



**SYLER**<sup>®</sup>

PE-LINED STEEL PIPE



**RUST FREE...Strong,  
Durable, Inflammable**

**SYLER**

**PE-Lined steel pipe**



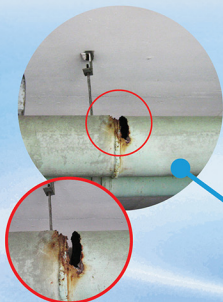
[www.sylerpipe.com](http://www.sylerpipe.com)

# Water Pipe...Who thinks not the matter

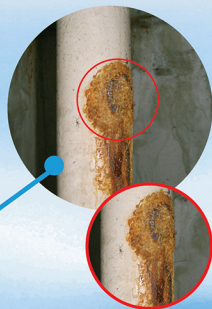
Clogged rusted pipe



Rust at the welding joint of the steel pipe



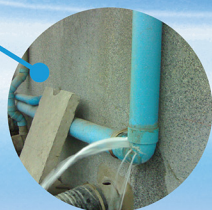
Leakage from corroded steel Pipe



“  
*Headache problems  
hiding in your buildings  
or in your old  
piping system*  
”



Plastic pipes become more friable and brittle after being exposure to sunlight.



PVC Pipes are prone to leak, brittle, and lack durability.

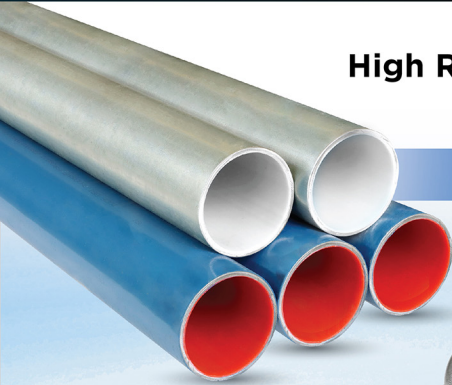


Plastic pipe are flammable and release smoke when burned, which is a major cause of fatalities in fire incidents


## High Rise Building, Condominium, Hotel and Industry

Long Life Time, No Rust, No Corrosion, No Leak

Fortified by Petty Patent Protection



Pipe Type C - White PE-Lined Core  Temperature Resistance 60°C

Pipe Type H - Red PE-Lined Core  Temperature Resistance 90°C

All fittings can be used under temperature of 90°C

ISO 9001 : 2008

Under Standard : BS 1387/85 CLASS M,

BS EN 10255 : 2004 CLASS M,

BS EN 10217-1 : 2019 and BS 6920 Part II

### Higher Properties than...General Pipes



No Fire Sparking



Strong Durable  
for impact loads



Ensure that the water flowing  
through the Syler pipe  
is pure liquid without rust  
and heavy metal



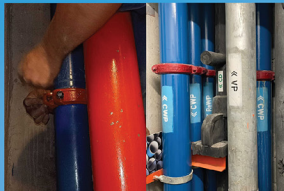
Long Lifetime



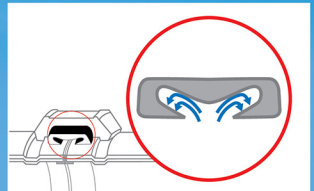
Suitable for  
any outdoor building  
(Sun & UV Resistance)



No Fire Sparking




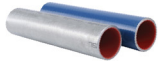











Easy to install even through on a limited space



By water pressure, the force and the housing  
of the coupling will work together, press and push  
the gasket on the pipe during no any leakage.

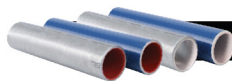
Polyethylene(PE) and Polypropylene (PP) are well known as the pure polymer. SYLER pipe do not use any additive, hence, our products are harmless.

# Qualification of Syler Pipe

Syler's Merchandise	Standard	Operating Temperature	Maximum Pressure	Usage Characteristics
 <p>Syler pipe for cold water (White inner-Type C)</p>	BS EN 10255: 2004 or BS 1387/85 CLASS M (former) (1/2" - 6")	Up to 3-60 °C	Test pressure Maximum up to 50 bar 735 PSI	Cold water pipe, chilled water pipe, air pipe, fire protection pipe
 <p>Syler pipe for hot water (Red inner-Type H)</p>	BS EN 10217-1: 2019 (8") BS 6920 Part II			
 <p>PP-Lined Fittings</p>	BS 21 	Up to 90 °C	Up to 20 bar	The fitting has one color and can be used for both hot and cold water.
 <p>Hot Roll Grooved Fittings</p>	 	Up to 90 °C	15-34.5 bar* 225-500 PSI	The fitting is red and can be used for both hot and cold water.
 <p>Grooved Coupling Paint</p>	 	Up to 90 °C	20-50 bar* 300-735 PSI	It can be used for installing PE-lined steel pipes with grooved fitting. <b>** For indoor installation</b>
 <p>Grooved Coupling Galvanized</p>	 	Up to 90 °C	20-50 bar* 300-735 PSI	It can be used for installing PE-lined steel pipes with grooved fitting with plastic lining. <b>** For outdoor installation</b>

## **i** Recommendation

- Hot water pipes with a distance of 20 meters or more must be insulated as well. (For insulation details, please contact the distributor.)
- The Syler pipe should not be connected directly to the copper pipe, because it will make Syler pipe corrodes faster than normal due to the transfer of electrons. Therefore, if you want to connect Syler pipe with copper pipe, brass joints must be used as an intermediary.
- The maximum pressure specified depends on the type and model of Coupling and Fittings used.



## Size and Thickness of Syler Pipe

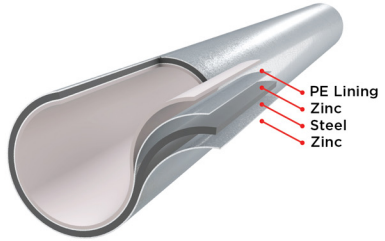
BS EN 10255: 2004 Class M (BS 1387/87 Class M) for Dia 1/2" - 6"  
and BSEN 10217: 2019 for Dia 8"

**Class M (Medium)**

Size		PE-Lined Steel Pipe				Galvanized Steel Pipe		PE Pipe		Weight	
Outside diameter (mm)	Inch	Outside diameter		Thickness (mm)	Permissible tolerance%	Thickness (mm)	Permissible tolerance%	Thickness (mm)	Permissible tolerance (mm)	kg/m	Permissible tolerance %
		Min.	Max.								
21.3	1/2"	21.0	21.8	3.8		2.6		1.2		1.23	
26.9	3/4"	26.5	27.3	3.9		2.6		1.3		1.59	
33.7	1"	33.3	34.2	4.5		3.2		1.3		2.39	
42.4	1-1/4"	42.0	42.9	4.7		3.2		1.5		3.08	
48.3	1-1/2"	47.9	48.8	4.7		3.2		1.5		3.53	
60.3	2"	59.7	60.8	5.1	± 10%	3.6	± 10%	1.5	± 0.1	5.00	± 7.5%
76.1	2-1/2"	75.3	76.6	5.1		3.6		1.5		6.38	
88.9	3"	88.0	89.5	5.8		4.0		1.8		8.43	
114.3"	4"	113.1	115.0	6.3		4.5		1.8		11.99	
165.1	6"	163.9	166.5	7.2		5.0		2.2		19.72	
219.1	8"	218.7	219.6	7.75		5.25		2.5		28.13	

BS EN 10217:2019 for Dia 8"

**SYLER** | PE-LINED STEEL PIPE



**Cold water (White inner - TYPE C)**

**Hot water (Red inner - TYPE H)**

**Class M (Medium)**

**Class M (Medium)**

Size		Product Code	Weight	
mm	Inch		Kg/meter	Kg/6 meters
15	1/2"	10C015-600T	1.23	7.38
20	3/4"	10C020-600T	1.59	9.54
25	1"	10C025-600	2.53	15.18
32	1-1/4"	10C032-600	3.28	19.66
40	1-1/2"	10C040-600	3.77	22.62
50	2"	10C050-600	5.17	31.01
65	2-1/2"	10C065-600	7.02	42.10
80	3"	10C080-600	8.84	53.01
100	4"	10C100-600	11.48	68.89
150	6"	10C150-600G	18.91	113.48
200	8"	10C200-600G	28.13	168.78

Size		Product Code	Weight	
mm	Inch		Kg/meter	Kg/6 meters
15	1/2"	10H015-600T	1.23	7.38
20	3/4"	10H020-600T	1.59	9.54
25	1"	10H025-600	2.53	15.18
32	1-1/4"	10H032-600	3.28	19.66
40	1-1/2"	10H040-600	3.77	22.62
50	2"	10H050-600	5.17	31.01
65	2-1/2"	10H065-600	7.02	42.10
80	3"	10H080-600	8.84	53.01
100	4"	10H100-600	11.48	68.89
150	6"	10H150-600G	18.91	113.48
200	8"	10H200-600G	28.13	168.78

\*8" pipe is not PE Power Coated outside the pipe surface

**Syler Pipe Pressure Test Procedure**

**Water pressure testing procedure for threaded installations**

1. Test water pressure at 1.5 times of the operating pressure for a period of 120 minutes.
  2. Test results must have no leaks and stable pressure.
- Remark:** During the water pressure test, all valves must be opened.

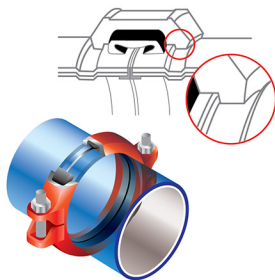
**Water pressure testing procedure for grooved installations**

1. Test the water pressure at 300 PSI for 5 minutes, then release the pressure.
2. Test the water pressure at 50 PSI for 5 minutes, then release the pressure.
3. Continue testing at design pressure levels/requirements of the relevant standard or Standard NFPA.
4. Test results must have no leaks and stable pressure.

# Grooved Coupling

**New innovation!** for installing large main pipes and fire protection pipe

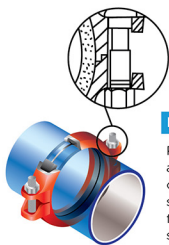
## Advantage of grooved coupling system



- ✓ Rust-free, strong, long service life.
- ✓ The joint has PE coated on the inside surface.
- ✓ Easy and quick installation. Save labor costs.
- ✓ Support variety of building structures.
- ✓ Be able to absorb vibration caused by earthquakes.
- ✓ Be able to accept a maximum pressure of 300-735 PSI (depending on the model of Coupling used)
- ✓ Absorb sound well

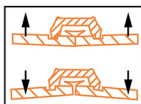


See the clip of  
Grooved Coupling Installation



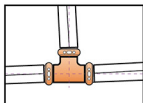
### Fixed Type

Rigid Coupling is designed to have a Tongue & Grooved system that combines a locking tongue and groove system together. This distinctive feature will make the pipe clamping stronger and more resistant to bending torque of weight in various ways



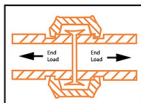
### Flexible Type

Flexible Coupling is exceptionally hard, durable to withstand conditions involving contraction-expansion or the need to bend the pipe from various causes such as temperature changes, vibration from earthquakes and vibration from other causes. Flexible Coupling will help reduce the use of Expansion Joint.



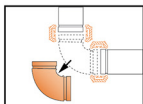
### Easy to line up pipes

With the Grooved Coupling system, line of pipe can be moved and adjusted as appropriate, before stretching, tightening tightly.



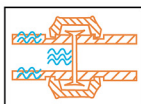
### Tightly fastened both inside and outside

With joints that sit on both sides of the pipe mounting grooves, it's the main cause of effective pressure and pulling force. It is able to withstand impacts from both directions



### Easy to remove and assemble

With the Grooved Coupling system, removing and assembling pipes is easy. Therefore, it is convenient to clean and carry out additional maintenance or change pipe linings.



### Soundproof and absorb vibration

With the Grooved Coupling system, the pipe is rolled grooved using a ring gasket. It is flexible, so it can reduce noise and absorb vibrations very well.

# Grooved fitting with plastic lining (Ductile iron)

WWW.SYLERPIPE.COM



45° Elbow



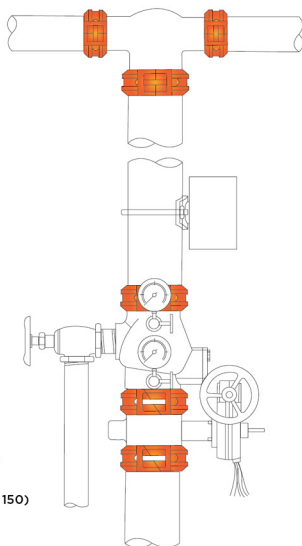
90° Elbow



Reducing Coupling (Concentric)



Reducing Coupling (Eccentric)



Cap



Adaptor Flange (PN16)



Reducing Tee



Tee



Grooved Line Gasket



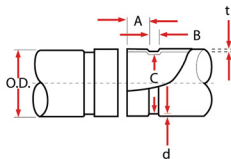
Flexible Coupling



Rigid Coupling



Reducing Flexible Coupling



Grooved Flange (PN 16, ANSI 150)



Cap with Female Thread Outlet

## Standard Roll Groove for BS 1387 (ISO 65) Steel And IPS Pipe

Nominal Size mm	Pipe O.D.			A +0.38/-0.76 mm	B +0.76/-0.38 mm	C +0.00 mm	Min. Wall t mm	Groove Depth d(ref.) mm	Max. Allowed Flare Dia. mm
	Basic mm	Max mm	Min mm						
25	33.7	34.2	33.3	15.88	7.14	30.23-0.38	1.65	1.60	36.3
32	42.4	42.9	42.0	15.88	7.14	38.99-0.38	1.65	1.60	45.0
40	48.3	48.8	47.9	15.88	7.14	45.09-0.38	1.65	1.60	51.1
50	60.3	60.8	59.7	15.88	8.74	57.15-0.38	1.65	1.60	63.0
65	76.1	76.6	75.3	15.88	8.74	72.26-0.46	2.11	1.98	78.7
80	88.9	89.5	88.0	15.88	8.74	84.94-0.46	2.11	1.98	91.4
100	114.3	115.0	113.1	15.88	8.74	110.08-0.51	2.11	2.11	116.8
150	165.1	166.5	163.9	15.88	8.74	160.78-0.56	2.77	2.16	167.6
200	219.1	220.7	218.31	19.05	11.91	214.40-0.64	2.77	2.34	223.5



# Grooved Coupling Installation Method

## 1. Pipe grooving Method



Syler pipe grooving machine

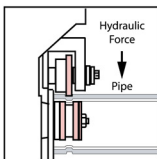
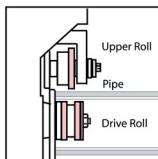
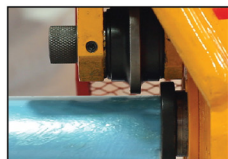
See the clip of pipe grooving



- 1.1 Place the grooving machine and insert the pipe so that the cross-section of the pipe meets with roller.
- 1.2 Adjust the level of the pipe that is put on the pipe stand with a water level gauge.
- 1.3 Pull the hydraulic valve to press against the pipe, then turn on the machine switch to start grooving.
- 1.4 When the grooving is finished, turn off the device, then lift the hydraulic valve. Use roll groove measuring tape to measure the groove according to the size of the grooved pipe. However, the depth of the roll groove is allowed for a variation of up to 3 millimeters. When the desired size is reached, lock the level of hydraulic pump at the grooving machine.

**i** While grooving the pipe, there should be a person holding the pipe to prevent the pipe cross-section from moving away from the roller. If the grooved pipe moves outward, it will cause the roll groove to tilt, unable to install the Coupling joint. You should allow the pipe to rotate 2-3 times before releasing your hands from supporting the pipe. Then start pressing the hydraulic weight lever and let the pipe rotate 2-3 times until the desired depth is achieved.

**Remarks:** SYLER pipe grooving must be done by SYLER's grooving machine only.



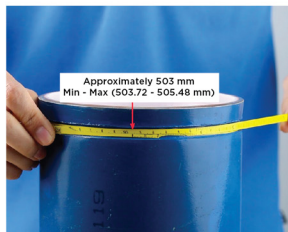
Insert the pipe so that the cross-section of the pipe meets with roller.

**Caution:** During the grooving, the heat will accumulate on the roller. This accumulated heat should be observed because if the roller is too hot, the plastic will be easily broken. Therefore, the grooving should be suspended to let the roller cool down before proceeding further.

\*\*Please see the installation information at [www.grooving-machine.com](http://www.grooving-machine.com).

### Groove Diameter

Nominal Pipe Size		Pipe OD	Standard Groove Dia.		Circumference of Roll Groove
inch	mm	mm	Min.	Max.	mm
1	25	33.7	29.9	30.2	93.77 - 94.97
1 1/4	32	42.4	38.6	39.0	121.29 - 122.49
1 1/2	40	48.3	44.7	45.1	140.46 - 141.65
2	50	60.3	56.8	57.2	178.34 - 179.54
2 1/2	65	76.1	71.8	72.3	225.56 - 227.01
3	80	88.9	84.4	84.9	265.4 - 266.85
4	100	114.3	109.5	110.0	344.22 - 345.82
6	150	165.1	160.2	160.8	503.72 - 505.48
8	200	219.1	213.7	214.4	671.54 - 673.56



Measuring roll groove of the pipe



## 2. Coupling

When the grooving is complete, install the coupling joint according to the following steps.



2.1 Apply Herme Seal 55 on the cross-section of the pipe and up to the gasket seat to prevent the cross-section of the pipe from rusting.



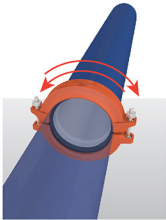
2.2 Put on Grooved line Gasket at the end of the pipe to prevent water from contacting with the cross-section of the pipe. (In case the pipe is installed with Coupling, Grooved line Gasket should be put on both ends.)



2.3 Apply Lubricant all over the rubber edge that contact with Coupling because the cross-section of the pipe may be sharp and cause scratches or flaw on the rubber, and the lifespan will deteriorate. Applying Lubricant will help prolong the lifespan of the rubber.



2.4 Put the lubricated rubber on the pipe first, then put it on the joint.

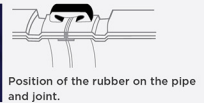


2.5 Bring the coupling joints together and tighten the nuts alternately, left-right, left-right until it is tight.

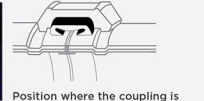


2.6 The installed pipe is complete.

**i** While tightening the nuts, be careful not to let the rubber coupling become out of shape.



Position of the rubber on the pipe and joint.



Position where the coupling is joined

### Grooved Coupling Assembly Method



1. Tighten the nuts alternately, left-right, left-right, left-right.

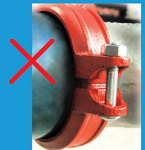


2. Tighten until it is tight

### **i** Caution



Each nut and gasket are different. Do not remove and pile them all together because it will cause confusion in installation.



If you put it on reverse, the teeth of coupling will collide.

*Coupling is designed with teeth on each side that fit into the groove just right, so the nut can be tightened until it reaches the end of the thread. Do not put it on reversely because the teeth will collide, and you won't be able to tighten the nut all the way and cause leak.*

# Grooved Flange (PN16, ANSI 150)

## For installing large main pipe and fire protection pipe

- ✓ Economical, easy to install, convenient and fast.
- ✓ Can be installed right away without having to use coupling again.
- ✓ Be able to withstand pressure up to 300 PSI.
- ✓ Come with a rubber gasket that is tightly attached to the pipe and joint. Prevent leaks.



## Procedure to put on the Grooved Flange

When the grooving is finished, put on the Grooved Flange according to the following steps:



1. Apply Herme Seal 55 on the cross-section of the pipe and up to the gasket seat to prevent the cross-section of the pipe from rusting.



2. Put on Grooved line Gasket at the end of the pipe to prevent water from contacting with the cross-section of the pipe.



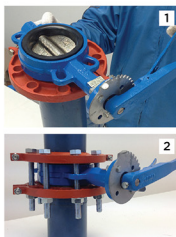
3. Apply Lubricant all over the rubber edge that contact with Coupling because the cross-section of the pipe may be sharp and cause scratches or flaw on the rubber, and the lifespan will deteriorate. Applying Lubricant will help prolong the lifespan of the rubber.



4. Put the lubricated rubber on the pipe first.

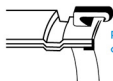


5. Bring the Grooved Flange together and tighten the nuts.

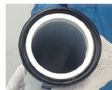


6. Can be installed with other plates as desired.

### **i** Caution



Position of the rubber gasket on the end of the pipe.



Rubber gasket specially designed with one side as gasket for coupling and the other side as an O-ring for the flange.

1. Turn the rubber gasket with the groove on top and put on the end of the pipe correctly.



2. Bring the grooved flange with the back attach to the end of the pipe.



3. Putting on the Grooved Flange correctly.

\* See more details at [www.sylterpipe.com](http://www.sylterpipe.com)

Compare the use of Grooved Flange and Adaptor Flange



Select the Grooved Flange that help you to save more.

Watch the clip of Grooved Flange installation



# Threaded Joint and Installation Methods SYLER Threaded Type

WWW.SYLERPIPE.COM



Union



Nipple



Socket



Cap



Plug



Flange



Elbow 45



Elbow 90



Reducing Elbow



Reducing Socket



Tee



Reducing Tee

## Procedure to install pipe and PP-Lined Fittings

### 1. Cutting

The "Syler" pipe should be cut to be 90 degree angle with tools that do not generate heat that make the inside of PE pipe heated until it melts or burns.

#### Recommended Cutting Tools

- Handsaw
- Power Hacksaw
- Roller Cutter
- Band Saw
- Circular Saw



Power Hacksaw



Roller Cutter



Band Saw



Pipe Cutting Machine\*

\*Remark: Syler can be cut up to the steel layer. For the plastic layer, use a Cutter.

### Caution

1. Do not cut the pipe with grinder and fiber cutter.
2. The pipe must be cut to be perpendicular to make the thread and groove meet the standard.
3. Do not cut "Syler" pipe with tools that cause high temperature, such as:
  - High speed fiber cutting saw
  - Gas cutting machine because it will cause the PE layer to burn and shrink, causing rust at the end of the pipe.
4. If cutting pipes with a Roller Cutter, use a blade that is new and sharp enough. Cutting pipes with a cutter that is not sharp will cause the end of the steel pipe to bend in. When combined with the joint, it may cause damage to the plastic inside the joint to the point of obstructing the flow of water, as shown in the picture.



Do not use a fiber saw to cut the Syler pipe.



The end of the pipe damaged due to the heat



Sample picture of a damaged joint



Roller Cutter Example picture of the inside of the pipe damaged from cutting the pipe with a Roller Cutter.

# Threaded Joint and Installation Methods for SYLER Threaded Type

## 2. Scraping or trimming the pipe end

Threading machine or cutter should be used to remove the unsmooth part. If the pipe end is not trimmed, it may cause damage to the plastic inside the joint and cause it to obstruct the flow of water as well.



Scraping or trimming the pipe end



Trimming the pipe end with tapping machine



Unsharping the edges of steel pipe surfaces

### **i** Caution

1. If scraping or trimming the pipe end with pipe deburrer installed in the threading machine, the pipe end must not be deburred more than 2 of 3 of the thickness of PE layer.
2. The steel pipe should be deburred at the pipe end where it is cut by using steel filings to prevent damage to the rubber (Gasket EPDM) of the Coupling because it will cause leakage from damage to the rubber and make the ability to endure the water pressure decrease.

Ratio for scraping and trimming pipe end



If the pipe end is not trimmed before screwing it in, it may cause damage to the inside of the joint.

## 3. Threading

Threading should be done to achieve thread length according to Standard BS21 and BSPT or according to the table below to prevent leaks and rusting of pipes and joints effectively.

### Figures showing standard number of thread

Pipe Size		Approximate Length of the Thread		Number of thread
mm	inch	mm		
25	1"	22.1		9.5
32	1-1/4"	24.1		10.5
40	1-1/2"	24.1		10.5
50	2"	27.5		12
65	2-1/2"	30.0		13
80	3"	34.9		14

\* 4" Pipe onwards should be installed with Grooved Coupling system



Watch clip of thread tapping

Threading machine

If there is a problem using the threading machine, please contact the manufacturer or distributor.

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ASADA Tel. +66 2042 9958-9

### **i** Caution

During the threading process, the threading oil or coolant should be turned up to maximum to prevent heat buildup that occurs during threading which may damage the PE layer and the use of tapping oil or coolant from the threading machine manufacturer is recommended.



## 4. Procedure for assembling and tightening pipes

After threading, the scrap steel, threading oil or coolant that is left in the pipe should be completely removed to prevent rust from scraps residue in the pipe and prevent odor caused by threading machine oil or coolant remaining inside the pipe, then clean the pipe threads and joints by wiping off all oil and dirt around the threads before applying Herme Seal 55 to the pipe threads and joints to prevent leaks and rust in the area where the threads are made more effective.

(Please see details on using Herme Seal 55 on page 15)

### Procedure to install the gate valve to the Syler pipe

The nipple connector must be used to be screwed into the gate valve only according to the following steps:



1. Apply Herme Seal 55 all over the threads and cross-section of the joint



2. Wrap the threads with tape or cotton string at the area where the threads of the joints are made on all threads.



3. Repeat step 1 and 2 with the threads on the other side of the joint



Herme Seal 55



4. Apply Herme Seal 55 all over the threaded tape of the nipple joint on the side where you want to install.



5. Screw the nipple onto the water gate valve or gate valve without waiting for Herme Seal 55 to dry.



6. Apply Herme Seal 55 all over the threaded area on the other side of the nipple joint



7. Screw the straight coupling onto the nipple coupling without waiting for Herme Seal 55 to dry



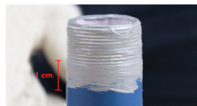
8. Apply Herme Seal 55 to the threads and cross-section of the pipe thoroughly.



9. Use thread tape or cotton string to wrap the threaded area of the pipe.



10. Apply Herme Seal 55 all over the thread wrapping tape on every thread of the pipe.



11. Approximately 1 cm. Apply to the surface of the pipe approximately 1 cm. below the thread



12. Screw the Syler pipe onto the straight connector.



13. Tighten the socket wrench again.

### Caution



For the marks caused by the wrench, paint over them to prevent rust from the pipe surface. The scratch on exterior paint of the Syler pipe does not affect its use in any way.  
(Paint specifications for the exterior surface can be requested from the manufacturer.)



Watch the clip of water gate valve or gate valve onto Syler pipe

# Procedure to Install Pipe and PP-Lined Fittings

## 4. Assembling and tightening pipes

Number of thread which will be screwed in by hand and pliers are as shown in the following table.

Pipe Size		Number of Thread Screwed	Tightening Torque	Plier
mm	inch	Time	kgf-m	kgf
25	1"	5.0 - 6.0	10	450 x 29
32	1-1/4"	6.0 - 7.0	12	450 x 35
40	1-1/2"	6.5 - 7.5	15	600 x 32
50	2"	7.5 - 8.5	20	600 x 42
65	2-1/2"	8.0 - 10.0	25	900 x 35
80	3"	9.0 - 11.0	30	900 x 43
100	4"	10.0 - 12.0	40	950 x 53
150	6"	11.0 - 13.5	60	1,150 x 63

## 5. Steps after installation is complete

After the connection is complete, repair defective parts on the pipe and joints, especially in the threaded area with rust-proof paint or anti-rust coating for the longest lifespan.

**i** Using paint shade RAL 5001 or oil paint TOA GLIPTON shade 7357. For more information, call +66 2335 5777, press 1, Color Information Department.

## 6. Cleaning Water Pipe System after Installation

After the installation is complete, water should be flowed to clean the inside of the pipe and clean out any dirt that may be caused by the installation completely, then disinfect the pipes that may be contaminated from the installation with a mixture of chlorine (Either liquid chlorine or a mixture of sodium hypochlorite can be used with the proportion not less than 50 ppm.) Leave it in the pipe for not less than 24 hours, then release clean water to wash it away until the residual chlorine in the system is up to 0.2 ppm.

## CHEMICAL RESISTANCE OF PE

Reagent	Resistance	Reagent		Reagent	Resistance
		Household	Industrial Chemicals		
Acids					
Acetic 1-10%	E	Soap	E	Cyclohexane	G
Acetic 10-60%	E	Sunlight Lotion	E	Diethylphthalate	E
Acetic 80-100%	E	Wax (liquid & paste)	E	Ethylene Glycol	E
Chromic 20%	E	Oil	E	Ethyl Acetate	F
Dichromate sulfuric	G	Camphor	F	Ethyl Alcohol	F
Hydrochloric 10%	E	Castor	G	Ethyl Ether	F
Hydrochloric 35 %	E	Cottonseed	G	Ethylene Chloride	E
Hydrochloric 75 %	E	Lined	G	Formaldehyde 40%	E
Hydrochloric conc	E	Mineral	G	Furfural 100%	E
Lactic 10-90%	E	Motor/SAS 10	G	Gasoline	G
Nitric 0-30%	G	Orange	G	Mercury	G
Nitric 30-80%	G	Peppermint	G	Methyl Alcohol	E
Nitric 95-98%	F	Transformer	G	Phenol 95%	E
Phosphoric 30-90%	E	Vegetable	G	Potassium Dichromate	E
Stearic 100 %	E	Pine	G	Propyl Alcohol	E
Stearic 70 %	E	Industrial Chemicals		Silver Nitrate Soln.	E
Stearic 80%	G			Sodium Bicarbonate Saturated	E
				Toluene	F
Base				Trichloroethylene	E
Ammonium hydroxide 30%	E	Acetone	G	Formic Acid 100%	E
Barium hydroxide 30%	E	Alumina (Al type) Conc.	E	Magnesium Chloride Saturated	E
Calcium hydroxide 30%	E	Ammonium nitrate Saturated	E	Mercurous Nitrate Saturated	F
Calcium hydroxide 30%	E	Amyl Acetate	E	Nitrobenzene 100%	F
Potassium hydroxide 30%	E	Amyl Alcohol 100%	E	Potassium Chloride Saturated	E
Sodium hydroxide 30%	E	Amyl Chloride 100%	G	Potassium Cyanide Saturated	E
		Benzaldehyde	E	Potassium Fluoride	E
Food & Food products		Benzene	G	Potassium Permanganate	E
		Buffy Alcohol	E	Tetrahydrofuran	F
Beer juice	E	Calcium chloride Sat'd Soln.	E	Urea	E
Beer	E	Carbon tetrachloride	P		
Carrot juice	E	Chlorobenzene	P		
Ketchup	E	Chloroform	P		

E = Excellent G = Good F = Fair P = Poor

\* If you want information on resistance to other chemicals not shown in the table above, please contact the company.





500 g

## Protect pipe threads and joints for an additional layer with rust-proof and pipe glue

Normally, the Syler pipe has the outer surface of galvanized steel coated with zinc. In tapping procedure it is necessary to scrape off the pipe surface and keep only the iron.

Therefore, there is a problem of rust in the thread area, which can be fixed by using Herme Seal 55 rust-proof glue to protect the pipe threads and joints completely.

### Properties of Herme Seal 55

- Highly effective in preventing rust with JWWA K142 (Japan Waterworks association) production standard from Japan.
- Prevents corrosion and leakage of steel pipes and lining pipes.
- Can be used with hot water pipe lining and water distribution pipes
- Contains no chemicals that are harmful to the body.

#### Properties

Color	: gray
Type of film	: drying and hardening
Viscosity	: 4,500 CPS.at 25 °C
Specific Gravity	: 1.2
Heated Residue	: 62 ±3%
Diluent	: specified solvent
QTY.500 g. / CAN	

Apply all over the threaded area and in the cross-section of the pipe.



Apply to the joint threads



### Table showing the average amount of glue to apply

In the case of applying too little glue, the glue will not cover the entire surface, which affects the efficiency of preventing water leakage and rust prevention. In addition, in the case of applying too much glue, it will cause greasy substances to crystallize in the pipe and become contamination that flows out with water.

Pipe Size	Amount of application
1"	3.49 g
1-1/4"	4.3 g
1-1/2"	5.1 g
2"	10.8 g
2-1/2"	12.0 g
3"	17.0 g
4"	20.5 g

### Instruction

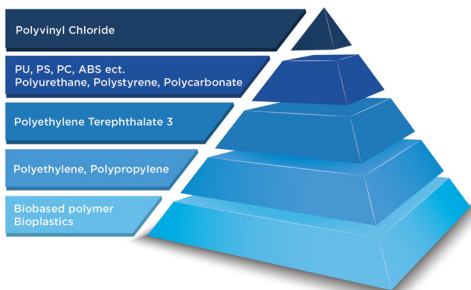
1. Clean and wash oil stains along the pipe threads and pipe surface.
2. Use a cloth to wipe it dry to make Herme Seal glue sticks to the surface and pipe threads well.
3. Apply glue all over the threaded area.
4. Screw it onto the joint to increase tightness.
5. Leave it for at least 8 -12 hours to give the time to adhere for efficiency in preventing leaks and rust.
6. Test water release.

### **i** Caution

Focus on applying glue to the "cross-section" area of the pipe because it is the point of direct contact with water.



# SYLER Pipe, Cleanliness You Can Trust



## Pyramid of plastic

The pyramid above shows the danger level of each type of plastic. The top is PVC, a plastic that has the least cleanliness and it can be seen that the bioplastic (Biobased Polymer) which is at the base of the pyramid is the cleanest plastic, but this type of plastic, such as natural rubber, cannot be used immediately. And when going through a chemical process, when it is used, natural rubber will lose its purity like before. Therefore, PE can be considered the cleanest and safest plastic. There are many other types of plastic, but this pyramid shows properties

of the main plastics currently used only. These properties are subject to change depending on many factors such as the production process, raw materials, or even the use of additives that have different special characteristics.

## Be confident in the quality

Under production standards that have been certified by ISO 9001 : 2008, making every pipe have the same standard quality. Moreover, Syler pipe has also passed the standard product test BS 1387/85 CLASS M (BSM), ensuring that every pipe has standard steel thickness and has been galvanized thicker than normal. As for cleanliness, Syler pipe has passed the test under Standard BS 6920 PART II, which is one of the standard water pipes with one of the strictest standards in the world by a leading laboratory, NUTEK System Co., Ltd, which test results show that:

Table shown the quantity of heavy metal in water passing through the Syler pipe

Metal Type	Heavy metal quantity (mg)	
	Standard BS 6920	SYLER pipe
Aluminum (Al)	≤ 200	< 10
Antimony (Sb)	≤ 10	< 0.05
Arsenic (As)	≤ 50	< 0.1
Barium (Ba)	≤ 1000	< 10
Cadmium (Cd)	≤ 5	< 0.1
Chromium (Cr)	≤ 50	< 1
Iron (Fe)	≤ 200	< 1
Lead (Pb)	≤ 50	< 0.5
Manganese (Mn)	≤ 50	< 0.5
Mercury (Hg)	≤ 1	< 0.01
Nickel (Ni)	< 50	< 1
Selenium (Se)	≤ 10	< 0.5
Silver (Ag)	≤ 10	< 0.5

**i** \*\* Syler pipe passes Standard that does not make the taste, color and transparency of the water changes (from testing of water that was stuck inside the pipe for 2 months.)

\* Amount of heavy metals contaminated with water (from testing of water that was stuck inside the pipe for 2 months.) lower than Standard from 20 - 500 times.

\* The amount of growth of microorganisms that can grow in water (from testing water that was stuck inside the pipe for 2 months) is 13 times lower than standard and no contaminants or toxins that are harmful to the human including various carcinogens is found in the water that was examined.

Table shown the amount of growth of microorganisms that can grow in water

	Standard BS 6920	SYLER Pipe
MDOO(mg/l)	≤ 2.4	0.18

## Testing Standard

\* Syler pipe has been inspected by the Department of Science Services under Standard BS 6920 Part II.

\* Syler pipe has been inspected by the Faculty of Engineering, Chulalongkorn University, Department of Mechanical Engineering under Standard BS 1387/85 Class Medium.

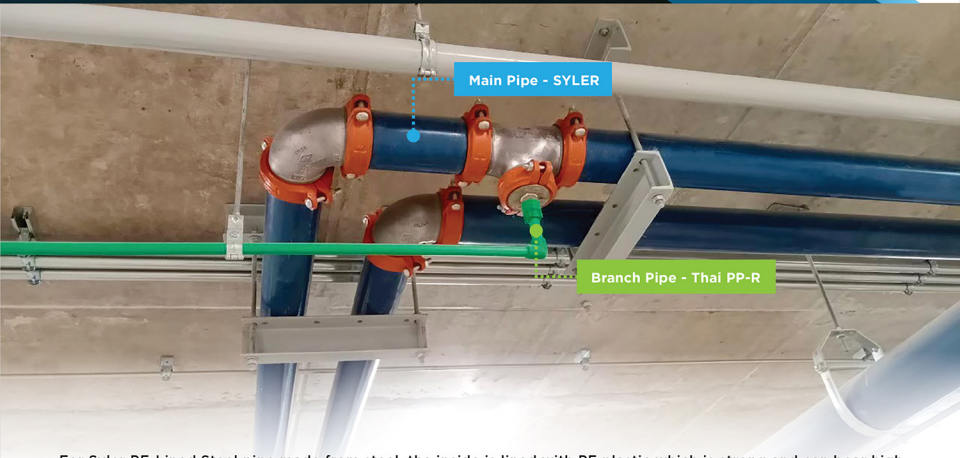
\* Syler pipe has been inspected by Nutek System Co., Ltd. under both Standard BS 6920 Part II and BS 1387/85 Class Medium. Nutek System is a laboratory approved by the Hong Kong Government for water delivery equipment testing to be used by the government in Hong Kong.





# Complete Water Pipe System

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For Syler PE-Lined Steel pipe made from steel, the inside is lined with PE plastic which is strong and can bear high pressure suitable for use as a main pipe. Installation with the grooved coupling system makes installing main pipes easy. As for branch pipes, you should choose PP-R 80 pipes that use socket fusion, making the pipes and joints become one. Therefore, we are confident that there will be no more leakage problems. Thai PP-R pipes are made from European quality plastic pellets with Germany export standard certified from DVGW and NSF 372 and it is more economical than general steel pipes.

Choosing to use Syler pipe as the main pipe and Thai PP-R pipe as the branch pipe has the advantage that the installation does not cause any sparks in the building. Therefore there is no fire risk. It is also easy to install, has long service life. There is no worries about leakage problems. So you can be confident in the cleanliness of the water flowing through. There will be no contact with metal or rust at a reasonable cost.

\* PE and PP are well known as the cleanest polymers. The Syler does not have any additives that are toxic during the production process, thus pipes and fittings are clean and free of carcinogens.

## Syler PE-Lined Steel pipe and fire extinguishing pipe system/ Pressure Relief Valve



Figure of PRV installation with SYLER pipe

# Some of Our Project References



Phatra Maharachansorn Medical Centre **G**



Queen Sirikit National Convention Center (QSNCC) **G**



Eastern MRT Orange Line **G**



Banyan Tree Residences  
Riverside Bangkok **G**



Four Season  
Private Residence **G**



Terminal 21 Rama 3 **G**



Grande Centre Point Space  
Pattaya **G**



AIA East Gateway **G**



UOB Plaza Bangkok **G**



Terminal 21 Pattaya **G**



Hino Motors Manufacturing **G**



One City Centre **G**

**G** = The projects were installed by grooved coupling system.



## Bangkok

- Petai Enterprise Rattanathibet Co.,Ltd. **O 2527 6111**
- S. Piphai Pipe and Fitting Chokchai 4 **O 2931 4176**
- Mitapai Ladprao 23 **O 2938 1786-90**
- Sahapiphat Co.,Ltd. Ladprao 101 **O 2736 9820-22**
- Leelawong Co.,Ltd. Sukhaphiban 2 **O 2726-4701**
- K.Paisarnramintra Co.,Ltd. Ramintra  
**O 2517 3948, O 2918 8712**
- Siam Viwat Co.,Ltd. Rama 2 **O 2417 9640-3**
- Damrongchai Kehaphan Co.,Ltd. Rama 2 **O 28770711-2**
- Worakij Commercial 84 Co.,Ltd. Rama 3 **O 2683 0580**
- MHT Co.,Ltd. Rama 4 **O 2655 8326-9**
- S.Thaiseeree Co.,Ltd. Rama 6 **O 2279 3399**
- P.Udomchai Ltd., Part. / Pokawin Charansanitwong/  
Phutthamonthon Sai 2 **O 2866 5653-5 ,O 2865 4534**
- Roong Siam Steel Co.,Ltd Pom Prap **O 2282 8316**
- Suanmali Trading Ltd., Part. Pom Prap  
**O 2223 6811, O 2221 3046**
- STK Plumbing Chan Road **O 2212 1151**
- Kiatsinsap Co.,Ltd. Romklao Soi 7 **O 2919 5319-11**
- Siam Pathum Group Co.,Ltd. Bang Khu Wat **O 2976 1317-9**
- Sripoonsupenterprise Co.,Ltd. Rangsit **O 2901 8899**
- T.S.B. Water Pipe Co.,Ltd. Suksawat **O 2817 3718**
- Cho. Panich (Thai) Co.,Ltd. Nakhon In **O 2115 9000**
- Jaroen Sahakit Pracharat **O 2258 0186**
- Chote Choo Chat (1993) Co.,Ltd.  
Pinklao - Nakhon Chai Si **O 2885 0100-6**
- Sahanoparatana Co.,Ltd. Sukhumvit 51 **O 2662 6603-7**
- 2 2 Import Export Ltd.,Part. Sukhumvit 101/1  
**O 27476671-5**
- Kij Siam Prise (1995) Co.,Ltd. Sukhumvit 103  
**O 2748 9812**
- Cho. Panich Lanluang Co.,Ltd. Srinakarin **O 2747 1379-82**
- Pipework 2544 Co.,Ltd. King Kaew **O 2738 5020-1**
- IMAX Engineering Lat Krabang **O 2075 0910-4**
- H.T. (Bangkok) Trading Ltd., Part.  
Chaloem Khet Yukon **O 2225 4370-3**
- J Omega Pipe And Fitting Ltd.,Part. Nonthaburi  
**O 2422 6565, O8 1801 1180**
- Siam Pipeling System Co.,Ltd. Wat Phan Thai Norasing  
**O3 4 458 140-1**

## Provincial Area

### Northern

Contact : **Khun Kay (Tel. 08 9699 2636)** and  
**Khun Born (Tel. 06 5419 9942)**

Chiang Rai/ Mae Hong Son/ Chiang Mai/ Lamphun/  
Lampang/ Phayao/ Phrae/ Nan/ Kamphaeng Phet/  
Tak/ Uttaradit/ Phitsanulok.

### North Central Area

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**Khun Born (Tel. 06 5419 9942)**

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### Western

Contact : **Khun Tuk (Tel. 08 1906 7006)**  
Lopburi/ Suphan Buri/ Kanchanaburi/ Ratchaburi.

### Central / Eastern

Contact : **Khun Tuk (Tel. 08 1906 7006)** and  
**Khun Pim (Tel. 08 1145 8685)**

(Distributor at Chonburi)

Saraburi/ Nakhon Nayok/ Prachinburi/ Chachoengsao/  
Sa Kaeo/ Chonburi/ Rayong/ Chanthaburi/ Trat.

### Northeast

Contact : **Khun New (Tel. 09 3546 6363)**

Loei/ Nong Khai/ Bueng Kan/ Nong Bua Lamphu/  
Udon Thani/ Sakon Nakhon/ Khon Kaen/ Kalasin/  
Mukdahan/ Chaiyaphum/ Maha Sarakham/ Roi Et/  
Yasothon/ Amnat Charoen/ Nakhon Ratchasima/  
Buriram/ Surin/ Sisaket/ Ubon Ratchathani.

### Southern

Contact : **Khun Ao (Tel. 09 1049 7976)**

Samut Songkhram/ Phetchaburi/ Chumphon/  
Prachuap Khiri Khan/ Ranong/ Surat Thani/  
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