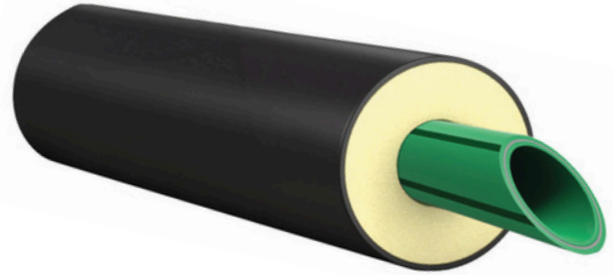


TORO 25 ISOTECH system consists of a complete range of PP-R pipes and fittings pre-insulated in PUR (Rigid Expanded Polyurethane) foam and protected by a HDPE (High Density Polyethylene) sheath tube.

TORO 25 ISOTECH system is used for the remote transport and distribution of energy, via water carrier fluid, between thermal power plants for heat production, refrigeration, heat pumps, geothermal and thermal systems, district heating systems, etc. and users, guaranteeing high levels of thermal insulation, maximum safety and application design reliability.

The internal service pipes are made with TORO 25 FIBER EvO multilayer pipes which allow to reduce the linear thermal expansions up to almost 75% compared to normal single-layer pipes. The external protective sheath in HDPE guarantees a high adhesion of the insulating material (PUR) as required by the EN 253 + EN 489-1 standard and protect the internal part, both from direct radiation and from environmental temperature variations.



APPLICATION FIELDS



civil and industrial heating networks



mechanical systems compressed air transport



shipbuilding



geothermal and thermal plants



hot and cold drinking water systems



irrigation systems



refrigeration and air conditioning systems

ADVANTAGES

- High thermal insulation capacity and watertight coating
- High resistance to corrosion, direct radiation and temperature changes
- Easy and fast installation
- Reduced weight compared to metal pipes, with significant advantages in transport, handling and installation
- Environmental and energy sustainability of the system

WELDING TECHNIQUES



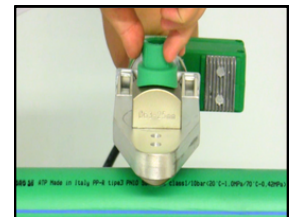
socket welding



butt welding



electrofusion



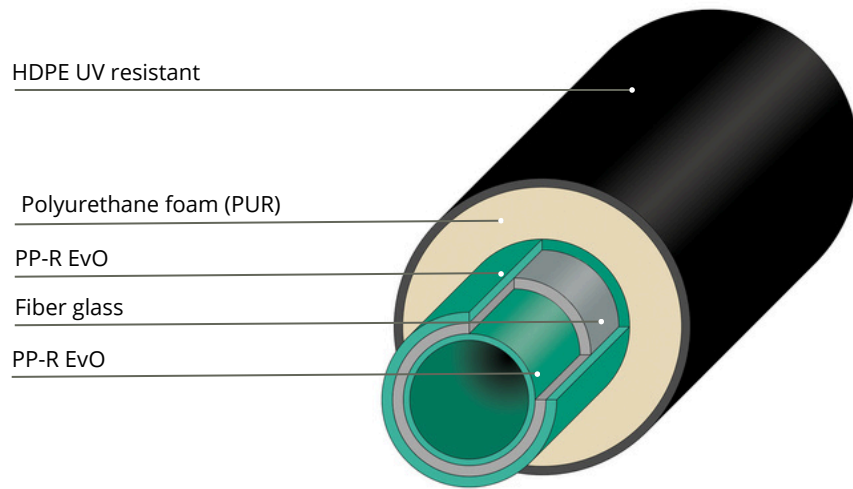
saddle welding

DIMENSIONS

SDR	Item	Service Pipe OD PP-R FIBER EvO mm	Service Pipe Thickness mm	Casing Pipe OD (HDPE) mm	Casing Pipe Thickness mm	Cut-Back mm	Insulation
PRE-INSULATED FIBER EvO - PN20 - SDR7,4 /S3,2							
7,4	TUB 32 SDR7,4 IT	32	4,4	90	3,0	190,0	PUR FOAM
	TUB 40 SDR7,4 IT	40	5,5	110	3,0		
	TUB 50 SDR7,4 IT	50	6,9	110	3,0		
	TUB 63 SDR7,4 IT	63	8,6	125	3,0		
	TUB 75 SDR7,4 IT	75	10,3	140	3,0		
	TUB 90 SDR7,4 IT	90	12,3	160	3,0		
	TUB 110 SDR7,4 IT	110	15,1	200	3,2		
	TUB 125 SDR7,4 IT	125	17,1	225	3,4		
PRR-INSULATED FIBER EvO - PN16 - SDR11 /S5							
11	TUB 32 SDR11 IT	32	2,9	90	3,0	190,0	PUR FOAM
	TUB 40 SDR11 IT	40	3,7	110	3,0		
	TUB 50 SDR11 IT	50	4,6	110	3,0		
	TUB 63 SDR11 IT	63	5,8	125	3,0		
	TUB 75 SDR11 IT	75	6,8	140	3,0		
	TUB 90 SDR11 IT	90	8,2	160	3,0		
	TUB 110 SDR11 IT	110	10,0	200	3,2		
	TUB 125 SDR11 IT	125	11,4	225	3,4		
	TUB 160 SDR11 IT	160	14,6	250	3,6		
	TUB 200 SDR11 IT	200	18,2	315	4,1		
	TUB 250 SDR11 IT	250	22,7	400	4,8		
	TUB 315 SDR11 IT	315	28,6	450	5,2		
PRE-INSULATED FIBER EvO - PN16 - SDR11 /S5							
17	TUB 160 SDR17 IT	160	9,1	250	3,6	190,0	PUR FOAM
	TUB 200 SDR17 IT	200	11,4	315	4,1		
	TUB 250 SDR17 IT	250	14,2	400	4,8		
	TUB 315 SDR17 IT	315	17,9	450	5,2		

PHYSICAL - MECHANICAL CHARACTERISTICS

Hygienic compatibility	supply of drinking water and food fluids intended for human consumption
Thermal conductivity at 50°C	0.03 W/mK
Thermal expansion coefficient	$\alpha = 0,035 \text{ mm/mK}$
Internal roughness	$\mu = 0,0050 \text{ mm}$
Operating temperature	-20°C / +95°C
Welding system	thermofusion, electrofusion, butt welding
Pipe structure	PP-R Fiber Evo pipe + PUR + HDPE
Material	PP-R EvO + GF + PP-R EvO + PUR + HDPE
Finish	matt
Colour	light green with black external cover
Supply	rods in sacks
Manufactured in accordance with standards	EN ISO 15874-2-3-5, DIN 8077-8078 - 16962, DVS 2207-2208, EN ISO 15494, SGBP 4653, NSF / ANSI / CAN 61, RINA-ASTM D 635:2010, ASTM D 2444:2010, BS 6920; EN 253 + EN 489-1 EN 448-449
Compatible with all PP-R fittings of the TORO 25 system	



CERTIFICATIONS

