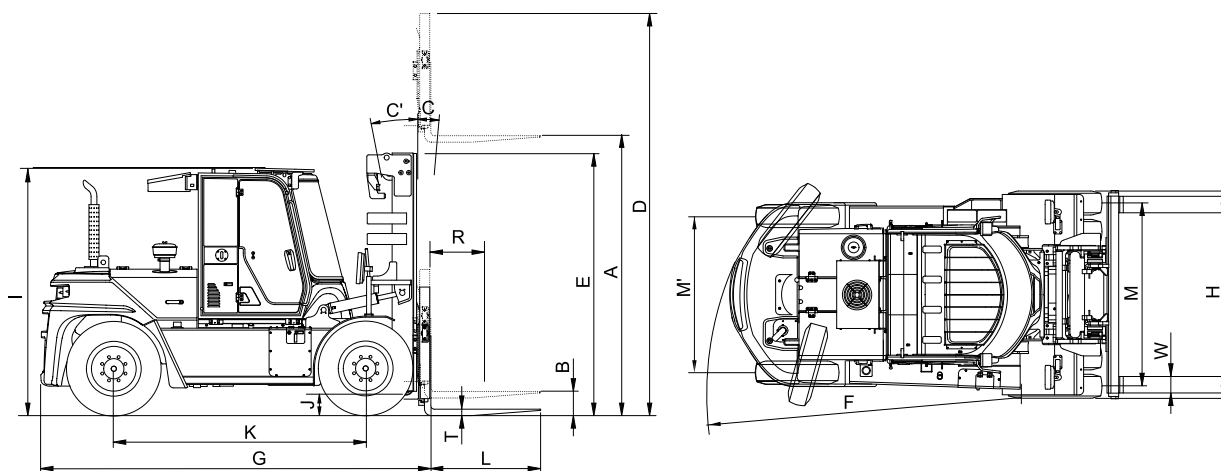


8. SPECIFICATIONS

1. SPECIFICATION TABLE



100D9V8SP01

Model			Unit	100D-9V
Capacity			kg (lb)	10000 (22000)
Load center	R		mm (in)	600 (24")
Weight(Unloaded)			kg (lb)	13125 (28936)
Fork	Lifting height	A	mm (ft·in)	3025 (9' 11")
	Free lift	B	mm (in)	150 (5.9)
	Lifting speed (Unload/Load)		mm/sec (ft/min)	500/440 (98.4/86.6)
	Lowering speed (Unload/Load)			500/500 (98.4/98.4)
	L×W×T	L,W,T	mm (in)	1200×180×75(47.2×7×3)
	Carriage width	N	mm (in)	2265 (89.2)
Mast	Tilt angle (forward/backward)	C/C'	degree	15/10
	Max. height	D	mm (ft·in)	4360 (14' 4")
	Min. height	E	mm (ft·in)	2850 (9' 4")
Body	Travel speed (Unload)		km/h (mph)	32.7 (20.3)
	Gradeability (Load)		%	34
	Min. turning radius (Outside)	F	mm (ft·in)	3965 (13' 0")
ETC	System set pressure		bar (psi)	226 (3271)
Overall length	G		mm (ft·in)	4245 (13' 9")
Overall width	H		mm (ft·in)	2265 (7' 5")
Cabin height	I		mm (ft·in)	2680 (8' 10")
Ground clearance	J		mm (in)	250 (9.8)
Wheel base	K		mm (ft·in)	2750 (9' 0")
Wheel tread front/rear	M/M'		mm (ft·in)	1693/1700 (5' 7"/5' 7")

2. SPECIFICATION FOR MAJOR COMPONENTS

1) ENGINE

Item	Unit	Specification
Model	—	Cummins F3.8
Type	—	Vertical, 4 cycle DI, EU Stage V diesel engine
Cooling Method	—	Water cooling
Number of cylinders and arrangement	—	4 cylinders, In-line
Firing order	—	1-3-4-2
Combustion chamber type	—	Direct injection
Cylinder bore X stroke	mm (in)	102 × 115 (4.0 × 4.5)
Piston displacement	cc (cu in)	3726 (227.4)
Compression ratio	—	17.2 : 1
Rated gross horse power	ps/rpm	112.4/2200
Maximum torque at rpm	kgf·m/rpm	51/1500
Engine oil quantity	ℓ (U.S. gal)	12 (3.17)
Dry weight	kg (lb)	360 (794)
High idling speed	rpm	2450
Low idling speed	rpm	850
Rated fuel consumption	g/kWh	217
Starting motor	V-kW	24-4.8
Alternator	V-A	28-70
Battery	V-AH	24-80

2) MAIN PUMP

Item	Unit	Specification	
Type	—	Axial piston variable pump	Gear fixed pump
Model	—	Casspa MVP	Casspa PLP
Displacement	cc/rev (in ³ /rev)	67 (4.1)	9.17 (0.56)
Maximum operating pressure	bar (psi)	280 (4060)	250 (3625)
Rated speed (Max/Min)	rpm	2700/600	
Weight	kgf (lbf)	31.6 (69.7)	

3) MAIN CONTROL VALVE (MCV)

Item	Unit	Specification
Type	—	Mono block (3spool), Semi-Mono block (4 / 5spool)
Model	—	Buchholz NG16
Operating method	-	Hydraulic pilot
Maximum flow rated (lift/lower, tilt)	lpm (U.S. gpm)	170 (45), 60 (16)
Lift/tilt relief valve set pressure (DV1)	bar (psi)	210 (3050)
Attachment oil flow rated (aux1/2/3)	lpm (U.S. gpm)	110 / 110 / 110 (29 / 29 / 29)
Attachment relief valve pressure (DV2)	bar (psi)	140 ~ 190 (2030 ~ 2760)
Built-in accessories valve	-	· Manual fork lowering valve (Emergency function) · Adj. max. fork lowering speed, Lower breake valve · Overcenter valve (tilt A2), Priority valve (steering)
Weight	kgf (lbf)	3 spool : 28 (61.7), 4 spool : 36 (79.4), 5 spool : 43 (94.8)

4) STEERING UNIT

Item	Unit	Specification
		100D-9V
Type	—	Load sensing
Model	—	VSP 200 LSH
Capacity	cc/rev (in ³ /rev)	200 (12.2)
Steering relief valve set pressure	bar (psi)	160 ~ 165 (2320 ~ 2390)
Weight	kgf (lbf)	5.5 (12)

5) CYLINDER

Index			Unit	Specification
				100D-9V
Main lift	V300	Tube bore diameter × Rod diameter × Stroke	mm (in)	85×60×1475 (3.34×2.36×58.1)
Main lift	TS450			85×60×1463 (3.34×2.36×57.6)
Free lift				95×70×767 (3.74×2.76×30.2)
Tilt (15/10 degree)				115×60×307 (4.53×2.36×12.09)
Steering				85×55×149.5 (3.35×2.16×5.89)
Weight	Lift	V300	kgf (lbf)	68.1 (150)
	Tilt	15/10 degree		48 (106)

6) POWER TRAIN DEVICE

Item			Specification		
			100D-9V		
Torque converter	Type		3 Element, 1 stage, 2 phases		
	Stall ratio		2.395 : 1		
Transmission	Model		ZF 3WG94		
	Type		Full auto, power shift		
	Gear shift (F/R)		3/3		
	Adjustment		Electrical single lever type		
	Overhaul ratio	FR	1 : 4.714	2 : 2.341	3 : 0.974
		RR	1 : 4.711	2 : 2.340	3 : 0.974
Axle	Type		Front-wheel drive type, fixed location		
	Gear ratio		12.86		
	Gear		Ring & pinion gear type		
Wheels	Q'ty (FR/RR)		Double : 4/2		
	Front (drive)		9.00-20-14 PR		
	Rear (steer)		9.00-20-14 PR		
Brakes	Travel		Front wheel, wet disc brake		
	Parking		Calliper disc, SHAR (Spring Actuate Hydraulic Release) type		
Steering	Type		Full hydraulic, power steering		
	Steering angle		75.87° to both right and left angle, respectively		

3. TIGHTENING TORQUE

NO	Item		Size	kgf · m	lbf · ft
1	Engine	Engine mounting bolt	M12 × 1.25	12.3 ± 3.0	89 ± 21.7
2		Engine bracket mounting nut	M10 × 1.5	6.9 ± 1.4	50 ± 10.1
3		Radiator mounting bolt, nut	M10 × 1.5	6.9 ± 1.4	50 ± 10.1
4	Hydraulic system	Hydraulic pump mounting bolt	M16 × 2.0	19 ± 2	138 ± 14.5
5		MCV mounting bolt	M 8 × 1.25	2.5 ± 0.5	18 ± 3.6
6		Steering unit mounting bolt	M10 × 1.5	4 ± 0.5	29 ± 3.6
7		Tilt cylinder; rod-end bolt, nut	M20 × 2.5	58 ± 6	420 ± 43.4
8		Tilt cylinder pin; mounting bolt	M10 × 1.5	6.9 ± 1.4	50 ± 10.1
9	Power train system	Transmission mounting bolt, nut	M16 × 2.0	60.5 ± 5.5	438 ± 39.8
10		Torque converter mounting bolt	M10 × 1.5	6.9 ± 1.4	50 ± 10
11		Drive axle mounting bolt, nut	M27 × 3.0	150 ± 15	1085 ± 109
12		Propeller shaft (to axle and TM)	3/8-24 UNF	7.0 ± 0.7	50.6 ± 5.1
13		Steering axle mounting bolt, nut	M18 × 2.5	41.3 ± 6.2	299 ± 44.8
14		Front and rear wheel mounting nut	M22 × 1.5	62.0 ± 9.3	448 ± 67.3
15	Others	Counterweight mounting bolt	M30 × 3.5	100 ± 15	723 ± 108
16		Operator's seat mounting nut	M 8 × 1.25	2.5 ± 0.5	18.1 ± 3.6
17		Cabin mounting bolt	M12 × 1.75	12.8 ± 3.0	92.6 ± 21.7
18		Mast mounting bolt	M20 × 2.5	57.9 ± 8.7	419 ± 63