

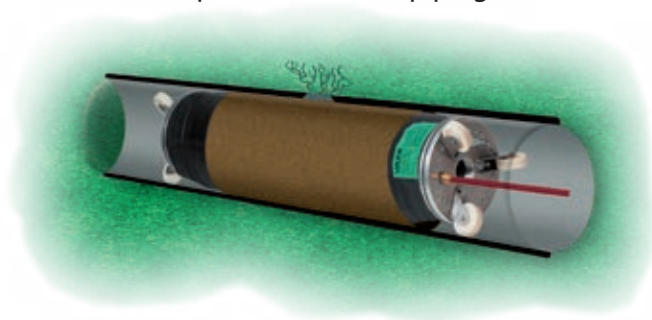
REHABILITATION PACKERS

Rehabilitation packers **P**, **FP**, **DP**, **HP** and **HPP** are used for repairing locally-damaged sewerages or other pipe-lines or for their successive maintenance. The packers can be applied to fissures, leaky joints, misalignments, root downgrowth and corroded sections. Sewerages made of all kinds of materials in the diameter ranging from 50 mm to 1200 mm can be maintained or repaired in this way.

These packers can be divided into several groups: short packers, flexible packers, lateral packers and long packers. They are made of a special rubber guaranteeing the necessary flexibility, strength and resistance. All their metal parts are made of corrosion-resistant materials.

The maintenance work consist of placing the packer and its insertion piece (a fabric of glass fibres impregnated with a special artificial resin) into the piping on the

damaged point. This procedure can be monitored by using a closed-loop television while the packer is not under pressure. Then the packer is inflated to the working pressure and the glass-fibre-fabric insertion piece is pressed against the wall of the pipe. As the overflowing resin penetrates the fissures and cavities, the damaged spot and the glass-fibre-fabric insertion piece become firmly connected. After the resin gets hardened, its static load capacity is supported with a short tube with gradual reductions. Then the packer is deflated and pulled out of the piping.



BEND PACKERS

Bend packers thanks to their construction are suitable for repairing in bend parts of pipelines at an angle from 45° to 90°. This construction and excellent rubber material of packers ensure, that the repair part is plain and without bumps.



Bend Packers OP

Type	Part - No.	Pipe diameter mm	Rubber body diameter mm	Rubber body length mm	Total length mm	Weight kg	Operating pressure bar
OP 5/7 - 0,4	7515	50-70	35	400	510	0,5	2,0
OP 5/7 - 0,6	7512	50-70	35	600	710	0,55	2,0
OP 5/7 - 1	7516	50-70	35	1000	1110	0,65	2,0
OP 5/7 - 1,5	7521	50-70	35	1500	1610	0,75	2,0
OP 7/9 - 0,6	7501	70-90	45	600	720	0,7	2,0
OP 7/9 - 1	7502	70-90	45	1000	1120	0,8	2,0
OP 7/9 - 1,5	7503	70-90	45	1500	1620	0,9	2,0
OP 8/11 - 0,6	7522	80-110	56	600	710	1,0	2,0
OP 8/11 - 1	7513	80-110	56	1000	1120	1,1	2,0
OP 8/11 - 1,5	7514	80-110	56	1500	1620	1,2	2,0
OP 10/13 - 0,6	7511	100-130	65	600	710	1,2	2,0
OP 10/13 - 1	7506	100-130	65	1000	1120	1,4	2,0
OP 10/13 - 1,5	7507	100-130	65	1500	1620	1,7	2,0
OP 14/17 - 0,6	7510	140-170	86	600	710	2,7	2,0
OP 14/17 - 1	7508	140-170	86	1000	1130	3,3	2,0
OP 14/17 - 1,5	7509	140-170	86	1500	1630	4	2,0
OP 18/21 - 1	7504	180-210	107	1000	1130	5	2,0
OP 18/21 - 1,5	7505	180-210	107	1500	1630	6	2,0

TABLE OF RESISTANCE FOR PIPE STOPPERS AND REHABILITATION PACKERS

A – Pipe stoppers and Rehabilitation packers

B – Pipe stoppers resistant to oil

C – Cone pipe stoppers ULK and PULK

Chemicals	Concentration %	A	B	C
Acetone		+/-	--	++
Acetylene – Alcohol		++	++	++
Aniline		+/-	--	--
Petrol		--	++	++
Benzene		--	--	--
Boric Acid	10	++	++	++
Brake Fluid		++	--	++
Butanol		++	++	++
Butyric Acid		--	+/-	--
Calcium Hydroxide		++	+/-	++
Calcium Hypochlorite	15	++	--	++
Diesel Oil		--	++	++
Ethanol		++	++	++
Formaldehyde	40	++	++	++
Glycerine		++	++	++
Kerosene		--	++	+/-
Methanol	50	++	++	++
Mineral Oil		--	++	++
Methyl Chloride		--	--	--
Natural Gas		--	++	++
Nitric Acid Diluted	50	+/-	+/-	--
Ozone		--	--	++
Phenol		--	--	--
Phosphoric Acid	60	+/-	--	++
Propanol		++	+/-	++
Sodium Hydroxide	20	++	++	++
Sodium Hypochlorite	10	+/-	--	++
Sulphuric Acid	20	++	++	++
Sulphuric Acid	50	++	+/-	++
Sulphuric Acid	60	--	--	+/-
Toluene		--	--	--
Ammonium Hypochlorite		+/-	--	++
Vinegar Acid		++	+/-	+/-
Ferrous Hypochlorite		++	++	++
Sea Water		++	++	++

++ resistant
+/- partially resistant
-- non-resistant

