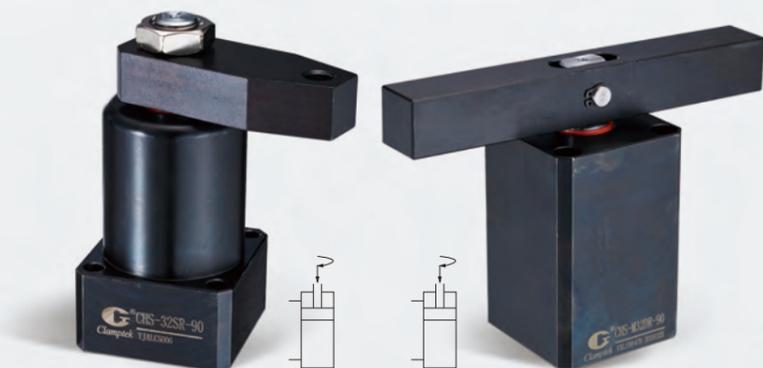


CHS/HSC

油壓轉角缸

CHS/HSC HYDRAULIC SWING CLAMP



產品特性

本產品適用於量產零件之專用機及MC治具，為提高生產效率的最佳幫手。主要功能為油壓缸作動時，活塞下壓行程中壓板會旋轉到設計的角度，再沿著直線繼續下壓直到壓板夾緊工件。
建議使用油壓轉角缸，請加裝流量控制閥，避免速度過快，以及轉角行程中，請勿夾持工件。缸體材質採用機械構造用碳素鋼，內壁特殊加工處理，表面光滑，使用壽命長。

最大操作壓力：70 kgf/cm²
最小操作壓力：15 kgf/cm²
作動方式：複動式

注意事項

夾緊及放鬆作動速度需適當放緩。
特殊壓臂長度及重量不得超過標準壓臂的1.5倍。
壓臂旋轉示意圖及安裝拆卸方式，請參見第4頁。

FEATURES

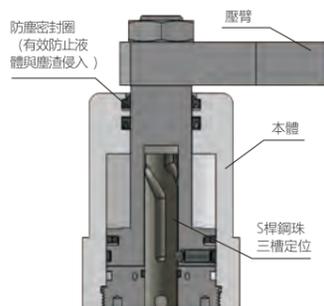
The product is ideal for mass production on a special purpose machine and jig in machining center. It will greatly upgrade the production efficiency. When the hydraulic clamp actuate, and the piston moves downward, the clamping arm will swing to a rated angle. Then it lowers until the workpiece is clamped securely.
To avoid too fast motion, a flow control valve is suggested to connect to the hydraulic swing clamp cylinder. Do not clamp the work piece while the clamp is swinging to avoid damaging the cylinder barrel and internal parts. The cylinder body is made from structural carbon steel. Inside surface is especially treated for maximum smoothness and long service life.

Max. operating pressure: 70 kgf/cm²
Min. operating pressure: 15 kgf/cm²
Double acting

NOTE

The acting speed of clamping-unclamping should be slowed down.
For customized clamp arm, please don't exceed 1.5 times of the original length and weight.
The methods to mount & remove and the rotation diagram of the clamp arm, please refer to page 4.

剖面圖 Sectional view



訂購標示法 ORDERING INDICATION

示例：CHS-MF25SR-90-E

CHS	系列 Series	CHS/HSC			
		空白：配管式 MF：油路板附調速 M：油路板型 FA：法蘭型	Line type Manifold with flow control Manifold type Flange type	TB：全牙型 FAM：法蘭型油路板 FAMT：法蘭型油路板附調速	Threaded body Flange with manifold Flange with flow control
MF	類型 Type				
25	油缸內徑 Hydraulic cylinder inside diameter	Φ25, Φ32, Φ40, Φ50, Φ63			
S	壓板型式 Clamping arm type	S:單邊壓板 D:雙邊壓板	S: Single side arm D: Double side arm		
R	轉角方向 Swing direction	R: 順時針右轉 R: Turn right	L: 逆時針左轉 L: Turn left	N: 0°不旋轉 N: 0° No swing	
90	轉角角度 Swing angle	標準角度 Standard angle 90° (±2°)		訂做角度 Order angle 0°, 45° (±2°), 60° (±2°)	
E	行程加長 E	行程加長型	Stroke extension (具體加長型見後面規格尺寸表)		

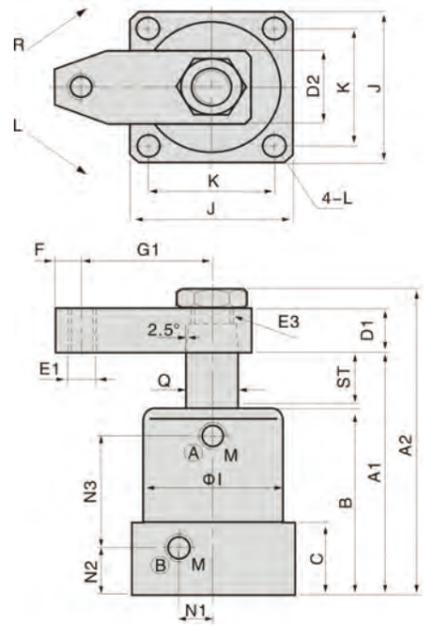
規格參數表 SPECIFICATION

型號	理論夾持力 (70 kgf/cm ²)	轉角行程	標準 垂直行程	加長 垂直行程	標準總行程	加長總行程	標準拉入 容積	加長行程 拉入容積	標準行程 推出容積	加長行程 推出容積	拉入受壓 面積	推出受壓 面積	使用溫度 範圍
MODEL	CLAMPING FORCE AT 70 kgf/cm ² (kgf)	SWING STROKE (mm)	STANDARD CLAMPING STROKE (mm)	EXTENDED CLAMPING STROKE (mm)	STANDARD TOTAL STROKE (mm)	EXTENDED TOTAL STROKE (mm)	OIL STANDARD CAPACITY CLAMP (cm ³)	OIL EXTENDED CAPACITY CLAMP (cm ³)	OIL STANDARD CAPACITY UNCLAMP (cm ³)	OIL EXTENDED CAPACITY UNCLAMP (cm ³)	EFF.PISTON AREA CLAMP (cm ²)	EFF.PISTON AREA UNCLAMP (cm ²)	RANGE OF TEMPERATURE (°C)
CHS/HSC-25	166	CHS 11.5 HSC 9	13 13	-	24.5 22	-	5.81 5.21	-	12.03 10.8	-	2.37	4.91	-10~+70°C
CHS/HSC-32	343	CHS 14.5 HSC 11	15 15	30	29.5 26	44.5	14.45 12.74	21.81 20.09	23.72 20.90	37.38 32.96	4.9	8.04	-10~+70°C
CHS/HSC-40	603	CHS 14.5 HSC 11	15 15	30	29.5 26	44.5	25.43 22.41	38.36 35.34	37.05 32.66	55.89 51.50	8.62	12.56	-10~+70°C
CHS/HSC-50	943	CHS 16 HSC 13	17 17	34	33 30	50	44.45 40.41	67.35 63.31	64.78 58.89	98.15 92.26	13.47	19.63	-10~+70°C
CHS/HSC-63	1488	CHS 16 HSC 13	17 17	34	33 30	50	70.16 63.78	106.3 99.92	102.83 93.48	155.8 146.45	21.26	31.16	-10~+70°C

使用流體：相當於 ISO 黏度等級的 ISO-VG-32 一般液壓油
Usable fluid: General Hydraulic Oil Equivalent to ISO-VG-32

配管式 LINE TYPE-S

Single side swing clamp

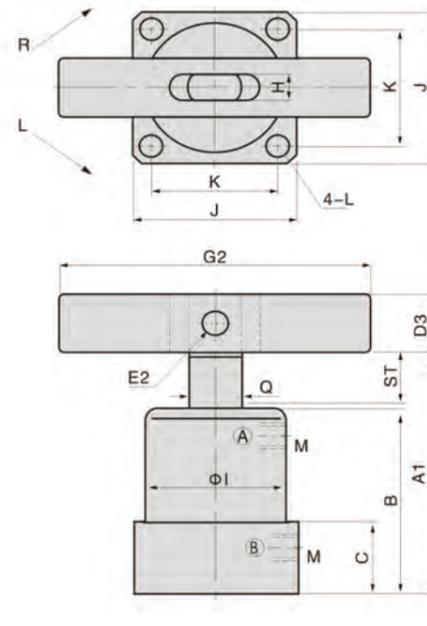


- Ⓐ 夾持油孔 Clamping port
- Ⓑ 放鬆油孔 Unclamping port

配管式 LINE TYPE-D

Double side swing clamp

註：下圖為轉角90°鬆開狀態

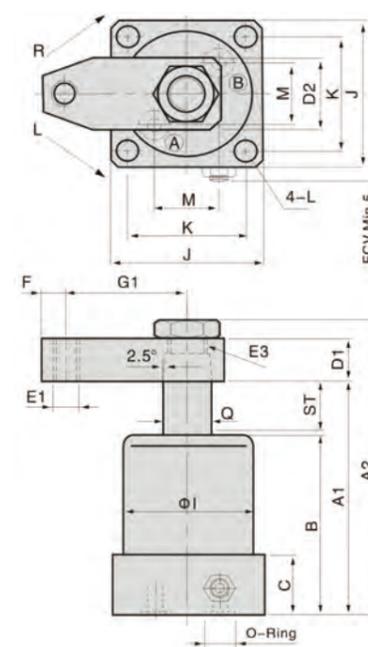


Unit:mm

MODEL ITEM	CHS/HSC-25	CHS/HSC-32	CHS/HSC-40	CHS/HSC-50	CHS/HSC-63	CHS-80
ST:Swing /Clamping	CHS 24.5:11.5/13 HSC 22:9/13	29.5:14.5/15 41:11/30	44.5:14.5/30 26:11/15	29.5:14.5/15 41:11/30	44.5:14.5/30 30:13/17	33:16/17 47:13/34
A1 Undamping	CHS 104 HSC 101	118 115	148 145	123 120	153 150	137 168
A2 Undamping	CHS 127 HSC 124	144 140	175 170	150 148	180 178	167 200
B	76	85	100	90	105	117
C	27	30	30	34	34	34
D1	16	18	18	20	23	28
D2	27	31	31	37	48	52
D3	□19	□22	□22	□25	□32	□34
E1	M10	M10	M10	M12	M16	M16
E2	φ8	φ8	φ10	φ12	φ15	φ16
E3	M14×1.5	M16×1.5	M18×1.5	M20×1.5	M24×2	M30×2
F	10	10	10	12	15	20
G1	50	55	60	65	75	85
G2	140	160	160	180	200	220
H	9	10	10	12	15	16
ΦI	φ46	φ50	φ54	φ66	φ80	φ100
J	52	56	63	72	88	110
K	40	44	48	57	70	87
L	φ6.8	φ6.8	φ9	φ9	φ11	φ13
M	PT1/8	PT1/8	PT1/8	PT1/4	PT1/4	PT1/4
N1	8	10	12	15	17	17
N2	17	19	19	21.5	22	25
N3	46	52	67	57	72	63.5
Q	φ18	φ20	φ22.4	φ28	φ35.5	φ40

油路板附調速 MF-S

Single side swing clamp

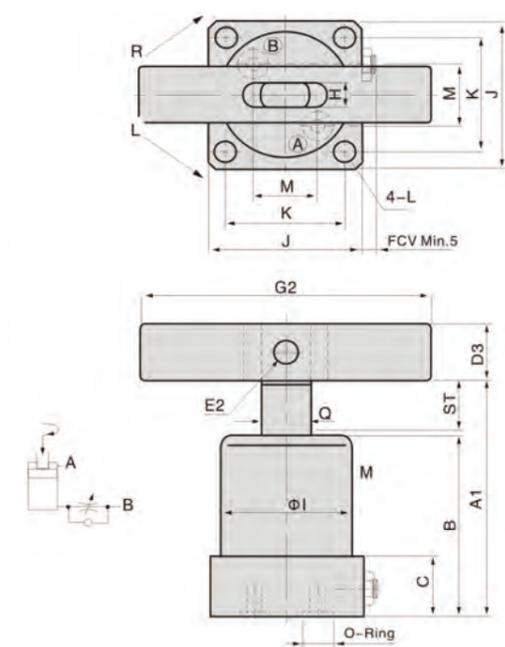


- Ⓐ 夾持油孔 Clamping port
- Ⓑ 放鬆油孔 Unclamping port

油路板附調速 MF-D

Double side swing clamp

註：下圖為轉角90°鬆開狀態

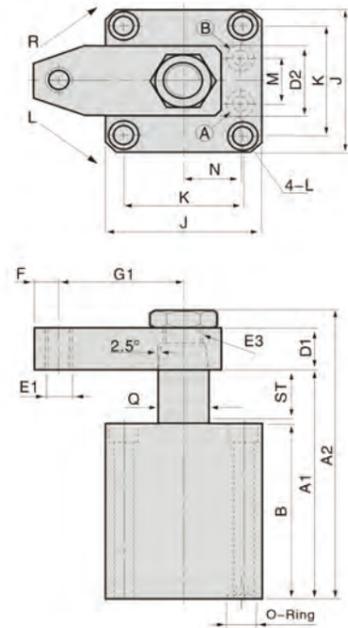


Unit:mm

MODEL ITEM	CHS/HSC-MF25	CHS/HSC-MF32	CHS/HSC-MF40	CHS/HSC-MF50	CHS/HSC-MF63
ST:Swing /Clamping	CHS 24.5:11.5/13 HSC 22:9/13	29.5:14.5/15 41:11/30	44.5:14.5/30 26:11/15	29.5:14.5/15 41:11/30	44.5:14.5/30 30:13/17
A1 Undamping	CHS 104 HSC 101	118 115	148 145	123 120	153 150
A2 Undamping	CHS 127 HSC 124	144 140	175 170	150 148	180 178
B	76	85	100	90	105
C	22	25	25	30	30
D1	16	18	18	20	23
D2	27	31	31	37	48
D3	□19	□22	□22	□25	□32
E1	M10	M10	M10	M12	M16
E2	φ8	φ8	φ10	φ12	φ15
E3	M14×1.5	M16×1.5	M18×1.5	M20×1.5	M24×2
F	10	10	10	12	15
G1	50	55	60	65	75
G2	140	160	160	180	200
H	9	10	10	12	15
ΦI	φ46	φ50	φ54	φ66	φ80
J	55	57	63	72	88
K	42	44	48	57	70
L	φ6.8	φ6.8	φ9	φ9	φ11
M	19	21	23	28	32
O-Ring	P7	P7	P9	P9	P9
Q	φ18	φ20	φ22.4	φ28	φ35.5

油路板型 M-S

Single side swing clamp

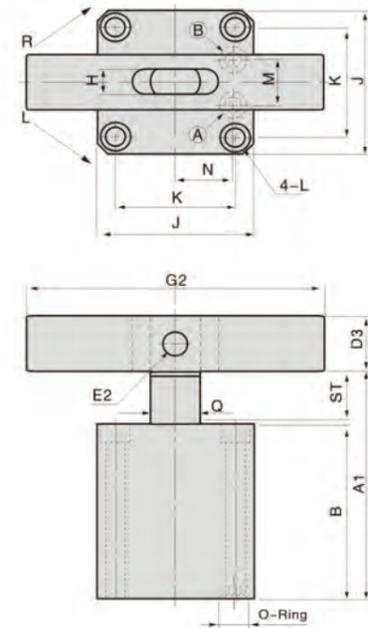


Ⓐ 夾持油孔 Clamping port
Ⓑ 放鬆油孔 Unclamping port

油路板型 M-D

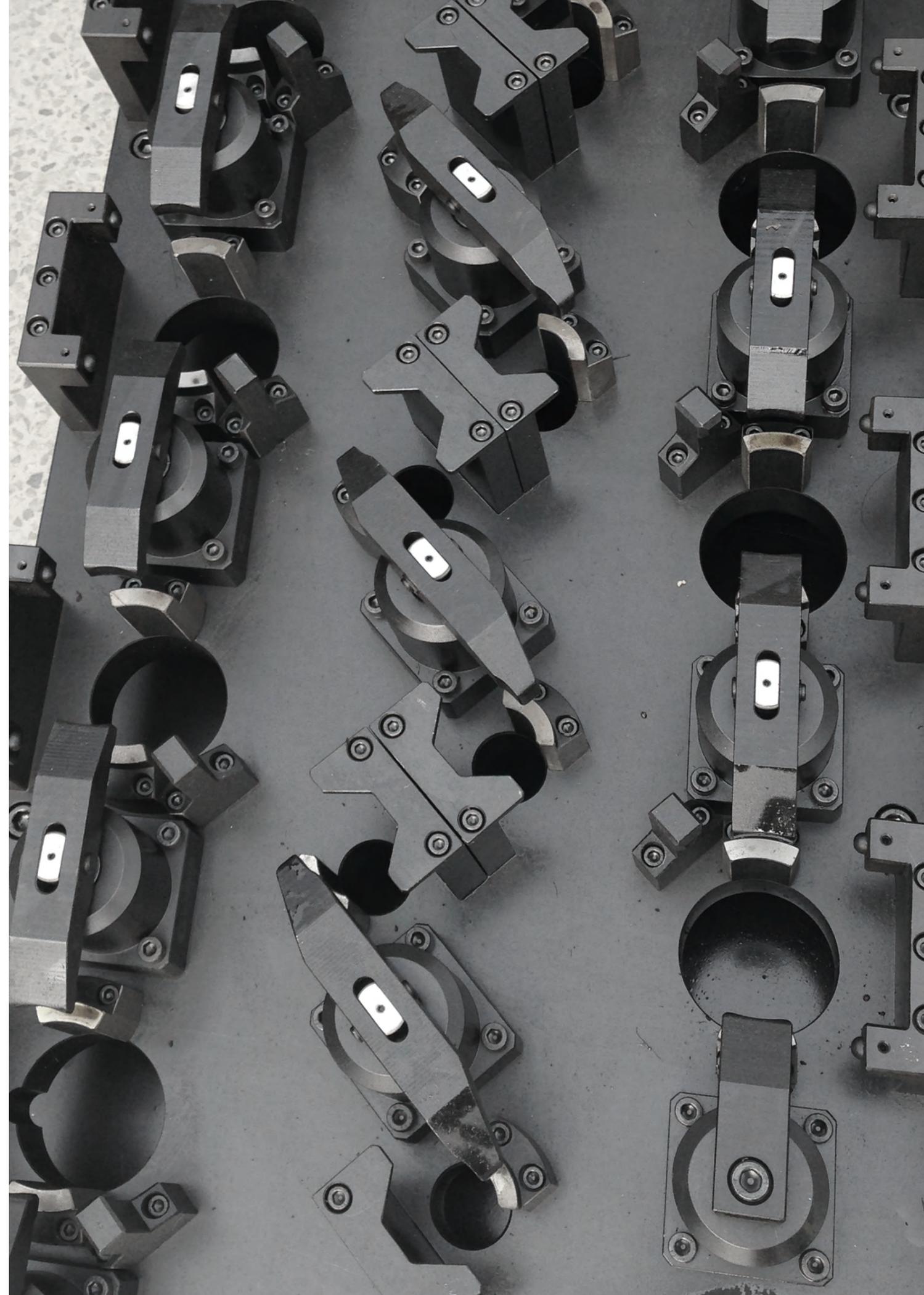
Double side swing clamp

註：下圖為轉角90°鬆開狀態



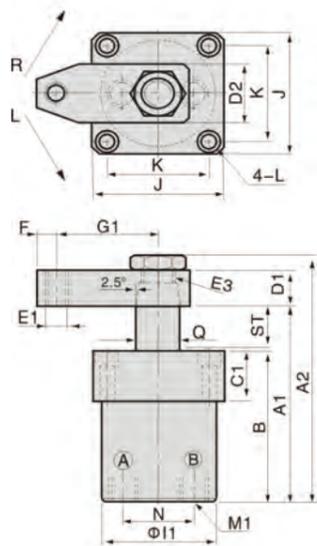
Unit:mm

MODEL ITEM	CHS/HSC-M25	CHS/HSC-M32	CHS/HSC-M40	CHS/HSC-M50	CHS-M63
ST:Swing CHS /Clamping HSC	24.5:11.5/13 22.9/13	29.5:14.5/15 26:11/15	29.5:14.5/15 26:11/15	33:16/17 30:13/17	33:16/17
A1 CHS Unclamping HSC	104 101	118 115	123 120	137 134	142 -
A2 CHS Unclamping HSC	127 124	144 140	150 148	167 166	177 -
B	76	85	90	100	105
D1	16	18	18	20	23
D2	27	31	31	37	48
D3	□19	□22	□22	□25	□32
E1	M10	M10	M10	M12	M16
E2	φ8	φ8	φ10	φ12	φ15
E3	M14×1.5	M16×1.5	M18×1.5	M20×1.5	M24×2
F	10	10	10	12	15
G1	50	55	60	65	75
G2	140	160	160	180	200
H	9	10	10	12	15
J	55	57	69	75	92
K	42	44	52	58	72
L	φ6.8-φ10.5 ×6.5D	φ6.8-φ10.5 ×6.5D	φ9-φ13.5 ×9D	φ9-φ13.5 ×9D	φ11-φ17 ×11D
M	18	22	26	32	40
N	20	22	26	30	37
O-Ring	P7	P7	P8	P8	P9
Q	φ18	φ20	φ22.4	φ28	φ35.5



法蘭型 FA-S

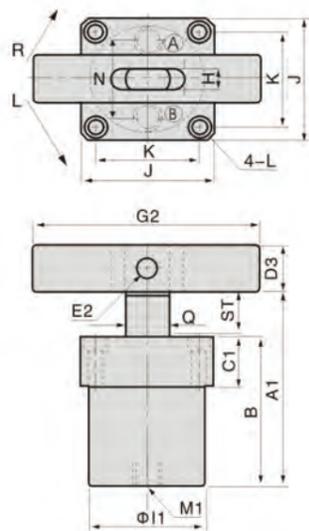
Single side swing clamp



法蘭型 FA-D

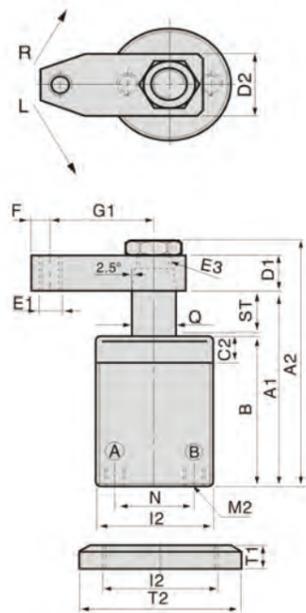
Double side swing clamp

註：下圖為轉角90°鬆開狀態



全牙型 TB-S

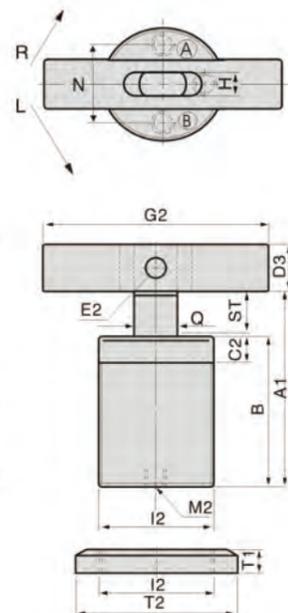
Single side swing clamp



全牙型 TB-D

Double side swing clamp

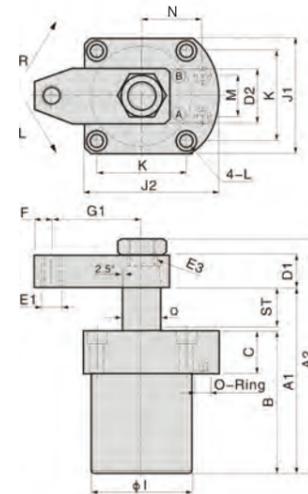
註：下圖為轉角90°鬆開狀態



- Ⓐ 夾持油孔 Clamping port
- Ⓑ 放鬆油孔 Unclamping port

法蘭型油路板 FAM-S

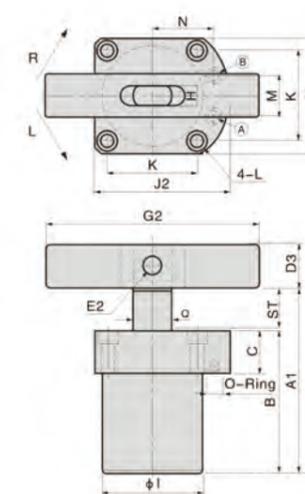
Single side swing clamp



法蘭型油路板 FAM-D

Double side swing clamp

註：下圖為轉角90°鬆開狀態



- Ⓐ 夾持油孔 Clamping port
- Ⓑ 放鬆油孔 Unclamping port

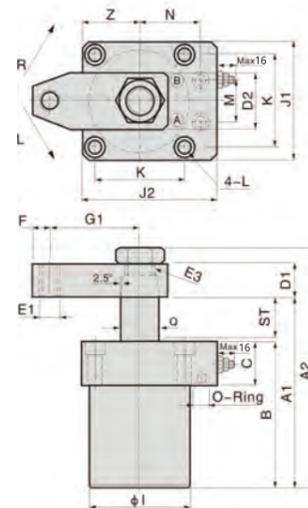
MODEL ITEM	CHS/HSC -FAM25	CHS/HSC -FAM32	CHS/HSC -FAM40	CHS/HSC -FAM50	CHS/HSC -FAM63
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ST:Swing /Clamping	CHS 24.5:11.5/13	CHS/HSC 29.5:14.5/15	CHS/HSC 29.5:14.5/15	CHS/HSC 33:16/17	CHS/HSC 33:16/17
A1 Unclamping	CHS 104	118	123	137	142
HSC	101	115	120	134	139
A2 Unclamping	CHS 127	144	150	167	177
HSC	124	140	148	165	175
B	76	85	90	100	105
C	22	25	25	30	30
D1	16	18	18	20	23
D2	27	31	31	37	48
D3	□19	□22	□22	□25	□32
E1	M10	M10	M10	M12	M16
E2	φ8	φ8	φ10	φ12	φ15
E3	M14×1.5	M16×1.5	M18×1.5	M20×1.5	M24×2
F	10	10	10	12	15
G1	50	55	60	65	75
G2	140	160	160	180	200
H	9	10	10	12	15
ΦI	φ45	φ50	φ58	φ68	φ81
J1	55	57	69	75	90
J2	64	65.5	79	87	104.5
K	42	44	52	58	70
L	φ6.8-φ10.5×6.5D	φ6.8-φ10.5×6.5D	φ9-φ13.5×9D	φ9-φ13.5×9D	φ11-φ17×11D
M	20	22	26	30	32
N	28	29	34.5	39	46
O-Ring	P6	P6	P9	P9	P9
Q	φ18	φ20	φ22.4	φ28	φ35.5

MODEL ITEM	CHS/HSC -FA25	CHS/HSC -FA32	CHS/HSC -FA40	CHS/HSC -FA50	CHS/HSC -FA63	CHS/HSC -TB25	CHS/HSC -TB32	CHS/HSC -TB40	CHS/HSC -TB50
ST:Swing /Clamping	CHS 24.5:11.5/13	CHS/HSC 29.5:14.5/15	CHS/HSC 29.5:14.5/15	CHS/HSC 33:16/17	CHS/HSC 33:16/17	CHS/HSC 24.5:11.5/13	CHS/HSC 29.5:14.5/15	CHS/HSC 29.5:14.5/15	CHS/HSC 33:16/17
A1 Unclamping	CHS 104	118	123	137	142	104	118	123	137
HSC	101	115	120	134	139	101	115	120	134
A2 Unclamping	CHS 127	144	150	167	177	127	144	150	167
HSC	124	140	148	166	175	124	140	148	166
B	76	85	90	100	105	76	85	90	100
C1	22	25	25	30	30	-	-	-	-
C2	-	-	-	-	-	12	12	15	15
D1	16	18	18	20	23	16	18	18	20
D2	27	31	31	37	48	27	31	31	37
D3	□19	□22	□22	□25	□32	□19	□22	□22	□25
E1	M10	M10	M10	M12	M16	M10	M10	M10	M12
E2	φ8	φ8	φ10	φ12	φ15	φ8	φ8	φ10	φ12
E3	M14×1.5	M16×1.5	M18×1.5	M20×1.5	M24×2	M14×1.5	M16×1.5	M18×1.5	M20×1.5
F	10	10	10	12	15	10	10	10	12
G1	50	55	60	65	75	50	55	60	65
G2	140	160	160	180	200	140	160	160	180
H	9	10	10	12	15	9	10	10	12
ΦI	φ45	φ50	φ58	φ68	φ81	-	-	-	-
I2	-	-	-	-	-	M45×1.5	M50×1.5	M55×1.5	M65×1.5
J	53	57	69	75	90	-	-	-	-
K	40	44	52	58	70	-	-	-	-
L	φ6.8-φ10.5×6.5D	φ6.8-φ10.5×6.5D	φ9-φ13.5×9D	φ9-φ13.5×9D	φ11-φ17×11D	-	-	-	-
M1	PT1/4	PT1/4	PT1/4	PT1/4	PT1/4	-	-	-	-
M2	-	-	-	-	-	PT1/8	PT1/8	PT1/8	PT1/8
N	28	32	40	50	63	28	32	40	50
T1×2PCS	-	-	-	-	-	10	11	11	12
T2	-	-	-	-	-	φ65	φ70	φ70	φ85
Q	φ18	φ20	φ22.4	φ28	φ35.5	φ18	φ20	φ22.4	φ28

法蘭型油路板附調速 FAMT-S

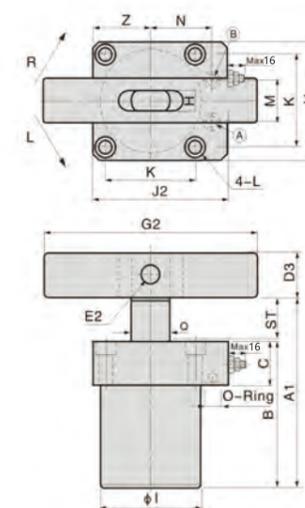
Single side swing clamp



法蘭型油路板附調速 FAMT-D

Double side swing clamp

註：下圖為轉角90°鬆開狀態



- Ⓐ 夾持油孔 Clamping port
- Ⓑ 放鬆油孔 Unclamping port

MODEL ITEM	CHS -FAMT25	CHS -FAMT32	CHS -FAMT40	CHS -FAMT50	CHS -FAMT63
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ST:Swing /Clamping	CHS 24.5:11.5/13	CHS/HSC 29.5:14.5/15	CHS/HSC 29.5:14.5/15	CHS/HSC 33:16/17	CHS/HSC 33:16/17
A1 Unclamping	CHS 104	118	123	137	142
A2 Unclamping	CHS 127	144	150	167	177
B	76	85	90	100	105
C	22	25	25	30	30
D1	16	18	18	20	23
D2	27	31	31	37	48
D3	□19	□22	□22	□25	□32
E1	M10	M10	M10	M12	M16
E2	φ8	φ8	φ10	φ12	φ15
E3	M14×1.5	M16×1.5	M18×1.5	M20×1.5	M24×2
F	10	10	10	12	15
G1	50	55	60	65	75
G2	140	160	160	180	200
H	9	10	10	12	15
ΦI	φ45	φ50	φ58	φ68	φ81
J1	55	57	69	75	90
J2	64	65.5	77	87	104.5
K	42	44	52	58	70
L	φ6.8-φ10.5×6.5D	φ6.8-φ10.5×6.5D	φ9-φ13.5×9D	φ9-φ13.5×9D	φ11-φ17×11D
M	20	22	26	30	32
N	28	29	34.5	39	46
O-Ring	P6	P6	P6	P9	P9
Q	φ18	φ20	φ22.4	φ28	φ35.5
Z	27.5	28.5	34.5	37.5	45