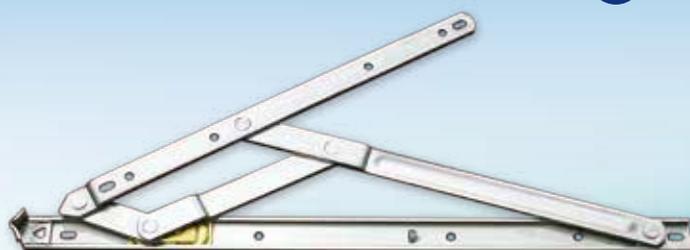


◆ 連桿系列 ◆

Friction Stay Series



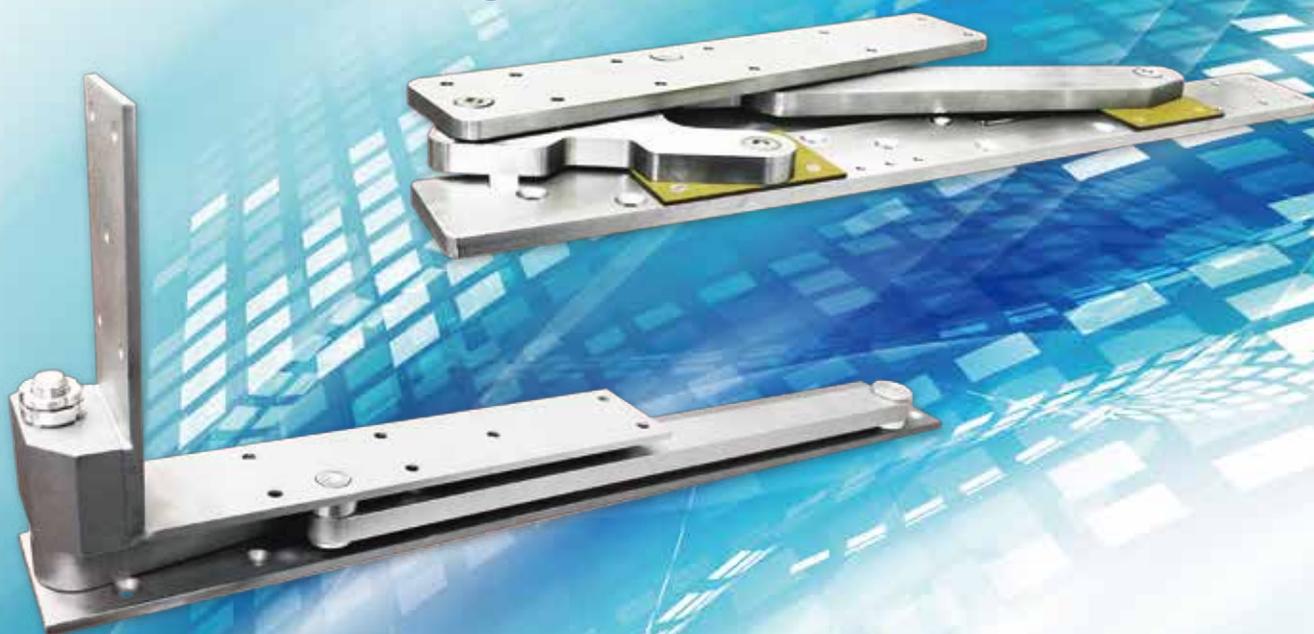
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創新 Innovation

專業 Professional

品質 Quality



四連桿測試報告

Test Report of Friction Stay



台灣門窗五金領導品牌

Test Report Test Report

TEST REPORT

Your Ref: Letter dated 21st Oct 2002 Date: 27th Nov 2002

Our Ref: 54S 024356/1/OKB Page: 1/6

DID: 68851429 Fax: 67793903

NOTE: This Report is issued subsidy to the "Terms and Conditions Governing Technical Services" set out in the "Request for Technical Services" form. The terms and conditions governing the issue of this report are set out overleaf.

SUBJECT:

Testing of stainless steel Window-stay submitted by Jam-Yuan Enterprises Co., Ltd.

TESTED FOR:

Jam-Yuan Enterprises Co., Ltd
No. 1, Alley 863
Kao-Shih Road, Yang-Mei Town
Tao-Yuan Hsien, Taiwan R.O.C.
Attn: Mr Jimmy Tseng

DESCRIPTION OF TEST SPECIMEN:

One unit of single panel aluminium casement window with a maximum opening of 76° was installed onto the test rig for operation test.

Casement overall size : 1100 mm (width) x 2000 mm (height)
Size of sash : 1100 mm (width) x 1900 mm (height)
Weight of sash : 110Kg
Friction-stay model : WF918

DRAWING SUBMITTED:

- 1) Construction details of friction stay WF918
- 2) Window extrusion profiles 4BTEST-1
- 3) Company's friction-stay photograph



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54S 024356/1/OKB

2/6 PSB Corporation

METHOD OF TEST:

Adopted from AAMA 904-96 - Voluntary Specification for friction hinges in Window application.

- A. Load test (Horizontal & Vertical load)- Clause 54
- B. Cycling test (Weatherseal gap measurements)— Clause 5.5
- C. Cycling test (Sagging measurements) – Company's requirements.

TABULATION OF RESULTS:

Date of test 18th Nov 2002

Sequence of test	Remarks
1. Load test(Horizontal & vertical load)	Passed
2. Cycling test(Weatherseal gap measurements)	
3. Cyclic test(Sagging measurements)	

TEST RESULTS:

(1) Load Test

Maximum opening:76°

Test	Result	AAMA 904-96 requirements
Apply a 223N horizontal load to the sash in the direction to close it. Maintain the load for 10 seconds and then remove it.	Passed	After removal of the load, the friction hinges should function in a normal way with no apparent damage.
Apply a 267N Vertical load acting downward. Maintain the load for 1 minute and then remove it.		



Photo 1: Test set-up for horizontal load test.



Photo 2: Test set-up for vertical load test.

54S 024356/1/OKB

3/4 PSB Corporation

TEST RESULT (CONT'D):

(2) Cycling Test (Weatherseal Gap Measurements)

The sash was operating at an angle of 45° throughout the 10,000 cycle.

Test	Weatherseal Gap (mm)		Result	AAMA 904 - 96 requirements
	No. of cycles			
Close the sash completely, apply a 115N force to the upper & lower corners of the sash to measure the weatherseal gap.	0	10,000	Passed	1) No structural failure of any part of the friction hinge shall be observed. 2) Weatherseal gap shall not exceed average of 1.52mm.
	Set to Zero	0.06 (Top) 0.03 (Bottom) Average: 0.05		



Photo 3: Test set-up for measurement of Weatherseal gap.



Photo 4: Close-up view.

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TEST RESULT (CONT'D):

(3) Cycling Test (Sagging Measurements)

The sash was operating at an angle of 45° throughout the 10,000 cycle.

Test	Sagging of sash (mm)		Result	Company's requirements
	No. of cycles			
With the sash at the maximum opening position of 76°, measure the sagging at the handle side, bottom corner of the sash.	0	10,000	Passed	The sash shall not sag more than 10 mm.
	Set to Zero	0.25		



Photo 5: Set-up for cyclic test.



Photo 6: Close-up view.



Photo 7: Close-up view of window-stay after 10,000 cycles.

Ong Khay Beng
Associate Engineer

Raymond Tai
Senior Engineer
Building & Industrial Products
Testing Group

連桿系列

JAM-YUAN ENTERPRISES CO., LTD

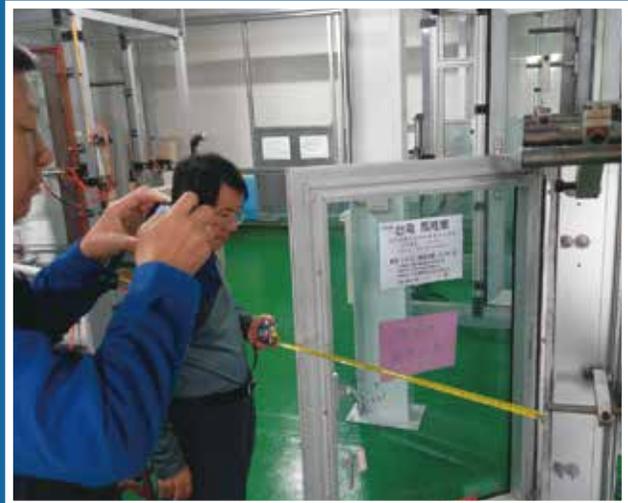
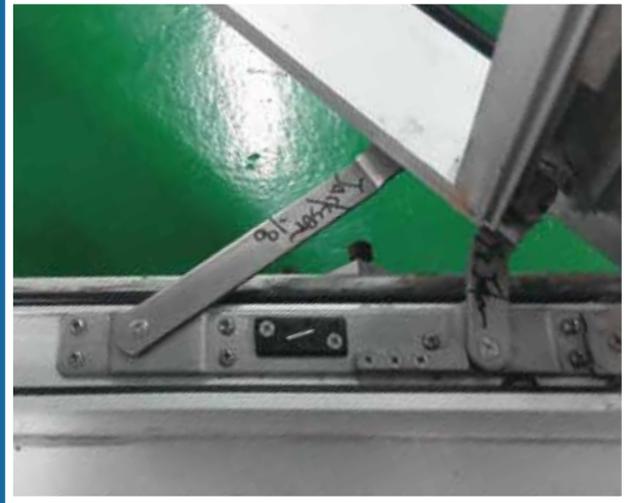


台灣門窗五金領導品牌

四連桿測試過程

Test Course of Friction Stay

連桿系列



專業製造 質量可靠
Professional Production
& Reliable Quality

JAM-YUAN ENTERPRISES CO., LTD

四連桿

Friction Stay

材質SUS304(Material SUS304)



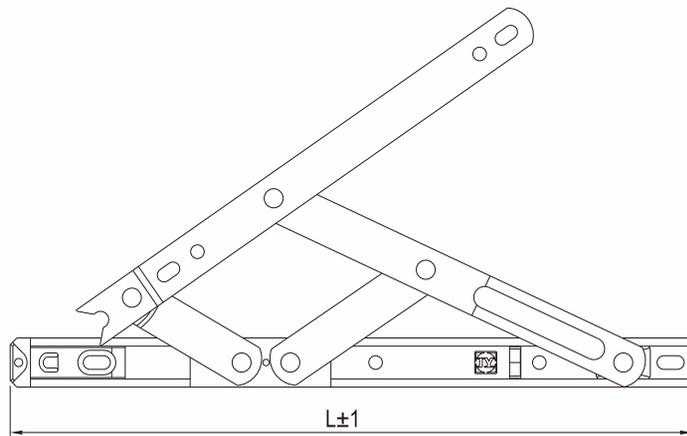
台灣門窗五金領導品牌

CAT輕型

專利產品 仿冒必究



產品編號	類型	長度(L)	最大開啟角度
CAT08	前拉式	208	60°
CAT10		252	90°
CAT12		302	
CAT14		357	
CAT16		407	

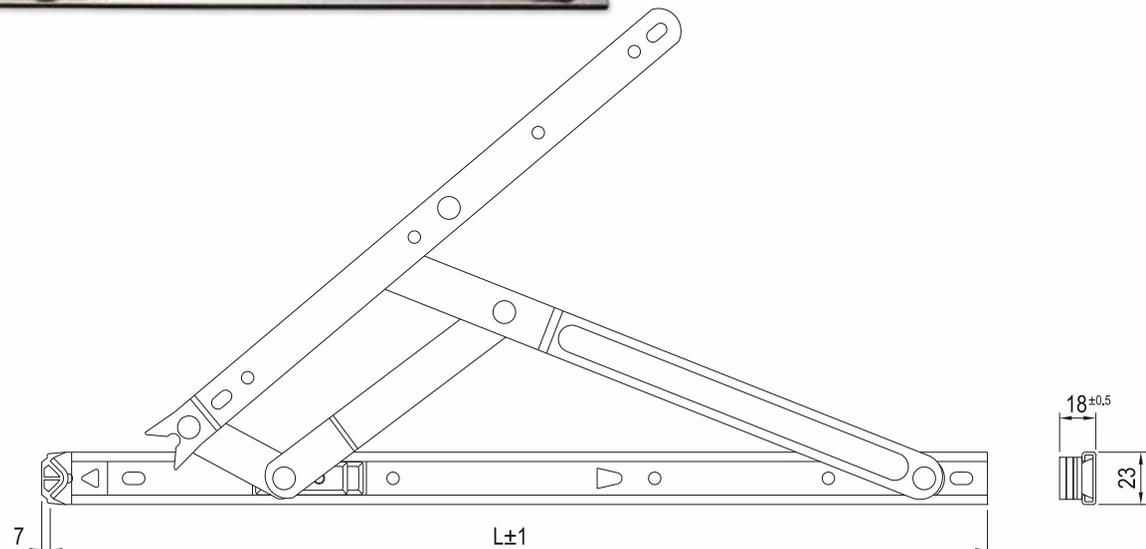


WT重型

專利產品 仿冒必究



產品編號	類型	長度(L)	最大開啟角度
WT10	前拉式	272	90°
WT12		315	
WT14		363	
WT16		416	
WT20		519	



連桿系列

JAM-YUAN ENTERPRISES CO., LTD

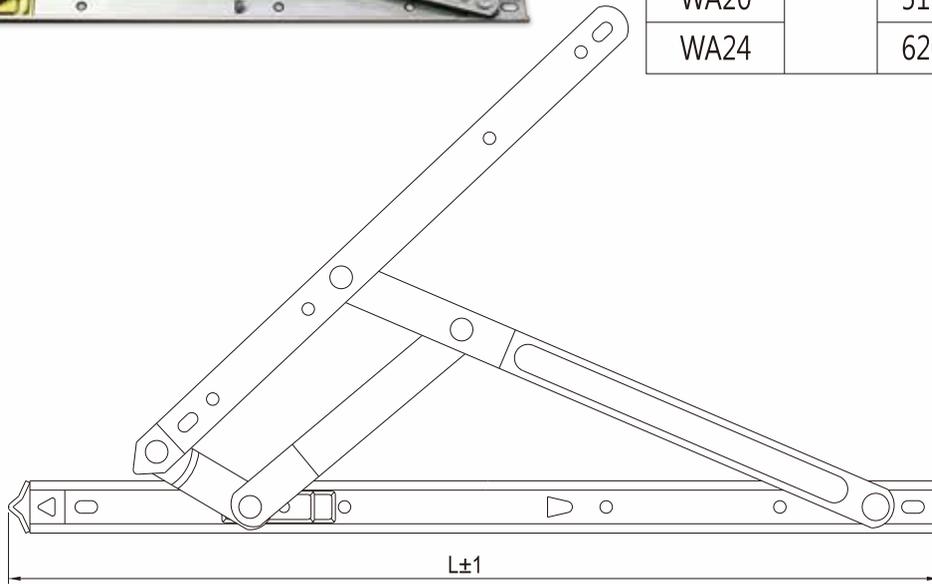


台灣門窗五金領導品牌

四連桿 Friction Stay

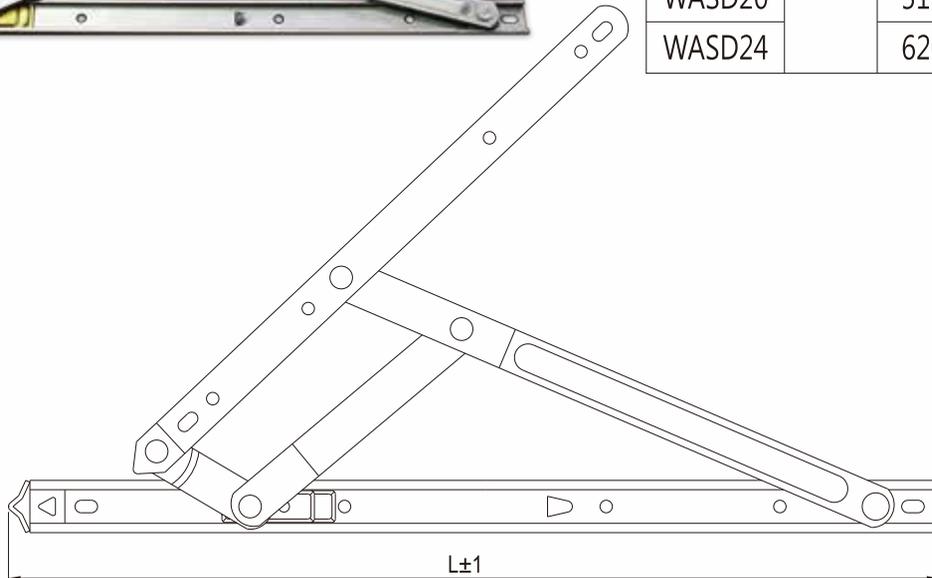
材質SUS304(Material SUS304)

WA重型



產品編號	類型	長度(L)	最大開啟角度
WA10	前拉式	270	90°
WA12		312	
WA14		361	
WA16		413	
WA18		465	
WA20		517	
WA24		620	

WASD重型



產品編號	類型	長度(L)	最大開啟角度
WASD10	前拉式	270	90°
WASD12		312	
WASD14		361	
WASD16		413	
WASD18		465	
WASD20		517	
WASD24		620	

連桿系列

JAM-YUAN ENTERPRISES CO., LTD

四連桿

Friction Stay

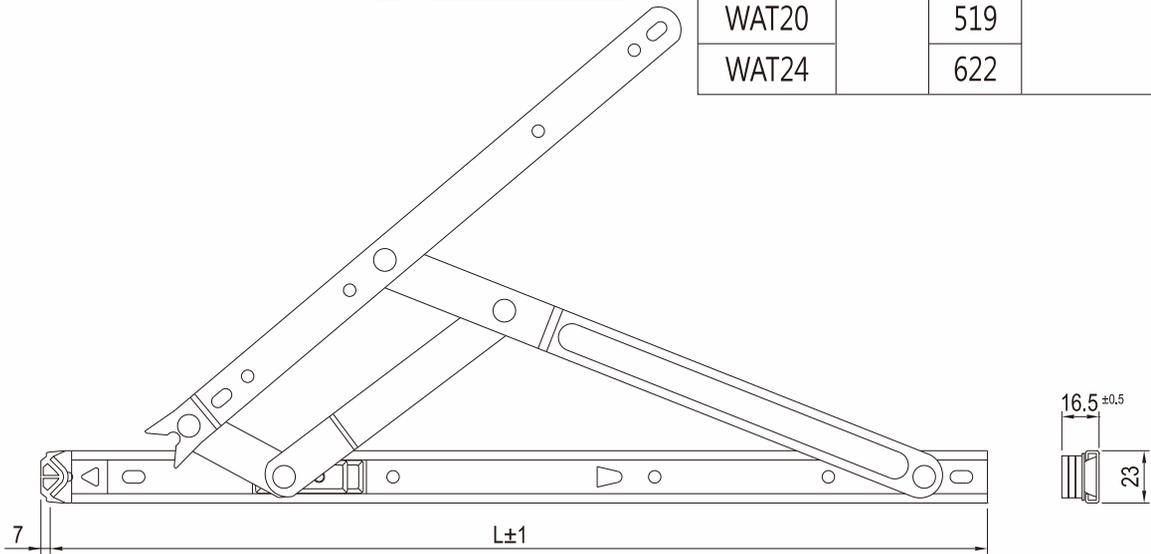
材質SUS304(Material SUS304)



台灣門窗五金領導品牌

WAT重型

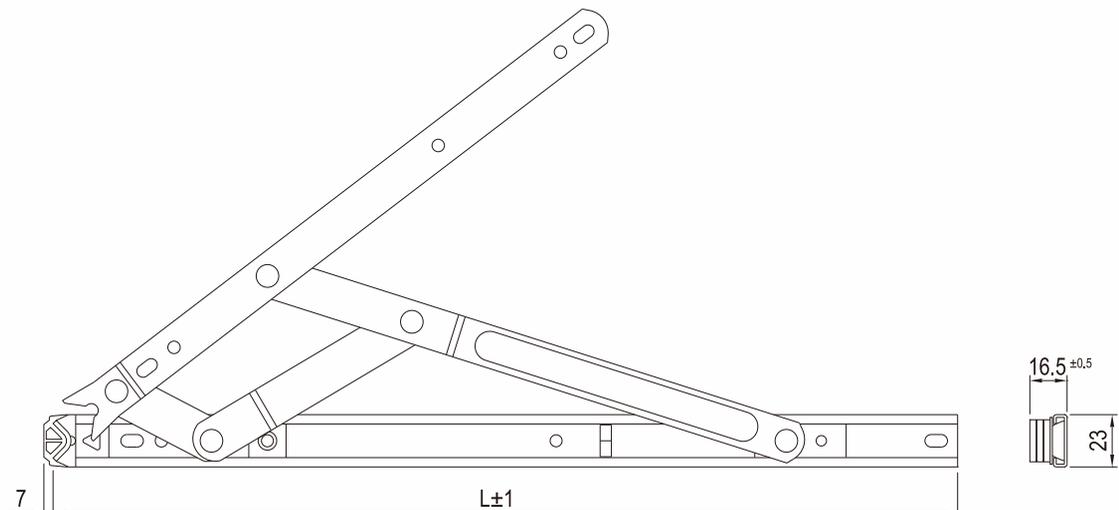
專利產品 仿冒必究



產品編號	類型	長度(L)	最大開啟角度
WAT08	前拉式	209	60°
WAT10		271	90°
WAT12		315	
WAT14		364	
WAT16		416	
WAT18		466	
WAT20		519	
WAT24		622	

WRT重型

專利產品 仿冒必究



產品編號	類型	長度(L)	最大開啟角度
WRT12	後拉式	326	90°
WRT16		401	
WRT20		518	
WRT24		614	

連桿系列

JAM-YUAN ENTERPRISES CO., LTD



台灣門窗五金領導品牌

四連桿 Friction Stay

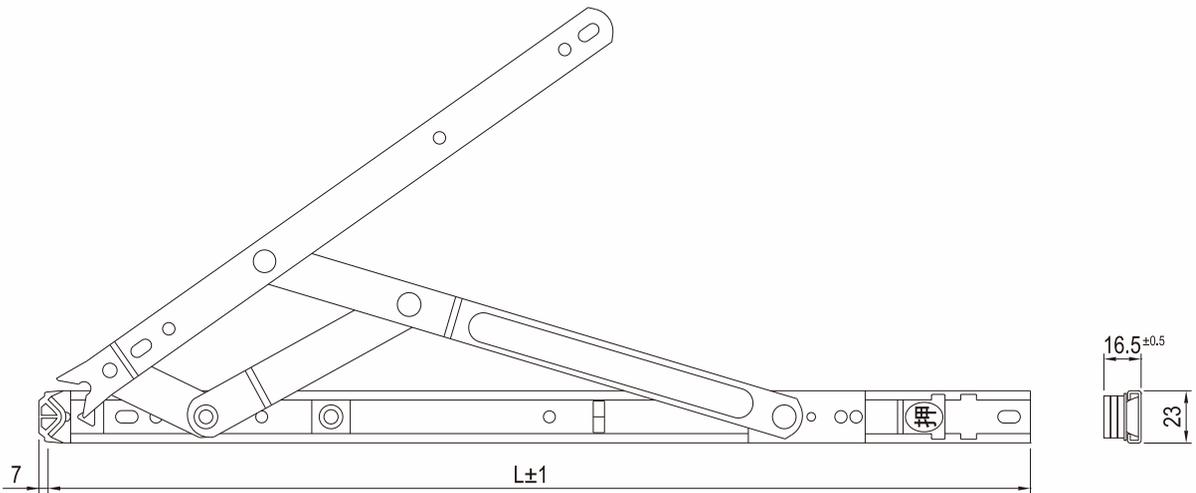
材質SUS304(Material SUS304)

WRT-BK重型

專利產品 仿冒必究

訂製品

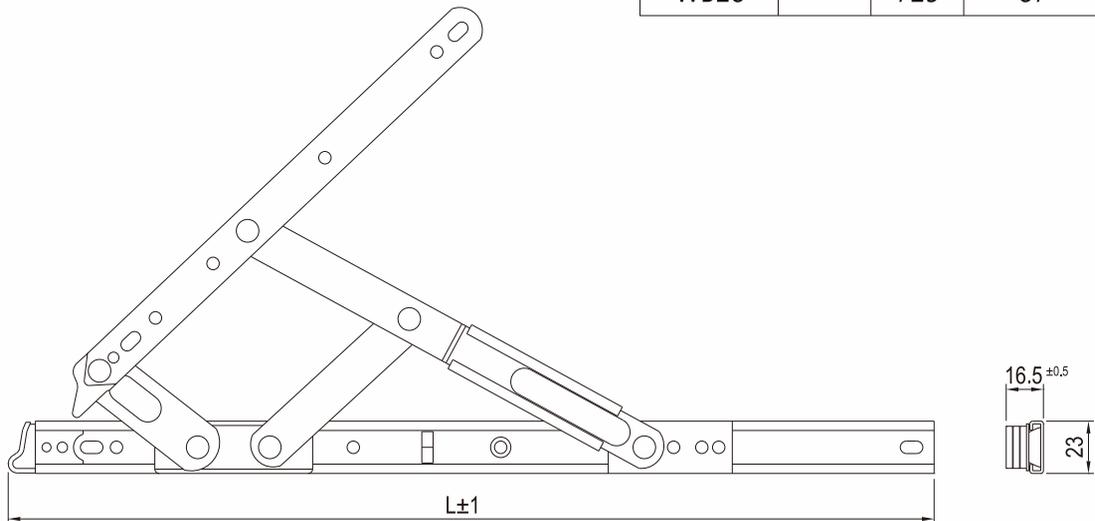
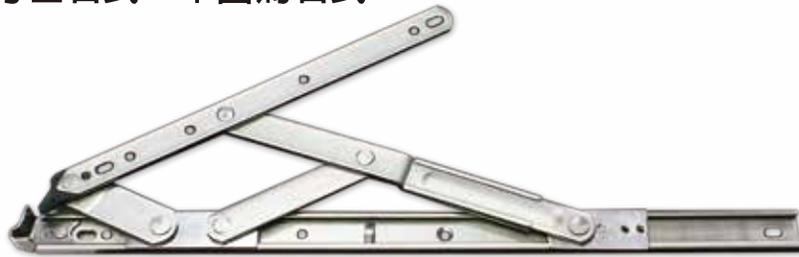
產品編號	類型	長度(L)	最大開啟角度	定位點
WRT14-BK	後拉式	372	90°	20°, 40°
WRT17-BK		437	90°	20°, 40°
WRT22-BK		552	90°	20°, 35°



WB加重型-美式鋼質

分左右式，本圖為右式

產品編號	類型	長度(L)	最大開啟角度
WB12	後拉式	319	65°
WB14		373	76°
WB16		410	85°
WB20		478	
WB22		559	
WB24		615	87°
WB28		725	



連桿系列

JAM-YUAN ENTERPRISES CO., LTD

四連桿

Friction Stay

材質SUS304(Material SUS304)



台灣門窗五金領導品牌

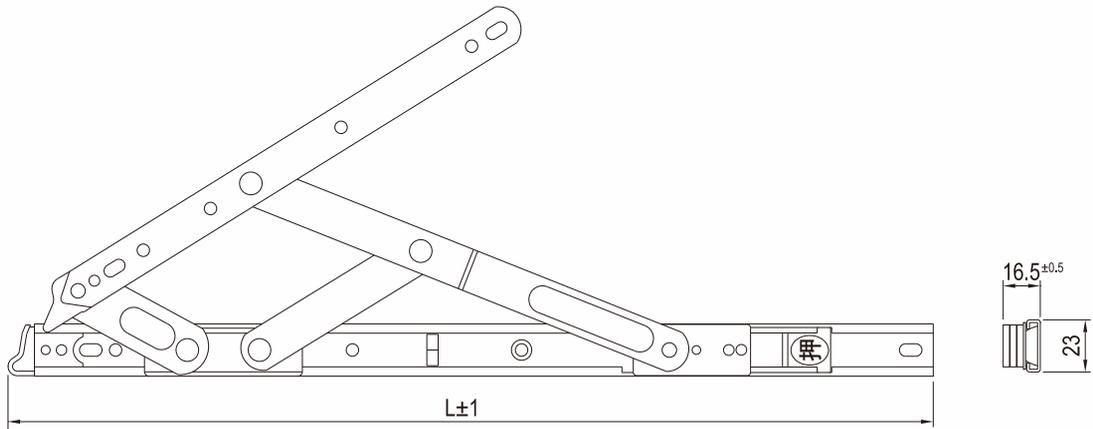
WBK加重型附定位開關-美式鋼質

專利產品 仿冒必究

分左右式，本圖為右式



產品編號	類型	長度(L)	最大開啟角度	定位點
WBK12	後拉式 有定位 開關	320	65°	40°
WBK14		373	76°	20°, 45°
WBK16		410	32°, 87°	60°
WBK20		478	85°	30°, 60°
WBK22		560	85°	15°, 45°
WBK24		652	85°	30°, 45°

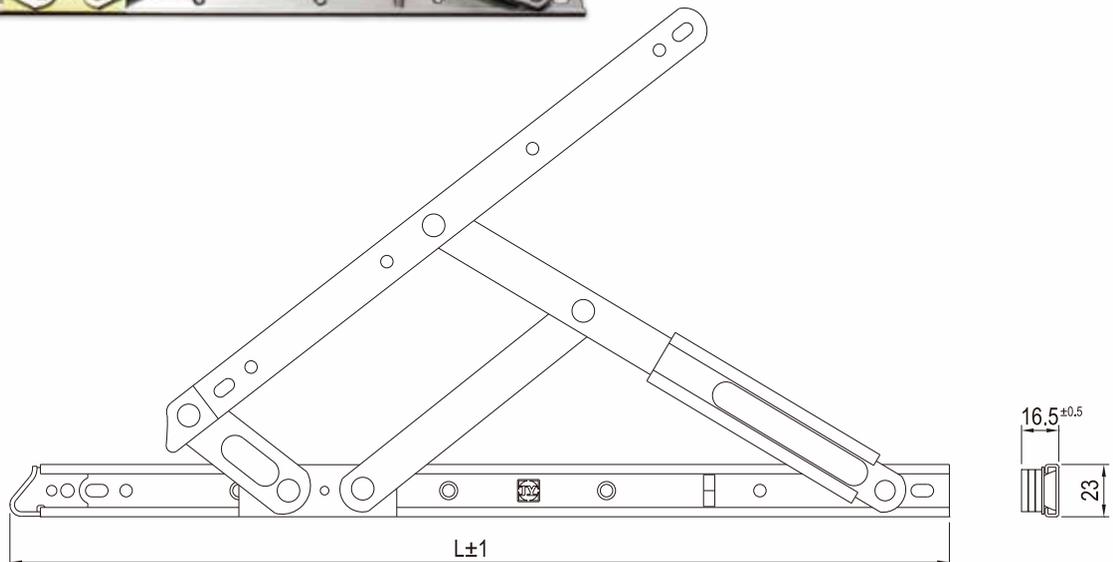


JW加重型-美式鋼質

分左右式，本圖為右式



產品編號	類型	長度(L)	最大開啟角度
JW12	前拉式	315	90°
JW14		355	85°
JW16		416	85°
JW20		520	82°
JW24		624	77.5°



連桿系列

JAM-YUAN ENTERPRISES CO., LTD



台灣門窗五金領導品牌

四連桿 Friction Stay

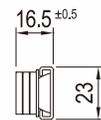
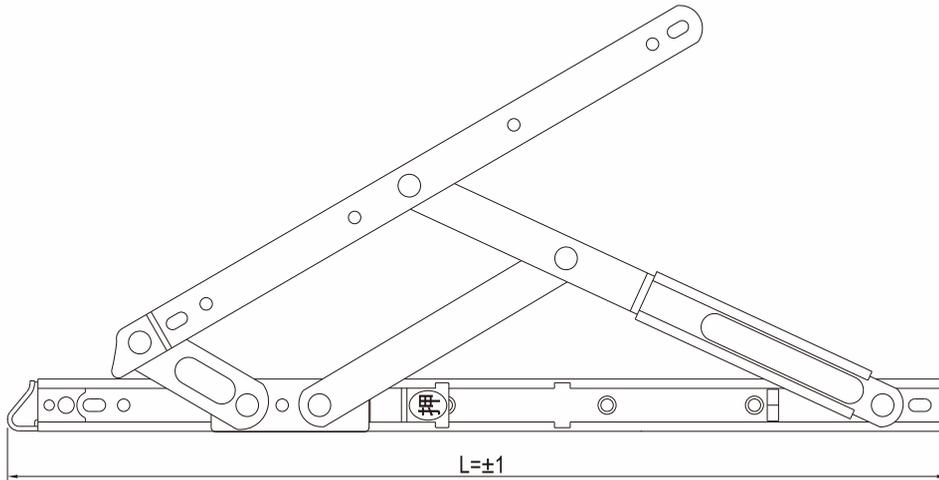
材質SUS304(Material SUS304)

JWK加重型-美式鋼質

分左右式，本圖為右式



產品編號	類型	長度(L)	最大開啟角度	定位點
JWK12	前拉式 有定位 開關	315	90°	30°, 70°
JWK16		416	85°	30°, 50°
JWK20		520	82°	25°, 50°
JWK24		624	77.5°	26°, 50°

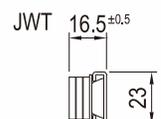
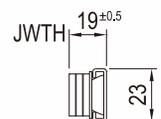
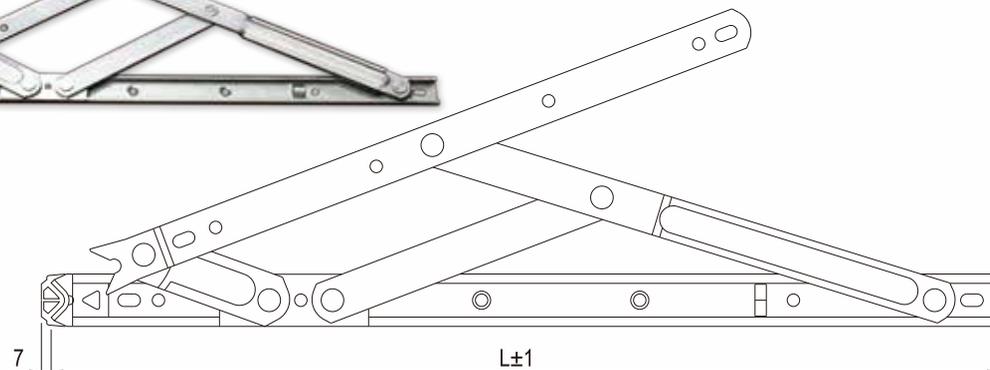


L=±1

JWT加重型-美式鋼質

專利產品 仿冒必究

產品編號	類型	長度(L)	最大開啟角度	產品編號	類型	長度(L)	最大開啟角度
JWT10	前拉式	260	90°	JWT10H	前拉式	260	90°
JWT12		316	90°	JWT12H		316	90°
JWT14		355	85°	JWT14H		355	85°
JWT16		420	85°	JWT16H		420	85°
JWT20		524	82°	JWT20H		524	82°
JWT24		624	77.5°	JWT24H		624	77.5°



L±1

7

連桿系列

JAM-YUAN ENTERPRISES CO., LTD

特殊軸型撐桿 Special Axis Friction Stay

材質SUS304(Material SUS304)

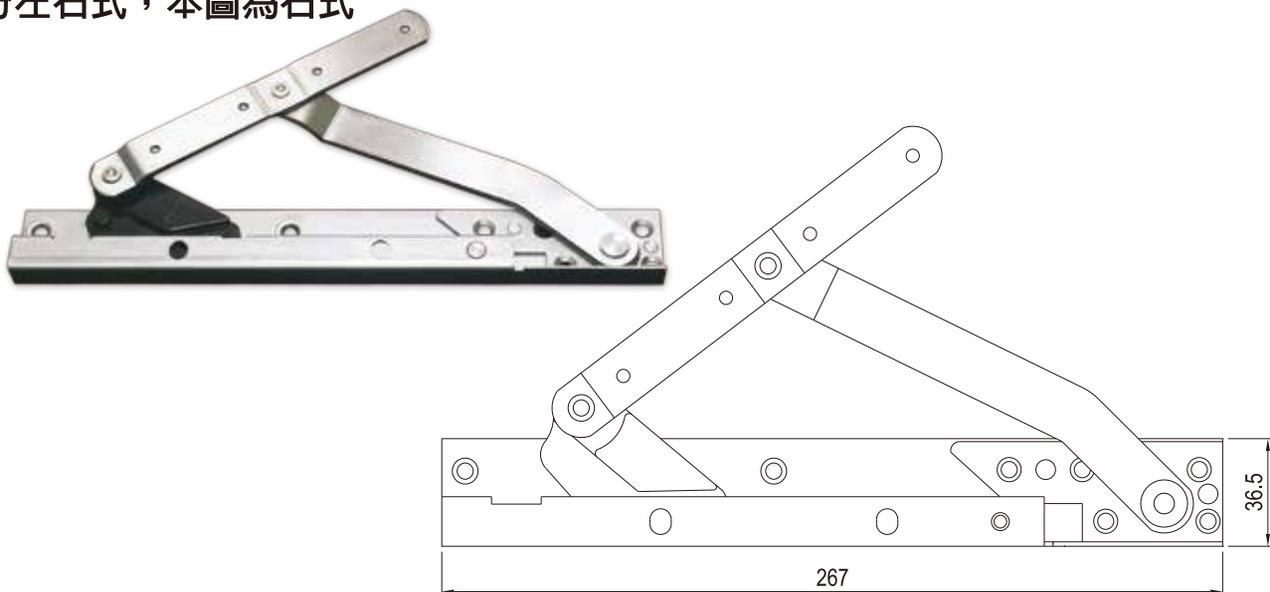


台灣門窗五金領導品牌

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FP015重型-日式系統

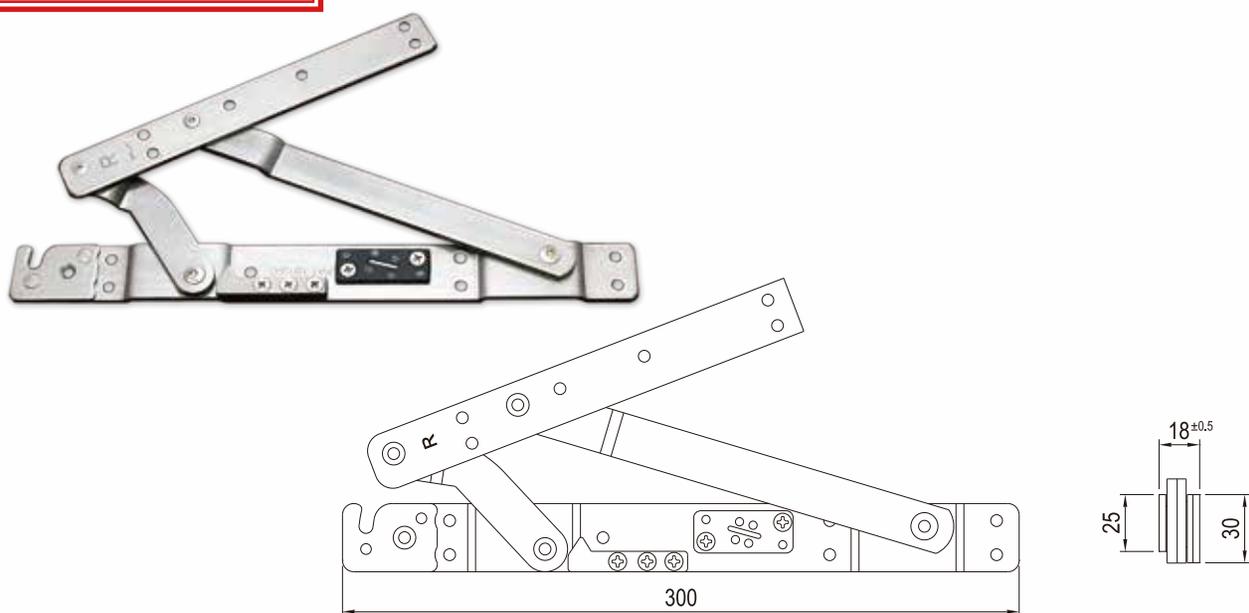
分左右式，本圖為右式



產品編號	材質	外觀尺寸(mm)			最大 開啟角度	推開窗		推射窗	
		長	寬	高		荷重(kg)	最大寬度(mm)	荷重(kg)	最大高度(mm)
AT-078	SUS304	267	36.5	16 ^{±0.5}	90°	60	1000	60	1500
FP015	SUS304	267	36.5	20 ^{±0.5}	90°	60	1000	60	1500

WF12超重軸型(帷幕牆專用)

專利產品 仿冒必究 分左右式，本圖為右式



產品編號	材質	外觀尺寸(mm)			最大 開啟角度	推開窗		推射窗	
		長	寬	高		荷重(kg)	最大寬度(mm)	荷重(kg)	最大高度(mm)
WF12	SUS304	300	30	18 ^{±0.5}	90°	65	1000	100	1800

JAM-YUAN ENTERPRISES CO., LTD



台灣門窗五金領導品牌

特殊軸型撐桿 Special Axis Friction Stay

材質SUS304(Material SUS304)

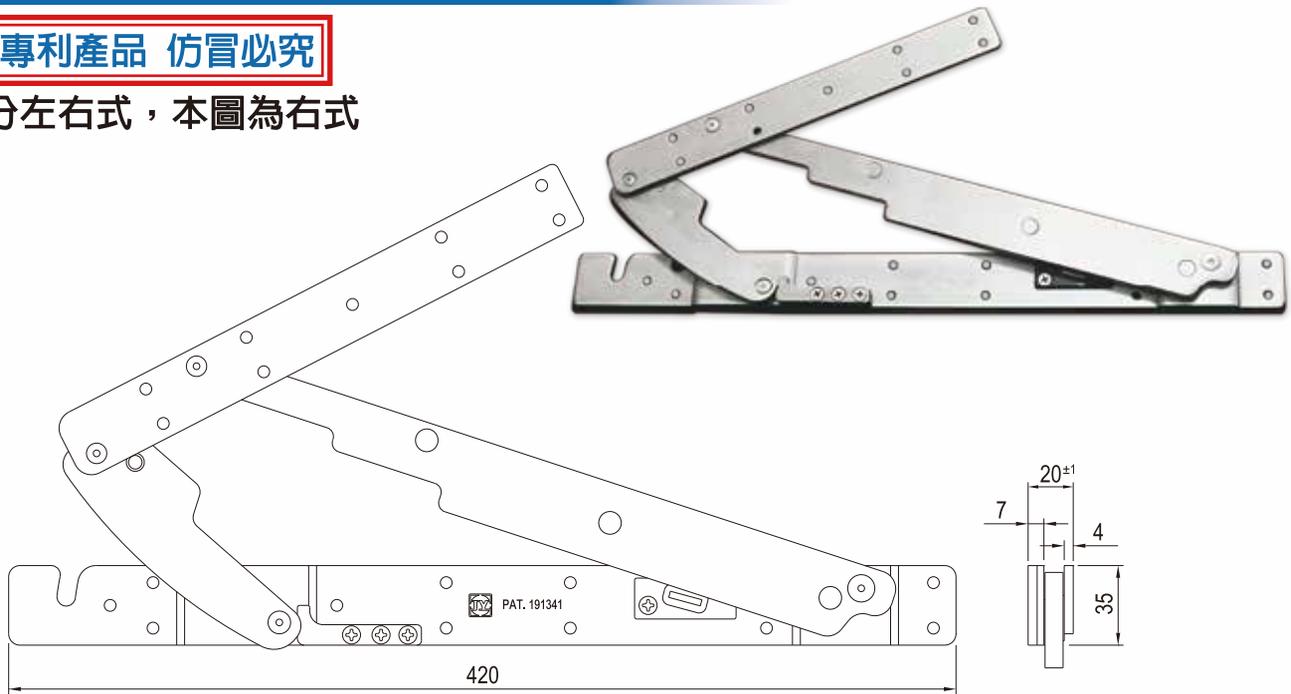
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JAM-YUAN ENTERPRISES CO., LTD

WF618超重軸型(帷幕牆專用)

專利產品 仿冒必究

分左右式，本圖為右式

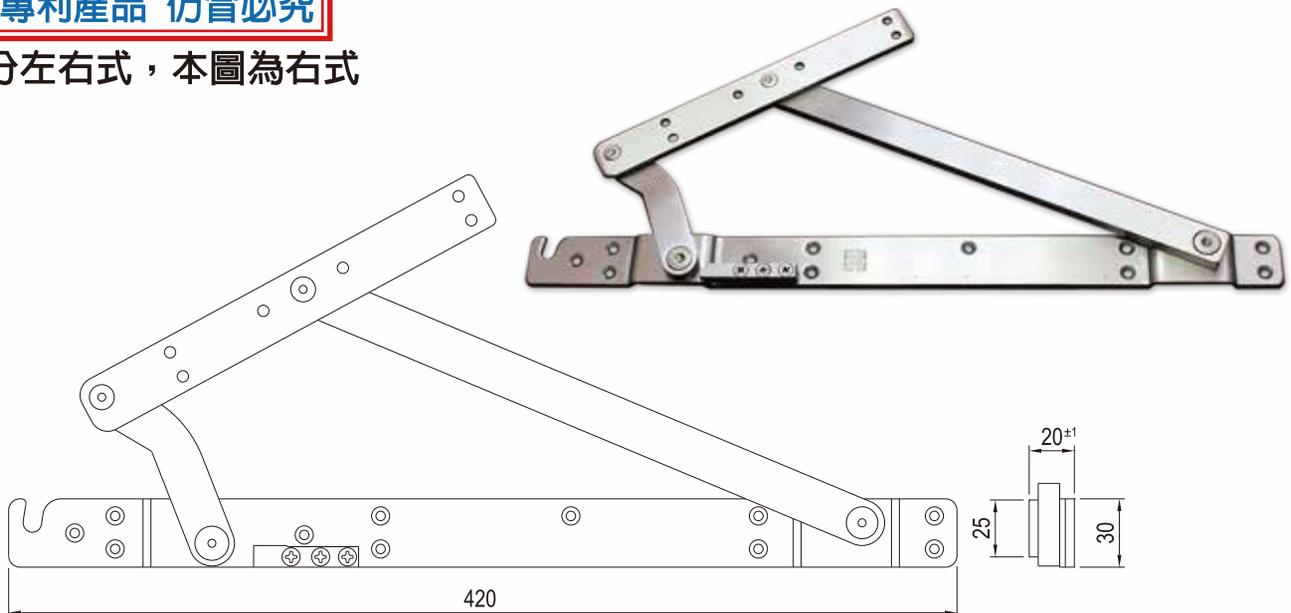


產品編號	材質	外觀尺寸(mm)			最大 開啟角度	推開窗		推射窗	
		長	寬	高		荷重(kg)	最大寬度(mm)	荷重(kg)	最大高度(mm)
WF618	SUS304	420	35	20±1	90°	60kg以內	1200	90	2200

WF918超重軸型(帷幕牆專用)

專利產品 仿冒必究

分左右式，本圖為右式



產品編號	材質	外觀尺寸(mm)			最大 開啟角度	推開窗		推射窗	
		長	寬	高		荷重(kg)	最大寬度(mm)	荷重(kg)	最大高度(mm)
WF918	SUS304	420	30	20±1	90°	100	1000	125	1800

特殊軸型撐桿

Special Axis Friction Stay

材質SUS304(Material SUS304)



台灣門窗五金領導品牌

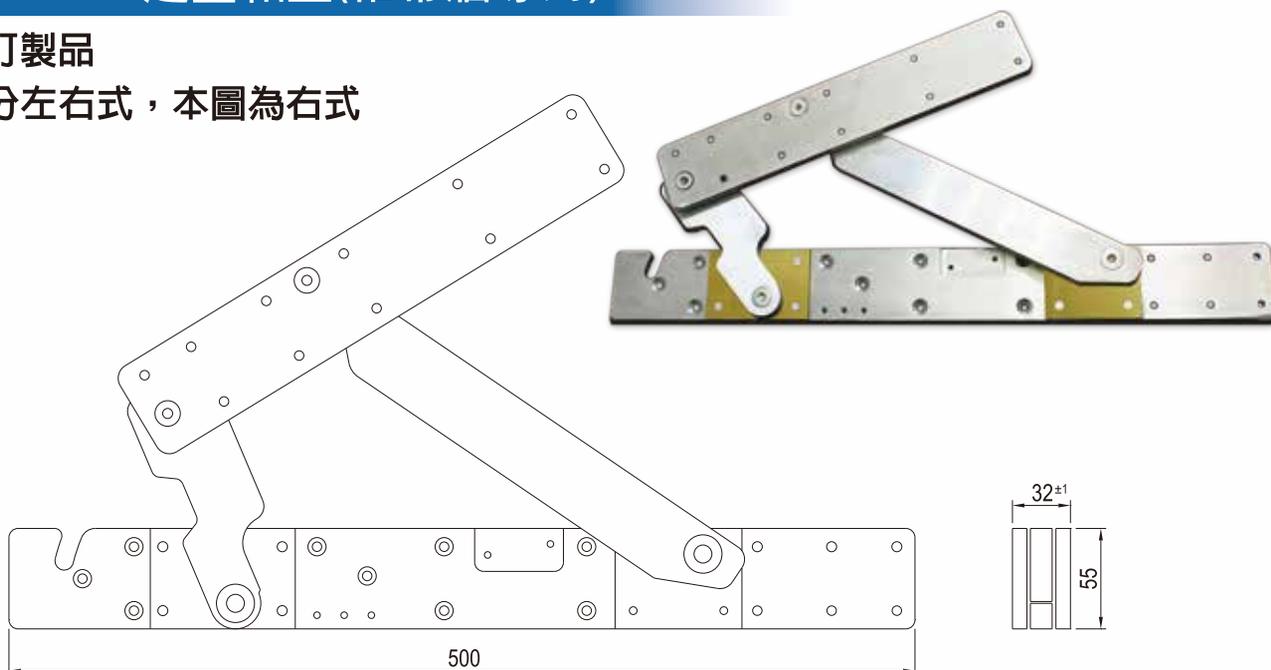
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JAM-YUAN ENTERPRISES CO., LTD

WF666超重軸型(帷幕牆專用)

訂製品

分左右式，本圖為右式

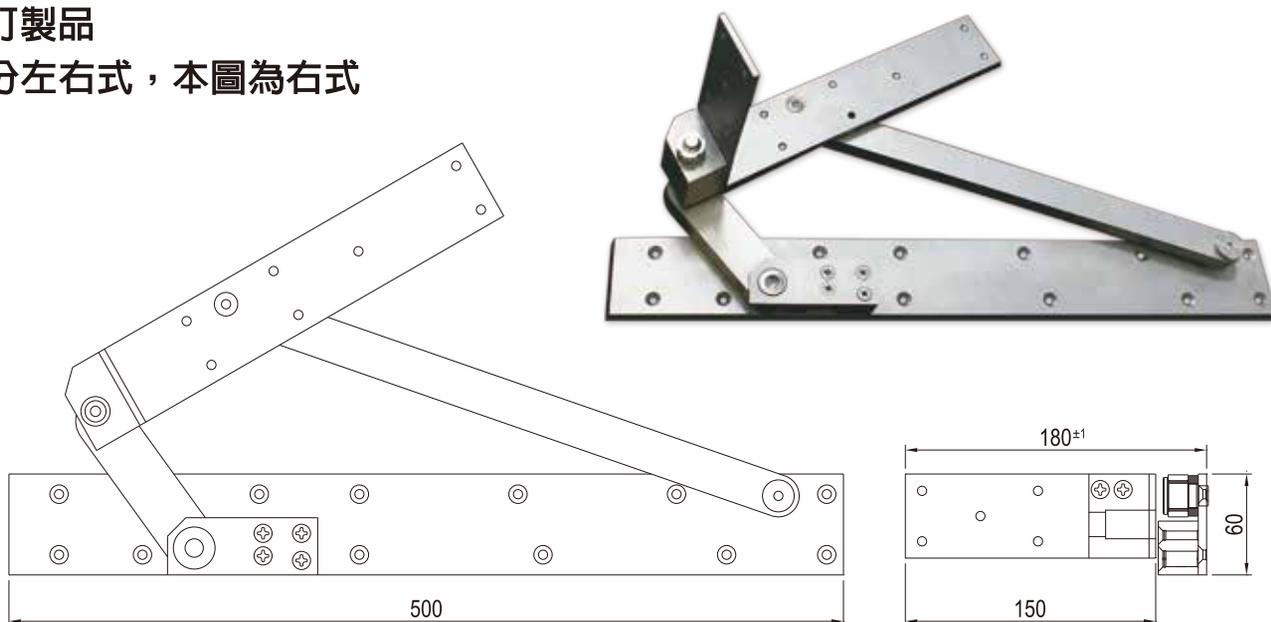


產品編號	材質	外觀尺寸(mm)			最大 開啟角度	推開窗		推射窗	
		長	寬	高		荷重(kg)	最大寬度(mm)	荷重(kg)	最大高度(mm)
WF666	SUS304	500	55	32 ^{±1}	90°	300	1500	400	2000

WF910超重軸型(帷幕牆專用)

訂製品

分左右式，本圖為右式



產品編號	材質	外觀尺寸(mm)			最大 開啟角度	推開窗		推射窗	
		長	寬	高		荷重(kg)	最大寬度(mm)	荷重(kg)	最大高度(mm)
WF910	SUS304	500	60	180 ^{±1}	90°	300	1500	400	2000



台灣門窗五金領導品牌

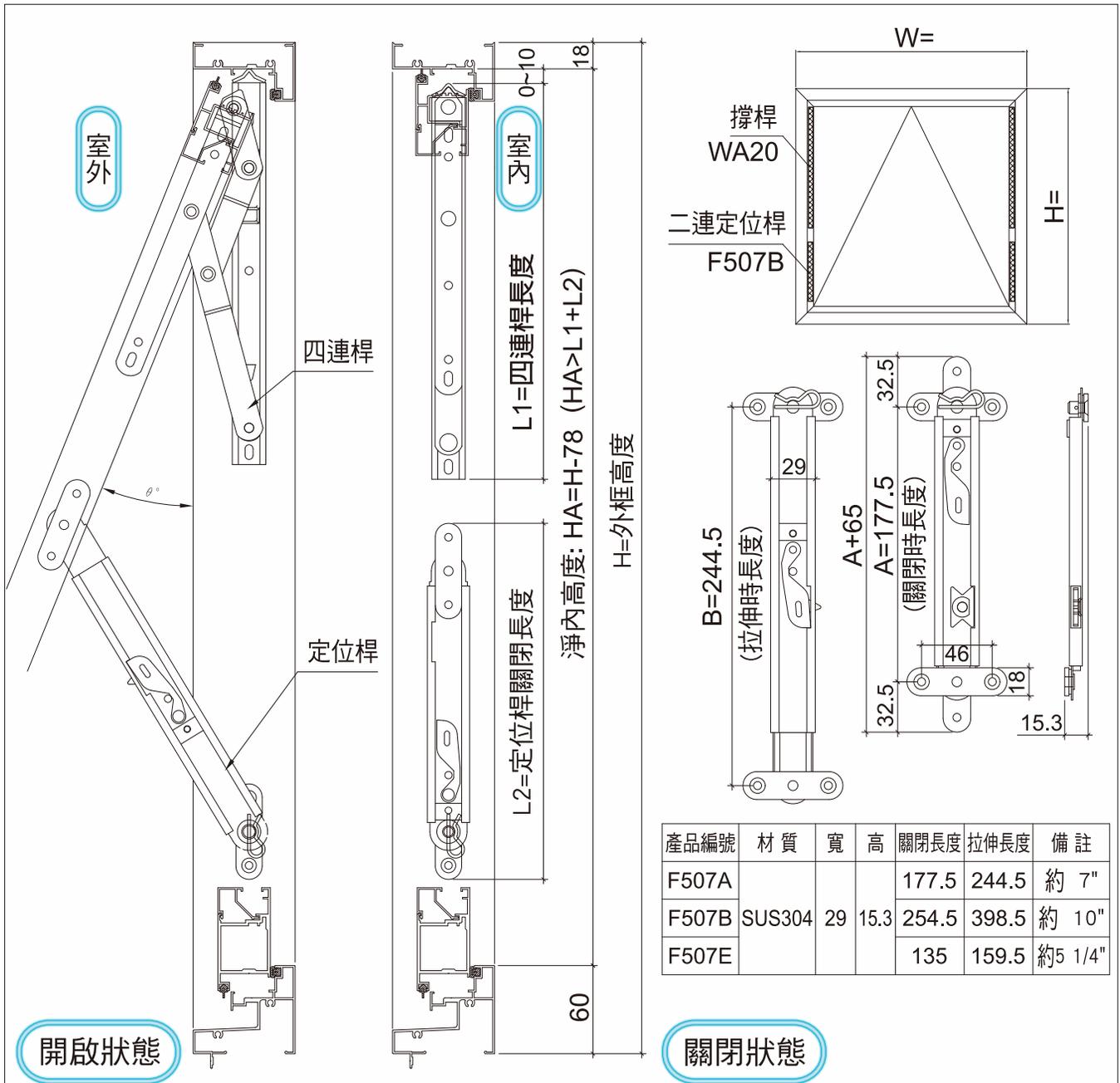
隱藏式二連定位桿

Affix Friction Stay

材質SUS304(Material SUS304)

連桿系列

JAM-YUAN ENTERPRISES CO., LTD



參考資料表【四連桿搭配二連定位桿】

四連桿規格		內扇最大開啟角度			窗扇最小高度(mm)	
編號	長度L1(mm)	未配合撐桿	搭配 F507A	搭配 F507B	搭配 F507A	搭配 F507B
WA10	270	90°	30°	57°	600	
WA12	312		23°	45°	650	725
WA14	361		21°	40°	700	775
WA16	413		20°	35°	750	825
WA18	465		17°	30°	800	875
WA20	517		15°	28°	855	930
WA24	620		13°	23°	960	1034

定位桿

Affix Friction Stay

材質SUS304(Material SUS304)

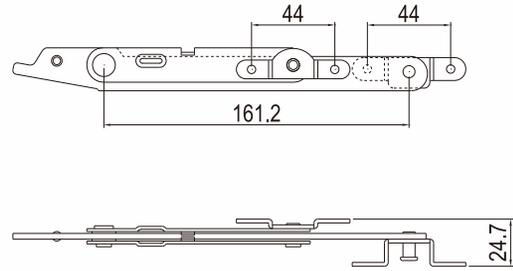


台灣門窗五金領導品牌

訂製品



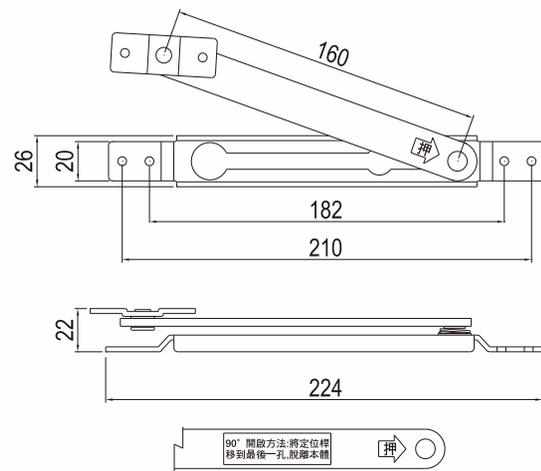
N630



緊急逃生用



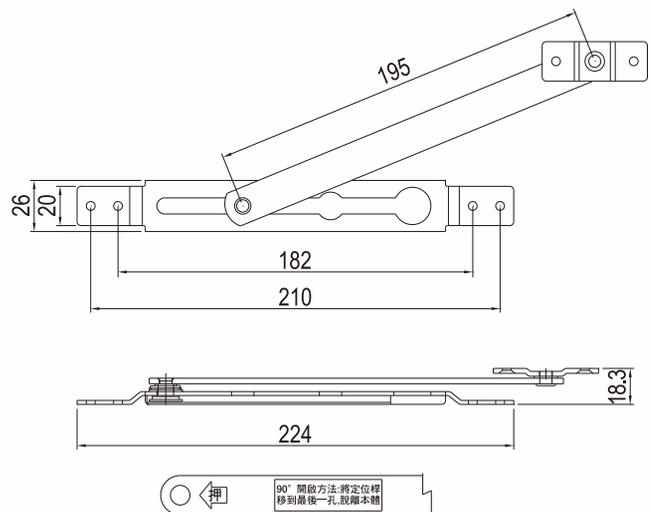
JT-049L



緊急逃生用



JT-050



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JAM-YUAN ENTERPRISES CO., LTD



台灣門窗五金領導品牌

定位桿 Affix Friction Stay

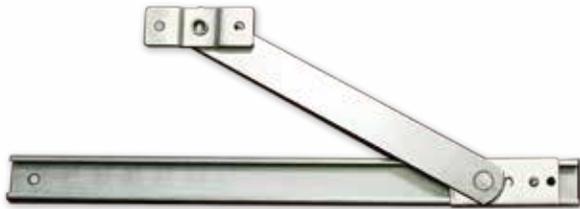
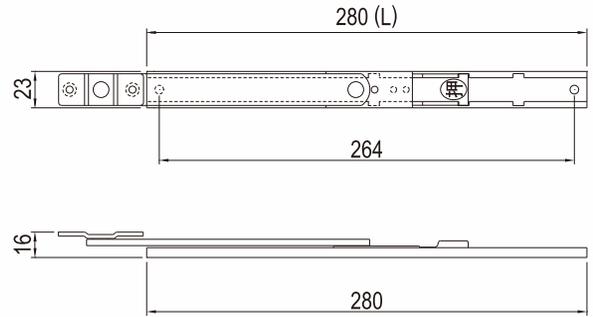
材質SUS304(Material SUS304)

連桿系列

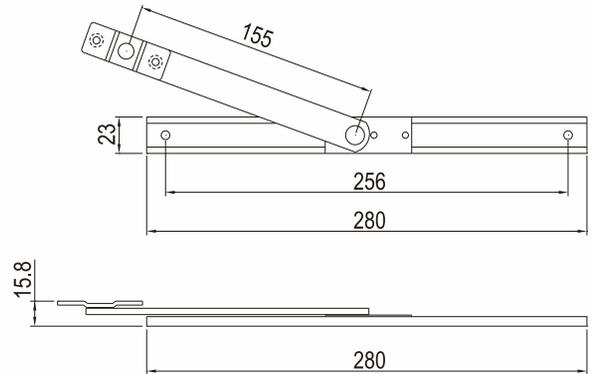
JAM-YUAN ENTERPRISES CO., LTD



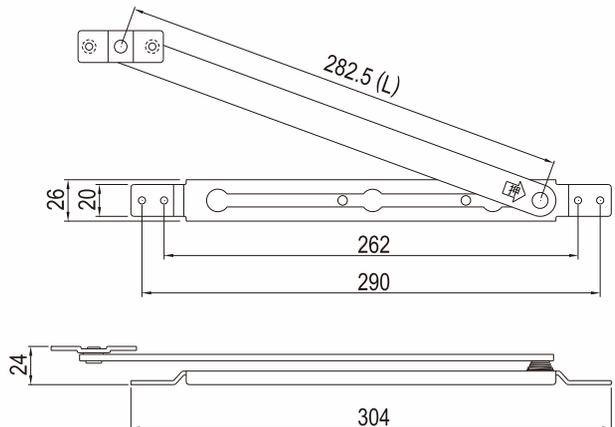
JY105



S2323



CA108C



定位桿

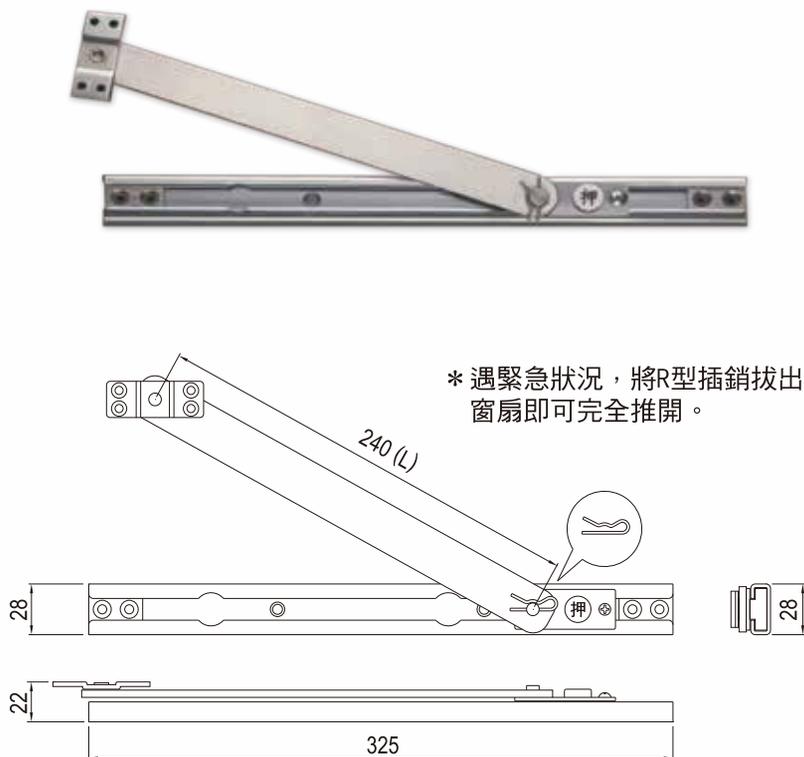
Affix Friction Stay

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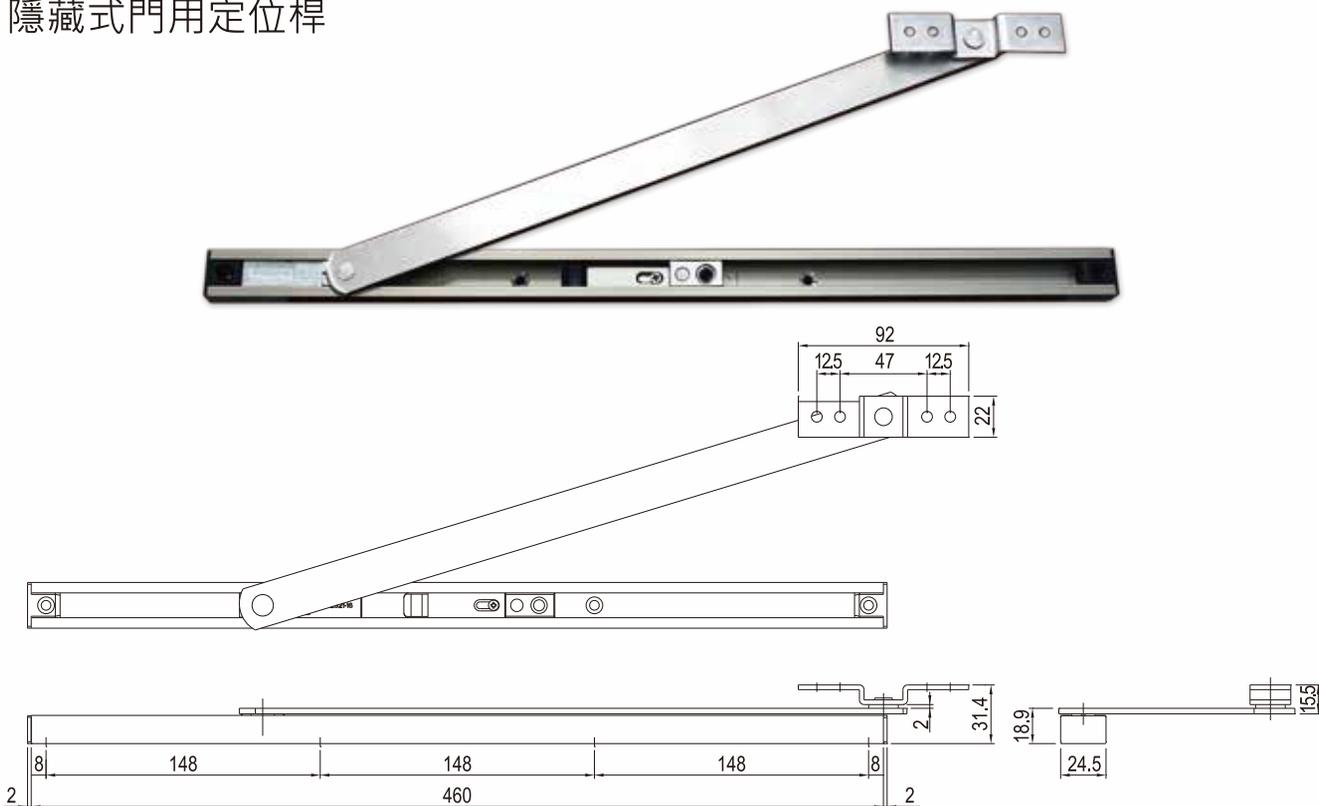
台灣門窗五金領導品牌

緊急逃生用



CA103K

隱藏式門用定位桿



AHC2321

連桿系列

JAM-YUAN ENTERPRISES CO., LTD

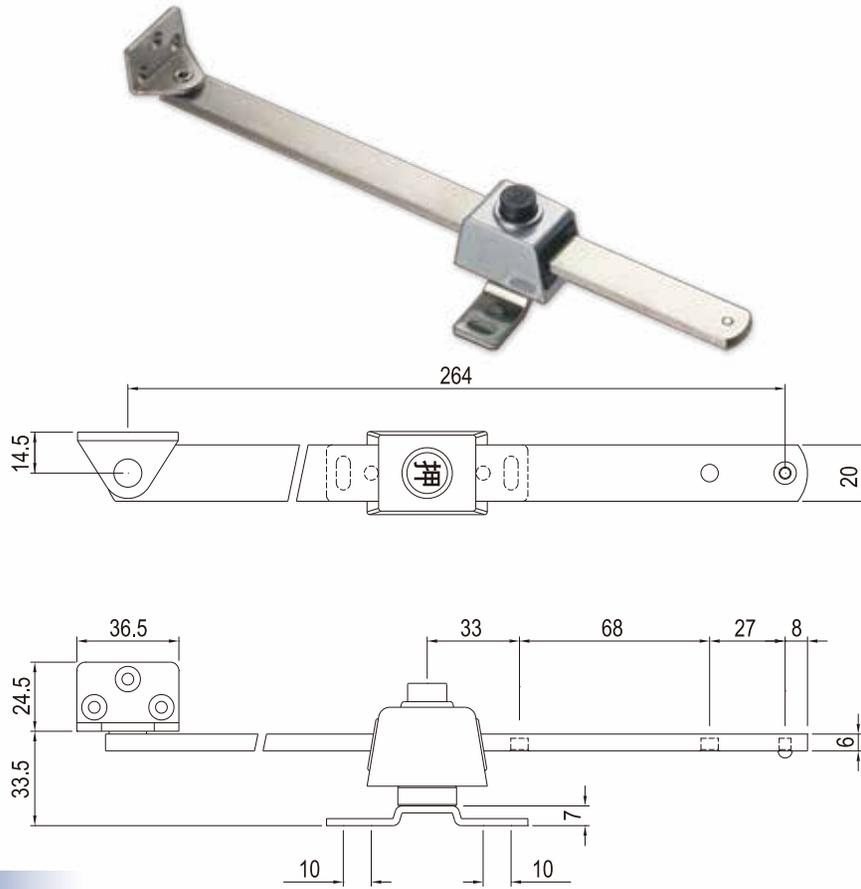


台灣門窗五金領導品牌

定位桿 Affix Friction Stay

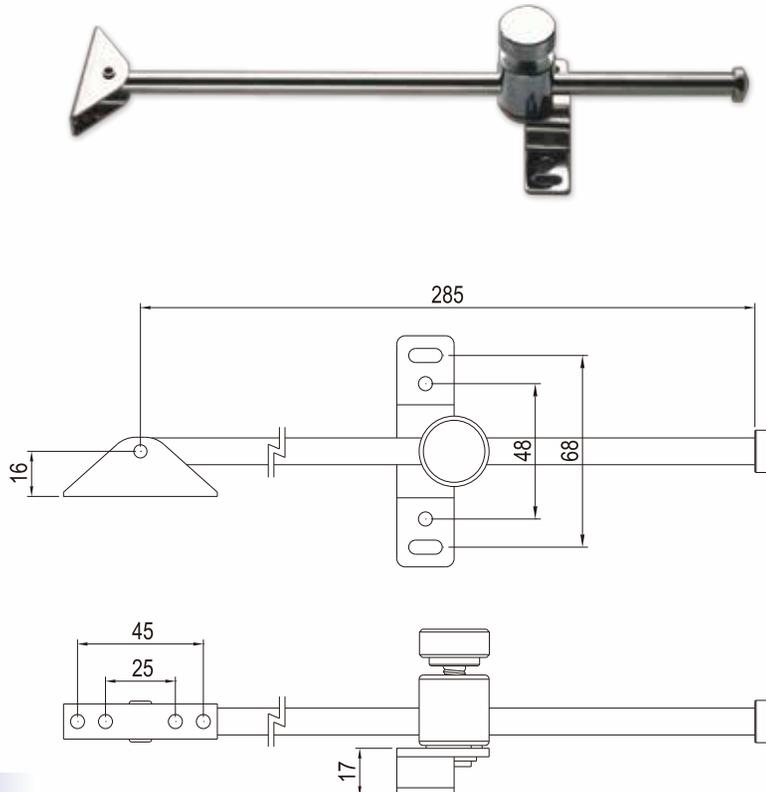
材質SUS304(Material SUS304)

外露式
訂製品



CA106

訂製品



CA109

連
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系
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JAM-YUAN ENTERPRISES CO., LTD

定位桿

Affix Friction Stay

材質SUS304(Material SUS304)

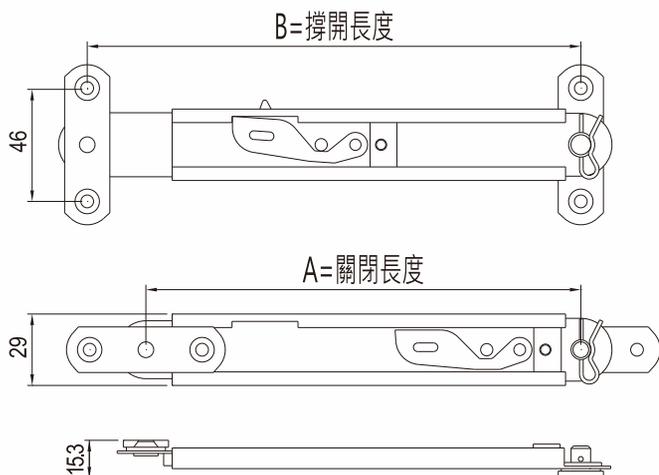


台灣門窗五金領導品牌

緊急逃生用

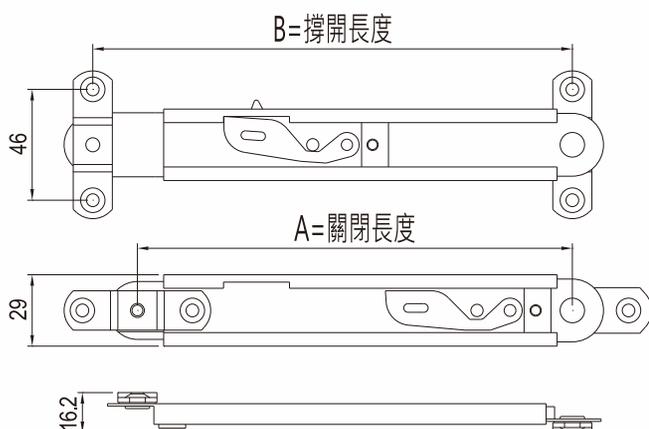


* 遇緊急狀況，將R型插銷拔出窗扇即可完全推開。



型號	尺寸	A	B	吋數換算
F507A		177.5	244.5	約 7"
F507B		254.5	398.5	約 10"
F507E		135	159.5	約 5又1/4"

F507



型號	尺寸	A	B	吋數換算
V507A		177.5	244.5	約 7"
V507B		254.5	398.5	約 10"

V507

連桿系列

JAM-YUAN ENTERPRISES CO., LTD

■ 鉸鏈系列

Hinge Series



旗型鉸鏈

Flag Hinge

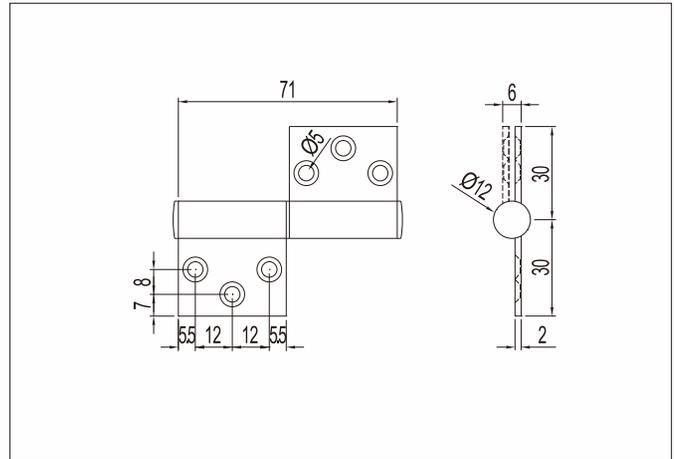
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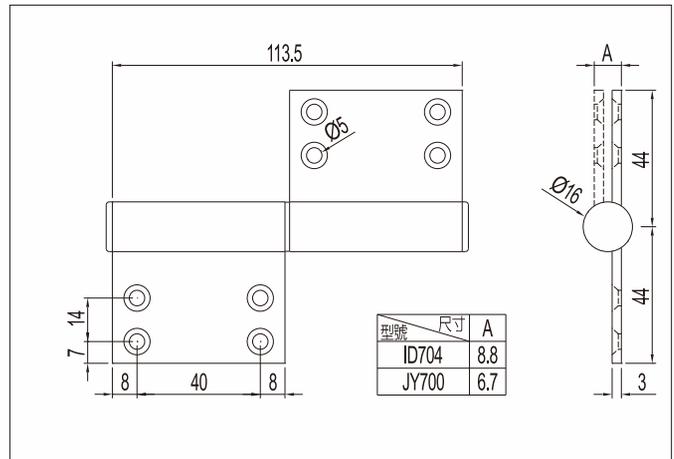
台灣門窗五金領導品牌



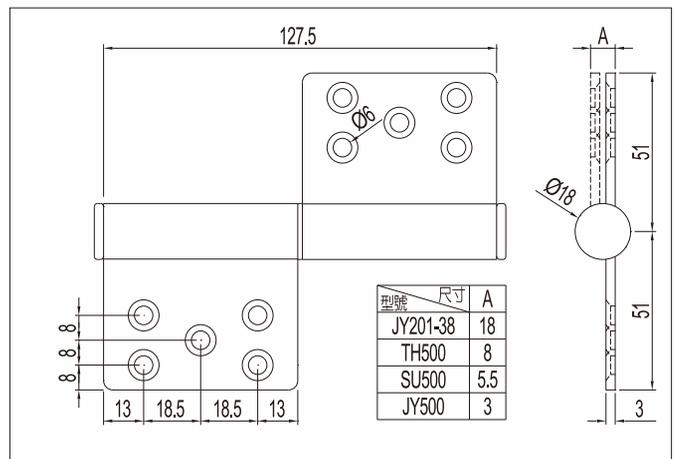
CG100



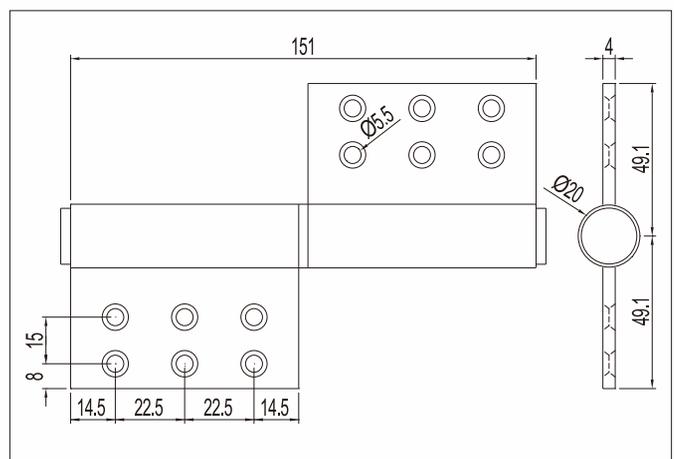
ID704



TH500



HG2701



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JAM-YUAN ENTERPRISES CO., LTD



台灣門窗五金領導品牌

蝴蝶鉸鏈 Butterfly Hinge

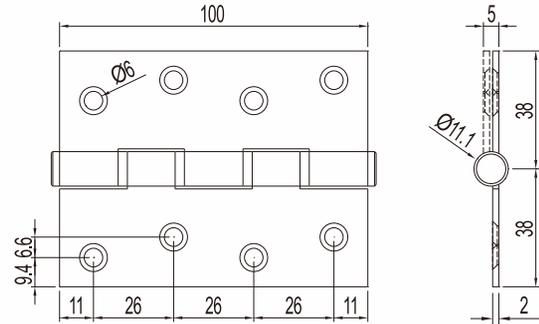
材質SUS304(Material SUS304)

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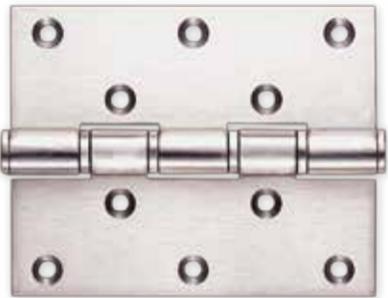
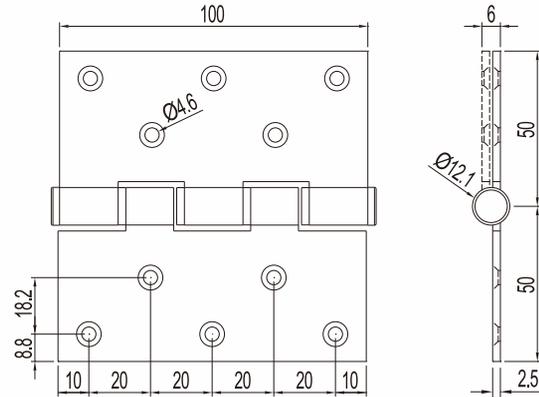
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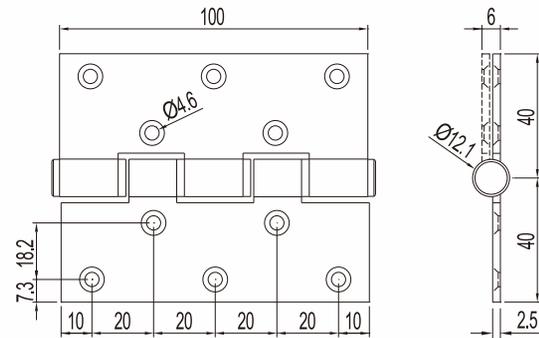
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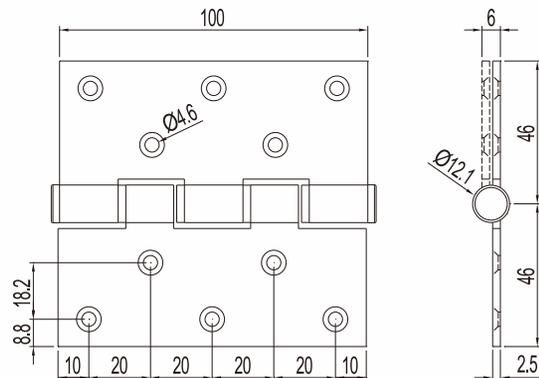
JT2508



JT2509



HG2511



蝴蝶鉸鏈

Butterfly Hinge

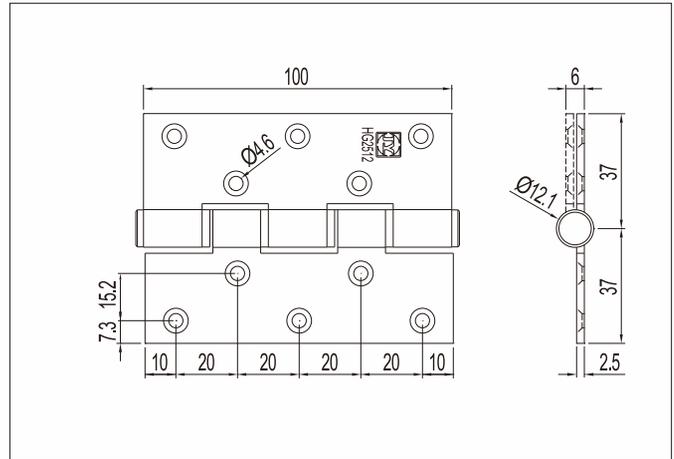
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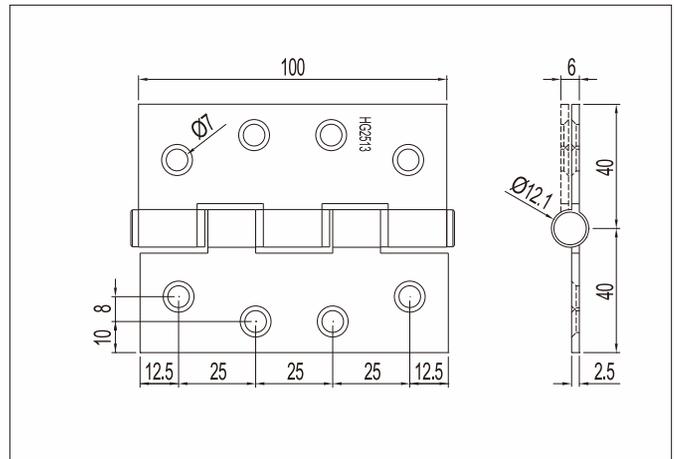
台灣門窗五金領導品牌



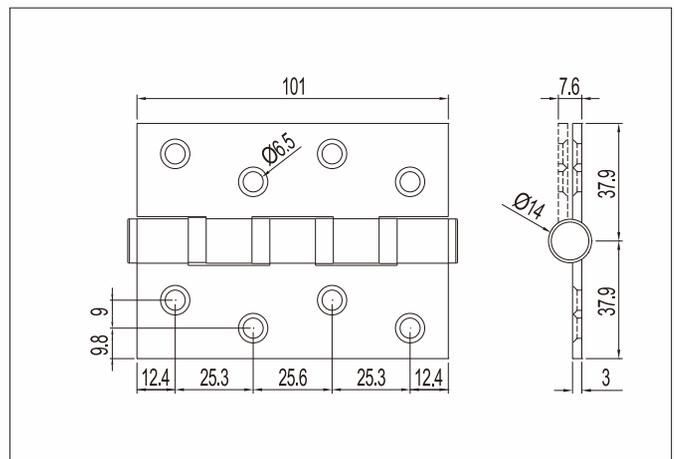
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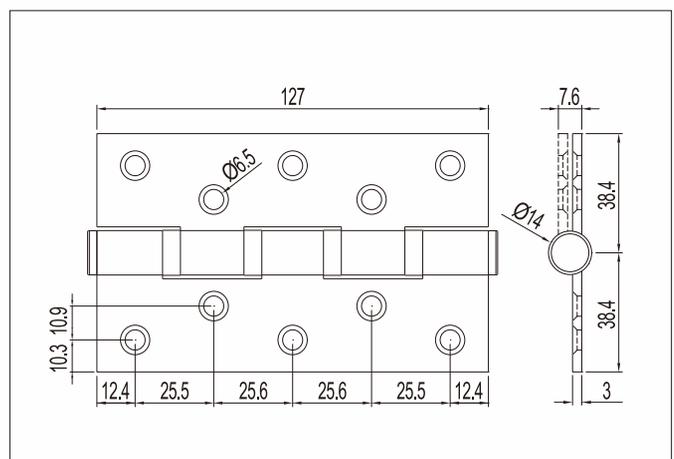
HG2513



HGH2601V



HGH2602V



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JAM-YUAN ENTERPRISES CO., LTD



台灣門窗五金領導品牌

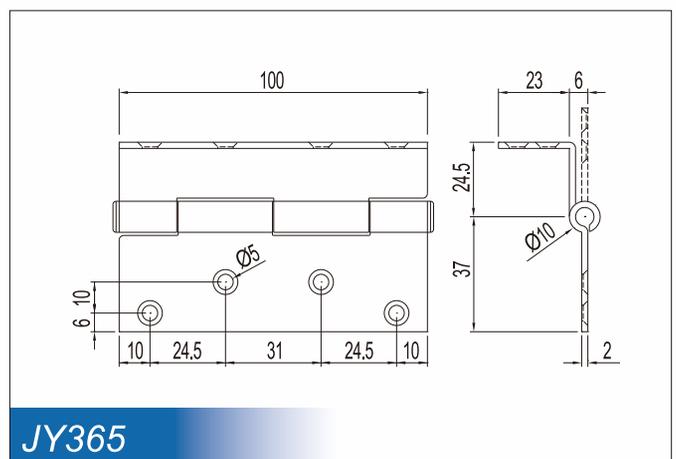
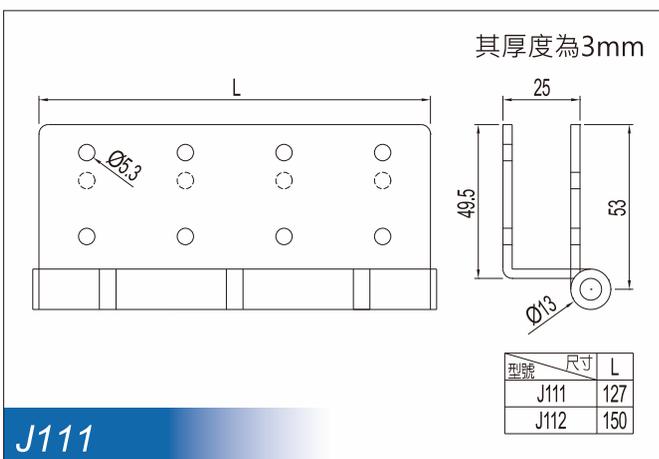
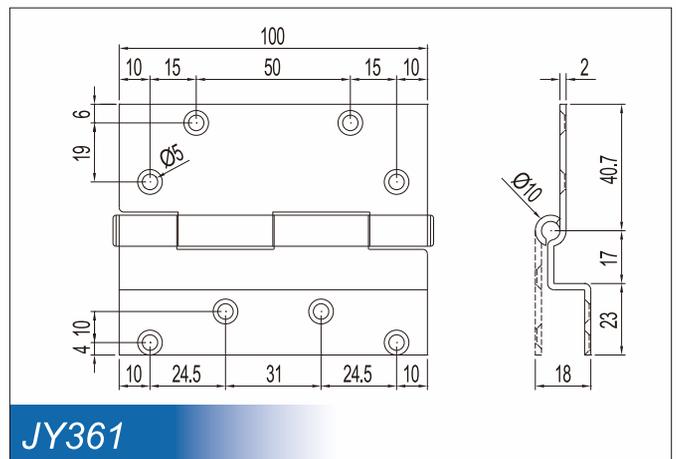
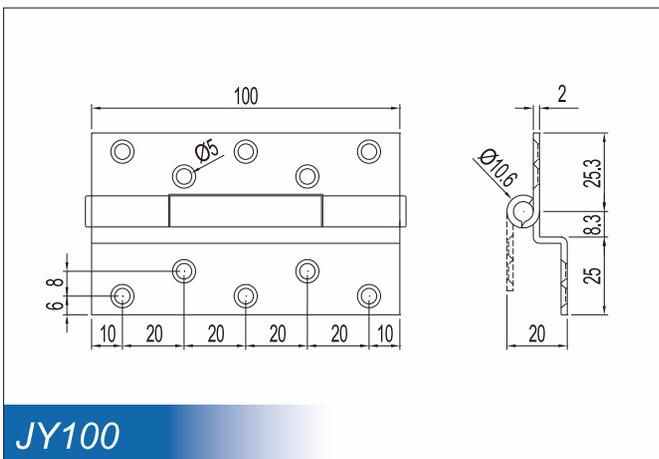
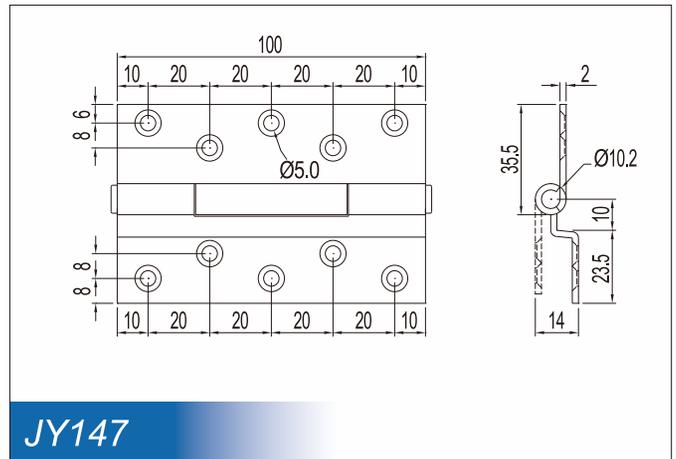
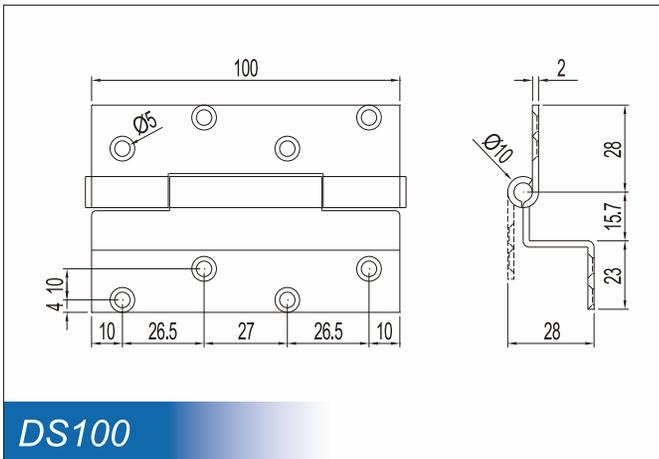
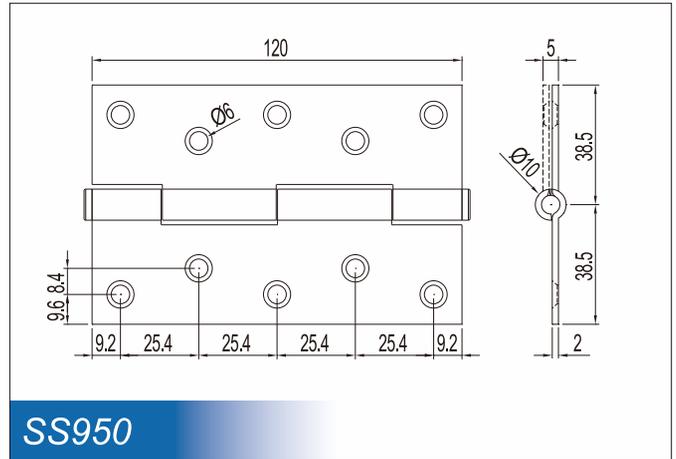
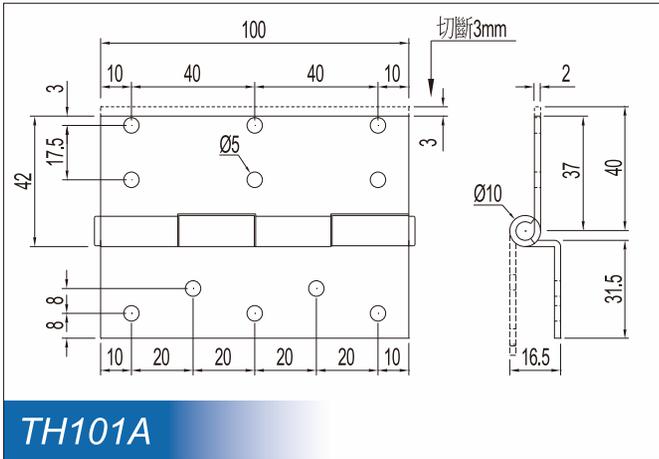
特製鉸鏈

Customized Hinge

材質SUS304(Material SUS304)

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JAM-YUAN ENTERPRISES CO., LTD



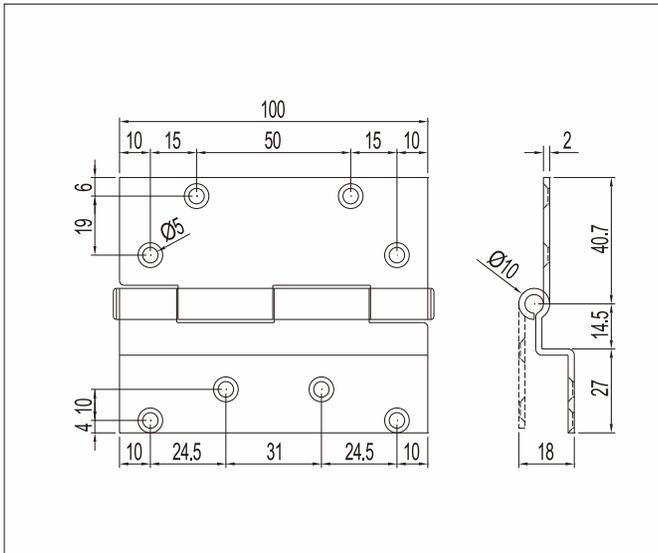
特製鉸鏈

Customized Hinge

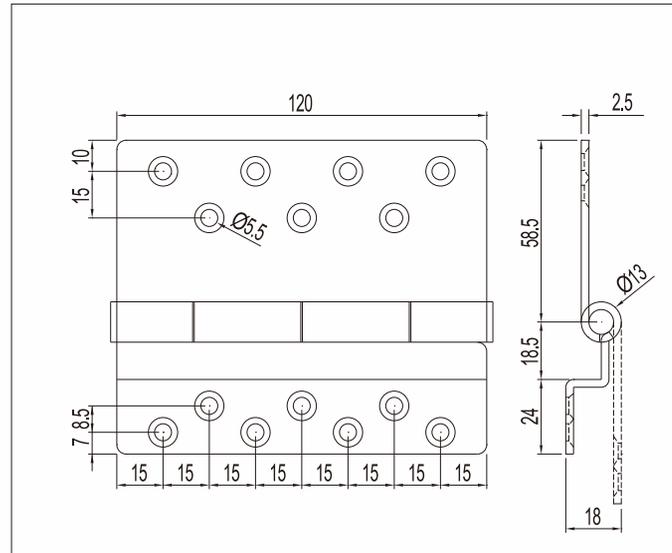
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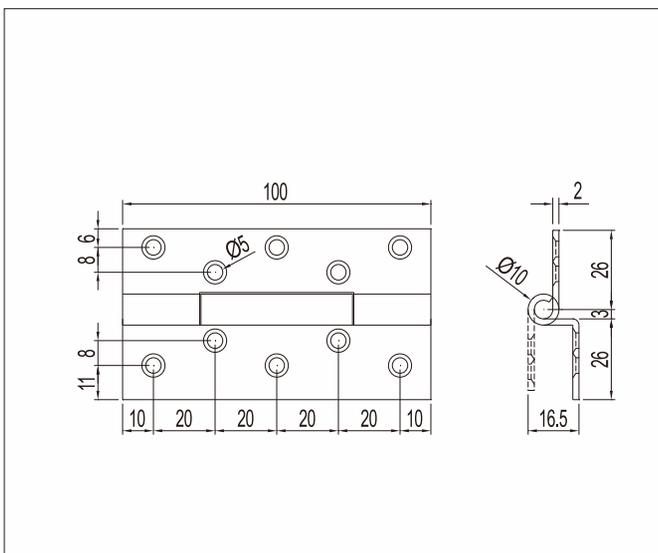
台灣門窗五金領導品牌



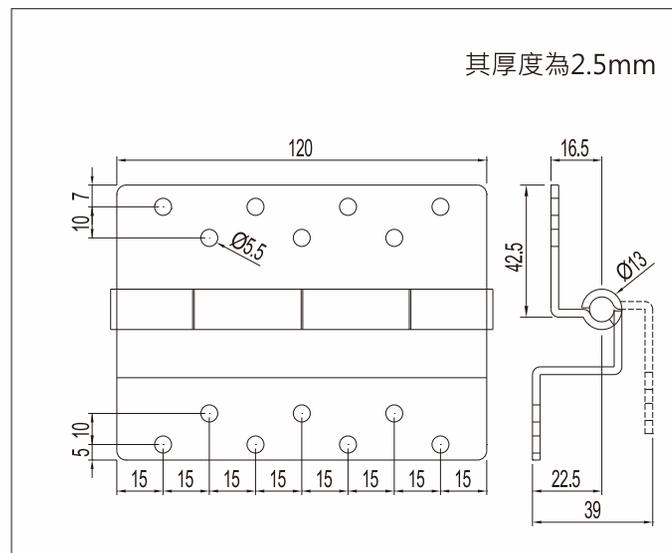
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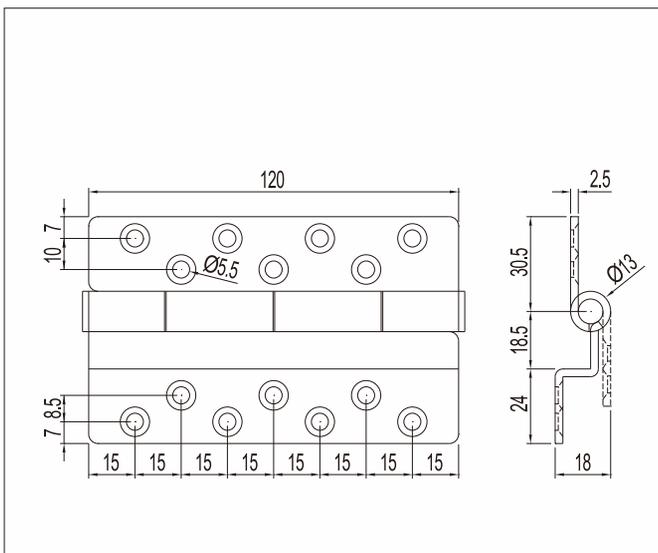
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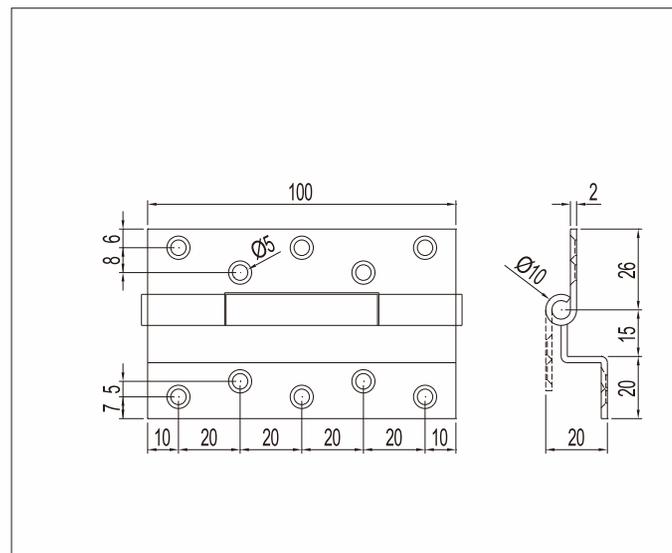
SZ100



TNP122



TNP120



YT80EA

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JAM-YUAN ENTERPRISES CO., LTD



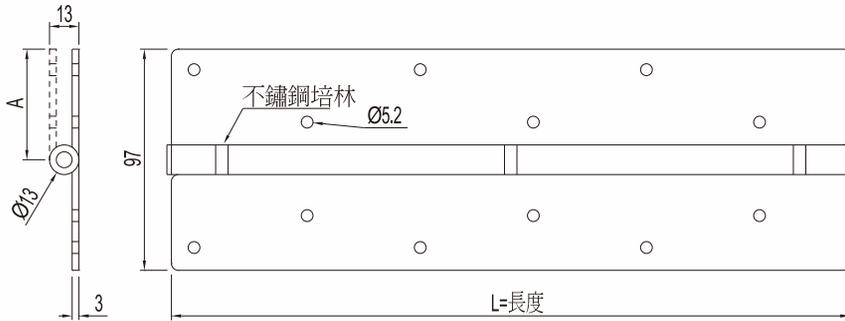
台灣門窗五金領導品牌

鋼琴鉸鏈

Piano Hinge

材質SUS304(Material SUS304)

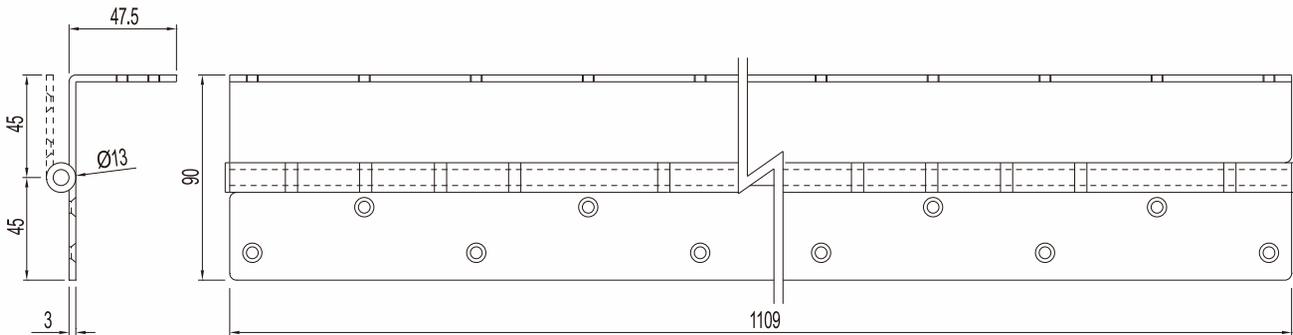
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型號	尺寸	A	L	備註
AC026-1		22	300	
AC026-2		30	300	
AC076		38.5	620	
AC036		48.5	620	孔位不同
AC046				孔位不同
AC056				孔位不同
AC066				孔位不同
AC066-1				孔位不同
AC056A				48.5

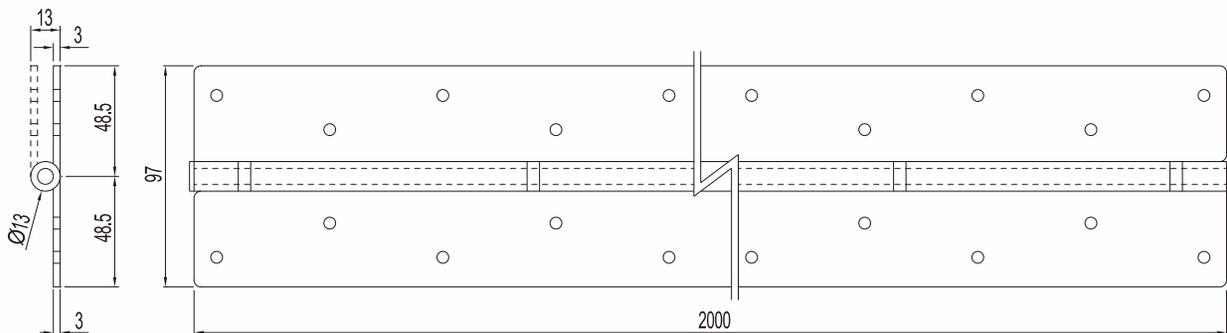
AC056

自由長度客製化



AC056B

自由長度客製化



AC063

JAM-YUAN ENTERPRISES CO., LTD

鋼琴鉸鏈

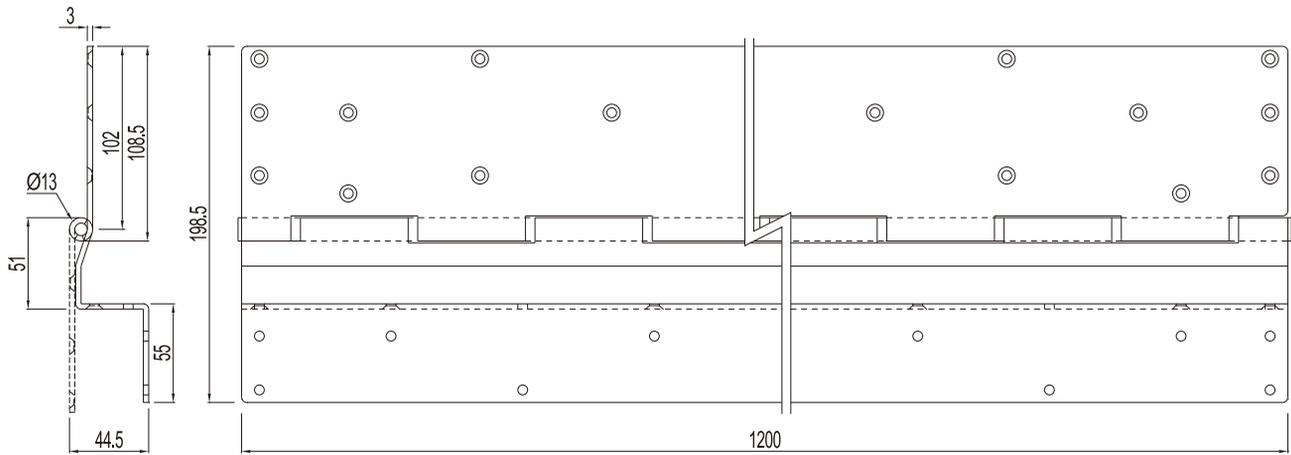
Piano Hinge

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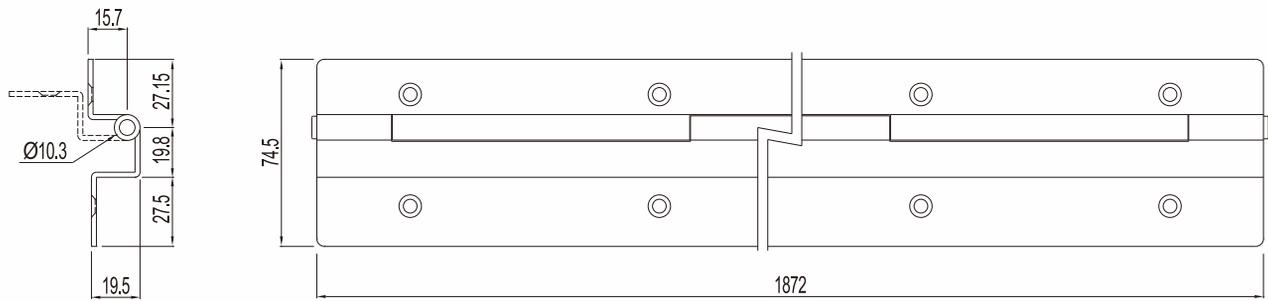
台灣門窗五金領導品牌

自由長度客製化



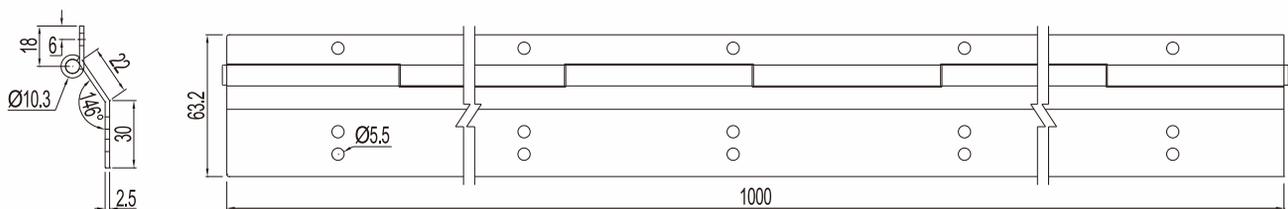
AC070

自由長度客製化



AC206A

自由長度客製化



AC207

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JAM-YUAN ENTERPRISES CO., LTD

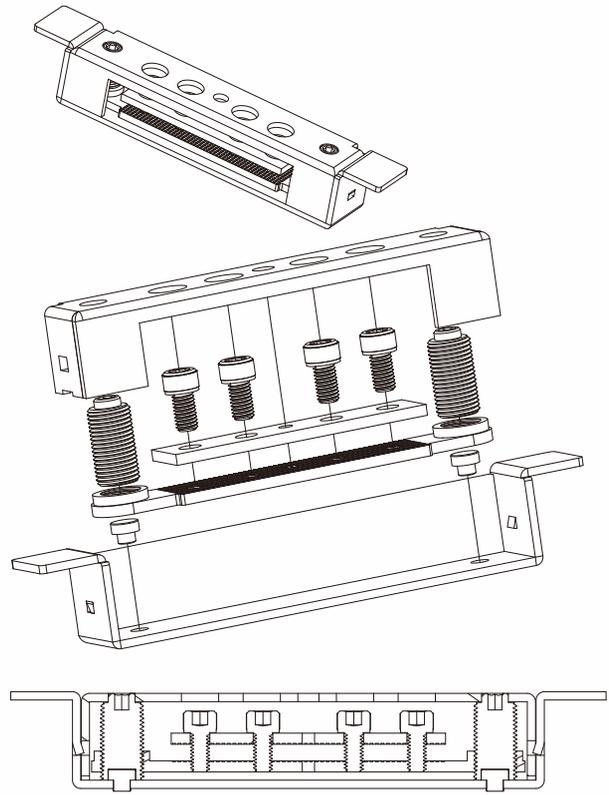
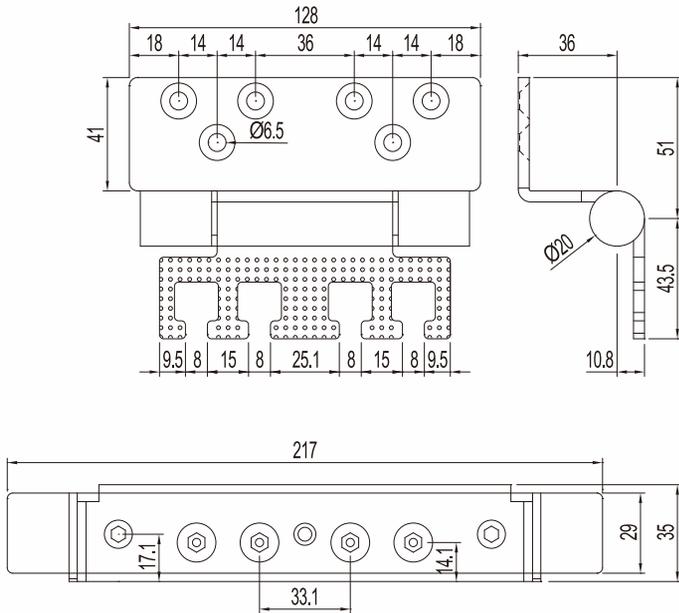


台灣門窗五金領導品牌

門用重型鉸鏈 Door Using Heavy Duty Hinge

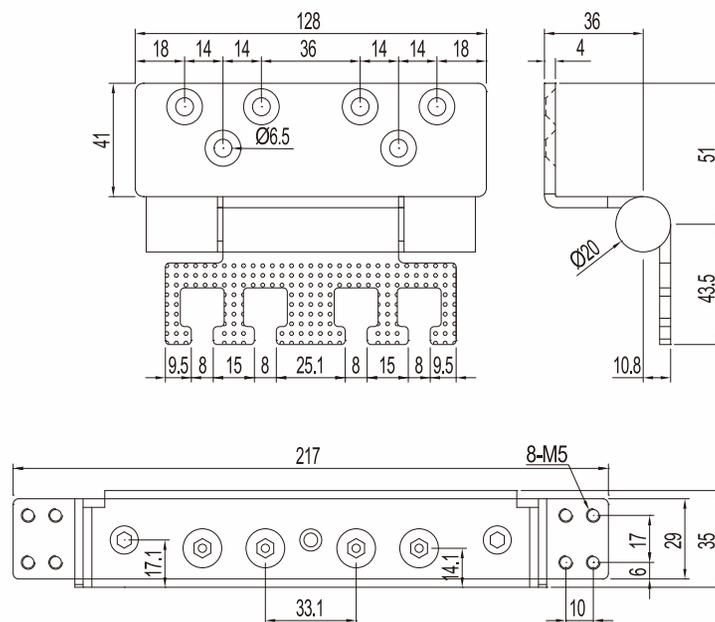
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三度空間重力鉸鏈



DH5301

三度空間重力鉸鏈



DH5301A