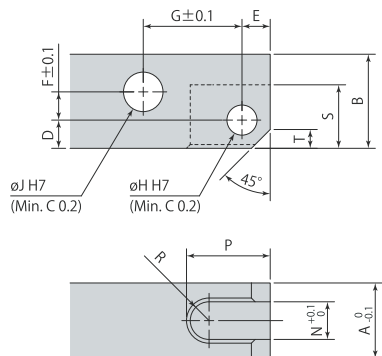


夾緊臂加工圖



注：不附帶夾緊臂，請用戶自備。

單位 (Unit) : mm

型號	BLU02	BLU04	BLU06	BLU10	BLU16	BLU25
A	12	12	16	19	22	32
B	14	16	20	25	31	38
D	5.5	6	6	8	9	12.5
E	5.5	6	6	7	10	13
F	3	3.5	6	7.5	9.5	9.5
G	16.5	18.5	21	24.5	30.5	37.5
øH	6 ^{+0.012} ₀	6 ^{+0.012} ₀	6 ^{+0.012} ₀	8 ^{+0.015} ₀	12 ^{+0.018} ₀	14 ^{+0.018} ₀
øJ	6 ^{+0.012} ₀	6 ^{+0.012} ₀	8 ^{+0.015} ₀	10 ^{+0.015} ₀	14 ^{+0.018} ₀	16 ^{+0.018} ₀
N	6	6	8	10	11	16
P	14	17	17	20	26.5	36
R	R3	R3	R4	R5	R5.5	R8
S	12	13.5	13.5	17.5	22	28
T	3	4	4	5	7	8

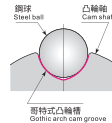
飛躍性地提高了耐久性、實現了高速夾緊

哥特式凸輪槽

Gothic arch cam groove

採用與鋼球大面積接觸的哥特式凸輪槽，有效降低了接觸面壓力，可連續、高頻率地高速旋轉，耐久性出色。

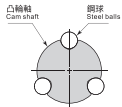
Superior durability, high frequency and high-speed swinging operation is achieved thanks to lowered and controlled seating surface pressure. This is made possible by adopting gothic arch cam grooves that use steel balls with larger surface area.



3點式鋼球支撐

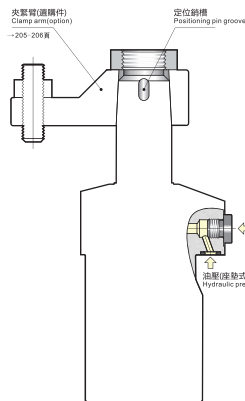
採用3點式鋼球支撐機構，實現了平穩的高速旋轉。

Smooth, stable and high-speed swinging operation has been achieved by 3-point ball support mechanism.



凸輪軸直徑大，確保了凸輪槽之間有充分的距離，因此剛性很高。由於凸輪槽的耐久性和耐衝擊性得到提高，因此無需過載保護機構即可進行穩定而準確的高速旋轉。

Large diameter cam shafts ensure wide distance between the cam grooves offers higher rigidity. As overload protection mechanism is not needed due to improvement of durability and impact resistance, providing stable and secure high-speed swing operation.

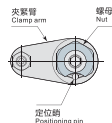


夾緊臂的定位與更換

Positioning and replacement of clamping arm

所有型號均採用定位銷槽。夾緊臂的定位(角度)簡單易行。

Positioning pin groove adopted with all models. Positioning (angle) of clamp arm can be performed easily.

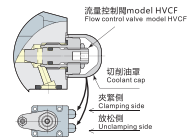


流量控制閥

Flow control valve

通過安裝流量控制閥(選購件)，可單獨調節動作速度，輕鬆控制同一回路上的順序動作和同步動作。--223-224頁

Operating speeds can be adjusted individually by mounting a flow control valve (option), making sequential operation on same circuit or control of synchronization operation easier. --223-224page



凸輪槽詳圖
Cam groove view

規格

型號/Model	HCTU01	HCTU02	HCTU04	HCTU06	HCTU10	HCTU16	HCTU25
油缸能力/油壓為7 MPa時/Cylinder force(hydraulic pressure 7 MPa) (kN)	2.4	2.8	4.4	6.3	9.9	16.3	25.8
夾緊力 ※1 油壓為7 MPa時/Hydraulic pressure 7 MPa (kN)	2.0	2.4	3.8	5.3	8.3	13.5	21.2
Clamping force 夾緊臂長度 (LH) /Clamp arm length (LH) (mm)	30	35	40	50	60	70	90
油缸內徑/Cylinder inner diameter (mm)	25	29	36	42	52	65	82
主杆徑/Rod diameter (mm)	14	18	22.4	25	30	35.5	45
油缸面積 (夾緊) /Effective area (clamp) (cm ²)	3.5	4.1	6.2	8.9	14.2	23.3	36.9
旋轉角度/Swing angle	90° ± 3°						
定位銷槽位置精度/Positioning pin groove position accuracy	± 1°						
夾緊重複定位精度/Repeated clamp positioning accuracy	± 0.5°						
全行程/Full stroke (mm)	16	18	20.5	23.5	26.5	28.5	36
旋轉行程/Rotary stroke (mm)	8	10	12.5	13.5	16.5	18.5	23
夾緊行程/Clamp stroke (mm)	8	8	8	10	10	10	13
最大旋轉扭矩 ※2/Max. swing torque ※2 (N·m)	0.6	0.7	1.6	1.8	3.4	5.6	9.3
油缸容量 Cylindercapacity	夾緊/Clamp (cm ³)	5.4	7.3	12.8	21.0	37.5	66.4
	放松/Unclamp (cm ³)	7.9	11.9	20.9	32.6	56.3	132.9
質量/Mass (kg)	0.31*3	0.9	1.3	1.7	2.8	4.7	9.9

使用油壓範圍: 1 ~ 7 MPa 保證耐壓: 10.5 MPa 使用環境溫度: 0 ~ 70℃ 使用液體: 普通礦物油基液壓油(相當于ISO-VG32)

* 夾緊力因夾緊臂長度而異。

* 垂直安裝時, 能以1 MPa的壓力抬升夾緊臂的極限值。

* 僅HCTU01型的主體使用鋁合金材質, 滿足轻量化需求。

氟系切削液噴灑的環境下也可以使用。

Working pressure range: 1 ~ 7 MPa Proof pressure: 10.5 MPa Operating temperature: 0 ~ 70℃

Fluid used: General mineral based hydraulic oil (ISO-VG32 equivalent)

*. Clamping force varies depending on clamp arm length.

*. This is the limit value for lifting arm at 1 MPa when mounted vertically.

*. Body material is aluminum only for model HCTU01, to reduce weight.

Fluorocarbon has been adopted for seal sections where cutting fluid is applied, as a measure for the use of chlorine-based cutting fluid (this is not thermal resistant specification).

型號表示

HCTU ①-②③ (例:HCTU06-R)/(Example: HCTU06-R)

① 大小(參照規格表) ② 旋轉方向(夾緊時)
Size(see table) Swing direction (when clamping)

③ 特殊規格記號 ※
Variation code

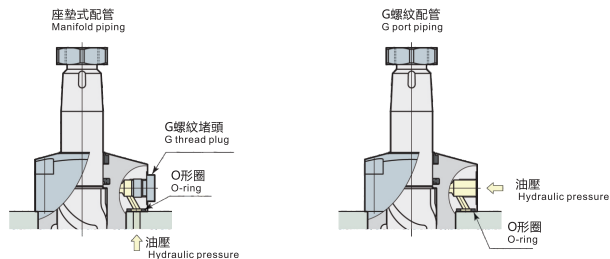
HCTU	01	L: 左轉 Turn left		無記號: 標準 (Nil): Standard	E: 雙頭杆規格 P: 頂端銷規格 N□: 旋轉角度30°、45°、60°
	02				
	04				
	06				
	10				
	16				
HCTU	25	R: 右轉 Turn right		N□: Swing angle 30°、45°、60°	

※: 特殊規格沒有對應全部大小, 詳情請參照各相應頁。產品目錄中未記載的特殊規格 (型號) 請參照其它資料。

※: All varieties are not available for all sizes. Refer to each relevant page for details.

Request for separate document regarding variation codes (models) that are not described in the catalog.

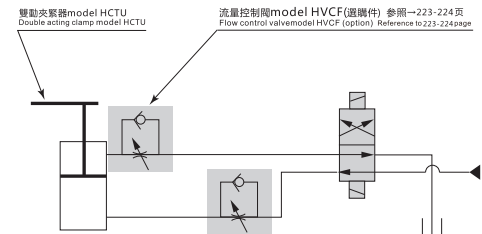
配管方法



HCTU型可選擇座墊式配管和G螺紋配管2種配管方法。采用G螺紋配管時, 請拆下G螺紋堵頭。(采用G螺紋配管時不要卸下O形圈, 利用安裝面進行密封。)關於G螺紋配管嵌入式接頭。

Two piping methods are available for model HCTU, manifold piping and G port piping. Dismantle plug when using G port piping. Whichever method is chosen for piping, O-ring must be used.

油壓回路圖(參考)



流量控制閥推薦使用過油節流控制方式。如果採用出油節流控制方式, 因為面積的差產生背壓形成高壓, 從而有可能會導致系統故障, 所以在設計回路是要注意。

For flow control valve, we recommend the meter-in control. If meter-out control is used, due to the area difference, it will cause back pressure and become high pressure. This can lead to malfunction of the system. Please be aware when designing the circuit.

外形尺寸表 Dimension table

型號 Model	HCTU01-½	HCTU02-½	HCTU04-½	HCTU06-½	HCTU10-½	HCTU16-½	HCTU25-½
A	117	131	148.5	158.5	178.5	201.5	244
B	38	45	50	57	70	86	108
C	48	55	60	66	82	96	120
D	29	32.5	35	37.5	47	53	66
E	19	22.5	25	28.5	35	43	54
F	30.5	35	40	46	56	68	88
G	35	39	47	53	63	78	100
H	14	18	22.4	25	30	35.5	45
J	77	83	92	99	113	124.5	148.5
K	48.5	54	61	66	77	84	97
L	28.5	29	31	33	36	40.5	51.5
M	17.5	20	22.5	25.5	28.5	30	37.5
N	16	20	25	25	27	35	45
P	6.5	8	9	9	10	12	13
R1	12.5	12.5	12.5	12.5	14	14	21
R2	18	22	24	28	36	45	50
R3	22.5	25	28	30.5	36	42	57
R4	16.2	20	22	26	30	38	50
S	22	27	30	36	46	55	
T	5	6	6	8	8	10	14
U	M12×15 (12 N·m)	M14×15 (16 N·m)	M18×15 (51 N·m)	M20×15 (60 N·m)	M24×15 (86 N·m)	M30×15 (120 N·m)	M39×15 (180 N·m)
V	20	19.5	20	20	19.5	20	26
W	4.3	5.5	5.5	6.8	9	11	14
X	8	9.5	9.5	11	14	17.5	20
Y	G1/8	G1/8	G1/8	G1/8	G1/4	G1/4	G3/8
Z	3.8	3.8	3.8	3.8	4.8	4.8	4.8
Z1	R3	R3	R3	R5	R6	R7	R10
O 封圈 O-ring	P7	P7	P7	P7	P8	P8	P10
AA	14	14	14	14	19	19	22
AB	9	10.5	10.5	10.5	12.5	12.5	14.5
BA	36	40	48	54	64	79	101
BB	M4	M5	M5	M6	M8	M10	M12
BC	4	4	4	4	6	6	8
HD	3 ¹⁾¹⁰ ø3(h8)×3	4 ¹⁾¹⁰ ø4(h8)×10	4 ¹⁾¹⁰ ø4(h8)×10	5 ¹⁾¹⁰ ø5(h8)×10	6 ¹⁾¹⁰ ø6(h8)×12	6 ¹⁾¹⁰ ø6(h8)×12	6 ¹⁾¹⁰ ø6(h8)×14

※2: O形圈的材料為氟橡膠 (硬度11590)。

注1. 本圖表示旋轉方向L (左轉) 的放鬆狀態, 夾緊時定位銷橫朝向油壓接口側。

口側, 旋轉方向和定位銷槽的關係請參照左圖。

2. 安裝面的最大表面粗糙度應加工在Ra6.3以下。

3. 不帶磨臂、锥形套、速度控制閥、定位銷和安裝螺絲。

4. 關於旋型套、夾緊臂, 請參照→221-222頁; 關於使用注意事項, 請參照→225頁

※2: O ring is made of fluorine rubber (115 hardness).

Note 1. The said rotation direction L (left) of the state of relaxation, the clamping groove location pin to and the pressure side of the interface and the relationship between the direction of rotation and the positioning pin slot, please refer to the left.

2. The maximum surface roughness of the mounting surface shall be processed in the following Ra6.3.

3. No pressure arm, speed valve, speed control valve, positioning pin and mounting screws are included.

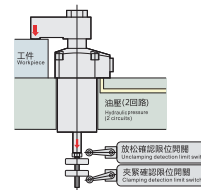
4. on the cone type, clamping arm, please refer to the 221-222 page;

on the use of attention, please refer to the 225 page

雙頭杆規格

Swing clamp Dual rod

使用例 / Usage example



型號表示 / Model designation

HCTU1-2E (例: HCTU06-E)

① 大小 (參照規格表)
Size (reference specification)② 旋轉方向(夾緊時)
Swing direction(when clamping)

HCTU	01 02 04 06 10 16 25	L: 左轉 L: Turn left	E: 雙頭杆規格 E: Dual rod
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外形尺寸表 Dimension table

型號/Model	HCTU01-½	HCTU02-½	HCTU04-½	HCTU06-½	HCTU10-½	HCTU16-½	HCTU25-½
油缸容量(放鬆) der capacity (unclamped)	7.0 cm ³	11.0 cm ³	19.3 cm ³	30.7 cm ³	53.3 cm ³	91.3 cm ³	182.9 cm ³
A	117	131	148.5	158.5	178.5	201.5	244
EB	24	26	28.5	31.5	34.5	36.5	44
EC	8	8	8	8	8	8	8
EE	8	8	10	10	12	12	16
EF	M5×0.8 深8	M5×0.8 深8	M6×1 深11	M6×1 深11	M8×1.25 深15	M8×1.25 深15	M10×1.5 深18
質量/Mass	0.35 kg	0.9 kg	1.3 kg	1.7 kg	2.8 kg	4.7 kg	9.9 kg

注1. 本圖表示旋轉方向L (左轉) 的放鬆狀態, 夾緊時定位銷橫朝向油壓接口側。

2. 本圖未記載的規格尺寸請參照規格→205-206頁, 外形尺寸→207頁。

Note 1. this figure represents the relaxation state of the rotational direction L (left turn).

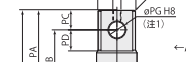
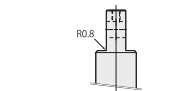
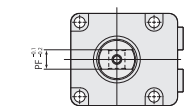
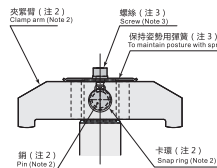
Positioning pin slots on the oil pressure interface side when the clamp is clamped turn). Positioning pin slots on the oil pressure interface side when the clamp is clamped.

2. this page does not record the size of the specification, please refer to the specification 205-206 page outline size 207 page.

頂端銷規格

Swing clamp Top pin

使用例 / Usage example



型號表示 / Model designation

HCTU 1-2P

(例: HCTU06-RN45)

HCTU	① 大小 (參照規格表) Size (reference specification)	② 旋轉方向(夾緊時) Swing direction (when clamping)	P: 頂端銷規格 P: Top pin
	01 02 04 06 10 16 25	L: 左轉 L: Turn left R: 右轉 R: Turn right	

外形尺寸表 Dimension table

(mm)

型號/Model	HCTU 01-P	HCTU 02-P	HCTU 04-P	HCTU 06-P	HCTU 10-P	HCTU 16-P	HCTU 25-P
PA	36	38.5	45	52	59	70.5	88
PB	28	30.5	35	40	45	51.5	64
PC	8	8	10	12	14	19	24
PD	9	9	11	13	15	20	25
PE	12	16	20.4	23	28	33.5	43
PF	8	8	10	12	16	18	22
PG	6 ^{+0.08} ₋₀	6 ^{+0.08} ₋₀	8 ^{+0.02} ₋₀	10 ^{+0.02} ₋₀	12 ^{+0.02} ₋₀	16 ^{+0.07} ₋₀	20 ^{+0.11} ₋₀
PH	14	18	22.4	25	30	35.5	45
PJ	28.5	29	31	33	36	40.5	51.5
PK	M3×0.5	M3×0.5	M4×0.7	M5×0.8	M6×1	M6×1	M8×1.25
PL	77	83	92	99	113	124.5	148.5
PM	113	121.5	137	151	172	195	236.5
質量/Mass	0.30 kg	0.9 kg	1.3 kg	1.8 kg	3.0 kg	4.9 kg	9.5 kg

注1. 本圖表示放鬆狀態。夾緊時銷孔朝向油壓接口側。

2. 不附帶夾緊臂、銷、卡環。請用戶自備。

3. 需要保持夾緊臂的姿勢時，請使用杆端螺紋孔。不附帶螺絲和保持姿勢用彈簧。

4. 本頁未記載的規格及尺寸，請參照規格→203-204頁，外形尺寸→205頁

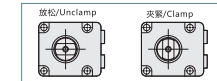
Note 1. this figure represents a relaxed state. When the clamp is clamped, the pin hole is directed towards the oil pressure interface side.

2. no clamping arms, pins, clasp. Please bring your own.

3. to maintain the position of the clamping arm, please use the rod end screw hole.

Spring without screws and holding posture.

4. this page does not record the size of the specification, please refer to the specification (203-204 page) outline size (205 pages).



型號表示

旋轉角度30°、45°、60°

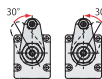
Swing clamp Swing angle 30°, 45°, 60°

HCTU 1-2 例: (HCTU06-RN45) (Example: (HCTU06-RN45))

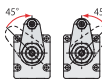
HCTU	① 大小 (參照規格表) Size (reference specification)	② 旋轉方向 (夾緊時) Swing direction (when clamping)	③ 旋轉角度(參照下圖) Swing angle
	01 02 04 06 10 16 25	L: 左轉 L: Turn left R: 右轉 R: Turn right	N30: 旋轉角度30° Swing angle 30° N45: 旋轉角度45° Swing angle 45° N60: 旋轉角度60° Swing angle 60°

旋轉角度 (夾緊時) / Swing angle (when clamping)

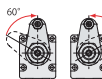
HCTU 1-L N30

旋轉角度30°
Swing angle 30°R: 右轉
R: Clockwise
L: 左轉
L: Counterclockwise

HCTU 1-L N45

旋轉角度45°
Swing angle 45°R: 右轉
R: Clockwise
L: 左轉
L: Counterclockwise

HCTU 1-L N60

旋轉角度60°
Swing angle 60°R: 右轉
R: Clockwise
L: 左轉
L: Counterclockwise

規格 Specifications

型號/Model	HCTU 01-L N30 N60	HCTU 02-L N30 N45 N60	HCTU 04-L N30 N45 N60	HCTU 06-L N30 N45 N60
旋轉角度 Swing angle	30°±3° 45°±3° 60°±3°	30°±3° 45°±3° 60°±3°	30°±3° 45°±3° 60°±3°	30°±3° 45°±3° 60°±3°
全行程 Full stroke	(mm) 11.8 12.7 13.7 13.0 14.3 15.5 14.3 15.8 17.4 16.8 18.4 20.1			
旋轉行程 Swing stroke	(mm) 3.8 4.7 5.7 5.0 6.3 7.5 6.3 7.8 9.4 6.8 8.4 10.1			
夾緊行程 Clamp stroke	(mm) 8	8	8	10
油缸容量 Cylinder capacity	夾緊 Clamp (cm³) 4.0 4.3 4.6 5.3 5.8 6.3 8.9 9.9 10.8 15.0 16.5 18.0	放鬆 Unclamp (cm³) 5.8 6.2 6.7 8.6 9.4 10.2 14.5 16.1 17.7 23.3 25.5 27.9		

型號/Model	HCTU 10-L N30 N45 N60	HCTU 16-L N30 N45 N60	HCTU 25-L N30 N45 N60
旋轉角度 Swing angle	30°±3° 45°±3° 60°±3°	30°±3° 45°±3° 60°±3°	30°±3° 45°±3° 60°±3°
全行程 Full stroke	(mm) 18.3 20.3 22.4 19.3 21.6 23.9 24.5 27.4 30.3		
旋轉行程 Swing stroke	(mm) 8.3 10.3 12.4 9.3 11.6 13.9 11.5 14.4 17.3		
夾緊行程 Clamp stroke	(mm) 10	10	13
油缸容量 Cylinder capacity	夾緊 Clamp (cm³) 25.9 28.8 31.7 44.8 50.2 55.6 90.4 101.0 111.6	放鬆 Unclamp (cm³) 38.8 43.1 47.5 63.9 71.5 79.2 129.4 144.6 159.8	

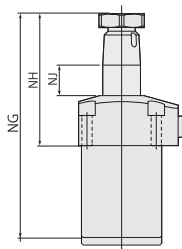
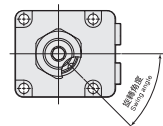
注: 本頁未記載的規格請參照→203-204頁

Note: this page does not record the specifications please refer to 203-204 page

旋轉角度30°、45°、60°
Swing clamp Swing angle 30°, 45°, 60°

HCTU
01
02
04
06
10
16
25

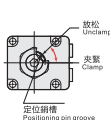
L N30
R N45
N60



旋轉方向L (左轉)
Swing direction L
(counter-clockwise)



旋轉方向R (右轉)
Swing direction R
(clockwise)



注1. 本圖表示旋轉方向L (左轉) 的放鬆狀態。
夾緊時定位銷槽朝向油壓接口側。
放鬆時的定位銷槽位置請參照上圖。
2. 本頁未記載的尺寸, 請參照→205頁

Note 1. This figure represents the relaxation state of the rotational direction L (left turn).
Positioning pin slots on the oil pressure interface side when the clamp is clamped.
To relax when the positioning pin slot position, please refer to the figure above.
2. The size of the page is not recorded, please refer to page 205.

外形尺寸表 Dimension table

型號/Model	HCTU 01 $\begin{smallmatrix} \text{L N30} \\ \text{R N45} \\ \text{N60} \end{smallmatrix}$			HCTU 02 $\begin{smallmatrix} \text{L N30} \\ \text{R N45} \\ \text{N60} \end{smallmatrix}$			HCTU 04 $\begin{smallmatrix} \text{L N30} \\ \text{R N45} \\ \text{N60} \end{smallmatrix}$			HCTU 06 $\begin{smallmatrix} \text{L N30} \\ \text{R N45} \\ \text{N60} \end{smallmatrix}$		
旋轉角度/Swing angle	30°±3°	45°±3°	60°±3°	30°±3°	45°±3°	60°±3°	30°±3°	45°±3°	60°±3°	30°±3°	45°±3°	60°±3°
NG	112.8	113.7	114.7	126.0	127.3	128.5	142.3	143.8	145.4	151.8	153.4	155.1
NH	64.3	65.2	66.2	72.0	73.3	74.5	81.3	82.8	84.4	85.8	87.4	89.1
NJ	13.3	14.2	15.2	15.0	16.3	17.5	16.3	17.8	19.4	18.8	20.4	22.1

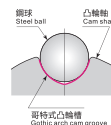
型號/Model	HCTU 10 $\begin{smallmatrix} \text{L N30} \\ \text{R N45} \\ \text{N60} \end{smallmatrix}$			HCTU 16 $\begin{smallmatrix} \text{L N30} \\ \text{R N45} \\ \text{N60} \end{smallmatrix}$			HCTU 25 $\begin{smallmatrix} \text{L N30} \\ \text{R N45} \\ \text{N60} \end{smallmatrix}$		
旋轉角度/Swing angle	30°±3°	45°±3°	60°±3°	30°±3°	45°±3°	60°±3°	30°±3°	45°±3°	60°±3°
NG	170.3	172.3	174.4	192.3	194.6	196.9	232.5	235.4	238.3
NH	93.3	95.3	97.4	108.3	110.6	112.9	135.5	138.4	141.3
NJ	20.3	22.3	24.4	20.8	23.1	25.4	26.0	28.9	31.8

飛躍性地提高了耐久性、實現了高速夾緊

哥特式凸輪槽
Gothic arch cam groove

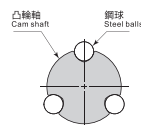
採用與鋼球大面積接觸的哥特式凸輪槽, 有效降低了接觸面壓力, 可連續、高頻率地高速旋轉, 耐久出色。

Superior durability, high frequency and high-speed swinging operation is achieved thanks to lowered and controlled seating surface pressure. This is made possible by adopting gothic arch cam grooves that use steel balls with larger surface area.



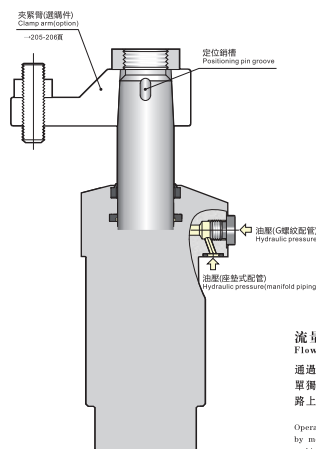
3點式鋼球支撐
3-point ball support

採用3點式鋼球支撐機構, 實現了平穩的高速旋轉。
Smooth, stable and high-speed swinging operation has been achieved by 3-point ball support mechanism.



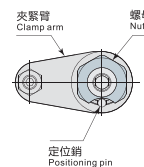
凸輪軸直徑大, 確保了凸輪槽之間有充分的距離, 因此剛性很高。由於凸輪軸的耐久性和耐衝擊性得到提高, 因此無需過載保護機構即可進行穩定而準確的高速旋轉。

Large diameter cam shaft and wide distance between the cam grooves offers higher rigidity. A overload protection mechanism is not needed due to improvement of durability and impact resistance, providing stable and secure high-speed swinging operation.



夾緊臂的定位及更換
Positioning and replacement of clamping arms
所有型號均採用定位銷槽。夾緊臂的定位(角度)簡單易行。

Positioning pin groove adopted with all models. Positioning (angle) of clamp arm can be performed easily.



流量控制閥
Flow control valve

通過安裝流量控制閥(選件), 可單獨調節動作速度, 輕鬆控制同一回路上的順序動作和同步動作。→223-224頁

Operating speeds can be adjusted individually by mounting a flow control valve (option), making sequential operation on same circuit or control of synchronization operation easier. 223-224page

