Eskom	Technical specification	Camden Power Station

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CONTENT

1. Introduction 3
2. Supporting Clauses 3
   2.1 Scope 3
   2.2 Normative/Informative References 3
   2.3 Definitions 4
   2.4 Abbreviations 5
   2.5 Roles and Responsibilities 5
3. Camden West Half-Station Shut Down – Required Spares 7
   3.1 Small Bore Valve Spares 7
4. Acceptance 8
5. Revisions 8
6. Acknowledgements 8
7. Appendix A – Bill of Materials 9
   7.1 Small Bore Valves - New 9
   7.2 Small Bore Butterfly Valves – Bolting and Gaskets - New 13
   7.3 Small Bore Valves – Pipe Couplings – New 17

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1. Introduction

Camden Power Station is planning a Half-Station Shutdown (HSSD) of the West-side units to facilitate the inspection, refurbishment and maintenance of the Main Cooling Water (CW) System. A primary objective of the shutdown is the refurbishment and/or replacement of critical valves that are normally inaccessible while the units are in operation. As the cooling water system is common to all four West-side units, maintenance on certain components cannot be safely or practically performed without implementing an HSSD.

This document serves as the technical reference for the procurement of replacement small bore valves for the Camden West side HSSD.

Camden Power Station initially attempted to procure all spares required for the West-side HSSD as a single turnkey project. This approach was intended to ensure proper integration of the various components and interfaces, while also simplifying coordination and interaction between the client and supplier.

However, the proposed turnkey procurement approach was not accepted through the sole source steercom process. Consequently, the original turnkey scope had to be divided into several smaller procurement categories and transactions. The station must now pursue multiple procurement processes to obtain the various spares and equipment required for execution of the West-side HSSD.

This change in procurement strategy has a significant impact on the planning and readiness of the West-side HSSD. The additional procurement interfaces and transactions introduce increased schedule risk and may affect the availability of the required spares and equipment prior to the planned outage.

Based on the current procurement status, Camden Power Station will not be ready to execute the West-side HSSD in December 2026, as currently reflected in the outage listing schedule. The planned HSSD start date will therefore need to be reviewed and revised to allow sufficient time for the procurement, manufacture, refurbishment and delivery of all required equipment and spares.

2. Supporting Clauses

2.1 Scope

This document defines the technical specifications for the **Small-Bore Valves** that will be installed during Camden's West HSSD.

2.1.1 Purpose

The purpose of this document is to define the technical specifications for the small-bore valve spares that will be utilised during the Camden West side HSSD.

2.1.2 Applicability

This document shall apply specifically to Eskom Camden Power Station for the 2027 West side Half Station Shut Down.

2.2 Normative/Informative References

All parties using this document shall apply the latest approved editions of the documents referenced in the paragraphs below. Should any of the referenced documents be revised after the issuance of this scope of work, any new or updated requirements introduced by such revisions shall be complied with.

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2.2.1 Normative

[1]	ISO 9001 Quality Management Systems
[2]	EN 10204 Metallic Products - Type of Inspection Documents
[3]	OHSACT Occupational Health and Safety Act of 1993
[4]	API 598 Valve Inspection and Testing
[5]	BS 10 Specification for flanges and bolting for pipes, valves and fittings
[6]	ISO 5210 – Industrial valves — multi-turn valve actuator attachments
[7]	ISO 5211 – Industrial valves — Part-turn actuator attachments
[8]	EN 593 - Industrial valves - Metallic butterfly valves for general purposes

Eskom Specifications

[9]	240-105020315 – Standard for Low Pressure Valves
[10]	240-105658000 - Supplier Contract Quality Management Specification (QM-58)

Drawing and Documentation Standards

[11]	240-76992014 - Project / Plant Specific Technical Documents and Records Management Work Instruction
[12]	240-65459834 - Project Documentation Deliverable Requirement Specification
[13]	240-54179170 - Technical Documentation Classification and Designation Standard
[14]	240-66920003 - Documentation Management Review and Handover Procedure for Gx Coal Projects
[15]	240-86973501 - Engineering drawing Standard

2.3 Definitions

Definition	Description
Contractor	The organisation or individual appointed by Eskom or the Supplier to perform the specified works, services, installation, refurbishment, fabrication, modification, inspection, testing, transport, or commissioning activities required under this Scope of Work.
Cooling Water	Medium, which is conveyed in the pipes, for which these valves will serve as isolation.

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Definition	Description
Cooling water duct	Main cooling water pipework, also referred to as cooling water duct, that transports cooling water from the cooling water pumps to the condensers and eventually back to the cooling towers/
Small Bore	When referenced in this document, small bore refers to a nominal size less than 1000mm.
Manufacturer	The original equipment manufacturer (OEM), fabricator, or production facility responsible for the manufacture, assembly, coating, machining, or refurbishment of the final product or component supplied under this Scope of Work.
Pipework	Pipes and fittings are used for the conveyance of steam, water, gases or other fluids.
Quality Control Plan (QCP)	A document specifying the activities to be inspected throughout the execution of the project, inclusive of test methods, procedures and acceptance criteria. (This term is equivalent to QIP and ITP)
Supplier	The company, manufacturer, contractor, service provider, or authorised representative responsible for the supply, refurbishment, manufacture, testing, inspection, documentation, and delivery of the equipment, materials, or services specified in this Scope of Work.
Valve	A device that regulates the flow of gases, liquids, fluidized solids and slurries by opening, closing or partially obstructing various passageways.

2.4 Abbreviations

Abbreviation	Description
CW	Cooling Water / (Circulating Water)
HSSD	Half Station Shut Down
NB	Nominal Bore
OD	Outside Diameter
QCP	Quality Control Plan
SBV	Small Bore Valve

2.5 Roles and Responsibilities

Eskom: Responsible for developing the Scope of Work (SOW) and the technical specifications for the works.

Supplier:

a) **Review and understanding of Scope of Work**
The Supplier shall be responsible for reviewing and verifying the accuracy and completeness of Eskom's specifications, ensuring full alignment with Eskom's internal standards as well as all applicable international standards. The Supplier shall further ensure full compliance with all specified deliverables and performance requirements.

b) **Technical description of stock items (Appendix A)**
The Supplier shall obtain and confirm the full technical descriptions of all stock items listed in Appendix A. This scope references Camden stock numbers associated with items to be procured or

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refurbished. The Supplier shall be responsible for supplying all items strictly in accordance with the applicable SAP stock descriptions and associated technical requirements.

c) **Schedule and lead time commitment**
The Supplier shall submit a detailed delivery schedule to Eskom indicating the planned delivery dates for all spares listed in Appendix A of this document. Any deviation from the approved delivery schedule shall be formally communicated to Eskom through early warning notifications issued by the Supplier without delay.

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3. Camden West Half-Station Shut Down – Required Spares

3.1 Small Bore Valve Spares

3.1.1 General Requirements

3.1.1.1 As part of the Camden West Half-Station Shutdown (HSSD), several small-bore isolation valves shall be replaced with new valves. The Supplier shall be responsible for the supply of the new valves.

3.1.1.2 There is currently no installed base or preferred OEM for these valves. The selection of a suitable manufacturer shall therefore be based primarily on compliance with the specified technical requirements and overall cost-effectiveness.

Prior to delivery of any small-bore valve or pipe coupling to Camden Power Station, the Supplier shall submit the following documentation to Eskom Camden Turbine Engineering for review and acceptance:

- Technical data sheets for the proposed items; and
- Cross-sectional drawings identifying the materials of construction for all relevant components.

Eskom Camden Turbine Engineering shall review the submitted documentation to verify compliance with the applicable SAP stock descriptions and specified technical requirements. The Supplier shall obtain formal acceptance from Eskom Camden Turbine Engineering prior to delivering any of the items to the station.

NOTE: Any item delivered to Camden Power Station without prior formal acceptance by Eskom Camden Turbine Engineering shall be rejected.

3.1.1.3 The full technical descriptions and required quantities for the metallic piping component spares are listed in ***Appendix A***.

3.1.1.4 To ensure proper installation of the new small-bore valves, each valve shall be supplied complete with a gasket and bolting kit. The associated gasket and bolting requirements are listed in ***Appendix A***.

3.1.1.5 The DN 450 butterfly valves require pipe couplings also to be supplied for their installation. The pipe couplings are listed in ***Appendix A.***

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4. Acceptance

This document has been seen and accepted by:

Name	Designation
Stefan Erasmus	Chief Technologist GX Engineering 2026-09-23
Xolani Dlamini	Snr. Turbine Maintenance Supervisor

5. Revisions

Date	Rev.	Compiler	Remarks
September 2026	3	A. Rudman	Included the full technical descriptions for the stock items listed in Appendix - A
September 2026	2	A. Rudman	Included review comments from Stefan Erasmus
September 2026	1	A. Rudman	Following the rejection of Camden Power Station's sole-source Steercom application for a turnkey procurement project covering all spares required for the West HSSD, this Scope of Work was developed to address only the small-bore valve spares.

6. Acknowledgements

None

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7. Appendix A – Bill of Materials

To simplify the required spares list for the Camden West Half-Station Shutdown (HSSD) Small Bore Valves (SBV), this section has been included to eliminate any ambiguity regarding the types and quantities of spares required.

7.1 Small Bore Valves - New

The following valves, listed in the Table below, are to be supplied to Camden Power Station. No deviations from the specified technical requirements will be accepted.

The Supplier shall not proceed with the delivery of any valve until formal acceptance has been provided by Camden Turbine Engineering. Only valves that have been reviewed and formally accepted by Camden Turbine Engineering shall be supplied to Camden Power Station.

The full technical descriptions, and required quantities applicable to this SOW, are listed in the Table below:

#	SHORT DESCRIPTION	STOCK NO.	TECHNICAL COMPONENT DESCRIPTION	QTY.
1	DN80 WAFER BFV EN	774675	VALVE, BUTTERFLY; TYPE: WAFER; NOMINAL SIZE: DN80; PRESSURE RATING: PN10; MAXIMUM OPERATING TEMPERATURE: 70 °C; END CONNECTION: WAFER, SUITABLE FOR INSTALLATION BETWEEN EN 1092-1 PN10 FLANGES; BODY MATERIAL: SPHEROIDAL GRAPHITE CAST IRON, EN-GJS-400-15, MATERIAL NUMBER EN-JS1030 (5.3106), TO EN 1563; FACE-TO-FACE DIMENSION: 46 MM, EN 558 SERIES 20; OPERATION: MANUAL; SEAT/LINING MATERIAL: EPDM; DESIGN STANDARD: EN 593; EACH VALVE SHALL BE SUPPLIED WITH AN EN 10204 TYPE 2.2 MATERIAL CERTIFICATE IN ENGLISH FOR ALL METALLIC PRESSURE-CONTAINING COMPONENTS; TENDERERS SHALL SUBMIT A TECHNICAL DATA SHEET FOR THE VALVE OFFERED FOR TECHNICAL EVALUATION.	8

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#	SHORT DESCRIPTION	STOCK NO.	TECHNICAL COMPONENT DESCRIPTION	QTY.
2	DN100 WAFER BFV EN	774676	VALVE, BUTTERFLY; TYPE: WAFER; NOMINAL SIZE: DN100; PRESSURE RATING: PN10; MAXIMUM OPERATING TEMPERATURE: 70 °C; END CONNECTION: WAFER, SUITABLE FOR INSTALLATION BETWEEN EN 1092-1 PN10 FLANGES; BODY MATERIAL: SPHEROIDAL GRAPHITE CAST IRON, EN-GJS-400-15, MATERIAL NUMBER EN-JS1030 (5.3106), TO EN 1563; FACE-TO-FACE DIMENSION: 52 MM, EN 558 SERIES 20; OPERATION: MANUAL; SEAT/LINING MATERIAL: EPDM; DESIGN STANDARD: EN 593; EACH VALVE SHALL BE SUPPLIED WITH AN EN 10204 TYPE 2.2 MATERIAL CERTIFICATE IN ENGLISH FOR ALL METALLIC PRESSURE-CONTAINING COMPONENTS; TENDERERS SHALL SUBMIT A TECHNICAL DATA SHEET FOR THE VALVE OFFERED FOR TECHNICAL EVALUATION.	16
3	DN100 AUTO-VENT	774695	VALVE, AIR RELEASE; TYPE: AUTOMATIC DOUBLE-ORIFICE AIR RELEASE VALVE; NOMINAL SIZE: DN100; PRESSURE RATING: PN16; MAXIMUM OPERATING TEMPERATURE: 65 °C; END CONNECTION: FLANGED, EN 1092-1 PN10; BODY MATERIAL: SPHEROIDAL GRAPHITE CAST IRON, BS 2789 GRADE 420/12; INTERNAL TRIM: STAINLESS STEEL; OPERATION: AUTOMATIC; FUNCTION: AUTOMATIC AIR RELEASE AND AIR ADMISSION; MODEL NO.: VENT-O-MAT RTX 1601 DOUBLE ORIFICE; TENDERERS SHALL SUBMIT A TECHNICAL DATA SHEET FOR THE VALVE OFFERED FOR TECHNICAL EVALUATION.	16
4	DN150 GATE VLV EN	774682	VALVE, GATE; TYPE: RESILIENT-SEATED, RISING STEM; NOMINAL SIZE: DN150; PRESSURE RATING: PN10; MAXIMUM OPERATING TEMPERATURE: 70 °C; END CONNECTION: FLANGED, EN 1092-2, PN10; FLANGE TYPE: 21; FACING: TYPE B, RAISED FACE; FACE-TO-FACE DIMENSION: 267 MM, EN 558 SERIES 3; BODY MATERIAL: SPHEROIDAL GRAPHITE CAST IRON, EN-GJS-500-7 (GGG-50); WEDGE: EPDM RUBBER ENCAPSULATED; OPERATION: MANUAL, HANDWHEEL; DESIGN STANDARD: EN 1074-1 AND EN 1074-2; TENDERERS SHALL SUBMIT A TECHNICAL DATA SHEET FOR THE VALVE OFFERED FOR TECHNICAL EVALUATION. THE DATA SHEET SHALL CONFIRM, AS A MINIMUM, THE VALVE SIZE, PRESSURE RATING, TEMPERATURE RATING, BODY MATERIAL, WEDGE/SEAT MATERIAL, STEM CONFIGURATION, FLANGE STANDARD AND FACE-TO-FACE DIMENSION.	9

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#	SHORT DESCRIPTION	STOCK NO.	TECHNICAL COMPONENT DESCRIPTION	QTY.
5	DN200 WAFER BFV EN	774671	VALVE, BUTTERFLY; TYPE: WAFER; NOMINAL SIZE: DN200; PRESSURE RATING: PN10; MAXIMUM OPERATING TEMPERATURE: 70 °C; END CONNECTION: WAFER, SUITABLE FOR INSTALLATION BETWEEN EN 1092-1 PN10 FLANGES; BODY MATERIAL: SPHEROIDAL GRAPHITE CAST IRON, EN-GJS-400-15, MATERIAL NUMBER EN-JS1030 (5.3106), TO EN 1563; FACE-TO-FACE DIMENSION: 60 MM, EN 558 SERIES 20; OPERATION: MANUAL; SEAT/LINING MATERIAL: EPDM; DESIGN STANDARD: EN 593; EACH VALVE SHALL BE SUPPLIED WITH AN EN 10204 TYPE 2.2 MATERIAL CERTIFICATE IN ENGLISH FOR ALL METALLIC PRESSURE-CONTAINING COMPONENTS; TENDERERS SHALL SUBMIT A TECHNICAL DATA SHEET FOR THE VALVE OFFERED FOR TECHNICAL EVALUATION.	8
6	DN250 GATE VLV EN	774678	VALVE, GATE; TYPE: RESILIENT-SEATED, RISING STEM; NOMINAL SIZE: DN250; PRESSURE RATING: PN10; MAXIMUM OPERATING TEMPERATURE: 70 °C; END CONNECTION: FLANGED, EN 1092-2, PN10; FLANGE TYPE: 21; FACING: TYPE B, RAISED FACE; FACE-TO-FACE DIMENSION: 330 MM, EN 558 SERIES 3; BODY MATERIAL: SPHEROIDAL GRAPHITE CAST IRON, EN-GJS-500-7 (GGG-50); WEDGE: EPDM RUBBER ENCAPSULATED; OPERATION: MANUAL, HANDWHEEL; DESIGN STANDARD: EN 1074-1 AND EN 1074-2; TENDERERS SHALL SUBMIT A TECHNICAL DATA SHEET FOR THE VALVE OFFERED FOR TECHNICAL EVALUATION. THE DATA SHEET SHALL CONFIRM, AS A MINIMUM, THE VALVE SIZE, PRESSURE RATING, TEMPERATURE RATING, BODY MATERIAL, WEDGE/SEAT MATERIAL, STEM CONFIGURATION, FLANGE STANDARD AND FACE-TO-FACE DIMENSION.	30
7	DN250 WAFER BFV EN	774677	VALVE, BUTTERFLY; TYPE: WAFER; NOMINAL SIZE: DN250; PRESSURE RATING: PN10; MAXIMUM OPERATING TEMPERATURE: 70 °C; END CONNECTION: WAFER, SUITABLE FOR INSTALLATION BETWEEN EN 1092-1 PN10 FLANGES; BODY MATERIAL: SPHEROIDAL GRAPHITE CAST IRON, EN-GJS-400-15, MATERIAL NUMBER EN-JS1030 (5.3106), TO EN 1563; FACE-TO-FACE DIMENSION: 68 MM, EN 558 SERIES 20; OPERATION: MANUAL; SEAT/LINING MATERIAL: EPDM; DESIGN STANDARD: EN 593; EACH VALVE SHALL BE SUPPLIED WITH AN EN 10204 TYPE 2.2 MATERIAL CERTIFICATE IN ENGLISH FOR ALL METALLIC PRESSURE-CONTAINING COMPONENTS; TENDERERS SHALL SUBMIT A TECHNICAL DATA SHEET FOR THE VALVE OFFERED FOR TECHNICAL EVALUATION.	24

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#	SHORT DESCRIPTION	STOCK NO.	TECHNICAL COMPONENT DESCRIPTION	QTY.
8	DN450 WAFER BFV API	774680	VALVE, BUTTERFLY; TYPE: WAFER, RESILIENT-SEATED; NOMINAL SIZE: DN450 (NPS 18); PRESSURE RATING: CLASS 150; MAXIMUM OPERATING TEMPERATURE: 70 °C; END CONNECTION: WAFER, SUITABLE FOR INSTALLATION BETWEEN ASME B16.5 CLASS 150 FLANGES; BODY MATERIAL: FERRITIC DUCTILE IRON, ASTM A395 GRADE 60-40-18; FACE-TO-FACE DIMENSION: 114 MM, API 609 CATEGORY A; OPERATION: MANUAL; SEAT/LINING MATERIAL: EPDM; DESIGN STANDARD: API 609, CATEGORY A; TENDERERS SHALL SUBMIT A TECHNICAL DATA SHEET FOR THE VALVE OFFERED FOR TECHNICAL EVALUATION. THE DATA SHEET SHALL CONFIRM, AS A MINIMUM, THE VALVE SIZE, PRESSURE RATING, TEMPERATURE RATING, BODY MATERIAL, DISC MATERIAL, SHAFT MATERIAL, SEAT/LINING MATERIAL, FLANGE COMPATIBILITY, FACE-TO-FACE DIMENSION AND OPERATING ARRANGEMENT.	23
9	DN450 GATE VLV ASME	774694	VALVE, GATE; TYPE: METAL-SEATED, WEDGE GATE; NOMINAL SIZE: DN450 (NPS 18); PRESSURE CLASS: ASME CLASS 150; MAXIMUM OPERATING TEMPERATURE: 70 °C; END CONNECTION: FLANGED, ASME B16.5 CLASS 150, RAISED FACE (RF); FACE-TO-FACE DIMENSION: 432 MM, ASME B16.10; BODY MATERIAL: ASTM A216 GRADE WCB; TRIM: 13Cr STAINLESS STEEL; OPERATION: MANUAL, GEARBOX AND HANDWHEEL; DESIGN STANDARD: ASME B16.34, API600; TENDERERS SHALL SUBMIT A TECHNICAL DATA SHEET FOR THE VALVE OFFERED FOR TECHNICAL EVALUATION. THE DATA SHEET SHALL CONFIRM, AS A MINIMUM, THE VALVE SIZE, PRESSURE CLASS, TEMPERATURE RATING, BODY MATERIAL, TRIM MATERIAL, SEAT CONFIGURATION, END CONNECTION, FACE-TO-FACE DIMENSION AND OPERATING ARRANGEMENT.	8
10	DN150 WAFER NRV ASME	784561	VALVE; TYPE: WAFER CHECK (NON-RETURN); NOMINAL SIZE: DN150 (NPS 6); VALVE PRESSURE CLASS: CLASS 125; MAXIMUM OPERATING TEMPERATURE: 50 °C; FACE-TO-FACE DIMENSION: ±80 MM; END CONNECTION: WAFER, SUITABLE FOR INSTALLATION BETWEEN DN150 (NPS 6) ASME B16.5 CLASS 150 FLANGES; BODY MATERIAL: ASTM A126 CLASS B; SEAT/SEAL TYPE: RESILIENT SEATED; SEAT/SEAL MATERIAL: NBR (BUNA-N); DESIGN STANDARD: API 594, WHERE APPLICABLE; VALVE DESIGN SHALL BE SUITABLE FOR THE SPECIFIED SERVICE CONDITIONS AND INSTALLATION INTERFACE. TENDERERS SHALL SUBMIT A TECHNICAL DATA SHEET FOR THE VALVE OFFERED, CLEARLY INDICATING THE VALVE GENERAL ARRANGEMENT/CROSS-SECTIONAL DRAWING, MATERIALS OF CONSTRUCTION FOR ALL MAJOR COMPONENTS, APPLICABLE DESIGN STANDARD(S), PRESSURE-TEMPERATURE RATING, FACE-TO-FACE DIMENSION AND FLANGE COMPATIBILITY.	8

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7.2 Small Bore Butterfly Valves – Bolting and Gaskets - New

The small-bore valve bolt kits shall include all required studs, nuts, washers, and gaskets for the respective valves to be installed.

The full technical descriptions, and required quantities applicable to this SOW, are listed in the Table below:

#	SHORT DESCRIPTION	STOCK NO.	DESCRIPTION	QTY.
11	BOLT KIT DN80 WAFER BUTTERFLY VALVE EN	774690	KIT, VALVE INSTALLATION; APPLICATION: DN80 WAFER-TYPE RESILIENT-SEATED BUTTERFLY VALVE, CW SYSTEM; VALVE DESIGN STANDARD: EN 593; FLANGE INTERFACE: EN 1092, PN10; KIT CONTENTS: STUDS: 8 OFF, M16 × 130 MM LONG, PROPERTY CLASS 4.6 TO ISO 898-1, HOT-DIP GALVANISED; NUTS: 16 OFF, M16 HEXAGON NUTS TO ISO 4032, PROPERTY CLASS 5 TO ISO 898-2, HOT-DIP GALVANISED; WASHERS: 16 OFF, M16 PLAIN WASHERS, NORMAL SERIES, TO ISO 7089, HOT-DIP GALVANISED; FASTENER HOT-DIP GALVANISED COATING TO ISO 10684; GASKETS: 2 OFF, NEOPRENE RUBBER, 200 MM OD × 90 MM ID × 3 MM THICK, SHORE A HARDNESS 60–75, SUITABLE FOR WATER SERVICE; TENDERERS SHALL SUBMIT TECHNICAL DATA SHEETS FOR ALL STUDS, NUTS, WASHERS AND GASKETS OFFERED FOR ESKOM ENGINEERING REVIEW PRIOR TO DELIVERY; ALL COMPONENT QUANTITIES, DIMENSIONS, MATERIALS, PROPERTY CLASSES AND APPLICABLE STANDARDS SHALL COMPLY WITH THIS STOCK DESCRIPTION.	8
12	BOLT KIT DN100 WAFER BUTTERFLY VALVE EN	774668	KIT, VALVE INSTALLATION; APPLICATION: DN100 WAFER-TYPE BUTTERFLY VALVE, CW SYSTEM; VALVE DESIGN STANDARD: EN 593; FLANGE INTERFACE: EN 1092, PN10; KIT CONTENTS: STUDS: 8 OFF, M16 × 140 MM LONG, PROPERTY CLASS 4.6 TO ISO 898-1, HOT-DIP GALVANISED; NUTS: 16 OFF, M16 HEXAGON NUTS, PROPERTY CLASS 5 TO ISO 898-2, HOT-DIP GALVANISED; WASHERS: 16 OFF, M16 PLAIN WASHERS, NORMAL SERIES, TO ISO 7089, HOT-DIP GALVANISED; GASKETS: 2 OFF, NEOPRENE RUBBER, 220 MM OD × 116 MM ID × 3 MM THICK, SHORE A HARDNESS 60–75, SUITABLE FOR WATER SERVICE; TENDERERS SHALL SUBMIT TECHNICAL DATA SHEETS FOR ALL STUDS, NUTS, WASHERS AND GASKETS OFFERED FOR ESKOM ENGINEERING REVIEW AND APPROVAL PRIOR TO DELIVERY; ALL COMPONENT QUANTITIES, DIMENSIONS, MATERIALS, PROPERTY CLASSES AND APPLICABLE STANDARDS SHALL COMPLY WITH THIS STOCK DESCRIPTION.	16

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#	SHORT DESCRIPTION	STOCK NO.	DESCRIPTION	QTY.
13	BOLT KIT DN150 GATE VALVE EN	774673	KIT, VALVE INSTALLATION; APPLICATION: DN150 MCW RESILIENT-SEATED GATE ISOLATION VALVE, CW SYSTEM; VALVE DESIGN STANDARD: EN 1074-1 AND EN 1074-2; FLANGE INTERFACE: EN 1092-2, PN10; KIT CONTENTS: STUDS: 16 OFF, M20 × 100 MM LONG, PROPERTY CLASS 4.6 TO ISO 898-1, HOT-DIP GALVANISED; NUTS: 32 OFF, M20 HEXAGON NUTS, PROPERTY CLASS 5 TO ISO 898-2, HOT-DIP GALVANISED; WASHERS: 32 OFF, M20 PLAIN WASHERS, NORMAL SERIES, TO ISO 7089, HOT-DIP GALVANISED; GASKETS: 2 OFF, NEOPRENE RUBBER, 285 MM OD × 170 MM ID × 3 MM THICK, SHORE A HARDNESS 60–75, SUITABLE FOR WATER SERVICE; TENDERERS SHALL SUBMIT TECHNICAL DATA SHEETS FOR ALL STUDS, NUTS, WASHERS AND GASKETS OFFERED FOR ESKOM ENGINEERING REVIEW AND APPROVAL PRIOR TO DELIVERY; ALL COMPONENT QUANTITIES, DIMENSIONS, MATERIALS, PROPERTY CLASSES AND APPLICABLE STANDARDS SHALL COMPLY WITH THIS STOCK DESCRIPTION.	9
14	BOLT KIT DN200 WAFER BUTTERFLY VALVE EN	774686	KIT, VALVE INSTALLATION; APPLICATION: DN200 WAFER-TYPE BUTTERFLY VALVE, CW SYSTEM; VALVE DESIGN STANDARD: EN 593; FLANGE INTERFACE: EN 1092, PN10; KIT CONTENTS: STUDS: 8 OFF, M20 × 160 MM LONG, PROPERTY CLASS 4.6 TO ISO 898-1, HOT-DIP GALVANISED; NUTS: 16 OFF, M20 HEXAGON NUTS, PROPERTY CLASS 5 TO ISO 898-2, HOT-DIP GALVANISED; WASHERS: 16 OFF, M20 PLAIN WASHERS, NORMAL SERIES, TO ISO 7089, HOT-DIP GALVANISED; GASKETS: 2 OFF, NEOPRENE RUBBER, 340 MM OD × 221 MM ID × 3 MM THICK, SHORE A HARDNESS 60–75, SUITABLE FOR WATER SERVICE; TENDERERS SHALL SUBMIT TECHNICAL DATA SHEETS FOR ALL STUDS, NUTS, WASHERS AND GASKETS OFFERED FOR ESKOM ENGINEERING REVIEW AND APPROVAL PRIOR TO DELIVERY; ALL COMPONENT QUANTITIES, DIMENSIONS, MATERIALS, PROPERTY CLASSES AND APPLICABLE STANDARDS SHALL COMPLY WITH THIS STOCK DESCRIPTION.	8

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#	SHORT DESCRIPTION	STOCK NO.	DESCRIPTION	QTY.
15	BOLT KIT DN250 GATE VALVE EN	774669	KIT, VALVE INSTALLATION; APPLICATION: DN250 MCW RESILIENT-SEATED GATE ISOLATION VALVE, CW SYSTEM; VALVE DESIGN STANDARD: EN 1074-1 AND EN 1074-2; FLANGE INTERFACE: EN 1092-2, PN10; KIT CONTENTS: STUDS: 24 OFF, M20 × 110 MM LONG, PROPERTY CLASS 4.6 TO ISO 898-1, HOT-DIP GALVANISED; NUTS: 48 OFF, M20 HEXAGON NUTS, PROPERTY CLASS 5 TO ISO 898-2, HOT-DIP GALVANISED; WASHERS: 48 OFF, M20 PLAIN WASHERS, NORMAL SERIES, TO ISO 7089, HOT-DIP GALVANISED; GASKETS: 2 OFF, NEOPRENE RUBBER, 395 MM OD × 276 MM ID × 3 MM THICK, SHORE A HARDNESS 60–75, SUITABLE FOR WATER SERVICE; TENDERERS SHALL SUBMIT TECHNICAL DATA SHEETS FOR ALL STUDS, NUTS, WASHERS AND GASKETS OFFERED FOR ESKOM ENGINEERING REVIEW AND APPROVAL PRIOR TO DELIVERY; ALL COMPONENT QUANTITIES, DIMENSIONS, MATERIALS, PROPERTY CLASSES AND APPLICABLE STANDARDS SHALL COMPLY WITH THIS STOCK DESCRIPTION.	30
16	BOLT KIT DN250 WAFER BUTTERFLY VALVE EN	774666	VALVE KIT - WAFER VALVE - KIT, VALVE REPAIR: TYPE: DN 250 WAFER TYPE BUTTERFLY VALVE (EN); APPLICATION: CW SYSTEM; SPECIFICATION: EN 593.EN1092 PN10; STUDS: 12 OF M20 X 170 MM LONG ISO 898-1 PROPERTY CLASS: 4.6 HOT-DIP GALVANIZED; NUTS: 24 OF M20 REGULAR NUTS ISO 898-2 PROPERTY CLASS: 5 HOT-DIP GALVANIZED; WASHERS: 24 OF NOMINAL SIZE 20 FLAT WASHERS ISO 7089 HOT-DIP GALVANIZED; GASKETS: TWO OFF NEOPRENE RUBBER GASKETS 395 MM X 276 MM X 3 MM THK; SHORE A HARDNESS 60–75 SUITABLE FOR WATER SERVICE; TENDERERS SHALL SUBMIT DATASHEETS FOR ALL STUDS;NUTS; WASHERS AND GASKETS FOR ESKOM ENGINEERING REVIEW AND APPROVAL PRIOR TO DELIVERY; VERIFY THAT THE QUANTITIES SUPPLIED AND THE TECHNICAL SPECIFICATIONS OF THE DELIVERED COMPONENTS COMPLY WITH THE STOCK DESCRIPTION	24

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#	SHORT DESCRIPTION	STOCK NO.	DESCRIPTION	QTY.
17	BOLT KIT DN450 GATE VALVE METAL SEAT ASME	774689	KIT, VALVE INSTALLATION; APPLICATION: DN450 (NPS 18) METAL-SEATED GATE ISOLATION VALVE, CW SYSTEM; FLANGE INTERFACE: ASME B16.5 CLASS 150; KIT CONTENTS: STUDS: 32 OFF, 1⅛ IN × 160 MM LONG, 8UN THREAD, ASTM A193 GRADE B7; NUTS: 64 OFF, 1⅛ IN HEAVY HEXAGON NUTS, 8UN THREAD, ASTM A194 GRADE 2H; WASHERS: 64 OFF, PLAIN WASHERS SUITABLE FOR 1⅛ IN STUDS; CORROSION PROTECTION: HOT-DIP GALVANISED; GASKETS: 2 OFF, NEOPRENE RUBBER, 635 MM OD × 461 MM ID × 3 MM THICK, SHORE A HARDNESS 60–75, SUITABLE FOR WATER SERVICE; TENDERERS SHALL SUBMIT TECHNICAL DATA SHEETS FOR ALL STUDS, NUTS, WASHERS AND GASKETS OFFERED FOR ESKOM ENGINEERING REVIEW AND APPROVAL PRIOR TO DELIVERY; ALL COMPONENT QUANTITIES, DIMENSIONS, MATERIALS AND APPLICABLE STANDARDS SHALL COMPLY WITH THIS STOCK DESCRIPTION.	8
18	BOLT KIT DN450 WAFER BUTTERFLY VALVE ASME	774667	KIT, VALVE INSTALLATION; APPLICATION: DN450 (NPS 18) WAFER-TYPE BUTTERFLY VALVE, CW SYSTEM; VALVE DESIGN STANDARD: API 609; FLANGE INTERFACE: ASME B16.5 CLASS 150; KIT CONTENTS: STUDS: 16 OFF, 1⅛ IN DIAMETER × 260 MM LONG, SUITABLE FOR ASME B16.5 CLASS 150 FLANGE BOLTING, HOT-DIP GALVANISED; NUTS: 32 OFF, HEXAGON NUTS, SUITABLE FOR 1⅛ IN STUDS, HOT-DIP GALVANISED; WASHERS: 32 OFF, PLAIN WASHERS, SUITABLE FOR 1⅛ IN STUDS, HOT-DIP GALVANISED; GASKETS: 2 OFF, NEOPRENE RUBBER, 635 MM OD × 461 MM ID × 3 MM THICK, SHORE A HARDNESS 60–75, SUITABLE FOR WATER SERVICE; TENDERERS SHALL SUBMIT TECHNICAL DATA SHEETS FOR ALL STUDS, NUTS, WASHERS AND GASKETS OFFERED FOR ESKOM ENGINEERING REVIEW AND APPROVAL PRIOR TO DELIVERY; ALL COMPONENT QUANTITIES, DIMENSIONS, MATERIALS AND APPLICABLE STANDARDS SHALL COMPLY WITH THIS STOCK DESCRIPTION.	23

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7.3 Small Bore Valves – Pipe Couplings – New

The DN450 butterfly valves require pipe couplings compatible with the specified flange standards.

Prior to supply, the Supplier shall submit a technical data sheet and general arrangement drawing for the proposed coupling to Eskom Turbine Engineering for review and approval. The Supplier shall not proceed with the manufacture or supply of the coupling until written approval has been provided by Eskom Turbine Engineering.

The full technical descriptions, and required quantities applicable to this SOW, are listed in the Table below:

#		STOCK NO.	DESCRIPTION	QTY.
19	PIPE COUPLING DN450 ASME	774702	COUPLING, PIPE; TYPE: FLANGED PIPE COUPLING; NOMINAL SIZE: NPS 18 (DN450); SERVICE: COOLING WATER; PRESSURE RATING: ASME CLASS 150; FLANGED CONNECTION: NPS 18, ASME B16.5 CLASS 150; PIPE OUTSIDE DIAMETER: 480 MM; COUPLING SHALL BE DESIGNED AND SIZED TO PROVIDE AN EFFECTIVE PRESSURE-TIGHT SEAL ON A PIPE WITH AN OUTSIDE DIAMETER OF 480 MM; BODY MATERIAL: STRUCTURAL STEEL, EN 10025 GRADE S275; ELASTOMERIC SEALS: EPDM, COMPLIANT WITH BS EN 681-1 AND SUITABLE FOR WATER SERVICE; FASTENERS: STAINLESS STEEL, GRADE A4-70, TO ISO 3506; COATING: WRAS-APPROVED COATING SYSTEM SUITABLE FOR WATER SERVICE, MINIMUM TOTAL DRY FILM THICKNESS: 300 µM; OVERALL COUPLING LENGTH: 253 MM; DESIGN REQUIREMENTS: EN 13480, WHERE APPLICABLE; EN 10204 TYPE 3.1 INSPECTION CERTIFICATES IN ENGLISH SHALL BE PROVIDED FOR ALL METALLIC COMPONENTS; TENDERERS SHALL SUBMIT A TECHNICAL DATA SHEET AND DIMENSIONAL DRAWING FOR THE COUPLING OFFERED FOR TECHNICAL EVALUATION. THE SUBMITTED DOCUMENTATION SHALL CONFIRM, AS A MINIMUM, THE PRESSURE RATING, FLANGE STANDARD AND CLASS, BODY MATERIAL, PIPE OD/SEALING RANGE, ELASTOMER MATERIAL, FASTENER MATERIAL, COATING SYSTEM AND THICKNESS, AND OVERALL COUPLING LENGTH.	6

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