

HYDRAULIC EXCAVATOR - BRZ

CASE

CONSTRUCTION

SINCE 1842.

CX220C S2

ENGINE

Brand	CASE/FPT
Model	NEF6 F4HE0687A*J101
Type	4-stroke engine, water-cooled, 6 cylinder – common rail injection system, turbocharged with air-cooled intercooler, with tier 3 emission certification.
Rating power	
Net (SAE J1349, ISO 9249)	148hp (110,3 kW) @ 1800 (rpm)
Gross (ISO 14396)	158.5 hp (118.2 kW) @ 1800 (rpm)
Piston displacement	6728 cc
Maximum torque	
Net (SAE J1349, ISO 9249)	408.44 lbf.ft (608 Nm) @ 1800 rpm
Gross (ISO 14396)	458.76 lbf.ft (622 Nm) @ 1800 rpm
Bore and stroke	4.09 x 5.19 in (104 x 132 mm)
Voltage	24 V
Alternator	90 A
Starter	24 V 5,0 kW

ELECTRICAL SYSTEM

Engine control	
1 - Dial type throttle control	
2 - One Touch Idle / Automatic deceleration / Automatic stop and shutdown system	
3 - Emergency stop	
Lights	
1 - Working lights	
Top	24V 70W x 1
Boom	24V 70W x 2
Cab	24V 70W x 2
2 - Operator's cabin compartment	24V 10W x 1
Battery	2 x 12V 100 Ah/5 HR
Safety	
1 - Travel alarm	
2 - Double horn	
Wire harness	Waterproof connectors

HYDRAULIC SYSTEM

Main pumps	2 axial piston pumps and variable flow with adjustment system
1 - Max. oil flow @ 1800 rpm	2 x 55.7 gpm (211 l/min)
2 - Work circuit pressure	
Boom/Arm/Bucket	4974 psi (34.3 MPa)
5337 psi (36.8 MPa) with auto power-up	
Swing circuit	4264 psi (29.4 MPa)
Travel circuit	4974 psi (34.3 MPa)
Pilot pump	1 gear pump
1 - Max. oil flow	4.7 gpm (18 l/min)
2 - Work circuit pressure	566 psi (3.9 MPa)
Control valves	
	With boom and arm retention valve. One 4-spool valve for the acceleration of the arm, boom, bucket and movement of the right track. One 5-spool valve for the movement of the left track, auxiliary, oscillation, arm, and tow bar acceleration
Swing device	
1 - Engine	Axial piston motor and fixed displacement
2 - Brake	SAHR type
3 - Final drive	Planetary gear reduction
4 - Turn table bushing	Ball bearing type with internal gear
5 - Max. swing speed	11.5 rpm
6 - Swing torque	47204 lbf.ft (64000 Nm)
Cylinder Qty Diam.Bore x Diam.Rod x Stroke	
Boom	2 4.7 in x 3.5 in x 4 ft 1.4 in (120 mm) (85 mm) (1255 mm)
Arm	1 5.5 in x 3.9 in x 4 ft 10 in (140 mm) (100 mm) (1460 mm)
Bucket	1 4.7 in x 3.5 in x 3 ft 3.7 in (120 mm) (85 mm) (1010 mm)
Filters	
Suction filter	105 µm
Return filter	6 µm
Pilot line filter	8 µm

HYDRAULIC CONTROLS

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

MONITOR SYSTEM

1 - Message display (warning, adjustments, etc...)
2 - Work mode display (SP, H, Auto)
3 - Machine state (power multiplier, etc...)
4 - Alarm and buzzer display
5 - Water temperature
6 - Hydraulic oil temperature
7 - Fuel level
8 - Diagnose System

OPERATOR'S ENVIRONMENT

Operator's cabin

- 1 - Round shaped cabin with a smooth design
- 2 - Safety glass on all windows
- 3 - Impact-proof cabin suspension for 4 point fluid mounting
- 4 - Sliding front window with automatic lock
- 5 - Full color LCD screen included
- 6 - Windscreen wipers and washer
- 7 - AM/FM radio with automatic tuner
- 8 - Floor carpet
- 9 - Ceiling hatch of polycarbonate and sun protective
- 10 - Automatic air conditioning
- 11 - Top FOPS defense level 1 (on the cabin's structure)
- 12 - Rollover protection structure (ROPS)
- 13 - Noise level
Internal 74 dBa (According to ISO 6396)
External 102 dBa (According to ISO 6395)

Operator's seat

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

With the following characteristics:

- 1 - Manual weight adjustment
- 2 - Backrest angle adjustment
- 3 - Seat height adjustment, adjustable armrest attached to the consoles
- 4 - Adjustable headrest
- 5 - Retractable seatbelt
- 6 - Adjustable back support
- 7 - The control consoles are adjusted independently from the seat

Other

- 1 - Rear view mirror (cabin side and right side)

UNDERCARRIAGE

Travel engine	Axial piston motor with variable piston displacement
Brake	SAHR type
Hydraulic service brake	Brake valve
Final drive	Planetary gear reduction
Travel speeds	
High	3.4 mph (5,6 km/h) (automatic speed change)
Low	2.1 mph (3,4 km/h)
Drawbar push	42264 lbf (188 kN)
Number of upper rollers	2 (on each side)
Number of lower rollers	8 (on each side)
Number of shoes	49 (on each side)
Type of shoes	Triple grousers
Link pitch	7.5 in (190 mm)
Shoes width - STD	1' 11" (600 mm)
Grade-ability	70 % (35 °)

OPERATING WEIGHT

Operating weight	48821 lb (22145 kg)
With 9' 7.8" (2,94 m) arm, 1.7 yd ³ (1,3 m ³) bucket, 1' 11" (600 mm) shoes, operator, lubricant, coolant and full fuel tank	
Shipping weight	47928 lb (21740 kg)
Operating weight - [Operator's weight 165 lb (75kg) + 90 % of fuel weight]	
Counterweight	9369 lb (4.250 kg)
Ground pressure	6.5 psi (0,45 kg/cm ²)
With 9' 7.8" (2,94 m) arm, 1.7 yd ³ (1,3 m ³) bucket, 1' 11" (600 mm) shoes	

DIGGING FORCE WITH 1.7 YD³ (1,3 m³) BUCKET

ISO 6015	9 ft 7.8 in (2,94 m)	7 ft 10.5 in (2,40 m)
Arm	23155 lbf (103 kN)	27651 lbf (123 kN)
Digging Force		
With auto power-up	24728 lbf (110 kN)	29674 lbf (132 kN)
Bucket	31024 lbf (138 kN)	31024 lbf (138 kN)
Digging Force		
With auto power-up	33272 lbf (148 kN)	33272 lbf (148 kN)

COMPONENTS WEIGHT

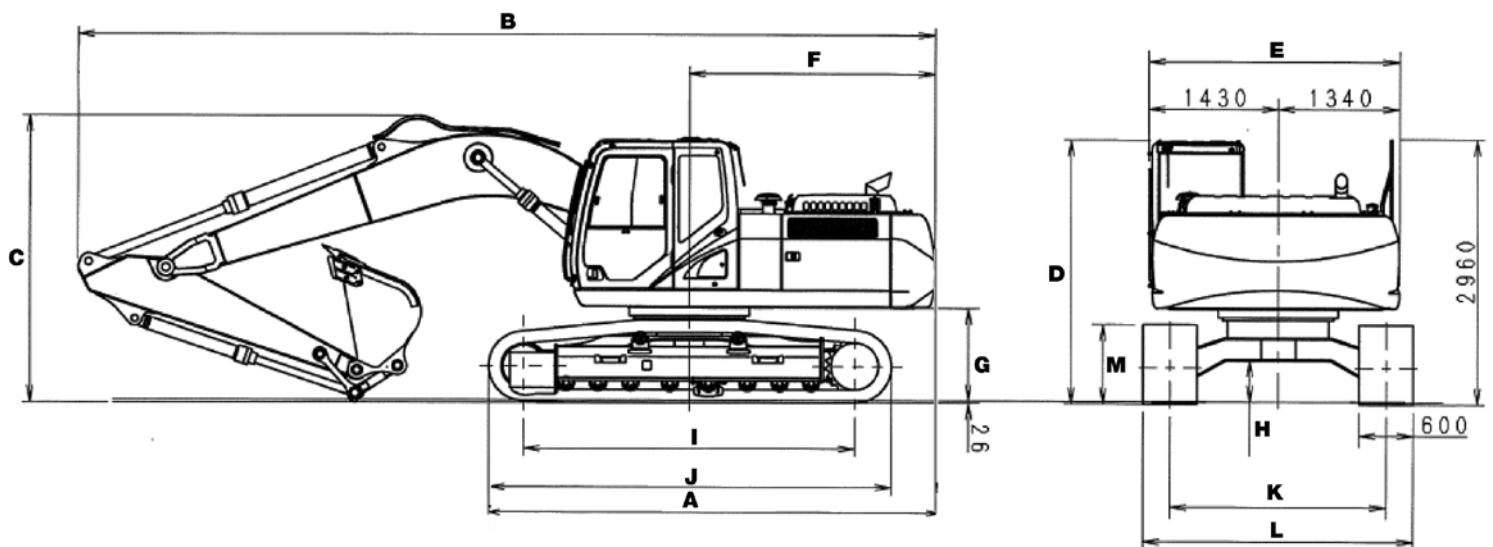
Track shoes

2' (600 mm)	6195 lb (2810 kg)
2' 3.5" (700 mm)	6795 lb (3082 kg)
2' 7.4" (800 mm)	7395 lb (3354 kg)

Arms

7' 10.5" (2.4 m)	1663 lb (754 kg)
9' 7.8" (2.94 m)	2009 lb (911 kg)

TRANSPORT DIMENSIONS

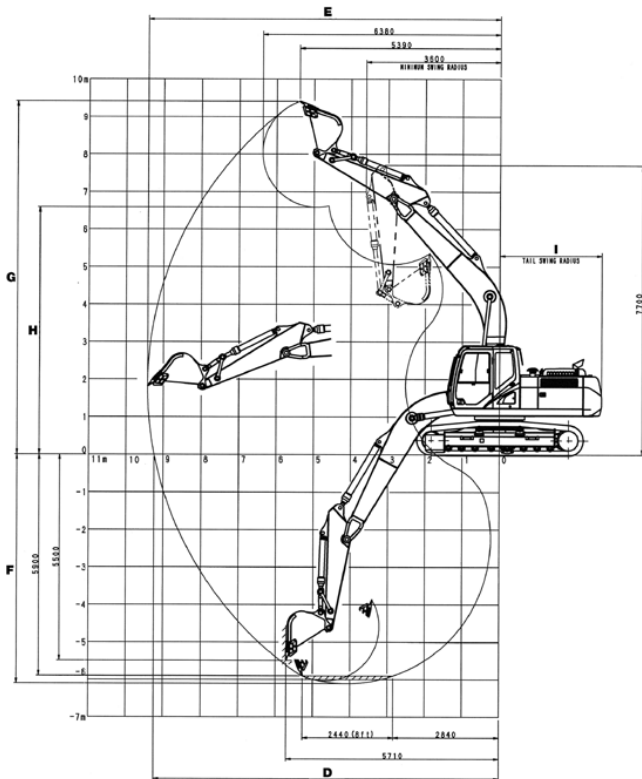


DIMENSIONS

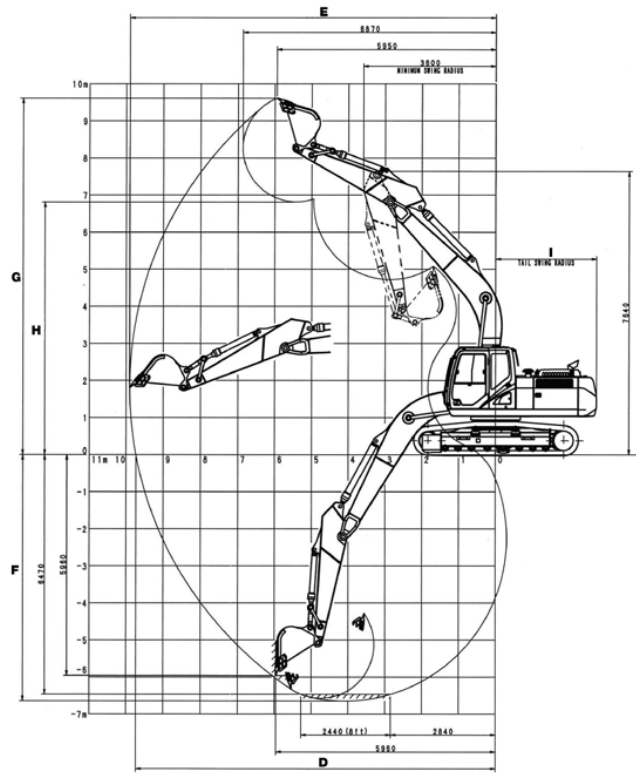
Arm	9 ft 7.8 in (2,94 m)	7 ft 10.5 in (2,40 mm)
A. Total length (without accessory)	16' 2.8" (4950 mm)	16' 2.8" (4950 mm)
B. Total length (with accessory)	30' 10" (9400 mm)	31' 1.2" (9480 mm)
C. Total height (with accessory)	9' 8.9" (2970 mm)	10' 5.5" (3190 mm)
D. Cabin height	9' 8.1" (2950 mm)	9' 8.1" (2950 mm)
E. Upper structure total width	9' 1" (2770 mm)	9' 1" (2770 mm)
F. Swing radius	9' (2750 mm)	9' (2750 mm)
G. Clearance height under upper structuree	3' 4.9" (1040 mm)	3' 4.9" (1040 mm)
H. Minimum distance to ground	1' 5.3" (440 mm)	1' 5.3" (440 mm)
I. Distance between shafts (from center to center of the wheels)	12' (3660 mm)	12' (3660 mm)
J. Full track length	14' 7.9" (4470 mm)	14' 7.9" (4470 mm)
K. Track gauge	7' 10" (2390 mm)	7' 10" (2390 mm)
L. Undercarriage overall width with 1' 11" (600 mm) shoes	9' 9.7" (2990 mm)	9' 9.7" (2990 mm)
M. Crawler track height	3' (920 mm)	3' (920 mm)

WORK RANGE CHART

LEVEL EXCAVATION WITH 9' 7.8" (2,94 M) ARM



LEVEL EXCAVATION WITH 7' 10.5" (2,40 M) ARM



WORK RANGE

	9 ft 7.8 in (2,94 m)	7 ft 10.5 in (2,40 m)
A. Boom	18' 8.4" (5700 mm)	18' 8.4" (5700 mm)
B. Bucket radius	4' 9" (1450 mm)	4' 9" (1450 mm)
C. Bucket pivot action	177°	177°
D. Maximum reach at ground level	31' 11" (9730 mm)	30' 3.7" (9240 mm)
E. Max. reach	32' 5.7" (9900 mm)	30' 10" (9420 mm)
F. Max. digging depth	21' 9.8" (6650 mm)	20' 0.5" (6110 mm)
G. Max. digging height	31' 6.3" (9610 mm)	30' 10" (9410 mm)
H. Max. dumping height	22' 4.1" (6810 mm)	21' 7.4" (6590 mm)
I. Swing radius (back end)	9' (2750 mm)	9' (2750 mm)

SYSTEM FLUIDS CAPACITIES AND SPECIFICATIONS

	Capacities	Specifications
Hydraulic system	63.4 gal (240 l)	ISO VG 46
Hydraulic tank	38.8 gal (147 l)	ISO VG 46
Fuel tank	108.3 gal (410 l)	(Diesel)
Cooling system	8.13 gal (30,8 l)	Coolant 55 %, Water 45 %
Final drive case (on each side)	1.32 gal (5,0 l)	API GL-4 90
Swing drive case	1.32 gal (5,0 l)	API GL-5 90
Engine housing (with remote oil filter)	4 gal (16 l)	SAE 15W40 API CI-4

NOTE:

- 1 - Case Construction is constantly improving its products and therefore it reserves the right to modify its design and specifications at any time.
- 2 - The graphics may include optional units and may not include all the standard units.
- 3 - These specifications refer to the ISO 7135 standard (Land machinery – hydraulic excavators – Terminology and commercial specifications) second edition date 12/15/2009

LIFT CAPACITY

Arm 9 ft 7.8 in (2.94 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)									*4731 kg (10431 lb)	*4731 kg (10431 lb)					*3843 kg (8473 lb)	*3843 kg (8473 lb)	6230 mm (20' 5")
6,0 m (19 ft 8 in)									*4727 kg (10422 lb)	*4727 kg (10422 lb)					*3560 kg (7849 lb)	*3560 kg (7849 lb)	7330 mm (24')
4,5 m (14 ft 9 in)									*5229 kg (11528 lb)	*5029 kg (11088 lb)	*4908 kg (10821 lb)	*4908 kg (10821 lb)	3473 kg (7657 lb)		*3493 kg (7701 lb)	3079 kg (6789 lb)	8010 mm (26' 3,2")
3,0 m (9 ft 10 in)							*7717 kg (17014 lb)	7332 kg (16165 lb)	*6035 kg (13305 lb)	4748 kg (10468 lb)	*5251 kg (11577 lb)	*5251 kg (11577 lb)	3352 kg (7390 lb)		*3573 kg (7878 lb)	2788 kg (6147 lb)	8370 mm (27' 5,5")
1,5 m (4 ft 11 in)							*9365 kg (20647 lb)	6747 kg (14875 lb)	*6874 kg (15155 lb)	4469 kg (9853 lb)	5136 kg (11323 lb)	5136 kg (11323 lb)	3222 kg (7104 lb)		*3799 kg (8376 lb)	2677 kg (5902 lb)	8450 mm (27' 8,6")
0 m (0 ft)					*6382 kg (14070 lb)	*6382 kg (14070 lb)	*10228 kg (22549 lb)	6426 kg (14167 lb)	7020 kg (15477 lb)	4272 kg (9419 lb)	5024 kg (11077 lb)	5024 kg (11077 lb)	3120 kg (6879 lb)		*4221 kg (9306 lb)	2720 kg (5997 lb)	8250 mm (27' 1")
-1,5 m (4 ft 11 in)			*6672 kg (14710 lb)	*6672 kg (14710 lb)	*10974 kg (24194 lb)	*10974 kg (24194 lb)	*10419 kg (22970 lb)	6334 kg (13965 lb)	6925 kg (15268 lb)	4188 kg (9233 lb)	4992 kg (11006 lb)	4992 kg (11006 lb)	3090 kg (6813 lb)		4762 kg (10499 lb)	2953 kg (6511 lb)	7760 mm (25' 5,4")
-3,0 m (9 ft 10 in)			*11532 kg (25424 lb)	*11532 kg (25424 lb)	*13952 kg (30759 lb)	12585 kg (27746 lb)	*9784 kg (21571 lb)	6406 kg (14123 lb)	6972 kg (15371 lb)	4230 kg (9326 lb)					5682 kg (12527 lb)	3513 kg (7745 lb)	6920 mm (22' 8,4")
-4,5 m (14 ft 9 in)					*11188 kg (24666 lb)	*11188 kg (24666 lb)	*7977 kg (17587 lb)	6657 kg (14677 lb)							*6054 kg (13347 lb)	4951 kg (10916 lb)	5560 mm (18' 2,9")

Short arm 7 ft 10.5 in (2.40 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)									*5325 kg (11740 lb)	5160 kg (11376 lb)					*5376 kg (11853 lb)	4171 kg (9196 lb)	6780 mm (22' 2,8")
4,5 m (14 ft 9 in)								*6766 kg (14917 lb)	*6766 kg (14917 lb)	*5759 kg (12697 lb)	4995 kg (11013 lb)	*5315 kg (11718 lb)	3460 kg (7628 lb)		*5253 kg (11581 lb)	3455 kg (7617 lb)	7510 mm (24' 7,5")
3,0 m (9 ft 10 in)								*8504 kg (18749 lb)	7224 kg (15927 lb)	*6516 kg (14366 lb)	4741 kg (10453 lb)	5300 kg (11685 lb)	3380 kg (7452 lb)		4887 kg (10774 lb)	3112 kg (6861 lb)	7890 mm (25' 10,5")
1,5 m (4 ft 11 in)								*9976 kg (21994 lb)	6731 kg (14840 lb)	7264 kg (16015 lb)	4501 kg (9924 lb)	5183 kg (11427 lb)	3270 kg (7210 lb)		4731 kg (10431 lb)	2990 kg (6592 lb)	7970 mm (26' 1,6")
0 m (0 ft)								*10593 kg (23354 lb)	6512 kg (14357 lb)	7091 kg (15633 lb)	4307 kg (9496 lb)	5107 kg (11260 lb)	3200 kg (7055 lb)		4866 kg (10728 lb)	3058 kg (6742 lb)	7760 mm (25' 5,4")
-1,5 m (4 ft 11 in)					*11285 kg (24880 lb)	*11285 kg (24880 lb)	*10424 kg (22981 lb)	6488 kg (14304 lb)	7044 kg (15530 lb)	4404 kg (9710 lb)					*5359 kg (11815 lb)	3365 kg (7419 lb)	7240 mm (23' 9")
-3,0 m (9 ft 10 in)					*13017 kg (28698 lb)	12961 kg (28575 lb)	*9452 kg (20839 lb)	6609 kg (14571 lb)	*6920 kg (15256 lb)						*6359 kg (14020 lb)	4125 kg (9095 lb)	6320 mm (20' 8,7")
-4,5 m (14 ft 9 in)							*6827 kg (15051 lb)	*6827 kg (15051 lb)							*6192 kg (13652 lb)	*6192 kg (13652 lb)	4790 mm (15' 8,5")

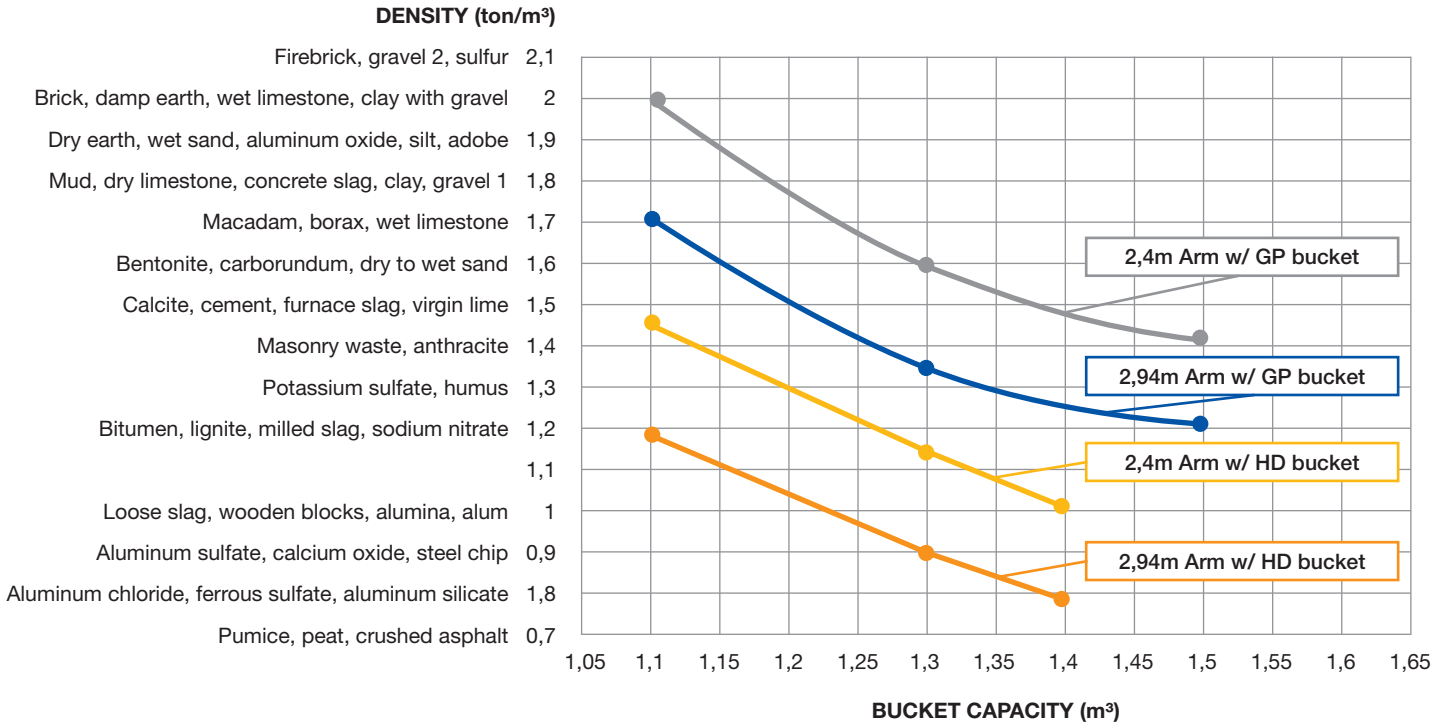
Nota: Machine in AUTO work mode - The loads are adopted according to the standard SAE J1097 ISO 10567D DIN 150 19-2 - The load capacities in kg indicated do not exceed the 75% of the tipping load or 87% the hydraulic elevation capacity - capacities marked with an asterisk (*) are limited by the hydraulic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

BUCKET INFORMATION

CX220C S2

BUCKET	CAPACITY yd ³ (m ³)	WIDTH ft in (mm)	WEIGHT lb (kg)	NUMBER OF TEETH
GD (WD)	1.44 (1.1)	4' 7,6" (1415)	1859 (843)	6
GD (NW)	1.44 (1.1)	3' 3,7" (1010)	1736 (787)	6
GD (WD)	1.7 (1.3)	4' 9,4" (1460)	2055 (932)	7
GD (NW)	1.96 (1.5)	4' (1220)	1927 (874)	5
GD (NW)	2.22 (1.7)	4' 7,8" (1420)	2157 (978)	6
HD (WD)	1.44 (1.1)	4' 9,8" (1470)	3082 (1398)	5
HD (NW)	1.44 (1.1)	3' 3,3" (1000)	3199 (1451)	4
HD (WD)	1.7 (1.3)	4' 9,8" (1470)	3378 (1532)	6
HD (NW)	1.7 (1.3)	3' 7,2" (1100)	3325 (1508)	5
HD (NW)	1.83 (1.4)	3' 11,5" (1210)	3074 (1394)	5

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



SERIES EQUIPMENT

Operator's compartment

Pressurized cabin with round shape and smooth design
 Safety glass on all windows
 Impact-proof cabin suspension for 4 cushion hydraulic mounting
 Sliding front window with automatic block
 Full color LCD screen included
 Windscreen wipers and washer
 AM/FM radio with automatic tuner
 Floor carpet
 Ceiling hatch of polycarbonate and sun protection
 Automatic air conditioning
 Top FOPS defense level 1 (on the cabin's structure)
 Rollover protection structure (ROPS)
 Operator's seat with low frequency mechanical suspension with helical dumper and double acting hydraulic dumper, manual weight adjustment, back angle adjustment, adjustable armrest height attached to the consoles, adjustable headrest, retractable seatbelt and adjustable back support.
 The control consoles are adjusted independently from the seat
 Rear mirror
 Double horn
 Travel alarm
 Joystick-like levers to control hydraulic functions
 Safety levers to neutralize hydraulic functions and start the engine

Engine

4-stroke engine, water-cooled, 6 cylinder – common rail injection system, turbocharged with air-cooled intercooler, with tier 3 emission certification.

Electrical System

Wiring with waterproof connectors
 Battery 2 x 12V 100 Ah/5HR
 Voltage 24 V
 Alternator 90 A
 Starter engine 5,0 kW

Hydraulic System

With ISO control pattern
 Work mode selection Auto, H and SP
 Auxiliary accessory mode
 Auto power up
 2 variable flow pumps
 Electronic flow control
 Cylinders with end cushioning
 1 pump for the pilot system
 7' 10" (2,40 m) arm

Undercarriage

Travel speeds
 High 3.4 mph (5,6 km/h)
 Automatic speed change
 Low 2.1 mph (3,4 km/h)
 Quantity of transport rollers:
 Quantity of upper rollers 2 (on each side)
 Quantity of lower rollers 8 (on each side)
 Number of shoes 49 (on each side)
 Shoes width 1' 11" (600 mm)
 Type of shoes Triple grousers
 Track length 14' 7" (4470 mm)
 Track gauge 7' 10" (2390 mm)
 Track guide Simple
 Sealed and lubricated chains



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

Cabin

Seat with air suspension
 2 options for front stone protection
 Level 2 FOPS superior protection
 Rain deflector
 Sun screen

Accessories



9' 7" (2,94 m) arm
 Heavy Duty bucket and link with hook
 Tropical cooling
 Six options for auxiliary accessory
 Rubber fender protector
 Additional handrails Rh + Lh
 Safety valve for the boom

Undercarriage

2' 3.5" (700 mm), 2' 7.5" (800 mm) shoes
 Triple track guide

Other

Back camera
 Side view camera
 Refueling pump
 Aux. Hydraulic
 Aux. Low fluid hydraulic

  Fleet monitoring and management system by satellite or cel phone tracking.

CASE Corporation reserves the right to make improvements in design or changes in specifications at any time without incurring any obligation to install them on units previously sold. The specifications, descriptions, and illustrative materials contained here reflect correctly the data known up to the publication date, but are subject to changes with no previous notice. The illustrations may include optional equipment and accessories and may not include all standard equipment.

CASE Construction equipments and CASE/FPT engines are manufactured by the same company: CNH Industrial

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Manufacturing plants

Contagem – Minas Gerais – Brasil
 Av. General David Sarnoff, 2.237
 Inconfidentes – C.P. 32210-900
 Tel.: +55 31 2104-3392

Sorocaba – São Paulo – Brasil
 Av. Jerome Case, 1.801
 Éden – C.P. 18087-220
 Tel.: +55 15 3334-1700