



**JDV**  
**CONTROL**  
**VALVES**

# **JEF / JEG Series**

## Pneumatic Actuator



**JMO Series**  
Manual Override





**JDV**  
**CONTROL**  
**VALVES**

# JEF / JEG Series

## Pneumatic Actuator



JEF/JEG series pneumatic actuators are specifically designed to respond to your demanding needs on automation valve market. We can provide a wide range of torque outputs to suit quarter turn ball, butterfly, plug valves and dampers for complete valve automation solutions. The latest manufacturing technologies have been operated in order to supply a high quality and cycle-life on JEF/JEG series. Our extensive inventory & engineering capabilities allow us to provide reliable and safety products to our customer with satisfaction.

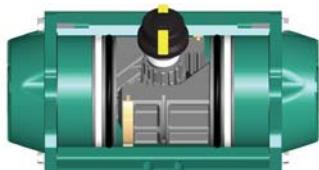
JEF/JEG 系列氣動執行器是專為球閥、蝶閥、旋塞閥、風門等 1/4 轉閥門運用在制程上控制而設計出的理想產品。雙齒輪齒排設計再加上曲柄式設計，提供使用者更多選擇以應不同的工況要求。優越的結構設計、精密的加工制程、強化的表面特殊處理以及嚴格的品質控管過程，使產品不僅達到最佳的控制性能，亦增加其使用壽命。

### PRODUCT FEATURES 產品特色

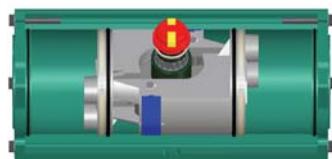
	Standard Version		Standard Version
Type	Twin Rack & Pinion Design: - Double Acting: JEF-040~210 - Spring Return: JEG-050~210 Scotch Yoke Design: - Double Acting: JEF-230~290 - Spring Return: JEG-230~290	Material	Body: - Standard Aluminum Alloy + Hard Anodized - Option: Aluminum Alloy + Epoxy Coated End Caps: Aluminum Alloy + Epoxy Coated Pinion Shaft: Alloy Steel + Electroless Nickel Plated Piston: Diecasted Aluminum Piston Seals: - Standard NBR Rubber - Option: Viton for higher or lower temperature Piston Guide: Self-lubricating Polypropylene + GF Springs: Alloy Steel
Specification	Interface Actuator/Valve: 4 or 8 female thread holes in the body conforms to DIN/ISO 5211, PART 1+2 Shaft: DIN 3337 Interface Actuator/Solenoid Valve: NAMUR Interface Actuator/Signal Unit: NAMUR	Air Supply	2.5 ~ 8.0 Bar
Ambient Temperature	Standard: -20 ~ 80 Deg C Option: -20 ~ 150 Deg C -35 ~ 80 Deg C	Movement	91.5° From -0.5° CW to 91° CCW
Torque Range	4 ~ 5000 Nm	Medium Quality	Filtered air (Residual oil, dust, and water mediums) according to PNEUROP/ISO Class 4

## JEF DOUBLE ACTING 雙動系列

JEF-040~210

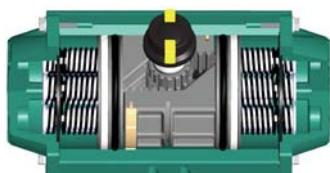


JEF-230/290



## JEG SINGLE ACTING 單動系列

JEG-050~210

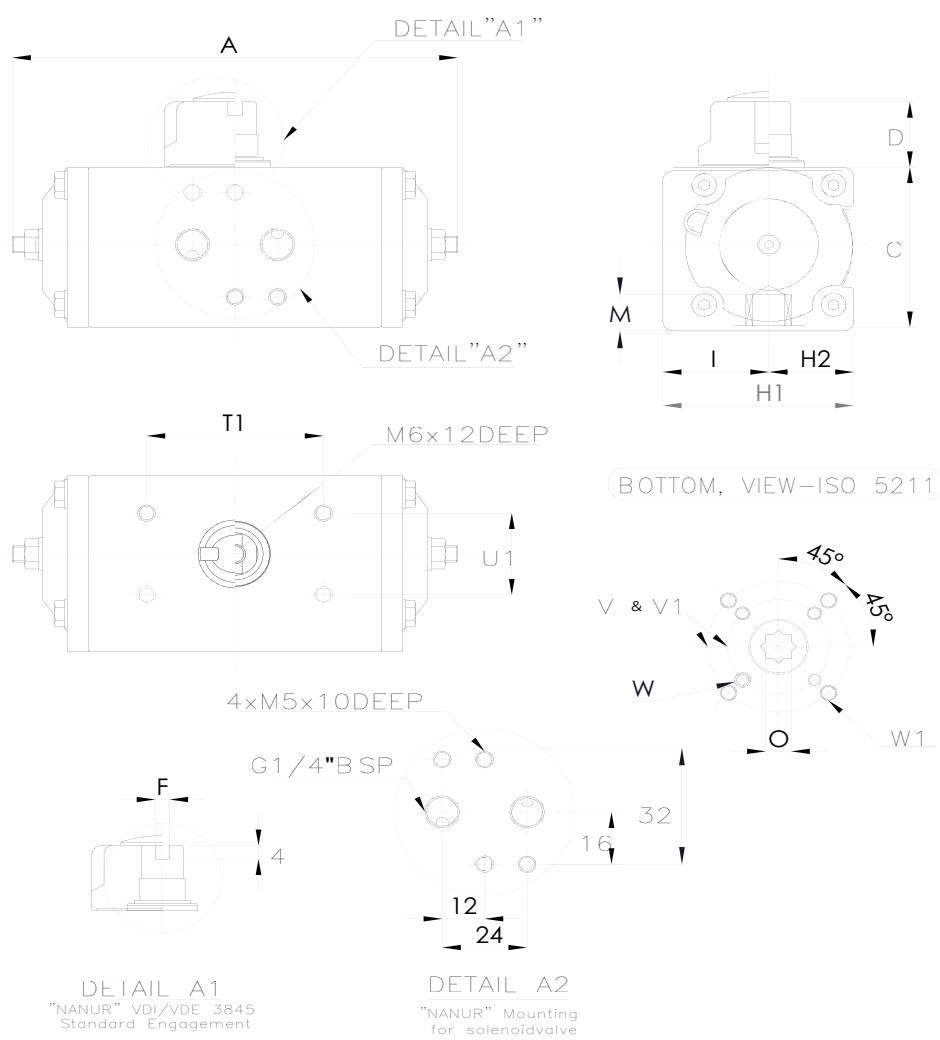


JEG-230/290



## Technical Specification 技術資料

JEF-040



(M.M)

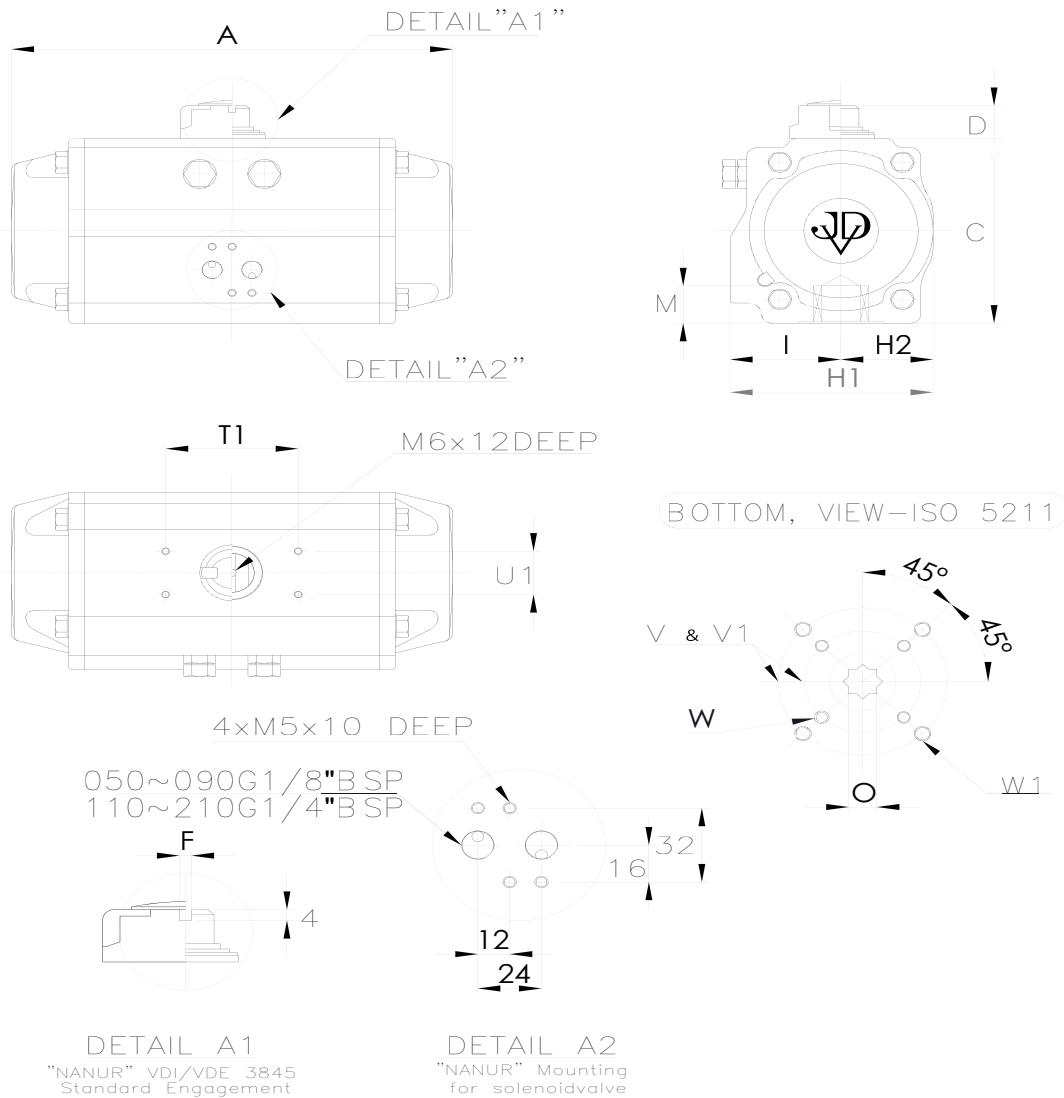
## DIMENSION

TYPE	A	C	D	F	H1	H2	I	M	O	T1	U1	V1/V	W/W1	ISO 5211
JEF040/90	126	49	20	49	54	24	30	10	9	50	25	Ø 36/Ø 50	M5/M6	F03/F05



**JDV  
CONTROL  
VALVES**

## JEF/JEG-050 ~ 210



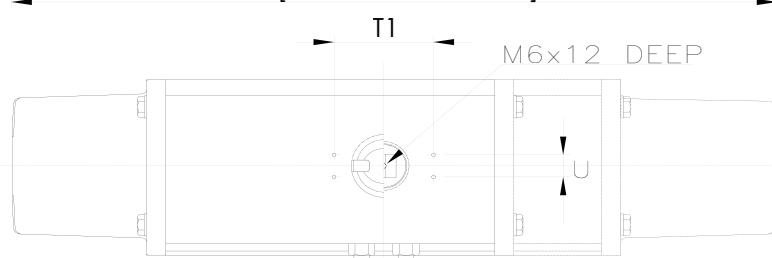
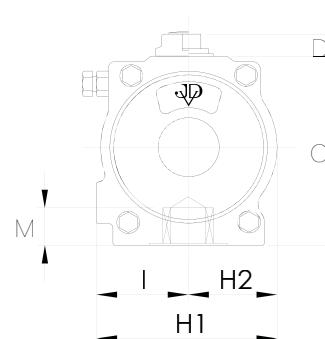
## DIMENSION

(M.M)

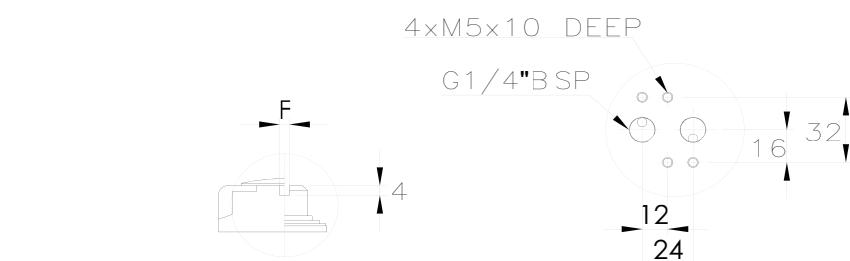
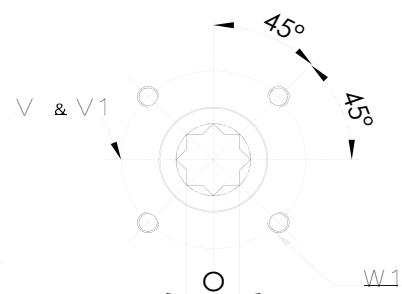
TYPE	A	C	D	F	H1	H2	I	M	O	T1	U1	V	W	ISO 5211
JEF050/90	144	73	20	4	72	30	42	14	11	80	30	Ø 36/ Ø 50	M5/M6	F03/F05
JEF060/90	163	87	20	4	85	38	47	18	14	80	30	Ø 50/ Ø 70	M6/M8	F05/F07
JEF070/90	202	87	20	4	85	38	47	18	14	80	30	Ø 50/ Ø 70	M6/M8	F05/F07
JEF080/90	210	104	20	4	96	42.5	53.5	22	17	80	30	Ø 50/ Ø 70	M6/M8	F05/F07
JEF090/90	247	116	20	4	108	49.5	58.5	22	17	80	30	Ø 50/ Ø 70/ Ø 102	M6/M8/M10	F05/F07/ F10
JEF110/90	268	128	20	4	123	56	67	22	17	80	30	Ø 50/ Ø 70/ Ø 102	M8/M10	F05/F07/ F10
JEF120/90	316	146	20	4	141	64	77	32	22	80	30	Ø 70/ Ø 102	M8/M10	F07/F10
JEF130/90	347	159	20	4	151	69	82	32	22	80	30	Ø 70/ Ø 102/ Ø 125	M8/M10/M12	F07/F10/ F12
JEF140/90	414	179	30	4	172	80	92	36	27	80	30	Ø 102/ Ø 125	M10/M12	F10/F12
JEF160/90	467	196	30	4	190	89	101	36	27	130	30	Ø 102/ Ø 125	M10/M12	F10/F12
JEF180/90	497	221	30	4	206	99	107	39	36	130	30	Ø 102/ Ø 125	M10/M12	F10/F12
JEF200/90	555	247	30	4	227	111	116	39	36	130	30	Ø 140	M16	F14
JEF210/90	628	256	30	4	236	116	120	43	36	130	30	Ø 140	M16	F14

## JEF/JEG-230/290

JEG230[SINGLE ACTUATOR] 669  
JEG230[DOUBLE ACTUATOR] 504



BOTTOM, VIEW-ISO 5211



DETAIL\_A1  
"NANUR" VDI/VDE 3845  
Standard Engagement

DETAIL\_A2  
"NANUR" Mounting

## DIMENSION (M.M)

TYPE	A	C	D	F	H1	H2	I	M	O	T1	U1	V1/V	WW1	ISO 5211
JEF230/90		256	30	4	236	116	120	54	46	130	30	Ø 160	M16	F16
JEF290/90		256	30	4	236	116	120	54	46	130	30	Ø 160	M16	F16



## DOUBLE ACTING TORQUE SHEET JEF SERIES 雙動扭力表 (Nm)

Type	Operating pressure P St [bar]									
	2.5	3	3.5	4	4.5	5	5.5	6	7	8
JEF-040	3.8	4.5	5.3	6	6.8	7.5	8.3	9	10.5	12
JEF-050	8.3	10	11.7	13.3	15	16.6	18.3	20	23.3	26.6
JEF-060	15	17.9	20.9	23.9	26.9	29.9	32.9	35.9	41.9	47
JEF-070	20.9	25.1	29.3	33.5	37.7	41.9	46.1	50.3	58.6	67
JEF-080	28.7	34.5	40.2	45.9	51.7	57.4	63.2	68.9	80.4	92
JEF-090	46.1	55.3	64.5	73.7	83	92.2	101	111	129	147
JEF-110	68.2	81.9	95.5	109	123	137	150	164	191	214
JEF-120	108	129	151	172	194	215	237	258	301	344
JEF-130	139	166	194	222	249	277	305	333	388	443
JEF-140	218	261	305	348	392	435	479	522	609	696
JEF-160	284	341	397	454	511	567	624	681	794	908
JEF-180	383	460	536	613	689	766	842	919	1072	1225
JEF-200	532	638	744	851	957	1063	1170	1276	1489	1702
JEF-210	587	704	822	939	1056	1174	1291	1409	1643	1878

JEF-230	Start	Run	End
4.2Bar	1507	753	1312
5.6Bar	2009	1005	1750
7 Bar	2511	1255	2187

JEF-290	Start	Run	End
4.2Bar	3011	1506	2622
5.6Bar	4017	2006	3498
7 Bar	5022	2509	4373

1 Nm = 8.86 Lb-in      1 Lb-in = 0.0115 Kgm      1 Kgm = 9.81 Nm      1 Mpa = 10 Bar  
 1 Lb-in = 0.113 Nm      1 Bar = 14.5 Psi      1 Kgm = 86.8 Lb-in      1 Lb-ft = 12 Lb-in

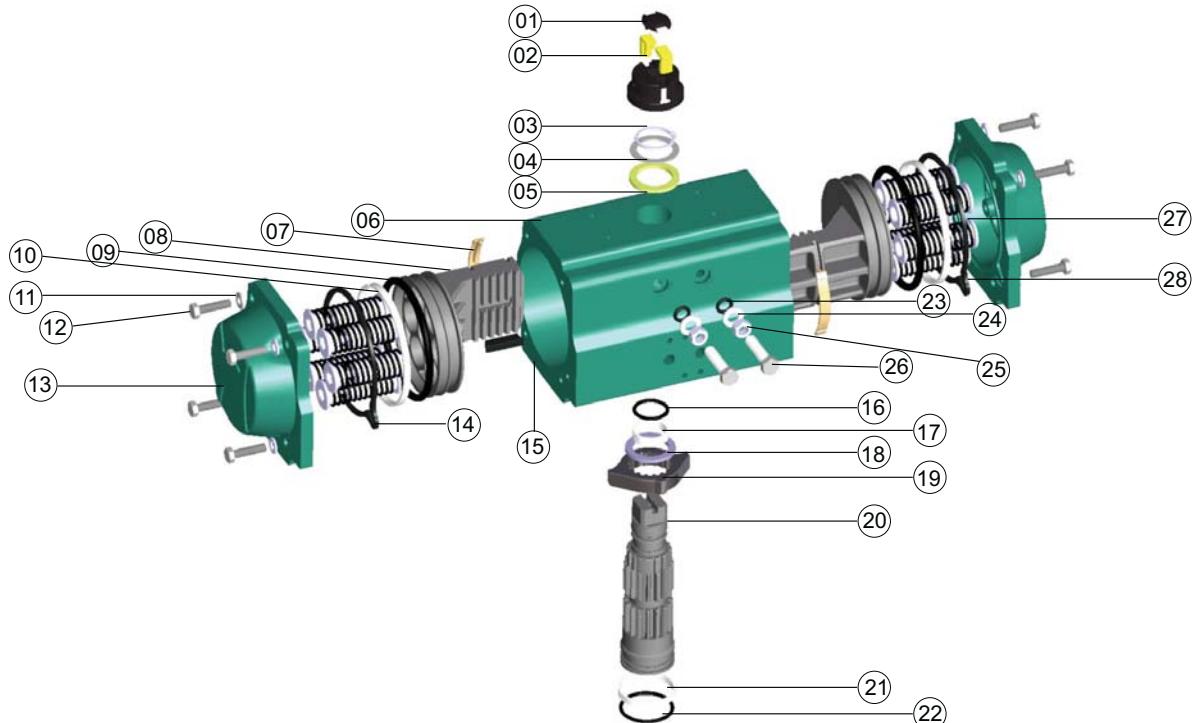






**JDV  
CONTROL  
VALVES**

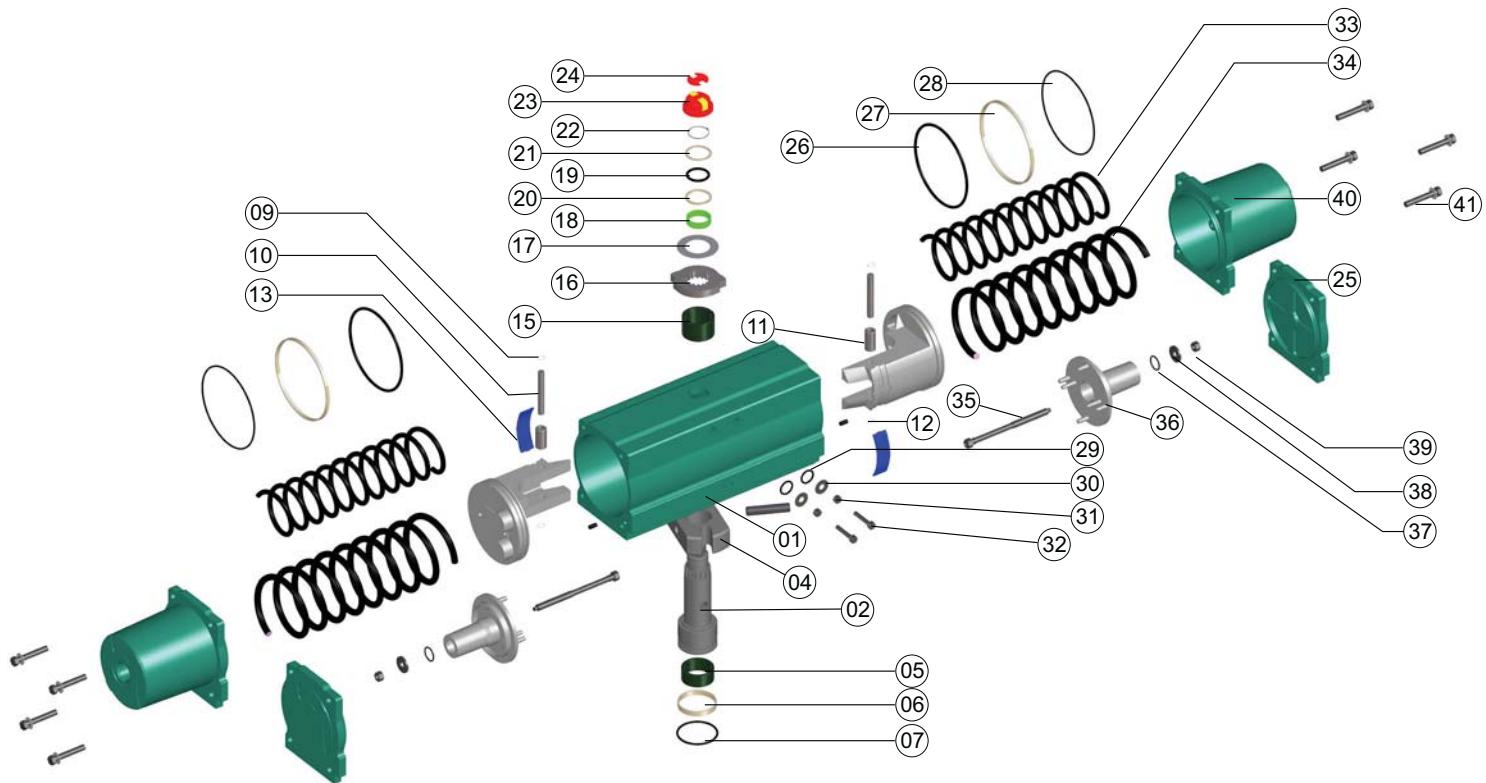
## FOR JEF/JEG-040 ~ 210



## MATERIAL

NO	PART DESCRIPTION	UNIT Q'TY	MATERIAL	CORROSION PROTECTION	OPTIONAL MATERIAL
1	Position indicator	4	Polypropylene+GF		
2	Position indicator holder	1	Polypropylene+GF		
3	Spring clip (pinion)	1	Stainless Steel	HP160,200 Nickel plated	
4	Thrust washer (pinion)	1	Stainless Steel		
5	Thrust bearing (pinion)	1	Polyphthalamide		
6	Body	1	Extruded Aluminium alloy	Hard anodized	
7	Bearing (piston back)	2	Polyphthalamide		
8	Piston	2	Die Cast Aluminium	Hard anodized	
9	O Ring (piston)	2	Nitrile (NBR70)		Viton SiliconViton
10	Bearing (piston head)	2	Polypropylene+GF		
11	Cap bolt washer	8	Stainless Steel		
12	Cap bolt (end cap)	2	Stainless Steel		
13	Right and left end cap	2	Die Cast Aluminium	Chromate+Polyester coated	
14	O Ring (end cap)	2	Nitrile (NBR70)		Viton SiliconViton
15	Piston guide	1	Polypropylene+GF		
16	O Ring (pinion top)	1	Nitrile (NBR70)		Viton SiliconViton
17	Bearing (pinion top)	1	Nylon 46		
18	Thrust bearing (pinion)	1	Polypropylene+GF		
19	Open.Close cam(stop arrangement)	1	Stainless Steel		
20	Drive shaft	1	Steel alloy	Nickel plated	
21	Bearing(piston bottom)	1	Nylon 46		
22	O Ring (pinion bottom)	1	Nitrile (NBR70)		Viton SiliconViton
23	O Ring (stop screw)	1	Nitrile (NBR70)		Viton SiliconViton
24	Stop bolt washer	2	Stainless Steel		
25	Stop nut	2	Stainless Steel		
26	Stop bolt	2	Stainless Steel		
27	Spring (cartridge)	min.5/max.12	High alloy Spring Steel	Epoxy coated	
28	Spring holder	1	Polypropylene+GF		

## FOR JEF/JEG-230~290



## MATERIAL

NO	PART DESCRIPTION	Q'TY	MATERIAL
1	Cylinder Body	1	Aluminium alloy
2	Drive shaft	1	Steel alloy
3	Yoke Pin	1	Steel
4	Yoke	1	Steel
5	Bottom Spacer	1	Nylon
6	Stem Bottom Bearing	1	Stainless Steel
7	Stem Bottom O-Ring	1	NBP
8	Piston	2	Aluminium
9	Snap Ring	2	Stainless Steel
10	Roller Pin	1	Steel
11	Shaft	1	Steel
12	Snap Ring	2	Stainless Steel
13	Piston Back Bearing	3	PTFE
14	Hole Sealant	2	NBR
15	Top Spacer	1	Nylon
16	OCT Cam	1	Steel
17	Stem Thrust Bearing	1	Stainless Steel
18	Stem Top Bearing	1	Stainless Steel
19	Stem Top O-Ring	1	NBR
20	Teflon Washer	1	PTFE
21	Stem Thrust Washer	1	Stainless Steel

NO	PART DESCRIPTION	Q'TY	MATERIAL
22	Snap Ring	5	Stainless Steel
23	Indicator	1	ABS
24	Indicator Holder Cover	1	ABS
25	Double Acting Cover	2	Aluminium
26	Piston O-Ring	2	NBP
27	Bearing (piston head)	3	PTFE
28	Cover O-Ring	2	NBR
29	Stop Bolt O-Ring	2	NBR
30	Stop Bolt Washer	2	Stainless Steel
31	Stop Bolt Nut	2	Stainless Steel
32	Stop Bolt	2	Stainless Steel
33	Inner Spring	1 or 2	Spring Steel
34	Outer Spring	1 or 2	Spring Steel
35	Spring Bolt	1 or 2	Stainless Steel
36	Spring Retainer	1 or 2	Aluminium
37	Spring O-Ring	1 or 2	NBR
38	Spring Washer	1 or 2	Steel
39	Spring Nut	1 or 2	Stainless Steel
40	Spring Return Cover	2	Aluminium
41	Cover Bolt	8	Stainless Steel
42			



**JDV**  
**CONTROL**  
**VALVES**

# JMO Series

## Manual Override 手動裝置



JMO Series manual override is an emergency device for opening/closing of valve in case of pneumatic actuator failure. its self-locking worm gear design provides safe and easy operation for transferring between control and manual.

JMO 系列手動裝置為一款緊急操作裝置，用於當氣動執行器失去作用時，依然能即由手動裝置來達到閥的開 / 關作用。特殊的過輪自動定位設計，使得在切換氣動 / 手動過程中更為安全及簡易。

### APPLICABLE STANDARD 設計標準

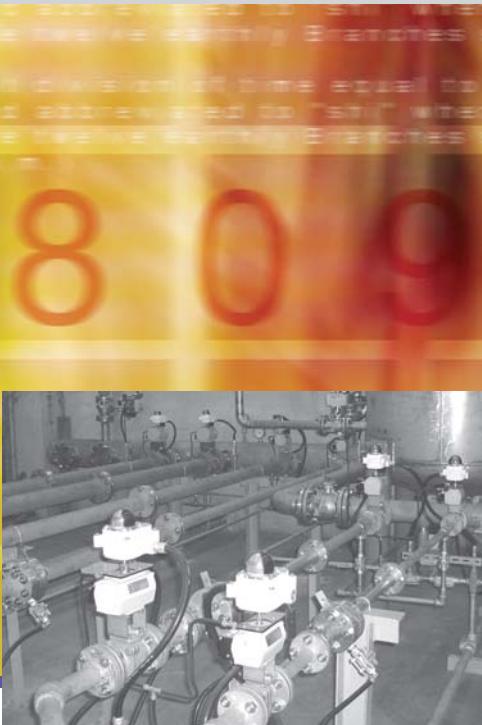
Model 型號 : JMO-1/JMO-2/JMO-3/JMO-4

Torque Range 扭力範圍 : 100 to 5200Nm

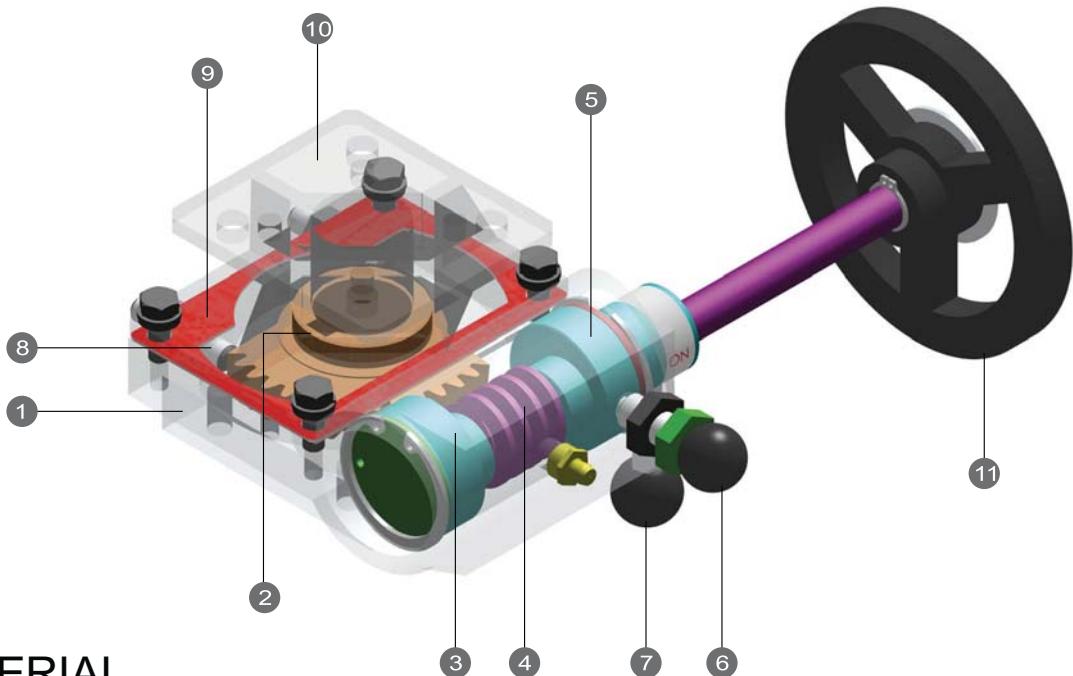
Temperature 溫度範圍 : -20°C to +80°C

Stroke Adjustment 角度調整範圍 : ± 10°C

Movement 作動範圍 : 0° to 90°



## TECHNICAL SPECIFICATION 技術資料



## MATERIAL

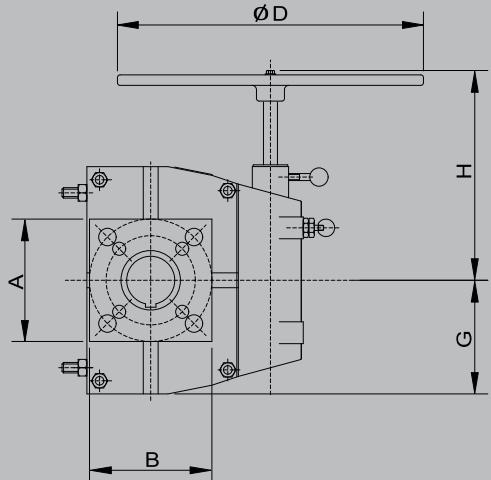
NO	PART NAME	MATERIAL
1	HOUSING	ALUMINUM
2	WORM WHEEL	IRON
3	ECCENTRIC BUSH BEAR	ALUMINUM
4	WORM SHAFT	ALUMINUM
5	ECCENTRIC BUSH H/W SIDE	ALUMINUM
6	SELECTOR	STEEL

NO	PART NAME	MATERIAL
1	ON/OFF LEVER	STEEL
2	LIMIT STOP	STEEL
3	GASKET	ASBESTOS
4	TOP COVER	ALUMINUM
5	HAND WHEEL	ALUMINUM
6	SELECTOR	STEEL

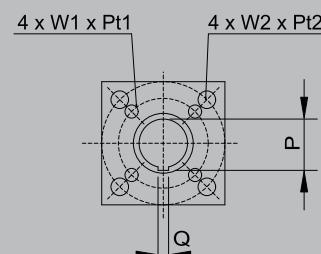
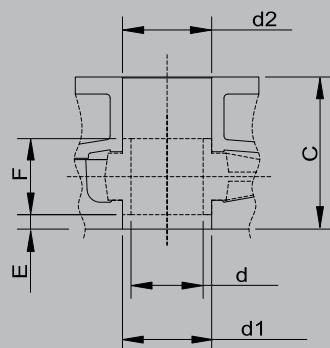
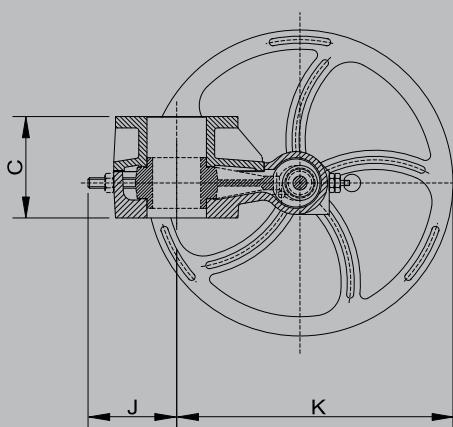
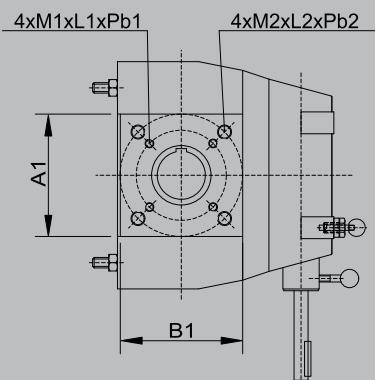


**JDV  
CONTROL  
VALVES**

### JMO-1~JMO-3



BOTTOM PAD DETAILS



TOP PAD DETAILS

SECTION - P-P'

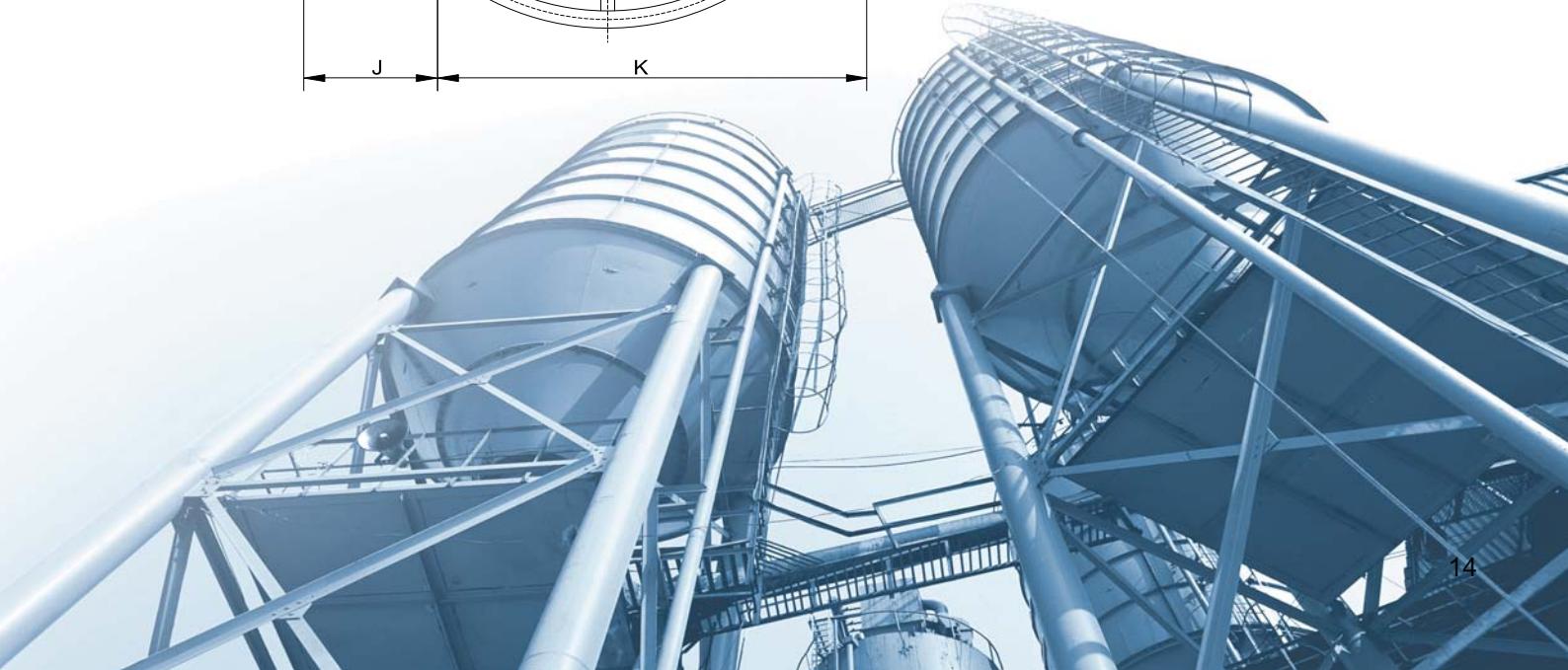
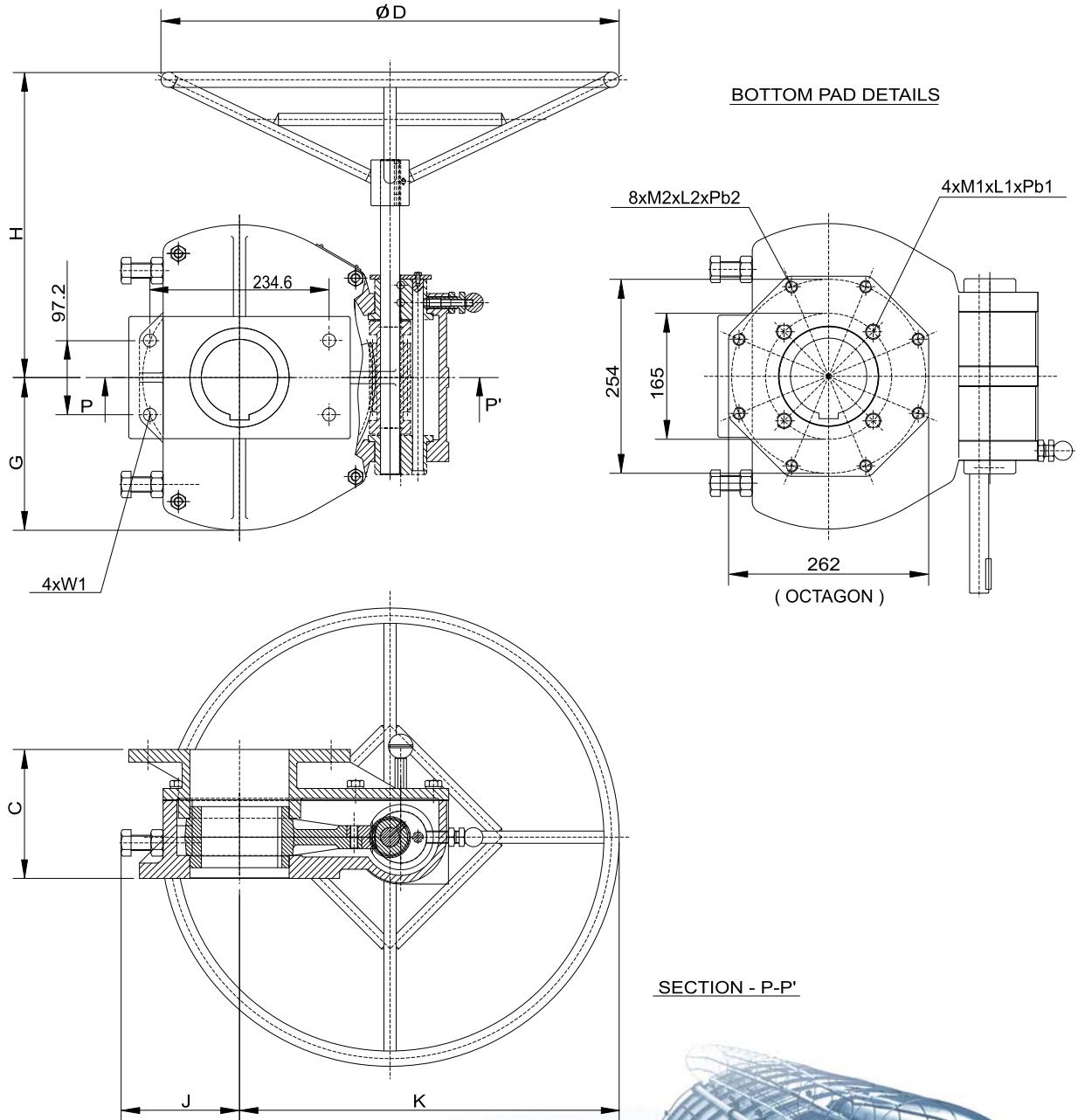
DRIVE DETAILS.

### DIMENSION

MODEL	A	B	A1	B1	C	D	E	F	G	H	J	K	Ød	Ød1	Ød2	P	Q	WT (KG)
JMO-1	71.5	80	72	80	74	100	18.5	25	50	130	40	99-106	27	38	28	30.4	8	2
JMO-2	100	120	100	100	88	200	23	35.5	73	170	70	175-184	32	42.5	42.5	35.3	8	5
JMO-3	140	140	140	140	124	350	19	58	134	240	102	307-316	55	68	68	58.3	12	14
JMO-4	160	290	262	262	168.8	600	14	80	200	420	145	498-526	100	130	130	105.5	25	43

MODEL	M1xL1xPb1	M2xL2xPb2	WxPt1	WxPt2	NO. OF TURN	INPUT FORCE MAX (N)	OUTPUT TORQUE MAX (Nm)
JMO-1	M6x9 DEEPxPCD-50	M8x13 DEEPxPCD-70	Ø 6.6xPCD-50	Ø 9.0xPCD-70	9.5	82	100
JMO-2	M8x13 DEEPxPCD-70	M10x16 DEEPxPCD-102	Ø 9.0xPCD-70	Ø 11.0xPCD-102	10	400	500
JMO-3	M10x16 DEEPxPCD-102	M16x16 DEEPxPCD-140	Ø 11.0xPCD-102	Ø 18.0xPCD-140	20	400	1600
JMO-4	M20x22 DEEPxPCD-165	M16x17 DEEPxPCD-254	Ø 17.0		22	400	5200

**JMO-4**





■ HEADQUARTERS

NO.6-1, QINGNIAN RD., YANGMEI DIST., TAOYUAN CITY 326, TAIWAN  
Tel: 886-3-4965066 Fax: 886-3-4965300 E-mail:sales@jdv.com.tw

Copyright 2009/12. All rights are reserved by JDV. Technical data and content may be changed by JDV as necessary

