

DEVELON

Mini Excavator

DX42-7



Engine

Make	DEVELON
Model	D18
Number of cylinders	3
Rated power, gross (hp per SAE J1995)	48.8 hp (36.4 kW) @ 2200 rpm
Rated power, net (hp per SAE J1349)	47.1 hp (35.1 kW) @ 2200 rpm
Max. torque, net (SAE J1995)	133.0 ft.-lb. (180.0 Nm) @ 1600 rpm
Displacement	146.0 in. ³ (2.4 L)
Bore and stroke	3.5" x 3.7" (90 mm x 94 mm)
Starter	12 V, 3.6 hp (2.7 kW)
Battery	12 V, 100 AH
Alternator	12 V, 90 A
Air cleaner	Double elements

Hydraulics

Main pumps	1 x 26.1 gpm (99.0 L/min.)
Pilot pump (gear design)	–
Relief pressure	3553.4 psi (249.8 kg/cm ²)

Maximum System Pressure

Boom/arm/bucket (normal mode)	4206.1 psi (295.7 kg/cm ²)
Swing (crossover relief)	3129.0 psi (220.0 kg/cm ²)

Undercarriage

Upper rollers (each track)	1
Lower rollers (each track)	4
Number of shoes (links per side)	Single assembly (rubber)

Swing Mechanism

Swing speed	0 – 9.8 rpm
Swing torque	6280.4 lbf.-ft. (868.3 kg·m)

Drive System

Travel speed (low – high)	2.0 – 3.1 mph (3.3 – 5.0 km/h)
Traction force, max. (drawbar pull)	10528.0 lbf. (4775.4 kgf)
Max. grade	70% (35°)

Environment

Sound level (ISO 6395)	97 dB(A)
Cabin sound level (ISO 6396)	73 dB(A)

Refill Capacities

Fuel tank	17.7 gal. (67.0 L)
Cooling system (radiator capacity)	2.2 gal. (8.3 L)
Engine oil	1.7 gal. (6.3 L)
Final drive (each side)	0.2 gal. (0.9 L)
Hydraulic system	27.7 gal. (105.0 L)
Hydraulic tank	12.7 gal. (48.0 L)

All capacities are approximate values. Always refer to the machine's OM for exact refill levels. Check the dipstick, level eye, level plug, etc., to achieve the correct level.

Hydraulic Cylinders

Boom (1) bore x rod diameter x stroke	3.5" x 2.2" x 25.5" (90 mm x 55 mm x 648 mm)
Arm (1) ^{1,2} bore x rod diameter x stroke	3.3" x 1.9" x 21.6" (85 mm x 50 mm x 550 mm)
Bucket (1) ¹ bore x rod diameter x stroke	2.7" x 1.6" x 20.3" (70 mm x 40 mm x 515 mm)
Swing blade – if equipped (1) bore x rod diameter x stroke	2.1" x 1.2" x 13" (55 mm x 30 mm x 331 mm)
Boom swing (1) bore x rod diameter x stroke	3.7" x 2.1" x 17.7" (95 mm x 55 mm x 449 mm)
Dozer blade – cabin (1) bore x rod diameter x stroke	3.7" x 1.9" x 7.5" (95 mm x 50 mm x 191 mm)
Dozer blade – canopy (1) bore x rod diameter x stroke	3.9" x 2.1" x 7.3" (100 mm x 55 mm x 185 mm)

¹ Cushion on rod end

² Cushion on base end

The piston rods and cylinder bodies are made of high-strength steel. A shock-absorbing mechanism is fitted in all cylinders to ensure shock-free operation and extended piston life.

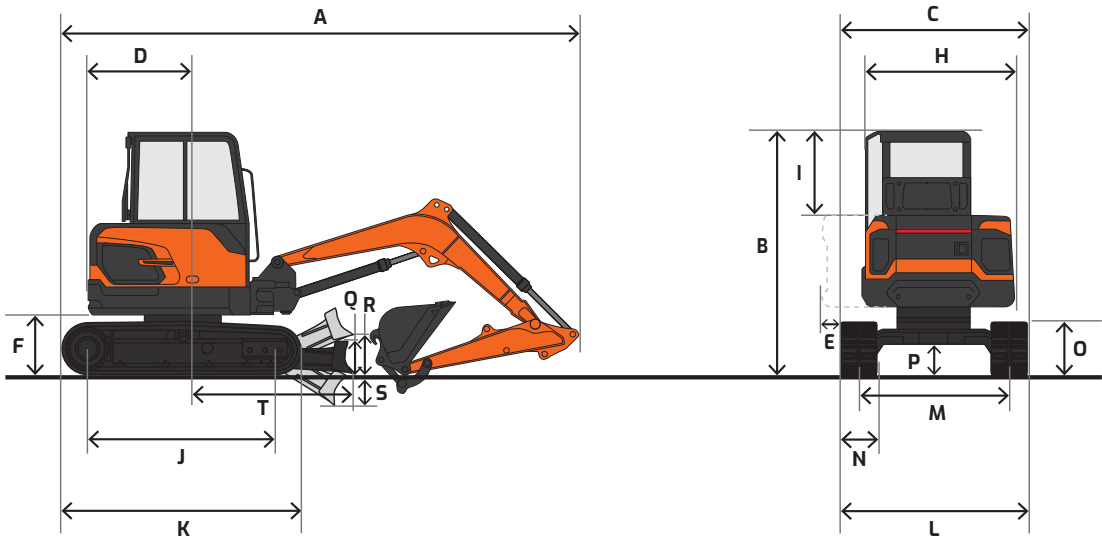
NOTE: Where applicable, dimensions are in accordance with Society of Automotive Engineers (SAE) and ISO standards. Specifications and design are subject to change without notice. All dimensions are given for DEVELON mini excavators equipped with standard rubber tracks. Pictures of DEVELON mini excavators may show other than standard equipment. All dimensions are shown in inches. Respective metric dimensions are enclosed by parentheses. Rounding may impact specifications. DEVELON equipment is manufactured with a Quality Management System that is in compliance with ISO 9001:2008.

Dimensions

		Dozer Blade & HVAC Cabin (US20/US40)	Angle Blade & HVAC Cabin (US21/US41)	Dozer Blade & Canopy (US30/US50)	Angle Blade & Canopy (US31/US51)
Boom type		One-piece boom			
Arm type		Standard arm			
Bucket type (SAE)		General-purpose			
Track type		Fixed (rubber)			
Shipping length	A	16' 3.6" (4967 mm)			
Overall height	B	8' 2.7" (2506 mm)		8' 2.5" (2503 mm)	
Shipping width	C	5' 8.9" (1750 mm)			
Tail swing radius	D	4' 3.2" (1300 mm)			
Tail swing overhang (rear)*		–			
Tail swing overhang (side)	E	1' 4.9" (430 mm)			
Counterweight clearance	F	1' 10.0" (559 mm)			
Upper structure width	H	5' 8.9" (1750 mm)			
Cabin height above house	I	3' 2.9" (988 mm)			
Tumbler distance	J	5' 7.7" (1720 mm)			
Overall track length	K	7' 2.0" (2185 mm)			
Undercarriage width	L	5' 8.5" (1740 mm)			
Track gauge	M	4' 6.7" (1390 mm)			
Track width	N	1' 1.8" (350 mm)			
Track height	O	1' 6.9" (479 mm)			
Car body clearance	P	1' 0.0" (305 mm)			
Blade height	Q	1' 2.6" (371 mm)	1' 4.1" (408 mm)	1' 2.6" (371 mm)	1' 4.1" (408 mm)
Blade clearance	R	1' 3.6" (397 mm)	1' 2.0" (355 mm)	1' 3.6" (397 mm)	1' 2.0" (355 mm)
Max. blade cut, below ground	S	1' 7.0" (482 mm)	1' 8.7" (525 mm)	1' 7.0" (482 mm)	1' 8.7" (525 mm)
Distance to dozer end	T	5' 7.1" (1705 mm)	5' 9.5" (1765 mm)	5' 7.1" (1705 mm)	5' 9.5" (1765 mm)

*Not shown on diagram
Less than zero indicated as "-"

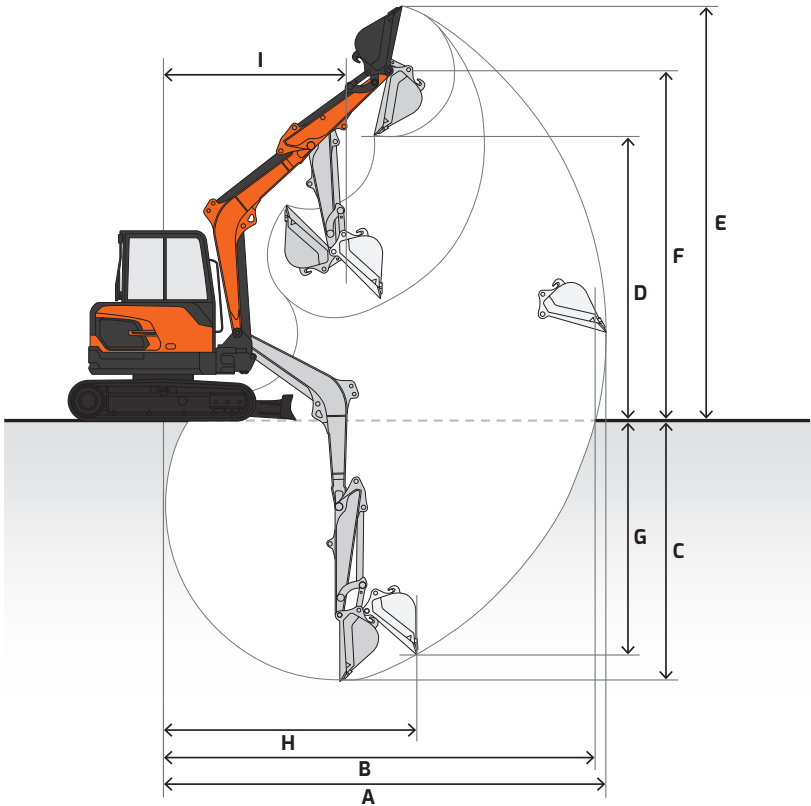
US40/US41/US50/US51 packages include rotating piping as standard.



Working Range

		Dozer Blade & HVAC Cabin (U520/U540)	Angle Blade & HVAC Cabin (U521/U541)	Dozer Blade & Canopy (U530/U550)	Angle Blade & Canopy (U531/U551)
Boom length		8' 6.4" (2600 mm)			
Arm length		5' 3.0" (1600 mm)			
Bucket capacity (SAE)		0.18 yd. ³ (0.14 m ³)			
Max. digging reach	A	18' 3.3" (5570 mm)			
Max. digging reach (ground)	B	17' 10.2" (5440 mm)			
Max. digging depth	C	11' 5.4" (3490 mm)			
Max. dumping height	D	12' 8.9" (3880 mm)			
Max. digging height	E	17' 10.2" (5440 mm)			
Max. bucket pin height	F	15' 3.7" (4665 mm)			
Max. vertical wall depth	G	9' 7.4" (2930 mm)			
Max. vertical digging radius	H	10' 10.5" (3315 mm)			
Min. swing radius	I	7' 3.0" (2210 mm)			
Boom swing – left/right		60°/53°			
Digging force, bucket		6482.0 lbf. (2940.0 kgf)			
Digging force, arm		4211.0 lbf. (1910.0 kgf)			
Counterweight		602 lb. (273 kg)			
Operating weight		9876 lb. (4480 kg)	10119 lb. (4590 kg)	9502 lb. (4310 kg)	9744 lb. (4420 kg)
Ground pressure		4.8 psi (0.34 kg/cm ²)	5.0 psi (0.35 kg/cm ²)	4.7 psi (0.33 kg/cm ²)	4.8 psi (0.34 kg/cm ²)

U540/U541/U550/U551 packages include rotating piping as standard.



Bucket

	Dozer Blade & HVAC Cabin (US20/US40)	Angle Blade & HVAC Cabin (US21/US41)	Dozer Blade & Canopy (US30/US50)	Angle Blade & Canopy (US31/US51)
Boom	8' 6.4" (2600 mm)			
Arm	5' 3.0" (1600 mm)			
Shoe size	14.0" (350 mm)			
Track type	Fixed (rubber)			
Counterweight	602 lb. (273 kg)			

Bucket Type	Model	Capacity yd³ (m³)	Width in. (mm)	Weight lb. (kg)	Height in. (mm)	Length in. (mm)	Number of Teeth	Connection/ Type
Quick-Hitch Ditching (QH04GB)	DC03GB-30QH	0.18 (0.14)	31 (787.4)	215 (97.5)	17.625 (447.7)	23.625 (600.1)	–	Quick-hitch
	DC03GB-36QH	0.22 (0.17)	37 (939.8)	250 (113.398)				
	DC03GB-42QH	0.26 (0.19)	43 (1092.2)	290 (131.7)				
Quick-Hitch Heavy-Duty (QH04QB)	HD03GB-12QH	0.06 (0.46)	12 (304.8)	125 (56.7)	18.375 (466.7)	30.875 (784.2)	3	Quick-hitch
	HD03GB-16QH	0.09 (0.07)	16 (406.4)	155 (70.4)			4	
	HD03GB-18QH	0.10 (0.07)	18 (457.2)	165 (74.9.0)			4	
	HD03GB-24QH	0.14 (0.11)	24 (609.6)	200 (90.8)			5	
Pin-On Ditching	DC04GB-30	0.18 (0.14)	31 (787.4)	250 (113.5)	23.0 (584.2)	26.75 (679.45)	–	Pin-on
	DC04GB-36	0.23 (0.17)	37 (939.8)	285 (129.4)				
	DC04GB-42	0.26 (0.19)	43 (1092.2)	315 (143.0)				
	DC04GB-48	0.31 (0.24)	49 (1244.6)	350 (158.9)				
Pin-On Heavy-Duty	HD04GB-12	0.06 (0.46)	13 (330.2)	145 (65.8)	22.625 (574.7)	32.0 (812.8)	3	Pin-on
	HD04GB-16	0.09 (0.07)	17 (431.8)	165 (74.9)			4	
	HD04GB-18	0.10 (0.07)	19 (482.6)	175 (79.4)			4	
	HD04GB-20	0.11 (0.08)	21 (533.4)	185 (84.0)			4	
	HD04GB-24	0.14 (0.11)	25 (635.0)	205 (93.1)			5	

Please consult with your DEVELON dealer to properly match buckets and attachments for the application.

US40/US41/US50/US51 packages include rotating piping as standard.

Lifting Capacity

 Rating over front  Rating over side or 360°

DX42-7 US20/US30/US40/US50

Boom: 8' 6.4" (2600 mm) | Arm: 5' 3.0" (1600 mm) | Counterweight: 602 lb. (273 kg) | 14.0" (350 mm) Rubber Shoes | Dozer Up | Bucket: None | Unit: lb.

B (ft. or m) A (ft. or m)	5' (1.0 m)		10' (2.0 m)		15' (3.0 m)		20' (4.0 m)		Max. Reach		A
											
20' (4.0 m)									2070 (940)	1910 (860)	11.82' (3.6 m)
15' (3.0 m)							1750 (800)	1620 (730)	1530 (690)	1410 (640)	14.21' (4.33 m)
10' (2.0 m)					2688* (1220*)	2460 (1110)	1720 (780)	1580 (720)	1330 (600)	1230 (560)	15.39' (4.69 m)
5' (1.0 m)					2540 (1150)	2300 (1050)	1650 (750)	1520 (690)	1260 (570)	1170 (530)	15.7' (4.78 m)
Ground Level			3670* (1660*)	3670* (1660*)	2430 (1100)	2210 (1000)	1610 (730)	1470 (670)	1310 (590)	1210 (550)	15.19' (4.63 m)
-5' (-1.0 m)	4030* (1830*)	4030* (1830*)	4690 (2130)	4100 (1860)	2410 (1090)	2180 (990)	1600 (720)	1470 (670)	1500 (680)	1380 (630)	13.75' (4.19 m)
-10' (-2.0 m)	7100* (3220*)	7100* (3220*)	4800 (2180)	4190 (1900)	2460 (1120)	2230 (1010)			2110 (960)	1930 (870)	10.97' (3.34 m)

DX42-7 US20/US30/US40/US50

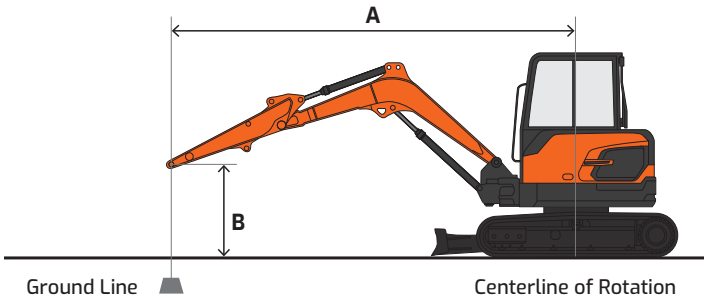
Boom: 8' 6.4" (2600 mm) | Arm: 5' 3.0" (1600 mm) | Counterweight: 602 lb. (273 kg) | 14.0" (350 mm) Rubber Shoes | Dozer Down | Bucket: None | Unit: lb.

B (ft. or m) A (ft. or m)	5' (1.0 m)		10' (2.0 m)		15' (3.0 m)		20' (4.0 m)		Max. Reach		A
											
20' (4.0 m)									2210* (1000*)	2210* (1000*)	11.82' (3.6 m)
15' (3.0 m)							2090* (950*)	1900 (860)	2030* (920*)	2210* (750)	14.21' (4.33 m)
10' (2.0 m)					2680* (1220*)	2680* (1220*)	2280* (1040*)	1860 (850)	2000* (910*)	1660 (660)	15.39' (4.69 m)
5' (1.0 m)					3570* (1620*)	2750 (1250)	2610* (1180*)	1800 (820)	2100* (950*)	1380 (630)	15.7' (4.78 m)
Ground Level			3670* (1660*)	3670* (1660*)	4080* (1850*)	2650 (1200)	2810* (1280*)	1750 (800)	2310* (1050*)	1430 (650)	15.19' (4.63 m)
-5' (-1.0 m)	4030* (1830*)	4030* (1830*)	6590* (2990*)	5100 (-2310)	3960* (1790*)	2620 (1190)	2630* (1190*)	1740 (790)	2380* (1080*)	1640 (740)	13.75' (4.19 m)
-10' (-2.0 m)	7100* (3220*)	7100* (3220*)	4830* (2190*)	4830* (2190*)	2930* (1330*)	2680 (1210)			2330* (1060*)	2300 (1040)	10.97' (3.34 m)

A Distance from center of rotation
B Height

NOTE: Do not use dozer blade as a outrigger. Lifting capacities are in compliance with SAE 1097 and ISO 10567. Machine in lifting mode with power boost turned on. Load point is the end of the arm. Rated loads shown do not exceed 75% of minimum tipping loads or 87% of hydraulic capacities. Rated loads marked with an asterisk (*) are limited by hydraulic capacities. The least stable position is over the side. The total mass of machine includes the mass of the boom, arm, counterweight, all operating fluids and 165 lb. (75 kg) operator.

US40/US41/US50/US51 packages include rotating piping as standard.



Lifting Capacity

 Rating over front  Rating over side or 360°

DX42-7 US21/US31/US41/US51

Boom: 8' 6.4" (2600 mm) | Arm: 5' 3.0" (1600 mm) | Counterweight: 602 lb. (273 kg) | 14.0" (350 mm) Rubber Shoes | Dozer Up | Bucket: None | Unit: lb.

B (ft. or m) A (ft. or m)	5' (1.0 m)		10' (2.0 m)		15' (3.0 m)		20' (4.0 m)		Max. Reach		A
											
20' (4.0 m)									2210* (1000*)	2210* (1000*)	11.82' (3.6 m)
15' (3.0 m)							2090* (950*)	1900 (860)	2030* (920*)	2210* (750)	14.21' (4.33 m)
10' (2.0 m)					2680* (1220*)	2680* (1220*)	2280* (1040*)	1860 (850)	2000* (910*)	1660 (660)	15.39' (4.69 m)
5' (1.0 m)					3570* (1620*)	2750 (1250)	2610* (1180*)	1800 (820)	2100* (950*)	1380 (630)	15.7' (4.78 m)
Ground Level			3670* (1660*)	3670* (1660*)	4080* (1850*)	2650 (1200)	2810* (1280*)	1750 (800)	2310* (1050*)	1430 (650)	15.19' (4.63 m)
-5' (-1.0 m)	4030* (1830*)	4030* (1830*)	6590* (2990*)	5100 (-2310)	3960* (1790*)	2620 (1190)	2630* (1190*)	1740 (790)	2380* (1080*)	1640 (740)	13.75' (4.19 m)
-10' (-2.0 m)	7100* (3220*)	7100* (3220*)	4830* (2190*)	4830* (2190*)	2930* (1330*)	2680 (1210)			2330* (1060*)	2300 (1040)	10.97' (3.34 m)

DX42-7 US21/US31/US41/US51

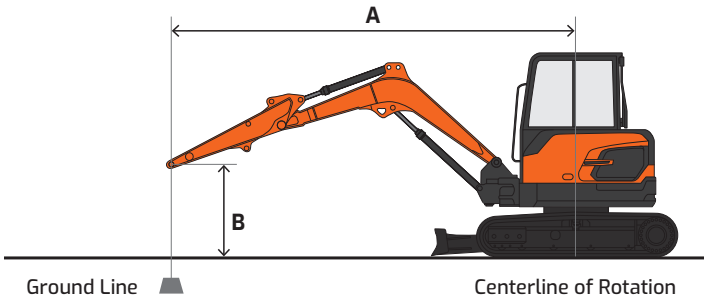
Boom: 8' 6.4" (2600 mm) | Arm: 5' 3.0" (1600 mm) | Counterweight: 602 lb. (273 kg) | 14.0" (350 mm) Rubber Shoes | Dozer Down | Bucket: None | Unit: lb.

B (ft. or m) A (ft. or m)	5' (1.0 m)		10' (2.0 m)		15' (3.0 m)		20' (4.0 m)		Max. Reach		A
											
20' (4.0 m)									2210* (1000*)	2210* (1000*)	11.82' (3.6 m)
15' (3.0 m)							2090* (950*)	1950 (890)	2030* (920*)	1710 (780)	14.21' (4.33 m)
10' (2.0 m)					2680* (1220*)	2680* (1220*)	2280* (1040*)	1910 (870)	2000* (910*)	1490 (680)	15.39' (4.69 m)
5' (1.0 m)					3570* (1620*)	2830 (1280)	2610* (1180*)	1850 (840)	2100* (950*)	1420 (650)	15.7' (4.78 m)
Ground Level			3670* (1660*)	3670* (1660*)	4080* (1850*)	2730 (1240)	2810* (1280*)	1800 (820)	2310* (1050*)	1470 (670)	15.19' (4.63 m)
-5' (-1.0 m)	4030* (1830*)	4030* (1830*)	6590* (2990*)	5250 (2380)	3960* (1790*)	2700 (1220)	2630* (1190*)	1800 (810)	2380* (1080*)	1690 (770)	13.75' (4.19 m)
-10' (-2.0 m)	7100* (3220*)	7100* (3220*)	4830* (2190*)	4830* (2190*)	2930* (1330*)	2750 (1250)			2330* (1060*)	2330* (1060*)	10.97' (3.34 m)

A Distance from center of rotation
B Height

NOTE: Do not use dozer blade as a outrigger. Lifting capacities are in compliance with SAE 1097 and ISO 10567. Machine in lifting mode with power boost turned on. Load point is the end of the arm. Rated loads shown do not exceed 75% of minimum tipping loads or 87% of hydraulic capacities. Rated loads marked with an asterisk (*) are limited by hydraulic capacities. The least stable position is over the side. The total mass of machine includes the mass of the boom, arm, counterweight, all operating fluids and 165 lb. (75 kg) operator.

US40/US41/US50/US51 packages include rotating piping as standard.



Standard & Optional Equipment

Standard Base Package, US20

■ Standard ● Optional

Engine

Emissions (EPA), T4f	■
High-pressure common-rail	■
Diesel oxidation catalyst (DOC)	■
Direct fuel injected	■
Fuel filter with water separator	■
Coolant recovery tank/coolant expansion tank	■
Dual element dry-type air filter	■
Electronic engine control (ECU)	■
Auto preheat cold start assist	■
Auto idle	■
Overheat engine protection	■

Hydraulic

Mechatronics Design	■
Variable axial piston main pump	■
Load-sensing pump control	■
Pilot-operated control valves	■
Spring-applied hydraulic release brake	■
Axial piston travel motor (high/low, auto)	■
Auxiliary hydraulics, one- & two-way piping without pedal	■
Auxiliary hydraulics, tilt/rotate, piping	●
Adjustable auxiliary flow, 10 presets	■
Adjustable auxiliary 1 pressure valve (after-market)	●

Electrical

Alternator – 12 V, 90 A	■
12 V battery, 900 CCA @ 0° F (-18° C)	■
Lights: cabin (1), boom (1)	■
Additional lighting	●
Rotating beacon	●
Hour meter	■
Laptop service port	■
Self-diagnostics system	■

Cabin

Steel, all-weather & sound suppressed	■
ROPS/TOPS (ISO 12117-2:2008)	■
Viscous mount with spring reinforcement	■
Front window with wiper/washer	■
Tinted safety glass	■
Front window with sun screen	■
Adjustable sliding side door window	■
Defrost, front window	■
Lockable doors	■
Seat	■
- 2" (51 mm) seat belt	
- Adjustable height & recline	
Leatherette seat	
- Heating & cooling	
- Mechanical/air-suspension	●
- 2" (51 mm) seat belt	
- Adjustable height & recline	
- Adjustable fore/aft	
- Adjustable armrests	
Control stands	■
- Height adjustable	
- Mounted to seat base	■
Mirrors	
Adjustable armrests	■
Air conditioner with heater	■
Instrumentation panel, digital	■
Speakers (2)	■
Power socket, 12 V	■
Interior light	■
Storage for operator's manuals	■
Bluetooth® stereo	■
Antenna, roof-mounted	■
Emergency breakout tool	■
Cup holder	■

Controls

Joystick controls	■
- Two hydraulic joysticks control boom, arm, bucket & slew functions	
- Thumb buttons control auxiliary hydraulics & boom swing	
Blade control lever	
Pattern control change valve (SAE, ISO)	■
Engine speed control dial	■
Travel pedals with hand levers	■
Switches, console-mounted	■
- Starter switch (key)	
- Heater/AC control panel	
- Boom swing switch	
- Rotating beacon (if equipped)	
- 12 V power socket & USB charger	
- Keypad buttons	
- Overload warning	
- Travel/swing alarm	
- Light	
- Work lights	
- Wiper & washer	
- Auto idle	
Emergency stop switch	■

Display Monitor & Warnings

Buzzer	■
- Engine oil pressure	
- Coolant temperature	
Touch screen display monitor	■
- Digital clock	
- Menu select button	
- Back button	
- Fuel gauge	
- Engine coolant temperature	
- Hydraulic oil temperature	
- Mode	
- Tachometer	
- Operating mode/flow setting selector	
Indicator lights	■
- Air filter restriction indicator	
- Engine check warning light	
- Hydraulic oil warning	
- Fuel warning	
- Auto idle indicator	
- Auxiliary flow mode indicator	
- Engine oil pressure light with audible alarm	
- Preheat (cold start assist) indicator	
- Two-speed travel indicator light	
Travel alarm	■

Undercarriage

Track rollers, upper	1
Track rollers, lower	4
Rubber tracks – 350 mm	■

Other

Centralized lubrication	■
- Swing pinion	
- Swing bearing	
Dozer blade	■
Manuals	■
- Operation	
- AEM Safety Manual	
Vandalism protection	■
- Lockable panels	
- Lockable fluid fill points	
MY DEVELON (telematics)	■

Certain specification(s) are based on engineering calculations and are not actual measurements. Specification(s) are provided for comparison purposes only and are subject to change without notice. Specification(s) for your individual DEVELON equipment will vary based on normal variations in design, manufacturing, operating conditions, and other factors. Pictures of DEVELON units may show other than standard equipment.

Powered by Innovation

DEVELON

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DX42-7 Mini Excavator Spec Sheet
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