



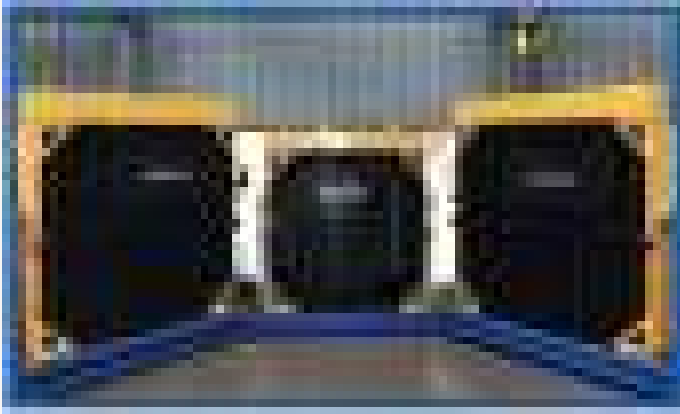
# **BSSC** **RADIATORS** EST. 1980

## **COMPANY PROFILE**






**MANUFACTURE | REPAIRS | SALES | SERVICES**  
**RADIATORS | INTER-COOLERS | VARIOUS OIL COOLERS | HEAT EXCHANGERS | FANS**








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BSSC RADIATORS (PTY LTD)

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# OUR COMPANY

## ABOUT US



Welcome to BSSC Radiators, a privately owned and proudly South African company founded in 2009, with industry experience dating back to the late 1980s and still owned by the Bennett family.

Continued development has transformed the company into a market leader in the field with over 40 years of abounding and diverse service in the mining industry.

We specialise in a wide range of heat-transfer products and services.

Our competitive advantage is our industry knowledge, solutions-focused approach, and commitment to personalised services, quality standards, the latest innovative practices and reliability, allowing our customers and strategic partners to feel reassured with our complete turnkey capability.

### OUR ICONOGRAPHY

ILLUSTRATED IN 3 PILLARS



QUALITY



HEALTH & SAFETY



ENVIRONMENTAL  
STANDARDS

## VISION STATEMENT

- ✓ Remain a market leader in the heat-transfer industry.
- ✓ Constantly strive to develop more efficient cooling solutions.
- ✓ An uncompromising determination to achieve a 'first time, every time' ethos.

## MISSION STATEMENT

- ✓ To provide high-grade solution-based heat transfer products for our clients' requirements.
- ✓ To design heat-transfer products that will improve the cooling system capabilities for a high output and long-lasting lifespan.
- ✓ To maximise customer satisfaction by providing a superior service to our clients in a timely and personalised manner.

***"WHERE FAMILY AND BUSINESS COME TOGETHER"***



## PROUDLY SOUTH AFRICAN

BSSC RADIATORS (PTY) LTD IS AN APPROVED MEMBER OF PROUDLY SOUTH AFRICAN



## OUR CLIENTS

WE PRIDE OURSELVES IN CUSTOMER SERVICE WITH AN EXTENSIVE FOOTPRINT WITHIN SOUTH AFRICA.



We supply products and services to the following industries and sectors:

- Mining & Earthmoving
- Forestry
- Plant Hire & Contractors
- Transportation
- Industrial
- Gas & Oil
- Locomotive
- Various OEMs
- Agricultural
- Other Radiator Outlets

## OUR SERVICES



### 01. COLLECTION & DELIVERY SERVICES

On-site collection and delivery.



### 02. BREAKDOWN - "RADIATOR 911"

We provide a 24/48-hour turnaround time service within our capacity.



### 03. FIELD SERVICE

Our standby team is available 24/7 to provide on-site breakdown services.



### 04. SERVICE EXCHANGE - PEX COMPONENTS

We have a wide range of complete cooling packs available.

## WARRANTY

Application	Type of Core	Repairs	Re-cores
On-Road	Conventional - Copper / Aluminium / Steel	12 Months	12 Months
Off-Road	Conventional - Copper / Aluminium / Steel	6 Months	6 Months
	Removable Tube - Copper / Aluminium	60 Months	60 Months
	Folded / Modular / Segmented	6 Months	6 Months

**ALL WARRANTY PERIODS START FROM DATE OF INSTALLATION**



# SERVICE EXCHANGE PROGRAM

*"AN INNOVATIVE FLEET MAINTENANCE SOLUTION"*

## YOUR SATISFACTION IS OUR COMMITMENT

BSSC Radiators is dedicated in providing our clients with heat transfer solutions for over 40 years. Our service exchange program enables our clients to have immediate access to a heat transfer solution for planned maintenance or emergency breakdown services.

## PLANNED MAINTENANCE PROGRAM

Fast-track your equipment repairs, minimize risk, and shorten your downtime with our service exchange program and avoid costly part availability issues, which has become a common problem in the mining industry.

- ✓ Effectively reduce mining equipment downtime
- ✓ Easier and safer maintenance for your fleet
- ✓ Guaranteed availability for planned maintenance
- ✓ Service exchange components on site ready for changeout

## EMERGENCY BREAKDOWN SERVICES "RADIATOR 911"

In emergency breakdown situations, our service exchange components are available for immediate delivery to site. In the event of insufficient stock availability, a 24/48-hour turnaround service within our capacity will be provided on a breakdown bases.

## SERVICE EXCHANGE PRODUCTS AND PARTS

BSSC Radiators have a comprehensive range of service exchange radiators, inter-coolers, various oil coolers, complete nosecone units, cooling packs and fans. As the demand continues to grow for this service, so does our range of service exchange parts.



**CAT 994H  
NOSEPHONE UNIT**



**CAT 994H  
COMPLETE COOLING PACK**

## OUR SERVICE EXCHANGE PROCESS



# RESEARCH & DEVELOPMENT

***"OUR HEAT-TRANSFER ENGINEERS HAVE THE SOLUTION FOR YOU"***

## ENGINEERING

Our engineering team draws on more than 40 years of experience servicing the mining industry, ensuring delivery of the most efficient product, designed and manufactured to customer specifications.

Taking your design specifications and our application knowledge, we develop each product as a fit-for-purpose solution, that meets all our clients' thermal requirements. Irrespective of the duty or application, we have the experience to optimise the heat transfer product for you.

## DESIGN - ADDING VALUE TO EVERY BLUEPRINT

We mechanically design every new heat transfer package using 3D AutoCAD Software. As part of the '5-step' process, we supply a 3D model to our customers for integration into their own designs. This resolves fitment delays when the final product is installed on-site, offering a complete 'turnkey' solution.

We have invested significantly in our capability for value engineering and optimising designs for cost, manufacture, reliability, operation, and serviceability. This manifests in our professional and user-friendly products.

## IN-HOUSE

- ✔ Dedicated drawing department
- ✔ Qualified draftsmen
- ✔ Various coded welders
- ✔ Full-fledged machine shop



**KOMATSU 960E-1/2 COOLING PACK  
AUTOCAD EXPLODED RENDERING**

## MANUFACTURING - WE'VE MADE PASSION OUR RAW MATERIAL

Our in-house fabrication capacity enables us to produce complex products with a high degree of quality control and short lead times as part of our solutions offering.

We can reliably produce customised products in low volumes while meeting all necessary compliance requirements, including material and dimensional specifications for our customers.

## WELDING - WE OFFER A WIDE RANGE OF FULLY COMPLIANT ENGINEERED SOLUTIONS

We have developed a vast array of qualified welding procedures and welders to support a wide variety of products. We can comply with project-specific standard requirements, be they international or local applications for specific vibration, durability, performance, corrosion protection and safety.

## INSTALLATION, TESTING & COMMISSIONING

Our specialised heat transfer engineers offer an 'end-to-end' service experience beginning with the testing of your plant and equipment to understand the performance and upgrade options available, through to the installation and commissioning of the heat transfer system.

### END-TO-END PROCESS





# GENERAL PRODUCT OVERVIEW

## VARIOUS AUTO-MOTIVE COOLERS

- Transmission Oil Coolers
- Hydraulic Oil Coolers
- Engine Oil Coolers
- Fuel Coolers



## TUBE AND SHELL COOLERS

For both in-plant and mobile equipment

### STANDARD OPERATING PRESSURES

Shell Side: (1000kPa)  
Tube Side: (350kPa)

### MAXIMUM TEMPERATURE

Water: 110°C  
Oil: 135°C

### ADVANTAGES:

- High pressure
- Various configurations of length and dimension
- Available in corrosion-resistant materials



## '4 STEP' CLEANING PROCESS



HIGH PRESSURE  
FLUSH



CHEMICAL  
CLEAN



ULTRA SONIC  
CLEAN



HYDRAULIC  
SHOCK LOADING

## COMPRESSOR OIL COOLERS

BSSC Radiators have the necessary specialised in-house testing facilities available to successfully test compressor oil coolers.

## INTER-COOLERS | AFTER-COOLERS

BSSC Radiators specialises in a wide range of aluminium Air-Air products.

CONFIGURATIONS		TYPE
OPTION 1	PLASTIC TANKS/ALUMINIUM CORE	CRIMP ON
OPTION 2	COMPLETE ALUMINIUM UNIT	WELD ON



**"KEEPING IT COOL UNDER PRESSURE"**





## AIR-CONDITIONING PRODUCTS AND PARTS

We supply new complete parts to OEM specifications

### CONDENSERS



### POLLEN FILTERS



### COMPRESSORS



### GAS R134A / R1234YF



### EVAPORATORS



### ACCESSORIES AND TOOLING



## FAN DIVISION

We specialise in a wide range of earth moving fans, manufactured and repaired to OEM specifications.

TYPE	SUPPLY / SERVICE	BALANCING
STEEL	NEW COMPLETE, RE-BLADE OR RECONDITION	BALANCING REPORT
MULTI-WING	NEW COMPLETE, RE-BLADE OR RECONDITION	
VISCOUS-CLUTCH	NEW COMPLETE	N/A



STEEL



VISCOUS-CLUTCH



MULTI-WING

## ACCESSORIES

RAM manufactures and supplies quality automotive belts, hoses and accessories to the replacement aftermarket.

OFFICIAL DISTRIBUTORS OF  
**ram**  
QUALITY BELTS & HOSES



LEVER-VENT RADIATOR CAP



PRESSURE TEST KIT



ANTI-FREEZE



HOSES

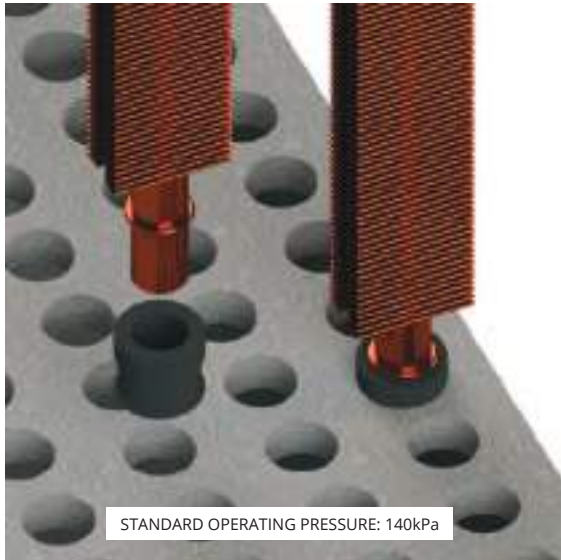


COMBUSTION TEST KIT

WE OFFER ON-SITE TRAINING FOR THE ABOVE ACCESSORIES

# REMOVABLE TUBE-TYPE CORE

BSSC RADIATORS REMOVABLE TUBE-TYPE CORE IS DESIGNED AND MANUFACTURED TO ***"OUTLAST THE ENGINE IN WHICH IT COOLS"***



STANDARD OPERATING PRESSURE: 140kPa

STANDARD COPPER REMOVABLE TUBE



STANDARD OPERATING PRESSURE: 1200kPa

SPIRAL ALUMINIUM REMOVABLE TUBE

## ADVANTAGES

### ON-SITE REPAIRABLE TO 100% COOLING CAPACITY

The removable tube is field-repairable and capable of being returned to 100% cooling capacity on-site often without having to remove the radiator out of the machine, saving on downtime and labour cost.

### FLEXIBLE GENUINE VITON GROMMETS

Individual cooling tubes are fitted in galvanised header-plates with genuine Viton grommets. Grommets absorb vibration, stresses and thermal shock which cause rigid soldered seams to crack and leak.

Maximum temperature: 250°C

### LOW MAINTENANCE

Tubes are arranged to create open passages so dirt and debris can blow through the core either with high pressure water or air.

### RETROFIT INSTALLATION

Convert your cooling pack to the removable tube-type core and save.

## OVERVIEW

- ✓ FLEXIBLE GENUINE VITON GROMMETS
- ✓ RETROFIT INSTALLATIONS
- ✓ 5-YEAR WARRANTY
- ✓ LOW MAINTENANCE
- ✓ ON-SITE REPAIRABLE



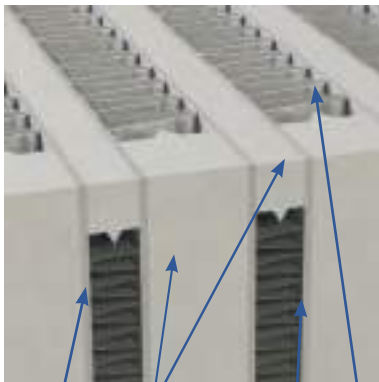


# WORLD OF ALUMINIUM

WE SPECIALISE IN ALUMINIUM IN-HOUSE WELDING AND MANUFACTURING OF VARIOUS CORES, TANKS, AND FRAMEWORK.

## LIST OF ALUMINIUM PRODUCTS

- OIL COOLERS
- HYDRAULIC OIL COOLERS
- TRANSMISSION OIL COOLERS
- RADIATORS
- INTER-COOLERS
- AIR-CONDENSERS



SUPPORTING PLATE      SIDE BAR      TURBULATED TUBE      COOLING FIN

### BAR AND PLATE ALUMINIUM

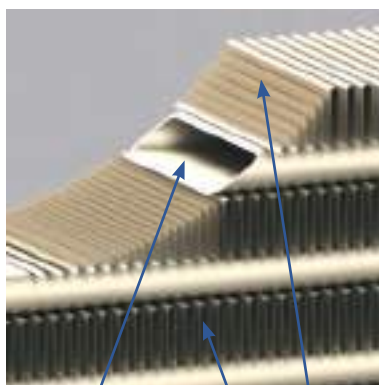
Features and benefits include:

The bar and plate configuration is extremely robust and resistant to external damage. It can withstand extreme operating pressures and offers superior heat-transfer capabilities.

Standard Operating Pressure: 3000kPa  
Maximum Temperatures: 220°C

#### ADVANTAGES:

- ✓ EXTREMELY ROBUST
- ✓ HIGH PRESSURE HANDLING
- ✓ SUPERIOR HEAT-TRANSFER CAPABILITIES



HOLLOW SEAMLESS TUBE      LOUVRES      CORRUGATED LOUVRED FIN

### TUBE AND FIN ALUMINIUM

Features and benefits include:

The tube and fin aluminium configuration is extremely lightweight, and is offered in multiple row and fin density combinations, to provide less clogging and optimise system performance, whether a welded or extruded tube application.

Standard Operating Pressure: 100kPa  
Maximum Temperatures: 220°C

#### ADVANTAGES:

- ✓ LIGHTWEIGHT
- ✓ LESS CLOGGING

***"OUR PRIORITY LIES IN OUR COOLING"***





# HEAT EXCHANGER DIVISION

BSSC Radiators specialises in the manufacturing, reconditioning, and repairing of various in-plant heat exchanger components.

## SHELL & TUBE HEAT EXCHANGERS



## DOUBLE PIPE HEAT EXCHANGERS



## AIR BLAST HEAT EXCHANGERS



## GASKETED PLATE HEAT EXCHANGERS



## PLATE HEAT EXCHANGERS



# INDUSTRIAL COOLING PACKS

BSSC Radiators specialises in the manufacturing, reconditioning, and repairing of various heat transfer components found in stationary and mobile equipment.

## INDUSTRIAL GENERATOR SETS

OPEN SET



CLOSED SET | SILENT TYPE



## INDUSTRIAL COOLING PACKS

INDUSTRIAL AIR COMPRESSOR



INDUSTRIAL LIGHT TOWER



INDUSTRIAL WATER PUMP



MOBILE FORKLIFTS



INDUSTRIAL CRUSHERS



# CERTIFICATION



TÜV RHEINLAND ISO 9001 CERTIFICATION



SABS ISO/SANS 10276 CERTIFICATION



PROUDLY SOUTH AFRICAN CERTIFICATION



LEVEL 2 B-BBEE CERTIFICATION

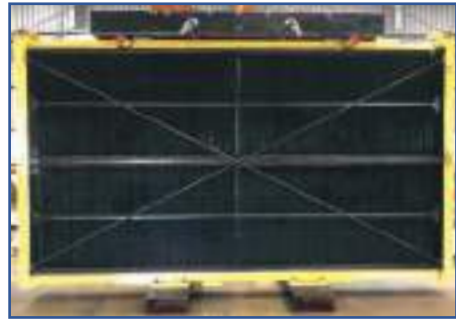


# HALL OF FAME

## COMPLETE REBUILD



KOMATSU 960E-1/2  
BEFORE

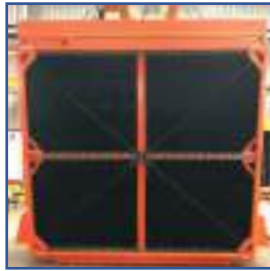


KOMATSU 960E-1/2  
AFTER

## CONVERSION



HITACHI EH 5000AC-3  
BEFORE



HITACHI EH 5000AC-3  
AFTER

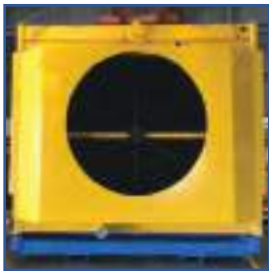


HITACHI EX 5500-6  
BEFORE



HITACHI EX 5500-6  
AFTER

## RE-CONDITION / RE-CORE



TEREX MT 4400  
AFTER



JOY-GLOBAL L2350  
AFTER



KOMATSU 930E  
AFTER



CAT 793D  
AFTER



CAT 777F  
AFTER



KOMATSU 785-7  
AFTER



KOMATSU 730E  
AFTER



CAT 789D  
AFTER



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