



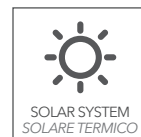
BALL VALVES FOR SOLAR SYSTEM
VALVOLE A SFERA PER IMPIANTI SOLARI TERMICI



EN

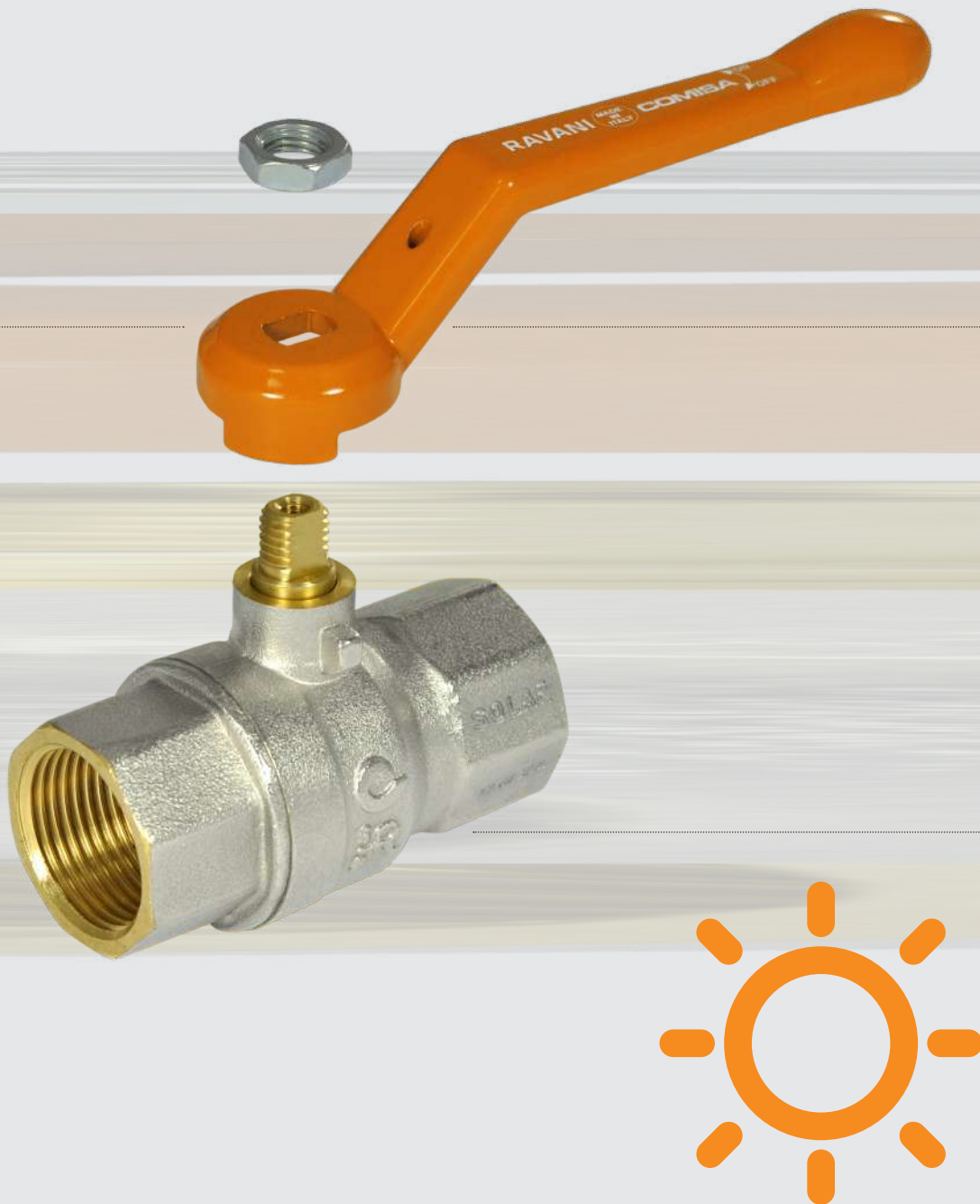


IT



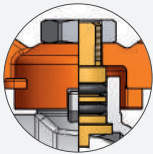


ANTI-BURSTING PIN / ANTISCOPPIO






F/F FEMALE / FEMALE
 FEMMINA / FEMMINA




ANTI-BURSTING PIN
 / PERNO ANTISCOPPIO

133

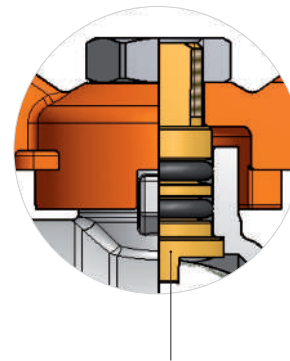


ISO 7/1



100%

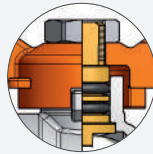
SIZE / MISURE	PN
1/2"	10
3/4"	10
1"	10



ANTI-BURSTING PIN
 INSTALLED INSIDE
 PERNO ANTISCOPPIO
 MONTATO DALL'INTERNO


BRASS ROD WITH DOUBLE O-RING INSTALLED INSIDE AGAINST TAMPERING
 AND/OR EXTRACTION AND EXPLOSION
 / ASTA IN OTTONE CON DOPPIO O-RING MONTATA DALL'INTERNO
 CONTRO LE MANOMISSIONI E/O ESTRAZIONE E ANTISCOPPIO

M/F MALE / FEMALE
 MASCHIO / FEMMINA




ANTI-BURSTING PIN
 / PERNO ANTISCOPPIO

133 M




ISO 7/1



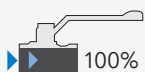
100%

SIZE / MISURE	PN
1/2"	10
3/4"	10
1"	10

134



ISO 228



100%

SIZE / MISURE	PN
3/8"	10

Certifications / Certificazioni



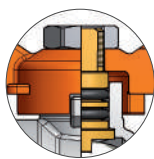
BALL VALVES FOR SOLAR SYSTEM / VALVOLA A SFERA PER IMPIANTI SOLARI TERMICI

Ball valve for solar system.
Valvola a sfera per impianti solari termici.

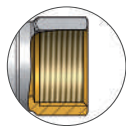


133 F/F

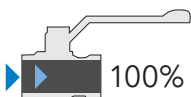
FEMALE / FEMALE
FEMMINA / FEMMINA



ANTI-BURSTING PIN
/ PERNO ANTISCOPPIO



ISO 7/1



FULL BORE / PASSAGGIO TOTALE



SIZE MISURE	PN	Kv
1/2"	10	16,3
3/4"	10	29,5
1"	10	43

Fluid: / *Fluido*
Water and glycoles / Acqua e glicole

Max % / max %:
50% glycoles / glicole 50%

Operating temperature
/ *Temperatura d'esercizio*
- 30°C  + 200°C

Maximum pressure: **10 bar**
Pressione massima: **10 bar**

- Bidirectional ball valve
- 100% Testing of the seals inwards and outwards on the entire batch produced
- Body and coupling made of brass CW617N in accordance with EN 12165, hot moulded, sandblasted and nickelplated prior to processing to eliminate the nickel from the surfaces that could come into contact with the fluid, while maintaining an appreciable aesthetic and optimum protection against the elements
- Control rod inserted from the inside (anti-bursting pin and tamperproof) made of CW614N brass in accordance with EN 12164 with double O-ring for maximum security
- Brass conforms to DIN 50930-6; D.M. 174; Directive 2011/65 / EC (ROHS II)
- O-ring green VITON
- Diamond and chrome plated ball
- High strength ball washers in PTFE
- Accommodations PTFE designed for easy maneuvering

- *Valvola a sfera bidirezionale*
- *Collaudi al 100% delle tenute verso l'interno e verso l'esterno sull'intero lotto prodotto*
- *Corpo e manicotto in ottone CW617N conforme a EN 12165, stampati a caldo sabbiati e nichelati prima della lavorazione per eliminare il nichel sulle parti potenzialmente a contatto con il fluido, pur mantenendo un' apprezzabile estetica e un'ottimale protezione contro gli agenti atmosferici*
- *Asta di manovra inserita dall'interno (antiscoppio e antimanomissione) in ottone CW614N conforme a EN12164 con doppio O-ring in materiale ad alta resistenza*
- *Ottone conforme a: DIN 50930-6; D.M. 174; Direttiva 2011/65/EC (ROHS II)*
- *O-ring in VITON verde*
- *Sfera diamantata e cromata a spessore*
- *Guarnizioni sfera in PTFE ad alta resistenza*
- *Alloggi PTFE progettati per facilitare la manovra*

Certifications /Certificazioni



Max % / max %
50% glycoles / glicole 50%

Comisa reserves the right to make any technical and aesthetical changes without prior warning, as part of a continual product and process improvement.
Comisa si riserva il diritto di apportare eventuali modifiche di natura tecnica ed estetica senza alcun preavviso, nell'ambito di un costante miglioramento del prodotto e del processo produttivo.

Threaded connection / Filetto di connessione

Conform to EN 10226-1 (ISO 7/1) / *Conforme*

Handle /Leve

- **Cast aluminum, painted lever and butterfly**
/ *In alluminio pressofuso, a leva e farfalla verniciata*



- **Sliding spindle extension**
/ *Prolungatore d'asta mobile*



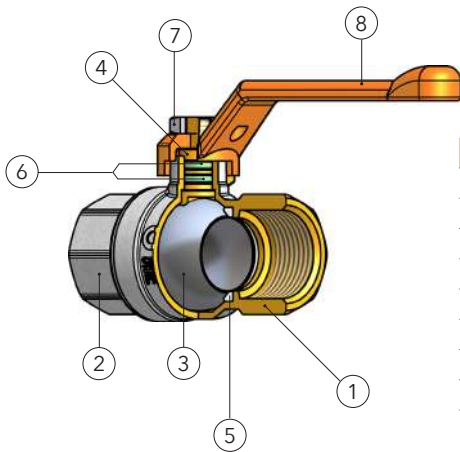
- **Fixed spindle extension**
/ *Prolungatore d'asta fisso*





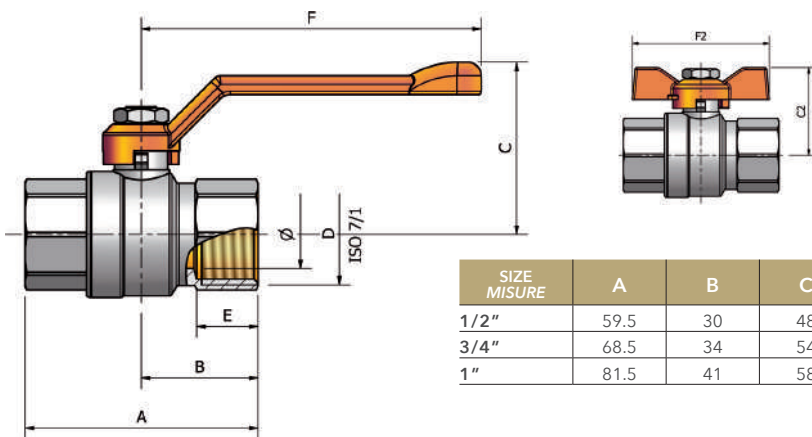
133 F/F FEMALE / FEMALE
 FEMMINA / FEMMINA

Materials / Materiali



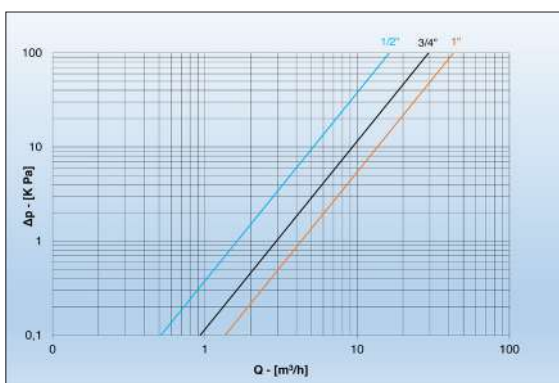
	DESCRIPTION	DESCRIZIONE	MATERIAL / MATERIALE
1	BODY	CORPO	BRASS / OTTONE CW617N UNI EN 12165
2	COUPLING	MANICOTTO	BRASS / OTTONE CW617N UNI EN 12165
3	BALL	SFERA	BRASS / OTTONE CW617N UNI EN 12165
4	SPINDLE	ASTA	BRASS / OTTONE CW614N UNI EN 12164
5	SEATS	GUARNIZIONI	P.T.F.E. (ALTA RESISTENZA / HIGH RESISTANCE)
6	O-RING	O-RING	VITON
7	NUT	DADO	STEEL / ACCIAIO 8 UNI EN 20898/2
8	HANDLE	LEVA	ALUMINIUM / ALLUMINIO EN AB-46100 UNI EN 1676

Dimensions / Dimensioni

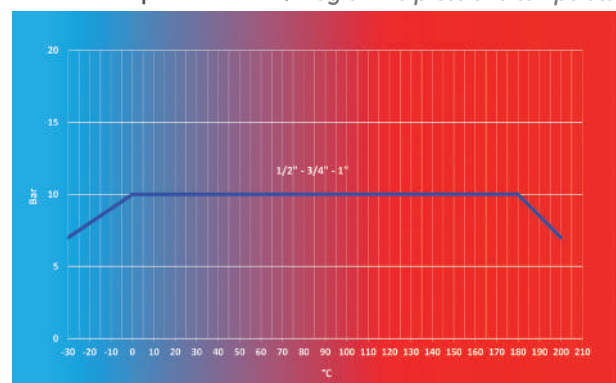


SIZE MISURE	A	B	C	C2	D	E	Ø	F	F2
1/2"	59.5	30	48	35	Rp 1/2	16.5	15	87	48
3/4"	68.5	34	54	39	Rp 3/4	18	20	100	60
1"	81.5	41	58	43	Rp 1"	21.5	25	100	60

Pressure drop chart / Diagramma perdite di carico



Pressure-temperature chart / Diagramma pressione-temperatura

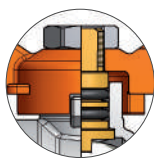


BALL VALVES FOR SOLAR SYSTEM / VALVOLA A SFERA PER IMPIANTI SOLARI TERMICI

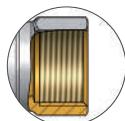
Ball valve for solar system.
Valvola a sfera per impianti solari termici.



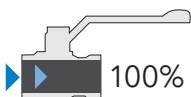
133 M M/F FEMALE / FEMALE
FEMMINA / FEMMINA



ANTI-BURSTING PIN
/ PERNO ANTISCOPPIO



ISO 7/1



FULL BORE / PASSAGGIO TOTALE



SIZE MISURE	PN	Kv
1/2"	10	16,3
3/4"	10	29,5
1"	10	43

Fluid: / Fluido
Water and glycoles / Acqua e glicole

Max % / max %:
50% glycoles / glicole 50%

Operating temperature
/ Temperatura d'esercizio
- 30°C + 200°C

Maximum pressure: 10 bar
Pressione massima: 10 bar

- Bidirectional ball valve
- 100% Testing of the seals inwards and outwards on the entire batch produced
- Body and coupling made of brass CW617N in accordance with EN 12165, hot moulded, sandblasted and nickelplated prior to processing to eliminate the nickel from the surfaces that could come into contact with the fluid, while maintaining an appreciable aesthetic and optimum protection against the elements
- Control rod inserted from the inside (anti-bursting pin and tamperproof) made of CW614N brass in accordance with EN 12164 with double O-ring for maximum security
- Brass conforms to DIN 50930-6; D.M. 174; Directive 2011/65 / EC (ROHS II)
- O-ring green VITON
- Diamond and chrome plated ball
- High strength ball washers in PTFE
- Accommodations PTFE designed for easy maneuvering

- Valvola a sfera bidirezionale
- Collaudi al 100% delle tenute verso l'interno e verso l'esterno sull'intero lotto prodotto
- Corpo e manicotto in ottone CW617N conforme a EN 12165, stampati a caldo sabbiati e nichelati prima della lavorazione per eliminare il nichel sulle parti potenzialmente a contatto con il fluido, pur mantenendo un' apprezzabile estetica e un'ottimale protezione contro gli agenti atmosferici
- Asta di manovra inserita dall'interno (antiscoppio e antimanomissione) in ottone CW614N conforme a EN12164 con doppio O-ring in materiale ad alta resistenza
- Ottone conforme a: DIN 50930-6; D.M. 174; Direttiva 2011/65/EC (ROHS II)
- O-ring in VITON verde
- Sfera diamantata e cromata a spessore
- Guarnizioni sfera in PTFE ad alta resistenza
- Alloggi PTFE progettati per facilitare la manovra

Certifications /Certificazioni



Comisa reserves the right to make any technical and aesthetical changes without prior warning, as part of a continual product and process improvement.
Comisa si riserva il diritto di apportare eventuali modifiche di natura tecnica ed estetica senza alcun preavviso, nell'ambito di un costante miglioramento del prodotto e del processo produttivo.

Threaded connection / Filetto di connessione

Conform to EN 10226-1 (ISO 7/1) / Conforme

Handle /Leve

- Cast aluminum, painted lever and butterfly
/ In alluminio pressofuso, a leva e farfalla verniciata



- Sliding spindle extension
/ Prolungatore d'asta mobile



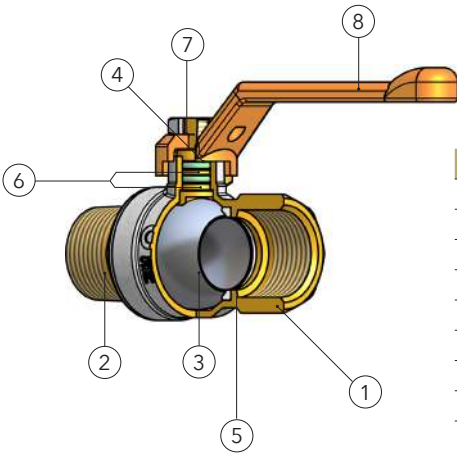
- Fixed spindle extension
/ Prolungatore d'asta fisso



133 M M/F FEMALE / FEMALE
 FEMMINA / FEMMINA

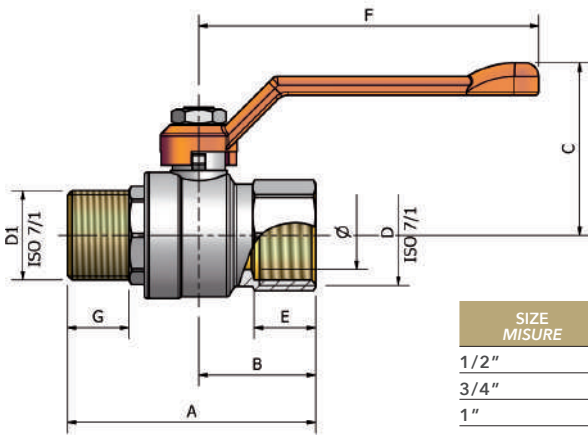


Materials / Materiali



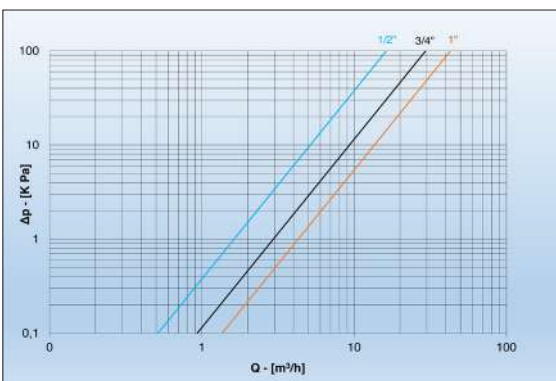
	DESCRIPTION	DESCRIZIONE	MATERIAL / MATERIALE
1	BODY	CORPO	BRASS / OTTONE CW617N UNI EN 12165
2	COUPLING	MANICOTTO	BRASS / OTTONE CW617N UNI EN 12165
3	BALL	SFERA	BRASS / OTTONE CW617N UNI EN 12165
4	SPINDLE	ASTA	BRASS / OTTONE CW614N UNI EN 12164
5	SEATS	GUARNIZIONI	P.T.F.E. (ALTA RESISTENZA / HIGH RESISTANCE)
6	O-RING	O-RING	VITON
7	NUT	DADO	STEEL / ACCIAIO 8 UNI EN 20898/2
8	HANDLE	LEVA	ALUMINIUM / ALLUMINIO EN AB-46100 UNI EN 1676

Dimensions / Dimensioni

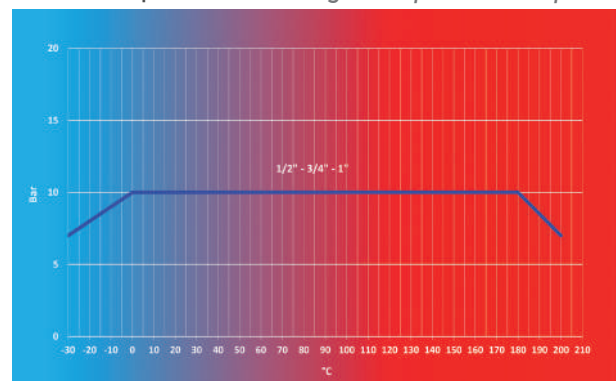


SIZE MISURE	A	B	C	C2	D	E	Ø	F	F2
1/2"	65.5	30	48	35	Rp 1/2	16.5	15	87	48
3/4"	73	34	54	39	Rp 3/4	18	20	100	60
1"	86	41	58	43	Rp 1"	21.5	25	100	60

Pressure drop chart / Diagramma perdite di carico



Pressure-temperature chart / Diagramma pressione-temperatura

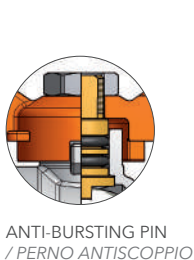


BALL VALVES FOR SOLAR SYSTEM
/ VALVOLA A SFERA PER IMPIANTI SOLARI TERMICI

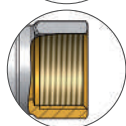
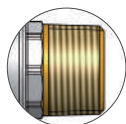
Ball valve for solar system.
Valvola a sfera per impianti solari termici.



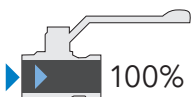
134 M/F **MALE / FEMALE**
MASCHIO / FEMMINA



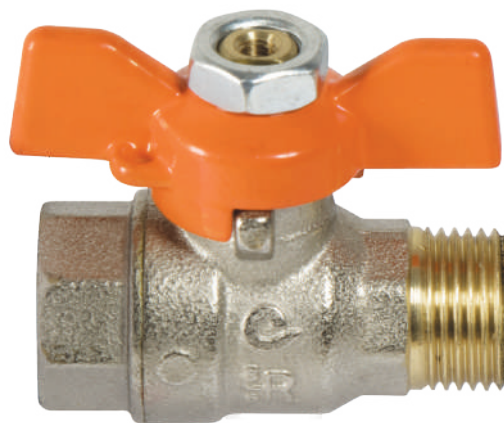
ANTI-BURSTING PIN
/ PERNO ANTISCOPPIO



ISO 228



FULL BORE / PASSAGGIO TOTALE



SIZE <i>MISURE</i>	PN	Kv
3/8"	10	6

Fluid: / *Fluido*
Water and glycoles / *Acqua e glicole*

Glycoles 50% 50% glicole

Operating temperature
/ Temperatura d'esercizio
- 30°C  + 200°C

Maximum pressure: **10 bar**
Pressione massima: 10 bar

- Bidirectional ball valve for interception air vent valves
- 100% Testing of the seals inwards and outwards on the entire batch produced
- Body and coupling made of brass CW617N in accordance with EN 12165, hot moulded, sandblasted and nickelplated prior to processing to eliminate the nickel from the surfaces that could come into contact with the fluid, while maintaining an appreciable aesthetic and optimum protection against the elements
- Control rod inserted from the inside (anti-bursting pin and tamperproof) made of CW614N brass in accordance with EN 12164 with double O-ring for maximum security
- Brass conforms to DIN 50930-6; D.M. 174; Directive 2011/65 / EC (ROHS II)
- O-ring green VITON
- Diamond and chrome plated ball
- High strength ball washers in PTFE
- Accommodations PTFE designed for easy maneuvering

- *Valvola a sfera bidirezionale per intercettazione valvole sfogo aria*
- *Collaudi al 100% delle tenute verso l'interno e verso l'esterno sull'intero lotto prodotto*
- *Corpo e manicotto in ottone CW617N conforme a EN 12165, stampati a caldo sabbatiati e nichelati prima della lavorazione per eliminare il nichel sulle parti potenzialmente a contatto con il fluido, pur mantenendo un'apprezzabile estetica e un'ottimale protezione contro gli agenti atmosferici*
- *Asta di manovra inserita dall'interno (antiscoppio e antimanomissione) in ottone CW614N conforme a EN12164 con doppio O-ring in materiale ad alta resistenza*
- *Ottone conforme a: DIN 50930-6; D.M. 174; Direttiva 2011/65/EC (ROHS II)*
- *O-ring in VITON verde*
- *Sfera diamantata e cromata a spessore*
- *Guarnizioni sfera in PTFE ad alta resistenza*
- *Alloggi PTFE progettati per facilitare la manovra*

Certifications /Certificazioni



Threaded connection / Filetto di connessione

Conform to EN ISO 228 / *Conforme*
Cylindrical / *Cilindrico*

Handle /Leve

- Butterfly painted
Farfalla verniciata



- Sliding spindle extension
/ Prolungatore d'asta mobile



- Fixed spindle extension
/ Prolungatore d'asta fisso

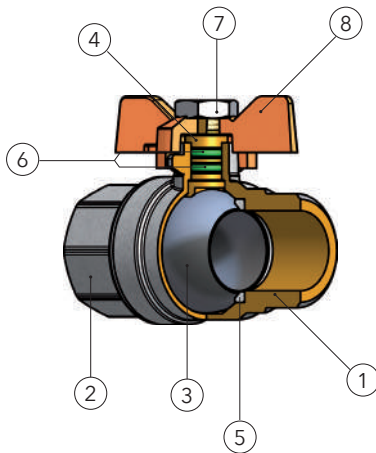


Ravani si riserva il diritto di apportare eventuali modifiche di natura tecnica ed estetica senza alcun preavviso, nell'ambito di un costante miglioramento del prodotto e del processo produttivo. Ravani reserves the right to make any technical and aesthetic changes without prior warning, as part of a continual product and process improvement.

134 M/F MALE / FEMALE
MASCHIO / FEMMINA

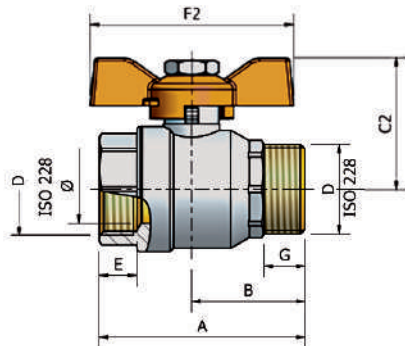


Materials / Materiali



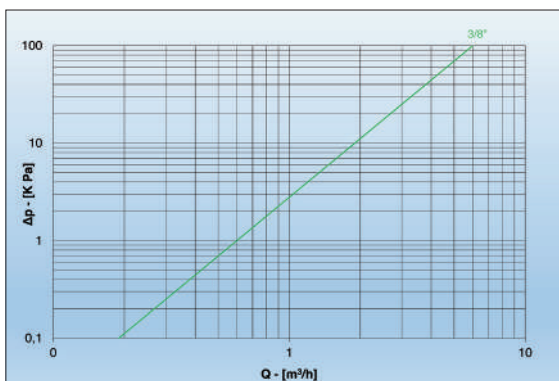
	DESCRIPTION	DESCRIZIONE	MATERIAL / MATERIALE
1	BODY	CORPO	BRASS / OTTONE CW617N UNI EN 12165
2	COUPLING	MANICOTTO	BRASS / OTTONE CW617N UNI EN 12165
3	BALL	SFERA	BRASS / OTTONE CW617N UNI EN 12165
4	SPINDLE	ASTA	BRASS / OTTONE CW614N UNI EN 12164
5	SEATS	GUARNIZIONI	P.T.F.E. (ALTA RESISTENZA / HIGH RESISTANCE)
6	O-RING	O-RING	VITON
7	NUT	DADO	STEEL / ACCIAIO 8 UNI EN 20898/2
8	HANDLE	LEVA	ALUMINIUM / ALLUMINIO EN AB-46100 UNI EN 1676

Dimensions / Dimensioni

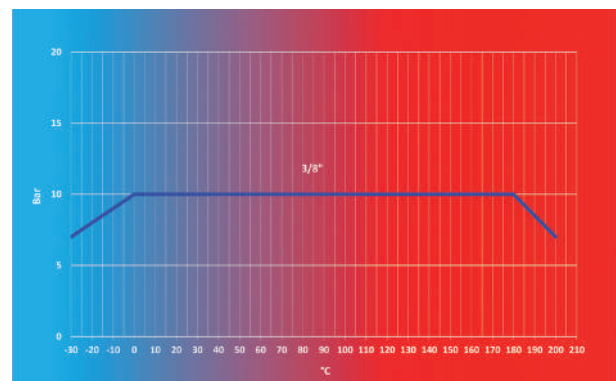


SIZE MISURE	A	B	C2	D	E	Ø	F2	G
3/8"	47	25.5	31	G 3/8	10	10	48	10

Pressure drop chart / Diagramma perdite di carico



Pressure-temperature chart / Diagramma pressione-temperatura



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