

# **HR16/HR16E**

# **Compact Crawler Excavator**

OPERATING 7,720 – 7,980 lbs WEIGHT (3,500 – 3,620 kg)

NET ENGINE 90WER (23.8 kW)

MAX DIG DEPTH 11' 8" (3.6 m)

MAX REACH 18' 9" (5.7 m)

# 



Operating Data, Standard Equipment	
Operating weight (rubber crawlers)	7,720 lbs (3,500 kg)
Operating weight (steel crawlers)	7,980 lbs (3,620 kg)
Total length (travel position)	10' 8" (3.3 m)
Total length (trailer transport position)	16' 9" (5.1 m)
Total height (travel position)	11' 5" (3.5 m)
Total height (top of cab)	8' 3" (2.5 m)
Total width (uppercarriage)	4' 6" (1.4 m)
Total width (undercarriage)	4' 9" (1.5 m)
Uppercarriage tailswing	4' 4" (1.3 m)
Working envelope (180° / 360°)	9' 7" / 10' 6" (3.0 / 3.2 m)
Ground clearance	12" (300 mm)
Bucket digging force (SAE J 1179)*	8,026 lbs (35,701 N)
Stick digging force (SAE J 1179)*	3,645 lbs (16,200 N)
Ground pressure (rubber crawlers)	4.4 psi (0.31 daN/cm²)
Ground pressure (steel crawlers)	4.5 psi (0.32 daN/cm²)

<sup>\*</sup>Standard equipment, may vary with different bucket and/or dipperstick.



# **Specifications**

Engine	
Manufacturer, model	Mitsubishi, S 4L
Туре	4-cylinder diesel engine
Combustion	4-stroke, swirl chamber injection
Displacement	107 in <sup>3</sup> (1.76 L)
Net power rating at 2,100 rpm (SAE J	1349) 32.5 hp (23.8 kW)
Cooling system	Water

Electrical System	
Nominal voltage	12 V
Battery	12 V / 74 Ah

### Power Transmission

Two-stage hydrostatic travel drive with axial piston variable displacement motor and reduction gear (fully enclosed). Brake valve for downhill drive.

Travel speeds (forward and reverse):

1st speed range / 2nd speed range 0-1.7 / 2.9 mph (0-2.7 / 4.6 km/h)

Gradeability 60%

Drawbar pull, 1st speed range 6,975 lbs (3,100 daN)

Travel motion alarm (acoustic signal) as standard.

Undercarriage	
Maintenance-friendly crawler-type underca hydraulic crawler tensioning.	arriage. Idler suspension with
Width rubber crawlers / steel crawlers	12" / 12" (300 / 300 mm)
Tread width	3' 9" (1.2 m)
Total length (sprocket - idler)	5' 1" (1.6 m)
Total length (undercarriage)	6' 6" (2.0 m)

# Dozer Blade

Dozer blade available in "standard" and "extra-long" version (referring to distance crawler - dozer blade), independent of drive train and sensitive control via hand lever.

Width x height	59" x 14" (1,510 x 360 mm)
Cut below ground (standard/extra-long)	12.6"/11.7" (320/298 mm)
Lift above ground (standard/extra-long)	8"/17.6" (202/447 mm)
Slope angle (standard/extra-long)	22.5° / 31°
Slope balance (standard/extra-long)	9.7° / 7.7°

# Steering

Independent control of tracks via hand controls or foot pedals.

Swing System	
Hydrostatic drive. Internally toothed ring gear.	
Swing speed	0 - 10.5 rpm

**Swing brake:** Hydrostatic drive also provides dynamic braking. Additional spring-loaded multi-disc brake automatically acting when the swing control lever is in neutral position.



### Hydraulic System

LS-axial-piston variable displacement pump, load-sensing and load-independent flow division (LUDV) for all work functions and travel drive, 3 simultaneous movements possible.

Working pressure	3,625 psi (250 bar)
Variable pump capacity maximum	26 gpm (99 Lpm)

Return line filter with electric contamination indicator. Compact hydraulic oil radiator provided as standard. Boom, dipperstick and articulated cylinders with end-position damping on both sides, bucket retract function with one-side end-position damping.

Additional control circuit for work attachments provided as standard.

Maximum working pressure	3,050 psi (210 bar)
Hydraulic power	12 gpm (45 Lpm) @ 2,750 psi (180 bar)
	11 gpm (40 Lpm) @ 3,050 psi (210 bar)

Open return as standard on HR16 and optional on HR16E. All functions can be activated proportionally.

Two servo-assisted four-way control levers for excavator operations.

Safety cut-off of all functions as soon as driver leaves cab.

HR16 has metric hydraulic hose fittings. HR16E has J.I.C. fittings.

Knickmatik <sup>®</sup>	
Lateral parallel adjustment of boom arrangeme	nt at full digging depth.
Angle of artic./ lateral adjustment left	60°/18" (60°/445 mm)
Angle of artic./ lateral adjustment right	60°/23" (60°/595 mm)

## Cab

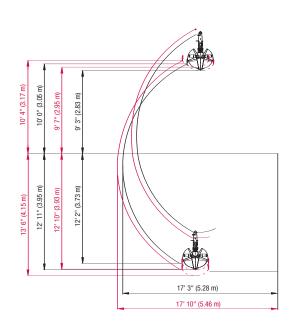
Spacious, sound-insulated full-vision steel cab with two equally large doors. TOPS certified. Safety glass windows. Thermo windows tinted in green. Skylight thermo window. Front window supported by pneumatic springs, lockable in place for ventilation and slideable under cab roof. Windshield washer. Glove box. Instrument panel, on the right side of the operator's seat with visual and acoustic warning device. Left-hand, outside rear-view mirror. Cab heating with windshield defroster through coolant heat exchanger and 2-setting fan and ventilating mode in summer. Fabric-covered, hydraulically cushioned operator's seat with height-adjustable armrests, height, tilt and weight adjustments and lap belt.

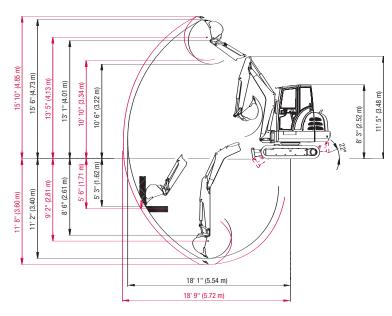
Working floodlight Halogen H-3.

Noise emission ambience LWA/Noise emission cab LpA 97/79 dB (A)

Fluid Capacities	
Fuel tank	13.7 gal (52 L)
Hydraulic system	24 gal (91 L)

# **Working Ranges & Dimensions: Monobloc Boom**





Dipperstick 63" (1.6 m)Dipperstick 70" (1.8 m)

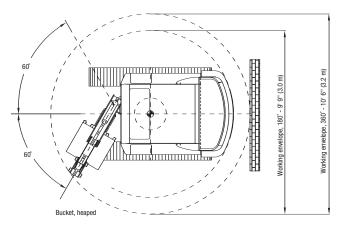
Lifting Capacities: 63" (1.6 m) Dipperstick Unit: x 1,000 lbs (Metric tons) Load radius from the center of the ring gear Bucket hinge pin height 6' 7" (2.0 m) 8' 2" (2.5 m) 9' 10" (3.0 m) 11' 6" (3.5 m) 13' 1" (4.0 m) 14' 9" (4.5 m) End Side End Side End Side End Side End Side End Side 6' 7" (2.0 m) Supported by blade 2.42 (1.10) 2.35 (1.07) 2.27 (1.03) 1.80 (0.82) 2.16 (0.98) 1.39 (0.63) 2.00 (0.91) 1.12 (0.51) 1.80 (0.82) 0.92 (0.42) Traveling 2.35 (1.07) 2.20 (1.00) 2.09 (0.95) 1.72 (0.78) 1.36 (0.62) 1.32 (0.60) 1.21 (1.55) 1.08 (0.49) 0.92 (0.42) 0.86 (0.39) \_ 3' 3" (1.0 m) Supported by blade 5.57 (2.53) 2.97 (1.35) 4.09 (1.86) 2.16 (0.98) 3.06 (1.39) 1.67 (0.76) 2.53 (1.15) 1.32 (0.60) 1.21 (0.96) 1.08 (0.49) 1.83 (0.83) 0.86 (0.40) Traveling 3.19 (1.45) 2.79 (1.27) 2.22 (1.01) 2.05 (0.93) 1.74 (0.79) 1.58 (0.72) 1.30 (0.59) 1.25 (0.57) 1.06 (0.48) 1.01 (01.46) 0.88 (0.40) 0.84 (0.38) Supported by blade 4.40 (2.00) 2.44 (1.11) 4.18 (1.90) 1.98 (0.90) 3.17 (1.44) 1.56 (0.71) 2.51 (1.14) 1.25 (0.57) 2.05 (0.93) 1.03 (0.47) 1.67 (0.76) 0.86 (0.39) 1.56 (0.71) 1.47 (0.67) 1.23 (0.56) 1.19 (0.54) 1.08 (0.49) 0.97 (0.44) 0.90 (0.41) 0.84 (0.38) Traveling 2.53 (1.15) 2.35 (1.07) 1.98 (0.90) 1.85 (0.84) - 3' 3" (- 1.0 m) Supported by blade 2.75 (1.25) 2.64 (1.20) 3.17 (1.44) 1.80 (0.82) 2.60 (1.18) 1.43 (0.65) 2.29 (1.04) 1.19 (0.54) 1.78 (0.81) 1.03 (0.47) 2.38 (1.08) 2.31 (1.05) 1.78 (0.81) 1.69 (0.77) 1.30 (0.59) 1.34 (0.61) 1.25 (0.57) 1.15 (0.52) 1.12 (0.51) 0.95 (0.43) Traveling

The above loads (all values in lbs x 1,000 resp. metric tons) are in compliance with SAE J 1097. They do not exceed 87% of hydraulic lifting capacity or 75% of tipping capacity. All values were determined with quick-attach system but without bucket. In case of mounted-on work attachments, the deadweights of the work attachments must be deducted from the permissible payloads. Work equipment: Rubber crawlers, dipperstick 63" (1.6 m).

# **Compact Crawler Excavator**

# **HR16/HR16E**

# **Working Envelope / Top View**



Work equipment: Monobloc boom with dipperstick 63" (1.6 m)

# **Optional Attachments / Accessories**

# Optional Accessories

Luxury height-adjustable operator's seat with extra-high back rest progressively adjustable to operator's weight. Seating has tilt and lengthwise adjustment.

Dipperstick 70" (1.8 m)

Cab-mounted working floodlight (front and rear)

Boom-mounted working floodlight

Crane loading wire-rope harness

Track shoes with "Felasto" tiles

Quick-change adapter for hydraulic hammer

Filling with biodegradable hydraulic oil, ester-based, VI 68

Immobilizer (anti-theft device)

Dozer blade float

# Optional Accessories (HR16E only)

Open (pressureless) hydraulic return

Bucket quick-attach coupler

# **Optional Attachments / Accessories**

Attachments		
	HR16	HR16E
Open return	std.	opt.
Two way auxiliary hydraulics	std.	n.a.
Bucket quick-attach	std.	opt.
Direct pin-on buckets	opt.	std.
Floor mat	std.	n.a.
Single auxiliary hydraulic circuit	n.a.	std.

Optional Buckets		
	Width	Capacity
Bucket with ejector	12" (300 mm)	2.20 ft3 (63 L)
Bucket	12" (300 mm)	2.31 ft <sup>3</sup> (66 L)
Bucket	16" (400 mm)	3.25 ft <sup>3</sup> (93 L)
Bucket	20" (500 mm)	4.27 ft <sup>3</sup> (122 L)
Bucket	24" (600 mm)	5.29 ft <sup>3</sup> (151 L)
Bucket	28" (700 mm)	6.40 ft <sup>3</sup> (181 L)
Ditch-cleaning bucket	39" (1,000 mm)	4.90 ft <sup>3</sup> (140 L)
Ditch-cleaning bucket	47" (1,200 mm)	5.95 ft <sup>3</sup> (170 L)
Swing bucket, 2 x 45°	39" (1,000 mm)	4.10 ft <sup>3</sup> (117 L)
Swing bucket, 2 x 45°	47" (1,200 mm)	4.90 ft <sup>3</sup> (141 L)

Clamshell Grabs (HR16 only)	
Width	Capacity
Type GL 1250 (QAS), grab swing brake 10" (250 mm)	1.6 ft³ (45 L)
Type GL 1350 (QAS), grab swing brake 14" (350 mm)	2.3 ft <sup>3</sup> (65 L)
Type GL 1450 (QAS), grab swing brake 18" (450 mm)	3.0 ft <sup>3</sup> (85 L)
Type GL 1600 (QAS), grab swing brake 24" (600 mm)	4.1 ft <sup>3</sup> (115 L)

# Hydraulic Hammer

Sound-insulated. Tools: Moil point and chisel



# **TEREX Construction Americas**

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