

UTOVARIVAČ TOČKAŠ WHEEL LOADER

ULT-220DE

Snaga na zamajcu
Power at Flywheel 162 kW / 220 KS (HP)

Radna težina
Operating Weight 18700 kg

Kapacitet kašike
Buckets Capacity 2,2 - 4,8 m³

Brzina
Speed 0 - 50 km/h



IMK  14.oktobar

MOTOR - ENGINE

Proizvođač i model: CUMMINS QSB 6.7 TIER-3
Vrsta: Dizel, 4-taktni vodom hlađeni, sa direktnim ubrizgavanjem, sa turbokompresorom
Broj cilindara 6
Prečnik cilindra/hod klipa 114/135 mm
Ukupna radna zapremina 8300 ccm
Stepen kompresije..... 17,5 : 1
Maksimalna izlazna neto snaga na zamajcu (ISO 9249) 162 kW (220 KS) pri 2100 o/min
Maksimalni moment: 1085 Nm pri 1.500 o/min
Težina motora..... 723 kg

ELEKTRIČNA INSTALACIJA

Napon 24 V
Akumulator (redna veza) 2 x 12 V
- kapacitet 2 x 135 Ah

TRANSMISIJA

Hidrodinamička Power shift transmisija, pretvarač obrtnog momenta i planetarni menjač sa elektrohidrauličkim komandovanjem pod opterećenjem.

Maksimalne brzine kretanja (standardne gume)

Brzine	Napred	Nazad
1	0-5 km/h	0-5 km/h
2	0-12 km/h	0-12 km/h
3	0-28 km/h	0-28 km/h
4	0-50 km/h	0-50 km/h

POGONSKI MOSTOVI

Pogon na sva četiri točka. Redukcija preko planetarnih zupčanika. Ugao klaćenja zadnjeg mosta $\pm 13^\circ$.

KOČNICE

Glavna kočnica: diskosna na sva četiri točka

Komandovanje hidraulično i to:

Pedalom za normalno kočenje u drumskoj vožnji,

Pedalom i uključivanjem prekidača za automatsko isključivanje menjača, pri čemu celokupna snaga motora stoji na raspolaganju

Ručna (parking) kočnica hidraulična, opružno akumulaciona sa dejstvom na vratilo prednjeg pogona

ENGINE

CUMMINS, model QSB 6.7 - TIER 3, 4-stroke water cooled diesel engine directly injected, and turbo compressor.

Number of cylinder 6
Diameter piston /stroke 114/135 mm
Total operating capacity 8300 ccm
Compression ratio 17,5 : 1
Max output power at net power flywheel 162 kW (220 HP) at 2100 rpm (ISO 9249).
Max torque 1085 Nm at 1500 rpm
Engine weight 723 kg

ELETRIC INSTALLATION

Voltage..... 24 V
Batteries (series connection) 2 x 12 V
- Capacity..... 2 x 135 Ah

TRANSMISSION

Hydrodynamic transmission POWER SHIFT, torque converter and planetary gearbox with electric-hydraulic control under load.

Maximal movement speed (standard tyres)

Speed	Forward	Backward
1	0-5 km/h	0-5 km/h
2	0-12 km/h	0-12 km/h
3	0-28 km/h	0-28 km/h
4	0-50 km/h	0-50 km/h

DRIVE AXLES

Four wheel drive. Reducing through planetary gears. Rear axle swinging angle $\pm 13^\circ$.

BRAKES

Main brake: disc on each four wheel.

Hydraulic control as follows;

By pedal for usual braking on the road.

By pedal and with automatic gearbox switching, for which total engine power is on disposal.

Handy (parking) hydraulic brake, with spring interaction on front drive shaft.

PNEUMATICI

Tip Tubeless
standarden gume 23,5 25/16PR (L₂)

HIDRAULIČNI SISTEM

Rezervoar ulja sa finim prečistačem u povratnom vodu i grubim prečistačem u usisnom vodu sa kontrolom podpritiska i nadpritiska

Pumpa radnog uređaja zupčasta
Protok pumpe na 2100 o/min 2 x 175 l/min
Regulisani pritisak u instalaciji radnog uređaja 175 bar
Razvodnik (servokomandovan) dvosekcijski
Servo-razvodnik..... sa dve ručice

HIDRAULIČNI CILINDRI:

Za dizanje strele 2 kom
Prečnik/hod klipa 160/920 mm
Za okretanje kašike 2 kom
Prečnik/hod klipa 125/710 mm

KAPACITET DIZANJA:

Kašika na tlu 19700 kg
Kašika u najvišem položaju 8500 kg
Sila kidanja 21000 daN

VREME TRAJANJA OPERACIJE:

Dizanje strele 7 s
Spuštanje strele 5,6 s
Zatvaranje kašike 1,4 s
Istresanje kašike 1,5 s

UPRAVLJANJE

Hidrostatičko "LOAD-SENSING" sa zglobnom šasijom

Ugao zaokretanja šasije ± 40°
Minimalni radijus zaokreta (preko gume)...5758 mm
Pumpa upravljača zupčasta
Protok pumpe na 2100 o/min 88 l/min
Maksimalni radni pritisak 150 bar
Hidraulični cilindri za upravljanje 2 kom
Prečnik/hod klipa 90/505 mm
Rezervna pumpa upravljanja
Protok pri brzini iznad 20 km/h cca. 50 l/min

KABINA

Zaštitna konstrukcija od prevrtanja ROPS (ISO 3471). Zaštitna konstrukcija od padajućih predmeta FOPS (ISO 3449).

Standardno izvođenje uz ograničenje spoljne temperature od 265 K (-8°C). Kabina je izolovana od toplote, buke i vibracija.

TEŽINA

Napred 8600 kg
Nazad..... 10100 kg
Ukupno (bez rukovaoca i tereta u kašici) ...18700 kg

PNEUMATICS

Type..... Tubeless
Standard tyres..... 23,5 25/16PR (L₂)

HYDRAULIC SYSTEM

Oil tank with fine filter subtraction in rude filter in intake line on under pressure and above pressure control.

Working attachment pump..... gear pump
Pump flow 2100 rpm 2x175 l/min
Regulated pressure in working attachment 175 bar
Distributor (servo controlled) two section
Servo-distributor with two arms

HYDRAULIC CYLINDERS:

For boom lift up..... 2 pcs
Diameter/piston stroke 160/920 mm
For turn over bucket 2 pcs
Diameter/piston stroke..... 125/710 mm

LIFT UP CAPACITY (STANDARD BUCKET):

Bucket on ground 19700 kg
Bucket on lowest position 8500 kg
Breakout force 21000 daN

OPERATION TIME:

Boom lift up 7 s
Boom put down 5,6 s
Bucket closing 1,4 s
Bucket dumping 1,5 s

STEERING

Hydrostatic "LOAD-SENSING" with articulated chassis

Chassis turning angle ± 40°
Minimal turning radius (over tyres) 5758 mm
Steering pump geared
Pump delivery at 2100 rpm 88 l/min
Maximal operation pressure 150 bar
Hydraulic control cylinders..... 2 pcs
Diameter/piston stroke 90/505mm
Spare steering pump
Flow at speed over 20 km/h cca. 50 l/min

CAB

Turn over protection construction ROPS (ISO 3471). Fall down protection construction FOPS (ISO 3449).

Standard performance with limitation on outer temperature of 265 K (-8°C). Cab is isolated of thermal influence, noise and vibration.

WEIGHT

Forward 8600 kg
Backward..... 10100 kg
Total (without operator and load in bucket) ..18700 kg

ULJE - GORIVO

Ulje za podmazivanje (motora)	28 l
Rashladna tečnost	60 l
Ulje u menjaču i reduktoru	47 l
Ulje u prednjem i zadnjem pogonskom mostu:	
Diferencijali	21+19 l
Planetarni reduktor	2x4,5 + 2x4 l
Ulje u hidrauličnoj instalaciji	290 l
Ulje u sistemu za kočenje	2,5 l
Rezervoar za gorivo	310 l

STANDARDNA OPREMA

Prednje svetlo: dugo, kratko, poziciono 2 kom

RADNO SVETLO:

Napred na krovu kabine	2 kom
Nazad na karoseriji	2 kom

SIGNALIZACIJA: Izvedena prema propisima o saobraćaju za vožnju javnim saobraćajnicama, a čine je: pokazivači pravca, stop svetla, poziciona svetla, upozoravajuće svetlo i rotaciono svetlo,

KONTROLNE LAMPE: pritiska ulja motora, alternatora, pokazivača pravca, upozoravajućeg svetla, dugog svetla, oborenog svetla, ručne kočnice, pokazivača protoka rezervne pumpe upravljača, zaprljanosti prečistača vazduha motora, punjenja hidrauličnih akumulatora i zaprljanosti filtera ulja hidraulike.

INSTRUMENTI:

Road relay 4 za praćenje rada motora.
Manometar za kontrolu pritiska ulja u menjaču.
Termometar za kontrolu temperature ulja pretvarača obrtnog momenta.
Termometar za kontrolu temperature hidrauličnog ulja.

KABINA

Kabina je zaptivena i opremljena integralnim sistemom za grejanje i provetravanje filtriranim vazduhom pod nadpritiskom.

Usmeravanjem toplog vazduha omogućava se odmrzavanje prednjeg vetrobranskog stakla.

Sa brisačima i sistemom za pranje vetrobranskog stakla, rukovanje utovarivačem znatno je olakšano u nepovoljnim vremenskim uslovima.

Sedište rukovaoca je snabdeveno sigurnosnim pojasem.

Položaj instrument table sa svetlosnim signalima i položaj komandi vidno smanjuju napor rukovaoca u radu.

ALAT I PRIBOR

Komplet alata i pribora.

KAŠIKA

Kašika sa "V" nožem 3,0 m³ (SAE)

OIL- FUEL

Oil for lubrication (engine)	28 l
Coolant in cooling system	60 l
Oil in gearbox and reduction gear	47 l
Oil in front and rear drive axle:	
Differentials	21+19 l
Planetary gearbox	2x4,5 + 2x4 l
Oil in hydraulics installation	290 l
Oil in brake system	2,5 l
Fuel tank	310 l

STANDARD EQUIPMENT

Front light: long, normal, positional..... 2 pcs

OPERATION LIGHT:

Forward on the cab top	2 pcs
Backward on body	2 pcs

SIGNALLING: Is performed acc. to the rules in traffic for driving on public roads and consist of: turn signals, stop light, position light, warning light and rotation light.

CONTROL LAMPS: engine oil pressure, alternator, turn signals, warning light, long light, normal light, parking brake, steering spare pump indicator and engine air filter, and engine air filter dirty indicator, accumulator fill in and mud in hydraulic oil.

INSTRUMENTS:

Road relay 4 for engine operation monitoring.
Manometer pressure oil control in gearbox.
Thermometer for control temperature oil torque converter.
Thermometer for control temperature hydraulic oil.

CAB

Cab is sealed and equipped with integral system for heating, ventilation by filtered air under sub pressure.

Directing of warm air enables defrosting of front windshield glass.

With windshield wipers and system for washing, operation of loader is much easier under bad weather conditions.

Operator seat is equipped with safety belt.

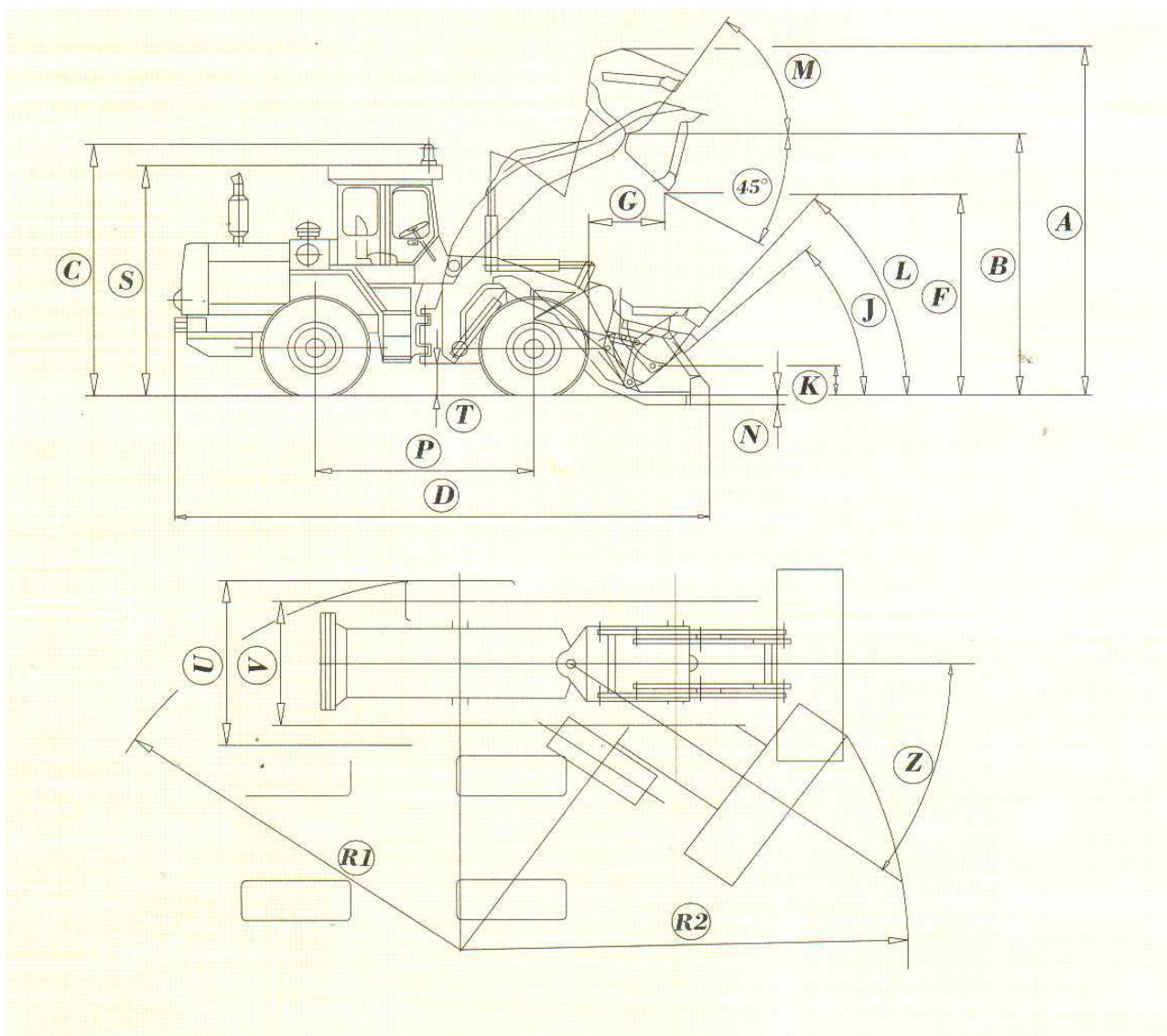
Position of instrument panel with light signals and position of controls reduce significantly the effort of operator during work.

TOOLS AND ACCESSORIES

Tools and accessories assy.

BUCKET

Bucket with "V" blade 3,0 m³ (SAE)



Maksimalna radna visina* Max operating height	mm	A	5483	Dubina kovanja Digging depth.	mm	N	205
Maksimalna visina zgloba kašike Max bucket joint height	mm	B	4087	Osovinski razmak Basic distance	mm	P	3100
Maksimalna visina mašine Max machine height	mm	C	3615	Visina krova kabine Cab roof height	mm	S	3400
Maksimalna dužina mašine* Max machine length	mm	D	7577	Klirens Groundclearance	mm	T	500
Maksimalna visina istresanja* Max dumping height	mm	F	3055	Širina preko guma Width over tyres	mm	U	2873
Dohvat na maksimalnoj visini* Reach on max height	mm	G	1001	Kolostrag Wheelbase	mm	V	2210
Ugao zatvorene kašike na tlu Closed bucket angle on ground	°	J	42	Ugao zaokretanja šasije Chassis turnover angle	°	Z	40
Visina zgloba kašike u transportnom položaju Bucket joint height in transportation	mm	K	364	Minimalni radijus zaokreta do guma Min radius of tyres turnover	mm	R ₁	5758
Ugao zatvorene kašike u transportnom položaju Closed bucket angle in transportation	°	L	44	Minimalni radijus zaokreta do vrha kašike u transportnom položaju* Min radius turnover to the bucket top in transportation	mm	R ₂	6229
Ugao zatvorene kašike na max visini Closed bucket angle on max height	°	M	65	Maksimalna spoljna širina kašike* Max outer bucket width	mm	-	2880

* Za standardnu kašiku 3,0 m³

* For standard bucket 3,0 m³

DODATNA OPREMA

Univerzalna kašika	3,0 m ³ (SAE)
Kašika za kamen	2,2 m ³ (SAE)
Kašika za lake materijale	4,0 m ³ (SAE)
Kašika za repu	4,8 m ³ (SAE)
Kašika za repu (rešetkasta).....	4,8 m ³ (SAE)
Mimoilazni hvatač balvana	

KLIMA UREĐAJ

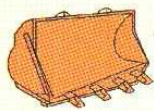
Klima uređaj na krovu kabine

OPTIONAL EQUIPMENT

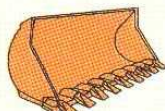
Universal bucket	3,0 m ³ (SAE)
Bucket for rocks	2,2 m ³ (SAE)
Bucket for light materials	4,0 m ³ (SAE)
Bucket for sugar beet	4,8 m ³ (SAE)
Bucket for sugar beet (grid).....	4,8 m ³ (SAE)
Butt log fork	

AIR CONDITIONER

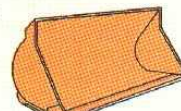
Air conditioner on cab top



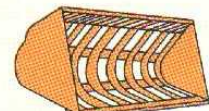
Kašika sa "V" nožem
Bucket with "V" egde



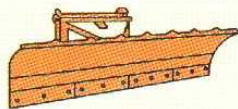
Univerzalna kašika
Universal bucket



Kašika za repu
Bucket for sugar beet



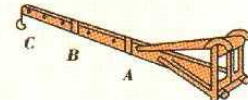
Kašika za repu (rešetkasta)
Bucket for sugar beet (grid)



Ravna daska za sneg
Snow blade



Brzo rastavljajuća ploča
Fast detachable plate



Kranska ruka
Crane hook

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Podaci i ilustracije važe za standardne varijante mašina

Illustration and data may differ from standard equipment