

BENDER

A R M A T U R E N

// VIELFALT AUS EINEM GUSS

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Made in Germany



***for the completely
valve !***

long-life 

// TECHNICAL PRODUCT INFORMATION FOR RED-BRASS COMBINED FREE-FLOW AND BACKFLOW-PREVENTER UPPER-PART type 3215



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Red-brass Combined Free-flow and backflow-preventer Upper-part type: 3215

Technical Productinformation (TPI)



picture 1: type 3215



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functional description

The red-brass Combined Free-flow and backflow-preventer upper-parts fulfill the function to shut-off DIN-DVGW certified Combined Free-flow and backflow-preventer valves in the area of potable water in case of maintenance or repairs. In delivery status the red-brass Combined Free-flow and backflow-preventer upper-parts are closed by a pre-stressed spring. If the water supply will be pressurized, the Valve cone remove from the seal seat and the flow rate is ensured. To interrupt the water supply it's necessary to turn the handwheel in clockwise. An inner sleeve of the spindle press against the Valve cone and the flow-rate will be avoided. This solution ensures the combination of a red-brass Free-flow and backflow-preventer valve.

product features

- connection: G-male-thread according to DIN ISO 228-1
- non-rising spindle
- permanent smooth-running by patented „SOFT“ drive system
- with EPDM flat seal
- dead storage free by inside twin O-Ring sealing
- with grease chamber
- with teflon coated spindle guide
- for Combined Free-flow and backflow-preventer valves according to DIN EN 13959

Red-brass Combined Free-flow and backflow-preventer Upper-part type: 3215

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Materials

- medium touched red-brass parts:
 - o red-brass (CC499K)
 - to be used for potable water according to DIN 50930-6 rather currently valid UBA positive list
- medium touched plastic parts:
 - o flat seals: EPDM ; O-Rings: EPDM
 - to be used for potable water according to elastomer-guideline of UBA + W270 approval
- other materials:
 - o handwheel: PA 6.6 + 30% glass-fibre
 - o Screw for handwheel: corrosion-resistant material
 - o nut: corrosion-resistant material

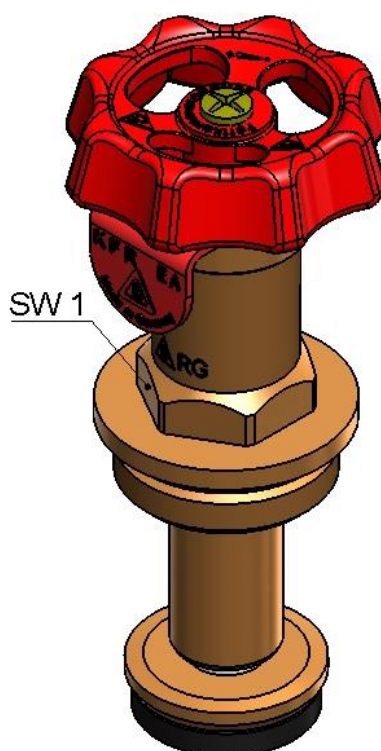
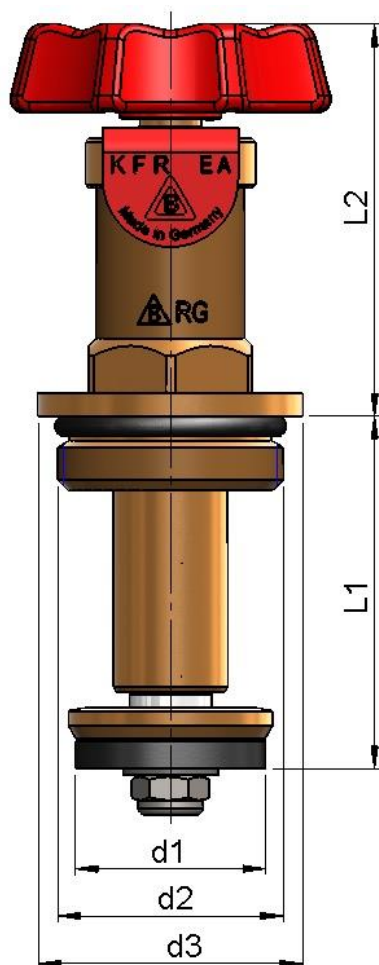
Packaging unit

Dimension	DN15	DN20	DN25	DN32	DN40	DN50
Packaging unit	40	30	20	15	10	10

Red-brass Combined Free-flow and backflow-preventer Upper-part type: 3215

Technical Productinformation (TPI)

sketch & dimension



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variation: non-rising spindle (type: 3215)

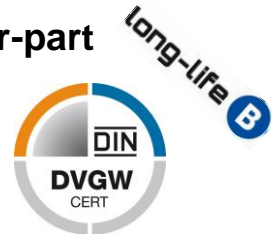
DN	d1	d2	d3 (-0,5)	L1		L2 open = close	stroke	SW1	item-number
				open	close				
15	17	G 1/2" B	25,5	28	38	51	10	22	3215150
20	22	G 3/4" B	31,5	28	46	51	18	22	3215200
25	28	G 1" B	39,5	29	55	58	26	24	3215250
32	36	G 1 1/4" B	49	37	66	61	29	27	3215320
40	42	G 1 1/2" B	56	36	75	67,5	39	32	3215400
50	53	G 2" B	68	46,5	92	68,5	45,5	34	3215500

NOTE: The red-brass Combined Free-flow and backflow-preventer Upper-parts with non-rising spindle of the type 3215 reach the required seat depth according to DIN 3502.

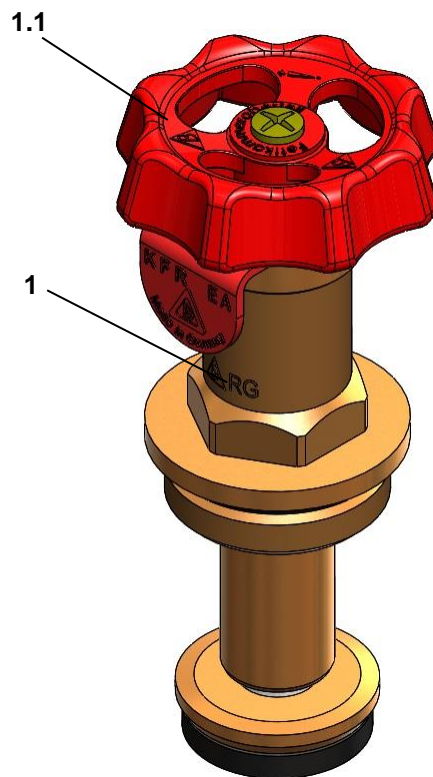
Red-brass Combined Free-flow and backflow-preventer Upper-part type: 3215

Technical Productinformation (TPI)

Exploded drawing & parts list



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Pos.	Description	Quantity
1	Red-brass Combined Free-flow and backflow-preventer upper-part (non-rising spindle)	1
.1.1	handwheel, red	1

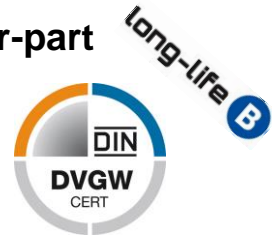
NOTE: Spare-parts and accessories are listed on the following sides.

Red-brass Combined Free-flow and backflow-preventer Upper-part type: 3215

Technical Productinformation (TPI)

Spare-parts & accessories

Pos. 1.1: handwheel, red			
DN	item-number	Dimensions	
-	-	Ø	square
15	3238150	50	6
20	3238200	50	6
25	3238250	50	6
32	3238320	60	7
40	3238400	60	7
50	3238500	60	7

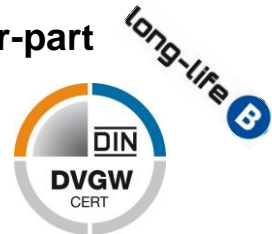


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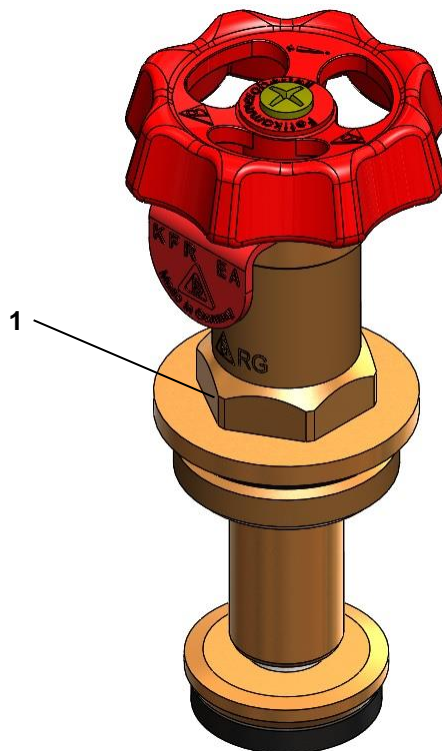
Red-brass Combined Free-flow and backflow-preventer Upper-part type: 3215

Technical Productinformation (TPI)

Scope of delivery



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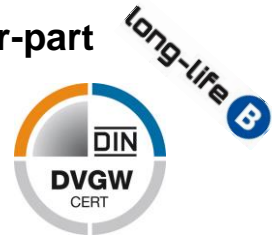


picture 2: type 3215

Pos.	Description	Quantity
1	Red-brass Combined Free-flow and backflow-preventer Upper-part (non-rising spindle)	1

Red-brass Combined Free-flow and backflow-preventer Upper-part type: 3215

Technical Productinformation (TPI)



Generally instruction

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- For your own safety and the safety of other persons read the completely Technical Productinformation.
- The Technical Productinformation must be checked at regular intervals of the issue date which is shown in the footer. If your version is no more up-to-date, please contact the company Bender Armaturen GmbH & Co. KG by the contact details in the headline.
- Check the product of completeness and damages in transit according to the drawing shown in „Scope of delivery“. For later customer complaint of the listed aspects we do not assume any liability.
- It is necessary to use the **PPE** (personal protective equipment). Use inter alia protecting gloves to avoid injury during the installation.
- High pressure-drops in the pipe system must be avoid.
- Spare-parts and accessories must be produced in our company. Otherwise used parts found **no legal claim** in case of damage.
- The installation has to be done in the right flow direction which is shown by an arrow on the body.
- Please note all national and international regulations of installation, accident prevention, hygiene and safety during the installation of pipe-systems and all further instructions of the Technical Productinformation. Also note the regular law, standards, guidelines and regulations (e.g. DIN, EN, ISO, DVGW and VDI) as well as regulations for protection of the environment, social insurance against occupational accidents and the local municipal utility.
- Responsible for the positioning and the installation of our products are planner, building firm and user.
- The removal of our products has to be done by the local environment regulations.

Red-brass Combined Free-flow and backflow-preventer Upper-part type: 3215

Technical Productinformation (TPI)



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product-specific instruction

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- mating-threads which are connected with our products must be checked with a gauge and has to be free of burrs. For pipe-threads it is necessary to consider the DIN ISO 228 and DIN EN 10226.
- The listed Red-brass Combined Free-flow and backflow-preventer upper-parts of the Technical Productinformation are working in two possible positions:
 - o fully open
 - o fully closed
- The Red-brass Combined Free-flow and backflow-preventer upper-parts are only use for shut-off potable water or other neutral liquids. Explicit not for throttling and regulation. Furthermore the upper-parts are covered for using in weatherproof areas.
- Bender Armaturen Red-brass Combined Free-flow and backflow-preventer upper-parts are normally free of maintenance. The function only can be conserved, if you operate the fitting in regular intervals. Scaling in potable water pipe-systems are possible, which can impair the function of the upper-part. To ensure a permanent function, the upper-part must be fully closed and fully open two times per year.
- In horizontal lines all Red-brass Combined Free-flow and backflow-preventer upper-parts must be adjusted upwards.
For vertical lines the flow direction of the water must be from the bottom up.
- For hot-water pipes it is required to have an operating temperature of 60°C.
- The inner space of the fitting must be free of foreign particles.
- Only approved sealing materials are allowed.
- Before using sealing material, please check that the pipe-system can be screwed easily into the valve. Liquid sealing materials must be hardening first.
- Please note that sealing materials do not reach into the fitting. Otherwise the function and tightness of the product is not possible.
- The tightening torque must be adjusting, that a damage of the connections will be avoid.
- Tools which increasing the hand torque of the handwheel are not allowed.
- Before you start with the installation please check that the Red-brass Combined free-flow and backflow-preventer valve is able for opening and closing.
- Flush the pipe-system according to the general accepted rules and specifications before you start with the installation.
- Please note that the pipe-system is depressurized and cooled down on a reasonable temperature for the installation.
- The products are covered for an operating temperature of maximum 90°C. Furthermore, we recommend an operating pressure of 2,5 until 3,5 bar and to forward-space a water softening-plant if the value > 14° dH.



The contents of our Technical Productinformation can be complemented, changed or deleted without prior notice.

The description of the TPI is no contract.

Red-brass Combined Free-flow and backflow-preventer Upper-part type: 3215

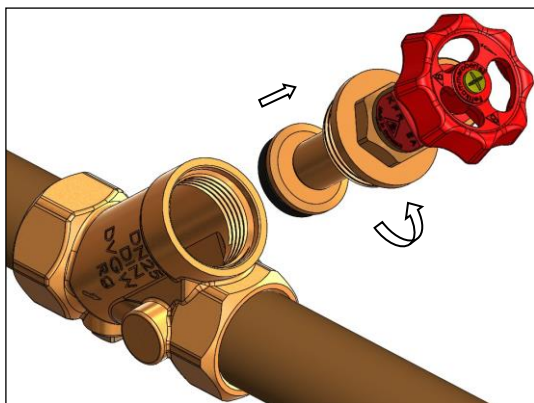
Technical Productinformation (TPI)



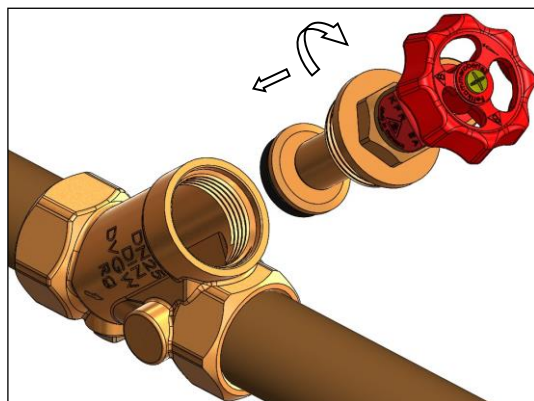
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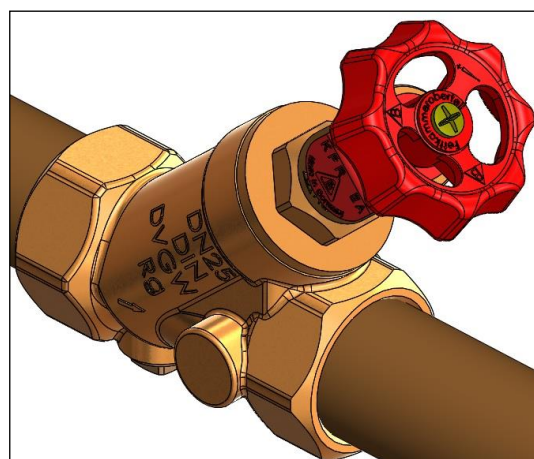
assembly



step 1



step 2



step 3

**Combined Free-flow and backflow-preventer
Upper-part
self-sealed by O-Ring**

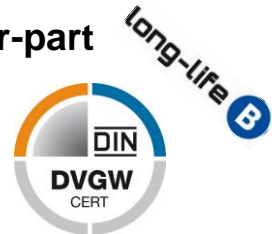
The inner space of the fitting must be free of foreign
particles.
body according to DIN 3502.

pressurized

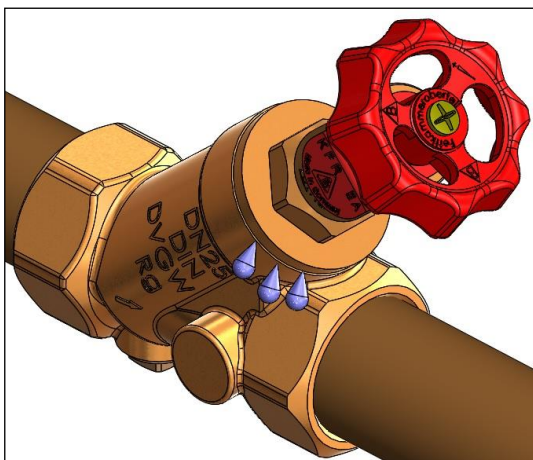


Red-brass Combined Free-flow and backflow-preventer Upper-part type: 3215

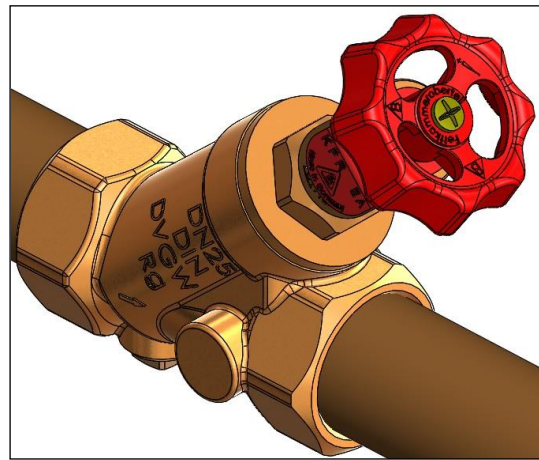
Technical Productinformation (TPI)



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final inspection not OK



final inspection OK

A duly pressure test has to be done according to DIN EN 806-4, chapter 6. The test results must be documented on the next page.

Red-brass Combined Free-flow and backflow-preventer Upper-part type: 3215

Technical Productinformation (TPI)



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Pressure test report

test procedure A – Filling and hydrostatic pressure test of installations inside of buildings for potable water for human use.

generally dates	final customer:		company stamp
	Plumber (name of company):		
	Inspector:		
	Item / Item-No.:		

leakage test with potable water

Tightness	1. Hot- or Cold water installation filling up slowly with potable water (<i>particles \geq than 150 μm are not allowed</i>), flushing and deaerating completely.			
	2. Temperature balance for 30 minutes to compensate possible differences between environmental- and water temperature.			
	3. Adjust pressure to 3 bar for 10 minutes.			
	4. Visual check of each connection of tightness:			
	5. Pressure after the end of the test (requirement: $\Delta p = 0$ bar) ^{*1} :			
	Leakage established:	<input type="checkbox"/> No	<input type="checkbox"/> Yes – in area:	
	action(s):			

The test has done according to this report.

conclusion	Building owner		Contractor	
	date, location:		date, location:	
	signature:		signature:	

^{*1} - NOTE: By consideration of the termic pressure pulsation it's necessary to stabilize the pressure in the installation system until the leakages will be find.