

# BE75

HYDRAULIC EXCAVATOR

- Efficient Hydraulic System
- Powerful Economical Engine
- Effort-free Operation
- Operator Comfort
- Dual Speed Travel System



Operating Mass	: 7500 kg
Fly Wheel Horse Power (Net)*	: 41.9 kW (57 hp) @ 2000 rpm
Fly Wheel Horse Power (Net) **	: 53kW (71hp) @ 2200 rpm
Bucket capacity	: 0.3 m <sup>3</sup>

\* Naturally Aspirated Engine

\*\* Engine with Turbocharger

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# BE75

## HYDRAULIC EXCAVATOR

### Salient Features :

#### Efficient Hydraulic System

Hydraulic system with axial piston pump assures smooth compound work equipment movement and travel. Rugged closed center load sensing hydraulic system.

#### Powerful economic engine

Diesel engine delivers 57 FHP@2000 rpm (Naturally Aspirated Engine), Diesel Engine delivered 76 HP (Gross)@2200 rpm (Turbo charge engine). A direct injection system for reduced fuel consumption assures high operational economy.

#### Effort free operation

Hydraulically assisted simple feather touch ergonomically designed controls ensures effort free operations.

#### Operator Comfort

Specially designed cabin provides plenty of work space and excellent visibility. Remote location of hydraulic tank away from the cabin prevents heating up of the cabin enhancing operator comfort and productivity.

#### Dual Speed Travel System

Dual Speed hydrostatic drive with counter balance valve and automatic parking brake ensures smooth and safe operation. The lower speed can be used during excavator operation and higher speed during long distance travel for better mobility.



#### ENGINE

Make	Kirloskar Oil Engines Ltd.	
Model	4R 1040 NA	4R 1040 TC BSIII
Type	Diesel, 4 stroke, Water Cooled, Direct Injection and Naturally Aspirated	Diesel, 4 stroke, Water Cooled, Direct Injection with Turbo Charger,
Power	FHP(Net) 41.9kW (57hp) @2000 rpm	FHP 53kW (71 hp) @2200 rpm
Max Torque	272 Nm (28 Kgm) @1500 rpm	300 Nm (30.59 Kgm) @1500 rpm

No. of cylinders	4, In-line
Bore & Stroke	∅ 105 mm x 120 mm
Total displacement	4160 cm <sup>3</sup>

#### Electrical

Alternator	24 V, 40A
Starting Motor	24V
Battery	2 x 12 V, 75 Ah



#### UNDERCARRIAGE

Track frame	Sturdy H bar type centre frame is integrally welded with reinforced box-sections.
Track Shoe width(STD)	450mm
No. of shoes	40 each side (Triple Grouser)
No. of carrier rollers	1 each Side
No. of track rollers	5 each side
Ground Pressure	0.031 Mpa (0.32 kg/cm <sup>2</sup> )



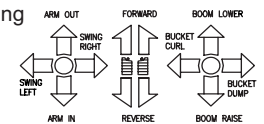
#### SWING SYSTEM

Type	Planetary gear reduction with built in automatic break for swing lock.
Max Swing Speed	11.8 rpm
Swing Circle	internal gear and pinion, immersed in grease
Reduction Ratio	142.348
Tail Swing radius	1830 mm



#### CONTROLS

Work Attachment	Hand operated joy stick pilot controls with accumulator sytem for smooth safe operation
Travel	Two foot pedals cum hand levers operated pilot control valves for forward / reverse travel and steering



#### INDICATORS/ALARM/GAUGES

Indicators for alternator charge. Alarm for low engine pressure. Gauges for fuel level, hour meter, water temperature and hydraulic oil level, sight gauge and FM radio, fan



#### REFILL CAPACITY (Coolant & Lubricant)

System	Capacity (liters)
Fuel Tank	122
Radiator	10
Engine	9.5
Final Drive each side	0.8
Hydraulic Tank	60

#### STANDARD EQUIPMENT

Boom (3710 mm), Std arm (1650 mm), Std. Bucket (0.3 m<sup>3</sup>, SAE heaped), starting motor, alternator, batteries, suction type fan, dry type air cleaner, horse power summation hydraulic system, 450 mm triple grouser shoes, hydraulic track adjuster, counter weight, hydrostatic drives, pilot pressure controls, all weather steel cabin (with safety glass windows, lockable door, wiper, electric horn, cabin lamp and adjustable seat with reclining device), rear view mirror, ash tray, portable fire extinguisher, front light & tool kit, Blade attachment for light dozing and leveling operations.

#### OPTIONAL ACCESSORIES / ATTACHMENTS / BUCKETS

Hydraulic Rock Breaker, Hard Faced Bucket, Trenching Bucket, Cabin front guard, FOPS ditch cleaning Bucket, weed Buckets, Trapezoidal Bucket, Ripper, Short Boom (2650mm).

## HYDRAULIC SYSTEM

**System Capacity (Liters) : 100**

### Hydraulic Pumps

#### Main

Type	Variable displacement axial piston pump
Max. oil flow	144 + 72 l/min @ 2000 rpm

### Hydraulic Motors

Travel	2 Nos. of two speed axial piston motors with built-in counter balance valves
Swing	1 no. axial piston motor

### Control Valves

Type	Main	Compact pilot operated load sensing 8 spool valve
Relief valve settings Mpa (kg/cm <sup>2</sup> )	Work Attachment (Boom, arm & bucket)	24.5 (250)
	Swing circuit	12.5 (130)
	Travel circuit	24.5 (250)

### Hydraulic Cylinders

Type	Double acting piston	
	Qty	Bore x Stroke(mm)
Boom	1	∅ 120 x 830
Arm	1	∅ 100 x 885
Bucket	1	∅ 90x 685

## DRIVES & BRAKES

Drive Type	Two speed hydrostatic with axial piston motor and planetary reduction gear box for each track
Travel and Steering	Forward/reverse travel and steering actuated with either hand levers or foot pedals. Independent drive to each track enables machine to make a pivot turn in either direction.
Max. Draw bar pull	55.7 kN (5680 kg)
Max Travel Speeds	1) 2.6 km/h - working 2) 4.4 km/h - Transport
Counter Balance Valve	Counter balance valve fitted on each hydraulic motors acts as hydraulic brake. This also prevents possible over speeding in down gradient
Brakes	Oil disc type, spring applied hydraulically released brakes. The brakes are automatically released when pedals are operated for travel.

## BACKHOE BUCKET

Bucket Capacity (m <sup>3</sup> ) (SAE heaped)	0.3
Bucket width (mm) without side cutters	740
Bucket width (mm) with side cutters	920
Bucket weight (kg)	
Without side cutters	220
With side cutters	244
No. of bucket teeth	4

## Working Range and Digging Forces

Description	Standard Arm (1650) mm
A. Max digging height	7120
B. Max dumping height	4995
C. Max bucket loading clearance	5000
D. Max vertical wall digging depth	3580
E. Max digging depth of cut for 2440 mm level bottom	3775
F. Max digging reach at ground level	6225
G. Max. Digging depth	4090
H. Min. reach at ground reference plane	818
J. Reach at Max. Height	2705
K. Max reach	6385
L. Reach to bucket pin center at Max. Height	2530
M. Max. Bucket hinge pin height	6065
<b>FORCES kN(kgf)</b>	
Bucket digging force	48.3 (4923)
Arm crowd force	37.4 (3802)

Material and specifications are subject to change without notice, Illustrations may include optional equipment & accessories

## SAFETY

- Built-in swing brake and hydraulic swing lock ensure safety during along distance travel and transportation.
- Horn
- Automatic parking brake
- Relief valves and safety valves for hydraulic system protection.
- Counter balance valves in travel motors to avoid possible over speeding in down gradient.
- Accumulator in pilot line to bring down the work attachment to a safer position in the absence of engine power.
- Hydraulic filters for protection of hydraulic system against oil contamination.
- Mechanical safety levers for locking hydraulic system controls.

## FILTER SYSTEM

### ENGINE

Lub Oil	Paper type
Fuel	Pre and Micro
Air	Double element dry type with pre cleaner
Hydraulic System	Return line filter

## MASS (kg)

**Operating Mass 7500**

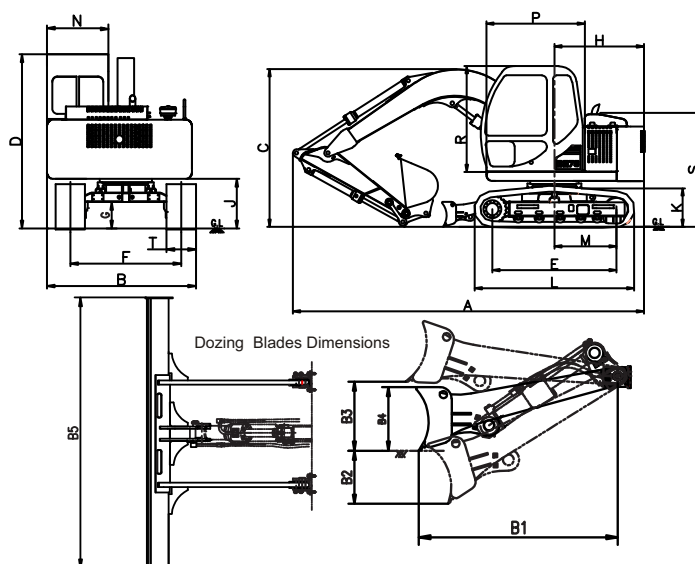
(Approximate) (Including Boom (3710 mm) Std. Arm (1650 mm), Std. Bucket (0.3m<sup>3</sup>, SAE Heaped), Operator, Lubricant, coolant, filled fuel tank and hydraulic tank.

## Dozing Blade Dimensions (mm)

B1 - Cutting edge to Rib pin center Distance	1321
B2 - Digging depth for ground level	436
B3 - Vertical lift from ground level	285
B4 - Blade height	455
B5 - Overall width	2250

## DIMENSIONS (mm)

A-Overall length / B - Width	5850 / 2280
C-Overall height (top of boom) / D-Cab	2615 / 2495
E-Track length on ground / K-height	2060 / 680
F-Track gauge / T-Width	1700 / 450
G-Min ground clearance / J-Cwt	405 / 760
H-Tail Swing Radius	1830
L- Crawler overall length	2645
M-Sprocket axis to axis rotation	1030
S-height upto Engine Hood	1865
N-Cab width / P-Length / R- Height	940 / 1590 / 1615





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