

有鑑於產業機械對於自動化、省力化及輕量化的需求日益殷切，東祐機械於民國八十一年創立，生產空油壓缸所需之油壓鋼管、不鏽鋼管、鋁合金管及鍍硬鉻鋼棒等材料，並代辦特殊鋼材進出口業務，本公司本著創新、品質、專業及服務四大經營理念，不斷開發引進更高強度、品質的材料供業界使用，更為提昇服務品質及效率，先後設立台南廠及台北廠，以服務全國的客戶。

在公司全體同仁及經營團隊共同努力下，堅持**創新、品質、專業及服務**四大經營理念，我們有信心持續創新突破，精益求精，期與所有的合作客戶共創更加寬廣的未來。

Costar has been in the business of manufacturing high quality honed tube, stainless steel tube, aluminum tube and hard chrome bar of hydraulic/pneumatic application since 1992.

Continuing to be at the forefront of this industry on the basis of innovation, profession, service and quality, Costar develops more & more higher mechanical properties and higher quality solution to meet customer's requirements.

Furthermore, Costar set up Tainan & Taipei service center & factory in the past few years for the demand of just-in-time delivery.

We believe, under the effort of all our colleagues & leading team-work, costar could cooperate with all our customers to penetrate and upgrade themselves for the bright future.



主要營業項目 MAJOR PRODUCTS

- 油壓鋼管 HYDRAULIC CYLINDER TUBE P3/P4
- 不鏽鋼管 STAINLESS CYLINDER TUBE P5
- 鋁合金管 ALUMINUM ALLOY CYLINDER TUBE P6
- 鍍硬鉻鋼棒 HARD CHROME BAR P7
- 高週波鍍硬鉻鋼棒 INDUCTION HARD CHROME BAR P8
- SUJ2線性滑軸 SLIDING ROD P9
- 油壓配管 HYDRAULIC SERVICE PIPE P10
- 機械加工零件(依圖製作) MACHINE COMPONENTS MANUFACTURED AS DRAWING
- 機械設計、諮商、研發等服務 MECHANICAL DESIGN, CONSULTATION, R&D etc. SERVICE

其它營業項目 OTHERS

本公司貿易部門提供客戶委辦進出口服務，其項目包括：
OUR TRADING DEPARTMENT COULD PROVIDE THE SERVICE FOR FOLLOWING ITEMS

- 各類合金鋼材 ALLOY BAR
- 高張力鋼板 HIGH TENSION PLATE
- 不鏽鋼材 STAINLESS STEEL
- 其它特殊金屬材料 SPECIAL METAL & MATERIAL
- 一般進出口業務 IMPORT/EXPORT AGENT





鍍光無縫油壓鋼管 HONED CYLINDER TUBE

產品簡介 Features:

本品採用冷抽高強度機械構造用碳素鋼管，
 素材經原廠回火處理，材質均勻，內徑經
 精密機械研磨，內徑表面粗度及公差，均
 符合國際標準。

Tubes are cold drawn & stress relieve annealed
 to get homogeneous & superior mechanical
 properties and to be honed by precise honing
 machine to match required I. D. surface condition,
 smoothness and tolerance of any standard.

材質（化學成分、機械性質）Grade(Chemical Composition, Mechanical Properties)

種類 Specification	材質 Grade	化學成分% Chemical Composition%					機械性質 Mechanical Properties		
		C	Si	Mn	P	S	抗拉強度kg/mm ² Tensile Strength	引張強度kg/mm ² Yield Strength	伸長率% Elongation
機械構造用碳素鋼管 Carbon steel tube for machine structural purposes	St 52	0.13	0.15	1.20	0.025	0.025	60min.	52min.	15min.
		0.18	0.30	1.40	max.	max.			
機械構造用碳素鋼管 Carbon steel tube for machine structural purposes	STKM 13C	0.25	0.35	0.3	0.04	0.04	52min.	39min.	15min.
		max.	max.	0.9	max.	max.			

產品規格 Specification:

1. 內徑表面精度 I.D. SURFACE ROUGHNESS : Ra 0.8 μm max.
2. 內徑公差 I.D. TOLERANCE : ISO H9,H7/H8 upon request.
3. 厚度公差 TOLERANCE OF WALL THICKNESS : ±10% of wall thickness
4. 直度 STRAIGHTNESS : 1/1000 max.

油壓缸設計壓力計算式 (Formula for cylinder design pressure)

$$P = \frac{200 \times \frac{Y}{S} \times \frac{t}{1.11}}{d_i + \frac{2t}{1.11}}$$

- P:**設計壓力 Design Pressure kg/cm²
Y:引張強度 Yield Strength kg/mm²
t:管壁厚度 Wall Thickness mm
S:安全係數 Safety Factor
d_i:鋼管內徑 Inside Diameter mm



銚光無縫油壓鋼管 HONED CYLINDER TUBE



常備庫存尺寸價格表 AVAILABLE STOCK SIZES & PRICE LIST

I.D. X O.D. (mm)	UNIT PRICE NTD/METER	適用壓力 Kg/cm ²	I.D. X O.D. (mm)	UNIT PRICE NTD/METER	適用壓力 Kg/cm ²	I.D. X O.D. (mm)	UNIT PRICE NTD/METER	適用壓力 Kg/cm ²
20 x 30	1,070 *	538	80 x 87	1,870	127	135 x 160	8,250	248
			80 x 89	2,000	160			
25 x 32	1,080	349	80 x 90	2,140	175	140 x 153	4,570	136
			80 x 95	3,120	251	140 x 160	6,340	198
30 x 36	1,270	265	80 x 100	3,680	326	140 x 165	7,800	241
30 x 40	1,300	400						
			85 x 95	2,370	166	150 x 160	4,440	99
32 x 42	1,300	381	85 x 100	3,640	237	150 x 163	4,710	127
						150 x 168	5,940	169
35 x 45	1,250	355	90 x 100	2,510	158	150 x 170	6,720	187
			90 x 105	3,230	227	150 x 175	8,400	227
40 x 45	1,020	175	90 x 110	4,260	289			
40 x 46	1,070	206				160 x 172	5,330	109
40 x 48	1,170	265	95 x 110	3,960	216	160 x 178	6,850	159
40 x 50	1,330	317	95 x 115	4,750	276	160 x 185	9,430	213
40 x 55	1,570	439				160 x 190	12,600	251
40 x 60	1,980	538	100 x 107	2,460	103			
			100 x 109	2,620	130	165 x 190	11,000	208
45 x 55	1,270	290	100 x 110	2,660	144			
45 x 60	1,810	400	100 x 114	3,220	194	170 x 190	7,810	166
			100 x 116	3,860	218	170 x 195	12,100	203
50 x 55	1,210	143	100 x 120	4,610	265	170 x 200	14,800	238
50 x 57	1,260	194	100 x 125	5,930	319			
50 x 58	1,320	218	100 x 130	6,660	369	180 x 196	7,240	129
50 x 60	1,410	265				180 x 202	10,530	172
50 x 65	1,970	369	105 x 120	4,280	198	180 x 212	17,600	239
50 x 70	2,480	459	105 x 125	5,450	254	180 x 216	18,500	265
55 x 65	1,490	244	110 x 120	2,980	132	185 x 216	18,100	227
55 x 70	2,320	341	110 x 125	4,020	189			
			110 x 130	5,230	244	190 x 220	20,100	216
60 x 70	1,840	227	110 x 135	7,900	295			
60 x 75	2,190	319				200 x 216	9,530	116
60 x 80	2,930	400	115 x 130	4,030	182	200 x 232	20,220	218
			115 x 135	6,020	235	200 x 242	25,280	276
63 x 69	1,450	137	115 x 140	8,800	284			
63 x 71	1,480	178				215 x 245	22,600	194
63 x 73	1,700	217	120 x 132	4,230	143			
63 x 76	2,340	272	120 x 135	4,390	175	220 x 250	24,200	190
			120 x 140	5,510	227			
65 x 75	1,750	212				225 x 254	24,600	180
65 x 80	2,590	298	125 x 135	3,330	116			
			125 x 137	4,140	139	230 x 260	18,200	126
70 x 80	1,880	198	125 x 140	4,620	170			
70 x 82	2,280	232	125 x 145	5,940	218	250 x 267	12,830	100
70 x 85	2,490	281	125 x 152	8,190	283	250 x 298	30,530	265
70 x 90	3,100	355						
			130 x 142	4,410	133	300 x 318	16,170	89
75 x 85	2,030	185	130 x 150	6,640	212			
75 x 90	2,750	265	130 x 155	7,600	256			

※特殊規格及長度亦接受訂製

SPECIAL SIZE AND LENGTH ARE AVAILABLE UPON REQUEST.

※以上適用壓力係以材質Si52安全係數3作計算，材質STKM13C之通用壓力約為材質Si52之75%。
 ABOVE RECOMMENDED SERVICE PRESSURE ARE BASED ON S.F.3 FOR Si52 GRADE.
 FOR GRADE STKM13C, ONLY 75% PRESSURE ARE RECOMMENDED.



不鏽鋼管 STAINLESS CYLINDER TUBE

油壓用不鏽鋼管 HYDRAULIC HONED STAINLESS TUBE

產品規格 Specification:

1. 材質 GRADE : SUS 304 TKS-C honed tube
2. 內徑公差 I.D. TOLERANCE : H9
3. 內徑粗糙度 I.D. ROUGHNESS : Ra = 0.8 μ m max.
4. 直度 STRAIGHTNESS : 1/1000 max.



常備庫存尺寸價格表 AVAILABLE STOCK SIZES & PRICE LIST

I.D. x O.D. (mm)	UNIT PRICE (NTD/METER)	I.D. x O.D. (mm)	UNIT PRICE (NTD/METER)
25 x 30	3000	63 x 73	7400
32 x 38	3600	80 x 90	10000
40 x 47	4300	100 x 111	12800
50 x 57	5200		

空壓用不鏽鋼管 PNEUMATIC COLD DRAWN STAINLESS TUBE

產品規格 Specification:

1. 材質 GRADE : SUS 304 or 316 TKS-C
2. 內徑公差 I.D. TOLERANCE : H9
3. 內徑粗糙度 I.D. ROUGHNESS : Ra = 0.6 μ m max.
4. 直度 STRAIGHTNESS : 1/1000 max.



常備庫存尺寸價格表 AVAILABLE STOCK SIZES & PRICE LIST

I.D. x O.D. (mm)	UNIT PRICE (NTD/METER)	I.D. x O.D. (mm)	UNIT PRICE (NTD/METER)
6 x 7	480	20 x 21.4	810
8 x 9	500	25 x 26.4	1025
10 x 11	525	32 x 33.6	1375
12 x 13.2	570	40 x 41.6	1700
16 x 17.4	725		

※規格長度每支3米 STANDARD LENGTH 3M/pc

※SPECIAL SIZE ARE AVAILABLE UPON REQUEST.



產品簡介 Features:

本品係用材質A6063之鋁合金管，內外徑經精密冷抽後，施以陽極處理而成，內徑表面光滑耐磨擦，適感應式空壓缸使用。

- ★ GRADE : A6063 TDS-T5
- ★ I.D. surface is super smooth and high abrasive resistance.
- ★ Suitable for magnetic air cylinder.

產品規格 Specification:

1. 材質 GRADE : A6063 TDS-T5
2. 內徑公差 I.D. TOLERANCE : H9-H11
3. 內徑粗糙度 I.D. ROUGHNESS : Ra = 0.6 μm max.
4. 硬陽厚度 I.D. ANODIZATION : 25 μm min.
5. 硬陽硬度 HARDNESS OF I.D. ANODIZED LAYER : 400Hv
6. 直度 STRAIGHTNESS : 1/1000 max.

常備庫存尺寸價格表 AVAILABLE STOCK SIZES & PRICE LIST

I.D. X O.D. X LENGTH (mm)	WEIGHT (Kg/pc)	UNIT PRICE (NTD/PC)	I.D. X O.D. X LENGTH (mm)	WEIGHT (Kg/pc)	UNIT PRICE (NTD/PC)
20 x 25 x 2050	0.98	640	80 x 86 x 3050	6.44	4260
25 x 30 x 2050	1.19	780	100 x 106 x 3050	7.99	5260
32 x 37 x 3050	2.23	1470	125 x 135 x 2050	11.30	7440
40 x 45 x 3050	2.75	1810	150 x 160 x 2050	13.47	8880
50 x 55 x 3050	3.39	2230	160 x 170 x 2050	14.33	9440
63 x 68 x 3050	4.23	2790			

※特殊規格亦接受訂製

SPECIAL SIZE ARE AVAILABLE UPON REQUEST.





鍍硬鉻鋼棒 HARD CHROME BAR

產品簡介 Features:

本品材質為中碳S45C，鋼棒表面經特殊鏡面研磨而成，光滑無比，表面硬鉻層經特殊電鍍技術處理，硬度高達Hv800以上，耐磨擦，抗腐蝕性特佳。

- ★ Steel grade AISI 1045.
- ★ Unique surface grinding and plating technique provide Hv 800 deposit Hardness.
- ★ Extra high abrasive and corrosive resistance.

產品規格 Specification:

1. 材質 GRADE : AISI 1045
2. 外徑精度 O.D. TOLERANCE : h8 or f8
3. 硬鉻厚度 LAYER THICKNESS : 25 μ m min.
4. 硬鉻硬度 SURFACE HARDNESS : Hv 800min.
5. 直度 STRAIGHTNESS : 1/2000 max.
6. 表面粗糙度 SURFACE ROUGHNESS Ra = 0.1-0.25 μ m



常備庫存尺寸價格表 AVAILABLE STOCK SIZES & PRICE LIST

外徑 O.D. (mm)	UNIT PRICE NTD/METER	外徑 O.D. (mm)	UNIT PRICE NTD/METER	外徑 O.D. (mm)	UNIT PRICE NTD/METER	外徑 O.D. (mm)	UNIT PRICE NTD/METER
8	230	25	570	40	1,027	75	3,520
10	240	25.4	620	45	1,254	80	4,090
12	250	28	660	50	1,627	85	4,750
14	260	30	704	55	1,920	90	5,280
16	304	31.5	790	56	1,980	95	5,640
18	367	32	807	60	2,200	100	5,940
20	440	35	880	65	2,640	110	7,600
22.4	527	35.5	917	70	3,080	120	9,460

※特殊材質及規格亦接受訂製

SPECIAL GRADE AND SIZE ARE AVAILABLE UPON REQUEST.



**產品簡介 Features:**

本品係以中碳鋼棒S45C為素材，經高週波處理，表面經特殊鏡面研磨，配合特殊電鍍技術處理而成，無論底材及表面均堅硬耐碰撞及磨擦，在惡劣及重負荷的工作環境下，使用壽命特長。

AISI 1045 bar are treated by unique case harden, surface grinding and chrome-plated technique to reach tough performance both in base and plated material. It prolong the life and minimize the damage from impact, abrasion and corrosion in heavy duty and bad working environment.

產品規格 Specification:

1. 材質 GRADE : AISI 1045
2. 外徑精度 O.D. TOLERANCE : h7 or f8
3. 高週波深度 CASE DEPTH : 2mm
4. 高週波硬度 INDUCTION HARDNESS : HRc 55±3
5. 硬鉻厚度 LAYER THICKNESS : 25 μm min.
6. 硬鉻硬度 SURFACE HARDNESS : Hv 800min.
7. 直度 STRAIGHTNESS : 1/2000 max.
8. 表面粗糙度 SURFACE ROUGHNESS Ra = 0.1-0.25 μm

**常備庫存尺寸價格表 AVAILABLE STOCK SIZES & PRICE LIST**

外徑O.D. (mm)	UNIT PRICE NTD/METER	外徑O.D. (mm)	UNIT PRICE NTD/METER	外徑O.D. (mm)	UNIT PRICE NTD/METER	外徑O.D. (mm)	UNIT PRICE NTD/METER
20	710	45	1,880	65	3,770	90	7,500
25	920	50	2,390	70	4,400	95	8,550
30	1,130	55	2,780	75	5,060	100	9,880
35	1,360	56	2,870	80	5,850	110	11,780
40	1,560	60	3,100	85	6,700	120	14,030

※特殊材質及規格亦接受訂製

SPECIAL GRADE AND SIZE ARE AVAILABLE UPON REQUEST.





產品簡介 Features:

本品係SUJ2之鋼棒，表面經高週波處理，外徑經精密研磨後，再施以硬鉻而成，外徑光滑耐磨擦適用於軸承之滑配。

Uniform hardness prolong service life, Hard chrome plated avoid rust problem, Excellent tolerance & smoothness control to ensure match & operate easily.

產品規格 Specification:

1. 材質 GRADE : SUJ2
2. 外徑公差 O.D. TOLERANCE : g6
3. 高週波深度 CASE DEPTH : 0.5 mm min.
4. 高週波硬度 INDUCTION HARDNESS : HRc 58 min.
5. 表面粗糙度 O.D. ROUGHNESS : Ra = 0.1~0.25 μ m
6. 直度 STRAIGHTNESS : 1/4000 max.



常備庫存尺寸價格表 AVAILABLE STOCK SIZES & PRICE LIST

O.D. x LENGTH (mm)	UNIT PRICE (NTD/METER)	O.D. x LENGTH (mm)	UNIT PRICE (NTD/METER)
6 x 2000	1700	25 x 3000	3600
8 x 2000	1740	30 x 3000	4350
10 x 2000	1780	35 x 3000	5500
12 x 2000	1860	40 x 3000	7400
13 x 2000	1900	50 x 3000	11800
16 x 2000	1950	60 x 3000	17000
20 x 2000	2000		



產品簡介 Features:

本品依DIN 2391/DIN 1630之規定製造而成，具備良加工性及耐高壓之特色，管內無氧化物，光滑無雜質，本品經防鏽處理可長期保存，兩端有塑膠套密封以防止異物進入，尺寸公差精確，適與吸入式接頭一起使用。

- ★ According to DIN 2391/DIN 1630 requirement.
- ★ Excellent performance on workability, flexibility and strength under high pressure.
- ★ No scale on both I.D. and O.D. surface with plastic caps protected on both end.
- ★ Accurate tolerance in dimension for easy connecting with joints.

材質（化學成分、機械性質） Grade (Chemical Composition, Mechanical Properties)

材質 Grade	化學成分 Chemical Composition					抗拉強度kg/mm ² Tensile Strength	引張強度kg/mm ² Yield Strength	伸長率% Elongation	彎曲試驗 Bend Test	
	C	Si	Mn	P	S				彎曲角度 Bend Angle	彎曲半徑 Inside Radius
DIN1630 Si 37.4	0.17 Max.	0.35 Max.	0.35 Min.	0.04 Max.	0.04 Max.	35 49	24min.	25min.	180°	4XO.D.

常備庫存尺寸價格表 AVAILABLE STOCK SIZES & PRICE LIST

鋼管外徑(mm) O.D.	4	6	8	8	10	10	12	12	15	15	15	18	18	18
管壁厚度(mm) Wall Thickness	1.0	1.0	1.0	1.5	1.0	1.5	1.2	1.5	1.2	1.5	2	1.5	2	2.5
UNIT PRICE (NTD/PC)	300	310	370	450	400	520	490	540	550	580	670	640	700	840
適用壓力(kg/cm ²) Apply pressure	553	362	269	409	214	325	214	269	171	214	288	178	239	300

鋼管外徑(mm) O.D.	20	20	20	22	22	25	25	28	30	34	38	42
管壁厚度(mm) Wall Thickness	2.0	2.5	3.0	2.0	2.5	2.5	3.0	3.0	3.0	3.5	4	4
UNIT PRICE (NTD/PC)	760	910	1060	810	980	1120	1310	1460	1520	2260	2920	3170
適用壓力(kg/cm ²) Apply pressure	214	269	325	194	244	214	258	230	214	221	226	204

※規格長度 STANDARD LENGTH : 4 METER

※外徑公差 O.D. TOLERANCE:

6~25mm max. ±0.1mm

25~35mm max. ±0.15mm

36~50mm max. ±0.2mm

