

ASA | Northern Iraq

GENERAL DESCRIPTION

The *Rotational Sifter* is designed and built by the ASA company, a regional manufacturer of mechanical demining equipment in Northern Iraq. The sifter system is made up of a cylinder covered by mesh which is attached to a Volvo truck. It is used to sieve soil of mine-contaminated areas, particularly from high fragmentation areas.

This machine is medium-sized, portable and easy to transfer from area to area. The driver cabin is protected by armour plating inside the truck's original cabin. A separate engine is used to power the sifter unit.

Use of the Rotational Sifter speeds the mine clearance process and minimises risk for deminers. The retained contaminated soil after sifting is almost free of fragmentations, so that any mines are more visible and easier to find.



ASA ROTATIONAL SIFTER

CLEARANCE METHODOLOGY

An armoured wheel loader or armoured excavator drops dry soil into the sifter container. The soil is fed into the sifting cylinder by a conveyor belt at the base of the container (hopper). The sifting cylinder rotates continually at 15 - 25 rpm. The cylinder is covered by steel mesh (45 mm x 45 mm) which is smaller than the smallest mines. Fine soil passes through this mesh and drops on to a conveyor belt which carries it to one side of the machine where it falls to the ground. The remaining soil, which includes any mines and ERW, is transferred to the back of the container where it is stored until the container is full. Contaminated soil is then offloaded in a specific, demarcated area where it is checked by deminers.

This is a powerful machine which gives a high daily production rate. It is suitable for use with most kinds of soil except for wet soil. The sifting process is suitable to tackle mine clearance in areas highly polluted with metal fragmentations where metal detectors are not suitable.

MACHINES IN USE TO DATE

Two machines are currently being used in Northern Iraq (Kurdistan)/Suleimanyah, by ASA.

ENGINE, FUEL AND OIL

The engine of the truck is the original Volvo. The second engine, used to power the sifting unit, is a six-cylinder Perkins.



Sifter loaded by excavator

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 and refresher training can be provided.

MAINTENANCE AND SUPPORT

On-site visits by a technical team with mobile workshop can be arranged with the manufacturer.

TESTS AND EVALUATIONS

No information yet available.

REPORTED LIMITATIONS AND STRENGTHS

No information yet available.

DIMENSIONAL DATA

1. Length without attachment	N/A
2. Length total	7,000 mm
3. Width without attachment	N/A
4. Width total	2,500 mm
5. Clearing Working width	N/A
6. Height Overall	3,700 mm
7. Mass Basic vehicle	6,000 kg
8. Mass Detachable unit(s)	8,000 kg
9. Mass Overall	14,000 kg

OPERATIONAL DATA

10. Wheels Tracks (description)	Wheel
11. Ground Bearing Pressure (kPa)	N/A
12. Hill climbing ability (in degrees)	20°
13. Number of Chains Chisels Tools	N/A
14. Beat pattern (hits per m ²) at different operating speeds	N/A
15. Length of Chains Tools	N/A
16. Diameter of flail drum	Sifting mesh is 45 mm x 45 mm
17. Rotation Speed	N/A
18. Clearance Working depth in varying terrain	As required
19. Working Speed (m ² /h)	
> Light Soil Medium Vegetation	100 m ² /h
> Medium Soil Medium Vegetation	
> Heavy Soil Dense Vegetation	80 m ² /h
20. Control of Clearance Working depth	N/A
21. Additional attachable working tools	
22. Armour	8 mm
23. Remote controlled	N/A
> greatest distance	N/A
24. Transportation	
> short distances	Self driven
> 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 ²)	Not given

ENGINE | FUEL | OIL

29. Engine	Volvo
30. Engine power at the flywheel	N/A
31. Sufficient power supplied to working tool	N/A
32. Fuel capacity	400 l
33. Fuel consumption	15 - 17 l/h
34. Separate engine for working unit	Perkins
35. Cooling system	Water cooled
36. Oil capacity (both engines)	20 l
37. Hydraulic oil capacity (both engines)	200 l

COSTS

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

OTHER

41. Operator comfort	Not given
42. Air conditioning	No