



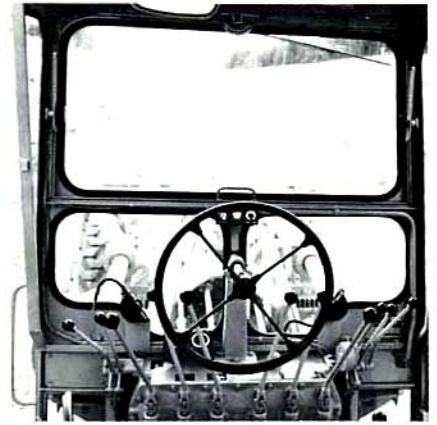
BM·VOLVO ROAD GRADER VHK 116



BM·VOLVO VHK 116



The reverse rake of the windscreen gives the driver a good view of the operating gear and the roof overhang serves as sun-visor. The windscreen and top section of the doors can be locked in the open position.



Control levers — easily accessible. Clear view in all directions from the driver's seat.

The BM·VOLVO VHK 116 is a road grader reflecting careful design in every detail. Extensive production resources and technical experience have made the VHK 116 a tool of high precision and high quality. The mechanical control of all implements subjected to heavy stresses gives perfect results in all tasks under all conditions. The control system remains extremely positive in action — even after many years of use — and the rugged design makes the grader very strong and durable. The weight distribution has been adapted to make full use of the power supplied by the diesel engine when carrying out demanding tasks. The driver's cab is freely suspended on rubber blocks to eliminate the transfer of noise and vibrations from chassis and engine. This arrangement in combination with careful insulation, good heating and ventilation facilities ensures excellent driver comfort.



The driver's seat is adjustable for height and legroom according to individual preference. Instrument panel — conveniently located.

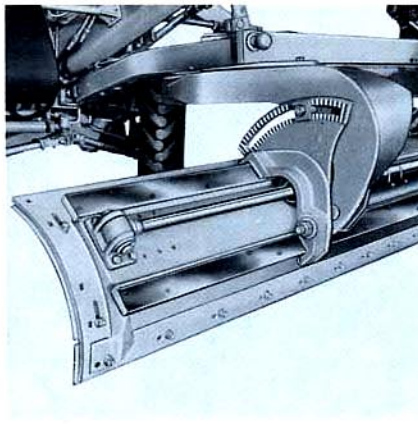


Hydraulic power-assisted steering with "mechanical feel". The mechanical steering functions independently of the power steering.





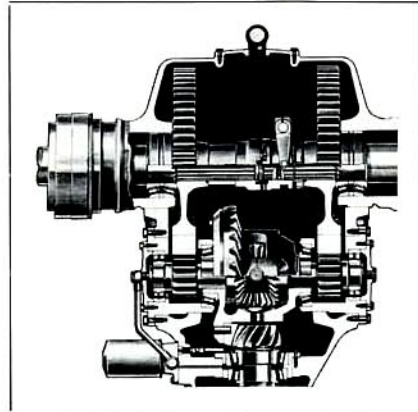
The adjustable blade circle guides, the teeth of the gear ring and the worm of the worm gear are subjected to special heat treatment. A safety clutch disengages the gear ring when running into solid obstacles.



The grader blade is of high-grade steel. The lateral blade slides are fitted with replaceable wear rails.



All universal joints for wheel inclination and steering have crosses journalled in needle roller bearings.



The differential provides reduced drive train stresses, tight turning circle and minimized tyre wear.

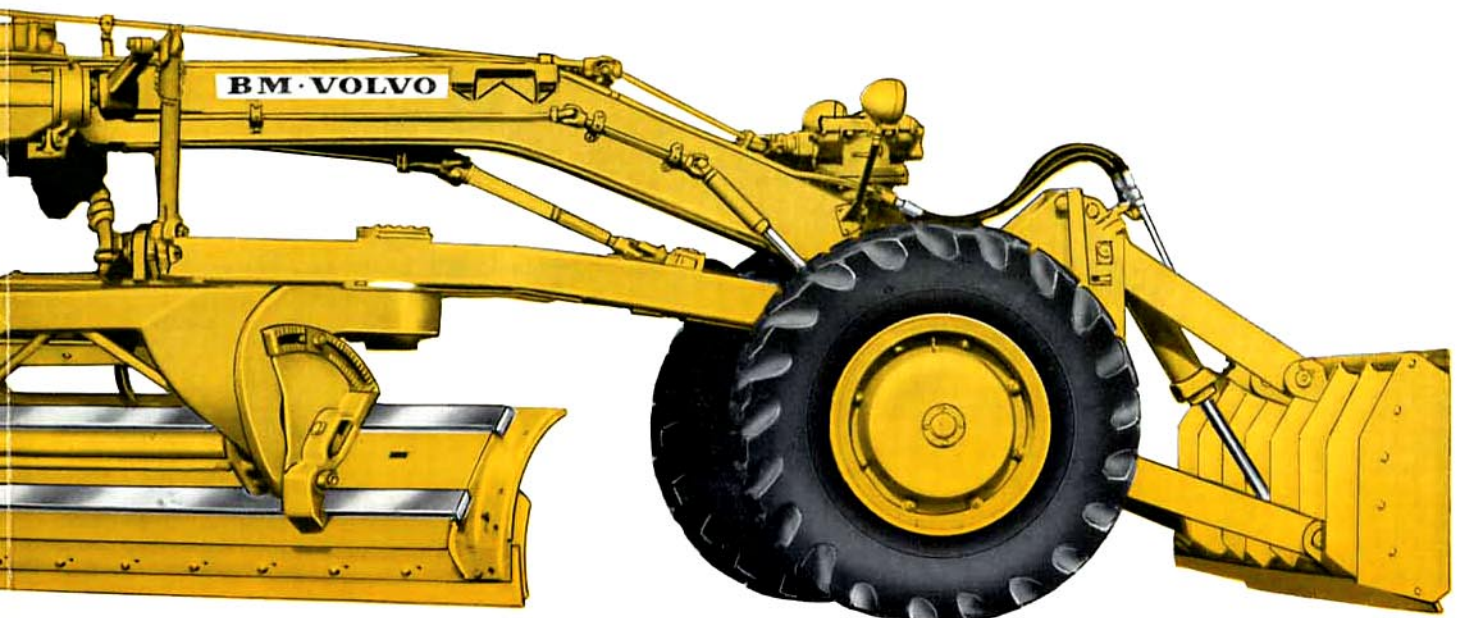
High quality

Components subjected to heavy stresses and wear have been carefully studied as regards material and design. Many parts of the VHK 116 are made of specially hardened high-grade steel. Many of the components are also easily replaceable to facilitate service and maintenance.

Properties

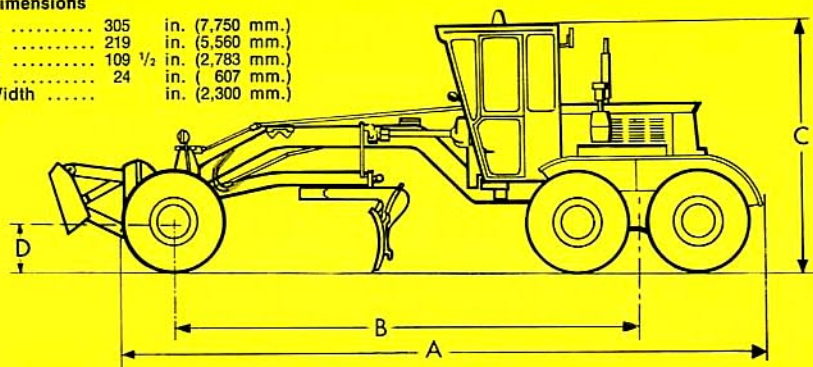
The mechanical control system gives the grader its individual characteristic of enabling the operator to select accurate settings, maintain full command of blade position and have the right "feel" of controls. The differential, the short wheel base and the facility for wheel inclination make the road grader extremely handy and easy to steer — a decisive advantage when operating where space is confined.

A quality grader through and through, offering driving comfort, easy manoeuvring and handiness



Dimensions

A	305	in. (7,750 mm.)
B	219	in. (5,560 mm.)
C	109 1/2	in. (2,783 mm.)
D	24	in. (607 mm.)
Width		in. (2,300 mm.)



TECHNICAL DATA

Weights

Service weight excg. scarifier and dozer blade	25,460 lb. (11,550 kg.)
Rear	17,770 lb. (8,060 kg.)
Front	7,700 lb. (3,490 kg.)
Service weight with scarifier	27,030 lb. (12,260 kg.)
Service weight with scarifier and dozer blade	28,890 lb. (13,105 kg.)

Engine

Volvo direct-injection diesel engine	Type D 70 A
Ratings at 1,900 r.p.m.	
SMMT, SAE, DIN	118, 135, 122 h.p.

Gearbox

Type	mechanical
No. of gears, forward/reverse	8/2

Speeds

Gear	1	2	3	4	5	6	7	8
m.p.h.	2.2	3.3	4.4	5.8	6.7	8.8	11.6	17.6
k.p.h.	3.5	5.3	7.1	9.3	10.8	14.1	18.7	28.4
Reverse low high								
m.p.h.	3.0	4.6						
k.p.h.	4.9	7.4						
Speed range (idling to max. r.p.m.)								
Forward:	0.8–18.6 m.p.h. (1.3–30 k.p.h.)							
Reverse:	1.2– 5.0 m.p.h. (1.9– 8 k.p.h.)							

Clutch

Type	dry plate
Dimension	2×14 in.

Steering

Mechanical, with independent hydraulic servo

Wheels

Tyre dimensions for front and rear wheels	
Standard	1300×24/12
Turning radius	20 ft. (9 m.)

Brakes

Foot brake: Hydraulic with vacuum servo, type Hydrovac, acting on 17×4-in. drums on front pair of rear wheels
Hand brake: Mechanical

Frame

Description: welded box-section with internal reinforcement

Clearance, to bottom of frame

Circle

Diameter	58 1/2 in. (1,486 mm.)
Rotation, mechanical	360°
Tooth material:	face hardened steel

Grader blade

Length	143 3/4 in. (3,650 mm.)
Height with cutting edge, chordal dimension	22 in. (560 mm.)
Cutting edge dimension, 2	6 in. × 5/8 in. × 6 ft.
Box-section reinforcement with guides on back of blade	

Grader blade settings

Lift above ground at 44° cutting angle	21 in. (535 mm.)
Circle, lateral shift	39 1/2 in. (1,000 mm.)
Blade, hydraulic lateral shift	52 in. (1,320 mm.)
Max. reach outside wheels	95 1/2 in. (2,425 mm.)
Cutting angle range	33–100°
Max. angle of slope	90°

Control system

Mechanical control by means of worm gears driven by control gearbox
Lifting speed

Driver's cab

Floor area	52×26 3/4 in. (1,320×680 mm.)
Distance between ground and floor	44 in. (1,120 mm.)
Inside dimension, floor to roof	75 in. (1,900 mm.)

Capacities

Fuel tank	48 1/2 Imp.gal. (220 litres)
Cooling system	6 1/2 Imp.gal. (30 litres)
Crankcase	2 3/4 Imp.gal. (12.5 litres)
Gearbox	13 1/2 Imp.gal. (62 litres)
Tandem housings, each ..	5 1/2 Imp.gal. (25 litres)
Hydraulic system	10 Imp.gal. (45 litres)

Electric system

Voltage	24 Volts
Generator	600 Watts

Windshield wipers

Vacuum powered	
Number	3

EXTRA EQUIPMENT

Scarifier

Weight	1,025 lb. (465 kg.)
Type	Vee
Effective width	48 1/2 in. (1,235 mm.)
Number of teeth	11
Tooth size	3×1 in. (75×25 mm.)
Tooth pitch	4 3/4 in. (120 mm.)
Distance scarifier/front axle	29 in. (735 mm.)
Max. cutting depth	8 1/4 in. (215 mm.)
Max. scarifier pressure	8,885 lb. (4,030 kg.)

Dozer blade

Weight with attachment plate	1,850 lb. (845 kg.)
Width	96 in. (2,440 mm.)
Height	32 in. (810 mm.)
Plate thickness	1 1/2 in. (12 mm.)
Max. clearance above ground	31 in. (790 mm.)
Max. cutting depth	6 1/4 in. (160 mm.)

Dozer blade (hyd. op.)

Weight with attachment plate	2,270 lb. (1,030 kg.)
Width	96 in. (2,440 mm.)
Height	32 in. (810 mm.)
Plate thickness	1 1/2 in. (12 mm.)
Max. clearance above ground	18 1/2 in. (470 mm.)
Max. cutting depth	7 1/2 in. (190 mm.)

Windrow eliminator

Weight	1,150 lb. (520 kg.)
Effective width, max.	104 1/2 in. (2,654 mm.)
Distance from outside tyre wall to extreme outer edge	22–25 in. (560–630 mm.)
Roading width: eliminator blade retracted within total grader width	
Vertical adjustment, range above ground	17 3/4–19 in. (450–485 mm.)
Vertical adjustment, range below ground	6 1/2–13 in. (165–200 mm.)
Cutting angle of cutting edge	90–110°
Cutting edge deflection relative to grader	25– 30°
Tropical cab and control platform	



BOLINDER-MUNKTELL

— member of the Volvo Group —
Eskilstuna, Sweden