

\* | 44.3 kW (59.4 HP) at 2100 rpm

▲ | 8540 - 8600 kg

▼ | 4175 - 4725 mm



## DX85R-3 | Compact Excavator



# All-round versatility and improved fuel efficiency

Whatever your application you can rely on the DX85R-3 ideal working range with reduced tail swing to take on all these tasks with efficient, dependable performance that saves you time and money.

- Optimised engine, now compliant with the Stage IIIB European regulations using EGR (Exhaust Gas Recirculation) and DPF (Diesel Particulate Filter)
- Improved load sensing closed-centre hydraulic system uses the engine power more effectively, maximising pump output and offering more comfort, smoothness and accuracy regardless the load
- Increased digging power, swing torque, lifting capacity, travel speed and traction force for higher performance
- Improved fuel efficiency means you can keep costs down and reduce the environmental impact
- The dozer blade float function allows fast finishing work, simply by travelling backwards



## Higher gradeability and work capability

Thanks to the high tractive effort and strong swing torque, the DX85R-3 offer excellent capability for working on slopes.



## Boom swing

The swing bracket and the boom swing cylinder size ensure powerful and stable performance.



## RPM dial / Auto idle

Thanks to the electronic control, the optimal engine rpm can be set per workload. The auto idle function applied as standard helps fuel efficiency and reduces noise levels.



## Main control valve

The machine can be precisely controlled in single and complex operations and the front hydraulic flow matched to the work load. This contributes to great fuel economy and smooth operation.

# Maximum controllability in every situation

Proportional auxiliary flow means that the excavator's power is matched by smooth, confident manoeuvres. Using sensitive joysticks and clear controls positioned for convenient access, you are able to work safely and confidently with minimum effort. Even the switches have been ergonomically placed on the right-hand control stand and positioned according to the frequency with which they are used. The highest standards of efficiency are just a finger's reach away.

## Colour LCD monitor panel

The new 5.7" colour LCD panel is located within the operator's line of sight. The monitor is user-friendly and gives access to machine settings, maintenance data and auxiliary flow control. Any abnormality is clearly displayed on the screen, allowing you to work safely and confidently with an accurate overview of all conditions.



## Gauges

- Engine coolant and hydraulic oil temperatures
- Engine speed
- Fuel level
- Eco symbol: changes colour when operating conditions change (idle, normal or loading)
- Eco gauge: shows the average fuel efficiency over the last minute of operation
- Warning symbols (12)
- Anti-theft function
- Maintenance schedule
- Diagnostic ability



Right controls



Proportional joystick with auxiliary thumb control



Dozer float function and travel mode switch



# The ideal workspace – designed around you

The DX85R-3 is designed to provide you with the best possible working conditions. The sophisticated ROPS cab is ISO-certified for your safety. Its spacious interior offers a fully adjustable and comfortable seat. Comfortably seated, you have easy access to several storage compartments and a clear all-round view of the worksite. Noise and vibration levels are reduced while air conditioning allows you to maximise your productivity and return on investment.



## Ergonomic operator environment

Spacious cab with ample leg room, robust ergonomic pedals, large & flat floor, cup holder, etc.



## Adjustable seat, head rest and arm rests

For more operator comfort.



## Air conditioning

Allows the operator to adjust the airflow to suit conditions.

# More durability – less maintenance

A reinforced X-chassis provides strength, while the optimised boom shape ensures uniform load distribution for more durability. Top quality materials, the most advanced computer-aided design and endurance testing under the most demanding conditions ensure your excavator will keep on performing.

The DX85R-3 is designed for low maintenance with longer intervals resulting in more machine availability while skilled Doosan-trained technicians are available to provide extra support when needed.



## Tilting cab

To simplify access to maintenance components.



## Centralised greasing points

To make maintenance easier, the greasing points have been centralised.



## Battery cut-off switch

For more safety and to maintain battery capacity.

# Technical specifications

## \* Engine

<b>• Model</b>	Yanmar 4TNV98 4-Cycle Water-Cooled, Direct injection
<b>• No. of cylinders</b>	4
<b>• Rated power at 2100 rpm</b>	44.3 kW (59.4 HP) (SAE J1349)
<b>• Max. torque at 1365 rpm</b>	24.6 kgf/m (241 Nm)
<b>• Idle (low - high)</b>	1050 [± 10] - 2250 [± 10] rpm
<b>• Piston displacement</b>	3319 cm <sup>3</sup>
<b>• Bore x stroke</b>	98 mm x 110 mm
<b>• Starter</b>	12 V / 3.0 kW
<b>• Batteries – Alternator</b>	12 V / 100 Ah – 12 V, 80 A
<b>• Air filter</b>	Double element with automatic dust evacuation.

## \* Fluid capacities

Fuel tank:	110 l
Cooling system (radiator capacity):	10 l
Hydraulic oil tank:	87 l
Engine oil:	10.2 l
Swing drive:	1.5 l
Travel device:	2 x 1.2 l

## \* Environment

Noise levels comply with environmental regulations (dynamic values).

<b>• Noise level LwA</b>	Guaranteed: 98 dB(A) (2000/14/EC) Measured: 97 dB(A) (2000/14/EC)
<b>• Operator LpA</b>	71 dB(A) (ISO 6396)

## \* Undercarriage

Very robust construction throughout. All welded structures designed to limit stresses. High-quality, durable materials. Lateral chassis welded and rigidly attached to undercarriage. Track rollers lubricated for life. Idlers and sprockets fitted with floating seals. Track shoes (option) made of induction-hardened alloy with triple grouser. Heat-treated connecting pins. Hydraulic track adjuster with shock-absorbing tension mechanism.

<b>• Number of rollers and links per side</b>	Upper rollers: 1 (ø 160 mm) Lower rollers: 5 (ø 156 mm) Number of links: 39 Overall track length: 2825 mm
-----------------------------------------------	--------------------------------------------------------------------------------------------------------------------

## \* Hydraulic system

- The hydraulic system enables independent or combined operations
- Load sensing closed centre hydraulic with variable displacement piston pump
- Proportional joystick control
- Two travel speeds offer either increased torque or high speed
- Auto-idle
- Auto shift travel
- Control of flow in auxiliary hydraulic circuits

## \* Pumps

Pump	Type	Displacement (cm <sup>3</sup> /rev)	Max. flow @ 2100 rpm (l/min)	Relief valve pressure (kgf/cm <sup>2</sup> )
Main (load sensing)	Tandem, Axial piston	72	151	-
Pilot	Gear	11	23.1	33

## • Maximum system pressure

Boom/arm/bucket:	316 kg/cm <sup>2</sup>
Work/travel:	300 kg/cm <sup>2</sup>
Swing:	220 kg/cm <sup>2</sup>

## \* Swing mechanism

- High-torque, axial piston motor with planetary reduction gear
- Swing bearing: single-row, shear type ball bearing with induction-hardened internal gear
- Internal gear and pinion immersed in lubricant
- Max. swing speed: 9.5 rpm
- Max. swing torque: 1950 kgf/m
- Boom swing angle L/R: 70° / 55°

## \* Drive

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

## • Travel speed (low - high)

2.7 - 4.7 km/h

## • Maximum traction (low - high)

3.9 t - 6.6 t

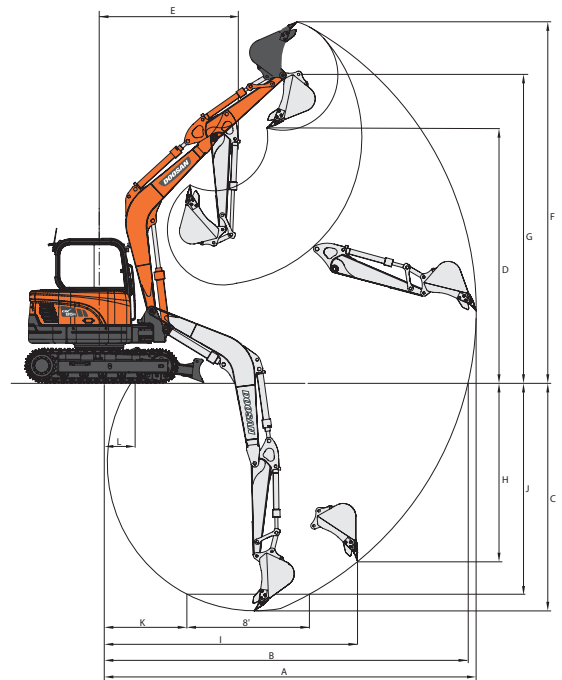
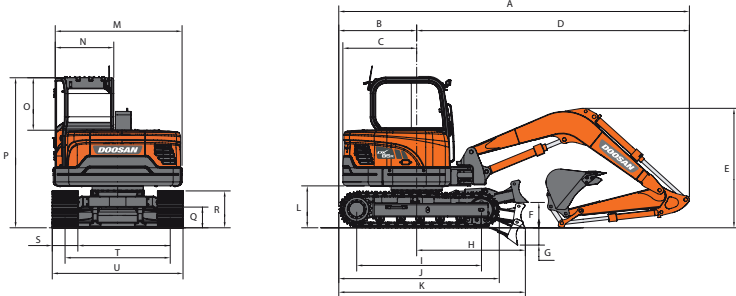
## • Maximum gradeability

35° / 70%

## \* Hydraulic cylinders

Piston rods and cylinder bodies of high-strength steel. Shock-absorbing mechanism fitted in cylinders for shock-free operation and extended life.

Cylinders	Quantity	Bore x rod diameter x stroke (mm)
Boom	1	115 x 70 x 775
Arm	1	100 x 65 x 866
Bucket	1	90 x 60 x 690
Dozer	2	100 x 60 x 149
Boom swing	1	110 x 60 x 738



### \* Dimensions

Boom length - mm		3380	
Arm length - mm		1700	2250
A	Shipping length - mm	6165	6265
B	Rear length - mm	1370	1370
C	Tail swing radius - mm	1300	1300
D	Front length - mm	4785	4890
E	Shipping height (boom) - mm	2085	2410
E	Shipping height (hose) - mm	2150	2480
F	Dozer height - mm	408	408
G	Dozer cut below grade - mm	304	304
H	Center line to blade - mm	1910	1910
I	Tumbler distance - mm	2200	2200
J	Track length - mm	2825	2825
K	Track length to dozer - mm	3280	3280
L	Counterweight clearance - mm	735	735
M	Upperstructure width - mm	2265	2265
N	Cab width - mm	1030	1030
O	Cab height above bonnet - mm	925	925
P	Height over cab - mm	2640	2640
Q	Ground clearance - mm	362	362
R	Track height - mm	670	670
S	Shoe width std. - mm	450	450
T	Track gauge - mm	1850	1850
U	Overall width - mm	2300	2300
	Boom swing distance, left - mm	704	704
	Boom swing distance, right - mm	837	837

### \* Working range

Boom length - mm		3380	
Arm length - mm		1700	2250
Bucket capacity - m <sup>3</sup>		0.28	0.28
A	Max. digging reach - mm	6915	7430
B	Max. digging reach (ground) - mm	6765	7295
C	Max. digging depth - mm	4175	4725
D	Max. loading height - mm	4645	4995
E	Min. swing radius - mm	2550	2635
F	Max. digging height - mm	6630	6980
G	Max. bucket pin height - mm	5655	6005
H	Max. vertical wall depth - mm	3245	3755
I	Max. radius vertical - mm	4730	4905
J	Max. digging depth (8' level) - mm	3815	4420
K	Min. radius 8' line - mm	1510	1480
L	Min. digging reach - mm	580	-55

### \* Weight

With 2.25 m arm and 0.28 m<sup>3</sup> bucket

	Shoe width (mm)	Operating weight (kg)	Ground pressure (kgf/cm <sup>2</sup> )
Rubber	450	8600	0.39
Steel	450	8630	0.39

### \* Digging forces (ISO)

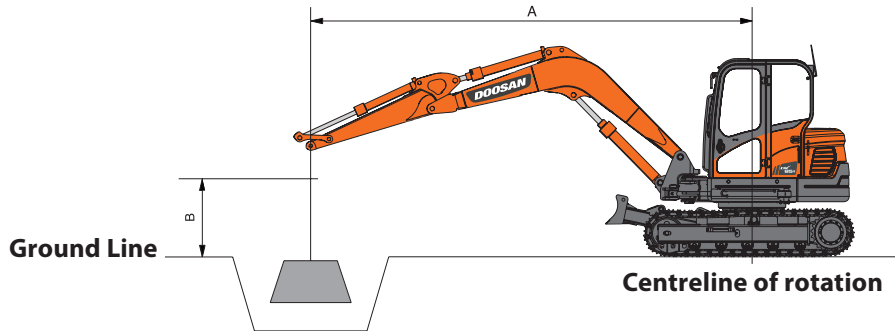
		Boom: 3.38 m Arm: 1.7 m Bucket: 0.28 m <sup>3</sup>	Boom: 3.38 m Arm: 2.25 m Bucket: 0.28 m <sup>3</sup>
Bucket (SAE / ISO)	t	5.50 / 6.30	5.50 / 6.30
	kN	53.9 / 61.8	53.9 / 61.8
Arm (SAE / ISO)	t	4.25 / 4.39	3.57 / 3.66
	kN	41.7 / 43.0	35.0 / 35.9

### \* Buckets

Capacity (m <sup>3</sup> )	Width (mm)		Weight (kg)	Boom: 3380 mm	
	With side cutters	W/O side cutters		Arm: 1700 mm	Arm: 2250 mm
0.28	813	707	232	B	B
0.20	646	540	199	A	A

A: Suitable for materials with a density less than or equal to 2000 kg/m<sup>3</sup>  
 B: Suitable for materials with a density less than or equal to 1600 kg/m<sup>3</sup>  
 For reference only.

# Lifting capacities



## Standard configuration - Dozer up

Standard track width: 2300 mm • Boom: 3380 mm • Arm: 1700 mm • W/O Bucket • Shoe: 450 mm

Units: 1000 kg

B (m)	A (m) 2.0		3.0		4.0		5.0		Max. lift		A (m)
	☺	☹	☺	☹	☺	☹	☺	☹	☺	☹	
5.0					1.95 *	1.85			2.01	1.63	4.29
4.0					1.90 *	1.85	1.55	1.27	1.48	1.2	5.13
3.0			2.70 *	2.70 *	2.19 *	1.78	1.53	1.25	1.26	1.02	5.62
2.0			3.28	2.55	2.09	1.68	1.49	1.2	1.15	0.93	5.86
1.0			3.06	2.35	1.99	1.58	1.43	1.15	1.12	0.9	5.89
0 (Ground)			3	2.3	1.93	1.52	1.4	1.12	1.16	0.93	5.72
-1.0	3.90 *	3.90 *	3.01	2.3	1.91	1.51	1.39	1.11	1.28	1.03	5.31
-2.0	5.27 *	4.8	3.06	2.35	1.94	1.53			1.59	1.27	4.61
-3.0			1.89 *	1.89 *					1.54 *	1.54 *	3.34

## Standard configuration - Dozer down

Standard track width: 2300 mm • Boom: 3380 mm • Arm: 1700 mm • W/O Bucket • Shoe: 450 mm

Units: 1000 kg

B (m)	A (m) 2.0		3.0		4.0		5.0		Max. lift		A (m)
	☺	☹	☺	☹	☺	☹	☺	☹	☺	☹	
5.0					1.95 *	1.95 *			2.01 *	2.01 *	4.29
4.0					1.90 *	1.90 *	1.90 *	1.67	1.80 *	1.59	5.13
3.0			2.70 *	2.70 *	2.19 *	2.19 *	1.95 *	1.65	1.74 *	1.36	5.62
2.0			3.97 *	3.53	2.64 *	2.25	2.13 *	1.6	1.77 *	1.25	5.86
1.0			3.50 *	3.31	3.05 *	2.15	2.31 *	1.55	1.88 *	1.21	5.89
0 (Ground)			4.52 *	3.25	3.20 *	2.08	2.38 *	1.51	1.96 *	1.25	5.72
-1.0	3.90 *	3.90 *	4.36 *	3.26	3.06 *	2.07	2.23 *	1.51	1.97 *	1.39	5.31
-2.0	5.27 *	5.27 *	3.56 *	3.31	2.52 *	2.1			1.93 *	1.72	4.61
-3.0			1.89 *	1.89 *					1.54 *	1.54 *	3.34

## Option 1 - Dozer up

Standard track width: 2300 mm • Boom: 3380 mm • Arm: 2250 mm • W/O Bucket • Shoe: 450 mm

Units: 1000 kg

B (m)	A (m) 2.0		3.0		4.0		5.0		6.0		Max. lift		A (m)
	☺	☹	☺	☹	☺	☹	☺	☹	☺	☹	☺	☹	
6.0											1.83 *	1.83 *	3.81
5.0							1.51 *	1.28			1.48 *	1.27	5.02
4.0							1.57 *	1.29			1.23	1	5.73
3.0					1.80 *	1.80 *	1.55	1.26	1.13	0.92	1.08	0.87	6.17
2.0			3.18 *	2.67	2.13	1.71	1.49	1.21	1.11	0.89	1	0.8	6.38
1.0			3.12	2.4	2	1.59	1.43	1.14	1.08	0.86	0.97	0.78	6.41
0 (Ground)			2.98	2.27	1.91	1.5	1.38	1.1	1.05	0.84	0.99	0.79	6.26
-1.0	3.34 *	3.34 *	2.94	2.24	1.87	1.46	1.35	1.07			1.07	0.86	5.90
-2.0	5.15 *	4.61	2.96	2.26	1.87	1.47	1.36	1.08			1.26	1.01	5.28
-3.0	4.62 *	4.62 *	2.96 *	2.33	1.93	1.52					1.68 *	1.4	4.27

## Option 1 - Dozer down

Standard track width: 2300 mm • Boom: 3380 mm • Arm: 2250 mm • W/O Bucket • Shoe: 450 mm

Units: 1000 kg

B (m)	A (m) 1.0		2.0		3.0		4.0		5.0		6.0		Max. lift		A (m)
	☺	☹	☺	☹	☺	☹	☺	☹	☺	☹	☺	☹	☺	☹	
6.0													1.83 *	1.83 *	3.81
5.0									1.51 *	1.51 *			1.48 *	1.48 *	5.02
4.0									1.57 *	1.57 *			1.36 *	1.33	5.73
3.0							1.80 *	1.80 *	1.69 *	1.67	1.64 *	1.22	1.32 *	1.16	6.17
2.0					3.18 *	3.18 *	2.30 *	2.29	1.91 *	1.61	1.71 *	1.2	1.34 *	1.08	6.38
1.0					4.34 *	3.37	2.79 *	2.16	2.15 *	1.54	1.80 *	1.17	1.42 *	1.05	6.41
0 (Ground)					4.76 *	3.22	3.10 *	2.07	2.31 *	1.49	1.84 *	1.14	1.56 *	1.08	6.26
-1.0	2.79 *	2.79 *	3.34 *	3.34 *	4.62 *	3.19	3.12 *	2.02	2.31 *	1.46			1.76 *	1.17	5.90
-2.0	4.11 *	4.11 *	5.15 *	5.15 *	4.07 *	3.21	2.83 *	2.03	2.01 *	1.47			1.77 *	1.37	5.28
-3.0			4.62 *	4.62 *	2.96 *	2.96 *	1.98 *	1.98 *					1.68 *	1.68 *	4.27

- Lifting capacities are in compliance with ISO 10567:2007(E).
- The load point is at the end of the arm.
- \* = The nominal loads are based on hydraulic capacity.
- The nominal loads shown do not exceed 75% of tipping loads or 87% of hydraulic lifting capacity.
- For lifting capacity with bucket, simply subtract the actual weight of the bucket from the values.
- The configurations indicated do not necessarily reflect the standard equipment of the machine.

☺ : Rating over front  
☹ : Rating over side or 360°



# Standard and optional equipment

## \* Standard equipment

Engine
Yanmar Diesel engine, Common Rail direct injection, EU Stage IIIB compliant, EGR
Diesel particulate filter (DPF)
Auto-idle
Hydraulic system
Boom and arm flow regeneration
Spare ports (valve)
Breaker piping
Cylinder cushioning & contamination seals
Control of auxiliary hydraulic flow and settings from the display panel, 1st auxiliary 2 way & 2nd auxiliary 2 way
Cab & Interior
Roll Over Protective Structure (ROPS)
Pressurised, sound-insulated cab
Adjustable seat with adjustable headrest and armrest
Air conditioning
Pull-up type front window and removable lower front window
Sliding right windows with lock
Ceiling light
Intermittent upper windshield wiper
Multiple storage compartments
Flat, spacious, easy-to-clean floor
Cup holder
Anti-theft protection
5.7" (14.5 cm) LCD colour monitor panel
Engine speed (RPM) control dial
Hydrostatic 2-speed travel system with manual or automatic shift
Radio-ready
12 V power socket
Serial communication port for laptop PC interface
Adjustable PPC for arm, boom, bucket and swing, with sliding proportional control for attachments and auxiliary hydraulic buttons
Travel pedals and hand levers
Master key
Diesel particulate filter regeneration switch
Safety
Boom and arm cylinder safety valves
Overload warning device
Rotating beacon
Hydraulic safety lock lever
Safety glass
Hammer for emergency escape
Right and left rearview mirrors
Emergency engine stop switch
Engine overheat and restart prevention system
Parking brake and cab swing lock automatic
Reinforced cast steel pivot points
Battery cut-off switch
Halogen work light (1 on cab top)
Lockable fuel cap
Other
Mono boom: 3380 mm – arm: 1700 mm
Counterweight: 1322 kg
Fuel filler pump
Double element air cleaner
Engine hood with gas spring
Self-diagnostic function
Battery (12 V, 100 Ah), alternator (12 V, 80 A)
Electric horn
Remote greasing for swing circle and workgroup pivot points
Guards for boom lights
Undercarriage
Fixed undercarriage
Hydraulic track adjuster
Greased and sealed track links
Rubber tracks 450 mm
Dozer blade (width: 2300 mm & height: 408 mm)

## \* Optional equipment

Cab & Interior
MP3/USB radio with CD player (kit)
Safety
FOGS cab - top and front cab guards (ISO 10262) (kit)
Front window upper and lower guards
Other
Long arm: 2250 mm
Hydraulic piping for crusher, quick coupler, clamshell, tilting and rotating buckets
Undercarriage
Dozer double check valve (kit)
Steel tracks 450 mm
3rd auxiliary clamshell

Some of these options may be standard in some markets. Some of these options may not be available for certain markets. Please check with your local DOOSAN dealer for more information about availability or to adapt your machine to your application needs.





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