



EMPOWERED PERFORMANCE

OMAL S.p.A.
Rodengo Saiano
Brescia ITALY

Type: DAN0180411S
P.nom= 5.6 bar
T.min= -20°C
F07-F10
P.max= 8.4 bar
T.max= +80°C

H2 INVICTUS

CATALOGUE

Code: 02729VKRC6
Pressure: 5.6 bar
Temperature: -20°C / +85°C
Material: XM-19 / XM-19
OM 000272/0007



EMPOWERED PERFORMANCE

H2 INVICTUS

CATALOGUE





H2 INVICTUS



Code:

Size:

Pressure:

Materials:

Temperature:

D2129VKR06

DN25-1" NPT

PN700

316 / XM-19 / XM-19

01/24

OM 000272/0007



VALVOLE A SFERA H2 INVICTUS • INDICE

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• Caratteristiche generali valvole a sfera **H2 INVICTUS**

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Valvola a sfera per alta pressione per idrogeno

• Certificati valvola a sfera H2 INVICTUS

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• General features ball valves **H2 INVICTUS**

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• **H2 INVICTUS**

High pressure hydrogen ball valve

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H2 INVICTUS

VALVOLA A SFERA PER ALTA PRESSIONE PER IDROGENO
HIGH PRESSURE HYDROGEN BALL VALVE





FEATURES & BENEFITS

Classe di pressione <i>Pressure class</i>	PN 550 H35	PN 700 H50
Corpo e manicotto <i>Body and ends</i>	Realizzati in ASTM A479 TP.316. <i>Made of ASTM A479 TP.316 .</i>	Realizzati in ASTM A479 TP.316 con requisiti supplementari per utilizzo con idrogeno. <i>Made of ASTM A479 TP.316 with additional requirements for hydrogen service.</i>
Sfera e stelo <i>Ball and stem</i>	Realizzati in XM-19 (NITRONIC 50). <i>Made of XM-19 (NITRONIC 50).</i> Abbinano una elevata resistenza meccanica con una struttura che minimizza il fenomeno di infragilimento da idrogeno. <i>They combine high mechanical strength with a structure that minimises hydrogen embrittlement.</i>	
Tenute <i>Sealing</i>	Garantita mediante guarnizioni a labbro insensibili a fenomeni di rapida decompressione. <i>Guaranteed by lip seals insensitive to rapid decompression phenomena.</i> Maggiore durata grazie al suo modulo elastico. <i>Longer life due to its elastic module.</i>	
H2 Ready <i>H2 Ready</i>	Tutti i materiali selezionati sono idonei per servizio idrogeno e verificati mediante Material Assessment validato da TÜV SÜD. <i>All selected materials are suitable for 100% H2 service and verified by Material Assessment validated by TÜV SÜD.</i>	
Certificazione ISO 19880-3 <i>ISO 19880-3 certification</i>	Servizio di shut-off – classe “A” . <i>Shut-off service - class “A” .</i>	
	Permette l’installazione all’interno delle stazioni di rifornimento idrogeno con designazione fino a H35. <i>Allows installation inside hydrogen fuelling stations with a designation up to H35.</i>	Permette l’installazione all’interno delle stazioni di rifornimento idrogeno con designazione fino a H50. <i>Allows installation inside hydrogen fuelling stations with a designation up to H50.</i>
Conformità direttiva europea 2014/34/UE ATEX <i>In compliance with ATEX 2014/34/UE european directive</i>	Ne consente l’installazione in presenza di ambiente potenzialmente esplosivo. <i>Installation is possible in a potential explosive environment.</i>	



VALVOLA A SFERA H2 INVICTUS

BALL VALVE H2 INVICTUS



CARATTERISTICHE GENERALI:

- Esecuzione flottante;
- Corpo realizzato in 2-pezzi;
- PN550 / H35;
- PN700 / H50;
- Tenuta soft-seat in PEEK;
- Temperatura di utilizzo: -40°C/+ 85°C;
- Connessioni NPT-F (ANSI B1.20.1) e Cone & Thread (a richiesta);
- Range dimensionale:
 - da 1/8" a 1/2" con diametro di passaggio 8 mm
 - da 3/4" a 1" con diametro di passaggio 12 mm
- Antistatic device EN12266-2;
- Stelo anti blow-out;
- Foratura piano per attuatore a norma ISO 5211;
- Fluido intercettato: idrogeno;

CERTIFICAZIONI:

- ISO 19880-3 certificato a richiesta;
- Livello di sicurezza funzionale fino a SIL 3 in accordo a IEC 61508;
- Ex CE/UKCA;

NORME DI PROGETTAZIONE:

- ISO 19880-1;
- ASME B16.34, ASME VIII div.1, EN 12516;

MAIN FEATURES:

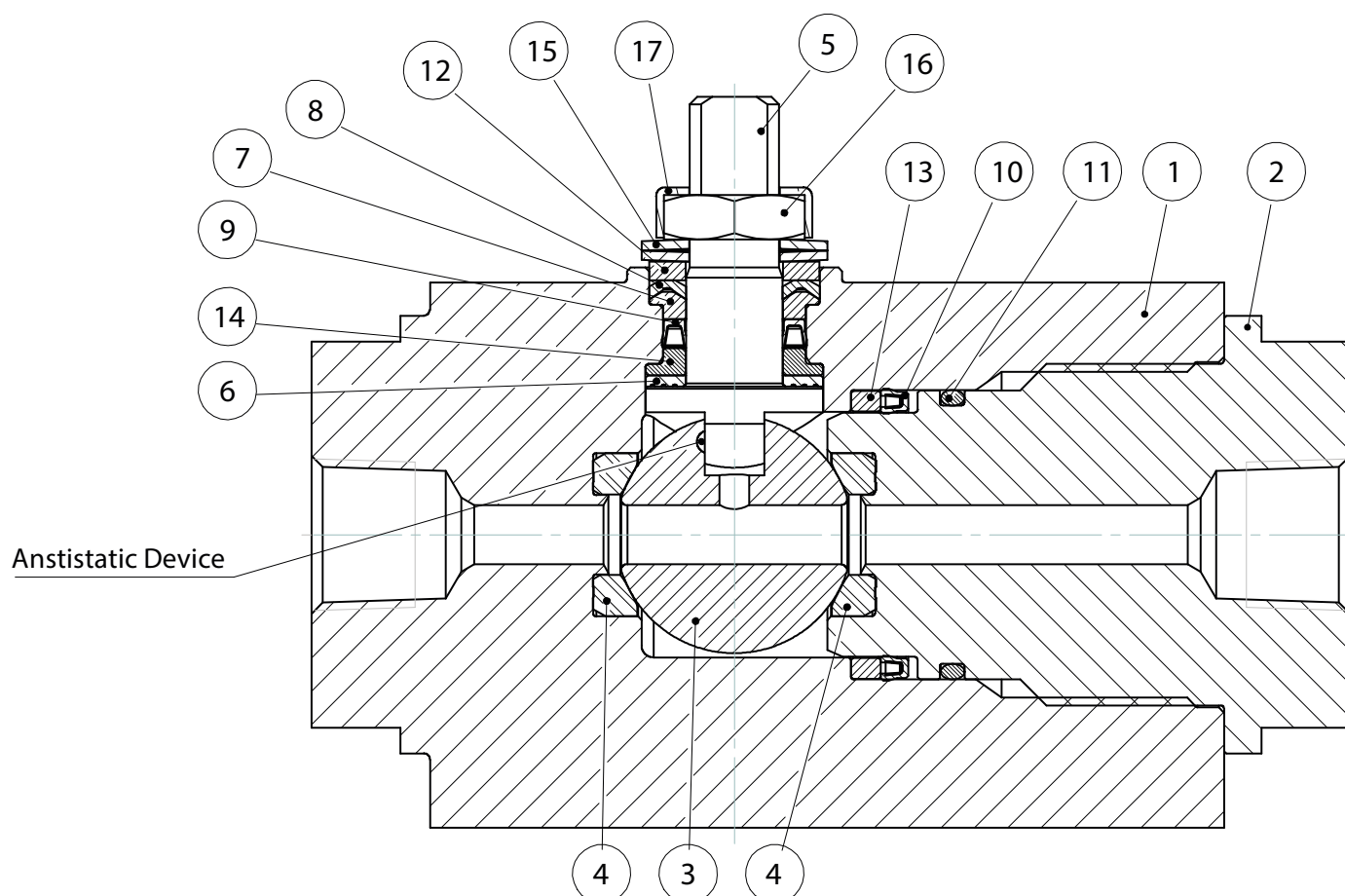
- Floating ball;
- 2-pieces body;
- PN550 / H35;
- PN700 / H50;
- Soft-seat seal PEEK;
- Operating temperature: -40°C/+ 85°C;
- NPT-F (ANSI B1.20.1) and Cone & Thread connections (on request);
- Size range:
 - from 1/8" to 1/2" with 8 mm passage diameter
 - from 3/4" to 1" with 12 mm passage diameter
- Antistatic device EN12266-2;
- Anti Blow-out stem;
- Actuator connection as per standard ISO 5211;
- Intercepted fluid: hydrogen;

CERTIFICATIONS:

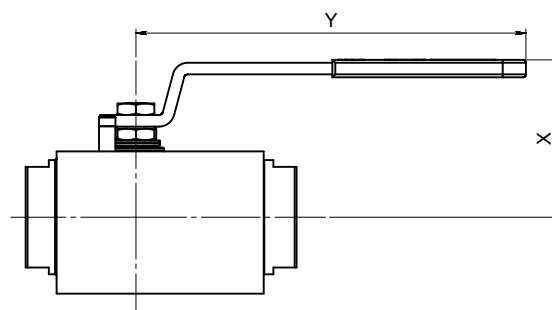
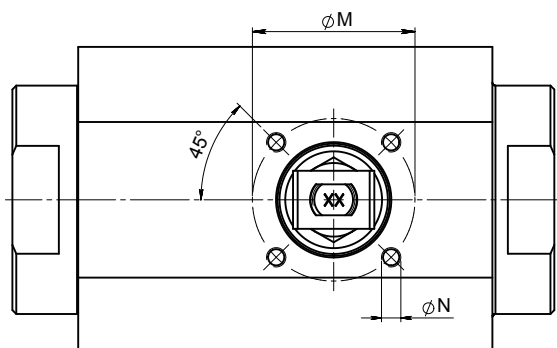
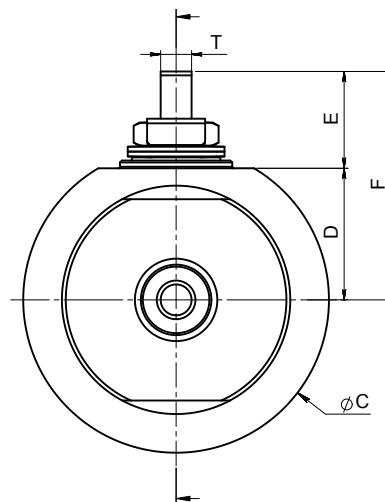
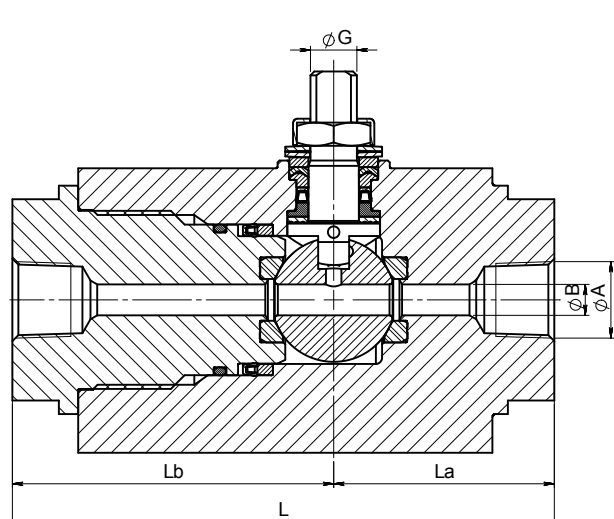
- ISO 19880-3 certificate on request;
- Safety integrity level up to SIL 3 according to IEC 61508;
- Ex CE/UKCA;

ENGINEERING STANDARDS:

- ISO 19880-1;
- ASME B16.34, ASME VIII div.1, EN 12516;



MATERIALI		MATERIALS
1	Corpo Body	A479 tp.316 / 1.4401
2	Manicotto Ends	A479 tp.316 / 1.4401
3	Sfera Ball	A479 tp.XM19 (Nitronic 50) cromata Hard Chromium plated
4	Seggi Seats	PEEK caricato Filled PEEK
5	Stelo Stem	A479 tp.XM19 (Nitronic 50)
6	Anello antifrizione Bottom sealing	DEVLON
7	Pacco a V inferiore Lower Chevron ring	PEEK caricato Filled PEEK
8	Pacco a V superiore Upper Chevron ring	DEVLON
9	Tenuta primaria stelo Primary stem seal	PEEK
10	Tenuta primaria corpo Primary body seal	PEEK
11	Tenuta secondaria corpo Secondary body seal	FKM 90
12	Anello premistoppa Gland nut ring	A479 tp.316 / 1.4401
13	Anello corpo Body ring	A479 tp.316 / 1.4401
14	Anello stelo Stem ring	A479 tp.XM19 (Nitronic 50)
15	Molle a tazza Spring washer	301 SS
16	Dado stelo Stem nut	A4-70
17	Fermo dado Stem nut plate	304 SS

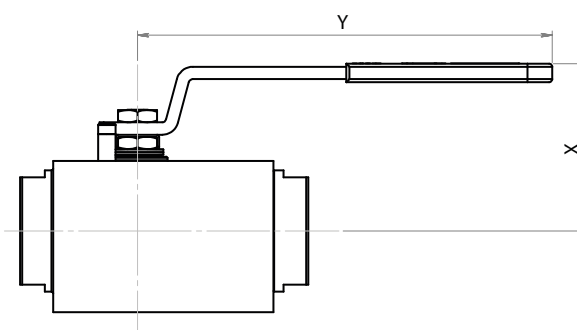
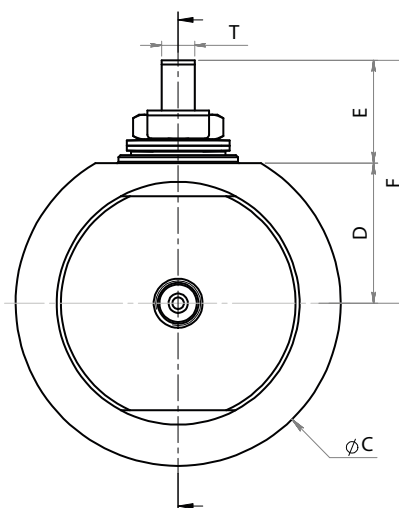
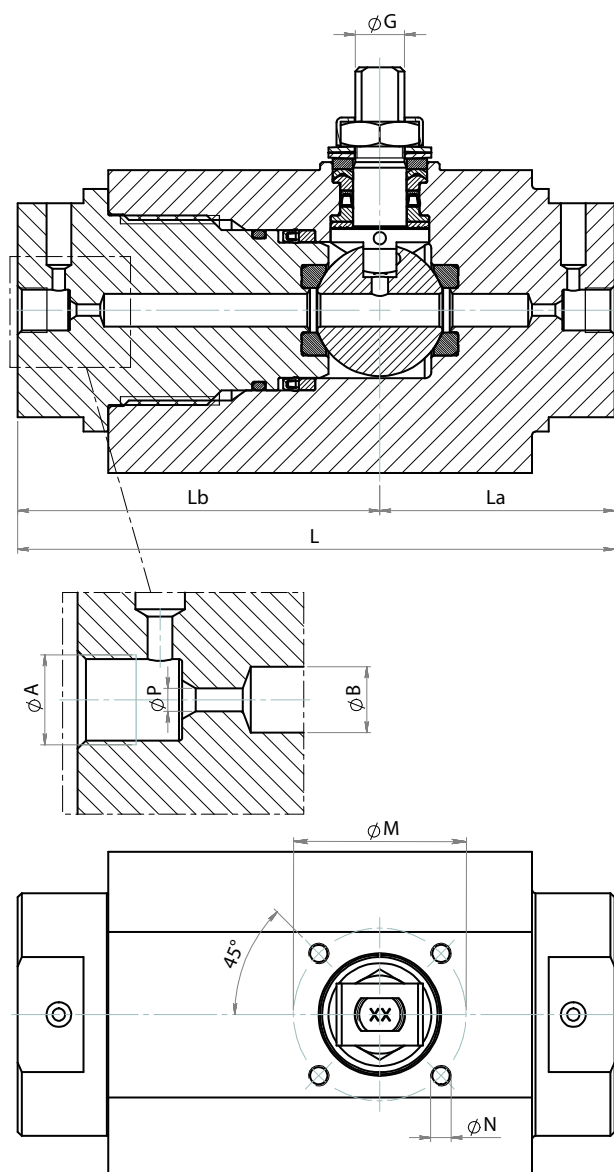


DIMENSIONI NPT NPT DIMENSIONS

NPS	DN	ØA	L	La	Lb	ØB	ØC	D	E	F	ØG	T	ISO 5211	ØM	ØN	Y	X	Peso <i>Weight</i> kg
1/8"	06	1/8" NPT	140	57	83	8	79	34	25	59	12	8	F04	42	M5	201,5	81	4,8
1/4"	08	1/4" NPT																4,8
3/8"	10	3/8" NPT																4,7
1/2"	15	1/2" NPT																4,6
3/4"	20	3/4" NPT	160	67	93	12	98	41	31	72	16	10	F05	50	M6	276,5	93	8,2
1"	25	1" NPT																8,1

Dimensioni valide sia per la PN550 che PN700.

Dimensions valid for both PN550 and PN700.



DIMENSIONI C&T C&T DIMENSIONS																			Peso <i>Weight</i> kg
C&T	ϕA	ϕP	ϕB	L	L_a	L_b	ϕB	ϕC	D	E	F	ϕG	T	ISO 5211	ϕM	ϕN	Y	X	
4M	7/16-20 UNF 2B	2,7	8	145	57	88	8	79	34	25	59	12	8	F04	45	M5	201,5	81	4,6
6M	9/16-18 UNF 2B	5,1		155	62	93	8	79	34	25	59	12	8	F04	45	M5	201,5	81	4,6
9M	13/16-16 UNF 2B	7,8		177	72	105	12	98	41	31	72	16	10	F05	50	M6	276,5	93	4,8
12M	3/4-14 NPSM 2B	-	12	177	72	105	12	98	41	31	72	16	10	F05	50	M6	276,5	93	8,5

Dimensioni valide sia per la PN550 che PN700.

Dimensions valid for both PN550 and PN700.



H2 INVICTUS PN550 NPT-F ASSE LIBERO *FREE SHAFT*

ASSE LIBERO *FREE SHAFT*

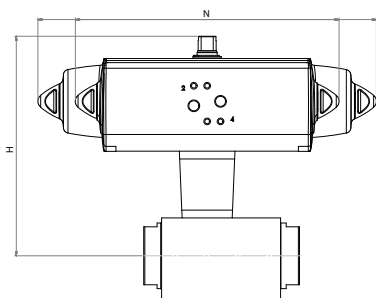
MISURA <i>SIZE</i>		ASSE LIBERO <i>FREE SHAFT</i>
DN [mm]	[inch]	
DN 06	1/8"	VINV501N
DN 08	1/4"	VINV502N
DN 10	3/8"	VINV503N
DN 15	1/2"	VINV504N
DN 20	3/4"	VINV505N
DN 25	1"	VINV506N

H2 INVICTUS PN550 NPT-F CON LEVA *WITH LEVER*

CON LEVA *WITH LEVER*

MISURA <i>SIZE</i>		CON LEVA <i>WITH LEVER</i>	KIT LEVA <i>LEVER KIT</i>
DN [mm]	[inch]		
DN 06	1/8"	LINV501N	KLVINV04
DN 08	1/4"	LINV502N	KLVINV04
DN 10	3/8"	LINV503N	KLVINV04
DN 15	1/2"	LINV504N	KLVINV04
DN 20	3/4"	LINV505N	KLV48008
DN 25	1"	LINV506N	KLV48008

H2 INVICTUS PN550 NPT-F CON ATTUATORE PNEUMATICO *WITH PNEUMATIC ACTUATOR*



CON ATTUATORE PNEUMATICO DOPPIO EFFETTO *WITH DOUBLE ACTING PNEUMATIC ACTUATOR*

MISURA <i>SIZE</i>		Codice articolo versione NPT <i>Item code NPT version</i>	Attuatore <i>Actuator</i>	Kit montaggio <i>Mounting kit</i>	N [mm]	H [mm]	Kg
DN [mm]	[inch]						
DN 06	1/8"	DINV501N	DAN0106411S	KCNBCHD6390	237	83,3	7,9
DN 08	1/4"	DINV502N	DAN0106411S	KCNBCHD6390	237	83,3	7,9
DN 10	3/8"	DINV503N	DAN0106411S	KCNBCHD6390	237	83,3	7,8
DN 15	1/2"	DINV504N	DAN0106411S	KCNBCHD6390	237	83,3	7,8
DN 20	3/4"	DINV505N	DAN0180411S	KCNCDHD6391	289,9	107,5	11,7
DN 25	1"	DINV506N	DAN0180411S	KCNCDHD6391	289,9	107,5	11,6

CON ATTUATORE PNEUMATICO SEMPLICE EFFETTO *WITH SPRING RETURN PNEUMATIC ACTUATOR*

MISURA <i>SIZE</i>		Codice articolo versione NPT <i>Item code NPT version</i>	Attuatore <i>Actuator</i>	Kit montaggio <i>Mounting kit</i>	N [mm]	H [mm]	Kg
DN [mm]	[inch]						
DN 06	1/8"	SINV501N	SRN0120401S	KCNBDHD6392	409,6	111,1	12,4
DN 08	1/4"	SINV502N	SRN0120401S	KCNBDHD6392	409,6	111,1	12,4
DN 10	3/8"	SINV503N	SRN0120401S	KCNBDHD6392	409,6	111,1	12,3
DN 15	1/2"	SINV504N	SRN0120401S	KCNBDHD6392	409,6	111,1	12,3
DN 20	3/4"	SINV505N	SRN0180401S	KCNCDHD6393	474	118	16,0
DN 25	1"	SINV506N	SRN0180401S	KCNCDHD6393	474	118	15,9



H2 INVICTUS PN700 NPT-F ASSE LIBERO *FREE SHAFT*

ASSE LIBERO *FREE SHAFT*

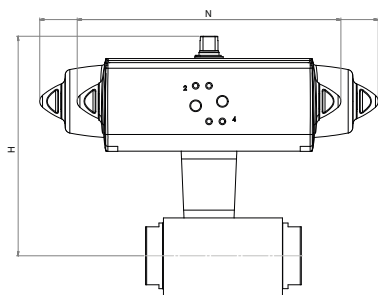
MISURA <i>SIZE</i>		ASSE LIBERO <i>FREE SHAFT</i>
DN [mm]	[inch]	
DN 06	1/8"	VINV01N
DN 08	1/4"	VINV02N
DN 10	3/8"	VINV03N
DN 15	1/2"	VINV04N
DN 20	3/4"	VINV05N
DN 25	1"	VINV06N

H2 INVICTUS PN700 NPT-F CON LEVA *WITH LEVER*

CON LEVA *WITH LEVER*

MISURA <i>SIZE</i>		CON LEVA <i>WITH LEVER</i>	KIT LEVA <i>LEVER KIT</i>
DN [mm]	[inch]		
DN 06	1/8"	LINV01N	KLVINV04
DN 08	1/4"	LINV02N	KLVINV04
DN 10	3/8"	LINV03N	KLVINV04
DN 15	1/2"	LINV04N	KLVINV04
DN 20	3/4"	LINV05N	KLV48008
DN 25	1"	LINV06N	KLV48008

H2 INVICTUS PN700 NPT-F CON ATTUATORE PNEUMATICO *WITH PNEUMATIC ACTUATOR*



CON ATTUATORE PNEUMATICO DOPPIO EFFETTO *WITH DOUBLE ACTING PNEUMATIC ACTUATOR*

MISURA <i>SIZE</i>		Codice articolo versione NPT <i>Item code NPT version</i>	Attuatore <i>Actuator</i>	Kit montaggio <i>Mounting kit</i>	N [mm]	H [mm]	Kg
DN [mm]	[inch]						
DN 06	1/8"	DINV01N	DAN0106411S	KCNBCHD6390	237	83,3	7,9
DN 08	1/4"	DINV02N	DAN0106411S	KCNBCHD6390	237	83,3	7,9
DN 10	3/8"	DINV03N	DAN0106411S	KCNBCHD6390	237	83,3	7,8
DN 15	1/2"	DINV04N	DAN0106411S	KCNBCHD6390	237	83,3	7,8
DN 20	3/4"	DINV05N	DAN0180411S	KCNCDHD6391	289,9	107,5	11,7
DN 25	1"	DINV06N	DAN0180411S	KCNCDHD6391	289,9	107,5	11,6

CON ATTUATORE PNEUMATICO SEMPLICE EFFETTO *WITH SPRING RETURN PNEUMATIC ACTUATOR*

MISURA <i>SIZE</i>		Codice articolo versione NPT <i>Item code NPT version</i>	Attuatore <i>Actuator</i>	Kit montaggio <i>Mounting kit</i>	N [mm]	H [mm]	Kg
DN [mm]	[inch]						
DN 06	1/8"	SINV01N	SRN0120401S	KCNBDHD6392	409,6	111,1	12,4
DN 08	1/4"	SINV02N	SRN0120401S	KCNBDHD6392	409,6	111,1	12,4
DN 10	3/8"	SINV03N	SRN0120401S	KCNBDHD6392	409,6	111,1	12,3
DN 15	1/2"	SINV04N	SRN0120401S	KCNBDHD6392	409,6	111,1	12,3
DN 20	3/4"	SINV05N	SRN0180401S	KCNCDHD6393	474	118	16,0
DN 25	1"	SINV06N	SRN0180401S	KCNCDHD6393	474	118	15,9

**TÜVNORD**

CERTIFICATE

This certifies, that the company

Omal S.p.A.
Via Ponte Nuovo 11
25020 Rodengo Saiano (BS)
Italy

Is authorized to provide the product mentioned below

Description of product: **High pressure floating ball valve series H2 Invictus**

In accordance with: **EN 61508:2010 Parts 1, 2, 4, 5, 6, 7**
The product meets also the requirements of standard EN 17955:2024



Registration No 26 27336 01
Test Report No PS-2733625-M
File reference: 27336-01

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www.tuev-nord.it

Validity
from 2026-04-14
until 2029-04-14

Cerro Maggiore, 2026-04-14
prodotti@tuev-nord.it

TNI-QF(IND-SIL-01)-14-Rev01_18_08_2023-Certificate_Type A

Please also pay attention to the information stated overleaf



NOTES:

A series of horizontal dotted lines for taking notes, spanning the width of the page.



Our history



Other applications



Sustainability



OMAL S.p.A. Società Benefit

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