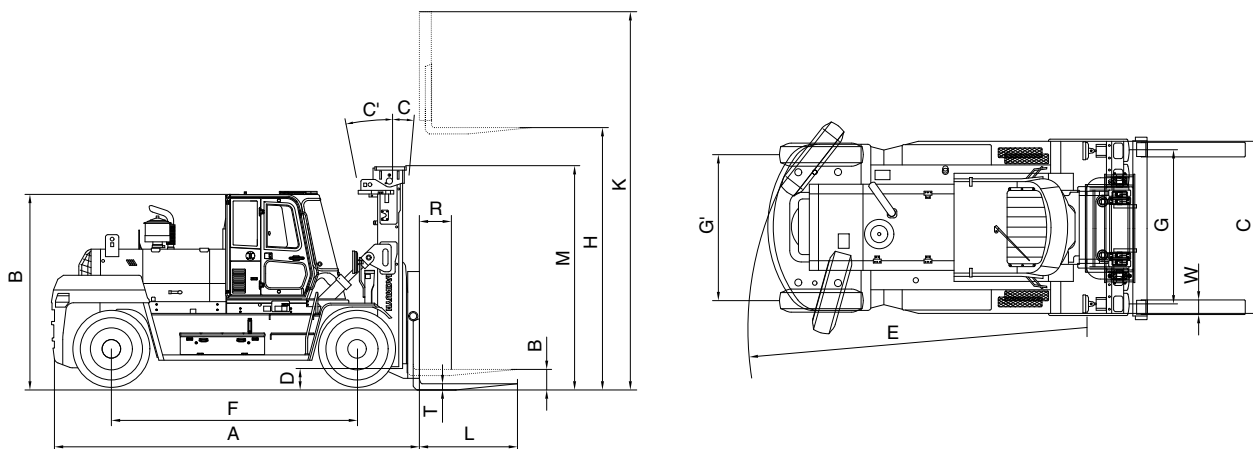


8. SPECIFICATIONS

1. SPECIFICATION TABLE



180D9SP01

Model			Unit	180D-9
Capacity			kg (lb)	18000 (40000)
Load center		R	mm (in)	900 (38)
Weight (Unloaded)			kg (lb)	26251 (57870)
Fork	Lifting height	A	mm (ft·in)	3320 (10' 11")
	Free lift	B	mm (ft·in)	0
	Lifting speed (Unload/Load)		mm/sec	420/370
	Lowering speed (Unload/Load)		mm/sec	300/420
	L×W×T	L,W,T	mm (in)	2450×250×100 (100×9.8×3.9)
Mast	Tilt angle (forward/backward)	C/C'	degree	10/10
	Max height	K	mm (ft·in)	4960 (16' 3")
	Min height	M	mm (ft·in)	3350 (11' 0")
Body	Travel speed (Unload)		km/h	37.5
	Gradeability (Load)		degree (%)	17.3 (31.1%)
	Min turning radius (Outside)	E	mm (ft·in)	5220 (18' 1")
ETC	Operating pressure		kgf/cm ²	240
	Hydraulic oil tank		ℓ (U.S.gal)	See page 7-56.
	Fuel tank		ℓ (U.S.gal)	312 (82.4)
Overall length		A	mm (ft·in)	5595 (18' 4")
Overall width		C	mm (ft·in)	2540 (8' 4")
Cabin height		B	mm (ft·in)	2990 (9' 10")
Ground clearance (Mast)		D	mm (in)	245 (9.6)
Wheel base		F	mm (ft·in)	3750 (12' 4")
Wheel tread front/rear		G/G'	mm (ft·in)	1860/2033 (6' 1" / 6' 8")

2. SPECIFICATION FOR MAJOR COMPONENTS

1) ENGINE

Item	Unit	Specification
Model	-	Benz 6R 1000 C30
Type	-	4 cycle turbocharged and inter cooled engine
Cooling Method	-	Water cooling
Number of cylinders and arrangement	-	6 cylinders, In-line
Firing order	-	1-5-3-6-2-4
Combustion chamber type	-	Direct injection
Cylinder bore X stroke	mm (in)	110 × 135 mm (4.33" × 5.31")
Piston displacement	cc (cu in)	7700 (470)
Compression ratio	-	17.5 : 1
Rated gross horse power	hp/rpm	285/2200
Maximum gross torque at rpm	kgf · m/rpm	117/1400
Engine oil quantity	l (U.S.gal)	26 (6.9)
Dry weight	kg (lb)	723 (1594)
High idling speed	rpm	2200
Low idling speed	rpm	600
Rated fuel consumption	g/ps.hr	165
Starting motor	V-kW	DENSO, 24-7.5
Alternator	V-A	24-70
Battery	V-AH	24-100

2) MAIN PUMP

Item	Unit	Specification
Type	-	Axial piston variable pump
Capacity	cc/rev	74+74
Maximum operating pressure	bar	300
Rated speed (Max/Min)	rpm	2550/500

3) MAIN CONTROL VALVE

Item	Unit	Specification
Type	-	Sectional
Operating method	-	Hydraulic pilot
Main relief valve pressure	bar	240/165
Flow capacity	lpm	400

4) STEERING UNIT

Item	Unit	Specification
Type	-	Load sensing/Non load reaction/Dynamic signal
Capacity	cc/rev	520
Rated flow	lpm	45.4

5) POWER TRAIN DEVICES

Item		Specification		
Torque converter	Model	W340, 1.773/271 (ZF SACH)		
	Type	3 Element, 1 stage, 2 phase		
	Stall ratio	1.773 : 1		
Transmission	Type	Full auto, power shift		
	Gear shift(FWD/REV)	3/3		
	Adjustment	Electrical single lever type		
	Overhaul ratio	FR	1 : 5.683	2 : 2.304 3 : 0.963
		RR	1 : 5.041	2 : 2.044 3 : 0.854
Axle	Type	Front-wheel drive type, fixed location		
	Gear ratio	11.73 : 1		
	Gear	Ring & Pinion gear type		
Wheels	Q'ty(FR/RR)	Double : 4/2		
	Front(drive)	12.00-20-20 PR		
	Rear(steer)	12.00-20-20 PR		
Brakes	Travel	Front wheel, wet disc brake		
	Parking	Axle pinion, hydraulic released caliper brake		
Steering	Type	Full hydraulic, power steering		
	Steering angle	71.9° to both right and left angle, respectively		

3. TIGHTENING TORQUE

NO	Item		Size	kgf · m	lbf · ft
1	Engine	Engine mounting bolt, nut	M24×3.0	100±15	723±109
2		Radiator mounting bolt, nut	M12×1.75	12.8±3.0	93±22
3	Hydraulic system	Hydraulic pump mounting bolt	M12×1.75	12.8±3.0	93±22
4		MCV mounting bolt, nut	M12×1.75	12.8±3.0	93±22
5		Steering unit mounting bolt	M10×1.5	6.9±1.4	50±10
6		Tilt cylinder; rod-end bolt, nut	M14×2.0	19.6±4.0	142±28.9
7	Power train system	Transmission mounting bolt, nut	M20×2.5	100±15	723±109
8		Torque converter mounting bolt	M10×1.5	4.5±0.6	32.5±4.3
9		Drive axle mounting bolt, nut	M24×3.0	100±15	723±109
10		Steering axle mounting bolt, nut	M24×3.0	100±15	723±109
11		Front wheel mounting nut	M22×1.5	84±12	608±87
12		Propeller shaft(To T/M)	M12×1.5	15±2	109±14.5
		Propeller shaft(To D/Axle)	M12×1.75	12.3±2.5	89±18
13	Others	Counterweight mounting bolt 1	M30×3.5	199±29.9	1439±216
		Counterweight mounting bolt 2	M24×3.0	100±15	723±109
14		Operator's seat mounting nut	M 8×1.25	3.4±0.7	24.6±5
15		Cab mounting nut	M16×2.0	29.7±4.5	215±32
16		Mast mounting bolt	M14×2.0	19.6±2.9	144±23