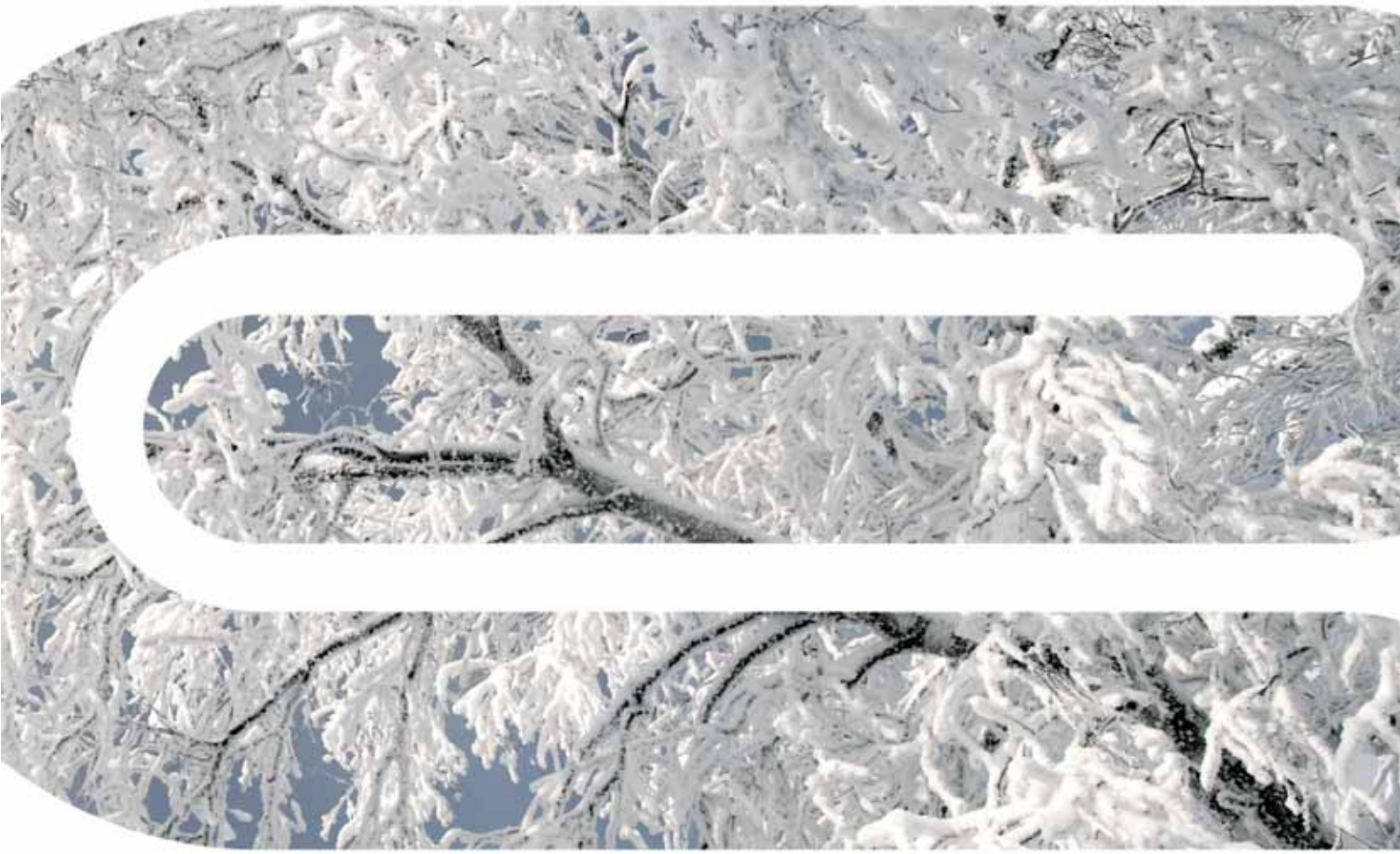
ENOLGAS

2010



GENERALE
GENERAL

INDUSTRIALE
INDUSTRIAL

SISTEMI
SYSTEMS

LISTINO
PRICE LIST

ENOLGAS

CATALOGO INDUSTRIALE
INDUSTRIAL CATALOGUE

ENOLGAS BONOMI SPA
Il punto fermo che si rinnova

. Il Gruppo

Enolgas è – oggi - **un marchio di garanzia** che racchiude l'esperienza pluridecennale di Enolgas Bonomi, una realtà leader nel settore delle valvole e dei sistemi per l'automazione domestica.

Nata nel 1960 come impresa famigliare, specializzata nella produzione di valvole a sfera in ottone, Enolgas Bonomi è oggi un **gruppo** con un'**offerta diversificata** ed una presenza capillare nei mercati **internazionali**.

Una realtà strutturata, capace di rispondere alle richieste dei clienti con flessibilità e dinamismo, senza rinunciare alla qualità. Dal 1991 Enolgas Bonomi è infatti certificata ISO 9001 e collabora attivamente con dipartimenti universitari. Il risultato? Una produzione ricca di **soluzioni innovative** e sempre in **linea con la normativa** internazionale.

. La Produzione

L'offerta di Enolgas Bonomi è caratterizzata da **numerosi brevetti** - sia italiani che internazionali - e da 3 divisioni specifiche:

. The Group

Today Enolgas is **a guarantee brand** which is the result of the long-term care and experience of Enolgas Bonomi, a leader in the field of valves and automation domestic networks.

Founded in 1960 as a family business, specialized in the production of brass ball valves, today Enolgas Bonomi is a **group** with a **diversified offer**, which is strongly present on **international** markets.
A structured reality, which can reply to market requests with flexibility and energy without sacrificing quality. Since 1991 Enolgas Bonomi is in fact holder of the ISO 9001 certificate and cooperates actively with universities departments. What is the result?
A rich production of **innovative solutions** always **in line with international standards**.

. The Production

Enolgas Bonomi's offer is characterized by various **patents**, both Italian and international, and by 3 specific areas:

. Valvole in ottone
. Valvole in acciaio
. Sistemi

Un'ampia gamma di prodotti e servizi in grado di soddisfare qualsiasi esigenza del mercato: dalle produzioni standard allo **studio di fattibilità** e alla conseguente realizzazione **di nuovi prodotti**.

Qualsiasi richiesta trova quindi nel marchio Enolgas la sua risposta:
soluzioni personalizzate, in linea con la normativa internazionale e – soprattutto – qualitativamente avanzate, grazie al lavoro di supervisione del **reparto controllo qualità**.

. Brass valves
. Industrial valves
. Home automation

That is a vast range of products and services which can meet any request of the market:
from standard production to **feasibility studies** and following manufacture **of new products**.

So any request can be met by Enolgas: customized solutions, in accordance with international standards and of the best quality, guaranteed by the **Quality Assurance department**.

ENOLGAS BONOMI SPA
Certificati

ENOLGAS BONOMI, che ha sempre considerato la Qualità un fattore strategico, è stata una delle prime aziende italiane del settore ad implementare un Sistema di Assicurazione Qualità secondo le normative americane, prima ancora che fossero redatte le ISO 9001.
Di conseguenza, già nel 1991 **ENOLGAS BONOMI** ha ottenuto l'approvazione del Sistema di Assicurazione Qualità secondo le normative ISO 9000, come certificato rispettivamente dall' ICIM-CISQ, quale Istituto di Certificazione Italiano e dall' IQNET, come Rete di Certificazione Internazionale.
ENOLGAS BONOMI, consapevole del fatto che la Qualità non ha limiti di tempo e di spazio, è continuamente impegnata ed orientata al costante miglioramento del prodotto, del servizio e della collaborazione con clienti e fornitori.
Per questo motivo, l'obiettivo primario di **ENOLGAS BONOMI** è la soddisfazione del cliente, in linea con i riferimenti della normativa UNI EN ISO 9001:2008.
Per raggiungere e superare questo obiettivo, **ENOLGAS BONOMI** cura particolarmente la selezione e la formazione del personale, essendo convinta che le risorse umane vengano prima di tutto.

ENOLGAS BONOMI SPA, impegnata nel garantire la massima qualità alla propria Clientela, ha da sempre recepito i dettami normativi applicabili ed adempiuto scrupolosamente agli obblighi di legge con particolare riferimento a quanto indicato nelle direttive comunitarie, negli standard internazionali ed nei quadri del Comitato Italiano Gas.

ENOLGAS BONOMI has always considered Quality a strategic factor and it has been one of the first Italian companies in its field to implement a Quality Assurance System in accordance with the American standards, before ISO 9001 was even drafted.
In fact it was 1991 when **ENOLGAS BONOMI**'s Quality Assurance System was approved in accordance with ISO 9000, as certificated by the Italian Certification Institute ICIM-CISQ and by the International Certification Network IQNET.
ENOLGAS BONOMI is well aware that Quality has no time or space limit and it is currently committed to the constant improvement of its products, service and collaborations with suppliers and customers.
That is why **ENOLGAS BONOMI**'s main goal is customer satisfaction, in line with UNI EN ISO 9001:2008 standard.
To keep and improve this goal **ENOLGAS BONOMI** takes special care in selecting and training its staff, convinced that human resources come first.
Since **ENOLGAS BONOMI SPA** foundation, quality assurance has been a key strategic task.
ENOLGAS BONOMI SPA fully complies with all the relevant standards and the mandatory law requirements, with special reference to the European Directives, to the international standards and to the Italian Gas Committee norms.

INDICE
INDEX

VALVOLE INDUSTRIALI
INDUSTRIAL VALVES

TENAX

TENAX
Valvole a sfera filettata in acciaio inox.
Passaggio integrale.

FILETTATURE
Femmina filettata UNI EN 10226 (ex ISO 7/1 Rp).
Maschio filettato UNI EN 10226 (ex ISO 7/1 Rp).
Filettature speciali (BSPT, NPT, ecc.) disponibili su richiesta.

PRESSIONE DI ESERCIZIO
Da PN 100 (1/4") a PN 40 (2").

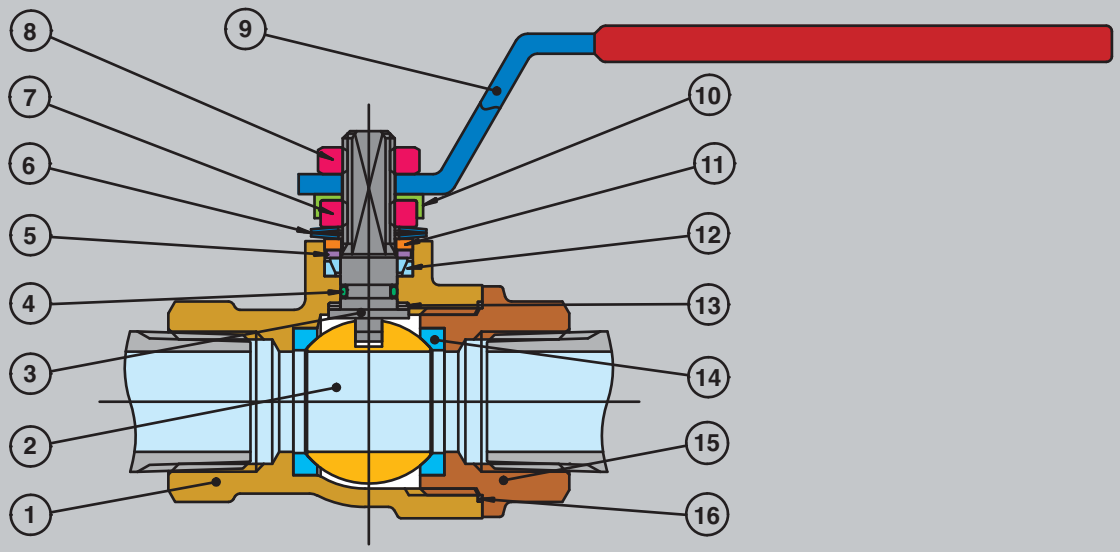
LIMITI DI TEMPERATURA
Da -20°C a +150°C.

TENAX
Ball valves in stainless steel with threads.
Full bore design.

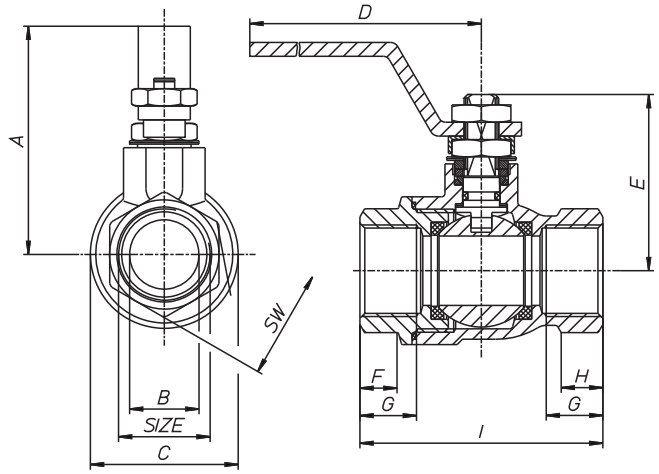
END CONNECTIONS
Female screwed to UNI EN 10226 (ex ISO 7/1 Rp).
Male screwed to UNI EN 10226 (ex ISO 7/1 Rp).
Special threads (BSPT, NPT, etc.) available on request.

WORKING PRESSURE
From PN 100 (1/4") to PN 40 (2").

TEMPERATURE LIMITS
From -20°C to +150°C.



PARTICOLARI COMPONENTS	DESCRIZIONE DESCRIPTION	MATERIALI MATERIAL
1 Corpo / Body	Fusione / Investment casting	AISI 316 D 1.4408
2 Sfera / Ball	Da barra / Forged	AISI 316 D 1.4401
3 Perno / Stem	Da barra / From bar	AISI 316 D 1.4401
4 O-ring / O-ring	Verde o nero / Green or black	Fluorelastomero / Fluoroelastomer
5 Premiguarnizione / Packing washers	Da barra / From bar	AISI 304 D 1.4301
6 Rondelle elastiche / Spring washers	Trafilato / Drawn	AISI 301 D 1.4310
7 Dado del perno / Stem retaining-nut	Fuso / Forged	AISI 304 D 1.4301
8 Dado / Locking nut	Fuso / Forged	AISI 304 D 1.4301
9 Leva / Lever handle	Plastificata rossa / P.V.C. insulated red color	AISI 304 D 1.4301
10 Base per il dado di fissaggio / Fixing-nut-plat	Blanked	AISI 304 D 1.4301
11 Fermo / Operation-stop	Blanked	AISI 304 D 1.4301
12 Guarnizione di tenuta superiore / Stem packing	Da barra / From bar	Virgin P.T.F.E.
13 Anello antifrizione / Thrust washer	Da barra / From bar	Virgin P.T.F.E.
14 Sedi laterali / Ball seats	Da barra / From bar	Virgin P.T.F.E.
15 Manicotto / End adapter	Fusione / Investment casting	AISI 316 D 1.4408
16 Guarnizione statica / Static gasket	Da barra / From bar	Virgin P.T.F.E.



ESECUZIONI SPECIALI
Guarnizioni speciali
Perni con dispositivo antistatico da 3/4" a 2"
Versione sgrassata
La valvola è disponibile con certificato ATEX su richiesta (da 3/4" a 2")

SPECIAL EXECUTIONS
Special gaskets available
Stems with antistatic device from 3/4" to 2"
Degreased version
On request the valve is available with ATEX certificate (from 3/4" to 2")

Size	A mm	B mm	C mm	D mm	E mm	F mm	G mm	H mm	I mm	SW. EXA.	SW. OCT.	MF weight gr.	FF weight gr.	PN
1/4"	52	8	29	110	37	8,5	11,4	8	50	21,5	-	230	230	100
3/8"	52	10	29	110	37	8,5	11,4	8	50	21,5	-	230	215	100
1/2"	55	15	34	110	42	10	15	9,5	60	26,5	-	315	285	100
3/4"	66	20	42,5	140	52	11,5	16,3	11,5	70	31,5	-	535	465	63
1"	70	25	50,5	140	56	14	19,1	13,5	85	40,5	-	805	710	63
1"1/4	85	32	63	180	68	15,5	21,4	16	95	-	49,5	1320	1180	40
1"1/2	91	40	75,5	180	74	18,5	21,4	16	105	-	54,5	1875	1740	40
2"	105	50	91	230	87	22,5	25,7	23,5	125	-	69,5	3130	2930	40

Coppia di sblocco in Nm / Breaking Torque in Nm

DN size		10 1/4-3/8"	15 1/2"	20 3/4"	25 1"	32 1"1/4	40 1" 1/2	50 2"
PN - bar	0	1,6	3,2	3,6	4,6	11,5	19	27,5
	16	1,8	4,3	4,9	5,9	15	24	38
	40	2,5	5,1	6	6,9	16,7	28,6	42
	64	3,2	5,6	6,8	8			
	100	3,8	6,5					
		Nm						

I valori in Nm possono cambiare a seconda dei materiali utilizzati per le sedi, della temperatura e del fluido. Per un utilizzo sicuro dei vari tipi di servocontrollo è necessario considerare un fattore di sicurezza idoneo.

Values in Nm can change depending on the material used for seats, on temperature and on the fluid used. For a safe working of the various sorts of servocontrol, it is necessary to consider a suitable safety factor.

Diagramma pressione/temperatura
Pressure/temperature diagram

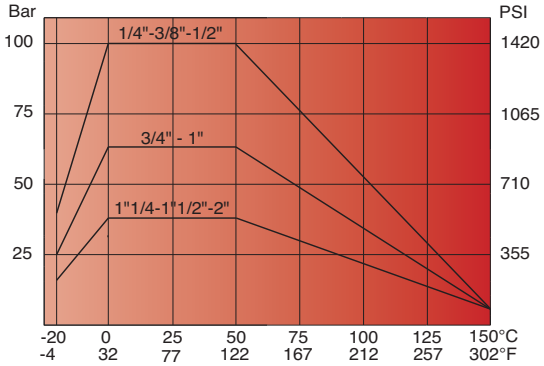
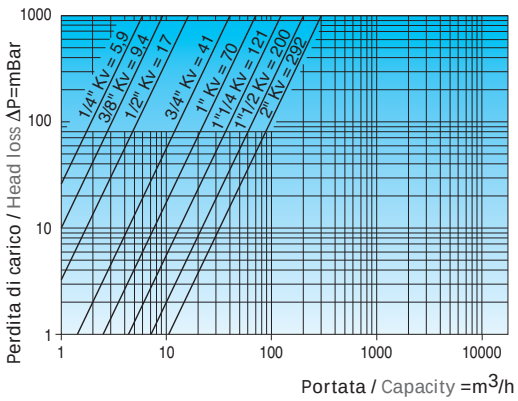


Diagramma perdite di carico
Head loss diagram



SAPHIR

SAPHIR
Valvole a filettata sfera in acciaio inox.
Versione lucida.
Passaggio totale.

FILETTATURE
Femmina filettata UNI EN 10226 (ex ISO 7/1 Rp)..
Maschio filettato UNI EN 10226 (ex ISO 7/1 Rp).
Filettature speciali (BSPT, NPT, ecc.) disponibili su richiesta.

PRESSIONE DI ESERCIZIO
Da PN 100 (1/4") a PN 40 (2").

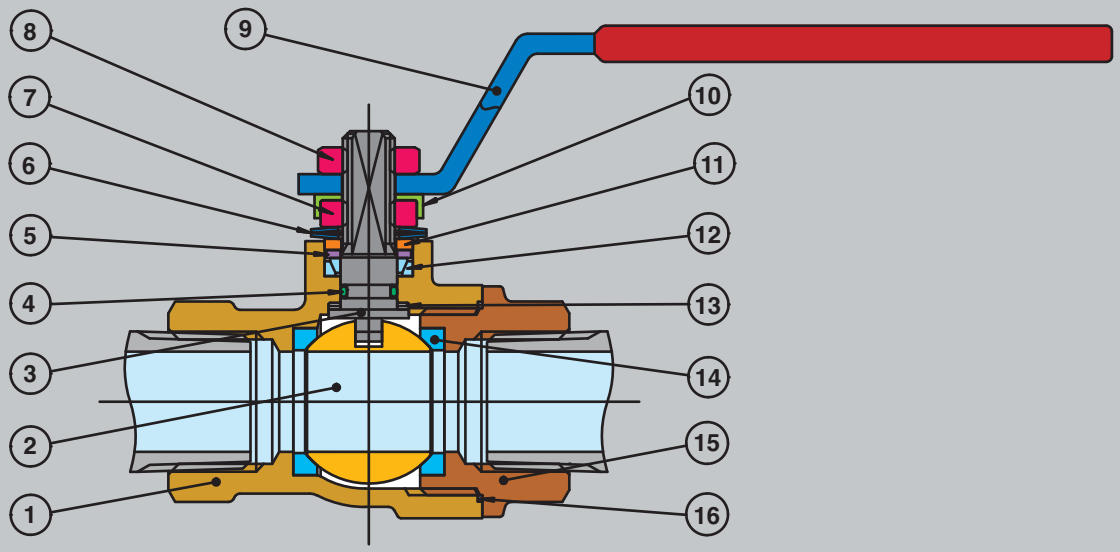
LIMITI DI TEMPERATURA
Da -20°C a +150°C.

SAPHIR
Ball valves in stainless steel with threads.
Polished version.
Full bore design.

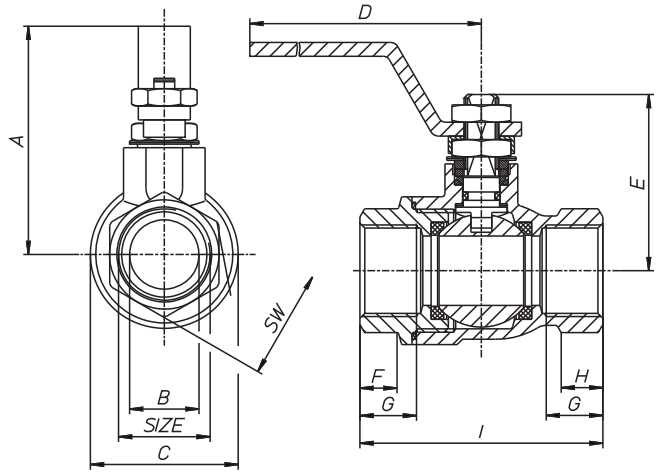
END CONNECTIONS
Female screwed to UNI EN 10226 (ex ISO 7/1 Rp).
Male screwed to UNI EN 10226 (ex ISO 7/1 Rp).
Special threads (BSPT, NPT, etc.) available on request.

WORKING PRESSURE
From PN 100 (1/4") to PN 40 (2").

TEMPERATURE LIMITS
From -20°C to +150°C.



PARTICOLARI COMPONENTS	DESCRIZIONE DESCRIPTION	MATERIALI MATERIAL
1 Corpo / Body	Fusione / Investment casting	AISI 316 D 1.4408
2 Sfera / Ball	Da barra / Forged	AISI 316 D 1.4401
3 Perno / Stem	Da barra / From bar	AISI 316 D 1.4401
4 O-ring / O-ring	Verde o nero / Green or black	Fluorelastomero / Fluoroelastomer
5 Premiguarnizione / Packing washers	Da barra / From bar	AISI 304 D 1.4301
6 Rondelle elastiche / Spring washers	Trafilato / Drawn	AISI 301 D 1.4310
7 Dado del perno / Stem retaining-nut	Fuso / Forged	AISI 304 D 1.4301
8 Dado / Locking nut	Fuso / Forged	AISI 304 D 1.4301
9 Leva / Lever handle	Plastificata rossa / P.V.C. insulated red color	AISI 304 D 1.4301
10 Base per il dado di fissaggio / Fixing-nut-plat	Blanked	AISI 304 D 1.4301
11 Fermo / Operation-stop	Blanked	AISI 304 D 1.4301
12 Guarnizione di tenuta superiore / Stem packing	Da barra / From bar	Virgin P.T.F.E.
13 Anello antifrizione / Thrust washer	Da barra / From bar	Virgin P.T.F.E.
14 Sedi laterali / Ball seats	Da barra / From bar	Virgin P.T.F.E.
15 Manicotto / End adapter	Fusione / Investment casting	AISI 316 D 1.4408
16 Guarnizione statica / Static gasket	Da barra / From bar	Virgin P.T.F.E.



ESECUZIONI SPECIALI
Guarnizioni speciali
Perni con dispositivo antistatico da 3/4" a 2"
Versione sgrassata
La valvola è disponibile con certificato ATEX su richiesta (da 3/4" a 2")

SPECIAL EXECUTIONS
Special gaskets available
Stems with antistatic device from 3/4" to 2"
Degreased version
On request the valve is available with ATEX certificate (from 3/4" to 2")

Size	A mm	B mm	C mm	D mm	E mm	F mm	G mm	H mm	I mm	SW. EXA.	SW. OCT.	MF weight gr.	FF weight gr.	PN
1/4"	52	8	29	110	37	8,5	11,4	8	55	21,5	-	230	230	100
3/8"	52	10	29	110	37	8,5	11,4	8	55	21,5	-	230	215	100
1/2"	55	15	34	110	42	10	15	9,5	65	26,5	-	315	285	100
3/4"	66	20	42,5	140	52	11,5	16,3	11,5	70	31,5	-	535	465	63
1"	70	25	50,5	140	56	14	19,1	13,5	85	40,5	-	805	710	63
1"1/4	85	32	63	180	68	15,5	21,4	16	95	-	49,5	1320	1180	40
1"1/2	91	40	75,5	180	74	18,5	21,4	16	105	-	54,5	1875	1740	40
2"	105	50	91	230	87	22,5	25,7	23,5	125	-	69,5	3130	2930	40

Coppia di sblocco in Nm / Breaking Torque in Nm

DN size		10 1/4-3/8"	15 1/2"	20 3/4"	25 1"	32 1"1/4	40 1"1/2	50 2"
PN - bar	0	1,6	3,2	3,6	4,6	11,5	19	27,5
	16	1,8	4,3	4,9	5,9	15	24	38
	40	2,5	5,1	6	6,9	16,7	28,6	42
	64	3,2	5,6	6,8	8			
	100	3,8	6,5					
		Nm						

I valori in Nm possono cambiare a seconda dei materiali utilizzati per le sedi, della temperatura e del fluido. Per un utilizzo sicuro dei vari tipi di servocontrollo è necessario considerare un fattore di sicurezza idoneo.

Values in Nm can change depending on the material used for seats, on temperature and on the fluid used. For a safe working of the various sorts of servocontrol, it is necessary to consider a suitable safety factor.

Diagramma pressione/temperatura
Pressure/temperature diagram

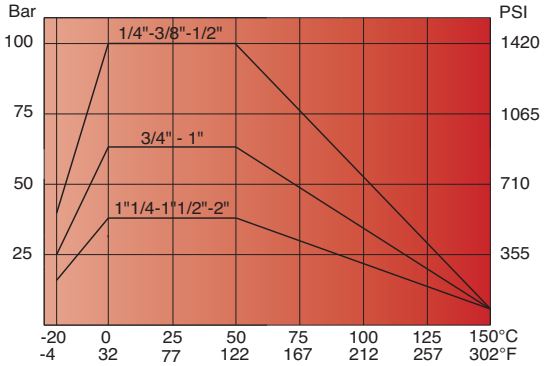
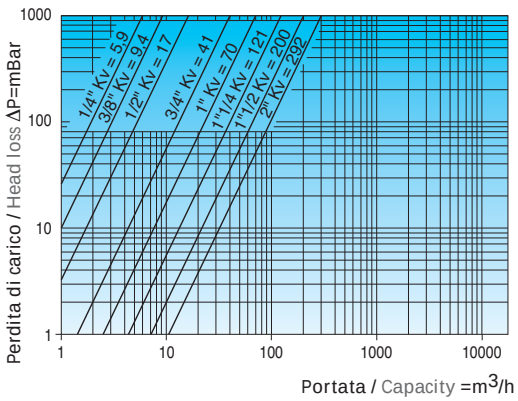


Diagramma perdite di carico
Head loss diagram



TENAX•WP

TENAX•WP
Valvole a sfera filettata in acciaio inox con basetta ISO per attuatori.

FILETTATURE
Femmina filettata UNI EN 10226 (ex ISO 7/1 Rp).
Maschio filettato UNI EN 10226 (ex ISO 7/1 Rp).
Filettature speciali (BSPT, NPT, ecc.) disponibili su richiesta.

PRESSIONE DI ESERCIZIO
Da PN 160 (3/8") a PN 40 (2").

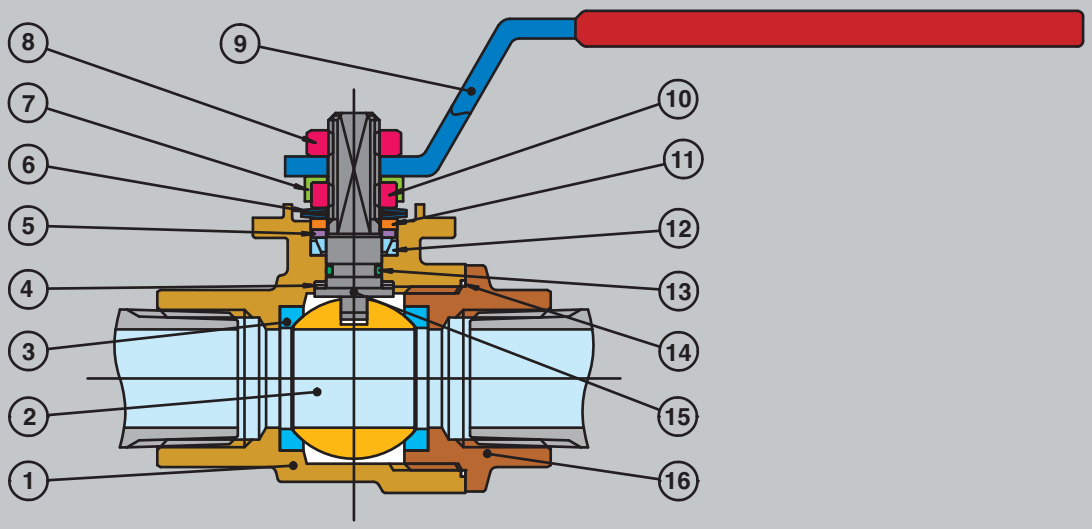
LIMITI DI TEMPERATURA
Da -20°C a +150°C.

TENAX•WP
Ball valves in stainless steel with ISO plate for actuators.

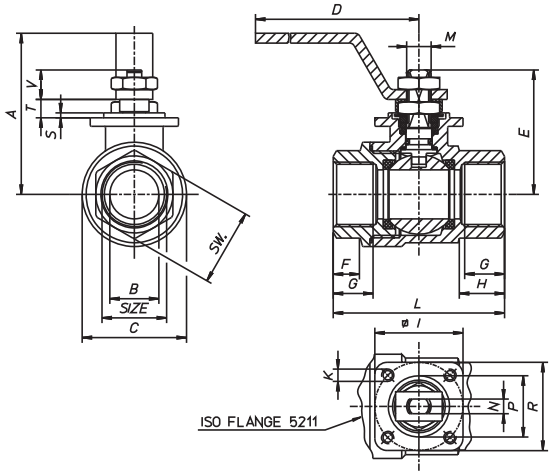
END CONNECTIONS
Female screwed to UNI EN 10226 (ex ISO 7/1 Rp).
Male screwed to UNI EN 10226 (ex ISO 7/1 Rp).
Special threads (BSPT, NPT, etc.) available on request.

WORKING PRESSURE
From PN 160 (3/8") to PN 40 (2").

TEMPERATURE LIMITS
From -20°C to +150°C.



PARTICOLARI COMPONENTS	DESCRIZIONE DESCRIPTION	MATERIALI MATERIAL
1 Corpo / Body	Fusione / Investment casting	AISI 316 D 1.4408
2 Sfera / Ball	Da barra / Forged	AISI 316 D 1.4401
3 Perno / Stem	Da barra / From bar	Virgin P.T.F.E.
4 Anello antifrizione / Thrust washer	Da barra / From bar	Virgin P.T.F.E.
5 Premiguarnizione / Packing washers	Da barra / From bar	AISI 304 D 1.4301
6 Rondelle elastiche / Spring washers	Trafilato / Drawn	AISI 301 D 1.4310
7 Base per il dado fisso / Fixing-nut-plat	Blanked	AISI 304 D 1.4301
8 Dado / Locking nut	Fuso / Forged	AISI 304 D 1.4301
9 Leva / Lever handle	Plastificata rossa / P.V.C. insulated red color	AISI 304 D 1.4301
10 Dado del perno / Stem retaining-nut	Fuso / Forged	AISI 304 D 1.4301
11 Fermo / Operation-stop	Blanked	AISI 304 D 1.4301
12 Guarnizione di tenuta superiore / Stem packing	Da barra / From bar	Virgin P.T.F.E.
13 O-ring / O-ring	Verde o nero / Green or black	Fluorelastomero / Fluoroelastomer
14 Guarnizione statica / Static gasket	Da barra / From bar	Virgin P.T.F.E.
15 Perno / Stem	Da barra / From bar	AISI 316 D 1.4401
16 Manicotto / End adapter	Fusione / Investment casting	AISI 316 D 1.4408



ESECUZIONI SPECIALI
Guarnizioni speciali
Perni con dispositivo antistatico da 3/4" a 2"
Versione sgrassata
La valvola è disponibile con certificato ATEX su richiesta (da 3/4" a 2")
Versione lucidata

SPECIAL EXECUTIONS
Special gaskets available
Stems with antistatic device from 3/4" to 2"
Degreased version
On request the valve is available with ATEX certificate (from 3/4" to 2")
Polished version

Size	A mm	B mm	C mm	D mm	E mm	F mm	G mm	H mm	I mm	K mm	L mm	M mm	N mm	P mm	R mm	S mm	T mm	V mm	SW. EXA.	SW. OCT.	ISO FLANGE	weight gr.	PN
3/8"	52	10	29	110	37	8,5	11,4	13,5	36	M5	55	M8	4	25	36	2	6	9,5	21,5	-	F03	245	160
1/2"	55	15	34	110	42	10	15	18	36	M5	65	M8	4	25	36	2	6	9,5	26,5	-	F03	325	160
3/4"	66	20	42,5	140	52	11,5	16,3	18	36	M5	70	M10	6	25	36	2	7,5	12	31,5	-	F03	510	100
1"	70	25	50,5	140	56	14	19,1	27,5	36	M5	85	M10	6	25	36	2	7,5	12	40,5	-	F03	765	100
1"1/4	85	32	63	180	68	15,5	21,4	28,5	42	M5	95	M12	8	30	42	3	9,5	13,5	-	49,5	F04	1270	64
1"1/2	91	40	75,5	180	74	18,5	21,4	23	42	M5	105	M12	8	30	42	3	9,5	13,5	-	54,5	F04	1810	64
2"	105	50	91	230	87	22,5	25,7	35	50	M6	125	M16	10	35	50	3	11,3	17,8	-	69,5	F05	3160	40

Coppia di sblocco in Nm / Breaking Torque in Nm

DN size	10 3/8"	15 1/2"	20 3/4"	25 1"	32 1"1/4	40 1"1/2	50 2"
PN - bar 0	1,6	3,2	3,6	4,6	11,5	19	27,5
16	1,8	4,3	4,9	5,9	15	24	38
40	2,5	5,1	6	6,9	16,7	28,6	42
64	3,2	5,6	6,8	8	18,4	32	
100	3,8	6,5	8,5	10			
160	5	8					
	Nm						

I valori in Nm possono cambiare a seconda dei materiali utilizzati per le sedi, della temperatura e del fluido. Per un utilizzo sicuro dei vari tipi di servocontrollo è necessario considerare un fattore di sicurezza idoneo.

Values in Nm can change depending on the material used for seats, on temperature and on the fluid used. For a safe working of the various sorts of servocontrol, it is necessary to consider a suitable safety factor.

Diagramma pressione/temperatura
Pressure/temperature diagram

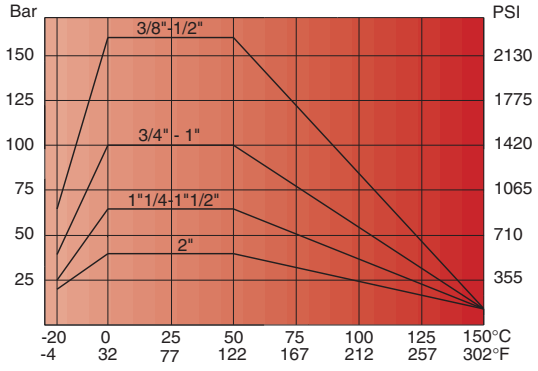
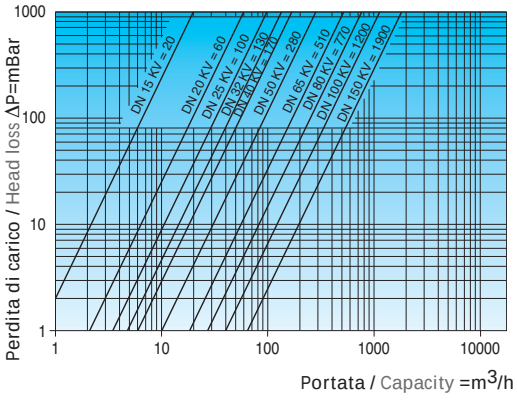


Diagramma perdite di carico
Head loss diagram



JADE

JADE
Valvola a sfera in acciaio tipo wafer.
Disponibile in acciaio inox e acciaio al carbonio.
Fori ISO 5211 per il montaggio dell'attuatore.
Fire safe a norma BS 6755, API 6FA, API 607.
Prescrizioni generali BS 5351.

CONNESSIONI
Flange come da norma UNI EN 1092-1

PRESSIONE DI ESERCIZIO
Standard PN40.
PN40 su richiesta solo su DN65 e DN100 (A105) e versione non debordante.

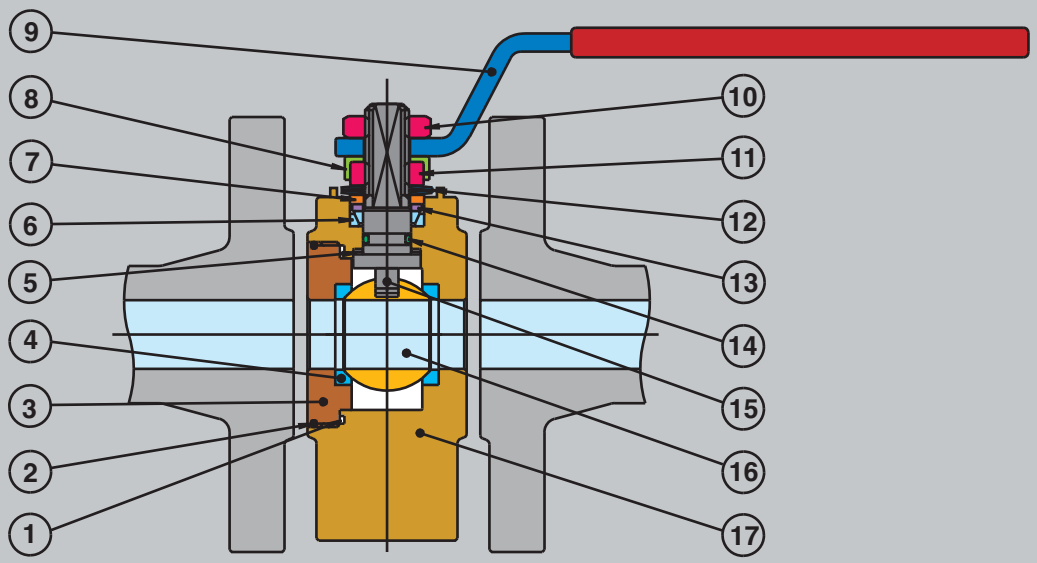
LIMITI DI TEMPERATURA
Da -20°C a +180°C. (AISI 316, PTFE)
Da -10°C a +180°C. (A105, PTFE)

JADE
Wafer ball valve stainless steel or carbon steel.
ISO 5211 mounting holes for actuators.
Fire safe BS 6755, API 6FA, API 607.
General prescription BS 5351.

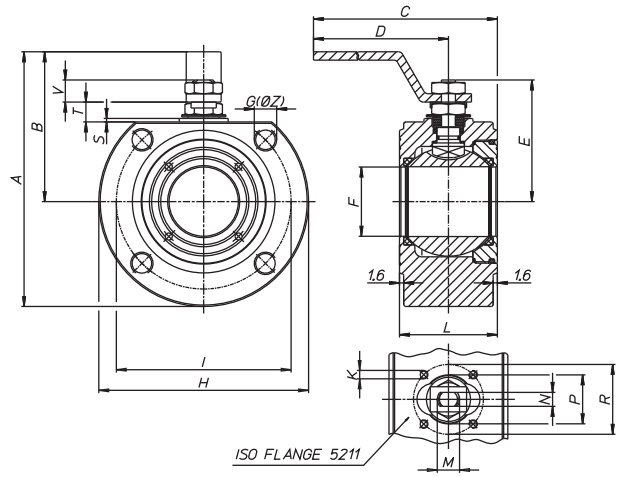
END CONNECTIONS
Flanges to UNI EN 1092-1

WORKING PRESSURE
Standard PN40.
PN40 on request only for DN65 and DN100 (A105) and "Long Version".

TEMPERATURE LIMITS
From -20°C to +180°C. (AISI 316, PTFE)
From -10°C to +180°C. (A105, PTFE)



PARTICOLARI COMPONENTS	JADE acciaio inox JADE stanless steel	JADE acciaio carbonio JADE carbon steel
1 Guarnizione statica / Static gasket	Virgin P.T.F.E.	Virgin P.T.F.E.
2 O-ring statico / Static O-ring	NBR	NBR
3 Ghiera / Body insert	AISI 316 D 1.4401	A 105
4 Sedi laterali / Ball seats	Virgin P.T.F.E.	Virgin P.T.F.E.
5 Anello antifrizione / Thrust washer	Virgin P.T.F.E.	Virgin P.T.F.E.
6 Guarnizione di tenuta superiore / Stem packing	Virgin P.T.F.E.	Virgin P.T.F.E.
7 Fermo / Operation-stop	AISI 304 D 1.4301	AISI 304 D 1.4301
8 Base per il dado di fissaggio / Fixing-nut-plat	AISI 304 D 1.4301	AISI 304 D 1.4301
9 Leva / Lever handle	AISI 304 D 1.4301	Fe PO2 Zinc. plated steel
10 Dado / Locking nut	AISI 304 D 1.4301	Zinc. plated steel
11 Dado del perno / Stem retaining-nut	AISI 304 D 1.4301	Zinc. plated steel
12 Rondelle elastiche / Spring washers	AISI 301 D 1.4310	50 CrV4
13 Premiguarnizione / Packing washers	AISI 303 D 1.4305	AISI 303 D 1.4305
14 O-ring / O-ring	Fluorelastomero / Fluoroelastomer	Fluorelastomero / Fluoroelastomer
15 Perno / Stem	AISI 316 D 1.4401	AISI 304 D 1.4301
16 Sfera / Ball	AISI 316 D 1.4401	DN 15/40 AISI 316 D 1.4401 DN 50/100 AISI 304 D 1.4301
17 Corpo / Body	AISI 316 D 1.4401	A 105



ESECUZIONI SPECIALI
Guarnizioni speciali
Versione sgrassata
Dispositivo antistatico da DN 15 a DN 32
Su richiesta è disponibile con certificato ATEX
Materiali corpo speciali

SPECIAL EXECUTIONS
Special gaskets available
Degreased version
Antistatic device from DN 15 to DN 32
ATEX certificate
Different materials available

	Size	A mm	B mm	C mm	D mm	E mm	F mm	G mm	H mm	K mm	I mm	L mm	M mm	N mm	P mm	R mm	S mm	T mm	V mm	Z mm	N° holes	PN	ISO FLANGE	weight gr.
STANDARD	DN15	110	65	160	140	48	15	M12	90	M5	65	35	M10	6	25	36	2	8	9	14	4	40	F03	1345
	DN20	120	70	160	140	51	20	M12	100	M5	75	38	M10	6	25	36	2	8	9	14	4	40	F03	1810
	DN25	137	82	200	180	62,5	25	M12	110	M5	85	43	M12	8	30	42	2	11,5	11,5	14	4	40	F04	2505
	DN32	150	85	207	180	67	32	M16	130	M5	100	54	M12	8	30	42	2	9,5	11,5	18	4	40	F04	4330
	DN40	172	102	260	230	80	40	M16	150	M6	110	60	M16	10	35	50	2,5	14	16	18	4	40	F05	5540
	DN50	185	110	265	230	87	50	M16	165	M6	125	70	M16	10	35	50	2,5	14	16	18	4	40	F05	7300
	DN65	225	137,5	380	333	122,5	65	M16	185	M8	145	95	M22	14	55	70	3	18,7	23,8	18	4/8	16	F07	15000
	DN80	245	150	395	333	132,5	78	M16	200	M8	160	122	M22	14	55	70	3	18,7	23,8	18	8	40	F07	20670
	DN100	275	165	440	370	148,5	96	M16	220	M10	180	140	M27	16	70	102	3	22,2	25,3	18	8	16	F10	31500
LONG VERSION	DN40	172	102	260	230	80	40	M16	150	M6	140	66	M16	10	35	50	2,5	14	16	18	4	40	F05	6215
	DN50	193	110	265	230	87	50	M16	165	M6	150	83	M16	10	0	50	0	14	16	18	4	40	F05	8930
	DN65	230	137,5	385	333	122,5	65	M16	185	M8	175	103	M22	14	55	70	3	18,7	23,8	18	4	16	F07	16490
	DN100	275	165	447	370	148,5	96	M16	220	M10	180	153	M27	16	70	102	3	22,2	25,3	18	8	16	F10	34625

Coppia di sblocco in Nm / Breaking Torque in Nm

DN size		15	20	25	32	40	50	65	80	100
PN - bar	0	4	7	10	16	25	35	55	75	150
	16	4,8	8,5	11,3	19	28	39	59	84,5	168
	25	5,2	9,1	12	20,5	29,5	41,5	62,5	92	180
	40	6	10,5	13	22,5	31,5	44	67	99	195
		Nm								

I valori in Nm possono cambiare a seconda dei materiali utilizzati per le sedi, della temperatura e del fluido. Per un utilizzo sicuro dei vari tipi di servocontrollo è necessario considerare un fattore di sicurezza idoneo.

Values in Nm can change depending on the material used for seats, on temperature and on the fluid used. For a safe working of the various sorts of servocontrol, it is necessary to consider a suitable safety factor.

Diagramma pressione/temperatura
Pressure/temperature diagram

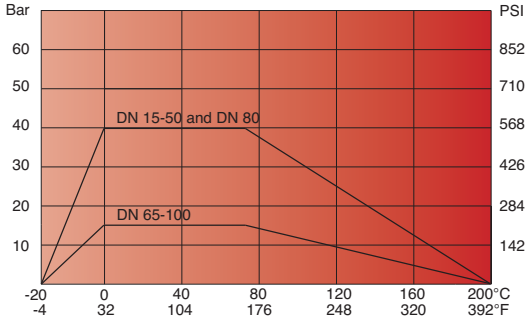
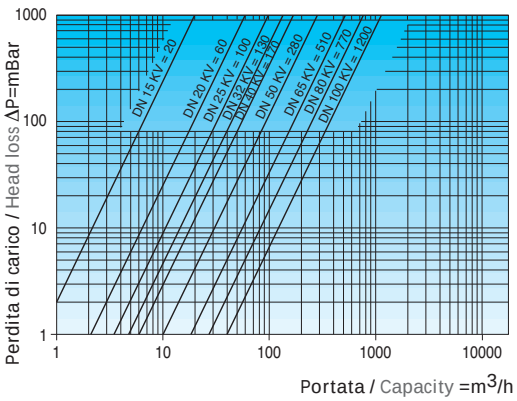


Diagramma perdite di carico
Head loss diagram



JADE ANSI 150

JADE
Valvola a sfera in acciaio tipo wafer.
Disponibile in acciaio inox e acciaio al carbonio.
Fori ISO 5211 per il montaggio dell'attuatore.
Fire safe a norma BS 6755, API 6FA, API 607.
Prescrizioni generali BS 5351.

CONNESSIONI
Flange come da norma ANSI B16.5

PRESSIONE DI ESERCIZIO
ANSI 150.

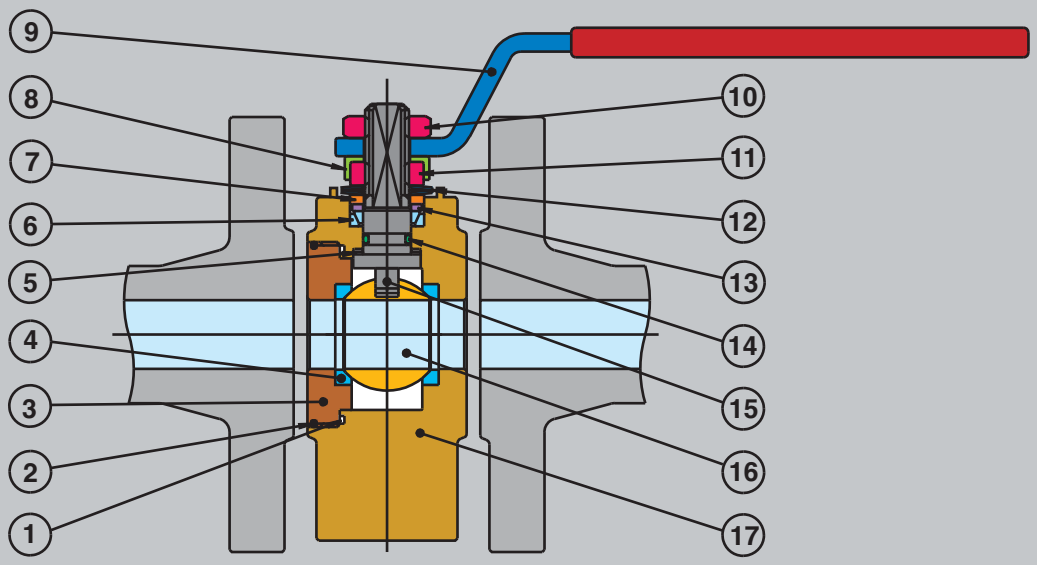
LIMITI DI TEMPERATURA
Da -20°C a +180°C. (AISI 316, PTFE)
Da -10°C a +180°C. (A105, PTFE)

JADE
Wafer ball valve stainless steel or carbon steel.
ISO 5211 mounting holes for actuators.
Fire safe BS 6755, API 6FA, API 607.
General prescription BS 5351.

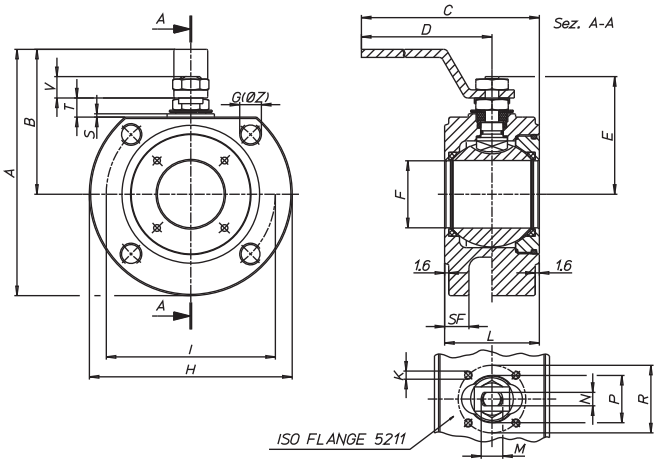
END CONNECTIONS
Flanges to ANSI B16.5

WORKING PRESSURE
ANSI 150.

TEMPERATURE LIMITS
From -20°C to +180°C. (AISI 316, PTFE)
From -10°C to +180°C. (A105, PTFE)



PARTICOLARI COMPONENTS	JADE acciaio inox JADE stanless steel	JADE acciaio carbonio JADE carbon steel
1 Guarnizione statica / Static gasket	Virgin P.T.F.E.	Virgin P.T.F.E.
2 O-ring statico / Static O-ring	NBR	NBR
3 Ghiera / Body insert	AISI 316 D 1.4401	A 105
4 Sedi laterali / Ball seats	Virgin P.T.F.E.	Virgin P.T.F.E.
5 Anello antifrizione / Thrust washer	Virgin P.T.F.E.	Virgin P.T.F.E.
6 Guarnizione di tenuta superiore / Stem packing	Virgin P.T.F.E.	Virgin P.T.F.E.
7 Fermo / Operation-stop	AISI 304 D 1.4301	AISI 304 D 1.4301
8 Base per il dado di fissaggio / Fixing-nut-plat	AISI 304 D 1.4301	AISI 304 D 1.4301
9 Leva / Lever handle	AISI 304 D 1.4301	Fe PO2 Zinc. plated steel
10 Dado / Locking nut	AISI 304 D 1.4301	Zinc. plated steel
11 Dado del perno / Stem retaining-nut	AISI 304 D 1.4301	Zinc. plated steel
12 Rondelle elastiche / Spring washers	AISI 301 D 1.4310	50 CrV4
13 Premiguarnizione / Packing washers	AISI 303 D 1.4305	AISI 303 D 1.4305
14 O-ring / O-ring	Fluorelastomero / Fluoroelastomer	Fluorelastomero / Fluoroelastomer
15 Perno / Stem	AISI 316 D 1.4401	AISI 304 D 1.4301
16 Sfera / Ball	AISI 316 D 1.4401	DN 15/40 AISI 316 D 1.4401 DN 50/100 AISI 304 D 1.4301
17 Corpo / Body	AISI 316 D 1.4401	A 105



ESECUZIONI SPECIALI
Guarnizioni speciali
Versione sgrassata
Dispositivo antistatico da 1/2" A 1"1/4
Su richiesta è disponibile con certificato ATEX
Materiali corpo speciali

SPECIAL EXECUTIONS
Special gaskets available
Degreased version
Antistatic device from 1/2" to 1"1/4
ATEX certificate
Different materials available

Size	A mm	B mm	C mm	D mm	E mm	F mm	G mm	H mm	K mm	I mm	L mm	M mm	N mm	P mm	R mm	S mm	T mm	V mm	Z mm	N° holes	ISO FLANGE	weight gr.
1/2"	110	65	160	140	48	15	1/2"	89	M5	60,5	35	M10	6	25	36	2	8	9	16	4	F03	1240
3/4"	120	70	160	140	51	20	1/2"	98,5	M5	70	38	M10	6	25	36	2	8	9	16	4	F03	1650
1"	136	82	200	180	62,5	25	1/2"	108	M5	79,5	43	M12	8	30	42	2	11,5	11,5	16	4	F04	2450
1"1/4	145	85	207	180	67	32	1/2"	118	M5	89	54	M12	8	30	42	2	9,5	11,5	16	4	F04	3665
1"1/2	165	102	260	230	80	40	1/2"	127	M6	98,5	60	M16	10	35	50	2,5	14	16	16	4	F05	4660
2"	193	110	265	230	87	50	5/8"	165	M6	120,5	70	M16	10	35	50	2,5	14	16	19	4	F05	5800
2"1/2	230	137,5	380	333	122,5	65	5/8"	185	M8	139,5	95	M22	14	55	70	3	18,7	23,8	19	4	F07	10350
3"	250	150	395	333	132,5	78	5/8"	200	M8	152,5	122	M22	14	55	70	3	18,7	23,8	19	4	F07	13900
4"	275	165	440	370	148,5	96	5/8"	220	M10	190,5	140	M27	16	70	102	3	22,2	25,3	19	8	F10	20000

Coppia di sblocco in Nm / Breaking Torque in Nm

DN size		1/2"	1/4"	1"	1"1/2	1"1/4	2"	2"1/2	3"	4"
PN	0	4	7	10	16	25	35	55	75	150
	19bar (ANSI150)	4,8	8,5	11,3	19	28	39	59	84,5	168
	Nm									

I valori in Nm possono cambiare a seconda dei materiali utilizzati per le sedi, della temperatura e del fluido. Per un utilizzo sicuro dei vari tipi di servocontrollo è necessario considerare un fattore di sicurezza idoneo.

Values in Nm can change depending on the material used for seats, on temperature and on the fluid used. For a safe working of the various sorts of servocontrol, it is necessary to consider a suitable safety factor.

Diagramma pressione/temperatura
Pressure/temperature diagram

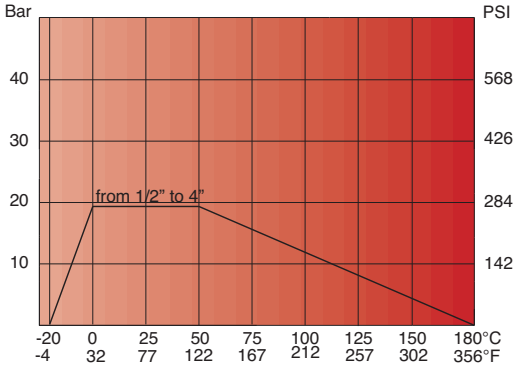
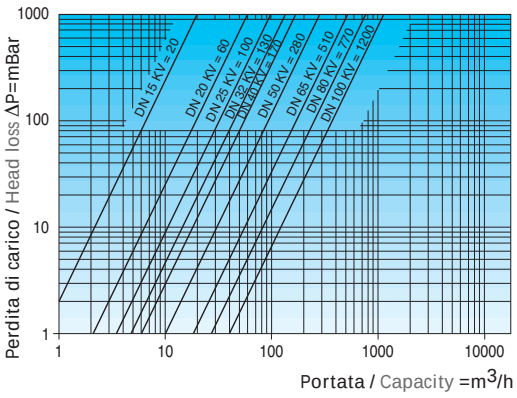


Diagramma perdite di carico
Head loss diagram



JADE ANSI 300 / PN64

JADE
Valvola a sfera in acciaio tipo wafer.
Disponibile in acciaio inox e acciaio al carbonio.
Fori ISO 5211 per il montaggio dell'attuatore.
Fire safe a norma BS 6755, API 6FA, API 607.
Prescrizioni generali BS 5351.

CONNESSIONI
Flange come da norma ANSI B16.5. (ANSI 300).
Flange come da norma UNI EN 1092-1 (PN64).

PRESSIONE DI ESERCIZIO
PN 64 o ANSI 300.

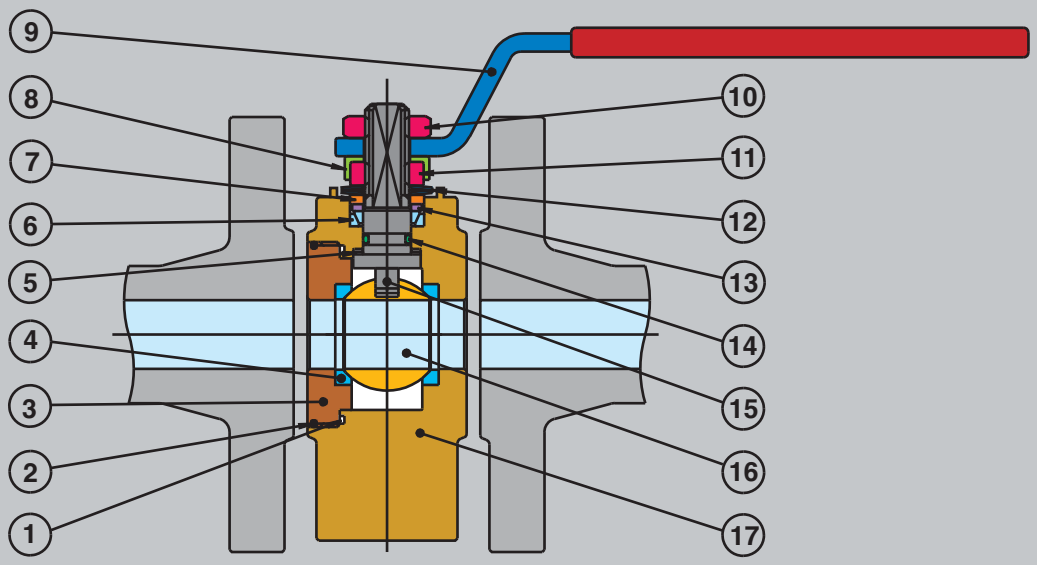
LIMITI DI TEMPERATURA
Da -20°C a +180°C. (AISI 316, PTFE)
Da -10°C a +180°C. (A105, PTFE)

JADE
Wafer ball valve stainless steel or carbon steel.
ISO 5211 mounting holes for actuators.
Fire safe BS 6755, API 6FA, API 607.
General prescription BS 5351.

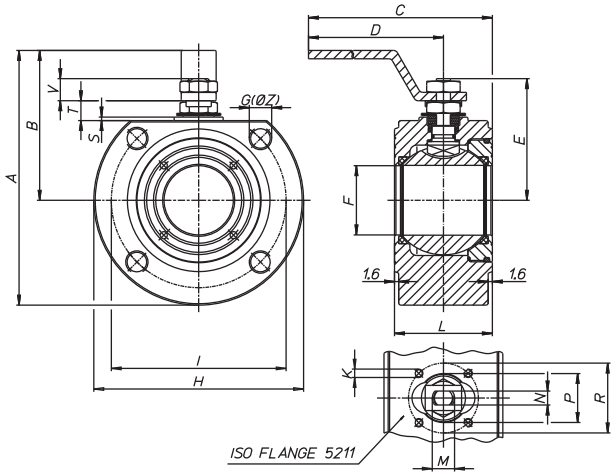
END CONNECTIONS
Flange to ANSI B16.5. (ANSI 300).
Flange to UNI EN 1092-1 (PN64).

WORKING PRESSURE
PN 64 or ANSI 300.

TEMPERATURE LIMITS
From -20°C to +180°C. (AISI 316, PTFE)
From -10°C to +180°C. (A105, PTFE)



PARTICOLARI COMPONENTS	JADE acciaio inox JADE stanless steel	JADE acciaio carbonio JADE carbon steel
1 Guarnizione statica / Static gasket	Virgin P.T.F.E.	Virgin P.T.F.E.
2 O-ring statico / Static O-ring	NBR	NBR
3 Ghiera / Body insert	AISI 316 D 1.4401	A 105
4 Sedi laterali / Ball seats	Virgin P.T.F.E.	Virgin P.T.F.E.
5 Anello antifrizione / Thrust washer	Virgin P.T.F.E.	Virgin P.T.F.E.
6 Guarnizione di tenuta superiore / Stem packing	Virgin P.T.F.E.	Virgin P.T.F.E.
7 Fermo / Operation-stop	AISI 304 D 1.4301	AISI 304 D 1.4301
8 Base per il dado di fissaggio / Fixing-nut-plat	AISI 304 D 1.4301	AISI 304 D 1.4301
9 Leva / Lever handle	AISI 304 D 1.4301	Fe PO2 Zinc. plated steel
10 Dado / Locking nut	AISI 304 D 1.4301	Zinc. plated steel
11 Dado del perno / Stem retaining-nut	AISI 304 D 1.4301	Zinc. plated steel
12 Rondelle elastiche / Spring washers	AISI 301 D 1.4310	50 CrV4
13 Premiguarnizione / Packing washers	AISI 303 D 1.4305	AISI 303 D 1.4305
14 O-ring / O-ring	Fluorelastomero / Fluoroelastomer	Fluorelastomero / Fluoroelastomer
15 Perno / Stem	AISI 316 D 1.4401	AISI 304 D 1.4301
16 Sfera / Ball	AISI 316 D 1.4401	DN 15/40 AISI 316 D 1.4401 DN 50/100 AISI 304 D 1.4301
17 Corpo / Body	AISI 316 D 1.4401	A 105



ESECUZIONI SPECIALI
Versione sgrassata
Dispositivo antistatico da 1/2" A 1"1/4
Su richiesta è disponibile con certificato ATEX
Guarnizioni differenti su richiesta

SPECIAL EXECUTIONS
Degreased version
Antistatic device from 1/2" to 1"1/4
ATEX certificate
Different gasket available

	Size	A mm	B mm	C mm	D mm	E mm	F mm	G mm	H mm	K mm	I mm	L mm	M mm	N mm	P mm	R mm	S mm	T mm	V mm	Z mm	N° holes	PN	ISO FLANGE	weight gr.
PN 64	DN15	119	66	161	140	48	15	M12	105	M5	75	42	M10	6	-	36	-	3	9	14	4	64	F03	2310
	DN20	138	73	163	140	55,5	20	M16	130	M5	90	46	M10	6	-	36	-	3	9	18	4	64	F03	3660
	DN25	160	90	205	180	70,5	25	M16	140	M5	100	50	M12	8	-	42	-	9,5	11,5	18	4	64	F04	4750
	DN32	173	95	207	180	75	32	M20	155	M5	110	54	M12	8	-	42	-	9,5	11,5	22	4	64	F04	6050
	DN40	194	109	263	230	87,5	40	M20	170	M6	125	66	M16	10	35	50	2,5	14	16	22	4	64	F05	8950
	DN50	206	116	272	230	94,5	50	M20	180	M6	135	83	M16	10	35	50	2,5	14	16	22	4	64	F05	12620
ANSI 300	1/2"	113	66	161	140	48	15	1/2"	95,2	M5	66,7	42	M10	6	-	36	-	3	9	16	4	ANSI 300	F03	1725
	3/4"	130	73	163	140	55,5	20	5/8"	117,5	M5	82,5	46	M10	6	-	36	-	3	9	19	4	ANSI 300	F03	2770
	1"	152	90	205	180	70,5	25	5/8"	123,8	M5	88,9	50	M12	8	-	42	-	9,5	11,5	19	4	ANSI 300	F04	3700
	1"1/4	162	95	207	180	75	32	5/8"	133	M5	99	54	M12	8	-	42	-	11,5	11,5	-	4	ANSI 300	F04	5200
	1"1/2	187	109	263	230	87,5	40	3/4"	155,6	M6	114,3	66	M16	10	35	50	2,5	14	16	22	4	ANSI 300	F05	10430
	2"	199	116	272	230	94,5	50	5/8"	165,1	M6	127	83	M16	10	-	50	2,5	14	16	19	8	ANSI 300	F05	11570

Coppia di sblocco in Nm / Breaking Torque in Nm

DN size		15 1/2"	20 3/4"	25 1"	32 1"1/4	40 1"1/2	50 2"			
PN	0	4	7	10	16	25	35			
	51bar (ANSI300)	6	10,5	13	22,5	31,5	44			
		Nm								

I valori in Nm possono cambiare a seconda dei materiali utilizzati per le sedi, della temperatura e del fluido. Per un utilizzo sicuro dei vari tipi di servocontrollo è necessario considerare un fattore di sicurezza idoneo.

Values in Nm can change depending on the material used for seats, on temperature and on the fluid used. For a safe working of the various sorts of servocontrol, it is necessary to consider a suitable safety factor.

Diagramma pressione/temperatura
Pressure/temperature diagram

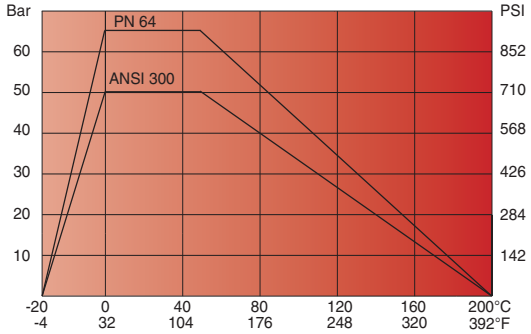
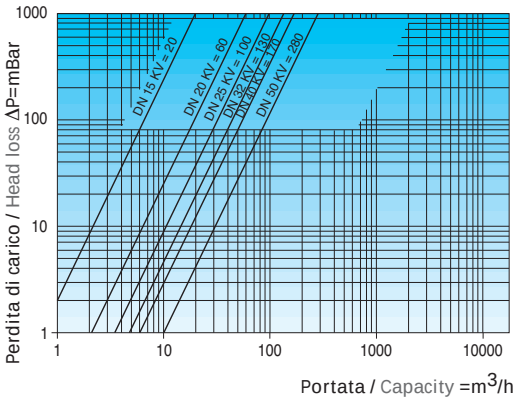


Diagramma perdite di carico
Head loss diagram



CAST JADE

JADE
Valvola a sfera in acciaio tipo wafer da fusione.
Disponibile in acciaio inox e acciaio al carbonio.
Fori ISO 5211 per il montaggio dell'attuatore.
Fire safe a norma BS 6755, API 6FA, API 607.
Prescrizioni generali BS 5351.

CONNESSIONI
Flange come da norma UNI EN 1092-1.

PRESSIONE DI ESERCIZIO
Standard PN 16, su DN32 PN40.

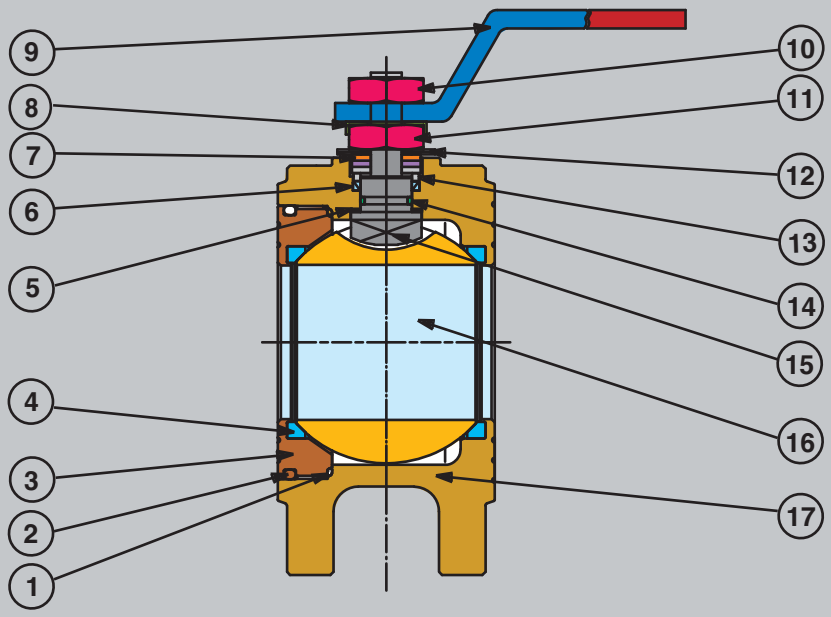
LIMITI DI TEMPERATURA
Da -20°C a +180°C. (AISI 316, PTFE)
Da -10°C a +180°C. (A105, PTFE)

JADE
Wafer ball valve in cast stainless steel or carbon steel.
ISO 5211 mounting holes for actuators.
Fire safe BS 6755, API 6FA, API 607.
General prescription BS 5351.

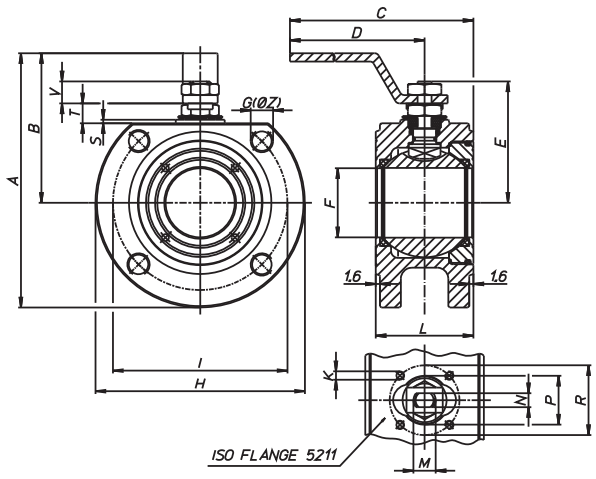
END CONNECTIONS
Flange to UNI EN 1092-1.

WORKING PRESSURE
Standard PN 16, DN32 is PN40.

TEMPERATURE LIMITS
From -20°C to +180°C. (AISI 316, PTFE)
From -10°C to +180°C. (A105, PTFE)



PARTICOLARI COMPONENTS	JADE acciaio inox JADE stanless steel	JADE acciaio carbonio JADE carbon steel
1 Guarnizione statica / Static gasket	Virgin P.T.F.E.	Virgin P.T.F.E.
2 O-ring statico / Static O-ring	NBR	NBR
3 Ghiera / Body insert	AISI 316 D 1.4401	A 105
4 Sedi laterali / Ball seats	Virgin P.T.F.E.	Virgin P.T.F.E.
5 Anello antifrizione / Thrust washer	Virgin P.T.F.E.	Virgin P.T.F.E.
6 Guarnizione di tenuta superiore / Stem packing	Virgin P.T.F.E.	Virgin P.T.F.E.
7 Fermo / Operation-stop	AISI 304 D 1.4301	AISI 304 D 1.4301
8 Base per il dado di fissaggio / Fixing-nut-plat	AISI 304 D 1.4301	AISI 304 D 1.4301
9 Leva / Lever handle	AISI 304 D 1.4301	Fe PO2 Zinc. plated steel
10 Dado / Locking nut	AISI 304 D 1.4301	Zinc. plated steel
11 Dado del perno / Stem retaining-nut	AISI 304 D 1.4301	Zinc. plated steel
12 Rondelle elastiche / Spring washers	AISI 301 D 1.4310	50 CrV4
13 Premiguarnizione / Packing washers	AISI 303 D 1.4305	AISI 303 D 1.4305
14 O-ring / O-ring	Fluorelastomero / Fluoroelastomer	Fluorelastomero / Fluoroelastomer
15 Perno / Stem	AISI 316 D 1.4401	AISI 304 D 1.4301
16 Sfera / Ball	AISI 316 D 1.4401	DN 15/40 AISI 316 D 1.4401 DN 50/100 AISI 304 D 1.4301
17 Corpo / Body	AISI 316 D 1.4408 cast	A 105



ESECUZIONI SPECIALI
Guarnizioni speciali
Versione sgrassata
Dispositivo antistatico da DN 15 a DN 32
Su richiesta è disponibile con certificato ATEX
Materiali corpo speciali

SPECIAL EXECUTIONS
Special gaskets available
Degreased version
Antistatic device from DN 15 to DN 32
ATEX certificate
Different materials available

	Size	A mm	B mm	C mm	D mm	E mm	F mm	G mm	H mm	K mm	I mm	L mm	M mm	N mm	P mm	R mm	S mm	T mm	V mm	Z mm	N° holes	PN	ISO FLANGE	weight gr.
STANDARD	DN32	150	85	207	180	67	32	M16	130	M5	100	54	M12	8	30	42	2	9,5	11,5	18	4	40	F04	4040
	DN40	172	102	260	230	80	40	M16	150	M6	110	60	M16	10	35	50	2,5	14	16	18	4	16	F05	4190
	DN50	193	110	265	230	87	50	M16	165	M6	125	70	M16	10	35	50	2,5	14	16	18	4	16	F05	5780
	DN65	230	137,5	380	333	122,65	65	M16	185	M8	145	95	M22	14	55	70	3	18,7	23,8	18	4	16	F07	10200
	DN80	250	150	395	333	132,5	78	M16	200	M8	160	122	M22	14	55	70	3	18,7	23,8	18	8	16	F07	13790
	DN100	275	165	440	370	148,5	96	M16	220	M10	180	140	M27	16	70	102	3	22,2	25,3	18	8	16	F10	20000

LONG VERSION	DN50	193	110	265	230	87	50	M16	165	M6	125	83	M16	10	0	50	0	14	16	18	4	16	F05	6180
	DN65	230	137,5	385	335	122,5	65	M16	185	M8	145	103	M22	14	55	70	3	18,7	23,8	18	4	16	F07	10690
	DN100	275	165	447	370	148,5	96	M16	220	M10	180	153	M27	16	70	102	3	22,2	25,3	18	8	16	F10	21940

Coppia di sblocco in Nm / Breaking Torque in Nm

DN size	32	40	50	65	80	100			
PN - bar 0	16	25	35	55	75	150			
PN - bar 16	19	28	39	59	84,5	168			
PN - bar 25	20,5								
PN - bar 40	22,5								
	Nm								

I valori in Nm possono cambiare a seconda dei materiali utilizzati per le sedi, della temperatura e del fluido. Per un utilizzo sicuro dei vari tipi di servocontrollo è necessario considerare un fattore di sicurezza idoneo.

Values in Nm can change depending on the material used for seats, on temperature and on the fluid used. For a safe working of the various sorts of servocontrol, it is necessary to consider a suitable safety factor.

Diagramma pressione/temperatura
Pressure/temperature diagram

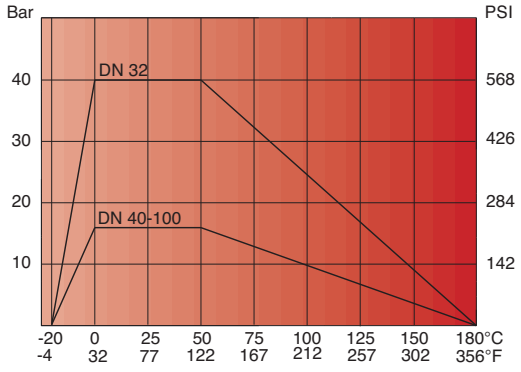
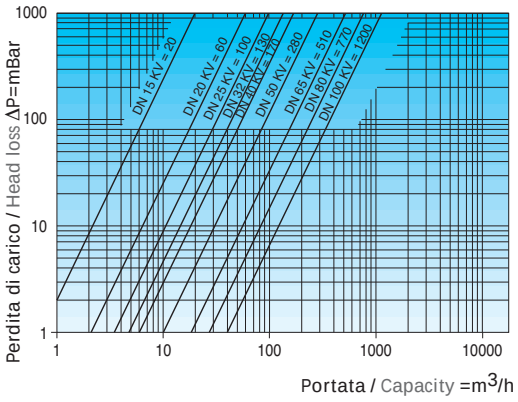


Diagramma perdite di carico
Head loss diagram



JACKET JADE

JADE
Valvola a sfera serie wafer con camicie di riscaldamento.
Disponibile in acciaio inox e acciaio al carbonio.
Fori ISO 5211 per il montaggio dell'attuatore.
Fire safe a norma BS 6755, API 6FA, API 607.
Prescrizioni generali BS 5351.

CONNESSIONI
Flange come da norma UNI EN 1092-1
ANSI B16.5.

PRESSIONE DI ESERCIZIO
Standard PN 16, su richiesta PN 25 e PN 40.
ANSI 150.

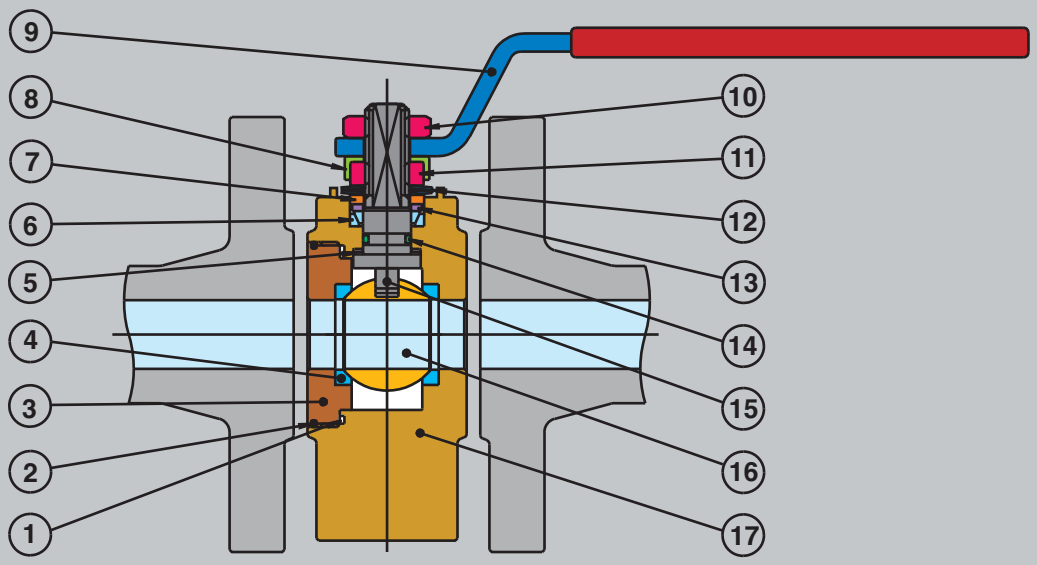
LIMITI DI TEMPERATURA
Da -20°C a +180°C. (AISI 316, PTFE)
Da -10°C a +180°C. (A105, PTFE)

JADE
Ball valve wafer type with heating jacket.
Available in stainless steel and carbon steel.
ISO 5211 mounting holes for actuators.
Fire safe BS 6755, API 6FA, API 607.
General prescription BS 5351.

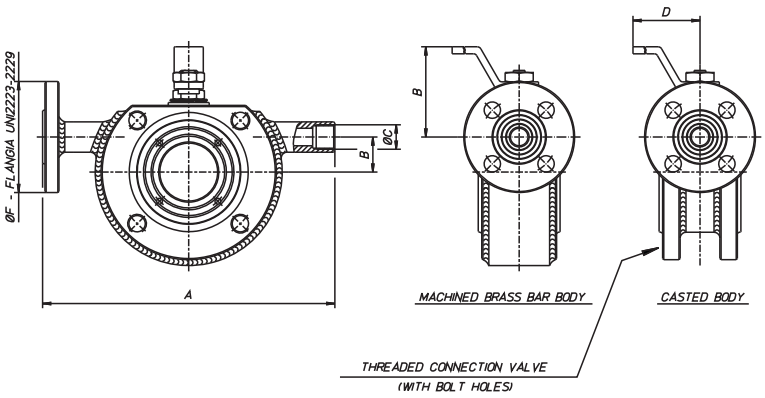
END CONNECTIONS
Flanges to UNI EN 1092-1
ANSI B16.5.

WORKING PRESSURE
Standard PN 16, on request PN 25 and PN 40.
ANSI 105.

TEMPERATURE LIMITS
From -20°C to +180°C. (AISI 316, PTFE)
From -10°C to +180°C. (A105, PTFE)



PARTICOLARI COMPONENTS	JADE acciaio inox JADE stanless steel	JADE acciaio carbonio JADE carbon steel
1 Guarnizione statica / Static gasket	Virgin P.T.F.E.	Virgin P.T.F.E.
2 O-ring statico / Static O-ring	NBR	NBR
3 Ghiera / Body insert	AISI 316 D 1.4401	A 105
4 Sedi laterali / Ball seats	Virgin P.T.F.E.	Virgin P.T.F.E.
5 Anello antifrizione / Thrust washer	Virgin P.T.F.E.	Virgin P.T.F.E.
6 Guarnizione di tenuta superiore / Stem packing	Virgin P.T.F.E.	Virgin P.T.F.E.
7 Fermo / Operation-stop	AISI 304 D 1.4301	AISI 304 D 1.4301
8 Base per il dado di fissaggio / Fixing-nut-plat	AISI 304 D 1.4301	AISI 304 D 1.4301
9 Leva / Lever handle	AISI 304 D 1.4301	Fe PO2 Zinc. plated steel
10 Dado / Locking nut	AISI 304 D 1.4301	Zinc. plated steel
11 Dado del perno / Stem retaining-nut	AISI 304 D 1.4301	Zinc. plated steel
12 Rondelle elastiche / Spring washers	AISI 301 D 1.4310	50 CrV4
13 Premiguarnizione / Packing washers	AISI 303 D 1.4305	AISI 303 D 1.4305
14 O-ring / O-ring	Fluorelastomero / Fluoroelastomer	Fluorelastomero / Fluoroelastomer
15 Perno / Stem	AISI 316 D 1.4401	AISI 304 D 1.4301
16 Sfera / Ball	AISI 316 D 1.4401	DN 15/40 AISI 316 D 1.4401 DN 50/100 AISI 304 D 1.4301
17 Corpo / Body	AISI 316 D 1.4408 cast / D 1.4401 from bar	A 105



ESECUZIONI SPECIALI

Camicie di riscaldamento in acciaio inox AISI 304
Filettature NPT secondo la norma ANSI B 1.20.1 (filettatura conica)
Su richiesta è disponibile con certificato ATEX

SPECIAL EXECUTIONS

Heating jackets in stainless steel AISI 304
End connections NPT to ANSI B 1.20.1 (taper threads)
ATEX certificate

Size	A mm	B mm	Ø C	D mm	E mm	Ø F
DN15	160	0	G1/2	140	65	DN15
DN20	160	0	G1/2	140	70	DN15
DN25	190	0	G1/2	180	82	DN15
DN32	210	25	G1/2	180	85	DN15
DN40	230	30	G1/2	230	102	DN15
DN50	250	10	G1/2	230	110	DN15
DN65	270	45	G1/2	350	137,5	DN15
DN80	300	50	G1/2	350	150	DN15
DN100	340	70	G1	508	165	DN25

Coppia di sblocco in Nm / Breaking Torque in Nm

DN size		15	20	25	32	40	50	65	80	100
PN - bar	0	4	7	10	16	25	35	55	75	150
	16	4,8	8,5	11,3	19	28	39	59	84,5	168
	25	5,2	9,1	12	20,5	29,5	41,5		92	
	40	6	10,5	13	22,5	31,5	44		99	
		Nm								

I valori in Nm possono cambiare a seconda dei materiali utilizzati per le sedi, della temperatura e del fluido. Per un utilizzo sicuro dei vari tipi di servocontrollo è necessario considerare un fattore di sicurezza idoneo.

Values in Nm can change depending on the material used for seats, on temperature and on the fluid used. For a safe working of the various sorts of servocontrol, it is necessary to consider a suitable safety factor.

Diagramma pressione/temperatura
Pressure/temperature diagram

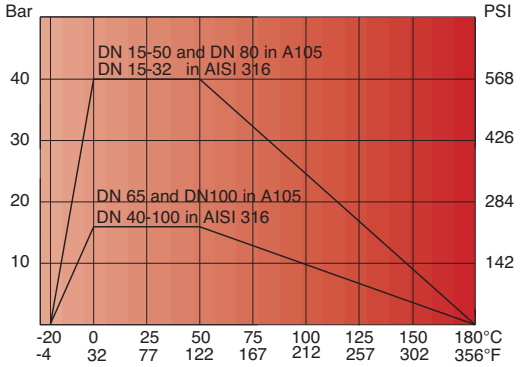
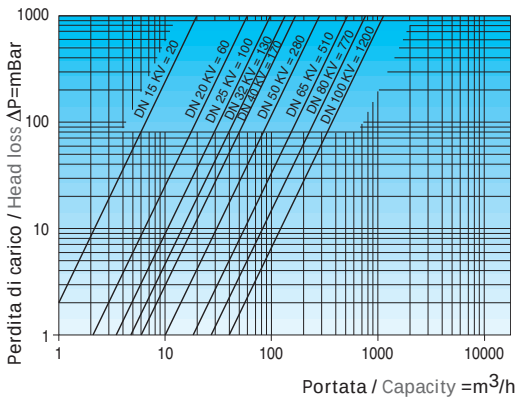


Diagramma perdite di carico
Head loss diagram



JADE 3W

JADE
Valvola a sfera tipo wafer a 3 vie.
Disponibile in acciaio inox e acciaio al carbonio.
Fori ISO per il montaggio dell'attuatore.
Fire safe a norma BS 6755, API 6FA, API 607.
Prescrizioni generali BS 5351.
Connessione con l'attuatore ISO 5211.

CONNESSIONI
Flange come da norma UNI EN 1092-1
ANSI B16.5.

PRESSIONE DI ESERCIZIO
Standard PN 16, su richiesta PN 25 e PN 40.

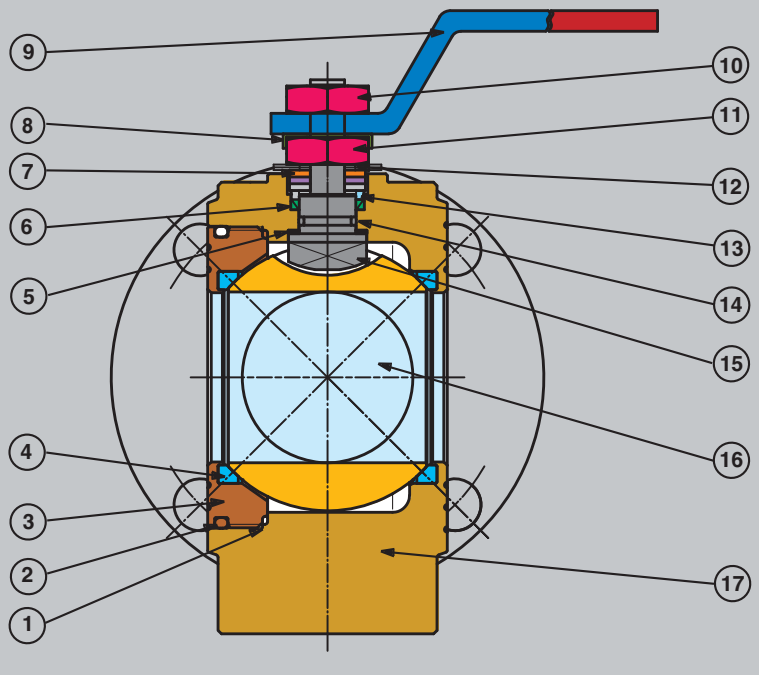
LIMITI DI TEMPERATURA
Da -20°C a +180°C. (AISI 316, PTFE)
Da -10°C a +180°C. (A105, PTFE)

JADE
3-way wafer ball valve.
Available in stainless steel and carbon steel.
ISO mounting holes for actuators.
Fire safe BS 6755, API 6FA, API 607.
General prescription BS 5351.
Connetion with actuator ISO 5211.

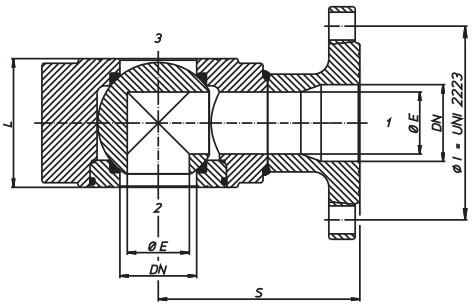
END CONNECTIONS
Flanges to UNI EN 1092-1
ANSI B16.5.

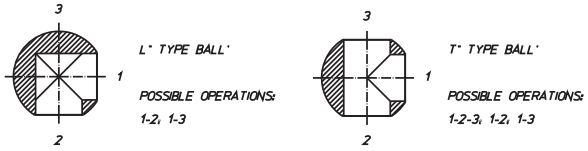
WORKING PRESSURE
Standard PN 16, on request PN 25 and PN 40.

TEMPERATURE LIMITS
From -20°C to +180°C. (AISI 316, PTFE)
From -10°C to +180°C. (A105, PTFE)



PARTICOLARI COMPONENTS	JADE acciaio inox JADE stanless steel	JADE acciaio carbonio JADE carbon steel
1 Guarnizione statica / Static gasket	Virgin P.T.F.E.	Virgin P.T.F.E.
2 O-ring statico / Static O-ring	NBR	NBR
3 Ghiera / Body insert	AISI 316 D 1.4401	A 105
4 Sedi laterali / Ball seats	Virgin P.T.F.E.	Virgin P.T.F.E.
5 Anello antifrizione / Thrust washer	Virgin P.T.F.E.	Virgin P.T.F.E.
6 Guarnizione di tenuta superiore / Stem packing	Virgin P.T.F.E.	Virgin P.T.F.E.
7 Fermo / Operation-stop	AISI 304 D 1.4301	AISI 304 D 1.4301
8 Base per il dado di fissaggio / Fixing-nut-plat	AISI 304 D 1.4301	AISI 304 D 1.4301
9 Leva / Lever handle	AISI 304 D 1.4301	Fe PO2 Zinc. plated steel
10 Dado / Locking nut	AISI 304 D 1.4301	Zinc. plated steel
11 Dado del perno / Stem retaining-nut	AISI 304 D 1.4301	Zinc. plated steel
12 Rondelle elastiche / Spring washers	AISI 301 D 1.4310	50 CrV4
13 Premiguarnizione / Packing washers	AISI 303 D 1.4305	AISI 303 D 1.4305
14 O-ring / O-ring	Fluorelastomero / Fluoroelastomer	Fluorelastomero / Fluoroelastomer
15 Perno / Stem	AISI 316 D 1.4401	AISI 316 D 1.4401
16 Sfera / Ball	AISI 316 D 1.4401	DN 15/40 AISI 316 D 1.4401 DN 50/100 AISI 304 D 1.4301
17 Corpo / Body	AISI 316 D 1.4408 cast / D 1.4401 from bar	A 105





ESECUZIONI SPECIALI
Guarnizioni speciali
Dispositivo antistatico da DN 15 a DN 32
Su richiesta è disponibile con certificato ATEX

SPECIAL EXECUTIONS
Special gaskets available
Antistatic device from DN 15 to DN 32
ATEX certificate

Size	Ø E	Ø I	L mm	S mm
DN15	10	65	35	85
DN20	15	75	38	90
DN25	20	85	43	90
DN32	25	100	54	105
DN40	32	110	66	120
DN50	40	125	83	130
DN65	50	145	103	150
DN80	65	160	122	175
DN100	78	180	153	185

Vogliate fare riferimento alla serie Jade per tutte le altre quote. / For all other dimensions, please refer to Jade series.

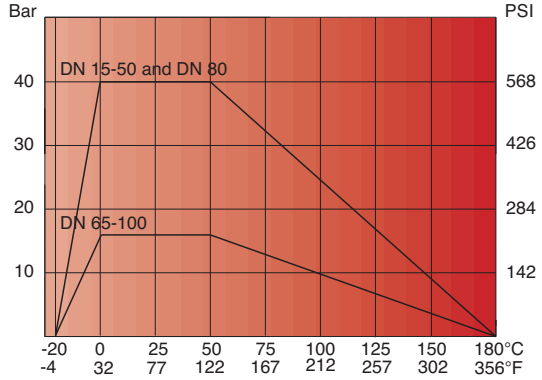
Coppia di sblocco in Nm / Breaking Torque in Nm

DN size		15	20	25	32	40	50	65	80	100
PN - bar	0	4	7	10	16	25	35	55	75	150
	16	4,8	8,5	11,3	19	28	39	59	84,5	168
	25	5,2	9,1	12	20,5	29,5	41,5		92	
	40	6	10,5	13	22,5	31,5	44		99	
		Nm								

I valori in Nm possono cambiare a seconda dei materiali utilizzati per le sedi, della temperatura e del fluido. Per un utilizzo sicuro dei vari tipi di servocontrollo è necessario considerare un fattore di sicurezza idoneo.

Values in Nm can change depending on the material used for seats, on temperature and on the fluid used. For a safe working of the various sorts of servocontrol, it is necessary to consider a suitable safety factor.

Diagramma pressione/temperatura
Pressure/temperature diagram



DIAMOND

DIAMOND
Valvola a sfera tipo wafer serie pesante in acciaio inox e acciaio carbonio.
Antistatica a norme BS 6755, API 6FA, API 607.
Connessione con attuatori a norma ISO 5211.
Prescrizioni generali a norma BS 5351.

CONNESSIONI
Flange come da norma UNI EN 1092-1.

PRESSIONE DI ESERCIZIO
Standard PN 16.
Su richiesta PN 25/PN 40.

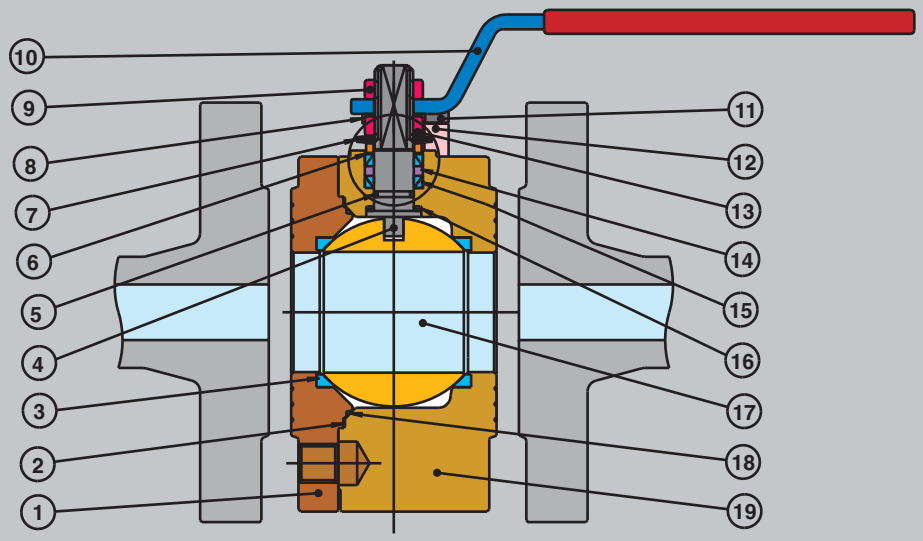
LIMITI DI TEMPERATURA
Da -20°C a +180°C. (AISI 316, PTFE)
Da -10°C a +180°C. (A105, PTFE)

DIAMOND
Wafer ball valve heavy series in stainless steel and carbon steel.
Fire safe BS 6755, API 6FA, API 607.
Connection with actuators to ISO 5211.
General prescriptions to BS 5351.

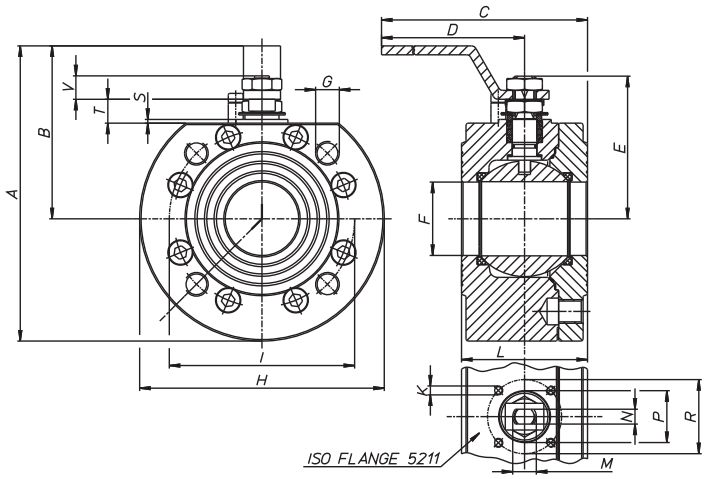
END CONNECTIONS
Flanges to UNI EN 1092-1.

WORKING PRESSURE
Standard PN 16.
On request PN 25/PN 40.

TEMPERATURE LIMITS
From -20°C to +180°C. (AISI 316, PTFE)
From -10°C to +180°C. (A105, PTFE)



PARTICOLARI COMPONENTS	DIAMOND acciaio inox DIAMOND stanless steel	DIAMOND acciaio carbonio DIAMOND carbon steel
1 Flangia di contenimento / Retaing flang	AISI 316 D 1.4401	A 105
2 Anello statico esterno / Outside static ring	Pure graphite	Pure graphite
3 Sedi laterali / Ball seats	Virgin P.T.F.E.	Virgin P.T.F.E.
4 Perno / Stem	AISI 316 D 1.4401	AISI 304 D 1.4301
5 O-ring / O-ring	Fluorelastomero / Fluoroelastomer	Fluorelastomero / Fluoroelastomer
6 Rondella di tenuta / Packing washer	AISI 304 D 1.4301	AISI 304 D 1.4301
7 Rondelle elastiche / Spring washers	AISI 301 D 1.4310	50 CrV4
8 Piastra ferma dado / Fixing-nut-plat	AISI 304 D 1.4301	AISI 304 D 1.4301
9 Dado bloccante / Locking nut	AISI 304 D 1.4301	A 105
10 Leva / Lever handle	AISI 304 D 1.4301	A 105
11 Vite per fermo di manovra / Screw for oper. stop	AISI 304 D 1.4301	A 105
12 Fermo di manovra / Operation stop	AISI 304 D 1.4301	A 105
13 Dado fissa perno / Stem retaining nut	AISI 304 D 1.4301	A 105
14 Anello superiore / Upper ring	Virgin P.T.F.E.	Virgin P.T.F.E.
15 Tenuta perno / Stem packing	Virgin P.T.F.E.	Virgin P.T.F.E.
16 Anello antifrizione / Thrust washer	Virgin P.T.F.E.	Virgin P.T.F.E.
17 Sfera / Ball	AISI 316 D 1.4401	AISI 304 D 1.4301
18 Guarnizione statica / Static gasket	Virgin P.T.F.E.	Virgin P.T.F.E.
19 Corpo / Body	AISI 316 D 1.4401	A 105



ESECUZIONI SPECIALI
Guarnizioni speciali
Versione sgrassata
Da DN 125 A DN 200 PN 25/40
Materiali corpo speciali

SPECIAL EXECUTIONS
Special gaskets available
Degreased version
DN 125 to DN 200 PN 25/40
Special materials available

Size	A mm	B mm	C mm	D mm	E mm	F mm	G mm	H mm	K mm	I mm	L mm	M mm	N mm	P mm	R mm	S mm	T mm	V mm	Z mm	N° holes	PN	ISO FLANGE	weight gr.
DN50	199	117	273	230	94,5	49,5	M16	165	M6	125	85	M16	10	35	50	2,5	16	14	-	4	40	F05	11000
DN65	232	239	372	320	122,5	65	M16	185	M8	145	103	M22	14	55	70	3	19	23,5	-	4	16	F07	17500
DN65	232	139	372	320	122,5	65	M16	185	M8	145	103	M22	14	55	70	3	19	23,5	-	8	40	F07	17300
DN80	249	149	381	320	132,5	78	M16	200	M8	160	122	M22	14	55	70	3	19	23,5	-	8	40	F07	22800
DN100	277	167	448	370	148,5	96	M16	220	M10	180	155	M27	16	70	102	3	22,2	25,3	-	8	16	F10	34500
DN100	284	167	448	370	148,5	96	M20	235	M10	190	155	M27	16	70	102	3	22,2	25,3	-	8	40	F10	39000
DN125	309	181	455	370	166,5	118	M16	255	M10	210	185	M27	16	70	102	3	22,2	25,3	-	8	16	F10	54200
DN125	316	181	455	370	166,5	118	M22	270	M10	220	185	M27	16	70	102	3	22,2	25,3	-	8	40	F10	61720
DN150	396	249	689	584	200	144	M20	295	M12	240	235	M42	26	-	125	-	4	31,5	650	8	16	F12	90570
DN150	396	249	702	584	200	144	M24	295	M12	250	235	M42	26	-	125	-	4	31,5	650	8	40	F12	91900
DN200	475	288	739	584	235	192	M20	365	M12	295	310	M42	26	-	125	-	4	27	650	12	16	F12	177060
DN200	475	288	739	584	235	192	M27	373	M12	320	310	M42	26	-	125	-	4	27	650	12	40	F12	183000

Coppia di sblocco in Nm / Breaking Torque in Nm

DN size		50	65	80	100	125	150	200		
PN - bar	0	35	55	75	150	240	310	600		
	16	39	59	84,5	168	300	400	800		
	25	41,5	62,5	92	180					
	40	44	67	99	195					
		Nm								

I valori in Nm possono cambiare a seconda dei materiali utilizzati per le sedi, della temperatura e del fluido. Per un utilizzo sicuro dei vari tipi di servocontrollo è necessario considerare un fattore di sicurezza idoneo.

Values in Nm can change depending on the material used for seats, on temperature and on the fluid used. For a safe working of the various sorts of servocontrol, it is necessary to consider a suitable safety factor.

Diagramma pressione/temperatura
Pressure/temperature diagram

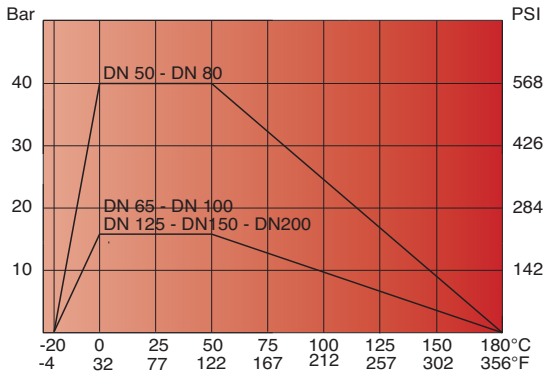
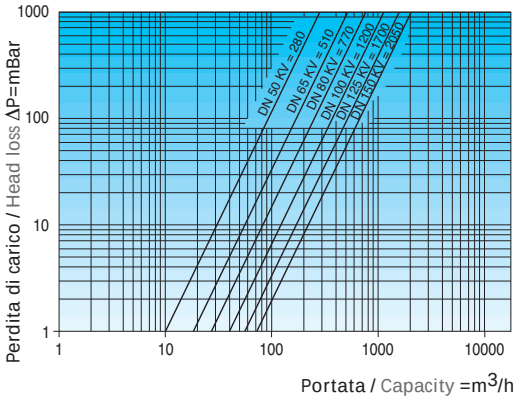


Diagramma perdite di carico
Head loss diagram



DIAMOND ANSI 150

DIAMOND
Valvola a sfera tipo wafer serie pesante in acciaio inox e acciaio carbonio.
Antistatica a norme BS 6755, API 6FA, API 607.
Connessione con attuatori a norma ISO 5211.
Prescrizioni generali a norma BS 5351.

CONNESSIONI
Flange come da norma ANSI B16.5.

PRESSIONE DI ESERCIZIO
ANSI 150.

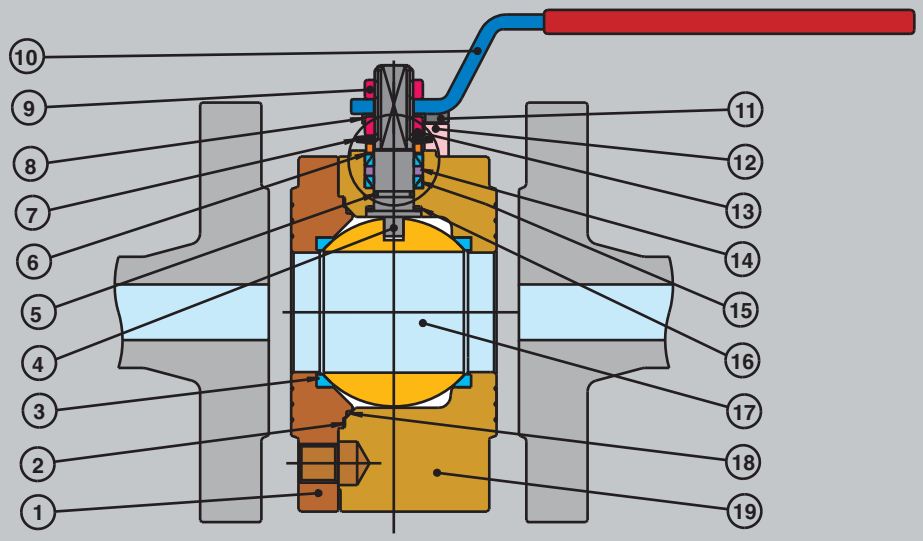
LIMITI DI TEMPERATURA
Da -20°C a +180°C. (AISI 316, PTFE)
Da -10°C a +180°C. (A105, PTFE)

DIAMOND
Wafer ball valve heavy series in stainless steel and carbon steel.
Fire safe BS 6755, API 6FA, API 607.
Connection with actuators to ISO 5211.
General prescriptions to BS 5351.

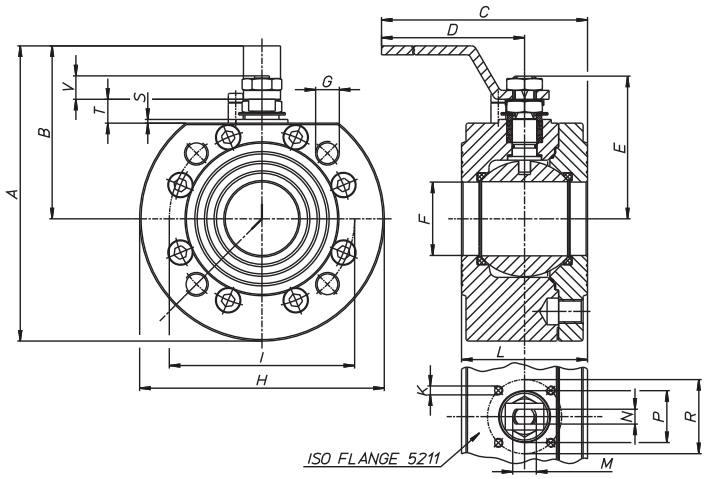
END CONNECTIONS
Flanges to ANSI B16.5.

WORKING PRESSURE
ANSI 150.

TEMPERATURE LIMITS
From -20°C to +180°C. (AISI 316, PTFE)
From -10°C to +180°C. (A105, PTFE)



PARTICOLARI COMPONENTS	DIAMOND acciaio inox DIAMOND stanless steel	DIAMOND acciaio carbonio DIAMOND carbon steel
1 Flangia di contenimento / Retaing flang	AISI 316 D 1.4401	A 105
2 Anello statico esterno / Outside static ring	Pure graphite	Pure graphite
3 Sedi laterali / Ball seats	Virgin P.T.F.E.	Virgin P.T.F.E.
4 Perno / Stem	AISI 316 D 1.4401	AISI 304 D 1.4301
5 O-ring / O-ring	Fluorelastomero / Fluoroelastomer	Fluorelastomero / Fluoroelastomer
6 Rondella di tenuta / Packing washer	AISI 304 D 1.4301	AISI 304 D 1.4301
7 Rondelle elastiche / Spring washers	AISI 301 D 1.4310	50 CrV4
8 Piastra ferma dado / Fixing-nut-plat	AISI 304 D 1.4301	AISI 304 D 1.4301
9 Dado bloccante / Locking nut	AISI 304 D 1.4301	A 105
10 Leva / Lever handle	AISI 304 D 1.4301	A 105
11 Vite per fermo di manovra / Screw for oper. stop	AISI 304 D 1.4301	A 105
12 Fermo di manovra / Operation stop	AISI 304 D 1.4301	A 105
13 Dado fissa perno / Stem retaining nut	AISI 304 D 1.4301	A 105
14 Anello superiore / Upper ring	Virgin P.T.F.E.	Virgin P.T.F.E.
15 Tenuta perno / Stem packing	Virgin P.T.F.E.	Virgin P.T.F.E.
16 Anello antifrizione / Thrust washer	Virgin P.T.F.E.	Virgin P.T.F.E.
17 Sfera / Ball	AISI 316 D 1.4401	AISI 304 D 1.4301
18 Guarnizione statica / Static gasket	Virgin P.T.F.E.	Virgin P.T.F.E.
19 Corpo / Body	AISI 316 D 1.4401	A 105



ESECUZIONI SPECIALI
Guarnizioni speciali
Versione sgrassata
Materiali corpo speciali

SPECIAL EXECUTIONS
Special gaskets available
Degreased version
Special materials available

Size	A mm	B mm	C mm	D mm	E mm	F mm	G mm	H mm	K mm	I mm	L mm	M mm	N mm	P mm	R mm	S mm	T mm	V mm	N° holes	ISO FLANGE	weight gr.
3”	244	149	394	333	132,5	78	5/8”	188	M8	152,5	122	M22	14	55	70	3	19	23,5	4	F07	21320
4”	277	167	448	370	148,5	96	5/8”	220	M10	190,5	155	M27	16	70	102	3	22,2	25,3	8	F10	39050
5”	309	181	463	370	166,5	118	3/4”	255	M10	215,9	185	M27	16	70	102	3	22,2	25,3	8	F10	55220
6”	396	249	689	584	200	144	3/4”	295	M12	241,3	235	M42	26	-	125	-	4	31,5	8	F12	91270
8”	475	288	739	584	235	192	3/4”	373	M12	298,4	310	M42	26	-	125	-	4	27	8	F12	177755

Coppia di sblocco in Nm / Breaking Torque in Nm

DN size		3”	4”	5”	6”	8”
PN - bar	0	75	150	240	310	600
	19bar (ANSI150)	84,5	168	300	400	800
		Nm				

I valori in Nm possono cambiare a seconda dei materiali utilizzati per le sedi, della temperatura e del fluido. Per un utilizzo sicuro dei vari tipi di servocontrollo è necessario considerare un fattore di sicurezza idoneo.

Values in Nm can change depending on the material used for seats, on temperature and on the fluid used. For a safe working of the various sorts of servocontrol, it is necessary to consider a suitable safety factor.

Diagramma pressione/temperatura
Pressure/temperature diagram

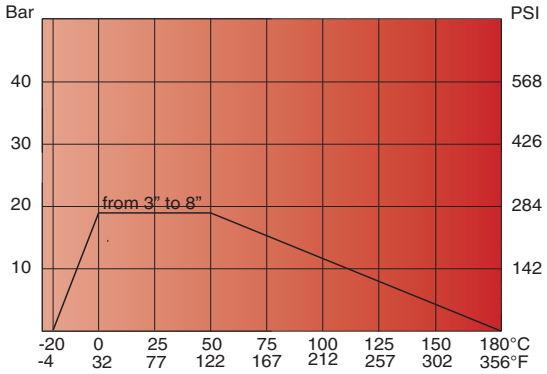
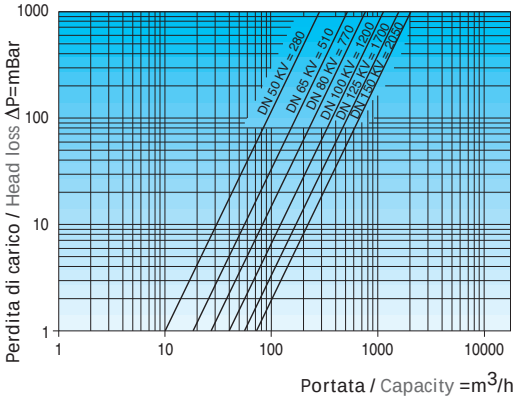


Diagramma perdite di carico
Head loss diagram



CAST DIAMOND

CAST DIAMOND
Valvola a sfera tipo wafer da fusione, serie pesante in acciaio inox e acciaio carbonio.
Antistatica a norme BS 6755, API 6FA, API 607.
Connessione con attuatori a norma ISO 5211.
Prescrizioni generali a norma BS 5351.

CONNESSIONI
Flange come da norma UNI EN 1092-1

PRESSIONE DI ESERCIZIO
Standard PN 16

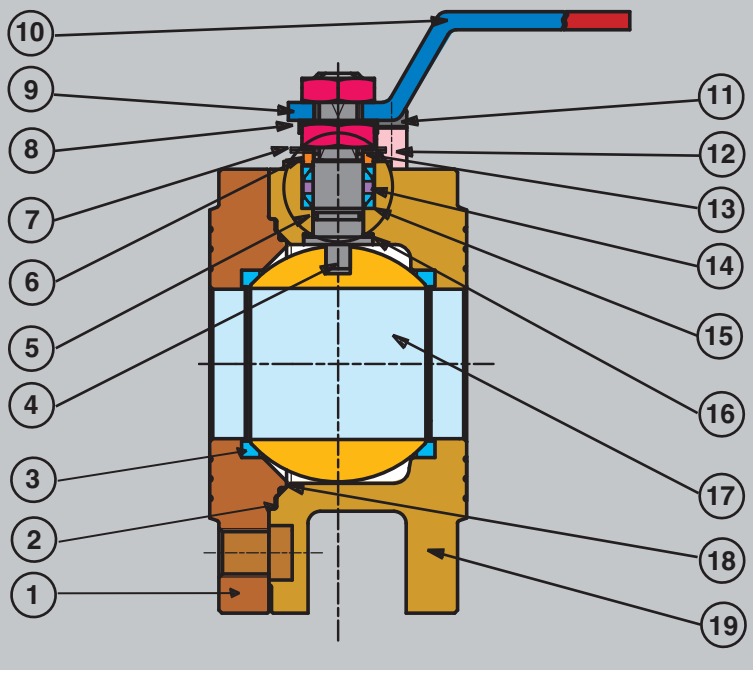
LIMITI DI TEMPERATURA
Da -20°C a +180°C. (AISI 316, PTFE)
Da -10°C a +180°C. (A105, PTFE)

CAST DIAMOND
Wafer ball valve cast version heavy line in stainless steel and carbon steel.
Fire safe BS 6755, API 6FA, API 607.
Connection with actuators to ISO 5211.
General prescriptions to BS 5351.

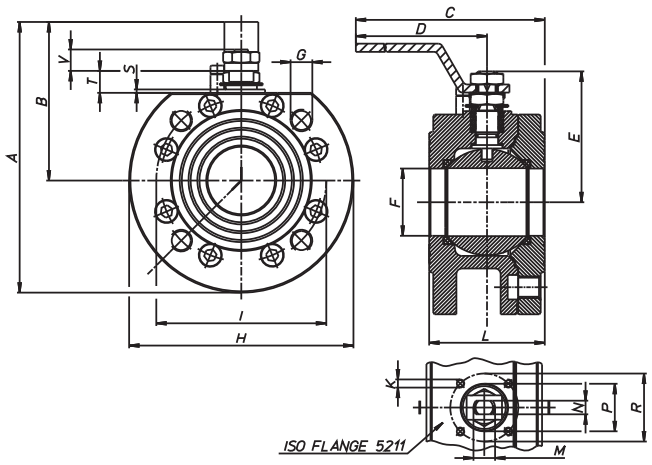
END CONNECTIONS
Flanges to UNI EN 1092-1

WORKING PRESSURE
Standard PN 16.

TEMPERATURE LIMITS
From -20°C to +180°C. (AISI 316, PTFE)
From -10°C to +180°C. (A105, PTFE)



PARTICOLARI COMPONENTS	DIAMOND acciaio inox DIAMOND stanless steel	DIAMOND acciaio carbonio DIAMOND carbon steel
1 Flangia di contenimento / Retaing flang	AISI 316 D 1.4401	A 105
2 Anello statico esterno / Outside static ring	Pure graphite	Pure graphite
3 Sedi laterali / Ball seats	Virgin P.T.F.E.	Virgin P.T.F.E.
4 Perno / Stem	AISI 316 D 1.4401	AISI 304 D 1.4301
5 O-ring / O-ring	Fluorelastomero / Fluoroelastomer	Fluorelastomero / Fluoroelastomer
6 Rondella di tenuta / Packing washer	AISI 304 D 1.4301	AISI 304 D 1.4301
7 Rondelle elastiche / Spring washers	AISI 301 D 1.4310	50 CrV4
8 Piastra ferma dado / Fixing-nut-plat	AISI 304 D 1.4301	AISI 304 D 1.4301
9 Dado bloccante / Locking nut	AISI 304 D 1.4301	A 105
10 Leva / Lever handle	AISI 304 D 1.4301	A 105
11 Vite per fermo di manovra / Screw for oper. stop	AISI 304 D 1.4301	A 105
12 Fermo di manovra / Operation stop	AISI 304 D 1.4301	A 105
13 Dado fissa perno / Stem retaining nut	AISI 304 D 1.4301	A 105
14 Anello superiore / Upper ring	Virgin P.T.F.E.	Virgin P.T.F.E.
15 Tenuta perno / Stem packing	Virgin P.T.F.E.	Virgin P.T.F.E.
16 Anello antifrizione / Thrust washer	Virgin P.T.F.E.	Virgin P.T.F.E.
17 Sfera / Ball	AISI 316 D 1.4401	AISI 304 D 1.4301
18 Guarnizione statica / Static gasket	Virgin P.T.F.E.	Virgin P.T.F.E.
19 Corpo / Body	AISI 316 D 1.4408 cast	A 105



ESECUZIONI SPECIALI
Guarnizioni speciali
Versione sgrassata
Materiali corpo speciali

SPECIAL EXECUTIONS
Special gaskets available
Degreased version
Special materials available

Size	A mm	B mm	C mm	D mm	E mm	F mm	G mm	H mm	K mm	I mm	L mm	M mm	N mm	P mm	R mm	S mm	T mm	V mm	N° holes	PN	ISO FLANGE	weight gr.
DN80	244	149	394	333	132,5	78	M16	200	M8	152,5	122	M22	14	55	70	3	19	23,5	4	16	F07	17050
DN125	306	181	455	370	166,5	118	M16	250	M10	210	185	M27	16	70	102	3	22,2	25,3	8	16	F10	39820
DN150	392	249	689	584	200	144	M20	285	M12	240	235	M42	26	-	125	-	4	31,5	8	16	F12	63100
DN200	458	288	739	584	235	192	M20	340	M12	295	310	M42	26	-	125	-	4	27	12	16	F12	139000

Coppia di sblocco in Nm / Breaking Torque in Nm

DN size		80	125	150	200
PN - bar	0	75	240	310	600
	16	84,5	300	400	800
		Nm			

I valori in Nm possono cambiare a seconda dei materiali utilizzati per le sedi, della temperatura e del fluido. Per un utilizzo sicuro dei vari tipi di servocontrollo è necessario considerare un fattore di sicurezza idoneo.

Values in Nm can change depending on the material used for seats, on temperature and on the fluid used. For a safe working of the various sorts of servocontrol, it is necessary to consider a suitable safety factor.

Diagramma pressione/temperatura
Pressure/temperature diagram

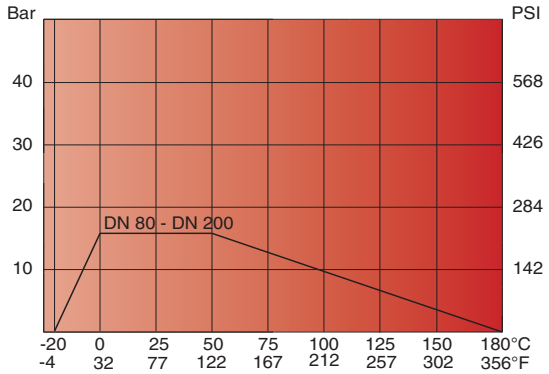
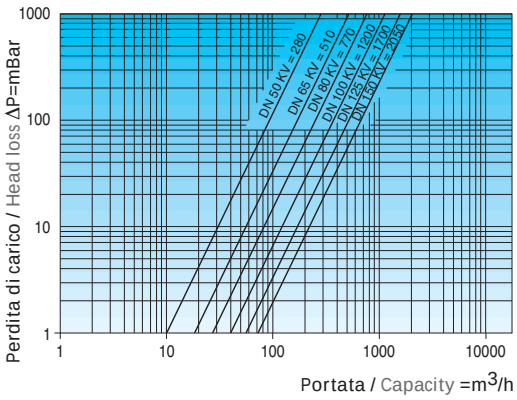


Diagramma perdite di carico
Head loss diagram



TOPAZ

TOPAZ
Valvola a sfera doppia flangia in acciaio inox e acciaio carbonio.
Antistatica a norme BS 6755, API 6FA, API 607.
Connessione con attuatori a norma ISO 5211.
Prescrizioni generali a norma BS 5351.

CONNESSIONI
Flange come da norma UNI EN 1092-1.
Scartamento come da norma DIN 3202.

PRESSIONE DI ESERCIZIO
PN 16/40 (fare riferimento al diagramma Pressione/Temperatura).

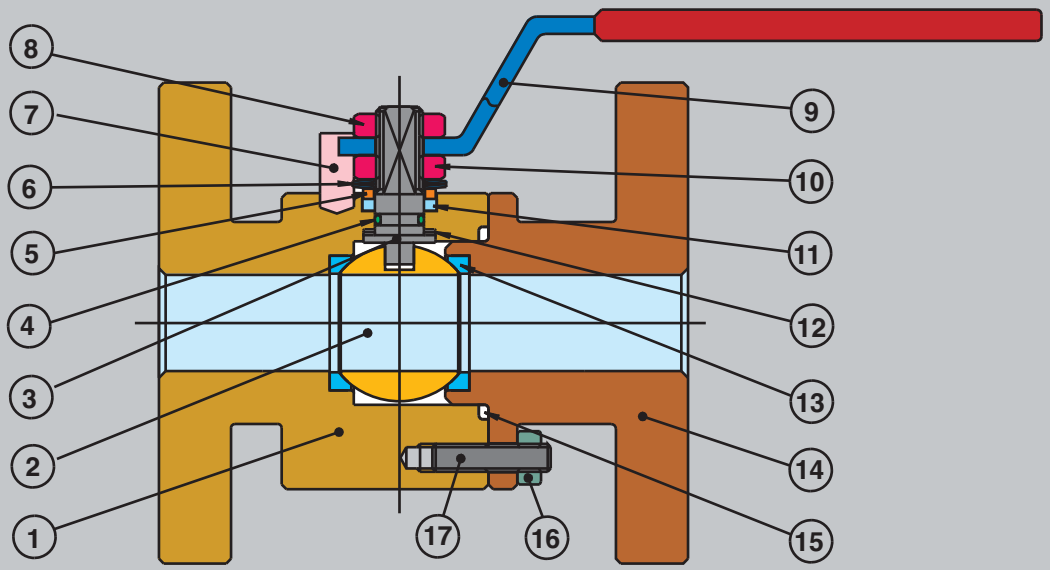
LIMITI DI TEMPERATURA
Da -20°C a +180°C. (AISI 316, PTFE)
Da -10°C a +180°C. (A105, PTFE)

TOPAZ
Split-body ball valve in stainless steel and carbon steel.
Fire safe BS 6755, API 6FA, API 607.
Connection with actuators to ISO 5211.
General prescriptions to BS 5351.

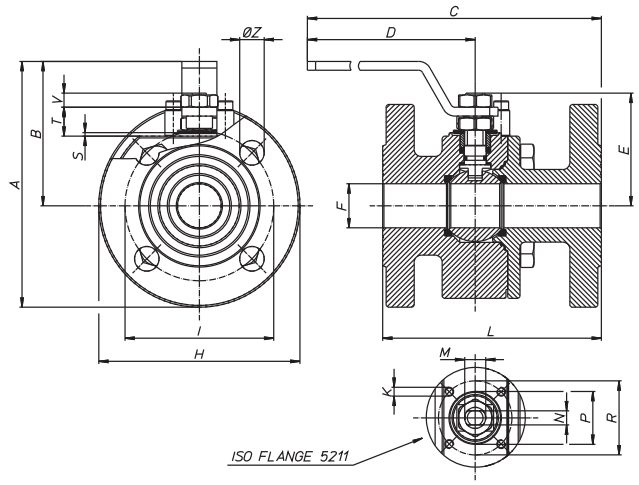
END CONNECTIONS
Flanges to UNI EN 1092-1.
Face to face to DIN 3202.

WORKING PRESSURE
PN 16/40 (please refer to Pressure/Temperature diagram).

TEMPERATURE LIMITS
From -20°C to +180°C. (AISI 316, PTFE)
From -10°C to +180°C. (A105, PTFE)



PARTICOLARI COMPONENTS	TOPAZ acciaio inox TOPAZ stanless steel	TOPAZ acciaio carbonio TOPAZ carbon steel
1 Corpo / Body	AISI 316 D 1.4401	A 105
2 Sfera / Ball	AISI 316 D 1.4401	AISI 304 D 1.4301
3 Perno / Stem	AISI 316 D 1.4401	AISI 304 D 1.4301
4 O-ring / O-ring	Fluorelastomero / Fluoroelastomer	Fluorelastomero / Fluoroelastomer
5 Premiguarnizione / Packing washers	AISI 316 D 1.4401	AISI 304 D 1.4301
6 Rondelle elastiche / Spring washers	AISI 301 D 1.4310	50CrV4
7 Fermo / Operation-stop	AISI 304 D 1.4301	Carbon steel 8.8
8 Dado / Locking nut	AISI 304 D 1.4301	A 105 Nickel-plated
9 Leva / Lever handle	A 105 Nickel-plated	A 105 Nickel-plated
10 Dado del perno / Stem retaining-nut	AISI 304 D 1.4301	A 105 Nickel-plated
11 Tenuta superiore perno / Upper stem packing	Virgin P.T.F.E.	Virgin P.T.F.E.
12 Anello antifrizione / Thrust washer	Virgin P.T.F.E.	Virgin P.T.F.E.
13 Sedi laterali / Ball seats	Virgin P.T.F.E.	Virgin P.T.F.E.
14 Flangia corpo / Body flange	AISI 316 D 1.4401	A 105
15 Guarnizione statica / Static gasket	Virgin P.T.F.E.	Virgin P.T.F.E.
16 Dado / Locking nut	AISI 304 D 1.4301	A 105 Nickel-plated
17 Bullone passante / Stud bolt	A 193 B8	A 193 B7



ESECUZIONI SPECIALI
Guarnizioni speciali
Da DN 65 a DN 150 PN 25/40
Da DN 15 a DN 100 PN 16/40, DIN 3202 faccia a faccia F1
Versione sgrassata
Dispositivo antistatico da DN 15 a DN 32
Su richiesta è disponibile con certificato ATEX
Versione lucidata

SPECIAL EXECUTIONS
Special gaskets available
From DN 65 to DN 150 PN 25/40
From DN 15 to DN 100 PN 16/40, DIN3202 face to face F1
Degreased version
Antistatic device from DN 15 to DN 32
Atex certificate

Size	A mm	B mm	C mm	D mm	E mm	F mm	G mm	H mm	K mm	I mm	L mm	M mm	N mm	P mm	R mm	S mm	T mm	V mm	N° holes	PN	ISO FLANGE	weight gr.
DN15	113,5	66	207	140	48	15	14	95	M5	65	115	M10	6	-	36	-	5	9	4	40	F03	3600
DN20	121,5	69	210	140	51	20	14	105	M5	75	120	M10	6	25	36	2	8	9	4	40	F03	4635
DN25	139,5	82	252	180	62,3	25	14	115	M5	85	125	M12	8	30	42	2	11,5	11,5	4	40	F04	5750
DN32	157	87	257	180	67	32	18	140	M5	100	130	M12	8	30	42	2	10	11	4	40	F04	8320
DN40	183	108	312	230	87,3	40	18	150	M6	110	140	M16	10	35	50	2,5	14,5	15,5	4	40	F05	11160
DN50	197,5	115	317	230	94,5	49,5	18	165	M6	125	150	M16	10	35	50	2,5	14,5	15,5	4	40	F05	14900
DN65	231	139	418	320	119,5	65	18	185	M8	145	170	M22	14	55	70	3	18,7	20,8	4	16	F07	23750
DN80	250	150	425	320	130	78	18	200	M8	160	180	M22	14	55	70	3	18,7	20,8	8	40	F07	28530
DN100	273	163	484	370	148,5	96	18	220	M10	180	190	M27	16	-	102	-	1,5	26	8	16	F10	35560
DN125	309	181	603	370	166,5	118	18	250	M10	210	325	M27	16	70	102	3	22	26	8	16	F10	65500
DN150	392	249	771	584	200	144	22	285	M12	240	350	M42	26	-	125	-	4	31,5	8	16	F12	108900
DN200	460	288	784	584	235	192	22	343	M12	295	400	M42	26		125		4	27	12	16	F12	194650

Coppia di sblocco in Nm / Breaking Torque in Nm

DN size		15	20	25	32	40	50	65	80	100	125	150	200
PN - bar	0	4	7	15	21	26	36	51	81	130	240	310	600
	16	5	8	17	23	28	39	54	86	150	300	400	800
	40	6	10	22	28	32	45	62	120	200	-	-	-
		Nm											

I valori in Nm possono cambiare a seconda dei materiali utilizzati per le sedi, della temperatura e del fluido. Per un utilizzo sicuro dei vari tipi di servocontrollo è necessario considerare un fattore di sicurezza idoneo.

Values in Nm can change depending on the material used for seats, on temperature and on the fluid used. For a safe working of the various sorts of servocontrol, it is necessary to consider a suitable safety factor.

Diagramma pressione/temperatura
Pressure/temperature diagram

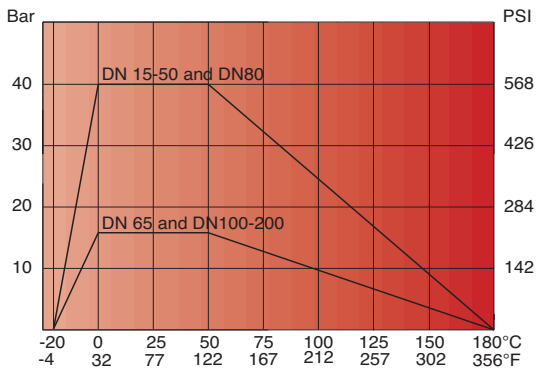
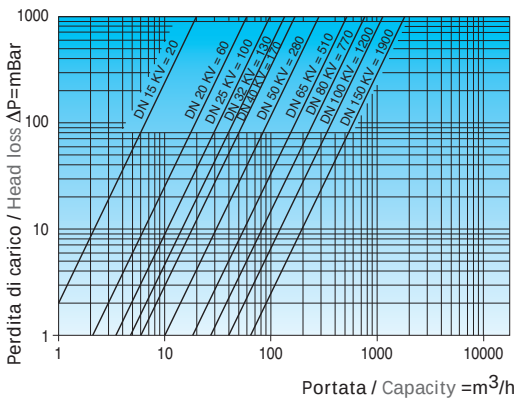


Diagramma perdite di carico
Head loss diagram



TOPAZ ANSI 150

TOPAZ
Valvola a sfera doppia flangia in acciaio inox e acciaio carbonio.
Antistatica a norme BS 6755, API 6FA, API 607.
Connessione con attuatori a norma ISO 5211.
Prescrizioni generali a norma BS 5351.

CONNESSIONI
Flange come da norma ANSI B16.5.
Scartamento come da norma ANSI B16.10.

PRESSIONE DI ESERCIZIO
ANSI 150.

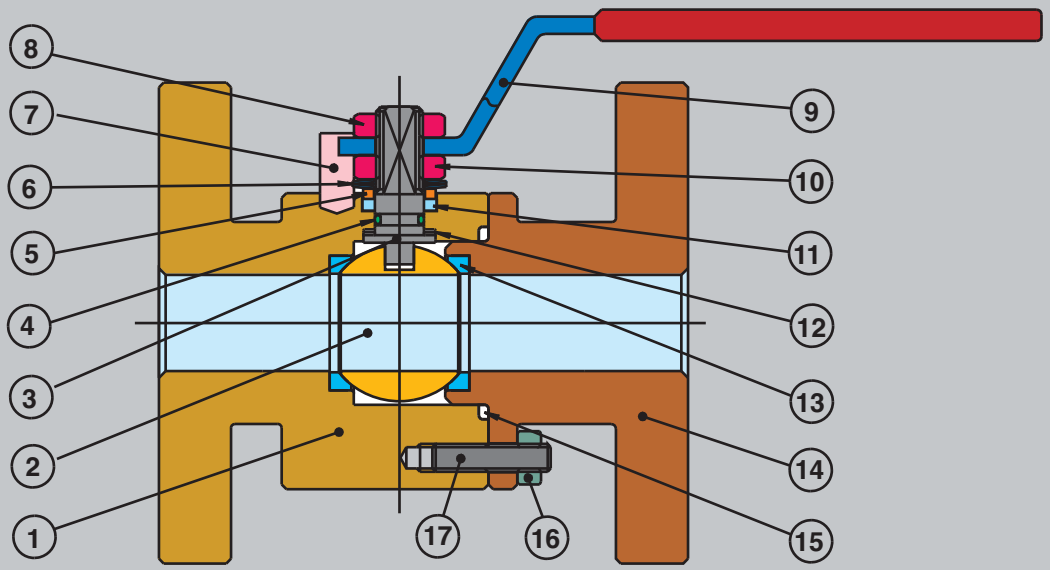
LIMITI DI TEMPERATURA
Da -20°C a +180°C. (AISI 316, PTFE)
Da -10°C a +180°C. (A105, PTFE)

TOPAZ
Split-body ball valve in stainless steel and carbon steel.
Fire safe BS 6755, API 6FA, API 607.
Connection with actuators to ISO 5211.
General prescriptions to BS 5351.

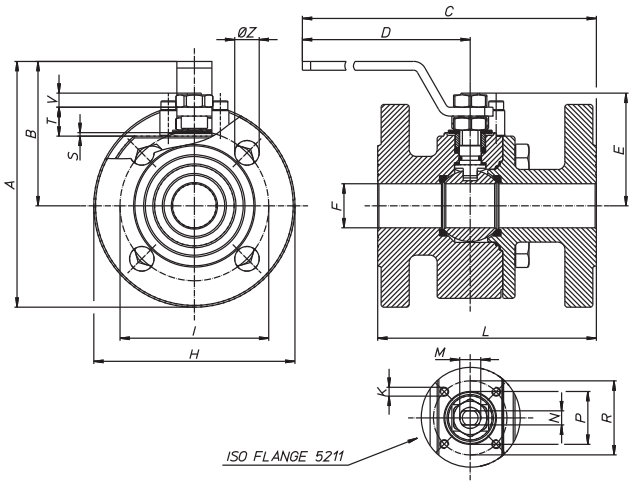
END CONNECTIONS
Flanges to ANSI B16.5.
Face to face to ANSI B16.10

WORKING PRESSURE
ANSI 150.

TEMPERATURE LIMITS
From -20°C to +180°C. (AISI 316, PTFE)
From -10°C to +180°C. (A105, PTFE)



PARTICOLARI COMPONENTS	TOPAZ acciaio inox TOPAZ stanless steel	TOPAZ acciaio carbonio TOPAZ carbon steel
1 Corpo / Body	AISI 316 D 1.4401	A 105
2 Sfera / Ball	AISI 316 D 1.4401	AISI 304 D 1.4301
3 Perno / Stem	AISI 316 D 1.4401	AISI 304 D 1.4301
4 O-ring / O-ring	Fluorelastomero / Fluoroelastomer	Fluorelastomero / Fluoroelastomer
5 Premiguarnizione / Packing washers	AISI 316 D 1.4401	AISI 304 D 1.4301
6 Rondelle elastiche / Spring washers	AISI 301 D 1.4310	50CrV4
7 Fermo / Operation-stop	AISI 304 D 1.4301	Carbon steel 8.8
8 Dado / Locking nut	AISI 304 D 1.4301	A 105 Nickel-plated
9 Leva / Lever handle	A 105 Nickel-plated	A 105 Nickel-plated
10 Dado del perno / Stem retaining-nut	AISI 304 D 1.4301	A 105 Nickel-plated
11 Tenuta superiore perno / Upper stem packing	Virgin P.T.F.E.	Virgin P.T.F.E.
12 Anello antifrizione / Thrust washer	Virgin P.T.F.E.	Virgin P.T.F.E.
13 Sedi laterali / Ball seats	Virgin P.T.F.E.	Virgin P.T.F.E.
14 Flangia corpo / Body flange	AISI 316 D 1.4401	A 105
15 Guarnizione statica / Static gasket	Virgin P.T.F.E.	Virgin P.T.F.E.
16 Dado / Locking nut	AISI 304 D 1.4301	A 105 Nickel-plated
17 Bullone passante / Stud bolt	A 193 B8	A 193 B7



ESECUZIONI SPECIALI
Guarnizioni speciali
Versione sgrassata
Dispositivo antistatico da 1/2" a 1"1/4
Su richiesta è disponibile con certificato ATEX

SPECIAL EXECUTIONS
Special gaskets available
Degreased version
Antistatic device from 1/2" to 1"1/4
ATEX certificate

Size	A mm	B mm	C mm	D mm	E mm	F mm	G mm	H mm	K mm	I mm	L mm	M mm	N mm	P mm	R mm	S mm	T mm	V mm	N° holes	ISO FLANGE	weight gr.		
1/2"	110,5	66	200	140	48	15	16	89	M5	60,5	108	M10	6	-	36	-	5	9	4	F03	3600		
3/4"	118	69	207	140	51	20	16	98,5	M5	70	117	M10	6	25	36	2	8	9	4	F03	3750		
1"	136	82	254	180	62,5	25	16	108	M5	79,4	127	M12	8	30	42	2	11,5	11,5	4	F04	5525		
1"1/4	146	87	267	180	67	32	16	117,5	M5	88,9	140	M12	8	30	42	2	10	11	4	F04	8320		
1"1/2	171,5	108	337	230	87,5	40	16	127	M6	98,4	165	M16	10	35	50	2,5	14,5	15,5	4	F05	10260		
2"	190	115	345	230	94,5	49,5	19	150	M6	120,7	178	M16	10	35	50	2,5	14,5	15,5	4	F05	13755		
2"1/2	228	139	438	320	122,5	65	19	178	M8	139,7	190	M22	14	55	70	3	18,7	23,8	4	F07	23130		
3"	245	150	448	320	132,5	78	19	190,5	M8	152,4	203	M22	14	55	70	3	18,7	23,8	4	F07	29235		
4"	273	163	523	370	148,5	96	19	220	M10	190,5	229	M27	16	-	102	-	1,5	26	8	F10	39385		
6"	389	249	815	584	200	144	22	280	M12	241,3	394	M42	26	-	125	-	4	31,5	8	F12	114100		
8"	460	288	841	584	235	192	22	343	M12	298,4	457	M42	26	-	125	-	4	27	8	F12	203485		

Coppia di sblocco in Nm / Breaking Torque in Nm

DN size		1/2"	1/4"	1"	1"1/2	1"1/4	2"	2"1/2	3"	4"
PN	0	4	7	15	21	26	36	51	81	130
	19bar (ANSI150)	5	8	17	23	28	39	54	86	150
		Nm								

I valori in Nm possono cambiare a seconda dei materiali utilizzati per le sedi, della temperatura e del fluido. Per un utilizzo sicuro dei vari tipi di servocontrollo è necessario considerare un fattore di sicurezza idoneo.

Values in Nm can change depending on the material used for seats, on temperature and on the fluid used. For a safe working of the various sorts of servocontrol, it is necessary to consider a suitable safety factor.

Diagramma pressione/temperatura
Pressure/temperature diagram

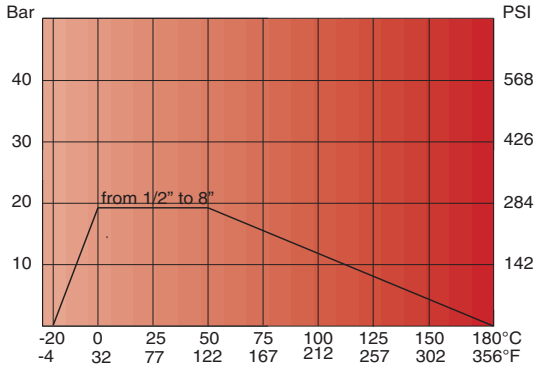
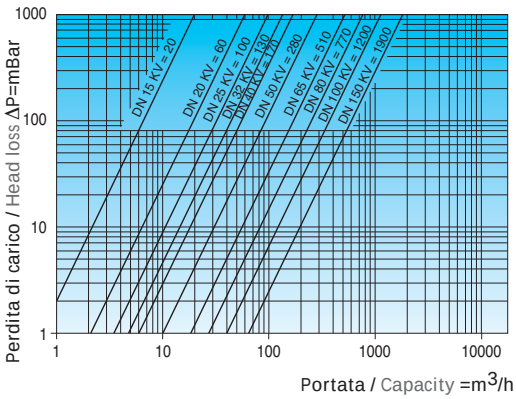


Diagramma perdite di carico
Head loss diagram



TOPAZ ANSI 300

TOPAZ
Valvola a sfera doppia flangia in acciaio inox e acciaio carbonio.
Antistatica a norme BS 6755, API 6FA, API 607.
Connessione con attuatori a norma ISO 5211.
Prescrizioni generali a norma BS 5351.

CONNESSIONI
Flange come da norma ANSI B16.5.
Scartamento come da norma ANSI B16.10.

PRESSIONE DI ESERCIZIO
ANSI 300.

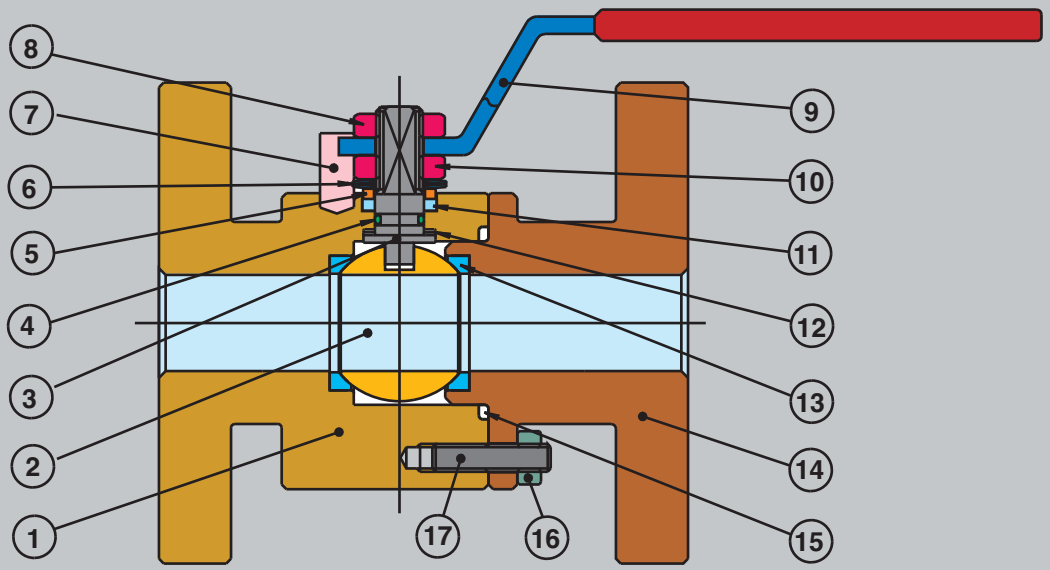
LIMITI DI TEMPERATURA
Da -20°C a +180°C. (AISI 316, PTFE)
Da -10°C a +180°C. (A105, PTFE)

TOPAZ
Split-body ball valve in stainless steel and carbon steel.
Fire safe BS 6755, API 6FA, API 607.
Connection with actuators to ISO 5211.
General prescriptions to BS 5351.

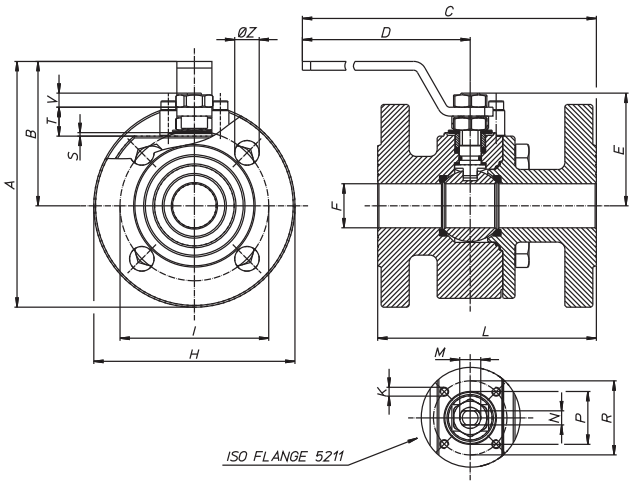
END CONNECTIONS
Flanges to ANSI B16.5.
Face to face to ANSI B16.10

WORKING PRESSURE
ANSI 300.

TEMPERATURE LIMITS
From -20°C to +180°C. (AISI 316, PTFE)
From -10°C to +180°C. (A105, PTFE)



PARTICOLARI COMPONENTS	TOPAZ acciaio inox TOPAZ stanless steel	TOPAZ acciaio carbonio TOPAZ carbon steel
1 Corpo / Body	AISI 316 D 1.4401	A 105
2 Sfera / Ball	AISI 316 D 1.4401	AISI 304 D 1.4301
3 Perno / Stem	AISI 316 D 1.4401	AISI 304 D 1.4301
4 O-ring / O-ring	Fluorelastomero / Fluoroelastomer	Fluorelastomero / Fluoroelastomer
5 Premiguarnizione / Packing washers	AISI 316 D 1.4401	AISI 304 D 1.4301
6 Rondelle elastiche / Spring washers	AISI 301 D 1.4310	50CrV4
7 Fermo / Operation-stop	AISI 304 D 1.4301	Carbon steel 8.8
8 Dado / Locking nut	AISI 304 D 1.4301	A 105 Nickel-plated
9 Leva / Lever handle	A 105 Nickel-plated	A 105 Nickel-plated
10 Dado del perno / Stem retaining-nut	AISI 304 D 1.4301	A 105 Nickel-plated
11 Tenuta superiore perno / Upper stem packing	Virgin P.T.F.E.	Virgin P.T.F.E.
12 Anello antifrizione / Thrust washer	Virgin P.T.F.E.	Virgin P.T.F.E.
13 Sedi laterali / Ball seats	Virgin P.T.F.E.	Virgin P.T.F.E.
14 Flangia corpo / Body flange	AISI 316 D 1.4401	A 105
15 Guarnizione statica / Static gasket	Virgin P.T.F.E.	Virgin P.T.F.E.
16 Dado / Locking nut	AISI 304 D 1.4301	A 105 Nickel-plated
17 Bullone passante / Stud bolt	A 193 B8	A 193 B7



ESECUZIONI SPECIALI
Guarnizioni speciali
Versione sgrassata
Dispositivo antistatico da 1/2" a 1"1/4
Su richiesta è disponibile con certificato ATEX
Materiali corpo speciali

SPECIAL EXECUTIONS
Special gaskets available
Degreased version
Antistatic device from 1/2" to 1"1/4
ATEX certificate
Different materials available

Size	A mm	B mm	C mm	D mm	E mm	F mm	H mm	K mm	I mm	L mm	M mm	N mm	P mm	R mm	S mm	T mm	V mm	Z mm	N° holes	ISO FLANGE	weight gr.
1/2"	113,5	66	232,1	140	48	15	89	M5	66,7	140	M10	6	-	36	-	5	9	16	4	F03	3600
3/4"	127,8	69	241,1	140	51	20	117,5	M5	82,5	151	M10	6	25	36	2	8	9	14	4	F03	5605
1"	144	82	292,1	180	62,5	25	124	M5	88,9	165	M12	8	30	42	2	11,5	11,5	19	4	F04	6245
1 1/4"	153,5	87	303,4	180	67	32	133	M5	98,4	178	M12	8	30	42	2	10	11	19	4	F04	8560
1 1/2"	186	108	358,5	230	87,5	40	156	M6	114,3	189	M16	10	35	50	2,5	14,5	15,5	22	4	F05	13185
2"	197,5	115	381	230	94,5	49,5	165	M6	127	216	M16	10	35	50	2,5	14,5	15,5	19	4	F05	16555
2 1/2"	234,5	139	485,4	320	122,5	65	191	M8	149,2	241	M22	14	55	70	3	18,7	23,8	22	8	F07	27825
3"	255	150	523,5	320	132,5	78	210	M8	168,3	283	M22	14	55	70	3	18,7	23,8	22	8	F07	36150
4"	290	163	559	370	148,5	96	254	M8	200	305	M27	16	-	102	-	1,5	26	22	8	F10	60055

Coppia di sblocco in Nm / Breaking Torque in Nm

DN size		1/2"	3/2"	1"	1"1/4	1"1/2	2"	3"	4"
PN	0	4	7	15	21	26	36	81	130
	51bar (ANSI300)	6	10	22	28	32	45	120	200
		Nm							

I valori in Nm possono cambiare a seconda dei materiali utilizzati per le sedi, della temperatura e del fluido. Per un utilizzo sicuro dei vari tipi di servocontrollo è necessario considerare un fattore di sicurezza idoneo.

Values in Nm can change depending on the material used for seats, on temperature and on the fluid used. For a safe working of the various sorts of servocontrol, it is necessary to consider a suitable safety factor.

Diagramma pressione/temperatura
Pressure/temperature diagram

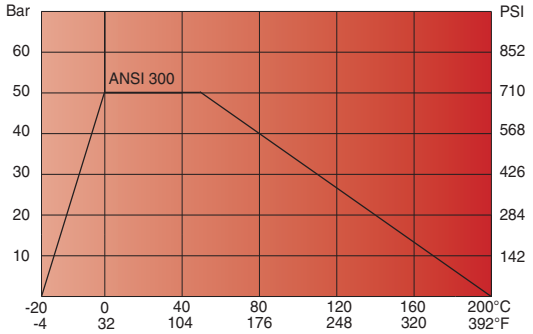
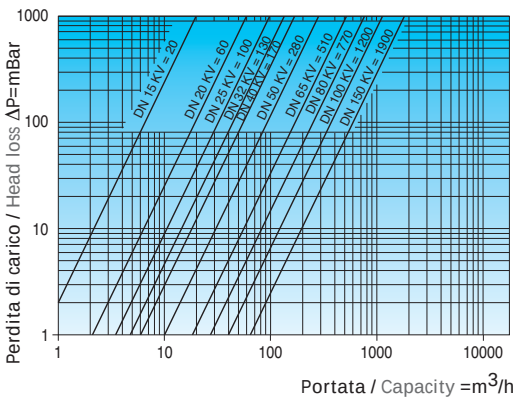


Diagramma perdite di carico
Head loss diagram



CAST TOPAZ

CAST TOPAZ
Valvola a sfera doppia flangia da fusione in acciaio inox e acciaio carbonio.
Antistatica a norme BS 6755, API 6FA, API 607.
Connessione con attuatori a norma ISO 5211.
Prescrizioni generali a norma BS 5351.

CONNESSIONI
Flange come da norma UNI EN 1092-1.
Scartamento come da norma DN 3202.

PRESSIONE DI ESERCIZIO
PN 16/40 (fare riferimento al diagramma pressione/temperatura).

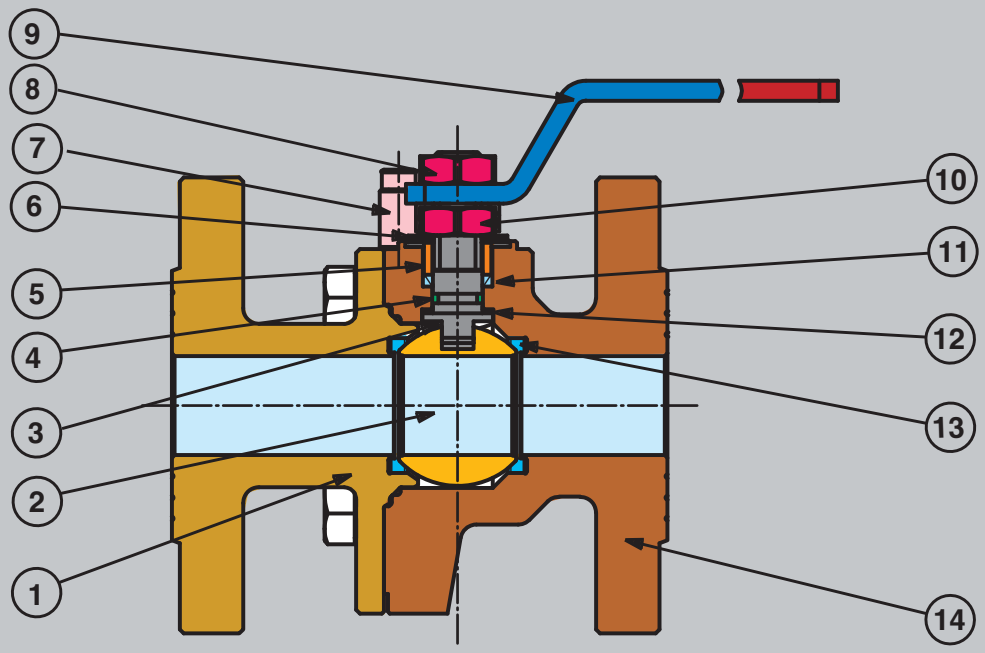
LIMITI DI TEMPERATURA
Da -20°C a +180°C. (AISI 316, PTFE)
Da -10°C a +180°C. (A105, PTFE)

CAST TOPAZ
Split-body ball valve cast version in stainless steel and carbon steel.
Fire safe BS 6755, API 6FA, API 607.
Connection with actuators to ISO 5211.
General prescriptions to BS 5351.

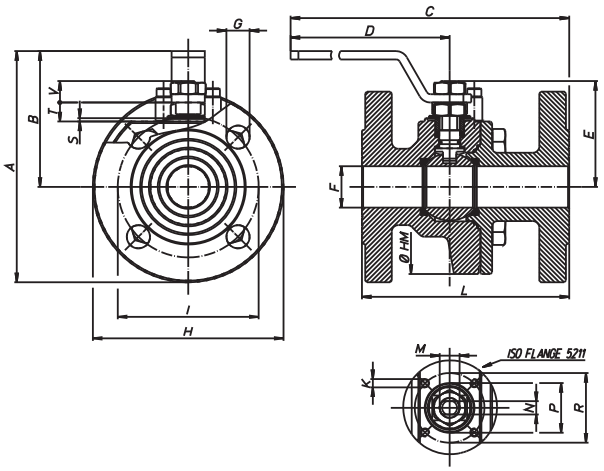
END CONNECTIONS
Flanges to UNI EN 1092-1.
Face to face to DN 3202.

WORKING PRESSURE
PN 16/40 (please refer to pressure/temperature diagram).

TEMPERATURE LIMITS
From -20°C to +180°C. (AISI 316, PTFE)
From -10°C to +180°C. (A105, PTFE)



PARTICOLARI COMPONENTS	TOPAZ acciaio inox TOPAZ stanless steel	TOPAZ acciaio carbonio TOPAZ carbon steel
1 Corpo / Body	AISI 316 D 1.4401	A 105
2 Sfera / Ball	AISI 316 D 1.4401	AISI 304 D 1.4301
3 Perno / Stem	AISI 316 D 1.4401	AISI 304 D 1.4301
4 O-ring / O-ring	Fluorelastomero / Fluoroelastomer	Fluorelastomero / Fluoroelastomer
5 Premiguarnizione / Packing washers	AISI 316 D 1.4401	AISI 304 D 1.4301
6 Rondelle elastiche / Spring washers	AISI 301 D 1.4310	50CrV4
7 Fermo / Operation-stop	AISI 304 D 1.4301	Carbon steel 8.8
8 Dado / Locking nut	AISI 304 D 1.4301	A 105 Nickel-plated
9 Leva / Lever handle	A 105 Nickel-plated	A 105 Nickel-plated
10 Dado del perno / Stem retaining-nut	AISI 304 D 1.4301	A 105 Nickel-plated
11 Tenuta superiore perno / Upper stem packing	Virgin P.T.F.E.	Virgin P.T.F.E.
12 Anello antifrizione / Thrust washer	Virgin P.T.F.E.	Virgin P.T.F.E.
13 Sedi laterali / Ball seats	Virgin P.T.F.E.	Virgin P.T.F.E.
14 Flangia corpo / Body flange	AISI 316 D 1.4408	A 105



ESECUZIONI SPECIALI
Guarnizioni speciali
Versione sgrassata
Dispositivo antistatico da DN 15 a DN 32
Su richiesta è disponibile con certificato ATEX
Materiali corpo speciali

SPECIAL EXECUTIONS
Special gaskets available
Degreased version
Antistatic device from DN 15 to DN 32
ATEX certificate
Different materials available

Size	A mm	B mm	C mm	D mm	E mm	F mm	G mm	H mm	K mm	I mm	L mm	M mm	N mm	P mm	R mm	S mm	T mm	V mm	HM mm	N° holes	PN	ISO FLANGE	weight gr.
DN25	139,5	82	252	180	62,3	25	14	115	M5	85	125	M12	8	30	42	2	11,5	11,5	105	4	40	F04	4930
DN40	183	108	312	230	87,3	40	18	150	M6	110	140	M16	10	35	50	2,5	14,5	15,5	140	4	40	F05	8700
DN50	197,5	115	317	230	94,5	49,5	18	165	M6	125	150	M16	10	35	50	2,5	14,5	15,5	155	4	40	F05	12930
DN65	231	139	418	320	122,5	65	18	185	M8	145	170	M22	14	55	70	3	18,7	23,8	183	4	16	F07	19240
DN80	250	150	425	320	132,5	78	18	200	M8	160	180	M22	14	55	70	3	18,7	23,8	198	8	40	F07	23520
DN100	273	163	484	370	148,5	96	18	220	M10	180	190	M27	16	-	102	-	1,5	26	218	8	16	F10	30230
DN125	306	181	603	370	166,5	118	18	250	M10	210	325	M27	16	70	102	3	22	26	246	8	16	F12	56100
DN150	392	249	771	584	200	144	22	285	M12	240	350	M42	26	-	125	-	4	31,5	287	8	16	F12	85200
DN200	460	288	784	584	235	192	22	343	M12	295	400	M42	26	-	125	-	4	27	377	12	16	F12	150200

Coppia di sblocco in Nm / Breaking Torque in Nm

DN size		15	20	25	32	40	50	65	80	100	125	150	200
PN - bar	0	4	7	10	16	25	35	55	75	150	240	310	600
	16	4,8	8,5	11,3	19	28	39	59	84,5	168	300	400	800
		Nm											

I valori in Nm possono cambiare a seconda dei materiali utilizzati per le sedi, della temperatura e del fluido. Per un utilizzo sicuro dei vari tipi di servocontrollo è necessario considerare un fattore di sicurezza idoneo.

Values in Nm can change depending on the material used for seats, on temperature and on the fluid used. For a safe working of the various sorts of servocontrol, it is necessary to consider a suitable safety factor.

Diagramma pressione/temperatura
Pressure/temperature diagram

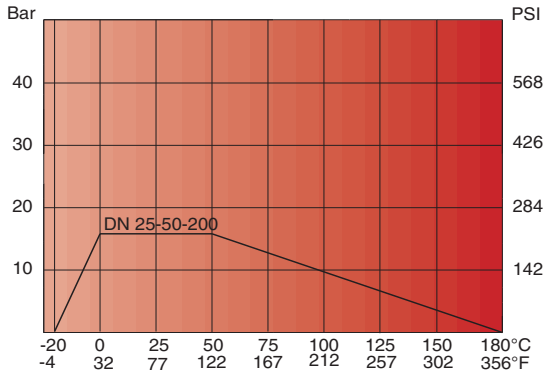
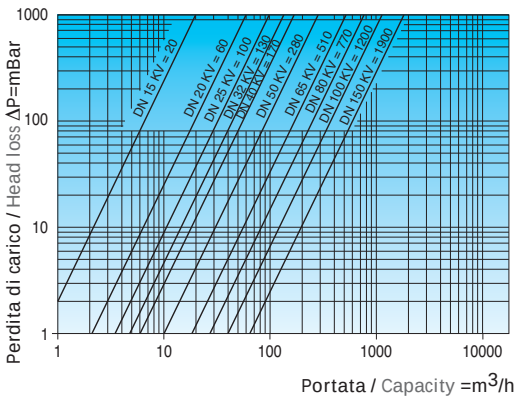


Diagramma perdite di carico
Head loss diagram



ATTUATORI PNEUMATICI IN ALLUMINIO
ALUMINIUM PNEUMATIC ACTUATORS

ATTUATORI PNEUMATICI IN ALLUMINIO
ALUMINIUM PNEUMATIC ACTUATORS

ATTUATORE PNEUMATICO
Attuatore pneumatico in alluminio a cremagliera, superficie anodizzata dura.

CONNESSIONI
Foratura inferiore per accoppiamento valvola secondo norme ISO 5211. Interfaccia per elettrovalvola, estremità superiore albero e foratura superiore per fissaggio accessori secondo norme VDI/VDE 3845, NAMUR.

PRESSIONE DI ALIMENTAZIONE
2 bar a 8 bar doppio effetto.
3 bar a 8 bar semplice effetto.

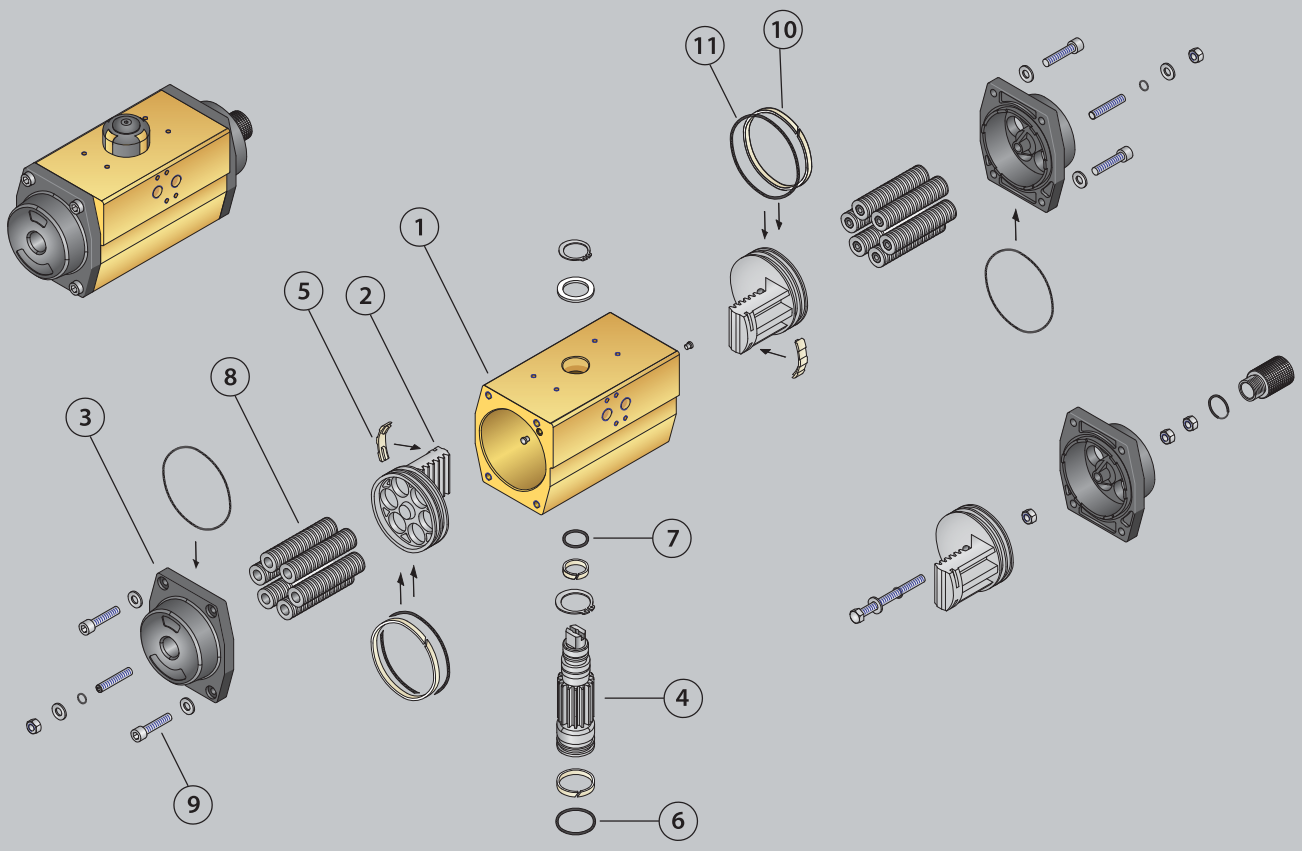
LIMITI DI TEMPERATURA
Da -20°C a + 80°C.

PNEUMATIC ACTUATOR
Rack and Pinion aluminium pneumatic actuator with hard anodized external surface.

END CONNECTIONS
Bottom drilling to match valve is in accordance with ISO 5211. Interface for solenoid valve, shaft top end and top drilling to assemble accessories are in accordance with VDI/VDE 3845, NAMUR.

INLET PRESSURE RANGE
From 2 bar to 8 bar double acting.
From 3 bar to 8 bar single acting.

TEMPERATURE LIMITS
From -20°C to +80°C.



PARTICOLARI COMPONENTS	DESCRIZIONE DESCRIPTION	MATERIALI MATERIAL
1 Corpo attuatore / Actuator body	Estruso / Extruded	Lega di alluminio / Aluminium alloy
2 Pistone / Piston	Fuso / Casted	Lega di alluminio / Aluminium alloy
3 Testata / End-cap	Fuso / Casted	Lega di alluminio / Aluminium alloy
4 Albero / Pinion	Da barra / From bar	Acciaio al carbonio / Carbon steel
5 Guida Pistone / Piston guide	Da barra / From bar	Resina acetalica / Acetal resin
6 Anello inf. Guida albero / Lower pinion guide ring	Resina acetalica / Acetal resin	
7 O-Ring / O-Ring	Stampato / Moulded	Gomma nitrilica / Nitrile rubber
8 Molle / Springs	Forgiato / Forged	Acciaio per molle / Spring steel
9 Vite testata / Screw end cap	Da barra / From bar	Acciaio inox / Stainless steel
10 Anello guida pistone / piston guide ring	Da barra / From bar	Resina acetalica / Acetal resin
11 O-Ring / O-Ring	Forgiato / Forged	Gomma nitrilica / Nitrile rubber

Attuatori pneumatici in alluminio

Gli attuatori pneumatici in alluminio a cremagliera (Rack & Pinion) Enolgas sono adatti per applicazioni nell'automazione civile ed industriale. Sono disponibili sia a doppio che a semplice effetto in diverse dimensioni e configurazioni e con forature secondo la norma ISO 5211. Gli attuatori sono provvisti di marcatura CE, certificato Ped e Atex.

Aluminium pneumatic actuators

The Enolgas Rack & Pinion aluminium pneumatic actuators are suitable for use in civil and industrial automation. They are available in both single and dual acting version, in various dimensions and with different executions, with bores connection in accordance with ISO 5211 standard. Actuators are CE marked and Ped and Atex certificated.

ATTUATORI DOPPIO EFFETTO / DOUBLE ACTING ACTUATORS

Modello Model	PRESSIONE DI ALIMENTAZIONE / OPERATING PRESSURE - bar						
	2	3	4	5	6	7	8
S2951X**06**	5.9	8.9	11.8	14.8	17.7	21.7	24.8
S2951X**15**	9.4	14.1	18.8	23.5	28.2	32.9	37.6
S2951X**20**	20	30	40	50	60	70	80
S2951X**40**	34	51	68	85	102	119	136
S2951X**50**	48	71	95	119	142	168	192
S2951X**55**	87	130.8	174.4	218	261.6	305.2	348.8
S2951X**70**	111	167	222	278	333	388.5	444
S2951X**75**	157.6	236.4	315.3	394.1	473	551.8	630.6
S2951X**80**	227	340	454	567	680	794.5	908
S2951X**85**	426	638	851	1064	1276	1491	1704
S2951X**90**	1078	1617	2156	2695	3234	3773	4312

Dimensionamento di attuatori a doppio effetto

Per dimensionare un attuatore occorre conoscere la coppia richiesta e la pressione d'aria disponibile all'ingresso dell'attuatore stesso. La coppia richiesta si determina dalla coppia di sblocco dichiarata della valvola in funzione delle condizioni d'esercizio maggiorata da un idoneo coefficiente di sicurezza. Successivamente si verifica sulla tabella di dimensionamento quale attuatore corrisponde alle condizioni di esercizio richieste, incrociando i valori di pressione di alimentazione con quelli della coppia richiesta.

Double acting actuators' dimensioning

To dimension an actuator it is necessary to know the requested torque and the air pressure available at the actuator entrance. The requested torque is given by the declared breaking torque increased by a suitable safety factor. Then on the dimensioning table please check which actuator corresponds to the requested working conditions, by crossing the pressure values and the requested torque ones.

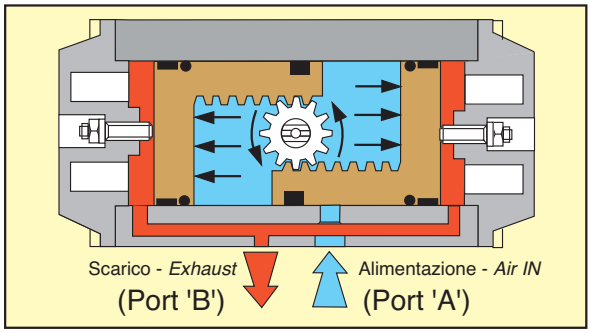
Coefficiente di Sicurezza

Il valore del coefficiente di sicurezza è funzione del mezzo passante all'interno della valvola, della sua temperatura, della sua densità e della sua viscosità. Il valore del coefficiente di sicurezza dipende inoltre dallo stato di aggregazione del mezzo, se il mezzo ha caratteristiche lubrificanti o no, se all'interno del mezzo c'è la presenza di materiali in grado di depositarsi all'interno della valvola o di incollarsi.

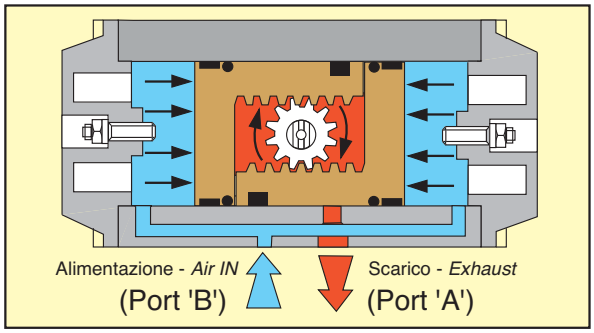
Safety factor

The safety factor is given by the medium going through the valve, its temperature, density and viscosity. The safety factor is moreover determined by the medium's state of aggregation, if it has lubricant features, if it contains materials which can deposit or get stuck inside the valve.

Movimento pistoni in apertura
Counter clockwise output rotation



Movimento pistoni in chiusura
Clockwise output rotation



ATTUATORI PNEUMATICI IN ALLUMINIO
ALUMINIUM PNEUMATIC ACTUATORS

ATTUATORI SINGLO EFFETTO / SINGLE ACTING ACTUATORS

Momento torcente attuatori semplice effetto (SR) / Torque output spring return actuators (SR) N m

Modello / Model	N° Molle / N° Of springs	ISO5211 connessione / ISO5211 connection	PRESSIONE DI ALIMENTAZIONE / OPERATING PRESSURE - bar												SPRING STROKE	
			3		4		5		6		7		8			
			0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	90°	0°
S297**10**	2	03	6.5	5.4	9.4	8.3	12.4	11.3	15.3	14.2	19.3	18.2	22.4	21.3	3.5	2.4
	3	03	5.3	3.7	8.2	6.6	11.2	9.6	14.1	12.5	18.1	16.5	21.2	19.6	5.2	3.6
	4	03	4.1	1.9	7	4.8	10	7.8	12.9	10.7	16.9	14.7	20	17.8	7.0	4.8
	5	03	-	-	3.1	2.7	8.8	6.1	11.7	9.0	15.7	13.0	18.8	16.1	8.7	6
	6	03	-	-	-	-	7.6	4.3	10.5	7.2	14.5	11.2	17.6	14.3	10.5	7.2
S297**20**	2	04	10.3	8.5	15.0	13.2	19.7	17.9	24.4	22.6	29.1	27.3	33.8	32.0	5.6	3.8
	3	04	8.4	5.7	13.1	10.4	17.8	15.1	22.5	19.8	27.2	24.5	31.9	29.2	8.4	5.7
	4	04	-	-	11.2	7.6	15.9	12.3	20.6	17.0	25.3	21.7	30.0	26.4	11.2	7.6
	5	04	-	-	-	-	14.0	9.5	18.7	14.2	23.4	18.9	28.1	23.6	14.0	9.5
	6	04	-	-	-	-	12.1	6.7	16.8	11.4	21.5	16.1	26.2	20.8	16.8	11.4
S297**30**	2	05	22.0	18.0	32.0	28.0	42.0	38.0	52.0	48.0	62.0	58.0	72.0	68.0	12.0	8.0
	3	05	18.0	12.0	28.0	22.0	38.0	32.0	48.0	42.0	58.0	52.0	68.0	62.0	18.0	12.0
	4	05	-	-	24.0	16.0	34.0	26.0	44.0	36.0	54.0	46.0	64.0	56.0	24.0	16.0
	5	05	-	-	-	-	30.0	20.0	40.0	30.0	50.0	40.0	60.0	50.0	30.0	20.0
	6	05	-	-	-	-	26.0	14.0	36.0	24.0	46.0	34.0	56.0	44.0	36.0	24.0
S297**35**	2	07	41.5	30.0	58.5	47.0	75.5	64.0	92.5	81.0	109.5	98.0	126.5	115.0	21.0	9.5
	3	07	32.0	20.0	49.0	37.0	66.0	54.0	83.0	71.0	100.0	88.0	117.0	105.0	31.0	19.0
	4	07	-	-	43.0	20.0	60.0	37.0	77.0	54.0	94.0	71.0	111.0	88.0	48.0	25.0
	5	07	-	-	-	-	53.0	33.0	70.0	50.0	87.0	67.0	104.0	84.0	52.0	32.0
	6	07	-	-	-	-	47.0	22.0	64.0	39.0	81.0	56.0	106.4	73.0	63.0	38.0
S297**40**	2	07	52.7	42.4	76.7	66.4	100.7	90.4	123.7	113.4	149.7	139.4	173.7	175.2	28.6	18.3
	3	07	43.0	28.0	67.0	52.0	91.0	76.0	114.0	99.0	140.0	125.0	164.0	153.6	43.0	28.0
	4	07	-	-	58.0	38.0	82.0	62.0	105.0	85.0	131.0	111.0	155.0	132.0	57.0	37.0
	5	07	-	-	-	-	73.0	47.0	96.0	70.0	122.0	96.0	146.0	110.4	72.0	46.0
	6	07	-	-	-	-	64.0	33.0	87.0	56.0	113.0	82.0	137.0	88.8	86.0	55.0
S297**45**	2	10	96.8	77.5	140.4	121.1	184.0	164.7	227.6	208.3	271.2	251.9	314.8	295.5	53.3	34.0
	3	10	79.8	50.9	123.4	94.5	167.0	138.1	210.6	181.7	254.2	225.3	297.8	268.9	79.9	51.0
	4	10	62.8	24.2	106.4	67.8	150.0	111.4	193.6	155.0	237.2	198.6	280.8	242.2	106.6	68.0
	5	10	-	-	89.4	41.1	133.0	84.7	176.6	128.3	220.2	171.9	263.8	215.5	133.3	85.0
	6	10	-	-	72.4	14.4	116.0	58.0	159.6	101.6	203.2	145.2	246.8	188.8	160.0	102.0
S297**50**	2	10	123.7	99.4	178.7	154.4	234.7	210.4	289.7	265.4	345.2	320.9	400.7	376.4	67.6	43.3
	3	10	103.0	66.0	158.0	121.0	214.0	177.0	269.0	232.0	324.5	287.5	380.0	343.0	101.0	64.0
	4	10	-	-	136.0	87.0	192.0	143.0	247.0	198.0	302.5	253.5	358.0	309.0	135.0	86.0
	5	10	-	-	-	-	170.0	109.0	225.0	164.0	280.5	219.5	336.0	275.0	169.0	108.0
	6	10	-	-	-	-	148.0	75.0	203.0	130.0	258.5	185.5	314.0	241.0	203.0	130.0
S297**55**	2	12	176.2	132.8	258.7	215.3	337.5	294.1	416.4	373.0	495.2	451.8	574.0	530.6	100.0	56.6
	3	12	147.9	82.8	230.4	165.3	309.2	244.1	388.1	323.0	466.9	401.8	545.7	480.6	150.0	84.9
	4	12	119.5	32.8	202.0	115.3	280.8	194.1	359.7	273.0	438.5	351.8	517.3	430.6	200.0	113.3
	5	12	-	-	173.7	65.3	252.5	144.1	331.4	223.0	410.2	301.8	489.0	380.6	250.0	141.6
	6	12	-	-	145.3	15.3	224.1	94.1	303.0	173.0	381.8	251.8	460.6	330.6	300.0	170.0
S297**60**	2	12	257.0	200.0	371.0	314.0	484.0	427.0	597.0	540.0	711.5	654.5	825.0	768.0	140.0	83.0
	3	12	215.0	130.0	329.0	244.0	442.0	357.0	555.0	470.0	669.5	584.5	783.0	698.0	210.0	125.0
	4	12	-	-	287.0	174.0	400.0	287.0	513.0	400.0	627.5	514.5	741.0	628.0	280.0	167.0
	5	12	-	-	-	-	358.0	217.0	471.0	330.0	585.5	444.5	699.0	558.0	350.0	209.0
	6	12	-	-	-	-	316.0	147.0	429.0	260.0	543.5	374.5	657.0	488.0	420.0	251.0
S297**80**	2	14	478.0	386.0	691.0	599.0	904.0	812.0	1116.0	1024.0	1331.0	1239.0	1704.0	1452.0	252.0	160.0
	3	14	398.0	260.0	611.0	473.0	824.0	686.0	1036.0	898.0	1251.0	1113.0	1464.0	1326.0	378.0	240.0
	4	14	-	-	531.0	347.0	744.0	560.0	956.0	772.0	1171.0	987.0	1384.0	1200.0	504.0	320.0
	5	14	-	-	-	-	664.0	434.0	876.0	646.0	1091.0	861.0	1304.0	1074.0	630.0	400.0
	6	14	-	-	-	-	584.0	308.0	796.0	520.0	1011.0	735.0	1224.0	948.0	756.0	480.0
S297**00**	2	16	1181.0	957.0	1720.0	1496.0	2259.0	2032.0	2798.0	2574.0	3337.0	3113.0	3876.0	3652.0	660.0	436.0
	3	16	963.0	628.0	1502.0	1167.0	2041.0	1706.0	2580.0	2245.0	3119.0	2748.0	3658.0	3323.0	989.0	654.0
	4	16	-	-	1284.0	837.0	1823.0	1376.0	2362.0	1915.0	2901.0	2454.0	3440.0	2993.0	1319.0	872.0
	5	16	-	-	-	-	1605.0	1046.0	2144.0	1585.0	2683.0	2124.0	3222.0	2663.0	1649.0	1090.0
	6	16	-	-	-	-	-	-	1909.0	1254.0	2448.0	1793.0	2987.0	2332.0	1980.0	1325.0

I codici si riferiscono agli attuatori in configurazione normalmente chiusa / The codes refer to normally closed actuators

CODIFICA ATTUATORI SINGOLO EFFETTO / ENCODING SINGLE ACTING ACTUATORS

S2971	**10**	2	03
Modello attuatore singolo effetto Single acting model	**Alessaggio attuatore** Stroke	**Numero di molle** Springs	**ISO 5211** **Connessione** Connection

ESEMPIO EXAMPLE

Dimensionamento di attuatori a semplice effetto

Gli attuatori a semplice effetto contengono un pacco di molle tra i pistoni e le testate; in conseguenza di questa esecuzione costruttiva la coppia di un attuatore a semplice effetto avrà sempre un valore inferiore rispetto a quello di un attuatore a doppio effetto di medesime dimensioni (Alesaggio); inoltre tale coppia durante la corsa non è costante ma decrescente per effetto della compressione delle molle che si oppongono al movimento dei pistoni.
Pertanto per dimensionare l'attuatore occorre conoscere la coppia richiesta e la pressione d'aria disponibile all'ingresso dell'attuatore stesso. La coppia richiesta si determina dalla coppia di sblocco dichiarata della valvola in funzione delle condizioni d'esercizio maggiorata da un idoneo coefficiente di sicurezza. Si cerca quindi sulla tabella nella colonna 0° (molle distese) di "Spring Stroke"/Coppia delle Molle il valore di coppia maggiore o uguale alla coppia richiesta. Restando sulla stessa fila ci si sposta verso sinistra fino ad incrociare il valore di pressione di alimentazione all'ingresso dell'attuatore, e si controlla che il valore di coppia nella colonna 90° (molle compresse) sia maggiore o uguale alla coppia richiesta. In caso positivo l'attuatore è stato dimensionato correttamente altrimenti si sceglie un modello di dimensioni (alesaggio) maggiori iterando il procedimento indicato fino a che entrambi i valori trovati siano verificati.

Single acting actuators dimensioning

The single acting actuators contain springs between the pistons and the end-cups. Because of this the single acting actuator's torque will always have a value inferior to the dual acting actuator's of the same dimensions (bore). Moreover this torque is not constant throughout the stroke, but it decreases, because of the springs compression which opposes the pistons movement.
Therefore in order to dimension the actuator it is necessary to know the requested torque and the air pressure available at the actuator entrance. The requested torque is given by the declared breaking torque increased by a suitable safety factor. On the table, column 0°, of "Spring Stroke" it is necessary to look for the torque's value higher or equal to the requested one. On that same line move to the left and cross the inlet pressure value at the actuator and check that the torque's value in column 90° (compressed springs) is higher or equal to the requested torque. If this is the case the actuator has been dimensioned correctly, if not it is necessary to chose a model with bigger dimensions (bore) repeating the procedure until both values found are verified.

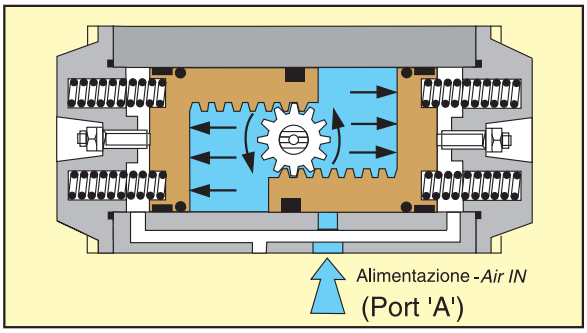
Coefficiente di Sicurezza

Il valore del coefficiente di sicurezza è funzione del mezzo passante all'interno della valvola, della sua temperatura, della sua densità e della sua viscosità. Il valore del coefficiente di sicurezza dipende inoltre dallo stato di aggregazione del mezzo, se il mezzo ha caratteristiche lubrificanti o no, se all'interno del mezzo c'è la presenza di materiali in grado di depositarsi all'interno della valvola o di incollarsi.

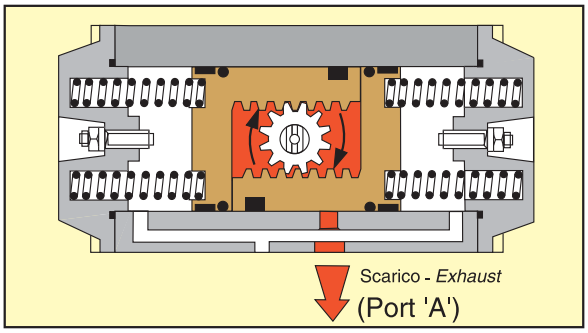
Safety factor

The safety factor is given by the medium going through the valve, its temperature, density and viscosity. The safety factor is moreover determined by the medium's state of aggregation, if it has lubricant features, if it contains materials which can deposit or get stuck inside the valve.

Movimento pistoni in chiusura
Counter Clockwise output rotation

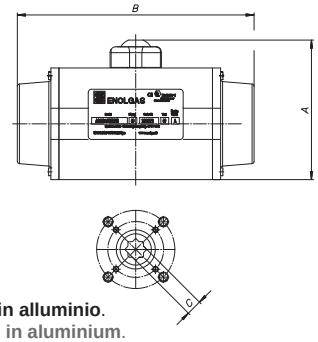


Movimento pistoni in apertura
Clockwise output rotation



ATTUATORI PNEUMATICI IN ALLUMINIO
ALUMINIUM PNEUMATIC ACTUATORS

ART. S.2951X
ATTUATORE PNEUMATICO DE
DA PNEUMATIC ACTUATOR



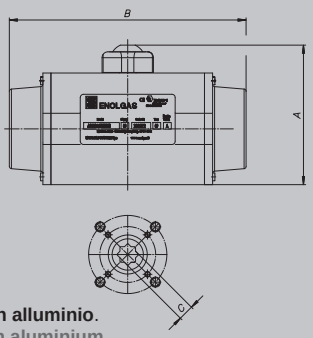
Attuatore pneumatico doppio effetto **in alluminio**.
Pneumatic servo control double acting **in aluminium**.

Code	S2951X06	S2951X15	S2951X20	S2951X40	S2951X50	S2951X55	S2951X70	S2951X75	S2951X80	S2951X85	S2951X90
A mm	87	103	120	130	145	172	185	206	230	300	385
B mm	142	155	213	236	276	310	366	388	468	563	750
C mm	9	11	14	17	17	22	22	27	27	36	46
FLANGIA	F03-F05	F04-F05	F05-F07	F07	F07-F10	F10	F10	F12	F12	F14	F16

CARATTERISTICHE ATTUATORE
S2951X Doppio effetto in alluminio

FEATURES OF THE ACTUATOR
S2951X Aluminium double acting

ART. S.2971
ATTUATORE PNEUMATICO SE
SA PNEUMATIC ACTUATOR



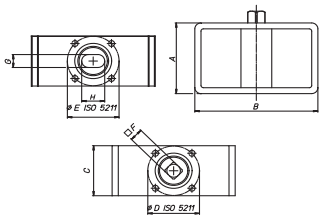
Attuatore pneumatico singolo effetto **in alluminio**.
Pneumatic servo control single acting **in aluminium**.

Code	S297110...	S297120...	S297130...	S297135...	S297140...	S297145...	S297150...	S297155...	S297160...	S297180...	S297100...
A mm	87	103	120	130	145	172	185	206	230	300	385
B mm	142	155	213	236	276	310	366	388	468	563	750
C mm	9	11	14	17	17	22	22	27	27	36	46
FLANGIA	F03-F05	F04-F05	F05-F07	F07	F07-F10	F10	F10	F12	F12	F14	F16

CARATTERISTICHE ATTUATORE
S2971 Singolo effetto in alluminio

FEATURES OF THE ACTUATOR
S2971 Aluminium single acting

ART. A.1501X
KIT COLLEGAMENTO
MOUNTING KIT



KIT COLLEGAMENTO / MOUNTING KIT

art. A1501X

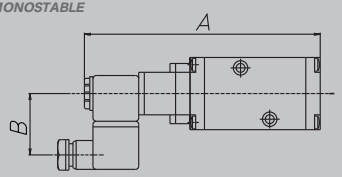
Castelletto e prolunga perno per accoppiamento valvola attuatore.
Disponibile solo con acquisto di valvola e attuatore.
L'immagine a sinistra è puramente indicativa.

Bracket + stem for connection between valve and actuator.
Available only with purchase of complete assembly: valve + actuator.
The picture on the left side is indicative.

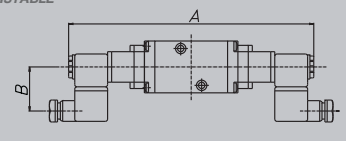
Code	A1501X01	A1501X02	A1501X03	A1501X04	A1501X05	A1501X06	A1501X07	A1501X08	A1501X09	A1501X10	A1501X11	A1501X12	A1501X13	A1501X14	A1501X15	A1501X16	A1501X17	A1501X18
Size	F03-F03	F03-F04	F03-F05	F04-F04	F04-F05	F04-F07	F05-F05	F05-F07	F05-F10	F07-F07	F07-F10	F07-F10	F10-F10	F10-F12	F10-F14	F12-F12	F12-F14	F12-F16
A	40	60	60	60	60	60	60	60	80	60	80	80	80	80	90	80	90	120
B	35	50	50	50	50	70	50	70	90	70	90	90	90	110	135	110	135	160
C	80	100	100	100	100	100	100	100	140	100	140	140	140	140	160	140	160	220
øD	F03	F03	F03	F04	F04	F04	F05	F05	F05	F07	F07	F07	F10	F10	F10	F12	F12	F12
øE	F04	F03	F05	F04	F05	F07	F05	F07	F10	F07	F10	F10	F10	F12	F14	F12	F14	F16
□F	9	11	14	11	14	17	14	17	22	17	22	27	22	22	36	27	36	46
G	6	6	6	8	8	18	10	10	10	14	14	14	16	16	16	26	26	26
H	10	10	10	12	12	12	16	16	16	22	22	22	27	27	27	42	42	42

ART. S.2701 a/to S.2706
ART. S.2731 a/to S.2736
ELETTROVALVOLE
NAMUR SOLENOID VALVES

MONOSTABILE
MONOSTABLE



BISTABILE
BISTABLE



ELETTROVALVOLE NAMUR
Elettrovalvola NAMUR multifunzionale 3/2 o 5/2 IP65
Attacco: 1/4" Gas (NPT)
Pressione d'utilizzo: 2-10 bar
Temperatura di utilizzo: -10°C + 70°C
Grado di protezione IP 65/DIN 40050

Disponibili con diversi classi di protezione.

NAMUR SOLENOID VALVES
Namur multi-function solenoid valve 3/2 or 5/2 IP65
Connection: 1/4" gas (NPT)
Working pressure: 2-10 bar
Working temperature: -10°C+70°C
Protection level IP 65/DIN 40050

Available with various rating of protection.

MONOSTABILE / MONOSTABLE
S2701 12VCC
S2702 24VCC
S2703 24VAC
S2704 48VAC
S2705 110VAC
S2706 220VAC

BISTABILE / BISTABLE
S2731 12VCC
S2732 24VCC
S2733 24VAC
S2734 48VAC
S2735 110VAC
S2736 220VAC

Note/Notes

ATTUATORI ELETTRICI
ELECTRIC ACTUATORS

ISO • TOP ACTUATORS

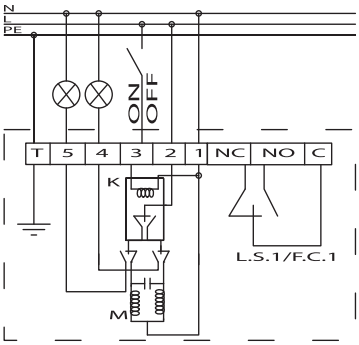
ATTUATORI ELETTRICI ISO 5211 / ELECTRIC ACTUATORS ISO 5211

CODICE S2870P40	**CODE** S2870P40
VOLTAGGIO 230V 50-60Hz Disponibile 24V Art. S2872P40	**POWER SUPPLY VOLTAGE** 230V 50-60Hz Available 24V S2872P40
POTENZA ASSORBITA 11 Watt	**ABSORBED POWER W** 11W
SEGNALE INGRESSO - 2 Punti / SPST / On-Off / Con relay interno	**INPUT SIGNAL** - 2 Position Control Signal / SPST / On-Off / With Internal Relay
COPPIA MOTRICE 40Nm max.	**OUTPUT TORQUE** 40Nm max.
ATTACCO PER VALVOLE ISO5211 F03-F04-F05-F07 CH 9-11-14mm	**ASSEMBLY** ISO5211 F03-F04-F05-F07 STAR 9-11-14mm
TEMPO DI AZIONAMENTO 35 Sec/90°	**WORKING TIME** 35 Sec/90°
TIPOLOGIA DI MOTORE Bidirezionale	**MOTOR TYPE** Bidirectional
ANGOLO DI ROTAZIONE 90°	**WORKING ANGLE** 90°
GRADO DI PROTEZIONE IP65	**PROTECTION** IP65
PESO 0,65 Kg	**WEIGHT** 0,65 Kg
TEMPERATURA DI ESERCIZIO -20° + 70°	**OPERATING TEMPERATURE** -20° + 70°
CONNESSIONE PG11 4 Fili	**CONNECTION** PG11 4 Wires
SEGNALE USCITA 230V 50-60Hz 200VA	**OUTPUT SIGNAL** 230V 50-60Hz 200VA
CONTATTO AUSILIARO 250V 10A (AC1)	**AUXILIARY CONTACT** 250V 10A (AC1)

SCHEMA ELETTRICO / WIRING DIAGRAM

1 - NEUTRO 230V 50/60Hz
2 - FASE 230V 50/60Hz (11W)
3 - FASE APERTURA/CHIUSURA
4 - FASE CON VALVOLA APERTA
5 - FASE CON VALVOLA CHIUSA
T - TERRA

N - NEUTRO (SN)
L - FASE (SP)
K - RELE INTERNO
F.C.1 - CONTATTO AUSILIARIO 250VAC 10A (AC1)
M - MOTORE

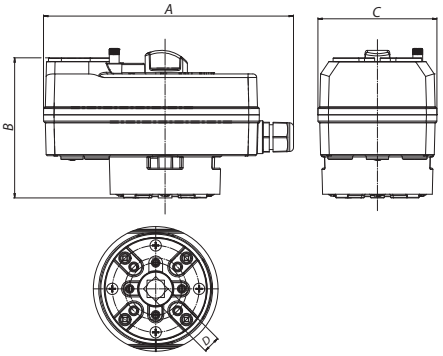


1 - NEUTRAL 230V 50/60Hz
2 - LINE 230V 50/60Hz (11W)
3 - LINE OPEN / CLOSED
4 - LINE WITH OPEN VALVE
5 - LINE WITH CLOSED VALVE
T - GROUND

N - NEUTRAL (SN)
L - LINE (SP)
K - INTERNAL RELAY
F.C.1 - AUX. CONTACT 250VAC 10A (AC1)
M - MOTOR

Art. S.2870P40

ATTUATORE ELETTRICO
ELECTRIC ACTUATOR



SIZE	
A mm	201,5
B mm	113
C mm	96
D mm	9-11-14
FLANGE	F03-F04-F05-F07

Attuatore ON-OFF con connessione ISO•TOP.
ON-OFF actuator with quick mounting connection ISO•TOP.

TERMINALE TERMINAL	DIREZIONE DIRECTION	DESCRIZIONE DESCRIPTION	CONNESSIONE CONNECTION
1 1	IN IN	NEUTRO NEUTRAL	COLLEGARE AL NEUTRO DELLA LINEA DI ALIMENTAZIONE POWER SUPPLY VOLTAGE NEUTRAL CONNECTION
2 2	IN IN	FASE PHASE	COLLEGARE ALLA FASE DELLA LINEA DI ALIMENTAZIONE POWER SUPPLY VOLTAGE PHASE CONNECTION
3 3	IN IN	APERTURA / CHIUSURA OPENING / CLOSING	QUANDO LA FASE E' COLLEGATA AL TERMINALE 3 LA VALVOLA APRE WHEN POWER SUPPLY VOLTAGE PHASE IS CONNECTED TO TERMINAL 3 THE VALVE OPENS OTHERWISE THE VALVE CLOSES
4 4	OUT OUT	FASE CON VALVOLA APERTA PHASE WITH OPENED VALVE	SE LA VALVOLA E' APERTA PRESENZA DI FASE SUL TERMINALE 4 WITH OPENED VALVE, PRESENCE OF PHASE ON TERMINAL 4
5 5	OUT OUT	FASE CON VALVOLA CHIUSA PHASE WITH CLOSED VALVE	SE LA VALVOLA E' CHIUSA PRESENZA DI FASE SUL TERMINALE 5 WITH CLOSED VALVE, PRESENCE OF PHASE ON TERMINAL 5
T T	IN IN	TERRA GROUND	COLLEGARE ALLA TERRA DELL'IMPIANTO DI ALIMENTAZIONE TERMINAL CONNECTION TO THE GROUND SYSTEM

ATTUATORI ELETTRICI
ELECTRIC ACTUATORS

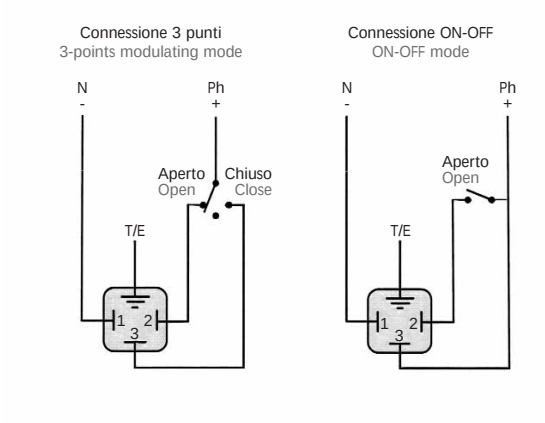
ATTUATORI ELETTRICI TAGLIA MEDIA ISO 5211 10-20Nm / ELECTRIC ACTUATORS MEDIUM DUTY ISO 5211 10-20Nm

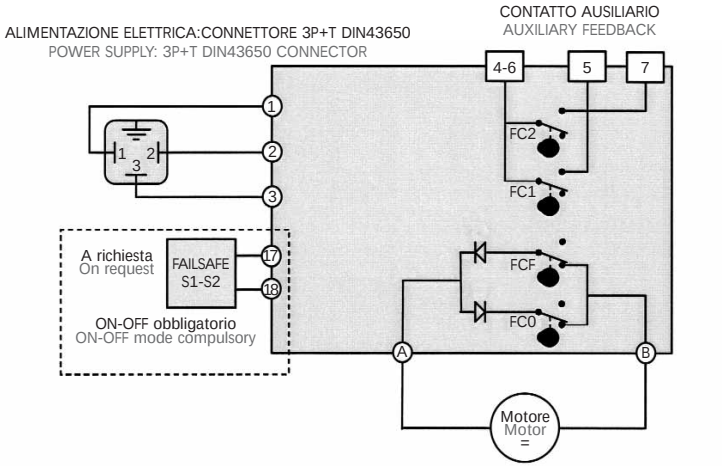
CODICE S3501P00 - S3504P00	**CODE** S3501P00 - S3504P00
VOLTAGGIO MULTIVOLT 90-240V AC 50-60Hz o 90-350V DC disponibile anche 15-30V AC 50-60 Hz o 12-48V DC	**POWER SUPPLY** MULTIVOLTAGE 90 - 240V AC 50-60Hz or 90-350V DC, available also 15-30V AC 50-60 Hz or 12-48V DC
POTENZA ASSORBITA 15 W	**ABSORBED POWER W** 15W
CONNESSIONI Connettore DIN 43650 3P+T + 1 ISO M20	**CONNECTIONS** - 3P+T DIN43650 connector + 1 ISO M20
COPPIA MOTRICE 10Nm o 20Nm	**OUTPUT TORQUE** 10Nm or 20Nm
TEMPO DI AZIONAMENTO 11 Sec/90° (versione 10Nm); 12 Sec/90° (versione 20Nm)	**WORKING TIME** 11 Sec/90° (version 10Nm); 12 Sec/90° (version 20Nm)
TIPOLOGIA DI MOTORE Sincrono	**MOTOR TYPE** Syncron
ANGOLO DI ROTAZIONE 90°	**WORKING ANGLE** 90°
GRADO DI PROTEZIONE IP66	**PROTECTION** IP66
PESO 1,4 Kg	**WEIGHT** 1,4 Kg
TEMPERATURA DI ESERCIZIO -10°C + 55°C	**OPERATING TEMPERATURE** -10°C + 55°C
CONTATTO AUSILIARIO 4x5A 240V	**AUXILIARY CONTACT** 4x5A 240V

SCHEMA ELETTRICO / WIRING DIAGRAM

1 - NEUTRO (-)
2 - FASE (+)
3 - FASE (+)
T/E - TERRA

1 - NEUTRAL (-)
2 - LINE (+)
3 - LINE (+)
T/E - GROUND

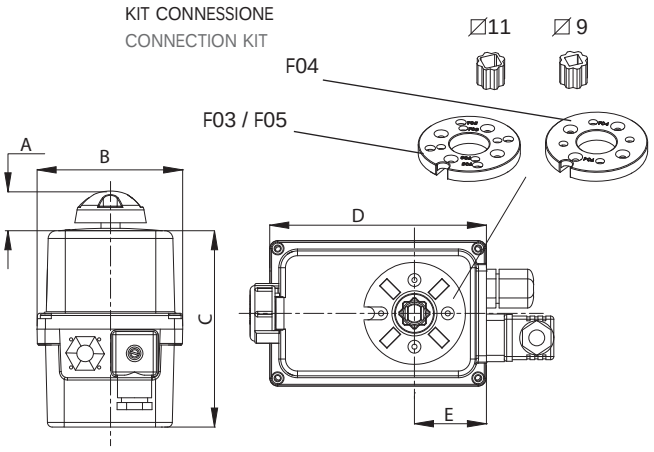




Art. S.3501P00 - S.3504P00

ATTUATORE ELETTRICO
ELECTRIC ACTUATOR

Attuatore elettrico ON-OFF 3 punti con connessione ISO5211.
Electric actuator ON-OFF 3 points with ISO5211 connection.



	A	B	C	D	E
SIZE	24	92	124	136	45

Disponibile su richiesta versione FAILSAFE.
Disponibile anche come attuatore proporzionale.
Available on request FAILSAFE version.
Available on request the proportional version.

ATTUATORI ELETTRICI
ELECTRIC ACTUATORS

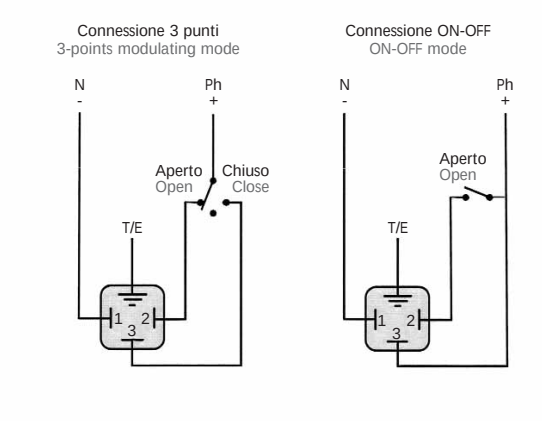
ATTUATORI ELETTRICI TAGLIA MEDIA ISO 5211 35-100Nm / ELECTRIC ACTUATORS MEDIUM DUTY ISO 5211 35-100Nm

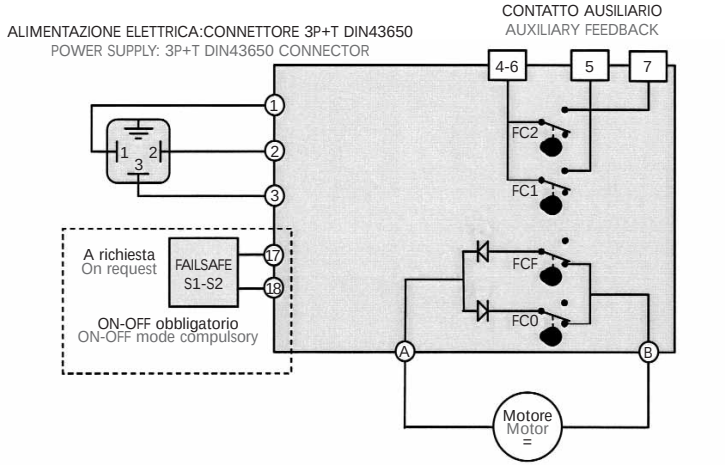
CODICE S3505P57 - S3526P57	**CODE** S3505P57 - S3526P57
VOLTAGGIO MULTIVOLT 90-240V AC 50-60Hz o 90-350V DC disponibile anche 15-30V AC 50-60 Hz o 12-48V DC	**POWER SUPPLY** MULTIVOLTAGE 90 - 240V AC 50-60Hz or 90-350V DC, available also 15-30V AC 50-60 Hz or 12-48V DC
POTENZA ASSORBITA 45 W	**ABSORBED POWER** 45W
CONNESSIONI Connettore DIN 43650 3P+T + 1 ISO M20	**CONNECTIONS** - 3P+T DIN43650 connector + 1 ISO M20
COPPIA MOTRICE da 35Nm a 100Nm	**OUTPUT TORQUE** from 35Nm to 100Nm
TEMPO DI AZIONAMENTO da 40 Sec/90° (versione 35Nm) a 109 Sec/90° (versione 100Nm)	**WORKING TIME** from 40 Sec/90° (version 35Nm) to 109 Sec/90° (version 100Nm)
TIPOLOGIA DI MOTORE Sincrono	**MOTOR TYPE** Syncron
ANGOLO DI ROTAZIONE 90°	**WORKING ANGLE** 90°
GRADO DI PROTEZIONE IP66	**PROTECTION** IP66
PESO 3 Kg	**WEIGHT** 3 Kg
TEMPERATURA DI ESERCIZIO -10°C + 55°C	**OPERATING TEMPERATURE** -10°C + 55°C
CONTATTO AUSILIARIO 4x5A 240V	**AUXILIARY CONTACT** 4x5A 240V

SCHEMA ELETTRICO / WIRING DIAGRAM

1 - NEUTRO (-)
2 - FASE (+)
3 - FASE (+)
T/E - TERRA

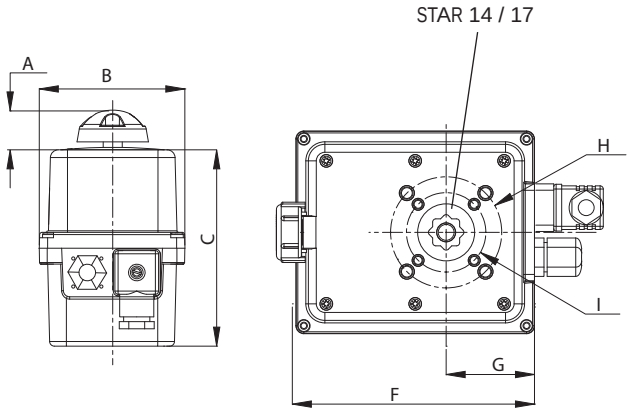
1 - NEUTRAL (-)
2 - LINE (+)
3 - LINE (+)
T/E - GROUND





Art. S.3505P57 - S.3526P57

ATTUATORE ELETTRICO
ELECTRIC ACTUATOR



	A	B	C	F	G	H	I
SIZE	24	128	152	151	54	F07 Ø70 M8	F05 Ø50 M6

Attuatore elettrico ON-OFF 3 punti con connessione ISO5211.
Electric actuator ON-OFF 3 points with ISO5211 connection.

Disponibile su richiesta versione FAILSAFE.
Disponibile anche come attuatore proporzionale.
Available on request FAILSAFE version.
Available on request the proportional version.

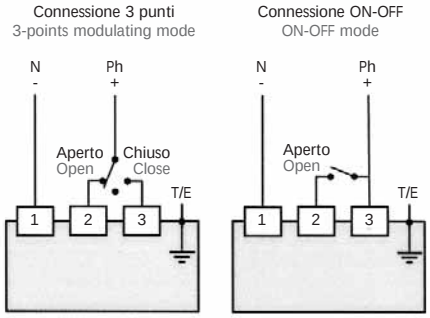
ATTUATORI ELETTRICI TAGLIA GRANDE ISO 5211 100-300 Nm / ELECTRIC ACTUATORS HEAVY DUTY ISO 5211 100-300 Nm

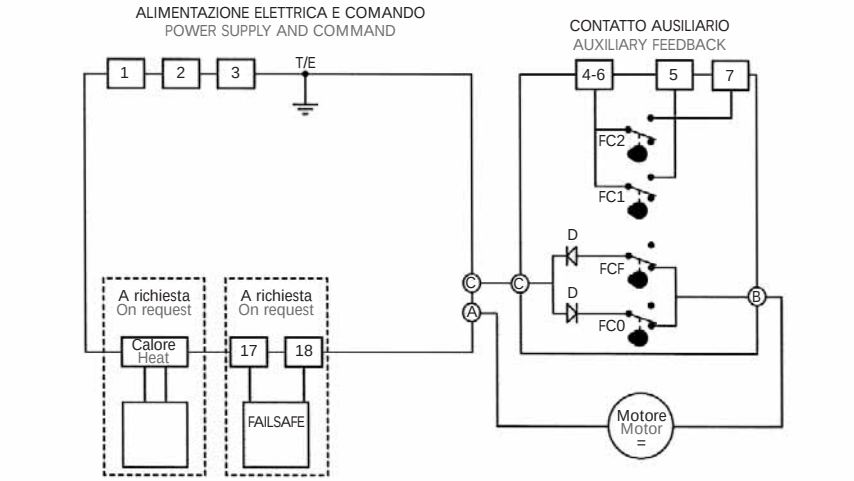
CODICE S3535X71 - S3556X71	**CODE** S3535X71 - S3556X71
VOLTAGGIO MULTIVOLT100 - 240V AC 50-60Hz, disponibile anche 24V AC/DC	**POWER SUPPLY** MULTIVOLTAGE 100 - 240V AC 50-60Hz, available also 24V AC/DC
POTENZA ASSORBITA da 45W a 85W	**ABSORBED POWER** 45W to 85W
CONNESSIONE ELETTRICA - 2 x ISO M20	**ELETRIC CONNECTION** - 2 x ISO M20
COPPIA MOTRICE da 100Nm a 300Nm	**OUTPUT TORQUE** from 100Nm to 300Nm
TEMPO DI AZIONAMENTO da 15 Sec/90° (versione 100Nm) a 50 Sec/90° (versione 300Nm)	**WORKING TIME** from 15 Sec/90° (version 100Nm) to 50 Sec/90° (version 300Nm)
TIPOLOGIA DI MOTORE Sincrono	**MOTOR TYPE** Syncron
ANGOLO DI ROTAZIONE 90°	**WORKING ANGLE** 90°
GRADO DI PROTEZIONE IP67	**PROTECTION** IP67
PESO 5,6 Kg	**WEIGHT** 5,6 Kg
TEMPERATURA DI ESERCIZIO -20°C + 70°C	**OPERATING TEMPERATURE** -20°C + 70°C
CONTATTO AUSILIARIO 4x5A 240V	**AUXILIARY CONTACT** 4x5A 240V

SCHEMA ELETTRICO / WIRING DIAGRAM

1 - NEUTRO (-)
2 - FASE (+)
3 - FASE (+)
T/E - TERRA

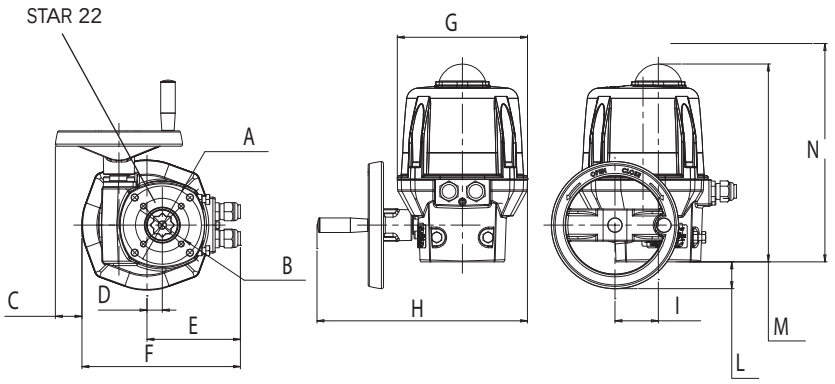
1 - NEUTRAL (-)
2 - LINE (+)
3 - LINE (+)
T/E - GROUND





Art. S.3535X71 - S.3556X71

ATTUATORE ELETTRICO
ELECTRIC ACTUATOR



	A	B	C	D	E	F	G	H	I	L	M	N
SIZE	Ø 102 ISO F10 4xM10	Ø 70 ISO F07 4xM8	35	20	122	207	170	275	57	35	258	-

Attuatore elettrico ON-OFF 3 punti con connessione ISO5211.
Electric actuator ON-OFF 3 points with ISO5211 connection.

Disponibile su richiesta versione FAILSAFE e ATEX.
Disponibile anche come attuatore proporzionale.
Available on request FAILSAFE and ATEX version.
Available on request the proportional version.

ATTUATORI ELETTRICI
ELECTRIC ACTUATORS

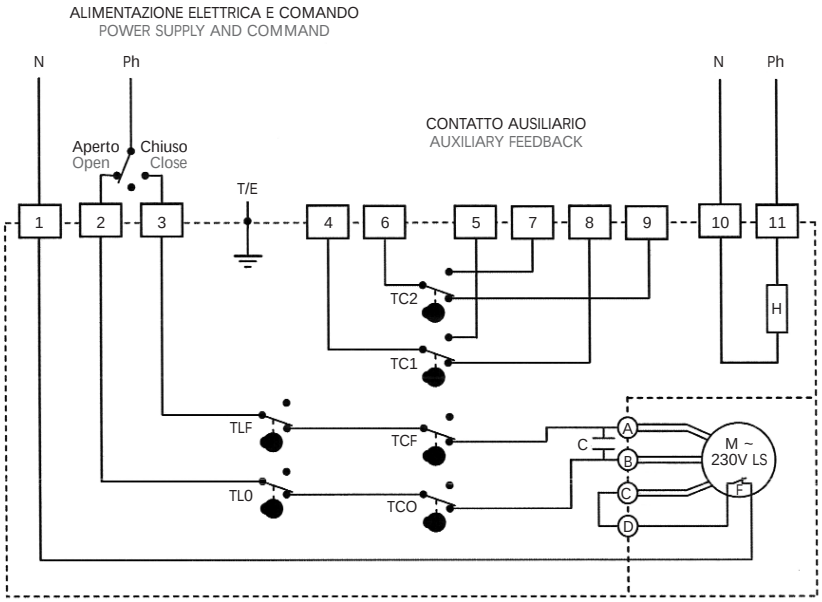
ATTUATORI ELETTRICI TAGLIA GRANDE ISO 5211 600-1000 Nm/ELECTRIC ACTUATORS HEAVY DUTY 600-1000 Nm ISO 5211

CODICE S3557X82 - S3568X82	**CODE** S3557X82 - S3568X82
VOLTAGGIO 400V tri, disponibile anche 230V AC 50-60Hz	**POWER SUPPLY** 400V tri, available also 230V AC 50-60Hz
POTENZA ASSORBITA 250 W	**ABSORBED POWER** 250 W
CONNESSIONE ELETTRICA - 2 x ISO M20	**ELETRIC CONNECTION** - 2 x ISO M20
COPPIA MOTRICE 600Nm o 1000Nm	**OUTPUT TORQUE** 600Nm or 1000Nm
TEMPO DI AZIONAMENTO 38 sec/90°	**WORKING TIME** 38 sec/90°
TIPOLOGIA DI MOTORE Sincrono	**MOTOR TYPE** Syncron
ANGOLO DI ROTAZIONE 90°	**WORKING ANGLE** 90°
GRADO DI PROTEZIONE IP67	**PROTECTION** IP67
PESO 17,1 Kg	**WEIGHT** 17,1 Kg
TEMPERATURA DI ESERCIZIO -20°C + 70°C	**OPERATING TEMPERATURE** -20°C + 70°C
CONTATTO AUSILIARIO 4x16A 240V	**AUXILIARY CONTACT** 4x16A 240V

SCHEMA ELETTRICO / WIRING DIAGRAM

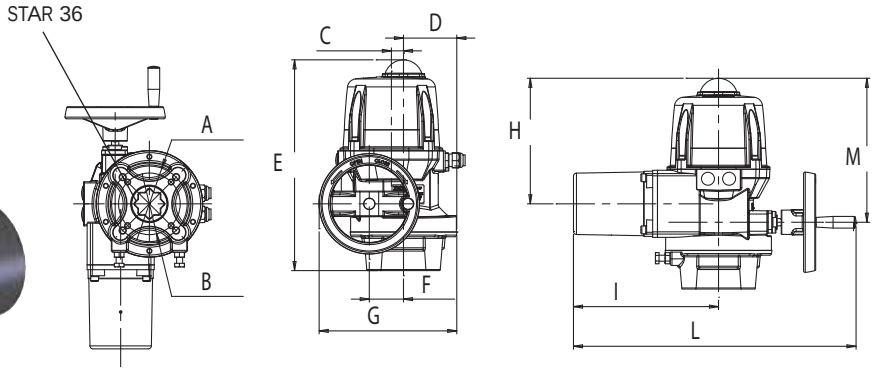
1 - NEUTRO (-)
2 - FASE (+)
3 - FASE (+)
T/E - TERRA

1 - NEUTRAL (-)
2 - LINE (+)
3 - LINE (+)
T/E - GROUND



Art. S.3557X82 - S.3568X82

ATTUATORE ELETTRICO
ELECTRIC ACTUATOR



	A	B	C	D	E	F	G	H	I	L	M
SIZE	Ø 125 F12 M12	Ø 102 F10 M10	20	88	349	56,6	228	208	240	468	238

Attuatore elettrico ON-OFF con connessione ISO5211.
Electric actuator ON-OFF with ISO5211 connection.

Note/Notes

DATI TECNICI / TECHNICAL DATA

Tabella delle resistenze chimiche - METALLI / Table of chemical resistance - METALS

E EXCELLENT
G GOOD
P POOR
N NOT RECOMMENDED
– =NO INFORMATION AVAILABLE
B = BOILING
C = HOT
Ta= ROOM TEMPERATURE

	CONCENTRATION	TEMPERATURE °C	AISI 304 18/8/2 CF8M 1.4401-1.4408	AISI 316 18/8/2 CF8M 1.4401-1.4408	CARBON STEEL A 105/A216WCB	CAST IRON	BRASS
Acetaldehyde		Ta	E	E	P	P	—
Acetilene		+20	E	E	E	E	N
Acetic Acid	10%	+20	E	E	N	N	G
Acetic Acid	10%	B	G	N	N	N	N
Acetic Acid	20-80%	+20	E	G	N	N	N
Acetic Acid	80%	B	G	G	N	N	N
Acetic Acid (vapours)	30%	C	P	P	N	N	N
Acetic Anhydride		B	G	G	P	P	P
Acetic Ester	concentrated	+20	E	E	G	G	—
Acetic Solvents		Ta	E	E	E	G	—
Acetone		B	E	E	G	G	E
Acido Cresilico		+20	E	E	G	G	G
Acido Idrofluorosilicico		Ta	P	P	N	N	G
Acrylonitrile		Ta	E	E	E	E	—
Alcool Diacetone		Ta	E	E	E	E	—
Alum	10%	B	G	G	N	N	G
Alum	saturaded	B	P	G	N	N	—
Aluminium Chloride	25%	+20	N	P	N	N	N
Aluminium (Chloride)	25%	+20	N	P	N	N	—
Aluminium (Chloride)	25%	B	N	N	N	N	—
Aluminium (Fluoride)	5%	+20	N	P	N	N	—
Aluminium Sulfate		+20	G	G	N	N	—
Aluminium Sulfate		B	P	G	N	N	—
Aluminium Sulphate		Ta	G	E	P	P	P
Ammines		+20	E	E	E	E	—
Ammonia	concentrated	+20	E	E	G	G	E
Ammonia	acquarosa	Ta	E	E	E	E	N
Ammonia	gaseous	C	N	N	P	P	—
Ammonium Bicarbonate		Ta	G	G	P	P	—
Ammonium Carbonate		+20	G	G	G	G	—
Ammonium Carbonate		Ta	G	G	G	G	—
Ammonium Chloride	10%	+20	G	G	P	P	N
Ammonium Chloride	10%	+20	G	G	P	P	—
Ammonium Chloride	10%	B	P	G	N	N	—
Ammonium Disulphate		+20	E	E	P	P	—
Ammonium Hydroxide		C	E	E	G	G	—
Ammonium Hydroxide	concentrated	Ta	E	E	G	G	—
Ammonium Hydroxide		C	E	E	G	G	N
Ammonium Monophosphate		+20	E	E	N	N	—
Ammonium Monophosphate		+20	E	E	N	N	—
Ammonium Nitrate		+20	G	G	G	G	—
Ammonium Nitrate	saturaded	B	G	G	P	P	—
Ammonium Nitrate		+20	G	G	G	G	N
Ammonium Persulphate	5%	+20	G	G	N	N	—
Ammonium Phosphate		Ta	G	G	N	N	—
Ammonium Sulphate	5%	+20	P	G	P	P	—
Ammonium Sulphate	10%	B	N	P	N	N	—
Ammonium Sulphate	saturaded	B	N	P	N	N	—
Ammonium Sulphate		+20	P	G	P	P	N
Ammonium Trisulphate		+20	G	E	G	G	—
Amyl Acetate	concentrated	+20	G	G	G	G	—
Amyl Acetate		Ta	G	G	P	P	G
Amyl Alcohol	concentrated	+20	E	E	N	N	E
Aniline	3%	+20	E	E	G	G	P
Aniline	concentrated	+20	G	G	G	G	P
Aniline (dyes)		Ta	E	E	P	P	P
Animal Oil		Ta	E	E	E	E	—
Antimony Trichloride		+20	N	N	N	N	—
Antimony Trichloride		Ta	N	N	N	N	—
Apple Juice		Ta	G	G	N	N	N
Asphalt		Ta	E	E	G	G	E
Barium Cholide	saturaded	+20	P	G	P	P	P
Barium Cholide	water sol.	C	N	P	N	N	P
Barium Carbonate		Ta	G	G	G	G	E
BariumChloride	5%	+20	G	G	P	P	N
Barium Hydroxide		Ta	G	G	P	P	G

	CONCENTRATION	TEMPERATURE °C	AISI 304 18/8/2 CF8M 1.4401-1.4408	AISI 316 18/8/2 CF8M 1.4401-1.4408	CARBON STEEL A 105/A216WCB	CAST IRON	BRASS
Barium Sulphate		+20	P	G	G	G	E
Barium Sulphate		+20	G	G	G	G	G
Barium Sulphate		Ta	G	G	P	P	E
Benzaldehyde		Ta	E	E	E	E	—
Benzoic Acid		+20	G	G	G	G	G
Benzol		C	G	G	G	G	E
Borax		+20	E	E	G	G	E
Boric Acid	5%	C	G	G	N	N	G
Brine		Ta	G	G	P	P	G
Bromine		+20	N	N	N	N	N
Butadiene		Ta	E	E	E	E	E
Butane		Ta	E	E	E	E	E
Butyric Acid	5%	+70	G	G	P	P	N
Butyl Alcohol		Ta	E	E	G	G	E
Butylene		Ta	E	E	E	E	—
Butyl Acetate		+20	G	G	E	E	—
Calcium Bisulphite		+20	P	G	N	N	G
Calcium Bisulphite		+20	P	G	N	N	G
Calcim Carbonate		+20	G	G	G	G	E
Calcium Carbonate		+20	G	G	G	G	E
Calcium Chloride		+20	P	G	P	P	N
Calcium Chloride	diluted	+20	P	G	P	P	N
Calcium Chloride	concentrated	+20	N	P	P	P	N
Calcium Chloride	concentrated	B	N	N	N	N	N
Calcium Hydroxide	5%	+20	G	G	G	G	G
Calcium Hydroxide	10%	B	G	G	N	N	G
Calcium Hydroxide	50%	B	N	G	N	N	G
Calcium Hypochlorite	2%	+20	P	P	N	N	N
Calcium Hydroxide		Ta	E	E	E	E	—
Calcium Hydroxide		+20	G	G	G	G	G
Calcium Hypochloride		+20	P	P	N	N	N
Calcium Sulphate		Ta	G	G	P	P	E
Calcium Sulphate	saturated	+20	G	G	G	G	—
Carbolic Acid		B	G	G	P	P	—
Carbonic Acid	saturated	+20	G	G	N	N	—
Carbon Dioxide		Ta	E	E	E	E	E
Carbon Disulphide		+20	G	G	G	G	G
Carbon Disulphide		Ta	G	G	G	N	E
Carbon Monoxide		B	E	E	E	E	—
Carbon Tetrachloride		+20	G	G	G	G	P
Carbon Tetrachloride		B	P	P	N	N	P
Carbon Tetrachloride	dry	Ta	E	E	G	G	P
Carbon Tetrachloride	wet	Ta	G	G	N	N	N
Caustic Soda	5%	+20	G	G	G	G	—
Caustic Soda	20%	B	E	E	G	G	—
Caustic Soda	50%	B	G	G	P	P	—
Caustic Soda	75%	B	P	P	N	N	—
Chlorinated Solvents	dry	Ta	G	G	P	P	—
Chloroacetic Acid		+20	N	N	N	N	N
Chlorobenzene	concentrated	+20	E	E	E	E	—
Chloroform		+20	E	E	E	E	E
Chlorous Acid		+20	N	N	N	N	N
Chlorosulfonic Acid	10%	+20	P	G	N	N	P
Chlorosulfonic Acid	concentrated	+20	G	G	N	N	P
Chromic Acid	5%	+20	G	G	G	G	N
Chromic Acid	50% com.	B	N	N	N	N	N
Citric Acid	5%	+20	E	E	N	N	P
Citric Acid	15%	B	G	G	N	N	P
Citric Acid	concentrated	B	N	G	N	N	P
Colophony		Ta	E	E	N	N	—
Coke-oven Gas		Ta	E	E	G	G	—
Copper Acetate		Ta	E	E	N	N	—
Copper Acetate	saturated	+20	G	G	N	N	—
Copper Chloride	19%	+20	P	G	P	G	N
Copper Chloride	1%	+20	P	G	N	N	—
Copper Chloride	5%	B	N	N	N	N	—

E EXCELLENT
G GOOD
P POOR
N NOT RECOMMENDED
– =NO INFORMATION AVAILABLE
B = BOILING
C = HOT
Ta= ROOM TEMPERATURE

	CONCENTRATION	TEMPERATURE °C	AISI 304 18/8/2 CF8M 1.4401-1.4408	AISI 316 18/8/2 CF8M 1.4401-1.4408	CARBON STEEL A 105/A216WCB	CAST IRON	BRASS
Copper Nitrate	5%	+20	E	E	N	N	P
Copper Nitrate	5%	220	E	E	N	N	—
Copper Nitrate	50%	C	G	G	N	N	—
Copper Sulphate		+20	G	G	N	N	—
Copper Sulphate	saturated	B	G	G	N	N	N
Copper Sulphate		+20	G	G	N	N	N
Creosote		C	G	G	G	G	—
Creosote Oil		Ta	G	G	G	G	E
Cyclohexane		Ta	E	E	E	E	—
Dlchloroethane		B	G	G	N	N	—
Diethylamine		Ta	E	E	E	E	—
Diethyl Ether		+20	E	E	E	G	—
Distilled Water		Ta	E	E	P	P	E
Epsom Salt		Ta	G	G	P	P	—
Ethane		Ta	G	G	G	G	E
Ethyl Acrylate		Ta	E	E	P	P	—
Ethyl Alcohol		B	G	G	G	G	E
Ethyl Acetate		Ta	G	G	G	G	E
Ethyl Chloride	dry	+20	E	E	E	E	—
Ethyl Chloride		+20	E	E	E	E	G
Ethylene Glycol		+20	E	E	E	E	G
Ethylene Oxide		Ta	G	G	G	G	E
Fatty Acids		B	G	G	P	P	N
Ferric Chloride	1%	+20	N	P	N	N	N
Ferric Chloride	5%	+20	N	N	N	N	N
Ferric Nitrate		Ta	P	P	N	N	N
Ferric Nitrate	5%	+20	G	G	N	N	N
Ferric Sulphate		+20	G	E	N	N	N
Ferric Sulphate	5%	B	G	G	N	N	N
Ferrous Chloride		Ta	N	N	N	N	N
Ferrous Sulphate	saturated	+20	G	G	N	N	N
Ferrous Sulphate	10%	+20	G	G	N	N	N
Fertilizers		Ta	G	G	G	G	—
Fish Oil		Ta	E	E	G	G	—
Fluorine	dry	+20	G	G	N	N	—
Formaldehyde		Cold	E	E	E	G	P
Formaldehyde		Hot	P	P	N	N	P
Formic Acid	5-50%	+20	G	G	N	N	N
Formic Acid	10-50%	B	N	N	N	N	N
Formic Acid	100%	+20	P	P	N	N	N
Formic Acid	100%	B	N	N	N	N	N
Freon	dry	Ta	E	E	E	E	E
Freon	wet	Ta	P	P	P	P	E
Fuel Oil		Ta	E	E	G	G	E
Furfuraldehyde		+20	G	G	G	G	E
Gallic Acid	5%	+70	G	G	N	N	—
Gas Chlorate	dry	+20	N	P	G	G	—
Gas Chlorate	wet	+100	N	N	N	N	—
Gaseous Methyl Chloride		+20	G	G	N	N	—
Gelatine		Ta	E	E	N	N	G
Glue		Ta	G	G	E	E	—
Glucose		Ta	G	G	G	G	E
Glycerol		+20	E	E	E	E	E
Glycols		Ta	G	G	G	G	—
Heptane		Ta	E	E	G	G	—
Hexane		Ta	G	G	G	G	—
Hexanol		Ta	E	E	E	E	—
Hydraulic Oil		Ta	E	E	E	E	—
Hydriodic Acid (iodidrico)	diluted	+20	N	N	N	N	—
Hydrocarbons		+20	E	E	E	E	E
Hydrobromic Acid		+20	N	N	N	N	N
Hydrocyanic Acid		+20	G	G	P	P	—
Hydrochloric Acid	1%	+20	N	P	N	N	N
Hydrochloric Acid	1%	B	N	N	N	N	N
Hydrochloric Acid	5%	+20	N	N	N	N	N
Hydrochloric Acid		+20	N	N	N	N	N

E EXCELLENT
G GOOD
P POOR
N NOT RECOMMENDED
– =NO INFORMATION AVAILABLE
B = BOILING
C = HOT
Ta= ROOM TEMPERATURE

	CONCENTRATION	TEMPERATURE °C	AISI 304 18/8/2 CF8M 1.4401-1.4408	AISI 316 18/8/2 CF8M 1.4401-1.4408	CARBON STEEL A 105/A216WCB	CAST IRON	BRASS
Hydrofluoric Acid	concentrated	+20	N	N	N	N	N
Hydrofluoric Acid	dry	+20	P	P	P	P	N
Hydrofluoric Acid	wet	+20	N	N	N	N	N
Hydrofluoric Acid		+20	N	N	N	N	N
Hydrogen Gas	cold	Ta	E	E	G	G	—
Hydrogen Dioxide		+20	E	E	N	N	N
Hydrogen Dioxide		B	G	G	N	N	N
Illuminating Gas		Ta	E	E	E	E	—
Ink		Ta	E	E	N	N	—
Iodine	dry	+20	N	N	P	N	—
Iodine	wet	+20	N	N	N	N	—
Iodoform		+20	E	E	N	N	—
Isooctane		Ta	E	E	E	E	—
Isopropyl Ether		Ta	E	E	E	G	—
Isopropyl Alcohol		Ta	G	G	G	G	—
Julces		B	G	E	N	N	N
Ketone		Ta	E	E	E	E	—
Kerosene		Ta	E	E	G	G	—
Lactic Acid	1%	B	G	G	N	N	P
Lactic Acid	5%	+70	G	G	N	N	P
Lactic Acid	5%	B	N	G	N	N	P
Lactic Acid	5-10%	+20	G	E	N	N	P
Lactic Acid	10%	+70	P	G	N	N	P
Lactic Acid	10%	B	N	P	N	N	P
Lactic Acid	concentrated	B	N	N	N	N	P
Latex		+20	E	E	N	N	—
Latex Emulsions		Ta	E	E	G	G	—
Lead Acetate		+20	G	G	N	N	—
Lead Acetate		Ta	G	G	N	N	—
Lemon Juice		Ta	G	G	N	N	N
Linoleic Acid		Ta	E	E	G	G	—
Linseed Oil		Ta	G	G	E	E	G
Liquefied Gas (LPG)		Ta	G	G	G	G	—
Lithlum		+150	E	E	G	G	—
Lubricating Oil		Ta	E	E	E	E	—
Lye		B	G	G	N	N	N
Lysol		+20	P	P	N	N	—
Magnesium Chloride	5%	+20	G	G	N	N	N
Magnesium Chloride	5%	C	N	N	N	N	N
Magnesium Chloride	10-30%	+20	P	G	N	N	N
Magnesium Chloride	saturated	+20	P	G	N	N	N
Magnesium Chloride	5%	+20	G	G	N	N	N
Magnesium Disulphate		Ta	E	E	G	G	—
Magnesium Hydroxide		C	E	E	G	G	G
Magnesium Oxide		+20	G	G	G	G	—
Magnesium Sulphate		+20	G	G	G	G	P
Magnesium Sulphate		+20	G	G	G	G	P
Maleic Acid		Ta	G	G	G	G	—
Malic Acid		C	G	G	N	N	—
Mercury		+150	P	P	G	G	N
Mercury		+500	N	N	N	N	N
Mercury Bichloride	2%	+20	N	N	N	N	N
Mercury Cyanide		+20	G	G	N	N	N
Mercury Cyanide		+20	G	G	N	N	—
Mercuric Chloride		Ta	N	P	N	N	—
Methane		Ta	G	G	G	G	E
Methyl Acetate		Ta	E	E	G	G	—
Methyl Alcohol		B	P	G	G	G	E
Methylacetone		Ta	E	E	G	G	—
Methylamine		Ta	E	E	G	G	—
Methyl Chloride		+20	G	G	N	N	G
Methylene Chloride		Ta	E	E	G	G	G
Methyl Formate		Ta	G	G	P	P	—
Milk		+20	E	E	N	N	G
Mineral Naphtha		+20	G	G	G	G	G
Mineral Oil		Ta	E	E	G	G	E

DATI TECNICI / TECHNICAL DATA

Tabella delle resistenze chimiche - METALLI / Table of chemical resistance - METALS

E EXCELLENT
G GOOD
P POOR
N NOT RECOMMENDED
– =NO INFORMATION AVAILABLE
B = BOILING
C = HOT
Ta= ROOM TEMPERATURE

	CONCENTRATION	TEMPERATURE °C	AISI 304 18/8/2 CF8M 1.4401-1.4408	AISI 316 18/8/2 CF8M 1.4401-1.4408	CARBON STEEL A 105/A216WCB	CAST IRON	BRASS
Mineral Water		Ta	G	G	P	P	G
Mixed Acid-turpentine		+20	N	N	N	N	N
Muriatic Acid		+20	N	P	N	N	N
Naphthalene		Ta	G	G	E	E	—
Natural Gas		Ta	E	E	G	G	E
Neon		+20	G	G	G	G	—
Nickel Chloride		+20	P	G	N	N	P
Nichel Chloride		+20	P	G	N	N	P
Nichel Sulphate		C	P	G	N	N	P
Nickel Sulphate		C	P	G	N	N	P
Nickel Nitrate		Ta	G	G	N	N	—
Nicotinic Acid		Ta	E	E	G	G	—
Nitric Acid	5-50%	+20	E	E	N	N	N
Nitric Acid	10-50%	B	G	P	N	N	N
Nitric Acid	85%	+20	G	G	G	G	N
Nitric Acid	85%	C	G	P	N	N	N
Nitric Acid	concentrated	+20	G	G	G	G	N
Nitric Acid	concentrated	B	P	P	N	N	N
Nitric Acid	anhydrous	Ta	E	E	E	E	N
Nitrobenzene		Ta	G	G	G	G	—
Nitrogen		Ta	E	E	E	E	E
Nitrous Acid	5%	+20	G	G	N	N	—
Nitrous Gases		Ta	E	E	G	G	—
Nitrous Oxide		Ta	G	G	G	G	—
Oil		Ta	E	E	G	G	G
Oleic Acid	crude	+20	G	G	P	P	—
Oleum		Ta	G	G	G	G	—
Olive Oil		Ta	E	E	G	G	P
Oxalic Acid	5%	C	P	P	N	N	—
Oxalic Acid	10%	+20	G	G	P	P	—
Oxalic Acid		B	N	N	N	N	—
Oxalic Acid	saturated	+20	G	G	P	P	—
Oxalic Acid	saturated	B	N	N	N	N	—
Oxygen	cold		E	E	G	G	E
Oxygen		+250	G	G	G	G	—
Ozone	dry	Ta	E	E	P	P	—
Ozone	wet	Ta	E	E	E	E	—
Paint Varnish		Ta	E	E	P	P	—
Palm Oil		Ta	G	G	P	P	—
Palmitic Acid		+20	G	G	P	P	P
Paraformaldehyde		Ta	G	G	G	G	—
Paraffin Wax		Ta	E	E	E	E	E
Pentane		Ta	E	E	G	G	—
Perchloroethylene		Ta	E	E	G	G	P
Peroxide		Ta	G	G	N	N	N
Petrol		Ta	E	E	E	E	E
Petrol (Crude)		+20	E	E	P	P	E
Phenol		B	G	G	P	P	—
Phosphoric Acid	C.P. 1%	+20	G	G	N	N	N
Phosphoric Acid	5%	+20	G	G	N	N	N
Phosphoric Acid	10%	+20	P	G	N	N	N
Phosphoric Acid	20-45%	B	N	P	N	N	N
Phosphoric Acid	45-85%	+20	N	G	N	N	N
Phosphoric Acid	85%	B	N	N	N	N	N
Phthalic Acid		Ta	G	G	P	P	—
Phthalic Anhydride			E	E	P	P	—
Picric Acid	water sol.	+20	E	E	P	P	N
Potassium Bichromate		+20	G	G	P	P	—
Potassium Bisulphite		Ta	G	G	N	N	—
Potassium Bromide		+20	P	G	N	N	—
Potassium Bromide		+20	P	G	N	N	—
Potassium Carbonate	1%	+20	E	G	G	G	P
Potassium Carbonate	1%	+20	G	G	G	G	—
Potassium Chlorate		+20	G	G	G	G	—
Potassium Chloride	1-5%	+20	P	G	N	N	P
Potassium Chlorate		+20	G	G	G	G	N

E EXCELLENT
G GOOD
P POOR
N NOT RECOMMENDED
– =NO INFORMATION AVAILABLE
B = BOILING
C = HOT
Ta= ROOM TEMPERATURE

	CONCENTRATION	TEMPERATURE °C	AISI 304 18/8/2 CF8M 1.4401-1.4408	AISI 316 18/8/2 CF8M 1.4401-1.4408	CARBON STEEL A 105/A216WCB	CAST IRON	BRASS
Potassium Chloride	1-5%	+20	P	G	N	N	N
Potassium Chloride	1-5%	B	N	N	N	N	N
Potassium Cyanide		+20	G	G	G	G	N
Potassium Cyanide		+20	G	G	G	G	N
Potassium Dichromate		+20	G	G	P	P	N
Potassium Diphosphate		Ta	E	E	E	E	—
Potassium Disulphine	saturated	+20	G	G	P	P	G
Potassium Ferricyanide		Ta	G	G	P	P	N
Potassium Ferricyanide	5%	+20	G	G	P	P	N
Potassium Hydroxide	5%	+20	G	G	G	G	N
Potassium Hypochlorite		+20	N	P	N	N	—
Potassium Iodide	2%	Ta	G	G	P	P	—
Potassium Nitrate	1-5%	+20	G	G	G	G	G
Potassium Nitrate	1-5%	C	G	G	G	G	—
Potassium Permanganate		+20	E	E	E	E	—
Potassium Permanganate		+20	E	E	E	E	—
Potassium Sulphate	1-5%	+20	G	G	G	G	G
Potassium Sulphate	saturated	+20	G	G	P	P	—
Potassium Sulphate		+20	G	G	G	G	G
Potassium Sulphite		Ta	E	E	G	E	G
Propane		Ta	G	G	G	G	E
Propanol		Ta	E	E	G	G	—
Propylene Glycol		Ta	G	G	G	G	—
Propionic Acid		+20	G	G	N	N	—
Prussic Acid		+20	G	G	P	P	—
Pyrogallic Acid		+20	G	G	G	G	—
Pyroligneous Acid		+20	E	E	N	N	—
Quinine Bisulphate	dry	+20	G	G	N	N	—
Resins		Ta	E	E	P	P	—
Sal Ammoniac		+20	G	G	P	P	—
Salicylic Acid		+20	G	G	N	N	—
Sea Water		+20	G	G	N	N	P
Shellac		Ta	E	E	E	E	—
Silver Bromide		+20	P	G	N	N	—
Silver Chloride		+20	N	N	N	N	—
Silver Nitrate		+20	G	G	N	N	—
Silver Nitrate		+20	G	G	N	N	N
Sludge		Ta	E	E	G	G	—
Soap		+20	G	G	G	G	G
Sodium Acetate	wet	+20	G	G	P	P	—
Sodium Acetate		Ta	G	G	P	P	—
Sodium Bicarbonate		+20	G	G	P	P	P
Sodium Bicarbonate		+20	G	G	P	P	P
Sodium Bisulphite		Ta	E	E	N	N	G
Sodium Borate		Ta	G	G	P	P	—
Sodium Bromide		Ta	G	G	P	N	—
Sodium Carbonate	5%	+70	G	G	G	G	—
Sodium Carbonate		+20	G	G	G	G	N
Sodium Chlorate	10%	+20	G	G	P	P	—
Sodium Chloride	20%	+20	G	G	P	P	—
Sodium Chloride	saturated	B	P	G	N	N	—
Sodium Chlorate		+20	G	G	P	P	N
Sodium Chloride	5%	+20	G	G	P	P	P
Sodium Cyanide		+20	G	G	G	G	N
Sodium Cyanide		+20	G	G	G	G	—
Sodium Disulphate		+20	G	G	N	N	G
Sodium Disulphate		+20	G	G	N	N	—
Sodium Disulphite		+20	G	G	G	G	G
Sodium Disulphite		C	G	G	P	P	G
Sodium Fluoride		Ta	G	G	N	N	—
Sodium Fluoride	5%	+20	G	G	N	N	—
Sodium Hydroxide		+20	E	E	E	E	—
Sodium Hypochlorite		Ta	P	P	N	N	N
Sodium Hypochlorite		+20	G	G	N	N	N
Sodium Hypochlorate	5%	+20	N	P	N	N	N
Sodium Hyposulphite		+20	G	G	N	N	N

E EXCELLENT
G GOOD
P POOR
N NOT RECOMMENDED
– =NO INFORMATION AVAILABLE
B = BOILING
C = HOT
Ta= ROOM TEMPERATURE

	CONCENTRATION	TEMPERATURE °C	AISI 304 18/8/2 CF8M 1.4401-1.4408	AISI 316 18/8/2 CF8M 1.4401-1.4408	CARBON STEEL A 105/A216WCB	CAST IRON	BRASS
Sodium Metaphosphate		Ta	E	E	G	G	N
Sodium Metasilicate	cold		E	E	P	P	—
Sodium Metasilicate		C	E	E	N	N	—
Sodium Nitrate		+20	E	E	G	G	—
Sodium Nitrate		Ta	G	G	G	G	P
Sodium Perborate		Ta	G	G	G	G	—
Sodium Peroxide		Ta	G	G	P	P	P
Sodium Phosphate		Ta	G	G	P	P	—
Sodium Silicate		Ta	G	G	G	G	G
Sodium Silicate		C	G	G	P	P	G
Sodium Silicate		Ta	G	G	G	G	—
Sodium Sulphate	saturated	+20	P	G	G	G	G
Sodium Sulphate		+20	P	G	G	G	G
Sodium Sulphite	10%	+65	P	G	G	G	G
Sodium Sulphite	10%	B	P	G	N	N	G
Sodium Sulphite	saturated	+20	G	G	G	G	G
Sodium Trisulphate	20%	+20	G	G	N	N	—
Sodium Thiosulphate		Ta	E	E	G	G	—
Soft Water		Ta	E	E	P	P	G
Solvent		Ta	E	E	G	G	E
Spirit Vinegar		+20	E	E	N	N	—
Starci		Ta	G	G	P	P	—
Stannic Chloride	5%	+20	N	P	N	N	—
Stannic Chloride	5%	B	N	N	N	N	—
Stannic Chloride	5%	+20	N	P	N	N	—
Stannous Chloride	saturated	+20	N	P	N	N	—
Stearic Acid		+20	G	E	P	P	P
Strontium Nitrate		+20	E	E	N	N	—
Styrene		Ta	E	E	E	E	—
Suds (Stearate)		Ta	E	E	E	G	—
Sugary Juices in general		+70	G	G	N	N	N
S Sulphur	dry and liquefied	+230	G	G	G	G	N
S Sulphur	wet and liquefied	+230	P	G	N	N	N
Sulphuric Anhydride	dry	Ta	E	E	G	G	G
Sulphuric Acid	dry	+20	E	E	E	E	—
Sulphuric Acid	wet	+20	P	G	P	P	—
Sulphuric Acid	5%	+20	P	G	N	N	N
Sulphuric Acid	5%	B	N	P	N	N	N
Sulphuric Acid	10%	+20	N	P	N	N	N
Sulphuric Acid	10%	B	N	N	N	N	N
Sulphuric Acid	50%	+20	N	N	N	N	N
Sulphuric Acid	50%	B	N	N	N	N	N
Sulphuric Acid	concentrated	+20	G	G	G	G	N
Sulphuric Acid	concentrated	B	N	N	N	N	N
Sulphuric Acid	fuming	+20	P	G	P	P	N
Sulphur Chloride		Ta	P	G	N	N	—
Sulphur Dioxide	dry	+250	G	G	G	G	E
Sulphur Dioxide	dry	+230	G	G	G	G	N
Sulphur Dioxide	wet	+20	P	G	N	N	N
Sulphurous Acid	saturated	+20	N	G	N	N	P
Syngas		Ta	G	G	G	G	—
Tannic Acid		+20	G	G	N	N	G
Tar		Ta	E	E	E	E	G
Tartaric Acid	10%	+20	E	E	N	N	P
Tartaric ACid	10%	C	P	G	N	N	P
Tetraethyl Lead		Ta	G	G	P	P	—
Titanium Tetrachloride	wet	+20	N	N	N	N	—
Tomato Juice		Ta	E	E	P	P	N
Toluene		Ta	E	E	E	E	E
Tributyl Phosphate		Ta	E	E	E	E	—
Trichloroethylene	dry	Ta	G	G	G	P	E
Trichloroacetic Acid		+20	N	N	N	N	P
Tung Oil		Ta	G	G	P	P	—
Turpentine		+20	E	E	E	E	G
Urea		Ta	G	G	P	P	—
Uric Acid	concentrated	+20	G	G	N	N	—

E EXCELLENT
G GOOD
P POOR
N NOT RECOMMENDED
– =NO INFORMATION AVAILABLE
B = BOILING
C = HOT
Ta= ROOM TEMPERATURE

	CONCENTRATION	TEMPERATURE °C	AISI 304 18/8/2 CF8M 1.4401-1.4408	AISI 316 18/8/2 CF8M 1.4401-1.4408	CARBON STEEL A 105/A216WCB	CAST IRON	BRASS
Varnish		+20	E	E	P	P	E
Varnish		C	G	G	N	N	E
Vaseline		Ta	G	G	P	P	—
Vinegar (vapors)		Ta	G	G	N	N	—
Viscose		Ta	G	G	G	G	—
Waste Water		+20	G	G	P	P	—
Wax		Ta	E	E	E	E	—
Wax Emulsions		Ta	E	E	E	E	—
Xylene	dry	Ta	E	E	G	G	—
Zinc Chloride	5%	+20	P	G	N	N	—
Zinc Chloride	5%	B	N	P	N	N	—
Zinc Chloride	5%	+20	P	G	N	P	N
Zinc Hydrosulphite		Ta	E	E	E	E	—
Zinc Sulphate	5%	+20	G	E	G	G	G
Zinc Sulphate	25%	B	P	G	N	N	G
Zinc Sulphate		Ta	G	G	N	N	N

DATI TECNICI / TECHNICAL DATA

Tabella delle resistenze chimiche - PLASTICHE / Table of chemical resistance - PLASTICS

E EXCELLENT
G GOOD
P POOR
N NOT RECOMMENDED
– =NO INFORMATION AVAILABLE

	DELRIN	EPDM	NBR	VITON	PTFE
Acetaldehyde	G	—	N	N	E
Acetal	—	—	—	—	E
Acetammide	—	E	G	G	E
Acetate Solvent	—	—	N	N	E
Acetilene	E	E	G	G	E
Acetic Acid 10-20%	N	E	E	E	E
Acetic Acid 50%	N	—	E	E	E
Acetic Acid 80%	N	E	G	G	E
Acetic Anhydride	N	—	N	N	E
Acetylene Chloride	—	—	N	E	E
Acetoacetato di Etile	—	—	N	N	E
Acetofenone	—	—	N	N	E
Acetone	E	E	N	N	E
Acetone 50% water	—	—	N	—	E
Acetonitrile	—	—	—	—	E
Acid Chloric 20%	—	—	N	N	E
Acid Laisileico	—	—	G	G	E
Acido Cresilico	N	—	N	E	E
Acrylonitrile	—	—	N	N	E
Adipic Acid	—	—	N	—	E
Air	—	E	E	E	E
Alumed Chrome	—	E	G	G	E
Alumed Potassium	—	E	G	G	E
Alumed Potassium Sulphate	—	E	—	—	E
Alumina	—	E	E	G	E
Aluminium Chloride	E	E	G	G	E
Aluminium Fluoride	—	E	G	G	E
Aluminium Hydroxide	E	E	G	G	E
Aluminium Nitrate	—	E	G	G	E
Aluminium Sulphate	E	E	G	G	E
Alum. (All. Potassium Sulphate)	E	—	E	—	E
Amyl Alcohol	E	E	—	—	E
Amyl Acetate	E	N	N	N	E
Ammonium Acetate	—	E	N	—	E
Ammonia (Anhydrous)	—	E	G	N	E
Ammonia (Gas)	—	—	G	N	E
Ammonium Chloride	P	E	G	G	E
Ammonium Sulphate	E	E	G	N	E
Ammonium Sulphite 50°C	—	—	E	—	E
Ammonium Sulphide	—	E	G	N	E
Ammonium Hydroxide	—	E	G	G	E
Ammonium Fluoride 25%	—	E	—	—	E
Ammonium Phosphate	—	E	G	G	E
Ammonium Metaphosphate	—	—	G	G	E
Ammonium Nitrate	E	E	G	N	E
Ammonium Oxalate	—	E	—	—	E
Ammonium Bicarbonate	P	E	—	—	E
Ammonium Bifluoride	—	E	—	—	E
Ammonium Carbonate	P	E	G	G	E
Amyl Chloride 77°C	—	—	N	E	—
Anhydrous Formic Acid	N	—	N	G	E
Aniline	E	N	N	E	E
Aqua Regia	—	—	N	E	E
Arsenic Acid	—	E	G	G	E
Artficial Gas	—	—	G	—	E
Asphalt	E	—	N	E	E

E EXCELLENT
G GOOD
P POOR
N NOT RECOMMENDED
– =NO INFORMATION AVAILABLE

	DELRIN	EPDM	NBR	VITON	PTFE
Barium Carbonate	—	E	—	—	E
Barium Chloride	E	E	G	G	E
Barium Hydroxide	—	E	G	G	E
Barium Nitrate	—	E	G	G	E
Barium Sulphate	—	E	G	G	E
Barium Sulphide	—	—	G	G	E
Beer	—	—	G	G	E
Benzaldehyde	—	—	N	N	E
Benzene, Benzol	—	—	N	N	E
Benzoic Acid	—	E	N	G	E
Benzykl Alcohol	—	—	N	E	E
Benzyl Chloride	—	—	N	—	E
Black Liquor	—	—	E	G	E
Borax	E	E	G	G	E
Boric Acid	E	E	G	G	E
Brine	—	G	E	—	E
Bromine Water	—	—	N	E	E
Butyl Acetate	—	—	—	—	E
Butyl Alcohol	E	E	N	E	E
Butyric Acid	E	N	N	—	E
Butyl Chloride	—	—	—	—	E
Butyl Phenol	—	—	—	—	E
Butyl Phthalate	—	—	N	—	E
Butter	—	—	E	—	E
Butadiene	E	—	E	E	E
Butane	E	E	N	E	E
Butylene	E	—	N	G	E
Calcium Bisulphite	E	E	G	G	E
Calcium Bicarbonate	—	—	—	—	E
Calcium Carbonate	E	E	G	G	E
Calcium Chlorate	—	—	G	G	E
Calcium Chloride	E	E	G	G	E
Calcium Disulphate	—	—	—	—	E
Calcium Fluoride	—	—	—	—	E
Calcium Hydroxide	E	E	G	G	E
Calcium Htpochlorite	E	E	N	G	E
Calcium Nitrate	—	E	G	G	E
Calcium Oxide 20°C	—	—	—	—	E
Calcium Sulphate	E	E	—	—	E
Cane Sugar Liquor	—	E	G	G	E
Carbolic Acid (phenol)	—	—	N	N	E
Carbonic Acid	N	E	G	G	E
Carbon Bisulphide	—	—	N	G	E
Carbon Dioxide	—	—	E	—	E
Carbon Monoxide	—	E	G	G	E
Castor Oil	E	E	G	G	E
Caustic Soda	—	E	P	—	E
Cellulose Acetate	—	E	N	N	E
Cellosolve	—	E	N	N	E
Cement	—	E	G	—	E
Cereal Syrup (Glucose)	—	—	G	G	E
Chloroacetic Acid	—	—	N	N	E
Chloroform	E	N	N	G	E
Chlorosulfonic Acid	—	—	—	—	E
Chlorine Dioxide	—	—	N	—	—
Chlorine Water	—	—	N	E	E

E EXCELLENT
G GOOD
P POOR
N NOT RECOMMENDED
– =NO INFORMATION AVAILABLE

	DELRIN	EPDM	NBR	VITON	PTFE
Chlorine Water	–	–	N	–	E
Chlorobenzene	E	N	N	G	E
Chromic Acid	N	–	G	E	E
Chromic Anhydride	–	–	G	E	E
Chrome Potassium Sulphate	–	–	G	–	E
Citric Acid	–	E	G	G	E
Coconut Oil	E	–	G	E	E
Coffee	–	E	N	E	E
Coke-oven Gas	–	E	N	G	E
Copper Acetate	–	–	–	N	E
Copper Chloride	E	E	G	G	E
Copper Nitrate	E	–	G	G	E
Copper Sulphate	E	E	G	G	E
Corn Oil	E	–	N	–	E
Cotton seeds Oil	–	–	G	E	E
Creosote	–	N	P	E	E
Cresol	–	–	N	N	E
Cromil Chloride	–	–	–	–	E
Crotonaldehyde	–	–	–	–	E
Crude Oil	–	–	G	E	E
Cyanoacetic Acid	–	–	–	–	E
Cyanogen Gas	–	E	–	–	E
Cyclohexane	–	N	G	G	E
Demineralized Water	–	E	G	G	E
Detergents	–	E	G	G	E
Dextrite	–	–	N	N	E
Dextrose	–	–	G	G	E
Diacetone	–	E	N	N	E
Diacetone Alcohol	–	–	N	–	E
Dibutylphthalate	–	–	–	G	E
Dichloroethane	–	–	N	E	E
Dichlorobenzene max 40°C	–	–	–	G	E
Dichloroethane	–	–	N	G	E
Dichloroethylene	–	–	N	G	E
Diethyl Ether	–	–	N	N	E
Diethyl Ether 40°C	–	–	G	N	E
Diethylcellosolve	–	–	–	–	E
Diethylamine max 40°C	–	–	N	–	E
Dimethyl	–	–	–	N	E
Dimethylphthalate	–	–	N	E	E
Dimethyl Ether	–	–	–	–	E
Dioxan	–	N	N	N	E
Diphenil (Dowtherms)	–	–	N	E	E
Disodium Phosphate 20°C	–	–	N	G	E
Distiller Water	E	E	G	G	E
Dry Sulphur Dioxide	N	–	N	N	E
Drilling Sludge	–	N	E	–	E
Drilling Sludge	–	N	E	–	E
Dry Sulphurized Hydrogen	–	E	–	N	E
Dry Sulphurized Hydrogen	–	E	–	N	E
Dyes	–	N	N	–	E
Dyes	–	N	N	–	E
Ethyl Acetate	E	N	N	N	E
Ethyl Acrylate	–	E	G	G	E
Ethyl Alcohol	E	E	P	E	E
Ethyl Chloride	E	–	G	G	E

E EXCELLENT
G GOOD
P POOR
N NOT RECOMMENDED
– =NO INFORMATION AVAILABLE

	DELRIN	EPDM	NBR	VITON	PTFE
Ethyl Glycol	–	E	E	E	E
Ethylene Bromide	–	–	N	–	E
Ethylene Chloride	–	–	N	E	E
Ethylene Diamine	–	–	E	E	E
Ethylene Glycol	–	E	G	E	E
Ethylene Oxide	–	–	N	N	E
Epichlorohydrin	–	–	N	N	E
Fats	–	N	E	–	E
Fatty Acids	–	–	G	G	E
Ferric Chloride	E	E	G	G	E
Ferric Nitrate 10-50%	–	E	G	G	E
Ferric Sulphate	E	E	G	G	E
Feerous Cloride	E	E	G	–	E
Ferrous Sulphate	E	E	G	G	E
Fluorinated Hydrogen	–	–	G	G	E
Fluorine Gas	–	–	N	N	E
Fluorosilicic Acid	–	E	P	–	–
Formaldehyde 35-50%	E	E	N	N	E
Formic Acid 10-85%	N	E	N	G	E
Freon F 11-12	–	–	G	G	–
Freon F 22	–	–	N	N	–
Fuel Oil	E	N	G	E	E
Fuel for aircrafts (JP4 or JP5)	–	N	G	E	E
Furfural	–	–	N	N	E
Furfuraldehyde	E	–	N	N	E
Gallic Acid	E	E	–	G	E
Galvanizing Solution	–	E	G	G	E
Gaseous Bromine	G	N	N	–	E
Gaseous Oxygen	E	–	N	G	E
Gas Oil	–	–	G	G	E
Gelatine	E	–	G	G	E
Glucose	E	–	G	G	E
Glue	–	E	P	–	E
Glycerol	P	–	G	E	E
Glycols 60°C	–	–	E	E	E
Glycocic Acid	–	E	–	–	E
Green Liquor	–	E	G	–	E
Helium	–	G	G	–	E
Heptane	–	E	G	E	E
Hexane	–	N	G	E	E
Hexanol	–	–	G	E	E
Hydraulic Fluid	–	–	G	E	E
Hydrobromic Acid	–	–	N	G	E
Hydrocyanic Acid	–	E	G	G	E
Hydrochloric Acid max 50%	–	E	–	G	E
Hydrofluoric Acid max 70%	–	–	N	E	–
Hydrofluoric Acid 100%	–	–	N	–	–
Hydrogen Dioxide	E	E	N	E	E
Hydrogen Chloride	–	–	–	–	E
Hydrogen	–	E	G	G	
Hydrogen Sulphide	–	–	N	N	E
Hydroquinone	–	E	N	G	E
Ink	–	E	–	–	–
Industrial Oils	–	–	–	–	E
Iodoform	E	–	N	E	E
Isobutyl-Methyl-Ketone	–	–	N	N	E

DATI TECNICI / TECHNICAL DATA

Tabella delle resistenze chimiche - PLASTICHE / Table of chemical resistance - PLASTICS

E EXCELLENT
G GOOD
P POOR
N NOT RECOMMENDED
– =NO INFORMATION AVAILABLE

	DELRIN	EPDM	NBR	VITON	PTFE
Isooctane	E	N	E	E	E
Isopropyl Alcohol	E	E	P	G	E
Isopropyl Ether	—	—	N	N	E
Juices	E	G	G	—	E
Kerose	—	—	G	E	E
Lactic Acid	N	—	N	G	E
Lard Oil	—	—	E	E	E
Lead Acetate	E	—	N	N	E
Lead Chloride max 20°C	—	—	—	G	E
Lead Sulphate	—	—	P	—	E
Leaded Petrol	E	—	G	G	E
Lemon Oil	—	G	P	—	E
Lime	—	E	N	—	E
Lime Sulphur	—	E	N	G	E
Linseed Oil	E	—	G	E	E
Liquid Chlorine	—	—	N	G	E
Liquid Soap	—	E	G	—	E
Lithium Bromine	—	E	G	G	E
Lubricating Oil	—	—	G	G	E
Maleic Acid	E	E	N	G	E
Malic Acid	E	—	G	G	E
Manganese Chloride max 20°C	—	—	G	G	E
Magnesium Carbonate	—	—	G	—	E
Magnesium Chloride	E	E	G	G	E
Magnesium Hydroxide	E	E	G	G	E
Magnesium Nitrate	—	E	G	—	E
Magnesium Oxide	—	G	G	—	E
Machine Oil	—	—	—	—	E
Magnesium Sulphate	E	E	G	—	E
Methane	E	E	G	E	E
Methanol	—	E	G	N	E
Methyl Acetate	—	P	N	N	E
Methyl Alcohol	E	E	G	N	E
Methyl Bromine	—	—	—	G	E
Methyl Chloride	—	—	N	G	E
Methyl Methacrylate	—	—	G	G	E
Methylene Chloride	—	N	N	N	E
Methylacetone	—	G	N	N	E
Methylcellosolve	—	—	P	N	E
Methyl-Ethyl-Ketone	—	—	N	N	E
Mercury	E	—	G	G	E
Mercuric Chloride	—	E	G	G	E
Mercuric Nitrate	—	E	—	—	E
Milk	E	—	G	G	E
Mineral Oil	E	—	G	G	E
Mineral Water	E	E	G	—	E
Mineral Naphtha (Combustible Oil)	E	N	G	E	E
Mixed Acids (°T max 32°C)	—	E	E	E	E
Molasses Monoclorobenzene	—	E	G	G	E
20°C	—	—	N	E	E
Motor Oil	—	—	G	G	E
n Butyl Mercaptan	—	—	—	—	E
Naphthalene	E	—	N	G	E
Ntural Gas	E	E	G	G	E
Nickel Ammonium Sulphate	—	—	—	—	E
Nickel Chloride	E	E	G	—	E

E EXCELLENT
G GOOD
P POOR
N NOT RECOMMENDED
– =NO INFORMATION AVAILABLE

	DELRIN	EPDM	NBR	VITON	PTFE
Nickel Nitrate	E	—	G	G	E
Nickel Salt	—	—	G	—	E
Nickel Sulphate	E	E	G	G	E
Nicotine	—	—	—	—	E
Nicotinic Acid	—	E	—	—	E
Nitric Acic	N	N	N	G	E
Nitrobenzene 25°C	—	G	N	N	E
Nitrobenzene over 25°C	—	—	N	N	E
Nitrogen	E	E	G	—	E
Nitromenthane	—	—	N	—	E
Nitrous Oxide 40°C	—	—	N	P	E
Oleum	N	—	N	E	E
Oleic Acid	E	—	E	N	E
Oli Vegatali	—	E	G	G	E
Olive Oil	—	G	E	E	E
Oxalic Acid	P	E	E	G	E
Oxygen	E	E	P	G	E
Ozone	—	—	N	G	E
Paint Solvents	—	N	N	N	E
Palmitic Acid	E	—	G	G	E
Paraffin Wax	E	—	G	—	E
Perchloric Acid	—	—	N	G	E
Perchloroethylene	—	N	N	E	E
Persolfato di Ammonio	—	E	G	—	E
Petrol Oils (acid or refined oils)	—	—	G	G	E
Petrolutum (Vaseline)	—	—	—	—	E
Phenil Chloride (Chlorobenzene)	—	—	N	E	E
Phenylhydrazine	—	—	N	G	E
Phenol (Carbolic Acid)	N	—	N	E	—
Phosphate 50°C	—	—	—	—	E
Phosphoric Acid 10%	N	—	N	G	E
Phosphoric Acid 25/50%	N	—	N	G	E
Phosphoric Acid 50/80%	N	E	N	G	E
Phosphorous Oxychloride	—	—	—	—	E
Phosphorous Pentoxide 20°C	—	—	—	—	E
Phosphorous Pentoxide	—	—	N	N	E
Phthalic Acid	E	—	N	—	E
Phthalic Anhydride	—	—	N	G	E
Picric Acid	—	E	P	G	E
Pickling solution	—	N	—	—	E
Polyvinyl Acetate	—	E	—	—	E
Potassium Bicarbonate	—	—	G	G	E
Potassium Bichromate (30%)	—	—	N	N	E
Potassium Bromide	E	E	G	G	E
Potassium Carbonate 50%	E	—	G	G	E
Potassium Chlorate	—	E	G	G	E
Potassium Chloride	E	E	G	G	E
Potassium Chromate 30%	—	E	—	—	E
Potassium Cyanide 30%	E	E	G	G	E
Potassium Ferricyanide 30%	—	—	G	G	E
potassium Fluoride	—	—	G	G	E
Potassium Hydroxide	—	—	G	G	E
Potassium Hydroxide 5-30%	—	E	N	—	E
potassium Hydroxide 50-90%	—	E	G	N	E
PotassiumHypochlorite 30°C	—	—	N	G	E
Potassium Hypochlorite 90°C	—	—	N	—	E

E EXCELLENT
G GOOD
P POOR
N NOT RECOMMENDED
– =NO INFORMATION AVAILABLE

	DELRIN	EPDM	NBR	VITON	PTFE
Potassium Iodide 70%	E	E	—	—	E
Potassium Nitrate 80%	—	E	G	G	E
Potassium Nitrate 1-5%	—	E	G	G	E
Potassium Oxalate 20%	—	—	—	—	E
Potassium Permanganate	—	E	N	P	E
Potassium Phosphate	—	—	E	E	E
Potassium Sulphate 10%	E	E	G	G	E
Potassium Sulphite	—	G	P	—	E
Potassium Sulphite	—	—	—	N	E
Propane	E	E	G	E	E
Propanol	—	—	G	G	E
Propylene Oxide	—	—	N	—	E
propylene Glycol	—	—	G	G	E
Pyridine	—	—	N	N	E
Pyrogallic Acid	E	—	P	P	E
Resins	—	—	—	G	E
Salicylic Acid	E	—	N	G	E
Salt Water	—	E	G	G	E
Sea Water	E	E	G	G	E
Sewage	—	G	G	G	E
Sewage	—	—	G	G	E
Silver Nitrate	E	E	G	G	E
Silicone Oil	—	—	G	G	E
Sodium Acetate	E	E	—	N	E
Sodium Bicarbonate	E	E	G	G	E
Sodium Bichromate	—	—	—	G	E
Sodium Bisulphite	E	E	G	G	E
Sodium Borate	E	—	G	G	E
Sodium Bromide	—	—	E	E	E
Sodium Carbonate	E	—	G	G	E
Sodium Chlorate	—	E	G	G	E
Sodium Chlorite	—	—	—	—	E
Sodium Chloride	E	E	G	G	E
Sodium Disulphate	—	—	G	G	E
Sodium Fluoride	—	E	—	—	—
Sodium Hydroxide (Caustic Soda)	—	E	P	—	E
Sodium Hypochlorite	E	E	N	G	E
Sodium Hypochlorite	—	E	G	G	E
Sodium Metaphosphate	—	—	G	G	E
Sodium Nitrate	E	E	P	N	E
Sodium Nitrite	—	—	—	—	E
Sodium Perborate 10%	E	—	G	G	E
Sodium Peroxide 10%	—	E	G	G	E
Sodium Phosphate	—	—	G	G	E
Sodium Silicate	E	E	G	G	E
Sodium Sulphate	E	E	G	G	E
Sodium Sulphite 10%	—	E	G	G	E
Sodium Sulphide 50%	E	E	G	G	E
Sodium Thiosulphate	E	E	G	G	E
Soft Water	E	E	E	—	
Spirit Vinegar	N	—	N	G	E
Stannic Chloride	—	E	G	G	E
Stannous Chloride	—	E	G	G	E
Starci	—	G	G	—	E
Steam 130°C	N	E	N	N	E
Stearic Acid	E	—	G	—	E

E EXCELLENT
G GOOD
P POOR
N NOT RECOMMENDED
– =NO INFORMATION AVAILABLE

	DELRIN	EPDM	NBR	VITON	PTFE
Suds	—	E	G	—	E
Sugarbeet Liquor	—	—	—	G	E
Sulphuric Acid 10-50%	P	E	P	E	E
Sulphuric Acid 60-70%	P	E	N	E	E
Sulphuric Acid 80-100%	N	—	N	E	E
Sulphurous Acid	P	—	N	G	E
Sulphamic Acid	—	E	—	—	E
Sulphur 20°C	—	—	N	N	E
Sulphur Chloride	—	—	N	G	E
Swimming pool Water	—	E	G	—	E
Tannic Acid	E	—	N	P	E
Tar	E	N	N	G	E
Tartaric Acid	E	—	G	G	E
Tetraphosphoric Acid	—	—	—	—	E
Tetrachydrofuran	—	—	N	N	E
Tetraethyl Lead	—	—	N	G	E
Thionyl Chloride	—	—	N	N	E
Toluene	E	N	N	G	E
Tomato Juice	—	—	G	G	E
Trichloroacetic Acid	—	—	N	G	E
Trisodium Phosphate	—	—	G	G	E
Tributyl Phosphate 30°C	—	—	N	N	E
Trichloroethylene	—	—	N	E	E
Transformer Oil	—	—	G	G	E
Turpentine	E	N	G	G	E
Unleaded Petrol	E	—	G	G	E
Urea	—	—	N	E	E
Various Esters	—	—	—	—	E
Various Ethers 40°C	—	—	G	N	E
Various Soaps	—	—	G	G	E
Various Ketones	—	—	N	N	E
Vaseline	—	—	P	P	E
Vegetable Oil	—	—	G	E	E
Vinyl Acetate	—	—	N	G	E
Wet Chlorine Gas	—	E	N	G	E
Wet Sulphurized hydrogen	—	E	N	E	E
Wet Sulphur Dioxide	E	E	G	N	E
White Liquor	—	E	N	G	E
Wine	—	—	G	G	E
Xylene, Xylol	—	—	N	G	E
Zinc Chloride	E	E	G	G	E
Zinc Nitrate	—	—	—	G	E
Zinc Sulphate 30%	—	E	G	G	E

DEPLI192_032010

NOTE

Le dimensioni ed i pesi indicati nei grafici e nelle tabelle sono indicativi. Il fabbricante si riserva la facoltà di modificare i propri prodotti senza preavviso alla clientela, per garantire l'aggiornamento tecnologico.

Le misure sono espresse in millimetri (mm) ed i pesi in grammi (gr), dove non specificato.

NOTE

The dimensions and weights reported in the tables and charts are indicative. The manufacturer retains the right to change specifications without prior notice, to ensure that the quality and technical standards are maintained at the highest level.

The measures are expressed in millimeters (mm) and the weights in grams (gr), unless otherwise specified.

SICURAMENTE MADE IN ITALY

CATALOGO INDUSTRIALE 2010

Pubblicato da:	ENOLGAS BONOMI S.P.A.
Compilato e redatto da:	Uff. Tecnico e Marketing ENOLGAS
Fotocomposto da:	Uff. Desk Top Publishing ENOLGAS
Fotografie di:	Studio Fotografico Odeon - Brescia
Copertine e design di:	T.Italia Immagine srl
Impianto di:	ARgrafica - Verona
Stampato da:	Tipografia Pagani - Brescia
Edizione:	2010

INDUSTRIAL CATALOGUE 2010

Published by:	*ENOLGAS BONOMI S.p.A.*
Compiled by:	*Technical and Marketing dptm. ENOLGAS*
Photocomposed by:	*Desk Top Publishing dptm. ENOLGAS*
Photographs by:	*Photografic Studio Odeon - Brescia*
Designed by:	*T.Italia Immagine srl*
Artworks by:	*ARgrafica - Verona*
Printed by:	*Tipografie Pagani - Brescia*
Edition:	*2010*

ENOLGAS

ENOLGAS BONOMI S.p.A. • via Europa 227 • 25062 Concesio (Bs) • Italy
tel. 030 2184311 • fax 030 2184333 • www.enolgas.it • enolgas@enolgas.it