

ELCY-1A 1.0cbm Diesel Scooptram LHD



I. Basic overview

• Adopting Cummins 4BTA3.9-C80 engine or China made YTO 4A3Z-22 engine power system, 60-66.6KW power, low emissions.reliable.

• The technology-leading slewing bearing structure design, hydraulic steering, rear axle swing compared to traditional form, lower failure rate, easy to maintain.

- Walking system uses the integrated torque converter transmission, the smaller at same time improves reliability.
- Operating system adopts pilot control, make work easier operation and higher efficiency.
- exhaust system uses a water filtration system, with a Canadian oxidation catalyst device greatly reducing the air pollution.
- Vehicle thick steel frame, steel reinforced vehicle, the bucket shovel blade made of high strength alloy steel, wear shear, V type structure, reducing the scooping resistance and longer life.
- Adopt smooth anti puncture narrow tire. Tire protection chains optional.
- The machine can make shoveling, loading, transportation and unloading in one job, have a smaller turning radius, compact structure, convenient operation, high efficiency operation for mining ore and Tunneling mucking, and site preparation work and construction of roads material transportation and other auxiliary operations.
- Optional: Wheel protection chains; Lengthen boom for high dump

Side dump bucket;Breaking hammer.

II. Specification

Model	ELCY-1A	
Main specifications		
Bucket capacity (m ³)	1.0	
Rated load (t)	2.0	
Max.Lifting capacity(t)	4.6	
Tipping Load(t)	5.04	
Weight (t)	7.0	
Lifting time of the arms (s)	≤3.3	
The sum of three items(s)	≤8.5	



Reverse gearI 0-5.8 II 0-9.5Max. climbing gradient20°Min.ground clearance(mm)210DimensionsOverall dimension (mm)\$717*1300*2000Wheel base (mm)2242Wheel tread(mm)1070Max. dumping height(mm)1250/1700Dumping reach (mm)860Min.turning radius(mm)outside4390DieseIengineEngine modelCummins 4BTA3.9/YTO LR4A3Z-22Engine typeIn-line,water-cooling,4-stroke, 4cylinder,direct-injectionRated power(kw)60/66Rated speed (r/min)2200Maximum torque /speed(N.m/rpm)370/1300Total exhaust of cylinder(L)3.9Type of startingElectric startTorque converterSingle stage, three elementsGearbox		· · · · · · · · · · · · · · · · · · ·	
Max. climbing gradient20°Min.ground clearance(mm)210DimensionsOverall dimension (mm)5717*1300*2000Wheel base (mm)2242Wheel tread(mm)1070Max. dumping height(mm)1250/1700Dumping reach (mm)860Min.turning radius(mm)outside4390Diese engineEngine modelCummins 4BTA3.9/YTO LR4A3Z-22Engine typeIn-line,water-cooling,4-stroke, 4cylinder,direct-injectionRated power(kw)60/66Rated speed (r/min)2200Maximum torque /speed(N.m/rpm)370/1300Total exhaust of cylinder(L)3.9Type of startingElectric startTorque converterTransmission systemTorque converterSingle stage, three elementsGearboxTTypeFix counter-shaft, power-shiftAxle and tireSpiral bevel gear,single stageType of final reducerSpiral bevel gear,single stageType of final reducerSingle stage planetarySize of tire9.75-18Working device of hydraulic system	Forward gear (km/h)	I 0-5.8 II 0-9.5	
Min.ground clearance(mm)210DimensionsOverall dimension (mm)5717*1300*2000Wheel base (mm)2242Wheel tread(mm)1070Max. dumping height(mm)1250/1700Dumping reach (mm)860Min.turning radius(mm)outside4390Diesel engineEngine modelCummins 4BTA3.9/YTO LR4A3Z-22Engine typeIn-line,water-cooling,4-stroke, 4cylinder,direct-injectionRated power(kw)60/66Rated speed (r/min)2200Maximum torque /speed(N.m/rpm)370/1300Total exhaust of cylinder(L)3.9Type of startingElectric startTorque converterTransmission systemTorque converterFix counter-shaft, power-shiftAxle and tireFix counter-shaft, power-shiftAxle and tireSingle stage planetaryType of final reducerSpiral bevel gear,single stageType of final reducerSingle stage planetarySize of tire9.75-18&10.00-20 for wet brake axleWorking device of hydraulic system			
DimensionsOverall dimension (mm)5717*1300*2000Wheel base (mm)2242Wheel tread(mm)1070Max. dumping height(mm)1250/1700Dumping reach (mm)860Min.turning radius(mm)outside4390Diesel engineEngine modelCummins 4BTA3.9/YTO LR4A3Z-22Engine typeIn-line,water-cooling,4-stroke, 4cylinder,direct-injectionRated power(kw)60/66Rated speed (r/min)2200Maximum torque /speed(N.m/rpm)370/1300Total exhaust of cylinder(L)3.9Type of startingElectric startTorque converterTransmission systemTorque converterFix counter-shaft, power-shiftAxle and tireFix counter-shaft, power-shiftAxle and tireSpiral bevel gear,single stageType of final reducerSpiral bevel gear,single stageType of final reducerSingle stage planetarySize of tire9.75-18Working device of hydraulic system	Max. climbing gradient	20°	
Overall dimension (mm)5717*1300*2000Wheel base (mm)2242Wheel tread(mm)1070Max. dumping height(mm)1250/1700Dumping reach (mm)860Min.turning radius(mm)outside4390Diesel engineEngine modelCummins 4BTA3.9/YTO LR4A3Z-22Engine typeIn-line,water-cooling,4-stroke, 4cylinder,direct-injectionRated power(kw)60/66Rated speed (r/min)2200Maximum torque /speed(N.m/rpm)370/1300Total exhaust of cylinder(L)3.9Type of startingElectric startTorque converterTransmission systemTorque converterSingle stage, three elementsGearboxTypeTypeSingle stage, three stageType of main reducerSpiral bevel gear,single stageType of final reducerSingle stage planetarySize of tire9.75-18Working device of hydraulic system	Min.ground clearance(mm)	210	
Wheel base (mm)2242Wheel tread(mm)1070Max. dumping height(mm)1250/1700Dumping reach (mm)860Min.turning radius(mm)outside4390Diesel engineEngine modelCummins 4BTA3.9/YTO LR4A3Z-22Engine modelCummins 4BTA3.9/YTO LR4A3Z-22Engine typeIn-line,water-cooling,4-stroke, 4cylinder,direct-injectionRated power(kw)60/66Rated speed (r/min)2200Maximum torque /speed(N.m/rpm)370/1300Total exhaust of cylinder(L)3.9Type of startingElectric startTorque converterTransmission systemTorque converterFix counter-shaft, power-shiftAxle and tireFix counter-shaft, power-shiftAxle and tireSpiral bevel gear,single stageType of final reducerSpiral bevel gear,single stageType of final reducerSingle stage planetarySize of tire9.75-18Working device of hydraulic system	Dimensions		
Wheel tread(mm)1070Max. dumping height(mm)1250/1700Dumping reach (mm)860Min.turning radius(mm)outside4390Diesel engineEngine modelCummins 4BTA3.9/YTO LR4A3Z-22Engine typeIn-line,water-cooling,4-stroke, 4cylinder,direct-injectionRated power(kw)60/66Rated speed (r/min)2200Maximum torque /speed(N.m/rpm)370/1300Total exhaust of cylinder(L)3.9Type of startingElectric startTorque converterTransmission systemTorque converterFix counter-shaft, power-shiftAxle and tireFix counter-shaft, power-shiftAxle and tireSpiral bevel gear, single stageType of final reducerSpiral bevel gear, single stageType of final reducerSingle stage planetarySize of tire9.75-18Working device of hydraulic system	Overall dimension (mm)	5717*1300*2000	
Max. dumping height(mm)1250/1700Dumping reach (mm)860Min.turning radius(mm)outside4390Diesel engineEngine modelCummins 4BTA3.9/YTO LR4A3Z-22Engine modelCummins 4BTA3.9/YTO LR4A3Z-22Engine typeIn-line,water-cooling,4-stroke, 4cylinder,direct-injectionRated power(kw)60/66Rated speed (r/min)2200Maximum torque /speed(N.m/rpm)370/1300Total exhaust of cylinder(L)3.9Type of startingElectric startTorque converterTransmission systemTorque converterFix counter-shaft, power-shiftAxle and tireFix counter-shaft, power-shiftAxle and tireSpiral bevel gear,single stageType of final reducerSpiral bevel gear,single stageType of final reducerSingle stage planetarySize of tire9.75-18Working device of hydraulic system	Wheel base (mm)	2242	
Dumping reach (mm)860Min.turning radius(mm)outside4390Diesel engineEngine modelCummins 4BTA3.9/YTO LR4A3Z-22Engine modelCummins 4BTA3.9/YTO LR4A3Z-22Engine typeIn-line,water-cooling,4-stroke, 4cylinder,direct-injectionRated power(kw)60/66Rated speed (r/min)2200Maximum torque /speed(N.m/rpm)370/1300Total exhaust of cylinder(L)3.9Type of startingElectric startTorque converterTransmis>o systemTorque converterSingle stage, three elementsGearboxFix counter-shaft, power-shiftAxle and tireSpiral bevel gear,single stageType of final reducerSpiral bevel gear,single stageType of final reducerSingle stage planetarySize of tire9.75-18Working device of hydraulic system	Wheel tread(mm)	1070	
Min.turning radius(mm)outside4390Diesel engineEngine modelCummins 4BTA3.9/YTO LR4A3Z-22Engine typeIn-line,water-cooling,4-stroke, 4cylinder,direct-injectionRated power(kw)60/66Rated speed (r/min)2200Maximum torque /speed(N.m/rpm)370/1300Total exhaust of cylinder(L)3.9Type of startingElectric startTorque converterTypeSingle stage, three elementsGearboxFix counter-shaft, power-shiftAxle and tireSpiral bevel gear,single stageType of final reducerSpiral bevel gear,single stageType of final reducerSingle stage planetarySize of tire9.75-18 &10.00-20 for wet brake axleWorking device of hydraulic system	Max. dumping height(mm)	1250/1700	
Diesel engineEngine modelCummins 4BTA3.9/YTO LR4A3Z-22Engine typeIn-line,water-cooling,4-stroke, 4cylinder,direct-injectionRated power(kw)60/66Rated speed (r/min)2200Maximum torque /speed(N.m/rpm)370/1300Total exhaust of cylinder(L)3.9Type of startingElectric startTransmission systemTorque converterTransmission systemTorque converterSingle stage, three elementsGearboxFix counter-shaft, power-shiftAxle and tireSpiral bevel gear,single stageType of final reducerSingle stage planetarySize of tire9.75-18Working device of hydraulic system	Dumping reach (mm)	860	
Engine modelCummins 4BTA3.9/YTO LR4A3Z-22Engine typeIn-line,water-cooling,4-stroke, 4cylinder,direct-injectionRated power(kw)60/66Rated speed (r/min)2200Maximum torque /speed(N.m/rpm)370/1300Total exhaust of cylinder(L)3.9Type of startingElectric startTransmission systemTorque converterTransmission systemTorque converterSingle stage, three elementsGearboxFix counter-shaft, power-shiftAxle and tireType of main reducerType of final reducerSingle stage planetarySize of tire9.75-18 &10.00-20 for wet brake axleWorking device of hydraulic system	Min.turning radius(mm)outside	4390	
Engine typeIn-line,water-cooling,4-stroke, 4cylinder,direct-injectionRated power(kw)60/66Rated speed (r/min)2200Maximum torque /speed(N.m/rpm)370/1300Total exhaust of cylinder(L)3.9Type of startingElectric startTransmission systemTorque converterIn-line, water-cooling,4-stroke, 4cylinder,direct-injectionTypeSingle stage, three elementsGearboxIn-line, water-cooling,4-stroke, 4cylinder,direct-injectionTypeSingle stage, three elementsGearboxIn-line, water-cooling,4-stroke, 4xle and tireType of main reducerSpiral bevel gear, single stageType of final reducerSingle stage planetarySize of tire9.75-18Working device of hydraulic system			
Engine typeIn-line,water-cooling,4-stroke, 4cylinder,direct-injectionRated power(kw)60/66Rated speed (r/min)2200Maximum torque /speed(N.m/rpm)370/1300Total exhaust of cylinder(L)3.9Type of startingElectric startTransmission systemTorque converterSingle stage, three elementsGearboxFix counter-shaft, power-shiftAxle and tireSpiral bevel gear,single stageType of final reducerSpiral bevel gear,single stageType of final reducerSingle stage planetarySize of tire9.75-18 &10.00-20 for wet brake axleWorking device of hydraulic system	Engine model	Cummins 4BTA3.9/YTO LR4A3Z-22	
Rated power(kw)60/66Rated speed (r/min)2200Maximum torque /speed(N.m/rpm)370/1300Total exhaust of cylinder(L)3.9Type of startingElectric startTransmission systemTorque converterSingle stage, three elementsGearboxFix counter-shaft, power-shiftType of main reducerSpiral bevel gear, single stageType of final reducerSingle stage planetarySize of tire9.75-18 &10.00-20 for wet brake axleWorking device of hydraulic system		In-line,water-cooling,4-stroke,	
Rated power(kw)60/66Rated speed (r/min)2200Maximum torque /speed(N.m/rpm)370/1300Total exhaust of cylinder(L)3.9Type of startingElectric startTransmission systemTorque converterSingle stage, three elementsGearboxFix counter-shaft, power-shiftType of main reducerSpiral bevel gear, single stageType of final reducerSingle stage planetarySize of tire9.75-18 &10.00-20 for wet brake axleWorking device of hydraulic system		•	
Rated speed (r/min)2200Maximum torque /speed(N.m/rpm)370/1300Total exhaust of cylinder(L)3.9Type of startingElectric startTransmission systemTorque converterImage: Single stage, three elementsTypeSingle stage, three elementsGearboxImage: Spiral bevel gear, single stageType of main reducerSpiral bevel gear, single stageType of final reducerSingle stage planetarySize of tire9.75-18 & 10.00-20 for wet brake axleWorking device of hydraulic system	Rated power(kw)		
Maximum torque /speed(N.m/rpm)370/1300Total exhaust of cylinder(L)3.9Type of startingElectric startTransmission systemTorque converterSingle stage, three elementsGearboxFix counter-shaft, power-shiftAxle and tireSpiral bevel gear, single stageType of main reducerSpiral bevel gear, single stageType of final reducerSingle stage planetarySize of tire9.75-18& 10.00-20 for wet brake axleWorking device of hydraulic system		2200	
Total exhaust of cylinder(L)3.9Type of startingElectric startTransmisson systemTorque converterSingle stage, three elementsTypeSingle stage, three elementsGearboxFix counter-shaft, power-shiftTypeFix counter-shaft, power-shiftAxle and tireSpiral bevel gear, single stageType of main reducerSpiral bevel gear, single stageType of final reducerSingle stage planetarySize of tire9.75-18 &10.00-20 for wet brake axleWorking device of hydraulic system	Maximum torque /speed(N.m/rpm)	370/1300	
Type of startingElectric startTransmission systemTorque converterImage: Single stage, three elementsTypeSingle stage, three elementsGearboxImage: Single stage, three elementsTypeFix counter-shaft, power-shiftAxle and tireImage: Spiral bevel gear, single stageType of main reducerSpiral bevel gear, single stageType of final reducerSingle stage planetarySize of tire9.75-18Working device of hydraulic system		3.9	
Torque converterImage: Single stage, three elementsTypeSingle stage, three elementsGearboxFix counter-shaft, power-shiftTypeFix counter-shaft, power-shiftAxle and tireSpiral bevel gear, single stageType of main reducerSpiral bevel gear, single stageType of final reducerSingle stage planetarySize of tire9.75-18 &10.00-20 for wet brake axleWorking device of hydraulic system		Electric start	
Torque converterSingle stage, three elementsTypeSingle stage, three elementsGearboxFix counter-shaft, power-shiftTypeFix counter-shaft, power-shiftAxle and tireSpiral bevel gear, single stageType of main reducerSpiral bevel gear, single stageType of final reducerSingle stage planetarySize of tire9.75-18 &10.00-20 for wet brake axleWorking device of hydraulic system	Transmiss	sion system	
GearboxFix counter-shaft, power-shiftTypeFix counter-shaft, power-shiftAxle and tireFix counter-shaft, power-shiftType of main reducerSpiral bevel gear, single stageType of final reducerSingle stage planetarySize of tire9.75-18 &10.00-20 for wet brake axleWorking device of hydraulic system			
GearboxFix counter-shaft, power-shiftTypeFix counter-shaft, power-shiftAxle and tireFix counter-shaft, power-shiftType of main reducerSpiral bevel gear, single stageType of final reducerSingle stage planetarySize of tire9.75-18 &10.00-20 for wet brake axleWorking device of hydraulic system	Туре	Single stage, three elements	
Axle and tire Axle and tire Type of main reducer Spiral bevel gear, single stage Type of final reducer Single stage planetary Size of tire 9.75-18 & 10.00-20 for wet brake axle Working device of hydraulic system	Gearbox		
Type of main reducerSpiral bevel gear, single stageType of final reducerSingle stage planetarySize of tire9.75-18 &10.00-20 for wet brake axleWorking device of hydraulic system	Туре	Fix counter-shaft, power-shift	
Type of final reducer Single stage planetary Size of tire 9.75-18 &10.00-20 for wet brake axle Working device of hydraulic system	Axle and tire		
Size of tire 9.75-18 &10.00-20 for wet brake axle Working device of hydraulic system	Type of main reducer	Spiral bevel gear, single stage	
Working device of hydraulic system	Type of final reducer	Single stage planetary	
	Size of tire	9.75-18 &10.00-20 for wet brake axle	
	Working device of hydraulic system		
	Model of working pump	2063	
Nominal displacement(ml/r) 63		63	
Multi-way directional valve			
Rated flow(L/min) 20		20	
Steering system			
Type Load-sensing hydraulic steering			
Displacement(ml/r) 250			
Max input pressure(Mpa) 16	· · · · · · · · · · · · · · · · · · ·	16	
Brake system			
Type of traveling break Air over hydraulic break			
Type of parking break Manual disc brake	Type of parking break	Manual disc brake	









1. Slewing bearing structure design. Integrated torque converter transmission YJ280+ZL20



2.Operator cab :Steering wheel +hydraulic joystick control.





2.Integrated torque converter transmission





3.CUMMINS 4BTA3.9-C80 Engine





4.Side dump bucket optional:



5.Quick coupler device:





6.Breaking hammer optional



7.Tire chains

