

The background of the entire page is a dark grey to black gradient, covered with a dense pattern of water droplets of various sizes. The droplets are rendered with highlights and shadows, giving them a three-dimensional appearance. In the upper right quadrant, there is a white circle with a thin grey border. Inside this circle, the word "HAAS" is written in a bold, orange, sans-serif font. A small registered trademark symbol (®) is positioned to the upper right of the letter "S".

**HAAS<sup>®</sup>**

***Production Catalog***







# VAPO spol. s r. o.

The company of VAPO spol. s r.o. was established in 1993 and is based in Červený Kostelec, Czech Republic. The company specializes in two fields: rubberized-fabric products and moulded mechanical-rubber parts.

Among the rubberized-fabric products rank pipe stoppers, lifting bags, leak sealing bags, sealing wedges, leak sealing bandages and rehabilitation packers. Further rubberized-fabric products are made according to specific requirements of our customers.

There is a wide range of mechanical-rubber parts manufactured by our company. The parts are produced on classic electric-heated moulding machines.

More than 25 years of knowledge and experience in the industry, investment in new technologies and cooperation with our business partners enable us to develop new products, improve our existing products and expand our production program. All our products are certified to ISO 9001. As a result, VAPO products guarantee maximum functionality and safety even in extreme conditions.

F 5490182EN (2017.05-01) (5490_018_2EN) ZERTIFIKAT ♦ CERTIFICATE ♦ 認證證書 ♦ CERTIFICADO ♦ CERTIFICAT	
	<b>CERTIFICATE</b>
	<b>Certification Body Management System No. 3053</b> TUV SUD Czech s.r.o.
	certifies that
	
	<b>VAPO, společnost s ručením omezeným</b> 17. listopadu 371, Lhota za Červeným Kostelcem CZ – 549 41 Červený Kostelec Ident. No.: 49283880
	has established and applies a Quality Management System for
	<ul style="list-style-type: none"><li>• pipe stoppers</li><li>• leak sealing bags</li><li>• lifting bags</li><li>• rehabilitation packers</li><li>• rubbermoulded parts</li></ul>
	An audit was performed, Report No. <b>11.768.795</b> Proof has been furnished that the requirements according to
	<b>ČSN EN ISO 9001:2016</b> are fulfilled. The certificate is valid from <b>18.09.2018</b> until <b>17.10.2019</b> Certificate Registration No. <b>09.148.160</b> , revision No. <b>1</b> This certificate is a revision of the certificate No. 09.148.160, issued 17.10.2016.
   	
Prague, 18.09.2018	
TUV SUD Czech s.r.o. • Novodvorská 934 • 142 21 Prague 4 • Czech Republic • <a href="mailto:certification@tuv-sud.cz">certification@tuv-sud.cz</a>	
TUV®	

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# PIPE STOPPERS

The pipe stoppers are effective tools for the quick and reliable sealing or closing of drainage systems, pipelines, sewers and gullies. They are mainly used during repair and maintenance work, accidents and for the leak test with water or air according to DIN EN 1610 of new or repaired sewers and pipe sections. Therefore they are highly valued in the water system organizations, construction industry, civil engineering and rescue and fire brigades.

The pipe stoppers are made of quality rubber reinforced with fabric. They withstand weather conditions, temperature from -30 °C to 80 °C, use and waste water and they are middle resistant of chemicals.

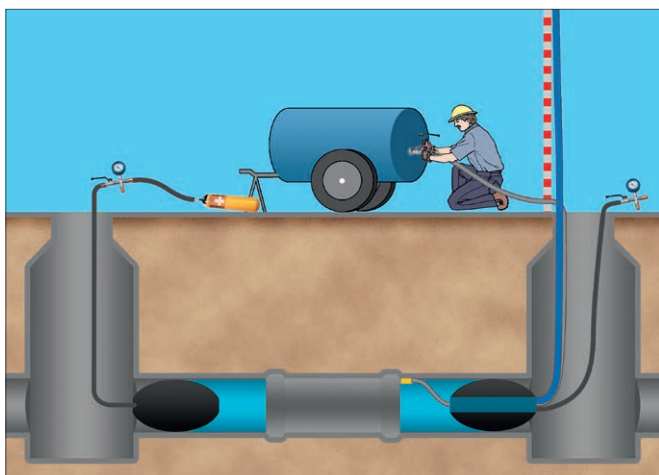
These basic product lines together cover the range of pipe diameters from 40 to 1600 mm. All pipe stoppers withstand the back pressure 1 bar or 0,5 bar.



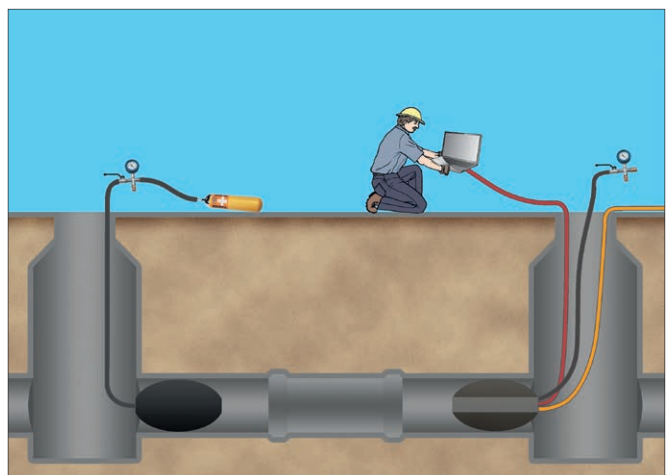
## Pipe Stoppers U

Type		U 4/7	U 5/10	U 7/15	U 10/20	U 15/30	U 20/40	U 20/50	U 30/60	U 40/80	U 50/100	U 60/120	U 100/160
Part - No.		1127	1101	1102	1103	1107	1104	1128	1105	1134	1106	1108	1109
Pipe diameter	mm	40–70	50–100	70–150	100–200	150–300	200–400	200–500	300–600	400–800	500–1000	600–1200	1000–1600
Operating pressure	bar	2,5	2,5	2,5	2,5	2,5	2,5	2,5	2,5	2,5	2,5	1,5	1,0
Back pressure	bar	1,0	1,0	1,0	1,0	1,0	1,0	1,0	1,0	1,0	1,0	0,5	0,5
Diameter	mm	38	47	67	96	135	190	190	270	360	450	560	850
Cylinder length	mm	160	340	330	510	550	580	740	730	1000	1050	1290	1900
Total length	mm	210	390	365	555	595	625	785	775	1070	1120	1360	1970
Weight	kg	0,3	0,5	0,5	1,2	2,1	3,9	4,5	7,6	18	25	38	95

The test of leakage with water according DIN EN 1610



The test of leakage with air according DIN EN 1610



# TEST PIPE STOPPERS

The test pipe stoppers are mainly used to seal or plug pipes and to divert the flow in case of pipe inspection, cleaning, damage or repair. They are effective tool for performing the air leak test or the water leak test. All the pipe stoppers have quickcouplings and flanges that enable connecting various accessories.

The test pipe stoppers **PU** have robust stainless steel flowthrough core with rubberized fabric mantle on it. In case of damage the mantle can be replaced. The flexible test pipe stoppers **PU-F** have flexible design where the flowthrough is ensured by a flexible hose. This enables their easy installation.

These basic product lines together cover the range of pipe diameters from 70 mm to 1600 mm.



## Flexible Test Pipe Stoppers PU-F

Type		PU 7/15 F	PU 10/20 F	PU 15/30 F	PU 20/40 F	PU 20/50 F	PU 30/60 FL	PU 30/60 F	PU 40/80 F	PU 50/100 F	PU 60/120 F	PU 100/160 F
Part - No.		1216	1214	1215	1213	1235	1218	1210	1238	1211	1212	1217
Pipe diameter	mm	70–150	100–200	150–300	200–400	200–500	300–600	300–600	400–800	500–1000	600–1200	1000–1600
Operating pressure	bar	2,5	2,5	2,5	2,5	2,5	2,5	1,5	2,5	2,5	1,5	1,0
Back pressure	bar	1,0	1,0	1,0	1,0	1,0	1,0	0,5	1,0	1,0	0,5	0,5
Diameter	mm	67	96	135	190	190	270	270	360	450	560	850
Cylinder length	mm	330	510	550	580	740	730	730	1000	1050	1290	1900
Total length	mm	420	600	640	670	830	820	820	1100	1150	1390	2000
Weight	kg	1,5	2,4	3,8	6,6	7,4	12,6	13,4	24	39	58	112
Bypass		1"	1"	1"	2"	2"	2"	2x2"	2"	2x2"	2x2"	2x2"

## Test Pipe Stoppers PU

Type		PU 7/15	PU 10/20	PU 20/50	PU 50/80	PU 50/120
Part - No.		1201	1202	1203	1204	1205
Pipe diameter	mm	70–150	100–200	200–500	500–800	500–1200
Operating pressure	bar	1,5	1,5	1,5	1,5	1,5
Back pressure	bar	0,5	0,5	0,5	0,5	0,5
Diameter	mm	67	96	190	450	450
Cylinder length	mm	330	510	580	680	1000
Total length	mm	450	610	690	720	1060
Weight	kg	2,1	4,7	12,5	40	52
Bypass		1"	1"	1x1"	2x1"	2x1"
				1x2"	1x2,5"	1x2,5"





# PROTECTIVE SLEEVES FOR PIPE STOPPERS

Protective sleeves extend the pipe stoppers life time because they protect them against debris and damages by sharp objects, stones and glass. Their dimensions correspond to basic pipe stopper lines **U, P-F**. The handling eyes help to put the sleeves on the pipe stoppers easier.

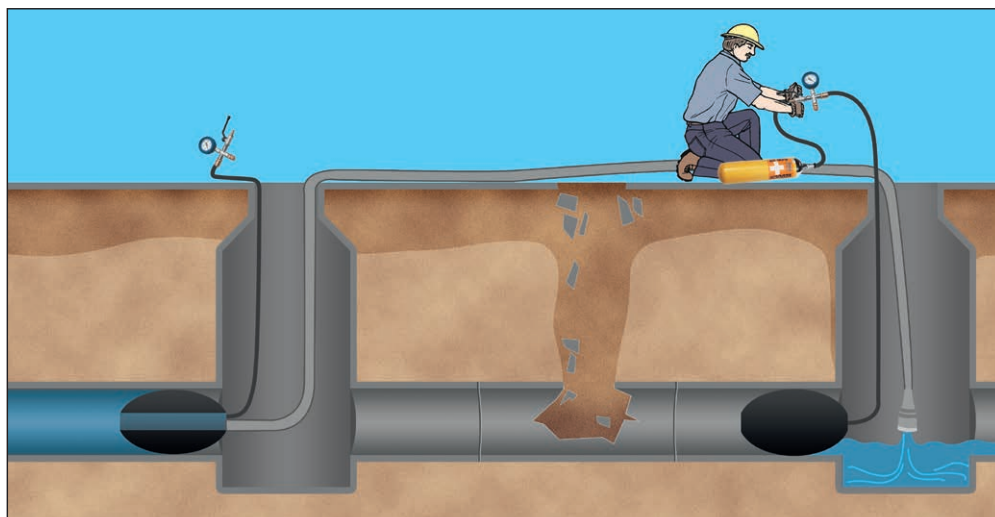


## Pipe Stoppers Protective Sleeves DN

Type		DN 70/150	DN 100/200	DN 150/300	DN 200/400	DN 200/500	DN 300/600	DN 400/800	DN 500/1000	DN 600/1200	DN 1000/1600
Part - No.		8622	8606	8607	8608	8609	8610	8619	8611	8612	8613
Pipe diameter	mm	70–150	100–200	150–300	200–400	200–500	300–600	400–800	500–1000	600–1200	1000–1600
Length of rubber	mm	300	480	520	550	690	680	900	950	1180	1700
Thickness of rubber	mm	2	2	3,5	4	4	4	6	6	6	7
Weight	kg	0,15	0,4	1,1	1,7	1,9	3,5	8,7	11	20	37

## Maximum back pressure measured in dry iron pipe – bar

Type	Pipe diameter in mm																
	40	50	70	75	100	150	200	250	300	400	500	600	800	1000	1200	1400	1600
U 4/7 – 2,5 bar	1,6	1,5	1,2														
U 5/10 – 2,5 bar		1,9	1,6	1,4	1,1												
U 7/15 – 2,5 bar				2,0	1,5	1,2											
U 10/20 – 2,5 bar					2,2	1,8	1,4										
U 15/30 – 2,5 bar						2,4	2,1	1,5	1,3								
U 20/40 – 2,5 bar							2,3	2,1	1,9	1,5							
U 20/50 – 2,5 bar							2,1	1,8	1,7	1,5	1,4						
U 30/60 – 2,5 bar									2,2	1,9	1,6	1,3					
U 40/80 – 2,5 bar										1,9	1,7	1,5	1,1				
U 50/100 – 2,5 bar											1,6	1,5	1,2	1,0			
U 60/120 – 1,5 bar												0,9	0,7	0,6	0,5		
U 100/160 – 1 bar														0,8	0,7	0,6	0,5
PU 7/15 F – 2,5 bar				2,0	1,5	1,2											
PU 10/20 F – 2,5 bar					2,2	1,8	1,4										
PU 15/30 F – 2,5 bar						2,4	2,1	1,5	1,3								
PU 20/40 F – 2,5 bar							2,3	2,1	1,9	1,5							
PU 20/50 F – 2,5 bar							2,1	1,8	1,7	1,5	1,4						
PU 30/60 FL – 2,5 bar									2,2	1,9	1,6	1,3					
PU 30/60 F – 1,5 bar									1,0	0,8	0,7	0,6					
PU 40/80 F – 2,5 bar										1,9	1,7	1,5	1,1				
PU 50/100 F – 2,5 bar											1,6	1,5	1,2	1,0			
PU 60/120 F – 1,5 bar												0,9	0,7	0,6	0,5		
PU 100/160 F – 1 bar														0,8	0,7	0,6	0,5



# SHORT PIPE STOPPERS



Thanks to their short length, these pipe stoppers are suitable especially for sealing sewer connections. They are also used in pipe leak tests.

As well as the other pipe stoppers they are made of high-quality rubber and the metal parts are made of corrosion-resistant materials.

The basic product line covers pipe diameters from 50 mm to 400 mm.

## Short pipe stoppers UK

Type		UK 5/7	UK 7/10	UK 10	UK 10/15	UK 11/17	UK 15	UK 15/20	UK 20	UK 20/25	UK 25/30	UK 30/40
Part - No.		1404	1411	1401	1406	1416	1402	1409	1403	1410	1407	1418
Pipe diameter	mm	50–70	70–100	100	100–150	110–170	150	150–200	200	200–250	250–300	300–400
Operating pressure	bar	2,5	2,5	2,5	2,5	2,5	2,5	2,5	2,5	2,5	2,5	2,5
Back pressure	bar	0,5	0,5	0,5	0,5	0,5	0,5	0,5	0,5	0,5	0,5	0,5
Diameter	mm	46	67	90	90	100	140	140	180	180	240	290
Cylinder length	mm	125	130	160	160	180	220	220	260	260	290	270
Total length	mm	190	185	210	220	230	280	280	320	320	360	330
Weight	kg	0,3	0,5	0,7	0,7	0,8	1,3	1,3	2,3	2,4	4,2	5,4

## Short Bypass Pipe Stoppers PUK

Type		PUK 5/7	PUK 7/10	PUK 10/15	PUK 11/17	PUK 15/20	PUK 20/25	PUK 25/30	PUK 30/40
Part - No.		1415	1405	1408	1417	1412	1413	1414	1420
Pipe diameter	mm	50–70	70–100	100–150	110–170	150–200	200–250	250–300	300–400
Operating pressure	bar	2,5	2,5	2,5	2,5	2,5	2,5	2,5	2,5
Back pressure	bar	0,5	0,5	0,5	0,5	0,5	0,5	0,5	0,5
Diameter	mm	46	67	90	100	140	180	240	290
Cylinder length	mm	125	130	160	180	220	260	290	270
Total length	mm	190	195	195	240	270	320	350	350
Weight	kg	0,3	0,4	0,8	1	2	3,6	5,9	7,5
Bypass		1/4"	1/2"	1/2"	1/2"	1"	2"	2"	2"





# BYPASS PIPE STOPPERS

The use of these pipe stoppers is advantageous if a higher rate of flow is required. The water passes through the stainless-steel centre part. The rubberized-fabric cover is put on this part and is exchangeable in case of defect. The diameter of the standard product line ranges from 100 to 1200 millimetres.



## Bypass Pipe Stoppers PU-G

Type		PU 10 2 G	PU 10/15 2 G	PU 15 2 G	PU 15/20 2 G	PU 10/20 2 G	PU 15/30 3 G	PU 20/50 4 G	PU 50/80 4 G	PU 50/80 6 G	PU 50/80 12 G	PU 50/120 4 G	PU 50/120 6 G	PU 50/120 12 G	
Part - No.		1220	1221	1222	1223	1206	1243	1207	1239	1240	1209	1241	1242	1219	
Pipe diameter	mm	100	100-150	150	150-200	100-200	150-300	200-500	500-800	500-800	500-800	500-1200	500-1200	500-1200	
Operating pressure	bar	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	
Back pressure	bar	0,5	0,5	0,5	0,5	0,5	0,5	0,5	0,5	0,5	0,5	0,5	0,5	0,5	
Diameter	mm	90	90	115	115	90	135	185	450	450	450	450	450	450	
Cylinder length	mm	230	300	230	290	550	520	610	680	680	680	970	970	970	
Total length	mm	320	420	320	380	650	620	750	830	830	830	1120	1120	1120	
Weight	kg	2,3	2,9	3	3,4	4,0	6,6	12,5	40	40	42	53	53	55	
Bypass		2"	2"	2"	2"	2"	3"	4"	4"	4"	6"	12"	4"	6"	12"

# HIGH-PRESSURE PIPE STOPPERS

If the standard sealing pipe stoppers cannot be used due to high back pressure, these high-pressure pipe stoppers are recommendable. Higher operational pressure is ensured by the special Kevlar reinforcement used in all the stoppers. The diameter of the standard product line ranges from 50 to 600 millimetres.

## High-Pressure Pipe Stoppers UU – 6 bar

Type		UU 5/7	UU 7/10	UU 10/15	UU 15/20	UU 20/30	UU 30/40	UU 40/50	UU 50/60
Part - No.		1119	1113	1114	1115	1116	1117	1135	1118
Pipe diameter	mm	50-70	70-100	100-150	150-200	200-300	300-400	400-500	500-600
Operating pressure	bar	6,0	6,0	6,0	6,0	6,0	6,0	6,0	6,0
Back pressure	bar	3,0	3,0	3,0	3,0	3,0	3,0	3,0	3,0
Diameter	mm	47	67	96	135	190	270	360	450
Cylinder length	mm	340	330	510	550	580	730	1000	1050
Total length	mm	390	365	555	595	625	775	1070	1130
Weight	kg	0,5	0,5	1,2	2,3	4,3	9,0	20	29

## High-Pressure Pipe Stoppers UU – 12 bar

Type		UU 7/9	UU 10/13	UU 14/17	UU 20/25	UU 30/35
Part - No.		1129	1130	1131	1132	1133
Pipe diameter	mm	70-90	100-130	140-170	200-250	300-350
Operating pressure	bar	12	12	12	12	12
Back pressure	bar	10	10	10	10	10
Diameter	mm	67	96	135	190	270
Cylinder length	mm	330	510	550	580	730
Total length	mm	365	555	595	625	775
Weight	kg	0,5	1,6	2,5	4,9	12



# EGG-SHAPED PIPE STOPPERS

These pipe stoppers are used to seal the egg-shaped profiles. Leak test can also be done with them. They are manufactured in two versions. The design **UV**, **PUV** and **PUV-F**, which copies the profile of the egg-shaped pipe, is used for smaller pipe profiles. For larger profiles, the pillow version **UVP** and **PUVP** is used. Its advantage is that it is flexible and that it can be inserted through a common shaft.



## Egg-shaped Pipe Stoppers UV, UVP

Type		UV 30/45 40/60	UV 50/75 60/90	UV 70/105 90/135	UVP 50/75 60/90	UVP 70/105 90/135
Part - No.		1601	1602	1603	1604	1605
Sealing cross-section	mm	300–400 450–600	500–600 750–900	700–900 1050–1350	500–600 750–900	700–900 1050–1350
Operating pressure	bar	1,0	1,0	1,0	1,0	1,0
Back pressure	bar	0,5	0,5	0,5	0,5	0,5
Dimensions (w x h x l)	mm	270 x 380 x 800	470 x 690 x 1060	650 x 960 x 1360	700 x 2100	1000 x 2500
Weight	kg	12	32	60	23	39

## Egg-shaped Test Pipe Stoppers PUV, PUV-F and PUVP

Type		PUV 30/45 40/60	PUV 50/75 60/90	PUV 70/105 90/135	PUV 30/45 40/60 F	PUV 50/75 60/90 F	PUV 70/105 90/135 F	PUVP 50/75 60/90	PUVP 70/105 90/135
Part - No.		1303	1301	1302	1304	1305	1306	1307	1308
Sealing cross-section	mm	300–400 450–600	500–600 750–900	700–900 1050–1350	300–400 450–600	500–600 750–900	700–900 1050–1350	500–600 750–900	700–900 1050–1350
Operating pressure	bar	1,0	1,0	1,0	1,0	1,0	1,0	1,0	1,0
Back pressure	bar	0,5	0,5	0,5	0,5	0,5	0,5	0,5	0,5
Dimensions (w x h x l)	mm	280 x 410 x 750	470 x 690 x 880	650 x 960 x 1060	270 x 380 x 800	470 x 690 x 1060	650 x 960 x 1360	700 x 2100	1000 x 2500
Weight	kg	25	51	78	19	51	98	31	48
Bypass		1x1" 1x2"	1x1" 1x2,5"	1x1" 1x2,5"	1x1" 1x2"	2x2"	2x2"	2"	2"



# PILLOW PIPE STOPPERS

These pipe stoppers are mainly used in various sewers and storm sewers. Their advantage is in their ability to be inserted into the sewer through the standard gullies. The special Kevlar reinforcement enables us to manufacture these stoppers in large diameters. The standard product line ranges from 1000 to 2200 millimetres.



**PUP**

**UP**

## Pillow Pipe Stoppers UP, PUP

Type		UP 100/140	UP 140/180	UP 180/220	PUP 100/140	PUP 140/180	PUP 180/220
Part - No.		1110	1111	1112	1225	1226	1227
Pipe diameter	mm	1000–1400	1400–1800	1800–2200	1000–1400	1400–1800	1800–2200
Operating pressure	bar	0,7	0,6	0,5	0,7	0,6	0,5
Back pressure	bar	0,5	0,5	0,5	0,5	0,5	0,5
Width of pillow	mm	1450	2050	2650	1450	2050	2650
Length of pillow	mm	2300	3200	3900	2300	3200	3900
Weight	kg	52	94	141	63	106	155
Bypass		–	–	–	2,5"	2,5"	2,5"

# TEST STOPPERS FOR GULLIES

These short, light and easy-to-handle stoppers are used for leak tests of standard gullies using water or air as the testing medium according to DIN EN 1610. The accessories are identical with common pipe stoppers. If required, we are able to manufacture the stopper of a different shape or size. They are standard **US** and light **US-L**.



**US**

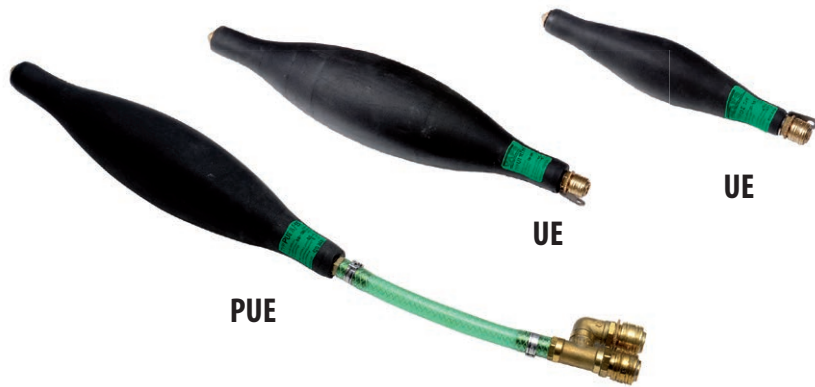


**US-L**

## Test Stoppers for Gullies US, US-L

Type		US 60/65	US 60/65 L	US 80/85 L	US 100/105 L
Part - No.		9028	9038	9116	9117
Pipe diameter	mm	600–650	600–650	800–850	1000–1050
Operating pressure	bar	1,5	1,0	1,0	1,0
Diameter	mm	560	580	780	980
Cylinder length	mm	300	200	200	200
Weight	kg	19	5,5	7,3	9
Bypass		2"	2"	2"	2"

## SKITTLE PIPE STOPPERS



These pipe stoppers are used for sealing of pipelines with a restricted inlet area. Due to their shape and flexibility they enable easy installation. Leak tests of house connections with air or water with these pipe stoppers are very easy, too. The standard product line covers a range from 50 to 200 millimetres.

### Skittle Pipe Stoppers UE

Type		UE 5/10	UE 8/15	UE 12/20
Part - No.		1705	1701	1702
Pipe diameter	mm	50–100	80–150	120–200
Operating pressure	bar	2,5	2,0	1,5
Back pressure	bar	1,0	1,0	1,0
Diameter	mm	48	78	116
Length	mm	300	380	520
Total length	mm	350	430	570
Opening for insertion	mm	40	50	60
Weight	kg	0,35	0,50	1,10

### Test Skittle Pipe Stoppers PUE

Type		PUE 5/10	PUE 8/15	PUE 12/20
Part - No.		1706	1703	1704
Pipe diameter	mm	50–100	80–150	120–200
Operating pressure	bar	2,5	2,0	1,5
Back pressure	bar	1,0	1,0	1,0
Diameter	mm	48	78	116
Length	mm	300	380	520
Total length	mm	520	600	770
Opening for insertion	mm	40	50	60
Weight	kg	0,60	0,80	1,40
Bypass	mm	4	4	6

## HALFROUND PIPE STOPPERS

These pipe stoppers are due to their length suitable for sealing of house connections and domestic pipe systems. Thanks to their shape, they are easy to install in pipelines with bends. Because they are short the air requirement is low and easily ensured by foot or hand pump. The standard product line covers a range from 50 to 200 millimetres.



### Halfround Pipe Stoppers UR

Type		UR 5/7	UR 7/10	UR 10/15	UR 15/20
Part - No.		9109	9110	9042	9094
Pipe diameter	mm	50–70	70–100	100–150	150–200
Operating pressure	bar	2,5	2,5	2,5	2,5
Back pressure	bar	0,5	0,5	0,5	0,5
Diameter	mm	46	67	90	140
Length	mm	95	125	150	170
Total length	mm	140	165	190	210
Weight	kg	0,3	0,4	0,65	1

# CONE PIPE STOPPERS

Cone pipe stoppers have in comparison with classical pipe stoppers different construction but their use is the same. They are mainly used during repair and maintenance work, accidents and the leak tests of pipelines. This construction allows their use for all profiles, also egg-shaped, rectangular and many others. These pipe stoppers are made of quality rubber. Therefore they have good chemical resistance, high age-resistance, low weight, and they are simply repairable. The diameter of standard product line ranges from 150 to 2200 mm.



## Cone Pipe Stoppers ULK

Type		ULK 15/40	ULK 25/60	ULK 40/100	ULK 50/120	ULK 60/140	ULK 70/160	ULK 120/220
Part - No.		1125	1120	1121	1126	1122	1123	1124
Pipe diameter	mm	150–400	250–600	400–1000	500–1200	600–1400	700–1600	1200–2200
Operating pressure	bar	1,0	1,0	1,0	1,0	1,0	1,0	1,0
Back pressure	bar	0,5	0,5	0,5	0,5	0,5	0,5	0,5
Total length	mm	900	1100	1950	2100	2450	2600	3450
Weight	kg	2,9	4,0	13	17	27	35	71



## Cone Test Pipe Stoppers PULK

Type		PULK 15/40	PULK 25/60	PULK 40/100	PULK 50/120	PULK 60/140	PULK 70/160	PULK 120/220
Part - No.		1233	1228	1229	1234	1230	1231	1232
Pipe diameter	mm	150–400	250–600	400–1000	500–1200	600–1400	700–1600	1200–2200
Operating pressure	bar	1,0	1,0	1,0	1,0	1,0	1,0	1,0
Back pressure	bar	0,5	0,5	0,5	0,5	0,5	0,5	0,5
Total length	mm	1000	1200	2050	2200	2550	2700	3550
Weight	kg	3,9	11	24	28	40	49	86
Bypass		1"	2"	2,5"	2,5"	2,5"	2,5"	2,5"





# PIPE STOPPERS WITH EYES ON BOTH SIDES



The design of these stoppers is basically the same like the pipe stoppers type **U**, but they have extra handling eye on the back side. This supports easier manipulation and securing against being pushed out.

## Pipe Stoppers with Eyes on Both Sides 20

Type		U 4/7	U 5/10	U 7/15	U 10/20	U 15/30	U 20/40	U 20/50	U 30/60	U 40/80	U 50/100	U 60/120
Part - No.		11278	11018	11028	11038	11078	11048	11288	11058	11348	11068	11088
Pipe diameter	mm	40–70	50–100	70–150	100–200	150–300	200–400	200–500	300–600	400–800	500–1000	600–1200
Operating pressure	bar	2,5	2,5	2,5	2,5	2,5	2,5	2,5	2,5	2,5	2,5	1,5
Back pressure	bar	1,0	1,0	1,0	1,0	1,0	1,0	1,0	1,0	1,0	1,0	0,5
Diameter	mm	38	47	67	96	135	190	190	270	360	450	560
Length	mm	160	340	330	510	550	580	740	730	1000	1050	1290
Total length	mm	210	390	365	555	595	625	785	775	1070	1120	1360
Weight	kg	0,3	0,5	0,5	1,2	2,1	3,9	4,5	7,6	18	25	38

# MULTITEST STOPPERS

These stoppers are used for pipe joints air leak test. The air leak test pressure is 0,001 MPa (100 mm of water column).



## Multitest Stoppers MTU

Type		MTU 30/50	MTU 50/70	MTU 70/90
Part - No.		9228	9239	9259
Pipe diameter	mm	300–500	500–700	700–900
Operating pressure	bar	1,5	1,5	1,5
Back pressure	bar	0,5	0,5	0,5
Diameter	mm	290	480	680
Total length	mm	300	300	270
Weight	kg	8	11,5	17

# PIPE STOPPERS OIL-RESISTANT

These pipe stoppers are derived from the basic pipe stopper types **U** and **UK** but their surface layer is made from oil resistant material. Therefore they are mainly used in the chemical industry.



## Pipe Stoppers Oil-Resistant OL

Type		U 4/7 OL	U 5/10 OL	U 7/15 OL	U 10/20 OL	U 15/30 OL	U 20/40 OL	U 20/50 OL	U 30/60 OL	U 40/80 OL	U 50/100 OL	U 60/120 OL	U 100/160 OL
Part - No.		11275	11015	11025	11035	11075	11045	11285	11055	11345	11065	11085	11095
Pipe diameter	mm	40–70	50–100	70–150	100–200	150–300	200–400	200–500	300–600	400–800	500–1000	600–1200	1000–1600
Operating pressure	bar	2,5	2,5	2,5	2,5	2,5	2,5	2,5	2,5	2,5	2,5	1,5	1,0
Back pressure	bar	1,0	1,0	1,0	1,0	1,0	1,0	1,0	1,0	1,0	1,0	0,5	0,5
Diameter	mm	38	47	67	96	135	190	190	270	360	450	560	850
Cylinder length	mm	160	340	330	510	550	580	740	730	1000	1050	1290	1900
Total length	mm	210	390	365	555	595	625	785	775	1070	1120	1360	1970
Weight	kg	0,3	0,5	0,5	1,2	2,1	3,9	4,5	7,6	18	25	38	95

## Short Pipe Stoppers Oil-Resistant OL

Type		UK 5/7 OL	UK 7/10 OL	UK 10 OL	UK 10/15 OL	UK 11/17 OL	UK 15 OL	UK 15/20 OL	UK 20 OL	UK 20/25 OL	UK 25/30 OL	UK 30/40 OL
Part - No.		14045	14115	14015	14065	14165	14025	14095	14035	14105	14075	14185
Pipe diameter	mm	50–70	70–100	100	100–150	110–170	150	150–200	200	200–250	250–300	300–400
Operating pressure	bar	2,5	2,5	2,5	2,5	2,5	2,5	2,5	2,5	2,5	2,5	2,5
Back pressure	bar	0,5	0,5	0,5	0,5	0,5	0,5	0,5	0,5	0,5	0,5	0,5
Diameter	mm	46	67	90	90	100	140	140	180	180	240	290
Cylinder length	mm	125	130	160	160	180	220	220	260	260	290	270
Total length	mm	190	185	210	220	230	280	280	320	320	360	330
Weight	kg	0,3	0,5	0,7	0,7	0,8	1,3	1,3	2,3	2,4	4,2	5,4

## Part-No. Description

50419	Inflation hose with quick couplings, 3 m
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50418	Inflation hose with nipples, 5 m
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50417	Inflation hose with nipples, 10 m
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50725	Safety and control gauge 0,5 bar – V 0,5
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50734	Safety and control gauge 0,6 bar – V 0,6
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50233	Safety and control gauge 0,7 bar – V 0,7
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50171	Safety and control gauge 1 bar – V 1
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50105	Safety and control gauge 1,5 bar – V 1,5
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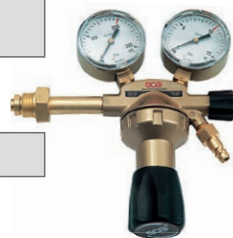
50172	Safety and control gauge 2,5 bar – V 2,5
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50728	Safety and control gauge 6 bar – V 6
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50744	Safety and control gauge 12 bar – V 12
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2005	Pressure reducer 200/8 bar
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2066	Pressure reducer 300/8 bar
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50152	Cylinder 7 l
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50151	Cylinder 5 l
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2036	Adapter for tireventil
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2047	Quick coupling for tireventil
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2046	Rope with snap hook, 5 m
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2113	Rope with snap hooks, 10 m
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## Part-No. Description

2150	Poly-Lift inflation hose with nipples, 5 m
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2151	Poly-Lift inflation hose with nipples, 10 m
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2152	Poly-Lift inflation hose with nipples, 15 m
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2155	Poly-Lift inflation hose with nipple and quick coupling, 5 m
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2156	Poly-Lift inflation hose with nipple and quick coupling, 10 m
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2157	Poly-Lift inflation hose with nipple and quick coupling, 15 m
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2065	Adapter quick coupling – tire ventil
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2010	Venting and measuring hose, 6 m for PU 10/20
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2009	Venting and measuring hose, 6 m for PU 20/50, PU 50/80, PU 50/120
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2060	Venting and measuring hose, 6 m for PU 30/60 F, PU 50/100 F
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2011	Stopcock with Storz D couplings
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2012	Stopcock with Storz C couplings
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2013	Stopcock with Storz B couplings
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2078	Stopcock with Storz A couplings
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# ACCESSORIES

## Part-No. Description

2058 Manometer for the leak test with air 0–250 mbar with hose, 5 m

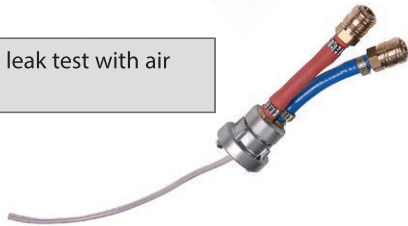


2086 Digital manometer for the leak test with air with hose, 5 m 0–2000 mbar



2128 Digital manometer for the leak test with air with hose, 5 m 0–200 mbar

2032 Adapter for the leak test with air N – D 25



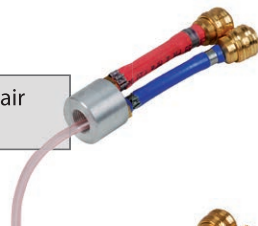
2035 Adapter for the leak test with air N – C 52



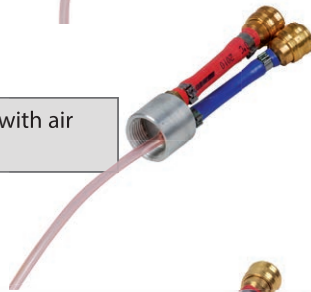
2073 Adapter for the leak test with air N – B 75



2064 Adapter for the leak test with air N – PUK 1/2"



2069 Adapter for the leak test with air N – PUK 1"



2138 Adapter for the leak test with air N – PUK 2"



## Part-No. Description

50435 Hand pump



50103 Foot pump



2023 Reduction Storz D 25/GEKA-coupling



2061 Reduction Storz C 52/GEKA-coupling



2070 Reduction Storz B 75/GEKA-coupling



2025 Reduction GEKA/quick coupling



2088 Adapter for the leak test with water NV – C 52



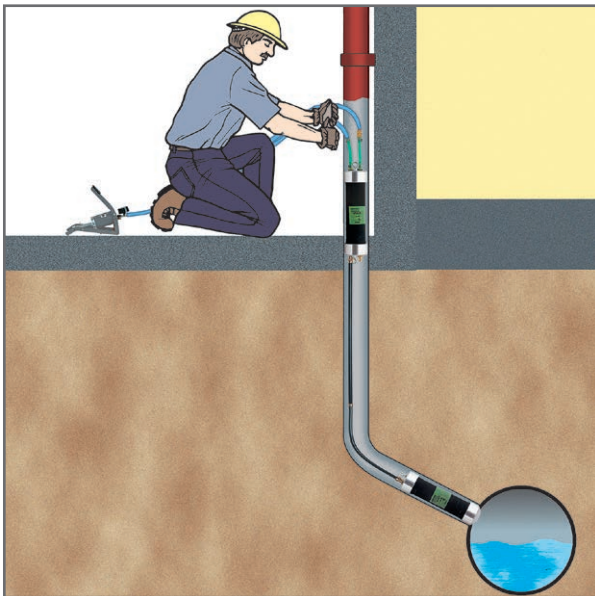
2087 Adapter for the leak test with water NV – B 75



# TESTING SET FOR HOUSE CONNECTIONS DS 8/15



This set is used for DN 80 to 150 mm pipe leak tests using air as the testing medium. They can be used both in straight sections of the pipe and in section with round or sharp bends or knee pieces up to 90 degrees. The set consists of a digital pressure gauge and all the necessary fittings and accessories for carrying out leak tests according to DIN EN 1610.



2106	Reduction MINI/V – 7,2/R	1 pc
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2085	Reduction MINI/R – 7,2/V	1 pc
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## Accessories and spare parts:

### Part-No. Description

1502	Test pipe stopper HPU 8/15	1 pc
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1505	Test pipe stopper HPU 8/15 W	1 pc
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1501	Pipe stopper HU 8/15	1 pc
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2089	Filling armature with manometer 0–4 bar	1 pc
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2090	Test armature for the leak test with air	1 pc
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2091	Digital manometer with hose, 1 m	1 pc
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2107	Sliding and filling rod, 2 m	4 pcs
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2108	Sliding and filling rod, 1 m	1 pc
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2109	Sliding and filling rod, 0,5 m	2 pcs
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2095	Rope with snap hooks, 10 m	1 pc
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50243	Portable case	1 pc
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# TESTING SET FOR HOUSE CONNECTION DS 10/20

## Accessories and spare parts:

### Part-No. Description

1504	Test pipe stopper HPU 10/20	1 pc
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1503	Pipe stopper HU 10/20	1 pc
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2089	Filling armature with manometer 0-4 bar	1 pc
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2101	Adapter for the leak test with air	1 pc
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2098	Stopcock G1" with GEKA couplings	1 pc
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2099	Float	1 pc
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2100	Safety armature 300 mbar for the leak test with air	1 pc
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2107	Sliding and filling rod, 2 m	4 pcs
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2108	Sliding and filling rod, 1 m	1 pc
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2109	Sliding and filling rod, 0,5 m	2 pcs
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2105	Adapter for digital manometer	1 pc
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This set is used for DN 100 to 200 mm pipe leak tests using air or water as the testing medium. They can be used both in straight sections of the pipe and in section with round or sharp bends. The set consists of all the necessary fittings and accessories for carrying out leak tests according to DIN EN 1610.

2097	Venting and measuring hose with GEKA couplings, 5 m	1 pc
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2095	Rope with snap hooks, 10 m	1 pc
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2106	Reduction MINI/V - 7,2/R	1 pc
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2085	Reduction MINI/R - 7,2/V	1 pc
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50244	Portable case	1 pc
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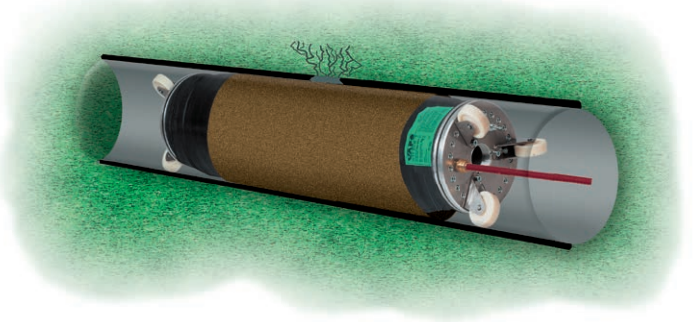
# REHABILITATION PACKERS

Rehabilitation packers are used for repairing locally damaged sewerages or other pipelines 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 30 mm to 1200 mm can be maintained or repaired in this way.

These packers can be divided into several groups: short packers **P** and **PV**, flexible packers **FP**, lateral packers **HP**, **HPP**, long packers **DP**, bend packers **OP** and hat packers **KP**. 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 their ends at an angle of 120°. The wheels ensure the stability of the packer in the pipeline. This design allows water to flow freely during the repair. The length of the effective surface is from 600 mm to 800 mm which is sufficient for repairing a joint or a short damaged spot.



### Short Packers P

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
P 15/20	7101	150–200	100	800	980	600	7,0	2,0
P 20/25	7106	200–250	145	800	1030	600	12,0	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	Rubber body dimensions	Rubber body length	Total length	Weight	Operating pressure
		mm	mm	mm	mm	kg	bar
PV 20/30	7112	200 x 300	140 x 195	800	980	14,0	1,5
PV 25/37,5	7113	250 x 375	190 x 270	800	980	22,0	1,5
PV 30/45	7110	300 x 450	230 x 330	800	1030	28,0	1,5
PV 40/60	7109	400 x 600	330 x 480	800	1030	49,0	1,5
PV 50/75	7114	500 x 750	420 x 615	900	1130	63,0	1,5
PV 60/90	7115	600 x 900	520 x 765	900	1130	80,0	1,5



# FLEXIBLE PACKERS

Flexible packers are provided with a single-layer rubberized-fabric sleeve with metal faces with wheels at both their ends at an angle of 120°. The wheels ensure the stability of the packer in the pipeline. This design allows water to flow freely during the repair. The effective surface ranges is from 600 mm to 3680 mm. Their flexibility allows easy installation in the pipeline.



## Flexible Packers FP

Type	Part-No.	Pipe diameter	Rubber body diameter	Rubber body length	Total length	Application length in max. diameter	Weight	Operating pressure	Bypass
		mm	mm	mm	mm	mm	kg	bar	
FP 10/15-1	7209	100-150	65	1000	1120	680	3,0	2,5	-
FP 10/15-1,5	7211	100-150	65	1500	1620	1180	3,5	2,5	-
FP 10/15-2	7210	100-150	65	2000	2120	1680	4,0	2,5	-
FP 10/15-2,5	7212	100-150	65	2500	2620	2180	4,5	2,5	-
FP 10/15-3	7213	100-150	65	3000	3120	2680	5,0	2,5	-
FP 10/15-3,5	7214	100-150	65	3500	3620	3180	5,5	2,5	-
FP 10/15-4	7215	100-150	65	4000	4120	3680	6,0	2,5	-
FP 15/25-1	7201	150-250	105	1000	1180	580	7,9	2,0	2"
FP 15/25-1,5	7216	150-250	105	1500	1680	1080	8,9	2,0	2"
FP 15/25-2	7202	150-250	105	2000	2180	1580	10	2,0	2"
FP 15/25-2,5	7217	150-250	105	2500	2680	2080	11	2,0	2"
FP 15/25-3	7218	150-250	105	3000	3180	2580	12,1	2,0	2"
FP 15/25-3,5	7219	150-250	105	3500	3680	3080	13,1	2,0	2"
FP 15/25-4	7220	150-250	105	4000	4180	3580	14,2	2,0	2"
FP 20/30-1	7236	200-300	144	1100	1340	680	10	1,5	2"
FP 20/30-1,5	7237	200-300	144	1600	1840	1180	11,1	1,5	2"
FP 20/30-2	7238	200-300	144	2000	2240	1580	12,2	1,5	2"
FP 20/30-2,5	7239	200-300	144	2600	2840	2180	13,3	1,5	2"
FP 20/30-3	7240	200-300	144	3000	3240	2580	14,4	1,5	2"
FP 20/30-3,5	7241	200-300	144	3600	3840	3180	15,5	1,5	2"
FP 20/30-4	7242	200-300	144	4000	4240	3580	16,6	1,5	2"
FP 30/40-1	7203	300-400	223	1100	1340	680	19	1,5	2"
FP 30/40-1,5	7221	300-400	223	1600	1840	1180	21	1,5	2"
FP 30/40-2	7204	300-400	223	2000	2240	1580	23	1,5	2"
FP 30/40-2,5	7222	300-400	223	2600	2840	2180	26	1,5	2"
FP 30/40-3	7223	300-400	223	3000	3240	2580	28	1,5	2"
FP 30/40-3,5	7224	300-400	223	3600	3840	3180	31	1,5	2"
FP 30/40-4	7225	300-400	223	4000	4240	3580	33	1,5	2"
FP 45/60-1	7205	450-600	360	1100	1340	600	40	1,0	4"
FP 45/60-1,5	7226	450-600	360	1600	1840	1100	45	1,0	4"
FP 45/60-2	7206	450-600	360	2000	2240	1400	48	1,0	4"
FP 45/60-2,5	7227	450-600	360	2700	2940	2100	55	1,0	4"
FP 45/60-3	7228	450-600	360	3000	3240	2400	58	1,0	4"
FP 60/80-1	7207	600-800	383	1400	1640	600	61	1,0	4"
FP 60/80-1,5	7229	600-800	383	1700	1940	900	64	1,0	4"
FP 60/80-2	7208	600-800	383	2000	2240	1200	67	1,0	4"
FP 60/80-2,5	7230	600-800	383	2700	2940	1900	74	1,0	4"
FP 60/80-3	7231	600-800	383	3000	3240	2200	77	1,0	4"
FP 80/100-1,5	7235	800-1000	550	1800	2040	950	83	1,0	4"
FP 100/120-2	7234	1000-1200	550	2200	2440	1250	90	1,0	4"



## Long Packers DP

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
DP 20/30-1	7429	200-300	150	1000	1100	580	5,1	1,5
DP 20/30-1,5	7403	200-300	150	1500	1600	1080	6,4	1,5
DP 20/30-2	7404	200-300	150	2000	2100	1580	7,7	1,5
DP 20/30-2,5	7402	200-300	150	2500	2600	2080	9,0	1,5
DP 20/30-3	7405	200-300	150	3000	3100	2580	10,3	1,5
DP 20/30-3,5	7417	200-300	150	3500	3600	3080	11,6	1,5
DP 20/30-4	7406	200-300	150	4000	4100	3580	12,9	1,5
DP 30/40-1	7440	300-400	240	1000	1100	580	9,4	1,5
DP 30/40-1,5	7418	300-400	240	1500	1600	1080	11,5	1,5
DP 30/40-2	7407	300-400	240	2000	2100	1580	13,6	1,5
DP 30/40-2,5	7419	300-400	240	2500	2600	2080	15,7	1,5
DP 30/40-3	7408	300-400	240	3000	3100	2580	17,8	1,5
DP 30/40-3,5	7401	300-400	240	3500	3600	3080	19,9	1,5
DP 30/40-4	7409	300-400	240	4000	4100	3580	22,0	1,5
DP 40/50-1,5	7420	400-500	340	1500	1600	1080	17,4	1,0
DP 40/50-2	7410	400-500	340	2000	2100	1580	20,7	1,0
DP 40/50-2,5	7421	400-500	340	2500	2600	2080	24,0	1,0
DP 40/50-3	7411	400-500	340	3000	3100	2580	27,3	1,0
DP 40/50-3,5	7422	400-500	340	3500	3600	3080	30,6	1,0
DP 40/50-4	7412	400-500	340	4000	4100	3580	34,0	1,0
DP 50/60-1,5	7423	500-600	430	1500	1600	1000	25,0	1,0
DP 50/60-2	7413	500-600	430	2000	2100	1500	29,2	1,0
DP 50/60-2,5	7424	500-600	430	2500	2600	2000	33,4	1,0
DP 50/60-3	7414	500-600	430	3000	3100	2500	37,6	1,0
DP 50/60-3,5	7425	500-600	430	3500	3600	3000	41,8	1,0
DP 50/60-4	7415	500-600	430	4000	4100	3500	46,0	1,0
DP 60/80-1,5	7434	600-800	510	1500	1600	920	31,0	0,6
DP 60/80-2	7436	600-800	510	2000	2100	1420	36,0	0,6
DP 60/80-2,5	7430	600-800	510	2500	2600	1920	41,0	0,6
DP 60/80-3	7437	600-800	510	3000	3100	2420	46,0	0,6
DP 60/80-3,5	7438	600-800	510	3500	3600	2920	51,0	0,6
DP 60/80-4	7439	600-800	510	4000	4100	3420	56,0	0,6



## BEND PACKERS

## Bend Packers OP

Typ	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
OP 5/7 - 0,4	7515	50-70	35	400	510	200	0,7	2,0
OP 5/7 - 0,6	7512	50-70	35	600	710	300	0,75	2,0
OP 5/7 - 1	7516	50-70	35	1000	1110	500	0,95	2,0
OP 5/7 - 1,5	7521	50-70	35	1500	1610	750	1,25	2,0
OP 7/10 - 0,6	7501	70-100	45	600	720	300	0,95	2,0
OP 7/10 - 1	7502	70-100	45	1000	1120	500	1,2	2,0
OP 7/10 - 1,5	7503	70-100	45	1500	1620	750	1,6	2,0
OP 8/11 - 0,6	7522	80-110	58	600	710	300	1,1	2,0
OP 8/11 - 1	7513	80-110	58	1000	1120	500	1,55	2,0
OP 8/11 - 1,5	7514	80-110	58	1500	1620	750	2,05	2,0
OP 10/13 - 0,6	7511	100-130	63	600	710	300	1,4	2,0
OP 10/13 - 1	7506	100-130	63	1000	1120	500	1,9	2,0
OP 10/13 - 1,5	7507	100-130	63	1500	1620	750	2,5	2,0
OP 12/15 - 1	7523	120-150	68	1000	1120	500	2,1	2,0
OP 12/15 - 1,5	7524	120-150	68	1500	1620	750	2,9	2,0
OP 14/20 - 1	7508	140-200	86	1000	1130	500	3,1	2,0
OP 14/20 - 1,5	7509	140-200	86	1500	1630	750	4	2,0
OP 18/25 - 1	7504	180-250	107	1000	1130	500	4,1	2,0
OP 18/25 - 1,5	7505	180-250	107	1500	1630	750	5,3	2,0



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



# LATERAL PACKERS

## 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	70	220	0,40	3,0
HP 5/7-0,6	7331	50-70	35	600	670	420	0,5	3,0
HP 5/7-0,8	7338	50-70	35	800	870	620	0,6	3,0
HP 5/7-1	7332	50-70	35	1000	1070	820	0,7	3,0
HP 5/7-1,5	7336	50-70	35	1500	1570	1320	0,95	3,0
HP 5/7-2	7333	50-70	35	2000	2070	1820	1,2	3,0
HP 5/7-2,5	7335	50-70	35	2500	2570	2320	1,45	3,0
HP 5/7-3	7337	50-70	35	3000	3070	2820	1,7	3,0
HP 7/10-0,6	7313	70-100	45	600	680	280	0,9	3,0
HP 7/10-1	7314	70-100	45	1000	1080	680	1,2	3,0
HP 7/10-1,2	7346	70-100	45	1200	1280	880	1,4	3,0
HP 7/10-1,5	7315	70-100	45	1500	1580	1180	1,6	3,0
HP 7/10-2	7316	70-100	45	2000	2080	1680	2	3,0
HP 7/10-2,5	7319	70-100	45	2500	2580	2180	2,4	3,0
HP 7/10-3	7317	70-100	45	3000	3080	2680	2,8	3,0
HP 7/10-3,5	7320	70-100	45	3500	3580	3180	3,2	3,0
HP 7/10-4	7318	70-100	45	4000	4080	3680	3,6	3,0
HP 10/15-0,6	7301	100-150	65	600	700	280	1,2	2,5
HP 10/15-0,8	7347	100-150	65	800	900	480	1,4	2,5
HP 10/15-1	7302	100-150	65	1000	1100	680	1,7	2,5
HP 10/15-1,2	7326	100-150	65	1200	1300	880	2	2,5
HP 10/15-1,5	7303	100-150	65	1500	1600	1180	2,3	2,5
HP 10/15-2	7304	100-150	65	2000	2100	1680	2,9	2,5
HP 10/15-2,5	7321	100-150	65	2500	2600	2180	3,5	2,5
HP 10/15-3	7309	100-150	65	3000	3100	2680	4,1	2,5
HP 10/15-3,5	7322	100-150	65	3500	3600	3180	4,7	2,5
HP 10/15-4	7311	100-150	65	4000	4100	3680	5,3	2,5
HP 10/20-0,6	7348	100-200	68	600	700	320	1,3	2,5
HP 10/20-1	7349	100-200	68	1000	1100	720	1,9	2,5
HP 10/20-1,5	7350	100-200	68	1500	1600	1220	2,7	2,5
HP 10/20-2	7351	100-200	68	2000	2100	1720	3,4	2,5
HP 10/20-2,5	7352	100-200	68	2500	2600	2220	4,1	2,5
HP 10/20-3	7353	100-200	68	3000	3100	2720	4,9	2,5
HP 10/20-3,5	7354	100-200	68	3500	3600	3220	5,6	2,5
HP 10/20-4	7355	100-200	68	4000	4100	3720	6,4	2,5
HP 15/25-0,6	7305	150-250	105	600	710	180	3,4	2,0
HP 15/25-1	7306	150-250	105	1000	1110	580	4,2	2,0
HP 15/25-1,5	7307	150-250	105	1500	1610	1080	5,1	2,0
HP 15/25-2	7308	150-250	105	2000	2110	1580	6	2,0
HP 15/25-2,5	7323	150-250	105	2500	2610	2080	6,9	2,0
HP 15/25-3	7310	150-250	105	3000	3110	2580	7,8	2,0
HP 15/25-3,5	7324	150-250	105	3500	3610	3080	8,7	2,0
HP 15/25-4	7312	150-250	105	4000	4110	3580	9,6	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 220 mm to 3720 mm.



# SMALL PACKERS

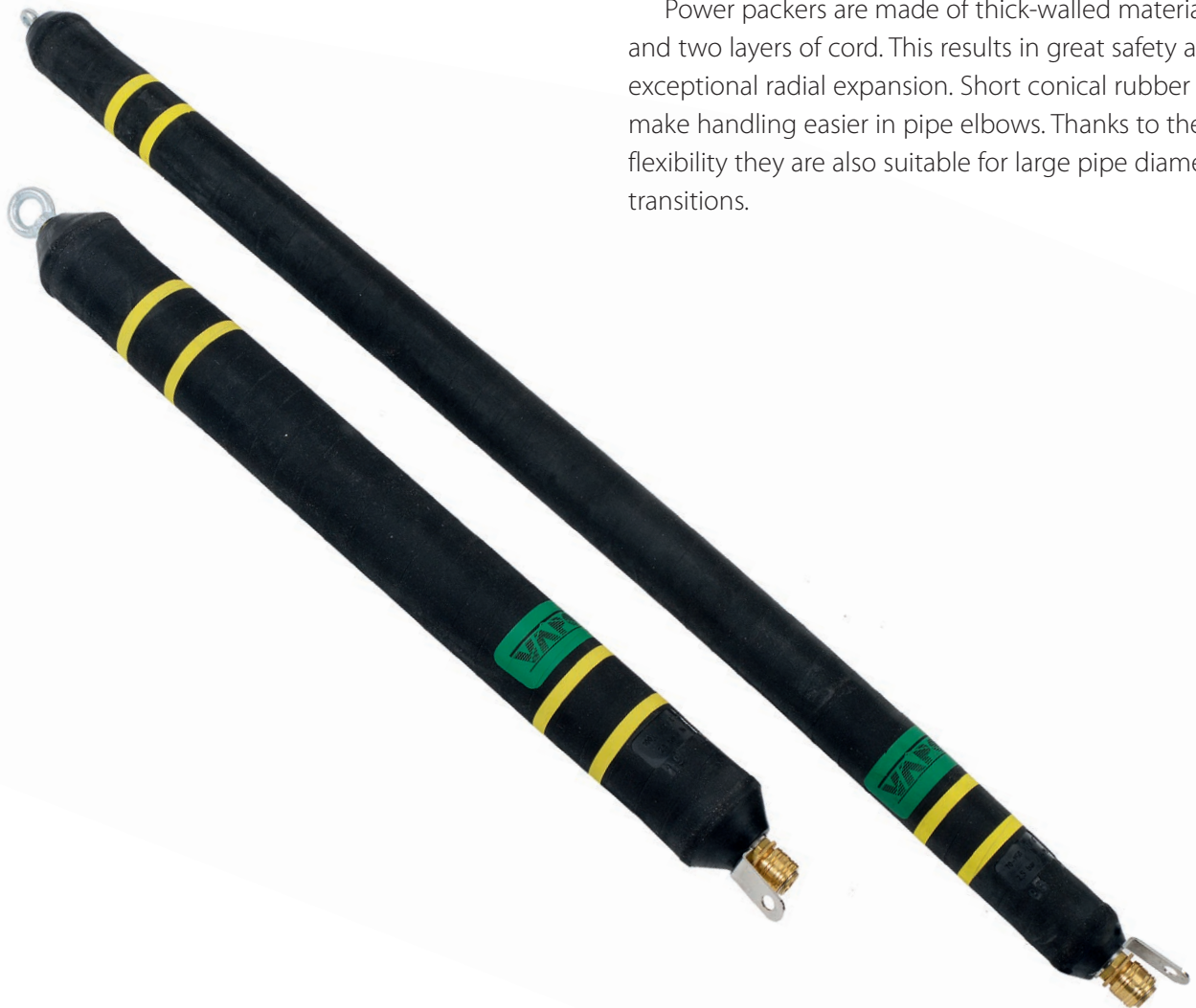
## Small Packers HP

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

Small 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 270 mm to 1370 mm.



Power packers are made of thick-walled material and two layers of cord. This results in great safety and exceptional radial expansion. Short conical rubber ends make handling easier in pipe elbows. Thanks to their flexibility they are also suitable for large pipe diameter transitions.



## Power-Packers HPP

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
HPP 5/12,5-0,6	7366	50-125	40	600	680	380	0,7	3,0
HPP 5/12,5-1	7367	50-125	40	1000	1080	780	1	3,0
HPP 5/12,5-1,5	7368	50-125	40	1500	1580	1280	1,45	3,0
HPP 5/12,5-2	7369	50-125	40	2000	2080	1780	1,9	3,0
HPP 5/12,5-2,5	7370	50-125	40	2500	2580	2280	2,35	3,0
HPP 5/12,5-3	7371	50-125	40	3000	3080	2780	2,8	3,0
HPP 5/12,5-3,5	7372	50-125	40	3500	3580	3280	3,25	3,0
HPP 5/12,5-4	7373	50-125	40	4000	4080	3780	3,7	3,0
HPP 7/15-0,6	7374	70-150	54	600	680	340	1	3,0
HPP 7/15-1	7375	70-150	54	1000	1080	740	1,5	3,0
HPP 7/15-1,5	7376	70-150	54	1500	1580	1240	2,1	3,0
HPP 7/15-2	7377	70-150	54	2000	2080	1740	2,8	3,0
HPP 7/15-2,5	7378	70-150	54	2500	2580	2240	3,5	3,0
HPP 7/15-3	7379	70-150	54	3000	3080	2740	4,2	3,0
HPP 7/15-3,5	7380	70-150	54	3500	3580	3240	4,9	3,0
HPP 7/15-4	7381	70-150	54	4000	4080	3740	5,6	3,0
HPP 10/20-0,6	7382	100-200	68	600	680	320	1,5	2,5
HPP 10/20-1	7383	100-200	68	1000	1080	720	2,4	2,5
HPP 10/20-1,5	7384	100-200	68	1500	1580	1220	3,45	2,5
HPP 10/20-2	7385	100-200	68	2000	2080	1720	4,5	2,5
HPP 10/20-2,5	7386	100-200	68	2500	2580	2220	5,55	2,5
HPP 10/20-3	7387	100-200	68	3000	3080	2720	6,6	2,5
HPP 10/20-3,5	7388	100-200	68	3500	3580	3220	7,65	2,5
HPP 10/20-4	7389	100-200	68	4000	4080	3720	8,7	2,5

# HATLINER PACKERS AND RUBBER HATS

The hatliner packers are used to repair the house connections to the main pipeline. They are similar to the short packers. They differ mainly by the fact that a special hat can be mounted in the middle of the mantle. This hat can be inflated separately. Due to this system the repair of the connection is easy and efficient. The sizes of the hat packers and the hats can be combined with each other according to the dimensions of the pipe connection that needs to be repaired.



## Hatliner Packers KP

Type	Part No.	Pipe diameter	Rubber body diameter	Rubber body length	Total length	Weight	Operating pressure	Bypass
		mm	mm	mm	mm	kg	bar	
KP 15	7601	150	65	700	800	1,6	2,0	no
KP 20/25	7602	200–250	100	800	1050	4	2,0	no
KP 25/30	7603	250–300	150	800	1100	11,5	2,0	yes
KP 30/40	7604	300–400	210	800	1100	17	2,0	yes
KP 40/60	7605	400–600	240	1000	1300	23	1,5	yes

## Rubber Hats K

Type	Part No.	Pipe diameter	Diameter of the hat bottom	Hat length	Weight	Operating pressure	Thread size
		mm	mm	mm	kg	bar	
K 9/12,5	76100	90–125	85	220	0,85	1,3	M 6
K 12,5/16	76200	125–160	100	225	0,90	1,3	M 6
K 16/25	76300	160–250	130	230	1,05	1,3	M 6



## Sliding and filling rods for rehabilitation packers

### Part-No. Description

2129	Sliding and filling rod	0,5 m – 20 G
2130	Sliding and filling rod	1 m – 20 G
2127	Sliding and filling rod	1,5 m – 20 G
2120	Sliding and filling rod	2 m – 20 G
2131	Sliding and filling rod	2,5 m – 20 G
2132	Sliding and filling rod	3 m – 20 G



### Part-No. Description

2037	Sliding and filling rod	0,5 m – 20 KR
2040	Sliding and filling rod	1 m – 20 KR
2041	Sliding and filling rod	1,5 m – 20 KR
2038	Sliding and filling rod	2 m – 20 KR



2076 Flex-Adapter N-P



## CUSTOM-MADE PRODUCTS

Based on our many years' experience in developing rubberized fabrics, we are able to manufacture a wide range of other products meeting specific requirements of our customers. We are experienced in manufacturing pipe stoppers and rehabilitation packers in sizes different from the standard product line. We are also able to manufacture air- or water-filled bags of various shapes and sizes for industrial use.



# TABLE OF RESISTANCE FOR PIPE STOPPERS AND REHABILITATION PACKERS

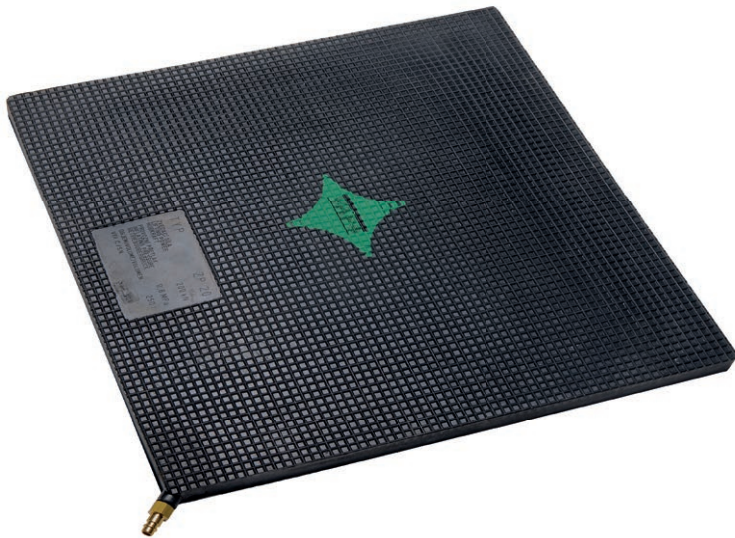
**A – Pipe stoppers and Rehabilitation packers**

**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



These bags made of top-quality rubber and Kevlar fibres enable rescuers to lift and remove heavy loads in various natural disasters, to pull people out of damaged vehicles in car or train accidents etc. The bags are also very useful in assembling heavy machines, tire changing in all kinds of vehicles and they are extraordinarily advantageous in assembling, repairing and maintaining water supply lines, water mains, gas lines and oil pipelines. The lifting bags can also be used for splitting stone blocks and pushing them away and they can be found very useful at airports, in the army etc. The standard set consists of five different models with the lifting force from 3 to 30 metric tons.

## Lifting Bags ZP – 8 bar

Type		ZP 3	ZP 6	ZP 10	ZP 20	ZP 30
Part - No.		1801	1802	1803	1804	1805
Lifting capacity	kN	30	60	100	200	300
Lifting height	mm	120	160	210	300	350
Dimensions	mm	230 x 230	300 x 300	390 x 390	530 x 530	640 x 640
Insertion height	mm	27	27	27	27	27
Air requirement at 8 bar	l	16	38	90	250	470
Operating pressure	bar	8,0	8,0	8,0	8,0	8,0
Weight	kg	1,5	2,5	4,9	7,7	11,2



## Accessories

### Part-No. Description

50419	Inflation hose with quick couplings, 3 m
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50422	Inflation hose with quick coupling and nipple, 5 m
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50437	Inflation hose with quick coupling and nipple, 10 m
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2028	Safety and control gauge 8 bar-ZP 8
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2029	Double safety and control gauge 8 bar-2 ZP 8
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2005	Pressure reducer 200/8 bar
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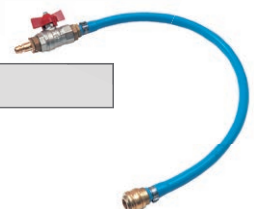
2066	Pressure reducer 300/8 bar
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50152	Cylinder 7 l
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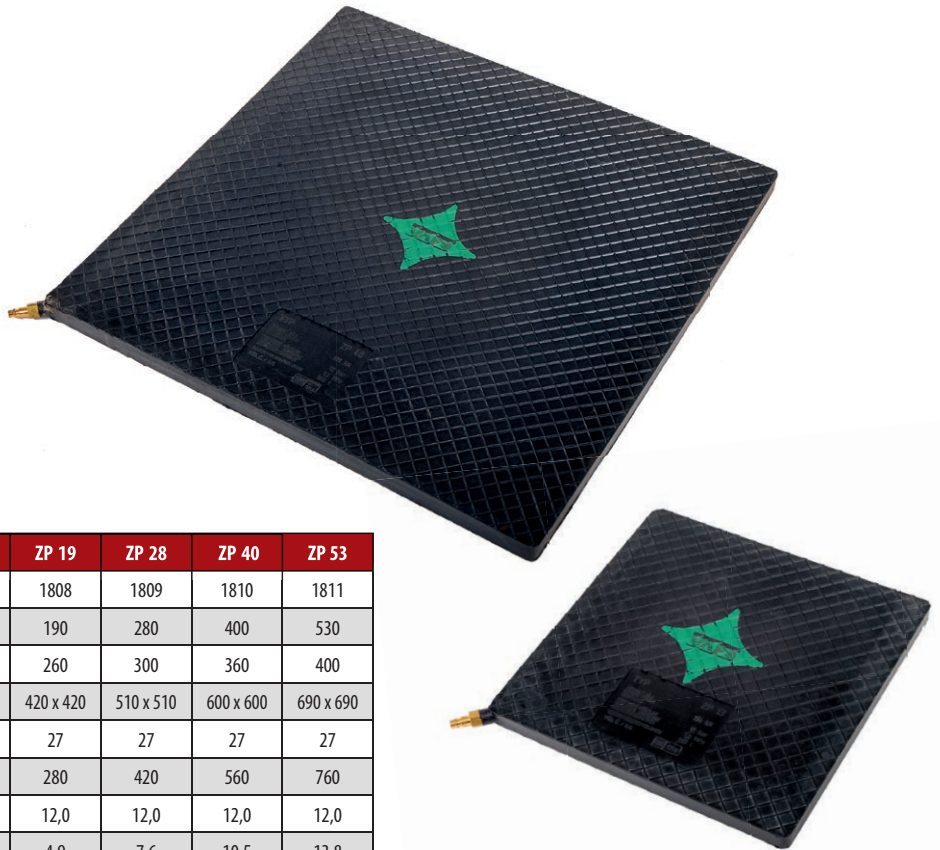
2034	Stopcock with hose
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# LIFTING BAGS

The lifting bags **ZP 12** have the same principle of use as the basic lifting bags **ZP 8**. Due to the high-strength material, they are designed to use higher operating pressure and therefore they can produce greater lifting force. The basic series consists of six sizes with lifting force from 8 to 53 tons.



## Lifting Bags ZP – 12 bar

Type		ZP 8	ZP 13	ZP 19	ZP 28	ZP 40	ZP 53
Part - No.		1806	1807	1808	1809	1810	1811
Lifting capacity	kN	80	130	190	280	400	530
Lifting height	mm	170	210	260	300	360	400
Dimensions	mm	270 x 270	340 x 340	420 x 420	510 x 510	600 x 600	690 x 690
Insertion height	mm	27	27	27	27	27	27
Air requirement at 12 bar	l	58	190	280	420	560	760
Operating pressure	bar	12,0	12,0	12,0	12,0	12,0	12,0
Weight	kg	2	3,2	4,9	7,6	10,5	13,8

## Accessories

### Part-No. Description

50419 Inflation hose with quick couplings, 3 m



50422 Inflation hose with quick coupling and nipple, 5 m



50437 Inflation hose with quick coupling and nipple, 10 m



2134 Safety and control gauge 12 bar-ZP 12



2164 Double safety and control gauge 12 bar-2 ZP 12

2005 Pressure reducer 200/8 bar



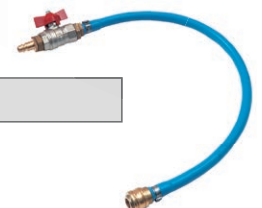
2173 Pressure reducer 300/12 bar



50152 Cylinder 7 l



2034 Stopcock with hose



# LEAK SEALING BAGS

Leak sealing bags for cracks are used for quick and temporary sealing of damaged cisterns, tanks and barrels. This is done by attaching the bag by tensioning belts and its inflation.



## Leak Sealing Bags TV

Type		TV 23/23	TV 60/30-1,5	TV 60/30-8	TV 60/30 0
Part - No.		1901	1908	1905	1909
Dimensions	mm	230 x 230	620 x 300	620 x 300	620 x 300
Sealing area	mm	200 x 200	500 x 250	500 x 250	500 x 250
Operating pressure	bar	1,5	1,5	8,0	1,5
Back pressure	bar	1,4	1,4	7,0	1,4
Weight	kg	1,5	6	6	10

## Accessories



50153	Tensioning and extending belt with ratchet, 5 m
50154	Tensioning and extending belt with ratchet, 10 m
50650	Tensioning and extending belt with hooks, 10 m
2020	Sealing plate 230 x 230 mm
2021	Sealing plate 500 x 300 mm
2144	Inflation hose with chain and nipple, 10 m

50105	Safety and control gauge 1,5 bar - V 1,5
50737	Safety and control gauge 8 bar - V 8
50736	Acid protection cover / PVC
2143	Foot pump
50417	Inflation hose with nipples, 10 m

# SET OF SEALING WEDGES

Sealing wedges are used to seal cracks and smole holes from safe distance. Can be operated by one person only. They are applied mainly on broken tanks, cisterns, barrels and pipes.

## Sealing Wedges TK

Type		TK 6/5	TK 8/5,5	TK 11/7	TK 7,5
Part - No.		1906	1904	1907	1903
Dimensions	mm	230 x 60 x 50	230 x 80 x 55	230 x 110 x 70	230 x 75
Sealing area	mm	15-45/60-80	15-45/80-110	30-60/110-170	30-90
Operation pressure	bar	1,5	1,5	1,5	1,5
Weight	kg	0,4	0,5	0,6	0,4



1906	Sealing wedge TK 6/5
1904	Sealing wedge TK 8/5,5
1907	Sealing wedge TK 11/7
1903	Sealing cone wedge TK 7,5
2140	Filling rod 35 cm – 3 pcs

2141	Filling rod 35 cm with chain and nipple
2142	Shut-off unit
2143	Foot pump
2031	Drip shield
50646	Portable case



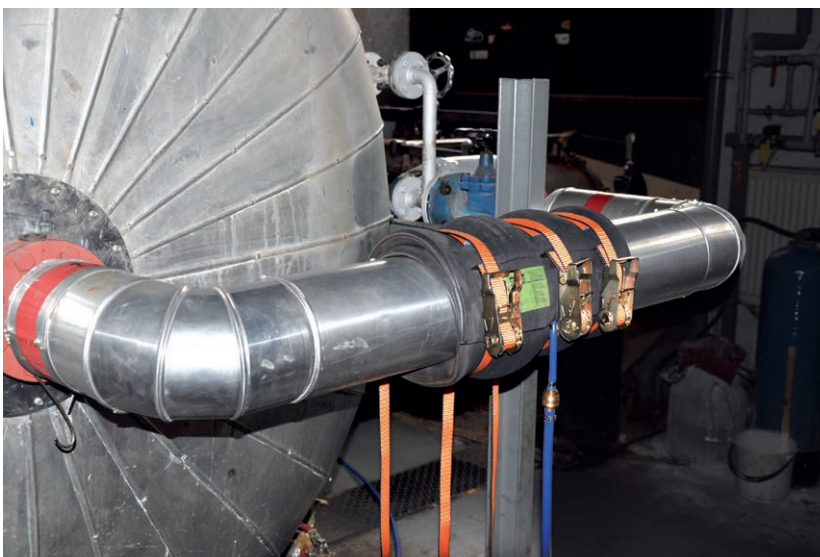
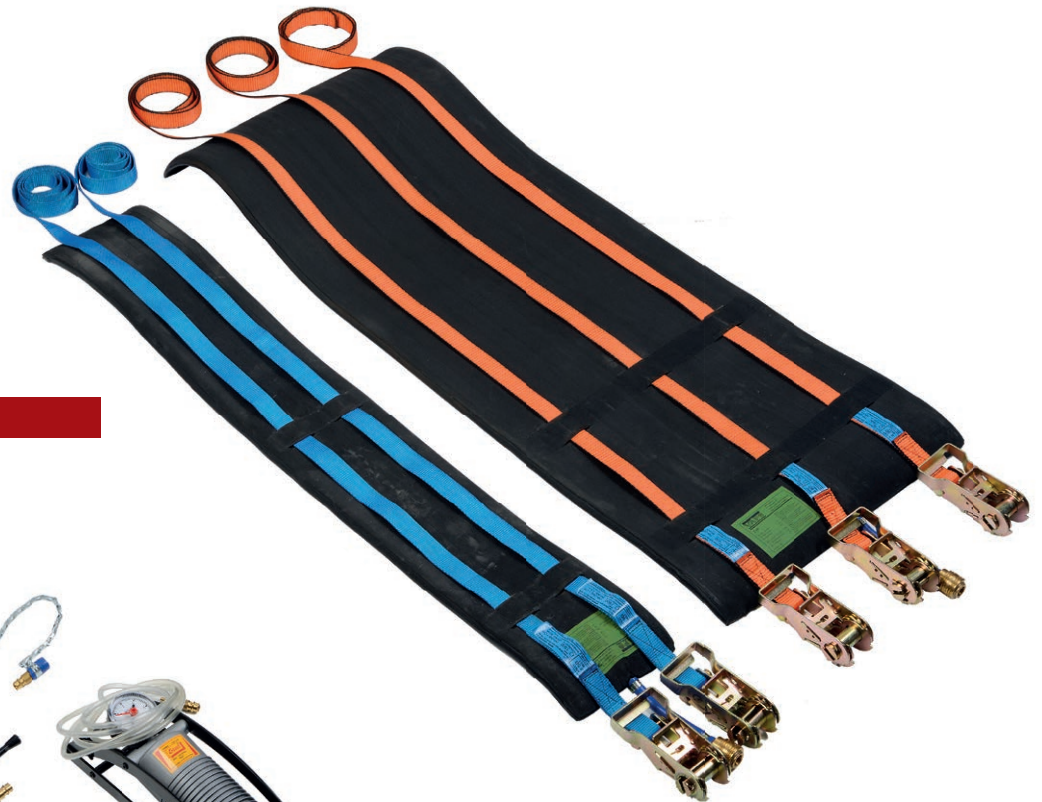
# LEAK SEALING BANDAGES

## Leak Sealing Bandages TB

Type		TB 15/100	TB 21/150	TB 42/100	TB 42/150
Part - No.		1910	1911	1912	1913
Dimensions	mm	150 x 1000	210 x 1500	420 x 1000	420 x 1500
Sealing area	mm	140	200	400	400
Operating pressure	bar	1,5	1,5	1,5	1,5
Back pressure	bar	1,4	1,4	1,4	1,4
Weight	kg	2,3	4,6	5,3	8,5

Leak sealing bandages are used for quick sealing of pipes from 5 cm to 48 cm. They are manufactured from chemically resistant material. Sealing is made by wrapping the bandage around the pipe, fixing the tensioning belts that are attached to the bandage and inflating the bandage.

## Accessories



2144	Inflation hose with chain and nipple 10 m
2143	Foot pump
50105	Safety and control gauge 1,5 bar - V 1,5

# RUBBERMOULDED PARTS

There is a wide range of mechanical-rubber parts manufactured by our company. The parts are produced on classic electric-heated moulding machines. We are able to produce these parts even in small series from one up to several thousand pieces.

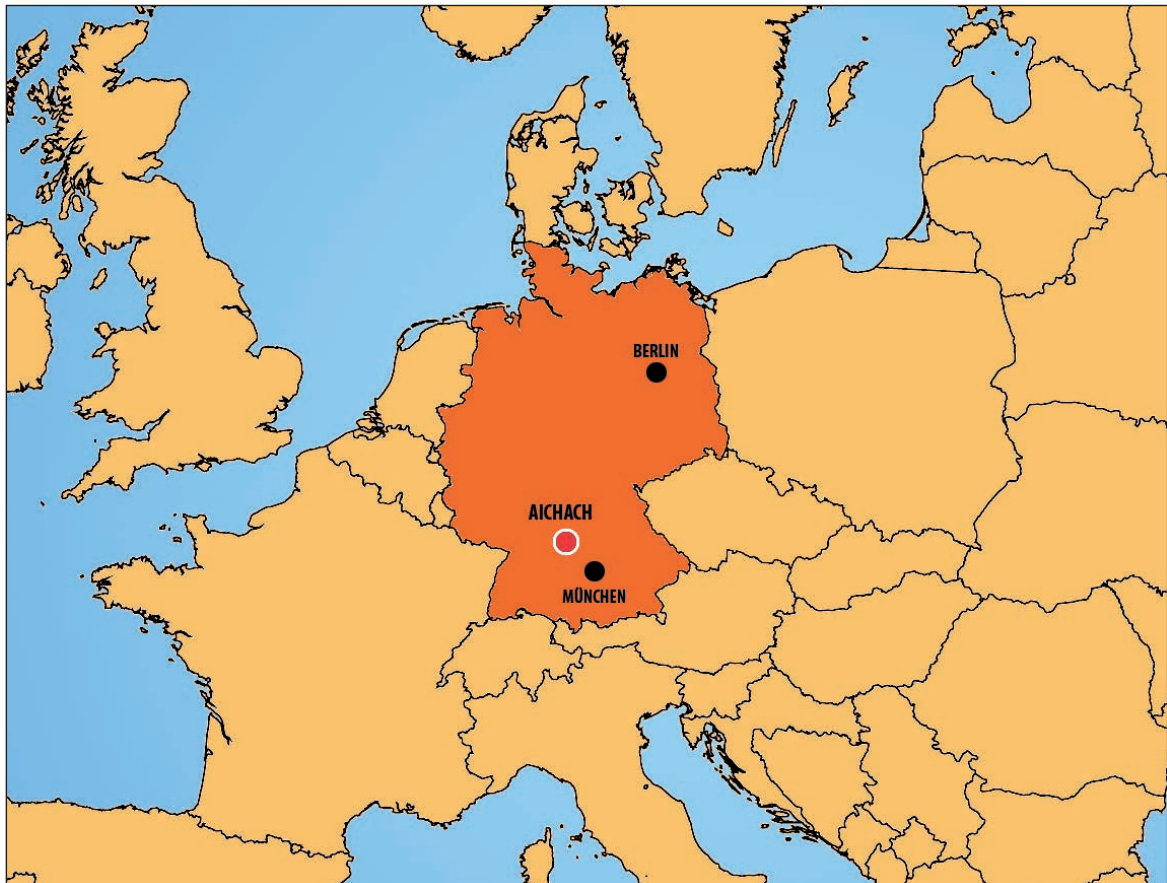
We process all kinds of elastomers including FPM, ECO and VMQ. Our main range of products includes various packing elements, bushings, stops, collars, cuffs, diaphragms (even with textile), springs, etc.















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