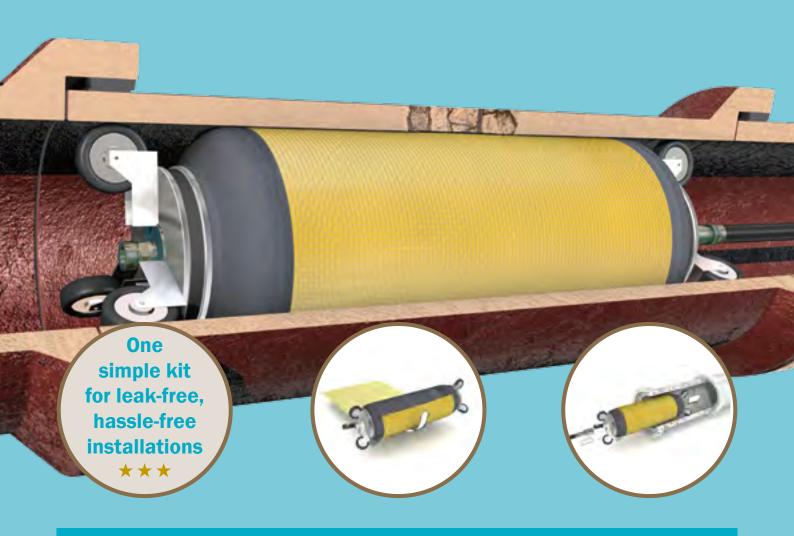


epros[®] DrainPacker Patch Kit

THE PIPE REPAIR SOLUTION THAT EVERYONE GETS



Installation Instructions



NO-DIG REPAIR FOR DAMAGED GRAVITY SEWER PIPES (BURIED AND IN BUILDINGS)

Trelleborgs epros® DrainPacker repair system is a sectional or point repair method for all types of wastewater, sewer and drainage pipes. Using epros® SilicateResins and chemically resistant, non-corroding epros® FiberGlassMats CRF(+), the method creates a frictional fit with the host pipe, and in doing so, seals sectional damages and provides structural repair.

Quick, simple and reliable, the epros® DrainPacker repair system is recommended by experienced users worldwide with more than 100,000 installations every year.

Part of this system is the **epros® DrainPacker Patch Kit** – an ideal solution for specialist pipe contractors who are looking for a tailor-made kit for each repair.

The patch kit is available in different configurations for single repairs in pipes ranging from 4" to 15" in diameter, and in repair lengths ranging from 2 ft to 5 ft (see table). The patch kit is also suitable with all common pipe materials.

Trelleborg Pipe Seals also provides all the technical equipment, material and instructions you need to apply the epros® DrainPacker method.

Leak-free pipes, hassle-free installations

- · Quick and easy installation
- Tested and approved by authorities worldwide
- Consistently high-quality results with zero leakage

System Benefits

- No volatile organic compounds (VOC) or styrene is released
 making the system odourless and environmentally-friendly
- epros® SilicateResins have a high chemical and heat resistance
- epros® SilicateResins are ambient-cure resins with a short cure time of approx. 1 to 3 hours
- Virtually no shrinkage ensures good frictional bond with host pipe
- Cures in the presence of water. Seals infiltration
- Self-extinguishing properties of the cured resin makes system suitable for use in critical areas such as airports, tunnels and buildings
- Tested service life of min. 50 years (10,000 hrs) according to European and ASTM standards
- Classification as "non-dangerous goods" means resins are easy to ship and transport

Installation Instructions

(refer to the corresponding diagrams on the left)

Ensure all items are present and to hand prior to commencing the work.

- 1. Pull the packer protection foil completely over the packer and secure at each end with the cable ties provided. Connect the flex adaptor to one side of the packer.

 Note: Use the correct packer for the corresponding pipe diameter as recommended below.
- 2. Lay out the groundsheet and open out the fiberglass mat. Position as marked "This Side Up".
- 3. Remove the clip from the resin bag and mix thoroughly by kneading the bag for one minute. Important: Once mixing is complete, the resin must be applied and the packer must be installed within 15 minutes.
- 4. Cut off one corner of the bag and pour part of the contents (50 60 %) onto the correctly positioned fiberglass mat.
- 5. Step 1: Use the spatula provided to spread the resin evenly and liberally to coat the surface.
 - Step 2: Fold along the first line. Pour on approximately one third of the remaining resin and spread out evenly.
 - Step 3: Make the second fold. Pour out approximately half of the remaining resin and spread out evenly.
 - Step 4: Turn over the folded impregnated mat onto the protective foil and pour on the remaining resin and spread evenly.
- 6. Place the impregnated fiberglass mat on the packer and centre it. Roll the mat around the packer.
- 7. Fix the mat onto the packer using the two wire ties provided. Position the ties 25 mm or 1 inch from the end of the fiberglass mat. Secure the wire tie with 3 half turns. Slightly inflate the packer to tighten fit if needed.
- 8. Insert the packer and patch into the pipe.
- 9. Push the packer into the pipe and position it at the point of repair, as marked on the push rod during pre-installation.
- 10. Inflate the packer to the recommended working pressure (depending on packer type). The wire ties will release and allow the impregnated mat to be pressed against the inner surface of the pipe at the point of repair.
 - Note: If the pipe is badly damaged, then care must be taken when inflating the packer to avoid distorting the internal diameter of the pipe. Full pressure might not be needed.
- 11. Leave the packer in place and maintain the working pressure until the resin is fully cured (curing time dependent on resin type and temperature refer to table). You can then deflate the packer and remove it from the pipe.

Equipment Required In Addition To The Patch Kit:

- 1. High-pressure water jet or similar, for cleaning the host pipe
- 2. Basic push camera or similar, for pipe inspection and measurement
- 3. Trelleborg Packer in the correct size
- 4. Trelleborg Push Rods and/or Pull Rope
- 5. Trelleborg Flex Adaptor
- 6. Trelleborg Pressure Regulator, including valve
- 7. Air compressor

epros[®] DrainPacker Patch Kits

Article no.	Article name and configuration no.	Resin type	Pipe diameter [inch]	Repair length [ft]
234462	Patch Kit 01	W	4	2
234468	Patch Kit 02	W	4	4
234463	Patch Kit 03	W	6	2
234469	Patch Kit 04	W	6	4
234464	Patch Kit 05	W	8	2
234470	Patch Kit 06	W	8	4
230100	Patch Kit 07	S	8	5
234502	Patch Kit 08	W	8	5
234465	Patch Kit 09	W	10	2
234471	Patch Kit 10	W	10	4
234466	Patch Kit 11	W	12	2
234472	Patch Kit 12	W	12	4
234467	Patch Kit 13	W	15	2
234473	Patch Kit 14	W	15	4

Resin pot times and curing times

Resin Type Temperature [°F]	W Pot Time [min]	W Cure Time [min]	S Pot Time [min]	S Cure Time [min]
50	20 – 22	130 – 135	45 – 48	310 – 320
59	19	115 – 120	42 – 44	260 - 280
68	17	60 – 90	32 – 34	210 - 230
77	13	40 – 55	28 – 29	180 - 200

Packer Types

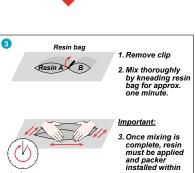
Pipe Diameter	Packer Type	
3" – 8" [70 – 150 mm]	epros® HLPacker 70/100 or 80/150	
6" – 10" [150 – 250 mm]	epros® FlexPacker 150/250	
12" – 15" [300 – 375 mm]	epros® FlexPacker 300/400	

Pre-installation Procedures

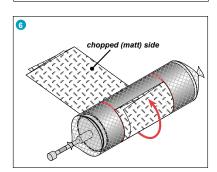
- 1. Select an **epros® DrainPacker Patch Kit** in the correct configuration for the pipe to be repaired.
- 2. We highly recommend cleaning the pipe prior to installation with a high-pressure water jet to remove grease, roots and other deposits. The pipe surface does not need to be dry; the patch can be installed without problems even if the pipe is full of water.
- 3. Insert a camera into the pipe to locate and assess the damage(s). At the same time, mark the camera cable/push rod at the insertion point this marks the distance to the repair point (for installation point 9 below).

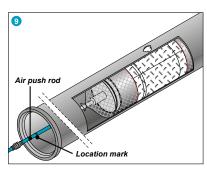
Please follow the manufacturers safety instructions when using the epros®DrainPacker Patch Kit. Ensure that eye and hand protection is used. Handle carefully and avoid direct contact with the chemicals.

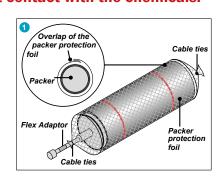


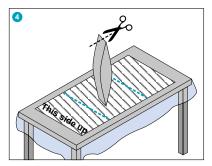


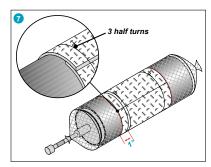
15 minutes.

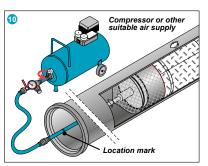


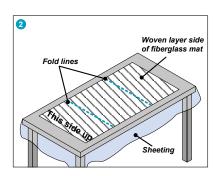


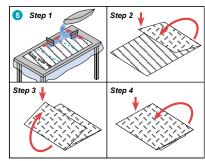


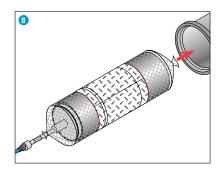


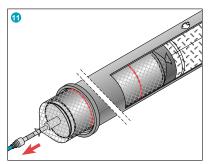














Trelleborg is a world leader in engineered polymer solutions that seal, damp and protect critical applications in demanding environments. Our innovative engineered solutions accelerate performance for customers in a sustainable way. The Trelleborg Group has local presence in over 40 countries around the world.

Trelleborg Pipe Seals is a world leading supplier of new and rehabilitation sealing solutions for concrete and plastic pipes and manholes used for water, sewerage and drainage. We deliver continuous innovation to customers across the globe, with a logistics and sales network. Comprising the most advanced polymer technology, our high performance seals ensure fulfillment of the highest possible reliability standards.

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