VANTERA

GROUP PTY LIMITED

GLOBAL EXPERTISE. GLOBAL REACH.

Integrated industrial thermal solutions, engineering, refractory systems, combustion technology and aluminium melting solutions.

Optimizing engineering with precision

OFFICIAL INSERTEC AGENT FOR SOUTHERN AFRICA

insertec

FURNACES & REFRACTORIES

Pretoria, Gauteng, South Africa

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01 | COMPANY OVERVIEW

Vantera Group Pty Ltd is an industrial thermal engineering and services company based in Pretoria, Gauteng.
The company combines furnace engineering, refractory solutions, furnace demolition and refurbishment, combustion systems, burner maintenance and advanced aluminium melting technology into one integrated service offering.

The key team members collectively contribute 68 years of professional experience, providing a practical foundation in smelting, engineering, furnace work, refractory installation and industrial services.

Our integrated approach is designed to give customers a single technical partner for projects involving the furnace structure, refractory lining, combustion system, commissioning, maintenance and process-support requirements.

Positioning

Where furnace engineering, refractory expertise and combustion technology meet practical industrial experience.

- Furnace demolition, dismantling, shutdowns and site rehabilitation
- Gas and oil burner systems, maintenance and commissioning
- Combustion controls, burner management and flame safeguard systems
- Technical consulting, inspections, training and compliance assessments
- Sidewell furnace technology for aluminium melting and recycling
- Turnkey project support from planning through commissioning and after-sales service



02 | OUR VISION, MISSION & VALUES

VISION

To establish an international footprint while maintaining quality service, excellent work ethic, honesty, integrity and strong customer relationships.

MISSION

To use modern technology, equipment and methodologies to deliver turnkey services safely and efficiently, particularly on demanding furnace, refractory, demolition and thermal-engineering projects.

OUR VALUES

- Quality service
- Innovation
- Integrity
- Flexibility
- Honesty
- Meeting target dates
- Customer-focused technical support
- Safety and responsible execution

CUSTOMER APPROACH

The source profile emphasizes personalized service, educated advice, skilled supervision and practical solutions aimed at optimizing plant costs and maintenance. The company also emphasizes the use of modern technology and methodologies to reduce workforce requirements and project duration while improving project safety.

Our commitment

We aim to become a trusted, long-term technical partner by combining practical site experience with disciplined engineering, quality products and responsive service.

03 | FURNACE ENGINEERING

Vantera Group Pty Ltd provides furnace engineering and project services for industrial thermal equipment. Vantera Group's capabilities include furnace building, rebuild projects, refurbishment, demolition, inspection and turnkey consulting as core activities.

SERVICES

- Furnace design and manufacturing support
- Furnace building and rebuild projects
- Furnace refurbishment and modernization
- Furnace inspection services
- Turnkey project consulting
- Equipment dismantling and rigging
- Fast-track shutdowns and site rehabilitation

PROJECT DELIVERY

Projects can be supported from initial assessment and scope definition through engineering, construction, refractory installation, burner integration, commissioning and after-sales technical support. This integrated approach is intended to reduce interfaces between separate contractors and improve coordination.

The furnace scope can be combined with refractory and combustion services so that thermal performance, lining life, burner operation and maintenance requirements are considered together.





04 | REFRACTORY SOLUTIONS

Refractory performance is critical to furnace reliability, heat retention, maintenance intervals and safe operation. Vantera Group Pty Ltd's source profile identifies both refractory installation services and supply of refractory products and specialized shapes.

REFRACTORY SERVICES

- Refractory demolition and removal
- Refractory installation
- Shotcreting
- Refractory dry-outs
- Refractory heat-ups
- Refractory fragmentation
- Industrial coatings and linings
- Inspection and refurbishment support

REFRACTORY PRODUCTS

- Refractory anchors
- Consumables
- Ceramic fibre modules – supply and fit
- Monolithic refractory linings – supply and installation
- Specialized refractory shapes
- Bricks and pre-cast shapes

Our refractory capability is intended to complement furnace engineering, allowing the lining system and furnace design to be considered as one thermal installation.



05 | FURNACE DEMOLITION & SHUTDOWN SERVICES

Vantera Group has a strong focus on furnace demolition and shutdown work. The team is described as experienced in turnkey demolition, refractory removal, confined-space demolition, mechanical dismantling and fast-track shutdowns.

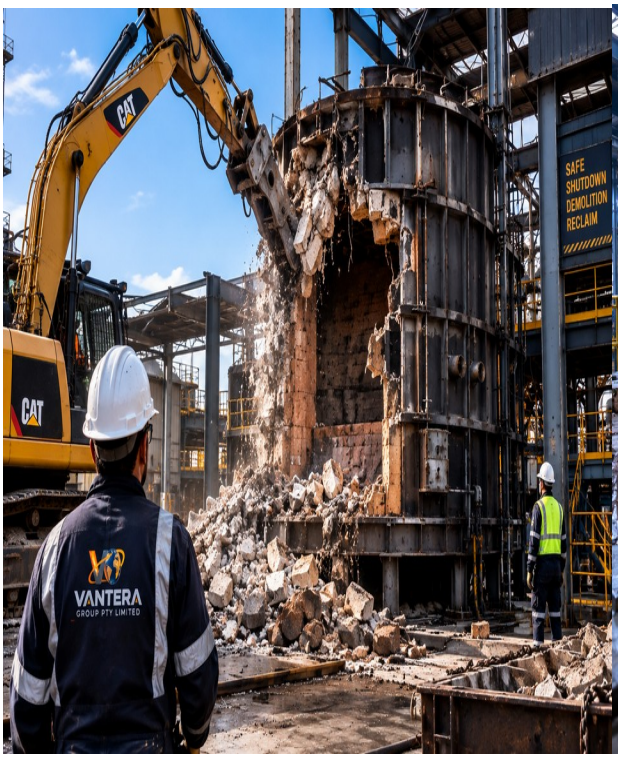
CAPABILITIES

- Turnkey furnace demolition
- Refractory demolition and removal
- Demolition in confined spaces
- Hot and cold material demolition
- Mechanical demolition and dismantling of equipment and structures
- Fast-track shutdowns under 24/7 conditions
- Site clean-ups and rehabilitation
- Mechanical dismantling and rigging

TECHNOLOGIES UTILIZED

- Remote-controlled demolition equipment
- High-powered crawler excavators and hydraulic breakers
- Mechanical dismantling and rigging
- Thermal oxygen lancing

The stated objective is to use modern equipment and methods to reduce project duration and workforce requirements while improving the safety profile of demanding industrial projects.





06 | COMBUSTION & BURNER SYSTEMS

The combustion portfolio extends Vantera Group Pty Ltd's thermal capability from the furnace structure and refractory lining into the burner and combustion system. The portfolio includes complete burner systems, package burners, control panels, maintenance, installation and field support.

PACKAGE BURNERS

A package burner is a self-contained combustion unit incorporating the burner head, combustion-air blower and associated safety components, simplifying installation and operation compared with separate burner components.

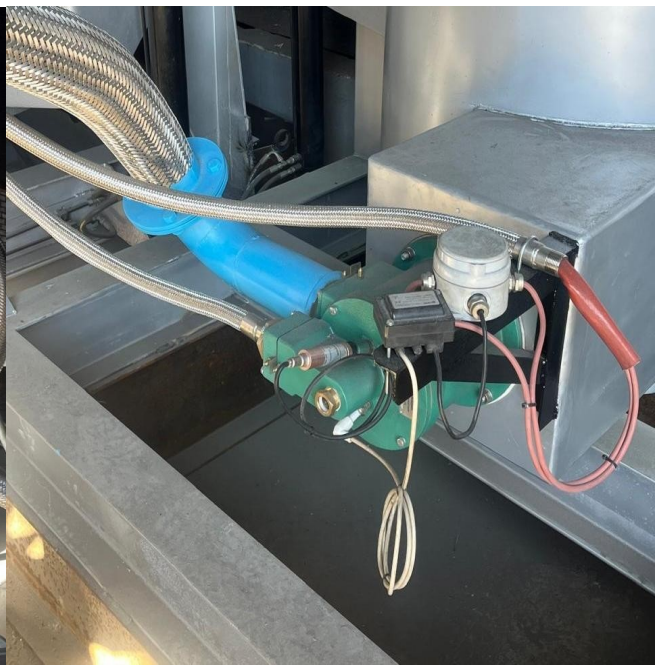
SERVICES

- Complete burner systems and control panels tailored to application requirements
- Gas and oil burner systems
- Package burner maintenance and installation
- Burner equipment maintenance
- Testing and inspections
- Burner commissioning and start-up
- Burner tuning and troubleshooting
- Consulting and training on fuel-fired equipment
- Fuel/air ratio control and combustion optimization

COMBUSTION PERFORMANCE

The combustion offering focuses on improving productivity and uptime, reducing fuel waste and emissions through optimized fuel/air control, improving process connectivity and data visibility, and strengthening safety through testing, inspection, field services and training.





07 | COMBUSTION CONTROLS, FLAME SAFEGUARD & IGNITION

Vantera Group's combustion capability includes burner-management systems, flame safeguards, flame detection, fuel/air ratio control and ignition technologies for automatically ignited oil, gas and combination-fuel burners.

COMBUSTION CONTROL TECHNOLOGIES

- Fireye NX6100 advanced burner management with parallel positioning and integrated flame safeguard
- Fireye NXF4000 Nexus parallel-positioning system with integrated flame safeguard
- Fireye BurnerLogix microprocessor-based burner management
- Fireye Modular M-Series II flame safeguard controls
- BurnerPRO flame safeguard controls
- UV, IR and combined flame detection
- Servo motors for coordinated fuel and air control
- High-energy ignition and pilot systems

These technologies form part of a broader combustion-control and safety offering. Final equipment selection is application-specific and should be confirmed during engineering and project design.



08 | SIDEWELL FURNACE TECHNOLOGY

OFFICIAL INSERTEC AGENT FOR SOUTHERN AFRICA

Vantera Group Pty Ltd is the official Insertec agent for Southern Africa, providing a regional point of contact for Insertec furnace technology, aluminium melting and recycling solutions, technical support, project coordination, commissioning and after-sales support.
This representation strengthens Vantera Group's ability to combine local site support with Insertec's international thermal-engineering and furnace technology.

INSERTEC Sidewell furnaces provide advanced reverberatory melting and alloying facilities for aluminium recycling. The design uses an open Sidewell chamber with recirculation and stirring.

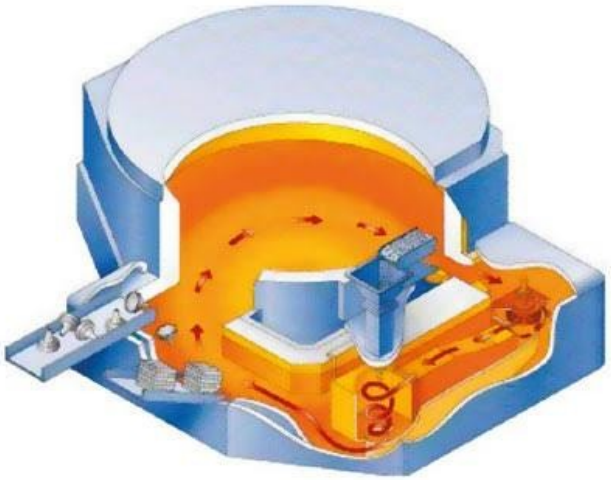
SIDEWELL DESIGN FEATURES

- Open Sidewell chamber with recirculation and stirring
- Sink-vortex of hot molten aluminium for light scrap melting
- Flow of molten metal through the open well for heavier scrap
- Stirring of the molten bath to improve alloying, composition and temperature uniformity
- Capacities from 15 to 150 metric tonnes
- Mechanical or electromagnetic recirculation systems
- Stationary or tilting designs
- Conventional, regenerative or oxy/fuel burners
- Dry-hearth options for sows or ingot bundles
- Range of holding capacities and combined melting rates

ALUMINIUM RECYCLING APPLICATIONS

Typical applications include light scrap such as turnings, chips and UBC, as well as heavier scrap such as profiles and fragmented parts. The recirculation system is also described as supporting bath homogenization and alloying.





09 | ALUMINIUM MELTING & RECYCLING APPLICATIONS

The Sidewell technology can be configured around the customer's scrap mix, melting rate and holding requirements. The recirculation system creates a sink vortex capable of drawing hot molten metal through the melting zone.

PROCESS BENEFITS

- Uniform melt composition
- Uniform temperature distribution
- Enhanced alloying effect for Si, Mg, Sr, Ti and other additions
- Potential reduction in fuel consumption
- Potential reduction in dross generation
- Improved melting of light scrap through the sink vortex
- Melting of heavier scrap through the open well

CONFIGURATION OPTIONS

- Sidewell with ALUSWIRLER® mechanical pump and vortex
- Dry hearth and sidewell combinations
- Dry hearths for ingot bundles or sows
- Stationary or tilting furnace arrangements
- Conventional, regenerative or oxy/fuel burner configurations



10 | TURNKEY PROJECT DELIVERY & TECHNICAL SUPPORT

Vantera Group Pty Ltd combines furnace, refractory and combustion capabilities into a single project-delivery model. The intent is to provide a coordinated scope rather than separate furnace, refractory and combustion packages.

PROJECT LIFE CYCLE

- Application assessment and technical consultation
- Concept development and project planning
- Furnace and refractory scope definition
- Combustion and burner-system integration
- Equipment supply and installation
- Refractory installation and controlled dry-out / heat-up
- Commissioning and start-up
- Testing, inspection and optimization
- Operator and end-user training
- Preventive maintenance and after-sales support
- Spare parts and refurbishment



SERVICE & MAINTENANCE

The combined offering includes inspections, burner maintenance, troubleshooting, burner tuning, combustion testing, field engineering, refractory support, preventive maintenance, training and technical assistance.



10 KEY PROJECTS & TECHNICAL EXPERIENCE

Vantera Group Pty Ltd combines furnace, refractory, combustion and metallurgical expertise to support customers through the full life cycle of an aluminium foundry. The following representative project scopes demonstrate the practical technical areas that can be delivered as part of a start-up, refurbishment, optimisation or ongoing support programme.

01 Aluminium Foundry Start-Up & Commissioning

End-to-end technical support for establishing or restarting an aluminium foundry, including furnace start-up, process setup, commissioning support, operator guidance and stabilization of initial production.

02 Furnace Installation, Commissioning & Optimisation

Commissioning and optimisation of new, refurbished or rebuilt furnaces, including burner integration, temperature control, refractory considerations, operating parameters and production readiness.

03 Furnace Operation Training

Practical operator training covering safe furnace start-up and shutdown, charging, melting practice, temperature control, holding, skimming, dross handling, furnace checks and day-to-day operating discipline.

04 Aluminium Production Training

Training production teams in charge preparation, melting cycles, alloy additions, melt treatment, casting preparation, production control and methods for achieving consistent output and quality.

05 Foundry Laboratory Set-Up & Laboratory Training

Support for laboratory implementation and training, including sample preparation, spectrometer operation, chemical analysis, alloy identification, result interpretation and linking laboratory results to furnace adjustments and production control.

10 KEY PROJECTS & TECHNICAL EXPERIENCE — CONTINUED

06 Alloy Development & Metallurgical Process Control

Technical support for producing aluminium alloys to specification through charge calculations, alloy additions, dilution, chemistry correction, melt treatment and final verification of chemical composition.

07 Refractory Installation, Dry-Out & Furnace Heat-Up

Refractory project support from material selection and demolition through installation, ceramic-fibre systems, monolithic linings, anchoring, controlled dry-out and furnace heat-up.

08 Burner & Combustion System Commissioning

Installation and commissioning support for burner systems, gas trains and combustion controls, including burner tuning, fuel/air adjustment, flame safeguard checks, troubleshooting and combustion optimisation.

09 Foundry Process & Production Optimisation

Improvement programmes focused on furnace utilisation, melting performance, fuel efficiency, metal recovery, dross management, production flow, process consistency and overall plant productivity.

10 Foundry Staff Training & Ongoing Technical Support

Structured technical training for operators, supervisors, laboratory personnel and maintenance teams, supported by SOP development, troubleshooting, inspections, production assistance and ongoing technical support.

PROJECT DELIVERY APPROACH

Where applicable, these project scopes can be combined into a single turnkey programme covering assessment, engineering, furnace and refractory work, combustion integration, commissioning, training, production support and after-sales technical assistance.

Note: These are presented as representative project scopes/capabilities. Specific client names, project dates, equipment models and measured outcomes should be added only where confirmed.

11 | INDUSTRIES & APPLICATIONS

Vantera Group provides experience and capability across a broad range of industrial environments. The combined offering is particularly suited to industries where thermal equipment, refractory systems and combustion performance are critical.

INDUSTRY	TYPICAL SUPPORT
Metals & Foundries	Furnaces, melting, refractory, burners, maintenance and shutdowns
Aluminium Recycling	Sidewell melting, light/heavy scrap processing, alloying and holding
Mining & Minerals	Thermal processing, furnace work, refractory and combustion support
Glass & Cement	Industrial heating, refractory systems and maintenance
Oil & Gas	Fuel-fired equipment, combustion systems, safety and maintenance
Food & Process Industries	Industrial heating and fuel-fired process equipment
Power & Industrial Plants	Combustion, refractory, maintenance and technical services

Selected source-profile clients

Bright Alloys • Vesuvius • Mineral Zone • Capital Refractory

12 | SAFETY, QUALITY & COMPLIANCE

Safety is an essential part of Vantera Group's business and is integrated into company decisions and project execution. The stated goal is zero harm, with an emphasis on international best practices and high practical levels of Safety, Health, Environmental and Quality Control.

SAFETY POLICY

- Employee, customer and contractor health and safety is treated as a priority
- Zero-harm objective
- Use of modern equipment and methodologies to improve project safety
- Safety considerations integrated into project planning and execution
- Testing, inspections and customized training within the combustion service offering

QUALITY & COMPLIANCE

Vantera Group is committed to supplying quality, compliant products and services in accordance with customer and project requirements. Compliance assessments are also listed among the company's services.

Any specific certification, manufacturer appointment, product approval or regulatory claim should be confirmed for the individual project before being included in a contractual or marketing document.



13 | OUR TEAM & CUSTOMER COMMITMENT

The wider team collectively contributes 68 years of professional experience.

TEAM CAPABILITIES

- Industrial smelting and furnace experience
- Furnace engineering and project support
- Refractory installation and maintenance
- Mechanical demolition and dismantling
- Combustion and burner support
- Technical consultation and supervision
- Shutdown and rehabilitation support

CUSTOMER COMMITMENT

At Vantera Group Pty Ltd, our customers are at the heart of everything we do. We are committed to delivering reliable, high-quality solutions that meet our customers' specific requirements and expectations.

Through technical expertise, professional service, and ongoing support, we work closely with our customers to ensure every project is completed safely, efficiently, and to the highest standards.

Our commitment is to:

Build long-term customer relationships.

Deliver quality workmanship and reliable solutions.

Provide professional technical support.

Understand and meet customer requirements.

Complete projects safely and on schedule.

Continuously improve our services and performance.

"Your success is our commitment."



14 | CONTACT DETAILS

VANTERA GROUP PTY LTD

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REGISTRATION

Company Registration Number:
2026/745410/07

TAX & COMPLIANCE

Tax Reference: 9043514331`

OFFICIAL INSERTEC AGENT FOR SOUTHERN AFRICA

FURNACE • REFRACTORY • COMBUSTION • ALUMINIUM MELTING

Integrated solutions for industrial heat and metallurgical processes.

CORPORATE PORTFOLIO NOTE

This master corporate portfolio consolidates Vantera Group's furnace engineering, refractory, combustion, aluminium melting and recycling, turnkey project support and technical-service capabilities. Vantera Group is presented as the official INSERTEC agent for Southern Africa. Project-specific equipment selections, performance guarantees and regulatory requirements remain subject to application engineering and formal quotation.