

LRS 275 (DUO) Sonic Rig



LRS 275 (DUO): Robust and powerful sonic rig

- Mineral sampling
- Environmental exploration
- Geotechnical sampling and testing
- Geo-constructional drilling
- Seismic drilling
- Customized solutions

The LargeRotoSonic 275 (LRS 275) is upgraded from the reliable CRS platform and built to host the powerful LS 50k Sonic drillhead in a relatively small package. The LRS 275 accelerates drill speed capacity and boosts your productivity.

This rig is also available as DUO, which is equipped with both a LargeRotoSonic drillhead and a four speed rotation head. Easily change the drillheads by shifting the trolleyboard. To combine Sonic sampling and diamond core drilling in the same borehole.



LRS 275 DUO

LargeRotoSonic Drill head	Metric	Imperial
Max. frequency	0 - 150 Hz	0 - 150 Hz
Sonic vibration oscillator output force	227 kN	50 k lbf
2 eccentrics, mechanically synchronized		
Rotation torque: clockwise 0-140 rpm	5,605 Nm @ 240 bar	4,134 ft-lbf @ 3,480 psi
Rotation torque: counter clockwise	7,200 Nm @ 310 bar	5,315 ft-lbf @ 4,495 psi
Head tilt max.	90°	90°
Type of damper / buffer	air cushion	air cushion
Max. hydraulic pressure on sonic	310 bar	5,000 psi
Mass of head	1,200 kg	2,700 lbf
Pull up force in combination with sonic	10,000 daN	22,480 lbf
Pull down force in combination with sonic	10,000 daN	22,480 lbf
Pull up force static	10,000 daN	22,480 lbf
Pull down force static	10,000 daN	22,480 lbf
Drilling under angle perpendicular driving direction	10°	10°
Advised power from rig engine	205 kW	275 HP

Rig	Metric	Imperial
Caterpillar 6 cylinder water cooled engine	205 kW	279 HP
Mass approx.	15,000 kg	33,000 lbs
Fuel tank (diesel)	230 liter	60 gallon
Load sensing hydraulic system	Included	Included
Control panel on turning arm	Included	Included
High pressure water pump	19 l/min. @ 210 bar	5 gpm @ 3,045 psi
Large flow water pump	283 l/min. @ 70 bar	75 gpm @ 1,015 psi
Aluminum water tank	500 liter	132 gallon
Rubber tracks	Included	Included
Radio remote for driving	Included	Included
Work lights	4	4

Mast	Metric	Imperial
Stroke (depending on manipulator)	5,200/5,500 mm	17'/18'
Mast dump	1,000 mm	3' 3 1/8"
Pull up	120 kN	26,977 lbf
Pull down	68 kN	15,287 lbf
Pull up and down speed	45 m/min	147 ft/min
Double hydraulic break out clamp	60 - 355 mm	2 3/8" - 13 31/32"
Adjustable clamping force of	0-140 kN	0-31,473 lbf
Break out torque	54 kNm	39,828 ft-lbf
Hydraulic break out cylinder	Included	Included
Main winch	3600 daN, speed 35 m/min, 50 m cable diam. 14 mm	8,093 ft-lbf, 115 ft/min, 164 ft, cable diam. 0.55"

Rod / casing handler		
Mechanical separators among different rod layers	Included	Included
Casing or drill rod storage depends on diameter and length	Included	Included

Options	Metric	Imperial
Remote control for all drilling functions		
SPT auto drop hammer with blow counter on control panel		
Casing lifter mounted on break out clamp	200 kN stroke 300 mm	45,000 lbs stroke 12"
Pneumatic separators among different rod layers		
Duplex mud pump	570 liter @ 45 bar	150 gallon @ 652 psi
SPX40 hose pump	114 l/min @ 9.6 bar	30 gpm @ 140 psi
Steel tracks		
Triple floatable clamp		
ManipALL 250 (magnetic rod loading arm; remote controlled)		
Safety cage		
Rotatable jibboom with second winch		



LRS 275 DUO

The DUO option will allow sonic drilling in all overburden and prove bedrock. To go deep into the bedrock a 4 speed rotary head allows diamond coring with the same sonic drill rig. This 4 speed rotary head will be positioned next to the sonic drill head and will side shift over the bore hole in case it will be used.

4-speeds rotary head:

- Consisting of steel construction with transmission gears and oil bath bearings.
- Driven by two hydraulic motors.
- Four-speeds selection by two mechanical gears and serial/parallel hydraulic motors connection from the control panel.

Inner dump shaft is equipped with a spring shock absorber. Air/mud injection swivel with internal passage 35 mm.

Speeds and torques settings depend on the chosen motor setup. There is 4 different motors to be chosen from to set up the rotary head. The motor that will be selected will have 4 speeds:

	1 st speed		2 nd speed		3 rd speed		4 th speed	
	daNm	rpm	daNm	rpm	daNm	rpm	daNm	rpm
Motor setup 1	45	950	90	475	200	210	400	105
Motor setup 2	70	660	140	330	320	144	640	72
Motor setup 3	90	530	180	265	407	116	814	58
Motor setup 4	110	410	220	205	500	90	1000	45

4-Speed rotary drill head	Metric	Imperial
Hydraulically driven in serial or parallel mode mechanical 2 speed selection		
Shock absorber		
Sub saver from rotary spindle		
Air / Mud swivel, inlet available	35 mm	1 3/8"
Torque / speed to select from	450 Nm @ 840 rpm to 5,600 Nm @ 65 rpm	331 ft-lbf @ 849 rpm to 4,130 ft-lbf @ 65 rpm



Choose your configuration

Royal Eijkelkamp provides the possibility of customising your LRS 275 and LRS 275 DUO. Customise it yourself, or choose one of our standard configurations for a shorter delivery time due to our rigs in stock. We offer three standard configurations called Basic, Pro and Royal. Scan the QR-code to view a complete overview.

Eijkelkamp Customer Service Agreement

Royal Eijkelkamp provides the possibility to add a tailor fit service contract to the extensive range of machines we offer. We call these the Eijkelkamp Customer Service Agreements. We have three types of Customer Service Agreements called Start, Pro and Royal. The Royal type is a service contract that can be tailor fit to the needs of the customer. All Eijkelkamp Customer Service Agreements will be delivered with the Eijkelkamp Service Assistant, this is an advanced track & trace system that is available for use by customer and driller on site via the mobile phone application and web browser.

For more information on demos, pilot projects or personal advice contact our sales department !

For urgent service calls and/or technical information contact or special service telephone: +31 313 800 967

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