



MD83

DESCRIPTION & CHART

The MD83 is Sheppard's lighter duty power steering gear designed to handle front axle ratings up 10,000 lbs. This gear is currently used in utility vans/package delivery trucks and other Class 6 & 7 applications.

	MD83	HD94	M100	M110	SD110	XD120
Front Axle Range	6-10k lbs (2700-4500 kg)	10-14.6k lbs (4500-6600 kg)	10-14.6k lbs (4500-6600 kg)	14.6-18k lbs (6600-8200 kg)	14.6-18k lbs (6600-8200 kg)	18-23k lbs (8200-10400 kg)
Output Torque @ Rated Pressure & 90% Efficiency	35,058 in-lbf (3961 Nm)	45,436 in-lbf (5134 Nm)	46,345 in-lbf (5236 Nm)	59,300 in-lbf (6700 Nm)	59,760 in-lbf (6752 Nm)	78,825 in-lbf (8906 Nm)
Rated Pressure	2,683 psi (185 bar)	2,683 psi (185 bar)	2,350 psi (162 bar)	2,175 psi (150 bar)	2,756 psi (190 bar)	2,175 psi (150 bar)
Minimum Pump Flow @1.5 HWT/s	2.4 GPM (9.1 LPM)	3.0 GPM (11.4 LPM)	3.0 GPM (11.4 LPM)	3.5 GPM (13.2 LPM)	3.9 GPM (14.8 LPM)	4.8 GPM (18.2 LPM)
Pump Flow Range Single Steering Gear	2.4-3.4 GPM (9.1-12.9 LPM)	3.0-4.0 GPM (11.4-15.1 LPM)	3.0-4.0 GPM (11.4-15.1 LPM)	3.5-4.5 GPM (13.2-17.0 LPM)	3.9-4.9 GPM (14.8-18.5 LPM)	4.8-5.8 GPM (18.2-22.0 LPM)
Ratio	16.9:1	16.9:1	18.9:1	23.0:1	16.9:1	23.0:1
Gear Travel	95°	95°	95°	100°	95°	96°
Normal System Operating Temperature	-40 to 220 °F (-40 to 104 °C)	-40 to 220 °F (-40 to 104 °C)	-40 to 220 °F (-40 to 104 °C)	-40 to 220 °F (-40 to 104 °C)	-40 to 220 °F (-40 to 104 °C)	-40 to 220 °F (-40 to 104 °C)
Not-To-Exceed Temperature	250 °F (121 °C)	250 °F (121 °C)	250 °F (121 °C)	250 °F (121 °C)	250 °F (121 °C)	250 °F (121 °C)
Output Shaft Diameter	2.00 in (50.8 mm)	2.00 in (50.8 mm)	2.00 in (50.8 mm)	2.25 in (57.2 mm)	2.25 in (57.2 mm)	2.50 in (63.5 mm)
Approximate Dry Weight	60 lbs (27.2 kg)	70 lbs (31.8 kg)	75 lbs (34.0 kg)	110 lbs (49.9 kg)	85 lbs (38.6 kg)	150 lbs (68.0 kg)
Pump Flow Range Dual Steering Gears @1.0 HWT/s & 90% Efficiency						
w/ MD83 Slave	4.0-5.5 GPM (15.1-20.8 LPM)	4.5-6.0 GPM (17.0-22.7 LPM)	4.6-6.1 GPM (17.4-23.1 LPM)	5.0-6.5 GPM (18.9-24.6 LPM)	5.3-6.8 GPM (20.1-25.7 LPM)	6.0-7.5 GPM (22.7-28.4 LPM)
w/ HD94 Slave	N/A	5.0-6.5 GPM (18.9-24.6 LPM)	5.1-6.6 GPM (19.3-25.0 LPM)	5.5-7.0 GPM (20.8-26.5 LPM)	5.5-7.0 GPM (20.8-26.5 LPM)	6.5-8.0 GPM (24.6-30.3 LPM)
w/ M100 Slave	N/A	N/A	5.3-6.8 GPM (20.1-25.7 LPM)	5.6-7.1 GPM (21.2-26.9 LPM)	N/A	6.6-8.1 GPM (25.0-30.7 LPM)
w/ M110 Slave	N/A	N/A	N/A	6.0-7.5 GPM (22.7-28.4 LPM)	N/A	7.0-8.5 GPM (26.5-32.2 LPM)
w/ SD110 Slave	N/A	N/A	N/A	6.5-8.0 GPM (24.6-30.3 LPM)	6.5-8.0 GPM (24.6-30.3 LPM)	7.3-8.8 GPM (27.6-33.3 LPM)
w/ XD120 Slave	N/A	N/A	N/A	N/A	N/A	8.0-9.5 GPM (30.3-36.0 LPM)
Output Torque Range @ Rated Pressure of Master Gear & 90% Efficiency						
w/ MD83 Slave	70,116 in-lbf (7922 Nm)	80,497 in-lbf (9095 Nm)	77,052 in-lbf (8706 Nm)	87,720 in-lbf (9911 Nm)	95,772 in-lbf (10821 Nm)	107,245 in-lbf (12117 Nm)
w/ HD94 Slave	N/A	90,878 in-lbf (10268 Nm)	86,144 in-lbf (9733 Nm)	96,133 in-lbf (10862 Nm)	106,435 in-lbf (12026 Nm)	115,661 in-lbf (13068 Nm)
w/ M100 Slave	N/A	N/A	92,690 in-lbf (10473 Nm)	102,194 in-lbf (11546 Nm)	N/A	121,719 in-lbf (13752 Nm)
w/ M110 Slave	N/A	N/A	N/A	118,600 in-lbf (13400 Nm)	N/A	138,125 in-lbf (15606 Nm)
w/ SD110 Slave	N/A	N/A	N/A	106,462 in-lbf (12029 Nm)	119,520 in-lbf (13504 Nm)	125,987 in-lbf (14235 Nm)
w/ XD120 Slave	N/A	N/A	N/A	N/A	N/A	157,650 in-lbf (17812 Nm)

Gear Options	Steer Axle Weight Rating									
	6-8k	10k	12k	13.2k	14.6k	16k	18k	20k	23k	> 23k
MD83	X	X								
M100		X	X	X	X					
HD94		X	X	X	X					
M110					X	X	X			
SD110					X	X	X			
XD120							X	X	X	
Dual*						X	X	X	X	X

* Contact R&S Engineering for options