No. 25000 2 25040 8 25050 7 25060 6 - 25080 4 25070 5 25100 9 25110 8 25120 7 25140 5 25150 4 -	unit: bag/carton -/////- 10/500 -///-	Item-No. 25001 9 25011 8 25021 7 25031 6 25111 2 25041 5 25091 0 25051 4 25121 4 25131 3 25151 1 25061 3 25161 0 25081 1	unit: bag/carton -/- 10/500 -/- 10/360 -/- 10/250 -/- 10/260 -/- 10/230 -/- 10/200	Item-No. 25002 6 25012 5 25022 4 25032 3 25092 7 25042 2 25112 2 25052 1 25122 1 25132 0 25152 8 25062 0 25162 7	unit: bag/ carton -/- 10/380 -/- 10/200 /- 10/200 -/- 10/170 -/- 10/140 -/- 10/120 -/-	Item-No. 25003 3 25013 2 25023 1 25063 7 25173 3 25083 5 25103 0 25053 8 25113 9 25123 8 25143 6 25153 5 25163 4 25183 2	unit: bag/carton -/- 10/180 -/- 10/120 -/- 10/120 -/- 10/120 -/- 10/ 80 -/- 10/ 40 -/- 10/ 72	ltem-No 25014 9 25024 8 25034 7 25074 3 25084 2 25094 1 25054 5 25114 6 25124 5 25174 0 25154 2 25164 1 25184 9	unit: bag/ carton - 10/120 -// 10 -/- 10/ 80 -/- 10/ 70 -/- 10/ 50 -/- 10/ 45 -// 10
Length mm 30 40 50 60 70 80 90 100 110 120 140 150 160 180 190	Item-No 25049 1 - 25069 9 - 25089 7 - 25109 2 - 25129 0 - 25159 7	unit: bag/carton - 10/640/ 10/500/	Item-No. 25000 2 25040 8 25050 7 25060 6 - 25080 4 25070 5 25100 9 25110 8 25120 7 25140 5	unit: bag/carton -/////- 10/500 -////	Item-No. 25001 9 25011 8 25021 7 25031 6 25111 2 25041 5 25091 0 25051 4 25121 4 25131 3 25151 1 25061 3 25161 0 25081 1 -	unit: bag/carton -/- 10/500 -/- 10/360 -/- 10/250 -/- 10/260 -/- 10/230 -/- 10/200 -/- 10/200	Item-No. 25002 6 25012 5 25022 4 25032 3 25092 7 25042 2 25112 2 25052 1 25132 0 25152 8 25062 0 25162 7 25142 9 -	unit: bag/ carton -/- 10/380 -/- 10/200 -/- 10/200 -/- 10/170 -/- 10/140 -/- 10/100 -	Item-No. 25003 3 25013 2 25023 1 25063 7 25173 3 25083 5 25103 0 25053 8 25113 9 25123 8 25143 6 25153 5 25163 4 25183 2 25193 1	unit: bag/carton -/- 10/180 -/- 10/120 -/- 10/120 -/- 10/120 -/- 10/ 80 -/- 10/ 40 -/- 10/ 72	ltem-No 25014 9 25024 8 25034 7 25074 3 25084 2 25094 1 25054 5 25114 6 25124 5 25174 0 25154 2 25164 1 25184 9 25194 8	unit: bag/ carton - 10/120 -// 10 -/- 10/ 80 -/- 10/ 70 -/- 10/ 50 -/- 10/ 45 -// 10
Length mm 30 40 50 60 70 80 90 100 110 120 140 150 160 180 190 200	Item-No 25049 1 - 25069 9 - 25089 7 - 25109 2 - 25129 0 - 25159 7 25209 9	unit: bag/carton - 10/640/ 10/400/////-	Item-No. 25000 2 25040 8 25050 7 25060 6 - 25080 4 25070 5 25100 9 25110 8 25120 7 25140 5 25150 4 -	unit: bag/carton -/////- 10/500 -////////-	Item-No. 25001 9 25011 8 25021 7 25031 6 25111 2 25041 5 25091 0 25051 4 25121 4 25131 3 25151 1 25061 3 25161 0 25081 1 -	unit: bag/carton -/- 10/500 -/- 10/360 -/- 10/250 -/- 10/260 -/- 10/230 -/- 10/200 -/- 10/200 -/- 10/120	Item-No. 25002 6 25012 5 25022 4 25032 3 25092 7 25042 2 25112 2 25052 1 25122 1 25132 0 25152 8 25062 0 25162 7 25142 9 - 25072 9	unit: bag/carton -/- 10/380 -/- 10/200 -/- 10/200 -/- 10/170 -/- 10/140 -/- 10/120 -/- 10/100 - 10/ 85	Item-No. 25003 3 25013 2 25023 1 25063 7 25173 3 25083 5 25103 0 25053 8 25113 9 25123 8 25143 6 25153 5 25163 4 25183 2 25193 1 25073 6	unit: bag/carton -/- 10/180 -/- 10/120 -/- 10/120 -/- 10/120 -/- 10/ 80 -/- 10/ 40 -/- 10/ 72 10/ 72 10/ 55	ltem-No 25014 9 25024 8 25034 7 25074 3 25084 2 25094 1 25054 5 25114 6 25124 5 25174 0 25154 2 25164 1 25184 9 25194 8 25204 4	unit: bag/ carton - 10/120 -// 10 -/- 10/ 80 -/- 10/ 50 -/- 10/ 45 -// 10 10/ 70 -/ 32
Length mm 30 40 50 60 70 80 90 100 110 120 140 150 160 180 190 200 220	Item-No 25049 1 - 25069 9 - 25089 7 - 25109 2 - 25129 0 - 25159 7	unit: bag/carton - 10/640/ 10/500////-	Item-No. 25000 2 25040 8 25050 7 25060 6 - 25080 4 25070 5 25100 9 25110 8 25120 7 25140 5	unit: bag/carton -/////- 10/500 -///	Item-No. 25001 9 25011 8 25021 7 25031 6 25111 2 25041 5 25091 0 25051 4 25121 4 25131 3 25151 1 25061 3 25161 0 25081 1 - 25071 2	unit: bag/carton -/- 10/500 -/- 10/360 -/- 10/250 -/- 10/260 -/- 10/230 -/- 10/200 -/- 10/200 -/- 10/120	Item-No. 25002 6 25012 5 25022 4 25032 3 25092 7 25042 2 25112 2 25052 1 25132 0 25152 8 25062 0 25162 7 25142 9 - 25072 9 -	unit: bag/ carton -/- 10/380 -/- 10/200 /- 10/200 -/- 10/170 -/- 10/140 -/- 10/100 10/85 -	Item-No. 25003 3 25013 2 25023 1 25063 7 25173 3 25083 5 25103 0 25053 8 25113 9 25123 8 25143 6 25153 5 25163 4 25183 2 25193 1 25073 6 25223 5	unit: bag/carton -/- 10/180 -/- 10/120 -/- 10/120 -/- 10/120 -/- 10/ 80 -/- 10/ 40 -/- 10/ 72 10/ 72 10/ 55 10/120	ltem-No 25014 9 25024 8 25034 7 25074 3 25084 2 25094 1 25054 5 25114 6 25124 5 25174 0 25154 2 25164 1 25184 9 25194 8 25204 4 -	unit: bag/ carton - 10/120 -// 10 -/- 10/ 80 -/- 10/ 70 -/- 10/ 50 -/- 10/ 45 -// 10 10/ 70 -/ 32 -
Length mm 30 40 50 60 70 80 90 100 110 120 140 150 160 180 190 200	Item-No 25049 1 - 25069 9 - 25089 7 - 25109 2 - 25129 0 - 25159 7 25209 9	unit: bag/carton - 10/640/ 10/400/////-	Item-No. 25000 2 25040 8 25050 7 25060 6 - 25080 4 25070 5 25100 9 25110 8 25120 7 25140 5	unit: bag/carton -/////- 10/500 -////////-	Item-No. 25001 9 25011 8 25021 7 25031 6 25111 2 25041 5 25091 0 25051 4 25121 4 25131 3 25151 1 25061 3 25161 0 25081 1 - 25071 2 - 25141 2	unit: bag/carton -/- 10/500 -/- 10/360 -/- 10/250 -/- 10/230 -/- 10/200 -// 10 - 10/120 - 10/120	Item-No. 25002 6 25012 5 25022 4 25032 3 25092 7 25042 2 25112 2 25052 1 25122 1 25132 0 25152 8 25062 0 25162 7 25142 9 - 25072 9	unit: bag/carton -/- 10/380 -/- 10/200 -/- 10/200 -/- 10/170 -/- 10/140 -/- 10/120 -/- 10/100 - 10/ 85 - 10/ 70	Item-No. 25003 3 25013 2 25023 1 25063 7 25173 3 25083 5 25103 0 25053 8 25113 9 25123 8 25143 6 25153 5 25163 4 25183 2 25193 1 25073 6 25223 5 25253 2	unit: bag/carton -/- 10/180 -/- 10/120 -/- 10/120 -/- 10/120 -/- 10/ 40 -/- 10/ 72 10/ 72 10/ 55 10/120 10/ 45	ltem-No 25014 9 25024 8 25034 7 25074 3 25084 2 25094 1 25054 5 25114 6 25124 5 25174 0 25154 2 25164 1 25184 9 25194 8 25204 4 -	unit: bag/ carton - 10/120 -// 10 -/- 10/ 80 -/- 10/ 50 -/- 10/ 45 -// 10 10/ 70 -/ 32

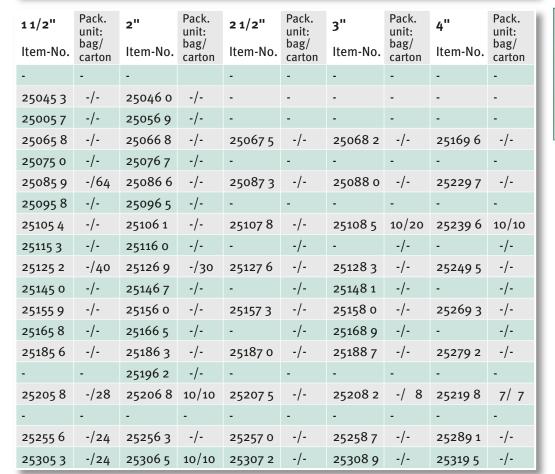


Pipe nipples (23)



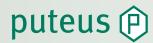
According to EN 10241, zinc plated

11/2"	Pack. unit:	2"	Pack. unit:	2 1/2"	Pack. unit:	3"	Pack. unit:	4"	Pack. unit:
Item-No.	bag/ carton								
-	-	-	-	-	-	-	-	-	-
24045 4	-/168	24046 1	-/-	-	-	-	-	-	-
240058	-/-	24056 0	-/-	-	-	-	-	-	-
24065 2	-/-	24066 9	-/-	240676	-/-	24068 3	-/-	241697	-/-
24075 1	-/-	240768	-/-	-	-	-	-	-	-
24085 0	-/ 64	240867	10/40	240874	-/-	24088 1	-/-	242298	-/-
240959	-/-	240966	-/-	-	-	-	-	-	-
24105 5	-/-	24106 2	10/30	241079	10/10	24108 6	10/20	242397	-/-
24115 4	-/-	24116 1	-/-	-	-/-	-	-/-	-	-/-
24125 3	-/ 40	24126 0	-/ 30	241277	-/-	24128 4	-/-	24249 6	-/-
24145 1	-/-	241468	-/-	-	-/-	24148 2	-/-	-	-/-
24155 0	10/30	24156 7	10/20	24157 4	-/-	24158 1	10/10	24269 4	-/-
24165 9	-/-	24166 6	-/-	-	-/-	24168 0	-/-	-	-/-
241857	-/-	24186 4	-/-	24187 1	-/-	24188 8	-/-	24279 3	-/-
-	-	24196 3	-/-	-	-	-	-	-	-
24205 2	-/ 28	24206 9	10/ 10	242076	-/-	242083	-/ 8	24219 9	-/4
-	-	-	-	-	-	-	-	-	-
24255 7	-/ 24	24256 4	-/-	24257 1	-/-	242588	-/-	24289 2	-/-
20105 9	-/ 24	201066	-/-	20107 3	-/-	20108 0	-/-	20119 6	-/-





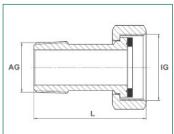
According to EN 10241, black



Water meter screw connections made of brass

Water meter screw according to the drinking water ordinance



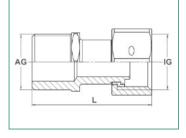


Brass hot-pressed, plain or chrome-plated, union nut with sealing eye, connecting piece with external thread, **with sealing**

Item-No.:	Item-No.:	Socket:	Union nut:	Length:	Packing unit:
plain	chrome plated	M	F	L	
WS-551-b-11780	WS-551-a-11780	R1/2"	G3/4"	45	-/100
WS-562-b-11780	WS-562-a-11780	R3/4"	G1"	58	-/100
WS-664-b-11780	-	R1"	G 1 1/4"	70	2/ 50
WS-665-11780	-	R 1 1/4"	G 1 ½"	71	0/ 25
WS-666-b-11780	-	R 1 1/2"	G2"	82,5	0/ 25
as above, but withou	t 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-11780-OD	-	R1"	G 1 1/4"	60	o/ 50
WS-665-11780-OD	-	R 1 1/4"	G 1 ½"	71	0/ 25
WS-666-b-11780-OD	-	R 1 1/2"	G2"	82,5	0/ 25
WS-667-b-G-N	-	R2"	G 2 ½"	75	-/-
Union nut loose, witl	h sealing (without illu	stration)			
WS-685-b-Mutter	-	-	G3/4"	13,5	-/700
WS-686-b-Mutter	-	-	G 1"	18	-/400
WS-664-b-Mutter	-	-	G 1 1/4"	20	-/200
Male threaded conn	ecting piece, without s	sealing (with	out illustrat	ion)	
WS-685-b-Tülle	-	R1/2"	-	39,5	-/500
WS-686-b-Tülle	-	R3/4"	-	48	-/250
WS-664-b-Tülle	-	R1"	-	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**

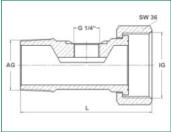
Item-No.:	Socket:	Union nut:	Length:	Wrench size:	Packing unit:
plain	M	F	L		
WS-2159 (with fuse ring)	R1/2"	G1/2"	45		-/-
WS-1555-b-11780	R3/4"	G3/4"	61,5	30	1/150
WS-1556-b-11780	R1"	G1"	60,5	38	1/100

Water meter screw according to the drinking water ordinance

Brass hot-pressed, plain, without sealing, with drain connection G1/4", 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"	67	-/-



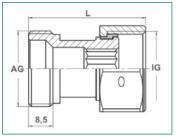


Water meter screw according to the drinking water ordinance

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

Item-No.:	Item-No.:	Socket:	Union nut:	Length:	Packing unit:
plain	chrome plated	M	F	L	
S-1228-A	-	G3/4"	G3/4"	41	25/150



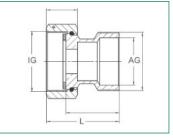


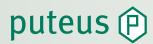
Screw connection with union nut

Chrome-plated, with AFM sealing, F/M

Item-No.:	Dim.:	Length:	Wrench size:	Packing unit:
S-3381	G1 1/4" x G1 1/4"	50,5	46,5	10/50
S-3382	G 2" x G 2"	56	65	5/30



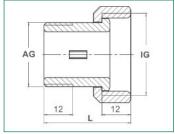




Water meter screw according to the drinking water ordinance







AFM gaskets

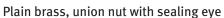


Spare parts water seals AFM 34 (DVGW/KTW W-270, SVGW, ÖVGW), temperature up to 200°C at 25 bar $\,$

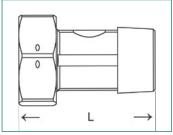
Item-No.:	Connection:	Size:	Packing unit:
WS-551-AFM	16,9 x 23,7 x 2 mm	3/4"	-/-
WS-562-AFM	23,2 x 29,8 x 2 mm	1"	-/5000
WS-1556-AFM	23,0 x 28,0 x 2 mm	1"	-/5000
WS-664-AFM	29,2 x 38,0 x 2 mm	1 1/4"	-/-
WS-665-AFM	32,0 x 44,0 x 2 mm	1 1/2"	-/-
WS-666-AFM	43,4 x 55,0 x 2 mm	2"	-/-

Screw connection with injection point / connection M 10x1





Item-No.:	Connection:	Union nut:	Length:	Packing unit:
plain	socket M		L	
WS-1475-b	R1"	G 1 1/4"	-	10/100

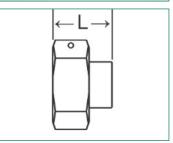


Screw connection with solder connection

Plain brass, union nut with sealing eye, with sealing

Item-No.:	Connection:	Union nut:	Length:	Packing unit:
plain	solder socket		L	
WS-563	15 mm	G3/4"	22	-/ 100
WS-564	18 mm	G3/4"	22	20/500
WS-565	22 mm	G1"	31,5	-/ 100



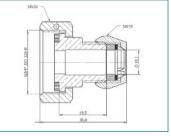


Screw connection for washstand meters

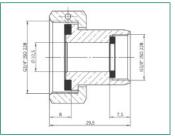
Brass chrome-plated, union nut with sealing eye

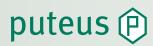
Item-No.:	Connection:	Union nut:	Length:	Packing unit:
	Srew connection outlet: Compression nut 3/4" x 10 mm	G3/4"	34	-/ 80
WS-569 (with- out sealing)	Srew connection inlet: Female thread 3/8"	G3/4"	29,5	-/100
WS-570	Set consisting of: WS-568-11780 + WS-569			10/500





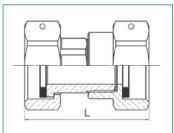






Screw connection for tap water meter





Brass chrome-plated, female thread on both sides, for connection with outlet valves 1/2" and 3/4", union nut with sealing eye

Item-No.:	Connection:	suitable for: outlet valves size	Length:	Packing unit:
WS-566	G 3/4" x G 3/4"	1/2"	47	-/100
WS-566-11780 (with AFM sealing)	G3/4" x G3/4"	1/2"	47	-/100
WS-567 (without sealing)	G 3/4" x G 1"	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 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: -20°C to + 120°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 female thread and union nut

Item-No.:	Female thread:	PE-pipe-	PE-pipe-	Packing unit:
	Size	Size	outside Ø	
34501 2	G1/2"	1/2"	20 mm	20/320
34502 9	G3/4"	3/4"	25 mm	15/240
34503 6	G1"	1"	32 mm	12/120
34504 3	G 1 1/4"	1 1/4"	40 mm	6/ 60
34505 0	G 1 ½"	1 1/2"	50 mm	4/ 72
345067	G 2"	2"	63 mm	2/ 38



Straight form, with male thread and union nut

Item-No.:	Female thread:	PE-pipe-	PE-pipe-	Packing unit:
	Size	Size	outside Ø	
34511 1	G1/2"	1/2"	20 mm	20/320
34512 8	G3/4"	3/4"	25 mm	15/240
34513 5	G1"	1"	32 mm	12/120
34514 2	G 1 1/4"	1 1/4"	40 mm	6/ 60
34515 9	G 1 ½"	1 1/2"	50 mm	4/ 72
34516 6	G 2"	2"	63 mm	2/ 38



Elbow, with two union nuts

Item-No.:	Female thread:	PE-pipe-	PE-pipe-
	Size	Size	outside Ø
34571 5	1/2"	20 mm	12/216
34572 2	3/4"	25 mm	10/100
34573 9	1"	32 mm	6/ 78
34574 6	1 1/4"	40 mm	4/ 48
34575 3	1 1/2"	50 mm	2/ 36
34576 o	2"	63 mm	2/ 14





Elbow, with female thread and union nut



Item-No.:	Female thread-	PE-pipe-	PE-pipe-	Packing unit:
	size	size	outside Ø	
34521 0	G1/2"	1/2"	20 mm	15/240
34522 7	G3/4"	3/4"	25 mm	12/192
34523 4	G1"	1"	32 mm	8/ 104
34524 1	G 1 1/4"	1 1/4"	40 mm	6/ 72
34525 8	G 1 ½"	1 1/2"	50 mm	4/ 48

Elbow, with male thread and union nut



Item-No.:	Male thread-	PE-pipe-	PE-pipe-	Packing unit:
	size	size	outside Ø	
34531 9	G1/2"	1/2"	20 mm	15/240
34532 6	G3/4"	3/4"	25 mm	12/120
34533 3	G 1"	1"	32 mm	8/ 80
34534 0	G 1 1/4"	1 1/4"	40 mm	6/ 72
34535 7	G 1 ½"	1 1/2"	50 mm	4/ 48
34536 4	2"	2"	63 mm	2/ 38

Elbow, with female thread union nut and wall fixation



Item-No.:	Female thread-	PE-pipe-	PE-pipe-	Packing unit:
	size	size	outside Ø	
34541 8	G1/2"	1/2"	20 mm	15/150
34542 5	G3/4"	3/4"	25 mm	12/156
34543 2	G 1"	1"	32 mm	8/ 64

T-piece, with three union nuts



Item-No.:	PE-pipe-	PE-pipe-	Packing unit:
	size	outside Ø	
34566 1	1/2"	20 mm	6/144
345678	3/4"	25 mm	6/108
34568 5	1"	32 mm	4/ 52
34569 2	1 1/4"	40 mm	4/ 36
34570 8	1 1/2"	50 mm	2/ 28
34560 9	2"	63 mm	-/-

T-piece, with female thread and two union nuts

Item-No.:	Female thread-	PE-pipe-	PE-pipe-	Packing unit:
	size	size	outside Ø	
345517	G1/2"	1/2"	20 mm	8/192
34552 4	G3/4"	3/4"	25 mm	6/ 96
34553 1	G1"	1"	32 mm	4/ 72
34554 8	G 1 1/4"	1 1/4"	40 mm	4/ 36
34555 5	G 1 ½"	1 1/2"	50 mm	2/ 26



Straight short form, with two union nuts

Item-No.:	PE-pipe-	PE-pipe-	Packing unit:
	size	outside Ø	
34581 4	1/2"	20 mm	12/192
34582 1	3/4"	25 mm	10/160
34583 8	1"	32 mm	8/104
34584 5	1 1/4"	40 mm	4/ 80
34585 2	1 1/2"	50 mm	2/ 48
34580 7	2"	63 mm	-/-



Straight long form, with two union nuts

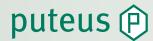
Item-No.:	PE-pipe-	PE-pipe-	Packing unit:
	size	outside Ø	
34586 9	1"	32 mm	6/72
34587 6	1 1/4"	40 mm	4/36
34588 3	1 1/2"	50 mm	2/36
34589 0	2"	63 mm	2/14



Sealing set for PE pipe compression fittings

Item-No.:	PE-pipe-	PE-pipe-	Packing unit:
	size	outside Ø	
345913	1/2"	20 mm	-/100
34592 0	3/4"	25 mm	-/ 75
345937	1"	32 mm	-/ 50
34594 4	1 1/4"	40 mm	-/ 30





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:
34500 5	1/2"	-/100
34510 4	3/4"	-/ 75
34520 3	1"	-/ 50
34530 2	1 1/4"	-/ 30

Compression fittings, polypropylene, for PE-pipes

Material: PP

maximum operating pressure: 10 bar

operating temperature : o°C to + 30°C

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

Straight form, with two union nuts



Item-No.:	Female thread-	PE-pipe-	Packing unit:
	size	outside Ø	
35581 3	1/2"	20 mm	50/300
35582 0	3/4"	25 mm	50/200
355837	1"	32 mm	50/150
35584 4	1 1/4"	40 mm	-/ 90
35585 1	1 1/2"	50 mm	-/ 50
35586 8	2"	63 mm	-/ 30

Straight form, with female thread and union nut



Item-No.:	Female thread-	PE-pipe-	PE-pipe-	Packing unit:
	size	size	outside Ø	
355011	1/2"	1/2"	20 mm	50/350
35502 8	3/4"	3/4"	25 mm	50/350
35503 5	1"	1"	32 mm	50/200
35504 2	1 1/4"	1 1/4"	40 mm	-/ 125
35505 9	1 ½"	1 1/2"	50 mm	-/ 75
35506 6	2"	2"	63 mm	-/ 65

Straight form, with male thread and union nut

Item-No.:	Male thread-	PE-pipe-	PE-pipe-	Packing unit:
	size	size	outside Ø	
35511 0	1/2"	1/2"	20 mm	50/550
35512 7	3/4"	3/4"	25 mm	50/350
35513 4	1"	1"	32 mm	50/200
35514 1	1 1/4"	1 1/4"	40 mm	-/ 130
35515 8	1 1/2"	1 1/2"	50 mm	-/ 80
35516 5	2"	2"	63 mm	-/ 45



Elbow, with two union nuts

Item-No.:	PE-pipe-	PE-pipe-	Packing unit:
	size	outside Ø	
3557 ¹ 7	1/2"	20 mm	50/250
35572 1	3/4"	25 mm	50/200
35573 8	1"	32 mm	-/ 50
35574 5	1 1/4"	40 mm	-/ 70
35575 2	1 1/2"	50 mm	-/ 40
35576 9	2"	63 mm	-/ 23



Elbow, with female thread and union nut

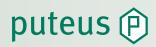
Item-No.:	Female thread-	PE-pipe-	PE-pipe-	Packing unit:
	size	size	outside Ø	
35521 9	1/2"	1/2"	20 mm	20/460
35522 6	3/4"	3/4"	25 mm	20/300
35523 3	1"	1"	32 mm	50/ 150
35524 0	1 1/4"	1 1/4"	40 mm	5/ 90
35525 7	1 1/2"	1 1/2"	50 mm	-/ 55
35526 4	2"	2"	63 mm	-/ 30



Elbow, with male thread and union nut

Item-No.:	Male thread-	PE-pipe-	PE-pipe-	Packing unit:
	size	size	outside Ø	
35531 8	1/2"	1/2"	20 mm	50/450
35532 5	3/4"	3/4"	25 mm	50/300
35533 2	1"	1"	32 mm	50/150
35534 9	1 1/4"	1 1/4"	40 mm	-/ 120
35535 6	1 1/2"	11/2"	50 mm	-/ 60
35536 3	2"	2"	63 mm	-/ 35





T-piece, with three union nuts



Item-No.:	PE-pipe-	PE-pipe-	Packing unit:
	size	outside Ø	
35566 o	1/2"	20 mm	50/150
355677	3/4"	25 mm	50/150
35568 4	1"	32 mm	-/ 8o
35569 1	1 1/4"	40 mm	-/ 45
35559 2	1 1/2"	50 mm	-/ 25
35560 8	2"	63 mm	-/ 14

T-piece, with female thread and two union nuts



Item-No.:	Female thread-	PE-pipe-	PE-pipe-	Packing unit:
	size	size	outside Ø	
35551 6	1/2"	1/2"	20 mm	20/240
35552 3	3/4"	3/4"	25 mm	10/ 150
35553 0	1"	1"	32 mm	50/ 100
35554 7	1 1/4"	1 1/4"	40 mm	-/ 60
35555 4	1 1/2"	1 1/2"	50 mm	-/ 33
35556 1	2"	2"	63 mm	-/ 20
35550 9	3/4"	1"	32 mm	-/ 100

T-piece, with male thread and two union nuts



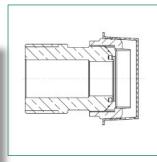
Item-No.:	Male thread-	PE-pipe-	PE-pipe-	Packing unit:
	size	size	outside Ø	
355417	1/2"	1/2"	20 mm	50/200
35542 4	3/4"	3/4"	25 mm	50/ 150
35543 1	1"	1"	32 mm	-/ 100
35544 8	1 1/4"	1 1/4"	40 mm	-/ 50
35545 5	1 ½"	1 1/2"	50 mm	-/ 30
35546 2	2"	2"	63 mm	-/ 18

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" x DN 12	-/50
363221	R1/2" x DN 16	-/50
363238	R3/4" x DN 16	-/50
36324 5	R3/4" x DN 20	-/50
36325 2	R1" x DN 20	-/50

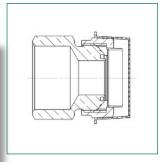




Screw connection with female thread

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

Item-No.:	Connection:	Packing unit:
36311 5	1/2" X DN 12	-/100
36312 2	Rp 1/2" x DN 16	-/100
36313 9	Rp 3/4" x DN 16	-/ 50
36314 6	Rp 3/4" x DN 20	-/ 50
36315 3	Rp 1" x DN 20	-/ 50

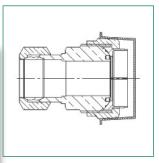




Screw connection for copper pipe

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

Item-No.:	Connection:	Packing unit:
36331 3	15 mm x DN 16	-/50
36332 0	18 mm x DN 16	-/50
363337	18 mm x DN 20	-/50
36334 4	22 mm x DN 20	-/50
36335 1	22 mm x DN 16	-/50

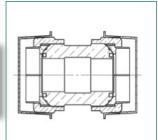




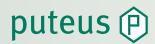
Screw connection (coupling)

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

Item-No.:	Connection:	Packing unit:
363016	DN 16 x DN 16	-/50
36302 3	DN 20 x DN 20	-/50



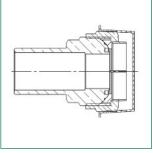




Brass fittings for solar corrugated stainless steel pipes material: CW617N, surface: plain

Connecting piece



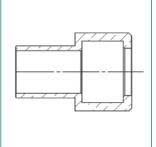


Metal sealing, safety clamps with teeth, with red plastic protection cap

Item-No.:	Connection:	Packing unit:
36343 6	22 mm x DN 16	-/100
36345 0	22 mm x DN 20	-/ 50

Connecting piece



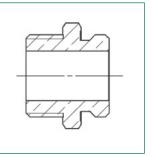


Socket with smooth spout, hexagonal

Item-No.:	Connection:	Packing unit:
36371 9	G3/4" x 18/22 mm	-/250
36372 6	G1" x 18/22 mm	25/150

Nipple male thread / male thread



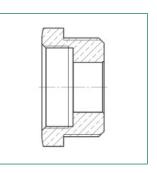


Nipple with male thread/male thread, delivery without O-ring

Item-No.:	Connection:	Packing unit:
36373 3	G3/4" x G3/4" L= 27 mm	25/350

Bushing





With male thread/female thread for flat-sealing connections

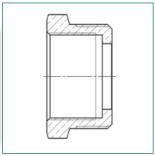
Item-No.:	Connection:	Packing unit:
36350-3/4	G3/4" x G1/2"	-/250
36350-1	G1" x G3/4"	-/ 175
36350-11/4	G 1½" X G 1"	-/ 80

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

Bushing

With male thread/female thread, metal sealing (conical thread)

Item-No.:	Connection:	Packing unit:
36351-3/4	G 3/4" x Rp 1/2"	-/350
36351-1	G1" x Rp 3/4"	-/200
36351-1 ¹ / ₄	G 11/4" x Rp 1"	-/ 80
36351-11/2	G 1½" x Rp 1¼"	-/100

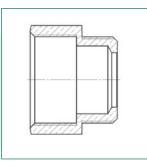




Socket nipple

With male thread/female thread, with enlarged wrench flat

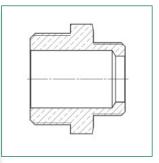
Item-No.:	Connection:	Packing unit:
36352-1/2	G 1/2" x Rp 1/2"	-/350
36352-3/4	G 3/4" x Rp 3/4"	-/200
36352-1	G 1" x Rp 1"	-/120
36352-11/4	G 11/4" x Rp 11/4"	-/ 90





Hexagon double nipple

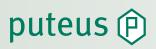
Item-No.:	Connection:	Pack. unit:	
With male thread	With male thread/male thread, cylindrical thread, flat sealing		
36353-3/4	G3/4" x G1/2"	10/200	
36353-1	G1" x G3/4"	-/ 110	
36353-11/4	G 1½" X G 1"	-/ 50	
36353-11/2	G 1½" X G 1¼"	-/ 50	
With male thread	/male thread, reduced thread , con	ical sealing	
36354-3/4	G 3/4" x R 1/2"	-/200	
36354-1	G1" x R3/4"	-/ 8o	
36354-1 ¹ / ₄	G 1½" x R 1" -/ 50		
36354-11/2	G 1½" x R 1¼" -/ 50		
With male thread/male thread, equal, flat sealing			
36355-1/2	G _{1/2} ", L= 28 mm, WS 21	15/300	
36355-3/4	G 3/4", L= 29 mm, WS 27 10/200		
36355-1	G1", L= 31 mm, WS 34 10/100		
36355-11/4	G ₁ ¹ / ₄ ", L= 36 mm, WS 42/6	-/ 45	
36355-11/2	G 1½", L= 40 mm, WS 48/8	-/ 50	

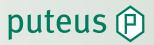




 $\mathbf{G} = \text{cylindrical}$

 $\mathbf{R} = \text{conical}$





puteus GmbH terms and conditions for contracting, delivery, and payment

- 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.
- 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.
- The right to make reasonable technical changes in the form, color, and/or weight of offerings is reserved.

Section 3 Shipping

- 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.
- 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.
- 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

- 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.
- 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

- 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

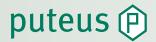
- Obvious defects or other objections with respect to the delivery item including the absence of guaranteed or warranted qualities are to be promptly reported to puteus GmbH in writing no later than 14 days after receipt of the delivery item.
- 2. puteus GmbH assumes no liability for deviations in quality, 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.
- 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

- 1. 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.
- 2. 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 procurement 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.
- 3. 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.
- 4. 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 accordance 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

1. 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).

2. 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

- 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

- 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.
- 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: July 2023

TECHNICAL INFORMATION

Size and weight

Unless otherwise stated, all dimensions are in millimeters (mm) and weights are in grams (g).

PN = nominal pressure in bars 1 bar 10N / cm² => ca. 10 m column of water

DN = nominal diameter in inches or mm 1" = 25,4 mm => ca. 25 mm

Nominal pressure is the maximum applicable pressure at the standard temperature, which, unless otherwise stated, is 20°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.

Mediun

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

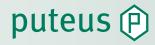
If there are no articles in our standard program that are suitable for your needs, we can also create custom models upon request. For this, we would need a detailed letter of inquiry with the corresponding number of units as well as drawings or sample parts.

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 excessive 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 products 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° 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!

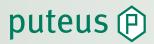
(as of July 2023)

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 1st use.
- 2. Ideally you should store the hose at a temperature between +10°C and +25°C. Temperatures of less than o°C or more than +40°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.

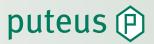
Use

- 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, §§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!

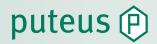
Tapping systems for non-drinking water that are installed in the household in addition to the drinking water supply system must be reported to the health authority!

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	1 3/4"	44,450 mm
1/4"	6,350 mm	2"	50,800 mm
3/8"	9,525 mm	2 1/4"	57,150 mm
1/2"	12,700 mm	2 1/2"	63,500 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"	82,550 mm
1"	25,400 mm	3 1/2"	88,900 mm
1 1/4"	31,750 mm	3 3/4"	95,250 mm
1 1/2"	38,100 mm	4"	101,600 mm





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 quality awareness.

LGAI





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Domizil Tönisvorst | AG Krefeld | HRB 9505 | UST-IDNR. DE 120 581 001 | ILN 40 12167 00000 3 CEO: Hans de Gruyter | Peter de Gruyter

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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.



Note: All information is subject to possible printing errors or changes in design or construction. Reprinting and photomechanical reproduction- also including excerpts - only with the authorization of puteus GmbH, Lenenweg 6, D-47918 Tönisvorst.



Other catalogs to our range:















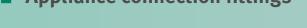












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