

IMI TRUFLO ITALY®

IMI ORTON

# C-REX™

Double Eccentric  
Segmented Ball Valve

## The ideal ball valve for severe service

**IMI Truflo Italy ball valves are designed as a solution for critical service applications, combining the advantages of main critical service valve designs while eliminating their weakness or design limitations.**

Our C-REX™ valve combines the strength and performance of trunnion mounted ball valve with the low operating torque design of the triple offset butterfly valve. This makes them ideal to meet the most stringent requirements in critical applications such as oil and gas, hydrogen, chemical, petrochemical, mining, and liquefied natural gas (LNG).

### Cavity Free

It eliminates the possibility of an over-pressurized body cavity.

### Single seated

Springless seat and Mechanical sealing independent from process pressure

### Quarter Turn Operation

Provides simple and flexible automation and near emission-free performance.

### Double Eccentric

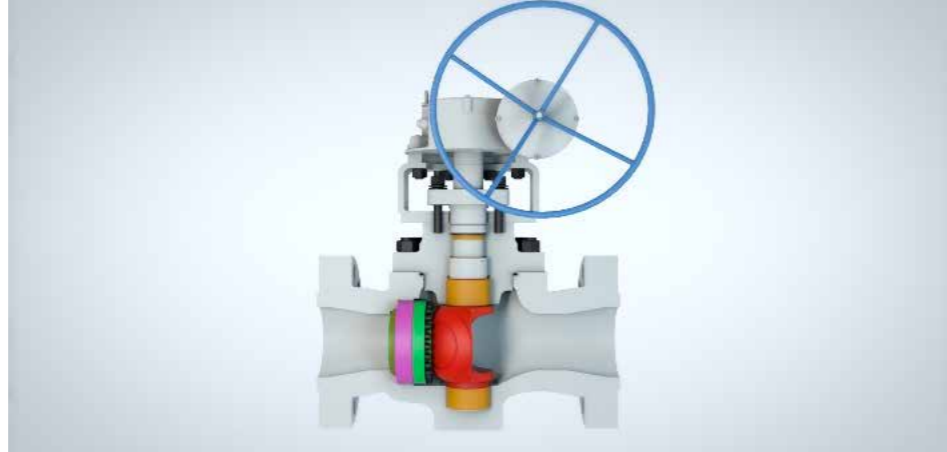
Provides friction-free operation for thousands of cycles and long service life.

### Torque Seated

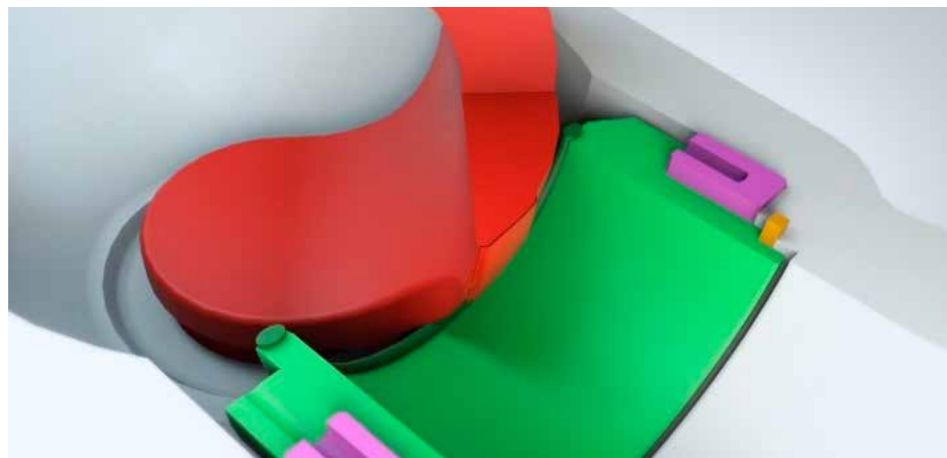
Ensures bi-directional tight shut-off performance through a mechanical seal.

### Other key features

The design is simple, piggable, and springless, whilst the ball has a surface coating.



High Durability



High Performance

## A Winning combination of benefits

Our C-REX™ valve has a simple design and few components compared to a traditional ball valve. Fewer components mean lower operational costs, easier access, and more straightforward, less frequent maintenance.

Another significant advantage is the weight reduction. This is allowed by the reduced number of valve components but also thanks to the following elements:

- Face to face as per ANSI B16.10 (even in class 150 and 300)
- Single seated
- No spring carrier
- Reduced flange diameter of body cover

The Top Entry design allows for in-line access to the valve internals, facilitating easy maintenance and shorter downtimes.

The Top Trunnion is an integral part of the ball that protects the stem from internal forces. The stem is protected against particle/medium by C-ring and primary gasket.

Where maintenance in line is not required Side Entry Option is available.



C shape ball and seat



Less Components

Less Maintenance



Less Operational Costs

Less Weight (up to 50%)

## A hard facing durable valve

The full hard face coating with Tungsten or Chrome Carbide is available on the sealing area, inner and outer ball surface, and all wetted parts. This provides the most durable hard surface available, which is perfect for severe service applications.

The absence of seams on the hard coating prevents weak points.

## C-REX™ for high cycling applications

The C-REX™ valve, with its double eccentric design, offers non-rubbing, low running torque and high-performance mechanical sealing.

The special ball and seat coating provide superior durability, reducing wear and extending valve life in high-cycle and abrasive applications.

Friction-free operation between the ball and seat makes the C-REX™ valve a perfect candidate for high cycle and high endurance processes like molecular sieve switching, high/low temperatures or other critical services.

The C-REX™ valve has been extensively tested with daily high cycle operations in extreme conditions, withstanding more than 15,000 cycles.

## C-REX™ Double Eccentric Ball Valve specifications

<b>Design:</b>	Side Entry (2/3 pieces) or top entry
<b>Size Range:</b>	DN 12 to 900
<b>Pressure Class:</b>	Class 150 to 1500 (ANSI rating)
<b>Temperature Range:</b>	254°C to +650 °C / -425 °F to +1200 °F
<b>End Connection:</b>	ANSI Flanges B16.5 / B16.47 NORSOK L-005 HUB (all major hub design) Welding ends BW / SWO
<b>Seal Material:</b>	Metal or soft
<b>Function:</b>	On/off & modulation

## Other suitable applications

Our C-REX™ valve can be installed in a wide range of applications, including:

- Refinery
- Slurry service
- Coal gas
- Hydrogen
- Pulp & paper
- Oil sands
- Mining
- Steam injection
- Hydrocarbons
- Liquefied natural gas (LNG)
- Fracking
- Oil & gas



Sectional view of the C Rex valve

## Bill of materials

### Standard configuration: CS metal seated

- Body bonnet: ASTM A216 WCB
- Ball: 316 + Tungsten Carbide HVOF coating (\*\*)
- Seat: 316 + Tungsten Carbide HVOF coating (\*\*)
- Stem: Nitronic 50, 17-4 PH
- Bolting: B7 - 2H
- Bearings: high endurance bearings
- Gasket/packing: low emission graphite

### Cryogenic configuration: SS resilient seated

- Body bonnet: ASTM A351 CF8M
- Ball: 316 seat 316 + PCTFE
- Stem: Nitronic 50
- Bolting: B8 - 8
- Bearings: high endurance bearings
- Gasket/packing: low emission graphite

(\*) Other bills of material are available upon request

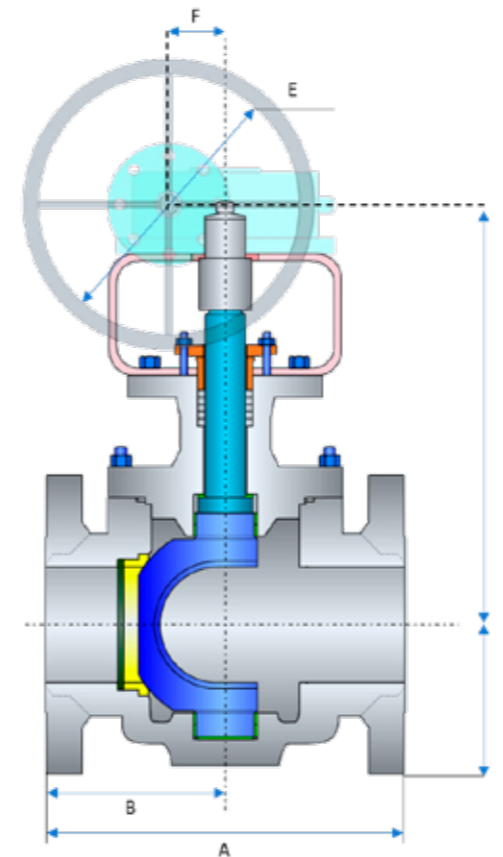
(\*\*) Chrome Carbide Coating above 250°C - alternate HF/HVOF coatings available depending on application

## Dimensions

SIZE	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	Weight (Kg)
<b>CLASS 150</b>							
2"	178	89	75	285	300	70	20
3"	283 (#)	141.5	125	340	300	70	40
4"	305 (#)	157.5	130	390	300	70	90
6"	394	197	180	450	400	85	170
8"	457	228,5	230	550	400	110	250
10"	533	266,5	250	650	400	150	390
12"	610	305	300	750	500	150	530
14"	686	343	320	800	500	150	880
16"	762	381	360	860	500	150	990
18"	864	432	400	930	600	220	1220
20"	914	457	450	1070	600	220	1680
22"	1092 (#)	546	520	1130	700	280	2370
<b>CLASS 300</b>							
2"	216	108	75	285	300	70	30
3"	283	141,5	125	340	300	70	50
4"	305	152,5	130	390	300	70	105
6"	403	201,5	180	450	400	85	210
8"	502	251	230	550	400	110	300
10"	568	284	250	650	400	150	430
12"	648	324	300	750	500	150	550
14"	762	381	320	800	500	150	1020
16"	838	419	360	860	500	150	1180
18"	914	457	400	930	600	220	1460
20"	991	495.5	450	1070	600	220	1700
22"	1092	546	520	1130	700	280	2530
<b>CLASS 600</b>							
2"	294	147	100	350	300	70	55
3"	356	178	140	400	300	70	75
4"	432	216	170	550	400	110	195
6"	559	279,5	200	580	400	110	310
8"	660	330	250	630	400	110	450
10"	787	393,5	290	720	500	150	720
12"	838	419	320	830	500	150	1010
14"	889	444.5	350	920	600	220	1360
16"	991	495.5	380	950	600	220	1730
18"	1092	546	440	1020	600	220	2350
20"	1194	597	510	1150	700	280	3100
22"	1295	647.5	570	1260	700	280	4180

## Dimensions

SIZE	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	Weight (Kg)
<b>CLASS 900</b>							
2"	371	185.5	100	405	500	150	85
3"	384	192	130	480	500	150	120
4"	460	230	150	550	500	150	210
6"	613	306.5	210	550	600	250	390
8"	740	370	250	590	600	250	700
10"	841	420.5	310	660	600	250	1100
12"	968	484	350	760	1000	345	1470
14"	1038	519	350	820	1000	345	2080
16"	1140	570	370	900	1000	345	2450
<b>CLASS 1500</b>							
2"	371	185.5	100	405	500	150	85
3"	473	236.5	130	530	500	150	170
4"	549	274.5	150	600	600	250	325
6"	711	355.5	240	620	600	250	530
8"	841	420.5	295	680	600	250	980
10"	1000	500	330	770	700	280	1560
12"	1146	573	395	830	700	280	2210
14"	1276	638	430	900	1000	345	2860
16"	1407	703.5	490	1000	1000	345	5230



(\*) All shown dimensions are in mm and weights in kg (for full port valves)  
 (\*\*) Other sizes, regular port, and classes are available upon request  
 (#) Face to Face Class 300

**Our Quality Management system meets the requirements of API Q1 9th and ISO 9001:2015.**



**High performance**

In addition, our C-REX™ has the following product certifications:

- Design: ASME B16.34 - API 6D & 6A
- Fire safe: API 607 / ISO 10497 / API 6FA
- Low fugitive emission ISO 15848-1 class AH
- Bidirectional tightness API 598
- Marine approvals: ABS / DNV-GL / BV
- PR2 approval
- Endurance test 15K cycles

The C-Rex ball valve

Top view of the valve



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