

MidRotoSonic XL DUO

Ask for your
tailored
OPEX ROI
calculation !



MRS XL DUO:

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

The MidRotoSonic Crawler XL DUO (MRS XL DUO) is equipped with a MidRotoSonic 50k drillhead as well as a four speed rotation head. Both heads are mounted on a hydraulic side shift. The MRS XL DUO accelerates drill speed, capacity and boosts your productivity.



MidRotoSonic 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	186 / 265 kW	250 / 355 HP

Rig	Metric	Imperial
Caterpillar 6 cylinder water cooled engine	200 kW	275 HP
Dimensions folded (L x W x H) approx.	8.850 x 2.310 x 2.995 mm	29' x 7'7" x 9'11"
Height (when drilling) max.	7.500 mm	24'7"
Mass approx.	15.000 kg	33,000 lbs
Fuel tank (diesel)	190 liter	50 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	160 l/min. @ 45 bar	42 gpm @ 652 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	5.200 mm	17'
Mast dump	1.000 mm	3' 31/8"
Pull up	120 kN	26,977 lbf
Pull down	80 kN	17,984 lbf
Pull up and down speed	45 m/min	147 ft/min
Double hydraulic break out clamp	60 - 350 mm	2 3/8" - 13 7/8"
Adjustable clamping force of	250 kN	56,202 lbf
Break out torque	78 kNm	57,530 ft-lbf
Hydraulic break out cylinder	Included	Included
Main winch	1.000 daN, 100 m/min, 100 m	2,250 ft-lbf, speed 328'/min, 328'

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
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 300 (magnetic rod loading arm)		
Safety cage		
Rotatable jibboom with second winch		

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 model: R02D060

- 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 60 mm.

Speeds and torques settings depend on the chosen motor setup. There is 6 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	35	950	70	425	125	270	250	135
Motor setup 2	42	860	84	430	150	240	300	120
Motor setup 3	55	700	110	350	190	200	370	100
Motor setup 4	68	540	136	270	240	150	480	75
Motor setup 5	80	430	160	215	290	120	580	60
Motor setup 6	100	340	200	170	355	100	710	50

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

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



Uitmaat 8
6987 ER Giesbeek
The Netherlands

T +31 313 880 201
E info@sonicsampdrill.com
I sonicsampdrill.com