Miniescavatore
CINGOLATO

DOOSAN

SCHEDA TECNICA

DX20Z

Potenza max: 14 CV - Peso operativo: 1,99 t - Benna max: 0,05 m³

TECHNICAL SPECIFICATIONS

ENGINE

Designed to deliver superior performance and fuel efficiency, the Yanmar 3TNV70 diesel engine fully meets the latest Stage V emission regulations. To optimize machine performance, the engine uses high-pressure fuel injectors, air-to-air inter-cooler and electronic engine controls.

Model

Yanmar 3TNV70

No. of cylinders

3

Rated power at 2200 rpm

ISO 14396 10.3 kW (13.8 hp)

Max. torque at 1600 rpm

47.6 ~ 51.9 Nm (5.3 kgf·m)

Idle (low - high)

1450 - 2375 rpm

Displacement

854 cm³

Bore × stroke

70 mm × 74 mm

Starter

12 V × 1.4 kW

Batteries - Alternator

1 × 12 V, 52 Ah – 12 V, 40 A

Air filter

Double element air cleaner

UNDERCARRIAGE

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

- Track rollers lubricated for life
- 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

Upper rollers (standard shoe)

NOT APPLICABLE

Lower rollers

3

Number of links & shoes per side

72

Link pitch

48 mm

HYDRAULIC SYSTEM

2-travel speeds offer either increased torque or high speed

Main pump

Variable axial piston pump
Maximum flow at rated rpm 2 × 17.6 l/min

Gear pump
Maximum flow at rated rpm 13.2 l/min

Pilot pump

Gear pump
Maximum flow at rated rpm 5.94 l/min

HYDRAULIC CYLINDERS

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

Cylinders	Quantity	Bore × rod diameter × stroke (mm)
Boom	1	60 × 35 × 439
Arm	1	55 × 35 × 425
Bucket	1	55 × 30 × 315
Dozer	1	70 × 35 × 118
Boom swing	1	60 × 30 × 323

SWING MECHANISM

The swing mechanism uses an axial piston motor, driving a 2-stage planetary reduction gear bathed 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

Maximum swing speed

9.6 rpm

Maximum swing torque

248 kgf·m

DRIVE

Each track is driven by an independent, high-torque axial piston motor through a planetary reduction gearbox. 2 levers / foot pedals guarantee smooth travel with counter-rotation on demand. The track frame protects the travel motor, brake and planetary.

Travel speed (low - high)

2.02 - 3.71 km/h

Maximum traction

1.573 - 0.731 t

Maximum gradeability

16.7° / 30%

CAB

The sophisticated ISO-certified TOPS pillar canopy – together with excellent visibility and stability – provides optimal operator comfort and safety. Comfortably seated, you have easy access to storage compartments and a clear all-round view of the work site. Noise and vibration levels are minimized.

A-weighted emission sound pressure level at the operator's position, LpAd (ISO 6396)

Declared: 76 dB(A)

A-weighted sound power level, LwAd (2000/14/EC)

Measured: 92 dB(A)

FLUID CAPACITIES

Fuel tank	20 l
Cooling system (radiator)	3.2 l
Hydraulic oil tank	25.5 l
Engine oil	2.8 l
Travel device	2 × 0.35 l

WEIGHT & GROUND PRESSURE

	Machine weight (kg)	Ground pressure (bar)
230 mm rubber shoes	1915	0.301

COMPONENT WEIGHTS

Item	Weight (kg)	Remarks
Machine (w/o front)	1664	
Upper structure (w/o front, counterweight)	1037	Boom swing bracket included
Canopy upper	23	
Canopy lower	14	
Counterweight	201	
Undercarriage	626	Dozer included
Dozer	85	
Dozer (center)	64	
Dozer extension	9.6	LH, RH each
Dozer cylinder	11	
Rubber shoe	60	each
Front assembly	230	
Boom	77	Piping included
Arm	55	Piping & links included
Bucket	50	
Boom cylinder (with cover)	18	
Arm cylinder (with cover)	16	
Bucket cylinder (with cover)	13	

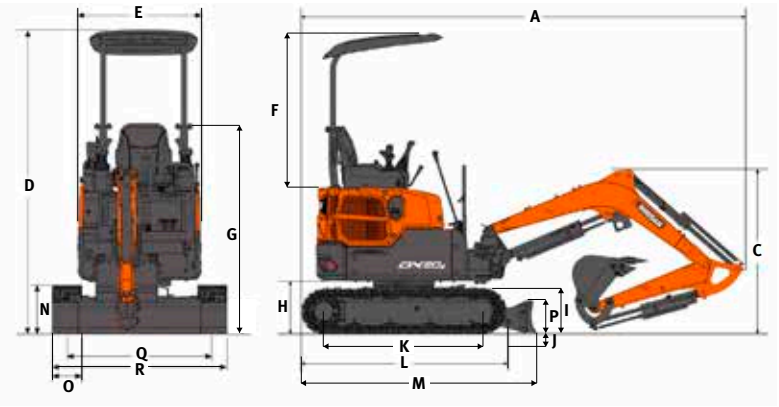
ARMS

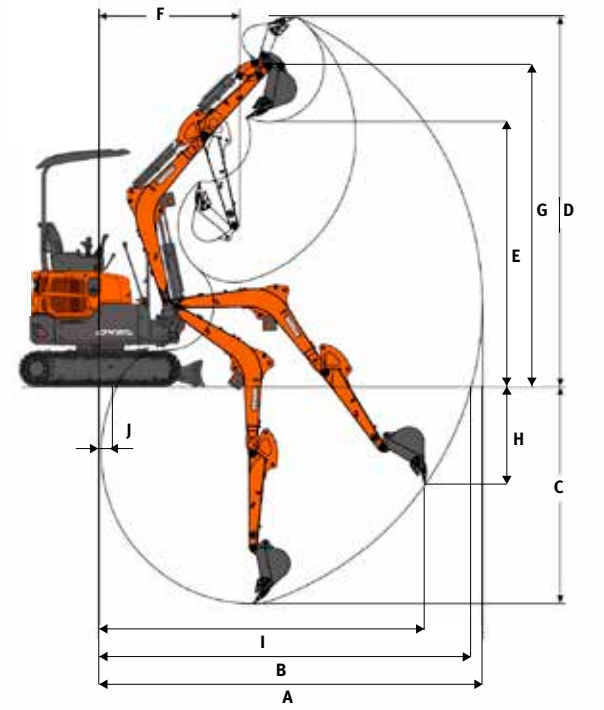
	Length (mm)	Weight (kg)	Digging force (ISO) (ton)
DX20Z (Standard)	1100	35	0.762

BUCKETS

	Capacity (m³) ISO	Width (mm)		Weight (kg)	Digging force (ISO) (ton)
		with side cutters	w/o side cutters		
DX20Z (recommended)	0.05	511	485	50	1.551

DIMENSIONS & WORKING RANGE





DIMENSIONS

Boom length		**mm**	**1725**
Arm length		**mm**	**1100**
Bucket capacity (ISO)		**m³**	**0.05**
Track shoe		**-**	**Rubber**
A	Shipping length	mm	3483
	Tail swing radius	mm	690
C	Shipping height (boom)	mm	1340
D	Shipping height over canopy	mm	2360
E	Upper structure width	mm	950
F	Canopy height above engine hood	mm	1209
G	Ground ~ lower canopy structure	mm	1605
H	Counterweight clearance	mm	419
I	Dozer blade max. lifting height	mm	251
J	Dozer blade max. lowering depth	mm	234
	Bucket to dozer distance	mm	216
K	Tumbler distance	mm	1258
L	Track length	mm	1612
M	Undercarriage length with dozer	mm	1847
N	Track height	mm	356
O	Shoe width	mm	230
P	Dozer blade height	mm	265
Q	Track guage	mm	720 (1130*)
R	Overall width	mm	950 (1360*)

*** Track extended**

WORKING RANGE

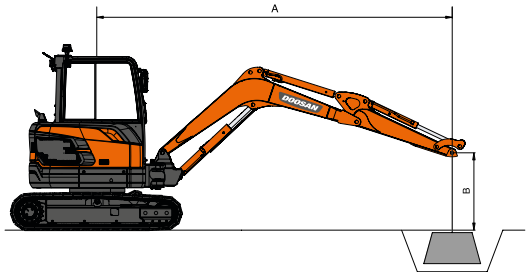
Boom length		**mm**	**1725**
Arm length		**mm**	**1100**
Bucket capacity (ISO)		**m³**	**0.05**
Track shoe		**-**	**Rubber**
A	Max. digging reach	mm	3975
B	Max. digging reach (ground)	mm	3875
C	Max. digging depth	mm	2345
D	Max. digging height	mm	3805
E	Max. dump height	mm	2750
F	Min. swing radius	mm	1565
	Tail swing radius	mm	690
G	Max. bucket pin height	mm	3315
H	Max. vertical wall depth	mm	1120
I	Max. radius vertical	mm	3350
J	Min. digging reach	mm	20
	Boom offset (right)	mm	513
	Boom offset (left)	mm	553

LIFTING CAPACITIES

BOOM 1725 MM • ARM 1100 MM • W/O BUCKET • 230 MM RUBBER SHOES OVER BLADE • BLADE UP

(UNIT: 1000 KG)

A	1.0 m		1.5 m		2.0 m		2.5 m		3.0 m		Max. reach		
B													A
BOOM 1725 mm • ARM 1100 mm • W/O BUCKET • 230 mm RUBBER SHOES													
3.0 m											0.33 *	0.33 *	2.32
2.5 m							0.30 *	0.30 *			0.28 *	0.28 *	2.83
2.0 m							0.32 *	0.32 *	0.31	0.32	0.26 *	0.26 *	3.15
1.5 m					0.41 *	0.41 *	0.37 *	0.37 *	0.3	0.32	0.26	0.26 *	3.33
1.0 m					0.55	0.57	0.39	0.41	0.3	0.31	0.24	0.26	3.41
0.5 m					0.53	0.55	0.38	0.4	0.29	0.31	0.24	0.26	3.39
0.0 m			0.77 *	0.77 *	0.52	0.54	0.37	0.39	0.29	0.3	0.25	0.27	3.29
-0.5 m	0.76 *	0.76 *	0.83	0.86	0.51	0.54	0.37	0.39	0.29	0.3	0.28	0.29	3.08
-1.0 m	1.12 *	1.12 *	0.84	0.87	0.52	0.54	0.37	0.39			0.33	0.35	2.72
-1.5 m	1.31 *	1.31 *	0.72 *	0.72 *	0.47 *	0.47 *					0.40 *	0.40 *	2.13



: Rating over front.
: Rating over side or 360°.

1. Lifting capacities are in compliance with ISO 10567.
2. The load point is at the end of the arm.
3. * limited hydraulic lift capacities.
4. Lift capacities do not exceed 75% of minimum tipping loads or 87% of hydraulic lifting capacity.
5. For lifting capacity with bucket, simply subtract the actual weight of the bucket from the values.
6. Lift capacities apply only to the machine as originally manufactured and normally equipped by the manufacturer.
7. The configurations indicated do not necessarily reflect the standard equipment of the machine.

STANDARD AND OPTIONAL EQUIPMENT

● Standard ○ Optional

Engine
- ● Yanmar 3TNV70 water-cooled, indirect injection
- ● Stage V

Cab & interior
- ● 2 pillar (detachable) canopy
- ● ZHS upper-structure concept
- ● Track expansion switch
- ● Stationary seat
- ● Small storage compartment
- ● 2-speed travel
- ○ 4 pillars canopy

Hydraulic System
- ● Hydraulic joystick control
- ● One way flow auxiliary lines on arm

Safety
- ● Battery switch-off
- ● Boom light protection, metal
- ● Boom LED lights
- ● Bucket and arm cylinder guards
- ● Battery cover

Other
- ● 1.1 m arm
- ● 1.725 m boom

Undercarriage
- ● Extendable undercarriage
- ● 950 mm dozer blade with two blade extensions (1360 mm extended)