RADIATOR VALVES

“Giacotech” TG, F series

Technical documentation

GIACOMINI
WATER E-MOTION

0157EN

SUMMARY

USE AND MAIN FEATURES

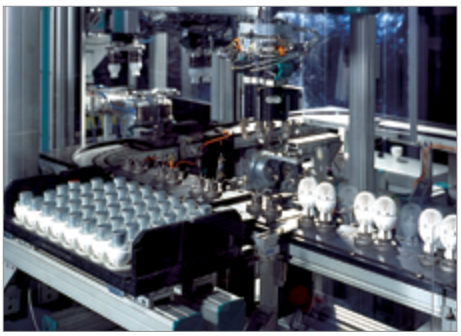
The **"Giacotech" TG, F series** valves and lockshields offers great practicality and reliability during installation. This family represents the evolution of the "Giacomini Programma 80" that, with its functional innovative characteristics (the thermostatic element and the pipe union with self-sealing element in plastic material) imposed itself on the market from 1979 on.
Today the "Giacotech" TG, F series is presented in an updated and extended form both for completeness of the range and in the technical aspects.

The current series offers a more complete range of products, from micrometric valves with thermostatic option to simple valves with thermostatic option, from manual valves to lockshields, all provided in both the iron and the adapter versions.
In this way the installer is able to choose with the confidence to identify and use the most suitable for his needs.
Among the peculiar characteristics of the "Giacotech" TG, F series, in particular:
• the introduction of a self-sealing element made of elastomeric material instead of plastic material;
• the unification of the adapter bases for the most used sizes;
• the restyling of the handwheels of the thermostatic micrometric valves;
• the introduction of worksite protections to preserve the thermostatic connection from accidental damage during installation.

QUALITY

The first company's Quality Management System ISO 9002 was certified in 1986 and was extended to ISO 9001 (the actual UNI EN ISO 9001:2008) in 1996. Subsequently, the Environmental Management System UNI EN ISO 14001:2004 of the company's manufacturing sites and goods export procedure were quality certified. Finally, the Occupational Health and Safety System is being certified to BS OHSAS 18001:2007. The next internal goal is to achieve the most recent energy and ethics certification.

Laboratory tests



Manufacturing assembly

CERTIFICATIONS

Certification	Description	Nation
028	KEYMARK (EN215)	European Community
	TELL (Thermostatic Efficiency Label)	European Community
Certita L'EXCELLENCE CERTIFIÉE	Certità	France

Information concerning certifications, compliance and homologations included in this catalogue are for reference only, subject to regular updating and may refer only to specific product dimensions.
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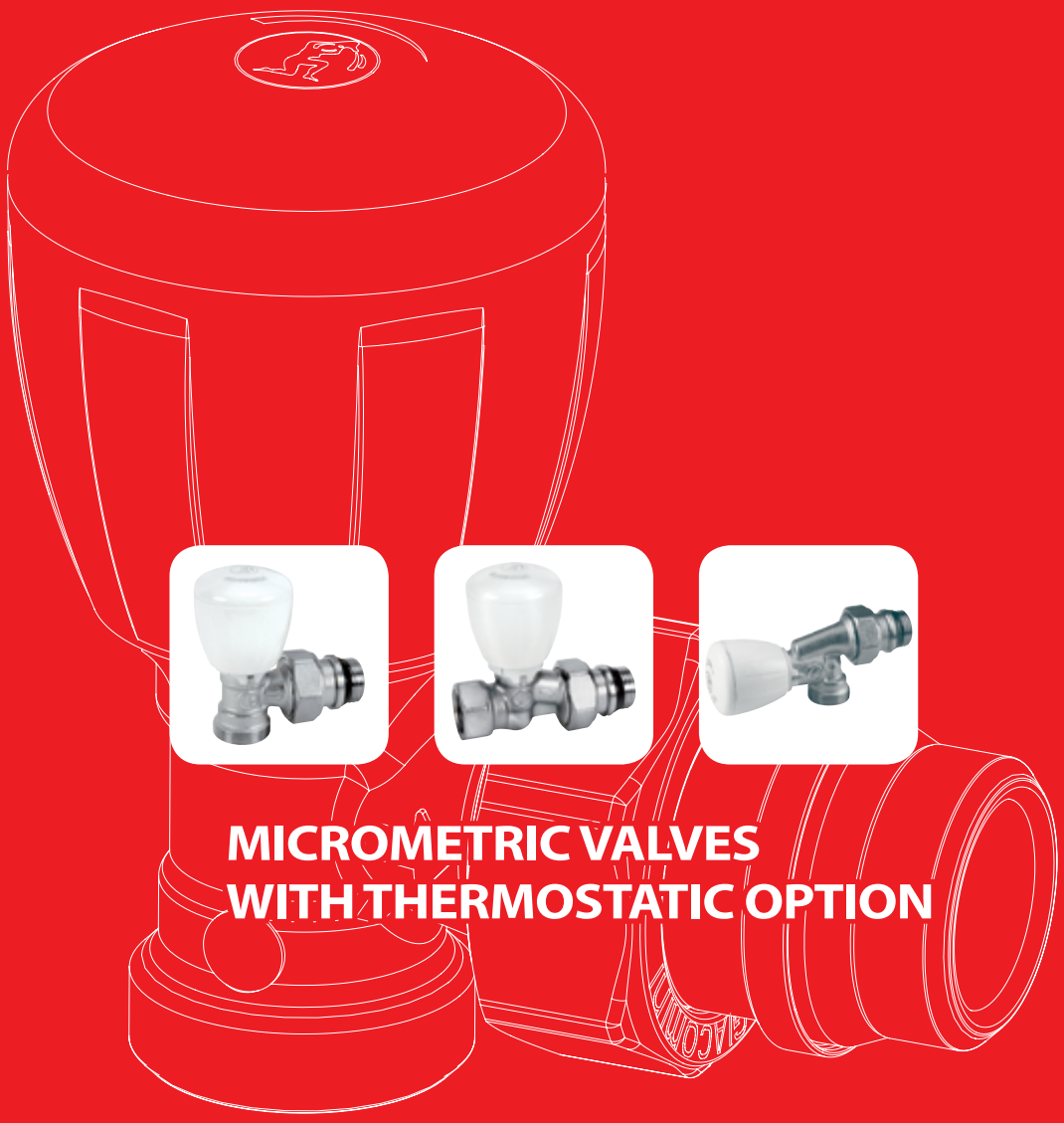


MICROMETRIC VALVES WITH THERMOSTATIC OPTION

Thermostatic option

Micrometric adjustment

Product codes and technical features

Dimensions with thermostatic heads

Additional information for KEYMARK (EN215) certified valves

THERMOSTATIC OPTION

The "Giacotech" TG, F series micrometric valves with thermostatic option, are easily equipped with thermostatic heads or thermo-electric actuators, in order to allow the automatic control of the room temperature, guaranteeing comfort and energy saving.
Therefore is possible to use the thermostatic heads with liquid sensor and Clip-Clap quick connection (R460, R468, R468C, R470), with remote sensor (R462), with remote sensor and knob (R463) or thermo-electric actuators normally open (R478/R478M) or normally closed (R473/R473M) directly controlled by common room thermostats.

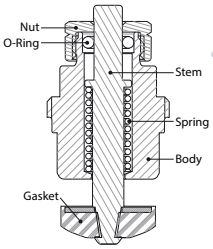
The thermostatic heads and thermo-electric actuators are installed directly on the valve body after removing the micrometric manual handwheel.
To remove the micrometric manual handwheel proceed as follow:
1) remove the upper cap using a screwdriver;
2) remove the internal adjustment pin;
3) remove the handwheel by turning it counterclockwise;
4) remove the cam using a screwdriver.

Warning.
With thermostatic head installed on the valve body, to avoid excessive loads on the seal gasket of the thermostatic bonnet (with the resulting risk of jamming and locking) during the summer months, is is recommended to place the knob in the fully open position, as marked by the symbol ✹.

In case of malfunction of the bonnet it is possible to replace the stem O-Ring, by unscrewing the nut using an hexagonal wrench 11 mm.

If the problem persists is also possible to replace the complete bonnet using the appropriate key R400.

BONNET

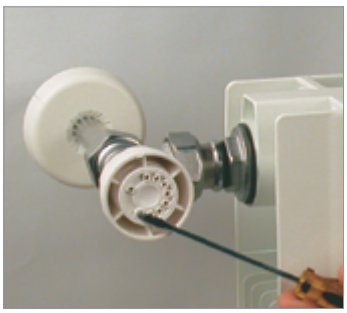


R400

The bonnet replacement with R400 key is not possible for the following valves: R421FX004, R422FX004, R401FX004, R402FX004.

MICROMETRIC ADJUSTMENT

The "Giacotech" TG, F series micrometric valves with thermostatic option are characterized by the possibility of carrying out the micrometric adjustment through which it is possible to partialize the opening of the valve operating in manual mode (i.e. without thermostatic head mounted on them).
Removing the upper cap gives access to the adjustment scale:
The adjustment can be made by moving the metal pin to the position suitable for your needs, according to the specific diagrams of each individual valve.



PRODUCT CODES AND TECHNICAL FEATURES

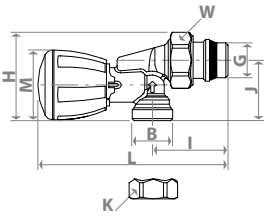
> R435TG

Reverse angle micrometric valve with thermostatic option, with iron pipe connection or for copper, plastic or multilayer pipe adaptor.
Fluid of use: water and glycol solutions (max. 30 %)
Temperature range: 5÷110 °C
Max. working pressure: 16 bar with manual handwheel; 10 bar in combination with thermostatic heads
Max. differential pressure with thermostatic heads: 1,4 bar (1/2")

Materials
Body and main components: UNI EN 12165 CW617N brass
Monobloc command stem: stainless steel
Manual handwheel: ABS
Gaskets: EPDM

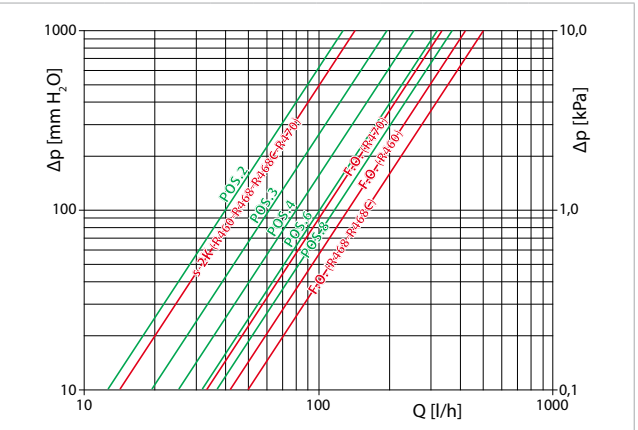
Product code	Connections	Finishing	Type of knob	Adaptors to use	Type of tail piece	Notes
R435X053	1/2"M (G, ISO 228) x 1/2"F (G, ISO 228)	Chrome plated	Micrometric handwheel	-	Tail piece with self-sealing	KEYMARK (EN215) certified
R435X062	1/2"M (G, ISO 228) x base 16	Chrome plated	Micrometric handwheel	R178, R178C, R179, R179AM	Tail piece with self-sealing	
R435X043	1/2"M (G, ISO 228) x base 18	Chrome plated	Micrometric handwheel	R178, R178C, R179, R179AM	Tail piece with self-sealing	

Product code	G x B	H [mm]	I [mm]	J [mm]	K [mm]	L [mm]	M [mm]	W [mm]
R435X053	1/2" x 1/2"	53	53	36	25	121	42	30
R435X062	1/2" x 16	53	45	36	-	113	42	30
R435X043	1/2" x 18	53	45	37	-	113	42	30



Hydraulic features

R435X053, R435X062, R435X043
Kv obtained according to the specifications of the EN215 Standard



Micrometric adjustment pin position				
2	3	4	6	8
0,40	0,62	0,80	1,02	1,26

With R460 head		With R468-R468C head		With R470 head	
s-2K	F.O.	s-2K	F.O.	s-2K	F.O.
0,47	1,49	0,47	1,61	0,47	1,14

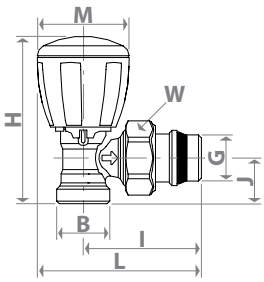
> R431TG

Angle micrometric valve with thermostatic option, with connection for copper, plastic or multilayer pipe adaptor.
Fluid of use: water and glycol solutions (max. 30 %)
Temperature range: 5÷110 °C
Max. working pressure: 16 bar with manual handwheel; 10 bar in combination with thermostatic heads
Max. differential pressure with thermostatic heads: 1,4 bar (3/8" - 1/2")

Materials
Body and main components: UNI EN 12165 CW617N brass
Monobloc command stem: stainless steel
Manual handwheel: ABS
Gaskets: EPDM

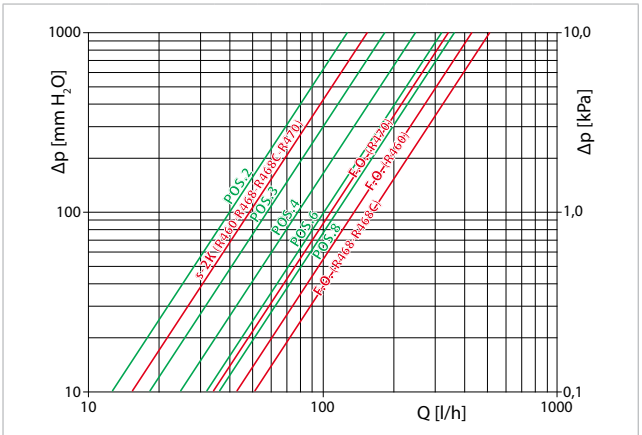
Product code	Connections	Finishing	Type of knob	Adaptors to use	Type of tail piece
R431X032	3/8"M (G, ISO 228) x base 16	Chrome plated brass	Micrometric handwheel	R178, R178C, R179, R179AM	Tail piece with self-sealing
R431X033	1/2"M (G, ISO 228) x base 16	Chrome plated brass	Micrometric handwheel	R178, R178C, R179, R179AM	Tail piece with self-sealing
R431X034	1/2"M (G, ISO 228) x base 18	Chrome plated brass	Micrometric handwheel	R178, R178C, R179, R179AM	Tail piece with self-sealing
R431EX037	1/2"M (G, ISO 228) x 3/4"Eurocone	Chrome plated brass	Micrometric handwheel	R178E, R179E	Tail piece with self-sealing

Product code	G x B	H [mm]	I [mm]	J [mm]	L [mm]	M [mm]	W [mm]
R431X032	3/8" x 16	75	53	21	74	42	30
R431X033	1/2" x 16	75	53	21	74	42	30
R431X034	1/2" x 18	75	53	21	74	42	30
R431EX037	1/2" x 3/4"E	75	53	21	74	42	30



Hydraulic features

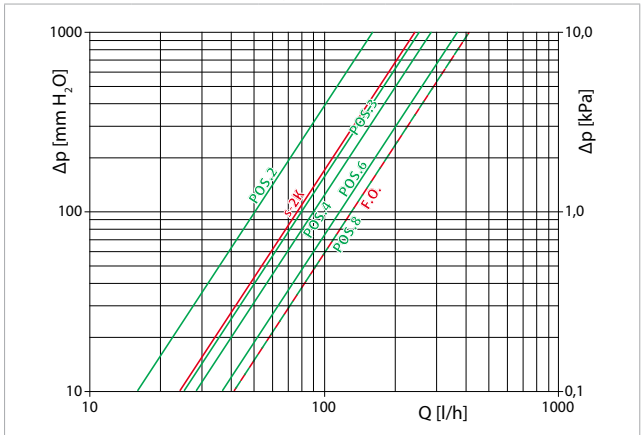
R431X032, R431X033, R431EX037
Kv obtained according to the specifications of the EN215 Standard



Micrometric adjustment pin position				
2	3	4	6	8
0,40	0,58	0,78	1,00	1,26

With R460 head		With R468-R468C head		With R470 head	
s-2K	F.O.	s-2K	F.O.	s-2K	F.O.
0,47	1,49	0,47	1,61	0,47	1,14

R431X034
Kv obtained with Giacomini laboratory loss of pressure station



Micrometric adjustment pin position				
2	3	4	6	8
0,50	0,80	0,90	1,25	1,41

With R460, R468, R468C, R470, R462, R463 thermostatic heads	
s-2K	F.O.
0,76	1,41

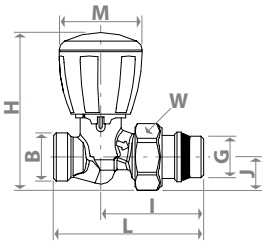
> R432TG

Straight micrometric valve with thermostatic option, with connection for copper, plastic or multilayer pipe adaptor.
Fluid of use: water and glycol solutions (max. 30 %)
Temperature range: 5÷110 °C
Max. working pressure: 16 bar with manual handwheel; 10 bar in combination with thermostatic heads
Max. differential pressure with thermostatic heads: 1,4 bar (3/8" - 1/2")

Materials
Body and main components: UNI EN 12165 CW617N brass
Monobloc command stem: stainless steel
Manual handwheel: ABS
Gaskets: EPDM

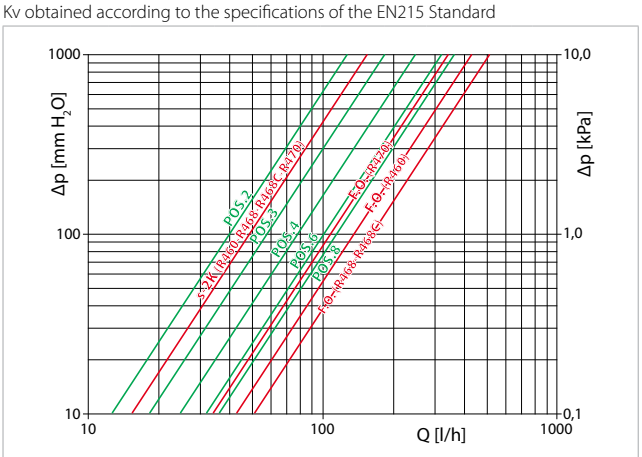
Product code	Connections	Finishing	Type of knob	Adaptors to use	Type of tail piece
R432X032	3/8"M (G, ISO 228) x base 16	Chrome plated brass	Micrometric handwheel	R178, R178C, R179, R179AM	Tail piece with self-sealing
R432X033	1/2"M (G, ISO 228) x base 16	Chrome plated brass	Micrometric handwheel	R178, R178C, R179, R179AM	Tail piece with self-sealing
R432X034	1/2"M (G, ISO 228) x base 18	Chrome plated brass	Micrometric handwheel	R178, R178C, R179, R179AM	Tail piece with self-sealing
R432EX037	1/2"M (G, ISO 228) x 3/4"Eurocone	Chrome plated brass	Micrometric handwheel	R178E, R179E	Tail piece with self-sealing

Product code	G x B	H [mm]	I [mm]	J [mm]	L [mm]	M [mm]	W [mm]
R432X032	3/8" x 16	79	51	17	74	42	30
R432X033	1/2" x 16	79	51	17	75	42	30
R432X034	1/2" x 18	79	51	17	76	42	30
R432EX037	1/2" x 3/4"E	79	51	17	76	42	30



Hydraulic features

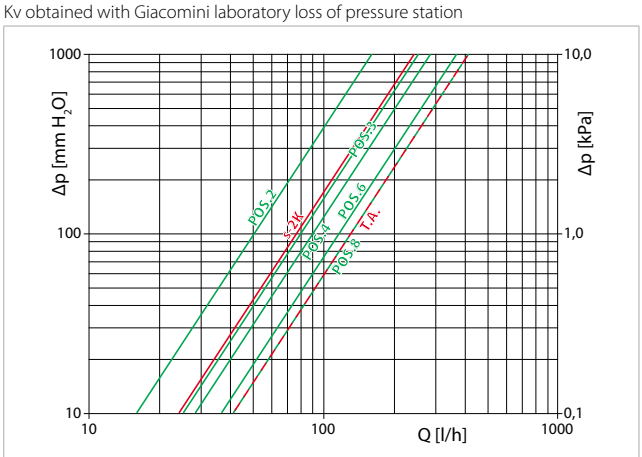
R432X032, R432X033, R432EX037
Kv obtained according to the specifications of the EN215 Standard



Micrometric adjustment pin position				
2	3	4	6	8
0,40	0,58	0,78	1,00	1,26

With R460 head		With R468-R468C head		With R470 head	
s-2K	F.O.	s-2K	F.O.	s-2K	F.O.
0,47	1,49	0,47	1,61	0,47	1,14

R432X034
Kv obtained with Giacomini laboratory loss of pressure station



Micrometric adjustment pin position				
2	3	4	6	8
0,50	0,80	0,90	1,25	1,41

With R460, R468, R468C, R470, R462, R463 thermostatic heads	
s-2K	F.O.
0,76	1,41

> R421TG

Angle micrometric valve with thermostatic option, with iron pipe connection.
Fluid of use: water and glycol solutions (max. 30 %)
Temperature range: 5÷110 °C
Max. working pressure: 16 bar with manual handwheel; 10 bar in combination with thermostatic heads
Max. differential pressure with thermostatic heads: 1,4 bar (3/8" - 1/2"); 0,7 bar (3/4"); 0,4 bar (1")

Materials
Body and main components: UNI EN 12165 CW617N brass
Monobloc command stem: stainless steel
Manual handwheel: ABS
Gaskets: EPDM

Product code	Connections	Finishing	Type of knob	Type of tail piece	Notes
R421X132	3/8"M (G, ISO 228) x 3/8"F (G, ISO 228)	Chrome plated brass	Micrometric handwheel	Tail piece with self-sealing	KEYMARK (EN215) certified
R421X133	1/2"M (G, ISO 228) x 1/2"F (G, ISO 228)	Chrome plated brass	Micrometric handwheel	Tail piece with self-sealing	KEYMARK (EN215) certified
R421FX004	3/4"M (G, ISO 228) x 3/4"F (G, ISO 228)	Chrome plated brass	Micrometric handwheel	Tail piece without self-sealing	KEYMARK (EN215) certified
R421X034	3/4"M (G, ISO 228) x 3/4"F (G, ISO 228)	Chrome plated brass	Micrometric handwheel	Tail piece without self-sealing	
R421X035	1"M (G, ISO 228) x 1"F (G, ISO 228)	Chrome plated brass	Micrometric handwheel	Tail piece without self-sealing	

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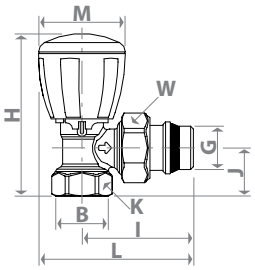
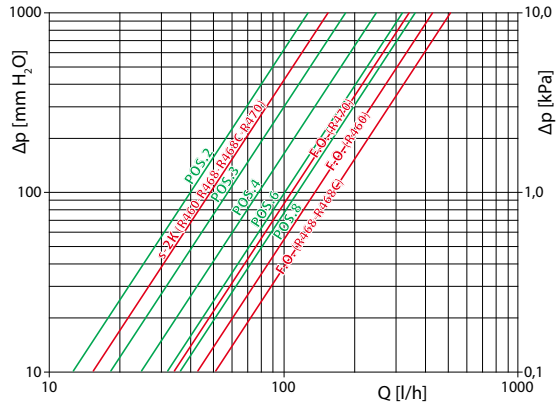
Product code	G x B	H [mm]	I [mm]	J [mm]	K [mm]	L [mm]	M [mm]	W [mm]
R421X132	3/8" x 3/8"	74	51	20	22	72	42	27
R421X133	1/2" x 1/2"	78	53	23	26	74	42	30
R421FX004	3/4" x 3/4"	87	58	26	32	76	42	38
R421X034	3/4" x 3/4"	79	60	25	32	81	42	38
R421X035	1" x 1"	97	72	31	39	94	42	46



Hydraulic features

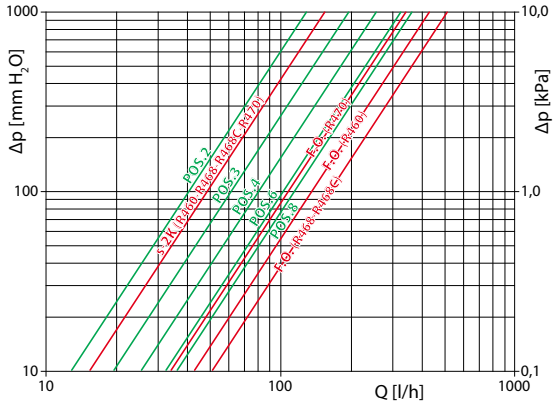
R421X132
Kv obtained according to the specifications of the EN215 Standard



Micrometric adjustment pin position				
2	3	4	6	8
0,40	0,58	0,78	1,00	1,26

With R460 head		With R468-R468C head		With R470 head	
s-2K	F.O.	s-2K	F.O.	s-2K	F.O.
0,47	1,49	0,47	1,61	0,47	1,14

R421X133
Kv obtained according to the specifications of the EN215 Standard

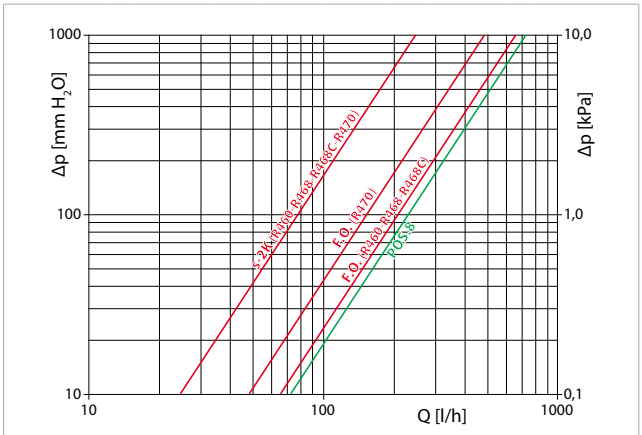


Micrometric adjustment pin position				
2	3	4	6	8
0,42	0,62	0,80	1,02	1,26

With R460 head		With R468-R468C head		With R470 head	
s-2K	F.O.	s-2K	F.O.	s-2K	F.O.
0,47	1,49	0,47	1,61	0,47	1,14

R421FX034

Kv obtained according to the specifications of the EN215 Standard

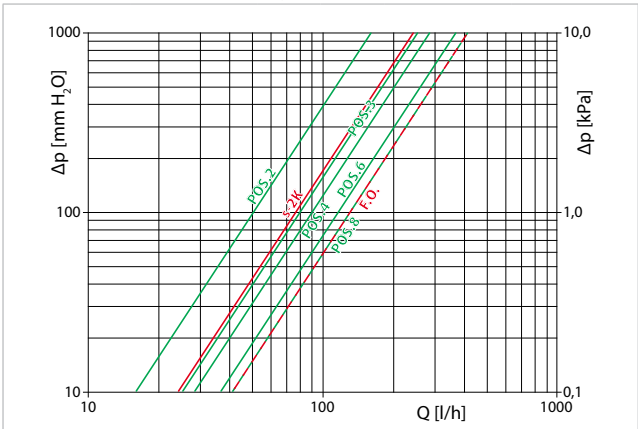


Micrometric adjustment pin position				
2	3	4	6	8
-	-	-	-	2,37

With R460 head		With R468-R468C head		With R470 head	
s-2K	F.O.	s-2K	F.O.	s-2K	F.O.
0,76	2,15	0,76	2,15	0,76	1,68

R421X034

Kv obtained with Giacomini laboratory loss of pressure station

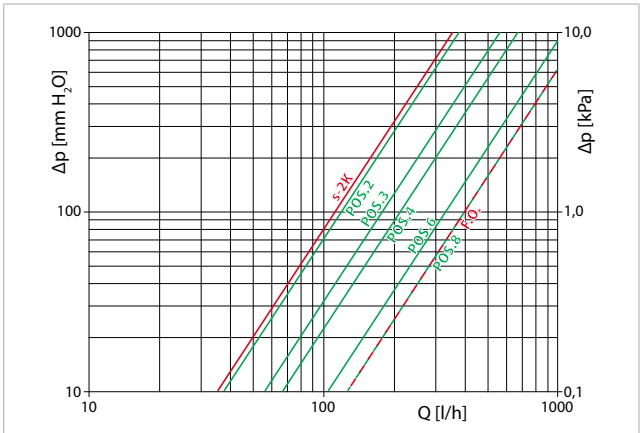


Micrometric adjustment pin position				
2	3	4	6	8
0,50	0,80	0,90	1,25	1,41

With R460, R468, R468C, R470, R462, R463 thermostatic heads	
s-2K	F.O.
0,76	1,41

R421X035

Kv obtained with Giacomini laboratory loss of pressure station



Micrometric adjustment pin position				
2	3	4	6	8
1,37	1,85	2,38	3,36	3,98

With R460, R468, R468C, R470, R462, R463 thermostatic heads	
s-2K	F.O.
1,22	3,98

> R422TG

Straight micrometric valve with thermostatic option, with iron pipe connection.
Fluid of use: water and glycol solutions (max. 30 %)
Temperature range: 5÷110 °C
Max. working pressure: 16 bar with manual handwheel; 10 bar in combination with thermostatic heads
Max. differential pressure with thermostatic heads: 1,4 bar (3/8" - 1/2"); 0,7 bar (3/4"); 0,4 bar (1")

Materials
Body and main components: UNI EN 12165 CW617N brass
Monobloc command stem: stainless steel
Manual handwheel: ABS
Gaskets: EPDM

Product code	Connections	Finishing	Type of knob	Type of tail piece	Notes
R422X132	3/8"M (G, ISO 228) x 3/8"F (G, ISO 228)	Chrome plated brass	Micrometric handwheel	Tail piece with self-sealing	KEYMARK (EN215) certified
R422X133	1/2"M (G, ISO 228) x 1/2"F (G, ISO 228)	Chrome plated brass	Micrometric handwheel	Tail piece with self-sealing	KEYMARK (EN215) certified
R422FX004	3/4"M (G, ISO 228) x 3/4"F (G, ISO 228)	Chrome plated brass	Micrometric handwheel	Tail piece without self-sealing	KEYMARK (EN215) certified
R422X034	3/4"M (G, ISO 228) x 3/4"F (G, ISO 228)	Chrome plated brass	Micrometric handwheel	Tail piece without self-sealing	
R422X035	1"M (G, ISO 228) x 1"F (G, ISO 228)	Chrome plated brass	Micrometric handwheel	Tail piece without self-sealing	

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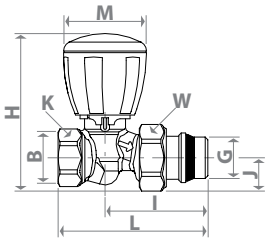
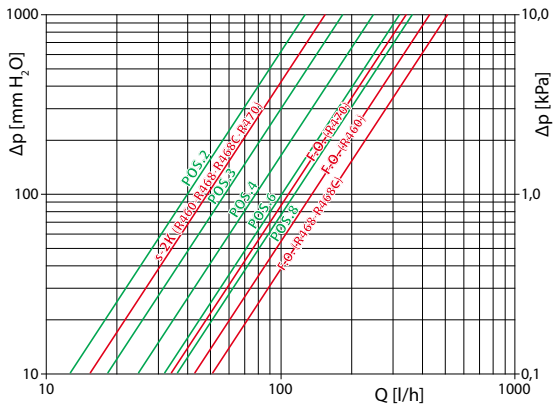
Product code	G x B	H [mm]	I [mm]	J [mm]	K [mm]	L [mm]	M [mm]	W [mm]
R422X132	3/8" x 3/8"	77	54	15	22	76	42	27
R422X133	1/2" x 1/2"	79	55	17	26	82	42	30
R422FX004	3/4" x 3/4"	89	61	22	32	93	42	38
R422X034	3/4" x 3/4"	83	55	21	32	81	42	38
R422X035	1" x 1"	95	64	26	39	105	42	46



Hydraulic features

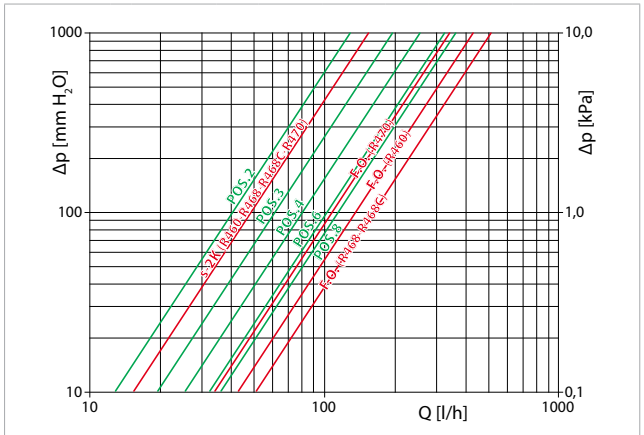
R422X132
Kv obtained according to the specifications of the EN215 Standard



Micrometric adjustment pin position				
2	3	4	6	8
0,40	0,58	0,78	1,00	1,26

With R460 head		With R468-R468C head		With R470 head	
s-2K	F.O.	s-2K	F.O.	s-2K	F.O.
0,47	1,49	0,47	1,61	0,47	1,14

R422X133
Kv obtained according to the specifications of the EN215 Standard

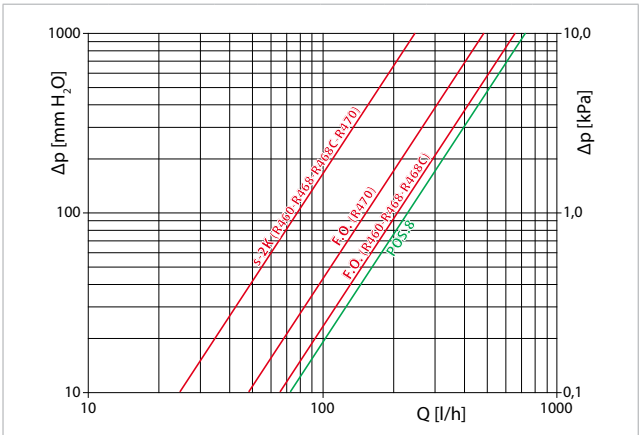


Micrometric adjustment pin position				
2	3	4	6	8
0,42	0,62	0,80	1,02	1,26

With R460 head		With R468-R468C head		With R470 head	
s-2K	F.O.	s-2K	F.O.	s-2K	F.O.
0,47	1,49	0,47	1,61	0,47	1,14

R422FX034

Kv obtained according to the specifications of the EN215 Standard

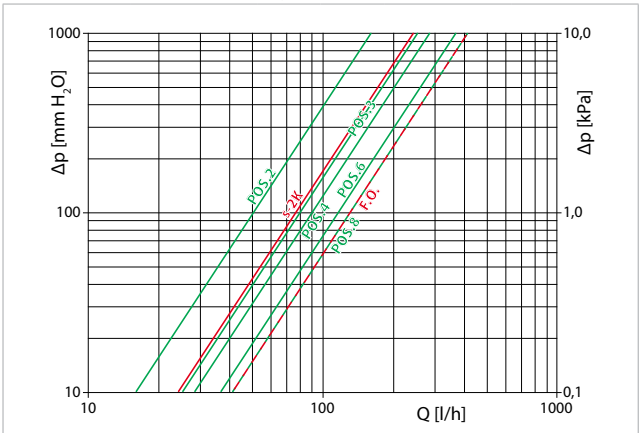


Micrometric adjustment pin position				
2	3	4	6	8
-	-	-	-	2,37

With R460 head		With R468-R468C head		With R470 head	
s-2K	F.O.	s-2K	F.O.	s-2K	F.O.
0,76	2,15	0,76	2,15	0,76	1,68

R422X034

Kv obtained with Giacomini laboratory loss of pressure station

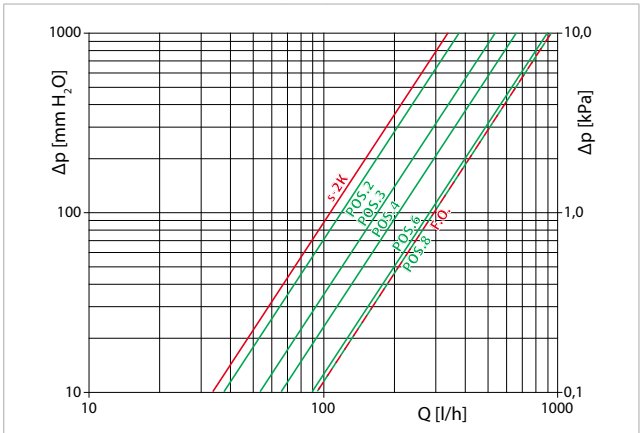


Micrometric adjustment pin position				
2	3	4	6	8
0,50	0,80	0,90	1,25	1,41

With R460, R468, R468C, R470, R462, R463 thermostatic heads	
s-2K	F.O.
0,76	1,41

R422X035

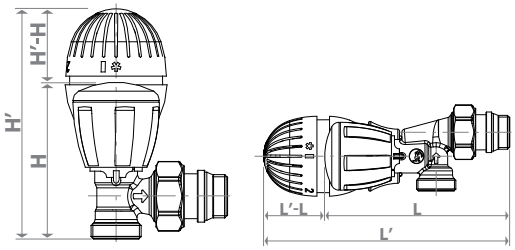
Kv obtained with Giacomini laboratory loss of pressure station



Micrometric adjustment pin position				
2	3	4	6	8
1,37	1,73	2,10	2,82	2,95

With R460, R468, R468C, R470, R462, R463 thermostatic heads	
s-2K	F.O.
1,15	2,95

DIMENSIONS WITH THERMOSTATIC HEADS



Type	Thermostatic heads			
	R460	R468	R468C	R470
H' - H [mm]	53	52	63	35
L' - L [mm] for R435TG	53	52	63	35

Warning.
On systems equipped with thermostatic heads, the use of the R147N pressure differential valves is recommended, in order to avoid overpressure phenomena derived from the possible closure by contemporaneousness factor of the heads.

ADDITIONAL INFORMATION FOR KEYMARK (EN215) CERTIFIED VALVES

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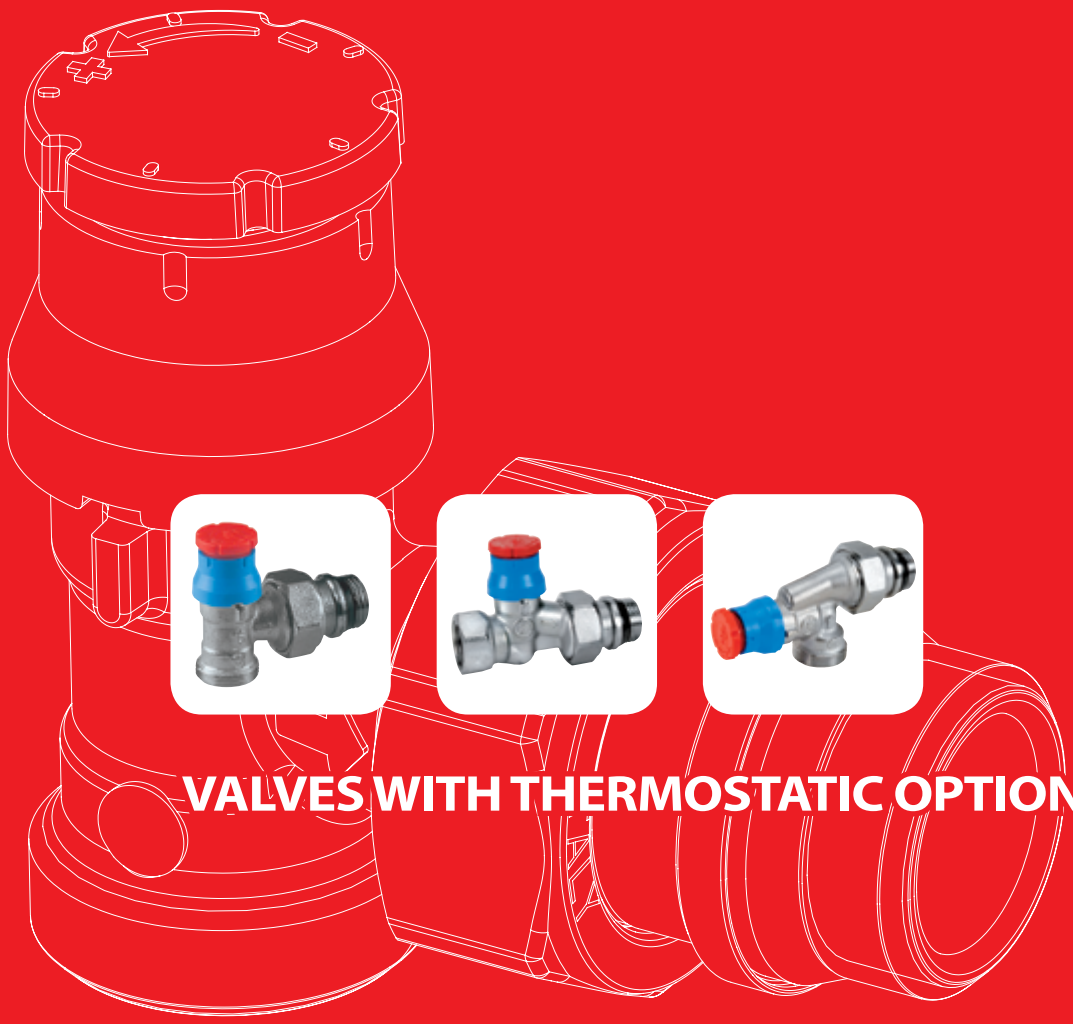
Valve size	Thermostatic head in combination	Nominal flow rate q_{mNH} in combination with thermostatic head [kg/h]	Authority *"a"* of the stopper
3/8" (R421X132, R422X132)	R460	150	0,90
1/2" (R421X133, R422X133, R435X053)		150	0,90
3/4" (R421FX034, R422FX034)		240	0,88
3/8" (R421X132, R422X132)	R468	150	0,91
1/2" (R421X133, R422X133, R435X053)		150	0,91
3/4" (R421FX034, R422FX034)		240	0,88
3/8" (R421X132, R422X132)	R468C	150	0,91
1/2" (R421X133, R422X133, R435X053)		150	0,91
3/4" (R421FX034, R422FX034)		240	0,88
3/8" (R421X132, R422X132)	R470	150	0,83
1/2" (R421X133, R422X133, R435X053)		150	0,83
3/4" (R421FX034, R422FX034)		240	0,79

KEYMARK (EN215) certification

Product code	Declared hysteresis "C"	Influence of the declared water temperature "W"	Declared response time "Z"	Influence of the declared differential pressure "D"
R460X001	0,35 K	0,90 K	26 min.	0,40 K
R468X001	0,23 K	0,42 K	25 min.	0,15 K
R468CX001	0,23 K	0,26 K	25 min.	0,15 K
R470X001	0,40 K	1,20 K	26 min.	0,55 K

Complies with Directive RT2012 *Certità con variation temporelle*		TELL	
Factor VT	Value VT	Energy efficiency class	Classification
0,56	0,6	0,50	A
0,29	0,3	0,32	A
0,22	0,3	0,29	A



VALVES WITH THERMOSTATIC OPTION

Thermostatic option

Worksite protection handwheel

Product codes and technical features

Dimensions with thermostatic heads

Additional information for KEYMARK (EN215) certified valves

THERMOSTATIC OPTION

The "Giacotech" TG, F series micrometric valves with thermostatic option, are easily equipped with thermostatic heads or thermo-electric actuators, in order to allow the automatic control of the room temperature, guaranteeing comfort and energy saving.
Therefore is possible to use the thermostatic heads with liquid sensor and Clip-Clap quick connection (R460, R468, R468C, R470), with remote sensor (R462), with remote sensor and knob (R463) or thermo-electric actuators normally open (R478/R478M) or normally closed (R473/R473M) directly controlled by common room thermostats.

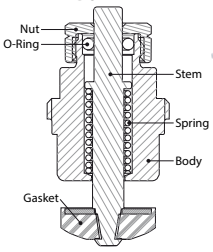
The thermostatic heads and thermo-electric actuators are installed directly on the valve body after removing the worksite protection handwheel..
To remove the worksite protection handwheel proceed as follow:
1) unscrew the upper cap counterclockwise;
2) relase the handwheel by levering the base using a screwdriver.

Warning.
With thermostatic head installed on the valve body, to avoid excessive loads on the seal gasket of the thermostatic bonnet (with the resulting risk of jamming and locking) during the summer months, is is recommended to place the knob in the fully open position, as marked by the symbol ✷.

In case of malfunction of the bonnet it is possible to replace the stem O-Ring, by unscrewing the nut using an hexagonal wrench 11 mm.

If the problem persists is also possible to replace the complete bonnet using the appropriate key R400.

BONNET



R400

The bonnet replacement with R400 key is not possible for the following valves: R421FX004, R422FX004, R401FX004, R402FX004.

WORKSITE PROTECTION HANDWHEEL

The worksite protection handwheel allows to preserve the valve from accidental blows during transport and installation.
Furthermore, the handwheel allows to manually partialize the valve flow rate; by rotating the upper cap counterclockwise, the valve will open, turning it clockwise the valve will close; at 36° cap rotations correspond to temperature variations of 1 °C.

PRODUCT CODES AND TECHNICAL FEATURES

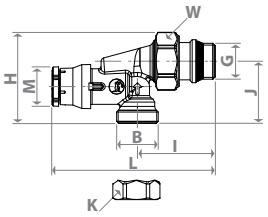
> R415TG

Reverse angle valve with thermostatic option, with iron pipe connection or for copper, plastic or multilayer pipe adaptor.
Fluid of use: water and glycol solutions (max. 30 %)
Temperature range: 5÷110 °C
Max. working pressure: 16 bar with manual handwheel; 10 bar in combination with thermostatic heads
Max. differential pressure with thermostatic heads: 1,4 bar (1/2")

Materials
Body and main components: UNI EN 12165 CW617N brass
Monobloc command stem: stainless steel
Worksite protection handwheel: PP-H
Gaskets: EPDM

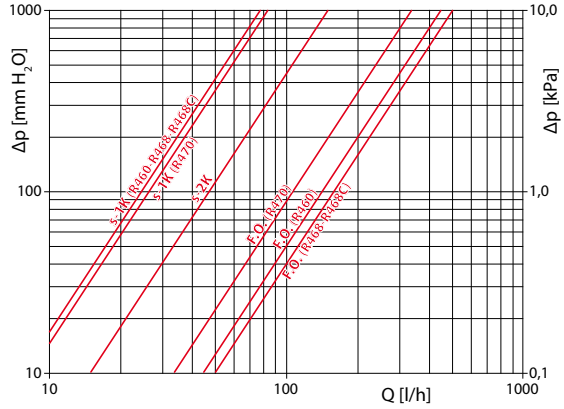
Product code	Connections	Finishing	Type of knob	Adaptors to use	Type of tail piece	Notes
R415X033	1/2"M (G, ISO 228) x 1/2"F (G, ISO 228)	Chrome plated	Worksite protection	-	Tail piece with self-sealing	KEYMARK (EN215) certified
R415X042	1/2"M (G, ISO 228) x base 16	Chrome plated	Worksite protection	R178, R178C, R179, R179AM	Tail piece with self-sealing	
R415X043	1/2"M (G, ISO 228) x base 18	Chrome plated	Worksite protection	R178, R178C, R179, R179AM	Tail piece with self-sealing	

Product code	G x B	H [mm]	I [mm]	J [mm]	K [mm]	L [mm]	M [mm]	W [mm]
R415X033	1/2" x 1/2"	53	53	36	25	106	23	30
R415X042	1/2" x 16	53	45	36	-	94	23	30
R415X043	1/2" x 18	53	45	37	-	94	23	30



Hydraulic features

R415X033, R415X042, R415X043
Kv obtained according to the specifications of the EN215 Standard



With R460 head			With R468-R468C head			With R470 head		
s-1K	s-2K	F.O.	s-1K	s-2K	F.O.	s-1K	s-2K	F.O.
0,25	0,47	1,49	0,25	0,47	1,61	0,27	0,47	1,14

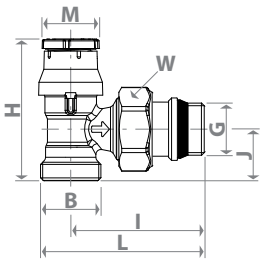
> R411TG

Angle valve with thermostatic option, with connection for copper, plastic or multilayer pipe adaptor.
Fluid of use: water and glycol solutions (max. 30 %)
Temperature range: 5÷110 °C
Max. working pressure: 16 bar with manual handwheel; 10 bar in combination with thermostatic heads
Max. differential pressure with thermostatic heads: 1,4 bar (3/8" - 1/2")

Materials
Body and main components: UNI EN 12165 CW617N brass
Monobloc command stem: stainless steel
Worksite protection: PP-H
Gaskets: EPDM

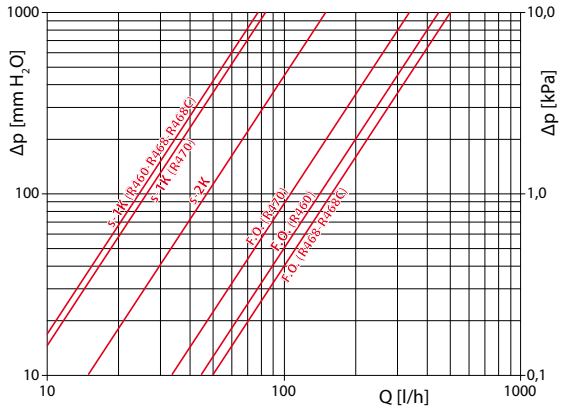
Product code	Connections	Finishing	Type of knob	Adaptors to use	Type of tail piece
R411X032	3/8"M (G, ISO 228) x base 16	Chrome plated brass	Worksite protection	R178, R178C, R179, R179AM	Tail piece with self-sealing
R411X033	1/2"M (G, ISO 228) x base 16	Chrome plated brass	Worksite protection	R178, R178C, R179, R179AM	Tail piece with self-sealing
R411X034	1/2"M (G, ISO 228) x base 18	Chrome plated brass	Worksite protection	R178, R178C, R179, R179AM	Tail piece with self-sealing

Product code	G x B	H [mm]	I [mm]	J [mm]	L [mm]	M [mm]	W [mm]
R411X032	3/8" x 16	56	53	21	66	23	30
R411X033	1/2" x 16	56	53	21	66	23	30
R411X034	1/2" x 18	56	53	21	66	23	30



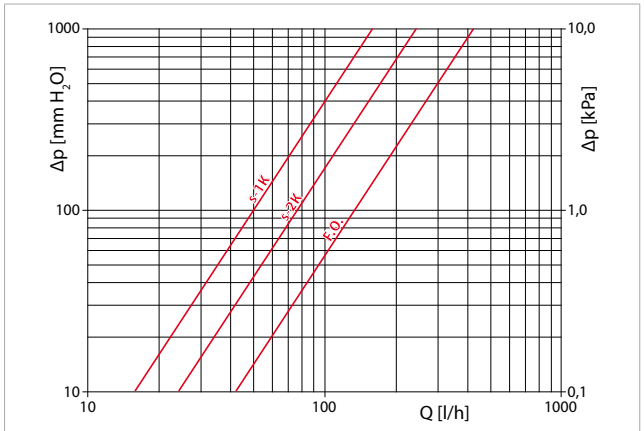
Hydraulic features

R411X032, R411X033
Kv obtained according to the specifications of the EN215 Standard



With R460 head			With R468-R468C head			With R470 head		
s-1K	s-2K	F.O.	s-1K	s-2K	F.O.	s-1K	s-2K	F.O.
0,25	0,47	1,49	0,25	0,47	1,61	0,27	0,47	1,14

R411X034
Kv obtained with Giacomini laboratory loss of pressure station



With R460, R468, R468C, R470, R462, R463 thermostatic heads		
s-1K	s-2K	F.O.
0,50	0,76	1,41

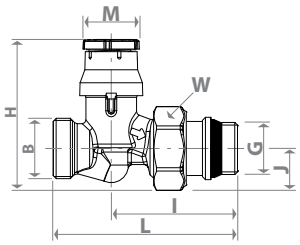
> R412TG

Straight valve with thermostatic option, with connection for copper, plastic or multilayer pipe adaptor.
Fluid of use: water and glycol solutions (max. 30 %)
Temperature range: 5÷110 °C
Max. working pressure: 16 bar with manual handwheel; 10 bar in combination with thermostatic heads
Max. differential pressure with thermostatic heads: 1,4 bar (3/8" - 1/2")

Materials
Body and main components: UNI EN 12165 CW617N brass
Monobloc command stem: stainless steel
Worksite protection: PP-H
Gaskets: EPDM

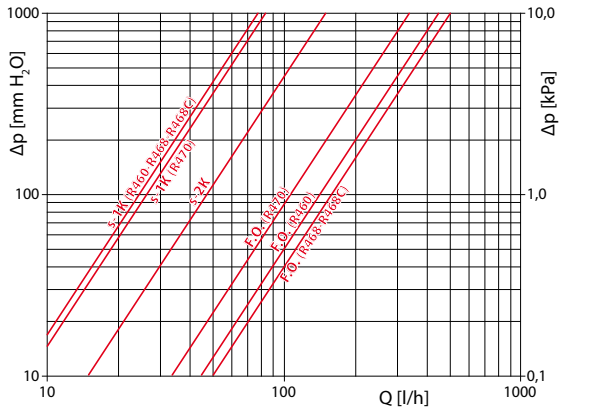
Product code	Connections	Finishing	Type of knob	Adaptors to use	Type of tail piece
R412X032	3/8"M (G, ISO 228) x base 16	Chrome plated brass	Worksite protection	R178, R178C, R179, R179AM	Tail piece with self-sealing
R412X033	1/2"M (G, ISO 228) x base 16	Chrome plated brass	Worksite protection	R178, R178C, R179, R179AM	Tail piece with self-sealing
R412X034	1/2"M (G, ISO 228) x base 18	Chrome plated brass	Worksite protection	R178, R178C, R179, R179AM	Tail piece with self-sealing

Product code	G x B	H [mm]	I [mm]	J [mm]	L [mm]	M [mm]	W [mm]
R412X032	3/8" x 16	60	51	17	74	23	30
R412X033	1/2" x 16	60	51	17	75	23	30
R412X034	1/2" x 18	60	51	17	76	23	30



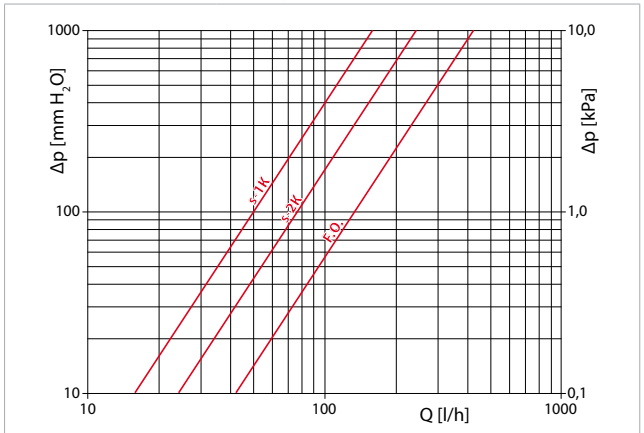
Hydraulic features

R412X032, R412X033
Kv obtained according to the specifications of the EN215 Standard



With R460 head			With R468-R468C head			With R470 head		
s-1K	s-2K	F.O.	s-1K	s-2K	F.O.	s-1K	s-2K	F.O.
0,25	0,47	1,49	0,25	0,47	1,61	0,27	0,47	1,14

R412X034
Kv obtained with Giacomini laboratory loss of pressure station



With R460, R468, R468C, R470, R462, R463 thermostatic heads		
s-1K	s-2K	F.O.
0,50	0,76	1,41

> R401TG

Angle valve with thermostatic option, with iron pipe connection.
Fluid of use: water and glycol solutions (max. 30 %)
Temperature range: 5÷110 °C
Max. working pressure: 16 bar with manual handwheel; 10 bar in combination with thermostatic heads
Max. differential pressure with thermostatic heads: 1,4 bar (3/8" - 1/2"); 0,7 bar (3/4"); 0,4 bar (1")

Materials
Body and main components: UNI EN 12165 CW617N brass
Monobloc command stem: stainless steel
Worksite protection handwheel: PP-H
Gaskets: EPDM

Product code	Connections	Finishing	Type of knob	Type of tail piece	Notes
R401X132	3/8"M (G, ISO 228) x 3/8"F (G, ISO 228)	Chrome plated brass	Worksite protection	Tail piece with self-sealing	KEYMARK (EN215) certified
R401X133	1/2"M (G, ISO 228) x 1/2"F (G, ISO 228)	Chrome plated brass	Worksite protection	Tail piece with self-sealing	KEYMARK (EN215) certified
R401FX004	3/4"M (G, ISO 228) x 3/4"F (G, ISO 228)	Chrome plated brass	Worksite protection	Tail piece without self-sealing	KEYMARK (EN215) certified
R401X034	3/4"M (G, ISO 228) x 3/4"F (G, ISO 228)	Chrome plated brass	Worksite protection	Tail piece without self-sealing	
R401X035	1"M (G, ISO 228) x 1"F (G, ISO 228)	Chrome plated brass	Worksite protection	Tail piece without self-sealing	

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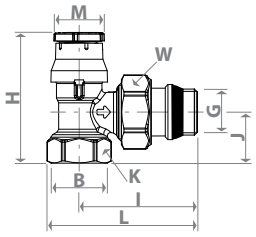
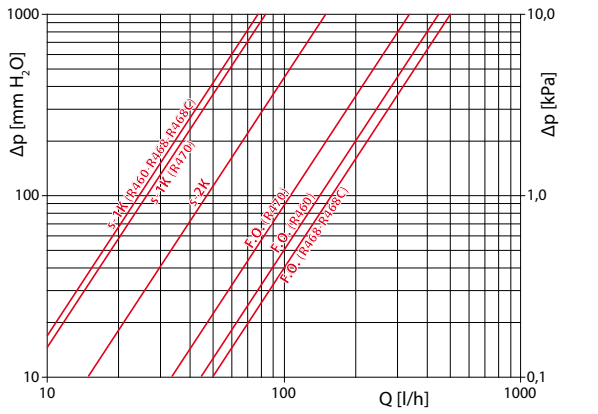
Product code	G x B	H [mm]	I [mm]	J [mm]	K [mm]	L [mm]	M [mm]	W [mm]
R401X132	3/8" x 3/8"	55	51	20	22	64	23	27
R401X133	1/2" x 1/2"	59	53	23	26	68	23	30
R401FX004	3/4" x 3/4"	68	62	26	32	69	23	38
R401X034	3/4" x 3/4"	60	60	25	32	78	23	38
R401X035	1" x 1"	78	72	31	39	94	23	46



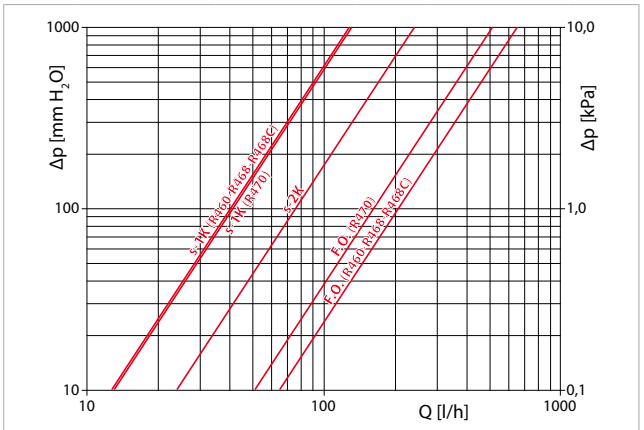
Hydraulic features

R401X132, R401X133 Kv obtained according to the specifications of the EN215



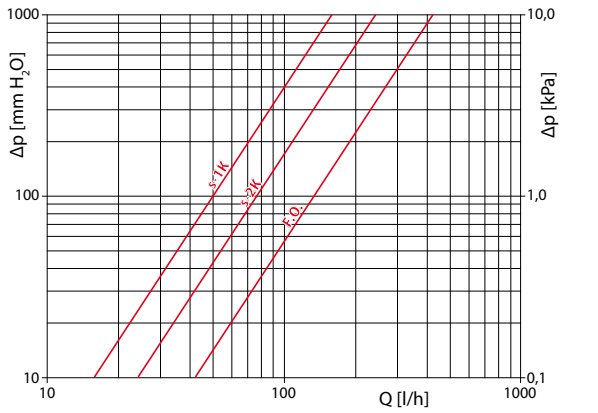
With R460 head			With R468-R468C head			With R470 head		
s-1K	s-2K	F.O.	s-1K	s-2K	F.O.	s-1K	s-2K	F.O.
0,25	0,47	1,49	0,25	0,47	1,61	0,27	0,47	1,14

R401FX034 Kv obtained according to the specifications of the EN215 Standard



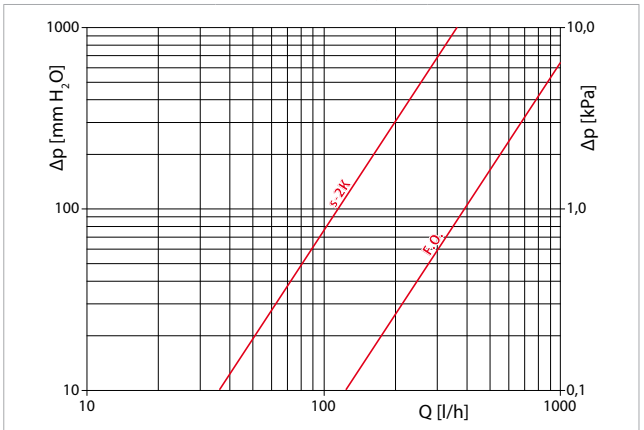
With R460 head			With R468-R468C head			With R470 head		
s-1K	s-2K	F.O.	s-1K	s-2K	F.O.	s-1K	s-2K	F.O.
0,40	0,76	2,15	0,40	0,76	2,15	0,41	0,76	1,68

R401X034 Kv obtained with Giacomini laboratory loss of pressure station



With R460, R468, R468C, R470, R462, R463 thermostatic heads		
s-1K	s-2K	F.O.
0,50	0,76	1,41

R401X035 Kv obtained with Giacomini laboratory loss of pressure station



With R460, R468, R468C, R470, R462, R463 thermostatic heads		
s-1K	s-2K	F.O.
-	1,22	3,98

> R402TG

Straight valve with thermostatic option, with iron pipe connection.
Fluid of use: water and glycol solutions (max. 30 %)
Temperature range: 5÷110 °C
Max. working pressure: 16 bar with manual handwheel; 10 bar in combination with thermostatic heads
Max. differential pressure with thermostatic heads: 1,4 bar (3/8" - 1/2"); 0,7 bar (3/4"); 0,4 bar (1")

Materials
Body and main components: UNI EN 12165 CW617N brass
Monobloc command stem: stainless steel
Worksite protection handwheel: PP-H
Gaskets: EPDM

Product code	Connections	Finishing	Type of knob	Type of tail piece	Notes
R402X132	3/8"M (G, ISO 228) x 3/8"F (G, ISO 228)	Chrome plated brass	Worksite protection	Tail piece with self-sealing	KEYMARK (EN215) certified
R402X133	1/2"M (G, ISO 228) x 1/2"F (G, ISO 228)	Chrome plated brass	Worksite protection	Tail piece with self-sealing	KEYMARK (EN215) certified
R402FX004	3/4"M (G, ISO 228) x 3/4"F (G, ISO 228)	Chrome plated brass	Worksite protection	Tail piece without self-sealing	KEYMARK (EN215) certified
R402X034	3/4"M (G, ISO 228) x 3/4"F (G, ISO 228)	Chrome plated brass	Worksite protection	Tail piece without self-sealing	
R402X035	1"M (G, ISO 228) x 1"F (G, ISO 228)	Chrome plated brass	Worksite protection	Tail piece without self-sealing	

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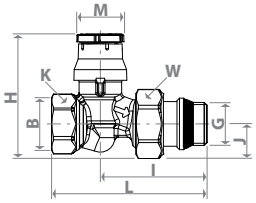
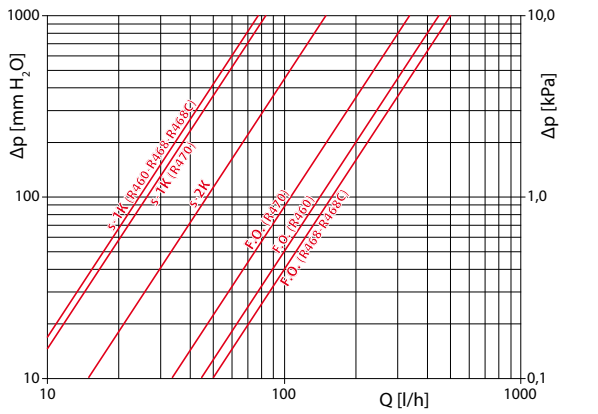
Product code	G x B	H [mm]	I [mm]	J [mm]	K [mm]	L [mm]	M [mm]	W [mm]
R402X132	3/8" x 3/8"	58	54	15	22	76	23	27
R402X133	1/2" x 1/2"	60	55	17	26	82	23	30
R402FX004	3/4" x 3/4"	70	61	22	32	97	23	38
R402X034	3/4" x 3/4"	64	55	21	32	81	23	38
R402X035	1" x 1"	76	64	26	39	105	23	46



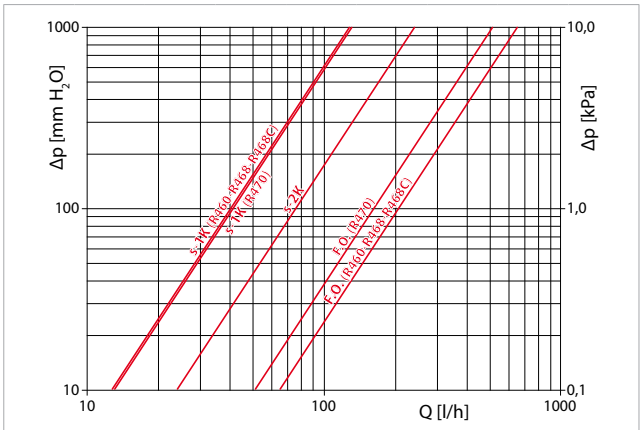
Hydraulic features

R402X132, R402X133 Kv obtained according to the specifications of the EN215



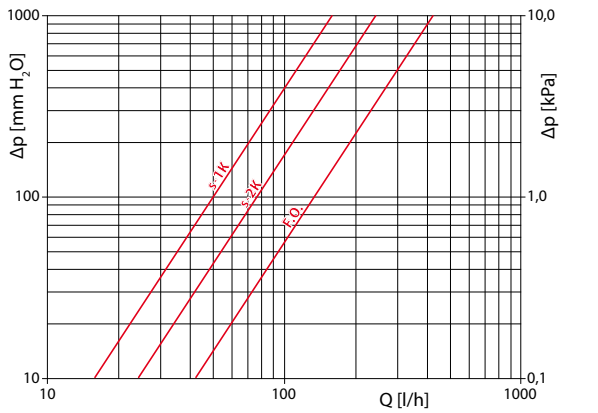
With R460 head			With R468-R468C head			With R470 head		
s-1K	s-2K	F.O.	s-1K	s-2K	F.O.	s-1K	s-2K	F.O.
0,25	0,47	1,49	0,25	0,47	1,61	0,27	0,47	1,14

R402FX034 Kv obtained according to the specifications of the EN215 Standard



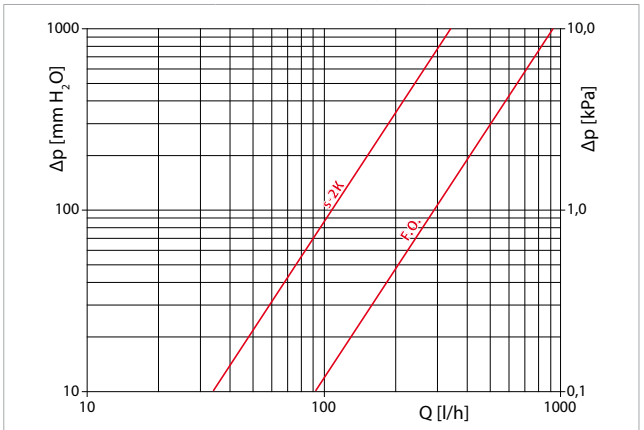
With R460 head			With R468-R468C head			With R470 head		
s-1K	s-2K	F.O.	s-1K	s-2K	F.O.	s-1K	s-2K	F.O.
0,40	0,76	2,15	0,40	0,76	2,15	0,41	0,76	1,68

R402X034 Kv obtained with Giacomini laboratory loss of pressure station



With R460, R468, R468C, R470, R462, R463 thermostatic heads		
s-1K	s-2K	F.O.
0,50	0,76	1,41

R402X035 Kv obtained with Giacomini laboratory loss of pressure station



With R460, R468, R468C, R470, R462, R463 thermostatic heads		
s-1K	s-2K	F.O.
-	1,15	2,95

> R403TG

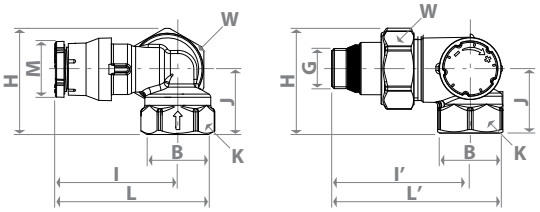
Double angle valve with thermostatic option, with iron pipe connection or for copper, plastic or multilayer pipe adaptor.
Fluid of use: water and glycol solutions (max. 30 %)
Temperature range: 5÷110 °C
Max. working pressure: 16 bar with manual handwheel; 10 bar in combination with thermostatic heads
Max. differential pressure with thermostatic heads: 1,4 bar (3/8" - 1/2")

Materials
Body and main components: UNI EN 12165 CW617N brass
Monobloc command stem: stainless steel
Worksite protection handwheel: PP-H
Gaskets: EPDM

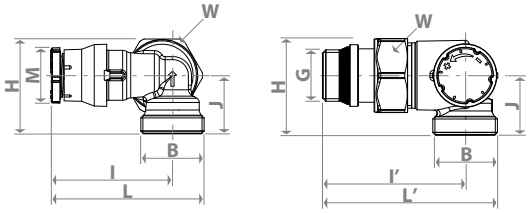
Product code	Connections	Finishing	Type of knob	Adaptors to use	Type of tail piece
R403X052	3/8"M (G, ISO 228) x 3/8"F (G, ISO 228) (LF)	Chrome plated brass	Worksite protection	-	Tail piece with self-sealing
R403X062	3/8"M (G, ISO 228) x 3/8"F (G, ISO 228) (RG)	Chrome plated brass	Worksite protection	-	Tail piece with self-sealing
R403X054	1/2"M (G, ISO 228) x 1/2"F (G, ISO 228) (LF)	Chrome plated brass	Worksite protection	-	Tail piece with self-sealing
R403X064	1/2"M (G, ISO 228) x 1/2"F (G, ISO 228) (RG)	Chrome plated brass	Worksite protection	-	Tail piece with self-sealing
R403X024	1/2"M (G, ISO 228) x base 18 (LF)	Chrome plated brass	Worksite protection	R178, R178C, R179, R179AM	Tail piece with self-sealing
R403X034	1/2"M (G, ISO 228) x base 18 (RG)	Chrome plated brass	Worksite protection	R178, R178C, R179, R179AM	Tail piece with self-sealing

Product code	G x B	H [mm]	I [mm]	I' [mm]	J [mm]	L [mm]	L' [mm]	M [mm]	W [mm]	K [mm]
R403X052	3/8" x 3/8" (LF)	43	50	57	27	65	71	23	30	27
R403X062	3/8" x 3/8" (RG)	43	50	57	27	65	71	23	30	27
R403X054	1/2" x 1/2" (LF)	43	50	57	27	65	71	23	30	27
R403X064	1/2" x 1/2" (RG)	43	50	57	27	65	71	23	30	27
R403X024	1/2" x 18 (LF)	41	50	58	24	63	71	23	30	-
R403X034	1/2" x 18 (RG)	41	50	58	24	63	71	23	30	-

IRON CONNECTION

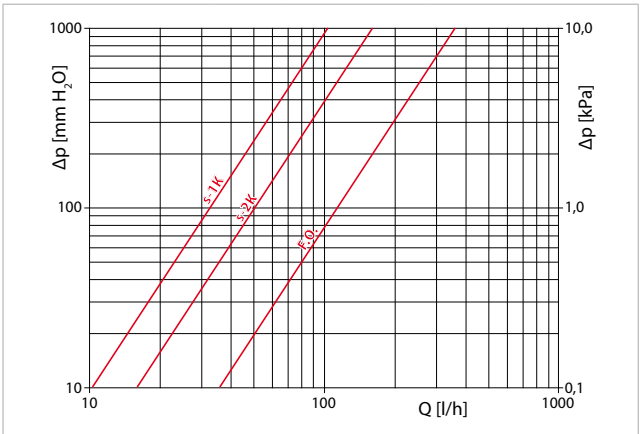


ADAPTOR CONNECTION



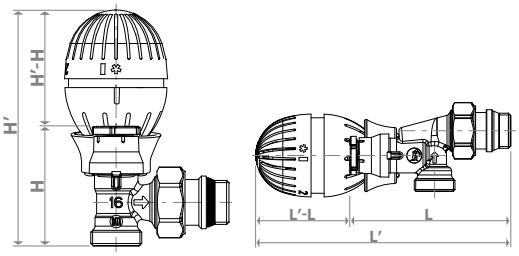
Hydraulic features

R403X052, R403X062, R403X054, R403X064, R403X024, R403X034
Kv obtained with Giacomini laboratory loss of pressure station



With R460, R468, R468C, R470, R462, R463 thermostatic heads		
s-1K	s-2K	F.O.
0,33	0,51	1,26

DIMENSIONS WITH THERMOSTATIC HEADS



	Thermostatic heads			
Type	R460	R468	R468C	R470
H' - H [mm]	71	71	81	54
L' - L [mm] for R415TG	71	71	81	54

Warning.
On systems equipped with thermostatic heads, the use of the R147N pressure differential valves is recommended, in order to avoid overpressure phenomena derived from the possible closure by contemporaneousness factor of the heads.

ADDITIONAL INFORMATION FOR KEYMARK (EN215) CERTIFIED VALVES

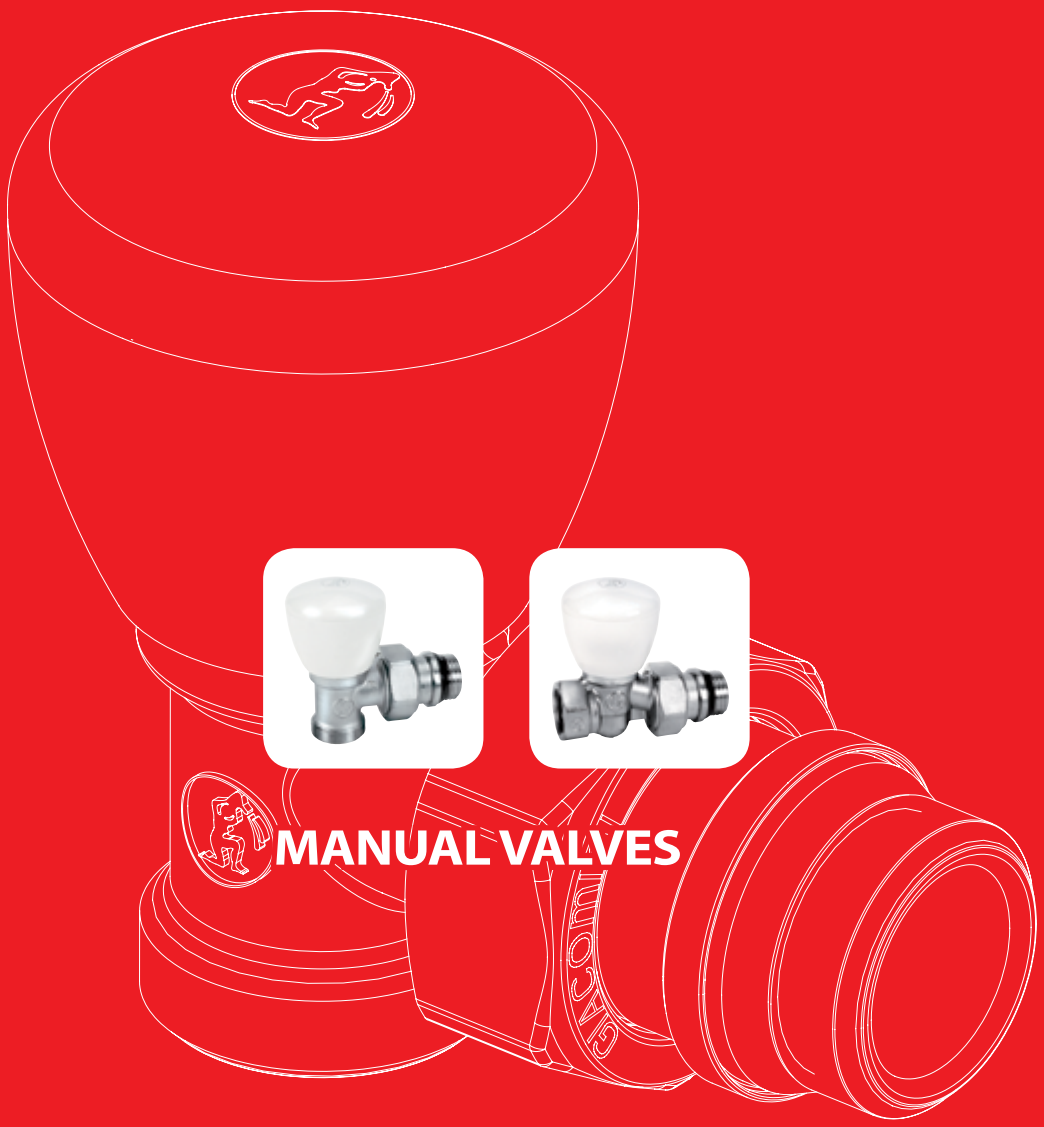
028

Valve size	Thermostatic head in combination	Nominal flow rate q_{mNH} in combination with thermostatic head [kg/h]	Authority *"a"* of the stopper
3/8" (R401X132, R402X132)	R460	150	0,90
1/2" (R401X133, R402X133, R415X033)		150	0,90
3/4" (R401FX034, R402FX034)		240	0,88
3/8" (R401X132, R402X132)	R468	150	0,91
1/2" (R401X133, R402X133, R415X033)		150	0,91
3/4" (R401FX034, R402FX034)		240	0,88
3/8" (R401X132, R402X132)	R468C	150	0,91
1/2" (R401X133, R402X133, R415X033)		150	0,91
3/4" (R401FX034, R402FX034)		240	0,88
3/8" (R401X132, R402X132)	R470	150	0,83
1/2" (R401X133, R402X133, R415X033)		150	0,83
3/4" (R401FX034, R402FX034)		240	0,79

KEYMARK (EN215) certification

Product code	Declared hysteresis "C"	Influence of the declared water temperature "W"	Declared response time "Z"	Influence of the declared differential pressure "D"
R460X001	0,35 K	0,90 K	26 min.	0,40 K
R468X001	0,23 K	0,42 K	25 min.	0,15 K
R468CX001	0,23 K	0,26 K	25 min.	0,15 K
R470X001	0,40 K	1,20 K	26 min.	0,55 K

Complies with Directive RT2012 *Certità con variation temporelle*		TELL	
Factor VT	Value VT	Energy efficiency class	Classification
0,56	0,6	0,50	A
0,29	0,3	0,32	A
0,22	0,3	0,29	A



MANUAL VALVES

Manual handwheel

Product codes and technical features

MANUAL HANDWHEEL

The habit, still strongly diffused, of installing manual valves has led Giacomini to include this type of valves within the "Giacotech" TG, F series.
The "Giacotech" TG, F series manual valves are characterized, as well as by simple maneuverability, by a new and more comfortable operating knob equipped with a specific worksite protection.

PRODUCT CODES AND TECHNICAL FEATURES

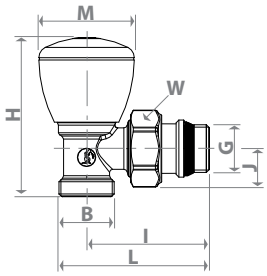
> R25TG

Angle manual valve, with connection for copper, plastic or multilayer pipe adaptor.
Fluid of use: water and glycol solutions (max. 30 %)
Temperature range: 5÷110 °C
Max. working pressure: 16 bar

Materials
Body and main components: UNI EN 12165 CW617N brass
Monobloc command stem: UNI EN 12164 CW617N brass
Manual handwheel: ABS
Gaskets: EPDM

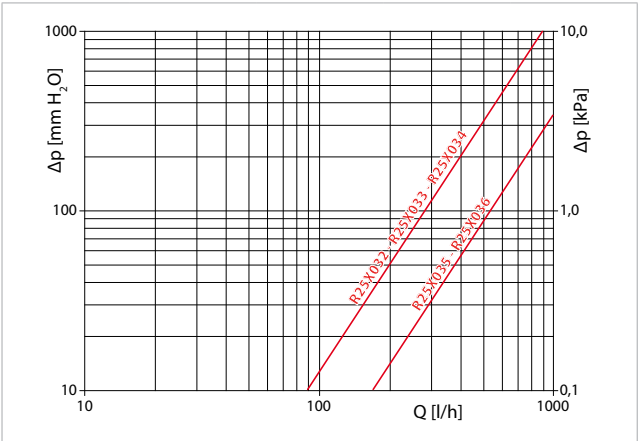
Product code	Connections	Finishing	Type of knob	Adaptors to use	Type of tail piece
R25X032	3/8"M (G, ISO 228) x base 16	Chrome plated brass	Manual handwheel	R178, R178C, R179, R179AM	Tail piece with self-sealing
R25X033	1/2"M (G, ISO 228) x base 16	Chrome plated brass	Manual handwheel	R178, R178C, R179, R179AM	Tail piece with self-sealing
R25X034	1/2"M (G, ISO 228) x base 18	Chrome plated brass	Manual handwheel	R178, R178C, R179, R179AM	Tail piece with self-sealing
R25X035	3/4"M (G, ISO 228) x base 18	Chrome plated brass	Manual handwheel	R178, R178C, R179, R179AM	Tail piece without self-sealing
R25X036	3/4"M (G, ISO 228) x base 22	Chrome plated brass	Manual handwheel	R178, R178C, R179, R179AM	Tail piece without self-sealing

Product code	G x B	H [mm]	I [mm]	J [mm]	L [mm]	M [mm]	W [mm]
R25X032	3/8" x 16	69	53	21	74	42	30
R25X033	1/2" x 16	69	53	21	74	42	30
R25X034	1/2" x 18	73	54	24	75	42	30
R25X035	3/4" x 18	79	60	24	84	49	38
R25X036	3/4" x 22	79	60	24	84	49	38



Hydraulic features

R25X032, R25X033, R25X034, R25X035, R25X036
Kv obtained with Giacomini laboratory loss of pressure station



Handwheel position Fully Open				
R25X032	R25X033	R25X034	R25X035	R25X036
2,88	2,88	2,88	5,34	5,34

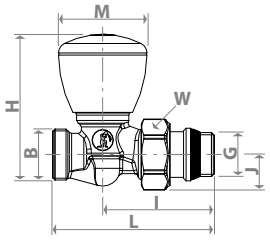
> R27TG

Straight manual valve, with connection for copper, plastic or multilayer pipe adaptor.
Fluid of use: water and glycol solutions (max. 30 %)
Temperature range: 5÷110 °C
Max. working pressure: 16 bar

Materials
Body and main components: UNI EN 12165 CW617N brass
Monobloc command stem: UNI EN 12164 CW617N brass
Manual handwheel: ABS
Gaskets: EPDM

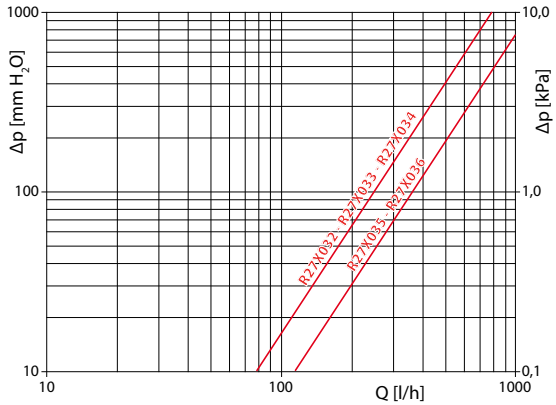
Product code	Connections	Finishing	Type of knob	Adaptors to use	Type of tail piece
R27X032	3/8"M (G, ISO 228) x base 16	Chrome plated brass	Manual handwheel	R178, R178C, R179, R179AM	Tail piece with self-sealing
R27X033	1/2"M (G, ISO 228) x base 16	Chrome plated brass	Manual handwheel	R178, R178C, R179, R179AM	Tail piece with self-sealing
R27X034	1/2"M (G, ISO 228) x base 18	Chrome plated brass	Manual handwheel	R178, R178C, R179, R179AM	Tail piece with self-sealing
R27X035	3/4"M (G, ISO 228) x base 18	Chrome plated brass	Manual handwheel	R178, R178C, R179, R179AM	Tail piece without self-sealing
R27X036	3/4"M (G, ISO 228) x base 22	Chrome plated brass	Manual handwheel	R178, R178C, R179, R179AM	Tail piece without self-sealing

Product code	G x B	H [mm]	I [mm]	J [mm]	L [mm]	M [mm]	W [mm]
R27X032	3/8" x 16	73	52	17	75	42	30
R27X033	1/2" x 16	73	52	17	76	42	30
R27X034	1/2" x 18	73	52	17	77	42	30
R27X035	3/4" x 18	87	55	21	81	49	38
R27X036	3/4" x 22	87	55	21	91	49	38



Hydraulic features

R27X032, R27X033, R27X034, R27X035, R27X036
Kv obtained with Giacomini laboratory loss of pressure station



Handwheel position Fully Open				
R27X032	R27X033	R27X034	R27X035	R27X036
2,50	2,50	2,50	3,65	3,65

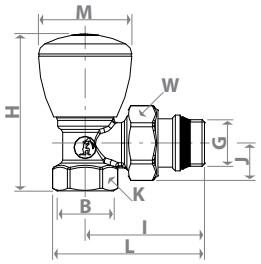
> R5TG

Angle manual valve, with iron pipe connection.
Fluid of use: water and glycol solutions (max. 30 %)
Temperature range: 5÷110 °C
Max. working pressure: 16 bar

Materials
Body and main components: UNI EN 12165 CW617N brass
Monobloc command stem: UNI EN 12164 CW617N brass
Manual handwheel: ABS
Gaskets: EPDM

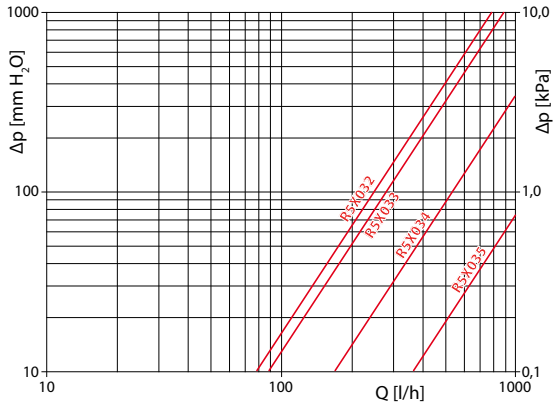
Product code	Connections	Finishing	Type of knob	Type of tail piece
R5X032	3/8"M (G, ISO 228) x 3/8"F (G, ISO 228)	Chrome plated brass	Manual handwheel	Tail piece with self-sealing
R5X033	1/2"M (G, ISO 228) x 1/2"F (G, ISO 228)	Chrome plated brass	Manual handwheel	Tail piece with self-sealing
R5X034	3/4"M (G, ISO 228) x 3/4"F (G, ISO 228)	Chrome plated brass	Manual handwheel	Tail piece without self-sealing
R5X035	1"M (G, ISO 228) x 1"F (G, ISO 228)	Chrome plated brass	Manual handwheel	Tail piece without self-sealing
R5X036	1 1/4"M (G, ISO 228) x 1 1/4"F (G, ISO 228)	Chrome plated brass	Manual handwheel	Tail piece without self-sealing

Product code	G x B	H [mm]	I [mm]	J [mm]	K [mm]	L [mm]	M [mm]	W [mm]
R5X032	3/8" x 3/8"	65	50	19	22	71	42	27
R5X033	1/2" x 1/2"	70	53	21	26	74	42	30
R5X034	3/4" x 3/4"	79	60	23	32	84	49	38
R5X035	1" x 1"	87	68	30	39	92	49	46
R5X036	1 1/4" x 1 1/4"	93	81	34	49	110	59	53



Hydraulic features

R5X032, R5X033, R5X034, R5X035, R5X036
Kv obtained with Giacomini laboratory loss of pressure station



Handwheel position Fully Open				
R5X032	R5X033	R5X034	R5X035	R5X036
2,46	2,88	5,34	11,50	-

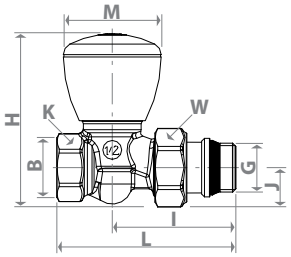
> R6TG

Straight manual valve, with iron pipe connection.
Fluid of use: water and glycol solutions (max. 30 %)
Temperature range: 5÷110 °C
Max. working pressure: 16 bar

Materials
Body and main components: UNI EN 12165 CW617N brass
Monobloc command stem: UNI EN 12164 CW617N brass
Manual handwheel: ABS
Gaskets: EPDM

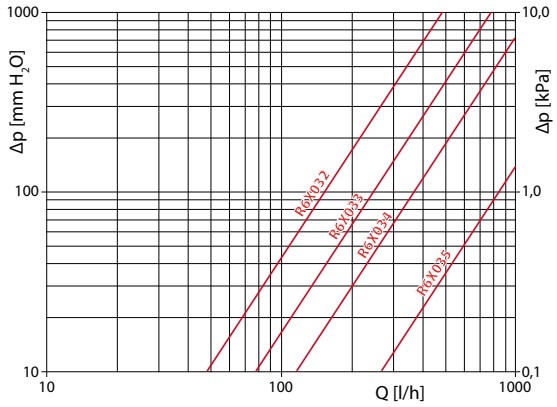
Product code	Connections	Finishing	Type of knob	Type of tail piece
R6X032	3/8"M (G, ISO 228) x 3/8"F (G, ISO 228)	Chrome plated brass	Manual handwheel	Tail piece with self-sealing
R6X033	1/2"M (G, ISO 228) x 1/2"F (G, ISO 228)	Chrome plated brass	Manual handwheel	Tail piece with self-sealing
R6X034	3/4"M (G, ISO 228) x 3/4"F (G, ISO 228)	Chrome plated brass	Manual handwheel	Tail piece without self-sealing
R6X035	1"M (G, ISO 228) x 1"F (G, ISO 228)	Chrome plated brass	Manual handwheel	Tail piece without self-sealing
R6X036	1 1/4"M (G, ISO 228) x 1 1/4"F (G, ISO 228)	Chrome plated brass	Manual handwheel	Tail piece without self-sealing

Product code	G x B	H [mm]	I [mm]	J [mm]	K [mm]	L [mm]	M [mm]	W [mm]
R6X032	3/8" x 3/8"	69	56	15	22	77	42	27
R6X033	1/2" x 1/2"	73	60	17	26	84	42	30
R6X034	3/4" x 3/4"	86	55	21	32	81	49	38
R6X035	1" x 1"	93	69	26	39	106	49	46
R6X036	1 1/4" x 1 1/4"	97	85	30	49	135	59	53

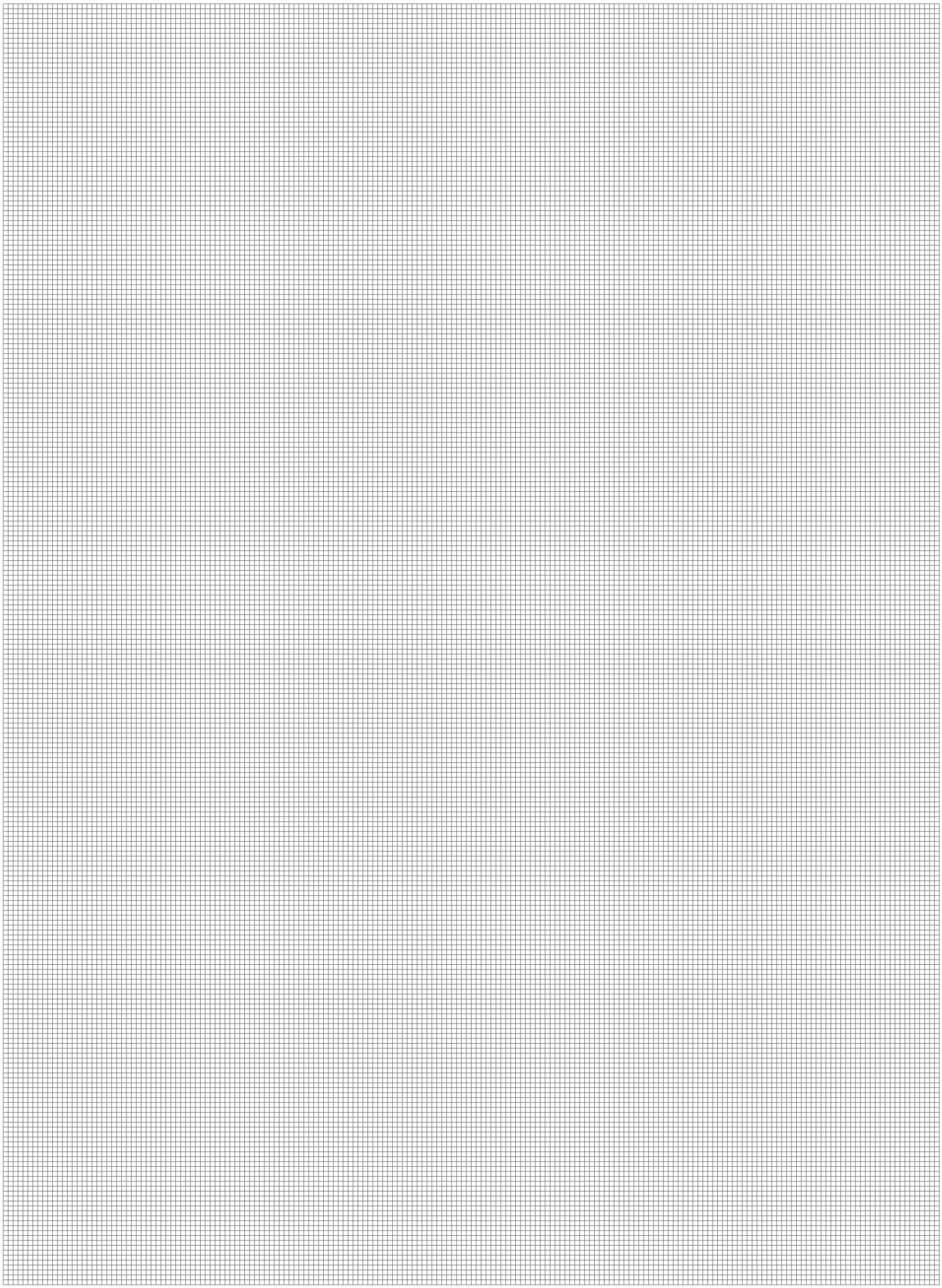


Hydraulic features

R6X032, R6X033, R6X034, R6X035, R6X036
Kv obtained with Giacomini laboratory loss of pressure station



Handwheel position Fully Open				
R6X032	R6X033	R6X034	R6X035	R6X036
1,58	2,50	3,65	8,45	-



System adjustment

Product codes and technical features

SYSTEM ADJUSTMENT

In order to allow the installer to have a complete installation system, the lockshields are also included in the "Giacotech" TG, F series, which are essential for the correct balancing of the system.
This operation is of fundamental importance to guarantee the correct installation functioning.
By removing the upper cap, you can easily access the adjustment stem that must be maneuvered with the aid of a specific Allen wrench (R73). Starting from the Fully Closed position, the stopper is opened according to the system design.

PRODUCT CODES AND TECHNICAL FEATURES

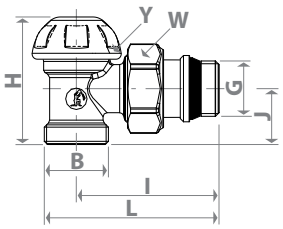
> R29TG

Angle lockshield, with connection for copper, plastic or multilayer pipe adaptor.
Fluid of use: water and glycol solutions (max. 30 %)
Temperature range: 5÷110 °C
Max. working pressure: 16 bar

Materials
Body and main components: UNI EN 12165 CW617N brass
Monobloc command stem: UNI EN 12164 CW617N brass
Protection cap: ABS or brass, depending on codes
Gaskets: EPDM

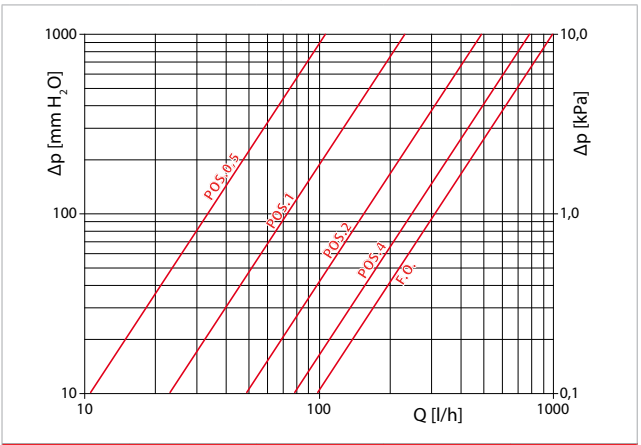
Product code	Connections	Finishing	Type of cap	Adaptors to use	Type of tail piece
R29X032	3/8"M (G, ISO 228) x base 16	Chrome plated brass	Plastic cap	R178, R178C, R179, R179AM	Tail piece with self-sealing
R29X033	1/2"M (G, ISO 228) x base 16	Chrome plated brass	Plastic cap	R178, R178C, R179, R179AM	Tail piece with self-sealing
R29X034	1/2"M (G, ISO 228) x base 18	Chrome plated brass	Plastic cap	R178, R178C, R179, R179AM	Tail piece with self-sealing
R29X035	3/4"M (G, ISO 228) x base 18	Chrome plated brass	Brass cap	R178, R178C, R179, R179AM	Tail piece without self-sealing
R29X036	3/4"M (G, ISO 228) x base 22	Chrome plated brass	Brass cap	R178, R178C, R179, R179AM	Tail piece without self-sealing

Product code	G x B	H [mm]	I [mm]	J [mm]	L [mm]	Y [mm]	W [mm]
R29X032	3/8" x 16	47	53	21	70	-	30
R29X033	1/2" x 16	47	53	21	70	-	30
R29X034	1/2" x 18	50	54	24	71	-	30
R29X035	3/4" x 18	54	60	24	79	35	38
R29X036	3/4" x 22	61	60	31	79	35	38



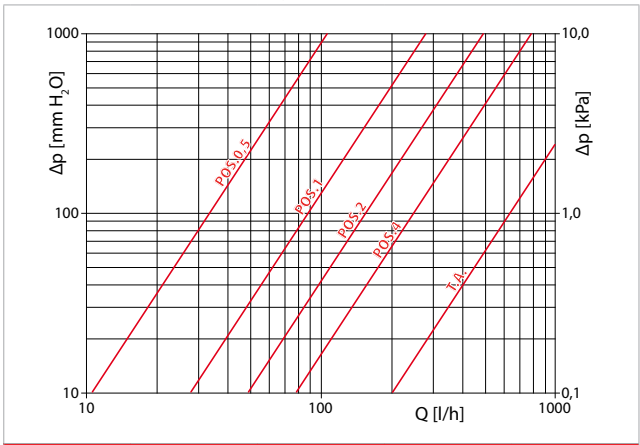
Hydraulic features

R29X032, R29X033, R29X034
Kv obtained with Giacomini laboratory loss of pressure station



N° of opening turns of the lockshield, starting from Fully Closed position				
0,5	1	2	4	F.O.
0,34	0,73	1,60	2,52	3,16

R29X035, R29X036
Kv obtained with Giacomini laboratory loss of pressure station



N° of opening turns of the lockshield, starting from Fully Closed position				
0,5	1	2	4	F.O.
0,35	0,89	1,60	2,52	6,32

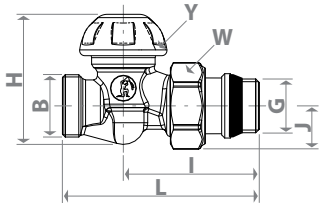
> R31TG

Straight lockshield, with connection for copper, plastic or multilayer pipe adaptor.
Fluid of use: water and glycol solutions (max. 30 %)
Temperature range: 5÷110 °C
Max. working pressure: 16 bar

Materials
Body and main components: UNI EN 12165 CW617N brass
Monobloc command stem: UNI EN 12164 CW617N brass
Protection cap: ABS or brass, depending on codes
Gaskets: EPDM

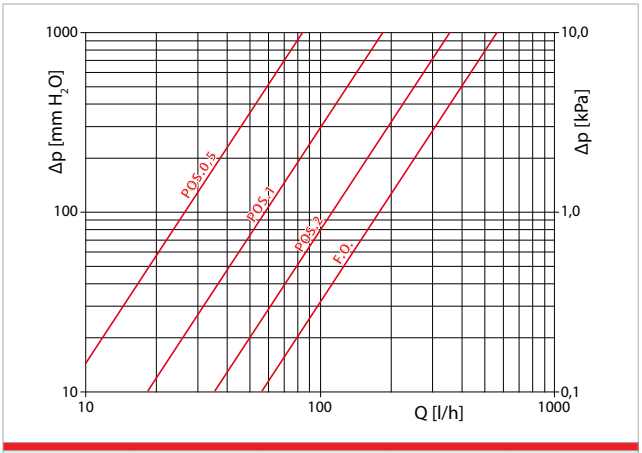
Product code	Connections	Finishing	Type of cap	Adaptors to use	Type of tail piece
R31X032	3/8"M (G, ISO 228) x base 16	Chrome plated brass	Plastic cap	R178, R178C, R179, R179AM	Tail piece with self-sealing
R31X033	1/2"M (G, ISO 228) x base 16	Chrome plated brass	Plastic cap	R178, R178C, R179, R179AM	Tail piece with self-sealing
R31X034	1/2"M (G, ISO 228) x base 18	Chrome plated brass	Plastic cap	R178, R178C, R179, R179AM	Tail piece with self-sealing
R31X035	3/4"M (G, ISO 228) x base 18	Chrome plated brass	Brass cap	R178, R178C, R179, R179AM	Tail piece without self-sealing
R31X036	3/4"M (G, ISO 228) x base 22	Chrome plated brass	Brass cap	R178, R178C, R179, R179AM	Tail piece without self-sealing

Product code	G x B	H [mm]	I [mm]	J [mm]	L [mm]	Y [mm]	W [mm]
R31X032	3/8" x 16	51	52	17	75	-	30
R31X033	1/2" x 16	51	52	17	76	-	30
R31X034	1/2" x 18	51	52	17	77	-	30
R31X035	3/4" x 18	62	54	21	80	35	38
R31X036	3/4" x 22	62	54	21	84	35	38



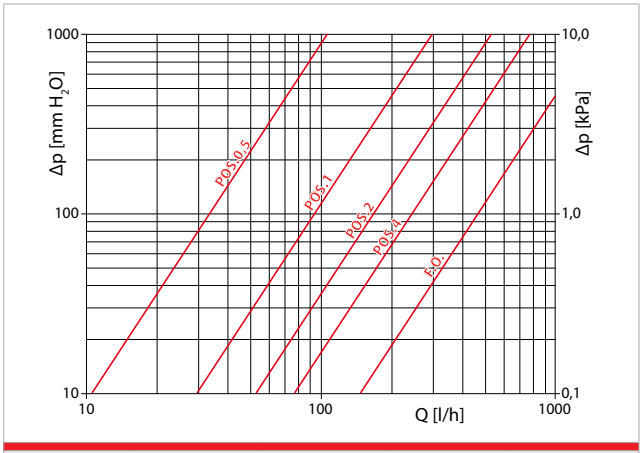
Hydraulic features

R31X032, R31X033, R31X034
Kv obtained with Giacomini laboratory loss of pressure station



N° of opening turns of the lockshield, starting from Fully Closed position				
0,5	1	2	4	F.O.
0,27	0,59	1,20	-	1,83

R31X035, R31X036
Kv obtained with Giacomini laboratory loss of pressure station



N° of opening turns of the lockshield, starting from Fully Closed position				
0,5	1	2	4	F.O.
0,35	0,94	1,76	2,50	4,71

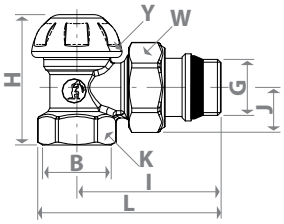
> R14TG

Angle lockshield, with iron pipe connection.
Fluid of use: water and glycol solutions (max. 30 %)
Temperature range: 5÷110 °C
Max. working pressure: 16 bar

Materials
Body and main components: UNI EN 12165 CW617N brass
Monobloc command stem: UNI EN 12164 CW617N brass
Protection cap: ABS or brass, depending on codes
Gaskets: EPDM

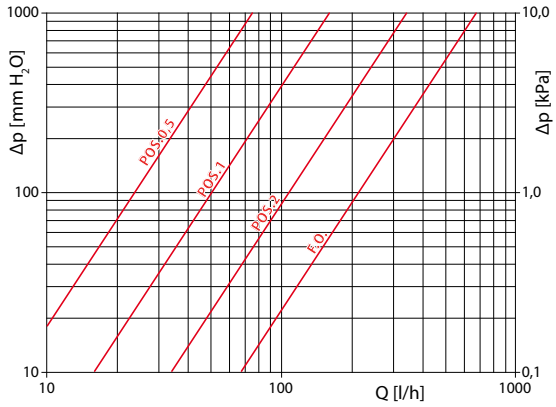
Product code	Connections	Finishing	Type of cap	Type of tail piece
R14X032	3/8"M (G, ISO 228) x 3/8"F (G, ISO 228)	Chrome plated brass	Plastic cap	Tail piece with self-sealing
R14X033	1/2"M (G, ISO 228) x 1/2"F (G, ISO 228)	Chrome plated brass	Plastic cap	Tail piece with self-sealing
R14X034	3/4"M (G, ISO 228) x 3/4"F (G, ISO 228)	Chrome plated brass	Plastic cap	Tail piece without self-sealing
R14X035	1"M (G, ISO 228) x 1"F (G, ISO 228)	Chrome plated brass	Brass cap	Tail piece without self-sealing
R14X036	1 1/4"M (G, ISO 228) x 1 1/4"F (G, ISO 228)	Chrome plated brass	Brass cap	Tail piece without self-sealing

Product code	G x B	H [mm]	I [mm]	J [mm]	K [mm]	L [mm]	Y [mm]	W [mm]
R14X032	3/8" x 3/8"	43	50	19	22	66	-	27
R14X033	1/2" x 1/2"	47	53	21	26	70	-	30
R14X034	3/4" x 3/4"	54	60	23	32	79	35	38
R14X035	1" x 1"	72	68	30	39	90	40	46
R14X036	1 1/4" x 1 1/4"	80	80	34	49	108	45	53



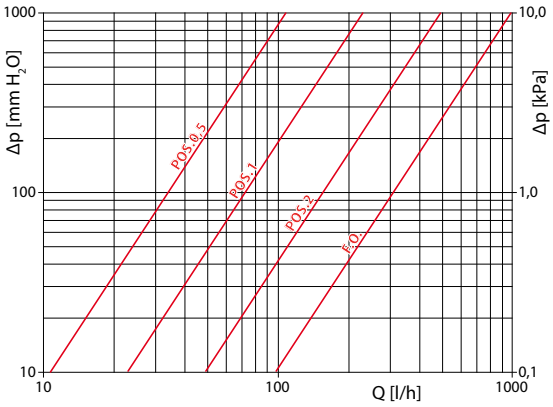
Hydraulic features

R14X032
Kv obtained with Giacomini laboratory loss of pressure station



N° of opening turns of the lockshield, starting from Fully Closed position				
0,5	1	2	4	F.O.
0,24	0,51	1,13	-	2,21

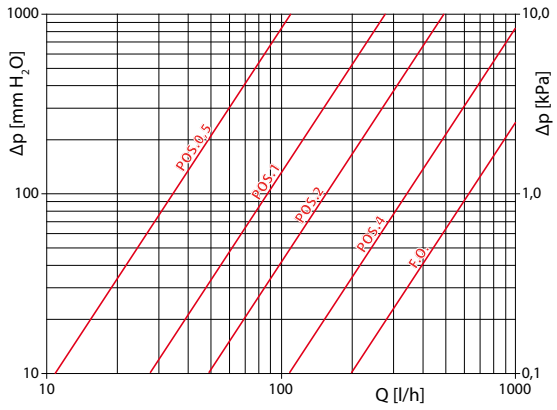
R14X033
Kv obtained with Giacomini laboratory loss of pressure station



N° of opening turns of the lockshield, starting from Fully Closed position				
0,5	1	2	4	F.O.
0,34	0,73	1,60	-	3,16

R14X034

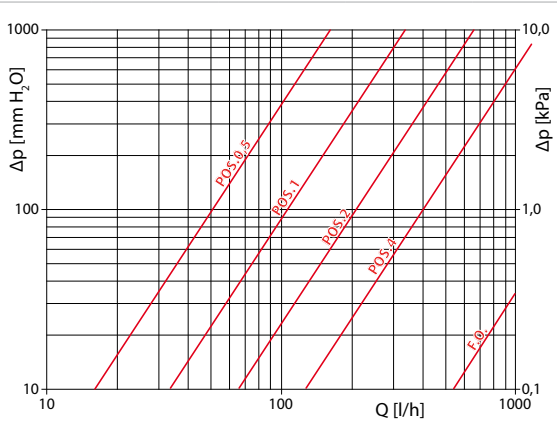
Kv obtained with Giacomini laboratory loss of pressure station



N° of opening turns of the lockshield, starting from Fully Closed position				
0,5	1	2	4	F.O.
0,35	0,89	1,60	3,46	6,32

R14X035

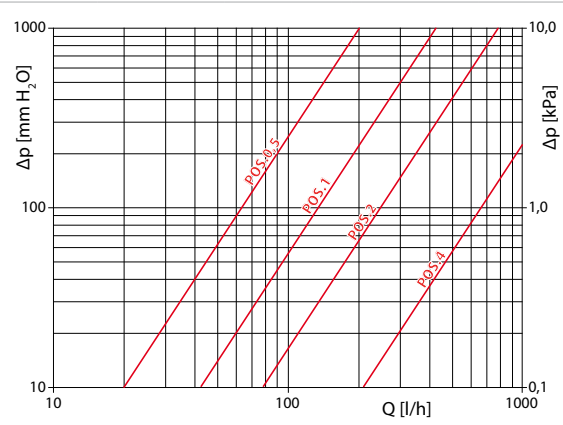
Kv obtained with Giacomini laboratory loss of pressure station



N° of opening turns of the lockshield, starting from Fully Closed position				
0,5	1	2	4	F.O.
0,51	1,15	2,12	4,00	11,80

R14X036

Kv obtained with Giacomini laboratory loss of pressure station



N° of opening turns of the lockshield, starting from Fully Closed position				
0,5	1	2	4	F.O.
0,64	1,46	2,52	6,70	14,10

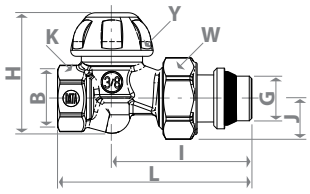
> R15TG

Straight lockshield, with iron pipe connection.
Fluid of use: water and glycol solutions (max. 30 %)
Temperature range: 5÷110 °C
Max. working pressure: 16 bar

Materials
Body and main components: UNI EN 12165 CW617N brass
Monobloc command stem: UNI EN 12164 CW617N brass
Protection cap: ABS or brass, depending on codes
Gaskets: EPDM

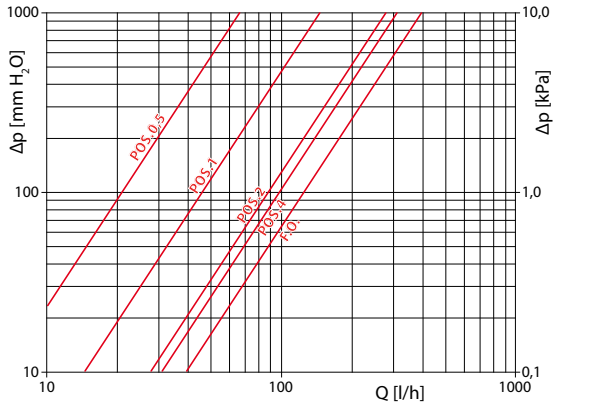
Product code	Connections	Finishing	Type of cap	Type of tail piece
R15X032	3/8"M (G, ISO 228) x 3/8"F (G, ISO 228)	Chrome plated brass	Plastic cap	Tail piece with self-sealing
R15X033	1/2"M (G, ISO 228) x 1/2"F (G, ISO 228)	Chrome plated brass	Plastic cap	Tail piece with self-sealing
R15X034	3/4"M (G, ISO 228) x 3/4"F (G, ISO 228)	Chrome plated brass	Plastic cap	Tail piece without self-sealing
R15X035	1"M (G, ISO 228) x 1"F (G, ISO 228)	Chrome plated brass	Brass cap	Tail piece without self-sealing
R15X036	1 1/4"M (G, ISO 228) x 1 1/4"F (G, ISO 228)	Chrome plated brass	Brass cap	Tail piece without self-sealing

Product code	G x B	H [mm]	I [mm]	J [mm]	K [mm]	L [mm]	Y [mm]	W [mm]
R15X032	3/8" x 3/8"	47	56	15	22	76	-	27
R15X033	1/2" x 1/2"	51	60	17	26	83	-	30
R15X034	3/4" x 3/4"	62	55	21	32	81	35	38
R15X035	1" x 1"	78	69	26	39	106	40	46
R15X036	1 1/4" x 1 1/4"	86	78	30	49	119	45	53



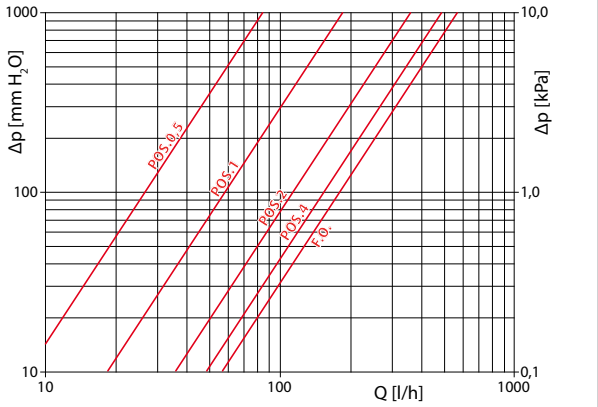
Hydraulic features

R15X032
Kv obtained with Giacomini laboratory loss of pressure station



N° of opening turns of the lockshield, starting from Fully Closed position				
0,5	1	2	4	F.O.
0,21	0,46	0,89	0,98	1,33

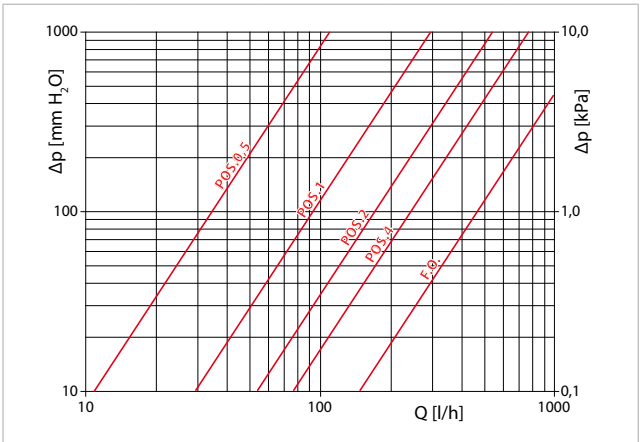
R15X033
Kv obtained with Giacomini laboratory loss of pressure station



N° of opening turns of the lockshield, starting from Fully Closed position				
0,5	1	2	4	F.O.
0,27	0,59	1,20	1,60	1,83

R15X034

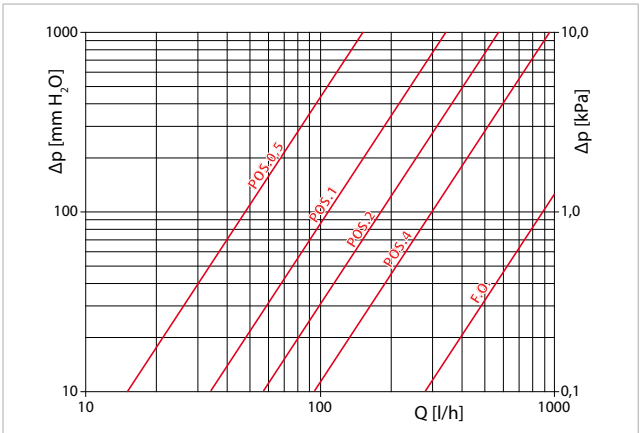
Kv obtained with Giacomini laboratory loss of pressure station



N° of opening turns of the lockshield, starting from Fully Closed position				
0,5	1	2	4	F.O.
0,35	0,94	1,76	2,50	4,71

R15X035

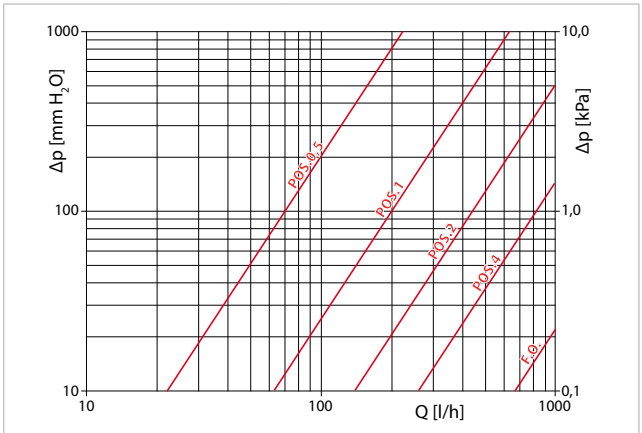
Kv obtained with Giacomini laboratory loss of pressure station



N° of opening turns of the lockshield, starting from Fully Closed position				
0,5	1	2	4	F.O.
0,48	1,17	1,87	3,00	8,94

R15X036

Kv obtained with Giacomini laboratory loss of pressure station



N° of opening turns of the lockshield, starting from Fully Closed position				
0,5	1	2	4	F.O.
0,70	2,00	4,42	8,16	11,20

ACCESSORIES AND SPARE PARTS

Thermostatic heads

Thermo-electric actuators

Tail pieces and nuts

Bonnets and special wrenches

Handwheels and caps

THERMOSTATIC HEADS

> R460

Thermostatic head with liquid sensor and Clip-Clap quick connection to the valve body. Can be installed on all valves with thermostatic option, series TG, D, F

Product code	Connection	Notes
R460X001	Clip-Clap	KEYMARK (EN215) certified

028

> R470

Thermostatic head with liquid sensor and Clip-Clap quick connection to the valve body. Can be installed on all valves with thermostatic option, series TG, D, F

Product code	Connection	Notes
R470X001	Clip-Clap	KEYMARK (EN215) certified

028

> R468

Thermostatic head with liquid sensor and Clip-Clap quick connection to the valve body. Can be installed on all valves with thermostatic option, series TG, D, F

Product code	Connection	Notes
R468X001	Clip-Clap	KEYMARK (EN215) certified

028

> R468C

Thermostatic head with liquid sensor and adaptor with M30 x 1,5 mm threaded connection. Can be installed on all valves with thermostatic option, series TG, D, F

Product code	Connection	Notes
R468CX001	Clip-Clap	KEYMARK (EN215) certified

028

> R462

Thermostatic head with remote sensor and knob on the valve.
Can be installed on all valves with thermostatic option, series TG, D, F.

Product code	Capillary pipe lenght [m]
R462X002	2
R462X005	5

> R463

Thermostatic head with remote sensor and knob, actuator to be installed on the valve.
Can be installed on all valves with thermostatic option, series TG, D, F.

Product code	Capillary pipe lenght [m]
R463X002	2
R463X005	5

TELL label

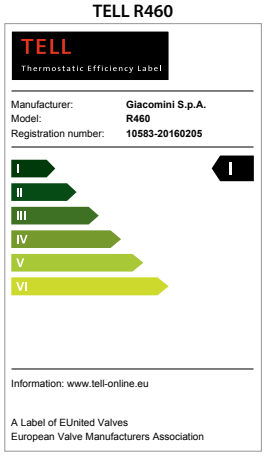
The R460, R468 and R468C thermostatic heads obtained the TELL label (Thermostatic Efficiency Label) in the class A of energy efficiency.

TELL is an European classification system, applicable to thermostatic radiator valves, and it has been thought to inform and guide the consumers towards conscious purchase decisions and a responsible use of the energy.

TELL classification criteria for thermostatic heads include the following merit factors:

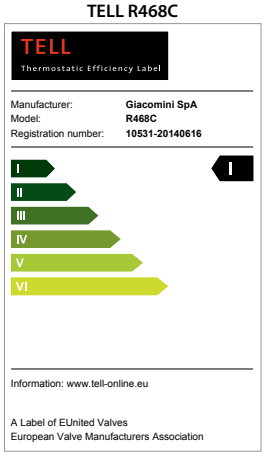
- influence of water temperature;
- hysteresis;
- response time;
- influence of differential pressure

TELL R460



TELL R468

TELL R468C



THERMO-ELECTRIC ACTUATORS

> R473

Thermo-electric actuator, normally closed, with Clip-Clap quick connection to the valve body. Cable lenght 1 m. Protection degree IP40. Can be installed on all valves with thermostatic option, series TG, D, F

Product code	Connection	Power supply
R473X221	Clip-Clap	230 V
R473X222	Clip-Clap	24 V

> R473M

Thermo-electric actuator with microswitch, normally closed, with Clip-Clap quick connection to the valve body. Cable lenght 1 m. Protection degree IP40. Can be installed on all valves with thermostatic option, series TG, D, F

Product code	Connection	Power supply
R473MX221	Clip-Clap	230 V
R473MX222	Clip-Clap	24 V

> R478

Thermo-electric actuator, normally open, with Clip-Clap quick connection to the valve body. Cable lenght 1,5 m. Protection degree IP40. Can be installed on all valves with thermostatic option, series TG, D, F

Product code	Connection	Power supply
R478X121	Clip-Clap	230 V
R478X122	Clip-Clap	24 V

> R478M

Thermo-electric actuator with microswitch, normally open, with Clip-Clap quick connection to the valve body. Cable lenght 1,5 m. Protection degree IP40. Can be installed on all valves with thermostatic option, series TG, D, F

Product code	Connection	Power supply
R478MX021	Clip-Clap	230 V
R478MX022	Clip-Clap	24 V

TAIL PIECES AND NUTS

> P15TG

Chrome plated brass tail piece, with self-sealing.

Product code	Connection
P15TGX002	tail piece 3/8"x3/8", for 3/8" iron pipe connection versions
P15TGX003	reduced tail piece 1/2"x3/8", for 3/8"x16, 1/2"x16, 1/2"x18 adaptor connection versions and 1/2" iron pipe connection versions
P15TGX004	tail piece 1/2"x1/2", for 1/2"x16, 1/2"x18 adaptor connection versions and 1/2" iron pipe connection versions

> P15-2

Chrome plated brass tail piece, without self-sealing and nut.

Product code	Connection
P15X002	3/8"
P15X003	1/2"
P15X004	3/4"
P15X005	1"
P15X006	1 1/4"

> R173

Chrome plated brass adjustable tail piece, without self-sealing and nut.

Product code	Connection
R173X002	3/8"
R173X003	1/2"
R173X004	3/4"
R173X005	1"
R173X006	1 1/4"
R173X007	1/2" reduced 3/8"

> R173TG

Chrome plated brass adjustable tail piece, with self-sealing and nut.

Product code	Connection
R173X032	3/8"
R173X033	1/2"
R173X037	1/2" reduced 3/8"

> P18L

Chrome plated brass nut for tail pieces.

Product code	Connection
P18LX002	5/8" x 3/8"
P18LX003	3/4" x 1/2"
P18LX004	1" x 3/4"
P18LX005	1 1/4" x 1"
P18LX006	1 1/2" x 1 1/4"

BONNETS AND SPECIAL WRENCHES

P12A

Bonnet for valves with thermostatic option.

Product code	Connection
P12AX011	for 3/8" - 1/2" - 3/4" valves
P12AX003	for 1" valves

R79B

Special key for tail pieces

Product code	Connection
R79BY001	from 3/8" to 1 1/4"

R400

Special key for valves with thermostatic option bonnet replacement, without emptying the system.

Product code	Connection
R400Y001	for P12AX011 bonnet

HANDWHEELS AND CAPS

> R450TG

Micrometric handwheel for valves with thermostatic option.

Product code	Connection
R450X012	-

> P22B-1

Handwheel for manual valves.

Product code	Connection
P22BY007	3/8" - 1/2"
P22BY008	3/4" - 1"
P22BY009	1 1/4"

> P26PD

Plastic cap for lockshields.

Product code	Connection
P26PY012	for 3/8" iron pipe connection
P26PY013	for 1/2" iron pipe connection and 3/8"x16, 1/2"x16 e 1/2"x18 adaptor connections

> P26A

Chrome plated brass cap for lockshields.

Product code	Connection
P26AX004	3/4"
P26AX005	1"
P26AX006	1 1/4"

GIACOMINI
WATER E-MOTION

ICIM
SISTEMI DI GESTIONE CERTIFICATI
ISO 9001 ISO 14001 OHSAS 18001

Additional information

For more information, go to www.giacomini.com or contact our technical assistance service: ☏ +39 0322 923372 🖷 +39 0322 923255 ✉ consulenza.prodotti@giacomini.com
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