

## 20. INSTALACJA PRZEWODOWA

**20.1.** KSZTAŁTKI Z PVC-U

**20.2.** KSZTAŁTKI Z PVC-U PN10

**20.3.** ARMATURA

**20.4.** RURY

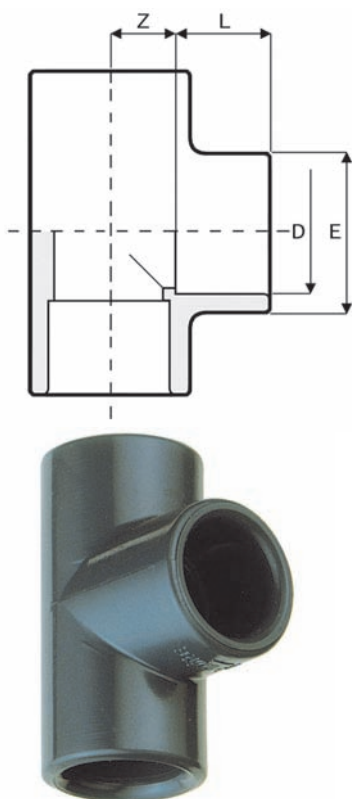
**20.5.** KLEJE I CZYŚCIWA

**20.6.** SYSTEMY RUROCIĄGOWE Z PE I PVC-C



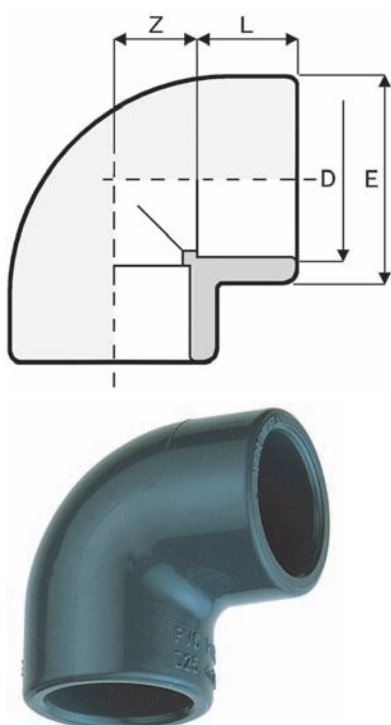
## 20.1. KSZTAŁTKI Z PVC-U

### 20.1.1. Trójnik 90°



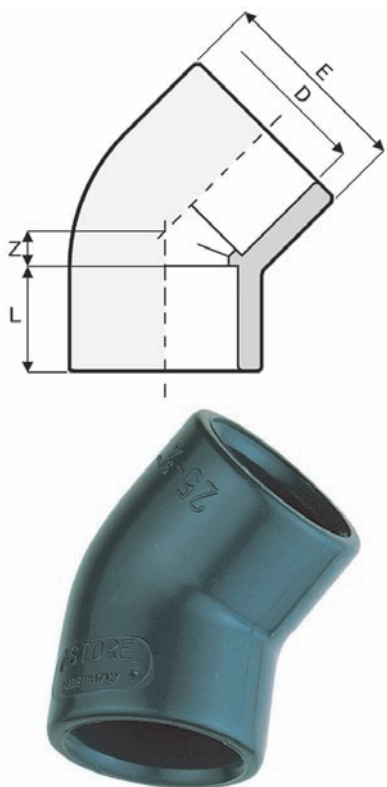
D	L	Z	E	Nr kat.
16	14	9	23	1R.TI1.160.00
20	16	11	28	1R.TI1.200.00
25	19	14	34	1R.TI1.250.00
32	22	17	42	1R.TI1.320.00
40	26	21	51	1R.TI1.400.00
50	31	26	61	1R.TI1.500.00
63	38	33	75	1R.TI1.630.00
75	44	39	89	1R.TI1.750.00
90	51	47	106	1R.TI1.900.00
110	61	61	131	1R.TI1.110.00
125	69	66	146	1R.TI1.130.00
140	76	72	163	1R.TI1.150.00
160	86	82	186	1R.TI1.170.00
180	96	94	215	1R.TI1.180.00
200	106	102	230	1R.TI1.210.00
225	119	115	258	1R.TI1.230.00
250	131	128	286	1R.TI1.260.00
280	146	144	319	1R.TI1.280.00
315	164	162	360	1R.TI1.330.00

### 20.1.2. Kolano 90°



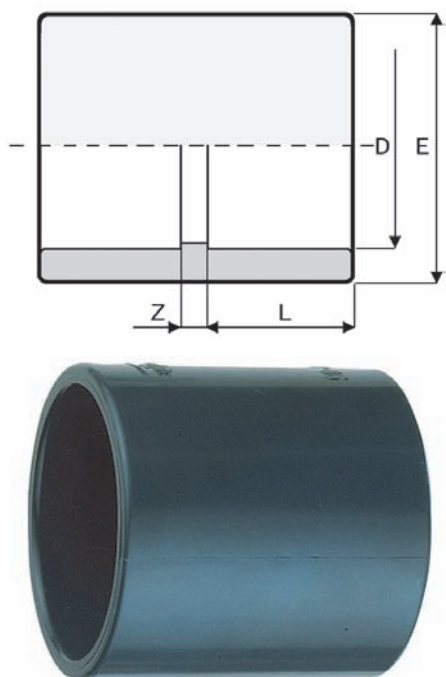
D	L	Z	E	Nr kat.
16	14	9	23	1R.GO1.160.00
20	16	11	28	1R.GO1.200.00
25	19	14	34	1R.GO1.250.00
32	22	17	39	1R.GO1.320.00
40	26	21	51	1R.GO1.400.00
50	31	26	59	1R.GO1.500.00
63	38	33	75	1R.GO1.630.00
75	44	39	89	1R.GO1.750.00
90	51	47	106	1R.GO1.900.00
110	61	57	129	1R.GO1.110.00
125	69	66	146	1R.GO1.130.00
140	76	72	163	1R.GO1.150.00
160	86	82	186	1R.GO1.170.00
180	96	94	215	1R.GO1.180.00
200	106	102	230	1R.GO1.210.00
225	119	115	258	1R.GO1.230.00
250	131	188	287	1R.GO1.260.00
280	147	210	325	1R.GO1.280.00
315	164	236	359	1R.GO1.330.00

### 20.1.3. Kolano 45°



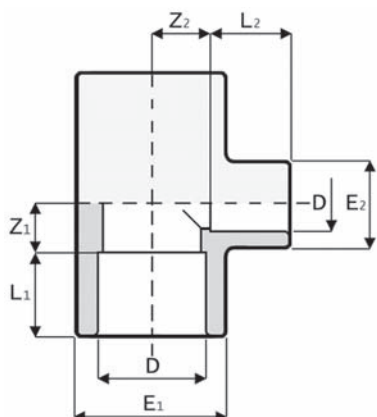
D	L	Z	E	Nr kat.
<b>16</b>	14	5	23	<b>1R.GY1.160.00</b>
<b>20</b>	16	5	28	<b>1R.GY1.200.00</b>
<b>25</b>	19	6	34	<b>1R.GY1.250.00</b>
<b>32</b>	22	8	42	<b>1R.GY1.320.00</b>
<b>40</b>	26	10	51	<b>1R.GY1.400.00</b>
<b>50</b>	31	12	61	<b>1R.GY1.500.00</b>
<b>63</b>	38	14	75	<b>1R.GY1.630.00</b>
<b>75</b>	44	17	89	<b>1R.GY1.750.00</b>
<b>90</b>	51	20	106	<b>1R.GY1.900.00</b>
<b>110</b>	61	24	129	<b>1R.GY1.110.00</b>
<b>125</b>	69	27	145	<b>1R.GY1.130.00</b>
<b>140</b>	76	31	163	<b>1R.GY1.150.00</b>
<b>160</b>	86	35	186	<b>1R.GY1.170.00</b>
<b>200</b>	108	48	230	<b>1R.GY1.210.00</b>
<b>225</b>	121	55	260	<b>1R.GY1.230.00</b>
<b>250</b>	131	58	286	<b>1R.GY1.260.00</b>
<b>280</b>	146	62	320	<b>1R.GY1.280.00</b>
<b>315</b>	164	66	359	<b>1R.GY1.330.00</b>

### 20.1.4. Mufa



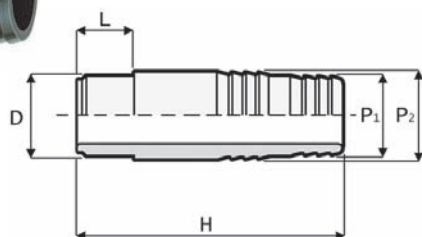
D	L	Z	E	Nr kat.
<b>16</b>	14	3	23	<b>1R.MA1.160.00</b>
<b>20</b>	16	3	28	<b>1R.MA1.200.00</b>
<b>25</b>	19	3	34	<b>1R.MA1.250.00</b>
<b>32</b>	22	3	42	<b>1R.MA1.320.00</b>
<b>40</b>	26	3	51	<b>1R.MA1.400.00</b>
<b>50</b>	31	3	58	<b>1R.MA1.500.00</b>
<b>63</b>	38	3	75	<b>1R.MA1.630.00</b>
<b>75</b>	44	4	89	<b>1R.MA1.750.00</b>
<b>90</b>	51	20	106	<b>1R.MA1.900.00</b>
<b>110</b>	61	5	129	<b>1R.MA1.110.00</b>
<b>125</b>	69	67	145	<b>1R.MA1.130.00</b>
<b>140</b>	76	8	162	<b>1R.MA1.150.00</b>
<b>160</b>	86	8	182	<b>1R.MA1.170.00</b>
<b>200</b>	106	12	231	<b>1R.MA1.210.00</b>
<b>225</b>	119	11	262	<b>1R.MA1.230.00</b>
<b>250</b>	131	10	286	<b>1R.MA1.260.00</b>
<b>280</b>	146	10	320	<b>1R.MA1.280.00</b>
<b>315</b>	164	12	355	<b>1R.MA1.330.00</b>

## 20.1.5. Trójnik redukcyjny



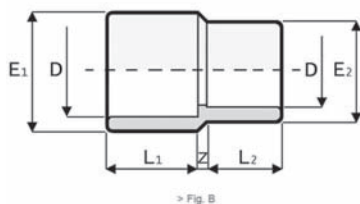
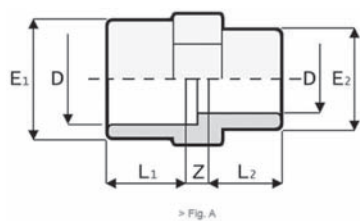
<b>DxD</b>	<b>L1</b>	<b>L2</b>	<b>Z1</b>	<b>Z2</b>	<b>E1</b>	<b>E2</b>	<b>Nr kat.</b>
<b>20x16</b>	16	14	11	11	28	23	<b>1R.TR1.20A.00</b>
<b>25x16</b>	19	14	14	14	34	23	<b>1R.TR1.25A.00</b>
<b>25x20</b>	19	16	14	14	34	28	<b>1R.TR1.25B.00</b>
<b>32x16</b>	22	14	17	17	42	23	<b>1R.TR1.32A.00</b>
<b>32x20</b>	22	16	17	17	42	28	<b>1R.TR1.32B.00</b>
<b>32x25</b>	22	19	17	17	42	34	<b>1R.TR1.32C.00</b>
<b>40x16</b>	26	14	21	21	51	23	<b>1R.TR1.40A.00</b>
<b>40x20</b>	26	16	21	21	51	28	<b>1R.TR1.40B.00</b>
<b>40x25</b>	26	19	21	21	51	34	<b>1R.TR1.40C.00</b>
<b>40x32</b>	26	22	21	21	51	42	<b>1R.TR1.40D.00</b>
<b>50x20</b>	31	16	26	26	61	28	<b>1R.TR1.50B.00</b>
<b>50x25</b>	31	19	26	26	61	34	<b>1R.TR1.50C.00</b>
<b>50x32</b>	31	22	26	26	61	42	<b>1R.TR1.50D.00</b>
<b>50x40</b>	31	26	26	26	61	51	<b>1R.TR1.50E.00</b>
<b>63x20</b>	38	16	33	33	75	28	<b>1R.TR1.63B.00</b>
<b>63x25</b>	38	19	33	33	75	34	<b>1R.TR1.63C.00</b>
<b>63x32</b>	38	22	33	33	75	42	<b>1R.TR1.63D.00</b>
<b>63x40</b>	38	26	33	33	75	51	<b>1R.TR1.63E.00</b>
<b>63x50</b>	38	31	33	33	75	61	<b>1R.TR1.63F.00</b>
<b>75x32</b>	44	22	39	39	89	42	<b>1R.TR1.75D.00</b>
<b>75x40</b>	44	26	39	39	89	51	<b>1R.TR1.75E.00</b>
<b>75x50</b>	44	31	39	39	89	61	<b>1R.TR1.75F.00</b>
<b>75x63</b>	44	38	39	39	89	75	<b>1R.TR1.75G.00</b>
<b>90x40</b>	51	26	47	47	106	51	<b>1R.TR1.90E.00</b>
<b>90x50</b>	51	31	47	47	106	61	<b>1R.TR1.90F.00</b>
<b>90x63</b>	51	38	47	47	106	75	<b>1R.TR1.90G.00</b>
<b>90x75</b>	51	44	47	47	106	89	<b>1R.TR1.90H.00</b>
<b>110x50</b>	61	31	57	57	129	61	<b>1R.TR1.11F.00</b>
<b>110x63</b>	61	38	57	57	129	75	<b>1R.TR1.11G.00</b>
<b>110x75</b>	61	44	57	57	129	89	<b>1R.TR1.11H.00</b>
<b>110x90</b>	61	51	57	57	129	106	<b>1R.TR1.11I.00</b>
<b>160x110</b>	86	61	82	57	187	131	<b>1R.TR1.17L.00</b>

## 20.1.6. Tuleja na wąż



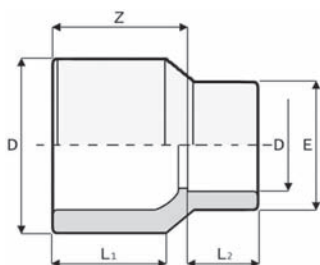
<b>DxP2xP1</b>	<b>L</b>	<b>H</b>	<b>Nr kat.</b>
<b>16x18x16</b>	14	60	<b>1R.PO1.160.00</b>
<b>20x22x20</b>	16	67	<b>1R.PO1.200.00</b>
<b>25x27x25</b>	19	81	<b>1R.PO1.250.00</b>
<b>32x32x30</b>	22	97	<b>1R.PO1.320.00</b>
<b>40x42x40</b>	26	104	<b>1R.PO1.400.00</b>
<b>50x52x50</b>	31	111	<b>1R.PO1.500.00</b>
<b>63x64x60</b>	38	123	<b>1R.PO1.630.00</b>

## 20.1.7. Redukcja długa (mufowa)



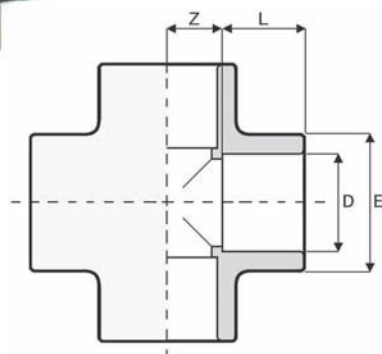
DxD	L1	L2	Z	E1	E2	Fig.	Nr kat.
<b>20x16</b>	16	14	6	28	23	B	<b>1R.MR1.20A.00</b>
<b>25x20</b>	19	16	6	34	28	B	<b>1R.MR1.25B.00</b>
<b>32x25</b>	22	19	6	42	34	B	<b>1R.MR1.32C.00</b>
<b>40x32</b>	26	22	6	51	42	B	<b>1R.MR1.40DS.00</b>
<b>50x40</b>	31	26	6	61	51	B	<b>1R.MR1.50E.00</b>
<b>63x50</b>	38	31	6	75	61	B	<b>1R.MR1.63F.00</b>
<b>75x63</b>	44	38	4	89	75	A	<b>1R.MR1.75G.00</b>
<b>90x75</b>	51	44	5	106	89	A	<b>1R.MR1.90H.00</b>
<b>110x90</b>	61	51	6	129	106	A	<b>1R.MR1.11I.00</b>
<b>125x110</b>	69	61	24	145	129	B	<b>1R.MR1.13L.00</b>
<b>140x110</b>	76	61	25	160	129	B	<b>1R.MR1.15L.00</b>

## 20.1.8. Redukcja długa (mufowo-nyplowa)

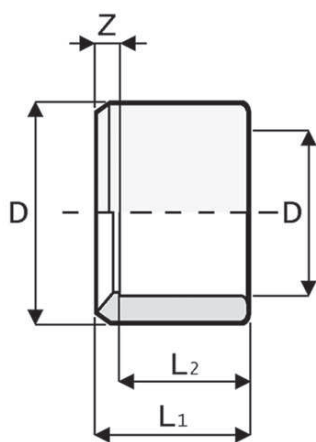
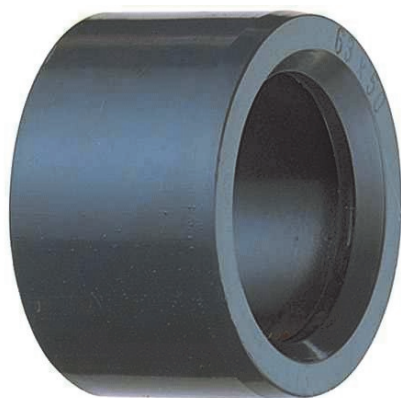


DxD	L1	L2	Z	E	Nr kat.
<b>140x110</b>	76	61	92	129	<b>1R.RL1.15L.00</b>
<b>160x110</b>	86	61	100	129	<b>1R.RL1.17L.00</b>

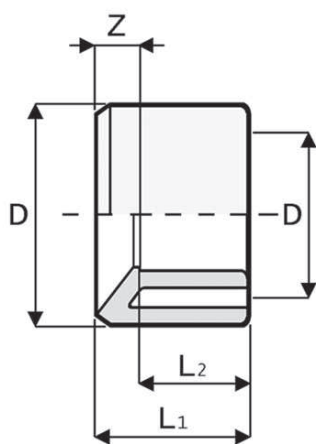
## 20.1.9. Czwórnik



D	L	Z	E	Nr kat.
<b>25</b>	19	14	35	<b>1R.CR1.250.00</b>
<b>32</b>	22	18	43	<b>1R.CR1.320.00</b>
<b>40</b>	26	23	52	<b>1R.CR1.400.00</b>
<b>50</b>	31	27	64	<b>1R.CR1.500.00</b>
<b>63</b>	38	33.5	79	<b>1R.CR1.630.00</b>

**20.1.10. Redukcja krótka**


&gt; Fig. A

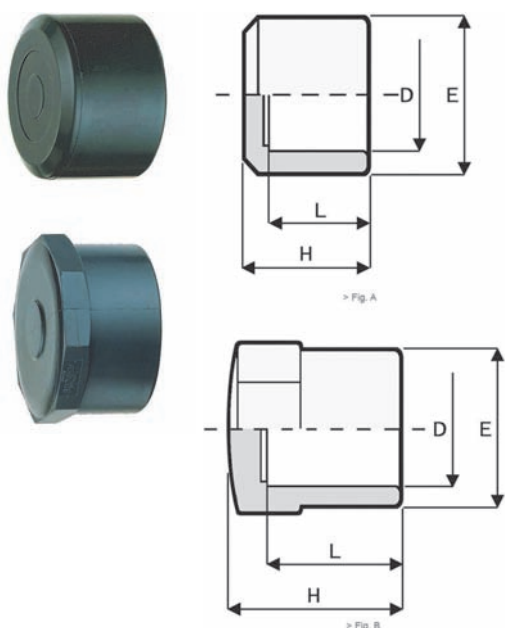


&gt; Fig. B

<b>DxD</b>	<b>L1</b>	<b>L2</b>	<b>Z</b>	<b>Fig.</b>	<b>Nr kat.</b>
<b>20x16</b>	16	14	2	A	<b>1R.RC1.20A.00</b>
<b>25x16</b>	19	14	5	B	<b>1R.RC1.25A.00</b>
<b>25x20</b>	19	16	3	A	<b>1R.RC1.25B.00</b>
<b>32x16</b>	22	14	8	B	<b>1R.RC1.32A.00</b>
<b>32x20</b>	22	16	6	B	<b>1R.RC1.32B.00</b>
<b>32x25</b>	22	19	3	A	<b>1R.RC1.32C.00</b>
<b>40x20</b>	26	16	10	B	<b>1R.RC1.40B.00</b>
<b>40x25</b>	26	19	7	B	<b>1R.RC1.40C.00</b>
<b>40x32</b>	26	22	4	A	<b>1R.RC1.40D.00</b>
<b>50x20</b>	31	16	15	B	<b>1R.RC1.50B.00</b>
<b>50x25</b>	31	19	12	B	<b>1R.RC1.50C.00</b>
<b>50x32</b>	31	22	9	B	<b>1R.RC1.50D.00</b>
<b>50x40</b>	31	26	5	A	<b>1R.RC1.50E.00</b>
<b>63x32</b>	38	22	16	B	<b>1R.RC1.63D.00</b>
<b>63x40</b>	38	26	12	B	<b>1R.RC1.63E.00</b>
<b>63x50</b>	38	31	7	A	<b>1R.RC1.63F.00</b>
<b>75x40</b>	44	26	18	B	<b>1R.RC1.75E.00</b>
<b>75x50</b>	44	31	13	B	<b>1R.RC1.75F.00</b>
<b>75x63</b>	44	38	6	A	<b>1R.RC1.75G.00</b>
<b>90x50</b>	51	31	20	B	<b>1R.RC1.90F.00</b>
<b>90x63</b>	51	38	13	B	<b>1R.RC1.90G.00</b>
<b>90x75</b>	51	44	7	A	<b>1R.RC1.90H.00</b>
<b>110x63</b>	61	38	23	B	<b>1R.RC1.11G.00</b>
<b>110x75</b>	61	44	17	B	<b>1R.RC1.11H.00</b>
<b>110x90</b>	61	51	9	A	<b>1R.RC1.11I.00</b>
<b>125x75</b>	69	44	25	B	<b>1R.RC1.13H.00</b>
<b>125x90</b>	69	51	18	B	<b>1R.RC1.13I.00</b>
<b>125x110</b>	69	61	8	A	<b>1R.RC1.13L.00</b>
<b>140x90</b>	76	51	25	B	<b>1R.RC1.15I.00</b>
<b>140x110</b>	76	61	15	B	<b>1R.RC1.15L.00</b>
<b>140x125</b>	76	69	7	B	<b>1R.RC1.15M.00</b>
<b>160x90</b>	86	51	35	B	<b>1R.RC1.17I.00</b>
<b>160x110</b>	86	61	25	A	<b>1R.RC1.17L.00</b>
<b>160x125</b>	86	69	17	B	<b>1R.RC1.17M.00</b>
<b>160x140</b>	86	76	10	B	<b>1R.RC1.17N.00</b>
<b>200x160</b>	106	86	20	B	<b>1R.RC1.21O.00</b>
<b>225x160</b>	119	86	33	B	<b>1R.RC1.23O.00</b>
<b>225x200</b>	119	106	13	A	<b>1R.RC1.23P.00</b>
<b>250x160</b>	132	86	45	B	<b>1R.RC1.26O.00</b>
<b>250x200</b>	132	106	25	A	<b>1R.RC1.26P.00</b>
<b>250x225</b>	132	119	12	A	<b>1R.RC1.26Q.00</b>
<b>280x225</b>	147	119	27	B	<b>1R.RC1.28Q.00</b>
<b>315x200</b>	165	106	58	B	<b>1R.RC1.33P.00</b>
<b>315x225</b>	165	119	45	B	<b>1R.RC1.33Q.00</b>
<b>315x250</b>	165	131	33	B	<b>1R.RC1.33R.00</b>
<b>315x280</b>	165	146	18	A	<b>1R.RC1.33S.00</b>



### 20.1.11. Korek



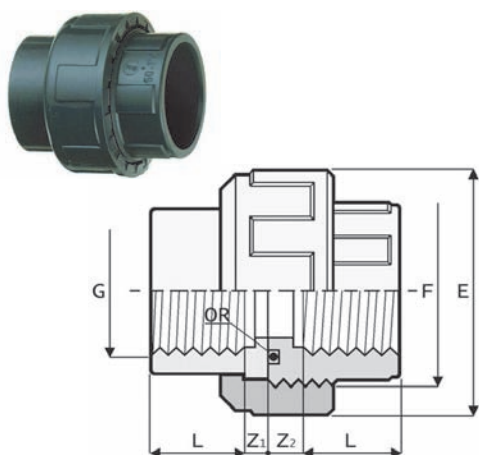
D	L	H	E	Fig.	Nr kat.
16	14	22	23	B	1R.CA1.160.00
20	16	24	28	A	1R.CA1.200.00
25	19	27	34	A	1R.CA1.250.00
32	22	30	42	A	1R.CA1.320.00
40	26	35	51	A	1R.CA1.400.00
50	31	40	61	A	1R.CA1.500.00
63	38	48	75	A	1R.CA1.630.00
75	44	59	89	B	1R.CA1.750.00
90	51	67	106	B	1R.CA1.900.00
110	61	77	129	B	1R.CA1.110.00
125	69	98	145	A	1R.CA1.130.00
140	76	108	162	A	1R.CA1.150.00
160	86	123	182	A	1R.CA1.170.00
225	119	163	260	A	1R.CA1.230.00

### 20.1.12. Łuk 90°

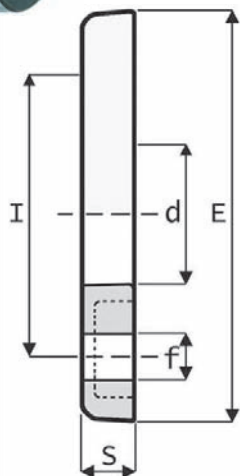


D	L	Z	E	Nr kat.
20	16	40	28	1R.CU1.200.00
25	19	50	36	1R.CU1.250.00
32	22	64	41	1R.CU1.320.00
40	26	80	51	1R.CU1.400.00
50	31	100	65	1R.CU1.500.00
63	38	126	77	1R.CU1.630.00
75	44	150	94	1R.CU1.750.00
90	51	180	113	1R.CU1.900.00
110	61	220	137	1R.CU1.110.00
160	86	207	189	1R.CU1.170.00

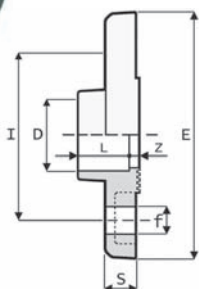
### 20.1.13. Dwuzłączka



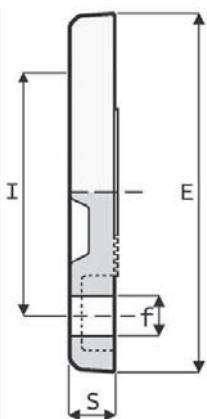
D	L	Z1	Z2	F	E	Nr kat.
16	11	3	10	3/4"	31	1R.BO1.160.00
20	16	3	10	1"	42	1R.BO1.200.00
25	19	3	10	1 1/4"	52	1R.BO1.250.00
32	22	3	10	1 1/2"	59	1R.BO1.320.00
40	26	3	12	2"	72	1R.BO1.400.00
50	31	3	14	2 1/4"	79	1R.BO1.500.00
63	38	3	18	2 3/4"	96	1R.BO1.630.00
75	44	3	18	3 1/2"	120	1R.BO1.750.00
90	51	5	18	4"	135	1R.BO1.900.00
110	61	5	18	5"	163	1R.BO1.110.00

**20.1.14. Kołnierz luźny**


D	DN	d	E	S	I	f	il.	śruba	Nr kat.
20	15	28	95	11	65	14	4	M12x55	1R.FL1.200.00
25	20	34	105	12	75	14	4	M12x60	1R.FL1.250.00
32	25	42	115	14	85	14	4	M12x60	1R.FL1.320.00
40	32	51	140	15	100	18	4	M16x70	1R.FL1.400.00
50	40	62	150	16	110	18	4	M16x75	1R.FL1.500.00
63	50	78	165	18	125	18	4	M16x80	1R.FL1.630.00
75	65	92	185	19	145	18	4	M16x90	1R.FL1.750.00
90	80	110	203	20	160	18	8	M16x90	1R.FL1.900.00
110	100	132	222	22	180	18	8	M16x100	1R.FL1.110.00
125	110	149	230	24	190	18	8	M16x100	1R.FL1.130.00
140	125	167	250	26	210	18	8	M16x110	1R.FL1.150.00
160	150	190	285	28	240	22	8	M20x120	1R.FL1.170.00
200	200	235	341	30	295	22	8/12	M20x120	1R.FL1.210.00
225	200	244	341	30	295	22	8/12	M20x140	1R.FL1.230.00
250	250	281	395	33	350	22	12	M20x140	1R.FL1.260.00
280	250	309	396	35	350	22	12	M20x160	1R.FL1.280.00
315	300	349	465	40	400	22	12	M20x180	1R.FL1.330.00

**20.1.15. Tuleja kołnierzowa stała**


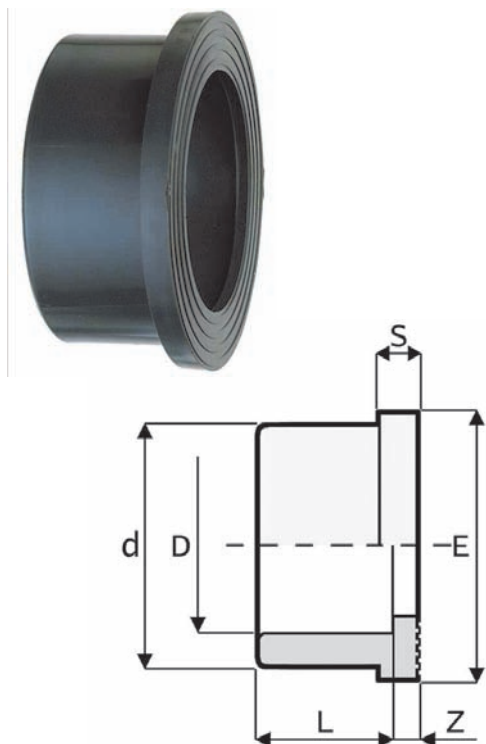
D	DN	L	Z	E	I	f	S	il.	śruba	Nr kat.
20	15	16	4	95	65	14	11	4	M12x55	1R.FF1.200.00
25	20	19	4	105	75	14	12	4	M12x60	1R.FF1.250.00
32	25	22	4	115	85	14	14	4	M12x60	1R.FF1.320.00
40	32	26	4	140	100	18	15	4	M16x70	1R.FF1.400.00
50	40	31	5	150	110	18	16	4	M16x75	1R.FF1.500.00
63	50	38	5	165	125	18	18	4	M16x80	1R.FF1.630.00
75	65	44	6	185	145	18	19	8	M16x90	1R.FF1.750.00
90	80	51	7	200	160	18	20	8	M16x90	1R.FF1.900.00
110	100	61	8	220	180	18	22	8	M16x100	1R.FF1.110.00

**20.1.16. Kołnierz ślepy**


D	DN	E	S	I	f	il.	śruba	Nr kat.
20	15	95	11	64	14	4	M12x55	1R.FC1.200.00
25	20	105	12	76	14	4	M12x60	1R.FC1.250.00
32	25	115	14	86	14	4	M12x60	1R.FC1.320.00
40	32	141	15	100	18	4	M16x70	1R.FC1.400.00
50	40	150	16	111	18	4	M16x75	1R.FC1.500.00
63	50	165	18	126	18	4	M16x80	1R.FC1.630.00
75	65	185	19	145	18	4	M16x90	1R.FC1.750.00
90	80	200	20	160	18	8	M16x90	1R.FC1.900.00
110	100	220	22	180	18	8	M16x100	1R.FC1.110.00

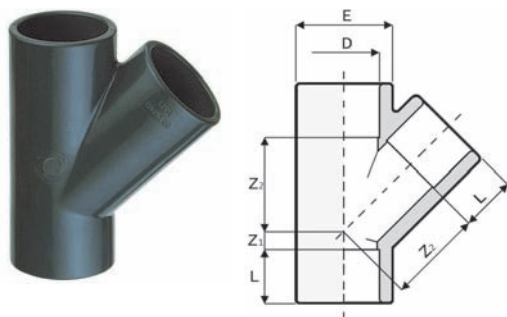


## 20.1.17. Tuleja kołnierzowa



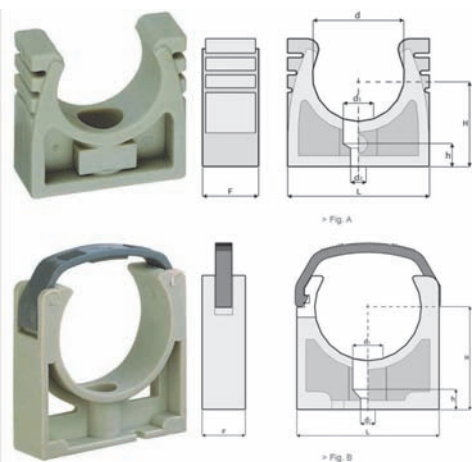
D	L	Z	d	S	E	Nr kat.
20	16	3	27	6	34	1R.QR1.200.00
25	19	3	33	7	41	1R.QR1.250.00
32	22	3	41	7	50	1R.QR1.320.00
40	26	3	50	8	61	1R.QR1.400.00
50	31	3	61	8	73	1R.QR1.500.00
63	38	3	76	9	90	1R.QR1.630.00
75	44	3	90	10	106	1R.QR1.750.00
90	51	5	108	11	125	1R.QR1.900.00
110	61	4	131	12	150	1R.QR1.110.00
125	69	5	147	13	168	1R.QR1.130.00
140	76	5	165	14	188	1R.QR1.150.00
160	86	5	188	16	212	1R.QR1.170.00
200	106	7	232	16	254	1R.QR1.210.00
225	119	7	248	16	274	1R.QR1.230.00
250	131	9	274	20	308	1R.QR1.260.00
280	147	14.5	307	32	327	1R.QR1.280.00
315	165	16	346	32	377	1R.QR1.330.00

## 20.1.18. Trójnik 45°

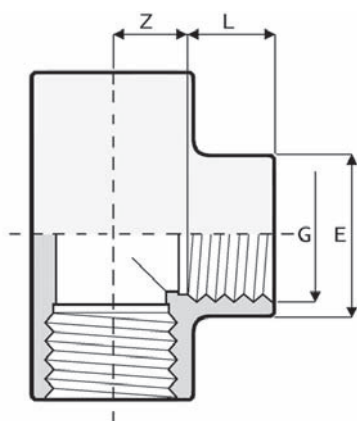


D	L	Z1	Z2	E	Nr kat.
20	16	7	30	27	1R.TY1.200.00
25	19	7	35	33	1R.TY1.250.00
32	22	9	44	41	1R.TY1.320.00
40	26	11	55	50	1R.TY1.400.00
50	31	12	68	63	1R.TY1.500.00
63	38	15	85	78	1R.TY1.630.00

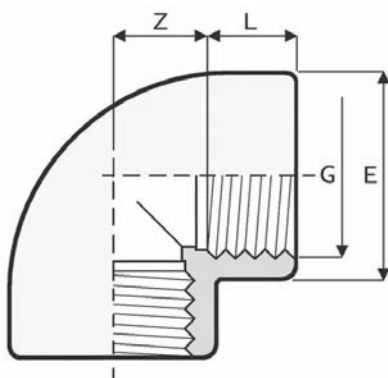
## 20.1.19. Uchwyt PP



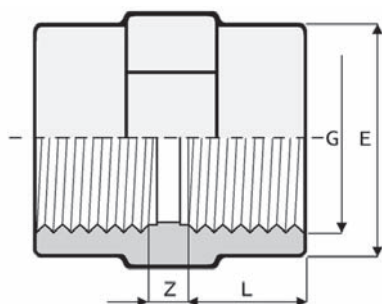
D	H	L	d2	d1	h	f	Fig.	Nr kat.
16	23	28	5.5	10.5	7.5	16	A	1R.ST1.160.00
20	25	33	5.5	10.5	7.5	16	A	1R.ST1.200.00
25	27.5	38	5.5	10.5	7.5	16	A	1R.ST1.250.00
32	31	48	5.5	10.5	7.5	16	A	1R.ST1.320.00
40	41.5	54	5.5	10.5	7.5	20	B	1R.ST1.400.00
50	46.5	64.5	7	14	9	23	B	1R.ST1.500.00
63	56	80	7	14	9	25	B	1R.ST1.630.00
75	63.6	94	9	17	10.5	27.5	B	1R.ST1.750.00
90	72	115	9	17	13.5	30	B	1R.ST1.900.00
110	84	139	9	17	14	30	B	1R.ST1.110.00

**20.1.20. Trójnik GW 90°**


<b>G</b>	<b>L</b>	<b>Z</b>	<b>E</b>	<b>Nr kat.</b>
<b>3/8"</b>	11.4	11.6	23	<b>1R.TI1.160.00</b>
<b>1/2"</b>	15	13	28	<b>1R.TI1.200.00</b>
<b>3/4"</b>	16.3	16.7	35	<b>1R.TI1.250.00</b>
<b>1"</b>	19.1	19.9	43	<b>1R.TI1.320.00</b>
<b>1 1/4"</b>	21.4	25.6	51	<b>1R.TI1.400.00</b>
<b>1 1/2"</b>	21.4	35.6	61	<b>1R.TI1.500.00</b>
<b>2"</b>	25.7	45.3	75	<b>1R.TI1.630.00</b>
<b>2 1/2"</b>	30.2	52.8	89	<b>1R.TI1.750.00</b>
<b>3"</b>	33.3	64.7	106	<b>1R.TI1.900.00</b>
<b>4"</b>	39.3	78.7	129	<b>1R.TI1.110.00</b>

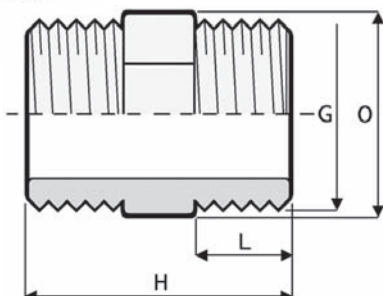
**20.1.21. Kolano GW 90°**


<b>G</b>	<b>L</b>	<b>Z</b>	<b>E</b>	<b>Nr kat.</b>
<b>3/8"</b>	11.4	11.6	23	<b>1R.GO2.160.00</b>
<b>1/2"</b>	15	13	28	<b>1R.GO2.200.00</b>
<b>3/4"</b>	16.3	16.7	35	<b>1R.GO2.250.00</b>
<b>1"</b>	19.1	19.9	43	<b>1R.GO2.320.00</b>
<b>1 1/4"</b>	21.4	25.6	51	<b>1R.GO2.400.00</b>
<b>1 1/2"</b>	21.4	35.6	61	<b>1R.GO2.500.00</b>
<b>2"</b>	25.7	45.3	76	<b>1R.GO2.630.00</b>
<b>2 1/2"</b>	30.2	52.8	89	<b>1R.GO2.750.00</b>
<b>3"</b>	33.3	64.7	106	<b>1R.GO2.900.00</b>
<b>4"</b>	39.3	78.7	129	<b>1R.GO2.110.00</b>

**20.1.22. Mufa GW**


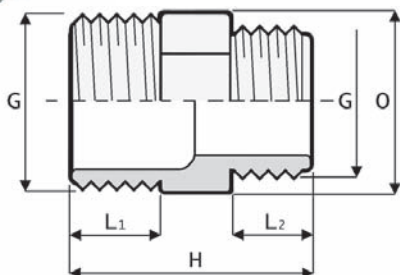
<b>G</b>	<b>L</b>	<b>Z</b>	<b>E</b>	<b>Nr kat.</b>
<b>3/8"</b>	11.4	8	23.5	<b>1R.MA2.160.00</b>
<b>1/2"</b>	15	7	28.5	<b>1R.MA2.200.00</b>
<b>3/4"</b>	16.3	8.5	35	<b>1R.MA2.250.00</b>
<b>1"</b>	19.1	9	43	<b>1R.MA2.320.00</b>
<b>1 1/4"</b>	21.4	11	50	<b>1R.MA2.400.00</b>
<b>1 1/2"</b>	21.4	17.5	61	<b>1R.MA2.500.00</b>
<b>2"</b>	25.7	19.5	76	<b>1R.MA2.630.00</b>
<b>2 1/2"</b>	30.2	9	89	<b>1R.MA2.750.00</b>
<b>3"</b>	33.3	10	103	<b>1R.MA2.900.00</b>
<b>4"</b>	39.3	11	130	<b>1R.MA2.110.00</b>

### 20.1.23. Nypel GW



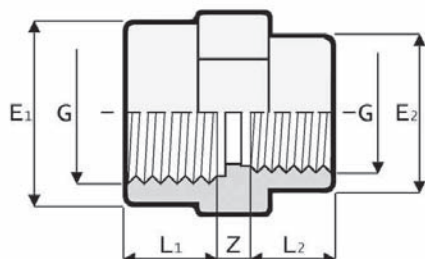
G	L	H	O	Nr kat.
3/8"	11.4	33	22	<b>1R.NI2.160.00</b>
1/2"	15	42	24	<b>1R.NI2.200.00</b>
3/4"	16.3	44	30	<b>1R.NI2.250.00</b>
1"	19.1	50	36	<b>1R.NI2.320.00</b>
1 1/4"	21.4	58	46	<b>1R.NI2.400.00</b>
1 1/2"	21.4	58	50	<b>1R.NI2.500.00</b>
2"	25.7	66	65	<b>1R.NI2.630.00</b>
2 1/2"	30.2	78	80	<b>1R.NI2.750.00</b>
3"	33.3	85	95	<b>1R.NI2.900.00</b>
4"	39.3	96	120	<b>1R.NI2.110.00</b>

### 20.1.24. Redukcja GZ

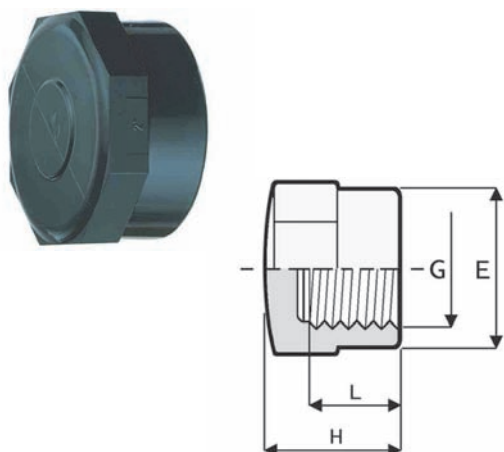


G	L1	L2	H	O	Nr kat.
1/2"x3/8"	15	11.4	38	24	<b>1R.NR2.20A.00</b>
3/4"x1/2"	16.3	15	43	30	<b>1R.NR2.25B.00</b>
1"x3/4"	19.1	16.3	47	36	<b>1R.NR2.32C.00</b>
1 1/4"x1"	21.4	19.1	56	46	<b>1R.NR2.40D.00</b>
1 1/2"x1 1/4"	21.4	21.4	58	50	<b>1R.NR2.50E.00</b>
2"x1 1/2"	25.7	21.4	62	65	<b>1R.NR2.63F.00</b>
2 1/2"x2"	30.2	25.7	72	80	<b>1R.NR2.75G.00</b>
3"x2 1/2"	33.3	30.2	82	95	<b>1R.NR2.90H.00</b>
4"x3"	39.3	33.3	90	120	<b>1R.NR2.111.00</b>

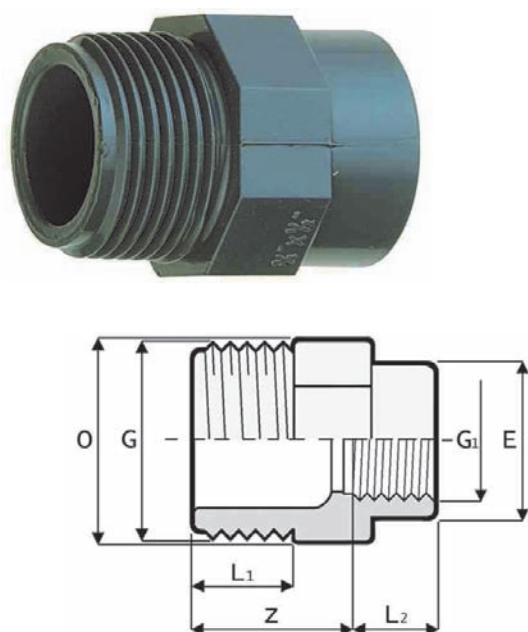
### 20.1.25. Redukcja GW



G	L1	L2	Z	E1	E2	Nr kat.
1/2"x3/8"	15	11.4	6	28	23	<b>1R.MR2.20A.00</b>
3/4"x1/2"	16.3	15	7	34	28	<b>1R.MR2.25B.00</b>
1"x3/4"	19.1	16.3	7	42	34	<b>1R.MR2.32C.00</b>
1 1/4"x1"	21.4	19.1	8	51	42	<b>1R.MR2.40D.00</b>
1 1/2"x1 1/4"	21.4	21.4	8	58	51	<b>1R.MR2.50E.00</b>
2"x1 1/2"	25.7	21.4	8	72	58	<b>1R.MR2.63F.00</b>
2 1/2"x2"	30.2	25.7	8	89	72	<b>1R.MR2.75G.00</b>
3"x2 1/2"	33.3	30.2	9	103	89	<b>1R.MR2.90H.00</b>
4"x3"	39.3	33.3	10	130	103	<b>1R.MR2.111.00</b>

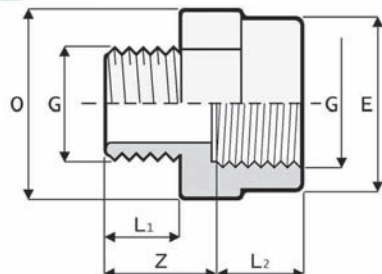
**20.1.26. Korek GW**


<b>G</b>	<b>L</b>	<b>H</b>	<b>E</b>	<b>Nr kat.</b>
<b>3/8"</b>	11.4	22	23	<b>1R.CA2.160.00</b>
<b>1/2"</b>	15	24	28	<b>1R.CA2.200.00</b>
<b>3/4"</b>	16.3	27	34	<b>1R.CA2.250.00</b>
<b>1"</b>	19.1	30	42	<b>1R.CA2.320.00</b>
<b>1 1/4"</b>	21.4	35	51	<b>1R.CA2.400.00</b>
<b>1 1/2"</b>	21.4	40	61	<b>1R.CA2.500.00</b>
<b>2"</b>	25.7	48	75	<b>1R.CA2.630.00</b>
<b>2 1/2"</b>	30.2	50	89	<b>1R.CA2.750.00</b>
<b>3"</b>	33.3	53	103	<b>1R.CA2.900.00</b>
<b>4"</b>	39.3	59	130	<b>1R.CA2.110.00</b>

**20.1.27. Redukcja GZ x GW**


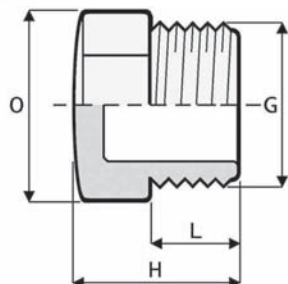
<b>GxG1</b>	<b>L1</b>	<b>L2</b>	<b>Z</b>	<b>E</b>	<b>O</b>	<b>Nr kat.</b>
<b>1/2"x3/8"</b>	15	11.4	24	23	24	<b>1R.RI2.20A.00</b>
<b>3/4"x3/8"</b>	16.3	11.4	25	23	30	<b>1R.RI2.25A.00</b>
<b>3/4"x1/2"</b>	16.3	15	26	28	30	<b>1R.RI2.25B.00</b>
<b>1"x3/8"</b>	19.1	11.4	28	23	36	<b>1R.RI2.32A.00</b>
<b>1"x1/2"</b>	19.1	15	29	28	36	<b>1R.RI2.32B.00</b>
<b>1"x3/4"</b>	19.1	16.3	30	34	36	<b>1R.RI2.32C.00</b>
<b>1 1/4"x1/2"</b>	21.4	15	33	28	46	<b>1R.RI2.40B.00</b>
<b>1 1/4"x3/4"</b>	21.4	16.3	33	34	46	<b>1R.RI2.40C.00</b>
<b>1 1/4"x1"</b>	21.4	19.1	33	42	46	<b>1R.RI2.40D.00</b>
<b>1 1/2"x3/4"</b>	21.4	16.3	34	34	50	<b>1R.RI2.50C.00</b>
<b>1 1/2"x1"</b>	21.4	19.1	34	42	50	<b>1R.RI2.50D.00</b>
<b>1 1/2"x1 1/4"</b>	21.4	21.4	34	51	55	<b>1R.RI2.50E.00</b>
<b>2"x1"</b>	25.7	19.1	37	42	65	<b>1R.RI2.63D.00</b>
<b>2"x1 1/4"</b>	25.7	21.4	37	51	65	<b>1R.RI2.63E.00</b>
<b>2"x1 1/2"</b>	25.7	21.4	37	58	65	<b>1R.RI2.63F.00</b>
<b>2 1/2"x1 1/4"</b>	30.2	21.4	43	51	80	<b>1R.RI2.75E.00</b>
<b>2 1/2"x1 1/2"</b>	30.2	21.4	43	58	80	<b>1R.RI2.75F.00</b>
<b>2 1/2"x2"</b>	30.2	25.7	43	72	80	<b>1R.RI2.75G.00</b>
<b>3"x1 1/2"</b>	33.3	21.4	47	58	95	<b>1R.RI2.90F.00</b>
<b>3"x2"</b>	33.3	25.7	47	72	95	<b>1R.RI2.90G.00</b>
<b>3"x2 1/2"</b>	33.3	30.2	47	89	95	<b>1R.RI2.90H.00</b>
<b>4"x2"</b>	39.3	25.7	53	72	120	<b>1R.RI2.11G.00</b>
<b>4"x2 1/2"</b>	39.3	30.2	53	89	120	<b>1R.RI2.11H.00</b>
<b>4"x3"</b>	39.3	33.3	53	103	120	<b>1R.RI2.11I.00</b>

## 20.1.28. Kształtka przejściowa GZ x GW



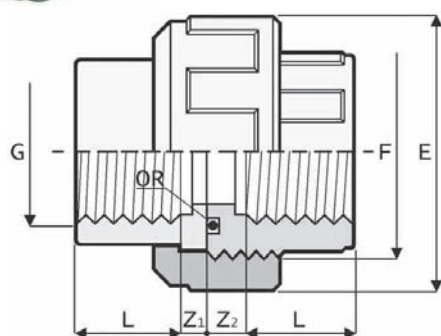
GxG	L1	L2	Z	O	E	Nr kat.
<b>3/8"x1/2"</b>	11.4	15.0	22	30	28	<b>1R.MG2.16B.00</b>
<b>1/2"x3/4"</b>	15.0	16.3	24	36	34	<b>1R.MG2.20C.00</b>
<b>3/4"x1"</b>	16.3	19.1	26	46	42	<b>1R.MG2.25D.00</b>
<b>1"x1 1/4"</b>	19.1	21.4	30	55	51	<b>1R.MG2.32E.00</b>
<b>1 1/4"x1 1/2"</b>	21.4	21.4	33	60	58	<b>1R.MG2.40F.00</b>
<b>1 1/2"x2"</b>	21.4	25.7	34	75	72	<b>1R.MG2.50G.00</b>
<b>2"x2 1/2"</b>	25.7	30.2	38	90	89	<b>1R.MG2.63H.00</b>
<b>2 1/2"x3"</b>	30.2	33.3	44	105	103	<b>1R.MG2.75I.00</b>
<b>3"x4"</b>	33.3	39.3	48	130	130	<b>1R.MG2.90L.00</b>

## 20.1.29. Korek GZ



G	L	H	O	Nr kat.
<b>3/8"</b>	11.4	24	22	<b>1R.TA2.160.00</b>
<b>1/2"</b>	15.0	29	24	<b>1R.TA2.200.00</b>
<b>3/4"</b>	16.3	30	30	<b>1R.TA2.250.00</b>
<b>1"</b>	19.1	33	36	<b>1R.TA2.320.00</b>
<b>1 1/4"</b>	21.4	39	46	<b>1R.TA2.400.00</b>
<b>1 1/2"</b>	21.4	39	50	<b>1R.TA2.500.00</b>
<b>2"</b>	25.7	43	65	<b>1R.TA2.630.00</b>
<b>2 1/2"</b>	30.2	51	80	<b>1R.TA2.750.00</b>
<b>3"</b>	33.3	55	95	<b>1R.TA2.900.00</b>
<b>4"</b>	39.3	61	120	<b>1R.TA2.110.00</b>

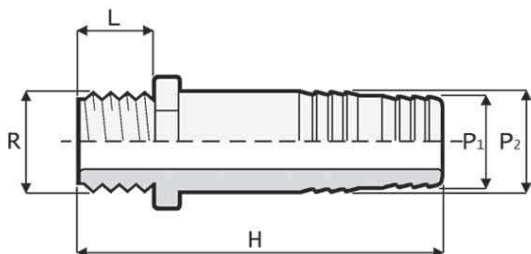
## 20.1.30. Dwuzłączka GW



G	L	Z1	Z2	F	E	Nr kat.
<b>3/8"</b>	11.4	5.6	13.6	3/4"	34	<b>1R.BO2.160.00</b>
<b>1/2"</b>	15.0	4.0	11.0	1"	42	<b>1R.BO2.200.00</b>
<b>3/4"</b>	16.3	5.7	12.7	1 1/4"	52	<b>1R.BO2.250.00</b>
<b>1"</b>	19.1	5.9	12.9	1 1/2"	59	<b>1R.BO2.320.00</b>
<b>1 1/4"</b>	21.4	7.6	16.6	2"	72	<b>1R.BO2.400.00</b>
<b>1 1/2"</b>	21.4	12.6	23.6	2 1/4"	79	<b>1R.BO2.500.00</b>
<b>2"</b>	25.7	15.3	30.3	2 3/4"	96	<b>1R.BO2.630.00</b>
<b>2 1/2"</b>	30.2	17.8	32.8	3 1/2"	120	<b>1R.BO2.750.00L</b>
<b>3"</b>	33.3	25.7	36.7	4"	135	<b>1R.BO2.900.00L</b>
<b>4"</b>	39.3	27.7	40.7	5"	163	<b>1R.BO2.110.00L</b>

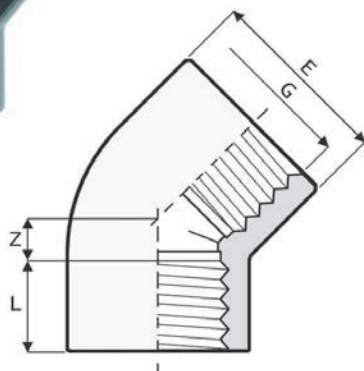


### 20.1.31. Tuleja na wąż GZ



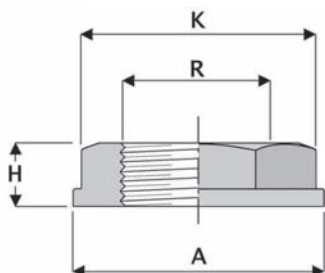
RxP1xP2	L	H	Nr kat.
<b>3/8"x16x18</b>	11.4	58	<b>1R.PO2.160.00</b>
<b>1/2"x20x22</b>	15.0	66	<b>1R.PO2.200.00</b>
<b>3/4"x25x27</b>	16.3	81	<b>1R.PO2.250.00</b>
<b>1"x30x32</b>	19.1	97	<b>1R.PO2.320.00</b>
<b>1 1/4"x40x42</b>	21.4	104	<b>1R.PO2.400.00</b>
<b>1 1/2"x50x52</b>	21.4	111	<b>1R.PO2.500.00</b>
<b>2"x60x64</b>	25.7	123	<b>1R.PO2.630.00</b>

### 20.1.32. Kolano 45° GW



G	L	Z	E	Nr kat.
<b>1/2"</b>	15.0	12.0	28	<b>1R.GY2.200.00</b>
<b>3/4"</b>	16.3	16.7	34	<b>1R.GY2.250.00</b>
<b>1"</b>	19.1	19.9	42	<b>1R.GY2.320.00</b>
<b>1 1/4"</b>	21.4	25.6	51	<b>1R.GY2.400.00</b>
<b>1 1/2"</b>	21.4	35.6	61	<b>1R.GY2.500.00</b>
<b>2"</b>	25.7	45.3	75	<b>1R.GY2.630.00</b>
<b>2 1/2"</b>	30.2	52.8	89	<b>1R.GY2.750.00</b>
<b>3"</b>	33.3	64.7	106	<b>1R.GY2.900.00</b>
<b>4"</b>	39.3	78.7	129	<b>1R.GY2.110.00</b>

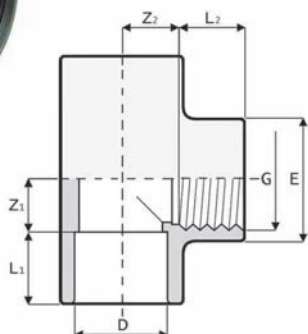
### 20.1.33. Nakrętka kontruująca GW



R	A	K	H	Nr kat.
<b>1/2"</b>	38	28	13.0	<b>1R.NU2.200.00</b>
<b>3/4"</b>	44	33	13.5	<b>1R.NU2.250.00</b>
<b>1"</b>	58	46	16.0	<b>1R.NU2.320.00</b>
<b>1 1/4"</b>	62	50	18.0	<b>1R.NU2.400.00</b>
<b>1 1/2"</b>	76	60	19.0	<b>1R.NU2.500.00</b>
<b>2"</b>	92	79	20.8	<b>1R.NU2.630.00</b>

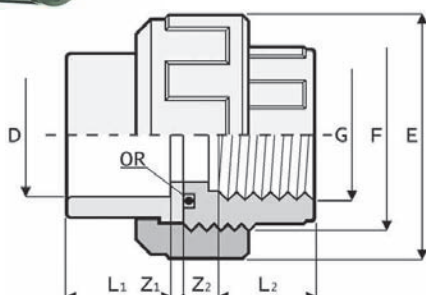


### 20.1.34. Trójnik d x GW 90°



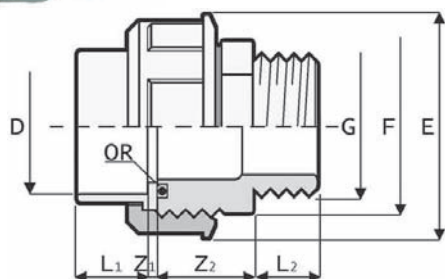
DxG	L1	L2	Z1	Z2	E	Nr kat.
16x3/8"	14	11.4	9	11.6	23	1R.TI3.16A.00
20x1/2"	16	15	12	13	28	1R.TI3.20B.00
25x3/4"	19	16.3	15	17	35	1R.TI3.25C.00
32x1"	22	19.1	18	21	43	1R.TI3.32D.00
40x1 1/4"	26	21.4	21	25.6	51	1R.TI3.40E.00
50x1 1/2"	31	21.4	26	35.6	61	1R.TI3.50F.00
63x2"	38	25.7	33	45.3	75	1R.TI3.63G.00
75x2 1/2"	44	30.2	39	52.8	89	1R.TI3.75H.00
90x3"	51	33.3	47	64.7	106	1R.TI3.90I.00
110x4"	61	39.3	57	78.7	129	1R.TI3.11L.00

### 20.1.35. Dwuzłaczka d x GW

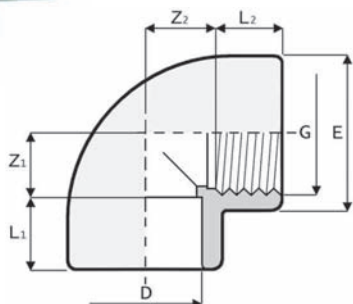


DxG	L1	L2	Z1	Z2	F	E	Nr kat.
16x3/8"	14	11.4	3	13.6	3/4"	34	1R.BO3.16A.00
20x1/2"	16	15.0	3	11.0	1"	42	1R.BO3.20B.00
25x3/4"	19	16.3	3	12.7	1 1/4"	52	1R.BO3.25C.00
32x1"	22	19.1	3	12.9	1 1/2"	59	1R.BO3.32D.00
40x1 1/4"	26	21.4	3	16.6	2"	72	1R.BO3.40E.00
50x1 1/2"	31	21.4	3	23.6	2 1/4"	79	1R.BO3.50F.00
63x2"	38	25.7	3	30.3	2 3/4"	96	1R.BO3.63G.00
75x2 1/2"	45	30.2	3	32.8	3 1/2"	120	1R.BO3.75H.00L
90x3"	53	33.3	5	36.7	4"	135	1R.BO3.90I.00L
110x4"	61	39.3	5	40.7	5"	163	1R.BO3.11L.00L

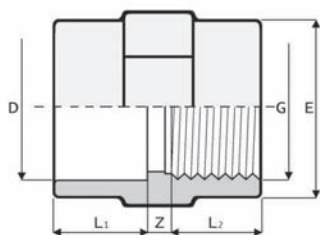
### 20.1.36. Dwuzłaczka d x GZ



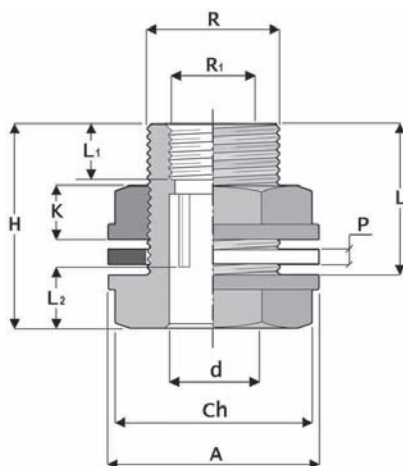
DxG	L1	L2	Z1	Z2	F	E	Nr kat.
50x1 1/2"	31	28	3	41	2 1/4"	79	1R.BM3.50F.00
50x2"	31	28	3	41	2 1/4"	79	1R.BM3.50G.00
63x2"	38	28	3	43	2 3/4"	96	1R.BM3.63G.00

**20.1.37. Kolano d x GW 90°**


<b>DxG</b>	<b>L1</b>	<b>L2</b>	<b>Z1</b>	<b>Z2</b>	<b>E</b>	<b>Nr kat.</b>
<b>16x3/8"</b>	14	11.4	9	11.6	23	<b>1R.GO3.16A.00</b>
<b>20x1/2"</b>	16	15	11	12	28	<b>1R.GO3.20B.00</b>
<b>25x3/4"</b>	19	16.3	14	17	35	<b>1R.GO3.25C.00</b>
<b>32x1"</b>	22	19.1	18	20.5	43	<b>1R.GO3.32D.00</b>
<b>40x1 1/4"</b>	26	21.4	21	25.6	51	<b>1R.GO3.40E.00</b>
<b>50x1 1/2"</b>	31	21.4	26	35.6	61	<b>1R.GO3.50F.00</b>
<b>63x2"</b>	38	25.7	33	46	76	<b>1R.GO3.63G.00</b>
<b>75x2 1/2"</b>	44	30.2	39	52.8	89	<b>1R.GO3.75H.00</b>
<b>90x3"</b>	51	33.3	47	64.7	106	<b>1R.GO3.90I.00</b>
<b>110x4"</b>	61	39.3	57	78.7	129	<b>1R.GO3.11L.00</b>

**20.1.38. Mufa d x GW**


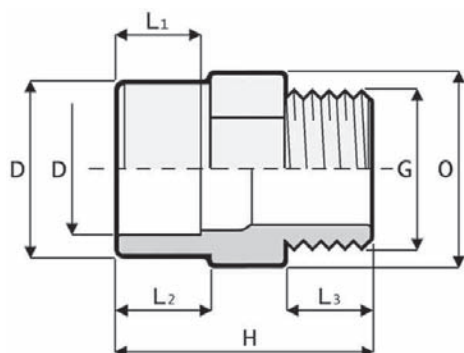
<b>DxG</b>	<b>L1</b>	<b>L2</b>	<b>Z1</b>	<b>Z2</b>	<b>Nr kat.</b>
<b>16x3/8"</b>	14	11.4	5.5	23.5	<b>1R.MA3.16A.00</b>
<b>20x1/2"</b>	16	15.0	4	28.5	<b>1R.MA3.20B.00</b>
<b>25x3/4"</b>	19	16.3	5	35	<b>1R.MA3.25C.00</b>
<b>32x1"</b>	22	19.1	6	43	<b>1R.MA3.32D.00</b>
<b>40x1 1/4"</b>	26	21.4	5	50	<b>1R.MA3.40E.00</b>
<b>50x1 1/2"</b>	31	21.4	8	61	<b>1R.MA3.50F.00</b>
<b>63x2"</b>	38	25.7	7.5	76	<b>1R.MA3.63G.00</b>
<b>75x2 1/2"</b>	44	30.2	8	89	<b>1R.MA3.75H.00</b>
<b>90x3"</b>	51	33.3	9	106	<b>1R.MA3.90I.00</b>
<b>110x4"</b>	61	39.3	10	129	<b>1R.MA3.11L.00</b>

**20.1.39. Złączka zbiornikowa GZ x GW x d**


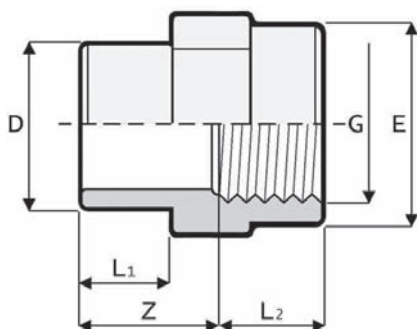
<b>RxdxR1</b>	<b>A</b>	<b>Ch</b>	<b>L</b>	<b>L1</b>	<b>L2</b>	<b>H</b>	<b>P</b>	<b>K</b>	<b>Nr kat.</b>
<b>3/4"x16x1/2"</b>	44	33	47	15.0	14	60.5	3	13.5	<b>1R.AS3.16B.00</b>
<b>1"x20x3/4"</b>	58	46	49	16.3	16	65	3	16.0	<b>1R.AS3.20C.00</b>
<b>1 1/4"x25x1"</b>	62	50	52	19.1	19	70	3	18.0	<b>1R.AS3.25D.00</b>
<b>1 1/2"x32x1"</b>	76	60	54	19.1	22	73	3	19.0	<b>1R.AS3.32D.00</b>
<b>2"x40x1 1/2"</b>	92	79	60	21.4	26	81	3	20.8	<b>1R.AS3.40F.00</b>



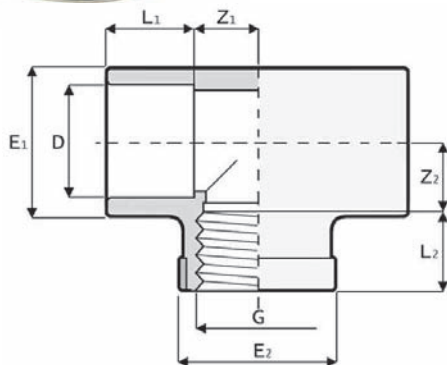
## 20.1.40. Kształka przejściowa d x GZ



<b>DxG</b>	<b>L1</b>	<b>L2</b>	<b>L3</b>	<b>H</b>	<b>O</b>	<b>Nr kat.</b>
<b>12x16x3/8"</b>	12	14	11.4	34.5	20.4	<b>1R.AM3.12A.00</b>
<b>16x20x3/8"</b>	14	16	11.4	40	24	<b>1R.AM3.16A.00</b>
<b>16x20x1/2"</b>	14	16	15.0	43	24	<b>1R.AM3.16B.00</b>
<b>20x25x3/8"</b>	16	19	11.4	43	30	<b>1R.AM3.20A.00</b>
<b>20x25x1/2"</b>	16	19	15.0	46	30	<b>1R.AM3.20B.00</b>
<b>20x25x3/4"</b>	16	19	16.3	47	30	<b>1R.AM3.20C.00</b>
<b>25x32x1/2"</b>	19	22	15.0	49	36	<b>1R.AM3.25B.00</b>
<b>25x32x3/4"</b>	19	22	16.3	50	36	<b>1R.AM3.25C.00</b>
<b>25x32x1"</b>	19	22	19.1	53	36	<b>1R.AM3.25D.00</b>
<b>32x40x3/4"</b>	22	26	16.3	54	46	<b>1R.AM3.32C.00</b>
<b>32x40x1"</b>	22	26	19.1	57	46	<b>1R.AM3.32D.00</b>
<b>32x40x1 1/4"</b>	22	26	21.4	60	46	<b>1R.AM3.32E.00</b>
<b>40x50x1"</b>	26	31	19.1	64	55	<b>1R.AM3.40D.00</b>
<b>40x50x1 1/4"</b>	26	31	21.4	67	55	<b>1R.AM3.40E.00</b>
<b>40x50 1 1/2"</b>	26	31	21.4	67	55	<b>1R.AM3.40F.00</b>
<b>50x63x1 1/4"</b>	31	38	21.4	74	65	<b>1R.AM3.50E.00</b>
<b>50x63x1 1/2"</b>	31	38	21.4	74	65	<b>1R.AM3.50F.00</b>
<b>50x63x2"</b>	31	38	25.7	78	65	<b>1R.AM3.50G.00</b>
<b>63x75x1 1/2"</b>	38	44	21.4	80	80	<b>1R.AM3.63F.00</b>
<b>63x75x2"</b>	38	44	25.7	84	80	<b>1R.AM3.63G.00</b>
<b>63x75x2 1/2"</b>	38	44	30.2	91	80	<b>1R.AM3.63H.00</b>
<b>75x90x2"</b>	44	51	25.7	94	95	<b>1R.AM3.75G.00</b>
<b>75x90x2 1/2"</b>	44	51	30.2	99	95	<b>1R.AM3.75H.00</b>
<b>75x90x3"</b>	44	51	33.3	102	95	<b>1R.AM3.75I.00</b>
<b>90x110x2"</b>	51	61	25.7	110	115	<b>1R.AM3.90G.00</b>
<b>90x110x2 1/2"</b>	51	61	30.2	110	115	<b>1R.AM3.90H.00</b>
<b>90x110x3"</b>	51	61	33.3	113	115	<b>1R.AM3.90I.00</b>
<b>90x110x4"</b>	51	61	39.3	118	115	<b>1R.AM3.90L.00</b>
<b>110x125x3"</b>	61	66	33.3	115	130	<b>1R.AM3.11I.00</b>
<b>110x125x4"</b>	61	66	39.3	120	130	<b>1R.AM3.11L.00</b>

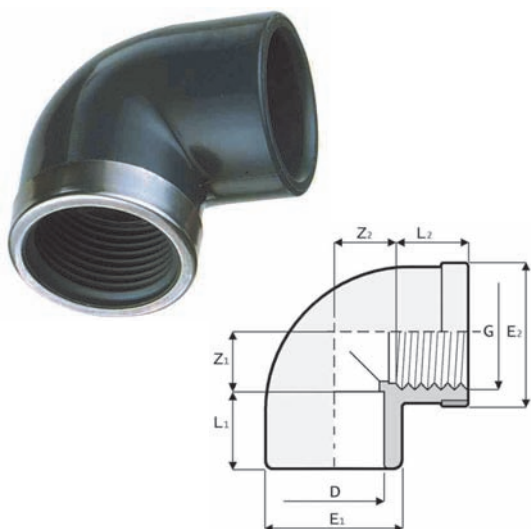
**20.1.41. Kształka przejściowa d x GW**


<b>DxG</b>	<b>L1</b>	<b>L2</b>	<b>E</b>	<b>Z</b>	<b>Nr kat.</b>
<b>16x3/8"</b>	14	11.4	23	22	<b>1R.AF3.16A.00</b>
<b>20x1/2"</b>	14	15.0	28	22	<b>1R.AF3.20B.00</b>
<b>20x3/4"</b>	16	15.0	28	26	<b>1R.AF3.20C.00</b>
<b>25x1/2"</b>	16	16.3	34	26	<b>1R.AF3.25B.00</b>
<b>25x3/4"</b>	16	19.0	28	29	<b>1R.AF3.25C.00</b>
<b>25x1"</b>	19	16.3	34	29	<b>1R.AF3.25D.00</b>
<b>32x3/4"</b>	19	19.1	42	29	<b>1R.AF3.32C.00</b>
<b>32x1"</b>	19	22.0	34	32	<b>1R.AF3.32D.00</b>
<b>40x1"</b>	22	19.1	42	33	<b>1R.AF3.40D.00</b>
<b>40x1 1/4"</b>	22	19.1	42	37	<b>1R.AF3.40E.00</b>
<b>50x1 1/4"</b>	26	21.4	51	37	<b>1R.AF3.50E.00</b>
<b>50x1 1/2"</b>	31	21.4	51	42	<b>1R.AF3.50F.00</b>
<b>50x2"</b>	31	21.4	58	42	<b>1R.AF3.50G.00</b>
<b>63x1 1/2"</b>	31	25.7	72	42	<b>1R.AF3.63F.00</b>
<b>63x2"</b>	38	25.7	72	50	<b>1R.AF3.63G.00</b>
<b>75x2"</b>	38	44.0	75	61	<b>1R.AF3.75G.00</b>
<b>75x2 1/2"</b>	44	30.2	89	59	<b>1R.AF3.75H.00</b>
<b>75x3"</b>	44	33.3	103	59	<b>1R.AF3.75I.00</b>
<b>90x2 1/2"</b>	44	51.0	89	68	<b>1R.AF3.90H.00</b>
<b>90x3"</b>	51	33.3	103	67	<b>1R.AF3.90I.00</b>
<b>90x4"</b>	51	39.3	130	67	<b>1R.AF3.90L.00</b>
<b>110x3"</b>	51	61.0	106	82	<b>1R.AF3.11I.00</b>
<b>110x4"</b>	61	39.3	130	77	<b>1R.AF3.11L.00</b>

**20.1.42. Trójnik d x GW 90° (pierścień wzmacniający)**


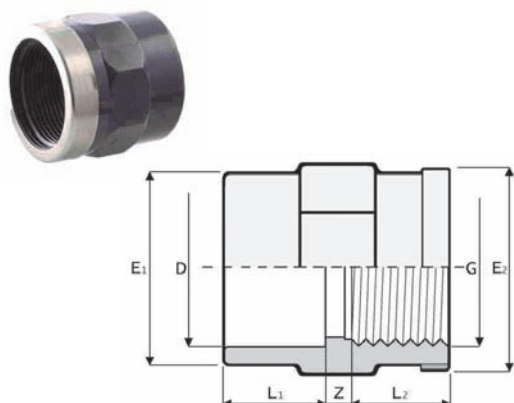
<b>DxG</b>	<b>L1</b>	<b>L2</b>	<b>Z1</b>	<b>Z2</b>	<b>E1</b>	<b>E2</b>	<b>Nr kat.</b>
<b>16x3/8"</b>	14	11.4	9	11.6	23	25	<b>1R.TM3.16A.00</b>
<b>20x1/2"</b>	16	15	11	12.0	28	30	<b>1R.TM3.20B.00</b>
<b>25x3/4"</b>	19	16.3	14	16.7	34	35	<b>1R.TM3.25C.00</b>
<b>32x1"</b>	22	19.1	17	19.9	42	45	<b>1R.TM3.32D.00</b>
<b>40x1 1/4"</b>	26	21.4	21	25.6	51	55	<b>1R.TM3.40E.00</b>
<b>50x1 1/2"</b>	31	21.4	26	35.6	61	65	<b>1R.TM3.50F.00</b>
<b>63x2"</b>	38	25.7	33	45.3	75	78	<b>1R.TM3.63G.00</b>

### 20.1.43. Kolano d x GW 90° (pierścień wzmacniający)



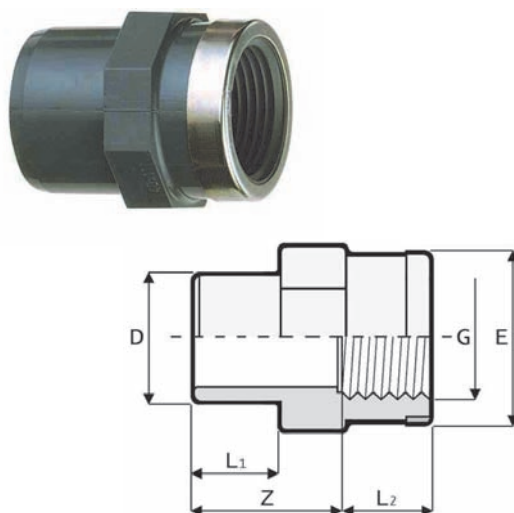
DxG	L1	L2	Z1	Z2	E1	E2	Nr kat.
16x3/8"	14	11.4	9	11.6	23	25	1R.GM3.16A.00
20x1/2"	16	15.0	11	12.0	28	30	1R.GM3.20B.00
25x3/4"	19	16.3	14	16.7	34	35	1R.GM3.25C.00
32x1"	22	19.1	17	19.9	42	45	1R.GM3.32D.00
40x1 1/4"	26	21.4	21	25.6	51	55	1R.GM3.40E.00
50x1 1/2"	31	21.4	26	35.6	61	65	1R.GM3.50F.00
63x2"	38	25.7	33	45.3	75	78	1R.GM3.63G.00

### 20.1.44. Mufa d x GW (pierścień wzmacniający)



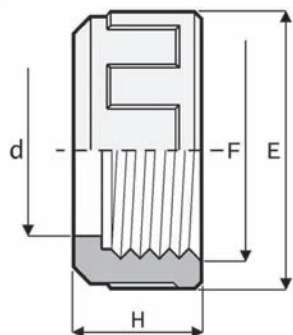
DxG	L1	L2	E1	E2	Z	Nr kat.
16x3/8"	14	11.4	23.5	24.5	5.5	1R.MM3.16A.00
20x1/2"	16	15.0	28.5	29.5	4	1R.MM3.20B.00
25x3/4"	19	16.3	35	36	5	1R.MM3.25C.00
32x1"	22	19.1	43	44	6	1R.MM3.32D.00
40x1 1/4"	26	21.4	50	51	5	1R.MM3.40E.00
50x1 1/2"	31	21.4	61	62	8	1R.MM3.50F.00
63x2"	38	25.7	76	77	7.5	1R.MM3.63G.00

### 20.1.45. Kształtka przejściowa d x GW (pierścień wzmacniający)

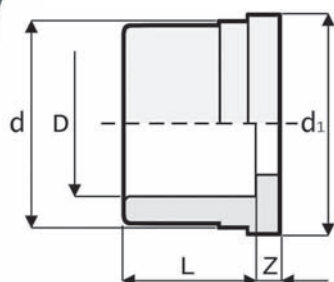


DxG	L1	L2	E	Z	Nr kat.
20x1/2"	16	15	30	26	1R.RM3.20B.00
25x1/2"	16	19	30	29	1R.RM3.25B.00
25x3/4"	19	16.3	35	29	1R.RM3.25C.00
32x3/4"	19	22	35	32	1R.RM3.32C.00
32x1"	22	19.1	45	33	1R.RM3.32D.00
40x1"	22	20.6	45	37	1R.RM3.40D.00
40x1 1/4"	26	21.4	55	37	1R.RM3.40E.00
50x1 1/2"	31	21.4	65	42	1R.RM3.50F.00
50x2"	31	25.7	78	42	1R.RM3.50G.00
63x2"	38	25.7	78	50	1R.RM3.63G.00

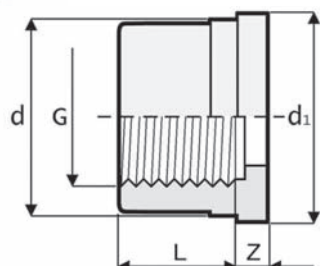


**20.1.46. Nakrętka do B01, B02 i B03**


<b>D</b>	<b>d</b>	<b>H</b>	<b>F</b>	<b>E</b>	<b>Nr kat.</b>
<b>16</b>	22.0	23	3/4"	34	<b>1R.BG1.160.00</b>
<b>20</b>	27.6	23	1"	42	<b>1R.BG1.200.00</b>
<b>25</b>	36.1	25	1 1/4"	52	<b>1R.BG1.250.00</b>
<b>32</b>	41.6	27	1 1/2"	59	<b>1R.BG1.320.00</b>
<b>40</b>	53.1	30	2"	72	<b>1R.BG1.400.00</b>
<b>50</b>	59.1	34	2 1/4"	79	<b>1R.BG1.500.00</b>
<b>63</b>	74.1	38	2 3/4"	96	<b>1R.BG1.630.00</b>
<b>75</b>	92.7	45	3 1/2"	120	<b>1R.BG1.750.00L</b>
<b>90</b>	105.5	52	4"	135	<b>1R.BG1.900.00L</b>
<b>110</b>	129.5	59	5"	163	<b>1R.BG1.110.00L</b>

**20.1.47. Luźny koniec do B01 i B03**


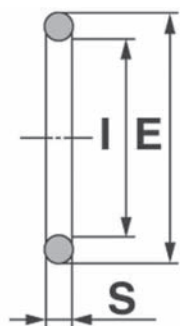
<b>D</b>	<b>L</b>	<b>Z</b>	<b>d</b>	<b>d1</b>	<b>Nr kat.</b>
<b>16</b>	14	3	22.0	24.0	<b>1R.BL1.160.00</b>
<b>20</b>	16	3	27.5	30.1	<b>1R.BL1.200.00</b>
<b>25</b>	19	3	36.0	38.8	<b>1R.BL1.250.00</b>
<b>32</b>	22	3	41.5	44.7	<b>1R.BL1.320.00</b>
<b>40</b>	26	3	53.0	56.5	<b>1R.BL1.400.00</b>
<b>50</b>	31	3	59.0	62.6	<b>1R.BL1.500.00</b>
<b>63</b>	38	3	74.0	78.4	<b>1R.BL1.630.00</b>
<b>75</b>	44	3	92.5	97.0	<b>1R.BL1.750.00</b>
<b>90</b>	51	5	104.8	110.0	<b>1R.BL1.900.00</b>
<b>110</b>	61	5	128.8	135.5	<b>1R.BL1.110.00</b>

**20.1.48. Luźny koniec do B02**


<b>G</b>	<b>L</b>	<b>Z</b>	<b>d</b>	<b>d1</b>	<b>Nr kat.</b>
<b>3/8"</b>	11.4	5.6	22.0	24.0	<b>1R.BL2.160.00</b>
<b>1/2"</b>	15.0	4.0	27.5	30.1	<b>1R.BL2.200.00</b>
<b>3/4"</b>	16.3	5.7	36.0	38.8	<b>1R.BL2.250.00</b>
<b>1"</b>	19.1	5.9	41.5	44.7	<b>1R.BL2.320.00</b>
<b>1 1/4"</b>	21.4	7.6	53.0	56.5	<b>1R.BL2.400.00</b>
<b>1 1/2"</b>	21.4	12.6	59.0	62.6	<b>1R.BL2.500.00</b>
<b>2"</b>	25.7	15.3	74.0	78.4	<b>1R.BL2.630.00</b>
<b>2 1/2"</b>	30.2	17.8	90.5	97.0	<b>1R.BL2.750.00</b>
<b>3"</b>	33.3	25.7	104.8	110.0	<b>1R.BL2.900.00</b>
<b>4"</b>	39.3	27.7	128.8	135.5	<b>1R.BL2.110.00</b>

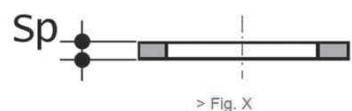
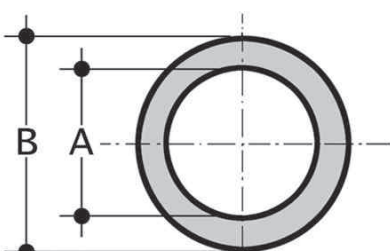
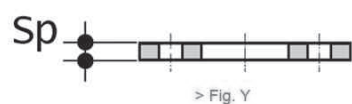
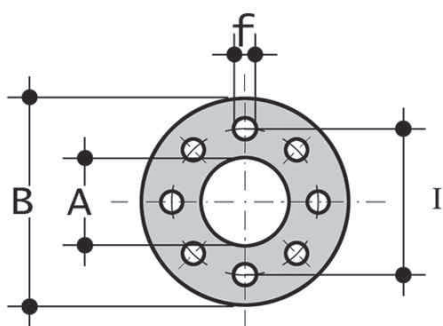


### 20.1.49. O-RING do B01, B02 i B03



D	I	E	S	Nr kat.
<b>16</b>	23.4	28.7	2.6	<b>1R.GBO.160.00</b>
<b>20</b>	20.2	27.2	3.5	<b>1R.GBO.200.00</b>
<b>25</b>	28.2	35.2	3.5	<b>1R.GBO.250.00</b>
<b>32</b>	32.9	39.9	3.5	<b>1R.GBO.320.00</b>
<b>40</b>	40.6	51.2	5.3	<b>1R.GBO.400.00</b>
<b>50</b>	47.0	57.6	5.3	<b>1R.GBO.500.00</b>
<b>63</b>	60.4	71.0	5.3	<b>1R.GBO.630.00</b>
<b>75</b>	75.6	86.2	5.3	<b>1R.GBO.750.00L</b>
<b>90</b>	91.4	102.0	5.3	<b>1R.GBO.900.00L</b>
<b>110</b>	113.7	124.3	5.3	<b>1R.GBO.110.00L</b>

### 20.1.50. Uszczelka płaska do QR1



D	A	B	I	Sp	f	Fig.	Nr kat.
<b>20</b>	20	32	-	2	-	X	<b>1R.GQP.200.00</b>
<b>25</b>	25	39	-	2	-	X	<b>1R.GQP.250.00</b>
<b>32</b>	32	48	-	2	-	X	<b>1R.GQP.320.00</b>
<b>40</b>	40	59	-	2	-	X	<b>1R.GQP.400.00</b>
<b>50</b>	50	71	-	2	-	X	<b>1R.GQP.500.00</b>
<b>63</b>	63	88	-	2	-	X	<b>1R.GQP.630.00</b>
<b>75</b>	75	104	-	2	-	X	<b>1R.GQP.750.00</b>
<b>90</b>	90	123	-	2	-	X	<b>1R.GQP.900.00</b>
<b>110</b>	110	148	-	3	-	X	<b>1R.GQP.110.00</b>
<b>125</b>	125	167	-	3	-	X	<b>1R.GQP.130.00</b>
<b>140</b>	140	186	-	3	-	X	<b>1R.GQP.150.00</b>
<b>160</b>	160	211	-	3	-	X	<b>1R.GQP.170.00</b>
<b>200</b>	197	267	-	3	-	X	<b>1R.GQP.210.00</b>
<b>225</b>	220	270	-	3	-	X	<b>1R.GQP.230.00</b>
<b>250</b>	250	305	-	4	-	X	<b>1R.GQP.260.00</b>
<b>280</b>	265	395	350	4	12 $\emptyset$ 22	Y	<b>1R.GQP.280.00</b>
<b>315</b>	290	462	400	4	12 $\emptyset$ 22	Y	<b>1R.GQP.330.00</b>