

# SD300

CONTENTS	PAGE
1. GENERAL SPECIFICATION.....	2
2. ENGINE SYSTEM.....	3
3. HYDRAULIC SYSTEM.....	5
4. DRIVE MECHANISM.....	5
5. HYDRAULIC CYLINDERS.....	7
6. DIMENSIONS AND WORKING RANGE.....	7
7. PERFORMANCE DATA.....	9
8. NOISE LEVEL.....	10
9. USER SERVICE DATA.....	10
10. TIPPING LOAD.....	10

MODEL

SD300

1/10

# 1. GENERAL SPECIFICATION

ITEMS		UNIT	STANDARD	OPTION(1)	OPTION(2)	OPTION(3)
OPERATING WEIGHT		<b>ton</b>	<b>17</b>	<b>17.1</b>	<b>17.3</b>	<b>17.2</b>
BUCKET CAPACITY ( SAE HEAPED)		<b>m<sup>3</sup></b>	<b>2.7</b>	<b>3.0</b>	<b>2.7</b>	<b>4.0</b>
ENGINE	RATED POWER (Gross)	<b>ps(kw)/rpm</b>	<b>220(162)/2000</b> ← ←			
	MAX. TORQUE (Gross)	<b>N.m/rpm</b>	<b>900/1300~1500</b> <b>75/1300</b>			
SYSTEM PRESSURE (WORK/STEER)		<b>kg/cm<sup>2</sup></b>	<b>170/140</b> ← ←			
TRAVEL SPEED		<b>km/h</b>	<b>0~36</b>			
GRADEABILITY		<b>%(°)</b>	<b>58 (30)</b> ←			
TIRE SIZE		<b>0</b>	<b>23.5-25-16PR</b>	<b>23.5-25-16PR</b>	<b>23.5-25-16PR</b>	<b>23.5-25-16PR</b>
BREAKOUT FORCE		<b>ton</b>	<b>16.2</b>	<b>15.9</b>	<b>16.2</b>	<b>13.4</b>
WORKING RANGE	DUMP HEIGHT AT 45°(w/ tooth)	<b>mm</b>	<b>3085</b>	<b>3384</b>	<b>3117</b>	<b>3012</b>
	DUMP REACH AT 45° (w/ tooth)	<b>mm</b>	<b>1297</b>	<b>1366</b>	<b>1335</b>	<b>1276</b>
	MAX. DUMP ANGLE (fully raised)	<b>deg</b>	<b>49°</b>	<b>49°</b>	<b>49°</b>	<b>49°</b>
	MAX. TILT ANGLE (on ground)	<b>deg</b>	<b>45°</b>	<b>45°</b>	<b>45°</b>	<b>45°</b>
	MAX. TILT ANGLE (fully raised)	<b>deg</b>	<b>59°</b>	<b>59°</b>	<b>59°</b>	<b>59°</b>
	MAX. TILT ANGLE (at carry)	<b>deg</b>	<b>50°</b>	<b>50°</b>	<b>50°</b>	<b>50°</b>
	BUCKET HINGE HEIGHT	<b>mm</b>	<b>4150</b>	<b>4450</b>	<b>4150</b>	<b>4150</b>
	DIGGING DEPTH (0° level)	<b>mm</b>	<b>120</b>	<b>200</b>	<b>122</b>	<b>90</b>
TRAVEL DIMENSION	OVERALL LENGTH	<b>mm</b>	<b>8080</b>	<b>8445</b>	<b>8122</b>	<b>8107</b>
	OVERALL WIDTH	<b>mm</b>	<b>2992</b>	<b>2992</b>	<b>2992</b>	<b>2992</b>
	OVERALL HEIGHT	<b>mm</b>	<b>3450</b>	<b>3450</b>	<b>3450</b>	<b>3450</b>
	GROUND CLEARANCE	<b>mm</b>	<b>420</b>	<b>420</b>	<b>420</b>	<b>420</b>
	WHEEL BASE	<b>mm</b>	<b>3200</b>	<b>3200</b>	<b>3200</b>	<b>3200</b>
	TREAD	<b>mm</b>	<b>2240</b>	<b>2240</b>	<b>2240</b>	<b>2240</b>
MAX. STEERING ANGLE		<b>deg</b>	<b>40</b>	<b>40</b>	<b>40</b>	<b>40</b>
TURNING RADIUS(OUT TIRE EDGE) (BUCKET EDGE)		<b>mm</b>	<b>5630</b>	<b>5630</b>	<b>5630</b>	<b>5630</b>
SOUND LEVEL in CAB (2000/14/EC)		<b>dB(A)</b>	<b>85</b>	<b>85</b>	<b>85</b>	<b>85</b>
EXTERNAL SOUND POWER LEVEL(2000/14/EC)		<b>dB(A)</b>	<b>114</b>	<b>114</b>	<b>114</b>	<b>114</b>
FUEL TANK CAPACITY		<b>Litre</b>	<b>300</b>	<b>300</b>	<b>300</b>	<b>300</b>
OPTION ATTACHMENTS		STANDARD BUCKET ( <b>2.7m<sup>3</sup></b> ) GENERAL BUCKET ( <b>3.0 m<sup>3</sup></b> ) ROCK BUCKET ( <b>2.7 m<sup>3</sup></b> ) LIGHT MATERIAL BUCKET ( <b>4.0 m<sup>3</sup></b> )				
Standard : <b>Standard Bucket, Standard Arm, 23.5-25-16 PR Tire</b> OPTION(1) : <b>3.0 m<sup>3</sup> Bucket, Long Arm, 23.5-25-16 PR Tire</b> OPTION(2) : <b>2.7 m<sup>3</sup> Rock Bucket, Standard Arm, 23.5-25-16 PR Tire</b> OPTION(3) : <b>4.0 m<sup>3</sup> Big Bucket, Standard Arm, 23.5-25-16 PR Tire</b>						

MODEL

**SD300**

**2/10**

## 2. ENGINE SYSTEM

### 2.1) ENGINE

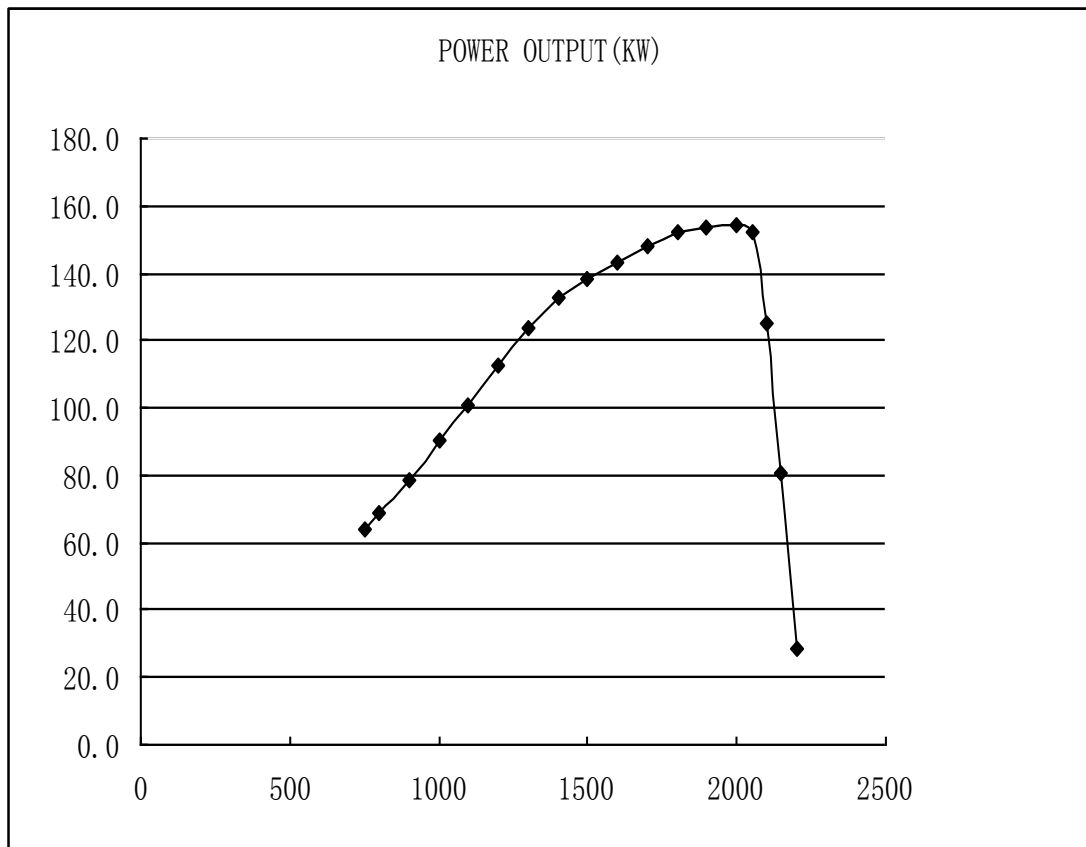
MAKER & MODEL	:	<b>Wei chai WD10G220E23 (TIER-II Certified)</b>
RATED HORSE POWER	:	<b>162 Kw/2000 rpm</b>
MAX. TORQUE	:	<b>900 N.m/13000~1500 rpm</b>
TYRE	:	<b>TURBO,DIRECT INJECTION</b>
DISPLACEMENT	:	<b>9726 cc</b>
NO. OF CYLINDER	:	<b>6</b>
HIGH IDLE SPEED	:	<b>2150~2200 rpm</b>
LOW IDLE SPEED	:	<b>750 rpm</b>
STARTING MOTOR	:	<b>24V X 7.5 kw</b>

### 2.2) ALTERNATOR

VOLTAGE	:	<b>28 V</b>
RATING AMPERES	:	<b>53.6 A</b>

### 2.3) BATTERY

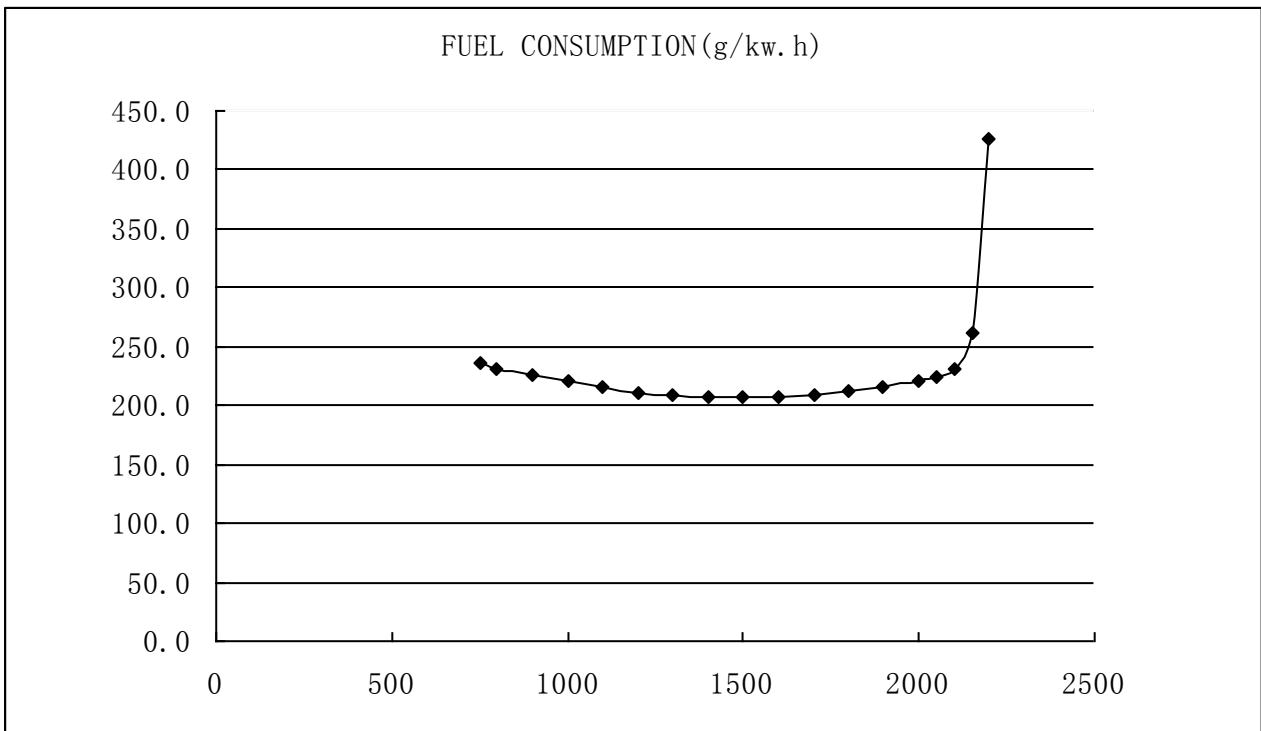
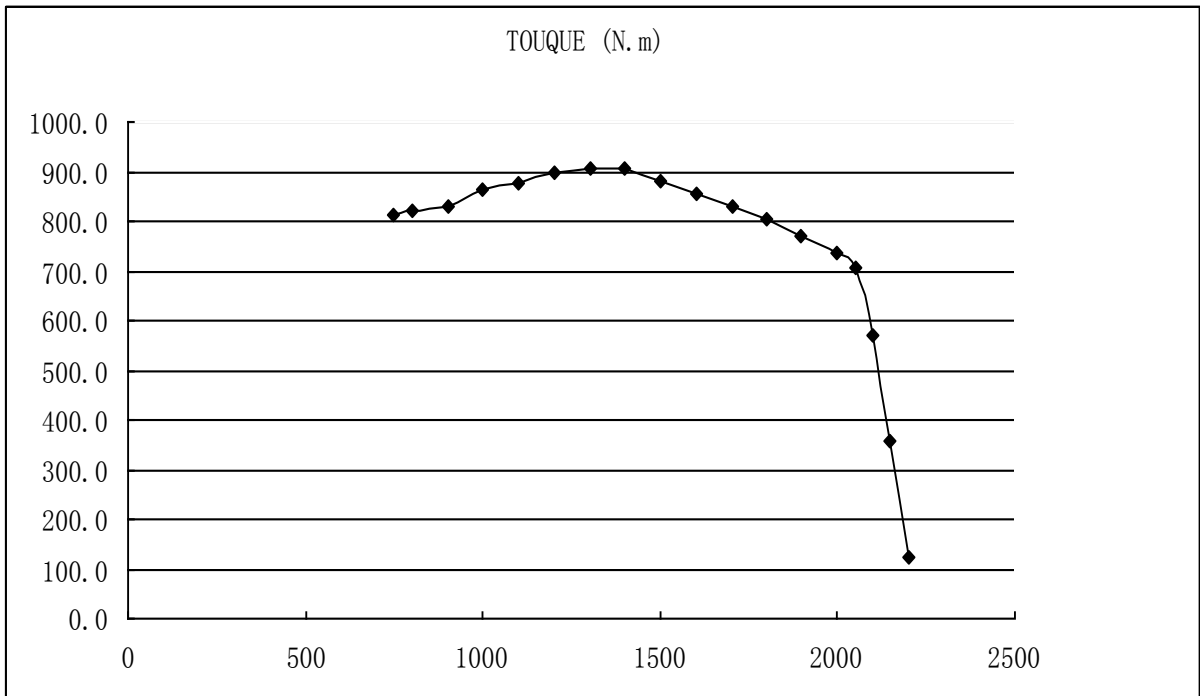
SYSTEM VOLTAGE	:	<b>24 V</b>
QUANTITY	:	<b>12 V x 2</b>
CAPACITY (AMP)	:	<b>120 AH</b>



MODEL

SD300

3/10



MODEL	SD300		4/10
-------	-------	--	------

### 3. HYDRAULIC SYSTEM

#### 3.1) MAIN PUMP

TYPE : **FIXED GEAR**  
DISPLACEMENT : **100 cc/rev**  
MAX. FLOW RATE : **215 l/min**  
TANK PRESSURIZING DEVICE : **SEMI PRESSURISED (AIR BREATHER)**

#### 3.2) STEERING & PILOT PUMP

TYPE : **TANDEM, FIXED GEAR**  
DISPLACEMENT(STEER/PILOT) : **80 / 10 cc/rev**  
MAX.FLOW RATE(STEER/PILOT) : **145 / 19 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/cm<sup>2</sup>**  
OVERLOAD RELIEF VALVE PRESS. : **190 kgf/cm<sup>2</sup>**

#### 3.4) REMOTE CONTROL VALVE

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

### 4. DRIVE MECHANISM

#### 4.1) TRAVELLING SYSTEM

##### 4.1.1) TRANSMISSION

TYPE : **2 SPEED, POWER-SHIFT,  
PLANET,ENGINE REMOTE  
MOUNTED WITH PROPELLER  
SHAFT & DAMPER**

##### 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**

MODEL

SD300

5/10

4.1.4) TRAVELLING PERFORMANCE (REFER TO NEXT PAGE)

MAX. SPEED : **38.0 KPH**  
MAX. TRACTIVE EFFORT : **16 TON**  
GRADEABILITY : **30° (58%)**

4.2) BRAKE SYSTEM

4.2.1) BRAKE PUMP

TYPE : **PISTION AIR**  
DISPLACEMENT : **168 cc/rev**  
MAX. SUPPLY FLOW : **145 l/min**

4.2.2) SERVICE BRAKE VALVE (SINGLE)

BRAKE PRESSURE AIR : **7.84 kgf/cm<sup>2</sup>**  
BRAKE PRESSURE OIL : **140 kgf/cm<sup>2</sup> at air pressure**  
**7.84 kgf/cm<sup>2</sup>**  
PEDAL FORCE : **30 kg at 140 kgf/cm<sup>2</sup>**

4.2.3) SYSTEM & PRESSURE SYSTEM

SYSTEM : **AIR PUSH HYDRAULIC, SINGLE LINE**  
BRAKE DISTANCE : **8.7 m at 32kph**

4.3) STEERING SYSTEM

4.3.1) PUMP

TYPE : **GEAR**  
DISPLACEMENT : **80 cc/rev**  
CONSTANT FLOW : **145 l/min**

4.3.2) STEERING UNIT

TYPE : **Coaxial Flow Amplifying**  
DISPLACEMENT : **1000 cc/rev**

MODEL

**SD300**

6/10

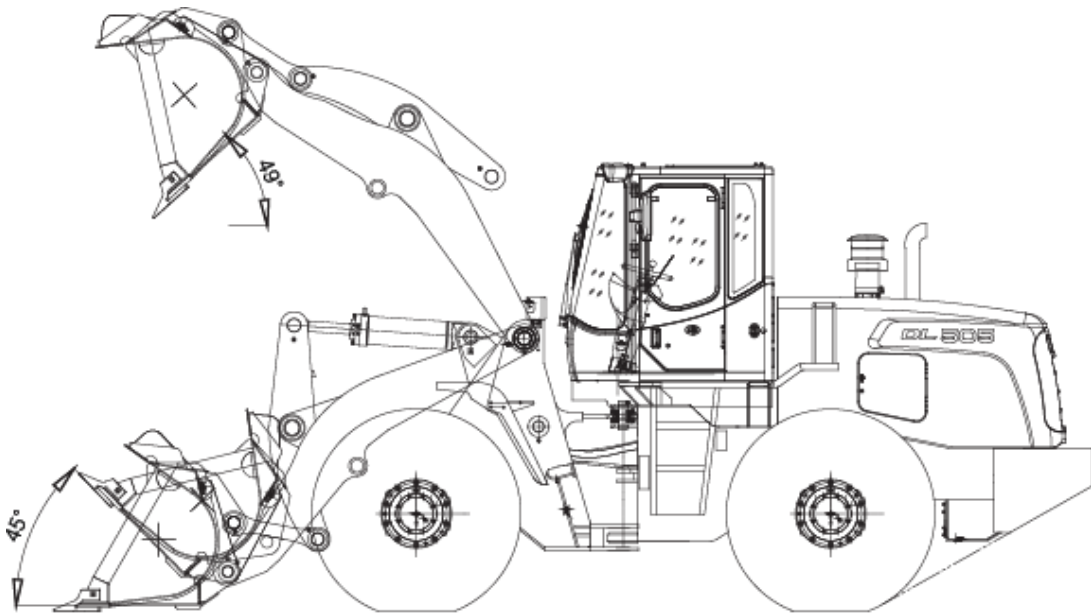
## 5. HYDRAULIC CYLINDERS

	LIFT	BUCKET	STEER
QUANTITY	2	1	2
BORE	165	190	90
ROD DIA.	90	90	50
STROKE	823	576	485

## 6. DIMENSIONS AND WORKING RANGE

6.1) MAX. DUMP ANGLE AT FULL HEIGHT

MAX. ROLLBACK AT GROUND

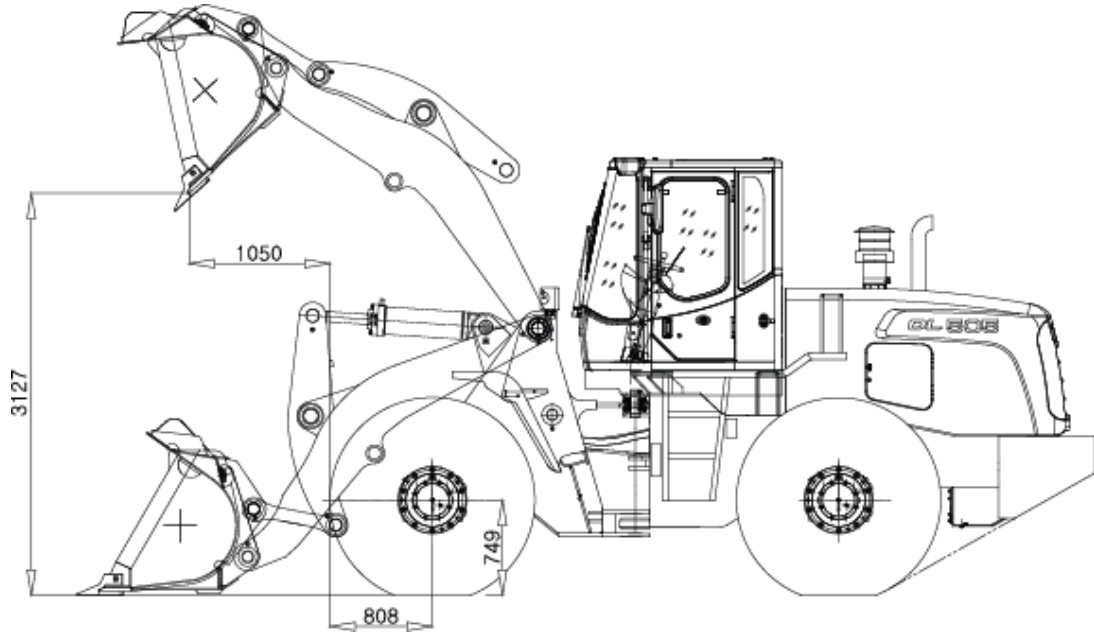


MODEL

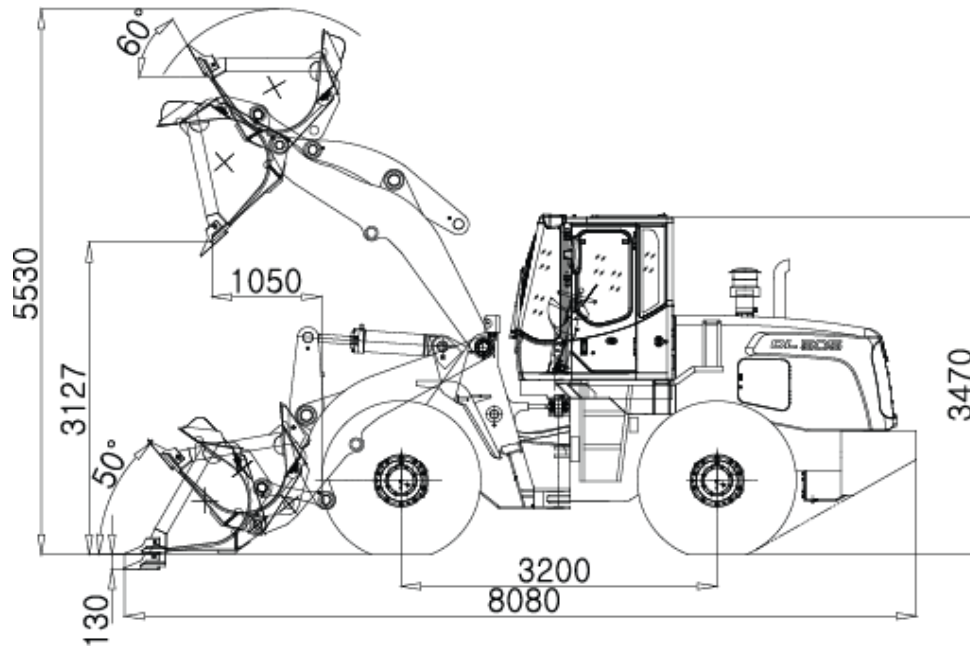
SD300

7/10

6.2) DUMPING CLEARANCE & DUMPING REACH



6.3) DIMENSIONS & PERFORMANCE SPECIFICATIONS



MODEL

SD300

8/10



## 7. PERFORMANCE DATA

### 7.1) PRESSURE SETS

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

### 7.2) SPEED & FORCE

OPERATION		UNIT	SPEED-FORCE	REMARKS
BOOM	UP	<b>SEC</b>	<b>6.5 ± 0.4</b>	
	DOWN	<b>SEC</b>	<b>3.5 ± 0.4</b>	
BUCKET	CROWD	<b>SEC</b>	<b>1.7 ± 0.3</b>	
	DUMP	<b>SEC</b>	<b>1.3 ± 0.3</b>	
STEERING	LOCK TO LOCK	<b>SEC</b>	<b>2.9 ± 0.4</b>	
E/G RPM (NO LOAD)	HIGH	<b>RPM</b>	<b>2200 ± 50</b>	
	LOW	<b>RPM</b>	<b>750 ± 50</b>	
E/G RPM (LOAD)	HYDRAULIC STALL	<b>RPM</b>	<b>2150 ± 50</b>	
	CONVERTER STALL	<b>RPM</b>	<b>2130 ± 50</b>	
	T/C + HYD. STALL	<b>RPM</b>	<b>1770 ± 50</b>	
COOLING FAN	HIGH	<b>RPM</b>	<b>1800± 50</b>	
TRAVEL SPEED (1/2)	LOW	<b>Km/h</b>	<b>11/36</b>	
BRAKING DISTANCE	HIGH	<b>m</b>	<b>10.2 m at 32 kph</b>	
MAX. TRACTIVE EFFORT		<b>kg</b>	<b>16400</b>	
BREAKOUT FORCE		<b>kg</b>	<b>17,100</b>	
PAYLOAD		<b>kg</b>	<b>5,000</b>	
STATIC TIPPING LOAD (straight)		<b>kg</b>	<b>11,300</b>	
STATIC TIPPING LOAD (full turn)		<b>kg</b>	<b>10,400</b>	

MODEL

**SD300**

9/10

## 8. NOISE LEVEL

$L_{WA}$  SURFACE SOUND POWER LEVEL : **114 dB(A) (2000/14/EC)**  
 $L_{pA}$  OPERATOR'S CABIN NOISE LEVEL : **85 dB(A) (ISO 6396)**

## 9. USER SERVICE DATA

COMPARTMENT/ GREASE JOINT	No, OF C/G	REFILL CAPACITY	FLUID OR LUBRICANT	SERVICE INTERVAL (hr)		
				LUBE	FILTER	
COOLING SYSTEM	1	42 ℓ	WATER	2000	—	
FUEL TANK	1	300 ℓ	DIESEL	—	500	
HYD. OIL TANK CAPACITY	1	245ℓ	ISO #46	2000	1000	
ENGINE CRANKCASE	1	19 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	49 ℓ	SAE 15W40	1000	1000	
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	—	

## 10. TIPPING LOAD (kgf)

10.1) TIPPING LOAD WITH BUCKET (3.0 m<sup>3</sup>)

- . 11,400 kg AT MAX. REACH, AT STRAIGHT FRAME.
- . 10,400kg AT MAX. REACH, AT FULL TURNED FRAME.

MODEL	SD300		10/10
-------	-------	--	-------