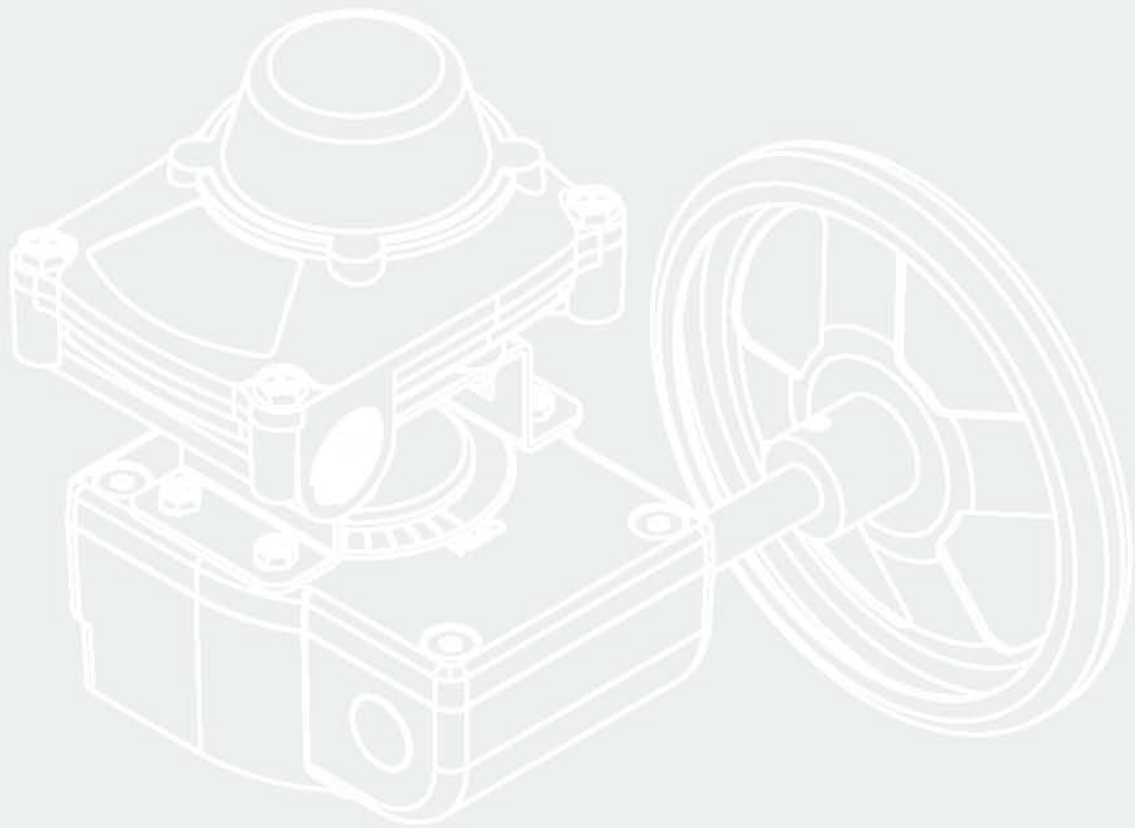




Hawks



COMPANY PROFILE

Yuandong-hawks are manufacturer and exporter, specialized in aluminum alloy casting since 1989; make the rotary pneumatic actuator since 2003.

Company building area of 18000 square meters, covers an area of 30000 square meters, and employee is about 300 persons.

Current main facilities include the non-ferrous smelting 3sets, heat treatment 6sets, shot blasting 2sets, vibration 2sets, machine center 5sets, CNC 18sets, lathes 30sets, milling 10sets, metallic gravity casting 20sets, die casting 6sets, ultrasonic cleaner 3sets, polisher 10sets, painting line 300 meters, assembly line 3sets, etc.

Yuandong-hawks main products are automatic equipments; include aluminum alloy castings, aluminum gearbox drivers, aluminum levers, pneumatic actuators, pneumatic cylinders, air filter regulator and lubricator combinations, limit switches, electro pneumatic positioners, solenoid valves, pulse valves, angle seat valves, butterfly valves, ball valves, DC motors, planetary geared motors etc.

Yuandong-hawks obtained ISO 9001 quality system and CE (ATEX) certificates issued by Sira, and focused on maintaining the products standard and performance stability.

Now some factories and companies had combined to be a new yuandong group, members include:

Fenghua Yuandong Auto Parts Co., Ltd.

Fenghua Hawks Automatic Equipment Co., Ltd.

Fenghua Haks Import and Export Co., Ltd.

Fenghua Leiteng Metal Co., Ltd.

Fenghua Weibo Machinery Manufacture Co., Ltd.

Fenghua Fengquan Micro Motor Co., Ltd.

Fenghua Liangjie Locomotive Part Co., Ltd.

Our products sales not only the home market, but also all of the world, especial in Europe market our products enjoyed a good reputation, even earned some famous brand customers.

Welcome to visit us at any time, wish to be your cooperative partner and supporter in China for long time.





Torque tester



Test room



The machining center



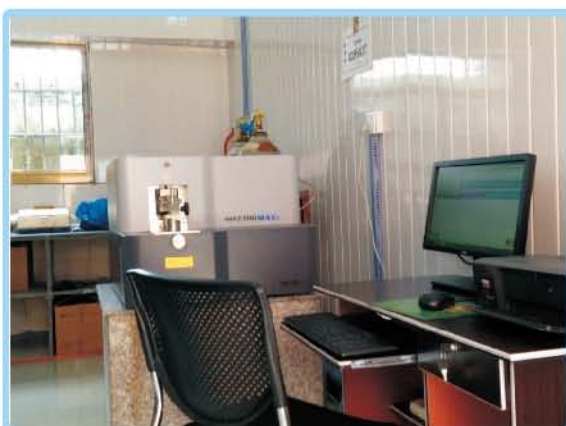
Die casting machine



Paint line



Assembly workshop



SPECTROMAXx



CMM-Hexagon



ISO9001 quality System certificate



CE(ATEX)



Weather proof is IP 67



Export Authorized certificate



Organization code



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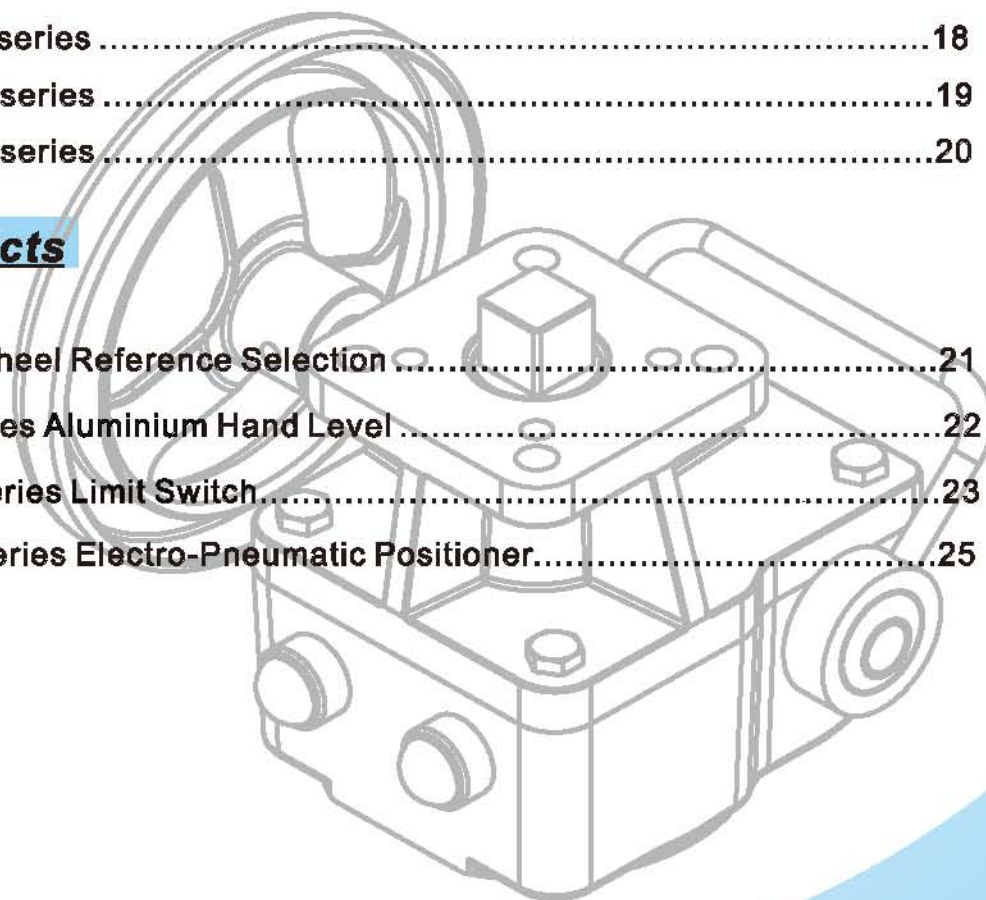
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Handwheel Gearbox Operator

20-series Aluminum Handwheel Gearbox Operator

Introduction and Features

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.

- ISO5211 direct mount patterns.
- Filled with special lubricant before leaving the factory.
- Weather proof is IP67.
- The output torque range:180-5500NM.
- 0-90° rotary, $\pm 5^\circ$ angle adjusting.



Ordering code

Series Model Valve square Flange Handwheel(ϕ)
 e.g: 20 - 070 - 11 - F05/F07 - 140

Detailed please reference selection.

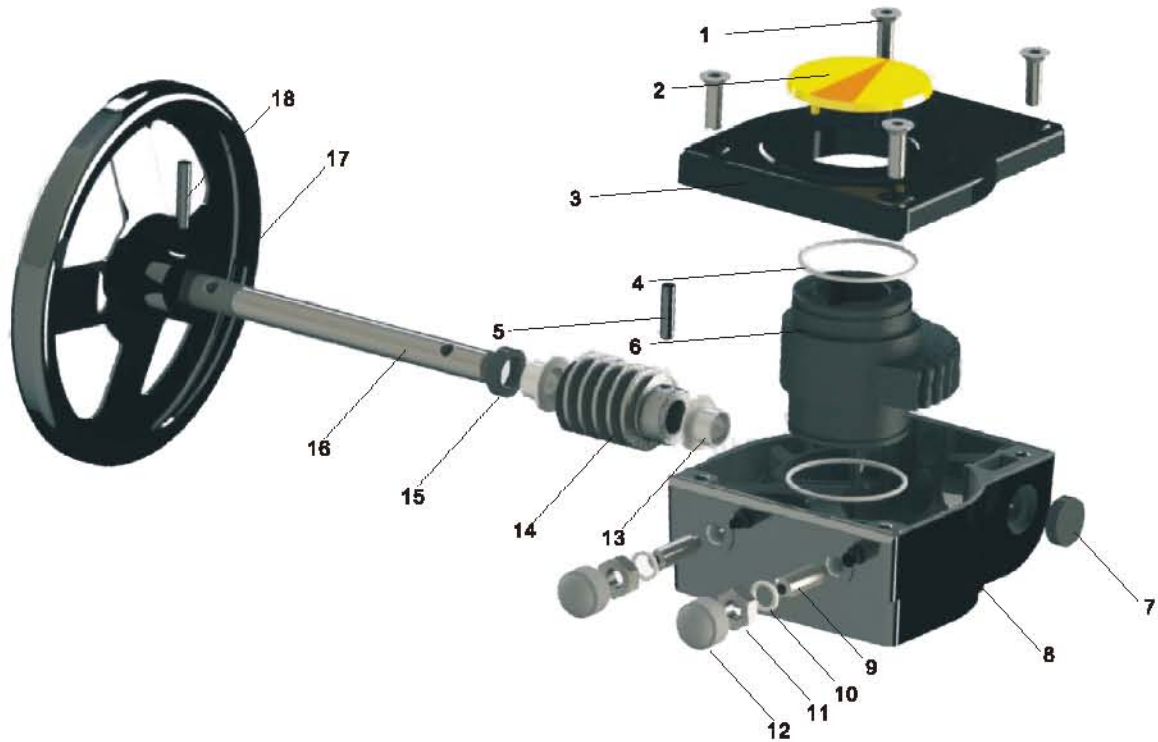
Reference Selection

Model	Square	ISO5211 Flange Type *	Hand wheel ϕ	Output/Input Torque Ratio	Max. Output Torque(Nm)	Butterfly valve	Ball valve	WT(KG)
20070	8/9/11/14/17	F05,F07	140	1:9.8	180	32-150	50	1.2
20090	8/9/11/14/17	F07,F09	200	1:12	300	32-200	63	2.1
20102	17/18/22	F07,F10	250	1:12.5	540	200-300	80	3.5
20125	17/18/22	F10,F12	300	1:12.5	675	250-350	100	4.8
20140	22/27	F10,F12,F14	400	1:10	1310	350-400	150	8.5
20140A	22/27	F10,F12,F14	400	1:10	1500	350-400	150	9.5
20140B	22/27/ $\phi 50 \times 14$	F10,F12,F14	600	1:11	1790	400-450	200	11
20165	38/ $\phi 50 \times 14$	F16	600	1:19	3250	450-500	250	17.5
20254	$\phi 60 \times 18 / \phi 65 \times 20 / \phi 80 \times 22$	F16,F25	700	1:19	6500	600-650	300	28
PS070	8/9/11/14	F05,F07	140	1:9.8	150	32-150	50	1

*PS Series Cover and Body is Engineer Plastics

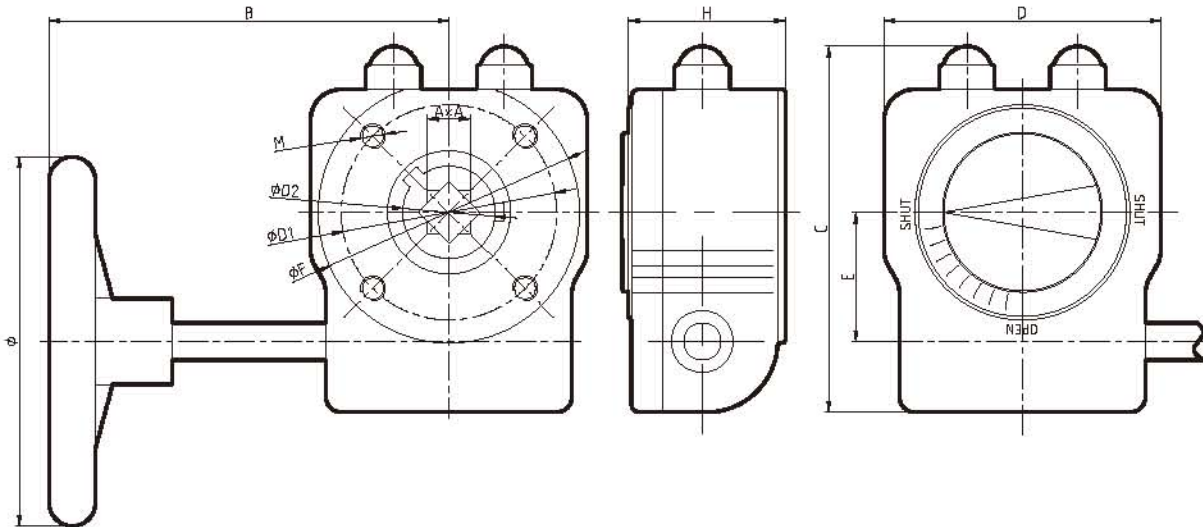
*ISO 5211 Flange single option but not both:F12 or F14,F14 or F16

Material and part list



NO.	Item	QTY	Material
1	Bolt	4	Stainless steel
2	Indicator	1	ABS resin
3	Cover	1	Aluminium polyester coating(20 Series)
			Engineering Plastics(PS Series)
4	O-Ring	2	NBR70
5	Pin	1	Spring Steel black
6	Worm gear	1	Ductile iron
7	Rearseal	1	NBR70
8	Body	1	Aluminium polyester coating(20 Series)
			Engineering Plastics(PS Series)
9	Adjusting Bolt	2	Steel black(Optional) SS304(Optional)
10	Adjusting Bolt Gasket	2	Galvanized steel(Optional)
			SS304(Optional)
11	Adjusting Nut	2	Galvanized steel(Optional)
			SS304(Optional)
12	Adjusting Nut Cap	2	NBR70
13	Bearing	2	Power metallurgy
14	Worm	1	Carbon Steel 45#
15	Front seal	1	NBR70
16	Rotating shaft	1	Carbon Steel 45#(Optional)
			SS304(Optional)
17	Handwheel	1	Carbon steel polyster coating
18	Pin	1	Spring Steel black
	Bush	1	Carbon Steel 45#

Dimension Table



Model	Gear Ratio	AxA	Deep	B	C	D	E	F	H	Ø	ØD1	MxDeep	ØD2
20070	1:40	8×8,9×9,11×11,14×14,17×17	45	160	115	80	42	78	48	140	50/70	4-M6×10/4-M8×12	30
20090	1:37	8×8,9×9,11×11,14×14,17×17	50	160	130	100	50	97	54	200	70/90	4-M8×12/4-M10×12	32
20102	1:36	17×17,19×19,22×22	53	215	150	120	60	117	56	250	70/102	4-M8×12/4-M10×15	43
20125	1:36	17×17,19×19,22×22	65	225	180	142	60	138	69	300	102/125	4-M8×12/4-M12×18	43
20140	1:50	22×22,27×27	80	325	215	178	77.5	174	83	400	140	4-M16×24	54
20140A	1:50	22×22,27×27	90	325	225	185	80	175	95	400	140	4-M16×24	54
20140B	1:39	22×22,27×27 Ø50×14	90	375	225	185	81.0	175	95	600	140	4-M16×24	50
20165	1:65	36×36 Ø50×14	100	395	268	230	104.5	220	105	600	165	4-M20×30	65
20254	1:52	Ø50×18, Ø65×20, Ø80×22	120	416	332	265	130	286	125	700	165/254	4-M20×30/8-M16×24	80
PS070	1:40	8×8,9×9,11×11,14×14,17×17	45	160	115	80	42	78	48	140	50/70	4-M6×10/4-M8×12	30

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 valve, otherwise manufacturer will not responsible accordingly.
Apply to all of the Hawks handwheel gearboxes operator.



GD-series Aluminum Declutch Handwheel Gearbox

Introduction and Features

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. Superiority, it does not need a distance plate installed between the pneumatic actuator and the declutch gear.

- 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 IP67.
- GD series products output torque range varies from 180 to 5500NM.
- 0-90° rotary, $\pm 5^\circ$ angle adjusting.



Ordering code

Series Model Actuator square Valve square Flange Handwheel(∅) Option
 e.g: GD - 050 - 11 - 11 - F05/F07 - 200 - M

M:Mechanical valves is option.

Detailed please reference selection.

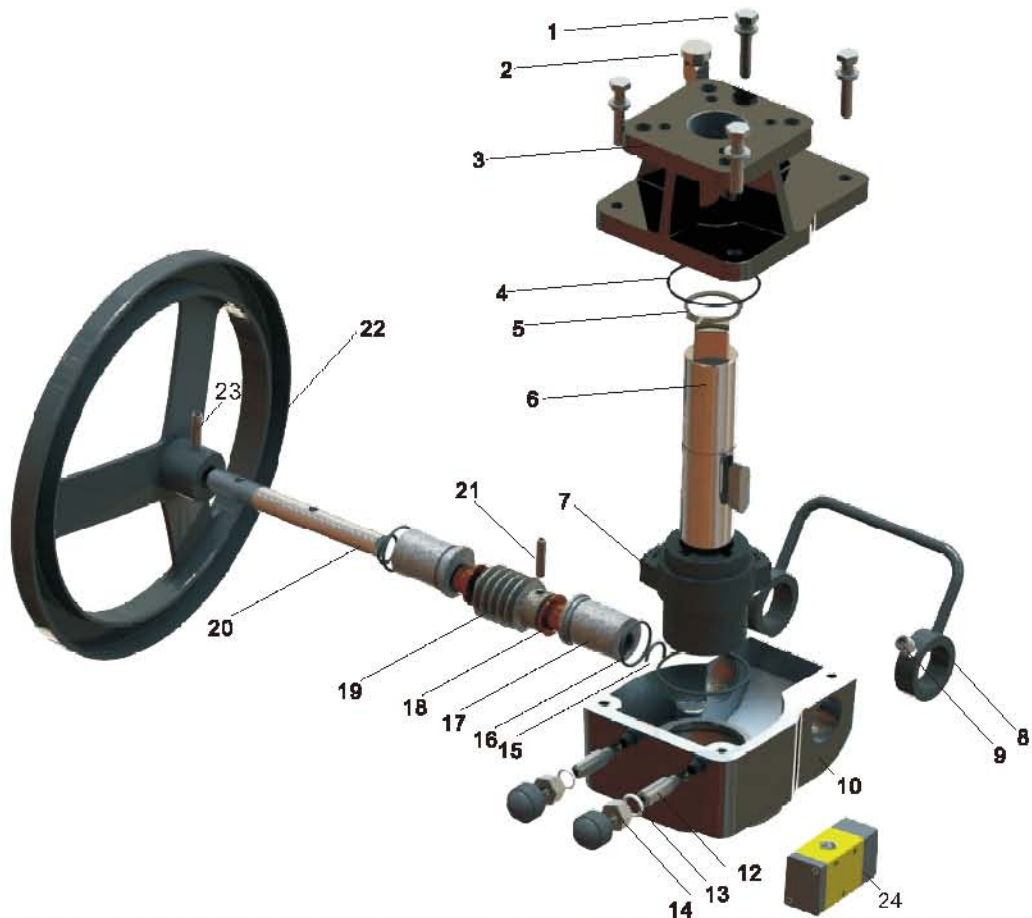
Reference Selection

Model	Actuator square	Valve square	ISO5211 Flange Type	Hand wheel ∅	Output/Input Torque Ratio	Max. Output Torque(Nm)	Actuator Model	Butterfly Valve	Ball valve	WT(KG)
GD050	11/14/17	11/14/17	F06,F07	200	1:9.6	300	52-106	32-160	50	2.7
GD070	14/17/19	14/17/19	F07,F10	200	1:12.5	360	63-127	32-200	63	4.3
GD102	22/27	22/27	F10,F12	300	1:12.5	810	105-160	200-300	80	6.8
GD140	27/36	27/36	F10,F12,F14	400	1:10	1310	140-210	250-350	100	13.5
GD166	36/46	36	F14,F16	600	1:19	2800	240-270	350-400	150	26.8
GD254	48	60	F25,F18	700	1:19	5500	270-300	450-500	250	40.3

ISO 5211 Flange single option but not both:F12 or F14;F14 or F16

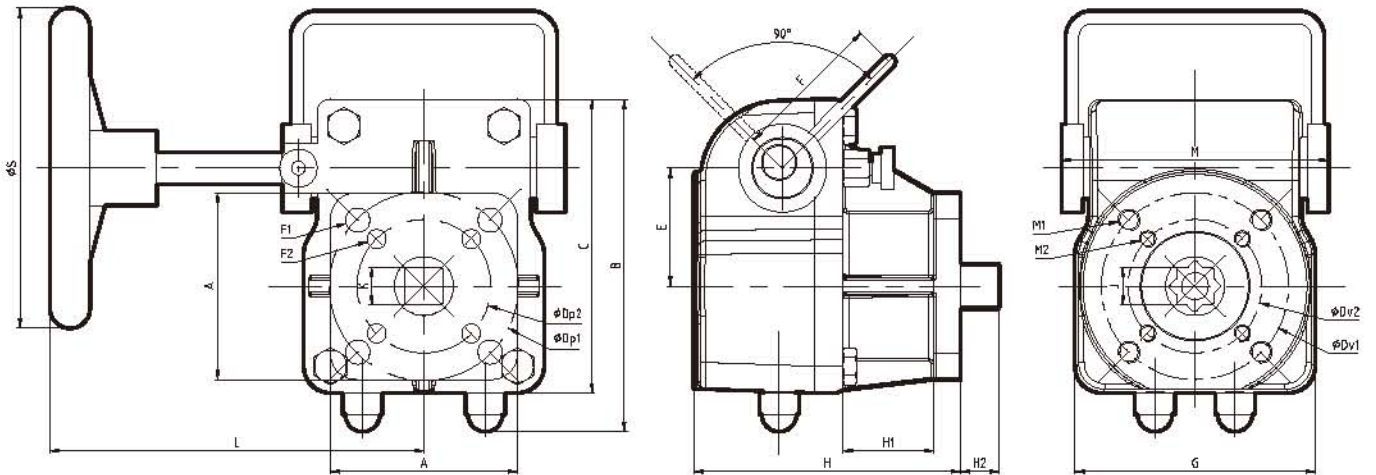
GD series declutch gearbox if application for spring returns pneumatic actuator, please contact Hawks manufacture first, our technical department will recommend the suitable gearbox model and hand wheel diameter for you.

Material and part list



NO.	Item	Q.TY	Material
1	Bolt	4	Stainless steel
2	The limiting assembly	1	SS304
3	Bracketcap	1	Aluminium polyester coating
4	O-Ring	2	NBR70
5	Clip spring	2	Steel black
6	Connecting shaft	1	Carbon steel45#
7	Worm gear	1	Ductile Iron
8	Wrench	1	SS304
9	Theset screws	1	SS304
10	Body	1	Aluminium polyester coating
11	Adjusting Bolt	2	Steel black (Option) SS304 (Option)
12	Adjusting Bolt Gasket	2	Galvanized steel (Option) SS304 (Option)
13	Adjusting Nut	2	Galvanized steel (Option) SS304 (Option)
14	Adjusting Nut Cap	2	NBR 70
15	O-Ring	2	NBR 70
16	O-Ring	2	NBR 70
17	Eccentric shaft	2	45# steel nickel plating
18	Bearing	2	Powder metallurgy
19	Worm	1	Carbon steel45#
20	Rotating shaft	1	Carbon steel 45 # (Option) SS304 (Option)
21	Pin	1	Spring Steel black
22	Hand wheel	1	Carbon steel polyester coating
23	Pin	1	Spring Steel black
24	Mechanical valve	1	Option

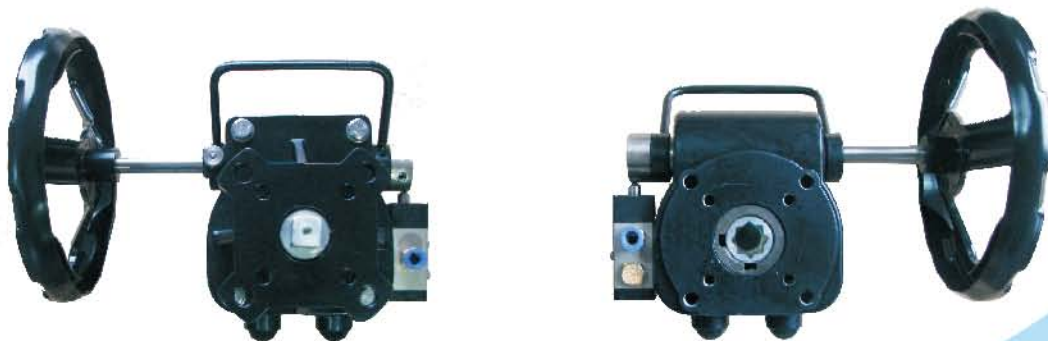
Dimension Table



Model	Gear Ratio	A	B	C	E	F	Dp1	F1	Dp2	F2	Dv1	M1	Dv2	M2	J=Deep	K	H2	Ref. Option Actuator Model	G	H	H1	L	M	ØS	Wt (kg)
GD050	1:40	70	125	110	44.2	54	70	8.5	50	8.5	70	4-M8×12	50	4-M8×10	11 × 12	11	11	52	90	100	33	143	104	200	2.7
															14 × 16	14	14	63-75							
															17 × 19	17	17	83-92							
GD070	1:38	95	150	135	52.2	70	102	11	70	8.5	102	4-M10×15	70	4-M8×12	14 × 16	14	14	63-75	125	118	43	177	124	200	4.3
															17 × 19	17	17	83-92							
															19 × 21	19	19	105							
GD102	1:38	115	185	180	85	70	125	13	102	11	125	4-M12×18	102	4-M10×15	22 × 24	22	22	105-127	140	124	45	180	140	300	8.8
															27 × 29	27	27	140-180							
															27 × 29	27	27	140-180							
GD140	1:50	140	225	200	85	78	125	13	102	11	125	4-M12×18	102	4-M10×15	27 × 29	27	27	140-180	185	182	56	325	180	400	13.5
							140	17	102	11	140	4-M16×24	102	4-M10×15	36 × 38	36	36	180-210							
GD165	1:55	165	268	243	104.5	105	140	17	-	-	140	4-M16×24	-	-	36 × 39	36	36	190-210	230	181	58	395	214	600	25.8
							165	21	-	-	165	4-M20×30	-	-	36 × 39	46	46	240-270							
GD254	1:62	275	330	283	130	115	165	21	264	17	165	4-M20×30	254	8-M16×24	Ø80×70	46	46	240-270	285	205	58	400	230	700	40.3

Guiding for model choosing and device operating:

Declutch Gearbox with mechanical valves, please require Hawks manufacturer



GD050-M

SW-series Aluminum Handwheel Gearbox

Introduction and Features

Our SW-series handwheel 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:180-5500NM.
- ISO5211 direct mount patterns.
- Filled with special lubricant before leaving the factory.
- Weather proof is IP67.
- 0-90° rotary, $\pm 5^\circ$ angle adjusting.
- Optional accessory include the position indicator, core joint, ect.



Ordering code

e.g: Series Model Valve square Handwheel(∅) Limit Switch box Model Type Feedback
 SW - 070 - 11 - 140 - YLS 200 M F

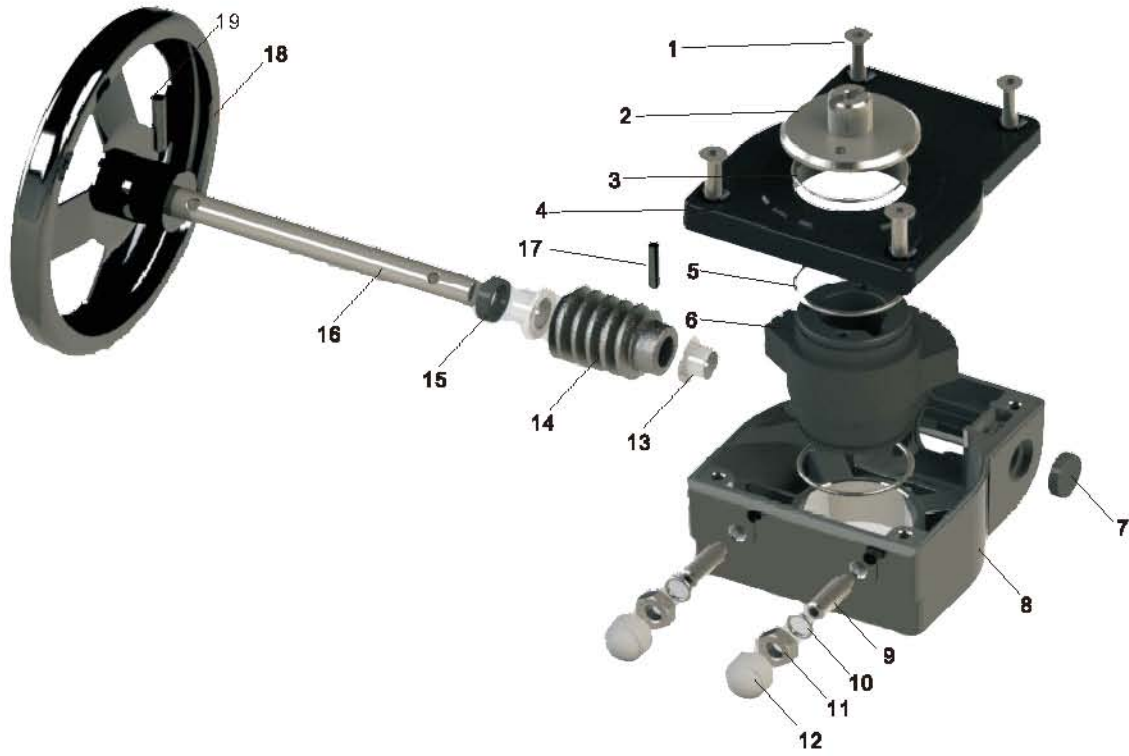
Limit switch model selection please reference the page of YLS series.
 Detailed please reference selection.

Reference Selection

Model	Square	ISO5211 Type	Hand wheel ∅	Output/Input Torque Ratio	Max. Output Torque(Nm)	Butterfly valve	Ball valve	WT(KG)
SW070	8/9/11/14/17	F05,F07	140	1:9.6	180	32-150	50	1.2
SW090	8/9/11/14/17	F07,F09	200	1:12	300	32-200	63	2.1
SW102	17/19/22	F07,F10	250	1:12.5	540	200-300	80	3.5
SW125	19/22	F10,F12	300	1:12.5	675	250-350	100	4.8
SW140	22/27	F10,F12,F14	400	1:10	1310	350-400	200	9.5
SW165	36/∅50X14	F14,F16	600	1:19	3250	450-500	250	17.5
SW254	60X18/ 65X20	F16,F25	700	1:19	5500	600-650	300	28

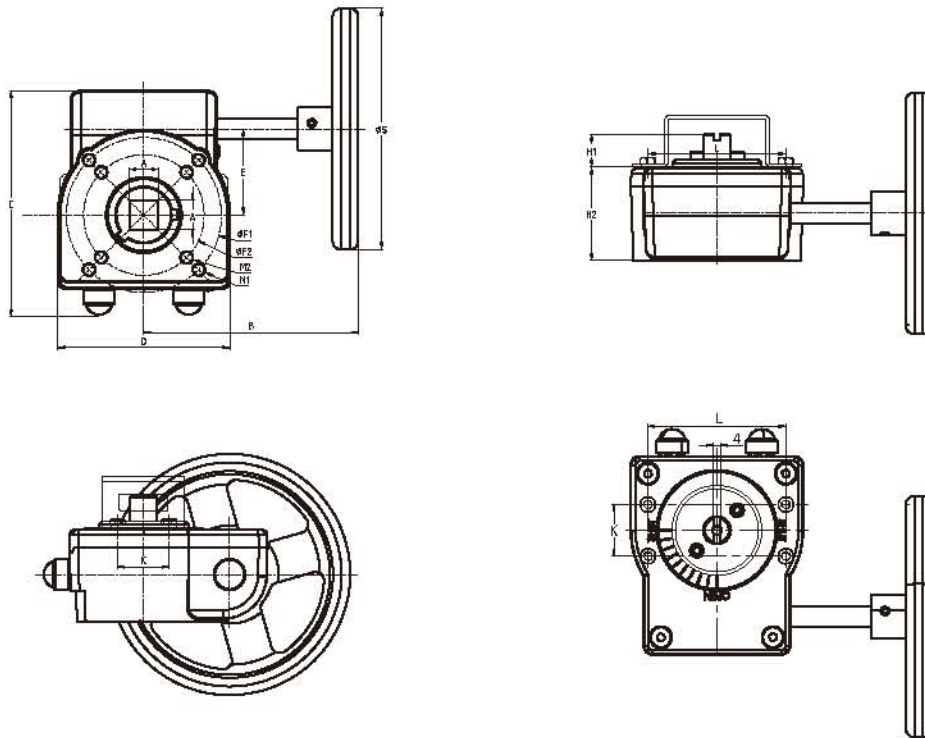
ISO 5211 Flange single option but not both:F12 or F14, F14 or F16. Joint standard is ISO5211(NAMUR) to fit valve

Material and part list



NO.	Item	QTY	Material
1	Bolt	4	Stainless steel
2	Core Joint	1	Aluminium polyester coating
3	O-Ring	1	NBR 70
4	Cover	2	Aluminium polyester coating
5	O-Ring	1	NBR 70
6	Worm gear	1	Ductile iron
7	Rear seal	1	NBR 70
8	Body	1	Aluminium polyester coating
9	Adjusting Bolt	2	Steel black(Optional) SS304(Optional)
10	Adjusting Bolt Gasket	2	Galvanized steel(Optional) SS304(Optional)
11	Adjusting Nut	2	Galvanized steel(Optional) SS304(Optional)
12	Adjusting Nut Cap	2	NBR 70
13	Bearing	2	Power metallurgy
14	Worm	1	Carbon Steel 45#
15	Front seal	1	NBR 70
16	Rotating shaft	1	Carbon Steel 45#(Optional) SS304(Optional)
17	Pin	1	Spring Steel black
18	Hand wheel	1	Carbon steel polyster coating
19	Pin	1	Spring Steel black
	Bush	1	Carbon Steel 45#

Dimension Table



Model	AxA	B	C	D	E	F1	M1	F2	M2	K	L	H1	H2	S
SW070	8×8,9×9,11×11,14×14,17×17	160	115	80	42	70	M8	50	M6	25	50	20	48	140
SW090	8×8,9×9,11×11,14×14,17×17	160	130	100	50	90	M8	70	M8	30	80	20	54	200
SW102	17×17,19×19,22×22	215	150	120	60	102	M10	70	M8	30	80	20	56	250
SW125	19×19,22×22	225	180	140	60	125	M12	102	M10	30	80	20	69	300
SW140	22×22,27×27	325	215	178	77.5	140	M16	-	-	30	130	20	95	300
SW165	36×36,Ø50×14	395	268	230	104.5	165	M20	-	-	30	130	20	105	300
SW254	Ø80×18,Ø65×20,Ø80×22	418	332	285	130	165/254	M20/M16	-	-	30	130	20	125	300

Joint standard is NAMUR(VDI/VDE 3845) to fit limit switch.



FM-series Aluminum Handwheel Gearbox

Introduction and Features

Our FM-series handwheel 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 built-in limit switch
- A perfect curve design, elegant appearance of generosity
- Filled with special lubricant before leaving the factory
- Powder coating in surface of strong anti-corrosion wear resistance
- ISO5211 direct mount patterns
- Weather proof is IP67
- Build in mechanical stops



Ordering code

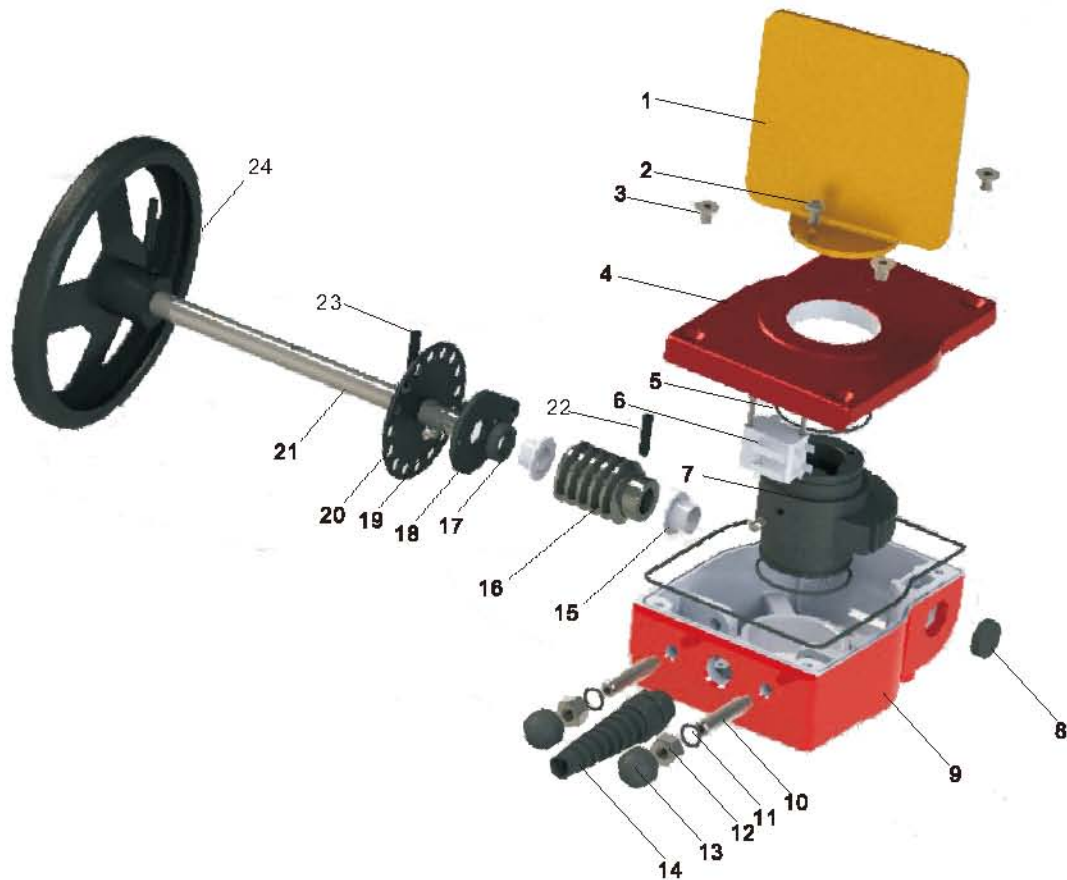
Series	Model	Shell Material	Valve square	Flange	Handwheel(∅)
e.g: FM	90	-A(Aluminum) -S(Cast iron)	11	F07/F10	140

Detailed please reference selection.

Reference Selection

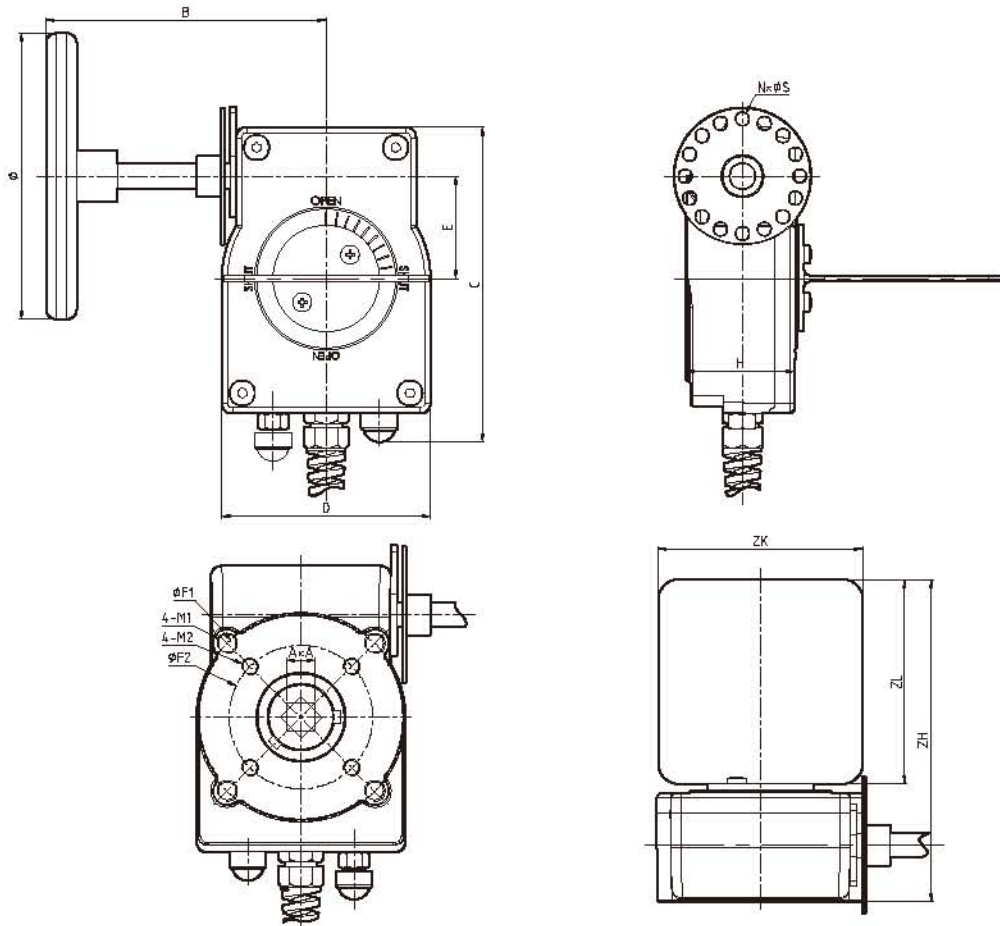
Model	Square	ISO5211 Flange Type	Hand wheel ∅	Output/Input Torque Ratio	Max. Output Torque(Nm)	Butterfly Valve	Ball valve	WT(KG)	Switches
FM090A	8/9/11/14/17	F07,F10	140	1:12	300	DN32-200	DN63	2.4	AC220V.5A
FM102A	17/19/22/24	F10,F12	300	1:12.5	675	DN200-300	DN100	5.5	AC220V.5A
FM090S	8/9/11/14/17	F07,F10	140	1:12	300	DN32-200	DN63	4.2	AC220V.5A
FM102S	17/19/22/24	F10,F12	300	1:12.5	675	DN200-300	DN100	8.5	AC220V.5A

Material and part list



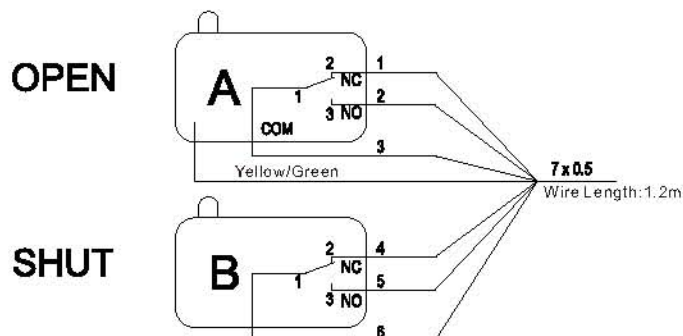
NO.	Item	QTY	Material	Optionnal material
1	Indicator board	1	Aluminium	
2	Bolt	2	SS304	
3	Countersunk head screw	4	SS304	
4	Cover	1	Aluminium polyester coating	HT200
5	O-Ring	2	NBR70	
6	Cable assembly	1	/	
7	Worm gear	1	Ductile iron	
8	Rearseal	1	NBR70	
9	Body	1	Aluminium polyester coating	HT200
10	Adjusting Bolt	2	Steel black	SS304
11	Adjusting Bolt Gasket	2	Galvanized steel	SS304
12	Adjusting Nut	2	Galvanized steel	SS304
13	Adjusting Nut Cap	2	NBR70	
14	Fanti-fold Cable Gland	1	NBR70	
15	Bearing	2	Power metallurgy	
16	Worm	1	Carbon Steel 45#	
17	Sealing Ring	1	NBR70	
18	Locking piece	1	Carbon Steel 45#	
19	Countersunk head screw	2	SS304	
20	Lock plate	1	Carbon Steel 45#	
21	Rotating shaft	1	Carbon Steel 45#	SS304
22	Pin	1	Sping Steel black	
23	Pin	1	Sping Steel black	
24	Handwheel	1	Carbon steel polyster coating	
	Bush	1	Carbon Steel 45#	

Dimension Table



Model	Torque	Gear Ratio	A×A	B	C	D	E	F1/F2	M1/M2	H	Ø	ZK	ZL	ZH
FM090A	300	1:37	8×8,9×9,11×11,14×14,17×17	160	155	102	50	102/70	M10/M8	53	140	100	100	157
FM102A	675	1:36	17×17,19×19,22×22,24×24	225	180	142	60	125/102	M12/M10	68	300	100	100	172
FM090S	300	1:37	8×8,9×9,11×11,14×14,17×17	160	155	102	50	102/70	M10/M8	53	140	100	100	157
FM102S	675	1:36	17×17,19×19,22×22,24×24	225	180	142	60	125/102	M12/M10	68	300	100	100	172

Wiring Diagram



Cast Iron Series Gearbox Operator

YH-ZT Series Cast Iron Handwheel Gearbox Operator

Weatherproof: IP68 design



Ordering code

Series Model Square Flange Handwheel(∅)
 e.g: YH-ZT - 300 - 11 - F07/F10 - 140/200

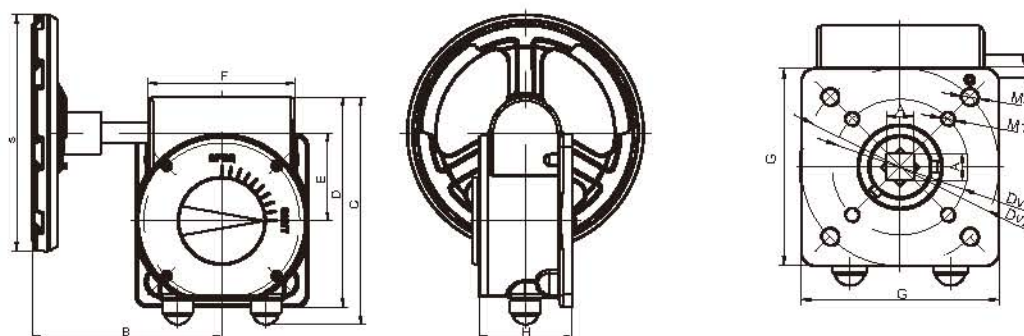
Detailed please reference selection.

Reference Selection

Model	Square	ISO5211 Flange Type	Handwheel ∅	Output/Input Torque Ratio	Max. Output Torque(Nm)	Butterfly valve	Ball valve
YH-ZT300	8/9/11/14/17	F07/F10	140/200	1:12.5	300	32-200	63
YH-ZT800	17/19/22	F10/F12	300	1:12.5	800	200-350	100
YH-ZT1800	22/27	F12/F14/F16	400/500/600	1:12	1800	350-450	200

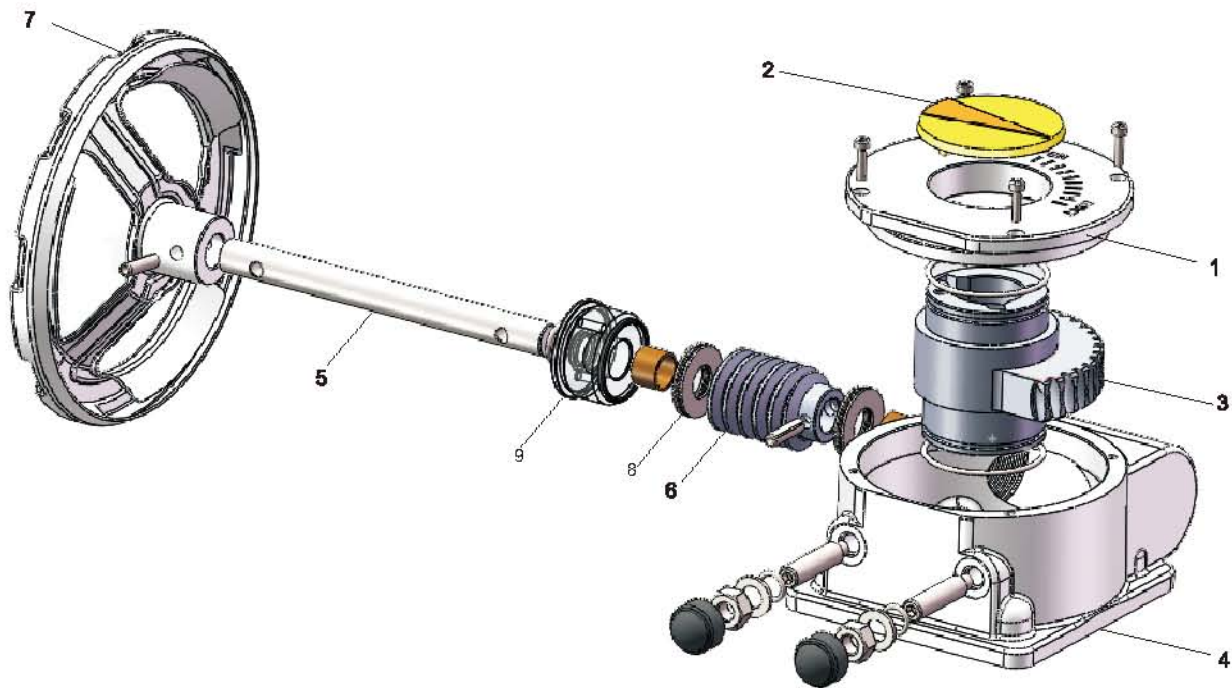
ISO 5211 Flange single option but not both:F12 or F14,F14 or F16

Dimension Table



Model	A*A	B	C	D	E	F	G	H	DV1	M1	DV2	M2	S
YH-ZT300	8*8,9*9,11*11,14*14,17*17	158	132	125	52	86	102	55	70	M8	102	M10	140/200
YH-ZT800	17*17,19*19,22*22	225	168	150	62.5	110	125	70	102	M10	125	M12	300
YH-ZT1800	22*22,27*27	325	220	200	85	140	165	93	125	M12	165	M20	400/500/600

Material and part list



Item	Description	Qty	Material	Optional material
1	Cover	1	HT200	
2	Indicator	1	Engineering Plastics	
3	Worm Gear	1	QT 450 GB1348-88	
4	Body	1	Gray Cast iron	
5	Worm Shaft	1	45GB699-88	Carbon steel 45#/SS304
6	Worm	1	Carbon steel 45#	
7	Hand Wheel	1	Carbon steel	Stamping/Welded
8	Needle-Bearing	1	AXK-AS	
9	Screw head	1	Carbon steel 45#/SS304	
	Bush	1	Copper Base Powder Metallurgy	

YH-AB Series Cast Iron Handwheel Gearbox Operator



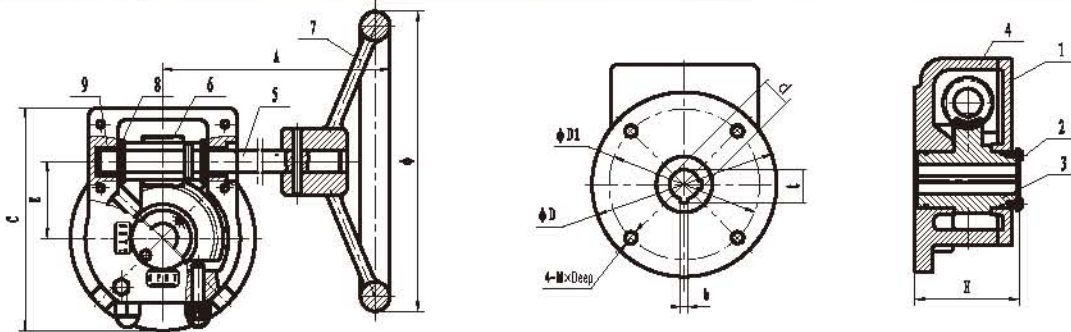
Ordering code

e.g: Series -YH-AB
 Model - 40
 Valve Size - 15
 Flange - F07
 Handwheel(ϕ) - 125
 Detailed please reference selection.

Reference Selection

Model	Max. Travel	Limit Adjust	Rating Input Torque(Nm)	Max. Output Torque(Nm)	Efficiency(%)	T	B	D1	Flange
YH-AB40	90	5	31	150	12	17.3	5	70	F07
YH-AB37	90	5	67	500	20	22.6	6	102	F10
YH-AB34	90	5	147	1000	20	33.3	8	102	F10
YH-AB38	90	5	263	2000	20	47.3	12	165	F16
YH-AB55	90	5	254	2800	20	47.3	12	165	F16
YH-AB80	90	5	135	2000	23	51.8	14	165	F16
YH-AB70	90	5	240	4000	23	62.3	16	165	F16

Dimension Table



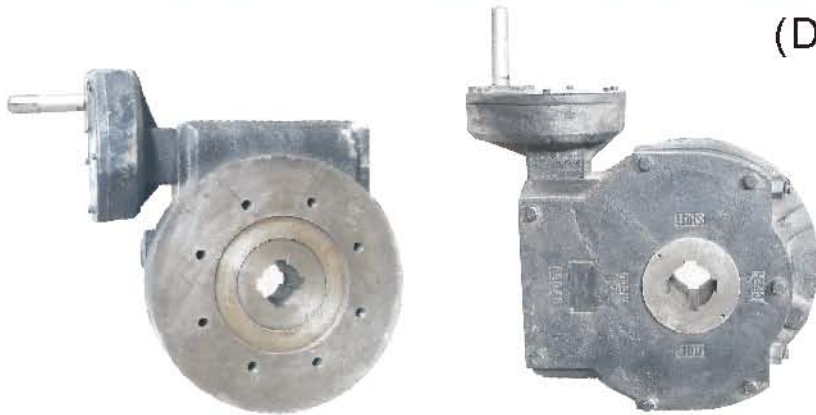
Model	Ratio	Valve Size d	dmax	b	t	4-MxDeep	D	D1	A	E	H	C	ϕ	Weight(KG)
YH-AB40	40:1	15	20	5	17.3	4-M8x12	80	70	150	43	54	124	125	2.2
YH-AB37	37:1	20	30	6	22.6	4-M10x15	125	102	220	52	65	127	300	3.5
YH-AB34	34:1	30	45	8	33.3	4-M16x20	138	102	270	71	88	174	400	8.5
YH-AB38	38:1	44	60	12	47.3	4-M20x26	210	165	294	88	93	226	600	19
YH-AB55	55:1	44	65	12	47.3	4-M20x26	220	165	340	104	102	258	700	24
YH-AB80	80:1	48	78	14	51.8	4-M20x26	255	165	433	120	121	265	400	32
YH-AB70	70:1	58	80	16	62.3	4-M20x26	260	165	433	126	121	265	700	34

Material and part list

Item	Description	Qty	Material	Optional material	Item	Description	Qty	Material	Optional material
1	Cover	1	QT 450 GB1348-88		6	Worm	1	40Cr GB3077-99	
2	Indicator	1	Q235A GB700-88		7	Hand Wheel	1	Ht200 GB9439-88	Stamping/Welded
3	Worm Gear	1	QT 450 GB1348-88		8	Needle-Bearing	1	AXK-AS	
4	Body	1	QT 450 GB1348-88		9	Bush	1	Copper Base Powder Metallurgy	
5	Worm Shaft	1	45 GB699-88						

Standard joint sizes are all of round holes without shaft, if want to the joint shaft with square on both ends can be custom-made, delivery time will be prolonged, please require Hawks manufacturer. Apply to all of the Cast Iron Gears Operator with round holes.

YH-AB Series Cast Iron Handwheel Gearbox Operator (Double Geared)



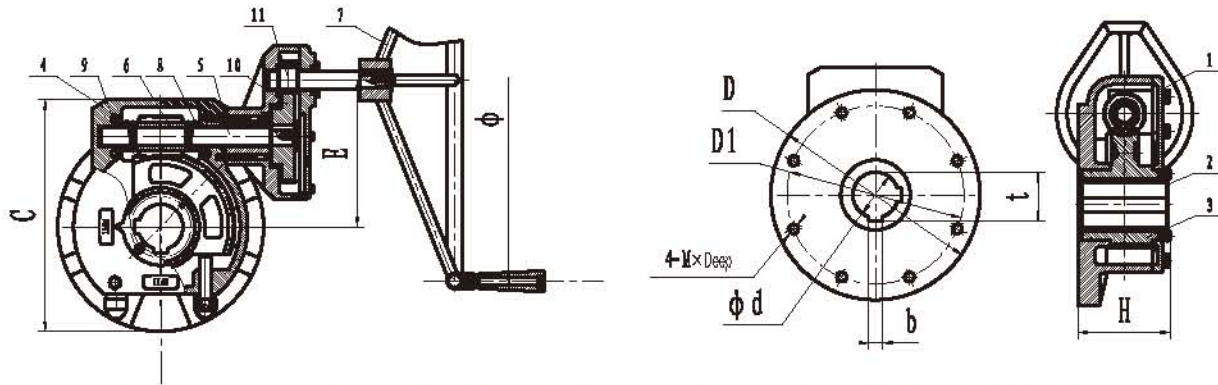
Ordering code

e.g: Series - YH-AB
 Model - 208
 Valve Size - 52
 Flange - F25
 Handwheel(ϕ) - 600
 Detailed please reference selection.

Reference Selection

Model	Max. Travel	Limit Adjust	Rating Input Torque(Nm)	Max. Output Torque(Nm)	Efficiency(%)	T	B	D1	Flange
YH-AB208	90	5	163	6800	20	56.3	16	254	F25
YH-AB312	90	5	210	12500	19	69.4	18	298	F30
YH-AB364	90	5	115	8000	19	69.4	18	254	F25
YH-AB546	90	5	137	15000	20	79.9	20	298	F30
YH-AB702	90	5	118	17500	21	79.9	20	298	F30

Dimension Table

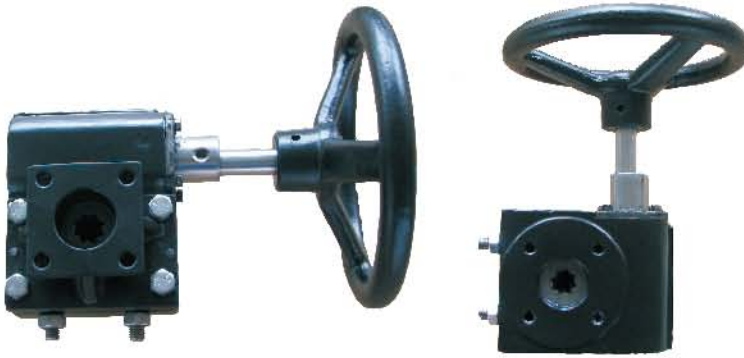


Model	Ratio	Valve Size(d)	dmax	b	t	4-MxDeep	D	D1	A	E	H	C	ϕ	Weight(KG)
YH-AB208	208:1	52	80	16	56	4-M16x20	300	254	335	211	155	265	600	45
YH-AB312	312:1	65	100	18	69	4-M20x26	370	298	388	263	160	482	600	70
YH-AB364	364:1	65	80	18	69	4-M16x20	300	254	348	148	155	322	600	53
YH-AB546	546:1	75	100	20	80	4-M20x26	370	298	401	148	160	482	600	78
YH-AB702	702:1	75	100	20	80	4-M20x26	370	298	466	357	180	584	600	100

Material and part list

Item	Description	Qty	Material	Optional material	Item	Description	Qty	Material	Optional material
1	Cover	1	QT 450 GB1348-88		7	Hand Wheel	1	HT200 GB9439-88	Stamping/Welded
2	Indicator	1	Q235A GB700-88		8	Needle-Bearing	1	AXK-AS	
3	Worm Gear	1	QT 450 GB1348-88		9	Bush	1		
4	Body	1	QT 450 GB1348-88		10	Gear	1	40Cr GB3077-99	
5	Worm Shaft	1	45 GB699-88		11	Gear Shaft	1	40Cr GB3077-99	
6	Worm	1	40Cr GB3077-99						

YH-LH Series Cast Iron Handwheel Clutch Gearbox Operator



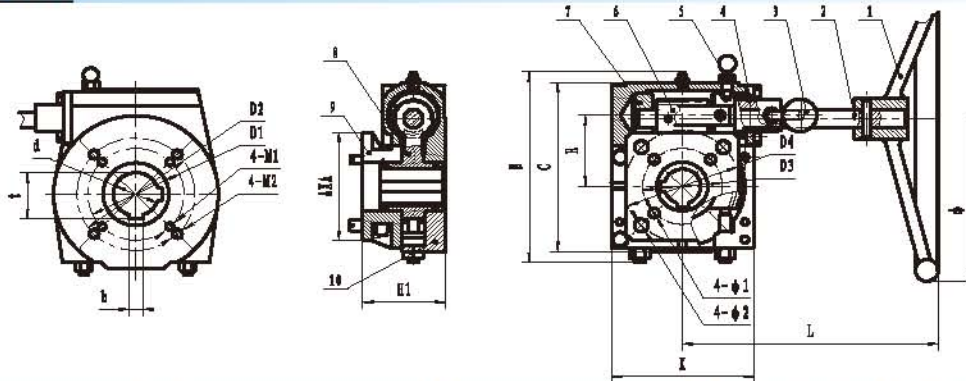
Ordering code

e.g: Series - YH-LH
 Model - 26
 Valve Size - 90
 Flange - F07
 Handwheel(φ) - 200
 Detailed please reference selection.

Reference Selection

Model	Max. Travel	Limit Adjust	Rating Input Torque(Nm)	Max. Output Torque(Nm)	Efficiency (%)	T	B	D1	Flange
YH-LH26	90	5	50	300	23	20.8; 25.5	6; 8	70	F07
YH-LH38	90	5	90	700	21	25.5; 35.3	8; 10; 14	70	F07
YH-LH54	90	5	120	1200	19	39.3; 51.8	10; 14; 18	102	F10
YH-LH80	90	5	140	2000	18	51.8; 64.4	14; 18	140; 165	F14; F16
YH-LH78	90	5	200	3100	21	51.8; 64.4	14; 18; 19.05	140; 165	F14; F16
YH-LH320	90	5	160	6000	21	59.3; 79.9	16; 20	254	F25
YH-LH410	90	5	200	15000	23	116.4	28	298	F30

Dimension Table



Model	Ratio	Worm Gear	Specification of worm gear				Body	Dimens of valve					Bracket	Dimens of bracket(cylinder)					Output torque (Nm)	Ref. option cylinder											
			d	b	t	d2		D	D1	4-M1	D2	4-M2		Ax1	D3	4-φ1	D4	4-φ2		H1	φ	L	B	C	K	E	HxH	model			
YH-LH26	26:1	F2	18	6	20.8	36	90	70	4-M8			(	64x64	70	4-9		71	200											14x14	63	
			22.2	8	25.5	36		70	4-M8			(	64x64	70	4-9		71	200	192	166	130	104	50.5	300				17x17	75/83/92		
YH-LH38	38:1	F2	17x17				125	50	4-M6	70	4-M8*	F2	64x64	50	4-7	70*	4-9	78	200												
			32	10	35.3	45		(	70	4-M8			(	100x70	70	4-8		79	200												
			38	10	41.3	60		(			102	4-10*	(	100x100	70	4-8	102*	4-12	79	200	195	191	156	125	65.5	500				22x22	105/127
			45	14	48.8	60		(102	4-10	(110x110			125	4-14	82	250	225										
YH-LH54	54:1	F2	45	14	48.8	60	375	102	4-M10			(	130x130			140	4-18	88	300	225											
			36	10	39.3	70		(			125	4-12	(	110x110	102	4-12	125*	4-14	86	250											
YH-LH80	80:1	F2	48	14	51.8	70	210	140	4-M16			(	156x156	140	4-18		300	271													
			60	18	64.4	85		(	165	4-M20			(	156x156	165	4-22		400	277	311	279	234	123	2000						46x46	254/255
YH-LH78	78:1	F2	48	14	51.8	70	276	140	4-M16			(	162x162	140	4-18																
			60	18	64.4	85		(165	4-M20			(162x162	165	4-22															
YH-LH320	320:1	F2	76	20	78.9	110	320	254	8-M16x25			(	300	254	8-φ18																
			55.1	16	59.3	100		((300	254	8-φ18															
YH-LH410	410:1	F2	110	28	116.4	160	410	298	8-M20x30			(	350	298	8-φ22																

Material and part list

Item	Description	Qty	Material	Optional material	Item	Description	Qty	Material	Optional material
1	Hand Wheel	1	Stamping	Welded	6	Worm	1	45 GB 699-88	
2	Worm Shaft	1	45 GB 699-88		7	Offcenter sleeve sub-assembly	1		
3	Handle	1			8	Worm Gear	1	GT450-10/GB91348-88	
4	Small cap	1	HT200 GB9439-88	Q235AGB/T770-1999	9	Bracket cap	1	HT200 GB9439-88	GT450-10/GB91348-88
5	Positioning pin sub-assembly	1			11	Body	1	HT200 GB9439-88	GT450-10/GB91348-88

YH-IW Series Cast Iron Handwheel Gearbox Operator



Ordering code

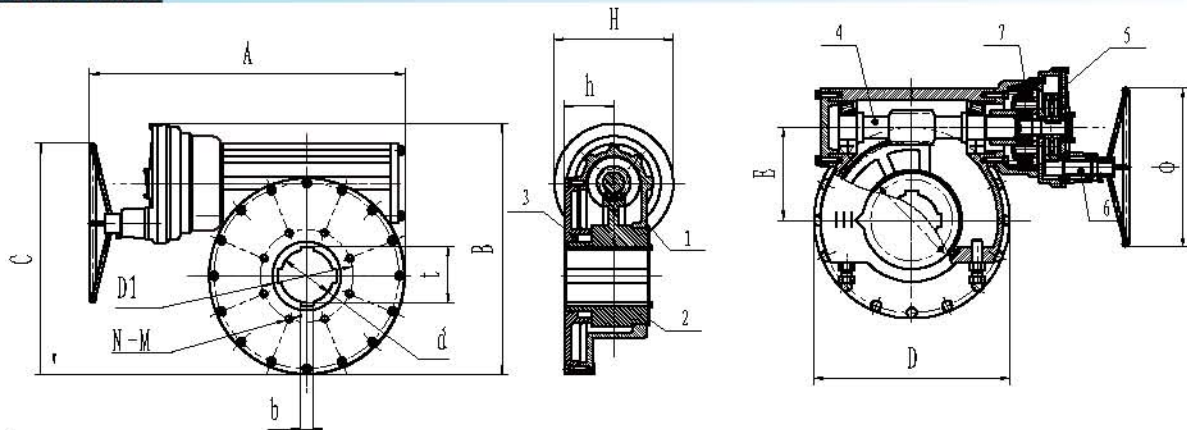
e.g: Series - YH-IW
 Model - 480
 Valve Size - 153

Detailed please reference selection.

Reference Selection

Model	Ratio	Max. Travel	Limit Adjust	Rating Input Torque(Nm)	Max. Output Torque(Nm)	b	d	D1	Flange
YH-IW480	480:1	90	5	120	23000	153	40	254	F25
YH-IW540	540:1	90	5	200	28000	153	40	254	F25
YH-IW720	720:1	90	5	200	34000	153	40	254	F25
YH-IW960	960:1	90	5	240	46000	178	45	298	F30
YH-IW1080	1080:1	90	5	240	51000	178	45	298	F30
YH-IW1080A	1080:1	90	5	200	40000	153	40	254	F25
YH-IW1440	1440:1	90	5	240	69000	203	50	356	F35
YH-IW2190	2190:1	90	5	240	105000	203	50	356	F35

Dimension Table



Model	DN	Valve Size(d)	b	t	D1	n-m	A	B	C	D	H	h	E	Weight(kg)	
YH-IW480	DN1000	153	40	162.4	254	8-M16	860	714	708	520	418	100	245	610	222
YH-IW540	DN1050														
YH-IW720	DN1300														
YH-IW960	DN1500	178	45	188.4	298	8-M20	1000	781	784	598	396	145	284	610	290
YH-IW1080	DN1650-DN1800														
YH-IW1080A	DN1500	153	40	162.4	254	8-M16	991	703	605	520	418	100	245	610	260
YH-IW1440	DN1900-DN2200	203	50	214.6	356	8-M30	1208	958	882	750	456	189	355	610	408
YH-IW2190	DN2400														

Material and part list

Item	Description	Qty	Material	Optional material
1	Housing	1	QT400-18	WCB GB12229-88
2	Worm gear	1	QT500-7 GB91348-88	
3	Cover	1	HT200 GB9439-88	WCB GB12229-88
4	Bracket	1	45 GB699-88	
5	Big Gear	1	ZG310-570	
6	Gear Shaft	1	45 GB699-88	
7	Ring Gear	1	45 GB699-88	
8	Hand Wheel	1	Stamping	Welded

YH-BA Series Cast Iron Handwheel Multi-Turning Gearbox Operator



Ordering code

e.g: Series - YH-BA

Model - 000

Flange - F12

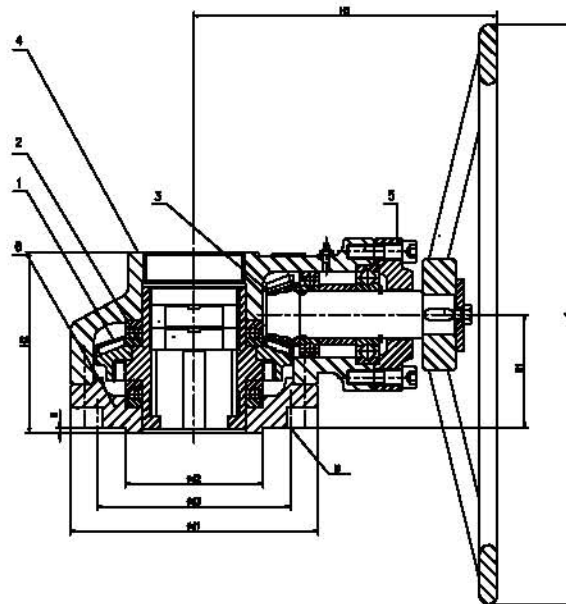
Handwheel(ϕ) - 140/200

Detailed please reference selection.

Reference Selection

Model	ϕ 1	ϕ 2	ϕ 3	H	M	Screw Holes	Hole Depth	H1	H2	ϕ	Gear Ratio	Max.Output Torque (N.m)	Max. Thrust (N)	Stem Dia (mm)
BA-000	160	85	125	4	M12	4	18	75	123	250	2.6:1	360	43000	28
BA-00	180	100	140	4	M16	4	24	82	130	310	2.9:1	480	64000	32
BA-0	210	127	165	4	M18	4	30	87	138	310	3:0:1	735	98000	38
BA-1	275	200	245	5	M14	8	30	105	175	460	4.1:1	1470	196000	50
BA-2	340	230	300	5	M20	8	35	140	220	530	5.2:1	2940	340000	65
BA-3	400	250	340	5	M24	8	40	155	255	600	5.7:1	4000	490000	75
BAA-3	420	260	356	5	M30	8	45	167	280	600	18:0:1	6000	630000	115

Dimension Table



Material and part list

NO	Item	Q.TY	Material	Option
1	big bevel gear	1	45 GB699-88	
2	Driving sleeve	1	QT500-7 GB91348-88	
3	Small bevel gear	1	45 GB699-88	
4	Housing	1	WCB GB12229-88	QT500-7 GB91348-88
5	Description	1	WCB GB12229-88	QT500-7 GB91348-88
6	Mounting Plate	1	QT500-7 GB91348-88	WCB GB12229-88
7	Hand Wheel	1	Stamping	Welded

YH-MJ Series Gearbox Operator



Ordering code

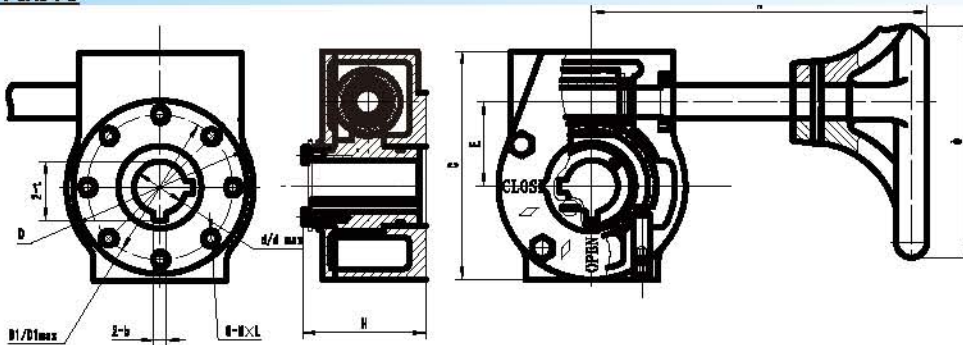
e.g: Series - YH-MJ
 Model - 24
 Flange - F12
 Valve Size - 11

Detailed please reference selection.

Reference Selection

Model	Travel(max)	Limit Adjust	Rating Input	Max. Output(Nm)	Efficiency
MJ24	90	5	30	300	10
MJ30	90	5	60	750	12.5
MJ50	90	5	60	1200	20
MJ80	90	5	80	2000	25

Dimension Table



Model	Ratio	Valve Size Range(DN)	d	d (max)	b	t	D	D1 (max)	n-MXL	A	Φ	C	E	H	Max. Output Torque(Nm)
MJ24	24:1	50-80	12.7	26	3	14.2	92	80	8-M8*12	161	150	127	45	75	300
		100	15.9		5	19.2	105								
		125-150	19.05		5	21.4	125								
MJ30	30:1	200	22.2	30	5	24.5	115	90	8-M12*18	226	300	176	66	85	750
		250	28.6	45	8	31.9	153	125	125						
MJ50	50:1	300-350	31.8	45	8	35	140	108	8-M12*18	232	300	197	78	86	1200
							175	140							
MJ80	80:1	400	33.3	54	10	36.7	197	170	8-M18*26	269	400	290	120	125	2000
		450	38.1			41.5	242	200							

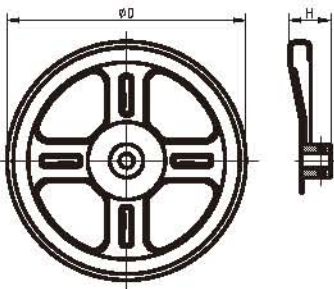
Material and part list

Item	Material
Housing Cover Handwheel	HT200/ASTM NO.30
Worm Gear	QT450/AST M65-45-12
Worm Shaft	45#AIS11045

Other Products

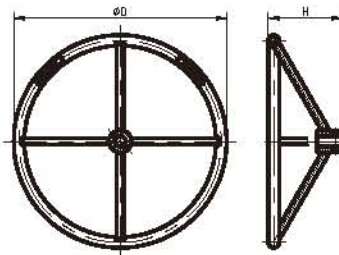
Handwheel Reference Selection

CY Series Stamp Handwheel



Gearbox Model	M.A. ±15%	Handwheel
20070	1: 9.6	Ø100-Ø200
20090	1: 12	
20102	1: 12.5	Ø200-Ø250
20125	1: 12.5	Ø200-Ø350
20140	1: 10	Ø350-Ø500
20140A	1: 10	
20140B	1: 11	Ø400-Ø600
20165	1: 19	Ø400-Ø1000
20254	1: 19	

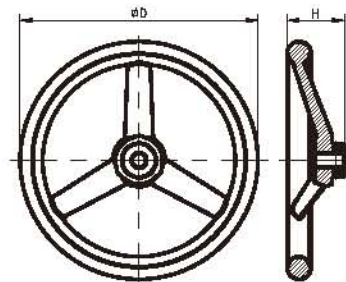
HJ Series Weld Handwheel



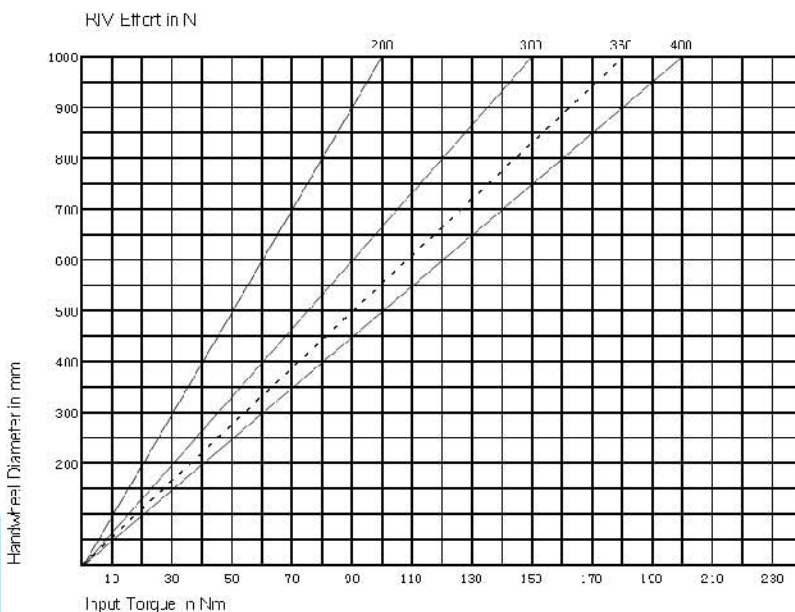
Type	ØD	H	Ref. Torque (Nm)
CY100	Ø100	36	20
CY120	Ø120	34	24
CY125	Ø125	34	25
CY140	Ø140	41	28
CY180	Ø180	42	36
CY200	Ø200	45	40
CY250	Ø250	59	50
CY300	Ø300	60	60
CY350	Ø350	63	70
CY400	Ø400	64	80

Type	ØD	H	Ref. Torque (Nm)
HJ400	Ø400	140	80
HJ600	Ø600	172.5	120
HJ700	Ø700	172.5	140
HJ800	Ø800	172.5	160
HJ1000	Ø1000	172.5	200

ZT Series Cast Iron Handwheel



Type	ØD	H	Ref. Torque (Nm)
ZT160	Ø160	45	32
ZT200	Ø200	48	40
ZT320	Ø320	60	64
ZT400	Ø400	64	80



Example how to use this chart:

1 Get the input torque required

$$\text{Input Torque} = \frac{\text{Output Required}}{\text{M.A.}}$$

2 Select Handwheel diameter

30-series aluminium Hand Level



Ordering code

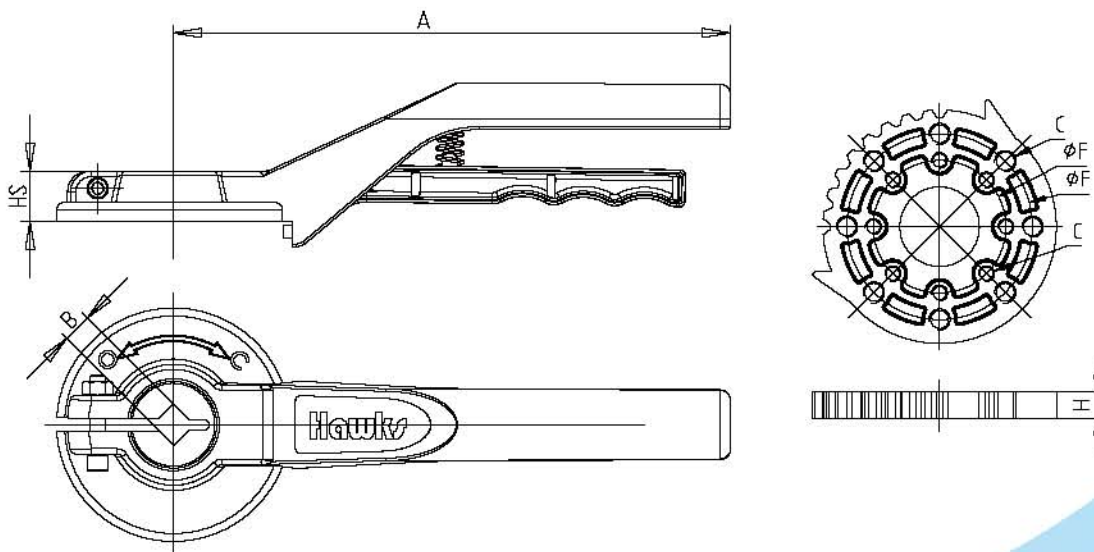
Series Model Valve Square

e.g: 30 150 - 11

Detailed please reference selection.

Reference Selection

Model	A	B (Square)	C	HS	F (Flange)	H	WT(KG)	Max. Output Torque(Nm)
30150	210	8/9/11/14/17	M6/M8	14-19	50/70	10	0.4	45
30250	340	14/17/22	M8/M10	23-28	70/102	12	0.95	85



YLS Series Limit Switch



Ordering code

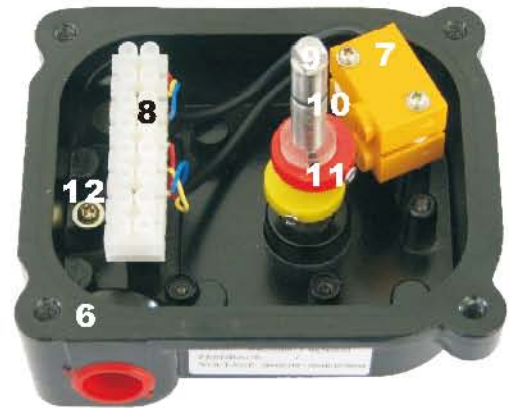
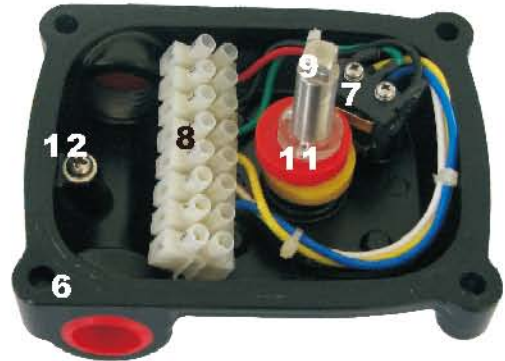
e.g: Series Model Thread type Type Feedback
 YLS - 200 - NPT - M1 - F
 Detailed please reference selection.

Series	Model	Type	Feedback
YLS	200	M2:Mechanical Switches(2 SPDT)	F:with 4-20mA Feedback(only for300, 400) Non:without Feedback
	300	M3:Mechanical Switches(3 SPDT)	
	400	M4:Mechanical Switches(4 SPDT)	
	500	M5Mechanical Switches(5 SPDT)	
	500	PP:P&F(NAMUR) ExiaIICT6	
	600	PA:Proximity Sensor(2 or 3)	
		QA:Magnet Sensor(2 or 3) SPST or SPDT	

Reference Selection

Model	YLS-200	YLS-300	YLS-400	YLS-500	YLS-600
Weather Proof	IP67		IP66		
Enclosure Exclusion proof	-		ExdIICT6	ExdIIBT6	ExdIIBT6
Temperature Range	-25°C-85°C				
Cable Entry	2*1/2G(BSPP),NPT,BSPT,M20/16x1.5		2*1/2 or 3/4G(BSPP), NPT, BSPT, M20x1.5		
Terminal Strips	8-12	8-14	8-12	8-10	8-12
Position Indicator	0-90°				
	Open-Yellow;Close-Red				
Terminal Strips	5A125-250VAC	15A125-250VAC			
Proximity Sensor	DV 24V(10-30VDC),<=150mA				
Magnet Sensor	5-240VAC/DC,<=300mA				
Position Transmitter			Feedback		

Dimension Table



NO.	PartName	Qty.	Material
1	Box Cover	1	Aluminum Die Casting/Stainless Steel only for YLS-600
2	Indicator Cover	1	Polycarbonate
3	Indicator	1	ABS
4	Bolts	4	Stainless Steel
5	Cover Bolts	4	Stainless Steel
6	Box Body	1	Aluminum Die Casting/Stainless Steel only for YLS-600
7	Limit Switch	2	Mechanical/Proximity/Magnet sensor
8	Terminal Strip	8-14	Polycarbonate, Tin Plated Brass, Stainless Steel
9	Shaft	1	Stainless Steel
10	Shaft O-ring	2	NBR
11	Cam	2	Polycarbonate
12	Grounding bolt	1	Stainless Steel
	Sealing ring	4	NBR
	Bush	2	Bronze

YEP-1000 Series Electro-Pneumatic Positioner



Ordering code

Series Model Actuator acting Acting Type Explosion Proof Feedback Style Pilot Vent Option
 e.g: YEP-1000 L S m L ① ①

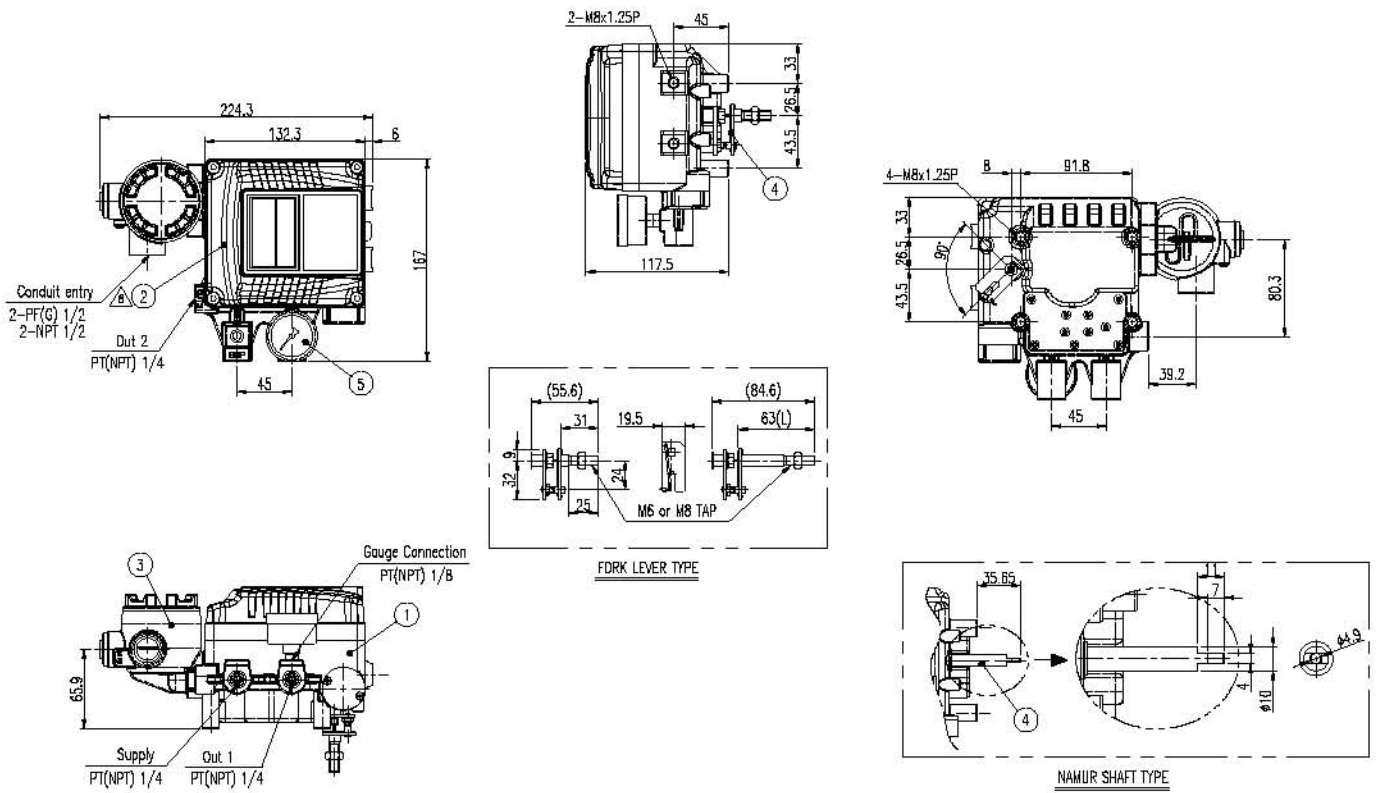
Series Model	Actuator acting	Acting Type	Explosion Proof	Feedback Style		Pilot Vent	Option
				-L	-R		
YEP-1000	-L(Linear) -R(Rotary)	-S(Single) -D(Double)	m Exd II BT6 l Exia II CT6 c Exd II CT6 n ordinary	①10 40mm ②40 70mm ③70 100mm ④100 130mm ⑤130 150mm	①M6*40L ②M6*63L ③M8*40L ④M8*63L ⑤NAMUR	①ActuatorVolume<90cm ³ ②ActuatorVolume90-180cm ³ ③ActuatorVolume>180cm ³	① Without ② With PTM inside ③ With L/S outside

E P positioner linear single type cannot with limit switch inside. Detailed please reference selection.

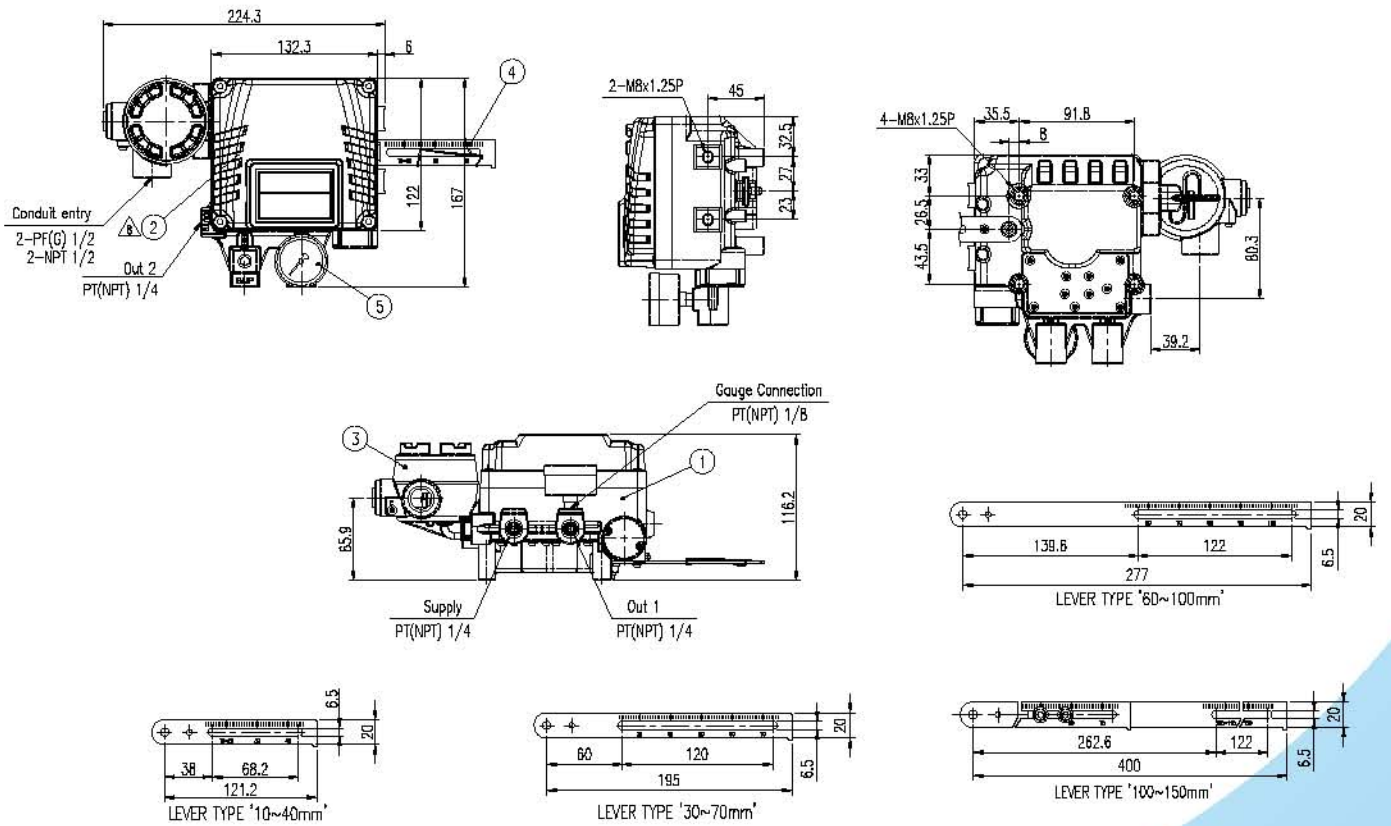
Reference Selection

Item	type	YEP-1000L		YEP-1000R	
		Linear		Rotary	
		Single	Double	Single	Double
Input signal		4~20mA DC			
Impedance		250±15Ω			
Air supply		1.4~7kgf/cm (20~100psi)			
Stroke		10~150mm 0~90°			
Air connection		PT(NPT)1/4			
Gauge connection		PT(NPT)1/8			
Conduit		PF1/2(G1/2)			
Explosion proof		Exd II BT6, Exd II CT6, Exia II CT6			
Protection		IP65			
Ambient temperature		-20°C~70°C			
Linearity		±1% F.S. ±2% F.S.			
Hysteresis		±1% F.S.			
Sensitivity		±0.2% F.S. ±0.5% F.S.			
Repeatability		±0.5%			
Air consumption		3LPM (Sup=1.4kgf/cm ² , 20psi)			
Flow capacity		80LPM (Sup=1.4kgf/cm ² , 20psi)			
Material		Aluminum alloy			
Weight		2.7kg(6Lb) 2.8kg(6.2Lb)			

YEP-1000L



YEP-1000R



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