

Operator's Manual

Dumper

3001[®]



Machine model	3001 D03-05 (from WNC0305VPAL00283)
Edition	5.1
Language	en
Article number	1000172672



**WACKER
NEUSON**



6 Technical data

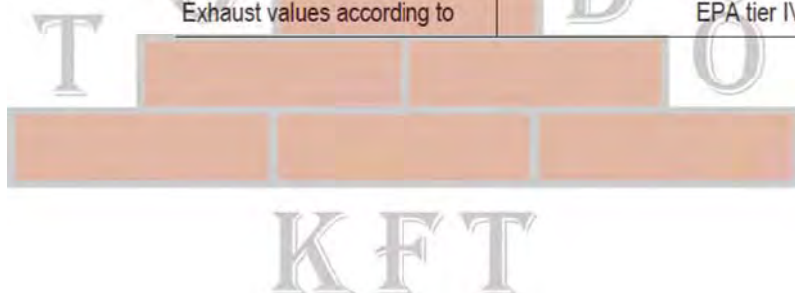
6.1 Chassis

Sturdy steel sheet chassis, rubber-mounted engine

6.2 Engine

Engine	3001 (up to serial no. AD310200)	3001 (from serial no. AE310242)
Product	Yanmar diesel engine	
Type	3TNV88-KNSV	3TNV88-BKNSV
Design	Water-cooled 4 stroke diesel engine	
Number of cylinders	3	
Displacement	1642 cm ³ (100.2 in ³)	
Nominal bore and stroke	88 x 90 mm (3.46 x 3.54 in)	
Output	26 kW +/- 5 % at 2800 rpm (34.9 hp +/- 5 % at 2800 rpm)	24.4 kW +/- 5 % at 2800 rpm (32.7 hp +/- 5 % at 2800 rpm)
Interm. torque	108.9 Nm at 1680 rpm (80.3 ft lbs at 1680 rpm)	106.5 Nm at 1200 rpm (78.6 ft lbs at 1200 rpm)
Max. engine speed without load	2995 rpm +/- 25 rpm (2995 rpm +/- 25 rpm)	
Idling speed	~ 1000 rpm +/- 25 rpm (~1000 rpm +/- 25 rpm)	
Fuel injection system	Direct injection	
Starting aid	Preheater (preheating time 15 seconds)	Glow elements (preheating time 10 – 15 seconds)
Exhaust values according to	97/68/EC tier 2 EPA tier 2	EC tier 3A EPA tier IV interim

Engine	3001
Product	Perkins diesel engine
Type	403F-15T
Design	Water-cooled 4 stroke diesel engine
Number of cylinders	3
Displacement	1496 cm ³ (91.3 in ³)
Nominal bore and stroke	84 x 90 mm (3.3 x 3.5 in)
Output	27 kW +/- 5 % at 2800 rpm (36.2 hp +/- 5 % at 2,800 rpm)
Interm. torque	112 Nm at 1800 rpm (78.6 ft lbs at 1800 rpm)
Max. engine speed without load	2800 rpm +/- 25 rpm (2,800 rpm +/- 25 rpm)
Idling speed	1200 rpm +/- 25 rpm (1,200 rpm +/- 25 rpm)
Fuel injection system	Indirect injection
Starting aid	Glow elements (preheating time 10 – 15 seconds)
Exhaust values according to	EPA tier IV final





6.3 Operating hydraulics

Operating hydraulics	3001
Hydraulic pump displacement	16.8 cm ³ /rev (1 in ³ /rev)
Hydraulic pump flow rate (at 2,800 rpm)	47 l/min (12.4 gal/min)
Max. operating pressure	220 bar (3,191 psi)
Secondary pressure limiting for swiveling cylinder	145 bar (2,103 psi)
Steering system	140 bar (2,031 psi)
Hydraulic reservoir capacity	33 l (8.7 gal)
Hydraulic oil quantity (system fill)	48 l (12.7 gal)

6.4 Traveling drive

Variable displacement pump	3001
Design	Axial piston pump
Flow rate (at 2800 rpm)	47 l/min (12.4 gal/min)
Max. operating pressure	360 bar (5,221 psi)

6.5 Machine travel specifications

Steering system	3001 (standard tires)	3001 (tire size 10.0/75 x 15.3)
Travel speed I	0 – 7 kph (0 – 4.35 mph)	0 – 6.3 kph (0 – 4 mph)
Travel speed II	0 – 24.5 kph (15.2 mph)	0 – 22 kph (0 – 13.7 mph)
Articulation	+/- 37°	
Oscillation	+/- 15°	
Outside turning radius	3850 mm (12'-8")	
Safe authorized inclination	14° (25 %) in all directions	

6.6 Brakes

Service/parking brake	3001
Design	Wet multidisk brakes
Location	Front axle
Effect	Hydraulic service brake Mechanical parking brake

6.7 Steering system

Steering system		3001
Design	Hydrostatic	
Steering mode	Chassis articulation steering	

6.8 Tires

Type	Tire size	Tire pressure	Load-bearing capacity
TS 05, standard tires (up to WNCD0305TPAL00339)	11.5/80 x 15.3	3.5 bar (51 psi)	PR 10
TS 05, standard tires (from WNCD0305EPAL00340)	11.5/80 x 15.3	3.5 bar (51 psi)	PR 14
TR 03 (option)	11.5/80 x 15.3	4.75 bar (69 psi)	PR 14
TS 05, for special skip (option)	10.0/75 x 15.3	3.2 bar (46 psi)	PR 8
TS 05, foam-filled (option) (up to WNCD0305TPAL00339)	11.5/80 x 15.3	--	PR 10
IM04, golf-course tires (option)	15.0/55 x 17	3.1 bar (45 psi)	PR 14

Spare wheel (option) corresponds to respective tires

6.9 Skip

Skip	Front skip	Swivel skip (option)	Special swivel skip (option)
Skip capacity	Struck	1500 l (396 gal)	1315 l (347 gal)
	Heaped	1850 l (489 gal)	1790 l (473 gal)
	Liquid capacity	1160 l (306 gal)	930 l (246 gal)
Payload	3000 kg (6614 lbs)		2600 kg (5732 lbs)

6.10 Coolant compound table

Outside temperature ¹	Distilled water	Coolant
Up to °C (°F)	% by volume	% by volume
-37 (-34.6)	50	50

1. Use the 1:1 concentration for warm outside temperatures, too, to ensure protection against corrosion, cavitation and deposits.

Do not mix the coolant with other coolants.

6.11 Vibration

Vibration	
Effective acceleration value for the upper extremities of the body (hand-arm vibration)	< Trigger value < 2.5 m/s ²
Effective acceleration value for the body (whole-body vibration)	< 0.5 m/s ²

Vibration values indicated in m/s².

Directive 2002/44/EC of European Parliament and Council on minimum health and safety requirements regarding exposure of workers to risks arising from physical agents (vibration).

Indications on hand-arm vibration

Hand-arm vibration is less than 2.5 m/s² during correct machine operation.

Indications on whole-body vibration

Whole-body vibration is less than 0.5 m/s² during correct machine operation.

Uncertainty of measurement K has been taken into account for the specified values.

The degree of vibration is influenced by various parameters.

Some of them are listed below:

- Operator: training, behavior, working method and strain.
- Job site: organization, preparation, surroundings, weather conditions and material.
- Machine: version, seat quality, quality of suspension system, attachments and condition of attachments.

Precise indications on the vibration degrees cannot be made for the machine.

Determination of vibration level for the three vibration axes.

- Under typical operating conditions, use the average vibration values measured.
- In order to obtain the estimated vibration value for an experienced operator on level ground, subtract the factors from the average vibration value.
- In case of an aggressive working method or difficult terrain, add the environmental factors to the average vibration level in order to obtain the estimated vibration level.

Note:

For further vibration indications, refer to the indications in ISO/TR 25398 Mechanical Vibrations – Directive on Estimation of whole-body vibration during operation of earth moving machines. This publication uses measuring values of international institutes, organizations and manufacturers. It contains information on whole-body vibration for operators in earth moving machines. For more information on the vibration values of the machine, refer to Directive 2002/44/EC of European Parliament and Council on minimum health and safety requirements regarding exposure of workers to risks arising from physical agents (vibration).

It explains the values for vertical vibration under heavy operating conditions.

Directives on reduction of vibration values in earth moving machines:

- Perform correct adjustments and maintenance on the machine.



6.14 Weights

Transport weights

Transport weight ¹	3001 (Yanmar)	3001 (Perkins)
Front skip	2450 kg (5,401 lbs)	2470 kg (5,445 lbs)
Swivel skip	2550 kg (5,622 lbs)	2570 kg (5,666 lbs)
Special swivel skip	2400 kg (5,291 lbs)	2570 kg (5,666 lbs)
Front skip and cabin	2550 kg (5,622 lbs)	2640 kg (5,821 lbs)
Swivel skip and cabin	2650 kg (5,842 lbs)	2740 kg (6,041 lbs)

1. Transport weight: basic machine + 10 % fuel capacity.

Operating weights

Operating weight ¹	3001 (Yanmar)	3001 (Perkins)
Front skip	2525 kg (5,566 lbs)	2545 kg (5,611 lbs)
Swivel skip	2625 kg (5,787 lbs)	2645 kg (5,831 lbs)
Special swivel skip	2475 kg (5,456 lbs)	2645 kg (5,831 lbs)
Front skip and cabin	2625 kg (5,787 lbs)	2715 kg (5,986 lbs)
Swivel skip and cabin	2725 kg (6,001 lbs)	2815 kg (6,206 lbs)

1. Operating weight: basic machine + user (75 kg/165 lbs).

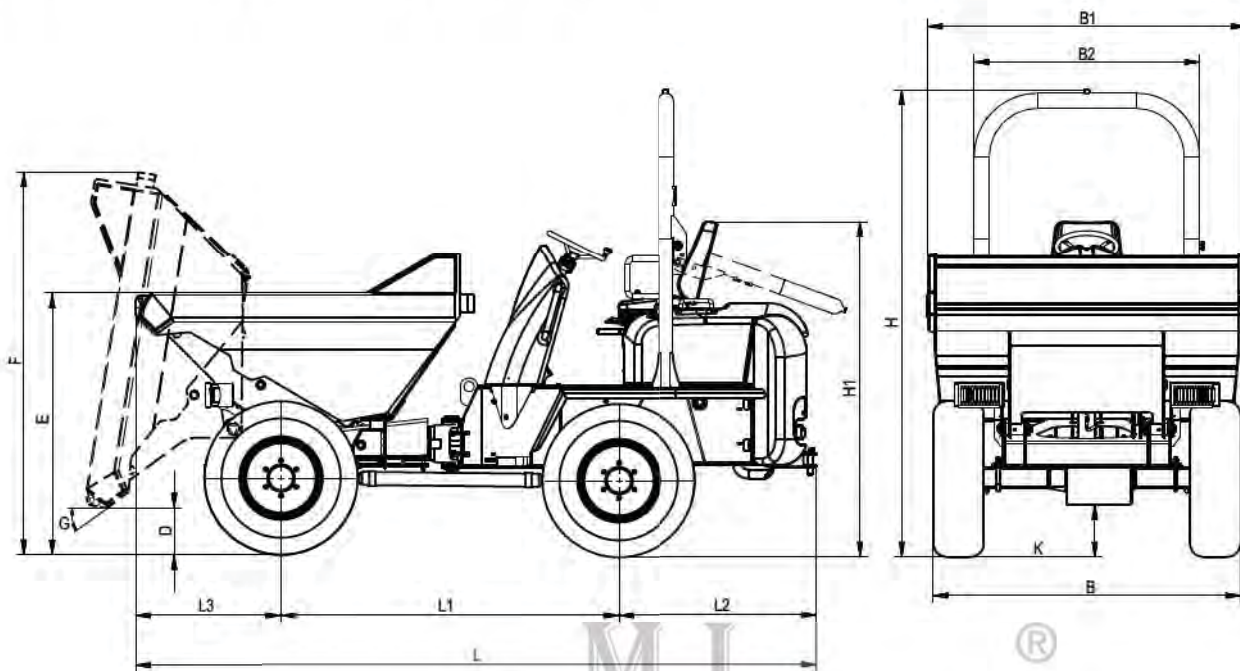


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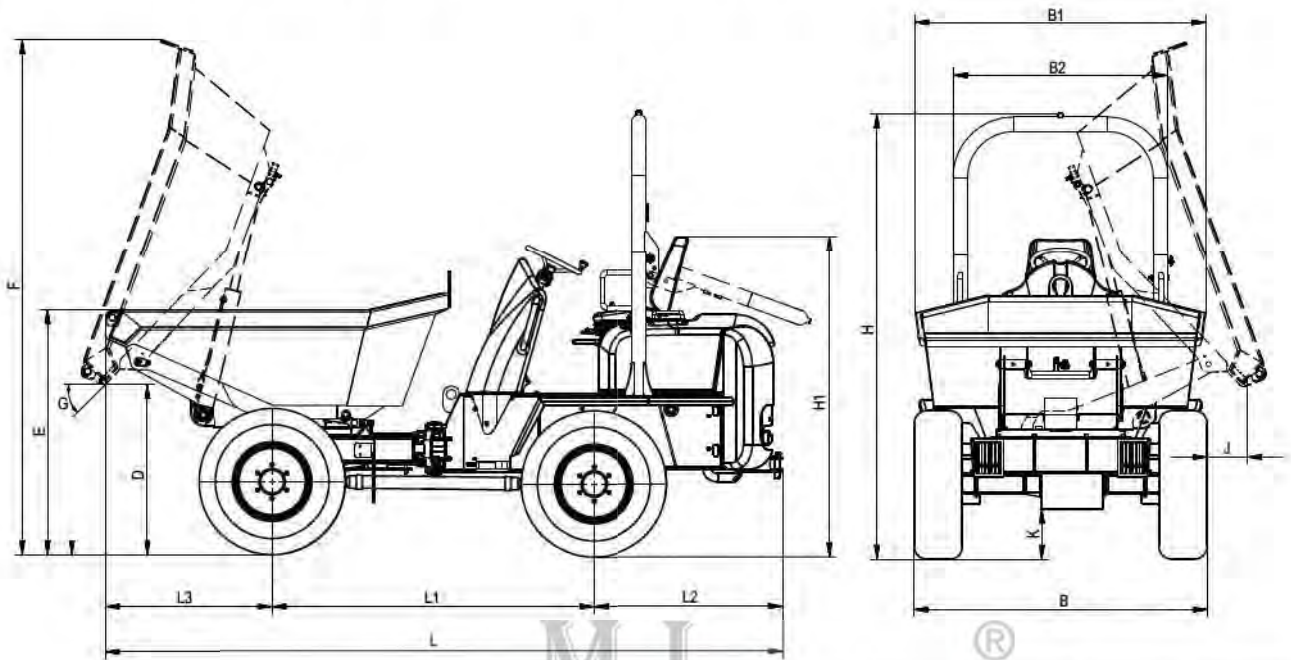
The actual machine weight depends on the selected options and must be read off the type label.

Add the weight of all subsequently installed equipment to the weight of the machine. Weight indications can vary by +/- 2 %.

6.15 Dimensions model 3001 (front skip)



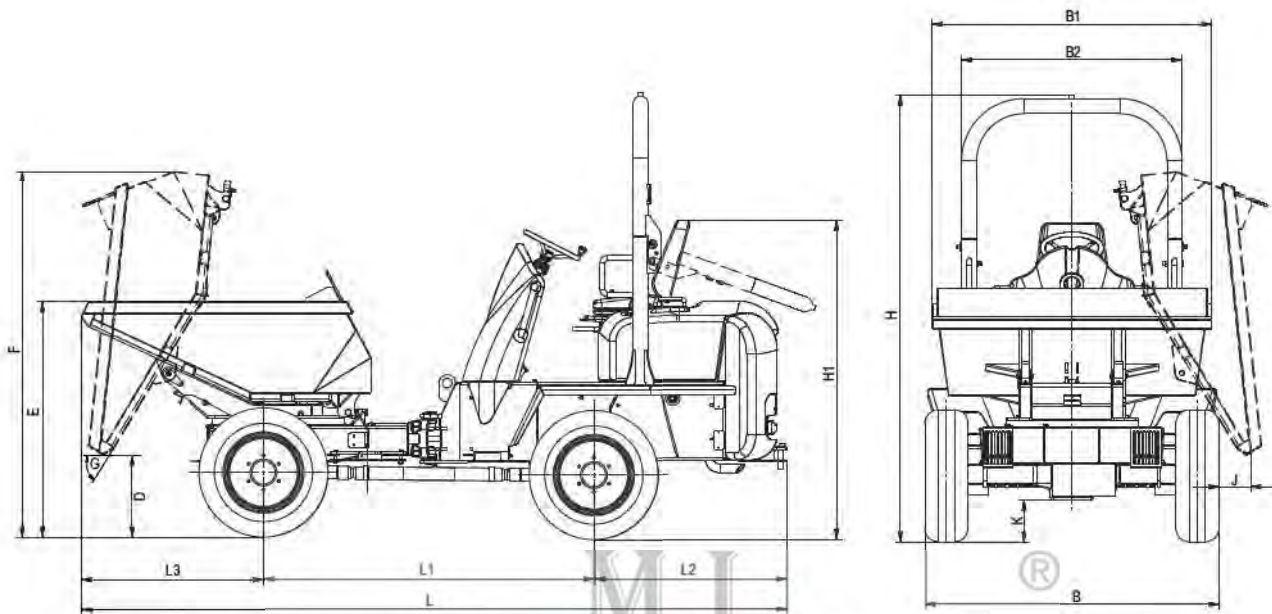
Main data		3001 (Yanmar)	3001 (Perkins)
B	Width	1785 mm (70 in)	
B1	Skip width	1860 mm (73 in)	
B2	Rollbar width	1310 mm (52 in)	
D	Ground clearance of tilted skip	260 mm (10 in)	
E	Height of front edge of skip	1475 mm (58 in)	
F	Height of upper edge of tilted skip	2220 mm (87 in)	
G	Tilt angle of skip	51°	
H	Height of raised rollbar	2670 mm (8'-9")	
H1	Height of lowered rollbar	1870 mm (74 in)	
K	Ground clearance	280 mm (11 in)	
L	Length	3980 mm (13'-1")	4080 mm (13'-5")
L1	Wheelbase	1960 mm (77 in)	
L2	Tail-end lateral projection	1160 mm (46 in)	1260 mm (50 in)
L3	Front projection	860 mm (34 in)	
	Outside turning radius	3850 mm (12'-8")	
	Safe authorized inclination	14° (25 %) in all directions	

6.16 Dimensions model 3001s (swivel skip) (option)


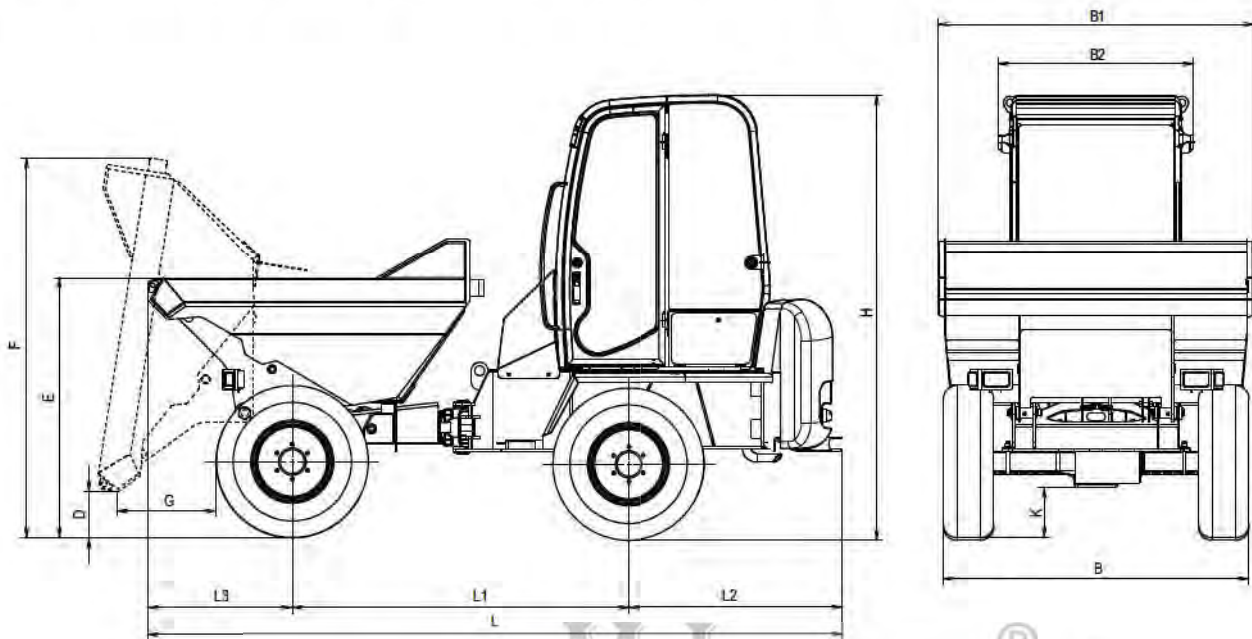
Main data		3001s (Yanmar)	3001s (Perkins)
B	Width	1785 mm (70 in)	
B1	Skip width	1775 mm (70 in)	
B2	Rollbar width	1310 mm (52 in)	
D	Ground clearance of tilted skip	1020 mm (40 in)	
E	Height of front edge of skip	1475 mm (58 in)	
F	Height of upper edge of tilted skip	3125 mm (10'-3")	
G	Tilt angle of skip	46°	
H	Height of raised rollbar	2670 mm (8'-9")	
H1	Height of lowered rollbar	1870 mm (74 in)	
K	Ground clearance	280 mm (11 in)	
L	Length	4140 mm (13'-7")	4240 mm (13'-11")
L1	Wheelbase	1960 mm (77 in)	
L2	Tail-end lateral projection	1160 mm (46 in)	1260 mm (50 in)
L3	Front projection	1020 mm (40 in)	
J	Projection of rotated skip	245 mm (10 in)	
	Outside turning radius	3850 mm (12'-8")	
	Safe authorized inclination	14° (25 %) in all directions	

6.17 Dimensions model 3001s special skip (swivel skip) (option)

Tilted height 2.2 m (86.6 in)

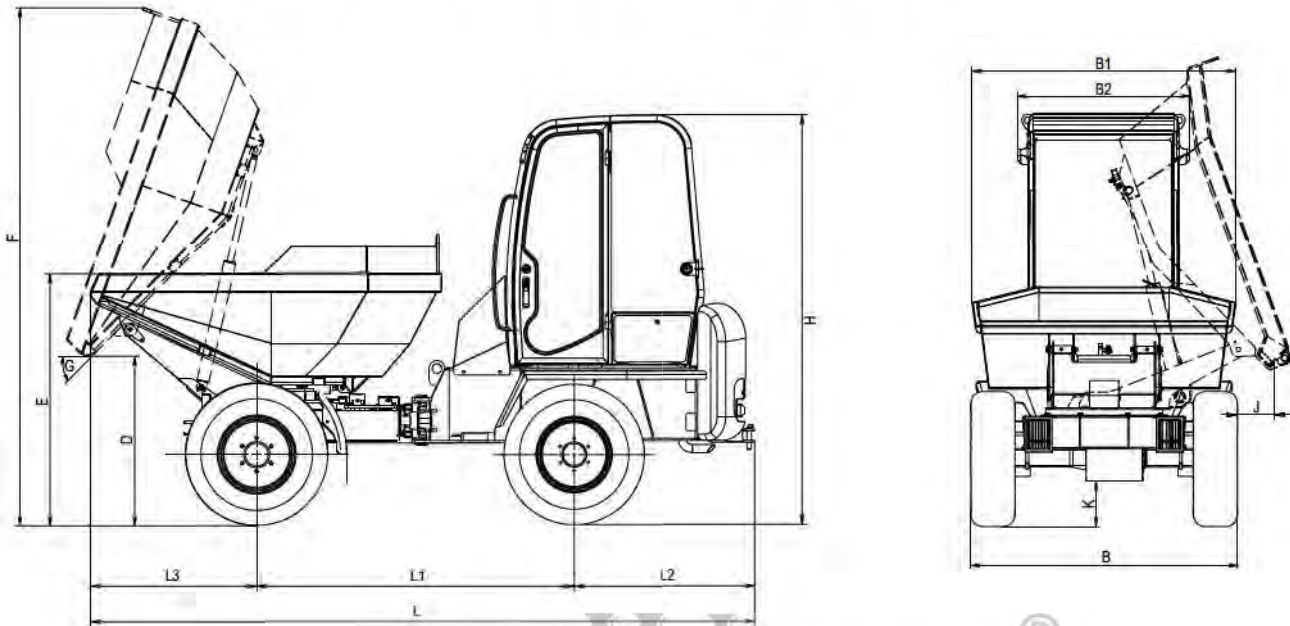


Main data		3001s (Yanmar)	3001s (Perkins)
B	Width	1785 mm (70 in)	
B1	Skip width	1775 mm (70 in)	
B2	Rollbar width	1310 mm (52 in)	
D	Ground clearance of tilted skip	1020 mm (40 in)	
E	Height of front edge of skip	1475 mm (58 in)	
F	Height of upper edge of tilted skip	2200 mm (87 in)	
G	Tilt angle of skip	46°	
H	Height of raised rollbar	2670 mm (8'-9")	
H1	Height of lowered rollbar	1870 mm (74 in)	
K	Ground clearance	280 mm (11 in)	
L	Length	4140 mm (13'-7")	4240 mm (13'-11")
L1	Wheelbase	1960 mm (77 in)	
L2	Tail-end lateral projection	1160 mm (45.7 in)	1260 mm (50 in)
L3	Front projection	1020 mm (40 in)	
J	Projection of rotated skip	245 mm (10 in)	
	Outside turning radius	3850 mm (12'-8")	
	Safe authorized inclination	14° (25 %) in all directions	

6.18 Dimensions model 3001 (front skip) cabin (option)


Main data		3001 (Yanmar)	3001 (Perkins)
B	Width	1785 mm (70 in)	
B1	Skip width	1860 mm (73 in)	
B2	Cabin width	1140 mm (45 in)	
D	Ground clearance of tilted skip	260 mm (10 in)	
E	Height of front edge of skip	1475 mm (58 in)	
F	Height of upper edge of tilted skip	2200 mm (87 in)	
G	Tilt angle of skip	51°	
H	Height	2610 mm (8'-7")	
K	Ground clearance	280 mm (11 in)	
L	Length	3980 mm (13'-1")	4080 mm (13'-5")
L1	Wheelbase	1960 mm (77 in)	
L2	Tail-end lateral projection	1160 mm (46 in)	1260 mm (50 in)
L3	Front projection	860 mm (34 in)	
J	Projection of rotated skip	-	
	Outside turning radius	3850 mm (12'-8")	
	Safe authorized inclination	14° (25 %) in all directions	

6.19 Dimensions model 3001s (swivel skip) cabin (option)



Main data		3001s (Yanmar)	3001s (Perkins)
B	Width	1785 mm (70 in)	
B1	Skip width	1775 mm (70 in)	
B2	Cabin width	1140 mm (45 in)	
D	Ground clearance of tilted skip	1020 mm (40 in)	
E	Height of front edge of skip	1475 mm (58 in)	
F	Height of upper edge of tilted skip	3125 mm (10'-3")	
G	Tilt angle of skip	46°	
H	Height	2610 mm (8'-7")	
K	Ground clearance	280 mm (11 in)	
L	Length	4140 (13'-7")	4240 mm (13'-11")
L1	Wheelbase	1960 mm (77 in)	
L2	Tail-end lateral projection	1160 mm (46 in)	1260 mm (50 in)
L3	Front projection	1020 mm (40 in)	
J	Projection of rotated skip	245 mm (10 in)	
	Outside turning radius	3850 mm (12'-8")	
	Safe authorized inclination	14° (25 %) in all directions	