Arpol

Because connecting matters

Index

Instal

flexible couplings for pipe connections

Rep

flexible couplings for pipe repair

Fix

flexible couplings for pipe connections with axial restraint

Trans

flexible couplings for connecting pipes with different outside diameter

Business.

Arpol premises

40 years of continual innovation

Our story began in 1976, as a family company that pioneered the design and manufacture of flexible couplings for all kinds of pipes and industries.

The ARPOL brand is today internationally recogniced for its made to measure manufacturing system and for its special understanding of customers' business needs.

As a result, ARPOL is known for having a wide variety of flexible and exclusive solutions for the pipe sector.

Quality is our guarantee

Our mission is to offer our customers the best possible solution to the problem they face. To us every project is unique and we do our best to offer the flexible coupling that best meets the customer's needs.

Our products are guaranteed by the constant supervision they undergo in our Barcelona factory. We are extremely rigorous with all the regulations of the sector and we also have our own patents and brands.

Solutions are our identity

We attach great importance to our R&D&I department. Our goal has always been to offer solutions to the problems that arise in the market. The world evolves and we evolve with it, so we are in a constant process of innovation.

"Because connecting matters" is not just a slogan, it's a way of working. We take the trouble to listen to and understand the individual needs of each and every one of our customers.

A company with an international vocation

We believe in our work, in its possibilities and in everything it can contribute. Connecting matters, as people and as a products. We collaborate with the main companies in the water and industry sectors and we have participated in the most advanced engineering projects in the world, like the irrigation project of Los Olmos desert, the Guadarrama tunnels ventilation system for the Madrid High Speed Train, and the Paris Water Purification Plant.

We are present in more than 40 countries and we aim to be in many more.

Sectors where we work

Some of the sectors that put their trust in our flexible couplings are water purification and treatment plants, chemical industry, power stations, domestic installations, civil construction and engineering, mining and bottling plants. But they are not all, as we continue to seek out new sectors where we can be of help.

Advantages.

Advantages
Of the application of flexible couplings

Easy to fit

Light weight

Fast to fit

Storage space saving

Cost saving installation

Qualities
To guarantee a long duration

Coated Casing

Blue Silicone

Materials

Quality W1
Anticorrosion coated carbon steel casing. Geomet coated carbon steel bolts and bars.

Quality W1-A2
Anticorrosion coated carbon steel casing. Stainless steel bolts and bars AISI 304.

Quality W2
Stainless Steel casing AISI 304 L. Geomet coated carbon steel bolts and bars.

Quality W4
Stainless steel casing AISI 304 L. Stainless steel bolts and bars AISI 304.

Quaiity W5
Stainless steel casing AISI 316 L. Stainless steel bolts and bars AISI 316.

Sealing gasket

EPDM
Suitable for water, air and some chemical products.
From -20°C to 100°C.

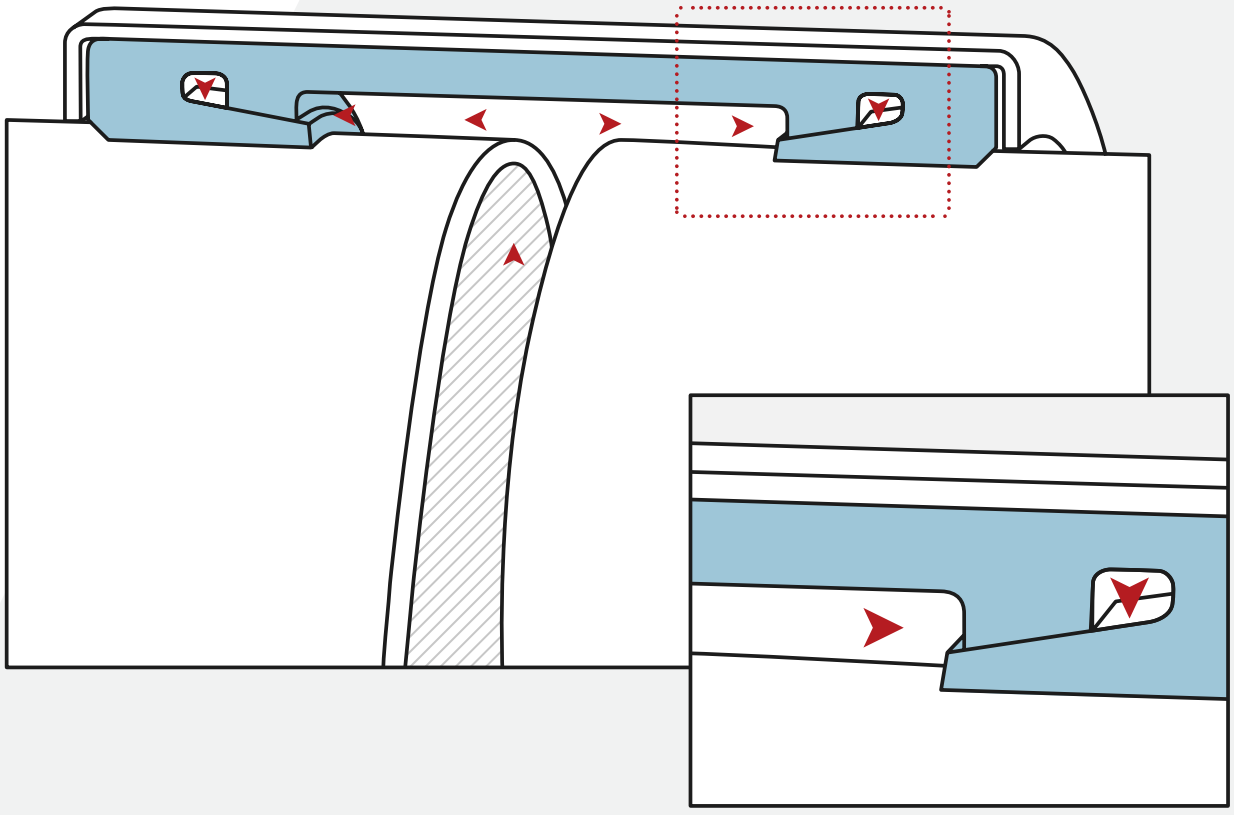
NBR
Suitable for fuel, gas and some hydrocarbons.
From -20°C to 80°C.

Silicone
Blue Silicone Suitable for drinking water and domestic water. Potability certification. From -55°C to 200°C.

Properties.

Sealing

Sealing lip pressure increase along pipe inner pressure.



Sealing detail

Coupling parts.

Sealing gasket
Casing
Bar
Inner Steel Plate (lock)
Bolt

- INSTAL
- REP
- FIX
- TRANS

Inox Inner Band

- NSTAL
- REP
- FIX
- TRANS

Anchoring Ring

- FIX-L
- FIX-M
- FIX-U

Sealing Gasket Support

- TRANS

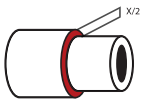
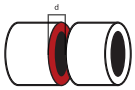
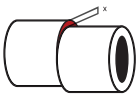
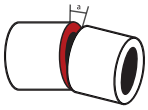
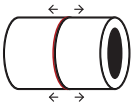
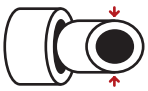
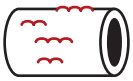
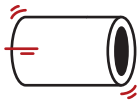
Permitted tolerances.

Pipe materials

	INSTAL	REP	FIX				TRANS
			FIX-L	FIX-M	FIX-U	MULTI-FIX	
Steel	O	O	O	O	O		O
Cast and Ductile Iron	O	O	O	O	O		O
Asbestos Cement	O	O					O
Concrete	O	O					O
GRP	O	O					O
PE	O	O			O	O	O
PVC	O	O			O	O	O

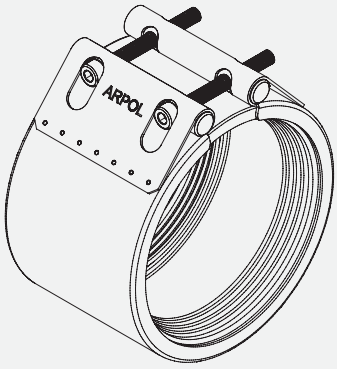
O Suitable only if there are no pipe movements

Pipe connection

	INSTAL	REP	FIX				TRANS
			FIX-L	FIX-M	FIX-U	MULTI-FIX	
 Different diameter	O	O	O	O	O		O
 With gaps	O	O	O	O	O	O	O
 Misaligned	O	O	O	O	O		O
 With angular deflection	O	O	O	O	O		O
 With movement	O	O					O
 With cracks		O					
 With deformation	O	O					O
 With rough surfaces	O	O					O
 With vibration	O	O	O	O	O	O	O

Series.

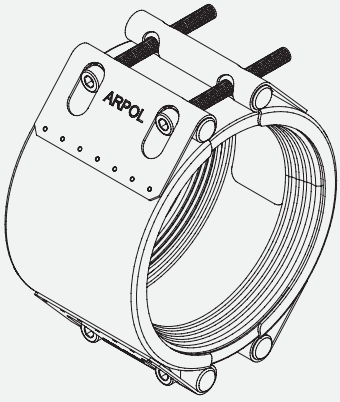
Arpol instal



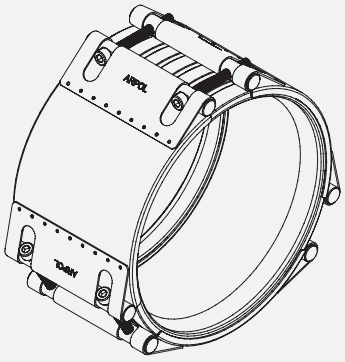
INSTAL

Flexible couplings for pipe CONNECTIONS

Arpol rep

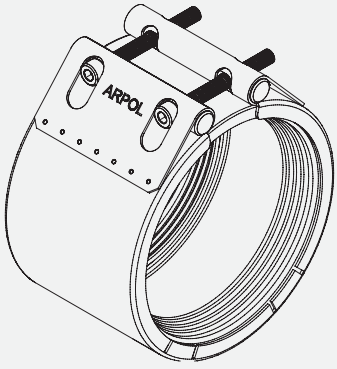


REP 2

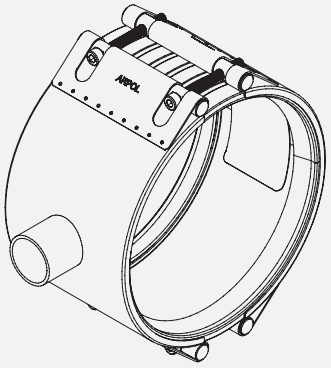


REP 3

Flexible couplings for pipe REPAIR

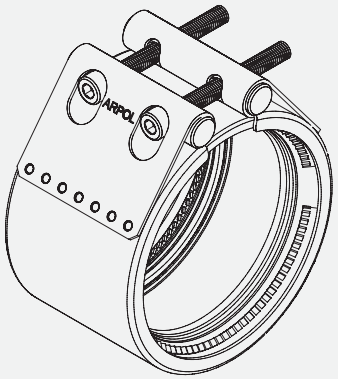


REP -C

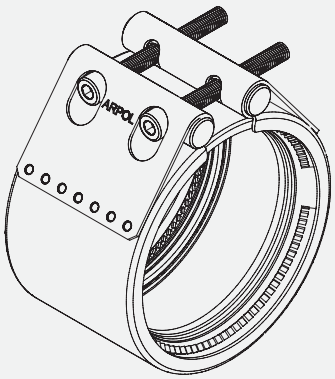


REP-S

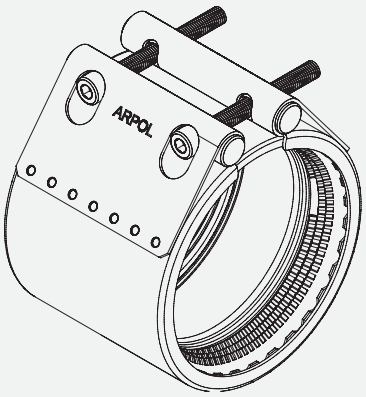
Arpol fix



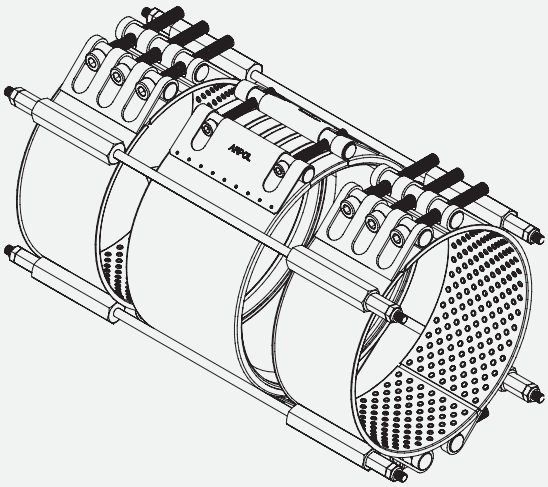
FIX-L



FIX-M



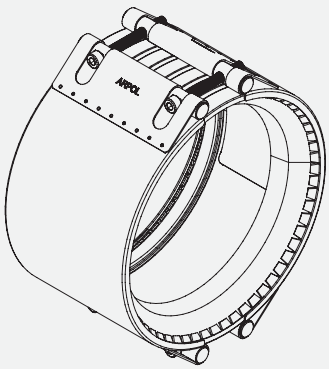
FIX-U



MULTI-FIX

flexible couplings for pipe connections with AXIAL RESTRAINT

Arpol trans



TRANS

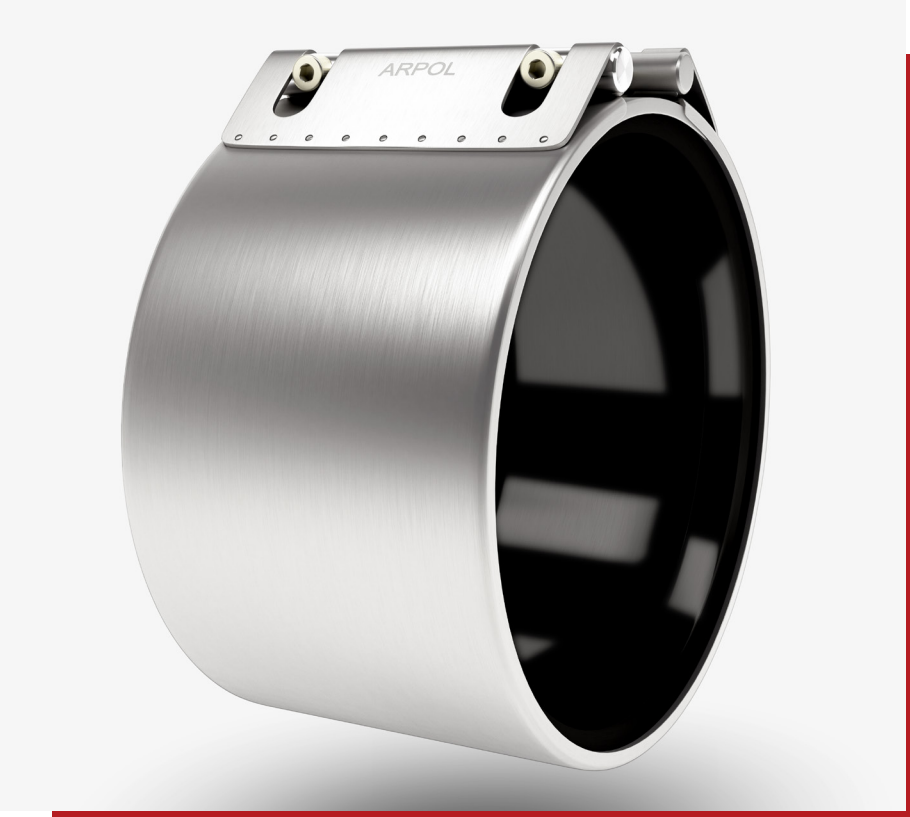
flexible couplings for connections of pipes with DIFFERENT OUTSIDE DIAMETER

instal
Arpol

INSTAL.

Connection.

Flexible couplings for pipe connection.

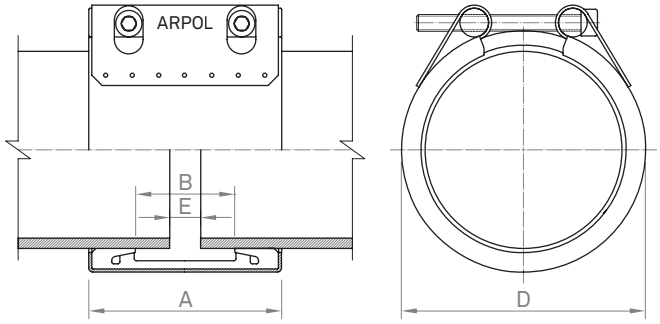


BECAUSE CONNECTING MATTERS

Nominal width 95

Serie IBX

To ensure correct operation, Fitting instructions must be respected.
Test pressure = 1.5 x PS



	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 L	1.4401
Bars			1045	1.0503	304 L	1.4307	316 L	1.4404
Inner Steel Plate (Lock)			304 L	1.4307	304 L	1.4307	316 L	1.4404

Sealing gasket: *EPDM / NBR / Silicone*

OD		Pressure							Bolts	
mm	mm	PN bar	PS bar	A mm	B mm	D mm	E^1 mm	E^2 mm	Diam.	Tor. Nm
48,3	47 - 49	16	45	78	31	67,3	5	15	M 8	7
54,0	53 - 55	16	45	78	31	73,0	5	15	M 8	7
57,0	56 - 58	16	40	78	31	76,0	5	15	M 8	7
60,3	59 - 61	16	40	78	31	79,3	5	15	M 8	7
63,0	62 - 65	16	40	78	31	82,0	5	15	M 8	7
76,1	74 - 77	16	30	94	45	98,1	5	15	M 8	7
84,0	82 - 85	16	30	94	45	106,0	5	15	M 8	7
88,9	87 - 91	16	30	95	45	110,9	5	15	M 8	7
104,0	102 - 106	16	30	95	45	126,0	5	15	M 8	10
108,0	107 - 111	14	30	95	45	130,0	5	15	M 8	10
114,3	112 - 117	13	30	95	45	136,3	5	15	M 8	10
125,0	124 - 127	12	20	95	45	147,0	5	15	M 8	10
129,0	127 - 131	12	20	95	45	151,0	5	15	M 8	10
133,0	131 - 136	11	20	95	45	155,0	5	15	M 8	10
139,7	137 - 142	11	20	95	45	161,7	5	15	M 8	10
154,0	152 - 156	10	20	95	45	176,0	5	15	M 8	10
159,0	156 - 161	10	20	95	45	181,0	5	15	M 8	10
168,3	166 - 171	10	20	95	45	190,3	5	15	M 8	10

E^1 *Permitted gaps without internal band* ***E^2*** *Permitted gaps with internal band*
PN *Shipbuilding industry safety factor ≥4* ***PS*** *Working pressure* ***OD*** *Outside Diameter* ***Tor.*** *Torque Value*

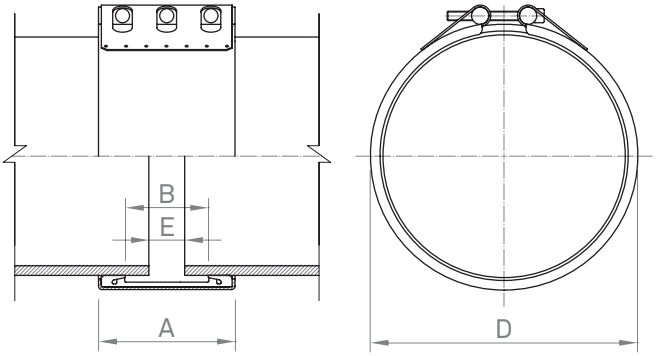
OD	Maximum diameter difference	Maximum angular deflection	Maximum misalignment
mm	mm	degrees	mm
48,3	0,5	4,0	1,0
54 - 63	1,0	4,0	1,0
76,1 - 104	1,5	4,0	1,0
108 - 154	2,5	4,0	1,0
159 - 168,3	2,5	4,0	2,0

See page 7 (Permitted tolerances)

Nominal width 140

Series IBY to IFY

To ensure correct operation, Fitting instructions must be respected.
Test pressure = 1.5 x PS



	IBY	ICY	IDY	IEY	IFY
	mm	mm	mm	mm	mm
A	139	140	141	142	144
B	86	86	86	86	86
D	DE + 23	DE + 24	DE + 25	DE + 26	DE + 28
E¹	10	10	10	10	10
E²	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 Plate (Lock)			304 L	1.4307	304 L	1.4307	316 L	1.4404

Sealing gasket: *EPDM / NBR / Silicone*

DN	IBY			ICY			IDY			IEY			IFY		
mm	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 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				14	M 12	35	19	M 12	35
600	6	M 10	30	9	M 10	30				13	M 12	35	17	M 12	35
650	6	M 10	35	8	M 10	35				12	M 12	45	16	M 12	45
700	6	M 10	35	7	M 10	35				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				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

Nominal diameter serve as guidance of the pressure scale. Measures in between DN range can be manufactured.
E¹ *Permitted gaps without internal band* ***E²*** *Permitted gaps with internal band* ***PS*** *Working pressure* ***DN*** *Nominal Diameter* ***OD*** *Outside Diameter* ***Tor.*** *Torque Value*

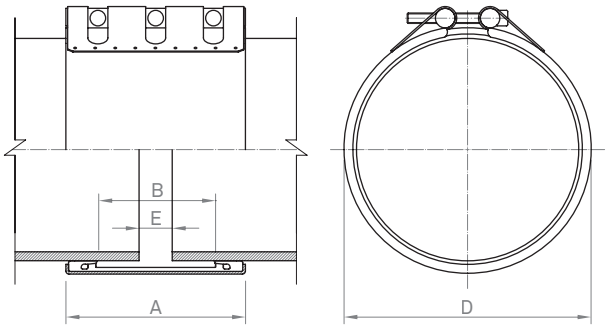
OD	Maximum diameter difference	Maximum angular deflection	Maximum misalignment
mm	mm	degrees	mm
150 - 250	2,5	2,0	2,0
250 - 500	2,5	2,0	3,0
500 - 1200	3,0	2,0	3,0

See page 7 (Permitted tolerances)

Nominal width 200

Series IBZ to IHFZ

To ensure correct operation, Fitting instructions must be respected.
Test pressure = 1.5 x PS



	IBZ	ICZ	IDZ	IEZ	IFZ	IGZ	IHFZ
	mm	mm	mm	mm	mm	mm	mm
A	199	200	201	202	204	206	204
B	142	142	142	142	142	142	142
D	DE + 23	DE + 24	DE + 25	DE + 26	DE + 28	DE + 30	DE + 52
E¹	15	15	15	15	15	15	15
E²	60	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 Plate (Lock)			304 L	1.4307	304 L	1.4307	316 L	1.4404

Sealing gasket: *EPDM / NBR / Silicone*

DN	IBZ			ICZ			IDZ			IEZ			IFZ			IGZ			IHFZ		
mm	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	PS bar	Diam.	Tor. Nm
150	23	M 12	20	30	M 12	20															
200	18	M 12	25	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				14	M 16	45	19	M 16	45						
600	6	M 12	35	9	M 12	35				13	M 16	50	17	M 16	50	21	M 20	60	27	M 20	70
650	6	M 12	40	8	M 12	45				12	M 16	60	16	M 16	60	20	M 20	70	25	M 20	80
700	6	M 12	45	7	M 12	45				11	M 16	60	15	M 16	60	18	M 20	70	24	M 20	80
750	5	M 12	45	7	M 12	45				10	M 16	60	14	M 16	60	17	M 20	80	22	M 20	80
800	5	M 12	50	6	M 12	50				10	M 16	70	13	M 16	70	16	M 20	90	20	M 20	90
850				6	M 12	60				9	M 16	70	12	M 16	70	15	M 20	90	19	M 20	90
900				6	M 12	60				9	M 16	80	12	M 16	80	14	M 20	100	19	M 20	100
950				5	M 12	60				8	M 16	80	11	M 16	80	14	M 20	100	17	M 20	100
1000				5	M 12	70				8	M 16	90	10	M 16	90	13	M 20	120	16	M 20	110
1100				5	M 16	90				7	M 16	90	9	M 16	90	12	M 20	120	15	M 20	120
1200				4	M 16	100				7	M 16	100	9	M 16	10	11	M 20	140	14	M 20	140
1300										6	M 16	120	9	M 16	120	10	M 20	140	13	M 20	140
1400										6	M 16	120	7	M 16	120	9	M 20	160	12	M 20	160
1500										5	M 16	140	7	M 16	140	9	M 20	160	11	M 20	160

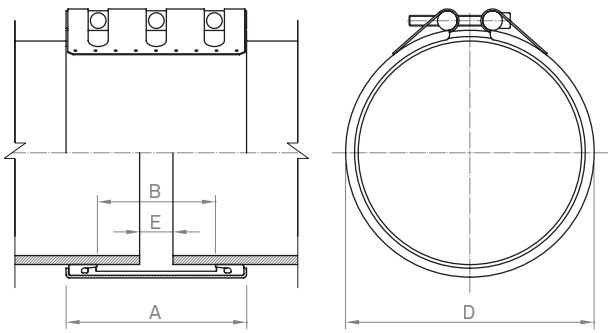
Nominal diameter serve as guidance of the pressure scale. Measures in between DN range can be manufactured.
E¹ *Permitted gaps without internal band* ***E²*** *Permitted gaps with internal band* ***PS*** *Working pressure* ***DN*** *Nominal Diameter* ***OD*** *Outside Diameter* ***Tor.*** *Torque Value*

OD	Maximum diameter difference		Maximum angular deflection		Maximum misalignment	
	IBZ - IGZ	IHFZ	IBZ - IGZ	IHFZ	IBZ - IGZ	IHFZ
mm	mm		degrees		mm	
150 - 250	2,5		2,0		2,0	
250 - 500	2,5		2,0		3,0	
500 - 1500	3,0	2,0	2,0	1,0	3,0	2,0

See page 7 (Permitted tolerances)

Coated nominal width 200

Serie AGZ



To ensure correct operation, Fitting instructions must be respected.
Test pressure = 1.5 x PS

	AGZ
	mm
A	206
B	142
D	DE + 30
E¹	15
E²	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 Plate (Lock)	304 L	1.4307						

Sealing gasket: *EPDM / NBR*

OD	AGZ		
mm	PS bar	Diam.	Tor. Nm
600	29	M 20	60
650	27	M 20	70
700	25	M 20	80
750	23	M 20	80
800	22	M 20	90
850	21	M 20	90
900	19	M 20	100
950	18	M 20	100
1000	18	M 20	120
1100	16	M 20	120
1200	15	M 20	140
1300	14	M 20	140
1400	13	M 20	160

Nominal diameter serve as guidance of the pressure scale. Measures in between DN range can be manufactured.
E¹ *Permitted gaps without internal band* ***E²*** *Permitted gaps with internal band* ***PS*** *Working pressure* ***DN*** *Nominal Diameter* ***OD*** *Outside Diameter* ***Tor.*** *Torque Value*

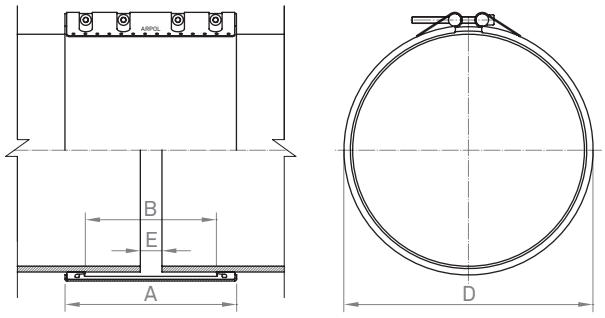
OD	Maximum diameter difference	Maximum angular deflection	Maximum misalignment
mm	**mm**	**degrees**	**mm**
500 - 1500	3,0	2,0	3,0

See page 7 (Permitted tolerances)

Nominal width 300

Series IBW a IHGW

To ensure correct operation, Fitting instructions must be respected.
Test pressure = 1.5 x PS



	IBW	ICW	IDW	IEW	IFW	IGW	IHFW	IHGW
	mm	mm	mm	mm	mm	mm	mm	mm
A	294	295	296	297	299	301	299	301
B	230	230	230	230	230	230	230	230
D	DE + 23	DE + 24	DE + 25	DE + 26	DE + 28	DE + 30	DE + 52	DE + 56
E[1]	15	15	15	15	15	15	15	15
E[2]	80	80	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 Plate (Lock)			304 L	1.4307	304 L	1.4307	316 L	1.4404

Sealing gasket: *EPDM*

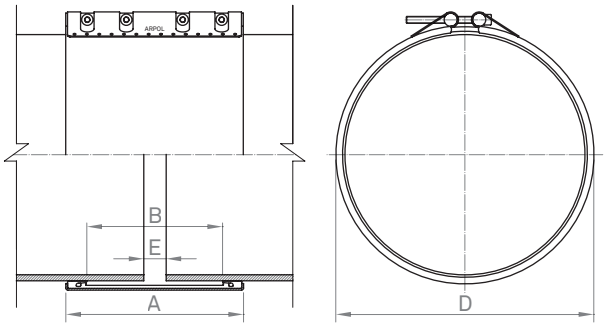
DN	IBW			ICW			IDW			IEW			IFW			IGW			IHFW			IHGW		
mm	PS bar	Diam.	Tor. Nm	PS bar	Diam.	Tor. Nm	PS bar	Diam.	Tor. Nm	PS bar	Diam.	Tor. Nm	PS bar	Diam.	Tor. Nm	PS bar	Diam.	Tor. Nm	PS bar	Diam.	Tor. Nm	PS bar	Diam.	Tor. Nm
300	12	M 12	15	16	M 12	15	20	M 12	15															
350	11	M 12	20	14	M 12	20	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				14	M 16	35	19	M 16	35									
600	6	M 12	30	9	M 12	30				13	M 16	40	17	M 16	40	21	M 20	40	27	M 20	60	34	M 24	60
650	6	M 12	30							12	M 16	45	16	M 16	45	20	M 20	60	25	M 20	60	32	M 24	60
700	6	M 12	35							11	M 16	45	15	M 16	45	18	M 20	60	23	M 20	70	29	M 24	80
750	5	M 12	35							10	M 16	50	14	M 16	50	17	M 20	60	22	M 20	70	27	M 24	80
800	5	M 12	40							10	M 16	50	13	M 16	50	16	M 20	70	20	M 20	70	26	M 24	90
850										9	M 16	60	12	M 16	60	15	M 20	70	19	M 20	80	24	M 24	90
900										9	M 16	60	12	M 16	60	14	M 20	70	18	M 20	80	23	M 24	100
950										8	M 16	60	11	M 16	60	14	M 20	80	17	M 20	90	22	M 24	100
1000										8	M 16	70	10	M 16	70	13	M 20	80	16	M 20	90	21	M 24	120
1100										7	M 16	70	9	M 16	70	12	M 20	90	15	M 20	100	19	M 24	120
1200										7	M 16	80	9	M 20	100	11	M 20	100	14	M 20	120	17	M 24	140
1300										6	M 16	80	8	M 20	100	10	M 20	100	13	M 20	120	16	M 24	140
1400										6	M 16	90	7	M 20	120	9	M 20	120	12	M 20	120	15	M 24	160
1500										5	M 16	100	7	M 20	120	9	M 20	120	11	M 20	140	14	M 24	160

Nominal diameter serve as guidance of the pressure scale. Measures in between DN range can be manufactured.
E[1] *Permitted gaps without internal band* ***E[2]*** *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	
	IBW - IGW	IHFW - IHGW	IBW - IGW	IHFW - IHGW	IBW - IGW	IHFW - IHGW
mm	mm		degrees		mm	
300 - 500	2,5		2,0		3,0	
500 - 1500	3,0	2,0	2,0	1,0	3,0	2,0

See page 7 (Permitted tolerances)

Coated nominal width 300



Serie AGW

To ensure correct operation, Fitting instructions must be respected.
Test pressure = 1.5 x PS

	AGW
	mm
A	301
B	230
D	DE + 30
E¹	15
E²	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 Plate (Lock)	304 L	1.4307						

Sealing gasket: *EPDM*

DN	AGW		
mm	PS bar	Diam.	Tor. Nm
600	29	M 20	50
650	27	M 20	60
700	25	M 20	60
750	23	M 20	60
800	22	M 20	70
850	21	M 20	70
900	19	M 20	70
950	18	M 20	80
1000	18	M 20	80
1100	16	M 20	90
1200	15	M 20	100
1300	14	M 20	100
1400	13	M 20	120
1500	12	M 20	120

Nominal Diameter serve as guidance of the pressure scale. Measures in between DN range can be manufactured.
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
mm	mm	degrees	mm
500 - 1500	3,0	2,0	3,0

See page 7 (Permitted tolerances)

Applications.

1.

2.

3.

4.

1. GRP pipe repair with a piece of pipe.

2. GRP pipe connection between manholes.

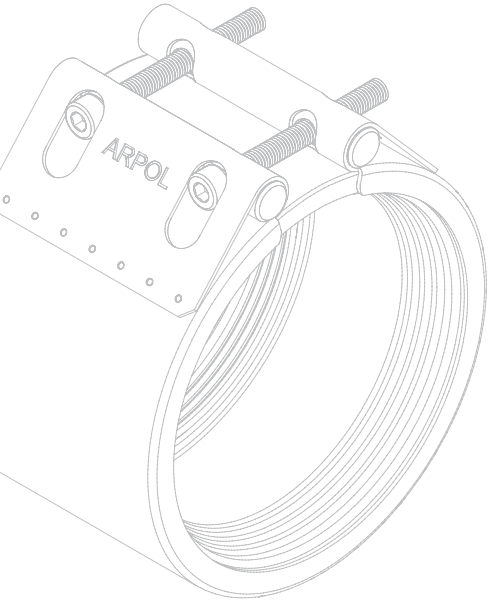
3. Galvanized steel line connection for air supply.

4. Aereal Steel pipe installation in a sewage water plant.

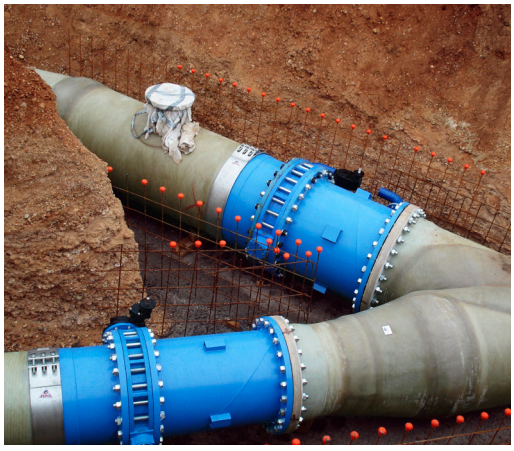
5. Dismantling joint installation inside a manhole.

6. GRP pipe connection to a flange adapter.

7. GRP sewage system installation.



5.



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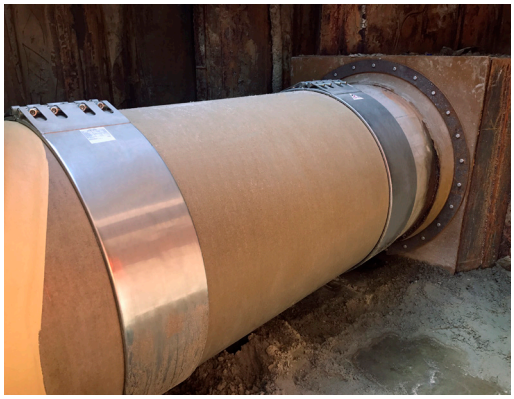


7.

Arpol rep

REP S

REP C

REP 3

REP.

Repair.

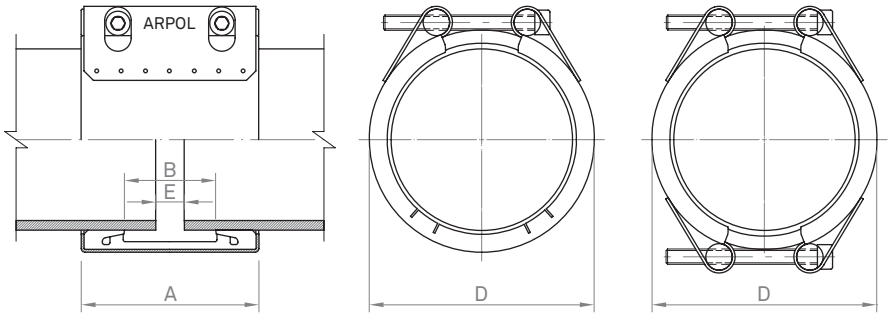
Flexible couplings for pipe repair.

REP 2

Nominal width 95

Series IBXC - IBXR

To ensure correct operation, Fitting instructions must be respected.
Test pressure = 1.5 x PS



	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 Plate (Lock)			304 L	1.4307	304 L	1.4307	316 L	1.4404

Sealing gasket: *EPDM / NBR / Silicone*

OD	Range		Pressure	Dimensions					Bolts	
mm	IBXC mm	IBXR mm	PS bar	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	57 - 64	40	78	31	80	5	15	M 8	7
63,0	62 - 65	60 - 64	40	78	31	84	5	15	M 8	7
66,0		64 - 68	40	94	45	88	5	15	M 8	7
69,0		67 - 72	30	94	45	92	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	95	45	113	5	15	M 8	7
94,0		90 - 96	30	95	45	116	5	15	M 8	7
104,0	102 - 106	98 - 106	30	95	45	128	5	15	M 8	10
108,0	107 - 111	107 - 111	30	95	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

E^1 *Permitted gaps without internal band* ***E^2*** *Permitted gaps with internal band* ***PS*** *Working pressure* ***OD*** *Outside Diameter* ***Tor.*** *Torque Value*

OD	Maximum diameter difference		Maximum angular deflection		Maximum misalignment		Maximum crack width	
	IBXC	IBXR	IBXC	IBXR	IBXC	IBXR	IBXC	IBXR
mm	mm		degrees		mm		mm	
48,3	0,5	-	4,0	-	1,0	-	20	
54 - 69	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	
159 - 168,3	2,5	3,0	4,0	4,0	2,0	2,0	35	

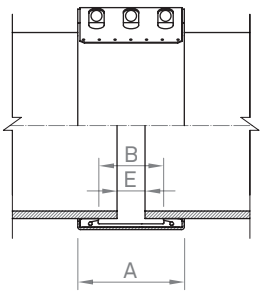
See page 7 (Permitted tolerances)

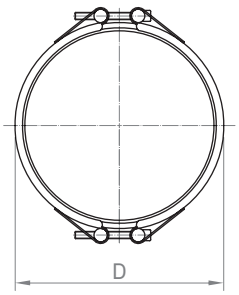
Nominal width 140

Series IBYR to IFYR
IBY3 to IFY3

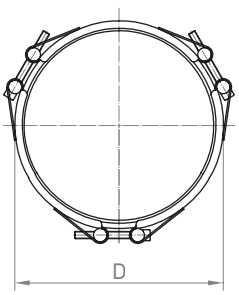
To ensure correct operation, Fitting instructions must be respected.
Test pressure = 1.5 x PS

REP 2





REP 3



	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	DE + 23	DE + 24	DE + 25	DE + 26	DE + 28
E¹	10	10	10	10	10
E²	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 Plate (Lock)			304 L	1.4307	304 L	1.4307	316 L	1.4404

Sealing gasket: *EPDM / NBR / Silicone*

DN	IBYR - IBY3			ICYR - ICY3			IDYR - IDY3			IEYR - IEY3			IFYR - IFY3		
mm	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 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

Nominal diameter serve as guidance of the pressure scale. Measures in between DN range can be manufactured.
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	6,0	2,0	2,0	50
250 - 500	5,0	6,0	2,0	3,0	50
500 - 1200	6,0	7,0	2,0	3,0	50

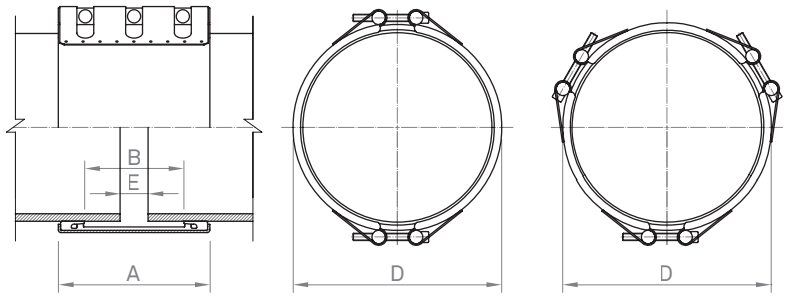
See page 7 (Permitted tolerances)

Nominal width 200

Series IBZR to IHFZR
IBZ3 to IHFZ3

To ensure correct operation, Fitting instructions must be respected.
Test pressure = 1.5 x PS

REP 2 REP 3



	IBZR IBZ3	ICZR ICZ3	IDZR IDZ3	IEZR IEZ3	IFZR IFZ3	IGZR IGZ3	IHFZR IHFZ3
	mm	mm	mm	mm	mm	mm	mm
A	199	200	201	202	204	206	204
B	142	142	142	142	142	142	142
D	DE+23	DE+24	DE+25	DE+26	DE+28	DE+30	DE+52
E^1	15	15	15	15	15	15	15
E^2	60	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 Plate (Lock)			304 L	1.4307	304 L	1.4307	316 L	1.4404

Sealing gasket: *EPDM / NBR / Silicone*

DN	IBZR - IBZ3			ICZR - ICZ3			IDZR - IDZ3			IEZR - IEZ3			IFZR - IFZ3			IGZR - IGZ3			IHFZR - IHFZ3		
mm	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	PS bar	Diam.	Tor. Nm
150	23	M 12	20	30	M 12	20															
200	18	M 12	25	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	27	M 20	70
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	25	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	23	M 20	80
750	5	M 12	45	7	M 12	45				10	M 16	60	14	M 16	60	17	M 20	80	22	M 20	80
800	5	M 12	50	6	M 12	50				10	M 16	70	13	M 16	70	16	M 20	90	20	M 20	90
850	5	M 12	60	6	M 12	60				9	M 16	70	12	M 16	70	15	M 20	90	19	M 20	90
900				6	M 12	60				9	M 16	80	12	M 16	80	14	M 20	100	18	M 20	100
950				5	M 12	60				8	M 16	80	11	M 16	80	14	M 20	100	17	M 20	100
1000				5	M 12	70				8	M 16	90	10	M 16	90	13	M 20	120	16	M 20	120
1100				5	M 16	90				7	M 16	90	9	M 16	90	12	M 20	120	15	M 20	120
1200				4	M 16	100				7	M 16	100	9	M 16	100	11	M 20	140	14	M 20	140
1300										6	M 16	120	8	M 16	120	10	M 20	140	13	M 20	140
1400										6	M 16	120	7	M 16	120	9	M 20	160	12	M 20	160
1500										5	M 16	140	7	M 16	140	9	M 20	160	11	M 20	160
1600										5	M 16	140	7	M 20	180	8	M 20	180	10	M 20	180
1700										5	M 16	140	6	M 20	180	8	M 20	180	10	M 20	180
1800										4	M 16	160	6	M 20	200	7	M 20	200	9	M 20	200
1900										4	M 16	160	6	M 20	200	7	M 20	200	9	M 20	200
2000										4	M 16	180	5	M 20	200	7	M 20	220	8	M 20	200

Nominal diameter serve as guidance of the pressure scale. Measures in between DN range can be manufactured.
E^1 *Permitted gaps without internal band* ***E^2*** *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	2 locks	3 locks	IBZR-IGZR	IHFZR	IBZR-IGZR	IHFZR	
	IBZR-IGZR	IBZ3-IGZ3	IHFZR	IHFZ3	IBZ3-IGZ3	IHFZ3	IBZ3-IGZ3	IHFZ3	
mm	mm	mm	mm	mm	degrees	degrees	mm	mm	mm
150 - 250	5,0	7,0			2,0		2,0		100
250 - 500	5,0	7,0			2,0		2,0		100
500 - 1500	6,0	8,0	3,0	4,0	2,0	1,0	3,0	2,0	100
1500 - 2000	6,0	8,0	3,0	4,0	1,0	1,0	3,0	2,0	100

Please enquire about diameters above 2000 mm.

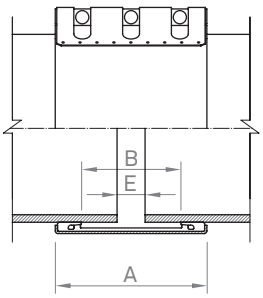
See page 7 (Permitted tolerances)

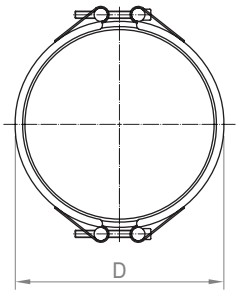
Coated nominal width 200

Serie AGZR - AGZ3

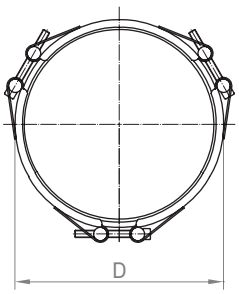
To ensure correct operation, Fitting instructions must be respected.
Test pressure = 1.5 x PS

REP 2





REP 3



	AGZR - AGZ3
	mm
A	206
B	142
D	DE + 30
E¹	15
E²	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 Plate (Lock)	304 L	1.4307						

Sealing gasket: *EPDM / NBR / Silicone*

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

Nominal diameter serve as guidance of the pressure scale. All measures within the DN range are manufactured.
E¹ *Permitted gaps without internal band* ***E²*** ***Pe****rmitted gaps with internal band* ***PS*** *Working pressure* ***DN*** *Nominal Diameter* ***OD*** *Outside Diameter* ***Tor.*** *Torque Value*

Please enquire about diameters above 2000 mm.

OD	Maximum diameter difference		Maximum crack width
	2 locks	3 locks	
mm	mm	mm	mm
500 - 1500	6,0	8,0	100
1500 - 2000	6,0	8,0	100

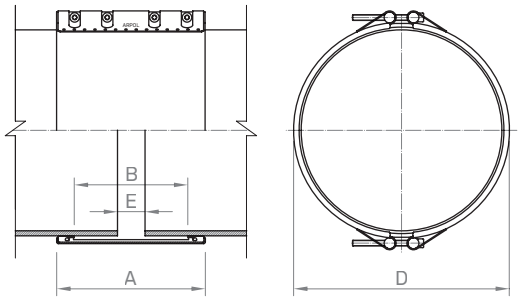
See page 7 (Permitted tolerances)

Nominal width 300

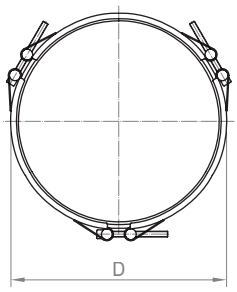
Series IBWR to IHGWR
IBW3 to IHGW3

To ensure correct operation, Fitting instructions must be respected.
Test pressure = 1.5 x PS

REP 2



REP 3



	IBWR IBW3	ICWR ICW3	IDWR IDW3	IEWR IEW3	IFWR IFW3	IGWR IGW3	IHFWR IHFW3	IHGWR IHGW3
	mm	mm	mm	mm	mm	mm	mm	mm
A	294	295	296	297	299	301	299	301
B	230	230	230	230	230	230	230	230
D	DE+23	DE+24	DE+25	DE+26	DE+28	DE+30	DE+52	DE+56
E[1]	15	15	15	15	15	15	15	15
E[2]	80	80	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 Plate (Lock)			304 L	1.4307	304 L	1.4307	316 L	1.4404

Sealing gasket: *EPDM*

DN	IBWR - IBW3			ICWR - ICW3			IDWR - IDW3			IEWR - IEW3			IFWR - IFW3			IGWR - IGW3			IHFWR - IHFW3			IHGWR - IHGW3		
mm	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	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	27	M 20	60	34	M 24	60
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	25	M 20	60	32	M 24	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	23	M 20	70	29	M 24	80
750	5	M 12	35	7	M 12	35				10	M 16	50	14	M 16	50	17	M 20	60	22	M 20	70	27	M 24	80
800	5	M 12	35	6	M 12	40				10	M 16	50	13	M 16	50	16	M 20	70	20	M 20	70	26	M 24	90
850				6	M 12	45				9	M 16	60	12	M 16	60	15	M 20	70	19	M 20	80	24	M 24	90
900				6	M 12	45				9	M 16	60	12	M 16	60	14	M 20	70	18	M 20	80	23	M 24	100
950										8	M 16	60	11	M 16	60	14	M 20	80	17	M 20	90	22	M 24	100
1000										8	M 16	70	10	M 16	70	13	M 20	80	16	M 20	90	21	M 24	120
1100										7	M 16	70	9	M 16	70	12	M 20	90	15	M 20	100	19	M 24	120
1200										7	M 16	80	9	M 20	100	11	M 20	100	14	M 20	120	17	M 24	140
1300										6	M 16	80	8	M 20	100	10	M 20	100	13	M 20	120	16	M 24	140
1400										6	M 16	90	7	M 20	120	9	M 20	120	12	M 20	120	15	M 24	160
1500										5	M 16	100	7	M 20	120	9	M 20	120	11	M 20	140	14	M 24	160
1600										5	M 16	100	7	M 20	140	8	M 20	140	10	M 20	140	13	M 24	180
1700										5	M 20	140	6	M 20	140	8	M 20	140	10	M 20	160	12	M 24	180
1800										4	M 20	140	6	M 20	140	7	M 20	140	9	M 20	160	12	M 24	200
1900										4	M 20	160	6	M 20	160	7	M 20	160	9	M 20	180	11	M 24	200
2000										4	M 20	160	5	M 20	160	7	M 20	160	8	M 20	180	11	M 24	220

Nominal diameter serve as guidance of the pressure scale . Measures in between DN range up to 4000 mm can be manufactured..
E[1] *Permitted gaps without internal band* ***E[2]*** *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	2 locks	3 locks	IBWR-IGWR	IHFWR-IHGWR	IBWR-IGWR	IHFWR-IHGWR	
	IBWR-IGWR	IBW3-IGW3	IHFWR-IHGWR	IHFW3-IHGW3	IBW3-IGW3	IHFW3-IHGW3	IBW3-IGW3	IHFW3-IHGW3	
mm	mm	mm	mm	mm	degrees	degrees	mm	mm	mm
300 - 500	5,0	7,0			2,0		3,0		190
500 - 1500	6,0	8,0	3,0	4,0	2,0	1,0	3,0	2,0	190
1500 - 2000	6,0	8,0	3,0	4,0	1,0	1,0	3,0	2,0	190

Please enquire about diameters above 2000 mm.

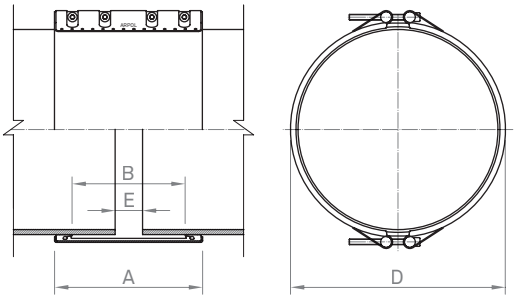
See page 7 (Permitted tolerances)

Coated nominal width 300

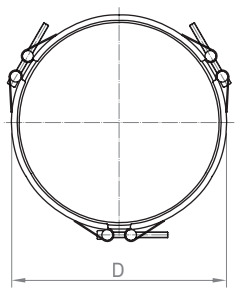
Series AGWR - AGW3

To ensure correct operation, Fitting instructions must be respected.
Test pressure = 1.5 x PS

REP 2



REP 3



	AGWR - AGW3
	mm
A	301
B	230
D	DE + 30
E[1]	15
E[2]	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 Plate (Lock)	304 L	1.4307						

Sealing gasket: *EPDM*

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

Nominal diameter serve as guidance of the pressure scale. Measures in between DN range up to 4000 mm can be manufactured.
E[1] *Permitted gaps without internal band* ***E[2]*** *Permitted gaps with internal band* ***PS*** *Working pressure* ***DN*** *Nominal Diameter* ***W*** *diámetro exterior* ***Tor.*** *Torque Value*

Please enquire about diameters above 2000 mm.

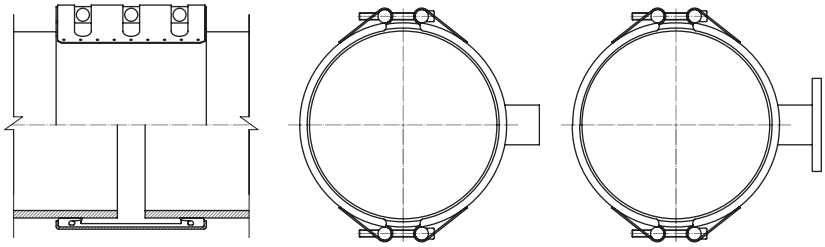
OD	Maximum diameter difference		Maximum angular deflection	Maximum misalignment	Maximum crack width
	2 locks	3 locks			
mm	mm	mm	degrees	mm	mm
500 - 1500	6,0	8,0	2,0	3,0	190
1500 - 2000	6,0	8,0	1,0	3,0	190

See page 7 (Permitted tolerances)

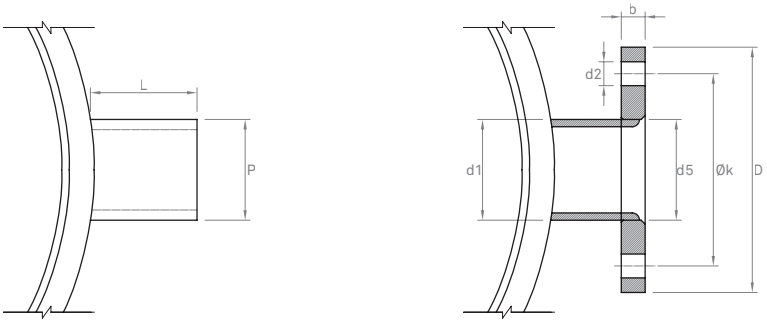
With outlet

Series REP-S

To ensure correct operation, Fitting instructions must be respected.



	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 Plate (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							Serie Y	Serie 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	150	16	110	•	•
2	56	66,2	50	60,3	18	61,5	165	18	125	•	•
2 ½	65	82,0	65	76,1	18	77,5	185	18	145		•
3	71	95,0	80	88,9	18	90,5	200	20	160		•
4	83	121,4	100	114,3	18	116,0	220	20	180		•

Available from DN 250 mm

Working pressure up to 10 bar

Thread BSP according to ISO 7/1

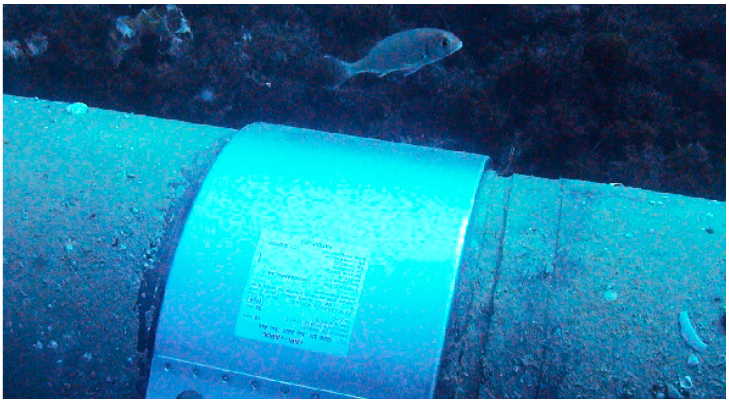
Flange according to EN 1092-1-01 PN10

Applications.

1.

2.

3.



4.

5.

6.

1. GRP pipe repair with a piece of pipe.

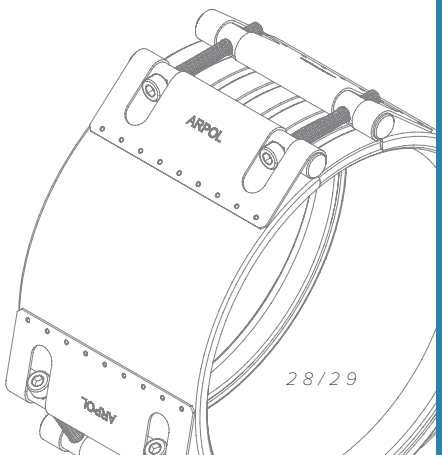
2. Underground GRP pipe repair.

3. Stainless steel welding seam repair.

4. Underwater asbestos-cement pipeline repair.

5. Flowmeter installation on an existing pipe with a REP coupling with outlet.

6. Coupling substitution on a DN 2300 mm main irrigation pipe.



FIX L

Connection of Steel pipes with one anchoring ring.

FIX M

Connection of Steel pipes with one reinforced anchoring ring.

FIX U

Connection of PE and PVC pipes with 3 anchoring rings.

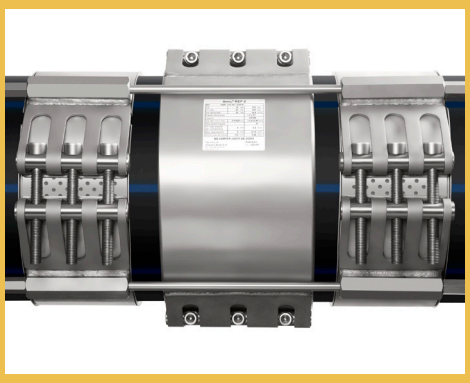
MULTI FIX

Anchoring system for PE pipes.

FIX-M

FIX-U

MULTI-FIX



Arpol fix

FIX.

Axial restraint.

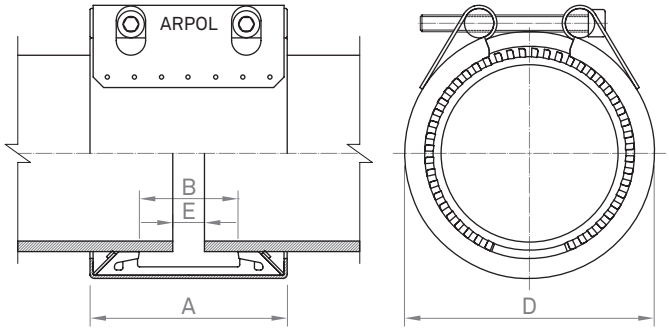
Flexible couplings for pipe connections with axial restraint

FIX-L

For steel pipe

Serie FIX-L

To ensure correct operation, Fitting instructions must be respected.
Test pressure = 1.5 x PS / PN



	Quality W1		Quality W2		Quality W4		Quality W5	
	AISI	DIN	AISI	DIN	AISI	DIN	AISI	DIN
Casing					304 L	1.4307	316 L	1.4404
Bolts					304	1.4301	316	1.4401
Bars					304 L	1.4307	316 L	1.4404
Inner Steel Plate (Lock)					304 L	1.4307	316 L	1.4404
Anchoring Ring					302	1.4310	302	1.4310

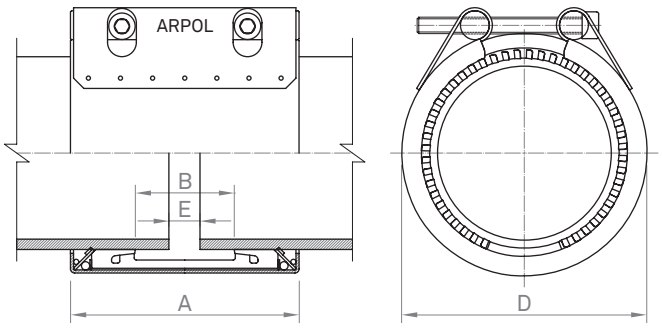
Sealing gasket: *EPDM / NBR / Silicone*

OD	Range	Pressure		Dimensions					Bolts	
mm	mm	PN bar	PS bar	A mm	B mm	D mm	E^1 mm	E^2 mm	Diam.	Tor. Nm
48.3	47.8 - 48.9	16	35	78	31	68	5	15	M 8	15
54.0	53.5 - 54.5	16	30	78	31	74	5	15	M 8	15
57.0	56.4 - 57.6	16	30	78	31	77	5	15	M 8	15
60.3	59.7 - 60.9	16	30	78	31	80	5	15	M 8	15
76.1	75.3 - 76.9	16	20	94	45	96	5	15	M 8	15
88.9	88.0 - 89.8	16	20	94	45	112	5	15	M 8	15
108.0	106.9 - 109.1	16	19	94	45	131	5	15	M 8	20
114.3	113.2 - 115.4	16	23	95	45	137	5	15	M 8	20
133.0	131.7 - 134.3	16	18	95	45	156	5	15	M 10	20
139.7	138.3 - 141.1	16	16	95	45	163	5	15	M 10	25
154.0	152.4 - 155.6	14	15	95	45	178	5	15	M 10	25
159.0	157.4 - 160.6	14	15	95	45	183	5	15	M 10	30
168.3	166.6 - 170.0	13	14	95	45	191	5	15	M 10	30
219.1	216.9 - 221.3		10	141	86	251	15	35	M 12	50
244.5	242.0 - 247.0		5,5	141	86	276	15	35	M 12	50
267.0	264.5 - 269.5		5	141	86	299	15	35	M 12	50
273.0	270.5 - 275.5		4,5	141	86	305	15	35	M 12	50
323.9	320.5 - 327.0		3	141	86	356	15	35	M 12	50
355.6	352.0 - 359.0		2,5	141	86	387	15	35	M 12	50
406,4	402.5 - 410.5		2	141	86	438	15	35	M 12	60
457,0	452.5 - 460.5		2	141	86	489	15	35	M 12	60
508,0	503.5 - 511.5		1,5	141	86	540	15	35	M 12	60
558,0	554.5 - 562.5		1,5	141	86	590	15	35	M 12	60
609,0	605.0 - 613.0		1	141	86	641	15	35	M 12	60

E^1 *Permitted gaps without internal band* ***E^2*** *Permitted gaps with internal band*
PN *Shipbuilding industry safety factor ≥4* ***PS*** *Working pressure* ***OD*** *Outside Diameter* ***Tor.*** *Torque Value*

OD	Maximum diameter difference	Maximum angular deflection	Maximum misalignment
mm	mm	degrees	mm
48	0,5	4,0	1,0
54 - 60	1,0	4,0	1,0
76 - 104	1,5	4,0	1,0
108 - 154	2,5	4,0	1,0
159 - 219	2,5	2,0	2,0
244 - 609	2,5	2,0	3,0

See page 7 (Permitted tolerances)



For steel pipe

Serie FIX-M

To ensure correct operation, Fitting instructions must be respected.
Test pressure = 1.5 x PS / PN

	Quality W1		Quality W2		Quality W4		Quality W5	
	AISI	DIN	AISI	DIN	AISI	DIN	AISI	DIN
Casing					304 L	1.4307	316 L	1.4404
Bolts					304	1.4301	316	1.4401
Bars					304 L	1.4307	316 L	1.4404
Inner Steel Plate (Lock)					304 L	1.4307	316 L	1.4404
Anchoring Ring					302	1.4310	302	1.4310

Sealing gasket: *EPDM / NBR / Silicone*

OD	Range	Pressure		Dimensions					Bolts	
mm	mm	PN bar	PS bar	A mm	B mm	D mm	E^1 mm	E^2 mm	Diam.	Tor. Nm
48.3	47.8 - 48.9	16	40	93	31	72	5	15	M 8	20
54.0	53.5 - 54.5	16	35	93	31	82	5	15	M 8	25
57.0	56.4 - 57.6	16	35	93	31	85	5	15	M 8	25
60.3	59.7 - 60.9	16	35	93	31	88	5	15	M 8	25
76.1	75.3 - 76.9	16	22	111	45	104	5	15	M 8	35
88.9	88.0 - 89.8	16	22	111	45	119	5	15	M 10	35
108.0	106.9 - 109.1	16	21	111	45	141	5	15	M 10	35
114.3	113.2 - 115.4	16	25	112	45	174	5	15	M 10	35
133.0	131.7 - 134.3	16	19	112	45	167	5	15	M 10	35
139.7	138.3 - 141.1	16	18	112	45	184	5	15	M 10	35
154.0	152.4 - 155.6	16	18	113	45	188	5	15	M 10	35
159.0	157.4 - 160.6	16	18	113	45	193	5	15	M 10	35
168.3	166.6 - 170.0	16	18	113	45	202	5	15	M 10	35
219.1	216.9 - 221.3		16	142	86	255	15	35	M 12	65
244.5	242.0 - 247.0		9	142	86	280	15	35	M 12	65
267.0	264.5 - 269.5		8	142	86	303	15	35	M 12	65
273.0	270.5 - 275.5		8	142	86	309	15	35	M 12	65
323.9	320.5 - 327.0		6	142	86	360	15	35	M 12	65
355.6	352.0 - 359.0		6	142	86	391	15	35	M 12	65
406.4	402.5 - 410.5		5	142	86	441	15	35	M 12	65

E^1 *Permitted gaps without internal band* ***E^2 Pe****rmitted gaps with internal band*
PN *Nominal pressure for the shipbuilding industry with safety factor ≥ 4* ***PS*** *Working pressure* ***OD*** *Outside Diameter* ***Tor.*** *Torque Value*

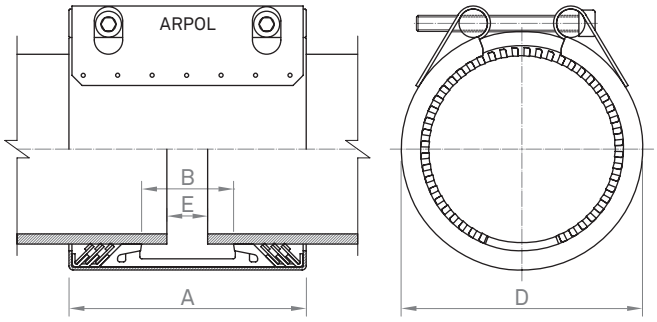
OD	Maximum diameter difference	Maximum angular deflection	Maximum misalignment
mm	mm	degrees	mm
48	0,5	4,0	1,0
54 - 60	1,0	4,0	1,0
76 - 104	1,5	4,0	1,0
108 - 154	2,5	4,0	1,0
159 - 219	2,5	2,0	2,0
244 - 406	2,5	2,0	3,0

See page 7 (Permitted tolerances)

For PE and PVC pipe

Serie FIX-U

To ensure correct operation, Fitting instructions must be respected.
Test pressure = 1,25 x PS



In order to prevent deformation and reduction of pipe diameters due temperature differentials, it is necessary to place an inner ring inside the PE or PVC pipe to stiffen it.

	Quality W1		Quality W2		Quality W4		Quality W5	
	AISI	DIN	AISI	DIN	AISI	DIN	AISI	DIN
Casing					304 L	1.4307	316 L	1.4404
Bolts					304	1.4301	316	1.4401
Bars					304 L	1.4307	316 L	1.4404
Inner Steel Plate (Lock)					304 L	1.4307	316 L	1.4404
Anchoring Ring					302	1.4310	316 L	1.4404

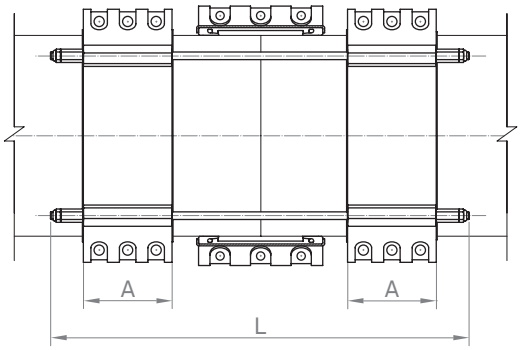
Sealing gasket: *EPDM / NBR / Silicone azul*

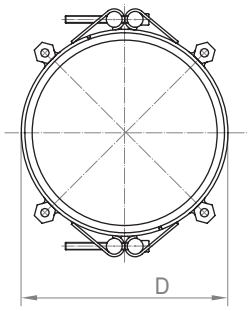
OD	Range	Pressure			ΔT max.			Max axial load			Dimensions				Bolts	
mm	mm	PS bar			°C			kN			A mm	B mm	D mm	E mm	Diam.	Tor. Nm
					PS6	PS10	PS16	PS6	PS10	PS16						
63	62,0 - 64,0		10	16		40	30		7,5	9,5	99	31	85	5	M8	10
75	74,0 - 76,0		10	16		40	30		10,6	13,5	117	31	97	5	M8	10
90	89,0 - 91,0		10	16		40	30		15,2	19,4	117	31	112	5	M8	15
110	108,0 - 111,0		10	16		40	30		22,7	29,0	117	45	132	5	M10	15
125	123,0 - 126,0		10	16		40	30		29,4	37,5	118	45	149	5	M10	15
140	138,0 - 142,0		10	16		40	30		36,9	47,0	118	45	164	5	M10	15
160	158,0 - 162,0		10	16		40	30		48,1	61,4	118	45	184	5	M10	15
180	178,0 - 182,0	6	10	16	40	20	15	40,6	43,3	51,5	201	95	217	10	M12	30
200	198,0 - 203,0	6	10	16	40	20	15	50,2	53,4	63,6	201	95	237	10	M12	30
225	222,0 - 227,0	6	10	16	40	20	15	63,5	67,6	80,4	201	95	262	10	M12	30
250	247,0 - 253,0	6	10	16	40	20	15	78,4	83,4	99,3	201	95	287	10	M12	40
280	277,0 - 283,0	6	10	16	40	20	15	98,4	104,7	124,6	201	95	317	10	M12	40
315	311,0 - 317,0	6	10		40	20		124,5	132,5		201	95	352	10	M12	40
355	351,0 - 357,0	6	10		40	20		158,1	168,3		201	95	392	10	M16	50
400	396,0 - 402,0	6	10		40	15		200,8	192,0		201	95	437	10	M16	50

E *Permitted gaps* ***PS*** *Working pressure* ***OD*** *Outside Diameter* ***ΔT*** *Temperature differential* ***Tor.*** *Torque Value*

OD	Maximum diameter difference	Maximum angular deflection	Maximum misalignment
mm	mm	degrees	mm
63	1,0	4,0	1,0
75 - 90	1,5	4,0	1,0
110 - 140	2,5	4,0	1,0
160 - 225	2,5	2,0	2,0
250 - 400	2,5	2,0	3,0

See page 7 (Permitted tolerances)





For PE pipe

Serie MULTI-FIX

To ensure correct operation, Fitting instructions must be respected.
Test pressure = 1,25 x PS

ARPOL MULTIFIX is the anchoring set only. Sealing coupling in the middle can be an ARPOL INSTAL or ARPOL REP.

In order to prevent deformation and reduction of pipe diameters due temperature differentials, it is necessary to place an inner ring inside the PE or PVC pipe to stiffen it.

This anchoring set requires a specialized installation process, please see the fitting instruction before choosing this product.

	Quality W1		Quality W2		Quality W4		Quality W5	
	AISI	DIN	AISI	DIN	AISI	DIN	AISI	DIN
Casing					304 L	1.4307	316 L	1.4404
Bolts					304	1.4301	316	1.4401
Bars					304 L	1.4307	316 L	1.4404
Restraining rod					304	1.4301	316	1.4401
Anchoring band					304 L	1.4307	316 L	1.4404

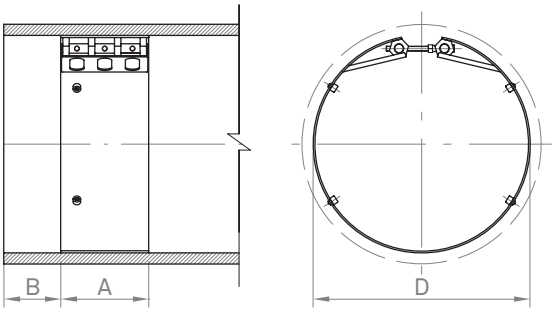
OD	Pressure			ΔT max.			Max axial load			Dimensions							Restraining rod					
mm	PS bar			°C			kN			A mm			L mm			D mm	Diam.			Cantidad		
				PS6	PS10	PS16	PS6	PS10	PS16	PS6	PS10	PS16	PS6	PS10	PS16		PS6	PS10	PS16	PS6	PS10	PS16
315	6	10	16	40	40	40	125	186	278	140	140	200	645	677	829	326	M12	M16	M16	4	4	4
355	6	10	16	40	40	40	158	237	353	140	140	200	645	677	829	366	M12	M16	M16	4	4	4
400	6	10	16	40	40	40	201	301	500	140	200	200	677	809	829	411	M16	M16	M20	4	4	4
450	6	10	16	40	40	40	254	382	567	140	200	200	677	829	829	461	M16	M20	M20	4	4	6
500	6	10		40	40		314	470		140	200		677	829		511	M16	M20		6	6	
560	6	10		40	40		393	589		140	200		677	829		571	M16	M20		6	6	
630	6	10		40	40		498	746		200	200		829	829		641	M20	M20		6	6	
710	6	10		40	30		633	810		200	200		829	829		722	M20	M20		6	8	
800	6	10		40	25		803	941		200	200		829	829		816	M20	M20		8	8	
900	6	10		40	20		1016	1081		200	200		829	829		916	M20	M20		9	9	
1000	6	10		40	15		1255	1200		200	200		829	829		1016	M24	M24		9	9	

***PS** Working pressure* ***OD** Outside Diameter* ***ΔT** Temperature differential*

Inside stiffener for Arpol MULTI-FIX

Serie MULTI-FIX

To ensure correct operation, Fitting instructions must be respected.



In order to prevent deformation and reduction of pipe diameters due temperature differentials, it is necessary to place an inner ring inside the PE or PVC pipe to stiffen it.

This anchoring set requires a specialized installation process, please see the fitting instruction before choosing this product.

	Quality W1		Quality W2		Quality W4		Quality W5	
	AISI	DIN	AISI	DIN	AISI	DIN	AISI	DIN
Casing					304 L	1.4307	316 L	1.4404
Bolts					304	1.4301	316	1.4401
Bars					304 L	1.4307	316 L	1.4404

OD	Dimensions						
mm	A mm			B mm	D mm		
	PS6	PS10	PS16		PS6 / SDR 26	PS10 / SDR 17	PS16 / SDR 11
315	140	140	200	140	291	278	258
355	140	140	200	140	328	313	290
400	140	200	200	140	369	353	327
450	140	200	200	140	415	397	368
500	140	200		140	462	441	
560	140	200		140	517	494	
630	200	200		140	582	556	
710	200	200		140	655	626	
800	200	200		140	738	706	
900	200	200		140	831	794	
1000	200	200		140	923	882	

OD *Outside Diameter* ***SDR*** *Standard Dimension Ratio, ratio of outside diameter to wall thickness* ***PS*** *Working pressure MULTI-FIX*

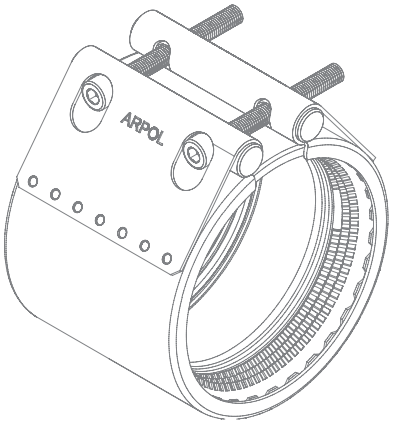
Applications.

1.

2.

3.

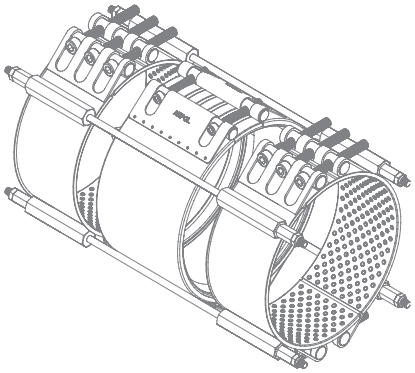
FIX-U



1. Restraint flexible coupling application on a pipe with vibration.

2. Restraint flexible coupling repair on a PE pipe.

MULTI-FIX



3. PE pipe anchoring installation for a mine water extraction.

Arpol trans

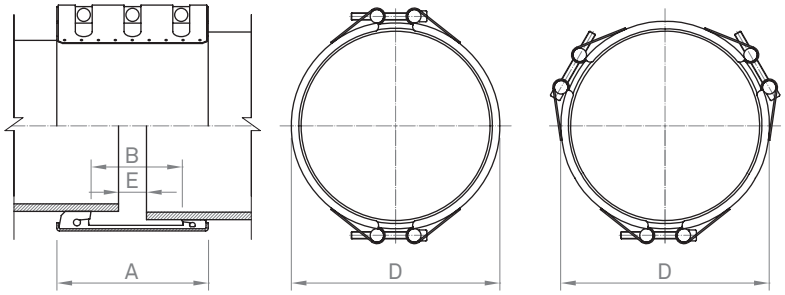
TRANS.

Different outside diameter.

Flexible couplings to connect pipes with different outside diameter.

Serie TRANS

To ensure correct operation, Fitting instructions must be respected.
Test pressure = 1,5 x PS



Working pressure up to 10 bar.

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

See dimensions on page 24. Series IBZR to IGZR

	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	1.5511	304	1.4301	316	1.4401
Bars			1045	1.0503	304 L	1.4307	316 L	1.4404
Inner Steel Plate (Lock)			304 L	1.4307	304 L	1.4307	316 L	1.4404

Sealing gasket: *EPDM*

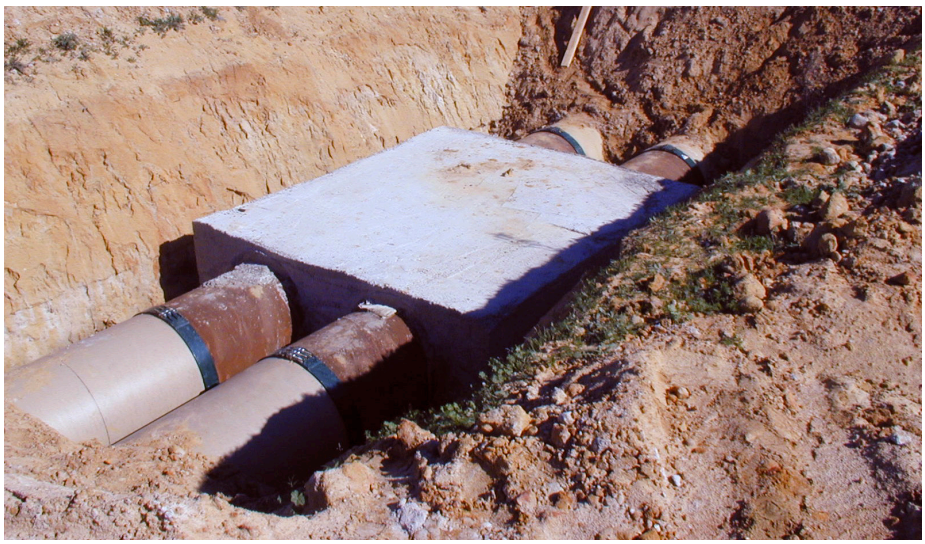
OD	TRANS 5				TRANS 10				TRANS 20				TRANS 30			
	2 locks		3 locks		2 locks		3 locks		2 locks		3 locks		2 locks		3 locks	
mm	Δ Ø min	Δ Ø max	Δ Ø min	Δ Ø max	Δ Ø min	Δ Ø max	Δ Ø min	Δ Ø max	Δ Ø min	Δ Ø max	Δ Ø min	Δ Ø max	Δ Ø min	Δ Ø max	Δ Ø min	Δ Ø max
60 - 159	consult															
160 - 230	2	10														
230 - 250	2	10	2	11												
251 - 299	2	10	2	11	5	15	4	16	15	25	14	26				
300 - 349	2	10	2	11	5	15	4	16	15	25	14	26	25	35	24	36
350 - 499	2	10	2	12	5	15	3	17	15	25	13	27	25	35	23	37
>500	2	11	2	13	4	16	2	18	14	26	12	28	24	36	22	38

OD *Outside Diameter* ***Δ Ø min*** *minimum difference between outside diameters* ***Δ Ø max*** *maximum difference between outside diameters*

OD	Maximum angular deflection	Maximum misalignment
mm	degrees	mm
60 - 159	4,0	0,5
160 - 500	2,0	2,0

See page 7 (Permitted tolerances)

Applications.



1.

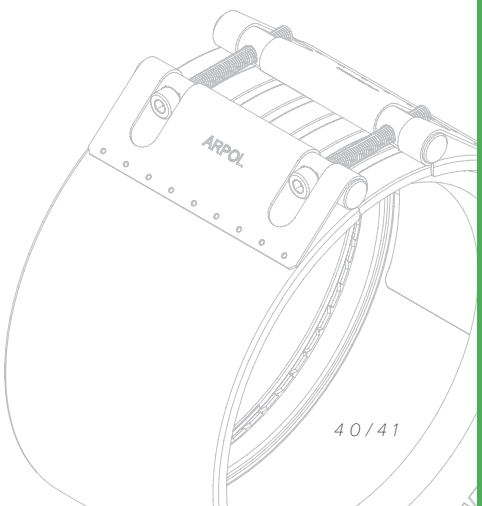
2.

3.

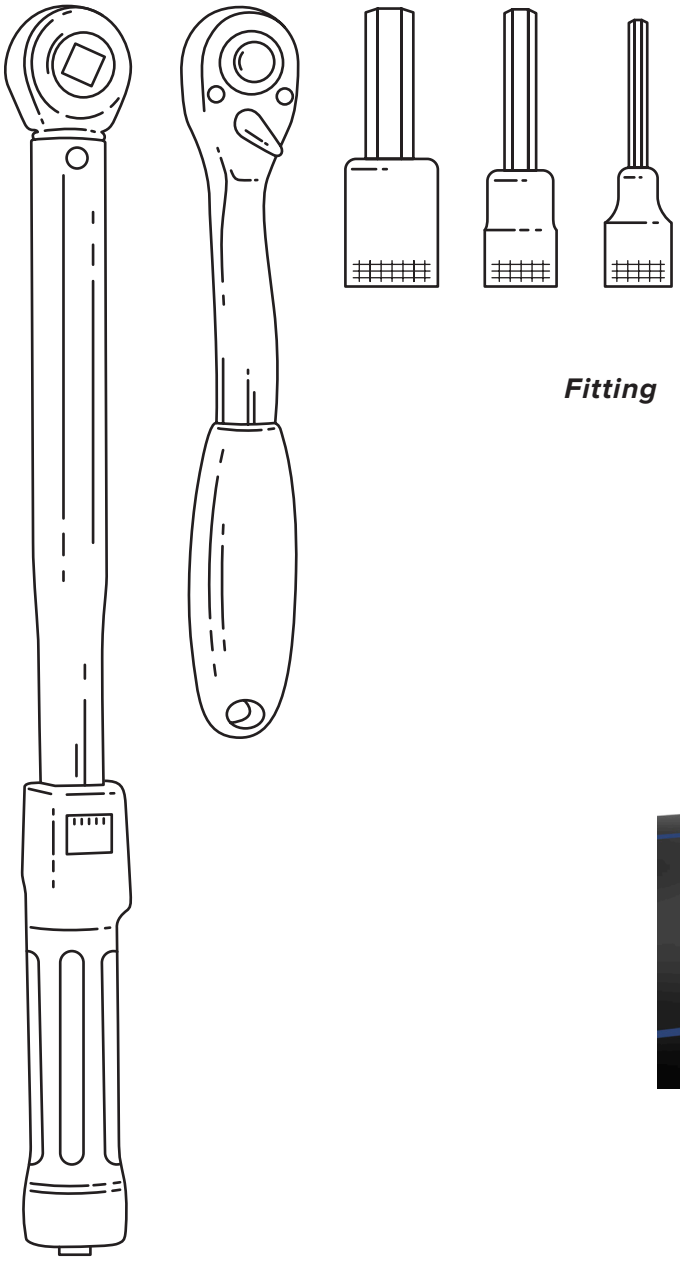
1. Connection of GRP and Steel pipes of different outside diameter.

2. GRP pipe repair with a different outside diameter ductile iron piece of pipe.

3. DN 1300 mm Asbestos cement pipe and steel pipe connection.



Tools.

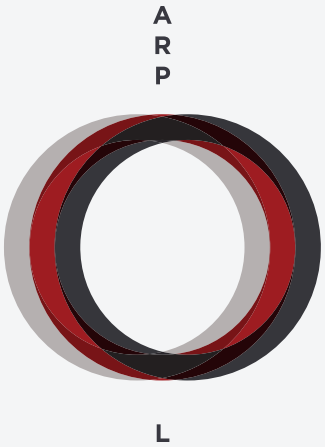


Fitting To correctly fit couplings, Arpol recommends the following tools:

- Torque wrench.
- Set of Allen spears.

The information contained herein may include inaccuracies or typographical errors. In addition, changes are periodically made to this information. Uniones Arpol may make such changes to this information at any time without notice to the user.

FLEXIBLE COUPLINGS



Arpol

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