

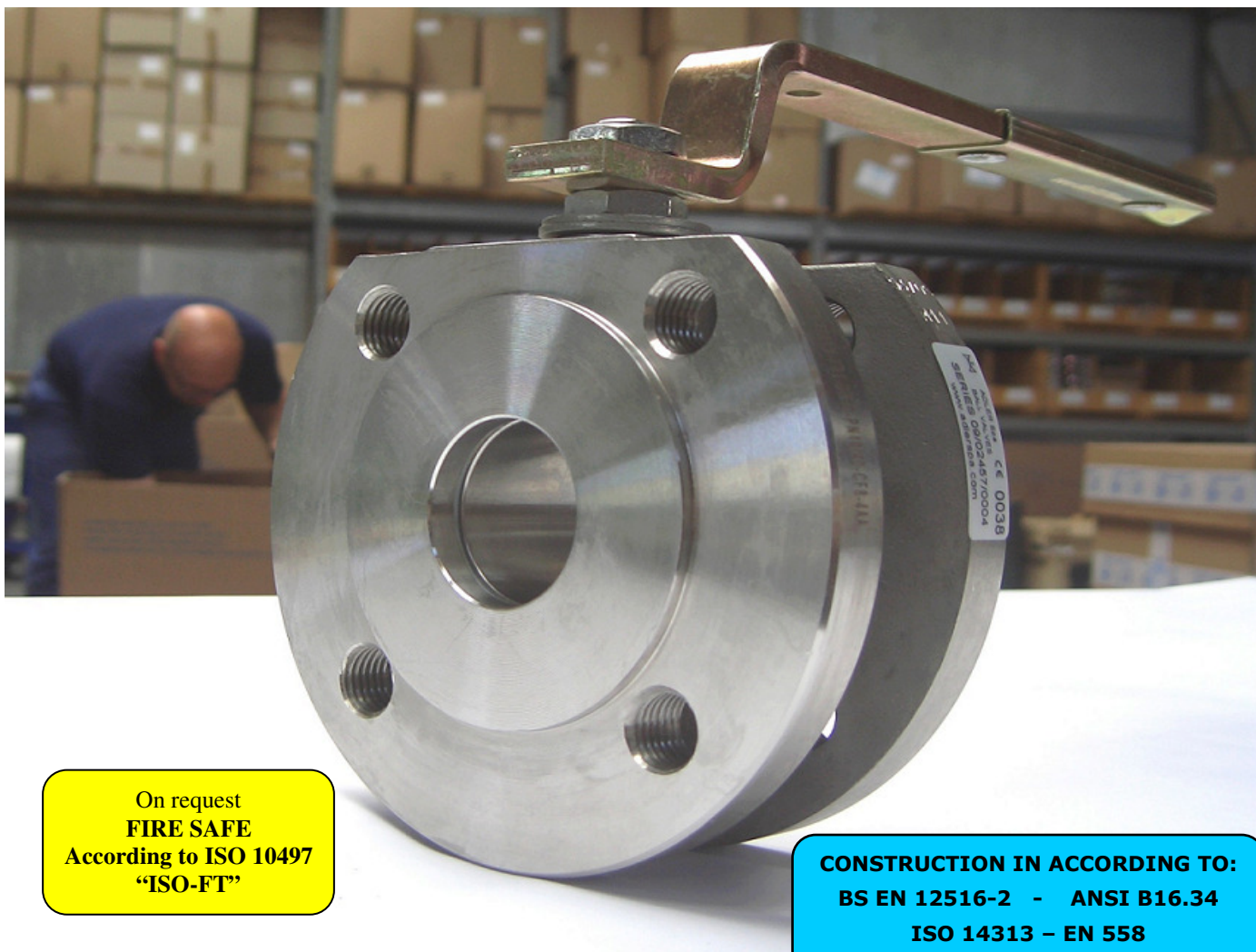


ISO 9001:2008 by L.R.  
PED DIR. 97/23/EC by L.R.  
ATEX DIR. 94/9/EC by B.V.  
FIRE SAFE EXECUTION by L.R.  
ISO 15848 by TÜV  
ANTISTATIC DEVICE by L.R.  
FIRE SAFE TESTED ISO 10497 by L.R.  
[WWW.ADLERSPA.COM](http://WWW.ADLERSPA.COM)

TYPE  
**FB1**  
PN 10 ÷ 40  
ANSI 150

## BALL VALVES "WAFER TYPE" FULL BORE ROBINETS A BOULE "WAFER" PASSAGE INTEGRAL FLANSCHKUGELHÄHNE IN "KOMPAKTBAUWEISE" VOLLER DURCHGANG

ISO nbr° LRC 0160281 QMS issued by L.R.Q.A. PED nbr° COV 0212112/01 issued by L.R.V.  
ATEX nbr° 40.2003.4392 issued by B.V. ISO 15848 nbr° I-148466/1-/2 issued by TÜV



On request  
**FIRE SAFE**  
According to ISO 10497  
"ISO-FT"

CONSTRUCTION IN ACCORDING TO:  
BS EN 12516-2 - ANSI B16.34  
ISO 14313 - EN 558

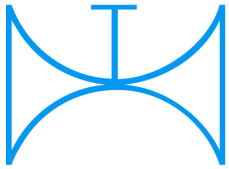
PRZEDSTAWICIEL W POLSCE:

**ARA**  
PNEUMATIK

53-012 Wrocław tel. 71 364 72 85  
ul. Wyścigowa 38 fax 71 364 72 83

[www.arapneumatik.pl](http://www.arapneumatik.pl)

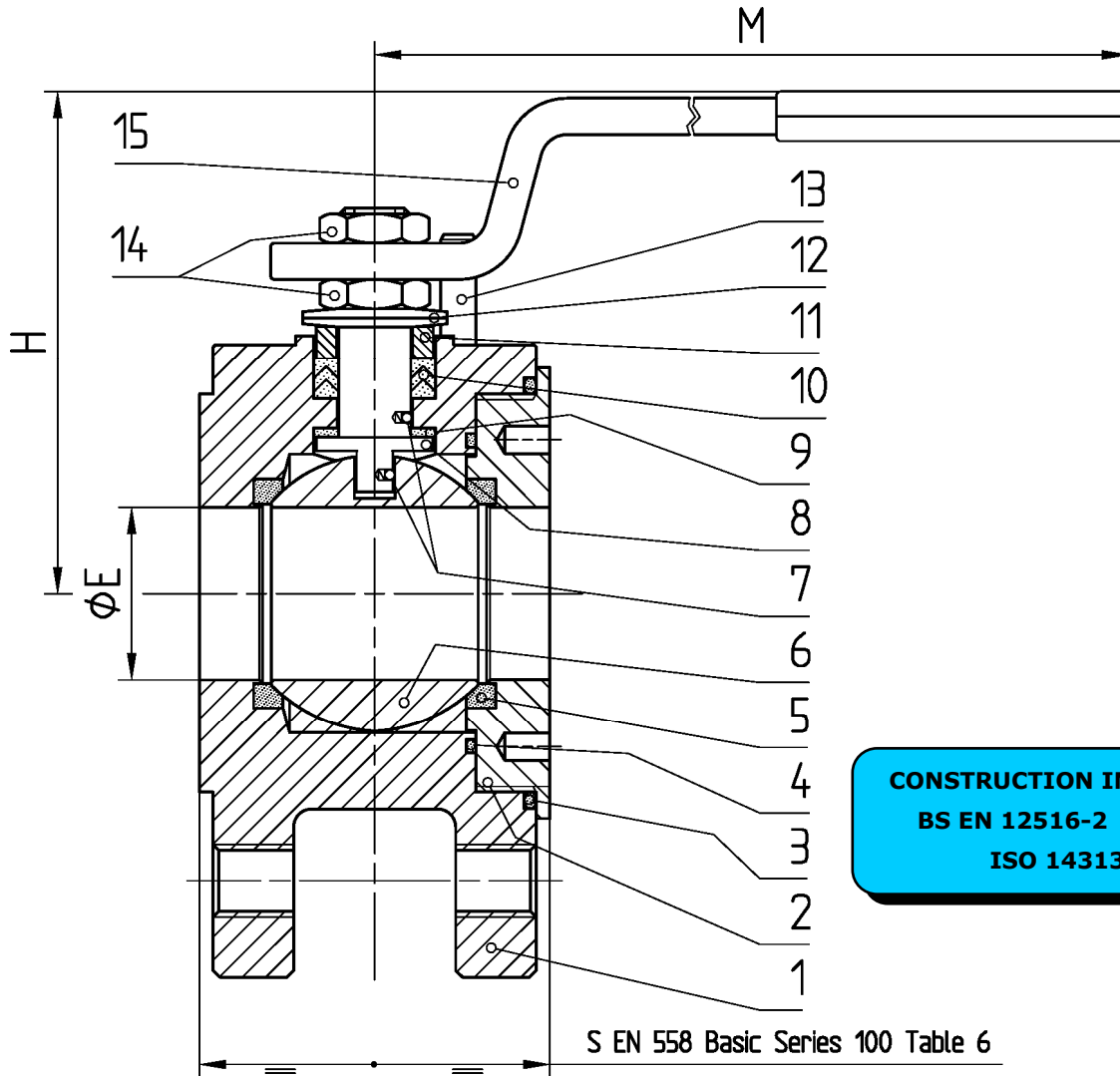




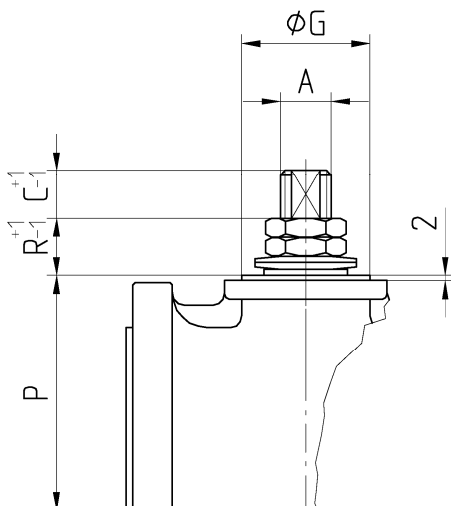
ISO 9001:2008 by L.R.  
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ISO 15848 by TÜV  
ANTISTATIC DEVICE by L.R.  
FIRE SAFE TESTED ISO 10497 by L.R.

TYPE  
**FB1**  
PN 10 ÷ 40  
ANSI 150

VALVOLA A SFERA "CORPO PIATTO" PASSAGGIO TOTALE  
BALL VALVES "WAFER TYPE" FULL BORE  
ROBINETS A BOULE "WAFER" PASSAGE INTEGRAL  
FLANSCHKUGELHÄHNE IN "KOMPAKTBAUWEISE" VOLLER DURCHGANG

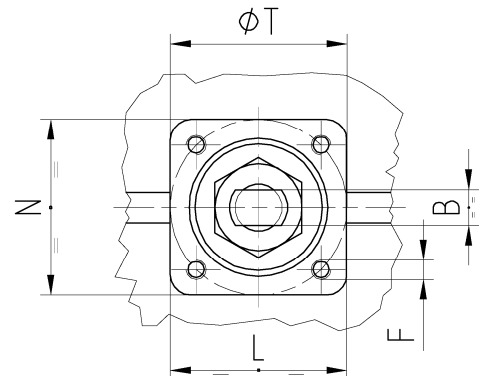


CONSTRUCTION IN ACCORDING TO:  
BS EN 12516-2 - ANSI B16.34  
ISO 14313 - EN 558



- ACCOPPIAMENTO VALVOLA ATTUATORE
- CONNECTION VALVE ACTUATOR
- ACCOUPLEMENT ROBINET-ACTIONNEUR
- ZUSAMMENBAU KUGELHAHN ANTRIEB

**ISO-5211**



N.	DESCRIZIONE DESCRIPTION BESCHREIBUNG	MATERIALI MATERIALS MATERIAUX WERKSTOFFE
1	CORPO BODY CORPS KÖRPER	ASTM A 351 CF8 ASTM A 351 CF8M
2	GHIERA INSERT EMBOUT GEWINDEDRUCKRING	ASTM A 182 F304- A479 S30400 ASTM A 182 F316- A479 S31600
3*◇	O-RING	FKM - (VITON)
4*	ANELLO SEAL ANNEAU DICHTUNGSRING	P.T.F.E.
5*	SEDE SEAT SIEGE SITZRING	P.T.F.E. / R.P.T.F.E. (OPTIONAL)
6	SFERA BALL BOULE KUGEL	ASTM A182 F304-A479 S30400 ASTM A351 CF8 ASTM A182 F316-A479 S31600 ASTM A351 CF8M
7	DISPOSITIVO ANTISTATICO ANTISTATIC DEVICE CONTACT ANTISTATIQUE ANTISTATIK VORRICHTUNG	ASTM A479 S31600
8	STELO STEM TIGE SPINDEL	ASTM A182 F304 A479 S30400 ≥ DN 40 ASTM A182 F316 A479 S31600

N.	DESCRIZIONE DESCRIPTION BESCHREIBUNG	MATERIALI MATERIALS MATERIAUX WERKSTOFFE
9*	BUSSOLA STEM SEAL JOINT TIGE UNTERE SPINDELABDICHTUNG	P.T.F.E.
10*◇	PACCO A "V" CHEVRON RINGS JOINT A "V" 3 FACHE DACHMANSCHETTE	P.T.F.E. / GRAFITE P.T.F.E. / GRAPHITE P.T.F.E. / GRAPHITE P.T.F.E. / GRAPHIT
11	PREMIBUSSOLA PRESSING BUSH PRESSE RONDELLE STOPFBUCHSDRUCKRING	ASTM A479 S31600
12	MOLLE A TAZZA SPRING WASHERS RONDELLES BELLEVILLE TELLERFEDERN	C72/50Cr V <sub>4</sub> ZINCATO - GALVANIZED ZINGUE - VERZINKT
13	VITE DI FERMO E FERMO PIN AND STOP PIN PLONT ET PLOT D'ARRET ANSCHLAGBOLZEN	UNI 3740 - 8.8 ZINCATO - GALVANIZED ZINGUE - VERZINKT
14	DADO - CONTRODADO NUT - LOCK NUT ECROU - CONTRE-ECROU MUTTER - KONTERMUTTER	UNI 3740 - 6S ZINCATO - GALVANIZED ZINGUE - VERZINKT
15	LEVA WRENCH LEVIER HANDHEBEL	UNI 5946 Fe 37 ZINCATO - GALVANIZED ZINGUE - VERZINKT
16		

\* RICAMBI CONSIGLIATI - RECOMMENDED SPARE PARTS - PIECES DE RECHANGE CONSEILLEES - ERSATZTEIL EMPFEHLUNG

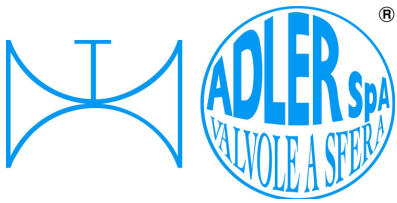
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DN	15	20	25	32	40	50	65	80	100	125	150	200	250	300	
A				12	16	16	22	22	30	30					
B				8	10	10	14	14	18	18					
C				10	10	10	12	12	17	17					
E	TYPE <b>FA1</b> VEDERE SEE VOIR SIEHE DN 15 ÷ 40 PN 10 ÷ 40 ANSI 150 ÷ 300			30	38	51	64	76	101	118					
F				M5	M6	M6	M8	M8	M8	M10					
ISO				F03	F05	F05	F07	F07	F07	F10					
G				25	35	35	55	55	55	70					
H				91	110	120	144	152	174	188					
L				48	58	56	67	68	70	97					
M	OPTIONAL TYPE <b>FA2</b> VEDERE SEE VOIR SIEHE DN 15 ÷ 250 PN 10 ÷ 40 ANSI 150 ÷ 300			185	280	280	370	370	470	650					
N				38	54	54	70	70	70	97					
P				46,5	55	65	82	90,5	99,5	113					
R				17	20	21	24	24	27	27					
S				51	64	84	103	120	154	182					
T				36	50	50	70	70	70	102					
Kg				3,8	5	7,5	10	14	20	31					

- DATI E CARATTERISTICHE SOGGETTI A VARIAZIONI SENZA PREAVVISO
- SPECIFICATIONS SUBJECT TO MODIFICATION WITHOUT PRIOR NOTICE
- TOUS DROITS DE MODIFICATION RESERVES
- KONSTRUKTIONSÄNDERUNGEN VORBEHALTEN

PN 10 ÷ 40 - ANSI 150





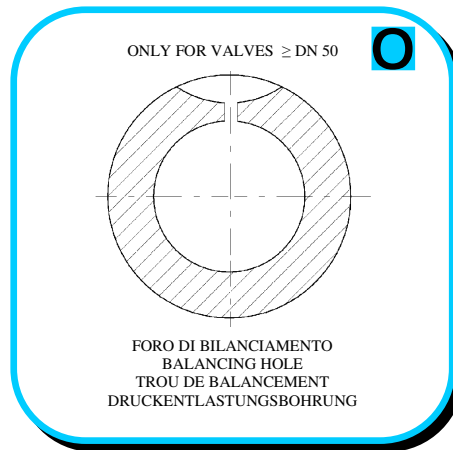
ISO 9001:2008 by L.R.  
 PED DIR. 97/23/EC by L.R.  
 ATEX DIR. 94/9/EC by B.V.  
 FIRE SAFE EXECUTION by L.R.  
 ISO 15848 by TÜV  
 ANTISTATIC DEVICE by L.R.  
 FIRE SAFE TESTED ISO 10497 by L.R.

TYPE  
**FB1**  
 PN 10 ÷ 40  
 ANSI 150

VALVOLA A SFERA "CORPO PIATTO" PASSAGGIO TOTALE  
 BALL VALVES "WAFER TYPE" FULL BORE

ROBINETS A BOULE "WAFER" PASSAGE INTEGRAL  
 FLANSCHKUGELHÄHNE IN "KOMPAKTBAUWEISE" VOLLER DURCHGANG

▪ ESECUZIONI ▪ EXECUTIONS ▪ EXECUTIONS ▪ AUSFÜHRUNGEN

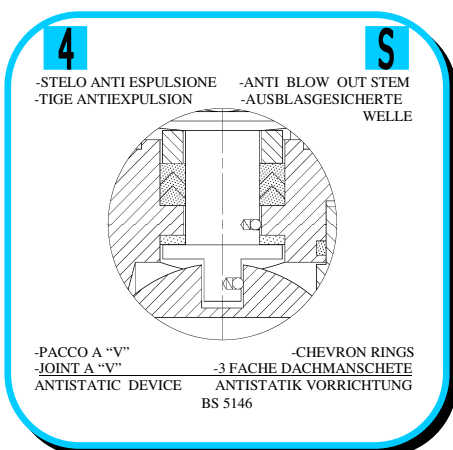
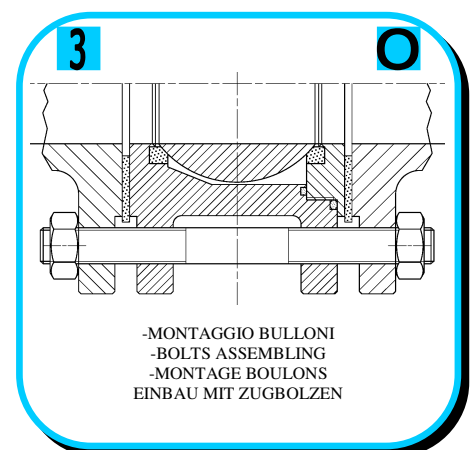
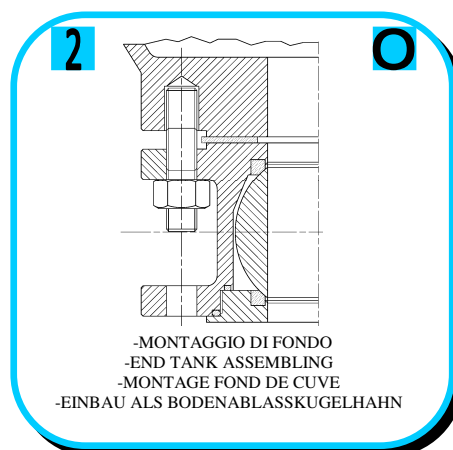
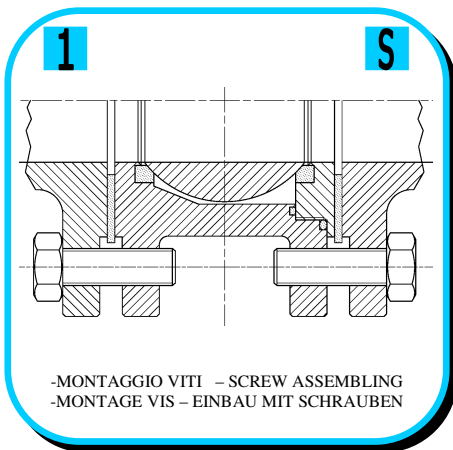


EXECUTIONS 4 - 12

EXECUTIONS 6 - 16

**S** STANDARD

**O** OPTIONAL



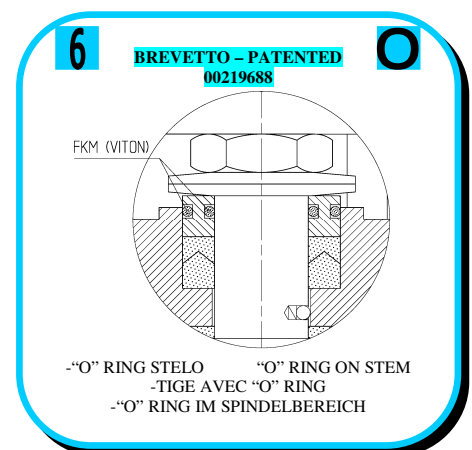
**TÜV**  
 CERTIFICATE

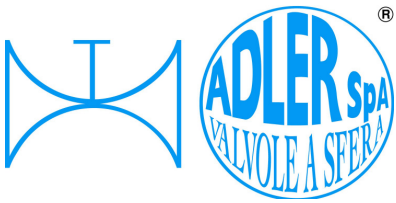
This certificate with No. 6489662 is the result of helium shaft leak tests performed on a

ADLER S.p.A.  
 OD 50/60/80 Ball Valve

with reference to the requirements of TA LUFF Ed. 072002 (Technische Anleitung zur Beschulung der Luft-Prüfung 5.2.4 + 76.2400 Ed. 11/2009 Annex 3.1.3) and with reference to prEN ISO 15848-1 Ed. 10/2005.

COMPANY	ADLER S.p.A. Valvole a Sfera - S. Stefano Torinese (MI)
TEST LOCATION	Laboratory OMECO, Monza (MI) and ADLER Production site
TIME OF TESTING	From 07 to 10th February 2005
TESTED VALVES	Ball valve, nominal diameter DN 50, nominal pressure Class 200 (B1 bar), forged RP body material ASTM A 479 316
REQUIREMENTS	Equipotence criteria of shaft sealing system according to TA LUFF Ed. July 2002 under Point 5.2.4 and correlated VDI 2464, Leaky Rate limit 10 <sup>-4</sup> cc/m <sup>3</sup> year - prEN ISO 15848: Endurance Test (1000 cycles) with three Adjustment (S1) - Leaky Rate Limit: 10 <sup>-4</sup> cc/m <sup>3</sup> year - prEN ISO 15848: Endurance Test (1000 cycles) with three Adjustment (S1) - Leaky Rate Limit: 10 <sup>-4</sup> cc/m <sup>3</sup> year
LEAK DETECTION METHOD	Helium Leak Control (Vacuum Method) Mass Spectrometer Type Balzers HLT 150
PACKING MATERIAL	Chevron PTFE Graphite rings
PACKING SEALING	As per attached drawing No. 470 23739 1 to 4
CONFIGURATION	Details of the test: Omeco Test Report: SP50552005
TEST RESULTS	The described valve shaft sealing system satisfies the TA LUFF requirements criteria as well as ISO 15848
QUALIFICATION	This sealing system can be classified according to prEN ISO 15848 as Class A, Q23 (3 normal cycles with 100,000 open/cycle and 100,000 closed/cycle) or Class B, Q24 (3 normal cycles with 100,000 open/cycle and one more SSA, combined the qualification)
IMPORTANT	This certificate must be referred to the OMECO Tag Report SP50552005 and the ADLER Procedure: Q23 01.
LOCATION: MILANO 28022005	TÜV INSPECTOR





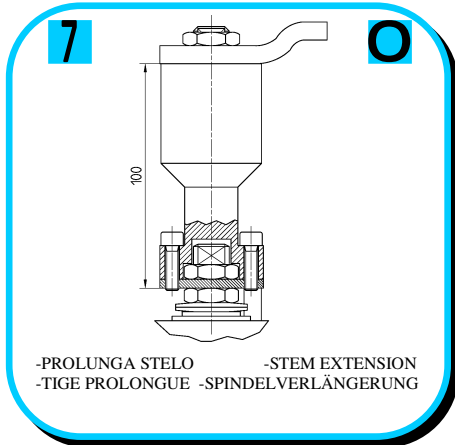
ISO 9001:2008 by L.R.  
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 FIRE SAFE EXECUTION by L.R.  
 ISO 15848 by TÜV  
 ANTISTATIC DEVICE by L.R.  
 FIRE SAFE TESTED ISO 10497 by L.R.

TYPE  
**FB1**  
 PN 10 ÷ 40  
 ANSI 150

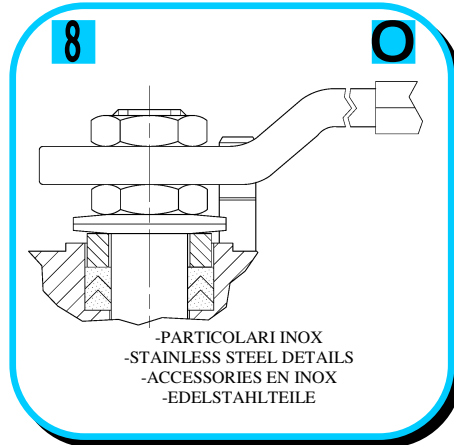
VALVOLA A SFERA "CORPO PIATTO" PASSAGGIO TOTALE  
 BALL VALVES "WAFER TYPE" FULL BORE

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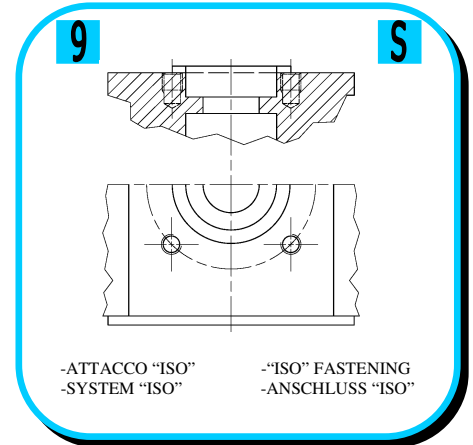
• ESECUZIONI • EXECUTIONS • EXECUTIONS • AUSFÜHRUNGEN



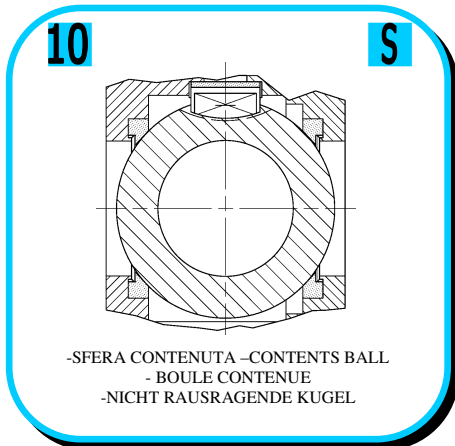
-PROLUNGA STELO -STEM EXTENSION  
 -TIGE PROLONGUE -SPINDELVERLÄNGERUNG



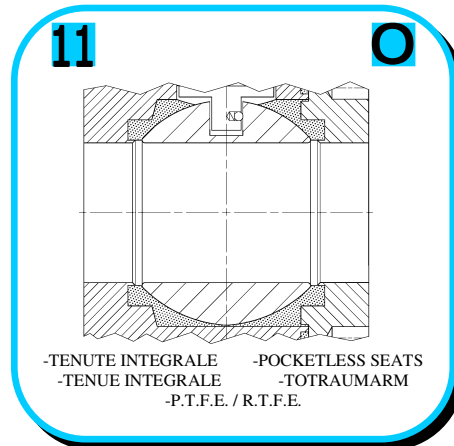
-PARTICOLARI INOX  
 -STAINLESS STEEL DETAILS  
 -ACCESSOIRES EN INOX  
 -EDELSTAHLTEILE



-ATTACCO "ISO" -"ISO" FASTENING  
 -SYSTEM "ISO" -ANSCHLUSS "ISO"



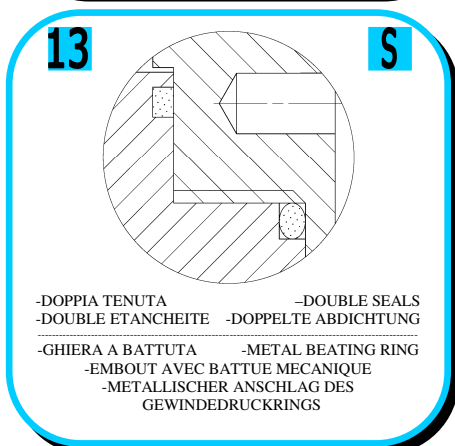
-SFERA CONTENUTA -CONTENTS BALL  
 -BOULE CONTENUE  
 -NICHT RAUSRAGENDE KUGEL



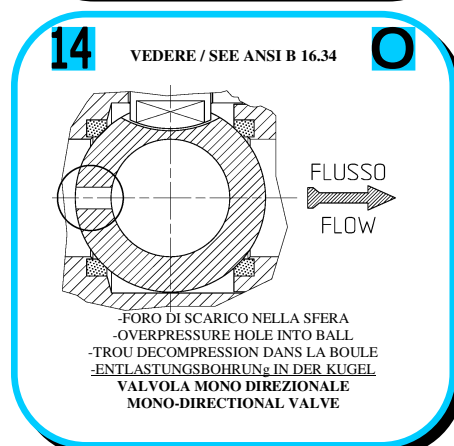
-TENUTE INTEGRALE -POCKETLESS SEATS  
 -TENUUE INTEGRALE -TOTRAUMARM  
 -P.T.F.E. / R.T.F.E.



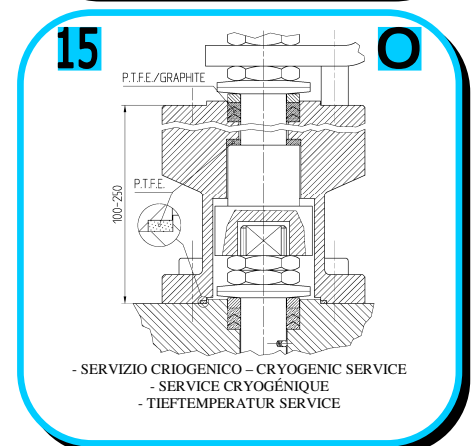
FIRE SAFE  
 ISO 10497 "ISO-FT"  
 (BS 6755 / API 607)



-DOPPIA TENUTA -DOUBLE SEALS  
 -DOUBLE ETANCHEITE -DOPPELTE ABDICHTUNG  
 -GHIERA A BATTUTA -METAL BEATING RING  
 -EMBOUT AVEC BATTUE MECANIQUE  
 -METALLISCHER ANSCHLAG DES  
 GEWINDEDRUCKRINGS



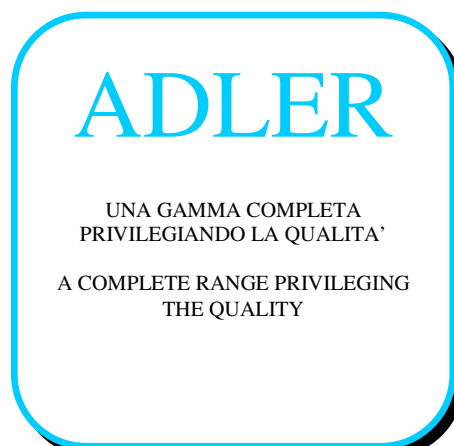
-FORO DI SCARICO NELLA SFERA  
 -OVERPRESSURE HOLE INTO BALL  
 -TROUGH DECOMPRESSION DANS LA BOULE  
 -ENTLASTUNGSBOHRUNG IN DER KUGEL  
 VALVOLA MONO DIREZIONALE  
 MONO-DIRECTIONAL VALVE



-SERVIZIO CRIOGENICO -CRYOGENIC SERVICE  
 -SERVICE CRYOGENIQUE  
 -TIEFTEMPERATUR SERVICE

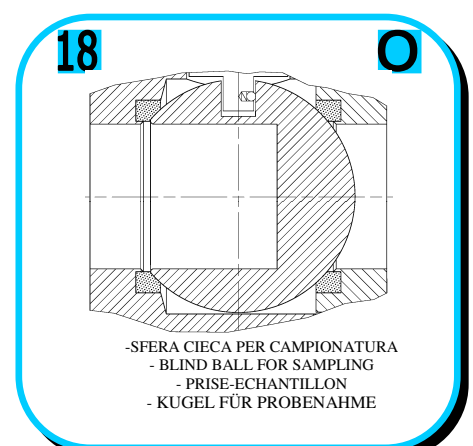


-FIRE SAFE ISO FT + "O" RING STELO  
 -FIRE SAFE ISO FT + "O" RING ON STEM  
 -SECURITE FEU ISO FT + TIGE AVEC "O" RING  
 -FEUERSICHERE AUSFÜHRUNG ISO FT +  
 "O" RING IM SPINDELBEREICH



UNA GAMMA COMPLETA  
 PRIVILEGIANDO LA QUALITA'

A COMPLETE RANGE PRIVILEGING  
 THE QUALITY



-SFERA CIECA PER CAMPIONATURA  
 -BLIND BALL FOR SAMPLING  
 -PRISE-ECHANTILLON  
 -KUGEL FÜR PROBENAHME



**VITI D'ASSEMBLAGGIO PER FB1**  
**ASSEMBLING SCREWS FOR FB1**  
**VIS D'ASSEMBLAGE POUR FB1**  
**MONTAGESCHRAUBEN FÜR FB1**

**TABLE**  
**07**

N° VITI – DIMENSIONE • N° SCREW – DIMENSIONS • N° VIS- DIMENSIONS • N° SCHRAUBEN – ABMESSUNGEN

**EUROPEAN NORM**

DN PN	10-15	20	25	32	40	50	65	80	100	125	150	200
10				8 M16 X35	8 M16 X35	8 M16 X40	8 M16 X40	* M16 X40	16 M16 X40	16 M16 X45		
16				8 M16 X35	8 M16 X35	8 M16 X40	8 M16 X40	16 M16 X40	16 M16 X40	16 M16 X45		
25				8 M16 X40	8 M16 X40	8 M16 X40	16 M16 X45	16 M16 X45	16 M20 X50	16 M24 X55		
40				8 M16 X40	8 M16 X40	8 M16 X40	16 M16 X45	16 M16 X45	16 M20 X50	16 M24 X55		

**ANSI METRIC**

(STANDARD ADLER)

Ø Rating	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"	5"	6"	8"
150				8 M14 X35	8 M14 X35	8 M16 X40	8 M16 X40	8 M16 X45	16 M16 X45	16 M20 X50		

**ANSI B1.1 UNC**

(ON REQUEST)

Ø Rating	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"	5"	6"	8"
150				8 1/2 X 1 1/4	8 1/2 X 1 1/2	8 5/8 X 1 1/2	8 5/8 X 1 3/4	8 5/8 X 1 3/4	16 5/8 X 1 3/4	16 3/4 X 2		

**ADLER WORKSHOP**



PRZEDSTAWICIEL W POLSCE:

**ARA**

**PNEUMATIK**

53-012 Wrocław tel. 71 364 72 85  
 ul. Wyścigowa 38 fax 71 364 72 83

[www.arapneumatik.pl](http://www.arapneumatik.pl)



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 20010 S. STEFANO TICINO (MI) ITALY V.le BORLETTI, 14 Tel. +39/02974842.11 FAX +39/0297271698  
 E-mail: [adler@adlerspa.com](mailto:adler@adlerspa.com) <http://www.adlerspa.com>