

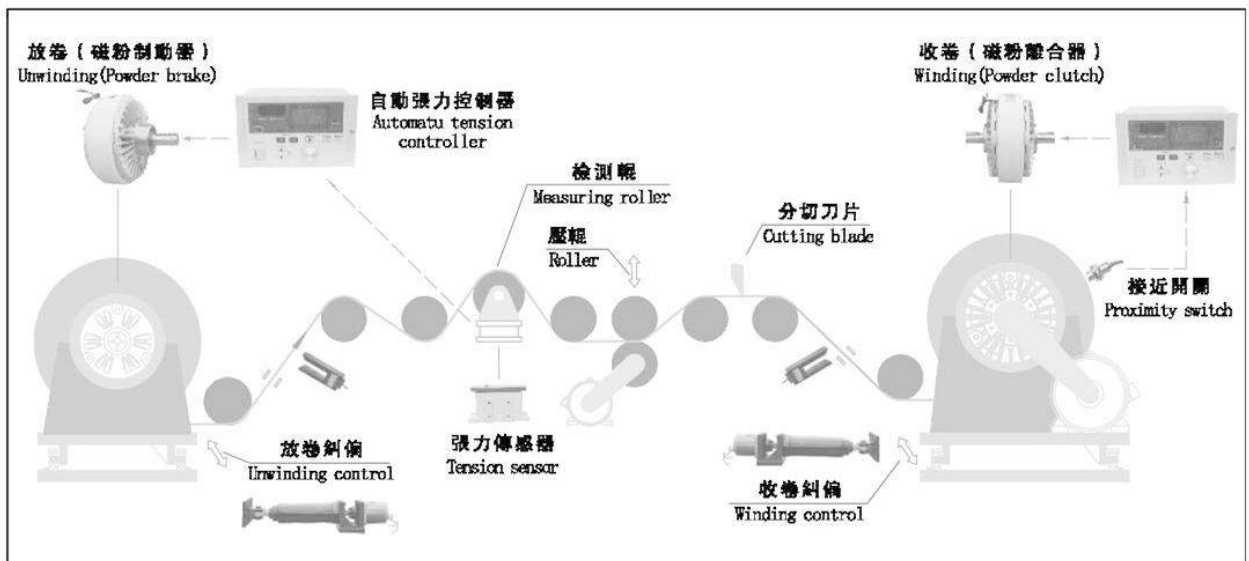


磁粉離合器/制動器簡介 Powder clutch/Brake introduction

■ 應用範圍 Application

由于磁粉離合器/制動器具有以上特性，現已廣泛應用于造紙、印刷、塑料、橡膠、紡織、印染、電纜電纜、冶金以及其他相關卷取加工行業中收卷和放卷張力的控制。下面是一套較為完整的張力控制系統示意圖。

Due to the features of the magnetic powder clutch and brake, they have been widely used in paper making, printing, plastic items, rubber industry, textile industry, printing and dyeing, wire and cable, metallurgy industry and tension control of winding and unwinding in roll material processing industry. A complete set of schematic of tension control system is as follows:



另外：磁粉離合器還可以用于緩衝啓動、過載保護、調速等；磁粉制動器還可以用于傳動機械的測試加載、制動等。

Moreover, the magnetic powder clutch can be also used in soft starting, overload protection, speed regulation; the magnetic powder brake can be also used in test loading and braking of the transmission machinery.

■ 設計參考 Design reference

首先，我們解釋一下兩個名詞：
First, let us learn the meaning of the following words:

1、滑差轉速：磁粉離合器為輸入軸與輸出軸之間的轉速差，磁粉制動器為輸入軸的轉速；

2、滑差功率：磁粉離合器/制動器在傳遞轉矩時，因為有滑差轉速而產生的功率。

1.slip rotational speed:the speed difference between input shaft and output shaft of magnetic powder clutch,the rotational speed of output shaft for magnetic powder brake.

2.slip power:the power generated from the slip rotational speed when the magnetic powder clutch or brake transfer torque.

磁粉離合器/制動器的選型一般以其所需的最大轉矩、轉速為依據來選定。但同時也要保證其實際工作的滑差功率小于額定值，因為滑差功率會轉化成熱量造成各部位零件的溫度上升。具體計算公式如下：

The selection of the magnetic powder clutch or brake rely on the maximum required torque and rotational speed.Because the temperature of all parts will rise when the slip power is converted into heat, it is guaranteed that the actual slip power is less than the rated value.

磁粉離合器/制動器簡介 Powder clutch/Brake introduction

$$P = \frac{2\pi}{60} \times M \times n = F \times V \quad (\text{unit:w})$$

式中 in this formula :

P –滑差功率 slip power (unit:w)

M –工作轉矩 working torque (units:N.m)

n –滑差轉速 slip rotational speed (units:r/min)

F –工作張力 working tension (unit:N)

V –綫速度 line speed (unit:m/s)

舉例：POD-B-10KG 磁粉制動器，滑差功率為 7000W，額定轉矩為 100 N.m，許用轉速為 1500 r/min。

Example: POD-B-10KG magnetic powder brake ,the slip power is 7000w, the rated torque is 100 N.m, the allowed rotational speed is 1500 r/min.

當其在額定轉矩工作時，允許的最高轉速為：

When it works at the rated torque,the highest allowed rotational speed is :

$$n = \frac{60 \times P}{2\pi \times M} = \frac{9.55 \times P}{M} = \frac{9.55 \times 7000}{100} = 668.8 \text{ (r/min)}$$

當其在最高滑差轉速工作時，允許的最大轉矩為：

When it works at the highest slip rotational speed ,the highest allowed torque is:

$$M = \frac{60 \times P}{2\pi \times n} = \frac{9.55 \times P}{n} = \frac{9.55 \times 7000}{1500} = 44.6 \text{ (N.m)}$$

■ 注意事項 Notes

● 不得超載、冷卻到位

Don't overload, meanwhile cool to appropriate temperature

磁粉離合器/制動器在工作時，其轉矩、轉速、滑差功率均不得超過額定值。冷卻方式(自然冷卻、強制氣冷卻、水冷卻)需根據實際工作時產生的最大滑差功率而定。冷卻空氣需過濾油和水。有條件，可加裝溫度檢測、報警裝置，防止溫度過高，影響磁粉的使用壽命。(最高溫度80℃)

The value of the torque /rotational speed /slip power should be less than the rated value. The cooling mode (natural cooling /forced air cooling/water cooling)should depend on the maximum slip power when it works and the cooling air should pass the water and oil filter.The temperature detector and the alarm should be installed to prevent high temperature which can affect the service life of the magnetic powder.(the highest temperature is 80°C)

● 關於壽命

Concerning the service life

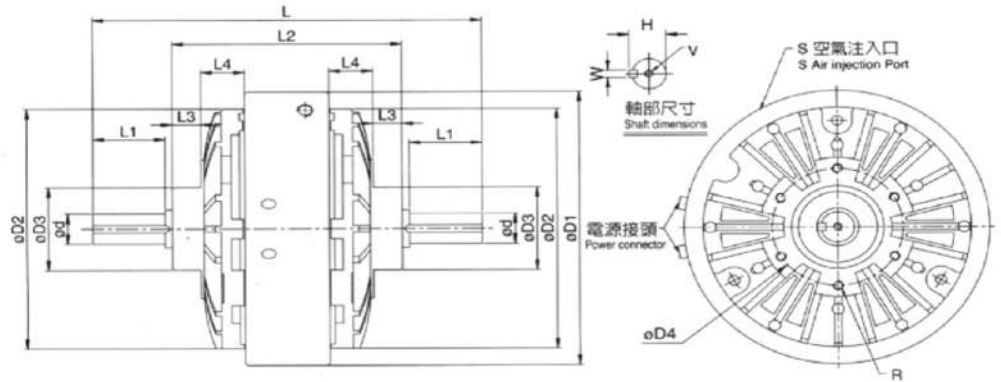
磁粉離合器/制動器的使用壽命在於磁粉的使用壽命。一般而言，磁粉在不超載的狀態下，其使用壽命為4500-7500小時；但在有些狀態下其使用壽命可延長數倍，如：降低磁粉離合器/制動器的工作轉矩、相對滑差轉速和滑差功率到額定值的50%-70%。也就是說，在設計時，餘量盡可能放大一些。

The life of the magnetic powder clutch and brake rely on the life of the magnetic powder. Generally speaking ,its service life is 4500-7500 hours in the state of non overloaded;But its service life can extend several times in some cases,such as:the working torque of the magnetic powder clutch/brake、relative slip rotational speed and slip power can be reduced to 50%-70% of the rated value.This is to say ,the margin can be enlarged as soon as possible when designing.



TJ-POC

磁粉式離合器 Magnetic Particle Clutch



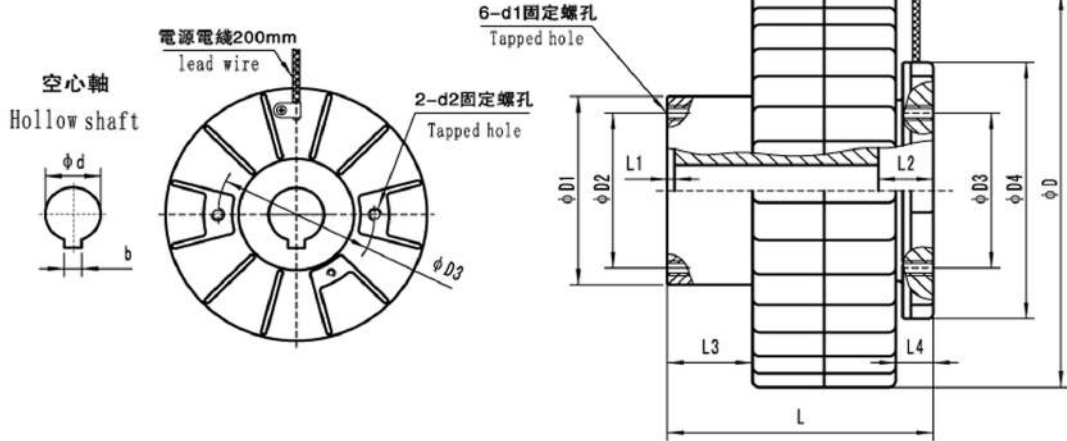
型號 MODEL		TJ-POC-0.6	TJ-POC-1.5	TJ-POC-2.5	TJ-POC-5	TJ-POC-10	TJ-POC-20	TJ-POC-40	
定格轉矩 [kgf-m](N-m) Rated torque		0.6(6)	1.2(12)	2.5(25)	5(50)	10(100)	20(200)	40(400)	
容量 Capacity DC24V (75°C)	電流(A) Current	0.81	0.94	1.24	2.15	2.4	2.7	3.5	
	電力(W) Power	19.4	22.5	30	51.5	57.6	64.8	84	
	時定數(S) Number of hours set	0.08	0.1	0.12	0.13	0.25	0.37	0.4	
慣性矩 Moment of inertia (kgm ²)	入力側 input side	6*10 ⁻⁴	1.34*10 ⁻³	3.8*10 ⁻³	9.5*10 ⁻³	3.5*10 ⁻²	9.15*10 ⁻²	2.4*10 ⁻¹	
	出力側 output side	2.40*10 ⁻⁴	4.90*10 ⁻⁴	1.49*10 ⁻³	4.8*10 ⁻³	2.5*10 ⁻²	6.89*10 ⁻²	2.2*10 ⁻¹	
強制空冷 容許滑動 功率 Allowable slippage rate with forced-air cooling	風壓(Pa) Air pressure	-	3*10 ⁴	5*10 ⁴	1*10 ⁵	6*10 ⁴	5*10 ⁴	2*10 ⁵	
	風量(M ³ /min) Air volume	-	0.2	0.4	0.6	1.1	1.6	2.0	
	功率(W) Power	-	250	380	700	1100	1900	2800	
重量 Weight	(kg)	4	5.2	9	14.5	37	53	100	
最高轉速 Maximum Speed	(r/min)	1800							
磁粉重量 Weight of powder(g)		10	20	33	60	140	225	370	
外型尺寸 Exterior dimensions	D1	134	152	182	219	276	325	395	
	D2	116	126	159.5	196	260.5	301	360	
	D3(g7)	42	42	55	74	100	110	130	
	D4	64	64	78	100	140	150	200	
	L	164	191.7	230	293.9	359	407.2	500.4	
	L1	26	29.5	43	55	65	69	92	
	L2	100	124	136	172	198	230	291	
	L3	14	15	17	30	28	30	35	
	L4	18	25.5	26	28	46	56	66.5	
	d(h7)	12	15	20	25	30	35	45	
	H(⁰ _{-0.2})	13.5	17	22	28	33	38.5	48.5	
	W(p7)	4	5			7		10	12
	V	M4*0.7P*8L	M4*0.7P*8L	M5*0.8P*10L	M6*1P*12L	M10*1.5P*20L			
R	6-M5*0.7P*10L	6-M6*1P*10L			6-M10*1.5P*15L		8-M10*1.5P*15L		
S	1/8	1/8		1/4	3/8				



TJ-POC-A

(法蘭盤輸入、空心軸輸出、空心軸支撐、外殼旋轉) 磁粉離合器

Magnetic powder clutch (flange input / hollow shaft output / hollow shall intall / rotational shell)



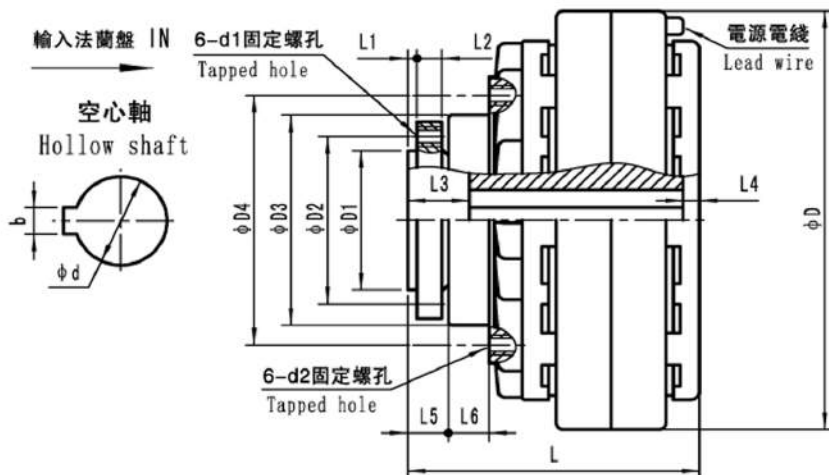
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定格轉距 (NM) Rated torque		6	12	25	50	100	200	400
容量 Capacity DC24V (75°C)	電流(A) Current	0.74	0.9	1.1	1.4	2.0	2.5	3.0
	許用轉速 (r/min) Allowable rotational speed	1800	1800	1800	1800	1800	1000	1000
	滑差功率(W) Slip power	130	320	450	700	900	1900	2600
外形尺寸 Outline dimension	D	128	160	180	220	275	335	360
	L	86	103	119	150	166	198	258
空心軸 聯結尺寸 Hollow shaft size	d(H7)	15	18	20	30	35	45	50
	b(F8)	4	5	6	8	10	14	14
	L1	1	2	2	3	4	1	1
	L2	21	25	26	31	32	45	50
	L3	21	32	36	48	48	59	68
法蘭盤聯結尺寸 Flange size	d1*深度Depth	M6*10	M6*10	M6*10	M8*12	M10*18	M10*18	M10*18
	D1(g7)	70	80	90	110	125	160	160
	D2	60	68	80	95	110	140	140
定子固定尺寸 Fixed stator size	D3	60	68	80	95	110	140	140
	D4	82	96	114	150	176	200	200
	L4	7	13	17	20	18	21	21
	d2*深度Depth	M4*8	M6*8	M6*8	M8*12	M10*18	M10*18	M10*18

(法蘭盤輸入、空心軸輸出、止口支撐、內殼旋轉) 磁粉離合器

Magnetic powder clutch(flange input/hollow shaft output/center ring install/inner shell rotates)

TJ **TJ-POC-B**

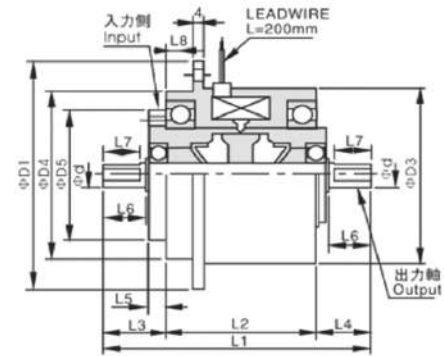
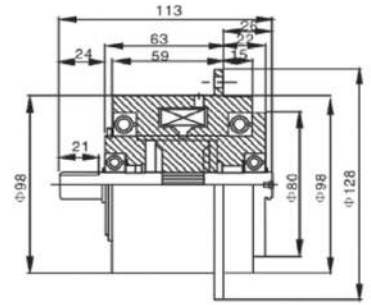
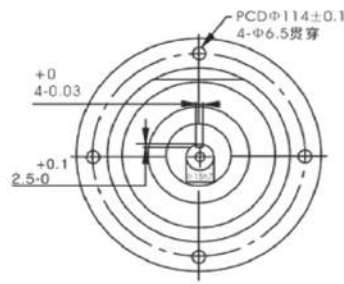
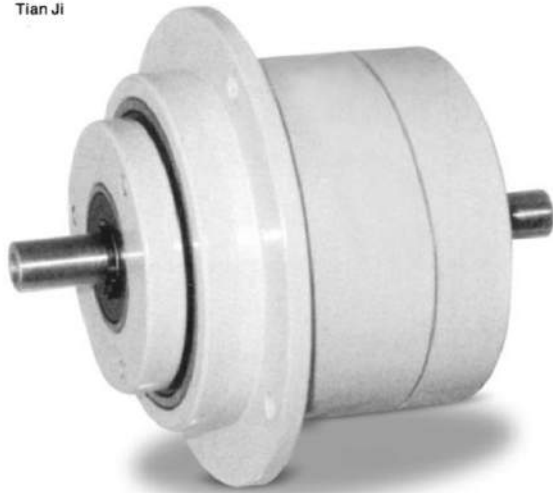
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型號 MODEL		TJ-POC-B-0.6	TJ-POC-B-1.5	TJ-POC-B-2.5	TJ-POC-B-5	TJ-POC-B-10	TJ-POC-B-20	TJ-POC-B-40
定格轉距 (NM)Rated torque		6	12	25	50	100	200	400
容量 Capacity DC24V (75°C)	電流(A) Current	0.9	1.0	2.0	2.3	2.5	2.5	3.0
	許用轉速 (r/min) Allowable rotational speed	1500	1500	1500	1500	1500	1000	1000
	滑差功率(W) Slip power	70	150	230	360	600	860	1300
外形尺寸 Outline dimension	D	140	152	186	220	290	336	398
	L	110	126	122	155	177	197	239
法蘭盤聯結尺寸 Flange size	D1(g7)	60	65	70	90	110	130	135
	D2	75	80	85	105	130	150	160
	L1	3	3	3	3	4	4	5
	L2	8	9	10	12	14	15	15
	d1*深度Depth	M5*8	M6*9	M6*10	M6*12	M10*14	M10*15	M12*15
空心軸 聯結尺寸 Hollow shaft size	d(H7)	16	20	25	30	35	45	50
	b(F8)	5	6	8	8	10	14	14
	L3	44	49	51	64	77	83	91
	L4	3	3	4	4	8	9	7
止口支撐尺寸 Center ring installation size	D3(g7)	85	90	100	120	150	170	180
	D4	100	105	115	140	180	190	210
	L5	13	14	15	17	20	21	23
	L6	24	29	26	36	41	42	43
	d2*深度Depth	M5*10	M6*12	M6*12	M6*14	M10*15	M10*16	M12*19

磁粉式微型離合器 Micro Magnatic Particle Clutch

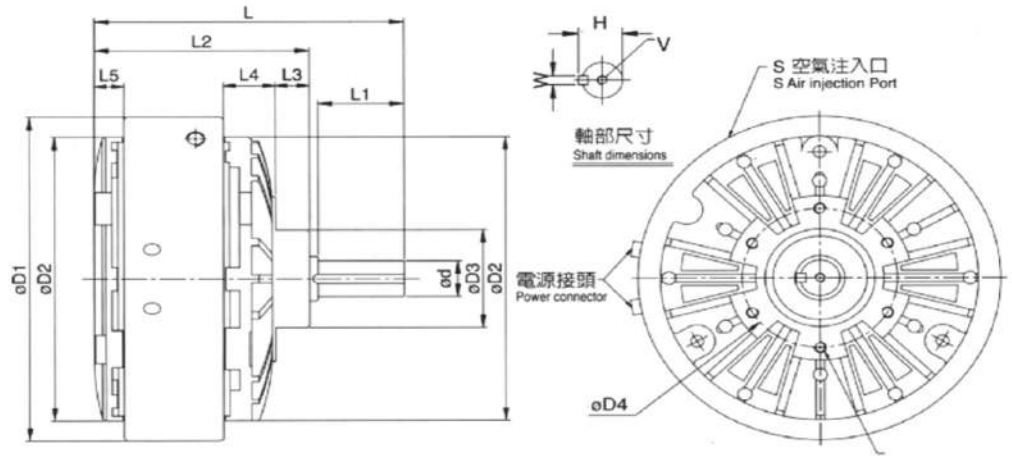
TJ-POC-C



型號 MODEL		TJ-POC-C-0.05	TJ-POC-C-0.1	TJ-POC-C-0.2	TJ-POC-C-0.5
定格轉距 (Nm) Rated torque		0.05 (0.5)	0.1 (1.0)	0.2 (2.0)	0.5 (5.0)
容量 Capacity DC24V (75°C)	電流(A)Current	0.35	0.47	0.55	0.8
	電力(W)Power	8.4	11.3	13	19
	時定數(S) Number of hours set	0.02	0.03	0.055	0.055
慣性矩 Moment of metia(kgm ²)	入力側Input side	2.1*10 ⁻¹	3.46*10 ⁻¹	6.8*10 ⁻¹	1.85
	出力側Output side	1.7*10 ⁻²	4.6*10 ⁻²	1.03*10 ⁻¹	4.0*10 ⁻¹
重量 Weight (kg)		0.67	0.88	1.27	2.3
最高轉速(r/min)Maximum speed		1800			
外型尺寸 Exterior dimensions	D1	70	76	85	100
	D2	60	66	75	90
	D3	50	56	65	80
	D4(g7)	48	54	63	78
	D5(g7)	40	42	48	60
	D6	30	34	40	50
	D6(g6)	5	7	9	12
	L1	77.2	83	95	111
	L2	47	48.5	53	64
	L3	16.6	18.5	22.5	25
	L4	13.6	16	19.5	22
	L5	5.5	5.5	6.5	6
	L6	10.5	12	15	18
	L7	9	10	13	16
	L8	8.5	8.5	9.5	12
	T	4.5	6.5	8.5	11.5



TJ-POD 磁粉式煞車器 Powder-type Solenoid Brake



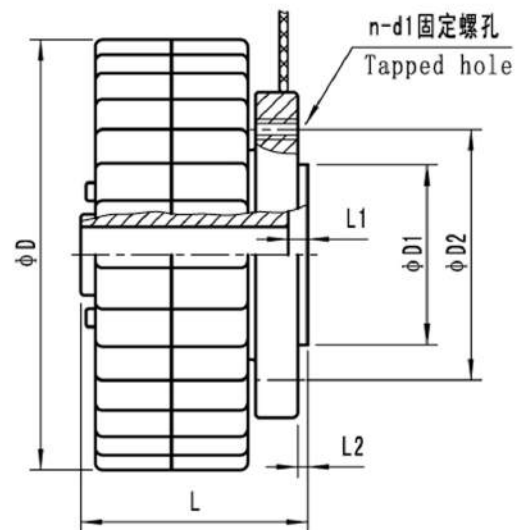
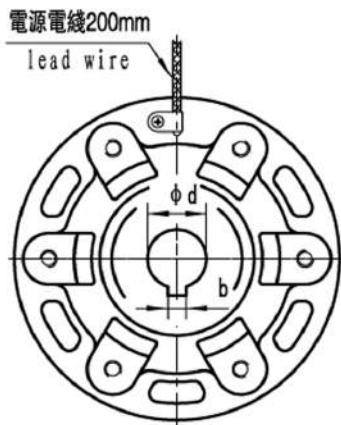
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定格轉距 [kgf-m](N-m) Rated turning distance		0.6(6)	1.2(12)	2.5(25)	5(50)	10(100)	20(200)	40(400)	
容量 Capacity DC24v (75°C)	電流(A) Current	0.81	0.94	1.24	2.15	2.4	2.7	3.5	
	電力(W) Power	19.4	22.5	30	51.5	57.6	64.8	84	
	時定數(S) Number of hours set	0.08	0.1	0.12	0.13	0.25	0.37	0.4	
慣性矩 Moment of inertia (kgm ²)		6.00*10 ⁻⁴	1.34*10 ⁻³	3.8*10 ⁻³	9.5*10 ⁻³	3.5*10 ⁻²	9.15*10 ⁻²	2.4*10 ⁻¹	
強制空冷 容許滑動 功率 Allowable slippage rate with forced-air cooling	風壓(Pa) Air pressure	-	3*10 ⁴	5*10 ⁴	1*10 ⁵	6*10 ⁴	5*10 ⁴	2*10 ⁵	
	風量(M ³ /min) Air volume	-	0.2	0.4	0.6	1.1	1.6	2.0	
	功率(W) Power	-	250	380	700	1100	1900	2800	
重量 Weight (kg)		4	5.2	9	14.5	34	53	100	
最高轉速 Maximum number of turns (r/min)		1800							
磁粉重量 Weight of powder(g)		10	20	33	60	140	225	370	
外型尺寸 Exterior dimensions	D1	134	152	182	219	278	327	395	
	D2	116	126	160	196	260	301	365	
	D3(g7)	42	42	55	74	100	110	130	
	D4	64	64	78	100	140	150	200	
	L	112.5	132	155	193	239	278	338	
	L1	114	29	43	55	65	69	92	
	L2	26	98	108	132	167	199	234	
	L3	14	15	17	30	28	30	35	
	L4	18	25.5	26	28	46	56	70	
	L5	12.5	14.5	15	18	21.5	32	40	
	d(h7)	12	15	20	25	30	35	45	
	H(-0.2)	13.5	17	22	28	33	38.5	48.5	
	W(p7)	4	5			7		10	12
	V	M4*0.7P*8L	M4*0.7P*8L	M5*0.8P*10L	M6*1P*12L	M10*1.5P*20L			
R	6-M5*0.7P*10L	6-M6*1P*10L			6-M10*1.5P*15L		8-M10*1.5P*15L		
S	1/8	1/8		1/4	3/8				

(空心軸聯結、止口支撐、外殼旋轉) 磁粉制動器

Magnetic powder brake(hollow shaft coupling/center ring install/rotational shell)

TJ-POD-A

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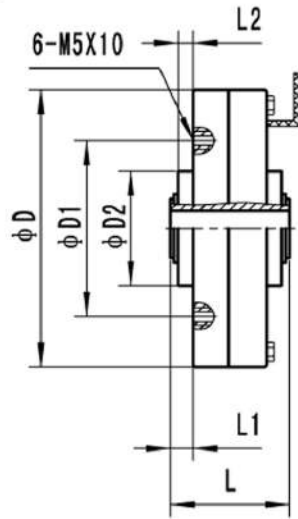
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定格轉距 (NM) Rated torque		6	12	25	50	100	200	400
容量 Capacity DC24V (75°C)	電流(A) Current	0.3	0.39	0.73	0.94	1.21	1.9	2.2
	許用轉速(r/min) Allowable rotational speed	1800	1800	1800	1800	1800	1000	1000
	滑差功率(W) Slip power	130	320	450	700	900	1900	2600
外形尺寸 Outline dimension	D	128	160	180	220	275	335	360
	L	68	88	98	115	136	160	210
空心軸 聯結尺寸 Hollow shaft size	d(H7)	12	18	20	30	35	45	50
	b(F8)	4	5	6	8	10	14	12
	L1	4	2	5	5	6	8	8
止口支撐尺寸 Center ring installation size	L2	2	5	5	5	5	6	6
	D1(g7)	70	74	100	110	120	160	160
	D2	80	100	140	150	150	240	240
	n-d1*深度 Depth	3-M5*10	3-M6*10	3-M10*19	3-M10*19	6-M10*22	6-M10*30	6-M10*30

(空心軸聯結、止口支撐、內殼旋轉) 磁粉制動器

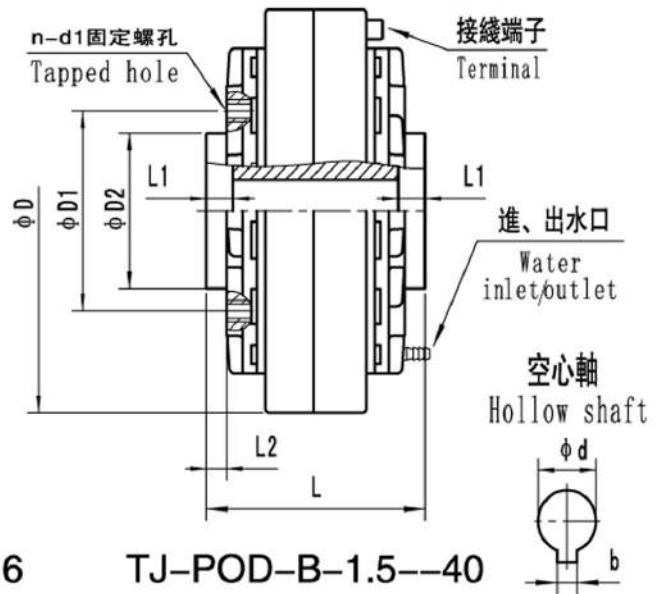
Magnetic powder brake(hollow shaft coupling/center ring install/inner shell rotates)



TJ-POD-B



TJ-POD-B-0.6

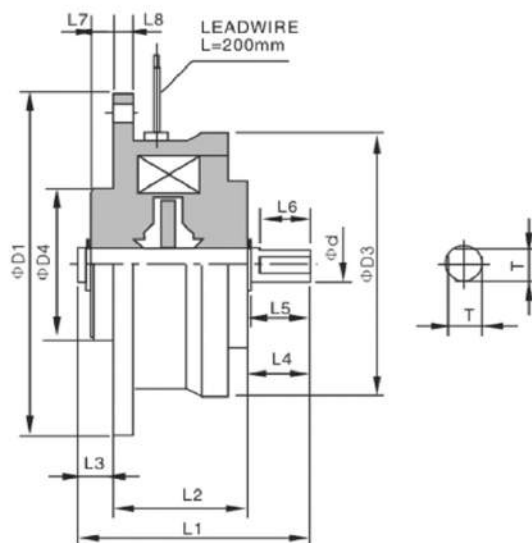
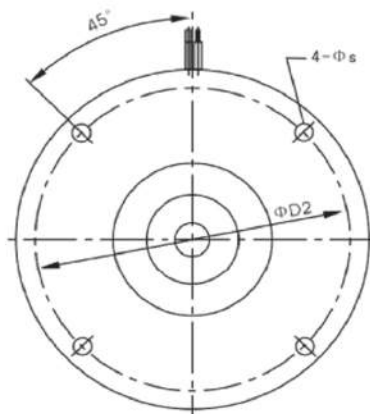


TJ-POD-B-1.5-40

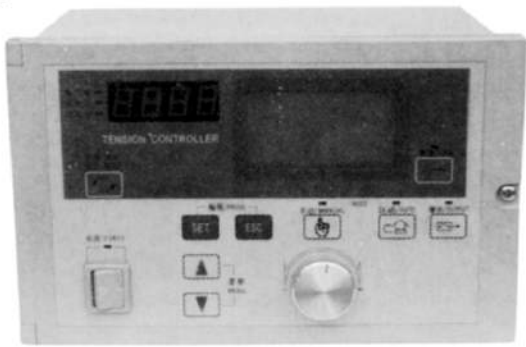
型號 MODEL		TJ-POD-B-0.6	TJ-POD-B-1.5	TJ-POD-B-2.5	TJ-POD-B-5	TJ-POD-B-10	TJ-POD-B-20	TJ-POD-B-40
定格轉距 (NM)Rated torque		6	12	25	50	100	200	400
容量 Capacity DC24V (75°C)	電流(A) Current	0.5	0.6	0.8	1.0	1.2	1.8	2.5
	許用轉速(r/min) Allowable rotational speed	1500	1500	1500	1500	1500	1000	1000
	滑差功率(W) Slip power	60	120	200	300/320	4000	5000	6000
外形尺寸 Outline dimension	D	126	152	172	220	258	298	370
	L	68	70	79	96	118	132	156
空心軸 聯結尺寸 Hollow shaft size	d(H7)	12	16	25	30	35	45	50
	b(F8)	4	5	8	8	10	14	14
	L1	5.5	6	7.5	8	9	11	13
止口支撐尺寸 Center ring installation size	L2	3	3	3	3	3	3	5
	D1	75	82	105	130	150	180	200
	D2(g7)	42	65	90	110	120	150	160
	d1*深度Depth	6-M5*8	6-M6*9	6-M6*9	6-M8*10	6-M10*12	6-M10*16	6-M12*19
冷卻方式Cooling mode		自冷 Self cooling			自冷/單水冷 Self cooling/Single water cooling		單水冷Single water cooling	



TJ-POD-C



型號 MODEL		TJ-POD-C-0.05	TJ-POD-C-0.1	TJ-POD-C-0.2	TJ-POD-C-0.5
定格轉距(kgm)(Nm) Rated torque		0.05(0.5)	0.1(1.0)	0.2(2.0)	0.5(5.0)
容量 Capacity DC24V (75°C)	電流(A)Current	0.35	0.42	0.5	0.6
	電力(W)Power	8.4	10	12	14.4
	時定數(S) Number of hours set	0.02	0.02	0.034	0.045
慣性矩 J Moment of inertia (kgm ²)		9.4*10 ⁻³	2.75*10 ⁻²	5.25*10 ⁻²	1.25*10 ⁻¹
重量 Weight (kg)		0.4	0.54	0.96	1.3
最高回轉速Max speed(r/min)		1800			
外型尺寸 Exterior dimensions	D1	70	76	90	108
	D2	60	66	80	95
	D3	50	56	70	82
	D4(g7)	24	30	40	44
	d(g7)	5	7	9	15
	L1	45	50	59	66
	L2	29	30	34	36
	L3	5	7	9	11
	L4	11	13	16	19
	L5	10	12.2	15	18
	L6	9	10	13	16
	L7	3	4	6	8
	L8	4	4	5	5
	S	4.5	4.5	4.5	6
T	4.5	6.5	8.5	14	



The tension controller signal input may choose is comes from:
 1. Tension detector electric current either voltage output (mA or mV) completely automatic.
 2. Encoder or close switch output signal (0~9V)--Semiau-tomatic.

特性 Specialty

自動張力控制器采用目前國際上多項先進技術：專用微處理器，高速18位A/D轉換器，抗干擾自動恢復技術，及PID無超調算法，從而實現恆張力控制。廣泛應用於印刷、包裝、造紙、紡織、纜纜等各種需對張力進行精密測控的行業。根據輸入信號的不同，分為全自動型張力控制器和半自動張力控制器。

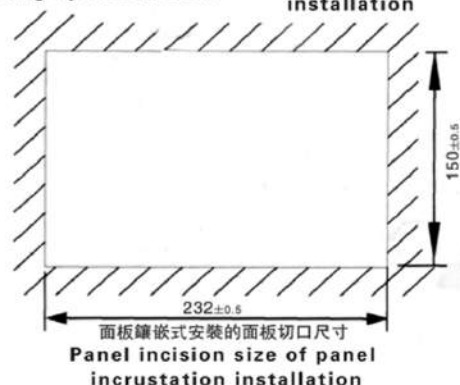
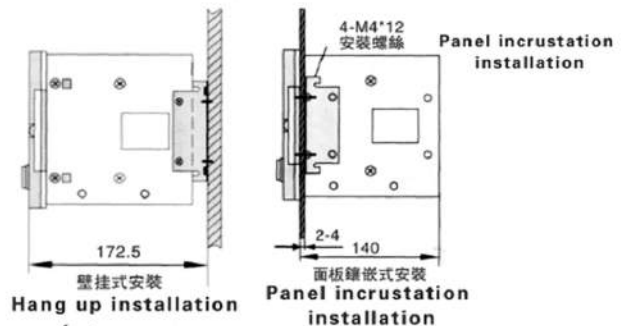
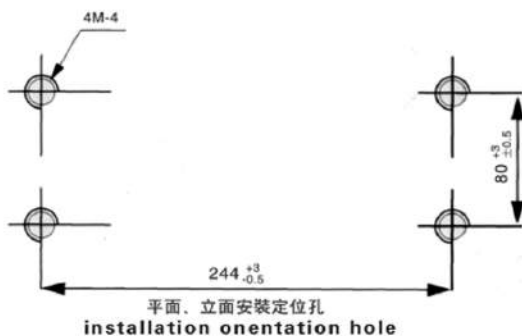
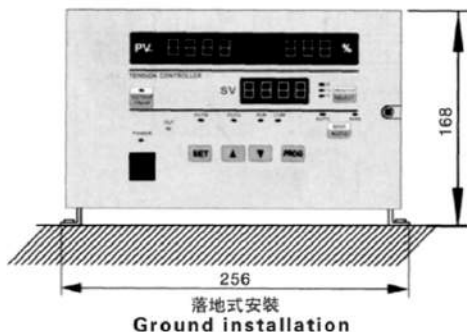
- 張力控制系統的信號輸入可以選擇是來自：
1. 張力檢測器的電流或電壓輸出(mA或mV)--全自動型
 2. 編碼器或接近開關的輸出信號 (0~9V)--半自動型

Our automatic tension control technology uses international many vanguard technologies, adopts the microprocessor, high speed 18 A/D switch, antijamming self-recovery technology, and PID non-over modulation algorithm, thus achieve the permanent tension control. Widely applies in printing, the packing, the papermaking, the spinning and also the weaving, the line cable and so on. According to the difference of signal, it divides into completely automatic and Semiau-tomatic.

規格 Specification

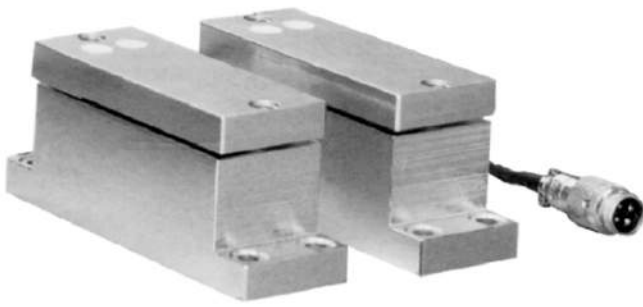
工作電源輸入 Work mains input	AC220V 100W
工作電源輸出 Work power source outputs	DC10V,張力檢測器電源 DC10V, the tension examination power source
模擬量輸入信號 Simulation input signal	兩路張力檢測器的信號輸入 two group tension detector signal input
模擬量出信號 Simulation output signal	控制輸出DC0 - 10V用于控制變頻器伺服放大器等 控制輸出DC0-24V用于控制DC24V, 電流在4A以下的磁粉(電磁)離合器 制動器等 Control outputs DC0-10V to use in serving controls and so on amplifier. Control output DC0-24V to use in controlling the DC24V electric current less than 4A, following magnetic powder (electromagnetism) digital quantity
數字量輸入信號 Input signal	每個數字量都是采用光電隔離電路輸入的，所有數字量輸入只有DIO DIA DIB each numeral quantities and so on coupling brake all to use the Photoelectricity isolation electric circuit to input, all digital quantity input only DIO DIA DIB
使用環境溫度 Use ambient temperature	-10~40°C
使用環境濕度 Use environment humidity	35~85%RH (不得結露) 35~85%RH (No condensation)
使用環境 Use environment	無腐蝕性，無可燃氣體， 無導電性塵埃，灰塵少 Non-corrosiveness, not flammable gas, non-conductive dust, dust few
接地 Earths	D類接地 (禁止與強電電綫共同接地) D kind of earth (It is prohibition of the strong electricity electric wire earths together)

安裝範例及尺寸 Installment model and size



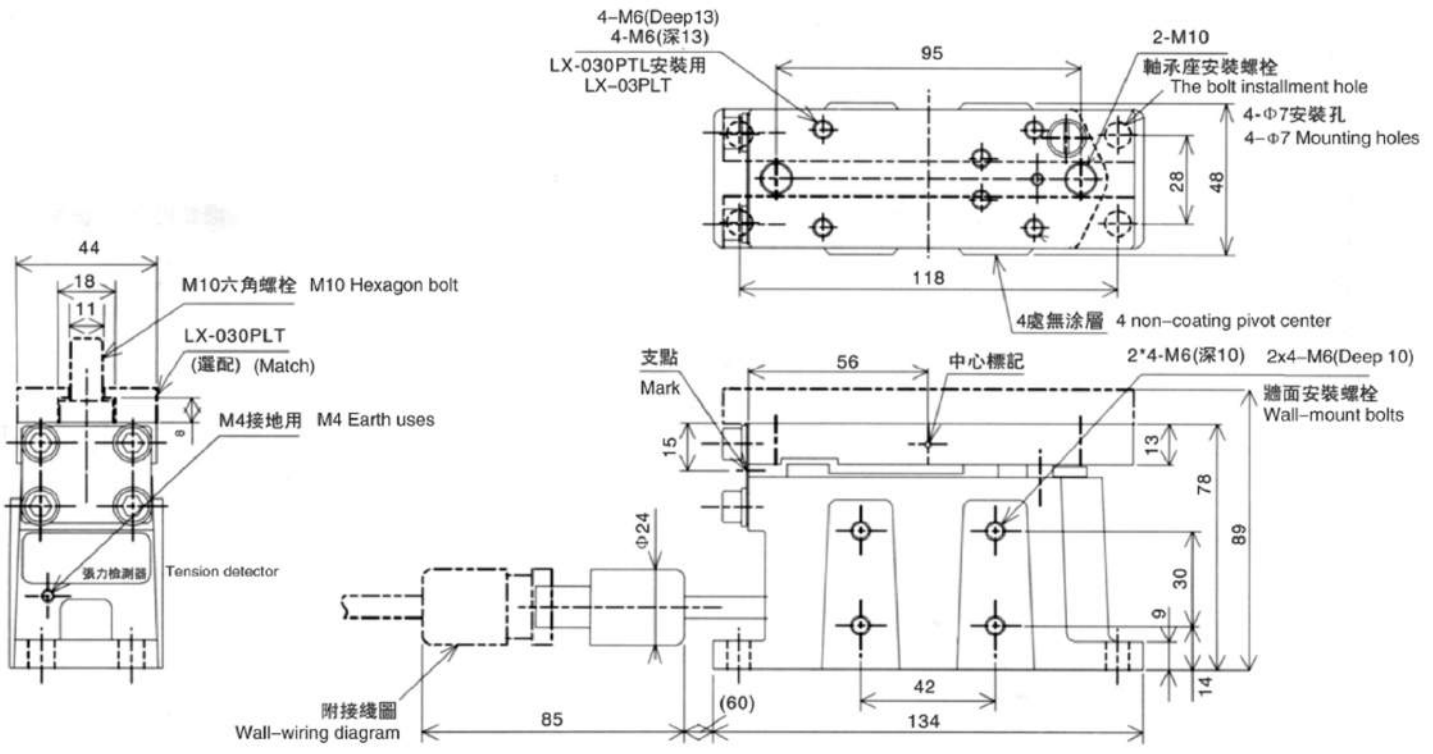


規格 Specification

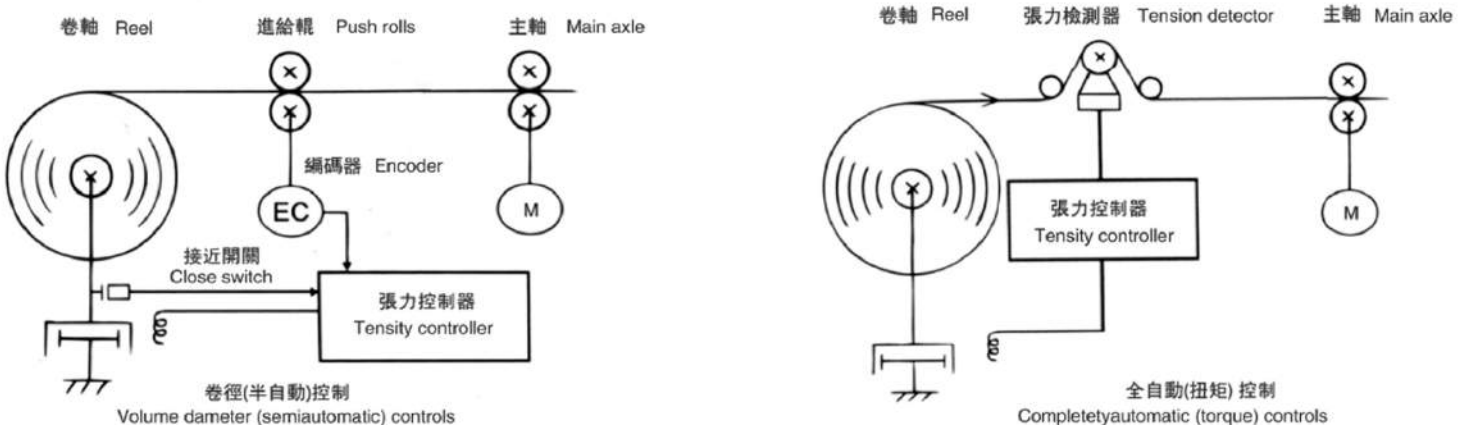


型號 Model	50N	150N	300N	500N
額定負載 Rated load	50N	150N	300N	500N
適用負載方向 Working load direction	壓縮和拉伸兩個方向 Compression and tension in both directions			
安裝 Installs	地面安裝、牆壁安裝、天花板安裝 Ground installation、Hang up installation、Suspended installation			
接線尺寸 The wiring size	7m*φ7 (附件) 7m*φ7 (Annex)			
使用條件 Exploitation conditions	-5~+40°C 振動2m/s ² 以下 -5~+40°C Vibration of the follwing 2m/s ²			
重量(約) Weight	1.8kg			

外型尺寸 Size

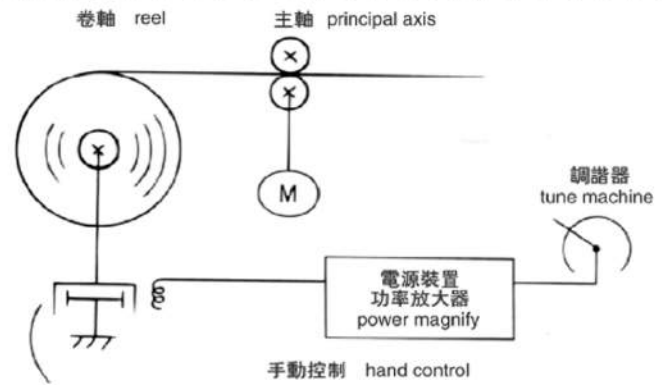


張力控制機構範例 The tension model of tension control





手動控制機構範例 Hand Controller Machine Example



特性 Character

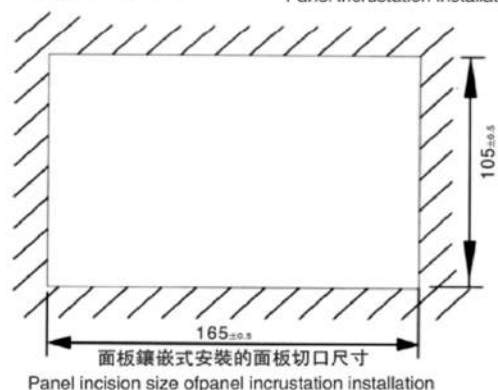
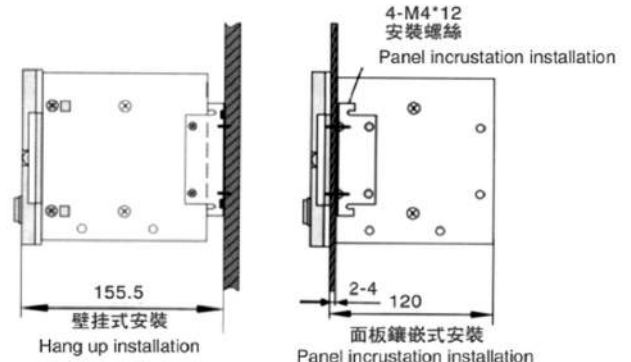
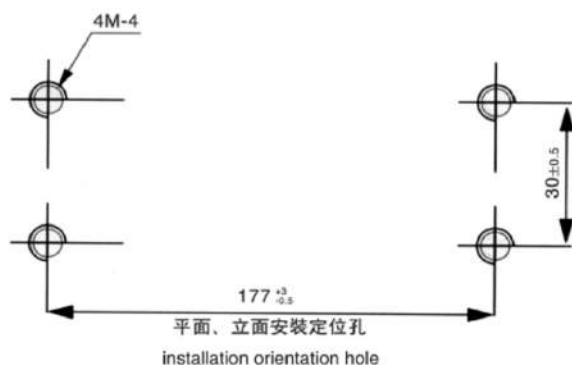
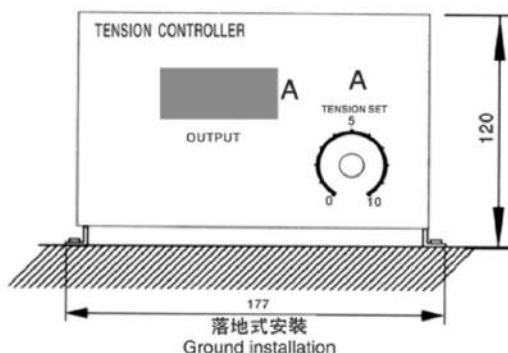
手動張力控制就是在收卷和放卷時伴隨卷徑的變化，分階段地對離合器和制動器的勵磁電流進行手動調整以得到張力的控制方式。此外，希望利用可編程控制器D/A變換器等裝置控制離合器/制動器的勵磁電流時，可以直接把外控電壓(0-10V)接入手動控制器，進行自動控制。範例如右上圖示。

Hand Tension Control is a way to get tension control by manually adjust the excitation current of clutch and arrester periodically while the diameter of reel change during Receives and Puts the volume。 In addition, we hope that we can utilize when programmable control D/A and other change machine control excitation current of clutch/arrester to input 0-10v voltage to hand controller, in order to control automatically. See Figure in the upper-right corner.

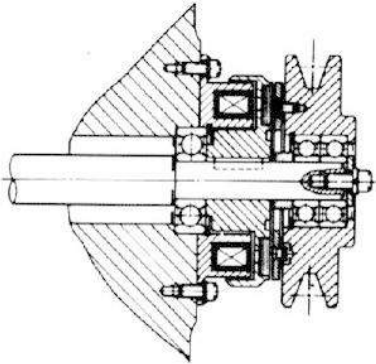
規格 Specification

控制方式 Control Manner	脉寬調制切換式調節系統 Pulse width concoct switch adjust system
輸入電壓 Input Voltage	AC85-264V 50/60HZ
輸出 Output	DC24V 0~4A
適用機種 Suitable for Machine	磁粉離合器、制動器 magnetism powder clutch, brake
輔助功能 Assistant Function	短路保護輸入信號并可外部信號控制 (面板信號或0~10v) Short Circuit to protect input signal and can be controlled by outside signal. (panel signal or 0-10v)
工作環境 Working Environment	使用周圍溫度: -5℃+40℃使用周圍溫度3.8%以下, 使用環境: 不容許腐蝕性氣體、塵埃及雨水 Use temperature around:-5 40,use temperature around below 3.8%,use environment: not allow causticity gas,dust and rain
安裝方法 Installation	落地式安裝、壁掛式安裝、鑲嵌式安裝 Ground installation, Hang up installation, incrustation installation
重量 Quantity	1kg

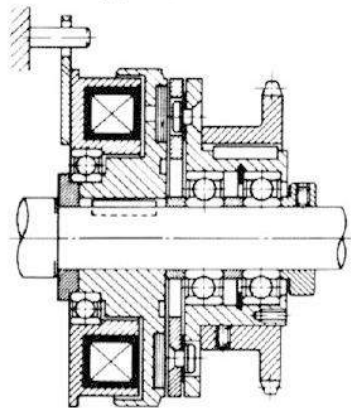
安裝範例及尺寸 Installation range and size



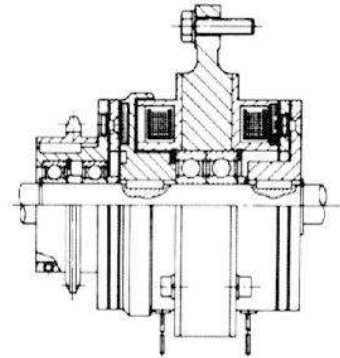
TJ-A使用例
TJ-A Applications



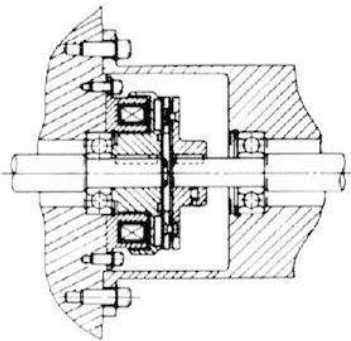
TJ-C2使用例
TJ-C2 Applications



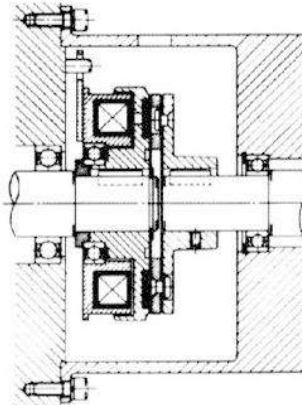
TJ-POE組合使用例
TJ-POE assembly applications



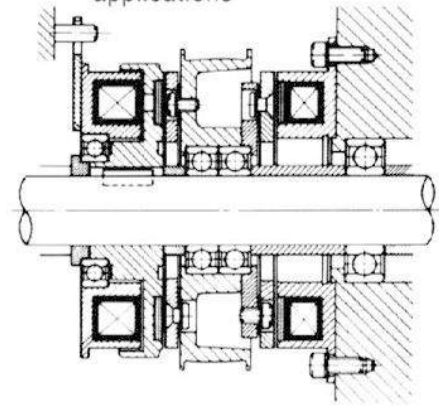
TJ-A1使用例
TJ-A1 Applications



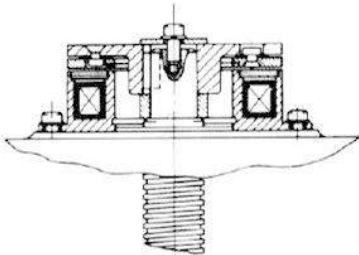
TJ-C1使用例
TJ-C1 Applications



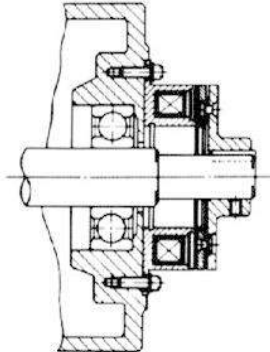
TJ-C與TJ-B組合使用例
TJ-C and TJ-B assembly applications



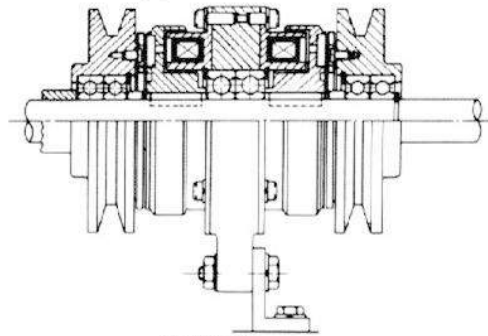
TJ-B1使用例
TJ-B1 Applications



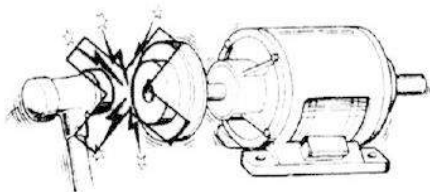
TJ-B2使用例
TJ-B2 Applications



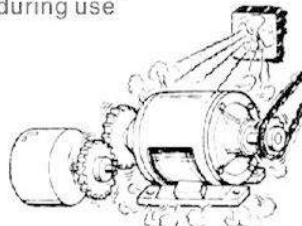
TJ-POE-A 雙組合使用例
TJ-POE-A dual assembly applications



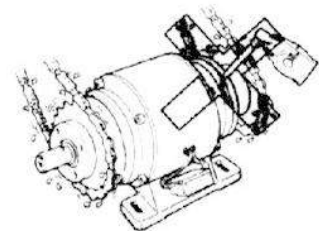
裝用時勿重力追打
Non-gravity hammer for installation



使用超負荷加以散熱
Dissipating heat form overloads during use



勿加油脂
Do no lubricate

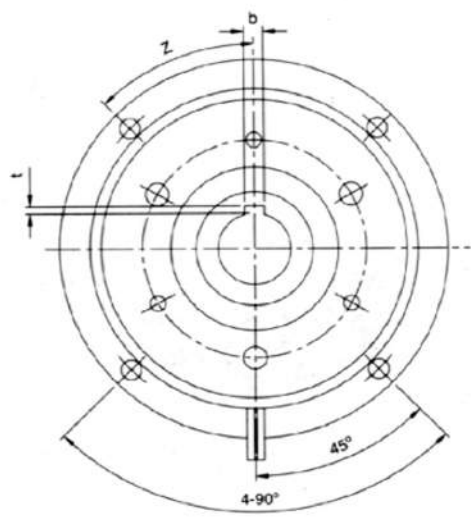
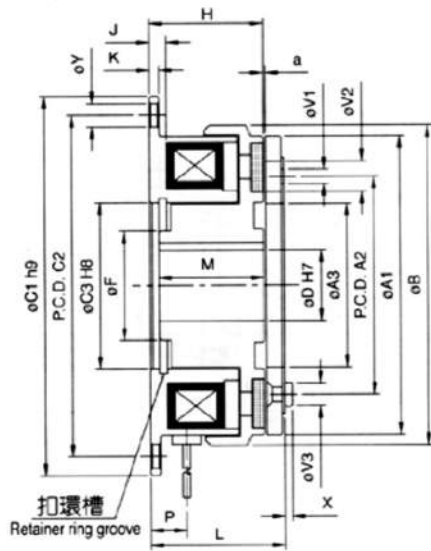


幹式單板電磁離合器突圓固定型

Dry Single-plate Solenoid Clutch



TJ-A

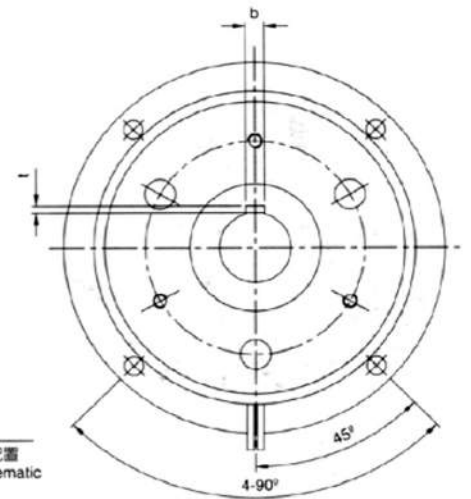
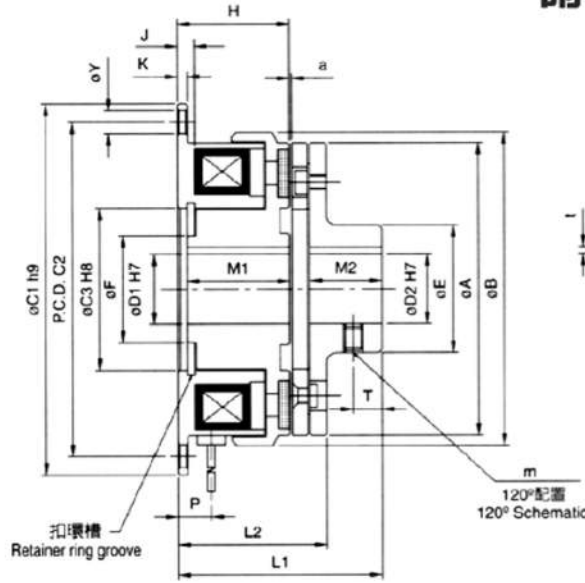


型號 MODEL		TJ-A-0.6	TJ-A-1.5	TJ-A-2.5	TJ-A-5	TJ-A-10	TJ-A-20	TJ-A-40					
靜摩擦轉距 Static Friction Torque (Kgm)(Nm)		0.55(5.5)	1.1(11)	2.2(22)	4.5(45)	9(90)	17.5(175)	35(350)					
動摩擦轉距 Dynamic Friction Torque (Kgm)(Nm)		0.5(5.0)	1.0(10)	2.0(20)	4(40)	8(80)	16(160)	32(320)					
功率 Power [24V](W) at 20°C		11	15	20	25	35	45	60					
徑方向 Radius	A1	63	80	100	125	160	200	250					
	A2	46	60	76	95	120	158	210					
	A3	34.5	41.8	52	62	80	99.5	125					
	B	67.5	85	106	133	169	212.5	264					
	C1	80	100	125	150	190	230	290					
	C2	72	90	112	137	175	215	270					
	C3	35	42	52	62	80	100	125					
	D	12 15	15 20	20 25	25 30	30 40	40 50	50 60					
	F	23	28.8	40	45	62	77	100					
	V1	3-3.1	3-4.1	3-5.1	3-6.1	3-8.1	3-10.2	4-12.2					
	V2	3-6.3	3-8	3-12	3-12.5	3-15	3-17.3	4-20.8					
	V3	3-6	3-6	3-7.5	3-9.8	3-13	3-18	4-23					
	Y	5	6	7	7	9.5	9.5	11.5					
Z	6-60°							8-45°					
軸方向 Shaft	H	24	26.5	30	33.5	37.5	44	51					
	J	3.5	4.3	5	5.5	6	7	7.85					
	K	2	2.5	3	3.5	4	5	6					
	L	28.05	31.3	35.9	40.5	47	56.2	64.47					
	M	22	24.1	27	30	33	40.15	47.15					
	P	7.5	9.5	8.9	9.5	11.5	13	15.5					
	X	1.5	1.4	1.7	2	2.5	4.5	6.4					
	a	0.2(±0.05)				0.3(^{+0.05} / _{-0.1})				0.5(⁰ / _{-0.2})			
	b	4 5	5 5	5 7	7 7	7 10	10 12	12 15					
	t	1.8 2.3	2.3 2.3	2.3 3.3	3.3 3.3	3.3 3.8	3.8 3.8	3.8 5.3					
重量 Weight (kg)		0.46	0.83	1.5	2.76	5.1	9.3	17					

幹式單板電磁離合器突圓固定型 Dry Single-plate Solenoid Clutch



附導座 With guideway

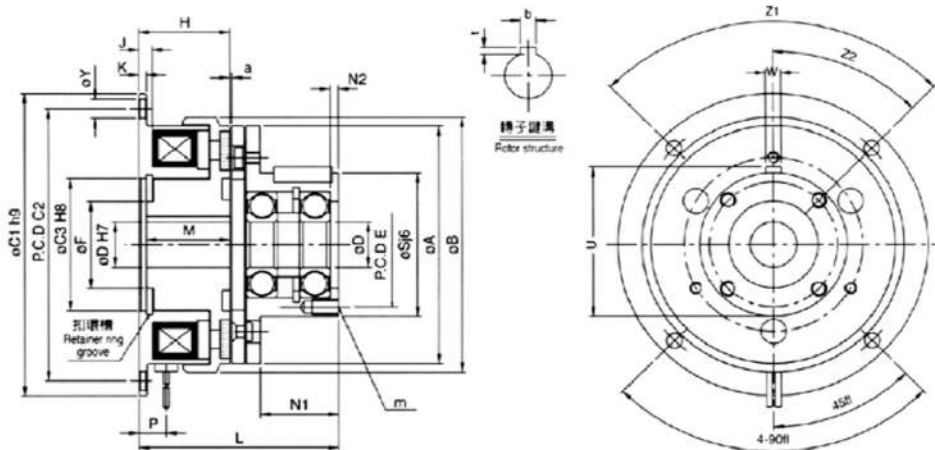


型號 MODEL	TJ-A1-0.6	TJ-A1-1.5	TJ-A1-2.5	TJ-A1-5	TJ-A1-10	TJ-A1-20	TJ-A1-40						
靜摩擦轉距 Static Friction Torque [Kgm](Nm)	0.55(5.5)	1.1(11)	2.2(22)	4.5(45)	9(90)	17.5(175)	35(350)						
動摩擦轉距 Dynamic Friction Torque [Kgm](Nm)	0.5(5.0)	1.0(10)	2.0(20)	4(40)	8(80)	16(160)	32(320)						
功率 Power [24V](W) at 20°C	11	15	20	25	35	45	60						
徑方向 Radius	A	63	80	100	125	160	200	250					
	B	67.5	85	106	133	169	212.5	264					
	C1	80	100	125	150	190	230	290					
	C2	72	90	112	137	175	215	270					
	C3	35	42	52	62	80	100	125					
	D1	12 15	15 20	20 25	25 30	30 40	40 50	50 60					
	D2	12 15	15 20	20 25	25 30	30 40	40 50	50 60					
	E	27.5	31	41	49	65	83	105					
	F	23	28	40	45	62	77	100					
	Y	5	6	7	7	9.5	9.5	11.5					
軸方向 Shaft	H	24	26.5	30	33.5	37.5	44	51					
	J	3.5	4.3	5	5.5	6	7	8					
	K	2	2.5	3	3.5	4	5	6					
	L1	43.05	51.3	60.9	70.8	85	101.2	118.5					
	L2	31.55	35.3	40.9	46.8	54	65.2	75.47					
	M1	22	24.1	27	30	34	40.15	47.15					
	M2	15	20	25	30	38	45	54					
	P	7.5	9.5	8.9	9.5	9.5	10.5	15.5					
	T	6	8	10	12	14	18	22					
	m	2-M4	2-M5		2-M6		2-M8		2-M10				
	a	0.2(±0.05)				0.3(^{+0.05} / _{-0.1})				0.5(⁻⁰ / _{-0.2})			
	b	4 5	5 5	5 7	7 7	7 10	10 12	12 15					
	t	1.8 2.3	2.3 2.3	2.3 3.3	3.3 3.3	3.3 3.8	3.8 3.8	3.8 5.3					
	重量 Weight (kg)	0.5	0.91	1.66	3.05	5.4	10.5	18.7					

幹式單板電磁離合器突圓固定型 Dry Single-plate Solenoid Clutch



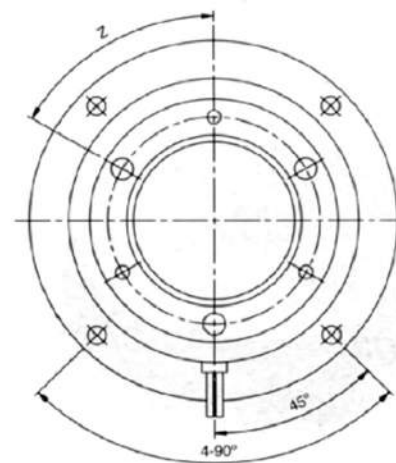
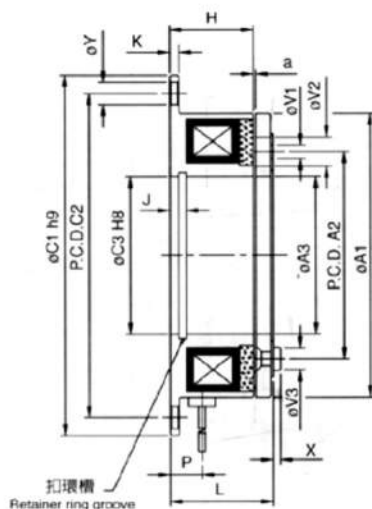
附軸承導座 With bearingy guideway



型號 MODEL		TJ-A2-0.6	TJ-A2-1.5	TJ-A2-2.5	TJ-A2-5	TJ-A2-10	TJ-A2-20	TJ-A2-40
靜摩擦轉距 [Kgm](Nm) Static Friction Torque		0.55(5.5)	1.1(11)	2.2(22)	4.5(45)	9(90)	17.5(175)	35(350)
動摩擦轉距 [Kgm](Nm) Dynamic Friction Torque		0.5(5.0)	1.0(10)	2.0(20)	4(40)	8(80)	16(160)	32(320)
功率 Power [24V](W) at 20°C		11	15	20	25	35	45	60
徑方向 Radius	A	63	80	100	125	160	200	250
	B	67.5	85	106	133	169	212.5	264
	C1	80	100	125	150	190	230	290
	C2	72	90	112	137	175	215	270
	C3	35	42	52	62	80	100	125
	D	12	15	20	25	30	40	50
	E	33	37	47	52	62	74.5	101.5
	F	23	28	40	45	62	77	100
	S	38	45	55	64	75	90	115
	U	39.5	47	57	67	78	93.5	118.5
	Y	5	6	7	7	9.5	9.5	11.5
軸方向 Shaft	H	24	26.5	30	33.5	37.5	44	51
	J	3.5	4.3	5	5.5	6	7	8
	K	2	2.5	3	3.5	4	5	6
	L	51.55	60.3	70.9	86.8	104	124.2	145.5
	M	22	24.1	27	30	34	39.15	47.15
	N1	20	25	30	40	50	60	70
	N2	2	2.5	3	2	3	5	6
	P	7.5	9.5	8.9	9.5	9.5	10.5	15.5
	W	4	5	5	7	7	2-M8 10	12
	Z1	3-120°		4-90°		6-60°	4-90°	8-45°
	Z2	60°	60°	45°	45°	30°	45°	225°
	m	3-M4*0.7P*4L	3-M4*0.7P*6L	4-M4*0.7P*8L		6-M5*0.8P*8L	4-M6*1P*12L	8-M6*1P*12L
	a	0.2(±0.05)			0.3(+0.05/-0.1)		0.5(-0/-0.2)	
	b	4	5	5	7	7	10	12
	t	1.8	2.3	2.3	3.3	3.3	3.8	3.8
重量 Weight (kg)	0.66	1.19	2.11	3.8	6.9	13	23.6	

幹式單板電磁煞車器

Dry Single-plate Solenoid Brake



型號 MODEL	TJ-B-0.6	TJ-B-1.5	TJ-B-2.5	TJ-B-5	TJ-B-10	TJ-B-20	TJ-B-40	
靜摩擦轉矩 [Kgm](Nm) Static Friction Torque	0.55(5.5)	1.1(11)	2.2(22)	4.5(45)	9(90)	17.5(175)	35(350)	
動摩擦轉矩 [Kgm](Nm) Dynamic Friction Torque	0.5(5.0)	1.0(10)	2.0(20)	4(40)	8(80)	16(160)	32(320)	
功率 Power [24V](W) at 20°C	11	15	20	25	35	45	60	
徑方向 Radius	A1	63	80	100	125	160	200	250
	A2	46	60	76	95	120	158	210
	A3	34.5	41.8	52	62	80	99.5	125
	C1	80	100	125	150	190	230	290
	C2	72	90	112	137	175	215	270
	C3	35	42	52	62	80	100	125
	V1	3-3.1	3-4.1	3-5.1	3-6.1	3-8.1	3-10.2	4-12.2
	V2	3-6.3	3-8	3-12	3-13	3-15	3-17.3	4-23
	V3	3-6	3-6	3-7.5	3-9.8	3-13	3-18	4-20.8
	Y	5	6	7	7	9.5	9.5	11.5
軸方向 Shaft	H	18	20	22	24	26	30	35
	J	3.5	4.3	5	5.5	6	7	8
	K	2	2.5	3	3.5	4	5	6
	L	22.05	24.8	27.9	31.3	35.5	42.2	48.6
	P	7.5	9.5	8.9	9	9.5	10.5	15.5
	X	1.5	1.4	1.7	2	2.5	5.7	6.4
	Z	6-60 °						8-45 °
	a	0.2(±0.05)			0.3(^{+0.05} / _{-0.1})		0.5(⁰ / _{-0.2})	
重量 Weight (kg)	0.28	0.5	0.91	1.68	3.15	5.9	10.5	

幹式單板電磁煞車器

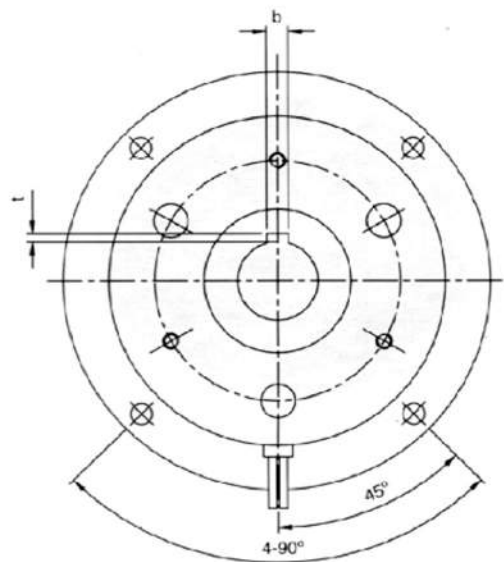
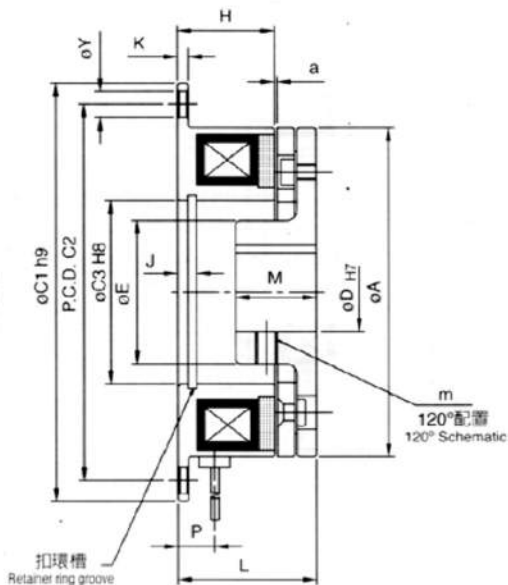
Dry Single-plate Solenoid Brake



TJ-B1

天機
Tian Ji

附導座 With guideway



型號 MODEL		TJ-B1-0.6	TJ-B1-1.5	TJ-B1-2.5	TJ-B1-5	TJ-B1-10	TJ-B1-20	TJ-B1-40					
靜摩擦轉距 (Kgm)(Nm) Static Friction Torque		0.55(5.5)	1.1(11)	2.2(22)	4.5(45)	9(90)	17.5(175)	35(350)					
動摩擦轉距 (Kgm)(Nm) Dynamic Friction Torque		0.5(5.0)	1.0(10)	2.0(20)	4(40)	8(80)	16(160)	32(320)					
功率 Power [24V](W) at 20°C		11	15	20	25	35	45	60					
徑方向 Radius	A	63	80	100	125	160	200	250					
	C1	80	100	125	150	190	230	290					
	C2	72	90	112	137	175	215	270					
	C3	35	42	52	62	80	100	125					
	D	12 15	15 20	20 25	25 30	30 40	40 50	50 60					
	E	27.5	31	41	49	65	83	105					
軸方向 Shaft	H	18	20	22	24	26	30	35.1					
	J	3.5	4.3	5	5.5	6	7	8					
	K	2	2.5	3	3.5	4	5	6					
	L	25.55	28.8	32.9	37.3	42.5	50.5	59.6					
	M	15	20	25	30	38	45	54					
	P	7.5	9.5	8.9	9	11.5	9.5	15.5					
	Y	5	6	7	7	9.5	9.5	11.5					
	m	2-M4	2-M5		2-M6		2-M8		2-M10				
	a	0.2(±0.05)				0.3(+0.05 / -0.1)				0.5(0 / -0.2)			
	b	4 5	5 5	5 7	7 7	7 10	10 12	12 12	15				
	t	1.8 2.3	2.3 2.3	2.3 2.3	3.3 3.3	3.3 3.8	3.8 3.8	3.8 3.8	5				
重量 Weight (kg)	0.32	0.58	1.07	1.97	3.45	7.1	12.2						

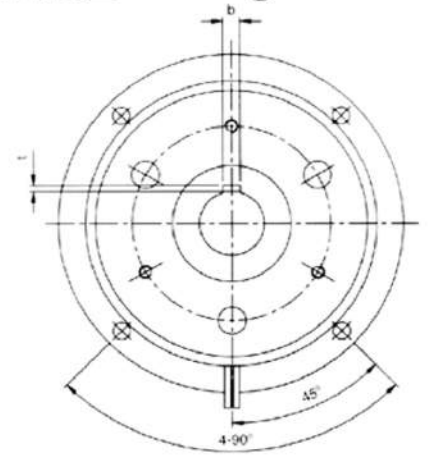
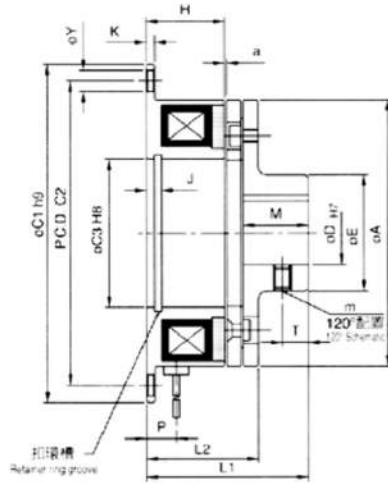
幹式單板電磁煞車器

Dry Single-plate Solenoid Brake



TJ-B2

附導座 With guideway



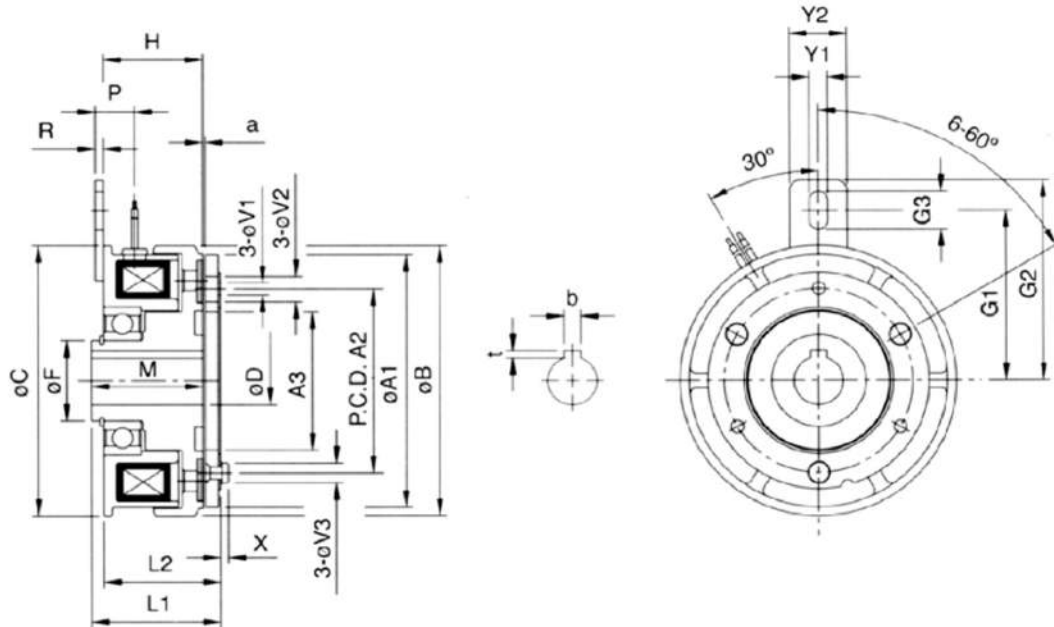
型號 MODEL		TJ-B2-0.6	TJ-B2-1.5	TJ-B2-2.5	TJ-B2-5	TJ-B2-10	TJ-B2-20	TJ-B2-40			
靜摩擦轉距 Static Friction Torque [Kgm](Nm)		0.55(5.5)	1.1(11)	2.2(22)	4.5(45)	9(90)	17.5(175)	35(350)			
動摩擦轉距 Dynamic Friction Torque [Kgm](Nm)		0.5(5.0)	1.0(10)	2.0(20)	4(40)	8(80)	16(160)	32(320)			
功率 Power [24V](W) at 20°C		11	15	20	25	35	45	60			
徑方向 Radius	A	63	80	100	125	160	200	250			
	C1	80	100	125	150	190	230	290			
	C2	72	90	112	137	175	215	270			
	C3	35	42	52	62	80	100	125			
	D	12 15	15 20	20 25	25 30	30 40	40 50	50 60			
	E	27.5	31	41	49	65	83	105			
軸方向 Shaft	H	18	20	22	24	26	30	35			
	J	3.5	4.3	5	5.5	6	7	8			
	K	2	2.5	3	3.5	4	5	6			
	L1	37	44.8	53	61.3	73.5	87.2	102.6			
	L2	25.5	28.8	33	37.3	42.5	51.2	59.6			
	M	15	20	25	30	38	45	54			
	P	7.5	9.5	9	9	9.5	10.5	15.5			
	T	6	8	10	12	14	18	22			
	Y	5	6	7	7	9.5	9.5	11.5			
	m	2-M4	2-M5		2-M6		2-M8		2-M10		
	a	0.2(±0.05)				0.3(^{+0.05} / _{-0.1})				0.5(⁰ / _{-0.2})	
	b	4 5	5 5	5 7	7 7	7 10	10 12	12 15			
	t	1.8 2.3	2.3 2.3	2.3 3.3	3.3 3.3	3.3 3.8	3.8 3.8	3.8 5.3			
重量 Weight (kg)	0.32	0.5	0.9	1.97	3.45	7.1	12.2				

內軸承式電磁離合器

Internal bearing-type Solenoid Clutch



TJ-C



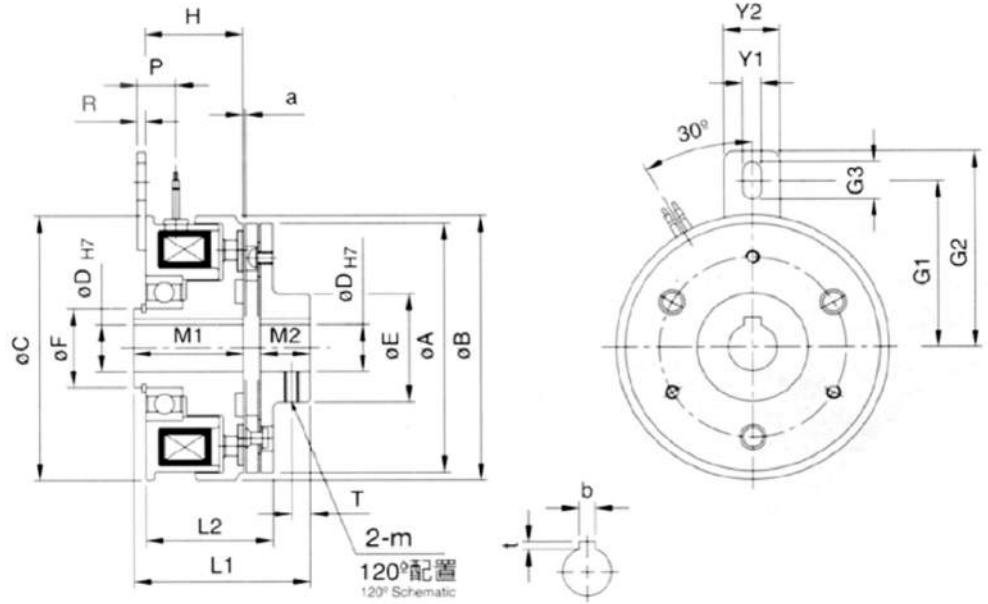
型號 MODEL		TJ-C-0.6	TJ-C-1.5	TJ-C-2.5	TJ-C-5	TJ-C-10	TJ-C-20	TJ-C-40
靜摩擦轉距 Static Friction Torque [Kgf-m](N-m)		0.55(5.5)	1.1(11)	2.2(22)	4.5(45)	9(90)	20(200)	40(400)
動摩擦轉距 Dynamic Friction Torque [Kgf-m](N-m)		0.5(5.0)	1.0(10)	2.0(20)	4(40)	8(80)	18(180)	35(350)
功率 Power [24V] at 20°C		11	15	20	25	35	45	60
徑方向 Radius	A1	63	80	100	125	160	200	280
	A2	46	60	76	95	120	158	210
	A3	34.5	41.5	52	62	80	99.5	124.5
	B	67.5	85	106	133	169	212.5	264
	C	67.5	85	106	133	169	212	250
	D	12 15	15	20	25	30	40	50
	F	20	25	30	40	50	60	70
	H	24.6	27	30	33.5	38.9	44	57
	R	2	2	2	2	3	3	5
	L1	31.1	34.2	40	45	52.7	60.5	88
	L2	28.6	31.6	36	40.8	48.4	55.5	70
	M	27.1	29.5	34	37.7	43.2	49	69
	P	9.5	11.5	11.6	11.6	14.5	12.5	13
	V1	3.1	4.1	5.1	6.1	8.1	10.2	12.2
	V2	6.3	8	12	13	15	18	22
	V3	6	6	7.5	9.8	13	17.5	21
X	1.5	1.4	1.7	2	2.5	7	8	
	a	0.2(±0.05)			0.3(^{+0.05} / _{-0.1})		0.5(⁰ / _{-0.2})	
軸方向 Shaft	G1	42.75	55	61.75	76.3	98.4	125	155
	G2	49.5	63.5	72.5	85	112	138	173
	G3	9.5	10.5	15.5	11.5	18.5	18.5	24
	Y1	4.5	5.5	6.5	6.5	8.5	8.5	12
	Y2	12	14	16	16	25	25	30
	b	4 5	5	5	7	7	10	12
	t	1.8 2.3	2.3	2.3	3.3	3.3	3.5	3.5
重量 Weight (kg)		1.0	1.5	2.5	4	7	9.8	17.5



內軸承式電磁離合器

Internal bearing-type Solenoid Clutch

附導座 With guideway



型號 MODEL		TJ-C1-0.6	TJ-C1-1.5	TJ-C1-2.5	TJ-C1-5	TJ-C1-10	TJ-C1-20	TJ-C1-40
靜摩擦轉距 Static Friction Torque [Kgf-m](N-m)		0.55(5.5)	1.1(11)	2.2(22)	4.5(45)	9(90)	17.5(175)	35(350)
動摩擦轉距 Dynamic Friction Torque [Kgf-m](N-m)		0.5(5.0)	1.0(10)	2.0(20)	4(40)	8(80)	16(160)	32(320)
功率 Power [24V] at 20°C		11	15	20	25	35	45	72
徑方向 Radius	A	63	80	100	125	160	200	250
	B	67.5	85	106	133	169	212.5	264
	C	67.5	85	106	133	169	212	250
	D	12	15	20	25	30	40	50
	E	27.5	31	41	49	65	83	105
	F	20	25	30	40	50	60	80
	H	24	27	30	33.5	38.9	44	53
	L1	46.2	54.2	64.9	75	90.7	109.5	123
	L2	32.2	35.6	40.9	46.8	55.4	64.5	77
	M1	27.1	29.5	34	37.7	43.2	49	56
	M2	9.5	20	25	30	38	45	54
	P	7.5	11.5	11.6	11.6	14.5	12.5	13
	R	2	2	2	2	3	3	6
T	6	8	10	12	14	18	22	
軸方向 Shaft	a	0.2(± 0.05)			0.3($^{+0.05}_{-0.1}$)		0.5($^{0}_{-0.2}$)	
	G1	42.75	55.3	61.75	76.3	98.35	125	155
	G2	49.5	63.5	72.5	85	112	138	173
	G3	9.5	10.5	15.5	11.4	18.5	18.5	24
	Y1	4.5	5.5	6.5	6.4	8.5	8.5	12
	Y2	12	14	16	16	25	25	30
	b	4	5	5	7	7	10	12
	t	1.8	2.3	2.3	3.3	3.3	3.5	3.5
m	2-M4	2-M5		2-M6	2-M8		2-M10	
重量 Weight (kg)	0.54	0.95	1.73	3.18	5.6	9.8	17.5	



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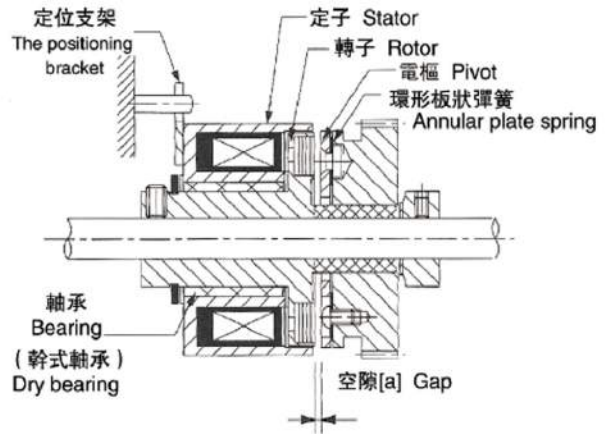


微型電磁離合器 · 制動器

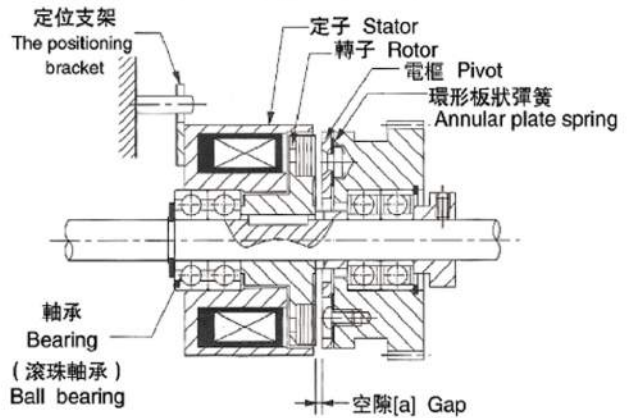
是最適合用于辦公機器、通信機器、汽車機器等扭矩，響應性能固定的小型精密機器的微型電磁離合器 · 制動器。

Miniature electromagnetic clutch · brake

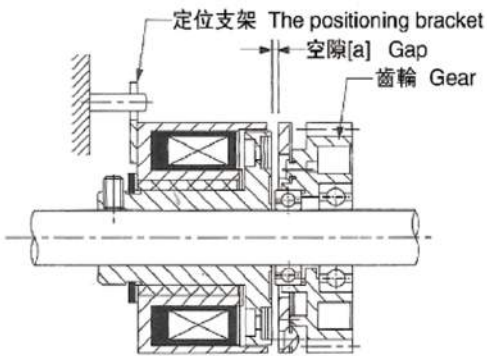
Is the most suitable for office machines, communications equipment, auto machine torque response performance, fixed small precision machinery of miniature electromagnetic clutch · brake.



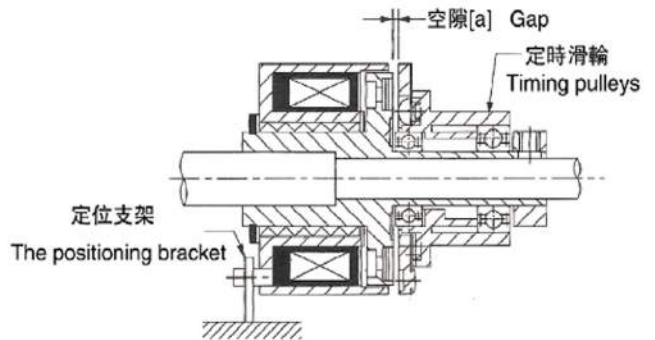
軸承安裝型 (幹式軸承) 構造
Bearing mounting type (dry bearing) structure



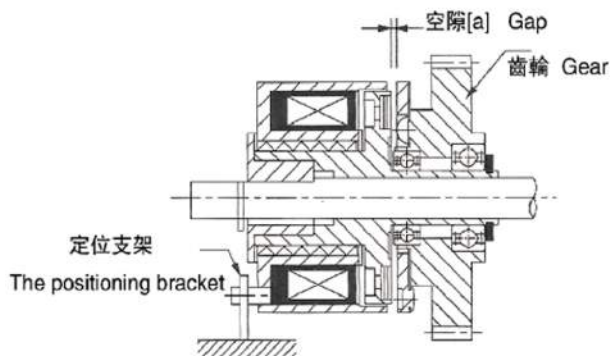
軸承安裝型 (滾珠軸承) 構造
Bearing mounting type (Ball bearing) structure



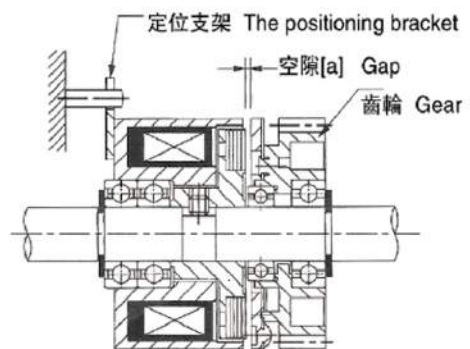
軸承安裝型 (幹式軸承) 組合例
Bearing mounting type (dry bearing) Combined with



軸承安裝型 (幹式軸承) 組合例
定時滑輪一體型
Bearing mounting type (dry bearing) Combined with Timing pulley type



軸承安裝型 (幹式軸承) 組合例
齒輪一體型
Bearing mounting type (dry bearing) Combined with Gear type



軸承安裝型 (滾珠軸承) 組合例
Bearing mounting type (ball bearing) combined with



TJ-C-A

微型電磁離合器-軸承安裝型

Miniature electromagnetic clutch bearing mounting type

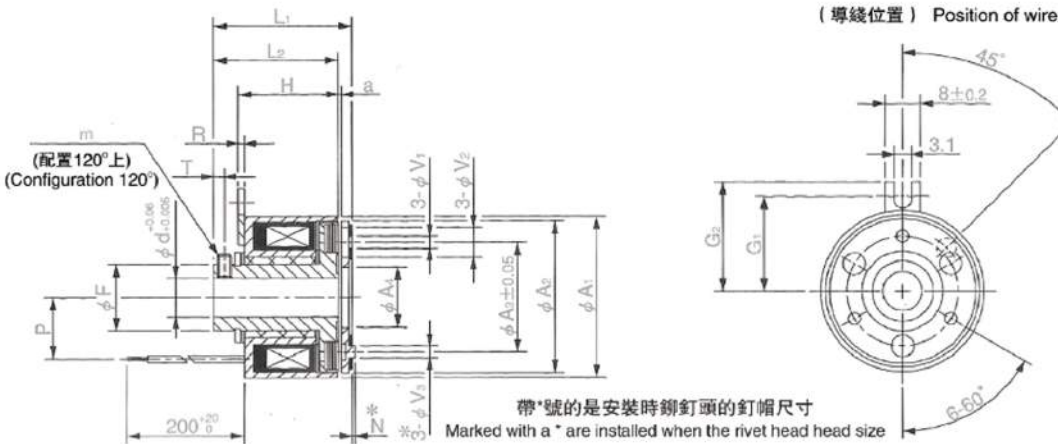
規格 Specifications



型號 Model	尺寸 Size	額額 (20°C時) Coil (20°C Hour)				耐熱 等級 Heat resistant grade	最高 旋轉速度 The maximum rotational speed [min ⁻¹]	旋轉部位電樞慣量J Rotating armature inertia parts J		容許 聯結作功 To allow blending power E _{os} [J]	空際再調整 之前的總作功 Before adjusting the total work space E _r [J]	電樞吸引 時間 Armature suction time t _a [s]	扭矩上升 時間 Torque rise time t _p [s]	扭矩消失 時間 Torque loss time t _d [s]	質量 Quality [kg]	
		動摩擦 扭矩T _d Dynamic friction torque [N·m]	電壓 Voltage [V]	容量 Capacity [W]	電流 Electric current [A]			電阻 Resistance [Ω]	電樞 Armature [kg·m ²]							轉子 Rotor [kg·m ²]
TJ-C-A-025-33B	025	0.4	DC24	4.5	0.188	128	B	3600	1.00×10 ⁻⁶	1.43×10 ⁻⁶	800	1.0×10 ⁶	0.014	0.028	0.030	0.07
TJ-C-A-03-33B	03	0.5	DC24	5.5	0.23	105	B	3600	1.30×10 ⁻⁶	1.85×10 ⁻⁶	900	1.5×10 ⁶	0.015	0.030	0.040	0.13
TJ-C-A-03-33M								500		1.90×10 ⁻⁶						
TJ-C-A-04-33B	04	1.0	DC24	5.9	0.25	98	B	3600	5.15×10 ⁻⁶	1.00×10 ⁻⁶	1900	2.0×10 ⁶	0.030	0.040	0.040	0.26
TJ-C-A-04-33M								500		1.05×10 ⁻⁶						

* 動摩擦扭矩T_d大為相對速度為100min⁻¹時的值。 Dynamic friction torque of T_d as relative velocity is 100min⁻¹ value.
 * 旋轉部位電樞慣量及重量為最大孔徑的值。 Rotating armature inertia and weight parts for maximum aperture value.
 * 請將電源電壓的變動控制在繞圈電壓的正負10%以內。 Please turn the power voltage change control coil voltage plus or minus 10%.

尺寸 Size TJ-C-A □ -33M

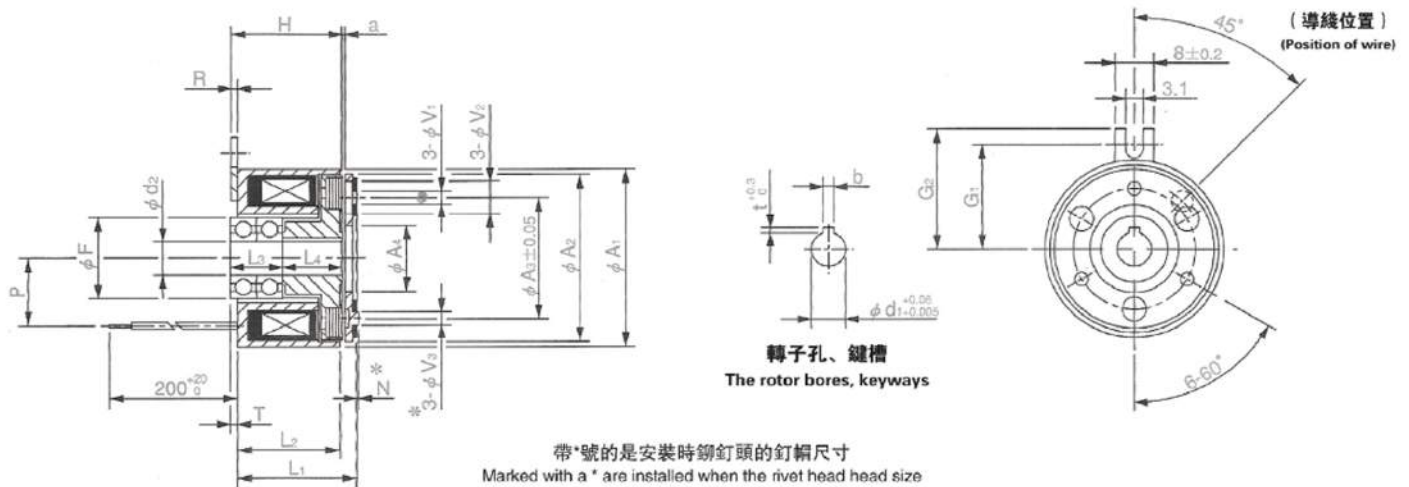


單位 Company [mm]

尺寸 Size	徑向尺寸 Radial dimension												軸向尺寸 Axial size								CAD文件 CAD file No.
	d	A ₁	A ₂	A ₃	A ₄	F	V ₁	V ₂	V ₃	G ₁	G ₂	m	H	R	L ₁	L ₂	P	N	T	a	
03	6	34	32	23	12.5	14	3-2.6	3-5.5	3-6	20	23	M3	21	1.2	28.6	26.2	13	3	2.3	0.2±0.05	—
	8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
04	8	45	42	30	18.5	18	3-3.1	3-6	3-6	25	27.5	M4	25.3	1.2	35.1	32.4	17.5	3.5	3	0.2±0.05	—
	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

* 尺寸標記N及V₃表示安裝時鉚釘頭的釘帽尺寸。 Size markers N and V₃ installed rivet head head size.

尺寸 Size TJ-C-A □ -33B

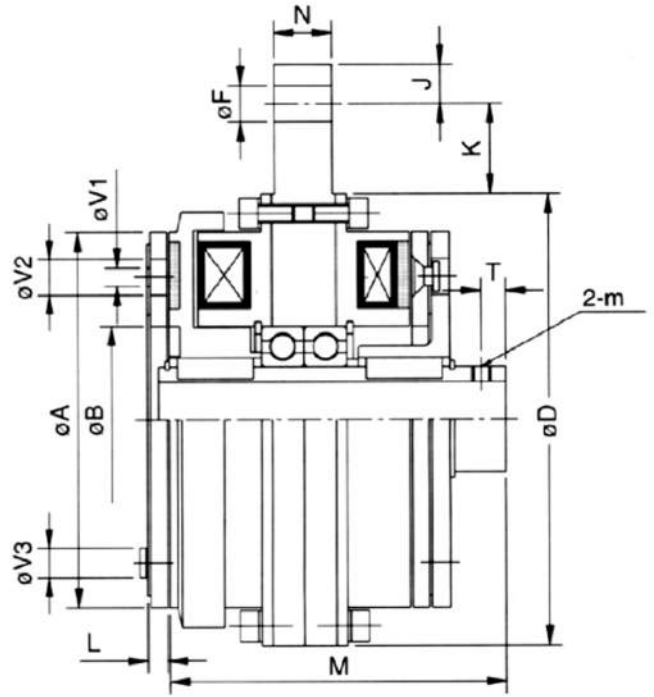
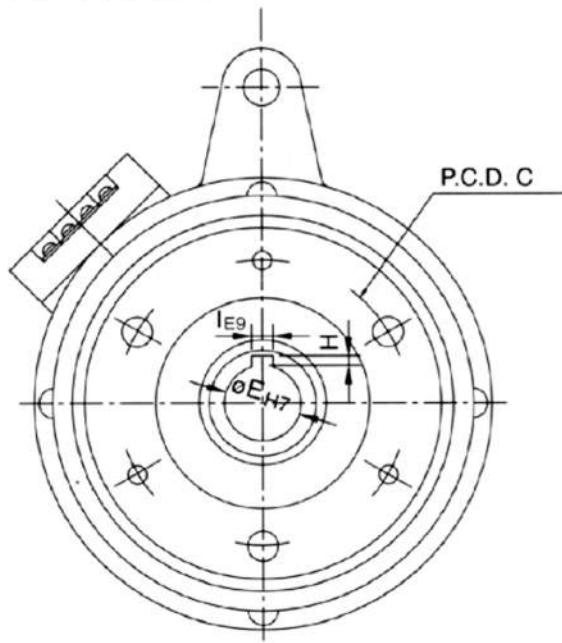


mm]

尺寸 Size	公稱尺寸 Nominal size	徑向尺寸 Radial dimension										軸向尺寸 Axial size										軸孔尺寸 Hole size				CAD 文件 No.
		A ₁	A ₂	A ₃	A ₄	F	V ₁	V ₂	V ₃	G ₁	G ₂	H	R	L ₁	L ₂	L ₃	L ₄	P	N	T	a	d ₂	d ₁	b	t	
03	6	34	32	23	12.5	15	3-2.6	3-5.5	3-6	20	23	21	1.2	22.2	19.8	10	11.3	13	3	1.5	0.2 ±0.05	6	6	2 ^{+0.030} _{-0.005}	0.8 ^{+0.3} ₀	—
	8	34	32	23	12.5	16	3-2.6	3-5.5	3-6	20	23	21	1.2	22.2	19.8	10	11.3	13	3	1.5	0.2 ±0.05	8	8	2 ^{+0.030} _{-0.005}	0.8 ^{+0.3} ₀	—
04	8	45	42	30	18.5	19	3-3.1	3-6	3-6	25	28	25.3	1.2	26.8	24.1	12	13	17.5	3.5	0.9	0.2 ^{+0.05} _{-0.1}	8	8	2 ^{+0.030} _{-0.005}	0.8 ^{+0.3} ₀	—
	10	45	42	30	18.5	19	3-3.1	3-6	3-6	25	28	25.3	1.2	26.8	24.1	14	11	17.5	3.5	0.9	0.2 ^{+0.05} _{-0.1}	10	10	3 ^{+0.025} ₀	1.2 ^{+0.3} ₀	—



天驰传动
TIANCHIHUANDONG



型號 MODEL		TJ-POE-1.5	TJ-POE-2.5	TJ-POE-5	TJ-POE-10	TJ-POE-20	TJ-POE-40
靜摩擦轉距 [Kgm](Nm) Static Friction Torque		1.1(11)	2.2(22)	4.5(45)	9.0(90)	17.5(175)	35(350)
動摩擦轉距 [Kgm](Nm) Dynamic Friction Torque		1.0(10)	2.0(20)	4.0(40)	8.0(80)	16(160)	32(320)
功率 Power [24V](W) at 20°C		15	20	25	35	45	60
徑方向 Radius	A	80	100	125	160	200	250
	B	42	52	62	80	100	125
	D	100	125	150	190	230	290
	F	10	10	12	15	18	21
	J	9	11	13	18	20	25
	K	20	25	30	37	44	50
	V1	3-4.1	3-5.1	3-6.1	3-8.1	3-10.2	4-12.2
	V2	3-8	3-10.5	3-12	3-15	3-18	4-22
	V3	3-7	3.9	3-10.5	3-14	3-17	4-19
軸方向 Shaft	C	60	76	95	120	158	210
	E	12	20	25	35	40	48
	H	1.8	2.3	3.3	3.8		
	I	4	5	7	10		12
	L	4.6	5.6	6.8	9.4	11.8	13.1
	M	97	107		148		148.5
	N	15	16	20			30
	T	8			12		
	m	M6			M8		
重量 Weight	(kg)	3	4.5	6	13.5	23	41.5



天吉机电
ELECTROMECHANICAL
ELECTRONIC
Manufactured by
ISO:9001
AUTHORISED
ENVIRONMENTAL
www.dgtianji.com

TYPE	-5
SIZE	40MM
NO. I	10/100
POWER	25W
BLAT	1.05A

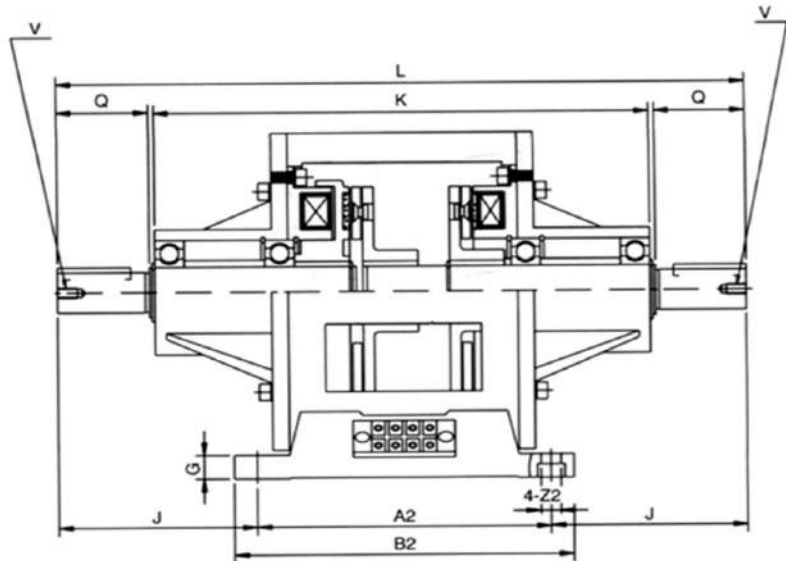
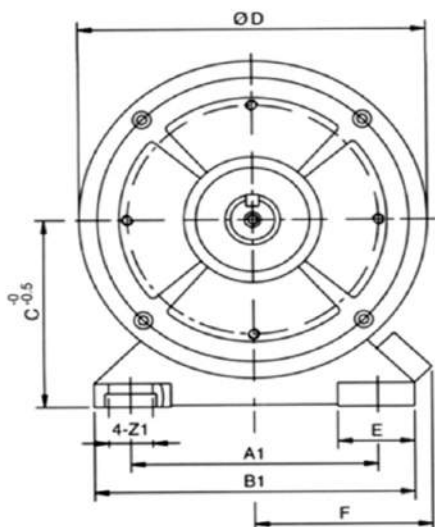
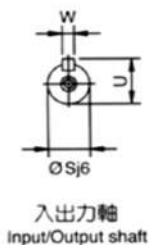


天吉传动
TIANJI CHUANDONG

內藏式電磁離合、煞車器組合

Internal Solenoid Culenoid Clutch and Brake Assembly

TJ-POA



型號 MODEL	TJ-POA-0.6	TJ-POA-1.5	TJ-POA-2	TJ-POA-5	TJ-POA-10	TJ-POA-20	TJ-POA-40		
靜摩擦轉距 Static Friction Torque (Kgm)(Nm)	0.55(5.5)	1.1(11)	2.2(22)	4.5(45)	9.0(90)	17.5(175)	35(350)		
功率 Power [24V](W) at 20°C	11	15	20	25	35	45	60		
懸垂負荷 Suspended load (kgf)	32	48	70	90	130	180	260		
徑方向 Radius	A1	65	80	105	135	155	195	250	
	B1	90	110	140	175	200	240	300	
	C	65	80	90	112	132	160	195	
	D	100	125	150	190	230	290	350	
	E	27.5	32	35	42	45	47	50	
	F	60	68	81	97	110	129	160	
	S	11	14	19	24	28	38	42	
	U	12.5	16	21	27	31	41.5	45.5	
	W	4	5		7		10	12	
	Z1	13.5	15	20	24	28	28	34	
軸方向 Shaft	A2	90	110	135	160	200	240	300	
	B2	105	130	160	185	230	270	340	
	G	10	12	15	15	18	20	23	
	J	48.5	63	80	108	145	188	216	
	K	132	171	210	270	362	448	530	
	L	187	236	295	376	490	616	772	
	Q	25	30	40	50	60	80	110	
	V	M4*0.7P*8L			M6*1P*11L			M10*1.5P*17L	M10
	Z2	6.5	9	11		14		17	
重量 Weight (kg)	2.1	4.2	6.8	12	22	49	90		



EMERGENCY
ELECTROMAGNETIC
CLUTCHBRAKE

Meets quality	TYPE	-1.3
ISO:9001	THROAT	1.68
AUTHORISE	VOL.1	0049
ENTERPRISE	FIG.2	08
	BLT	0.83

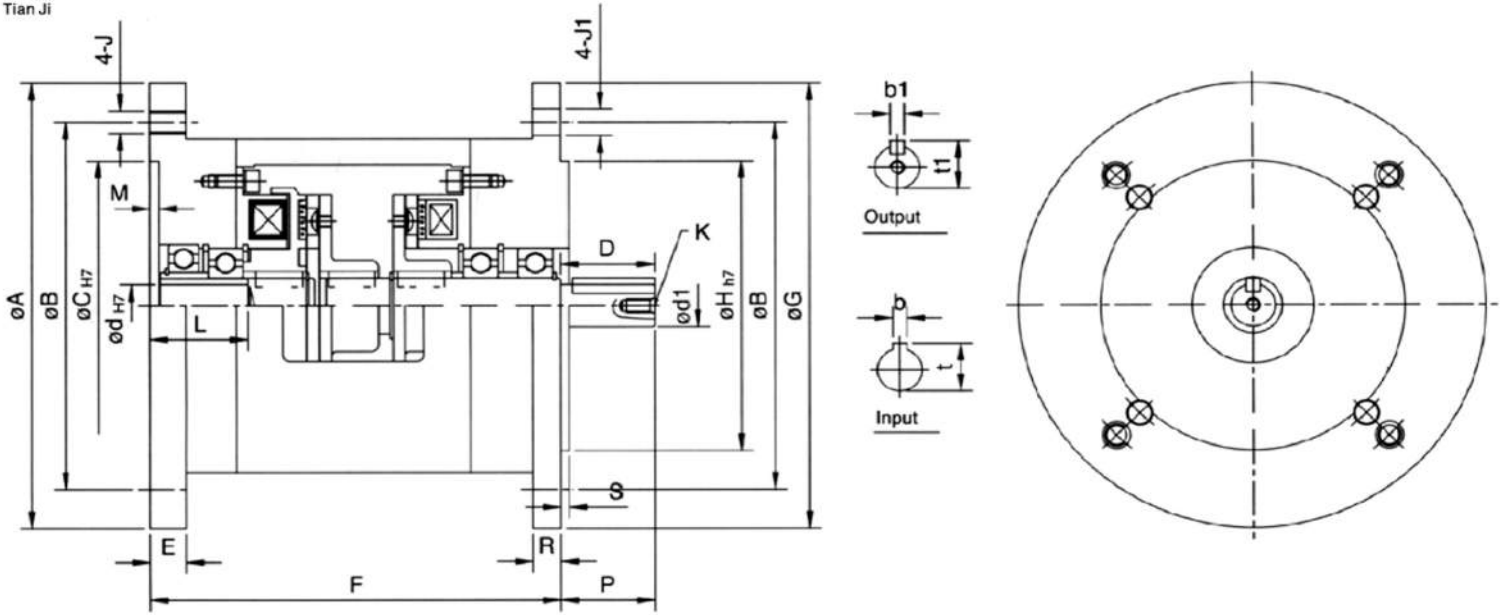
DONG GUAN TAI JI CO.;LTD



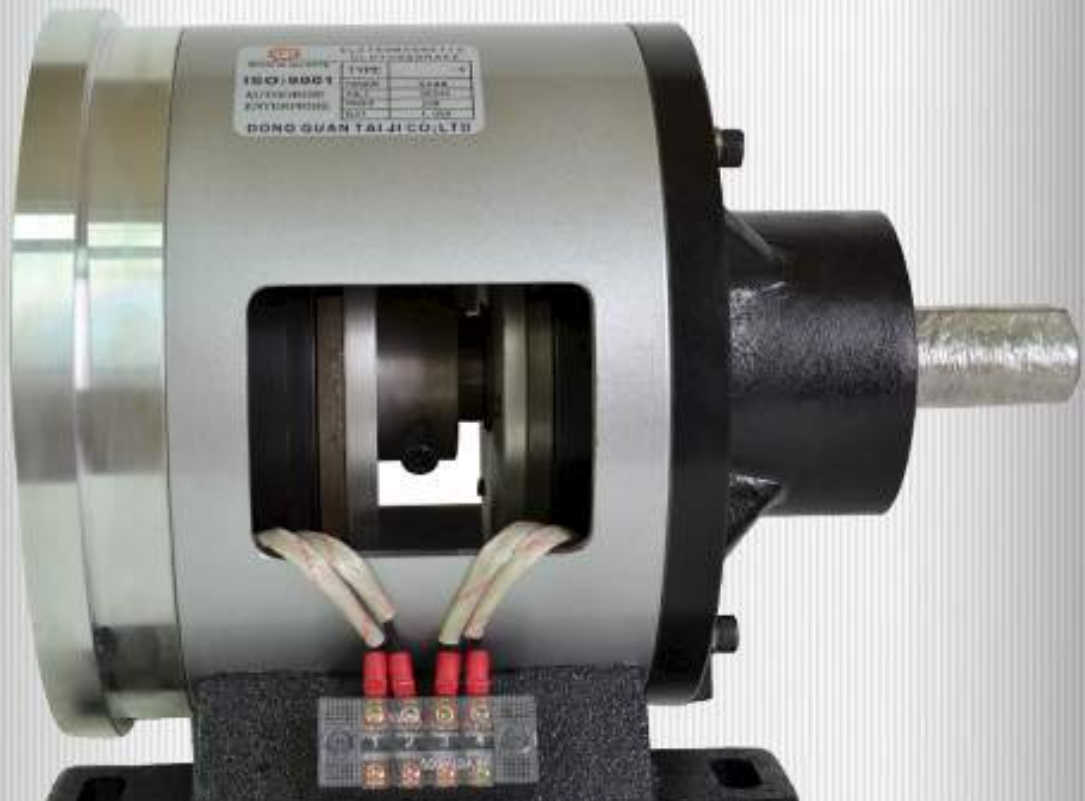
天机传动
TIANJI CHUANDONG



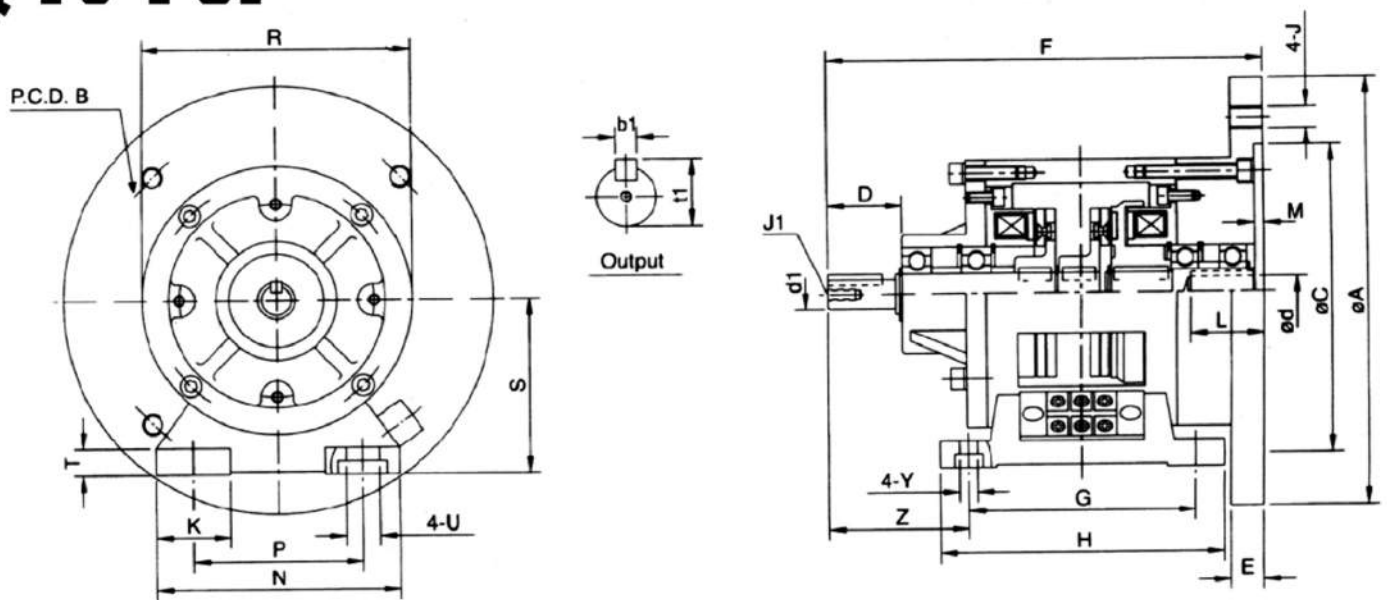
天機
Tian Ji



型號 MODEL		TJ-POH-0.6	TJ-POH-1.5	TJ-POH-2.5	TJ-POH-5	TJ-POH-10	TJ-POH-20	
靜摩擦轉距 Static Friction Torque [Kgm](Nm)		0.55(5.5)	1.1(11)	2.2(22)	4.5(45)	9.0(90)	17.5(175)	
動摩擦轉距 Dynamic Friction Torque [Kgm](Nm)		0.5(5.0)	1.0(10)	2.0(20)	4.0(40)	8.0(80)	16(160)	
功率 Power [24V](W) at 20°C		11	15	20	25	35	45	
徑方向 Radius	A	160	160	200	200	250	300	
	B	130	130	165	165	215	265	
	C	110	110	130	130	180	230	
	H	110	110	130	130	180	230	
	J	M8		M10		M12		
	J1	10		12		14		
	d	11	14	19	24	28	38	
	d1	11	14	19	24	28	38	
	D	25	30	40	50	60	80	
軸方向 Shaft	E	12		15.5	15	13	16	
	F	131	150	175.5	241.5	285	456	
	L	27	32	42	52	62	82	
	M	5			6			
	P	25	30	40	50	60	80	
	R	9	9.5	12	11	9	12	
	S	3.5			4			
	b	4	5	6	8		10	
	t	12.8	16.3	21.8	27.3	31.3	41.8	
	b1	4	5	6	8		10	
	t1	12.5	16	21.5	11	27	31	14
重量 Weight	(kg)	2.5	4.8	8.5	14	24	47	



 **天和传动**
TIANJIHUANDONG



型號 MODEL		TJ-POI-0.6	TJ-POI-1.5	TJ-POI-2.5	TJ-POI-5	TJ-POI-10	TJ-POI-20
靜摩擦轉距 Static Friction Torque [Kgm](Nm)		0.55(5.5)	1.1(11)	2.2(22)	4.5(45)	9.0(90)	17.5(175)
動摩擦轉距 Dynamic Friction Torque [Kgm](Nm)		0.5(5.0)	1.0(10)	2.0(20)	4.0(40)	8.0(80)	16(160)
功率 Power [24V](W) at 20°C		11	15	20	25	35	45
徑方向 Radius	A	160	160	200	200	250	300
	B	130	130	165	165	215	265
	C	110	110	130	130	180	230
	J	M8		M10		M12	
	J1	M4*0.7P*8L		M6*1P*11L			M10*1.5P*17L
	R	100	125	150	190	230	290
	S	65	80	90	112	132	160
	T	10	12	15	15	18	20
	d	11	14	19	24	28	38
	d1	11	14	19	24	28	38
軸方向 Shaft	D	25	30	40	50	60	80
	E	12		15.5	15	13	16
	F	160	194.5	234.5	310.5	389	536
	G	90	110	135	160	200	240
	H	105	130	160	185	230	270
	K	27.5	32	35	42	45	47
	L	27	32	42	52	62	82
	M	5			6		
	N	90	110	140	175	200	240
	P	65	80	105	135	155	195
	U	13.5	15	20	24	28	28
	Y	6.5	9	11		14	
	Z	48.5	63	80	108	145	188
	b	4	5	6	7		10
	t	12.8	16.3	21.8	27.3	31.3	41.8
	b1	4	5	6	8		10
	t1	12.5	16	21.5	27	31	41.5
	重量 Weight (kg)		2.6	5	9	15	25



ELECTROMAGNETIC
CLUTCH BRAKE

TYPE	-3
TORQUE	1000
NO. 1	2000
NO. 2	300
NO. 3	1.00

DONG GUAN TAI JI CO., LTD



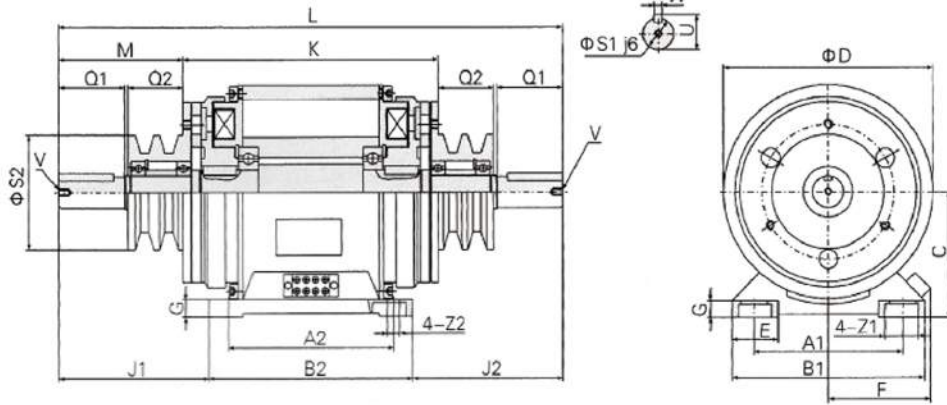
天和传动
TIAN TICHUANDONG

雙電磁離合器組帶皮帶輪

Dual Solenoid Clutch With Pulley



TJ-POF1



型號 MODEL		TJ-POF1-0.6	TJ-POF1-1.5	TJ-POF1-2.5	TJ-POF1-5	TJ-POF1-10	TJ-POF1-20	TJ-POF1-40
靜摩擦轉距[Kgm](Nm) Static Friction Torque		0.55(5.5)	1.1(11)	2.2(22)	4.5(45)	9.0(90)	17.5(175)	35(350)
功率 Power [24V](w) at 20°C		11	15	20	25	35	45	60
懸垂負荷 Suspended load(Kgf)		14	25	45	70	100	180	260
外型尺寸 Exterior dimensions	A1	52.5	65	80	105	120	155	195
	A2	75	90	110	125	155	200	240
	B1	80	90	110	140	175	200	240
	B2	95	105	130	160	185	230	270
	C	55	65	80	90	112	132	160
	D	80	100	125	150	190	230	290
	E	27.5	27.5	32	35	42	45	47
	F	57	60	68	81	97	110	129
	G	10	10	12	15	15	18	20
	J1	65.5	70.5	88	108.5	136.5	172	223
	J2	65.5	70.5	88	108.5	136.5	172	223
	K	111.5	133	162	193	232	190	350
	L	204	246	306	377	458	574	716
	M	46.5	56.5	72	92	113	142	183
	Q1	25	30	40	50	60	80	110
	Q2	20	25	30	40	50	60	70
	S1(j6)	11	14	19	24	28	38	42
	S2(j6)	75	80	85	85	102	138	165
	U	12.5	16	21	27	31	41.5	45.5
	W	4	5	5	7	7	10	12
Z1	13.5	13.5	15	20	24	28	28	
Z2	6.5	6.5	9	11	11	14	14	
V	M4	M4	M6	M6	M6	M10	M10	
重量 Weight (kg)		1.5	2.7	5.5	9.5	18.5	35	64



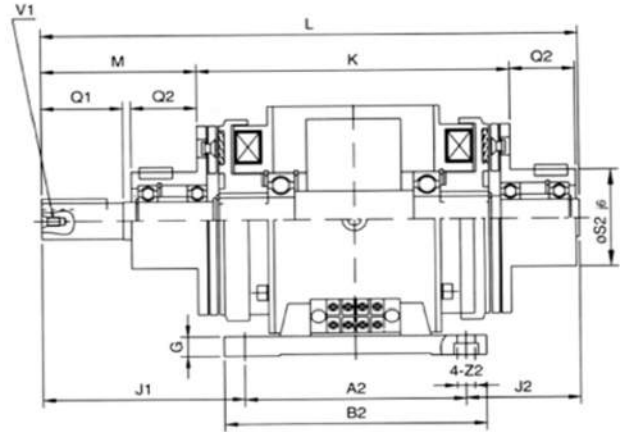
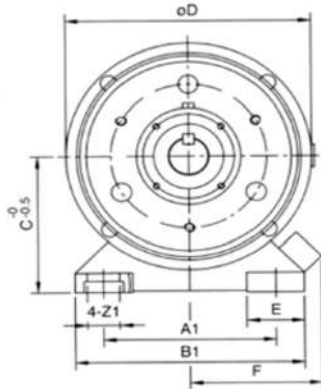
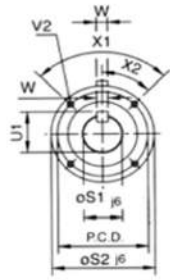
天和传动
TIANJI CHUANDONG



TJ-POF2

雙電磁離合器組

Dual Solenoid Clutch



型號 MODEL	TJ-POF-0.6	TJ-POF-1.5	TJ-POF-2.5	TJ-POF-5	TJ-POF-10	TJ-POF-20	TJ-POF-40	
靜摩擦轉距 [Kgm](Nm) Static Friction Torque	0.55(5.5)	1.1(11)	2.2(22)	4.5(45)	9.0(90)	17.5(175)	35(350)	
功率 Power [24V](W) at 20°C	11	15	20	25	35	45	60	
懸垂負荷Suspended load(Kgf)	14	25	45	70	100	180	260	
徑方向 Radius	A2	.75	90	110	135	160	240	
	B2	95	105	130	160	185	270	
	G	10	10	12	15	15	20	
	J1	65.5	78.5	98	121	149	238	
	J2	40.5	40.5	62	74	90	154	
	K	111.5	133	162	193	232	350	
	L	181	217	266	327	397	603	
	M	46.5	56.5	72	92	113	183	
	Q1	25	30	40	50	60	110	
	Q2	20	25	30	40	50	70	
V1	M4*0.7P*8L		M6*1P*11L			M10*1.5P*17L		
Z2	6.5	6.5	9	11	11	14	14	
軸方向 Shaft	A1	52.5	65	80	105	135	195	
	B1	80	90	110	140	175	240	
	C	55	65	80	90	112	160	
	D	80	100	125	150	190	290	
	E	27.5	27.5	32	35	42	47	
	F	57	60	68	81	97	129	
	N	33	37	49	56	65	101.5	
	S1	11	14	19	24	28	42	
	S2	38	45	55	64	75	115	
	U1	12.5	16	21	27	31	45.5	
	U2	39.5	47	57	67	78	118.5	
	V2	M4*0.7P*6L		M4*0.7P*8L			M6*1P*12L	
	W	4	5	7	10	12		
	X1	3-120 °			4-90 °			8-45 °
X2	60 °			45 °			22.5 °	
Z1	13.5	13.5	15	20	24	28	28	
重量 Weight (kg)	1.5	2.7	5.5	9.6	18.5	35	64	



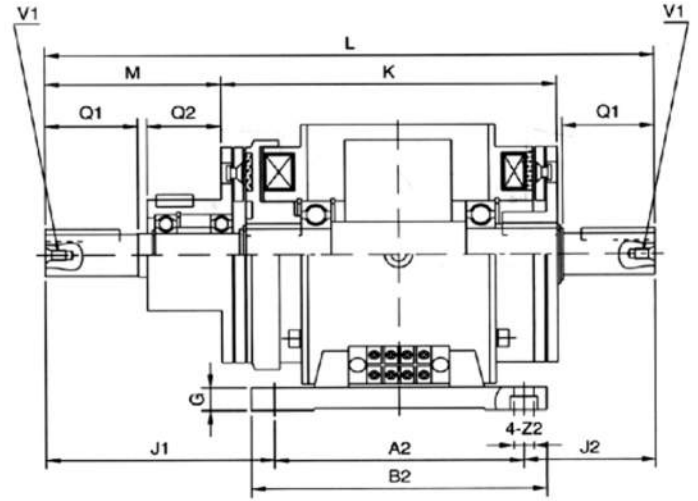
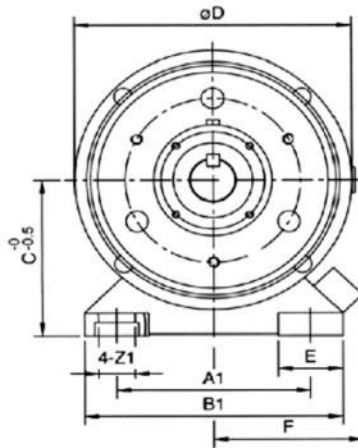
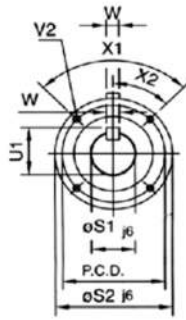
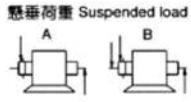
输入轴 出力轴

 ELECTROMAGNETIC CLUTCH&BRAKE
Main quality
ISO:9001
AUTOMATIC ENTERPRISE
DONG GUAN TAI JI CO.,LTD

TYPE	-S
TORQUE	2.2KN
VOLT	30VDC
POWER	20W
SIZE	1.5寸

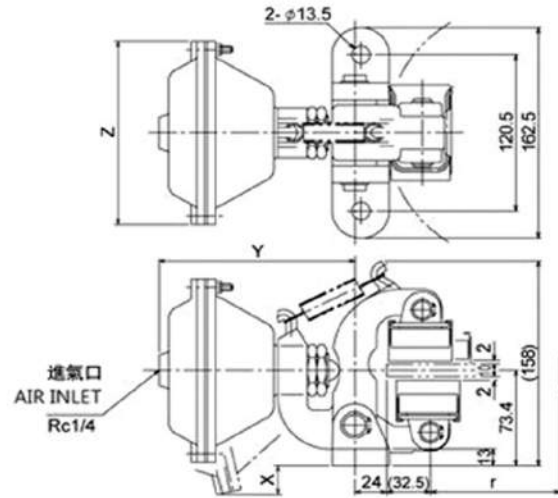


天利传动
TIANLICHUANDONG

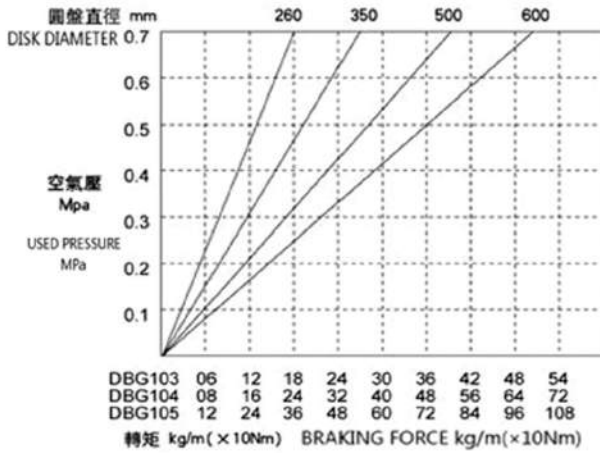


型號 MODEL		TJ-POB-0.6	TJ-POB-1.5	TJ-POB-2.5	TJ-POB-5	TJ-POB-10	TJ-POB-20	TJ-POB-40	
靜摩擦轉距 (Kgm)(Nm) Static Friction Torque		0.55(5.5)	1.1(11)	2.2(22)	4.5(45)	9.0(90)	17.5(175)	35(350)	
功率 Power [24V](W) at 20°C		11	15	20	25	35	45	60	
懸垂負荷 (Kgt) Suspended load	A	30	45	70	90	140	200	290	
	B	14	25	45	70	100	180	260	
徑方向 Radius	A2	75	90	110	135	160	200	240	
	B2	95	105	130	160	185	230	270	
	G	10	10	12	15	15	18	20	
	J1	65.5	78.5	98	121	149	187	238	
	J2	40.5	40.5	62	74	90	117	154	
	K	105.5	126.5	154	184	221	276	334	
	L	181	217	270	330	399	504	632	
	M	46.5	56.5	72	92	113	142	183	
	Q1	25	30	40	50	60	80	110	
	Q2	20	25	30	40	50	60	70	
	V1	M4*0.7P*8L			M6*1P*11L			M10*1.5P*17L	
	Z2	6.5	6.5	9	11	11	14	14	
軸方向 Shaft	A1	52.5	65	80	105	135	155	195	
	B1	80	90	110	140	175	200	240	
	C	55	65	80	90	112	132	160	
	D	80	100	125	150	190	230	290	
	E	27.5	27.5	32	35	42	45	47	
	F	57	60	68	81	97	110	129	
	N	33	37	49	56	65	79	101.5	
	S1	11	14	19	24	28	38	42	
	S2	38	45	55	64	75	90	115	
	U1	12.5	16	21	27	31	41.5	45.5	
	U2	39.5	47	57	67	78	93.5	118.5	
	V2	M4*0.7P*6L		M4*0.7P*8L			M6*1P*12L		
	W	4	5	7	10	12			
	X1	3-120°			4-90°			8-45°	
X2	60°			45°			22.5°		
Z1	13.5	13.5	15	20	24	28	28		
重量 Weight (kg)	1.5	2.7	5.5	9.6	18.5	35	64		

DBG-10



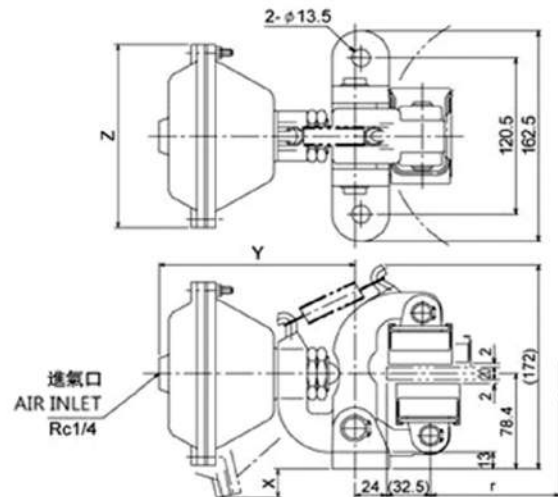
● 空壓與轉矩的關係 CHARACTERISTIC CURVE



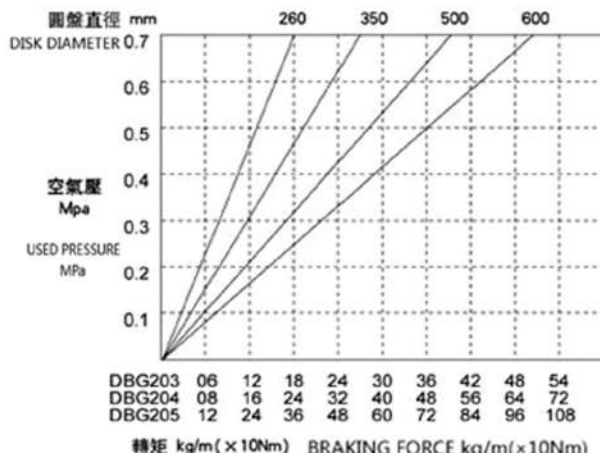
● 規格表 SPECIFICATION

型號 Type	DBG-103	DBG-104	DBG-105
圓盤厚度 Disc thickness	10mm	10mm	10mm
圓盤直徑 Usable disc dia	200mm ↑	200mm ↑	200mm ↑
最大壓力 MAX.working air presue	0.7Mpa	0.7Mpa	0.7Mpa
壓縮比 Compression ratio	0.74	0.74	0.74
摩擦片磨耗 Pads clearance	7mm	7mm	7mm
重量(約) Weight (approximately)	5kg	5.5kg	6kg
X	5mm	18mm	36mm
Y	145mm	145mm	160mm
ØZ	118mm	141mm	177mm

DBG-20



● 空壓與轉矩的關係 CHARACTERISTIC CURVE



● 規格表 SPECIFICATION

型號 Type	DBG-203	DBG-204	DBG-205
圓盤厚度 Disc thickness	20mm	20mm	20mm
圓盤直徑 Usable disc dia	200mm ↑	200mm ↑	200mm ↑
最大壓力 MAX.working air presue	0.7Mpa	0.7Mpa	0.7Mpa
壓縮比 Compression ratio	0.74	0.74	0.74
摩擦片磨耗 Pads clearance	7mm	7mm	7mm
重量(約) Weight (approximately)	5kg	5.5kg	6kg
X	0mm	13mm	31mm
Y	145mm	145mm	160mm
ØZ	118mm	141mm	177mm



TJ-DBH

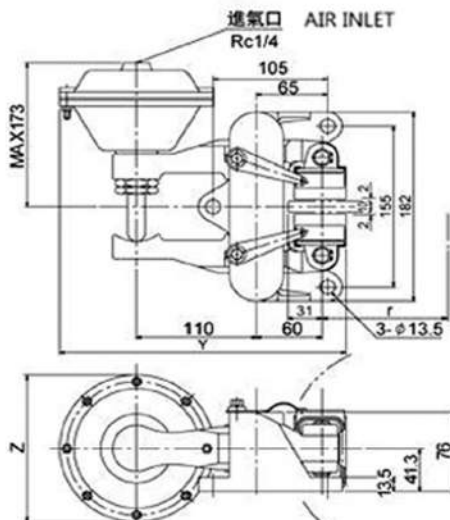
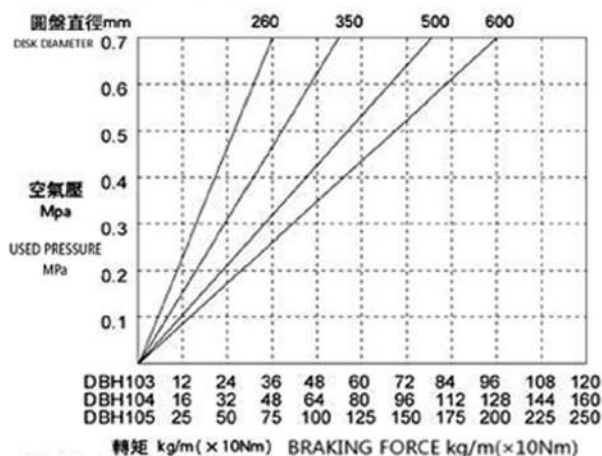
DBH型(卧式)空壓碟式制動器

DBH Model Air Disc Brakes (Horizontal-type)

DBH-10



● 空壓與轉矩的關係 CHARACTERISTIC CURVE



注：卧式型碟式制動器分左右兩式。此圖為右式。訂貨時請注明左右邊。
Note: This chart is right-like, when ordering about please indicate side.

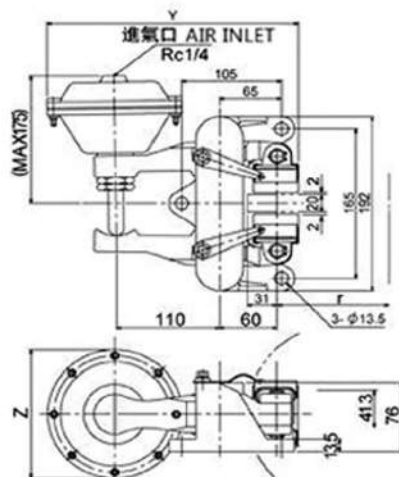
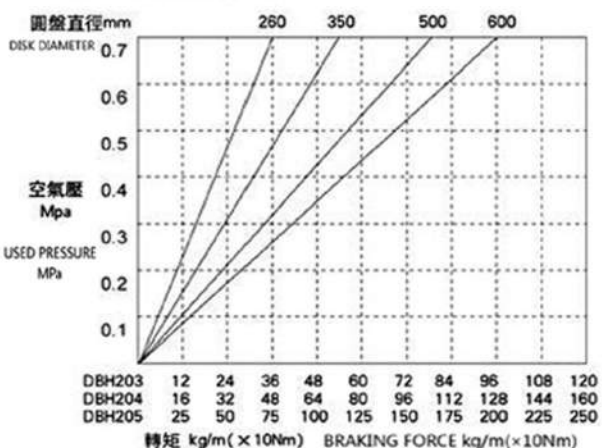
● 規格表 SPECIFICATION

型號 Type	DBH-103	DBH-104	DBH-105
圓盤厚度 Disc thickness	10mm	10mm	10mm
圓盤直徑 Usable disc dia	200mm ↑	200mm ↑	200mm ↑
最大壓力 MAX.working air pressure	0.7Mpa	0.7Mpa	0.7Mpa
壓縮比 Compression ratio	1.83	1.83	1.83
摩擦片磨耗 Pads clearance	7mm	7mm	7mm
重量(約) Weight (approximately)	8kg	8.5kg	9kg
Y	251mm	263mm	280mm
ØZ	118mm	141mm	177mm

DBH-20



● 空壓與轉矩的關係 CHARACTERISTIC CURVE

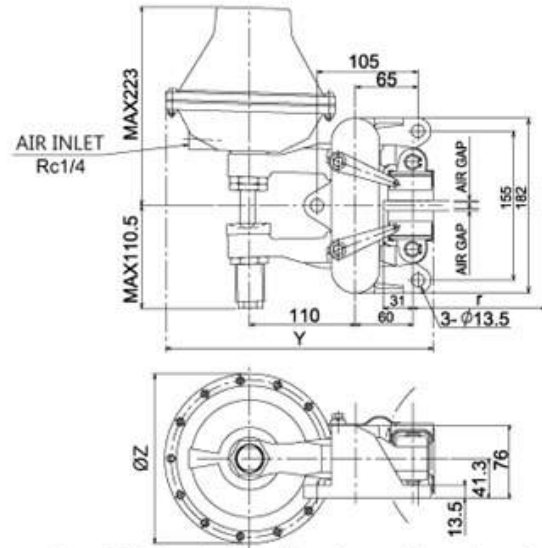


注：卧式型碟式制動器分左右兩式。此圖為右式。訂貨時請注明左右邊。
Note: This chart is right-like, when ordering about please indicate side.

● 規格表 SPECIFICATION

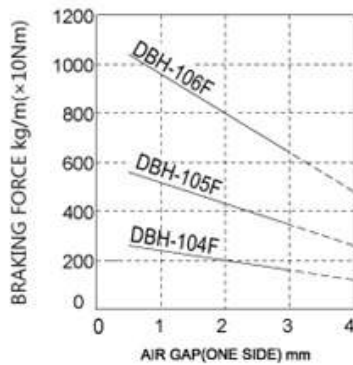
型號 Type	DBH-203	DBH-204	DBH-205
圓盤厚度 Disc thickness	20mm	20mm	20mm
圓盤直徑 Usable disc dia	200mm ↑	200mm ↑	200mm ↑
最大壓力 MAX.working air pressure	0.7Mpa	0.7Mpa	0.7Mpa
壓縮比 Compression ratio	1.83	1.83	1.83
摩擦片磨耗 Pads clearance	7mm	7mm	7mm
重量(約) Weight (approximately)	8.5kg	9kg	9.5kg
Y	251mm	263mm	280mm
ØZ	118mm	141mm	177mm

DBH-10F (Horizontal) Air-actuated Disc Brakes (Brakes By Springs, Release by Air)



Note: This chart is right-like, when ordering about please indicate side.

● CHARACTERISTIC CURVE



● SPECIFICATION

Type	DBH-104F	DBH-105F	DBH-106F
Disc thickness	10-12.7mm	10-12.7mm	10-12.7mm
Usable disc dia (Braking force=Kg)	200mm ↑ 300(3000)	200mm ↑ 550(5500)	200mm ↑ 1100(11000)
MIN.working air pressue	0.5Mpa	0.5Mpa	0.5Mpa
Pads clearance	7mm	7mm	7mm
Weight (approximately)	9kg	9.5kg	10kg
Y	263mm	280mm	298mm
ØZ	141mm	177mm	213mm

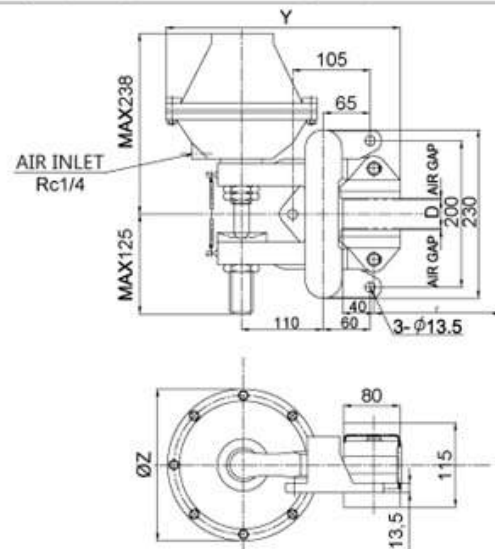
Effective radius of braking

$$r = \frac{1}{1000} \left(\frac{\text{DISC DIA}}{2} - 31 \right)$$

Torque calculaton (Braking force=Kg)

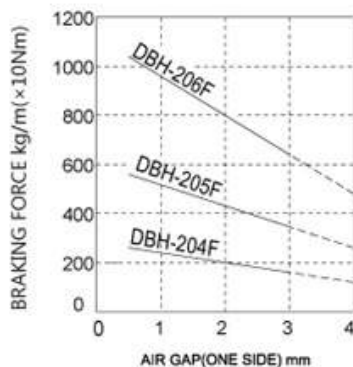
$$T (\text{kg} \cdot \text{m}) = \text{kg} \times r$$

DBH-20F (Horizontal) Air-actuated Disc Brakes (Brakes By Springs, Release by Air)



Note: This chart is right-like, when ordering about please indicate side.

● CHARACTERISTIC CURVE



● SPECIFICATION

Type	DBH-20(38)4F	DBH-10(38)5F	DBH-10(38)6F
Disc thickness	20-38mm	20-38mm	20-38mm
Usable disc dia (Braking force=Kg)	350mm ↑ 300(3000)	350mm ↑ 550(5500)	350mm ↑ 1100(11000)
MIN.working air pressue	0.5Mpa	0.5Mpa	0.5Mpa
Pads clearance	7mm	7mm	7mm
Weight (approximately)	9.5kg	10kg	10.5kg
Y	263mm	280mm	298mm
ØZ	141mm	177mm	213mm

Effective radius of braking

$$r = \frac{1}{1000} \left(\frac{\text{DISC DIA}}{2} - 31 \right)$$

Torque calculaton (Braking force=Kg)

$$T (\text{kg} \cdot \text{m}) = \text{kg} \times r$$

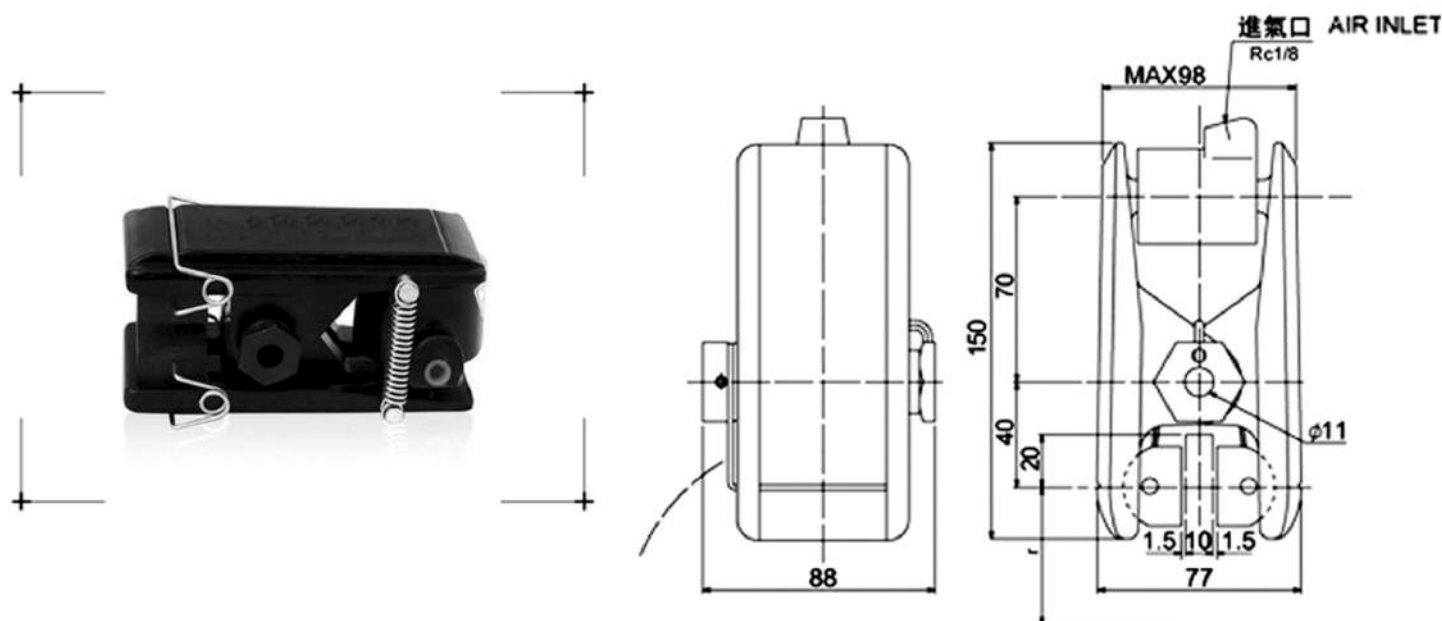


TJ-DBC

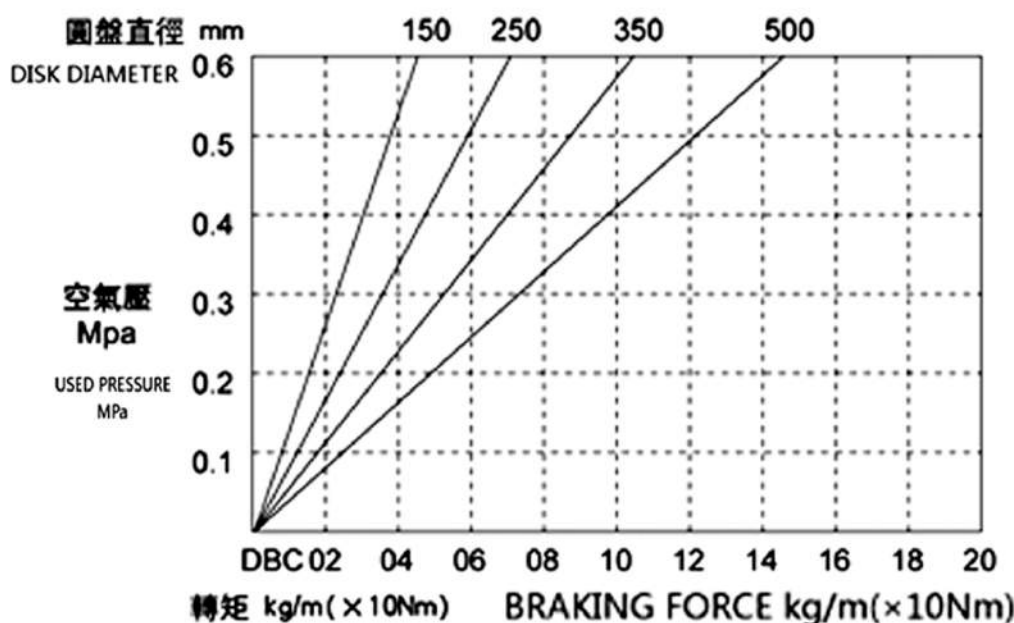
DBC型空壓碟式制動器

DBC Air Disc Brakes

DBC



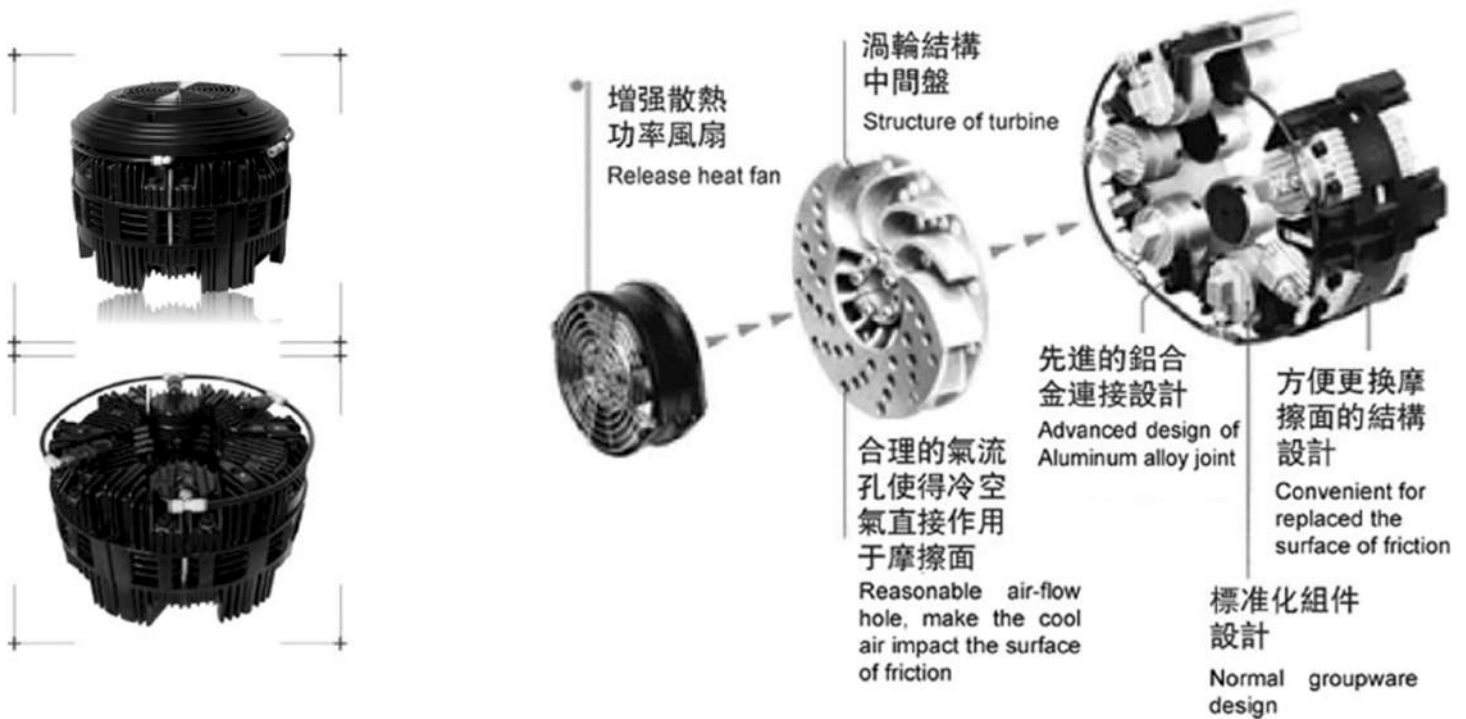
● 空壓與轉矩的關係 CHARACTERISTIC CURVE



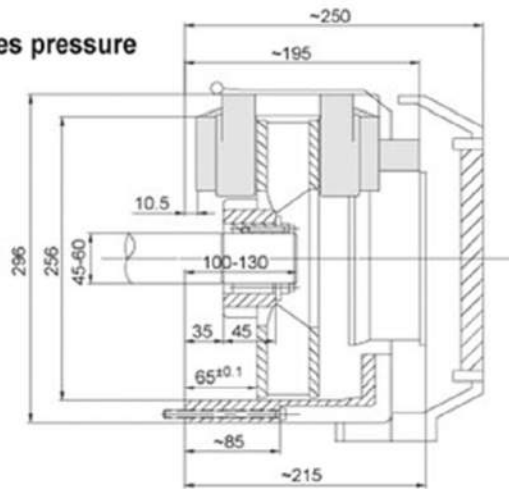
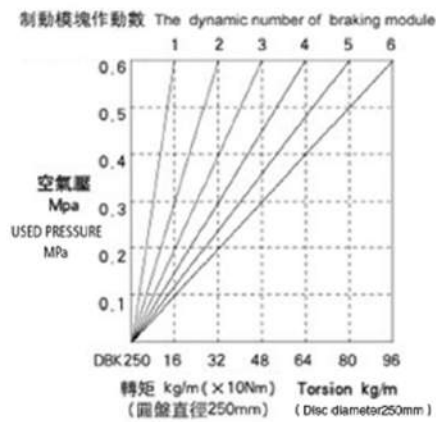
● 規格表 SPECIFICATION

型號	Type	DBC-10
圓盤厚度	Disc thickness	10mm
圓盤直徑	Usable disc dia	150mm↑
最大壓力	MAX.working air pressue	0.6Mpa
氣壓缸面積	Barometric pressure cylinder area	19.63cm ²
摩擦片磨耗	Pads clearance	5mm
重量 (約)	Weight (approximately)	2.3kg

外形尺寸及內部結構圖 Outline dimensional drawing (mm)



● 空壓與轉矩的關係 Torque verses pressure



● 規格表 Specification

DBK 250.0.0.0 (制動盤直徑為250mm)	DBK 250.0.0.0 (The diameter of brake disc is 250 mm)
空氣壓 Air Pressure	Min 0.02Mpa Max 0.6Mpa
單個模塊轉矩 kg/m(N/m)	A modular braking system torque 0.15(1.5) 16(160)

散熱功率 kw Heat dissipation (KW)	轉速 100rpm Rotational speed	轉速 300rpm Rotational speed	轉速 600rpm Rotational speed	轉速 1000rpm Rotational speed
帶風扇 with ventilator	3.5	4.5	6	9
不帶風扇 without ventilator	1.3	2.2	3	4.8

[注] 散熱功率: 此數值是在環境溫度30°C, 盤面溫度150°C時的測定值。
 旋轉方向: 順時針旋轉, 逆時針方向旋轉散熱功率要降低15%。
 Remarks: 1、Heat dissipation: The value of power has been obtained in the following test conditions:
 (1)Discs in continuous rotation with ambient temperature +30°
 (2)Temperature on the disc +150°
 2、Direction of rotation: with right hand rotation the power is reduced by 15%

最高轉速 max/rpm	重量(約) Net weight	慣量 Inertia
2500rpm	22kg	I=0.058kgm ²

[注] 圓盤內孔直徑隨安裝形式不同可以依據需求定制(min 45mm-max 60mm)
 Note: The diameter of the inner hole with the installation disc in different forms can be customized according to demand (min 45mm-max 60mm)



TJ-DBK

DBK10\DBK20.2\DBK20.4型空壓碟式制動器

Air-actuated Disc Brakes

DBK



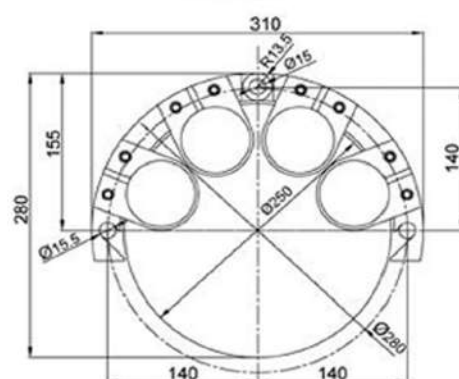
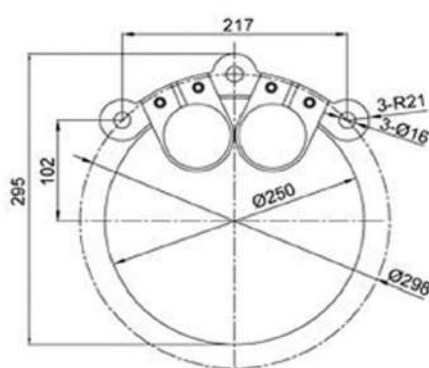
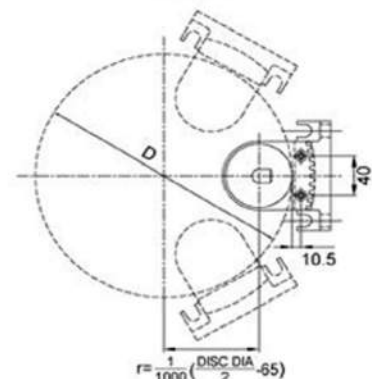
DBK-10



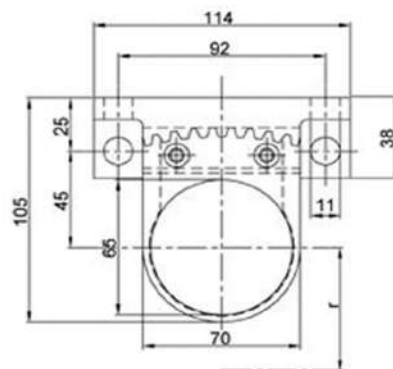
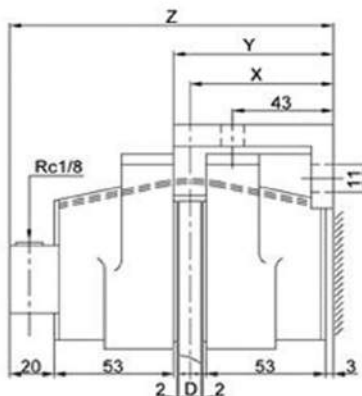
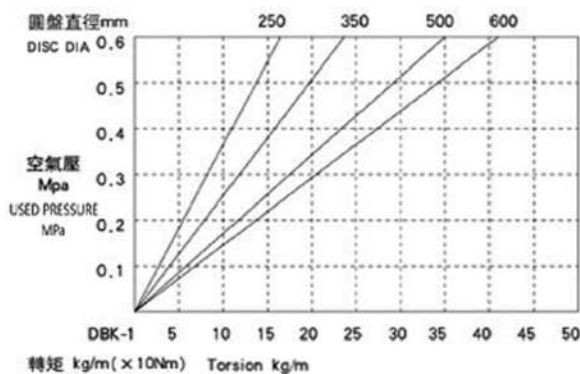
DBK-20.2



DBK-20.4



● 空壓與轉矩的關係 Torque versus pressure



● 單制動模塊轉矩計算 A modular braking system torque calculation

制動推力 (0.6Mpa)	Braking force(6kg/cm ²)	195kg
圓盤有效制動半徑	Effective radius of braking(m)	$r = \frac{1}{1000} \left(\frac{\text{DISC DIA}}{2} - 65 \right)$
轉矩計算公式 (制動推力=kg)	Torque calculation(Braking force=kg)	$T (\text{kg} \cdot \text{m}) = \text{kg} \times r$

● 規格表 Specification

型號	Type	DBK-10	DBK-20.2	DBK-20.4
圓盤厚度(D)	Disc thickness(A)	10mm	20mm	20mm
圓盤直徑	Usable disc dia	250mm ↑	250mm ↑	250mm ↑
最大壓力	MAX. working air pressure	0.6Mpa	0.6Mpa	0.6Mpa
摩擦片磨耗	Pads clearance	6mm	6mm	6mm
重量 (約)	Weight	2kg	4kg	8kg
X		64mm	69mm	69mm
Y		71mm	76mm	76mm
Z		144mm	150mm	150mm

[注] 不同直徑與厚度圓盤制動器可以依據需求定制
 Note: The different diameter and thickness can be customized according to requirements of disc brake



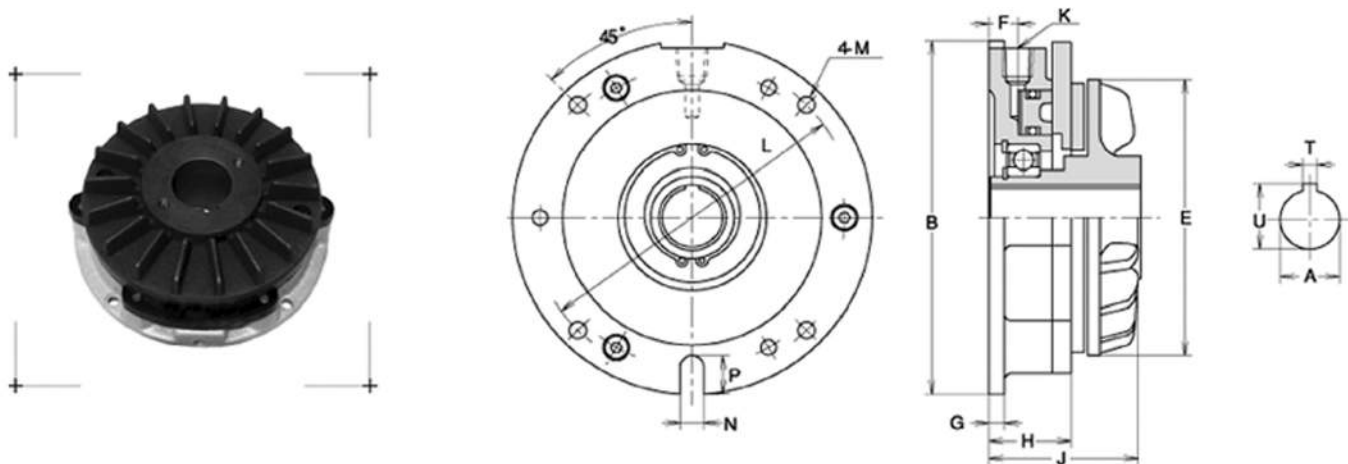
TJ-NAB

NAB型(標準型)空壓通軸式制動器

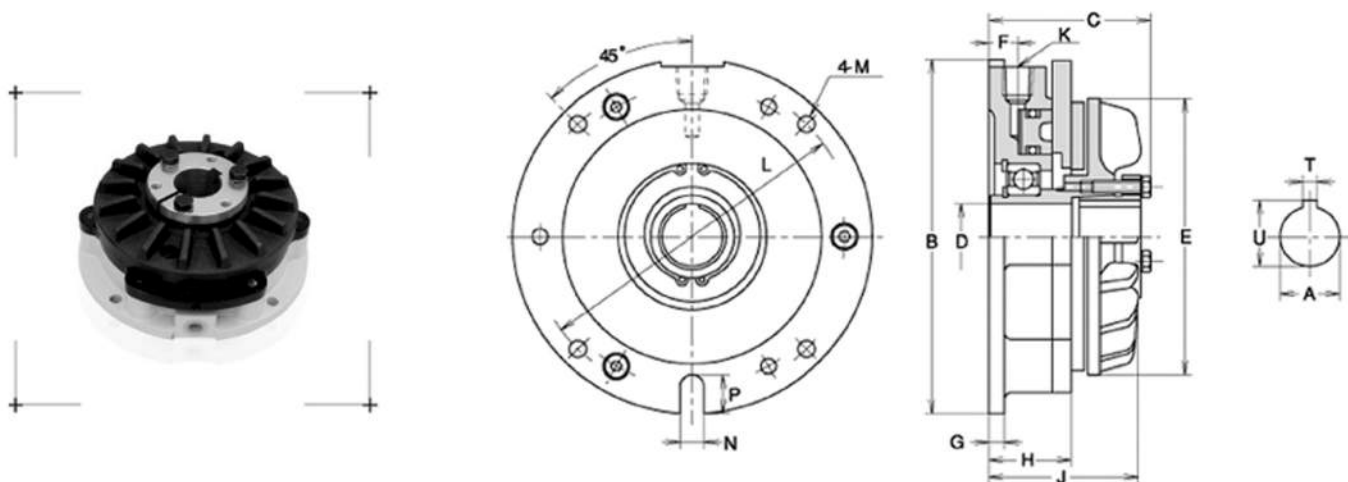
NAB (Standard) Air Through Shaft Brakes

主要尺寸表 Model Air Brakes

NAB-□S



NAB-□T



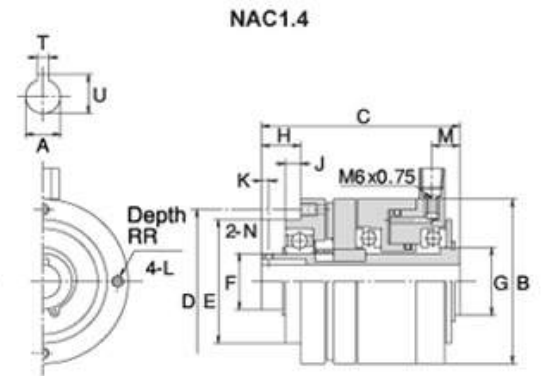
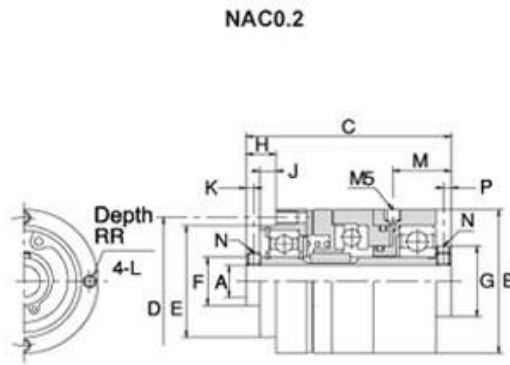
型號 Type	靜摩擦轉矩 Static Torque kg/m(N/m)	主要尺寸(mm) Size (mm)											
		0.6MPa時	A	B	C	D	E	F	G	H	J	K	L
NAB5	5.3(53)	25	150	68.5	27.8	117	12	6.5	34.5	64	Rc1/4	135	7
NAB10	10(100)	35	182	79.5	38	155	12	10	44	77	Rc1/4	165	9
NAB20	21.6(216)	50	228	96	57	204	11	10	47	87	Rc1/4	210	9
NAB40	51(510)	75	302	120	83	256	18	13	58.5	114	Rc1/4	278	14
NAB65	63.6(636)	75	350	134	83	280	20	18	70	141	Rc1/4	320	18

型號 Type	主要尺寸(mm) Size (mm)					重量(約) (kg) Weight (kg)
	N	P	T	U	鍵	
NAB5	10	16.5	6	27.8	6x6x25	3.5
NAB10	16	17	10	38.3	10x8x30	6.6
NAB20	20	20	12	53.3	12x8x45	12
NAB40	22	22	18	79.4	18x11x65	25
NAB65	25	30	18	79.4	18x11x65	36

[注] 若于定張力控制連續使用之場合時，M5進氣口必需接上空壓，強制空冷以增加滑動功率，延長壽命。

ATTENTION: in continuously use of Tension Control System, the M5 entry should be promoted by air, and strongly to produce cold air to raise its power and prolong its life.

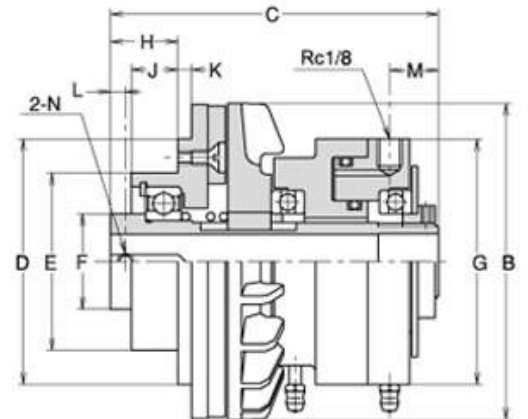
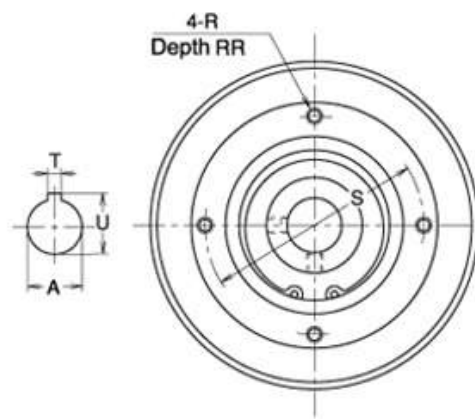
NAC0.2 | NAC1.4 Model Air Clutches



Type	Static Torque (N·m)	Size (mm)											
		A(H7)	B	C	D	E(h7)	F	G	H	J	K	L	LL
NAC 0.2	2.2	10	45	62	40	35	15	22	9	5	2.4	M4	6.5
NAC 1.4	13.7	15	73	85	64	55	25	30	17	6.5	3	M5	7

Type	Size (mm)						Weight (kg)
	M	N	P	T	U	Keyway	
NAC 0.2	18	M4	2.4	—	—	—	0.36
NAC 1.4	12	M4	—	5	17.3	5x5x16	1.3

NAC2 Model Air Clutches



Type	Static Torque (N·m)	Size (mm)											
		A(H7)	B	C	D	E(h7)	F	G	H	J	K	L	M
NAC 2	26	20	115	120	90	65	35	90	24.5	17	5	5.5	18

Type	Size (mm)							Weight (kg)
	N	R	RR	S	T	U	Keyway	
NAC 2	M6x0.75	M6	11	80	5	22.3	5x5x25	2.9

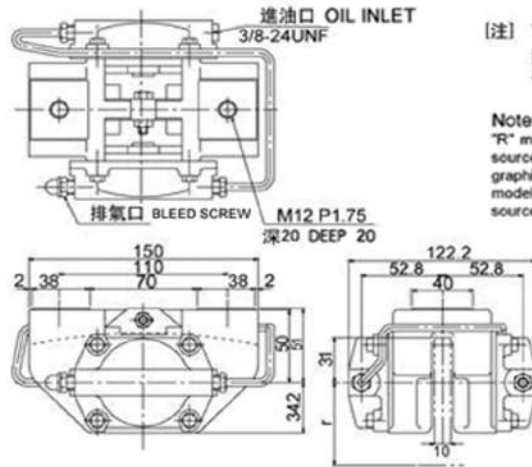


TJ-DBM

DBM型油壓碟式制動器

DBM oil hydraulic disc brake

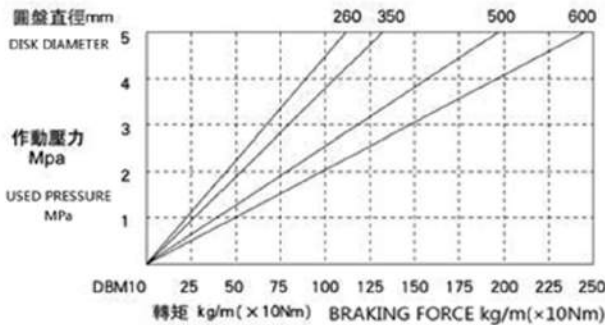
DBM-10



[注] "R"型,即作動源由右方進入。
圖示為"R"型。
"L"型,即作為動源由左方進入。

Note:
"R" model, namely does moves the source to enter by right. The graphical representation is R. "L" model, namely does moves the source to enter by the left side.

● 空壓與轉矩的關係 CHARACTERISTIC CURVE

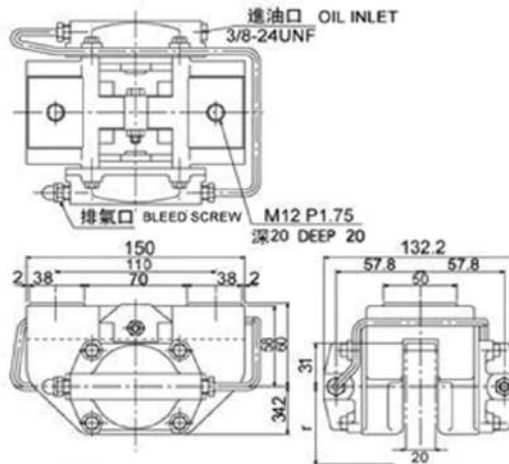


● 規格表 SPECIFICATION

型號	Type	DBM10
油壓缸型式	Cylinder model	2 1/8
油壓缸面積	Cylinder areadf	22.88cm ²
所需油量	Oil quantity	2.5c.c
圓盤厚度	Disc thickness	10mm
圓盤直徑	Usable disc dia	200mm ↑
最大壓力	MAX.working air pressue	5Mpa
摩擦片磨耗	Pads clearance	7mm
重量 (約)	Weight (approximately)	4.5kg

[注] 此制動器以制動油為主要作動源,亦可配合空油轉換增壓器而以空壓為作動源。
Note: Oil to be used:Use Brake Oil(Vegetable Oil). Also Brake for Mineral Oil are Available.

DBM-20

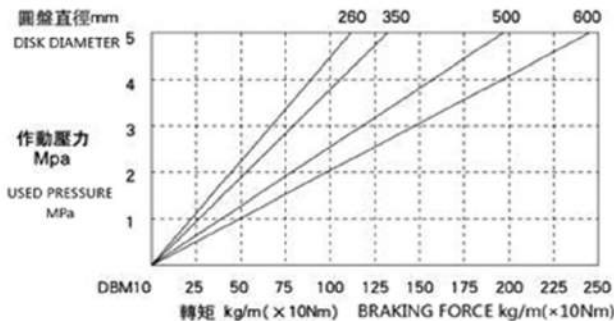


● 規格表 SPECIFICATION

型號	Type	DBM20
油壓缸型式	Cylinder model	2 1/8
油壓缸面積	Cylinder areadf	22.88cm ²
所需油量	Oil quantity	2.5c.c
圓盤厚度	Disc thickness	20mm
圓盤直徑	Usable disc dia	200mm ↑
最大壓力	MAX.working air pressue	5Mpa
摩擦片磨耗	Pads clearance	7mm
重量 (約)	Weight (approximately)	5.5kg

[注] 此制動器以制動油為主要作動源,亦可配合空油轉換增壓器而以空壓為作動源。
Note: Oil to be used:Use Brake Oil(Vegetable Oil). Also Brake for Mineral Oil are Available.

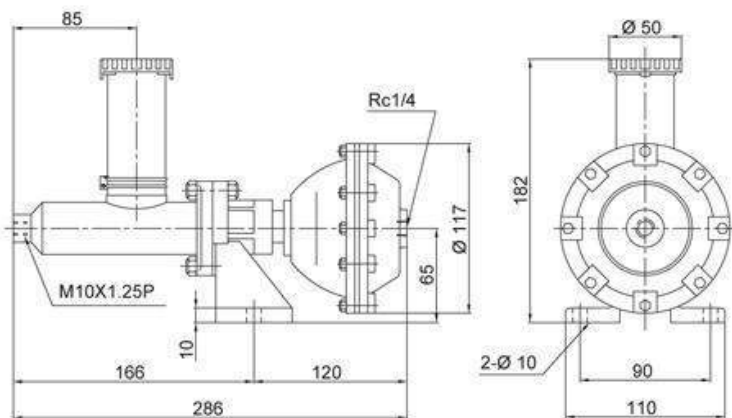
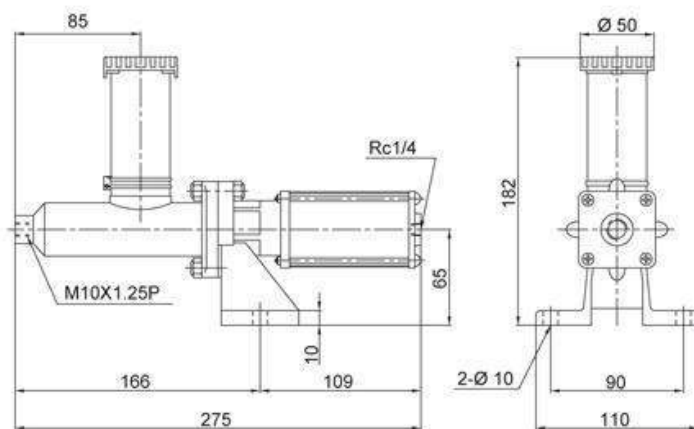
● 空壓與轉矩的關係 CHARACTERISTIC CURVE



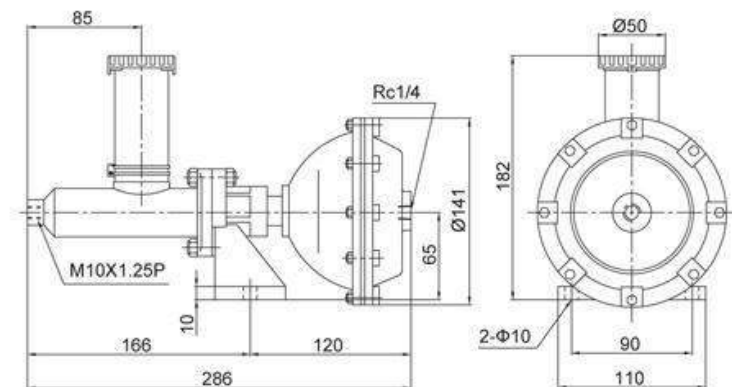
規格

型號	BST2	BST3	BST4
空壓缸	2"	3"	4"
最大氣壓	0.7Mpa	0.7Mpa	0.7Mpa
增壓比	7	10	14
最大油壓 Mpa	4.9	7	9.8
產生油量 c.c	9	12	12
重量(約) kg	1.6	2	2.5

BST2



BST4





TJ-STO / STW

軸座型安全夾頭(STO/STW型)

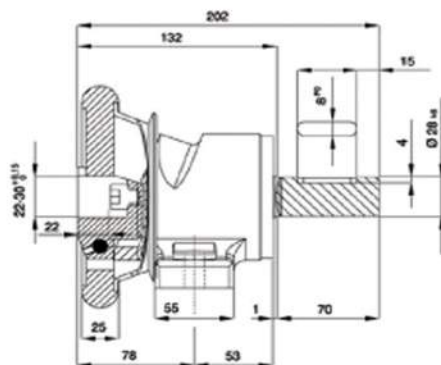
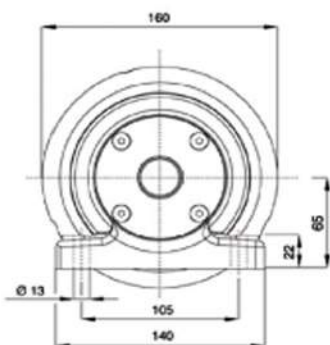
Spindle Seat Safety Chucks (STO/STW)

型號	Type	STO/STW 28-	STO/STW 35-	STO/STW 50-	STO/STW 75-
梁最大荷重量 kg	Maximum load capacity quantity	800	1600	2800	7000
承受最大轉矩 kg/m(N/m)	Withstanding biggest torque	18(180)	35(350)	110(1100)	235(2350)
卷軸軸端允許尺寸 mm	Reel axial-tab terminal permission size	22-30	30-40	40-50	50-80
重量 (約) kg	Weight	18	25	50	85

STO/STW 28 規格及參數 Specifications and parameters



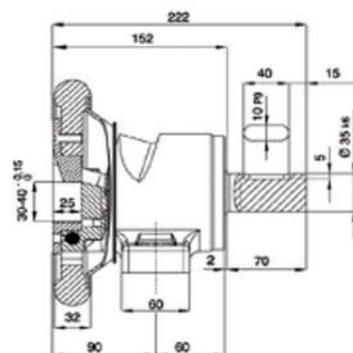
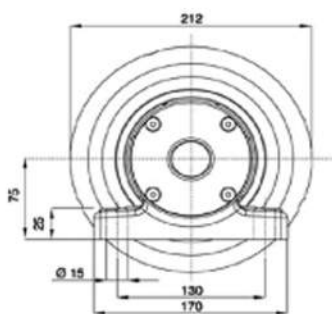
STO



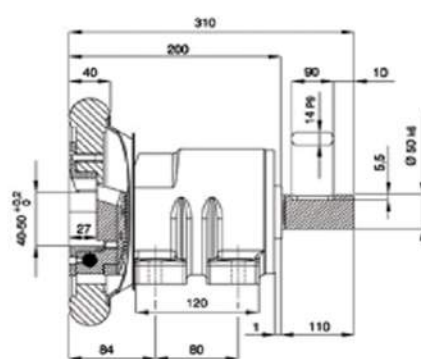
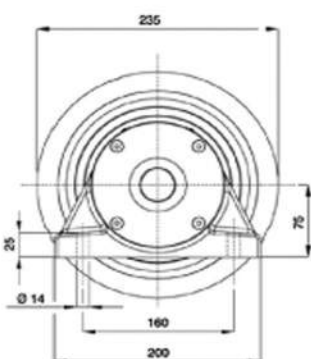
STO/STW 35 規格及參數 Specifications and parameters



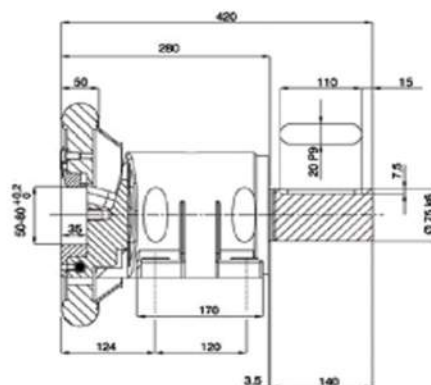
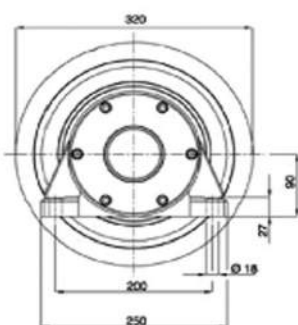
STW



STO/STW 50 規格及參數 Specifications and parameters



STO/STW 75 規格及參數 Specifications and parameters





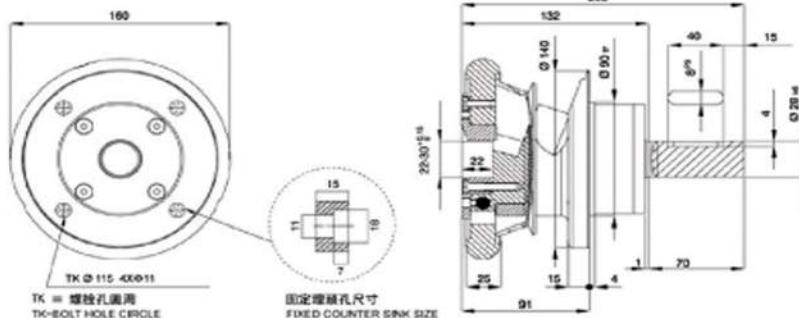
TJ-FLO / FLW

法蘭型安全夾頭(FLO/FLW型)

Flange Safety chucks (FLO/FLW)

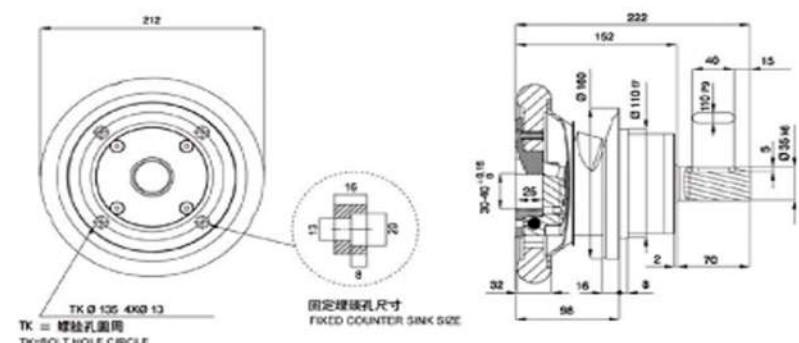
型號	Type	FLO/FLW 28-	FLO/FLW 35-	FLO/FLW 50-	FLO/FLW 75-
梁最大荷重量 kg	Maximum load capacity quantity	800	1600	2800	7000
承受最大轉矩 kg/m(N/m)	Withstanding biggest torque	18(180)	35(350)	110(1100)	235(2350)
卷軸軸端允許尺寸 mm	Reel axial-tab terminal permission size	22-30	30-40	40-50	50-80
重量 (約) kg	Weight	18	25	50	85

FLO/FLW 28 規格及參數 Specifications and parameters



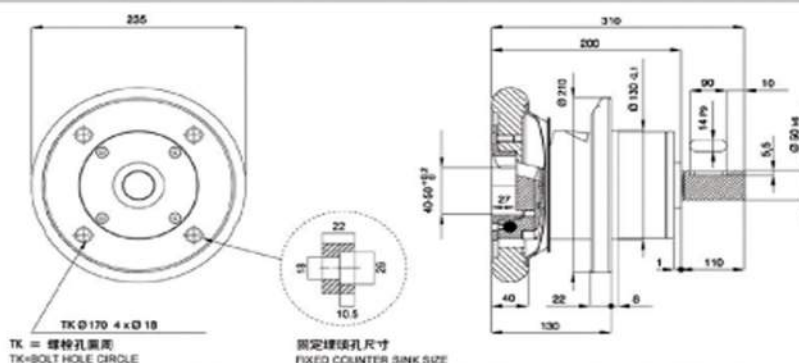
注：軸端尺寸在此許範圍內可根據需求定制。
Note: The axial-tab terminal size in allows in the scope to be possible to have custom-made based on the demand

FLO/FLW 35 規格及參數 Specifications and parameters



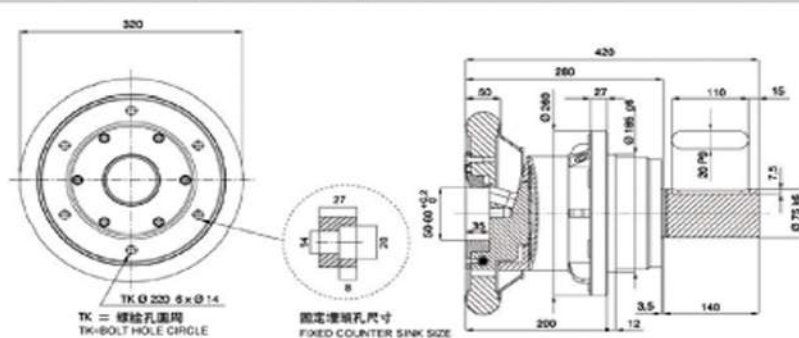
注：軸端尺寸在此許範圍內可根據需求定制。
Note: The axial-tab terminal size in allows in the scope to be possible to have custom-made based on the demand

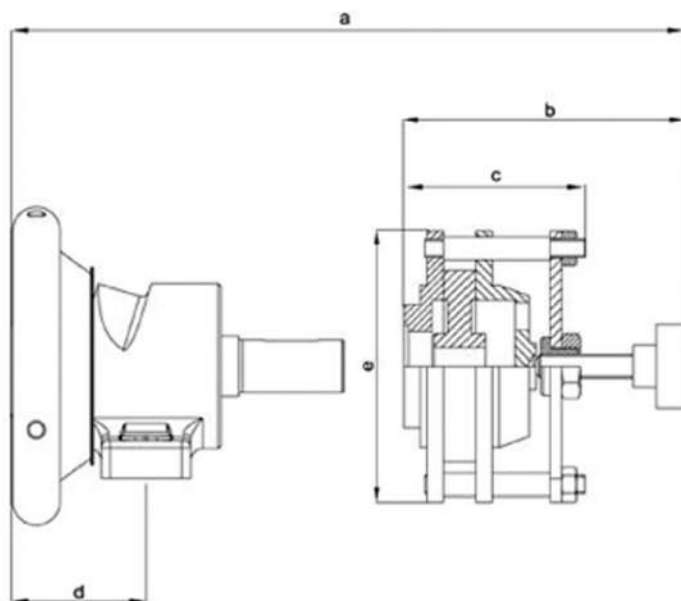
FLO/FLW 50 規格及參數 Specifications and parameters



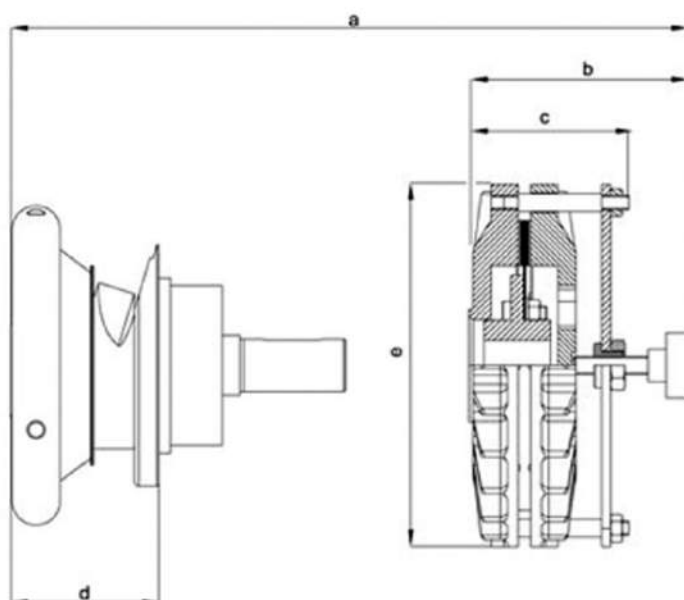
注：軸端尺寸在此許範圍內可根據需求定制。
Note: The axial-tab terminal size in allows in the scope to be possible to have custom-made based on the demand

FLO/FLW 75 規格及參數 Specifications and parameters





型號 Model	轉矩 Torque <small>kg/m(N/m) min-max</small>	a	b	c	e
TYPE 28 + ESB200	0.2(2)–4(40)	235	118	86	Ø200
TYPE 35 + ESB200	0.2(2)–4(40)	241	118	86	Ø200
TYPE 50 + ESB200	0.2(2)–4(40)	258	118	86	Ø200
TYPE 75 + ESB200	0.2(2)–4(40)	327	118	86	Ø200



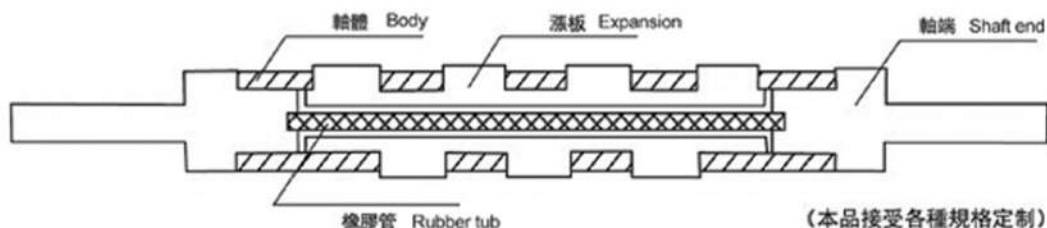
型號 Model	轉矩 Torque <small>kg/m(N/m) min-max</small>	a	b	c	e
TYPE 28 + ESB250	0.3(3)–5(50)	235	136.5	110	Ø250
TYPE 35 + ESB250	0.3(3)–5(50)	241	136.5	110	Ø250
TYPE 50 + ESB250	0.3(3)–5(50)	258	136.5	110	Ø250
TYPE 75 + ESB250	0.3(3)–5(50)	327	136.5	110	Ø250



鍵條式氣壓卷軸 Key Type Air Shaft

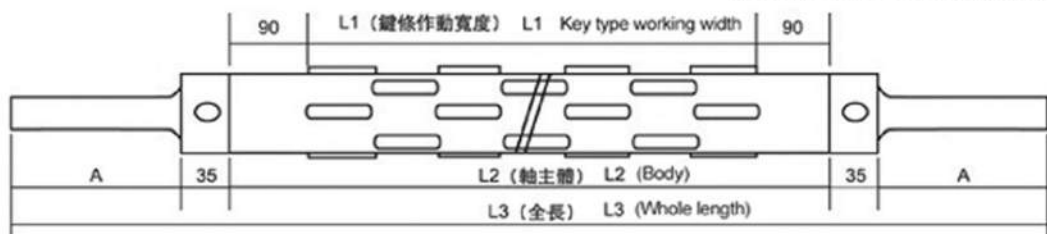


●基本構造 Basic construction



(本品接受各種規格定制)
(Accept various customized)

●基本標準式樣 Basic standard type



●L2+70概算重量 L2+70 Approximate weight

L2+70長度 Length	2"	3"	6"
600~1000mm	8~12(kg)	15~20(kg)	另行計算 Separately calculate
1000~1300mm	12~14(kg)	20~25(kg)	
1300~1600mm	14~16(kg)	25~30(kg)	
1600~2000mm	16~20(kg)	30~38(kg)	

	未充氣時直徑 Dia before gas-filled	充氣后直徑 Dia after gas-filled	適用卷管內徑 Inner dia apply to roller
1英寸標準型 1' standard type	=ø25mm	=ø28~ø32mm	=ø26~ø30mm
2英寸標準型 2' standard type	=ø49mm	=ø52~ø54mm	=ø50.5~ø52mm
3英寸標準型 3' standard type	=ø74mm	=ø79~ø81mm	=ø75.5~ø78.5mm
6英寸標準型 6' standard type	=ø149mm	=ø155~ø157mm	=ø151~ø153mm

●用途 Application

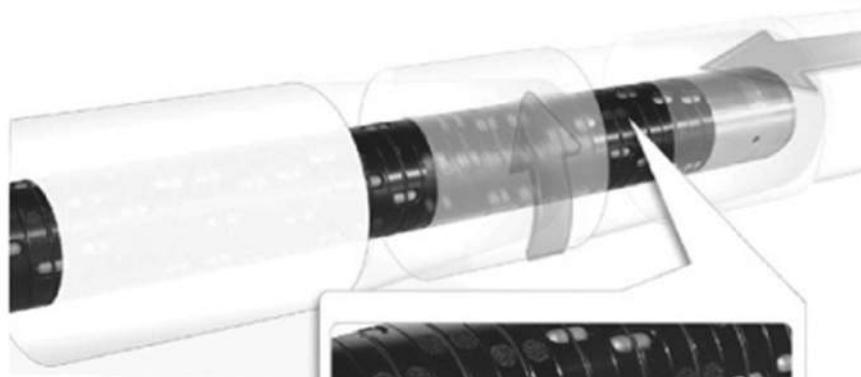
本品適用於扭力及承載重量較高之分條、印刷、復卷、塗步、貼合、制袋、造紙或其他相關卷取及發送料之機械配合使用。

[備注] 1. 本型式有45#鋼及鋁合金兩種，一般承重在800Kg，長度小於1500mm軸建議使用鋁合金管。
2. 接收各種特殊規格訂制。

This product applied to high torque and load requested machine related to rolling and transporting material performance, such as slitting line, printing, rewinding, coating, laminating, packing, paper making machines.

[Note] 1. This type have two kinds 45# steel and aluminium alloy, we recommend aluminium alloy tube if normal load weight less than 800kgs and length less than 1500mm.
2. All the specification can be customized

滑差氣壓軸 Sliding type air shaft

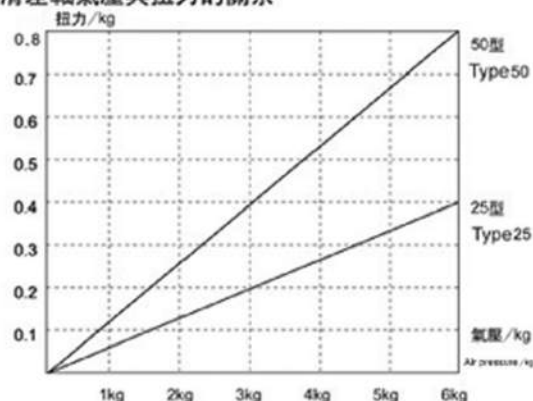


氣壓軸特殊分段，獨立打滑及扭力設定結構，它將能解決分條每一卷材料因厚薄及張力不均所造成的脫卷現象，能有效提高產品質量及工效。

It has independent sliding and torque construction, can improve products' quality and working efficiency by solving the each roller debatch caused by the unevenness on tension and thickness.

主要用于分條產品質量要求比較高，速度比較快的分條設備。
Mainly used in slitting machine with the products requested high quality and high speed.

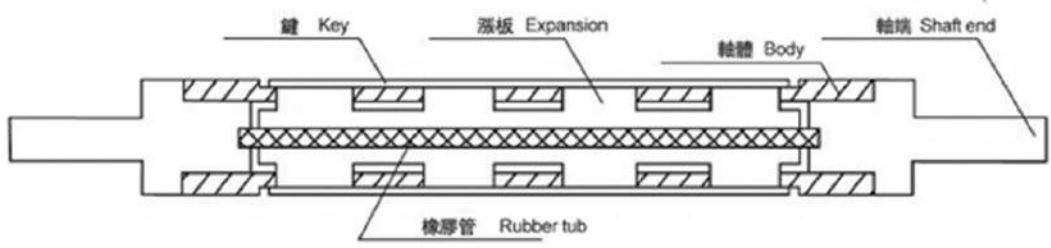
●滑差軸氣壓與扭力的關係



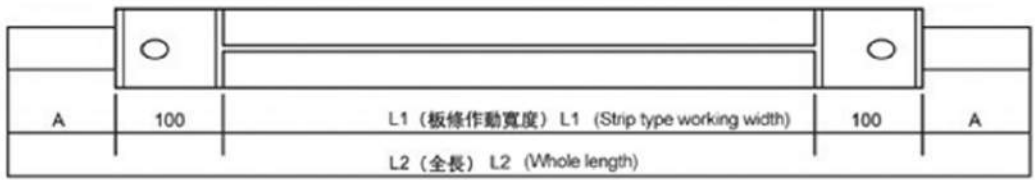
板條式氣漲軸 Strip Type Air Shaft



●基本構造 Basic construction



●基本標準式樣 Basic standard type



●L1+70概算重量 Approximate weight

L1+200長度 Length	3"
600~1000mm	11~16(kg)
1000~1300mm	16~20(kg)
1300~1600mm	20~24(kg)
1600~2000mm	24~30(kg)

	未充氣時直徑 Dia before gas-filled	充氣后直徑 Dia after gas-filled	適用卷管內徑 Inner dia apply to roller
3英寸標準型 3" standard type	≈ø75mm	≈ø78mm	≈ø75.6~ø76.8mm
6英寸標準型 6" standard type	≈ø150mm	≈ø158mm	≈ø151~ø156mm

●用途 Application

本品適用於分條、印刷、復卷、塗布、貼合及其他需要較高真圓或表面卷取之機械使用。

- [備注] 1.本型式分三片及六片式兩種，一般精度要求高者建議使用六片式。
2.接受各種特殊規格訂制。

This product applied to high proper circle and surface rolling requested machine such as slitting line, printing, rewinding, coating, laminating machines.

- [Note] 1.This shaft has two kinds three slices and six slices, normally we recommend six slices if request high accuracy.
2.All the specification can be customized.

氣壓式套夾 Pneumatic sleeve



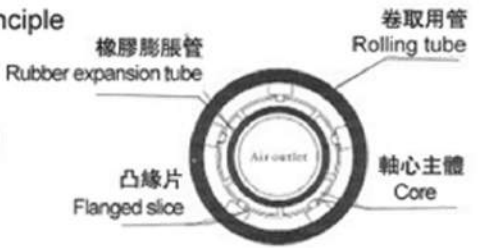
●基本標準式樣 Basic standard type



●動作原理 Operation principle



氣壓注入時
When gas filled



氣壓開放時
When gas out

●用途 Application

- 1.本套夾可配合3英寸氣壓軸或74~75mm外徑之卷使用。
- 2.可用3英寸氣壓軸本身之抓力對本套夾之內徑加以固定或以附屬之弧形迫環固定之。
- 3.本套夾可單一或對於軸上任意定點加以固定使用。
- 4.本產品適于短暫替代用，長期使用時建議以6英寸軸為佳。

- 1.The sleeve matches 3" air shaft or OD at 74-75mm roller.
- 2.The ID of the sleeve can be fixed by the grip of 3" air shaft or fixed by the accessorial camber ring.
- 3.The sleeve can be used fixed independently or fixed on any fixed point on shaft.
- 4.This type of shaft just for short term replacement, we recommend 6" shaft for long-term usage.