

CODE: 836388

# Lim-Tec<sup>®</sup> Catalog 2024

*EMB-Series (Ball Screw - Economical Series)*



Lim-Tec (Beijing) Transmission Equipment Co., Ltd.

On Feb.25, 2016, Lim-Tec successfully landed on NEEQ with the code of 836388, pioneering the linear motion development in China.

In 2005, Joint Venture Enterprise Lim-Tec (Beijing) Transmission Equipment Co.,Ltd was set up by Lim-Tec Group and Beijing Reloh International Trade Co., Ltd to introduce advanced European linear motion technology and the concept of modular combination design, guiding the new direction of domestic screw jack and linear actuator industry.

We have more than 10 branch offices in China to provide high-quality products, well-rounded technical support and prompt after-sales service. Up to Nov.30, 2020, there were 200000 sets of products successfully applied to automobile equipment, automation assembly, metallurgical industry,aerospace industry, port machinery and other industries.

200 million RMB has been invested to introduce nearly a hundred CNC machine tools as well as to build a modern 20 thousand metre square plant with constant temperature control. Eventually, our anual production capacity has reached 50 thousand sets, making Lim-Tec a competitive and professional linear actuator/screw jack/servo actuator manufacturing centre in the world.





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# 「 EMB SERIES ECONOMICAL SERVO ACTUATOR 」

## ■ Economical servo actuator EMB features:

Miniature electric actuators with a load range of 5kg to 1500kg.

Compact design, 30% smaller in size compared to similar products.

All components are modularly assembled, standardized and cost-effective.

Rolled ball screw, high efficiency, high speed.

Equipped with economical stepper servo motor and integrated driver, compatible with bus systems like CAN, EtherCAT, etc.

The built-in program is a perfect replacement for small linear mechanisms such as pneumatic cylinders and other small linear mechanisms.

Silent design, maintenance-free.

## Performance table:

Model	EMB05	EMB10	EMB20		EMB30		
Lead mm	2	4	5	10	5	10	25
Rated force KN	0.35	1	5	4.8	8.5	13	8.7
Max. Speed mm/s	150	266	250	500	166	332	830
Torque at rated force Nm	0.17	1.00	6.22	11.94	9.4	28.75	48.89
Dynamic load of Ball Screw KN	4	5	10.5	12	17	28	16.5
Parallel mounting inertia $\text{kgm}^2 \cdot 10^{-3}$	0.028	0.042	0.1	0.18	1.388	2.409	2.527
Inline coupling inertia $\text{kgm}^2 \cdot 10^{-4}$	0.013	0.027	0.08	0.09	0.763	0.784	0.885
Inertia/100mm $\text{kgm}^2 \cdot 10^{-4}$	0.008	0.016	0.052	0.056	0.303	0.309	0.355
Max. Stroke mm	300	300	500		800		
Max. input rpm	4500	4000	3000		2750		
Max. Acceleration $\text{m/s}^2$	6	3	3	6	3	6	10
Weight ( Without motor ) kg	1.22	1.35	6.9		15.3		
Weight per 100mm stroke kg	0.36	0.47	0.54		1.3		
Max.idling angle	$\pm 0.3$	$\pm 0.3$	$\pm 0.3$		$\pm 0.3$		
Axial backlash mm	0.04	0.05	0.05		0.05		
Lead Tolerance within 300mm/mm	0.05	0.05	0.05		0.05		
Repeat accuracy mm	0.02	0.02	0.02		0.02		

## EMB05 Performance Specification

Model	Lead mm	Reducer	Ratio	Speed at 3000rpm mm/s	Actual load N										Max.linear speed mm/s
					350		300		200		100		50		
					Power KW	Torque Nm	Power KW	Torque Nm	Power KW	Torque Nm	Power KW	Torque Nm	Power KW	Torque Nm	
EMB05-02	2	Parallel 1:1	NON	100	0.055	0.174	0.055	0.174	0.055	0.174	0.055	0.174	0.055	0.174	150
		Inline shaft coupling 1:1	NON	100	0.049	0.155	0.049	0.155	0.049	0.155	0.049	0.155	0.049	0.155	150

## EMB10 Performance Specification

Model	Lead mm	Reducer	Ratio	Speed at 3000rpm mm/s	Actual load N										Max.linear speed mm/s
					1000		800		500		300		100		
					Power KW	Torque Nm	Power KW	Torque Nm	Power KW	Torque Nm	Power KW	Torque Nm	Power KW	Torque Nm	
EMB10-04	4	Parallel 1:1	NON	200	0.313	0.995	0.250	0.796	0.156	0.498	0.094	0.299	0.094	0.299	266
		Parallel 2:1	NON	100	0.156	0.498	0.125	0.398	0.078	0.249	0.047	0.149	0.047	0.150	266
		Inline shaft coupling 1:1	NON	200	0.278	0.885	0.222	0.708	0.139	0.442	0.083	0.265	0.083	0.265	266

## EMB20 Performance Specification

Model	Lead mm	Reducer	Ratio	Speed at 3000rpm mm/s	Actual load N										Max.linear speed mm/s
					5000		3500		1500		1000		500		
					Power KW	Torque Nm	Power KW	Torque Nm	Power KW	Torque Nm	Power KW	Torque Nm	Power KW	Torque Nm	
EMB20-05	5	Parallel 1:1	NON	250	1.912	6.088	1.339	4.262	0.574	1.827	0.383	1.218	0.191	0.609	250
			1:3	83	0.671	2.136	0.470	1.495	0.201	0.641	0.134	0.427	0.067	0.214	250
			1:5	50	0.403	1.282	0.281	0.897	0.121	0.385	0.081	0.237	0.040	0.128	250
			1:10	25	0.202	0.641	0.141	0.449	0.061	0.193	0.041	0.119	0.020	0.064	250
		Parallel 2:1	NON	125	0.956	3.044	0.670	2.131	0.287	0.914	0.192	0.609	0.096	0.305	250
			Inline shaft coupling 1:1	NON	250	1.738	5.535	1.217	3.875	0.522	1.661	0.348	1.107	0.174	0.554
		Parallel 1:1	1:3	83	0.610	1.942	0.427	1.359	0.183	0.583	0.122	0.388	0.061	0.195	250
			1:5	50	0.366	1.165	0.255	0.815	0.110	0.350	0.074	0.215	0.036	0.116	250
			1:10	25	0.184	0.583	0.128	0.408	0.055	0.118	0.037	0.108	0.018	0.058	250
							4800		3500		1500		1000		500
EMB20-10	10	Parallel 1:1	NON	500	3.531	11.240	2.575	8.196	1.104	3.513	0.736	2.342	0.368	1.171	500
			1:3	167	1.239	3.944	0.904	2.876	0.387	1.233	0.258	0.822	0.129	0.411	500
			1:5	100	0.743	2.366	0.542	1.718	0.232	0.740	0.155	0.493	0.077	0.247	500
			1:10	50	0.372	1.183	0.271	0.859	0.116	0.370	0.078	0.247	0.039	0.124	500
		Parallel 2:1	NON	250	1.766	5.620	1.288	4.098	0.552	1.756	0.368	1.171	0.184	0.586	500
			Inline shaft coupling 1:1	NON	500	3.210	10.218	2.341	7.451	1.004	3.194	0.669	2.129	0.335	1.065
		Parallel 1:1	1:3	167	1.126	3.585	0.822	2.615	0.352	1.121	0.235	0.747	0.117	0.374	500
			1:5	100	0.675	2.151	0.493	1.562	0.211	0.673	0.141	0.448	0.070	0.225	500
			1:10	50	0.338	1.076	0.247	0.781	0.106	0.337	0.071	0.224	0.035	0.113	500

## EMB30 Performance Specification

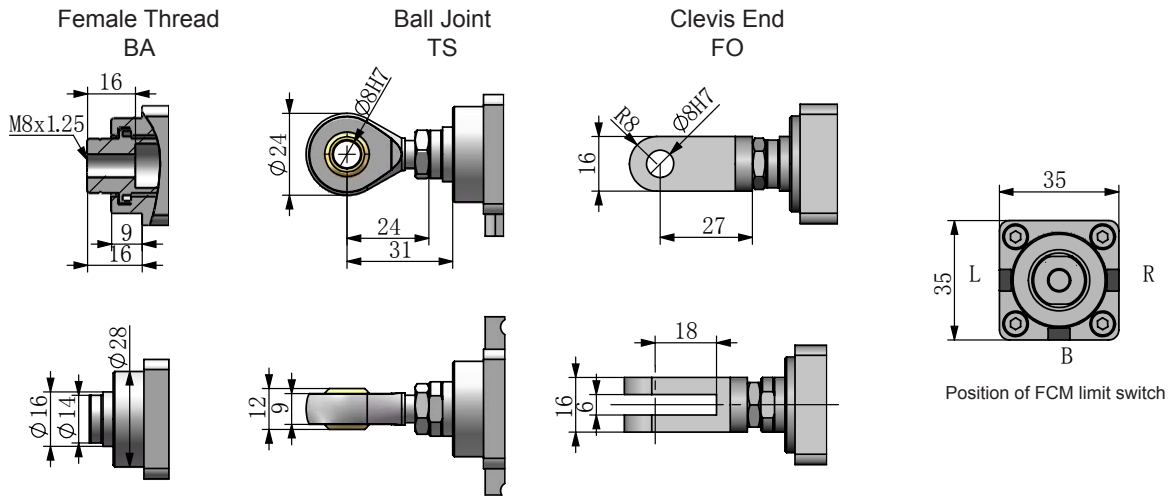
Model	Lead mm	Reducer	Ratio	Speed at 1500rpm mm/s	Actual load N										Max.linear speed mm/s
					8500		6000		4000		2000		1000		
					Power KW	Torque Nm	Power KW	Torque Nm	Power KW	Torque Nm	Power KW	Torque Nm	Power KW	Torque Nm	
EMB30-05	5	Parallel 1:1	NON	125	1.661	10.574	1.172	7.464	0.782	4.976	0.391	2.488	0.195	1.244	166
			1:3	42	0.583	3.710	0.411	2.619	0.274	1.746	0.137	0.873	0.069	0.437	166
			1:5	25	0.350	2.226	0.247	1.571	0.165	1.048	0.082	0.524	0.041	0.262	166
			1:10	13	0.175	1.113	0.123	0.786	0.082	0.524	0.041	0.262	0.021	0.131	166
			1:20	6	0.092	0.587	0.065	0.415	0.043	0.276	0.022	0.138	0.011	0.069	166
			1:50	3	0.037	0.235	0.026	0.166	0.017	0.111	0.009	0.055	0.004	0.028	166
		Parallel 2:1	NON	63	0.830	5.287	0.586	3.732	0.391	2.488	0.195	1.244	0.098	0.622	166
			Inline shaft coupling 1:1	NON	125	1.476	9.399	1.042	6.635	0.695	4.423	0.347	2.212	0.174	1.106
		Parallel 1:1	1:3	42	0.518	3.298	0.366	2.328	0.244	1.552	0.122	0.776	0.061	0.388	166
			1:5	25	0.311	1.979	0.219	1.397	0.146	0.931	0.073	0.466	0.037	0.233	166
			1:10	13	0.155	0.989	0.110	0.698	0.073	0.466	0.037	0.233	0.018	0.116	166
			1:20	6	0.082	0.522	0.058	0.369	0.039	0.246	0.019	0.123	0.010	0.061	166
			1:50	3	0.033	0.209	0.023	0.147	0.015	0.098	0.008	0.049	0.004	0.025	166

Model	Lead mm	Reducer	Ratio	Speed at 1500rpm mm/s	Actual load N										Max.linear speed mm/s
					12500		10000		8000		5000		2500		
					Power KW	Torque Nm	Power KW	Torque Nm	Power KW	Torque Nm	Power KW	Torque Nm	Power KW	Torque Nm	
EMB30-10	10	Parallel 1:1	NON	250	4.781	30.442	3.825	24.354	3.060	19.483	1.913	12.177	0.957	6.089	332
			1:3	83	1.678	10.683	1.342	8.545	1.074	6.836	0.671	4.273	0.336	2.136	332
			1:5	50	1.007	6.409	0.805	5.127	0.644	4.102	0.403	2.564	0.201	1.282	332
			1:10	25	0.503	3.205	0.403	2.564	0.322	2.051	0.202	1.282	0.101	0.641	332
			1:20	13	0.252	1.603	0.202	1.282	0.161	1.026	0.101	0.641	0.051	0.321	332
			1:50	5	0.101	0.641	0.081	0.513	0.064	0.410	0.040	0.256	0.020	0.128	332
		Parallel 2:1	NON	125	2.391	15.221	1.913	12.177	1.530	9.742	0.957	6.089	0.479	3.045	332
			NON	250	4.346	27.675	3.477	22.140	2.782	17.712	1.739	11.070	0.870	5.535	332
		Inline shaft coupling 1:1	1:3	83	1.525	9.712	1.220	7.768	0.976	6.215	0.610	3.885	0.305	1.942	332
			1:5	50	0.915	5.826	0.732	4.661	0.585	3.729	0.366	2.331	0.183	1.165	332
			1:10	25	0.457	2.914	0.366	2.331	0.293	1.865	0.184	1.165	0.092	0.583	332
			1:20	13	0.229	1.457	0.183	1.166	0.147	0.933	0.092	0.583	0.046	0.292	332
			1:50	5	0.091	0.583	0.073	0.466	0.059	0.373	0.037	0.233	0.018	0.117	332
								8500		5000		2500		1000	
EMB30-25	25	Parallel 1:1	NON	625	7.650	48.707	4.781	30.442	2.391	15.220	0.952	6.088	0.476	3.044	830
			1:3	208	2.684	17.090	1.678	10.681	0.839	5.340	0.334	2.136	0.167	1.068	830
			1:5	125	1.611	10.254	1.006	6.409	0.503	3.204	0.200	1.281	0.100	0.641	830
			1:10	63	0.805	5.127	0.503	3.204	0.252	1.602	0.100	0.641	0.050	0.320	830
			1:20	31	0.403	2.564	0.252	1.602	0.126	0.801	0.050	0.321	0.025	0.160	830
			1:50	13	0.161	1.025	0.100	0.641	0.050	0.320	0.020	0.128	0.010	0.064	830
		Parallel 2:1	NON	313	3.825	24.354	2.391	15.221	1.196	7.610	0.476	3.044	0.238	1.522	830
			NON	625	6.955	44.279	4.346	27.675	2.174	13.836	0.865	5.535	0.433	2.767	830
		Inline shaft coupling 1:1	1:3	208	2.440	15.536	1.525	9.710	0.763	4.855	0.304	1.942	0.152	0.971	830
			1:5	125	1.465	9.322	0.915	5.826	0.457	2.913	0.182	1.165	0.091	0.583	830
			1:10	63	0.732	4.661	0.457	2.913	0.229	1.456	0.091	0.583	0.045	0.291	830
			1:20	31	0.366	2.331	0.229	1.456	0.115	0.728	0.045	0.292	0.023	0.145	830
			1:50	13	0.146	0.932	0.091	0.583	0.045	0.291	0.018	0.116	0.009	0.058	830

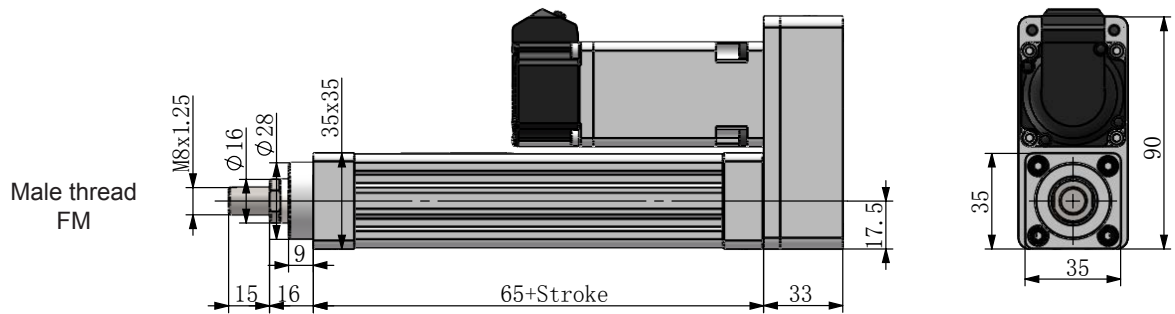


EMB05 Overall Dimension:

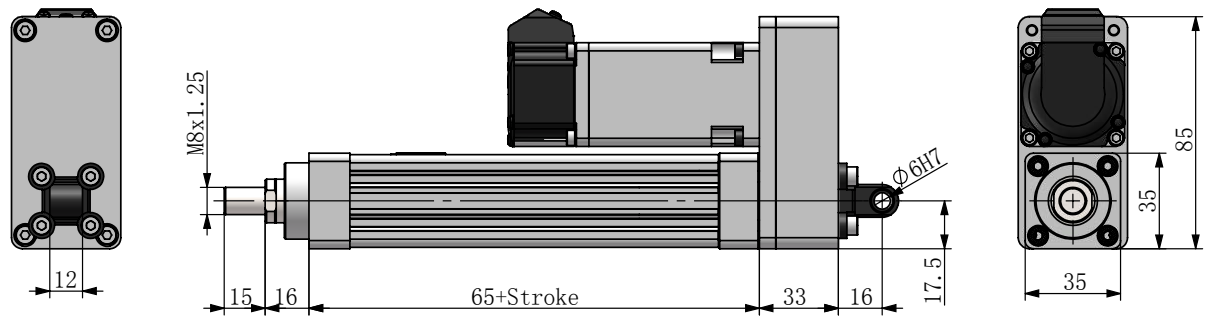
Front Attachment



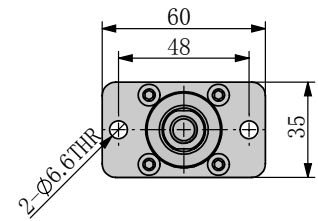
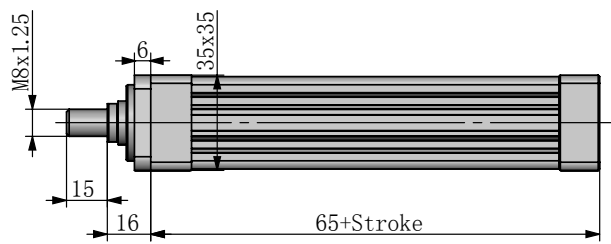
EMB05 Parallel dimension-P10,P20



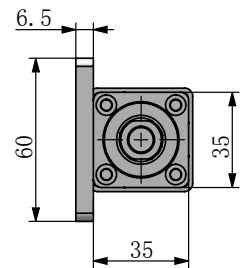
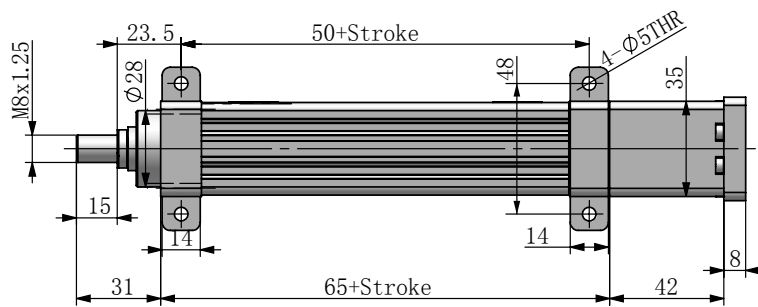
EMB05 Rear clevis mounting-RC



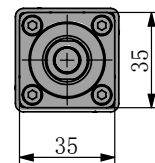
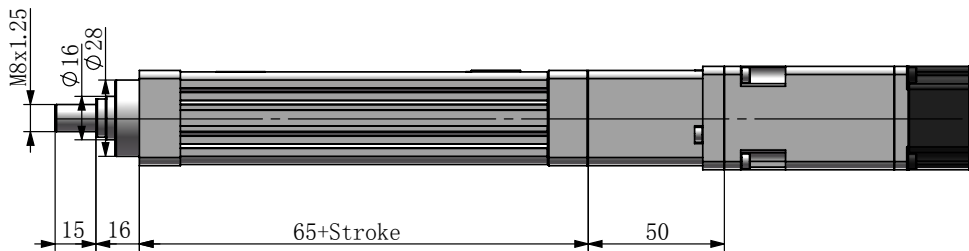
EMB05 Front flange mounting-FF



EMB05 Side flange mounting-SF

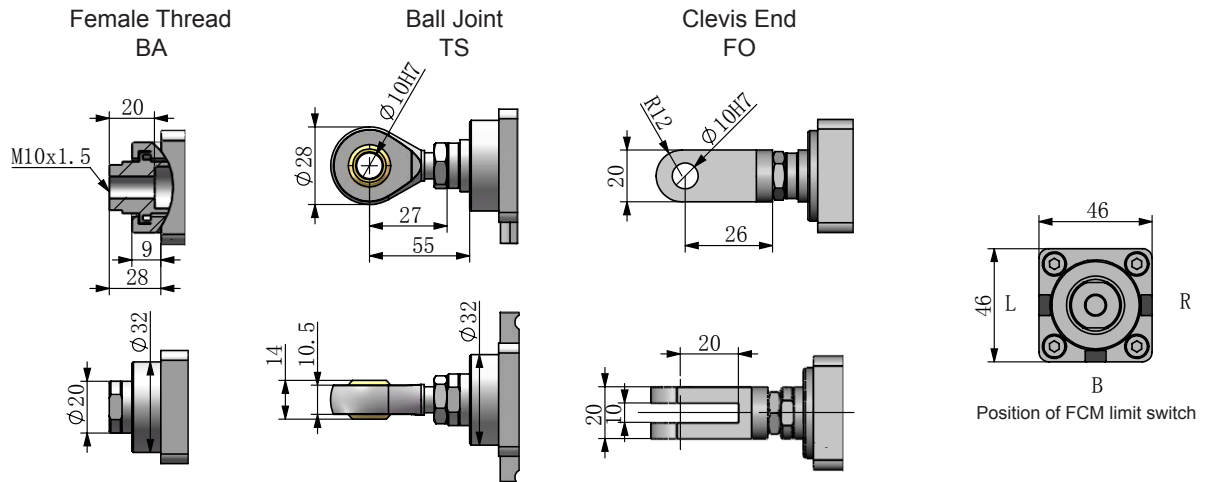


EMB05 Inline dimension-SC

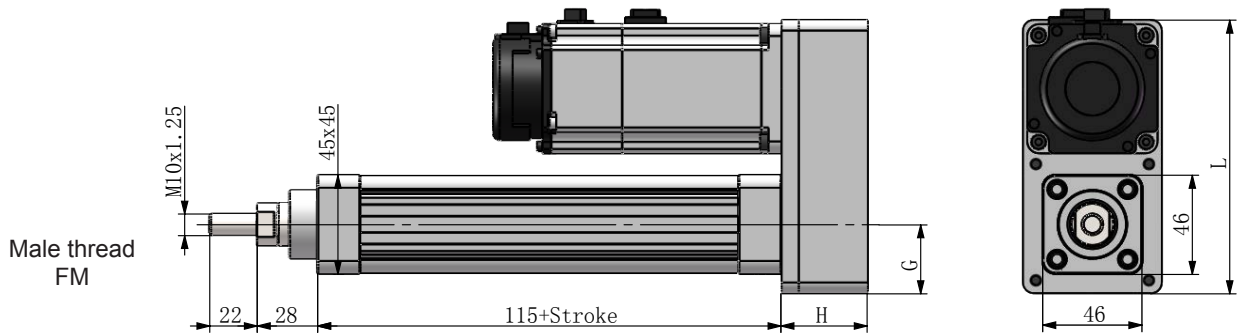


EMB10 Overall Dimension:

Front Attachment

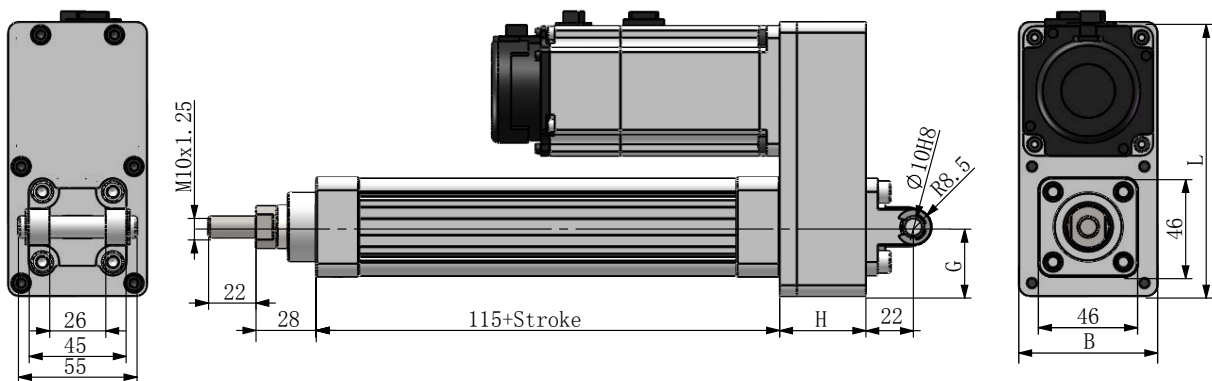


EMB10 Parallel dimension-P10,P20

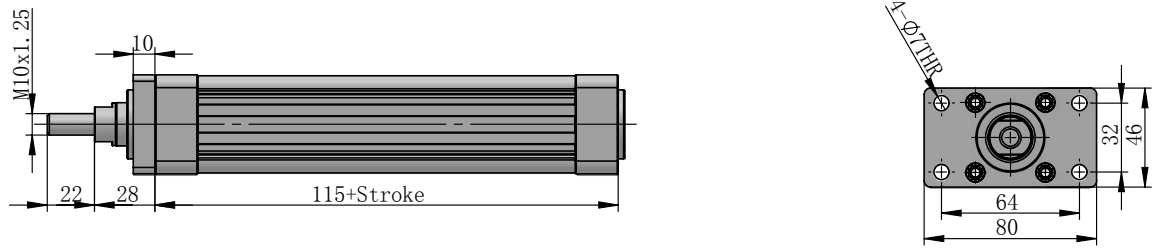


400W (含) 以下电机	H	L	B	G
P10	40	132	64	32
P20	40	140	80	42.5

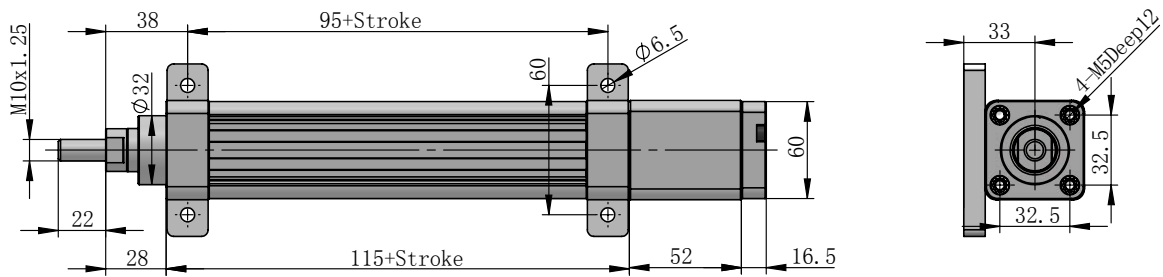
EMB10 Rear clevis mounting-RC



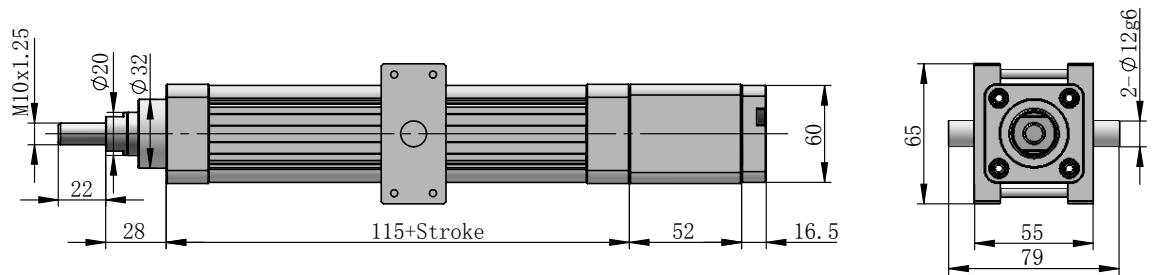
EMB10 Front flange mounting-FF



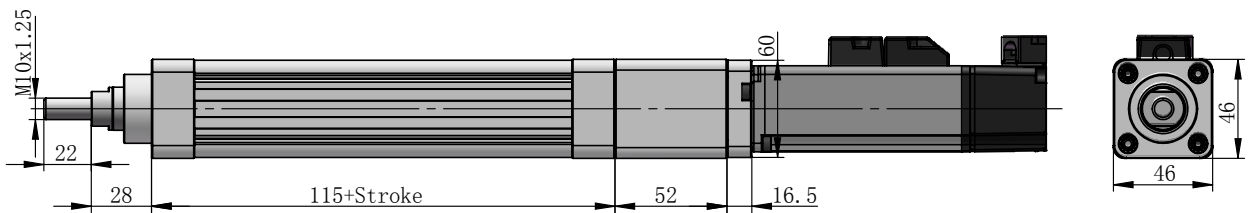
EMB10 Side flange mounting-SF



EMB10 Trunnion mounting-ST

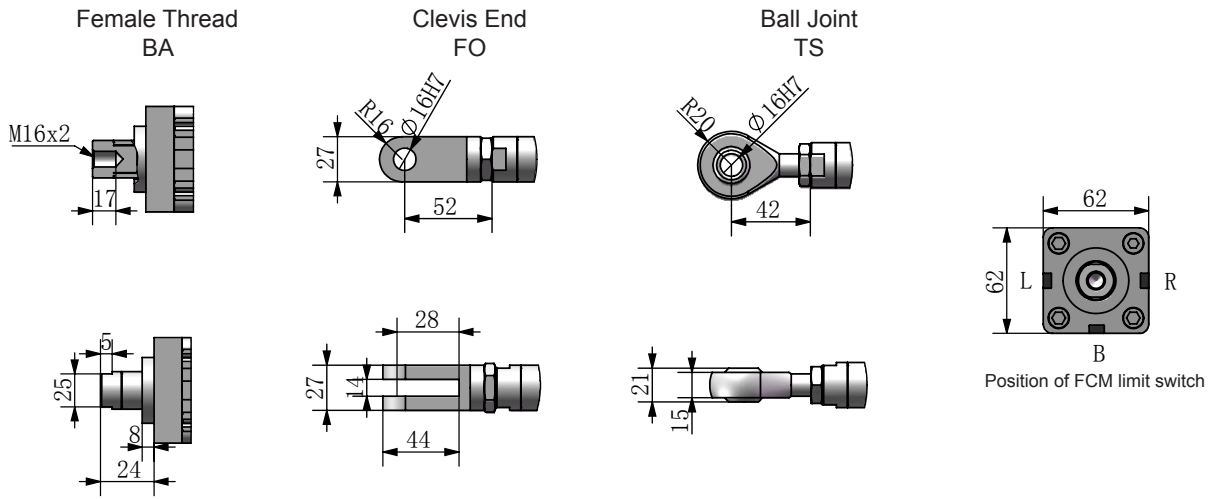


EMB10 Inline dimension-SC

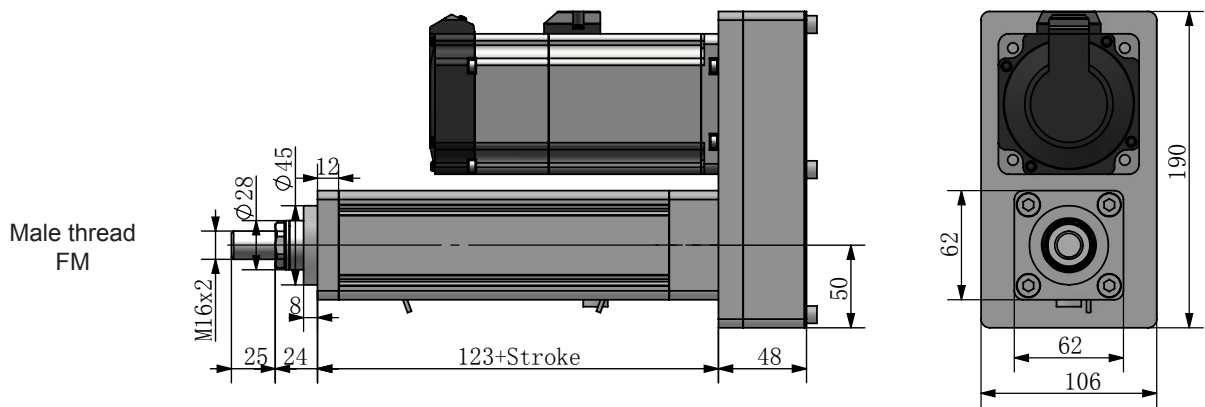


EMB20 Overall Dimension:

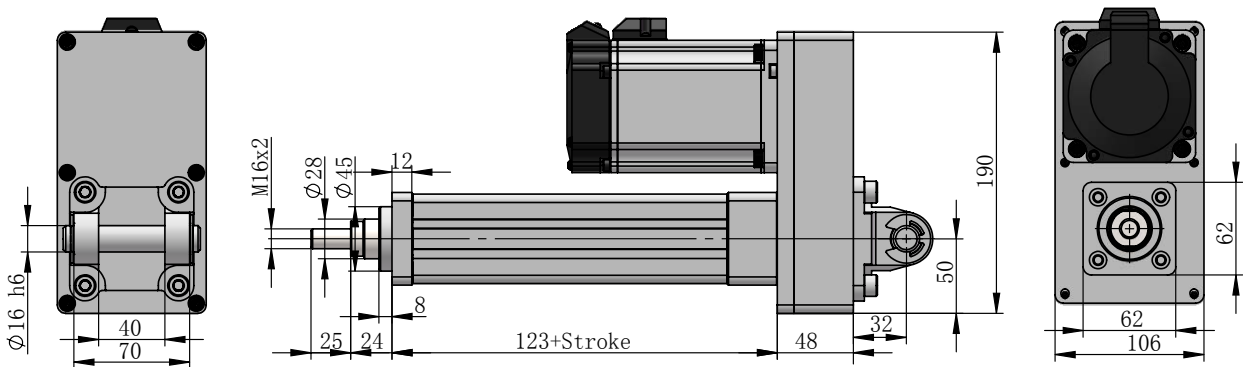
Front Attachment



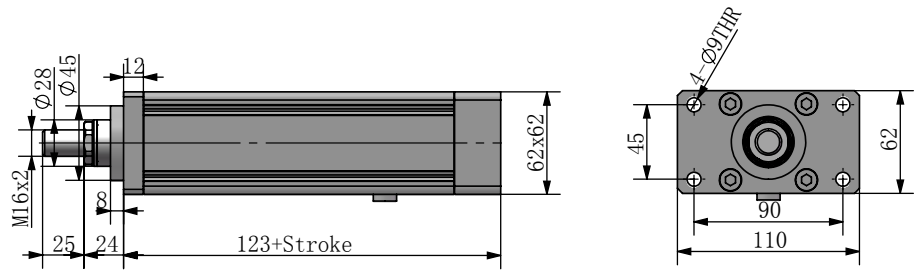
EMB20 Parallel dimension-P10,P20



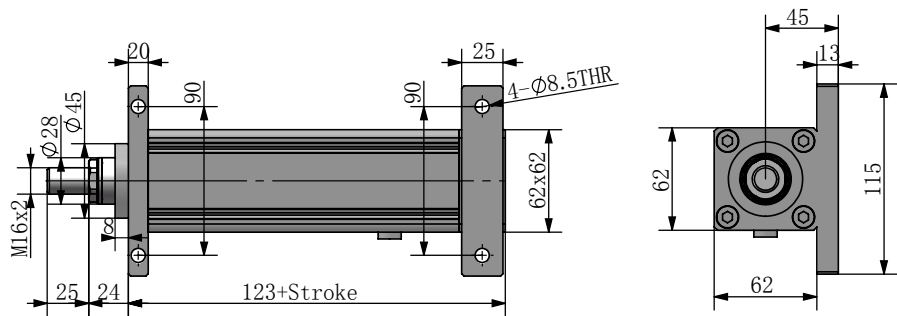
EMB20 Rear clevis mounting-RC



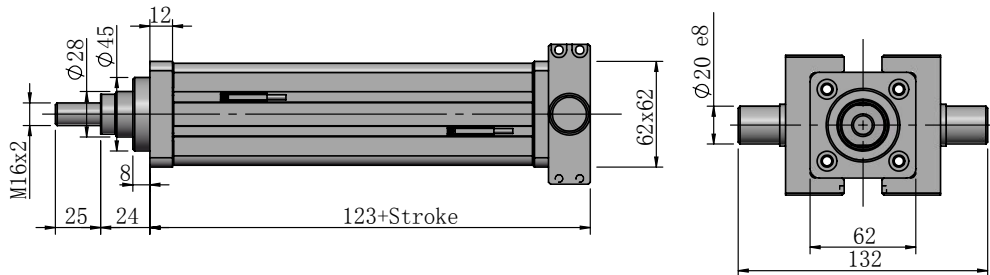
EMB20 Front flange mounting-FF



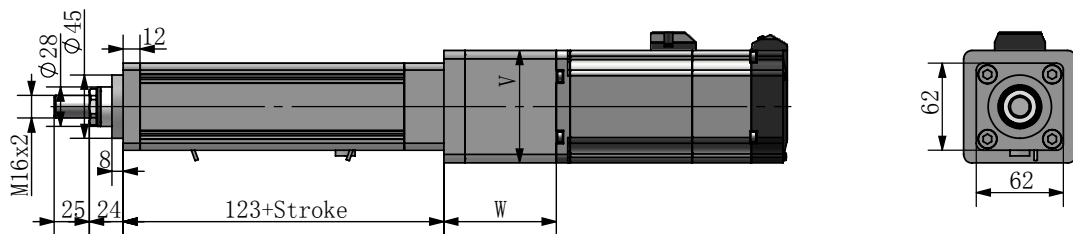
EMB20 Side flange mounting-SF



EMB20 Trunnion mounting-ST



EMB20 Inline dimension-SC

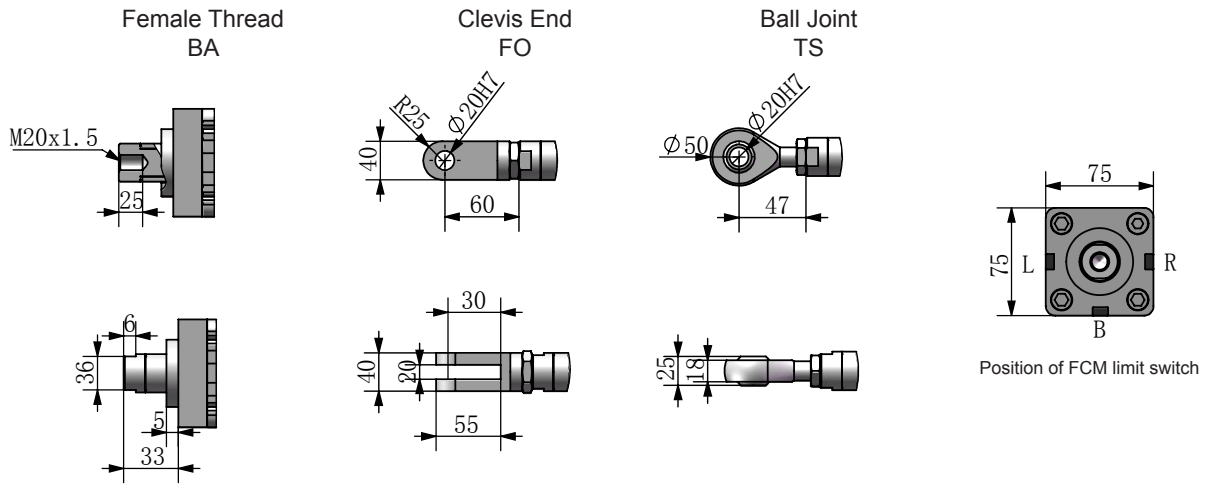


Power	Ratio	Lower than 750W		750W-1.5KW	
Size	Ratio	1:1	3~10:1	1:1	3~10:1
W		83.6	160.6	90.5	194
V		80	80	100	100

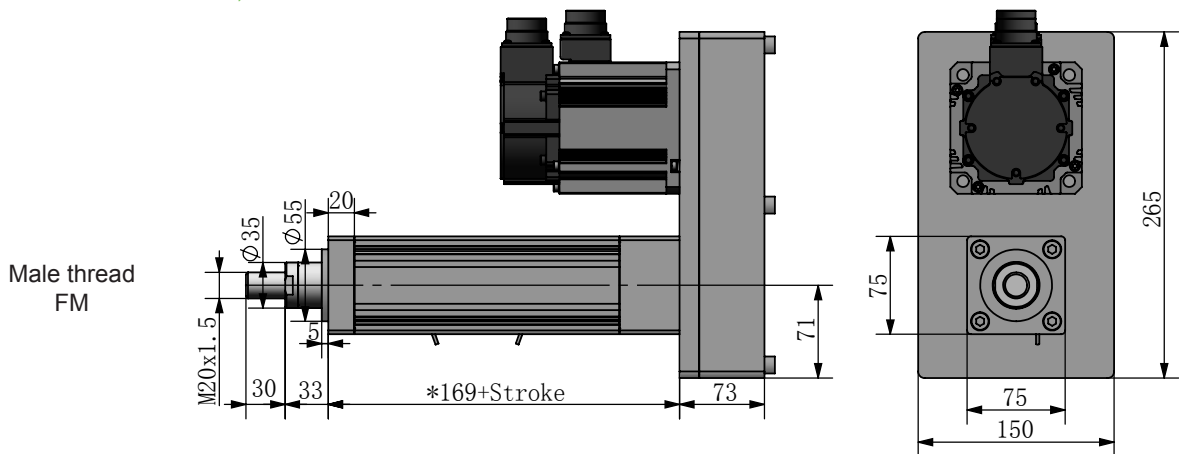
The dimension in above table is for reference only, the dimension will be different depends on different motor manufacturer.

EMB30 Overall Dimension:

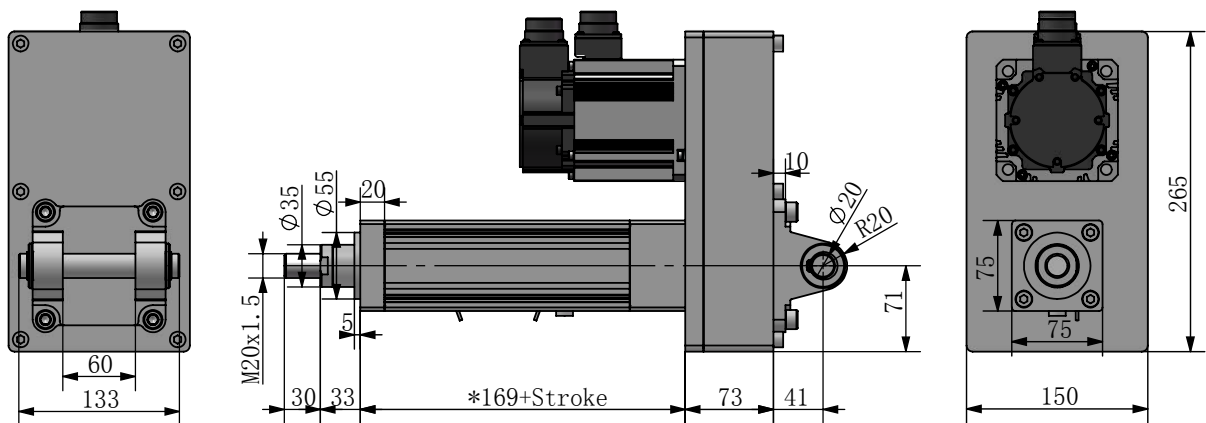
Front Attachment



EMB30 Parallel dimension-P10,P20

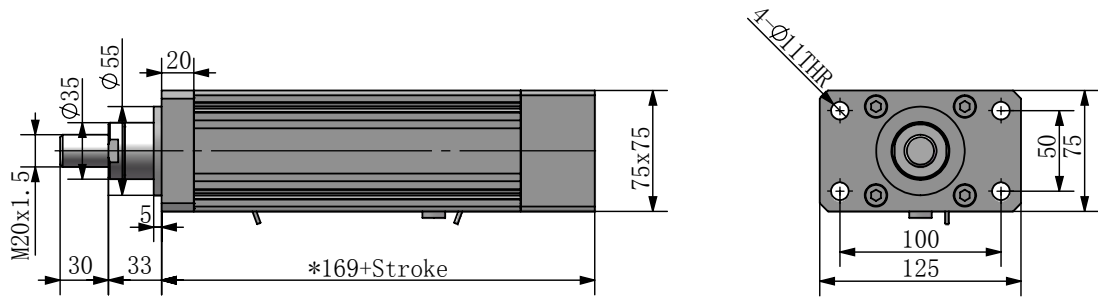


EMB30 Rear clevis mounting-RC

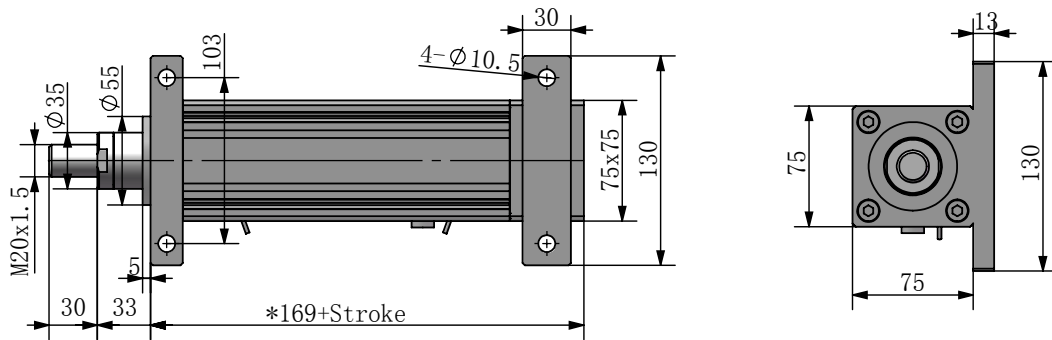


unit mm: \* Indicates that the length is 169mm at a lead of 5mm, the length 204mm at a lead of 10mm; the length 189mm at a lead of 25mm.

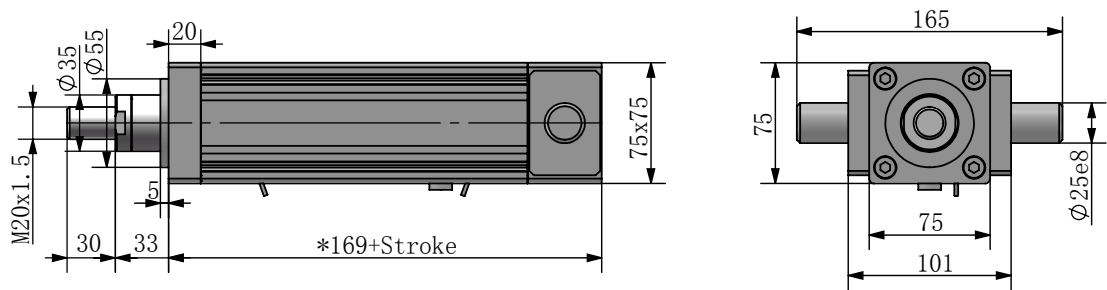
EMB30 Front flange mounting-FF



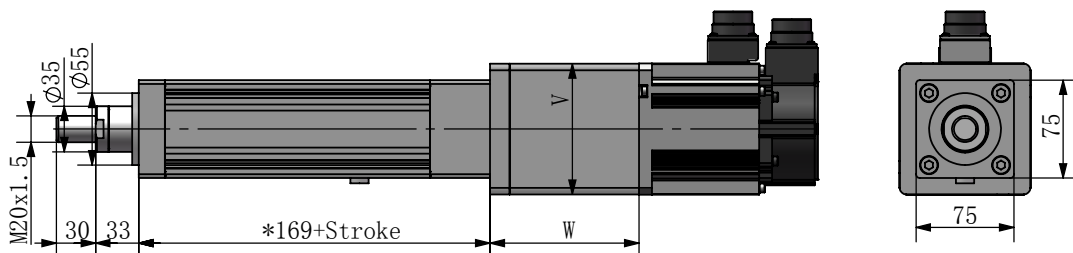
EMB30 Side flange mounting-SF



EMB30 Trunnion mounting-ST



EMB30 Inline dimension-SC



Size	Power Ratio	Lower than 1.5KW			1.5KW-2.5KW		
		1:1	3~10:1	15~100:1	1:1	3~10:1	15~100:1
W		104	199.5	247.5	124	219.5	267.5
V		100	100	100	130	130	130

The dimension in above table is for reference only, the dimension will be different depends on different motor manufacturer.

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