RADIATOR VALVES

“Giacotech” TG, F series

Technical documentation

GIACOMINI
WATER E-MOTION

0157EN

SUMMARY

USE AND MAIN FEATURES

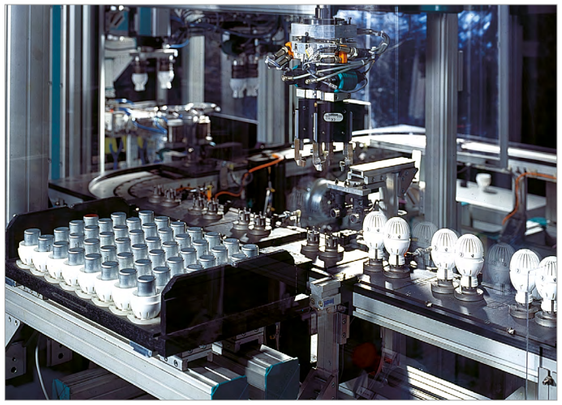
The **"Giacotech" TG, F series** valves and lockshields offers great practicality and reliability during installation. This family represents the evolution of the "Giacomini Programma 80" that, with its functional innovative characteristics (the thermostatic element and the pipe union with self-sealing 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

MICROMETRIC VALVES WITH THERMOSTATIC OPTION

Thermostatic option

Micrometric adjustment

Product codes and technical features

Dimensions with thermostatic heads

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 chronothermostat for radiators (K470H, K470W).

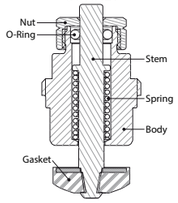
The thermostatic heads and chronothermostat for radiators are installed directly on the valve body after removing the micrometric manual handwheel.
To remove the micrometric manual handwheel proceed as follow:
1) remove the upper cap using a screwdriver;
2) remove the internal adjustment pin;
3) remove 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.

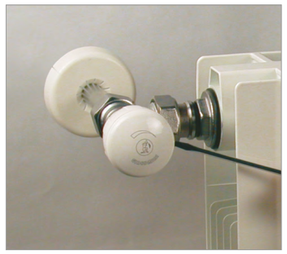
BONNET

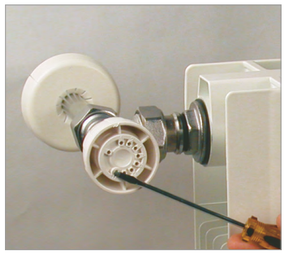


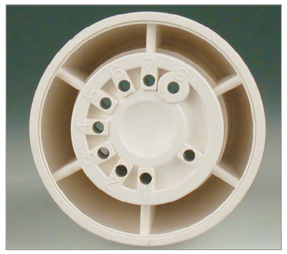
R400

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

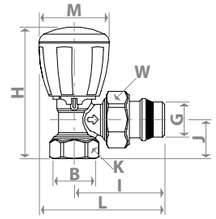
> R421TG

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: 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

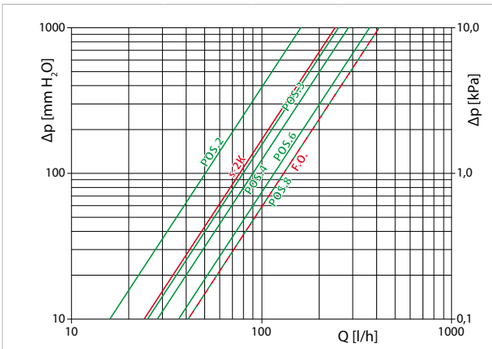
Product code	Connections	Finishing	Type of knob	Type of tail piece
R421X034	G 3/4"M x G 3/4"F	Chrome plated brass	Micrometric handwheel	Tail piece without self-sealing
R421X035	G 1"M x G 1"F	Chrome plated brass	Micrometric handwheel	Tail piece without self-sealing

Product code	G x B	H [mm]	I [mm]	J [mm]	K [mm]	L [mm]	M [mm]	W [mm]
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

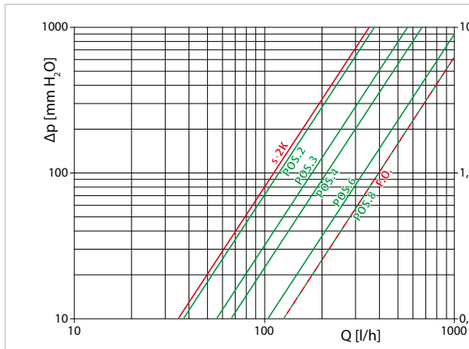
R421X034



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

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

R421X035



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

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

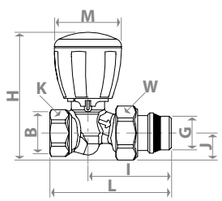
> R422TG

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: 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

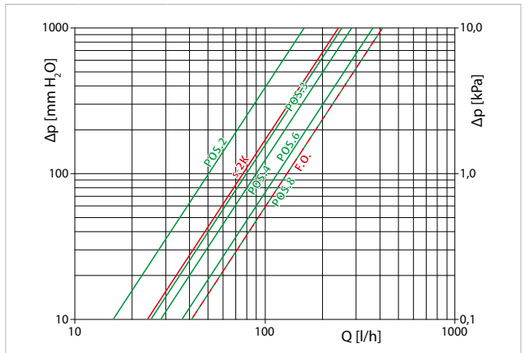
Product code	Connections	Finishing	Type of knob	Type of tail piece
R422X034	G 3/4"M x G 3/4"F	Chrome plated brass	Micrometric handwheel	Tail piece without self-sealing
R422X035	G 1"M x G 1"F	Chrome plated brass	Micrometric handwheel	Tail piece without self-sealing

Product code	G x B	H [mm]	I [mm]	J [mm]	K [mm]	L [mm]	M [mm]	W [mm]
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

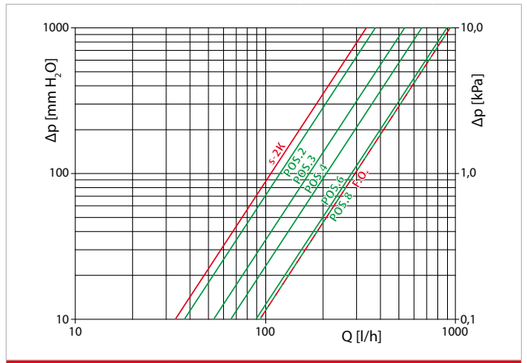
R422X034



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

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

R422X035



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

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

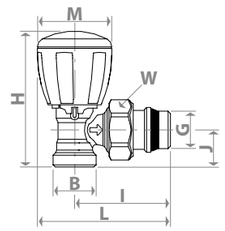
> R431TG

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

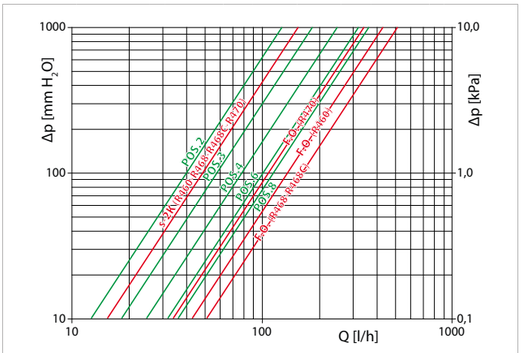
Product code	Connections	Finishing	Type of knob	Adaptors to use	Type of tail piece
R431X032	G 3/8"M x Base 16	Chrome plated brass	Micrometric handwheel	R178, R178C, R179, R179AM	Tail piece with self-sealing
R431X033	G 1/2"M x Base 16	Chrome plated brass	Micrometric handwheel	R178, R178C, R179, R179AM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

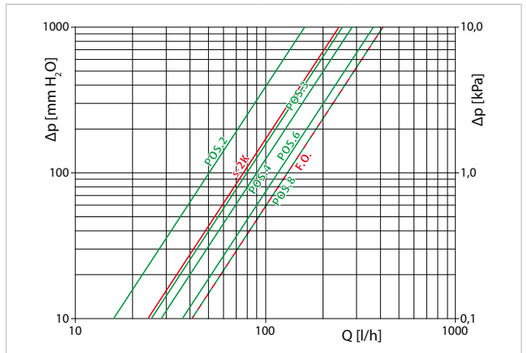
R431X032, R431X033, R431EX037



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

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

R431X034



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

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

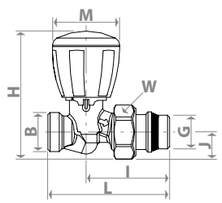
> R432TG

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

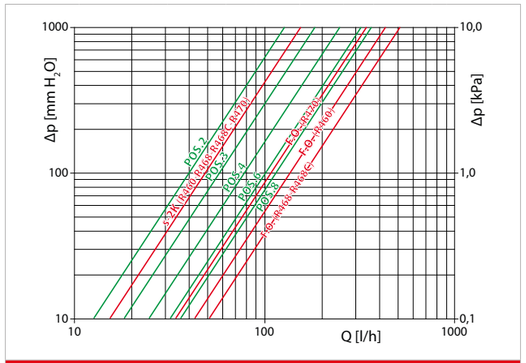
Product code	Connections	Finishing	Type of knob	Adaptors to use	Type of tail piece
R432X032	G 3/8"M x Base 16	Chrome plated brass	Micrometric handwheel	R178, R178C, R179, R179AM	Tail piece with self-sealing
R432X033	G 1/2"M x Base 16	Chrome plated brass	Micrometric handwheel	R178, R178C, R179, R179AM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

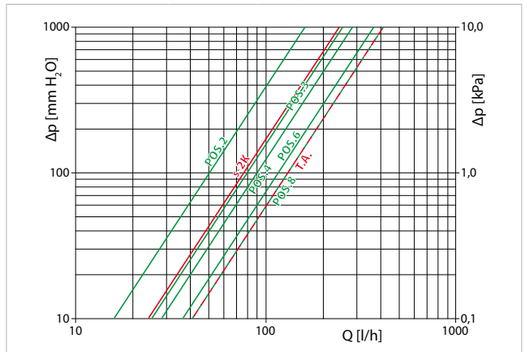
R432X032, R432X033, R432EX037



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

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

R432X034



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

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

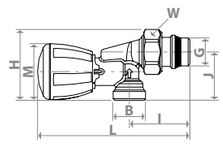
> R435TG

Reverse angle micrometric valve with thermostatic option, with 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

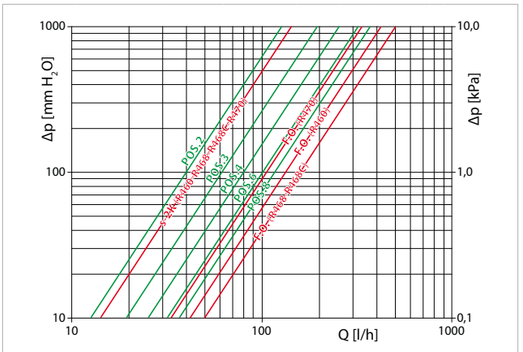
Product code	Connections	Finishing	Type of knob	Adaptors to use	Type of tail piece
R435X062	G 1/2"M x Base 16	Chrome plated brass	Micrometric handwheel	R178, R178C, R179, R179AM	Tail piece with self-sealing
R435X043	G 1/2"M x Base 18	Chrome plated brass	Micrometric handwheel	R178, R178C, R179, R179AM	Tail piece with self-sealing

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



Hydraulic features

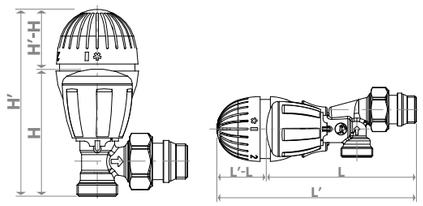
R435X062, R435X043



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

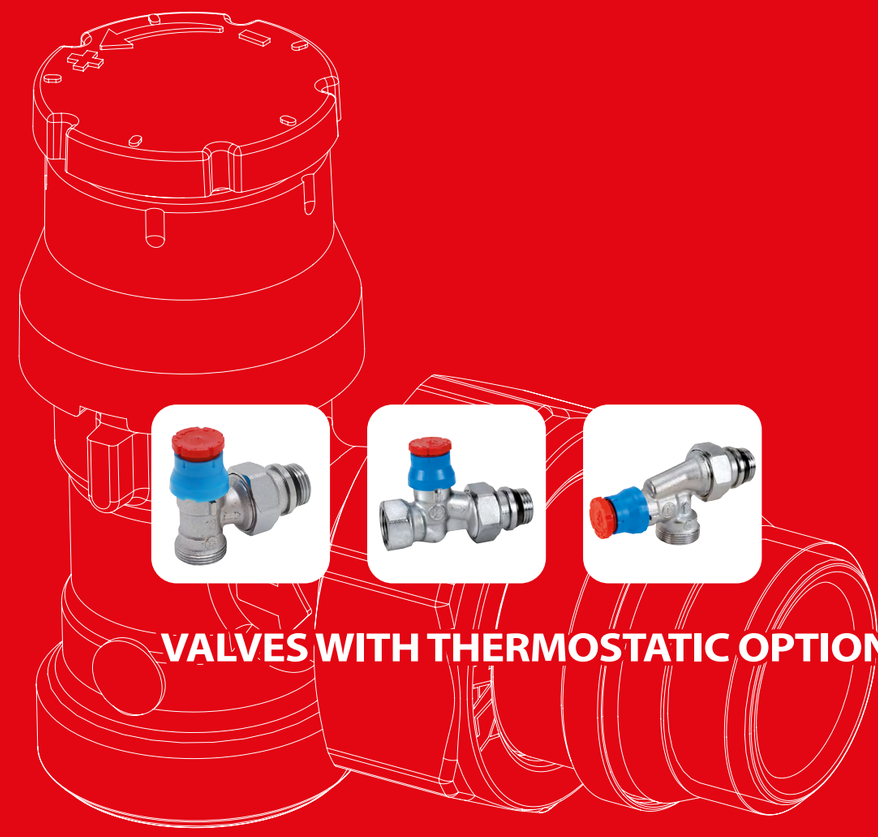
	With R460 head		With R468-R468C head		With R470 head	
Curve	s-2K	F.O.	s-2K	F.O.	s-2K	F.O.
Kv	0,47	1,49	0,47	1,61	0,47	1,14

DIMENSIONS WITH THERMOSTATIC HEADS



	Thermostatic heads			
Type	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.



VALVES WITH THERMOSTATIC OPTION

THERMOSTATIC OPTION

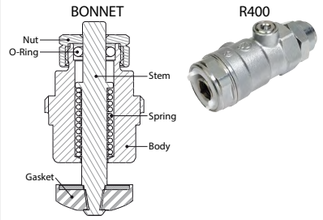
The "Giacotech" TG, F series micrometric valves with thermostatic option, are easily equipped with thermostatic heads or thermo-electric actuators, in order to allow the automatic control of the room temperature, guaranteeing comfort and energy saving.
Therefore is possible to use the thermostatic heads with liquid sensor and Clip-Clap quick connection (R460, R468, R468C, R470), with remote sensor (R462), with remote sensor and knob (R463) or chronothermostat for radiators (K470H, K470W).

The thermostatic heads and chronothermostat for radiators 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.



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

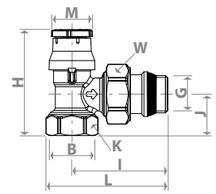
> R401TG

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: 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

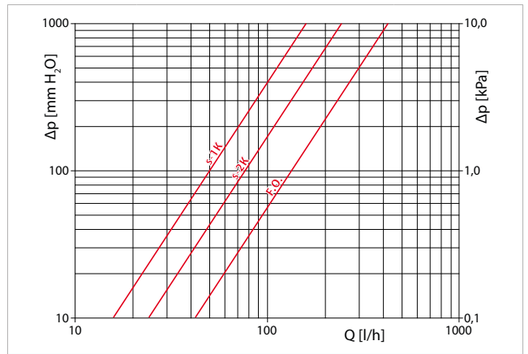
Product code	Connections	Finishing	Type of knob	Type of tail piece
R401X034	G 3/4"M x G 3/4"F	Chrome plated brass	Worksite protection	Tail piece without self-sealing
R401X035	G 1"M x G 1"F	Chrome plated brass	Worksite protection	Tail piece without self-sealing

Product code	G x B	H [mm]	I [mm]	J [mm]	K [mm]	L [mm]	M [mm]	W [mm]
R401X034	3/4" x 3/4"	60	60	25	32	78	23	38
R401X035	1" x 1"	78	72	31	39	94	23	46



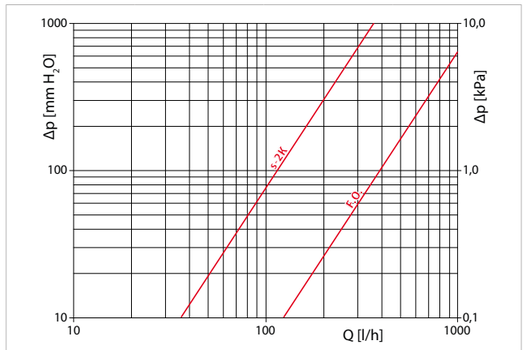
Hydraulic features

R401X034



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

R401X035



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

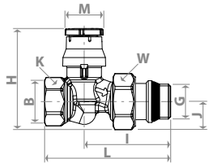
> R402TG

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

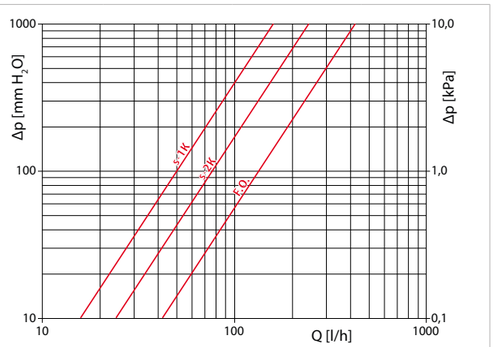
Product code	Connections	Finishing	Type of knob	Type of tail piece
R402X034	G 3/4"M x G 3/4"F	Chrome plated brass	Worksite protection	Tail piece without self-sealing
R402X035	G 1"M x G 1"F	Chrome plated brass	Worksite protection	Tail piece without self-sealing

Product code	G x B	H [mm]	I [mm]	J [mm]	K [mm]	L [mm]	M [mm]	W [mm]
R402X034	3/4" x 3/4"	64	55	21	32	81	23	38
R402X035	1" x 1"	76	64	26	39	105	23	46



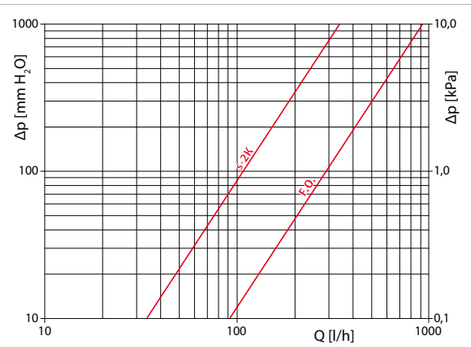
Hydraulic features

R402X034



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

R402X035



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

> R403TG

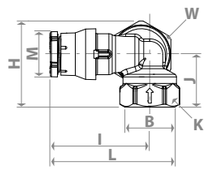
Double angle valve with thermostatic option, with iron pipe connection or for copper, plastic or multilayer pipe adaptor.
Fluid of use: water and glycol solutions (max. 30 %)
Temperature range: 5÷110 °C
Max. working pressure: 16 bar with manual handwheel; 10 bar in combination with thermostatic heads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

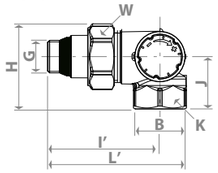
Materials
Body and main components: UNI EN 12165 CW617N brass
Monobloc command stem: stainless steel
Worksite protection handwheel: PP-H
Gaskets: EPDM

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

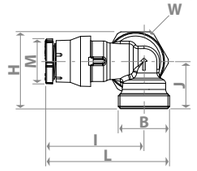
Product code	G x B	H [mm]	I [mm]	I' [mm]	J [mm]	L [mm]	L' [mm]	M [mm]	W [mm]	K [mm]
R403X052	3/8" x 3/8" (LF)	43	50	57	27	65	71	23	30	27
R403X062	3/8" x 3/8" (RG)	43	50	57	27	65	71	23	30	27
R403X054	1/2" x 1/2" (LF)	43	50	57	27	65	71	23	30	27
R403X064	1/2" x 1/2" (RG)	43	50	57	27	65	71	23	30	27
R403X024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

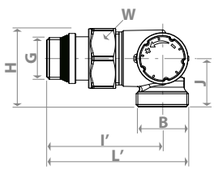
IRON CONNECTION





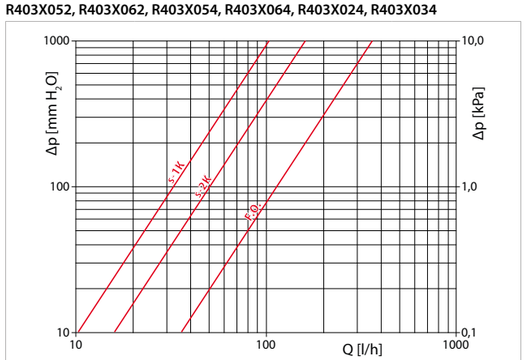
ADAPTOR CONNECTION





Hydraulic features

R403X052, R403X062, R403X054, R403X064, R403X024, R403X034



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

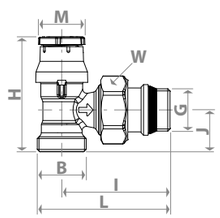
> R411TG

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

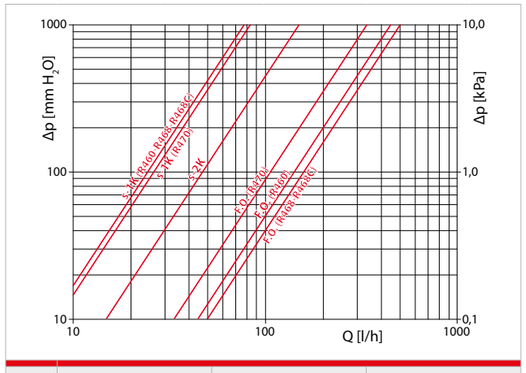
Product code	Connections	Finishing	Type of knob	Adaptors to use	Type of tail piece
R411X032	G 3/8"M x Base 16	Chrome plated brass	Worksite protection	R178, R178C, R179, R179AM	Tail piece with self-sealing
R411X033	G 1/2"M x Base 16	Chrome plated brass	Worksite protection	R178, R178C, R179, R179AM	Tail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



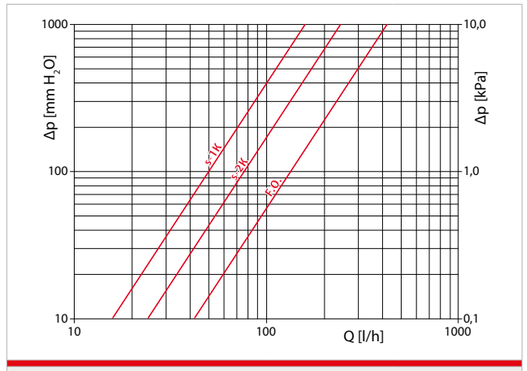
Hydraulic features

R411X032, R411X033



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

R411X034



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

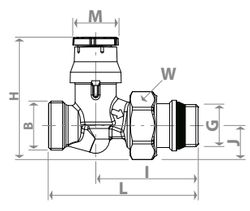
> R412TG

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

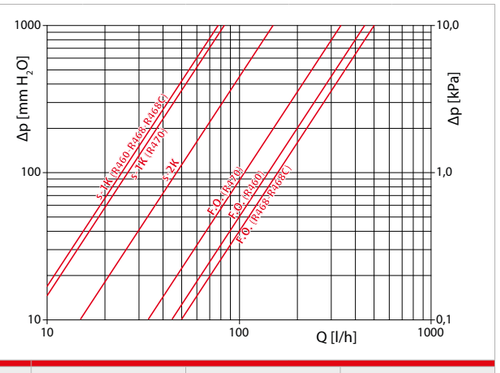
Product code	Connections	Finishing	Type of knob	Adaptors to use	Type of tail piece
R412X032	G 3/8"M x Base 16	Chrome plated brass	Worksite protection	R178, R178C, R179, R179AM	Tail piece with self-sealing
R412X033	G 1/2"M x Base 16	Chrome plated brass	Worksite protection	R178, R178C, R179, R179AM	Tail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



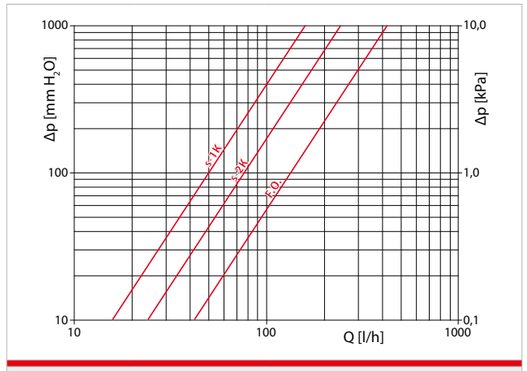
Hydraulic features

R412X032, R412X033



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

R412X034



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

Valves with thermostatic option

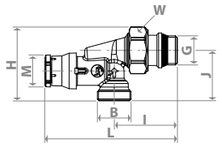
> R415TG

Reverse angle valve with thermostatic option, with 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

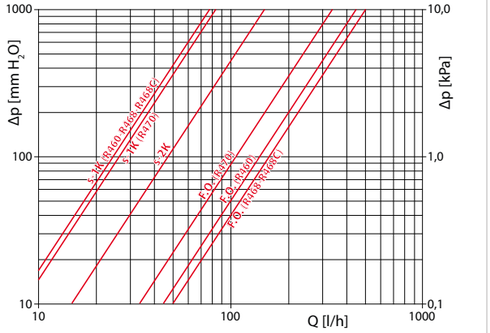
Product code	Connections	Finishing	Type of knob	Adaptors to use	Type of tail piece
R415X042	G 1/2"M x Base 16	Chrome plated brass	Worksite protection	R178, R178C, R179, R179AM	Tail piece with self-sealing
R415X043	G 1/2"M x Base 18	Chrome plated brass	Worksite protection	R178, R178C, R179, R179AM	Tail piece with self-sealing

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



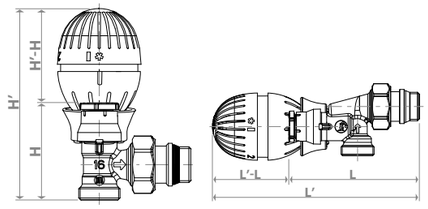
Hydraulic features

R415X042, R415X043



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

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.

VALVES WITH THERMOSTATIC OPTION AND KEYMARK (EN215) CERTIFICATION

028

CERTIFICATIONS

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

THERMOSTATIC OPTION

The "Giacotech" TG, F series micrometric valves with thermostatic option, are easily equipped with thermostatic heads KEYMARK (EN215) certified, 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).

The thermostatic heads are installed directly on the valve body.
Depending on whether the valve is equipped with a worksite protection handwheel or manual handwheel, proceed as follows:

• **valves with worksite protection:**
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.

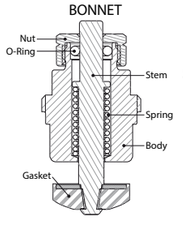
• **valves with manual handwheel:**
to remove the micrometric manual handwheel proceed as follow:
1) remove the upper cap using a screwdriver;
2) remove the internal adjustment pin;
3) remove the handwheel by turning it counterclockwise;
4) remove the cam using a screwdriver.

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, R421FX004, R422FX004, R401FX004, R402FX004.

PRODUCT CODES AND TECHNICAL FEATURES

> R401TG

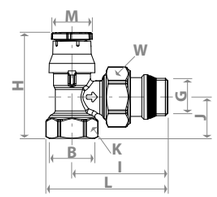
Angle valve with thermostatic option, with iron pipe connection.
Fluid of use: water and glycol solutions (max. 30 %)
Temperature range: 5÷110 °C
Max. working pressure: 16 bar with manual handwheel; 10 bar in combination with thermostatic heads
Max. differential pressure with thermostatic heads (except R462, R463, R462L): 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	G 3/8"M x G 3/8"F	Chrome plated brass	Worksite protection	Tail piece with self-sealing	KEYMARK (EN215) certified
R401X133	G 1/2"M x G 1/2"F	Chrome plated brass	Worksite protection	Tail piece with self-sealing	KEYMARK (EN215) certified
R401FX004	G 3/4"M x G 3/4"F	Chrome plated brass	Worksite protection	Tail piece without self-sealing	KEYMARK (EN215) certified

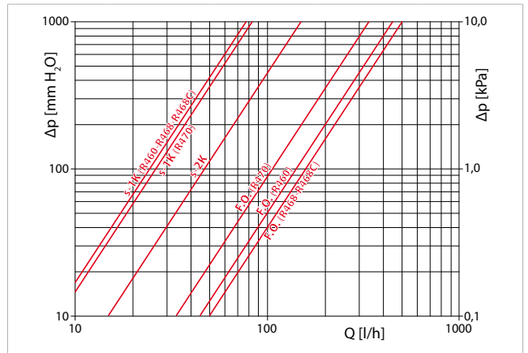
028

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



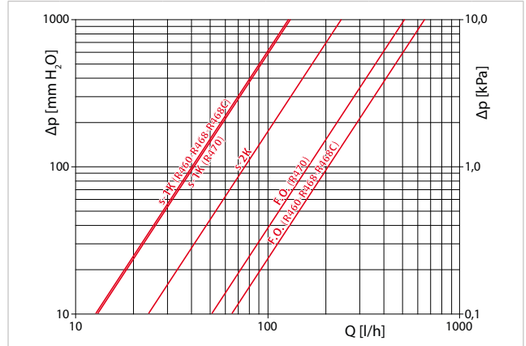
Hydraulic features

R401X132, R401X133



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

R401FX004



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

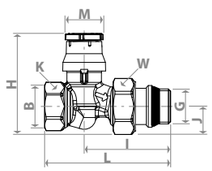
> R402TG

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 (except R462, R463, R462L): 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

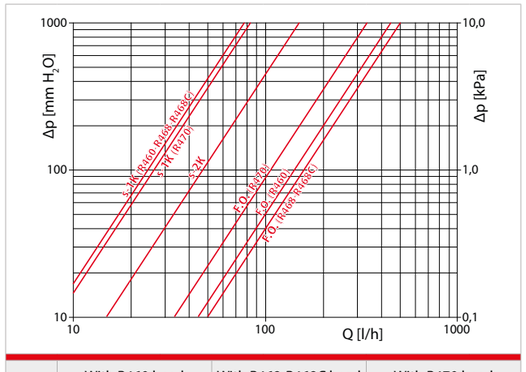
Product code	Connections	Finishing	Type of knob	Type of tail piece	Notes
R402X132	G 3/8"M x G 3/8"F	Chrome plated brass	Worksite protection	Tail piece with self-sealing	KEYMARK (EN215) certified
R402X133	G 1/2"M x G 1/2"F	Chrome plated brass	Worksite protection	Tail piece with self-sealing	KEYMARK (EN215)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

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



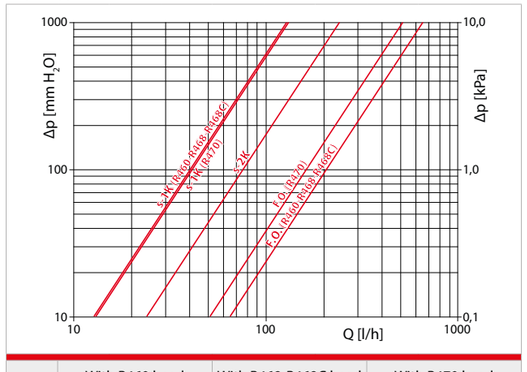
Hydraulic features

R402X132, R402X133



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

R402FX004



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

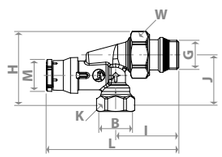
> R415TG

Reverse 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 (1/2")

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

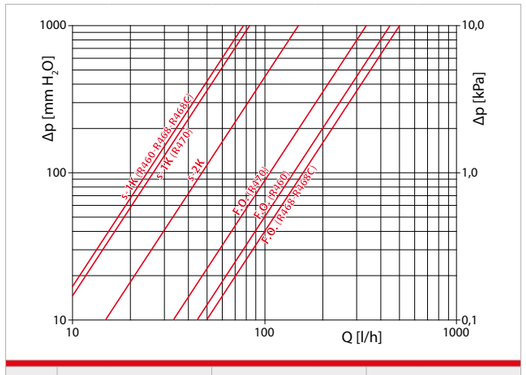
Product code	Connections	Finishing	Type of knob	Type of tail piece	Notes
R415X033	G 1/2"M x G 1/2"F	Chrome plated brass	Worksite protection	Tail piece with self-sealing	KEYMARK (EN215) certified

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



Hydraulic features

R415X033



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

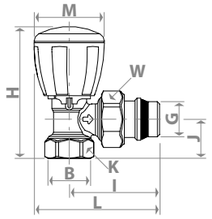
> R421TG

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 (except R462, R463, R462L): 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

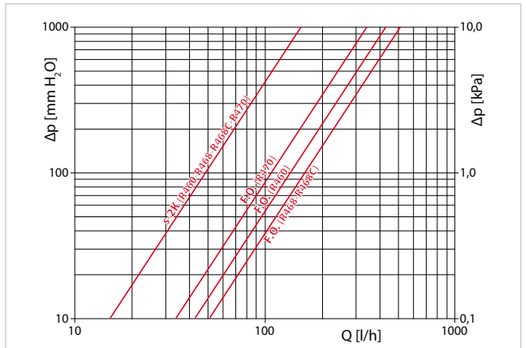
Product code	Connections	Finishing	Type of knob	Type of tail piece	Notes
R421X132	G 3/8"M x G 3/8"F	Chrome plated brass	Micrometric handwheel	Tail piece with self-sealing	KEYMARK (EN215) certified
R421X133	G 1/2"M x G 1/2"F	Chrome plated brass	Micrometric handwheel	Tail piece with self-sealing	KEYMARK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

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



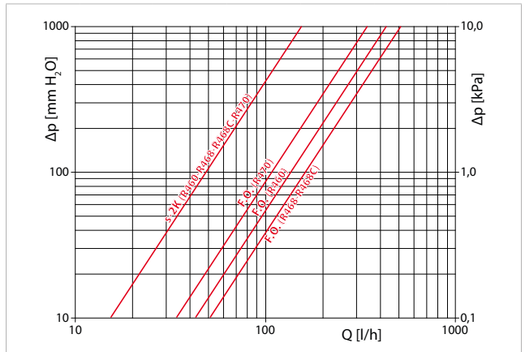
Hydraulic features

R421X132



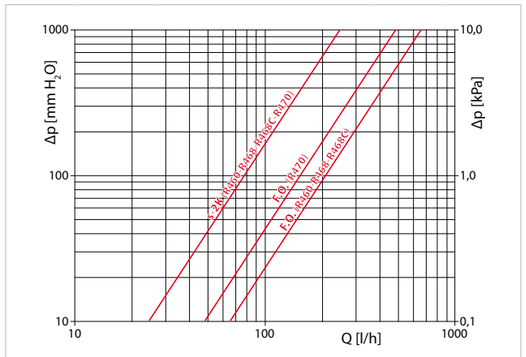
	With R460 head		With R468-R468C head		With R470 head	
Curve	s-2K	F.O.	s-2K	F.O.	s-2K	F.O.
Kv	0,47	1,49	0,47	1,61	0,47	1,14

R421X133



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

R421FX004



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

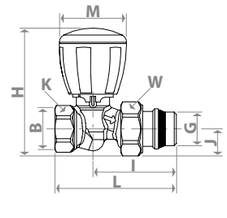
> R422TG

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 (except R462, R463, R462L): 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

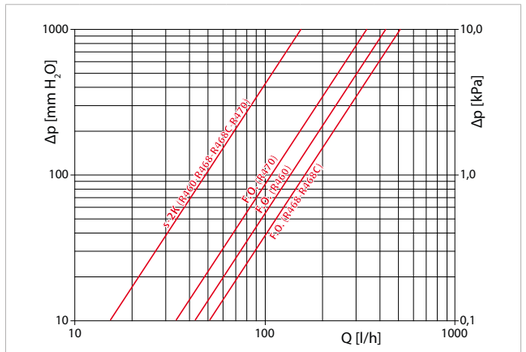
Product code	Connections	Finishing	Type of knob	Type of tail piece	Notes
R422X132	G 3/8"M x G 3/8"F	Chrome plated brass	Micrometric handwheel	Tail piece with self-sealing	KEYMARK (EN215) certified
R422X133	G 1/2"M x G 1/2"F	Chrome plated brass	Micrometric handwheel	Tail piece with self-sealing	KEYMARK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

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



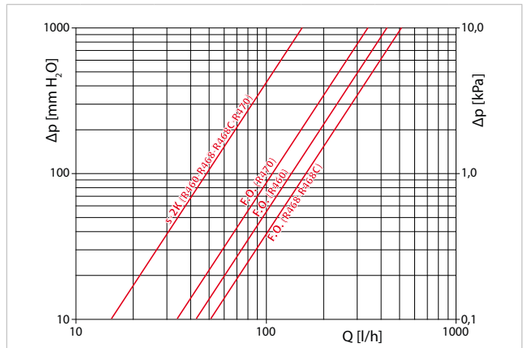
Hydraulic features

R422X132



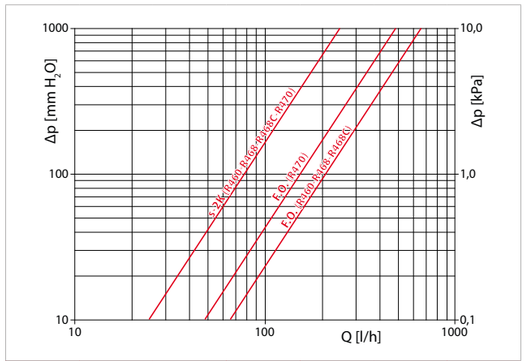
	With R460 head		With R468-R468C head		With R470 head	
Curve	s-2K	F.O.	s-2K	F.O.	s-2K	F.O.
Kv	0,47	1,49	0,47	1,61	0,47	1,14

R422X133



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

R422FX004



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

Valves with thermostatic option and KEYMARK (EN215) certification

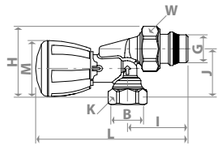
> R435TG

Reverse 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 (1/2")

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

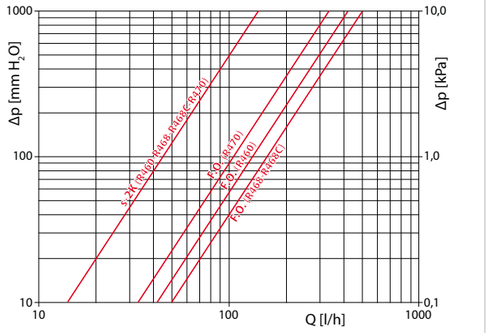
Product code	Connections	Finishing	Type of knob	Type of tail piece	Notes
R435X053	G 1/2"M x G 1/2"F	Chrome plated brass	Micrometric handwheel	Tail piece with self-sealing	KEYMARK (EN215) certified

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



Hydraulic features

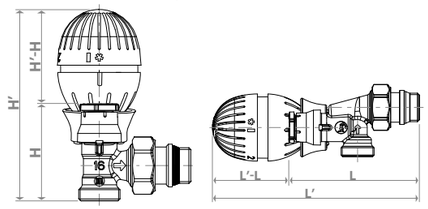
R435X053



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

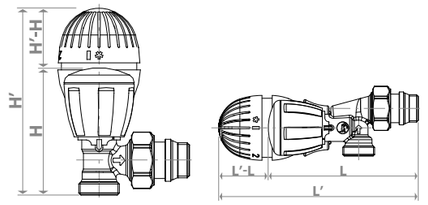
DIMENSIONS WITH THERMOSTATIC HEADS

Valves with worksite protection



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

Valves with manual handwheel



	Thermostatic heads			
Type	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

Valve size	Thermostatic head in combination	Nominal flow rate q_{nNH} 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″ (R401FX004, R402FX004)		240	0,88
3/8″ (R401X132, R402X132)	R468 	150	0,91
1/2″ (R401X133, R402X133, R415X033)		150	0,91
3/4″ (R401FX004, R402FX004)		240	0,88
3/8″ (R401X132, R402X132)	R468C 	150	0,91
1/2″ (R401X133, R402X133, R415X033)		150	0,91
3/4″ (R401FX004, R402FX004)		240	0,88
3/8″ (R401X132, R402X132)	R470 	150	0,83
1/2″ (R401X133, R402X133, R415X033)		150	0,83
3/4″ (R401FX004, R402FX004)		240	0,79

Valve size	Thermostatic head in combination	Nominal flow rate q_{nNH} 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″ (R421FX004, R422FX004)		240	0,88
3/8″ (R421X132, R422X132)	R468 	150	0,91
1/2″ (R421X133, R422X133, R435X053)		150	0,91
3/4″ (R421FX004, R422FX004)		240	0,88
3/8″ (R421X132, R422X132)	R468C 	150	0,91
1/2″ (R421X133, R422X133, R435X053)		150	0,91
3/4″ (R421FX004, R422FX004)		240	0,88
3/8″ (R421X132, R422X132)	R470 	150	0,83
1/2″ (R421X133, R422X133, R435X053)		150	0,83
3/4″ (R421FX004, R422FX004)		240	0,79

KEYMARK (EN215) certification

Product code	Declared hysteresis C_H	Influence of the declared water temperature W_H	Declared response time Z_H	Influence of the declared differential pressure D_H	Control accuracy CA_H
R460X001	0,35 K	0,9 K	26 min.	0,4 K	0,6 K
R468X001	0,23 K	0,42 K	25 min.	0,15 K	0,2 K
R468CX001	0,23 K	0,26 K	25 min.	0,15 K	0,2 K
R470X001	0,4 K	1,2 K	26 min.	0,55 K	0,6 K

Complies with Directive RT2012 *Certità con variation temporelle*		TELL	
Factor VT	Value VT_H	Energy efficiency class	Classification
0,56	0,6	0,5	I
0,29	0,3	0,32	I
0,22	0,3	0,29	I

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

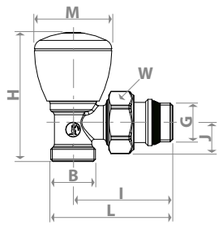
> R25TG

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

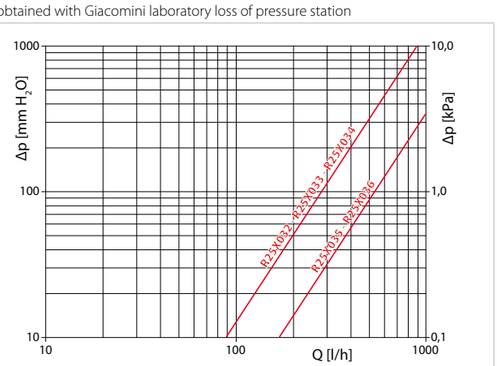
Product code	Connections	Finishing	Type of knob	Adaptors to use	Type of tail piece
R25X032	G 3/8"M x Base 16	Chrome plated brass	Manual handwheel	R178, R178C, R179, R179AM	Tail piece with self-sealing
R25X033	G 1/2"M x Base 16	Chrome plated brass	Manual handwheel	R178, R178C, R179, R179AM	Tail piece with self-sealing
R25X034	G 1/2"M x Base 18	Chrome plated brass	Manual handwheel	R178, R178C, R179, R179AM	Tail piece with self-sealing
R25X035	G 3/4"M x Base 18	Chrome plated brass	Manual handwheel	R178, R178C, R179, R179AM	Tail piece without self-sealing
R25X036	G 3/4"M 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					
Code	R25X032	R25X033	R25X034	R25X035	R25X036
Kv	2,88	2,88	2,88	5,34	5,34

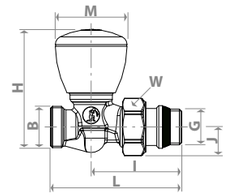
> R27TG

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

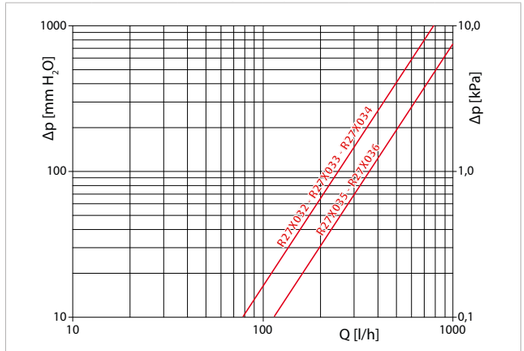
Product code	Connections	Finishing	Type of knob	Adaptors to use	Type of tail piece
R27X032	G 3/8"M x Base 16	Chrome plated brass	Manual handwheel	R178, R178C, R179, R179AM	Tail piece with self-sealing
R27X033	G 1/2"M x Base 16	Chrome plated brass	Manual handwheel	R178, R178C, R179, R179AM	Tail piece with self-sealing
R27X034	G 1/2"M x Base 18	Chrome plated brass	Manual handwheel	R178, R178C, R179, R179AM	Tail piece with self-sealing
R27X035	G 3/4"M x Base 18	Chrome plated brass	Manual handwheel	R178, R178C, R179, R179AM	Tail piece without self-sealing
R27X036	G 3/4"M 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					
Code	R27X032	R27X033	R27X034	R27X035	R27X036
Kv	2,50	2,50	2,50	3,65	3,65

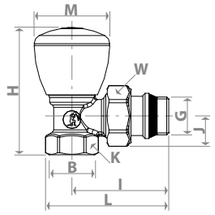
> R5TG

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

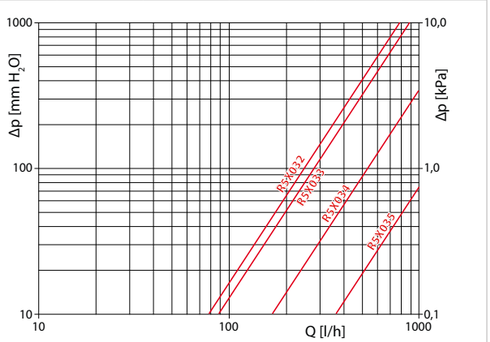
Product code	Connections	Finishing	Type of knob	Type of tail piece
R5X032	G 3/8"M x G 3/8"F	Chrome plated brass	Manual handwheel	Tail piece with self-sealing
R5X033	G 1/2"M x G 1/2"F	Chrome plated brass	Manual handwheel	Tail piece with self-sealing
R5X034	G 3/4"M x G 3/4"F	Chrome plated brass	Manual handwheel	Tail piece without self-sealing
R5X035	G 1"M x G 1"F	Chrome plated brass	Manual handwheel	Tail piece without self-sealing
R5X036	G 1-1/4"M x G 1-1/4"F	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					
Code	R5X032	R5X033	R5X034	R5X035	R5X036
Kv	2,46	2,88	5,34	11,50	-

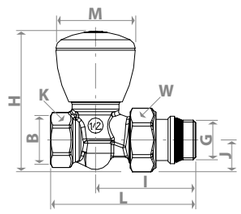
> R6TG

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

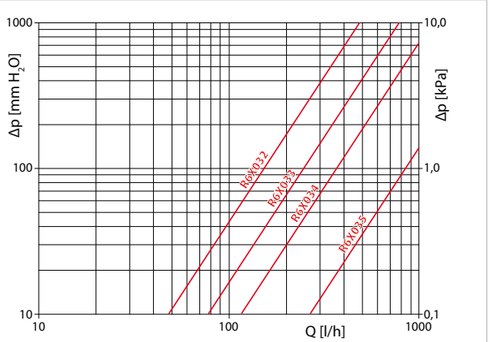
Product code	Connections	Finishing	Type of knob	Type of tail piece
R6X032	G 3/8"M x G 3/8"F	Chrome plated brass	Manual handwheel	Tail piece with self-sealing
R6X033	G 1/2"M x G 1/2"F	Chrome plated brass	Manual handwheel	Tail piece with self-sealing
R6X034	G 3/4"M x G 3/4"F	Chrome plated brass	Manual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

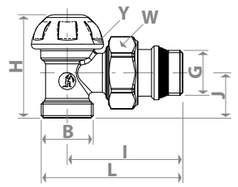
> R29TG

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

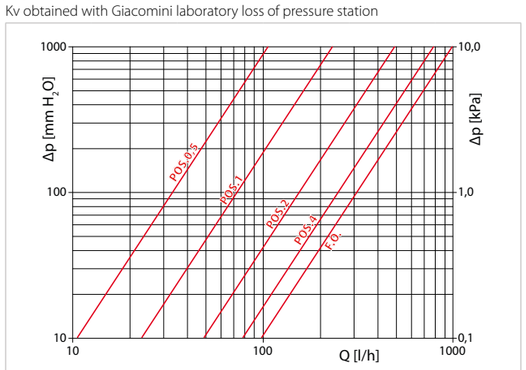
Product code	Connections	Finishing	Type of cap	Adaptors to use	Type of tail piece
R29X032	G 3/8"M x Base 16	Chrome plated brass	Plastic cap	R178, R178C, R179, R179AM	Tail piece with self-sealing
R29X033	G 1/2"M x Base 16	Chrome plated brass	Plastic cap	R178, R178C, R179, R179AM	Tail piece with self-sealing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



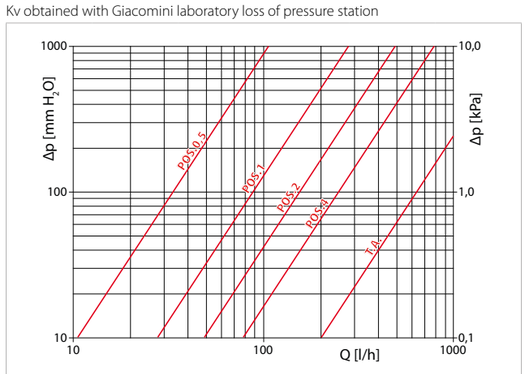
Hydraulic features

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



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

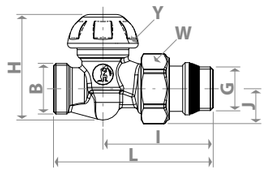
> R31TG

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

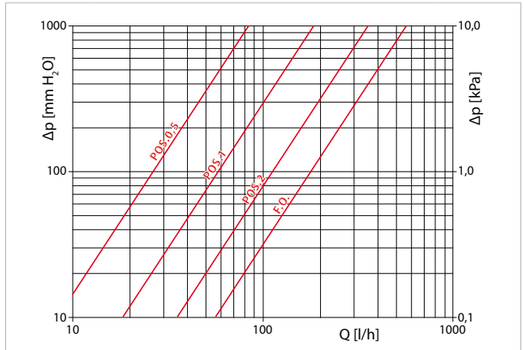
Product code	Connections	Finishing	Type of cap	Adaptors to use	Type of tail piece
R31X032	G 3/8"M x Base 16	Chrome plated brass	Plastic cap	R178, R178C, R179, R179AM	Tail piece with self-sealing
R31X033	G 1/2"M x Base 16	Chrome plated brass	Plastic cap	R178, R178C, R179, R179AM	Tail piece with self-sealing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



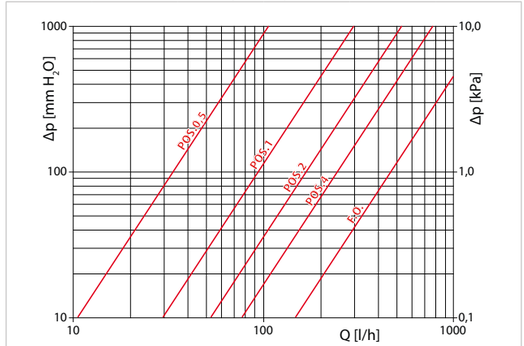
Hydraulic features

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



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

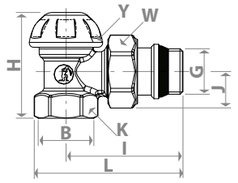
> R14TG

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

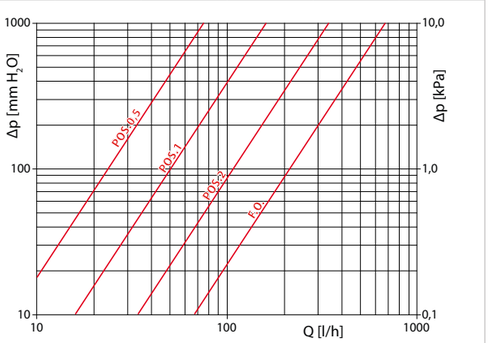
Product code	Connections	Finishing	Type of cap	Type of tail piece
R14X032	G 3/8"M x G 3/8"F	Chrome plated brass	Plastic cap	Tail piece with self-sealing
R14X033	G 1/2"M x G 1/2"F	Chrome plated brass	Plastic cap	Tail piece with self-sealing
R14X034	G 3/4"M x G 3/4"F	Chrome plated brass	Plastic cap	Tail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



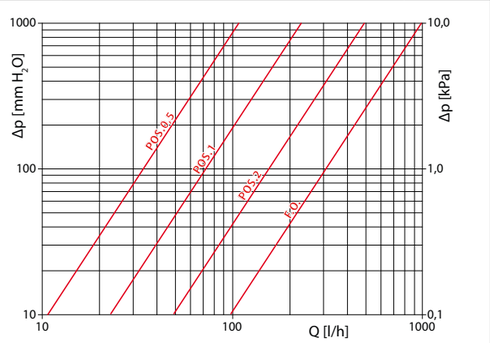
Hydraulic features

R14X032
Kv obtained with Giacomini laboratory loss of pressure station



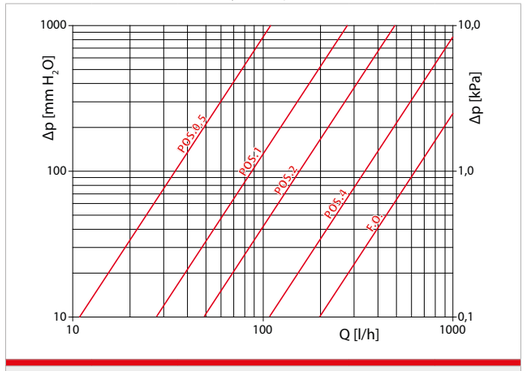
N° of opening turns of the lockshield, starting from Fully Closed position					
N° of turns	0,5	1	2	4	F.O.
Kv	0,24	0,51	1,13	-	2,21

R14X033
Kv obtained with Giacomini laboratory loss of pressure station



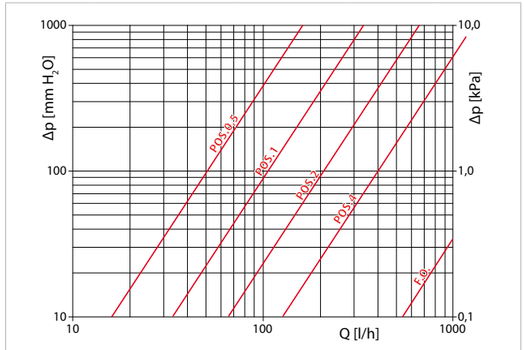
N° of opening turns of the lockshield, starting from Fully Closed position					
N° of turns	0,5	1	2	4	F.O.
Kv	0,34	0,73	1,60	-	3,16

R14X034
Kv obtained with Giacomini laboratory loss of pressure station



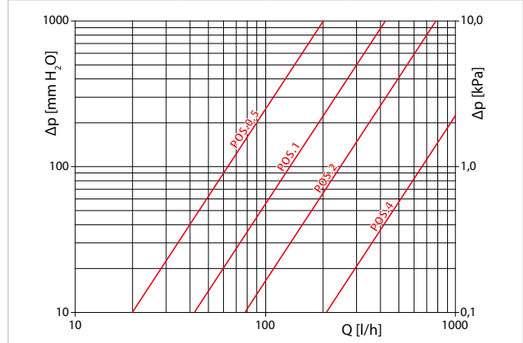
N° of opening turns of the lockshield, starting from Fully Closed position					
N° of turns	0,5	1	2	4	F.O.
Kv	0,35	0,89	1,60	3,46	6,32

R14X035
Kv obtained with Giacomini laboratory loss of pressure station



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

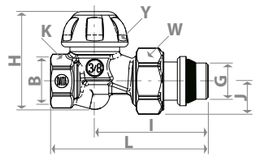
> R15TG

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

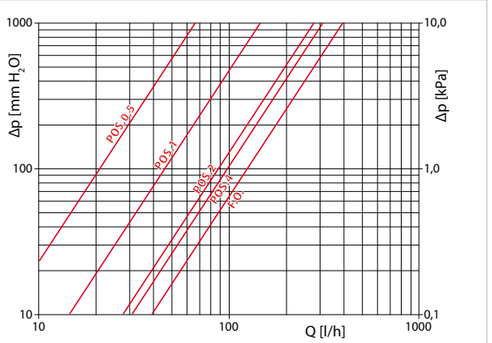
Product code	Connections	Finishing	Type of cap	Type of tail piece
R15X032	G 3/8"M x G 3/8"F	Chrome plated brass	Plastic cap	Tail piece with self-sealing
R15X033	G 1/2"M x G 1/2"F	Chrome plated brass	Plastic cap	Tail piece with self-sealing
R15X034	G 3/4"M x G 3/4"F	Chrome plated brass	Plastic cap	Tail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

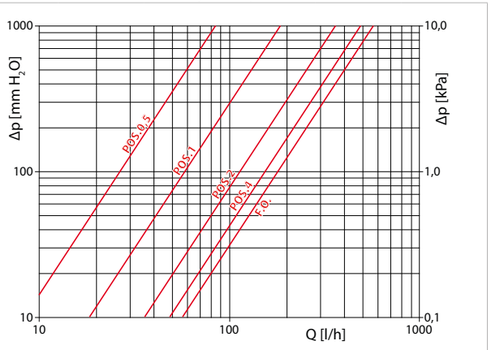
R15X032
Kv obtained with Giacomini laboratory loss of pressure station



N° of opening turns of the lockshield, starting from Fully Closed position

N° of turns	0,5	1	2	4	F.O.
Kv	0,21	0,46	0,89	0,98	1,33

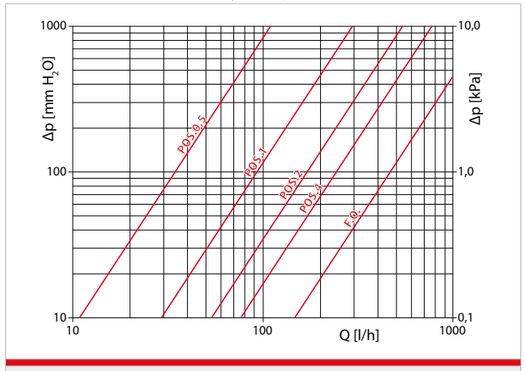
R15X033
Kv obtained with Giacomini laboratory loss of pressure station



N° of opening turns of the lockshield, starting from Fully Closed position

N° of turns	0,5	1	2	4	F.O.
Kv	0,27	0,59	1,20	1,60	1,83

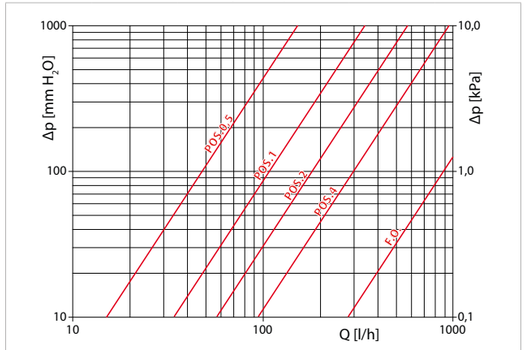
R15X034
Kv obtained with Giacomini laboratory loss of pressure station



N° of opening turns of the lockshield, starting from Fully Closed position

N° of turns	0,5	1	2	4	F.O.
Kv	0,35	0,94	1,76	2,50	4,71

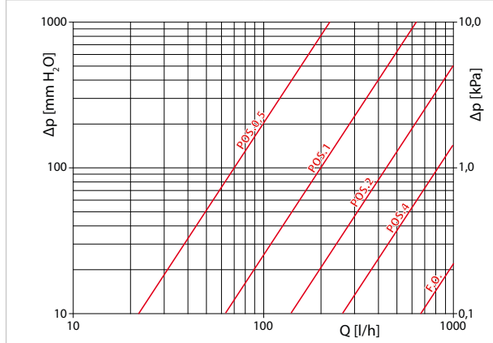
R15X035
Kv obtained with Giacomini laboratory loss of pressure station



N° of opening turns of the lockshield, starting from Fully Closed position

N° of turns	0,5	1	2	4	F.O.
Kv	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

N° of turns	0,5	1	2	4	F.O.
Kv	0,70	2,00	4,42	8,16	11,20

ACCESSORIES AND SPARE PARTS

Thermostatic heads

Chronothermostat for radiators

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

> 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

> 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

> 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

> 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

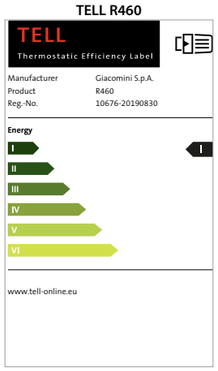
Thermostatic head with remote sensor and knob, actuator to be installed on the valve.
Can be installed on all valves with thermostatic option, series TG, D, F.

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

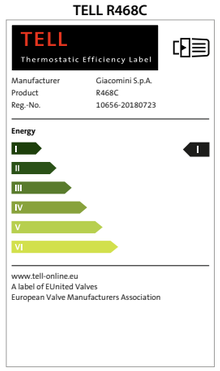
TELL label

The R460 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 R468C



CHRONOTHERMOSTAT FOR RADIATORS

> K470H

Chronothermostat for radiator.
4 programmable daily time bands.
Power supply with 2 batteries 1,5 V AA.
Protection degree IP30.
Working temperature range 0÷50 °C.
Compliance with Directive 2004/108/EC.
Can be installed on all TG, F series thermostatic valves.

Product code	Connection	Power supply
K470HX001	M30 x 1,5 mm with adaptor	2 batteries 1,5 V

> K470W

Wireless head for radiator.
Operation in combination with the KD410 Connect-TRV control unit for remote management of the heating system (KLIMAdomotic TRV series).
Protection degree: IP20.
Temperature control range: 5÷30 °C.
Working temperature 0÷50 °C.
Complies with the EMC Directive 2014/53/EU.
Can be installed on all TG, F series thermostatic valves.

Product code	Connection	Power supply
K470WX011	M30 x 1,5 mm with adaptor	2 batteries 1,5 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
P12AX012	for 3/4" series F 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"

⚠ Safety Warning. Installation, commissioning and periodical maintenance of the product must be carried out by qualified operators in compliance with national regulations and/or local standards. A qualified installer must take all required measures, including use of Individual Protection Devices, for his and others' safety. An improper installation may damage people, animals or objects towards which Giacomini S.p.A. may not be held liable.

♻ Package Disposal. Carton boxes: paper recycling. Plastic bags and bubble wrap: plastic recycling.

ℹ Additional information. For more information, go to giacomini.com or contact our technical assistance service. This document provides only general indications. Giacomini S.p.A. may change at any time, without notice and for technical or commercial reasons, the items included herewith. The information included in this technical sheet do not exempt the user from strictly complying with the rules and good practice standards in force.

🗑 Product Disposal. Do not dispose of product as municipal waste at the end of its life cycle. Dispose of product at a special recycling platform managed by local authorities or at retailers providing this type of service.

GIACOMINI
WATER E-MOTION

ICIM
SISTEMA DI GESTIONE CERTIFICATO
ISO 9001:15 ISO 14001:15 ISO 45001:18

Giacomini S.p.A.
Via per Alzo 39, 28017 San Maurizio d'Opaglio (NO) Italia
consulenza.prodotti@giacomini.com
+39 0322 923372 - giacomini.com