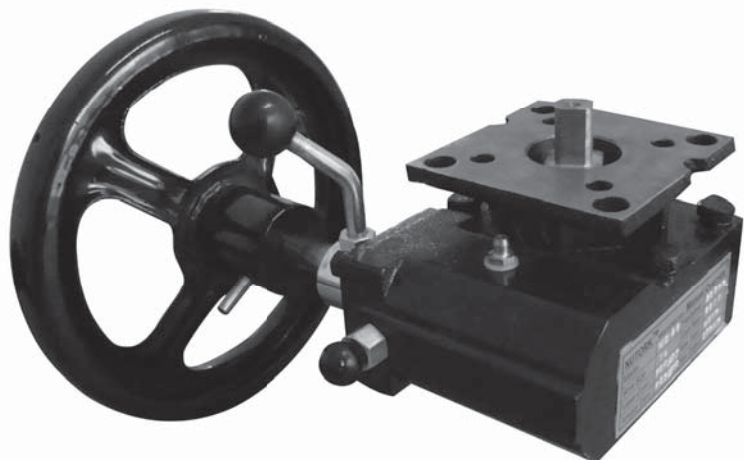


Declutchable Wormgear Manual Override



Aluminum Alloy Body
Output Torque: 300~5500Nm



Cast Iron & Ductile Iron Body
Output Torque: 300~70000Nm

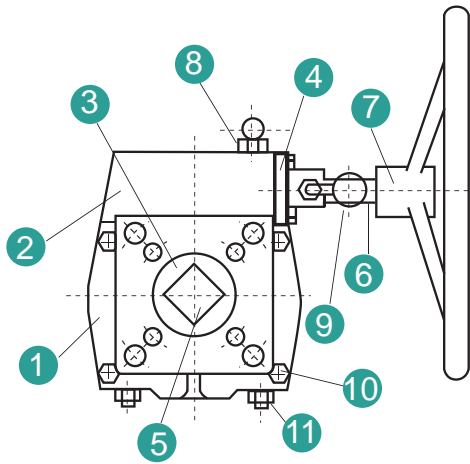
Declutchable Wormgear Manual Override



Aluminum Alloy Body



Cast Iron & Ductile Iron Body



FEATURES

- * ISO5211 Compliant upper and lower mounting patterns.
- * ISO5211 Compliant upper male square drive provide direct mount to ISO compliant actuators without adapters. and female “ double square ” lower drive provide direct mount to ISO compliant valves.
- * Dual position limit stops
- * External lube fitting
- * Roller thrust bearings on worm gear for improve efficiency

Material of Construction

Item	Description	Standard Material		
		MO30-MO310	MO850-MO3200	MOA30-MOA130
1	Cover	Cast Iron	Ductile Iron	Aluminum Alloy
2	Body	Cast Iron	Ductile Iron	Aluminum Alloy
3	Drive Gear	Ductile Iron		
4	Gear Cover	Cast Iron	Ductile Iron	Aluminum Alloy
5	Upper Male Square Stem	Carbon Steel		
6	Handwheel Shaft	Carbon Steel with Chrome Plated		
7	Handwheel	Plated Carbon Steel		
8	Position Lock Assy	Plated Carbon Steel		
9	Position Lever Assy	Plated Carbon Steel		
10	Cover Bolts	Carbon Steel with Zinc Plated		
11	Limit Stops	Stainless Steel		
12	Gear Cover Bolts	Carbon Steel with Zinc Plated		
13	Shaft Bushings	Carbon Steel		
14	Grease Fitting	Brass		
15	Nameplate	Aluminium		
16	O-Rings	NBR(Buna-N)		

Note: Item 12-16 is not shown.

Performance Data Table of MO Series Cast Iron & Ductile Iron Body

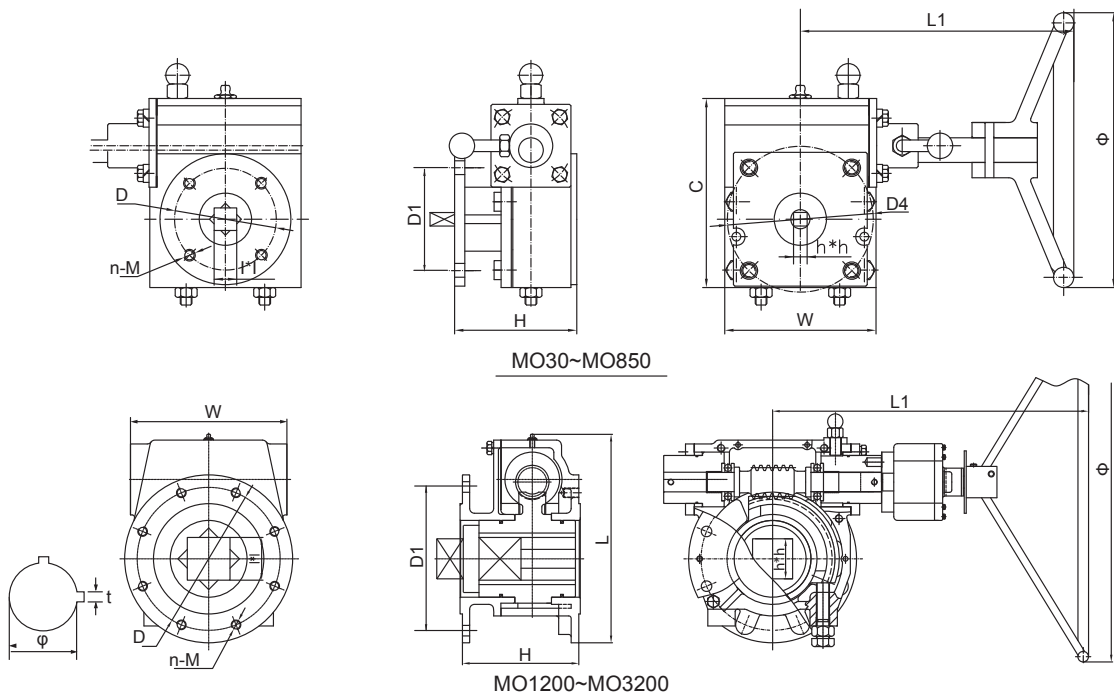
Model	Gear Ratio	Mechanical Efficiency(%)	Max. Output Torque (Nm)	Weight (kg)	Double Acting Actuator Model	Single Acting Actuator Model
MO30	26:1	25	300	6	NKD063~NKD105	NKS063~NKS125
MO70	38:1	29	700	13	NKD125~NKD140	NKS125~NKS160
MO120	54:1	18	1200	17	NKD160~NKD190	NKS160~NKS190
MO200	80:1	20	2000	22	NKD210/ NSF14DA	NKS-190~NKS-210/ NSF14SR
MO310	78:1	25	3100	34	NKD240/ NSF14DA	NKS210~NKS240/ NSF14SR
MO850	315:1	14.8	8500	106	NKD270~NKD300/ NSF16DA	NKS240~NKS270/ NSF14SR~NSF25SR
MO1200	333:1	15	12000	159	NSF25DA	NSF25SR
MO1800	490:1	21	18000	178	NSF30DA	NSF25SR~NSF30SR
MO2500	623:1	20.8	25000	210	NSF30DA	NSF30SR
MO3200	945:1	19.9	32000	280	NSF35DA	NSF35SR
MO7000	1460:1	21.3	70000	400	NSF40DA	NSF40SR

Declutchable Wormgear Manual Override

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Performance Data Table of MOA Series Aluminum Alloy Body

Model	Gear Ratio	Mechanical Efficiency(%)	Max. Output Torque (Nm)	Weight (kg)	Double Acting Actuator Model	Single Acting Actuator Model
MOA30	40:1	8.6	300	2.7	NKD063~NKD105	NKS063~NKS125
MOA36	38:1	8.6	360	4.3	NKD063~NKD105	NKS063~NKS125
MOA80	36:1	8.5	810	6.8	NKD105~NKD140	NKS125~NKS160
MOA130	50:1	8.5	1310	13.5	NKD160~NKD190	NKS160~NKS210
MOA280	55:1	19.0	2800	25.8	NKD210~NKD240	NKS190~NK210
MOA550	52:1	19.0	5500	40.3	NKD270~NSF16-300DA	NKS240~NSF16-300SR5



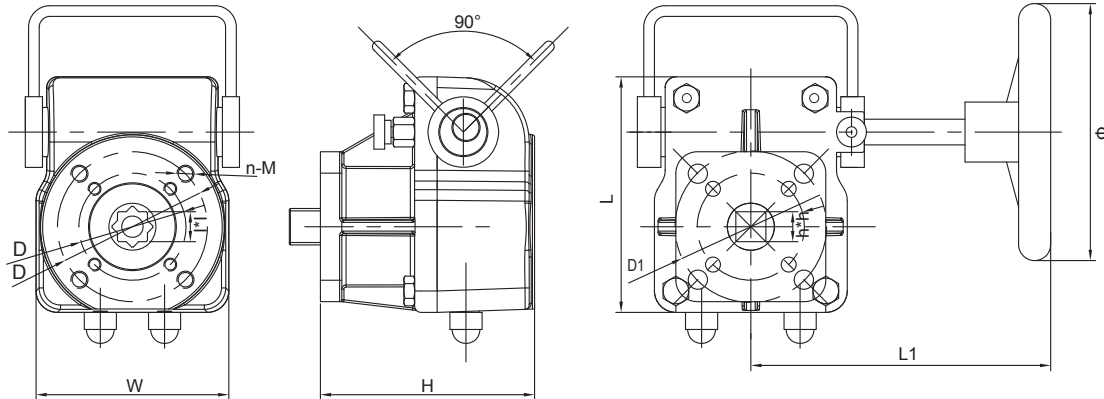
Dimension Table of MO Series Cast Iron & Ductile Iron Body

Model	ISO5211 Top Flange (D1)	Top Connection for Actuator (mm)		ISO5211 Bottom Flange (D)	Bottom Connection for Valve(mm)		n-M	(L) Length (mm)	(W) Width (mm)	(H) Height (mm)	(L1) Center to Hand wheel	(Φ) Hand wheel Dia. (mm)
		Male Square (h*h)	Round Dia. *Pin Width/ Height (φ*t)		Double Square (l*l)	Round Dia. *Pin Width/ Height (φ*t)						
MO30	F07/F10	◇14	Please Consult Factory	F05/F07	◇22	φ22*6/35	4-M8	166	104	85	191	200
MO70	F07/F10	◇22		F07/F10	◇36	φ45*14/38	4-M8 4-M10	191	125	84	225	300
MO120	F12/F14	◇27		F10 or F12	◇36	φ60*18/45	4-M10 4-M12	234	175	87	233	300
MO200	F14/F16	◇36		F14 or F16	◇36	φ60*18/55	4-M16 4-M20	311	234	115	277	400
MO310	F14/F16	◇36		F14 or F16	◇46	φ65*18/62	4-M16 4-M20	351	276	117	363	600
MO850	F16/F25	◇46	φ70*20/144	F16/F25	◇55	φ70*20/100	4-M20 8-M16	386	300	244	463	700
MO1200	F25/F30	◇55	φ100*28/134	F25 or F30	◇55	φ100*28/108	8-M16 8-M20	456	360	242	588	800
MO1800	F25/F30	◇75	φ120*32/117	F25 or F30	◇75	φ120*32/125	8-M16 8-M20	435	350	252	659	750
MO2500	F30/F35	◇100	φ148*36/120	F30 or F35	◇100	φ148*36/132	8-M20 8-M30	532	415	252	692	750
MO3200	F30/F35	◇100	φ148*36/125	F30 or F35	◇100	φ148*36/140	8-M20 8-M30	596	415	265	714	750
MO7000	F35/F40	◇100	φ148*36/125	F35 or F40	◇100	φ148*36/140	8-M20 8-M36	660	415	310	805	1000

Dimensions are only for reference. Nutork Corp. reserves the right to change the parameters without prior notice.

Declutchable Wormgear Manual Override

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Dimension Table of MOA Series Aluminum Alloy Body

Model	ISO5211 Top Flange (D1)	Top Connection	ISO5211 Bottom Flange (D)	Bottom Connection	n-M	(L) Length (mm)	(W) Width (mm)	(H) Height (mm)	(L1) Center to Hand wheel	(Φ) Hand wheel Dia. (mm)
		Male Square (h*h)		Double Square (I*I)						
MOA30	F05/F07	◇11/14/17	F05/F07	◇11/14/17	4-M8	110	90	100	143	200
MOA36	F07/F10	◇14/17/19	F07/F10	◇14/17/19	4-M8	135	125	118	177	200
MOA80	F10/F12	◇22/27	F10/F12	◇22/27	4-M10 4-M12	160	140	124	190	300
MOA130	F12 or F14	◇27/36	F12 or F14	◇27/36	4-M12 4-M16	200	185	162	325	400
MOA280	F14 or F16	◇36/46	F14 or F16	◇36/46	4-M16 4-M20	243	230	181	395	600
MOA550	F16/F25	◇46	F16/F25	◇46	4-M20	283	265	205	400	700

Order Information

Product Model	Upper Mounting Connection			Lower Mounting Connection			Hand wheel (mm)	
	Top Male Square	Upper Round Dia. Conn. Option	Upper ISO Pattern	Lower Female Double Square	Lower Round Dia. Conn. Option	Lower ISO Pattern		
MO Series:		Please Consult Factory						
MO30:300Nm	◇14mm		F07/F10	◇22	φ22*6 / 35	F05/F07	200	
MO70:700Nm	◇22mm		F07/F10	◇36	φ45*14 / 38	F07/F10	300	
MO120:1200Nm	◇27mm		F12/F14	◇36	φ60*18 / 45	F10 or F12	300	
MO200:2000Nm	◇36mm		F14/F16	◇36	φ60*18 / 55	F14 or F16	400	
MO310:3100Nm	◇36mm		F14/F16	◇46	φ65*18 / 62	F14 or F16	600	
MO850:8500Nm	◇46mm		φ70*20 / 144	F16/F25	◇55	φ70*20 / 100	F16/F25	700
MO1200:12000Nm	◇55mm		φ100*28 / 134	F25/F30	◇55	φ100*28 / 108	F25 or F30	800
MO1800:18000Nm	◇75mm		φ120*32 / 117	F25/F30	◇75	φ120*32 / 125	F25 or F30	750
MO2500:25000Nm	◇100mm		φ148*36 / 120	F30/F35	◇100	φ148*36 / 132	F30 or F35	750
MO3200:32000Nm	◇100mm		φ148*36 / 125	F30/F35	◇100	φ148*36 / 140	F30 or F35	750
MO7000:70000Nm	◇100mm		φ148*36 / 125	F35/F40	◇100	φ148*36 / 140	F35 or F40	1000
MOA Series:								
MOA30:300Nm	◇11/14/17	N/A	F05/F07	◇11/14/17	N/A	F05/F07	200	
MOA36:360Nm	◇14/17/19	N/A	F07/F10	◇14/17/19	N/A	F07/F10	200	
MOA80:810Nm	◇22/27	N/A	F10/F12	◇22/27	N/A	F10/F12	300	
MOA130:1310Nm	◇27/36	N/A	F12 or F14	◇27/36	N/A	F12 or F14	400	
MOA280: 2800Nm	◇36/46	N/A	F14 or F16	◇36/46	N/A	F14 or F16	600	
MOA550:5500Nm	◇46	N/A	F16/F25	◇46	N/A	F16/F25	700	

Dimensions are only for reference. Nutork Corp. reserves the right to change the parameters without prior notice.