

SD310

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1. GENERAL SPECIFICATION

ITEMS		UNIT	STANDARD	OPTION(1)	OPTION(2)	OPTION(3)
OPERATING WEIGHT		ton	17.3	17.4	17.6	17.5
BUCKET CAPACITY (SAE HEAPED)		m³	3.0	2.7	2.7	4.0
ENGINE	RATED POWER (Gross)	ps(kw)/rpm	217(160)/2000			
	MAX. TORQUE (Gross)	N.m/rpm	902/1300~1500			
SYSTEM PRESSURE (WORK/STEER)		kg/cm²	170/140			
TRAVEL SPEED		km/h	0~38			
GRADEABILITY		%(°)	58 (30)			
TIRE SIZE			23.5-25-16PR	23.5-25-16PR	23.5-25-16PR	23.5-25-16PR
BREAKOUT FORCE		ton	16.2	15.9	16.2	13.4
WORKING RANGE	DUMP HEIGHT AT 45°(w/ tooth)	mm	3085	3384	3117	3012
	DUMP REACH AT 45° (w/ tooth)	mm	1297	1366	1335	1276
	MAX. DUMP ANGLE (fully raised)	deg	49°	49°	49°	49°
	MAX. TILT ANGLE (on ground)	deg	45°	45°	45°	45°
	MAX. TILT ANGLE (fully raised)	deg	59°	59°	59°	59°
	MAX. TILT ANGLE (at carry)	deg	50°	50°	50°	50°
	BUCKET HINGE HEIGHT	mm	4150	4450	4150	4150
	DIGGING DEPTH (0° level)	mm	120	200	122	90
TRAVEL DIMENSION	OVERALL LENGTH	mm	8260	8625	8302	8287
	OVERALL WIDTH	mm	2992	2992	2992	2992
	OVERALL HEIGHT	mm	3450	3450	3450	3450
	GROUND CLEARANCE	mm	420	420	420	420
	WHEEL BASE	mm	3200	3200	3200	3200
	TREAD	mm	2150	2150	2150	2150
MAX. STEERING ANGLE		deg	40	40	40	40
TURNING RADIUS(OUT TIRE EDGE) (Bucket edge)		mm	5800	5800	5800	5800
SOUND LEVEL in CAB (2000/14/EC)		dB(A)	81	81	81	81
EXTERNAL SOUND POWER LEVEL(2000/14/EC)		dB(A)	112	112	112	112
FUEL TANK CAPACITY		Litre	350	350	350	350
OPTION ATTACHMENTS		STANDARD BUCKET (3.0m³) GENERAL BUCKET (2.7 m³) ROCK BUCKET (2.7 m³) LIGHT MATERIAL BUCKET (4.0 m³)				
Standard : Standard Bucket, Standard Arm, 23.5-25-16 PR Tire OPTION(1) : 2.7 m³ Bucket, Long Arm, 23.5-25-16 PR Tire OPTION(2) : 2.7 m³ Rock Bucket, Standard Arm, 23.5-25-16 PR Tire OPTION(3) : 4.0 m³ Big Bucket, Standard Arm, 23.5-25-16 PR Tire						

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2. ENGINE SYSTEM

2.1) ENGINE

MAKER & MODEL	:	Doosan DE08TIS (TIER-II Certified)
RATED HORSE POWER	:	160 kW/2000 rpm
MAX. TORQUE	:	902 N.m/1300 rpm
TYPE	:	TURBO, DIRECT INJECTION
DISPLACEMENT	:	8071 cc
NO. OF CYLINDER	:	6
HIGH IDLE SPEED	:	2200±50 rpm
LOW IDLE SPEED	:	800±25 rpm
STARTING MOTOR	:	24V X 6 kw

2.2) ALTERNATOR

VOLTAGE	:	28 V
RATING AMPERES	:	60 A

2.3) BATTERY

SYSTEM VOLTAGE	:	24 V
QUANTITY	:	12 V x 2
CAPACITY (AMP)	:	120 AH

3. HYDRAULIC SYSTEM

3.1) MAIN PUMP

TYPE	:	FIXED GEAR
DISPLACEMENT	:	104.9 cc/rev
MAX. FLOW RATE	:	206 l/min
TANK PRESSURIZING DEVICE	:	SEcBREATHER)

3.2) STEERING & PILOT PUMP

TYPE	:	TANDEM, FIXED GEAR
DISPLACEMENT (STEER/PILOT)	:	81.68 / 21.14 cc/rev
MAX.FLOW RATE (STEER/PILOT)	:	152 / 39 l/min

3.3) CONTROL VALVE

TYPE	:	PILOT CONTROL WITH FLOAT SPOOL
NO. OF SPOOLS	:	2 (3)
SPOOL ARRANGEMENT	:	BUCKET - LOADER ARM - AUX.
RELIEF VALVE PRESSURE	:	170 kgf/cm²
OVERLOAD RELIEF VALVE PRESS.	:	190 kgf/cm²

3.4) REMOTE CONTROL VALVE

TYPE	:	PILOT OPERATED MONO LEVER WITH MAGNETIC COILS (DETENT COILS- ARM RAISE/FLOAT, BUCKET CROWD)
PRESSURE/STROKE CHARACTER	:	25 BAR @ 14 mm STROKE

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4. DRIVE MECHANISM

4.1) TRAVELLING SYSTEM

4.1.1) TRANSMISSION TYPE	:	4 SPEEDS, POWER-SHIFT, COUNTERSHAFT, ENGINE REMOTE MOUNTED WITH PROPELLER SHAFT & DAMPE
4.1.2) FRONT AXLE TYPE	:	FULLY FLOATING PLANETARY-TYPE HUB DRIVE FIXED MOUNTING
4.1.3) REAR AXLE TYPE	:	FULLY FLOATING PLANETARY-TYPE HUB DRIVE TRUNNION MOUNTING
4.1.4) TRAVELLING PERFORMANCE (REFER TO NEXT PAGE)		
MAX. SPEED	:	38.0 KPH
MAX. TRACTIVE EFFORT	:	17 TON
GRADEABILITY	:	30° (58%)

4.2) BRAKE SYSTEM

4.2.1) BRAKE PUMP TYPE	:	PISTION AIR
DISPLACEMENT	:	110cm²
MAX. SUPPLY FLOW	:	145 l/min
4.2.2) SERVICE BRAKE VALVE (SINGLE)		
BRAKE PRESSURE AIR	:	7.84 kgf/cm²
BRAKE PRESSURE OIL	:	140 kgf/cm² at air pressure 7.84 kgf/cm²
PEDAL FORCE	:	30 kg at 140 kgf/cm²
BRAKE DISTANCE	:	5.7 m at 32kph

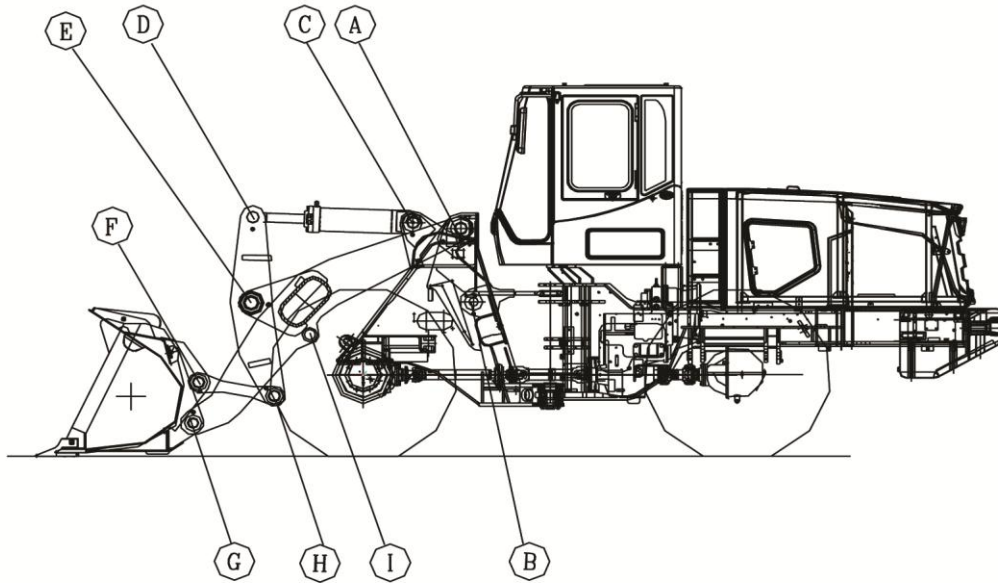
4.3.) STEERING SYSTEM

4.3.1) PUMP TYPE	:	GEAR
DISPLACEMENT	:	81.68 cc/rev
CONSTANT FLOW	:	152 l/min
4.3.2) STEERING UNIT TYPE	:	Coaxial Flow Amplifying
DISPLACEMENT	:	1000 cc/rev

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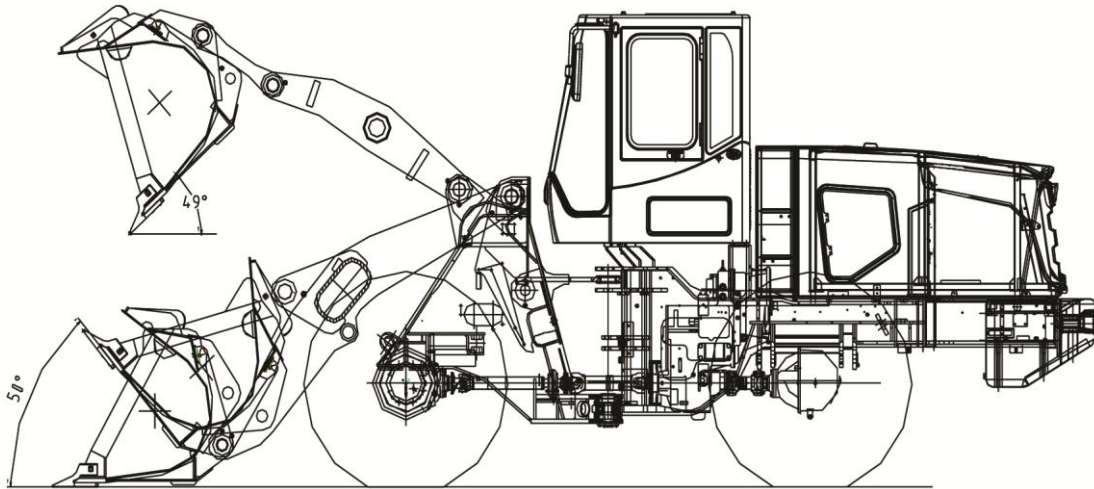
POINT	DIA. (mm)	LENGTH (mm)
A	100	306
B	80	306
C	100	276
D	100	213
E	110	400
F	90	236
G	80	276
H	90	213
I	80	210

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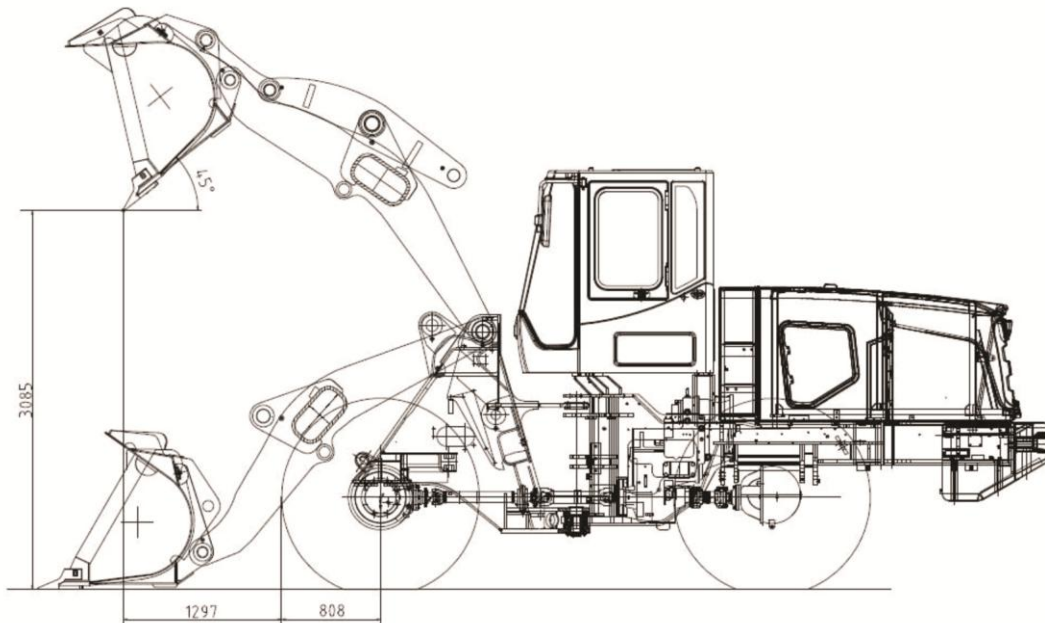
5. DIMENSIONS AND WORKING RANGE

5.1) MAX. DUMP ANGLE AT FULL HEIGHT

5.1.1) MAX. ROLLBACK AT GROUND



5.1.2) DUMPING CLEARANCE & DUMPING REACH

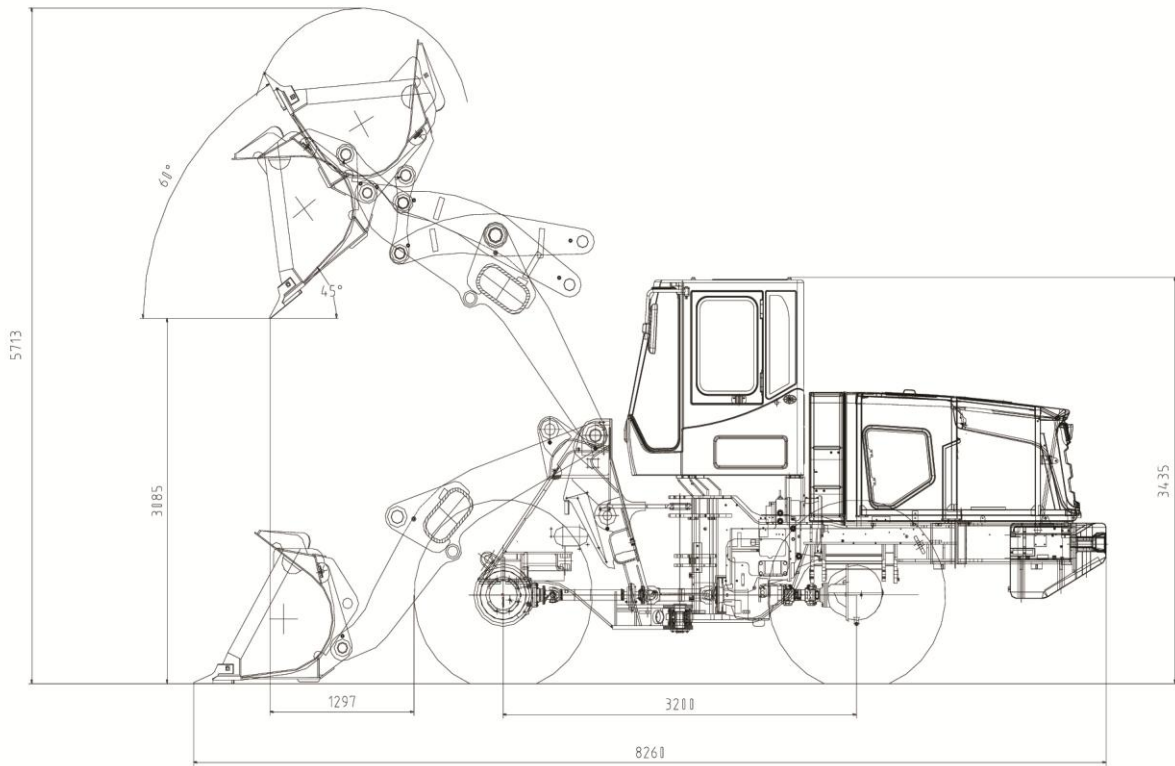


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5.2) DIMENSIONS & PERFORMANCE SPECIFICATIONS



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6. PERFORMANCE DATA

6.1) PRESSURE SETS

WORKING (PORT RELIEF)	:	170 ± 5 kg/cm²
STEERING RELIEF (LS PORT SIDE)	:	140 ± 5 kg/cm²
(STEER PUMP SIDE)	:	200 ± 5 kg/cm²
PILOT CONTROL	:	30 ± 2 kg/cm²
BRAKE ACCUMULATOR CHARGING	:	7.84 ± 5 kg/cm²
SERVICE BRAKE	:	140 ± 3 kg/cm²
PARKING BRAKE RELEASE	:	4.0 ± 3 kg/cm²
T/M SELECTION PRESSURE	:	16 + 2 kg/cm²

6.2) SPEED & FORCE

OPERATION		UNIT	SPEED-FORCE	REMARKS
BOOM	UP	SEC	6.5 ± 0.4	
	DOWN	SEC	3.5 ± 0.4	
BUCKET	CROWD	SEC	1.7 ± 0.3	
	DUMP	SEC	1.3 ± 0.3	
STEERING	LOCK TO LOCK	SEC	2.9 ± 0.4	
E/G RPM (NO LOAD)	HIGH	RPM	2200 ± 50	
	LOW	RPM	750 ± 50	
E/G RPM (LOAD)	HYDRAULIC STALL	RPM	2150 ± 50	
	CONVERTER STALL	RPM	2130 ± 50	
	T/C + HYD. STALL	RPM	1770 ± 50	
COOLING FAN	HIGH	RPM	1400 ± 50	
TRAVEL SPEED (1/2)	LOW	Km/h	11/36	
BRAKING DISTANCE	HIGH	m	5.7 m at 32 kph	
MAX. TRACTIVE EFFORT		kg	16400	
BREAKOUT FORCE		kg	16,200	
PAYLOAD		kg	5,000	
STATIC TIPPING LOAD (straight)		kg	13,300	
STATIC TIPPING LOAD (full turn)		kg	11,300	

7. NOISE LEVEL

L _{WA} GUARANTEED SOUND POWER LEVEL	:	114 dB(A) (2000/14/EC)
L _{pA} OPERATOR NOISE	:	81 dB(A) (ISO 6396)

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8. USER SERVICE DATA

COMPARTMENT/ GREASE JOINT	No, OF C/G	REFILL CAPACITY	FLUID OR LUBRICANT	SERVICE INTERVAL (hr)		
				LUBE	FILTER	
COOLING SYSTEM	1	45 ℓ	WATER	2000	-	
FUEL TANK	1	330 ℓ	DIESEL	-	500	
HYD. OIL TANK CAPACITY	1	245 ℓ	ISO #46	2000	1000	
ENGINE CRANKCASE	2	22 ℓ	SAE 15W40	250	250	
DIFFERENTIAL	FRONT	1	17 ℓ	GEAR OIL	1000	-
	REAR	1	17 ℓ	GEAR OIL	1000	-
HUB REDUCTION	FRONT	2	2 x 5 ℓ	GEAR OIL	1000	-
	REAR	2	2 x 5 ℓ	GEAR OIL	1000	-
T/C AND T/M	1	35 ℓ	SAE 15W40	500	500	
PROPELLER SHAFT	10	-	GREASE	10	-	
FRONT PIN	13	-	GREASE	10	-	
ARTICULATION JOINT	2	-	GREASE	10	-	
REAR AXLE PIVOT	2	-	GREASE	10	-	
STEER CYLINDER	4	-	GREASE	10	-	

9. TIPPING LOAD (kgf)

9.1) TIPPING LOAD WITH BUCKET (3.0 m³)

- 13,300 kg AT MAX. REACH, AT STRAIGHT FRAME.
- 11,300kg AT MAX. REACH, AT FULL TURNED FRAME.

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