

HYDRAULIC EXCAVATOR – BRZ

CASE

CONSTRUCTION

SINCE 1842.

CX180C

ENGINE

Brand	ISUZU
Model	AI-4JJ1X
Type	Water-cooled, 4-cycle diesel, 4-cylinder in line, high pressure Common Rail system, turbocharger with air cooled intercooler, Tier 3 emission certification.
Rated power at 2000 rpm	
Net (SAE J1349, ISO 9249)	119,6 hp (89,2 kW)
Gross (ISO 14396)	123,4 hp (92,0 kW)
Piston displacement	2999 cc
Maximum torque at 1800 rpm	
Net (SAE J1349, ISO 9249)	288.4 lbf.ft (391 Nm)
Gross (ISO 14396)	294.3 lbf.ft (399 Nm)
Bore and stroke	3.75 x 4.13 in (95,4 x 104,9 mm)
Voltage	24 V
Alternator	50 A
Starter	24 V 4,0 kW

ELECTRICAL SYSTEM

Engine control	
1 - Dial type throttle control	
2 - One Touch Idle / automatic deceleration / automatic idling shutdown system	
3 - Emergency stop	
Lights	
1 - Work lights	
Upper	24 V 70 W X 1
Boom	24 V 70 W X 2
Cab	24 V 70 W X 2
2 - Operator's cab room	24 V 10 W X 1
Battery	2 X 12 V 100 Ah/5HR
Safety	
1 - Travel alarm	
2 - Double horn	
Wire harness	Waterproof connectors

HYDRAULIC SYSTEM

Main pumps	2 variable displacement axial piston pumps with electronic regulating system
1 - Max. oil flow @ 2000 rpm	2 x 37.5 gpm (142 l/min)
2 - Work circuit pressure	
Boom/Arm/Bucket	4975 psi (34.3 MPa)
5265 psi (36.3 MPa) with auto power-up	
Swing circuit	4047 psi (27.9 MPa)
Travel circuit	4975 psi (34.3 MPa)
Pilot pump	1 gear pump
1 - Max. oil flow	5.8 gpm (22 l/min)
2 - Working circuit pressure	566 psi (3.9 MPa)
Control valves	
With Boom/Arm holding valve. One 4-spool valve for right track travel, bucket, boom and arm acceleration. One 5-spool valve for left track travel, auxiliary, swing, boom acceleration and arm.	
Swing device	
1 - Motor	Fixed displacement axial piston motor
2 - Brake	SAHR type
3 - Final drive	Planetary gear reduction
4 - Turn table bearing	Ball bearing type with internal gear
5 - Max. swing speed	11 rpm
6 - Swing torque	33.264 lbf.ft (45.100 Nm)
Cylinder	Qty Diam.Bore x Diam.Rod x Stroke
Boom	2 4.5 in x 3.1 in x 3 ft 1.3 in (115 mm) (80 mm) (1.179 mm)
Arm	1 4.9 in x 3.5 in x 3 ft 7.5 in (125 mm) (90 mm) (1.280 mm)
Bucket	1 4.1 in x 3.0 in x 3 ft 2.8 in (105 mm) (75 mm) (985 mm)
Filters	
Suction filter	105 µm
Return filter	6 µm
Pilot line filter	8 µm

HYDRAULIC CONTROLS

Boom/Arm/Bucket/Swing	Pilot pressure control system (ISO pattern control)
Travel	Pilot pressure control system
Work mode selection	
1 - Mode – SP	
2 - Mode – H	
3 - Mode – Auto	
Travel mode selection	(2 speeds)
Attachment cushion control	
Hydraulic lock	(gate lock, left side tilt console)

MONITOR SYSTEM

1 - Message display (Caution, condition, etc...)
2 - Work mode display (SP, H, Auto)
3 - Machine condition (Power boost, etc...)
4 - Alarm display and buzzer
5 - Water temperature
6 - Hydraulic oil temperature
7 - Fuel level
8 - Diagnosis system
9 - Optional side and rear view camera

OPERATOR'S ENVIRONMENT

Operator's cabin

- 1 - Smooth and round shape design cab
- 2 - Safety glass on all windows
- 3 - Shock-less cab suspension by 4-point fluid mounting
- 4 - Sliding front window with automatic lock
- 5 - Full color LCD screen included
- 6 - Membrane switch on monitor display
- 7 - Windshield wiper & washer
- 8 - AM/FM radio with automatic tuner and Bluetooth
- 9 - Floor carpet
- 10 - Polycarbonate roof hatch & Sun shade
- 11 - Auto air conditioner
- 12 - Top FOPS defense level 1 (ISO 10262)
- 13 - Rollover protection structure (ROPS ISO 12117-2)

Sound level

Internal	70 dB(A) (according ISO 6396)
External	99 dB(A) (according ISO 6395)

OPERATOR'S SEAT

Low frequency mechanic suspension with helical spring and double acting hydraulic damper.

(Achieving the EM 6 category in ISO 7096)

With the following characteristics

- 1 - Manual weight adjustment
- 2 - Backrest angle adjustment
- 3 - Seat height adjustment,
- 4 - Adjustable pivoting armrests linked to consoles
- 5 - Adjustable headrest
- 6 - Retractable seatbelt
- 7 - Adjustable lumbar support
- 8 - The control consoles are adjusted independently from the seat

UNDERCARRIAGE

Travel motor	Variable displacement axial piston motor
Brake	SAHR type
Hydraulic service brake	Brake valve
Final drive	Planetary gear reduction
Travel speeds	
High	3.2 mph (5.2 km/h) (automatic speed change)
Low	1.7 mph (2.7 km/h)
Drawbar push	33.194 lbf (161 kN)
Number of upper rollers	2 (on each side)
Number of lower rollers	7 (on each side)
Number of shoes	44 on each side
Type of shoes	Triple grousers
Link pitch	7.5" (190 mm)
Shoes width - STD	2' (600 mm)
Grade-ability	70% (35°)

OPERATING WEIGHT

Operating weight	38.971 lb (17.677 kg)
With 8' 7" (2,62 m) arm, 1.28 yd ³ (0.98 m ³) bucket, 2' (600 mm) shoes, 165 lb (75 kg) operator, lubricant, coolant and full fuel tank.	
Shipping weight	16.226 lb (17.360 kg)
Operating weight – (Operator's weight 165 lb (75 kg) + 90% of the fuel weight)	
Counterweight	7496 lb (3.400 kg)
Ground pressure	5.8 psi (0,41 kgf/cm ²)
With 8' 7" (2,62 m) arm, 1.28 yd ³ (0.98 m ³) bucket, 2' (600 mm) track shoes, with triple grousers.	

DIGGING FORCE

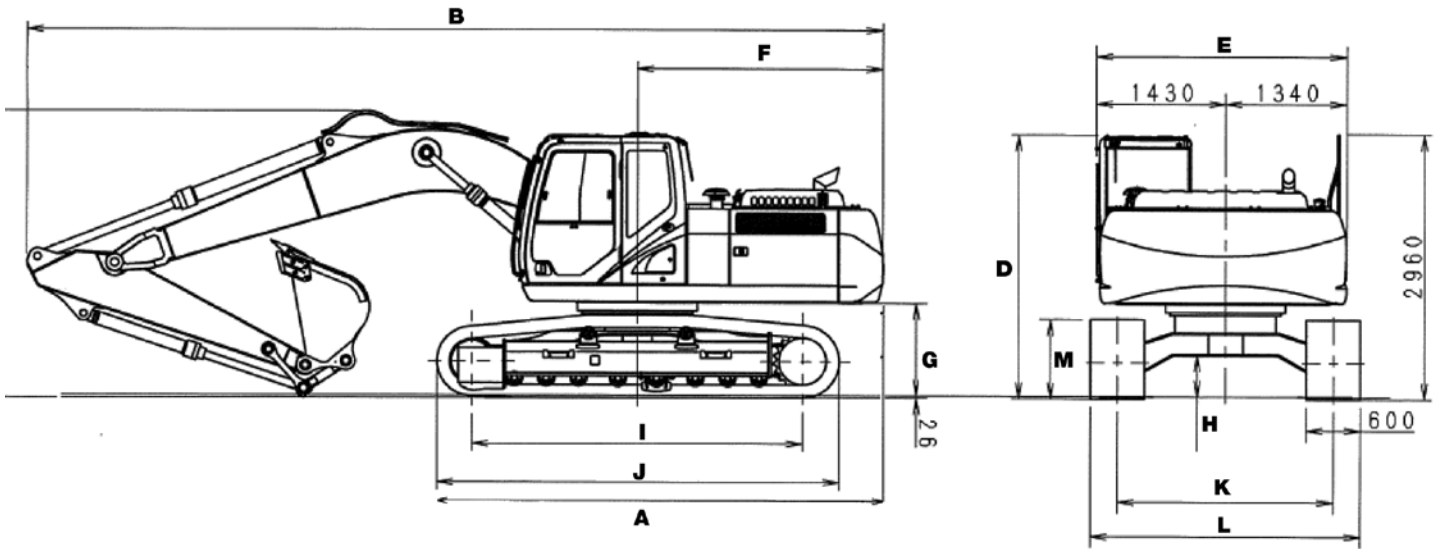
WITH 0.72 YD³ (0,55 m³) BUCKET

ISO 6015	8 ft 7 in (2,62 m)	10 ft (3,05 m)
Arm digging force	17.760 lbf (79 kN)	16.186 lbf (72 kN)
With auto power-up	18.884 lbf (84 kN)	17.310 lbf (77 kN)
Bucket digging force	25.179 lbf (112 kN)	25.179 lbf (112 kN)
With auto power-up	26.528 lbf (118 kN)	26.528 lbf (118 kN)

COMPONENT WEIGHTS

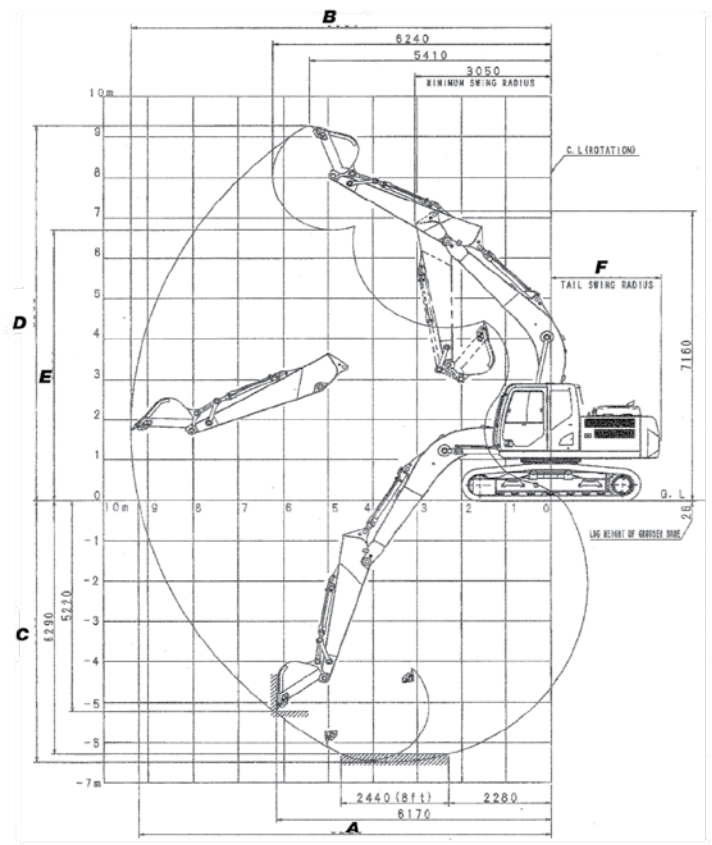
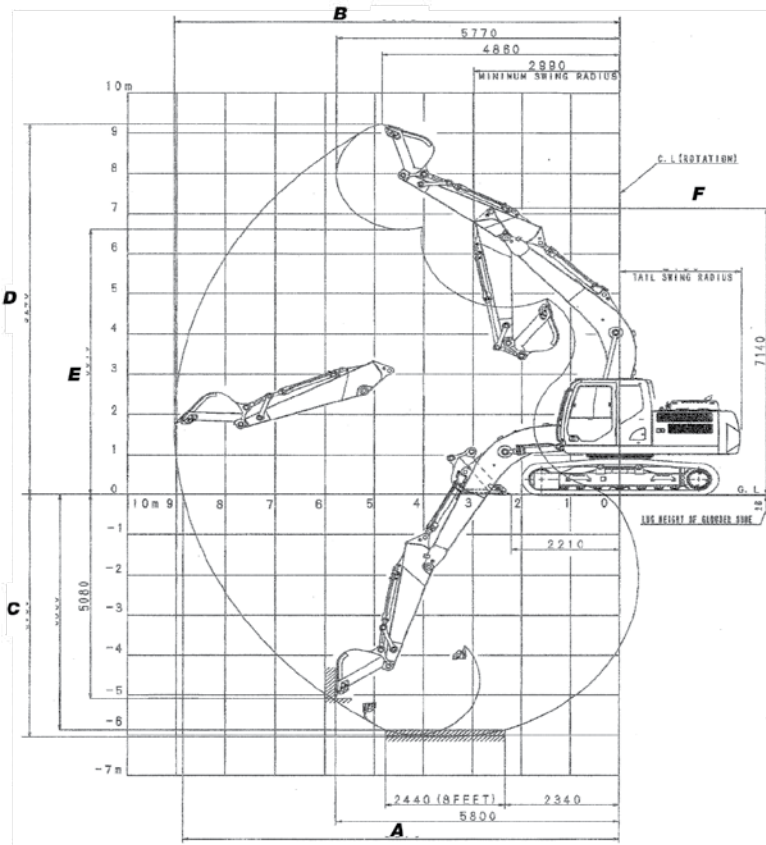
Bucket		
HD 0,72 yd ³ (0,55 m ³)		1.162 lb (527 kg)
GD 0,81 yd ³ (0,62 m ³)		1.219 lb (553 kg)
GD 0,92 yd ³ (0,70 m ³)		1.270 lb (576 kg)
HD 1,05 yd ³ (0,80 m ³)		1.501 lb (681 kg)
GD 1,29 yd ³ (0,98 m ³)		1.426 lb (647 kg)
Shoes		
600 mm (2')		5.300 lb (2.404 kg)
700 mm (2' 3,5")		6.107 lb (2.770 kg)
Arms		
2,62 m (8' 7")		1.320 lb (599 kg)
3,05 m (10')		1.356 lb (615 kg)

DIMENSIONS



Arm	8 ft 7 in (2,62 m)	10 ft (3,05 m)
A. Overall length (without attachment)	14' 5.6" (4410 mm)	14' 5.6" (4410 mm)
B. Overall length (with attachment)	27' 8.3" (8440 mm)	27' 10.6" (8500 mm)
C. Overall height (with attachment)	9' 8.5" (2960 mm)	10' 3.2" (3130 mm)
D. Cab height	9' 7.7" (2940 mm)	9' 7.7" (2940 mm)
E. Upper structure overall width	8' 4.0" (2540 mm)	8' 4.0" (2540 mm)
F. Swing radius	8' 0.5" (2450 mm)	8' 0.5" (2450 mm)
G. Clearance height under upper structure	3' 4.1" (1020 mm)	3' 4.1" (1020 mm)
H. Minimum ground clearance	1' 4.5" (420 mm)	1' 4.5" (420 mm)
I. Wheel base (center to center of wheels)	10' 5.5" (3190 mm)	10' 5.5" (3190 mm)
J. Crawler overall length	13' 1.1" (3990 mm)	13' 1.2" (3990 mm)
K. Track gauge	6' 6.3" (1990 mm)	6' 6.3" (1990 mm)
L. Undercarriage overall width with 2' (600 mm) shoes	8' 6.0" (2590 mm)	8' 6.0" (2590 mm)
M. Crawler track height	3' 0.2" (920 mm)	3' 0.2" (920 mm)

PERFORMANCE INFORMATION



Arm	8 ft 7 in (2,62 m)	10 ft (3,05 m)
A. Boom length	16' 10.7" (5150 mm)	16' 10.7" (5150 mm)
B. Bucket radius	4' 5.1" (1350 mm)	4' 5.1" (1350 mm)
C. Bucket rotation	178°	178°
D. Maximum reach at ground level	29' 1.2" (8870 mm)	30' 3.0" (9220 mm)
E. Max. reach	29' 7.9" (9040 mm)	30' 9.3" (9380 mm)
F. Max. digging depth	19' 10.6" (6060 mm)	21' 3.1" (6480 mm)
G. Max. digging height	30' 3.8" (9240 mm)	30' 5.7" (9290 mm)
H. Max. dumping height	21' 8.2" (6610 mm)	21' 11.4" (6690 mm)
I. Swing (rear end) radius	8' 0.5" (2450 mm)	8' 0.5" (2450 mm)

SERVICE CAPACITIES AND SPECIFICATIONS

	Capacities	Specifications
Hydraulic system	43.6 gal (165 l)	ISO VG 46
Hydraulic tank	23.8 gal (90 l)	ISO VG 46
Fuel tank	79.2 gal (300 l)	(Diesel)
Cooling system	4.3 gal (16,2 l)	Coolant 55% 45% water
Final drive case (on each side)	1,5 gal (5,8 l)	API GL-4 90
Swing drive case	1,3 gal (5,0 l)	API GL-5 90
Engine crank case (with remote oil filter)	4,5 gal (17 l)	API CD SAE 10W-30

NOTE:

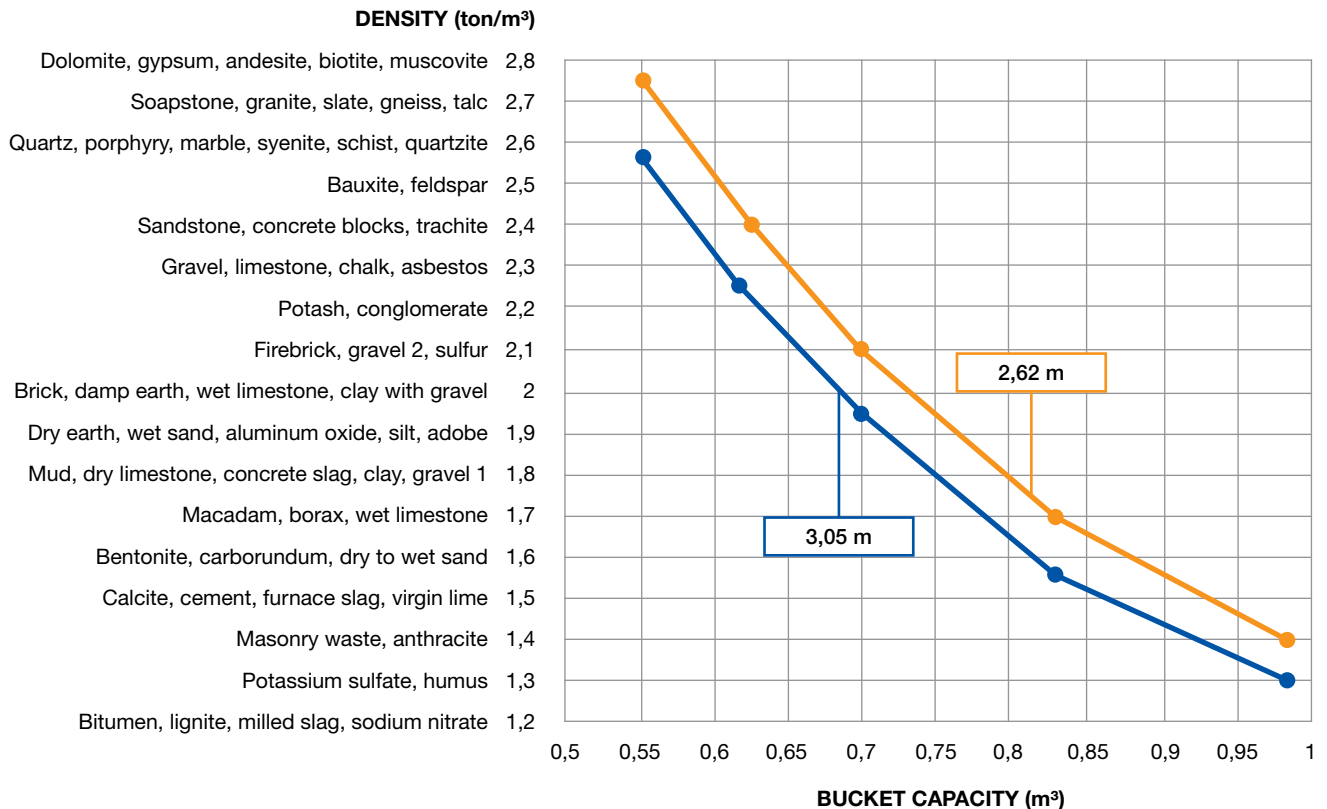
- 1 - CASE CONSTRUCTION is constantly improving its products and, therefore, reserves the right to modify designs and specifications at any time.
- 2 - The illustrations may include optional equipment and may not include all standard equipment.
- 3 - These specifications refer to ISO 7135 (Earthmoving machinery - Hydraulic excavators - terminology and commercial specifications) second edition dated 12/15/2009.

BUCKET INFORMATION

CX180C - ISO

BUCKET	CAPACITY yd ³ (m ³)	WIDTH inch (mm)	WEIGHT lb (kg)	NUMBER OF TEETH
GD	0.72 (0.55)	32" (810)	1162 (527)	5
GD	0.81 (0.62)	36" (905)	1219 (553)	5
GD	0.92 (0.70)	39" (990)	1270 (576)	5
HD (WD)	1.05 (0.80)	44" (1115)	1446 (656)	5
GD (WD)	(1,29) (0,98)	48" (1220)	1426 (647)	6

Note: HD – (Heavy Duty)
 GD – (General Duty)
 SD – (Severe Duty)
 WD – (Wide)
 NW – (Narrow)



LIFT CAPACITY

HD Arm 8 ft 7 in (2,62 m)

	0 m (0 ft)		1,5 m (4 ft 11 in)		3,0 m (9 ft 10 in)		4,5 m (14 ft 9 in)		6,0 m (19 ft 8 in)		7,5 m (24 ft 7 in)		9,0 m (25 ft 6 in)		MAXIMUM REACH		ft (m)
	FRONT	SIDE	FRONT	SIDE	FRONT	SIDE	FRONT	SIDE	FRONT	SIDE	FRONT	SIDE	FRONT	SIDE	FRONT	SIDE	
7,5 m (24 ft 7 in)																	
6,0 m (19 ft 8 in)									*3867 kg (8526 lb)	3358 kg (7404 lb)					*2596 kg (5724 lb)	*2596 kg (5724 lb)	6380 mm (20' 11")
4,5 m (14 ft 9 in)							*5163 kg (11383 lb)	*5163 kg (11383 lb)	4758 kg (10490 lb)	3294 kg (7263 lb)	*3044 kg (6711 lb)	2190 kg (4829 lb)			*2479 kg (5466 lb)	2423 kg (5342 lb)	7170 mm (23' 6")
3,0 m (9 ft 10 in)					*10074 kg (22210 lb)	8865 kg (19544 lb)	*5686 kg (12536 lb)	4823 kg (10633 lb)	5091 kg (11224 lb)	3137 kg (6916 lb)	3496 kg (7708 lb)	2130 kg (4696 lb)			*2502 kg (5516 lb)	2149 kg (4738 lb)	7590 mm (24' 11")
1,5 m (4 ft 11 in)							7635 kg (16833 lb)	4443 kg (9796 lb)	4898 kg (10799 lb)	2965 kg (6537 lb)					*2647 kg (5836 lb)	2046 kg (4511 lb)	7690 mm (25' 2,6")
0 m (0 ft)					*6109 kg (13469 lb)	*6109 kg (13469 lb)	7364 kg (16235 lb)	4213 kg (9289 lb)	4754 kg (10481 lb)	2836 kg (6253 lb)					*2951 kg (6506 lb)	2083 kg (4593 lb)	7490 mm (24' 6,8")
-1,5 m (4 ft 11 in)			*5715 kg (12600 lb)	*5715 kg (12600 lb)	*10221 kg (22534 lb)	7666 kg (16901 lb)	7277 kg (16044 lb)	4140 kg (9128 lb)	4698 kg (10358 lb)	2786 kg (6143 lb)					*3540 kg (7805 lb)	2295 kg (5060 lb)	6960 mm (22' 10")
-3,0 m (9 ft 10 in)			10187 kg (22459 lb)	10187 kg (22459 lb)	*11820 kg (26059 lb)	7820 kg (17241 lb)	7344 kg (16191 lb)	4196 kg (9251 lb)	4776 kg (10530 lb)	2856 kg (6297 lb)					*4757 kg (10488 lb)	2846 kg (6275 lb)	6020 mm (19' 9")
-4,5 m (14 ft 9 in)					*8507 kg (18755 lb)	8177 kg (18028 lb)									*5614 kg (12377 lb)	4611 kg (10166 lb)	4400 mm (14' 5")

HD Arm 10 ft (3,05 m)

	0 m (0 ft)		1,5 m (4 ft 11 in)		3,0 m (9 ft 10 in)		4,5 m (14 ft 9 in)		6,0 m (19 ft 8 in)		7,5 m (24 ft 7 in)		9,0 m (25 ft 6 in)		MAXIMUM REACH		ft (m)
	FRONT	SIDE	FRONT	SIDE	FRONT	SIDE	FRONT	SIDE	FRONT	SIDE	FRONT	SIDE	FRONT	SIDE	FRONT	SIDE	
7,5 m (24 ft 7 in)																	
6,0 m (19 ft 8 in)									*3835 kg (8455 lb)	3461 kg (7631 lb)					*2362 kg (5208 lb)	*2362 kg (5208 lb)	6780 mm (22' 3")
4,5 m (14 ft 9 in)									*4423 kg (9752 lb)	3377 kg (7446 lb)	*2424 kg (5345 lb)	2310 kg (5093 lb)			*2289 kg (5047 lb)	2287 kg (5042 lb)	7530 mm (24' 8,4")
3,0 m (9 ft 10 in)					*8783 kg (19364 lb)	*8783 kg (19364 lb)	*6098 kg (13444 lb)	4954 kg (10922 lb)	*5075 kg (11189 lb)	3210 kg (7077 lb)	3630 kg (8003 lb)	2250 kg (4961 lb)			*2330 kg (5137 lb)	2043 kg (4505 lb)	7930 mm (26')
1,5 m (4 ft 11 in)					*7332 kg (16165 lb)	*7332 kg (16165 lb)	7673 kg (16917 lb)	4547 kg (10025 lb)	4961 kg (10938 lb)	3022 kg (6663 lb)	3538 kg (7800 lb)	2170 kg (4785 lb)			*2478 kg (5464 lb)	1945 kg (4288 lb)	8030 mm (26' 4")
0 m (0 ft)					*7082 kg (15614 lb)	*7082 kg (15614 lb)	7430 kg (16381 lb)	4270 kg (9414 lb)	4794 kg (10569 lb)	2873 kg (6334 lb)	3442 kg (7589 lb)	2100 kg (4630 lb)			*2768 kg (6103 lb)	1969 kg (4341 lb)	7840 mm (25' 8,6")
-1,5 m (4 ft 11 in)			*5593 kg (12331 lb)	*5593 kg (12331 lb)	*10023 kg (22097 lb)	7646 kg (16857 lb)	7294 kg (16081 lb)	4155 kg (9161 lb)	4709 kg (10382 lb)	2797 kg (6167 lb)					*3310 kg (7298 lb)	2140 kg (4718 lb)	7330 mm (24')
-3,0 m (9 ft 10 in)			*9181 kg (20241 lb)	*9181 kg (20241 lb)	*12536 kg (27637 lb)	7753 kg (17093 lb)	7315 kg (16127 lb)	4173 kg (9200 lb)	4732 kg (10433 lb)	2818 kg (6213 lb)					4287 kg (9452 lb)	2575 kg (5677 lb)	6450 mm (21' 2")
-4,5 m (14 ft 9 in)					*9850 kg (21715 lb)	8041 kg (17728 lb)	6683 kg (14734 lb)	4348 kg (9586 lb)							*5777 kg (12737 lb)	*3808 kg (8396 lb)	4970 mm (16' 3,6")

NOTA: Machine in AUTO work mode - The loads are adopted according to the standard SAE J1097, ISO 10567D and DIN 150 19-2 - The load capacities in kg indicated do not exceed the 75% of the tipping load or 87% the hydraulic elevation capacity - capacities marked with an asterisk (*) are limited by the hydraulic capacity.

STANDARD EQUIPMENT

Operator's compartment

Suspension system with 4 cushions
 Cab with ROPS and FOPS level 1 protection
 Air suspension seat
 3" Seat belt
 Automatic air conditioning
 AM/FM radio with automatic tuner and Bluetooth
 Control panel with 7" display and option for rear and side view camera
 Joystick levers to control hydraulic functions
 Travel pedal with auxiliary levers for manual control
 Footrest
 Safety levers to neutralize hydraulic functions with action delay timer
 Front windshield folding up, with limit switch sensor
 Sunroof and tilting roof
 Intermittent front windscreen wiper with two speeds and water jet
 Sliding left side window
 External rearview mirror
 Internal light
 Cup, phone and objects holders
 Double general key (mechanical / electric)

Upper chassis

16' 10.7" (5150 mm) boom
 8' 7" (2,62 m) penetration arm
 Turn brake with electronic management
 Rotating crown in grease bath

Lower chassis

Triple grouser shoe of 2' (600 mm)
 Track length 13' 1.1" (3,990 mm)
 Sealed and lubricated track
 Track activation by two-speed hydrostatic translation system
 Disc parking brakes (SAHR)
 Double track guide

Engine

Isuzu turbocharged, Tier 3 certified
 Dial-type acceleration control
 Automatic engine deceleration
 Electronic engine speed control
 Auto-idle device
 Auto stop device

Electric system

Batteries (2)
 Monitoring / diagnostics electronic system
 Cab's front working lights
 Boom working lights
 Alternator 50 A

Hydraulic system

With ISO control pattern
 Work mode selection Auto, H and SP
 Auxiliary accessory mode
 Auto power up
 2 variable flow pumps 142 l/min (37.5 gpm) at 2000 rpm
 Automatic reduction of pump flow
 Cylinders with end cushioning and electronic regenerative system

Other

Centralized lubrication for monobloc arm
 1,28 yd³ (0,98 m³) GD bucket



ISO Conformitie

ROPS	12117-2:2008
FOPS level 1	10262:1998
Seat belt	6683:2005
Operator's seat	11112:1995
Seat vibration	7096:2000
Operator's primary controls, functional information, symbols for operator controls and other displays	10968:2004 / 6011:2003 6405-1:2004 / 6405-2:1993 / 6682:1995
Machine-control systems	15998:2008
Visibility	5006:2006 14401-1:2004 / 14401-2:2004
Sound level	
Internal	6396:2008
External	6395:2008
Ground contact pressure	16754:2008
Digging force	6015:2006
Terminology and commercial specifications	7135:2009
Lift capacity	10567:2007

OPTIONAL EQUIPMENT

10' (3,05 m) excavation arm
 Buckets for general applications, rock and severe applications
 2' 3,5" (700 mm) shoes
 Prepared for hydraulic hammer
 Prepared for rotating grab
 Prepared for hydraulic scissors
 Prepared for forest processor
 Lower chassis protection cover
 Auxiliary lighting
 Front protection
 Level 2 FOPS superior protection
 Operator's seat with low frequency mechanical suspension with helical dumper and double acting hydraulic dumper
 Rotating beacon
 Side view camera
 Rear view camera
 SiteWatch control system (telemetry and/or satellite)
 Advanced telemetry subscription 1, 2, 3, 4 or 5 years
 Fuel refueling pump



SiteWatch™

Fleet monitoring and tracking management system through satellite or mobile phone

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