

Hydraulic Excavators XE490U



Rated Power: 430 hp
Operating Weight: 109,790 lb
Bucket Capacity: 3.15 yd³

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Technical Specifications

Engine

Designed to deliver superior performance and fuel efficiency, the Cummins Stage V diesel engine fully meets the emissions regulations. To optimize machine performance, the engine uses high-pressure fuel injectors, an air-to-air inter-cooler, and electronic engine controls. 4-cycle water-cooled, turbocharged, Exhaust Gas Recirculation (EGR) and Selective Catalytic Reduction (SCR) with a Diesel Particulate Filter (DPF).

Model	Cummins X12
Engine type	Water-cooled, 4 strokes, direct injection, turbo-charged with air-air intercoller
No. of cylinders	6
Rated power at 2100 rpm	
(SAE J1995)	430 hp at 1800 RPM
(SAE J1349)	
(ISO 9249)	
Max. torque at 1400 rpm	2034 N·m
Piston displacement	3.1 gal
Bore × stroke	5.2"x5.7"
Starter	24 V × 7.5 kW
Batteries - Alternator	28V/70A
Air filter	Donaldson's the latest PSD air filter and pre-filtered dust separator

Weight

Shoe width (in.)	Operating weight (lb)	Ground pressure (psi)
31"	1,097,900	1.16
31"	1,095,698	1.14
24"	1,086,878	1.33

Hydraulic system

The XICS (XCMG Intelligent Control System) is the brain of the excavator - minimizing fuel consumption and enabling the efficiency of the hydraulic system to be optimized for all working conditions. To harmonize the operation of the engine and the hydraulics, the XICS is connected to the engine's electronic control unit (ECU) via a data transfer link.

- The hydraulic system enables independent and combined operations – 2-speed travel offers either increased torque or high travel speed
- A cross-sensing pump system and an auto-deceleration system improve fuel efficiency.
- 8 attachment modes, 3 power modes - flow and pressure control of auxiliary hydraulic circuits from control panel
- Computer-controlled pump flow control

> Pumps flow & system pressure

Main pumps, type:	2 × Variable pump
Rated flow	2×95.1 gal/min
Pilot pump, type:	Gear pump
Relief valve settings:	
Pressure up	4,975/5,366 psi
Travel	4,975 psi
Swing	4,496 psi
Pilot	566 psi

Undercarriage

Extremely robust construction throughout - made of high-quality, durable materials, with all welded structures designed to limit stresses.

- Lifetime lubricated track rollers, idlers and sprockets fitted with floating seals
- Track shoes made of induction-hardened alloy with triple grouser
- Heat-treated connecting pins
- Hydraulic track adjuster with shock-absorbing tension mechanism

> Number of rollers and track shoes per side

Upper rollers (standard shoe)	2
Lower rollers	9
Number of links & shoes per side	49
Link pitch	190
Overall track length	39'6"

Cab

Optimal climate control is provided by the integrated air-conditioning and heating system. An automatically controlled fan supplies the pressurized and filtered cab air, which is distributed throughout the cab from multiple vents. The fully adjustable heated air suspension operator's seat includes a seat belt. The operator can adjust the ergonomic seat and joystick console separately according to his preferences.

> Noise emission

Noise level LpA (ISO 6396)	71 dB(A)
Noise level LwA (ISO 6395)	108 dB(A)



Technical Specifications

Component weights

Item	Unit	XE490U	Remarks
Upper structure without front	lb	48,502	
Lower structure assembly	lb	34,233	31" in shoe
Front assembly	lb	22,417	
Counterweight	lb	20,944	
Boom	ft/lb	22'8"/8,369	
Arm	ft/lb	11'/3,968	

Drive

An independent, high-torque axial piston motor through a planetary reduction gearbox drives each track. Two levers with foot pedals guarantee smooth travel with counter-rotation on demand. The track frame protects the travel motors with hydraulically released multi-disc brakes and planetary gears.

Speed & traction

Travel speed (low - high)	2/3.4 mile/h
Maximum traction	338 kN
Maximum gradeability	35° / 70 %

Buckets

Bucket type	Capacity(yd ³)	Width(in.)		Weight(lb)	Boom 22'8"
		With side cutters	W/o side cutters		Arm 11'
HD	3.15	74	74	5,113	B
HD	3.2	71	71	5,582	B
SD	3.3	72	72	5,406	C

Swing mechanism

The swing mechanism uses an axial piston motor to drive a 2-stage planetary reduction gear in oil for maximum torque.

- Swing bearing: single-row, shear-type ball bearing with induction hardened internal gear
- Internal gear and pinion immersed in lubricant

>Swing speed & torque

Maximum swing speed	9.2 rpm
Maximum swing torque	1 230 kN·m

>Fluid capacities

Fuel tank	192 gal
Cooling system (radiator)	5 gal
Urea (DEF) tank	22 gal
Hydraulic oil tank	114 gal
Engine oil	1 gal
Swing drive	4 gal
Travel device	2x3 gal

Hydraulic cylinders

High-strength steel piston rods and cylinder bodies. Shock-absorbing (cushion) mechanism fitted in all cylinders for shock-free operation and extended piston life.

Cylinders	Quantity	Bore x rod diameter x stroke (in.)
Boom	2	6.5"x4.5"x61.8"
Arm	1	7.5"x5.1"x69.2"
Bucket	1	6.7"x4.7"x54.7"

GP: General purpose; HD: Heavy duty; SD: Severe duty;

A: Suitable for materials with a density less than or equal to 2100 kg/m³(131 lb/ft³)

B: Suitable for materials with a density less than or equal to 1800 kg/m³(112 lb/ft³)













C: Suitable for materials with a density less than or equal to 1500 kg/m³(93 lb/ft³)



Based on ISO 10567 and SAE J296, arm length without quick-coupler. For reference only.

Lifting Capacities

XE490U

Standard track width: 10'99" · W/o bucket (lb)

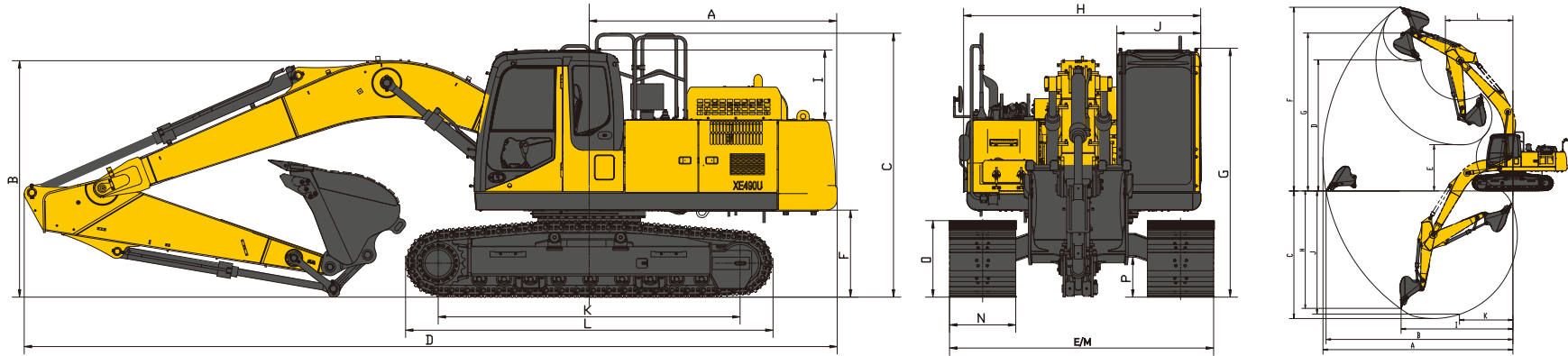
Lph(ft)	Lpr (ft)	A		10		15		20		25.0		29.5		Max. reach	
		B													
Boom 22'8" Arm 9'7" Shoe 31" Counterweight 20,944 lb	29.5													*18,752	*18,752
	25							*22,504	*22,504					*17,751	*17,751
	20							*23,600	23,044	*22,392	17,334			*17,493	16,457
	15				*38,836	*38,836	*30,044	*30,044	*25,646	22,202	*23,183	16,968		*17,751	14,923
	10				*48,162	42,381	*34,513	28,752	*28,031	21,237	*24,365	16,464		*18,490	14,096
	5				*41,488	39,905	*38,034	27,264	*30,108	20,368	*25,447	15,972		*18,490	13,809
	Ground				*46,698	39,043	*39,744	26,362	*31,329	19,749	*25,985	15,613		*21,891	14,034
	-5		*33,984	*33,984	*52,123	38,935	*39,500	26,071	*31,279	19,446	*25,408	15,474		*24,286	14,883
	-10		*52,657	*52,657	*47,983	39,279	*37,180	26,071	*29,407	19,491				*24,696	16,695
	-15		*52,802	*52,802	*40,891	40,088	*31,973	26,600						*24,581	20,496

 : Over front
 : Over side or 360°

1. The lifting capacity ratings are based on ISO10567.
2. * The maximum lifting capacity is limited by hydraulic rather than tipping load.
3. With the machine standing on level and firm ground, the lifting capacity does not exceed 87% of the hydraulic capacity or 75% of the tipping load.
4. The operator should be familiar with the machinery operation and maintenance manuals. Local regulations concerning the operation safety of machinery must be followed at all times.
5. The lift diagrams only cover machines that are originally built by the XCMG; without lifting chains and any other lifting equipment.
6. When the excavator is used to lift or handle materials, it must comply with local regulations.



Technical Specifications



Dimensions

XE490U		ft
Boom length-ft		22'8"
Arm length-ft		11'
Bucket capacity-yd ³		2.41
A	Tail swing radius	12'6"
B	Shipping height (boom)	14'5"
C	Shipping height (guardrail)	14'5"
D	Shipping length	39'6"
E	Shipping width	11'9"
F	Counterweight clearance	4'6"
G	Height over cab	10'10"
H	Upper structure width	10'1"
I	Cab height above house	1'7"
J	Cab width	3'7"
K	Tumbler distance	14'6"
L	Track length	17'11"
M	Track Gauge	11'9"
N	Shoe width std.	31"
O	Track height	4'
P	Ground clearance	1'8"

Working range

XE490U		ft
Boom length-ft		22'8"
Arm length-ft		11'
Bucket capacity-yd ³		2.41
A	Max. digging reach	39'2"
B	Max. digging reach (ground)	37'9"
C	Max. digging depth	26'2"
D	Max. loading height	24'4"
F	Max. digging height	35'1"
J	Max. digging depth (8' level)	25'8"
L	Min. swing radius	16'6"

Digging forces (ISO)

XE490U		ft
Boom length-ft		22'8"
Arm length-ft		11'
Bucket capacity-yd ³		2.41
Bucket (Normal/Press. Up) - lbf		276 kN
Arm (Normal/Press. Up) - lbf		215 kN