

**ZHEJIANG JIMAI
AUTO-TECH CO.,LTD.**

Professional manufacturer of worm gear
actuators/pneumatic actuators



**JMG SERIES
WORM GEAR ACTUATOR**



ZHEJIANG JIMAI AUTO-TECH CO.,LTD.

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CO.,LTD.

**STRICT ON QUALITY
SURVIVE ON QUALITY
PROMOTE BY CREDIBILITY**

「QUALIFICATION RATE 99.9%」



COMPANY INTRODUCTION

Zhejiang Jimai Auto-tech Co.,Ltd is a professional company that produces worm gear actuators and pneumatic actuators, which integrates research, development, production and sales. With years of rich production experience and strict adherence to the ISO9001 international quality assurance system, JIMAI products have always been at the advanced level at home and abroad. JIMAI products have advantages like wide variety, complete specifications, beautiful appearance and so on. Our main equipment includes more than 30 machining centers, over 60 turning milling composite machine and CNC lathes. With total more than 120 equipment, JIMAI greatly improve the overall performance of actuators. The products are widely used in industries such as petroleum, chemical, food area.

“Quality first and service first” are the principles that JIMAI people adhere to. We wholeheartedly provides customers with high-quality products and good services. JIMAI people is ambitious and pragmatic, to keep up with the times and face the world with professional technology and advanced equipment. We welcome domestic and foreign customers to negotiate and establish business to seek economic and technological cooperation.

CORPORATE CULTURE

Enterprise Spirit

Continuously innovating

Enterprise objectives

Produce first-class products to customers

Enterprise policy

Survive with quality, develop with speed

Enterprise philosophy

Team spirit and excellent service

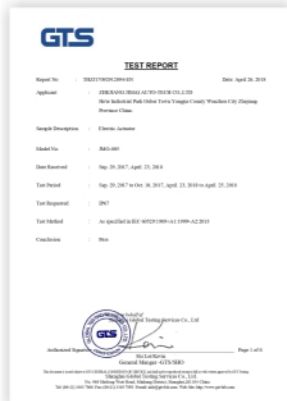
Enterprise development

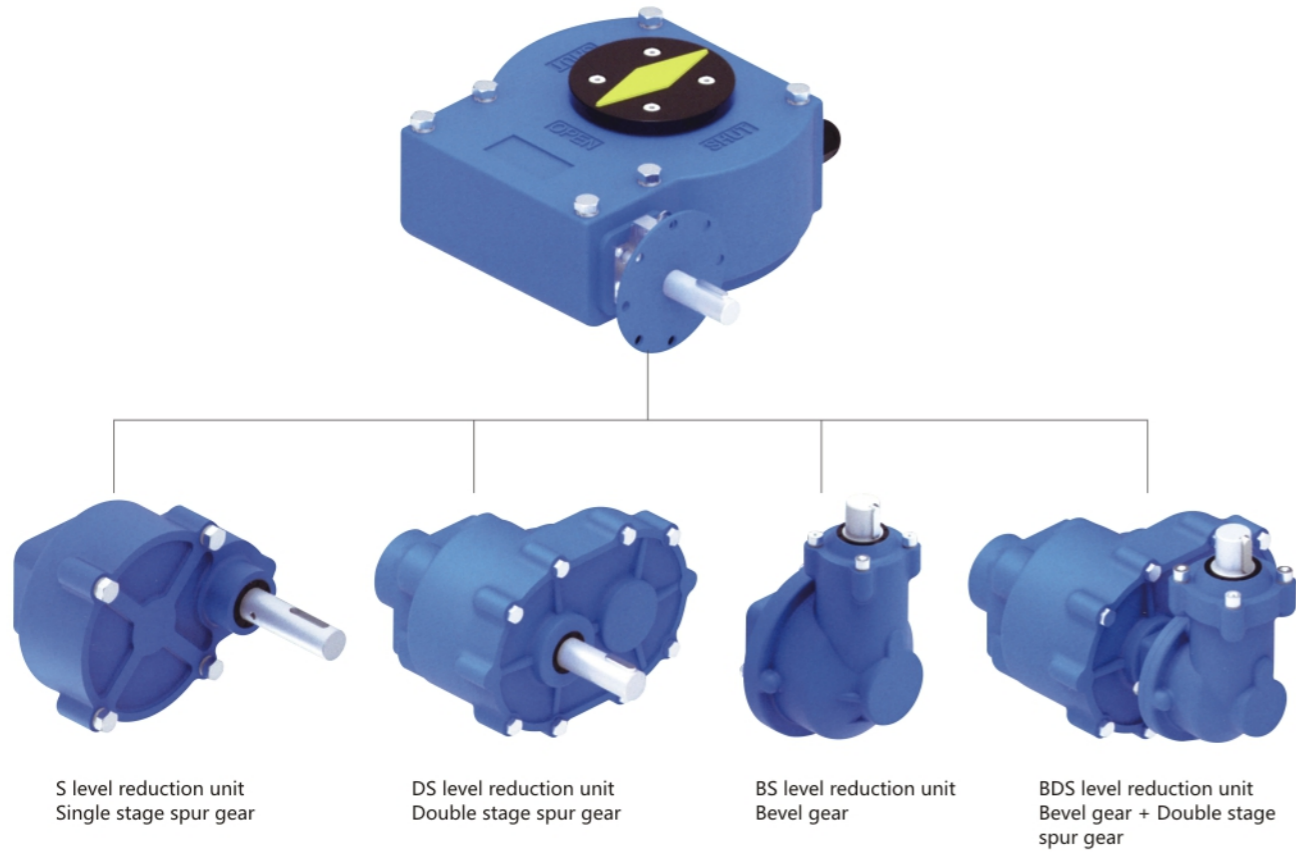
Continuously innovate and improve to provide high-quality products

Enterprise Value

Professional,enthusiastic,innovative,contributing and responsible

ENTERPRISE QUALIFICATION



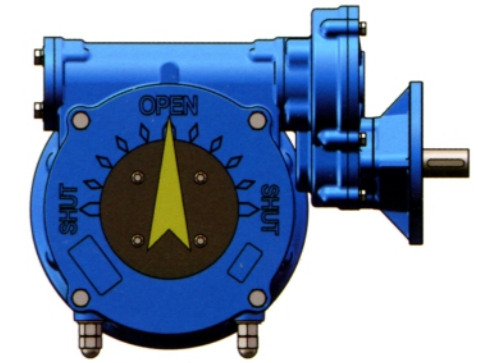


The high-efficiency JMG series worm gear actuators are developed based on modular design, standardization and generalization, which can help to shorten the produce launch cycle, reduce cost and improve product quality. The worm gear actuator can flexibly adjust the speed ratio according to different control requirements of valves.

The JMG series worm gear actuators maintain high component versatility, making the production process easier. The connecting flange can meet different standards ISO5211, ISO5210,JB2920. Also, JMG series can do quarter turn and multi turn based on customer requirements.



JMG Series: Quarter turn manual worm gear actuator



JMG-S Series: Quarter turn manual worm gear actuator



JMG-DS Series: Quarter turn manual worm gear actuator



JMG-BS Series: (worm gear+bevel gear) Quarter turn manual worm gear actuator

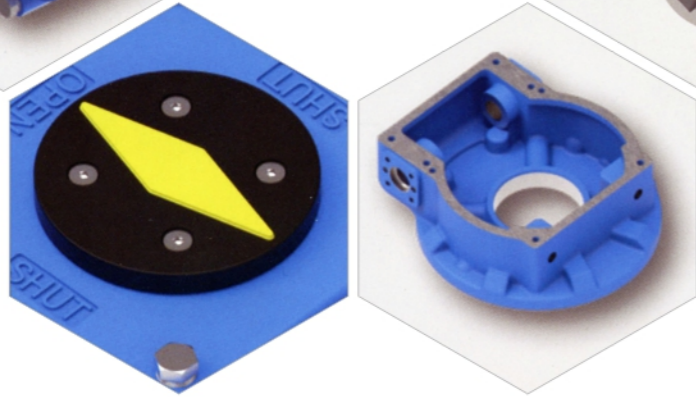
High quality bearing, improving efficiency and service life. Worm and shaft are fixed by four bolts, proving higher security.



Adopt O-ring seal. Sealing plate are made by rubber material, providing excellent waterproof and dust-proof protection.



High efficiency reduction unit, adopting high-strength carbon steel heating treatment process. Using reasonable gear ratio configuration, proving more comfortable using experience.



Adopting high-strength plastic indicator panel, it can intuitive indication of valve opening position.

Worm box adopts high strength ductile iron and surface is treated by epoxy spraying. With ISO 5211 standard valve connection flange, easier to install.

Ductile iron Worm gear and carbon steel quenched worm, combined with high-precision machining, providing higher level wear resistance and transmission efficiency.

JMG series worm gear

widely used for ball valve, butterfly valve, plug valves and so on



Product Features

- Torque range 260N.m to 58000N.m
- 20 different models
- High transmission efficiency
- Manual and pipe network application
- 90° degree rotation (±5°)
- Stable self-locking design
- Superior gear contact ratio
- Weather proof level: IP67 (option:IP68)
- Temp range: -45°C~+180°C

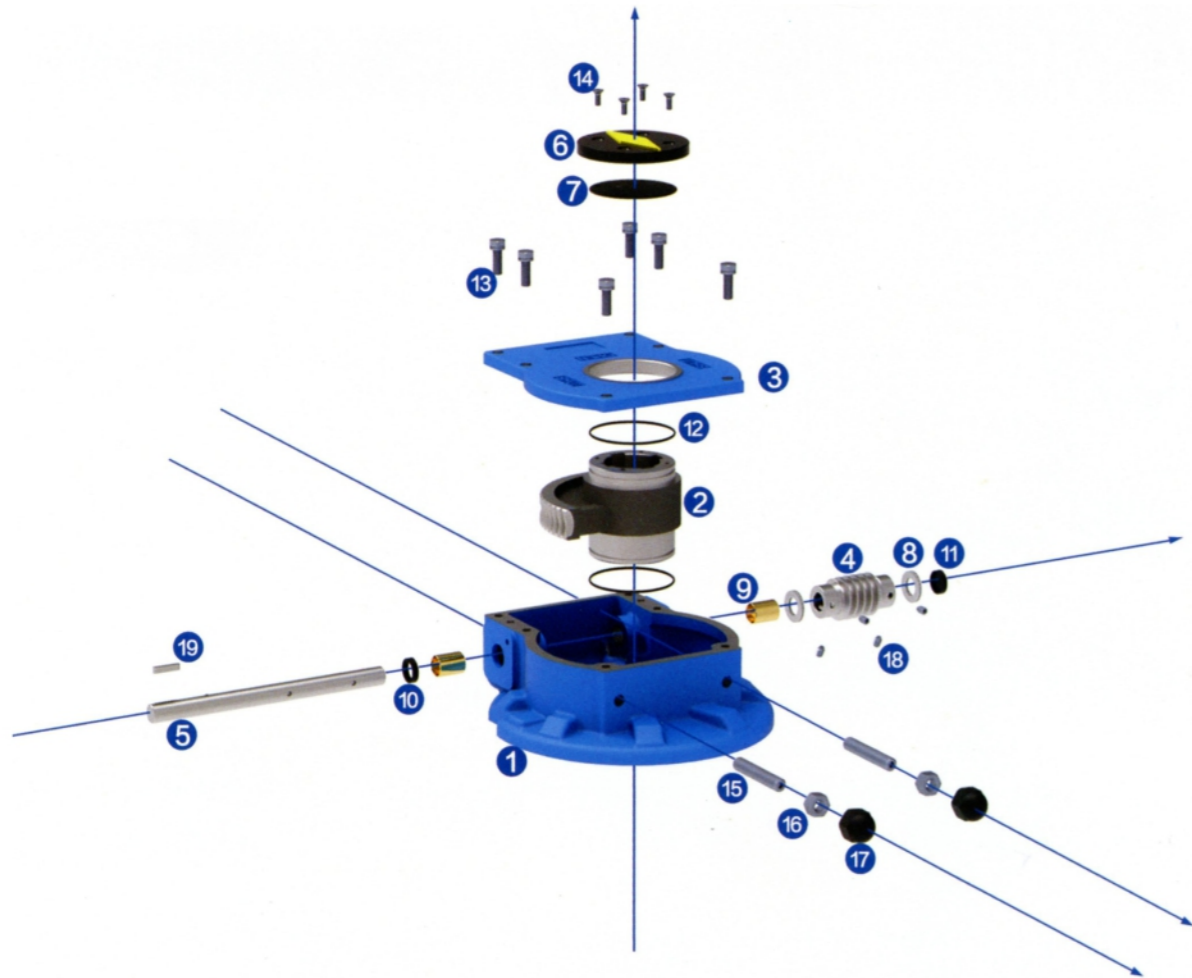
JMG series worm gear

widely used for ball valve, butterfly valve, plug valves and so on

Product Features

- Torque range 260N.m to 58000N.m
- High transmission efficiency
- Electric, manual and pipe network application
- 90° degree rotation (±5°)
- Stable self-locking design
- Speed ratio can adjust based on working condition
- Valve stem and bush optional
- Weather proof level: IP67 (option:IP68)
- Temp range: -45°C~+180°C





Nos	Part name	Standard			
		Material	GB	JIS	ASTM
1	Worm Box	Ductile iron	QT450-10	FCD-450	65-45-12
2	Worm gear	Ductile iron	QT500-7	FCD-500	80-55-06
3	Box cover	Ductile iron	QT450-10	FCD-450	65-45-12
4	Worm	Alloy steel	45	SCM435	ANSI 4340
5	Shaft	Carbon steel	45	S45C	A576-1045
6	Indicator	Aluminum alloy	YL112	ADC12	SG100B
7	Sealing plate	BUNA-N	NBR	NBR	NBR
8	Thrust bearing	Bearing steel	GCr15	SUJ2	A295-52100
9	Bearing	Carbon steel	20+PTFE	S20C+PTFE	A576-1020+PTFE
10	Oil seal	BUNA-N	NBR	NBR	NBR
11	Cover oil seal	BUNA-N	NBR	NBR	NBR
12	O-ring	BUNA-N	NBR	NBR	NBR
13	Hexagon bolt	Alloy steel	45	SCM435	A322-4135
14	Screw	Alloy steel	45	SCM435	A322-4135
15	Hexagon nut	Alloy steel	45	SCM435	A322-4135
16	Hexagon nut	Carbon steel	45	S45C	A576-1045
17	Nut cover	BUNA-N	NBR	NBR	NBR
18	Set screw	Alloy steel	45	SCM435	A322-4135
19	Flat key	Carbon steel	45	S45C	A576-1045

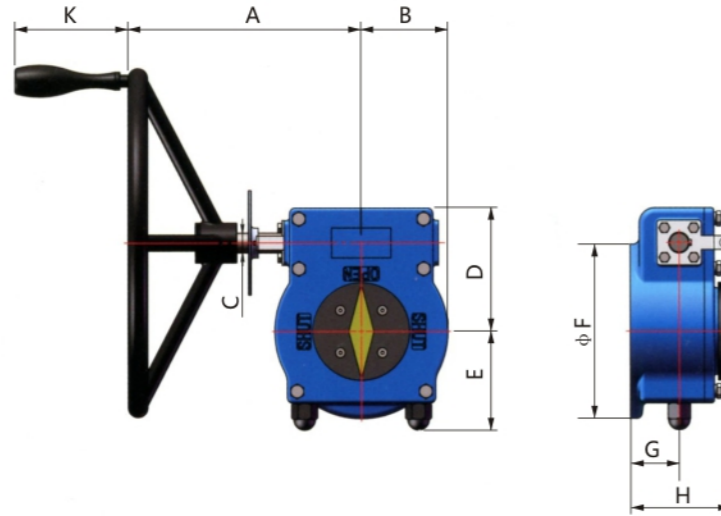
JMG Manual series technical parameter								
Model	Speed ratio	Input torque	Output torque	Amplitude factor	Connection flange	Max. Valve steam Diam	Max.Install Height	Handwheel Diam
JMG15	27	32	260	8.1	(F05)F07	20	55	200
JMG20	37	47	520	11.1	F07/F10	28	58	200
JMG21	38	75	850	11.3	F10/F12/F14	36	63	300
JMG30	40	113	1350	11.9	F12/F14/F16	48	85	350
JMG55	47	142	2000	14.1	(F12)F14/F16	53	90	350
JMG58	55	152	2500	16.4	F16/F20	62	95	400
JMG88	61	164	3000	18.3	(F14)F16/F20/F25	65	105	500
JMG88-S32	167	90	4200	46.7	(F14)F16/F20/F25	65	105	350
JMG100-S32	177	111	5500	49.5	(F16)F20/F25	72	110	500
JMG195-S32	167	139	6500	46.8	F16/F20/F25	80	115	500
JMG195-S40	208	129	7500	58.1	F16/F20/F25	80	115	500
JMG280-S50	280	108	8500	78.7	F25/F30	90	136	500
JMG300-S50	290	117	9500	81.2	F25/F30	95	145	500
JMG300-DS60	348	117	11000	94.0	F25/F30	95	145	500
JMG680-DS60	372	139	14000	100.7	(F25)F30/F35	115	148	500
JMG680-DS80	519	121	17000	140.5	(F25)F30/F35	115	148	500
JMG780-DS100	587	145	23000	158.6	F30/F35	125	157	600
JMG980-DS120	756	147	30000	204.1	(F30)F35	140	180	600
JMG1080-DS150	1005	147	40000	272.1	(F30)F35/F40	150	195	600
JMG1180-DS200	1467	116	46000	396.6	(F35)F40	160	230	600
JMG1280-DS300	1618	133	58000	436.1	(F35)F40	170	230	600

1.The outer circle flange is based on large flange size. Ex.(F25)F30, standard will be F30, Diam is 350.

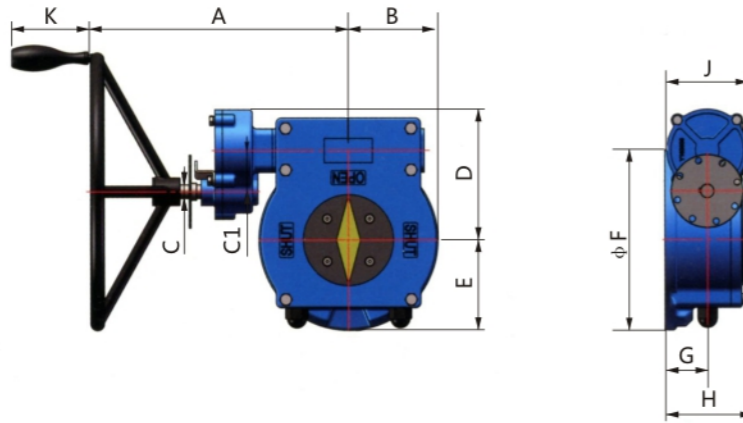
2.Detailed flange connection dimension is on page 14.

3.Handwheel is installed on the left

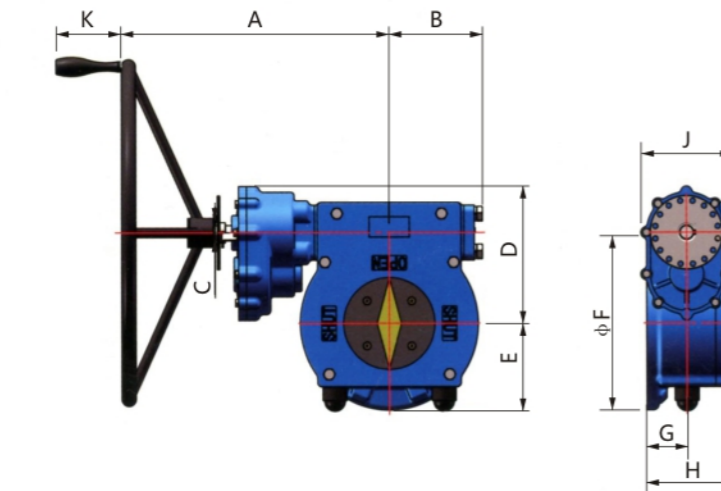
A Type



B Type



C Type



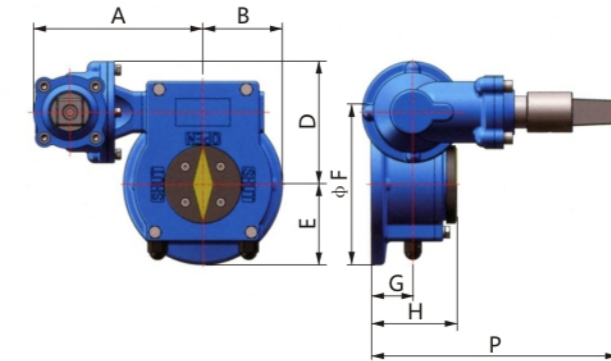
Dimension of JMG manual series

Type	Model	Connection flange	Flange outer Diam	A	B	C	C1	D	E	G	H	J	K
A	JMG15	(F05)F07	90	106	45	12	/	62	45	27	61	/	0
	JMG20	F07	90	167	52	15	/	79	65	32	69	/	0
		F10	125	167	63	15	/	79	65	29	68	/	0
	JMG21	F10	125	222	63	15	/	88	75	36	80	/	0
		F12	150	222	75	15	/	88	75	31	73	/	0
	JMG30	F14	175	230	88	15	/	88	88	41	81	/	0
		F12	150	230	75	20	/	113	82	46	95	/	114
		F14	175	230	88	20	/	113	88	46	95	/	114
	JMG55	F16	210	240	105	20	/	113	105	46	95	/	114
		(F12)F14	175	255	88	20	/	125	100	49.5	101	/	114
	JMG58	F16	210	255	109	20	/	125	105	49.5	101	/	114
		F20	260	275	130	20	/	138	130	53.5	106	/	114
	JMG88	(F14)F16	210	315	113	20	/	155	105	55	118	/	114
		F20	260	315	130	20	/	155	130	55	118	/	114
F25		300	315	150	20	/	155	150	55	118	/	114	
JMG88-S32	(F14)F16	210	390	113	20	59	175	105	55	118	118	114	
	F20	260	390	130	20	59	175	130	55	118	118	114	
	F25	300	390	150	20	59	175	150	55	118	118	114	
JMG100-S32	(F16)F20	260	400	130	20	59	180	130	58	121	118	114	
	F25	300	400	150	20	59	180	150	58	121	118	114	
JMG195-S32	F16	210	400	128	20	59	190	127	62	127	118	114	
	F20	260	400	130	20	59	190	130	62	127	118	114	
JMG195-S40	F25	300	400	150	20	59	190	150	62	127	118	114	
	F16	210	410	128	20	70	200	127	62	127	142	114	
JMG280-S50	F20	260	410	130	20	70	200	130	62	127	142	114	
	F25	300	410	150	20	70	200	150	62	127	142	114	
JMG300-S50	F25	300	435	160	25	90	250	170	70.5	149	212	114	
	F30	350	435	175	25	90	250	175	74.5	153	212	114	
JMG300-DS60	F25	300	450	165	25	90	263	150	70	160	212	114	
	F30	350	450	175	25	90	263	175	70	160	212	114	
JMG680-DS60	F25	300	470	165	25	/	240	150	70	160	160	114	
	F30	350	470	175	25	/	240	175	70	160	160	114	
JMG680-DS80	(F25)F30	350	510	195	25	/	265	196	71	165	160	114	
	F35	415	510	195	25	/	265	196	96	190	160	114	
JMG780-DS100	(F25)F30	350	510	195	25	/	265	196	71	165	160	114	
	F35	415	510	195	25	/	265	196	96	190	160	114	
JMG980-DS120	F30	350	520	210	30	/	295	175	77	168	205	114	
	F35	415	520	210	30	/	295	208	97	189	205	114	
JMG1080-DS150	(F30)F35	415	570	225	30	/	320	210	95	220	230	114	
	F40	475	610	245	30	/	360	210	100	237	260	114	
JMG1180-DS200	(F30)F35	415	610	245	30	/	360	210	113	250	260	114	
	F40	475	610	245	30	/	360	210	113	250	260	114	
JMG1280-DS300	(F35)F40	475	620	260	30	/	400	240	119	272	310	114	
	F40	475	650	295	30	/	440	255	122	275	310	114	

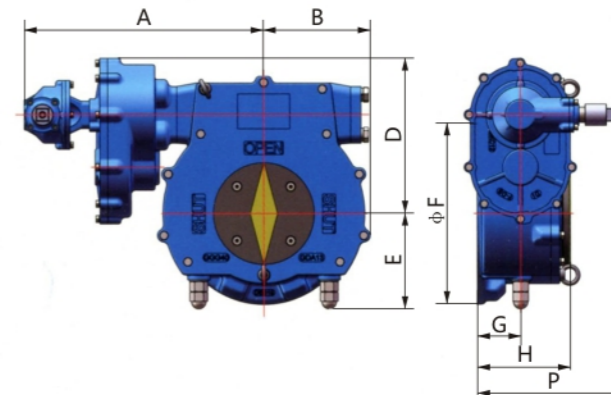
Pipe network series technical parameter								
Model	Speed ratio	Input torque	Output torque	Amplitude factor	Connection flange	Max. Valve steam Diam	Max.Install Height	Handwheel Diam
JMG21-BS05	47	71	850	12.0	F10/F12/F14	36	63	200
JMG30-BS10	62	85	1350	15.9	F12/F14/F16	48	85	300
JMG55-BS10	72	109	2000	18.3	(F12)F14/F16	53	90	350
JMG58-BS10	85	115	2500	21.7	F16/F20	62	95	400
JMG88-BS20	128	123	4000	32.5	(F14)F16/F20/F25	65	105	400
JMG100-BS20	135	160	5500	34.4	(F16)F20/F25	72	110	500
JMG195-BDS10	320	98	7500	76.5	F16/F20/F25	80	115	500
JMG280-BS40	194	172	8500	49.4	F25/F30	90	136	600
JMG300-BS40	201	185	9500	51.4	F25/F30	95	145	600
JMG300-BDS10	535	86	11000	127.9	F25/F30	95	145	600
JMG680-BDS10	572	124	17000	137.1	(F25)F30/F35	115	148	600
JMG780-BDS20	966	99	23000	232.3	F30/F35	125	157	600
JMG980-BDS20	1241	101	30000	297.0	(F30)F35	140	180	600
JMG1080-BDS20	1650	101	40000	396.0	(F30)F35/F40	150	195	600
JMG1180-BDS20	1981	97	46000	474.2	(F35)F40	160	230	600
JMG1280-BDS20	2186	111	58000	522.5	(F35)F40	170	230	600

1.The outer circle flange is based on large flange size. Ex.(F25)F30, standard will be F30, Diam is 350.
2.Detailed flange connection dimension is on page 14.
3.Can provide handwheel and pipe network adapter

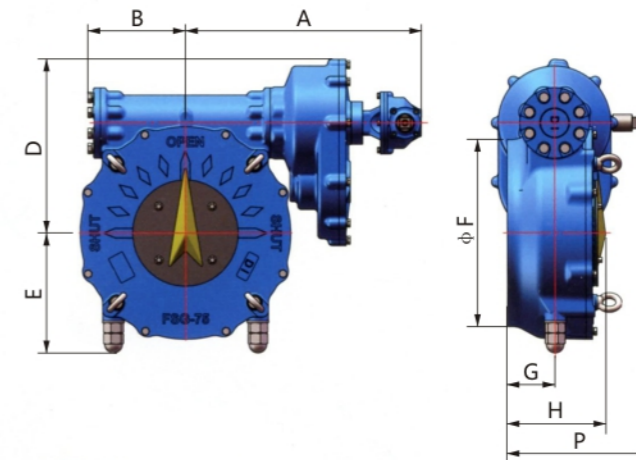
A Type



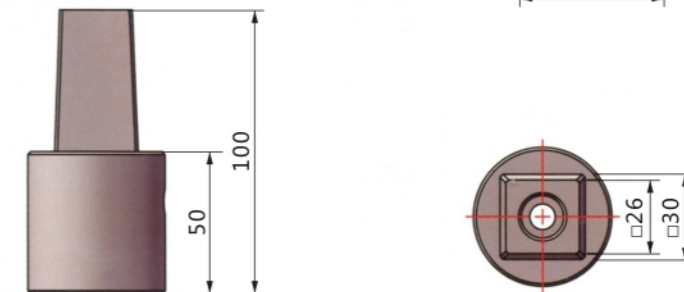
B Type



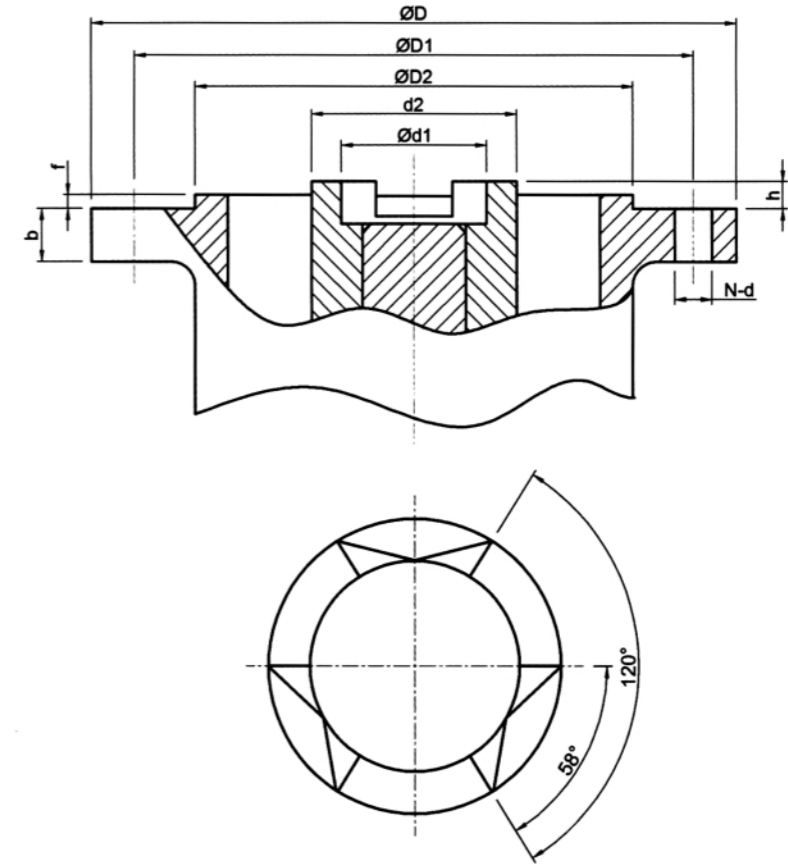
C Type



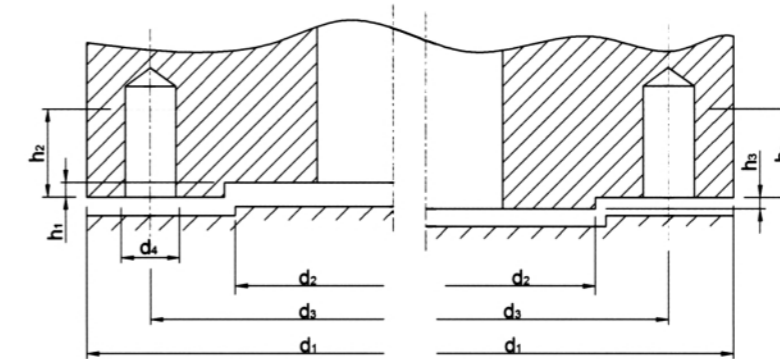
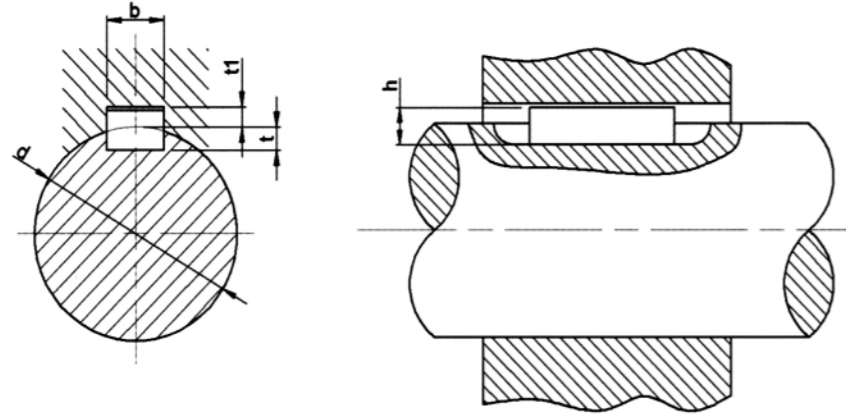
Pipe network adapter dimension



Dimension of pipe network series										
Type	Model	Connecting flange	Flange outer Diam	A	B	D	E	G	H	P
A	JMG21-BS05	F10	125	166	63	107	63	36	80	242
		F12	150	166	75	107	75	31	73	237
		F14	175	175	88	107	88	41	81	247
	JMG30-BS10	F12	150	186	75	135	82	46	95	272
		F14	175	186	88	135	88	46	95	272
		F16	210	195	105	135	105	46	95	272
	JMG55-BS10	(F12)F14	175	197	88	145	100	49.5	101	276
		F16	210	197	109	145	105	49.5	101	276
	JMG58-BS10	F16	210	205	105	157	105	53.5	106	280
		F20	260	205	130	157	130	53.5	106	280
	JMG88-BS20	(F14)F16	210	250	113	191	105	55	118	304
		F20	260	250	130	191	130	55	118	304
		F25	300	250	150	191	150	55	118	304
	JMG100-BS20	(F16)F20	260	250	130	200	130	58	121	307
		F25	300	250	150	200	150	58	121	307
	JMG195-BDS10	F16	210	335	128	200	127	62	127	288
		F20	260	335	130	200	130	62	127	288
		F25	300	335	150	200	150	62	127	288
JMG280-BS40	F25	300	290	160	250	170	70.5	149	350	
	F30	350	290	175	250	175	74.5	153	354	
JMG300-BS40	F25	300	295	165	265	150	70	160	350	
	F30	350	295	175	265	175	70	160	350	
JMG300-BDS10	F25	300	395	165	237	150	70	160	296	
	F30	350	395	175	237	175	70	160	296	
JMG680-BDS10	(F25)F30	350	425	195	262	196	71	165	297	
	F35	415	425	208	262	208	96	190	322	
JMG780-BDS20	F30	350	480	210	295	175	77	168	326	
	F35	415	480	210	295	208	97	188	346	
JMG980-BDS20	(F30)F35	415	515	225	320	210	95	220	345	
JMG1080-BDS20	(F30)F35	415	550	245	360	210	100	237	350	
	F40	475	550	245	360	238	113	250	363	
JMG1180-BDS20	(F35)F40	475	567	260	400	240	119	272	370	
JMG1280-BDS20	(F35)F40	475	590	295	440	255	122	275	390	

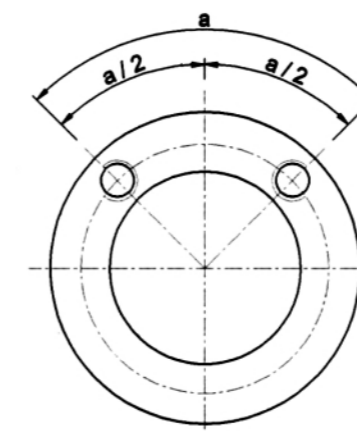


JB2920 Connection dimension											
Electric model	Frame size	D	D1	D2	b	f	h	d1	d2	d	n
Z5/Z10/Z15	2	145	120	90	12	4	8	30	45	12	4
Z20/Z30	3	185	160	125	15	4	10	42	58	14	4
Z45/Z60	4	225	195	150	20	5	12	50	72	18	4
Z90/Z120	5	275	235	180	25	5	14	62	82	22	4
Z180/Z250	7	330	285	220	30	6	16	72	98	26	4
Z350/Z500	8	380	340	280	35	6	20	80	118	22	8
Z650/Z800	9	430	380	300	40	8	25	85	128	26	8
Z1000/Z1200	10	510	450	360	45	8	30	105	158	33	8



Shaft Dia d (Nominal)	Key b×h Nominal	Nominal Keyseat									
		b Nominal	Width b					Depth h			
			Tolerance					t Shaft		t1 Keyway	
			Loose Fitting		Standard		Tight Fitting	Size	TOL	Size	TOL
6~8	2×2	2	+0.03	+0.06	-0.004	±0.0125	-0.006	1.2		1	
>8~10	3×3	3	0	+0.02	-0.029		-0.031	1.8		1.4	
>10~12	4×4	4						2.5	+0.1	1.8	+0.1
>12~17	5×5	5	+0.03	+0.08	0	±0.015	-0.012	3		2.3	
>17~22	6×6	6	0	+0.03	-0.03		-0.042	3.5		2.8	
>22~30	8×7	8	+0.04	+0.10	0	±0.018	-0.015	4		3.3	
>30~38	10×8	10	0	+0.04	-0.036		-0.051	5		3.3	
>38~44	12×8	12						5		3.3	
>44~50	14×9	14	+0.04	+0.15	0	±0.0215	-0.018	5.5		3.8	
>50~58	16×10	16	0	+0.05	-0.043		-0.061	6		4.3	
>58~65	18×11	18						7	+0.2	4.4	+0.2
>65~75	20×12	20						7.5		4.9	
>75~85	22×14	22	+0.05	+0.15	0	±0.026	-0.021	9		5.4	
>85~95	25×14	25	0	+0.07	-0.052		-0.074	9		5.4	
>95~110	28×16	28						10		6.4	
>110~130	32×18	32						11		7.4	
>130~150	36×20	36						12		8.4	
>150~170	40×22	40	+0.06	+0.18	0	±0.031	-0.026	13		9.4	
>170~200	45×25	45	0	+0.08	-0.062		-0.088	15		10.4	
>200~230	50×28	50						17		11.4	
>230~260	56×32	56						20		12.4	
>260~290	63×32	63	+0.07	+0.22	0	±0.037	-0.032	20	+0.3	12.4	+0.3
>290~330	70×36	70	0	+0.10	-0.074		-0.106	22		14.4	
>330~380	80×40	80						25		15.4	
>380~440	90×45	90	+0.09	+0.26	0	±0.0135	-0.037	28		17.4	
>440~500	100×50	100	0	+0.12	-0.087		-0.124	31		19.5	

Flange type	Dimension							
	d1 Outer Diam	d2 Concave convex surface	d3 Bolt Circle	d4 Bolt nos	h1 Concave Surface	h2 Bolt depth	h3 Convex surface	Dowel pin
F05	Φ90	/	Φ50	4-M6	/	8	/	/
F07	Φ90	Φ55	Φ70	4-M8	3	11	/	/
F10	Φ125	Φ70	Φ102	4-M10	3	13	2.5	Φ10Depth9
F12	Φ150	Φ85	Φ125	4-M12	3	16	2.5	Φ10Depth9
F14	Φ175	Φ100	Φ140	4-M16	4	21	3	Φ12Depth11
F16	Φ210	Φ130	Φ165	4-M20	5	26	3	Φ12Depth11
F20	Φ260	Φ160	Φ200	8-M16	5	21	3	Φ12Depth11
F25	Φ300	Φ200	Φ254	8-M16	5	21	3	Φ16Depth13
F30	Φ350	Φ230	Φ298	8-M20	5	26	3	Φ20Depth13
F35	Φ415	Φ260	Φ356	8-M30	5	39	3	Φ20Depth13
F40	Φ475	Φ300	Φ406	8-M36	8	47	5	Φ25Depth13
F48	Φ560	Φ370	Φ483	12-M36	8	47	5	Φ25Depth13
F60	Φ686	Φ470	Φ603	20-M36	8	47	5	Φ30Depth15



Hole location

Flange type	a/2
F03 to F16	45°
F20 to F40	22.5°
F48	15°
F60 to F80	9°
F100	5.625°