

AZEETA[®]

**AZEETA PIPE SYSTEM
SDN BHD**
(199701039760)

PP-R Hot & Cold Water plumbing system



COMPLIANCE STANDARDS :
ISO 15874 , MS 2286 , DIN 8077/8078

Listed By

SPAN





PP-R Hot & Cold Water Plumbing System

INTRODUCTION

Azeeta Pipe System Sdn Bhd (455260-W) was incorporated in Malaysia in December 1997. Since then, it continues to fulfill its objective by manufacturing and supplying Thermoplastic Piping System such as ABS For Domestic Plumbing, Water and Sewerage Reticulation.

In line with our product development, the company decides to take its production to the next level by introducing **AZEETA® PP-R Hot & Cold Water Piping System**

AZEETA® PP-R Hot & Cold Water System aims to provide an alternative solution to today's plumbing and industries needs.

THE MATERIAL

Polypropylene Random Copolymer (PP-R) is a proven material to be used in domestic pressure piping systems for hot and cold water. This is due to its ability to withstand high internal pressure which can prolong its service life even at elevated temperature.

FEATURES

- Class 2 for hot water supply @ 70°C
- Designed to Last 50 years
- Non - Toxic - Tested to BS6920 / MS1583
- Noise Reduction
- No Corrosion
- No Scaling
- Minimal Maintenance
- Low Pressure Losses
- Low Thermal Conductivity
- Easy, Fast and Reliable Installation
- Save Space
- Long Service Life at Elevated Temperature up to 70°C.

APPLICATION

- Hot & Cold Water System
- Domestic Water Filtering System
- Chilled and Condense water Circulation

MANUFACTURING STANDARD

AZEETA® PP-R pipes and fittings comply with **ISO 15874, MS2286 and DIN 8077/8078**

DIMENSION OF PP-R PIPE - Hot & Cold Water Supply

Nominal Size DN/OD	Mean Outside Diameter $d_{em, max}$ (mm)	Internal Diameter (mm)	PN (Bar) @ 20°C	P_d (Bar) Class 2 70°C	Pipe Series	e_{min} Wall Thicknesses (mm)
20	20.3	16.5	14	4	S5.0	1.9
	20.3	14.7	22	6	S3.2	2.8
	20.3	13.5	28	8	S2.5	3.4
25	25.3	20.7	14	4	S5.0	2.3
	25.3	18.3	22	6	S3.2	3.5
	25.3	16.9	28	8	S2.5	4.2
32	32.3	26.5	14	4	S5.0	2.9
	32.3	23.5	22	6	S3.2	4.4
	32.3	21.5	28	8	S2.5	5.4
40	40.4	33.0	14	4	S5.0	3.7
	40.4	29.4	22	6	S3.2	5.5
	40.4	27.0	28	8	S2.5	6.7
50	50.5	41.3	14	4	S5.0	4.6
	50.5	36.7	22	6	S3.2	6.9
	50.5	33.9	28	8	S2.5	8.3
63	63.6	52.0	14	4	S5.0	5.8
	63.6	46.4	22	6	S3.2	8.6
	63.6	42.6	28	8	S2.5	10.5
75	75.7	62.1	14	4	S5.0	6.8
	75.7	55.1	22	6	S3.2	10.3
	75.7	50.7	28	8	S2.5	12.5
90	90.9	74.5	14	4	S5.0	8.2
	90.9	66.3	22	6	S3.2	12.3
	90.9	60.9	28	8	S2.5	15.0
110	111.0	91.0	14	4	S5.0	10.0
	111.0	80.8	22	6	S3.2	15.1
	111.0	74.4	28	8	S2.5	18.3
160	161.5	132.3	14	4	S5.0	14.6
	161.5	117.7	22	6	S3.2	21.9
	161.5	108.3	28	8	S2.5	26.6

* All dimension quoted are in "mm" and in accordance to ISO 15874, MS2286 and DIN 8077/8078 and subject to *manufacturing tolerances*. Standard pipe length is 4m. Longer length available upon request.

* PN @ 20°C refer to MS 2286-2:2012 ANNEX C.

PPR Fitting

Socket (Soc x Soc)		Equal Tee (Soc x Soc x Soc)		Elbow 90° (Soc x Soc)		Elbow 45° (Soc x Soc)	
							
d(mm)	Product Code	d(mm)	Product Code	d(mm)	Product Code	d(mm)	Product Code
20	12-ESP-020	20	12-ETP-020	20	12-EEP-020	20	12-E45-020
25	12-ESP-025	25	12-ETP-025	25	12-EEP-025	25	12-E45-025
32	12-ESP-032	32	12-ETP-032	32	12-EEP-032	32	12-E45-032
40	12-ESP-040	40	12-ETP-040	40	12-EEP-040	40	12-E45-040
50	12-ESP-050	50	12-ETP-050	50	12-EEP-050	50	12-E45-050
63	12-ESP-063	63	12-ETP-063	63	12-EEP-063	63	12-E45-063
75	12-ESP-075	75	12-ETP-075	75	12-EEP-075	75	12-E45-075
90	12-ESP-090	90	12-ETP-090	90	12-EEP-090	90	12-E45-090
110	12-ESP-110	110	12-ETP-110	110	12-EEP-110	110	12-E45-110
160	12-ESP-160	160	12-ETP-160	160	12-EEP-160	160	12-E45-160

Female Threaded Elbow (Soc x Fipt with Metal Insert)		Male Threaded Elbow (Soc x Mipt with Metal Insert)		Female Threaded Adaptor (FTA) (Soc x Fipt with Metal Insert)		Male Threaded Adaptor (MTA) (Soc x Mipt with Metal Insert)	
							
d(mm)(inch)	Product Code	d(mm)(inch)	Product Code	d(mm)(inch)	Product Code	d(mm)(inch)	Product Code
20-1/2"	12-FTE-20 x 1/2"	20-1/2"	12-MTE-20 x 1/2"	20-1/2"	12-FTA-20 x 1/2"	20-1/2"	12-MTA-20 x 1/2"
20-3/4"	12-FTE-20 x 3/4"	20-3/4"	12-MTE-20 x 3/4"	20-3/4"	12-FTA-20 x 3/4"	20-3/4"	12-MTA-20 x 3/4"
25-1/2"	12-FTE-25 x 1/2"	25-1/2"	12-MTE-25 x 1/2"	25-1/2"	12-FTA-25 x 1/2"	25-1/2"	12-MTA-25 x 1/2"
25-3/4"	12-FTE-25 x 3/4"	25-3/4"	12-MTE-25 x 3/4"	25-3/4"	12-FTA-25 x 3/4"	25-3/4"	12-MTA-25 x 3/4"
32-3/4"	12-FTE-32 x 3/4"	32-3/4"	12-MTE-32 x 3/4"	32-3/4"	12-FTA-32 x 3/4"	32-1"	12-MTA-32 x 1"
32-1"	12-FTE-32 x 1"	32-1"	12-MTE-32 x 1"	32-1"	12-FTA-32 x 1"	32-3/4"	12-MTA-32 x 3/4"
				40-11/4"	12-FTA-40 x 11/4"	40-11/4"	12-MTA-040 x 11/4"
				50-11/2"	12-FTA-50 x 11/2"	50-11/2"	12-MTA-050 x 11/2"
				63-2"	12-FTA-63 x 2"	63-2"	12-MTA-063 x 2"

Female Threaded Tee (Soc x Fipt with Metal Insert)		Male Threaded Tee (Soc x Mipt with Metal Insert)		Male Threaded Union (Soc x Mipt with Metal Insert)		Union Socket (Soc x Soc)	
							
d(mm)(inch)	Product Code	d(mm)(inch)	Product Code	d(mm)(inch)	Product Code	d(mm)	Product Code
20 x 1/2"	12-FTT-20 x 1/2"	20 x 1/2"	12-MTT-20 x 1/2"	d20-1/2"	12-MTU-20 x 1/2"	20	12-UNS-020
25 x 1/2"	12-FTT-25 x 1/2"	25 x 1/2"	12-MTT-25 x 1/2"	d25-3/4"	12-MTU-25 x 3/4"	25	12-UNS-025
25 x 3/4"	12-FTT-25 x 3/4"	25 x 3/4"	12-MTT-25 x 3/4"	d32-1"	12-MTU-32 x 1"	32	12-UNS-032
32 x 3/4"	12-FTT-32 x 3/4"	32 x 3/4"	12-MTT-32 x 3/4"	d40-11/4"	12-MTU-40 x 1 1/4"		
32 x 1"	12-FTT-32 x 1"	32 x 1"	12-MTT-32 x 1"	d50-11/2"	12-MTU-50 x 1 1/2"		
				d63-2"	12-MTU-63 x 2"		

Reducing Tee (Soc x Soc x Soc)



d(mm)	Product Code
25×20	12-RTP-025020
32×20	12-RTP-032020
32×25	12-RTP-032025
40×20	12-RTP-040020
40×25	12-RTP-040025
40×32	12-RTP-040032
50×20	12-RTP-050020
50×25	12-RTP-050025
50×32	12-RTP-050032
50×40	12-RTP-050040
63×25	12-RTP-063025
63×32	12-RTP-063032
63×40	12-RTP-063040
63×50	12-RTP-063050
75×25	12-RTP-075025
75×32	12-RTP-075032
75×40	12-RTP-075040
75×50	12-RTP-075050
75×63	12-RTP-075063
90×32	12-RTP090032
90×40	12-RTP-090040
90×50	12-RTP-090050
90×63	12-RTP-090063
90×75	12-RTP-090075
110×50	12-RTP-110050
110×63	12-RTP-110063
110×75	12-RTP-110075
110×90	12-RTP-110090

Reducing Socket (Soc x Soc)



d(mm)	Product Code
25×20	12-RSP-025020
32×20	12-RSP-032020
32×25	12-RSP-032025
40×20	12-RSP-040020
40×25	12-RSP-040025
40×32	12-RSP-040032
50×20	12-RSP-050020
50×25	12-RSP-050025
50×32	12-RSP-050032
50×40	12-RSP-050040
63×20	12-RSP-063020
63×25	12-RSP-063025
63×32	12-RSP-063032
63×40	12-RSP-063040
63×50	12-RSP-063050
75×32	12-RSP-075032
75×40	12-RSP-075040
75×50	12-RSP-075050
75×63	12-RSP-075063
90×50	12-RSP-090050
90×63	12-RSP-090063
90×75	12-RSP-090075
110×50	12-RSP-110050
110×63	12-RSP-110063
110×75	12-RSP-110075
110×90	12-RSP-110090
160×110	12-RSP-160110

Reducing Bush (Soc x Spig)



d(mm)	Product Code
25×20	12-RBP-025020
32×20	12-RBP-032020
32×25	12-RBP-032025
40×20	12-RBP-040020
40×25	12-RBP-040025
40×32	12-RBP-040032
50×20	12-RBP-050020
50×25	12-RBP-050025
50×32	12-RBP-050032
50×40	12-RBP-050040
63×20	12-RBP-063020
63×25	12-RBP-063025
63×32	12-RBP-063032
63×40	12-RBP-063040
63×50	12-RBP-063050

Welding Repair Socket Tool



d(mm)	Product Code
D7mm	12-WPS-007
D11mm	12-WPS-011

End Cap (Soc)



d(mm)	Product Code
20	12-ECP-020
25	12-ECP-025
32	12-ECP-032
40	12-ECP-040
50	12-ECP-050
63	12-ECP-63
75	12-ECP-075
90	12-ECP-090
110	12-ECP-110
160	12-ECP-160

Stub End Flange (Soc x Flange)



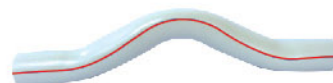
d(mm)	Product Code
40	12-SEF-040
50	12-SEF-050
63	12-SEF-063
75	12-SEF-075
90	12-SEF-090
110	12-SEF-110

Weld In Saddle



d(mm)	Product Code
d63-32	12-WIS-063032
d75-32	12-WIS-075032
d90-32	12-WIS-090032

Bending Pipe (For Hot Water) (Spig x Spig)



d(mm)	Product Code
20	12-BPH-020
25	12-BPH-025
32	12-BPH-032

Bending Pipe (For Cold Water) (Spig x Spig)



d(mm)	Product Code
20	12-BPC-020
25	12-BPC-025
32	12-BPC-032

PPR Full Face Flange (Drilled to PN16 PCD)



d(mm)	Product Code
110	12-FFD-110
160	12-FFD-160

Electrofusion Socket



d(mm)	Product Code
110	12-EFS-110
160	12-EFS-160

Pipe Clamp



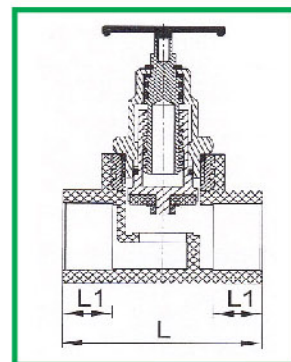
d(mm)	Product Code
20	12-PC1-020
25	12-PC1-025
32	12-PC1-032



STOP VALVE

(Soc x Soc)

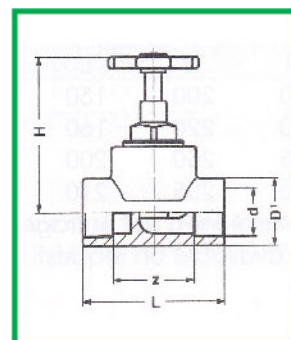
SIZES (mm)	L1 (mm)	L (mm)	Product Code
OD20	16	64	12-STV-020
OD25	18	74	12-STV-025
OD32	20.5	82	12-STV-032
OD40	22	85	12-STV-040
OD50	25	115	12-STV-050
OD63	29	121	12-STV-063



LONG STEM STOP VALVE WITH METAL HANDLE

(Soc x Soc)

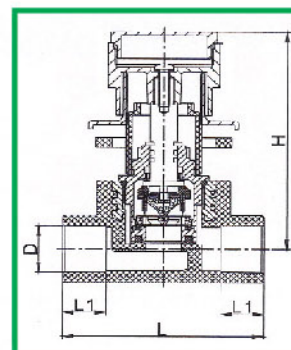
SIZES (mm)	d (mm)	D1 (mm)	Z (mm)	L (mm)	H (mm)	Product Code
OD20	19.1	28.2	30.9	64.5	125	2-LSV-020
OD25	24.5	34	44.1	76.5	126	12-LSV-025
OD32	31.2	43.7	44.4	83.2	128.5	12-LSV-032



CONCEALED VALVE

(Soc x Soc)

SIZES (mm)	L1 (mm)	L (mm)	D (mm)	H (mm)	Product Code
OD20	15	64.3	19.1	128.2	12-LCV-020
OD25	17	76.8	24.3	131	12-LCV-025
OD32	18.5	83.8	31.5	138.3	12-LCV-032



Manual Peeling Tools



d(mm)	Product Code
20-25	12-MTS-020025
32-40	12-MTS-032040

Electrofusion Welding Machine



d(mm)	Product Code
110-160	12-EFM-110160

PPR Pipe Scraper



d(mm)	Product Code
110-160	12-PPS-110160

Assistant Tools for Socket Fusion



d(mm)	Product Code
90-160	12-ATS-090160

Socket Fusion Welding Machine



d(mm)	Product Code
20 - 63	12-MAC-020063
75 - 110	12-MAC-075110
160	12-MAC-160

Pipe Clamp

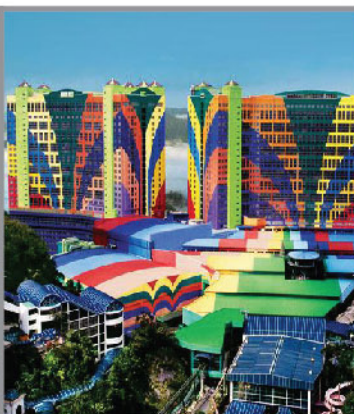


d(mm)	Product Code
110-160	12-PPC-110160

PPR Project List - 2018/19



The Ruma



Genting Theme Park Hotel



MAS Annex



Melaka Harbour City



The Exchange 106
(formerly TRX Signature Tower)



Forest City Johor



Stadium Bukit Jalil



The Ship Campus



Bukit Bintang City Centre
(BBCC)



R&F Princess Cove



ECO Majestic @ Semenyih



Southkey Megamall



MET 1 Residences @
KL Metropolis



Sepang International Circuit



Pavilion Damansara Heights



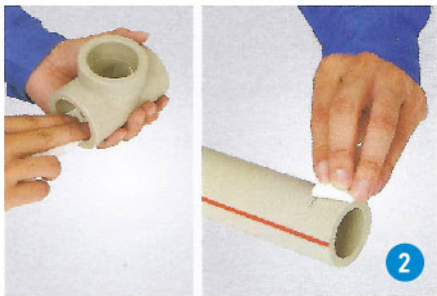
Sunway Carnival Mall

JOINING INSTRUCTION



1 Marking the pipe

Mark the insertion depth on the pipe (refer to table). Marking should remain visible during the heating and joining process.



2 Cleaning the pipe and fitting

Clean inner surface of the fitting and the outer surface of the pipe. Both surfaces should be free from any dirt, grease or cracks as the presence of any of these can affect the quality of weld.



3 Heating The Pipe and Fitting

Push the pipe and fitting into the heating tool. Once the pipe and fitting are heated (according to the correct heating time), remove the pipe and fitting carefully. Care should be taken to avoid twisting.

The fusion is subject to the following data

Pipe Diameter mm	Welding Depth (mm/min)	Heating Time (s)	Jointing time (s)	Cooling time (s)
20	11.0	6	4	2
25	12.5	7	4	3
32	14.5	8	6	4
40	17.0	12	6	4
50	20.0	18	6	5
63	24.0	25	8	6
75	26.0	30	8	8
90	29.0	40	10	8
110	32.5	50	10	8
160	50.0	120	16	15



4 Joining The Pipe and Fitting

To join the pipe and fitting, push the pipe into the fitting until it reaches the mark made earlier (mark should remain visible). During the joining time, small rotations not more than 5° angle is permissible. However, during the cooling period, avoid any rotation or stress on the joint. It is recommended to let the joint cool down naturally. Water, ice and any other method should be avoided.



5 Joint Inspection

Visually inspect the joint to ensure that a continuous fusion seam is formed around the pipe circumference.

**Note : Insulation of hot water pipe and removal of chlorine from water is recommended for centralised hot water circulation application.*

AZEETA PIPE SYSTEM SDN BHD (199701039760)

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