

Ararat Company | Iraq

### GENERAL DESCRIPTION

The *NOMA Crusher* is manufactured by the Ararat company, a regional producer of mechanical demining equipment in Northern Iraq. The medium-size tiller system is designed for mine clearance task as well as ground preparation tasks by crushing the topsoil and simultaneously clearing the mines.

The machine can operate in all ground conditions, even in difficult terrain.

The NOMA Crusher and the methodology have been accredited by the General Directorate for Mine Action in Iraq.

The machine is remotely controlled by an operator from a safe distance. It is described as an economic, simple machine and easy to maintain.



NOMA CRUSHER

### CLEARANCE METHODOLOGY

The crushing action is created by a rotational axle which is surrounded by the 99 carbon teeth. Rotation speed is up to 500 rpm. The machine can penetrate the ground and achieve a clearance depth of up to 30 cm. There is no gap between the carbon teeth.

The Crusher is designed to detonate or destroy all AP and AV mines. The area production rate is approximately 2,000 - 3,000 m<sup>2</sup> per day depending on ground conditions.

### MACHINES IN USE TO DATE

Two machines are operated by the Ararat company for the Iraqi Government in the Kurdistan region.

### ENGINE, FUEL AND OIL

- > The Crusher is equipped with a 300 hp Deutz diesel engine.
- > Fuel consumption is 15 litres per hour under normal conditions.

## **FACTORY SUPPORT**

- > A basic spare parts set is included in the purchase package.
- > Heavy maintenance for the machine can be provided on request.
- > Mechanic and operator training as well as refresher training can be provided.
- > The manufacturer can send their own technicians with a mobile workshop for on-site maintenance.

## **MAINTENANCE SUPPORT**

Ararat have a special team to perform maintenance and other services, depending on the contract and customer request.



NOMA CRUSHER

## **TESTS AND EVALUATIONS**

This is a new product and no reports are yet available.

## **REPORTED LIMITATIONS AND STRENGTHS**

No information available. It is likely that it will be difficult to operate with precision at greater distances, as with all remotely controlled machines.

**DIMENSIONAL DATA**

1. Length without attachment	4,000 mm
2. Length total	5,500 mm
3. Width without attachment	2,100 mm
4. Width total	2,300 mm
5. Clearing   Working width	2,100 mm
6. Height   Overall	2,600 mm
7. Mass   Basic vehicle	6,500 kg
8. Mass   Detachable unit(s)	2,500 kg
9. Mass   Overall	9,000 kg

**OPERATIONAL DATA**

10. Wheels   Tracks (description)	Wheels
11. Ground Bearing Pressure (kPa)	Not given
12. Hill climbing ability (in degrees)	Not given
13. Number of Chains   Chisels   Tools	99 teeth
14. Beat pattern (hits per m <sup>2</sup> ) at different operating speeds	Not given
15. Length of Chains   Tools	250 mm
16. Diameter of drum	Not given
17. Rotation Speed	500 rpm
18. Clearance   Working depth in varying terrain	30 cm
19. Working Speed (m <sup>2</sup> /h)	
> Light Soil   Medium Vegetation	500 m <sup>2</sup> /h
> Medium Soil   Medium Vegetation	Not given
> Heavy Soil   Dense Vegetation	400 m <sup>2</sup> /h
20. Control of Clearance   Working depth	Manual
21. Additional attachable working tools	
22. Armour	10 mm
23. Remote controlled	Yes
> greatest distance	400 m
24. Transportation	
> short distances	From site to site by a low bed trailer
> long distances	
> sea transport	
> air transport	

## SYSTEM STATUS AND DEPLOYMENT

25. Machines in use	2
26. Other types	No
27. Location of use	Northern Iraq
28. Totally cleared so far (m <sup>2</sup> )	Not given

## ENGINE | FUEL | OIL

29. Engine	DEUTZ diesel engine with 300 hp
30. Engine power at the flywheel	Not given
31. Sufficient power supplied to working tool	Not given
32. Fuel capacity	Not given
33. Fuel consumption	14 - 15 l/h
34. Separate engine for working unit	No
35. Cooling system	Air cooled
36. Oil capacity (both engines)	18 l
37. Hydraulic oil capacity (both engines)	120 l

## COSTS

38. Cost of system	Not given
39. Other costs	Not given
> training	—
> spare part set chains   belts	—
40. Availability for hire	Not given

## OTHER

41. Operator comfort	N/A
42. Air conditioning	N/A