Tier 4 Final Engine

Net Power SAE J1349 / 128 HP (96 kW) at 2,050 rpm Bucket Range 0.39 m³ - 1.05 m³ (0.51 yd³ - 1.37 yd³) Standard Bucket 0.70 m³ (0.92 yd³) Operating Weight 18,830 kg (41,513 lb)

ENGINE				
Make / model			Perkins 1204F	
Туре			Water cooled, 4-cycle diesel, 4 cylinders in line, direct injection, turbo- charged and air cooled	
Rated flywheel	SAE	J1995 (gross)	137 HP (102.1 kW) / 2,050 rpm	2
horsepower	SAE	J1349 (net)	128 HP (96 kW) / 2,050 rpm	100
Max. torque			57.1 kgf.m (413 lbf.ft) @ 1,400 rpm	
Bore × stroke			105 x 127 mm (4.13" x 5")	
Piston displacement			4,400 cc (268.5 in³)	The state of the s
Batteries			2 x 12V x 100 Ah	
Starting motor			24 V - 4.5 kW	
Alternator			24 V - 100 Amp	

HYDRAULIC SYSTEM MAIN PUMP Type Two variable displacement piston pumps Max. flow 2 x 164 l/min (43.3 gpm) Sub-pump for pilot circuit (Gear Pump) 31.5 l/min (8.3 gpm)

HYDRAULIC MOTORS			
	Travel	Two-speed axial pistons motor with brake valve and parking brake	
	Swing	Axial piston motor with automatic brake	

CROSS-SENSING AND FUEL-SAVING PUMP SYSTEM

RELIEF VALVE SETTING				
Implement circuits	350 kgf/cm² (5,690 psi)			
Travel	350 kgf/cm² (5,690 psi)			
Power boost (boom, arm, bucket)	380 kgf/cm² (5,400 psi)			
Swing circuit	285 kgf/cm ² (4,054 psi)			
Pilot circuit	40 kgf/cm² (570 psi)			
Service valve	Installed			

Service varie	motaned			
HYDRAULIC CYLINDERS				
	Boom: 2-115 x 1,090 mm (4.5" x 42.9")			
	Arm: 1-120 x 1,355 mm (4.7" x 53.3")			
No. of cylinders	Bucket: 1-110 x 995 mm (4.3" x 39.2")			
bore X stroke	Blade: 2-110 x 320 mm (4.3" x 12.6")			
	2PCS 1st: 2-115 x 960 mm (4.5" x 37.8")			
	2nd: 1-160 x 650 mm (6.3" x 25.6")			

DRIVES & BRAKES			
Drive method	Fully hydrostatic type		
Drive motor	Axial piston motor, in-shoe design		
Reduction system	Planetary reduction gear		
Max. drawbar pull	17,000 kgf (37,500 lbf)		
Max. travel speed (high / low)	5.3 km/hr (3.3 mph) / 3.2 km/hr (2.0 mph)		
Gradeability	35° (70%)		
Parking brake	Multi wet disc brake		

CONTROL

Pilot pressure-operated joysticks and pedals with detachable lever provide almost effortless and fatigueless operation.

Pilot control	Two joysticks with one safety lever (LH): Swing and arm (RH): Boom and bucket (ISO)	
Traveling and steering	Two levers with pedals	
Engine throttle	Electric, dial type	



OPERATING WEIGHT (APPROXIMATE)

Operating weight, including 5,100 mm (16' 9") boom, 3,100 mm (10' 2") arm, SAE heaped 0.70 m³ (0.92 yd³) bucket, lubricant, coolant, full fuel tank, max 3,250 kg (7,165 lb) counterweight and all other standard equipment.

OPERATING WEIGHT

Shoes		Operating weight		Ground pressure
Туре	Width mm (in)	kg (lb)		kgf/cm² (psi)
Triple	600 (24")	HX160L	18,830 (41,513)	0.46 (6.51)
grouser	700 (28")	HX160L	19,084 (42,073)	0.40 (5.62)

SWING SYSTEM			
Swing motor	Axial pistons motor		
Swing reduction	Planetary gear reduction		
Swing bearing lubrication	Grease-bathed		
Swing brake	Multi wet disc brake		
Swing speed	10.3 rpm		

SERVICE REFILL CAPACITIES			
Refilling	liters	US gal	
Fuel tank	290	76.6	
Engine coolant	27.5	7.3	
Engine oil	10.5	2.8	
Swing device	6.2	1.6	
Final drive (each)	3.0	0.8	
Hydraulic system (including tank)	240	63.4	
Hydraulic tank	125	33.0	
DEF/AdBlue® tank	19	5	

UNDERCARRIAGE

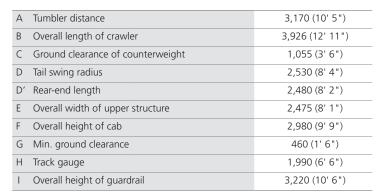
The X-leg type center frame is integrally welded with reinforced box-section track frames. The undercarriage includes lubricated rollers, idlers, track adjusters with shock absorbing springs and sprockets, and a track chain with double or triple grouser shoes.

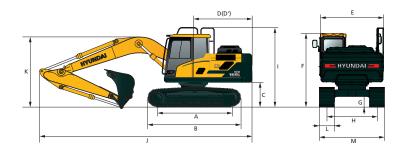
Center frame	X - leg type	
Track frame	Pentagonal box type	
No. of shoes on each side	49 EA	
No. of carrier rollers on each side	2 EA	
No. of track rollers on each side	7 EA	
No. of rail guards on each side	1 EA	

Tier 4 Final Engine

HX160L DIMENSIONS Unit: mm (ft·in)

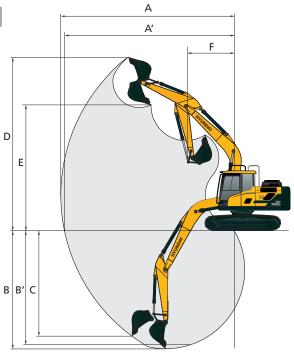
5.1 m (16' 9") boom and 2.2 m (7' 3"), 2.6 m (8' 6"), 3.1 m (10' 2") arm





	Boom length		5,100 (16' 9")	
	Arm length	2,200 (7' 3")	2,600 (8' 6")	3,100 (10' 2")
J	Overall length	8,660 (28' 5")	8,650 (28' 5")	8,650 (28' 5")
K	Overall height of boom	3,010 (9' 11")	2,990 (9' 10")	3,150 (10' 4")
L	Track shoe width	500 (20")	600 (24")	700 (28")
М	Overall width	2,490 (8' 2")	2,590 (8' 6")	2,690 (8' 10")

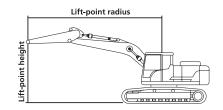
HX160L WORKING RANGE			Unit : mm (ft·in)
Boom length		5,100 (16' 9")	
Arm length	2,200	2,600	3,100
	(7' 3")	(8' 6")	(10' 2")
A Max. digging reach	8,690	9,020	9,450
	(28' 6")	(29' 7")	(31' 0")
A' Max. digging reach on ground	8,530	8,860	9,300
	(28' 0")	(29' 1")	(30' 6")
B Max. digging depth	5,660	6,060	6,560
	(18' 7")	(19' 11")	(21' 6")
B' Max. digging depth (8' level)	5,430	5,850	6,370
	(17' 10")	(19' 2")	(20' 11")
C Max. vertical wall digging depth	5,120	5,380	5,710
	(16' 10")	(17' 8")	(18' 9")
D Max. digging height	8,750	8,840	8,980
	(28' 8")	(29' 0")	(29' 6")
E Max. dumping height	6,110	6,220	6,390
	(20' 1")	(20' 5")	(21' 0")
F Min. swing radius	3,180	3,170	3,170
	(10' 5")	(10' 5")	(10' 5")



DIGGING F	ORCE					
Arm	Length	mm (ft·in)	2,200 (7' 3")	2,600 (8' 6")	3,100 (10' 2")	
AIIII	Weight	kg (lb)	750 (1,560)	810 (1,790)	890 (1,960)	
		kN	107.9 [117.2]	107.9 [117.2]	107.9 [117.2]	
	SAE Bucket	kgf	11,000 [11,940]	11,000 [11,940]	11,000 [11,940]	
		lbf	24,250 [26,330]	24,250 [26,330]	24,250 [26,330]	
digging force	force ISO	kN	123.6 [134.2]	123.6 [134.2]	123.6 [134.2]	
		kgf	12,600 [13,680]	12,600 [13,680]	12,600 [13,680]	[Power
		lbf	27,780 [30,160]	27,780 [30,160]	27,780 [30,160]	Boost]
		kN	87.2 [94.7]	77.3 [83.9]	69.0 [74.9]	
	Arm crowd force ISO	kgf	8,890 [9,650]	7,880 [8,560]	7,030 [7,630]	
		lbf	19,600 [21,280]	17,370 [18,860]	15,500 [16,830]	
		kN	91.0 [98.8]	80.3 [87.2]	71.4 [77.5]	
. 3. 66		kgf	9,280 [10,080]	8,190 [8,890]	7,280 [7,900]	
		lbf	20,460 [22,210]	18,060 [19,600]	16,050 [17,430]	

Note: Arm weight includes bucket cylinder, linkage, and pin

Tier 4 Final Engine



Lifting Capacity

Boom: 5,100 mm (16' 9")

Capacities based on North American Standard Configuration in accordance with ISO condition 2 standard.

Arm: 3,100 mm (10' 2")

Bucket: 0.70 m³ (0.92 yd³) SAE heaped

Rating over front Rating over side or 360 degree

Shoe: 600 mm (24") triple grouser. CWT 3.250 kg (7.165 lb)

						Lift-poir	nt radius					At	max. reach	
Lift-point height m (ft)		1.5 m (4.9 ft)		3.0 m (9.8 ft)		4.5 m (4.5 m (14.8 ft)		6.0 m (19.7 ft)		7.5 m (24.6 ft)		Capacity	
				· ·						Ū		ľ		m (ft)
6.0 m	kg							*3,810	3,790			*2,850	*2,580	6.78
(19.7 ft)	lb							*8,400	8,360			*6,290	*6,290	(22.2)
4.5 m	kg							*4,360	3,730	*2,980	2,590	*2,760	2,560	7.55
(14.8 ft)	lb							*9,600	8,210	*6,560	5,700	*6,080	5,630	(24.8)
3.0 m	kg			*9,340	*9,340	*6,570	5,490	*5,470	3,580	3,910	2,540	*2,800	2,300	7.97
(9.8 ft)	lb			*20,590	*20,590	*14,490	12,110	*12,070	7,900	8,620	5,600	*6,180	5,060	(26.1)
1.5 m	kg			*7,940	*7,940	*8,260	5,130	5,350	3,410	3,830	2,460	*2,970	2,200	8.09
(4.9 ft)	lb			*17,500	*17,500	*18,200	11,300	11,790	7,530	8,440	5,430	*6,560	4,840	(26.5)
Ground	kg			*7,130	*7,130	8,040	4,870	5,200	3,280	3,760	2,400	*3,310	2,230	7.91
Line	lb			*15,710	*15,710	17,720	10,740	11,460	7,230	8,290	5,290	*7,300	4,910	(26.0)
-1.5 m	kg	*5,530	*5,530	*10,100	8,740	7,910	4,760	5,120	3,210			3,780	2,410	7.43
(-4.9 ft)	lb	*12,200	*12,200	*22,280	19,280	17,440	10,490	11,280	7,070			8,340	5,310	(24.4)
-3.0 m	kg	*9,310	*9,310	*13,130	8,830	7,920	4,770	5,130	3,220			4,520	2,860	6.57
(-9.8 ft)	lb	*20,530	*20,530	*28,950	19,470	17,460	10,520	11,310	7,090			9,970	6,310	(21.6)
-4.5 m	kg			*10,050	9,080	*6880	4,910					*5,640	4,110	5.14
(-14.8 ft)	lb			*22,160	20,010	*15,170	10,830					*12,430	9,050	(16.9)

- 1. Lifting capacities are based on ISO 10567.
- 2. Lifting capacity of the HX Series does not exceed 75% of tipping load with the machine on firm, level ground or 87% of full hydraulic capacity.
- 3. The Lift-point is bucket pivot mounting pin on the arm (without bucket mass).
- 4. (*) indicates load limited by hydraulic capacity.



Tier 4 Final Engine

ENGINE	STD	ОРТ
Perkins 1204F Engine	•	
HYDRAULIC SYSTEM		
Intelligent Power Control (IPC)		
3-power mode, 2-work mode, user mode	•	
Variable power control	•	
Pump flow control	•	
Attachment mode flow control	•	
Engine auto idle	•	
Engine auto shutdown control		•
Electronic fan control	•	
CAB & INTERIOR	STD	OPT
ISO standard cabin		
Rise-up type windshield wiper	•	
Radio / USB player	•	
Bluetooth / hands-free mobile phone system with USB	•	
Miracast	•	
24V DC to 12V DC converter	•	
Electric horn	•	
All-weather steel cab with 360° visibility	•	
Safety glass windows	•	
Sliding fold-in front window	•	
Sliding side window (LH)	•	
Lockable door	•	
Hot and cool box	•	
Storage compartment and ashtray	•	
Transparent cabin roof cover	•	
Sun visor Door and cab locks, one key	•	
Mechanical suspension seat with heater	•	
Pilot-operated adjustable joystick	•	
Console box height adjust system	•	
Cabin lights	•	
Cabin front window rain guard		•
Cabin roof–steel cover		•
Automatic climate control		
Air conditioner and heater	•	
Defroster	•	
Starting aid (air grid heater) for cold weather	•	
Centralized monitoring		
8" LCD display	•	
Engine speed or trip meter / accel.	•	
Engine coolant temperature gauge	•	
Max. power	•	
Low speed / high speed	•	
Auto idle	•	
Overload		•
Check engine	•	
Air cleaner clogging	•	
Indicators	•	
ECO gauges	•	
Fuel level gauge	•	
Hydraulic oil temperature gauge Fuel warmer	•	
Warnings	•	
Communication error	•	
Low battery	•	
Clock	•	
CIOCK		

CAB & INTERIOR	STD	OPT
Seat		
Adjustable air suspension seat with heater	•	
Cabin FOG/FOPS		
FOG ISO 10262 Level 2 Front and top guard		•
(FOPS ISO 3449 Level 2) Top guard		•
Cabin ROPS		
ROPS ISO 12117-2	•	
SAFETY	STD	OPT
Battery master switch	•	
Rearview camera	•	
AAVM (All-Around View Monitoring)		•
Four front working lights (2 boom mounted, 2 front frame mounted)) •	
Travel alarm	•	
Rear work lamp		•
Beacon lamp		•
Automatic swing brake	•	
Boom holding system	•	
Arm holding system	•	
Safety lock valve for boom cylinder with overload warning device		•
Safety lock valve for arm cylinder		•
Swing lock system		•
Three outside rearview mirrors	•	
OTHER	STD	OPT
Booms		
5.1 m, 16' 9"	•	
5.1 m, 16' 9" 2-piece		•
Arms		
2.2 m, 7' 3"		•
2.6 m, 8' 6"		•
3.1 m, 10' 2"	•	
Removable clean-out dust net for cooler	•	
Removable reservoir tank	•	
Fuel pre-filter	•	
Fuel warmer		•
Self-diagnostics system	•	
Hi Mate Remote Management System Mobile	•	
Hi-Mate Remote Management System Satellite		•
Batteries (2 x 12V x 100 Ah)	•	
Fuel-filler pump (50 ℓ/min / 13 gpm)		•
Single-acting piping kit (breaker, etc.)		•
Double-acting piping kit (clamshell, etc.)	•	
Rotating piping kit		•
Quick coupler piping	•	
Quick coupler		•
Boom float control		•
Pilot accumulator	•	
Pattern change valve (SAE and ISO)	•	
Fine swing control system		•
Tool kit		•
UNDERCARRIAGE	STD	OPT
Lower frame under cover (additional)		•
Lower frame under cover (normal)	•	
Track shoes		
Triple grouser shoes (600 mm, 24")	•	
Triple grouser shoes (700 mm, 28")		•
Triple grouser shoes (500 mm, 20")		•
Track rail guard	•	
Full track rail guard		•

NOTE: Standard and optional equipment may vary. Materials and specifications are subject to change without advance notice. Contact your Hyundai dealer for more information.



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PLEASE	CONTACT

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