

Engine

Isuzu AI-4HK1X Tier 3 turbocharged diesel engine with electronic fuel control, 153 Net HP (114 kW), 5.2 Liter displacement, 4-cylinder, water-cooled, EGR with cooler, air-to-air intercooler, 24-volt system, 50 amp alternator, Emergency Engine Stop, Green Plug oil drain, double element air filter.

SAE net horsepower	153 hp (114 kW) @ 1800 rpm
Displacement	317 cu in (5,193 cc)
Maximum torque.....	454 lbf-ft (616 Nm)
Starter.....	24V-5.0kW
Alternator.....	50 amp
Battery.....	92 amp-hours

Cab and Controls

Cab with a/c and heat with defrost, analog gauge package, illuminated softtouch switches, low-effort controls, control pattern changer, blade control, one-touch idle, safety glass windows, intermittent windshield wiper with washer, polycarbonate roof hatch, sun visor, shockless cab suspension with four fluid mountings, KAB® reclining suspension seat, AM/FM radio, dome light, seat belt, cup holder, storage compartments, floor mat, footrests, cigarette lighter, ashtray, 12-volt outlet, travel alarm, handrail, mirrors. Common key locks, tool box, 70W work light, non-skid surface pads, handrail.

A/C output.....	13,490 BTU/hr
Heater output.....	12,900 BTU/hr
Sound level (inside cab)	76.0 dB(A)
Sound level (exterior)	102.0 dB(A)

Hydraulic System

Open-center system, two variable displacement axial piston pumps and one gear pump for pilot controls, main control valve with one 4-spool valve and one 5-spool valve with auxiliary spool, 1-spool valve for blade, oil cooler, boom and arm holding valves, attachment cushion, o-ring face seals, 6 micron return filter.

Hydraulic Pumps

Maximum flow	2 x 50.2 gpm (2 x 190 l/min)
Pilot pump maximum flow	5.3 gpm (20 l/min)
Blade pump maximum flow	18.2 gpm (69 l/min)

Relief Valve Settings

Boom/arm/bucket	4,970 psi (343 bar)
in Power-Boost Mode.....	5,410 psi (373 bar)
Swing circuit	4,410 psi (304 bar)
Travel circuit	4,970 psi (343 bar)
Blade circuit.....	3,280 psi (226 bar)

Hydraulic Cylinders

	number of cylinders – bore x rod x stroke
Boom	2 - 4.9" x 3.5" x 50.6" (125 mm x 90 mm x 1,284 mm)
Arm	1 - 5.3" x 3.7" x 58.0" (135 mm x 95 mm x 1,474 mm)
Bucket	1 - 4.5" x 3.1" x 39.8" (115 mm x 80 mm x 1,012 mm)
Blade	2 - 5.1" x 3.1" x 10.2" (130 mm x 80 mm x 260 mm)

Hydraulic Oil Filtration

Return filter.....	6 micron
Pilot filter.....	8 micron
Suction screen.....	150 micron



Swing

Fixed-displacement, axial piston swing motor, planetary gear reduction. Mechanical disc brake and ball bearing with internal gear for turntable.

Swing speed.....	0 – 10.6 rpm
Tail swing.....	5' 8" (1.72 m)
Swing torque	48,679 lbf-ft. (66.0 kN•m)

Undercarriage

X Pattern carbody with 9' 4" (2.85m) LC long undercarriage by 6' 6" (1.99m) track gauge, sealed and strutted track chain, sealed rollers and idlers, two-speed independent hydrostatic travel with compact planetary final drive, disc type brakes, adjustable track tension, swivel guard, 7' 7" (2.32m) hydraulically controlled dozer blade.

Carrier rollers.....	2 per side
Track rollers - LC no blade.....	8 per side
Track rollers - Reg. w/ blade.....	7 per side
Track link pitch.....	7.48" (190 mm)
Shoes - LC no blade	49 per side
Shoes - Reg. w/ blade	46 per side
Shoe width - LC no blade	31.5" (800 mm)
Shoe width - Reg. w/ blade.....	23.6" (600 mm)
Ground pressure - LC no blade 800mm shoe....	5.5 psi (0.38 bar)
Ground pressure - Reg. w/ blade 600mm shoe.	8.0 psi (0.55 Bar)

Lubricant and Coolant Capacity

Fuel tank.....	70.01 gallons (265.0 Liters)
Hydraulic tank.....	31.70 gallons (120.0 Liters)
Hydraulic system.....	54.16 gallons (205.0 Liters)
Final drive (per side).....	1.24 gallons (4.7 Liters)
Swing drive.....	1.32 gallons (5.0 Liters)
Engine oil.....	6.10 gallons (23.1 Liters)
Cooling system.....	6.76 gallons (25.6 Liters)

Travel System

Variable-displacement axial piston travel motor, planetary gear reduction final drive, spring-applied hydraulic release disc brake. Max. travel speed..... 1.9 - 3.1 mph (3.1 - 5.0 km/h)
Drawbar pull..... 42,039 lbf (187 kN)
Gradeability..... 70% (35°)

Attachment

Boom.....	18' 8" (5.70 m)
Available Arms (Excavator)	Digging Force*
• 9' 10" (3.00m).....	21,360 lbf (95 kN) with Power-Boost applied..... 23,380 lbf (104 kN)
• 7' 10" (2.40m).....	27,650 lbf (123 kN) with Power-Boost applied..... 29,670 lbf (132 kN)
Bucket Digging Force.....	29,230 lbf (130 kN) with Power-Boost applied..... 31,700 lbf (141 kN)

*Digging force ratings are based on ISO 6015, "Earthmoving Machinery – Hydraulic Excavators – Tool Forces."

Fuel Usage*

Heavy.....	4.56 gal / hr (17.28 liter / hr)
Average.....	3.99 gal / hr (15.12 liter / hr)
Light.....	3.14 gal / hr (11.88 liter / hr)

*Fuel economy varies widely depending on application. "Heavy" represents nearly continuous operation in tough digging applications in SP Mode. "Light" represents easy digging applications utilizing the machine about 50% of the time in SP Mode.

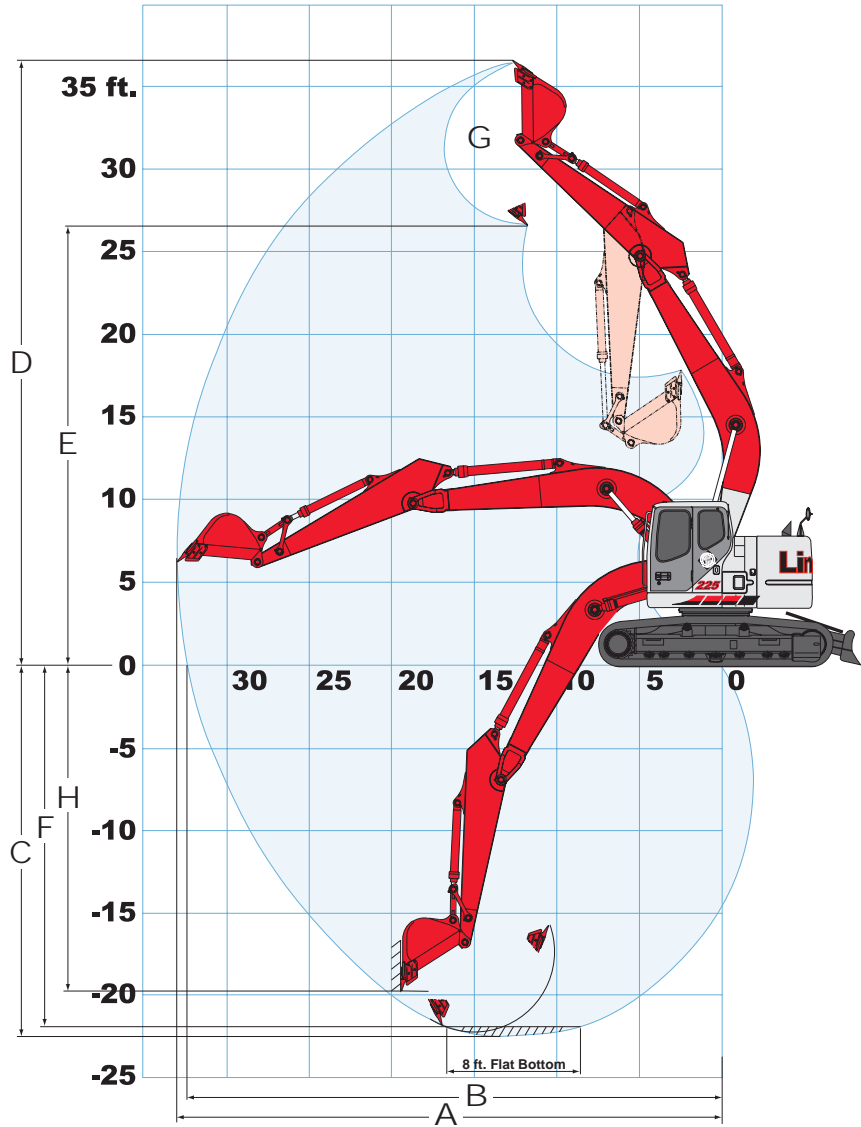
Operating Weight

Mono Boom Excavator - Working weight with 31.5" (800mm) shoes, 18' 8" (5.70m) boom, 9' 10" (3.00m) arm, 1,540lb (700kg) bucket, 13,790lb (6,255kg) counterweight..... 53,352 lbs. (24 200 kg) with dozer blade (600mm shoes)..... 53,793 lbs (24,400 kg)

225 Spin Ace® Tier 3 Specifications

Working Ranges

	Machine equipped with 18' 8" (5.70 m) boom.	9' 10" Arm (3.00 m)	7' 10" Arm (2.40 m)
A.	Max. digging radius	32' 6" (9.91 m)	30' 9" (9.37 m)
B.	Max. digging radius @ ground level	31' 11" (9.73 m)	30' 1" (9.18 m)
C.	Max. digging depth	22' 0" (6.70 m)	20' 0" (6.10 m)
D.	Max. digging height	35' 10" (10.91 m)	34' 6" (10.52 m)
E.	Max. dumping height	26' 4" (8.02 m)	25' 0" (7.63 m)
F.	Digging depth – 8' (2.44 m) level bottom	21' 5" (6.53 m)	19' 4" (5.89 m)
G.	Bucket wrist angle	177°	177°
H.	Max. vertical wall depth	19' 11" (6.07 m)	18' 0" (5.48 m)



Bucket Sizes

225 MSR

Bucket Type	Capacity	Width Outside Lip	Weight	# Teeth	No Blade		Blade Up	
					7' 10" (2.40 m)	9' 10" (3.00 m)	7' 10" (2.40 m)	9' 10" (3.00 m)
ESCO STDP	.65 yd ³ (.50 m ³)	24" (610 mm)	1,151 lb. (522 kg)	4	H	H	H	H
	.87 yd ³ (.67 m ³)	30" (762 mm)	1,265 lb. (574 kg)	4	H	H	H	H
	1.09 yd ³ (.83 m ³)	36" (914 mm)	1,433 lb. (650 kg)	5	H	H	H	M
	1.31 yd ³ (1.00 m ³)	42" (1 067 mm)	1,570 lb. (712 kg)	5	M	M	M	L
	1.53 yd ³ (1.17 m ³)	48" (1 219 mm)	1,687 lb. (765 kg)	5	M	L	L	L
	1.75 yd ³ (1.34 m ³)	54" (1 372 mm)	1,853 lb. (841 kg)	6	L	L	L	N/A
ESCO HDP	.64 yd ³ (.49 m ³)	24" (610 mm)	1,392 lb. (631 kg)	3	H	H	H	H
	.85 yd ³ (.65 m ³)	30" (762 mm)	1,592 lb. (722 kg)	4	H	H	H	H
	1.07 yd ³ (.82 m ³)	36" (914 mm)	1,794 lb. (814 kg)	5	H	H	H	M
	1.29 yd ³ (.99 m ³)	42" (1 067 mm)	1,954 lb. (886 kg)	5	M	M	M	L
	1.51 yd ³ (1.15 m ³)	48" (1 219 mm)	2,114 lb. (959 kg)	5	M	L	L	N/A
	1.72 yd ³ (1.32 m ³)	54" (1 372 mm)	2,315 lb. (1 050 kg)	6	L	N/A	L	N/A
ESCO XDP	.64 yd ³ (.49 m ³)	24" (610 mm)	1,549 lb. (703 kg)	3	H	H	H	H
	.85 yd ³ (.65 m ³)	30" (762 mm)	1,769 lb. (802 kg)	4	H	H	H	H
	1.07 yd ³ (.82 m ³)	36" (914 mm)	1,933 lb. (877 kg)	4	H	H	H	M
	1.29 yd ³ (.99 m ³)	42" (1 067 mm)	2,152 lb. (976 kg)	5	M	L	M	L
	1.51 yd ³ (1.15 m ³)	48" (1 219 mm)	2,316 lb. (1 051 kg)	5	L	L	L	N/A
	1.72 yd ³ (1.32 m ³)	54" (1 372 mm)	2,536 lb. (1 150 kg)	6	L	N/A	N/A	N/A
POWER	.61 yd ³ (.47 m ³)	24" (610 mm)	1,956 lb. (887 kg)	4	H	H	H	H
	.80 yd ³ (.61 m ³)	30" (762 mm)	2,102 lb. (953 kg)	5	H	H	H	H
	.99 yd ³ (.76 m ³)	36" (914 mm)	2,287 lb. (1 037 kg)	5	H	M	H	M
	1.18 yd ³ (.90 m ³)	42" (1 067 mm)	2,433 lb. (1 104 kg)	5	M	M	M	L
	1.38 yd ³ (1.06 m ³)	48" (1 219 mm)	2,578 lb. (1 169 kg)	5	L	L	L	N/A
ESCO DITCH	1.08 yd ³ (.83 m ³)	60" (1 524 mm)	1,470 lb. (667 kg)	0	H	H	H	M
	1.20 yd ³ (.92 m ³)	66" (1 676 mm)	1,557 lb. (706 kg)	0	H	M	M	M
	1.50 yd ³ (1.15 m ³)	72" (1 829 mm)	1,648 lb. (748 kg)	0	M	M	M	L

Approval Code For Arm/Bucket Combinations:

- H - Heavy material (up to 3,370 lbs./ yd³)
- M - Medium material (up to 2,700 lbs./ yd³)
- L - Light material (up to 2,020 lbs./ yd³)
- N/A - Not applicable

225 Spin Ace[®] Tier 3 Specifications

Lifting Capacities 225 Spin Ace[®]

9' 10" (3.00 m) Arm without blade

18' 8" (5.70 m) Boom and 1,435 lb. (651 kg) Bucket

Bucket Hook Height		Radius of Load											
		10' 0" (3.05 m)		15' 0" (4.57 m)		20' 0" (6.10 m)		25' 0" (7.62 m)		Cap. at Max. Reach			
		End	Side	End	Side	End	Side	End	Side	End	Side		
+30' 0" (7.62 m)	lbs. kg											5,950* 2 699*	5,950* 2 699*
+25' 0" (7.62 m)	lbs. kg											5,250* 2 381*	5,250* 2 381*
+20' 0" (6.10 m)	lbs. kg					9,850* 4 468*	9,850* 4 468*					4,950* 2 245*	4,950* 2 245*
+15' 0" (4.57 m)	lbs. kg			12,400* 5 625*	12,400* 5 625*	10,900* 4 944*	10,550* 4 785*	10,000* 4 536*	7,100 3 221			4,950* 2 245*	4,950 2 245
+10' 0" (3.05 m)	lbs. kg	23,550* 10 682*	23,550* 10 682*	15,750* 7 144*	15,600* 7 076	12,450* 5 647*	10,000* 4 536	10,700* 4 854*	6,850 3 107			5,100* 2 313*	4,550 2 064
+5' 0" (1.52 m)	lbs. kg	21,200* 9 616*	21,200* 9 616*	19,350* 8 777*	14,650 6 645	14,050* 6 373*	9,400 4 264	11,150 5 058	6,550 2 971			5,400* 2 449*	4,400 1 996
Ground Line	lbs. kg	18,550* 8 414*	18,550* 8 414*	21,150* 9 594*	13,750 6 237	15,200* 6 895*	8,900 4 037	10,850 4 922	6,300 2 858			6,000* 2 722*	4,600 2 087
-5' 0" (1.52 m)	lbs. kg	24,200* 10 977*	24,200* 10 977*	21,050* 9 548*	13,400 6 078	15,100 6 849	8,650 3 924	10,700 4 854	6,150 2 790			6,950* 3 153*	5,100 2 313
-10' 0" (3.05 m)	lbs. kg	28,150* 12 769*	26,650* 12 088*	19,500* 8 845*	13,450 6 101	14,300* 6 486*	8,600 3 901	10,250* 4 649*	6,200 2 812			8,600* 3 901*	6,300 2 858
-15' 0" (4.57 m)	lbs. kg	22,150* 10 047*	22,150* 10 047*	15,800* 7 167*	13,800 6 260	11,000* 4 990*	8,900 4 037					6,750* 3 062*	6,750* 3 062*

7' 10" (2.40 m) Arm without blade

18' 8" (5.70 m) Boom and 1,539 lb. (698 kg) Bucket

Bucket Hook Height		Radius of Load											
		10' 0" (3.05 m)		15' 0" (4.57 m)		20' 0" (6.10 m)		25' 0" (7.62 m)		Cap. at Max. Reach			
		End	Side	End	Side	End	Side	End	Side	End	Side		
+30' 0" (7.62 m)	lbs. kg											9,100* 4 128*	9,100* 4 128*
+25' 0" (7.62 m)	lbs. kg											7,850* 3 561*	7,850* 3 561*
+20' 0" (6.10 m)	lbs. kg			11,900* 5 398*	11,900* 5 398*	10,800* 4 899*	10,650 4 831					7,450* 3 379*	6,500 2 948
+15' 0" (4.57 m)	lbs. kg	18,600* 8 437*	18,600* 8 437*	14,100* 6 396*	14,100* 6 396*	12,000* 5 443*	10,400 4 717	10,800* 4 899*	7,000 3 175			7,400* 3 357*	5,550 2 517
+10' 0" (3.05 m)	lbs. kg	22,500* 10 206*	22,500* 10 206*	17,400* 7 893*	15,550 7 053	13,400* 6 078*	9,900 4 491	11,350 5 148	6,850 3 107			7,600* 3 447*	5,050 2 291
+5' 0" (1.52 m)	lbs. kg			20,700* 9 390*	14,400 6 532	14,800* 6 713*	9,350 4 241	11,150 5 058	6,600 2 994			8,100* 3 674*	4,950 2 245
Ground Line	lbs. kg	16,900* 7 666*	16,900* 7 666*	21,500* 9 752*	13,750 6 237	15,450 7 008	8,950 4 060	10,900 4 944	6,400 2 903			8,900 4 037	5,200 2 359
-5' 0" (1.52 m)	lbs. kg	24,200* 10 977*	24,200* 10 977*	20,900* 9 480*	13,600 6 169	15,250 6 917	8,800 3 992	10,850 4 922	6,300 2 858			9,650* 4 377*	5,850 2 654
-10' 0" (3.05 m)	lbs. kg	25,900* 11 748*	25,900* 11 748*	18,600* 8 437*	13,750 6 237	13,550* 6 146*	8,850 4 014					8,700* 3 946*	7,550 3 425
-15' 0" (4.57 m)	lbs. kg	18,750* 8 505*	18,750* 8 505*	13,600* 6 169*	13,600* 6 169*								
-20' 0" (6.10 m)	lbs. kg												

Notes: Excavator lifting capacities

- Lifting capacities shown should not be exceeded. Weight of all lifting accessories must be deducted from the above lifting capacities.
- Lifting capacities are based on machine standing on firm, uniform supporting surface. User must make allowances for job conditions such as soft or uneven ground.
- Lifting capacities shown do not exceed 75% of minimum tipping loads or 87% of hydraulic capacities. Capacities marked with an asterisk (*) are limited by hydraulic capacities.
- Least stable position is over the side.
- Operator should be fully acquainted with the Operator's Manual & Operating Safety Booklet, furnished by LBX before operating the machine.
- Capacities apply only to the machine as originally manufactured and normally equipped by LBX Company LLC.
- Lift capacity ratings are based on SAE J1097, "Earthmoving Machinery - Hydraulic Excavators - Lift Capacity".

225 Spin Ace® Tier 3 Specifications

Dimensions

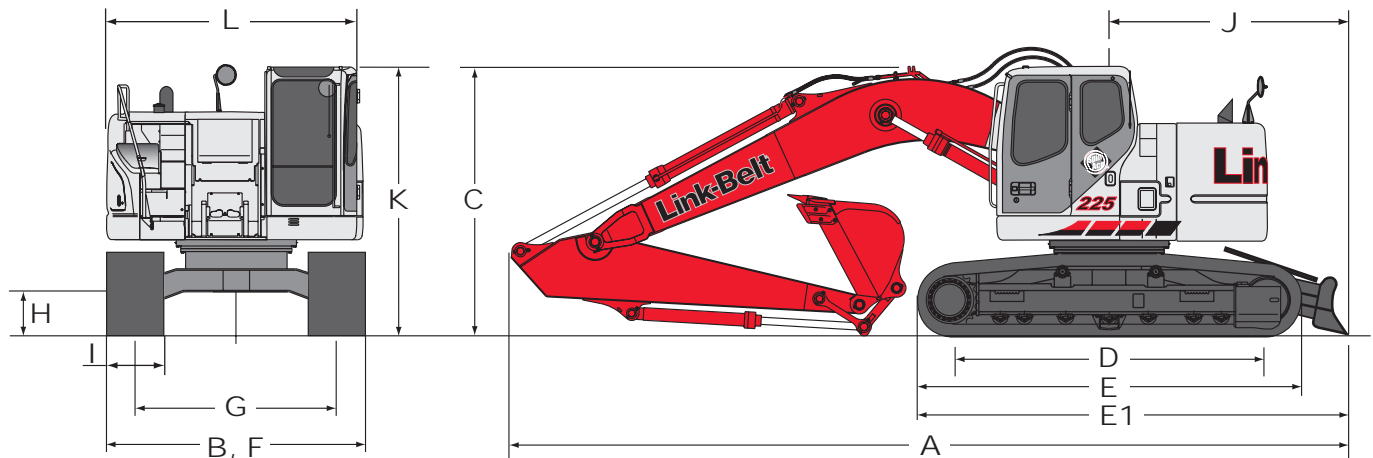
Dimensions - 9' 10" (3.00 m) arm

A.	Overall length	29' 0" (8.85 m)
	Overall length*	30' 4" (9.25 m)
B.	Overall width	10' 6" (3.19 m)
	Overall width*	9' 2" (2.80 m)
C.	Overall height	9' 9" (2.97 m)
D.	Distance between sprocket and idler	12' 0" (3.66 m)
	Distance between sprocket and idler*	11' 1" (3.37 m)
E.	Overall length of crawler	14' 8" (4.46 m)
E1.	Overall length of crawler and blade	15' 6" (4.72 m)
F.	Overall width of crawler with std. shoe	10' 6" (3.19 m)
	Overall width of crawler with std. shoe*	9' 2" (2.80 m)
G.	Track gauge	7' 10" (2.39 m)
	Track gauge*	7' 3" (2.20 m)
H.	Min. ground clearance	18.1" (460 mm)
I.	Shoe width	31.5" (800 mm)
	Shoe width*	23.6" (600 mm)
J.	Tail swing radius	5' 8" (1.72 m)
K.	Cab height	9' 9" (2.97 m)
L.	Overall width of upperstructure	9' 2" (2.80 m)

Dimensions - 7' 10" (2.40 m) arm

A.	Overall length	29' 4" (8.93 m)
	Overall length*	30' 7" (9.33 m)
C.	Overall height	10' 4" (3.14 m)

*Machine equipped with a dozer blade



Standard Equipment

- Two selectable working modes (Normal and Economy)
- Control Pattern Selector Valve
- One-touch decelerator
- Power-Boost (trigger activated)
- Integral cylinder cushioning
- Cushioned attachment
- Swing cushion valve
- Auxiliary valve spool
- Travel alarm
- Auto power swing
- Two speed travel w/auto shift
- Low noise/low vibration cab floating on 4 fluid filled mounts
- Sliding/reclining, suspension cloth upholstered seat with adjustable arm rests and lumbar support, seat belt
- Analog gauge package
- Heater and air conditioner
- Rear view mirrors
- Two work lights, cab and boom
- Horn, interior lighting, AM/FM STEREO radio, clock, floor mat, cigarette lighter
- 12 volt accessory outlet for cell phones/audio extras
- Safety glass windows with windshield wiper and washer
- Gate lock lever (hydraulic lockout device)
- Vandalism locks
- Common key for cab & house doors, engine hood, and fuel cap
- Upper and lower undercovers
- Chrome plated boom foot pin with brass bushing
- Chrome plated boom to arm connection pin with brass bushing
- 31.5" (800 mm) 3-bar grouser shoes LC no blade
- 23.6" (600 mm) shoes - Reg. w/blade
- 13,790 lb. (6 255 kg) Counterweight

Options

- Arms -
 - 9' 10" (3.0 m)
 - 7' 10" (2.4 m)
- 27.5" (700 mm) 3-bar grouser shoes
- Rubber track
- Dozer blade (factory install)
- Auxiliary Hydraulics
 - Single Acting
 - Multi-Function
 - Thumb
- Hose Burst Check Valves
- Couplers (field install)
 - Esco Multi-Pin Grabber
- Thumbs (field install)
 - Universal rigid
 - Hydraulic non-link
 - Hydraulic non-link (for coupler)
 - Hydraulic link

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