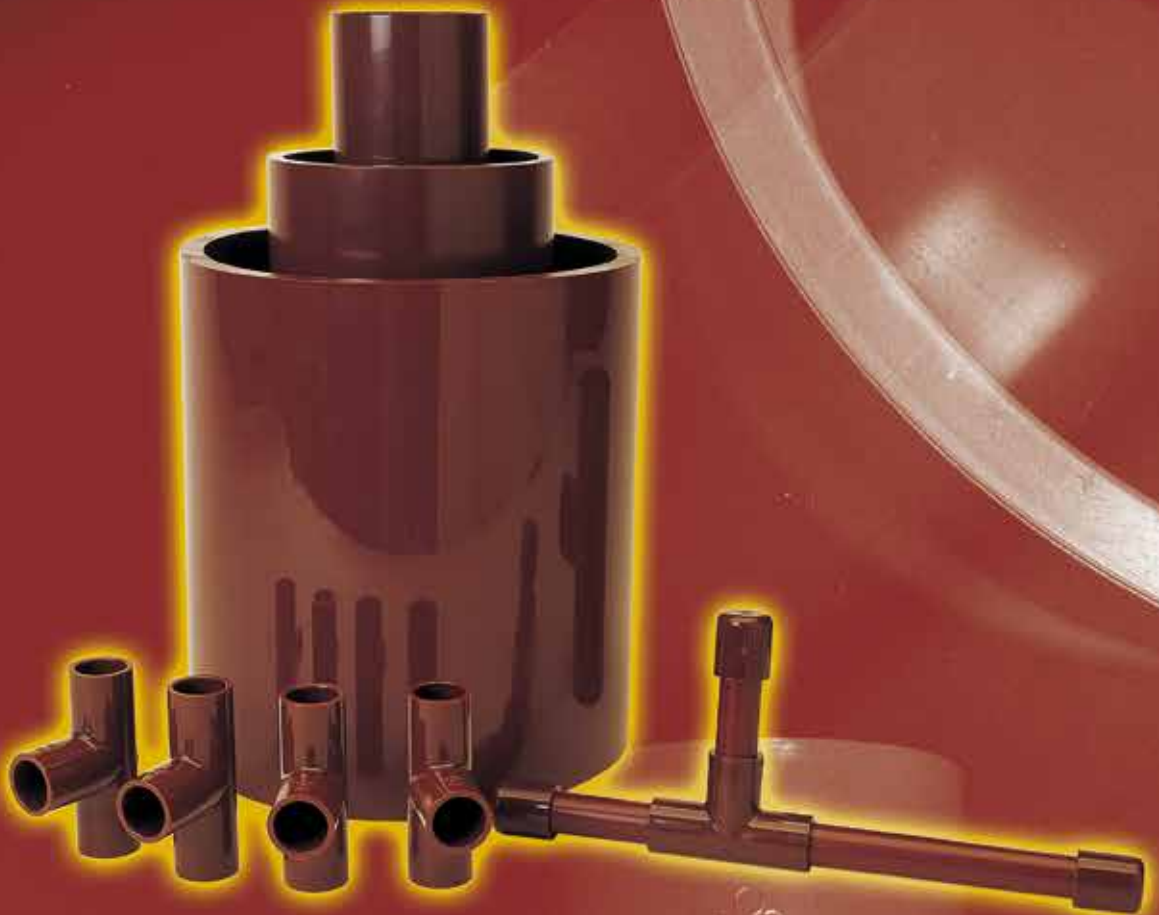




# 耐熱管(HT-CPVC管)&接頭

## HT-CPVC PIPES AND FITTINGS



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# 1

## 前言 Preface

- HT-CPVC管具有優異的耐酸、耐鹼、耐腐蝕、強度高，流體阻力小，不影響水質，質輕，搬運施工簡便，更具有耐熱特性，可廣泛應用於家庭熱水、溫泉水、化工熱流體輸送、工業熱廢水排放及半導體電子工廠的熱水與熱溫化學藥液輸送等工程的配管與消防配管。
- 本公司生產的HT-CPVC管與接頭，品質優良，其成品各種規格、物理與化學特性均符合**CNS 14664 CPVC管**、**CNS 14808 CPVC接頭**、**ASTM F441 CPVC管 SCH40、SCH80的標準要求**，**CPVC材質符合ASTM D-1784的23447之標準要求**，深獲業界一致的好評與愛用。
- 目前本公司擁有全國規模最大，最新式的HT-CPVC管與HT-CPVC接頭的生產設備，其產能高居全國之冠，銷售市場亦遍佈全球，在國內亦可利用密集的經銷網來作最佳的售後服務。

- Featuring excellent acid, alkali and corrosion resistance, high rigidity, minimum fluid resistance and no influence on water quality, the heat-resistant HT-CPVC is a lightweight material for easy handling and installation. It meets a wide range of applications that include household hot water, hot spring water, chemical engineering works, heated fluid supply in semi-conductor Fab. or chemical factories; industrial heated waste water drainage as well as fire fighting works.
- As best-selling products, the HT-CPVC pipes and fittings produced by NAN YA feature a full range of both physical and chemical properties that meet CNS 14664、CNS 14808、ASTM F441 for SCH40、SCH80 standards. CPVC material meet cell classification 23447 of ASTM D-1784.
- Currently, we have the largest and finest production equipment for HT-CPVC pipes and fittings in Taiwan. The overall output, which is

second to none in the local industry, is sold worldwide. At the same time, the intensive local marketing network is delivering satisfactory service as well.



## 1. 耐熱性高：

可應用於93°C以下的熱水，化工熱溫流體的輸送。

## 2. 耐腐蝕性，耐化學藥品性優良：

耐酸、耐鹼、耐腐蝕性優異，熱水熱溫化學藥液配管均很適合。

## 3. 具有優異的保溫性：

熱傳導率很小，約為鋼管的1/360，對於管內流體有保溫作用。

## 4. 不附著水垢：

管壁光滑，不會附著水垢，與同口徑之金屬管比較，其流量較大。

## 5. 不影響水質：

長期使用，不會影響水質，可符合溶解試驗的各項要求。

## 6. 富有電氣絕緣性：

電氣絕緣性良好，可應用於高壓電耐熱電力用管。

## 7. 施工簡便：

與一般之PVC管相同，施工簡便，施工費用低廉。

## 1. Optimal heat resistance:

This makes the product apt for the supply of heated water or heated chemical fluids, which under 93°C.

## 2. Good pharmacopoeia and corrosion resistance:

The optimal resistance to acids, alkalis and corrosion makes the product apt for piping works for hot water and heated chemical fluids.

## 3. Optimal heat insulation:

At minimum heat transmittance: The minimum heat transmittance that is rated at approximately 1/360 that of steel pipes, delivers heat insulation to the fluid inside the pipe.

## 4. No incrustation:

Thanks to the glossy wall that invites no incrustation, the pipe delivers larger flow when compared with metal pipes of identical diameters.

## 5. No impacts on water quality:

When used for long period of time, the pipe does not produce impacts on the water quality and it meets all solution requirements.

## 6. Good electrical insulation:

The good electrical insulation makes the pipe apt for high-voltage and heat-resistant applications.

## 7. Easy installation:

As other PVC pipes, this pipe is installable by using a simple method at minimum cost.

# 3

## HT-CPVC管・接頭用途

## Applications of HT-CPVC pipe and fitting

1. 家庭、餐廳、大飯店等建築物的熱水用管。
2. 一般工廠的熱水用管。
3. 化學工廠的熱溫化學藥液輸送用管與熱溫廢水排放用管。
4. 溫泉配管。
5. 消防用管。
6. 空調系統，熱水循環配管。
7. 高壓電纜，耐熱性電力用管。
8. 半導體電子工廠的熱水與熱溫化學藥品輸送配管。
9. 電鍍工廠的熱溫電鍍藥液配管。
10. 埋地式高壓電力電纜用套管。
11. 其他各種熱溫液體輸送配管。

1. Hot water piping for households, restaurants and hotels.
2. Hot water piping works for manufacturing plants.
3. Delivery pipe for heated chemical fluids and wastewater in chemical plants.
4. Hot spring piping
5. Fire fighting pipes
6. A/C systems, hot water circulation piping system
7. High-voltage cable and heat-resistant power pipes
8. Piping for transfer heated water or heated chemical fluids in semi-conductor Fab.
9. Piping for heated chemical fluids in electroplating plant.
10. Buried piping for high voltage power cable.
11. Other types of heated fluid delivery pipes.



熱水用管 Hot water piping



石化工廠 Petrochemical plant



溫泉配管 Hot Spring piping



半導體廠 Semi-conductor Fab.

## 4

## HT-CPVC管・接頭之物性

## Physical property of HT-CPVC pipes and fitting

### 1. PVC管線/HT-CPVC管線之使用溫度與操作壓力對照表 Temperature Pressure De-rating For Thermoplastic Materials

Elevated temperature fluid mediums require a de-rating of thermoplastic pipe maximum internal pressure ratings at 73°F. To determine the maximum internal pressure rating at an elevated temperature, simply multiply the product pressure rating at 73°F by the percentage specified for the desired temperature.

本表係以常溫73°F(23°C)時，PVC管線/HT-CPVC管線之使用操作壓力為100%，隨著使用溫度升高，其操作壓力殘餘的百分比。

System Operating Temperature °F °C 管線使用溫度	73 (23)	80 (27)	90 (32)	100 (38)	110 (43)	120 (49)	130 (54)	140 (60)	150 (66)	160 (71)	170 (77)	180 (82)	190 (88)	200 (93)	210 (99)
UPVC	100%	90%	75%	62%	50%	40%	30%	22%	-0-	-0-	-0-	-0-	-0-	-0-	-0-
HT-CPVC	100%	100%	91%	82%	73%	65%	57%	50%	45%	40%	32%	25%	22%	20%	-0-

### 2. HT-CPVC管之物性：

#### Physical property of HT-CPVC pipe：

試驗項目 Test Item	品質標準 Test Value	
抗拉強度 Tensile strength test	15°C時為49.0MPa{500kgf/cm <sup>2</sup> }以上 49.0Mpa (500kgf/cm <sup>2</sup> ) and up at 15°C 90°C時為11.8MPa{120kgf/cm <sup>2</sup> }以上 11.8Mpa (120kgf/cm <sup>2</sup> ) and up at 90°C	
耐水壓性 Hydraulic pressure resistance test	3.92MPa{40kgf/cm <sup>2</sup> }無漏水或破裂現象 3.92Mpa {40kgf/cm <sup>2</sup> } showing no leakage or fracture	
耐壓扁性 Flattening strength test	無破裂或裂痕現象 No leakage or fracture	
熱間內壓破裂試驗 Thermal internal-pressure breakage test	90°C溫度加壓1.4MPa{15kgf/cm <sup>2</sup> }無漏水或其他之缺點 At 90°C and 1.4Mpa{15kgf/cm <sup>2</sup> }, no leakage or other flaws	
衛氏(vicat)軟化溫度 Vicat softening temperature test	100°C以上 100°C and over	
灰分試驗 Ash content test	4%以下 4% and below	
管材VCM含量 VCM content test	1.0mg/L以下 1.0mg/L and below	
溶出性 Solubility	濁度 Turbidity	0.5度以下 0.5° and below
	色度 Colorness	1.0度以下 1.0° and below
	過錳酸鉀消耗量 KMnO <sub>4</sub> consumption	2.0mg/L以下 2.0mg/L and below
	鉛溶出量 Pb extraction	0.008mg/L以下 0.008mg/L and below
	鋅溶出量 Zinc extraction	0.5mg/L以下 0.5mg/L and below
	餘氯之減量 Loss of reduced residual chlorine	1.0mg/L以下 1.0mg/l and below
	臭氣及異味 Odor & taste	無不良氣味 No odor
	氯乙烯單體(VCM)溶出量 Molten extraction	0.0015mg/L以下 0.0015mg/L and below
浸漬性 Immersion	蒸餾水 Distilled water	±0.20mg/cm <sup>2</sup> 以內 Within ±0.20mg/cm <sup>2</sup>
	10%氯化鈉溶液 10% sodium chloride solution	
	30%硫酸 30% sulfuric acid solution	
	40%氫氧化鈉溶液 40% sodium hydroxide solution	
	40%硝酸 40% nitric acid solution	

註：(1)自來水用不必試浸漬試驗。 Remarks: (1) No immersion test required for drinking water.  
(2)一般用不必試溶出試驗。 (2) No solution test for regular applications.

## 4

## CPVC管・接頭之物性

## Physical property of HT-CPVC pipes and fitting

## 3. HT-CPVC管接頭之物性：

## Physical property of HT-CPVC fitting：

試驗項目 Test Item		品質標準 Test Value
抗拉強度 Tensile strength test		15°C時為49.0MPa{500kgf/cm <sup>2</sup> }以上 49.0Mpa (500kgf/cm <sup>2</sup> ) and up at 15°C
		90°C時為11.8MPa{120kgf/cm <sup>2</sup> }以上 11.8Mpa (120kgf/cm <sup>2</sup> ) and up at 90°C
耐水壓性 Hydraulic pressure resistance test		3.92MPa{40kgf/cm <sup>2</sup> }無漏水或破裂現象 3.92Mpa {40kgf/cm <sup>2</sup> } showing no leakage or fracture
熱間內壓破裂試驗 Thermal internal-pressure breakage test		90°C溫度加壓1.4MPa{15kgf/cm <sup>2</sup> }無漏水或其他之缺點 At 90°C and 1.4Mpa{15kgf/cm <sup>2</sup> }, no leakage or other flaws
衛氏(vicat)軟化溫度 Vicat softening temperature test		100°C以上 100°C and over
灰分試驗 Ash content test		4%以下 4% and below
接頭VCM含量 VCM content test		1.0mg/L以下 1.0mg/L and below
溶出性 Solubility	濁度 Turbidity	0.5度以下 0.5° and below
	色度 Colorness	1.0度以下 1.0° and below
	過錳酸鉀消耗量 KMnO <sub>4</sub> consumption	2.0mg/L以下 2.0mg/L and below
	鉛溶出量 Pb extraction	0.008mg/L以下 0.008mg/L and below
	鋅溶出量 Zinc extraction	0.5mg/L以下 0.5mg/L and below
	餘氯之減量 Loss of reduced residual chlorine	1.0mg/L以下 1.0mg/L and below
	臭氣及異味 Odor & taste	無不良氣味 No odor
	氯乙烯單體(VCM)溶出量 Molten extraction	0.0015mg/L以下 0.0015mg/L and below
	浸漬性 Immersion	蒸餾水 Distilled water
10%氯化鈉溶液 10% sodium chloride solution		
30%硫酸 30% sulfuric acid solution		
40%氫氧化鈉溶液 40% sodium hydroxide solution		
40%硝酸 40% nitric acid solution		

註：(1)自來水用不必試浸漬試驗。 Remarks: (1) No immersion test required for drinking water.

(2)一般用不必試溶出試驗。 (2) No solution test for regular applications.

## 5

# HT-CPVC管化學性質表

## HT-CPVC Chemical Properties

HT-CPVC管對大部分的酸、鹼、鹽具有優良抗化學藥品性，但是如用於有機溶劑時，物性將顯著降低。

HT-CPVC pipes shows an excellent chemical resistance to most acids, alkaline and salts. But when it is used for organic solvents, it is remarkably swelled and physical properties fall down.

化學品/Chemicals	濃度/Concentration	20°C/68°F	60°C/140°F	80°C/176°F
鹽酸/Hydrochloric acid	20%	Excellent	Excellent	Good
鹽酸/Hydrochloric acid	35%	Excellent	Excellent	Good
硝酸/Nitric acid	40%	Excellent	Fair	Fair
硝酸/Nitric acid	60%	Good	Fair	Not good
硫酸/Sulfuric acid	30%	Excellent	Good	Good
硫酸/Sulfuric acid	50%	Excellent	Good	Not Good
亞硫酸/Sulphurous acid	100%	Good	Not good	Not good
醋酸/Acetic acid	60%	Excellent	Fair	Fair
醋酸/Acetic acid	95%	Good	Not good	Not good
碳酸/Carbonic acid	100%	Excellent	Fair	Fair
苛性鈉(氫氧化鈉)/Caustic soda	40%	Excellent	Excellent	Good
苛性鈉(氫氧化鈉)/Caustic soda	60%	Excellent	Excellent	Good
氯化鈉(食鹽)/Sodium chloride	Saturate/高飽合度	Excellent	Excellent	Good
碳酸鈉/Sodium carbonate	Saturate/高飽合度	Excellent	Excellent	Good
硫酸鈉/Sodium sulfate	Saturate/高飽合度	Excellent	Excellent	Good
過氧化氫/Hydrogen peroxide	Less than 30%/ 30%以下	Excellent	Good	Not good
碳酸銨/Ammonium carbonate	Saturate/高飽合度	Excellent	Excellent	Good
甲醇/Methanol	100%	Excellent	Fair	Unavailable
乙醇/Ethanol	100%	Excellent	Good	Unavailable
異丙醇/Isopropanol	100%	Excellent	Good	Good
丁醇/Butanol	100%	Excellent	Good	Fair
甘油(丙三醇)/Glycerine	100%	Excellent	Excellent	Excellent
丙酮/Acetone	100%	Unavailable	Unavailable	Unavailable
乙酮/Methyl ethyl ketone	100%	Unavailable	Unavailable	Unavailable
甲苯/Toluene	100%	Unavailable	Unavailable	Unavailable



## 6

# HT-CPVC管規格

## Specifications of HT-CPVC pipes

### 1. HT-CPVC管 CNS規格：(CNS 14664)

#### CNS 14664 Specifications of HT-CPVC pipes：

單位:mm Unit: mm

標稱管徑 Normal pipe size		外徑及許可差 <sup>(1)</sup> Outside diameter & tolerance <sup>(1)</sup>	厚度 Wall thickness		近似內徑 (參考) Approx. inside diameter	質量(kg/m) <sup>(2)</sup> (參考) Approx. weight (kg/M) <sup>(2)</sup>
			最小 Minimum	許可差 Tolerance		
15	½"	22±0.1	2.86	+0.6	16	0.245
20	¾"	26±0.1	2.80	+0.6	20	0.326
25	1"W	32±0.13	3.20	+0.6	25	0.473
32	1¼"W	38±0.13	3.20	+0.6	31	0.573
40	1½"	48±0.15	3.70	+0.6	40	0.822
50	2"	60±0.15	4.10	+0.8	51	1.186
65	2½"	76±0.18	5.40	+0.8	65	1.912
80	3"	89±0.18	5.50	+0.8	78	2.303
100	4"	114±0.2	6.60	+0.8	100	3.601
125	5"	140±0.25	7.00	+1.0	125	4.668
150	6"	165±0.28	12.45	+1.2	140	9.523
200	8"	216±0.38	12.52	+1.4	191	12.774
250	10"	267±0.38	14.73	+1.8	237	18.632
300	12"	318±0.38	17.13	+2.2	280	25.842

註/ Note：

1. 外徑係指任意垂直兩方向之外徑算術平均值。
  2. 質量之計算係以最小厚度加厚度許可差之1/2為計算厚度，並以比重為1.51而計算者。
1. Outer diameter shall refer to the arithmetic mean value of any 2 given O.D. at the right angle to each other.
  2. Approximate weight shall be estimated by adding the minimum thickness to 1/2 of the allowable thickness tolerance at the specific gravity of 1.51.

## 6

## HT-CPVC管規格

## Specifications of HT-CPVC pipes

## 2. HT-CPVC管 ASTM規格：

## ASTM Specifications of HT-CPVC pipes：

單位:mm Unit: mm

ASTM標準					
規格 SIZE	外徑及公差 Outside Diameter & Tolerance	SCH40		SCH80	
		厚度及公差 Thickness & Tolerance	參考重量(Kg/M) Weight	厚度及公差 Thickness & Tolerance	參考重量(Kg/M) Weight
3/8"	0.675±0.004 (17.14±0.10)	0.091+0.020 (2.31+0.51)	0.179	0.126+0.020 (3.20+0.51)	0.226
1/2"	0.840±0.004 (21.34±0.10)	0.109+0.020 (2.77+0.51)	0.265	0.147+0.020 (3.73+0.51)	0.330
3/4"	1.050±0.004 (26.67±0.10)	0.113+0.020 (2.87+0.51)	0.351	0.154+0.020 (3.91+0.51)	0.448
1"	1.315±0.005 (33.40±0.13)	0.133+0.020 (3.38+0.51)	0.517	0.179+0.021 (4.55+0.53)	0.657
1 1/4"	1.660±0.005 (42.16±0.13)	0.140+0.020 (3.56+0.51)	0.699	0.191+0.023 (4.85+0.58)	0.909
1 1/2"	1.900±0.006 (48.26±0.15)	0.145+0.020 (3.68+0.51)	0.833	0.200+0.024 (5.08+0.61)	1.103
2"	2.375±0.006 (60.32±0.15)	0.154+0.020 (3.91+0.51)	1.117	0.218+0.026 (5.54+0.66)	1.526
2 1/2"	2.875±0.007 (73.02±0.18)	0.203+0.024 (5.16+0.61)	1.763	0.276+0.033 (7.01+0.84)	2.327
3"	3.500±0.008 (88.90±0.20)	0.216+0.026 (5.49+0.66)	2.309	0.300+0.036 (7.62+0.91)	3.117
4"	4.500±0.009 (114.30±0.23)	0.237+0.028 (6.02+0.71)	3.285	0.337+0.040 (8.56+1.02)	4.558
5"	5.563±0.010 (141.30±0.25)	0.258+0.031 (6.55+0.79)	4.456	0.375+0.045 (9.52+1.14)	6.322
6"	6.625±0.011 (168.28±0.28)	0.280+0.034 (7.11+0.86)	5.787	0.432+0.052 (10.97+1.32)	8.700
8"	8.625±0.015 (219.08±0.38)	0.322+0.039 (8.18+0.99)	8.716	0.500+0.060 (12.70+1.52)	13.216
10"	10.750±0.015 (273.5±0.38)	0.365+0.044 (9.27+1.12)	12.377	0.593+0.071 (15.06+1.80)	19.628
12"	12.750±0.015 (323.85±0.38)	0.406+0.049 (10.31+1.24)	16.332	0.687+0.082 (17.45+2.08)	26.961
14"	14.000±0.015 (355.60±0.38)	0.437+0.053 (11.10+1.35)	19.333	0.750+0.090 (19.05+2.29)	32.345
16"	16.000±0.019 (406.40±0.48)	0.500+0.060 (12.70+1.52)	25.256	0.750+0.090 (19.05+2.29)	41.584

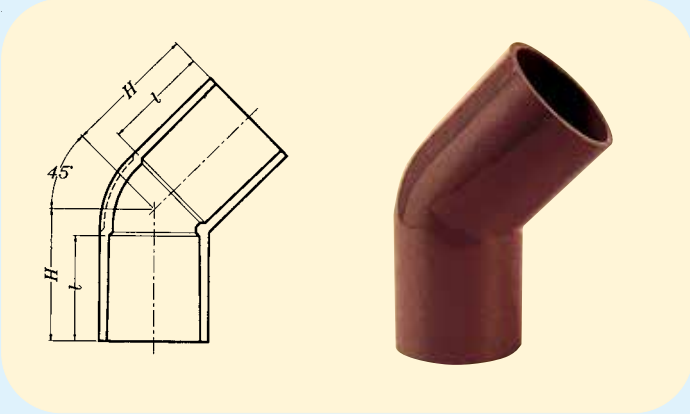
# 7

## HT-CPVC接頭規格(CNS 14808)

### Specification of HT-CPVC Fittings

#### 45° L 型給水接頭 45° XELBOW

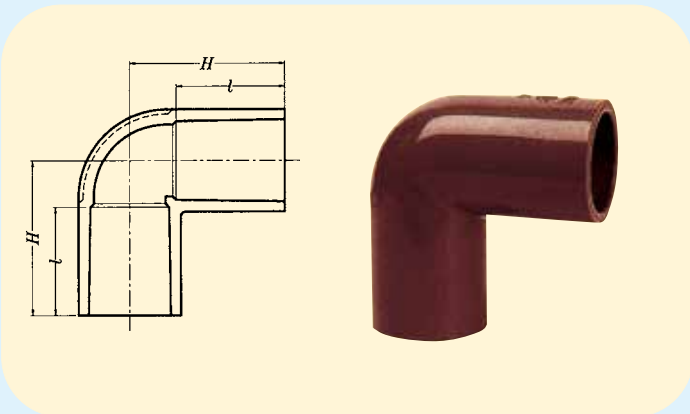
單位：mm



規格 SIZE	ℓ	H
16 1/2"	30	38
20 3/4"	35	44
27 1"	40	51
35 1 1/4"	44	56
40 1 1/2"	55	69
50 2"	63	80
65 2 1/2"	69	90
80 3"	72	95
90 3 1/2"	80	105
100 4"	92	121
125 5"	112	150
150 6"	140	185
200 8"	172	224
250 10"	185	248

#### 90° L 型給水接頭 90° XELBOW

單位：mm



規格 SIZE	ℓ	H
13 3/8"	26	36
16 1/2"	30	43
20 3/4"	35	50
25 1"-W	40	58
28 1"	40	60
30 1 1/4"-W	44	65
35 1 1/4"	44	68
40 1 1/2"	55	82
50 2"	63	96
65 2 1/2"	69	110
80 3"	72	120
90 3 1/2"	80	135
100 4"	92	152
125 5"	112	188
150 6"	140	228
200 8"	172	288
250 10"	185	326

註/Remark :

1. 1 1/2"以下規格之下水道用為橘紅色。

2. 製品亦可依點線製造。

1. Specification of above 1 1/2" for sewerage use are reddish-orange color.

2. Production can follow the instructions along dashed lines as well.

## 7

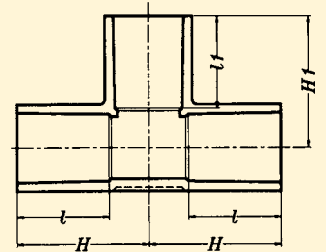
## HT-CPVC接頭規格(CNS 14808)

## Specification of HT-CPVC Fittings

單位：mm

規格 SIZE	$\ell$	$\ell 1$	H	H1
13X13 3/8"	26	26	36	36
16X13 1/2"X3/8"	30	26	41	38
16X16 1/2"	30	30	43	43
20X13 3/4"X3/8"	35	26	46	40
20X16 3/4"X1/2"	35	30	48	45
20X20 3/4"	35	35	50	50
25X13 1"WX3/8"	40	26	51	43
25X16 1"WX1/2"	40	30	53	48
25X20 1"WX3/4"	40	35	55	53
25X25 1"W	40	40	58	58
28X13 1"X3/8"	40	26	51	45
28X16 1"X1/2"	40	30	53	49
28X20 1"X3/4"	40	35	55	54
28X28 1"	40	40	60	60
30X30 1 1/4"W	44	44	65	65
35X13 1 1/4"X3/8"	44	26	55	52
35X16 1 1/4"X1/2"	44	30	57	53
35X20 1 1/4"X3/4"	44	35	59	58
35X28 1 1/4"X1"	44	40	64	63
35X35 1 1/4"	44	44	68	68
40X13 1 1/2"X3/8"	55	26	66	52
40X16 1 1/2"X1/2"	55	30	68	56
40X20 1 1/2"X3/4"	55	35	70	62
40X25 1 1/2"X1"W	55	40	73	67
40X28 1 1/2"X1"	55	40	75	67
40X30 1 1/2"X1 1/4"W	55	44	76	71
40X35 1 1/2"X1 1/4"	55	44	79	71
40X40 1 1/2"	55	55	82	82
50X13 2"X3/8"	63	26	74	58
50X16 2"X1/2"	63	30	76	64
50X20 2"X3/4"	63	35	78	68
50X25 2"X1"W	63	40	81	73
50X28 2"X1"	63	40	82	74
50X35 2"X1 1/4"	63	44	86	77
50X40 2"X1 1/2"	63	55	90	88
50X50 2"	63	63	96	96
65X40 2 1/2"X1 1/2"	69	55	96	96
65X50 2 1/2"X2"	69	63	102	104
65X65 2 1/2"	69	69	110	110
80X20 3"X3/4"	72	35	90	82
80X28 3"X1"	72	40	94	87
80X40 3"X1 1/2"	72	55	100	102
80X50 3"X2"	72	63	105	110
80X65 3"X2 1/2"	72	69	113	117
80X80 3"	72	72	120	120
90X90 3 1/2"	80	80	135	135
100X40 4"X1 1/2"	92	55	120	115
100X50 4"X2"	92	63	125	122
100X80 4"X3"	92	72	140	132
100X100 4"	92	92	152	152
125X80 5"X3"	112	72	160	148
125X100 5"X4"	112	92	174	168
125X125 5"	112	112	188	188
150X80 6"X3"	140	72	193	160
150X100 6"X4"	140	92	202	182
150X125 6"X5"	140	112	214.5	200
150X150 6"	140	140	228	228
200X100 8"X4"	172	92	236.5	204
200X150 8"X6"	172	140	264	252
200X200 8"	172	172	287.5	287
250X250 10"	185	185	325	325

## T 型給水接頭 TEE



註：製品亦可依點線製造。

Remark : Production can follow the instructions along dashed lines as well.

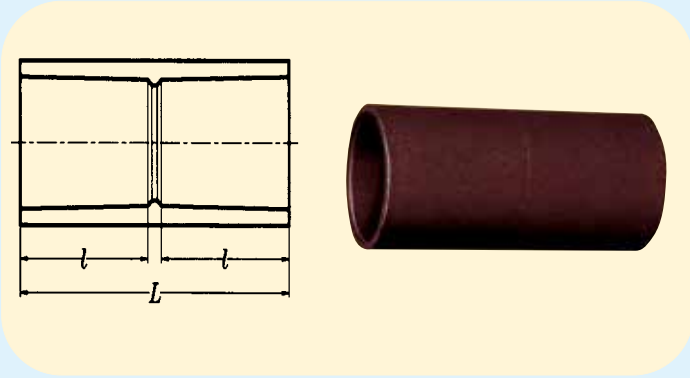
# 7

## HT-CPVC接頭規格(CNS 14808)

### Specification of HT-CPVC Fittings

#### 同徑普通給水接頭 COUPLING

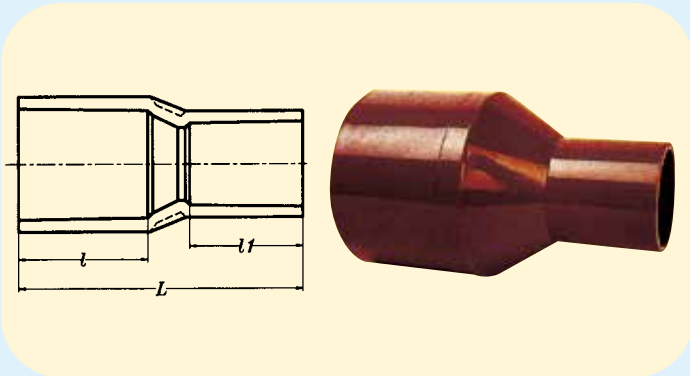
單位：mm



規格 SIZE	ℓ	L
13 3/8"	26	57
16 1/2"	30	65
20 3/4"	35	77
25 1"-W	40	87
28 1"	40	87
35 1 1/4"	44	95
45 1 1/2"	55	117
50 2"	63	133
65 2 1/2"	69	147
80 3"	72	155
90 3 1/2"	80	166
100 4"	92	200
125 5"	112	235
150 6"	140	300
200 8"	172	360
250 10"	185	400

#### 異徑普通給水接頭 REDUCER COUPLING

單位：mm



規格 SIZE	ℓ	ℓ 1	L
16X13 1/2"X3/8"	30	26	67
20X13 3/4"X3/8"	35	26	68
20X16 3/4"X1/2"	35	30	72
25X20 1"WX3/4"	40	35	84
28X16 1"X1/2"	40	30	86
28X20 1"X3/4"	40	35	88
30X25 1 1/4"X1"W	44	40	95
35X16 1 1/4"X1/2"	44	30	100
35X20 1 1/4"X3/4"	44	35	96
35X28 1 1/4"X1"	44	40	96
40X16 1 1/2"X1/2"	55	30	114
40X20 1 1/2"X3/4"	55	35	110
40X28 1 1/2"X1"	55	40	112
40X35 1 1/2"X1 1/4"	55	44	108
50X16 2"X1/2"	63	30	120
50X20 2"X3/4"	63	35	135
50X28 2"X1"	63	40	136
50X35 2"X1 1/4"	63	44	136
50X40 2"X1 1/2"	63	55	136
65X40 2 1/2"X1 1/2"	69	55	150
65X50 2 1/2"X2"	69	63	153
80X40 3"X1 1/2"	72	55	165
80X50 3"X2"	72	63	165
80X65 3"X2 1/2"	72	69	165
100X40 4"X1 1/2"	92	55	190
100X50 4"X2"	92	63	208
100X80 4"X3"	92	72	190
125X100 5"X4"	112	92	225
150X80 6"X3"	140	72	260
150X100 6"X4"	140	92	280
150X125 6"X5"	140	112	295
200X100 8"X4"	172	92	340
200X125 8"X5"	172	112	345
200X150 8"X6"	172	140	350
250X200 10"X8"	185	172	420

註/Remark :

1. 1 1/2"以下規格之下水道用為橘紅色。

2. 製品亦可依點線製造。

1. Specification of above 1 1/2" for sewerage use are reddish-orange color.

2. Production can follow the instructions along dashed lines as well.

# 7

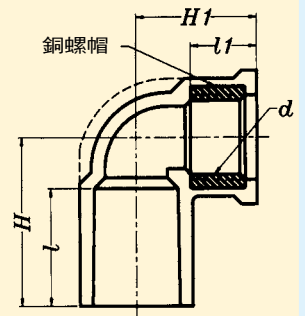
## HT-CPVC接頭規格(CNS 14808) Specification of HT-CPVC Fittings

單位：mm

規格 SIZE	$\ell$	H	螺牙 THREAD		H1
			d	$\ell_1$	
16 1/2"	30	43	PF1/2"	16.5	32
20 3/4"	35	51	PF3/4"	18.5	36.5
28 1"	40	60	PF 1"	21	42.5

### L 型水龍頭接頭 FAUCET FITTING—90° Elbow

入銅產品  
(Insert bronze nut)



註：製品亦可依點線製造。

Remark: Production can follow the instructions along dashed lines as well.

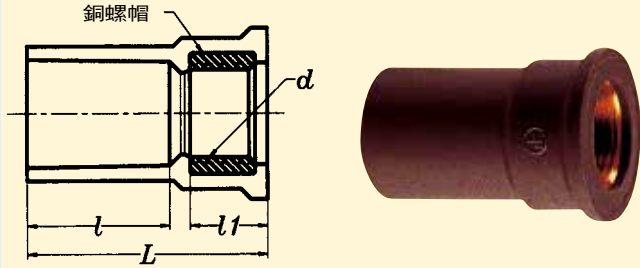
# 7

## HT-CPVC接頭規格(CNS 14808) Specification of HT-CPVC Fittings

單位：mm

### S 型水龍頭接頭 FAUCET FITTING—Female Adapter

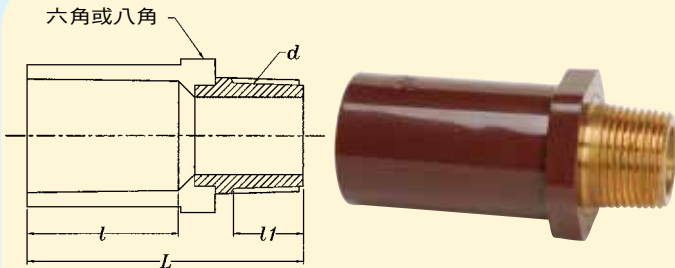
入銅產品  
(Insert bronze nut)



規格 SIZE	$\ell$	螺牙 THREAD		L
		d	$\ell_1$	
16 1/2"	30	PF1/2"	16.5	52
20 3/4"	35	PF3/4"	18.5	63
28 1"	40	PF 1"	21	69

### 止閥接頭 MALE ADAPTER

入銅產品 (Insert bronze nut)

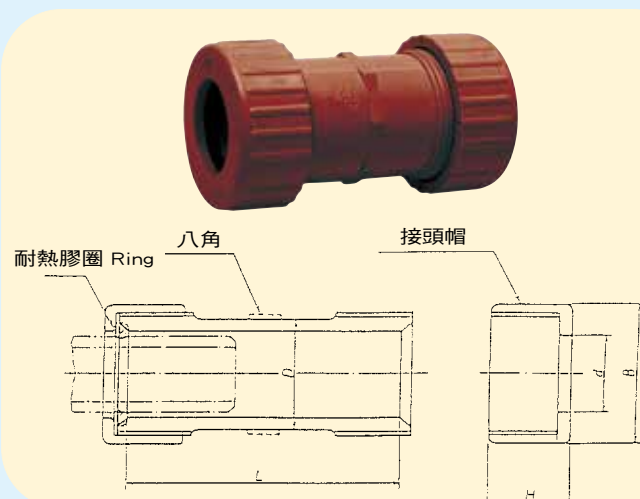


單位：mm

規格 SIZE	$\ell$	螺牙 THREAD		L
		d	$\ell_1$	
16 1/2"	30	PT1/2"	15	68
20 3/4"	35	PT3/4"	17	83
28 1"	40	PT1"	19	97
35 1 1/4"	44	PT1 1/4"	22	108
40 1 1/2"	55	PT1 1/2"	22	112
50 2"	63	PT2"	26	130

### 伸縮接頭 EXPANSION ADAPTER

單位：mm



規格 SIZE	D	L	H (最小值)	d	B (最小值)
1/2" 16	33.8	90	28	22.8	42
3/4" 20	37.8	90	29	26.8	47
1" 28	48.8	96	31	34.8	54

# 7

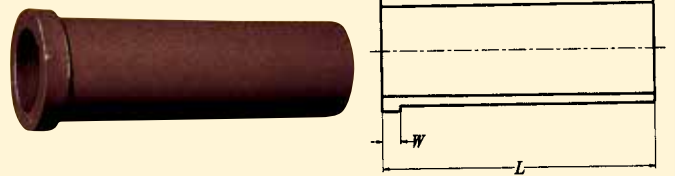
## HT-CPVC接頭規格(CNS 14808)

### Specification of HT-CPVC Fittings

單位 : mm

規格 SIZE	W	L
13 1/2"W	5	80
20 3/4"	6	90
25 1"W	7	100
30 1 1/4"W	8	110
40 1 1/2"	8	120
50 2"	9	130

#### 由令 UNION



單位 : mm

規格 SIZE	ℓ	L	備註 REMARK
13 3/8"	26	29	圖 1 FIG.1
16 1/2"	30	34.5	圖 1 FIG.1
20 3/4"	35	39.5	圖 1 FIG.1
25 1"W	40	44	圖 1 FIG.1
28 1"	40	45	圖 1 FIG.1
30 1 1/4"W	44	48	圖 1 FIG.1
35 1 1/4"	44	49	圖 1 FIG.1
40 1 1/2"	55	59.5	圖 1 FIG.1
50 2"	63	68	圖 1 FIG.1
65 2 1/2"	69	100	圖 2 FIG.2
80 3"	72	107	圖 2 FIG.2
90 3 1/2"	80	120	圖 2 FIG.2
100 4"	92	138	圖 2 FIG.2
125 5"	112	168	圖 2 FIG.2
150 6"	140	205	圖 2 FIG.2
200 8"	172	260	圖 2 FIG.2

#### 塞頭 CAP

圖 1 FIG.1

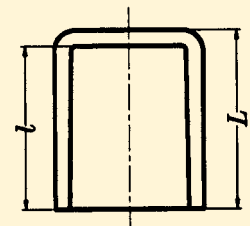
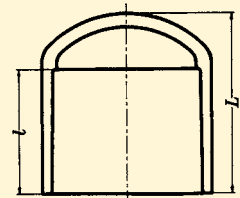


圖 2 FIG.2



註/Remark :

1. 1 1/2" 以下規格之下水道用為橘紅色。
2. 製品亦可依點線製造。
1. Specification of above 1 1/2" for sewerage use are reddish-orange color.
2. Production can follow the instructions along dashed lines as well.

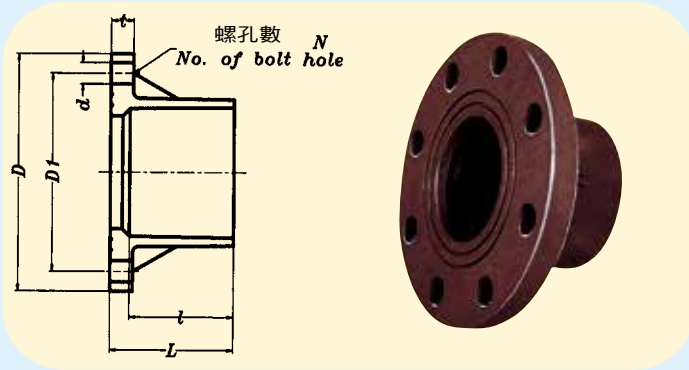


# 7

## HT-CPVC接頭規格(CNS 14808) Specification of HT-CPVC Fittings

### 法蘭接頭 FLANGE

單位 : mm

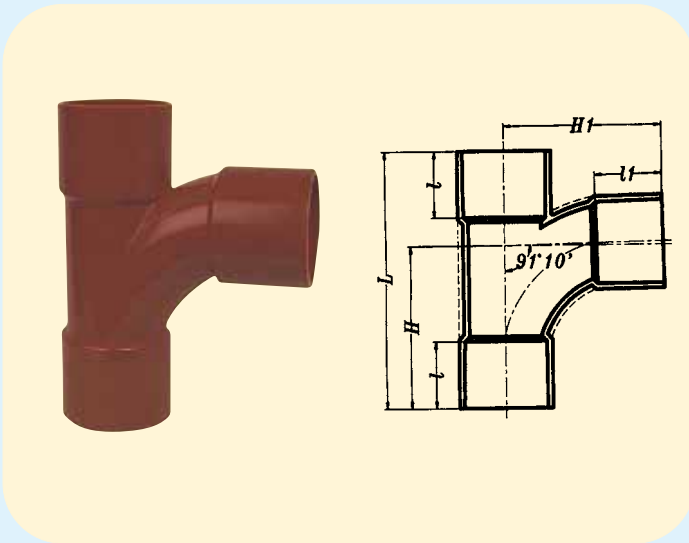


規格 SIZE	D	D1	ℓ	螺孔 Hole		t	L
				d	N		
40 1 1/2"	140	105	55	19	4	17	68
50 2"	155	120	63	19	4	17	76
65 2 1/2"	175	140	69	19	4	18	83
80 3"	185	150	72	19	8	20	86
100 4"	210	175	92	19	8	20	107
125 5"	250	210	112	23	8	20	130
150 6"	280	240	140	23	8	22	165
200 8"	330	290	172	23	12	22	195
250 10"	400	355	185	25	12	24	235
300 12"	445	400	230	25	16	30	295

註：每法蘭接頭附1pc膠墊圈。  
Remark : Each flanged connector comes with an 1PC washer.

### 順 T 接頭 SANITARY TEE

單位 : mm



規格 SIZE	ℓ	ℓ1	H	H1	L
40X40 1 1/2"	55	55	111	111	180
50X40 2"X1 1/2"	63	55	114	118	192
50X50 2"	63	63	114	127	200
65X65 2 1/2"	68	68	132	140	234
80X50 3"X2"	72	63	140	145	235
80X80 3"	72	72	177	172	280
100X50 4"X2"	92	63	154	152	270
100X80 4"X3"	92	72	194	182	318
100X100 4"	92	92	224	219	355
125X80 5"X3"	112	72	235	198	350
125X100 5"X4"	112	92	235	219	388
125X125 5"	112	112	252	233	416
150X50 6"X2"	140	63	215	180	420
150X80 6"X3"	130	72	230	207	420
150X100 6"X4"	130	92	246	234	425
150X125 6"X5"	140	112	273	252	468
150X150 6"	140	140	290	295	495
200X50 8"X2"	172	63	245	210	440
200X80 8"X3"	172	72	265	235	470
200X100 8"X4"	172	92	262	263	510
200X150 8"X6"	172	140	307	320	560
200X200 8"	172	172	347	360	615
250X150 10"X6"	185	140	332	345	588

## 7

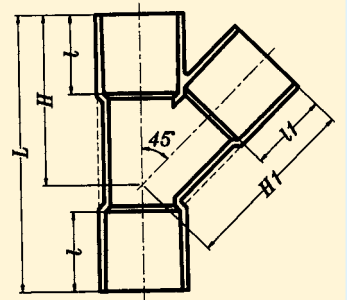
## HT-CPVC接頭規格(CNS 14808)

## Specification of HT-CPVC Fittings

單位 : mm

規格 SIZE	$\ell$	$\ell 1$	H	H1	L
40X40 1 1/2"	55	55	116	119	185
50X40 2"X1 1/2"	63	55	132	128	202
50X50 2"	63	63	141	142	220
80X50 3"X2"	72	63	164	164	239
80X80 3"	72	72	180	188	280
100X50 4"X2"	92	63	195	185	285
100X80 4"X3"	92	72	213	202	319
100X100 4"	92	92	230	240	355
125X50 5"X2"	112	63	233	192	337
125X80 5"X3"	112	72	252	216	372
125X100 5"X4"	112	92	272	252	415
125X125 5"	112	112	282	292	434
150X50 6"X2"	140	63	270	228	385
150X80 6"X3"	130	72	282	240	412
150X100 6"X4"	130	92	294	274	435
150X125 6"X5"	140	112	322	310	500
150X150 6"	140	140	344	352	530
200X50 8"X2"	172	63	327	258	445
200X80 8"X3"	172	72	345	282	485
200X100 8"X4"	172	92	362	316	520
200X150 8"X6"	172	140	400	394	600
200X200 8"	172	172	446	433	690
250X150 10"X6"	185	140	450	430	625

## 45° Y 型接頭 45° WYE



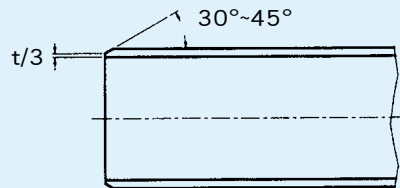
## 8

## HT-CPVC管的接合施工法(冷接法)

## Installation of HT-CPVC pipes (Unheating connection)

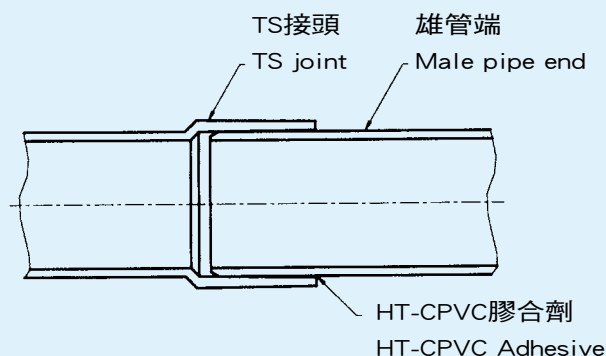
1. 雄管端以粗目銼刀或砂輪沿30~45°外角，其殘留之厚度約1/3t，但不得小於1mm（如下圖所示）。

1. Whittle the outside angle of male pipe using a file or sander in 30~45° the remaining edge shall be of 1/3 t, but never less than 1mm (as shown below).



2. 為軟化、半滲透接合處，以增加接合強度，接頭內部、管端外部應均勻塗抹清潔劑，塗抹範圍至少應與插入長度相同。
3. 承口內部與管端外表，用乾布擦拭乾淨，於承口內與雄管端表面各塗佈HT-CPVC膠合劑，待部份溶劑揮發而膠著性增強時，則用力插入，並旋轉90°角度，使膠合劑之塗佈更為均勻。中大口徑不必旋轉，但插入後管端可墊以厚板或角材加以輕輕槌入。
4. CPVC膠合劑乾涸期間，請勿移動。

2. In order to increase the joint strength please smear the primer on the inside of fitting and outside of pipe for the primer to adequately penetrate. The primer must be cover the joint area.
3. Wipe clean the inside of the fitting and outside of the pipe using a piece of dry cloth. Apply vinyl adhesive in proper quantity on the inside of the fitting and the outside of the male pipe. When the solvent becomes partially volatilized and the adhesion reinforced, insert the pipe and turn it 90° to allow even spreading of the adhesive. Do not turn pipes of medium and large diameters. Though, after the insertion, pad in by slighting hammering in a thick plate or a corner lining into the pipe end.
4. Please don't move the pipes and fittings before the CPVC adhesive volatilied.



## 9

## HT-CPVC管施工應注意事項

## Instructions for installation of HT-CPVC pipes

1. HT-CPVC管之耐熱使用範圍：HT-CPVC管一般使用於200°F(93°C)以下之熱溫流體，其使用溫度與使用壓力之關係，請參照P5。
  2. 混凝土之埋設：HT-CPVC管應儘量避免埋設於混凝土之內，如需埋設時須留意伸縮問題，且打混凝土前，管線須試10kgf/cm<sup>2</sup>的靜水壓，並維持1小時，無破裂或漏水時始可打混凝土。
  3. 膠合劑的選用：HT-CPVC管線的接合須採用耐熱CPVC膠合劑，不可採用一般性之硬質UPVC膠合劑。
  4. 現場熱加工之防止：HT-CPVC管或HT-CPVC接頭，禁止在工地作熱加工或以焊條焊接。
  5. 結凍之防止：HT-CPVC管與一般HT-UPVC管相同，在寒帶地區之露出配管，須做凍結防止措施，其保溫材應採用耐熱性材質。
  6. 紫外線的防止：陽光直接照射，表面會加速褪色，故露出配管時，管線需以保溫材保護或表面加以被覆。
  7. HT-CPVC管之褪色問題：HT-CPVC管長期使用於80-90°C之高溫下，表面雖會變白，但是對品質上不會有異常。
  8. HT-CPVC管的支撐：HT-CPVC管的支撐距離，如下表所示供參考。
1. Range of heat resistance of HT-CPVC pipe: The HT-CPVC pipe is usually used for heated fluids of up to 200°F(93°C). The relationship between temperature and the applicable pressure is given in page 5.
  2. Embedding in RC: Embedding of HT-CPVC pipes in RC shall be avoided. When necessary, be sure to leave a proper expansion margin. Before grouting RC, a 1-hour static hydraulic test of 10 kgf/cm<sup>2</sup> shall be conducted and the test shall show no fracture or leakage.
  3. Selection of adhesives: Adhesion of the HT-CPVC pipe shall be carried out with a heat-resistant type for CPVC and no ordinary vinyl adhesive shall be used.
  4. Prevention of site heating: No HT-CPVC or HT-UPVC fittings shall be heated or welded with a rod in the work site.
  5. Prevention of freezing: Just like an ordinary HT-UPVC pipe, all adapters used in cold areas shall be provided with freezing measures and the insulation material shall be heat-resistant.
  6. Prevention of ultraviolet rays: Direct sunshine on the surface of the pipe would make the pipe decolor. The protruding adapter shall be coated with insulation materials.
  7. Decoloring HT-CPVC: When used in environment of 80-90°C for long periods of time, the surface of the pipe may turn whitish, though the quality remains the same.
  8. Support of HT-CPVC pipes: HT-CPVC pipes shall be properly supported at the following pitch:

單位：m/ Unit：m

標稱管徑 Nominal diameter	縱向支撐距離 Longitudinal pitch	橫向支撐距離 Horizontal pitch
35m/m(11/4")以下/and under	1.0	0.6
40m/m(11/2")-65m/m(21/2")	1.5	1.0
80m/m(3")-150m/m(6")	2.0	1.5
200m/m(8")以上/and up	2.5	2.0

# 9

## HT-CPVC管施工應注意事項

### Instructions for installation of HT-CPVC pipes

9. HT-CPVC管的搬運卸貨：HT-CPVC管於搬運中或施工中應防止掉落，卸貨時亦禁止用拋落之不當方法。

9. Handling and unloading of HT-CPVC pipe: When handling or installing HT-CPVC pipes, keep them from falling. When unloading them, do not drop them.

10. HT-CPVC管管線之伸縮問題：

10. Expansion of HT-CPVC pipes:

1. HT-CPVC管線之解決伸縮問題，請儘量採用圈狀伸縮接頭，或具有耐熱橡膠環的伸縮接頭。

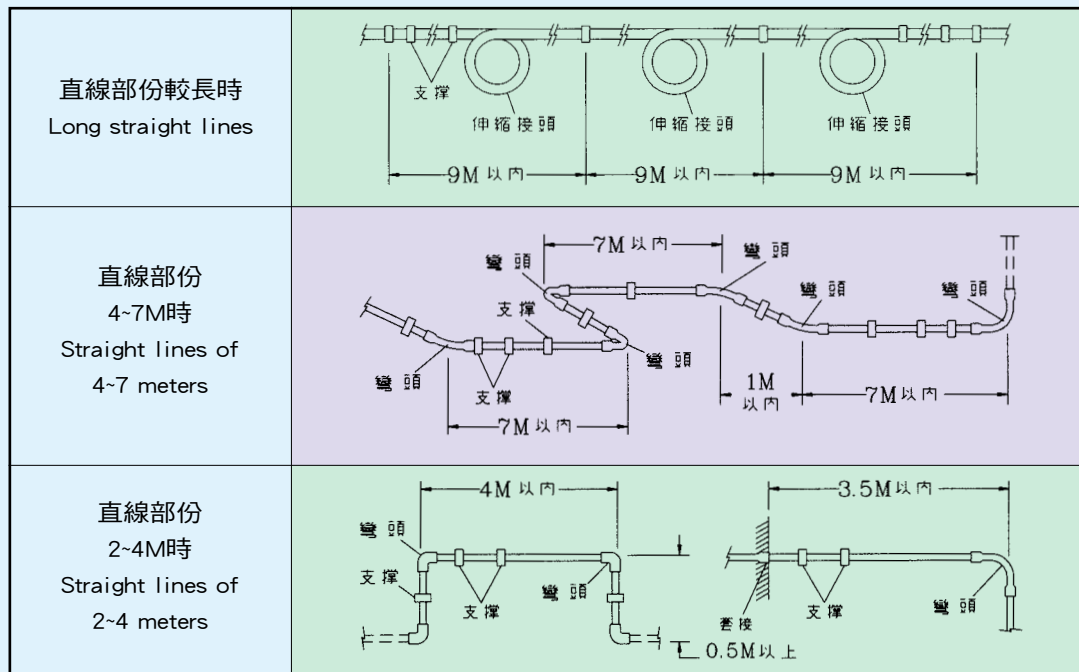
(1) As solution to the issue of expansion of HT-CPVC pipes, use tubular adapters or adapters having a heat-resistance rubber ring.

2. HT-CPVC管橫向直向配管，每9m長需裝配1PC伸縮接頭，如不採用伸縮接頭，則每7m以內採用90°彎頭作平面狀配管，以縮短直線配管長度，並由彎頭來吸收熱脹冷縮所產生之內應力，其考慮伸縮問題的橫向配管施工，請參照下圖。HT-CPVC管線膨脹係數為 $7 \times 10^{-5}/^{\circ}\text{C}$ ，伸縮量範例：

(2) One expansion adapter shall be provided to the HT-CPVC pipe in both horizontal and vertical direction at every 9 meters. If no expansion adapter is used, a flat bend of 90° shall be provided at every than 7 meters. The purpose of this adapter is to reduce the stretch of the linear piping and the bend would absorb the internal stress created by the expansion. For transverse piping works, the issue of expansion shall be dealt in the following manner.

水溫溫差 $^{\circ}\text{C}$	伸縮量/HT-CPVC管直線距離
20 $^{\circ}\text{C}$	1.4cm/10M
40 $^{\circ}\text{C}$	2.8cm/10M

11. The tops of HT-CPVC pipe line, which has to instal automatic discharge valve.



11. HT-CPVC管線最高點，均應加裝自動排氣閥。

12. HT-CPVC adhesive can not touch with water.

12. HT-CPVC膠合劑，不可參混水份。

13. Installation the insert bronze nut CPVC fittings, please follow the appropriate torque as below tightening the insert bronze nut CPVC fittings. Please note, do not use excessive force closure may cause crack CPVC fittings.

13. 使用CPVC入銅接頭產品，請依照下列適當扭矩鎖合銅螺帽(牙)，請注意，不可使用過大的力量鎖合，鎖合扭矩過大可能造成CPVC接頭裂開。

單位：N-m

規格 SIZE	1/2"(16)	3/4"(20)	1"(28)	1 1/4"(35)	1 1/2"(40)	2"(50)
扭矩 Torque	20-29	39-49	49-59	59-69	69-78	78-88

**一、產品用途：**

1. 硬質CPVC管與CPVC管之接合。
2. 硬質CPVC管與CPVC接頭配件之接合。

**二、產品特色：**

1. 硬質CPVC材質接著性佳。
2. 以CPVC硬質膠合劑接著凝固後仍具CPVC特性。
3. 施工簡便乾燥速度快，接著性佳。

**三、CPVC硬質膠合劑使用選擇說明：**

1. 口徑2吋(含)以下CPVC配管，使用CPVC硬質膠合劑(AASBA、黏度500~1000CPS)。
2. 口徑2~12吋CPVC配管，建議使用高黏度CPVC硬質膠合劑(AASBH、黏度1600CPS以上)。
3. 12吋以上管徑管件間隙較大，施工粘著時務必經多次塗佈，一定要將管件間隙完全填滿膠，方可確保無施工異常發生。
4. 管線粘著施工期間不能移動，依CNS規範常溫經時24小時後即可通水；低溫5℃以下需經時48小時後再通水。

\*\*給水管有耐壓需求應依實務需求執行水壓測試正常後，再大範圍施作或覆蓋水泥。

**I. Applications**

1. Gluing rigid CPVC pipes.
2. Gluing rigid CPVC pipe and CPVC fitting.

**II. Characteristics**

1. Superb adhesion with rigid CPVC materials.
2. With same CPVC characteristics after solidification when gluing PVC-U pipe with CPVC vinyl adhesive.
3. Easy for construction; quick-drying after installation.

**III. Remarks**

1. Gluing CPVC pipe (Size: below 2 inches) with AASBA vinyl adhesive (Viscosity: 80~100CPS).
2. Gluing PVC-U pipe (Size: 2~12 inches) with AASBH vinyl adhesive (Viscosity: above 1600CPS).
3. To ensure that nothing happened during PVC-U piping projects (Pipe size: above 12 inches), please glue PVC-U pipes over and over again with vinyl adhesive until there is not any gap in pipes.
4. Do not move the pipeline during the construction. Besides, according to CNS standards, it is suggested that water be transferred after 24 hours at normal temperature or after 48 hours at 5°C.

\*\*To meet the requirement of pressure resistance, water supply pipe should pass the hydrostatic test before cement covering.





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