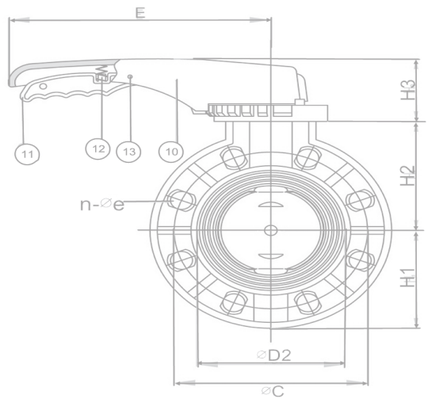
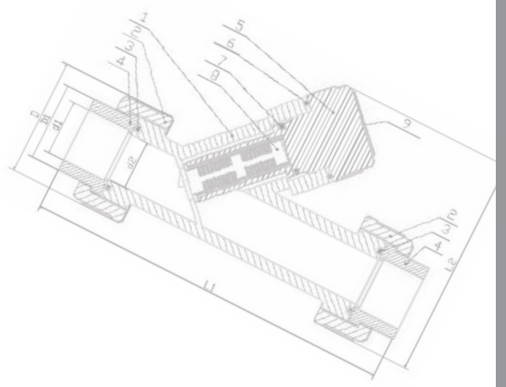
TAIWAN





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SANKING

Edition 5th

JUMPANNY Liquid System

KEKALBOLEH SDN BHD
(199901021248/496148-K)
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Pusat Perindustrian Kolombong Jaya,
Mile 5.5, Jalan Kolombong,
88450 Kota Kinabalu, Sabah.
Tel/WhatsApp: 088-385555 / 013-8867570
Website: kekalboleh.com

Valves	Fittings	Pipes
➤ Ball Valve	➤ UPVC Sch 80	➤ UPVC Sch 80
➤ Butterfly Valve	➤ CPVC Sch 80	➤ CPVC Sch 80
➤ Check Valve	➤ Clear PVC	➤ Clear PVC
➤ Foot Valve	➤ DIN PN16	➤ DIN PN16
➤ Y Strainer	➤ PP	➤ PP
➤ Pneumatic Valve	➤ Accessory	
➤ Electric Valve		
➤ **Safety Valve**		
➤ **Diaphram Valve**		

TÜV CERT PED 97/23/EC – Module D1 CE 0035

CE

QUALITY ASSURED FIRM ISO 9001 SGS NATIONAL ACCREDITATION OF CERTIFICATION BODIES

三詠開發塑膠製品有限公司
JUMPANNY ENTERPRISE CO., LTD.

發 展 史

..... *HISTORY*

1998年 三詠開發公司，JUMPANNY品牌成立

2000年 設立新竹分公司，服務北部客戶

2002年 成立外銷事業部，行銷全球

2004年 於廈門設立生產及研發中心

2006 年 入駐同安工業區新廠房

2007 年 設立模具製造廠，自行研發產品，並獲ISO認証

2008 年 二期廠房擴建，並獲CE安全認証

2009 年 榮獲高新技術企業殊榮

2013 年 成立JUMPANNY氣動執行器事業部，配合我司閥門銷售

概 況

..... *PROFILE*

『三詠公司』專業生產銷售UPVC、 CPVC、CLEAR PVC、PP、PPH等塑膠直管、 配件及閥門，產品符合 ANSI、JIS、CNS、DIN等國家標準，並取得ISO9001與飲用水衛生安全許可、歐盟CE安全認証。

我們的產品在國內外的銷售使用已20餘年，深受業界廣大用戶的好評，並于2004年投資成立『廈門三登塑膠工業有限公司』，致力於開發生產工業塑膠管路、閥門系統。為了讓產品更穩定完美，我們也是國內第一家採用專業加工機，再加工生產閥門、管件之工廠；經再加工的產品，大大改善了閥門的安全性、精密性能更佳、手動開啟的扭力值更小，使得零配件組裝， 更趨於完美。

JUMPANNY is professional in manufacturing thermoplastic valves since 1998. We always focus on developing innovative valves with top designs and performance, not just quality products.

After more than 23 years development, now we could supply various thermoplastic valvesin UPVC, CPVC, Clear PVC, PPH.. etc., and all products are strictly produced as per international standards such as ANSI, DIN, JIS, CNS, NPT, PT, BSPF and so on.

In order to make our product more perfect, all JUMPANNY valves must pass CNC machine and other fine processing steps before assembly, and 100% testing before leaving our factories. Also, all valves are specially added in UV powder to resist sunlight and enhance the life span. Besides, any CaCO3 or recycled materials are forbidden in JUMPANNY valves, we always committed to the quality and best services, and we believe this policy is correct.

Pipe
Fittings
Valves

好管

Table of Contents

Clear PVC Piping System.....7-10
UPVC SCH 40/80 Piping System.....11-20
CPVC SCH 40/80 Piping System.....21-30
PP Piping System.....31-34
JP-640 True Union Ball Valve.....35-36
JP-690 Tree Way True Union B.V.....37
JP-640 Flanged Type True Union B.V.....38
JP-810 Butterfly Valve (Lever Type).....39
JP-820N Butterfly Valve(Gear Type).....40
JP-P640 Pneumatic Actuator Ball Valve.....41
JP-P690 Pneumatic Actuator Tree Way B.V.....42
JP-P810 Pneumatic Actuator Butterfly V.....43
JP-E640 Electric Actuator 2PCS B.V.....44
JP-E690 Electric Actuator Tree Way B.V.....45
JP-E810 Electric Actuator Butterfly V.....46-47
JP-E820 Butterfly Valve(No Handle).....48
JP-460 Ball Check Valve.....49
JP-440 True Union Ball Check Valve.....50
JP-950 Y Strainer/ Filter.....51
JP-470 Foot Valve.....52
JP-420 Wafer Check Valve.....53
JP-712 SamplingValve.....54
JP-650 Safety Valve.....55
JP-750 Diaphragm Valve.....56
JP-240 Union, Gasket, Flange, Blind flange....57-58
JP-305/JP-311 UPVC Cement.....59-60
JP-324/P48 CPVC Cement/Primer.....61-62
Product Feature.....63-76
Resistant Character.....77-78

應用領域
APPLICATIONS

水處理行業
Water Treatment

化工行業
Chemical Industry

電子行業
Electric Industry

醫藥行業
Medical Industry

養殖業
Feeding Industry

1
- 市政給.排水 Municipal water supply and Discharge
- 食品.飲用水 Food and drinking water
- 工業酸鹼管路系統 Piping System
- 純水.廢水 Water Purifying and Water pouring
- 熱水與消防系統 Hot water&fire protection
- 溫泉 Hot spring

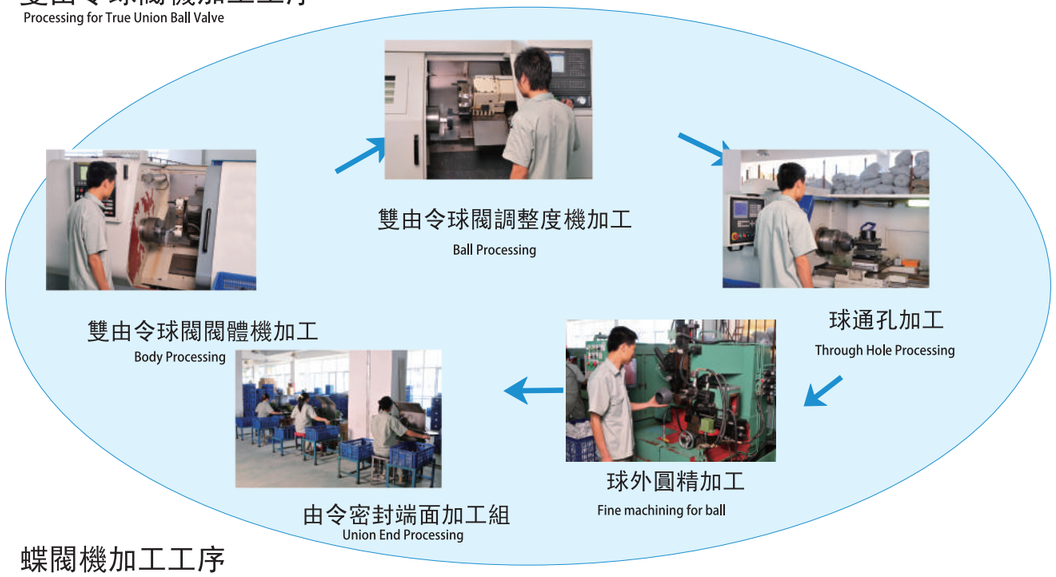
2
- 介質過濾 Piping systems for agent filteration
- 反滲透 Reverse osmosis
- 鍋爐 Boiler
- 灌溉輸送 Water irrigation

3
- 電路板刻蝕 PCB etching
- 有機化工 Oranic chemical industry
- 電鍍 Electric plating
- 發電 Power generation

服務全球
GLOBAL SERVICES

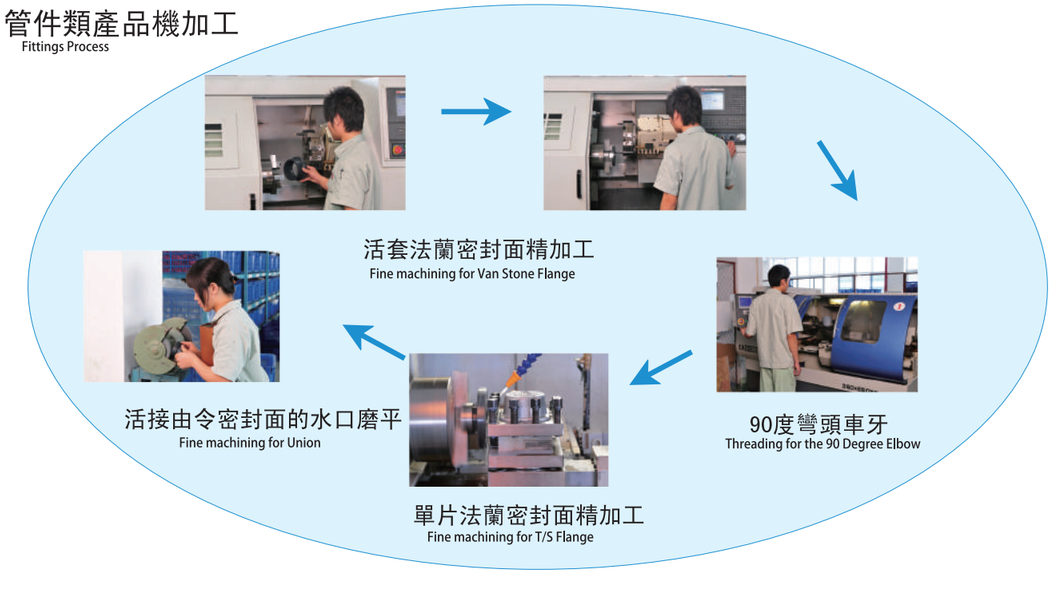
生產過程 Process of Production

● 雙由令球閥機加工工序
Processing for True Union Ball Valve

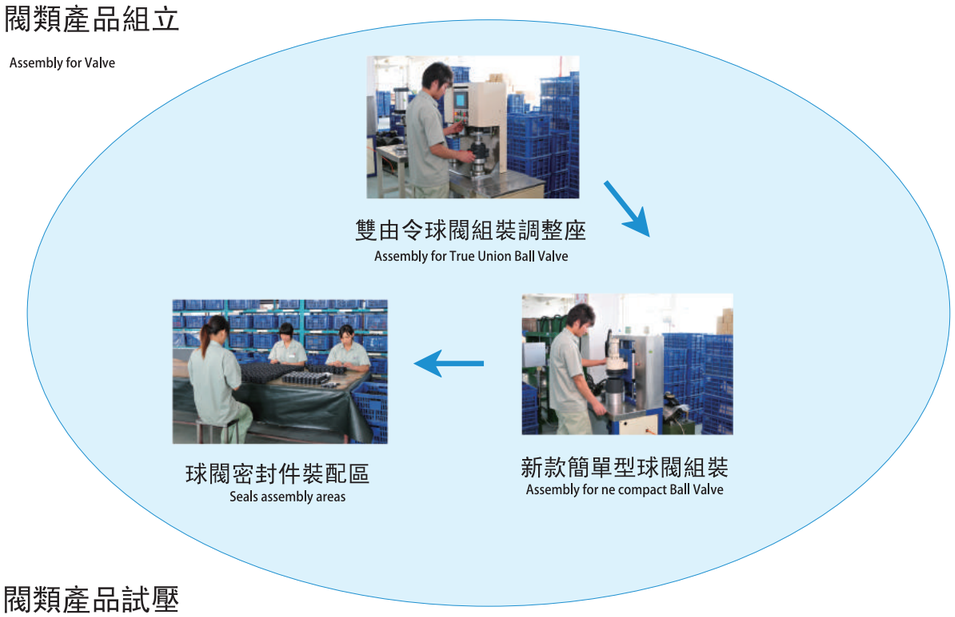


● 蝶閥機加工工序
Butterfly Valve Processing

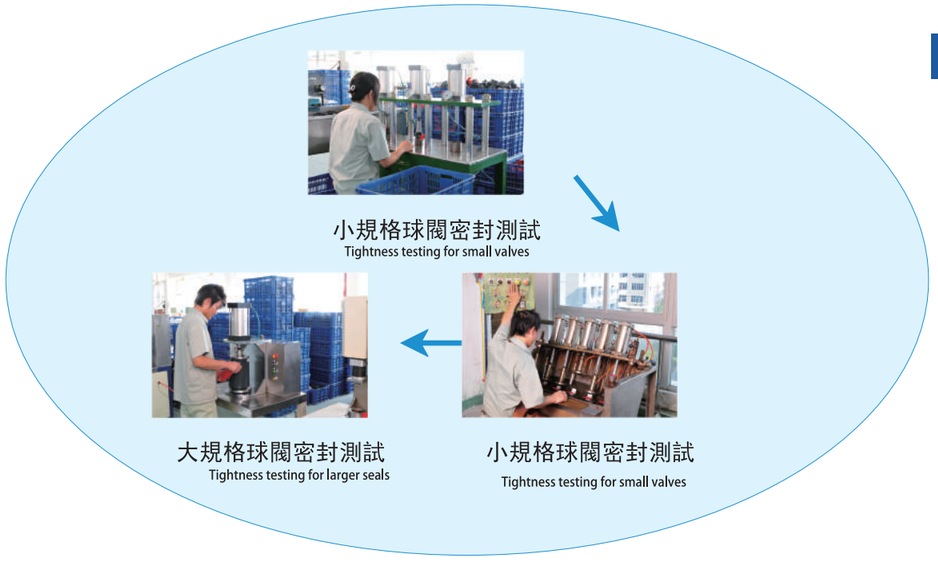
● 管件類產品機加工
Fittings Process



● 閥類產品組立
Assembly for Valve



● 閥類產品試壓
Pressure Testing Valves



由於PVC注塑品會有收縮，熔接縫，合模線等缺陷，從而無可避免的會影響到一個閥門整體的裝配性和密封性,JUMPANNY 閥門有別於一般閥類廠商直接將注塑零件組裝成閥門出售，而是設立多道精密機加工工序，並自行開發出先進的、科學的組裝，試壓設備和方法。

As PVC products are easily compressed, connection area melted & exsiting parting lines, so it will unavoidably effect the whole assembly and tightness of valves. JUMPANNY different from other valve manufacturers who sold the valves directly after assembly, we set up many fine machining processes and developed advanced and sciertific methods of assembly together with testing facilities.

特性 Characteristics

- 管及配件均為透明，有異狀能迅速處理。
- 內徑光滑，不積垢，不影響流速。
- 可清楚看出流體之流向不需貼指示標。
- 用在雙套管路之內外管，具監視及保護作用。
- 施工簡便、快速，不需特殊工具及專業人才。
- Simple solvent welded joining techniques.
- Fully compatible with standard PVC pipe, fittings and valve.
- Corrosion resistant、non-conductive、resists bacterial and biological activity.
- Wide range of chemical resistance.
- It can be used in double containment piping system, it have monitoring and protection.
- Lightweight, easy to handle and install, lower overall installed cost more than other alternatives.
- Stocked in 10 feet length, plain end.

適用範圍 Application

電子半導體廠、環保水處理、化工……等產業配管系統。

Electronics semiconductor plant、water treatment、chemical industry….etc.

產品特性 Properties

物理特性 Physical Property	標準值 SI Unit	測試條件 Test Condition	參考範圍 Reference Standard
比重 Specific Gravity	1.4	常溫 Normal Temp.	ASTM D792
張力強度 Tensile Strength (kgf/cm²)	571	常溫 Normal Temp.	CNS 1922
抗壓強度 Compressive Strength (kgf/cm²)	-	常溫 Normal Temp.	CNS 1922
熱軟化溫度 Heat Softening (℃)	80	-	ASTM D648
燃燒性 Flammability (℃)	-	不助燃 NON	CNS 1302, 1303
建議操作溫度範圍 Operation Temp. (℃)	0~60	-	

Note: The above information is for reference only. (以上資料僅供參考)

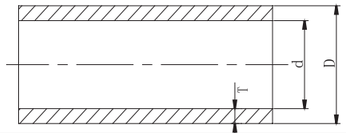
直管擺放注意事項 Pipe Storage

- 透明管建議存放在室內，如須放置在戶外，務必擺放在平坦且乾燥的地方，以避免直管彎曲變形及沾染灰塵。
  Indoor Storage of pipe is recommended but that is not always convenient. Therefore, when storing pipe outdoors, choose a flat, dry location to avoid bending and mud collection.
- 透明管抗紫外線能力低，所以長期暴露於日照下，容易造成透明管變色。
  The pipe must be protected from the sun, When the pipe is not protected from the sun, extended exposure to ultraviolet rays may cause discoloration.
- 透明管運送方式，詳閱P61
  More details about Pipe transportation, please see Page 61

透明管 Clear pipe/3M

(CR100)

- 尺寸 Size: 1/2″ ~6″
- 規格 Standard: ANSI . JIS

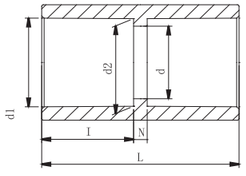


Size	O.D (mm)	O.D. Tolerance	Socket Type I	Socket Type II (SCH40)	T(mm)
			T (mm)	T (mm)	Tolerance
1/2”	21.3	±0.10	2.5	2.77	+0.51
3/4”	26.7	±0.10	2.5	2.87	+0.51
1”	33.4	±0.13	2.5	3.38	+0.51
1” (JIS)	32.3	±0.13	2.5	-	+0.51
1-1/4”	42.2	±0.13	3.0	3.56	+0.51
11/4” (JIS)	38.0	±0.13	3.0	-	+0.51
1-1/2”	48.3	±0.15	3.0	3.68	+0.51
2”	60.3	±0.15	3.5	3.91	+0.51
2-1/2”	73.0	±0.18	4.0	5.16	+0.61
21/2” (JIS)	76.0	±0.18	4.0	-	+0.61
3”	88.9	±0.20	4.5	5.49	+0.66
4”	114.3	±0.23	5.0	6.02	+0.71
6”	168.3	±0.28	-	7.11	+0.86

- 長度 Length: 3 M (可依客戶需求訂製 Customizable)

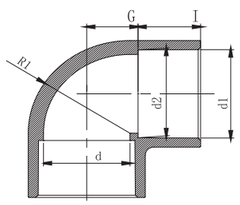
平接頭Coupling(SxS)

(CR129)



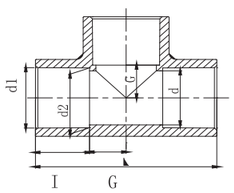
Nominal Size	Socket Type			Structural Diameter		
	d1	d2	I	d	N	L
1/2”	21.54	21.23	24	16	4	52
3/4”	26.87	26.57	27	22	4	58
1”	33.65	33.27	30	30	4	64
1-1/4”	42.42	42.04	34	38	4	72
1-1/2”	48.56	48.11	37	44	4	78
2”	60.63	60.17	41	54	4	86
2-1/2”	73.38	72.85	46.5	67	5	98
3”	89.31	88.7	50	82	7	107
4”	114.76	114.1	60	106	7	127
6”	168.83	168.0	79	158	10	168

● 90°彎頭Elbow(SxS)
(CR106)



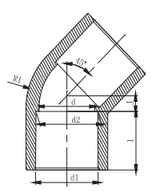
Nominal	Socket Type			Structural Diameter		
Size	d1	d2	I	d	G	R1
1/2”	21.54	21.23	24	16	13	23.0
3/4”	26.87	26.57	27	22	15	28.5
1”	33.65	33.27	30	30	18	37.0
1-1/4”	42.42	42.04	34	38	23	46.0
1-1/2”	48.56	48.11	37	44	26	51.5
2”	60.63	60.17	41	54	32	63.5
2-1/2”	73.38	72.85	46.5	67	39	77.5
3”	89.31	88.7	50	82	47	93.5
4”	114.76	114.1	60	106	59	119.0
6”	168.83	168.0	79	158	89	174.5

● 三通Tee(SxSxS)
(CR101)



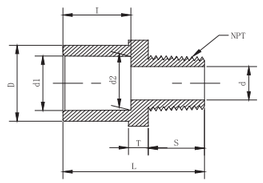
Nominal	Socket Type			Structural Diameter		
Size	d1	d2	I	d	G	L
1/2”	21.54	21.23	24	16	13	74
3/4”	26.87	26.57	27	22	15	84
1”	33.65	33.27	30	30	18	96
1-1/4”	42.42	42.04	34	38	23	114
1-1/2”	48.56	48.11	37	44	26	126
2”	60.63	60.17	41	54	32	146
2-1/2”	73.38	72.85	46.5	67	39	171
3”	89.31	88.7	50	82	47	194
4”	114.76	114.1	60	106	59	238
6”	168.83	168.0	79	158	89	336

● 45°彎頭Elbow(SxS)
(CR117)



Nominal	Socket Type			Structural Diameter		
Size	d1	d2	I	d	J	R1
1/2”	21.54	21.23	24	16	6.5	23.0
3/4”	26.87	26.57	27	22	8.0	28.5
1”	33.65	33.27	30	30	8.0	37.0
1-1/4”	42.42	42.04	34	38	10.0	46.0
1-1/2”	48.56	48.11	37	44	12.0	51.5
2”	60.63	60.17	41	54	16.0	63.5
2-1/2”	73.38	72.85	46.5	67	18.0	77.5
3”	89.31	88.7	50	82	19.5	93.5
4”	114.76	114.1	60	106	26.0	119.0
6”	168.83	168.0	79	158	45.0	174.5

● 外牙接頭Male Adapter(SxT)
(CR136)



Nominal	Socket Type			Structural Diameter				
Size	d1	d2	I	d	T	S	D	L
1/2”	21.54	21.23	24	13.2	7.0	19.85	30	50.0
3/4”	26.87	26.57	27	19.0	7.0	18.5	35	50.5
1”	33.65	33.27	30	24.0	8.0	21.0	44	59.0
1-1/4”	42.42	42.04	34	32.0	8.0	25.4	54	63.4
1-1/2”	48.56	48.11	37	38.0	8.0	26.0	60	67.0
2”	60.63	60.17	41	48.0	8.0	30.0	80	80.0

UPVC SCH40/80 PIPING SYSTEM

簡介 Introduction

SCH80 UPVC(聚氯乙烯)管路系統,為特殊的高分子材料,具有良好的抗老化,耐酸鹼及化學穩定性,並符合NSF美國生飲用水標準,因其物理及化學特性上的優勢,十分適用於飲用水輸送及化學溶劑輸送,故廣泛的應用在液體輸送及空調系統上。

SCH 80 UPVC is the most commonly used plastic material for manufacturing plastic pipe. It has a relatively high tensile strength and modulus of elasticity and, therefore is stronger and more rigid than most other thermoplastics. SCH80 UPVC has been used successfully in such areas as chemical processing, industrial plating, chilled water distribution, salt water, chemical drainage, and irrigation systems.

使用功能

純水輸送系統　海水輸送系統
灌溉輸送系統　污水輸送系統
空調冰水／迴水系統
酸鹼化學品輸送系統
環境工程一般管路系統

適用範圍

電鍍廠、化工廠 電子廠
鋼鐵廠、ＩＣ半導體廠
發電廠、核電廠 、污水處理場
食品廠、造紙廠 、飲料廠
藥品廠、醫院

UPVC SCH80物性表

特　性	SI Unit	測試條件	參考規範
比重 Specific Gravity	1.4	常溫	ASTM D792
張力強度 Tensile strength(N/㎜²)	51	常溫	ASTM D638
抗壓強度 Compressive Strength(N/㎜²)	70	常溫	ASTM D695
彎曲強度 Flexural Strength(N/㎜²)	100	常溫	ASTM D790
熱軟化溫度 Heat Softening(℃)	80	Vicat	ASTM D648
衝擊強度 Izod Impact(J/㎡,Notch)	40	常溫	ASTM D256
熱膨脹系數 Cofficient of Thermal Expansion(cm/cm,℃)	8×10^{-5}		ASTM D696
燃燒性 Flammability(℃)	不燃		CNS 1302-3
建議操作溫度範圍 Operation Temperature(℃)	0~60 ℃		

Note:
1. 直管材質符合ASTM D-1784 PVC 1120標準.
2. 直管尺寸規格, 符合ASTM D-1785標準.
3. SCH80 配件符合ASTM D2467, SCH 40 配件符合ASTM D2466, 牙接配件符合ASTM D2464之標準.

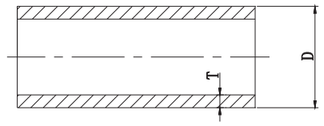
* UPVC SCH40/80 material meet to PVC 1120 of ASTM D-1785, outline dimension specifications and physical properties meet the ASTM D1785.

* SCH 80 Fittings specifications meet the ASTM D2467, SCH40 meets to ASTM D2466, Threaded End meet to ASTM D2464.

特性 Characteristics

化學穩定性高、無二次公害之虞、耐腐蝕性強、絕緣不導電、耐高壓可承受額定壓力3~4倍、耐撞擊不易變形、耐候性佳、韌性強、內壁光滑、保溫佳熱傳導系數為SGP的1/300、重約GIP的1/6、冷膠接合施工簡便、使用壽命長達30年以上。

UPVC SCH 40/80 直管 Pipe (5.8M/PCS)
(400 / 800)

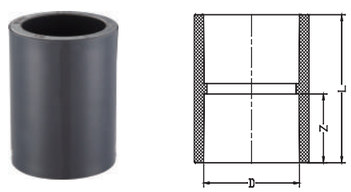


Nominal Size	O.D. (mm)	O.D. Tolerance	Wall Thickness, Working Pressure (PSI)					
			SCH80			SCH40		
			T (mm)	Tolerance	PSI	T (mm)	Tolerance	PSI
1/2”	21.34	±0.10	3.73	+ 0.51	850	2.77	+ 0.51	600
3/4”	26.67	±0.10	3.91	+ 0.51	690	2.87	+ 0.51	480
1”	33.40	±0.13	4.55	+ 0.53	630	3.38	+ 0.51	450
1-1/4”	42.16	±0.13	4.85	+ 0.58	520	3.56	+ 0.51	370
1-1/2”	48.26	±0.15	5.08	+ 0.61	470	3.68	+ 0.51	330
2”	60.32	±0.15	5.54	+ 0.66	400	3.91	+ 0.51	280
2-1/2”	73.02	±0.18	7.01	+ 0.84	420	5.16	+ 0.61	300
3”	88.90	±0.20	7.62	+ 0.91	370	5.49	+ 0.66	260
4”	114.30	±0.23	8.56	+ 1.02	320	6.02	+ 0.71	220
5”	141.30	±0.25	9.52	+ 1.14	290	6.55	+ 0.79	190
6”	168.28	±0.28	10.97	+ 1.32	280	7.11	+ 0.86	180
8”	219.08	±0.38	12.70	+ 1.52	250	8.18	+ 0.99	160
10”	273.05	±0.38	15.06	+ 1.80	230	9.27	+ 1.12	140
12”	323.85	±0.38	17.45	+ 2.08	230	10.31	+ 1.24	130

Standard Lengths:　19ft (5.8M)
Standard Colors:　Dark Grey
Remark:
1kg/cm² = 14.223 PSI　1Mpa = 142.86 PSI　73℉ = 22.8℃

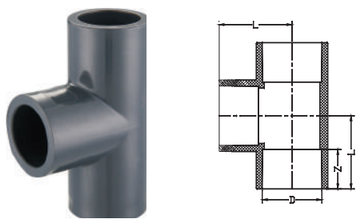
以上壓力適用於水溫73℉(23℃)，當溫度高於73℉(23℃)時，須視材料(UPVC或CPVC)參考溫度遞減常數.

直接頭Coupling (SXS)
(829)



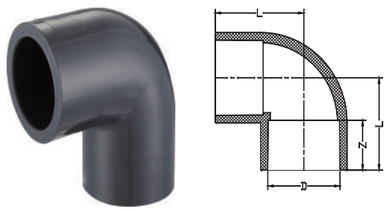
Nominal	Socket Type	Structural Diameter	
Size	D	Z	L
1/2”	21.34	24.0	51.7
3/4”	26.67	26.0	55.6
1”	33.40	29.0	61.6
1-1/4”	42.16	34.0	68.5
1-1/2”	48.26	36.0	76.2
2”	60.32	40.0	81.5
2-1/2”	73.02	46.0	97.5
3”	88.90	50.0	105.4
4”	114.30	60.0	126.4
5”	141.80	67.0	139.6
6”	168.28	85.0	180.5
8”	219.84	104.60	220.0
10”	273.81	130.0	270.0
12”	324.61	155.0	320.0

正三通 Equel Tee (SxSxS)
(801)



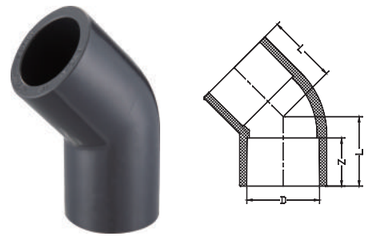
Nominal	Socket Type	Structural Diameter	
Size	D	Z	L
1/2”	21.34	24.0	35.0
3/4”	26.67	26.0	40.0
1”	33.40	29.0	46.5
1-1/4”	42.16	33.0	56.0
1-1/2”	48.26	36.0	63.5
2”	60.32	38.0	70.0
2-1/2”	73.02	46.0	83.5
3”	88.90	50.0	96.0
4”	114.30	59.0	124.0
5”	141.80	69.0	143.0
6”	168.28	76.8	159.5
8”	219.84	104.60	219.6
10”	273.81	130.00	275.0
12”	324.61	155.0	330.0

90°彎頭Elbow(SxS)
(806)



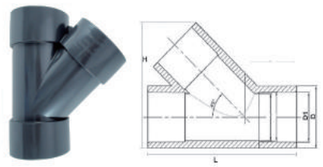
Nominal	Socket Type	Structural Diameter	
Size	D	Z	L
1/2”	21.34	24.0	37.5
3/4”	26.67	26.0	41.0
1”	33.40	29.0	48.5
1-1/4”	42.16	34.0	61.0
1-1/2”	48.26	35.0	64.2
2”	60.32	40.0	74.0
2-1/2”	73.02	46.0	84.5
3”	88.90	50.0	97.0
4”	114.30	60.0	118.0
5”	141.80	68.0	146.0
6”	168.28	78.0	168.5
8”	219.84	101.6	222.25
10”	273.81	141.1	288.73
12”	324.61	168.0	339.73

45°彎頭Elbow(SxS)
(817)



Y 三通 WYE TEE (SxSxS)

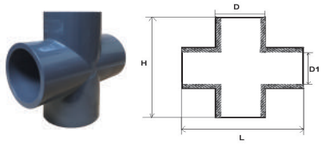
(875)



Nominal	Socket Type		Structural Diameter	
Size	D1	D	L	H
1-1/2”	48.26	61.0	150	122
2”	60.32	75.0	181	148
2-1/2”	73.02	89.0	208	175
3”	88.90	106.0	237	205
4”	114.30	132.0	289	255
6”	168.28	192.0	415	375

四通 CROSS (SxSxSxS)

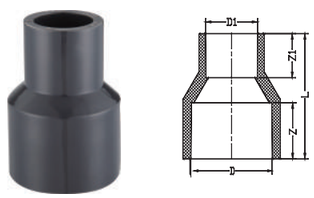
(820)



Nominal	Socket Type		Structural Diameter	
Size	D1	D	L	H
1/2”	21.34			
3/4”	26.67			
1”	33.40			
2”	60.32	76.0	143.0	143.0
2-1/2”	73.02	89.0	168.0	168.0

大小頭長 Reducing Coupling (SxS)

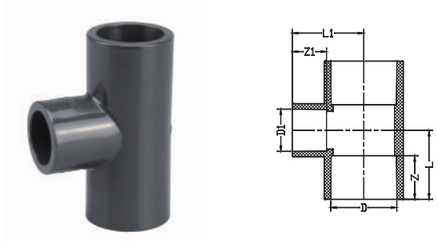
(829)



Nominal	Socket Type			Structural Diameter	
Size	D1	Z	Z1	D	L
3/4”x1/2”	21.34	27.0	24.0	26.67	60.0
1”x1/2”	21.34	30.0	24.0	33.40	63.0
1”x3/4”	26.67	30.0	27.0	33.40	67.5
1-1/4”x3/4”	26.67	33.0	27.0	42.16	75.0
1-1/4”x1”	33.40	33.0	30.0	42.16	69.0
1-1/2”x1”	33.40	36.0	30.0	48.26	77.0
1-1/2”x1-1/4”	42.16	36.0	33.0	48.26	83.5
2”x1-1/4”	42.16	39.0	33.0	60.30	89.0
2”x1-1/2”	48.26	39.0	36.0	60.30	94.0
2-1/2”x1-1/2”	48.26	46.0	36.0	73.02	99.0
2-1/2”x2”	60.32	46.0	39.0	73.02	102.0
3”x2”	60.32	49.0	39.0	88.90	106.5
3”x2-1/2”	73.02	49.0	46.0	88.90	115.5
4”x2-1/2”	73.02	59.0	46.0	114.30	124.5
4”x3”	88.90	59.0	49.0	114.30	130.0
6”x4”	114.30	76.8	57.5	168.28	165.0

異三通 Red Tee (SxSxS)

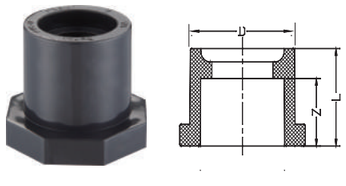
(801)



Nominal	Socket Type			Structural Diameter		
Size	D	D1	Z	L1	L	Z1
3/4”x1/2”	26.67	21.34	27.0	39.0	39.5	24.0
1”x1/2”	33.40	21.34	30.0	42.0	42.5	24.0
1”x3/4”	33.40	26.67	30.0	45.5	45.5	27.0
1-1/4”x3/4”	42.16	26.67	33.0	50.0	48.5	27.0
1-1/4”x1”	42.16	33.40	33.0	53.0	51.5	30.0
1-1/2”x1/2”	48.26	21.34	36.0	48.5	48.3	22.5
1-1/2”x3/4”	48.26	26.67	36.0	52.0	51.0	26.0
1-1/2”x1”	48.26	33.40	36.0	57.5	56.0	30.0
1-1/2”x1-1/4”	48.26	42.16	36.0	61.0	61.0	33.0
2”x1/2”	60.30	21.34	29.5	54.4	51.3	22.5
2”x3/4”	60.30	26.67	38.5	58.0	54.0	26.0
2”x1”	60.30	33.40	38.5	61.0	57.3	29.0
2”x1-1/4”	60.30	42.16	39.0	67.0	64.0	33.0
2”x1-1/2”	60.32	48.26	39.0	70.0	64.0	36.0
2-1/2”x1-1/2”	73.02	48.26	46.0	76.5	74.0	36.0
2-1/2”x2”	73.02	60.32	46.0	79.5	80.0	39.0
3”x2”	88.90	60.32	49.0	87.5	83.0	39.0
3”x2-1/2”	88.90	73.02	49.0	107.0	89.5	46.0
4”x2”	114.30	60.32	57.5	96.8	90.4	38.5
4”x2-1/2”	114.30	73.02	59.0	107.0	99.5	46.0
4”x3”	114.30	88.90	59.0	110.0	107.5	49.0
6”x4”	168.28	114.30	76.8	144.3	138.1	57.5

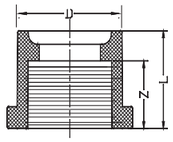
● 異徑接頭（卜申）Reducing Bushing(SXS)

(837)



Nominal	Socket Type	Structural Diameter	
Size	D	Z	L
3/4”x1/2”	26.67	24.0	33.3
1”x1/2”	33.40	24.0	33.3
1”x3/4”	33.40	28.0	37.0
1-1/4”x1”	42.16	29.0	40.0
1-1/2”x1/2”	48.26	24.2	44.45
1-1/2”x3/4”	48.26	26.0	41.00
1-1/2”x1”	48.26	29.0	44.45
1-1/2”x1-1/4”	48.26	36.0	46.00
2”x1/2”	60.32	24.2	44.45
2”x3/4”	60.32	27.4	47.62
2”x1”	60.32	29.0	45.00
2”x1-1/2”	60.32	35.5	46.00
2-1/2”x1-1/2”	73.02	37.9	68.74
2-1/2”x2”	73.02	46.0	61.00
3”x1-1/2”	88.90	35.5	55.00
3”x2”	88.90	38	56.00
3”x2-1/2”	88.90	47.5	58.74
4”x2”	114.30	41.1	66.68
4”x3”	88.90	48.5	65.50
5”x4”	141.81	60.2	84.00
6”x3”	168.28	50.0	101.00
6”x4”	168.28	57.5	85.30
6”x5”	168.28	69.7	90.00
8”x6”	219.10	79.0	125.41
10”x6”	173.05	79.0	163.51
10”x8”	273.05	105.0	163.51
12”x8”	219.10	105.0	176.21
12”x10”	219.10	130.0	176.21

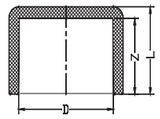
● 異徑接頭（卜申）Reducing Bushing(SXT)



Nominal	Socket Type	Structural Diameter	
Size	D	Z	L
1/2”x1/4”	21.34	24.0	29.0
1/2”x3/8”	21.34	24.0	29.3
3/4”x1/2”	26.67	27.0	33.0
1”x1/2”	33.40	30.0	36.0
1”x3/4”	33.40	30.0	36.0

● 管帽 Cap (S)

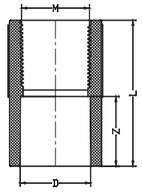
(847)



Nominal	Socket Type	Structural Diameter	
Size	D	Z	L
1/2”	21.34	24.0	34.0
3/4”	26.67	27.0	37.0
1”	33.40	30.0	40.0
1-1/4”	42.16	33.0	43.0
1-1/2”	48.26	36.0	46.0
2”	60.32	39.0	53.0
2-1/2”	73.02	46.0	61.0
3”	88.90	49.0	66.0
4”	114.30	59.0	67.5
5”	141.81	69.0	79.0
6”	168.28	76.8	159.5

● 內牙接頭 (SxNPT) Female Adaptor

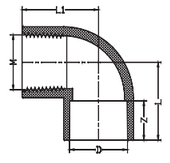
(835)



Nominal	Socket Type		Structural Diameter	
Size	D	Z	M (NPT)	L
1/2”	21.34	24.0	14.0	50.5
3/4”	26.67	27.0	14.0	56.5
1”	33.40	30.0	11.5	62.5
1-1/4”	42.16	33.0	11.5	68.5
1-1/2”	48.26	36.0	11.5	74.5
2”	60.32	39.0	11.5	80.5
2-1/2”	73.02	46.0	8.0	97.0
3”	88.90	49.0	8.0	103.0
4”	114.30	59.0	8.0	123.0

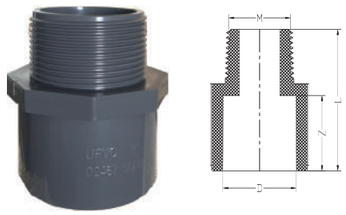
● 龍口彎 Faucet Elbows (SXNPT)

(807)



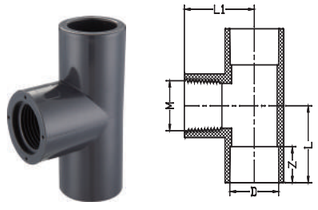
Nominal	Socket Type			Structural Diameter	
Size	D	Z	M (NPT)	L	L1
1/2”	21.34	24.0	14.0	36.4	36.4
3/4”	26.67	27.0	14.0	42.7	42.7
1”	33.40	30.0	11.5	49.1	49.1

- 外牙接頭 (SxNPT) Male Adaptor
  (836)



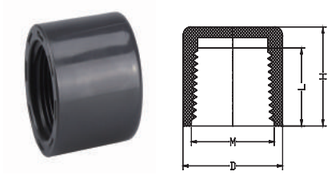
Nominal	Socket Type		Structural Diameter	
Size	D	Z	M (NPT)	L
1/2”	21.34	24.0	14.0	43.5
3/4”	26.67	27.0	14.0	53.0
1”	33.40	28.5	11.5	57.0
1-1/4”	42.16	33.0	11.5	64.0
1-1/2”	48.26	36.0	11.5	70.0
2”	60.32	38.0	11.5	74.5
2-1/2”	73.02	46.0	8.0	93.5
3”	88.90	49.0	8.0	99.5
4”	114.30	59.0	8.0	113.5

- 內牙三通 RED. Tee (SxNPTXS)
  (802)



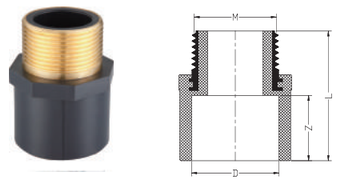
Nominal	Socket Type			Structural Diameter	
Size	D	Z	M (NPT)	L	L1
3/4”x1/2”	26.67	24.0	14	36.5	36.5
1”x1/2”	33.40	27.0	14	42.0	42.0
1”x3/4”	33.40	30.0	14	48.0	48.0

- 內牙管帽 Female Cap (NPT)
  (848)



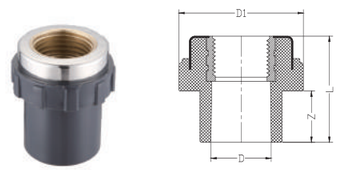
Nominal	Socket Type		Structural Diameter	
Size	D	M (NPT)	Z	L
1/2”	21.34	14.0	24.0	30.5
3/4”	26.67	14.0	27.0	33.5
1”	33.40	11.5	30.0	37.0

- 埋銅外牙接頭 Male Adaptor (Copper Thread)
  (836F)



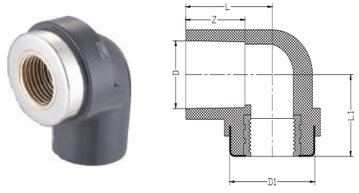
Nominal	Socket Type		Structural Diameter	
Size	D	Z	M	L
1/2”	21.34	24.0	1/2”	45.0
3/4”	26.67	27.0	3/4”	51.0
1”	33.40	30.0	1”	53.0
1-1/4”	42.16	33.0	1-1/4”	62.0
1-1/2”	48.26	36.0	1-1/2”	66.0
2”	60.32	39.0	2”	74.0

- 埋銅內牙接頭 Female Adaptor (Copper Thread)
  (835F)



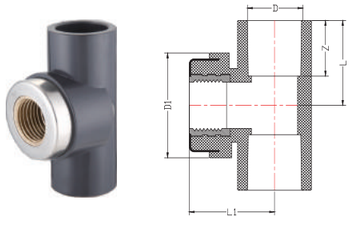
Nominal	Socket Type		Structural Diameter	
Size	D	Z	D1	L
1/2”	21.34	24.0	45.0	19.0
1/2”x3/4”	21.34	24.0	45.0	19.0
3/4”	26.67	27.0	45.0	21.0
3/4”x1/2”	26.67	27.0	45.0	21.0
1”	33.40	30.0	49.5	26.0
1”x3/4”	33.40	30.0	49.5	26.0

- 埋銅內牙彎頭 Elbows 90 (Copper Thread)
  (807F)



Nominal	Socket Type		Structural Diameter		
Size	D	Z	D1	L1	L
1/2”	21.34	24.0	42.5	28.0	29.0
1/2”x3/4”	21.34	24.0	42.5	28.0	29.0
3/4”	26.67	27.0	42.5	29.5	31.0
3/4”x1/2”	26.67	27.0	42.5	29.5	31.0

- 埋銅內牙三通 Tee (Copper Thread)
  (802F)



Nominal	Socket Type		Structural Diameter		
Size	D	Z	D1	L1	L
1/2”	21.34	24.0	42.5	34.0	34.0
1/2”x3/4”	21.34	24.0	42.5	34.0	34.0
3/4”	26.67	27.0	42.5	36.5	37.0
3/4”x1/2”	26.67	27.0	42.5	36.5	37.0

CPVC SCH40/80 PIPING SYSTEM

簡介 Introduction

CPVC(氯化聚氯乙烯)，為耐熱性管件，適用範圍為 0℃ - 9 3℃，本產品材質符合ASTM F441 Type IV, Grade 1.標準；直管尺度及規格符合ASTM D-1785，配件尺度符合ASTM F-439(管口)及ASTM F-437(牙口)。 因其耐溫、耐化學性的特性，所以被廣泛應用於化工熱流體輸送、工業廢水排放、半導體電子廠的熱水與溫泉及熱溫化學藥液等工程配管及消防配管。

CPVC(Chlorinated Polyvinyl Chloride) is a kind of heat resistant pipe fittings, the available temperature is 0℃-93℃. The material conforms to ASTM F441 Type IV, Grade 1. The dimension specifications of pipe meets to ASTM D-1785, Physical dimensions and tolerance of CPVC SCH80 fittings meet the requirements of ASTM F439 for socket type fittings and ASTM F-437 for threaded fittings. So it is usually used in engineering pipeline and fire protection pipeline, chemical hot fluid transport, hot spring, industrial waste output and the heating for water and chemical products in Semi-Conduct plant and so on.

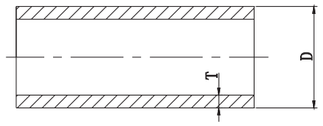
特性 Characteristics

1. 耐熱性高，可應用於93℃以下的熱水及化工熱流體輸送。
2. 耐腐蝕性、耐化學藥品性優良。
3. 保溫性佳，為鋼管的１／３６０。
4. 管壁光滑，不附著水垢。
5. 符合溶解試驗，不影響水質。
6. 絕緣性佳，可應用於高壓電、耐熱電力用管。
7. 冷料接合、施工簡便，施工費用低廉。

1. Hot–resistant: It can be used for the transportation of hot water and chemical hot fluid under 93 degree.
2. Corrosion–resistant, high resistant with chemicals.
3. Good heat insulation, 360 times more than that of steel pipe.
4. Smooth pipe wall, it is resistant with water scale.
5. Accordance with dissolution testing, it will not affect the quality of water.
6. Good thermal insulation, it is applied to high–voltage surge pipes.
7. Convenient for the connection,low handling fees.

CPVC SCH 40/80 直管 Pipe (5.8M/PCS)

(300 / 500)



Nominal Size	O.D. (mm)	O.D. Tolerance	Wall Thickness, Working Pressure (PSI)							
			SCH80				SCH40			
			T (mm)	Tolerance	PSI@73℉	PSI@180℉	T (mm)	Tolerance	PSI@73℉	PSI@180℉
1/2”	21.34	±0.10	3.73	+ 0.51	850	213	2.77	+ 0.51	600	150
3/4”	26.67	±0.10	3.91	+ 0.51	690	173	2.87	+ 0.51	480	120
1”	33.40	±0.13	4.55	+ 0.53	630	158	3.38	+ 0.51	450	113
1-1/4”	42.16	±0.13	4.85	+ 0.58	520	130	3.56	+ 0.51	370	93
1-1/2”	48.26	±0.15	5.08	+ 0.61	470	118	3.68	+ 0.51	330	83
2”	60.32	±0.15	5.54	+ 0.66	400	110	3.91	+ 0.51	280	70
2-1/2”	73.02	±0.18	7.01	+ 0.84	420	105	5.16	+ 0.61	300	75
3”	88.90	±0.20	7.62	+ 0.91	370	93	5.49	+ 0.66	260	65
4”	114.30	±0.23	8.56	+ 1.02	320	80	6.02	+ 0.71	220	55
5”	141.30	±0.25	9.52	+ 1.14	290	73	6.55	+ 0.79	190	48
6”	168.28	±0.28	10.97	+ 1.32	280	70	7.11	+ 0.86	180	45
8”	219.08	±0.38	12.70	+ 1.52	250	63	8.18	+ 0.99	160	40
10”	273.05	±0.38	15.06	+ 1.80	230	58	9.27	+ 1.12	140	35
12”	323.85	±0.38	17.45	+ 2.08	230	58	10.31	+ 1.24	130	33

Standard Lengths: 19ft (5.8M)

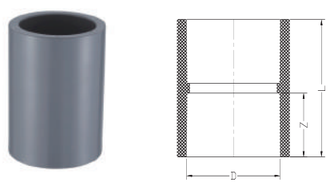
Standard Colors: Light Grey

Remark:

1kg/cm2 = 14.223 PSI 1Mpa = 142.86 PSI 73℉ = 22.8℃

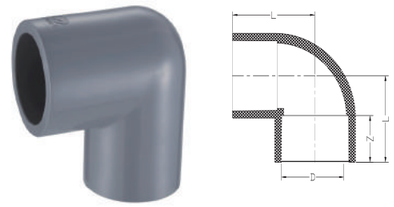
以上壓力適用於水溫 73℉(23℃)，當溫度高於 73℉(23℃)時，須視材料(UPVC 或 CPVC)參考溫度遞減常數

直接頭Coupling (SXS)
(529)



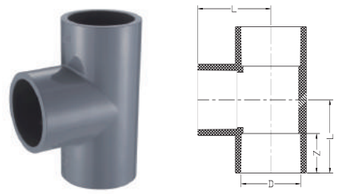
Nominal	Socket Type	Structural Diameter	
Size	D	Z	L
1/2”	21.34	24.0	50.5
3/4”	26.67	27.0	56.5
1”	33.40	30.0	62.5
1-1/4”	42.16	33.0	68.5
1-1/2”	48.26	36.0	74.5
2”	60.32	39.0	80.5
2-1/2”	73.02	46.0	97.0
3”	88.90	49.0	103.0
4”	114.30	59.0	123.0
5”	141.80	69.0	145.0
6”	168.28	76.8	159.5
8”	219.84	104.60	220.0
10”	273.81	130.0	270.0
12”	324.61	155.0	320.0

90°彎頭Elbow(SxS)
(506)



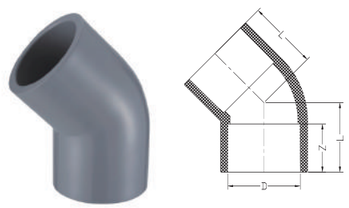
Nominal	Socket Type	Structural Diameter	
Size	D	Z	L
1/2”	21.34	24.0	36.5
3/4”	26.67	27.0	42.5
1”	33.40	30.0	49.5
1-1/4”	42.16	33.0	56.0
1-1/2”	48.26	36.0	63.0
2”	60.32	39.0	7305
2-1/2”	73.02	46.0	86.5
3”	88.90	49.0	100.0
4”	114.30	59.0	124.0
5”	141.80	68.0	143.0
6”	168.28	76.8	159.5
8”	219.84	101.6	222.25
10”	273.81	141.1	288.73
12”	324.61	168.0	339.73

正三通 Equel Tee (SxSxS)
(501)



Nominal	Socket Type	Structural Diameter	
Size	D	Z	L
1/2”	21.34	24.0	36.5
3/4”	26.67	27.0	42.5
1”	33.40	30.0	49.5
1-1/4”	42.16	33.0	56.0
1-1/2”	48.26	36.0	63.0
2”	60.32	39.0	73.5
2-1/2”	73.02	46.0	86.5
3”	88.90	49.0	100.0
4”	114.30	59.0	124.0
5”	141.80	69.0	143.0
6”	168.28	76.8	159.5
8”	219.84	104.60	219.6
10”	273.81	130.00	275.0
12”	324.61	155.0	330.0

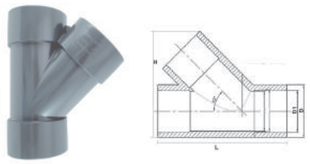
45°彎頭Elbow(SxS)
(517)



Nominal	Socket Type	Structural Diameter	
Size	D	Z	L
1/2”	21.34	24.0	30.5
3/4”	26.67	27.0	34.5
1”	33.40	30.0	39.5
1-1/4”	42.16	33.0	45.0
1-1/2”	48.26	36.0	49.0
2”	60.32	39.0	54.5
2-1/2”	73.02	46.0	66.0
3”	88.90	49.0	72.0
4”	114.30	59.0	88.0
5”	141.80	70.0	102.76
6”	168.28	76.8	159.5
8”	219.84	104.6	160.34
10”	273.81	130.0	223.84
12”	324.61	155.2	265.11

Y 三通 WYE TEE (SxSxS)

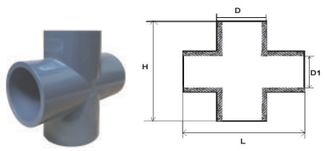
(575)



Nominal	Socket Type		Structural Diameter	
Size	D1	D	L	H
11/2”	48.26	61	150	122
2”	60.32	75	181	148
21/2”	73.02	89	208	175
3”	88.90	106	237	205
4”	114.30	132	289	255
6”	168.28	192	415	375

四通 CROSS (SxSxSxS)

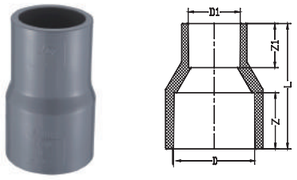
(520)



Nominal	Socket Type		Structural Diameter	
Size	D1	D	L	H
2”	60.32	76	143	143
21/2”	73.02	89	168	168

大小頭長 Reducing Coupling (SxS)

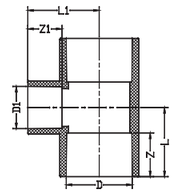
(529)



Nominal	Socket Type			Structural Diameter	
Size	D1	Z	Z1	D	L
3/4”x1/2”	21.34	27.0	24.0	26.67	60.0
1”x1/2”	21.34	30.0	24.0	33.40	63.0
1”x3/4”	26.67	30.0	27.0	33.40	67.5
1-1/4”x3/4”	26.67	33.0	27.0	42.16	75.0
1-1/4”x1”	33.40	33.0	30.0	42.16	69.0
1-1/2”x1”	33.40	36.0	30.0	48.26	77.0
1-1/2”x1-1/4”	42.16	36.0	33.0	48.26	83.5
2”x1-1/4”	42.16	39.0	33.0	60.30	89.0
2”x1-1/2”	48.26	39.0	36.0	60.30	94.0
2-1/2”x1-1/2”	48.26	46.0	36.0	73.02	99.0
2-1/2”x2”	60.32	46.0	39.0	73.02	102.0
3”x2”	60.32	49.0	39.0	88.90	106.5
3”x2-1/2”	73.02	49.0	46.0	88.90	115.5
4”x2-1/2”	73.02	59.0	46.0	114.30	124.5
4”x3”	88.90	59.0	49.0	114.30	130.0
6”x4”	114.30	76.8	57.5	168.28	165.0

異三通 Red Tee (SxSxS)

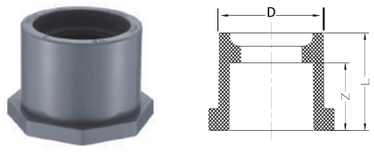
(501)



Nominal	Socket Type			Structural Diameter		
Size	D	D1	Z	L1	L	Z1
3/4”x1/2”	26.67	21.34	27.0	39.0	39.5	24.0
1”x1/2”	33.40	21.34	30.0	42.0	42.5	24.0
1”x3/4”	33.40	26.67	30.0	45.5	45.5	27.0
1-1/4”x3/4”	42.16	26.67	33.0	50.0	48.5	27.0
1-1/4”x1”	42.16	33.40	33.0	53.0	51.5	30.0
1-1/2”x1/2”	48.26	21.34	36.0	48.5	48.3	22.5
1-1/2”x3/4”	48.26	26.67	36.0	52.0	51.0	26.0
1-1/2”x1”	48.26	33.40	36.0	57.5	56.0	30.0
1-1/2”x1-1/4”	48.26	42.16	36.0	61.0	61.0	33.0
2”x1/2”	60.30	21.34	29.5	54.4	51.3	22.5
2”x3/4”	60.30	26.67	38.5	58.0	54.0	26.0
2”x1”	60.30	33.40	38.5	61.0	57.3	29.0
2”x1-1/4”	60.30	42.16	39.0	67.0	64.0	33.0
2”x1-1/2”	60.32	48.26	39.0	70.0	64.0	36.0
2-1/2”x1-1/2”	73.02	48.26	46.0	76.5	74.0	36.0
2-1/2”x2”	73.02	60.32	46.0	79.5	80.0	39.0
3”x2”	88.90	60.32	49.0	87.5	83.0	39.0
3”x2-1/2”	88.90	73.02	49.0	107.0	89.5	46.0
4”x2”	114.30	60.32	57.5	96.8	90.4	38.5
4”x2-1/2”	114.30	73.02	59.0	107.0	99.5	46.0
4”x3”	114.30	88.90	59.0	110.0	107.5	49.0
6”x4”	168.28	114.30	76.8	144.3	138.1	57.5

異徑接頭（ㄐ申）Reducing Bushing(SXS)

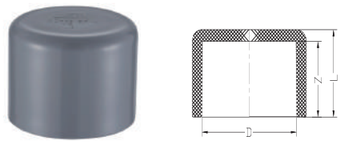
(537)



Nominal	Socket Type	Structural Diameter	
Size	D	Z	L
3/4”x1/2”	26.67	24.0	34.0
1”x1/2”	33.40	24.0	36.5
1”x3/4”	33.40	27.0	37.0
1-1/4”x1”	42.16	30.0	40.0
1-1/2”x1/2”	48.26	24.22	44.45
1-1/2”x3/4”	48.26	27.40	44.45
1-1/2”x1”	48.26	30.58	44.45
1-1/2”x1-1/4”	48.26	36.0	46.0
2”x1/2”	60.32	24.22	44.45
2”x3/4”	60.32	27.40	47.62
2”x1”	60.32	30.58	47.62
2”x1-1/2”	60.32	39.0	53.0
2-1/2”x1-1/2”	73.02	37.93	68.74
2-1/2”x2”	73.02	46.0	61.0
3”x1-1/2”	88.90	37.93	58.74
3”x2”	88.90	41.10	58.74
3”x2-1/2”	88.90	47.45	58.74
4”x2”	114.30	41.10	66.68
4”x3”	88.9	49.0	66.0
5”x4”	141.81	60.15	84.0
6”x3”	168.28	50.0	101.0
6”x4”	168.28	57.5	85.3
6”x5”	168.28	69.66	90.0
8”x6”	219.10	79.0	125.41
10”x6”	173.05	79.0	163.51
10”x8”	273.05	105.0	163.51
12”x8”	219.10	105.0	176.21
12”x10”	219.10	130.0	176.21

管帽 Cap (S)

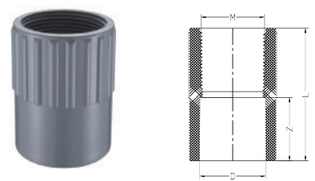
(547)



Nominal	Socket Type	Structural Diameter	
Size	D	Z	L
1/2”	21.34	24.0	34.0
3/4”	26.67	27.0	37.0
1”	33.40	30.0	40.0
1-1/4”	42.16	33.0	43.0
1-1/2”	48.26	36.0	46.0
2”	60.32	39.0	53.0
2-1/2”	73.02	46.0	61.0
3”	88.90	49.0	66.0
4”	114.30	59.0	67.5
5”	141.81	69.0	79.0
6”	168.28	76.8	159.5
8”	219.84	104.6	161.93
10”	273.82	135.0	168.75
12”	324.61	160.0	184.15

內牙接頭 (SxFPT) Female Adaptor

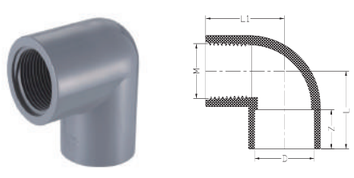
(535)



Nominal	Socket Type		Structural Diameter	
Size	D	Z	M (NPT)	L
1/2”	21.34	24.0	14	50.5
3/4”	26.67	27.0	14	56.5
1”	33.40	30.0	11.5	62.5
1-1/4”	42.16	33.0	11.5	68.5
1-1/2”	48.26	36.0	11.5	74.5
2”	60.32	39.0	11.5	80.5
2-1/2”	73.02	46.0	8	97.0
3”	88.90	49.0	8	103.0
4”	114.30	59.0	8	123.0

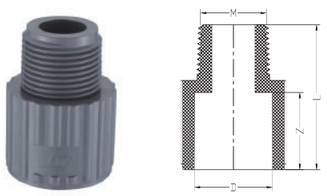
龍口彎 Faucet Elbows (SXFPT)

(507)



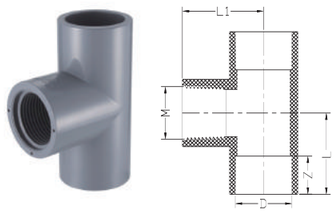
Nominal	Socket Type			Structural Diameter	
Size	D	Z	M (NPT)	L	L1
1/2”	21.34	24.0	14	36.4	36.4
3/4”	26.67	27.0	14	42.7	42.7
1”	33.40	30.0	11.5	49.1	49.1

外牙接頭 (SxMPT) Male Adaptor
(536)



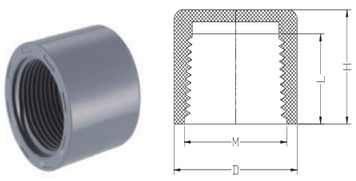
Nominal	Socket Type		Structural Diameter	
Size	D	Z	M (NPT)	L
1/2”	21.34	24.0	14	43.5
3/4”	26.67	27.0	14	53.0
1”	33.40	30.0	11.5	58.0
1-1/4”	42.16	33.0	11.5	64.0
1-1/2”	48.26	36.0	11.5	69.0
2”	60.32	39.0	11.5	75.5
2-1/2”	73.02	46.0	8	93.5
3”	88.90	49.0	8	99.5
4”	114.30	59.0	8	113.5

內牙三通 RED. Tee (SxFPTXS)
(502)



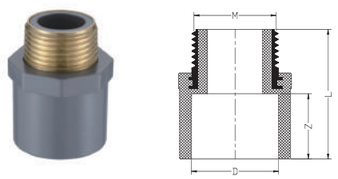
Nominal	Socket Type			Structural Diameter	
Size	D	Z	M (NPT)	L	L1
3/4”x1/2”	26.67	24.0	14	36.5	36.5
1”x1/2”	33.40	27.0	14	42.0	42.0
1”x3/4”	33.40	30.0	14	48.0	48.0

內牙管帽 Female Cap (FPT)
(548)



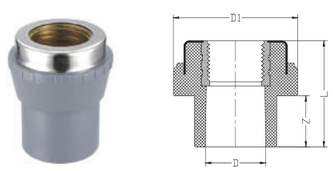
Nominal	Socket Type		Structural Diameter	
Size	D	M (NPT)	Z	L
1/2”	21.34	14	24.0	30.5
3/4”	26.67	14	27.0	33.5
1”	33.40	11.5	30.0	37.0

埋銅外牙接頭 Male Adaptor (Copper Thread)
(536F)



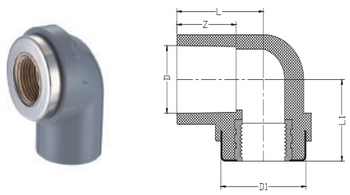
Nominal	Socket Type		Structural Diameter	
Size	D	Z	M	L
1/2”	21.34	24.0	1/2”	45.0
3/4”	26.67	27.0	3/4”	51.0
1”	33.40	30.0	1”	53.0
1-1/4”	42.16	33.0	1-1/4”	62.0
1-1/2”	48.26	36.0	1-1/2”	66.0
2”	60.32	39.0	2”	74.0

埋銅內牙接頭 Female Adaptor (Copper Thread)
(535F)



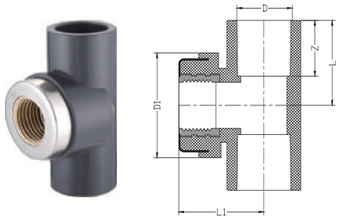
Nominal	Socket Type		Structural Diameter	
Size	D	Z	D1	L
1/2”	21.34	24.0	45.0	19.0
1/2”x3/4”	21.34	24.0	45.0	19.0
3/4”	26.67	27.0	45.0	21.0
3/4”x1/2”	26.67	27.0	45.0	21.0
1”	33.40	30.0	49.5	26.0
1”x3/4”	33.40	30.0	49.5	26.0

埋銅內牙彎頭 Elbows 90 (Copper Thread)
(507F)



Nominal	Socket Type		Structural Diameter		
Size	D	Z	D1	L1	L
1/2”	21.34	24.0	42.5	28.0	29.0
1/2”x3/4”	21.34	24.0	42.5	28.0	29.0
3/4”	26.67	27.0	42.5	29.5	31.0
3/4”x1/2”	26.67	27.0	42.5	29.5	31.0

埋銅內牙三通 Tee (Copper Thread)
(502F)



Nominal	Socket Type		Structural Diameter		
Size	D	Z	D1	L1	L
1/2”	21.34	24.0	42.5	34.0	34.0
1/2”x3/4”	21.34	24.0	42.5	34.0	34.0
3/4”	26.67	27.0	42.5	36.5	37.0
3/4”x1/2”	26.67	27.0	42.5	36.5	37.0

PP(聚丙烯, Polypropylene) PIPING SYSTEM

簡介 Introduction

PP (聚丙烯, Polypropylene) ，工作溫度為 -10° C ~ +100°C , 最高可耐溫120°C 。是所有熱塑性管材中，最輕的一種，具有良好之耐化學性，同時在高溫下，具有穩定的特性，PVC無法適用之高溫，高腐蝕性化學品，可以採用PP取代 。

特性 Characteristics

- ■ 質輕 Light Weight.
- ■ 耐衝擊強度大 Hight impact strenght.
- ■ 耐熱、耐寒 High temperature resistence.
- ■ 無臭無味無毒 Tastless and odorless.
- ■ 耐化學性強 Good Chemical resistence.
- ■ 保溫、保冷 Low thermal conductivity.
- ■ 耐腐蝕 Corrosion resistance.
- ■ 絕緣性佳 Non-conductive
- ■ 管壁光滑 Smoothly wall
- ■ 施工簡便 Easy to install
- ■ 使用壽命長 Long use life

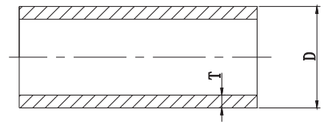
應用範圍 Application

用途廣泛包括廢氣處理設備、廢水處理設備、電鍍設備、實驗室桌櫃、環保設備、食品機械、農業灌溉、建築板模、溫泉水管、化工儲槽及無塵空調

商品規格 Specification

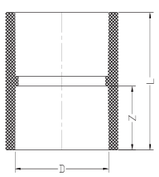
標準 : CNS
長度 : 4M / 6M
尺寸 : 1/2″ ~ 12″

PP管材尺寸規格表



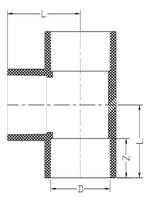
標準管徑 m/m	外徑 m/m	近似內徑 m/m	厚度 m/m	長度 m/m	每支管重 KG
1/2”	22	17	2.5	4	.585
3/4”	27	22	2.5	4	.735
1”	34	28	3.0	4	1.16
1-1/4”	42	35	3.5	4	1.824
1-1/2”	48	40	4.0	4	2.112
2”	60	51	4.5	4	2.997
2-1/2”	76	68	4.0	6	5.184
21/2"	76	56	10.0	6	11.880
3”	89	81	4.0	6	6.120
3"	89	79	5.0	6	7.260
3"	89	69	10.0	6	14.220
4”	114	108	3.0	6	5.994
4"	114	103	5.5	6	10.742
4"	114	98	8.0	6	15.624
5”	140	132	4.0	6	9.792
5"	140	127	6.5	6	15.624
6”	165	157	4.0	6	11.592
6"	165	151	7.0	6	19.908
8”	216	206	5.0	6	18.990
8"	216	200	8.0	6	29.952
10”	267	257	5.0	5	19.650
10"	267	247	10.0	5	38.550
12”	318	308	5.0	5	23.475
12"	318	294	12.0	5	55.080

直接頭Coupling (SXS)



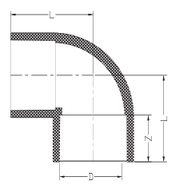
Nominal Size	O.D. m/m	I.D. m/m	Thickness m/m	Length m/m	Weight KG
1/2”	29	20	4.5	33	0.01
3/4”	37	26	5.5	43	0.02
1”	44	33	5.5	54	0.03
1-1/4”	53	41	6.0	63	0.05
1-1/2”	60	46	7.0	70	0.07
2”	71	59	6.0	86	0.10
2-1/2”	87	75	6.0	92	0.11
3”	102	89	7.0	98	0.16
4”	128	113	7.5	112	0.25
5”	158	138	10	122	0.55
6”	179	163	8	188	0.70

正三通 Equel Tee (SxSxS)



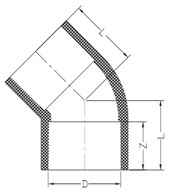
Nominal Size	O.D. m/m	I.D. m/m	Thickness m/m	High m/m	Length m/m	Weight KG
1/2”	28	20	4.0	47	64	0.02
3/4”	36	26	5.0	55	78	0.05
1”	43	33	5.0	72	105	0.07
1-1/4”	54	42	6.0	80	109	0.11
1-1/2”	60	48	6.0	87	115	0.13
2”	70	59	5.5	109	145	0.21
2-1/2”	87	76	5.5	123	160	0.21
3”	101	89	6.0	139	186	0.33
4”	127	114	6.5	174	217	0.55

彎頭Elbow(SxS)



Nominal Size	O.D. m/m	I.D. m/m	Thickness m/m	Length m/m	Weight KG
1/2”	29	20	4.5	47.0	0.02
3/4”	36	26	5.0	56.5	0.02
1”	43	33	5.0	78.0	0.05
1-1/4”	54	42	6.0	80.0	0.07
1-1/2”	62	48	7.0	90.0	0.12
2”	75	60	7.5	110.0	0.21
2-1/2”	88	76	6.0	118.0	0.16
3”	103	89	7.0	144.0	0.26
4”	127	114	6.5	165.0	0.42
5”	152	140	6.0	195.0	0.58
6”	175	165	5.0	260.2	0.62

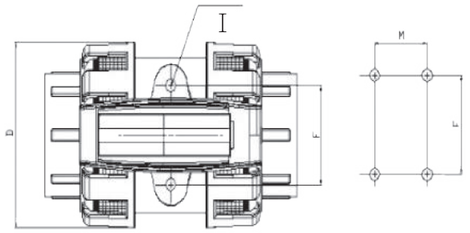
45°彎頭Elbow(SxS)

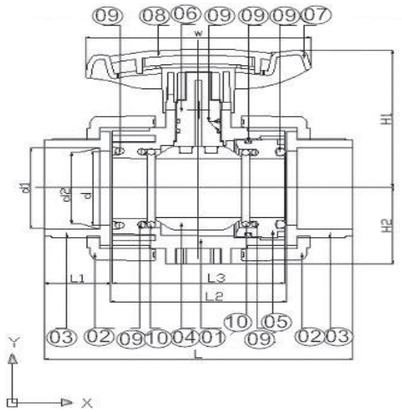


Nominal Size	O.D. m/m	I.D. m/m	Thickness m/m	Length m/m	Weight KG
1/2”	29	20	4.5	47.0	0.02
3/4”	36	26	5.0	56.5	0.02
1”	43	33	5.0	78.0	0.05
1-1/4”	54	42	6.0	80.0	0.07
1-1/2”	62	48	7.0	90.0	0.12
2”	75	60	7.5	110.0	0.21
2-1/2”	88	76	6.0	118.0	0.16
3”	103	89	7.0	144.0	0.26
4”	127	114	6.5	165.0	0.42
5”	152	140	6.0	195.0	0.58
6”	175	165	5.0	260.2	0.62

雙由令球閥 / True Union Ball Valve

Item : JP-640
Size : 1/2" ~ 2"
Joint End : Socket (ANSI/CNS/DNS/JIS)
Threaded (PT/NPT/BSPF)
Working Pressure: 150 PSI





NO.	PART	MATERIAL	Q'TY
1	BODY	UPVC/CPVC/PP	1
2	UNION NUT	UPVC/CPVC/PP	2
3	UNION END	UPVC/CPVC/PP	2
4	BALL	UPVC/CPVC/PP	1
5	THREADED SPACER	UPVC/CPVC/PP	1
6	STEM	UPVC/CPVC/PP	1
7	HANDLE	ABS	1
8	HANDLE CAP	ABS	1
9	ORING	EPDM/VITON	7
10	SEAT	PTFE	2

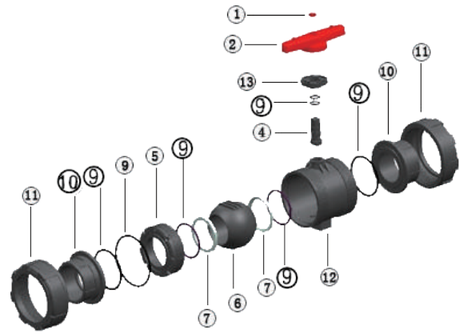
Nom. / SIZE	d 1				d 2			
	ANSI	DIN	JIS	CNS	ANSI	DIN	JIS	CNS
DN15 (1/2")	21.54	20.30	22.30	22.40	21.23	20.10	21.70	21.9
DN20 (3/4")	26.87	25.30	26.30	26.40	26.57	25.10	25.70	25.9
DN25 (1")	33.65	32.30	32.33	34.50	33.27	32.10	31.67	33.9
DN32 (1-1/4")	42.42	40.30	38.43	42.50	42.04	40.10	37.57	41.9
DN40 (1-1/2")	48.56	50.30	48.46	48.60	48.11	50.10	47.54	47.9
DN50 (2")	60.63	63.30	60.56	60.60	60.17	63.10	59.44	59.9

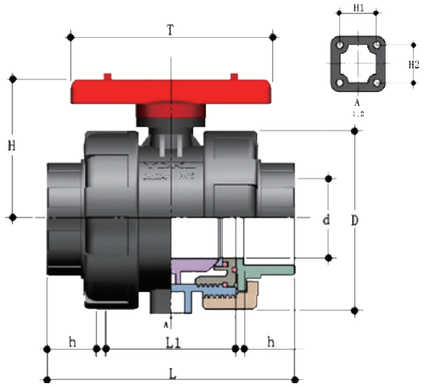
Unit: mm

Nom. / Size	D	L	H1	H2	L1	L2	L3	W	I	F	Operating torque (N・M)
DN15 (1/2")	53.8	113.0	49.3	27.5	21.8	68.0	55.8	75.0	M6	31.0	3.0
DN20 (3/4")	64.8	123.0	63.0	33.5	25.4	70.5	59.6	92.0	M6	33.0	3.5
DN25 (1")	76.0	140.0	73.0	39.0	27.8	83.5	73.5	93.8	M6	40.0	4.0
DN32 (1-1/4")	85.8	162.8	86.0	43.5	32.0	92.0	82.0	110.0	M8	45.0	5.0
DN40 (1-1/2")	91.5	176.0	95.5	48.0	28.0	98.0	87.0	115.0	M8	52.0	7.0
DN50 (2")	122.0	205.0	113.0	62.0	38.0	126.0	115.0	146.0	M8	70.0	10.0

雙由令球閥 / True Union Ball Valve

Item : JP-640
Size : 21/2" ~ 4"
Joint End : Socket (ANSI/CNS/DNS/JIS)
Threaded (PT/NPT/BSPF)
Working Pressure: 150 PSI





NO.	PART	MATERIAL	Q'TY
1	HANDLE CAP	ABS	1
2	HANDLE	ABS	1
4	STEM	UPVC/CPVC/PP	1
5	THREADED SPACER	UPVC/CPVC/PP	1
6	BALL	UPVC/CPVC/PP	1
7	BALL SEAT	TEFLON	2
9	ORING	EPDM/VITON	7
10	UNION END	UPVC/CPVC/PP	2
11	UNION NUT	UPVC/CPVC/PP	2
12	BODY	UPVC/CPVC/PP	1

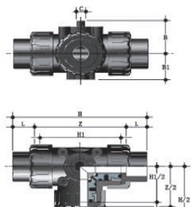
Nom. / SIZE	d 1				d 2			
	ANSI	DIN	JIS	CNS	ANSI	DIN	JIS	CNS
DN65 (21/2")	73.38	75.30	76.60	76.70	72.85	74.80	75.87	75.90
DN80 (3")	89.31	90.40	89.60	89.80	88.70	89.80	88.83	88.90
DN100 (4")	114.76	110.40	114.70	115.00	114.07	109.80	113.98	113.80

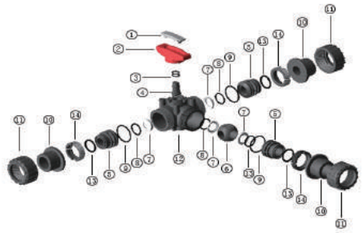
Unit: mm

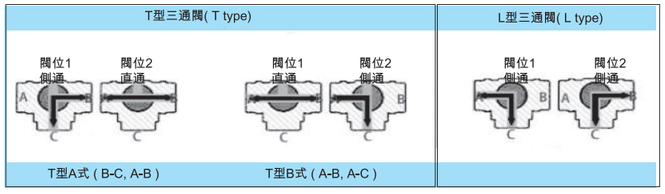
Nom. / Size	D	H	h	L	L1	T	H1	H2	Operating torque(N・M)
DN65 (21/2")	148.00	132.00	46.00	234.00	120.50	170.00	35.00	35.00	12.0
DN80 (3")	178.20	156.00	550.00	265.00	139.50	221.00	35.00	35.00	16.0
DN100 (4")	218.90	173.00	65.00	309.00	165.00	250.00	35.00	35.00	25.0

● 三通球閥 / Three Ways Ball Valve

Item : JP-690
Size : 1/2” ~ 2”
Joint End : Socket (ANSI/CNS/DIN/JIS)
Threaded (PT/NPT/BSPF)
Working Pressure: 150 PSI







NO.	PART	MATERIAL	Q'TY
1	Cap	PVC	1
2	Handle	PVC	1
3	O-ring	EPDM/ VITON	2
4	Stem	PVC	1
5	Seal Carrier	PVC	3
6	Ball	PVC	1
7	Seat Seal	PTFE	4
8	O-ring	EPDM/ VITON	4
9	O-ring	EPDM/ VITON	3
10	End Connector	PVC	3
11	Union Nut	PVC	3
12	Body	PVC	1
13	O-ring	EPDM/ VITON	3
14	Snap ring	PVC	3

Unit: mm

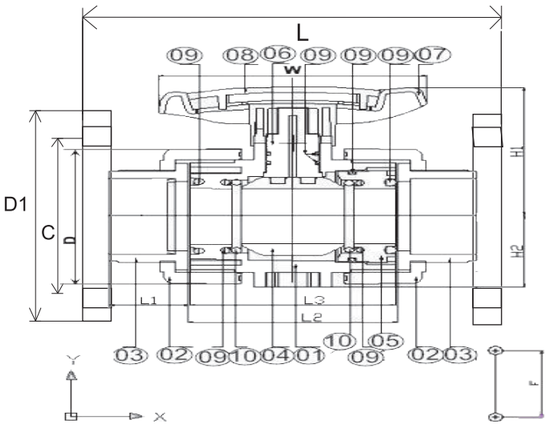
Nom. Size	D	L	H1	H2	L1	L2	L3	W	I	F	E
DN15 (1/2")	53.8	110.2	49.3	27.5	21.8	68.0	55.8	75.0	M6	31.0	69.0
DN20 (3/4")	64.8	120.2	63.0	33.5	25.4	70.5	59.6	92.0	M6	33.0	69.0
DN25 (1")	76.0	138.5	73.0	39.0	27.8	83.5	73.5	93.8	M6	40.0	82.2
DN32 (1-1/4")	85.8	162.8	86.0	43.5	32.0	92.0	82.0	110.0	M8	45.0	82.2
DN40 (1-1/2")	91.5	170.0	95.5	48.0	28.0	98.0	87.0	115.0	M8	52.0	117.0
DN50 (2")	122.0	205.0	113.0	62.0	38.0	126.0	115.0	146.0	M8	70.0	117.0

Nom. Size	d				B	B1	C	H	H1	Z	L	H1/2	Z/2	H/2	L1	L2	Operating torque (N.M.) / ISO
	ANSI	DIN	JIS	CNS													
DN15 (1/2")	21.54	20.30	22.30	22.40	51	38.5	69	138	83	119	22.5	54.5	59.5	81.5	26	18	3.5 (F03)
DN20 (3/4")	26.87	25.30	26.30	26.40	51	38.5	69	172	109	123	24.5	54.5	61.5	86	26	18	3.5 (F03)
DN25 (1")	33.65	32.30	32.33	34.50	58	46	82	200	130	144	28	65	72	100	26	18	4.5 (F03)
DN32 (1-1/4")	42.42	40.30	38.43	42.50	58	46	82	208	130	144	32	65	72	104	26	18	4.5 (F03)
DN40 (1-1/2")	48.56	50.30	48.46	48.60	110	64	-	240	154	171	34.5	77	85.5	120	50	30	5.5 (F07)
DN50 (2")	60.63	63.30	60.56	60.60	110	64	-	246	154	171	37.5	77	85.5	123	50	30	5.5 (F07)

● 法蘭式球閥 / Flanged Type True Union Ball Valve

Item : JP-640F
Size : 1/2” ~ 4”
Joint End : Flange End (ANSI/CNS/DIN/JIS)
Working Pressure: 150 PSI

NO.	PART	MATERIAL	Q'TY
1	BODY. FLANGE	UPVC/CPVC/PP	1
2	UNION NUT	UPVC/CPVC/PP	2
3	UNION END	UPVC/CPVC/PP	2
4	BALL	UPVC/CPVC/PP	1
5	THREADED SPACER	UPVC/CPVC/PP	1
6	STEM	UPVC/CPVC/PP	1
7	HANDLE	ABS	1
8	HANDLE CAP	ABS	1
9	ORING	EPDM/VITON	7
10	SEAT	PTFE	2

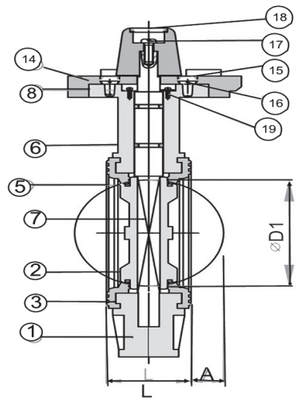


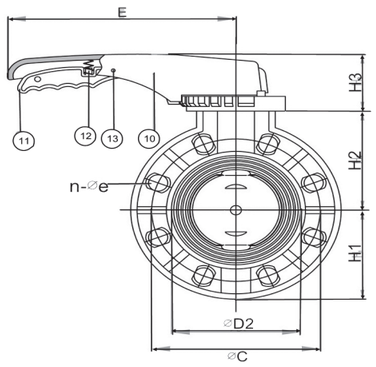
Unit: mm

Nom. Size	D	d	C			H1	H2	L2	W	I	F	D1	L	n-φe	
			ANSI	JIS	DIN									ANSI	JIS
DN15 (1/2")	53.8	15	60.3	70	65	49.3	27.5	68.0	75.0	M6	31.0	95.0	139.2	4-15	
DN20 (3/4")	64.8	20	70.0	75	75	63.0	33.5	70.5	92.0	M6	33.0	104.5	148.6	4-15	
DN25 (1")	76.0	25	79.4	90	85	73.0	39.0	83.5	93.8	M6	40.0	118.0	173.0	4-16	
DN32 (1-1/4")	85.8	32	88.9	100	100	86.0	43.5	92.0	110.0	M8	45.0	139.5	194.8	4-16	
DN40 (1-1/2")	91.5	40	98.4	105	110	95.5	48.0	98.0	115.0	M8	52.0	150.0	215.0	4-19	
DN50 (2")	122.0	50	120.7	120	125	113.0	62.0	126.0	146.0	M8	70.0	165.0	244.0	4-19	
DN65 (21/2")	148.0	65	139.5	140	145	132	74.0	120.5	170	M10	84	185.5	281.6	4-19	
DN80 (3")	178.2	75	152.4	150	160	156	89.1	139.5	221	M10	84	200.0	303.5	8-19	
DN100 (4")	218.9	97	190.5	175	180	173	109.5	165	250	M10	84	229.0	353.0	8-19	

手動式蝶閥 / Butterfly Valve (Lever Type)

Item : JP-810
Size : 2” ~ 8”
Joint End : Flange End (ANSI/CNS/DIN/JIS)
Working Pressure: 150 PSI





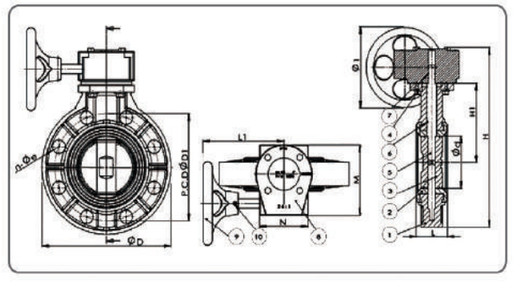
NO.	PART	MATERIAL	Q'TY
1	BODY	PVC/CPVC/FRPP	1
2	DISC	PVC/CPVC/FRPP	1
3	SEAT	EPDM/ VITON	1
5	STABILIZING RING	SS304	2
6	STEM O-RING	EPDM	1
7	VALVE STEM	SS304/ SS316	1
8	SHAFT RETAINER	SS304	1
10	HANDLE LEVER	ABS	1
11	TRIGGER	ABS	1
12	SPRING	SS304	1
13	PIN	SS304	1
14	POSITION LOCK PLATE	PVC	1
15	PLATE CAP	PVC	4
16	PLATE SCREW	SS304	4
17	HANDLE BOLT	SS304	1
18	HANDLE CAP	ABS	1
19	SHAFT RETAINER SCREW	SS304	2

Unit: mm

Nom. Size	L	A	C	n-e		D1	D2	E	H1	H2	H3	Operating torque	
				JIS	DIN/ANSI							(FT*LB)	(N*M)
2”	44.5	4.8	123	4-20		54	85.8	220	79	88	74	25	34
2-1/2”	48.0	9.5	143	4-21		67	104.5	220	90	97	74	25	34
3”	53.0	15.0	157	8-21		83	119.5	249	96	115	74	25	34
4”	57.0	22.0	186	8-21		101	141.0	249	110	128	74	25	34
5”	68.0	29.5	213	8-24		127	171.5	320	127	157	96	40	54
6”	73.0	39.5	240	8-24		152	197.0	320	145	170	96	40	54
8”	92.0	54.0	296	12-24	8-24	200	249.0	335	172	213	96	59	80

齒輪式蝶閥 / Butterfly Valve (Worm Gear Type)

Item : JP-820N
Size : 8” ~ 16”
Joint End : Flange (ANSI/CNS/DIN/JIS)
Working Pressure : 8” ~ 12” 100PSI
14” ~ 16” 60PSI



NO.	PART	MATERIAL	Q'TY
1	BODY	PVC/CPVC/FRPP	1
2	DISC	PVC/CPVC/FRPP	1
3	SEAT SEAL	EPDM/ VITON	1
4	SCREW	STEEL	4
5	STEM	SS304	1
6	STEM O-RING	EPDM/VITON	2
7	KEY	STEEL	1
8	GEAR BOX	IRON	1
9	HAND WHEEL	IRON	1
10	PIN	STEEL	1

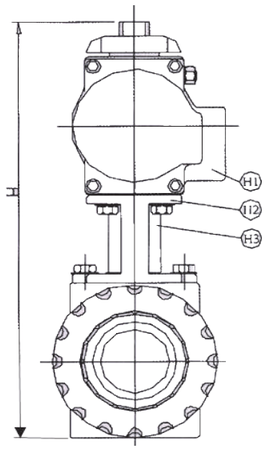
Unit: mm

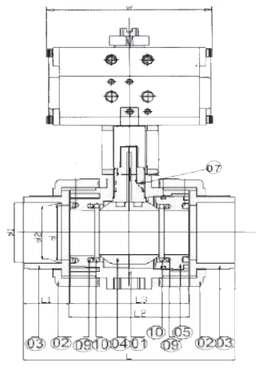
Nom. Size	ØD	Ød	L	P.C.D. ØD1			Ll	H1	H	n-Øe		
				JIS	DIN	ANSI				JIS	DIN	ANSI
8”	345	200	88	290	295	298	200	228	470	12-Ø23	8-Ø23	8-Ø23
10”	400	255	101	355	350	362	210	258	535	12-Ø25	12-Ø25	12-Ø25
12”	460	303	106	400	400	432	210	305	590	16-Ø25	12-Ø25	12-Ø25
14”	510	338	110	445	450	476	280	325	678	16-Ø25	16-Ø25	12-Ø29
16”	570	390	113	510	503	540	280	350	733	16-Ø27	16-Ø27	16- Ø29

氣動球閥 / Pneumatic Actuator Ball Valve

Item : JP-P640
Size : 1/2" ~ 4"
Joint End : Socket (ANSI/CNS/DIN/JIS)
Threaded (PT/NPT/BSPF)
Flange (ANSI/CNS/DIN/JIS)
Max. Oper Pressure: 120 PSI
Lowest Air Pressure: 60PSI
Working Pressure: 150 PSI

NO.	PART	MATERIAL	Q'TY
1	BODY	UPVC/CPVC/PP	1
2	UNION NUT	UPVC/CPVC/PP	2
3	UNION END	UPVC/CPVC/PP	2
4	BALL	UPVC/CPVC/PP	1
5	THREADED SPACER	UPVC/CPVC/PP	1
7	STEM O-RING	EPDM/VITON	2
9	O-RING	EPDM/VITON	5
10	SEAT	PTFE	2
H1	PNEUATIC ACTUATOR	ALUMINUM	1
H2	BRACKET	ALUMINUM	1
H3	ADAPTER	SUS304	1





Unit: mm

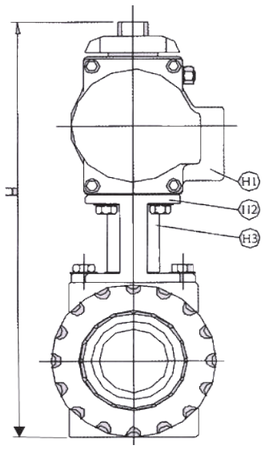
Size \ Nom.	d1				d2				L1	L2	L	H	W	
	ANSI	DIN	JIS	CNS	ANSI	DIN	JIS	CNS					DA	SR
DN15 (1/2")	21.54	20.3	22.30	22.40	21.23	20.10	21.70	21.9	21.8	68.0	110.2	164	116	116
DN20 (3/4")	26.87	25.3	26.30	26.40	26.57	25.10	25.70	25.9	25.4	70.5	120.2	173	116	116
DN25 (1")	33.65	32.3	32.33	34.50	33.27	32.10	31.67	33.9	27.8	83.5	138.5	209	116	145
DN32 (1-1/4")	42.42	40.3	38.43	42.50	42.04	40.10	37.57	41.9	32.0	92.0	162.8	230	145	145
DN40 (1-1/2")	48.56	50.3	46.46	48.60	48.11	50.10	47.54	47.9	28.0	98.0	170.0	245	145	145
DN50 (2")	60.63	63.3	60.56	60.60	60.17	63.10	59.44	59.9	38.0	126.0	205.0	283	169	201
DN65(21/2")	73.38	75.3	76.60	76.70	72.85	74.80	75.87	75.9	46.0	120.5	234.0	278	169	201
DN80(3")	89.31	90.4	89.60	89.80	88.70	89.80	88.83	88.9	55.0	139.5	258.5	313	169	201
DN100(4")	114.76	110.4	114.70	115.00	114.07	109.80	113.98	113.8	65.0	165.0	309.0	353	169	201

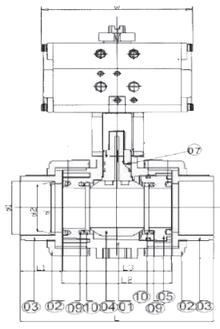
NOTE: DA=Double Action 雙動 ; SR=Spring Action單動

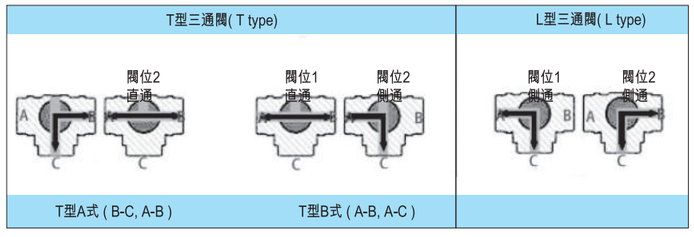
氣動三通球閥 / Pneumatic Acutator Three Way Ball Valve

Item : JP-P690
Size : 1/2" ~ 2"
Joint End : Socket (ANSI/CNS/DIN/JIS)
Threaded (PT/NPT/BSPF)
Flange (ANSI/CNS/DIN/JIS)
Max. Oper Pressure: 120 PSI
Lowest Air Pressure: 60PSI
Working Pressure: 150 PSI

NO.	PART	MATERIAL	Q'TY
1	BODY	UPVC/CPVC/PP	1
2	UNION NUT	UPVC/CPVC/PP	2
3	UNION END	UPVC/CPVC/PP	2
4	BALL	UPVC/CPVC/PP	1
5	THREADED SPACER	UPVC/CPVC/PP	1
7	STEM O-RING	EPDM/VITON	2
9	O-RING	EPDM/VITON	5
10	SEAT	PTFE	2
H1	PNEUATIC ACTUATOR	ALUMINUM	1
H2	BRACKET	ALUMINUM	1
H3	ADAPTER	SUS304	1







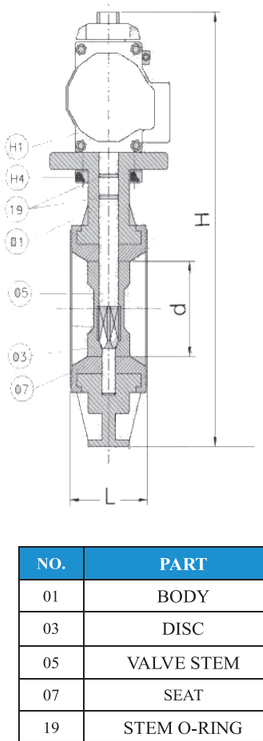
Unit: mm

Size \ Nom.	d1				d2				L1	L2	L	H	W	
	ANSI	DIN	JIS	CNS	ANSI	DIN	JIS	CNS					DA	SR
DN15 (1/2")	21.54	20.3	22.30	22.40	21.23	20.10	21.70	21.9	21.8	68.0	163	164	116	116
DN20 (3/4")	26.87	25.3	26.30	26.40	26.57	25.10	25.70	25.9	25.4	70.5	172	173	116	116
DN25 (1")	33.65	32.3	32.33	34.50	33.27	32.10	31.67	33.9	27.8	83.5	200	209	116	145
DN32 (1-1/4")	42.42	40.3	38.43	42.50	42.04	40.10	37.57	41.9	32.0	92.0	208	230	145	145
DN40 (1-1/2")	48.56	50.3	46.46	48.60	48.11	50.10	47.54	47.9	28.0	98.0	240	245	145	145
DN50 (2")	60.63	63.3	60.56	60.60	60.17	63.10	59.44	59.9	38.0	126.0	246	283	169	201

NOTE: DA=Double Action 雙動 ; SR=Spring Action單動

氣動蝶閥 / Pneumatic Actuator Butterfly Valve

Item : JP-P810
Size : 2 ~ 10”
Joint End : Flange End (ANSI/CNS/DIN/JIS)
Max. Oper Pressure: 115 PSI
Lowest Air Pressure: 75 PSI
Working Pressure: 2” ~8” - 150 PSI
10” - 90 PSI



NO.	PART	MATERIAL	Q'TY
01	BODY	PVC/CPVC/FRPP	1
03	DISC	PVC/CPVC/FRPP	1
05	VALVE STEM	SS304/ SS306	1
07	SEAT	EPDM/ VTION	1
19	STEM O-RING	EPDM/ VITON	2
H1	PNEUMATIC ACTUATOR	ALUMINUM	1
H4	BOLT	SS304	4

Unit: mm

Nom. Size	d	D2	C	n-φe JIS	n-φe DIN/ANSI	L	H	H2	M	W DA	W SR	T	Operating torque (FT*LB)	Operating torque (N*M)
2”	54	85.8	123	4-20		44.5	276.0	99.0	50	145	169	11	25	34
2-1/2”	67	104.5	143	4-21		48.0	296.0	108.0	50	169	201	14	25	34
3”	83	119.5	157	8-21		53.0	320.0	126.0	50	169	201	14	25	34
4”	101	141.0	186	8-21		57.0	347.5	139.5	50	169	201	14	25	34
5”	127	171.5	213	8-24		68.0	389.0	141.0	50	209	242	17	40	54
6”	152	197.0	240	8-24		73.0	450.5	184.5	50	209	242	17	40	54
8”	200	249.0	296	12-24	8-24	92.0	541.0	228.0	70	275	275	22	59	80
10”	255	300	355	12-25		101.0	610.0	258.0	70	275	332	22	89	120

NOTE: DA=Double Action 雙動 ; SR=Spring Action單動

電動球閥 / Electric Actuator Ball Valve

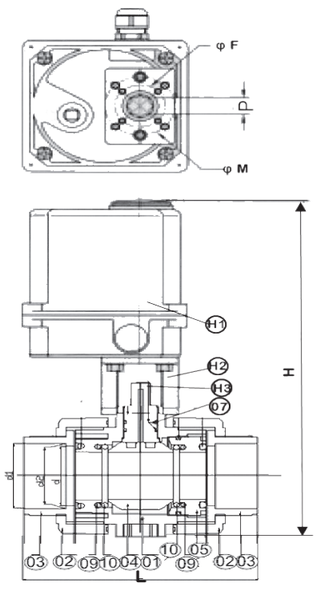
Item : JP-E640
Size : 1/2” ~ 4”
Joint End : Socket (ANSI/CNS/DIN/JIS)
Threaded (PT/NPT/BSPF)
Flange (ANSI/CNS/DIN/JIS)
Working Pressure: 150 PSI

SIZE	Specification				Speed(sec.)		Output Torque (kgf/cm)		
	POWER	AC110V	AC220V	DC24V	AC	DC	AC110V	AC220V	DC24V
1/2”~ 2”	10W	0.6A	0.3A	0.1A	10	15	350	362	438
UM-1	15W	0.7A	0.4A	N/A	10	N/A	410	432	N/A
21/2”	15W	0.6A	0.3A	0.1A	10	15	350	362	438
UM-1	10W	0.7A	0.4A	N/A	10	N/A	410	432	N/A
3”~ 4”	15W	1.2A	0.4A	N/A	12	N/A	500	500	N/A
UM-2	10W	N/A		1A	N/A	16	N/A	N/A	700

1/2”~2”

21/2”~4”

NO.	PART	MATERIAL	Q'TY
1	BODY	UPVC/CPVC/PP	1
2	UNION NUT	UPVC/CPVC/PP	2
3	UNION END	UPVC/CPVC/PP	2
4	BALL	UPVC/CPVC/PP	1
5	THREADED SPACER	UPVC/CPVC/PP	1
7	STEM O-RING	EPDM/VITON	2
9	O-RING	EPDM/VITON	5
10	SEAT	PTFE	2
H1	ELECTRIC ACTUATOR	NYLON	1
H2	BRACKET	ALUMINUM	1
H3	ADAPTER	SUS304	1



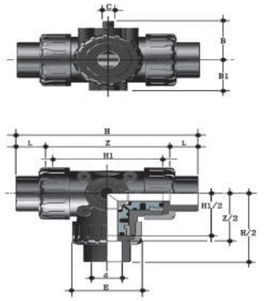
Unit: mm

Nom. Size	d1 ANSI	d1 DIN	d1 JIS	d1 CNS	d2 ANSI	d2 DIN	d2 JIS	d2 CNS	L	H	M	F	P
DN15 (1/2")	21.54	20.30	22.30	22.40	21.23	20.10	21.70	21.9	110.2	228.8	50	36	9
DN20 (3/4")	26.87	25.30	26.30	26.40	26.57	25.10	25.70	25.9	120.2	239.8	50	36	9
DN25 (1")	33.65	32.30	32.33	34.50	33.27	32.10	31.67	33.9	138.5	272.0	50	36	11
DN32 (1-1/4")	42.42	40.30	38.43	42.50	42.04	40.10	37.57	41.9	162.8	281.8	50	36	11
DN40 (1-1/2")	48.56	50.30	46.46	48.60	48.11	50.10	47.54	47.9	170.0	289.5	50	36	11
DN50 (2")	60.63	63.30	60.56	60.60	60.17	63.10	59.44	59.9	205.0	320.0	50	36	11
DN65 (21/2")	73.38	75.30	76.60	76.70	72.85	74.80	75.87	75.90	234.00	315.0	50	36	14
DN80 (3")	89.31	90.40	89.60	89.80	88.70	89.80	88.83	88.90	258.50	350.0	50	36	14
DN100 (4")	114.76	110.40	114.70	115.00	114.07	109.80	113.98	113.80	309.00	390.0	-	70	17

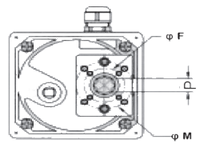
電動三通球閥 / Electric Actuator Three Ways Ball Valve

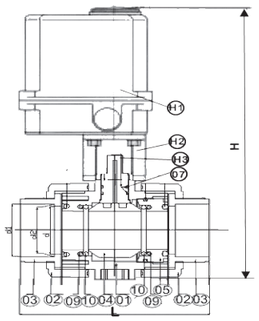
Item : JP-E690
Size : 1/2" ~2"
Joint End : Socket (ANSI/CNS/DIN/JIS)
Threaded (PT/NPT/BSPF)
Flange (ANSI/CNS/DIN/JIS)
Working Pressure: 150 PSI

SIZE	Specification				Speed(sec.)		Output Torque (kgf/cm)		
	POWER	AC110V	AC220V	DC24V	AC	DC	AC110V	AC220V	DC24V
1/2"~ 2" UM-1	10W	0.6A	0.3A	0.1A	10	15	350	362	438
	15W	0.7A	0.4A	N/A	10	N/A	410	432	N/A



閥位1
側通





NO.	PART	MATERIAL	Q'TY
1	BODY	UPVC/CPVC/PP	1
2	UNION NUT	UPVC/CPVC/PP	2
3	UNION END	UPVC/CPVC/PP	2
4	BALL	UPVC/CPVC/PP	1
5	THREADED SPACER	UPVC/CPVC/PP	1
7	STEM O-RING	EPDM/VITON	2
9	O-RING	EPDM/VITON	5
10	SEAT	PTFE	2
H1	ELECTRIC ACTUATOR	NYLON	1
H2	BRACKET	ALUMINUM	1
H3	ADAPTER	SUS304	1

T型三通閥(T type)	L型三通閥(L type)
T型A式 (B-C, A-B) T型B式 (A-B, A-C)	

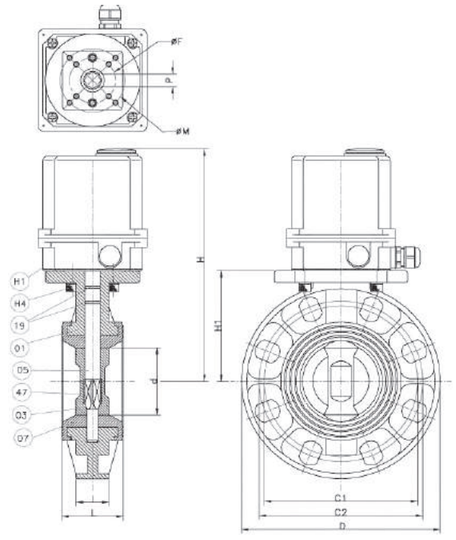
Nom.	D	L	H1	H2	L1	L2	L3	W	I	F	E
DN15 (1/2")	53.8	163.0	49.3	27.5	21.8	68.0	55.8	75.0	M6	31.0	69.0
DN20 (3/4")	64.8	172.0	63.0	33.5	25.4	70.5	59.6	92.0	M6	33.0	69.0
DN25 (1")	76.0	200.0	73.0	39.0	27.8	83.5	73.5	93.8	M6	40.0	82.2
DN32 (1-1/4")	85.8	208.0	86.0	43.5	32.0	92.0	82.0	110.0	M8	45.0	82.2
DN40 (1-1/2")	91.5	240.0	95.5	48.0	28.0	98.0	87.0	115.0	M8	52.0	117.0
DN50 (2")	122.0	246.0	113.0	62.0	38.0	126.0	115.0	146.0	M8	70.0	117.0

Nom.	d				B	B1	C	H	H1	Z	L	H1/2	Z/2	H/2	L1	L2	Operating torque (N.M.) / ISO
	ANSI	DIN	JIS	CNS													
DN15 (1/2")	21.54	20.30	22.30	22.40	51	38.5	69	163	109	119	22.5	54.5	59.5	81.5	26	18	3.5 (F03)
DN20 (3/4")	26.87	25.30	26.30	26.40	51	38.5	69	172	109	123	24.5	54.5	61.5	86	26	18	3.5 (F03)
DN25 (1")	33.65	32.30	32.33	34.50	58	46	82	200	130	144	28	65	72	100	26	18	4.5 (F03)
DN32 (1-1/4")	42.42	40.30	38.43	42.50	58	46	82	208	130	144	32	65	72	104	26	18	4.5 (F03)
DN40 (1-1/2")	48.56	50.30	48.46	48.60	110	64	-	240	154	171	34.5	77	85.5	120	50	30	5.5 (F07)
DN50 (2")	60.63	63.30	60.56	60.60	110	64	-	246	154	171	37.5	77	85.5	123	50	30	5.5 (F07)

電動蝶閥 / Electric Actuator Butterfly Valve

Item : JP-E810
Size : 2 ~ 8"
Joint End : Flange End (ANSI/CNS/DIN/JIS)
Working Pressure: 150 PSI

SIZE	Specification				Speed(sec.)		Output Torque (kgf/cm)		
	POWER	AC110V	AC220V	DC24V	AC	DC	AC110V	AC220V	DC24V
2"~21/2" UM-1	10W	0.6A	0.3A	0.1A	10	15	350	362	400
	15W	0.7A	0.4A	N/A	10	N/A	410	432	N/A
3"~4" UM-2	15W	1.2A	0.4A	N/A	12	N/A	500	500	N/A
	10W	N/A	N/A	1A	N/A	16	N/A	N/A	700
5"~6" UM-3	25W	0.8A	0.6A	N/A	8	N/A	1486	1562	N/A
	30W	N/A		0.3A	N/A	8	N/A	N/A	1500
8" UM-4	25W	0.8A	0.6A	N/A	20	N/A	2500	2500	N/A
					30		3118	3320	
	30W	N/A		0.3A	N/A	20	N/A		2500
						30			3500



NO.	PART	MATERIAL	Q'TY
01	BODY	PVC/CPVC/FRPP	1
03	DISC	PVC/CPVC/FRPP	1
05	VALVE STEM	SS304/ SS316	1
07	SEAT	EPDM/ VITON	1
19	STEM O-RING	EPDM/ VITON	2
H1	ELECTRIC ACTUATORS	NYLON	1
H4	BOLT	SS304	4

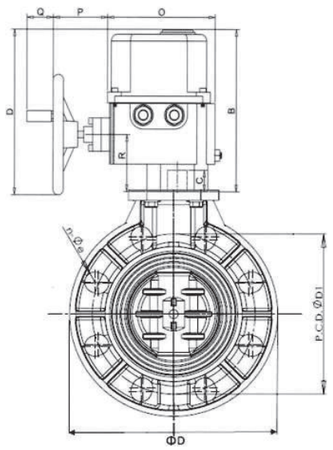
Unit: mm

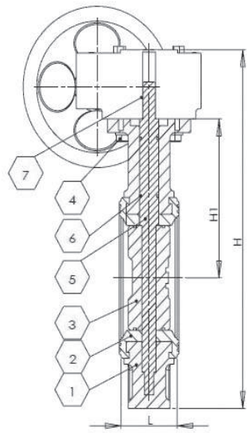
Nom. Size	d	D2	C	n- φ e		L	H	H2	P	Operating torque	
				JIS	DIN/ANSI					(FT*LB)	(N*M)
2"	54	85.8	123	4-20		44.5	244.0	99.0	14	25	34
2-1/2"	67	104.5	143	4-21		48.0	253.0	108.0	14	25	34
3"	83	119.5	157	8-21		53.0	271.0	126.0	14	25	34
4"	101	141.0	186	8-21		57.0	311.5	139.5	14	25	34
5"	127	171.5	213	8-24		68.0	313.0	141.0	17	40	54
6"	152	197.0	240	8-24		73.0	428.5	184.5	17	40	54
8"	200	249.0	296	12-24	8-24	92.0	472.0	228.0	22	59	80

● 電動蝶閥 / Electric Actuator Butterfly Valve

Item : JP-E820
Size : 10 ~ 14”
Joint End : Flange (ANSI/CNS/DIN/JIS)
Working Pressure: 10” ~ 12” 90 PSI
14” 60 PSI

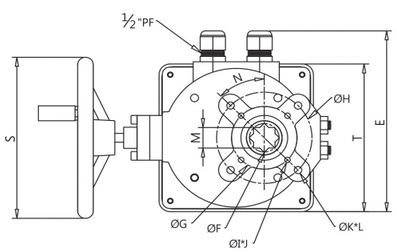
SIZE	Specification				Speed(sec.)		Output Torque (kgf/cm)		
	POWER	AC110V	AC220V	DC24V	AC	DC	AC110V	AC220V	DC24V
10” UM-4	25W	0.6A	0.6A	N/A	30	N/A	3118	3320	N/A
	30W	N/A		0.3A	N/A	20	N/A		2500
12” UM-5	40W	0.9A	0.6A	N/A	30	N/A	4266	4873	N/A





NO.	PART	MATERIAL	
1	BODY	UPVC/CPVC/FRPP	1
2	SEAT	EPDM/FPM	1
3	DISC	UPVC/CPVC/FRPP	1
4	SCREW	STEEL	4
5	STEM	SS304	1
6	O-RING	EPDM/FPM	2
7	CONNECTOR	STEEL	1

DC 電壓驅動器高度需增高26mm

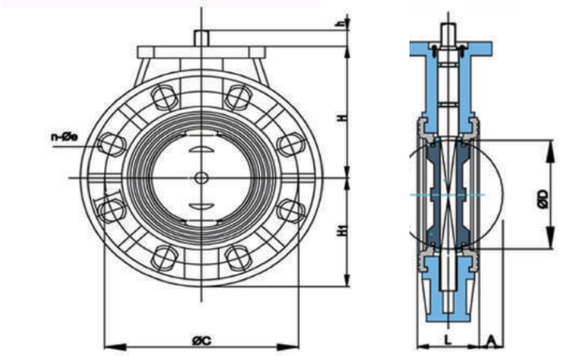


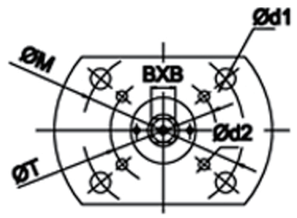
Unit: mm

Size \ Nom.	φ D	P.C.D. φ D1 DIN	ANSI	JIS	H1	n-φ e DIN	ANSI	JIS	L	D	Q	P	O	B	R	S	E	T
10”(250)	400	350	362	355	258	12*25	12*25	12*25	101	249	42	87	173	244	85	180	203	165
12”(300)	460	400	432	400	305	12*25	12*25	16*25	106	274	42	87	173	276	92	180	203	165
14”(350)	510	450	476	445	325	16*25	12*29	16*25	110	274	42	87	173	276	92	180	203	165

● 無把手蝶閥 / Butterfly Valve (No handle)

Item : JP-812P
Size : 2” ~ 8”
Joint End : Flange End (ANSI/CNS/DIN/JIS)
Working Pressure: 150 PSI





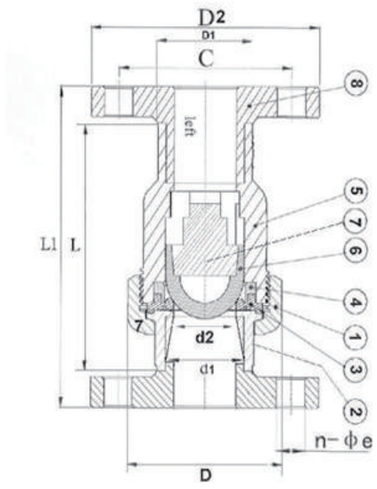
NO.	PART	MATERIAL	Q'TY
1	BODY	PVC	1
2	DISC	PVC	1
3	SEAT	EPDM/ VITON	1
4	STABILIZING RING	SS304	2
5	STEM O-RING	EPDM	1
6	VALVE STEM	SS304/ SS316	1
7	SHAFT RETAINER	SS304	1
8	POSITION LOCK PLATE	PVC	1
9	PLATE CAP	PVC	4
10	PLATE SCREW	SS304	4
11	HANDLE BOLT	SS304	1
12	SHAFT RETAINER SCREW	SS304	2

Unit: MM

Size	H1	H	C	n-e JIS	n-e DIN/ANSI	D	h	B	M	d1	T	d2	L	Operating torque N.M (FT*LB)
2"	79	88	123	4-20		54	11	11	70(F05/F07)	8.5	50	7	44.5	15
2-1/2"	90	97	143	4-21		67	11	11	70(F05/F07)	8.5	50	7	48.0	22
3"	96	115	157	8-21		83	14	14	70(F05/F07)	8.5	50	7	53.0	26
4"	110	128	186	8-21		101	14	14	70(F05/F07)	8.5	50	7	57.0	26
5"	127	157	213	8-24		127	17	17	102(F07/F10)	11	70	8.5	68.0	40
6"	145	170	240	8-24		152	17	17	102(F07/F10)	11	70	8.5	73.0	55
8"	172	213	296	12-24	8-24	200	22	22	102(F10)	11	70	8.5	92.0	80

球型逆止閥 / Ball Check Valve

Item : JP-460
Size : 1/2” ~ 6”
Joint End : Socket (ANSI/CNS/DIN/JIS)
Flanged(ANSI/CNS/DIN/JIS)
Working Pressure: 1/2” ~ 21/2” 150 PSI
3” ~ 4” 100 PSI
6” 80 PSI



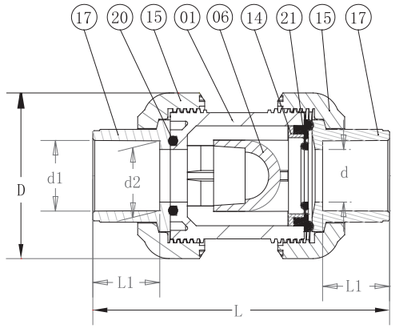
NO.	PART	MATERIAL	Q'TY
1	UNION END	UPVC/CPVC/FRPP	1
2	UNION NUT	UPVC/CPVC/FRPP	1
3	SPACER	UPVC/CPVC/FRPP	1
4	SEAL	EPDM/VITON	1
5	BODY	UPVC/CPVC/FRPP	1
6	SPIGOT	UPVC/CPVC/FRPP	1
7	BALL	UPVC/CPVC/FRPP	1
8	FLANGE	UPVC/CPVC/FRPP	1

Unit: mm

Nom. SIZE	d 1				d 2				D1	D	D2	L	L1	n-φe
	ANSI	DIN	JIS	CNS	ANSI	DIN	JIS	CNS						
DN15 (1/2")	21.54	20.30	22.30	22.40	21.23	20.10	21.70	21.9	30	53	95.0	90	118.4	4-15
DN20 (3/4")	26.87	25.30	26.30	26.40	26.57	25.10	25.70	25.9	35	63	104.5	106	134.4	4-15
DN25 (1")	33.65	32.30	32.33	34.50	33.27	32.10	31.67	33.9	43	73	118.0	124	158.0	4-16
DN32 (1-1/4")	42.42	40.30	38.43	42.50	42.04	40.10	37.57	41.9	53	85	139.5	139	171	4-16
DN40 (1-1/2")	48.56	50.30	48.46	48.60	48.11	50.10	47.54	47.9	62	97	150.0	151	187	4-19
DN50 (2")	60.63	63.30	60.56	60.60	60.17	63.10	59.44	59.9	75	118	165.0	169	203	4-19
DN65 (2-1/2")	73.38	75.30	76.60	76.70	72.85	75.10	75.87	75.9	91	134	185.5	230	276	4-19
DN80 (3")	89.31	90.40	89.60	89.80	88.70	90.10	88.83	88.9	110	158	200.0	263	307	8-19
DN100 (4")	114.76	110.4	114.7	115.0	114.1	110.10	113.98	113.8	135	202	229.0	352	396	8-19
DN150(6")	168.83	160.5	166.2	166.2	168.0	160.20	165.30	164.6	193	258	286.5	382	432	8-23

雙由令球型逆止閥 / True Union Ball Check Valve

Item No.: JP-440
Size: 1/2”~2”
Joint End: Socket (ANSI/ CNS/ JIS/ DIN)
Working Pressure: 150 PSI



NO.	PART	MATERIAL	Q'TY
1	BODY	UPVC	1
6	BALL	UPVC	1
14	SEAL GASKET	EPDM/VITON	1
21	GLAND	UPVC	1
15	UNION NUT	UPVC	2
17	UNION END	UPVC	2
20	O-RING	EPDM/VITON	1

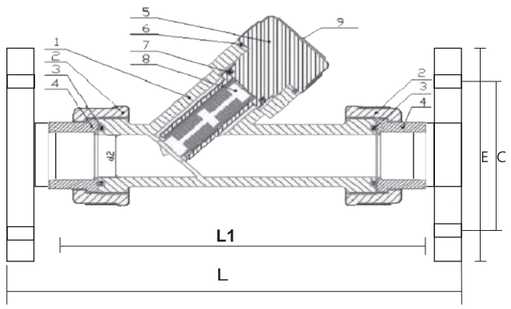
Nom. SIZE	d 1				d 2				D	L	L1
	ANSI	DIN	JIS	CNS	ANSI	DIN	JIS	CNS			
DN15 (1/2")	21.54	20.30	22.30	22.40	21.23	20.10	21.70	21.9	54.0	96.0	22.3
DN20 (3/4")	26.87	25.30	26.30	26.40	26.57	25.10	25.70	25.9	63.0	112.0	25.5
DN25 (1")	33.65	32.30	32.33	34.50	33.27	32.10	31.67	33.9	73.5	132.5	26.5
DN32 (1-1/4")	42.42	40.30	38.43	42.50	42.04	40.10	37.57	41.9	84.5	150.5	29.5
DN40 (1-1/2")	48.56	50.30	48.46	48.60	48.11	50.10	47.54	47.9	98.0	158.5	35.0
DN50 (2")	60.63	63.30	60.56	60.60	60.17	63.10	59.44	59.9	118.0	183.5	35.5

PAGE 49 - 50

Y型過濾器 / Y Strainer/ Y filter

Item : JP-950
Size : 1/2 ~ 4”
Joint End : Socket End(ANSI/CNS/DIN/JIS)
Flange End (ANSI/CNS/DIN/JIS)
Working Pressure: 1/2“~ 2” 150 PSI
21/2“ ~ 4” 90 PSI

PP Screen Specification : 1/2” ~ 2” 20 mesh
21/2” ~ 4” 10 mesh
SUS 304 Screen : 1/2” ~ 4” 40 mesh



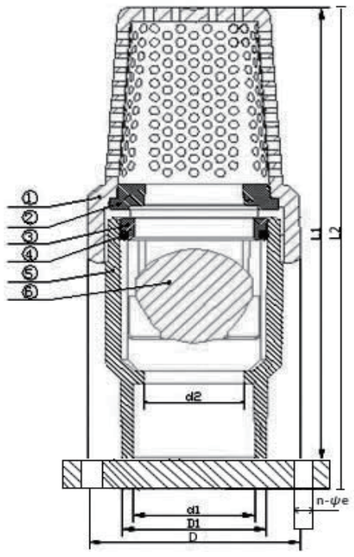
NO.	PART	MATERIAL	Q’TY	NO.	PART	MATERIAL	Q’TY
1	BODY	Clear PVC	1	6	STRAINER SEAL	EPDM	1
2	UNION NUT	UPVC	2	7	STRAINER O-RING	EPDM	1
3	O-RING	EPDM/VITON	2	8	SCREEN	PP / SUS304	1
4	UNION END	UPVC	2	9	STRAINER COVER	ABS	1
5	STRAINER NUT	UPVC	1				

Unit: mm

Nom. SIZE	d 1				d 2				D	L	H	E	n-φe		C		
	ANSI	DIN	JIS	CNS	ANSI	DIN	JIS	CNS					ANSI	JIS	ANSI	JIS	DIN
DN15(1/2")	21.54	20.30	22.30	22.40	21.23	20.10	21.70	21.9	42	178	42	95	4-15		60.3	70	65
DN20(3/4")	26.87	25.30	26.30	26.40	26.57	25.10	25.70	25.9	52	198.4	58	104.5	4-15		70.0	75	75
DN25(1")	33.65	32.30	32.33	34.50	33.27	32.10	31.67	33.9	58	223.2	52	118	4-16		79.4	90	85
DN32(1-1/4")	42.42	40.30	38.43	42.50	42.04	40.10	37.57	41.9	72	240.0	72	139.5	4-16		88.9	100	100
DN40(1-1/2")	48.56	50.30	48.46	48.60	48.11	50.10	47.54	47.9	82.6	294.0	82.6	150	4-19		98.4	105	110
DN50(2")	60.63	63.30	60.56	60.60	60.17	63.10	59.44	59.9	101	346	101	165	4-19		120.7	120	125
DN65(2-1/2")	73.38	75.30	76.60	76.70	72.85	75.10	75.87	75.9	128	424.6	128	185.5	4-19		139.5	140	145
DN80(3")	89.31	90.40	89.60	89.70	88.70	90.10	88.83	88.9	146	480	146	200	8-19		152.4	150	160
DN100(4")	114.76	110.4	114.7	115.0	114.1	110.10	113.98	113.8	168	512	168	229	8-19		190.5	175	180

福特閥 / Foot Valve

Item : JP-470
Size : 3/4” ~ 6”
Joint End : Socket (ANSI/CNS/DNS/JIS)
Working Pressure: 3/4 ” ~ 21/2” 150 PSI
3” ~ 4” 100 PSI
6” 80 PSI



NO.	PART	MATERIAL	Q’TY
1	FILTER	UPVC/CPVC/FRPP	1
2	PAD	UPVC/CPVC/FRPP	1
3	SPACER	UPVC/CPVC/FRPP	1
4	SEAL	EPDM/VITON	1
5	BODY	UPVC/CPVC/FRPP	1
6	BALL	UPVC/CPVC/FRPP	1

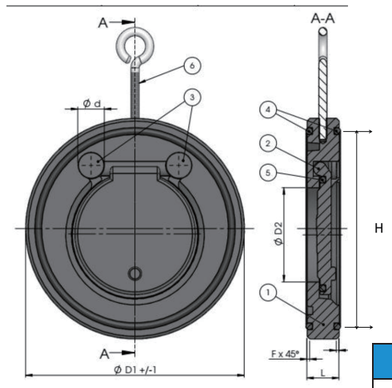
Unit: mm

Nom. SIZE	d 1				d 2				D	D1	L1	L2	n-φe
	ANSI	DIN	JIS	CNS	ANSI	DIN	JIS	CNS					
DN15(1/2")													
DN20(3/4")	26.87	25.30	26.30	26.40	26.57	25.10	25.70	25.9	63	35	146	160.2	4-15
DN25(1")	33.65	32.30	32.33	34.50	33.27	32.10	31.67	33.9	73	43	174	189.6	4-16
DN32(1-1/4")	42.42	40.30	38.43	42.50	42.04	40.10	37.57	41.9	85	53	190	206	4-16
DN40(1-1/2")	48.56	50.30	48.46	48.60	48.11	50.10	47.54	47.9	97	62	206	224	4-19
DN50(2")	60.63	63.30	60.56	60.60	60.17	63.10	59.44	59.9	118	75	235	252	4-19
DN65(2-1/2")	73.38	75.30	76.60	76.70	72.85	75.10	75.87	75.9	134	91	302	325	4-19
DN80(3")	89.31	90.40	89.60	89.70	88.70	90.10	88.83	88.9	158	110	350	372.5	8-19
DN100(4")	114.76	110.4	114.7	115.0	114.1	110.10	113.98	113.8	202	135	428	453	8-19
DN150(6”)	168.83	160.5	166.2	166.2	168.0	160.20	165.30	164.6	258	193	475	500	8-23

PAGE 51 - 52

● 擺動式 / 夾式(單片式)逆止閥 / WAFER CHECK VALVE

Item : JP-420
Size : 2″ ~12″ (DN50~DN300)
Joint End : Flange (ANSI/CNS/DIN/JIS)
Working Pressure: 2″ ~ 6″ 150PSI
8″ ~12″ 90PSI



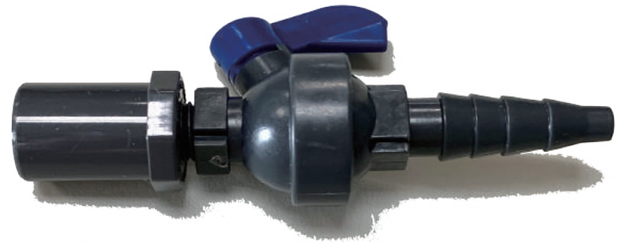
NO.	PART	MATERIAL	Q'TY
1	BODY	UPVC	1
2	DISC	UPVC	1
3	CLIP	UPVC	2
4	BODY ORING	EPDM	2
5	DISC ORING	EPDM	1
6	RING BOLT	SUS304	1

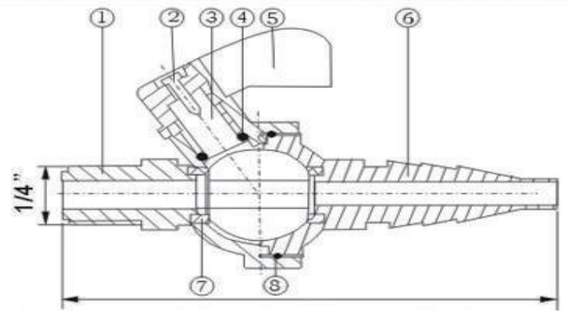
Unit: mm

Size	ϕ D1 +/-1	ϕ D2 +/-1	ϕ d	L +/-1	H
DN50 (2")	103	32	12	20	88
DN65 (21/2")	129	40	12	20	99
DN80 (3")	144	55	14	21	114
DN100 (4")	164	70	20	23	143
DN125 (5")	194	92	20	23	173.1
DN150 (6")	220	110	20	26	197
DN200 (8")	275	149	20	24	262.4

● 實驗式球閥/考克閥/ SAMPLING VALVE

Item : JP-712
Size : 1/4″ & 1/2″
Joint End : NPT
Working Pressure: 150 PSI





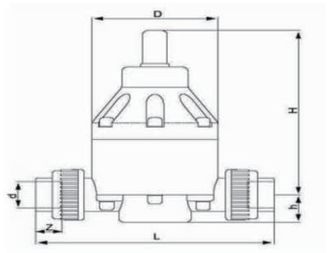
NO.	PART	MATERIAL	Q'TY
1	BODY	UPVC	1
2	SCREW	UPVC	2
3	STEM	UPVC	1
4	O-RING	EPDM	1
5	HANDLE	EPDM	1
6	BODY	SUS304	1
7	SEAL	EPDM	1
8	O-RING	EPDM	1

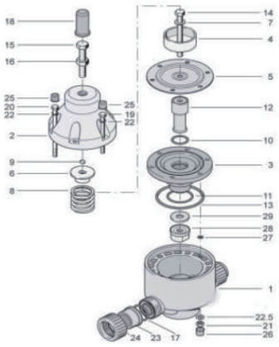
Unit: mm

SIZE	d1	D1	D2	L	L1	W	T	L2	D2	D3			PT
										ANSI	DIN	JIS	
1/4"	6	8	12	90	14	16	6	16	8	21.3	20.0	22	19

安全閥 / SAFTY VALVE

Item : JP-650
Size : 1/2" ~ 2-1/2"
Joint End : Socket, PT, Flanged
Working Pressure: 150 PSI



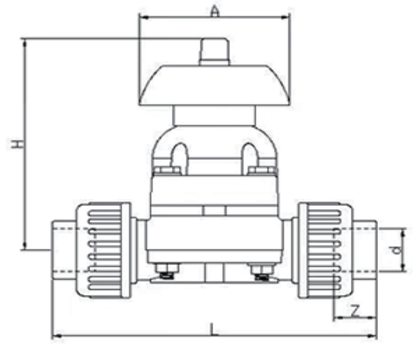


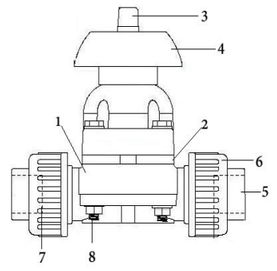
NO.	PART	MATERIAL	Q'TY
1	BODY	PVC/PP/CPVC/PVDF	1
2	O-RING	EPDM	1
3	DIAPHRAGM	PTFE	1
4	UNION END	PVC/PP/CPVC/PVDF	1
5	UNION NUT	PVC/PP/CPVC/PVDF	1
6	SPRING	SUS304	1

Size	L	H	D	d	z	h
DN15 (1/2")	170	154	82	20	21	27
DN20 (3/4")	170	173	82	25	21	27
DN25 (1")	212	173	107	32	26	35
DN32 (11/4")	226	173	107	40	26	35
DN40 (11/2")	292	225	148	50	37	58
DN50 (2")	305	225	148	63	37	58
DN65 (21/2")	390	225	148	75	42	58

膈膜閥 / Diaphragm Valve

Item : JP-750
Size : 1/2" ~ 4"
Joint End : Socket, PT, Flanged
Working Pressure: 150 PSI





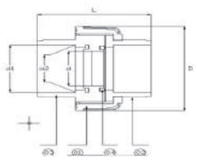
NO.	PART	MATERIAL	Q'TY
1	BODY	UPVC/CPVC/PPH	1
2	DIAPHRAGM	EPDM/VITON	1
3	GAUGE COVER	CLEAR PVC	1
4	HANDLE	PPH	1
5	UNION END	UPVC/CPVC/PPH	2
6	UNION NUT	UPVC/CPVC/PPH	2
7	O-RING	EPDM/VITON	2
8	NUT	SUS304	4

Unit: mm

Size	da	A	H	L	Z
DN15 (1/2")	20	65	99	140	18.5
DN20 (3/4")	25	65	99	142	21
DN25 (1")	32	94	136	176	26
DN32 (1-1/4")	40	94	136	180	28
DN40 (1-1/2")	50	118	178	245	37
DN50 (2")	63	118	178	258	37
DN65 (2-1/2")	75	258	240	343	42.5
DN80 (3")	90	258	240	365	50
DN100 (4")	110	365	277		

由令 / Union

Item : JP-240
Size : 1/2” ~ 4”
Joint End : Socket (ANSI/CNS/DIN/JIS)
Threaded (PT/NPT/BSPF)
Working Pressure: 150 PSI

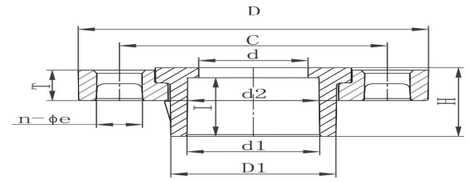


NO.	PART	MATERIAL	Q'TY
1	UNION NUT	UPVC/CPVC/PP	1
2	UNION END	UPVC/CPVC/PP	1
3	BODY	UPVC/CPVC/PP	1
4	ORING	EPDM/VITON	1

Nom. / SIZE	d	d 1				d 2				D	L
		ANSI	DIN	JIS	CNS	ANSI	DIN	JIS	CNS		
DN15(1/2")	15	21.54	20.30	22.30	22.40	21.23	20.10	21.70	21.9	53.8	59
DN20(3/4")	20	26.87	25.30	26.30	26.40	26.57	25.10	25.70	25.9	64.8	63.3
DN25(1")	25	33.65	32.30	32.33	34.50	33.27	32.10	31.67	33.9	76	72.8
DN32(1-1/4")	32	42.42	40.30	38.43	42.50	42.04	40.10	37.57	41.9	85.8	78.5
DN40(1-1/2")	40	48.56	50.30	48.46	48.60	48.11	50.10	47.54	47.9	91.5	88
DN50(2")	50	60.63	63.30	60.56	60.60	60.17	63.10	59.44	59.9	122	99
DN65(2-1/2")	63	73.38	75.30	76.60	76.70	72.85	75.10	75.87	75.9		
DN80(3")	75	89.31	90.40	89.60	89.70	88.70	90.10	88.83	88.9		
DN100(4")	97	114.76	110.4	114.7	115.0	114.1	110.10	113.98	113.8		

活套法蘭 / Universal Van Stone Flange

Item : JP-272
Size : 1/2” ~ 8 ”
Joint End: Socket (ANSI/JIS/DIN)
Working Pressure: 150 PSI

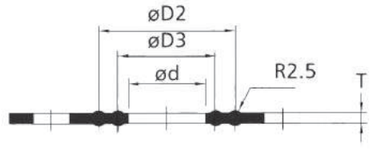


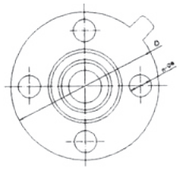
Unit: mm

Nom. / SIZE	FLANGE D	d	ANSI SOCKET	C	H	T	n-Φe	APPROX. Wt. (g)
1/2"	95.0	15.0	21.54	70.0	28.5	15.0	4-15	112
3/4"	104.5	21.5	26.87	73.0	30.0	15.5	4-15	148
1"	118.0	25.0	33.65	85.0	33.5	16.0	4-16	190
11/4"	139.5	32.0	42.42	100.0	38.5	16.5	4-16	275
11/2"	150.0	40.5	48.56	105.0	42.0	18.0	4-19	360
2"	165.0	50.0	60.63	125.0	46.5	20.0	4-19	485
21/2"	185.5	65.2	73.38	142.2	53.0	22.0	4-19	668
3"	200.0	80.5	89.31	157.0	56.25	22.8	8-19	785
4"	229.0	108.0	114.76	185.0	67.0	23.5	8-19	1050
5"	258.0	127.5	141.81	216.0	73.4	27.5	8-22	1415
6"	286.5	150.0	168.83	242.0	86.0	26.0	8-23	1865
8"	342.5	204	219.84	298	115.5	35.0	8-23	3200

EPDM/VITON/PTFE+EPDM 墊片Gasket

Item : JP-280
Size : 1/2”~ 12
Joint End: Socket (ANSI/JIS/DIN)
Working Pressure: 150 PSI





JIS 10K Unit: mm

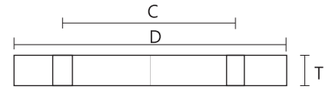
Nom. / Size	D1	D2	D3	D4	d1	n-Øe
1/2"	26	41	70	93	18	4-15
3/4"	32	47	75	98	22	4-15
1"	38	53	60	123	30	4-19
1-1/4"	50	65	100	133	37	4-19
1-1/2"	54	69	105	138	43	4-19
2"	68	83	120	153	54	4-19
2-1/2"	86	101	140	173	69	4-19
3"	98	112	150	183	80	8-19
4"	120	138	175	208	102	8-19
5"	145	166	210	248	127	8-23
6"	168	190	240	278	150	8-23
8"	216	190	240	278	150	8-23
10"	270	306	355	398	249	12-25
12"	324	352	400	443	300	16-25

ANSI#150LB Unit: mm

Nom. / Size	D1	D2	D3	D4	d1	n-Øe
1/2"	25.40	40.64	60.45	86.36	17.78	4-16
3/4"	33.02	48.26	70.10	96.52	22.86	4-16
1"	38.10	53.34	79.50	106.7	30.48	4-16
1-1/4"	50.80	66.04	88.90	114.3	38.10	4-16
1-1/2"	53.34	68.55	98.55	124.4	43.18	4-16
2"	68.58	83.82	120.7	149.9	53.34	4-19
2-1/2"	86.36	101.6	139.7	175.2	68.58	4-19
3"	99.06	111.8	152.4	187.9	81.28	4-19
4"	119.4	137.2	190.5	226.1	101.6	8-19
6"	167.6	190.5	241.3	276.9	148.9	8-22
8"	215.9	246.4	298.5	340.4	198.1	8-22
10"	269.2	307.3	361.9	403.9	249.9	12-25
12"	325.2	353.1	431.8	480.1	299.7	12-25

盲法蘭 Blind Flange

Item : JP-262B
Size : 1/2” ~ 8 ”
Joint End: Socket (ANSI/JIS/DIN)
Working Pressure: 150 PSI



Unit: mm

Nom. / SIZE	FLANGE D	C	T	n-Φe
1/2"	95.0	70.0	14.0	4 - 15
3/4"	104.5	73.0	15.0	4 - 15
1"	118.0	85.0	16.0	4 - 16
11/4"	139.5	100.0	16.0	4 - 16
11/2"	150.0	105.0	17.5	4 - 19
2"	165.0	125.0	19.5	4 - 19
21/2"	185.5	142.2	21.0	4 - 19
3"	200.0	157.0	21.5	8 - 19
4"	229.0	185.0	22.0	8 - 19
5"	258.0	216.0	27.5	8 - 22
6"	286.5	242.0	29.0	8 - 23
8"	342.5	298.0	35.0	8 - 23

UPVC專用冷膠 / CEMENTS - 305 UPVC CEMENT

Item : JP-305
Size : 0.5L / 1L
Color : Clear 透明

305™工業級透明: 產品符合NSF及ASTM D2564標準，屬於中等粘度，適合6”（DN150）以下所有規格的PVC管和管配件使用。，適合工業，灌溉，廢水和水處理工業領域，電線導管，游泳池...等管道系統。

- PVC cement for all classes and schedules with interference fit through 6" (160mm) diameter schedule 80 through 4" (110 mm) diameter.
- Quality Product for Industrial, Irrigation, DWV, Electrical Conduit, Pool & Spa and Plumbing, including PVC foam core pipe.
- Meets ASTM D 2564.
- Suitable for use as a one step cement without primer on non-pressure systems if local codes permit.

GENERAL DESCRIPTION:

305 PVC is an industrial grade, clear or blue or gray emission, medium bodied, fast setting, high strength PVC solvent cement for all classes and schedules of pipe and fittings with interference fit through 6 inch (160 mm) diameter, Schedule 80 through 4 inch (110 mm) diameter. Can be used without primer on non-pressure systems if local codes permit.

APPLICATION:

305 PVC is for use on all types of PVC plastic pipe applications, Type I and Type II. It is suitable for use with potable water pressure systems, irrigation, turf, foam core, conduit, sewer, drain, waste and vent systems. Meets ASTM D 2564 Standard, Meets SCAQMD Rule 1168/316A.

UPVC專用冷膠 / CEMENTS - 311 UPVC CEMENT

Item : JP-311
Size : 0.5L / 1L
Color : Grey 灰色

311™ 工業級灰色: 產品符合NSF及ASTM D2564標準，屬於高等粘度，適合12”(DN300)以下所有規格的UPVC管和管配件使用。該產品有很好的空隙填充性能，本產品的高強度屬性，為工業管道系統最理想的膠合產品。

- PVC cement for all classes and schedules with interference fit, including Schedule 80 through 12" (315 mm) diameter.
- It has good gap filling properties and its medium set allows more working time in warm weather.
- High strength formula is ideal for industrial piping systems.
- Meets ASTM D 2564.

GENERAL DESCRIPTION:

311 PVC is an industrial grade, gray, low VOC emission, heavy bodied, medium setting, high strength PVC solvent cement for all classes and schedules of pipe and fittings with interference fit through 12 inch (315 mm) diameter, including Schedule 80.It has good gap filling properties and its medium set allows more working time in warm weather.

APPLICATION:

311 CPVC is especially formulated for use on industrial piping systems (CPVC or PVC) requiring chemical resistance to caustics, including hypochlorite solutions, mineral acids, aggressive water and aqueous salt solutions. Approved for use with Corzan™ Industrial Piping Systems.. Meets ASTM F 493 and D 2846 Standards. Compliance with ASTM F 493, for use in potable, drain, waste, vent and sewer applications.

CPVC專用冷膠 / CEMENTS - 324 CPVC CEMENT

Item ：JP-324
Size ：0.5L / 1L
Color ：Grey 淺灰色

324™ 工業級灰色: 產品符合NSF及ASTM F-493 標準，屬於高等粘度，適合12”（DN300）以下所有規格的UPVC管和管配件使用。該產品有很好的空隙填充性能，本產品的高強度屬性，為工業管道系統最理想的膠合產品。

- CPVC Solvent Cement for all classes and schedules with interference fit through 12" (315 mm) diameter.
- Premium, high-strength, chemical-resistant solvent cement for use with CPVC piping systems carrying acids, bases, salts, and hypochlorite.
- Ideal for use in waste water plants.
- May be used on PVC industrial piping systems for chemical applications.
- Meets ASTM F- 493

GENERAL DESCRIPTION:

324 CPVC is an industrial grade, orange or gray, low VOC emission, heavy bodied, medium setting, high strength CPVC solvent cement for all classes and schedules of pipe and fittings with interference fit, including Schedule 80 through12 inch (315mm) diameter. Also recommended for PVC industrial piping systems for chemical applications.

APPLICATION:

324 CPVC is especially formulated for use on industrial piping systems (CPVC) or (PVC) requiring chemical resistance to caustics, including hypochlorite solutions, mineralacids, aggressive water and aqueous salt solutions. Approved for use with Corzan™ Industrial Piping Systems.. Meets ASTM F 493 and D 2846 Standards. Compliance with ASTM F 493, for use in potable, drain, waste, vent and sewer applications.

UPVC/CPVC專用清潔劑 / Primer - P48

Item ：JP-P48
Size ：0.5L
Color ：Clear 透明

P-48™ 透明清潔劑 產品符合NSF及ASTM F656標準，優質low VOC預粘劑, 對於PVC和CPVC配件及直管內外徑做表層清潔及軟化，可加強膠水接合強度，對於管與配件接合是非常重要的。

- Very aggressive primer for use on PVC and CPVC pipe and fittings.
- Recommended for Commercial and Large diameter thermoplastic piping systems, specifically CPVC Schedule 40/80.
- Ideal for use in cold weather applications.
- Meets ASTM F656.
- Removes surface dirt, grease and grime as well as softens the pipe surface to allow a fast, secure solvent weld.
- For use in areas where plumbing code calls for verificiation that a primer has been used.

GENERAL DESCRIPTION:

P-48 Prime is an industrial grade Primer non-bodied, fast acting, primer. The strong action of P-68 primer rapidly softens and dissolves the joining surfaces of PVC and CPVC pipe and fittings. Available in clear and purple; the latter allows easy identification when used on the joining surfaces.

APPLICATION:

P-48 Prime, when used in conjunction with appropriate HP International solvent cements, will make consistently strong, well-fused joints. It is essential that the joining surfaces of pipe and fittings be softened and remains softened prior to assembly. The main function of the primer is to expedite the penetration and softening of the surfaces. Its rate of penetration into the joining surfaces is more rapid than that of solvent cement alone. It is suitable for use with all types, classes and schedules of PVC and CPVC pipe and fittings. It is specially recommended for use on Schedule 80 and large pipe size. Meets ASTM F 656 Standards. Compliance with ASTM F 493.

UPVC/CPVC ASTM SCH40/80 特性 FEATURE

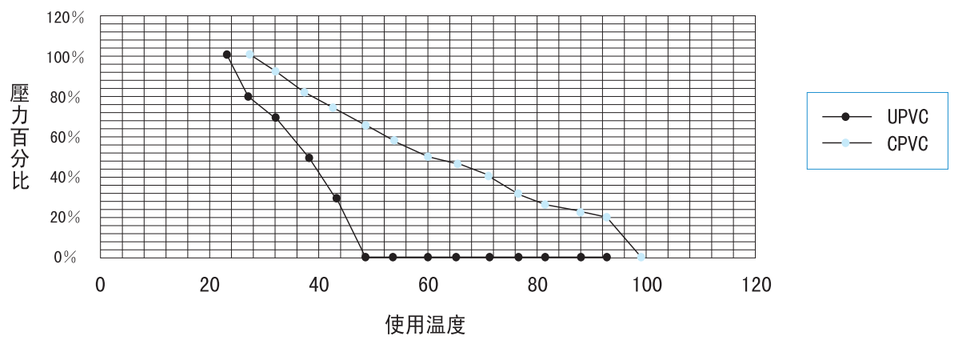
● UPVC管綫與CPVC管綫之使用温度與操作壓力對照表
Comparison Of Using Temperature And Operating Pressure About Upvc Pipe And Cpvc Pipe

本表系以常温23℃時，UPVC管綫之使用操作壓力爲100%，隨着温度升高，其操作壓力殘餘的百分比。
Note: Below table is based on normal 23 degree, operating pressure of UPVC pipe/CPVC pipe is 100%. It demonstrates the percentage of operating pressure is changed according to the temperature.

˚F	73	80	90	100	110	120	130	140	150	160	170	180	190	200	210
˚C	23	27	32	38	43	49	54	60	66	71	77	82	88	93	99
UPVC	100%	90%	75%	62%	50%	40%	30%	22%	0%	0%	0%	0%	0%	0%	0%
CPVC	100%	100%	91%	82%	73%	65%	57%	50%	45%	40%	32%	25%	22%	20%	0%

PS：有螺牙的管綫， **UPVC** 部份不得超過 **110˚F** （**43˚C**）；**CPVC** 部份不得超過 **150˚F** （**66˚C**）；
PS: For the threaded pipes, UPVC part should not exceed 110°F(43℃); CPVC part should not exceed 150°F(66℃);

UPVC、CPVC使用温度與操作壓力變化表



• 特性说明 Characteristics and Specification

1. 耐腐蝕　化學穩定性高，不會污染管內水質可保持系統的衛生及效能，適合一般給水與化學工藝設備。

2. 絕緣體　絕緣不導電，沒有漏電之慮，且沒有電腐蝕之慮，確保系統之壽命及安全。

3. 耐壓高　可以承受管道壓力等級3-4倍的爆裂壓力測試，足以克服在正常操作條件下的水錘作用，確保系統之品質及安全。

4. 耐撞擊　在低溫條件下，可以承受極大外力而不變形損壞。

5. 耐候佳　經國內外實績證明，長期在惡劣環境下，也可維持極佳的系統穩定性。

6. 韌性強　可將外力或內應力變化所造成之損害降至最低，如水錘、地震等。

7. 內壁光滑　壓力摩擦損失少，除了可減低泵揚程外，更不易有污物附著壁上減少流量，可確保系統之流量穩定，效率及壽命增長。

8. 無公害　環保材料配方，材質穩定沒有二次污染。

9. 保溫佳　熱傳導系統約為鍍鋅鋼管的1/300，也是工程塑料中最低者之一，除可提高能源效率外，亦可減少保溫費用及減少結霧困擾。

10. 質輕　重量僅約鍍鋅鋼管的1/6，搬運及施工便利，可節省大量人力和寶貴的時間。

11. 施工易　採用專用溶劑膠水結合，施工方便迅速，介面處可提供比直管更高的耐壓強度。

12. 壽命长　室內管道系統載水在室溫、管道壓力等級內操作，預期使用壽命可達50年。

1. Corrosion–resistant	It is with high c hemical stability, it will not contaminate the water in pipes and can maintain the sanitation and efficiency of system, it is available for water supplying and chemical industrial facilities.
2. Nonconductive	It is isolated and has not the risk of power leakage and electric corrosion, with that it can make sure the life–span and safety of system.
3. High Compression Resistance	It can bear for the explosion pressure testing with 3–4times more than the scale of pipes pressure and overcome the effect of water hammer under standard operating condition, so it can make sure the quality and safety of system.
4. Impact Resistance	Under low temperature condition, it can still keep good shape during high pressure.
5. Weather Resistance	With actual testing at home and abroad, it shows that the pipe can still maintain good system stability under long time exposure at worse circumstance.
6. High Tenacity	It can minimize the damage caused by outside force or inside force (like water hammer, earthquake etc.) to the lowest point.
7. Smooth Intine	The loss of friction pressure is little. Except for reducing pump’s head of delivery, it can also prohibit the coherence of contamination on the wall which results in slowing the rate of flow. So it can make sure the system’s flow stability, efficiency and expand the life–span.
8. No Public Hazard	The formula is environmental, the material is steady and not with second contamination.
9. Heat Insulation	The efficiency of heat conduction system is about 300 times less than that of Zn plating pipe, it is also the lowest one in engineering plastic. Other than rising the energy efficiency, it can also reduce fees of heat keeping and decrease the disturb of fogging.
10. Nature light	The weight is 6 times less than that of Zn plating pipes, it is convenient for handling and operation which can save lots of manpower and time.
11. Easy for Operation	It uses specified solvent adhesive for connection, it is convenient and quick for operating and the interface can offer higher pressure resistance than that of vasa recta.
12. Long Life–span	The expected life–span can reach to 50 years if the indoor pipe system is operated under room temperature and within pipe pressure band.

● 安装程序 Erection Sequence

這個程序將包含典型地下安裝的步聚：置放環境、管溝的挖掘、管路組合/安置以及回填。

The sequence includes the steps of representative underground installation as follows: placing environment、digging of trench、combination of pipes/emplacement and backfill.

● 置放環境 Placing Environment

室外冷水管可直敷于土壤中，热水管道应架空敷设或安装于地下管沟内。

Outdoor pipes filled with cold water can be placed in the soil while the pipes filled with hot water shall be placed upside soil or installed in the trench underground.

● 管溝的挖掘 The Digging of Trench

1、室外埋地管的埋設深度應根據冰凍深度、外部荷載及與其他管道的交叉等因素確定。
一般情況下，埋設深度應在冰凍線以下0.2m，且應滿足下表的規定。
UPVC/CPVC管道的最小覆土深度
注：設計有規定時按設計要求挖掘。
2、溝寬應略大於管徑，以便於管道的安裝和敷設為度。
3、溝底應連續平整，不得有石塊及其他堅硬物。管道可敷設在未經擾動的原土上。

1、The digging depth of outdoor pipes should be based on the frost depth、outer loading、the cross of pipes and other factors. Normally, the digging depth should be 0.2m under frost line and should meet below requirements.
The lowest depth of molding for UPVC/CPVC pipes.
Note: The digging should be as per the design if it is specified.
2、The width of trench should be larger than pipe diameter a bit to easy the installation and placing of pipes.
3.、The bottom of trench should be smooth continuously. Existing of stones or other hard goods are not allowed. The pipes can be placed upon raw soil which is un–digging.

UPVC/CPVC管道的最小覆土深度
The Minimum Depth of Molding for UPVC/CPVC pipes

項目 ITEM NO	最小覆土深度（M） MIN. Depth of Molding (M)
人行道下 Under Footpath	0.5
車行道下 Under Roadway	0.7
其他地面下 Other Underground	0.5

注：設計有規定時按設計要求挖掘。
Note: The digging of trench should be as per the design if it is specified.

● 管路組合/安置 Pipes Combination/Installation

管路可以視個別的安裝要求，在溝渠內部或外部，用傳統的溶劑黏接技術組合。

如果管路是在溝渠外組合，則在適當固化後將管放入溝渠內，但絕對不可以用滾動或丟落的方式，當較小尺寸管路（約$2^1/2$"以下）在溝渠內組合，如果安裝時周邊溫度與最後操作時溫度差異將非常大，建議須依一般塑膠配管習慣考量熱膨脹／收縮對管路產生之影響而予以適當配置管路（如採蛇行方式放置），並在適當固化時間後即可進行回填。放置較長的接合管路時應適當支撐，以防止過度的應力。

The pipes can be combined with traditional solvent cohering technology inside or outside the trench according to individual installation requirements.
If the pipe is combined outside the trench, it should be placed in the trench after appropriate solidification, while rolling or casting off is not allowed. If the pipe combined inside the trench is with small size (below $2^1/2$") and the changed ambient temperature during installation and after operation is great, the effect of thermal expansion/constriction to pipes should be taken into consideration during placing the pipes (for example, placing them as per snakelike), and then backfilling after solidification for some time. Appropriate holding is needed when placing long connecting pipes so as to avoid excess pressure.

● 回填 Backfilling

管道的回填應在管道安裝後儘快進行，回填土不應含有礫石、凍土塊及其它堅硬物。應根據管道下部的土質情況，採取夯實、墊砂或局部用混凝土墊層加固。

The backfilling for pipes should take place once the pipes are installed, and break–stone、soil blocks and other hard objects are not allowed in it. Padding, placing sand or consolidating with concrete partly should be taken according to the soil situation underneath pipes.

獨立變數：每分鐘加侖數與管的標稱尺寸
相關變數：速度，摩擦水頭損失，每100英尺管的增壓降壓、內部平滑度

Sch–80管的流量和摩擦損失

每分鐘加侖數	½ in 流速（呎／秒）	½ in 摩擦水頭損失（呎／100呎）	½ in 摩擦壓力損失（PSI/100呎）	½ in 最大增壓(PSI)	¾ in 流速（呎／秒）	¾ in 摩擦水頭損失（呎／100呎）	¾ in 摩擦壓力損失（PSI/100呎）	¾ in 最大增壓(PSI)	1 in 流速（呎／秒）	1 in 摩擦水頭損失（呎／100呎）	1 in 摩擦壓力損失（PSI/100呎）	1 in 最大增壓(PSI)	1¼ in 流速（呎／秒）	1¼ in 摩擦水頭損失（呎／100呎）	1¼ in 摩擦壓力損失（PSI/100呎）	1¼ in 最大增壓(PSI)	1½ in 流速（呎／秒）	1½ in 摩擦水頭損失（呎／100呎）	1½ in 摩擦壓力損失（PSI/100呎）	1½ in 最大增壓(PSI)	2 in 流速（呎／秒）	2 in 摩擦水頭損失（呎／100呎）	2 in 摩擦壓力損失（PSI/100呎）	2 in 最大增壓(PSI)	2½ in 流速（呎／秒）	2½ in 摩擦水頭損失（呎／100呎）	2½ in 摩擦壓力損失（PSI/100呎）	2½ in 最大增壓(PSI)	3 in 流速（呎／秒）	3 in 摩擦水頭損失（呎／100呎）	3 in 摩擦壓力損失（PSI/100呎）	3 in 最大增壓(PSI)	4 in 流速（呎／秒）	4 in 摩擦水頭損失（呎／100呎）	4 in 摩擦壓力損失（PSI/100呎）	4 in 最大增壓(PSI)	6 in 流速（呎／秒）	6 in 摩擦水頭損失（呎／100呎）	6 in 摩擦壓力損失（PSI/100呎）	6 in 最大增壓(PSI)	8 in 流速（呎／秒）	8 in 摩擦水頭損失（呎／100呎）	8 in 摩擦壓力損失（PSI/100呎）	8 in 最大增壓(PSI)	10 in 流速（呎／秒）	10 in 摩擦水頭損失（呎／100呎）	10 in 摩擦壓力損失（PSI/100呎）	10 in 最大增壓(PSI)	12 in 流速（呎／秒）	12 in 摩擦水頭損失（呎／100呎）	12 in 摩擦壓力損失（PSI/100呎）	12 in 最大增壓(PSI)
1	1.465	2.198	0.950	44.100	0.779	0.473	0.205	21.570																																									
3	4.395	16.816	7.269	132.300	2.338	3.619	1.564	64.710	1.402	1.043	0.451	37.290																																				
5	7.326	43.310	18.720	220.500	3.896	9.322	4.029	107.800	2.336	2.686	1.161	62.150																																				
7	10.256	80.763	34.910	308.700	5.455	17.383	7.514	150.900	3.271	5.008	2.165	87.010																																				
9	3 in				7.013	27.686	11.967	194.100	4.205	7.977	3.448	111.870																																						
10	0.498	0.042	0.018	10.500	7.792	33.652	14.546	215.700	4.672	9.696	4.191	124.300																																				
15	0.747	0.089	0.038	15.750	4 in				7.008	20.545	8.880	186.450																																				
20	0.996	0.151	0.065	21.000	0.570	0.039	0.017	11.220	9.344	35.002	15.129	248.600																																				
25	1.245	0.228	0.099	26.250	0.712	0.059	0.025	14.025																																								
30	1.494	0.320	0.138	31.500	0.855	0.082	0.036	16.830																																								
35	1.743	0.425	0.184	36.750	0.997	0.109	0.047	19.635																																								
40	1.992	0.545	0.235	42.000	1.140	0.140	0.061	22.440																																								
45	2.241	0.678	0.293	47.250	1.282	0.174	0.075	25.245																																								
50	2.490	0.823	0.356	52.500	1.425	0.212	0.092	28.050																																								
60	2.988	1.154	0.499	63.000	1.710	0.297	0.128	33.660																																								
70	3.486	1.536	0.664	73.500	1.995	0.395	0.171	39.270																																								
80	3.984	1.966	0.850	84.000	2.280	0.506	0.219	44.880																																								
90	4.482	2.446	1.057	94.500	2.565	0.629	0.272	50.490																																								
100	4.980	2.973	1.285	105.000	2.850	0.765	0.330	56.100																																								
125	6.225	4.494	1.943	131.250	3.562	1.156	0.500	70.125																																								
150	7.469	6.299	2.723	157.500	4.274	1.620	0.700	84.150	1.880	0.220	0.095	34.500																																				
175	8.714	8.381	3.622	183.750	4.987	2.155	0.932	98.175	2.193	0.292	0.126	40.250																																				
200	9.959	10.732	4.639	210.000	5.699	2.760	1.193	112.200	2.506	0.374	0.162	46.000																																				
250					7.124	4.173	1.804	140.250	3.133	0.566	0.244	57.500																																						
300					8.549	5.849	2.528	168.300	3.760	0.793	0.343	69.000																																						
350					9.974	7.781	3.363	196.350	4.386	1.055	0.456	80.500																																						
400									5.013	1.351	0.584	92.000																																						
450									5.369	1.680	0.726	103.500																																						
500									6.266	2.042	0.883	115.000																																						
750									9.399	4.327	1.870	172.500																																						
1000																																															
1250																																															
1500																																															
1750																																															
2000																																															

注意：1.每秒流速建議不可超過5英尺。
2.UPVC 管不可用空氣或壓縮氣體進行壓力測試。

● 管摩擦損失 Friction Loss Of Pipes

UPVC管的好處之一就是它平滑的內面可以減少水垢和污塞。也就是說，一開始就可以減少液體流動時的摩擦力，而且不會隨著系統的老化而增加摩擦力，有效節省初期及長期能源耗用成本。

Hazen-Williamsam是一般公認的計算管路系統摩擦壓損公式。下列液體流量表的數值就是參考此公式計算出來的，UPVC管的表面粗糙度常數C=150。

One advantage of UPVC pipe is that its smooth inside surface can reduce the water scale and dirt. That is, it can reduce the friction during flowing of liquid. Besides, the friction will not increase along with the aging of system, so it can effectively save the cost for the original and timeless usage of energy.

Hazen–Williamsam is generally acknowledged formula of calculating the loss of pipe friction system. Below data of flow–measuring apparatus is calculated as per this formula. UPVC pipe's surface roughness constant C=150.

$$\triangle f_{100} = 0.2083 \left(\frac{100}{C}\right)^{1.852} \frac{g^{1.852}}{d^{4.8655}}$$

其中 $\triangle f_{100}$ = 每一百英尺管的摩擦損失(呎)
d = 管內徑(吋)
g = 每分鐘流動率(加侖)
C = 管表面粗糙度常數

Note: $\triangle f_{100}$ = Friction Loss of pipe per 100 inch (feet)
d = Internal Diameter (inch)
g = Flow Rate per Minute (gallon)
c = Roughness Constant of pipe surface

常數	管類型
150	UPVC管，新-30年
130 - 140	鋼/鑄鐵管，新
120	鑄鐵，4-12年
110	鍍鋅鋼；鑄鐵，13-20年

● 配件的摩擦壓損 Friction Loss Of Fittings

配件的摩擦損失是從在液體中可以產生相同摩擦損失的等長直管中計算出來的。一般配件的管相當長度可參考如下。

The friction loss of fittings is calculated from the same length of pipe which will generate the same level of friction underwater. The comparative pipes compared with fittings are as follows.

等價管長(呎)
Standard size

標稱尺寸（吋）	90° 標準彎頭	45° 標準彎頭	標準三通 直流流量	標準三通 分支流量
½	1.5	0.8	1.0	3.0
¾	2.0	1.1	1.4	4.0
1	2.6	1.4	1.7	5.2
1¼	3.4	1.8	2.3	6.8
1½	4.0	2.1	2.7	8.0
2	5.1	2.7	3.4	10.2
2½	6.1	3.3	4.1	12.2
3	7.6	4.1	5.1	15.2
4	10.0	5.3	6.7	20.0
6	15.1	8.0	10.1	30.2
8	19.9	10.6	13.2	39.7
10	24.9	13.3	16.6	49.9
12	29.7	15.9	19.8	59.4

● 水錘壓力 Water Hammer Pressure

水錘產生起因於打開或關閉閥，啓動或停止泵，或管中空氣的移動。管中的液體流動急速改變，產生　種增壓作用，即所謂的水錘。

下表中最大增壓之數值係在華氏73度下，以常用水錘計算公式計算出來的，每分鍾指定水流量的假設是突然完全停止。水以外的液體數值可乘以液體比重的平方根。

水錘壓力加系統操作壓力不應超過建議系統工壓力定率的1.5倍。

爲了將水錘所產生的液壓震動減至最小，通常應該將直線液體流速限制在5ft/s，尤其是6英寸或更大的管。系統啓動，注入液體時的速度應限制在1ft/s，直到所有的空氣都排出系統外，而且壓力停止在操作狀態下。在操作時系統中不可存有任何空氣。泵不可在空氣中抽拉。

必要時，應使用額外的保護設備，以防止水錘的傷害。這項額外的設備可以包括釋壓閥，避震器，水錘吸收器，以及眞空釋放閥等。

Hammer is caused by opening or closing the valve, switch on or turn off the pump or the shift of air in the pipe. When the flow rate of fluid changes sharply, it will generate a kind of pressure which is named hammer.

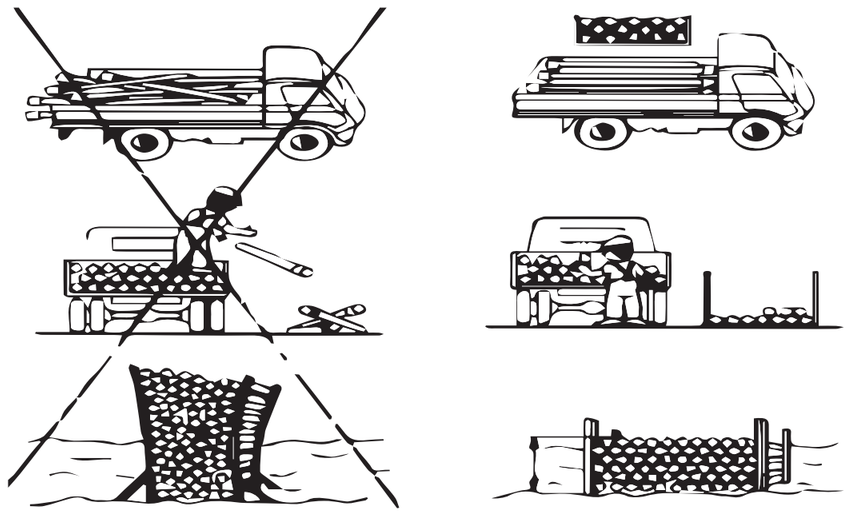
The largest pressure figure in below table is calculated by the formula of water hammer under Fahrenheit 73℃ and it is based on the appointed flow per minute is stopped suddenly. Except for water pressure figure, the rest can be multiplied by the square root of specific gravity.

The hammer pressure plus operational pressure of system shall not exceed by 1.5 times of the recommended system working pressure.

To reduce the shaking caused by water hammer to the lowest level, normally the rate of water flow will be limited to 5ft/s, especially for the 6 inch pipe or more larger pipes. Once switching on, the speed of injected water shall be limited to 1 ft/s until all the air in the system is excluded and the pressure is on hold at the operating stage. No air is allowed in the operating system and the pump cannot be operated in the air.

If necessary, extra protecting facilities are required to use for protect the damage caused by water hammer. Such facilities include pressure relief valve, shock absorber, water hammer absorber and vacuum relief valve etc.

● 管材運輸注意事項 PIPING TRANSPORT NOTE



● 管路在接合後宜在沒有任何壓力下靜置一段時間，即可小心進行下一步裝卸組合，以確保最佳接合效果。安裝步驟完成，並參考下列之固化時間要求後，該系統即可進行壓力測試。在進行壓力測試時，請將管路系統內注滿水，並將空氣排出。請勿使用空氣或壓縮氣體進行壓力測試。溶劑黏膠的安置與固化時間主要受管尺寸、溫度、相對濕度及適合緊度的影響。環境越乾燥，管越小，濕度越高，緊密度越大，乾燥的時間就越快。

在極端溫度條件下應特別注意系統的組合。當溫度低於華氏40度（攝氏4度）時，應給與額外的安置與保藏時間。當溫度高於華氏100度（攝氏38度）時，裝配者應確定在接合前要接合的兩面上之黏膠仍是濕的。

The pipe shall be placed steadily for some time without any pressure after connecting, then it will be passed to the next stage of connection so as to make sure the best performance. After assembly, the system will be passed to pressure test afterwards solidification for some time as per below tables. When testing the pressure, water is required to fill up in the pipe and water shall be excluded. To test pressure by usage of air or compression of air is forbidden. Placing and consolidating time of solvent agent is affected by dimension of pipes、temperature、comparative humidity and adaptive tightness. If the environment is much dry, the pipe is smaller, the humidity and tightness are much higher, then the rate of dryness will be much quicker.

More attention shall be paid to the system when it is under extreme temperature. When the temperature is under Fahrenheit 40℃(38 centigrade), the operator shall make sure both sides of connectation area is still wet before assembly.

● 靜置建議時間 Recommended placing time

周邊溫度	1¼" 以下	1½" ~ 3"	4" ~ 8"	10" ~ 12"
15°C以上	15分鐘	30分鐘	1小時	2小時
4°C ~ 15°C	1小時	2小時	4小時	8小時
低於4°C	3小時	6小時	12小時	24小時

● 壓力測試前建議之固化時間（試壓在180PSI以下：10″ 以上試壓在100PSI以下）

Recommended curing time before presure testing (testing presure is under 180psi: if pipes are above 10 inch the testing pressure is under 100psi)

周邊溫度	1¼" 以下	1½" ~ 3"	4" ~ 8"	10" ~ 12"
15°C以上	1小時	2小時	6小時	24小時
4°C ~ 15°C	2小時	4小時	12小時	40小時
低於4°C	8小時	16小時	48小時	8天

● 壓力測試前建議之固化時間（試壓在180SPI以上）

Recommended curing time before presure testing (the testing pressure is above 180psi)

周邊溫度	1¼" 以下	1½" ~ 3"	4" ~ 8"
15°C~ 43°C	6小時	6小時	24小時
4°C ~ 15°C	12小時	24小時	48小時
低於4°C	48小時	96小時	8天

＊註：相對溼度如超過60%以上，固化時間建議應適度延長約50%之時間。

NOTE:If the comparative humidity excess 60 percentage, the solidifying time is suggested to postone for 50 percentage.

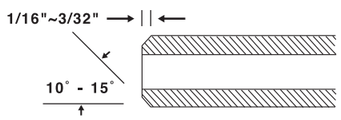
● 1. 切割 Cutting

管可以用輪形塑膠管切割器，電鋸，或齒形完好的塑膠管切割用鋸子等簡單工具輕鬆切割。在用鋸子切割時儘量確保管被切成垂直平整，管切得越垂直，黏合的面積就越大。

The pipe can be cut with ordinary facilities like rolled plastic cutter, electric cutter or plastic using hacksaw with good tooth outline. The pipe should be cut vertically and smoothly when cutting with hacksaw, since the connecting area will be larger if the pipe is cut much vertically.

● 2. 去毛邊 Deburring

利用去角工具或銼刀將管內外的毛邊和銼屑清除乾淨。並建議施以適當導角（參如右圖）以使管口易於進入套節，並減少抹去配件上溶劑黏膠的機會。



Angels removing tools or grater will be used for removing burrs inside and outside the pips and clearing filings. Appropriate bevel (like drawing on the right) is recommended so that the pipe orifice can insert into fittings easily and reduce the chance of solvent adhering onto fittings.

● 3. 配件準備 Fittings Prepare

用乾淨的乾布擦掉管及配件接合面上的灰塵和水分。並檢查管與配件的接合情形。管材試插深度宜為配件承口深度的1/3~3/4。

Removing the bust and moisture upon pipes and connection of fittings with clean dry cloth and checking the connecting situation between fittings. The test inserting depth of pipes should be 1/3 ~ 3/4 of the fitting socket.

● 4. 塗抹清潔劑 Detergent Painting

管與配件套接時膠合的結合面需先使用清潔劑來滲透軟化，以增進溶劑黏膠之溶接效果，使用大約管直徑一半大小的塗抹工具或毛刷（建議勿用破布）將清潔劑均勻塗在管材插口端外表面和配件承口內表面，大尺寸管件接合或必要時宜增加塗抹次數及量，以確保表面的軟化效果。

The connected areas between pipes and fittings should be penetrated and soften with detergent in order to enhance the taking effect around solvents. The detergent will be painted evenly upon pipes faucet and surface of fitting faucet areas with half of pipe diameter painting tools or brushes (wasted cloth is not recommended). As to long size pipes, more times' painting and usage of detergent is required if necessary so as to make sure the soften performance of pipes' surface.

● 5. 塗抹溶劑黏膠 Solvent Detergent Painting

溶劑黏膠必須在管表面清潔劑作用完畢后塗上。接合表面必須被浸透而且軟化。黏膠應以管直徑一半大小的天然鬃刷塗上。管末端外面應塗厚層黏膠，配件套接內面應塗中等厚度黏膠。大於2英寸的管應在其末端塗上等二層黏膠或相對增加塗抹次數。

The solvent detergent should be painted on the surface of pipe after it is painted with detergent and the connecting area should be penetrated and soften. The viscose should be put on the nature brush of which the diameter is half of the pipe and the outer surface for the end of pipe should be also covered with viscose. Appropriate viscose needs to paint inside the connecting area of fittings. If the size of pipe is larger than 2 inch, two layers of viscose or more times of painting are required to paint at the end of it.

粘接方法簡介
CEMENTING METHOD

● 6. 組合 Combination

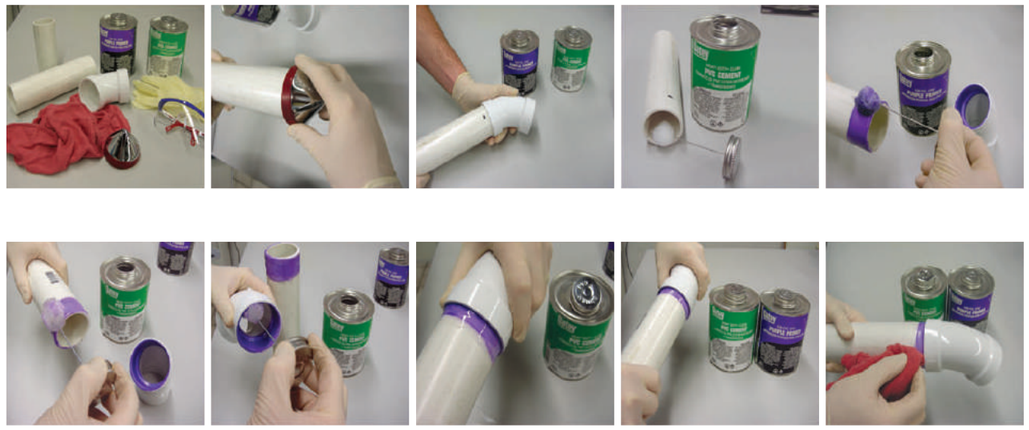
塗完黏膠後，應立刻將管插入配件套接並旋轉1/4圈，管必須和配件套接底部接觸。組合應維時10到15秒固定以確保初步接合 （6" 以上管件之接合，需要二人合作緊握接合處約1～3分鐘）。管和配件接合點的周圍膠水溢出應很明顯。如果套接口周圍的溢出黏膠不連續了，表示所塗抹的黏膠不足。果眞如此，建議應將配件丟棄，重新組合接頭。過量溢出部份的黏膠可利用破布擦去。

After painting, the pipe should be inserted into the fitting at once and rotated for 1/4 circles. And the pipe must reach the end of the fitting. The combination shall be maintained for 10s to 15s for consolidating to make sure the elementary connection (two persons are required to tightly hold the connection area for about 1–3 min if the pipe is more than 6 inch). And the phenomena of viscose leaking around the connection point of pipes and fittings shall be obvious. If not, it means the painting of viscose is not adequate, as a result, the fitting should be scraped and recombined. For the overflowing viscose, it can be wiped with tatters.

● 7. 每QT容量可膠合數量參考 The Amount Of Gluing Per Qt Volume

1/2"	3/4"	1"	1 1/2"	2"	3"	4"	6"	8"	10"	12"
300	200	125	90	60	40	30	10	5	2～3	1～2

Joining Pipe and Fittings



SCH40、SCH80規格成品物性表
Physical Property Composition of SCH40 and SCH80

試驗項目	品質標准
長期水壓試驗Sustained Pressure	符合ASTM D-1785
爆破水壓試驗Burst Pressure	符合ASTM D-1785
壓扁試驗Flattening	符合ASTM D-1785,加壓內徑變形至原來40%時，不破裂
膠化試驗Extrusion Quality	符合ASTM D-1785

SCH40、SCH80規格之各種耐水壓力值比較表：
Water Pressure Comparasion for all specifications of SCH40 and SCH80

單位Unit:PSI (kg)

標准管徑 Size	SCH40			SCH80		
	長期水壓試驗值 Sustained Pressure	爆破水壓試驗值 Burst Pressure	使用操作壓力 Water Pressure Ratings	長期水壓試驗值 Sustained Pressure	爆破水壓試驗值 Burst Pressure	使用操作壓力 Water Pressure Ratings
3/8"	1310(90.3)	1990(137.2)	620(42.7)	1930(133.1)	2940(202.7)	920(63.4)
1/2"	1250(86.2)	1910(131.7)	600(41.4)	1780(122.7)	2720(187.6)	850(58.6)
3/4"	1010(69.6)	1540(106.2)	480(33.1)	1440(99.3)	2200(151.7)	690(47.6)
1 "	950(65.5)	1440(99.3)	450(31.0)	1320(91.0)	2020(139.3)	630(43.4)
11/4"	770(53.1)	1180(81.4)	370(25.5)	1090(75.2)	1660(114.5)	520(35.9)
11/2"	690(47.6)	1060(73.1)	330(22.8)	990(68.3)	1510(104.1)	470(32.4)
2"	580(40.0)	890(61.4)	280(19.3)	850(58.6)	1290(88.9)	400(27.6)
21/2"	640(44.1)	970(66.9)	300(20.7)	890(61.4)	1360(93.8)	420(29.0)
3"	590(40.7)	840(57.9)	260(17.9)	790(54.5)	1200(82.7)	370(25.5)
4"	470(32.4)	710(49.0)	220(15.2)	680(46.9)	1040(71.7)	320(22.1)
5"	410(28.3)	620(42.7)	190(13.1)	610(42.1)	930(64.1)	290(20.0)
6"	370(25.5)	560(38.6)	180(12.4)	590(40.7)	890(61.4)	280(19.3)
8"	330(22.8)	500(34.5)	160(11.0)	520(35.9)	790(54.5)	250(17.2)
10"	300(20.7)	450(31.0)	140(09.7)	490(33.8)	750(51.7)	230(15.9)
12"	280(19.3)	420(29.0)	130(09.0)	480(33.1)	730(50.3)	230(15.9)

注：(1)以上資料來源：ASTM D-1785
(2)試驗温度爲73°F(23°C)。
(3)SCH80之使用操作壓力系指無螺牙之管綫。

Remarks: (1)The above data comes from ASTM D-1785.
(2)Testing temperature is 73°F(23°C).
(3)SCH-80 Water Pressure rating means unthread piping.

CPVC管材系列和規格尺寸 Series And Specifications Of Cpvc Pipes

公稱外徑d_n	平均外徑		管系列		
			S6.3	S5	S4
	d_{min}	d_{max}	公稱壁厚en		
20	20	20.2	2.0*(1.5)	2.0*(1.9)	2.3
25	25	25.2	2.0*(1.9)	2.3	2.8
32	32	32.2	2.4	2.9	3.6
40	40	40.2	3	3.7	4.5
50	50	50.2	3.7	4.6	5.6
63	63	63.3	4.7	5.8	7.1
75	75	75.3	5.6	6.8	8.4
90	90	90.3	6.7	8.2	10.1
110	110	110.4	8.1	10	12.3
125	125	125.4	9.2	11.4	14
140	140	140.5	10.3	12.7	15.7
160	160	160.5	11.8	14.6	17.9
注:考慮到剛度要求,帶“*”的最小壁厚為2.0mm,計算液壓試驗壓力時使用括弧中的壁厚					

備注：1、管材長度可按客戶要求定做；2、客戶選用之管材規格尺寸以實際訂單爲準
Note:1. Length of pipes can be made as per customers' requirements;
2. Customer required specifications and dimensions shall as per actual orders

CPVC管使用條件級別 Using Condition Ranks of CPVC Pipes

氯化聚氯乙烯管道系統採用GB/T18993-2003的規定，按使用條件選用其中的二個應用等級，見下表.每個級別均對應於一個特定的應用範圍及50年的使用壽命，在實際應用時，還應考慮0.6MPa、0.8MPa、1.0MPa不同的使用壓力。

CPVC pipe system use the specification of GB/T18993-2003. It uses two of the application ranks as per the using conditions, please see below table.Each rank meet specific applied range and 50 years of life-span. In the actual operation, the using pressures of 0.6M Pa、0.8M Pa and 1.0M Pa shall be taken into consideration.

CPVC管使用條件級別
Using Condition Ranks of CPVC Pipes

應用等級	T_D/℃	在T_D下的時間/年	T_{max}/℃	在T_{max}下的時間/年	T_{mal}/℃	在T_{mal}下的時間/h	典型的應用範圍
級別1	60	49	80	1	95	100	供給熱水(60℃)
級別2	70	49	80	1	95	100	供給熱水(70℃)

上表所列各使用條件級別的管道系統應同時滿足在20℃、1.0MPa條件下輸送冷水50年的使用壽命的要求。

Note:Above using ranks shall meet the requirement of transporting cold water for 50 years under the condition.

CPVC管系列S值的選擇 S Value for CPVC Pipe Series

CPVC管按不同的材料及使用條件級別（見GB/T18993.1）和設計壓力選擇對應的S值，見右表

The S value of CPVC pipes are clasified according to different materials, using condition ranks (refer to GB/T18993.1) and designed pressure. More details please see below table.

管系列（S）：用以表示管材規格的無量綱數值系列。可按公式（1）計算

$$S=\frac{d_n-e_n}{2e_n} \quad \cdots\cdots (1)$$

式中：
d_n——公称外径，单位为毫米（mm）；
e_n——公称壁厚，单位为毫米（mm）.

PVC-C管材管系列S的選擇
Choosing of S Value for PVC-C pipe series

設計壓力P_n/MPa	管系列S	
	級別1 σ_b=4.38MPa	級別2 σ_b=4.16MPa
0.6	6.3	6.3
0.8	5	5
1	4	4

靜液壓應力（σ）：以水為介質，管道受內壓時管壁內的環向應力，單位為MPa，用公式(2)近似算。

$$\sigma=P\cdot\frac{d_{em}-e_{min}}{2e_{min}} \quad \cdots\cdots (2)$$

式中：P——管道所受内压，单位为兆帕（MPa）；
d_{em}——管的平均外径，单位为毫米（mm）；
e_{min}——管的最小壁厚，单位为毫米（mm）

熱膨脹處理設計參考資料
Reference for the deposition of thermal expansion

設計伸縮曲管公式如下所示：

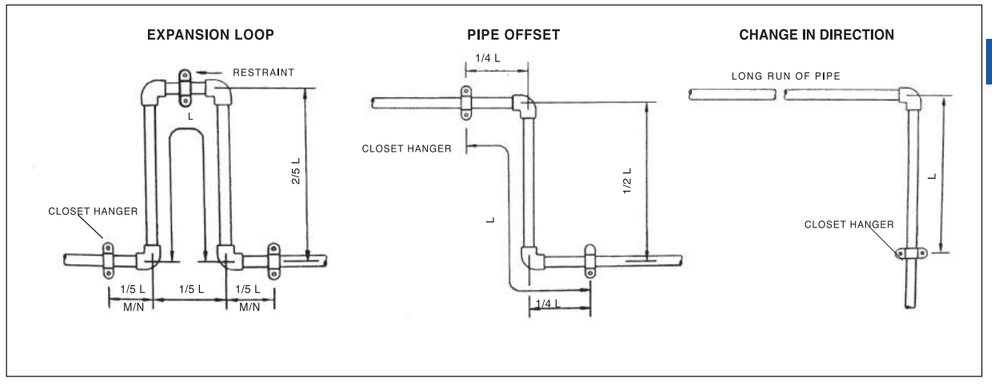
I ＝ 伸縮曲管長度（吋或公分）
E ＝ 彈性係數（PSI或Mpa）
D ＝ 配管之平均外徑（吋或公分）
△L ＝ 因溫度變化所產生之配管長度改變
S ＝ 允許的纖維應力（PIS或Mpa）

伸縮曲管公式

$$I=\left(\frac{3ED\ \triangle L}{S}\right)^{1/2}$$

The formula for designing expansion bend is as follows:
I = the length of expansion bend(inch or centimetre)
E=elastic coefficient(PSI or Mpa)
D=the average external diameter(inch or centimetre)
△L=the different length of pipe caused by temperature variation
S= allowed the fiber of stress(PSI or Mpa)

伸縮曲管及偏向管圖例 Telescopic piece pipe and turn to control circle



建議最大支撐間距/熱膨脹處理/彈性係數
RECOMMENDED MAX.SUPPORT INTERVAL/DEAL WITH THERMAL EXPANSION/ELASTIC COEFFICIENT

建議最大支撐間距（公尺）
The Recommended Largest Supporting Space (Meter)

溫度°C	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"	3"	4"	6"	8"	10"	12"
16	1.50	1.65	1.80	1.80	1.95	2.10	2.25	2.40	2.70	3.00	3.30	3.60	3.90
27	1.35	1.50	1.65	1.80	1.80	1.95	2.25	2.25	2.55	2.85	3.15	3.30	3.60
38	1.35	1.35	1.50	1.65	1.65	1.80	1.95	2.10	2.25	2.70	2.85	3.00	3.15
49	1.20	1.20	1.05	1.05	1.05	1.20	1.35	1.35	1.50	1.80	1.95	2.10	2.25
60	0.75	0.75	0.90	0.90	1.05	1.05	1.20	1.20	1.35	1.50	1.65	1.80	1.95

上表係以連續跨距間隔和輸送比重 1.00 以上流體之非絕緣線間隔爲基礎。
建議支撐架勿將管路完全鎖緊，應保持適當之間距，以利熱膨脹等應力產生時之伸縮調整。
如常態工作溫度經常保持在 60°C 以上，建議可考量採用 CPVC 管路系統，在耐溫及成本等整體考量下應可更加有效率。

Above data is based on continuous mid-span spacing and transporting proportion is above 1.00 for the flowing fluid .
It is not recommended to lock the holding bracket tightly, appropriate space shall be kept to facilitate the adjustment for the pressure caused by thermal expansion.
If the normal working temperature can keep above 60 degree usually, it is suggested to adopt CPVC pipe system as this shall be more efficient on the basis of temperature resistance and cost.

UPVC不同溫度下的彈性係數/Modulus of Elasticity for UPVC

溫度 Temperature		係數 E Modulus		壓力 S Stress	
°F	°C	PSI	MPa	PSI	MPa
73	23	400,000	2,758	2,000	13.79
90	32	375,000	2,585	1,500	10.34
110	43	330,000	2,275	1,000	6.89
120	49	312,000	2,151	800	5.52
140	60	270,000	1,861	440	3.03

耐藥性一覽表
Table of Reagents-Resistant Character

分類 Category / 藥品 Reagents	PVC(℃)			PP(℃)			PPG(℃) FRTP			PVDF(℃)			PTFE(℃) TEFLON			EPDM(℃)			CR(℃) NEOPRENE			CSM(℃) HYPALON			FMP(℃) VITON		
	20	40	60	30	60	90	30	60	120	30	90	130	120	180	260	20	60	110	20	40	80	20	40	90	60	120	180
硫酸 Sulfuric Acid 10%~60%	◎	◎	◎	◎	◎	◎	◎	◎	○	◎	◎	○	◎	◎	○	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	○
硫酸 Sulfuric Acid 90%	◎	○	○	◎	◎	○	◎	◎	○	◎	◎	○	◎	◎	○	◎	◎	○	◎	◎	○	◎	◎	◎	◎	○	○
硫酸 Sulfuric Acid 98%	○	△	X	△	X	X	○	△	X	○	○	△	○	△	△	○	△	X	○	△	X	○	○	X	△	△	X
鹽酸 Hydrochloric Acid 1%~10%	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
鹽酸 Hydrochloric Acid 20%	◎	◎	○	◎	◎	◎	◎	◎	○	◎	◎	○	◎	◎	○	◎	◎	○	◎	◎	○	◎	◎	○	◎	◎	○
鹽酸 Hydrochloric Acid 35%	◎	◎	○	◎	◎	○	◎	◎	○	◎	◎	○	◎	◎	○	◎	◎	○	◎	◎	○	◎	◎	○	◎	◎	○
硝酸 Nitric Acid 10%	◎	◎	○	◎	◎	◎	◎	◎	○	◎	◎	○	◎	◎	○	◎	◎	○	◎	◎	○	◎	◎	○	◎	◎	○
硝酸 Nitric Acid 30%	◎	○	○	◎	○	○	◎	◎	○	◎	○	○	◎	○	○	◎	○	○	◎	◎	○	◎	◎	○	◎	○	○
硝酸 Nitric Acid 50%	◎	○	△	◎	△	X	◎	△	△	◎	△	△	○	△	△	◎	△	△	◎	△	△	◎	○	△	◎	△	△
燐酸 Phosphor Acid 30%	◎	◎	◎	◎	◎	◎	◎	◎	○	◎	◎	○	◎	○	△	◎	◎	○	◎	◎	○	◎	◎	◎	◎	○	○
燐酸 Phosphor Acid 50%	◎	◎	○	◎	◎	○	◎	◎	○	◎	○	○	◎	○	○	◎	◎	○	◎	◎	○	◎	◎	○	◎	◎	○
鉻酸 Hydro Acid 5%	◎	◎	◎	◎	△	X	◎	○	△	◎	○	△	◎	○	△	◎	△	△	◎	◎	○	◎	◎	○	◎	○	△
鉻酸 Hydro Acid 20%	◎	◎	○	◎	○	○	◎	○	○	◎	○	△	◎	○	△	◎	○	○	◎	○	△	◎	◎	○	◎	○	△
鉻酸 Hydro Acid 50%	○	X	X	○	△	X	○	X	X	◎	X	X	△	X	X	○	△	△	○	△	△	○	△	△	○	△	△
酢酸 Acetic Acid 20%	◎	◎	○	◎	◎	△	◎	◎	△	◎	○	△	◎	○	△	◎	○	△	◎	○	○	◎	◎	○	◎	○	△
硫酸鎳 Nickel Sulphate, 稀釋 Diluted	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
氟酸 Hydrofluoric Acid 10%	◎	◎	△	◎	○	△	◎	△	△	◎	△	△	○	○	△	◎	○	△	◎	○	△	◎	○	△	◎	○	△
氟酸 Hydrofluoric Acid 40%	◎	○	△	◎	○	△	◎	○	△	◎	○	△	◎	○	△	◎	○	△	◎	○	△	◎	○	△	◎	○	△
氟酸 Hydrofluoric Acid 55%	○	△	X	△	X	X	○	○	△	○	○	△	○	○	△	○	△	△	○	○	△	○	○	△	◎	○	△
次亞鹽素酸 Hypochlorous Acid 10%	◎	◎	◎	◎	○	○	◎	◎	○	◎	○	○	◎	○	○	◎	◎	○	◎	◎	○	◎	◎	○	◎	○	○
苛性鈉 Sodium Hydroxide 20%	◎	◎	◎	◎	◎	◎	◎	◎	○	◎	◎	○	◎	○	○	◎	◎	○	◎	◎	○	◎	◎	○	◎	○	○
苛性鈉 Sodium Hydroxide 50%	◎	◎	◎	◎	◎	◎	◎	◎	○	◎	◎	○	◎	○	○	◎	○	○	◎	◎	○	◎	◎	○	◎	○	○
氨水 Ammonium Water 15%	◎	◎	◎	◎	◎	○	◎	◎	○	◎	◎	○	◎	◎	○	◎	◎	○	◎	◎	○	◎	◎	○	◎	◎	○
碳酸鈉 Sodium Carbonate	◎	◎	◎	◎	◎	◎	◎	◎	○	◎	◎	○	◎	◎	○	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	○
食鹽水(飽和) Sodium Chloride	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
氯化鈣 Calcium Chloride	◎	◎	◎	◎	◎	◎	◎	◎	○	◎	◎	○	◎	◎	○	◎	◎	○	◎	◎	◎	◎	◎	◎	◎	◎	○
氯化鎂 Magnesium Chloride	◎	◎	◎	◎	◎	◎	◎	◎	○	◎	◎	○	◎	◎	○	◎	◎	○	◎	◎	◎	◎	◎	◎	◎	◎	○
硫化鈉 Sodium Sulfide 60%	◎	◎	◎	◎	◎	◎	◎	◎	○	◎	◎	○	◎	◎	○	◎	◎	○	◎	◎	◎	◎	◎	◎	◎	◎	○
次亞氯酸鈉 Sodium Hypochlorite 10%	◎	◎	◎	◎	◎	◎	◎	◎	○	◎	◎	○	◎	◎	○	◎	◎	○	◎	◎	◎	◎	◎	◎	◎	◎	○
次亞氯酸鈉 Sodium Hypochlorite 20%	◎	◎	◎	◎	◎	◎	◎	◎	○	◎	◎	○	◎	◎	○	◎	◎	○	◎	◎	◎	◎	◎	◎	◎	◎	○
氯化氨 Ammonium Chloride 35%	◎	◎	○	◎	◎	○	◎	◎	○	◎	○	○	◎	○	○	◎	◎	○	◎	◎	○	◎	◎	○	◎	○	○
鍍錫液 Solution of Tio-Plation	◎	◎	○	◎	◎	○	◎	◎	○	◎	○	○	◎	○	○	◎	◎	○	◎	◎	○	◎	◎	○	◎	○	○
鍍鉻液 Solution of Chromium-Plating	◎	◎	○	◎	◎	○	◎	◎	○	◎	◎	○	◎	◎	○	◎	◎	○	◎	◎	○	◎	◎	○	◎	◎	○
亞硫酸 Sulphurous Acid Lo	◎	◎	◎	◎	◎	◎	◎	◎	○	◎	◎	○	◎	◎	○	◎	◎	○	◎	○	○	◎	◎	○	◎	◎	○
乙醛+醋酸 Acetaldehyde+Acetic 10%~90%	○	△	X	○	△	X	○	△	X	○	△	X	○	△	X	◎	○	△	◎	○	△	◎	○	△	○	△	X
明礬 Alums, Aquesous, 稀釋 Diluted	◎	◎	○	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
明礬 Alums, Aquesous,工業純淨 Technically Pure	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
明礬 Alums, Aquesous,飽和 Saturated	◎	◎	○	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
氯化鋁 Aluminium Chloride, 稀釋 Diluted	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
氯化鋁 Aluminium Chloride, 飽和 Saturated	◎	◎	○	◎	◎	○	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
硫酸鋁 Aluminium Sulphate, 稀釋 Diluted	◎	◎	◎	◎	◎	○	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
硫酸鋁 Aluminium Sulphate, 飽和 Saturated	◎	◎	○	◎	◎	○	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
醋酸銨 Ammonium Acetate 100%	◎	◎	○	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
碳酸銨 Ammonium Carbonate 60%	◎	◎	○	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
阿摩尼亞 Ammonia Water 60%	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	○	◎	◎	○	◎	◎	○	◎	◎	◎
阿摩尼亞 Ammonia Water 100%	◎	◎	△	◎	◎	○	◎	◎	○	◎	◎	◎	◎	◎	◎	◎	◎	○	◎	◎	○	◎	◎	○	◎	◎	◎
氟化銨 Ammonium Fluoride 10%	◎	◎	○	◎	◎	△	◎	○	△	◎	◎	○	◎	◎	○	◎	◎	○	◎	△	△	◎	◎	○	◎	◎	○
氟化銨 Ammonium Fluoride 20%	◎	◎	○	◎	○	△	◎	○	△	◎	◎	○	◎	◎	○	◎	◎	○	◎	△	△	◎	◎	○	◎	◎	○
三氯化銻 Antimony Chloride 50%	◎	◎	○	◎	◎	○	◎	◎	○	◎	◎	○	◎	◎	◎	◎	◎	○	◎	◎	○	◎	◎	○	◎	◎	◎
三氯化銻 Antimony Chloride 90%	◎	○	△	◎	◎	△	◎	◎	○	◎	◎	○	◎	◎	◎	◎	◎	○	◎	◎	○	◎	◎	○	◎	◎	○

◎優秀 Excellent　○可使用 Available　△視情形而使用 According to situations　X 腐蝕,不可使用 Not Recommended

分類 Category / 藥品 Reagents	PVC(℃)			PP(℃)			PPG(℃) FRTP			PVDF(℃)			PTFE(℃) TEFLON			EPDM(℃)			CR(℃) NEOPRENE			CSM(℃) HYPALON			FMP(℃) VITON		
	20	40	60	30	60	90	30	60	120	30	90	130	120	180	260	20	60	110	20	40	80	20	40	90	60	120	180
鹽酸 Hydrochloric Acid 36%　144g 混	◎	◎	○	◎	◎	○	◎	◎	○	◎	○	○	◎	○	△	◎	◎	○	◎	◎	○	◎	◎	○	◎	○	○
鹽酸 Hydrochloric Acid 20%　100g 混	◎	◎	○	◎	○	○	◎	◎	○	◎	○	○	◎	○	△	◎	◎	○	◎	◎	○	◎	◎	○	◎	○	○
硫酸 Sulfuric Acid 98%　13g mixture	◎	◎	○	◎	◎	○	◎	◎	○	◎	○	○	◎	○	○	◎	◎	○	◎	◎	○	◎	◎	○	◎	○	○
硫酸 Sulfuric Acid 5% 3g mixture	◎	◎	○	◎	○	○	◎	○	○	◎	○	○	◎	○	△	◎	○	○	◎	◎	○	◎	◎	○	◎	○	○
硝酸 Nitric Acid 50% 5g Mixture	◎	◎	○	◎	○	△	◎	○	△	◎	○	△	○	○	△	◎	△	△	◎	○	△	◎	○	△	◎	○	△
對苯二甲酸 Nickel Sulphate, 20%	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
對苯二甲酸 Nickel Sulphate, 50%	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
硫酸鎂 Magnesium Suphate, 稀釋 Diluted	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
硫酸鎂 Magnesium Suphate, 100%	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
氯化第一鐵 Ferrous Chloride 5% Mixture	◎	◎	○	◎	○	○	◎	○	○	◎	○	△	○	○	△	◎	○	○	◎	○	○	◎	◎	○	◎	○	△
氯化第二鐵 Ferric Chloride 5% Mixture	◎	◎	○	◎	○	○	◎	○	○	◎	○	△	○	○	△	◎	○	○	◎	○	○	◎	◎	○	◎	○	△
蘋果酸 Apple Acid 1%	◎	◎	○	◎	◎	○	◎	◎	○	◎	◎	○	◎	◎	○	◎	◎	○	◎	◎	○	◎	◎	○	◎	◎	◎
砷酸 Arsenic Acid, 稀釋 Diluted	◎	◎	○	◎	◎	◎	◎	◎	◎	◎	◎	○	◎	◎	◎	◎	◎	◎	◎	◎	○	◎	◎	○	◎	◎	◎
砷酸 Arsenic Acid, 稀釋 Diluted 80%	◎	◎	○	◎	◎	○	◎	◎	○	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
苯醛 Benzaldehyde 0.1%	◎	○	X	◎	△	X	◎	○	X	◎	○	X	◎	○	△	◎	◎	○	◎	○	X	◎	◎	○	◎	◎	○
苯 Benzene, 工業純淨 Technically Pure	△	△	X	△	△	X	△	△	X	○	△	X	○	△	X	△	△	X	△	△	X	△	△	X	○	○	X
苯和石油精 Benzine Benzene 80%	△	△	X	△	△	X	△	△	X	○	△	X	○	△	X	△	△	X	△	△	X	△	△	X	◎	○	X
油精 Benzyl Alcohol 100%	◎	○	○	◎	○	○	◎	◎	○	◎	◎	○	◎	◎	○	◎	◎	△	◎	○	△	◎	○	○	◎	△	○
硼砂 Borax, 稀釋 Diluted	◎	◎	○	◎	◎	○	◎	◎	◎	◎	◎	○	◎	◎	○	◎	◎	○	◎	◎	○	◎	◎	○	◎	◎	◎
硼酸 Boric Acid, 稀釋 Diluted	◎	◎	○	◎	◎	○	◎	◎	◎	◎	◎	○	◎	◎	○	◎	◎	○	◎	◎	○	◎	◎	○	◎	◎	◎
溴 Bromine, 液體 Liquid 100%	△	△	X	△	△	X	△	△	X	○	△	X	○	△	X	△	△	X	△	△	X	◎	△	X	◎	△	X
溴 Bromine, 水蒸氣少量 Vapours Poor	○	△	X	○	△	X	○	○	X	○	○	△	○	○	△	○	△	X	○	△	X	◎	△	X	◎	◎	X
溴 Bromine, 水飽和 Water Saturated	◎	△	X	△	△	X	○	△	X	◎	○	△	◎	○	△	○	△	X	△	△	X	◎	○	△	◎	○	△
丁二烯 Buaddiene 50%	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	○	△	X	◎	◎	○	○	○	△	◎	○	○
丁二烯 Buaddiene 100%	◎	◎	○	○	△	X	◎	○	○	◎	○	△	◎	△	△	○	△	X	○	○	△	○	△	X	○	○	△
丁烷 Butane 50%	◎	○	△	◎	○	△	◎	○	△	◎	○	△	◎	△	△	◎	△	△	◎	△	△	◎	◎	◎	◎	○	△
丁醇 Butanol Up to 100%	◎	○	○	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	○	◎	◎	◎	◎	◎	◎
醋酸丁酯 Butyl Acetate,工業純淨 Technically Pure	△	△	X	○	△	X	○	△	X	○	△	△	○	○	△	◎	○	△	○	○	△	X	○	△	X	△	△
丁酸 Butyric Acid 20%	◎	○	○	◎	○	○	◎	○	○	◎	○	○	◎	○	○	◎	○	○	◎	○	○	◎	○	○	◎	○	○
丁酸 Butyric Acid 20%,工業純淨 Technically Pure	△	△	X	△	△	X	△	△	X	○	△	X	△	△	X	△	△	X	△	△	X	○	△	X	△	△	X
鈣氯化物 Calcium Chloride, 稀釋 Diluted	◎	◎	○	◎	◎	○	◎	◎	○	◎	◎	○	◎	◎	○	◎	◎	○	◎	◎	○	◎	◎	○	◎	◎	○
鈣氯化物 Calcium Chloride, 一般溫度	◎	◎	○	◎	◎	○	◎	◎	○	◎	◎	○	◎	◎	○	◎	◎	○	◎	◎	◎	◎	◎	◎	◎	◎	○
酒酸 Wine Acid Up to 10%	◎	◎	○	◎	◎	◎	◎	◎	○	◎	◎	○	◎	◎	○	◎	◎	○	◎	◎	○	◎	◎	○	◎	◎	○
蘇打 Soda, 稀釋 Diluted	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	○
海水 Sea Water 100%	◎	◎	◎	◎	◎	○	◎	◎	○	◎	◎	○	◎	◎	○	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	○
腐蝕性的鹼水碳酸鉀 Caustric Potachlye 40%	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	○	◎	◎	○	◎	◎	○	○	○	△
腐蝕性的鹼水碳酸鉀 Caustric Potachlye50~60%	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	○	◎	◎	○	○	○	△
硝酸鹽 Calcium Nitrate 50%	◎	◎	◎	◎	◎	○	◎	◎	○	◎	◎	○	◎	◎	○	◎	◎	◎	◎	◎	◎	◎	◎	○	◎	◎	○
二氧化碳 Carbon Dioxide, 乾 dry 100%	◎	◎	◎	◎	◎	○	◎	◎	○	◎	◎	○	◎	◎	○	◎	◎	◎	◎	◎	○	◎	◎	○	◎	◎	○
二氧化碳 Carbon Dioxide, 濕 Moist 100%	◎	◎	○	◎	◎	○	◎	◎	○	◎	◎	○	◎	◎	○	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	○
一氧化碳 Carbon Monoxide 100%	◎	◎	◎	◎	◎	○	◎	◎	○	◎	◎	○	◎	◎	○	◎	◎	◎	◎	◎	○	◎	◎	○	◎	◎	○
樟腦油 Camphor Oil, 純淨 Saturated	◎	○	△	◎	○	△	◎	○	△	◎	○	△	◎	○	△	○	○	△	○	○	△	○	○	△	○	○	△
蘇打溶解 Caustic Soda Solution 40%	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	○	◎	◎	○	◎	◎	○	◎	◎	○	◎	◎	○	○	○	△
蘇打溶解 Caustic Soda Solution 40%~50%	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	○	◎	◎	○	◎	◎	○	◎	◎	○	◎	◎	○	◎	○	△
甲酸 Formic Acid, 工業純淨 Technically Pure	◎	○	△	◎	◎	○	◎	◎	○	◎	◎	○	◎	◎	○	◎	◎	○	◎	◎	○	◎	◎	○	○	○	○
甲酸 Formic Acid 20%	◎	◎	○	◎	◎	○	◎	◎	○	◎	◎	○	◎	◎	○	◎	◎	○	◎	◎	○	◎	◎	○	◎	○	○
甲酸 Formic Acid 50%	◎	◎	○	◎	◎	○	◎	○	○	◎	○	○	◎	○	○	◎	○	○	◎	◎	○	◎	◎	○	◎	○	○
乙丁稀二酸 Maleic Acid, 飽和 Saturated	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	○
乙丁稀二酸 Maleic Acid, 飽和 35%	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	○

◎優秀 Excellent　○可使用 Available　△視情形而使用 According to situations　X 腐蝕,不可使用 Not Recommended