

MITSUBISHI TRACTOR

BS3F

DIRECT-DRIVE

(DD)



MITSUBISHI
HEAVY INDUSTRIES, LTD.



MITSUBISHI TRACTOR BS3F

Curved-apee shoe

Specialty designed for use on the swamp version of BS3F tractor shovel, this shoe provides better self-cleaning action and traction in swampy ground work. The apex of each shoe comes just under link joint during operation. This feature gives no rocking motion to the shoe . . . minimizes strain on undercarriage components. The result is long life of links, pins and bushings.

Backhoe attachment (optional)

	BS3F standard backhoe	BS3F swamp backhoe
• Gross weight	5,200 kg (11,464 lb)	5,600 kg (12,336 lb)
• Data		
Bucket capacity (standard)	0.13 m ³ (0.17 yd ³)	
Bucket width (standard)	600 mm (1'11-5/8")	
Max. digging depth	3,180 mm (10'4-13/32")	
Max. cutting height	3,630 mm (12'0-3/4")	
Max. loading height	2,380 mm (7'9-11/16")	
Max. reach from swing axis	4,330 mm (14'2-1/2")	
Swing arc (uninterrupted)	185°	
Offset range (from center line of tractor)	450 mm (1'5-3/4")	
Hoe weight	1,250 kg (2,756 lb)	

• (Extra-cost buckets)

- 0.08-m³ (400-mm width) bucket.
- 0.06-m³ (300-mm width) bucket.
- 0.08-m³ (400-mm width) clay bucket.



Optional Attachments

- Multi-purpose bucket (for standard machine)
- Side dump bucket (for standard machine)
- Angling blade
- Beach rake (for standard machine)
- Farm rake (for standard machine)
- Lift fork
- Trencher (for swamp machine)
- 3-point hitch
- Winch
- Integral arch
- Guide roller
- Transmissions for low speeds, super-low speeds, ultra-low speeds
- Power take-off device
- Swing drawbar (for machine equipped with 3-point hitch)
- Rear roster (for machine equipped with 3-point hitch)
- Overhead guard
- Single-grouser shoe (for standard machine)
- Three-bar shoe (for standard machine)
- Snow shoe (for standard machine)
- Flat shoe (for standard machine)

• These specifications are subject to change without prior notice.



The above appearance is BS3F with backhoe model.

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MITSUBISHI TRACTOR BS3F

Reliable engine, rugged undercarriage, comfortable cockpit boasts of many merits!

Field-proven powerful engine

MITSUBISHI S4E Diesel Engine, with 2609 cc displacement, has greater lugging ability to pick up full bucket load and keep it moving without stalling - with less noise and at minimum fuel consumption rate.

Operating ease and convenience

- Roomy deck is perfectly clear except for pedals - no obstructions to climb over when you get on or off a BS3F.
- Fingertip controls are grouped close to the operator to allow him to combine basic motions into smooth cycle.
- Wide forward visibility permits the operator to see every inch of his attachment every minute.

Workability for higher production

- Entirely new lift arm design gives you bigger value combining power and balance - value that will give you higher dumping clearance and longer reach on any type or size of job.
- Greater breakout force available at bucket teeth makes the BS3F outproduce any other machine in its class in handling hard-to-dig materials. Job-designed 8-tooth bucket assures concentrated digging and easier dumping.

Rugged, dependable undercarriage

Proven in thousands of hours of field experience, tougher links, pins and bushings plus sealed track design preventing uneven wear outlast competitive tracks by a wide margin.

Easy maintenance, longer life

Cartridge type crankcase lube oil filter, sealed bucket linkage, less lubrication points - these and other serviceability features in the BS3F reduce time-wasting daily maintenance tasks ... give you longer tractor life.

Versatility

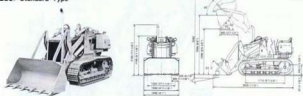
Selection from two types of tractor - standard and swamp plus wide choice of interchangeable attachments gives you unlimited job opportunities.



Big, roomy cockpit lets the operator do more work with less end-of-hard-day aches and pains.

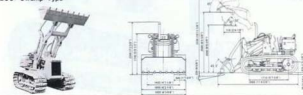
BS3F Standard Type

(units: mm (in.))



BS3F Swamp Type

(units: mm (in.))



MITSUBISHI BS3F TRACTOR SHOVEL (DIRECT-DRIVE) SEPCIFICATIONS

		BS3F standard type	BS3F swamp type	
- Operating weight - Bucket capacity - Rated output - Travel speeds and drawbar pull		3,900 kg (8,598 lb)	4,200 kg (9,258 lb)	
			0.4 m ³ (10.52 cu yd) 26 PS (34.91 HP)	
	Range	Travel speeds		Max. drawbar pull * (Forward)
		Forward	Reverse	
	1st	3.8 km/h (1.14 MPH)	4.3 km/h (2.67 MPH)	3,990 kg (8,798 lb)
	2nd	3.8 km/h (2.42 MPH)	4.3 km/h (2.81 MPH)	--
	3rd	4.7 km/h (4.29 MPH)	--	--

■ Dimensions

Length, overall	3,505 mm (11' 6")	3,485 mm (11' 4.3/8")
Width, overall (incl. bucket)	1,550 mm (5' 1")	1,520 mm (5' 0.5/8")
Width, overall (incl. bucket)	1,500 mm (4' 11.1/8")	1,500 mm (5' 0.1/8")
Height, overall (incl. exhaust pipe)	2,165 mm (7' 1.1/4")	2,200 mm (7' 2.5/8")
Height, overall (incl. exhaust pipe)	1,705 mm (5' 7.1/8")	1,740 mm (5' 8.5/8")
Track gauge	1,200 mm (3' 11.1/4")	1,400 mm (4' 7.1/8")
Base width	300 mm (11.3/8")	500 mm (1' 7.3/4")
Track length on ground		1,710 mm (5' 7.5/8")
Ground contact area with standard shoes	10,260 cm ² (1,580 in ²)	17,100 cm ² (2,661 in ²)
Ground pressure	9.38 kg/cm ² (9.3 psi)	9.28 kg/cm ² (9.2 psi)
Min. ground clearance	300 mm (11.5/8")	290 mm (11.3/8")
Overload height above ground	440 mm (1' 5.3/8")	420 mm (1' 5.1/8")
Max. lift height	2,590 mm (8' 6")	2,580 mm (8' 5.5/8")
Dump clearance	1,990 mm (6' 5.3/8")	2,040 mm (6' 8.3/8")
Dump reach	800 mm (2' 7.1/2")	715 mm (2' 4.1/8")
Rollback at ground		43.5°
Dump angle (fully raised)		50°
Digging depth (at 10° cutting edge angle)	225 mm (8.7/8")	220 mm (8.5/8")

* Max. drawbar pull is based on 85% mechanical efficiency and is limited by ground conditions and machine weight.

■ Diesel engine

Model	Mitsubishi S4R diesel engine
Type	4-stroke, water-cooled, in-line, swirl-chamber
Number of cylinders	4—94mm x 94 mm (3.45/64")
Piston x stroke	
Rated displacement	2,400 cc (149.33 cu in)
Rated output	26 PF (34.91 HP)
Rated speed	2,400 rpm

• Swirl chambers that provide optimum fuel-air mixing for clean and complete burning under all speed and load conditions, offset pistons, spoke-type pullies, rigid crankcase - these add much to quiet but power-rich performance.

• Forced-lubricated fuel injection pump
Easy-to-replace cartridge type oil filter
Sheathed heater plugs and 24-ohm starter insure easy starting in cold weather.

■ Main clutch

Type	Oil-cooled, double-disc, coil-spring
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■ Transmission

Type	Sliding mesh, manual-shift
Number of ratios	Forward: 3 Reverse: 2

■ Steering

Clutch type	Dry, multi-disc, coil-spring
Brake type	Dry, externally contracting band.
Parking brake type	Foot-operated

* Clutch and brake are interconnected.

■ Final drive

Type	Spir gear - 1-stage reduction
Seal type	Floating seal

■ Track roller frames

Welded to form rugged box section. Non-oscillating suspension mounted by track roller guards. Lifetime-lubricated rollers and idlers.

Number of carrier rollers (each side)	1
Number of track rollers (each side)	5

■ Track shoes

Type	Standard	Swamp
	Assembled diff-ferential height triple grouser	Assembled curved apex
Number of shoes (each side)		36
Pitch		135 mm (5.3/16")
Grouser height	30 mm (1.1/8")	70 mm (2.3/4")
Track adjustment	Hydraulic	

■ Hydraulics

Ramp Type Capacity (at 2,400 rpm) Regulated pressure Location - drive		Gear 64 l/min (16.9 U.S.Gal/min) 160 kg/cm ² (2,275.2 psi) Front side of engine - driven from engine through universal joints
Control valve Type		2-ylunger

Operating positions Bucket lift control Bucket dump control Cylinders (double-acting)		Raise, Hold, Lower, Float Dump, Hold, Rollback Lift cylinders, bore x Number Dump cylinders, bore x Number
		60 mm (3.35/64") x 2 63 mm (2.31/64") x 2

■ Refill capacities

Fuel tank	80 l (15.85 U.S.Gal.)
Cooling system	15 l (3.96 U.S.Gal.)
Lubrication system	
Engine crankcase	7 l (1.86 U.S.Gal.)
Main clutch	6 l (1.59 U.S.Gal.)
Transmission and bevel gear case	9 l (2.38 U.S.Gal.)
Final drive (each side)	6.5 l (1.72 U.S.Gal.)
Hydraulic tank	37 l (9.77 U.S.Gal.)

These specifications are, unless otherwise noted, of the BS3F tractor shovel equipped with 0.4 cubic meter bucket with teeth.

■ Standard equipment

0.4-cubic meter bucket with teeth
Track roller guards (guiding guards for swamp version)
Lighting facilities - 1 set
Canopy top Service tools - 1 set