



# HR 13 Mini Excavator

Power and state-of-the-art engineering

Operating weight 1.9-2.0 t  
Engine output 13.3 kW (18 HP)  
Bucket capacities 22-69 l



HR 13 - The machine illustrated may include non-standard equipment



# Technical data

## Engine

Manufacturer	Mitsubishi
Type	3-cylinder diesel engine
Combustion	4-stroke cycle swirl chamber injection
Power rating acc. to ISO 9249 (DIN 70020) at 2400 rpm	13.3 kW (18 HP)
Displacement	952 cm <sup>3</sup>
Cooling system	Water

## Electrical system

Nominal voltage	12 V
Battery	12 V / 74 Ah

## Power transmission

Hydrostatic drive with axial piston motor and reduction gear, fully enclosed. "Straight Travel" function. Brake valve for downhill drive.

Travel speed, forward/reverse	0-2.7 / 4.5 km/h
Max. gradability	60 %
Drawbar pull (1 <sup>st</sup> / 2 <sup>nd</sup> speed range)	1500 / 730 daN

## Undercarriage

Hydraulically retractable / extendable undercarriage provided as standard. Crawler adjustment by means of ball valve, dozer blade to be actuated from operator's seat. Range of adjustm. (outer edge of crawlers) 990-1340 mm

## Crawler gear

Maintenance-free crawler-type undercarriage. Idler suspension with hydraulic crawler tensioning.

Rubber crawlers / steel crawlers	230 mm
Total length (sprocket-idler)	1130 mm
Total length	1490 mm

## Dozer blade

Independent of drive train, sensitive control via hand lever.

Width x height	1340 x 235 mm
Lift below ground	160 mm
Lift above ground	200 mm
Slope angle	25 deg.

## Steering

Independent single control of crawlers, also counterwise via 2-circuit hydraulic system. Sensitive control via hand lever, combined with foot pedals. Foot rests, left and right, on pedal console.

## Swing system

Hydrostatic drive, also acting as low-maintenance brake. Additional brake to be operated by multi-function handle (push-button), also acts when engine is shut off. Internally toothed ring gear.

Swing speed of uppercarriage	0-10 r.p.m.
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## Hydraulic system

Dual fixed displacement pump with power switch. Load-independent flow division (LUDV) for all work functions and travel drive. Simultaneous independent control of 3 movements.

Working pressure	180 bar
Pump capacity	33.6+19.2 l/min

Tank-immersed return filter with electric contamination indicator.

Block hydraulic oil radiator provided as standard. Boom, dipperstick and articulated cylinders with end-position damping on both sides.

Standard control circuit for work attachments.

Hydraulic power:	37 l/min @ 120 bar
	33 l/min @ 180 bar

Open return as standard. 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.

## Operating data, standard equipment

Operating weight (rubber crawlers)	1930 kg
Operating weight (steel crawlers)	2000 kg
Overall length in travel position	2680 / 2730* mm
Overall length (trailer transport position)	4235 / 4220* mm
Total height in travel position	2740 mm
Total width (crawlers retracted)	1000 mm
Uppercarriage tailswing	1160 mm
Uppercarriage frontswing	1400 mm
Working envelope 180°	2560 mm
Working envelope 360°	2800 mm
Ground clearance	170 mm
Breakout force acc. to DIN 24086	15.700 N
Ripping force acc. to DIN 24086	11,000 (9700*) N
Specific ground pressure (rubber)	0.30 daN/cm <sup>2</sup>
Specific ground pressure (steel)	0.31 daN/cm <sup>2</sup>

## Knickmatik®

Lateral parallel adjustment at full digging depth.

Angle of articulation / Lat. adj. to the left	60° / 420 mm
Angle of articulation / Lat. adj. to the right	60° / 550 mm

## Cab

Spacious, sound-insulated full-vision steel cab (free spaces acc. to EN 23411), ROPS (acc. to ISO 3471), FOPS\*\* (acc. to ISO 3449) and TOPS (acc. to ISO 12117) certified, with two equally large doors.

Safety glass windows, thermo windows tinted in green. Skylight thermo window. Front window supported by pneumatic springs, lockable in place for ventilation and slidable 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, ventilating mode in summer.

Fabric-covered, hydraulically cushioned operator's seat with height-adjustable armrests, height, tilt and weight adjustments, lap belt. Working floodlight Halogen H-3.

Noise emission ambience L <sub>WA</sub>	95 dB (A)
Noise emission cab L <sub>pA</sub>	78 dB (A)

Measured in dynamic measuring cycle acc. to EEC-directive 2000/14/EG.

## Fluid capacities

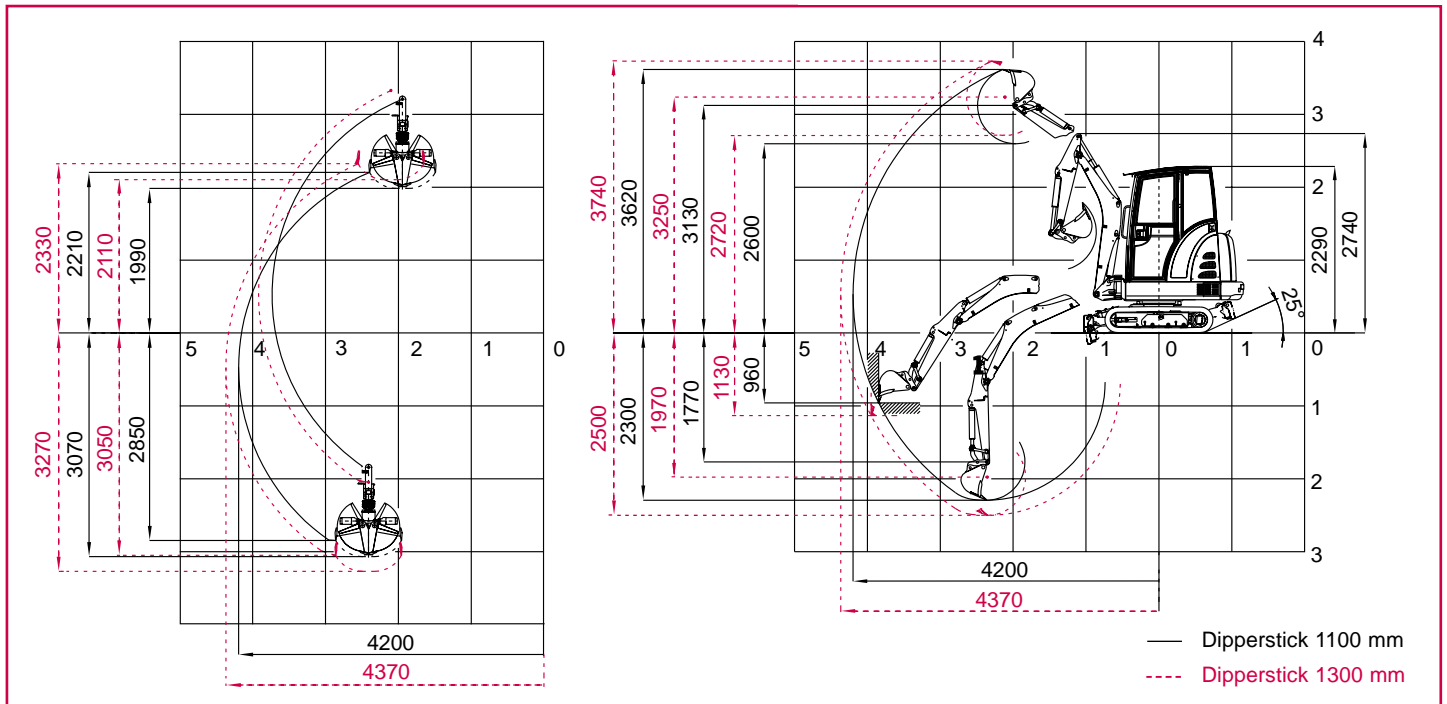
Fuel tank	30 l
Hydraulic oil (tank 25 l)	35 l

\* with dipperstick 1300 mm (optional)

\*\* FOPS-approved only with skylight guard (optional)

# Digging envelope

HR 13 Monobloc boom



# Carrying capacity

Load radius from the center of the ring gear

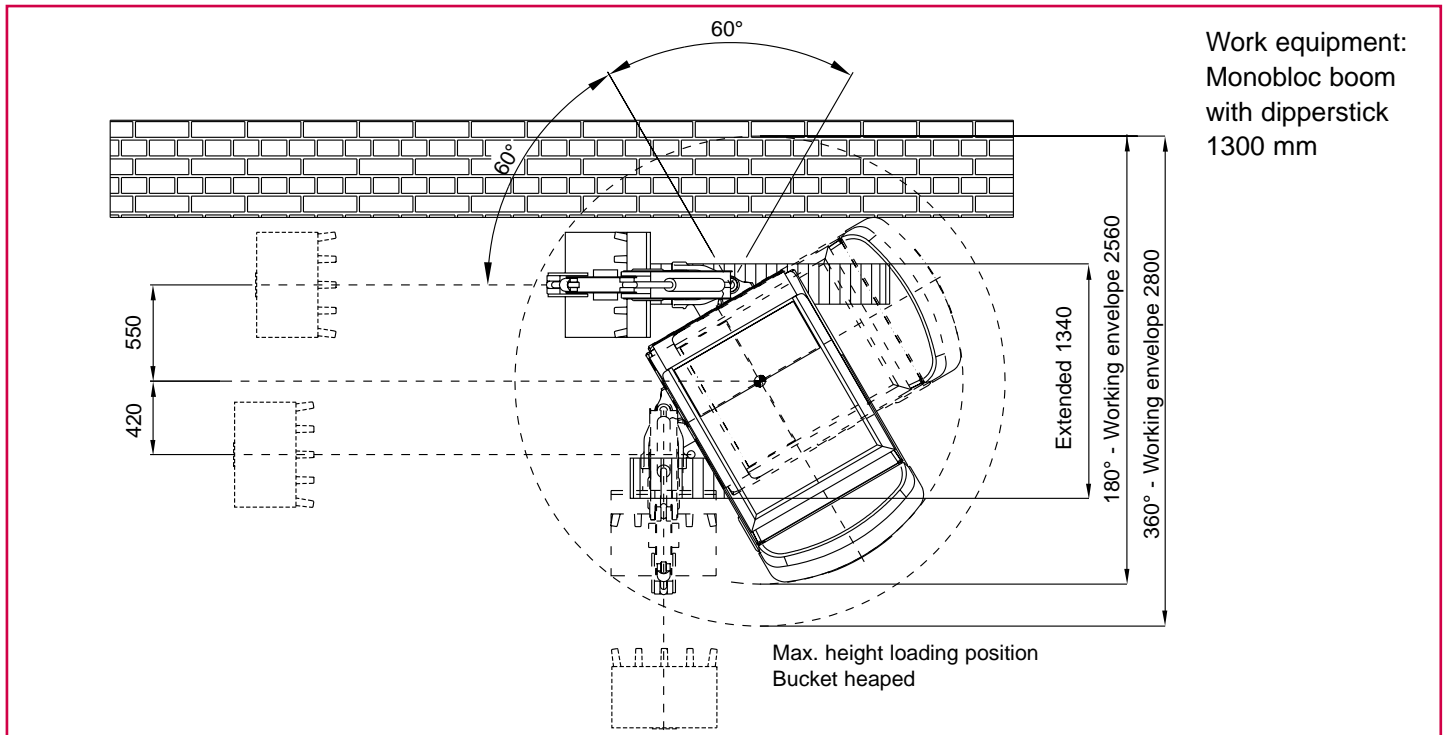
Bucket hinge pin height		1.5 m				2.0 m				2.5 m				3.0 m				3.5 m			
		UE		UR		UE		UR		UE		UR		UE		UR		UE		UR	
Dipperstick 1100		180°	90°	180°	90°	180°	90°	180°	90°	180°	90°	180°	90°	180°	90°	180°	90°	180°	90°	180°	90°
2 m	S	-	-	-	-	-	-	-	-	0.40	0.40	0.40	0.32	0.38	0.35	0.38	0.25	-	-	-	-
	T	-	-	-	-	-	-	-	-	0.39	0.38	0.39	0.31	0.37	0.33	0.37	0.24	-	-	-	-
1 m	S	-	-	-	-	0.66	0.52	0.66	0.44	0.44	0.44	0.31	0.38	0.36	0.38	0.24	0.31	0.30	0.31	0.19	
	T	-	-	-	-	0.65	0.50	0.65	0.43	0.43	0.42	0.43	0.30	0.37	0.34	0.37	0.23	0.30	0.29	0.30	0.18
0 m	S	-	-	-	-	0.74	0.58	0.74	0.40	0.52	0.43	0.52	0.29	0.39	0.33	0.39	0.23	0.28	0.28	0.28	0.18
	T	-	-	-	-	0.72	0.56	0.63	0.38	0.50	0.40	0.45	0.27	0.38	0.31	0.38	0.21	0.27	0.27	0.27	0.17
- 0.75 m	S	1.00	1.00	1.00	0.56	0.64	0.64	0.64	0.39	0.42	0.33	0.42	0.29	0.30	0.25	0.30	0.23	-	-	-	-
	T	0.98	0.74	0.98	0.53	0.63	0.47	0.63	0.37	0.40	0.31	0.40	0.27	0.30	0.23	0.30	0.21	-	-	-	-

Bucket hinge pin height		1.5 m				2.0 m				2.5 m				3.0 m				3.5 m			
		UE		UR		UE		UR		UE		UR		UE		UR		UE		UR	
Dipperstick 1300		180°	90°	180°	90°	180°	90°	180°	90°	180°	90°	180°	90°	180°	90°	180°	90°	180°	90°	180°	90°
2 m	S	-	-	-	-	-	-	-	-	0.39	0.45	0.39	0.32	0.37	0.35	0.37	0.25	0.26	0.25	0.26	0.20
	T	-	-	-	-	-	-	-	-	0.38	0.43	0.38	0.31	0.36	0.32	0.36	0.24	0.24	0.24	0.24	0.20
1 m	S	-	-	-	-	0.68	0.52	0.68	0.44	0.48	0.44	0.48	0.31	0.38	0.36	0.38	0.24	0.30	0.29	0.30	0.19
	T	-	-	-	-	0.67	0.50	0.67	0.43	0.46	0.42	0.46	0.30	0.37	0.34	0.37	0.23	0.29	0.28	0.29	0.18
0 m	S	-	-	-	-	0.70	0.58	0.70	0.40	0.50	0.43	0.50	0.29	0.37	0.33	0.37	0.23	0.28	0.28	0.28	0.18
	T	-	-	-	-	0.59	0.56	0.59	0.38	0.43	0.40	0.43	0.27	0.36	0.31	0.36	0.21	0.27	0.27	0.27	0.17
- 0.75 m	S	1.00	0.75	1.00	0.56	0.55	0.64	0.55	0.39	0.39	0.33	0.39	0.29	0.30	0.25	0.30	0.23	0.18	0.18	0.18	0.18
	T	0.98	0.74	0.98	0.53	0.54	0.62	0.54	0.37	0.38	0.31	0.38	0.27	0.30	0.23	0.30	0.21	0.18	0.18	0.18	0.18

All values in tons (t) were determined acc. to ISO 10567 and include a stability factor of 1.33 or 87% of the hydraulic lifting capacity. All values were determined without bucket. In case of mounted-on work attachments, the deadweights of the work attachments must be deducted from the permissible payloads. UE = Undercarriage extended. UR = Undercarriage retracted, S = Supported, T = Traveling. Working equipment: Rubber crawlers.

# Dimensions

## HR 13 Top view / Working envelope



# Additional equipment

## Optional accessories

- Mechanical quick-attach system for work tools (QAS)
- Canopy (weight reduction 80 kg)
- Dipperstick 1300 mm
- FOPS-skylight guard
- Cab-mounted working floodlight, front and rear
- Boom-mounted working floodlight
- Yellow beacon
- Travel motion alarm (acoustic signal)
- Crane lifting beam
- Track shoes with "Felasto" tiles
- Quick-change adapter for hydraulic hammer
- Filling with biodegradable hydraulic oil, ester-based, VI 68
- Immobilizer

Further accessories available on request

## Buckets

Bucket, with ejector (QAS)	250 mm / 25 l
Bucket (QAS)	250 mm / 22 l
Bucket (QAS)	300 mm / 26 l
Bucket	400 mm / 40 l
Bucket (QAS)	400 mm / 38 l
Bucket (QAS)	500 mm / 49 l
Bucket	600 mm / 61 l
Bucket (QAS)	600 mm / 60 l
Ditch-cleaning bucket (QAS)	1000 mm / 65 l
Swing bucket, 2 x 45 deg. (QAS)	1000 mm / 69 l

## Clamshell grab

Type GL 1250 (QAS), grab swing brake	250 mm / 45 l
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Further attachments available on request  
Subject to change without further notice