



# CNC切削中心機零配件

## Accessories for Machining Centers



# CNC切削中心機零配件

## ACCESSORIES FOR MACHINING CENTERS



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Rotating Coolant Unions

拉刀爪  
Spindle Clamping Units

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Pallet Clamping Systems

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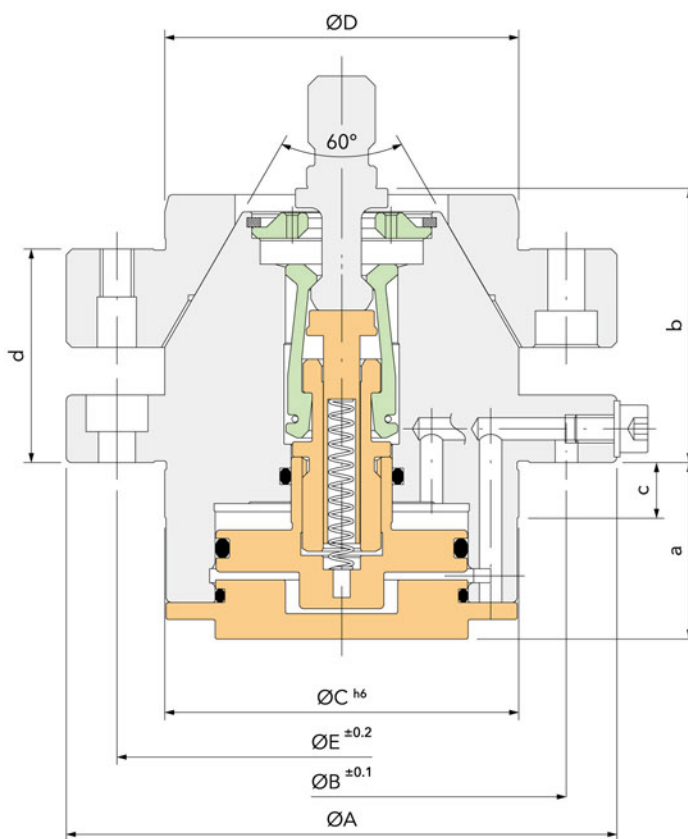
● 中心出水壓力計  
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# 定位座

## Pallet Clamping Systems



規格 Part No.	A	B	C	D	E	a	b	c	d
500 型定位座 Type 500 Pallet Clamping Systems	98	80	63	63	80	31.5	49	10	38
800 型定位座 Type 800 Pallet Clamping Systems	140	118	96	130	118	58	71	15	59.5

訂購編號 Order No.	規格 Part No.
SPH500-M	500 型定位座 (公) Type 500 Pallet Clamping Systems (M)
SPH500-F	500 型定位座 (母) Type 500 Pallet Clamping Systems (F)

訂購編號 Order No.	規格 Part No.
SPH800-M	800 型定位座 (公) Type 800 Pallet Clamping Systems (M)
SPH800-F	500 型定位座 (母) Type 800 Pallet Clamping Systems (F)

# 拉力計

## Grip Pull Force Gauges



### 油壓機械式結構，高穩定性

### Oil Pressure Mechanical Structure, High Stability.

- 確認拉力計上的拉桿螺栓規格是否與主軸夾爪的規格相對應。
  - 量測環境溫度須控制在室溫  $25\pm 1^\circ\text{C}$  內。
  - 將拉力計及主軸前端錐度部分擦拭乾淨後，夾持拉力計即可。
- Check the specification of pull studs on the pull force gauges should correspond the specification of pull stud clamping unit.
  - Measuring environment's temperature should be controlled within  $25\pm 1^\circ\text{C}$ .
  - Clean the pull force gauges and front-end taper parts and then clamp the pull force gauge.
- 為確保量測數值的正確性，拉力計須在有預拉的情況下使用 (如左下方錶圖)。
  - ISO 拉力計使用前：請將拉桿螺栓鎖緊，完成預壓 (鎖緊即可)。
  - HSK 拉力計使用前：請將六角扳手置入錐度內底部六角孔，順時針鎖緊至指針外圈一格 (如左下方錶圖) 即可。
  - 實測拉力：以指針所指外圈之數值  $\times 10$ ，即為實測拉力 (kg-f)。
- To ensure the accuracy of the pull force measurement, gauge has to be used in the pre-pull condition (as shown in the left below picture).
  - Before using the ISO force gauge, please lock the pull stud to be at pre-pull condition (not lock too tight).
  - Before using the HSK force gauge, please put the hexagon wrench into the hexagonal hole at the bottom of the taper, then lock clockwise till the indicator moved one scale in the outer ring (as shown in the left below picture).
  - The finger indicated the value of the outer ring  $\times 10$ ; the value is pull force measured.

規格 Part No.	量測範圍 Measuring Range
ISO20	0~40 kg/cm <sup>2</sup>
ISO25	0~40 kg/cm <sup>2</sup>
ISO30	0~60 kg/cm <sup>2</sup>
ISO40	0~160 kg/cm <sup>2</sup>
ISO50	0~350 kg/cm <sup>2</sup>
HSK32	0~160 kg/cm <sup>2</sup>
HSK40	0~160 kg/cm <sup>2</sup>
HSK50	0~350 kg/cm <sup>2</sup>
HSK63	0~350 kg/cm <sup>2</sup>
HSK100	0~600 kg/cm <sup>2</sup>

# 冷卻液迴轉接頭

## Rotating Coolant Unions

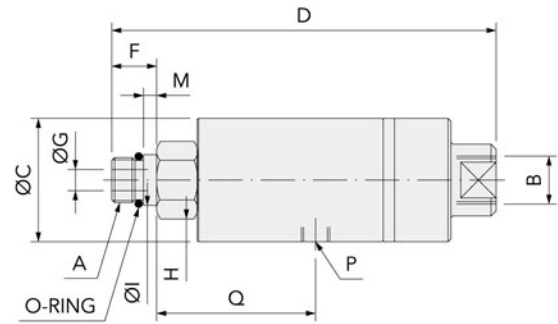


Fig. 1

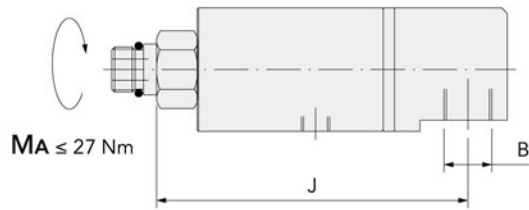


Fig. 2

• MA : 最大鎖緊扭矩。 • MA: Max. Tightening Torque

### ● 操作數據

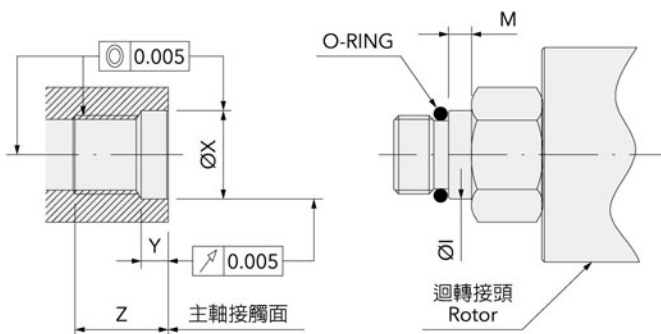
#### Operating Datum

最高壓力 Max. Pressure	最低作動壓力 Min. Closes Seal Pressure	最高轉數 Max. rpm	最大流量 Max. Flow Rate	最高工作溫度 Max. Working Temp.	切削液最大顆粒度 Coolant Purity
50 bar	4 bar	15,000 rpm	28 L/min	70 °C	< 25 μ

訂購編號 Order No.	圖號 Fig.	A	B	C	D	F	G	H	I	J	M	P	Q
G200711M16180	1	M16*1.5PLH	3/8" NPT	43.7	136	16	7.5	24	18	-	5	1/8" NPT	57
G200711M16090	2				140					110			

### ● 建議主軸端之加工精度

#### Preparation of the Spindle



主軸端 Spindle End			迴轉接頭端 Rotor Pilot	
X	Y	Z	I	M
18.01 18.00	7	17	17.985 17.975	5

- 主軸端裝配內孔與中心線同心度 < 0.005 mm T.I.R. °
- 主軸端面與中心線垂直度 < 0.01 mm °
- 與主軸接合最大鎖緊扭矩：27 Nm °
- Pilot bore dia. to be concentric to the centerline within 0.005 mm T.I.R.
- Spindle face to be perpendicular to the centerline within 0.01 mm T.I.R.
- Max. Tightening Torque: 27 Nm.

# 冷卻液迴轉接頭

## Rotating Coolant Unions

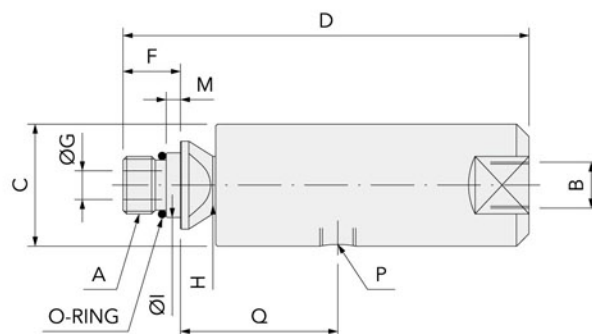


Fig. 1

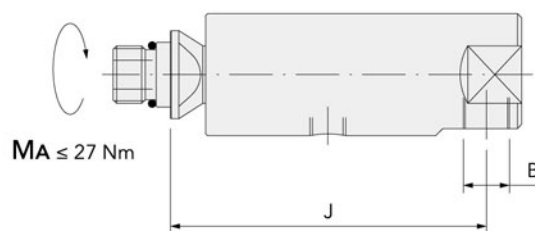


Fig. 2

• MA : 最大鎖緊扭矩。 • MA: Max. Tightening Torque

### ● 操作數據

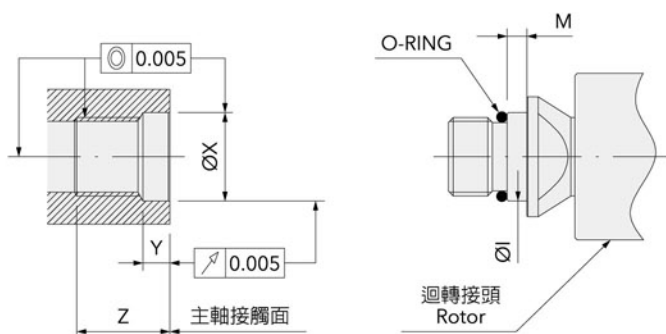
#### Operating Datum

最高壓力 Max. Pressure	最高轉數 Max. rpm	最大流量 Max. Flow Rate	最高工作溫度 Max. Working Temp.	切削液最大顆粒度 Coolant Purity
50 bar	20,000 rpm	28 L/min	70 °C	< 25 μ

訂購編號 Order No.	圖號 Fig.	A	B	C	D	F	G	H	I	J	M	P	Q
G2008RUL0180	1	M16*1.5PLH	1/4" NPT	34.0	114	16	8.0	17	18	-	4	1/8" NPT	44
G2008RUL0090	2									88			

### ● 建議主軸端之加工精度

#### Preparation of the Spindle

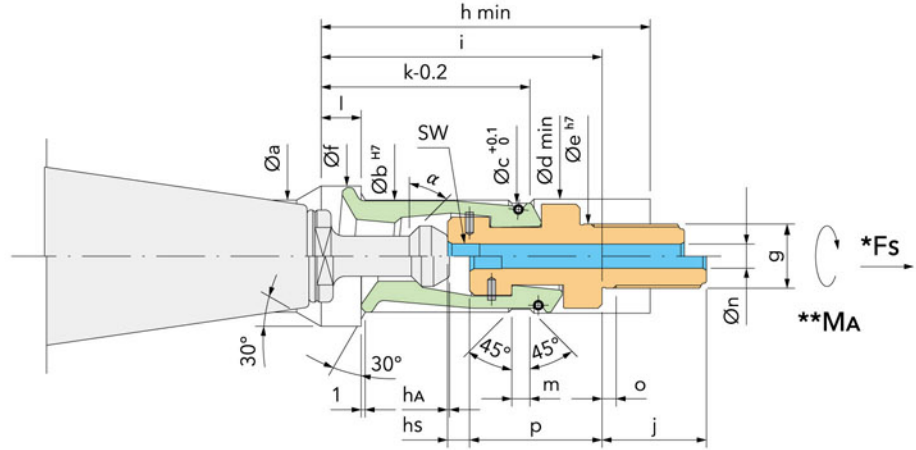


主軸端 Spindle End			迴轉接頭端 Rotor Pilot	
X	Y	Z	I	M
18.01 18.00	7	17	17.985 17.975	4

- 主軸端裝配內孔與中心線同心度 < 0.005 mm T.I.R. ◦
- 主軸端面與中心線垂直度 < 0.01 mm ◦
- 與主軸接合最大鎖緊扭矩：27 Nm ◦
- Pilot bore dia. to be concentric to the centerline within 0.005 mm T.I.R.
- Spindle face to be perpendicular to the centerline within 0.01 mm T.I.R.
- Max. Tightening Torque: 27 Nm.

# BT主軸夾爪外牙式

## BT Pull Stud Type Clamping Units



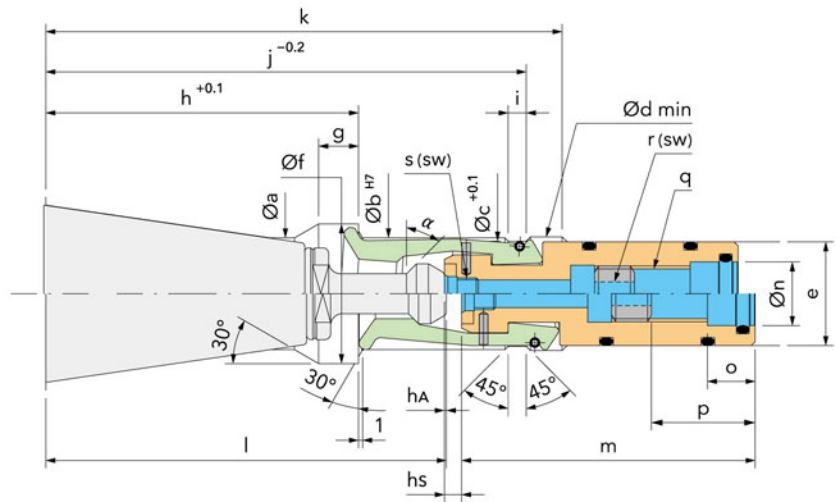
- 此型夾爪具有保持定位功能。
- 爪片經特殊處理，耐磨耗。
- Fs：最大拉刀力。
- MA：最大鎖緊扭矩。
- The grippers have the held position function.
- Special treated segments can prevent abrasion.
- Fs: Max. Clamping Force
- MA: Max. Tightening Torque

訂購編號 Order No.	規格 Part No.	$\alpha$ $\pm 15'$	a	b H7	c	d	e h7	f	g	h min	i	j	k	l	m	n	o	P	hs	hA	Fs Max. kN	MA Nm	SW mm
9106H-41	BT30-45° H	45°	19.6	19	17.8	20.2	10	24	M10*1.5P	50	47	20	37	7.5	3.5	3	3	20.5	4	0.5	10	30	5
9106H-41B (軸心加長1.5)	BT30-45° B	45°	19.6	19	17.8	20.2	10	24	M10*1.5P	50	47	20	37	7.5	3.5	3	3	22.0	4	2	10	30	5
9106H-41D (軸心加長2.3)	BT30-45° D	45°	19.6	19	17.8	20.2	10	24	M10*1.5P	50	47	20	37	7.5	3.5	3	3	22.8	4	2.8	10	30	5
9106H-42	BT30-60° H	60°	19.6	19	17.8	20.2	10	24	M10*1.5P	50	47	20	37	7.5	3.5	3	3	20.5	4	0.5	10	30	5
9106H-42B (軸心加長1.5)	BT30-60° B	60°	19.6	19	17.8	20.2	10	24	M10*1.5P	50	47	20	37	7.5	3.5	3	3	22	4	2	10	30	5
9106H-42D (軸心加長2.3)	BT30-60° D	60°	19.6	19	17.8	20.2	10	24	M10*1.5P	50	47	20	37	7.5	3.5	3	3	22.8	4	2.8	10	30	5
9106H-03	BT40-45° H	45°	28	28	26.4	28.5	16	35	M16*1.5P	82	70	26	52	10	4.5	6	3.5	33	5.5	0.5	18	65	6
9106H-03A	BT40-45° A	45°	28	28	26.4	28.5	12	35	M12*1.0P	82	70	26	52	10	4.5	4	3.5	33	5.5	0.5	18	65	6
9106H-06	BT40-60° H	60°	28	28	26.4	28.5	16	35	M16*1.5P	82	70	26	52	10	4.5	6	3.5	33	5.5	0.5	18	65	6
9106H-06B (軸心加長1.2)	BT40-60° B	60°	28	28	26.4	28.5	16	35	M16*1.5P	82	70	26	52	10	4.5	6	3.5	34.2	4.3	0.5	18	65	6
9106H-08	BT40-90° H	90°	28	28	26.4	28.5	16	35	M16*1.5P	82	70	26	52	10	4.5	6	3.5	33	5.5	0.5	18	65	6
9106H-21	BT50-45° H	45°	43	43	40.4	43.5	22	54	M22*1.5P	98	90	35	69	16	5	9.5	4.5	37	8.5	0.5	35	160	10
9106H-25	BT50-60° H	60°	43	43	40.4	43.5	22	54	M22*1.5P	98	90	35	69	16	5	9.5	4.5	37	8.5	0.5	35	160	10
9106H-26	BT50-90° H	90°	43	43	40.4	43.5	22	54	M22*1.5P	98	90	35	69	16	5	9.5	4.5	37	8.5	0.5	35	160	10
9106H-61	BT60-45° H	45°	66	62	58.6	62.5	30	77	M30*1.5P	130	125	40	96	23	6.5	16	5	49.5	11.5	1	70	450	17
9106H-66	BT60-60° H	60°	66	62	58.6	62.5	30	77	M30*1.5P	130	125	40	96	23	6.5	16	5	49.5	11.5	1	70	450	17



# BT主軸夾爪內牙式

## BT Pull Stud Type Clamping Units

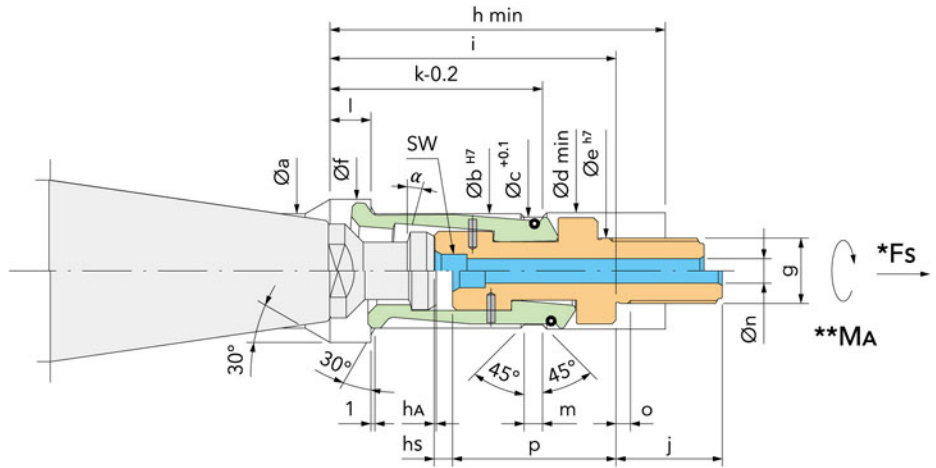


- 此型夾爪具有保持定位功能。
- 爪片經特殊處理，耐磨耗。
- The grippers have the held position function.
- Special treated segments can prevent abrasion.

訂購編號 Order No.	規格 Part No.	$\alpha$ $\pm 15'$	a	b H7	c	d min	e	f	g	h	i	j	k	l	m	n	o	P	q	r (sw)	s (sw)	hs	hA
9106H-41C	BT30-45° C	45°	19.6	19	17.8	19.5	17.5	24	7.5	55.9	3.5	85.65	97.5	71.4	57.5	12	10	23	M10*1.25P	4/5	5	4	0.5
9106H-41CA (軸心加長0.75)	BT30-45° CA	45°	19.6	19	17.8	19.5	17.5	24	7.5	55.9	3.5	85.65	97.5	71.4	58.25	12	10	23	M10*1.25P	4/5	5	3.55	0.8
9106H-41CB (軸心加長1.5)	BT30-45° CB	45°	19.6	19	17.8	19.5	17.5	24	7.5	55.9	3.5	85.65	97.5	71.4	59	12	10	23	M10*1.25P	4/5	5	3.5	1.5
9106H-03BD (軸心加長1.2)	BT40-45° BD	45°	28	28	26.4	28.5	26	35	10	78.4	4.5	120.4	129.4	100.4	73.6	16	12	26	M14*1.5P	6	-	4.3	0.5
9106H-08BD (軸心加長1.2)	BT40-90° BD	90°	28	28	26.4	28.5	26	35	10	78.4	4.5	120.4	129.4	100.4	73.6	16	12	26	M14*1.5P	6	-	4.3	0.5

# DIN69872主軸夾爪外牙式

## DIN69872 Pull Stud Type Clamping Units

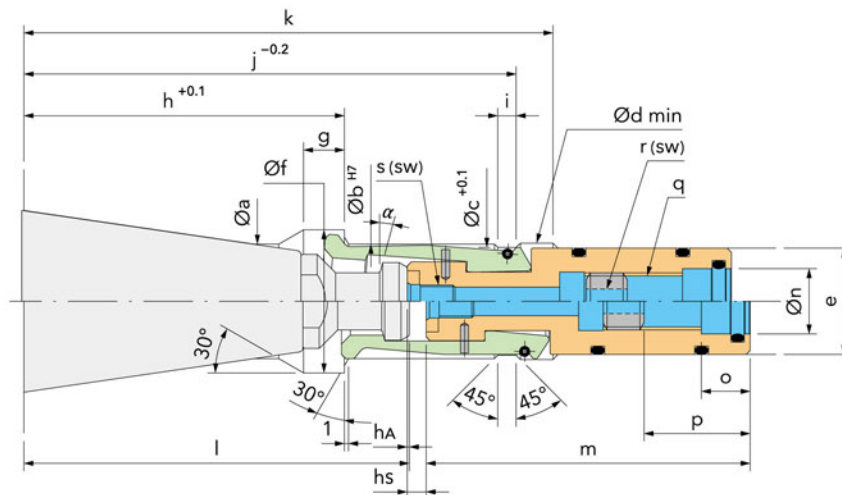


- 此型夾爪具有保持定位功能。
- 爪片經特殊處理，耐磨耗。
- Fs：最大拉刀力。
- MA：最大鎖緊扭矩。
- The grippers have the held position function.
- Special treated segments can prevent abrasion.
- Fs: Max. Clamping Force
- MA: Max. Tightening Torque

訂購編號 Order No.	規格 Part No.	$\alpha$ $\pm 15'$	a	b H7	c	d	e h7	f	g	h min	i	j	k	l	m	n	o	P	hs	hA	Fs Max. kN	MA Nm	SW mm
9106H-47	DIN30-47	15°	19.6	19	17.8	20.2	10	24	M10*1.5P	50	47	20	37	7.5	3.5	3	3	19.5	4	0.5	10	30	5
9106H-07	DIN40-07	15°	28	28	26.4	28.5	16	35	M16*1.5P	82	70	26	52	10	4.5	6	3.5	40	4.5	0.5	18	65	8
9106H-07A	DIN40-07A	15°	28	28	26.4	28.5	12	35	M12*1.0P	82	70	26	52	10	4.5	4	3.5	40	4.5	0.5	18	65	8
9106H-27	DIN50-27	15°	43	43	40.4	43.5	22	54	M22*1.5P	98	90	35	69	16	5	9.5	4.5	48	8.5	0.5	35	160	10
9106H-67	DIN60-67	15°	66	62	58.6	62.5	30	77	M30*1.5P	130	125	40	96	23	6.5	16	5	74.5	11.65	1.15	70	450	17

# DIN69872主軸夾爪內牙式

## DIN69872 Pull Stud Type Clamping Units

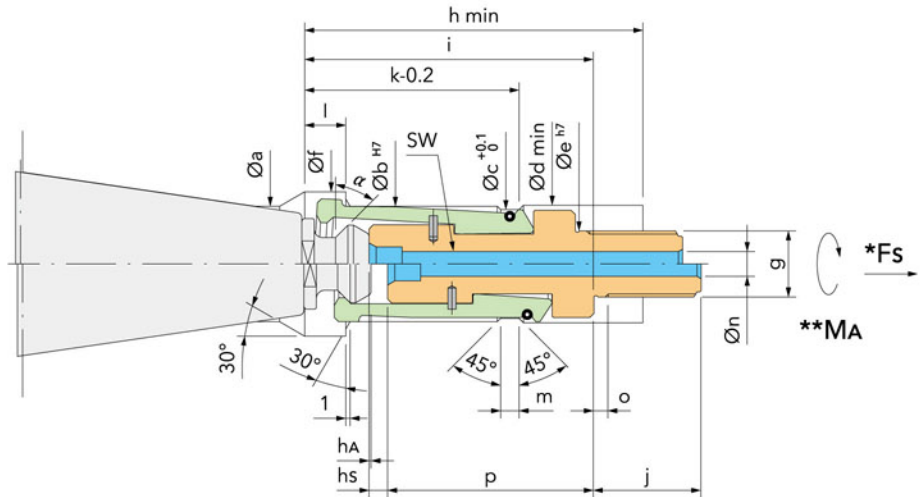


- 此型夾爪具有保持定位功能。
- 爪片經特殊處理，耐磨耗。
- The grippers have the held position function.
- Special treated segments can prevent abrasion.

訂購編號 Order No.	規格 Part No.	$\alpha$ $\pm 15'$	a	b H7	c	d min	e	f	g	h	i	j	k	l	m	n	o	P	q	r (sw)	s (sw)	hs	hA	外徑 O型環
9106H-07C	DIN40-07C	15°	28	28	-	-	28	35	10	78.4	-	-	170.4	94.25	69.8	16	6	14	M16*1.5P	6	8	4.5	0.5	1
9106H-07D	DIN40-07D	15°	28	28	26.4	28.5	26	35	10	78.4	4.5	120.4	129.4	94.25	79.3	16	12	26	M14*1.5P	6	-	4.5	0.5	2
9106H-07F	DIN40-04F	15°	28	28	26.4	28.5	26	35	10	78.4	4.5	120.4	129.4	94.25	79.3	16	12	26	M14*1.5P	6	-	4.5	0.5	3

# CAT主軸夾爪外牙式

## CAT Pull Stud Type Clamping Units

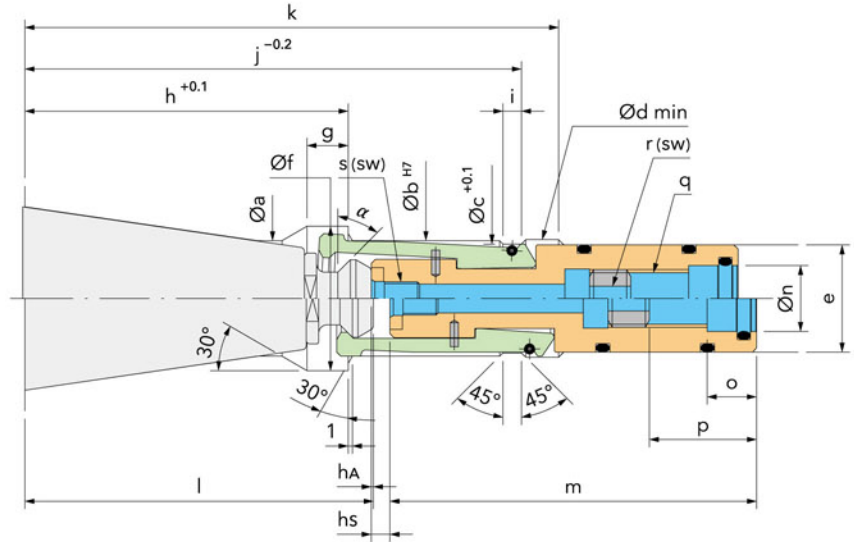


- 此型夾爪具有保持定位功能。
- 爪片經特殊處理，耐磨耗。
- Fs：最大拉刀力。
- MA：最大鎖緊扭矩。
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- Fs: Max. Clamping Force
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訂購編號 Order No.	規格 Part No.	$\alpha$ $\pm 15'$	a	b H7	c	d	e h7	f	g	h min	i	j	k	l	m	n	o	P	hs	hA	Fs Max. kN	MA Nm	SW mm
9106H-44	CAT30-44	45°	19.6	19	17.8	20.2	10	24	M10*1.5P	50	47	20	37	7.5	3.5	3	3	32.7	3	0.5	10	30	5
9106H-04	CAT40-04	45°	28	28	26.4	28.5	16	35	M16*1.5P	82	70	26	52	10	4.5	6	3.5	50	4.5	0.5	18	65	8
9106H-04A	CAT40-04A	45°	28	28	26.4	28.5	12	35	M12*1.0P	82	70	26	52	10	4.5	4	3.5	50	4.5	0.5	18	65	8
9106H-24	CAT50-24	45°	43	43	40.4	43.5	22	54	M22*1.5P	98	90	35	69	16	5	9.5	4.5	58	7	0.5	35	160	10

# CAT主軸夾爪內牙式

## CAT Pull Stud Type Clamping Units

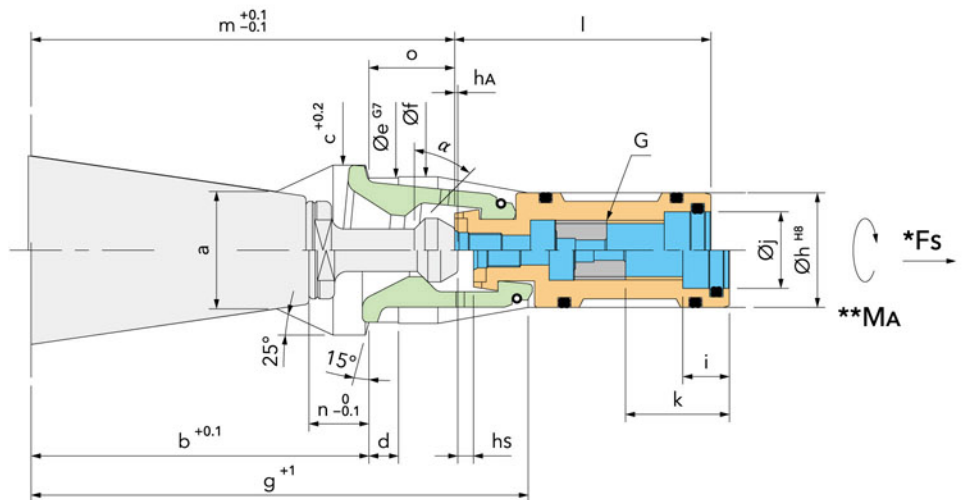


- 此型夾爪具有保持定位功能。
- 爪片經特殊處理，耐磨耗。
- The grippers have the held position function.
- Special treated segments can prevent abrasion.

訂購編號 Order No.	規格 Part No.	$\alpha$ $\pm 15'$	a	b H7	c	d min	e	f	g	h	i	j	k	l	m	n	o	P	q	r (sw)	s (sw)	hs	hA	外徑 O型環
9106H-04C	CAT40-04C	45°	28	28	26.4	28.5	26	35	10	78.4	4.5	120.4	129.4	84.5	78	-	-	9	M16*1.0P	6	8	4.5	0.5	0
9106H-04D	CAT40-04D	45°	28	28	26.4	28.5	26	35	10	78.4	4.5	120.4	129.4	84.5	88.9	16	12	26	M14*1.5P	6	-	4.5	0.5	2
9106H-04F	CAT40-04F	45°	28	28	26.4	28.5	26	35	10	78.4	4.5	120.4	129.4	84.5	88.9	16	12	26	M14*1.5P	6	-	4.5	0.5	3

# OTT主軸夾爪

## OTT Pull Stud Type Clamping Units



- 爪片經特殊處理，耐磨耗。
- $F_s$ ：最大拉刀力。
- $MA$ ：最大鎖緊扭矩。
- $b$  距離有兩個長度：#40 = 79.5 / 86.5 mm。
- Special treated segments can prevent abrasion.
- $F_s$ : Max. Clamping Force
- $MA$ : Max. Tightening Torque
- There are two different length for  $b$  distance. #40 = 79.5 / 86.5 mm.

訂購編號 Order No.	規格 Part No.	$\alpha$ $\pm 15'$	a	b	c	d	e G7	f	g	h H8	i	j	k	l	m	n	o	hs	hA	G	$F_s$ Max. kN	MA Nm
9105-43	OTT-BT30-45°	45°	19.5	59	27	5	22.5	23	91	19	10	12	23	57.5	70.4	10.6	11.4	3.2	1	M10*1.25P	10	30
9105-03	OTT-BT40-45°	45°	27.6	79.5	40	7	34	34.5	117	27	11	18	24.5	60.3	99.7	14.1	20.2	3.7	0.65	M14*1.5P	18	65
9105-03A	OTT-BT40-45° A	45°	27.6	86.5	40	7	34	34.5	117	27	11	16	24.5	60	99.4	21.1	12.9	3.8	1	M14*1.5P	18	65
9105-06	OTT-BT40-60°	60°	27.6	79.5	40	7	34	34.5	117	27	11	18	24.5	60.3	99.7	14.1	20.2	3.7	0.65	M14*1.5P	18	65
9105-08	OTT-BT40-90°	90°	27.6	79.5	40	7	34	34.5	117	27	11	18	24.5	60.3	99.7	14.1	20.2	3.7	0.65	M14*1.5P	18	65
9105-23	OTT-BT50-45°	45°	43	116.5	56	8	49	49.5	163	40	12	20	33.5	68.8	145.75	14.7	29.25	4.2	1	M16*1.5P	35	160
9105-25	OTT-BT50-60°	60°	43	116.5	56	8	49	49.5	163	40	12	20	33.5	68.8	145.75	14.7	29.25	4.2	1	M16*1.5P	35	160
9105-26	OTT-BT50-90°	90°	43	116.5	56	8	49	49.5	163	40	12	20	33.5	68.8	145.75	14.7	29.25	4.2	1	M16*1.5P	35	160
9105-04	OTT-CAT40-04	45°	27.6	79.5	40	7	34	34.5	117	27	11	18	24.5	77.55	82.9	11.2	3.4	2.9	1.6	M14*1.5P	18	65
9105-24	OTT-CAT50-24	45°	43	116.5	56	8	49	49.5	163	40	12	20	33.5	87.8	125.95	14.9	9.45	3.8	1.05	M16*1.5P	35	160
9105-07	OTT-DIN40-07	15°	27.6	79.5	40	7	34	34.5	117	27	11	18	24.5	66.5	93.6	11.2	14.1	3.8	0.65	M14*1.5P	18	35
9105-07A	OTT-DIN40-07A	15°	27.6	86.5	40	7	34	34.5	117	27	11	16	24.5	60	99.4	21.1	12.9	3.8	1	M14*1.5P	18	65
9105-27	OTT-DIN50-27	15°	43	116.5	56	8	49	49.5	163	40	12	20	33.5	79.6	134.55	14.9	18.05	3.5	1.05	M16*1.5P	35	160

# ISO主軸夾爪

## ISO Pull Stud Type Clamping Units

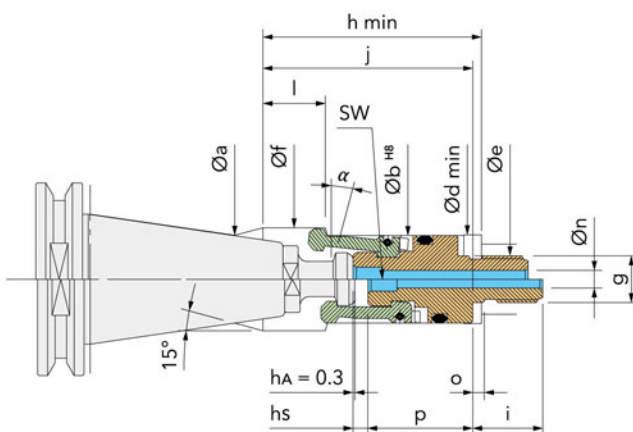


Fig. 1

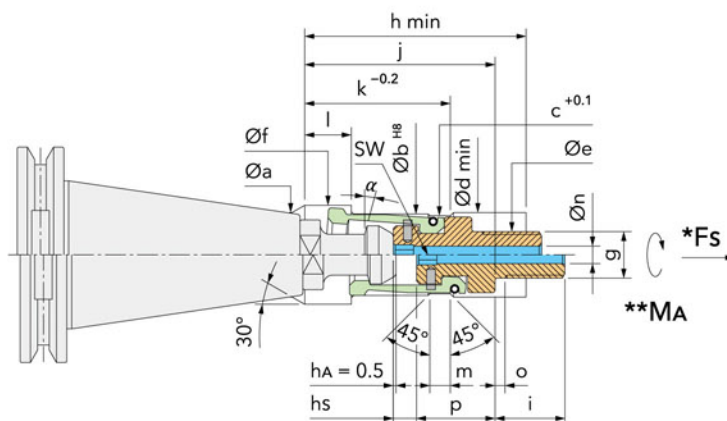


Fig. 2

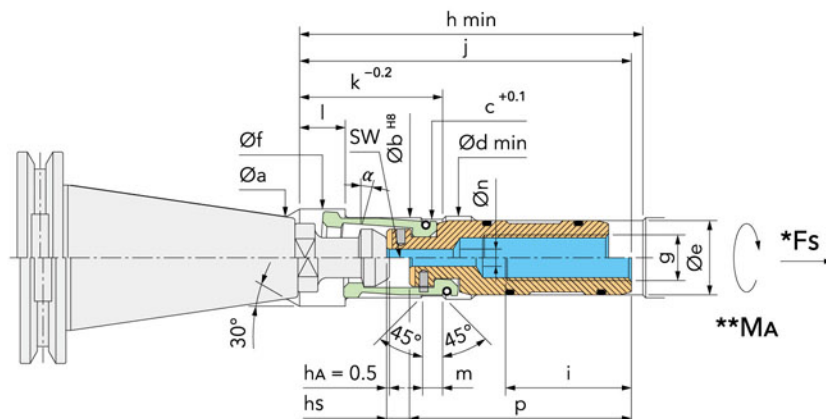


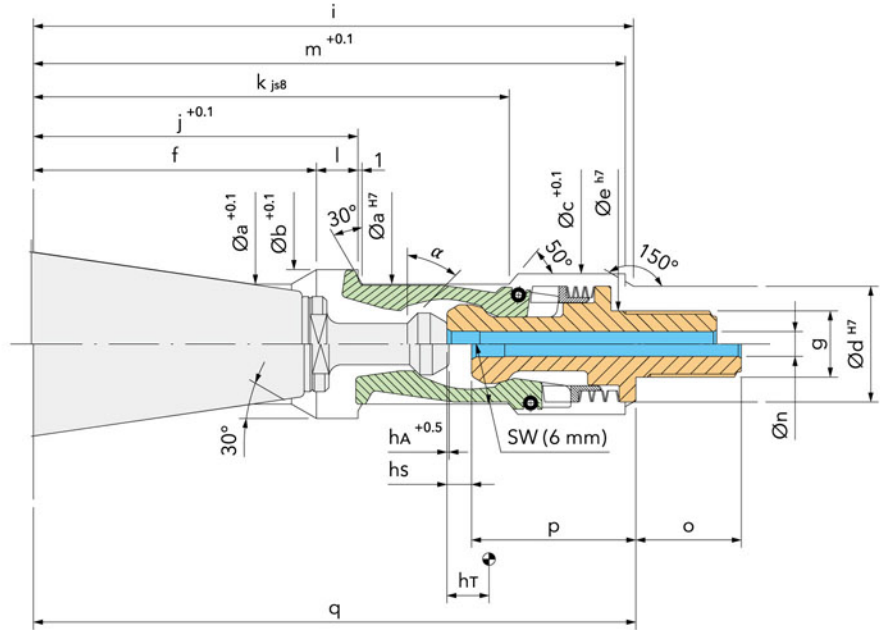
Fig. 3

- 此型夾爪具有保持定位功能。
- 爪片經特殊處理，耐磨耗。
- $F_s$ ：最大拉刀力。
- $MA$ ：最大鎖緊扭矩。
- The grippers have the held position function.
- Special treated segments can prevent abrasion.
- $F_s$ : Max. Clamping Force
- $MA$ : Max. Tightening Torque

訂購編號 Order No.	規格 Part No.	圖號 Fig	$\alpha$ $\pm 15'$	a	b H8	c	d min	e	f	g	h	i	j	k	l	m	n	o	P	r (sw)	hs	hA	Fs Max. kN	MA Nm
9106H-65	ISO20	1	15°	15	15	-	15.2	8	17.6	M8*1.0P	37.36	12	35.86	-	10.66	-	3	2	17.95	4	2.5	0.3	-	-
9106H-64	ISO25	2	15°	14.5	14	13.4	14.5	8	17	M8*1.0P	38	12	32.7	25	8	3.5	3	2	13.5	3	4	0.5	4	12
9106H-64C	ISO25	3	15°	14.5	14	13.5	14.5	13	17	M8*1.25P	60	22	58	25	8	3.5	3	-	38.8	-	4	0.5	4	12

# BT倍力夾爪外牙式

## BT Pull Stud Type Clamping Units



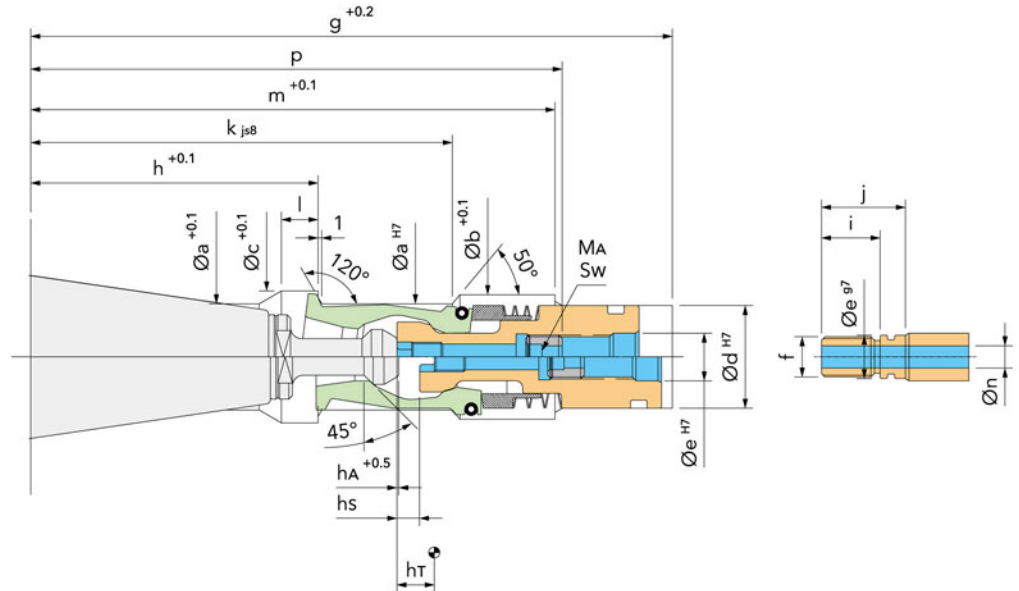
- 爪片經特殊處理，耐磨耗。
- Special treated segments can prevent abrasion.
- Fs：最大拉刀力。
- Fs: Max. Clamping Force
- MA：最大鎖緊扭矩。
- MA: Max. Tightening Torque

訂購編號 Order No.	規格 Part No.	a H7	b	c	d	e	f	g	i	j	k	l	m	n	o	p	q	hA	hT	hs	Fs Max. kN	MA Nm	SW mm
9106VM-441	BT30M-45°	20	23.5	25	19.5	10	47.5	M10*1.5P	95.4	55.4	81.8	7.9	94.4	3	20	27.1	103	0.5	7	5	6	10	5
9106VM-442	BT30M-60°	20	23.5	25	19.5	10	47.5	M10*1.5P	95.4	55.4	81.8	7.9	94.4	3	20	27.1	103	0.5	7	5	6	10	5
9106VM-403	BT40M-45°	29	36	34	28	16	68.4	M16*1.5P	145	78.4	115	10	143	6	25.5	39.7	145.6	0.5	9	6	18	30	6
9106VM-403A	BT40M-45°	29	36	34	28	16	68.4	M16*1.5P	145	78.4	115	10	143	6	25.5	41.2	145.6	2	9	6	18	30	6
9106VM-406	BT40M-60°	29	36	34	28	16	68.4	M16*1.5P	145	78.4	115	10	143	6	25.5	39.7	145.6	0.5	9	6	18	30	6
9106VM-408	BT40M-90°	29	36	34	28	16	68.4	M16*1.5P	145	78.4	115	10	143	6	25.5	39.7	145.6	0.5	9	6	18	30	6
9106VM-421	BT50M-45°	44	54	50	38	22	101.75	M22*1.5P	210.5	117.75	176.75	16	209	9.5	35	69.2	224.5	0.5	12	9	35	30	10
9106VM-425	BT50M-60°	44	54	50	38	22	101.75	M22*1.5P	210.5	117.75	176.75	16	209	9.5	35	69.2	224.5	0.5	12	9	35	30	10
9106VM-426	BT50M-90°	44	54	50	38	22	101.75	M22*1.5P	210.5	117.75	176.75	16	209	9.5	35	69.2	224.5	0.5	12	9	35	30	10



# BT倍力夾爪內牙式

## BT Pull Stud Type Clamping Units

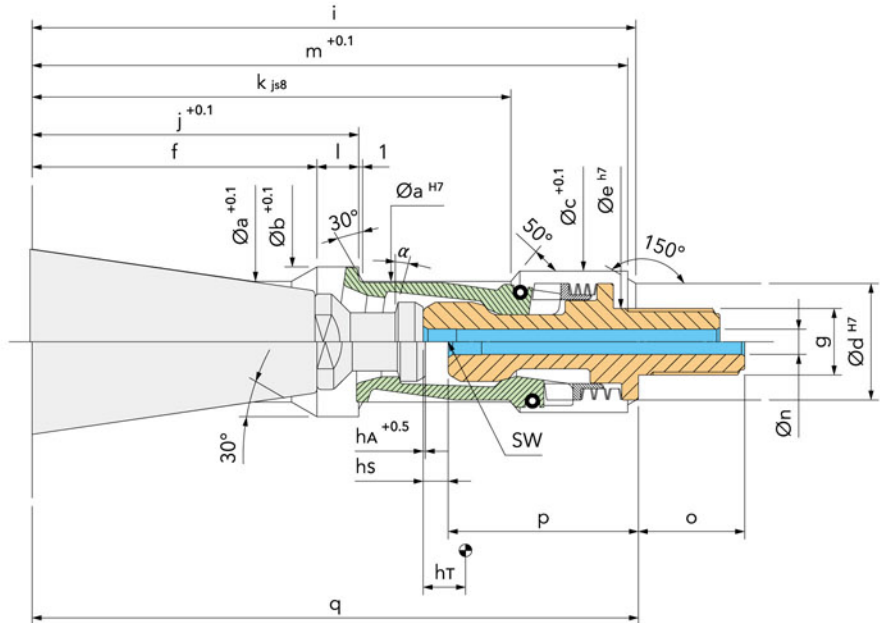


- 爪片經特殊處理，耐磨耗。
- Special treated segments can prevent abrasion.
- Fs：最大拉刀力。
- Fs: Max. Clamping Force
- MA：最大鎖緊扭矩。
- MA: Max. Tightening Torque

訂購編號 Order No.	規格 Part No.	a H7	b	c	d	e	f	g	h	i	j	k	l	m	n	p	hA	hT	hs	Fs Max. kN	MA Nm	SW mm
9106VF-641	BT30F-45°	20	23.5	25	19.5	11	M10*1.0P	121.3	55.4	9.5	17	81.8	7.9	94.4	5	100.5	0.5	7	5	6	10	4
9106VF-642	BT30F-60°	20	23.5	25	19.5	11	M10*1.0P	121.3	55.4	9.5	17	81.8	7.9	94.4	5	100.5	0.5	7	5	6	10	4
9106VF-603	BT40F-45°	29	34	36	28	13	M12*1.0P	175	78.4	15	22.5	115	10	143	6	145	0.5	9	6	18	30	6
9106VF-606	BT40F-60°	29	34	36	28	13	M12*1.0P	175	78.4	15	22.5	115	10	143	6	145	0.5	9	6	18	30	6
9106VF-608	BT40F-90°	29	34	36	28	13	M12*1.0P	175	78.4	15	22.5	115	10	143	6	145	0.5	9	6	18	30	6
9106VF-421	BT50F-45°	44	50	54	38	17	M16*1.5P	251	117.75	19	25	176.75	16	209	7	214	0.5	12	9	35	30	6
9106VF-625	BT50F-60°	44	50	54	38	17	M16*1.5P	251	117.75	19	25	176.75	16	209	7	214	0.5	12	9	35	30	6
9106VF-626	BT50F-90°	44	50	54	38	17	M16*1.5P	251	117.75	19	25	176.75	16	209	7	214	0.5	12	9	35	30	6

# DIN69872倍力夾爪外牙式

## DIN69872 Pull Stud Type Clamping Units

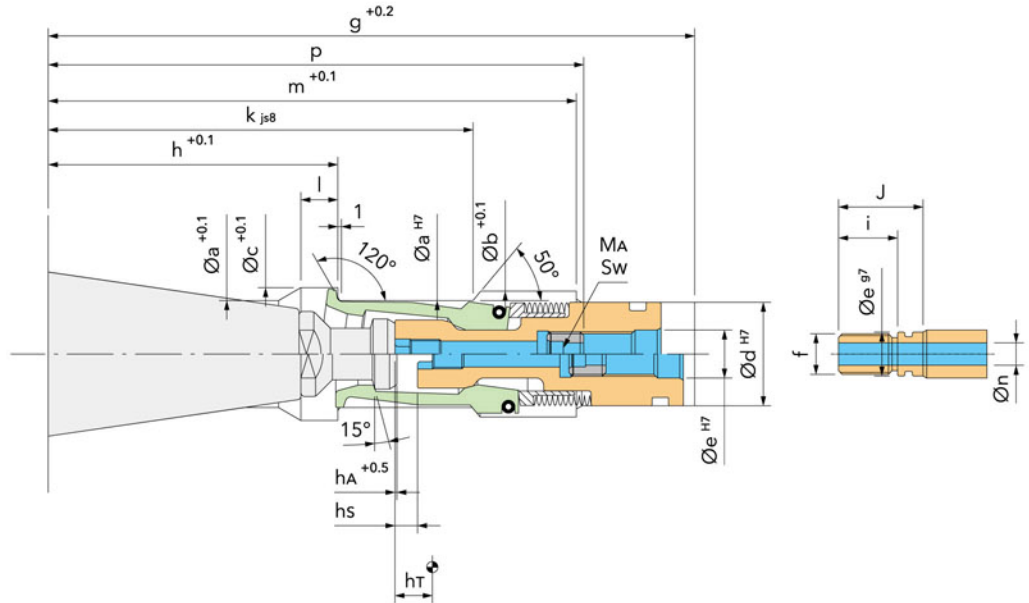


- 爪片經特殊處理，耐磨耗。
- Special treated segments can prevent abrasion.
- Fs：最大拉刀力。
- Fs: Max. Clamping Force
- MA：最大鎖緊扭矩。
- MA: Max. Tightening Torque

訂購編號 Order No.	規格 Part No.	a H7	b	c	d	e	f	g	i	j	k	l	m	n	o	p	q	hA	hT	hs	Fs Max. kN	MA Nm	SW mm
9106VM-447	DIN30M-47	20	23.5	25	19.5	10	47.5	M10*1.5P	95.4	55.4	81.8	7.9	94.4	3	20	26.7	103	0.5	7	5	6	10	5
9106VM-407	DIN40M-07	29	36	34	28	16	68.4	M16*1.5P	145	78.4	115	10	143	6	25.5	45.7	145.6	0.5	9	6	18	30	6
9106VM-427	DIN50M-27	44	54	50	38	22	101.75	M22*1.5P	210.5	117.75	176.75	16	209	9.5	35	80.4	224.5	0.5	12	9	35	30	10

# DIN69872倍力夾爪內牙式

## DIN69872 Pull Stud Type Clamping Units

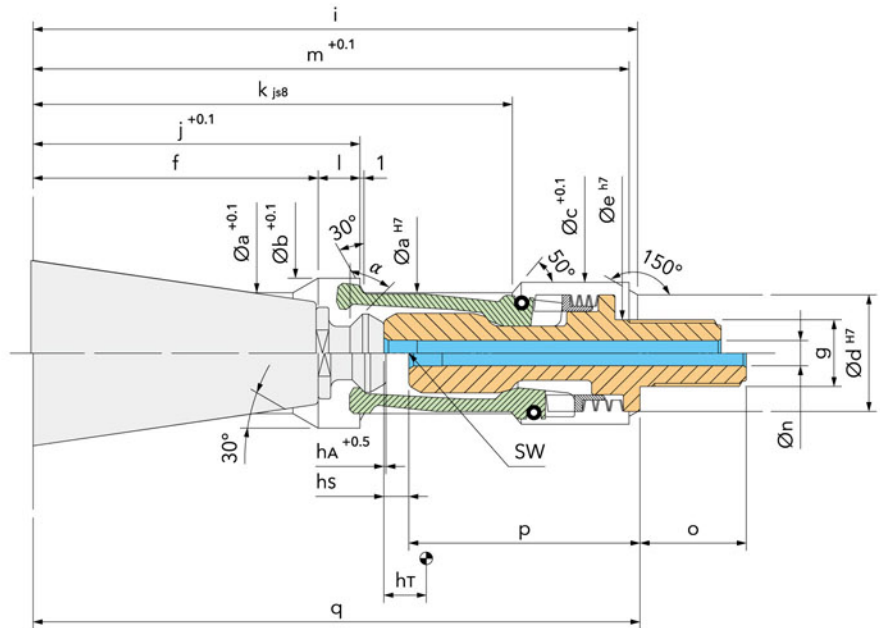


- 爪片經特殊處理，耐磨耗。
- Special treated segments can prevent abrasion.
- Fs：最大拉刀力。
- Fs: Max. Clamping Force
- MA：最大鎖緊扭矩。
- MA: Max. Tightening Torque

訂購編號 Order No.	規格 Part No.	a H7	b	c	d	e	f	g	h	i	J	k	l	m	n	p	h <sub>A</sub>	h <sub>T</sub>	h <sub>s</sub>	Fs Max. kN	MA Nm	SW mm
9106VF-647	DIN30F-47	20	23.5	25	19.5	11	M10*1.0P	121.3	55.4	9.5	17	81.8	7.9	94.4	5	100.5	0.5	7	5	6	10	4
9106VF-607	DIN40F-07	29	34	36	28	13	M12*1.0P	175	78.4	15	22.5	115	10	143	6	145	0.5	9	6	18	30	6
9106VF-427	DIN50F-27	44	50	54	38	17	M16*1.5P	251	117.75	19	25	176.75	16	209	7	214	0.5	12	9	35	30	6

# CAT倍力夾爪外牙式

## CAT Pull Stud Type Clamping Units

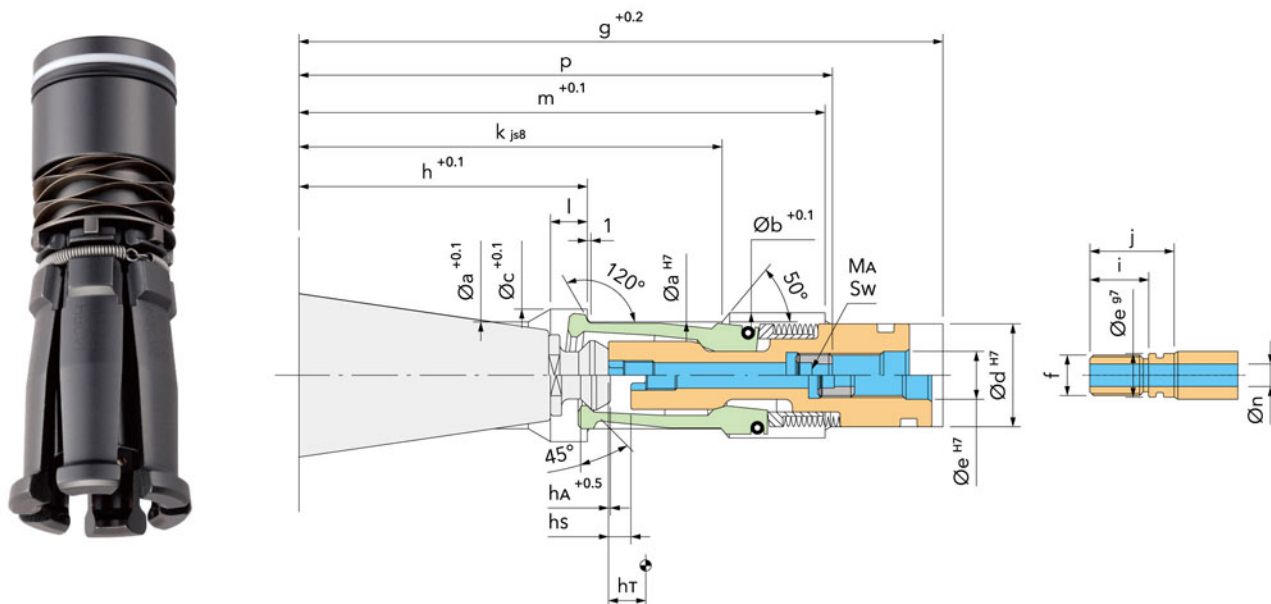


- 爪片經特殊處理，耐磨耗。
- Special treated segments can prevent abrasion.
- Fs：最大拉刀力。
- Fs: Max. Clamping Force
- MA：最大鎖緊扭矩。
- MA: Max. Tightening Torque

訂購編號 Order No.	規格 Part No.	a H7	b	c	d	e	f	g	i	j	k	l	m	n	o	p	q	hA	hT	hs	Fs Max. kN	MA Nm	SW mm
9106VM-444	CAT30M-44	20	23.5	25	19.5	10	47.5	M10*1.5P	95.4	55.4	81.8	7.9	94.4	3	20	38.9	103	0.5	7	5	6	10	5
9106VM-404	CAT40M-04	29	36	34	28	16	68.4	M16*1.5P	145	78.4	115	10	143	6	25.5	55.45	145.6	0.5	9	6	18	30	6
9106VM-424	CAT50M-24	44	54	50	38	22	101.75	M22*1.5P	210.5	117.75	176.75	16	209	9.5	35	89	224.5	0.5	12	9	35	30	10

# CAT倍力夾爪內牙式

## CAT Pull Stud Type Clamping Units

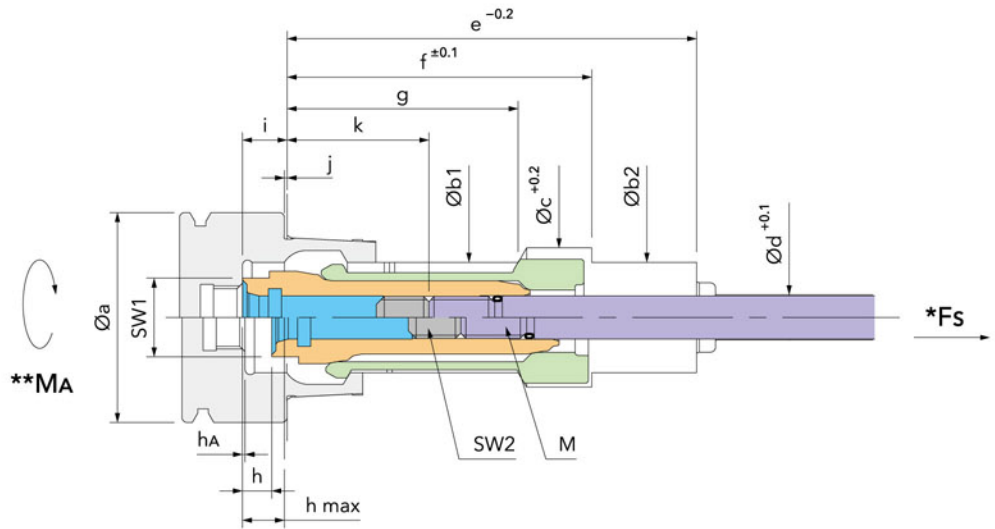


- 爪片經特殊處理，耐磨耗。
- Special treated segments can prevent abrasion.
- Fs：最大拉刀力。
- Fs: Max. Clamping Force
- MA：最大鎖緊扭矩。
- MA: Max. Tightening Torque

訂購編號 Order No.	規格 Part No.	a H7	b	c	d	e	f	g	h	i	j	k	l	m	n	p	hA	hT	hs	Fs Max. kN	MA Nm	SW mm
9106VF-644	CAT30F-44	20	23.5	25	19.5	11	M10*1.0P	121.3	55.4	9.5	17	81.8	7.9	94.4	5	100.5	0.5	7	5	6	10	4
9106VF-604	CAT40F-04	29	34	36	28	13	M12*1.0P	175	78.4	15	22.5	115	10	143	6	145	0.5	9	6	18	30	6
9106VF-624	CAT50F-24	44	50	54	38	17	M16*1.5P	251	117.75	19	25	176.75	16	209	7	214	0.5	12	9	35	30	6

# HSK 拉刀夾爪

## HSK Clamping Units

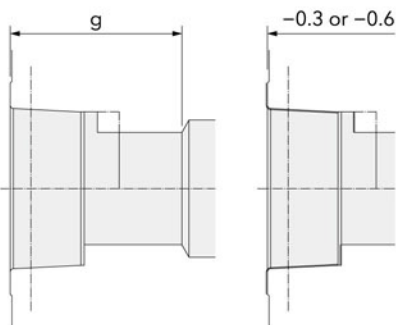


- 爪片經特殊處理，耐磨耗。
- Special treated segments can prevent abrasion.
- Fs：最大拉刀力。
- Fs: Max. Clamping Force
- MA：最大鎖緊扭矩。
- MA: Max. Tightening Torque

訂購編號 Order No.	規格 Part No.	a	b1 H10	b2 H6	c	d	e	f	g	M	h	hA	i	j	k	h Max.	Fs Max. kN	MA Nm	SW1 mm	SW2 mm
9106H-HSK25	HSK25	25	14	14	18	6.4	40	25.5	18.5	M6*0.5P	4.6	0.5	6.5	0.5	5.5	7	2.8	7	10	3
9106H-HSK32	HSK32	32	17	17	22.5	6.6	62.5	43	30	M6*1.0P	5.1	0.5	8.5	0.5	19.5	7.5	5	10	12	3
9106H-HSK40	HSK40	40	21	21	26.5	8.6	78	58	44	M8*1.25P	5.6	0.5	8.5	0.5	27.0	8	6.8	15	15	4
9106H-HSK50	HSK50	50	26	26	33.0	10.6	84	61	45	M10*1.5P	6.4	0.5	10.5	0.5	26.5	9	11	20	18	4
9106H-HSK63	HSK63	63	34	34	41.6	14.6	94	69	52	M14*1.5P	7.4	0.5	10.5	0.5	31.5	10	18	30	24	5
9106H-HSK80	HSK80	80	42	42	50	16.6	98	72	56	M16*1.5P	8.3	0.5	13	0.5	29	11	28	30	27	6
9106H-HSK100	HSK100	100	53	53	63	18.4	124	93	70	M16*1.5P	9.15	0.5	13	0.5	34.5	12.5	45	50	36	6

# HSK 維修拉刀夾爪

## HSK Repair Clamping Units



規格 Part No.	拉刀夾爪 Clamping Units		維修拉刀夾爪 Repair Clamping Units		維修拉刀夾爪 Repair Clamping Units	
	HSK		HSK -0.3		HSK -0.6	
	訂購編號 Order No.	g	訂購編號 Order No.	g	訂購編號 Order No.	g
HSK32	9106H-HSK32	30.0	9106H-HSK32-0.3	29.7	9106H-HSK32-0.6	29.4
HSK40	9106H-HSK40	44.0	9106H-HSK40-0.3	43.7	9106H-HSK40-0.6	43.4
HSK50	9106H-HSK50	45.0	9106H-HSK50-0.3	44.7	9106H-HSK50-0.6	44.4
HSK63	9106H-HSK63	52.0	9106H-HSK63-0.3	51.7	9106H-HSK63-0.6	51.4
HSK100	9106H-HSK100	70.0	9106H-HSK100-0.3	69.7	9106H-HSK100-0.6	69.4

# HSK Sensor 定位用治具

## HSK Gauge for Sensor Position



訂購編號 Order No.	規格 Part No.
8002-032-SENSOR	HSK32-Sensor
8002-040-SENSOR	HSK40-Sensor
8002-050-SENSOR	HSK50-Sensor
8002-063-SENSOR	HSK63-Sensor
8002-100-SENSOR	HSK100-Sensor

# HSK 瓣爪安裝治具(組)

## HSK Clamping Unit Installation Fixture (Set)



Fig. 1



Fig. 2



Fig. 3



Fig. 4

訂購編號 Order No.				規格 Part No.
量測心軸治具 Mandrel Measurement Fixture	調整心軸治具 Mandrel Adjustment Fixture	夾爪安裝治具 Clamping Unit Installation Fixture	瓣爪安裝治具整組 Clamping Unit Installation Fixture (Set)	
Fig. 1	Fig. 2	Fig. 3	Fig. 4	
8004-025	8004W-025	8005-025	8006-025S	HSK25
8004-032	8004W-032	8005-032	8006-032S	HSK32
8004-040	8004W-040	8005-040	8006-040S	HSK40
8004-050	8004W-050	8005-050	8006-050S	HSK50
8004-063	8004W-063	8005-063	8006-063S	HSK63
8004-080	8004W-080	8005-080	8006-080S	HSK80
8004-100	8004W-100	8005-100	8006-100S	HSK100

# STB 標準測試棒

## STB Standard Test Bars



Fig. 1

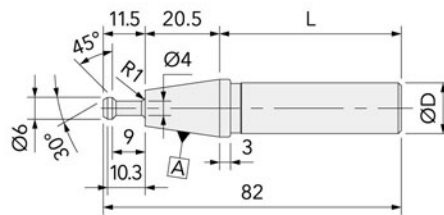
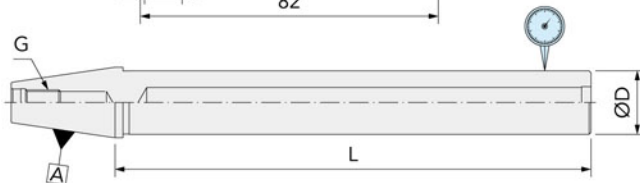


Fig. 2

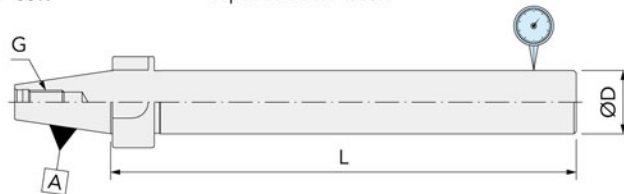


規格 Part No.	Fig.	ØD	L	G	真圓度 Roundness
ISO10-14-050	1	14	50	-	< 0.003
ISO15-16-075	2	16	75	M06	
ISO20-20-075		20		M08	
ISO25-20-075		32	M12		
ISO30-32-250		40	250	M16	
ISO40-40-300		300	40	M24	
ISO50-40-300					

- 隨貨附木盒包裝，請直立擺放。
- 錐度密合度 > 85%。
- Supplied with wooden case, vertical storage necessarily.
- Taper contact > 85%.



Fig. 3

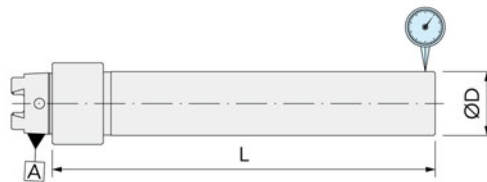


規格 Part No.	Fig.	ØD	L	G	真圓度 Roundness
ABT30-32-235	3	32	235	M12	< 0.003
ABT40-50-350		50	350	M16	
ABT50-50-360		50	360	M24	

- 隨貨附木盒包裝，請直立擺放。
- 錐度密合度 > 85%。
- Supplied with wooden case, vertical storage necessarily.
- Taper contact > 85%.



Fig. 4



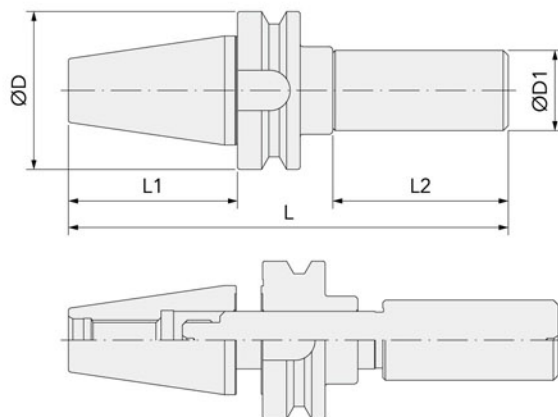
規格 Part No.	Fig.	ØD	L	真圓度 Roundness
HSK25 E-20-150	-	20	150	< 0.003
HSK32A /E-25-200	4	25	200	
HSK40A /E-32-200		32	200	
HSK50A /E-32-250		50	250	
HSK63A /E-50-200		40	200	
HSK63A /E-40-300		40	300	
HSK100A /E-50-200		50	200	
HSK100A /E-50-350		50	350	

- 隨貨附木盒包裝，請直立擺放。
- 錐度密合度 > 85%。
- Supplied with wooden case, vertical storage necessarily.
- Taper contact > 85%.



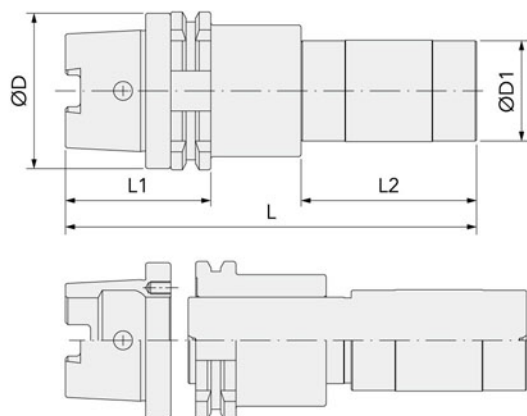
# ATC 校刀治具

## ATC / Spindle Aligners



規格 Part No.	ØD	ØD1	L1	L2	L
• ISO25-ATC	37	20	40.5	70	138.5
BT30-ATC	46	25	50.4	74.5	154.9
BT40-ATC	63	32	67.4	70	175.4
BT50-ATC	100	40	104.8	80	231.8
DV30-ATC	50	25	51	74.5	154.3
DV40-ATC	63.5	32	71.45	70	178.25
DV50-ATC	97.45	40	104.8	80	231.6
CV30-ATC	46.05	25	51	74.5	154.3
CV40-ATC	63.5	32	71.45	70	178.25
CV50-ATC	98.42	40	104.8	80	231.6

• 接單生產。 • Customized Production.



規格 Part No.	ØD	ØD1	L1	L2	L
HSK32A-ATC	32	26	36	57	132
HSK40A-ATC	40	27	40		136
HSK50A-ATC	50	32	51	70	157
HSK63A-ATC	63	40	58		164
HSK100A-ATC	100	64	79	100	217

# 主軸鬆刀量具

## Tool Ejection Path Instruments



訂購編號 Order No.	規格 Part No.
6151-61	ISO20
6151-71	ISO25
6151-41	BT30
6151-01	BT40
6151-21	BT50
7151-41	DV30
7151-01	DV40
7151-21	DV50
5151-01	CV40
5151-21	CV50

# 主軸錐度規

## Tapper Gauges



訂購編號 Order No.			規格 Part No.
環規 Ring Gauge	塞規 Plug Gauge	整組 Set	
6145-10-R	6145-10-P	6145-10-F	ISO10
6145-15-R	6145-15-P	6145-15-F	ISO15
6145-20-R	6145-20-P	6145-20-F	ISO20
6145-25-R	6145-25-P	6145-25-F	ISO25
6145-30-R	6145-30-P	6145-30-F	ISO30
6145-40-R	6145-40-P	6145-40-F	ISO40
6145-50-R	6145-50-P	6145-50-F	ISO50

# 主軸深度規

## Spindle Depth Gauge



訂購編號 Order No.	規格 Part No.
6145-A30-F	ABT30
6145-A40-F	ABT40
6145-A50-F	ABT50

- 指示量錶：另購品。
- Dial Indicators: Purchased separately.

# 中心出水壓力計

## Coolant Through Pressure Gauges



- 實測壓力：以指針所指外圈之數值，即為實測壓力 (kg-f)。
- The finger indicated the value of the outer ring; the value is pull force measured.

規格 Part No.	量測範圍 Measuring Range
ISO40	0~40 kg/cm <sup>2</sup>
ISO50	0~60 kg/cm <sup>2</sup>
HSK63	0~40 kg/cm <sup>2</sup>
HSK100	0~60 kg/cm <sup>2</sup>



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