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# Contents

February 2017 / Vol. 001



## ASUNG CPVC Pipe and Fittings

|    |  |    |                    |
|----|--|----|--------------------|
| 06 | Features   | 24 | Tee                |
| 08 | Caution in Use   | 26 | Reducer Tee        |
| 10 | Plumbing Instructions  | 28 | Reducer Socket     |
| 11 | General Properties of CPVC   | 30 | Union Socket       |
| 12 | Comparison of Characteristics of Plastics used in Pipes and Fittings | 32 | Union Thread       |
| 16 | Pipe   | 33 | Blind Flange       |
| 18 | 90° Elbow  | 34 | T.S Flange         |
| 20 | 45° Elbow  | 36 | Cap                |
| 22 | Socket   | 38 | Valve Socket       |
|    |  | 40 | Work Specification |

# ASUNG CPVC

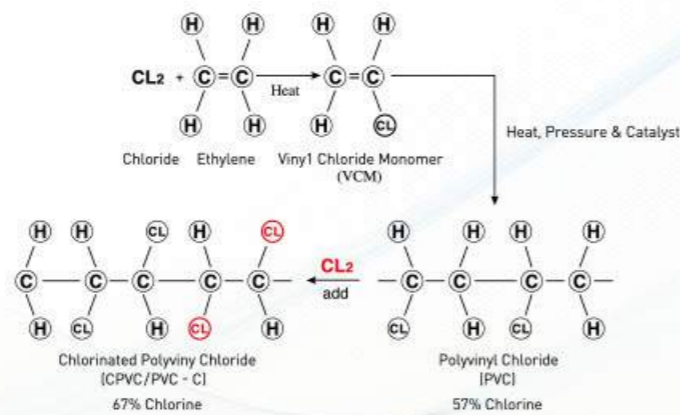
## Pipe and Fittings

### CPVC (Chlorinated PolyVinyl Chloride) pipe

CPVC(Chlorinated PolyVinyl Chloride) pipes are heat-resistant hard PVC products. They maintain the outstanding properties of poly vinyl chloride, including resistance to chemicals, corrosion and high level of constructability, and at the same time they have innovatively improved the weakness of PVS in terms of heat resisting properties.



#### CPVC - Chlorinated PolyVinyl Chloride



#### Features

### 1. Heat Resistance

CPVC pipes are thermal resistant up to 90°C while other conventional PVC pipes can only withstand up to 60°C. They are suitable for carrying hot water and chemicals.

### 2. Thermal and Cooling Properties

The level of heat conduction is as low as 1/360 of steel pipes or 1/300 of copper pipes, thus CPVC pipes are the reliable choice for pipelines that require thermal or cooling functions. They must be insulated to protect from UV rays or freezing in the winter.

### 3. Sanitation

Heat-resistant PVC pipes are hygienic since they are highly resistant to corrosion and are free of scale generation.

### 4. Electrical Insulation

Unlike metallic pipes, the electrical insulation properties of CPVC pipes are outstanding. Thus, they are free of electrical erosion that causes a short circuit.

### 5. Constructability

It is light to handle, easy to cut and join, and easily maneuverable even in small spaces

### 6. Cost Competitiveness (in terms of material and construction costs)

CPVC pipes are a highly economic plumbing material as they are less expensive than other pipe types, resistant to heat and corrosion and take a shorter time to install.





# ASUNG CPVC

Pipe and Fittings

CPVC (Chlorinated PolyVinyl Chloride) pipe



## Caution in Use



### 1. Strict compliance with pressure and temperature requirements

The operation pressure and temperature of CPVC pipes are closely correlated with each other and they should be kept at the specified levels to maintain stability of the plumbing system.



### 2. Adding flexibility to the pipeline

The pipeline should be flexibility treated to minimize impact from the vibrating fluid.



### 3. Caution in handling

Exercise care not to drop in transit or hit with tools during construction. Avoid impact, especially in winter.

### 4. Caution in cutting

Cut the pipe squarely, check the cut surface and use a rotating cutter for 50A or above.



### 5. Use of the adhesive and welding rod exclusive for CPVC

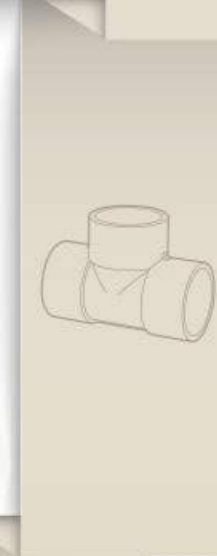
Only the heat resisting adhesive and welding rod for CPVC must be used for welding, bonding and joining.

The general adhesive for PVC must not be used.

For extra welding work to reinforce the glue joint, remove excess adhesive before commencing the welding work.

Set the hot air of the welding machine to 165°C~190°C for welding of the pipe and fitting. Keep the tip of the welder gun about 10mm away from the welding rod. Press down hard on the welding rod squarely while keeping the hot air at 45°, and melt well ensuring that the pipe does not burn.

If the pipe is burnt or insufficiently melted during welding, the bonding force will be reduced.



### 6. Caution with some chemicals

Since the CPVC pipes are plastic with a high level of resistance to corrosion, they must not be used with certain chemicals, including ester, ketone, aromaticity, carbon, paint, insecticide and high-concentrated organic solvents.



# ASUNG CPVC

## Pipe and Fittings

### Plumbing Instructions

#### 1. Supporting Spaces

Asung's CPVC pipes, just like PVC pipes, require more supports than metallic pipes. The supporting space by nominal diameter is provided in the following table.

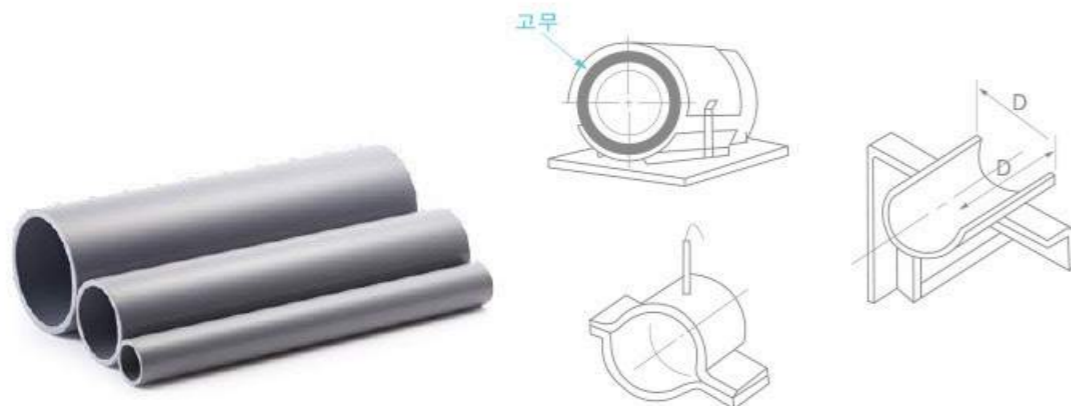
| Temp      | Fluid  | Diameter |     |     |     |     |     |     |     |     |     |     |     | unit:M |
|-----------|--------|----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--------|
|           |        | 16       | 20  | 25  | 40  | 50  | 65  | 80  | 100 | 125 | 150 | 200 | 250 |        |
| Room Temp | Liquid | 1.0      | 1.0 | 1.3 | 1.4 | 1.5 | 1.7 | 1.8 | 2.0 | 2.5 | 2.5 | 2.9 | 3.0 | 3.6    |
|           | Gas    | 1.2      | 1.5 | 1.7 | 2.0 | 2.3 | 2.5 | 2.8 | 3.0 | 3.5 | 4.0 | 4.5 | 5.0 | 5.5    |
| 60        | Liquid | 0.7      | 0.8 | 0.9 | 1.0 | 1.1 | 1.2 | 1.4 | 1.6 | 1.7 | 1.8 | 2.1 | 2.2 | 2.5    |
|           | Gas    | 0.9      | 1.0 | 1.2 | 1.4 | 1.6 | 1.8 | 2.0 | 2.2 | 2.5 | 3.0 | 3.1 | 3.5 | 3.9    |
| 80        | Liquid | 0.7      | 0.8 | 0.8 | 0.9 | 1.0 | 1.0 | 1.2 | 1.4 | 1.5 | 1.7 | 1.9 | 2.0 | 2.3    |
|           | Gas    | 0.9      | 0.9 | 1.1 | 1.2 | 1.4 | 1.6 | 1.8 | 2.0 | 2.4 | 2.6 | 2.8 | 3.2 | 3.5    |
| 100       | Liquid | 0.6      | 0.7 | 0.8 | 0.8 | 0.9 | 1.0 | 1.1 | 1.3 | 1.4 | 1.6 | 1.8 | 1.9 | 2.2    |
|           | Gas    | 0.8      | 0.8 | 1.0 | 1.3 | 1.3 | 1.5 | 1.7 | 1.9 | 2.2 | 2.3 | 2.4 | 3.0 | 3.3    |

\* It is assumed that the room temperature for pipes other than those indoor is 30°C for the above table.

#### 2. Supporting Positions

To determine the position of the supports, please consider that the joints on the dynamic loading line (pulsation, vibration, impact) in most pipelines require support.

To support the pipeline, pipe bands and shafts are commonly used. If the band is a press-down type, select a longer one and use buffer materials inside the band.

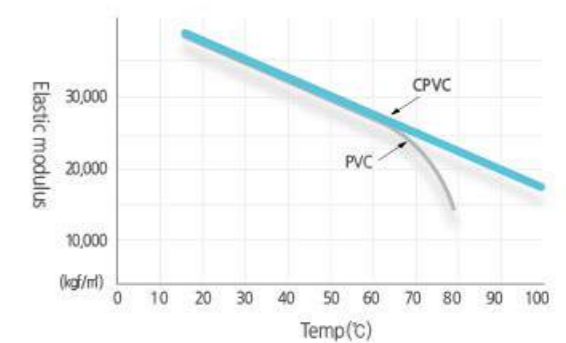
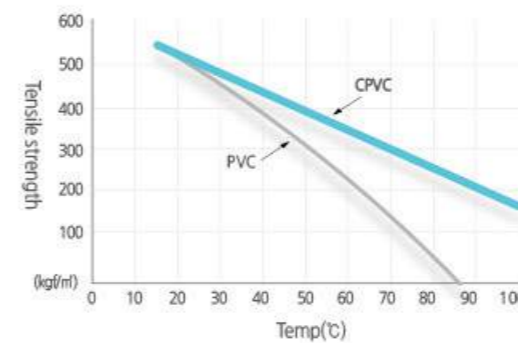


### General Properties of CPVC

| Properties            | Unit                            | Test Method            | CPVC       |                      |
|-----------------------|---------------------------------|------------------------|------------|----------------------|
| Physical Properties   | Specific gravity                | ASTM D 792             | 1.53       |                      |
|                       | Hardness                        | ASTM D 785             | 140        |                      |
|                       | Absorption factor               | mg/ml                  | ASTM D 570 | 0.04~0.06            |
| Mechanical Properties | Tensile strength                | kgf/cm <sup>2</sup>    | ASTM D 638 | 500~550              |
|                       | Flexural strength               | kgf/cm <sup>2</sup>    | ASTM D 970 | 900                  |
|                       | Compression strength            | kgf/cm <sup>2</sup>    | ASTM D 695 | 700                  |
|                       | Shearing strength               | kgf/cm <sup>2</sup>    | ASTM D 732 | 420                  |
|                       | Expansion                       | %                      |            | 40~80                |
|                       | Elastic modulus                 | kgf/cm <sup>2</sup>    | ASTM D 747 | 3x10 <sup>7</sup>    |
|                       | Specific heat                   |                        |            | 0.38                 |
| Thermal Properties    | Impulse strength                | kgf-cm/cm <sup>2</sup> | ASTM D 256 | 7~9                  |
|                       | Coefficient of linear expansion | °C <sup>-1</sup>       | ASTM D 696 | 6-8x10 <sup>-5</sup> |
|                       | Specific heat                   | cal/(g°C)              |            | 0.2~0.3              |
| Electrical Properties | Thermal conductivity            | kcal/(h.m.°C)          |            | 0.095~0.12           |
|                       | Softening temp                  | °C                     | JIS K 6742 | 110~117              |
|                       | Heat treatment temp             | °C                     |            | 150~160              |
| Electrical Properties | Volume resistivity              | Ω.cm                   | ASTM D 257 | 5.5x10 <sup>15</sup> |
|                       | Withstand voltage               | KV/mm                  |            | 40 more than         |
|                       | Permittivity                    |                        | ASTM D 150 | 3.2                  |

#### Temperature changes and Mechanical strength

Although CPVC plumbing materials offer better tensile strength and elastic modulus than general PVC products, please be aware that their mechanical properties change by temperature changes.



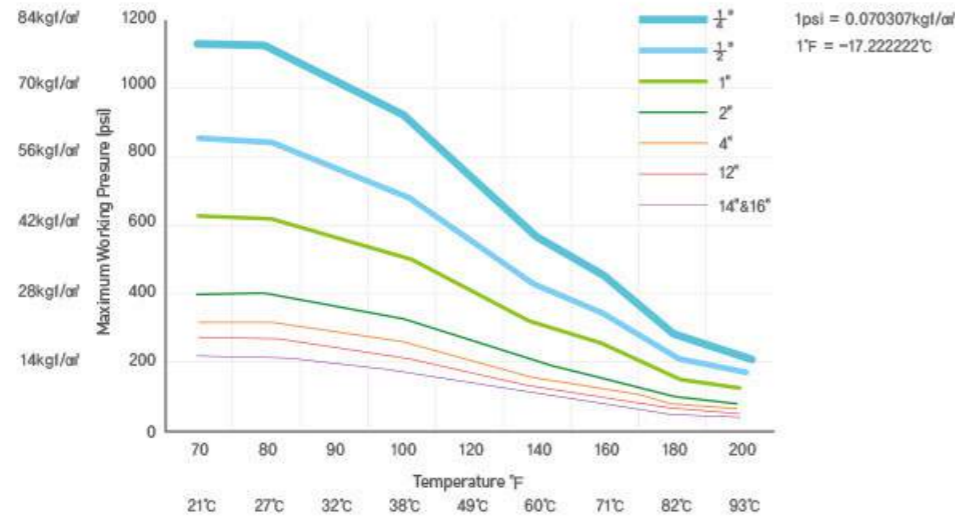


# ASUNG CPVC

## Pipe and Fittings

### CPVC PIPE SCH.80

Maximum Working Pressure vs. Temperature



### O-Ring

|                  |                | Range of operating temperatures |     |     |    |    |    |     |     |         |
|------------------|----------------|---------------------------------|-----|-----|----|----|----|-----|-----|---------|
|                  |                | -40                             | -20 | -10 | 60 | 85 | 90 | 100 | 105 | 120-140 |
| Synthetic rubber | Natural rubber | △                               | ○   | ○   | △  |    |    |     |     |         |
|                  | CR, NBR        | △                               | ○   | ○   | ○  | ○  | X  |     |     |         |
|                  | EPDM, FPM      | ○                               | ○   | ○   | ○  | ○  | ○  | △   |     |         |
|                  | PTFE           | ○                               | ○   | ○   | ○  | ○  | ○  | ○   | ○   | ○       |

|                  |                | Range of corrosion resistance |             |                |            |             |               |                 |                                 |               |
|------------------|----------------|-------------------------------|-------------|----------------|------------|-------------|---------------|-----------------|---------------------------------|---------------|
|                  |                | mild acid                     | strong acid | oxidizing acid | mixed acid | mild alkali | strong alkali | organic solvent | Solvent containing organic acid | corrosive gas |
| Synthetic rubber | Natural rubber | ○                             | X           | X              | X          | ○           | △             | X               | X                               | X             |
|                  | CR, NBR        | ○                             | △           | X              | △          | ○           | ○             | X               | △                               | △             |
|                  | EPDM, FPM      | ○                             | △           | △              | ○          | ○           | ○             | X               | △                               | △             |
|                  | PTFE           | ○                             | ○           | ○              | ○          | ○           | ○             | ○               | ○                               | ○             |

○ : Usable △ : May be usable X : Unusable

### Comparison of Characteristics of Plastics used in Pipes and Fittings

#### Range of operating temperatures and corrosion resistance

|      | Range of operating temperatures |     |     |    |    |    |     |     |         |
|------|---------------------------------|-----|-----|----|----|----|-----|-----|---------|
|      | -40                             | -20 | -10 | 60 | 85 | 90 | 100 | 105 | 120-140 |
| PVC  | X                               | X   | △   | ○  | X  | X  | X   | X   | X       |
| PPH  | X                               | ○   | ○   | ○  | ○  | ○  | △   | X   | X       |
| PPG  | X                               | ○   | ○   | ○  | ○  | ○  | ○   | X   | X       |
| CPVC | X                               | ○   | ○   | ○  | ○  | ○  | X   | X   | X       |
| PVDF | ○                               | ○   | ○   | ○  | ○  | ○  | ○   | ○   | ○       |

|      | Range of corrosion resistance |             |                |            |             |               |                 |               |
|------|-------------------------------|-------------|----------------|------------|-------------|---------------|-----------------|---------------|
|      | mild acid                     | strong acid | oxidizing acid | mixed acid | mild alkali | strong alkali | organic solvent | corrosive gas |
| PVC  | ○                             | ○           | ○              | ○          | ○           | ○             | X               | ○             |
| PPH  | ○                             | ○           | △              | △          | ○           | ○             | X               | X-○           |
| PPG  | ○                             | ○           | ○              | ○          | ○           | ○             | X               | ○             |
| CPVC | ○                             | ○           | ○              | ○          | ○           | ○             | X               | ○             |
| PVDF | ○                             | ○           | ○              | ○          | ○           | ○             | ○               | ○             |

\* Please refer to the booklet titled "CHEMICAL RESISTANCE ON ASUNG VALVE" for further information.

### Comparison of Mechanical Properties

| Property \ Material   | UPVC                  | CPVC                  | PPH                   | PPG                    | PVDF                  | Testmethod |
|---|-----------------------|-----------------------|-----------------------|------------------------|-----------------------|------------|
| Tensile strength (kgf/cm <sup>2</sup> ) (lb/in <sup>2</sup> ) | 500-550 (7,100-7,820) | 500-550 (7,100-7,820) | 300-350 (4,570-4,980) | 700-750 (9,960-10,670) | 500-600 (7,110-8,530) | ASTM D 638 |
| Impulse strength (kgf/cm <sup>2</sup> )                       | 3-5                   | 7-10                  | 4-5                   | 6-8                    | 10-20                 | ASTM D 256 |
| Coefficient of expansion (10 <sup>-5</sup> /°C)               | 6-8                   | 6-8                   | 11-12                 | 4-5                    | 11-12                 | ASTM D 696 |
| Max. applicable temp. °C(°F)                                  | 60(140)               | 90(195)               | 90(195)               | 100(210)               | 120(250)              |            |

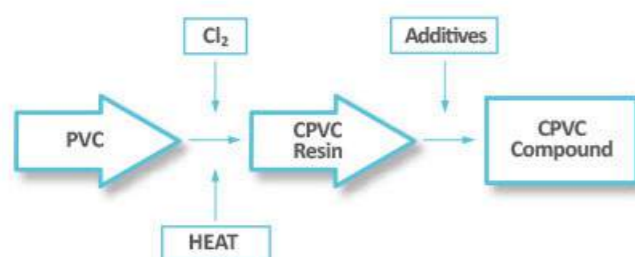
# ASUNG CPVC

Pipe, Fitting System



## CPVC [Chlorinated PolyVinyl Chloride]

CPVC(Chlorinated PolyVinyl Chloride) pipes are heat-resistant hard PVC products. They maintain the outstanding properties of poly vinyl chloride, including resistance to chemicals, corrosion and high level of constructability, and at the same time they have innovatively improved the weakness of PVS in terms of heat resisting properties.





# ASUNG CPVC

Pipe and Fittings

## PIPE

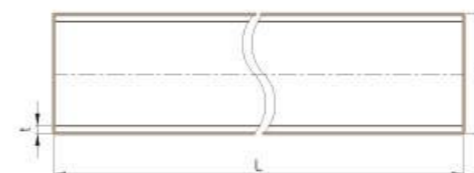
### CPVC



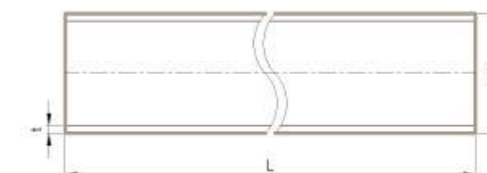
### HTPVC



### JIS



### SCH. 80



### JIS

| NOMINAL SIZE | D   | t    | L     | unit:mm |
|--------------|-----|------|-------|---------|
|              |     |      |       |         |
| 13A          | 18  | 2.5  |       |         |
| 15A          | 22  | 3.0  |       |         |
| 20A          | 26  | 3.0  |       |         |
| 25A          | 32  | 3.5  |       |         |
| 32A          | 38  | 3.5  |       |         |
| 40A          | 48  | 4.0  |       |         |
| 50A          | 60  | 4.5  | 4,000 |         |
| 65A          | 76  | 5.2  |       |         |
| 80A          | 89  | 5.9  |       |         |
| 100A         | 114 | 7.1  |       |         |
| 125A         | 140 | 8.3  |       |         |
| 150A         | 165 | 9.6  |       |         |
| 200A         | 216 | 11.1 |       |         |

\*JIS HTPVC up to 100A available (SCH.80 unavailable)

### SCH. 80

| NOMINAL SIZE |      | D     | t     | L      | unit:inch |
|--------------|------|-------|-------|--------|-----------|
| mm           | inch |       |       |        |           |
| 15A          | ½"   | 0.840 | 0.147 |        |           |
| 20A          | ¾"   | 1.050 | 0.154 |        |           |
| 25A          | 1"   | 1.315 | 0.179 |        |           |
| 32A          | 1-¼" | 1.660 | 0.191 |        |           |
| 40A          | 1-½" | 1.900 | 0.200 |        |           |
| 50A          | 2"   | 2.375 | 0.218 |        |           |
| 65A          | 2-½" | 2.875 | 0.276 | 157.48 |           |
| 80A          | 3"   | 3.500 | 0.300 |        |           |
| 100A         | 4"   | 4.500 | 0.337 |        |           |
| 125A         | 5"   | 5.563 | 0.375 |        |           |
| 150A         | 6"   | 6.625 | 0.432 |        |           |
| 200A         | 8"   | 8.625 | 0.500 |        |           |

# ASUNG CPVC

Pipe and Fittings

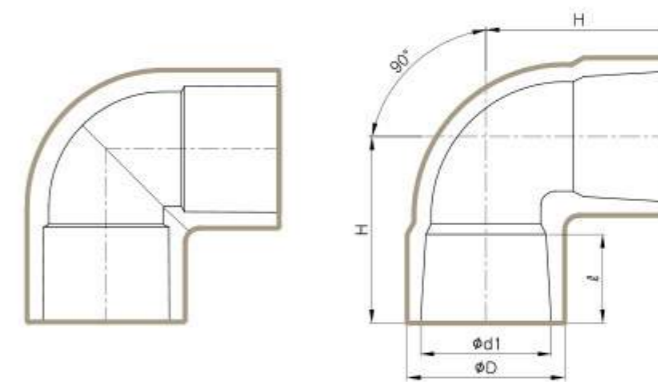
## 90° ELBOW

CPVC

HTPVC



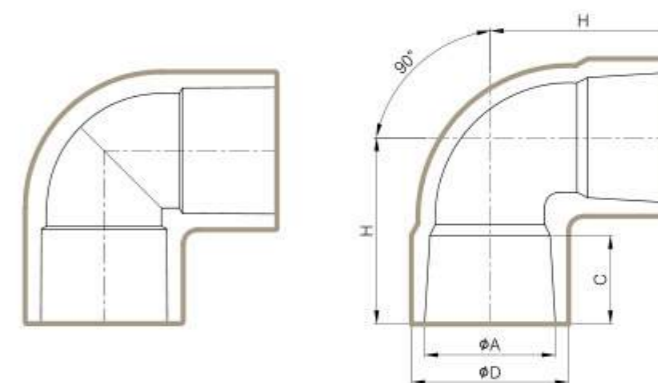
JIS ▶



15A~50A

13A, 65A~200A

SCH. 80 ▶



½"~2"

2-½"~8"

JIS

unit:mm

| NOMINAL SIZE | D   | d1    | l     | H   |
|--------------|-----|-------|-------|-----|
| 13A          | 25  | 18.4  | 18.0  | 34  |
| 15A          | 30  | 22.4  | 22.0  | 38  |
| 20A          | 36  | 26.4  | 25.5  | 43  |
| 25A          | 44  | 32.4  | 28.5  | 51  |
| 32A          | 53  | 38.4  | 32.0  | 58  |
| 40A          | 60  | 48.4  | 35.0  | 65  |
| 50A          | 73  | 60.4  | 38.0  | 76  |
| 65A          | 90  | 76.6  | 44.5  | 88  |
| 80A          | 107 | 89.7  | 47.5  | 100 |
| 100A         | 134 | 114.7 | 57.0  | 119 |
| 125A         | 162 | 141.2 | 66.5  | 143 |
| 150A         | 189 | 166.3 | 82.5  | 172 |
| 200A         | 247 | 217.6 | 105.5 | 268 |

SCH. 80

unit:inch

| NOMINAL SIZE |      | D     | A     | C     | H      |
|--------------|------|-------|-------|-------|--------|
| mm           | inch |       |       |       |        |
| 15A          | ½"   | 1.181 | 0.848 | 0.874 | 1.496  |
| 20A          | ¾"   | 1.417 | 1.058 | 1.000 | 1.693  |
| 25A          | 1"   | 1.732 | 1.325 | 1.126 | 2.008  |
| 32A          | 1-¼" | 2.087 | 1.670 | 1.252 | 2.283  |
| 40A          | 1-½" | 2.362 | 1.912 | 1.374 | 2.559  |
| 50A          | 2"   | 2.874 | 2.387 | 1.500 | 2.992  |
| 65A          | 2-½" | 3.543 | 2.889 | 1.748 | 3.465  |
| 80A          | 3"   | 4.213 | 3.516 | 1.874 | 3.937  |
| 100A         | 4"   | 5.276 | 4.518 | 2.248 | 4.685  |
| 125A         | 5"   | 6.378 | 5.583 | 3.000 | 5.630  |
| 150A         | 6"   | 7.441 | 6.647 | 3.000 | 6.772  |
| 200A         | 8"   | 9.724 | 8.655 | 4.000 | 10.551 |



# ASUNG CPVC

Pipe and Fittings

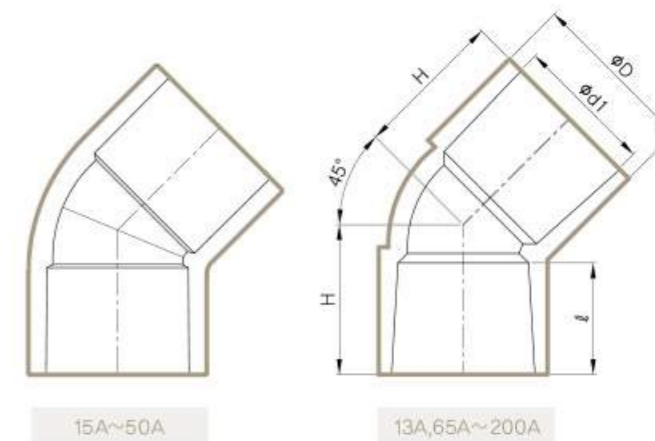
## 45° ELBOW

CPVC

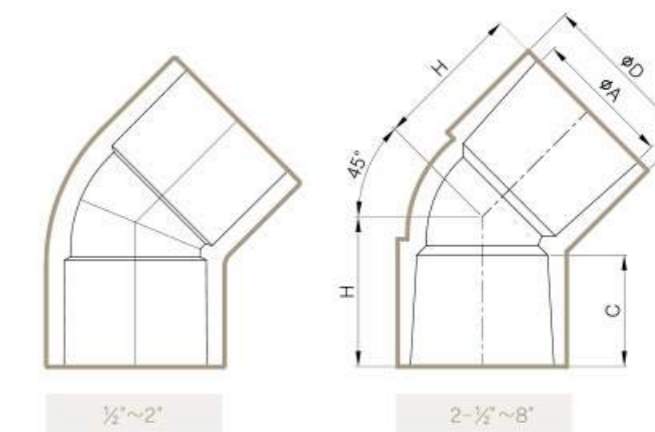
HTPVC



JIS ▶



SCH. 80 ▶



JIS

| NOMINAL SIZE | D   | d1    | l     | unit:mm |  |
|--------------|-----|-------|-------|---------|--|
|              |     |       |       | H       |  |
| 13A          | 24  | 18.4  | 18.0  | 30      |  |
| 15A          | 30  | 22.4  | 22.0  | 30      |  |
| 20A          | 34  | 26.4  | 25.5  | 34      |  |
| 25A          | 41  | 32.4  | 28.5  | 38      |  |
| 32A          | 52  | 38.4  | 32.0  | 43      |  |
| 40A          | 64  | 48.4  | 35.0  | 48      |  |
| 50A          | 76  | 60.4  | 38.0  | 55      |  |
| 65A          | 92  | 76.6  | 44.5  | 79      |  |
| 80A          | 105 | 89.7  | 47.5  | 87      |  |
| 100A         | 133 | 114.7 | 57.0  | 100     |  |
| 125A         | 161 | 141.2 | 66.5  | 140     |  |
| 150A         | 190 | 166.3 | 82.5  | 156     |  |
| 200A         | 247 | 217.6 | 123.0 | 210     |  |

SCH. 80

| NOMINAL SIZE |      | D     | A     | C     | unit:inch |  |
|--------------|------|-------|-------|-------|-----------|--|
| mm           | inch |       |       |       | H         |  |
| 15A          | ½"   | 1.181 | 0.848 | 0.874 | 1.181     |  |
| 20A          | ¾"   | 1.417 | 1.058 | 1.000 | 1.339     |  |
| 25A          | 1"   | 1.732 | 1.325 | 1.126 | 1.535     |  |
| 32A          | 1-¼" | 2.087 | 1.670 | 1.252 | 1.732     |  |
| 40A          | 1-½" | 2.362 | 1.912 | 1.374 | 1.890     |  |
| 50A          | 2"   | 2.874 | 2.387 | 1.500 | 2.205     |  |
| 65A          | 2-½" | 3.622 | 2.889 | 1.748 | 2.480     |  |
| 80A          | 3"   | 4.173 | 3.516 | 1.874 | 2.756     |  |
| 100A         | 4"   | 5.197 | 4.518 | 2.248 | 3.465     |  |
| 125A         | 5"   | 6.457 | 5.583 | 3.000 | 4.646     |  |
| 150A         | 6"   | 7.441 | 6.647 | 3.000 | 4.961     |  |
| 200A         | 8"   | 9.685 | 8.655 | 4.000 | 8.268     |  |

# ASUNG CPVC

Pipe and Fittings

## SOCKET

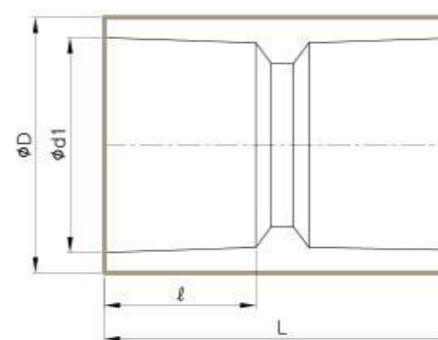
### CPVC



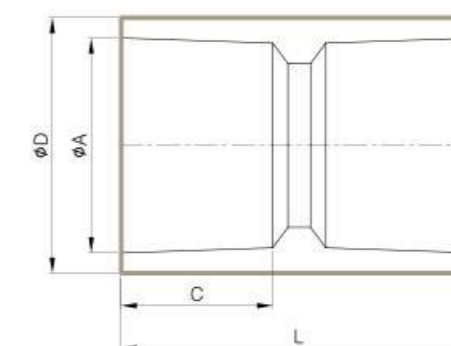
### HTPVC



### JIS



### SCH. 80



### JIS

| NOMINAL SIZE | D   | d1    | ℓ     | L   | unit:mm |
|--------------|-----|-------|-------|-----|---------|
|              |     |       |       |     |         |
| 13A          | 25  | 18.4  | 18.0  | 43  |         |
| 15A          | 30  | 22.4  | 22.0  | 53  |         |
| 20A          | 35  | 26.4  | 25.5  | 58  |         |
| 25A          | 44  | 32.4  | 28.5  | 63  |         |
| 32A          | 53  | 38.4  | 32.0  | 74  |         |
| 40A          | 61  | 48.4  | 35.0  | 80  |         |
| 50A          | 73  | 60.4  | 38.0  | 86  |         |
| 65A          | 92  | 76.6  | 44.5  | 113 |         |
| 80A          | 107 | 89.7  | 47.5  | 122 |         |
| 100A         | 134 | 114.7 | 57.0  | 127 |         |
| 125A         | 160 | 141.2 | 66.5  | 169 |         |
| 150A         | 190 | 166.3 | 76.2  | 184 |         |
| 200A         | 249 | 217.6 | 102.2 | 234 |         |

### SCH. 80

| NOMINAL SIZE |      | D     | A     | C     | L     | unit:inch |
|--------------|------|-------|-------|-------|-------|-----------|
| mm           | inch |       |       |       |       |           |
| 15A          | ½"   | 1.181 | 0.848 | 0.874 | 2.126 |           |
| 20A          | ¾"   | 1.378 | 1.058 | 1.000 | 2.362 |           |
| 25A          | 1"   | 1.654 | 1.325 | 1.126 | 2.480 |           |
| 32A          | 1-¼" | 2.047 | 1.670 | 1.252 | 2.874 |           |
| 40A          | 1-½" | 2.362 | 1.912 | 1.374 | 2.992 |           |
| 50A          | 2"   | 2.835 | 2.387 | 1.500 | 3.386 |           |
| 65A          | 2-½" | 3.622 | 2.889 | 1.748 | 4.449 |           |
| 80A          | 3"   | 4.213 | 3.516 | 1.874 | 4.882 |           |
| 100A         | 4"   | 5.197 | 4.518 | 2.248 | 5.039 |           |
| 125A         | 5"   | 6.378 | 5.583 | 3.000 | 6.654 |           |
| 150A         | 6"   | 7.480 | 6.647 | 3.000 | 7.244 |           |
| 200A         | 8"   | 9.503 | 8.655 | 4.000 | 9.216 |           |



# ASUNG CPVC

Pipe and Fittings

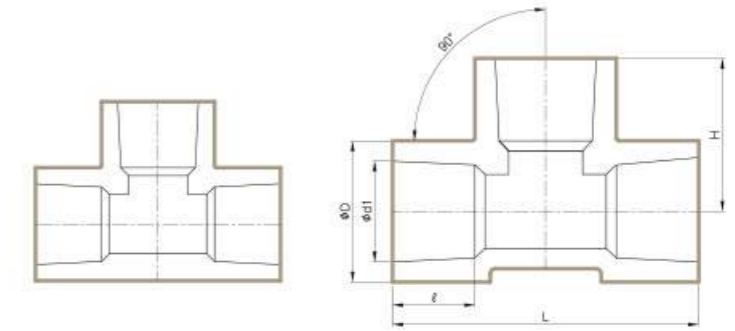
## TEE

### CPVC

### HTPVC



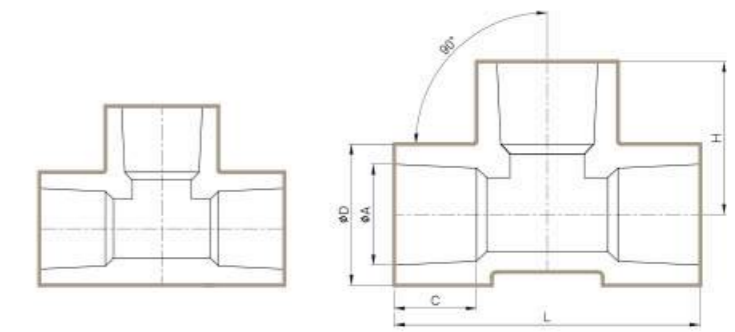
JIS ▶



15A~50A

13A, 65A~200A

SCH. 80 ▶



1/2"~2"

2-1/2"~8"

JIS

unit:mm

| NOMINAL SIZE | D   | d1    | l     | H   | L   |
|--------------|-----|-------|-------|-----|-----|
|              |     |       |       |     |     |
| 13A          | 25  | 18.4  | 18.0  | 35  | 70  |
| 15A          | 30  | 22.4  | 22.0  | 38  | 75  |
| 20A          | 36  | 26.4  | 25.5  | 43  | 86  |
| 25A          | 44  | 32.4  | 28.5  | 51  | 102 |
| 32A          | 53  | 38.4  | 32.0  | 58  | 116 |
| 40A          | 60  | 48.4  | 35.0  | 65  | 130 |
| 50A          | 73  | 60.4  | 38.0  | 75  | 150 |
| 65A          | 90  | 76.6  | 44.5  | 89  | 178 |
| 80A          | 107 | 89.7  | 47.5  | 100 | 199 |
| 100A         | 135 | 114.7 | 57.0  | 133 | 265 |
| 125A         | 162 | 141.2 | 66.5  | 156 | 311 |
| 150A         | 189 | 166.3 | 82.5  | 178 | 356 |
| 200A         | 247 | 217.6 | 147.5 | 265 | 527 |

SCH. 80

unit:inch

| NOMINAL SIZE |        | D     | A     | C     | H      | L      |
|--------------|--------|-------|-------|-------|--------|--------|
| mm           | inch   |       |       |       |        |        |
| 15A          | 1/2"   | 1.181 | 0.848 | 0.874 | 1.496  | 2.953  |
| 20A          | 3/4"   | 1.417 | 1.058 | 1.000 | 1.693  | 3.386  |
| 25A          | 1"     | 1.732 | 1.325 | 1.126 | 2.008  | 4.016  |
| 32A          | 1-1/4" | 2.087 | 1.670 | 1.252 | 2.283  | 4.567  |
| 40A          | 1-1/2" | 2.362 | 1.912 | 1.374 | 2.559  | 5.118  |
| 50A          | 2"     | 2.874 | 2.387 | 1.500 | 2.953  | 5.906  |
| 65A          | 2-1/2" | 3.543 | 2.889 | 1.748 | 3.504  | 7.008  |
| 80A          | 3"     | 4.213 | 3.516 | 1.874 | 3.937  | 7.835  |
| 100A         | 4"     | 5.236 | 4.518 | 2.248 | 5.236  | 10.433 |
| 125A         | 5"     | 6.339 | 5.583 | 3.000 | 6.142  | 12.244 |
| 150A         | 6"     | 7.441 | 6.647 | 3.000 | 7.008  | 14.055 |
| 200A         | 8"     | 9.724 | 8.655 | 4.000 | 10.433 | 20.748 |

# ASUNG CPVC

## Pipe and Fittings

### REDUCER TEE

CPVC



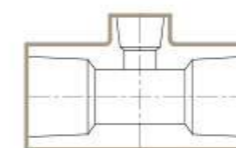
HTPVC



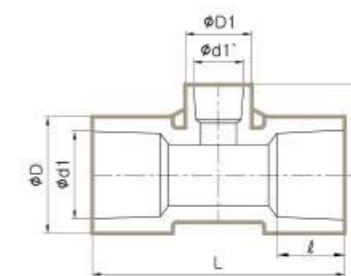
JIS

|              |          |      |       |      |      |      | unit:mm      |      |
|--------------|----------|------|-------|------|------|------|--------------|------|
| NOMINAL SIZE | D        | d1   | D1    | d1'  | L    | H    | NOMINAL SIZE | t    |
|              |          |      |       |      |      |      |              |      |
| A-TYPE       | 20Ax15A  | 36   | 26.4  | 30   | 22.4 | 81   | 15A          | 22.0 |
|              | 25Ax15A  | 44   | 32.4  | 30   | 22.4 | 88   | 20A          | 25.5 |
|              | 25Ax20A  | 44   | 32.4  | 36   | 26.4 | 94   | 25A          | 28.5 |
|              | 32Ax15A  | 53   | 38.4  | 30   | 22.4 | 94   | 32A          | 32.0 |
|              | 32Ax20A  | 53   | 38.4  | 36   | 26.4 | 100  | 40A          | 35.0 |
|              | 32Ax25A  | 53   | 38.4  | 44   | 32.4 | 107  | 50A          | 38.0 |
|              | 40Ax15A  | 60   | 48.4  | 30   | 22.4 | 100  | 65A          | 44.5 |
|              | 40Ax20A  | 60   | 48.4  | 36   | 26.4 | 106  | 80A          | 47.5 |
|              | 40Ax25A  | 60   | 48.4  | 44   | 32.4 | 114  | 100A         | 57.0 |
|              | 40Ax32A  | 60   | 48.4  | 53   | 38.4 | 124  |              |      |
|              | 50Ax15A  | 73   | 60.4  | 30   | 22.4 | 107  |              |      |
|              | 50Ax20A  | 73   | 60.4  | 36   | 26.4 | 111  |              |      |
|              | 50Ax25A  | 73   | 60.4  | 44   | 32.4 | 121  |              |      |
|              | 50Ax32A  | 73   | 60.4  | 53   | 38.4 | 130  |              |      |
| 50Ax40A      | 73       | 60.4 | 60    | 48.4 | 137  |      |              |      |
| B-TYPE       | 65Ax25A  | 91   | 76.6  | 42   | 32.4 | 178  |              |      |
|              | 65Ax32A  | 88   | 76.6  | 58   | 38.4 | 178  |              |      |
|              | 65Ax40A  | 88   | 76.6  | 58   | 48.4 | 178  |              |      |
|              | 65Ax50A  | 91   | 76.6  | 72   | 60.4 | 178  |              |      |
|              | 80Ax40A  | 107  | 89.7  | 62   | 48.4 | 207  |              |      |
|              | 80Ax50A  | 107  | 89.7  | 75   | 60.4 | 214  |              |      |
|              | 100Ax40A | 135  | 114.7 | 75   | 48.4 | 264  |              |      |
|              | 100Ax50A | 132  | 114.7 | 75   | 60.4 | 264  |              |      |
| C-TYPE       | 80Ax65A  | 107  | 89.7  | 106  | 88   | 76.6 | 199          | 98   |
|              | 100Ax65A | 135  | 114.7 | 107  | 90   | 76.6 | 264          | 112  |

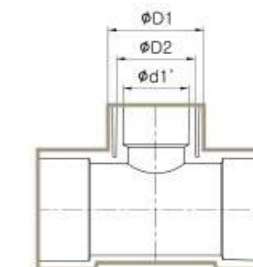
JIS ▶



A-TYPE

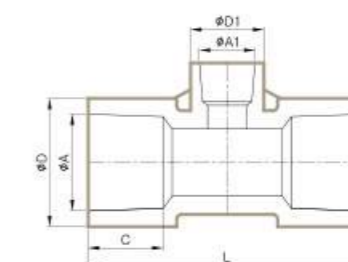


B-TYPE



C-TYPE

SCH. 80 ▶



SCH. 80

|              |               |       |       |       |       |              | unit:inch |       |  |
|--------------|---------------|-------|-------|-------|-------|--------------|-----------|-------|--|
| NOMINAL SIZE | D             | A     | D1    | A1    | L     | NOMINAL SIZE | C         |       |  |
|              |               |       |       |       |       |              |           |       |  |
| 20Ax15A      | 3/4"x1/2"     | 1.417 | 1.058 | 1.181 | 0.848 | 15A          | 1/2"      | 0.874 |  |
| 25Ax15A      | 1"x1/2"       | 1.772 | 1.325 | 1.181 | 0.848 | 20A          | 3/4"      | 1.000 |  |
| 25Ax20A      | 1"x3/4"       | 1.772 | 1.325 | 1.417 | 1.058 | 25A          | 1"        | 1.126 |  |
| 32Ax25A      | 1-1/4"x1"     | 2.047 | 1.670 | 1.772 | 1.325 | 32A          | 1-1/4"    | 1.252 |  |
| 40Ax15A      | 1-1/2"x1/2"   | 2.441 | 1.912 | 1.181 | 0.848 | 40A          | 1-1/2"    | 1.374 |  |
| 40Ax20A      | 1-1/2"x3/4"   | 2.441 | 1.912 | 1.417 | 1.058 | 50A          | 2"        | 1.500 |  |
| 40Ax25A      | 1-1/2"x1"     | 2.441 | 1.912 | 1.772 | 1.325 | 65A          | 2-1/2"    | 1.748 |  |
| 40Ax32A      | 1-1/2"x1-1/4" | 2.441 | 1.912 | 2.047 | 1.670 | 80A          | 3"        | 1.874 |  |
| 50Ax25A      | 2"x1"         | 2.953 | 2.387 | 1.772 | 1.325 | 100A         | 4"        | 2.248 |  |
| 50Ax40A      | 2"x1-1/2"     | 2.953 | 2.387 | 2.441 | 1.912 |              |           |       |  |
| 65Ax32A      | 2-1/2"x1-1/4" | 3.543 | 2.889 | 2.047 | 1.670 |              |           |       |  |
| 80Ax40A      | 3"x1-1/2"     | 4.213 | 3.516 | 2.441 | 1.912 |              |           |       |  |
| 80Ax50A      | 3"x2"         | 4.213 | 3.516 | 2.953 | 2.387 |              |           |       |  |
| 100Ax50A     | 4"x2"         | 5.236 | 4.518 | 2.953 | 2.387 |              |           |       |  |
| 100Ax80A     | 4"x3"         | 5.236 | 4.518 | 4.213 | 3.516 |              |           |       |  |



# ASUNG CPVC

## Pipe and Fittings

### REDUCER SOCKET

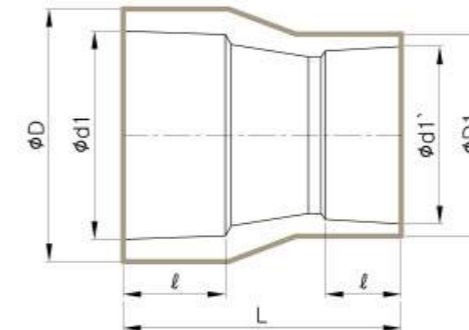
CPVC



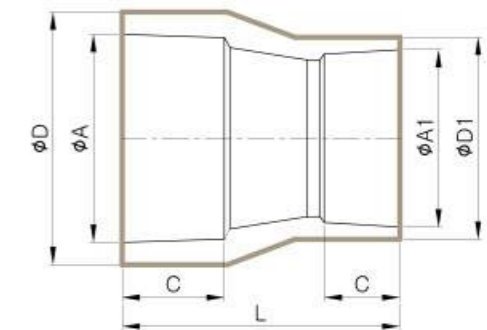
HTPVC



JIS



SCH. 80



JIS

| NOMINAL SIZE | D   | d1    | D1  | d1'   | L   | unit:mm      |      |
|--------------|-----|-------|-----|-------|-----|--------------|------|
|              |     |       |     |       |     | NOMINAL SIZE | ℓ    |
| 15Ax13A      | 28  | 22.4  | 25  | 18.4  | 52  | 13A          | 18.0 |
| 20Ax13A      | 33  | 26.4  | 25  | 18.4  | 55  | 15A          | 22.0 |
| 20Ax15A      | 33  | 26.4  | 28  | 22.4  | 55  | 20A          | 25.5 |
| 25Ax13A      | 40  | 32.4  | 25  | 18.4  | 62  | 25A          | 28.5 |
| 25Ax15A      | 40  | 32.4  | 29  | 22.4  | 65  | 32A          | 32.0 |
| 25Ax20A      | 43  | 32.4  | 34  | 26.4  | 65  | 40A          | 35.0 |
| 32Ax25A      | 52  | 38.4  | 42  | 32.4  | 75  | 50A          | 38.0 |
| 40Ax15A      | 58  | 48.4  | 30  | 22.4  | 74  | 65A          | 44.5 |
| 40Ax20A      | 58  | 48.4  | 33  | 26.4  | 76  | 80A          | 47.5 |
| 40Ax25A      | 58  | 48.4  | 43  | 32.4  | 76  | 100A         | 57.0 |
| 40Ax32A      | 58  | 48.4  | 46  | 38.4  | 79  | 125A         | 66.5 |
| 50Ax20A      | 72  | 60.4  | 33  | 26.4  | 92  | 150A         | 82.5 |
| 50Ax25A      | 72  | 60.4  | 42  | 32.4  | 79  |              |      |
| 50Ax32A      | 72  | 60.4  | 52  | 38.4  | 92  |              |      |
| 50Ax40A      | 72  | 60.4  | 58  | 48.4  | 92  |              |      |
| 65Ax40A      | 89  | 76.6  | 72  | 48.4  | 108 |              |      |
| 65Ax50A      | 89  | 76.6  | 72  | 60.4  | 108 |              |      |
| 80Ax50A      | 104 | 89.7  | 72  | 60.4  | 107 |              |      |
| 80Ax65A      | 104 | 89.7  | 89  | 76.6  | 111 |              |      |
| 100Ax50A     | 132 | 114.7 | 72  | 60.4  | 120 |              |      |
| 100Ax80A     | 132 | 114.7 | 104 | 89.7  | 130 |              |      |
| 125Ax100A    | 161 | 141.2 | 132 | 114.7 | 156 |              |      |
| 150Ax100A    | 188 | 166.3 | 132 | 114.7 | 177 |              |      |
| 150Ax125A    | 188 | 166.3 | 160 | 141.2 | 183 |              |      |

SCH. 80

| NOMINAL SIZE |         | D     | A     | D1    | A1    | L     | unit:inch |      |       |
|--------------|---------|-------|-------|-------|-------|-------|-----------|------|-------|
| mm           | inch    |       |       |       |       |       | mm        | inch | C     |
| 20Ax15A      | ¾"x½"   | 1.299 | 1.058 | 1.102 | 0.848 | 2.165 | 15A       | ½"   | 0.874 |
| 25Ax15A      | 1"x½"   | 1.575 | 1.325 | 1.102 | 0.848 | 2.559 | 20A       | ¾"   | 1.000 |
| 25Ax20A      | 1"x¾"   | 1.575 | 1.325 | 1.299 | 1.058 | 2.953 | 25A       | 1"   | 1.126 |
| 32Ax25A      | 1¼"x1"  | 2.047 | 1.670 | 1.575 | 1.325 | 2.913 | 32A       | 1¼"  | 1.252 |
| 40Ax15A      | 1½"x½"  | 2.283 | 1.912 | 1.102 | 0.848 | 2.992 | 40A       | 1½"  | 1.374 |
| 40Ax20A      | 1½"x¾"  | 2.283 | 1.912 | 1.299 | 1.058 | 2.953 | 50A       | 2"   | 1.500 |
| 40Ax25A      | 1½"x1"  | 2.283 | 1.912 | 1.575 | 1.325 | 2.520 | 65A       | 2½"  | 1.748 |
| 40Ax32A      | 1½"x1¼" | 2.283 | 1.912 | 2.047 | 1.670 | 3.622 | 80A       | 3"   | 1.874 |
| 50Ax20A      | 2"x¾"   | 2.835 | 2.387 | 1.299 | 1.058 | 2.756 | 100A      | 4"   | 2.248 |
| 50Ax25A      | 2"x1"   | 2.835 | 2.387 | 1.575 | 1.325 | 3.622 | 125A      | 5"   | 3.000 |
| 50Ax32A      | 2"x1¼"  | 2.835 | 2.387 | 2.047 | 1.670 | 2.756 | 150A      | 6"   | 3.000 |
| 50Ax40A      | 2"x1½"  | 2.835 | 2.387 | 2.283 | 1.912 | 3.622 |           |      |       |
| 65Ax40A      | 2½"x1½" | 3.504 | 2.889 | 2.283 | 1.912 | 3.661 |           |      |       |
| 65Ax50A      | 2½"x2"  | 3.504 | 2.889 | 2.835 | 2.387 | 3.937 |           |      |       |
| 80Ax50A      | 3"x2"   | 4.094 | 3.516 | 2.835 | 2.387 | 4.173 |           |      |       |
| 80Ax65A      | 3"x2½"  | 4.094 | 3.516 | 3.504 | 2.889 | 4.291 |           |      |       |
| 100Ax50A     | 4"x2"   | 5.197 | 4.518 | 2.835 | 2.387 | 4.331 |           |      |       |
| 100Ax80A     | 4"x3"   | 5.197 | 4.518 | 4.094 | 3.516 | 4.882 |           |      |       |
| 125Ax100A    | 5"x4"   | 6.299 | 5.583 | 5.197 | 4.518 | 5.984 |           |      |       |
| 150Ax100A    | 6"x4"   | 7.362 | 6.647 | 5.197 | 4.518 | 6.881 |           |      |       |
| 150Ax125A    | 6"x5"   | 7.362 | 6.647 | 6.299 | 5.583 | 7.008 |           |      |       |

# ASUNG CPVC

Pipe and Fittings

## UNION SOCKET

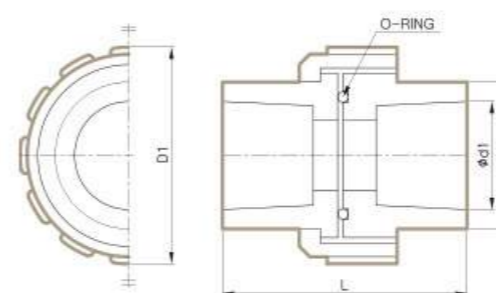
### CPVC



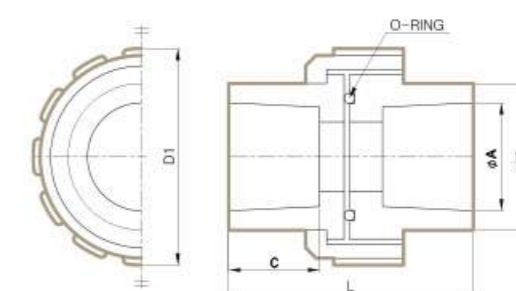
### HTPVC



### JIS



### SCH. 80



### JIS

| NOMINAL SIZE | D   | D1  | d1    | L   | unit:mm |
|--------------|-----|-----|-------|-----|---------|
|              |     |     |       |     |         |
| 15A          | 30  | 49  | 22.4  | 59  |         |
| 20A          | 36  | 60  | 26.4  | 68  |         |
| 25A          | 46  | 70  | 32.4  | 86  |         |
| 32A          | 54  | 80  | 38.4  | 84  |         |
| 40A          | 65  | 97  | 48.4  | 102 |         |
| 50A          | 75  | 106 | 60.4  | 114 |         |
| 65A          | 89  | 132 | 76.6  | 121 |         |
| 80A          | 105 | 153 | 89.7  | 148 |         |
| 100A         | 136 | 204 | 114.7 | 167 |         |

### SCH. 80

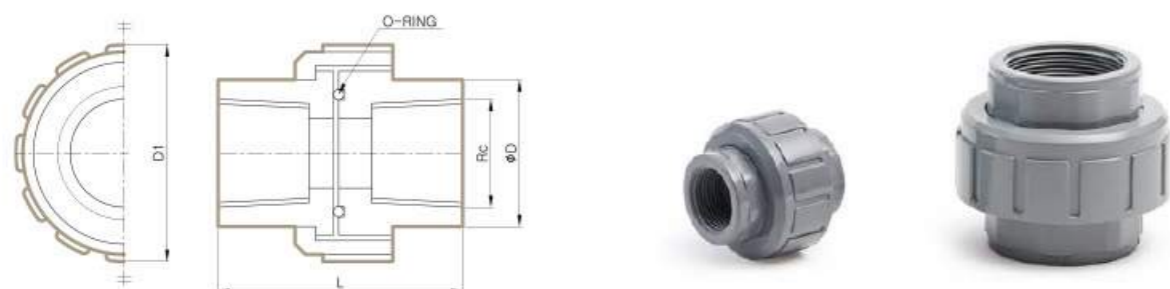
| NOMINAL SIZE |      | D     | A     | D1    | L     | C     | unit:inch |
|--------------|------|-------|-------|-------|-------|-------|-----------|
| mm           | inch |       |       |       |       |       |           |
| 15A          | ½"   | 1.181 | 0.848 | 1.929 | 2.323 | 0.874 |           |
| 20A          | ¾"   | 1.417 | 1.058 | 2.362 | 2.677 | 1.000 |           |
| 25A          | 1"   | 1.811 | 1.325 | 2.756 | 3.386 | 1.126 |           |
| 32A          | 1-¼" | 2.126 | 1.670 | 3.150 | 3.307 | 1.252 |           |
| 40A          | 1-½" | 2.559 | 1.912 | 3.819 | 4.016 | 1.374 |           |
| 50A          | 2"   | 2.953 | 2.387 | 4.173 | 4.488 | 1.500 |           |
| 65A          | 2-½" | 3.504 | 2.889 | 5.197 | 4.764 | 1.748 |           |
| 80A          | 3"   | 4.134 | 3.516 | 6.024 | 5.827 | 1.874 |           |
| 100A         | 4"   | 5.354 | 4.518 | 8.031 | 6.575 | 2.248 |           |

# ASUNG CPVC

Pipe and Fittings

## UNION THREAD

CPVC

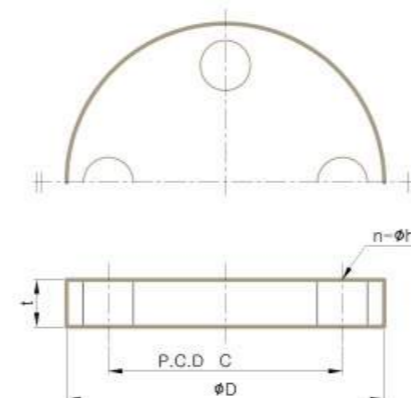


JIS

| NOMINAL SIZE | D   | D1  | L   | unit:mm |
|--------------|-----|-----|-----|---------|
|              |     |     |     | Rc      |
| 15A          | 32  | 49  | 48  | ½"      |
| 20A          | 38  | 60  | 59  | ¾"      |
| 25A          | 48  | 70  | 66  | 1"      |
| 32A          | 58  | 80  | 71  | 1-¼"    |
| 40A          | 67  | 97  | 84  | 1-½"    |
| 50A          | 78  | 106 | 94  | 2"      |
| 65A          | 89  | 132 | 121 | 2-½"    |
| 80A          | 105 | 153 | 148 | 3"      |
| 100A         | 136 | 204 | 167 | 4"      |

## BLIND FLANGE

CPVC



JIS

| NOMINAL SIZE | JIS 10K |     |       | t  |
|--------------|---------|-----|-------|----|
|              | D       | C   | n-h   |    |
| 15A          | 95      | 70  | 4-15  | 15 |
| 20A          | 100     | 75  | 4-15  | 15 |
| 25A          | 125     | 90  | 4-19  | 15 |
| 32A          | 135     | 100 | 4-19  | 15 |
| 40A          | 140     | 105 | 4-19  | 16 |
| 50A          | 155     | 120 | 4-19  | 20 |
| 65A          | 175     | 140 | 4-19  | 22 |
| 80A          | 185     | 150 | 8-19  | 22 |
| 100A         | 210     | 175 | 8-19  | 23 |
| 125A         | 250     | 210 | 8-23  | 25 |
| 150A         | 280     | 240 | 8-23  | 27 |
| 200A         | 330     | 290 | 12-23 | 29 |

ANSI

| NOMINAL SIZE |      | ANSI CLASS #150 |      |       | t     |
|--------------|------|-----------------|------|-------|-------|
| mm           | inch | D               | C    | n-h   |       |
| 15A          | ½"   | 3.50            | 2.38 | 40.63 | 0.590 |
| 20A          | ¾"   | 3.88            | 2.75 | 40.63 | 0.590 |
| 25A          | 1"   | 4.25            | 3.12 | 40.63 | 0.590 |
| 32A          | 1-¼" | 4.62            | 3.50 | 40.63 | 0.590 |
| 40A          | 1-½" | 5.00            | 3.88 | 40.63 | 0.630 |
| 50A          | 2"   | 6.00            | 4.75 | 40.75 | 0.787 |
| 65A          | 2-½" | 7.00            | 5.50 | 40.75 | 0.866 |
| 80A          | 3"   | 7.50            | 6.00 | 40.75 | 0.866 |
| 100A         | 4"   | 9.00            | 7.50 | 80.75 | 0.905 |
| 125A         | 5"   | 10.00           | 8.50 | 80.87 | 0.984 |
| 150A         | 6"   | 11.00           | 9.50 | 80.87 | 1.063 |



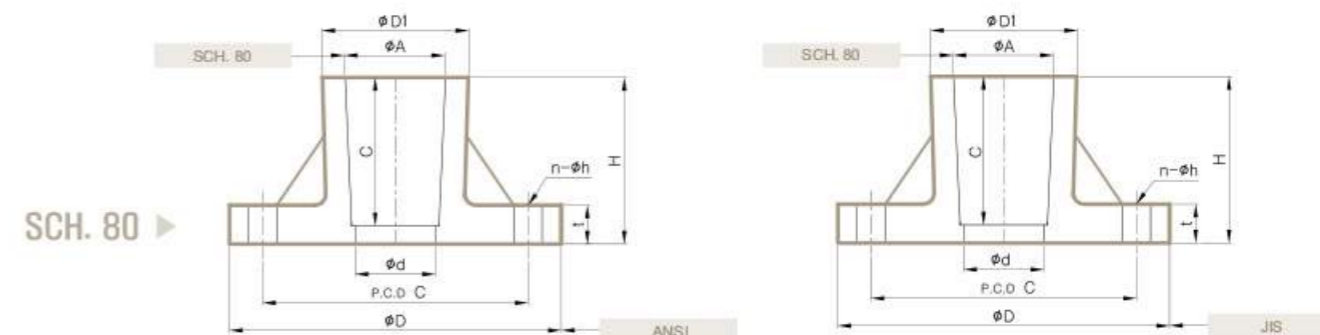
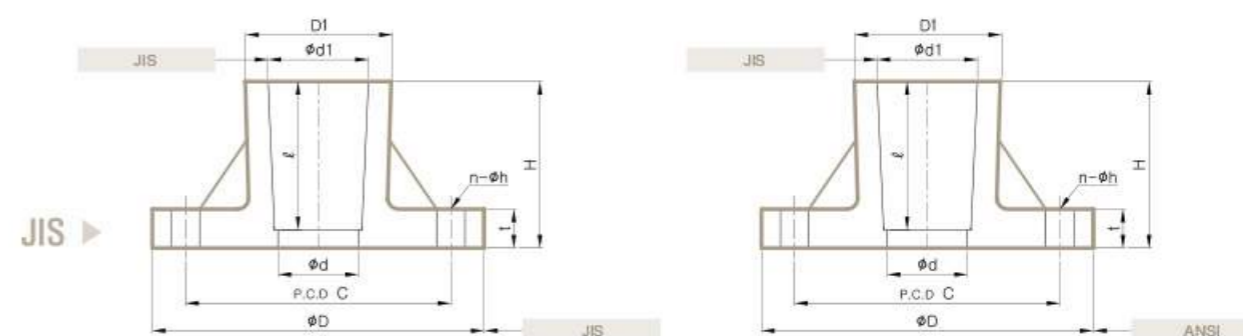
# ASUNG CPVC Pipe and Fittings

## T.S FLANGE

CPVC



HTPVC



JIS (SOCKET : JIS / FLANGE HALL : JIS)

| NOMINAL SIZE | D1  | d   | d1    | t     | H   | t  | JIS 10K |     |       |
|--------------|-----|-----|-------|-------|-----|----|---------|-----|-------|
|              |     |     |       |       |     |    | D       | C   | n-h   |
| 15A          | 32  | 18  | 22.4  | 31.0  | 46  | 15 | 95      | 70  | 4-15  |
| 20A          | 35  | 22  | 26.4  | 36.0  | 46  | 15 | 100     | 75  | 4-15  |
| 25A          | 42  | 25  | 32.4  | 38.0  | 46  | 15 | 125     | 90  | 4-19  |
| 32A          | 52  | 33  | 38.4  | 43.0  | 50  | 15 | 135     | 100 | 4-19  |
| 40A          | 61  | 41  | 48.4  | 55.0  | 61  | 16 | 140     | 105 | 4-19  |
| 50A          | 74  | 52  | 60.4  | 64.0  | 70  | 20 | 155     | 120 | 4-19  |
| 65A          | 87  | 67  | 76.6  | 71.0  | 78  | 22 | 175     | 140 | 4-19  |
| 80A          | 102 | 78  | 89.7  | 73.0  | 81  | 22 | 185     | 150 | 8-19  |
| 100A         | 130 | 101 | 114.7 | 92.0  | 100 | 23 | 210     | 175 | 8-19  |
| 125A         | 160 | 127 | 141.2 | 108.0 | 121 | 25 | 250     | 210 | 8-23  |
| 150A         | 189 | 147 | 166.3 | 139.0 | 150 | 27 | 280     | 240 | 8-23  |
| 200A         | 241 | 200 | 217.6 | 143.0 | 160 | 29 | 330     | 290 | 12-23 |

SCH. 80 + ANSI (SOCKET : SCH. 80 / FLANGE HALL : ANSI)

| NOMINAL SIZE |      | D1    | d     | A     | C     | H     | t     | ANSI CLASS #150 |      |        |
|--------------|------|-------|-------|-------|-------|-------|-------|-----------------|------|--------|
| mm           | inch |       |       |       |       |       |       | D               | C    | n-h    |
| 15A          | ½"   | 1.260 | 0.709 | 0.848 | 0.874 | 1.811 | 0.591 | 3.50            | 2.38 | 4-0.63 |
| 20A          | ¾"   | 1.378 | 0.866 | 1.058 | 1.000 | 1.811 | 0.591 | 3.88            | 2.75 | 4-0.63 |
| 25A          | 1"   | 1.653 | 0.984 | 1.325 | 1.126 | 1.811 | 0.591 | 4.25            | 3.12 | 4-0.63 |
| 32A          | 1-¼" | 2.047 | 1.299 | 1.670 | 1.252 | 1.968 | 0.591 | 4.62            | 3.50 | 4-0.63 |
| 40A          | 1-½" | 2.401 | 1.614 | 1.912 | 1.374 | 2.401 | 0.630 | 5.00            | 3.88 | 4-0.63 |
| 50A          | 2"   | 2.913 | 2.047 | 2.387 | 1.500 | 2.756 | 0.787 | 6.00            | 4.75 | 4-0.75 |
| 65A          | 2-½" | 3.425 | 2.638 | 2.889 | 1.748 | 3.071 | 0.866 | 7.00            | 5.50 | 4-0.75 |
| 80A          | 3"   | 4.015 | 3.070 | 3.516 | 1.874 | 3.189 | 0.866 | 7.50            | 6.00 | 4-0.75 |
| 100A         | 4"   | 5.118 | 3.976 | 4.518 | 2.248 | 3.937 | 0.906 | 9.00            | 7.50 | 8-0.75 |
| 125A         | 5"   | 6.299 | 5.000 | 5.583 | 3.000 | 4.764 | 0.984 | 10.00           | 8.50 | 8-0.87 |
| 150A         | 6"   | 7.441 | 5.787 | 6.647 | 3.000 | 5.905 | 1.063 | 11.00           | 9.50 | 8-0.87 |

JIS + ANSI (SOCKET : JIS / FLANGE HALL : ANSI)

| NOMINAL SIZE | D1  | d   | d1    | t     | H   | t  | ANSI CLASS #150 |       |      |
|--------------|-----|-----|-------|-------|-----|----|-----------------|-------|------|
|              |     |     |       |       |     |    | D               | C     | n-h  |
| 15A          | 32  | 18  | 22.4  | 31.0  | 46  | 15 | 88.9            | 60.4  | 4-16 |
| 20A          | 35  | 22  | 26.4  | 36.0  | 46  | 15 | 98.6            | 69.9  | 4-16 |
| 25A          | 42  | 25  | 32.4  | 38.0  | 46  | 15 | 108.0           | 79.2  | 4-16 |
| 32A          | 52  | 33  | 38.4  | 43.0  | 50  | 15 | 117.3           | 88.9  | 4-16 |
| 40A          | 61  | 41  | 48.4  | 55.0  | 61  | 16 | 127.0           | 98.5  | 4-16 |
| 50A          | 74  | 52  | 60.4  | 64.0  | 70  | 20 | 152.4           | 120.6 | 4-19 |
| 65A          | 87  | 67  | 76.6  | 71.0  | 78  | 22 | 177.8           | 139.7 | 4-19 |
| 80A          | 102 | 78  | 89.7  | 73.0  | 81  | 22 | 190.5           | 152.4 | 4-19 |
| 100A         | 130 | 101 | 114.7 | 92.0  | 100 | 23 | 228.6           | 190.5 | 8-19 |
| 125A         | 160 | 127 | 141.2 | 108.0 | 121 | 25 | 254.0           | 215.9 | 8-22 |
| 150A         | 189 | 147 | 166.3 | 139.0 | 150 | 27 | 279.4           | 241.3 | 8-22 |
| 200A         | 241 | 200 | 217.6 | 143.0 | 160 | 29 | 342.9           | 298.4 | 8-22 |

SCH. 80 + JIS (SOCKET : SCH. 80 / FLANGE HALL : JIS)

| NOMINAL SIZE |      | D1  | d   | A      | C    | H   | t  | JIS 10K |     |      |
|--------------|------|-----|-----|--------|------|-----|----|---------|-----|------|
| mm           | inch |     |     |        |      |     |    | D       | C   | n-h  |
| 15A          | ½"   | 32  | 18  | 21.54  | 22.2 | 46  | 15 | 95      | 70  | 4-15 |
| 20A          | ¾"   | 35  | 22  | 26.87  | 25.4 | 46  | 15 | 100     | 75  | 4-15 |
| 25A          | 1"   | 42  | 25  | 33.66  | 28.6 | 46  | 15 | 125     | 90  | 4-19 |
| 32A          | 1-¼" | 52  | 33  | 42.42  | 31.8 | 50  | 15 | 135     | 100 | 4-19 |
| 40A          | 1-½" | 61  | 41  | 48.56  | 34.9 | 61  | 16 | 140     | 105 | 4-19 |
| 50A          | 2"   | 74  | 52  | 60.63  | 38.1 | 70  | 20 | 155     | 120 | 4-19 |
| 65A          | 2-½" | 87  | 67  | 73.38  | 44.4 | 78  | 22 | 175     | 140 | 4-19 |
| 80A          | 3"   | 102 | 78  | 89.31  | 47.6 | 81  | 22 | 185     | 150 | 8-19 |
| 100A         | 4"   | 130 | 101 | 114.76 | 57.1 | 100 | 23 | 210     | 175 | 8-19 |
| 125A         | 5"   | 160 | 127 | 141.81 | 76.2 | 121 | 25 | 250     | 210 | 8-23 |
| 150A         | 6"   | 189 | 147 | 168.83 | 76.2 | 150 | 27 | 280     | 240 | 8-23 |

# ASUNG CPVC

Pipe and Fittings

## CAP

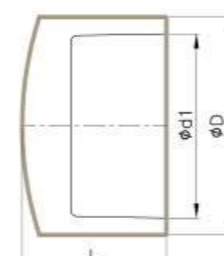
### CPVC



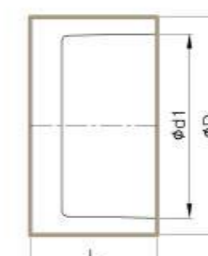
### HTPVC



### JIS

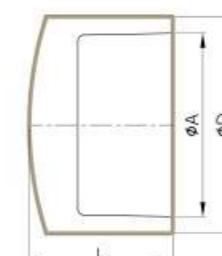


15A~65A

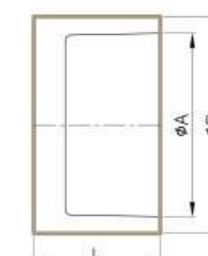


80A~200A

### SCH. 80



1/2"~2-1/2"



3"~6"

### JIS

unit:mm

| NOMINAL SIZE | D   | d1    | L   |
|--------------|-----|-------|-----|
| 15A          | 30  | 22.4  | 31  |
| 20A          | 34  | 26.4  | 36  |
| 25A          | 42  | 32.4  | 40  |
| 32A          | 47  | 38.4  | 44  |
| 40A          | 58  | 48.4  | 48  |
| 50A          | 73  | 60.4  | 52  |
| 65A          | 88  | 76.6  | 60  |
| 80A          | 107 | 89.7  | 60  |
| 100A         | 132 | 114.7 | 62  |
| 125A         | 162 | 141.2 | 98  |
| 150A         | 190 | 166.3 | 110 |
| 200A         | 242 | 217.6 | 134 |

### SCH. 80

unit:inch

| NOMINAL SIZE |        | D     | L     | A     |
|--------------|--------|-------|-------|-------|
| mm           | inch   |       |       |       |
| 15A          | 1/2"   | 1.181 | 1.220 | 0.848 |
| 20A          | 3/4"   | 1.339 | 1.417 | 1.058 |
| 25A          | 1"     | 1.654 | 1.575 | 1.325 |
| 32A          | 1-1/4" | 1.850 | 1.732 | 1.670 |
| 40A          | 1-1/2" | 2.283 | 1.890 | 1.912 |
| 50A          | 2"     | 2.874 | 2.047 | 2.387 |
| 65A          | 2-1/2" | 3.465 | 2.362 | 2.889 |
| 80A          | 3"     | 4.213 | 2.362 | 3.516 |
| 100A         | 4"     | 5.197 | 2.441 | 4.518 |
| 125A         | 5"     | 6.378 | 3.858 | 5.583 |
| 150A         | 6"     | 7.480 | 4.331 | 6.647 |

# ASUNG CPVC

Pipe and Fittings

## VALVE SOCKET

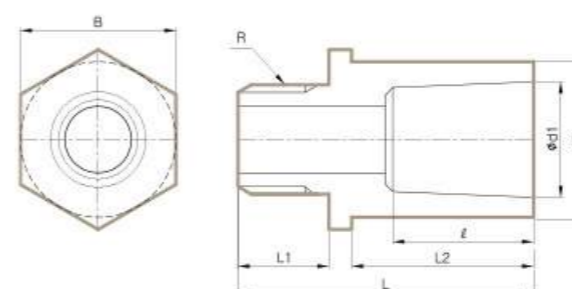
CPVC



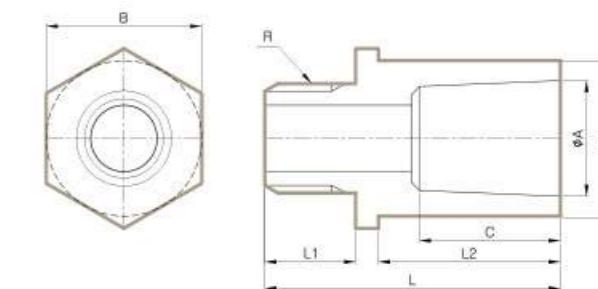
HTPVC



JIS



SCH. 80



JIS

| NOMINAL SIZE | R    | D  | B  | d1   | ℓ    | L  | L1 | L2 |
|--------------|------|----|----|------|------|----|----|----|
| 15A          | ½"   | 29 | 29 | 22.4 | 22.0 | 47 | 18 | 22 |
| 20A          | ¾"   | 36 | 36 | 26.4 | 25.5 | 54 | 21 | 23 |
| 25A          | 1"   | 43 | 43 | 32.4 | 28.5 | 59 | 25 | 25 |
| 32A          | 1-¼" | 46 | 47 | 38.4 | 32.0 | 67 | 27 | 29 |
| 40A          | 1-½" | 58 | 60 | 48.4 | 35.0 | 76 | 27 | 36 |
| 50A          | 2"   | 70 | 73 | 60.4 | 38.0 | 87 | 32 | 43 |

unit:mm

SCH. 80

| NOMINAL SIZE | R    | D     | B     | A     | C     | L     | L1    | L2    |
|--------------|------|-------|-------|-------|-------|-------|-------|-------|
| 15A          | ½"   | 1.142 | 1.142 | 0.848 | 0.874 | 1.850 | 0.709 | 0.866 |
| 20A          | ¾"   | 1.417 | 1.417 | 1.058 | 1.000 | 2.126 | 0.827 | 0.906 |
| 25A          | 1"   | 1.693 | 1.693 | 1.325 | 1.126 | 2.323 | 0.984 | 0.984 |
| 32A          | 1-¼" | 1.811 | 1.850 | 1.670 | 1.252 | 2.638 | 1.063 | 1.142 |
| 40A          | 1-½" | 2.283 | 2.362 | 1.912 | 1.374 | 2.992 | 1.063 | 1.417 |
| 50A          | 2"   | 2.756 | 2.874 | 2.387 | 1.500 | 3.425 | 1.260 | 1.693 |

unit:inch



# ASUNG CPVC

## Pipe and Fittings

### Work Specification



#### 1 Cutting

- \* Cut the pipe squarely and check the cut surface.
- \* You may use various cutting devices (wheel type cutter, ratchet type, saw, cast iron pipe cutter).



#### 2 Rounding

- \* Round the outer diameter of the pipe at 10°~15°.
- \* The purpose of rounding is to prevent the dropping of bond on the rounded part when it is running thereby making easier to join/assemble the pipes.



#### 3 Fitting Preparation

- \* Remove foreign materials and pipe debris from the inside and outside of the pipe and wipe the area to be joined with a dry cloth ensuring the area is free of dust, oil and moisture.



#### 4 Final Check (before applying adhesive)

- \* Join the pipe to the fitting to check that they are all dry.
- \* Insert the pipe into the fitting as a trial run before applying the adhesive.
- \* Measure the depth of the fitting, draw a line on the surface of the pipe to indicate the insertion depth (See Table 1 for the insertion length), and draw another line (the reference line) by adding 2cm to the first line.
- \* The first line may be erased when you apply primer or solvent cement, and this is why you draw the second line.
- \* Insert the pipe into the fitting until it is 1/3~2/3 of the way in
- \* If not properly inserted, repeat the process from the beginning (1).



#### 5 Solvent cement (bond)

- \* Open the solvent cement to check the contents and shake well to mix. (This is to prevent the sediment from sinking.)
- \* Check if the state of solvent cement is good, it should not look like a gel.
- \* Discard if it is hardened or turned to a gel.
- \* Keep the solvent cement sealed after use for storage and to prevent it from going hard.



#### 6 Sequence of the application of solvent cement

- \* Remove dust and other foreign materials from the pipe using a paper towel or clean cloth.

#### \* Sequence of the application of solvent cement

- Apply a sufficient amount of solvent cement evenly on the insertion depth of the pipe 2-3 times using a brush or other suitable tools.
- Apply solvent cement evenly on the fitting on its insertion area 2-3 times and apply it again on the pipe.



#### \* NOTE

- If necessary, apply a layer of primer before applying solvent cement.



#### 7 Joining (Assembly)

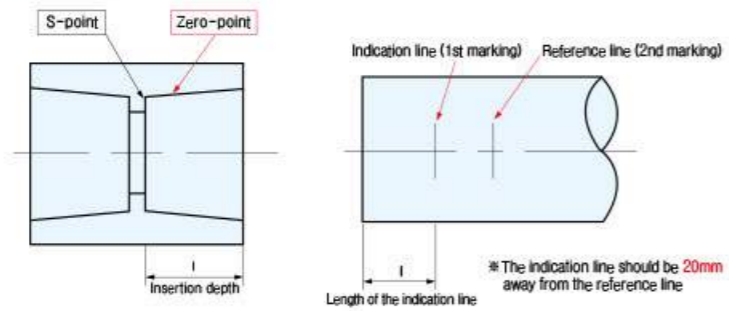
- \* Rotate 1/8~2/8 the pipe as you insert the pipe into the fitting until it reaches the far end.
- \* Hold the joint for 10 - 30 seconds to keep the pipe from being pushed out after it is bonded to the fitting. (Hold longer for large pipes).
- \* Check that the fitting is correctly aligned and the pipe is fully inserted.
- \* Check for any beads of cement around the pipe and the fitting.
- \* If the bead is not formed uniformly on the insertion area or there are any voids it indicates that not a sufficient amount of solvent cement has been applied. Cut away the joint and re-work as it will likely cause a leak.



# ASUNG CPVC

## Pipe and Fittings

### Welding with solvent cement



### Insertion depth by section (Table 1)

| Diameter (nominal size) | Insertion depth | Diameter (nominal size) | Insertion depth |
|-------------------------|-----------------|-------------------------|-----------------|
| 25A                     | 29              | 80A                     | 48              |
| 32A                     | 32              | 100A                    | 57              |
| 40A                     | 35              | 125A                    | 67              |
| 50A                     | 38              | 150A                    | 76              |
| 65A                     | 44              | 200A                    | 102             |

### Set time of solvent cement

The pipe size, the tightness during insertion, the temperature and humidity affect the construction and set time. It takes a shorter time for the cement to set for small pipes having a tight fit at high temperature under dry conditions. It takes longer to set in the opposite conditions. Depending on the pipe size and temperature during assembly the joint must not be exposed to any impact (stress) for 1-5 minutes.

The following set time must be observed for the following activities.

| Pipe diameter (ID) | Set time (15kgf/cm <sup>2</sup> Water pressure test) |          |           |
|--------------------|--|----------|-----------|
|                    | Set time by ambient temp.                            |          |           |
|                    | 15°C~38°C  | 4°C~15°C | -17°C~4°C |
| 25A                | 6hrs.  | 12hrs.   | 48hrs.    |
| 32A                | 6hrs.  | 32hrs.   | 10days    |
| 40A                | 12hrs.   | 32hrs.   | 10days    |
| 50A                | 12hrs.   | 48hrs.   | 15days    |
| 65A                | 24hrs.   | 96hrs.   | 15days    |
| 80A                | 24hrs.   | 96hrs.   | 15days    |
| 100A               | 24hrs.   | 96hrs.   | 15days    |

### Amount of cement use (based on 1kg/can)

| Pipe diameter      | 25A | 32A  | 40A  | 50A  | 65A  | 80A  | 100A | 125A | 150A  | 200A  |
|--------------------|-----|------|------|------|------|------|------|------|-------|-------|
| Amount required(g) | 8.0 | 11.0 | 14.1 | 20.3 | 28.4 | 35.7 | 50.0 | 62.3 | 125.0 | 249.9 |
| No. of joints      | 125 | 91   | 71   | 50   | 35   | 28   | 20   | 16   | 8     | 4     |

