



valve  
solutions &  
technology



# ECO GENERATION

NON-CONTACT BALL VALVE

(TOLBOOM – PATENTED DESIGN)



# TRUE-NON-CONTACT BALL VALVE

## NEXT GENERATION FRICTION FREE VALVE

Size	1" ~ 32"
Trim	RB or FB (API6D)
Pressure	150# ~ 2500# (upto API10000)
Temperature	-196°C ~ 650°C
Connections	Wide choice on request
Materials	NACE MR-01-75/ISO 15156

### MARKET APPLICATIONS

- Coking & De-coking process
- Hydrogen Service
- Dehydration & Regeneration
- Sand and Slurry Application
- Molecular Sieve dehydration switches valves
- Replacement of Rising Stem Ball Valve / Other valves
- Heat transfer fluids/hot oil or Gas
- Power Generation
- Emergency Shutdown (ESD)

# Non-Contact Ball Valves Features

**World 1<sup>st</sup> quarter turn Non Contact friction free.**

**Eco Generation** No Rubbing Between Sealing Surfaces During Turning and Sealing

The quarter-turn eccentric force convey to tilt-and-turn action eliminates seal abrasion, which is the major cause of seat wear in conventional ball, butterfly, gate and plug valves.

## Single-seat Design (DIB-1)

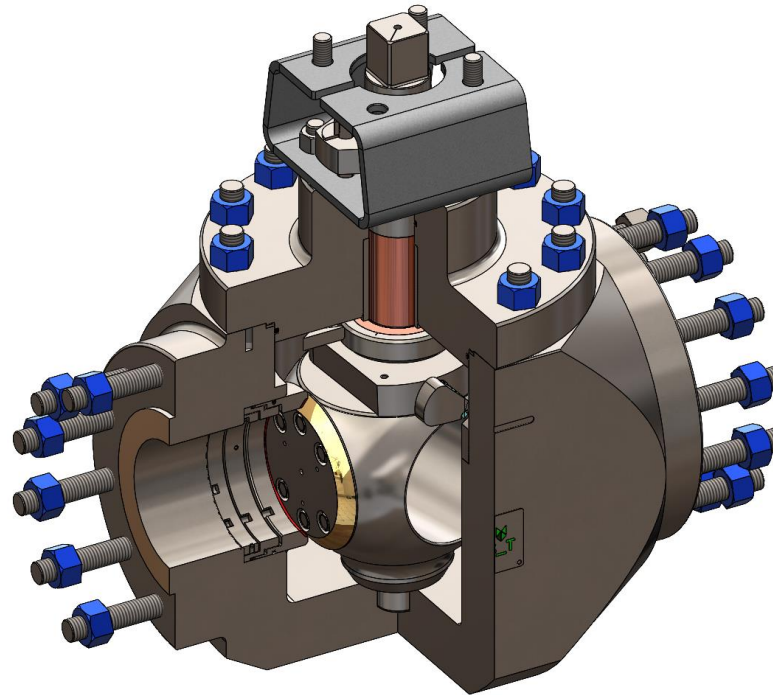
The single, stationary seat in the NCB valve seals in both directions and avoids the problems of trapped pressure between seals.

## Self-Flushing

Self-cleaning Tilting @ last 10degree the core away from the seat before rotation causes immediate flow around 360 degrees of the core face. Product flow flushes any foreign material away from the seat without localized, high-velocity erosive flow.

## Long life

Non contact ball valves replace troublesome ball valves, gate valves, globe valves and plug valves. The VS-T design has performance advantages that reduce plant outage and reduce the cost of ownership.



## Low-torque & Low energy Consumption

Ultra low torque valves turn easily because eccentric offset design to seal rubbing /friction is eliminated.

## Galling proof Hard Core

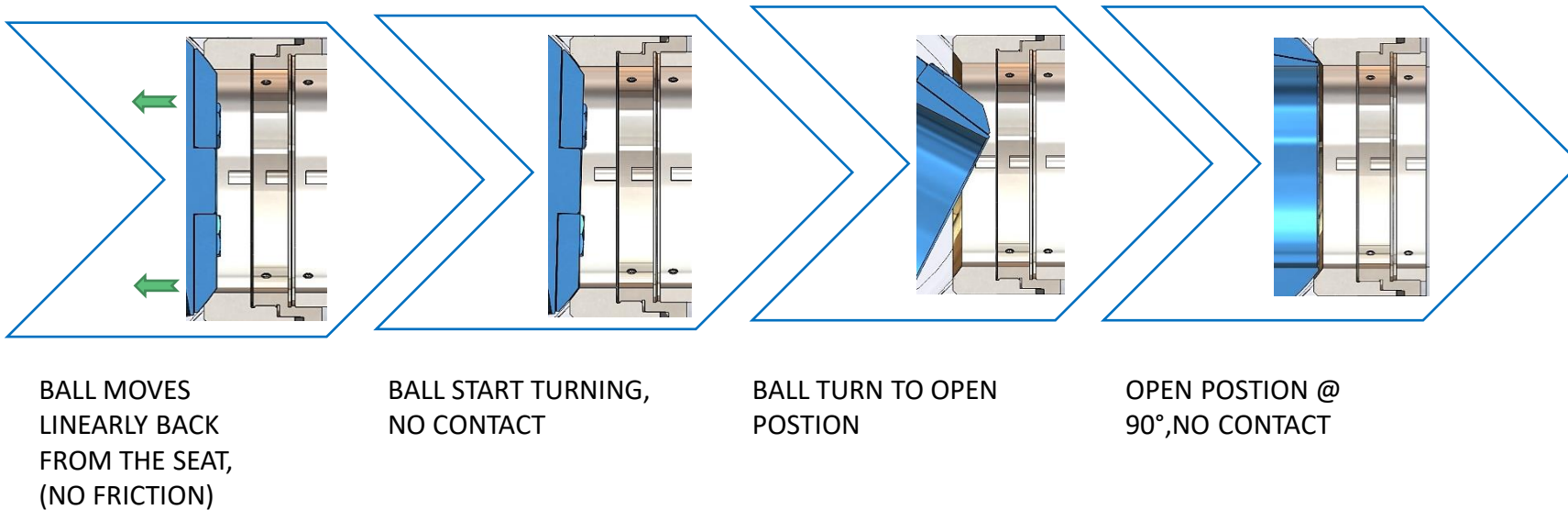
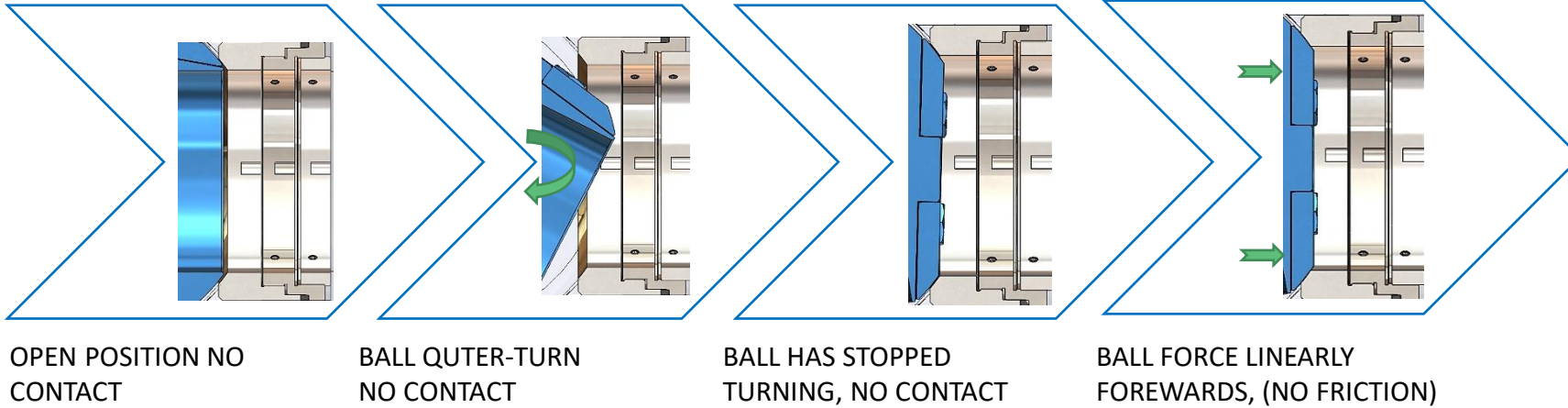
Wear-resistant Hard Facing on Core The core face is a solid stellite-6, smooth material that will endure difficult service, without loss of sealing integrity.

## Top-entry Design – Easy Maintenance

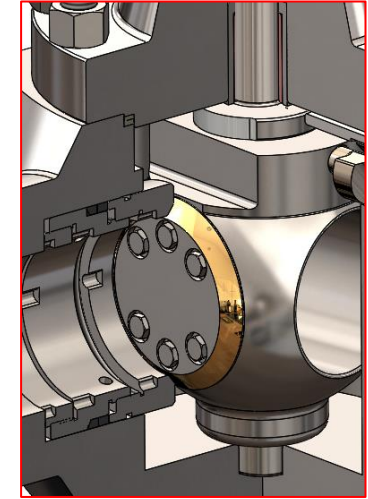
In-line inspection and repair, after system depressurizing, simplifies maintenance.



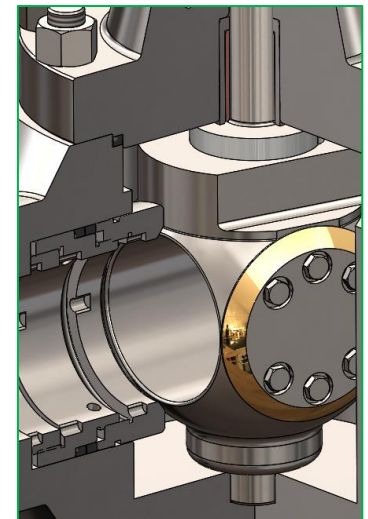
# NON-CONTACT SEQUENCE OF OPERATION



VALVE CLOSE.



VALVE OPEN.





# DIMENSIONS



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**ANSI Class 150**

**ANSI Class 300**

**ANSI Class 600**

**ANSI Class 900**

**ANSI Class 1500**

**ANSI Class 2500**

SIZE	FTF Long pattern (API6D) RF	WEIGHT Long pattern (API6D)
1	216*	28
2	216	35
3	204	50
4	292	95
6	356	185
8	495	268
10	622	480
12	698	732
14	787	958
16	864	1360
18	978	1800
20	978	2200

SIZE	FTF Long pattern (API6D) RF	WEIGHT Long pattern (API6D)
1	216*	35
1 1/2	242*	42
2	242*	42
3	283	58
4	305	115
6	404	192
8	502	320
10	674	497
12	762	890
14	826	1260
16	902	1590
18	915	1870

SIZE	FTF Long pattern (API6D) RF	WEIGHT Long pattern (API6D)
1	216	39
2	216	42
3	204	90
4	292	150
6	356	260
8	495	545
10	622	940
12	698	1360
14	787	1690
16	864	1920
18	978	2200
20	978	3300

SIZE	FTF Long pattern (API6D) RF	FTF Long pattern (API6D) RTJ	WEIGHT Long pattern (API6D)
1	254	254	45
1 1/2	305	305	55
2	369	372	70
3	381	385	112
4	458	461	125
6	610	613	375
8	737	740	660
10	839	842	1120
12	966	969	1650
14	1029	1039	1960
16	1131	1140	3200

SIZE	FTF Long pattern (API6D) RF	FTF Long pattern (API6D) RTJ	WEIGHT Long pattern (API6D)
1	254	254	45
1 1/2	305	305	58
2	369	372	85
3	470	474	135
4	547	550	250
6	705	712	660
8	832	842	850
10	991	1001	1450
12	1131	1147	1850

SIZE	FTF Long pattern (API6D) RTJ	WEIGHT Long pattern (API6D)
1	451	55
1 1/2	454	68
2	454	92
3	585	225
4	683	320
6	928	880
8	1039	1380
10	1293	1620

# QUALITY ASSURANCE



**American  
Petroleum  
Institute**



2018-151

## Certificate of Authority to use the Official API Monogram

License Number: **6D-1876**

**ORIGINAL**

The American Petroleum Institute hereby grants to

**VS-T VALVES BV**  
**Gewenten 47**  
**Roosendaal, Noord-Brabant**  
**The Netherlands**

the right to use the Official API Monogram® on manufactured products under the conditions in the official publications of the American Petroleum Institute entitled API Spec Q1® and **API-6D** and in accordance with the provisions of the License Agreement.

In all cases where the Official API Monogram is applied, the API Monogram shall be used in conjunction with this certificate number: **6D-1876**

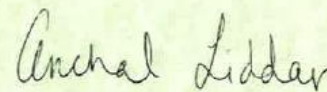
The American Petroleum Institute reserves the right to revoke this authorization to use the Official API Monogram for any reason satisfactory to the Board of Directors of the American Petroleum Institute.

The scope of this license includes the following: Ball Valves

QMS Exclusions: No Exclusions Identified as Applicable

Effective Date: **MAY 8, 2022**

Expiration Date: **MAY 8, 2025**



Senior Vice President of Global Industry Services

To verify the authenticity of this license, go to [www.api.org/compositelist](http://www.api.org/compositelist).



## MANAGEMENT SYSTEM CERTIFICATE

Certificate no.:  
288655-2019-AQ-NLD-RvA

Initial certification date:  
01 November 2016

Valid:  
16 September 2021 – 15 September 2024

This is to certify that the management system of  
**VS&T B.V.**  
Gewenten 47, 4704 RE Roosendaal, Netherlands  
and the sites as mentioned in the appendix accompanying this certificate

has been found to conform to the Quality Management System standard:  
**ISO 9001:2015**

This certificate is valid for the following scope:  
**Overhaul, repair, modification, maintenance and testing of all standard valves and safety valves for industrial purposes.**

Place and date:  
Barendrecht, 12 October 2021



For the issuing office:  
DNV - Business Assurance  
Zwolseweg 1, 2994 LB Barendrecht, Netherlands



J.H.C.N. van Oijpewijk  
Management Representative