

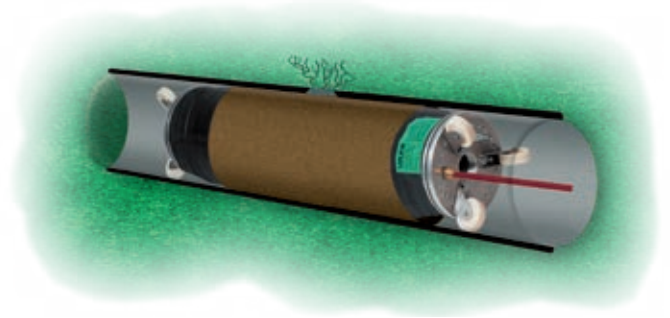
REHABILITATION PACKERS

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.



Lateral Packers HP

Type	Part - No	Pipe diameter	Rubber body diameter	Rubber body length	Total length	Application length in max. diameter	Weight	Operating pressure
		mm	mm	mm	mm	mm	kg	bar
HP 5/7-0,4	7329	50-70	35	400	510	220	0,50	3,0
HP 5/7-0,6	7331	50-70	35	600	710	420	0,55	3,0
HP 5/7-0,8	7338	50-70	35	800	910	620	0,60	3,0
HP 5/7-1	7332	50-70	35	1000	1110	820	0,65	3,0
HP 5/7-1,5	7336	50-70	35	1500	1610	1320	0,75	3,0
HP 5/7-2	7333	50-70	35	2000	2110	1820	0,9	3,0
HP 5/7-2,5	7335	50-70	35	2500	2610	2320	1,05	3,0
HP 5/7-3	7337	50-70	35	3000	3110	2820	1,2	3,0
HP 7/10-0,6	7313	70-100	45	600	720	280	0,65	3,0
HP 7/10-1	7314	70-100	45	1000	1120	680	0,75	3,0
HP 7/10-1,2	7346	70-100	45	1200	1310	880	0,80	3,0
HP 7/10-1,5	7315	70-100	45	1500	1620	1180	0,85	3,0
HP 7/10-2	7316	70-100	45	2000	2120	1680	0,95	3,0
HP 7/10-2,5	7319	70-100	45	2500	2620	2180	1,2	3,0
HP 7/10-3	7317	70-100	45	3000	3120	2680	1,5	3,0
HP 7/10-3,5	7320	70-100	45	3500	3620	3180	1,65	3,0
HP 7/10-4	7318	70-100	45	4000	4120	3680	1,8	3,0
HP 10/15-0,6	7301	100-150	65	600	720	280	1,1	2,5
HP 10/15-0,8	7347	100-150	65	800	920	480	1,25	2,5
HP 10/15-1	7302	100-150	65	1000	1120	680	1,4	2,5
HP 10/15-1,2	7326	100-150	65	1200	1320	880	1,6	2,5
HP 10/15-1,5	7303	100-150	65	1500	1620	1180	1,8	2,5
HP 10/15-2	7304	100-150	65	2000	2120	1680	2,1	2,5
HP 10/15-2,5	7321	100-150	65	2500	2620	2180	2,5	2,5
HP 10/15-3	7309	100-150	65	3000	3120	2680	2,9	2,5
HP 10/15-3,5	7322	100-150	65	3500	3620	3180	3,3	2,5
HP 10/15-4	7311	100-150	65	4000	4120	3680	3,7	2,5
HP 10/20-0,6	7348	100-200	68	600	720	320	1,55	2,5
HP 10/20-1	7349	100-200	68	1000	1120	720	2,05	2,5
HP 10/20-1,5	7350	100-200	68	1500	1620	1220	2,65	2,5
HP 10/20-2	7351	100-200	68	2000	2120	1720	3,25	2,5
HP 10/20-2,5	7352	100-200	68	2500	2620	2220	3,85	2,5
HP 10/20-3	7353	100-200	68	3000	3120	2720	4,45	2,5
HP 10/20-3,5	7354	100-200	68	3500	3620	3220	5,05	2,5
HP 10/20-4	7355	100-200	68	4000	4120	3720	5,65	2,5
HP 15/25-0,6	7305	150-250	105	600	730	180	2,5	2,0
HP 15/25-1	7306	150-250	105	1000	1130	580	3,2	2,0
HP 15/25-1,5	7307	150-250	105	1500	1630	1080	4,0	2,0
HP 15/25-2	7308	150-250	105	2000	2130	1580	4,8	2,0
HP 15/25-2,5	7323	150-250	105	2500	2630	2080	5,6	2,0
HP 15/25-3	7310	150-250	105	3000	3130	2580	6,4	2,0
HP 15/25-3,5	7324	150-250	105	3500	3630	3080	7,2	2,0
HP 15/25-4	7312	150-250	105	4000	4130	3580	8,0	2,0



Lateral packers are suitable for maintaining and repairing small-diameter pipes especially with house piping. They consist of a rubberized-fabric tube rounded at both its ends to facilitate manipulation in pipe bends. The effective surface ranges from 500 to 3700 mm.

SMALL LATERAL PACKERS

Small lateral packers are used for repairing of the smallest diameter of house pipeline. For easy manipulation in pipe bends the rigid ends of packer are made as short as possible. The effective surface ranges from 300 mm to 1300 mm.

Small Lateral Packers HP

Type	Part - No	Pipe diameter	Rubber body diameter	Rubber body length	Total length	Application length in max. diameter	Weight	Operating pressure
		mm	mm	mm	mm	mm	kg	bar
HP 3/4 - 0,4	7330	30-40	25	400	450	270	0,30	3,0
HP 3/4 - 0,6	7341	30-40	25	600	650	470	0,40	3,0
HP 3/4 - 1	7342	30-40	25	1000	1050	870	0,60	3,0
HP 3/4 - 1,5	7343	30-40	25	1500	1550	1370	0,90	3,0
HP 3,5/5 - 0,4	7339	35-50	30	400	450	270	0,35	3,0
HP 3,5/5 - 0,6	7340	35-50	30	600	650	470	0,45	3,0
HP 3,5/5 - 1	7344	35-50	30	1000	1050	870	0,65	3,0
HP 3,5/5 - 1,5	7345	35-50	30	1500	1550	1370	0,95	3,0



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

