# BACKHOE LOADER



# SINCE 1842.

# 580N - BRZ

#### ENGINE

Brand	CASE/FPT
Model	F4GE9454K*J607
	certificate Tier 3 / MAR-I
Туре	4-stroke, turbocharged
Cylinders	4
Bore/Stroke	104 x 132 mm
Displacement	4.5 l (4,500 cm <sup>3</sup> )
Fuel injection	Direct
Fuel	Diesel
Fuel filter	With water separator in line
Air intake	Cross flow
Cooling system	Liquid
Automatic fan belt te	ensioner
Integrated engine oil	cooling system
Venturi type system	in the engine air intake line
Radiator with expansi	sion tank
Muffler with anti-spa	rk device
Cold Start auxiliary of	device (optional)
Maximum lubrication	n angle (forward and
backward)	35°
Maximum lubrication	n angle (side) 35°
Engine speeds	
Rated	full load 2,200 rpm
Low	idle speed 875 – 1,025 rpm
High	no load 2,300 – 2,450 rpm
Power	At 2,200 rpm
Gross (ISO14396)	85 hp (63 kW)
Net (SAE J1349)	79 hp (59 kW)
Maximum torque	at 1,400 rpm
Gross (ISO14396)	374 Nm (38.1 kgf.m)
Net (SAE J1349)	366 Nm (37.3 kgf.m)
Overtorque	36% (± 5%)
NOTE: Gross power	and torques according to

NOTE: Gross power and torques according to SAE J1995/ISO 14396 standard; and net power and torques according to SAE J1349 standard.

#### TRANSMISSION

Standard	Powershuttle, fully synchronized,		
4 forward speeds and 4 reverse speeds			
<b>T</b>	1.0		

Iraction	4x2
Traction 4x4	Planetary drive over hydraulic
р	ressure, switch located in the panel

Hydraulic inversion clutch with powered forward and reverse gear shift

Transmission declutch switches "Declutch", one in the gear shift lever and other in the loader control lever

Ratios	Forward	Reverse
1st	5.603	4.643
2nd	3.481	2.884
3rd	1.584	1.313
4th	0.793	0.657
Torque converter		Ratio 3.2

Maximum lubrication angle 35° (forward and backward)Maximum lubrication

angle 30° (side)

## **ELECTRICAL SYSTEM**

Voltage	12 volts , negative grounding
Alternator	120 A
Battery	100 Ah, 750 A

## **HYDRAULIC SYSTEM**

Hydraulic implement pum	
Gear pump, installed at th take-off (PTO)	e transmission power
Flow at 2,200 rpm	108 l/min @ 231 bar
Loader control valve Monoblock, 2 (Standard) single control lever for hyo and auxiliary devices, pos and return-to-dig system	draulic lifting, tilting
Excavator control valve Monoblock, 6 (standard), center parallel circuits wit	
Main relief pressure	231 +/-3.5 bai
Filters Replaceable 7µm filter ele return line, with saturated	
Hydraulic oil cooler For heavy duty v	vork (high performance)
Adjustable unidirectional I	hydraulic auxiliary
(optional):	60.6 to 106 l/mir
Bidirectional hydraulic aux 108	xiliary outlet (optional): I/min at 231 +/- 3.5 bai

## **ENGINE COOLING**

Radiator Core type Core front area Pipe rows	Square wave 3,145 cm² 3
Fan Suction type, 9 blade Diameter Ratio	es, viscous 500 mm 1,1:1
Water pump Type	Integral
Lubricant oil pump	With pressurized nozzles under the pistons

## **AXLES AND BRAKES**

Electro-hydrau				
	Hydraulio			on-the-go
		pusn		activation
4x4 Front Axle				dard / HD
Differential ra			2	.0/2.385
Planetary hu Total reducti			-	6.0 / 6.0 2.0 / 14.3
Maximum stat		nacity	1	2.0/14.3
4x2	ic load ca	ipacity		32,124 kg
4x2 4x4				29,308 kg
4x4 HD				30,791 kg
Operating stat	ic load ca	nacity		50,751 Kg
4x2		ipaony		8,030 kg
4x4				7,136 kg
4x4 HD				8,604 kg
4x4 Front Axle				-,
Maximum lu		anala	35	° (forward
	Dification	angle		ackward)
Maximum lu	brication	angle		30° (side)
Rear axle		-		. ,
Differential ra	atio			2.5
Planetary hu				6.4
Total reduction				16.0
Maximum st				40.889 kg
Operating st			/	10,197 kg
Maximum lu	brication	angle		ward and
			k	backward)
Maximum lu	brication	angle		30° (side)
Service brake				
Two self-adju				
	ilically act	tuated, e	external	mounting
Disc area				619 cm <sup>2</sup>
Total braking a	irea		1	2,477 cm <sup>2</sup>
Parking brake				
Mounted ir	the trans	smissior	n, spring	actuated
and hydra	aulically r	eleased	(SAHR),	actuated
				the panel
Travel speed -	km/h			
	1st	2nd	3rd	4th
Forward	6.1	9.7	21.4	42.8
Backward	7.3	11.8	25.8	51.6*
Front tires 12x	16.5 and	rear tire	s 19.5x2	24
*Net available		arabift t		

\*Not available with Powershift transmission

## CAPACITIES

Fuel tank	159 I
Engine Oil with filter	13.6
Hydraulic system Total with standard ground en Total with Extendahoe arm Reservoir with filter Reservoir without filter	gaging arm 106   111,7   55   53
Engine cooling system Without cab heater With cab heater	17.3   18
Transmission 4 x 2 – Total system Powershuttle 4 x 4 – Total system Powershuttle	17   19,9
4x4 Front Axle Differential Planetaries (each)	Standard / HD 5.5   / 7.7   0.7   / 1.0
Rear axle Differential and planetaries	13.6
Brake fluid – the same oil from t system	he transmission
Front glass wiper reservoir	2.8

## LOADER

Lifting, tilting, control floating and return-to-dig functions in a single lever
Automatic leveling
Bucket leveling indicator
Parallel kinematic
2 parallel tilting cylinders
Open center hydraulic system
Transmission declutch switch in the loader switch lever and in the gear shift lever
Hydraulic quick coupling for front bucket (on demand)
Auxiliary hydraulic outlet for front accessories (on demand)
Ride Control (optional)

## EXCAVATOR

Negative retraction angle	
Open center hydraulic system	l
Maximum slewing torque	22,258 Nm (2,269.7 kgf.m
Control with 3 control levers a	and slewing pedal
Control with 2 control levers (	optional)
Extendahoe arm (optional)	
Mechanical quick coupling for Extendahoe (on demand)	r rear bucket
Auxiliary hydraulic outlet for re (on demand)	ear accessories
Slewing damping Pro Control standard item	system –
Stabilizers Wing type with steel pad Wing type with reversible pa steel/rubber (optional)	ads –

#### Configuration 1

Unit equipped with 4x4 traction, standard 4x4 front axle, ROPS/FOPS closed cab with air conditioner, mechanical suspension seat, 93" loader bucket for general purpose, 30" HD excavator bucket, Tier 3 turbocharged engine, 12x16.5 front tires, 19.5x24 rear tires, standard ground engaging arm, 12 V battery, 80 kg operator, 187 kg counterweight (400lb) and full fuel reservoir: 7.858 kg

Component Weights:			
82" 4 in 1 front bucket		658	kg
82" front bucket with weld-on teeth	ו holder	310	kg
85" front bucket with weld-on teeth	ו holder	327	kg
93" front bucket with weld-on teeth	ו holder	539	kg
24" HD rear bucket with bolt-on te	eth 1	93.5	kg
30" HD rear bucket with bolt-on te	eth	226	kg
Closed cab (in addition to the ope	n cab)	503	kg
Standard Counterweight	187 kg	(412	lb)
Counterweight for Extendahoe arm			
3	17.5 kg	(700	lb)
Extendahoe arm (in addition to sta	andard a	(rm	
×		129	kg
Cardan shaft protection		128	kg
4x4 Standard front axle		264	kg
4x4 Front Axle HD		373	kg

## **BUCKET – LOADER**

Width	Туре	Struck capacity	Heaped capacity	Weight
2,083 mm (82')	General purpose – with bolt-on reversible blade	0.67 m <sup>3</sup>	0.79 m <sup>3</sup>	310 kg
2,083 mm (82')	General purpose – weld-on teeth holder, pin-on teeth	0.67 m <sup>3</sup>	0.79 m <sup>3</sup>	310 kg
2,159 mm (85')	General purpose – with bolt-on reversible blade	0.73 m <sup>3</sup>	0.85 m³	327 kg
2,159 mm (85')	General purpose – weld-on teeth holder, pin-on teeth	0.73 m <sup>3</sup>	0.85 m³	327 kg
2,362 mm (93')	General purpose – with bolt-on reversible blade	0.82 m <sup>3</sup>	0.96 m <sup>3</sup>	539 kg
2,362 mm (93')	General purpose – weld-on teeth holder, pin-on teeth	0.82 m <sup>3</sup>	0.96 m <sup>3</sup>	539 kg
2,083 mm (82')	4 in 1, with bolt-on cutting blade	0.65 m <sup>3</sup>	0.80 m <sup>3</sup>	658 kg
2.392 mm (93')	General purpose - with bolt-on blade (interchangeable with bolt-on teeth	ר) 0.82 m³	1.00 m <sup>3</sup>	539 kg
2.382 mm (93')	General purpose - with bolt-on teeth (interchangeable with bolt-on blade	e) 0.82 m <sup>3</sup>	1.00 m <sup>3</sup>	539 kg

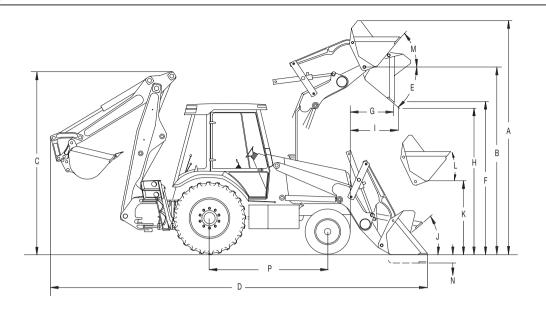
## **BUCKET – EXCAVATOR**

Width	Туре	Heaped capacity	Weight
457 mm (18')*	General purpose	0.13 m <sup>3</sup>	105 kg
610 mm (24')	General purpose	0.18 m <sup>3</sup>	123.4 kg
305 mm (12')*	Universal HD (heavy-duty)	0.10 m <sup>3</sup>	133.6 kg
457 mm (18')*	Universal HD (heavy-duty)	0.15 m³	161.6 kg
610 mm (24')	Universal HD (heavy-duty)	0.22 m <sup>3</sup>	193.5 kg
762 mm (30')	Universal HD (heavy-duty)	0.29 m <sup>3</sup>	222 kg
914 mm (36')*	Universal HD (heavy-duty)	0.36 m <sup>3</sup>	250.5 kg
*On domand			

\*On demand

## **EXCAVATOR LIFTING CAPACITY**

LIFTING WITH DIGGING ARM WIDE OPEN	STANDARD (KG)	EXTEND	AHOE (KG)
		Retracted arm	Extended arm
+ 4,876 mm (16')	-	-	768
+ 4,270 mm (14')	1,121	1,030	897
+ 3,660 mm (12')	1,296	1,199	964
+ 3,050 mm (10')	1,345	1,246	985
⊦ 2,440 mm (8')	1,353	1,252	984
+ 1,830 mm (6')	1,344	1,242	985
+ 1,220 mm (4')	1,329	1,225	982
- 610 mm (2')	1,312	1,207	977
Ground level	1,297	1,191	977
610 mm (2')	1,285	1,178	973
1,220 mm (4')	1,282	1,174	972
1,830 mm (6')	1,294	1,183	977
2,440 mm (8')	1,338	1,224	993
3,050 mm (10')	1,506	1,385	1,030
3,660 mm (12')	-	-	1,102
4,270 mm (14')	-	-	1,413
ifting the digging arm (boom positioned at 65°)			
- 4,270 mm (14')	-	-	1,431
- 3,660 mm (12')	1,877	1,877	1,352
- 3,050 mm (10')	1,735	1,735	1,281
- 2,440 mm (8')	1,774	1,774	1,295
+ 1,830 mm (6')	1,976	1,976	1,365
- 1,220 mm (4')	2,348	2,348	1,337
⊦ 610 mm (2')	-	-	1,581

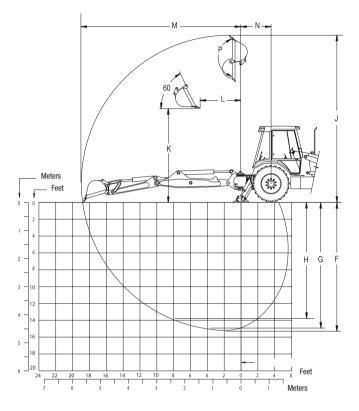


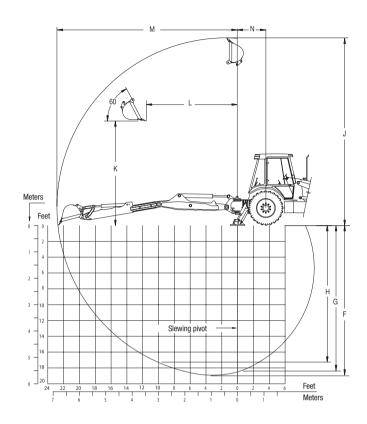
4x4 Traction with 19.5x24 rear tires and 93" general purpose front bucket. \*Standard 4x4 front axle with 12x16.5 tires. \*\*Standard 4x4 front axle HD with 12.5/80x18 tires.

A. Operation height with front bucket fully lifted	4,183 mm* / 4,269 mm**
B. Height up to hinge pin with front bucket fully lifted	3,417 mm* / 3,503 mm**
C. Maximum transportation height With standard ground engaging arm With Extendahoe ground engaging arm	3,368 mm* 3,537 mm*
D. Total length with front bucket on the ground With standard ground engaging arm	7,119 mm*
E. Maximum dump angle at maximum height	47°*
F. Maximum dump height with tilting angle at 45°	2,690 mm* / 2,776 mm**
G. Dump reach at maximum height with tilting angle at 45°, measured from the bumper	801 mm*
H. Maximum dump height	2,690 mm* / 2,776 mm**
I. Maximum dump reach angle at maximum height	801 mm*
J. Bucket closing angle at ground level	42°*
K. Height up to the front bucket hinge pin at transport position (43.4°, according to SAE J49)	345 mm* / 431 mm**
L. Transport angle (according to SAE J49)	42°*
M. Front bucket closing angle at maximum height	Adjustable
N. Digging depth below ground level with front bucket leveled	194 mm* / 108 mm**
P. Wheelbase	2,146 mm
Total transport width (measured at rear tires)	2,077 mm
Ground clearance up to front axle differential (4x4)	253 mm* / 339 mm**
Ground clearance up to the slewing tower	380 mm* / 294 mm**
Ground clearance, cardan shaft protection	267 mm* / 353 mm**
Height up to the canopy top ROPS/FOPS	2,663 mm
Height up to the closed cab ROPS/FOPS	2,717 mm
Height up to the exhaust pipe	2,623 mm
Loader lifting capacity up to maximum height (horizontal level)	30.26 kN (3,086 kgf)
Loader breakout power – dumping cylinder	47.25 kN (4,818 kgf)

## DIMENSIONS

4x4 Traction with 19.5x24 rear tires and 24" HD rear bucket. \*4x4 Standard front axle with 12x16.5 tires. \*\*4x4 HD front axle with 12.5/80x18 tires.





	Standard	Extendahoe Retracted	Extendahoe Extended
F. Maximum digging depth	4,507.7 mm	4,507.7 mm	5,625.1 mm
G. Digging depth – flat bottom (2')	4,533.8 mm	4,533.8 mm	5,593.5 mm
H. Digging depth – flat bottom (8')	4,239.9 mm	4,239.9 mm	5,364.0 mm
J. Rear bucket maximum height	6,070.5 mm	6,070.5 mm	7,067.4 mm
K. Load height	3,595.1 mm	3,595.1 mm	4,341.4 mm
L. Load reach	1,263.0 mm	1,263.0 mm	2,026.6 mm
M. Load reach from the slewing center	5,709.5 mm	5,709.5 mm	6,740.3 mm
N. Distance from slewing center and rear axle	1,115.1 mm	1,115.1 mm	1,115.1 mm
P. Bucket rotation	198.0°	198.0°	198.0°
Rear arm total slewing angle	180°	180°	180°
Rear bucket digging power	50.4 kN (5,141 kgf)	50.4 kN (5,141 kgf)	50.4 kN (5,141 kgf)
Ground engaging tool digging power	29.5 kN (3,007 kgf)	29.5 kN (3,007 kgf)	21.7 kN (2,217 kgf)

## **CYLINDERS**

	Cylinder diameter	Rod diameter	Stroke
Loader			
Lifting (2)	82.6 mm	44.5 mm	733.0 mm
Bucket (2)	76.2 mm	38.1 mm	516.5 mm
Bucket 4 in 1 (2)	76.2 mm	44.5 mm	230.6 mm
Excavator			
Lifting arm	114.3 mm	57.2 mm	971.6 mm
Digging arm	108 mm	57.2 mm	628.5 mm
Bucket	82.6 mm	57.2 mm	897.9 mm
Extendahoe	76.2 mm	44.5 mm	1,068 mm
Slewing (2)	95.3 mm	50.8 mm	282 mm
Stabilizers (2)	108.0 mm	57.2 mm	542.9 mm
Direction			
4x2	63.0 mm	36.0 mm	154.0 mm
4x4	63.0 mm	36.0 mm	154.0 mm

#### **OTHERS**

Tilting engine hood – easy maintenance a	ccess	
Rubber front bumpers		
Counterweight (for standard front arm)	187 kg	
Counterweight (for extendable front arm)	317.5 kg	
Tool kit (Option)		
Pro Control - Excavator slewing damping (standard item)	system	
Extendahoe – Extendable excavator arm (Optional)		
Hydraulic quick coupling (on demand)		
Uni and bidirectional hydraulic assistant (optional)		
Retrofit Kit – Allows using M series rear buckets (optional)		
Stabilizers with reversible pads (optional)		
Cold start auxiliary (optional)		
Turbocharged engine with Tier III certificate (standard item)		

Powershift Transmission with automatic gear change (optional)

Cardan axle and engine crankcase protection (standard item for 4x4 traction and optional for 4x2 traction)

Ride Control – load damping system (optional)

HD Front Axle for 4x4 traction (optional)

Note: all specifications according to recommended practices or SAE standard, if applicable.

## **580N LOADER VERSION**

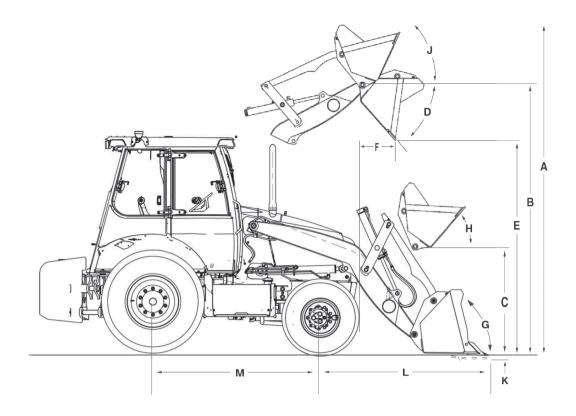
- Based on 580N backhoe loader without rear implement.
- Available for 4x4 traction with open or closed cab with air conditioner.
- Engine, transmission, axles (except for 4x2 front axle), tires and wheels, hydraulic system, electrical system, brakes and operator area similar to 580N backhoe loader.

Loader performance data similar to 580N backhoe loader.

Items not included in loader version:

Boom, arm, rear bucket, arms and stabilizers pads, cylinders for boom, arm, rear bucket, stabilizers and slewing, excavator controls, excavator control valve, front counterweight, hoses, excavator tubes and connections and others.

Exclusive items for the loader version: 1,785 kg rear counterweight and fastening loader version mat



4x4 Traction with 19.5x24 rear tires and 93" general purpose front bucket. \*4x4 Standard front axle with 12x16.5 tires. \*\*4x4 HD front axle with 12.5/80x18 tires.

## LOADER DIMENSIONS

A. Operation height with front bucket fully lifted	4,183 mm* / 4,269 mm**
B. Height up to hinge pin with front bucket fully lifted	3,417 mm* / 3,503 mm**
C. Height up to the front bucket hinge pin at transport position (43.4°, according to SAE J49 standard)	345 mm* / 431 mm**
D. Maximum dump angle at maximum height	47°*
E. Maximum dump height with tilting angle at 45°	2,690 mm* / 2,776 mm**
F. Dump reach at maximum height with tilting angle at 45°, measured from the bumper	801 mm*
G. Bucket closing angle at ground level	42°*
H. Transport angle (according to SAE J49 standard)	42°*
J. Front bucket closing angle at maximum height	Adjustable
K. Digging depth below ground level with front bucket leveled	194 mm* / 108 mm**
L. Reach from the front axle center – bucket on the ground	2,080 mm
Loader lifting capacity up to maximum height (horizontal level)	30.3 kN (3,086 kgf)
Loader breakout power – dumping cylinder	47.25 kN (4,818 kgf)
M. Wheelbase	2,146 mm

**OPERATOR AREA** ROPS/FOPS Open cab Start-up using key Hydrostatic Steering Vinyl seat with suspension, armrest and 180° rotation Loader switch lever with differential block actuation switch and transmission declutch Excavator with slewing pedal and 3 lever control Inside rear-view mirror (90 x 275 mm) Sliding seat belt - 50.8 mm (2") Cup-holder and stowage compartment Anti-vandalism side panel lid Rubber mat Front glass wiper and washer: 2 front work lights 2 rear work lights 2 turn signal lights and front emergency lights - amber 2 turn signal lights and rear emergency lights - amber 2 position and brake tail lights - red 2 outlets of 15 A on the right panel **ROPS/FOPS** Closed cab Cloth seat with mechanical suspension, adjustable armrest and 180° rotation Clothes hook Roof lamp actuated at the door or on the switch Radio readv Rear side windows with total opening feature and latch Lighting package with 6 headlights: 2 front, 2 rear and 2 side lights 2 outlets of 15 A on the right panel Footrest (only with Pilot Control)

**OPERATOR AREA (OPTIONAL)** ROPS/FOPS Open cab Pilot Control excavator pilot control External rear view mirrors Lighting package with: + 2 front headlights + 2 rear headlights + 2 side headlights Excavator motion and slewing control with two levers Vinyl seat with air suspension and powered height setting **ROPS/FOPS** Closed cab Pilot Control - excavator pilot control External rear view mirrors Vinyl seat with mechanical suspension Armrest and 180° rotation AM/FM radio, stereo, MP3 Sliding seat belt - 76.2 mm (3") Adjustable steering column Excavator motion and slewing control with two levers Cloth seat with air suspension and powered height setting Lighting package with:

+ 2 front headlights

+ 2 rear headlights

NOTE: Anti-vandalism side panel lid not available for closed cab version.

## INSTRUMENTS

Analogue indicator with backlight: Engine water temperature Converter oil temperature Fuel level Voltmeter (battery load) Tachometer (rpm) Hour meter

Warning light: Air Filter obstruction Alternator Air conditioner - high or low pressure Cold Start (optional) Engine Oil pressure Hydraulic oil filter obstruction Parking brake actuated Low fuel level

Audible alarms:

- Engine coolant temperature Engine Oil pressure Converter oil temperature above 116 °C
- Parking brake actuated
- Reverse alarm Double actuation horn (front and rear)

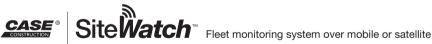
## TYRES AND WHEELS

4 x 2

Front 10.5 x 16, 10 lining - 8" Rim - One piece 11L x 16, 10 lining - 8" Rim - One piece Rear 14.00 x 24, 10 lining – 8" Rim – One piece 16.9L x 24, 10 lining – 15" Rim – One piece 17.5 x 25, 12 lining - 14" Rim - One piece 17.5 x 25, 16 lining - 14" Rim - Three pieces 19.5L x 24, 12 lining - 16" Rim - One piece 4 x 4 Front 12 x 16.5, 10 lining - 9.75" Rim - One piece 12.5/80x18, 10 lining - 9" Rim - One piece\* Rear 16.9L x 24, 10 lining - 15" Rim - One piece 17.5 x 25, 12 lining - 14" Rim - One piece 17.5 x 25, 16 lining – 14" Rim – Three pieces 19.5L x 24, 12 lining - 16" Rim - One piece \*Available only for 4x4 HD Front Axle. \*\*Loader version available only for 4x4 version.

## SLEWING RADIUS

4x2	
Brakes applied	3,400 mm
Brakes not applied	3,700 mm
4x4 – traction applied	Standard / HD
Brakes applied	3,800 / 4,350 mm
Brakes not applied	4,250 / 4,500 mm
4x4 – traction not applied	Standard / HD
Brakes applied	3,450 / 3,850 mm
Brakes not applied	3,825 / 4,000 mm



CASE is entitled to make improvements and changes to these specifications at any time, with no obligation to install such improvements in units previously sold. Specifications, descriptions and illustrations herein accurately represent the data available at the time of this publication, however, they may vary according to the region and are subject to modifications without previous notice. Illustrations may include optional items and accessories and may not include all standard equipment.

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#### Plants

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