

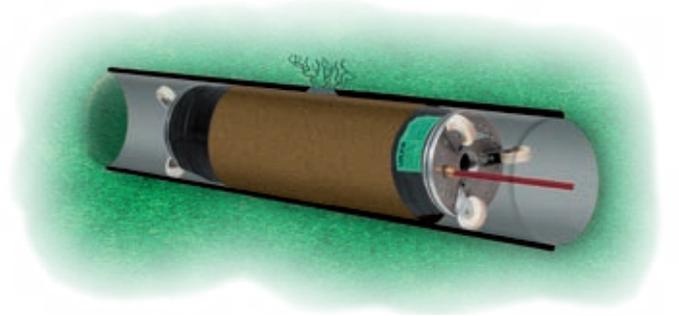
REHABILITATION PACKERS

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.



SHORT PACKERS



Short packers are provided with an exchangeable two-layer rubberized-fabric sleeve mounted on a metal central part. Moreover, the packers are provided with wheels at both its ends at an angle of 120°. The wheels ensure the stability of the packer in the pipeline. Its design allows water to flow freely during the repair. The length of the effective surface is 600 mm which is sufficient for repairing a joint or a short damaged spot.

Short Packers P

Type	Part - No	Pipe diameter mm	Rubber body diameter mm	Rubber body length mm	Total length mm	Application length in max. diameter mm	Weight kg	Operating pressure bar
P 15/20	7101	150–200	100	800	980	600	7,0	2,0
P 25/30	7102	250–300	190	800	1030	600	17,0	2,0
P 30/35	7107	300–350	235	800	1030	600	21,0	1,5
P 35/40	7103	350–400	290	800	1030	600	25,0	1,5
P 45/50	7104	450–500	380	900	1130	700	38,0	1,5
P 60/70	7105	600–700	480	1000	1230	800	52,0	1,0



Egg-Shaped Short Packers PV

Type	Part - No	Sealing cross-section mm	Rubber body dimensions mm	Rubber body length mm	Total length mm	Application length mm	Weight kg	Operating pressure bar
PV 20/30	7112	200 x 300	140 x 195	800	980	600	16,0	1,5
PV 25/37,5	7113	250 x 375	190 x 270	800	980	600	25,0	1,5
PV 30/45	7110	300 x 450	230 x 330	800	1030	600	34,0	1,5
PV 40/60	7109	400 x 600	330 x 480	800	1030	600	49,0	1,5
PV 50/75	7114	500 x 750	420 x 615	900	1130	700	63,0	1,0
PV 60/90	7115	600 x 900	520 x 765	900	1130	700	80,0	1,0

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

