OMAL®
AUTOMATION

EMPOWERED PERFORMANCE

H2 INVICTUS
CATALOGUE

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PRODUCTS

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H2 INVICTUS

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DMG
AUTOMATION
Code: D2129VKR06
Size: DN25-1" NPT
Pressure: PN700
Materials: 316 / XM-19 /XM-19
Temperature: -40°C / +85°C
01/24
OM 000272/0007

H2 INVICTUS

VALVOLE A SFERA H2 INVICTUS · INDICE

H2 INVICTUS BALL VALVES · INDEX

Pag:

H2 INVICTUS

VALVOLA A SFERA PN700 PER IDROGENO
PN700 HYDROGEN BALL VALVE

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

VALVOLA A SFERA H2 INVICTUS
BALL VALVE H2 INVICTUS

CARATTERISTICHE GENERALI:
- Esecuzione flottante;
- Corpo realizzato in 2-pezzi;
- 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 ½" con diametro di passaggio 8 mm
  da ¾" 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;

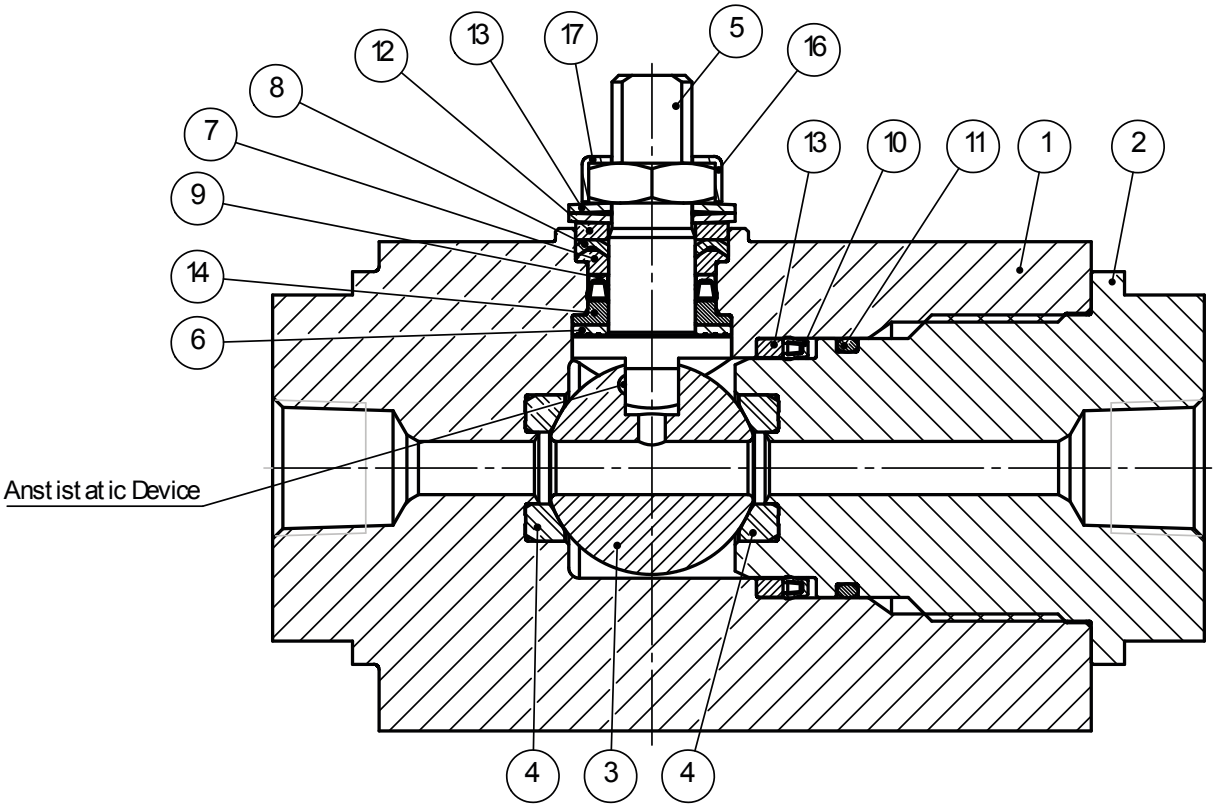
CERTIFICAZIONI:
- ISO 19880-3;
- Ex CE/UKCA;

NORME DI PROGETTAZIONE:
- ISO 19880-1;
- ASME B16.34, ASME VIII div.1, EN 12516;

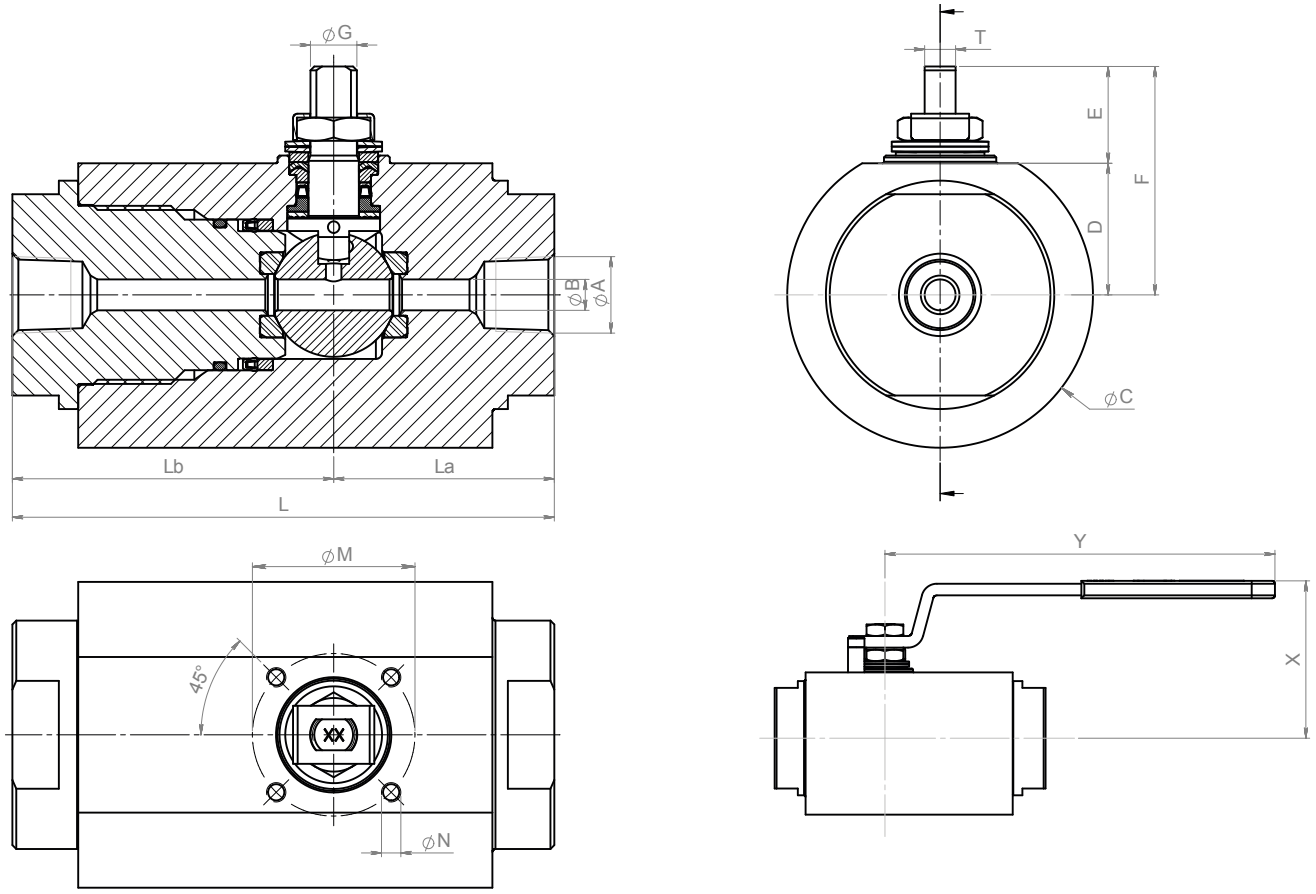
MAIN FEATURES:
- *Floating ball;*
- *2-pieces body;*
- *PN700 / H50;*
- *Soft-seat seal PEEK;*
- *Operating temperature: -40°C/+ 85°C;*
- *NPT-F (ANSI B1.20.1) and Cone & Thread connections (on request);*
- *Size range:*
  from 1/8" to ½" with 8 mm passage diameter
  from ¾" to 1" with 12 mm passage diameter
- *Antistatic device EN12266-2;*
- *Anti Blow-out stem;*
- *Actuator connection as per standard ISO 5211;*
- *Intercepted fluid: hydrogen;*

CERTIFICATIONS:
- *ISO 19880-3;*
- *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	Molle a tazza *Spring washer*	301 SS
14	Anello stelo *Stem ring*	A479 tp.XM19 (Nitronic 50)
16	Dado stelo *Stem nut*	A4-70
17	Fermo dado *Stem nut plate*	304 SS



DIMENSIONI *DIMENSIONS*

NPS	DN	ØA	L	La	Lb	ØB	ØC	D	E	F	ØG	T	ISO 5211	ØM	ØN	Y	X	Peso *Weight* 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

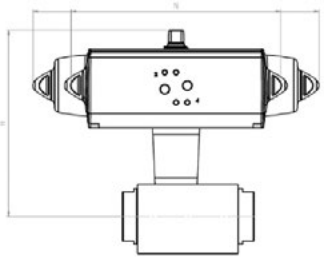
H2 INVICTUS
ASSE LIBERO *FREE SHAFT*

ASSE LIBERO *FREE SHAFT*		
MISURA *SIZE*		**ASSE LIBERO** *FREE SHAFT*
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
CON LEVA *WITH LEVER*

CON LEVA *WITH LEVER*			
MISURA *SIZE*		**CON LEVA** *WITH LEVER*	**KIT LEVA** *LEVER KIT*
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
CON ATTUATORE PNEUMATICO *WITH PNEUMATIC ACTUATOR*



CON ATTUATORE PNEUMATICO DOPPIO EFFETTO *WITH DOUBLE ACTING PNEUMATIC ACTUATOR*							
MISURA *SIZE*		**Codice articolo versione NPT** *Item code NPT version*	**Attuatore** *Actuator*	**Kit montaggio** *Mounting kit*	**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 *SIZE*		**Codice articolo versione NPT** *Item code NPT version*	**Attuatore** *Actuator*	**Kit montaggio** *Mounting kit*	**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

BESCHEINIGUNG ■ CERTIFICATION ■ ATTESTATION ■ CONSTANCIA ■ شهادة ■ BELGE

Add value.
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Statement of Compliance

The shut-off valve class "A"

H2 INVICTUS

manufactured by OMAL S.p.a fulfills the requirements of the

ISO 19880-3.

The valve was tested according to the following specifications:

Maximum allowable working pressure:	70 MPa
Operating Temperature:	-40°C to +85°C
Bore diameter:	8 mm
Connections:	NPT 1/8", NPT 1/4", NPT 3/8", NPT 1/2", 7/16-20 UNF, 9/16-20 UNF, 13/16-20 UNF

München, 10.03.2025

Raphael Mayer
Global Technical Lead Alternative Fuel Components

TÜV SÜD Industrie Service GmbH, Westendstraße 199, 80686 München, Germany

Add value.
Inspire trust.

Report from 25-03-04

Report No.: 500604323-60-01 Rev. 1

Material compatibility assessment within specified operating conditions for a ball valve for use in hydrogen service

On behalf of:

OMAL S.p.A. SB
Via ponte Nuovo 11
25050 Rodengo Saiano (BS) I

Based on a subcontract for:

TÜV Italia Srl
Via Carducci 125, pal. 23
20099 Sesto San Giovanni (MI)

Date: 25-03-04

Our reference:
IS-ESZ4-MUC\engle-to

Report No. 500604323-60-01 Rev. 1

This Document consits of 11 pages and 1 annex.
page 1 of 11

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The test results refer exclusively to the units under test..

TÜV SÜD Industrie Service GmbH
Energy and Systems
Dept. Hydrogen Projects

Dr. Christopher Tom Engler

Tel. +49 (0) 89 5791 1421
christophertom.engler@tuvsud.com

Headquarters: Munich
Trade Register Munich HRB 96 869
VAT ID No. DE129484218
Information pursuant to § 2 [1] DL-InfoV (Germany) at tuvsud.com/imprint

Supervisory Board:
Reiner Block (Chairman)
Board of Management:
Ferdinand Neuwieser (CEO)
Thomas Kainz
Simon Kellerer

TÜV SÜD Industrie Service GmbH
Energy and Systems
Westendstr. 199
80686 Munich
Germany

tuvsud.com/de-is
Phone: +49 89 5190-4001

V 2020-05

INERIS

Appareil non électrique destiné à être utilisé en atmosphères explosibles
Non electrical equipment intended for use in potentially explosive atmospheres
Apparecchi non elettrici destinati ad essere utilizzati in atmosfera potenzialmente esplosiva

Directive 2014/34/UE
Directive 2014/34/EU / Direttiva 2014/34/UE

ACCUSÉ DE RECEPTION D'UN DOSSIER TECHNIQUE
ACKNOWLEDGE RECEIPT OF TECHNICAL DOCUMENTATION
AVVISO DI RICEVIMENTO DEL FASCICOLO TECNICO

Appareil / Equipment / Apparecchiatura :
BALL VALVES

Type(s)/ Type(s) / Tipo(i) : Wafer type, Split body type, Split Wafer type steel ball valves / Two-piece, Three-piece steel ball valve High-pressure - threaded ends / Two-piece brass ball valves threaded ends

Marquage/ Marking / Marcatura : Ex II 2 GD

Dépositaire / Applicant / Richiedente : OMAL S.p.A.
Via Ponte Nuovo 11
I- 25050 Rodengo Saiano (BS)

L'INERIS, organisme notifié et identifié sous le numéro 0080, conformément aux articles 17 et 21 de la Directive du Conseil 2014/34/UE du 26 février 2014, accuse réception du dossier conformément à la procédure décrite au chapitre 3, article 13 1) b) ii) de la Directive.

INERIS, notified body and identified under number 0080, in accordance with articles 17 and 21 of Council Directive 2014/34/EU of the 26 february 2014, acknowledges receipt of file according to the procedure described chapiter 3, article 13 1) b) ii) of the Directive.

L'INERIS, organismo notificato e identificato con il n.0080 conformemente agli articoli 17 e 21 della Direttiva 2014/34/UE del Consiglio dell'Unione Europea del 26 febbraio 2014, conferma il ricevimento del fascicolo in conformita alla procedura prevista nella rubrica 3, articolo 13 1) b) ii) della Direttiva.

La documentation technique référencée : VS-19 dated 10/10/2019 est consignée sous le numéro d'enregistrement : n° INERIS-EQEN 035241/19.

The technical documentation referenced : VS-19 dated 10/10/2019 is consigned under the reference : no INERIS-EQEN 035241/19.

La documentazione tecnica di riferimento : VS-19 dated 10/10/2019 è depositata con il numero di registrazione : n° INERIS-EQEN 035241/19.

Dans le cadre de cet enregistrement, l'INERIS n'a pas examiné le contenu de la documentation technique.

Within the scope of the recording, INERIS did not examine the contain of the technical documentation.

Nel quadro di questa registrazione, INERIS non ha examinato il contenuto della documentazione tecnica.

Date de fin de validité : 2029.11.07

Validity completion date : 2029.11.07

Data di fine di validità : 2029.11.07

Verneuil-en-Halatte, le 2019.11.07

Le Directeur Général de l'INERIS, Par délégation,

The Chief Executive Officer of INERIS, By delegation,

Il Direttore generale dell' INERIS, Per Delega,

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Parc Technologique Alata BP 2 F-60550 Verneuil-en-Halatte
tél +33(0)3 44 55 66 77 fax +33(0)3 44 55 66 99 internet www.ineris.fr
Institut national de l'environnement industriel et des risques
Etablissement public à caractère industriel et commercial - RCS Compiègne B 381 984 924 - Siret 381 984 921 00019 - APE 7120B - TVA Intracom FR 73 381 984 921

OMAL S.p.A. Società Benefit

Headquarter Via Ponte Nuovo, 11 - 25050 Rodengo Saiano (BS), Italy
Production Site Via Brognolo, 12 - 25050 Passirano (BS), Italy
Ph. +39 030 8900145 · Fax +39 030 8900423 · info@omal.it

OMAL USA Corp.

1835 Airport Exchange Blvd, Suite 100- 41018 Erlanger, (Kentucky), USA
Ph. +1 (859) 900-2108 · info@omal.com

OMAL Asia Pacific Ltd.

26/73, Moo 7, Racha Thewa Sub-district, Bang Phli District,
Samut Prakan Province, (Bangkok), Thailand
Ph. 02-117-1188 · info@omal.co.th

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