



**Heavy duty, compactness, high torque, high torsional stiffness, highefficiency, low noise, low backlash.**

大功率，小体积，大扭矩，高刚性，高效率，低噪音，低背隙



**造型数据:  
Selection data:**

扭矩 ( Nm )	35-2300
速比	4-100
背隙 ( arcmin )	3-5
最大工作温度 ( °C )	90
噪音 ( dB )	60-75

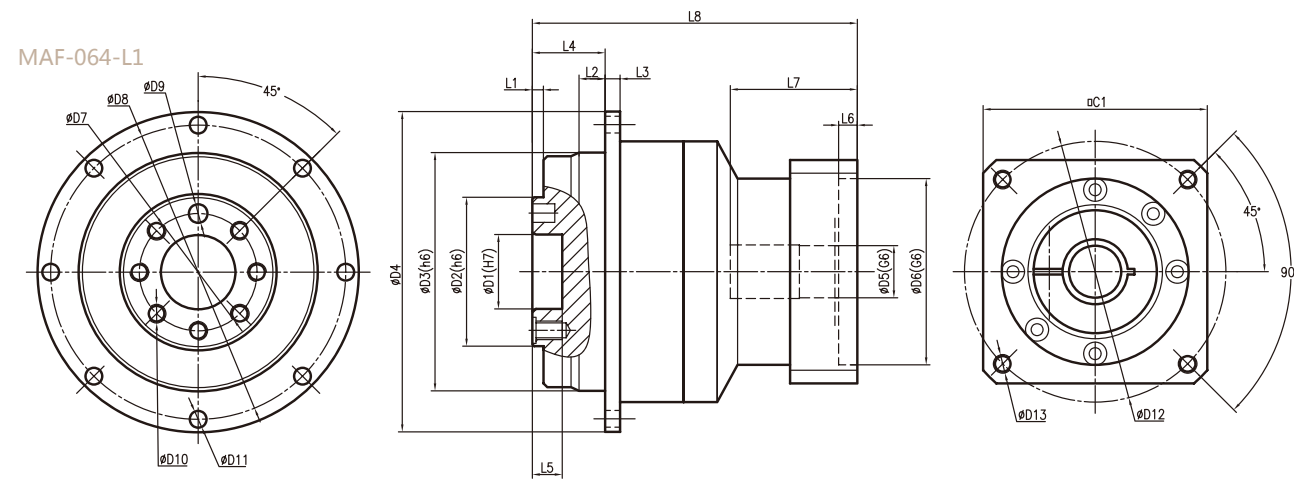
Nominal output torque ( Nm )	35-2300
Reduction ratio	4-100
Backlash ( arcmin )	3-5
Max.working temperature ( °C )	90
Noise ( dB )	60-75

# Planetary Gearbox

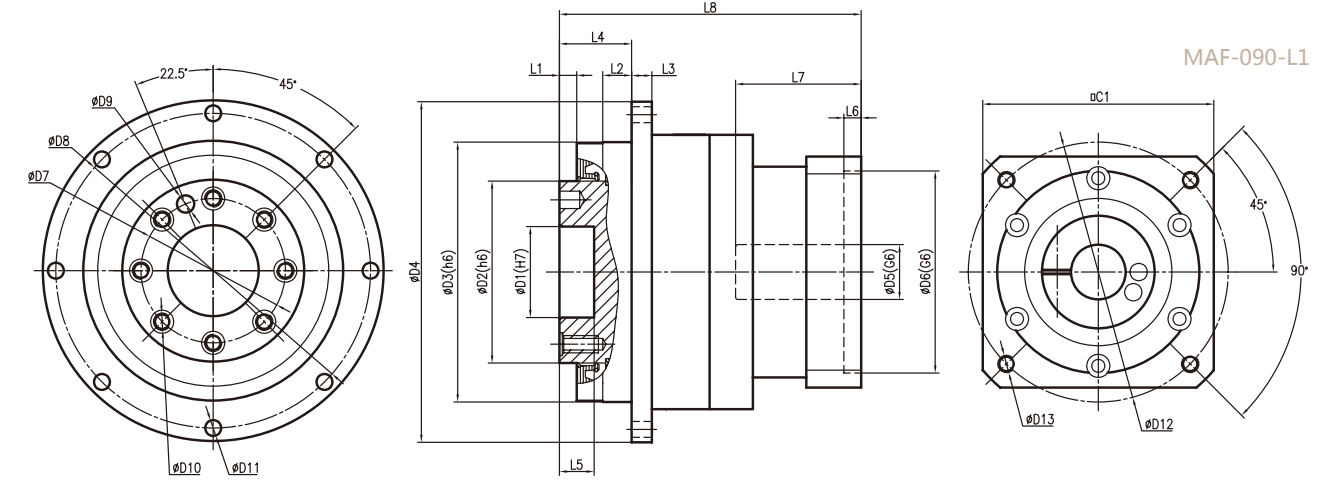
## Drawing / Size

# Planetary Gearbox

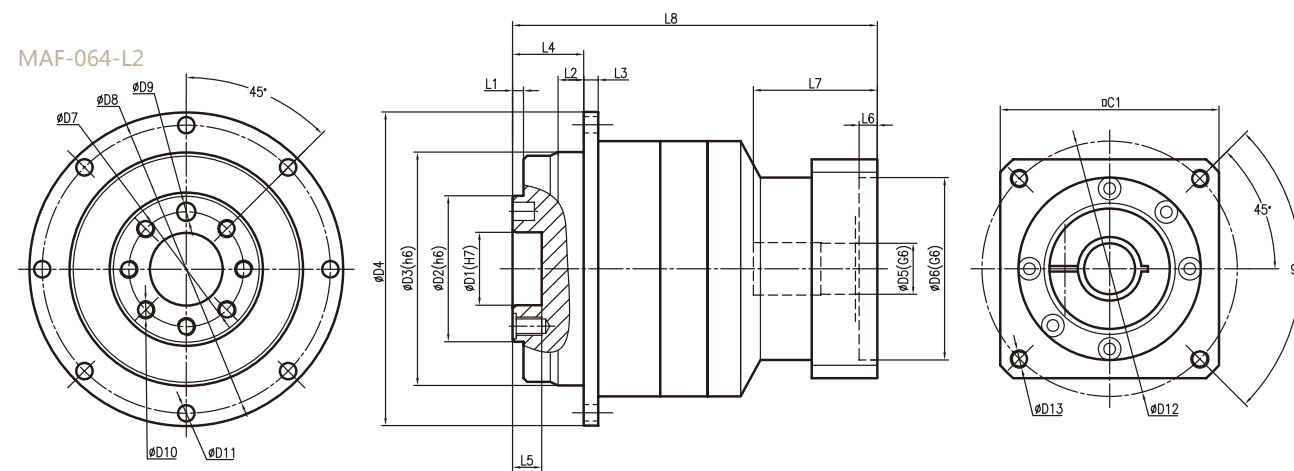
## Drawing / Size



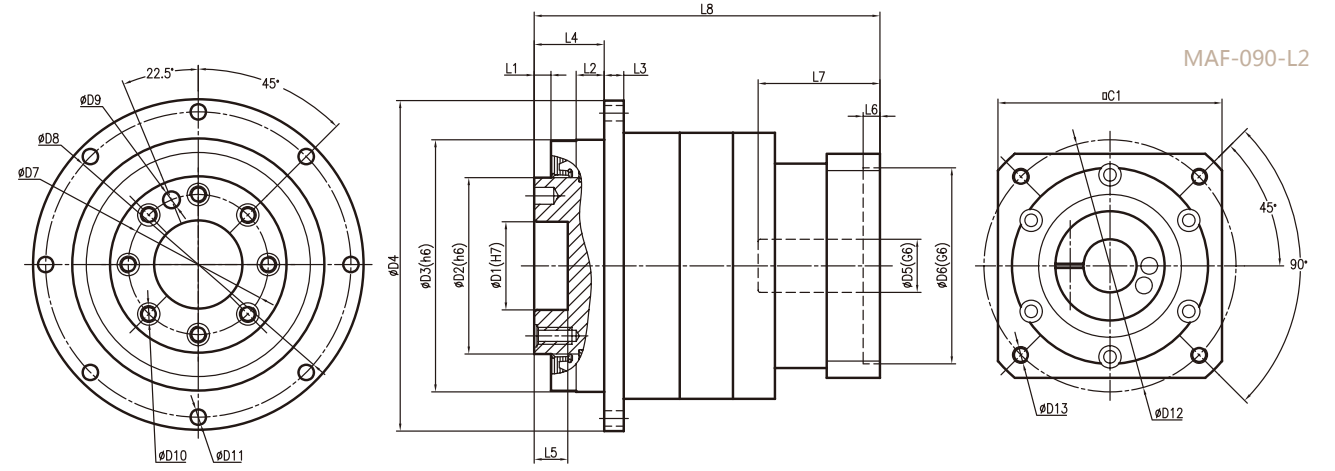
Flange	D1	D2	D3	D4	D5	D6	D7	D8	D9	D10	D11	D12	D13	L1	L2	L3	L4	L5	L6	L7	L8	C1
Type I	Φ20	Φ40	Φ64	Φ86	Φ8	Φ30	Φ31.5	Φ79	Φ5X8	7-M5X8	8-Φ4.5	Φ46	4-M4X8	3	7	4	19.5	8	4	28	80.5	40
Type II	Φ20	Φ40	Φ64	Φ86	Φ11	Φ50	Φ31.5	Φ79	Φ5X8	7-M5X8	8-Φ4.5	Φ70	4-M4X8	3	7	4	19.5	8	5	34	87	60
Type III	Φ20	Φ40	Φ64	Φ86	Φ14	Φ50	Φ31.5	Φ79	Φ5X8	7-M5X8	8-Φ4.5	Φ70	4-M5X10	3	7	4	19.5	8	5	34	87	60



Flange	D1	D2	D3	D4	D5	D6	D7	D8	D9	D10	D11	D12	D13	L1	L2	L3	L4	L5	L6	L7	L8	C1
Type I	Φ31.5	Φ63	Φ90	Φ118	Φ14	Φ50	Φ50	Φ109	Φ6X7	8-M6X12	8-Φ5.5	Φ70	4-M5X10	6	10	7	30	12	5	32	97	60
Type II	Φ31.5	Φ63	Φ90	Φ118	Φ19	Φ70	Φ50	Φ109	Φ6X7	8-M6X12	8-Φ5.5	Φ90	4-M6X12	6	10	7	30	12	6	43.5	104.5	80
Type III	Φ31.5	Φ63	Φ90	Φ118	Φ22	Φ110	Φ50	Φ109	Φ6X7	8-M6X12	8-Φ5.5	Φ145	4-M8X16	6	10	7	30	12	10	59	120	130



Flange	D1	D2	D3	D4	D5	D6	D7	D8	D9	D10	D11	D12	D13	L1	L2	L3	L4	L5	L6	L7	L8	C1
Type I	Φ20	Φ40	Φ64	Φ86	Φ8	Φ30	Φ31.5	Φ79	Φ5X8	7-M5X8	8-Φ4.5	Φ46	4-M4X8	3	7	4	19.5	8	4	28	103	40
Type II	Φ20	Φ40	Φ64	Φ86	Φ11	Φ50	Φ31.5	Φ79	Φ5X8	7-M5X8	8-Φ4.5	Φ70	4-M4X8	3	7	4	19.5	8	5	34	110.5	60
Type III	Φ20	Φ40	Φ64	Φ86	Φ14	Φ50	Φ31.5	Φ79	Φ5X8	7-M5X8	8-Φ4.5	Φ70	4-M5X10	3	7	4	19.5	8	5	34	110.5	60



Flange	D1	D2	D3	D4	D5	D6	D7	D8	D9	D10	D11	D12	D13	L1	L2	L3	L4	L5	L6	L7	L8	C1
Type I	Φ31.5	Φ63	Φ90	Φ118	Φ14	Φ50	Φ50	Φ109	Φ6X7	8-M6X12	8-Φ5.5	Φ70	4-M5X10	6	10	7	30	12	5	34	123	60
Type II	Φ31.5	Φ63	Φ90	Φ118	Φ19	Φ70	Φ50	Φ109	Φ6X7	8-M6X12	8-Φ5.5	Φ90	4-M6X12	6	10	7	30	12	6	43.5	132.5	80
Type III	Φ31.5	Φ63	Φ90	Φ118	Φ22	Φ110	Φ50	Φ109	Φ6X7	8-M6X12	8-Φ5.5	Φ145	4-M8X16	6	10	7	30	12	10	59	139	130

☒ Dimensions based on servo-motor, please contact us for custom made order.  
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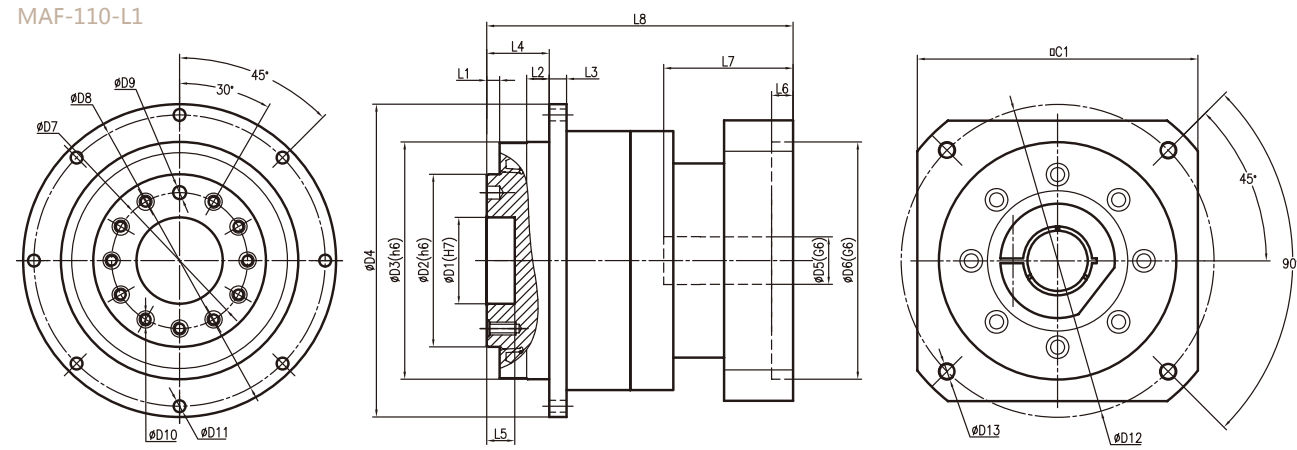
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# Planetary Gearbox

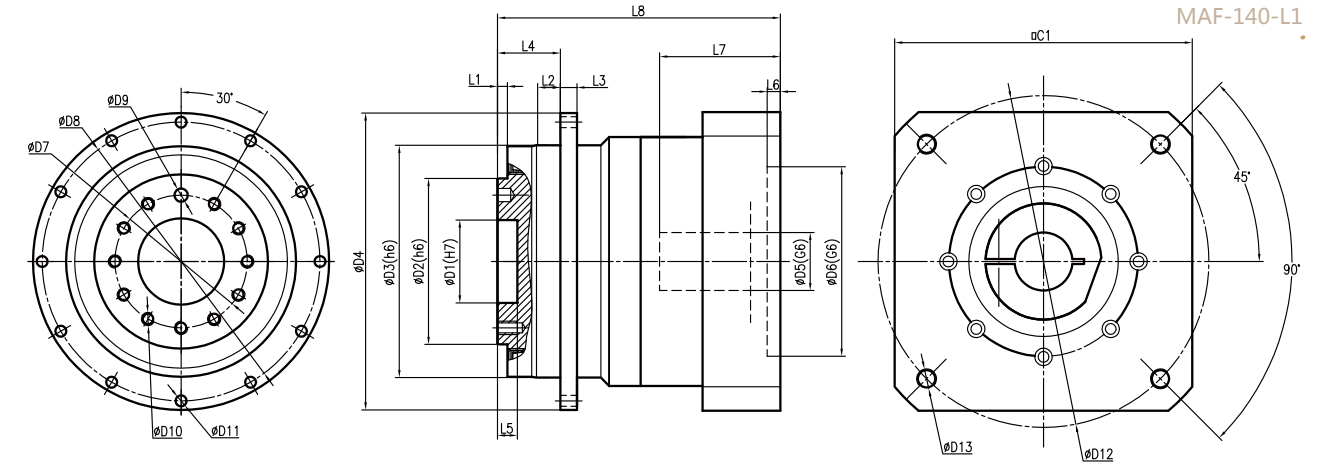
## Drawing / Size

# Planetary Gearbox

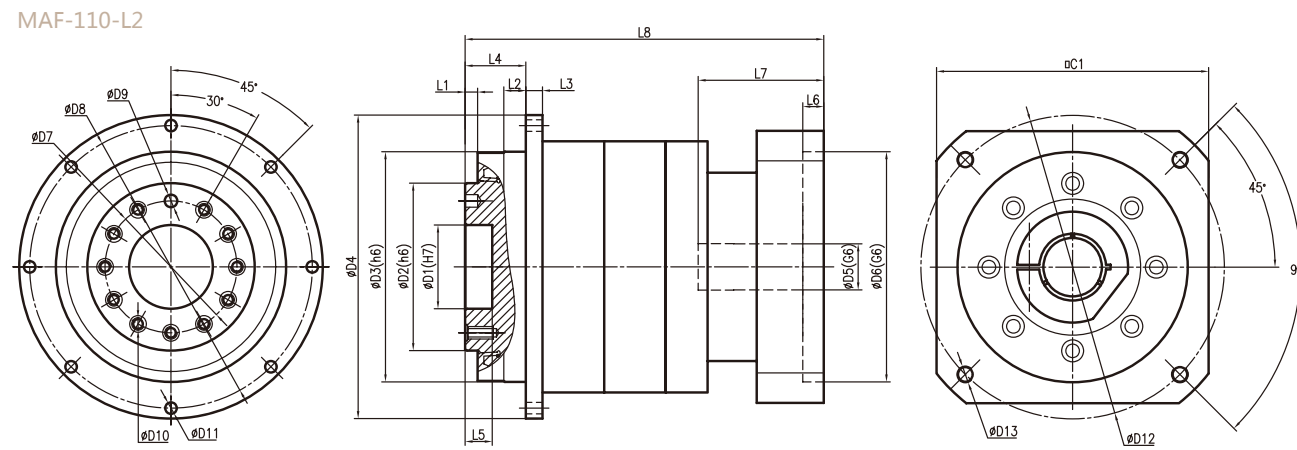
## Drawing / Size



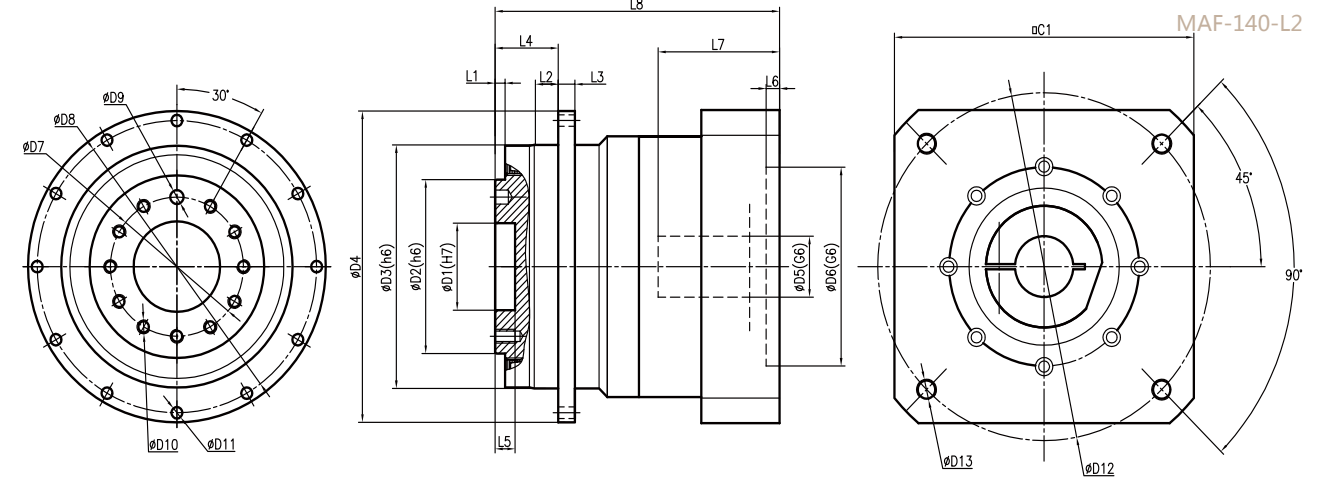
Flange	D1	D2	D3	D4	D5	D6	D7	D8	D9	D10	D11	D12	D13	L1	L2	L3	L4	L5	L6	L7	L8	C1
Type I	Φ40	Φ80	Φ110	Φ145	Φ22	Φ110	Φ63	Φ135	Φ6X7	11-M6X12	8-Φ5.5	Φ145	4-M8X15	6	10	8	29	13	10	60	142	130
Type II	Φ40	Φ80	Φ110	Φ145	Φ24	Φ110	Φ63	Φ135	Φ6X7	11-M6X12	8-Φ5.5	Φ145	4-M8X15	6	10	8	29	13	10	60	142	130
Type III	Φ40	Φ80	Φ110	Φ145	Φ28	Φ110	Φ63	Φ135	Φ6X7	11-M6X12	8-Φ5.5	Φ145	4-M8X15	6	10	8	29	13	10	60	142	130



Flange	D1	D2	D3	D4	D5	D6	D7	D8	D9	D10	D11	D12	D13	L1	L2	L3	L4	L5	L6	L7	L8	C1
Type I	Φ50	Φ100	Φ140	Φ179	Φ24	Φ110	Φ80	Φ168	Φ8X7	11-M8X17	12-Φ6.6	Φ145	4-M8X15	6	14.5	10	38	12	6	73	159	130
Type II	Φ50	Φ100	Φ140	Φ179	Φ38	Φ114.3	Φ80	Φ168	Φ8X7	11-M8X17	12-Φ6.6	Φ200	4-M12X25	6	14.5	10	38	12	8	85	171	180
Type III	Φ50	Φ100	Φ140	Φ179	Φ48	Φ114.3	Φ80	Φ168	Φ8X7	11-M8X17	12-Φ6.6	Φ200	4-M12X25	6	14.5	10	38	12	8	115	201	180



Flange	D1	D2	D3	D4	D5	D6	D7	D8	D9	D10	D11	D12	D13	L1	L2	L3	L4	L5	L6	L7	L8	C1
Type I	Φ40	Φ80	Φ110	Φ145	Φ19	Φ70	Φ63	Φ135	Φ6X7	11-M6X12	8-Φ5.5	Φ90	4-M6X12	6	10	8	29	13	6	43.5	151.5	80
Type II	Φ40	Φ80	Φ110	Φ145	Φ22	Φ110	Φ63	Φ135	Φ6X7	11-M6X12	8-Φ5.5	Φ145	4-M8X15	6	10	8	29	13	10	60	176	130
Type III	Φ40	Φ80	Φ110	Φ145	Φ24	Φ110	Φ63	Φ135	Φ6X7	11-M6X12	8-Φ5.5	Φ145	4-M8X15	6	10	8	29	13	10	60	176	130
Type IV	Φ40	Φ80	Φ110	Φ145	Φ28	Φ110	Φ63	Φ135	Φ6X7	11-M6X12	8-Φ5.5	Φ145	4-M8X15	6	10	8	29	13	10	60	176	130



Flange	D1	D2	D3	D4	D5	D6	D7	D8	D9	D10	D11	D12	D13	L1	L2	L3	L4	L5	L6	L7	L8	C1
Type I	Φ50	Φ100	Φ140	Φ179	Φ19	Φ70	Φ80	Φ168	Φ8X7	11-M8X17	12-Φ6.6	Φ90	4-M5X12	6	14.5	10	38	12	6	65	195.5	90
Type II	Φ50	Φ100	Φ140	Φ179	Φ24	Φ110	Φ80	Φ168	Φ8X7	11-M8X17	12-Φ6.6	Φ145	4-M8X15	6	14.5	10	38	12	8	73	199.5	130
Type III	Φ50	Φ100	Φ140	Φ179	Φ38	Φ114.3	Φ80	Φ168	Φ8X7	11-M8X17	12-Φ6.6	Φ200	4-M12X25	6	14.5	10	38	12	8	85	215	180

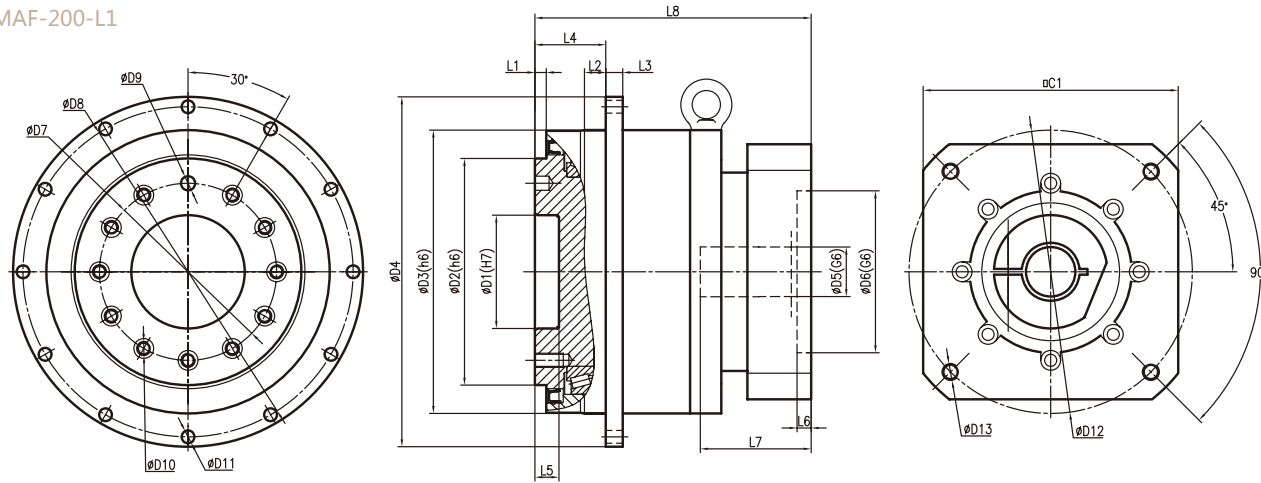
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# Planetary Gearbox Drawing / Size

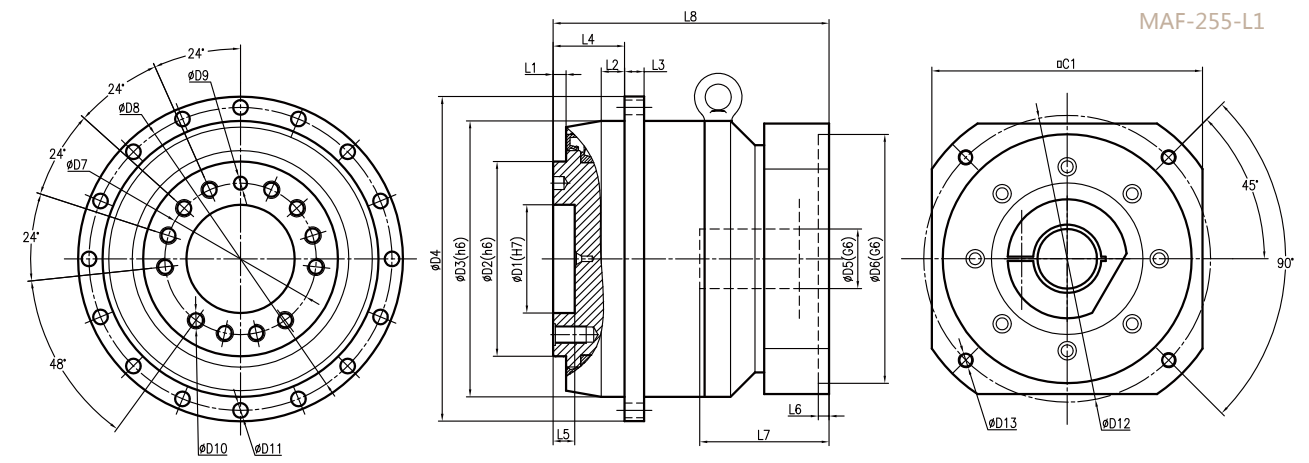
# Planetary Gearbox Drawing / Size

MAF-200-L1



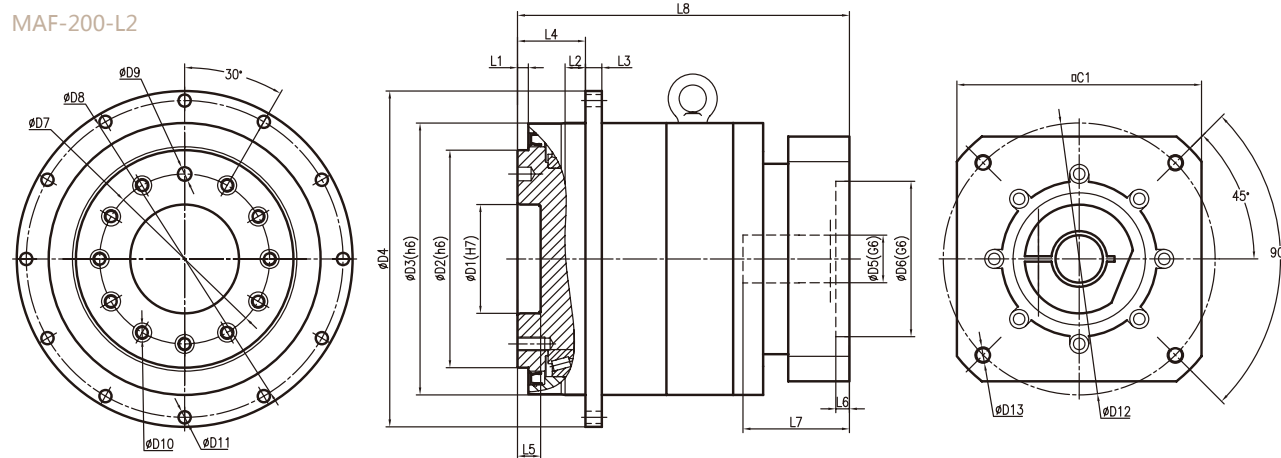
Flange	D1	D2	D3	D4	D5	D6	D7	D8	D9	D10	D11	D12	D13	L1	L2	L3	L4	L5	L6	L7	L8	C1
Type I	Φ80	Φ160	Φ200	Φ247	Φ35	Φ114.3	Φ125	Φ233	Φ10X10	11-M10X20	12-Φ9	Φ200	4-M12X25	8	15	12	50	16	10	88	196	180
Type II	Φ80	Φ160	Φ200	Φ247	Φ42	Φ114.3	Φ125	Φ233	Φ10X10	11-M10X20	12-Φ9	Φ200	4-M12X25	8	15	12	50	16	10	115	226	180
Type III	Φ80	Φ160	Φ200	Φ247	Φ48	Φ200	Φ125	Φ233	Φ10X10	11-M10X20	12-Φ9	Φ235	4-M12X25	8	15	12	50	16	10	117	229	220

MAF-255-L1



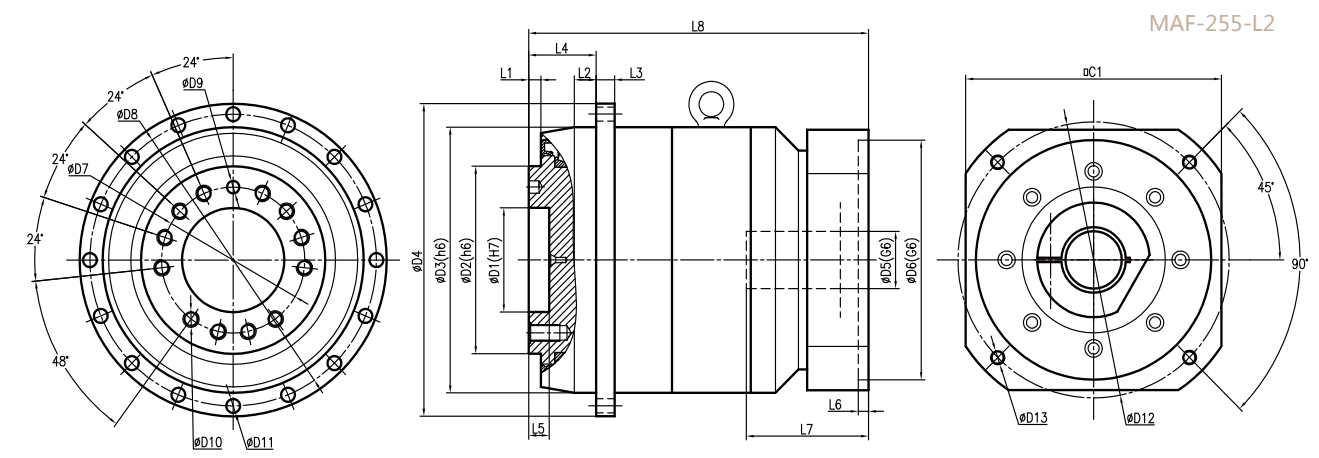
Flange	D1	D2	D3	D4	D5	D6	D7	D8	D9	D10	D11	D12	D13	L1	L2	L3	L4	L5	L6	L7	L8	C1
Type I	Φ100	Φ180	Φ255	Φ300	Φ48	Φ200	Φ140	Φ280	Φ12X10	12-M16X25	16-Φ13.5	Φ235	4-M12X25	12	21.5	18	66	20	10	119.5	255	220
Type II	Φ100	Φ180	Φ255	Φ300	Φ55	Φ200	Φ140	Φ280	Φ12X10	12-M16X25	16-Φ13.5	Φ235	4-M12X25	12	21.5	18	66	20	10	119.5	255	220

MAF-200-L2



Flange	D1	D2	D3	D4	D5	D6	D7	D8	D9	D10	D11	D12	D13	L1	L2	L3	L4	L5	L6	L7	L8	C1
Type I	Φ80	Φ160	Φ200	Φ247	Φ35	Φ114.3	Φ125	Φ233	Φ10X10	11-M10X20	12-Φ9	Φ200	4-M12X25	8	15	12	50	16	10	83	247.5	180
Type II	Φ80	Φ160	Φ200	Φ247	Φ42	Φ114.3	Φ125	Φ233	Φ10X10	11-M10X20	12-Φ9	Φ200	4-M12X25	8	15	12	50	16	10	115	277.5	180
Type III	Φ80	Φ160	Φ200	Φ247	Φ48	Φ200	Φ125	Φ233	Φ10X10	11-M10X20	12-Φ9	Φ235	4-M12X25	8	15	12	50	16	10	117	280	220

MAF-255-L2



Flange	D1	D2	D3	D4	D5	D6	D7	D8	D9	D10	D11	D12	D13	L1	L2	L3	L4	L5	L6	L7	L8	C1
Type I	Φ100	Φ180	Φ255	Φ300	Φ35	Φ114.3	Φ140	Φ280	Φ12X10	12-M16X25	16-Φ13.5	Φ200	4-M12X25	12	20	18	66	20	6	73	295	180
Type II	Φ100	Φ180	Φ255	Φ300	Φ48	Φ200	Φ140	Φ280	Φ12X10	12-M16X25	16-Φ13.5	Φ235	4-M12X25	12	20	18	66	20	10	117	330	220
Type III	Φ100	Φ180	Φ255	Φ300	Φ55	Φ200	Φ140	Φ280	Φ12X10	12-M16X25	16-Φ13.5	Φ235	4-M12X25	12	20	18	66	20	10	117	330	220

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# Planetary Gearbox Performance table

MAF-064																	
Symb.	i	T <sub>2N</sub>	T <sub>2Not</sub>	n <sub>1N</sub>	n <sub>1Max</sub>	j <sub>t</sub>	C <sub>2t</sub>	F <sub>2RMax</sub>	F <sub>2AMax</sub>	J <sub>1</sub>	η	L <sub>h</sub>	T	Lub	PC	MP	dB
Unit		N <sub>m</sub>	N <sub>m</sub>	rpm	rpm	arcmin	Nm/arcmin	N	N	kgcm <sup>2</sup>	%	h	°C				
I STAGE	4	50	2×T <sub>2N</sub>	3300	6000	≤3	13	1300	680	0.13	≥95	>20000	-15~45	Life Lubrication 终身润滑	IP65	Any 任何方向	≤60
	5	50								0.13							
	6	50								0.13							
	7	50								0.13							
	8	50								0.03							
	9	35								0.03							
	10	35								0.03							
II STAGE	20	50	2×T <sub>2N</sub>	3300	6000	≤5	13	1300	680	0.03	≥90	>20000	-15~45	Life Lubrication 终身润滑	IP65	Any 任何方向	≤60
	25	50								0.03							
	50	50								0.03							
	80	50								0.03							
	100	35								0.03							

# Planetary Gearbox Performance table

MAF-110																	
Symb.	i	T <sub>2N</sub>	T <sub>2Not</sub>	n <sub>1N</sub>	n <sub>1Max</sub>	j <sub>t</sub>	C <sub>2t</sub>	F <sub>2RMax</sub>	F <sub>2AMax</sub>	J <sub>1</sub>	η	L <sub>h</sub>	T	Lub	PC	MP	dB
Unit		N <sub>m</sub>	N <sub>m</sub>	rpm	rpm	arcmin	Nm/arcmin	N	N	kgcm <sup>2</sup>	%	h	°C				
I STAGE	4	300	2×T <sub>2N</sub>	2300	6000	≤3	82	7800	4000	2.87	≥95	>20000	-15~45	Life Lubrication 终身润滑	IP65	Any 任何方向	≤65
	5	350								2.71							
	6	360								2.71							
	7	350								2.62							
	8	360								2.61							
	9	240								2.58							
	10	220								2.57							
II STAGE	20	300	2×T <sub>2N</sub>	2300	6000	≤5	82	7800	4000	0.47	≥90	>20000	-15~45	Life Lubrication 终身润滑	IP65	Any 任何方向	≤65
	25	350								0.47							
	50	350								0.44							
	80	350								0.44							
	100	220								0.44							

MAF-090																	
Symb.	i	T <sub>2N</sub>	T <sub>2Not</sub>	n <sub>1N</sub>	n <sub>1Max</sub>	j <sub>t</sub>	C <sub>2t</sub>	F <sub>2RMax</sub>	F <sub>2AMax</sub>	J <sub>1</sub>	η	L <sub>h</sub>	T	Lub	PC	MP	dB
Unit		N <sub>m</sub>	N <sub>m</sub>	rpm	rpm	arcmin	Nm/arcmin	N	N	kgcm <sup>2</sup>	%	h	°C				
I STAGE	4	120	2×T <sub>2N</sub>	2600	6000	≤3	31	3100	1650	0.51	≥95	>20000	-15~45	Life Lubrication 终身润滑	IP65	Any 任何方向	≤63
	5	125								0.47							
	6	125								0.47							
	7	125								0.45							
	8	125								0.45							
	9	80								0.44							
	10	80								0.44							
II STAGE	20	120	2×T <sub>2N</sub>	2600	6000	≤5	31	3100	1650	0.13	≥90	>20000	-15~45	Life Lubrication 终身润滑	IP65	Any 任何方向	≤63
	25	125								0.13							
	50	125								0.13							
	80	125								0.44							
	100	80								0.13							

MAF-140																	
Symb.	i	T <sub>2N</sub>	T <sub>2Not</sub>	n <sub>1N</sub>	n <sub>1Max</sub>	j <sub>t</sub>	C <sub>2t</sub>	F <sub>2RMax</sub>	F <sub>2AMax</sub>	J <sub>1</sub>	η	L <sub>h</sub>	T	Lub	PC	MP	dB
Unit		N <sub>m</sub>	N <sub>m</sub>	rpm	rpm	arcmin	Nm/arcmin	N	N	kgcm <sup>2</sup>	%	h	°C				
I STAGE	4	650	2×T <sub>2N</sub>	2000	5000	≤3	151	12000	8100	7.54	≥95	>20000	-15~45	Life Lubrication 终身润滑	IP65	Any 任何方向	≤66
	5	700								7.42							
	6	700								7.42							
	7	700								7.14							
	8	700								7.13							
	9	500								7.08							
	10	460								7.03							
II STAGE	20	650	2×T <sub>2N</sub>	2000	5000	≤5	151	12000	8100	2.71	≥90	>20000	-15~45	Life Lubrication 终身润滑	IP65	Any 任何方向	≤66
	25	700								2.71							
	50	700								2.57							
	80	700								2.57							
	100	460								2.57							

# Planetary Gearbox Performance table

# Planetary Gearbox Efficiency Chart

MAF-200																	
Symb.	i	T <sub>2N</sub>	T <sub>2Not</sub>	n <sub>1N</sub>	n <sub>1Max</sub>	j <sub>t</sub>	C <sub>2t</sub>	F <sub>2RMax</sub>	F <sub>2AMax</sub>	J <sub>1</sub>	η	L <sub>h</sub>	T	Lub	PC	MP	dB
Unit		N <sub>m</sub>	N <sub>m</sub>	rpm	rpm	arcmin	Nm/arcmin	N	N	kgcm <sup>2</sup>	%	h	°C				
I STAGE	4	1350	2×T <sub>2N</sub>	2000	4000	≤3	450	18520	15500	23.4	≥95	>20000	-15~45	Life Lubrication 终身润滑	IP65	Any 任何方向	≤73
	5	1400								23.4							
	6	1400								23.4							
	7	1400								23.4							
	8	1400								21.8							
	9	980								21.8							
II STAGE	10	980	2×T <sub>2N</sub>	2000	4000	≤5	450	18520	15500	21.8	≥90	>20000	-15~45	Life Lubrication 终身润滑	IP65	Any 任何方向	≤73
	20	1350								21.8							
	25	1400								21.8							
	50	1400								21.8							
	80	1400								21.8							
100	980	21.8															

## Efficiency

The efficiency of planetary reducers varies with several parameters such as ratio, input speed, temperature, lubrication conditions, etc.

The efficiency was measured under the following working conditions:

Input speed (rpm)	3000
Operating temperature (°C)	25
Lubricant	Standard

## 效率特性

减速机的效率一般因减速比、输入转速、负载转速、温度、润滑条件而异。在下列测定条件下，各系列的效率如下所示。此外，图表的数值均为平均值。

输入转速 (rpm)	3000
环境温度 (°C)	25
润滑剂	标准润滑剂

MAF-255																	
Symb.	i	T <sub>2N</sub>	T <sub>2Not</sub>	n <sub>1N</sub>	n <sub>1Max</sub>	j <sub>t</sub>	C <sub>2t</sub>	F <sub>2RMax</sub>	F <sub>2AMax</sub>	J <sub>1</sub>	η	L <sub>h</sub>	T	Lub	PC	MP	dB
Unit		N <sub>m</sub>	N <sub>m</sub>	rpm	rpm	arcmin	Nm/arcmin	N	N	kgcm <sup>2</sup>	%	h	°C				
I STAGE	4	2200	2×T <sub>2N</sub>	2000	3000	≤3	1023	27000	24000	64.3	≥95	>20000	-15~45	Life Lubrication 终身润滑	IP65	Any 任何方向	≤77
	5	2300								64.3							
	6	2300								64.3							
	7	2300								64.3							
	8	2300								64.3							
	9	1800								64.3							
II STAGE	10	1600	2×T <sub>2N</sub>	2000	3000	≤5	1023	27000	24000	23.4	≥90	>20000	-15~45	Life Lubrication 终身润滑	IP65	Any 任何方向	≤77
	20	2200								23.4							
	25	2300								23.4							
	50	2300								23.4							
	80	2300								23.4							
100	1600	23.4															

