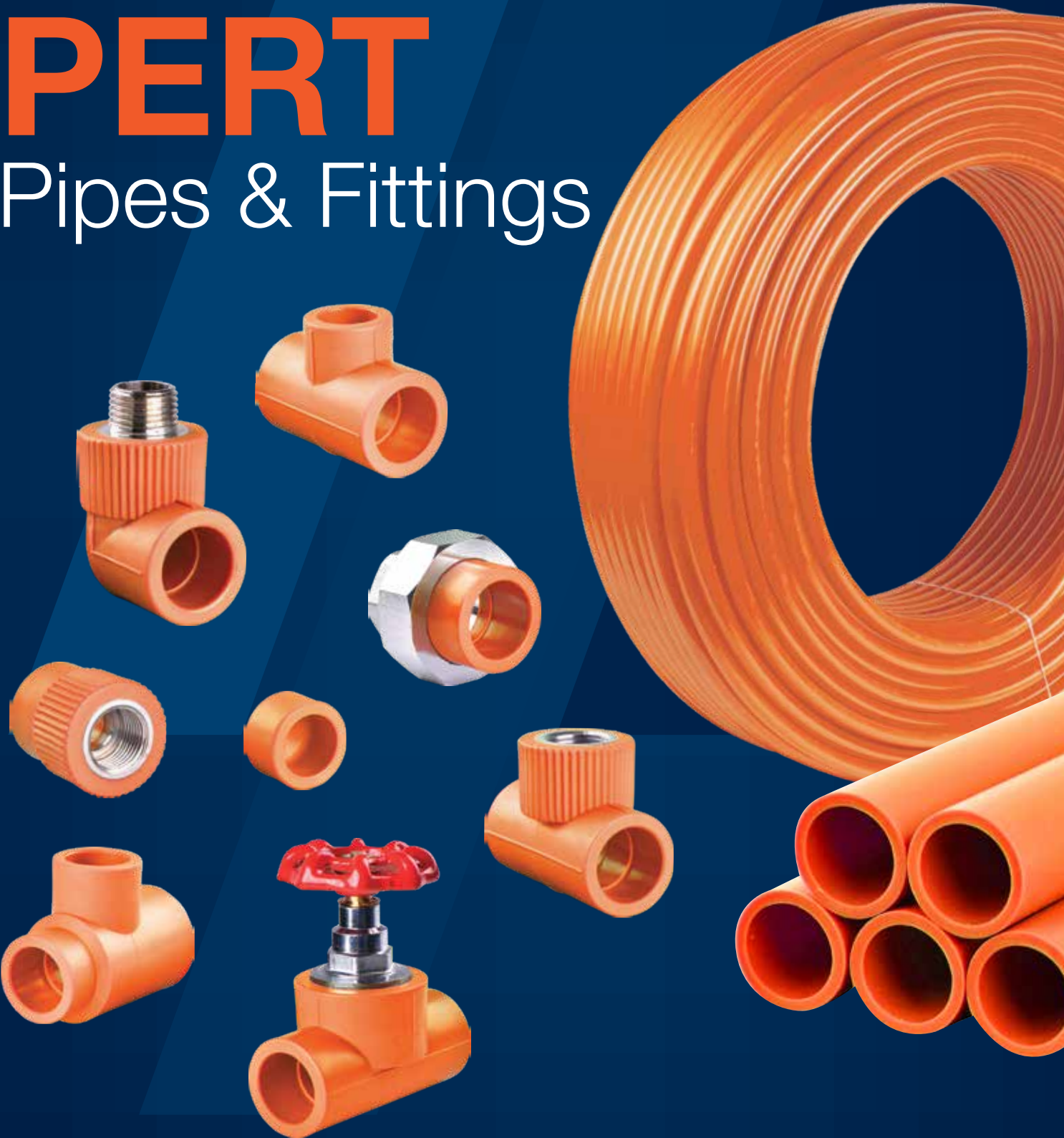


SANSICO[™]

PERT

Pipes & Fittings

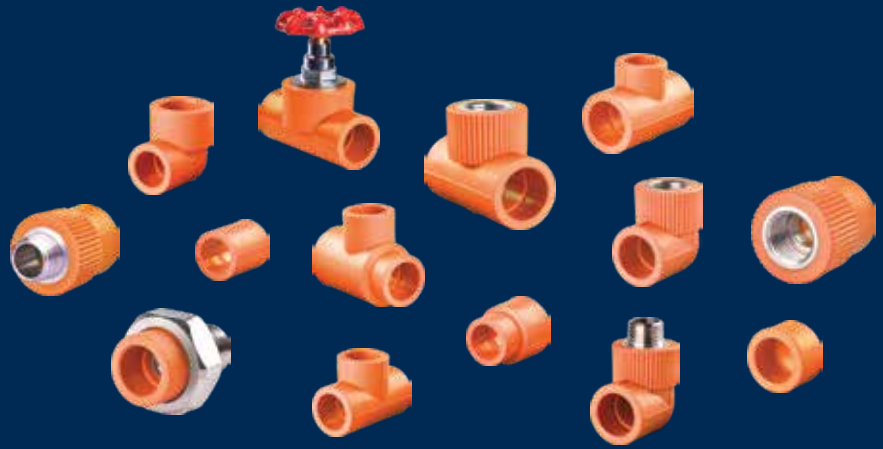


**THE EXPERT
IN FUSION JOINTS**

ISO 22391-2, ISO 22391-3
Print Edition for July 2019



PERT Fittings



THE EXPERT IN FUSION JOINTS

The Sansico PERT Socket Fusion fittings system is specifically designed for reliable, high performance jointing and long service life for PERT piping systems. Our jointing system has been proven to be the most efficient and reliable socket fusion system as it eliminates the potential for operator error.

We offer quality tools and micro processor socket fusion machines, which when combined with our fittings offer state-of-the-art high performance pipe jointing solutions. Our intelligent socket fusion machine is able to ensure quality control by data retrieval of measurements and records. This together with our SIRIM certified and SPAN approved ISO 22391-2 (Pipe) and ISO 22391-3 (Fittings) PERT pipes & fittings assure you of a minimum 50 years life span for your potable water needs.

Installation Method



1 Select the equipment.



2 Square and prepare the pipe ends.



3 Heat the parts.



4 Join the parts, allow to cool equipment.

Preparing

Cut the end of the pipe square. Chamfer the pipe end. Remove scraps, burrs, shavings, oil, or dirt from the surfaces to be joined. Clamp the cold ring on the pipe at the proper position, using the integral depth gauge pins or a separate (thimble type) depth gauge. The cold ring will assist in re-rounding the pipe and provide a stopping point for proper insertion of the pipe into the heating tool and coupling during the fusion process.

Heating

Check the heater temperature. Periodically verify the proper surface temperature using a pyrometer or other surface temperature measuring device. If temperature indicating markers are used, do not use them on a surface that will come in contact with the pipe or fitting. Bring the hot clean tool faces into contact with the outside surface of the end of the pipe and with the inside surface of the socket fitting, in accordance with pipe and fitting manufacturers' instructions.

Joining

Simultaneously remove the pipe and fitting from the tool using a quick "snap" action. Inspect the melt pattern for uniformity and immediately insert the pipe squarely and fully into the socket of the fitting until the fitting contacts the cold ring. Do not twist the pipe or fitting during or after the insertion, as is the practice with some joining methods for other pipe materials.

Cooling

Hold or block the pipe in place so that the pipe cannot come out of the joint while the mating surfaces are cooling. These cooling times are listed in the pipe or fitting manufacturer's instructions.

PERT Fittings List



PERT Pipe

Code	Nominal Size DN/OD	Nominal Outside Diameter d_n	Mean Outside Diameter		Pipe Series S 3,2 Wall Thickness e_{min}
			$d_{em. min}$	$d_{em. max}$	
PERT 20mm Length	20	20	20.0	20.3	2.8
PERT 25mm Length	25	25	25.0	25.3	3.5
PERT 32mm Length	32	32	32.0	32.3	4.4

also available in roll form (100m)



Equal Coupling

Code	Size	Heating Time (Sec)	Fusion Time (Sec)	Cooling Time (Min)
PEC 20	20	5	4	2
PEC 25	25	7	4	2
PEC 32	32	8	6	4



Reducing Coupling

Code	Size	Heating Time (Sec)	Fusion Time (Sec)	Cooling Time (Min)
PRC 25.20	25 x 20	5	4	2
PRC 32.20	32 x 20	7	4	2
PRC 32.25	32 x 25	8	6	4



Equal 90 Elbow

Code	Size	Heating Time (Sec)	Fusion Time (Sec)	Cooling Time (Min)
P90 EE 20	20	5	4	2
P90 EE 25	25	7	4	2
P90 EE 32	32	8	6	4



Reducing 90 Elbow

Code	Size	Heating Time (Sec)	Fusion Time (Sec)	Cooling Time (Min)
P90 RE 25.20	25 x 20	5	4	2
P90 RE 32.20	32 x 20	7	4	2
P90 RE 32.25	32 x 25	8	6	4



Equal 45 Elbow

Code	Size	Heating Time (Sec)	Fusion Time (Sec)	Cooling Time (Min)
P45 EE 20	20	5	4	2
P45 EE 25	25	7	4	2
P45 EE 32	32	8	6	4



Equal Tee

Code	Size	Heating Time (Sec)	Fusion Time (Sec)	Cooling Time (Min)
PET 20	20	5	4	2
PET 25	25	7	4	2
PET 32	32	8	6	4



Reducing Tee

Code	Size	Heating Time (Sec)	Fusion Time (Sec)	Cooling Time (Min)
PRT 25.25.20	25 x 25 x 20	5	4	2
PRT 32.32.20	32 x 32 x 20	5	4	2
PRT 32.32.25	32 x 32 x 25	7	4	2
PRT 20.20.25	20 x 20 x 25	8	6	4
PRT 25.25.32	25 x 25 x 32	8	6	4



End Cap

Code	Size	Heating Time (Sec)	Fusion Time (Sec)	Cooling Time (Min)
PECP 20	20	5	4	2
PECP 25	25	7	4	2
PECP 32	32	8	6	4



Over Bend

Code	Size	Heating Time (Sec)	Fusion Time (Sec)	Cooling Time (Min)
POB 20	20	5	4	2
POB 25	25	7	4	2
POB 32	32	8	6	4



Male Threaded Coupling

Code	Size	Heating Time (Sec)	Fusion Time (Sec)	Cooling Time (Min)
PMTC 20.1/2	20 x 1/2"	5	4	2
PMTC 20.3/4	20 x 3/4"	7	4	2
PMTC 25.1/2	25 x 1/2"	5	4	4
PMTC 25.3/4	25 x 3/4"	7	4	2
PMTC 32.3/4	32 x 3/4"	8	6	4
PMTC 32.1	32 x 1"	8	6	4



Female Threaded Coupling

Code	Size	Heating Time (Sec)	Fusion Time (Sec)	Cooling Time (Min)
PFTC 20.1/2	20 x 1/2"	5	4	2
PFTC 20.3/4	20 x 3/4"	7	4	2
PFTC 25.1/2	25 x 1/2"	5	4	2
PFTC 25.3/4	25 x 3/4"	7	4	2
PFTC 32.3/4	32 x 3/4"	8	6	4
PFTC 32.1	32 x 1"	8	6	4



Male Threaded Elbow

Code	Size	Heating Time (Sec)	Fusion Time (Sec)	Cooling Time (Min)
PMTE 20.1/2	20 x 1/2"	5	4	2
PMTE 25.1/2	25 x 1/2"	7	4	2
PMTE 25.3/4	25 x 3/4"	7	4	2
PMTE 32.3/4	32 x 3/4"	8	6	4
PMTE 32.1	32 x 1"	8	6	4



Female Threaded Elbow

Code	Size	Heating Time (Sec)	Fusion Time (Sec)	Cooling Time (Min)
PFTE 20.1/2	20 x 1/2"	5	4	2
PFTE 25.1/2	25 x 1/2"	7	4	2
PFTE 25.3/4	25 x 3/4"	7	4	2
PFTE 32.3/4	32 x 3/4"	8	6	4
PFTE 32.1	32 x 1"	8	6	4



Double Plastic End Union

Code	Size	Heating Time (Sec)	Fusion Time (Sec)	Cooling Time (Min)
PDPEU 20	20	5	4	2
PDPEU 25	25	7	4	2
PDPEU 32	32	8	6	4



Female Threaded Tee

Code	Size	Heating Time (Sec)	Fusion Time (Sec)	Cooling Time (Min)
PFTT 20.1/2	20 x 1/2"	5	4	2
PFTT 25.1/2	25 x 1/2"	7	4	2
PFTT 25.3/4	25 x 3/4"	7	4	2
PFTT 32.3/4	32 x 3/4"	8	6	4
PFTT 32.1	32 x 1"	8	6	4



Brass Stop Valve

Code	Size	Heating Time (Sec)	Fusion Time (Sec)	Cooling Time (Min)
PBSV 20	20	5	4	2
PBSV 25	25	7	4	2
PBSV 32	32	8	6	4

PERT Fittings

The Sansico Socket Fusion PERT fittings complies to ISO 22391 and are PN20 rated, comes in sizes from 20mm to 32mm. The benefits of the PERT water system over other systems are non toxicity, corrosion resistance, high flow capacity and long life span. Material wise, PERT and HDPE have superior properties as compared to other plastic materials in relation to water hammer problems.

Product Warranty

Sansico Industries Sdn Bhd warrants its materials to be free of defects in workmanship and under normal use, service and when used for the purposes under the conditions for which they are intended.

This warranty shall not apply to any Sansico Industries Sdn Bhd material that has been altered, repaired and/or used in any way, stored outside, or has been subject to misuse, negligence, accident and/or has not been installed in accordance with installation instructions.

The obligation of Sansico Industries Sdn Bhd under this warranty shall be limited to the replacement of any part that may prove defective under normal use.

Sansico Industries Sdn Bhd shall not be liable for indirect, special, incidental or consequential damage or penalties and does not assume any liability of purchaser to others, or to anyone for injury to persons and/or property.

Any claim regarding shortage or damages from shipment of material must be submitted in writing to Sansico Industries Sdn Bhd within 10 days after receipt of shipment. Buyer shall note loss or damage on delivery order and provide a delivery receipt stating such with driver's signature.

Purchaser is responsible for passing on this Limited Warranty to their customer.

Installation

Installation instructions must be adhered to, or our Product Warranty is null and void. Installation of socket fusion fittings must be carried out by properly trained and qualified operator(s) and/or by witness of the factory representative.

Sansico Industries Sdn Bhd shall have the right to inspect the said material and purchaser shall, if requested, return defective product prepaid to the Sansico Industries Sdn Bhd Purchaser shall assume all responsibility and expenses for removal, reinstallation and freight charges in connection with the foregoing remedy.

PERT Properties

PERT type materials have been used successfully in domestic hot and cold water piping systems for more than 20 years. PERT can also compete with high-end engineering plastics, offering significant cost savings.

Characteristics of the PERT pipes

- Hydraulic friction coefficient: 0.007 mm
- Thermal conductivity: 0.45 W/m °K
- Coefficient of linear dilatation: 0.026 mm/m °C
- Maximum working temperature: 95°C (1 hr)
- Minimum working temperature: - 20°C
- Maximum punctual temperature: 110°C
- Maximum Service Pressure: 10 bar
- Nominal pressure: PN 20 (Hot Water)
PN 16 (Cold Water)



Sansico Socket Welder **SSW 32** **SSW 63**



Manual Equipment

Manual socket welders for joining pipes and fittings, in compliance with the standards in force. They feature an aluminum heating plate and a practical, heat-insulated plastic handle. They can weld PERT, HDPE, PP, PP-R, PVDF pipes and fittings and they're characterized by different shapes and working ranges, suitable for different applications. They're available with an adjustable electronic thermoregulator. This new TFE control system features a new self-diagnostic device, provided with an alarm, which would alert the operator in case of abnormally; at the same time, the heating element would switch off automatically. Thanks to an algorithm PID microcontroller, combined with a platinum sensor, the temperature control system can react faster to the external temperature fluctuations, and guarantee higher reliability and longer durability.

Technical Features

TYPE: TE, TFE	SSW 32	SSW 63
Working range	up to Ø 32 mm	up to Ø 63 mm
Materials	PERT, HDPE, PP, PP-R PB, PVDF	
Power supply	230 V S. Ph. 50/60 Hz, 110 V S. Ph. 50/60 Hz	
Max, absorbed power	800 W	
Working temperature	180° to 290°C	
Ambient temperature	5° to 40°C	
Weight	1,82 Kg	
Dimensions	175 x 50 x 360 mm	



Sansico Industries Sdn Bhd (448766-D)

No. 20, Jalan Uranus AK U5/AK,
Taman Subang Impian, Seksyen U5,
40150 Shah Alam, Selangor.

Tel : (603) 7859 7299 (Hunting Line)

Fax : (603) 7859 0299

E-mail : enquiry@sansico.com.my

Website : www.sansico.com.my

