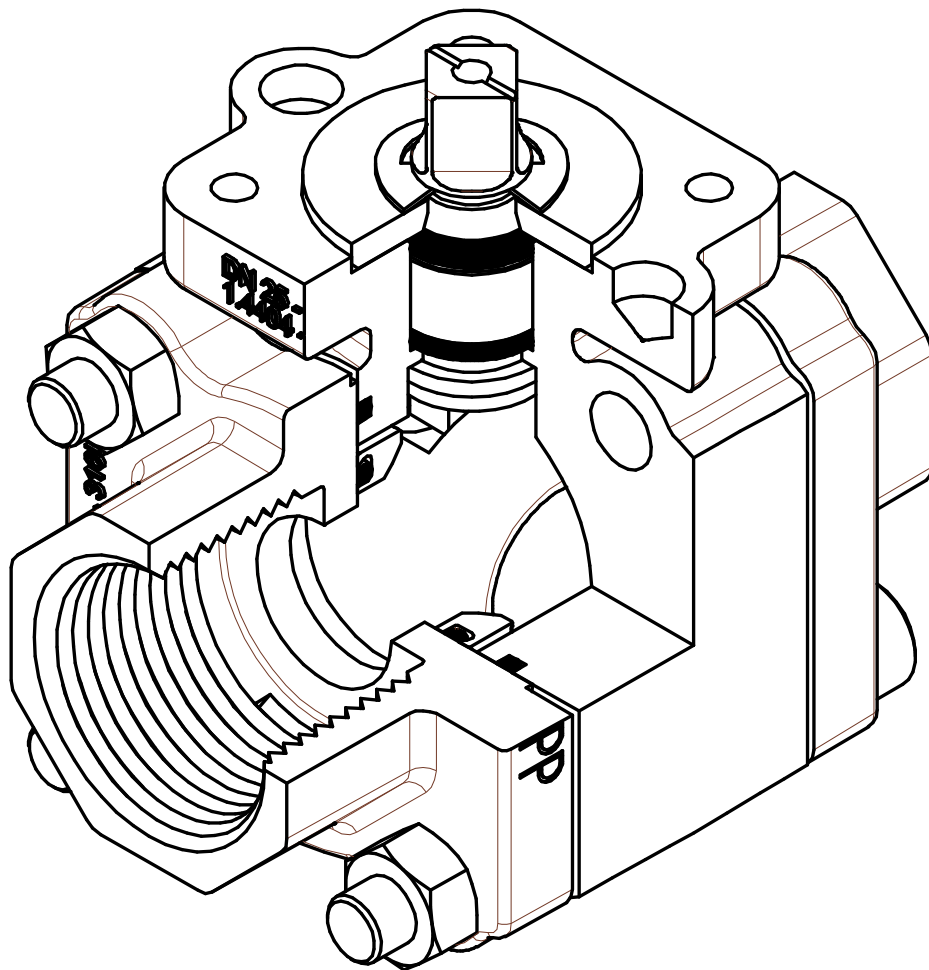


# **KINETROL PDK series**

## **THREE-PIECE SEVERE DUTY BALL VALVE**



Issue A	Signed D.G.W	Date 03-10-23	<b>KINETROL</b> Trading Estate Farnham Surrey England	Doc.No. TD233 Page 1 of 5
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### Section 1: Ball valves.

#### 1.1. General

##### 1.1.1 Warning and safety instructions

Installation, operation, or maintenance of this product should only be undertaken by fully trained and qualified personnel.

Hearing protection is recommended before operating equipment. Always wear protective gloves, clothing and eyewear when performing any installation or maintenance operations.

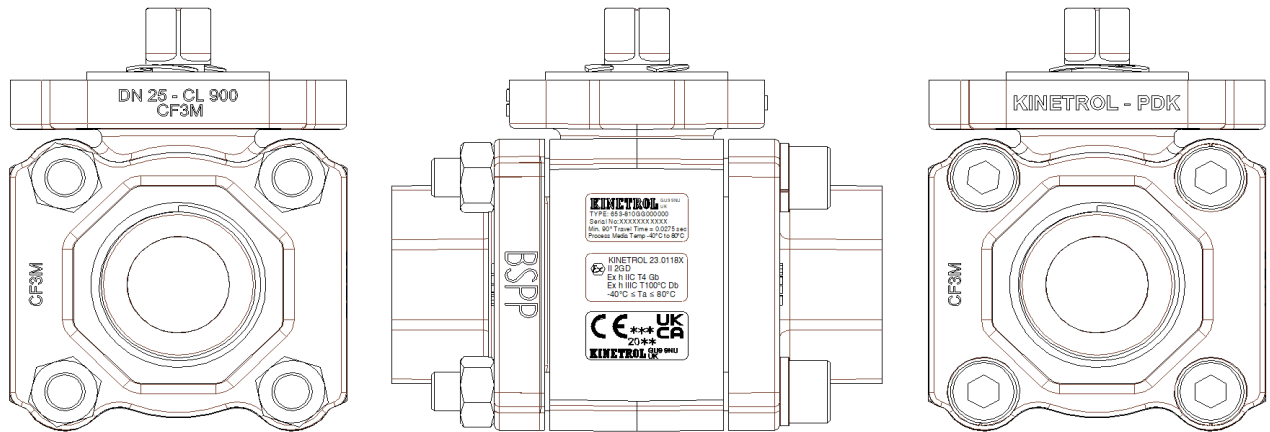
Keep hands, clothing and hair clear of valve ports. An actuated valve could operate without warning causing damage to clothing or serious injury.

Ensure actuator is de-energised with the air supply disconnected and that the pipeline is de-pressurised and drained before removing valve.

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### 1.1.2 Valve labelling

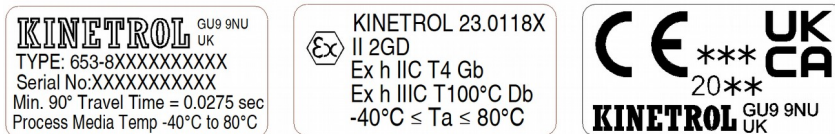
Figure 1: Valve showing cast and printed labels



#### Valve information:

- DN Size
- Class designation
- Material
- Manufacturers name or trademark
- Serial Number
- ATEX Rating
- Thread type
- Min and Max temperature
- Product Identification.
- Year of manufacture.
- Max Pressure

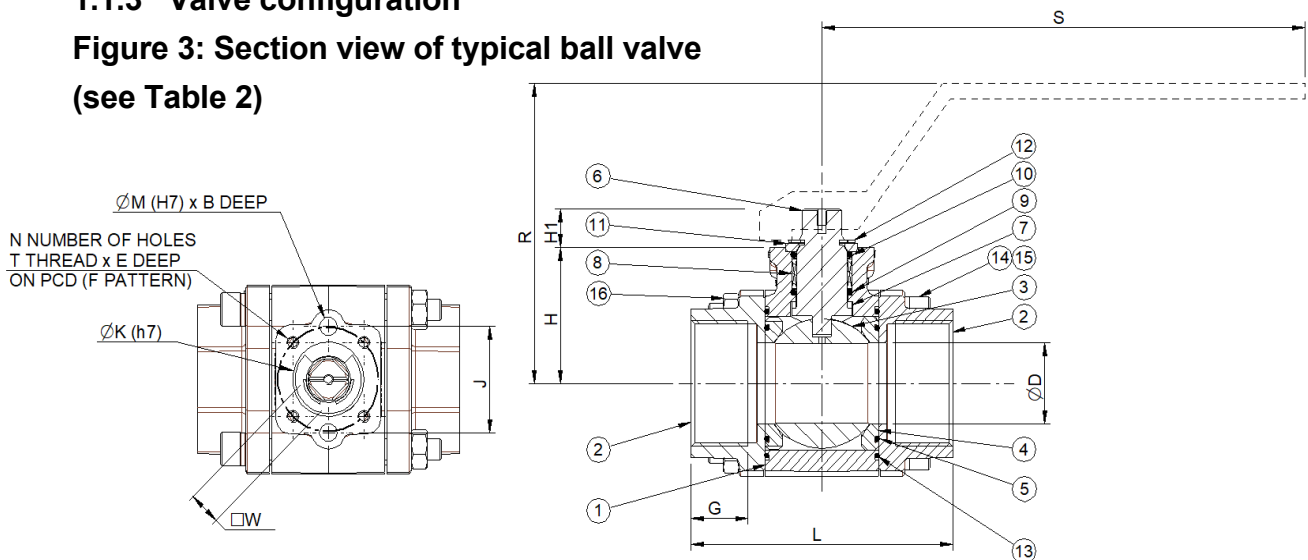
Figure 2: Standard ATEX CAT 2 Label



### 1.1.3 Valve configuration

Figure 3: Section view of typical ball valve

(see Table 2)



**1.1.4 Materials**

**Table 1: Valve components (see Figure 3).**

No.	Part Name	Material	No.	Part Name	Material
1	Body	CF3M	9	Stem O-ring	Nitrile
2	End Cap	CF3M	10	Bush O-ring	Nitrile
3	Ball	CF8M	11	Stem Washer	316
4	Ball Seat	UHMWPE	12	Circlip	Plated Carbon Steel
5	Seat O-ring	Nitrile	13	Body O-ring	Nitrile
6	Stem	17-4PH / 316SS	14	Bolt	A4-70
7	Thrust Washer	UHMWPE	15	Washer	A4-70
8	Stem Bearing	UHMWPE	16	Nut	A4-70

**1.1.5 Dimensions**

**Table 2: Reduce Bore (see Figure 3).**

DN	NPS	D	G	L	R	S	H	H1	W	J	K	ØM	B	F	N	T	E	PCD	Cv	Torque (Nm)
25	1	20	22	96	64	175	42.5	15	9.5	50.8	36	8.8	4	F05	4	M6	10	50	27	10
50	2	37.1	29	130	144	240	65	18.5	16	50.8	36	8.8	4	F05	4	M6	10	50	96	45

**Note: valve torque does not include Safety Factor.**

**1.1.6 Maintenance**

- 1) Maintenance should be carried out when wear affects valve performance.
- 2) Valve life will vary according to application conditions, cycle frequency, temperature, type of process media, etc.
- 3) Detailed maintenance and replacement instructions in section 1.2.

**1.1.7 Recommended spare parts**

- 1) Standard seal kits available for each valve size, consist of the following:
  - 2 off ball seats (4)      - 2 off seat O-ring (5)      - 1 off thrust washer (7)
  - 1 off stem O-ring (9)      - 1 off bush O-ring (10)      - 1 off circlip (12)
  - 2 off body O-ring (13)

**Table 3: Standard spare part ordering codes**

	Size	Seal Kit	Stem	Endcap BSPP	Endcap NPT	Ball
Reduced Bore	DN25 / NPS 1	PDK-025-001	PDK-025-002	PDK-025-003	PDK-025-003NPT	PDK-025-004RB
	DN50 / NPS 2	PDK-050-001	PDK-050-002	PDK-050-003	PDK-050-003NPT	PDK-050-004RB

**Note: Non standard spares available upon request.**

## 1.2. Ball valve service instructions

### 1.2.1 Dismantling ball valve

- 1) Follow stages A to G (Figure 4), inspect and replace parts as necessary.  
Note: Circlip pliers will be needed to remove circlip (item 12) do NOT re-use circlip once removed.

### 1.2.2 Re-assembling ball valve

- 1) Follow stages G to A (Figure 4), tighten bolts (item 14 as per table 4).  
Note: Circlip (item 12) is bowed so orientation is important.

Figure 4: Typical ball valve assembly procedure

