

ELECTRIC ACTUATORS



SMD-range

YMD-range



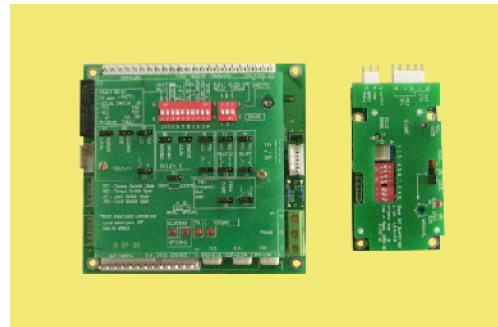
BAOHENG VALVE-CONTROL CO.,LTD



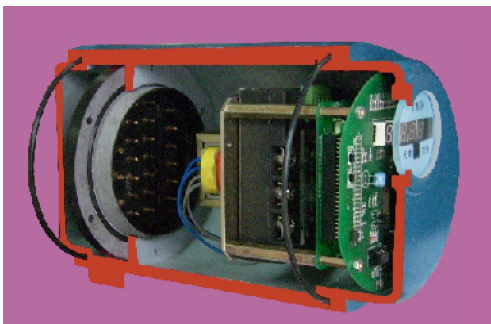


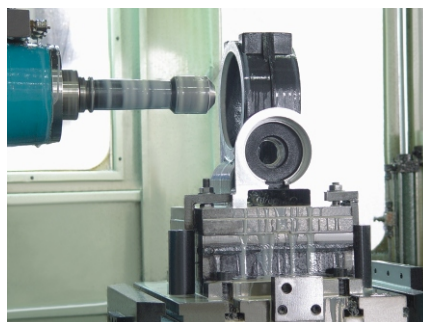
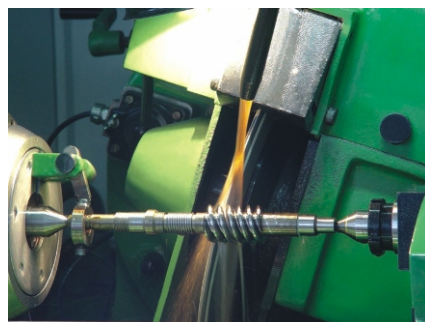
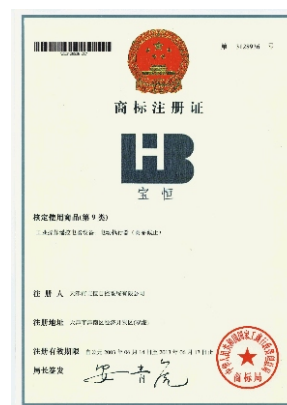
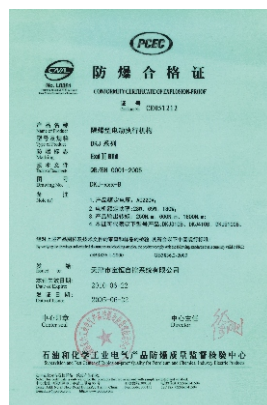
Baoheng is a private owned company with it`s plant and office of over 10 thousand square meters and years sales amount of 60 million RMB of electric actuator 5000 sets and sales network all over china market and some of the product exported overseas.

With the 15 years of development, Baoheng has consolidated it`s major role in the field of electric actuator in china and being successfully supplied thousands of electric actuator that serving many industry which included power plant, steel & iron, cement, petrol chemical oil and water treatment.



2: the actuator for non-intrusive YMD-range





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1: The actuators of SMD-range

1.1: Brief description of SMD-range

SMD-range of product implemented the maxim of logic control with a advanced design and preceded the features of MD-range. With regards to the product function and anti-interruption.

SMD motor used high start torque and low inertia rotor, it`s output terminal directly with a gear wheel attached and a short responding time.

Mechanical speed reducing unit used planet gears and worm wheel and can self-locked and has liability that insured actuator can be used for a long period of repairing and no need to be replaced and maintained. It can be installed for any angle.

SMD used advanced IC that electric actuator implemented and with it`s single phase supply driver of solid state relay which can be used for a long time and no need for daily maintain and can be used in a highly automation and frequency using resort.

SMD-range: unique design, reliability, easy of adjustment

Electric and mechanism protect

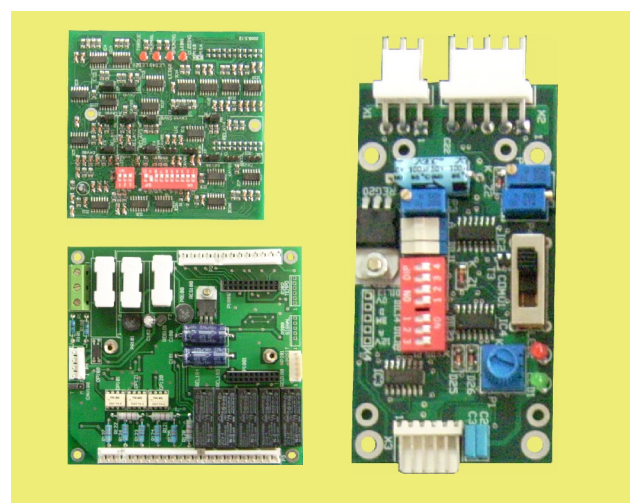
- 1 : fuse protect against short circuit
- 2 : thermal motor protection
- 3 : signal-lose protection
- 4 : torque limit switch
- 5 : mechanical stop protect valve
- 6 : travel limit switch
- 7 : enclosure protection IP65
- 8 : SMT-surface mount technology

Easy to operate

- 1: local handwheel operation
- 2: local electrical operation
- 3: control by signal 4-20mA
- 4: multi-voltage control
- 5: control by contacts
- 6: ESD-emergency shut down
- 7: CW or CCW rotation
- 8: easy adjustment of travel limit switch



easy adjustment of travel limit switch



SMT-surface mount technology

1.2: Specification and type

- (1) Quarter-turn actuators : output torque 100Nm--50000Nm
- (2) Linear actuators : output thrust 6.4KN--150KN
- (3) Multi-turn actuators : output torque 40Nm--4000Nm

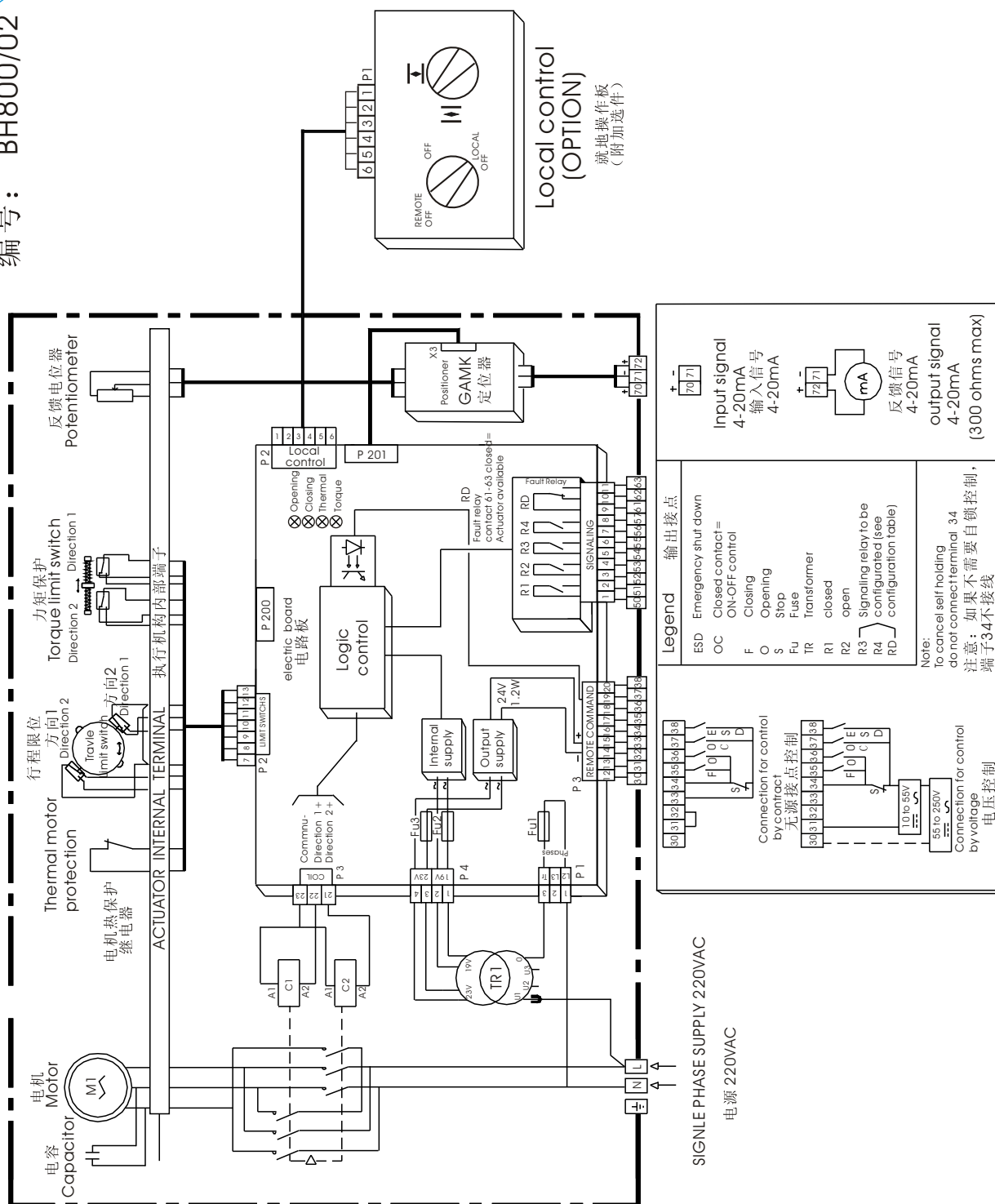
1.3: Technical data and performance

- 1: Input signal: A) 4-20mA
 - B) Control by contacts (opto-isolators)
 - C) Control by voltage (opto-isolators)
- 2: Input resistance: 250 ohm
- 3: Feedback signal: A) 4-20mA
 - B) Fully open and close relay contact
- 4: Dead band: 1%-3%
- 5: Damping characteristic: 0 hunting
- 6: non-linear error: 1%-2.5%
- 7: Enclosure: IP65 according to IEC 145
- 8: Insulation: class B (or F) for motor
- 9: Power supply: 220VAC +10% (-15%)
380VAC $\pm$ 10%
- 10: Duty cycle: 50% start 1200 times per hour
- 11: Temperature acceptance: -20 $^{\circ}$ ~+70 $^{\circ}$ C centigrade
- 12: Environment humidity: less than 95% and no-dew
- 13: Insulation resistance: terminal between signal and shell >20M ohm
terminal between power and shell >50M ohm
terminal between power and signal >50M ohm
- 14: Insulation intensity: terminal between signal and shell >500V
terminal between power and signal >500V
terminal between power and shell >1500V (220V supply)
2000V (380V supply)
- 15: Wave with temperature: within 48 hours is less than 1%

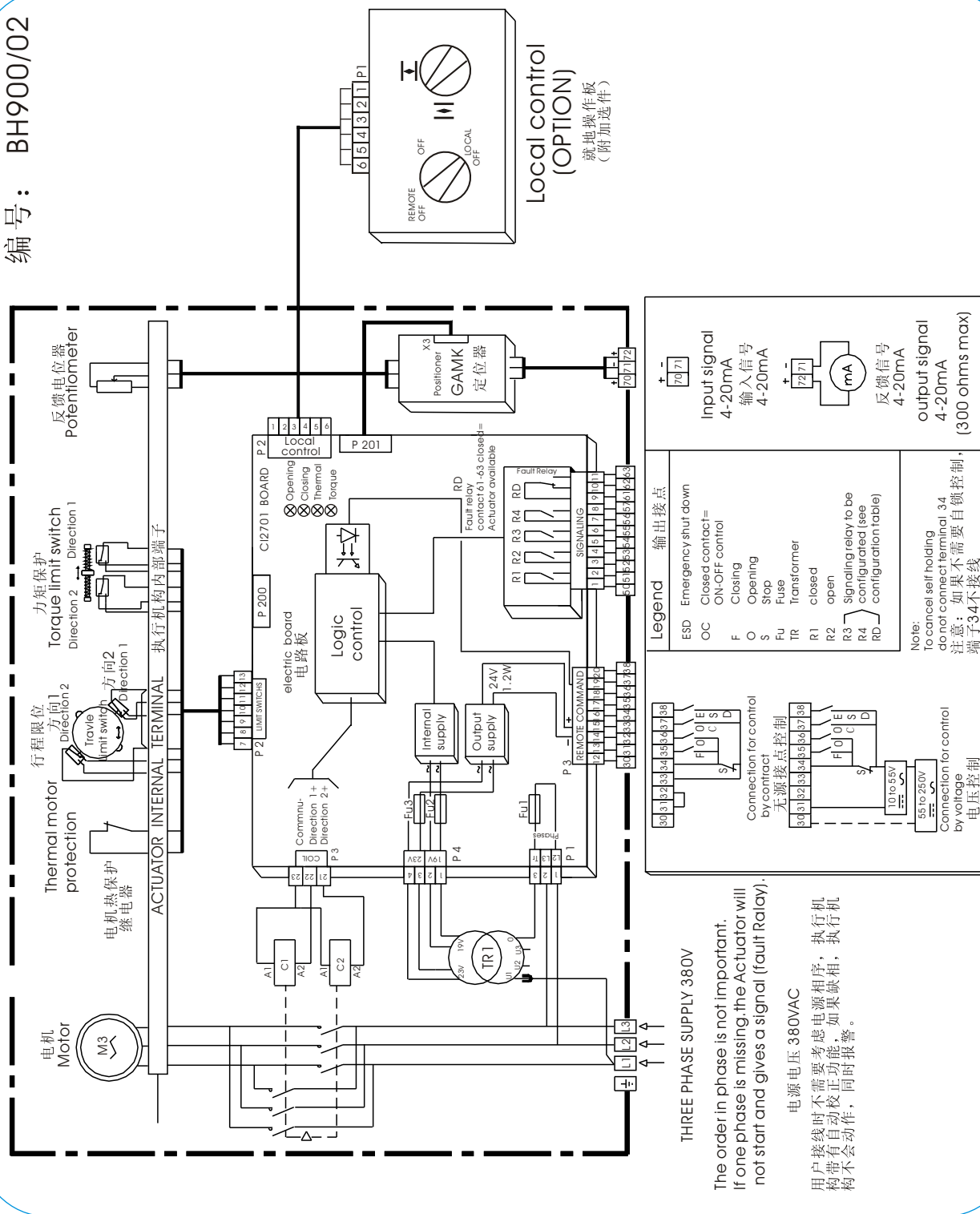
Above the data is according to standard GB/T8219-1999 <the electric actuator is using for control and testing in the industry process>

1.4: Wiring diagram

编号: BH800/02



编号: BH900/02



1.5: The parameter of quarter-turn actuators

The quarter-turn actuators have two type of installation, 1) Flange mounting is fit the actuators directly to the valve (In this case, should consider the temperature of medium and easy to check machine). 2)Foot-plate mounted is more convenience for installation and maintenance). Below table is the type of quarter-turn actuators.

SMD-rang quarter-turn type and data

Output Torque Nm	Type 3phase 380V	Operating time 90°/sec	power KW	Current rated A	Current start A	Weight Kg
100	SMD-10/F	25	0.03	0.30	0.50	15
250	SMD-25/F	30/60	0.03	0.30	0.50	30
600	SMD-60/F	30/60	0.06	0.30	0.80	45
1000	SMA+RS100/F	30/35/40/50	0.12	0.80	1.60	70
1600	SMB+RS160/F	20/30/40/50	0.20	0.90	2.20	101
2500	SMB+RS250/F	20/30/40/60	0.37	1.10	4.50	125
4000	SMB+RS400/F	30/40/50/70	0.50	1.50	4.50	165
6000	SMB+RS600/F	40/55/76/104	1.00	2.70	14.0	190
10000	SMB+RS1000/F	57/78/104/129	1.00	2.70	14.0	230
16000	SMB+RS1600/F	73/91/125/165	1.50	3.40	20.0	250
25000	SMB+RS2500/F	121/165/228/286	2.20	4.40	27.0	340
35000	SMB+RS3500/F	150/208/286/390	3.00	7.20	37.0	470
50000	SMB+RS5000/F	208/286/390	4.50	9.10	52.0	495

Below table is showed code of type

Multi-turn actuator	Gearboxes	Output torque	Power	Operating time	Type of installation	Control model
SMB	+RS	160	/K	30 sec	H	T
SMA-small torque SMB-big torque	RS-quarter-turn gearbox	1600Nm	K- 1 phase F- 3 phase	30 sec	H- foot-plate mounted Z- flange mounted	T- control signal 4-20mA Y- control signal voltage or contacts

For example: SMB+RS160/K30HT: The actuator output torque is 1600Nm, single phase power, quarter-turn, operating time is 30sec, installation is foot-plate, control signal is 4-20mA.

SMB+RS400/F70ZY: The actuator output torque is 4000Nm, three phase power, quarter-turn, operating time is 70sec, flange installation, control signal is voltage or contacts.

SMD-rang quarter-turn type and data

Output Torque Nm	Type 1 phase 220V	Operating time 90°/sec	power KW	Current rated A	Current start A	Weight Kg
100	SMD-10/K	25	0.03	0.60	0.90	15
250	SMD-25/K	30/60	0.03	0.60	0.90	30
600	SMD-60/K	30/60	0.06	1.20	1.70	45
1000	SMA+RS100/K	35/45/50	0.15	2.00	3.00	70
1600	SMB+RS160/K	30/40/50	0.20	2.50	3.50	101
2500	SMB+RS250/K	30/40/60	0.20	2.50	3.50	125
4000	SMB+RS400/K	40/55/75	0.30	2.90	4.50	165
6000	SMB+RS600/K	76/104/172	0.30	2.90	4.50	190
10000	SMB+RS1000/K	104/129/194	0.40	3.50	14.0	230
16000	SMB+RS1600/K	171/235	0.40	3.50	14.0	250

1.6: Drawing of foot plate-mounted model

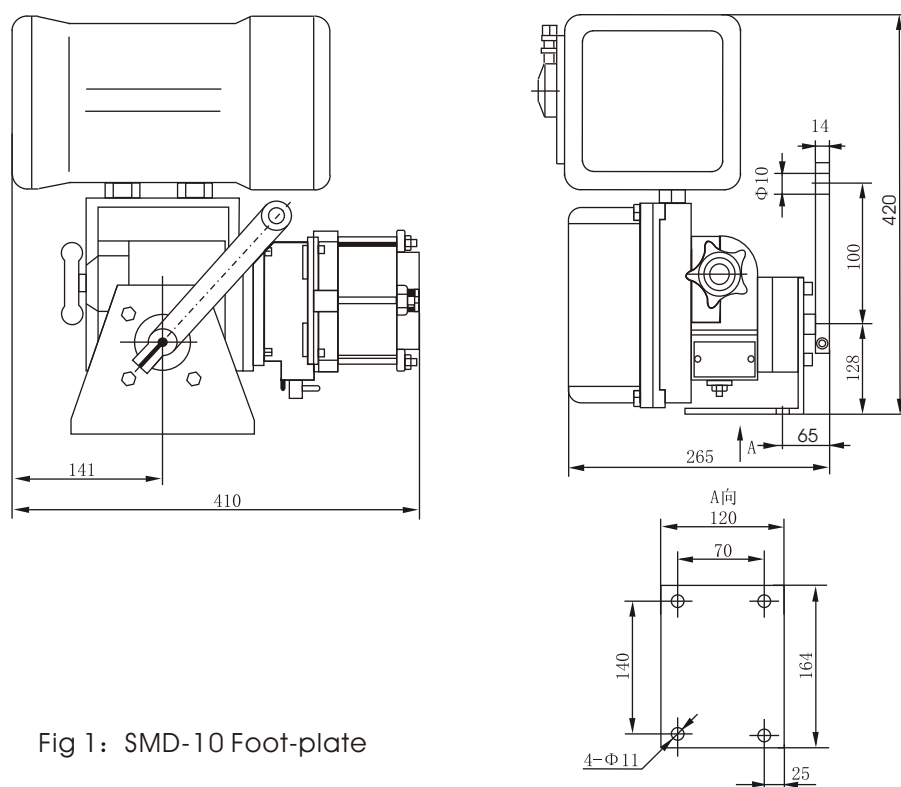


Fig 1: SMD-10 Foot-plate

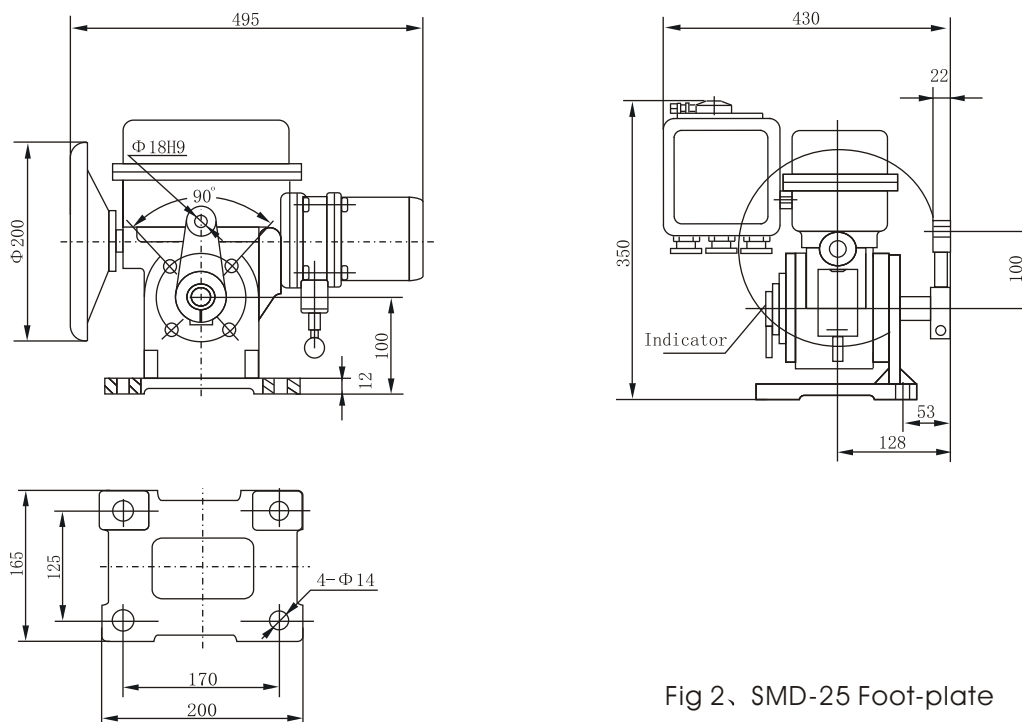


Fig 2、SMD-25 Foot-plate

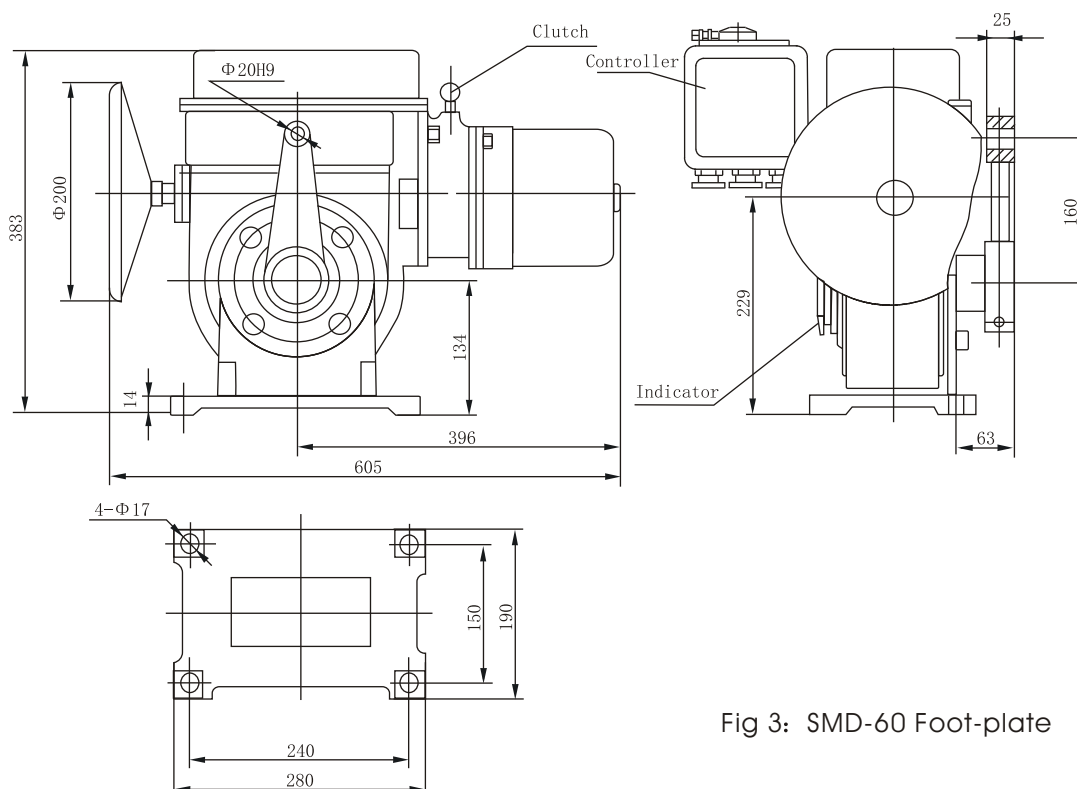
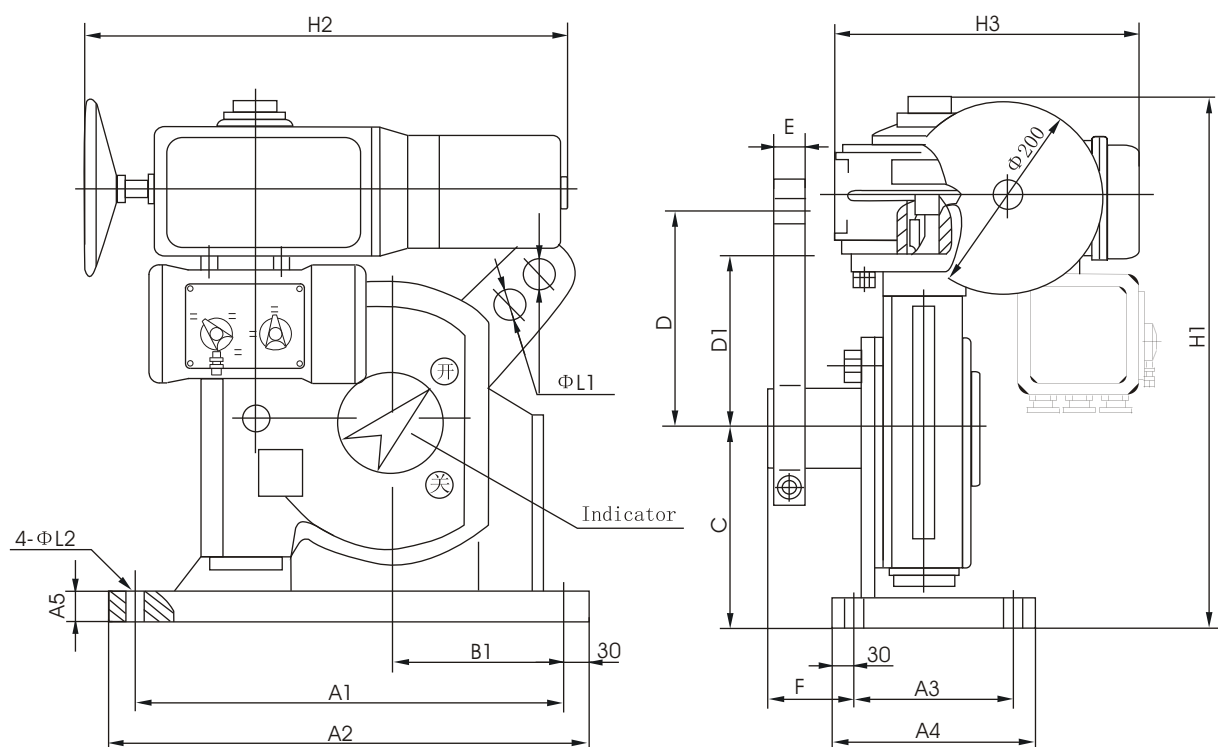
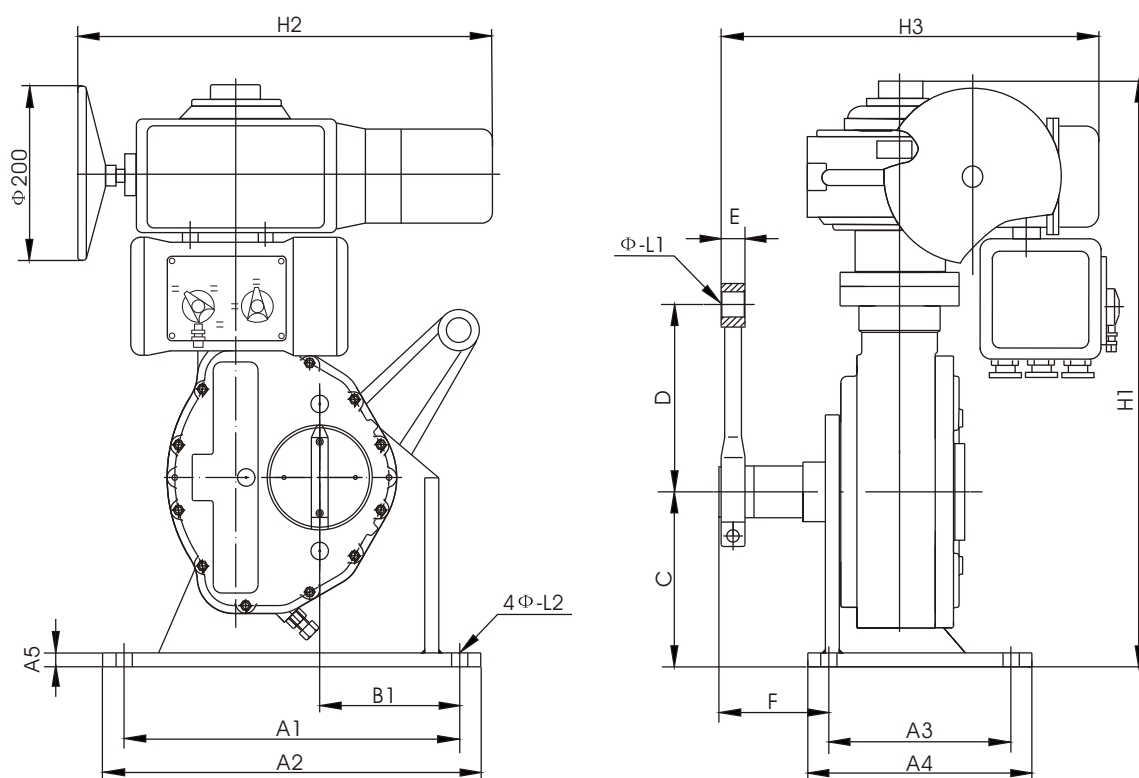


Fig 3: SMD-60 Foot-plate



Type	A1	A2	A3	A4	A5	B1	C	D	D1	E	F	H1	H2	H3	$\Phi L1$	$\Phi L2$
SMA+RS100	320	380	180	240	12	150	150	250	200	28	80	433	420	337	2× $\Phi 20$	$\Phi 14$
SMB+RS160	375	435	175	235	14	195	170	250	200	30	80	500	530	430	2× $\Phi 20$	$\Phi 18$
SMB+RS250	440	500	180	240	14	210	230	250	200	34	80	602	566	433	2× $\Phi 30$	$\Phi 22$
SMB+RS400	440	500	180	240	16	210	230	250	200	34	80	623	600	433	2× $\Phi 30$	$\Phi 22$

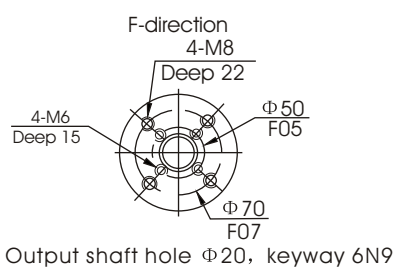
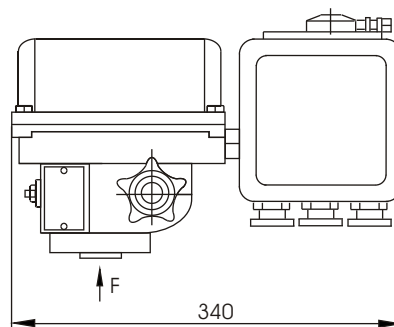
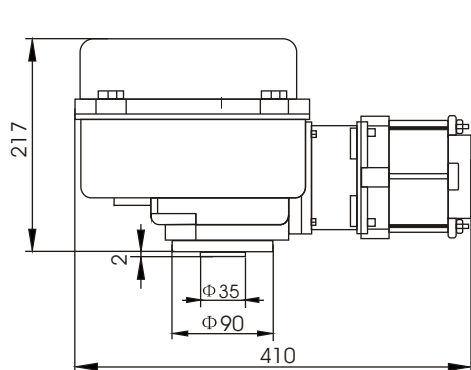
SMD Foot-plate installation diagram



型号	A1	A2	A3	A4	A5	B1	C	D	E	F	H1	H2	H3	ΦL1	ΦL2
SMB+RS600	480	540	260	320	18	200	250	350	34	160	745	583	510	Φ36	Φ22
SMB+RS1000	530	590	300	360	22	220	270	400	40	160	764	583	580	Φ40	Φ32
SMB+RS1600	530	590	300	360	22	220	270	400	40	160	930	583	580	Φ40	Φ32
SMB+RS2500	600	670	300	370	22	280	355	400	40	160	1172	700	588	Φ40	Φ32
SMB+RS2500	640	710	320	390	24	300	360	400	40	160	1191	700	580	Φ40	Φ32
SMB+RS5000	640	710	320	390	24	300	360	400	40	160	1191	700	580	Φ40	Φ32

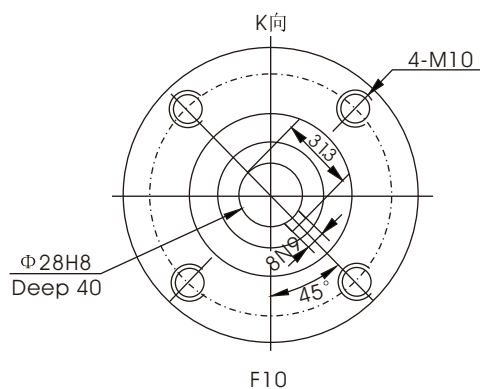
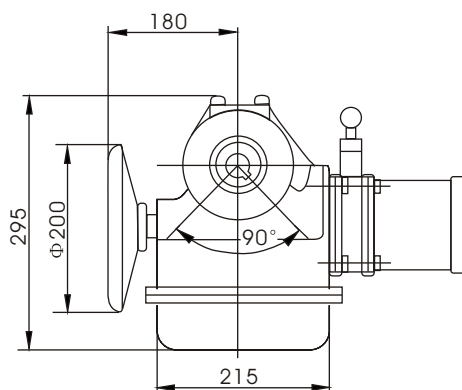
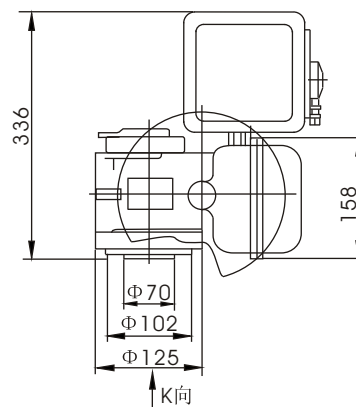
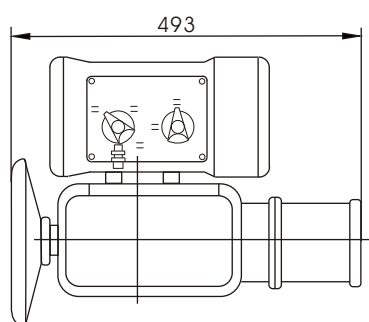
SMD Foot-plate installation diagram

1.7: Drawing of direct-mounted model



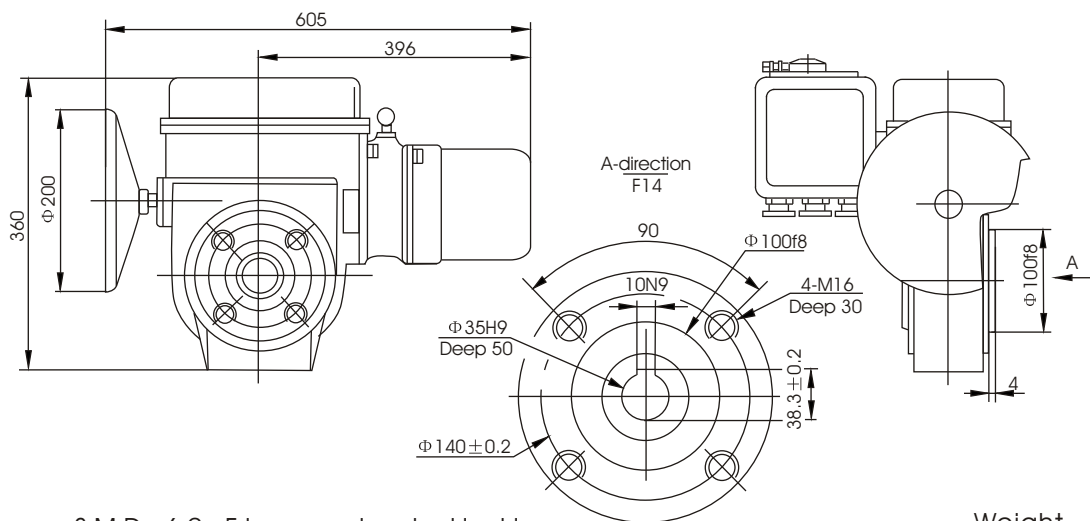
SMD-10 Flange installation

Weight: 13Kg



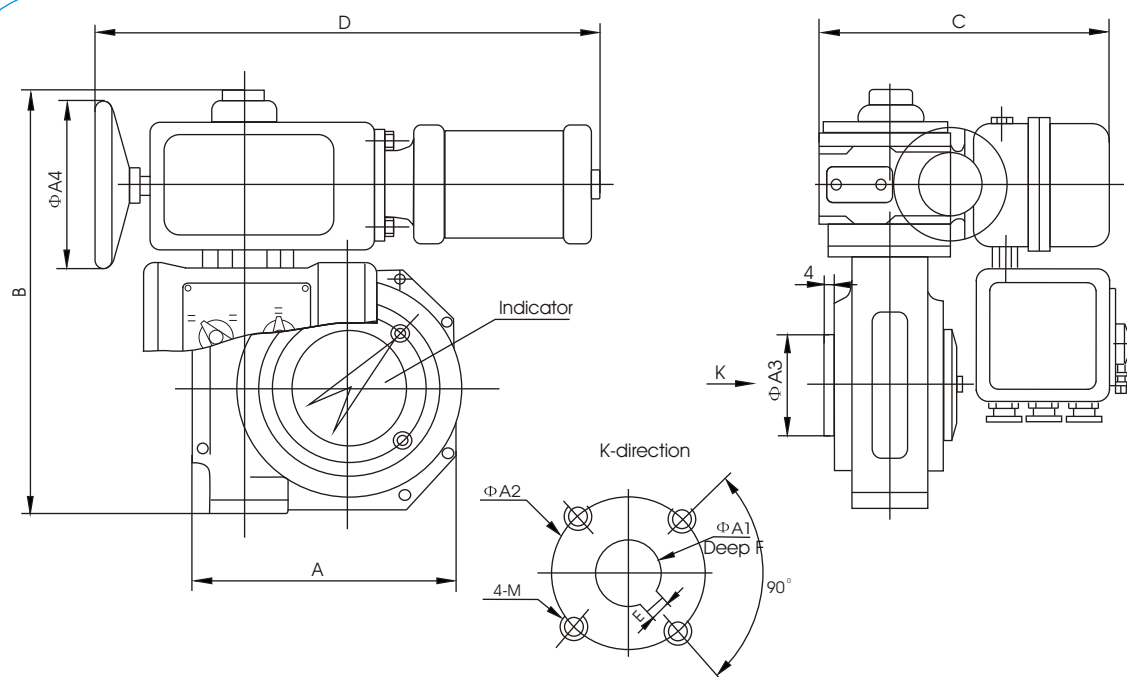
SMD-25 Flange installation

Weight: 23Kg



SMD-60 Flange installation

Weight: 37Kg



Type	Flange	A	B	C	D	E-key	F	$\Phi A1$	$\Phi A2$	$\Phi A3$	M	$\Phi A4$	Weight
SMA+RS100	F12	265	408	275	520	14JS9	50	$\Phi 45E8$	$\Phi 125$	$\Phi 80$	M12	100	68
SMB+RS160	F14	296	372	361	612	18JS9	80	$\Phi 60f8$	$\Phi 140$	$\Phi 100$	M16	200	75
SMB+RS250	F16	348	534	361	612	20JS9	90	$\Phi 72H8$	$\Phi 165$	$\Phi 130$	M20	200	90
SMB+RS400	F16	388	591	386	588	20JS9	100	$\Phi 72H8$	$\Phi 165$	$\Phi 130$	M20	200	130
SMB+RS600	F16	328	706	368	586	22JS9	130	$\Phi 80H8$	$\Phi 165$	$\Phi 130$	M20	200	145
SMB+RS1000	F16	398	740	400	586	28JS9	150	$\Phi 98H8$	$\Phi 254$	$\Phi 200$	8-M16	200	170

SMD Foot-plate installation diagram

1.8: Linear actuators

These consist of a lead screw arrangement attached to the base of the actuator In order to provide a linear output. An optional mounting yoke is available if required. Please apply to Baoheng for details.

Type and size for three phase power SMD-range linear actuators

Thrust KN	Type 3 phase 380V	Stroke mm	Linear speed mm/S	Valve screw F	Flange D1	flange D2	Bolt hole D3	Outline A/B	power KW	current rated/start (A)	Weight Kg
6.4	SMA+Z64/F	10 $\begin{smallmatrix} \nearrow \\ \searrow \end{smallmatrix}$ 40	1.2/1.8	M8×1.25 M12×1.25	Φ80 Φ105	Φ60 Φ80	2-Φ10 4-Φ12	480/407 550/460	0.03	0.3/0.5	39
10	SMA+Z100/F	25 $\begin{smallmatrix} \nearrow \\ \searrow \end{smallmatrix}$ 60	1.2/1.8	M12×1.25 M16×1.5	Φ105 Φ118	Φ80 Φ95	4-Φ12 4-Φ12	550/460 591/460	0.12	0.8/1.6	41
16	SMB+Z160/F	40 $\begin{smallmatrix} \nearrow \\ \searrow \end{smallmatrix}$ 100	1.5/2.3	M16×1.5 M20×1.5	Φ118 Φ135	Φ95 Φ100	4-Φ12 6-Φ18	591/460 591/460	0.20	0.9/2.2	68
25	SMB+Z250/F	40 $\begin{smallmatrix} \nearrow \\ \searrow \end{smallmatrix}$ 100	1.4/2.7	M20×1.5 M27×1.5	Φ135	Φ100	6-Φ18	591/460 591/460	0.37	1.1/4.5	75
40	SMB+Z400/F	Non-standard version. Size, lead screw, yoke of the valve is required.									
60	SMB+Z600/F										
100	SMB+Z1000/F										
150	SMB+Z1500/F										

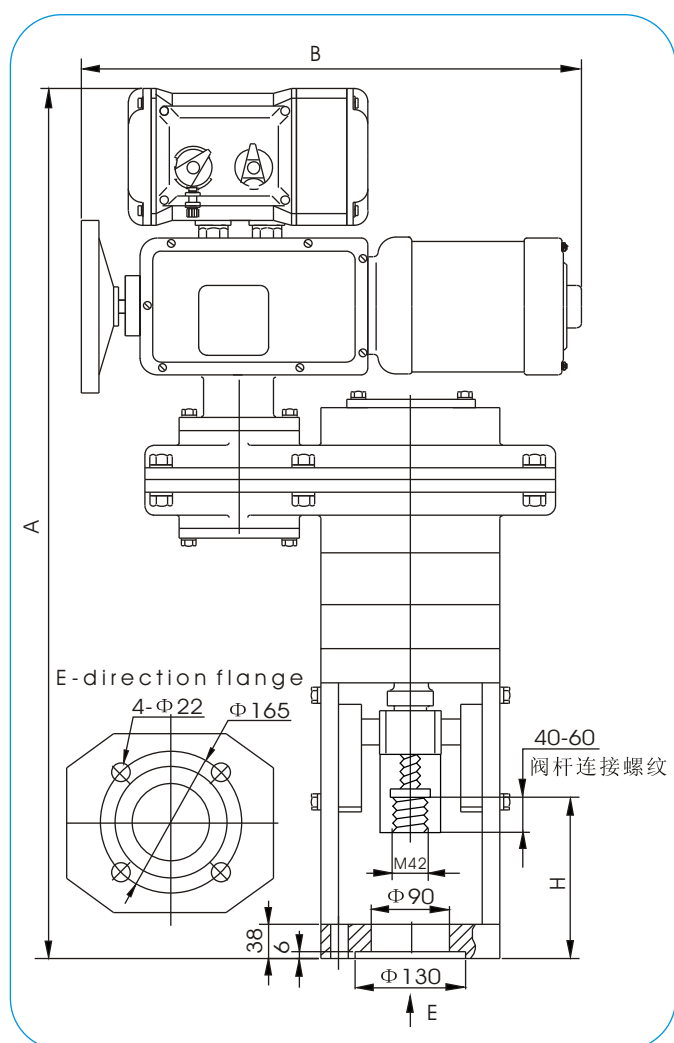
Type and size for single phase power SMD-range linear actuators

Thrust KN	Type 1 phase 220V	Stroke mm	Linear speed mm/S	Valve screw F	Flange D1	flange D2	Bolt hole D3	Outline A/B	power KW	current rated/start (A)	Weight Kg
6.4	SMA+Z64/K	10 $\begin{smallmatrix} \nearrow \\ \searrow \end{smallmatrix}$ 40	1.2/1.8	M8×1.25 M12×1.25	Φ80 Φ105	Φ60 Φ80	2-Φ10 4-Φ12	480/407 550/460	0.03	0.6/0.9	39
10	SMA+Z100/K	25 $\begin{smallmatrix} \nearrow \\ \searrow \end{smallmatrix}$ 60	1.2/1.8	M12×1.25 M16×1.5	Φ105 Φ118	Φ80 Φ95	4-Φ12 4-Φ12	550/460 591/460	0.15	2.0/3.0	41
16	SMB+Z160/K	40 $\begin{smallmatrix} \nearrow \\ \searrow \end{smallmatrix}$ 100	1.5/2.3	M16×1.5 M20×1.5	Φ118 Φ135	Φ95 Φ100	4-Φ12 6-Φ18	591/460 591/460	0.20	2.5/3.5	68
25	SMB+Z250/K	40 $\begin{smallmatrix} \nearrow \\ \searrow \end{smallmatrix}$ 100	1.4/2.7	M20×1.5 M27×1.5	Φ135	Φ100	6-Φ18	591/460 591/460	0.40	3.5/14	75

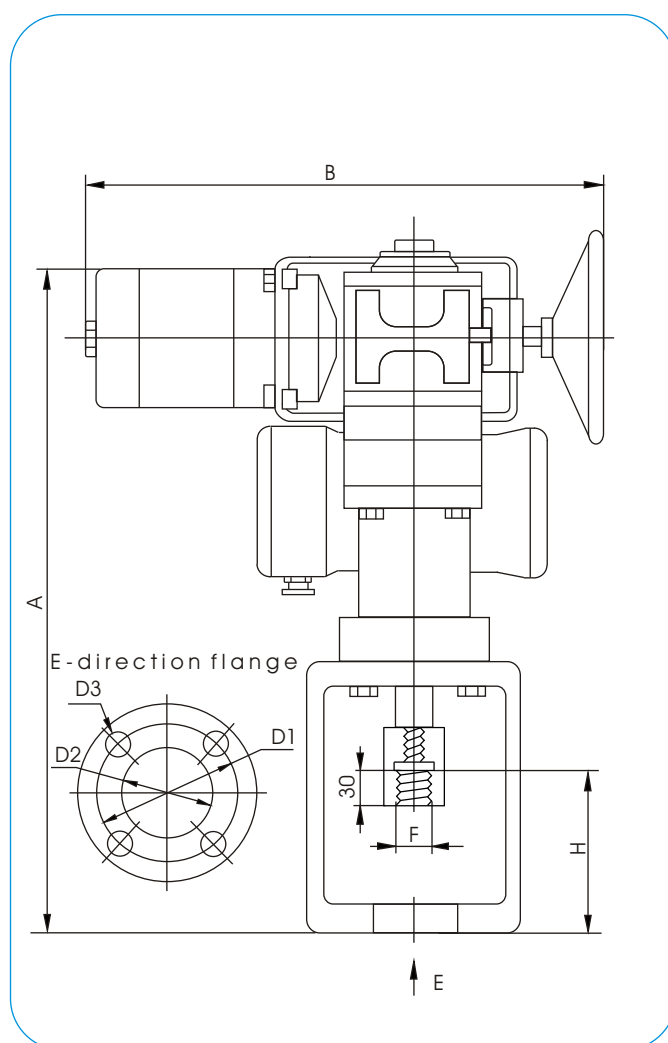
Below table is showed code of type

Multi-turn actuator	Linear	Output thrust	Power	Stroke	Linear speed	Control model
SMB	+Z	6.4	/K	25	1.2	T
SMA-small torque SMB-big torque	Z- linear	6.4KN	K- 1 phase F- 3 phase	25mm	1.2mm/sec	T- control signal 4-20mA Y- control signal voltage or contacts

For example: SMB+Z64/K2512T: The actuator output thrust is 6400N, single phase power, stroke is 25mm, linear speed is 1.2mm/sec, control signal is 4-20mA.



100KN及150KN Thrust diagram



Below 60KN thrust diagram

Stroke	10	16	25	40	60	100
Fully closed position H	80	75	65	105	107	145

SMD Linear actuators installation diagram

1.9: Multi-turn actuators

3 phase supply 380V , 50Hz

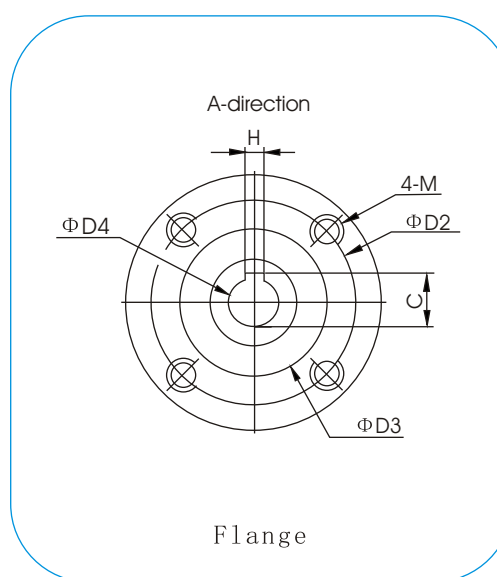
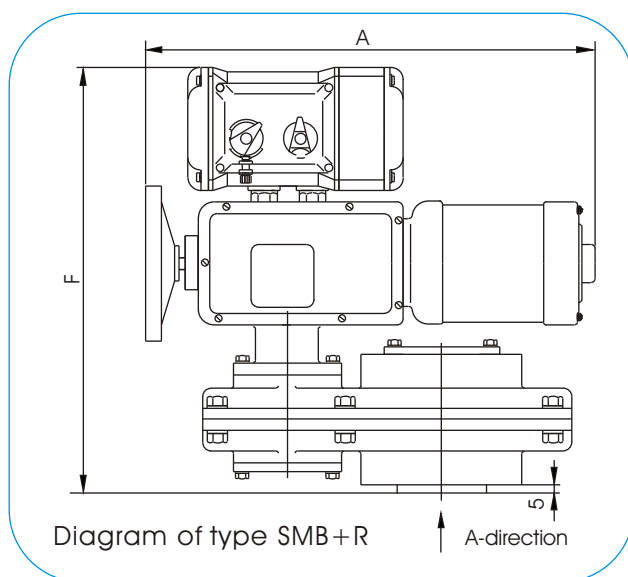
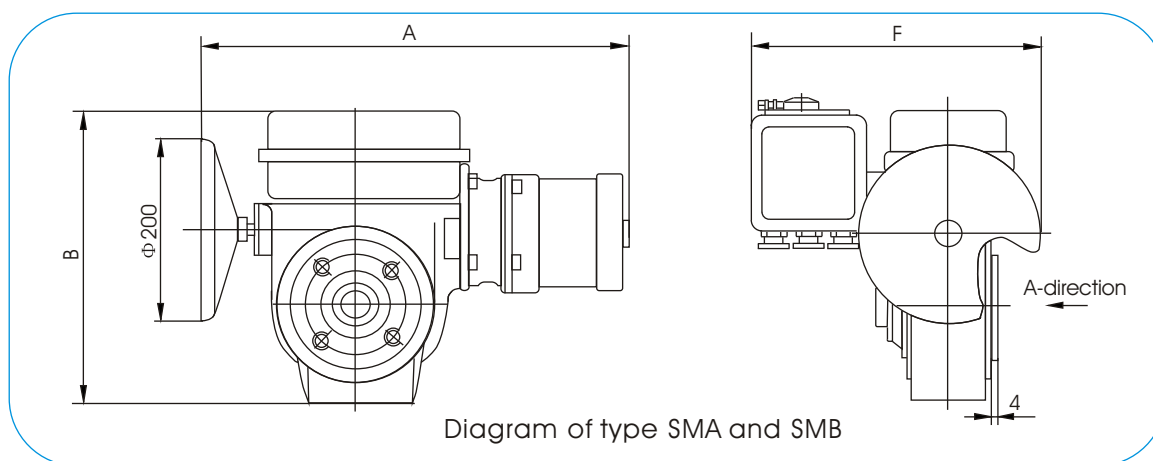
Output Torque Nm	Type	Output speed rpm	Number of turns	power KW	Current rated A	Current start A	Weight Kg
60 100	SMA	6/12/18/24 6/12/18/24	1~36 1~36	0.20 0.37	0.90 1.10	2.20 4.50	23
160 250 400 600	SMB	12/18/24/36 12/18/24/36 12/18/24/36 12/18/24/36	1~36 1~36 1~36 1~36	0.50 1.00 1.50 2.20	1.50 2.70 3.40 4.40	4.50 14.0 20.0 27.0	46
1000	SMB+R05	12/18/24/36	1~36	3.00	7.20	37.0	75
1600	SMB+R10	12/18/24/36	1~36	4.50	9.10	52.0	96
2500	SMB+R25	12/18/24	1~36	5.50	11.0	62.0	110

1 phase supply 220V , 50Hz

Output Torque Nm	Type	Output speed rpm	Number of turns	power KW	Current rated A	Current start A	Weight Kg
60 100	SMA	6/12/18/24 6/12/18/24	1~36 1~36	0.20 0.40	2.50 3.50	3.50 14.0	23
160 250	SMB	12/18/24 7/12	1~36 1~36	0.20 0.40	2.50 3.50	3.50 14.0	46

Below table is showed code of type

Multi-turn actuator	Gearboxes	Output torque	Power	Output speed(rpm)	Number of turns	Control model
SMB	+R	16	/K	12	6	T
SMA-small torque SMB-big torque	R-multi-turn gearbox	160Nm	K- 1 phase F- 3 phase	12 turns/min	6-turns	T- control signal 4-20mA Y- control signal voltage or contacts



型 号	法兰	A	B	F	C	H	M	ΦD2	ΦD3	ΦD4
SMA(40-100Nm)	F10	440	336	350	22.8	6N9	M10	Φ 102±0.2	Φ 70	Φ 20H8-深50
SMB(160-600Nm)	F14	612	360	375	31.3	10N9	M16	Φ 140±0.2	Φ 100	Φ 28H8-深60
SMB+R05 600-1000Nm	F16	612	360	375	43.3	12N9	M20	Φ 165±0.2	Φ 130	Φ 40H8-深60
SMB+R10 600-1000Nm	F16	612	360	375	48.8	14N9	M20	Φ 165±0.2	Φ 130	Φ 45H8-深80
SMB+R25 1600-2500Nm	F16	612	360	375	53.8	14N9	M20	Φ 165±0.2	Φ 130	Φ 50H8-深80

SMD Multi-turn actuators installation diagram

2: The actuators of YMD-range

2.1: Brief description of YMD-range

YMD-range of products applied MD-range sophisticated technology of mechanical drive. Electric control box applied double sealed construction and tested or operated by infra-red setting tool for pre-setting.

Due to the application of EEPROM memory which can memorize settled figure amount time by time in the inner part of the actuators, the figure can be out-let after the actuators be re-plugged and can be revised ten thousands of times and maintained 100 years of time.

The actuator`s position, running state can be displayed by the digital display screen which is so convenient for the user to check out. Living operation button are not applied to avoiding mis-operation. Infra-red remote control enhanced it`s anti-interruption function due to the application of code writing technology.

YMD-range has a highly liability with it`s power driver is made by solid state relay with a long using time and no need to be daily maintained and with a high frequency of unit motion amounted to 1200 times per hour and can be used in a highly automated and high frequency using resort.

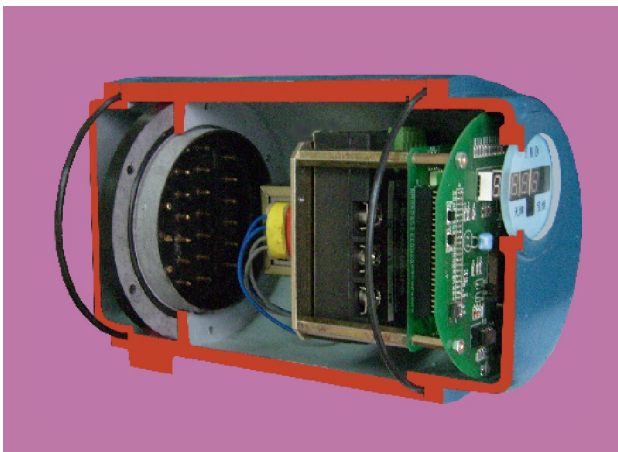
YMD-range: high-performance, reliability, non-intrusive adjustment

Electric and mechanism protect

- 1 : phase discriminator and phase-lose protect
- 2 : thermal motor protection
- 3 : signal-lose protection
- 4 : torque limit switch
- 5 : mechanical stop protect valve
- 6 : travel-overturn protect
- 7 : double-seal structure
- 8 : independence watchdog protect

Easy to operate

- 1: local handwheel operation
- 2: local electrical operation
- 3: control by signal 4-20mA
- 4: control by contacts
- 5: local control and adjustment by infra-red setting tool



Double-seal structure



Non-intrusive adjustment

2.2: Specification and type

- (1) Quarter-turn actuators : output torque 100Nm--50000Nm
- (2) Linear actuators : output thrust 6.4KN--150KN
- (3) Multi-turn actuators : output torque 40Nm--4000Nm

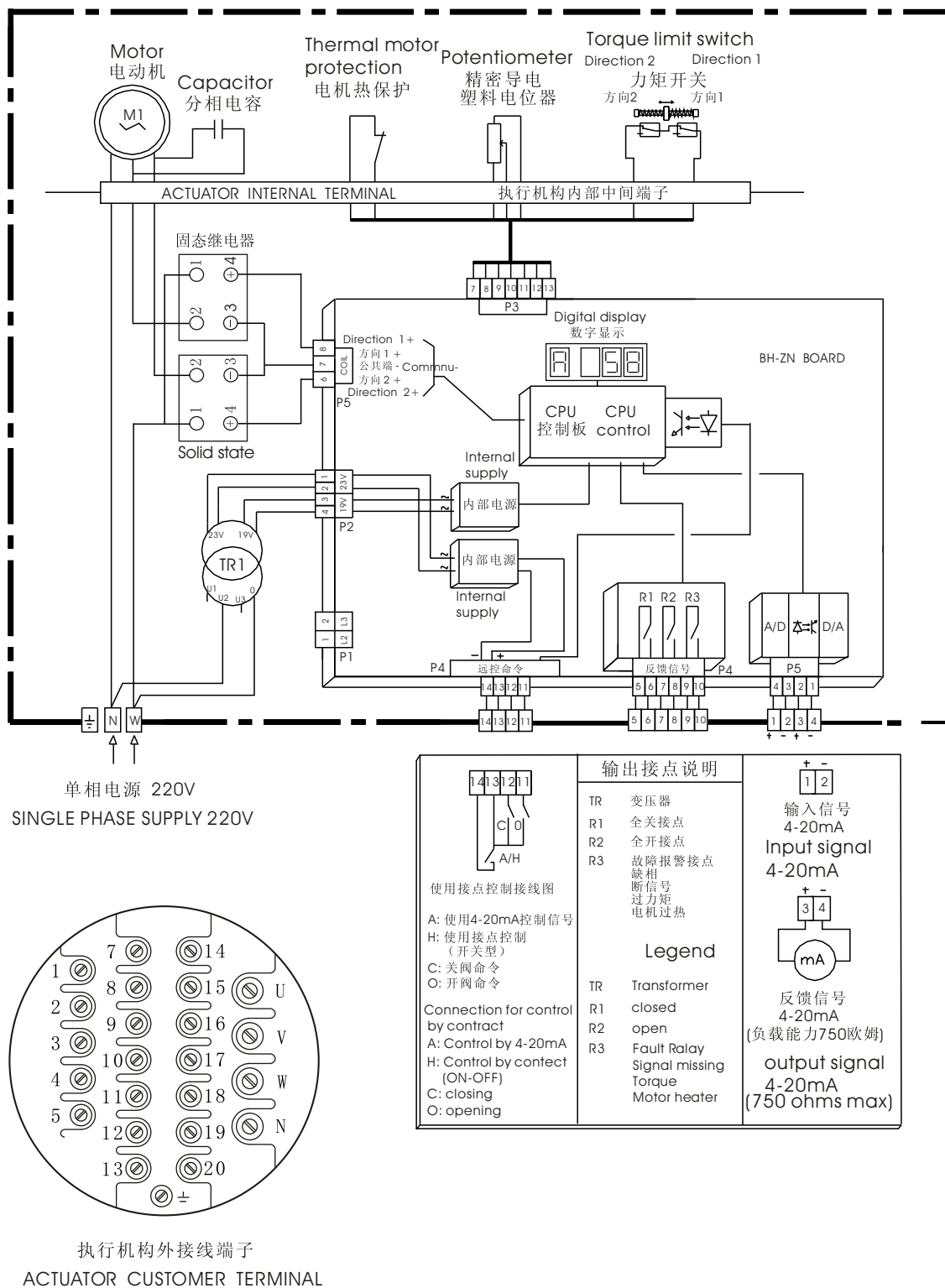
2.3: Technical data and performance

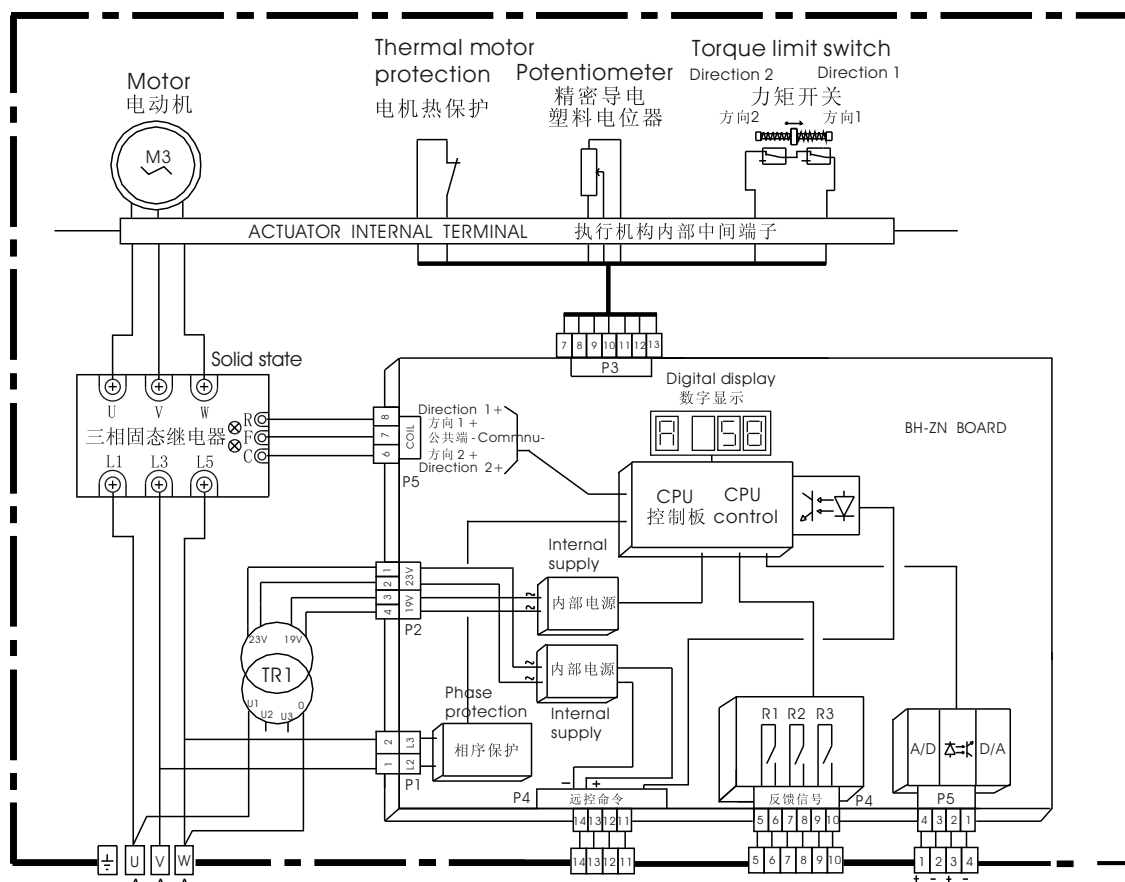
- 1: Input signal: A) 4-20mA
B) Control by contacts (opto-isolators)
- 2: Input resistance: 250 ohm
- 3: Feedback signal: A) 4-20mA
B) Fully open and close relay contact
- 4: Dead band: 1%-3%
- 5: Damping characteristic: 0 hunting
- 6: non-linear error: 1%-2.5%
- 7: Enclosure: IP65 according to IEC 145
- 8: Insulation: class B (or F) for motor
- 9: Power supply: 220VAC +10% (-15%)
380VAC $\pm$ 10%
- 10: Duty cycle: 50% start 1200 times per hour
- 11: Temperature acceptance: -20^o~+70^oC centigrade
- 12: Environment humidity: less than 95% and no-dew
- 13: Insulation resistance: terminal between signal and shell > 20M ohm
terminal between power and shell > 50M ohm
terminal between power and signal > 50M ohm
- 14: Insulation intensity: terminal between signal and shell > 500V
terminal between power and signal > 500V
terminal between power and shell > 1500V (220V supply)
2000V (380V supply)
- 15: Wave with temperature: within 48 hours is less than 1%

Above the data is according to standard GB/T8219-1999 <the electric actuator is using for control and testing in the industry process>

2.4: Wiring diagram

编号: BH1000/02



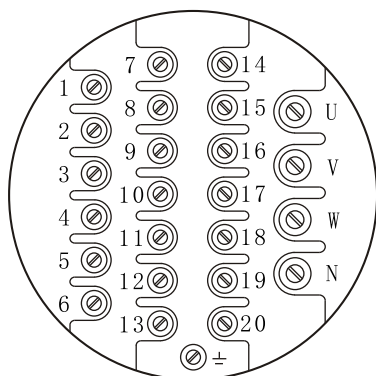


三相电源 380V

用户不需要考虑相序, 执行机构具有鉴相功能, 如果缺相执行机构停止并报警。

THREE PHASE SUPPLY 380V

The order in phase is not important. If one phase is missing, the Actuator will not start and gives a signal (fault Relay).



执行机构外接线端子
ACTUATOR CUSTOMER TERMINAL

输出接点说明		Legend	
使用接点控制接线图 A: 使用4-20mA控制信号 H: 使用接点控制 (开关型) C: 关阀命令 O: 开阀命令 Connection for control by contact A: Control by 4-20mA H: Control by contact (ON-OFF) C: closing O: opening	TR	变压器	Transformer
	R1	全开接点	closed
	R2	全开接点	open
	R3	故障报警接点	Fault Relay
反馈信号 4-20mA Input signal 4-20mA 反馈信号 4-20mA (负载能力750欧姆) output signal 4-20mA (750 ohms max)	Signal missing	断信号	Signal missing
	Torque	过力矩	Torque
	Motor heater	电机过热	Motor heater

2.5: The parameter of quarter-turn actuators

The quarter-turn actuators have two type of installation, 1) Flange mounting is fit the actuators directly to the valve (In this case, should consider the temperature of medium and easy to check machine). 2)Foot-plate mounted is more convenience for installation and maintenance). Below table is the type of quarter-turn actuators.

YMD-rang quarter-turn type and data

Output Torque Nm	Type 3 phase 380V	Operating time 90°/sec	power KW	Current rated A	Current start A	Weight Kg
100	YMD-10/F	25	0.03	0.30	0.50	15
250	YMD-25/F	30/60	0.03	0.30	0.50	30
600	YMD-60/F	30/60	0.06	0.30	0.80	45
1000	YMA+RS100/F	30/35/40/50	0.12	0.80	1.60	70
1600	YMB+RS160/F	20/30/40/50	0.20	0.90	2.20	101
2500	YMB+RS250/F	20/30/40/60	0.37	1.10	4.50	125
4000	YMB+RS400/F	30/40/50/70	0.50	1.50	4.50	165
6000	YMB+RS600/F	40/55/76/104	1.00	2.70	14.0	190
10000	YMB+RS1000/F	57/78/104/129	1.00	2.70	14.0	230
16000	YMB+RS1600/F	73/91/125/165	1.50	3.40	20.0	250
25000	YMB+RS2500/F	121/165/228/286	2.20	4.40	27.0	340
35000	YMB+RS3500/F	150/208/286/390	3.00	7.20	37.0	470
50000	YMB+RS5000/F	208/286/390	4.50	9.10	52.0	495

Below table is showed code of type

Multi-turn actuator	Gearboxes	Output torque	Power	Operating time	Type of installation	Control model
YMB	+RS	160	/K	30 sec	H	T
YMA-small torque YMB-big torque	RS-quarter-turn gearbox	1600Nm	K- 1 phase F- 3 phase	30 sec	H- foot-plate mounted Z- flange mounted	T- control signal 4-20mA Y- control signal voltage or contacts

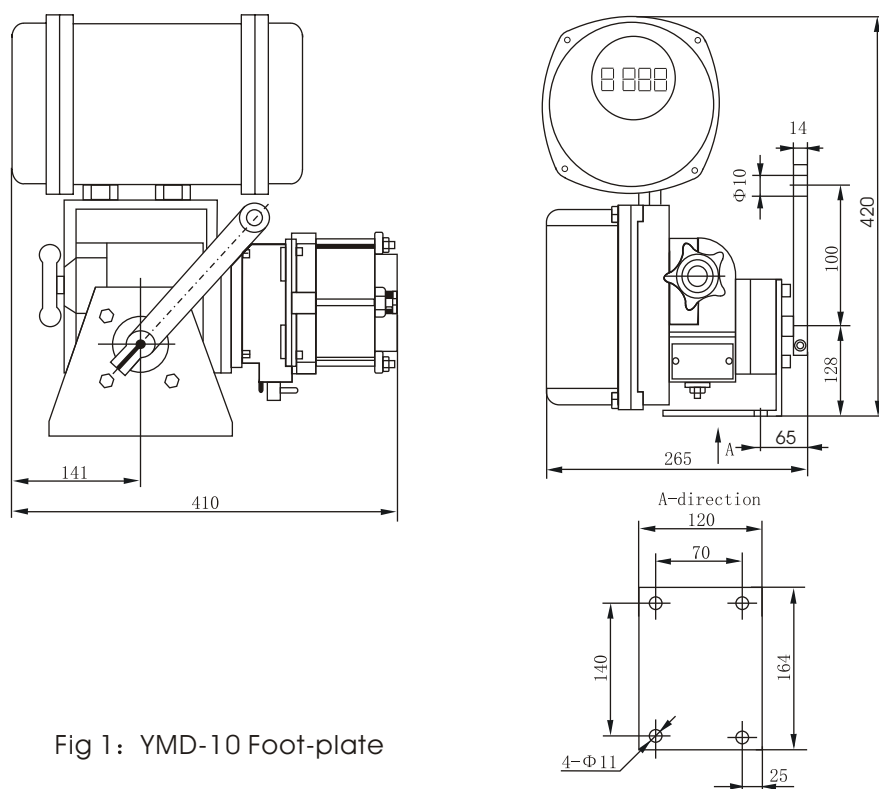
For example: YMB+RS160/K30HT: The actuator output torque is 1600Nm, single phase power, quarter-turn, operating time is 30sec, installation is foot-plate, control signal is 4-20mA.

YMB+RS400/F70ZY: The actuator output torque is 4000Nm, three phase power, quarter-turn, operating time is 70sec, flange installation, control signal is voltage or contacts.

YMD-rang quarter-turn type and data

Output Torque Nm	Type 1 phase 380V	Operating time 90°/sec	power KW	Current rated A	Current start A	Weight Kg
100	YMD-10/K	25	0.03	0.60	0.90	15
250	YMD-25/K	30/60	0.03	0.60	0.90	30
600	YMD-60/K	30/60	0.06	1.20	1.70	45
1000	YMA+RS100/K	35/45/50	0.15	2.00	3.00	70
1600	YMB+RS160/K	30/40/50	0.20	2.50	3.50	101
2500	YMB+RS250/K	30/40/60	0.20	2.50	3.50	125
4000	YMB+RS400/K	40/55/75	0.30	2.90	4.50	165
6000	YMB+RS600/K	76/104/172	0.30	2.90	4.50	190
10000	YMB+RS1000/K	104/129/194	0.40	3.50	14.0	230
16000	YMB+RS1600/K	171/235	0.40	3.50	14.0	250

2.6: Drawing of foot plate-mounted model



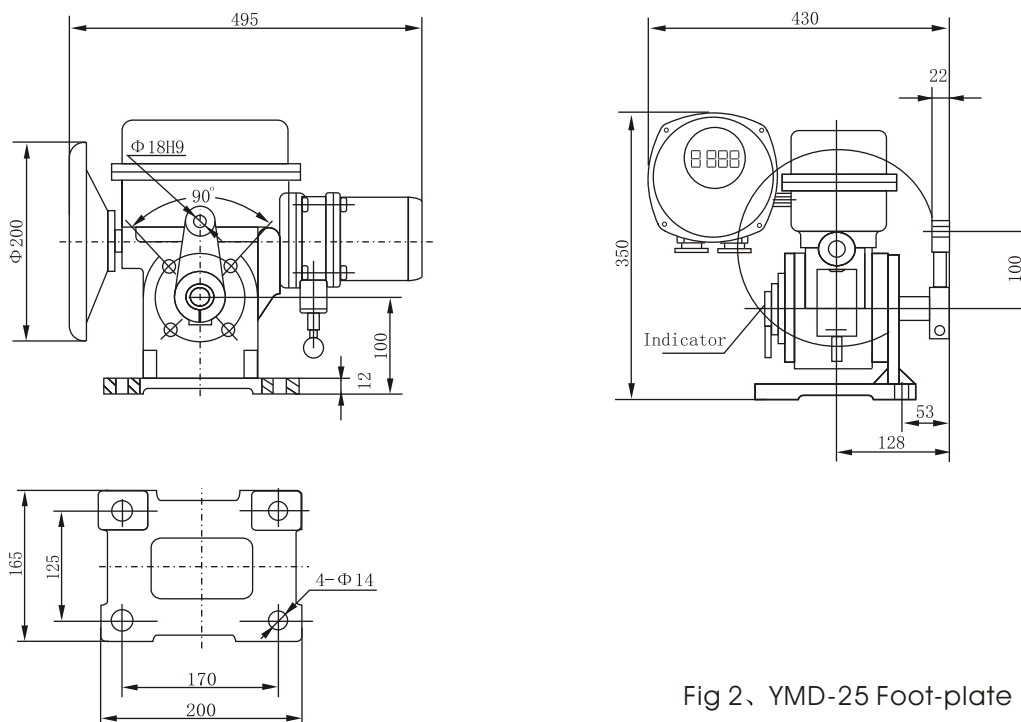


Fig 2、YMD-25 Foot-plate

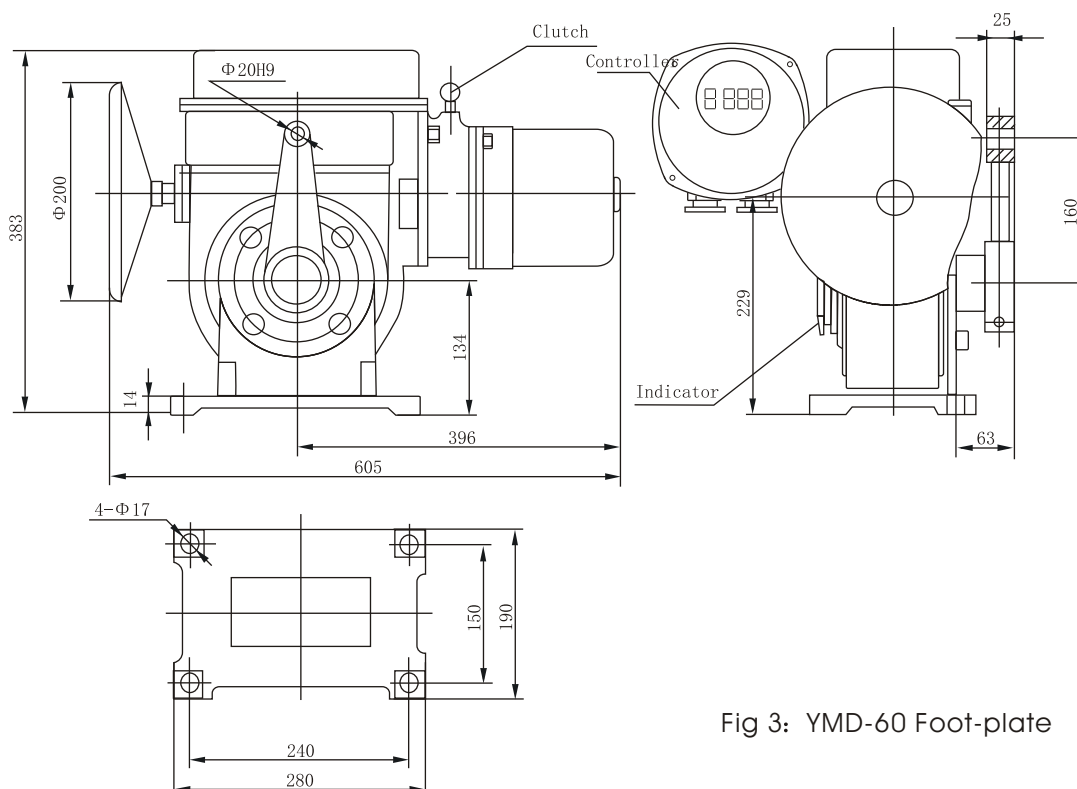
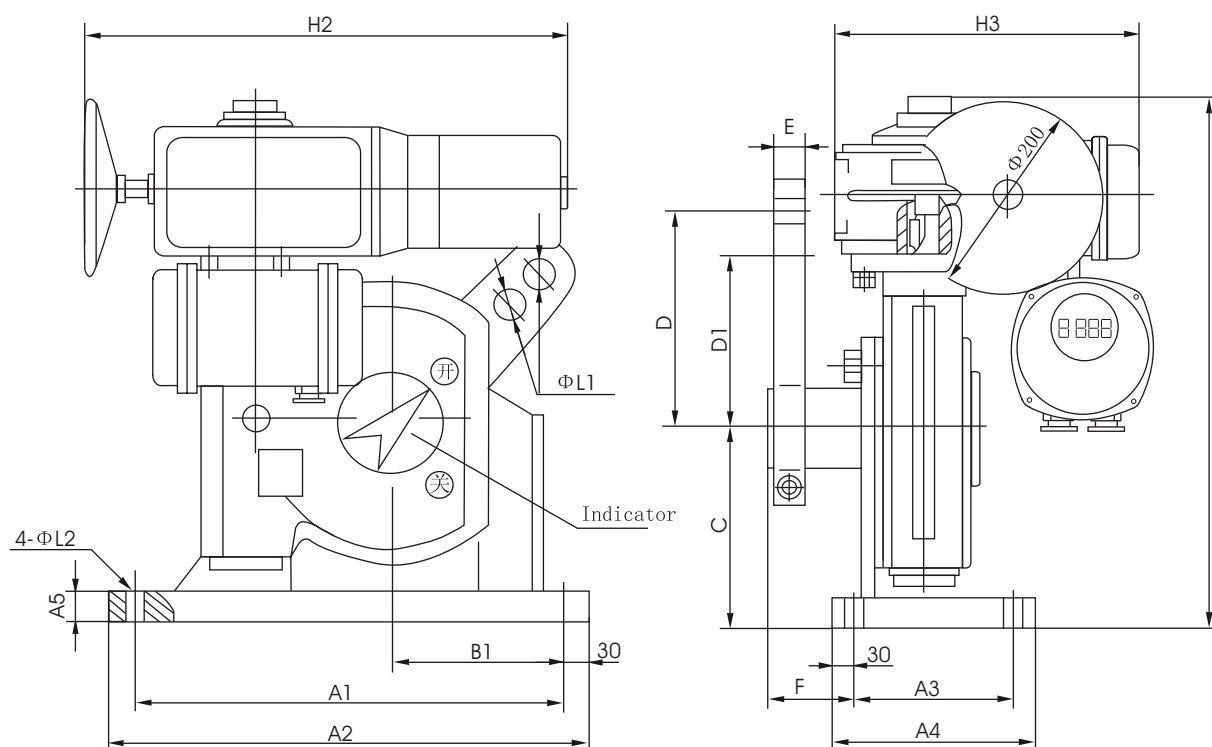
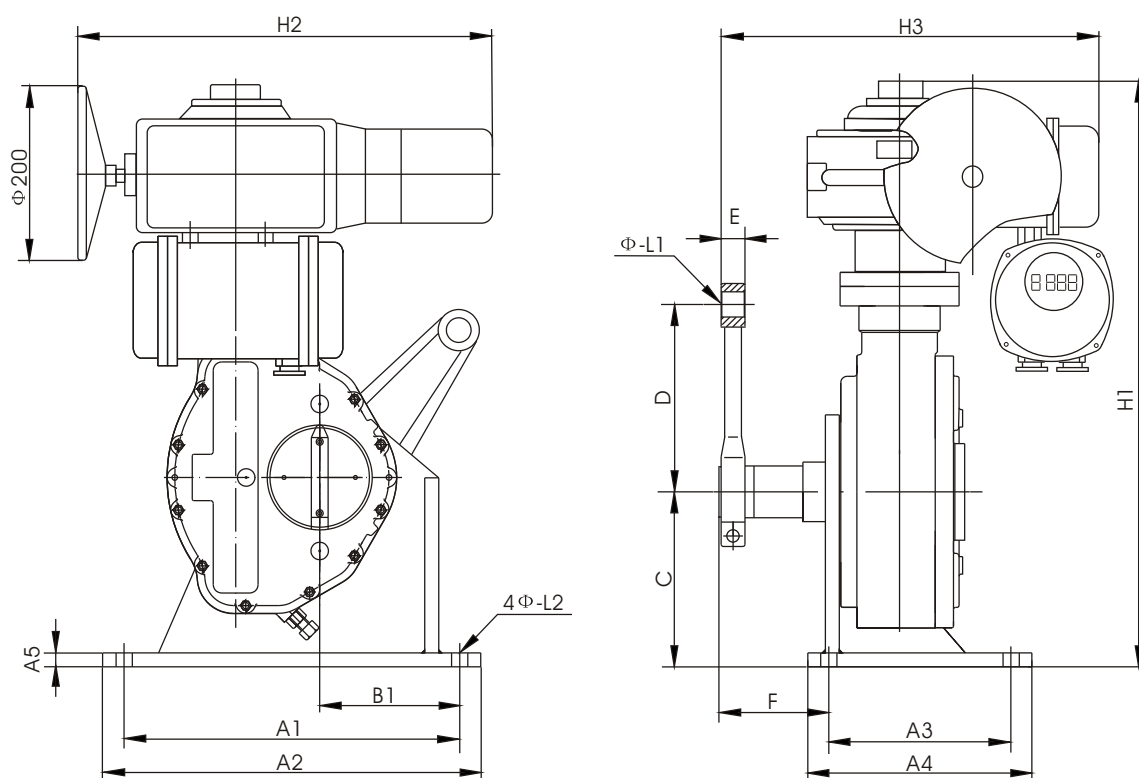


Fig 3: YMD-60 Foot-plate



Type	A1	A2	A3	A4	A5	B1	C	D	D1	E	F	H1	H2	H3	ΦL1	ΦL2
YMA+RS100	320	380	180	240	12	150	150	250	200	28	80	433	420	337	2×Φ20	Φ14
YMB+RS160	375	435	175	235	14	195	170	250	200	30	80	500	530	430	2×Φ20	Φ18
YMB+RS250	440	500	180	240	14	210	230	250	200	34	80	602	566	433	2×Φ30	Φ22
YMB+RS400	440	500	180	240	16	210	230	250	200	34	80	623	600	433	2×Φ30	Φ22

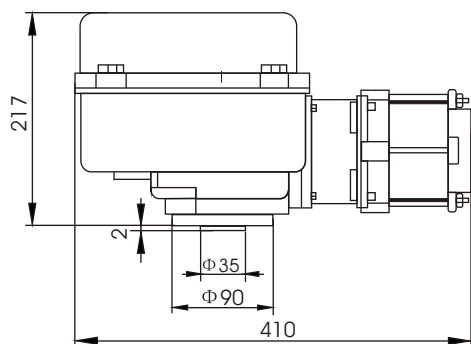
YMD Foot-plate installation diagram



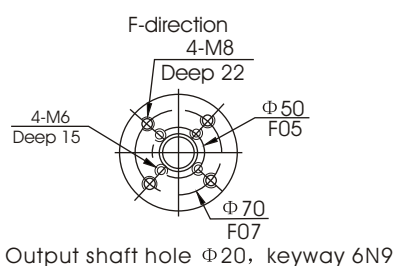
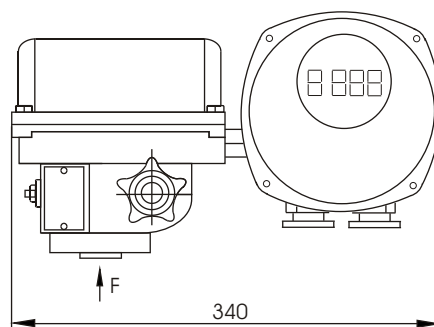
Type	A1	A2	A3	A4	A5	B1	C	D	E	F	H1	H2	H3	Φ L1	Φ L2
YMB+RS600	480	540	260	320	18	200	250	350	34	160	745	583	510	Φ 36	Φ 22
YMB+RS1000	530	590	300	360	22	220	270	400	40	160	764	583	580	Φ 40	Φ 32
YMB+RS1600	530	590	300	360	22	220	270	400	40	160	930	583	580	Φ 40	Φ 32
YMB+RS2500	600	670	300	370	22	280	355	400	40	160	1172	700	588	Φ 40	Φ 32
YMB+RS2500	640	710	320	390	24	300	360	400	40	160	1191	700	580	Φ 40	Φ 32
YMB+RS5000	640	710	320	390	24	300	360	400	40	160	1191	700	580	Φ 40	Φ 32

YMD Foot-plate installation diagram

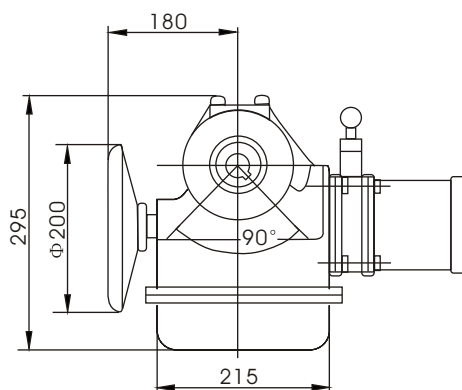
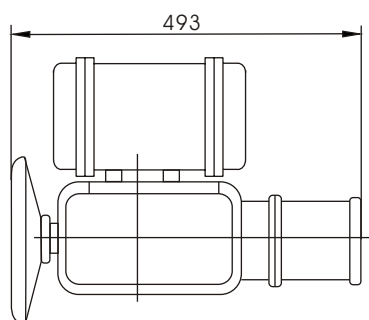
2.7: Drawing of direct-mounted model



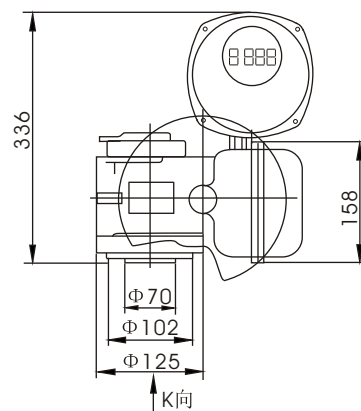
YMD-10 Flange installation



Weight: 13Kg



YMD-25 Flange installation



Weight: 23Kg



Type	Flange	A	B	C	D	E-key	F	ΦA1	ΦA2	ΦA3	M	ΦA4	Weight
YMA+RS100	F12	265	408	275	520	14JS9	50	Φ 45E8	Φ 125	Φ 80	M12	100	68
YMB+RS160	F14	296	372	361	612	18JS9	80	Φ 60f8	Φ 140	Φ 100	M16	200	75
YMB+RS250	F16	348	534	361	612	20JS9	90	Φ 72H8	Φ 165	Φ 130	M20	200	90
YMB+RS400	F16	388	591	386	588	20JS9	100	Φ 72H8	Φ 165	Φ 130	M20	200	130
YMB+RS600	F16	328	706	368	586	22JS9	130	Φ 80H8	Φ 165	Φ 130	M20	200	145
YMB+RS1000	F16	398	740	400	586	28JS9	150	Φ 98H8	Φ 254	Φ 200	8-M16	200	170

2.8: Linear actuators

These consist of a lead screw arrangement attached to the base of the actuator In order to provide a linear output. An optional mounting yoke is available if required. Please apply to Baoheng for details.

Type and size for three phase power YMD-range linear actuators

Thrust KN	Type 3 phase 380V	Stroke mm	Linear speed mm/S	Valve screw F	Flange D1	flange D2	Bolt hole D3	Outline A/B	power KW	current rated/start (A)	Weight Kg
6.4	YMA+Z64/F	10 $\begin{smallmatrix} \nearrow \\ \searrow \end{smallmatrix}$ 40	1.2/1.8	M8×1.25 M12×1.25	Φ80 Φ105	Φ60 Φ80	2-Φ10 4-Φ12	480/407 550/460	0.03	0.3/0.5	39
10	YMA+Z100/F	25 $\begin{smallmatrix} \nearrow \\ \searrow \end{smallmatrix}$ 60	1.2/1.8	M12×1.25 M16×1.5	Φ105 Φ118	Φ80 Φ95	4-Φ12 4-Φ12	550/460 591/460	0.12	0.8/1.6	41
16	YMB+Z160/F	40 $\begin{smallmatrix} \nearrow \\ \searrow \end{smallmatrix}$ 100	1.5/2.3	M16×1.5 M20×1.5	Φ118 Φ135	Φ95 Φ100	4-Φ12 6-Φ18	591/460 591/460	0.20	0.9/2.2	68
25	YMB+Z250/F	40 $\begin{smallmatrix} \nearrow \\ \searrow \end{smallmatrix}$ 100	1.4/2.7	M20×1.5 M27×1.5	Φ135	Φ100	6-Φ18	591/460 591/460	0.37	1.1/4.5	75
40	YMB+Z400/F	Non-standard version. Size, lead screw, yoke of the valve is required.									
60	YMB+Z600/F										
100	YMB+Z1000/F										
150	YMB+Z1500/F										

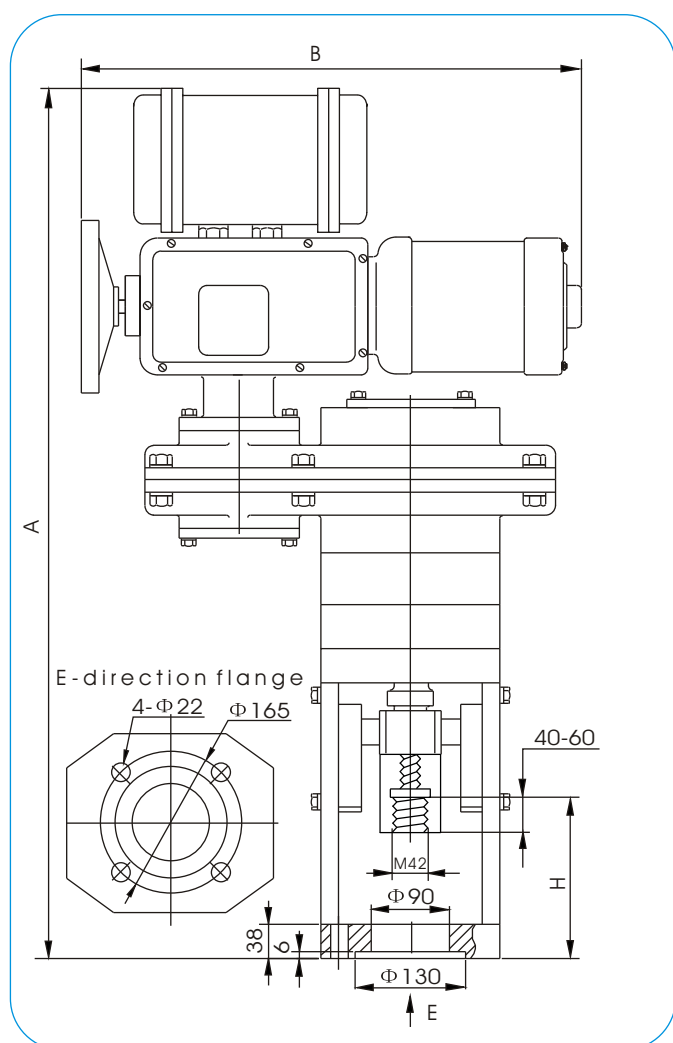
Type and size for single phase power YMD-range linear actuators

Thrust KN	Type 1 phase 220V	Stroke mm	Linear speed mm/S	Valve screw F	Flange D1	flange D2	Bolt hole D3	Outline A/B	power KW	current rated/start (A)	Weight Kg
6.4	YMA+Z64/K	10 $\begin{smallmatrix} \nearrow \\ \searrow \end{smallmatrix}$ 40	1.2/1.8	M8×1.25 M12×1.25	Φ80 Φ105	Φ60 Φ80	2-Φ10 4-Φ12	480/407 550/460	0.03	0.6/0.9	39
10	YMA+Z100/K	25 $\begin{smallmatrix} \nearrow \\ \searrow \end{smallmatrix}$ 60	1.2/1.8	M12×1.25 M16×1.5	Φ105 Φ118	Φ80 Φ95	4-Φ12 4-Φ12	550/460 591/460	0.15	2.0/3.0	41
16	YMB+Z160/K	40 $\begin{smallmatrix} \nearrow \\ \searrow \end{smallmatrix}$ 100	1.5/2.3	M16×1.5 M20×1.5	Φ118 Φ135	Φ95 Φ100	4-Φ12 6-Φ18	591/460 591/460	0.20	2.5/3.5	68
25	YMB+Z250/K	40 $\begin{smallmatrix} \nearrow \\ \searrow \end{smallmatrix}$ 100	1.4/2.7	M20×1.5 M27×1.5	Φ135	Φ100	6-Φ18	591/460 591/460	0.40	3.5/14	75

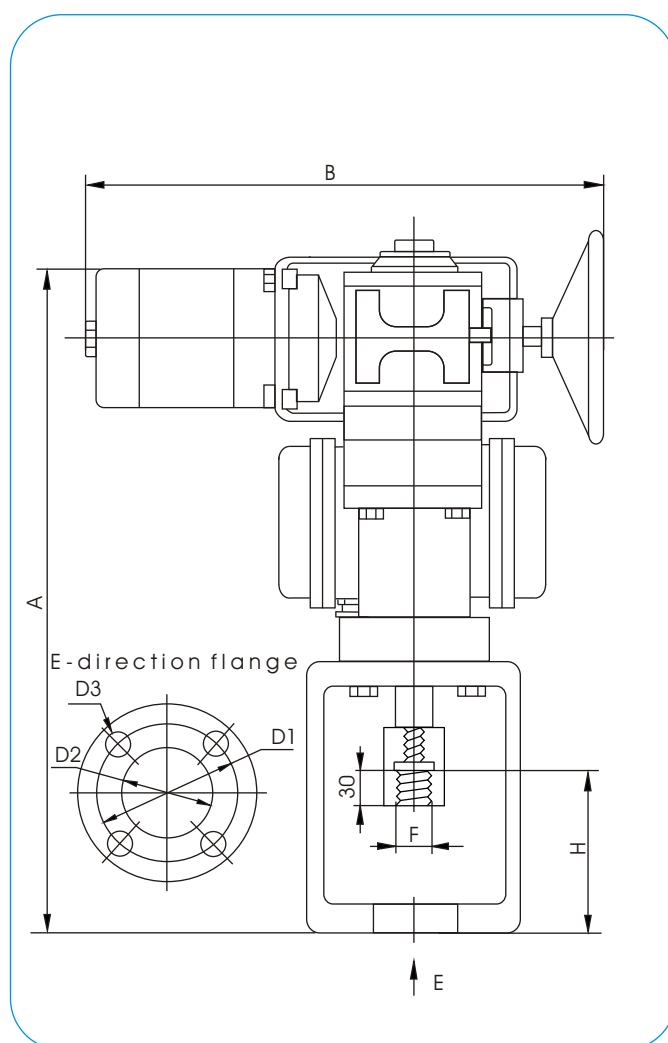
Below table is showed code of type

Multi-turn actuator	Linear	Output thrust	Power	Stroke	Linear speed	Control model
YMB	+Z	6.4	/K	25	1.2	T
YMA-small torque YMB-big torque	Z- linear	6.4KN	K- 1 phase F- 3 phase	25mm	1.2mm/sec	T- control signal 4-20mA Y- control signal voltage or contacts

For example: YMB+Z64/K2512T: The actuator output thrust is 6400N, single phase power, stroke is 25mm, linear speed is 1.2mm/sec, control signal is 4-20mA.



100KN及150KN Thrust diagram



Below 60KN thrust diagram

Stroke	10	16	25	40	60	100
Fully closed position H	80	75	65	105	107	145

YMD Linear actuators installation diagram

2.9: Multi-turn actuators

3 phase supply 380V , 50Hz

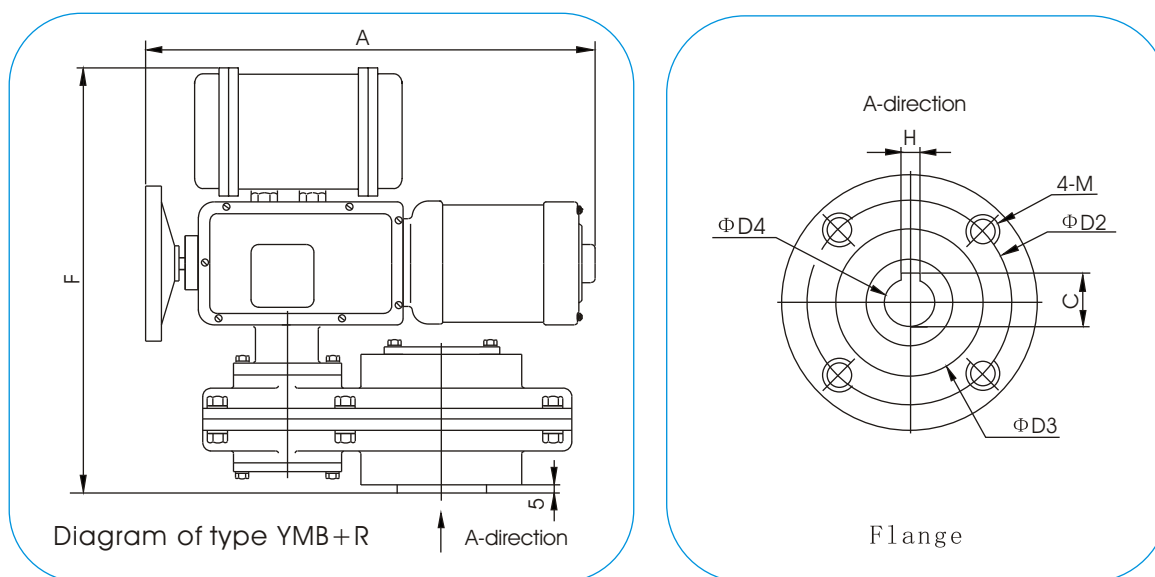
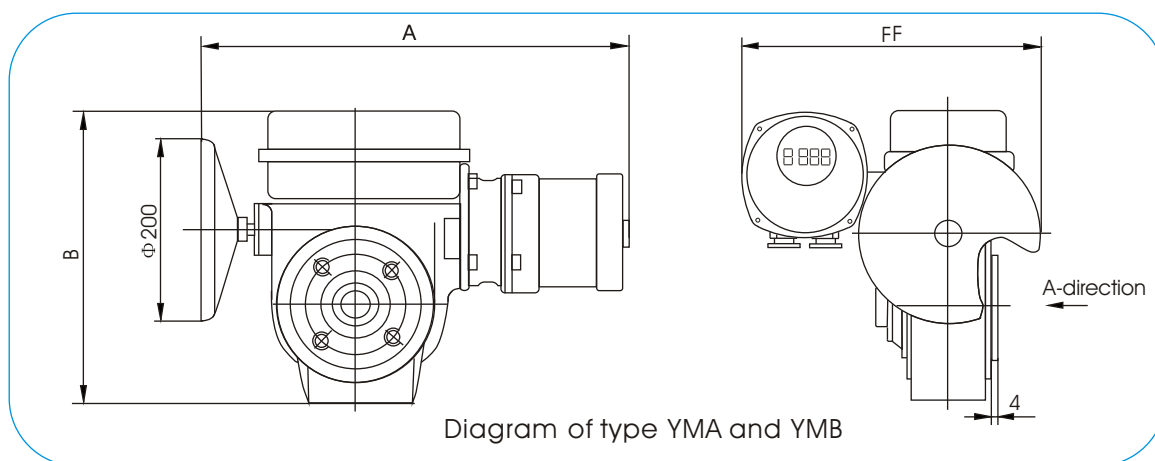
Output Torque Nm	Type	Output speed rpm	Number of turns	power KW	Current rated A	Current start A	Weight Kg
60 100	YMA	6/12/18/24 6/12/18/24	1~36 1~36	0.20 0.37	0.90 1.10	2.20 4.50	23
160 250 400 600	YMB	12/18/24/36 12/18/24/36 12/18/24/36 12/18/24/36	1~36 1~36 1~36 1~36	0.50 1.00 1.50 2.20	1.50 2.70 3.40 4.40	4.50 14.0 20.0 27.0	46
1000	YMB+R05	12/18/24/36	1~36	3.00	7.20	37.0	75
1600	YMB+R10	12/18/24/36	1~36	4.50	9.10	52.0	96
2500	YMB+R25	12/18/24	1~36	5.50	11.0	62.0	110

1 phase supply 220V , 50Hz

Output Torque Nm	Type	Output speed rpm	Number of turns	power KW	Current rated A	Current start A	Weight Kg
60 100	YMA	6/12/18/24 6/12/18/24	1~36 1~36	0.20 0.40	2.50 3.50	3.50 14.0	23
160 250	YMB	12/18/24 7/12	1~36 1~36	0.20 0.40	2.50 3.50	3.50 14.0	46

Below table is showed code of type

Multi-turn actuator	Gearboxes	Output torque	Power	Output speed(rpm)	Number of turns	Control model
YMB	+R	16	/K	12	6	T
YMA-small torque YMB-big torque	R-multi-turn gearbox	160Nm	K- 1 phase F- 3 phase	12 turns/min	6-turns	T- control signal 4-20mA Y- control signal voltage or contacts



型 号	法兰	A	B	F	C	H	M	ΦD2	ΦD3	ΦD4
YMA(40-100Nm)	F10	440	336	350	22.8	6N9	M10	Φ 102±0.2	Φ 70	Φ 20H8-深50
YMB(160-600Nm)	F14	612	360	375	31.3	10N9	M16	Φ 140±0.2	Φ 100	Φ 28H8-深60
YMB+R05 1000Nm	F16	612	360	375	43.3	12N9	M20	Φ 165±0.2	Φ 130	Φ 40H8-深60
YMB+R10 1600Nm	F16	612	360	375	48.8	14N9	M20	Φ 165±0.2	Φ 130	Φ 45H8-深80
YMB+R25 2500Nm	F16	612	360	375	53.8	14N9	M20	Φ 165±0.2	Φ 130	Φ 50H8-深80

SMD Multi-turn actuators installation diagram



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