

PARATECH

FESCO
by **PARATECH**

Product catalog **PARATECH**

Aiming to become a company with the
world's best technology and brand as a
comprehensive fire safety company

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Developed sprinkler
flexible hose
and acquired FM
certification

FOR 31 TYPES SUCH
AS SPRINKLER, VALVE,
SP-JOINT, UL, FM,
LPCB

Firefighting equipment
construction for semiconductor
and LCD production plants



CONTENTS

All products under the motto of “right from the start” as products are directly connected to the safety of the people.

Sprinkler

General type is installed in apartments, officetels, and other apartment houses.

Valve

It is a product used in wet sprinkler facilities. U drain valve (Sight Glass) is applied.

Sprinkler Joint

It is a product used to connect sprinkler and piping in apartment buildings and commercial buildings.

CPVC

Installation of semi-incombustible materials (flame retardant grade 2 or higher) on the ceiling and half-width of apartments, hotel officetels, and multi-family houses

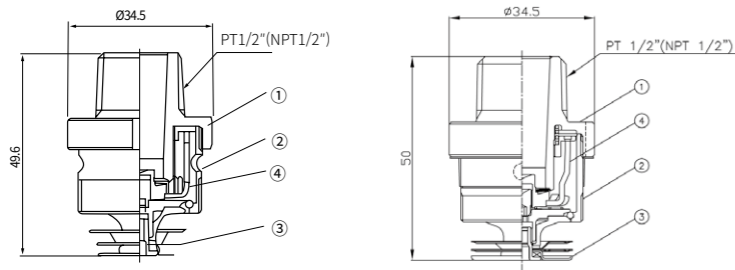


Sprinkler

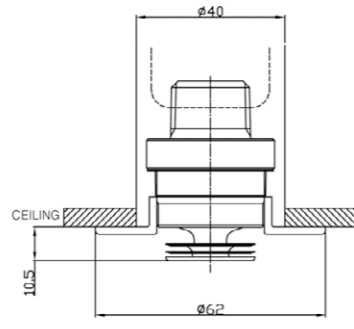
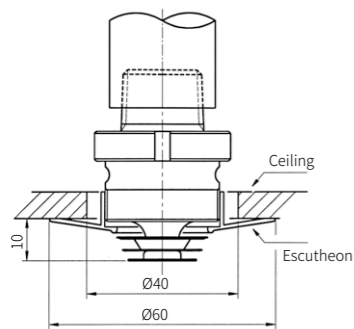
UL Flush Type Sprinkler

Paratech Flush Type Sprinkler has a protective cap which protects sprinkler head from any external damage during transport and install. It uses Teflon sheet which has better sealing and elasticity than conventional copper plate gasket. With its compact size and aesthetical design, it is widely used for apartments, hotels, theaters, department stores, hospitals and multi-purpose buildings.

• Assembly Diagram



• Installation Diagram



PI720



PI721

Standard Response Type Sprinkler

Paratech Glass Bulb Type Sprinkler is specially designed to meet various customer requirements. It uses glass bulb which contains special liquid instead of conventional fuse. The glass bulb simplifies sprinkler structure and ensures stable operation in varying ambient temperature.

• Specification

Model NO	PI 210(Upright)		PI 220(Pendent)	
Operating Temperature	68°C (155°F)	93°C (200°F)	68°C (155°F)	93°C (200°F)
Max. Ambient Temperature	38°C (100°F)	66°C (150°F)	38°C (100°F)	66°C (150°F)
Temp. Indication Color	Red	Green	Red	Green
Connection Screw Size	15A (PT 1/2", NPT 1/2")			
Orifice Size	Ø11.2 mm			
Test Pressure	Rated Water Press : 3.5MPa (500 psi) Air Press: 0.7MPa (100psi)			
Max. Pressure	1.23MPa(175 psi)			
Flow Rate	80ℓ/min-0.1MPa (K=80)			
Glass Bulb	G5(5mm)			
Weight (kg)	8			
Packaging (Ea.)	100			

※ Types are available in brass, chrome coated and white painted.

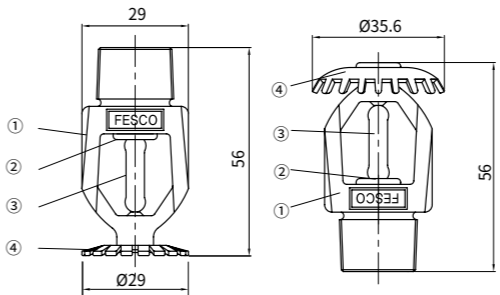


Pendent Type

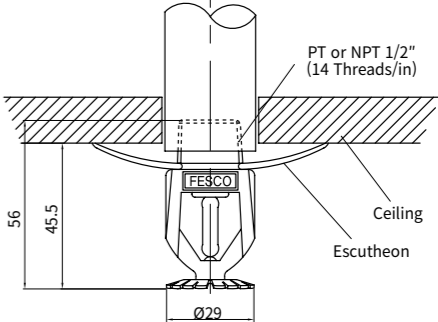


Upright Type

• Assembly Diagram



• Installation Diagram





Flush Type Sprinkler

Paratech Flush Type Sprinkler has minimal design which makes it smaller than conventional flush type sprinklers, and small size well harmonizes with any interior design. With precise deflector design and world patent heat collecting technology, faster and more accurate performance came from its small body.

Special Coated Sprinkler

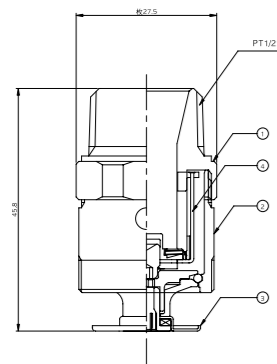
Paratech Special Coated Sprinkler has coated surface of special material which greatly increases anticorrosion ability. With UL certification, this special purpose sprinkler is used in where the corrosion rate is high like a fume duct of semiconductor factory.



Specification

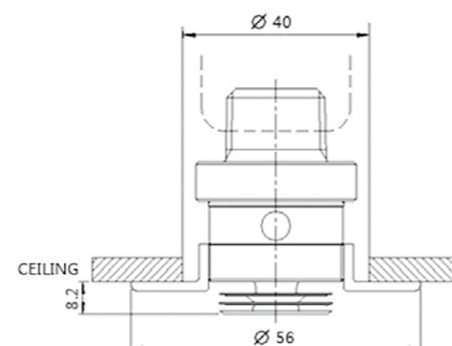
Model NO	FH751EQR	FH752EQR	FH751	FH752
Operating Temperature	72°C	105°C	72°C	105°C
Max. Ambient Temperature	39°C	67°C	39°C	67°C
Response	Quick Response		Standard Response	
Radius of Spary	2.6m			
Thread Size	15A (PT 1/2")			
Orifice Size	Ø11.3 mm			
Test Pressure	2.5Mpa			
Flow Rate	80ℓ/min–0.1MPa (K=80)			
Weight	8kg/Box			
Packaging (EA/Box)	100			

• Assembly Diagram



No	Part	Material
1	Body	Forged Brass
2	Frame	Brass
3	Heat Collector	Copper
4	Deflector	Copper

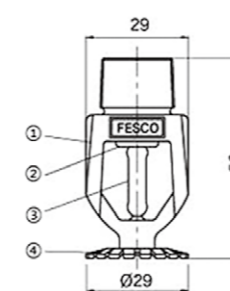
• Installation Diagram



Specification

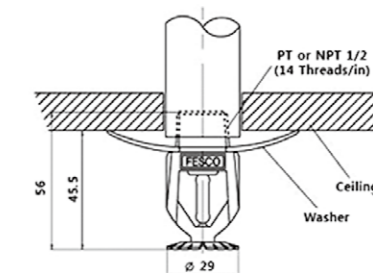
Model NO	PI 220(Pendent)			PI 221(Pendent)	
Operating Temperature	68°C (155°F)	93°C (200°F)	57°C (135°F)	68°C (155°F)	93°C (200°F)
Max. Ambient Temperature	38°C (100°F)	66°C (150°F)	38°C (100°F)	38°C (100°F)	66°C (150°F)
Temp. Indication Color	Red	Green	Orange	Red	Green
Response Speed	Standard Response			Quick Response	
Glass Bulb	G5(5mm)			F3(3mm)	
Connection Screw Size	15A (PT 1/2", NPT 1/2")				
Orifice Size	Ø11.2 mm				
Test Pressure	Rated Water Press : 3.5MPa (500psi) Air Press: 0.7MPa (100psi)				
Max. Pressure	1.23MPa(175psi)				
Flow Rate	K=80LPM-0.1MPa(K=5.6GPM/(psi)1/2)				
Weight (kg)	8kg/Box				
Packaging (Ea.)	100				

• Assembly Diagram



No	Part	Material
1	Frame	Forged Brass
2	Bulb Cap	Brass
3	Glass Bulb	-
4	Deflector	Brass

• Installation Diagram





Valve



UL Flush Type Sprinkler

PARATECH UL/FM valves are designed to conform to the international standard with most compact and competitive size. The simple and light design products are also available for the customers who pursue the most reliable and economical fire sprinkler system.

• Specification

Model No	FAVB100R- UL/FM	FAVB150R- UL/FM	FAVB200R- (Flange)UL/FM	FAVB200R- (Groove)UL/FM
Size	100A	150A	200A	
Approved Standards	UL/FM			
Max.Pressure	175PSI		250PSI	
Test Pressure	350PSI		500PSI	
Direction	Vertical			
Flange	ANSI150lb FF Type		ANSI/AWWA C606	
Weight(kg)	38.6	56.2	76.5	57.6
Packing(ea)	1	1	1	1

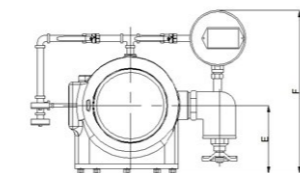
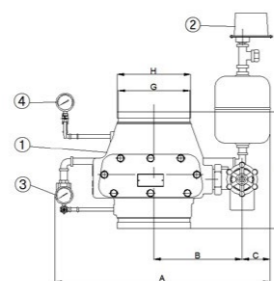
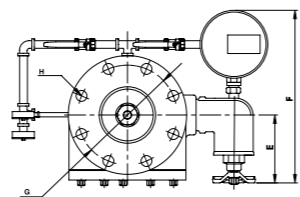
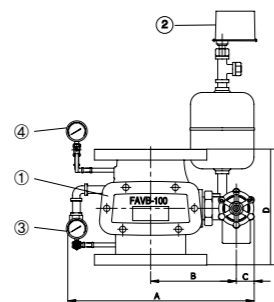
• Assembly Diagram



FAVB 100R-UL/FM



FAVB 200R-(Groove)UL/FM



Retarding Chamber Type

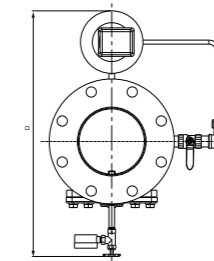
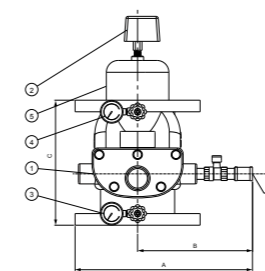
• Specification

Model No	Standard Type		Combined Type	
	A2-RC-100	A2-RC-150	A2-RC-100U	A2-RC-150U
Size	100A	150A	100A	150A
Max. Pressure	1.4 MPa			
Test Pressure	2.0 MPa			
Direction	Vertical			
Flange	KS B1511 10K			
Weight(Kg)	18	34.4	18.3	34.3
Packing(Ea)	1	1	1	1

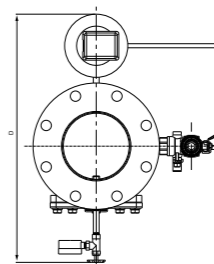
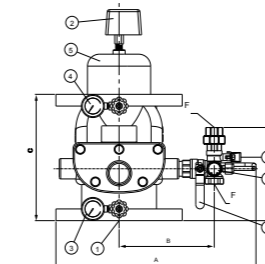
※ Combined Type : Combined Sight Glass and Alarm Check Valve.

• Assembly Diagram

(Standard Type)



(Combined Type)



A2-RC-100U
(Combined Type)

Double Interlock Valve

Specification

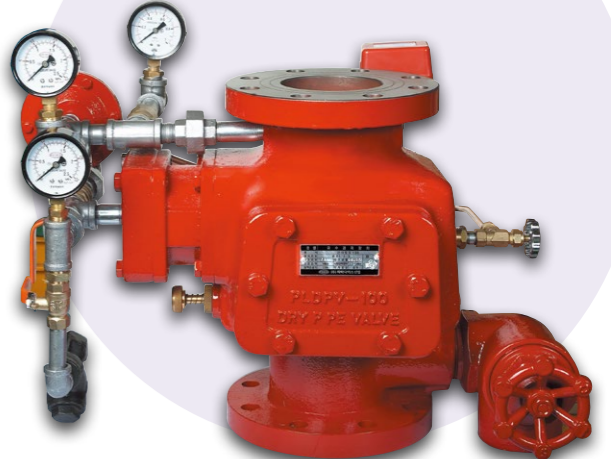
Model No	DI-P1-10K-150
Size	150A
Max. Pressure	1.4MPa
Test Pressure	2.0MPa
Direction	Vertical
Flange Size	KS B1511
Weight(Kg)	51.1
Packing(Ea)	1



Dry Pipe Valve

Specification

Model No	PLDPV 100	PLDPV 150
Size	100A	150A
Max. Pressure	1.4MPa	
Test Pressure	2.0MPa	
Pressure Loss	0.02 MPa	
Direction	Vertical	
Flange Size	KS B1513 10K	
Weight(Kg)	61	81
Packing(Ea)	1	1



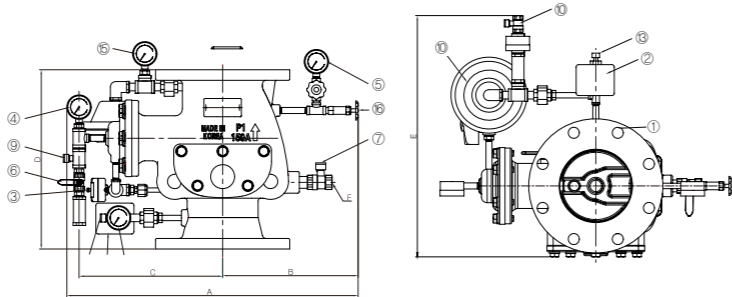
• Dimension

Size	A	B	C	D	E	F
Model No						
DI-P1-10K-150	650	310	300	374	560	25A

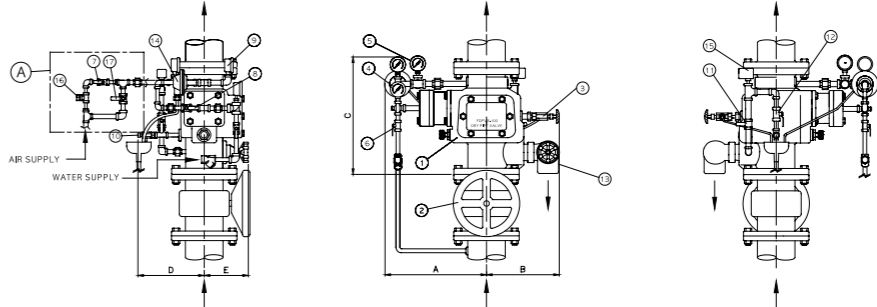
• Part List

NO	Part	NO	Part
1	Valve Body	9	Manual Control Valve
2	Pressure Switch(Low)	10	Air Supply Valve
3	Electric Control Valve	11	Pressure Gauge (Inlet)
4	Pressure Gauge (Setting)	12	Pressure Gauge (Outlet)
5	Pressure Gauge (Outlet)	13	Drip Check Valve
6	Water Supply Control Valve	14	Actuator
7	Drain Valve	15	Air Pressure Valve
8	Pressure Switch(High) Test Valve	16	Air Control Valve

• Assembly Diagram



• Assembly Diagram



• Dimension

Size	A	B	C	D	E
Model No					
PLDPV 100	261	255	443	270	150
PLDPV 150	278	280	490	290	150

• Part List

NO	Part	NO	Part
1	Dry Pipe Valve	10	Drip Check Valve
2	OS & Y Valve	11	Pressure Switch Test Valve
3	Air Control Valve	12	Ball Valve
4	Priming Water Supply-Valve	13	Drain Valve
5	Actuating Unit Air Supply-Valve	14	Actuator
6	Actuating Unit Water Supply-Valve	15	Pressure Switch
7	Air Supply-Valve	16	Pressure Control Valve
8	Actuating Unit Water Stop Valve	17	Air Supply-Valve
9	Pressure Gauge		

Cautions

- 1 Insulate the valves and accessories to prevent freezing damage in the cold winter.
- 2 Clean up inside of valves and accessories after installation to prevent the sprinkler system damage.
- 3 Install the proper pipe with specified diameter for secondary side.
- 4 Drain water in the pipe of secondary side before opening the valve cover for repair or clean up.
- 5 Follow the manual for electrical wiring.

Sprinkler Joint

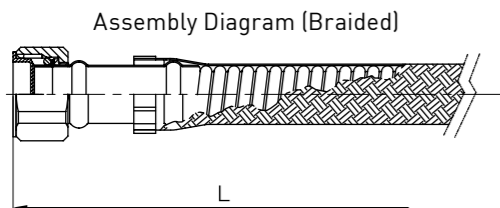
Sprinkler Flexible Hose with Fittings

Paratech SP-Joint has acquired International Authentications of UL/FM/LPCB with excellent durability and corrosion resistance. It also designed for easy installation at any space.

• SP-Joint Specification

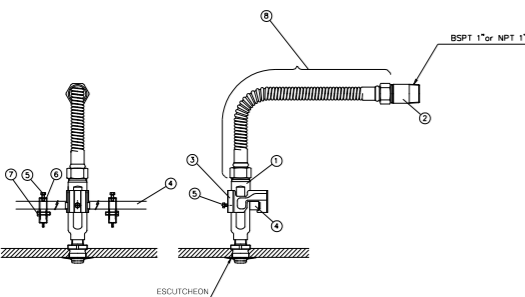
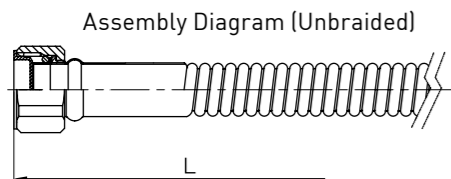
1. Braided Type

- Pipe external diameter Ø25,Ø28 2types (BSS, BSSN, BASN)



2. Unbraided Type

- Pipe external diameter Ø25,Ø28 2types (USSI, USS, USSN, UASN)



Approved Standards	ApprovedLength(mm)
UL	700~1800
FM	700~1800
LPCB	700~1800

Model	Specification
BSS	Braided Straight Ø25
BSSN	Braided Straight Ø28
BASN	Braided Angle Ø28
USSI	Unbraided Straight Ø25
USS	Unbraided Straight Ø25
USSN	Unbraided Straight Ø28
UASN	Unbraided Angle Ø28

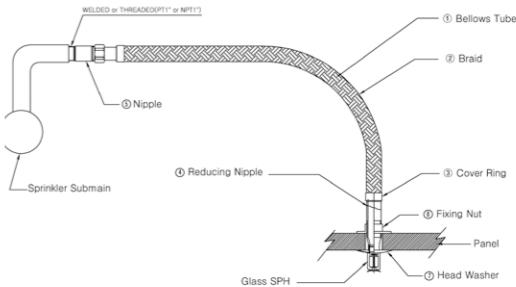
No	Part Name	Material	Quantity
1	Angle Pipe(Straight)	SPPS	1
2	Nipple	SPPS	1
3	Center Bracket	SPC	1
4	Rectangular Bar	SS400	1
5	Fixing Bolt 1	SS400	3
6	Side Bracket	SPC	2
7	Fixing Bolt 2	SS400	2
8	SP-Joint	STS304	1

SFT (Sprinkler Flexible Tube)

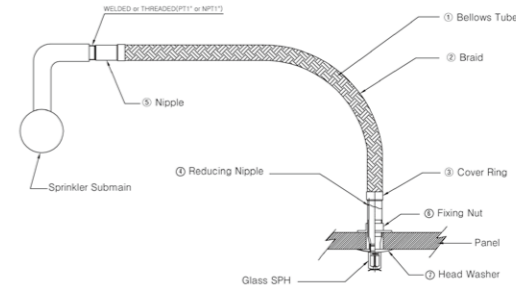
Paratech SFT(Sprinkler Flexible Tube) is designed for clean room of semi-conductor factories (PDP, TFT-LCD and etc). It should be used in combination with sprinkler for clean room where mould-bar is connected.



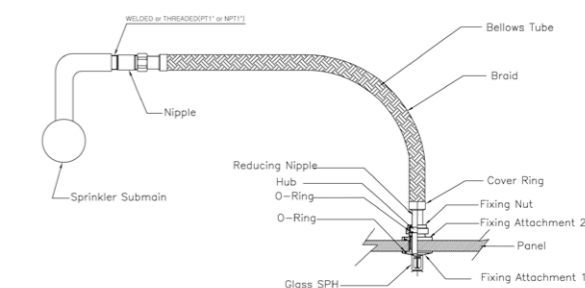
• SFT-A Installation Diagram



• SFT-C Installation Diagram



• SFT-G/G2 Installation Diagram



CPVC



BlazeMaster® FIRE SPRINKLER SYSTEMS

When dealing with fire protection, you need a piping system you can depend on. Paratech BlazeMaster® CPVC pipe and fittings are designed specifically for fire sprinkler systems based on more than 40 years of proven experience.

Paratech Co.,Ltd. is the only Licensed Manufacture in Korea to supply CPVC pipe and fittings to the market by using UL approved Lubrizol material. Paratech BlazeMaster® CPVC takes fire sprinkler systems to a level of superior performance that exceeds your expectations.

Resistance to corrosion and chemical attack
Resistance to heat and pressure
Flame resistance and mechanical strength at high temperatures
Easy installation and economy in total installation cost



Direct exposure to flame at 878°C
(Water Pressure Resistance:1.2MPa)



The inner side of the pipe maintains good condition after cutting.

LOI(Limiting Oxygen Index)

Material	LOI
CPVC	60
Cotton	16 ~ 17
PE	17
PP / PB / ABS	18
PVC	45

Oxygen composition in the air : 21%

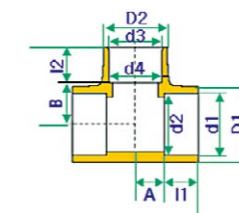
Heat Conductivity

Material	Heat Conductivity (Btu/ft hr°F)
CPVC	0.95
Insulation	0.25
Steel Pipe	325
Copper Pipe	2.688w



PIPES

(cULus listed)



• Pipe

Size	Do = Avg.OD(mm)	t = min.Thickness(mm)	Wt.(g/ea)	Packing(ea/Bag)
3/4"	26.7	1.98	1.04	12
1"	33.4	2.46	1.56	8
1-1/4"	42.2	3.12	2.48	6
1-1/2"	48.2	3.58	3.28	5
2"	60.3	4.47	5.04	3
2-1/2"	73.0	5.41	7.36	2
3"	88.9	6.58	10.84	1

• Fitting Tee

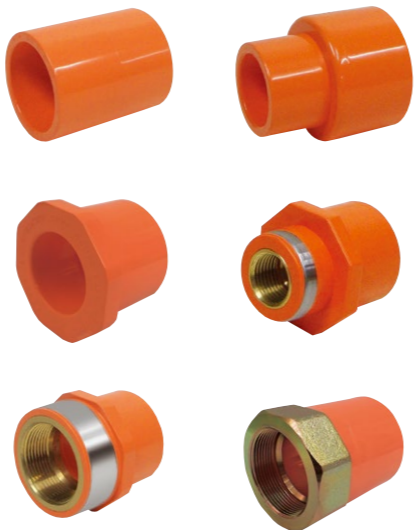
Size	Schedule	D	d1	d2	A	I	Wt.(g/ea)	Packing(ea/Box)
3/4"	40	33.8	26.87	26.57	14.4	21	55	150
1"	40	41.9	33.66	33.27	18	23	90	120
1-1/4"	40	50.4	42.42	42.04	23	27	140	80
1-1/2"	80	60	48.56	48.11	26	37	245	40
2"	80	73	60.63	60.17	32	42	400	20
2-1/2"	80	89	73.38	72.85	40	47	750	12
3"	80	106	89.30	88.70	48	50	1120	12

Fire Sprinkler Systems Be Used?

BlazeMaster® CPVC pipe and fittings are Listed by Underwriters Laboratories (UL & C-UL) for use in

See UL Fire Protection Equipment Directory, categories VIWT and HFYH. BlazeMaster® fire sprinkler systems shall be employed in wet-pipe systems.(A wet-pipe system contains water and is connected to a water supply so that the water will discharge immediately when the sprinkler is opened.)

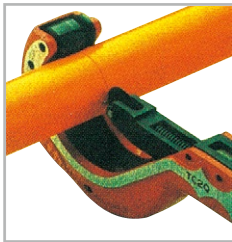
BlazeMaster® CPVC pipe manufactured by Paratech must never be used in a system using compressed air or other gases.



Installation

Installing CPVC

1. Cutting

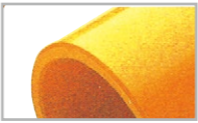


- Cut pipe squarely using a ratchet cutter, a wheel-type plastic tubing cutter, a power saw or a fine toothed saw.
- Ratchet cutter should not apply when temp. below 10° C

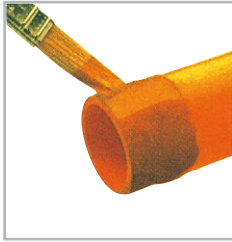
2. Deburring



- Use a chamfering tool or other tool to remove burrs and filings from the inside and outside of the pipe.



3-1. Cement Application to pipe



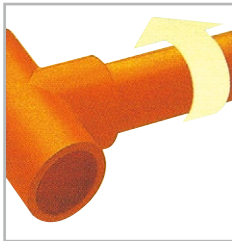
- Apply solvent cement to outside of pipe using a brush or a dauber.

3-2. Cement Application to fittings



- Apply solvent cement to the fitting socket.
- Do not puddle the cement in fitting.

4. Assembly



- Immediately insert the pipe into the fitting socket while rotating the pipe 1/4 turn. This ensures against potential "leak" tracks in the solvent cement.
- Make sure that the pipe bottoms in the socket and hold for 10~15 seconds.

5. Observe specified curing time.



- Do not apply external shock or internal pressure until the adhesive is absolutely cured.

Curing time

Minimum Cure Prior to Pressure Testing

Pipe Size		Ambient Temperature During Cure		
mm	inches	16°C to 49°C (60°F to 120°F)	4°C to 15°C (39°F to 59°F)	-18°C to 4°C (0°F to 39°F)
20	3/4"	1 hr.	4 hrs.	48 hrs.
25	1"	1.5 hr.	4 hrs.	48 hrs.
32×40	1-1/4"×1-1/2"	3 hrs.	32 hrs.	10 days
50	2"	8 hrs.	48 hrs.	-
65×80	2-1/2"×3"	24 hrs.	96 hrs.	-

Solvent cement can be applied at temperatures below 4°C for pipe 2" in size and larger, however the temperature of the system must be raised to 4°C or higher and allowed to cure per the above recommendations prior to pressure testing. When bringing cement, pipe or fittings in from the outside, be sure they are brought up to room temperature before using the 16°C to 49°C cure schedule.

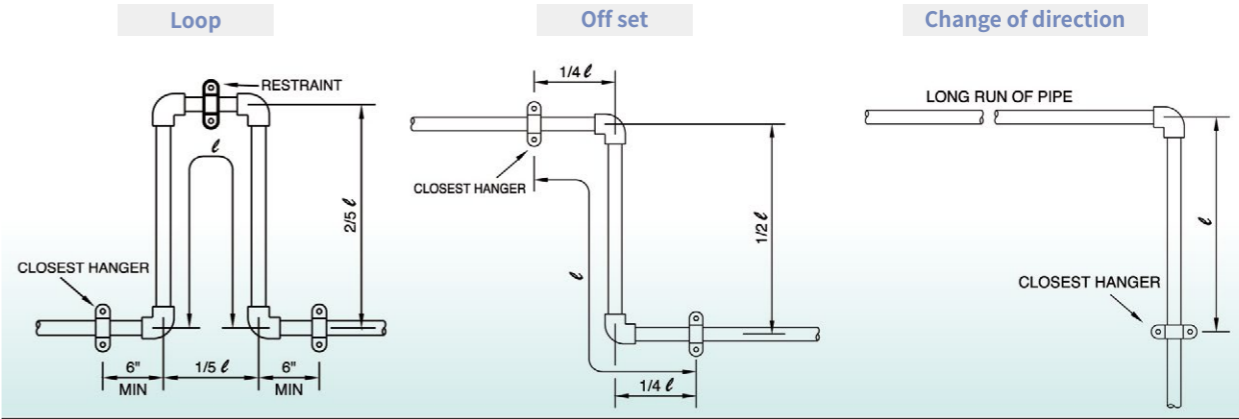
Hangers and Support

Installing CPVC

BlazeMaster® pipe is rigid, it requires fewer supports than flexible plastic systems.

Nominal Size		Maximum Support Spacing	
mm	inches	meters	feet
20	3/4"	1.7	5-1/2
25	1"	1.8	6
32	1-1/4"	2.0	6-1/2
40	1-1/2"	2.1	7
50	2"	2.4	8
65	2-1/2"	2.7	9
80	3"	3.0	10

Expansion Loop and Offset Configuration



A company that protects life and property,

Paratech Co., Ltd. aims to become a company with the world's best technology and brand as a comprehensive fire safety company.

By 2023, it will grow into a global top 10 company with 50% market share in the domestic market,
By 2033, we will become a global top 5 company.

