

1989 bonfix®

CATALOGUE 2013



We know who we work for, every day.....

Many have come to know BONFIX as a committed supplier of compression fittings and associated products and services.

A reputation we have consistently highlighted with fun, original ads, trade fair presences, out-of-the-box promotion letters, unusual acquisition activities, and overall a radiant, positive image.

We're comfortable with our happy image, as long as it doesn't lead to the impression that we're not serious about our work. The success of BONFIX is based on a premium quality product range, fast and accurate deliveries, and promises being kept. Always with you, our customer, at the centre.

For these reasons, and to celebrate the opening of our new business premises, we have reserved a prominent place at our new location for the sculpture pictured here.

The mechanic stands at the main entrance, reminding everyone who works at BONFIX, even before they start their daily duties, "who it is we work for".

Yours sincerely,
BONFIX B.V.

Ing. M.R. van Buul
Director



SCAN
+

EXPERIENCE

Simply awake this catalogue with your smartphone!

1 Install the free „Junaio“ app from the App Store or the Android Market on your smartphone.

2 Then download the „BONFIX“-channel.

3 Keep the camera at approximately 30 cm from the frontpage of the current catalogue. Have fun!

Constancy on your order



Open

Monday through Friday
08.00 hours to 17.30 hours.



Telephone

0031 (0) 88 460 07 94



Fax

0031 (0) 88 460 02 29



E-mail

info@bonfix.nl

sales@bonfix.nl



Internet

Order online is very easy.
you will find our extensive catalog on www.bonfix.eu



One-day delivery

All orders placed before 16.00 hours will be delivered within 48 hours.



Postal orders up to 16.00 hours

Postal orders submitted before 16.00 hours are delivered to the post office on the same day.



Collect

Collect your order at our service desk from Monday through Friday between 8.00 hours and 12.00 hours and 13.00 hours and 17.30 hours. If you place your order by telephone or fax prior to collection, we will have it ready by the time you arrive. That way you can save precious time.

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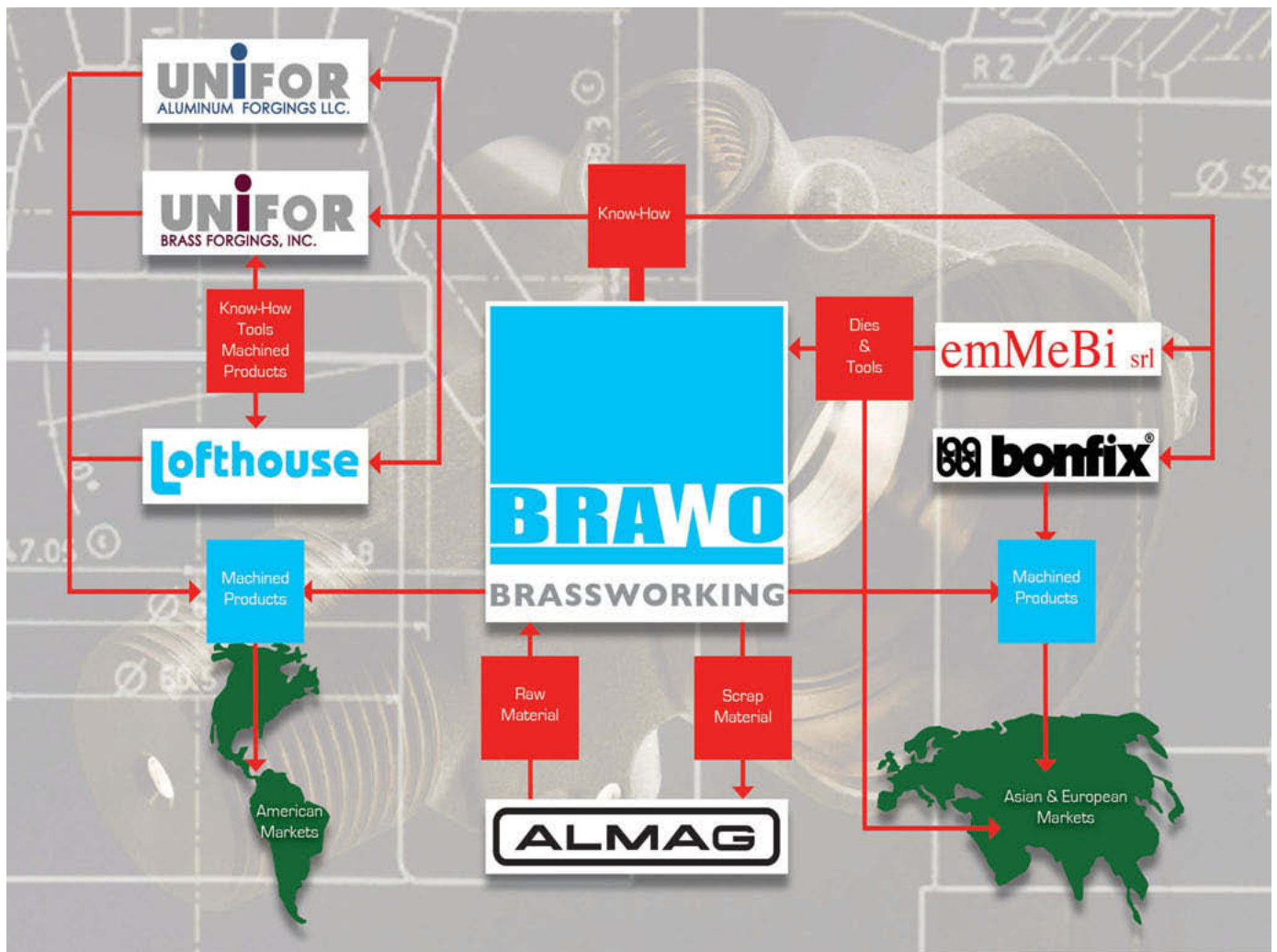
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BONFIX®

Introduction





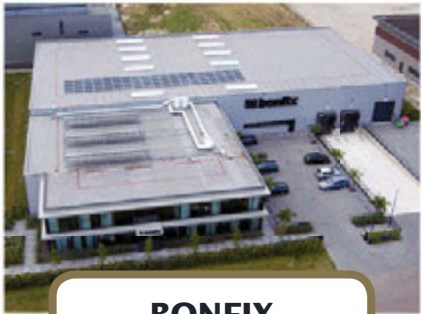
Group of companies



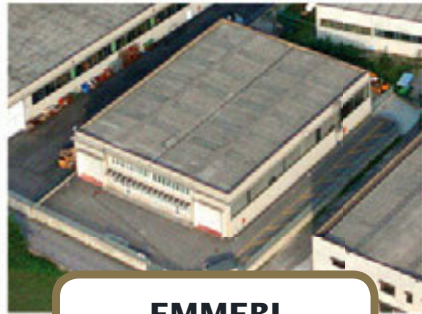
BRAWO
premises - Headquarter



BRAWO
premises – Machining plant



BONFIX
premises



EMMEBI
premises



UNIFOR BRASS
premises



UNIFOR ALUMINIUM
premises



LOFTHOUSE
premises

Total: 70.000 sqm

Mission

The Company's Key to success is synthesised in its mission and strategy. The objective is to deliver a high level of service to the customer, reliability, technological assistance in product development and cost reduction in the final product. All this translates into reaching a high level of customer loyalty, with which to develop common development strategies giving mutual satisfaction.

Brass advantages

- Excellent mechanical characteristics at low temperatures.
- Very good plastic deformation at high temperatures.
- Wear resistant.
- Resistant to corrosion through dezincification.
- Excellent machinability.
- Compatible to diverse surface treatments.

Hot forging advantages



- The process is established and reliable.
- Absence of porosity in comparison to die-casting.
- Achievement of product with good dimensional tolerances.
- High mechanical characteristics.
- Possibility to manufacture products with complex shapes.
- Excellent surface appearance for aesthetic product.
- Flexible and competitive production line.

Why to choose BONFIX?

- Integrated group - from the raw material to the “finished” product.
- Co-operation and project assistance in order to optimise the costs respecting the requested technical and functional features.
- Internal project and production of dies and tools, based on a company know-how continuously in evolution.
- Featuring flexible, complementary and innovative production equipment along the whole manufacturing process. Employing 30 presses and a similar number of transfer machines and working cells, BRAWO manufactures small and large batches of parts ranging from 30 grams (0.066 lbs) through 25 Kgs (55 lbs).
- Process control.
- Maximum attention to the environment by activities to avoid pollution. Compliance with laws and applicable regulations.
- Continuous attention to the improvement of the human resources skills by a continuous training process.
- Customer oriented:
 - Vendor Management Program
 - Kanban
 - Just-in-time
 - Consignment Stock
 - Warehouse in US
 - On-line ordering
 - Personnel at customer’s disposal 52 week per year.



Support and technical assistance to the customer



Technical dept.

- Design and development process
- Product optimization



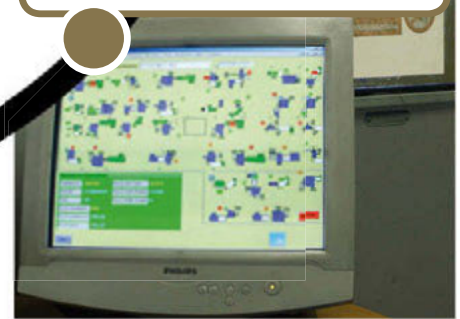
Dies and tools are projected and built internally

Production process

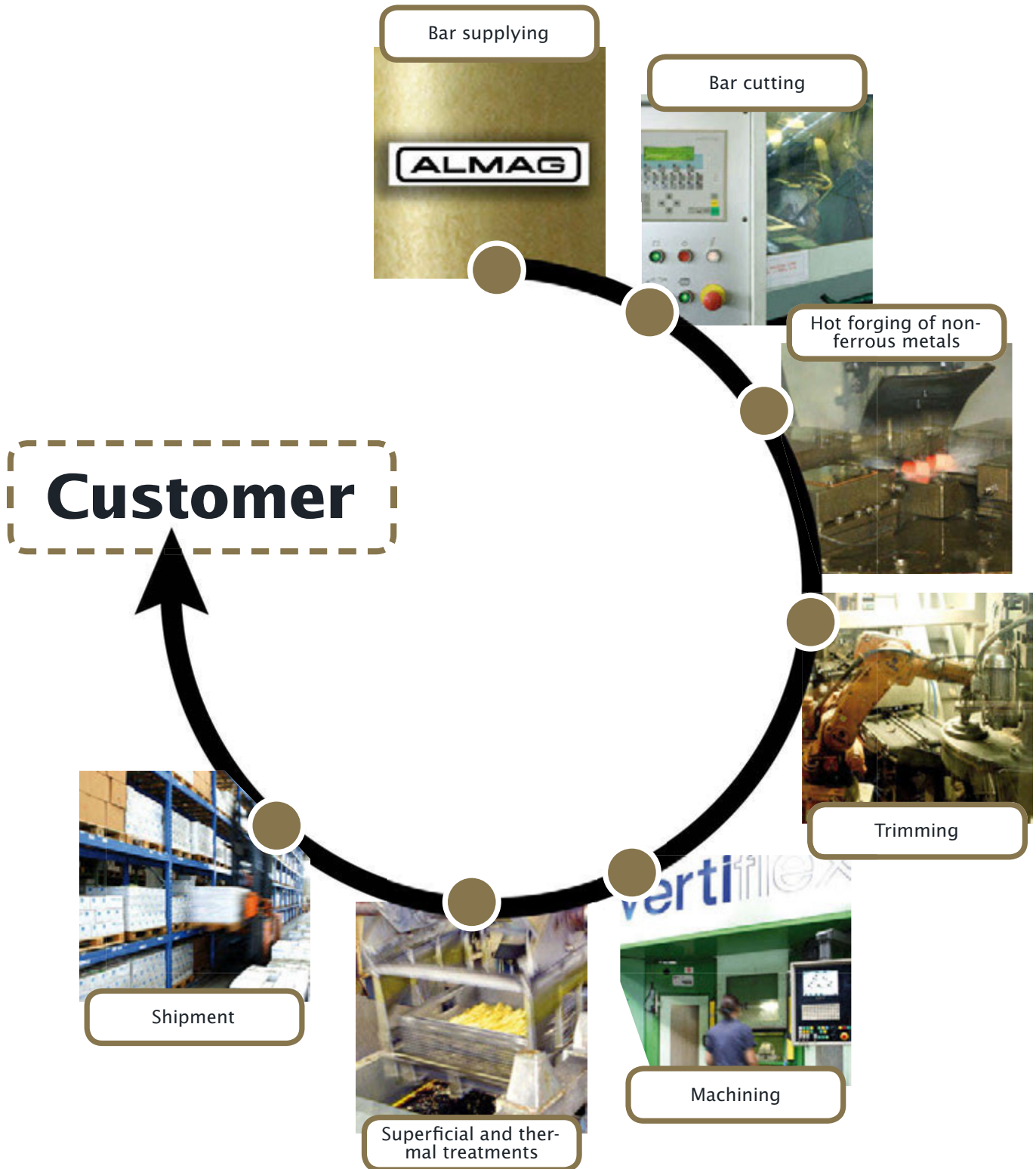
Verify the conformity of the parts by dedicated innovative instruments



Efficient monitoring of the whole integrated process by applicative software



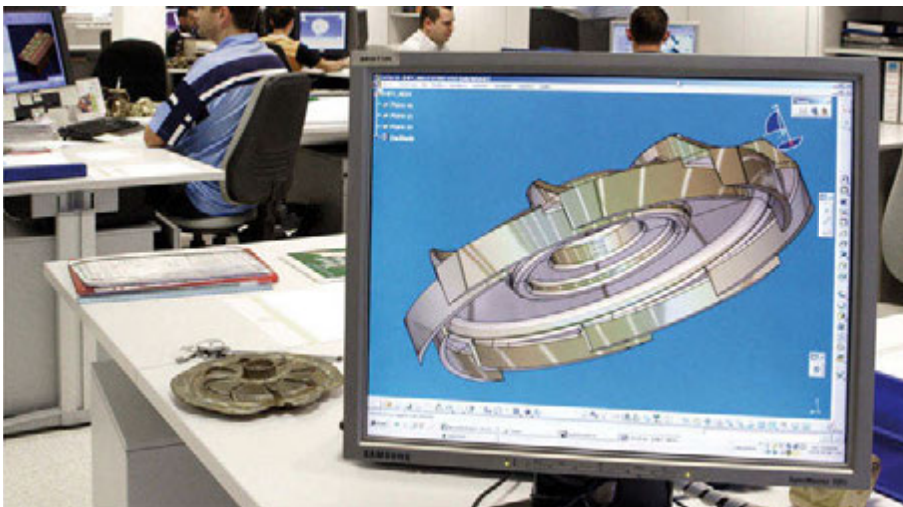
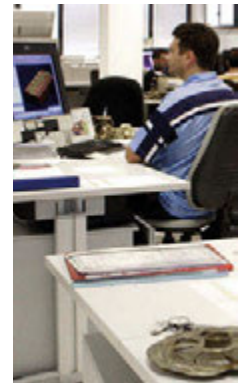
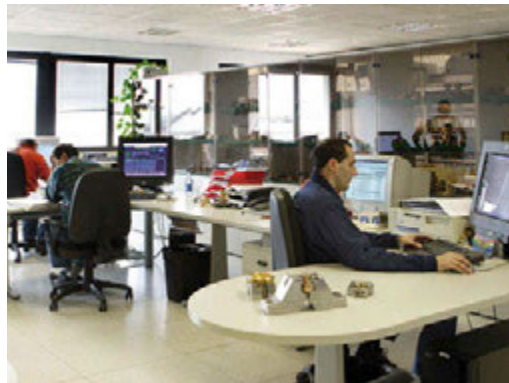
Productive process



Technical department

Engineering process

- Validation of the feasibility study stage and development of the tools and production cycle phases.
- Control of the sampling stage.
- Definition and maintenance of the process technical parameters.
- Development of the control plan.
- Study and analysis of corrective actions.



Tool making



- State of the art equipment in the manufacturing of die and machining tools able to run 24 hours a day un-manned.
- Drastic reduction of manufacturing lead times.

Raw material

- Wide availability of alloys and dimensions in sinergy with ALMAG S.p.A.
- Competitiveness and flexibility of supply.



Billet heating



- Latest generation Gas and Induction furnaces.
- Continuous monitoring of the billett temperature in the forging stage with the use of pyrometers.
- Maintenance of optimal forging temperature for each item.
- Achievement of the material grain structure and mechanical characteristics conforming to the customers requirements.

Hot forging

- 34 machines most of these automated with electronic management.
- Bell-presses from 350 to 700 tonnes.
- Horizontal Coring presses from 250 to 550 tonnes.
- Vertical Coring presses from 200 to 800 tonnes.
- Screw presses (fly press) from 250 to 900 tonnes.

With these different type of machineries it is possible to get products with a weight range starting from few grams up to 25 kilograms.



Hatebur forging technology



- Three automatic machines with induction heating.
- High productive speed : up to 10.000 pieces/hour.
- Pieces with weight from 17,5 to 115 grams.
- Daily output: more than 700.000 pieces.

Heat and surface treatments



Natural



Shot blasting



Swarf blasting



Yellow pickling



Burnishing



Nickel plating



Chrome plating

Chip removal machining

Transfer machines “3-way“ with fixed jaw

- More than 30 machines able to machine every type of part.
- Flexibility for the production of small and large batches.
- Full electronic traceability of the product through barcoding.
- High productivity robotic cells.
- Machining of simple parts.
- Machines from 10 to 18 stations.
- Automatic loaders also robotic aimed at reducing costs wherever possible.

Transfer machines with jaw rotation and machining “4th way”

- The fixture rotation in the machine allows the machining of the fourth way.
- Maintenance of small tolerances due to the machining in one single positioning.
- Possibility of inclined machining.

Transfer machines with jaw rotation and machining of “5th way”

- Machines with rotary bed and vertical axis from 15 to 28 units.
- The rotating jaw allows machining of the piece on 5 sides in one operation.
- Simultaneous machining with more units to manufacture complex items with reduced cycle times.
- Excellent surface finishing through high cutting speed and use of coolant through the tool.

Vertiflex machining centers

- Machines with 8 CNC machining centers with 48 tools.
- The clamping system allows machining on 5 sides from any angle.
- The 6th side can be machined with double holding.
- Flexibility and precision of a machining center with the costs of a transfer machine.

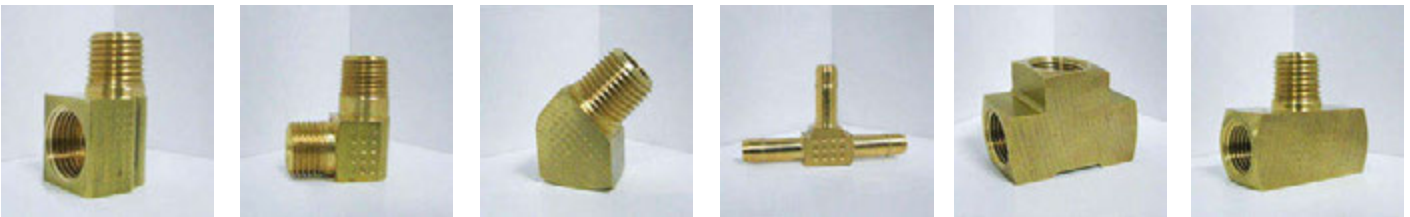
Machining centers and lathes with Numeric Control

- Execution of small sampling batches.
- Set-up times reduced to the minimum.

Chip removal machining

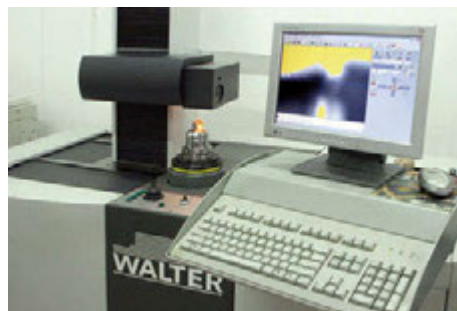
Bar-Stock Machining

- Bar feed capabilities for solid material or forgings.
- Live tooling and 3rd Y axis on all turrets.
- Transfer machines 3 way with fixed jaw.
- Ability to machine recessed features with U axis facing heads.
- Cycle time as low as three seconds.
- Robotic loading with Vision system.



Quality control

- Constant monitoring through the inspection of the product and process characteristics.
- Monitoring and measurement from first off to final inspection.
- Usage of a state of the art instrumentation.
- Usage of statistical techniques to monitor the production process (SPC).





**We orientate our company
to your requirements!**

A series of horizontal dashed lines for writing.



Sanitary compression fittings



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
82473	10 x 10	G / K	5	200
82473AN	10 x 10	G / K	5	200

AN = Nickel plated brass

Straight coupling
2 x compression ends



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
82471	12 x 10	G / K	5	200
82538	15 x 10	G / K	5	150

Straight reduced coupling
2 x compression ends



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
82465	12 x 10	G / K	5	200
82465AN	12 x 10	G / K	5	200
82466	15 x 10	G / K	5	150
82466AN	15 x 10	G / K	5	150

AN = Nickel plated brass

**Straight coupling
without abutment**

2 x compression ends



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
82566	1/4 x 10	K	5	250
81103*	3/8 x 10	G / K	5	200
81113*	1/2 x 10	G / K	5	150

* Taper thread

Straight coupling
male iron x compression end



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
82547	1/4 x 10	K	5	250
81203**	3/8 x 10	G / K	5	150
81217**	1/2 x 10	G / K	5	150
81217AN**	1/2 x 10	G / K	5	150

** Long internal thread AN = Nickel plated brass

Straight coupling
female iron x compression end



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
82493	10	G / K	5	300

Stop end
1 x compression end



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
82527	10 x 10	G / K	5	150
82527AN	10 x 10	G / K	5	150

AN = Nickel plated brass

Elbow
2 x compression ends



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
82462	12 x 10	G / K	5	100
82462AN	12 x 10	G / K	5	100
82461	15 x 10	G / K	5	100
82461AN	15 x 10	G / K	5	100

AN = Nickel plated brass

Elbow reduced

2 x compression ends



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
82453	10 x 10 x 10	G / K	5	100
82453AN	10 x 10 x 10	G / K	5	100

AN = Nickel plated brass

Tee

3 x compression ends



A series of horizontal dashed lines for writing.



Compression fittings



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
82470	6 x 6		5	400
82485	8 x 8		5	300
82473	10 x 10	G / K	5	200
82473AN	10 x 10	G / K	5	200
82537	12 x 12	G / K	5	200
82537AN	12 x 12	G / K	5	200
82530	15 x 15	G / K	5	100
82530AN	15 x 15	G / K	5	100
82851	18 x 18	G / K	5	80
82531	22 x 22	G / K	5	50
82531AN	22 x 22	G / K	5	50
82532	28 x 28	G / K	5	40
82532AN	28 x 28	G / K	5	40
82534	35 x 35	G / K	5	20
82535	42 x 42	G / K	5	10
82539	54 x 54	G / K	1	5

AN = Nickel plated brass

Straight coupling
2 x compression ends



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
82910	10 x 8		5	400
82911	12 x 8		5	350
82471	12 x 10	G / K	5	200
82538	15 x 10	G / K	5	150
82472	15 x 12	G / K	5	150
82472AN	15 x 12	G / K	5	150
52746	18 x 15	G / K	5	120
82533	22 x 15	G / K	5	70
82533AN	22 x 15	G / K	5	70
82579	22 x 20		5	70
82579AN	22 x 20		5	70
82536	28 x 22	G / K	5	40
82536AN	28 x 22	G / K	5	40
82467	35 x 15	G / K	5	20
82468	35 x 22	G / K	5	20

AN = Nickel plated brass

Straight reduced coupling
2 x compression ends



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
82465	12 x 10	G / K	5	200
82465AN	12 x 10	G / K	5	200
82466	15 x 10	G / K	5	150
82466AN	15 x 10	G / K	5	150

AN = Nickel plated brass

**Straight coupling
without abutment**

2 x compression ends



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
81104	1/8 x 6		5	300
82568	1/4 x 6		5	300
81107	1/4 x 8		5	300
82566	1/4 x 10	K	5	250
82567	1/4 x 12		5	250
81108*	1/4 x 15	G / K	5	300
81109	3/8 x 8		5	300
81103*	3/8 x 10	G / K	5	200
82543*	3/8 x 12	G / K	5	200
82543AN*	3/8 x 12	G / K	5	200
82740*	3/8 x 15	G / K	5	150
82740AN*	3/8 x 15	G / K	5	150
81112	1/2 x 8		5	300
81113*	1/2 x 10	G / K	5	150
82528*	1/2 x 12	G / K	5	150
82528AN*	1/2 x 12	G / K	5	150
82741*	1/2 x 15	G / K	5	150
82741AN*	1/2 x 15	G / K	5	150
52491*	1/2 x 18	G / K	5	100
82529*	1/2 x 22	G / K	5	70
82529AN*	1/2 x 22	G / K	5	70
82742*	3/4 x 15	G / K	5	80
82742AN*	3/4 x 15	G / K	5	80
82492*	3/4 x 18	G / K	5	80
82743*	3/4 x 22	G / K	5	70
82743AN*	3/4 x 22	G / K	5	70
82556*	3/4 x 28	G / K	5	70
82744*	1 x 22	G / K	5	50
82744AN*	1 x 22	G / K	5	50
82745*	1 x 28	G / K	5	40
82745AN*	1 x 28	G / K	5	40
82474*	1 1/4 x 35	G / K	5	20
82548*	1 1/2 x 42	G / K	5	10
82549*	2 x 54	G / K	5	10

* Taper thread AN = Nickel plated brass

Straight coupling
male iron x compression end



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
81202	1/4 x 8		5	250
82547	1/4 x 10	K	5	250
81204	3/8 x 8		5	250
81203**	3/8 x 10	G / K	5	150
82586**	3/8 x 12	G / K	5	150
82575**	3/8 x 15	G / K	5	150
82575AN**	3/8 x 15	G / K	5	150
81213	1/2 x 8		5	250
81217**	1/2 x 10	G / K	5	150
81217AN**	1/2 x 10	G / K	5	150
82576	1/2 x 12	K	5	150
82748**	1/2 x 12	G / K	5	150
82581**	1/2 x 15	G / K	5	100
82581AN**	1/2 x 15	G / K	5	100
52574**	1/2 x 18	G / K	5	100
82577**	1/2 x 22	G / K	5	60
82577AN**	1/2 x 22	G / K	5	60
82578	3/4 x 15	K	5	80
82578AN	3/4 x 15	K	5	80
82749**	3/4 x 15	G / K	5	80
82749AN**	3/4 x 15	G / K	5	80
52750**	3/4 x 18	G / K	5	70
82582**	3/4 x 22	G / K	5	50
82582AN**	3/4 x 22	G / K	5	50
82585**	1 x 22	G / K	5	50
82585AN**	1 x 22	G / K	5	50
82583**	1 x 28	G / K	5	40
82583AN**	1 x 28	G / K	5	40
82475**	1 1/4 x 35	G / K	5	20
82588**	1 1/2 x 42	G / K	5	10
82589**	2 x 54	G / K	1	8

** Long internal thread AN = Nickel plated brass

Straight coupling
female iron x compression end



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
82493	10	G / K	5	300
82494	12	G / K	5	300
82494AN	12	G / K	5	300
82495	15	G / K	5	200
82495AN	15	G / K	5	200
82496	22	G / K	5	80
82496AN	22	G / K	5	80
82497	28	G / K	5	50
82497AN	28	G / K	5	50
82498	35	G / K	5	30

AN = Nickel plated brass

Stop end
1 x compression end



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
82491	6 x 6		5	300
82487	8 x 8		5	200
82527	10 x 10	G / K	5	150
82527AN	10 x 10	G / K	5	150
82526	12 x 12	G / K	5	150
82526AN	12 x 12	G / K	5	150
82520	15 x 15	G / K	5	100
82520AN	15 x 15	G / K	5	100
82861	18 x 18	G / K	5	60
82521	22 x 22	G / K	5	40
82521AN	22 x 22	G / K	5	40
82522	28 x 28	G / K	5	30
82522AN	28 x 28	G / K	5	30
82523	35 x 35	G / K	5	15
82524	42 x 42	G / K	5	10
82525	54 x 54	G / K	5	5

AN = Nickel plated brass

Elbow

2 x compression ends



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
82462	12 x 10	G / K	5	100
82462AN	12 x 10	G / K	5	100
82461	15 x 10	G / K	5	100
82461AN	15 x 10	G / K	5	100
82463	15 x 12	G / K	5	100
82463AN	15 x 12	G / K	5	100
82464	22 x 15	G / K	5	50
82464AN	22 x 15	G / K	5	50
82479	28 x 15	G / K	5	40
82481	28 x 22	G / K	5	30
82481AN	28 x 22	G / K	5	30

AN = Nickel plated brass

Elbow reduced

2 x compression ends



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
82708*	1/4 x 12	G / K	5	150
82804*	3/8 x 10	G / K	5	150
82701*	3/8 x 12	G / K	5	150
82701AN*	3/8 x 12	G / K	5	150
82617*	3/8 x 15	G / K	5	100
82617AN*	3/8 x 15	G / K	5	100
81811*	1/2 x 10	G / K	5	150
82703*	1/2 x 12	G / K	5	150
82700*	1/2 x 15	G / K	5	100
82700AN*	1/2 x 15	G / K	5	100
52566*	1/2 x 18	G / K	5	70
82709*	1/2 x 22	G / K	5	50
82709AN*	1/2 x 22	G / K	5	50
82704*	3/4 x 15	G / K	5	50
82704AN*	3/4 x 15	G / K	5	50
52862*	3/4 x 18	G / K	5	50
82702*	3/4 x 22	G / K	5	50
82702AN*	3/4 x 22	G / K	5	50
82705*	3/4 x 28	G / K	5	30
82706*	1 x 22	G / K	5	30
82706AN*	1 x 22	G / K	5	30
82707*	1 x 28	G / K	5	30
82707AN*	1 x 28	G / K	5	30
82721**	1 1/4 x 35	G / K	5	20
82722**	1 1/2 x 42	G / K	5	15
82723**	2 x 54	G / K	1	10

* Taper thread AN = Nickel plated brass

Elbow
male iron x compression end



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
82404**	3/8 x 10	G / K	5	150
82598**	3/8 x 12	G / K	5	150
82598AN**	3/8 x 12	G / K	5	150
82605**	3/8 x 15	G / K	5	100
82407**	1/2 x 10	G / K	5	150
82596**	1/2 x 12	G / K	5	150
82596AN**	1/2 x 12	G / K	5	150
82591**	1/2 x 15	G / K	5	100
82591AN**	1/2 x 15	G / K	5	100
52863**	1/2 x 18	G / K	5	70
82595**	1/2 x 22	G / K	5	100
82595AN**	1/2 x 22	G / K	5	100
82482**	3/4 x 15	G / K	5	60
82482AN**	3/4 x 15	G / K	5	60
52864**	3/4 x 18	G / K	5	60
82592**	3/4 x 22	G / K	5	50
82592AN**	3/4 x 22	G / K	5	50
82597**	3/4 x 28	G / K	5	30
82594**	1 x 22	G / K	5	30
82594AN**	1 x 22	G / K	5	30
82593**	1 x 28	G / K	5	30
82593AN**	1 x 28	G / K	5	30
82559**	1 1/4 x 35	G / K	5	15
82603**	1 1/2 x 42	G / K	5	10
82599**	2 x 54	G / K	1	5

** Long internal thread AN = Nickel plated brass

Elbow
female iron x compression end



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
82499	6 x 6 x 6		5	200
82486	8 x 8 x 8		5	200
82453	10 x 10 x 10	G / K	5	100
82453AN	10 x 10 x 10	G / K	5	100
82452	12 x 12 x 12	G / K	5	100
82452AN	12 x 12 x 12	G / K	5	100
82501	15 x 15 x 15	G / K	5	60
82501AN	15 x 15 x 15	G / K	5	60
52871	18 x 18 x 18	G / K	5	40
82502	22 x 22 x 22	G / K	5	30
82502AN	22 x 22 x 22	G / K	5	30
82503	28 x 28 x 28	G / K	5	20
82503AN	28 x 28 x 28	G / K	5	20
82516	35 x 35 x 35	G / K	5	10
82517	42 x 42 x 42	G / K	1	5
82451	54 x 54 x 54	G / K	1	3

AN = Nickel plated brass

Tee
3 x compression ends



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
82454	12x15x12	G / K	5	70
82454AN	12x15x12	G / K	5	70
82455	15x12x12	G / K	5	70
82455AN	15x12x12	G / K	5	70
82456	15x12x15	G / K	5	60
82456AN	15x12x15	G / K	5	60
82457	15x15x12	G / K	5	60
82504	15x22x15	G / K	5	50
82504AN	15x22x15	G / K	5	50
82505	22x15x22	G / K	5	30
82505AN	22x15x22	G / K	5	30
82506	22x15x15	G / K	5	40
82506AN	22x15x15	G / K	5	40
82507	22x22x15	G / K	5	30
82507AN	22x22x15	G / K	5	30
82519	22x28x22	G / K	5	20
82519AN	22x28x22	G / K	5	20
82458	28x15x22	G / K	5	20
82458AN	28x15x22	G / K	5	20
82508	28x15x28	G / K	5	20
82508AN	28x15x28	G / K	5	20
82459	28x22x15	G / K	5	20
82459AN	28x22x15	G / K	5	20
82513	28x22x22	G / K	5	20
82513AN	28x22x22	G / K	5	20
82514	28x22x28	G / K	5	20
82514AN	28x22x28	G / K	5	20
82509	28x28x15	G / K	5	20
82509AN	28x28x15	G / K	5	20
82515	28x28x22	G / K	5	20
82515AN	28x28x22	G / K	5	20
82476	35x15x35	G / K	5	10
82477	35x22x35	G / K	5	10
82478	35x28x35	G / K	5	10

AN = Nickel plated brass

Tee, reduced

3 x compression ends



way to read the Tee
international system

Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
99952	12 x 1/2 x 12	G / K	5	100
82644	15 x 1/4 x 15	G / K	5	60
82644AN	15 x 1/4 x 15	G / K	5	60
82645	15 x 3/8 x 15	G / K	5	60
82646	15 x 1/2 x 15	G / K	5	50
82646AN	15 x 1/2 x 15	G / K	5	50
82791	18 x 1/2 x 18	G / K	5	40
82792	18 x 3/4 x 18	G / K	5	40
82640	22 x 1/2 x 22	G / K	5	30
82640AN	22 x 1/2 x 22	G / K	5	30
82647	22 x 3/4 x 22	G / K	5	30
82647AN	22 x 3/4 x 22	G / K	5	30
82642	28 x 1/2 x 28	G / K	5	20
82642AN	28 x 1/2 x 28	G / K	5	20
82643	28 x 3/4 x 28	G / K	5	20

AN = Nickel plated brass

Tee
2 x compression end x female iron



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
82613*	15 x 15 x 1/2	G / K	5	20
82612*	22 x 22 x 3/4	G / K	5	20
82614*	22 x 22 x 1	G / K	5	20
82615*	28 x 28 x 1	G / K	5	20

* Taper thread

Tee
2 x compression end x male iron



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
82611	15 x 15 x 1/2	G / K	5	60
82611AN	15 x 15 x 1/2	G / K	5	60
82641	22 x 22 x 1/2	G / K	5	30
82641AN	22 x 22 x 1/2	G / K	5	30
82648	22 x 22 x 3/4	G / K	5	20
82648AN	22 x 22 x 3/4	G / K	5	20

AN = Nickel plated brass

Tee
2 x compression end x female iron



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
82760	15 x 15 x 15	G / K	5	50
82760AN	15 x 15 x 15	G / K	5	50
82762	22 x 15 x 22	G / K	5	20
82762AN	22 x 15 x 22	G / K	5	20
82763	22 x 15 x 15	G / K	5	30
82763AN	22 x 15 x 15	G / K	5	30
82761	22 x 22 x 22	G / K	5	20
82761AN	22 x 22 x 22	G / K	5	20

AN = Nickel plated brass

Corner tee
3 x compression end



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
82510	15 x 15 x 15 x 15	G / K	5	30
82510AN	15 x 15 x 15 x 15	G / K	5	30
82518	22 x 15 x 22 x 15	G / K	5	20
82518AN	22 x 15 x 22 x 15	G / K	5	20
82616	22 x 15 x 15 x 15	G / K	5	20
82616AN	22 x 15 x 15 x 15	G / K	5	20
82511	22 x 22 x 22 x 22	G / K	5	20
82511AN	22 x 22 x 22 x 22	G / K	5	20
82512	28 x 28 x 28 x 28	G / K	5	10

AN = Nickel plated brass

Cross
4 x compression ends



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
52569	1/2 x 12	G / K	5	40
82570	1/2 x 15	G / K	5	40
82570AN	1/2 x 15	G / K	5	40
82469	1/2 x 22	G / K	5	30
82572	3/4 x 15	G / K	5	30
82573	3/4 x 22	G / K	5	20
82573AN	3/4 x 22	G / K	5	20

AN = Nickel plated brass

Female wallflange
female iron x compression end



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
82571	3/4 x 15	G / K	5	30

Male wallflange
male iron x compression end



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
82680	15 x 15		5	70
82680AN	15 x 15		5	100
82681	22 x 22		5	50
82681AN	22 x 22		5	50

AN = Nickel plated brass

**Straight coupling
with draining tap**

2 x compression ends



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
82780	15 x 15		5	70
82780AN	15 x 15		5	70
82781	22 x 22		5	40
82781AN	22 x 22		5	40

AN = Nickel plated brass

**Straight coupling
with vent**

2 x compression ends



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
82660	15 x 15		5	50
82660AN	15 x 15		5	50
82661	22 x 22		5	25
82661AN	22 x 22		5	25
82662	28 x 28		5	20

AN = Nickel plated brass

**Elbow coupling
with draining tap**

2 x compression ends



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
82670	1/2 x 15		5	100

**Elbow coupling
with draining tap**

male iron x compression end



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
82770	15 x 15		5	70
82770AN	15 x 15		5	70
82771	22 x 22		5	40
82771AN	22 x 22		5	40

AN = Nickel plated brass

Elbow coupling with vent

2 x compression ends



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
84400	15 x 15 u		1	80
84405AN	15 x 15 u		1	80
84409	22 x 22 u		1	40
84410AN	22 x 22 u		1	40

AN = Nickel plated brass u = External

Elbow

compression x plain end



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
82900	15 x 15		1	50
82901	22 x 22		1	40

Straight coupler

2 x male



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
84105	15		5	200

Straight coupling
1 x compression



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
84205	15		5	100

Straight coupling
1 x compression end



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
82800	1/2 x 15		5	60
82800AN	1/2 x 15		5	60

Straight radiator union
male iron x compression end



AN = Nickel plated brass

Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
82790	1/2 x 15		5	50
82790AN	1/2 x 15		5	50

AN = Nickel plated brass

Elbow radiator union
male iron x compression end



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
82560	15		5	100
82561	22		5	90
82562	28		5	60
82563	35		1	30
82564	42		1	20
82565	54		1	10

Tank connector
1 x compression end



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
82710	12 x 8		5	500
82711	12 x 10	G / K	5	400
82712	15 x 10	G / K	5	400
82715	15 x 12	G / K	5	300
82716	22 x 12	G / K	5	200
82717	22 x 15	G / K	5	200
82720	22 x 18	G / K	5	100
82726	28 x 12	G / K	5	80
82718	28 x 15	G / K	5	150
82718AN	28 x 15	G / K	5	150
82719	28 x 22	G / K	5	150
82727	35 x 22	G / K	5	60
82728	35 x 28	G / K	5	100
82729	42 x 28	G / K	5	50
82737	42 x 35	G / K	5	40
82738	54 x 35	G / K	5	40
82739	54 x 42	G / K	5	30

AN = Nickel plated brass

Reducer
1- piece / 3-pieces



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
84079	6		25	1000
84077	8		25	1000
84061	10	G / K	25	500
84061AN	10	G / K	25	500
83706	12	G / K	25	500
83706AN	12	G / K	25	500
83700	15	G / K	25	250
83700AN	15	G / K	25	250
84064	18	G / K	25	200
83701	22	G / K	25	200
83701AN	22	G / K	25	200
83702	28	G / K	25	125
83702AN	28	G / K	25	125
83703	35	G / K	5	70
83704	42	G / K	5	50
83705	54	G / K	5	40

AN = Nickel plated brass

Compression nut



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
82810	12		25	700
82811	15		5	500
82811AN	15		25	500
82812	22		25	400
82813	28		25	350

AN = Nickel plated brass

Blanking plug



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
84081	6		25	1000
84082	8		25	1000
84076	10	G / K	25	1500
84010	12	G / K	25	1500
84070	15	G / K	25	1000
84078	18	G / K	25	900
84071	22	G / K	25	500
84072	28	G / K	25	300
84073	35	G / K	5	200
84074	42	G / K	5	250
84075	54	G / K	5	80

Compression ring



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
47005	1/2 x 15		50	300

Compression set
universal



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
47105	1/2 x 15		50	600

Compression set
type Danfoss



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
47205	1/2 x 15		50	300

Compression set
type Heimeier



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
23905	14 x 2,0	For body 15 mm	10	500
23910	16 x 2,0	For body 15 mm	10	500
23915	20 x 2,0	For body 22 mm	10	500
23925	25 x 2,5	For body 28 mm	10	500
23935	26 x 3,0	For body 28 mm	10	500

**Compression set
For ALU-PEX (Multilayer)**



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
99960	15 x 22		1	25

Open wrench

24 x 32 mm receivers for compression
nut 15 and 22 mm



For the combined size of 15 and 22 mm is only 1 key required where normally 2 pieces are needed.



**BONFIX[®] brass and nickel plated sanitary
compression fittings**



Technical documentation



General

Modern installation techniques are increasingly focusing on:

- a** Quick and time-saving applications,
- b** Simple and quick replacement of the connection fittings,
- c** Guarantee of a high quality.

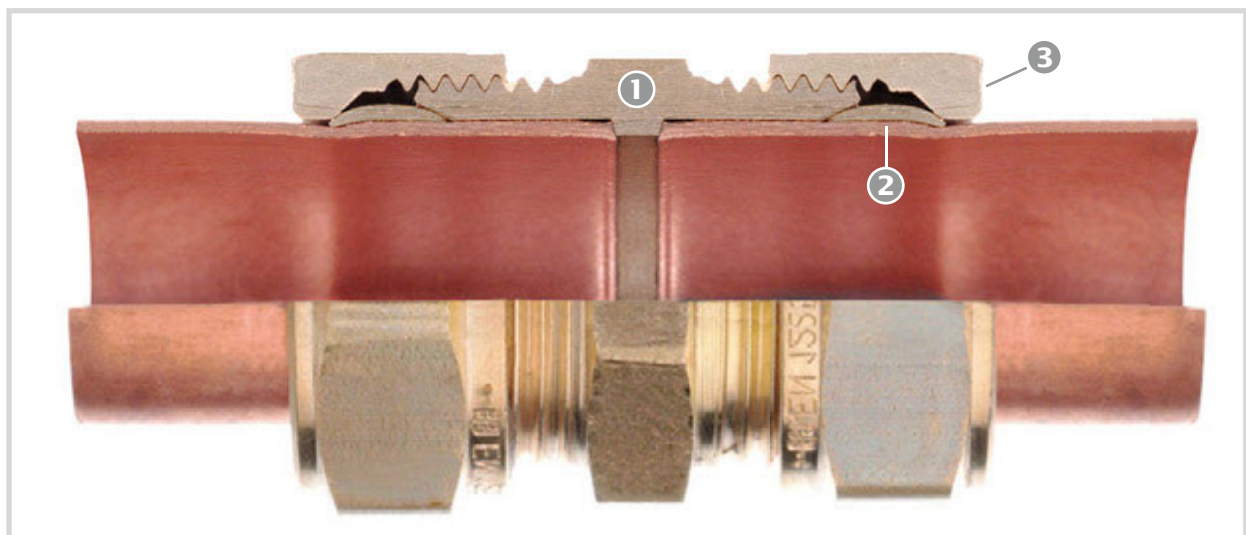
This makes that traditional techniques such as soldering, spot threading, gluing or forcing are replaced by the use of brass compression fittings; not only for heating installations but also for water and gas pipes and industrial transport systems. Moreover, the use of these fittings depends on the following factors:

- a** the size and material of the tube,
- b** the temperature and pressure of the gas or liquid and
- c** the standards of the country where the fittings are implemented en where they have to be officially approved. For example: DIN-DVGW for Germany, V.A. for Denmark, BS864-2 for England, KVBG/ARGB for Belgium, KIWA and GASTEC QA for the Netherlands.



Components

The compression fitting consists of 3 parts: the body (1), the compression ring (2) and the coupling nut (3). It comes fully assembled so that it can be connected to the copper pipe in a simple way.



The compression ring is clamped between the two bores of the compression nut and the housing. By tightening the compression nut, the ring will firstly become distorted at the side of the housing, because at that place, the angle of the housing is smaller than that of the nut. The further tightening of the nut causes the other side of the ring to be clamped in the nut as well; whereby the high pressure on the ring ensures a hermetic seal.


Installation instructions

- Cut the tube to the correct length.

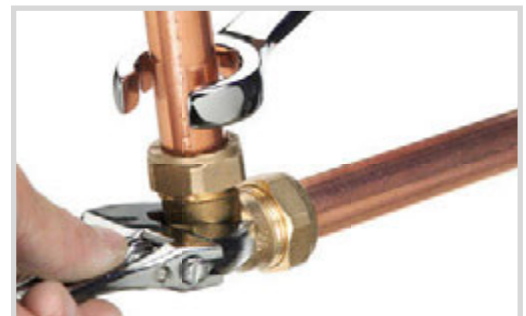
- Remove any burrs and check the tube end for scratches, contaminations or distortions.

- Check the correct position of the compression ring and insert the tube in the fitting until stopped. The ring should now be positioned around the tube. Tighten the coupling nut by hand.

- Tighten the nut subsequently with a wrench, according to the specifications. A complete turn for the diameters of 12 and 15 mm, a 1/2 - 3/4 turn for the diameter of 22 mm and approximately a 3/4 turn for diameters greater than or equal to 28 mm.

Excessive tightening of the compression nut can lead to breakage or leakage. 

- The situation, right after the compression nut has been tightened correctly.
- Check the connection for leaks.



Quality marks

Body	Medium	Max. temp./pressure	Tube material
KIWA BRL639/02	Water	90°C / 10 Bar (1 mPa)	CU 10 - 54 mm
GASTEC QA KE35	Gas	0,2 Bar (20kPa)	CU 10 - 54 mm

The popular sizes bear a KIWA and/or QA GASTEC mark. See, respectively, the K or G indication in the tables, associated with the items.

Warranty and liability

The warranty and liability are in accordance with our general terms and conditions, as deposited with the Chamber of Commerce Oost Nederland under the number 05054087 and they are printed in our catalogue and listed on our website.

The use of parts, other than the original parts of Bonfix compression fittings will nullify the warranty.

Damage caused by stress corrosion is not covered by the product warranty. The warranty will also be void if the products are implemented outside the application scope (temperature, pressure, medium, etc.).

Reassembly of existing connections

An existing connection can be disconnected and re-assembled in a safe way, because the compression ring around the pipe is deformed, and therefore remains in place. This is not allowed for compression fittings in gas installations, see Building Decree (NPR) 3378-11. The compression ring is again put under tension by tightening the coupling nut by hand and subsequently turning a quarter turn.

The compression ring can be removed by obliquely cutting it, without damaging the tube. The ring can then be opened up by inserting a screwdriver into the slot and making a rotating motion. Another way is to use slip joint pliers, the jaws of which are placed over the ring, and to carefully squeeze the ring a few times, while the pliers are being rotated.

The stretched ring can now be slid off the tube.

Concrete-casting / immurement

Tubes for the supply of water may be concrete-cast under the VEWIN Worksheets, if the tubes cannot be affected by the material of the wall or floor.

Hot water pipes should be provided with a casing. We recommend that all concrete-cast tubes (both for hot and cold water) are provided with a casing. In inaccessible areas, a tube sleeve is required, as to allow for any leakage to be detected. For gas, a distinction is made between accessibly and inaccessibly concrete-casting. For a complete list with the exceptions, please refer to the Building Decree (NPR) 3378. Compression fittings with (half hard) copper tubes may be concrete-cast in, for instance, tube ducts.

Installation of a one-piece reducer

Bonfix produces a whole range of one-piece reducer sets, as to allow for almost any reduction to be realized.

The one-piece reducer is provided with a break strip in the middle of the fitting. When tightening the nut, the high pressure forces this strip to break. After $\pm 1/4$ turn the reducer set breaks, this is noticeable when tightening the coupling nut. After the reducer set has broken, the coupling nut has to be tightened by $3/4-1$ turn, whereby both parts will slide together and the tube is clamped and sealed.

Stress corrosion

Stress corrosion cracking (SCC) is a form of corrosion that leads to cracks in the metal due to interaction between metal, the environment and mechanical load (tensile stress during installation).

Stress corrosion can only occur if there is a combination of the following factors:

- a** The presence of ammonia in the insulation material or other corrosive substances in the vicinity of the installation.
- b** Condensation on the installation.
- c** Tensile stress (or residual stress) in the material.

Caution is advised when using brass compression fittings for the installation of refrigeration systems and heat pumps. Therefore, we strongly discourage it. **Assembly is at the own risk of the installer!** For these types of installation, copper solder fittings or bronze thread/solder fittings, which are not susceptible to stress corrosion, should be used.

Use appropriate tools to prevent damage.

Warranty and liability

The warranty and liability are in accordance with our general terms and conditions. Damage caused by stress corrosion is not covered by the product warranty.



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Steel galvanized compression fittings



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
53005	15 x 15		10	120
53010	22 x 22		10	60
53015	28 x 28		10	30
53020	35 x 35		5	15

Straight coupling
2 x compression ends



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
53105	22 x 15		10	80
53110	28 x 22		10	50
53115	35 x 28		5	20
53120	42 x 35		2	10

Straight reducing coupling
2 x compression ends



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
53205	15 x 15		10	120
53210	22 x 22		10	60
53215	28 x 28		10	30
53220	35 x 35		5	20
53225	42 x 42		1	6

Straight coupling without abutment
2 x compression ends



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
53305*	3/8 x 15		10	180
53310*	1/2 x 15		10	180
53315*	1/2 x 22		10	100
53320*	3/4 x 15		10	100
53325*	3/4 x 22		10	100
53330*	3/4 x 28		10	60
53340*	1 x 22		10	60
53345*	1 x 28		10	50
53350*	1 x 35		5	20
53360*	1 1/4 x 35		5	15

Straight coupling
male iron x compression end



* Taper thread

Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
53405	3/8 x 15		10	150
53410	1/2 x 15		10	140
53415	1/2 x 22		10	80
53420	1/2 x 28		10	50
53425	3/4 x 15		10	100
53430	3/4 x 22		10	80
53435	3/4 x 28		10	50
53445	1 x 22		10	50
53450	1 x 28		10	40
53455	1 x 35		5	20
53465	1 1/4 x 35		5	15
53470	1 1/4 x 42		1	10

Straight coupling
female iron x compression end



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
53505	15 x 15		10	100
53510	22 x 22		10	60
53515	28 x 28		10	30
53520	35 x 35		5	20
53525	42 x 42		1	8

Elbow
2 x compression ends



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
53605	22 x 15		10	60
53610	28 x 22		10	30

Reducing elbow
2 x compression ends



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
53705*	3/8 x 15		10	100
53710*	1/2 x 15		10	100
53715*	1/2 x 22		10	50
53720*	3/4 x 22		10	50
53730*	1 x 28		5	30
53740*	1 1/4 x 35		2	12

Elbow
male iron x compression end



* Taper thread

Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
53805	3/8 x 15		10	80
53810	1/2 x 15		10	80
53815	1/2 x 22		10	40
53820	3/4 x 22		10	40
53830	1 x 28		5	20

Elbow
Female iron x compression end



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
53905	15 x 15u		10	80
53910	22 x 22u		10	80

u = External

Elbow
1 x compression



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
54005	15 x 15		10	60
54010	22 x 22		10	50

Elbow coupling with vent
2 x compression ends



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
54105	15 x 15 x 15		10	80
54110	22 x 22 x 22		10	30
54115	28 x 28 x 28		5	20
54120	35 x 35 x 35		2	10
54125	42 x 42 x 42		1	6

Tee
3 x compression ends



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
54205	15 x 22 x 15		10	50
54210	22 x 15 x 15		10	50
54215	22 x 15 x 22		10	40
54220	22 x 22 x 15		10	40
54225	22 x 28 x 22		5	30
54230	28 x 15 x 22		5	30
54235	28 x 15 x 28		5	20
54240	28 x 22 x 22		5	20
54245	28 x 22 x 28		5	20
54250	28 x 28 x 22		5	20
54255	35 x 22 x 35		2	12
54260	35 x 28 x 28		2	10
54265	35 x 28 x 35		2	10

Reducing Tee
3 x compression ends



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
54305	15 x 1/2 x 15		10	80
54310	22 x 1/2 x 22		10	50
54315	22 x 3/4 x 22		10	40
54320	28 x 1/2 x 28		5	30
54330	35 x 1/2 x 35		2	12

Tee
compression ends x female iron



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
54505	15 x 15 x 1/2		10	50
54510	22 x 22 x 1/2		10	30
54520	28 x 28 x 1/2		5	25

Tee
compression ends x compression end



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
54805	15 x 15 x 15		10	60
54810	22 x 15 x 15		10	40
54815	22 x 22 x 15		10	30
54820	22 x 22 x 22		10	30

Corner tee
3 x compression end



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
54905	15 x 15 x 15		10	50
54915	22 x 22 x 22		5	20
54925	28 x 28 x 28		2	10

By-pass tee
3 x compression end



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
55005	15 x 15 x 15 x 15		10	40
55015	22 x 15 x 22 x 15		5	30

Cross-over 90°
4 x compression end



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
55105	1/2 x 15		10	120

Radiatorconnector straight
male iron x compression end



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
55205	1/2 x 15		10	80

Radiatorconnector, elbow
male iron x compression end



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
55305	15		50	500
55310	22		50	300
55315	28		50	200
55320	35		10	100
55325	42		5	30

Compression nut



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
55405	15		50	1000
55410	22		50	500
55415	28		50	300
55420	35		10	150
55425	42		10	100

Compression ring



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
55505	3/8		50	300
55510	1/2		50	300
55515	3/4		50	150
55520	1		10	100
55525	1 1/4		10	100
55530	1 1/2		5	20
55535	2		2	10

Compressionring, thickwalled



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
55605	15		25	250
55610	22		10	200

Airvent plug



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
58605	t.b.v. Unicor		25	200
58610	17		25	300

Endplug



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
55805	15		25	200
55810	22		10	120
55815	28		10	60
55820	35		5	30
55825	42		1	20

Stop end

1 x compression end



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
55905	22 x 15		25	250
55910	28 x 15		25	150
55915	28 x 22		25	150
55920	35 x 22		10	100
55925	35 x 28		10	100
55930	42 x 22		10	40
55935	42 x 28		10	40
55940	42 x 35		10	40

Reducing set



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
56105	3/4 x 15		1	4

Expansion tank-holder



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
56205	22		10	40
56210	28		5	25

Airvent



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
56305*	3/8 x 3/8		10	40
56310*	1/2 x 1/2		10	40
56315*	3/4 x 3/4		5	25
56320*	1 x 1		2	14
56325*	1 1/4 x 1 1/4		1	8
56330*	1 1/2 x 1 1/2		1	6
56335*	2 x 2		1	4

Adapter male, thickwalled
male iron x compression end



* Taper thread

Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
56425	1 1/2 x 1 1/2		1	6
56430	2 x 2		1	4

Adapter female, thickwalled
female iron x compression end



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
56505	1 1/2 x 1 1/2		1	6
56510	2 x 2		1	3

Sleeve coupling, thickwalled
2 x compression end



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
58205	14 x 2,0		25	150
58210	16 x 2,0		25	150

Adaptor for Alupex



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
58305	14 x 2,0		25	150
58310	16 x 2,0		25	150

Adaptor for Pex



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
58410	15		25	150

Adaptor for copper/steel



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
58505	17 - 15		25	400

Nut



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
55705	15		50	300
55710	22		25	200

Endplug



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
58705	17 x 15		10	120

Adaptor



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
58805	15 x 17		10	120
58810	17 x 17		10	100

Straight coupling



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
58905	15 x 17		10	100
58910	17 x 17		10	100

Elbow
M22 x M22



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
59005*	1/2 x 17		10	150

* Taper thread

Adaptor
male x M22



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
59105	1/2 x 17		10	120

Straight coupling
Female x M22



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
59205*	1/2 x 17		10	100

* Taper thread

Transitionelbow
male x M22



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
59305	17x17x17		10	80

**Tee**
M22 x M22 x M22



BONFIX[®] steel galvanised compression fittings

Technical documentation



Introduction

BONFIX BV has a complete range of steel galvanised compression fittings in the sizes 15 to 42 mm which can be used in central heating installations. A connection between thick-walled and thin-walled tubes can be realized by means of a special compression ring. This compression ring ensures a tight seal, which is tested by TNO. The great diversity of these fittings is the unique feature of this range. BONFIX Compression fittings are only used for central heating installations. Other applications are only permitted after prior written approval of BONFIX B.V.



Fittings

The BONFIX compression fittings are used with standard commercially available thin-walled zinc plated steel tubes. The fittings can be implemented within a temperature range of 0° C to 90° C, the peak temperature is 120° C. The maximum pressure is 10 bar at 15 ° C and 6 bar at 90° C.

Tubes

The following tubes can be installed with BONFIX steel galvanised compression fittings.

- Thin-walled, zinc plated steel tubes, seamless or welded, according to EN10303-2 (previously DIN 2393) or EN10305-3 / NEN1982 (previously DIN2394).
- Thick-walled steel heating tubes, manufactured according to DIN 2440 and ISO R65.
- Tubes of hard, half hard and soft copper with dimensions according to EN 1057, wall thickness according to KIWA BRL-K760/03. Copper tubes bearing the KIWA mark meet the requirements. When using copper tubes of half hard or soft copper, a support sleeve has to be implemented.

It is possible to connect tubes of different materials with the same type of coupling, considering a variation of the compression rings. Furthermore, combinations of thin-and thick-walled tubes are possible up to and including the size 2 ". The thick-walled compression rings intercept the size difference between thick and thin-walled tubes. Special fittings are required for rings of the sizes 1 1/2 "and 2". Please refer to the thick-walled fittings whose part numbers start with 563 .., 564 .. and 565 ..

Quality mark

The zinc plated steel compression fittings don't bear a quality mark.

Installation instructions (with compression rings for thin-and thick-walled tubes)

1. Shorten the tube to correct length (by cutting or sawing it) and remove any burrs with a deburrer. Check the tube end for scratches, contaminations or distortions.



2. Slide the coupling nut, and then the compression ring, on the tube. Check the correct position of the compression ring. Insert the longest side of the compression rings for thick-walled tubes in the fitting. Insert the tube into the fitting until stopped. The ring should now abut the conical seat of the fitting.



3. Tighten the coupling nuts hand tight and subsequently tighten them with a suitable open-ended spanner 1Y rotation (= 9 spanner faces).

In case of a compression ring for thick-walled tubes, tighten the nut after the first heat cycle with min. a Y rotation (= 3 Y spanner faces).



4. Check the tightness of the connection and verify whether it is installed according to the local standards.
5. The tubes have to be installed in such a way, as to avoid any tension on the fittings. Expansion joints and bends should be used, where necessary.

The following sizes of compression rings for thick-and thin-walled tubes can be used in compression fittings of the same size:

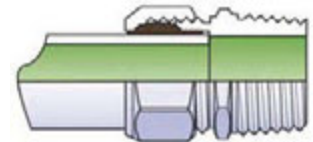
Thick-walled	--	3/8"	1/2"	3/4"	1"	1 1/4"
Diameter fitting	15 mm	22 mm	22 mm	28 mm	35 mm	42 mm

Note: Always use new compression rings when re-using fittings.



Installation requirements for the compression rings:

Insert the thick-walled ring with the long side in the fitting.



Compression fittings with rings for thin-walled and thick-walled tubes after assembly.



Compression fitting with ring for thin-walled tubes after assembly.



Use appropriate tools to prevent damage.

Warranty and liability

The warranty and liability are in accordance with our general terms and conditions. Damage caused by stress corrosion is not covered by the product warranty.



A series of horizontal dashed lines for writing.



Brass capillary fittings



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
81590	12 x 12	G / K	5	300
81600	15 x 15	G / K	5	200
81610	22 x 22	G / K	5	100
82050	28 x 28	G / K	5	60
82160	35 x 35	G / K	5	40
82170	42 x 42	G / K	5	20
82180	54 x 54	G / K	1	15

Straight coupling
2 x solder



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
82060	15 x 12	G / K	10	300
82070	22 x 15	G / K	10	150
85020	28 x 15		1	80
82190	28 x 22	G / K	10	80
85030	35 x 22		1	75
85040	35 x 28	K	1	35
85050	42 x 35		1	30
85060	54 x 42		1	30

Reducing coupling
2 x solder



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
85770	15 u x 1/4		50	750
85790	22 u x 1/2		50	500
85800	28 u x 3/4		50	150

u = External

Reducer
solder x female iron



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
82151	12	G / K	10	500
82152	15	G / K	10	250
82153	22	G / K	10	300
82150	28	G / K	10	150
85150	35		1	100
85160	42		1	60
85170	54		1	40

Stop end
1 x solder



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
82199	12 u x 10		10	800
82203	12 u x 11	K	5	500
82201	15 u x 12	G / K	10	500
82204	15 u x 14	G / K	10	400
85100	22 u x 12		1	400
82202	22 u x 15	G / K	10	250
85110	28 u x 15		1	300
82200	28 u x 22	G / K	10	150
85120	35 u x 22		1	80
82205	35 u x 28	G / K	1	80
85130	42 u x 28		1	50
85140	42 u x 35		1	50

u = External

Reducer
male x female



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
82061	15 u x 12	G / K	10	300
82062	22 u x 15	G / K	10	200
82063	28 u x 22	G / K	10	100
85070	35 u x 28	G / K	1	70
85080	42 u x 35	G / K	1	50
85090	54 u x 42	G / K	1	20

u = External

Reducer
male x solder



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
85180	1/4 x 12	K	10	300
81550	3/8 x 12	K	10	250
81551**	3/8 x 12	G / K	10	250
82210	3/8 x 15	K	10	200
82211**	3/8 x 15	G / K	10	200
82220	1/2 x 12	K	10	200
85820**	1/2 x 12	G / K	10	150
81560	1/2 x 15	K	10	150
81561**	1/2 x 15	G / K	10	150
85190	1/2 x 22	K	10	150
82230	3/4 x 15	K	10	150
82231**	3/4 x 15	G / K	10	120
81570	3/4 x 22	K	10	100
81571**	3/4 x 22	G / K	10	100
85200	1 x 22	K	1	100
81911**	1 x 28	G / K	1	60
85210	1 1/4 x 35	K	1	30
85240**	1 1/4 x 35	G / K	1	25
85220	1 1/2 x 42	K	1	20
85250**	1 1/2 x 42	G / K	1	20
85230	2 x 54	K	1	16
85260**	2 x 54	G / K	1	10

** Long internal thread

Straight connector
female iron x solder



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
81300	3/8 x 12	K	10	300
82321*	3/8 x 12	G / K	10	300
82320	3/8 x 15	K	10	250
82329*	3/8 x 15	G / K	10	250
82240	1/2 x 12	K	10	200
82331*	1/2 x 12	G / K	10	200
81580	1/2 x 15	K	10	200
82322*	1/2 x 15	G / K	10	150
82250	1/2 x 22	K	10	100
82323*	1/2 x 22	G / K	10	100
82260	3/4 x 15	K	10	100
82324*	3/4 x 15	G / K	10	100
81330	3/4 x 22	K	10	100
82325*	3/4 x 22	G / K	10	100
82340	3/4 x 28	K	10	80
82330	1 x 22	K	10	100
82333*	1 x 22	G / K	10	80
82270	1 x 28	K	10	60
82326*	1 x 28	G / K	10	60
82280	1 1/4 x 35	K	10	40
82327*	1 1/4 x 35	G / K	10	40
82350	1 1/2 x 42	K	1	30
82328*	1 1/2 x 42	G / K	1	30
85280	2 x 54	K	1	20
85290*	2 x 54	G / K	1	10

Straight connector
male iron x solder



* Taper thread

Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
81640	12 x 12	G / K	5	250
81650	15 x 15	G / K	5	150
81660	22 x 22	G / K	5	60
81920	28 x 28	G / K	5	40
82100	35 x 35	G / K	5	20
82420	42 x 42	G / K	1	12
85300	54 x 54	K	1	8

Elbow
2 x solder



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
81930	15 x 12	G / K	10	200
82431	22 x 12	G / K	10	100
82430	22 x 15	G / K	10	100
85310	28 x 22	K	1	50

Reducing elbow
2 x solder



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
81311	3/8 x 10		10	500
81180	3/8 x 12	K	10	200
81181**	3/8 x 12	G / K	10	150
81182	3/8 x 15	K	10	300
81183**	3/8 x 15	G / K	10	250
85320	1/2 x 12	K	1	200
81540	1/2 x 15	K	10	120
81541**	1/2 x 15	G / K	10	120
85325**	1/2 x 22	G / K	1	100
81940	3/4 x 22	K	10	120
81941**	3/4 x 22	G / K	10	120
85330	1 x 22		1	70
85340	1 x 28	K	1	40
85350	1 1/4 x 35	K	1	25
85360	1 1/2 x 42		1	20
85370	2 x 54		1	10

** Long internal thread

Elbow
female iron x solder



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
81271	3/8 x 10		10	500
81620	3/8 x 12	K	10	500
81621*	3/8 x 12	G / K	10	200
81622	3/8 x 15	K	10	150
82412*	3/8 x 15	G / K	10	150
81274	1/2 x 10		10	300
82410	1/2 x 12	K	10	250
82411*	1/2 x 12	G / K	10	250
81630	1/2 x 15	K	10	120
81631*	1/2 x 15	G / K	10	120
82440	3/4 x 22	K	10	60
82441*	3/4 x 22	G / K	10	60
85380	1 x 28	K	10	50
85390	1 1/4 x 35	K	1	50
85400	1 1/2 x 42		1	15
85410	2 x 54		1	10

* Taper thread

Elbow
male iron x solder



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
81700	12 x 12 x 12	G / K	10	200
81710	15 x 15 x 15	G / K	10	120
81720	22 x 22 x 22	G / K	10	50
82110	28 x 28 x 28	G / K	10	30
82400	35 x 35 x 35	G / K	5	15
85420	42 x 42 x 42	K	1	10
85430	54 x 54 x 54	K	1	6

Tee
3 x solder



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
81950	12 x 15 x 12	G / K	10	150
81670	15 x 12 x 15	G / K	10	150
81730	15 x 12 x 12	G / K	10	150
81960	15 x 15 x 12	G / K	10	120
82360	15 x 22 x 15	G / K	10	100
81680	22 x 12 x 22	G / K	10	100
81690	22 x 15 x 22	G / K	10	80
81970	22 x 15 x 15	G / K	10	80
81740	22 x 22 x 15	G / K	10	60
82500	22 x 28 x 22	G / K	5	60
81980	28 x 15 x 28	G / K	5	80
85440	28 x 15 x 15		5	70
81990	28 x 22 x 22	G / K	5	60
82000	28 x 22 x 28	G / K	5	40
82380	28 x 28 x 22	G / K	5	50
85490	35 x 15 x 35	K	1	40
82390	35 x 22 x 35	G / K	1	20
85500	35 x 28 x 35	K	1	20
85520	42 x 22 x 42	K	1	20
85530	42 x 28 x 42	K	1	20
85540	42 x 35 x 42		1	15
85545	54 x 15 x 54	K	1	10
85550	54 x 22 x 54		1	10
85570	54 x 35 x 54		1	10

Reducing tee
3 x solder



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
81291	10 x 3/8 x 10		10	500
82030	12 x 1/4 x 12	K	10	450
85590	12 x 3/8 x 12	K	10	300
81294	12 x 1/2 x 12		10	250
82040	15 x 1/4 x 15	K	10	150
82120	15 x 3/8 x 15	K	10	150
82130	15 x 1/2 x 15	K	10	100
82140	22 x 1/4 x 22	K	10	60
85600	22 x 3/8 x 22	K	10	150
82031	22 x 1/2 x 22	K	10	60
82370	22 x 3/4 x 22	K	5	60
85612	22 x 1 x 22		1	60
85610	28 x 1/4 x 28		1	60
82032	28 x 1/2 x 28	K	1	50
85611	28 x 3/4 x 28		1	50
85613	28 x 1 x 28		1	40
85614	35 x 5/4 x 35		1	30
85615	42 x 3/2 x 42		1	20
85616	54 x 2 x 54		1	10

Tee
solder x female iron x solder



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
82010	12 x 12 x 1/4	K	10	400
82020	15 x 15 x 1/4	K	10	300

Tee
solder x solder x female iron



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
85730	12 x 12 x 12 x 12		1	100
85740	15 x 15 x 15 x 15		1	80
85750	22 x 22 x 22 x 22		1	50
85760	28 x 28 x 28 x 28		1	50
85767	54 x 54 x 54 x 54		1	5

Cross
4 x solder



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
90540	3/8 x 12	K	5	80
90540AN	3/8 x 12	K	5	80
90630	3/8 x 15	K	5	100
90640	1/2 x 12	K	5	70
90560	1/2 x 15	K	5	60
90560AN	1/2 x 15	K	5	60
90720	3/4 x 22	K	5	50
85620	1 x 28	K	1	20

Backplate elbow - low
female iron x solder



AN = Nickel plated brass

Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
90550	3/8 x 12	G / K	10	70
90571	1/2 x 12	G / K	10	60
90571AN	1/2 x 12	G / K	10	60
90570	1/2 x 15	G / K	10	50
90570AN	1/2 x 15	G / K	10	50
90600	3/4 x 22	G / K	10	40
90600AN	3/4 x 22	G / K	10	40

AN = Nickel plated brass

Backplate elbow - high
female iron x solder



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
85640	12 x 3/8 x 12	K	1	120
85650AN	12 x 3/8 x 12	K	1	120
90650	15 x 1/2 x 15	K	10	60
90650AN	15 x 1/2 x 15	K	10	60

AN = Nickel plated brass

Backplate tee - low
solder x female iron x solder



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
85660	12 x 3/8 x 12	K	1	70
90651	15 x 1/2 x 15	G / K	1	50
85670	22 x 3/4 x 22	G / K	1	40

Backplate tee
solder x female iron x solder



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
90561	1/2 x 15	G / K	10	50
90561AN	1/2 x 15	G / K	10	50

AN = Nickel plated brass

Backplate elbow with shifted copper end for direct fixing of saddled pipes

female iron x solder



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
85810	1/2 x 15 x 1/2		10	60

Backplate elbow closed type

male iron x solder x female iron





BONFIX® brass capillary fittings

Technical documentation



Introduction

BONFIX B.V. offers a wide range of brass capillary fittings for water supply, gas and central heating installations under the BONFIX® brand name.

Technical specifications

The technical specifications are based on the current status. BONFIX B.V. reserves the right to modify technical specifications without prior notice. No rights can be derived from the technical specifications contained in this brochure.



General

BONFIX® capillary fittings are couplings for realizing gas and watertight connections between one or more copper tubes. The BONFIX capillary fittings have high dimensional accuracy and are made from high quality brass.

Usage

The BONFIX® capillary fittings are suitable for implementation in gas installations, water supply installations and central heating installations. Other uses are only permitted subject to pressure/temperature and medium, after the prior written approval of BONFIX B.V.

Technical information

The BONFIX® hotstamped fittings are made from premium brass: straight fittings are made from CuZn39Pb3 and the press parts (e.g. knees and T-pieces) are made from CuZn40Pb2. The capillary fittings are especially designed for the connection of copper tubes according to EN 1057 with a wall thickness according to KIWA BRL-K760 / 3. At the capillary side, the capillary fittings have a capillarity according to EN 1254-1. The couplings with cylindrical thread are threaded according to ISO 228 (G). The couplings with a tapered interior thread (Rp) and a tapered exterior thread (R) are threaded according to ISO 7/2-2000. Admissible operating pressures (for soft soldering) according to EN 1254-1:

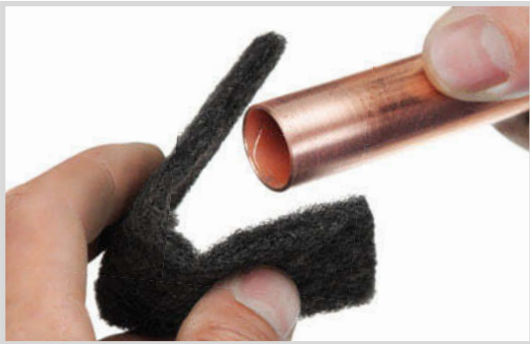
Tube ø	Solder type	Admissible operating pressure in mPa (bar) at a temperature of		
		30°C	65°C	110°C
Up to and including 28	Base tin/lead 50/50%	1,6 (16)	1 (10)	0,6 (6)
35 to and including 54	Base tin/silver 95/5%	2,5 (25)	2,5 (25)	1,6 (16)
Up to and including 28	Base tin/lead 50/50%	1,6 (16)	1 (10)	0,6 (6)
35 to and including 54	Base tin/silver 95/5%	2,5 (25)	1,6 (16)	1 (10)

Quality mark

The popular sizes bear the KIWA and/or QA GASTEC quality mark. See the K or G designation in the tables, associated with the items.

Installation instructions

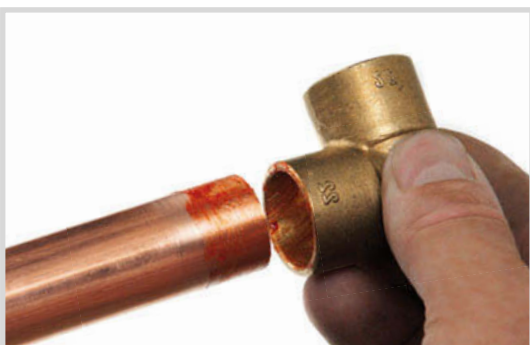
- Cut the tube to correct length at a right angle. The main requirement for a good soldering is, without any doubt, the cleaning of the parts to be connected. The surface has to be free of dust and invisible metal particles, which may impede a proper connection. Fat, chips and dirt can be removed with traditional means such as steel wool, sandpaper or special tools that have been developed for this purpose.



- However, the heating causes the formation of an oxide layer on the surface, which hinders the soldering. Therefore, it is necessary to use a third substance that counteracts the formation of oxide. So the liquid or solder paste has to be applied thinly, smoothly and opaquely on the ends to be soldered.



- Subsequently, the parts to be soldered have to be slid together.



- All the parts have to be heated until the temperature, at which the solder starts to flow when it comes into contact with the parts to be soldered, is reached. Hold the solder against the parts and allow it to flow into the seam. When the solder subsides in between the tube and the fitting, the parts are hot enough and a proper connection is being realized.



- Finally, the solder connection can be cleaned.



Note: Only soft soldering is allowed, hard soldering is not allowed by VEWIN, because of the dezincification of the brass at high temperatures (> 400 ° C).



Use appropriate tools to prevent damage.

Warranty and liability

The warranty and liability are in accordance with our general terms and conditions. Damage caused by stress corrosion is not covered by the product warranty.



A series of horizontal dashed lines for writing.



Double bracket



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
90730	3/8 x 12	K	1	36
90740	1/2 x 15	K	1	24

Wallplate bracket
type Gemini



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
90780	3/8 - 1/2 - 3/4		1	50
90785	3/8 - 1/2 - 3/4		1	50

**Universal plastic
blinking plug**



90780



90785



BONFIX® wallplate brackets (type Gemini)

Technical documentation



Introduction

BONFIX B.V. supplies brass wallplate brackets under the BONFIX® brand name.

Technical specifications

The technical specifications are based on the current status. BONFIX B.V. reserves the right to modify technical specifications without prior notice. No rights can be derived from the technical specifications contained in this brochure.



General

The BONFIX® wallplate brackets consist of a bracket with two wallplates in order to facilitate the installation of wall mixer taps. The bracket provides a fixed centre-to-centre distance of the wallplates.

Usage

The BONFIX® wallplate brackets are suitable for use in drinking water installations. Other uses are only permitted subject to pressure/temperature and medium, after the prior written approval of BONFIX B.V.

Technical information

The BONFIX® wallplates are manufactured from high quality brass (CuZn40Pb2). The wallplates are especially designed for the connection of copper tubes, according to EN 1057 with a wall thickness according to KIWA BRL-K760 / 3. The wallplates are provided with a cylindrical thread according to ISO 228. The brackets meet the European standard 2002/95/CE RoHS: the brackets were subjected to a surface treatment with an ecological galvanization.

Quality mark

The BONFIX® wallplate brackets bear the KIWA quality mark.

Installation instructions

For the assembly of BONFIX® wallplate brackets, please refer to the technical documentation of the solder fittings. Only brass or plastic cylindrical inserts should be used for sealing the wall plates on the bracket. Excessive inward rotations or the use of incorrect inserts may cause leakage of the wallplate, for which we cannot be held liable.

Use appropriate tools to prevent damage

Warranty and liability

The warranty and liability are in accordance with our general terms and conditions. Damage caused by stress corrosion is not covered by the product warranty.





2- and 3-pieces brass fittings



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
70703*	3/8 x 1/2	K	10	120
70705*	1/2 x 3/4	K	10	120
70710*	3/4 x 1	K	10	80
70715*	1 x 1 1/4	K	1	50
70720*	1 1/4 x 1 1/2	K	1	30
70725*	1 1/2 x 2	K	1	20
70730*	2 x 1 1/2	K	1	10

* Taper thread

Nut and lining
male iron x nut



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
00310	3/8 x 12	K	10	450
00260	1/2 x 12	K	10	200
00270	1/2 x 15	K	10	200
00271	3/4 x 15	K	10	100
00210	1 x 15	K	10	100
00211	1 x 22	K	10	80
00212	1 1/4 x 28	K	10	60
00213	1 1/2 x 35	K	10	40
00214	2 x 42	K	1	25
00215	2 1/2 x 54	K	1	10

Nut and lining
female iron x solder



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
00320	12 x 12	G	10	100
00321	15 x 15	G	10	80
00322	22 x 22	G	10	50
00323	28 x 28	G	5	40
00324	35 x 35	G	1	25
00325	42 x 42	G	1	10
00326	54 x 54	G	1	6

3-pieces straight union
2 x solder



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
00219*	3/8 x 12	G	10	120
00220*	1/2 x 15	G	10	80
00240*	3/4 x 22	G	5	40
00241*	1 x 28	G	5	20
00242*	1 1/4 x 35	G	5	15
00243*	1 1/2 x 42	G	1	10
00244*	2 x 54	G	1	6

* Taper thread

3-pieces straight union
male iron x solder



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
00231	3/8 x 12	G	10	100
00230	1/2 x 15	G	10	80
00250	3/4 x 22	G	10	40
00251	1 x 28	G	1	40
00252	1 1/4 x 35	G	1	20
00253	1 1/2 x 42	G	1	10
00254	2 x 54	G	1	8

3-pieces straight union
female iron x solder



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
00291	3/8 x 12	G	10	200
00290	1/2 x 15	G	10	120
00292	3/4 x 22	G	10	30

3-pieces bent connector
female iron x solder



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
00299*	3/8 x 12	G	10	150
00300*	1/2 x 15	G	10	100
00301*	3/4 x 22	G	10	40

3-pieces bent connector
male iron x solder



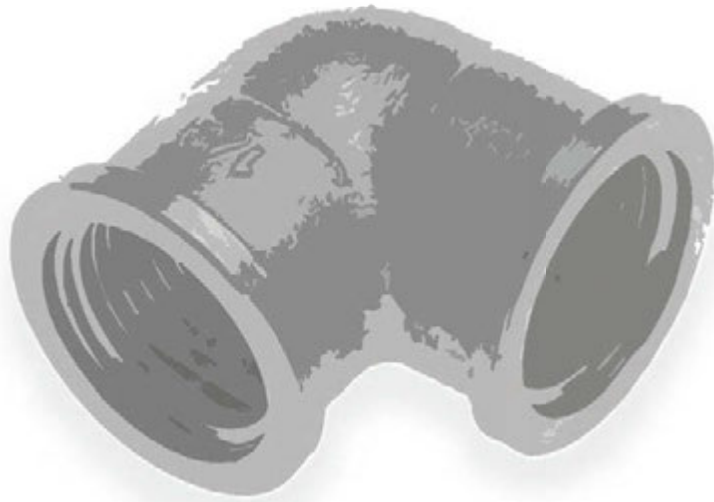
* Taper thread

Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
70708	3/8		1	1000
70709	1/2		1	500
70711	3/4		1	400
70712	1		1	300
70713	1 1/4		1	100

Nut NEN 2544



A series of horizontal dashed lines for writing, spanning the width of the page.



Threaded fittings



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
81750	1/8		25	600
81370	1/4		10	350
81380	3/8		10	200
81380CR	3/8		10	200
81450	1/2		10	150
81450CR	1/2		10	150
81460	3/4		10	90
81050	1		10	60
81060	1 1/4		5	30
81040	1 1/2		5	30
81030	2		5	15
81160	2 1/2		1	6
81170	3		1	5

CR = Polished chrome plated

Socket
2 x female



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
81437	1/4 x 1/8		25	500
81438	3/8 x 1/4		10	250
81439	1/2 x 1/4		25	300
81440	1/2 x 3/8		10	200
81400	3/4 x 1/2		10	100
80774	1 x 3/8		10	70
80770	1 x 1/2		10	70
80780	1 x 3/4		10	50
80788	1 1/4 x 1/2		1	30
80789	1 1/4 x 3/4		1	30
80790	1 1/4 x 1		1	30
80800	1 1/2 x 1		1	25
80810	1 1/2 x 1 1/4		1	25
80814	2 x 1		1	20
80816	2 x 1 1/4		1	20
80820	2 x 1 1/2		1	20

Reducing socket
2 x female



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
87105	1/4		10	800
87110	3/8		10	400
87115	1/2		10	250
87120	3/4		10	120

Straight nipple
male



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
81508	1/8		10	700
81509	1/4		10	500
81510	3/8		10	350
81510CR	3/8		10	350
81130	1/2		10	200
81130CR	1/2		10	200
81520	3/4		10	120
81110	1		10	70
80680	1 1/4		5	50
80670	1 1/2		5	30
80660	2		5	20
80650	2 1/2		1	18
82490	3		1	10

CR = Polished chrome plated

Nipple
2 x male



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
80530	1/4 x 1/8		25	500
80531	3/8 x 1/8		25	600
80540	3/8 x 1/4		10	400
80541	1/2 x 1/4		10	200
80541CR	1/2 x 1/4		10	200
80550	1/2 x 3/8		10	250
80551	3/4 x 3/8		10	150
80560	3/4 x 1/2		10	150
80580	1 x 1/2		10	90
80570	1 x 3/4		10	90
80570CR	1 x 3/4		10	90
80571	1 1/4 x 1/2		10	60
80573	1 1/4 x 3/4		10	60
80590	1 1/4 x 1		10	60
80592	1 1/2 x 3/4		1	50
80591	1 1/2 x 1		1	40
80600	1 1/2 x 1 1/4		1	40
80602	2 x 1		1	30
80604	2 x 1 1/4		1	40
80620	2 x 1 1/2		1	30
80630	2 1/2 x 2		1	10
81820	3 x 2		1	20
81825	3 x 2 1/2		1	10

CR = Polished chrome plated

Reducing nipple
2 x male



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
81426	1/4 x 1/8		10	600
81427	3/8 x 1/8		10	500
81428	3/8 x 1/4		10	400
81467	1/2 x 1/8		10	350
81429	1/2 x 1/4		10	300
81430	1/2 x 3/8		10	300
81430CR	1/2 x 3/8		10	300
81468	3/4 x 1/4		10	200
81469	3/4 x 3/8		10	200
81470	3/4 x 1/2		10	200
81470CR	3/4 x 1/2		10	200
81079	1 x 3/8		10	100
81080	1 x 1/2		10	100
81410	1 x 3/4		10	100
81090	1 1/4 x 1/2		10	70
81100	1 1/4 x 3/4		10	70
80690	1 1/4 x 1		10	70
81010	1 1/2 x 1/2		5	50
81830	1 1/2 x 3/4		5	50
80700	1 1/2 x 1		5	50
81420	1 1/2 x 1 1/4		5	50
80720	2 x 1/2		1	20
80730	2 x 3/4		1	20
80740	2 x 1		1	30
81020	2 x 1 1/4		1	30
80990	2 x 1 1/2		1	30
80760	2 1/2 x 2		1	20
81790	3 x 1 1/4		1	20
81800	3 x 1 1/2		1	20
81810	3 x 2		1	20
81000	3 x 2 1/2		1	15

CR = Polished chrome plated

Reducing bush
male x female



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
80859	1/8		10	700
80860	1/4		10	500
80870	3/8		10	400
80870CR	3/8		10	400
80880	1/2		10	350
80880CR	1/2		10	350
80890	3/4		10	200
80890CR	3/4		10	200
80900	1		10	100
80910	1 1/4		10	80
80920	1 1/2		1	70
80930	2		1	30
80931	2 1/2		1	25

CR = Polished chrome plated

Hexagonal cap
female



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
81339	1/8		10	500
81340	1/4		10	500
81390	3/8		10	350
81070	1/2		10	250
80940	3/4		10	200
80950	1		10	100
80960	1 1/4		10	60
80970	1 1/2		5	40
80980	2		1	40
80981	2 1/2		1	30
80982	3		1	20

Plug
male



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
87705	1/8		10	500
87710	1/4		10	400
87715	3/8		10	300

Air outlet valve
male



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
87205	3/8 x 1/4		10	500
87210	1/2 x 1/4		10	500
87215	1/2 x 3/8		10	500
87220	3/4 x 3/8		10	350
87225	3/4 x 1/2		10	350
87230	1 x 1/2		10	200
87235	1 x 3/4		10	200
87240	1 1/4 x 1		10	100
87245	1 1/2 x 1 1/4		1	100
87250	2 x 1 1/4		1	50

Reducing ring
male x female



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
85900	1/2		1	100
85905CR	1/2		1	100

CR = Polished chrome plated

Attic Wallplate
female iron



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
88305CR	1/2 x 1/2 x 1/2		1	100

CR = Polished chrome plated

Tee
female x female x male



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
87305	1/8		10	1000
87310	1/4		10	800
87315	3/8		10	700
87320	1/2		10	700
87325	3/4		10	400
87330	1		10	200
87335	1 1/4		10	150
87340	1 1/2		10	80
87345	2		10	50

Backnut
female



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
80200	1/8		10	250
80210	1/4		10	170
80220	3/8		10	150
80220CR	3/8		10	150
80230	1/2		10	90
80230CR	1/2		10	90
80240	3/4		10	60
80240CR	3/4		10	60
80250	1		10	30
80260	1 1/4		1	20
80270	1 1/2		1	15
80280	2		1	5
80281	2 1/2		1	4
80282	3		1	2

CR = Polished chrome plated

Elbow
2 x female



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
82602	3/8		10	100
82600	1/2		10	80
82601	3/4		10	40
82604	1		5	30

Elbow
2 x male



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
80290	1/4		10	150
80300	3/8		10	120
80300CR	3/8		10	120
80310	1/2		10	80
80310CR	1/2		10	80
80320	3/4		10	40
80330	1		10	30
80340	1 1/4		5	15
80350	1 1/2		2	10
80360	2		1	5
80365	2 1/2		1	3
80370	3		1	2

CR = Polished chrome plated

Elbow
male x female



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
84905	3/8		10	140
84910	1/2		10	100
84915	3/4		10	50

Elbow
male x female



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
88205	3/4 x 3/4 x 3/4		1	80
88207CR	3/4 x 3/4 x 3/4		1	80

CR = Polished chrome plated

Y-branch
male x female x male



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
81500	1/2 x 1/2 x 1/2		1	100
81500CR	1/2 x 1/2 x 1/2		1	100

CR = Polished chrome plated

Y-branch
female x male x female



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
80120	1/8		10	200
80130	1/4		10	150
80140	3/8		10	80
80150	1/2		10	60
80150CR	1/2		10	60
80110	3/4		10	40
80160	1		5	25
80170	1 1/4		1	15
80180	1 1/2		1	12
80190	2		1	5
80193	2 1/2		1	3
80195	3		1	2

CR = Polished chrome plated

Tee
3 x female



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
80830	1/2 x 3/8 x 1/2		1	100
80840	3/4 x 1/2 x 3/4		1	50
80848	1 x 1/2 x 1		1	20
80850	1 x 3/4 x 1		1	40

Reducing tee
3 x female



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
88105	1/2 x 1/2 x 1/2		1	60
88110	3/4 x 3/4 x 3/4		1	30
88115	1 x 1 x 1		1	15

Tee
female x male x female



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
88005	1/2 x 1/2 x 1/2		1	60

Tee
male x female x male



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
87905	1/2 x 1/2 x 1/2		1	90
87910	3/4 x 3/4 x 3/4		1	70
87915	1 x 1 x 1		1	50

Tee
3 x male



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
87805	1/2 x 1/2 x 1/2 x 1/2		10	50
87810	3/4 x 3/4 x 3/4 x 3/4		10	30
87815	1 x 1 x 1 x 1		1	20

Cross
4 x female



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
99510	1/2 x 1/2		1	50
99515	3/4 x 3/4		1	40
99520	1 x 1		1	25
99525	1 1/4 x 1 1/4		1	12
99530	1 1/2 x 1 1/2		1	12
99535	2 x 2		1	8
99540	2 1/2 x 2 1/2		1	6
99545	3 x 3		1	4
99550	4 x 4		1	1

**Brass Y pattern filter
with stainless steel filter**
2 x female



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
87405	1/2		10	250
87410	3/4		10	150
87415	1		10	100

Double insert



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
87505	1/8 x 10		10	400
87506	1/8 x 14		10	400
87510	1/4 x 10		10	400
87512	1/4 x 14		10	350
87515	3/8 x 10		10	300
87517	3/8 x 12		10	300
87519	3/8 x 14		10	300
87520	1/2 x 10		10	250
87521	1/2 x 12		10	250
87522	1/2 x 14		10	200
87525CR	1/2 x 14		10	250
87526	1/2 x 16		10	200
87528	1/2 x 18		10	200
87530	1/2 x 20		10	150
87532	1/2 x 25		10	100
87535	3/4 x 20		10	100
87537	3/4 x 25		10	100
87539	1 x 25		10	50
87540	1 x 30		10	50
87545	1 1/4 x 30		1	30
87547	1 1/4 x 35		1	30
87549	1 1/4 x 40		1	30
87550	1 1/2 x 40		1	20
87552	1 1/2 x 45		1	15
87555	2 x 50		1	12
87560	2 1/2 x 60		1	9
87565	3 x 80		1	7
87570	4 x 100		1	5

Insert
male x mm



CR = Polished chrome plated

Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
87605	1/8 x 10		10	400
87607	1/8 x 14		10	400
87610	1/4 x 10		10	300
87612	1/4 x 14		10	300
87615	3/8 x 10		10	250
87617	3/8 x 12		10	250
87619	3/8 x 14		10	250
87625	1/2 x 10		10	200
87627	1/2 x 12		10	200
87628	1/2 x 14		10	200
87630	1/2 x 16		10	200
87632	1/2 x 18		10	200
87634	1/2 x 20		10	200
87635	3/4 x 20		10	100
87638	3/4 x 25		10	200
87648	1 x 25		10	200
87645	1 x 30		1	50
87650	1 1/4 x 30		1	40
87652	1 1/4 x 35		1	30
87655	1 1/2 x 40		1	20
87660	2 x 50		1	10

Insert
female x mm



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Reducers and extension nipples



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
45000	1/4 x 1/8		10	400
45020	3/8 x 1/4		10	400
45020CR	3/8 x 1/4		10	400
45030	1/2 x 1/4		10	250
45030CR	1/2 x 1/4		10	250
45040	1/2 x 3/8		10	250
45045CR	1/2 x 3/8		10	250
45050	3/4 x 1/2		10	150
45055CR	3/4 x 1/2		10	150
45060	1 x 1/2		5	100
45065CR	1 x 1/2		5	100
45070	1 x 3/4		5	100
45075CR	1 x 3/4		5	100
45076	1 1/4 x 1		1	80
45085	1 1/2 x 1		1	40

CR = Polished chrome plated

Reducer
female x male



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
86005	3/8 x 10		10	300
86010	3/8 x 15		10	300
86015	3/8 x 20		10	200
86020	3/8 x 25		10	200
86025	3/8 x 30		10	180
86030	3/8 x 40		10	150
86035	3/8 x 50		10	100
86050	1/2 x 10		10	200
86055	1/2 x 15		10	180
86060	1/2 x 20		10	150
86065	1/2 x 25		10	150
86070	1/2 x 30		10	100
86075	1/2 x 40		10	100
86080	1/2 x 50		10	80
86085	1/2 x 55		10	80
86090	1/2 x 60		10	60
86095	1/2 x 70		10	50
86100	1/2 x 80		10	40
86105	1/2 x 100		10	40
86110	3/4 x 10		10	150
86115	3/4 x 15		10	150
86120	3/4 x 20		10	100
86125	3/4 x 25		10	90
86130	3/4 x 30		10	80
86135	3/4 x 40		10	60
86140	3/4 x 50		10	50
86145	3/4 x 60		5	40
86150	3/4 x 70		5	30
86155	3/4 x 80		5	20
86160	3/4 x 100		5	20
86165	1 x 10		1	120
86170	1 x 15		1	100
86175	1 x 20		1	70
86180	1 x 25		1	50
86185	1 x 30		1	50
86190	1 x 40		1	40
86195	1 x 50		1	30

**Extension nipple
polished chrome plated**
female x length (mm)



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
46004	3/8 x 10		10	300
46009	3/8 x 15		10	300
46014	3/8 x 20		10	200
46019	3/8 x 25		10	200
46024	3/8 x 30		10	180
46029	3/8 x 40		10	150
46034	3/8 x 50		10	100
46051	1/2 x 10		10	200
46054	1/2 x 15		10	200
46061	1/2 x 20		10	150
46064	1/2 x 25		10	150
46069	1/2 x 30		10	100
46074	1/2 x 40		10	100
46081	1/2 x 50		10	80
46084	1/2 x 55		10	60
46089	1/2 x 60		10	60
46094	1/2 x 70		10	40
46099	1/2 x 80		10	40
46106	1/2 x 100		5	40
46109	3/4 x 10		10	150
46114	3/4 x 15		10	150
46119	3/4 x 20		10	100
46124	3/4 x 25		10	80
46129	3/4 x 30		10	80
46134	3/4 x 40		10	60
46139	3/4 x 50		10	50
46144	3/4 x 60		5	35
46149	3/4 x 70		5	30
46154	3/4 x 80		5	20
46159	3/4 x 100		5	20
46164	1 x 10		1	120
46169	1 x 15		1	100
46174	1 x 20		1	70
46179	1 x 25		1	50
46184	1 x 30		1	50
46189	1 x 40		1	40
46194	1 x 50		1	30

Extension nipple
female x length (mm)





BONFIX® thread fittings, reducers and tap extension nipples



Technical documentation



Introduction

BONFIX B.V. supplies a wide range of brass and chromed brass thread fittings, reducers, and polished chrome tap extension nipples under the BONFIX® brand name.

Technical specifications

The technical specifications are based on the current status. BONFIX B.V. reserves the right to modify technical specifications without prior notice. No rights can be derived from the technical specifications contained in this brochure.

General

BONFIX® threaded fittings are connectors for a watertight and airtight connection between appliances, accessories and pipes.

Usage

BONFIX® thread fittings, reducers and tap extension nipples are developed to be used with water supply installations, compressed air equipment, and central heating systems.

The fittings are suitable for connecting appliances, accessories, and connectors.

The local regulations should be complied with for the various uses. Other uses are only permitted subject to pressure/temperature and medium and after receiving written consent from BONFIX B.V.

Technical information

The BONFIX® standard brass thread fittings are manufactured using the best brass. The straight fittings are made from CuZn39Pb3 and hotstamped parts from CuZn40Pb2.

Connections laid in the ground or in environments corrosive to brass should be properly protected.

Installation instructions

First, eliminate any dirt from the screw thread. Then, wrap the threads (in the direction of the thread) with hemp, sealant or Teflon PTFE tape. Screw the parts together. Hemp is only suitable for central heating systems.

Quality mark

BONFIX® thread fittings, reducers and tap extension nipples do not have a quality mark.



Use appropriate tools to prevent damage

Warranty and liability

The warranty and liability are in accordance with our general terms and conditions. Damage caused by stress corrosion is not covered by the product warranty.





Tube support for copper pipe



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
50000	12 u x 1,0		100	1500
50010	15 u x 1,0		100	1000
50015	18 u x 1,0		100	800
50020	22 u x 1,0		100	400

u = External

**Copper tube support
for copper pipe**



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
50005	12 u x 1,0		100	1500
50012	15 u x 1,0		100	1000
50018	22 u x 1,0		100	400

u = External

**Brass tube support
for copper pipe**





Bib cocks and undersink cocks



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
70407	1/2 x 3/4	K	1	24
70427	1/2 x 3/4	K	1	24

**Bibcock
for washing machine**



70407



70427

Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
70487	1/2 x 3/4	K	1	24
70488	1/2 x 3/4	K	1	24

**Bibcock
for washing machine**
with non-return valve



70487



70488

Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
70413	3/8 x 12	K	1	50
70413AN	3/8 x 12	K	1	50

AN = Nickel plated brass

Undersink cock
female x compression



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
70422	3/8 x 12	K	1	100

Undersink cock
female x solder



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
90204CR	3/8 x 10		1	27
99977CR	1/2 x 10		1	27

CR = Polished chrome plated

Bathroom angle valve
male x compression





BONFIX® bib cocks and undersink cocks

Technical documentation



Introduction

BONFIX B.V. provides a range of bib cocks and undersink cocks under the BONFIX® brand name.

Technical specifications

The technical specifications are based on the current status. BONFIX B.V. reserves the right to modify technical specifications without prior notice. No rights can be derived from the technical specifications contained in this brochure.



General

The BONFIX® bib cocks and undersink cocks are made for shutting of the water supply using a valve.

Usage

The BONFIX® bib cocks and undersink cocks can be used for (drinking) water systems to shut off the water supply for toilet reservoirs, washbasins, etc. Other uses are only permitted subject to pressure/temperature and medium and after written consent from BONFIX B.V.

Technical information

The BONFIX® bib cocks and undersink cocks are made from high quality brass CuZn40Pb2 en CuZn39Pb3 and can be used in environments with working pressure up to 1000 kPa (10 bar) and temperature up to 90°C.

Quality mark

The BONFIX® bib cocks and undersink cocks bear the KIWA quality mark.

Installation instructions

To install BONFIX® bib cocks and undersink cocks with compression connections, refer to the technical documentation for the compression fittings. To install BONFIX® bib cocks and undersink cocks with capillary connections, refer to the technical documentation for the soldering of fittings.

Use appropriate tools to prevent damage

Warranty and liability

The warranty and liability are in accordance with our general terms and conditions. Damage caused by stress corrosion is not covered by the product warranty.





BONFIX® bibcocks

Technical documentation



Introduction

BONFIX B.V. provides a wide selection of chromed brass bibcocks under the BONFIX® brand name.

Technical specifications

The technical specifications are based on the current status. BONFIX B.V. reserves the right to modify technical specifications without prior notice. No rights can be derived from the technical specifications contained in this brochure.



General

The BONFIX® bibcocks are made for the tapping of water. The taps are KIWA approved. Our taps come in different versions and can have black or chrome knobs and integrated check valves.

Usage

BONFIX® bibcocks are used for drinking water pipes as well as a universal tap connection for washing machines, dishwashers, drinking water tap, and so on. In addition, BONFIX® bibcocks are available with integrated check valves. Only the BONFIX® bibcocks with an integrated check valve are suitable for filling central heating systems. BONFIX® bibcocks with check valves are not suitable as outside taps because these taps cannot be drained in the winter. Other uses are only permitted subject to pressure/temperature and medium and after receiving written consent application from BONFIX B.V.

Technical information

BONFIX® bibcocks are made from premium chromed brass and are equipped with an aerator (DA) and optionally an integrated check valve (EB).

BONFIX® bibcocks can be used in environments with working pressure up to 1000 kPa (10 bar) and temperature up to 90°C.

Function of aerators/check valves

Aerators prevent (polluted) water from being sucked back into the water supply when low pressure occurs. Letting air from the outside into the pipe allows a column of air to form in the pipe that separates the drinking water from the polluted water.

Quality mark

BONFIX[®] bibcocks bear the KIWA quality mark.

Installation instructions

These taps must be installed in accordance with the local water company requirements.

Inspection

Perform the inspection according to the applicable instructions/worksheets according to water worksheet 1.4 G, an aerator (DA) must be periodically inspected, at least once a year, to ensure that it is working properly. Check valves integrated in the bibcocks that cannot be inspected (EB) must be replaced after ten years.

Use appropriate installation tools to prevent damage**Warranty and liability**

The warranty and liability are in accordance with our general terms and conditions.
Damage caused by stress corrosion is not covered by the product warranty.





Eccentric connectors and wall plates with cover



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
80010	1/2 x 3/8		2	40
80030	3/4 x 3/8		2	40
80020	3/4 x 1/2		2	40

**Eccentric connector
brass nickel-plated**
with threaded chrome rosette and gasket



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
80510	3/4 x 3/8		1	32

**Eccentric connector
brass nickel-plated, 17,5 mm**

with threaded chrome rosette and gasket



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
80100	1/2 x 3/8		2	40
80115	1/2 x 1/2		2	40
80125	3/4 x 3/8		2	40
80135	3/4 x 1/2		2	40

**Eccentric connector
brass nickel-plated, 30 mm**
with threaded chrome rosette and gasket



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
80205	3/4 x 1/2		2	40

**Eccentric connector
(screwdriver)**
with threaded chrome rosette and gasket



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
90580	1/2 x 12	K	1	30
90590	3/4 x 15	K	1	30

**Wallplate
with chrome-plate cover**
male iron x copper



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
80315AN	1/2 x 3/8		1	200
80325AN	3/4 x 1/2		1	200

**Eccentric connector
brass nickel-plated**
2 x male



AN = Nickel plated brass

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Gas valves and gas hoses



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
50105	1/2 x 3/4	G	1	100
50110	3/4 x 1	G	1	70

Valve for gas
female x male



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
50205	1/2 x 15	G	1	80

Valve for gas
female x soldering tail piece



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
50305	1/2 x 1/2	G	1	35
50310	3/4 x 3/4	G	1	20
50315	1 x 1	G	1	10
50320	1 1/4 x 1 1/4	G	1	6
50325	1 1/2 x 1 1/2	G	1	4
50330	2 x 2	G	1	2

Valve for gas
female x mail tail piece



50320
50325
50330

Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
50405	15 x 3/4	G	1	80
50410	22 x 3/4	G	1	75
50415	22 x 1	G	1	70

Valve for gas
compression x male



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
50505	15 x 15	G	1	70
50510	22 x 15	G	1	60
50515	22 x 22	G	1	50

Valve for gas
compression x soldering tail piece



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
50605	15 x 1/2	G	1	35
50610	22 x 1/2	G	1	30
50615	22 x 3/4	G	1	20

Valve for gas
compression x male tail piece



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
50705	15 x 1/2	G	1	35
50710	22 x 1/2	G	1	30

Valve for gas
compression x female tail piece



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
50805	15 x 15	G	1	35
50810	22 x 15	G	1	30
50815	22 x 22	G	1	20

Valve for gas
compression x compression tail piece



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
99005	1/2 x 1/2	G	1	80
99010	3/4 x 3/4	G	1	40

Valve for gas
2 x female



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
88405	3/4 x 15	G	1	200
88410	1 x 22	G	1	200
88415	1 1/4 x 28	G	1	100

Nut and lining
female iron x solder



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
88505*	3/4 x 1/2	G	1	250
88510*	1 x 3/4	G	1	80
88515*	1 1/4 x 1	G	1	70

Nut and lining
female iron x male



* Taper thread

Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
88610	3/4 x 1/2	G	1	350
88605	1 x 1/2	G	1	300

Nut and lining
female iron x female



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
81405AN	M24 x 15		10	200

Nut and lining
M24 x copper



AN = Nickel plated brass

Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
88705	3/4 x 15	G	1	120
88710	1 x 22	G	1	100

Nut and lining
Female iron x compression



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
88805AN	M24 x 15		10	150

Nut and lining
M24 x compression



AN = Nickel plated brass

Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
94105CR	1/2 x 15	G	1	100

CR = Polished chrome plated

Gasvalve
compression x female



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
81005CR	1/2	G	1	100

CR = Polished chrome plated

Gate valve (straight-way type)
male x M24



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
81115CR	1/2	G	1	35

CR = Polished chrome plated

Gate valve (elbow type)
male x M24



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
81205CR	3/8	G	10	250
81210CR	1/2	G	10	200

CR = Polished chrome plated

Straight
female x M24



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
81305CR	3/8	G	10	150
81310CR	1/2	G	10	150

CR = Polished chrome plated

Elbow
female x M24



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
81505	30	G	1	25
81511	40	G	1	25
81515	50	G	1	25
81521	60	G	1	25
81525	70	G	1	25
81530	80	G	1	25
81535	90	G	1	25
81542	100	G	1	25
81545	125	G	1	10
81553	150	G	1	10
81558	200	G	1	10
81562	250	G	1	10
81564	300	G	1	10

**Black rubber hose
for gas**
2 x M24



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
81603	40	G	1	25
81605	60	G	1	25
81611	80	G	1	25
81615	100	G	1	25
81619	120	G	1	25

**Yellow stainless steel hose
for gas**
2 x M24





BONFIX[®] gas valves, fittings and gas hoses

Technical documentation



Introduction

BONFIX B.V. provides a wide selection of BONFIX® gas valves, fittings, and stainless-steel gas hoses under the BONFIX® brand name.

Technical specifications

The technical specifications are based on the current status. BONFIX B.V. reserves the right to modify technical specifications without prior notice. No rights can be derived from the technical specifications contained in this brochure. General These BONFIX® products are made for shutting off gas pipes.



Usage

The BONFIX® gas valves are used in gas installations. The BONFIX® gas valves and fittings may be used in accordance with the regulations for natural gas installations in NEN1078 and the Building Decree NPR 3387. Other uses are only permitted subject to pressure/temperature and medium and after receiving written consent from BONFIX B.V.

Technical information

The bodies of all gas valves are made of brass CuZn40Pb2 and CuZn39Pb3. The ball valve taps are equipped with a chromed brass ball and O-ring seal. All fittings are made of brass (CuZn39Pb3). The inlet side of the BONFIX® connecting tap is equipped with a conical external thread R 1/2" in accordance with ISO 7-1. The outlet side is equipped with metric screw thread M24 x 1.5 (in accordance with ISO 724) for the connection of a gas hose set or a two-way connector. The BONFIX® gas taps can be used in environments with working pressure up to 20 kPa (200 mbar) and temperature up to -5°C. The permitted pressure drop for connection pipes may not exceed 0.09kPa (0.9mbar). For installations with an operating pressure of 3 kPa (30mbar), you should consult NEN 1078.

Quality mark

The BONFIX® gas valve and fittings bear the GASTEC QA quality mark.

Installation instructions

According to the regulations, the gate valve must be connected on the inlet side of the internal gas installation. When installing the gate valve, use the appropriate spanners that are intended to fit with the specially made spanner surfaces.

Follow the regulations for natural gas installations as specified in NEN1078 and the Building Decree NPR 3387. Other uses are only permitted after written consent from BONFIX B.V.

Use appropriate tools to prevent damage.

Warranty and liability

The warranty is voided when the use of BONFIX[®] gas taps does not comply with the regulations in NEN 1078 and the Building Decree NPR 3387. The warranty and liability are in accordance with our general terms and conditions.





BONFIX[®] flexible rubber gas connecting hoses

Technical documentation



Introduction

BONFIX B.V. supplies a range of flexible rubber gas connecting hoses under the BONFIX® brand name.



Technical specifications

The technical specifications are based on the current status.

BONFIX B. V. reserves the right to modify technical specifications without prior notice. No rights can be derived from the technical specifications contained in this brochure.

General

The BONFIX® flexible rubber gas connecting hose is made for the connection of the gas connection tap to a gas appliance

Usage

- The BONFIX® flexible rubber gas connecting hose is suitable for use with all gas installations designed for working pressure up to 200 mbar and temperatures between -5°C to 60°C as specified for natural gas installations in the regulations in NEN 1078.
- The BONFIX® flexible rubber gas connecting hose is the solution for the legal requirement for connecting (movable) gas appliances such as cookers ≤ 14 kW, free-standing ovens, hobs or stoves, built-in ovens and built-in stoves, washers, dryers and heaters running on gas, fires and open air portable gas appliances.

Technical information

The BONFIX® flexible rubber gas connecting hose is equipped with the required M24 cap nut connecting hose with integrated sealing ring and available in various lengths.

Quality mark

The BONFIX® flexible rubber gas connecting hose bears the Gastec QA quality mark and is certified to test specification KE 34.

Installation instructions

Gas hoses must show a production date as specified in the Commodities Act. There is no legal requirement regarding lifespan or replacement. **The user is responsible for his gas installation.** Regular inspections of the gas installation should lead to the replacement of damaged or cracked hoses. The environmental conditions determine the lifespan of the product. In optimal conditions, a lifespan of more than 10 years is not unusual.

Use appropriate tools to prevent damage

Warranty and liability

The warranty and liability are in accordance with our general terms and conditions. Damage caused by stress corrosion is not covered by the product warranty.





BONFIX[®] flexible stainless-steel gas connecting hoses



Technical documentation



Attention

Read these instructions carefully before installing or performing maintenance on the flexible stainless-steel gas connecting hoses. Save these installation instructions for future use.

Before beginning the installation, make sure that the place you choose for installing the connecting hose conforms with the applicable installation regulations, worksheets, and safety standards.

Consult a qualified fitter if in doubt about the installation of the flexible stainless-steel gas connecting hose

General

The flexible stainless-steel gas connecting hose is the solution to the legal requirement for connecting gas appliances with a permanent set up.

The flexible stainless-steel gas connecting hose consists of a corrugated stainless-steel (AISI 316L) hose with welded (T.I.G.) stainless-steel (AISI 303) links, nickel-plated brass M24x1.5 cap nuts (CW614N) and is fitted with a yellow PE protective coat.

The stainless-steel gas connecting hose can be connected directly to any gas appliance with a permanent set up.

This product, which is simple and quick to install, guarantees an optimal, safe and flexible connection.

Usage

All gas appliances that have a permanent set up.

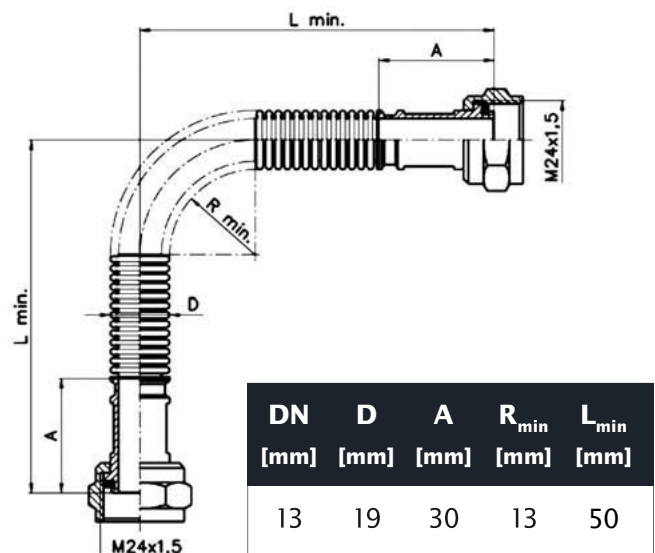
- Examples: built-in cooker, built-in oven, built-in stove, washing machine or dryer running on gas, water heater, storage water heater, gas heater, gas fire, central heating appliance, air heater, cookers > 14 kW, industrial equipment.

Benefits

No need for periodic replacement, direct connection to the gas appliance, quick and easy installation, high temperature resistance, long life span, high flexibility through small bend radius.

Storage

The gas connecting hose should be stored in its original packaging to protect it from dust, dirt and moisture.



Installation instructions

Do not remove the packaging until you are ready to begin the installation. Turn off the gas supply tap before beginning the installation. Make sure you follow the regulations for natural gas installations as specified in NEN 1078. Install the pipe taking the maximum allowable bend radius R_{min} into consideration (see tables). Prevent any kind of damage to the connecting hose during the installation. Do not use tools or exert any twisting strain on the corrugated part of the connecting hose. Each flexible stainless-steel gas connecting hose is checked that it is gas tight. Check that the assembled parts for leaks in accordance with the applicable regulations and worksheets. Remove the foaming agent immediately after checking for leaks and thoroughly clean the gas connecting hose.

Quality mark

The flexible stainless-steel gas connecting hose bears the GASTEC QA quality mark.

Maintenance

The stainless-steel gas connecting hose does not need maintenance.

Liability

We guarantee the perfect quality of the product and its materials. In the unlikely event that you find a fault in the materials and/or workmanship, please return the gas connecting hose with a copy of the sales receipt and a written complaint. Returns must be made within 8 days of purchase.

The quality of the installation of the stainless-steel gas connecting hose depends on many factors that we cannot influence, such that we do not accept any liability beyond replacing a faulty product. In particular, this holds for consequential or financial losses due to faulty installation. In addition, please refer to our general terms and conditions.

Information

For more information, go to our website: www.bonfix.eu

Use appropriate tools to prevent damage

Warranty and liability

The warranty and liability are in accordance with our general terms and conditions. Damage caused by stress corrosion is not covered by the product warranty.



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Belgian gas valve



Article number	Size	KVBG	Per bag	Per box
51205	1/2 x 1/2	KVBG	1	25
51210	3/4 x 3/4	KVBG	1	20
51215	1 x 1	KVBG	1	12
51216	1 1/4 x 1 1/4	KVBG	1	4
51217	1 1/2 x 1 1/2	KVBG	1	4
51220	2 x 2	KVBG	1	3

Gas valves
2 x female



Article number	Size	KVBG	Per bag	Per box
51305	1/2 x 1/2	KVBG	1	25
51310	3/4 x 3/4	KVBG	1	20
51315	1 x 1	KVBG	1	12

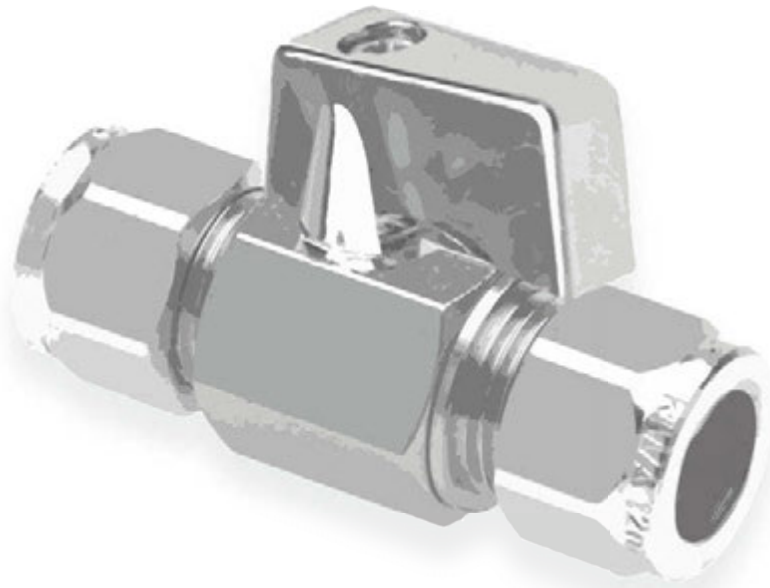
Gas valves
female x female



Article number	Size	KVBG	Per bag	Per box
51405	1/2 x 1/2	KVBG	1	25

Gas valves
female x male





Mini ball valves chrome plated



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
93005	10 x 10	K	5	200
93010	12 x 10	K	5	200
93015	15 x 10	K	5	120

**Straight mini ball valves
(screwdriver)**
2 x compression ends



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
93120	10 x 10	K	5	200
93125	12 x 10	K	5	175
93130	15 x 10	K	5	150

**Straight mini ball valves
(chrome plate handle)**
2 x compression ends



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
93235	10 x 10	K	5	200
93240	12 x 10	K	5	200
93245	15 x 10	K	5	150

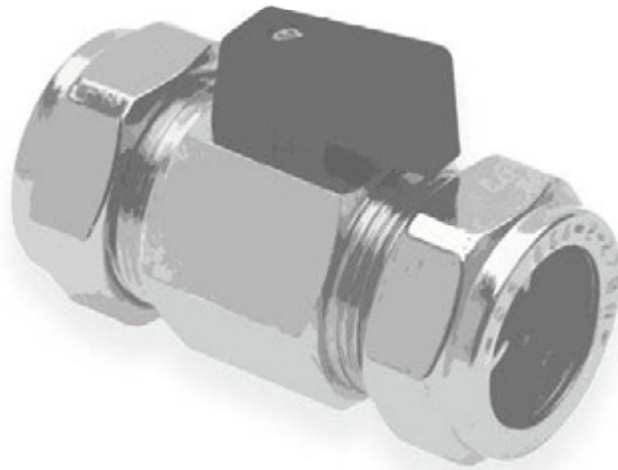
**Angle mini ball valves
(screwdriver)**
2 x compression ends



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
93350	10 x 10	K	5	200
93355	12 x 10	K	5	200
93360	15 x 10	K	5	150

**Angle mini ball valves
(chrome plate handle)**
2 x compression ends





Straight and angled mini ball valves



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
93465	12 x 12	K	5	150
93470	15 x 15	K	5	100
93475	22 x 22	K	5	50

**Straight mini ball valve
(screwdriver)**

2 x compression ends



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
93580	12 x 12	K	5	150
93585	15 x 15	K	5	100
93590	22 x 22	K	5	80

**Straight mini ball valve
(chrome plate handle)**

2 x compression ends



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
93695	12 x 12	K	5	100
93698	15 x 15	K	5	100

**Angle mini ball valve
(screwdriver)**

2 x compression ends



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
93685	3/8 x 12		5	100
93688	3/8 x 15		5	100

**Angle mini ball valve
(screwdriver)**

flat male x compression end



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Mini ball valves general



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
93705	1/8 x 1/8		5	210
93710	1/4 x 1/4		5	180
93715	3/8 x 3/8		5	150
93720	1/2 x 1/2		5	80
93725	3/4 x 3/4		5	45

**Straight mini ball valve
(screwdriver)**

2 x female



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
93830	1/8 x 1/8		5	210
93835	1/4 x 1/4		5	180
93840	3/8 x 3/8		5	150
93845	1/2 x 1/2		5	80
93850	3/4 x 3/4		5	60

**Straight mini ball valve
(black handle)**

2 x female



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
93955	1/8 x 1/8		5	210
93960	1/4 x 1/4		5	180
93965	3/8 x 3/8		5	150
93970	1/2 x 1/2		5	120
93975	3/4 x 3/4		5	90

**Straight mini ball valve
(screwdriver)**

male x female



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
94080	1/8 x 1/8		5	210
94085	1/4 x 1/4		5	180
94090	3/8 x 3/8		5	150
94095	1/2 x 1/2		5	120
94098	3/4 x 3/4		5	60

**Straight mini ball valve
(black handle)**

male x female





Ball cocks



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
92005	1/4 x 1/4		1	75
92010	3/8 x 3/8		1	75
92015	1/2 x 1/2		1	50
92020	3/4 x 3/4		1	30
92025	1 x 1		1	15
92030	1 1/4 x 1 1/4		1	10
92035	1 1/2 x 1 1/2		1	5
92040	2 x 2		1	4
92045	2 1/2 x 2 1/2		1	1
92050	3 x 3		1	1
92055	4 x 4		1	1

Ball cock (straight-way type)
2 x female



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
92145	1/4 x 1/4		1	75
92155	3/8 x 3/8		1	75
92160	1/2 x 1/2		1	50
92165	3/4 x 3/4		1	30
92170	1 x 1		1	15
92175	1 1/4 x 1 1/4		1	10

Ball cock (straight-way type)
2 x female



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
92275	1/4 x 1/4		1	90
92280	3/8 x 3/8		1	75
92285	1/2 x 1/2		1	60
92290	3/4 x 3/4		1	30
92295	1 x 1		1	15
92296	1 1/4 x 1 1/4		1	10
92297	1 1/2 x 1 1/2		1	5
92299	2 x 2		1	3

Ball cock (straight-way type)
female x male



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
92315	1/4 x 1/4		1	90
92320	3/8 x 3/8		1	75
92325	1/2 x 1/2		1	60
92330	3/4 x 3/4		1	30
92335	1 x 1		1	15

Ball cock (straight-way type)
female x male



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
92440	3/8 x 3/8		1	75
92445	1/2 x 1/2		1	50
92450	3/4 x 3/4		1	30
92455	1 x 1		1	15

Ball cock (straight-way type)

2 x male



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
92560	3/8 x 3/8		1	75
92565	1/2 x 1/2		1	50
92570	3/4 x 3/4		1	40
92575	1 x 1		1	30

Ball cock (straight-way type)

2 x male



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
92680	15 x 15		1	30
92685	22 x 22		1	20
92690	28 x 28		1	10
92695	35 x 35		1	5

Ball cock (straight-way type)

2 x compression ends



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
92795	15 x 15		1	50
92797	22 x 22		1	30
92799	28 x 28		1	10

Ball cock (straight-way type)

2 x compression ends



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
92810	1/2 x 1/2		1	50
92815	3/4 x 3/4		1	30
92820	1 x 1		1	25
92825	1 1/4 x 1 1/4		1	10
92830	1 1/2 x 1 1/2		1	10
92835	2 x 2		1	4
92837	2 1/2 x 2 1/2		1	2
92840	3 x 3		1	1
92845	4 x 4		1	1
92850	5 x 5		1	1
92855	6 x 6		1	1

**Full flow gate valve
brass surface**
2 x female



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
92950	1/2		1	30
92955	3/4		1	20
92960	1		1	10

**Ball drain cock
with hose screw joint**
nickel-plated





BONFIX[®] universal ball cocks

Technical documentation



Introduction

BONFIX B.V. offers an extensive range of BONFIX® universal ball cocks. They come in a version of nickel plated brass.

Technical specifications

The technical specifications are based on the current status. BONFIX B.V. reserves the right to modify technical specifications without prior notice. No rights can be derived from the technical specifications contained in this brochure.



General

The BONFIX® universal ball cocks are made for shutting off the water supply within water supply installations, irrigation systems (e.g. in greenhouses) or central heating installations. The cocks have a full bore, which prevents any flow loss and are equipped with a removable red lever or butterfly knob, ensuring an enduring smooth operation.

Usage

The BONFIX® universal ball valves are used in central heating installations, water supply and irrigation systems. Other uses are only permitted subject to pressure/temperature and medium after prior written approval of BONFIX B.V.

Technical information

The BONFIX® universal ball cocks are nickel plated brass cocks and made from high quality brass (CuZn40Pb2); they are provided with a chrome plated ball with a teflon seal, which guarantees a smooth and easy operation.

Quality mark

The BONFIX® universal ball cocks don't bear a quality mark.

Installation instructions

For the BONFIX® universal ball cocks with compression connections, please refer to the technical documentation for compression fittings. Other uses are only permitted subject to pressure/temperature and medium, after prior written approval of BONFIX B.V.

Use appropriate tools to prevent damage

Warranty and liability

The warranty and liability are in accordance with our general terms and conditions. Damage caused by stress corrosion is not covered by the product warranty.





Flexible stainless steel connecting hoses



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
95005	10 x 10	K	10	40
95010	12 x 10	K	10	40
95020	12 x 12	K	10	40
95015	15 x 10	K	10	40
95025	15 x 12	K	10	40
95030	15 x 15	K	10	40

35 centimetre
2 x clamp coupling



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
94905	1/2 x 10	K	10	40
94910	1/2 x 12	K	10	40
94915	1/2 x 15	K	10	40

35 centimetre
screw-cap x clamp coupling



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
95205	3/8 x 3/8	K	10	40
95215	1/2 x 3/8	K	10	40
95210	1/2 x 1/2	K	10	40

35 centimetre
2 x screw-cap



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
95305	3/8 x 3/8	K	10	40
95310	1/2 x 1/2	K	10	40

35 centimetre
screw-cap x male thread



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
95405	3/8 x 10	K	10	40
95410	3/8 x 12	K	10	40
95415	1/2 x 15	K	10	40

35 centimetre
male thread x clamp coupling



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
95505	10	K	10	40
95510	12	K	10	40

35 centimetre
10 mm. plane connecting sleeve x
clamp coupling



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
95105	3/8 x 10	K	10	40
95110	3/8 x 12	K	10	40
95115	3/8 x 15	K	10	40

35 centimetre
screw-cap x clamp coupling



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
95805	10	K	10	40
95810	12	K	10	40

50 centimetre
10 mm plane connecting sleeve x clamp
coupling



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
95705	3/8 x 10	K	10	30
95710	3/8 x 12	K	10	40
95715	3/8 x 15	K	10	40

50 centimetre
screw-cap x clamp coupling



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
95605	12 x 10	K	10	40
95610	15 x 10	K	10	40

50 centimetre
2 x clamp coupling



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
95905	1/2 x 1/2	K	10	30

50 centimetre
2 x screw-cap





BONFIX[®] flexible stainless-steel connecting hoses

Technical documentation



Introduction

BONFIX B.V. provides an extensive selection of BONFIX® stainless-steel flexible connecting hoses.



Technical specifications

The technical specifications are based on the current status.

BONFIX B.V. reserves the right to modify technical specifications without prior notice. No rights can be derived from the technical specifications contained in this brochure.

General

The BONFIX® stainless-steel flexible connecting hoses are made for connecting sanitary fixtures such as clean water taps, etc.

Usage

The BONFIX® stainless-steel flexible connecting hoses can be used for drinking water pipes. Other uses are only permitted subject to pressure/temperature and medium and after written consent from BONFIX B.V.

Technical information

The BONFIX® stainless-steel flexible connecting hoses are made of a stainless-steel outer shell (AISI 304) with an outer diameter of 12 mm. The inner hose is made of rubber (EPDM) with an inner diameter of 8 mm. The BONFIX® stainless-steel flexible connecting hoses can be used in environments with a working pressure up to 1000 kPa (10 bar) and temperature up to 90°C.

Quality mark

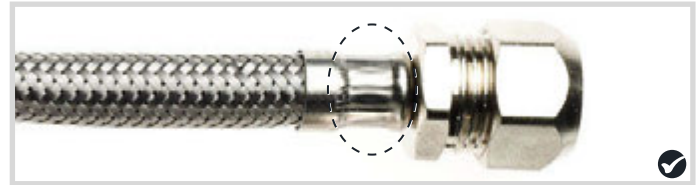
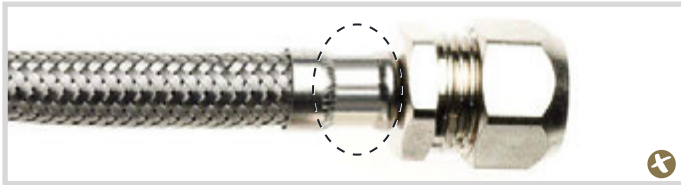
The BONFIX® stainless-steel flexible connecting hoses bear the KIWA quality mark.

Installation instructions

Please note that all products listed in this catalogue are made to be used for a specific purpose. It is up to the customer to choose the correct product for its appropriate purpose and to observe the relevant installation instructions. Everyone installing our products is obliged to make this introduction available to their end user.



- Check that the connecting hoses and the hose are connected without problems at both ends.

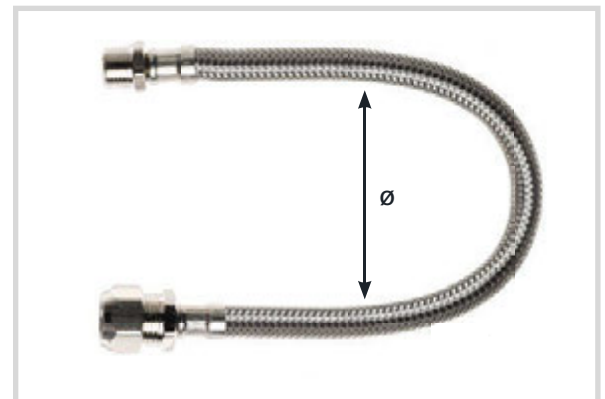


- The hoses must not be put under tension when being installed.



- A bend radius that is too tight will damage the hose. See table for the minimum recommended bend radius per type.

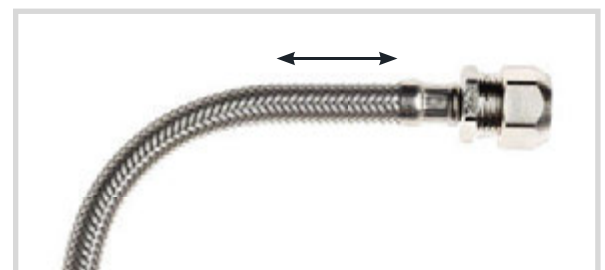
Type	Minimum recommended bend radius
DN6	∅ 50 mm
DN8	∅ 60 mm
DN10	∅ 70 mm
DN13	∅ 90 mm



- Install the connecting hoses without any twists!



- The hose should be straight for a length of twice the hose diameter before the bend.



- The mesh should not be flush mounted. Install the hose so that it can be easily checked.



- Hoses with plain connecting sleeve and an O-ring (for connecting with a single-lever mixing tap, single nozzle tap, etc.) must be manually screwed onto the fixture. Keys or other tools must not be used because the load would be too much and can cause cracks in the connecting sleeve.

A damaged connecting sleeve can fail over time and due to pressure surges. This could cause a lot of damage to your home and is a good reason to avoid the tap being installed by an unqualified individual.

- The hoses connected to the fixture may not be improperly loaded as this can cause damage and future failures.



- The copper pipe must be fully inserted into the connection pieces.



- Pressure regulators should be built in where the water supply installation enters the house.
- The water supply system should not remain under pressure when you are away for prolonged periods or when the temperature drops below 0°C. Frozen water can burst the hose.

Other uses are only permitted subject to pressure/temperature and medium and after written consent from BONFIX B.V.

Use appropriate tools to prevent damage.

Warranty and liability

The warranty and liability are in accordance with our general terms and conditions.
Damage caused by stress corrosion is not covered by the product warranty.



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Stop cocks with KIWA mark



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
96005	12 x 12	K	1	40
96010	15 x 15	K	1	30
96015	22 x 22	K	1	20
96020	28 x 28	K	1	12

Without drainplug connection
2 x solder



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
96105	12 x 12	K	1	30
96110	15 x 15	K	1	30
96115	22 x 22	K	1	15
96120	28 x 28	K	1	10
96125	35 x 35	K	1	5
96130	42 x 42	K	1	4
96135	54 x 54	K	1	2

With drainplug connection
2 x solder



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
96205	12 x 12	K	1	30
96210	15 x 15	K	1	25
96215	22 x 22	K	1	20

Without drainplug connection
solder x solder with union



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
96305	12 x 12	K	1	30
96310	15 x 15	K	1	25
96315	22 x 22	K	1	20
96320	28 x 28	K	1	15
96325	35 x 35	K	1	6
96330	42 x 42	K	1	2
96335	54 x 54	K	1	1

With drainplug connection
solder x solder with union



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
96405	12 x 12	K	1	30
96410	15 x 15	K	1	30
96415	22 x 22	K	1	15

Without drainplug connection

2 x compression ends



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
96505	12 x 12	K	1	30
96510	15 x 15	K	1	30
96515	22 x 22	K	1	15

With drainplug connection

2 x compression ends



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
96905	1/2 x 1/2	K	1	30
96910	3/4 x 3/4	K	1	20
96915	1 x 1	K	1	10

With drainplug connection

2 x female



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
96605	1/4	K	10	150

Drain valve

with fibre ring



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
96705	3/8 (12 mm)	K	1	80
96710	1/2 (15 mm)	K	1	60
96715	3/4 (22 mm)	K	1	40
96720	1 (28 mm)	K	1	30

Head for stop cock
with fibre ring



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
96805	1/4	K	50	1000
96807AN	1/4	K	50	1000

Plug
with fibre ring



AN = Nickel plated brass



BONFIX[®] stop cocks with KIWA mark

Technical documentation



Introduction

BONFIX BV supplies a wide range of KIWA approved stop cocks. They come in capillary and compression versions, with and without drain plug connection under the BONFIX® brand name.

Technical specifications

The technical specifications are based on the current status. BONFIX B.V. reserves the right to modify technical specifications without prior notice. No rights can be derived from the technical specifications contained in this brochure.

General

The BONFIX® stop cocks are designed for shutting off the water supply within a water supply installation by means of a plug valve. The cocks are provided with a replaceable upper part.

Usage

The BONFIX® stop cocks can be used for (drinking) water installations to shut off tubes. Other uses are only permitted subject to pressure/temperature and medium after the prior written approval of BONFIX B.V.

Technical information

The BONFIX® valves are made from first class brass CuZn39Pb3 and CuZn40Pb2 and are provided with a plug seal. The models with a drain plug connection are supplied, including a G1/4" plug, pre-installed at one side. The BONFIX® stop cocks can be used in environments with an operating pressure up to 1000 kPa (10 bar) and at a continuous temperature of up to 60°C.

Quality mark

The BONFIX® stop cocks bear the KIWA quality mark.

Installation instructions

For the installation of BONFIX® stop cocks with compression connections, please refer to the technical documentation for compression fittings. For the installation of BONFIX® stop cocks with capillary connections, please refer to the technical documentation for capillary fittings.



Use appropriate tools to prevent damage

Warranty and liability

The warranty and liability are in accordance with our general terms and conditions. Damage caused by stress corrosion is not covered by the product warranty.





Ball stop cocks with KIWA mark



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
97005	12 x 12	K	1	80
97010	15 x 15	K	1	60
97015	22 x 22	K	1	40
97020	28 x 28	K	1	25

Without drainplug connection

2 x compression ends



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
97105	12 x 12	K	1	80
97110	15 x 15	K	1	60
97115	22 x 22	K	1	40
97120	28 x 28	K	1	25
97125	35 x 35	K	1	6
97130	42 x 42	K	1	4
97135	54 x 54	K	1	2

With drainplug connection

2 x compression ends



97125 97130 97135

Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
97205	1/2 x 1/2	K	1	25
97210	3/4 x 3/4	K	1	20
97215	1 x 1	K	1	10
97220	1 1/4 x 1 1/4	K	1	6
97225	1 1/2 x 1 1/2	K	1	4
97230	2 x 2	K	1	2

With drainplug connection

2 x female iron



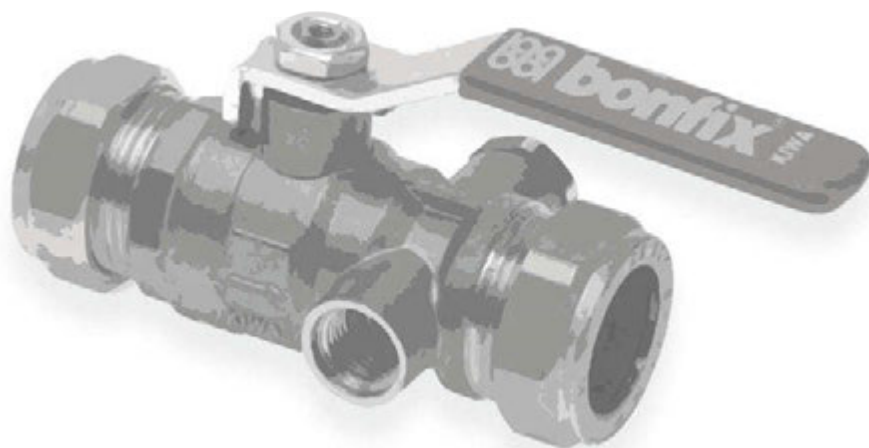
97205 97215 97225

Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
97112	15 x 15	K	1	60
97118	22 x 22	K	1	30
97122	28 x 28	K	1	25

**With drainplug connection
and backflow prevention**

2 x compression ends





KIWA BONFIX[®] ball stop cocks

Technical documentation



Introductions

BONFIX B.V. provides a wide selection of KIWA approved ball stop cocks with and without drain plug connection under the BONFIX® brand name.

Technical specifications

The technical specifications are based on the current status. BONFIX B.V. reserves the right to modify technical specifications without prior notice. No rights can be derived from the technical specifications contained in this brochure.



General

The BONFIX® ball stop cocks are made for shutting off the water supply within a water supply installation by means of a ball valve. The cocks have a full bore and are provided with a blue lever, ensuring an enduring smooth operation, and with a clear open-closed position. Flow losses are prevented, thanks to the full bore.

Usage

The BONFIX® ball stop cocks can be used for drinking water and central heating installations. The models with compression fittings have an additional advantage for renovation projects, as they allow for a quick installation in difficult accessible places. Other implementations are only permitted subject to pressure/temperature and medium, after the written approval of BONFIX B.V.

Technical information

The BONFIX® ball stop cocks are made of high quality brass (CuZn40Pb2) and provided with a chrome plated ball with teflon seal, ensuring an enduring smooth and easy operation. The models with a drain plug connection are supplied including the G1/4" plug, pre-installed on one side. The BONFIX® ball stop cocks can be used in environments with an operating pressure up to 1000 kPa (10 bar), at temperatures up to 90°C.

Quality mark

The BONFIX® ball stop cocks bear the KIWA quality mark.

Installation instructions

For the installation of the BONFIX[®] ball stop valve with compression connections, please refer to the technical documentation for the compression fittings.

Other uses are only permitted subject to pressure/temperature and medium, after the written approval of BONFIX B.V.

Use appropriate tools to prevent damage**Warranty and liability**

The warranty and liability are in accordance with our general terms and conditions. Damage caused by stress corrosion is not covered by the product warranty.





Bib cocks



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
71110	1/2		1	24

Bib cock
polished brass



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
71010	1/2		1	24

Bib cock
polished chrome-plated



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
71310	1/2		1	24

Bib cock with hose-union
polished brass



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
71210	1/2		1	24

Bib cock with hose-union
polished chrome-plated



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
71510	1/2		1	24

Bib cock with lockshield headwork and hose-union
polished brass



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
71410	1/2		1	24

Bib cock with lockshield headwork and hose-union
polished chrome-plated



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
98005	1/2		1	24

Bib cock
polished chrome-plated



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
98200	1/2		1	30
98205	3/4		1	20

Bib cock with hose-union
polished brass



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
98105	1/2		1	30
98110	3/4		1	20

Bib cock with hose-union
polished chrome-plated



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
98305	1/2		1	24

Bib cock with lockshield headwork and hose-union
polished chrome-plated



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
97905	1/2		1	30

Bib cock with hose union
polished chrome-plated



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
97805	1/2		1	1200
97810	1/2		1	1200

Key for bib cock



97805



97810

Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
98405	1/2		1	30
98410	3/4		1	25
98415	1		1	20

Bib cock with hose-union
chromed-sandblasted



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
98805	1/2		1	12

**Combinational valve
for connection**
polished chrome-plated



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
98605	1/2 x 3/4		1	250
98610	3/4 x 1		1	200
98615	1 x 5/4		1	200

**Hose union
with connector and capnut**
polished chrome-plated



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
98905	1/2		1	15
98910	1/2		1	10
98915	1/2		1	10
98920	1/2		1	10
98925	1/2		1	10
98930	1/2		1	10
98935	1/2		1	10
98940	1/2		1	10
98945	1/2		1	10
98950	1/2		1	10

**Artistic tap with rosette
and rubber hose adppter**



98905



98910



98915



98920



98925



98930



98935



98940



98945



98950

Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
99105	1/2 x 15		1	20

Round wallplate
polished



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
97705	3/4 x 1/2 x 1/2		1	150

**Connector
for bib cock assembly**
male x female x male



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
97305	3/4		1	30

Round wallplate with plug
polished brass



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
97405	3/4		1	30

Round wallplate with plug
polished chrome-plated



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
82005	1/2		1	30

Round wallplate + connector
polished chrome-plated



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
97505	3/4		1	30

Square wallplate with plug
polished brass



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
97605	3/4		1	30

Square wallplate with plug
polished chrome-plated



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
71605	1/2		1	1

Frostproof Outside Tap





**BONFIX® frost-proof outside tap with KIWA
non-return valve**

Technical documentation



Introduction

BONFIX B.V. supplies frost-free wall taps with KIWA approved non-return valves under the BONFIX® brand name.

Technical specifications

The technical specifications are based on the current status. BONFIX B. V. reserves the right to modify technical specifications without prior notice. No rights can be derived from the technical specifications contained in this brochure.



Quality mark

The BONFIX® frost-free outside tap is equipped with a KIWA approved non-return valve.

Benefits

- The stainless-steel wall plate (3) has a moulded angle of two degrees and this provides the required drainage through the automatic drain.
- The elbow connector 15 x 18 mm (7) has an angle of 88 degrees to compensate for the two degrees of the wall plate (3).
- The extended compression elbow (7) has a KIWA approved non-return valve from Watts Industries.
- If the hole for the copper pipe (4) is drilled in a masonry joint then the two holes on the stainless-steel wall plate (3) can be drilled exactly in a whole brick.
- The inside of the chromed body (2) is not chromed, which allows a good solder connection to be made.
- The stainless-steel outside tap (3) has a lock hole to prevent rotation of the tap head. For example, when closing or closing the tap.
- The tap has an 18 mm supply pipe (4) instead of 22 mm so that a smaller hole can be drilled in the wall. The flow is the same as for a 22 mm pipe.
- Two methods are provided for using the tap: a screw mounted knob (1) and a removable key (8).
- The tap head (2) is provided with a warning label so that the consumer understands the automatic drain. The label uses non-permanent glue.

Safety precautions

First, check that you have received all the necessary parts. Before you begin, you need to rinse the pipes so that no dirt can get into the non-return valve and/or the tap body.

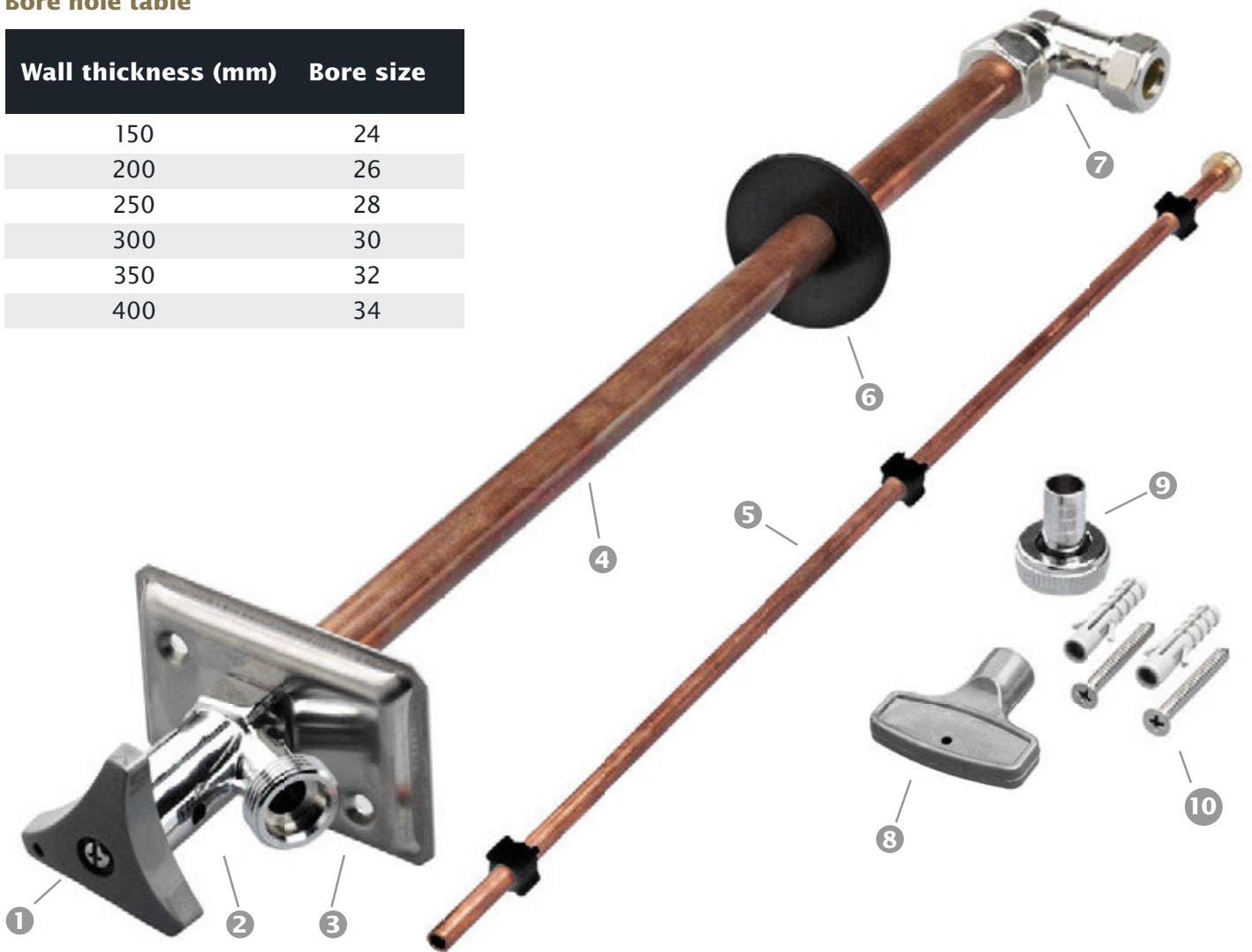
The stainless-steel wall plate has an angle of two degrees. This creates the correct angle of inclination after the outside tap is installed and this ensures proper drainage.

Safety precautions

The built-in non-return valve prevents back flow of contaminated water.

Bore hole table

Wall thickness (mm)	Bore size
150	24
200	26
250	28
300	30
350	32
400	34



Components

The frost-free outside tap with KIWA approved non-return valve consists of several parts: plastic knob (1), tap body (2) and wall plate (3), copper pipe (4) and copper spindle (5), plastic wallbush (6), elbow connector (compression) with KIWA approved non-return valve (7), plastic key (8), hose connector and hose socket (9), and stainless-steel screws with wall plugs (2x) (10).

Operation

The tap is fitted with a plastic knob (1) and also comes with an additional separate plastic key (8). The tap is operated using the fitted knob. If the frost-proof outside tap can be reached by unauthorized persons then the knob can be removed and the supplied key (8) can be used instead.

The tap head has a removable transparent label. The text on the label informs the user that the tap drips after it is turned off. Furthermore, the outside tap is provided with straightforward installation and operating instructions.

Installation instructions

- Determine where the tap will be positioned.
- Dismantle the stainless-steel wall plate (3) and use it to mark the holes on the wall.
- Drill the mounting holes (8 mm drill).
- Determine the bit size using the bore hole table and horizontally drill the feed-through hole.
- Determine the length of the copper tube (4)
and retain at least 25 mm extra length for mounting the elbow connector (7).
- Shorten the copper spindle (5) to exactly the same length as the copper tube (4). Remove burrs and sawing remnants from the copper spindle and tube.
- Fit the wall plate (3) to the tap head (2) and attach the tap to the wall using the supplied wall plugs and stainless-steel screws (10).
- Insert the wallbush (6) over the copper tube (4) on the inside of the wall.
- Slide the brass spindle (5) in the copper tube (4) on the inside of the wall. If there is insufficient space then the spindle can also be mounted from the outside of the nut. Beforehand, dismantle the interior mechanism of the tap head (2).
- Turn the plastic knob (1) to open the tap completely. Then install the elbow connector (7).
- Connect the elbow connector (7) to the water mains.

Use appropriate installation tools to prevent damage

Warranty and liability

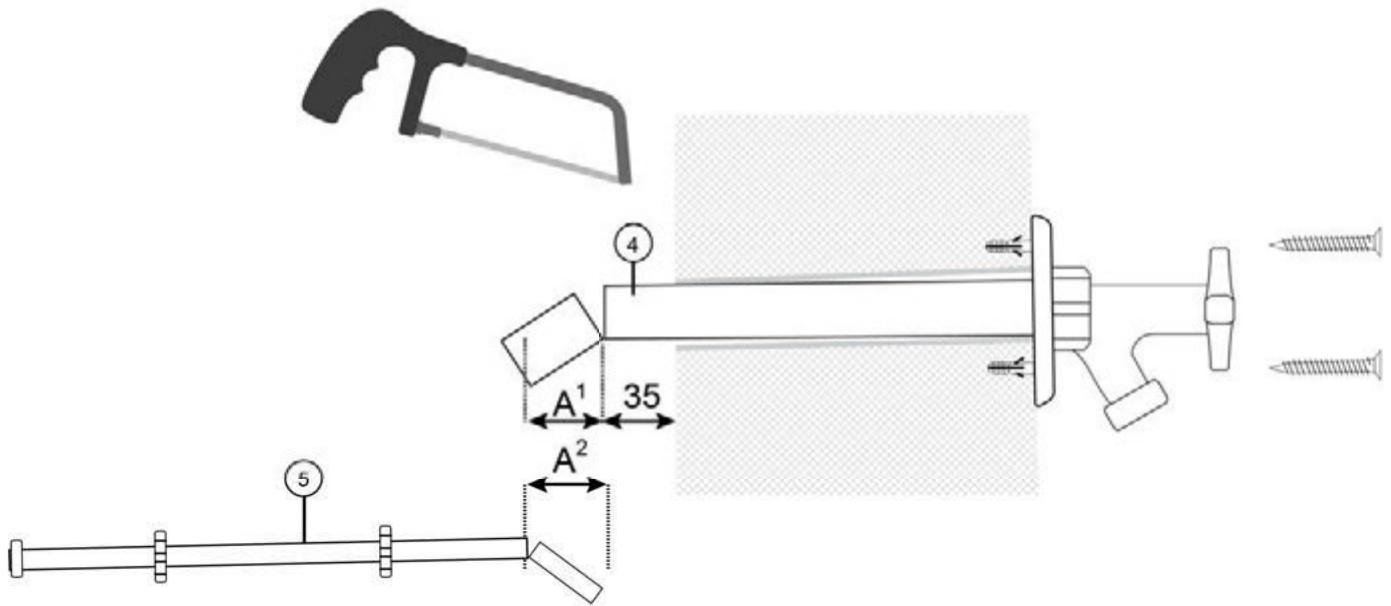
The warranty and liability are in accordance with our general terms and conditions.
Damage caused by stress corrosion is not covered by the product warranty.



Safety precautions

Important information about when the tap has to be shortened!

The shortened length (A2) * of the spindle (5) must exactly match the shortened length (A1) * of the copper pipe (4).



* The shortened length A1 in the diagram is equal to A2.

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Boiler filling cocks



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
94405	1/2		1	50

Boiler filling cock



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
94205	1/2		1	100
94206	1/2		1	100
94210	3/4		1	30

Boiler filling cock
with black handle



94206 : with heavy twisted tulle

Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
94505	1/2		1	50
94510AN	1/2		1	50

Boiler filling cock
with red handle



AN = Nickel plated brass





BONFIX[®] boiler filling cocks

Technical documentation



Introduction

BONFIX B.V. provides an extensive selection of BONFIX® brass boiler filling cocks. They come in brass and nickel plated versions.

Technical specifications

The technical specifications are based on the current status. BONFIX B.V. reserves the right to modify technical specifications without prior notice. No rights can be derived from the technical specifications contained in this brochure.

General

The BONFIX® boiler filling cocks are designed for the filling and draining of radiators and central heating installations.

Usage

The BONFIX® boiler filling cocks can be used in central heating systems, water supply and irrigation systems. Other uses are only permitted subject to pressure/temperature and medium, after prior written approval of BONFIX B.V.

Technical information

The BONFIX® boiler filling cocks are made of high quality brass (CuZn40Pb2) and provided with a ball-lock with an open and closed position, a long exterior tapered thread and a heavy duty hose coupling. The BONFIX® boiler filling cocks can be used in environments with an operating pressure up to 1000 kPa (10 bar), at temperatures up to 90°C.

Quality mark

The BONFIX® boiler filling cocks don't bear a quality mark.

Installation instructions

To create a connection, we recommend the use of approved Gastec tape on the long exterior thread. When opening and closing the fill and drain valve, the cap or knob, never rotate more than 1/4 turn. Other uses are only permitted subject to pressure/temperature and medium, after prior written approval of BONFIX B.V.



Use appropriate tools to prevent damage

Warranty and liability

The warranty and liability are in accordance with our general terms and conditions. Damage caused by stress corrosion is not covered by the product warranty.





Radiator-appendages



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
31005	1/2		1	500
31010	3/4		1	250

Air vent plug rotating head
EPDM gasket



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
33005	1/2		1	250

**Rotating drain plug
small draining**
EPDM gasket



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
34000	3/8		10	300
34005	1/2		1	200

**Rotating drain plug
big draining**
Silicone gasket



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
32005*	1/8		100	1000

**Air vent plug
male**



* Taper thread

Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
99705	5 mm		250	1500

Key



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
35005	5 mm		100	1000

Metal key



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
99605	15 x 1/2		1	8

Thermostatic Radiator Valve - ANGLE TYPE - 15 Copper Tube Connection



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
99610	15 x 1/2		1	8

Thermostatic Radiator Valve - STRAIGHT TYPE - 15 Copper Tube Connection



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
60605	22 x 22		1	25

Differential pressure controller
2 x compression



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
94805	3/8		1	30

Automatic air vent
including 3/8 service valve



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
62005	1/2		1	100
62007	1/2		1	100

Rotating fill and drain valve with silicone O-ring nickel
male



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
30005	1/2		1	500

Blanking plug
EPDM gasket



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
99706	12 mm		1	100

Metal key



BONFIX[®] differential pressure overflow valve

Technical documentation



Introduction

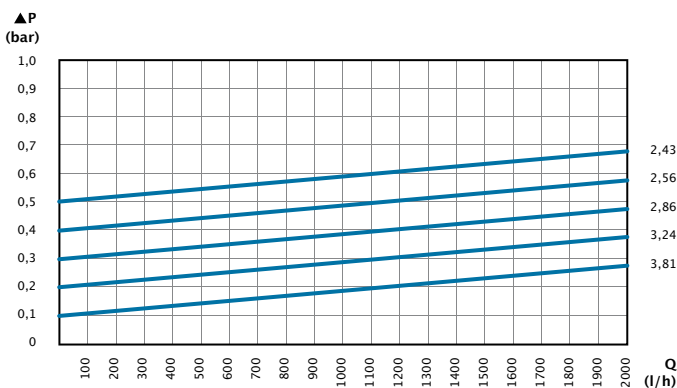
BONFIX B.V. supplies a range of differential pressure overflow valves under the BONFIX® brand name.

Usage and operation:

A differential pressure overflow valve ensures that pressure differences in a central heating system do not occur. Pressure differences can arise from sudden temperature increases, for example, by the clogging of thermostatically controlled taps or the influence of a floor heating system.

The central heating then passes less water through the system causing a pressure difference (also called pressure differential). By placing a differential pressure overflow valve between the supply and return line reduces the pressure difference such that fewer or no interferences occur in the central heating system.

The higher pressure difference opens the differential pressure overflow valve, which prevents a large drop in the water circulation in the central heating system. The differential pressure overflow valve also ensures that a noise nuisance is avoided and ensures a sufficient flow preventing the central heating boiler pump being overloaded.



Technical specifications:

Maximum operating temperature	: 100 degrees celcius
Maximum operating pressure	: 4 bar
Adjustable pressure difference	: 0,1 tot 0,5 bar
Factory default	: 0,2 bar
Junction	: 22 mm compression
Flow direction	: As indicated on the differential pressure overflow valve

Use appropriate tools to prevent damage

Warranty and liability

The warranty and liability are in accordance with our general terms and conditions. Damage caused by stress corrosion is not covered by the product warranty.



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Luxor appendages



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
73005	14 x 2,0		40	320
73010	16 x 2,0		40	320
73015	18 x 2,0		40	320
73020	20 x 2,0		40	320

**TP 98 Compression fitting
for polyethylene pipe**
thread 3/4" eurokonus



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
73100	14 x 2,0		40	320
73105	16 x 2,0		40	320
73110	18 x 2,0		40	320
73115	20 x 2,0		40	320

**TP 99 Compression fitting
for polyethylene pipe**
thread 3/4" eurokonus



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
73205	15		40	320

**TR 91/A Soft compression
fitting with ogive of EP 851
for copper pipe**
thread 3/4" eurokonus



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
73305	1/2 x 3/4		50	400

**RD 900 Reducing nipple +
O-ring**
male x eurokonus



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
74305	1/2		1	80

Angle radiator valve with hand - wheel
2 x eurokonus



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
74405	1/2		1	80

Angle radiator valve with hand - wheel
2 x eurokonus



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
73505	3/4 x 3/4		1	400

RD 902 Dubble nipple
2 x eurokonus



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
73605	1/2 x 3/4		1	50

RD 903 Straight
male x eurokonus



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
73705	1/2 x 3/4		1	30

RC 904 Elbow
male x eurokonus



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
73805	1/2 x 3/4		1	30

RC 905 Elbow
female x eurokonus



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
73905	3/4 x 3/4		1	30

RC 906 Elbow
2 x eurokonus



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
23705	1/2		10	200

Telescopic coupling
male



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
73405	3/4 x 3/4 x 3/4		1	25

RT 911 Tee
3 x eurokonus

A series of horizontal dashed lines for writing.



Teflon tape, hemp and open wrench



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
81706	0,075 mm x 10 m		1	100
81705	0,1 mm x 12 m	G	1	200

Teflon tape
12 mm breed



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
99805	200 gr.		1	50

Sealing hemp
200 gram



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
99960	15 x 22		1	25

Open wrench
24 x 32 mm receivers for compression
nut 15 and 22 mm



For the combined size of 15 and 22 mm is only 1 key required where normally 2 pieces are needed.



Expansion fittings



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
63005	3/4 x 3/4		1	60

Straight coupling
male x female





BONFIX[®] brass expansion vessel coupling

Technical documentation



Introduction

BONFIX B.V. supplies expansion vessel couplings under the BONFIX® brand name.

Expansion vessel coupling

The BONFIX® expansion vessel coupling allows you to easily test whether an expansion vessel is working properly without draining the system and, then if needed, replace the vessel.

Components:

for expansion vessels up to 25 litres.

1: frog G 3/4" external thread **2:** plastic valve **3:** cap nut **4:** sleeve G 3/4" internal thread **5:** valve body



Operation

This new product in the BONFIX selection allows you to test and replace an expansion vessel without draining the entire central heating system and without refilling it again after replacing the expansion vessel. This is possible thanks to the fact that this coupling is equipped with a check valve with a 0-ring seal for the central heating side and for the connection on the expansion vessel.

So, no more spilling of dirty water in the house from the central heating system because the coupling on the expansion vessel side can be disassembled externally.

The vessel expansion can remain in the same position for both installation and removal using the three-part coupling. This is a substantial advantage compared to the usual two-part coupling where the fitter has to rotate the entire vessel to mount the coupling.

Installation is much simpler, faster and of course, cleaner.

Installing a three-part expansion vessel coupling

Wrap the G 3/4" external thread of the frog with hemp, Teflon tape or a suitable liquid packing. Then install the expansion vessel support or fitting on the central heating system side. The frog has a machined surface for easy installation.

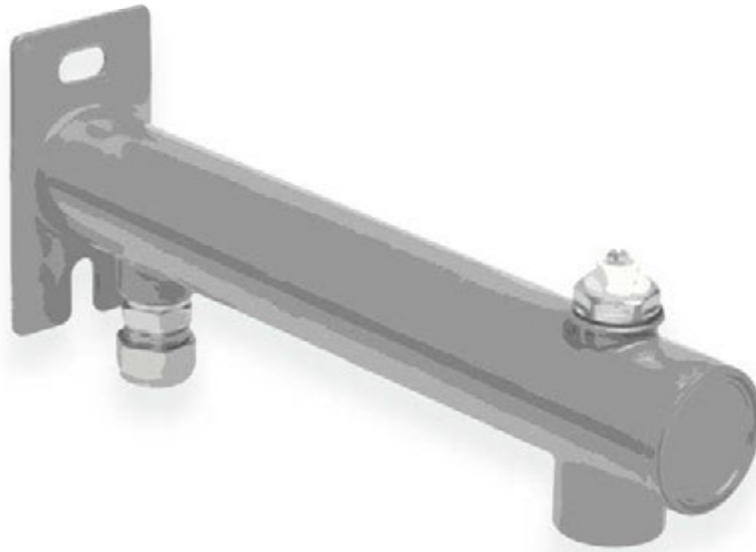
Fit the G 3/4" threaded sleeve of the expansion vessel coupling on the packed external thread of the expansion vessel. Then press the two brass parts together and tighten the cap nut.

Use appropriate tools to prevent damage

Warranty and liability

The warranty and liability are in accordance with our general terms and conditions. Damage caused by stress corrosion is not covered by the product warranty





Expansion vat console



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
99205	3/4 x 15		1	10
99305	3/4 x 15		1	10
99405	3/4 x 15		1	10

Expansion vat console
thread x compression 3 hole with
mounting





Others



Article number	Size	Per bag	Per box
91205	1,5 m	1	50
91210	3,5 m	1	30
91215	5,0 m	1	20

Dark blue filling sets
with 3/4 "swivel mounted right | including key



Article number	Size	Per bag	Per box
91305		1	50

Insulation pad



Article number	Size	Per bag	Per box
91410	680 x 220 x 32	1	50
91415	750 x 220 x 32	1	50
91405	750 x 220 x 32	1	50

Floor pipe
PVC and chrome



Article number	Size	Per bag	Per box
91910	1 1/4 x 32	1	20
91905	1 1/4 x 32	1	30

Chrome plated syphon
Polished chrome tube wall escutcheon



91905



91910

Article number	Size	Per bag	Per box
92105CR	1/2	1	50

CR = Polished chrome plated

T-aerator
female x male



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Safety valve & Boiler connection set



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
52005	1/2		1	100

Safety valve
male x female



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
52105	1/2		1	100

Safety valve
male x female



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
52305	1/2		1	100

Safety valve
2 x female



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
52405	1/2		1	100

Safety valve
2 x female



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
52605	15	K	1	25

Boiler connection set
15 compression - 8 bar



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
52705	15	K	1	25

Boiler connection set
15 compression - 8 bar



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C.V. connection package



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
99040	Reflex		1	1

Reflex-vessel



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
99041	Floco		1	1

Floco-vessel



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
99042	Flexcon		1	1

Flexcon-vessel





Renovation package



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
99050	Reflex		1	48

Reflex-vessel



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
99051	Floco		1	48

Floco-vessel



Article number	Size	Gastec QA/ KIWA-ATA- Certified	Per bag	Per box
99052	Flexcon		1	48

Flexcon-vessel



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GENERAL TERMS AND CONDITIONS		bonfix Top quality since 1860
1. Definitions		
1.1. The following terms bear the meaning assigned to them for the purposes of these general terms and conditions:		
Quotation	a written (which is also deemed to include in electronic form) offer made by Bonfix, any natural person or legal entity that procures products and/or services from Bonfix or negotiates with or consults Bonfix about the supply of products and/or the provision of services;	
Customer	any natural person or legal entity that procures products and/or services from Bonfix or negotiates with or consults Bonfix about the supply of products and/or the provision of services;	
Bonfix	the private company with limited liability, BONFIX B.V., having its registered office in Zwolle in accordance with its articles of association (registered with the Chamber of Commerce and Industry as Number 05004367);	
Order	any order which a Customer places with Bonfix irrespective of the form it takes;	
Agreement	whenever arrangements Bonfix and a Customer agree to, be it in writing or not, as well as any written amendment of or supplement to such arrangements, pursuant to which Bonfix supplies the Customer with products and/or provides the latter with services;	
Terms & Conditions	these general terms and conditions.	
2. Scope of application		
2.1. Any offer made, Quotation presented, Agreement and its execution, as well as any act (legal or otherwise) undertaken by or on behalf of Bonfix for the purposes of the foregoing, shall be governed by these Terms and Conditions and the relevant Agreement. By placing an Order, accepting a Quotation or concluding an Agreement a Customer consents to these Terms and Conditions without reservation.		
2.2. The scope of application of any general terms and conditions other than these Terms and Conditions is explicitly precluded, however they may be called and whatever form they may take. This is deemed to include procurement terms and conditions or any other general terms and conditions which a Customer may have. By accepting an offer or a Quotation made by or on behalf of Bonfix, by placing an Order, by entering into an Agreement with Bonfix, by accepting delivery effected by or on behalf of Bonfix, or by accepting services provided by or on behalf of Bonfix, a Customer shall be deemed to have accepted that these Terms and Conditions will apply unconditionally and that the scope of application of any other general terms and conditions referred to in this article is precluded, and in so far as is relevant that Customer shall be deemed to have rejected the scope of application of other general terms and conditions.		
2.3. Any derogating clauses, supplements, amendments or other arrangements shall only apply if Bonfix and a Customer agree to them in writing, and they shall only apply to the Agreement in respect of which it is agreed that they will apply for the purposes of supplementing and/or derogating from it.		
2.4. Bonfix and a Customer shall be deemed to have declared that they consent to the exclusive application of these Terms and Conditions to any subsequent Quotations, Orders and Agreements involving them as well.		
2.5. Any commercial terms used in offers, Quotations, Orders, Agreements or otherwise must be construed in accordance with the interpretational rules for the interpretation of Commercial Terms introduced by the International Chamber of Commerce (ICC Incoterms), which are applicable when the relevant Agreement is concluded.		
3. Quotation and conclusion of Agreement		
3.1. Any Quotation or other offer made by or on behalf of Bonfix in any form whatsoever, shall be free of obligation and shall not bind Bonfix, unless the parties explicitly agree otherwise in writing.		
3.2. An Agreement shall only be concluded - after a Customer places an Order with Bonfix either in response to a Quotation provided by the latter or otherwise - on the day when Bonfix provides the Customer with written confirmation of his Order (which may or may not occur in electronic form or by e-mail) or on the day when an Agreement entered into by the parties is signed by Bonfix.		
3.3. Verbal undertakings given or arrangements made		



General Terms and Conditions



1. Definitions

1.1. The following terms bear the meaning assigned to them for the purposes of these general terms and conditions:

Quotation	a written (which is also deemed to include in electronic form) offer made by Bonfix;
Customer	any natural person or legal entity that procures products and/or services from Bonfix or negotiates with or consults Bonfix about the supply of products and/or the provision of services;
Bonfix	the private company with limited liability, BONFIX B.V., having its registered office in Zwolle in accordance with its articles of association (registered with the Chamber of Commerce and Industry as Number 05054087);
Order Agreement	any order which a Customer places with Bonfix irrespective of the form it takes; whatever arrangements Bonfix and a Customer agree to, be it in writing or not, as well as any written amendment of or supplement to such arrangements, pursuant to which Bonfix supplies the Customer with products and/or provides the latter with services.
Terms & Conditions	these general terms and conditions.

2. Scope of application

2.1. Any offer made, Quotation presented, Agreement and its execution, as well as any act (legal or otherwise) undertaken by or on behalf of Bonfix for the purposes of the foregoing, shall be governed by these Terms and Conditions and the relevant Agreement. By placing an Order, accepting a Quotation or concluding an Agreement a Customer consents to these Terms and Conditions without reservation.

2.2. The scope of application of any general terms and conditions other than these Terms and Conditions is explicitly precluded, howsoever they may be called and whatever form they may take. This is deemed to include procurement terms and conditions or any other general terms and conditions which a Customer may have. By accepting an offer or a Quotation made by or on behalf of Bonfix, by placing an Order, by entering into an Agreement with Bonfix, by accepting delivery effected by or on behalf of Bonfix, or by accepting services provided by or on behalf of Bonfix, a Customer shall be deemed to have accepted that these Terms and Conditions will apply unconditionally and that the scope of application of any other general terms and conditions referred to in this article is precluded, and in so far as is relevant that Customer shall be deemed to have rejected the scope of application of other general terms and conditions.

2.3. Any derogating clauses, supplements, amendments or other arrangements shall only apply if Bonfix and a Customer agree to them in writing, and they shall

only apply to the Agreement in respect of which it is agreed that they will apply for the purposes of supplementing and/or derogating from it.

2.4. Bonfix and a Customer shall be deemed to have declared that they consent to the exclusive application of these Terms and Conditions to any subsequent Quotations, Orders and Agreements involving them as well.

2.5. Any commercial terms used in offers, Quotations, Orders, Agreements or otherwise must be construed in accordance with the International Rules for the Interpretation of Commercial Terms produced by the International Chamber of Commerce (ICC Incoterms), which are applicable when the relevant Agreement is concluded.

3. Quotation and conclusion of Agreement

3.1. Any Quotation or other offer made by or on behalf of Bonfix in any form whatsoever, shall be free of obligation and shall not bind Bonfix, unless the parties explicitly agree otherwise in writing.

3.2. An Agreement shall only be concluded – after a Customer places an Order with Bonfix either in response to a Quotation provided by the latter or otherwise – on the day when Bonfix provides the Customer with written confirmation of his Order (which may or may not occur in electronic form or by e-mail) or on the day when an Agreement entered into by the parties is signed by Bonfix.

3.3. Verbal undertakings given or arrangements made

by Bonfix and/or any of its subordinates may only be binding on Bonfix, if and in so far as a Customer subsequently confirms them in writing.

- 3.4.** In the event that an Order is placed verbally (which includes by telephone) with a Bonfix employee, it shall only be deemed to have been accepted by Bonfix and an Agreement shall only be deemed to have been concluded, if Bonfix does not notify the Customer concerned that it does not accept the Order or not in the manner in which it was placed: (a) within ten (10) working days after a verbal Order in the case of delivery ex stock; (b) within six (6) months after the relevant Order in the case of any supply which is not covered by §(a); and (c) by no later than when the fulfilment of the relevant Order commences.
- 3.5.** Unless a Customer does not protest against this immediately or within two (2) working days at the latest, the Agreement entered into by the parties shall be deemed to be accurately and comprehensively reflected in a confirmation of the relevant Order or Agreement sent by or on behalf of Bonfix.
- 3.6.** Bonfix shall sell and supply any products ordered by a Customer subject to generally accepted tolerance levels in relation to dimensions, quantities and weights, unless the parties explicitly agree otherwise.
- 3.7.** Any technical advice, figures, measurements and so forth which Bonfix provides, shall only be binding in so far as Bonfix provides a Customer with written confirmation of same. In the absence of written confirmation Bonfix shall not be liable for any loss which occurs as a result of any discrepancies with the information which it has provided. Bonfix at any rate reserves the right to alter any technical specifications without prior notice. No rights may be derived from Bonfix's technical specifications, such as those referred to in its product catalogues, brochures, or technical or other documentation.
- 3.8.** Any amendment and/or cancellation of all or part of an Order by a Customer or at his request may only occur with Bonfix's prior written consent and subject to the condition that the Customer will pay for all of the work which Bonfix has already performed. In the event of full or partial cancellation at a Customer's request, Bonfix shall be entitled to charge the

Customer for any costs (additional or otherwise) associated with this and to set a new delivery time.

- 3.9.** A Customer's acceptance of a Quotation presented or some other offer made by or on behalf of Bonfix or any confirmation of same (in any form whatsoever) which derogates from Bonfix's prior Quotation or offer, shall be deemed to be a rejection of that prior Quotation or offer and to constitute a new offer, which shall not be binding on Bonfix. Notwithstanding the provisions of Section 225(2) of the Civil Code, Vol. 6, this shall also apply in the event that such acceptance merely derogates from Bonfix's offer in minor respects.
- 3.10.** Subject to what is stipulated in the other provisions of this article, Bonfix may still revoke an offer or Quotation with immediate effect even after a Customer has received it. Pursuant to such revocation no agreement shall be concluded and Bonfix shall be required to refund all that it has already received to the Customer concerned. Furthermore, Bonfix shall at all times be entitled to refuse an Order or an Agreement (or to enter into one).
- 4. Supply**
- 4.1.** Except if and in so far as may otherwise be agreed in writing, any delivery time stipulated by or on behalf of Bonfix for the purposes of a Quotation, other offer, or confirmation of an Order or Quotation, is not intended to be of a material nature or a deadline set for fulfilment. Any deadline (or delivery time) stipulated by Bonfix shall be set to the best of its knowledge in accordance with the information that was available when the relevant offer was made or the Agreement concluded, and shall be observed as far as possible.
- 4.2.** Unless Bonfix stipulates otherwise (for example, in its confirmation of the relevant Order or Agreement), the delivery time shall commence at the latest of the times stipulated below (depending on the prevailing circumstances):
- a** the date on which the relevant Agreement is concluded (see Article 3.2 of these Terms and Conditions);
 - b** where additional documents, information, permits, licences and/or other documents are required for the purposes of implementing the

relevant Agreement, the date on which Bonfix receives such documents;

- c** where the parties agree that a sum (or part thereof) must be paid in advance before any work commences, the date on which Bonfix receives that sum.
- 4.3.** Apart from the circumstances prevailing when an Order is confirmed or when an Agreement is signed, the delivery time shall also be based on the timely delivery to Bonfix of any material or products ordered from other parties. In the event of a delay which occurs due to a change in the relevant working conditions or the late delivery of materials or products that have been ordered, in respect of which Bonfix is not culpable, the delivery time shall accordingly be extended proportionately in so far as it is necessary to do so.
- 4.4.** Default shall not occur in the event of a failure to meet a delivery deadline without prior notice of default, nor shall the Customer be entitled to compensation or to cancel the relevant Agreement, except in the case of a deliberate act or omission, or gross negligence on the part of Bonfix.
- 4.5.** Unless the parties explicitly agree otherwise in writing, delivery shall be effected ex-works at the warehouse on Bonfix's premises. The time when delivery is effected ex-works at the warehouse on Bonfix's premises, shall be deemed to be the time of delivery.
- 4.6.** Bonfix shall be entitled to deliver in parts (part deliveries), for which parts separate invoices may be issued, in which case the Customer concerned shall have a duty to pay the separate invoices in accordance with Article 10 of these Terms and Conditions.
- 4.7.** A Customer shall have a duty to inspect any products that are supplied immediately when actual delivery occurs to check for any defects or damage. In the event that it is impossible to inspect the products immediately, the Customer shall be required to notify Bonfix of this as soon as possible but within two (2) working days at the latest. Bonfix must be notified of any claim or complaint concerning the products supplied in accordance with the provisions of Article 6 of these Terms and Conditions.
- 5. Transport and risk**
- 5.1.** Unless the parties agree otherwise in writing, any risks pertaining to the products sold and/or supplied to a Customer by or on behalf of Bonfix shall pass to that Customer at such time as the products are delivered (in accordance with the provisions of Article 4.5 of these Terms and Conditions).
- 5.2.** In the event that the parties agree in writing, that Bonfix will arrange transport for the relevant products, the Customer concerned shall be required to submit delivery instructions to Bonfix no less than five (5) working days before the agreed date of delivery.
- 5.3.** Unless the parties agree otherwise, the products shall be transported at the relevant Customer's risk and expense. The Customer shall also be responsible for any risks involved in the transport in the event that Bonfix declares to the transport company, that Bonfix will be liable for any loss suffered during transport. Bonfix shall not be required to recover any loss suffered from some other party. If required, Bonfix shall assign its rights against the transport company to the relevant Customer.
- 5.4.** In the event that the Customer arranges transport himself, he shall have a duty to collect (or to cause this to be done) any product which he has bought immediately but at any rate within three (3) working days after Bonfix notifies the Customer that the product is ready to be collected. In the event that the Customer is unable to collect the product within that time, Bonfix shall be entitled to issue an invoice to the Customer for the relevant product, and also to store it (or cause this to be done) at its own discretion but at the Customer's risk and expense, and to charge the Customer for the relevant storage costs.
- 5.5.** In the event that a Customer fails to collect a product or fails to do so within the collection period stipulated in Clause 5.4 of these Terms and Conditions, Bonfix shall be entitled to demand compliance on the part of the Customer or to cancel the relevant Agreement, subject to Bonfix's right in either case to seek compensation and payment of the costs referred to in Clause 5.4 of these Terms and Conditions.

6. Claims and complaints

- 6.1.** Pursuant to Article 4.7 of these Terms and Conditions a Customer shall be required to inspect any products that have been supplied immediately when they are actually delivered, to check for any defects or damage. The Customer shall be required to notify Bonfix of any defect or damage in or to a consignment within eight (8) days after they are actually delivered on pain of the extinction of his rights.
- 6.2.** In the event that it is impossible to submit a written complaint within the period stipulated in Clause 6.1, a period of eight (8) days shall apply as of the time when the defect was or could have been noticed.
- 6.3.** In the absence of timely notice in accordance with the provisions of the foregoing clauses (6.1 and 6.2), all of the products concerned shall be deemed to have reached the Customer in good condition and without having suffered any damage, and to have been unconditionally accepted and approved by the Customer. After that period the Customer shall no longer be permitted to enforce any right in relation to any shortcoming, defect, loss and so forth in relation to the products that have been delivered.
- 6.4.** In the event that Bonfix deems that there are grounds for a complaint concerning a consignment, it shall only have a duty to replace the relevant product, if its business interests constitute grounds for doing so and in so far as any replacement or repairs may be expected from Bonfix. The Customer concerned may not enforce a right to compensation of any nature whatsoever. The customer shall only be entitled to proceed with the return of a product, after he receives written consent from Bonfix to do so. Such return shall be effected entirely at the Customer's risk and expense.
- 6.5.** Under no circumstances shall the submission of a complaint discharge a Customer from his financial obligations under the terms of Article 10 of these Terms and Conditions.

7. Warranty

- 7.1.** Bonfix shall be deemed to have complied with its duties in full, if the products that have been supplied satisfy the requirements of normal commercial

quality. More onerous quality requirements shall only apply if agreed to in writing.

- 7.2.** A Customer may only invoke a warranty in the event that the use of a product supplied corresponds with its designated purpose. Use corresponding to its designated purpose shall at any rate be deemed to refer to its use in line with the information concerning the product supplied by Bonfix and only in accordance with the properties ascribed to it by Bonfix or its manufacturer.
- 7.3.** A warranty shall not cover and/or shall not apply in the event that:
- a** any defect which occurs as a result of a failure to comply (strictly) with the relevant installation, operating or maintenance instructions;
 - b** any defect which occurs as a result of exposing the relevant product to abnormal, unforeseen circumstances or as a result of handling the product in some other careless and/or incompetent way;
 - c** any defect which occurs due to the normal wear and tear that the product experiences;
 - d** any defect which occurs or probably occurred as a result of stress corrosion;
 - e** any defect which occurs or probably occurred as a result of the product being assembled and/or installed by some other party, which is deemed to include the relevant Customer himself;
 - f** any defect which occurs as a result of abiding by any government rule concerning the nature or quality of the material used;
 - g** any defect which occurs as a result of using or applying any products, materials, items, works and/or structures explicitly at the request or on the instructions of the Customer concerned;
 - h** any defect which occurs as a result of using a part sourced from some other party;
 - i** the relevant Customer is in default vis-à-vis Bonfix;
 - j** the Customer concerned fails to afford Bonfix an opportunity to inspect a defect within ten (10) working days after it is discovered;
 - k** one (1) year has elapsed since supply was effected.

- 7.4.** Bonfix shall not grant a warranty in relation to the operation and/or potential use of any product which a Customer supplies (or passes on) to some other party or in respect of any product which a Customer

processes and then supplies (or passes on) to some other party.

8. Liability

- 8.1.** Bonfix shall only be liable for any loss that occurs directly pursuant to foreseeable and avoidable deficiencies, for which it may be held culpable and which relate directly to the relevant Agreement (or its implementation).
- 8.2.** Bonfix's liability shall at any rate be confined to its warranty obligations pursuant Article 7 of these Terms and Conditions.
- 8.3.** Any duty (legal or otherwise) that Bonfix has to pay compensation to a Customer on any grounds whatsoever, shall at all times be confined to compensation for direct loss (as stipulated in Clause 8.7 below) – only – subject to a maximum equivalent to the sum which Bonfix's legal liability insurance provider disburses or pays out in the relevant case plus any excess payable by Bonfix. If necessary, Bonfix shall provide information about its maximum insured sum at the request of any Customer.
- 8.4.** If and in so far as Bonfix's legal liability insurance provider does not proceed with such disbursement or payment under the terms of Clause 8.3 for any reason whatsoever, any duty (legal or otherwise) on the part of Bonfix to pay compensation, shall be confined to a maximum equivalent to the amount for which Bonfix issues an invoice (exclusive of VAT) under the terms of the relevant Agreement.
- 8.5.** If and in so far as Bonfix's legal liability insurance provider does not proceed with such disbursement or payment under the terms of Clause 8.3 for any reason whatsoever, or one (1) or more limitation(s) of Bonfix's liability under the terms of this article contravenes or contravene any applicable, mandatory legislation is or are not upheld by a court of law (for example, because it is or they are contrary to principles of equity and fairness) and this could result in Bonfix being liable for compensation (which may include compensation for indirect loss) in excess of EUR 1000.00 (one thousand euros), Bonfix's liability, or at any rate its duty (legal or otherwise) to pay compensation, shall be confined to no more than the latter sum.
- 8.6.** Nonetheless, the maximum sums referred to in Clauses 8.3 to 8.5 shall not apply in the event of deliberate carelessness or gross negligence on the part of Bonfix, albeit only in so far as the loss concerned is due (or also due) to a deliberate act or omission, in respect of which the relevant Customer shall bear the onus of proof, unless otherwise applicable pursuant to the legally stipulated burden of proof.
- 8.7.** Direct loss shall be deemed to refer to:
- a** material damage to any property owned by a Customer;
 - b** any reasonable expenses which a Customer incurs for the purposes of determining liability and loss (or the extent of direct loss);
 - c** any reasonable expenses which a Customer reasonably incurs, could incur or was permitted to incur for the purposes of preventing or limiting any loss in so far as the Customer can show that such costs had the effect of limiting direct loss;
 - d** any reasonable expenses which a Customer reasonably incurs for the purposes of obtaining extrajudicial redress under the terms of Section 96(1)(c) of the Civil Code, Vol. 6.
- 8.8.** Under no circumstances may Bonfix be held liable for or be required to effect compensation for any indirect and/or incidental loss, unless any applicable mandatory legislation does not permit such an exclusion or at any rate the entire exclusion of such loss (or part thereof). Amongst other things, indirect and/or incidental loss shall refer to (but shall not be confined to) consequential loss, a loss of turnover and or earnings, foregone savings, any investments that have been made, any loss due to the interruption or standstill of business operations and/or any expenses incurred by the purposes of preventing, determining or limiting indirect and/or incidental loss and/or liability for same, costs incurred for the purposes of obtaining compensation for indirect or incidental loss by extrajudicial means. Should Bonfix nevertheless be held liable for indirect loss, the provisions of Clause 8.4 and/or 8.5 shall apply (including direct loss).
- 8.9.** Bonfix shall only be liable on the grounds of a culpable failure to comply with any obligation it has pursuant to an Agreement, if a Customer gives Bonfix written notice to the effect that the latter is in

default forthwith, that is to say, within no more than eight (8) days after the relevant delivery or after the relevant defect has been or could have been discovered, in respect of which the Customer grants Bonfix a reasonable period of time within which to comply with his duties pursuant to that Agreement and to do so properly, and Bonfix also appears to be incapable of effecting proper compliance after this period.

8.10. Any claim for compensation and/or compliance made against Bonfix or any right which a Customer is required to enforce against Bonfix, shall lapse or prescribe merely by virtue of the expiry of one (1) year following the incident which occasioned the loss or the invocation of any other right, unless it follows from these Terms and Conditions that some other period (of prescription or otherwise) is applicable.

8.11. With regard to any product which Bonfix obtains from some other party, the provisions (of the relevant contract and/or warranty) governing that relationship shall also apply in relation to the relevant Customer, if and in so far as Bonfix wishes to invoke such provisions. In the event that a Customer wishes to take legal action against such other party directly, that Customer shall indemnify Bonfix against any claim made by such other party in relation to the latter being held liable, as well as any associated costs incurred by Bonfix.

9. Force majeure

9.1. In the event that Bonfix is unable to comply with its obligations pursuant to an Agreement as a result of a situation of force majeure, those duties shall be suspended for as long as that situation persists.

9.2. In the event that a situation of force majeure lasts longer than three (3) months, either party shall be entitled to cancel the relevant Agreement by means of a written statement addressed to the other party.

9.3. A situation of force majeure shall be deemed to exist, if it is impossible to implement all or part of an Agreement due to a cause or incident which Bonfix cannot reasonably avoid or which is partly beyond Bonfix's control. Examples of situations of force majeure are strikes, industrial sit-ins, a delivery delay or failure on the part of any supplier, the

disruption of transport, government measures and so forth.

9.4. In the event of force majeure a Customer shall not claim compensation of any nature or form whatsoever.

10. Payment and prices

10.1. Any price quoted shall be entirely free of obligation, unless otherwise agreed in writing.

10.2. Unless explicitly agreed otherwise, the prices charged by Bonfix shall be exclusive of VAT and any other expenses, such as transport and packaging costs, and so forth.

10.3. Bonfix may pass on the effects of any change in factors which may influence cost, such as purchase prices (of products or raw materials, for example), foreign exchange differences, government measures, import and export duties, transport costs, insurance premiums and so forth to a Customer. The latter shall not be entitled to cancel the relevant Agreement as a result of such a price increase, provided that it is reasonable and fair.

10.4. Unless agreed otherwise in writing, a Customer shall pay all invoices within thirty (30) days net after the relevant invoice date, except where different, specific terms of payment are stipulated on an invoice or in the confirmation of the relevant Order. A Customer shall not be entitled to set-off or suspension in respect of any invoice.

10.5. In the event that Bonfix is of the opinion – and this opinion is reasonable – that a Customer's financial circumstances constitute grounds for doing so, Bonfix shall be entitled to require advance payment or security and may suspend the execution of all or part of the relevant Agreement in anticipation of same.

10.6. A Customer shall be in default merely by virtue of the expiry of a term of payment, or if a moratorium – judicial or extrajudicial – bankruptcy or debt rescheduling has been applied for or has been granted in relation to the Customer, and no initial or further demand or notice of default shall be required for this purpose. The legally stipulated commercial interest rate (Section 119a of the Civil Code,

Vol. 6) shall also be payable on any outstanding amount over the time during which the Customer is in default of payment. The Customer shall be required to pay all judicial and extrajudicial costs, which includes all of the expenses actually charged for legal assistance and advice, such as any fees payable to court bailiffs, local counsel, lawyers, and any other party that – explicitly in derogation of the Liquidatietarief Rechtbanken en Gerechtshoven [Schedule of Fees for Courts of Appeal and District Courts] – is associated with the collection of the claim concerned, and the amount involved shall be set at the equivalent of no less than 15% of the total outstanding sum (exclusive of VAT) subject to a minimum of EUR 500.00 (five hundred euros).

10.7. Any payment made by a Customer shall be deemed to be towards the invoice that has been outstanding the longest.

11. Retention of title

11.1. Any product that is supplied shall remain the property of Bonfix until such time as the relevant Customer fulfils all of his obligations pursuant or related to any Agreement pursuant to which Bonfix has a duty to effect supply. Until that time the Customer shall have a duty to keep any products supplied by Bonfix separate from any other products and to ensure that they can clearly be identified as Bonfix's property.

11.2. A Customer shall not be entitled to rent out, alienate, lend, pledge or otherwise encumber any products before title to them passes to him. The Customer may only sell, deliver or process such products in so far as this is necessary for the purposes of his normal business operations.

12. Cancellation

12.1. In the event of default on the part of a Customer (in so far his compliance is not permanently or temporarily impossible) Bonfix shall be entitled to cancel or terminate the relevant Agreement without judicial intervention, subject to its right to demand compliance (instead) or compensation (instead or in addition to same) and/or to take any other action (legal or otherwise).

12.2. A Customer shall be entitled to cancel the relevant Agreement in the event that Bonfix still culpably fails

to comply with its material obligations pursuant to the relevant Agreement, after being given proper written notice which is as detailed as possible, stipulating a reasonable period of time for it to remedy its default (be it substantial or otherwise). In setting a reasonable period of time for compliance the Customer shall be required to take all of the concrete circumstances of the case into account.

12.3. Furthermore, Bonfix shall be entitled to cancel all or part of an Agreement with immediate effect without notice of default or judicial intervention by means of a written notice in the event that the Customer concerned is granted a moratorium be it provisional or otherwise, in the event that an application is filed for the Customer's bankruptcy or he is declared bankrupt, should his business be liquidated or terminated other than for the purposes of restructuring it or a merger of businesses, or in the event that the Customer's business is sold or a change occurs in his management board. Under no circumstances shall Bonfix have a duty to pay compensation pursuant to cancellation on these grounds.

12.4. Any amount for which Bonfix has issued an invoice before termination or cancellation in connection with what it has already done or supplied for the purposes of implementing an Agreement, shall remain payable in full and shall fall due with immediate effect upon cancellation.

13. Intellectual property rights

13.1. All intellectual property rights (which is at any rate deemed to include copyright, trademarks, patents, trading names, database rights and know-how) and any related materials, such as analyses, reports, designs, advice, sketches, drawings, documentation, instruction manuals and any preparatory material for same, belonging to Bonfix shall explicitly continue to be vested in Bonfix (or its licensors or suppliers). This shall also apply to any products developed for or placed at the disposal of a Customer pursuant to an Agreement (or a contract for the provision of professional services).

13.2. A Customer shall not be permitted to remove or amend any inscription concerning intellectual property rights from Bonfix's products. A Customer shall guarantee that he will not do or omit to do

anything which infringes on Bonfix's intellectual property rights, renders them invalid and/or poses a danger to these rights.

13.3. In the unlikely event it appears that a product which Bonfix has sold to a Customer in the Netherlands infringes on any intellectual property right held by a third party and legal action is taken against the Customer in this respect, the Customer shall have a duty to notify Bonfix of this in writing immediately. Acting at its own discretion, Bonfix shall either obtain the right to use that product, shall supply a replacement product which does not cause an infringement or shall refund the purchase price to the Customer after it has received the product from the latter, less a reasonable fee for the period during which the Customer had the product at his disposal. A Customer shall not have any claim nor be entitled to enforce one in the case of an infringement of intellectual property rights outside the Netherlands.

13.4. Bonfix may not under any circumstances be held liable for the infringement of any intellectual property or exclusive right due to any modification of a product sold or supplied by or on behalf of Bonfix, or the use or application of such a product, which differs from that stipulated by Bonfix, which the latter assumed would be the case, or which occurred without Bonfix's knowledge or consent.

14. Governing law and disputes

14.1. All Agreements and disputes between Bonfix and a Customer shall be governed by and construed in accordance with the law of the Netherlands.

14.2. The Vienna Convention on Contracts of Sale shall not apply, unless the parties explicitly agree otherwise in writing.

14.3. In the event that it is impossible to settle any dispute between Bonfix and a Customer amicably, it shall only be brought before the appropriate competent court of law in Zwolle, the Netherlands.

15. Other provisions

15.1. In the event that any provision of these Terms and Conditions is void or is nullified, their remaining articles shall continue to apply in full. Bonfix and the Customer concerned shall (or shall have a duty to do

so) consult each other for the purposes of agreeing on a new provision to replace the one that is void or has been nullified, and when doing so shall as far as possible have regard to the purpose and purport of the provision that is void or has been nullified, without exposing the new provision to nullity or nullification (again).

15.2. Bonfix shall be entitled to amend or supplement these Terms and Conditions unilaterally. The Customer shall be deemed to have declared in advance – unless this cannot reasonably be expected of him – that he consents to any amendment or supplement. Such an amendment shall come into effect at a time to be announced by Bonfix. If no notice is given of the time when an amendment is to come into effect, it shall come into force as soon as the relevant Customer has been notified of it and/or the relevant version has been lodged with the Chamber of Commerce and Industry.

15.3. The most recent applicable version has been lodged with the Chamber of Commerce [Kamer van Koophandel Oost-Nederland] as Number 05054087.

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Open
Monday through Friday 08.00 hours to 17.30 hours



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