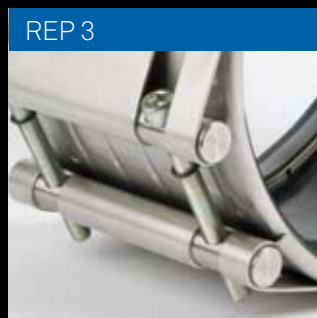
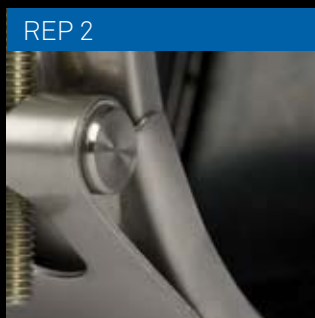


REP

FLEXIBLE COUPLINGS FOR PIPE REPAIR



REP 3



REP-C



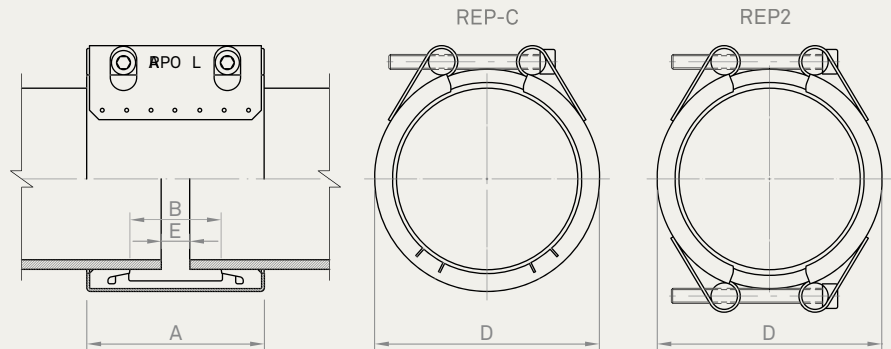
REP 2



REP-S

NOMINAL WIDTH 95

Series IBXC - IBXR



	Quality W1		Quality W2		Quality W4		Quality W5	
	AISI	DIN	AISI	DIN	AISI	DIN	AISI	DIN
Casing			304 L	1.4307	304 L	1.4307	316 L	1.4404
Bolts			1035	1.0501	304	1.4301	316	1.4401
Bars			1045	1.0503	304 L	1.4307	316 L	1.4404
Inner Steel Bridge (Lock)			304 L	1.4307	304 L	1.4307	316 L	1.4404

OD mm	Range		Pressure PS bar	Dimension					Bolts	
	IBXC mm	IBXR mm		A mm	B mm	D mm	E ¹ mm	E ² mm	Diam.	Tor. Nm
48,3	47 - 49		45	78	31	68	5	15	M 8	7
54,0	53 - 55		45	78	31	74	5	15	M 8	7
57,0	56 - 58		40	78	31	77	5	15	M 8	7
60,3	59 - 61		40	78	31	80	5	15	M 8	7
63,0	62 - 65	60 - 64	40	78	31	84	5	15	M 8	7
76,1	74 - 77	74 - 78	30	94	45	99	5	15	M 8	7
84,0	82 - 85	80 - 86	30	94	45	107	5	15	M 8	7
88,9	87 - 91	87 - 93	30	94	45	113	5	15	M 8	7
104,0	102 - 106	98 - 106	30	94	45	128	5	15	M 8	10
108,0	107 - 111	107 - 111	30	94	45	133	5	15	M 8	10
114,3	112 - 117	110 - 116	30	95	45	139	5	15	M 8	10
125,0	124 - 127	118 - 125	20	95	45	149	5	15	M 8	10
129,0	127 - 131	125 - 131	20	95	45	153	5	15	M 8	10
133,0	131 - 136	131 - 136	20	95	45	158	5	15	M 8	10
139,7	137 - 142	137 - 144	20	95	45	164	5	15	M 8	10
154,0	152 - 156	147 - 156	20	95	45	178	5	15	M 8	10
159,0	156 - 161	156 - 162	20	95	45	183	5	15	M 8	10
168,3	166 - 171	166 - 171	20	95	45	193	5	15	M 8	10

E¹ Permitted gaps without internal band E² Permitted gaps with internal band PS Working pressure OD Outside diameter Tor. Torque Value

OD mm	Maximum diameter difference		Maximum angular deflection		Maximum misalignment		Maximum crack width	
	IBXC mm	IBXR mm	IBXC degrees	IBXR degrees	IBXC mm	IBXR mm	IBXC mm	IBXR mm
48,3	0,5	-	4,0	-	1,0	-	20	
54 - 63	1,0	2,0	4,0	4,0	1,0	1,0	20	
76,1 - 104	1,5	3,0	4,0	4,0	1,0	1,0	35	
108 - 154	2,5	3,0	4,0	4,0	1,0	1,0	35	
154 - 168,3	2,5	3,0	4,0	4,0	2,0	2,0	35	

See page 5 (Permitted tolerances)

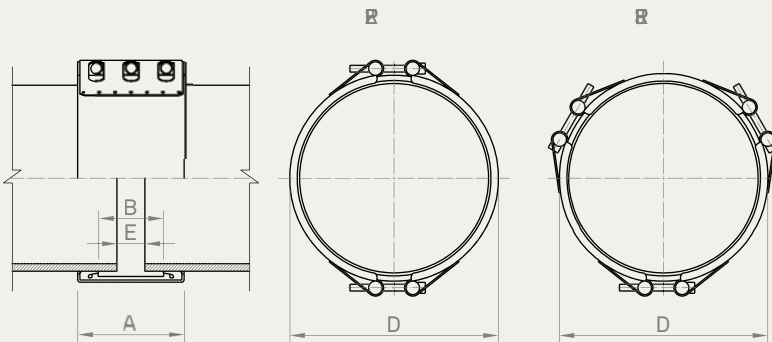
For the correct operation of the coupling, fitting instructions must be respected.

Sealing gasket: EPDM / NBR / Silicone

Test pressure = 1.5 x PS

NOMINAL WIDTH 140

Series IBYR to IFYR IBY3 to IFY3



	IBYR IBY3	ICYR ICY3	IDYR IDY3	IEYR IEY3	IFYR IFY3
	mm	mm	mm	mm	mm
A	139	140	141	142	144
B	86	86	86	86	86
D	OD + 23	OD + 24	OD + 25	OD + 26	OD + 28
E ¹	10	10	10	10	10
E ²	35	35	35	35	35

	Quality W1		Quality W2		Quality W4		Quality W5	
	AISI	DIN	AISI	DIN	AISI	DIN	AISI	DIN
Casing			304 L	1.4307	304 L	1.4307	316 L	1.4404
Bolts			1035	1.0501	304	1.4301	316	1.4401
Bars			1045	1.0503	304 L	1.4307	316 L	1.4404
Inner Steel Bridge (Lock)			304 L	1.4307	304 L	1.4307	316 L	1.4404

DN mm	IBYR - IBY3			ICYR - ICY3			IDYR - IDY3			IEYR - IEY3			IFYR - IFY3		
	PS bar	Diam. mm	Tor. Nm	PS bar	Diam. mm	Tor. Nm	PS bar	Diam. mm	Tor. Nm	PS bar	Diam. mm	Tor. Nm	PS bar	Diam. mm	Tor. Nm
150	23	M 10	20	30	M 10	20									
200	18	M 10	20	24	M 10	20	30	M 10	20						
250	15	M 10	20	19	M 10	20	24	M 10	20						
300	12	M 10	25	16	M 10	20	20	M 10	20						
350	11	M 10	30	14	M 10	20	18	M 10	20	21	M 10	20	28	M 12	25
400	9	M 10	30	13	M 10	20	16	M 10	20	19	M 10	20	25	M 12	25
450	8	M 10	25	11	M 10	25	14	M 10	25	17	M 12	30	22	M 12	30
500	8	M 10	30	10	M 10	25	13	M 10	25	15	M 12	30	20	M 12	35
550	7	M 10	30	9	M 10	30	12	M 10	30	14	M 12	35	19	M 12	35
600	6	M 10	30	9	M 10	30	11	M 10	30	13	M 12	35	17	M 12	35
650	6	M 10	35	8	M 10	35	10	M 12	40	12	M 12	45	16	M 12	45
700	6	M 10	40	7	M 10	35	9	M 12	45	11	M 12	45	15	M 12	45
750	5	M 10	40	7	M 10	40				10	M 12	45	14	M 16	60
800	5	M 10	40	6	M 12	50				10	M 12	50	13	M 16	70
850	5	M 10	45	6	M 12	60				9	M 12	60	12	M 16	70
900				6	M 12	60				9	M 12	60	12	M 16	80
950				5	M 12	60				8	M 12	60	11	M 16	80
1000				5	M 12	70				8	M 12	70	10	M 16	90
1100				5	M 12	70				7	M 16	90	9	M 16	90
1200				4	M 12	80				7	M 16	100	9	M 16	100

E¹ Permitted gaps without internal band E² Permitted gaps with internal band PS Working pressure DN Nominal diameter OD Outside diameter Tor. Torque Value

For the correct operation of the coupling, fitting instructions must be respected.

Nominal diameters serve as guidance of the pressure scale. All measures within the DN range are manufactured.

Sealing gasket: EPDM / NBR / Silicone

Test pressure = 1.5 x PS

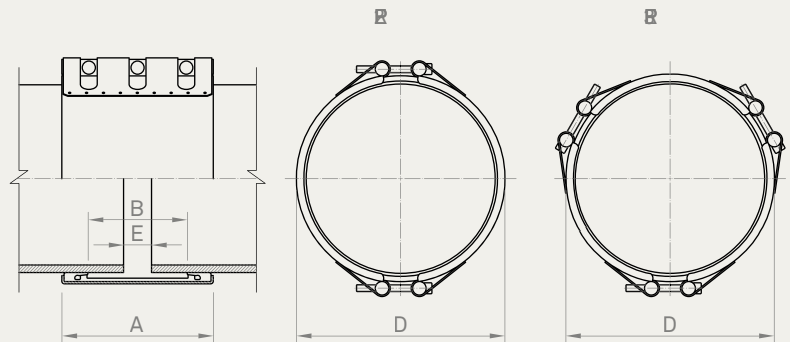
OD mm	Maximum diameter difference		Maximum angular deflection degrees	Maximum misalignment mm	Maximum crack width mm
	2 locks mm	3 locks mm			
150 - 250	5,0	7,0	2,0	2,0	50
250 - 500	5,0	7,0	2,0	3,0	50
500 - 1200	6,0	8,0	2,0	3,0	50

See page 5 (Permitted tolerances)

NOMINAL WIDTH 200

Series IBZR to IGZR IBZ3 to IGZ3

	IBZR IBZ3	ICZR ICZ3	IDZR IDZ3	IEZR IEZ3	IFZR IFZ3	IGZR IGZ3
	mm	mm	mm	mm	mm	mm
A	199	200	201	202	204	206
B	142	142	142	142	142	142
D	OD + 23	OD + 24	OD + 25	OD + 26	OD + 28	OD + 30
E ¹	15	15	15	15	15	15
E ²	60	60	60	60	60	60



	Quality W1		Quality W2		Quality W4		Quality W5	
	AISI	DIN	AISI	DIN	AISI	DIN	AISI	DIN
Casing			304 L	1.4307	304 L	1.4307	316 L	1.4404
Bolts			1035	1.0501	304	1.4301	316	1.4401
Bars			1045	1.0503	304 L	1.4307	316 L	1.4404
Inner Steel Bridge (Lock)			304 L	1.4307	304 L	1.4307	316 L	1.4404

DN	IBZR - IBZ3			ICZR - ICZ3			IDZR - IDZ3			IEZR - IEZ3			IFZR - IFZ3			IGZR - IGZ3		
	PS bar	Diam.	Tor. Nm	PS bar	Diam.	Tor. Nm	PS bar	Diam.	Tor. Nm	PS bar	Diam.	Tor. Nm	PS bar	Diam.	Tor. Nm	PS bar	Diam.	Tor. Nm
150	23	M 12	20	30	M 12	20												
200	18	M 12	20	24	M 12	25	30	M 12	20									
250	15	M 12	25	19	M 12	25	24	M 12	20									
300	12	M 12	30	16	M 12	30	20	M 12	20									
350	11	M 12	35	14	M 12	30	18	M 12	25	21	M 12	25	28	M 16	30			
400	9	M 12	35	13	M 12	25	16	M 12	30	19	M 12	25	25	M 16	60			
450	8	M 12	45	11	M 12	30	14	M 12	30	17	M 12	30	22	M 16	40			
500	8	M 12	45	10	M 12	35	13	M 12	35	15	M 12	30	20	M 16	40			
550	7	M 12	35	9	M 12	35	12	M 12	35	14	M 16	45	19	M 16	45			
600	6	M 12	35	9	M 12	35	11	M 12	40	13	M 16	50	17	M 16	50	21	M 20	60
650	6	M 12	40	8	M 12	45	10	M 12	45	12	M 16	60	16	M 16	60	20	M 20	70
700	6	M 12	45	7	M 12	45	9	M 12	45	11	M 16	60	15	M 16	60	18	M 20	70
750	5	M 12	45	7	M 12	45				10	M 16	60	14	M 16	60	17	M 20	80
800	5	M 12	50	6	M 12	50				10	M 16	70	13	M 16	70	16	M 20	90
850	5	M 12	60	6	M 12	60				9	M 16	70	12	M 16	70	15	M 20	90
900				6	M 12	60				9	M 16	80	12	M 16	80	14	M 20	100
950				5	M 12	60				8	M 16	80	11	M 16	80	14	M 20	100
1000				5	M 12	70				8	M 16	90	10	M 16	90	13	M 20	120
1100				5	M 16	90				7	M 16	90	9	M 16	90	12	M 20	120
1200				4	M 16	100				7	M 16	100	9	M 16	100	11	M 20	120
1300										6	M 16	120	8	M 16	120	10	M 20	140
1400										6	M 16	120	7	M 16	120	9	M 20	160
1500										5	M 16	140	7	M 16	140	9	M 20	160
1600										5	M 16	140	7	M 20	180	8	M 20	180
1700										5	M 16	140	6	M 20	180	8	M 20	180
1800										4	M 16	160	6	M 20	200	7	M 20	200
1900										4	M 16	160	6	M 20	200	7	M 20	200
2000										4	M 16	180	5	M 20	200	7	M 20	220

E¹ Permitted gaps without internal band E² Permitted gaps with internal band PS Working pressure DN Nominal diameter OD Outside diameter Tor. Torque Value

OD	Maximum diameter difference		Maximum angular deflection	Maximum misalignment	Maximum crack width
	2 locks	3 locks			
mm	mm	mm	degrees	mm	mm
150 - 250	5,0	7,0	2,0	2,0	100
250 - 500	5,0	7,0	2,0	3,0	100
500 - 1500	6,0	8,0	2,0	3,0	100
1500 - 2000	6,0	8,0	2,0	3,0	100

See page 5 (Permitted tolerances)

For bigger diameters, please consult.

For the correct operation of the coupling, fitting instructions must be respected.

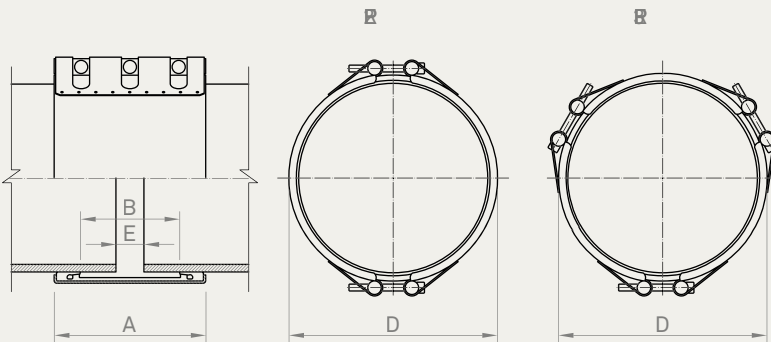
Nominal diameters serve as guidance of the pressure scale. All measures within the DN range are manufactured.

Sealing gasket: EPDM / NBR / Silicone

Test pressure = 1.5 x PS

COATED NOMINAL WIDTH 200

Series AFZR to AGZR
AFZ3 to AGZ3



	AFZR - AFZ3	AGZR - AGZ3
	mm	mm
A	204	206
B	142	142
D	OD + 28	OD + 30
E ¹	15	15
E ²	60	60

	Quality W1		Quality W2		Quality W4		Quality W5	
	AISI	DIN	AISI	DIN	AISI	DIN	AISI	DIN
Casing	1024	1.0570						
Bolts	1035 / 304	1.0501 / 1.4301						
Bars	1045 / 304 L	1.0503 / 1.4307						
Inner Steel Bridge (Lock)	304 L	1.4307						

DN	AFZR - AFZ3			AGZR - AGZ3		
	PS bar	Diam.	Tor. Nm	PS bar	Diam.	Tor. Nm
500	27	M20	60			
550	25	M20	60			
600	23	M20	60	29	M20	60
650	21	M20	70	27	M20	70
700	20	M20	80	25	M20	80
750	19	M20	80	23	M20	80
800	17	M20	90	22	M20	90
850	16	M20	90	21	M20	90
900	16	M20	100	19	M20	100
950	15	M20	100	18	M20	100
1000	14	M20	120	18	M20	120
1100	13	M20	120	16	M20	120
1200	12	M20	120	15	M20	140
1300	11	M20	140	14	M20	140
1400	10	M20	160	13	M20	160
1500	9	M20	160	12	M20	160
1600	9	M20	180	11	M20	180
1700	8	M20	180	10	M20	150
1800	8	M20	200	10	M20	200
1900	7	M20	200	9	M20	200
2000	7	M20	200	9	M20	220

E¹ Permitted gaps without internal band E² Permitted gaps with internal band PS Working pressure DN Nominal diameter OD Outside diameter Tor. Torque Value

For bigger diameters, please consult.

For the correct operation of the coupling, fitting instructions must be respected.

Nominal diameters serve as guidance of the pressure scale. All measures within the DN range are manufactured.

Sealing gasket: EPDM / NBR / Silicone

Test pressure = 1.5 x PS

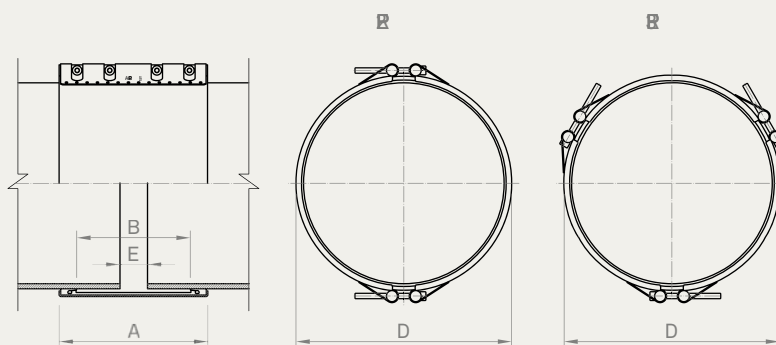
OD	Maximum diameter difference		Maximum angular deflection	Maximum misalignment	Maximum crack width
	2 locks	3 locks			
mm	mm	mm	degrees	mm	mm
500 - 1500	6,0	8,0	2,0	3,0	100
1500 - 2000	6,0	8,0	1,0	3,0	100

See page 5 (Permitted tolerances)

NOMINAL WIDTH 300

Series IBWR to IGWR IBW3 to IGW3

	IBWR IBW3	ICWR ICW3	IDWR IDW3	IEWR IEW3	IFWR IFW3	IGWR IGW3
	mm	mm	mm	mm	mm	mm
A	294	295	296	297	299	301
B	240	240	240	240	240	240
D	OD + 23	OD + 24	OD + 25	OD + 26	OD + 28	OD + 30
E ¹	15	15	15	15	15	15
E ²	80	80	80	80	80	80



	Quality W1		Quality W2		Quality W4		Quality W5	
	AISI	DIN	AISI	DIN	AISI	DIN	AISI	DIN
Casing			304 L	1.4307	304 L	1.4307	316 L	1.4404
Bolts			1035	1.0501	304	1.4301	316	1.4401
Bars			1045	1.0503	304 L	1.4307	316 L	1.4404
Inner Steel Bridge (Lock)			304 L	1.4307	304 L	1.4307	316 L	1.4404

DN mm	IBWR - IBW3			ICWR - ICW3			IDWR - IDW3			IEWR - IEW3			IFWR - IFW3			IGWR - IGW3		
	PS bar	Diam.	Tor. Nm	PS bar	Diam.	Tor. Nm	PS bar	Diam.	Tor. Nm	PS bar	Diam.	Tor. Nm	PS bar	Diam.	Tor. Nm	PS bar	Diam.	Tor. Nm
300	12	M 12	15	16	M 12	15	20	M 12	15									
350	11	M 12	20	14	M 12	20	18	M 12	20	21	M 16	25	28	M 16	25			
400	9	M 12	20	13	M 12	20	16	M 12	20	19	M 16	30	25	M 16	30			
450	8	M 12	25	11	M 12	25	14	M 12	25	17	M 16	30	22	M 16	30			
500	8	M 12	25	10	M 12	25	13	M 12	25	15	M 16	35	20	M 16	35			
550	7	M 12	30	9	M 12	30	12	M 12	25	14	M 16	35	19	M 16	35			
600	6	M 12	30	9	M 12	30	11	M 12	30	13	M 16	40	17	M 16	40	21	M 20	40
650	6	M 12	30	8	M 12	30	10	M 12	30	12	M 16	45	16	M 16	45	20	M 20	60
700	6	M 12	35	7	M 12	35	9	M 12	30	11	M 16	45	15	M 16	45	18	M 20	60
750	5	M 12	35	7	M 12	35				10	M 16	50	14	M 16	50	17	M 20	60
800										10	M 16	50	13	M 16	50	16	M 20	70
850										9	M 16	60	12	M 16	60	15	M 20	70
900										9	M 16	60	12	M 16	60	14	M 20	70
950										8	M 16	60	11	M 16	60	14	M 20	80
1000										8	M 16	70	10	M 16	70	13	M 20	80
1100										7	M 16	70	9	M 16	70	12	M 20	90
1200										7	M 16	80	9	M 20	100	11	M 20	100
1300										6	M 16	80	8	M 20	100	10	M 20	100
1400										6	M 16	90	7	M 20	120	9	M 20	120
1500										5	M 16	100	7	M 20	120	9	M 20	120
1600										5	M 16	100	7	M 20	140	8	M 20	140
1700										5	M 20	140	6	M 20	140	8	M 20	140
1800										4	M 20	140	6	M 20	140	7	M 20	140
1900										4	M 20	160	6	M 20	160	7	M 20	160
2000										4	M 20	160	5	M 20	160	7	M 20	160

E¹ Permitted gaps without internal band E² Permitted gaps with internal band PS Working pressure DN Nominal diameter OD Outside diameter Tor. Torque Value

OD mm	Maximum diameter difference		Maximum angular deflection degrees	Maximum misalignment mm	Maximum crack width mm
	2 locks mm	3 locks mm			
300 - 500	5,0	7,0	2,0	3,0	190
500 - 1500	6,0	8,0	2,0	3,0	190
1500 - 2000	6,0	8,0	1,0	3,0	190

See page 5 (Permitted tolerances)

For bigger diameters, please consult.

For the correct operation of the coupling, fitting instructions must be respected.

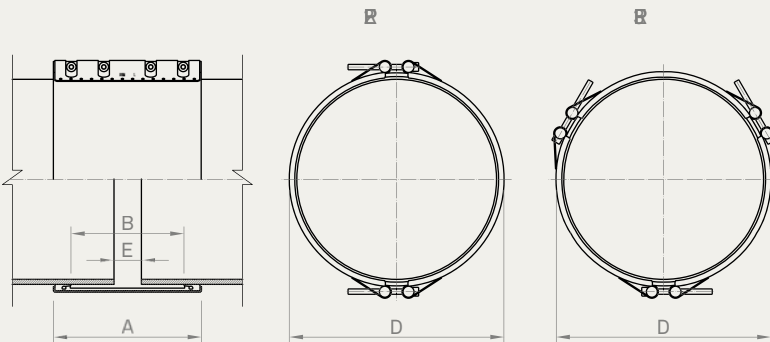
Nominal diameters serve as guidance of the pressure scale. All measures within the DN range are manufactured.

Sealing gasket: EPDM / NBR

Test pressure = 1.5 x PS

COATED NOMINAL WIDTH 300

Series AFWR to AGWR
AFW3 to AGW3



	AFWR - AFW3	AGWR - AGW3
	mm	mm
A	299	301
B	240	240
D	OD + 28	OD + 30
E ¹	15	15
E ²	80	80

	Quality W1		Quality W2		Quality W4		Quality W5	
	AISI	DIN	AISI	DIN	AISI	DIN	AISI	DIN
Casing	1024	1.0570						
Bolts	1035 / 304	1.0501 / 1.4301						
Bars	1045 / 304 L	1.0503 / 1.4307						
Inner Steel Bridge (Lock)	304 L	1.4307						

DN	AFWR - AFW3			AGWR - AGW3		
	PS bar	Diam.	Tor. Nm	PS bar	Diam.	Tor. Nm
500	27	M20	40			
550	25	M20	45			
600	23	M20	50	29	M20	50
650	21	M20	60	27	M20	60
700	20	M20	60	25	M20	60
750	19	M20	60	23	M20	60
800	17	M20	70	22	M20	70
850	16	M20	70	21	M20	70
900	16	M20	70	19	M20	70
950	15	M20	80	18	M20	80
1000	14	M20	80	18	M20	80
1100	13	M20	90	16	M20	90
1200	12	M20	100	15	M20	100
1300	11	M20	100	14	M20	100
1400	10	M20	120	13	M20	120
1500	9	M20	120	12	M20	120
1600	9	M20	140	11	M20	140
1700	8	M20	140	10	M20	140
1800	8	M20	140	10	M20	140
1900	7	M20	160	9	M20	160
2000	7	M20	160	9	M20	160

E¹ Permitted gaps without internal band E² Permitted gaps with internal band PS Working pressure DN Nominal diameter OD Outside diameter Tor. Torque Value

For bigger diameters, please consult.

For the correct operation of the coupling, fitting instructions must be respected.

Nominal diameters serve as guidance of the pressure scale. All measures within the DN range are manufactured.

Sealing gasket: EPDM / NBR

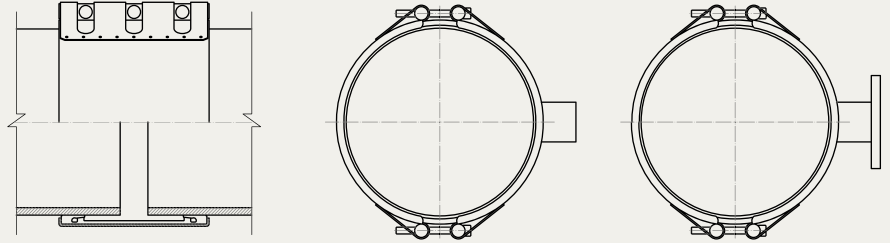
Test pressure = 1.5 x PS

OD	Maximum diameter difference		Maximum angular deflection	Maximum misalignment	Maximum crack width
	2 locks	3 locks			
mm	mm	mm	degrees	mm	mm
500 - 1500	6,0	8,0	2,0	3,0	190
1500 - 2000	6,0	8,0	1,0	3,0	190

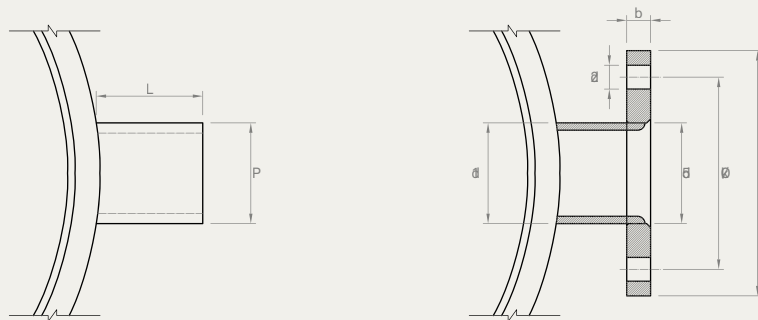
See page 5 (Permitted tolerances)

WITH OUTLET

Series REP-S



	Quality W1		Quality W2		Quality W4		Quality W5	
	AISI	DIN	AISI	DIN	AISI	DIN	AISI	DIN
Casing			304 L	1.4307	304 L	1.4307	316 L	1.4404
Bolts			1035	1.0501	304	1.4301	316	1.4401
Bars			1045	1.0503	304 L	1.4307	316 L	1.4404
Inner Steel Bridge (Lock)			304 L	1.4307	304 L	1.4307	316 L	1.4404
Outlet Thread			316 L	1.4404	316 L	1.4404	316 L	1.4404
Outlet Flange			304 L	1.4307	304 L	1.4307	316 L	1.4404



Outlet thread			Outlet flange							Series Y	Series Z
DN in	L mm	P mm	DN mm	d1 mm	d2 mm	d5 mm	D mm	b mm	Øk mm	Width 140 mm	Width 200 mm
1	43	39,5	25	33,7	14	34,5	115	16	85	•	•
1 ½	48	54,5	40	48,3	18	49,5	111	18	110	•	•
2	56	66,2	50	60,3	18	61,5	125	19	125	•	•
2 ½	65	82,0	65	76,1	18	77,5	145	20	145	•	•
3	71	95,0	80	88,9	18	90,5	160	20	160	•	•
4	83	121,4	100	114,3	18	116,0	180	22	180	•	•

Available from DN 250 mm

Working pressure up to 10 bar

Thread BSP according to ISO 7/1

Flange according to EN 1092-1-01 PN10

For the correct operation of the coupling, fitting instructions must be respected.

APPLICATION

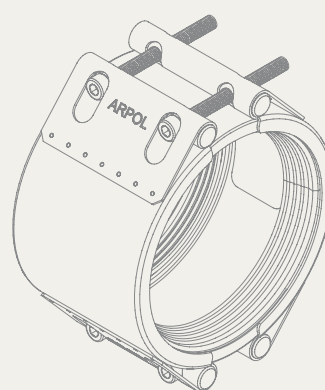
REP



- Repair of an underwater asbestos-cement pipeline.
- Installation of a polyester pipe in a power plant.



- Repair of a cracked concrete pipe.
- Repair of an underground polyester pipe.



- Repair of a polyester pipe 3m OD.