

# PM 81/LN Ø81 mm, Metal-Low-Noise

Parameter	1-stage	2-stage	3-stage
Perm. output torque $T_{AB}$ (Appl. factor $C_B = 1.0$ )	20.0 Nm	60.0 Nm	120.0 Nm
Gearbox efficiency, approx.	0.80	0.75	0.70
Max. backlash	0.50 °DEG*	0.55 °DEG	0.60 °DEG
Recommended initial speed	3,000 U/min	3,000 U/min	3,000 U/min
Min. Operating temperature	-30 °C	-30 °C	-30 °C
Max. Operating temperature	+120 °C	+120 °C	+120 °C

\* LN: 0,85 °DEG. For plastic PL wheels only! Impact of 1st stage for 2-4 stage versions is negligible.

### Current reduction ratios i rounded

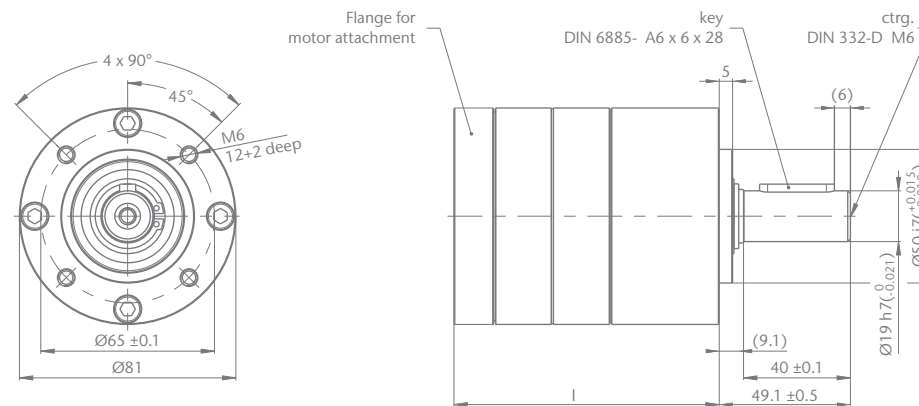
1-stage		2-stage		3-stage	
PM	LN	PM	LN	PM	LN
4:1 (3.71)	4:1 (3.65)	14:1 (13.73)	14:1 (13.53)	51:1 (50.89)	50:1 (50.16)
4:1 (4.29)	5:1 (4.59)	16:1 (15.88)	16:1 (15.65)	59:1 (58.86)	58:1 (58.01)
5:1 (5.18)	5:1 (5.36)	18:1 (18.37)	17:1 (17.00)	68:1 (68.07)	67:1 (67.08)
7:1 (6.75)	7:1 (6.55)	19:1 (19.20)	19:1 (18.92)	71:1 (71.16)	70:1 (70.13)
	9:1 (8.63)	22:1 (22.21)	23:1 (22.96)	79:1 (78.72)	81:1 (81.11)
	*13:1 (13.20)	25:1 (25.01)	25:1 (24.65)	93:1 (92.70)	91:1 (91.36)
		27:1 (26.85)	28:1 (27.76)	95:1 (95.18)	98:1 (98.07)
		29:1 (28.93)	28:1 (28.05)	100:1 (99.51)	102:1 (101.89)
		35:1 (34.98)	34:1 (33.92)	107:1 (107.21)	106:1 (105.65)
		46:1 (45.56)	45:1 (44.69)	115:1 (115.08)	115:1 (114.77)
			58:1 (58.22)	124:1 (123.98)	123:1 (123.20)
			*68:1 (68.40)	130:1 (129.62)	128:1 (127.74)
			*89:1 (89.10)	139:1 (139.14)	137:1 (136.99)
				150:1 (149.90)	145:1 (145.36)
				169:1 (168.85)	166:1 (166.40)
				181:1 (181.25)	176:1 (175.75)
				195:1 (195.27)	192:1 (191.54)
				236:1 (236.10)	232:1 (231.59)
				308:1 (307.55)	302:1 (301.68)
					393:1 (392.98)
					*462:1 (461.70)
					*601:1 (601.43)

\* not all reduction ratios available ex-stock

Output side with ball bearing (2RS)	1-stage	2-stage	3-stage
Max. load, radial (Middle output shaft)	400 N	600 N	1.000 N
Max. load, axial	80 N	120 N	200 N
Max. perm.fitting pressure	1,500 N	1,500 N	1,500 N
Weight approx. with motor flange C80	1.8 kg	2.5 kg	3.2 kg

Gearbox length in mm	1-stage	2-stage	3-stage
Length l*	72.8 ± 0.6	94.45 ± 0.6	116.1 ± 0.6

\* The minimum length is only possible with an optimal attachment to the motor, the actual length we like to determine for you.



**All figures are approximate values.**

Variations are possible and may arise for example due to non-standardized inspection and measurement methods. For more detailed information, please contact us directly. The company always reserves the right to make technical modifications. For current status, please consult [www.imsgear.com](http://www.imsgear.com)