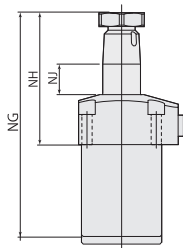
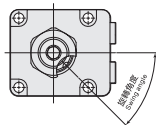


旋轉角度30°、45°、60°
Swing clamp Swing angle 30°, 45°, 60°

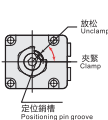
HCTU
01
02
04
06
10
16
25
L N30
R N45
N60



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



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



- 1.本圖表示旋轉方向(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 turns).
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 $\frac{L}{R}$ N30 N45 N60			HCTU 02 $\frac{L}{R}$ N30 N45 N60			HCTU 04 $\frac{L}{R}$ N30 N45 N60			HCTU 06 $\frac{L}{R}$ 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°
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 $\frac{L}{R}$ N30 N45 N60			HCTU 16 $\frac{L}{R}$ N30 N45 N60			HCTU 25 $\frac{L}{R}$ 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°
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

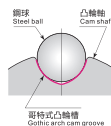
飛躍性地提高了耐久性、實現了高速夾緊

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.

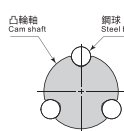


3點式鋼球支撐

3-point ball support

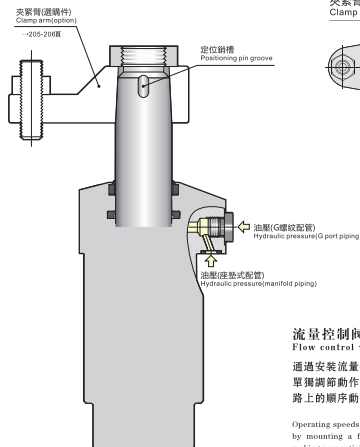
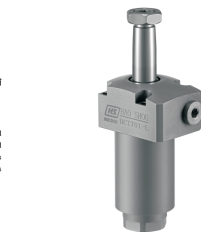
採用3點式鋼球支撐機構,實現了平穩的高速旋轉。

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。由於凸輪部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 swing operation.

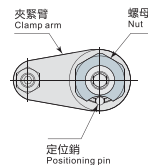


夾緊臂的定位及更換

Fastening 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.

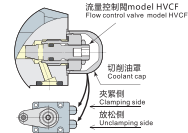


流量控制閥

Flow control valve

通過安裝流量控制閥(選配件),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。

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



凸輪槽視圖
Cam groove view

規格

型號/Model	HCTT01	HCTT02	HCTT04	HCTT06	HCTT10	HCTT13	HCTT25	
油缸能力(油壓為7 MPa時)/Cylinder force(hydraulic pressure 7 MPa)※4(kN)	2.0	2.4	3.4	5.1	8.1	13.3	20.5	
夾緊力 ※1 油壓為7 MPa時/Hydraulic pressure 7 MPa (kN)	1.7	2.0	2.9	4.3	6.8	11.0	16.8	
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)	3.4	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/90°swing 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)	0.15	0.2	0.6	1.0	1.8	3.6	5.4	
油缸容量(夾緊) /Cylinder capacity (clamp) (cm ³)	5.4	7.3	12.8	21.0	37.5	66.4	132.9	
回位彈簧力 Return spring force	放松/Unclamp (kN)	0.23	0.29	0.50	0.74	1.13	1.79	2.92
	夾緊行程中央位置/Clamp stroke central position (kN)	0.37	0.47	0.94	1.12	1.79	2.99	5.32
	夾緊完成時/Clamp end (kN)	0.42	0.52	1.05	1.22	1.94	3.25	5.85
推薦配管內徑※3/Recommended piping inner diameter※3 (mm)	ø6	ø6	ø6	ø6	ø8	ø8	ø10	
質量/Mass (kg)	0.37 ⁻³	1.0	1.5	2.0	3.3	5.5	10.4	

使用油壓範圍: 2.5 ~ 7 MPa 保證耐壓: 10.5 MPa 使用環境溫度: 0 ~ 70°C 使用液體: 普通礦物油基液壓油 (相當于ISO-VG32)

- ※1: 夾緊力因夾緊臂長度而異。
- ※2: 垂直安裝時, 能以彈簧力(放鬆時)抬升夾緊臂的極限值。
- ※3: 使用多個夾緊器以及油壓配管較長時, 請注意配管內徑。
- ※4: 在夾緊行程中央位置時的值。
- ※5: 僅HCTT01型的主體使用鋁合金材質, 滿足轻量化需求。

氟素切削液噴灑的環境下也可以使用。

Working pressure range: 2.5 ~ 7 MPa Proof pressure: 10.5 MPa Operating temperature: 0 ~ 70°C

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

- ※1: Clamping force varies depending on clamp arm length. Refer to performance table for details.
- ※2: This is the limit value for lifting arm with spring force (unclamp) when mounted vertically.
- ※3: Care must be taken when numerous clamps are used or when hydraulic piping is long.
- ※4: This is value for central position of clamp stroke.
- ※5: Body material is aluminum only for model HCTT01, to reduce weight. ※6: ISO R898 class 12.9

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

HCTT ①-②③ (例:HCTT06-RA)/(Example: HCTT06-RA)

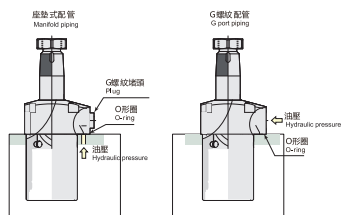
① 大小(參照規格表) Size(see table) ② 旋轉方向(夾緊時) Swing direction (when clamping)

③ 特殊規格記號 ※ Variation code

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

※: 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)請參照其他資料。
※: 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.

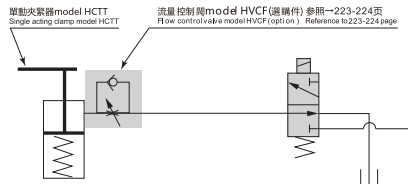
配管方法
Piping method



HCTT型可選擇座墊式配管和G端紋配管2種配管方法。
採用G端紋配管時, 請拆下G端紋堵頭。
(採用G端紋配管時不要卸下O形環, 利用安裝面進行密封。)

Two piping methods are available for model HCTT, manifold piping and G port piping. Whichever method is chosen for piping, O-ring must be used.

油壓回路圖(參考)
Hydraulic circuit diagram (reference)



流量控制閥請使用差油節流控制方式。
Use flow control valve for meter-in control.

型號表示

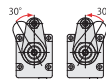
HCTT ①-②-③ (例: HCTT06-RN45) (Example: HCTT06-RN45)



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

HCTT ①- $\frac{L}{R}$ -N30

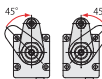
旋轉角度30° Swing angle 30°



R: 右轉 R: Clockwise
L: 左轉 L: Counterclockwise

HCTT ①- $\frac{L}{R}$ -N45

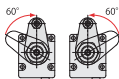
旋轉角度45° Swing angle 45°



R: 右轉 R: Clockwise
L: 左轉 L: Counterclockwise

HCTT ①- $\frac{L}{R}$ -N60

旋轉角度60° Swing angle 60°



R: 右轉 R: Clockwise
L: 左轉 L: Counterclockwise

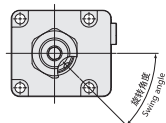
規格 Specifications

型號 Model	HCTT01- $\frac{L}{R}$ -N30 N30 N45 N60			HCTT02- $\frac{L}{R}$ -N30 N45 N60			HCTT04- $\frac{L}{R}$ -N30 N45 N60			HCTT06- $\frac{L}{R}$ -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 (夾緊) Cylinder capacity (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
回位彈簧力 (放鬆) Return spring force (undamp) (kN)	0.28	0.27	0.26	0.36	0.34	0.32	0.66	0.62	0.58	0.88	0.85	0.81

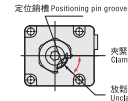
型號 Model	HCTT10- $\frac{L}{R}$ -N30 N45 N60			HCTT16- $\frac{L}{R}$ -N30 N45 N60			HCTT25- $\frac{L}{R}$ -N30 N45 N60		
旋轉角度 Swing angle	30°±3°	45°±3°	60°±3°	30°±3°	45°±3°	60°±3°	30°±3°	45°±3°	60°±3°
全行程 Full stroke (mm)	18.3	20.3	22.4	19.3	21.6	23.9	24.5	27.4	30.3
旋轉行程 Swing stroke (mm)	8.3	10.3	12.4	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 (夾緊) Cylinder capacity (clamp) (cm³)	25.9	28.8	31.7	44.8	50.2	55.6	90.4	101.0	111.6
回位彈簧力 (放鬆) Return spring force (undamp) (kN)	1.38	1.32	1.25	2.26	2.15	2.03	3.86	3.62	3.39

注: 本頁未記載的規格尺寸請參照規格→221-222頁。
This page does not record the size of the specifications, please refer to the specifications of the 221-222 page

HCTT ①- $\frac{L}{R}$ -N30
N45
N60



旋轉方向 Swing direction L (左轉) (counterclockwise)



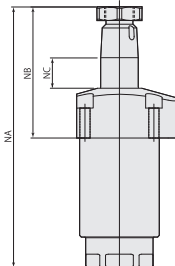
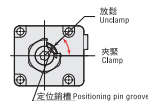
注 1. 本圖表示旋轉方向 L (左轉) 的放鬆狀態。
夾緊時定位銷槽朝向油壓接口側。
放鬆時的定位銷槽位置請參照上圖。

2. 本頁未記載的規格尺寸請參照規格→213頁。

1. The diagram indicates unclamped condition of swing direction L (stands for counterclockwise). Direction of positioning pin groove will be hydraulic port side at the time of clamping.

2. This page does not record the size of the specifications, please refer to the specifications of the 213 page

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



外形尺寸表 Dimension table

型號 Model	HCTT01- $\frac{L}{R}$ -N30 N45 N60			HCTT02- $\frac{L}{R}$ -N30 N45 N60			HCTT04- $\frac{L}{R}$ -N30 N45 N60			HCTT06- $\frac{L}{R}$ -N30 N45 N60		
旋轉角度 Swing angle (when clamping)	30°±3°	45°±3°	60°±3°	30°±3°	45°±3°	60°±3°	30°±3°	45°±3°	60°±3°	30°±3°	45°±3°	60°±3°
NA	124.8	125.7	126.7	131.0	132.3	133.5	155.3	156.8	158.4	171.8	173.4	175.1
NB	64.3	65.2	66.2	72.0	73.3	74.5	81.3	82.8	84.4	85.8	87.4	89.1
NC	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	HCTT10- $\frac{L}{R}$ -N30 N45 N60			HCTT16- $\frac{L}{R}$ -N30 N45 N60			HCTT25- $\frac{L}{R}$ -N30 N45 N60		
旋轉角度 Swing angle (when clamping)	30°±3°	45°±3°	60°±3°	30°±3°	45°±3°	60°±3°	30°±3°	45°±3°	60°±3°
NA	195.3	197.3	199.4	222.3	224.6	226.9	272.5	275.4	278.3
NB	93.3	95.3	97.4	108.3	110.6	112.9	135.5	138.4	141.3
NC	20.3	22.3	24.4	20.8	23.1	25.4	26.0	28.9	31.8