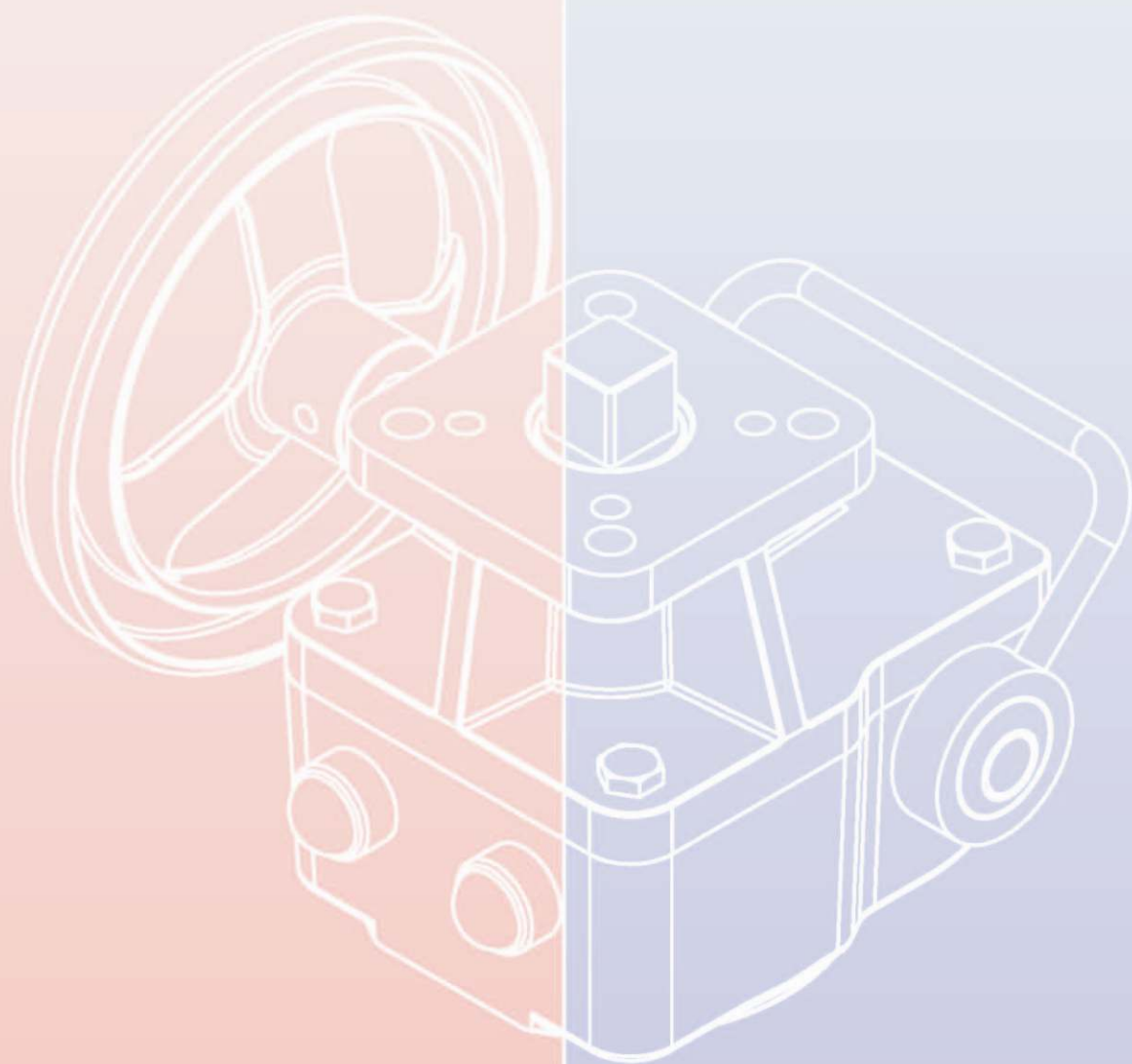




Yuandong

奉化市远东车辆部件有限公司

Fenghua Yuandong Auto Parts Limited Company

Hawks

奉化市哈克斯自动化设备有限公司

Fenghua Hawks Automatic Equipment Limited Company

Handwheel Gearbox Operator

Our 20-series Aluminum valve handwheel gearbox, 90 quarter turn drive device is suitable for butterfly valve, ball valve and plug valve and so on. The aluminum alloy material body after static electricity powder coating has an excellent appearance, strong adhesion/mechanical property and anti-corrosion/wear resistance.

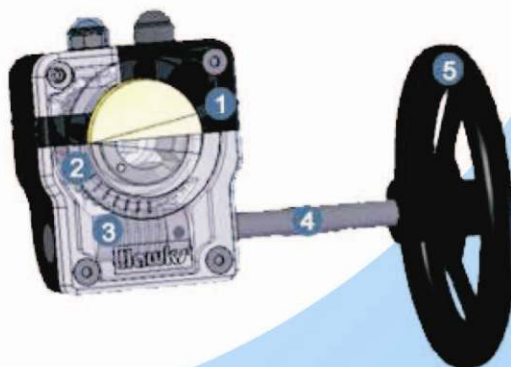
- ISO 5211 direct mount patterns.
- Filled with special lubricant before leaving the factory.
- Weatherproof is IP 65.
- The output torque range: 180-5500NM
- 5 degree angle adjusting



Guiding for model choosing and device operating:

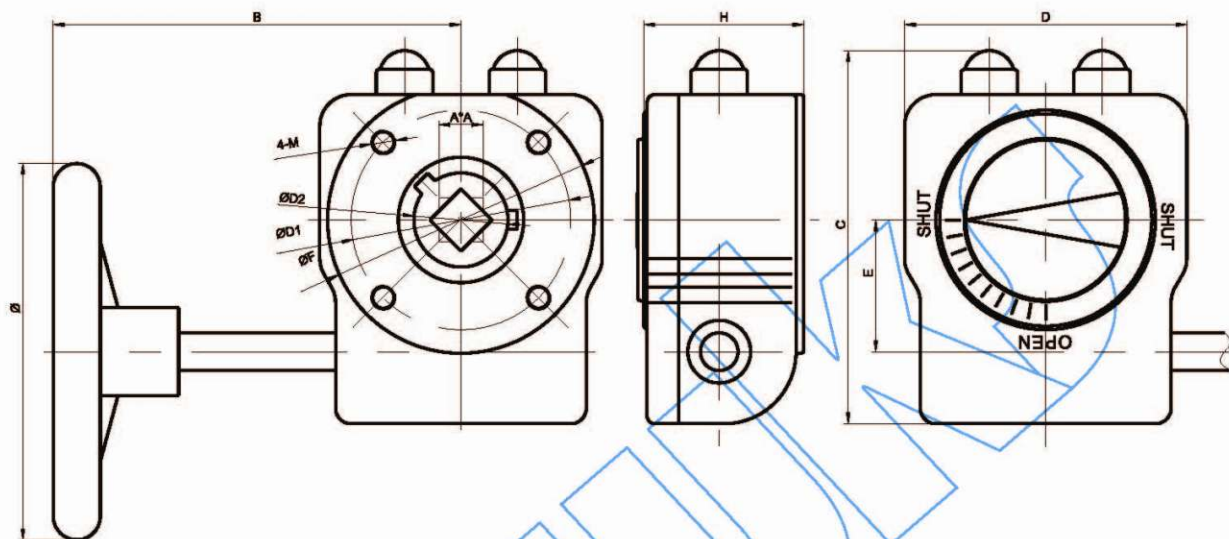
1. The device should be correctly installed. The worm gear shaft hole should be concentric with the valve shaft. And then the screws must be tighten up.
2. The rating torque can be output when the load applied on handwheel meets the requirement. In order not to demange the device, the user must not operate the device by changing the handwheel diameter and using resultant force that exceeds the required input value.

No	Part Name	Standard Material	Optional Material
1	Body	Aluminum Alloy	
2	Worm Gear	Ductile Iron QT400-15	
3	Worm	Carbon Steel	
4	Shaft	Carbon Steel	Stainless Steel
5	Hand Wheel	Carbon Steel	
	Screw	Carbon Steel	Stainless Steel



Handwheel Gearbox Operator

Dimension Table



Model	Torque		A×A	B	C	D	E	F	H	φ	φD1	4-M	φD2
20070	180	1:4.0	8×8,9×9,11×11,14×14,17×17	160	115	80	42	78	48	140	50/70	M6/M8	30
20090	300	1:3.7	8×8,9×9,11×11,14×14,17×17	160	130	100	50	97	54	200	70/90	M8/M8	32
20102	540	1:3.6	17×17,19×19,22×22	215	150	120	60	117	56	250	70/102	M8/M10	43
20125	675	1:3.6	17×17,19×19,22×22	225	180	142	60	138	69	300	102/125	M10/M12	43
20140	1310	1:5.0	22×22,27×27	325	225	185	80	175	95	400	140	M16	54
20140B	1790	1:3.9	22×22,27×27,φ50×14	375	225	185	81.0	175	95	600	140	M16	50
20165	3250	1:5.5	36×36,φ50×14	395	268	230	104.5	220	105	600	165	M20	65
20254	5500	1:5.2	φ60×18,φ65×20,φ80×22	416	332	265	130	286	125	700	165/254	M20/M16	80

Reference Selection

Model	Output/Input	Reference	Butterfly valve	Ball valve model	WT(kg)
20070	1:9.6	180	32-150	50	1.6
20090	1:12	300	32-200	83	1.8
20102	1:12.5	540	200-300	80	3
20125	1:12.5	675	250-350	100	5
20140	1:10	1310	350-400	150	10
20140B	1:11	1790	400-450	200	13
20165	1:19	3250	450-500	250	20
20254	1:19	5500	600-650	300	25



Gearbox Declutch Operator

The Aluminum Declutch Gearbox is specially designed for butterfly valves, ball valves, and plug valves, etc. together with pneumatic actuators. This device allows manual operation during installing, system testing if when air resource is not loaded. It can be mounted directly on most of the popular rack & pinion style pneumatic actuators in the market. Of course, it does not need a distance plate installed between the pneumatic actuator and the declutch gearbox.

- A simple and compact design, light-weight device.
- ISO 5211 connecting standard
- Easy to switch from manual drive to pneumatic drive by using the wrench retainer.
- Internal parts lubricated with special lubricant when the device is assembled.
- Weatherproof is IP65
- GD series products output torque range varies from 180 to 5500NM
- 5 degree angle adjusting

Guidings for model choosing and device operating:

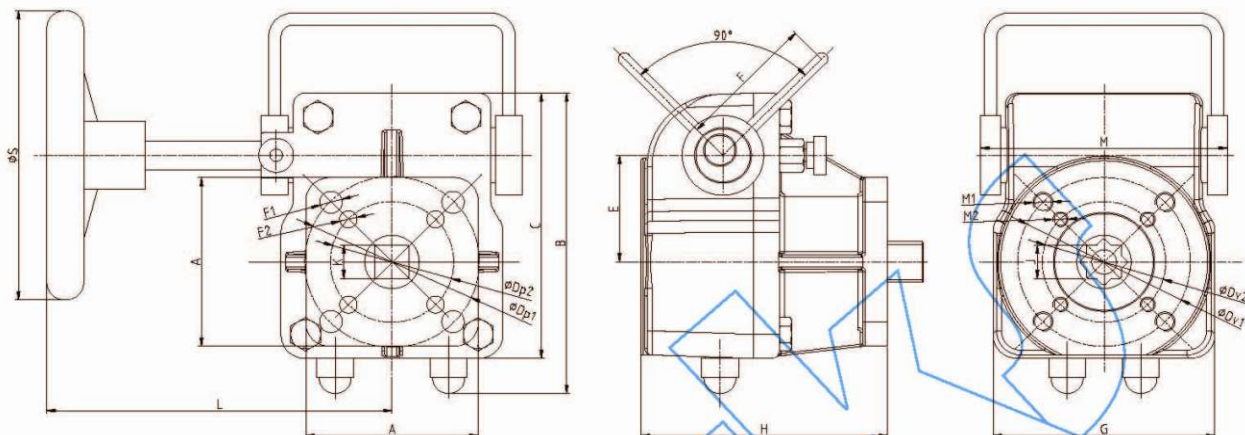
1. The device should be correctly installed. The worm gear shaft hole should be concentric with the valve shaft. And then the screws must be tighten up.
2. The rating torque can be output when the load applied on handwheel meets the requirement. In order not to demange the device, the user must not operate the device by changing the handwheel diameter and using resultant force that exceeds the required input value.



No	Part Name	Standard Material	Optional Material
1	Hand Wheel	Carbon Steel	
2	Shaft	Carbon Steel	Stainless Steel
3	Elastic Limit Pin	Stainless Steel	
4	Wrench Retainer	Carbon Steel	Paint
5	Cap	Aluminum Alloy ZL104	
6	Worm	Carbon Steel	
7	Worm Gear	Ductile Iron QT400-15	
8	Connecting Axle	Carbon Steel	Zinc Coating
9	Body	Aluminum Alloy	
-	Eccentric Guide	Carbon Steel	Stainless Steel
-	Screw	Carbon Steel	Stainless Steel

Gearbox Declutch Operator

Dimension Table



Model	Gear Ratio	Output Torque (Nm)	A	B	C	E	F	Dp1	F1	Dp2	F2	Dv1	M1	Dv2	M2	J&K	For Actuator Model	G	H	L	M	S	Wt(kg)
GD050	1:40	300	70	125	110	44.2	54	70	8.5	50	8.5	70	M8	50	M8	11 14 17	52 63-75 83-92	90	100	143	104	200	2.3
GD070	1:38	360	95	150	135	52.2	70	102	11	70	8.5	102	M10	70	M8	14 17 19	63-75 83-92 105	125	118	177	124	200	3.5
GD102	1:36	810	115	185	160	85	70	125	13	102	11	125	M12	102	M10	22 27	105-127 140-160	140	124	190	140	300	5.6
GD140	1:50	1310	140	225	200	85	78	125	13	102	11	125	M12	102	M10	27	140-180 190-210	185	162	325	180	400	12.5
GD165	1:55	2800	165	268	243	104.5	105	140	17	-	-	140	M16	-	-	36	190-210 240-270	230	181	395	214	800	22.5
GD254	1:52	5500	275	330	283	130	115	165	21	254	17	165	M20	254	M16	46	240-270	265	205	400	230	700	26

Reference Selection

Model	Output/Input	Reference	Actuator Model	Butterfly valve	Ball valve model	WT(kg)
GD050	1:9.6	300	52-105	32-150	50	2.3
GD070	1:12.5	360	63-127	32-200	63	3.5
GD102	1:12.5	810	105-160	200-300	80	5.6
GD140	1:10	1310	140-210	250-350	100	12.5
GD165	1:19	2800	240-270	350-400	150	22.5
GD254	1:19	5500	270-300	450-500	250	26



Sw Series Handwheel Gearbox Operator

Our SW Series hand wheel gearbox are special designed of gearbox cover can support the limit switch bracket, easy to amount the limit switch directly without any accessories. This series gearbox can control 90 degree rotary valves, such as butterfly valve, ball valve and plug valve and so on. The aluminum alloy material body after static electricity powder coating has an excellent appearance, strong adhesion/mechanical property and anti-corrosion/wear resistance.

- The output torque range:180-2800NM
- ISO 5211 direct mount patterns
- Filled with special lubricant before leaving the factory.
- Weatherproof is IP 65.
- 5 degree angle adjusting
 - Optional accessory include the position indicate or core joint etc
 - Limit switch model selection please reference the page of ALS series

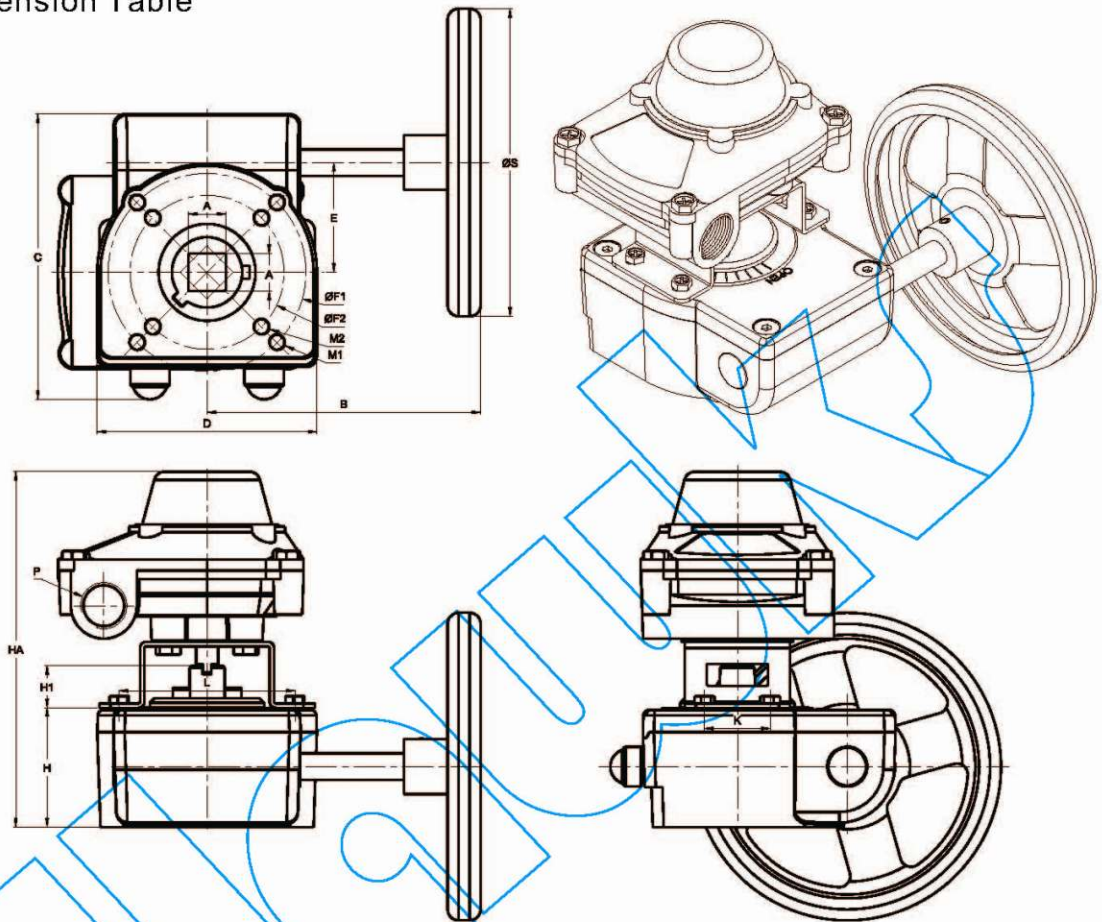


Ordering Symbols and Specifications

SW		070 - ALS		200	M	F
SW-Gear box		Limit Switch box				
Series No.	Model	Series No.	Model	Type	Feedback	
	070		200 - IP67 Mini type	M - Mechanical Switches	F - with 4-20mA Feedback (only for 300,400)	
	090		300 - IP67 Big type	P - Proximity Sensors		
	102		400 - IP67+Exd II CT6	Q - Magnetic Switches	Non - without Feedback	
	125		500 - IP67+Exd II BT6	D - Double Sensor		

SW-series Handwheel Gearbox Operator

Dimension Table



MODEL	AxA	B	C	D	E	F1	M1	F2	M2	K	L	H1	H	*HA	*P	S
SW070	8x8/9x9/11x11/14x14/17x17	160	115	80	42	70	M8	50	M6	25	50	20	48	156	G1/2	140
SW090	8x8/9x9/11x11/14x14/17x17	160	130	100	50	90	M8	70	M8	30	80	20	54	162	G1/2	200
SW102	17x17/19x19/22x22	215	150	120	60	102	M10	70	M8	30	80	20	56	164	G1/2	250
SW125	19x19/22x22	225	180	140	60	125	M12	102	M10	30	80	20	69	177	G1/2	300

*HA dimension equal to height of both gearbox and limit switch, and Change all ording to limit swith tyes.

*P dimension is joint size of limit switch, details please reference the page of ALS limit switch.

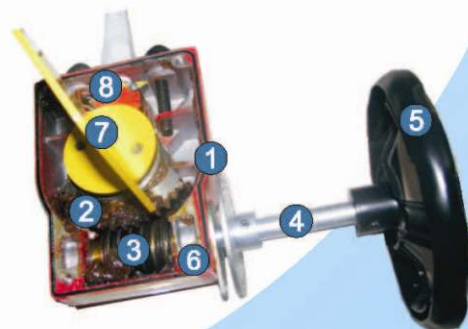
FM-series Handwheel Gearbox Operator

Our FM Series hand wheel gearbox is special designed for firefighting etc. This series gearbox can control 90 degree rotary valves, such as butterfly valve, ball valve and plug valve and so on. The aluminum alloy material body after static electricity powder coating has an excellent appearance, strong adhesion/mechanical property and anti-corrosion/wear resistance.

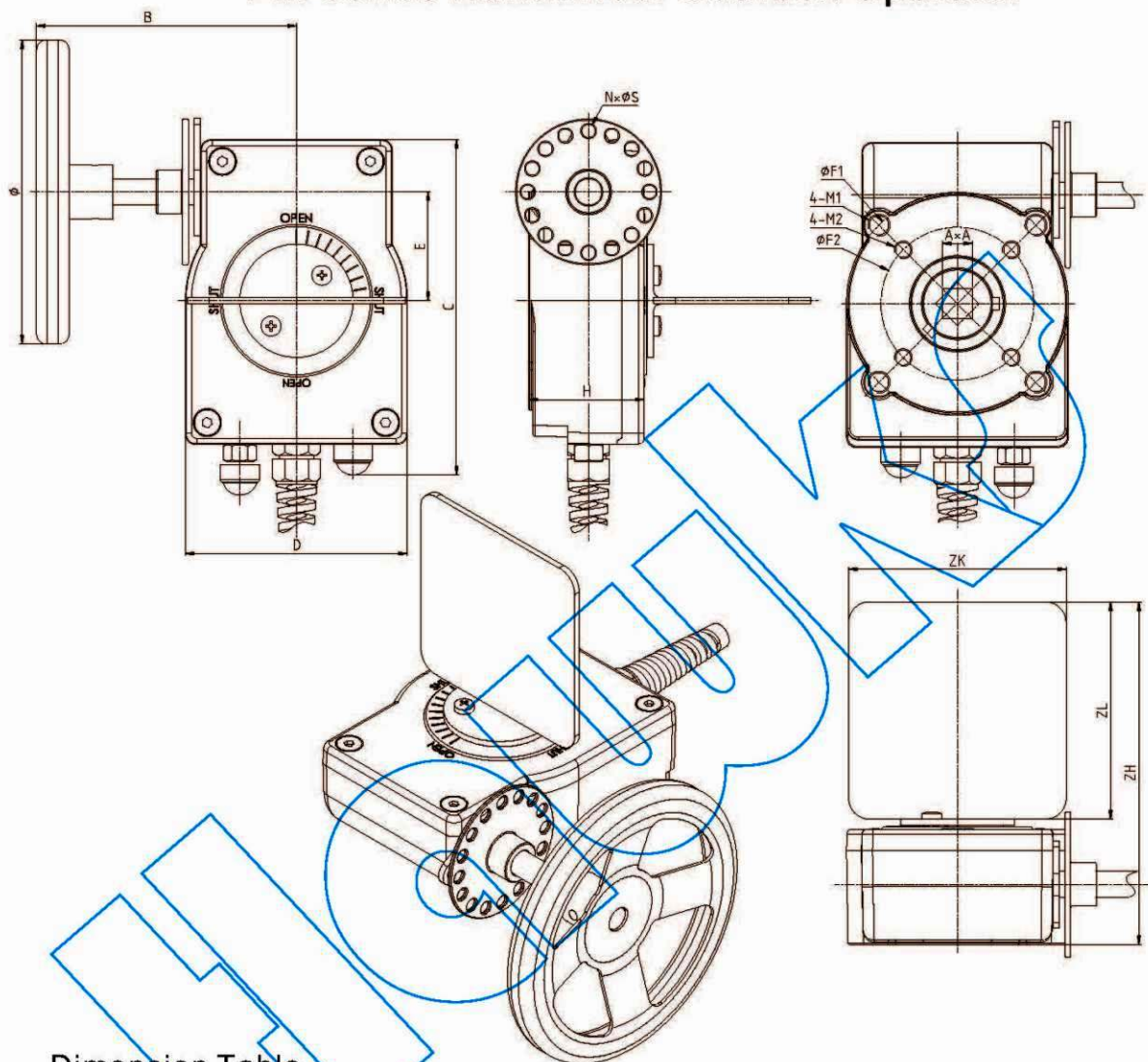
- The yellow marked flag easy to look at in long distance
- Prepared for padlock kit easy for lock and avoid illegal operation
- Signal sensing line function is equivalent to a limit switch and a gear box combination
- All aluminum shell light and beautiful
- Filled with special lubricant before leaving the factory
- Powder coating in surface of strong anti-corrosion/wear resistance
- ISO 5211 direct mount patterns
- Weatherproof is IP 65
- Build in mechanical stops



NO.	Part Name	Standard Material	Optional Material
1	Body	Aluminum Alloy	
2	Worm Gear	Ductile Iron QT400-15	
3	Worm	Carbon Steel	
4	Shaft	Carbon Steel	Stainless Steel
5	Hand Wheel	Carbon Steel	
6	Screw	Carbon Steel	Stainless Steel
7	Signs	Carbon Steel	
8	Micro Switch	Metal and plastic etc.	



FM-series Handwheel Gearbox Operator



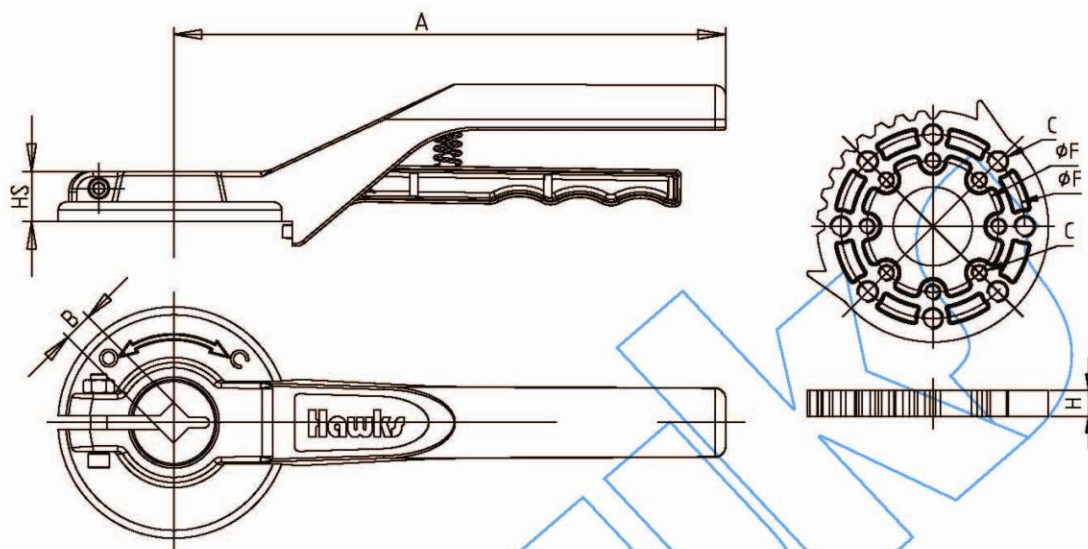
Dimension Table

Model	Torque		AxA	B	C	D	E	F1/F2	M1/M2	H	Ø	ZK	ZL	ZH
FM090	300	1:37	8x8,9x9,11x11,14x14,17x17	160	155	102	50	102/70	M10/M8	53	140	100	100	157
FM125	675	1:36	17x17,19x19,22x22,24x24	225	180	142	60	125/102	M12/M10	68	300	100	100	172

Reference Selection

Model	Output/Input Torque Ratio	Reference Output Torque(Nm)	Butterfly Valve model choosing	Ball Valve model choosing	Wt(kg)	Switches
FM090	1:12	300	DN32-200	DN63	2.1	AC220,5A
FM125	1:12.5	675	DN250-350	DN100	5.5	AC220,5A

Lever



MODEL	A	B	C	HS	F	H	WT(kg)
30150	210	8/9/11/14/17	M6/M8	14-19	50/70	10	0.4
30250	340	14/17/22	M8/M10	23-28	70/102	12	0.95



ALS Series Limit Switch

Design

This series of limit switch box applies compact design to offer a mini-type limit switch box which provides a simple application for valve and pneumatic actuator position monitoring. This mini-type product is weather proof protection in an aluminum die-cast enclosure and O-ring. The bracket is designed in light of ISO5211 and NAMUR standard.

Features

1 Compact and beautiful design

Mini-type aluminum die-casting cover and housing with powder coated in any colors.

2 Bolts on visual position Indicator

Secure waterproof.

3 "Quick-Set" cam

With spring loaded splinted cam, no need to adjust again after initial setting and Easy setting without tool.

4 Multipoint terminal strip

Standard 8 points and enough strips for connection.

5 Dual cable entries

2xG1/2 (Standard); 2-M20x1.5 or 2x1/2NPT(Option).

6 Captive cover bolts

No worry to loose bolts while cover opens.

7 Easy mounting

NAMUR standard stainless steel shaft and bracket.

ALS — **3** 00

M1

F

F - with 4~20 mA Feedback
(only for 300,400)
Non - without Feedback

M1 - Mechanical Switches
M2 - Mechanical Switches
M3 - Mechanical Switches
M4 - Mechanical Switches
M5 - Mechanical Switches
P1 - Proximity sensors
P1 - Proximity sensors
Q1 - Magnetic Switches
D - Double Sensor (for 200)

2 - IP67 Mini type
3 - IP67 Big type
4 - IP67+Exd II CT8
5 - IP67+Exd II ST8

Limit Switch Box Series



Model	ALS-200	ALS-300	ALS-400	ALS-500
Weather Proof	IP67			
Enclosure Exclusionproof			Exd 11 C T6	Exd 11 B T6
Temperature Range	-25°C — 85°C			
Cable Entry	2*1/2G(BSPP),NPT,BSPT,M20-1.5		2*3/4G(BSPP),NPT,BSPT	
Terminal Strips	8—12	8—14	8—12	8—10
Position Indicator	0-90°		0-90°	
	Open-Yellow;Closed-Red			
Terminal Strips	5A125-250VAC	15A125-250VAC		
Proximity Sensor	DC 24V (10-30VDC),<=150mA			
Magnet Sensor	5-240VAC/DC,<=300mA			
Position Transmitter	Feedback 4-20mA			

Fenghua Yuandong Auto Parts Co., Ltd.
Fenghua Hawks Automatic Equipment Co., Ltd.
Fenghua Haks Import and Export Co., Ltd.

Address: No. 285 Yuelin Road East, Fenghua, Ningbo, Zhejiang Province, 315500, P.R.China
Tel: +86-574-88912193
Fax: +86-574-88935669
Email: hawks01@188.com, hawks06@188.com
Web: [Http:// www.cn-hawks.com](http://www.cn-hawks.com)
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