TECHNICAL CATALOGUE

REDUCED FLOW BALL VALVES: ORIENT

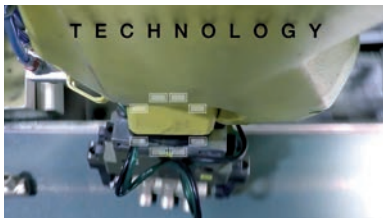
ITAP AT A GLANCE

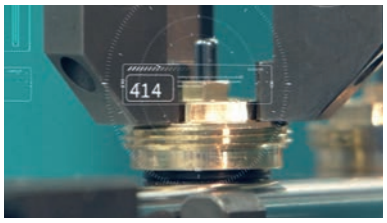
THE COMPANY

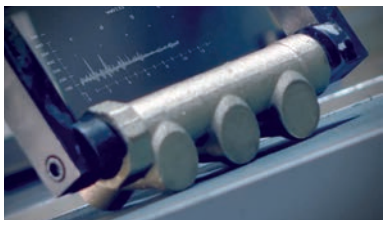
ITAP SpA, founded in Lumezzane (Brescia) in 1972, is currently one of the leading production companies in Italy of **valves, fittings and distribution manifolds** for plumbing and heating systems.

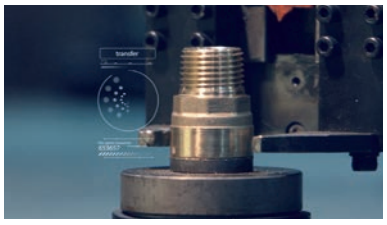
Thanks to a fully automated production process, with 85 transfer machines and 55 assembly lines, it is capable of producing 400,000 pieces per day.

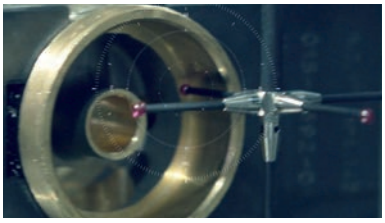
Our innate pursuit for innovation and observance of technical regulations is supported by the company certification ISO 9001. The company has always considered its focus on quality as the main tool to obtain significant business results: today ITAP SpA is proud to offer products bearing the approval of numerous international certifying bodies.











ITAP products have obtained approvals by more than 30 certification bodies from all over the world.

REDUCED FLOW BALL VALVES: ORIENT

111 Orient ball valve, reduced flow

Suitable for domestic water services, heating and air-conditioning plants, compressed air systems.
ORIENT

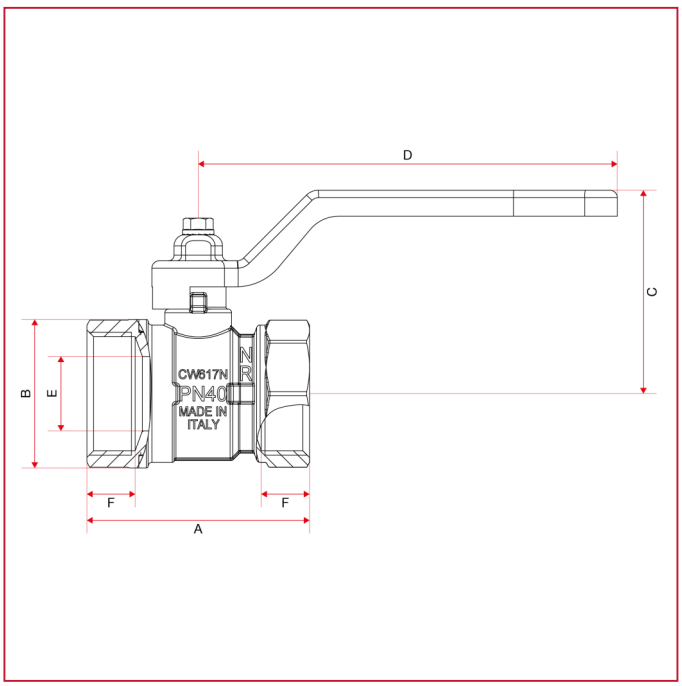
MEASURE	PRESSURE	CODE	PACKING
1/4" (DN 8)	50bar/725psi	0900014	12/168
3/8" (DN 10)	50bar/725psi	0900038	12/168
1/2" (DN 15)	50bar/725psi	1110012	12/144
3/4" (DN 20)	40bar/580psi	1110034	10/90
1" (DN 25)	40bar/580psi	1110100	8/64
1"1/4 (DN 32)	30bar/435psi	1110114	4/48
1"1/2 (DN 40)	30bar/435psi	1110112	3/24
2" (DN 50)	25bar/362.5psi	1110200	2/16

CERTIFICATIONS

TECHNICAL SPECIFICATIONS

Female/female threads.
Lever handle in steel.
Body in nickel-plated brass.
Minimum and maximum working temperatures: -20°C, 150°C in absence of steam.
Threads: ISO 228 (equivalent to DIN EN ISO 228 and BS EN ISO 228).

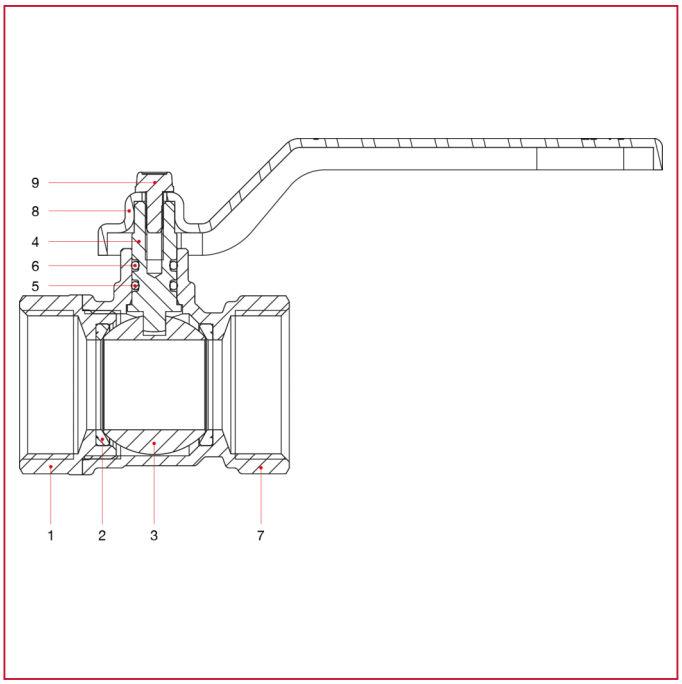
OVERALL DIMENSIONS



REDUCED FLOW BALL VALVES: ORIENT

	1/4"	3/8"	1/2"	3/4"	1"	1"1/4	1"1/2	2"
DN	8	10	15	20	25	32	40	50
A	44,4	44,4	48	53,5	60	72	80	97
B	23,5	24	27	34	40	50	59	72
C	37,3	37,3	39,3	48,8	54,8	58,8	74,8	80,8
D	80	80	80	88,5	113	113	138	138
E	10	10	12	15	20	25	32	40
F	10	10	11	12	13	14,5	15	18
Kg/cm2 bar	50	50	50	40	40	30	30	25
LBS - psi	725	725	725	580	580	435	435	362,5

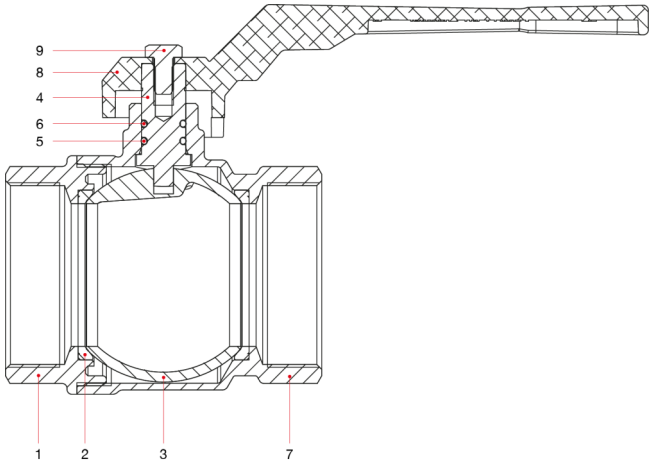
MATERIALS sizes 1/4" through 2"



POS.	DESCRIPTION	N.	MATERIAL
1	Female end adapter	1	Nickel-plated brass CW617N
2	Seat	2	P.T.F.E.
3	Ball	1	Chrome-plated brass CW617N
4	Stem	1	Brass CW614N
5	O-ring	1	NBR
6	O-ring	1	Viton®
7	Body	1	Nickel-plated brass CW617N
8	Lever handle	1	Varnished steel P04
9	Screw	1	Zinc-plated steel C4C

REDUCED FLOW BALL VALVES: ORIENT

MATERIALS sizes 2"1/2 through 4"



POS.	DESCRIPTION	N.	MATERIAL
1	Female end adapter	1	Nickel-plated brass CW617N
2	Seat	2	P.T.F.E.
3	Ball	1	Chrome-plated brass CW617N
4	Stem	1	Brass CW614N
5	O-ring	1	NBR
6	O-ring	1	Viton®
7	Body	1	Nickel-plated brass CW617N
8	Lever handle	1	Varnished aluminium
9	Screw	1	Zinc-plated CB4 FF (C34)

REDUCED FLOW BALL VALVES: ORIENT

INSTALLATION

The itap S.p.A.'s valves are bi-directional, that means they manage the flow in both the directions.
The valves are composed by a ball, two seal in PTFE material, one stem, two sailing rings (O-Rings), one handle and a couple of parts made of brass (body and end adopter) that contain them and that are assembled by means of threat and a sealed material to obtain their aim.
In order to avoid that the sealed material gets broken and then the valve looses the connection between the body and the end-adapter, it's necessary to avoid to submit the two parts under the influence of a torque.
For the installation normal hydraulic practices must be used, and especially:
- ones have to be sure that the two pipes are correctly aligned;
- during the assembling process the installer has to apply its assembling tools at the end that is nearest to the pipe;
- the application of the sealing materials by the fitter (PTFE or hempen cloth) must be limited at the threat zone. An excess should interferes in the ball-gasket's closure zone, compromising the tightness.
- in the case that the fluid transported presents some impurities (dust, water too hard, etc.) ones have to remove these impurities by the means of a filter. Otherwise they could damage the seals.

DISASSEMBLY

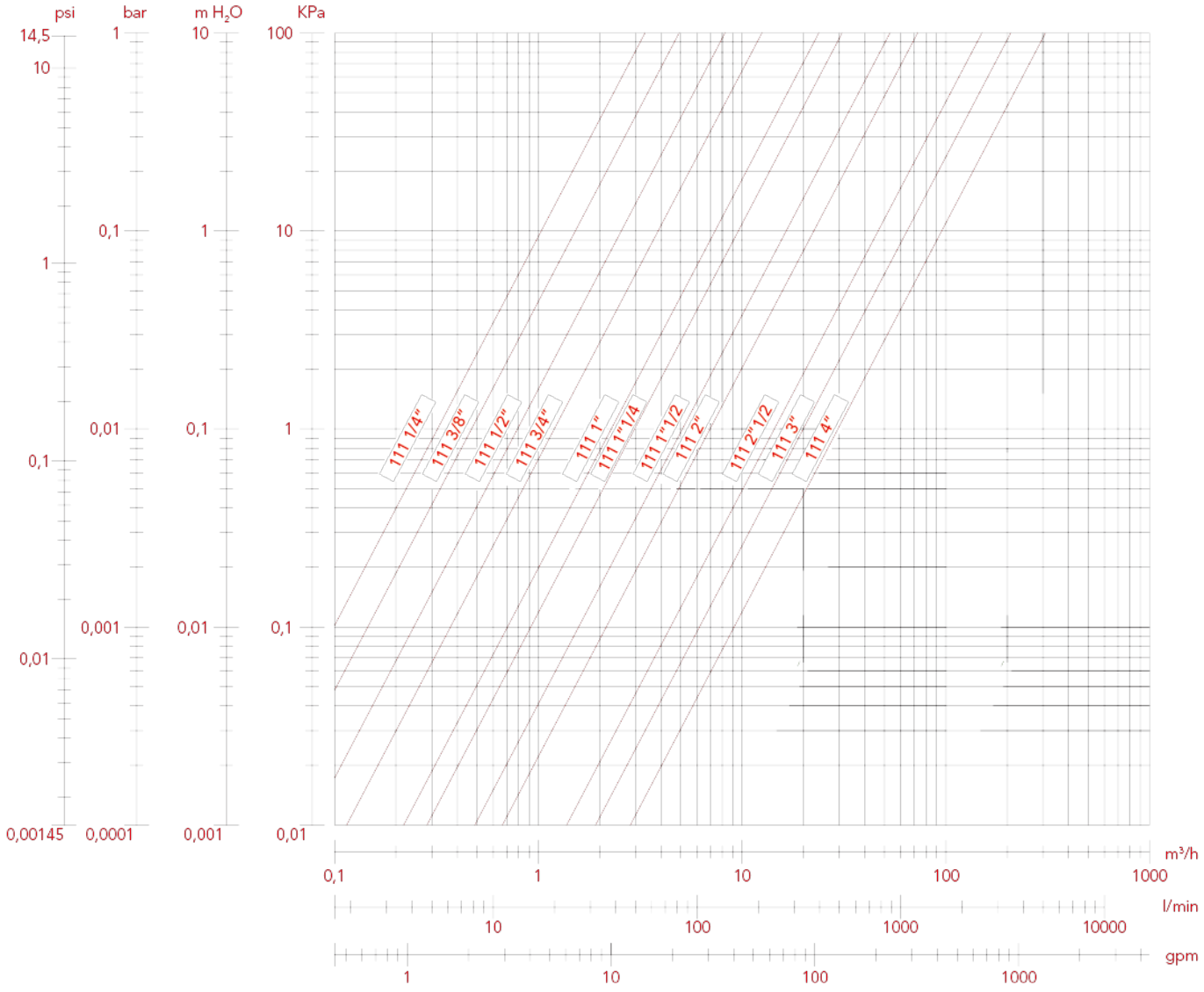
To remove the valve from the pipe line or anyhow before to unscrew the junctions linked to it:
- wear the clothing protective normally required to work with the fluid transported within the line;
- depressurizze the line and operate in this way:
  - positioning the valve in opened position and than empty the line;
  - handle the valve to put down the residue pressure contained inside the space between the ball and the body before of remove it from the line;
  - during the disassembly apply the screw tool at the end of the valve nearest the pipe;

MAINTENANCE

Verify the valve periodically, according to its application's field and its works' field and its work's conditions, in order to be sure that the valve works correctly.

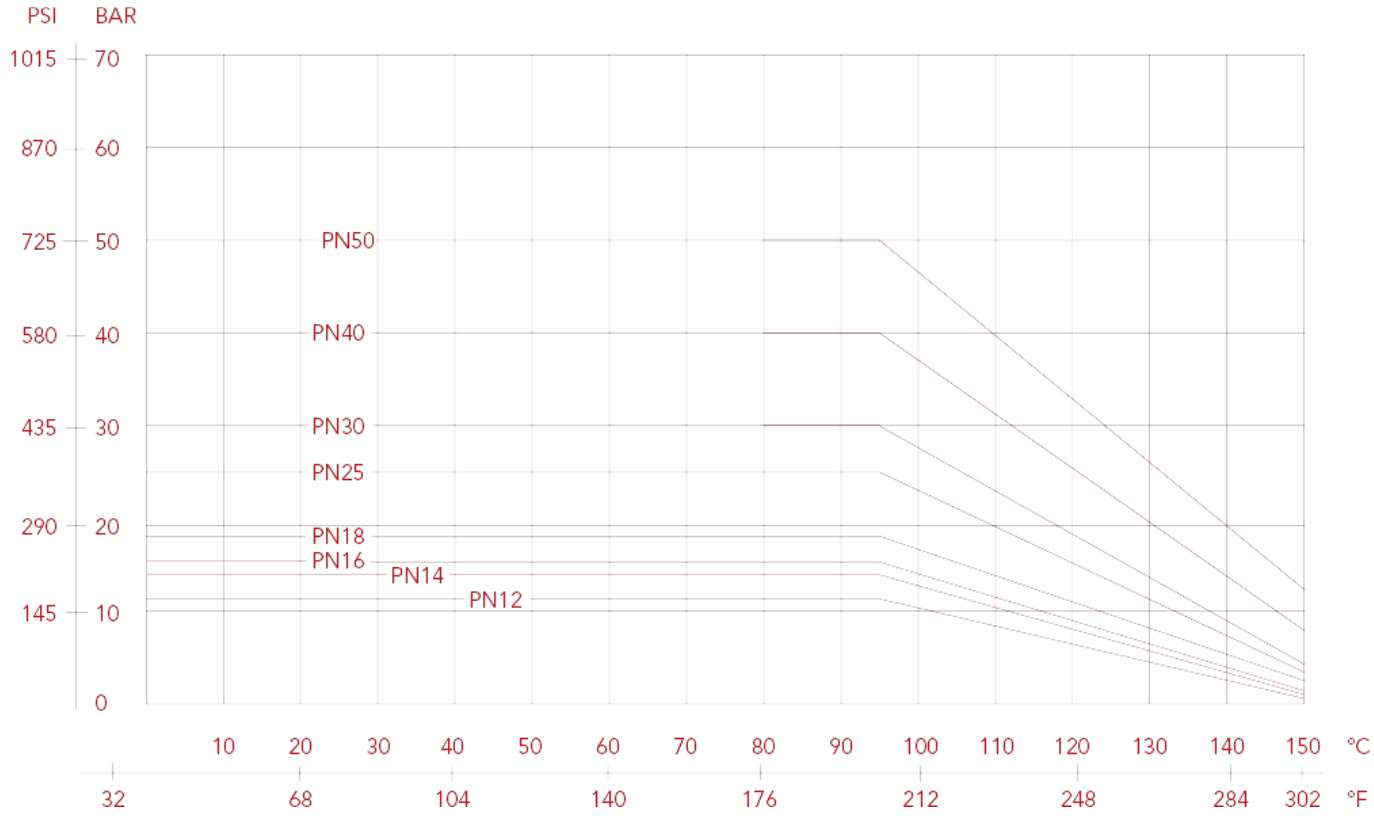
LOSS DIAGRAM (With water)

	1/4"	3/8"	1/2"	3/4"	1"	1"1/4	1"1/2	2"
KV	3,33	4,92	8,14	12,26	23,45	30,34	52	72



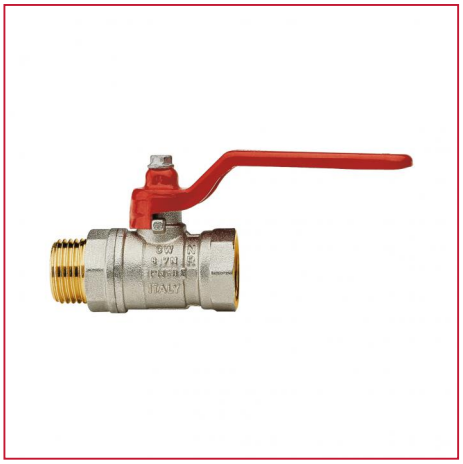
PRESSURE-TEMPERATURE DIAGRAM

The values shown by the dropping lines state the maximum limit of employment of the valves.
The shown values are approximate.



112 Orient ball valve, reduced flow

Suitable for domestic water services, heating and air-conditioning plants, compressed air systems.
ORIENT



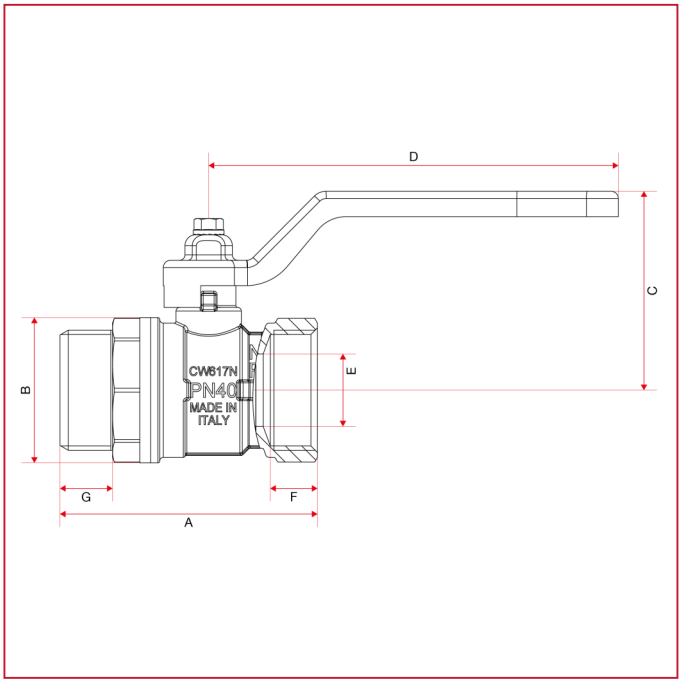
MEASURE	PRESSURE	CODE	PACKING
1/4" (DN 8)	50bar/725psi	0910014	12/144
3/8" (DN 10)	50bar/725psi	0910038	12/144
1/2" (DN 15)	50bar/725psi	1120012	10/120
3/4" (DN 20)	40bar/580psi	1120034	8/72
1" (DN 25)	40bar/580psi	1120100	4/48

CERTIFICATIONS

TECHNICAL SPECIFICATIONS

Male/female threads.
Lever handle in steel.
Body in nickel-plated brass.
Minimum and maximum working temperatures: -20°C, 150°C in absence of steam.
Threads: ISO 228 (equivalent to DIN EN ISO 228 and BS EN ISO 228).

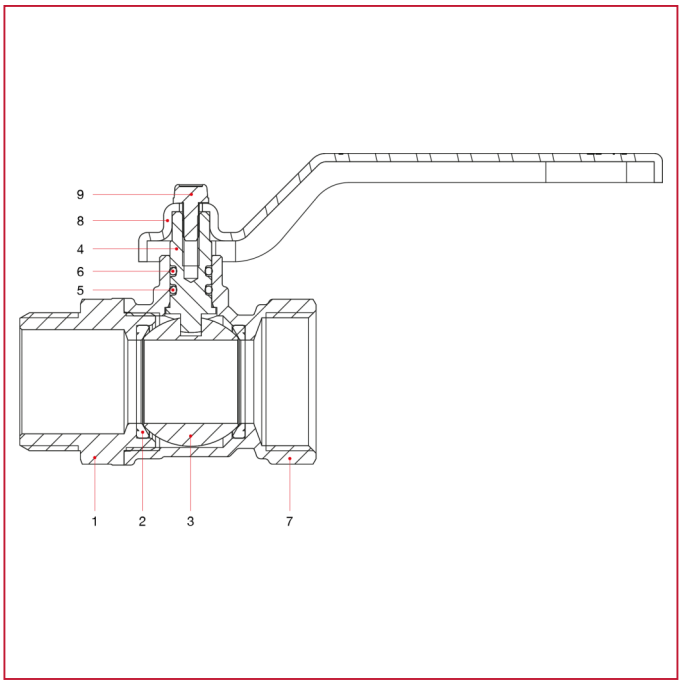
OVERALL DIMENSIONS



REDUCED FLOW BALL VALVES: ORIENT

	1/4"	3/8"	1/2"	3/4"	1"
DN	8	10	15	20	25
A	53,9	53,9	58,5	63,5	71
B	23,5	24	27	34	40
C	37,3	37,3	39,3	48,8	54,8
D	80	80	80	88,5	113
E	8	10	12	15	20
F	10	10	11	12	13
G	10,5	10,5	11,5	12,5	14,5
Kg/cm2 bar	50	50	50	40	40
LBS - psi	725	725	725	580	580

MATERIALS



POS.	DESCRIPTION	N.	MATERIAL
1	Male end adapter	1	Nickel-plated brass CW617N
2	Seat	2	P.T.F.E.
3	Ball	1	Chrome-plated brass CW617N
4	Stem	1	Brass CW614N
5	O-ring	1	NBR
6	O-ring	1	Viton®
7	Body	1	Nickel-plated brass CW617N
8	Lever handle	1	Varnished steel P04
9	Screw	1	Zinc-plated steel C4C

REDUCED FLOW BALL VALVES: ORIENT

INSTALLATION

The itap S.p.A.'s valves are bi-directional, that means they manage the flow in both the directions.
The valves are composed by a ball, two seal in PTFE material, one stem, two sailing rings (O-Rings), one handle and a couple of parts made of brass (body and end adopter) that contain them and that are assembled by means of threat and a sealed material to obtain their aim.
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For the installation normal hydraulic practices must be used, and especially:
- ones have to be sure that the two pipes are correctly aligned;
- during the assembling process the installer has to apply its assembling tools at the end that is nearest to the pipe;
- the application of the sealing materials by the fitter (PTFE or hempen cloth) must be limited at the threat zone. An excess should interferes in the ball-gasket's closure zone, compromising the tightness.
- in the case that the fluid transported presents some impurities (dust, water too hard, etc.) ones have to remove these impurities by the means of a filter. Otherwise they could damage the seals.

DISASSEMBLY

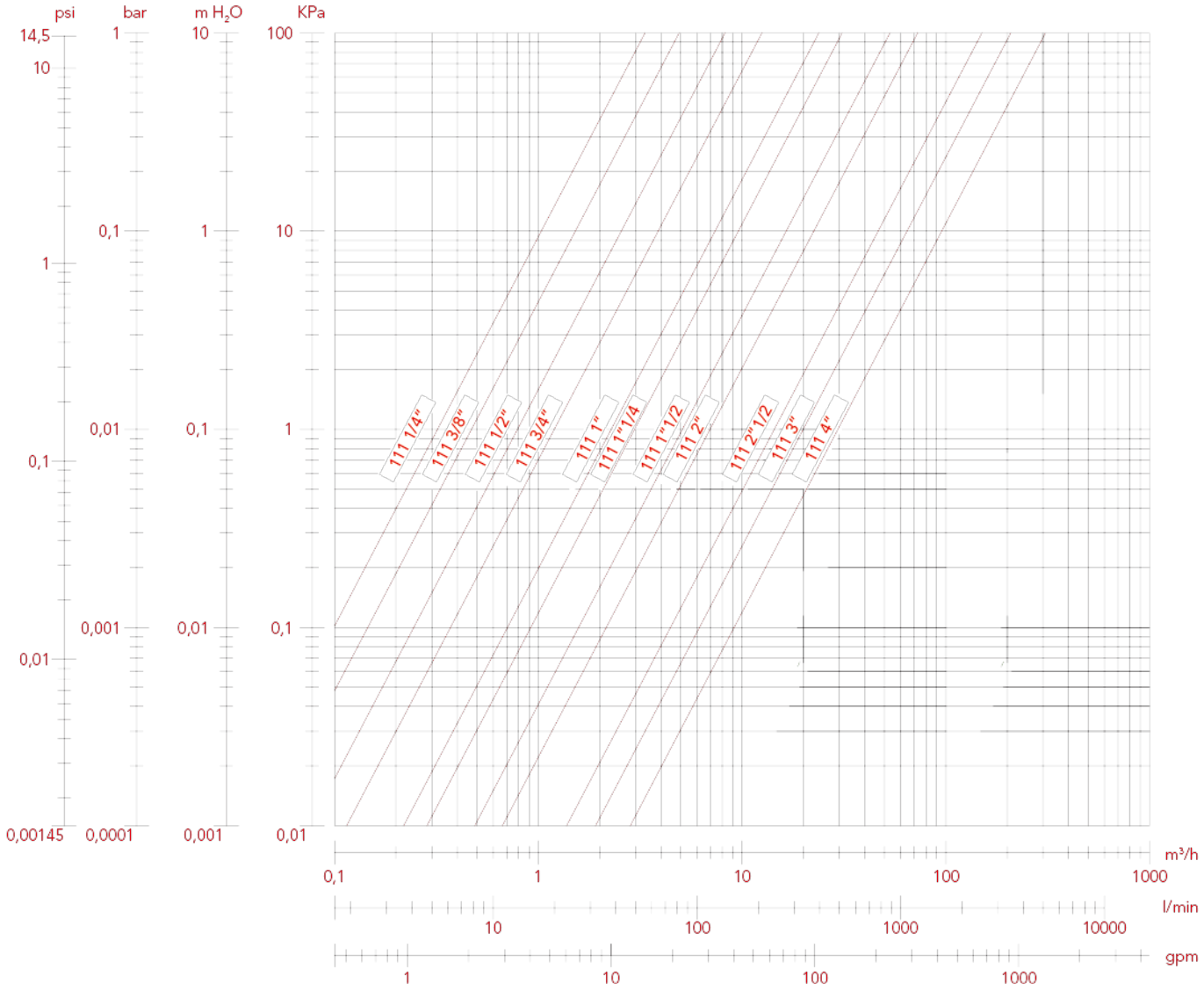
To remove the valve from the pipe line or anyhow before to unscrew the junctions linked to it:
- wear the clothing protective normally required to work with the fluid transported within the line;
- depressurizze the line and operate in this way:
  - positioning the valve in opened position and than empty the line;
  - handle the valve to put down the residue pressure contained inside the space between the ball and the body before of remove it from the line;
  - during the disassembly apply the screw tool at the end of the valve nearest the pipe;

MAINTENANCE

Verify the valve periodically, according to its application's field and its works' field and its work's conditions, in order to be sure that the valve works correctly.

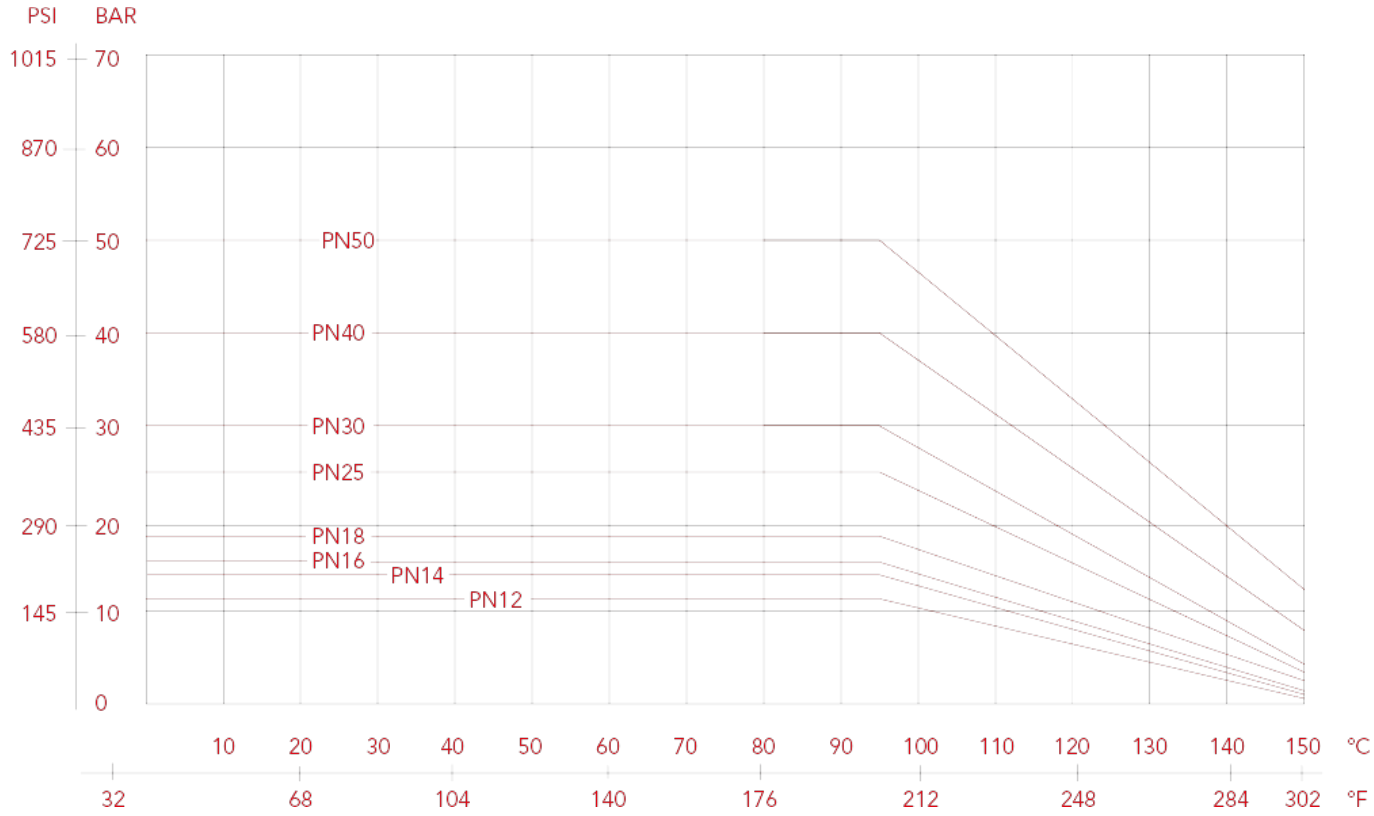
LOSS DIAGRAM (With water)

	1/4"	3/8"	1/2"	3/4"	1"
KV	3,33	4,92	8,14	12,26	23,45



PRESSURE-TEMPERATURE DIAGRAM

The values shown by the dropping lines state the maximum limit of employment of the valves.
The shown values are approximate.



113 Orient ball valve, reduced flow

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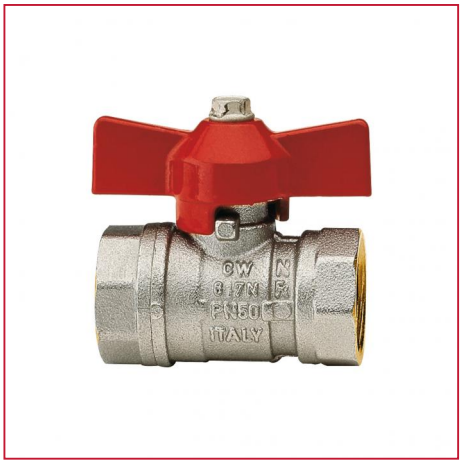


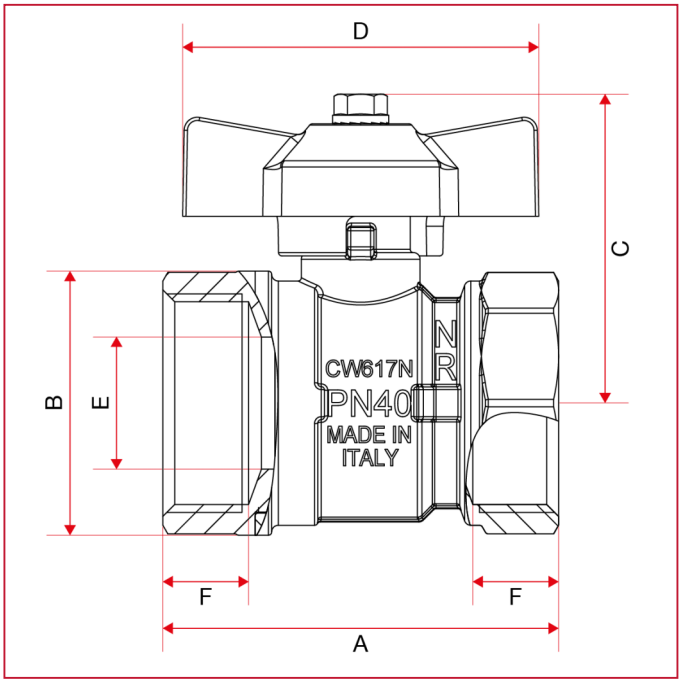
MEASURE	PRESSURE	CODE	PACKING
1/4" (DN 8)	50bar/725psi	0920014	15/210
3/8" (DN 10)	50bar/725psi	0920038	15/210
1/2" (DN 15)	50bar/725psi	1130012	12/144
3/4" (DN 20)	40bar/580psi	1130034	8/112
1" (DN 25)	40bar/580psi	1130100	6/72

CERTIFICATIONS

TECHNICAL SPECIFICATIONS

Female/female threads.
T handle in aluminium.
Body in nickel-plated brass.
Minimum and maximum working temperatures: -20°C, 150°C in absence of steam.
Threads: ISO 228 (equivalent to DIN EN ISO 228 and BS EN ISO 228).

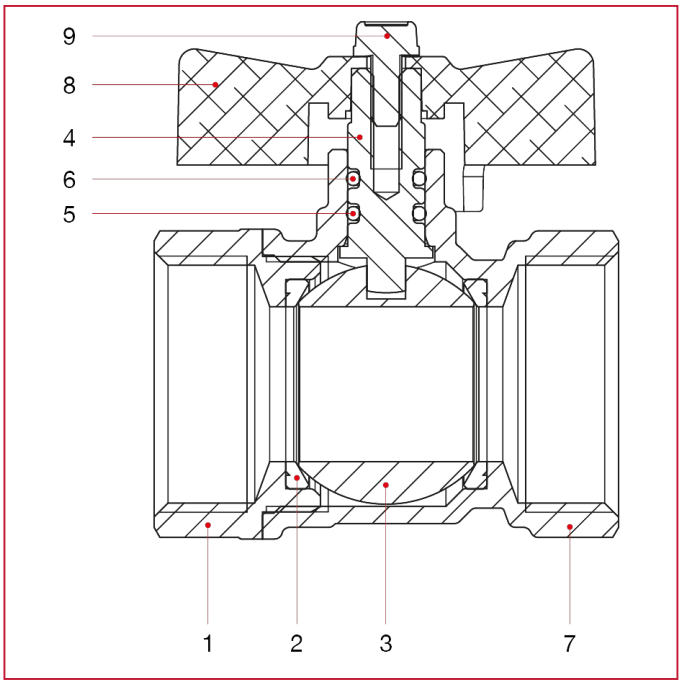
OVERALL DIMENSIONS



REDUCED FLOW BALL VALVES: ORIENT

	1/4"	3/8"	1/2"	3/4"	1"
DN	8	10	15	20	25
A	44,4	44,4	48	53,5	60
B	23,5	24	27	34	40
C	37,3	37,3	39,3	43,8	46,8
D	47	47	47	54	54
E	10	10	12	15	20
F	10	10	11	12	13
Kg/cm2 bar	50	50	50	40	40
LBS - psi	725	725	725	580	580

MATERIALS



POS.	DESCRIPTION	N.	MATERIAL
1	Female end adapter	1	Nickel-plated brass CW617N
2	Seat	2	P.T.F.E.
3	Ball	1	Chrome-plated brass CW617N
4	Stem	1	Brass CW614N
5	O-ring	1	NBR
6	O-ring	1	Viton®
7	Body	1	Nickel-plated brass CW617N
8	T handle	1	Varnished aluminium
9	Screw	1	Zinc-plated steel C4C

REDUCED FLOW BALL VALVES: ORIENT

INSTALLATION

The itap S.p.A.'s valves are bi-directional, that means they manage the flow in both the directions.
The valves are composed by a ball, two seal in PTFE material, one stem, two sailing rings (O-Rings), one handle and a couple of parts made of brass (body and end adopter) that contain them and that are assembled by means of threat and a sealed material to obtain their aim.
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- in the case that the fluid transported presents some impurities (dust, water too hard, etc.) ones have to remove these impurities by the means of a filter. Otherwise they could damage the seals.

DISASSEMBLY

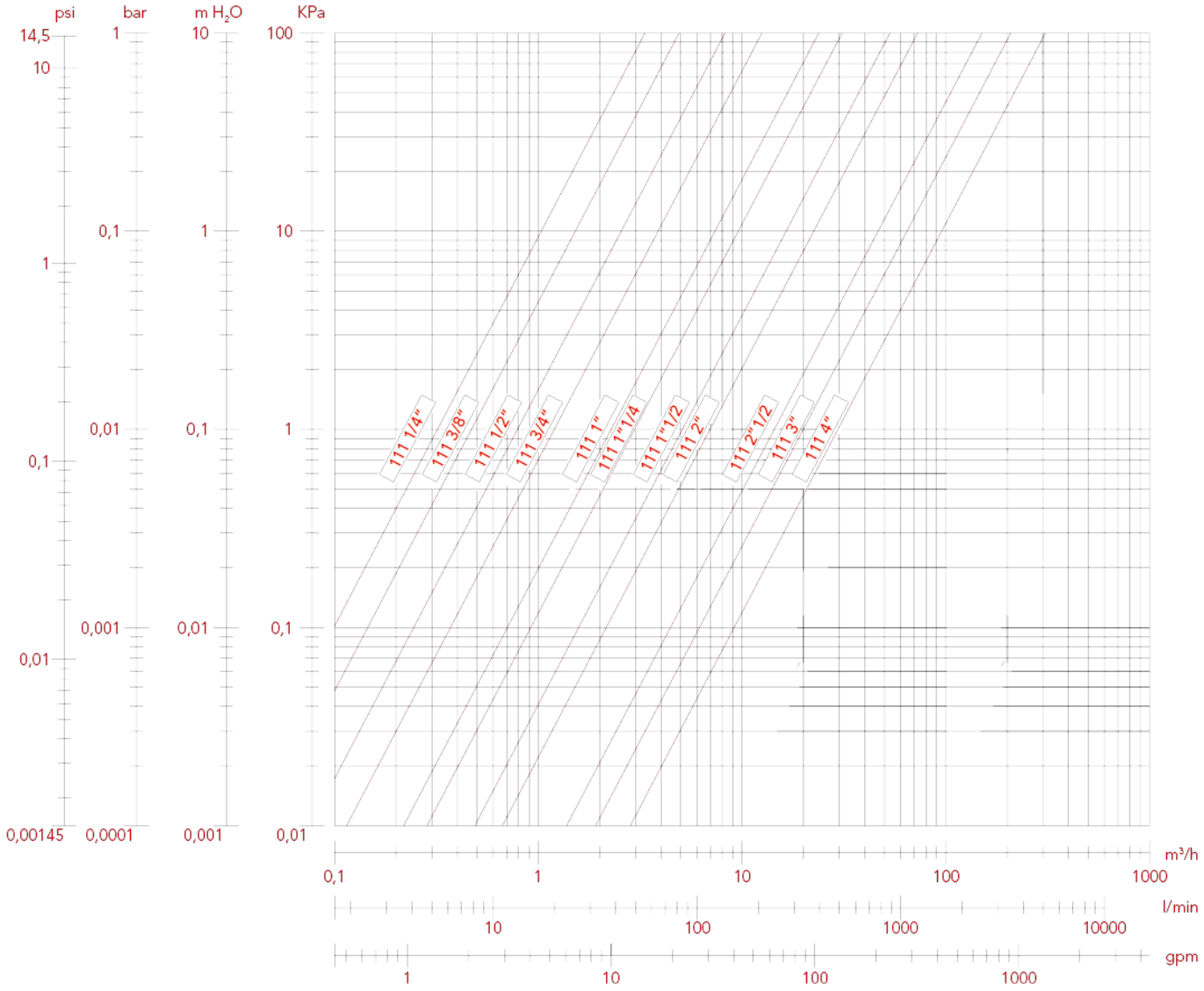
To remove the valve from the pipe line or anyhow before to unscrew the junctions linked to it:
- wear the clothing protective normally required to work with the fluid transported within the line;
- depressurizze the line and operate in this way:
  - positioning the valve in opened position and than empty the line;
  - handle the valve to put down the residue pressure contained inside the space between the ball and the body before of remove it from the line;
  - during the disassembly apply the screw tool at the end of the valve nearest the pipe;

MAINTENANCE

Verify the valve periodically, according to its application's field and its works' field and its work's conditions, in order to be sure that the valve works correctly.

LOSS DIAGRAM (With water)

	1/4"	3/8"	1/2"	3/4"	1"
KV	3,33	4,92	8,14	12,26	23,45



PRESSURE-TEMPERATURE DIAGRAM

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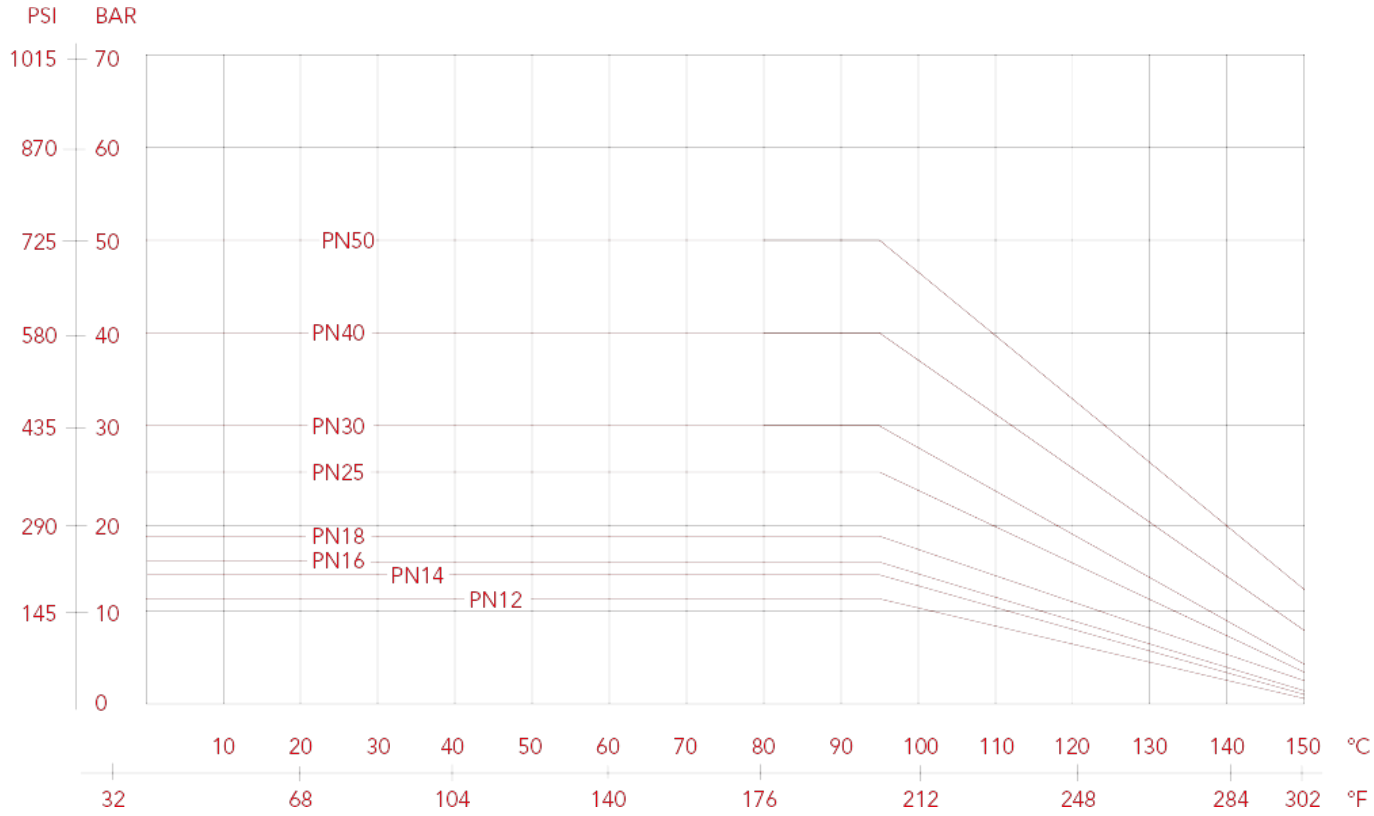

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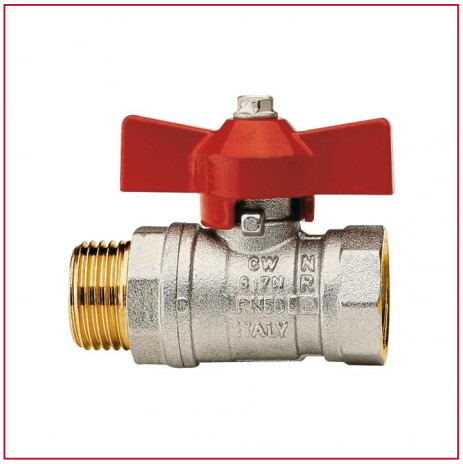


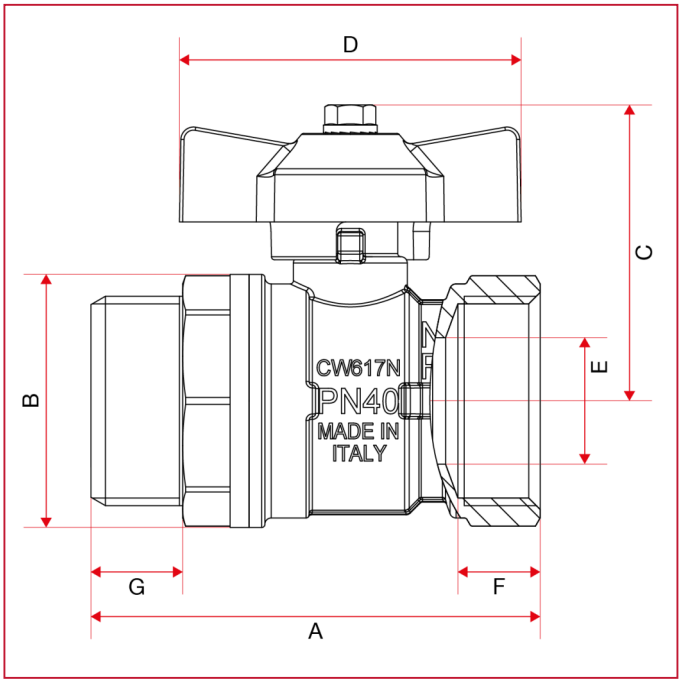
MEASURE	PRESSURE	CODE	PACKING
1/4" (DN 8)	50bar/725psi	0930014	15/180
3/8" (DN 10)	50bar/725psi	0930038	15/180
1/2" (DN 15)	50bar/725psi	1140012	12/144
3/4" (DN 20)	40bar/580psi	1140034	8/96
1" (DN 25)	40bar/580psi	1140100	5/60

CERTIFICATIONS

TECHNICAL SPECIFICATIONS

Male/female threads.
T handle in aluminium.
Body in nickel-plated brass.
Minimum and maximum working temperatures: -20°C, 150°C in absence of steam.
Threads: ISO 228 (equivalent to DIN EN ISO 228 and BS EN ISO 228).

OVERALL DIMENSIONS



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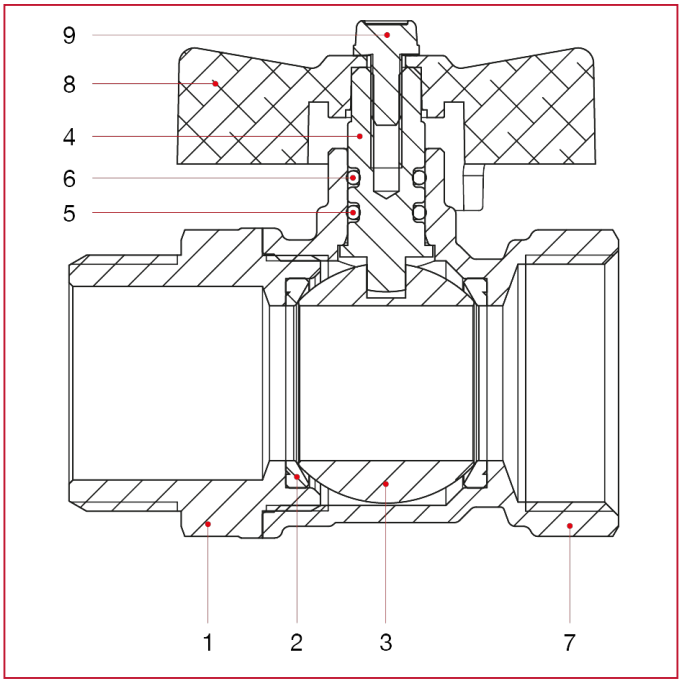
A	53,9	53,9	58,5	63,5	71
B	23,5	24	27	34	40
C	37,3	37,3	39,3	43,8	46,8
D	47	47	47	54	54
E	8	10	12	15	20
F	10	10	11	12	13
G	10,5	10,5	11,5	12,5	14,5
Kg/cm2 bar	50	50	50	40	40
LBS - psi	725	725	725	580	580

MATERIALS



POS.	DESCRIPTION	N.	MATERIAL
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REDUCED FLOW BALL VALVES: ORIENT

INSTALLATION

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DISASSEMBLY

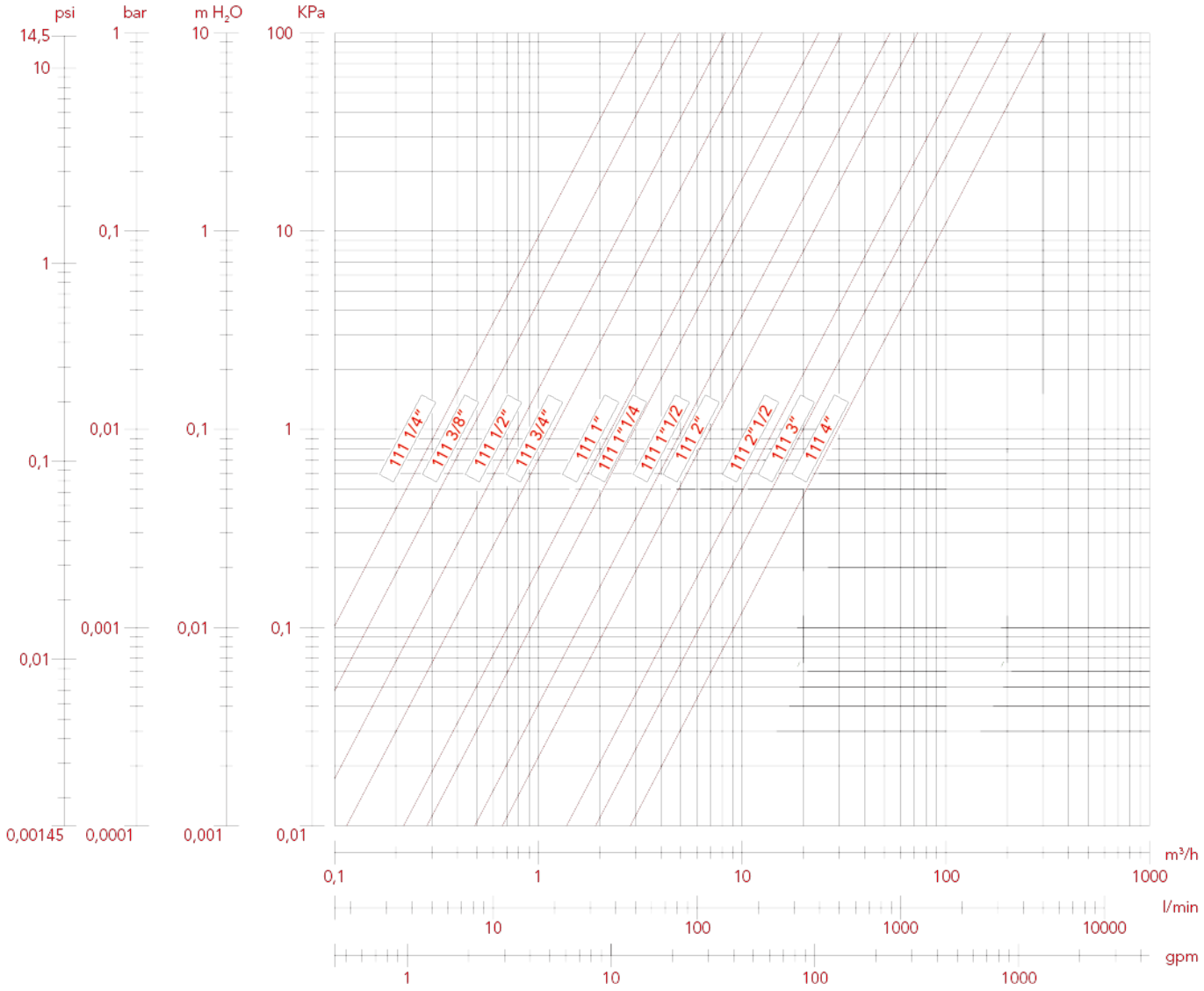
To remove the valve from the pipe line or anyhow before to unscrew the junctions linked to it:
- wear the clothing protective normally required to work with the fluid transported within the line;
- depressurizze the line and operate in this way:
  - positioning the valve in opened position and than empty the line;
  - handle the valve to put down the residue pressure contained inside the space between the ball and the body before of remove it from the line;
  - during the disassembly apply the screw tool at the end of the valve nearest the pipe;

MAINTENANCE

Verify the valve periodically, according to its application's field and its works' field and its work's conditions, in order to be sure that the valve works correctly.

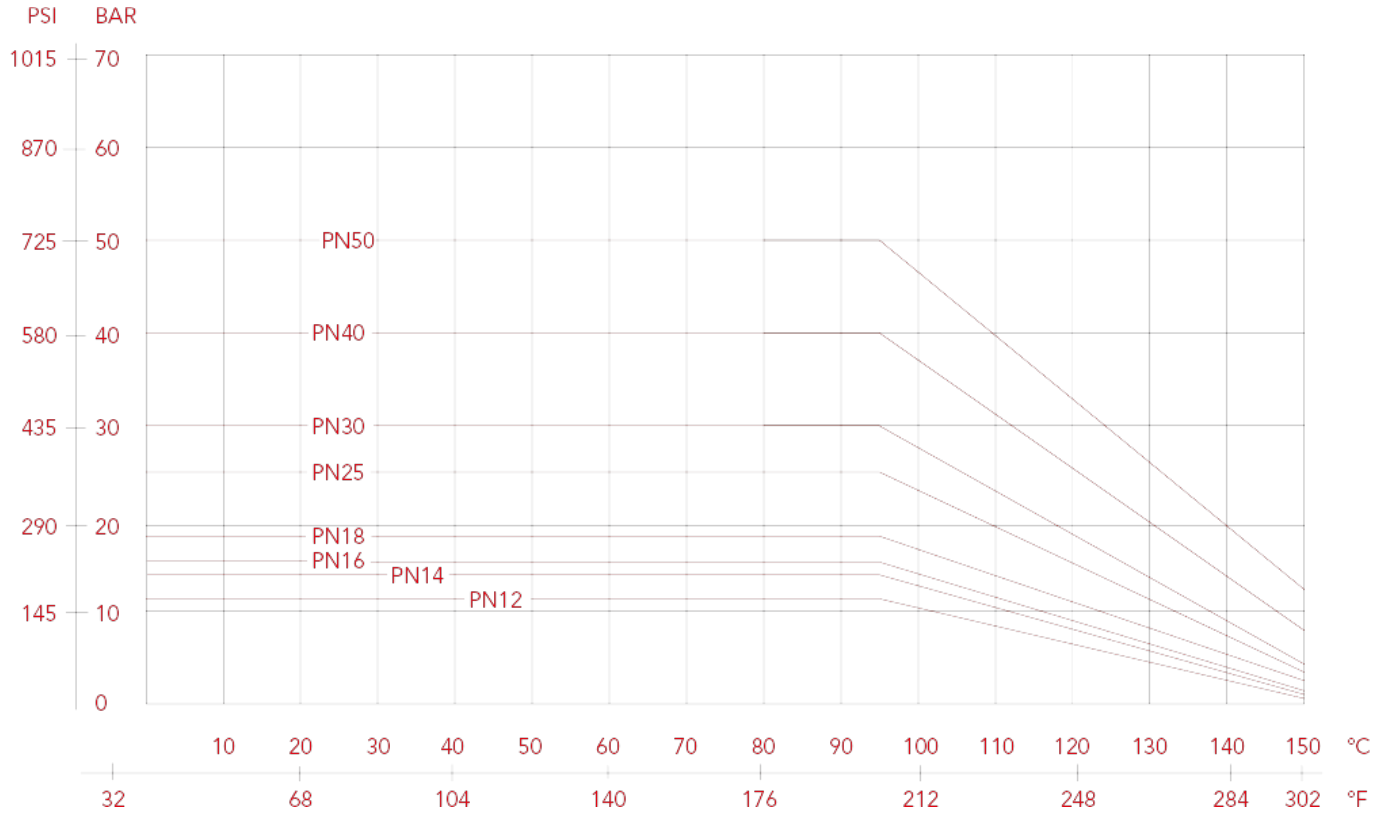
LOSS DIAGRAM (With water)

	1/4"	3/8"	1/2"	3/4"	1"
KV	3,33	4,92	8,14	12,26	23,45



PRESSURE-TEMPERATURE DIAGRAM

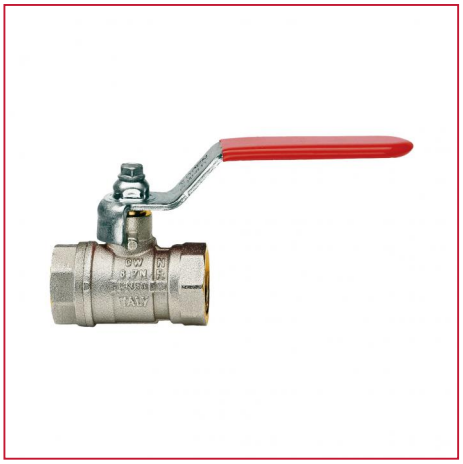
The values shown by the dropping lines state the maximum limit of employment of the valves.
The shown values are approximate.



REDUCED FLOW BALL VALVES: ORIENT

211 Orient ball valve, reduced flow

Suitable for domestic water services, heating and air-conditioning plants, compressed air systems.
ORIENT



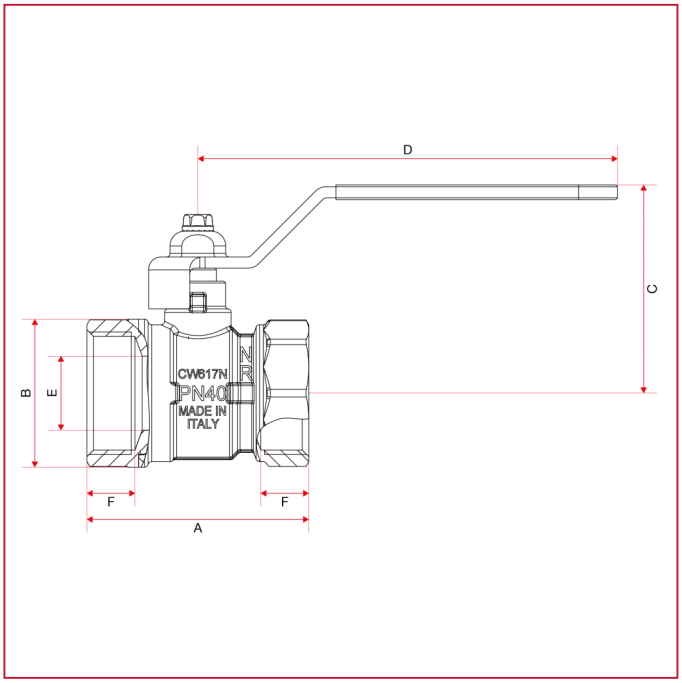
MEASURE	PRESSURE	CODE	PACKING
1/2" (DN 15)	50bar/725psi	2110012	12/108
3/4" (DN 20)	40bar/580psi	2110034	10/90
1" (DN 25)	40bar/580psi	2110100	8/48
1"1/4 (DN 32)	30bar/435psi	2110114	4/44
1"1/2 (DN 40)	30bar/435psi	2110112	3/24
2" (DN 50)	25bar/362.5psi	2110200	2/16

CERTIFICATIONS

TECHNICAL SPECIFICATIONS

Female/female threads.
Flat lever handle in lined steel.
Body in nickel-plated brass.
Minimum and maximum working temperatures: -20°C, 150°C in absence of steam.
Threads: ISO 228 (equivalent to DIN EN ISO 228 and BS EN ISO 228).

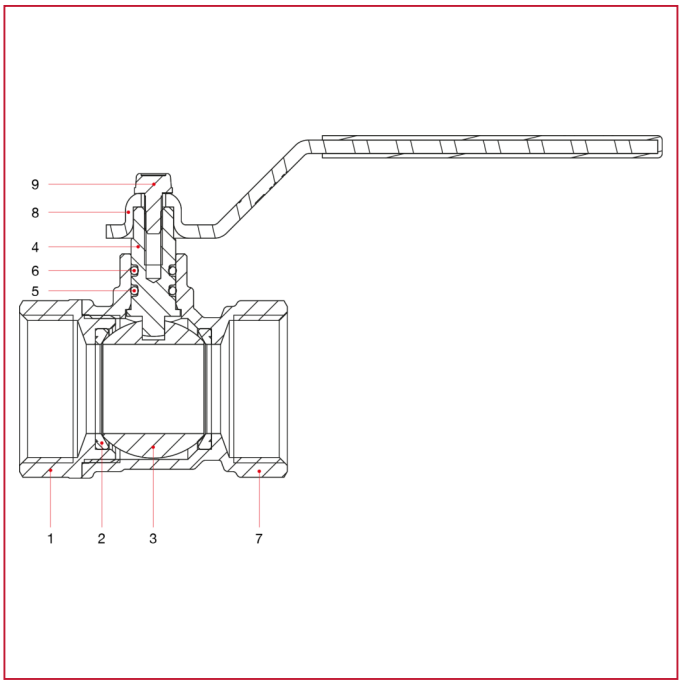
OVERALL DIMENSIONS



REDUCED FLOW BALL VALVES: ORIENT

	1/2"	3/4"	1"	1"1/4	1"1/2	2"
DN	15	20	25	32	40	50
A	48	53,5	60	72	80	97
B	27	34	40	50	59	72
C	44	50,8	56,8	60,8	76,6	82,3
D	86	93	114	114	138,5	138,5
E	12	15	20	25	32	40
F	11	12	13	14,5	15	18
Kg/cm2 bar	50	40	40	30	30	25
LBS - psi	725	580	580	435	435	362,5

MATERIALS



POS.	DESCRIPTION	N.	MATERIAL
1	Female end adapter	1	Nickel-plated brass CW617N
2	Seat	2	P.T.F.E.
3	Ball	1	Chrome-plated brass CW617N
4	Stem	1	Brass CW614N
5	O-ring	1	NBR
6	O-ring	1	Viton®
7	Body	1	Nickel-plated brass CW617N
8	Flat lever handle	1	Zinc-plated and plastic coated steel P04
9	Screw	1	Zinc-plated steel C4C

REDUCED FLOW BALL VALVES: ORIENT

INSTALLATION

The itap S.p.A.'s valves are bi-directional, that means they manage the flow in both the directions.
The valves are composed by a ball, two seal in PTFE material, one stem, two sailing rings (O-Rings), one handle and a couple of parts made of brass (body and end adopter) that contain them and that are assembled by means of threat and a sealed material to obtain their aim.
In order to avoid that the sealed material gets broken and then the valve looses the connection between the body and the end-adapter, it's necessary to avoid to submit the two parts under the influence of a torque.
For the installation normal hydraulic practices must be used, and especially:
- ones have to be sure that the two pipes are correctly aligned;
- during the assembling process the installer has to apply its assembling tools at the end that is nearest to the pipe;
- the application of the sealing materials by the fitter (PTFE or hempen cloth) must be limited at the threat zone. An excess should interferes in the ball-gasket's closure zone, compromising the tightness.
- in the case that the fluid transported presents some impurities (dust, water too hard, etc.) ones have to remove these impurities by the means of a filter. Otherwise they could damage the seals.

DISASSEMBLY

To remove the valve from the pipe line or anyhow before to unscrew the junctions linked to it:
- wear the clothing protective normally required to work with the fluid transported within the line;
- depressurizze the line and operate in this way:
  - positioning the valve in opened position and than empty the line;
  - handle the valve to put down the residue pressure contained inside the space between the ball and the body before of remove it from the line;
  - during the disassembly apply the screw tool at the end of the valve nearest the pipe;

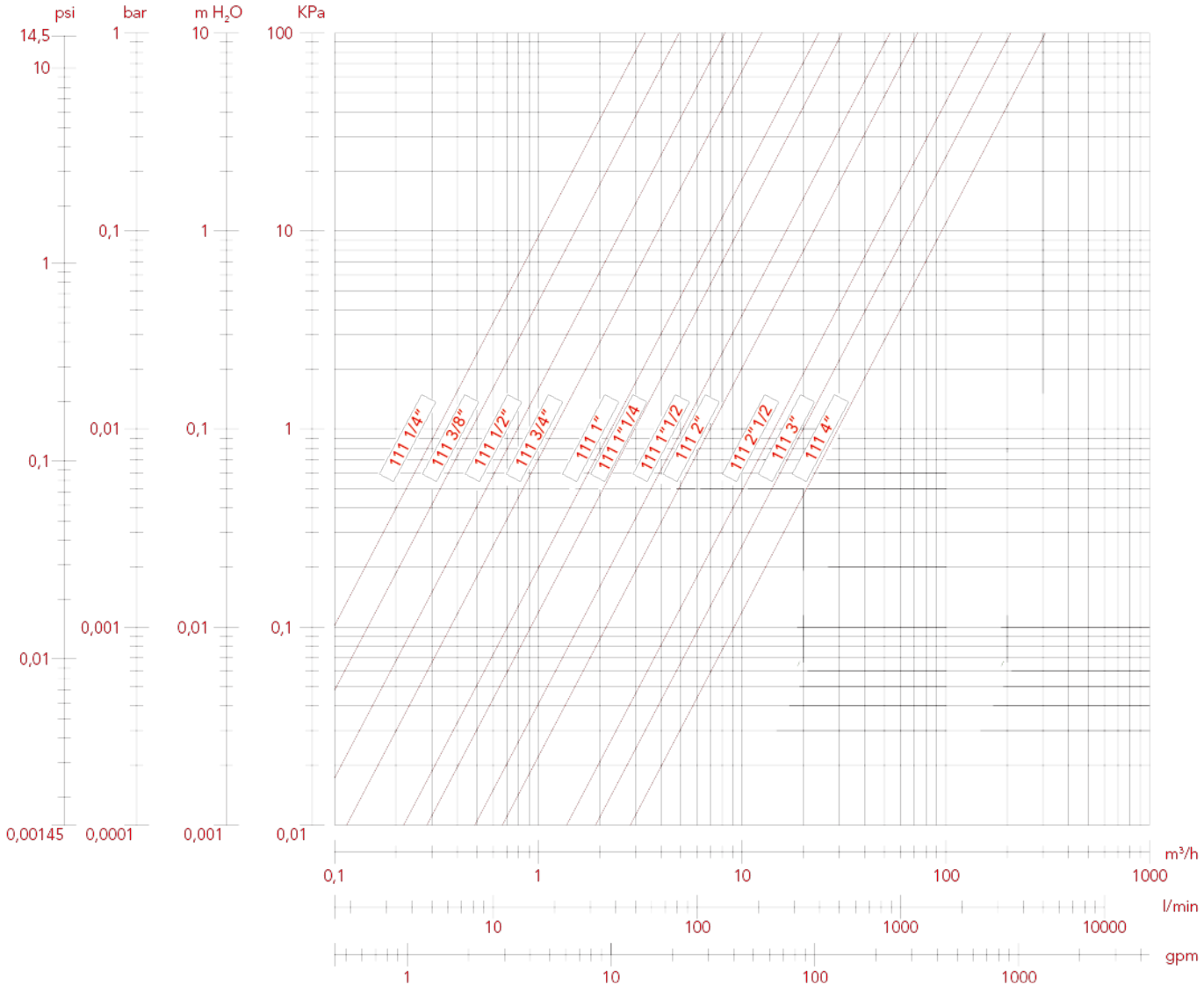
MAINTENANCE

Verify the valve periodically, according to its application's field and its works' field and its work's conditions, in order to be sure that the valve works correctly.

REDUCED FLOW BALL VALVES: ORIENT

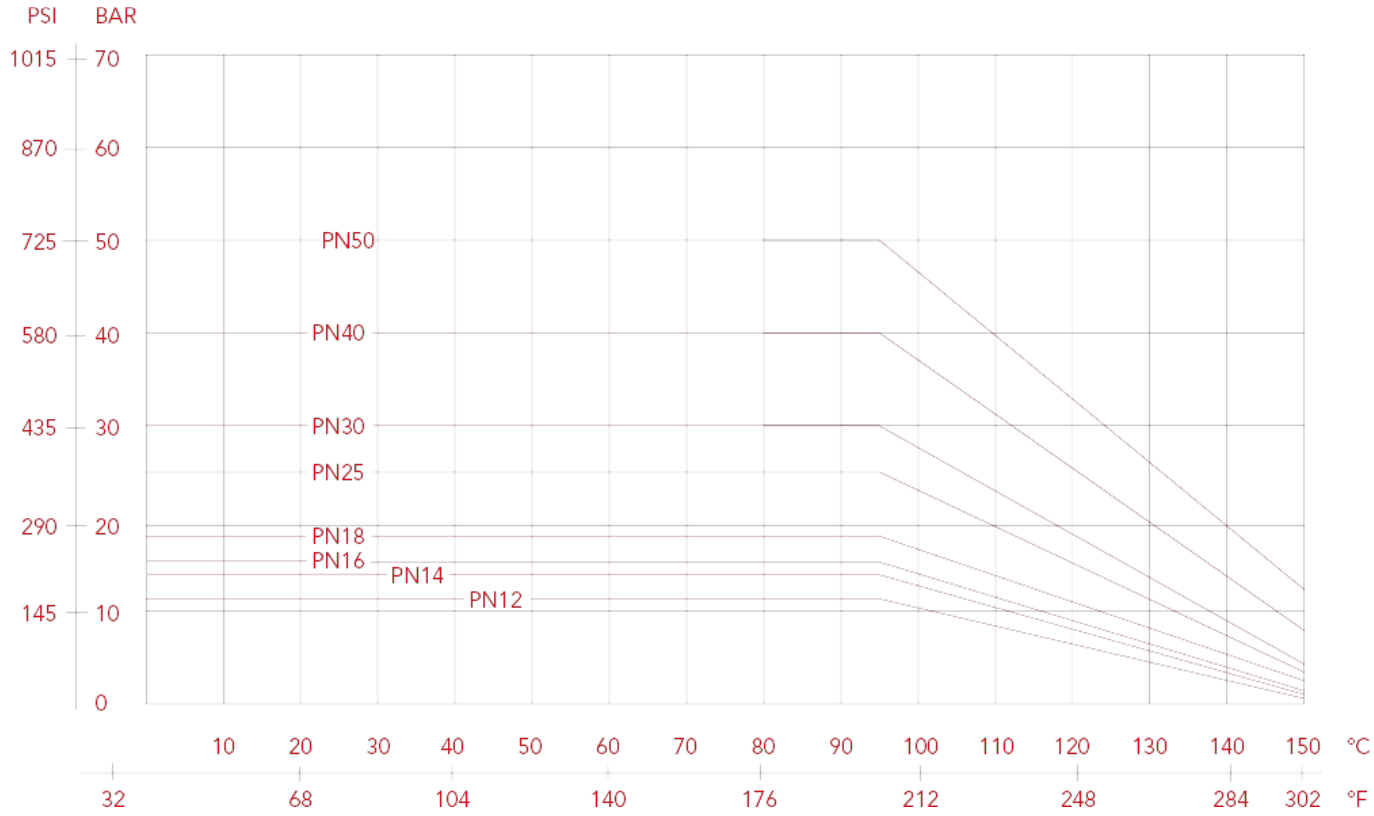
LOSS DIAGRAM (With water)

	1/2"	3/4"	1"	1"1/4	1"1/2	2"
KV	3,33	4,92	8,14	12,26	23,45	30,34



PRESSURE-TEMPERATURE DIAGRAM

The values shown by the dropping lines state the maximum limit of employment of the valves.
The shown values are approximate.



REDUCED FLOW BALL VALVES: ORIENT

113DF Orient ball valve with female swivel, reduced flow

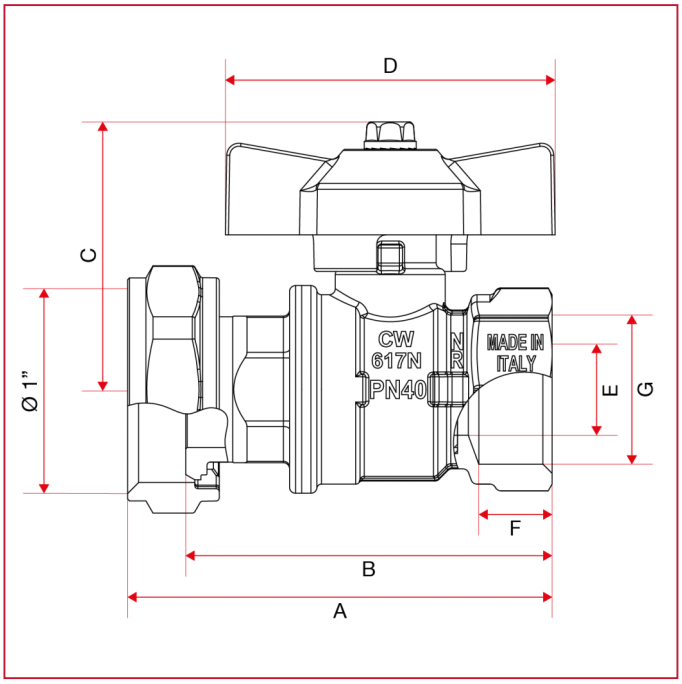
Suitable for domestic water services, heating and air-conditioning plants, compressed air systems.
ORIENT

MEASURE	PRESSURE	CODE	PACKING
3/4" x 1"	40bar/580psi	1130034100	6/72
1" x 1"	40bar/580psi	1130100100	6/72

TECHNICAL SPECIFICATIONS

Female/female threads.
T handle in aluminium.
Nickel-plated brass body and swivel.
Minimum and maximum working temperatures: -20°C, 150°C in absence of steam.
Threads: ISO 228 (equivalent to DIN EN ISO 228 and BS EN ISO 228).

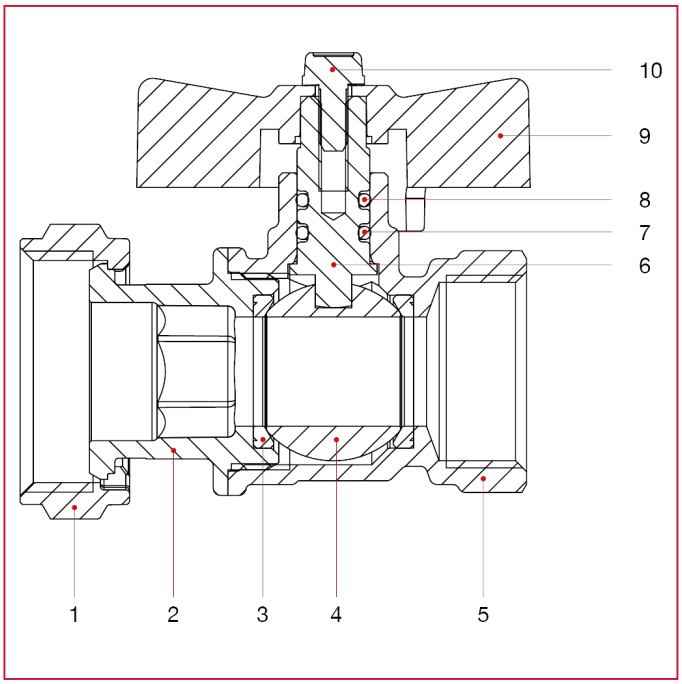
OVERALL DIMENSIONS



REDUCED FLOW BALL VALVES: ORIENT

	3/4" x 1"	1" x 1"
DN	20	25
A	69,5	74,5
B	60	65
C	43,8	46,8
D	54	54
E	15	20
F	12	13
G	3/4"	1"
Kg/cm2 bar	40	40
LBS - psi	580	580

MATERIALS



POS.	DESCRIPTION	N.	MATERIAL
1	Nut	1	Nickel-plated brass CW617N
2	Female end adapter	1	Nickel-plated brass CW617N
3	Seal	2	P.T.F.E.
4	Ball	1	Chrome-plated brass CW617N
5	Body	1	Nickel-plated brass CW617N
6	Stem	1	Brass CW614N
7	O-ring	1	NBR
8	O-ring	1	Viton®
9	Screw	1	Zinc-plated steel C4C
10	T handle	1	Varnished aluminium

REDUCED FLOW BALL VALVES: ORIENT

INSTALLATION

The itap S.p.A.'s valves are bi-directional, that means they manage the flow in both the directions.
The valves are composed by a ball, two seal in PTFE material, one stem, two sailing rings (O-Rings), one handle and a couple of parts made of brass (body and end adopter) that contain them and that are assembled by means of threat and a sealed material to obtain their aim.
In order to avoid that the sealed material gets broken and then the valve looses the connection between the body and the end-adapter, it's necessary to avoid to submit the two parts under the influence of a torque.
For the installation normal hydraulic practices must be used, and especially:
- ones have to be sure that the two pipes are correctly aligned;
- during the assembling process the installer has to apply its assembling tools at the end that is nearest to the pipe;
- the application of the sealing materials by the fitter (PTFE or hempen cloth) must be limited at the threat zone. An excess should interferes in the ball-gasket's closure zone, compromising the tightness.
- in the case that the fluid transported presents some impurities (dust, water too hard, etc.) ones have to remove these impurities by the means of a filter. Otherwise they could damage the seals.

DISASSEMBLY

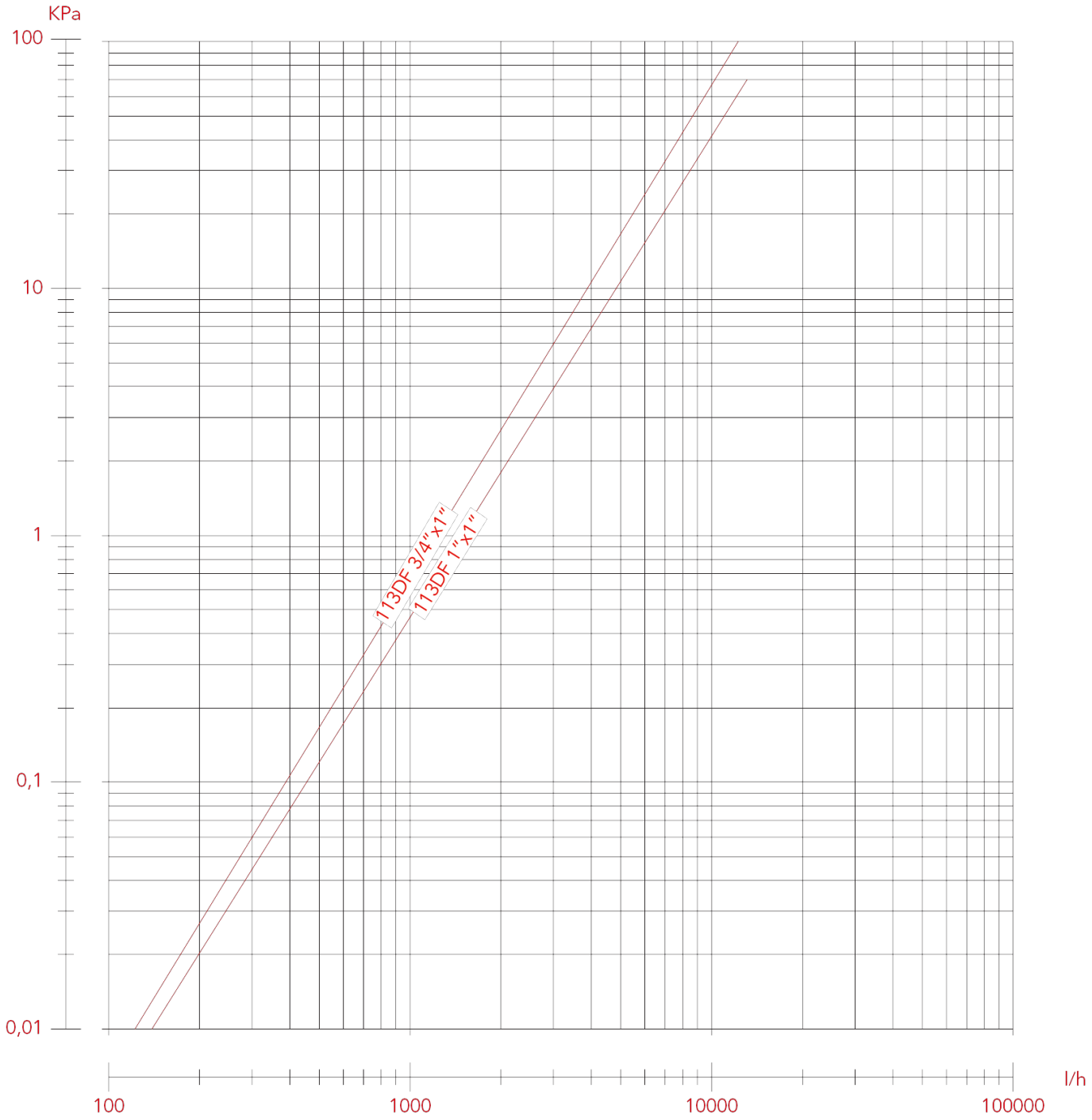
To remove the valve from the pipe line or anyhow before to unscrew the junctions linked to it:
- wear the clothing protective normally required to work with the fluid transported within the line;
- depressurizze the line and operate in this way:
- positioning the valve in opened position and than empty the line;
- handle the valve to put down the residue pressure contained inside the space between the ball and the body before of remove it from the line;
- during the disassembly apply the screw tool at the end of the valve nearest the pipe;

MAINTENANCE

Verify the valve periodically, according to its application's field and its works' field and its work's conditions, in order to be sure that the valve works correctly.

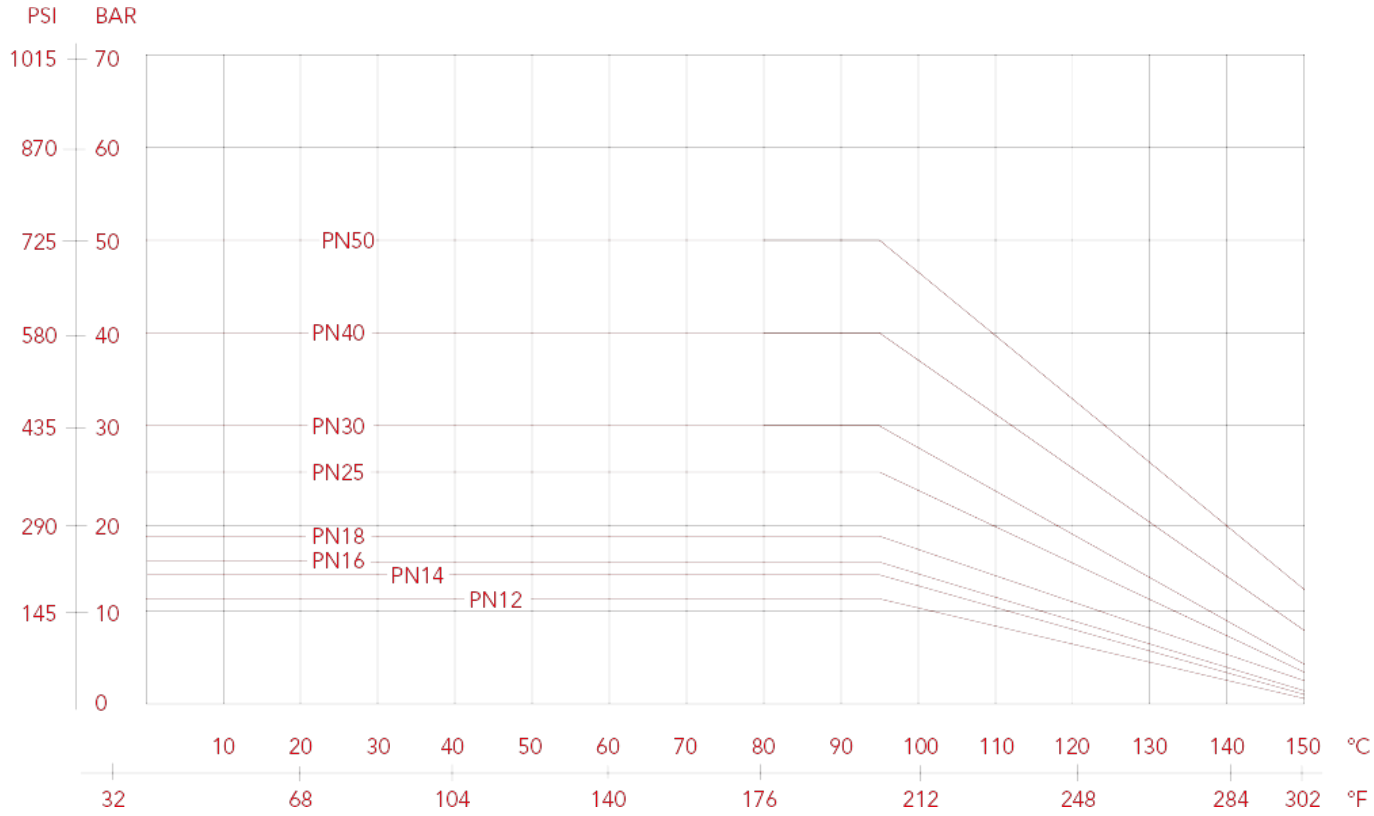
LOSS DIAGRAM (With water)

	3/4" x 1"	1" x 1"
KV	12,2	13,2



PRESSURE-TEMPERATURE DIAGRAM

The values shown by the dropping lines state the maximum limit of employment of the valves.
The shown values are approximate.



113DFN Orient ball valve with female swivel, reduced flow

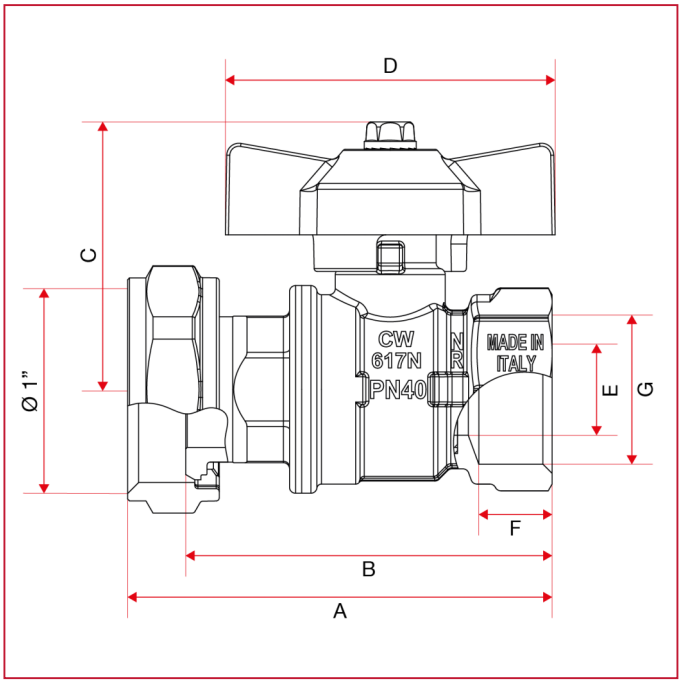
Suitable for domestic water services, heating and air-conditioning plants, compressed air systems.
ORIENT

MEASURE	PRESSURE	CODE	PACKING
3/4" x 1"	40bar/580psi	1130034100N	6/72
1" x 1"	40bar/580psi	1130100100N	6/72

TECHNICAL SPECIFICATIONS

Female/female threads.
T handle in aluminium.
Nickel-plated brass body and swivel.
Minimum and maximum working temperatures: -20°C, 150°C in absence of steam.
Threads: ISO 228 (equivalent to DIN EN ISO 228 and BS EN ISO 228).

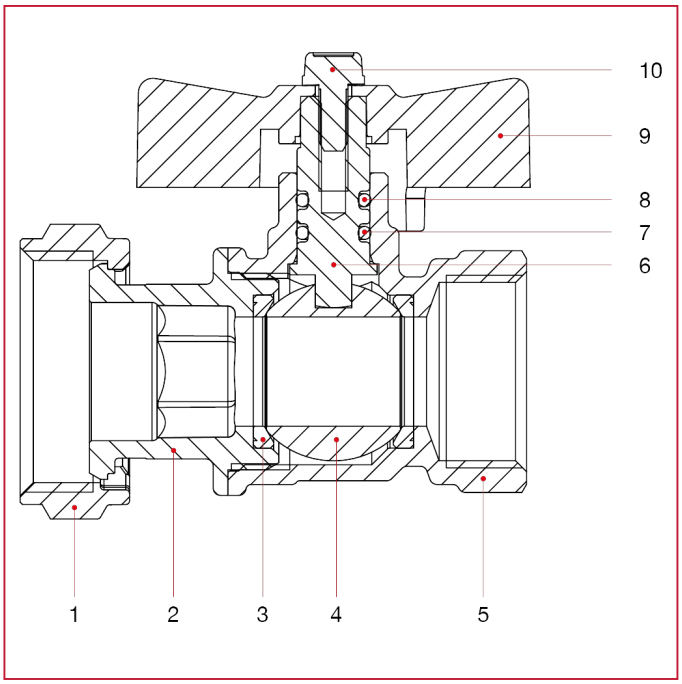
OVERALL DIMENSIONS



REDUCED FLOW BALL VALVES: ORIENT

	3/4" x 1"	1" x 1"
DN	20	25
A	69,5	74,5
B	60	65
C	43,8	46,8
D	54	54
E	15	20
F	12	13
G	3/4"	1"
Kg/cm2 bar	40	40
LBS - psi	580	580

MATERIALS



POS.	DESCRIPTION	N.	MATERIAL
1	Nut	1	Nickel-plated brass CW617N
2	Female end adapter	1	Nickel-plated brass CW617N
3	Seal	2	P.T.F.E.
4	Ball	1	Chrome-plated brass CW617N
5	Body	1	Nickel-plated brass CW617N
6	Stem	1	Brass CW614N
7	O-ring	1	NBR
8	O-ring	1	Viton®
9	Screw	1	Zinc-plated steel C4C
10	T handle	1	Varnished aluminium

REDUCED FLOW BALL VALVES: ORIENT

INSTALLATION

The itap S.p.A.'s valves are bi-directional, that means they manage the flow in both the directions.
The valves are composed by a ball, two seal in PTFE material, one stem, two sailing rings (O-Rings), one handle and a couple of parts made of brass (body and end adopter) that contain them and that are assembled by means of threat and a sealed material to obtain their aim.
In order to avoid that the sealed material gets broken and then the valve looses the connection between the body and the end-adapter, it's necessary to avoid to submit the two parts under the influence of a torque.
For the installation normal hydraulic practices must be used, and especially:
- ones have to be sure that the two pipes are correctly aligned;
- during the assembling process the installer has to apply its assembling tools at the end that is nearest to the pipe;
- the application of the sealing materials by the fitter (PTFE or hempen cloth) must be limited at the threat zone. An excess should interferes in the ball-gasket's closure zone, compromising the tightness.
- in the case that the fluid transported presents some impurities (dust, water too hard, etc.) ones have to remove these impurities by the means of a filter. Otherwise they could damage the seals.

DISASSEMBLY

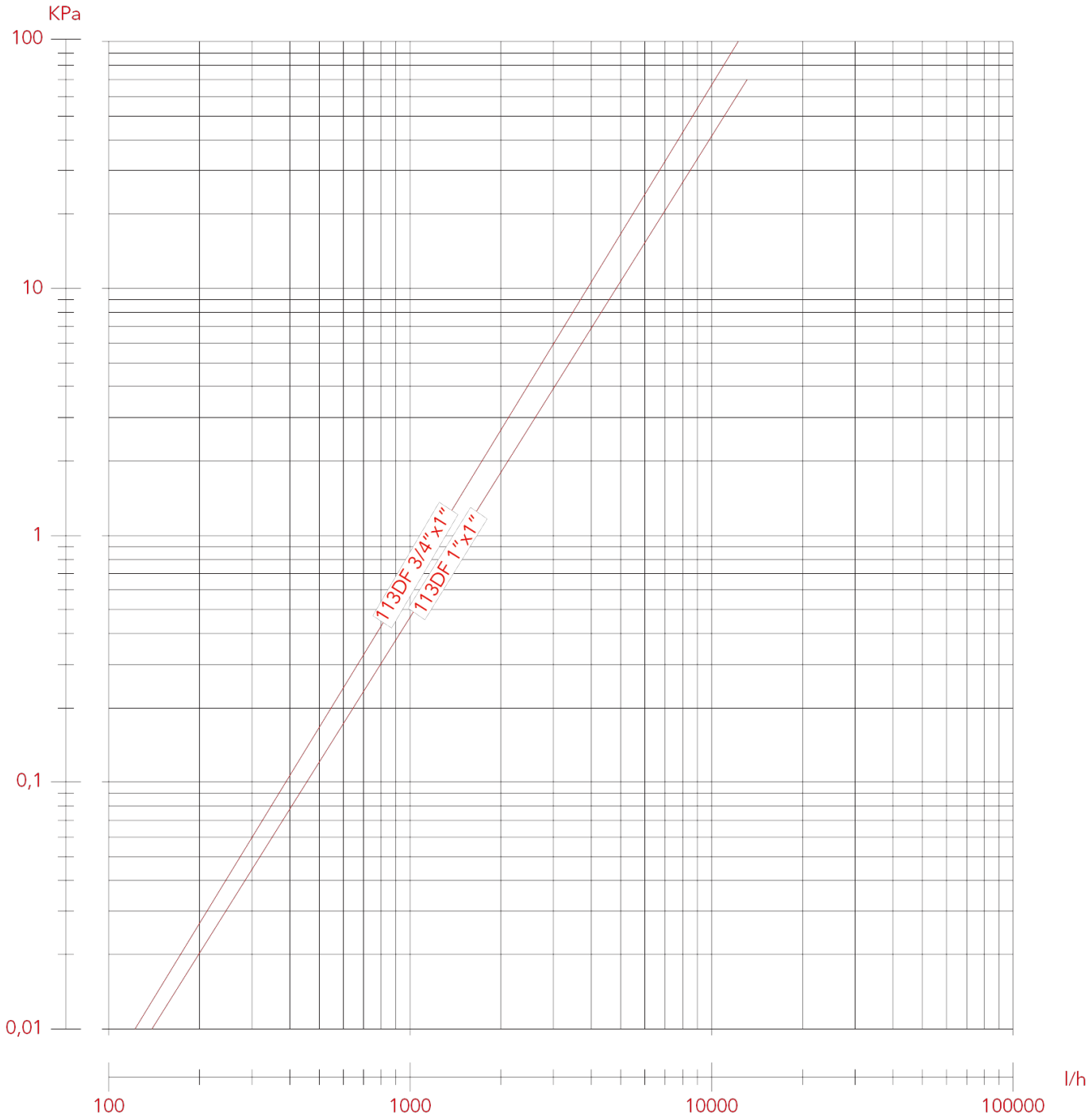
To remove the valve from the pipe line or anyhow before to unscrew the junctions linked to it:
- wear the clothing protective normally required to work with the fluid transported within the line;
- depressurizze the line and operate in this way:
- positioning the valve in opened position and than empty the line;
- handle the valve to put down the residue pressure contained inside the space between the ball and the body before of remove it from the line;
- during the disassembly apply the screw tool at the end of the valve nearest the pipe;

MAINTENANCE

Verify the valve periodically, according to its application's field and its works' field and its work's conditions, in order to be sure that the valve works correctly.

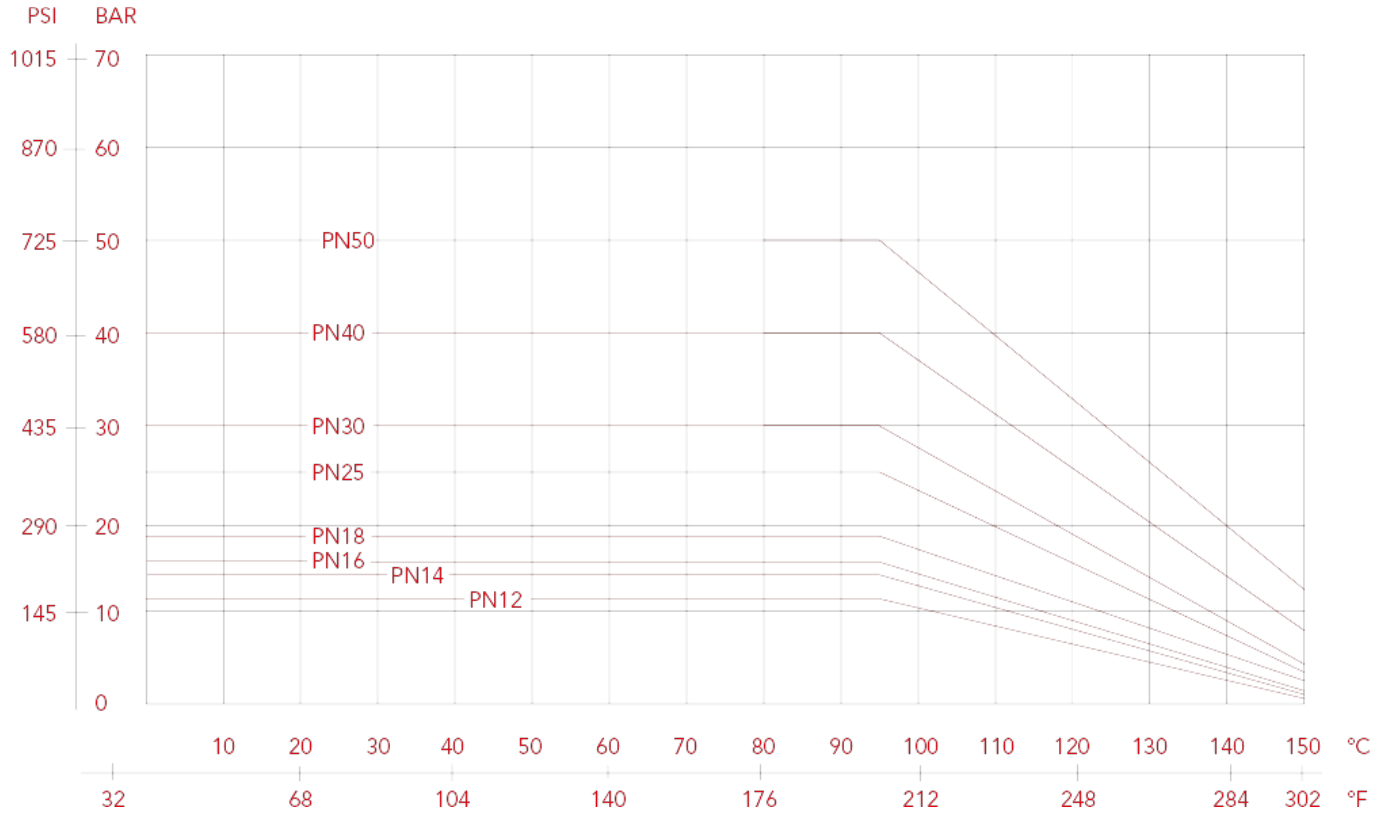
LOSS DIAGRAM (With water)

	3/4" x 1"	1" x 1"
KV	12,2	13,2



PRESSURE-TEMPERATURE DIAGRAM

The values shown by the dropping lines state the maximum limit of employment of the valves.
The shown values are approximate.



REDUCED FLOW BALL VALVES: ORIENT

113DFB Orient ball valve with female swivel, reduced flow

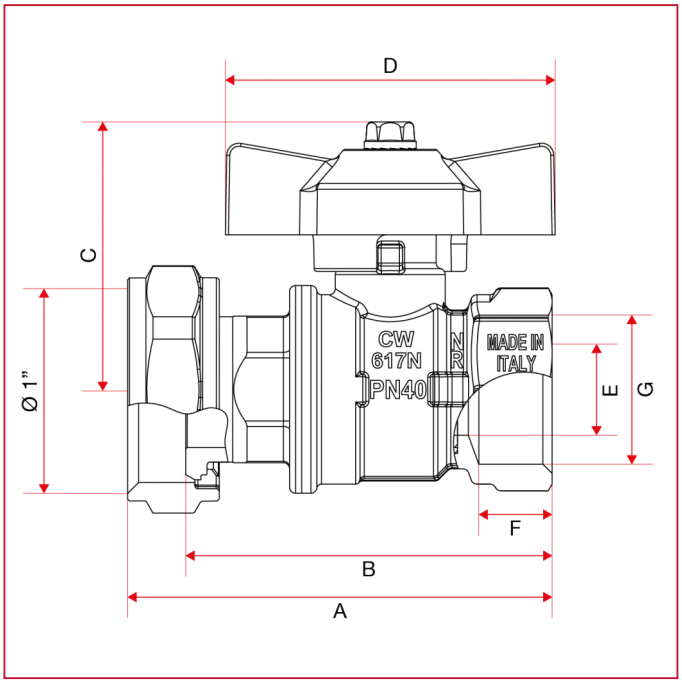
Suitable for domestic water services, heating and air-conditioning plants, compressed air systems.
ORIENT

MEASURE	PRESSURE	CODE	PACKING
3/4" x 1"	40bar/580psi	1130034100B	6/72
1" x 1"	40bar/580psi	1130100100B	6/72

TECHNICAL SPECIFICATIONS

Female/female threads.
T handle in aluminium.
Nickel-plated brass body and swivel.
Minimum and maximum working temperatures: -20°C, 150°C in absence of steam.
Threads: ISO 228 (equivalent to DIN EN ISO 228 and BS EN ISO 228).

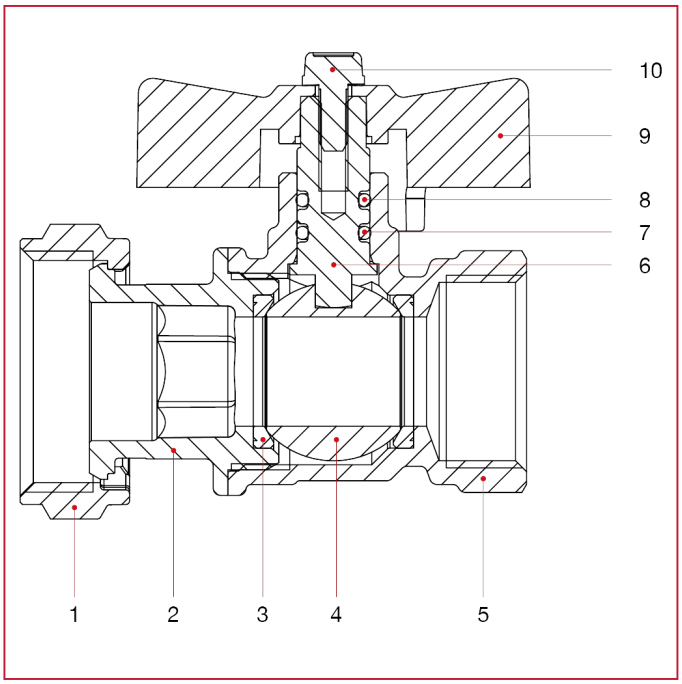
OVERALL DIMENSIONS



REDUCED FLOW BALL VALVES: ORIENT

	3/4" x 1"	1" x 1"
DN	20	25
A	69,5	74,5
B	60	65
C	43,8	46,8
D	54	54
E	15	20
F	12	13
G	3/4"	1"
Kg/cm2 bar	40	40
LBS - psi	580	580

MATERIALS



POS.	DESCRIPTION	N.	MATERIAL
1	Nut	1	Nickel-plated brass CW617N
2	Female end adapter	1	Nickel-plated brass CW617N
3	Seal	2	P.T.F.E.
4	Ball	1	Chrome-plated brass CW617N
5	Body	1	Nickel-plated brass CW617N
6	Stem	1	Brass CW614N
7	O-ring	1	NBR
8	O-ring	1	Viton®
9	Screw	1	Zinc-plated steel C4C
10	T handle	1	Varnished aluminium

REDUCED FLOW BALL VALVES: ORIENT

INSTALLATION

The itap S.p.A.'s valves are bi-directional, that means they manage the flow in both the directions.
The valves are composed by a ball, two seal in PTFE material, one stem, two sailing rings (O-Rings), one handle and a couple of parts made of brass (body and end adopter) that contain them and that are assembled by means of threat and a sealed material to obtain their aim.
In order to avoid that the sealed material gets broken and then the valve looses the connection between the body and the end-adapter, it's necessary to avoid to submit the two parts under the influence of a torque.
For the installation normal hydraulic practices must be used, and especially:
- ones have to be sure that the two pipes are correctly aligned;
- during the assembling process the installer has to apply its assembling tools at the end that is nearest to the pipe;
- the application of the sealing materials by the fitter (PTFE or hempen cloth) must be limited at the threat zone. An excess should interferes in the ball-gasket's closure zone, compromising the tightness.
- in the case that the fluid transported presents some impurities (dust, water too hard, etc.) ones have to remove these impurities by the means of a filter. Otherwise they could damage the seals.

DISASSEMBLY

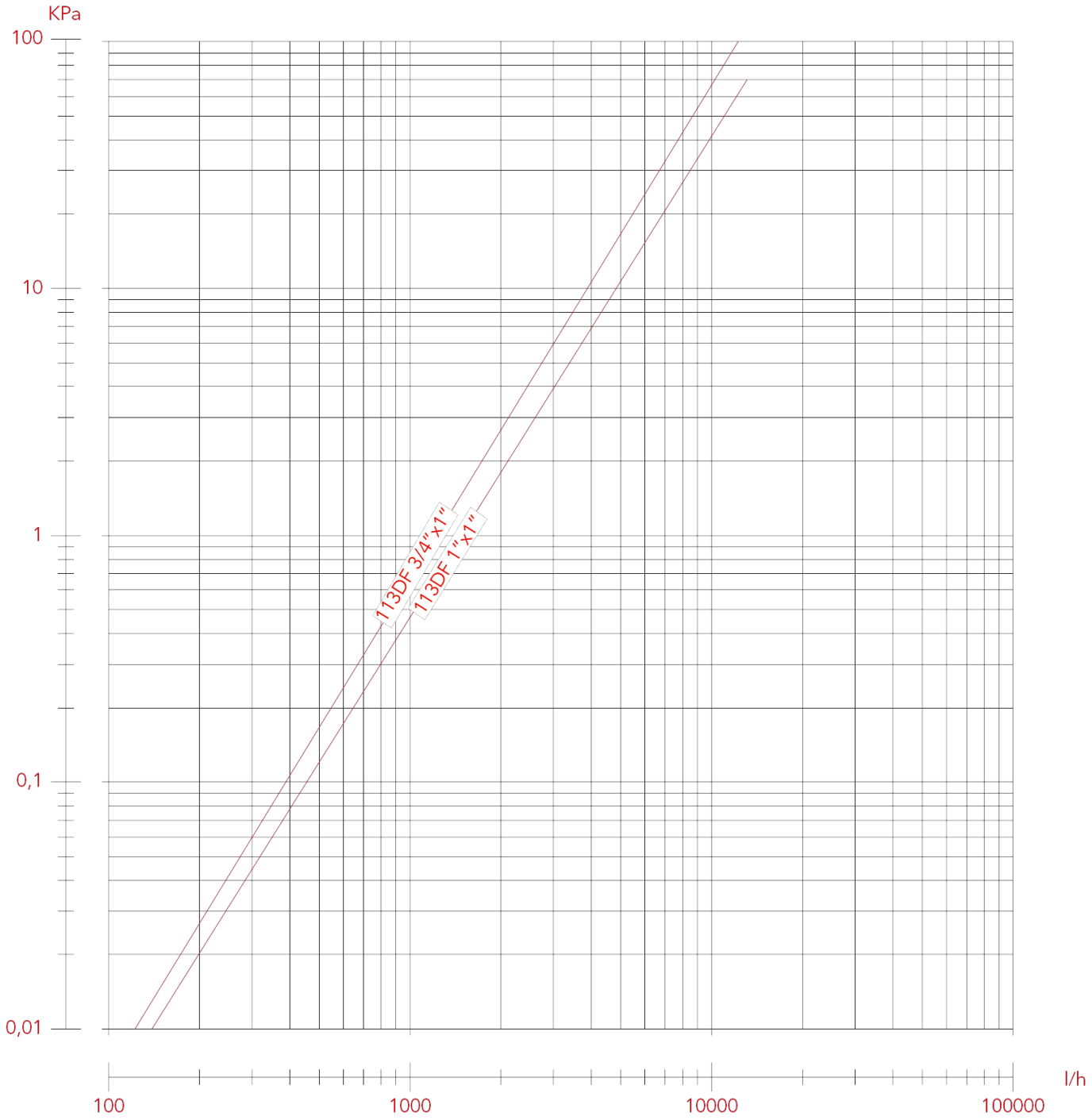
To remove the valve from the pipe line or anyhow before to unscrew the junctions linked to it:
- wear the clothing protective normally required to work with the fluid transported within the line;
- depressurizze the line and operate in this way:
- positioning the valve in opened position and than empty the line;
- handle the valve to put down the residue pressure contained inside the space between the ball and the body before of remove it from the line;
- during the disassembly apply the screw tool at the end of the valve nearest the pipe;

MAINTENANCE

Verify the valve periodically, according to its application's field and its works' field and its work's conditions, in order to be sure that the valve works correctly.

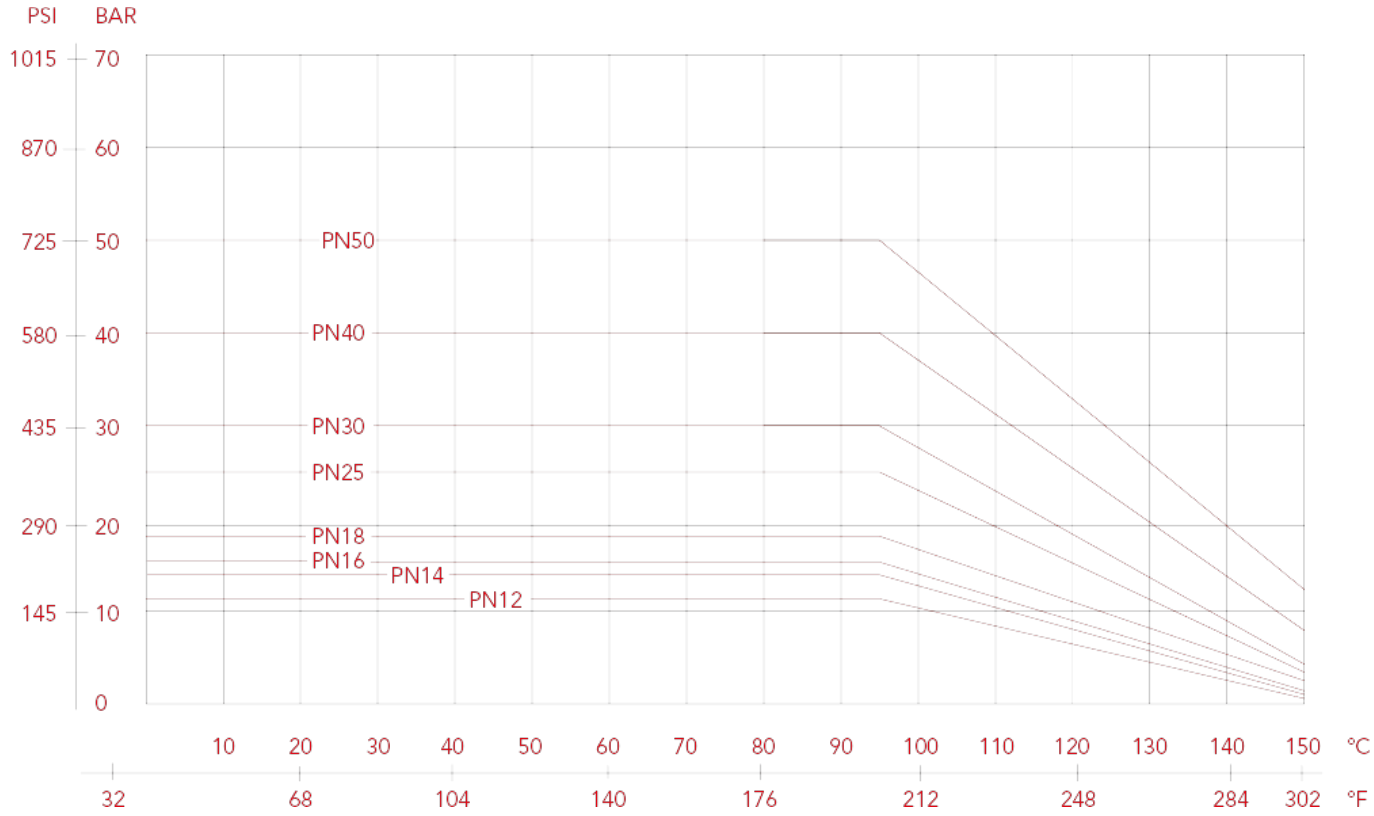
LOSS DIAGRAM (With water)

	3/4" x 1"	1" x 1"
KV	12,2	13,2



PRESSURE-TEMPERATURE DIAGRAM

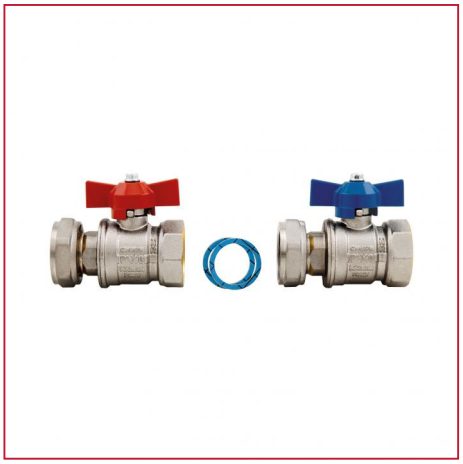
The values shown by the dropping lines state the maximum limit of employment of the valves.
The shown values are approximate.



REDUCED FLOW BALL VALVES: ORIENT

113DFK Orient ball valve kit with female swivel, reduced flow

Suitable for domestic water services, heating and air-conditioning plants, compressed air systems.
ORIENT

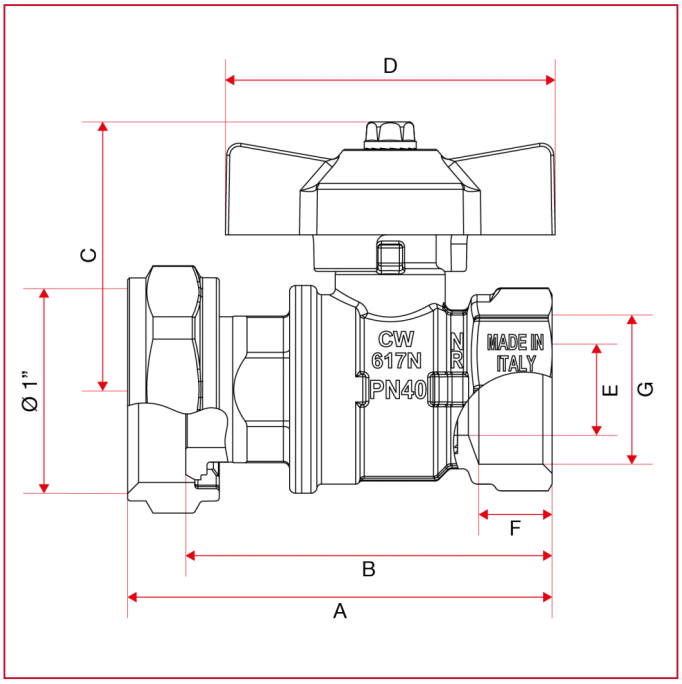


MEASURE	PRESSURE	CODE	PACKING
1" x 1"	40bar/580psi	1130100100K	1/26

TECHNICAL SPECIFICATIONS

Female/female threads.
T handle in aluminium.
Nickel-plated brass body and swivel.
Minimum and maximum working temperatures: -20°C, 150°C in absence of steam.
Threads: ISO 228 (equivalent to DIN EN ISO 228 and BS EN ISO 228).

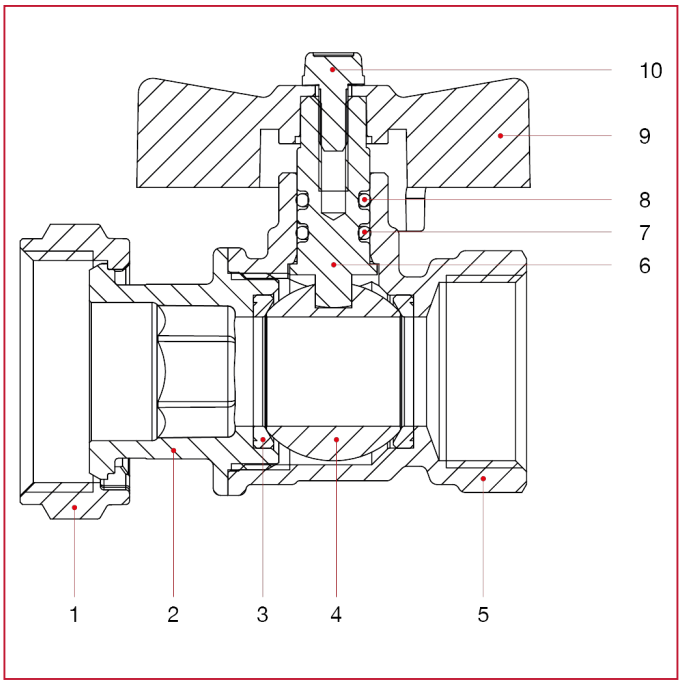
OVERALL DIMENSIONS



REDUCED FLOW BALL VALVES: ORIENT

	1" x 1"
DN	25
A	74,5
B	65
C	46,8
D	54
E	20
F	13
G	1"
Kg/cm2 bar	40
LBS - psi	580

MATERIALS



POS.	DESCRIPTION	N.	MATERIAL
1	Nut	1	Nickel-plated brass CW617N
2	Female end adapter	1	Nickel-plated brass CW617N
3	Seal	2	P.T.F.E.
4	Ball	1	Chrome-plated brass CW617N
5	Body	1	Nickel-plated brass CW617N
6	Stem	1	Brass CW614N
7	O-ring	1	NBR
8	O-ring	1	Viton®
9	Screw	1	Zinc-plated steel C4C
10	T handle	1	Varnished aluminium

REDUCED FLOW BALL VALVES: ORIENT

INSTALLATION

The itap S.p.A.'s valves are bi-directional, that means they manage the flow in both the directions.
The valves are composed by a ball, two seal in PTFE material, one stem, two sailing rings (O-Rings), one handle and a couple of parts made of brass (body and end adopter) that contain them and that are assembled by means of threat and a sealed material to obtain their aim.
In order to avoid that the sealed material gets broken and then the valve looses the connection between the body and the end-adapter, it's necessary to avoid to submit the two parts under the influence of a torque.
For the installation normal hydraulic practices must be used, and especially:
- ones have to be sure that the two pipes are correctly aligned;
- during the assembling process the installer has to apply its assembling tools at the end that is nearest to the pipe;
- the application of the sealing materials by the fitter (PTFE or hempen cloth) must be limited at the threat zone. An excess should interferes in the ball-gasket's closure zone, compromising the tightness.
- in the case that the fluid transported presents some impurities (dust, water too hard, etc.) ones have to remove these impurities by the means of a filter. Otherwise they could damage the seals.

DISASSEMBLY

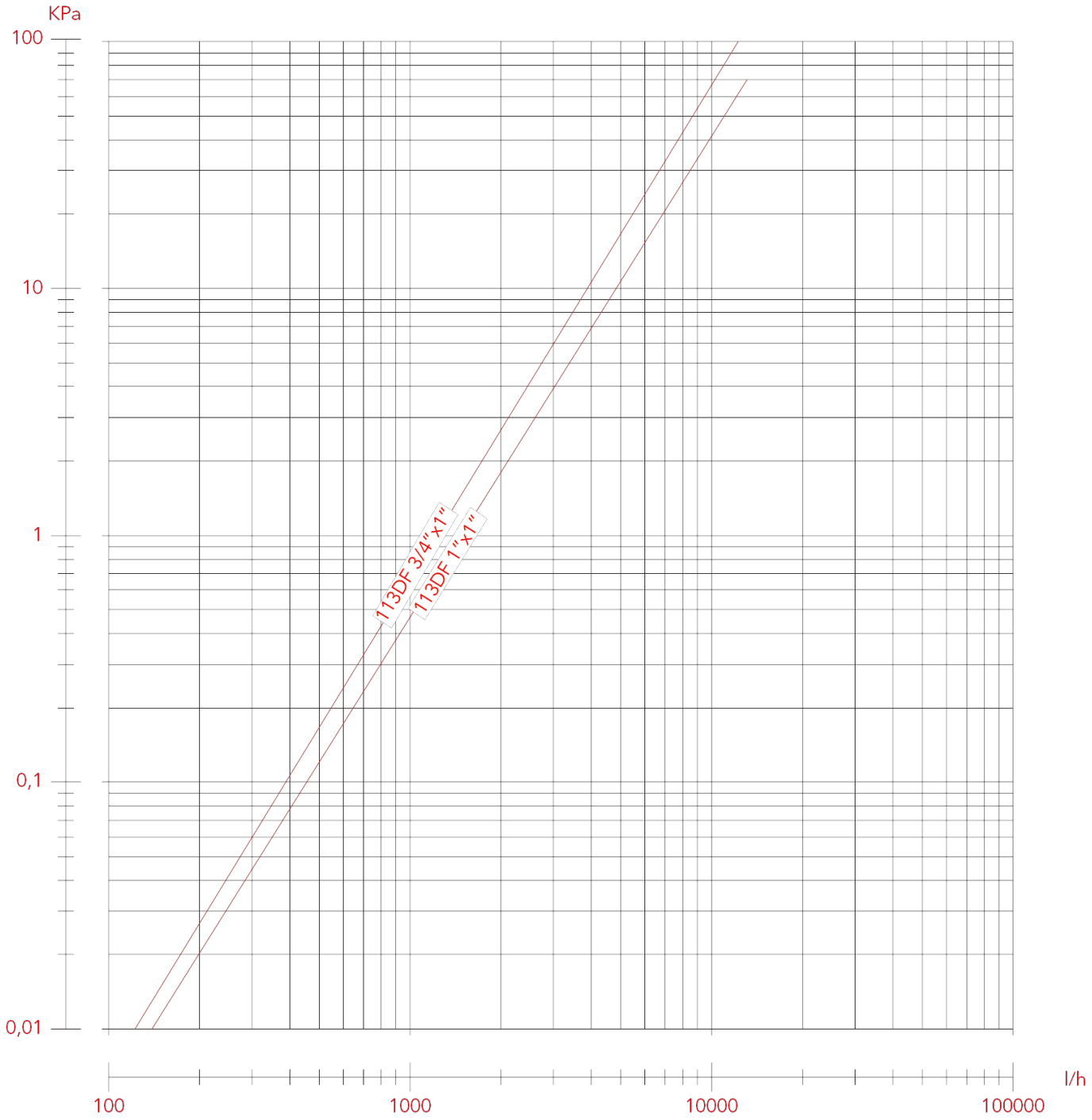
To remove the valve from the pipe line or anyhow before to unscrew the junctions linked to it:
- wear the clothing protective normally required to work with the fluid transported within the line;
- depressurizze the line and operate in this way:
  - positioning the valve in opened position and than empty the line;
  - handle the valve to put down the residue pressure contained inside the space between the ball and the body before of remove it from the line;
  - during the disassembly apply the screw tool at the end of the valve nearest the pipe;

MAINTENANCE

Verify the valve periodically, according to its application's field and its works' field and its work's conditions, in order to be sure that the valve works correctly.

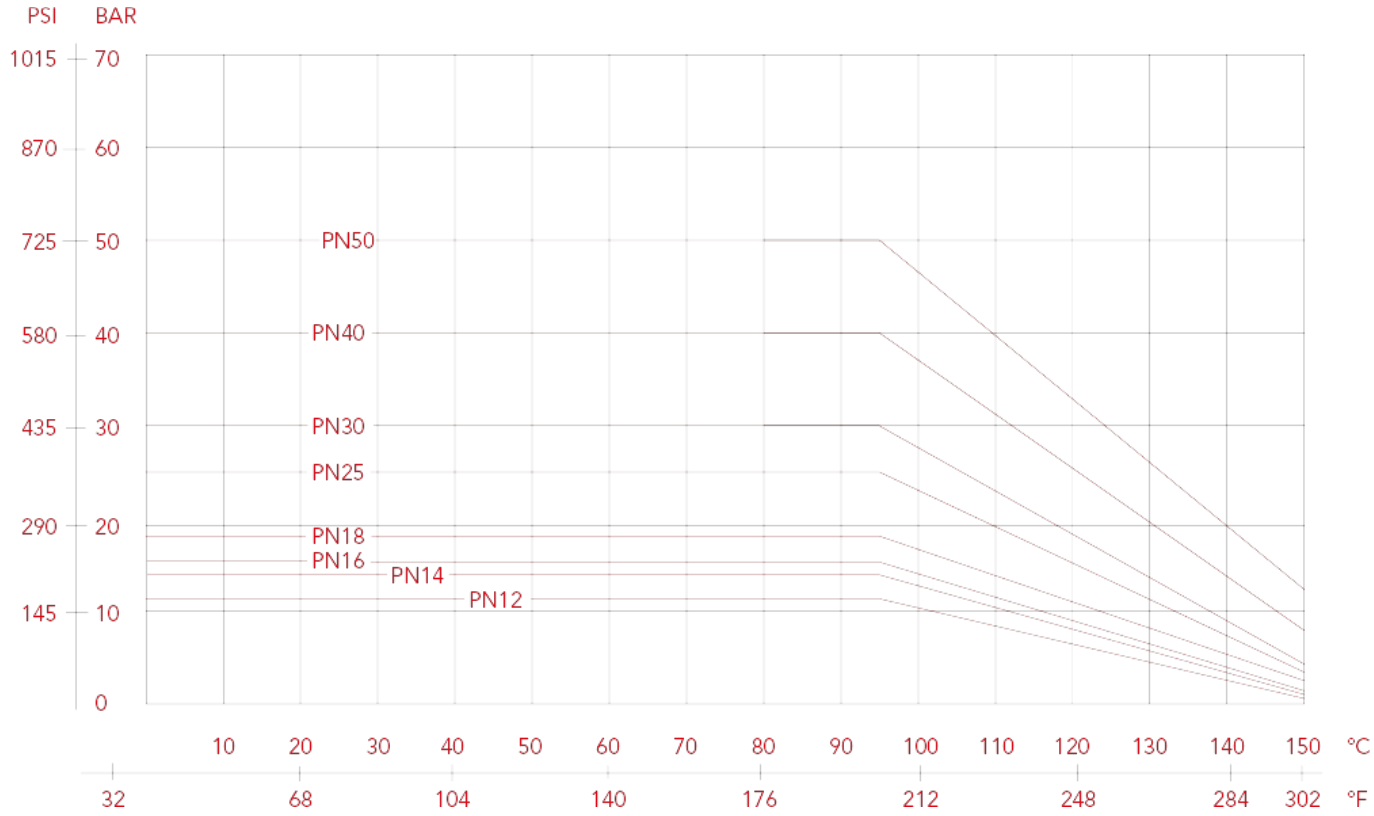
LOSS DIAGRAM (With water)

	1" x 1"
KV	13,2



PRESSURE-TEMPERATURE DIAGRAM

The values shown by the dropping lines state the maximum limit of employment of the valves.
The shown values are approximate.



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