

	Scope of Work	Hendrina Power Station
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1. INTRODUCTION

This document defines the contract works to be executed by the successful bidder, of which is evaluated and selected using the Tender Technical Evaluation process. The Scope of Work for this contract entails the supply and delivery of spares that are readily available in the market for use in the turbine plant to Hendrina Power Station on an as and when required basis.

2. SUPPORTING CLAUSES

2.1 SCOPE

The scope comprises of, but not limited to, the supply and delivery of all required Off-the-Shelf spares for the turbine plant such as bolts, nuts, washers, gaskets, bearings, etc. All spares supplied must be accompanied by quality control documentation.

2.1.1 Purpose

The purpose of this scope of work is to outline all the spare materials required, the contract work to be performed by the supplier, and the responsibilities of all parties involved. The contract scope of work serves to support the tender technical evaluation process.

2.1.2 Applicability

This document shall apply to Eskom Hendrina Power Station

2.2 NORMATIVE/INFORMATIVE REFERENCES

Parties using this document shall apply the most recent edition of the documents listed in the following paragraphs.

2.2.1 Normative

- [1] ISO 9001 Quality Management Systems
- [2] Occupational Health and Safety Act 85 of 1993
- [3] 240-168966153 - Generation Tender Technical Evaluation Procedure
- [4] 380-137062: Tender Technical Evaluation Strategy for Supply & Delivery of Turbine Auxiliaries Off-The-Shelf Spares

2.2.2 Informative

- [5] 32-1034 Eskom Procurement Policy

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2.3 DEFINITIONS

Term	Definition
Employer	The organization (Eskom) to which the supplier will be contracted for this tender and contracts that may result therefrom
Employer's Premises	Hendrina Power Station
Industrial Storage Facility	Physical space suitable for the storage of the items specified in the scope of work
Off the shelf item	A product that is available immediately and does not need to be specially made to suit a particular purpose.
Returnable	Document submitted by tenderer for evaluation in support of tender bid
Spares	Parts that can be used for replacement

2.4 ABBREVIATIONS

Term	Definition
ISO	International Organization of Standardization
QCP/QIP	Quality Control Plan / Quality Inspection Plan
PS	Power Station
SANS	South African National Standard
SAP	System Application and Products
SOW	Scope of Work

2.5 ROLES AND RESPONSIBILITIES

Turbine Engineering/Technical Support Services Department –

- Compilation of the scope of work and list of spares for this contract

Turbine Maintenance –

- Consolidate all spares in the turbine plant.
- Send all the required documentation to materials management.

Materials Management

- Placement of contract.
- Managing of the spares contract

Spares Supplier –

- Supplying and delivery of spares as per the spares contract

2.6 PROCESS FOR MONITORING

N/A

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2.7 RELATED/SUPPORTING DOCUMENTS

N/A

3. SCOPE OF WORK

Subsequent to the issuing of a task order by the Employer’s representative, the supplier must:

- Supply and deliver required spares on an “as and when required” basis for a maximum period of five(5) years from the effective date.
- If details of the spare is given including the brand and part numbers, the spare must be supplied as such.
- If the spare does not match the description on the purchase order description it will be rejected.
- Transport the spares to the Employer’s premises.
- Always keep contingency spares in storage in case of emergencies throughout the duration of the contract.
- Supply all necessary material and test certification/documentation for the spares.
- Provide confirmation of technical specification on delivery of spares.

In case of emergencies, the supplier MUST deliver the required spares to the employer’s premises WITHIN 24 hours.

List of components	Long Description	Stock number	Quantity
Kit, Seal repair	KIT, VALVE REPAIR: TYPE: CONTROL; DEARATOR OVERIDER; COMPRISING: 3 OFF VITON RU QI TYPE WITH RETAINING RINGS 52-70-10/1,3 OFF VITON O RINGS H152, 1 X VITON SQUARE RING 82-3-3, 1 X RETAINING RING/SEAL 255-293- 10/45	73224	10
SEAL: TYPE PRESSURE, 57 ID X 65 OD X 10 THK	PACKING, PREFORMED: INSIDE DIAMETER: 57 MM, OUTSIDE DIAMETER: 65 MM, THICKNESS: 10 MM, TYPE: PRESSURE, MATERIAL: GRAPHITE PURE 99 PCT; WITH 45DEG ANGLE TAPER TO THE INSIDE ON ONE END, IT IS CRITICAL FOR ALL	220063	100

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List of components	Long Description	Stock number	Quantity
	SIZES TO BE ACCURATE AND HAVE SMOOTH FINISHES, FOR USE ON HPH F/W OUTLET I/V BYPASS, RING (SQUARE), MATERIAL CERTIFICATE MUST BE SUBMITTED WITH DELIVERY; VENDORS ARE RESPONSIBLE FOR ENSURING THAT THEY ARE PERFORMING AGAINST THE CORRECT DRAWING REVISION NUMBER (IF APPLICABLE)		
BOLT ASSY:MP;M20;LG 225	BOLT, ASSEMBLY: TYPE: MULTI PURPOSE, NOMINAL DIAMETER: M20, LENGTH: 225 MM, HEAD: HEX, GRADE: 8.8, MATERIAL: HTS, NUT QUANTITY: 1; DIN931	222746	100
GLASS TUBE 1930x20x2,5mm	TUBE, METERING: SIZE: 19 MM, LENGTH: 1.96 M, MATERIAL: GLASS; FOR RESERVE FEED WATER TANK (RFT) MINIMUM PRESSURE 3 BAR; 2.5 MM THK	52812	10
SEAL,RUBBER 27X19X15 GAUGE GLASS	SEAL, RING: TYPE: GAUGE SIGHT GLASS, INSIDE DIAMETER: 19 MM, OUTSIDE DIAMETER: 27 MM, THICKNESS: 15 MM, MATERIAL: VITON; SMOOTH FINISH, OVERALL LENGTH: 15MM, TO BE DELIVERED WITH THE FOLLOWING INFO - SHELF LIFE AND STORAGE METHOD	104228	50

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List of components	Long Description	Stock number	Quantity
FILTER: TYPE CARTRIDGE, SIZE 250 MM ID X 320 MM OD X 325 MM LG	FILTER: TYPE: CARTRIDGE, DIMENSIONS: ID 250 X OD 320 X LG 325 MM, MATERIAL: POLYOLEFIN THERMALLY BONDED, MICRON: 0.3 UM, SPECIFICATION: CL F9; SUPPL P/N: LP320532C2309; AREA: 2,3 CUBIC METER, NO. OF PLEATS: 100, FOR USE ON RESERVE FEEDWATER TANK	219942	10
ASSY:FLOATING BALL AND STEM	ASSEMBLY: TYPE: FLOATING BALL/STEM, APPLICATION: MICROWIRE FILTER AUTO BLOW DOWN SYSTEM; REFERENCE NO: F514466PT; FLOATING WITH STEM; VALVE SIZE: 50 MM	215899	10
KIT: BALL V/V 50 MM SEAL KIT	KIT, VALVE REPAIR: TYPE: BALL 50 MM; SUPPL P/N: F 51; 50MM VALVE; CONSIST OF 1 X 40MM S/TH SEAL 25PCT GL; 1 X 40MM GLAND NUT L/CLIP; 1 X 40MM GLAND NUT STN/STL; 1 X 50MM BODY SEAL V/PTFE; 1 X 40MM GLAND PACK FL GRP; 2 X 40MM DISC SPRING S/S; 2 X 50MM SEAT RING FLOUROFIL N/CPR, USED ON MICRO WIRE FILTER BLOW DOWN SYSTEM	215900	10

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List of components	Long Description	Stock number	Quantity
GEARBOX:ACTUATOR;4:1;24 RPM	GEARBOX: TYPE: ACTUATOR, RATIO: 4:1, SPEED: 24 R/MIN, POWER: 1000 N M; F14 MOUNTING FLANGES; A DRIVE; GST 16.1; VENDORS ARE RESPONSIBLE FOR ENSURING THAT THEY ARE PERFORMING AGAINST THE CORRECT DRAWING REVISION NUMBER (IF APPLICABLE)	579373	5
BEARING,BALL:6206-2Z	BEARING, BALL: TYPE: DEEP GROOVE; STYLE: DOUBLE SHIELD; INSIDE DIAMETER: 30 MM; OUTSIDE DIAMETER: 62 MM; WIDTH: 16 MM; ROW: SINGLE; SUPPL P/N: 6206-2Z; VENDORS ARE RESPONSIBLE FOR ENSURING THAT THEY ARE PERFORMING AGAINST THE CORRECT DRAWING REVISION NUMBER (IF APPLICABLE).	29837	10
SEAL MECHANICAL	Mechanical seal: double face mechanical seal, 0350MFDBVCSXN Drawing No: LD11	0754335	10
SCREEN: FILTER; MESH	SCREEN: TYPE: FILTER, MESH SIZE: SQ 28 MM, WIRE SIZE: 0.15 MM, MATERIAL: SS; FINE STRAINING MESH, SUPPLIED IN SHEETS 1.5 SQ M, FOR USE ON MICROWIRE FILTER UNITS 1 AND 6 - 10; VENDORS ARE RESPONSIBLE FOR ENSURING THAT THEY ARE PERFORMING	51872	5

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List of components	Long Description	Stock number	Quantity
	AGAINST THE CORRECT DRAWING REVISION NUMBER (IF APPLICABLE)		
SEAL, OIL: TYPE DOUBLE LIP - INPUT SHAFT	SEAL, OIL: TYPE: DOUBLE LIP, INSIDE DIAMETER: 1-3/8 IN, OUTSIDE DIAMETER: 2-1/4 IN, WIDTH: 3/8 IN, MATERIAL: NITRILE, SPRING LOADED: YES; SUPPL P/N: D2601225; FOR USE ON MICROWIRE FILTER GEARBOX	219878	10
SEAL, OIL: TYPE DOUBLE LIP - OUTPUT SHAFT	SEAL, OIL: TYPE: DOUBLE LIP, INSIDE DIAMETER: 2-1/2 IN, OUTSIDE DIAMETER: 3-1/4 IN, WIDTH: 3/8 IN, MATERIAL: NITRILE, SEALING MEMBER: DOUBLE LIP, SPRING LOADED: YES; SUPPL P/N: D2601325; FOR USE ON MICROWIRE FILTER GEARBOX	219880	10
PACKING:PREFORMED: ID 698 X OD 753.1 X 45 Consist of 2 parts	GASKET, PRE CUT: DIMENSIONS: ID 698 X OD 753.1 X THK 45 MM, TYPE: CASS HP HEATER PREFORMED, MATERIAL: GRAPHITE PURE 99.8 PCT, SHAPE: RECT; CONSIST OF 2 X 45 DEG PARTS, MUST BE REINFORCED WITH INCONNEL WIRE MESH 16 X 16, STATOTHERM COVER SEAL STYLE 0881/AI7- BURGMANN, OPERATING TEMP OF 250 DEG, OPERATING PRESSURE 204 BAR, MATERIAL	52820	20

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List of components	Long Description	Stock number	Quantity
	CERTIFICATE TO BE ISSUED ON DELIVERY		
PACKING:PREFORMED: ID 680 x OD 720 x 30 45 degree taper	PACKING, PREFORMED: INSIDE DIAMETER: 680 MM, OUTSIDE DIAMETER: 720 MM, THICKNESS: 30 MM, TYPE: RING, MATERIAL: GRAPHITE PURE 99.8 PCT; BULKE HP HEATER; STATOTHERM COVER SEAL STYLE V881/I7, 45 DEG TAPER, MUST BE REINFORCED WITH INCONNEL WIRE MESH 16X16, OPERATING TEMP OF 250 DEG C, OPERATING PRSSURE OF 204 BAR, MATERIAL CERTIFICATE TO ISSUED ON DELIVERY; VENDORS ARE RESPONSIBLE FOR ENSURING THAT THEY ARE PERFORMING AGAINST THE CORRECT DRAWING REVISION NUMBER (IF APPLICABLE)	104225	20
RING,PISTON	RING, PISTON: INSIDE DIAMETER: 105 MM, OUTSIDE DIAMETER: 115 MM, THICKNESS: 4 MM, MATERIAL: BRS; REFERENCE NO: 209EV21; POSITION	73254	10

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List of components	Long Description	Stock number	Quantity
	58; FOR 3 WAY BY-PASS VALVE, PERSTA		
RING,SCRAPER	RING: TYPE: SCRAPER, INSIDE DIAMETER: 55 MM, OUTSIDE DIAMETER: 65 MM, WIDTH: 3 MM, MATERIAL: STL 1.4086; REFERENCE NO: 209EV21; FOR BABCOCK THREE WAY BYPASS VALVE PERSTA, POSITION 63, D.B THERMAL	73253	10
ASSY:STEM/DISC;	ASSEMBLY: TYPE: STEAM/DISC, MATERIAL: 1.4057 CR PLTD; WITH DISC; FOR 3 WAY BYPASS VALVE; COMPLETE WITH HALF RINGS; RETAINING NUT AND LOCKING PLATE; FINISH N4; DISC MATERIAL 15MO3; SEATS HARD FORCED	73255	5
SEAL:VIRINTA 245.2 x 280 x 20	SEAL: TYPE: VIRINTA, DIMENSIONS: ID 245.2 X OD 280 X THK 20 MM, MATERIAL: GRAPHITE PURE 99.8 PCT; SUPPL P/N: AN16075.4; SUPPL P/N: AN16074.4; FIG NO: 000694; MAXIMUM PRESSURE 190BAR, FOR 2-WAY VALVE, SMOOTH FINISHES, MATERIAL CERTIFICATE TO BE SUBMITTED	101522	10

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List of components	Long Description	Stock number	Quantity
SEAL:VIRINTA 245.2 x 280 x 24	SEAL: TYPE: VIRINTA, DIMENSIONS: ID 245.2 X OD 280 X THK 24 MM, MATERIAL: GRAPHITE PURE 99.8 PCT; SUPPL P/N: AN18015.4; DRAWING NO: 71529-73439, REV 1; COVER, STYLE V881 45 DEG TAPER, FOR 3-WAY VALVE, SMOOTH FINISHES, MATERIAL CERTIFICATE TO BE SUBMITTED	104408	10
SEAL:VIRINTA 225 x 194,2 x 28	SEAL: TYPE: VALVE COVER, DIMENSIONS: ID 194.2 X OD 224 X THK 28 MM, MATERIAL: GRAPHITE PURE 99.8 PCT W/REINFORCING; SUPPL P/N: AN19280.4; STYLE V0881/AI7, 45DEGREE TAPER, SMOOTH ID AND OD FINISH, VIRINTA JOINT FOR USE ON BABCOCK 3 WAY VALVE WITH 190BAR MAX PREESURE, MATERIAL CERTIFICATE TO BE SUBMITTED	104234	10
SEAL:VIRINTA 193 x 224 x 32	PACKING, PREFORMED: INSIDE DIAMETER: 193 MM, OUTSIDE DIAMETER: 224 MM, THICKNESS: 32 MM, MATERIAL: GRAPHITE; DRAWING NO: 21.7159.9 POS 8, REV 1; DRAWING NO: AN 142804, REV 1; REFERENCE NO: 27; GASKETS, FOR 3 WAY BYPASS VALVE, MATERIAL	104409	10

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List of components	Long Description	Stock number	Quantity
	SPECIFICATION 21.734 3.9, NONE ASBESTOS, ONLY BURGMANN STATOTHERM COVER SEALS STYLE V881 45 DEGREE TAPER, PURE 99.8PCT ACCEPTABLE; VENDORS ARE RESPONSIBLE FOR ENSURING THAT THEY ARE PERFORMING AGAINST THE CORRECT DRAWING REVISION NUMBER (IF APPLICABLE)		
SEAL:VIRINTA 99 x 82 x 17	PACKING, PREFORMED: INSIDE DIAMETER: 82 MM, OUTSIDE DIAMETER: 99 MM, THICKNESS: 17 MM, MATERIAL: GRAPHITE; SHAPE V RING, MATERIAL CERTIFICATE TO BE SUBMITTED; VENDORS ARE RESPONSIBLE FOR ENSURING THAT THEY ARE PERFORMING AGAINST THE CORRECT DRAWING REVISION NUMBER (IF APPLICABLE)	104407	10
RING,PISTON	RING, PISTON: INSIDE DIAMETER: 105 MM, OUTSIDE DIAMETER: 115 MM, THICKNESS: 4 MM, MATERIAL: BRS; REFERENCE NO: 209EV21; POSITION 58; FOR 3 WAY BY- PASS VALVE, PERSTA	73254	10
RING,SCRAPER	RING: TYPE: SCRAPER, INSIDE DIAMETER: 55 MM, OUTSIDE DIAMETER: 65 MM, WIDTH: 3 MM, MATERIAL: STL	73253	10

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List of components	Long Description	Stock number	Quantity
	1.4086; REFERENCE NO: 209EV21; FOR BABCOCK THREE WAY BYPASS VALVE PERSTA, POSITION 63, D.B THERMAL		
ASSY:STEM/DISC;	ASSEMBLY: TYPE: STEM/DISC, MATERIAL: 1.4057 CR PLTD; AND DISC; FOR T FORM 2 WAY BYPASS VALVE; COMPLETE WITH HALF RINGS; RETAINING NUT AND LOCKING PLATE; FINISH N4; DISC MATERIAL 15MO3; SEAT HARD FACED	73256	10
SEAL:VIRINTA 224 x 194,2 x 32	PACKING, PREFORMED: INSIDE DIAMETER: 194.2 MM, OUTSIDE DIAMETER: 224 MM, THICKNESS: 32 MM, TYPE: V RING, MATERIAL: GRAPHITE PURE 99.8 PCT; FIG NO: 000694; JOINT AN 19280.4 FOR USE ON 2WAY VALVE AN16075.4 AND AN16074.4 MAX PRESSURE 190 BAR, ONLY BURGMANN STATOTHERM COVER SEALS STYLE V881, 45 DEGREE TAPER, WITH REINFORCING ACCEPTABLE SMOOTH ID AND OD FINISH, MATERIAL CERTIFICATE TO BE SUBMITTED; VENDORS ARE RESPONSIBLE FOR ENSURING THAT THEY ARE PERFORMING	101527	10

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List of components	Long Description	Stock number	Quantity
	AGAINST THE CORRECT DRAWING REVISION NUMBER (IF APPLICABLE)		
SEAL:VIRINTA 245.2 x 280 x 20	SEAL: TYPE: VIRINTA, DIMENSIONS: ID 245.2 X OD 280 X THK 20 MM, MATERIAL: GRAPHITE PURE 99.8 PCT; SUPPL P/N: AN16075.4; SUPPL P/N: AN16074.4; FIG NO: 000694; MAXIMUM PRESSURE 190BAR, FOR 2-WAY VALVE, SMOOTH FINISHES, MATERIAL CERTIFICATE TO BE SUBMITTED	101522	10
SEAL:VIRINTA 245.2 x 280 x 24	SEAL: TYPE: VIRINTA, DIMENSIONS: ID 245.2 X OD 280 X THK 24 MM, MATERIAL: GRAPHITE PURE 99.8 PCT; SUPPL P/N: AN18015.4; DRAWING NO: 71529-73439, REV 1; COVER, STYLE V881 45 DEG TAPER, FOR 3-WAY VALVE, SMOOTH FINISHES, MATERIAL CERTIFICATE TO BE SUBMITTED	104408	10

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List of components	Long Description	Stock number	Quantity
GAUGE,PYREX H/P 1050LGX16MM OD	GLASS, SIGHT: DIMENSIONS: ID 9 MM X OD 16 MM X LG 2 M, MATERIAL: GLASS PYREX, COLOR: CLEAR; HIGH PRESSURE	161882	5
GLASS,GAUGE 1220MMX20MM	GLASS, LEVEL GAUGE: DIMENSIONS: OD 20 MM X LG 1.22 M X WALL THK 2.5 MM, TYPE: HIGH PRESSURE, COLOR: CLEAR	161884	5
COOLER FLD INDSTRL:7-03953A;WATER	COOLER, FLUID INDUSTRIAL: TYPE: WATER, MATERIAL: SS GR 304, CAPACITY RATING: 45 L/MIN, CORE FRONTAL AREA: 330 MM2, RELIABILITY INDICATOR: PERFOMANCE CURVE; MANUF P/N: 7- 03953A; FLR SAMPLE COOLER; SHELL RATINGS 31 BAR @ 343 DEG C; TUBE RATING 345 @ 538 DEG C; TUBE MATERIAL 316/316 SHELL MATERIAL 304SS; AREA 0.33M2; VENDORS ARE RESPONSIBLE FOR ENSURING THAT THEY ARE PERFORMING AGAINST THE CORRECT DRAWING REVISION NUMBER (IF APPLICABLE)	627451	5

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List of components	Long Description	Stock number	Quantity
STEAM TRAP	TRAP, STEAM: TYPE: AUTOMATIC, CONNECTION: BW, PRESSURE RATING: 250 BAR, MATERIAL: 10CRMO910; REFERENCE NO: BK212; FOR USE ON AEG KANIS TURBINE (BK212 15MM); VENDORS ARE RESPONSIBLE FOR ENSURING THAT THEY ARE PERFORMING AGAINST THE CORRECT DRAWING REVISION NUMBER (IF APPLICABLE)	58553	5
BALL FLOAT	FLOAT: TYPE: RD BALL, DIMENSIONS: DIA 195 X LG 273 MM, MATERIAL: SS; SUPPL P/N: 45117-503; VALVE; VENDORS ARE RESPONSIBLE FOR ENSURING THAT THEY ARE PERFORMING AGAINST THE CORRECT DRAWING REVISION NUMBER (IF APPLICABLE)	63836	5
Seal flange	SEAL: TYPE: FLANGE, MATERIAL: PTFE; SIZE: 14MM ID; SPECIFICATION: ISO 9002; LENGTH: 5 M; PH VALUE RANGE: 0-14; MAX PRESSURE: 3000 PSI; TEMPERATURE RANGE: -240 TO 300 DEG C	101460	5
LP Heater plugs	PLUG: TYPE: LP HEATER, SIZE: 17.7 MM, MATERIAL: MILD STL; LENGTH 60.2MM	632139	5

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List of components	Long Description	Stock number	Quantity
PIPE, METALLIC: OD 323.9 MM; x 4MM WT	PIPE, METALLIC: NOMINAL PIPE SIZE DESIGNATION: 323.9 MM, MATERIAL: STL 1.0345, LENGTH: 6 M, WALL THICKNESS: 4 MM, CONSTRUCTION: SEAMLESS, END TYPE: BW, MAXIMUM OPERATING PRESSURE: 1489.27 KPA, MAXIMUM OPERATING TEMP: 40 DEG C, GRADE: P235GH, SPECIFICATION: BS EN 10216-2; DRAWING NO: ITEM42, REV 0; REQUIREMENT DOC: 204-86546783-REV.1; MATERIAL CERTIFICATE 3.1 IN COMPLAINCE TO BS EN 10204-2004	655425	5
PLUG:EXPANDABLE RUBBER	PLUG: TYPE: EXPANDABLE RUBBER, SIZE: OD 21 X LG 41.50 MM, MATERIAL: CHLOROPRENE; EXPANDABLE CONDENSER RUBBER PLUG FOR SEALING CONDENSER TUBE LEAKS; RUBBER HARDNESS MUST BE GREATER THAN SHORE 70 BOLT MATERIAL; STAINLESS STEEL; NUT MATERIAL BRASS; MINIMUM BOLT DIAMETER BOLT DIAMETER 6MM; EXTERNAL WASHER MATERIAL BRASS OR STAINLESS STEEL; EXTERNAL WASHER DIAMETER 26.50MM; EXTERNAL WASHER	659679	5

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List of components	Long Description	Stock number	Quantity
	THICKNESS 1MM; INTERNAL WASHER DIAMETER 20MM; INTERNAL WASHER THICKNESS 1MM; DIFFERENTIAL PRESSURE RATING 350KPA; TEMPERATURE RATING 50 DEG C		
BEARING,BALL:6308-2RS	BEARING, BALL: TYPE: CONRAD; STYLE: DOUBLE SEAL; INSIDE DIAMETER: 40 MM; OUTSIDE DIAMETER: 90 MM; WIDTH: 23 MM; ROW: SINGLE; SUPPL P/N: 6308-2RS; VENDORS ARE RESPONSIBLE FOR ENSURING THAT THEY ARE PERFORMING AGAINST THE CORRECT DRAWING REVISION NUMBER (IF APPLICABLE).	29942	5
BEARING,BALL:6307-2RS	BEARING, BALL: TYPE: DEEP GROOVE, STYLE: DOUBLE SEAL, INSIDE DIAMETER: 35 MM, OUTSIDE DIAMETER: 80 MM, WIDTH: 21 MM, ROW: SINGLE; SUPPL P/N: 6307-2RS; VENDORS ARE RESPONSIBLE FOR ENSURING THAT THEY ARE PERFORMING AGAINST THE CORRECT DRAWING REVISION NUMBER (IF APPLICABLE)	30267	5

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List of components	Long Description	Stock number	Quantity
BEARING,BALL:6307-2Z	BEARING, BALL: TYPE: DEEP GROOVE, STYLE: DOUBLE SHIELD, INSIDE DIAMETER: 35 MM, OUTSIDE DIAMETER: 80 MM, WIDTH: 21 MM, ROW: SINGLE; SUPPL P/N: 6307-2Z; NOTE: MUST BE ORIGINAL PACKED; VENDORS ARE RESPONSIBLE FOR ENSURING THAT THEY ARE PERFORMING AGAINST THE CORRECT DRAWING REVISION NUMBER (IF APPLICABLE)	32254	5
COVER DUST STEEL	COVER: TYPE: DUST, DIMENSIONS: ID 34 X OD 67 X THK 8 MM, MATERIAL: STL; FOR NORMAR FLOW PUMP NE/NF 100-250	214022	5
SHAFT 548mm x 30mm S/S	SHAFT, PUMP: LENGTH: 548 MM, MATERIAL: SS, NOMINAL DIAMETER: 30 MM; SUPPL P/N: 02314; FOR NORMAFLOW PUMP NE/NF 100-250, MIDDLE SIZE 48MM, COUPLING 32MM, BEARING DE 35MM, NDE 40MM, GLAND SLEEVE 38MM	214024	5
SEAL, MECHANICAL	SEAL, MECHANICAL: SHAFT DIAMETER: 38 MM, BODY MATERIAL: BVPFF, APPLICATION: WATER PUMP; SUPPL P/N: 041 592 000; REFERENCE NO: J0281; FACE MATERIAL: CARBON CERAMIC, NORMAL FLOW NE 100-250,	215892	5

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List of components	Long Description	Stock number	Quantity
	MG 921/1.500-G50; VENDORS ARE RESPONSIBLE FOR ENSURING THAT THEY ARE PERFORMING AGAINST THE CORRECT DRAWING REVISION NUMBER (IF APPLICABLE)		
VT-40 Plate Heat Exchanger Plate Stainless Steel material and fitted with Nitrile clip on rubber gaskets(316ss 0.6mm)	PLATE: TYPE: HEAT EXCHANGER, DIMENSIONS: WD 425 MM X LG 1.4 M X THK 5 MM, MATERIAL: SS; MANUF P/N: 171/5386; REFERENCE NO: 171/5386; FITTED WITH NITRILE CLIP ON RUBBER; VT40	632001	5
GASKET SET:SEAL;HEAT EXCHANGER;171	GASKET SET: TYPE: SEAL, APPLICATION: HEAT EXCHANGER, QUANTITY: 171; MODEL NUMBER: D31157; TYPE GEA AHL BORN; VT 40 PLATE, TWO END PLATE MATERIAL EPDM; VENDORS ARE RESPONSIBLE FOR ENSURING THAT THEY ARE PERFORMING AGAINST THE CORRECT DRAWING REVISION NUMBER (IF APPLICABLE)	101479	20
VT40 Port rings	RING: TYPE: EVAPORATOR, INSIDE DIAMETER: 130 MM, OUTSIDE DIAMETER: 145 MM, WIDTH: 8 MM, MATERIAL: VITON; VT40	631454	20
NBR Gasket	GASKET: TYPE: SEALING, DIMENSIONS: ID 13.5 X THK 2 MM,	631452	20

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List of components	Long Description	Stock number	Quantity
	MATERIAL: RUBBER; GASKET O RING; PLATE HEAT EXCHANGER; HOLLOW STRIP; SECTIONAL SHAPE O SHAPE		
M30 Bolts	NUT: TYPE: HEAT EXCHANGER, DIAMETER: 30 MM, THREAD: V THREAD, MATERIAL: MILD STEEL	631929	50
Nuts	STUD: TYPE: PLATE HEAT EXCHANGER, DIAMETER: 30 MM, THREAD: V THREAD, LENGTH: 1.05 M, MATERIAL: MILD STEEL, THREAD LENGTH: 3 MM	631928	50
COUPLING TURBOFLEX	COUPLING, SHAFT FLEXIBLE: TYPE: TURBOFLEX; BORE DIAMETER: 101 X 81 MM; MATERIAL: STL; MODEL NUMBER: HBS1500-8; 276 MM OUTSIDE DIAMETER, 472 MM LENGTH, FOR USE ON 50PST KSB FEED PUMP HCD6N/8, ITEM TO BE PACKED AND PRESERVED AND CLEARLY MARKED; VENDORS ARE RESPONSIBLE FOR ENSURING THAT THEY ARE PERFORMING AGAINST THE CORRECT DRAWING REVISION NUMBER (IF APPLICABLE).	240298	10

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List of components	Long Description	Stock number	Quantity
COUPLING TURBOFLEX BOLTS	BOLT: TYPE: TURBOFLEX COUPLING; DIAMETER: 12.5 MM; LENGTH: 64 MM; HEAD: HALF RD; GRADE: B15456-3; MATERIAL: B15456-3; THREAD: 1.5 MM; SPECIFICATION: B15456-3; MODEL NUMBER: HBS1500-8; ON 50 PCT KSB FEEDPUMP HCD6N/8, TO BE SUPPLIERD AS A MATCHED SET OF 16	240299	10
COUPLING TURBOFLEX MEMBRANE	MEMBRANE: TYPE: TURBOFLEX COUPLING; MATERIAL: STL; MODEL NUMBER: HBS1500-8; SIZE: 180MM DIA X 17.4MM THK, FOR USE ON HBS 1500-8 ON 50PCT KSB FEED PUMP HCD6N/8, ITEMS TO BE PACKED AS A SET AND CLEARLY MARKED	240300	10
PUMP PACKING 18 MM BURGMANN 6230/SL	PACKING, BULK: WIDTH: 18 MM; MATERIAL: GRAPHITE/PTFE; SHAPE: SQ; SUPPL P/N: 6230/SL; TO BE SUPPLIED IN MULTIPLES OF 2.5KG OR 5KG BOXES, DEPENDING ON ORDER QUANTITY; BURGMAN BRAND ONLY ACCEPTABLE, NO SUBSTITUTES	235230	5

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List of components	Long Description	Stock number	Quantity
STAND-BY OIL PUMP COMP WITH MOTOR	PUMP, CENTRIFUGAL: SPEED: 1410 R/MIN, DRIVER: ELECTRIC MOTOR 380 V 1.5 KW, TYPE: OIL CIRCULATING; REFERENCE NO: KF1/24D10KN000DD1; REFERENCE NO: DKF1404 (P0010080046); TYPE KRACHT Z122/23, INSULATED FOR CONTINUOUS RUNNING, COMPLETE WITH BELLHOUSING COUPLING AND MOTOR, FOR USE ON ELECTRIC FEED, STANDBY OIL	141142	5
GAUGE,PYREX H/P 1050LGX16MM OD	GLASS, SIGHT: DIMENSIONS: ID 9 MM X OD 16 MM X LG 2 M, MATERIAL: GLASS PYREX, COLOR: CLEAR; HIGH PRESSURE	161882	5
INDICATOR,FLOW 15MM 0.04-0.20L/SEC KYTOL	METER, FLOW: TYPE: LIQUID; CONNECTION: 15 MM; RANGE: 0.04- 0.2 L/S; MATERIAL: PLASTIC; MEDIUM: LIQUID	152127	5
INDICATOR,FLOW 15MM 0.05-0.30L/SEC KYTOL	METER, FLOW: TYPE: LIQUID; CONNECTION: 15 MM; RANGE: 0.05- 0.3 L/S; MATERIAL: PLASTIC; MEDIUM: LIQUID	152128	5
INDICATOR,FLOW 20MM 0.10-0.50L/SEC KYTOL	METER, FLOW: TYPE: LIQUID; CONNECTION: 20 MM; RANGE: 0.1- 0.5 L/S; MATERIAL: PLASTIC; MEDIUM: LIQUID; REFERENCE NO: HRK AC58; REFERENCE NO: HRV	152129	5

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List of components	Long Description	Stock number	Quantity
INDICATOR,FLOW 20MM 0.20-1.00L/SEC KYTOL	METER, FLOW: TYPE: LIQUID, CONNECTION: BSP 3/4 IN, RANGE: 0.2-1 L/S, MATERIAL: PLASTIC, MEDIUM: LIQUID; MODEL NUMBER: HK-AC56	152130	5
INDICATOR,FLOW 32MM 0.20-2.00L/SEC KYTOL	METER, FLOW: CONNECTION: 32 MM; RANGE: 0-2 L/S; MATERIAL: PLASTIC; MEDIUM: LIQUID	154347	5
COOLER SENTRY	COOLER, FLUID INDUSTRIAL: TYPE: WATER, MATERIAL: SS GR 304, CAPACITY RATING: 45 L/MIN, CORE FRONTAL AREA: 330 MM2, RELIABILITY INDICATOR: PERFORMANCE CURVE; MANUF P/N: 7-03953A; FLR SAMPLE COOLER; SHELL RATINGS 31 BAR @ 343 DEG C; TUBE RATING 345 @ 538 DEG C; TUBE MATERIAL 316/316 SHELL MATERIAL 304SS; AREA 0.33M2; VENDORS ARE RESPONSIBLE FOR ENSURING THAT THEY ARE PERFORMING AGAINST THE CORRECT DRAWING REVISION NUMBER (IF APPLICABLE)	627451	10

3.1 EFFECTIVE DATE

This document will be effective from the date that the contract is authorised.

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3.2 WORKS

A list of the spares to be supplied and delivered by the Supplier is supplied in the table below:

3.3 MATERIAL CERTIFICATES AND GUARANTEES

The following documentation must be supplied to the Employer's representative before any item is accepted on site:

- Material Certificate for all metallic products.
- Applicable guarantee/warranty, where applicable.

3.4 GENERAL REQUIREMENTS

Other spares not listed in the spares list can and will be required on an as and when basis subject to approval by both the employer and the supplier.

3.4.1 Storage

The supplier must have a suitably sized storage facility where a minimum amount of all the spares are to be kept for when the Employer requires them urgently. It is the responsibility of the supplier to ensure the safekeeping of spares, and that the quality of spares is not negatively impacted whilst in storage.

The spares must always be available and ready for delivery at the Employer's premises at request.

3.4.2 Handling And Transportation

The supplier is expected to practice safe handling techniques during the unloading, offloading, and throughout the transportation of the spares. The Employer's representative will not accept any damaged items upon delivery.

Should the delivered spares be found to be defective or non-functional during or after delivery, the supplier remains responsible for the handling and transportation in the replacement process of the item(s).

4. AUTHORISATION

This document has been seen and accepted by:

Name & Surname	Designation

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5. REVISIONS

Date	Rev.	Compiler	Remarks

6. DEVELOPMENT TEAM

The following people were involved in the development of this document:

7. ACKNOWLEDGEMENTS

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