

KRATOS high cycle carbon steel

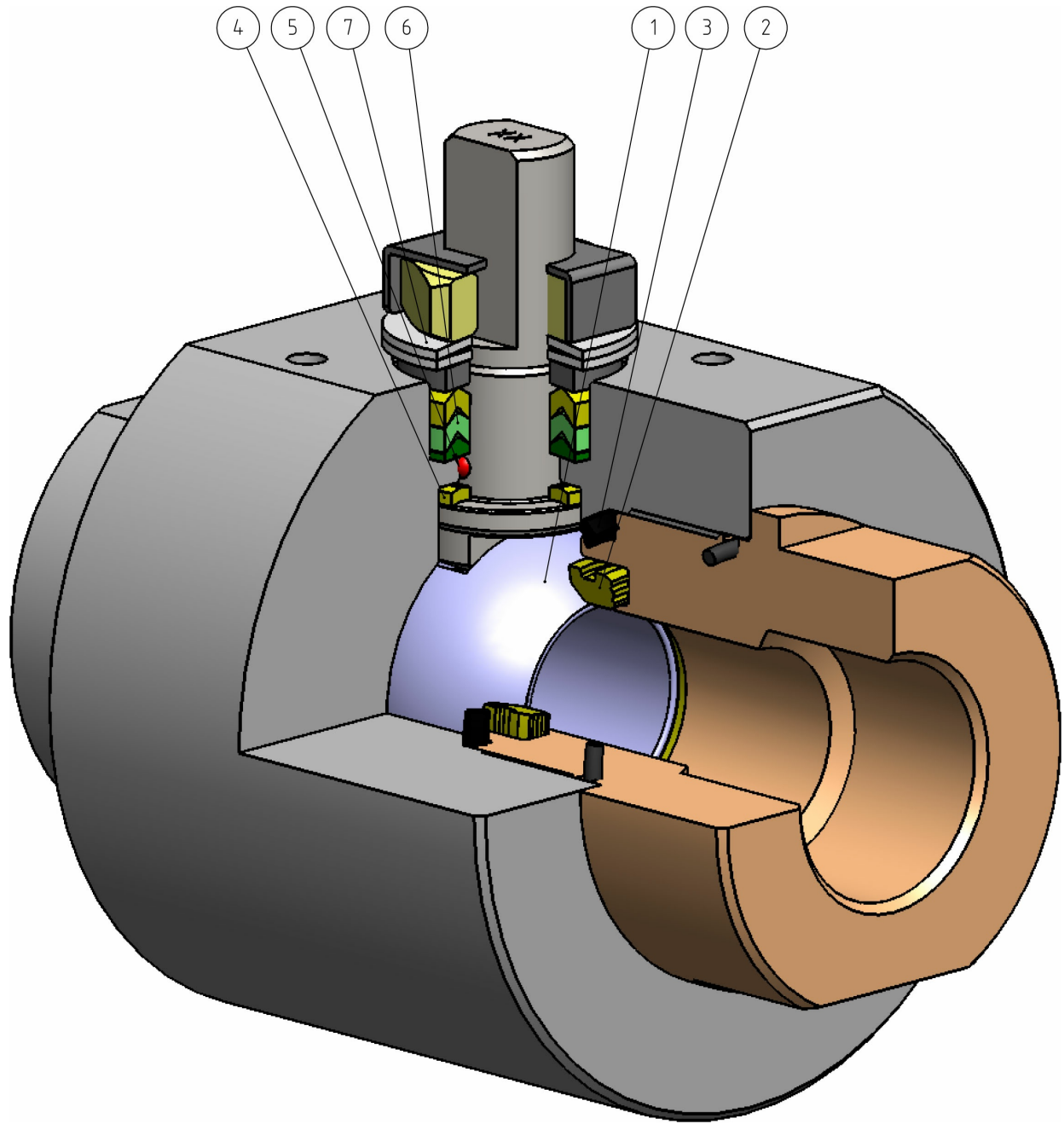


Macro Ball valves

Category KRATOS

Subcategory KRATOS high cycle

benefits



1. Stainless steel ball, coated with 40 µm Hard Chrome.

Longer seal life due to the low wear of the ball.

2. Seat.

Less wear comparing with not modify seat.
High resistance to stress.

3. DEVLON Body-End gasket.

Supplementary gasket for oring protection.

4. DEVLON Bottom sealing.

Less wear comparing with not modify seat.
High resistance to stress.

5. 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.

6. "V" seals pack with 3 seals.

It ensures a perfect tightness even after a high number of cycles.

7. 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.

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.

PED Certificate.

Full compliance with European Safety Standards for Pressure Equipment.

Fugitive Emission ISO 15848 (ISO FE AH-C03-SSA 0) certificate.

High level of safety of the tightness towards the outside is granted.

ATEX Certificate.

Installation is possible in a potential explosive environment.

UP to SIL 3 certified

Guarantee of the high level of functional safety

FIRE SAFE Certificate (on request)

Guarantees the tightness of the valve also in case of fire

features

STANDARD FEATURES:

- Threaded ends EN ISO 228-1or NPT.
- Floating ball, full bore.
- Soft-seat seal DEVLON.
- Stem seal with V-pack.
- Operating temperature: from -46°C to +100°C.
- Tightness Class: EN12266-1 rate A.
- Antistatic device EN12266-2.
- Anti Blow-out stem.
- Actuator connection as per standard ISO 5211.
- Superficial treatment: Galvanized.
- Fluid type: self-lubricating fluids (liquid and gaseous) compatible with the construction materials. For non self-lubricating fluids (e.g. water) or other applications, contact our sales department.

FEATURES ON REQUEST:

- Sealing: PTFE glass filled (PTFE-GF), PTFE carbon-graphite filled (PTFECF), Modified PTFE, PEEK. For other types of materials please contact our sales department.
- Mono-directional version with pressure-relief hole in the ball.
- Stainless steel lever . For versions in materials different from the standard (body, ball, stem), please contact our sales department.
- For other coating please contact our sales department.
- ATEX marking and certificate ON REQUEST.

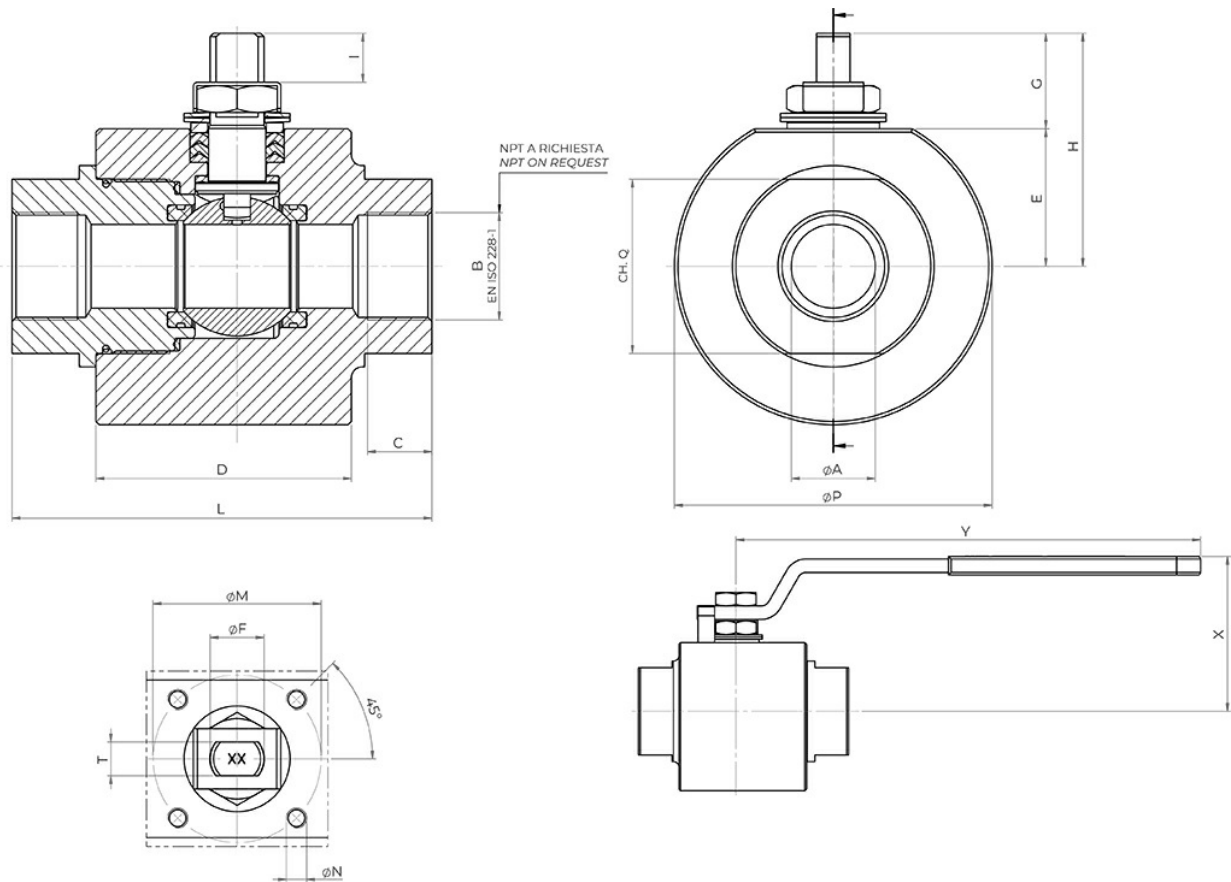
CERTIFICATIONS:

- In compliance with European Directive 2014/68/EU PED.
- Fugitive Emission ISO 15848 (ISO FE BH-C03-SSA 0) -50°C/+100°C.
- **Safety integrity level up to SIL 3 according to IEC 61508.**
- In compliance with ATEX 2014/34/EU European Directive (ATEX certificate ON REQUEST).
- FIRE SAFE certification according to ISO 10497 Third ed. 2010 / API 607 Seventh ed. 2016 (On request).

ENGINEERING STANDARDS:

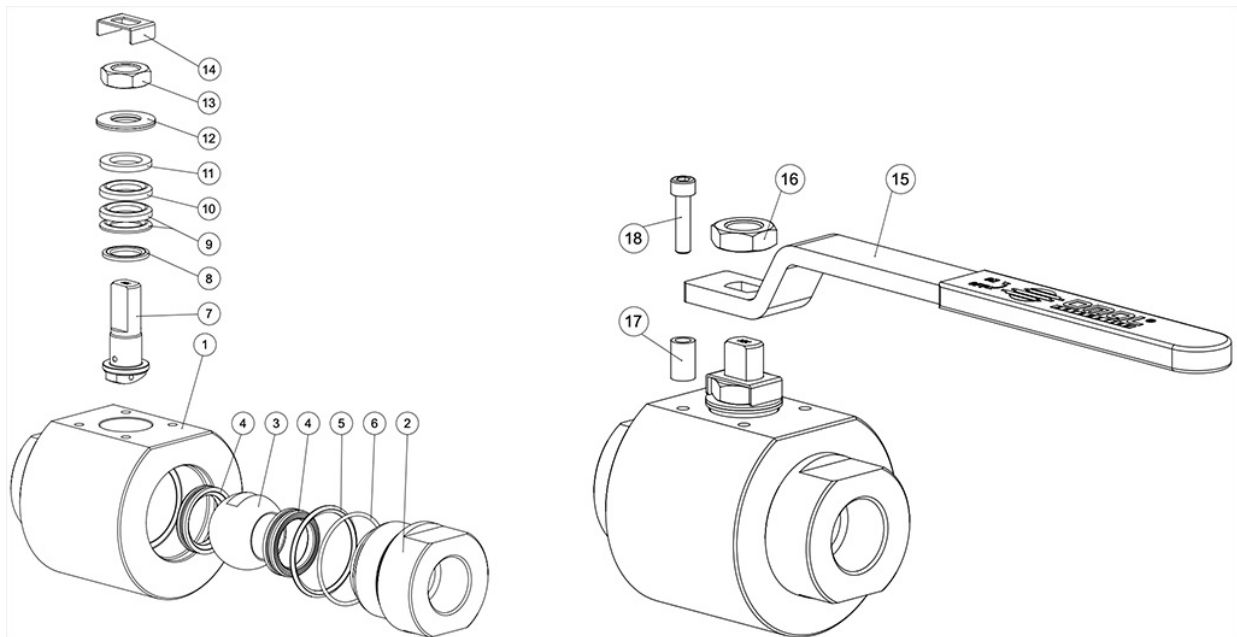
- Body thickness in compliance with: ASME B16.34, ASME VIII div.1, EN 12516.

dimensions



DIMENSIONS																			
Size		ϕA	B	C	ϕP	D	E	G	H	I	L	ISO	ϕM	ϕN	T/F	CH.Q	Y	X	Kg*
DN [mm]	[inch]																		
DN 08	1/4"	9	1/4"	11,5	60	55	25,5	20	45,5	8,2	85	F03	36	M5	6/M10	32	141,5	67	1,5
DN 10	3/8"	9	3/8"	11,5	60	55	25,5	20	45,5	8,2	85	F03	36	M5	6/M10	32	141,5	67	1,5
DN 15	1/2"	13	1/2"	15	75	60	32,5	22,5	55	9,8	90	F04	42	M5	8/M12	38	151,5	80	2,5
DN 20	3/4"	19	3/4"	16,5	79	60	35	22,5	57,5	9,8	90	F04	42	M5	8/M12	45	151,5	82	2,7
DN 25	1"	25	1"	19,5	94,5	76	41	28,5	69,5	14,6	125	F05	50	M6	10/M16	52	276,5	92	4,5
DN 32	1" 1/4	32	1" 1/4	22	104	76	46,5	28,5	75	14,6	125	F05	50	M6	10/M16	65	276,5	98	5,5
DN 40	1" 1/2	38	1" 1/2	22	129	90	56,5	41	97,5	21,9	150	F07	70	M8	14/M22	75	351,5	117	9,8
DN 50	2"	51	2"	26	149,5	104	68	39,5	107,5	20,9	170	F07	70	M8	14/M22	95	351,5	128	14,3

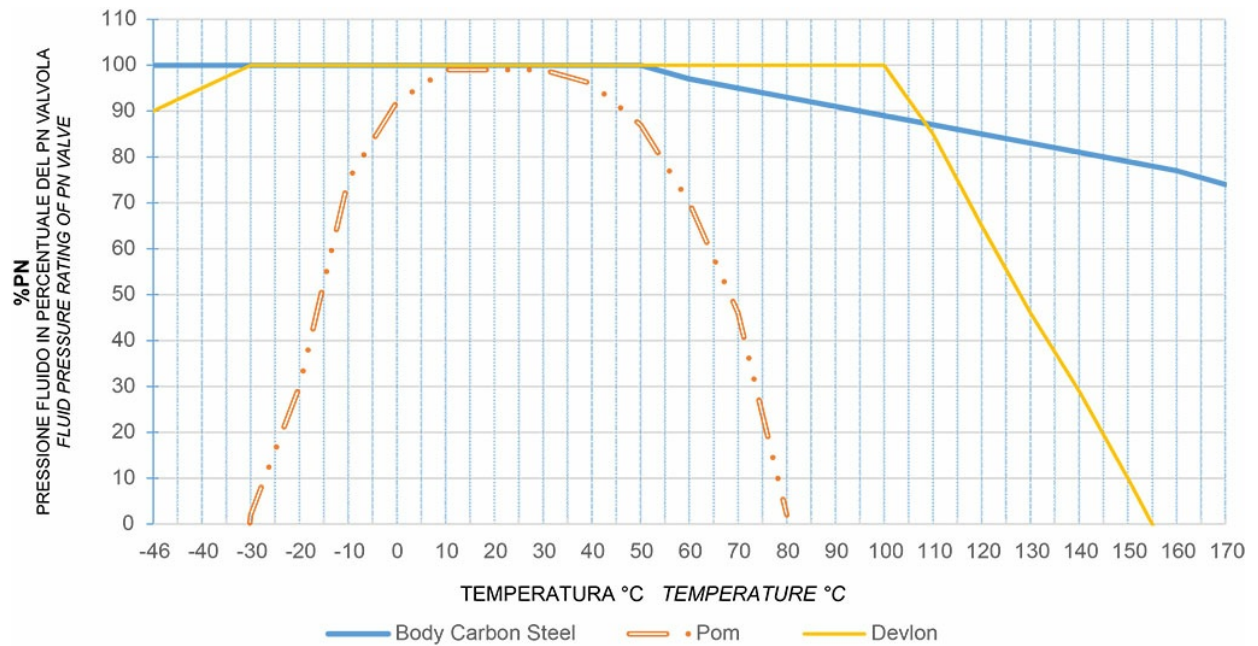
* Free shaft.

materials


MATERIALS		
1	Body	ASTM A350 LF2 Galvanized
2	End	ASTM A350 LF2 Galvanized
3	Ball	A217 CA15 / A479 TP.410 / A182 F6A + Hard chromium plated
4*	Seats	DEVLON
5*	Body-Ends gasket	DEVLON
6*	Body-Ends o'ring	HNBR
7	Stem	A564 TP.630 (17-4 PH)
8*	Bottom sealing	DEVLON
9*	Chevron rings	TFM1600
10*	Chevron rings	DEVLON
11	Packing gland ring	Carbon steel Galvanized
12	Springs washer	Carbon steel Galvanized
13	Stem nut	Carbon steel Galvanized
14	Stop nut plate	304 S.S.
15	Lever	Fe37 Galvanized
16	Lock nut	Carbon steel Galvanized
17	Holder screw	Carbon steel Galvanized
18	Holder screw	A2-70 (304 S.S.)
*Components of seals kit		

diagrams and breakaway torque

Pressure/temperature diagram

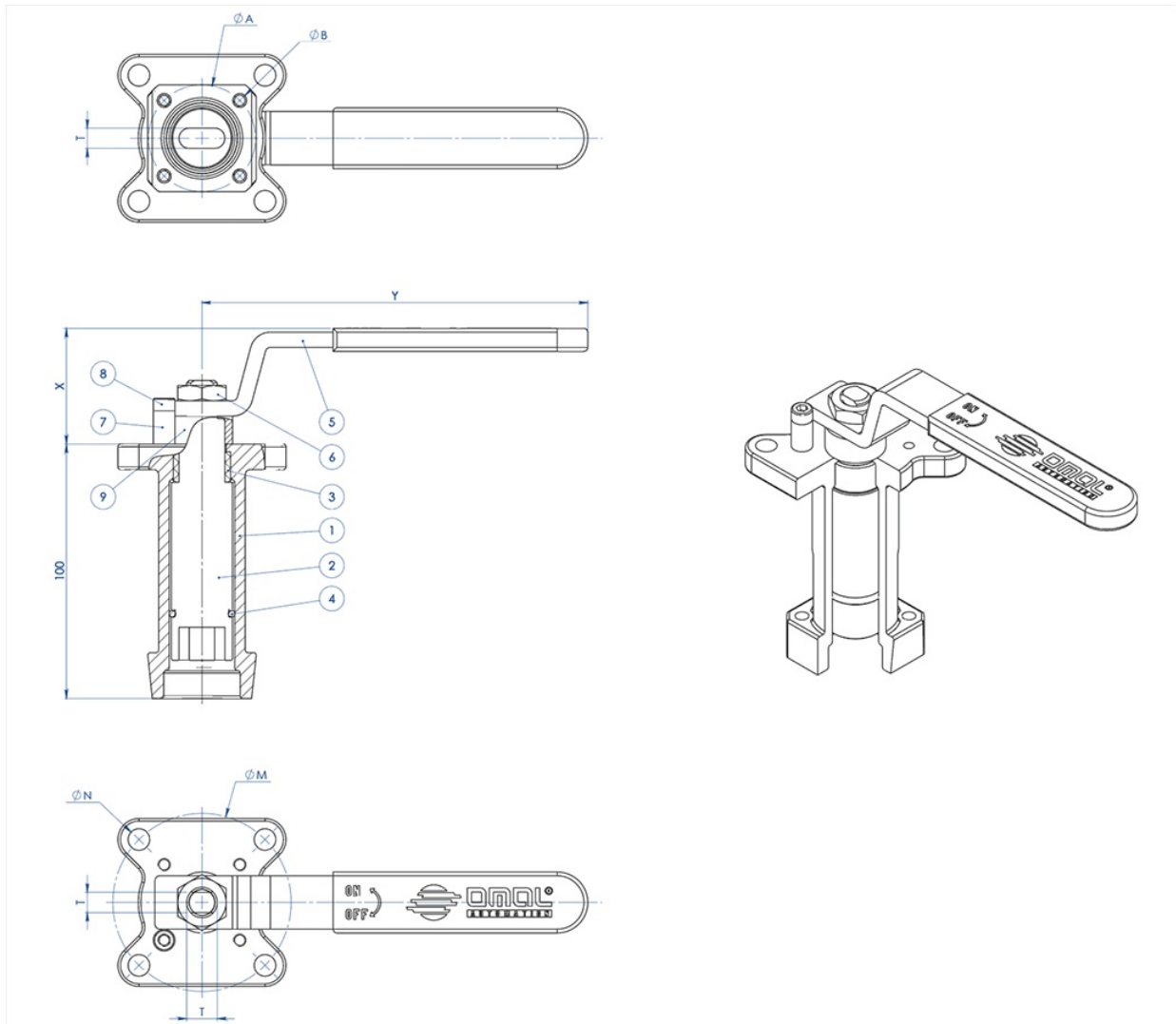


BREAKAWAY TORQUES Nm								
PN - Size	DN 08 1/4"	DN 10 3/8"	DN 15 1/2"	DN 20 3/4"	DN 25 1"	DN 32 1 1/4"	DN 40 1 1/2"	DN 50 2"
6000 PSI / 413 bar	22	22	25	33	48			
5000 PSI / 344 bar						66	91	
4000 PSI / 276 bar								140

Torque can vary depending on temperature and type of fluid, a safety factor 1.4 must be applied.

FLOW RATE KV m ³ /h								
KV m ³ /h	4,8	5	10,5	24	41	73	103	190

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

accessories
CASTING STEM EXTENSION WITH LEVER


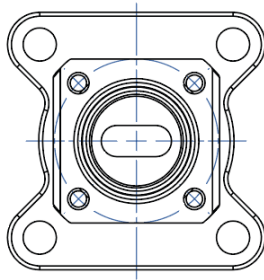
MATERIALS		
PART. N°	DESCRIPTION	MATERIAL
1	Extension	AISI304 S.S.
2	Pin	AISI 430 F
3	Bush	DELRIN
4	O-RING	NBR
5	Lever	Fe 37 galvanized (*)
6	Nut	galvanized carbon steel (*)
7	Holder Lever	galvanized carbon steel (*)
8	Holder screw	A2-70
9	Spacer	PTFE Carbon Filled

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

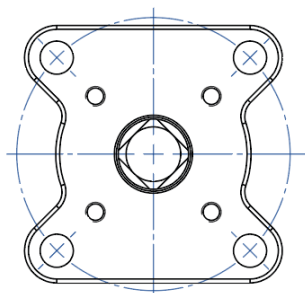
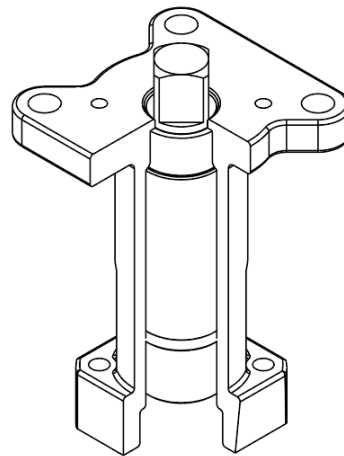
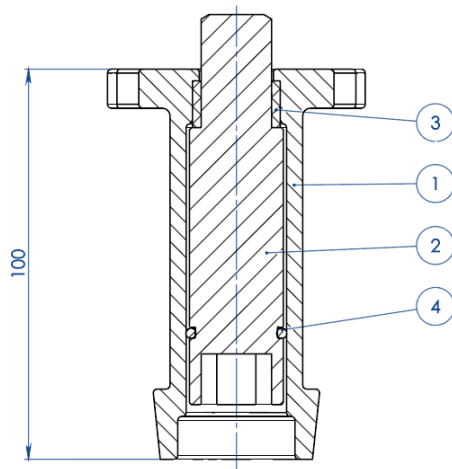
ISO VALVE	DIMENSIONS						
	ØA	ØB	ØM	ØN	F/T	X	Y
F03	36	5,5	36	5,5	10/6	38,5	141,5
F04	42	5,5	42	M5	12/8	45,5	151,5
F05	50	6,5	50	6,5	16/10	48,5	276,5
F07	70	8,5	70	8,5	22/14	57,5	351,5
F10	102	11	102	11	30/18	79,5	451,5

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

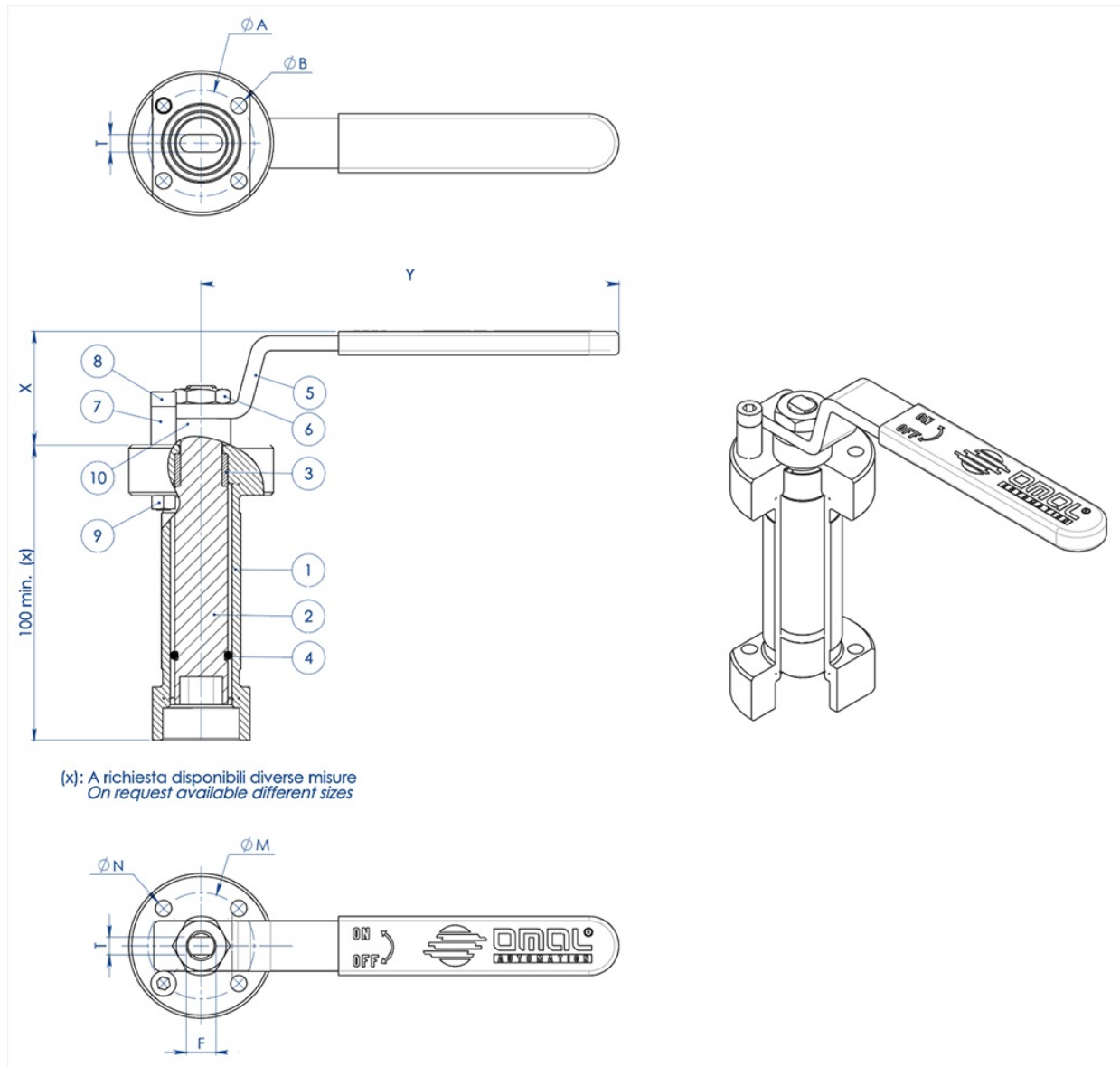


NOTA: Le dimensioni dipendono dalla taglia dell'attuatore
NOTE: Dimensions depending from actuator's size

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



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

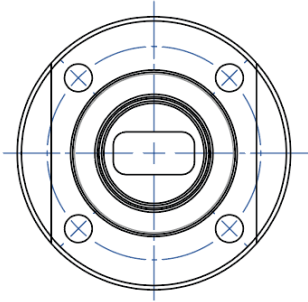
(*): On request available in Aisi 304 s.s.

(**): No available on valves with Iso connection F04

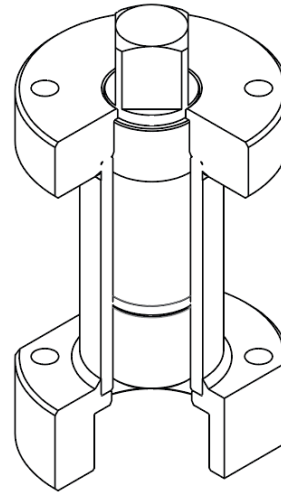
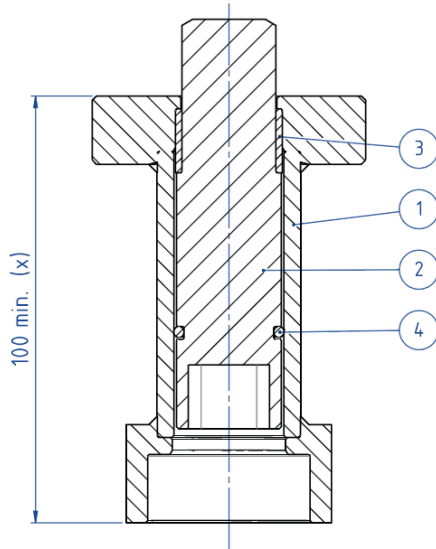
DIMENSIONS							
ISO VALVE	ØA	ØB	ØM	ØN	F/T	X	Y
F03	36	5,5	36	5,5	10/6	38,5	141,5
F04	42	5,5	42	M5	12/8	45,5	151,5
F05	50	6,5	50	6,5	16/10	48,5	276,5
F07	70	9	70	9	22/14	57,5	351,5
F10	102	11	102	11	30/18	79,5	451,5

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

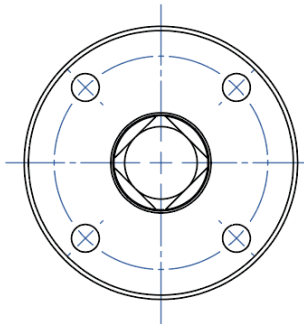
WELDED STEM EXTENSION FOR ACTUATORS



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



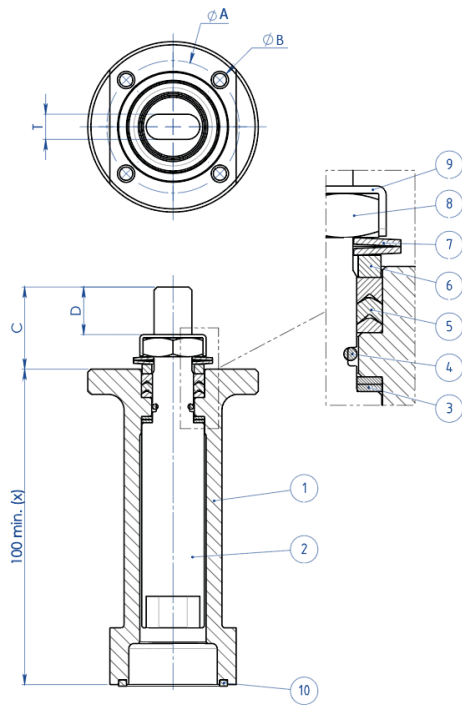
(x): A richiesta disponibili diverse misure
 On request available different sizes



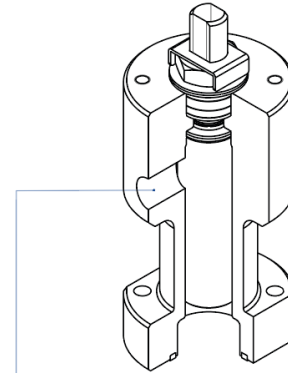
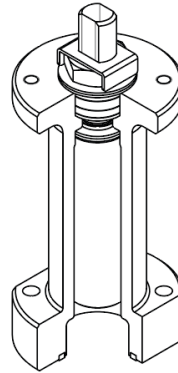
NOTA: Le dimensioni dipendono dalla taglia dell'attuatore
NOTE: Dimensions depending from actuator's size

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

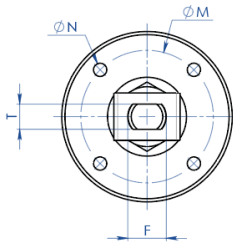
NOTE: Code of the stem extension depending from drive's type and valve's connection; to be requested at the order.

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

PED

ATEX - Ball Valves

FUGITIVE EMISSION KRATOS - 425bar

FUGITIVE EMISSION KRATOS - 430bar

SIL IEC 61508 - KRATOS

UKCA

FIRE SAFE KRATOS - ASTM A350 LF2 + DEVLON

FIRE SAFE KRATOS - 316 S.S + DEVLON

Manuali

MANUALE UMAH1000

Istruzioni

ISTRUZIONI USO 8_1534