

# CYTJ45 Underground Rock Drilling Jumbo

CYTJ45 rock drilling rig is a full hydraulic rock drilling rig for tunnels and mines. It covers an area of up to 33 square meters. It adopts hydraulic control mode and is equipped with a heavy drill boom. The RN-0338 rock drill can easily cope with harsh working conditions and provide powerful Power, strength and reliability to help you maximize productivity.

The rock drill adopts aerosol lubrication, the pressure oil film protects and lubricates the joint interfaces, reduces the internal pollution of the rock drill and prolongs the service life.

The slewing motor is bidirectionally reversible and has stepless speed regulation, which can provide the powerful torque required for efficient operation and reduce the risk of drilling tool jamming.

The double buffer system not only prevents the shock wave reflected from the rock from propagating back and forth in the drill rod, protecting the rock drill and the drilling tool, but also keeps the drill bit against the rock and keeps the drilling tool tight during the drilling process. Heavy-duty booms supported by double delta suspension ensure accurate hydraulic parallel holding in all directions. Heavy-duty aluminum alloy propelling beam has high bending and torsional strength and long service life. Rugged articulated heavy duty chassis with four wheel drive. The rear axle oscillating device ensures good contact with the ground in harsh conditions.





#### **SPECIFICATIONS**

Flat ground

| Dimensions (mm)          | 11267×2080×2900 |
|--------------------------|-----------------|
| Working arm              | Single          |
| Drilling depth           | 4000mm          |
| Total Weight             | 12.5T           |
| Cab lift height          | 700mm           |
| Shank thread             | R38             |
| Drill thread             | T38             |
| Drill diameter           | 45mm            |
| Minimum ground clearance | 236mm           |
| Steering angle           | ±41°            |

# Forward & reverse speed (with CUMMINS QSF3. engine)

>10 km/h

| D. J. J. 21 (DM 0220)              |                  |
|------------------------------------|------------------|
| Rock drill (RN-0338)               |                  |
| Shank                              | T38              |
| Length (without shank)             | 1008mm           |
| Impact power                       | 18kW             |
| Impact frequency                   | 60Hz             |
| Hydraulic system pressure (Max)    | 230bar           |
| Slewing system                     | Independent slew |
| Swing speed                        | 0-215rpm         |
| Swing torque (Max)                 | 700Nm            |
| Lubrication air consumption (3bar) | 300l/min         |
| Water Consumption                  | 40-120L/min      |
| weight                             | 164.1kg          |



# **Lion One Mining Service (Ptd) Ltd**

| Drill arm Drill arm  | Propulsion beam                   |                                       |
|--|-----------------------------------|---------------------------------------|
| Drilling depth 4000mm  Weight, including rock drill 580kg  Propulsion 13kN  Drill arm  Drill arm  Propulsion beam compensation 1250mm  Drill arm extension 1350mm  Parallel retention complete  Propulsion beam flip 360°  Drill arm lift angle (maximum) ±35°  Drill arm swing angle (maximum) ±35°  Drill arm weight 1855kg  Air system  Sliding Vane Air Compressor Xunteng  Exhaust volume 0.53m³/min  Barometer 8bar  Water system  Booster pump Southern Pump Industry  Limited Data 4m³/h  Traffic usage range 1.5~7m³/h  Control System  Direct control hydraulic system DCS  Basic function with automatic anticard solder  Electrical System  Total installed power 60.5kW  Main motor 1×55kW  Rated voltage 380V  Rated frequency 50Hz  Start triangle  Motor thermal overload protection  Impact timer  Phase sequence protector  Earth leakage protector  Charger 24V12A  Cable reel 1100mm   | Total length                      | 5650mm                                |
| Weight, including rock drill 580kg Propulsion 13kN  Drill arm  Drill arm  Propulsion beam compensation 1250mm  Drill arm extension 1350mm  Parallel retention complete Propulsion beam flip 360°  Drill arm lift angle (maximum) +65° /-30°  Drill arm swing angle (maximum) ±35°  Drill arm weight 1855kg  Air system  Sliding Vane Air Compressor Xunteng  Exhaust volume 0.53m³/min  Barometer 8bar  Water system  Booster pump Southern Pump Industry  Limited Data 4m³/h  Traffic usage range 1.5~7m³/h  Control System  Direct control hydraulic system DCS  Basic function with automatic anticard solder  Electrical System  Total installed power 60.5kW  Main motor 1×55kW  Rated voltage 380V  Rated frequency 50Hz  Start triangle  Motor thermal overload protection  Impact timer  Phase sequence protector  Earth leakage protector  Charger 24V12A  Cable reel 1100mm  | Drill pipe length                 | 4305mm                                |
| Propulsion 13kN  Drill arm  Drill arm  Propulsion beam compensation 1250mm  Parallel retention complete  Propulsion beam flip 360°  Drill arm lift angle (maximum) +65°/-30°  Drill arm swing angle (maximum) ±35°  Drill arm weight 1855kg  Air system  Sliding Vane Air Compressor Xunteng  Exhaust volume 0.53m³/min  Barometer 8bar  Water system  Booster pump Industry  Limited Data 4m³/h  Traffic usage range 1.5~7m³/h  Control System  Direct control hydraulic system DCS  Basic function with automatic anticard solder  Electrical System  Total installed power 60.5kW  Main motor 1×55kW  Rated voltage 380V  Rated frequency 50Hz  Startup mode Star triangle  Motor thermal overload protection  Impact timer  Phase sequence protector  Earth leakage protector  Charger 24V12A  Cable reel 1100mm   | Drilling depth                    | 4000mm                                |
| Drill arm  Propulsion beam compensation 1250mm  Prill arm extension 1350mm  Parallel retention complete  Propulsion beam flip 360°  Drill arm lift angle (maximum) +65° /-30°  Drill arm swing angle (maximum) ±35°  Drill arm weight 1855kg  Air system  Sliding Vane Air Compressor Xunteng  Exhaust volume 0.53m³/min  Barometer 8bar  Water system  Booster pump Southern Pump Industry  Limited Data 4m³/h  Traffic usage range 1.5~7m³/h  Control System  Direct control hydraulic system DCS  Basic function with automatic anticard solder  Electrical System  Total installed power 60.5kW  Main motor 1×55kW  Rated voltage 380V  Rated frequency 50Hz  Startup mode Star triangle  Motor thermal overload protection  Impact timer  Phase sequence protector  Earth leakage protector  Charger 24V12A  Cable reel 1100mm  | Weight, including rock drill      | 580kg                                 |
| Drill arm  Propulsion beam compensation 1250mm  Drill arm extension 1350mm  Parallel retention complete  Propulsion beam flip 360°  Drill arm lift angle (maximum) +65° /-30°  Drill arm swing angle (maximum) ±35°  Drill arm weight 1855kg  Air system  Sliding Vane Air Compressor Xunteng  Exhaust volume 0.53m³/min  Barometer 8bar  Water system  Booster pump Southern Pump Industry  Limited Data 4m³ /h  Traffic usage range 1.5~7m³ /h  Control System  Direct control hydraulic system DCS  Basic function with automatic anticard solder  Electrical System  Total installed power 60.5kW  Main motor 1×55kW  Rated voltage 380V  Rated frequency 50Hz  Startup mode Star triangle  Motor thermal overload protection  Impact timer  Phase sequence protector  Earth leakage protector  Charger 24V12A  Cable reel 1100mm  | Propulsion                        | 13kN                                  |
| Propulsion beam compensation 1250mm  Drill arm extension 1350mm  Parallel retention complete  Propulsion beam flip 360°  Drill arm lift angle (maximum) +65° /-30°  Drill arm swing angle (maximum) ±35°  Drill arm swing angle (maximum) 1855kg  Air system  Sliding Vane Air Compressor Xunteng  Exhaust volume 0.53m³/min  Barometer 8bar  Water system  Booster pump Southern Pump Industry  Limited Data 4m³/h  Traffic usage range 1.5~7m³/h  Control System  Direct control hydraulic system DCS  Basic function with automatic anticard solder  Electrical System  Total installed power 60.5kW  Main motor 1×55kW  Rated voltage 380V  Rated frequency 50Hz  Start triangle  Motor thermal overload protection  Impact timer  Phase sequence protector  Earth leakage protector  Charger 24V12A  Cable reel 1100mm  | Drill arm                         |                                       |
| Drill arm extension complete Propulsion beam flip 360° Drill arm lift angle (maximum) +65° /-30° Drill arm swing angle (maximum) ±35° Drill arm weight 1855kg  Air system Sliding Vane Air Compressor Xunteng Exhaust volume 0.53m³/min Barometer 8bar  Water system Booster pump Southern Pump Industry Limited Data 4m³/h Traffic usage range 1.5~7m³/h  Control System Direct control hydraulic system DCS Basic function with automatic anticard solder  Electrical System Total installed power 60.5kW Main motor 1×55kW Rated voltage 380V Rated frequency 50Hz Startup mode Star triangle Motor thermal overload protection Impact timer Phase sequence protector Earth leakage protector Charger 24V12A Cable reel 1100mm  | Drill arm                         |                                       |
| Parallel retention complete Propulsion beam flip 360°  Drill arm lift angle (maximum) +65° /-30°  Drill arm swing angle (maximum) ±35°  Drill arm weight 1855kg  Air system  Sliding Vane Air Compressor Xunteng  Exhaust volume 0.53m³/min  Barometer 8bar  Water system  Booster pump Southern Pump Industry  Limited Data 4m³/h  Traffic usage range 1.5~7m³/h  Control System  Direct control hydraulic system DCS  Basic function with automatic anticard solder  Electrical System  Total installed power 60.5kW  Main motor 1×55kW  Rated voltage 380V  Rated frequency 50Hz  Startup mode Star triangle  Motor thermal overload protection  Impact timer  Phase sequence protector  Earth leakage protector  Charger 24V12A  Cable reel 1100mm   | Propulsion beam compensation      | 1250mm                                |
| Propulsion beam flip  Drill arm lift angle (maximum) +65° /-30°  Drill arm swing angle (maximum) ±35°  Drill arm swing angle (maximum) ±35°  Drill arm weight 1855kg  Air system  Sliding Vane Air Compressor Xunteng Exhaust volume 0.53m³/min  Barometer 8bar  Water system  Booster pump Southern Pump Industry Limited Data 4m³/h  Traffic usage range 1.5~7m³/h  Control System  Direct control hydraulic system DCS  Basic function with automatic anticard solder  Electrical System  Total installed power 60.5kW  Main motor 1×55kW  Rated voltage 380V  Rated frequency 50Hz  Startup mode Star triangle  Motor thermal overload protection  Impact timer  Phase sequence protector  Earth leakage protector  Charger 24V12A  Cable reel 1100mm  | Drill arm extension               | 1350mm                                |
| Drill arm lift angle (maximum) +65° /-30°  Drill arm swing angle (maximum) ±35°  Drill arm weight 1855kg  Air system  Sliding Vane Air Compressor Xunteng  Exhaust volume 0.53m³/min  Barometer 8bar  Water system  Booster pump Industry  Limited Data 4m³/h  Traffic usage range 1.5~7m³/h  Control System  Direct control hydraulic system DCS  Basic function with automatic anticard solder  Electrical System  Total installed power 60.5kW  Main motor 1×55kW  Rated voltage 380V  Rated frequency 50Hz  Startup mode Star triangle  Motor thermal overload protection  Impact timer  Phase sequence protector  Earth leakage protector  Charger 24V12A  Cable reel 1100mm  | Parallel retention                | complete                              |
| Drill arm swing angle (maximum) ±35°  Drill arm weight 1855kg  Air system  Sliding Vane Air Compressor Xunteng  Exhaust volume 0.53m³/min  Barometer 8bar  Water system  Booster pump Southern Pump Industry  Limited Data 4m³/h  Traffic usage range 1.5~7m³/h  Control System  Direct control hydraulic system DCS  Basic function with automatic anticard solder  Electrical System  Total installed power 60.5kW  Main motor 1×55kW  Rated voltage 380V  Rated frequency 50Hz  Startup mode Star triangle  Motor thermal overload protection  Impact timer  Phase sequence protector  Earth leakage protector  Charger 24V12A  Cable reel 1100mm   | Propulsion beam flip              | 360°                                  |
| Drill arm weight 1855kg  Air system  Sliding Vane Air Compressor Xunteng Exhaust volume 0.53m³/min Barometer 8bar  Water system  Booster pump Southern Pump Industry Limited Data 4m³/h  Traffic usage range 1.5~7m³/h  Control System  Direct control hydraulic system DCS Basic function with automatic anticard solder  Electrical System  Total installed power 60.5kW  Main motor 1×55kW  Rated voltage 380V  Rated frequency 50Hz  Startup mode Star triangle  Motor thermal overload protection  Impact timer  Phase sequence protector  Earth leakage protector  Charger 24V12A  Cable reel 1100mm   | Drill arm lift angle (maximum)    | +65° /-30°                            |
| Air system  Sliding Vane Air Compressor Xunteng  Exhaust volume 0.53m³/min  Barometer 8bar  Water system  Booster pump Southern Pump Industry  Limited Data 4m³/h  Traffic usage range 1.5~7m³/h  Control System  Direct control hydraulic system DCS  Basic function with automatic anticard solder  Electrical System  Total installed power 60.5kW  Main motor 1×55kW  Rated voltage 380V  Rated frequency 50Hz  Startup mode Star triangle  Motor thermal overload protection  Impact timer  Phase sequence protector  Earth leakage protector  Charger 24V12A  Cable reel 1100mm  | Drill arm swing angle (maximum)   | ±35°                                  |
| Exhaust volume  Exhaust volume  Barometer  Booster pump  Limited Data  Traffic usage range  Control System  Direct control hydraulic system DCS  Basic function with automatic anticard solder  Electrical System  Total installed power  Rated voltage  Rated frequency  Startup mode  Motor thermal overload protection  Earth leakage protector  Charger  24V12A  Cable reel  Southern Pump Industry  Limited Data  4m³ /h  Touraffic usage range  1.5~7m³ /h  60.5kW  Amin motor  1×55kW  Startriangle   | Drill arm weight                  | 1855kg                                |
| Exhaust volume  Barometer  Barometer  Water system  Booster pump  Limited Data  Traffic usage range  Control System  Direct control hydraulic system DCS  Basic function with automatic anticard solder  Electrical System  Total installed power  Ataled voltage  Rated voltage  Start triangle  Motor thermal overload protection  Impact timer  Phase sequence protector  Earth leakage protector  Charger  24V12A  Cable reel  Counter Southern Pump Industry  Atm3 /h  Couthern Pump Industry  Atm3 /h  Couthern Pump Industry  Atm3 /h  Atm3 /h  Couthern Pump Industry  Atm3 /h  Atm3 /h  Atm3 /h  Couthern Pump Industry  Industry  Industry  Couthern Pump Industry  Indu | Air system                        |                                       |
| Barometer  Water system  Booster pump  Limited Data  Traffic usage range  1.5~7m³/h  Control System  Direct control hydraulic system DCS  Basic function with automatic anticard solder  Electrical System  Total installed power  60.5kW  Main motor  1×55kW  Rated voltage  380V  Rated frequency  50Hz  Start triangle  Motor thermal overload protection  Impact timer  Phase sequence protector  Earth leakage protector  Charger  24V12A  Cable reel  1100mm   | Sliding Vane Air Compressor       | Xunteng                               |
| Water system  Booster pump Southern Pump Industry  Limited Data 4m³ /h  Traffic usage range 1.5~7m³ /h  Control System  Direct control hydraulic system DCS  Basic function with automatic anticard solder  Electrical System  Total installed power 60.5kW  Main motor 1×55kW  Rated voltage 380V  Rated frequency 50Hz  Startup mode Star triangle  Motor thermal overload protection  Impact timer  Phase sequence protector  Earth leakage protector  Charger 24V12A  Cable reel 1100mm  | Exhaust volume                    | 0.53m³/min                            |
| Booster pump Limited Data  4m³/h  Traffic usage range 1.5~7m³/h  Control System  Direct control hydraulic system DCS  Basic function with automatic anticard solder  Electrical System  Total installed power 60.5kW  Main motor 1×55kW  Rated voltage 380V  Rated frequency 50Hz  Start triangle  Motor thermal overload protection  Impact timer  Phase sequence protector  Earth leakage protector  Charger 24V12A  Cable reel 1100mm   | Barometer                         | 8bar                                  |
| Limited Data 4m³ /h  Traffic usage range 1.5~7m³ /h  Control System  Direct control hydraulic system DCS  Basic function with automatic anticard solder  Electrical System  Total installed power 60.5kW  Main motor 1×55kW  Rated voltage 380V  Rated frequency 50Hz  Startup mode Star triangle  Motor thermal overload protection  Impact timer  Phase sequence protector  Earth leakage protector  Charger 24V12A  Cable reel 1100mm   | Water system                      |                                       |
| Traffic usage range 1.5~7m³/h  Control System  Direct control hydraulic system DCS  Basic function with automatic anticard solder  Electrical System  Total installed power 60.5kW  Main motor 1×55kW  Rated voltage 380V  Rated frequency 50Hz  Startup mode Star triangle  Motor thermal overload protection  Impact timer  Phase sequence protector  Earth leakage protector  Charger 24V12A  Cable reel 1100mm   | Booster pump                      |                                       |
| Control System  Direct control hydraulic system DCS  Basic function with automatic anticard solder  Electrical System  Total installed power 60.5kW  Main motor 1×55kW  Rated voltage 380V  Rated frequency 50Hz  Startup mode Star triangle  Motor thermal overload protection  Impact timer  Phase sequence protector  Earth leakage protector  Charger 24V12A  Cable reel 1100mm  | Limited Data                      | $4m^3/h$                              |
| Direct control hydraulic system DCS  Basic function with automatic anticard solder  Electrical System  Total installed power 60.5kW  Main motor 1×55kW  Rated voltage 380V  Rated frequency 50Hz  Startup mode Star triangle  Motor thermal overload protection  Impact timer  Phase sequence protector  Earth leakage protector  Charger 24V12A  Cable reel 1100mm  | Traffic usage range               | $1.5 \sim 7 \mathrm{m}^3 /\mathrm{h}$ |
| Basic function with automatic anticard solder  Electrical System  Total installed power 60.5kW  Main motor 1×55kW  Rated voltage 380V  Rated frequency 50Hz  Startup mode Star triangle  Motor thermal overload protection  Impact timer  Phase sequence protector  Earth leakage protector  Charger 24V12A  Cable reel 1100mm   | Control System                    |                                       |
| Electrical System  Total installed power 60.5kW  Main motor 1×55kW  Rated voltage 380V  Rated frequency 50Hz  Startup mode Star triangle  Motor thermal overload protection  Impact timer  Phase sequence protector  Earth leakage protector  Charger 24V12A  Cable reel 1100mm  |                                   |                                       |
| Total installed power 60.5kW  Main motor 1×55kW  Rated voltage 380V  Rated frequency 50Hz  Startup mode Star triangle  Motor thermal overload protection  Impact timer  Phase sequence protector  Earth leakage protector  Charger 24V12A  Cable reel 1100mm   |                                   |                                       |
| Total installed power 60.5kW  Main motor 1×55kW  Rated voltage 380V  Rated frequency 50Hz  Startup mode Star triangle  Motor thermal overload protection  Impact timer  Phase sequence protector  Earth leakage protector  Charger 24V12A  Cable reel 1100mm   | Electrical System                 |                                       |
| Rated voltage 380V  Rated frequency 50Hz  Startup mode Star triangle  Motor thermal overload protection  Impact timer  Phase sequence protector  Earth leakage protector  Charger 24V12A  Cable reel 1100mm  |                                   | 60.5kW                                |
| Rated frequency 50Hz  Startup mode Star triangle  Motor thermal overload protection  Impact timer  Phase sequence protector  Earth leakage protector  Charger 24V12A  Cable reel 1100mm  | Main motor                        | 1×55kW                                |
| Startup mode Star triangle  Motor thermal overload protection  Impact timer  Phase sequence protector  Earth leakage protector  Charger 24V12A  Cable reel 1100mm  | Rated voltage                     | 380V                                  |
| Motor thermal overload protection  Impact timer  Phase sequence protector  Earth leakage protector  Charger 24V12A  Cable reel 1100mm  | Rated frequency                   | 50Hz                                  |
| Impact timer  Phase sequence protector  Earth leakage protector  Charger 24V12A  Cable reel 1100mm   | Startup mode                      | Star triangle                         |
| Phase sequence protector  Earth leakage protector  Charger 24V12A  Cable reel 1100mm   | Motor thermal overload protection |                                       |
| Earth leakage protector  Charger 24V12A  Cable reel 1100mm   | Impact timer                      |                                       |
| Charger 24V12A Cable reel 1100mm   | Phase sequence protector          |                                       |
| Cable reel 1100mm  | Earth leakage protector           |                                       |
|  | Charger                           | 24V12A                                |
| Transformer 1KVA   |                                   |                                       |
|  | Cable reel                        | 1100mm                                |

| Pump unloading start 20bar  System pressure 230bar  Hydraulic tank. Maximum volume 200L  Oil temperature gauge  Hydraulic oil filter display  Low oil level display  Water-cooled hydraulic oil cooler  Hydraulic oil filtration accuracy  Mineral based hydraulic oil |
|--|
| Hydraulic tank. Maximum volume  Oil temperature gauge  Hydraulic oil filter display  Low oil level display  Water-cooled hydraulic oil cooler  Hydraulic oil filtration accuracy  10 µ   |
| Volume  Oil temperature gauge  Hydraulic oil filter display  Low oil level display  Water-cooled hydraulic oil cooler  Hydraulic oil filtration accuracy  10 μ   |
| Hydraulic oil filter display  Low oil level display  Water-cooled hydraulic oil cooler  Hydraulic oil filtration accuracy  10 µ  |
| Low oil level display  Water-cooled hydraulic oil cooler  Hydraulic oil filtration accuracy 10 µ   |
| Water-cooled hydraulic oil cooler Hydraulic oil filtration accuracy 10 μ   |
| cooler  Hydraulic oil filtration accuracy  10 μ  |
| accuracy 10 µ  |
| •  |
|  |
| Chassis  |
| CUMMINS QSF3.8 Diesel engines  |
| Engine rated power 74kW@2200rpm  |
| 420Nm@1000~1600  |
| Maximum torque rpm   |
| Fixed cab seat   |
| Four-wheel drive  Integrated with rear   |
| Hydrostatic Transmission axle  |
| Front axle Made in China   |
| Rear axle Made in China, With a $\pm 8^{\circ}$ swing angle  |
| Tire Front 315/70R15 Rear8.25R15   |
| Approach angle and departure angle 15°   |
| Expandable front hydraulic leg 2 pcs   |
| Rear hydraulic leg 2 pcs   |
| Service brake 2 independent circuits,Hydraulic brake, spring release   |
| Emergency stop and parking Spring brake  |
| brake hydraulic release  |
| Fuel tank volume 75L   |
| Exhaust gas catalytic purification device  |
| silencer   |
| Electrical System 24V  |
| Battery 2×12V 100Ah  |
| Driving lights 4×50W LED   |
| Work light $4 \times 180W + 1 \times 60W$ LED spotlight  |
| brake light  |
| Fire extinguisher  |
| Spirit level   |
| Climbing ability of the driving wheel at maximum load 25%  |
| Horn, reversing buzzer and lighting  |



# **Lion One Mining Service (Ptd) Ltd**

Rock drill lubrication alarm device

Automatic centralized lubrication device

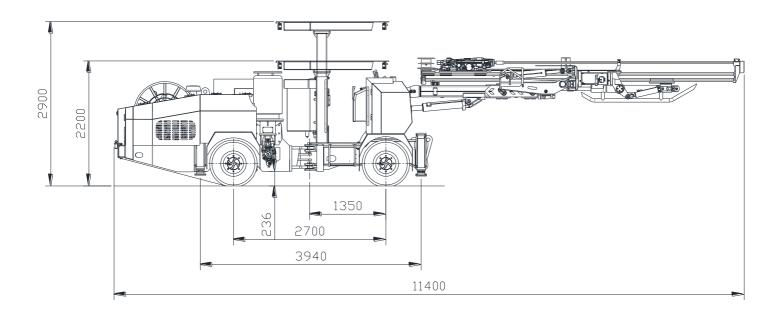
#### Drill pipe

| Specification |             | Minimum rock drilling aperture |
|---------------|-------------|--------------------------------|
| mm            | R32-H35-R38 | 45                             |
|               | R32-H35-T38 | 45                             |

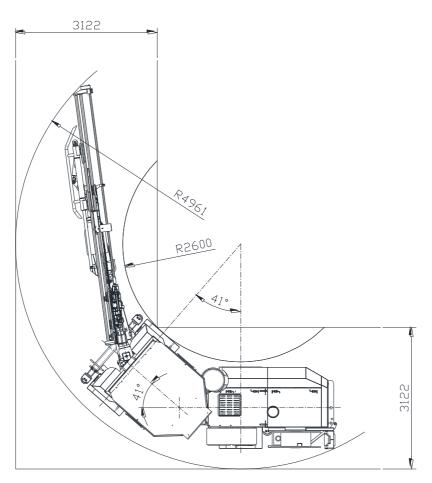
#### Shank

| Thread |     | Diameter | Llength |
|--------|-----|----------|---------|
| mm     | R38 | 38       | 381mm   |
|        | T38 | 38       | 438mm   |

#### **Equipment size**



# **Lion One Mining Service (Ptd) Ltd**



Equipment coverage is about 33 m<sup>2</sup>

