

ULTRA PRECISION PLANETARY GEAR REDUCERS / TECHNICAL DATA

MZE

Technical Data

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MZE TECHNICAL DATA

Model / Size		Stages	60	90	120	140
Full load efficiency	%	1			≥95	
		2			≥92	
Standard Backlash	arcmin	1	≤5	≤5	≤5	≤5
		2	≤8	≤8	≤8	≤8
Precision Backlash	arcmin	1	≤3	≤3	≤3	≤3
		2	≤5	≤5	≤5	≤5
Noise ②	dB(A)		≤60	≤60	≤65	≤67
Lifetime ①	hr				20000	
Max radial load	N		1300	2800	5200	9400
Max axial load	N		550	1000	2300	4700
Nominal Input Speed	rpm		5000	4000	4000	3000
Max input speed	rpm		10000	8000	8000	6000
Torsional stiffness	Nm/arcmin		5	11	18	50
Weight	kg	1	1.35	4.25	9.15	14.6
		2	1.7	7	13	19.2
Operating temp.	°C				-10 ~ 90	
Degree of protection					IP 65	
Lubrication					Synthetic lubrication	
Mounting direction					Any	

① Life reduced by half under continuous operation.

② Noise level measured on input running at 3000 rpm with no load (i = 5)

Model / Size		Stages	Ratio	60	90	120	140
Nominal output torque	Nm	1	3	35	100	170	342
			4	40	110	220	542
			5	45	125	250	650
			7	40	110	200	550
			10	30	80	180	450
		2	15	35	100	170	342
			20	45	110	220	542
			25	45	125	250	650
			30	40	110	220	600
			35	40	125	200	550
			40	40	110	220	542
			50	45	125	250	650
			70	40	110	200	550
			100	30	80	180	450

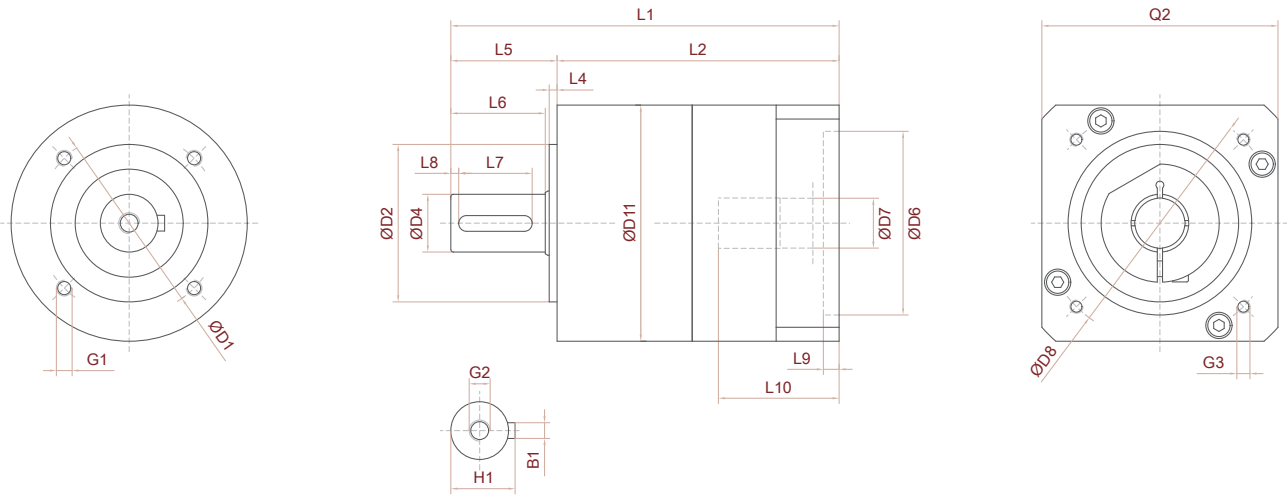
MAX Output torque 2.5 times of Nominal Output Torque

Model / Size		Stages	Ratio	60	90	120	140
Mass Moments of Inertia	Kg-cm ²	1	3	0.16	0.61	3.25	9.21
			4	0.14	0.48	2.74	7.54
			5	0.13	0.47	2.71	7.42
			7	0.13	0.45	2.62	7.14
			10	0.13	0.44	2.57	7.03
		2	15,20,25	0.13	0.47	2.71	7.42
			35	0.13	0.45	2.57	7.14
			30,40,50	0.13	0.44	2.62	7.03
			70,100	0.13	0.13	0.44	2.57

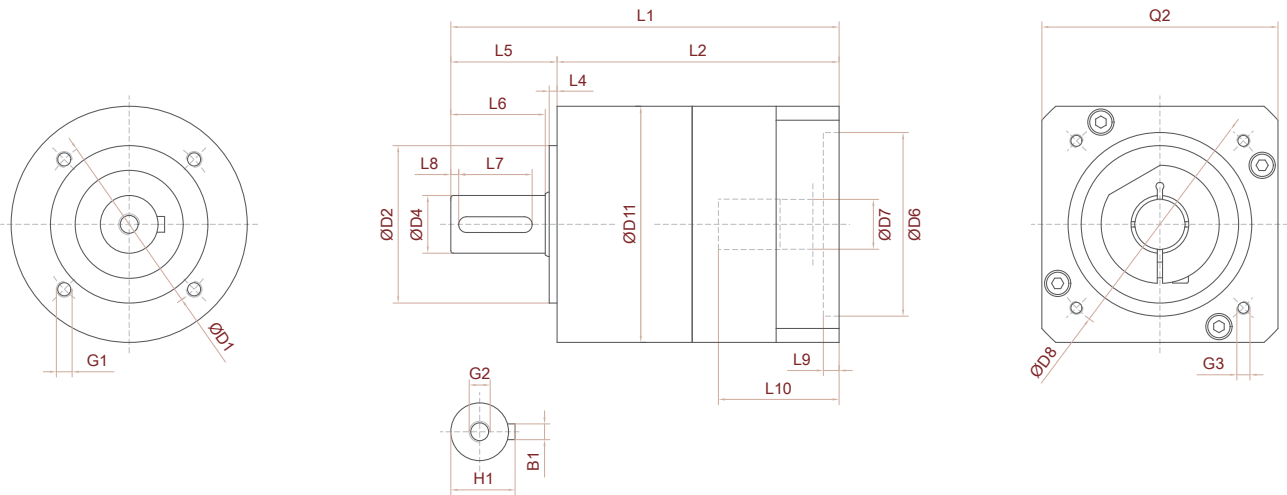
MZE

Profile Dimensions

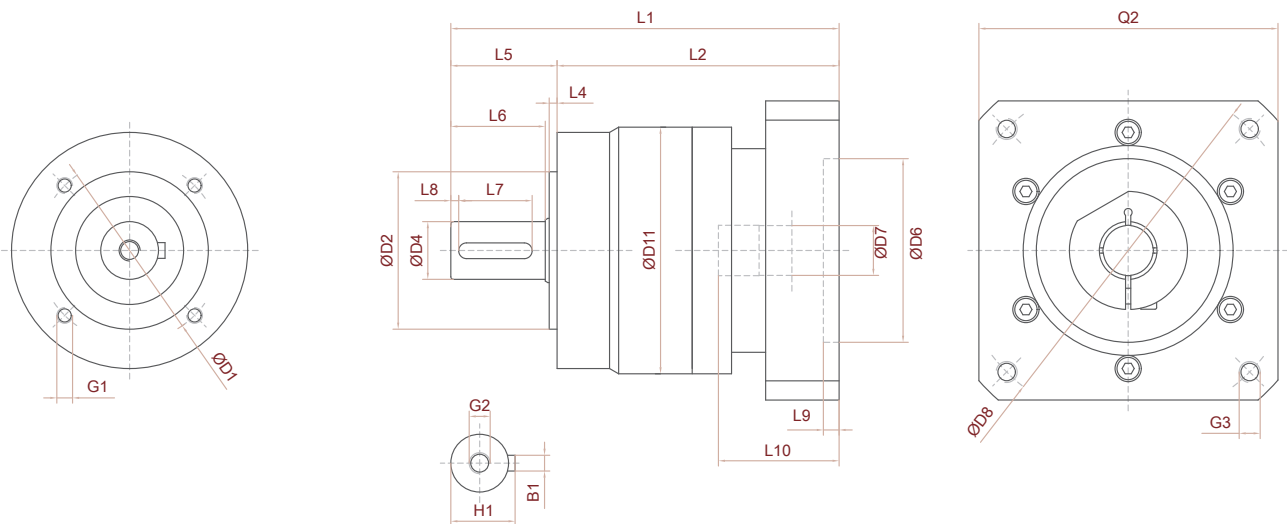
MZE60



MZE90



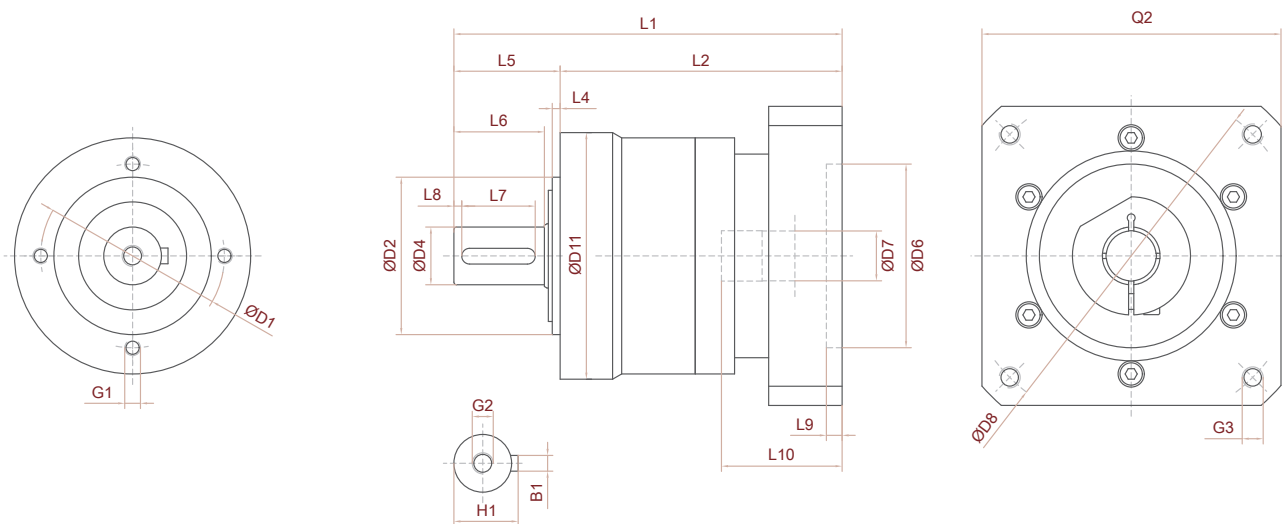
MZE120



MZE

Profile Dimensions

MZE140



Model / Size	Stages		MZE60	MZE90	MZE120	MZE140
Overall length	1	L1	108	148	191	259
	2		128	175.5	228	300.5
Body length	1	L2	80.5	108	136	162
	2		100.5	135	173	203.5
Input flange		Q2	□60	□90	□130	□180
Output						
Pilot length		L4	3	3	4	12
Output shaft length		L5	27.5	40.5	55	97
shaft shoulder to the shaft end		L6	23.5	36.5	49	82
Flat end length / Key length		L7	20	30	40	65
Key length to the shaft end		L8	3	3	5	5
Mounting hole circle		D1	Ø52	Ø70	Ø100	Ø140
Pilot diameter		D2	Ø40 g6	Ø60 g6	Ø80 g6	Ø120 g6
Output shaft diameter		D4	Ø14 g6	Ø20 g6	Ø25 g6	Ø40 g6
Flange Section		D5	—	—	Ø115	Ø155
Centering		D9	Ø60	Ø90	Ø120	Ø150
Housing diameter		D11	Ø60	Ø90	Ø125	Ø155
Key width		B1	5	6	8	12
Flat end height / Key Height		H1	16	22.5	28	43
mounting thread x depth		G1	4-M5	4-M6	4-M10	4-M10
center screw hole x depth		G2	M5x12	M8	M8	M16
Input						
Pilot depth		L9	5.5	6	8	8
motor shaft length		L10	32.5	47	62.5	81.5
Pilot diameter		D6	Ø50 G6	Ø70 G6	Ø110 G6	Ø114.3 G6
Input shaft diameter		D7	Ø14 G6	Ø19 G6	Ø22 G6	Ø35 G6
Mounting hole circle		D8	Ø70	Ø90	Ø145	Ø200
mounting thread x depth		G3	4-M4	4-M5	4-M8	4-M12

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MZE PROFILE DIMENSIONS