OMAL S.p.A. Società Benefit
Headquarters: Via Ponte Nuovo 11, Rodengo Saiano (Brescia) Italy
Production site: Via Brognolo 12, Passirano (Brescia) Italy
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MAGNUM Split Wafer 3 ways 4 seals PN 16-40 ANSI 150 stainless steel ball valve

Macro Ball valves

Category MAGNUM

Subcategory MAGNUM Split Wafer 3 ways 4 seals

Family MAGNUM Split Wafer 3 ways 4 seals PN 16-40 ANSI 150

benefits

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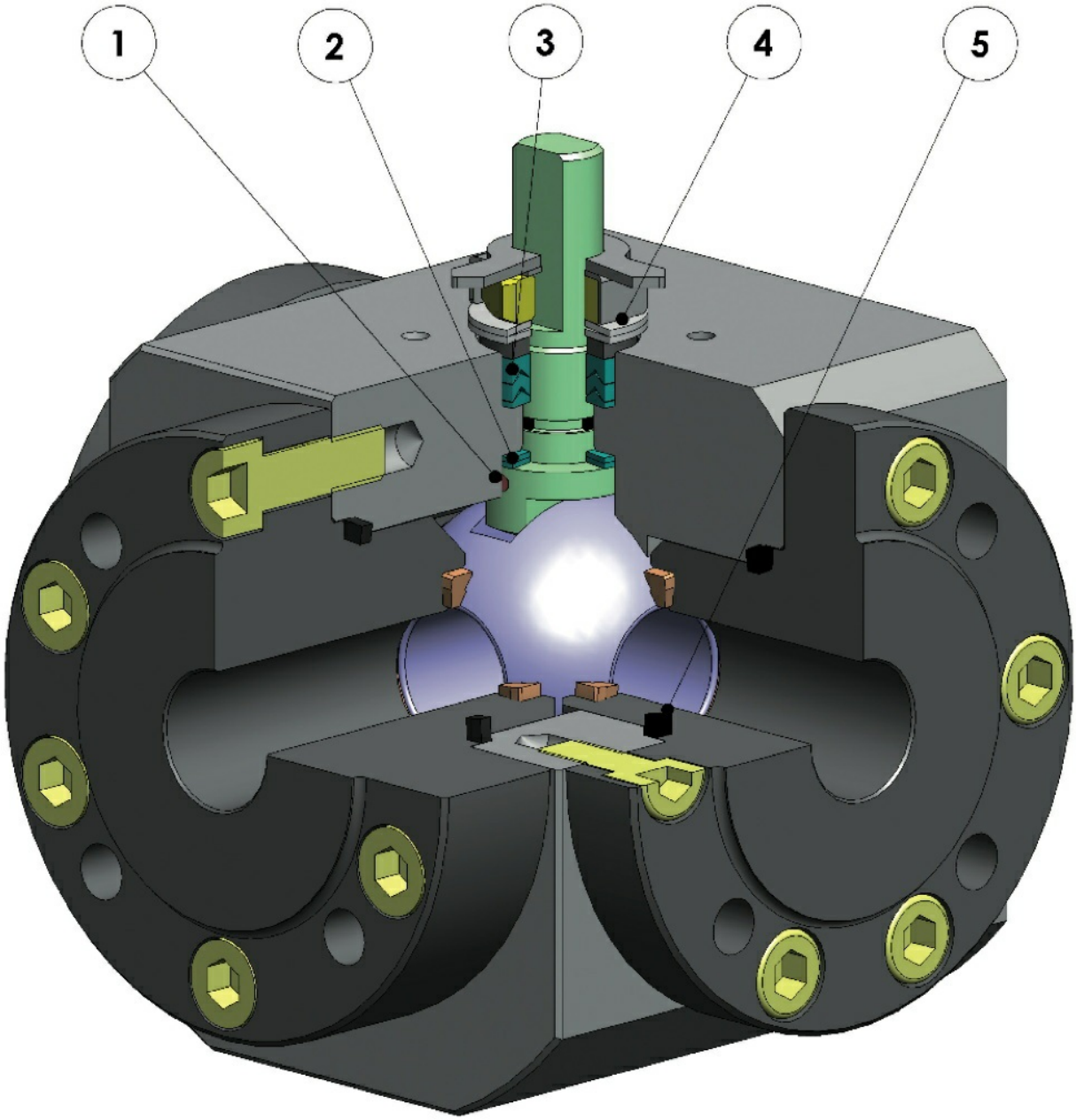

1. Antistatic device ((electrical continuity between ball, stem and body)
Static electricity is avoided which can cause sparks and fire in an inflammable/explosive environment
Contact safety throughout the entire life of the valve

2. Double antifriction washer
Less Breakaway Torque is granted
Less wear comparing with the execution with the single washer

3."V" seals pack; 3 seals + o-ring
It ensures a perfect tightness even after a high number of cycles

4. Spring washer on the shaft seal
Guarantee of the recovery of the gap due to the wear caused by the rotational movement of the shaft avoiding leakage towards the outside part.
Allow to maintain energized the "chevron" seals (V), thus avoiding any leakage to the outside, against huge temperature excursions

5. Stretch Graphite seal
Tightness towards outside is granted, independently by the thermal excursions to which the valve is subjected

Greater precision in the alignment of axes due to a unique positioning in the process machining from raw material to finished valve
Longer lifetime of the valve
Less breakaway torque

Valve body in carbon steel made with NACE certified material as standard
Greater corrosion resistance
Greater ductility of the material

100% in- house manufacturing process technology
Maximum control and accuracy in all the stages of the manufacturing process
Flexibility in supply quickly special executions requested by customers

ATEX Certificate
Installation is possible in a potential explosive environment

TA LUFT fugitive emission Certificate
High level of safety of the tightness towards the outside is granted

PED Certificate
Full compliance with European Safety Standards for Pressure Equipment

features

STANDARD FEATURES

- Floating ball, full bore
- Soft-seat seal Modified PTFE
- Standard for connecting flanges: EN1092-1, ASME B16.5
- Pressure Class : ansi 150; PN16-40
- Tightness Class: EN12266-1 rate A
- Working temperature: -40°C +150°C
- Intercepted fluid: air, water, gas, petroleum and petrochemical products, aggressive fluids.
- Antistatic device EN12266-2
- Stem seal: Modified PTFE V-pack
- Additional seal on stem with FKM O-ring
- Anti Blow-out stem
- Actuator connection as per standard ISO 5211

EXECUTION ON REQUEST

- For other flanges type please contact our sales department.
- Sealing in: PTFE reinforced with glass (PTFE-GF), PTFE reinforced with carbongraphite (PTFE-CF). For other types of materials please contact our sales department.
- Stainless steel lever
- Stainless steel stem nuts and springs
- For versions with materials (body/ball/stem) different from the standard please contact our sales department
- ATEX marking and certificate ON REQUEST

CERTIFICATIONS

- In compliance with European Directive 2014/68/EU PED; Fugitive Emission ISO 15848 (ISO FE BH-C03-SSA 0); Ta-Luft VDI: 2440
- Safety integrity level up to SIL3 according to the IEC 61508
- In compliance with ATEX 2014/34/EU Directive , ATEX certificate ON REQUEST.

ENGINEERING STANDARD

- Body thickness in compliance with: ASME B16.34, ASME VIII div.1, EN12516
- Materials and rating in compliance with ASME B16.34 for ANSI valves and EN12516 for PN valves.

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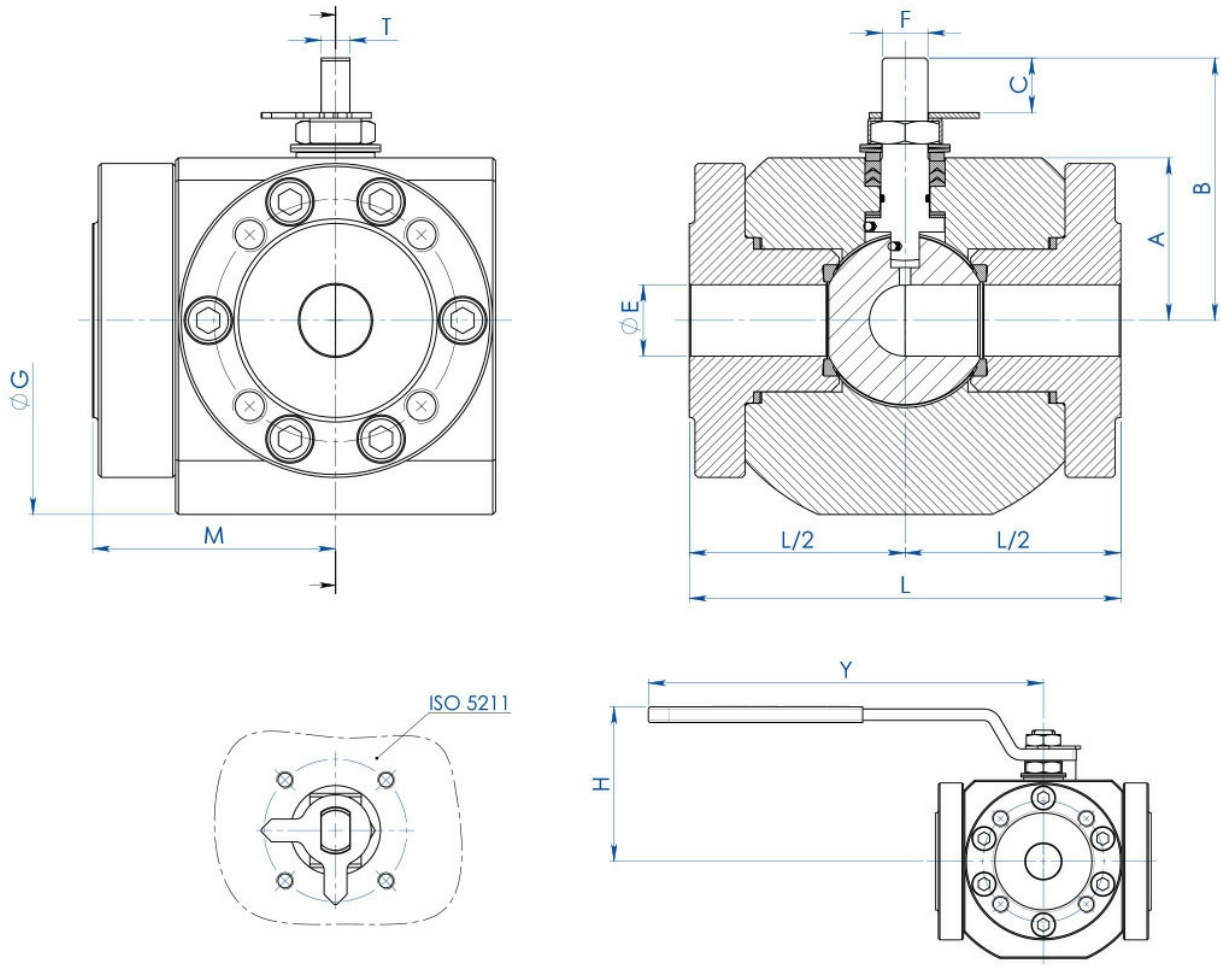
dimensions



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DIMENSIONS -PN-

SIZE		PN	øE	L	M	A	B	C	ATT. ISO	F/T	ØG	øJ	ØR	S	P	ØK	HOLES N°	ØI	H	Y	Kg.	LEVER KIT	SEALS KIT
DN [mm]	[inch]																						
15	1/2"	16-40	13	124	62	40	55	9,2	F03	10/6	112	90	45	2	15	65	4	M12	73	140	6,8	KLV58004	KGBV557040
20	3/4"	16-40	19	136	79	48	71	13	F04	12/8	130	100	58	2	14	75	4	M12	90,4	150	10,5	KLV58006	KGBV557050
25	1"	16-40	25	151	85	57	92	19,1	F05	16/10	149	110	68	2	16	85	4	M12	108,4	275	15,2	KLV58008	KGBV557060
32	1" 1/4	16-40	32	167	96	60	95	19,1	F05	16/10	164	130	78	2	20	100	4	M16	111,4	275	20,8	KLV58008	KGBV557070
40	1" 1/2	16-40	38	185	100	72	119,5	26,4	F07	22/14	185	140	88	3	20	110	4	M16	132,5	350	26,1	KLV58010	KGBV557080
50	2"	16-40	51	200	110	81	128,5	26,7	F07	22/14	195	150	102	3	20	125	4	M16	141,5	350	32,4	KLV58010	KGBV557090
65	2" 1/2	16	64	218	121	93	154	33,2	F10	30/18	220	178	122	3	20	145	4	M16	180,3	450	47,6	KLV58012	KGBV557100
80	3"	16	76	244	126	101	162	33,2	F10	30/18	239	190	135	3	20	160	8	M16	188,3	450	57,9	KLV58012	KGBV557110
100	4"	16	102	325	150	124	182	33,2	F10	30/18	296	235	158	3	20	180	8	M16	208,3	450	109	KLV58012	KGBV557120

DIMENSIONS -ANSI-

SIZE		ANSI	ØE	L	M	A	B	C	ATT. ISO	F/T	ØG	ØJ	ØR	S	P	ØK	HOLES N°	ØI	H	Y	Kg.	LEVER KIT	SEALS KIT
DN [mm]	[inch]																						
15	1/2"	150	13	124	62	40	55	9,2	F03	10/6	112	90	35,1	1,6	16	60,5	4	1/2"UNC	73	140	6,8	KLV58004	KGBV557040
20	3/4"	150	19	136	79	48	71	13	F04	12/8	130	100	42,9	1,6	16	69,8	4	1/2"UNC	90,4	150	10,4	KLV58006	KGBV557050
25	1"	150	25	151	85	57	92	19,1	F05	16/10	149	110	50,8	1,6	16	79,2	4	1/2"UNC	108,4	275	15,2	KLV58008	KGBV557060
32	1" 1/4	150	32	167	96	60	95	19,1	F05	16/10	164	130	63,5	1,6	16	88,9	4	1/2"UNC	111,4	275	21,3	KLV58008	KGBV557070
40	1" 1/2	150	38	185	100	72	119,5	26,4	F07	22/14	185	140	73	1,6	16	98,6	4	1/2"UNC	132,5	350	26,4	KLV58010	KGBV557080
50	2"	150	51	200	110	81	128,5	26,7	F07	22/14	195	150	91,9	1,6	20	120,6	4	5/8"UNC	141,5	350	32,6	KLV58010	KGBV557090
65	2" 1/2	150	64	218	121	93	154	33,2	F10	30/18	220	178	104,6	1,6	20	139,7	4	5/8"UNC	180,3	450	46,6	KLV58012	KGBV557100
80	3"	150	76	244	126	101	162	33,2	F10	30/18	239	190	127	1,6	20	152,4	4	5/8"UNC	188,3	450	58,5	KLV58012	KGBV557110
100	4"	150	102	325	150	124	182	33,2	F10	30/18	296	235	157,2	1,6	20	190,5	8	5/8"UNC	208,3	450	109	KLV58012	KGBV557120

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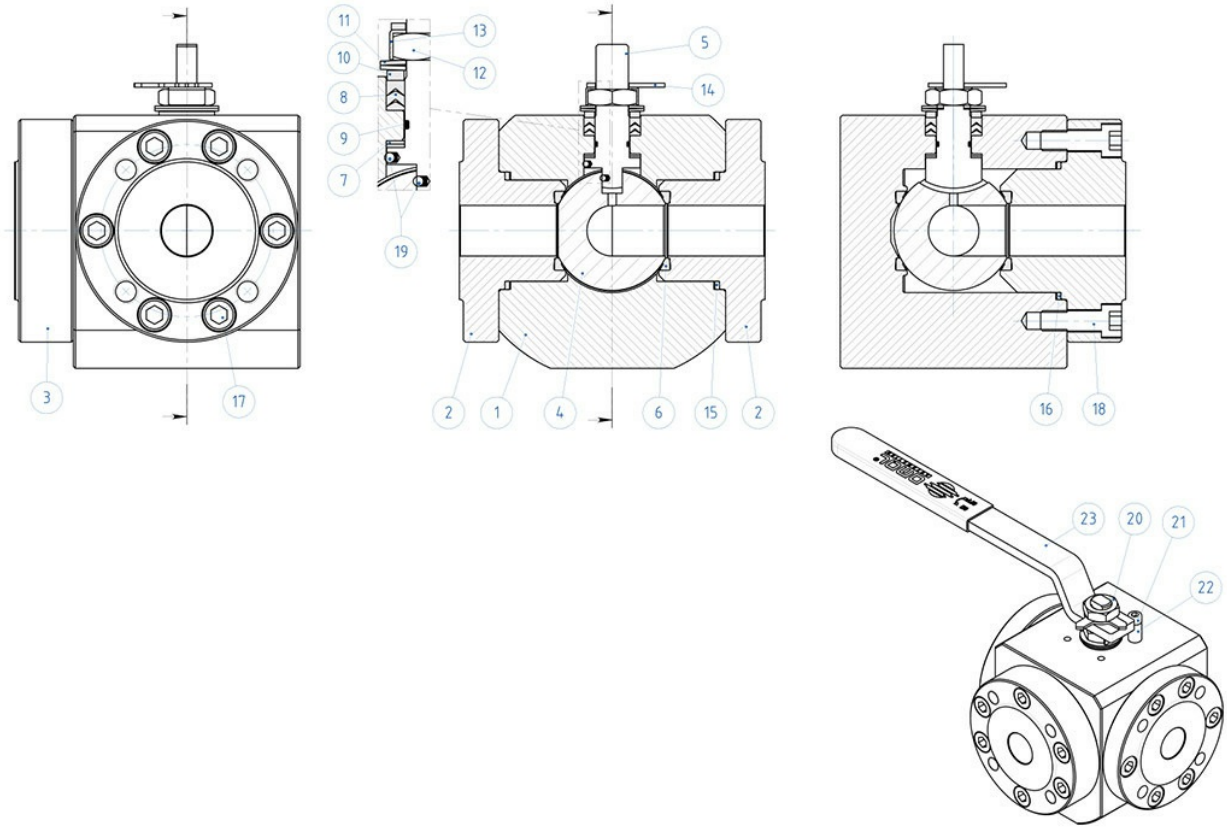
materials

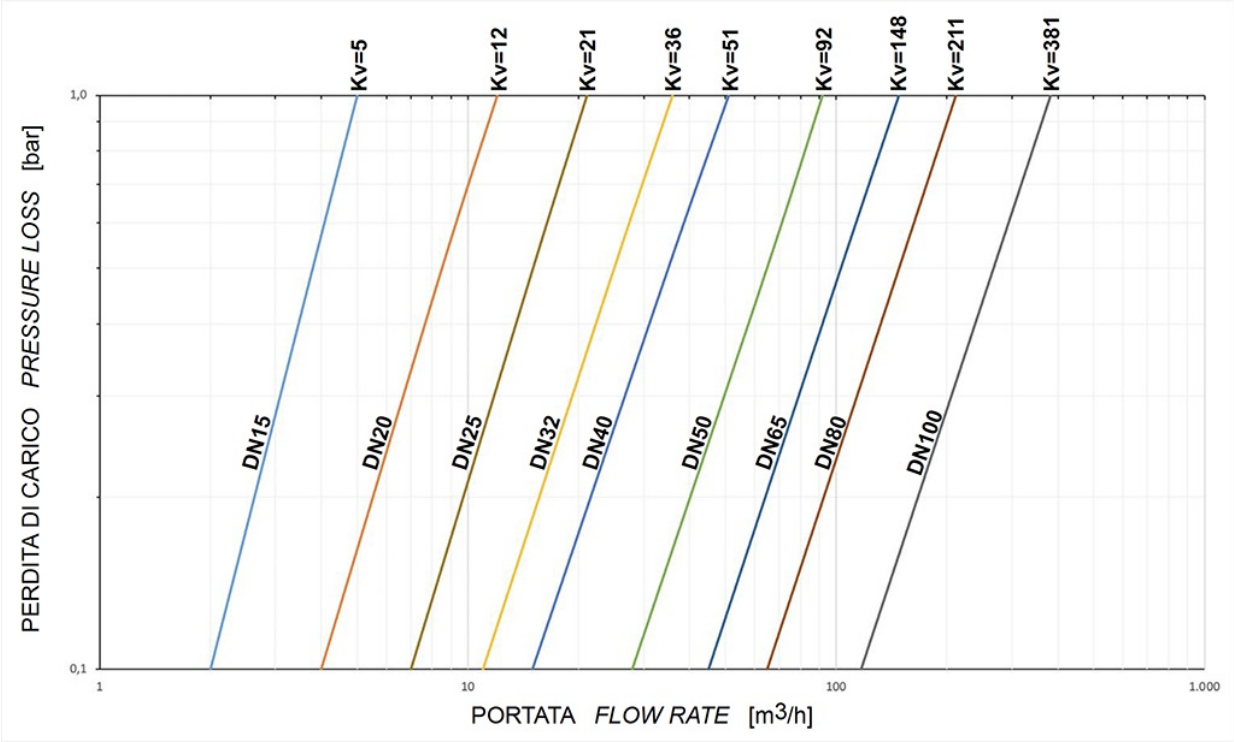


MATERIALS - SPLIT WAFER PN16-40 ANSI 150		
N°	**Description**	**316 Stainless steel**
1	Body	ASTM A182 F316 / A479TP.316
2	Ring nut	
3	Side entry ring nut	
4	Ball	ASTM A351 CF8M
5	Stem	A564 TP.630 (17-4PH)
6*	Seat	Modified PTFE
7*	Stem lower sealing	Modified PTFE
8*	Chavron ring	Modified PTFE
9*	Stem o-ring	FKM
10	Packing gland ring	304 S.S.
11	Stem springs	Carbon steel galvanized (xx)
12	Stem nut	Carbon steel galvanized (x)
13	Stop nut plate	304 S.S.
14	Indicator	304 S.S.
15*	Body ring nut gasket	Grafoil
16*	Body side entry ring nut gasket	Grafoil
17	Body ring nut screw	A2-70 (304 S.S.)
18	Body-side entring ring nut screw	
19	Antistatic device	316 S.S.
20	Lock nut	Carbon steel galvanized (x)
21	Holder screw	A2-70 (304 S.S.)
22	Holder screw	Carbon steel galvanized (x)
23	Lever	Fe37 galvanized (x)
* Components of seals kit		

AVAILABLE ON REQUEST:
(x) : 304 s.s.
(xx) : 301 s.s.

diagrams and breakaway torque

Flow/pressure loss diagram and Kv nominal coefficient



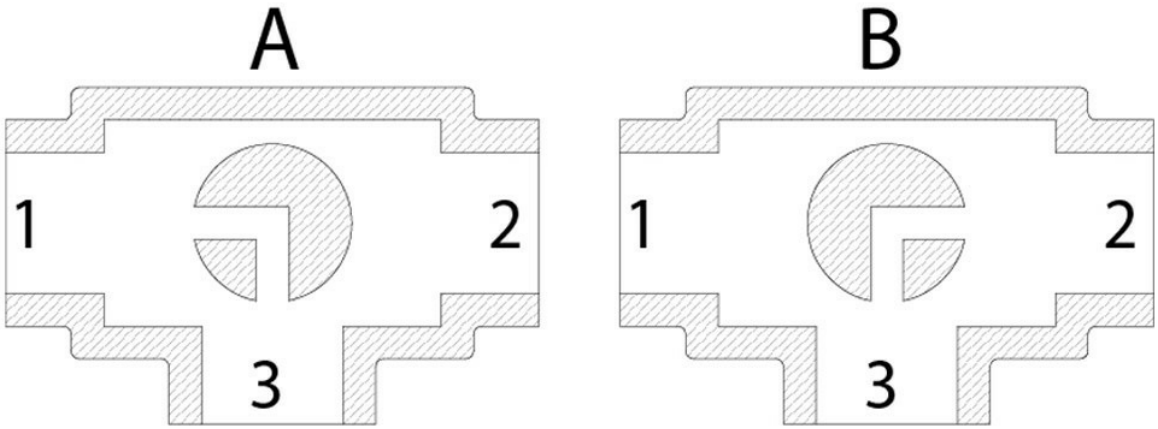
Kv is the coefficient, expressed in m3/h (with water at 15°C) causing a pressure loss of 1 bar.

specifications

Plan for "L" port

N.B.: "**A**" must be the rest position of the ball with **SR FAIL CLOSE** actuator.
"**B**" must be the rest position of the ball with **SR FAIL OPEN** actuator.

View from above



Plan for "T" port

With actuator 2 positions with 90° rotation are possible only: the configuration of the ball must always be communicated at our sales department.
N.B.: Choose the rest position of the ball with **SR FAIL CLOSE** actuator; whenever supplied with air, actuator turns in an anticlockwise direction.
Choose the rest position of the ball with **SR FAIL OPEN** actuator; whenever supplied with air, actuator turns in a clockwise direction.

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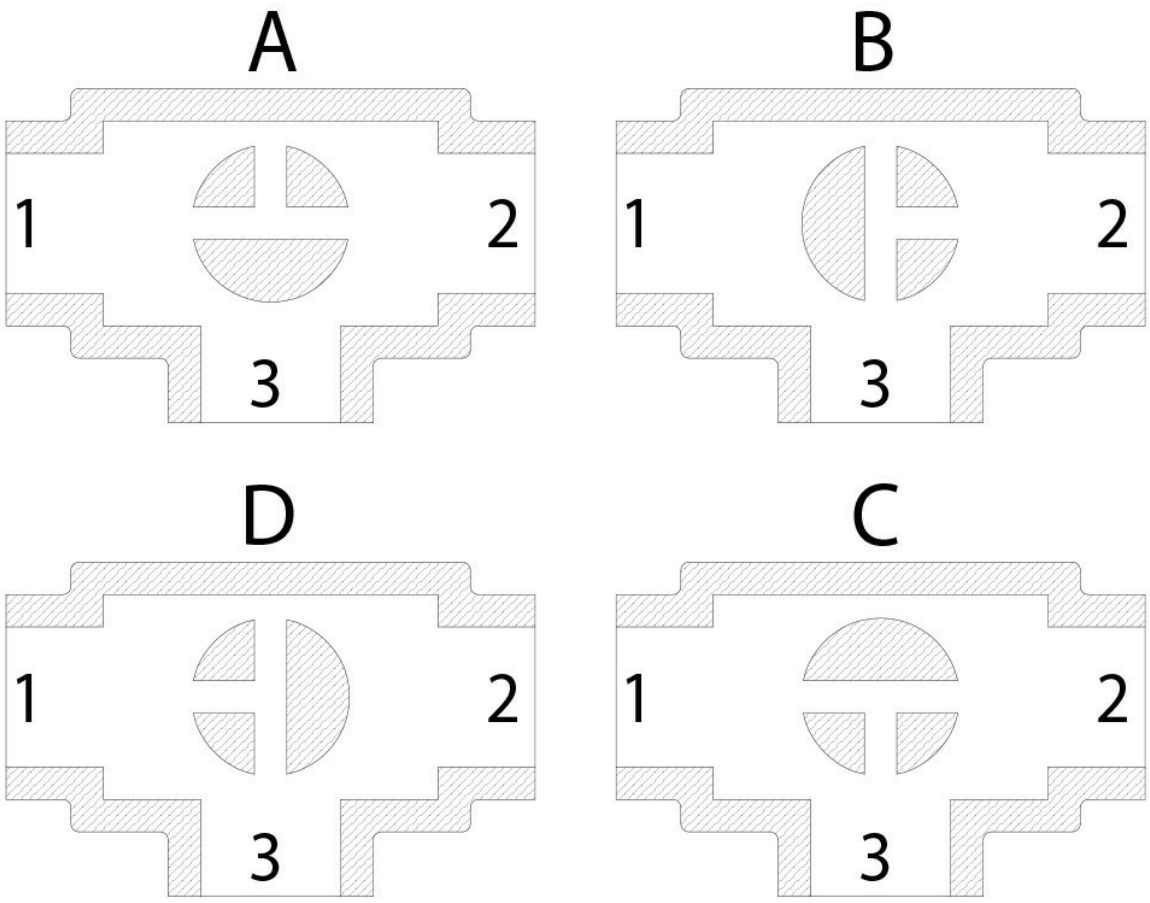
View from above



The sizing of pneumatic actuators has been done considering a minimum supply pressure of 5,6 barg.
In case of not lubricated fluids and/or fluids containing solid particles, torques could be higher than the ones indicated.

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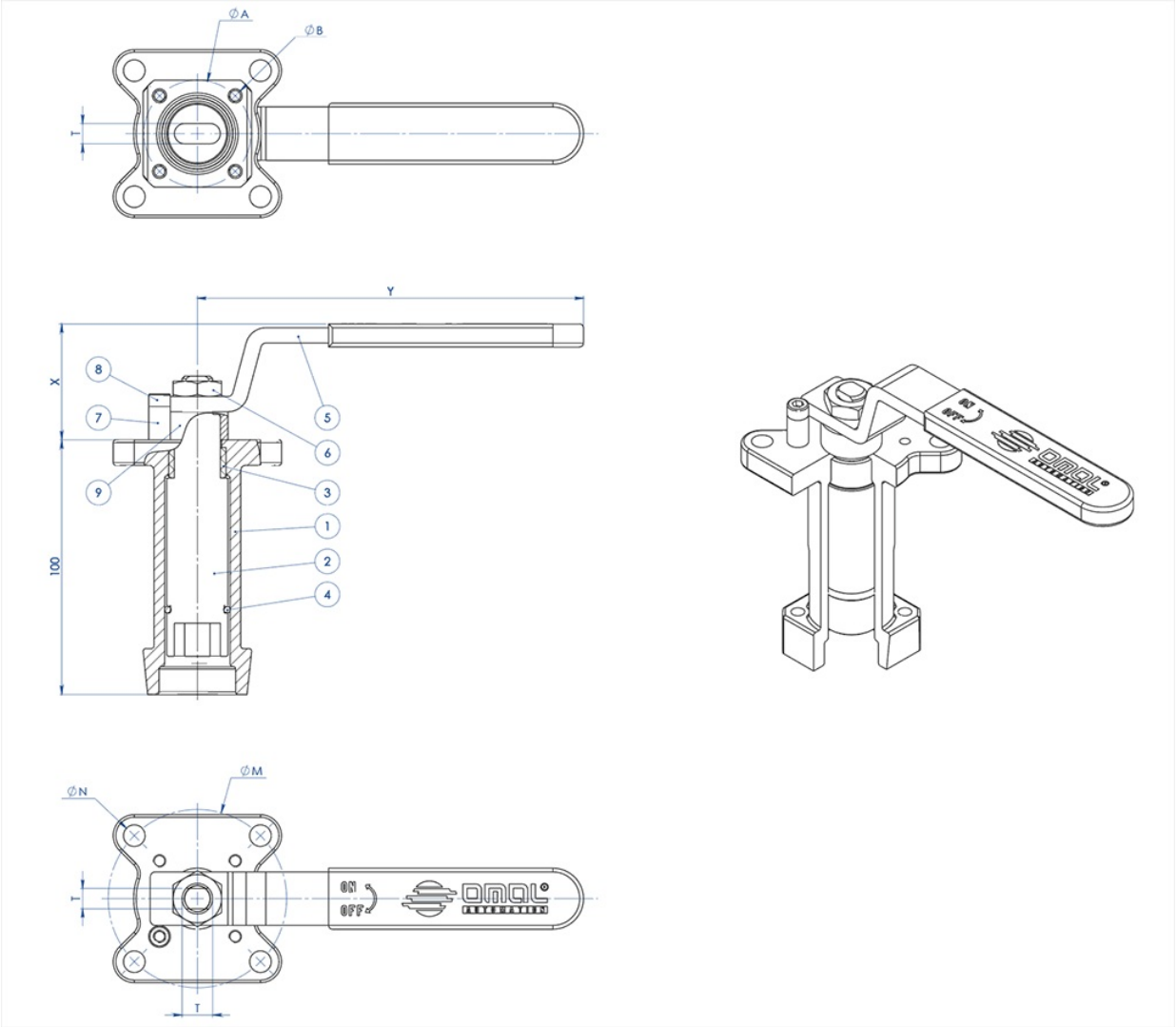
CASTING STEM EXTENSION WITH LEVER



MATERIALS		
PART. N°	**DESCRIPTION**	**MATERIAL**
1	Extension	AISI304 S.S.
2	Pin	AISI 430 F
3	Bush	DELRIN
4	O-RING	NBR
5	Lever	Fe 37 galvanized (*)
6	Nut	galvanized carbon steel (*)
7	Holder Lever	galvanized carbon steel (*)
8	Holder screw	A2-70
9	Spacer	PTFE Carbon Filled

(*): On request available in Aisi 304 s.s.

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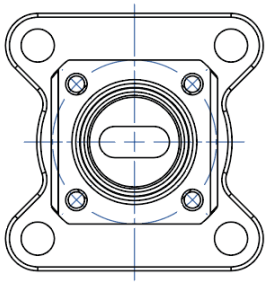
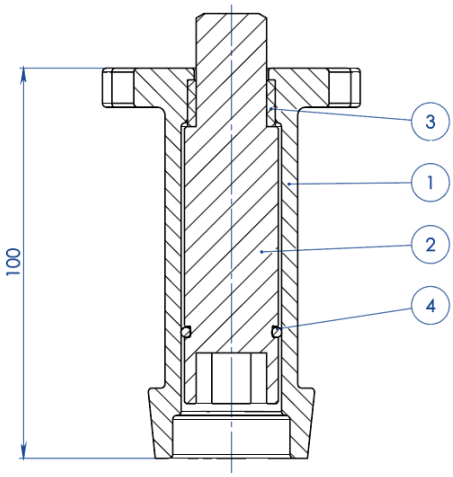
DIMENSIONS							
ISO VALVE	**ØA**	**ØB**	**ØM**	**ØN**	**F/T**	**X**	**Y**
F03	36	5,5	36	5,5	10/6	38,5	141,5
F04	42	5,5	42	M5	12/8	45,5	151,5
F05	50	6,5	50	6,5	16/10	48,5	276,5
F07	70	8,5	70	8,5	22/14	57,5	351,5
F10	102	11	102	11	30/18	79,5	451,5

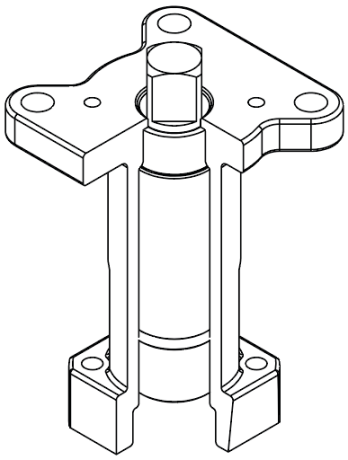
NOTE: Code of the spindle extension depending from drive's type and valve's connection; to be requested at the order.

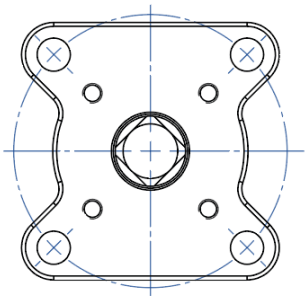
CASTING STEM EXTENSION FOR ACTUATORS



NOTA: Le dimensioni dipendono dalle dimensioni dell'attacco valvola
NOTE: Dimensions depending from valve's connection







NOTA: Le dimensioni dipendono dalla taglia dell'attuatore
NOTE: Dimensions depending from actuator's size

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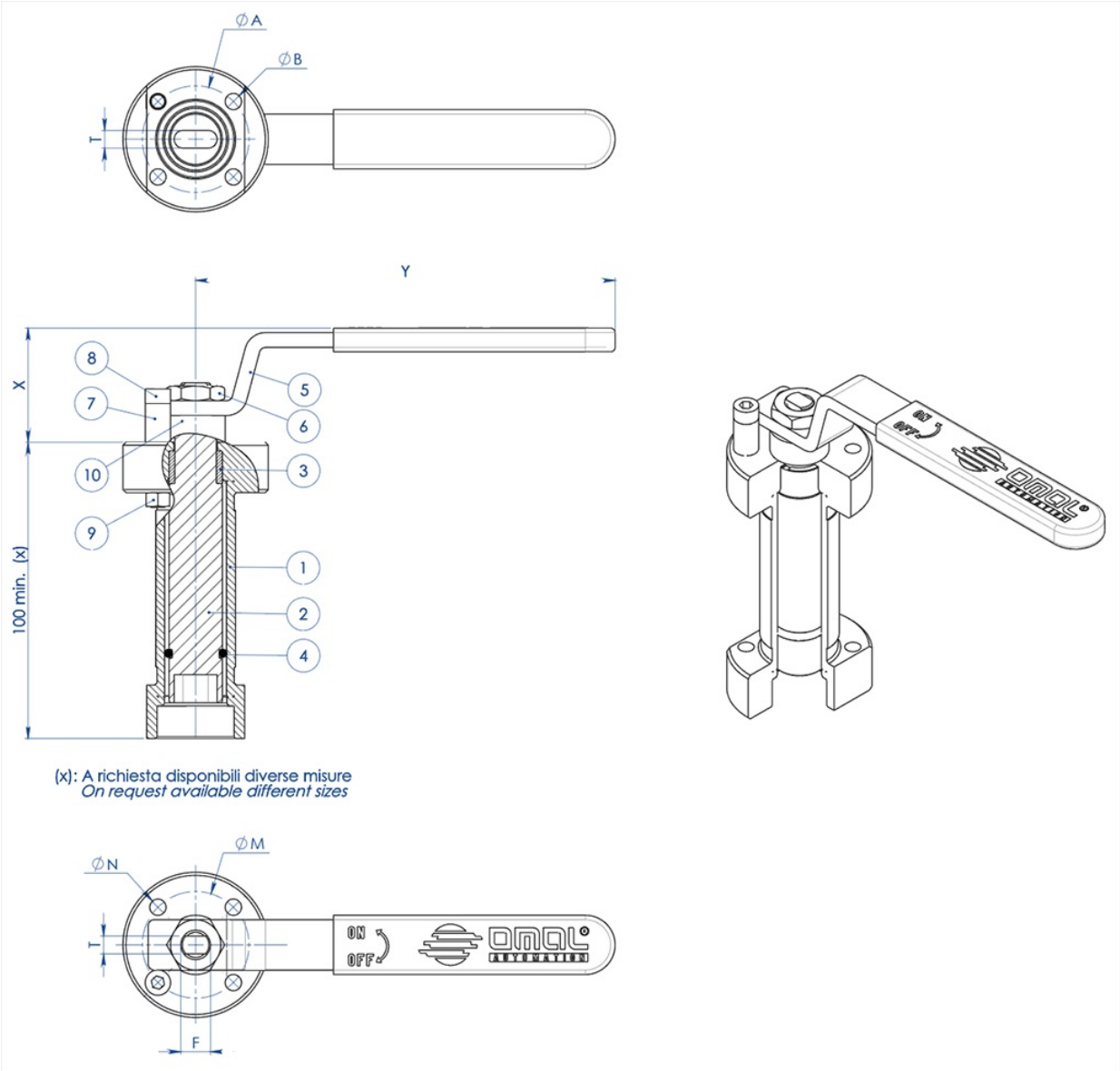
MATERIALS		
PART. N°	**DESCRIPTION**	**MATERIAL**
1	Extension	ASTM A351 CF8M
2	Pin	AISI 430 F
3	Bush	DELRIN
4	O-RING	NBR

NOTE: Code of the spindle extension depending from drive's type and valve's connection; to be requested at the order

WELDED STEM EXTENSION WITH LEVER



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MATERIALS		
PART. N°	**DESCRIPTION**	**MATERIAL**
1	Extension	304 s.s.
2	Pin	AISI 430 F
3	Bush	DELRIN
4	O-Ring	NBR
5	Lever	Fe 37 galvanized (*)
6	Nut	galvanized carbon steel (*)
7	Holder Lever	galvanized carbon steel (*)
8	Holder screw	A2-70
9	Holder nut	A2-70 (**)
10	Spacer	PTFE Carbon Filled

(*): On request available in Aisi 304 s.s.
(**): No available on valves with Iso connection F04

DIMENSIONS							
ISO VALVE	**ØA**	**ØB**	**ØM**	**ØN**	**F/T**	**X**	**Y**
F03	36	5,5	36	5,5	10/6	38,5	141,5
F04	42	5,5	42	M5	12/8	45,5	151,5
F05	50	6,5	50	6,5	16/10	48,5	276,5
F07	70	9	70	9	22/14	57,5	351,5
F10	102	11	102	11	30/18	79,5	451,5

NOTE: Code of the stem extension depending from drive's type and valve's connection; to be requested at the order.

WELDED STEM EXTENSION FOR ACTUATORS

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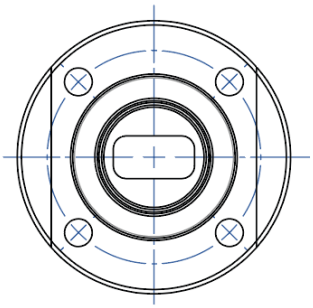
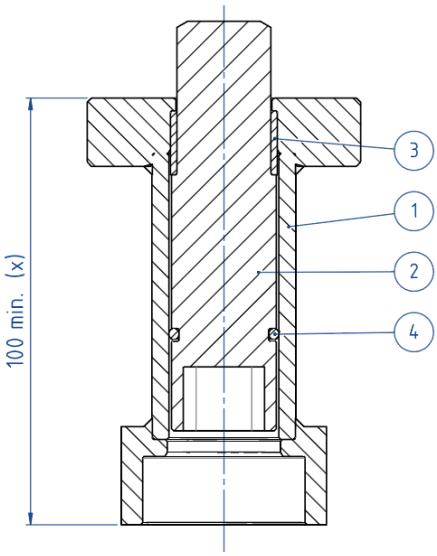
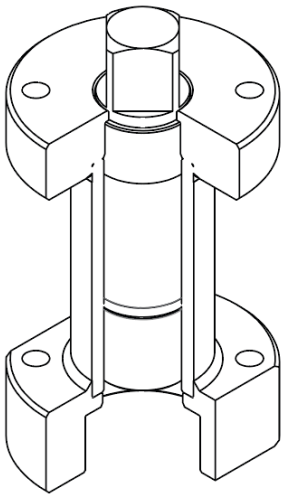
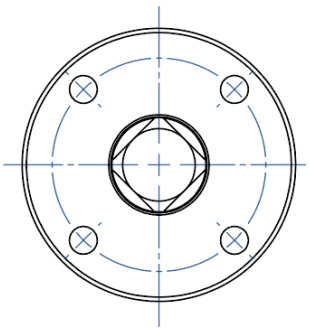


NOTA: Le dimensioni dipendono dalle dimensioni dell'attacco valvola
NOTE: Dimensions depending from valve's connection





(x): A richiesta disponibili diverse misure
On request available different sizes



NOTA: Le dimensioni dipendono dalla taglia dell'attuatore
NOTE: Dimensions depending from actuator's size

MATERIALS		
PART. N°	**DESCRIPTION**	**MATERIAL**
1	Extension	304 S.S.
2	Pin	AISI 430 F
3	Bush	DELRIN
4	O-RING	NBR

NOTE: Code of the stem extension depending from drive's type and valve's connection; to be requested at the order.

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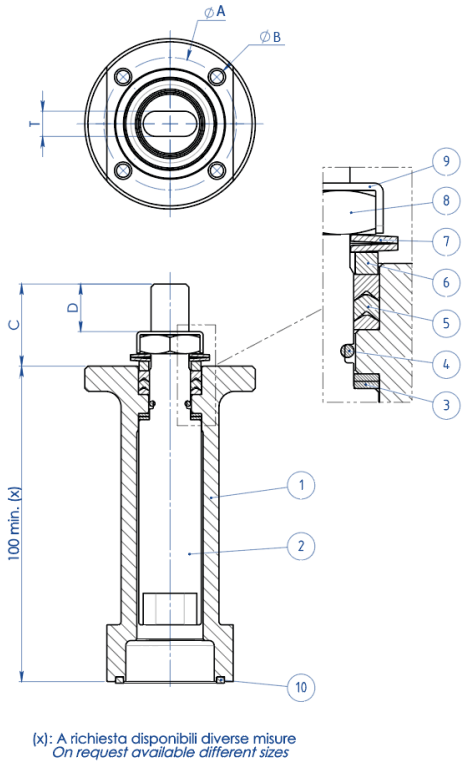
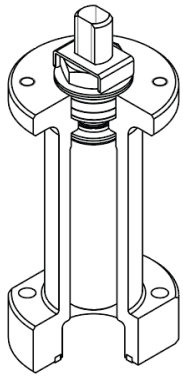
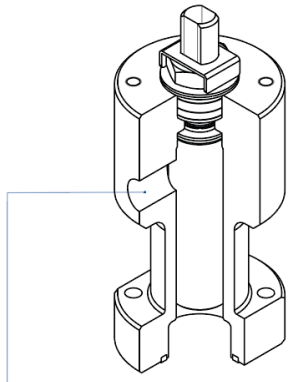
STEM EXTENSION WITH ADDITIONAL SEAL

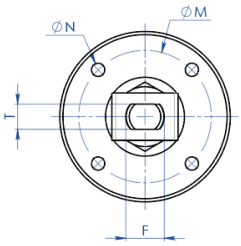


(x): A richiesta disponibili diverse misure
On request available different sizes





A richiesta disponibile anche la versione con presa per Sniffer
Stem extension with sniffer also available on request



MATERIALS		
PART. N°	**DESCRIPTION**	**MATERIAL**
1	Extension	304 s.s.
2	Pin	A564 TP.630 (17-4ph)
3	Bottom Sealing	TFM1600
4	O-Ring	FKM
5	Chevron Ring	TFM1600
6	Packing Gland Ring	304 s.s.
7	Spring Washer	50CrV4 Galvanized
8	Stem Nut	UNI 3740-1 6S Galvanized
9	Stop Nut Plate	304 s.s.
10	Gasket	GRAFOIL

DIMENSIONS							
ISO VALVE	**ØA**	**ØB**	**ØM**	**ØN**	**F/T**	**C**	**D**
F03	36	5,5	36	M5	10/6	20	10,2
F04	42	5,5	42	M5	12/8	26	15,1
F05	50	6,5	50	M6	16/10	35	21,2
F07	70	8,5	70	M8	22/14	47,5	28,4
F10	102	10,5	102	M10	30/18	61	35,2

NOTE: Code of the spindle extension depending from drive's type and valve's connection; to be requested at the order.

documents

Certificati

TA LUFT - MAGNUM & THOR
ATEX - Ball Valves
SIL IEC 61508 - MAGNUM & THOR
FUGITIVE EMISSION DN25 CL.300 T1-T2-T3-M1-M4-M5-M6
FUGITIVE EMISSION DN100 CL.300 T1-T2-T3-M1-M4-M5-M6
PED
UKCA

Manuali

MANUALE UMAH1000

Istruzioni

ISTRUZIONI USO 8_0844-33