



Discover the
**AUSTEX
X1550TH MKII**

Safer Drilling

Faster Mobilisation

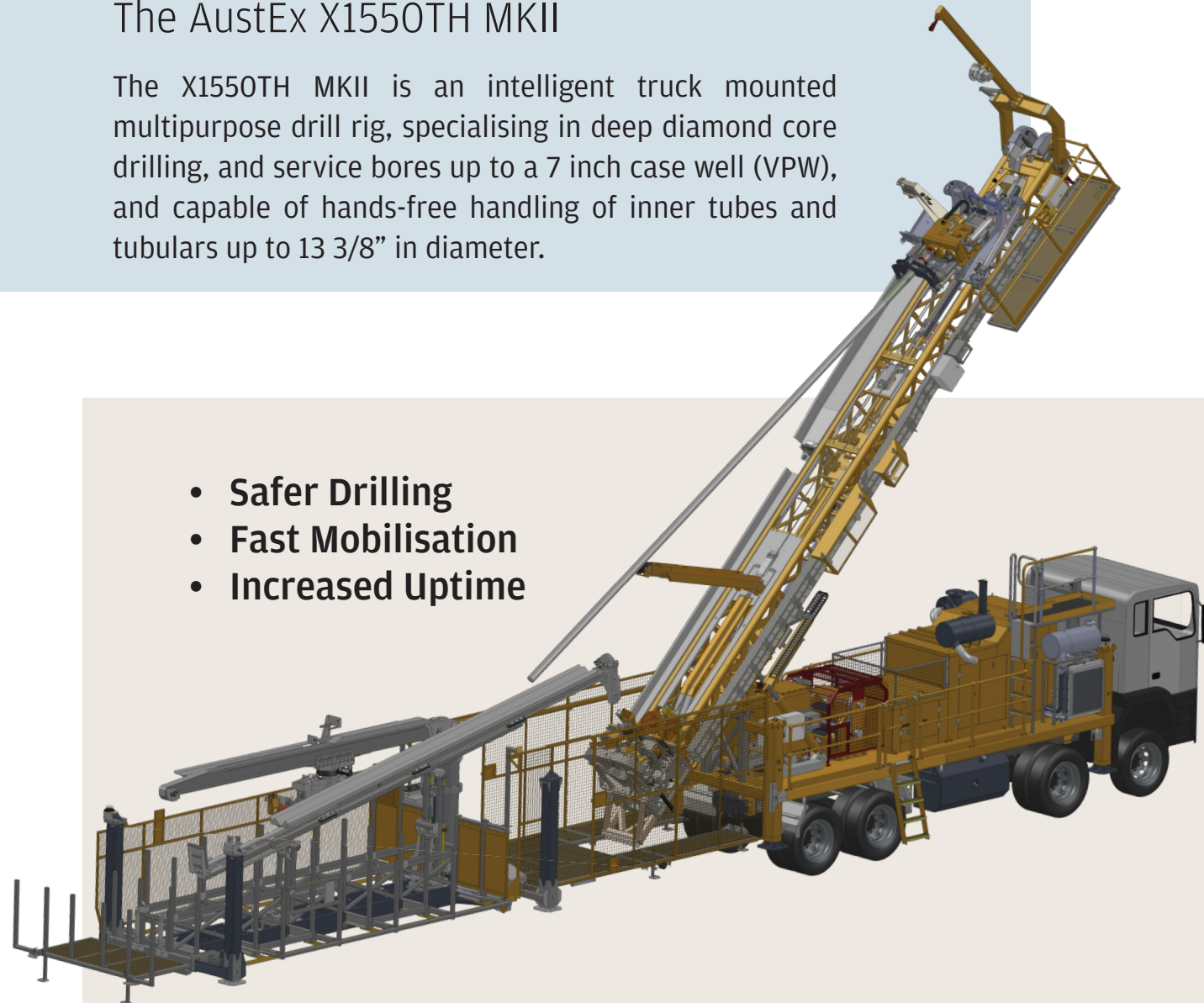
Reliable Results



Introducing

The AustEx X1550TH MKII

The X1550TH MKII is an intelligent truck mounted multipurpose drill rig, specialising in deep diamond core drilling, and service bores up to a 7 inch case well (VPW), and capable of hands-free handling of inner tubes and tubulars up to 13 3/8" in diameter.



- **Safer Drilling**
- **Fast Mobilisation**
- **Increased Uptime**

The AustEx X1550TH MKII is designed to deliver measurable outcomes where it matters most:

- Reduced exposure through hands-free operation
- Lower cost per metre through automation and uptime
- Predictable delivery through intelligent systems and diagnostics

Powered by our advanced fleet, including the AustEx X1550TH MkII, we partner with our clients to deliver highly reliable and efficient drilling programs.

Advanced Operator Control & Visibility

- Portable Pelican-case control terminal with industrial touch HMI and secondary display for dedicated camera views
- Joystick, dial, and switch-panel controls combined with software automation reduce operator workload
- Real-time display of key drilling parameters such as pressures, flows, weight-on-bit, and depth

Built-In Diagnostics & System Intelligence

- Comprehensive diagnostics covering communications, inputs/outputs, engine, CAN network, and control hardware
- Over 1,300 monitored alarms and events, with live alerts and historical logs for troubleshooting and analysis
- Pre-emptive fault detection for sensors and hydraulic valves to minimise downtime

Situational Awareness with Integrated Cameras

- On-rig cameras:
 - Three operational views (drill head, breakout/slips, wireline winch)
 - Front and rear surveillance views
 - Two AI human-detection cameras that will isolate the uni sloop if humans are within the operational area of the equipment
- Optional telemetry integration allows live viewing and historical footage access via the Cortex SmartDrill platform

Increased Productivity & Operational Efficiency

- Automatic setup and pack-up routines, including base levelling, mast angle control, and mast locking, reduce non-productive time
- Supports manual, supervised, and automatic operating modes, allowing progressive automation as site confidence grows
- Remote engine start/stop, RPM control, and monitoring streamline daily operations

Telemetry & Future-Ready Automation

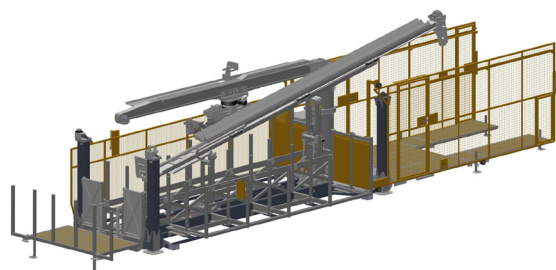
- Telemetry-ready architecture supporting GPS, GSM, MWD sensors, data logging, and remote access
- Designed to align with the industry's transition toward greater automation and unmanned drilling operations

Robust, Mine-Ready System Design

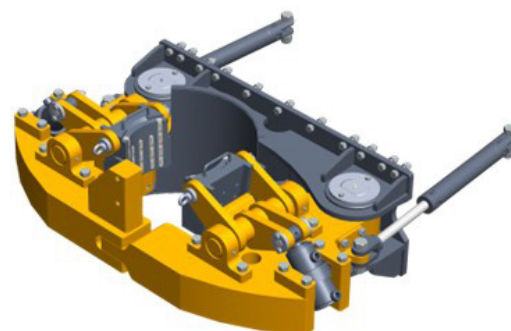
- Industrial PLC-based control system using electric-over-hydraulic closed-loop control
- Designed for harsh outdoor environments, with IP65-rated on-rig equipment and ruggedised cabling and connectors
- Operating temperature range up to 50 °C on-rig, supporting year-round exploration drilling

X1550TH MKII SPECIFICATIONS

Max. Pull Back	23,000 kg (50,700 lbs)
Max. Pull down	11,500 (25,353 lbs)
Drilling Diameters	BQ (2.19") to 20 in.
Max. Rotation Torque	17,800 Nm (13,128 Ft lbs)
Max. Feed Speeds	875 mm / sec (2.8 f / sec)
Hydraulics	Load Sensing Piston Pumps
Rig Carrier	MAN TGS 41.480 8x8



UNI SLOOP	
Capacity	9-metre rod pulls and 500 kg WLL
Safety	- AI Human sensing cameras and warning lights - Sliding safety gates with access doors and RFID sensors
Offsider Platform	Fold down hydraulically
Rod Handling	Rod stabilisers and non-magnetic rods handled automatically
Rod Storage	4 x rod bins rated to 5000 kg each
Rod Handling Range	BQ to 18 in., up to 9 m lengths and 500 kg capacity
Control Consoles	25 m wireless remote control consoles



POWER FOOT	
Foot	Hydraulically operated, self-energising power foot clamp
Jaw Options	60 mm to 273 mm
Available Jaw Sizes	Standard and deep-hole jaw sizes from 2 3/16" to 10 3/4"
Jaw Inserts	Bolt-in tungsten jaw inserts for easy replacement and extended life
Available Casing Jaws	Long-series low-pressure casing jaws from 2 3/8" to 7"
Clamp System	10 3/4 ft hydraulic clamp that opens to pass large stabilisers and bits

DRILL RIG MAST

Feed Stroke	9.75 m (32 ft)
Mast Dump	1.8 m (5.9 ft)
Feed system	- Heavy duty dual 20 mm pull-back ropes - Heavy duty dual 20 mm pull-down ropes 6.5" feed cylinder delivering 23 t pull back
RC Boom	Hydraulic slewing / lifting boom with winch and static brake (500 kg WLL)
Overshot	Hands-free overshot handling
Breakout	- Hands-free NQ to 20" 20,000 Nm breaking torque

CONTROL PANEL & HYDRAULICS

Hydraulic Valves	Rexroth and Linde
Pumps	- Linde 280 cc main pump with high pressure filtration - Linde 105 cc water pump - Linde 75 cc AUX pump - Triple gear hydraulic cooler pump
Filtration	- High pressure, tank and case drain filters 1 x hydraulic tank and case oil return filtration - Main circuit hydraulic pressure filtration
Water pump	- Retractable wash down hose - FMC L18 (69 GPM) Piston Pump
Tanks	800 L capacity hydraulic oil tank - AustEx Hammer Oiler (optional) 1000 L diesel tank
Overshot	25 m wireless remote Drillers Control

DRILL RIG

Engine	- Cummins M11 @400 HP at 1800 rpm - Engine Acoustic Enclosure
Optimal Compressor	- Sullair HP500 with 1162 cfm at 500 psi - Atlas ORX10 with 1240 cfm at 435 psi - Separator / Fuel Save System - Thermal Valve and High Pressure Filter
Cooler	Vertical Pack rated to 55 c
Features	- Wireline winch with spooler and static brake, 2500 m (8,200 ft) of 8 mm (5/16") capacity - Hydraulic mast angle locking system - Jack leg counter-balance valves coupled directly to cylinders - Fold up ladder with self-closing gate and Australian Standard handrails - Centralised pre-start and service area 2 x 9 kg fire extinguishers - Fire Suppression System

ROTATION DRIVE HEAD

Ratio	- High speed 1.9 : 1 - Low speed 16.4 : 1
Head	Tilting drive head
Spindle	2 speed floating spindle
Motors	Linde HMV210 rotation motor
Gears	- Hardened and ground - Hands-free gear changing
Speed	0 - 1500 rpm providing up to 17,800 Nm (13,128 ft lbs)
Cooler	Drive Head Oil Cooler

Our Clients

At Lucas, we consider ourselves privileged to have a diverse range of clients, from global industry leaders to local councils. Our commitment to understanding and adapting to each of our clients' unique challenges is what drives us. By forging strong, collaborative relationships, we consistently deliver tailored solutions that meet our clients' specific needs, exceed expectations, and contribute directly to their success.



About Us

Who we are

Founded in Sydney, Australia in the 1950's, the company became a highly specialised mining and infrastructure service provider in Australia. AJ Lucas listed on the Australian Stock Exchange in 1999 and saw considerable growth in the following years, concentrating on the resources market and undertaking significant projects in the Water, Oil and Gas segments.



What we do

Lucas Drilling provides a comprehensive suite of drilling services which includes exploration, production and directional drilling. Lucas also provides a range of engineering services including design of wells, drilling optimisation, professional steering services, specialised equipment and geosteering for directional drilling programmes.

Our Experience

With over 40 years of experience in the mining and coal seam gas industries, Lucas has developed a unique operating platform designed to deliver high-value solutions to complex and critical projects.

Our People

Lucas is recognised for having a highly skilled and respected workforce of approximately 285 employees, many of whom live and work within our operating regions. Performance management and leadership development are central to maintaining high levels of team engagement. We prioritise the growth of our people by offering customised training programs and opportunities to gain industry-recognised qualifications. Additionally, our promotion and rotation initiatives across various operational areas enhance our employee's versatility and experience. This commitment to employee development is reflected in retention of our field leadership; with the average tenure in excess of 12 years.

Health & Safety

Our personnel are highly skilled with an outstanding safety record. We are committed to maintaining an injury-free workplace through an embedded safety culture and a comprehensive Occupational Health and Safety System. These ensure effective environmental and safety practices across all our operations. Our Safety and Quality Management Systems are accredited to AS/NZS and ISO standards.

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