



# LIVAB DD-10

## Tractor Dumper



The LIVAB DD-10 is an entirely new 10-ton dumper trailer built specially for use with the BM-Volvo 350 tractor. If required, the dumper may be driven through a gearbox from the tractor rear-axle p.t.o. The gearbox is a specially designed model, which has given many years' good service in military and other vehicles. The dumper axle is the same as used in Volvo Viking trucks. The towbar assembly is of new design and features a double joint permitting 70° angul deflection between trailer and tractor, in both planes.

The LIVAB DD-10 may be driven with the dumper axle live or dumb, as required. Engagement of the tractor rear-axle p.t.o. results automatically in engagement of the dumper gearbox, by means of a pneumatic servo.

The LIVAB DD-10 is equipped with compressed-air operated servo brakes, regulated from the driver's seat by a conveniently placed lever. Stop/tail lights and flashing turn signals are standard equipment.

The LIVAB DD-10 has a rigidly-built tipping body with double steel bottom and 2" planking between. The body is operated hydraulically, the oil pressure being supplied by a generously dimensioned pump fitted at the front of the tractor.

For use with the LIVAB DD-10, the BM-Volvo 350 is supplied with 14.00—34/10 drive-wheel tyres, the dumper being equipped with 14.00—24/10 tyres. The large tyres give good ground clearance under both dumper and tractor axles. The wide angular deflection possible between tractor and trailer — even in the vertical plane — and the small turning circle radius of 4.4 m. combine to give very good off-the-road performance.

### Specification

Payload .....	tons	10
Cubic capacity, approx. . .	m <sup>3</sup>	6
Width, approx. ....	m	2.4
Length, " .....	m	4.9
Length, " ,incg. tractor	m	7.5
Height to top of sides ....	m	2.1
Angle of tip .....		65°
Tipping time, approx. ....	sec.	12
Lowering time, approx. ....	"	6
Tyres .....		14.00—24/20
Brakes: Compressed air, incg. emergency brake		
Wheelbase (driving wheel — support wheel), approx. ....	m	3.8
Turning circle radius, tractor/trailer combination, approx. m		4.4
Max. climbing ability, tractor/trailer combination with load .....		29°
Tare weight, approx. ....	tons	3.8

### Optional extras

Chafe strips for rock haulage  
Tailboard for flowing loads (e.g.sand)



# BM·VOLVO 350 Tractor for the DD-10 dumper



## Specifikation:

### Dimensions

Total length .....	mm. 3,600
„ width .....	mm. 1,830
„ height .....	mm. 2,375
Height to radiator top .....	mm. 1,520
Wheelbase .....	mm. 2,305
Ground clearance ..	mm. 485
Front track .....	mm. 1,330, 1,430
Rear track .....	mm. 1,550, 1,635

### Weight and capacities

Standard weight ....	kg. 2,640
Fuel tank .....	litres 65
Cooling system ....	„ 14
Engine lubricant ....	„ 10.5
Gearbox lubricant ..	„ 53

### Engine

3-cylinder, 4-stroke diesel with direct injection and o.h.v., replaceable wet-type liners	
Bore .....	mm 111.12
Stroke .....	mm 130
Capacity .....	litres 3.78
Compression ratio .....	16.5
Maximum r.p.m. ....	r.p.m. 1,800
Output at 1,800 r.p.m. ....	h.p. SAE 60
Output at 1,800 r.p.m. ....	h.p. DIN 56
Max. torque at 1,100 r.p.m. ..	kg-m. DIN 24.5

### Electric and cooling systems

Make of electric equipment ..	Bosch
Voltage .....	V 12
Battery capacity ....	A/hour 152
Generator output .....	watts 130
Starter power .....	h.p. 4
Centrifugal water pump, thermostat, radiator with blind, pressure release valve in radiator cap.	

### Rear-axle p.t.o.

Shaft end dimension: 1 3/8", 6 splines. P.t.o. speed: 1 rev. for each 1/10 m. tractor advance. Individual multiple-disc steel clutch for p.t.o. operation.

### Hydraulics

Vane-type pump, with shaft drive from crankshaft. Pump capacity: 50 l/min. Working pressure: 120 kg/cm<sup>2</sup>.

### Other standard equipment

Pneumatic fittings for dumper brakes. Front mudguards. Extension mudguards at rear. Safety frame and all steel cab. Horn. Flashing turn signals. Rearview mirrors. Heater and defroster system.

### Optional extra

Power-assisted steering.

### Governor

Centrifugal type, adjustable between idling speed and 1,800 r.p.m. Manual and foot controls.

### Clutch

Single dry-plate type  
Diameter ..... in. 13

### Speeds

Gear	Speed, kph	
	at 1,500 r.p.m.	at 1,800 r.p.m.
1	2.1	2.5
2	3.2	3.8
3	4.0	4.7
4	5.3	6.4
5	6.0	7.1
6	7.9	9.5
7	9.0	10.7
8	13.4	16.1
9	15.5	18.6
10	23.3	28.0
rev. 1	3.8	4.6
„ 2	5.8	7.0

### Tyres

Front .....	7.50—18/8
Rear .....	14—34/10

### Brakes

Fully-enclosed mechanical (expanding-shoe) steering brakes. Pedals lockable in depressed position.

### Tractor-meter

Combined rev. counter, speedometer and engine-hour counter.

- The BM·Volvo 350 is powered by a modern 3.8-litre, 60-h.p., direct-injection diesel, economical on fuel and a sure starter even in sub-Arctic weather. A centrifugal governor responds rapidly to load changes. The oil, fuel and air filter systems are designed throughout for maximum reliability.
- The BM·Volvo 350 carries a powerful (152 Amp.hr.) battery and a powerful (4 h.p.) starter . . . the right equipment to match the worst winter weather.
- The BM·Volvo 350 has ten forward gears and two reverse. The easy-change gearbox can be operated without stopping. The tractor represents a careful balance of weight and power, and of power, torque and transmission ratios, resulting in maximum work capacity.
- The BM·Volvo 350 is equipped as standard with differential lock, bringing a number of advantages: The tractor is more efficient on slippery surfaces, pulling power and performance on bad ground are better, tyre wear and fuel consumption are reduced. To summarise: more work done at lower unit cost.
- The BM·Volvo 350 is handy and easily steered. The car-type steering eliminates all kick. The readily-accessible driver's seat has all levers and pedals within easy reach, the instrumentation is clearly presented and visibility good. All in all, the 350 is easy to care for and easy to drive. Driver comfort is particularly noteworthy — the all-steel cab has heavy-duty heating and a comfortable, adjustable seat.

The manufacturers reserve the right to change specifications without notice.

## **BOLINDER-MUNKTELL**

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**VOLVO**

No. 2030 E

GAPPE & SPORRE, E-TUNA  
Printed in Sweden 2000 3/64  
Endast för spridning utomlands