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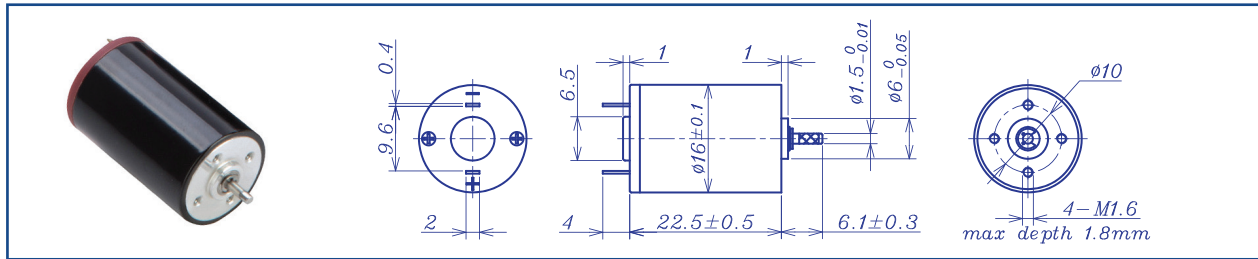
TOTAL SOLUTION for Precision
DC Drive System 2020

DC BRUSHED MOTOR
BRUSHED METAL SERIES

Assun Metal Brush Series Coreless motors are manufactured with coreless rotors and metal brush commutators. The high efficiency and precision character of metal brushed coreless motor made it perfect for energy critical and fast responding applications such as medical tools and robotic actuators.



AM-CL1623MAN SERIES



		Precious metal brush			Ball Bearings				
Motor Model			0109	0108	0310	0308	0610	0608	1212
Nominal voltage	V		1.5	1.5	3	3	6	6	12
No load speed	±12% rpm		9100	7850	10130	7690	9875	7574	12440
No load current	Max 150% mA		60	55	35	23	22	18	14
Recommend limit for continuous operating	Max cont. torque	mN.m	1.2	1.3	1.9	2.1	2.2	2.1	2.1
	Rated Speed	rpm	7596	6106	7674	5142	7202	4861	9839
	Rated Current	mA	850	800	700	600	400	300	250
	Rated Power	W	1.0	0.9	1.5	1.1	1.6	1.1	2.2
Starting current	mA		4839	3409	2778	1765	1418	805	1143
Stall torque	mN.m		7	6	8	6	8	6	10
Maximum power output	W		1.8	1.2	2.0	1.3	2.1	1.2	3.3
Maximum Efficiency	%		79	76	79	78	77	72	79
Terminal resistance	±12% Ω		0.31	0.44	1.08	1.7	4.23	7.45	10.5
Inductance (1KHz)	mH		0.001	0.006	0.038	0.058	0.15	0.27	0.41
Mechanical time constant	ms		17.6	18.7	19.0	17.2	16.9	17.7	16.9
Moment of inertia	gcm ²		1.37	1.37	1.37	1.37	1.3	1.3	1.33
Torque constant	mN.m/A		1.6	1.8	2.8	3.7	5.7	7.4	9.1
Speed constant	rpm/V		6143	5319	3420	2597	1672	1291	1050
Speed/torque gradient	rpm/mN.m		1225	1304	1323	1201	1238	1301	1211
Weight	g		18.6	18.6	18.6	18.4	18.4	18.4	18.5

ADDITIONAL INFORMATION

Motor thermal resistance:	41.7K/W	Motor thermal time constant:	379S
Axial (dynamic):	0.8 N	Radial (5mm from mounting face):	12 N
Press-fit force (static):	26 N	Max allowable screw depth into flange:	1.8 mm
Maximum radial play (5mm from mounting face):	≤0.02 mm	Axial play:	Preset
Maximum winding temperature:	85°C	Ambient temperature range:	-30 to 65°C
Standard rear shaft diameter:	2 mm	Standard rear shaft length "L":	0/3.7 mm

Total Length (Gearbox and Motor): L _T =L ₁ +L ₂ +L ₃			
L1:16GP	L1:20GP	L2:CL16	L3
15.9	18.8	22.50	-
23.3	23.6		
27.0	28.4		

AM-CL1623MAN Combination Scheme

Recommended Gearbox:
Planetary Gearbox:
AM-16GP
AM-20GP

Recommended Encoder:
Encoder S: AM-EN1611S***
2~3 Channels

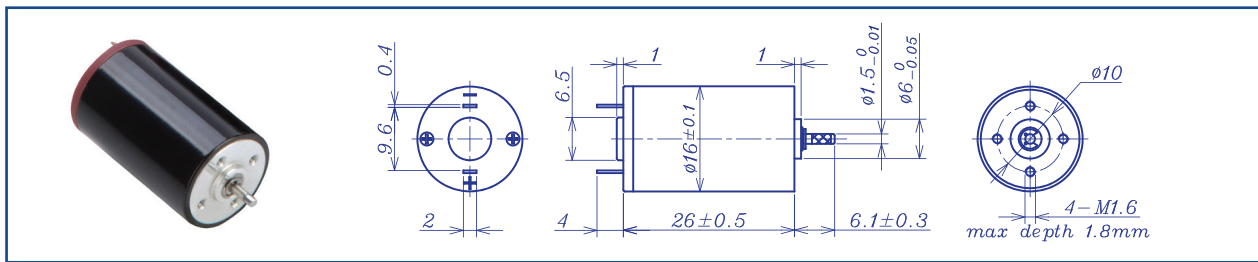
For more combination specs, visit Assun Motor website.

Remarks: Client can choose gearbox and encoder to match with this motor. Some combinations are listed here for reference.

Motor data tested at 25°C. Motor operation exceeding continuous limits will reduce life or result in damage. At elevated ambient temperatures, load current must be reduced.

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AM-CL1626MAN SERIES

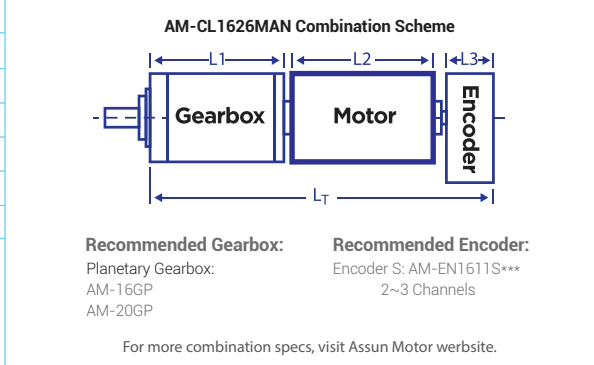


		Precious metal brush				Ball Bearings				
Motor Model		0109	0308	0310	0608	0610	1210	1212	2414	
Nominal voltage		V	1.5	3	3	6	6	12	12	24
No load speed ±12%		rpm	9350	8256	10340	8129	10544	10691	12075	14306
No load current Max 150%		mA	68	25	25	10	18	10	9.2	12
Recommend limit for continuous operating	Max cont. torque	mN.m	1.2	2.5	2.1	2.7	1.8	2.5	2.3	2.2
	Rated Speed	rpm	8117	5736	8594	6001	9134	8426	10247	12476
	Rated Current	mA	850	750	800	400	350	250	250	150
	Rated Power	W	1.0	1.5	1.9	1.7	1.7	2.2	2.4	2.9
Starting current		mA	6000	2400	4615	1500	2500	1143	1600	1091
Stall torque		mN.m	9	8	13	10	13	12	15	17
Maximum power output		W	2.2	1.8	3.4	2.2	3.7	3.4	4.7	6.4
Maximum Efficiency		%	80	81	86	84	84	82	85	80
Terminal resistance ±12%		Ω	0.25	1.25	0.65	4.0	2.4	10.5	7.5	22
Inductance (1KHz)		mH	0.003	0.031	0.016	0.15	0.095	0.4	0.29	0.85
Mechanical time constant		ms	14.2	12.7	10.3	9.8	9.9	11.2	10.1	10.5
Moment of inertia		gcm ²	1.3	1.2	1.2	1.2	1.2	1.2	1.2	1.2
Torque constant		mN.m/A	1.5	3.4	2.8	7.0	5.4	10.6	9.4	15.8
Speed constant		rpm/V	6305	2781	3465	1364	1770	899	1012	603
Speed/torque gradient		rpm/mN.m	1041	1012	817	779	787	888	804	837
Weight		g	22.6	22.4	22.4	22.4	22.4	22.1	22.2	22.4

ADDITIONAL INFORMATION

Motor thermal resistance:	37.6K/W	Motor thermal time constant:	400S
Axial (dynamic):	3.4 N	Radial (5mm from mounting face):	2.6 N
Press-fit force (static):	36 N	Max allowable screw depth into flange:	1.8 mm
Maximum radial play (5mm from mounting face):	≤0.02 mm	Axial play:	Preset
Maximum winding temperature:	85°C	Ambient temperature range:	-30 to 65°C
Standard rear shaft diameter:	2 mm	Standard rear shaft length "L":	0/3.7 mm

Total Length (Gearbox and Motor): L _T =L ₁ +L ₂ +L ₃			
L1:16GP	L1:20GP	L2:CL16	L3
15.9	18.8	26.0	-
23.3	23.6		
27.0	28.4		

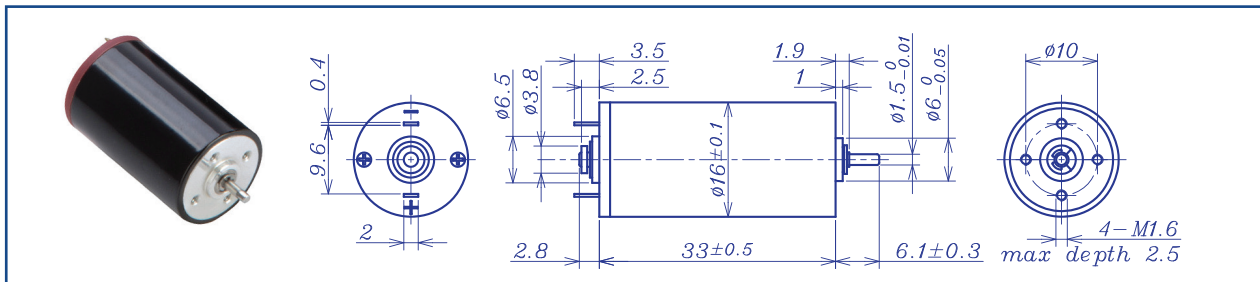


Remarks: Client can choose gearbox and encoder to match with this motor. Some combinations are listed here for reference.

Motor data tested at 25°C. Motor operation exceeding continuous limits will reduce life or result in damage.
At elevated ambient temperatures, load current must be reduced.

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AM-CL1633MAN SERIES

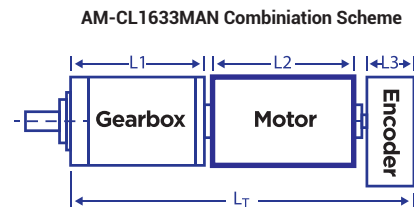


		Precious metal brush			Ball bearings				
Motor Model			0308	0305	0607	0606	0605	1207	1205
Nominal voltage	V		3	3	6	6	6	12	12
No load speed	±12% rpm		7700	5370	7250	5790	5280	6600	5200
No load current	Max 150% mA		50	30	35	22	24	14	12
Recommend limit for continuous operating	Max cont. torque	mN.m	2.9	3.3	3.5	3.7	3.5	3.2	3.6
	Rated speed	rpm	6204	3931	5775	4354	3813	5165	3683
	Rated current	mA	850	650	480	400	350	200	200
	Rated power	W	1.9	1.3	2.1	1.7	1.4	1.7	1.4
Starting current	mA		4167	2344	2222	1546	1198	870	583
Stall torque	mN.m		15	12	17	15	1.2	15	12
Maximum power output	W		3.1	1.7	3.2	2.3	1.7	2.5	1.7
Maximum efficiency	%		79	79	76	78	74	76	73
Terminal resistance	±12% Ω		0.72	1.28	2.7	3.88	5.01	13.8	20.6
Inductance	(1KHZ) mH		0.024	0.061	0.15	0.22	0.28	0.74	1.21
Mechanical time constant	ms		11.5	10.7	10.4	9.5	10.3	10.5	10.2
Moment of inertia	gcm ²		2.15	2.32	2.32	2.32	2.32	2.22	2.29
Torque constant	mN.m/A		3.7	5.3	7.8	9.8	10.6	17.1	21.5
Speed constant	rpm/V		2598	1813	1228	979	898	559	444
Speed/ torque gradient	rpm/mN.m		509	441	426	389	423	452	426
Weight	g		27.9	28.7	28.7	28.6	28.7	28.1	28.6

ADDITIONAL INFORMATION

Motor thermal resistance:	25.2K/W	Motor thermal time constant:	1286S
Axial (dynamic):	1.0 N	Radial (5mm from mounting face):	180.0 N
Press-fit force (static):	16 (90)N	Max allowable screw depth into flange:	4.5mm
Maximum radial play (5mm from mounting face):	≤0.02 mm	Axial play	0 (<8.0N)
Maximum winding temperature:	85°C	Ambient temperature range:	-30 to 65°C
Standard rear shaft diameter:	2 mm	Standard rear shaft length "L":	0/3.7 mm

Total Length (Gearbox and Motor): L _T =L ₁ +L ₂ +L ₃			
L1:16GP	L1: 20GP	L2:CL16	L3: EN16S
15.9	18.8	33.0	10.7
23.3	23.6		
27.0	28.4		



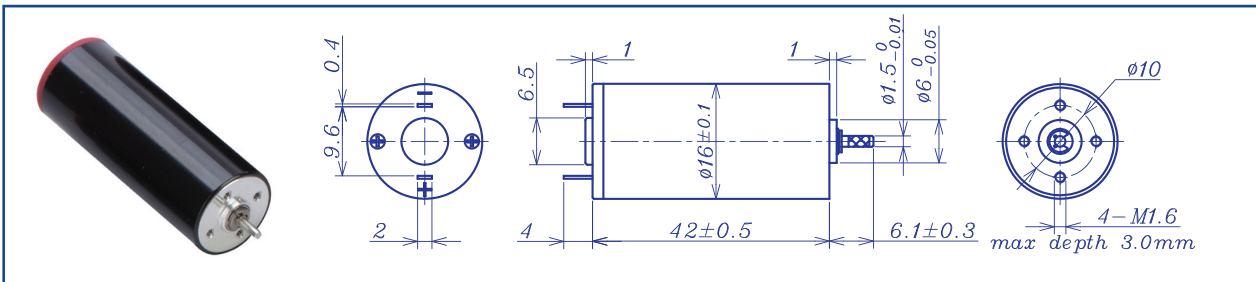
Recommended Gearbox: Planetary Gearbox: AM-16GP, AM-20GP
Recommended Encoder: Encoder S: AM-EN1611S*** 2~3 Channels

For more combination specs, visit Assun Motor website.

Motor data tested at 25°C. Motor operation exceeding continuous limits will reduce life or result in damage. At elevated ambient temperatures, load current must be reduced.

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AM-CL1642MAN SERIES

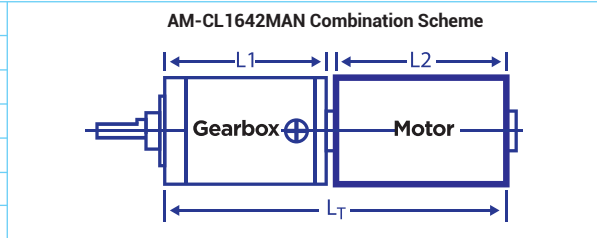


Motor Model	Precious metal brush					Ball bearings				
		0609	1210	2409	2411	3609	3611	4809	4811	
Nominal voltage	V	6	12	24	24	36	36	48	48	
No load speed ±12%	rpm	9222	9952	9450	11120	9207	11682	9339	11253	
No load current Max 150%	mA	19	10.5	6.0	7.0	4.5	5.0	3.5	4.2	
Recommend limit for continuous operating	Max cont. torque	mN.m	5.3	5.0	5.2	4.2	5.4	4.3	5.2	
	Rated speed	rpm	8094	8874	8393	10215	8090	10700	8122	
	Rated current	mA	850	450	220	210	150	150	110	
	Rated power	W	4.5	4.7	4.5	4.5	4.6	4.8	4.4	
Starting current	mA	7059	4068	1920	2500	1204	1731	821	1182	
Stall torque	mN.m	44	47	46	51	45	51	40	48	
Maximum power output	W	10.5	12.1	11.4	14.9	10.8	15.5	9.8	14.1	
Maximum efficiency	%	90	90	89	90	88	90	87	88	
Terminal resistance ±12%	Ω	0.85	2.95	12.5	9.6	29.9	20.8	58.5	40.6	
Inductance (1KHZ)	mH	0.054	0.2	0.95	0.66	2.22	2.22	3.8	3.8	
Mechanical time constant	ms	7.0	6.7	6.4	6.8	6.1	7.3	7.1	9.6	
Moment of inertia	gcm ²	3.14	3.01	3.01	3.01	2.8	3.01	2.9	3.9	
Torque constant	mN.m/A	6.2	11.5	24.2	20.6	37.2	29.3	48.9	40.6	
Speed constant	rpm/V	1541	831	395	465	257	325	195	235	
Speed/ torque gradient	rpm/mN.m	211	214	204	217	206	231	234	235	
Weight	g	39.0	38.5	38.5	38.5	38.5	38.6	37.9	38.1	

ADDITIONAL INFORMATION

Motor thermal resistance:	K/W	Motor thermal time constant:	S
Axial (dynamic):	3.4 N	Radial (5mm from mounting face):	6.0 N
Press-fit force (static):	36N	Max allowable screw depth into flange:	3.0 mm
Maximum radial play (5mm from mounting face):	≤0.02 mm	Axial play	Preset
Maximum winding temperature:	85°C	Ambient temperature range:	-30 to 65°C
Standard rear shaft diameter:	N/A	Standard rear shaft length "L":	N/A

Total Length (Gearbox and Motor): L _T =L ₁ +L ₂ +L ₃			
L1:16GP	L1: 20GP	L2:CL16	L3
15.9	18.8	42.0	
23.3	23.6		
27.0	28.4		



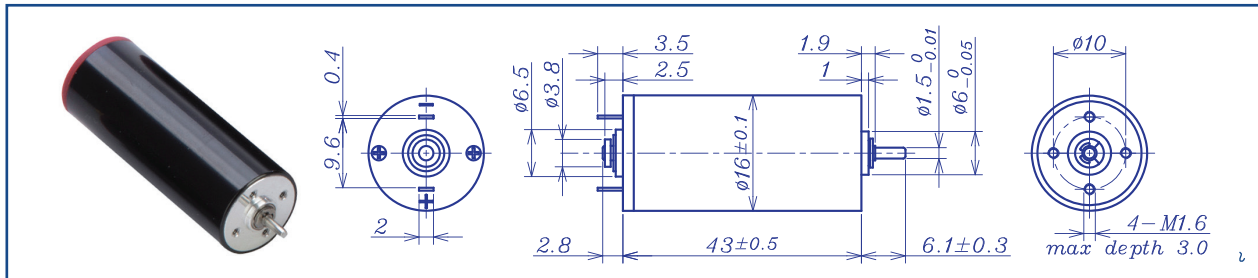
Remarks: Client can choose gearbox and encoder to match with this motor. Some combinations are listed here for reference.

Recommended Gearbox:
Planetary Gearbox:
AM-16GP
AM-20GP
For more combination specs, visit Assun Motor website.

Motor data tested at 25°C. Motor operation exceeding continuous limits will reduce life or result in damage.
At elevated ambient temperatures, load current must be reduced.

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AM-CL1643MAN SERIES



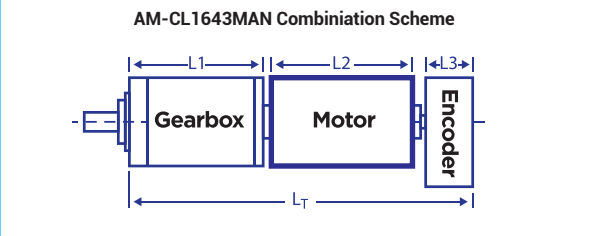
Precious metal brush Ball bearings

Motor Model		0307	0305	0607	0605	0907	1206	1204	2607
Nominal voltage	V	3	3	6	6	9	12	12	26
No load speed	±12% rpm	6730	5242	6620	4987	6878	6360	4400	7080
No load current	Max 150% mA	65	50	32	23	24	16	10	10
Recommend limit for continuous operating	Max cont. torque	mN.m	3.3	4.0	5.3	5.4	5.3	5.4	5.2
	Rated speed	rpm	5768	4058	5207	3607	5462	5008	2728
	Rated current	mA	850	800	650	500	450	320	250
	Rated power	W	2.0	1.7	2.9	2.0	3.0	2.8	1.8
Starting current	mA	5556	3371	2927	1754	2093	1446	642	718
Stall torque	mN.m	23	18	25	20	26	25	16	24
Maximum power output	W	4.1	2.5	4.3	2.6	4.6	4.2	1.9	4.5
Maximum efficiency	%	80	77	80	78	80	80	77	78
Terminal resistance	±12% Ω	0.54	0.89	2.05	3.42	4.3	8.3	18.7	36.7
Inductance	(1KHZ) mH	0.018	0.037	0.11	0.21	0.24	0.52	1.1	2.01
Mechanical time constant	ms	9.3	9.0	8.2	8.2	8.7	7.7	8.3	8.7
Moment of inertia	gcm ²	3.04	2.94	2.94	3.11	3.07	2.94	2.91	2.87
Torque constant	mN.m/A	4.2	5.4	8.6	11.4	12.4	17.8	25.6	34.6
Speed constant	rpm/V	2270	1774	1116	841	773	536	372	276
Speed/ torque gradient	rpm/mN.m	291	293	267	253	269	250	272	289
Weight	g	38.9	38.6	38.7	40.1	40.1	38.7	38.5	38.4

ADDITIONAL INFORMATION

Motor thermal resistance:	24.9K/W	Motor thermal time constant:	412 S
Axial (dynamic):	1.0 N	Radial (5mm from mounting face):	1.8 N
Press-fit force (static):	16(70)N	Max allowable screw depth into flange:	3.0 mm
Maximum radial play (5mm from mounting face):	≤0.02 mm	Axial play	Preset
Maximum winding temperature:	85°C	Ambient temperature range:	-30 to 65°C
Standard rear shaft diameter:	2 mm	Standard rear shaft length "L":	0/3.7 mm

Total Length (Gearbox and Motor): L _T =L1+L2+L3			
L1:16GP	L1: 20GP	L2:CL16	L3: EN16S
15.9	18.8	43.0	10.7
23.3	23.6		
27.0	28.4		



Remarks: Client can choose gearbox and encoder to match with this motor. Some combinations are listed here for reference.

Recommended Gearbox:
Planetary Gearbox:
AM-16GP
AM-20GP

Recommended Encoder:
Encoder S: AM-EN1611S***
2~3 Channels

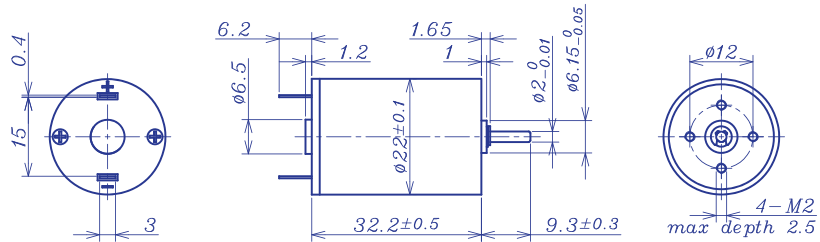
For more combination specs, visit Assun Motor website.

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AM-CL2232MAN SERIES



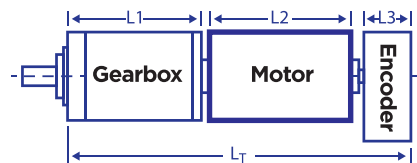
Motor Model		Precious metal brush				Ball bearings			
		0308	0305	0607	0605	1207	1205	2407	2406
Nominal voltage	V	3	3	6	6	12	12	24	24
No load speed	±12% rpm	7600	4500	6998	5006	6548	4986	7048	6167
No load current	Max 150% mA	55	30	27	14	10.2	7	6.5	8.5
Recommend limit for continuous operating	Max cont. torque	mN.m	3.2	5.2	5.9	7.2	6.8	7.8	7.1
	Rated speed	rpm	6998	3745	6083	3843	5448	3769	5901
	Rated current	mA	900	850	750	650	400	350	220
	Rated power	W	2.3	2.0	3.8	2.9	3.9	3.1	4.3
Starting current	mA	10714	4918	5556	2752	2330	1412	1319	1057
Stall torque	mN.m	40	31	45	31	40	32	42	39
Maximum power output	W	8.0	3.6	8.3	4.1	6.9	4.2	7.8	6.2
Maximum efficiency	%	86	85	87	86	87	86	86	83
Terminal resistance	±12% Ω	0.28	0.61	1.08	2.18	5.15	8.50	18.2	22.7
Inductance	(1KHZ) mH	0.015	0.037	0.68	0.14	0.32	0.54	1.1	1.38
Mechanical time constant	ms	11.4	9.2	9.8	9.9	9.8	9.5	9.6	9.3
Moment of inertia	gcm ²	5.75	6.02	6.02	5.88	5.75	5.82	5.55	5.55
Torque constant	mN.m/A	3.8	6.3	8.1	11.4	17.4	22.9	32.4	36.9
Speed constant	rpm/V	2546	1509	1172	839	548	418	295	259
Speed/torque gradient	rpm/mN.m	190.1	145.5	155.4	160.5	162.0	155.2	166.0	159.5
Weight	g	56.4	56.9	56.9	56.7	56.5	56.6	56.3	56.3

ADDITIONAL INFORMATION

Motor thermal resistance:	24.9K/W	Motor thermal time constant:	685 S
Axial (dynamic):	5.9 N	Radial (5mm from mounting face):	8.0 N
Press-fit force (static):	16(90)N	Max allowable screw depth into flange:	2.5 mm
Maximum radial play (5mm from mounting face):	≤0.02 mm	Axial play	Preset
Maximum winding temperature:	85°C	Ambient temperature range:	-30 to 65°C
Standard rear shaft diameter:	2 mm	Standard rear shaft length "L":	0/3.7 mm

Total Length (Gearbox and Motor): L _T =L1+L2+L3			
L1:20GP	L1: 24GP	L2:CL22	L3: EN22S
18.8	22.2	32.2	10.7
23.6	27.4		
28.4	32.6		

AM-CL2232MAN Combination Scheme



Recommended Gearbox: Planetary Gearbox: AM-20GP, AM-24GP
Recommended Encoder: Encoder S: AM-EN2211S***, 2~3 Channels

For more combination specs, visit Assun Motor website.

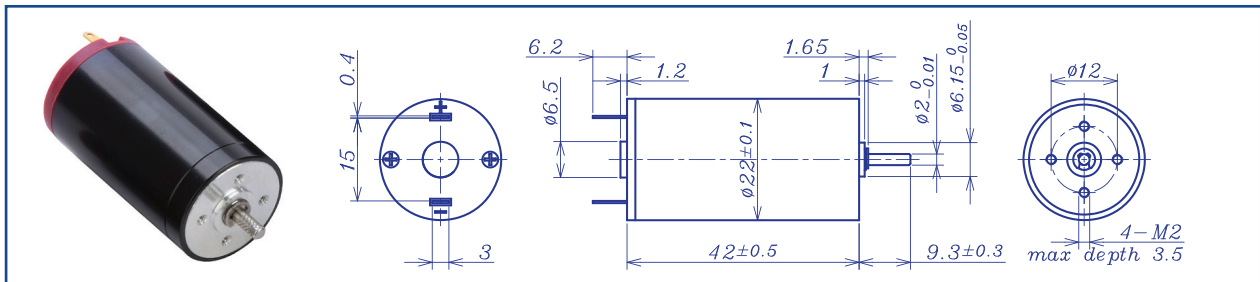
Remarks: Client can choose gearbox and encoder to match with this motor. Some combinations are listed here for reference.

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AM-CL2242MAN SERIES

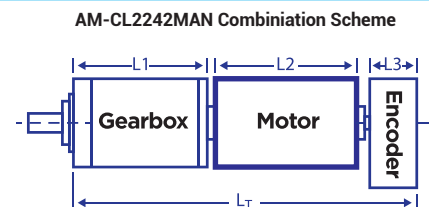


Motor Model		Precious metal brush				Ball bearings				
		0606	0606	1207	1205	2407	2405	4806	4804	
Nominal voltage	V	6	6	12	12	24	24	48	48	
No load speed	±12% rpm	6426	5045	7150	5457	7125	4743	6457	4487	
No load current	Max 150% mA	46	30	24	20	13	7.5	6.5	3.7	
Recommend limit for continuous operating	Max cont. torque	mN.m	8.3	10.4	12.4	13.2	14.0	15.0	13.6	14.9
	Rated speed	rpm	5833	4369	6352	4657	6240	3843	5615	3591
	Rated current	mA	980	950	800	650	450	320	200	150
	Rated power	W	5.1	4.8	8.2	6.4	9.2	6.0	8.0	5.6
Starting current	mA	10169	6818	6977	4317	3529	1655	1463	736	
Stall torque	mN.m	90	77	111	90	113	79	103	74	
Maximum power output	W	15.1	10.1	20.8	12.8	21.0	9.8	17.4	8.7	
Maximum efficiency	%	87	87	89	87	88	87	87	86	
Terminal resistance	±12% Ω	0.59	0.88	1.72	2.78	6.80	14.5	32.8	65.2	
Inductance	(1KHZ) mH	0.36	0.09	0.23	0.44	0.7	3.01	4.01	5.01	
Mechanical time constant	ms	6.5	6.2	6.0	5.8	6.0	5.5	5.8	5.8	
Moment of inertia	gcm ²	8.66	8.92	8.92	9.06	9.06	8.79	8.73	9.12	
Torque constant	mN.m/A	8.9	11.3	16.0	20.9	32.0	48.1	70.5	101.6	
Speed constant	rpm/V	1076	846	598	457	298	199	135	94	
Speed/ torque gradient	rpm/mN.m	71.5	66.0	64.4	60.8	63.2	59.8	63.1	60.3	
Weight	g	79.5	79.8	79.8	80.1	80.1	79.6	79.5	80.1	

ADDITIONAL INFORMATION

Motor thermal resistance:	18.4 K/W	Motor thermal time constant:	798 S
Axial (dynamic):	5.9 N	Radial (5mm from mounting face):	8.0 N
Press-fit force (static):	16(70)N	Max allowable screw depth into flange:	3.5 mm
Maximum radial play (5mm from mounting face):	≤0.02 mm	Axial play	Preset
Maximum winding temperature:	85°C	Ambient temperature range:	-30 to 65°C
Standard rear shaft diameter:	2 mm	Standard rear shaft length "L":	0/3.7 mm

Total Length (Gearbox and Motor): L _T =L ₁ +L ₂ +L ₃				
L1:20GP	L1: 24GP		L2:CL22	L3: EN22S
18.8	22.2		42.0	10.7
23.6	27.4			
28.4	32.6			



Recommended Gearbox: Planetary Gearbox:
AM-20GP
AM-24GP

Recommended Encoder: Encoder S: AM-EN2211S***
2~3 Channels

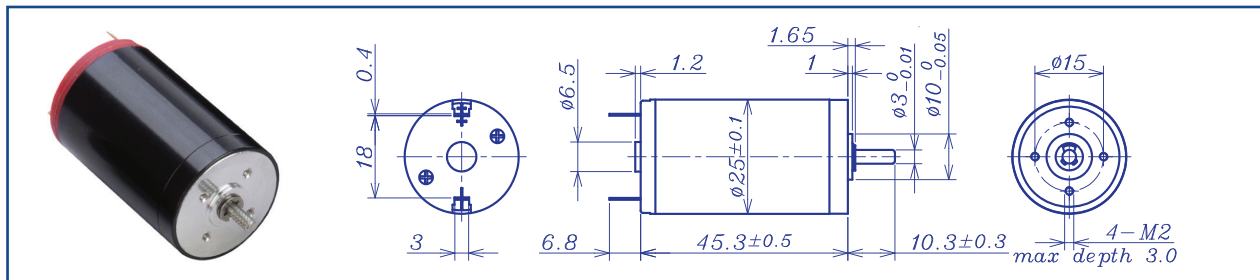
For more combination specs, visit Assun Motor website.

Motor data tested at 25°C. Motor operation exceeding continuous limits will reduce life or result in damage.
At elevated ambient temperatures, load current must be reduced.

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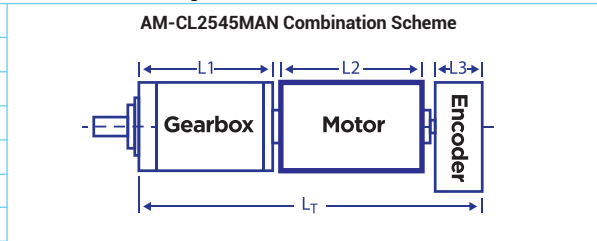
AM-CL2545MAN SERIES



		Precious metal brush			Ball bearings					
Motor Model			0606	0604	1206	1204	2406	2404	4807	4805
Nominal voltage	V		6	6	12	12	24	24	48	48
No load speed	±12% rpm		5960	4070	5920	4100	6020	4250	6850	4900
No load current	Max 150% mA		88	47	38	26	24	14	13	7
Recommend limit for continuous operation	Max cont. torque	mN.m	8.2	12.6	17.6	18.2	18.8	22.3	20.4	27.3
	Rated speed	rpm	5641	3583	5251	3461	5374	3472	6102	3818
	Rated current	mA	950	950	950	680	520	430	320	300
	Rated power	W	4.9	4.7	9.7	6.6	10.5	8.1	13.1	10.9
Starting current	mA		16216	7595	8108	4225	4461	2286	2824	1333
Stall torque	mN.m		154.2	105.6	155.5	116.6	168.0	121.8	187.2	123.4
Maximum power output	W		24.1	11.3	24.1	12.5	26.5	13.5	33.6	15.8
Maximum efficiency	%		86	85	87	85	86	85	87	86
Terminal resistance	±12% Ω		0.37	0.79	1.48	2.84	5.38	10.5	17.0	36
Inductance	(1KHZ) mH		0.03	0.07	0.15	0.36	0.60	1.19	2.05	3.6
Mechanical time constant	ms		5.0	5.4	5.3	5.2	5.1	5.0	5.2	5.4
Moment of inertia	gcm ²		12.3	13.5	13.5	13.5	13.5	13.6	13.6	12.9
Torque constant	mN.m/A		9.6	14.0	19.3	27.8	37.9	53.6	66.6	93.1
Speed constant	rpm/V		999	683	496	344	252	178	143	103
Speed/torque gradient	rpm/mN.m		38.6	38.5	38.1	35.1	35.8	34.9	36.6	39.7
Weight	g		108	108	108	108	108	108	108	108

ADDITIONAL INFORMATION			
Motor thermal resistance:	18.6 K/W	Motor thermal time constant:	969 S
Axial (dynamic):	7.3 N	Radial (5mm from mounting face):	20.0 N
Press-fit force (static):	60(120)N	Max allowable screw depth into flange:	3.0 mm
Maximum radial play (5mm from mounting face):	≤0.02 mm	Axial play	Preset
Maximum winding temperature:	85°C	Ambient temperature range:	-30 to °C65
Standard rear shaft diameter:	1.5 mm	Standard rear shaft length "L":	0/3.7 mm

Total Length (Gearbox and Motor): L _T =L1+L2+L3			
L1:24GP	L1: 28GP	L2:CL25	L3: EN16S
22.2	25.9	45.3	10.7
27.4	33.1		
32.6	40.3		



Remarks: Client can choose gearbox and encoder to match with this motor. Some combinations are listed here for reference.

Recommended Gearbox:
Planetary Gearbox:
AM-24GP
AM-28GP

Recommended Encoder:
Encoder S: AM-EN1611S***
2~3 Channels

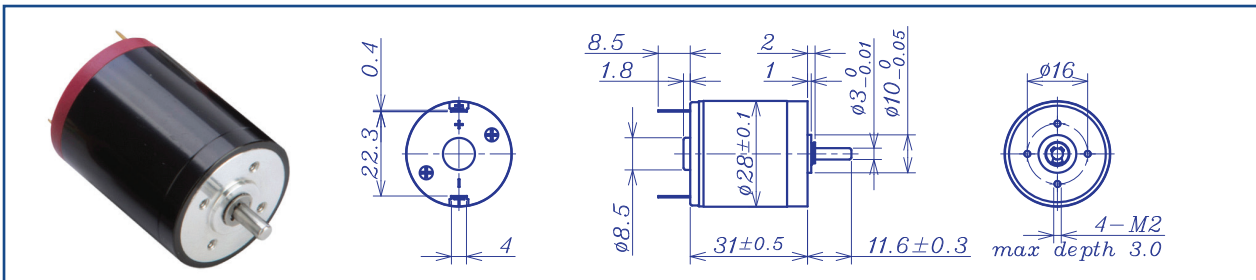
For more combination specs, visit Assun Motor website.

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AM-CL2831MAN SERIES



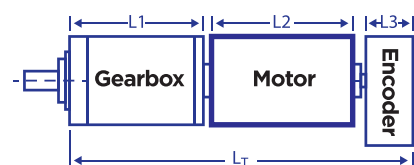
Motor Model		Precious metal brush				Ball bearings				
		0606	0604	1207	1204	2406	2404	4806	4805	
Nominal voltage	V	6	6	12	12	24	24	48	48	
No load speed	±12% rpm	6276	3960	7437	4000	6050	4288	6430	5704	
No load current	Max 150% mA	45	25	30	13	10	6.5	6.5	5.3	
Recommend limit for continuous operation	Max cont. torque	mN.m	5.9	8.3	5.7	8.1	9.0	11.3	10.2	9.1
	Rated speed	rpm	5690	3195	6860	3199	5186	3130	5731	4742
	Rated current	mA	700	600	400	300	250	220	150	120
	Rated power	W	3.5	2.8	4.1	2.7	4.9	3.7	5.7	4.5
Starting current	mA	7059	3000	4800	1446	1690	797	878	686	
Stall torque	mN.m	64	43	73	41	63	42	62	54	
Maximum power output	W	10.5	4.4	14.2	4.3	10.0	4.7	10.4	8.1	
Maximum efficiency	%	85	83	85	82	85	83	84	83	
Terminal resistance	±12% Ω	0.85	2.0	2.5	8.3	14.2	30.1	54.7	70	
Inductance	(1KHZ) mH	0.063	0.17	0.19	0.69	1.2	2.4	4.1	5.1	
Mechanical time constant	ms	17.1	16.1	16.1	16.1	15.6	16.4	17.3	17.7	
Moment of inertia	gcm ²	16.6	16.6	15.6	15.6	15.6	15.3	15.8	16.1	
Torque constant	mN.m/A	9.1	14.3	15.3	28.4	37.7	53.0	70.8	79.7	
Speed constant	rpm/V	1053	666	624	336	254	180	135	120	
Speed/torque gradient	rpm/mN.m	98.6	92.8	101.8	98.3	95.6	102.3	104.3	105.1	
Weight	g	86.2	86.2	85.3	85.3	85.3	85	85.3	85.2	

ADDITIONAL INFORMATION

Motor thermal resistance:	19.3 K/W	Motor thermal time constant:	817.2 S
Axial (dynamic):	7.3 N	Radial (5mm from mounting face):	24.0 N
Press-fit force (static):	60(120)N	Max allowable screw depth into flange:	3.0 mm
Maximum radial play (5mm from mounting face):	≤0.02 mm	Axial play	Preset
Maximum winding temperature:	85°C	Ambient temperature range:	-30 to °C65
Standard rear shaft diameter:	1.5 mm	Standard rear shaft length "L":	0/3.7 mm

Total Length (Gearbox and Motor): L _T =L1+L2+L3			
L1:28GP	L1: 32GP	L2:CL28	L3: EN16S
25.9	27.4	31.0	10.7
33.1	35.9		
40.3	44.4		

AM-CL2831MAN Combination Scheme



Recommended Gearbox: Planetary Gearbox: AM-28GP, AM-32GP
Recommended Encoder: Encoder S: AM-EN1611S*** 2~3 Channels

For more combination specs, visit Assun Motor website.

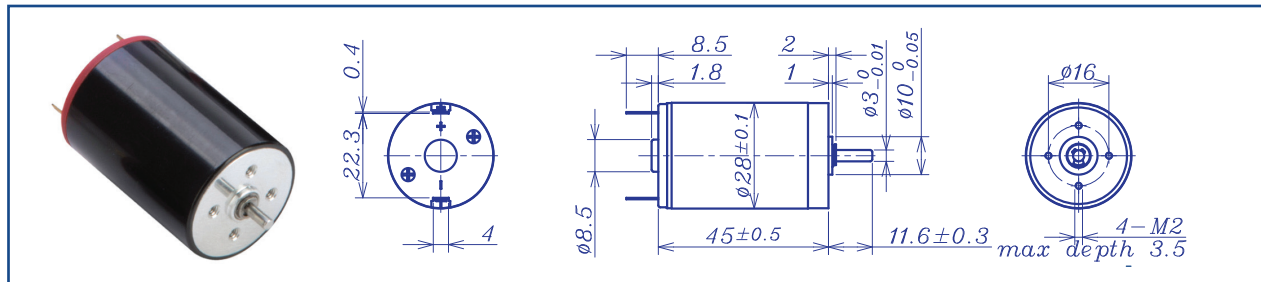
Remarks: Client can choose gearbox and encoder to match with this motor. Some combinations are listed here for reference.

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AM-CL2845MAN SERIES



Motor Model	Precious metal brush					Ball bearings				
		0606	0604	1206	1204	2406	2404	4806	4805	
Nominal voltage	V	6	6	12	12	24	24	48	48	
No load speed	±12% rpm	6150	4450	6240	4350	5960	4536	6520	4900	
No load current	Max 150% mA	91	59	53	35	25	12	14	9	
Recommend limit for continuous operating	Max cont. torque	mN.m	8.0	11.4	16.4	21.6	22.8	24.6	29.1	29.9
	Rated speed	rpm	5911	4151	5837	3794	5396	3944	5834	4097
	Rated current	mA	950	950	950	860	620	500	430	330
	Rated power	W	4.9	5.0	10.0	8.6	12.9	10.2	17.8	12.8
Starting current	mA	22222	13333	13953	6486	6316	3750	3967	1967	
Stall torque	mN.m	205.3	170.2	254.3	169.0	240.9	188.3	276.9	182.3	
Maximum power output	W	33.1	19.8	41.5	19.3	37.6	22.4	47.3	23.4	
Maximum efficiency	%	88	87	88	86	88	89	88	87	
Terminal resistance	±12% Ω	0.27	0.45	0.86	1.85	3.80	6.4	12.1	24.4	
Inductance	(1KHZ) mH	0.02	0.05	0.11	0.21	0.47	0.77	1.47	3.00	
Mechanical time constant	ms	6.3	6.0	5.2	5.3	5.1	5.0	4.8	5.3	
Moment of inertia	gcm ²	20.1	21.8	20.4	19.8	19.5	19.8	19.5	19.0	
Torque constant	mN.m/A	9.3	12.8	18.3	26.2	38.3	50.4	70.1	93.1	
Speed constant	rpm/V	1029	745	522	364	249	190	136	103	
Speed/torque gradient	rpm/mN.m	30.0	26.2	24.5	25.7	24.7	24.1	23.5	26.9	
Weight	g	140	140	136	136	136	136	136	136	

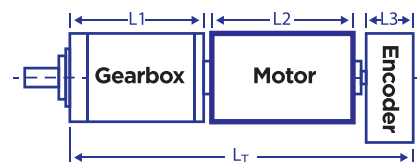
ADDITIONAL INFORMATION

Motor thermal resistance:	15.6 K/W	Motor thermal time constant:	1086 S
Axial (dynamic):	7.3 N	Radial (5mm from mounting face):	28.0 N
Press-fit force (static):	60(120)N	Max allowable screw depth into flange:	3.5 mm
Maximum radial play (5mm from mounting face):	≤0.02 mm	Axial play:	Preset
Maximum winding temperature:	85°C	Ambient temperature range:	-30 to °C65
Standard rear shaft diameter:	1.5 mm	Standard rear shaft length "L":	0/3.7 mm

Total Length (Gearbox and Motor): $L_T=L_1+L_2+L_3$

L1:28GP	L1:32GP	L2:CL28	L3: EN16S
25.9	27.4	45.0	10.7
33.1	35.9		
40.3	44.4		

AM-CL2845MAN Combination Scheme



Recommended Gearbox:
Planetary Gearbox:
AM-28GP
AM-32GP

Recommended Encoder:
Encoder S: AM-EN1611S***
2~3 Channels

For more combination specs, visit Assun Motor website.

Remarks: Client can choose gearbox and encoder to match with this motor. Some combinations are listed here for reference.

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