

TECHNICAL CATALOGUE

MANUAL VALVES FOR RADIATORS



ITAP SpA, founded in Lumezzane (Brescia) in 1972, is currently one of the leading production companies in Italy of valves, fittings and distribution manifolds for plumbing and heating systems. Thanks to fully automated production processes, with 72 tooling machines and 51 assembly lines, we are able to produce 200,000 pieces per day. Our innate pursuit for innovation and observance of technical regulations is supported by the company certification ISO 9001: 2008. The company has always considered its focus on quality as the main tool to obtain significant business results: today ITAP SpA is proud to offer products bearing the approval of numerous international certifying bodies.

MANUAL VALVES FOR RADIATORS





MANUAL VALVES
FOR RADIATORS

MANUAL VALVES



Available sizes: 1/2" - 3/4"

Articles 296S, 394, 394S, 396 and 396S also available in size: 3/8"

To be used with iron piping or, together with an Itap-Fit® connector (art. 618), with copper pipe, cross-linked polyethylene (PEX) or polybutylene. In the case of use with PEX or polybutylene it is also requested the use of the liner (art. 655).



Available size: 1/2"

Articles 297S, 395, 395S, 397 and 397S also available in size: 3/8"

To be used with multilayer, PEX or polybutylene piping, together with 595M or 510 Multi-Fit® connectors. Suitable also for copper piping, together with a compression fitting (art. 595).

The male thread "G" is equipped with a conical seat and inner diameter mm.16.



TECHNICAL SPECIFICATIONS

Body: nickel-plated brass CW617N.

Stem: brass CW614N.

O-ring: EPDM or NBR.

Maximum working temperature: 110°C.

Maximum working pressure: 10 bar.

Threads: ISO 228 (equivalent to DIN EN ISO 228 and BS EN ISO 228).

Articles 294S - 295S - 296S - 297S - 394S - 395S - 396S - 397S equipped with union connection with O-ring.

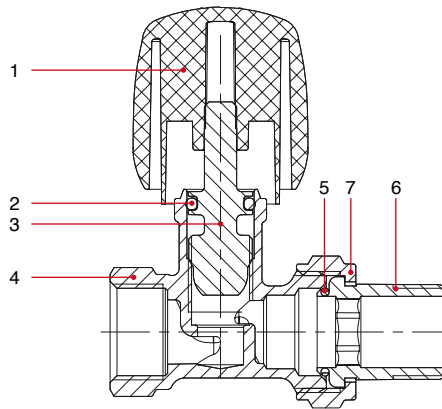
294

STRAIGHT MANUAL VALVE



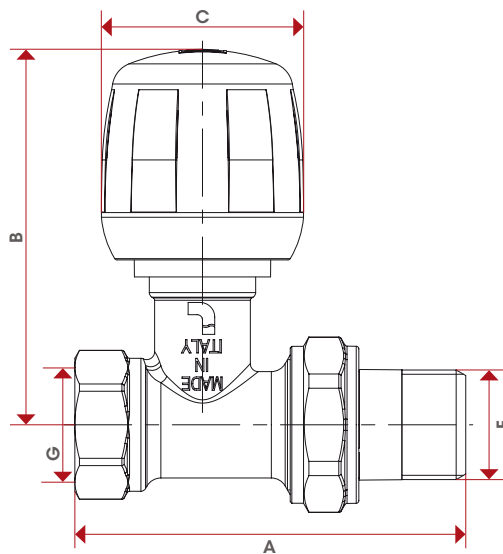
SIZE	PRESSURE	CODE	PACKING
1/2" (DN 15)	10bar/145psi	2940012	12/96
3/4" (DN 20)	10bar/145psi	2940034	8/64

MATERIALS



POS.	DESCRIPTION	N.	MATERIAL
1	Handle	1	ABS
2	O-Ring	1	EPDM
3	Bonnet	1	Brass CW614N
4	Body	1	Nickel-plated brass CW617N
5	O-Ring	1	NBR
6	Union	1	Nickel-plated brass CW617N
7	Nut	1	Nickel-plated brass CW617N

OVERALL DIMENSIONS



	1/2"	3/4"
DN	15	20
A	73,5	77,5
B	70,6	72,1
C	38	38
F	1/2"	3/4"
G	1/2"	3/4"
Kg/cm ² bar	10	10
LBS - psi	145	145

CERTIFICATIONS



294S

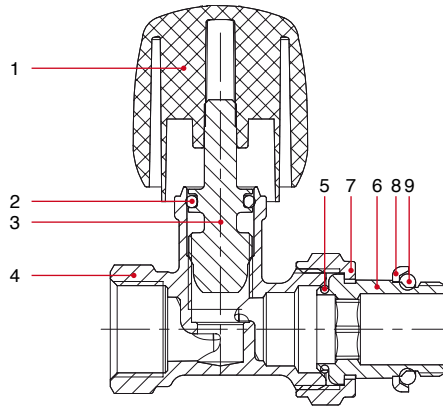
STRAIGHT
MANUAL VALVE



Union connection with O-ring

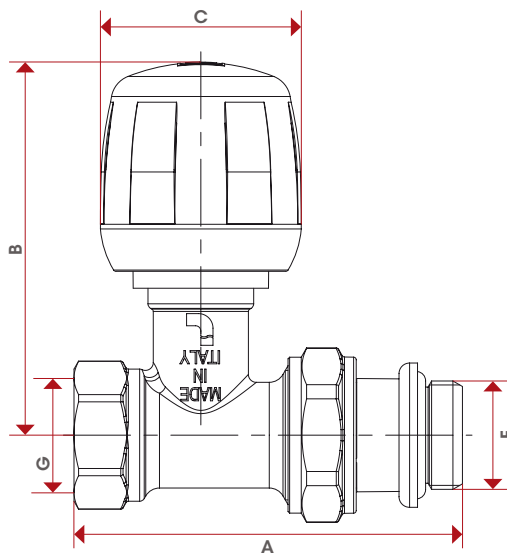
SIZE	PRESSURE	CODE	PACKING
1/2" (DN 15)	10bar/145psi	2940012S	12/96
3/4" (DN 20)	10bar/145psi	2940034S	8/80

MATERIALS



POS.	DESCRIPTION	N.	MATERIAL
1	Handle	1	ABS
2	O-Ring	1	EPDM
3	Bonnet	1	Brass CW614N
4	Body	1	Nickel-plated brass CW617N
5	O-Ring	1	NBR
6	Union	1	Nickel-plated brass CW617N
7	Nut	1	Nickel-plated brass CW617N
8	Ring	1	Steel Fe
9	O-Ring	1	NBR

OVERALL DIMENSIONS



	1/2"	3/4"
DN	15	20
A	73,5	77,5
B	70,6	72,1
C	38	38
F	1/2"	3/4"
G	1/2"	3/4"
Kg/cm ² bar	10	10
LBS - psi	145	145

CERTIFICATIONS



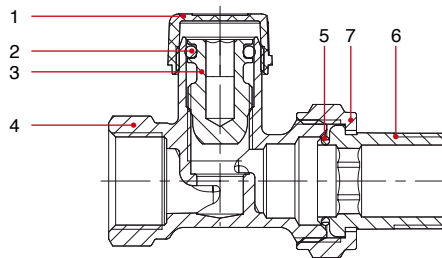
296

STRAIGHT LOCKSHIELD



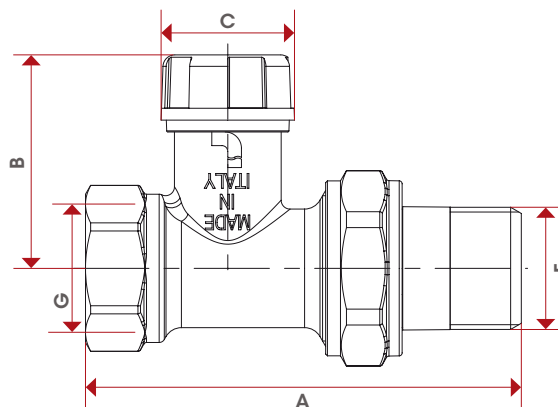
SIZE	PRESSURE	CODE	PACKING
1/2" (DN 15)	10bar/145psi	2960012	12/156
3/4" (DN 20)	10bar/145psi	2960034	8/104

MATERIALS



POS.	DESCRIPTION	N.	MATERIAL
1	Cap	1	ABS
2	O-Ring	1	EPDM
3	Bonnet	1	Brass CW614N
4	Body	1	Nickel-plated brass CW617N
5	O-Ring	1	NBR
6	Union	1	Nickel-plated brass CW617N
7	Nut	1	Nickel-plated brass CW617N

OVERALL DIMENSIONS



	1/2"	3/4"
DN	15	20
A	73,5	77,5
B	36	39
C	22,5	22,5
F	1/2"	3/4"
G	1/2"	3/4"
Kg/cm ² bar	10	10
LBS - psi	145	145

CERTIFICATIONS



296S

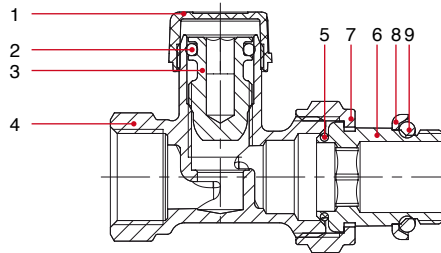
STRAIGHT LOCKSHIELD



Union connection with O-ring

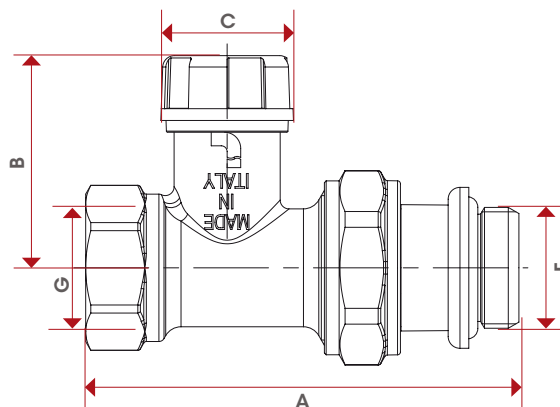
SIZE	PRESSURE	CODE	PACKING
3/8" (DN 10)	10bar/145psi	2960038S	12/132
1/2" (DN 15)	10bar/145psi	2960012S	12/132
3/4" (DN 20)	10bar/145psi	2960034S	8/104

MATERIALS



POS.	DESCRIPTION	N.	MATERIAL
1	Cap	1	ABS
2	O-Ring	1	EPDM
3	Bonnet	1	Brass CW614N
4	Body	1	Nickel-plated brass CW617N
5	O-Ring	1	NBR
6	Union	1	Nickel-plated brass CW617N
7	Nut	1	Nickel-plated brass CW617N
8	Ring	1	Steel Fe
9	O-Ring	1	NBR

OVERALL DIMENSIONS



	3/8"	1/2"	3/4"
DN	10	15	20
A	72	73,5	77,5
B	36	36	39
C	22,5	22,5	25
F	3/8"	1/2"	3/4"
G	3/8"	1/2"	3/4"
Kg/cm ² bar	10	10	10
LBS - psi	145	145	145

CERTIFICATIONS



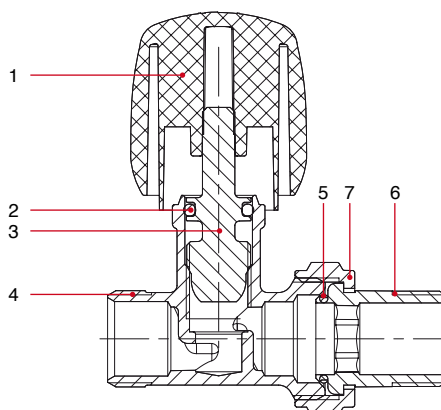
295

STRAIGHT
MANUAL VALVE



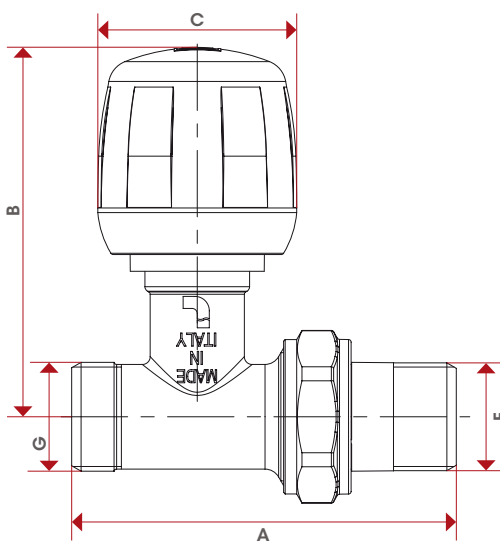
SIZE	PRESSURE	CODE	PACKING
1/2" (DN 15)	10bar/145psi	2950012	12/96

MATERIALS



POS.	DESCRIPTION	N.	MATERIAL
1	Handle	1	ABS
2	O-Ring	1	EPDM
3	Bonnet	1	Brass CW614N
4	Body	1	Nickel-plated brass CW617N
5	O-Ring	1	NBR
6	Union	1	Nickel-plated brass CW617N
7	Nut	1	Nickel-plated brass CW617N

OVERALL DIMENSIONS



	1/2"
DN	15
A	73,5
B	70,6
C	38
F	1/2"
G	1/2"
Kg/cm ² bar	10
LBS - psi	145

CERTIFICATIONS



295S

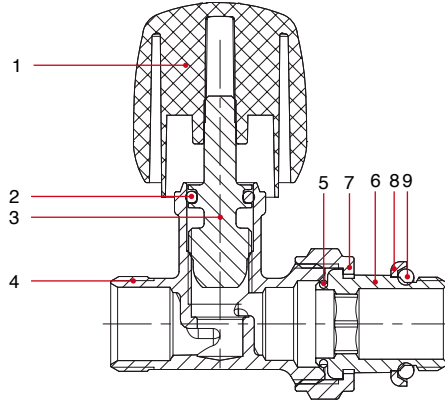
STRAIGHT
MANUAL VALVE



Union connection with O-ring

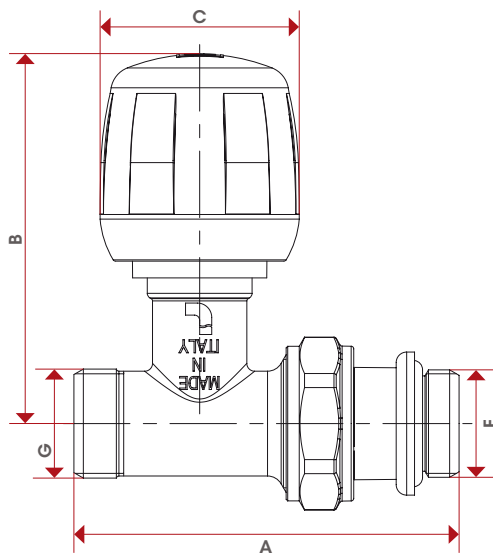
SIZE	PRESSURE	CODE	PACKING
1/2" (DN 15)	10bar/145psi	2950012S	12/96

MATERIALS



POS.	DESCRIPTION	N.	MATERIAL
1	Handle	1	ABS
2	O-Ring	1	EPDM
3	Bonnet	1	Brass CW614N
4	Body	1	Nickel-plated brass CW617N
5	O-Ring	1	NBR
6	Union	1	Nickel-plated brass CW617N
7	Nut	1	Nickel-plated brass CW617N
8	Ring	1	Steel Fe
9	O-Ring	1	NBR

OVERALL DIMENSIONS



	1/2"
DN	15
A	73,5
B	70,6
C	38
F	1/2"
G	1/2"
Kg/cm ² bar	10
LBS - psi	145

CERTIFICATIONS



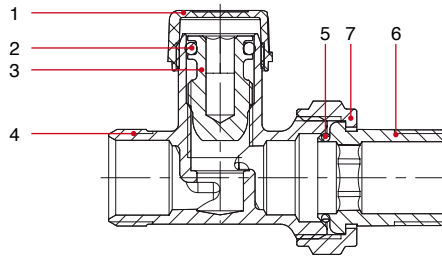
297

STRAIGHT LOCKSHIELD



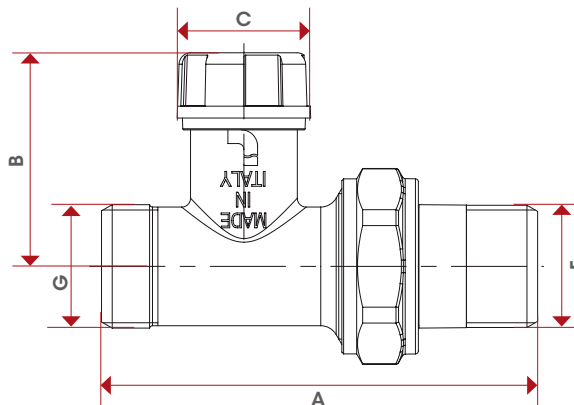
SIZE	PRESSURE	CODE	PACKING
1/2" (DN 15)	10bar/145psi	2950012	12/156

MATERIALS



POS.	DESCRIPTION	N.	MATERIAL
1	Cap	1	ABS
2	O-Ring	1	EPDM
3	Bonnet	1	Brass CW614N
4	Body	1	Nickel-plated brass CW617N
5	O-Ring	1	NBR
6	Union	1	Nickel-plated brass CW617N
7	Nut	1	Nickel-plated brass CW617N

OVERALL DIMENSIONS



	1/2"
DN	15
A	73,5
B	36
C	22,5
F	1/2"
G	1/2"
Kg/cm ² bar	10
LBS - psi	145

CERTIFICATIONS



297S

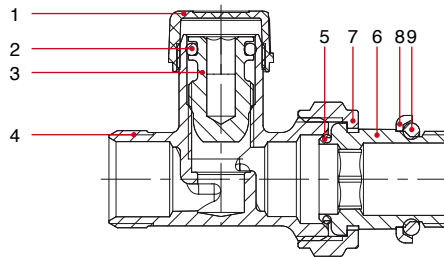
STRAIGHT LOCKSHIELD



Union connection with O-ring

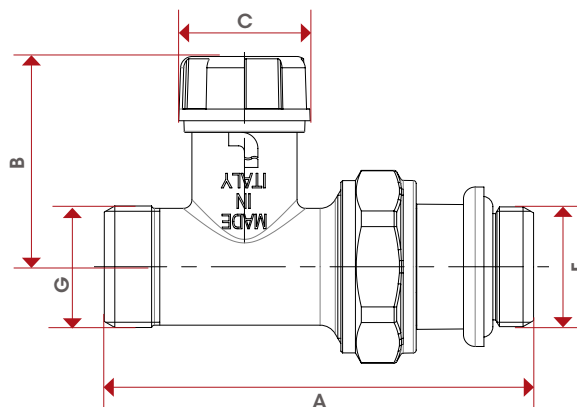
SIZE	PRESSURE	CODE	PACKING
3/8" (DN 10)	10bar/145psi	2970038S	12/192
1/2" (DN 15)	10bar/145psi	2970012S	12/156

MATERIALS



POS.	DESCRIPTION	N.	MATERIAL
1	Cap	1	ABS
2	O-Ring	1	EPDM
3	Bonnet	1	Brass CW614N
4	Body	1	Nickel-plated brass CW617N
5	O-Ring	1	NBR
6	Union	1	Nickel-plated brass CW617N
7	Nut	1	Nickel-plated brass CW617N
8	Ring	1	Steel Fe
9	O-Ring	1	NBR

OVERALL DIMENSIONS



	3/8"	1/2"
DN	10	15
A	72	73,5
B	36	36
C	22,5	22,5
F	3/8"	1/2"
G	3/8"	1/2"
Kg/cm ² bar	10	10
LBS - psi	145	145

CERTIFICATIONS



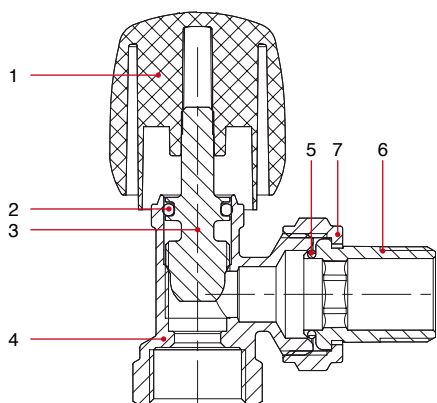
394

ANGLE MANUAL VALVE



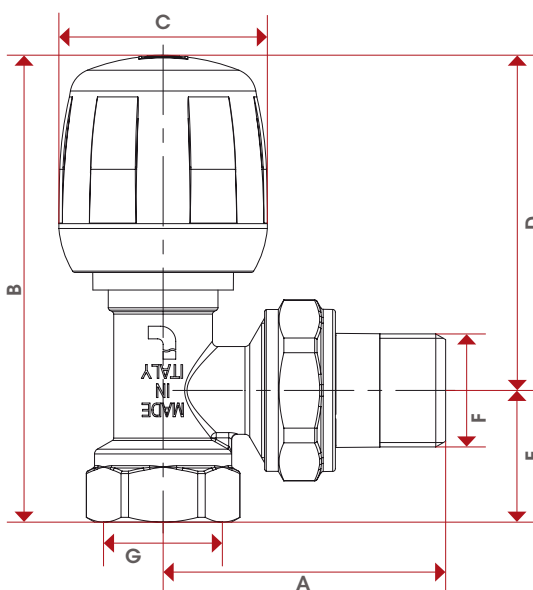
SIZE	PRESSURE	CODE	PACKING
3/8" (DN 10)	10bar/145psi	3940038	12/96
1/2" (DN 15)	10bar/145psi	3940012	12/144
3/4" (DN 20)	10bar/145psi	3940034	8/104

MATERIALS



POS.	DESCRIPTION	N.	MATERIAL
1	Handle	1	ABS
2	O-Ring	1	EPDM
3	Bonnet	1	Brass CW614N
4	Body	1	Nickel-plated brass CW617N
5	O-Ring	1	NBR
6	Union	1	Nickel-plated brass CW617N
7	Nut	1	Nickel-plated brass CW617N

OVERALL DIMENSIONS



	3/8"	1/2"	3/4"
DN	10	15	20
A	49	51,5	58
B	82,6	85,1	86,8
C	38	38	38
D	61,1	61,1	63,4
E	21,5	24	23,4
F	3/8"	1/2"	3/4"
G	3/8"	1/2"	3/4"
Kg/cm ² bar	10	10	10
LBS - psi	145	145	145

CERTIFICATIONS



394S

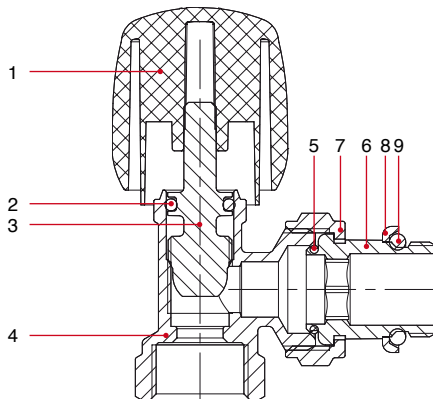
ANGLE
MANUAL VALVE



Union connection with O-ring

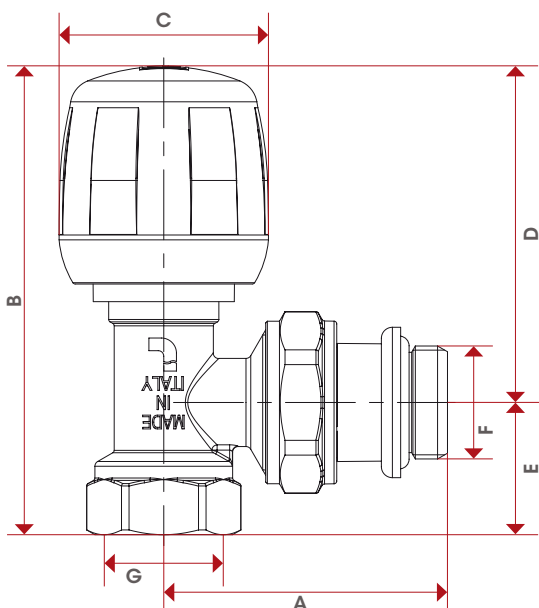
SIZE	PRESSURE	CODE	PACKING
3/8" (DN 10)	10bar/145psi	3940038S	12/96
1/2" (DN 15)	10bar/145psi	3940012S	12/96
3/4" (DN 20)	10bar/145psi	3940034S	8/80

MATERIALS



POS.	DESCRIPTION	N.	MATERIAL
1	Handle	1	ABS
2	O-Ring	1	EPDM
3	Bonnet	1	Brass CW614N
4	Body	1	Nickel-plated brass CW617N
5	O-Ring	1	NBR
6	Union	1	Nickel-plated brass CW617N
7	Nut	1	Nickel-plated brass CW617N
8	Ring	1	Steel Fe
9	O-Ring	1	NBR

OVERALL DIMENSIONS



	3/8"	1/2"	3/4"
DN	10	15	20
A	50	51,5	58
B	82,6	85,1	86,8
C	38	38	38
D	61,1	61,1	63,4
E	21,5	24	23,4
F	3/8"	1/2"	3/4"
G	3/8"	1/2"	3/4"
Kg/cm ² bar	10	10	10
LBS - psi	145	145	145

CERTIFICATIONS



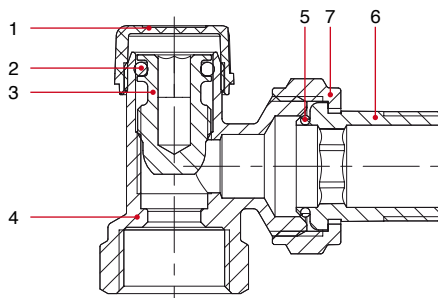
396

ANGLE LOCKSHIELD



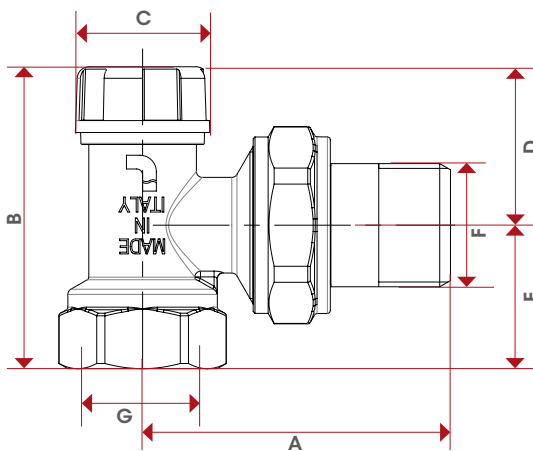
SIZE	PRESSURE	CODE	PACKING
3/8" (DN 10)	10bar/145psi	3960038	12/156
1/2" (DN 15)	10bar/145psi	3960012	12/156
3/4" (DN 20)	10bar/145psi	3960034	8/104

MATERIALS



POS.	DESCRIPTION	N.	MATERIAL
1	Cap	1	ABS
2	O-Ring	1	EPDM
3	Bonnet	1	Brass CW614N
4	Body	1	Nickel-plated brass CW617N
5	O-Ring	1	NBR
6	Union	1	Nickel-plated brass CW617N
7	Nut	1	Nickel-plated brass CW617N

OVERALL DIMENSIONS



	3/8"	1/2"	3/4"
DN	10	15	20
A	49	51,5	58
B	48	50,5	53,7
C	22,5	22,5	25
D	26,5	26,5	30,3
E	21,5	24	23,4
F	3/8"	1/2"	3/4"
G	3/8"	1/2"	3/4"
Kg/cm ² bar	10	10	10
LBS - psi	145	145	145

CERTIFICATIONS



396S

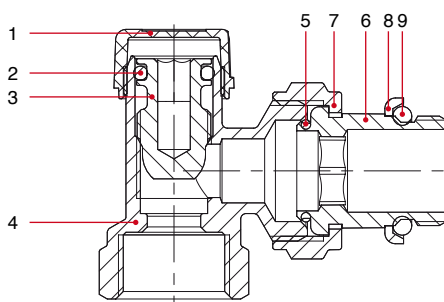
ANGLE LOCKSHIELD



Union connection with O-ring

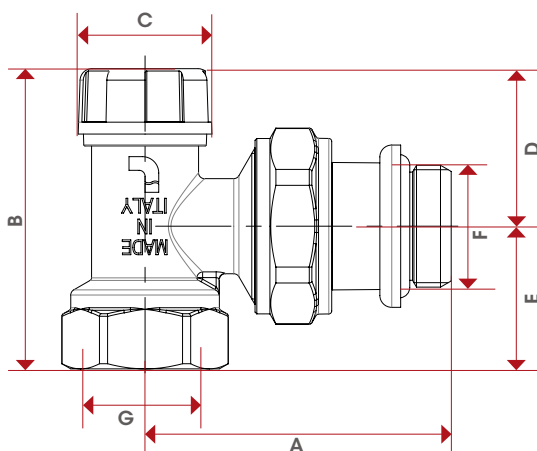
SIZE	PRESSURE	CODE	PACKING
3/8" (DN 10)	10bar/145psi	3960038S	12/132
1/2" (DN 15)	10bar/145psi	3960012S	12/156
3/4" (DN 20)	10bar/145psi	3960034S	8/104

MATERIALS



POS.	DESCRIPTION	N.	MATERIAL
1	Cap	1	ABS
2	O-Ring	1	EPDM
3	Bonnet	1	Brass CW614N
4	Body	1	Nickel-plated brass CW617N
5	O-Ring	1	NBR
6	Union	1	Nickel-plated brass CW617N
7	Nut	1	Nickel-plated brass CW617N
8	Ring	1	Steel Fe
9	O-Ring	1	NBR

OVERALL DIMENSIONS



	3/8"	1/2"	3/4"
DN	10	15	20
A	50	51,5	58
B	48	50,5	53,7
C	22,5	22,5	25
D	26,5	26,5	30,3
E	21,5	24	23,4
F	3/8"	1/2"	3/4"
G	3/8"	1/2"	3/4"
Kg/cm ² bar	10	10	10
LBS - psi	145	145	145

CERTIFICATIONS



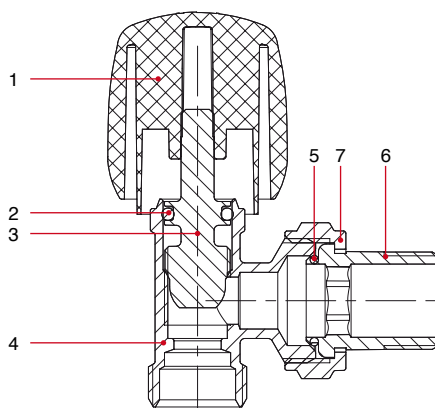
395

ANGLE
MANUAL VALVE



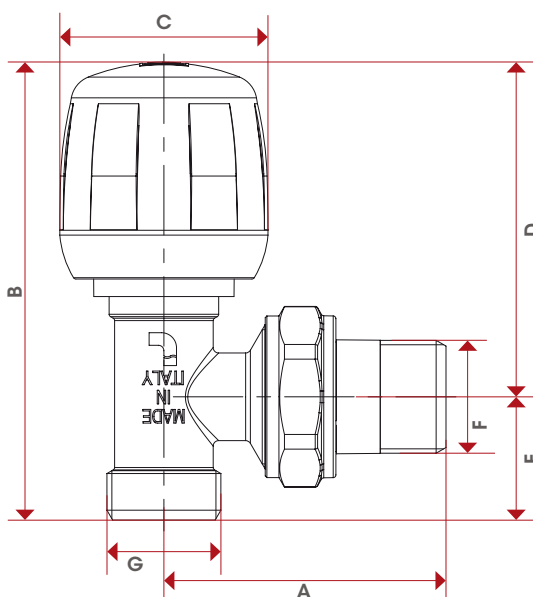
SIZE	PRESSURE	CODE	PACKING
3/8" (DN 10)	10bar/145psi	3950038	12/96
1/2" (DN 15)	10bar/145psi	3950012	12/96

MATERIALS



POS.	DESCRIPTION	N.	MATERIAL
1	Handle	1	ABS
2	O-Ring	1	EPDM
3	Bonnet	1	Brass CW614N
4	Body	1	Nickel-plated brass CW617N
5	O-Ring	1	NBR
6	Union	1	Nickel-plated brass CW617N
7	Nut	1	Nickel-plated brass CW617N

OVERALL DIMENSIONS



	3/8"	1/2"
DN	10	15
A	49	51,5
B	83,6	83,6
C	38	38
D	61,1	61,1
E	22,5	22,5
F	3/8"	1/2"
G	1/2"	1/2"
Kg/cm ² bar	10	10
LBS - psi	145	145

CERTIFICATIONS



395S

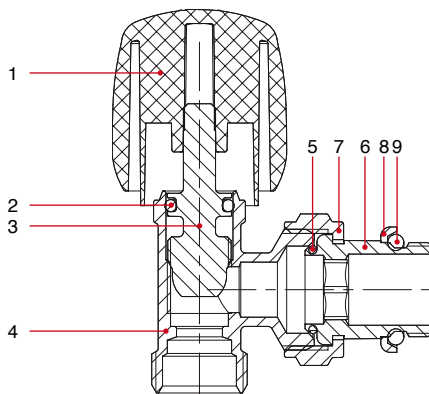
ANGLE
MANUAL VALVE



Union connection with O-ring

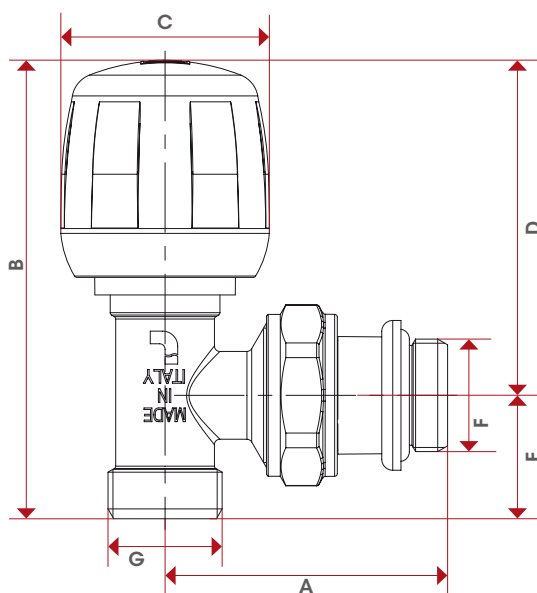
SIZE	PRESSURE	CODE	PACKING
3/8" (DN 10)	10bar/145psi	3950038S	12/96
1/2" (DN 15)	10bar/145psi	3950012S	12/96

MATERIALS



POS.	DESCRIPTION	N.	MATERIAL
1	Handle	1	ABS
2	O-Ring	1	EPDM
3	Bonnet	1	Brass CW614N
4	Body	1	Nickel-plated brass CW617N
5	O-Ring	1	NBR
6	Union	1	Nickel-plated brass CW617N
7	Nut	1	Nickel-plated brass CW617N
8	Ring	1	Steel Fe
9	O-Ring	1	NBR

OVERALL DIMENSIONS



	3/8"	1/2"
DN	10	15
A	50	51,5
B	74,5	74,5
C	34	34
D	52	52
E	22,5	22,5
F	3/8"	1/2"
G	1/2"	1/2"
Kg/cm ² bar	10	10
LBS - psi	145	145

CERTIFICATIONS



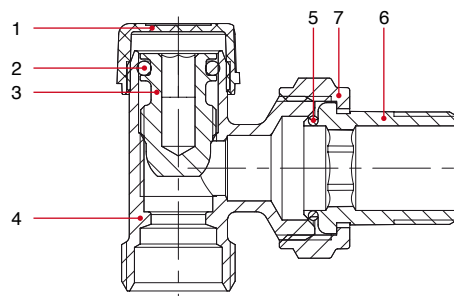
397

ANGLE LOCKSHIELD



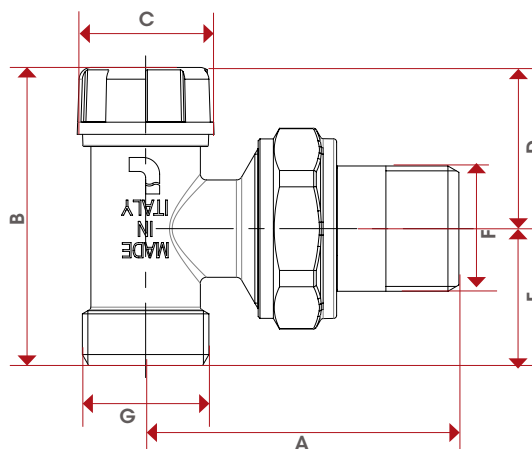
SIZE	PRESSURE	CODE	PACKING
3/8" (DN 10)	10bar/145psi	3970038	12/156
1/2" (DN 15)	10bar/145psi	3970012	12/156

MATERIALS



POS.	DESCRIPTION	N.	MATERIAL
1	Cap	1	ABS
2	O-Ring	1	EPDM
3	Bonnet	1	Brass CW614N
4	Body	1	Nickel-plated brass CW617N
5	O-Ring	1	NBR
6	Union	1	Nickel-plated brass CW617N
7	Nut	1	Nickel-plated brass CW617N

OVERALL DIMENSIONS



	3/8"	1/2"
DN	10	15
A	49	51,5
B	49	49
C	22,5	22,5
D	26,5	26,5
E	22,5	22,5
F	3/8"	1/2"
G	1/2"	1/2"
Kg/cm ² bar	10	10
LBS - psi	145	145

CERTIFICATIONS



397S

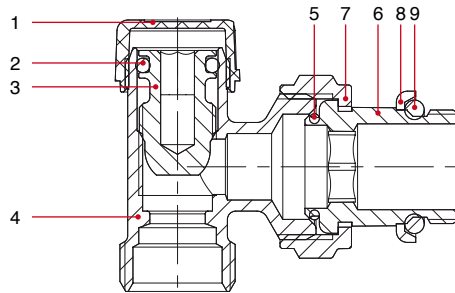
ANGLE LOCKSHIELD



Union connection with O-ring

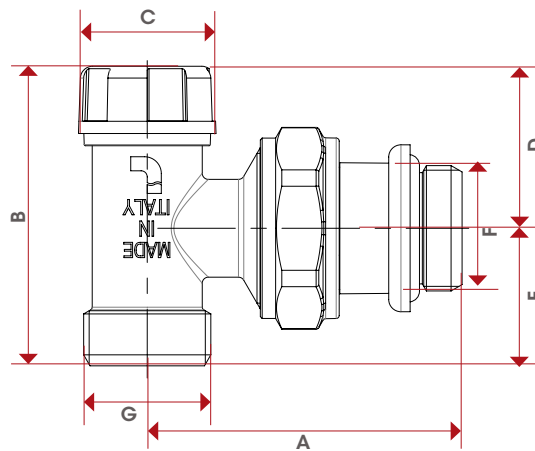
SIZE	PRESSURE	CODE	PACKING
3/8" (DN 10)	10bar/145psi	3970038S	12/132
1/2" (DN 15)	10bar/145psi	3970012S	12/192

MATERIALS



POS.	DESCRIPTION	N.	MATERIAL
1	Cap	1	ABS
2	O-Ring	1	EPDM
3	Bonnet	1	Brass CW614N
4	Body	1	Nickel-plated brass CW617N
5	O-Ring	1	NBR
6	Union	1	Nickel-plated brass CW617N
7	Nut	1	Nickel-plated brass CW617N
8	Ring	1	Steel Fe
9	O-Ring	1	NBR

OVERALL DIMENSIONS

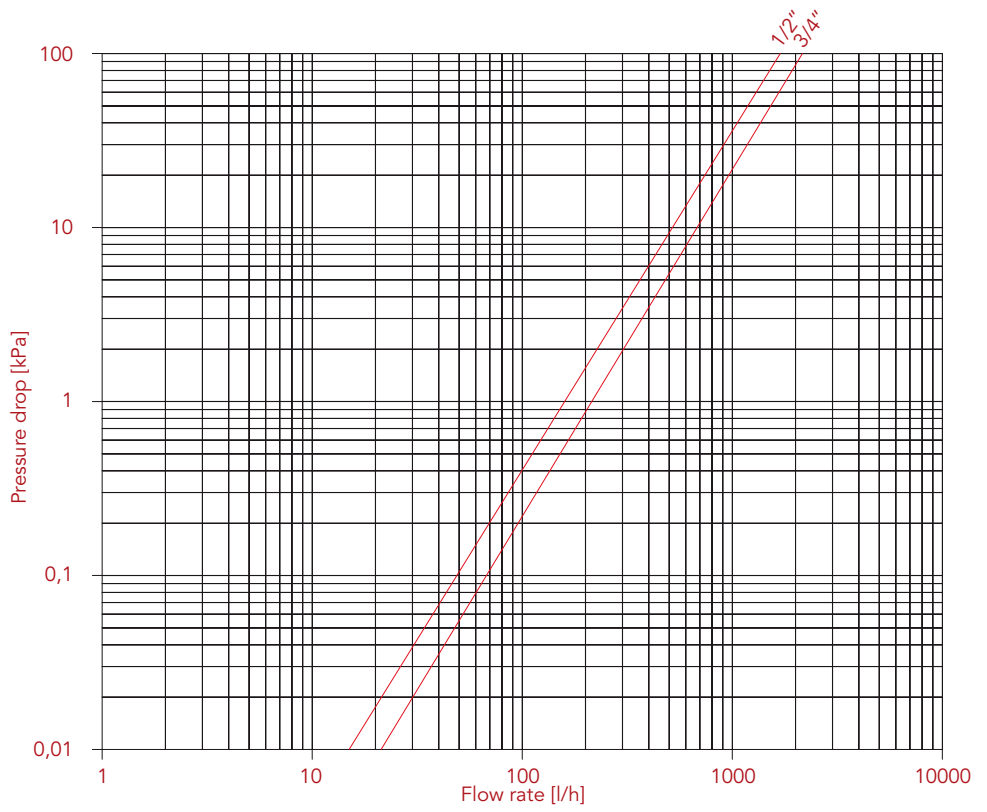
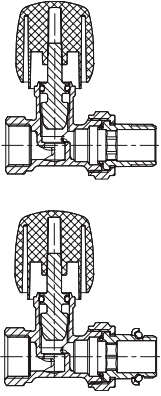


	3/8"	1/2"
DN	10	15
A	50	51,5
B	49	49
C	22,5	22,5
D	26,5	26,5
E	22,5	22,5
F	3/8"	1/2"
G	1/2"	1/2"
Kg/cm ² bar	10	10
LBS - psi	145	145

CERTIFICATIONS



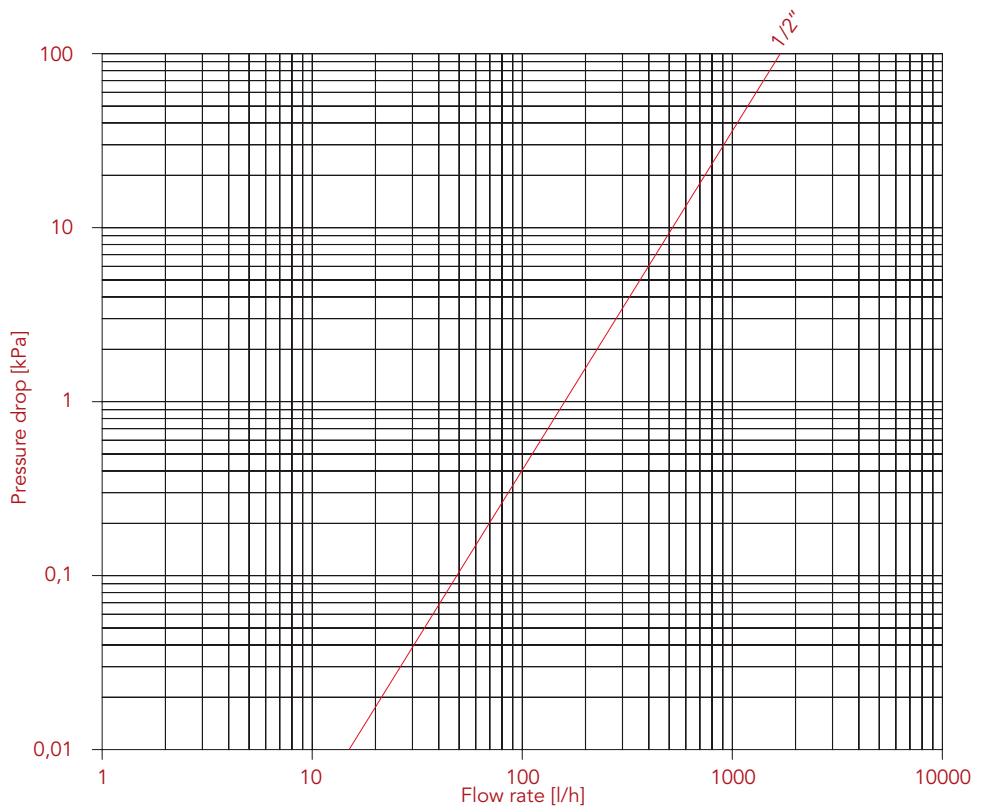
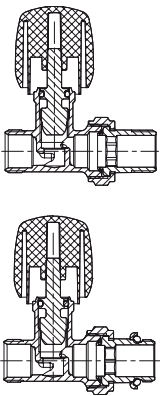
294 - 294S



SIZES	1/2"	3/4"
Kv	1,72	2,15

With water

295 - 295S

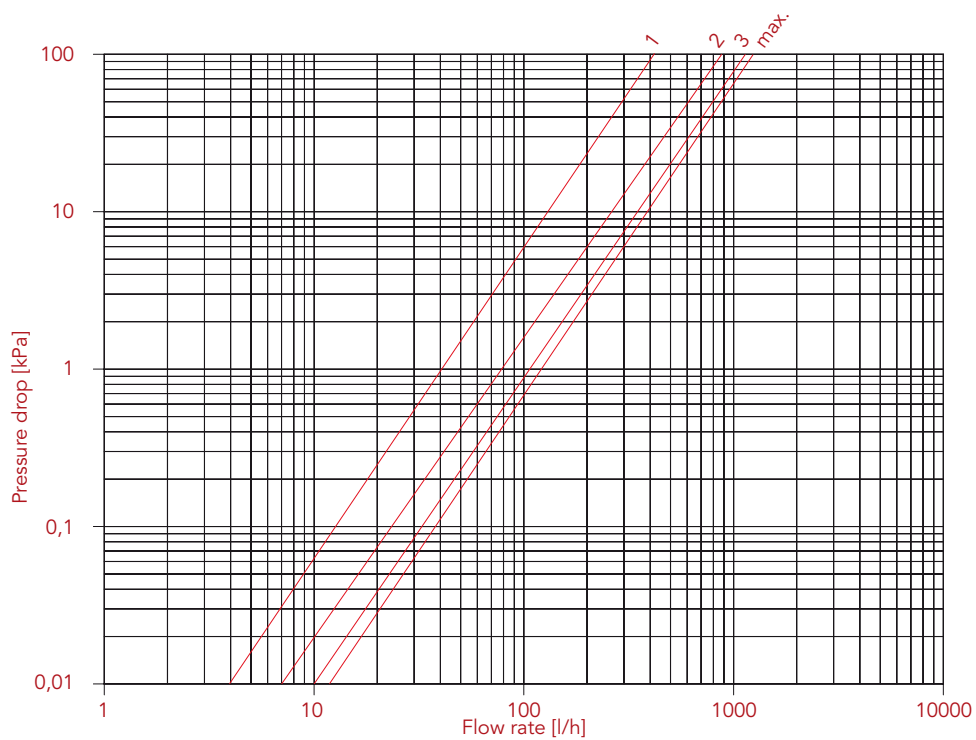
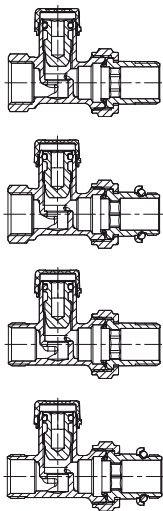


SIZES	1/2"
Kv	1,72

With water



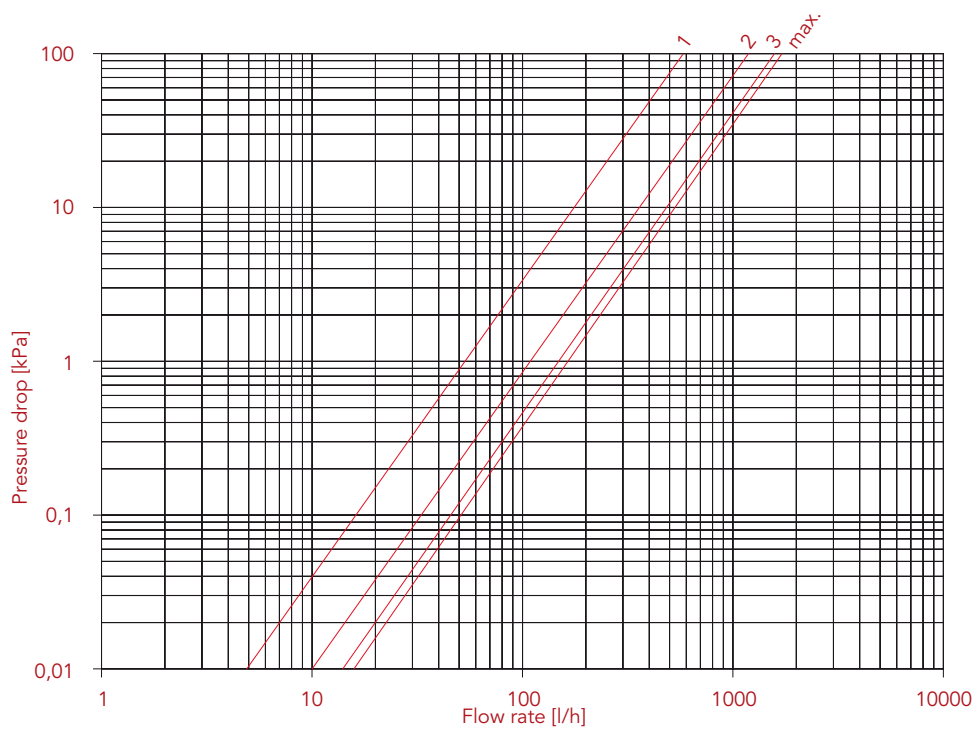
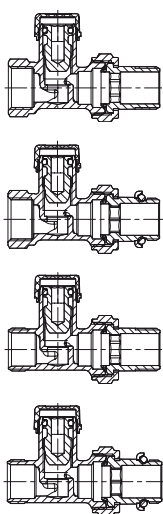
296 - 296S
297 - 297S
3/8"



SIZES	3/8"			
Turn	1	2	3	Open
Kv	0,4	0,9	1,1	1,26

With water

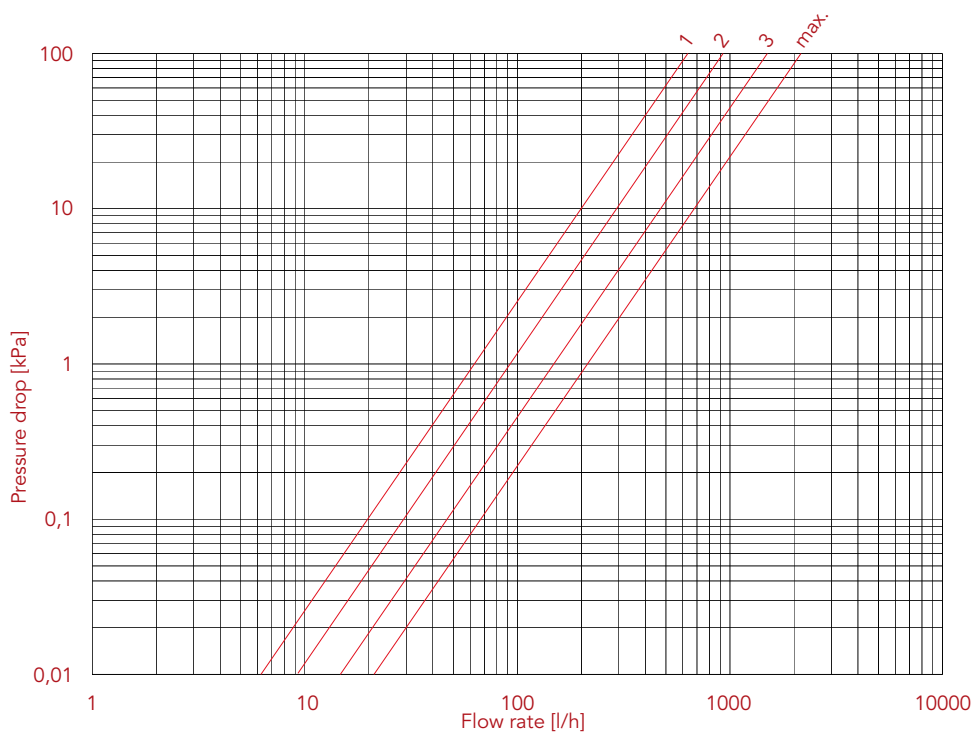
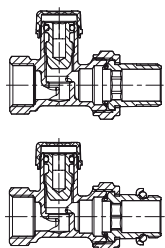
296 - 296S
297 - 297S
1/2"



SIZES	1/2"			
Turn	1	2	3	Open
Kv	0,6	1,2	1,6	1,72

With water

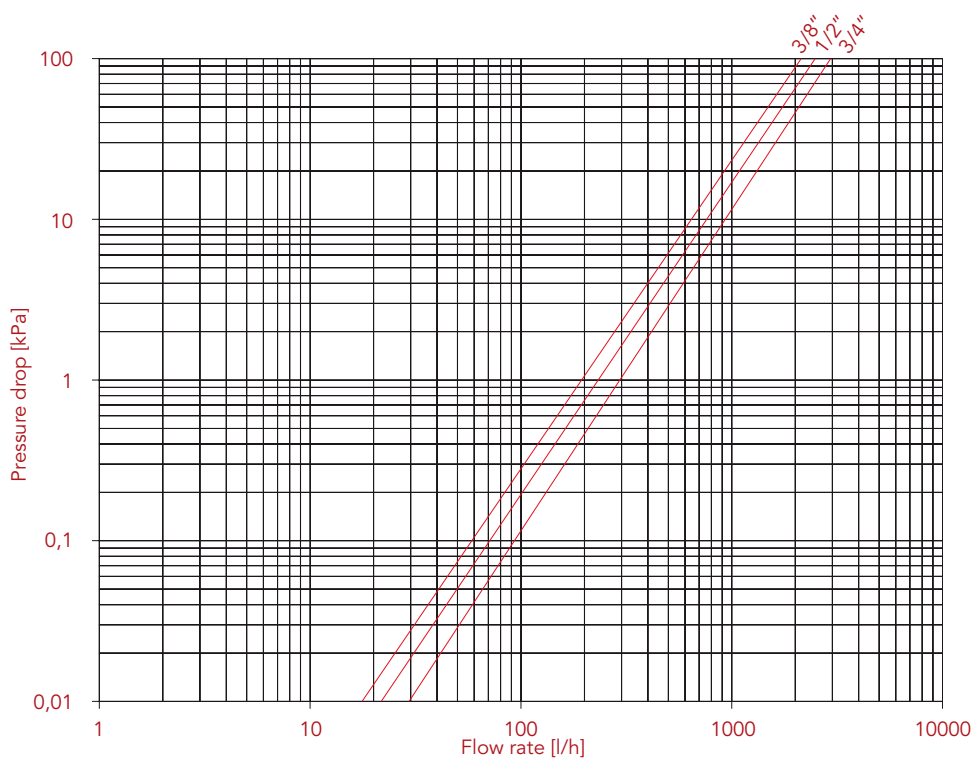
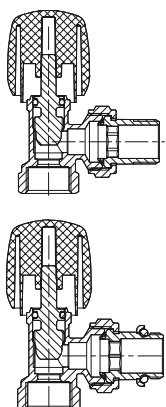
296 - 296S
3/4"



SIZES	3/4"			
Turn	1	2	3	Open
Kv	0,6	0,9	1,5	2,15

With water

394 - 394S

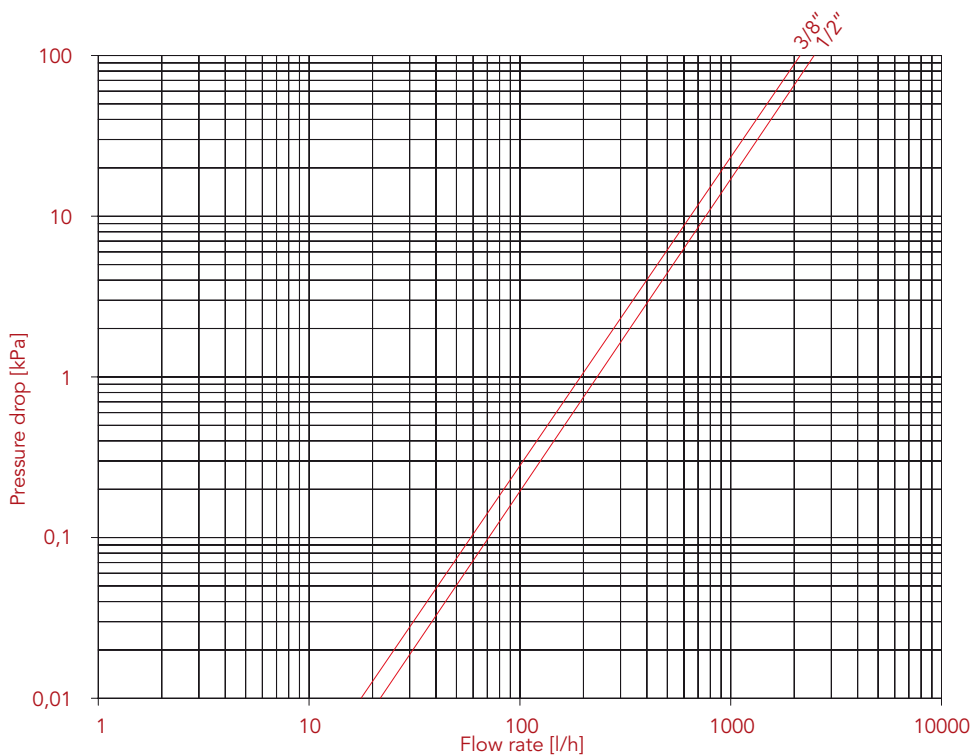
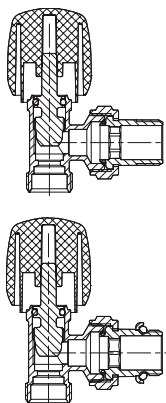


SIZES	3/8"	1/2"	3/4"
Kv	2,13	2,51	2,94

With water



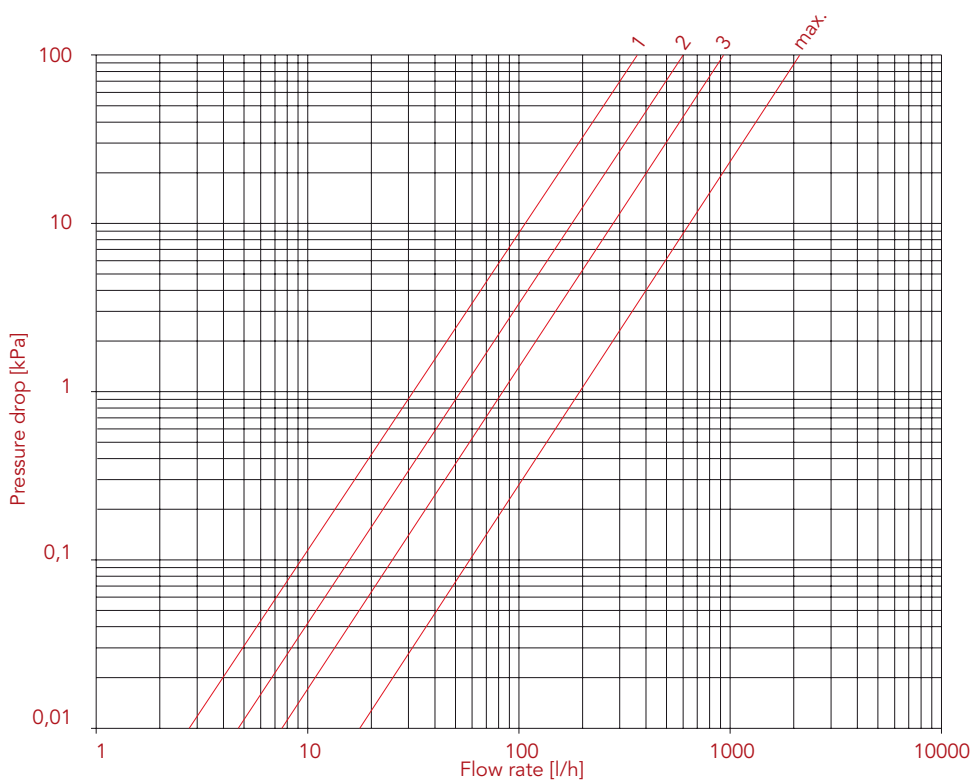
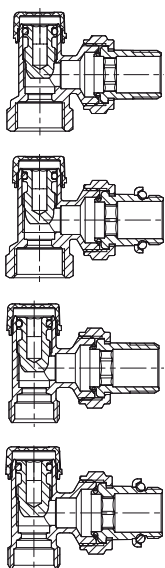
395 - 395S



SIZES	3/8"	1/2"
Kv	2,13	2,51

With water

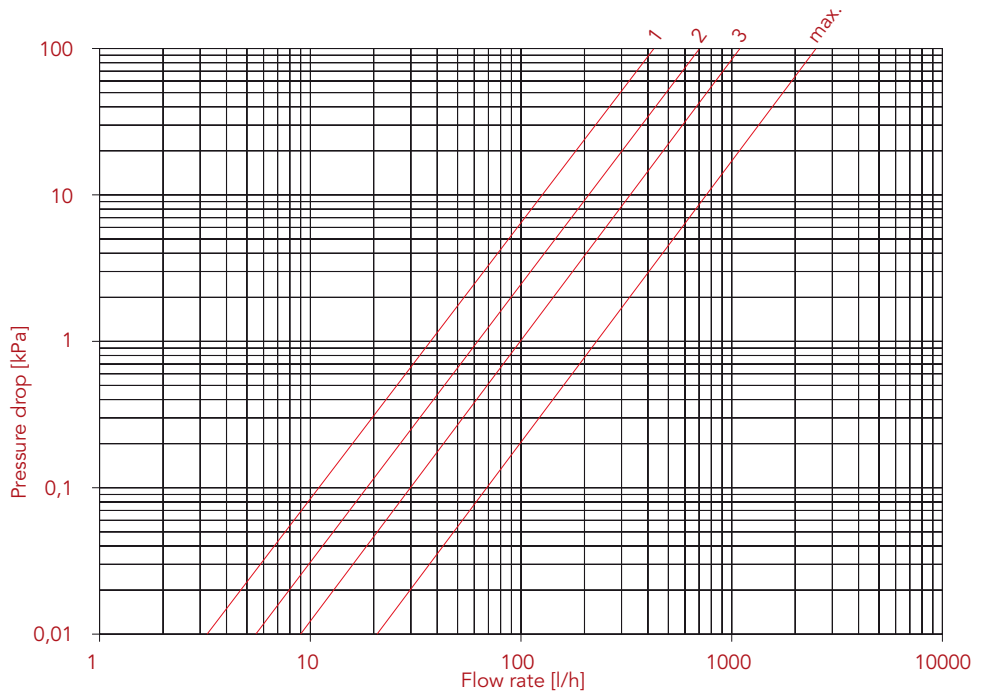
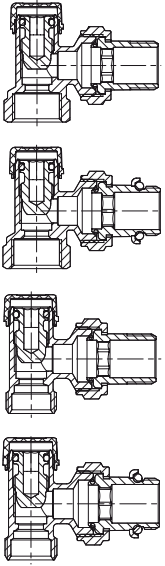
396 - 396S 397 - 397S 3/8"



SIZES	3/8"			
Turn	1	2	3	Open
Kv	0,38	0,60	0,92	2,13

With water

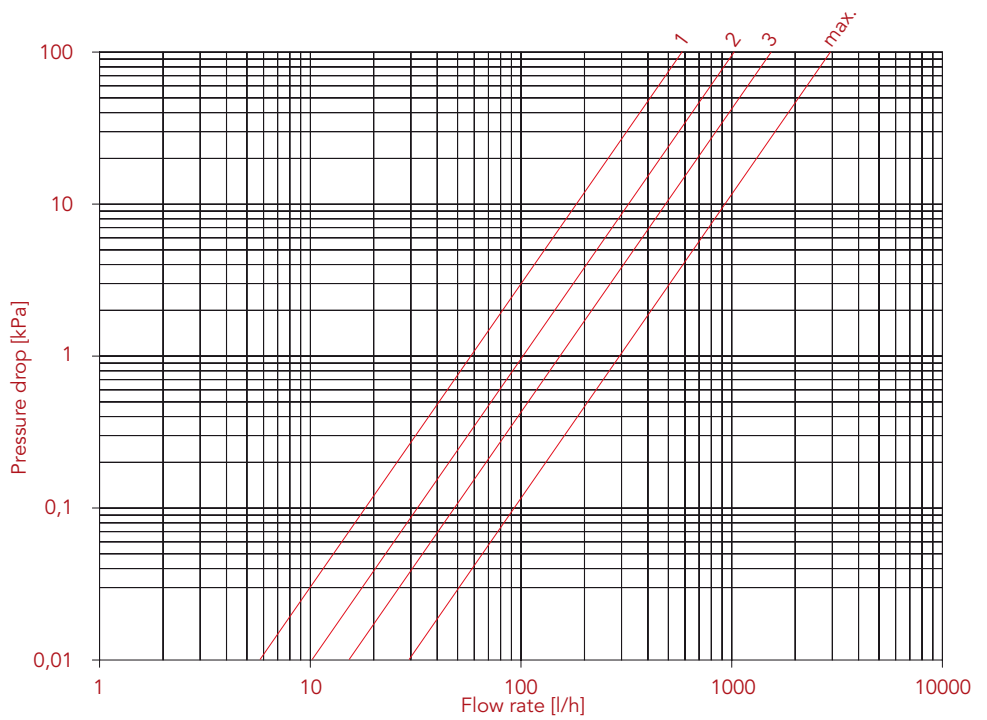
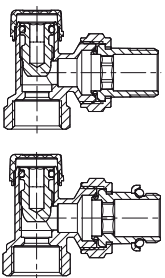
396 - 396S
397 - 397S
1/2"



SIZES	1/2"			
Turn	1	2	3	Open
Kv	0,42	0,70	1,10	2,51

With water

396 - 396S
3/4"



SIZES	3/4"			
Turn	1	2	3	Open
Kv	0,60	1,02	1,54	2,94

With water





TEC

PRESSURE DROP



MANUAL VALVES FOR RADIATORS





NOTES

A series of horizontal dashed lines for taking notes, extending from the right side of the 'NOTES' header across the page.



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