



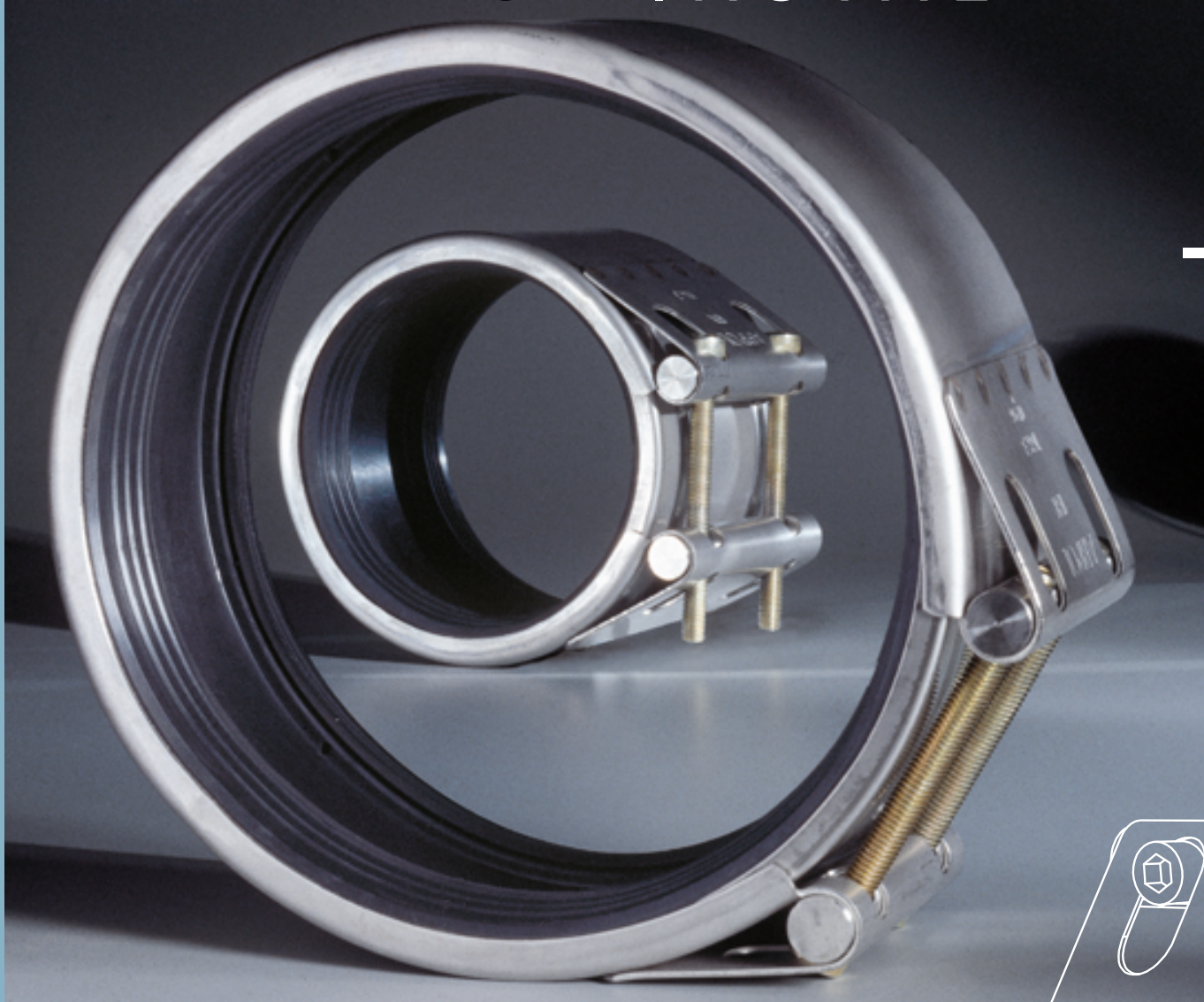
n.v. P. Boonen & C° s.a.
Rubber Products - Hoses - Couplings - Floorcoverings

ARPOL



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ARPOL INSTAL



flexible couplings
for pipe
connections



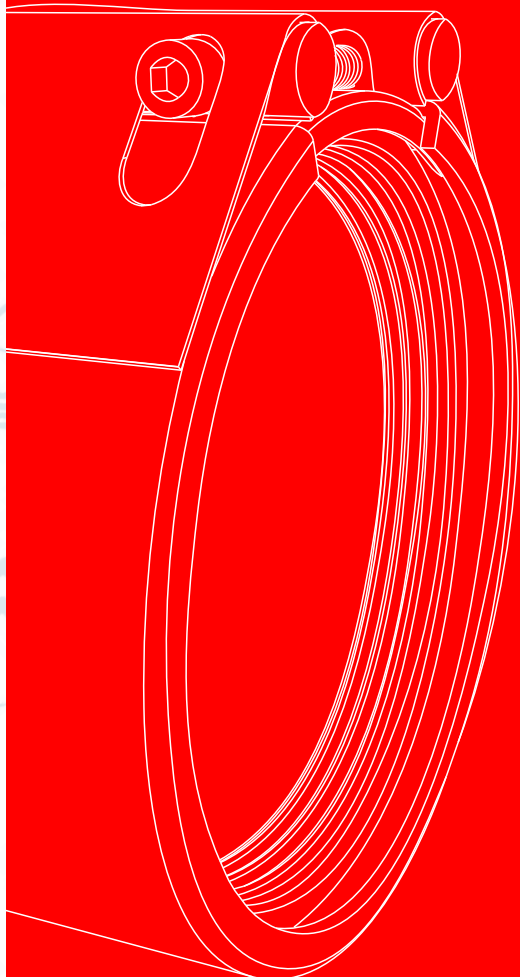
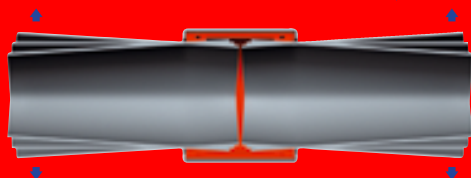
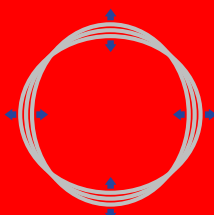
▼ A D V A N T A G E S

SIMPLICITY OF INSTALLATION

Complete unit.
Ready for use.
Low weight.
Only one locking point.
Quick assembly.
Minimum space required.
Economic solution.

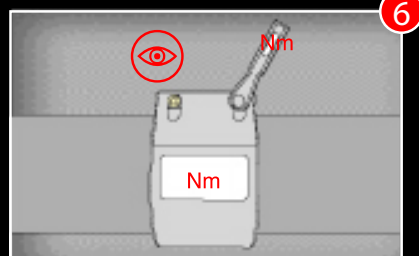
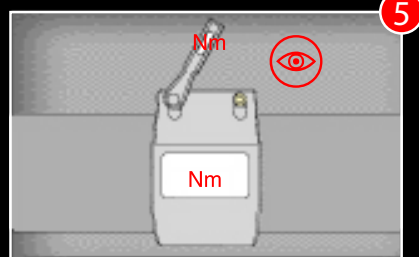
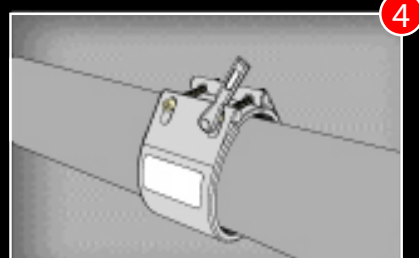
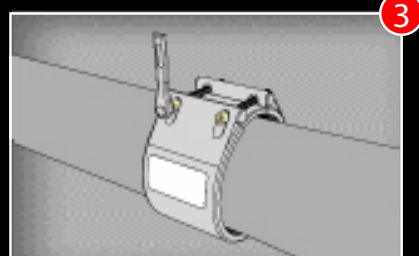
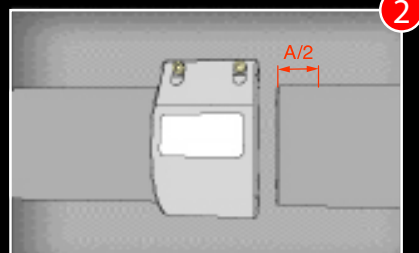
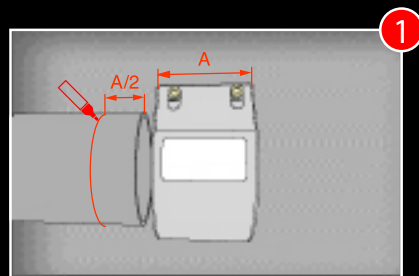
FLEXIBILITY

Angular deflections.
Axial movements.
Radial deformations.
Rough surfaces.
Absorbs vibrations.

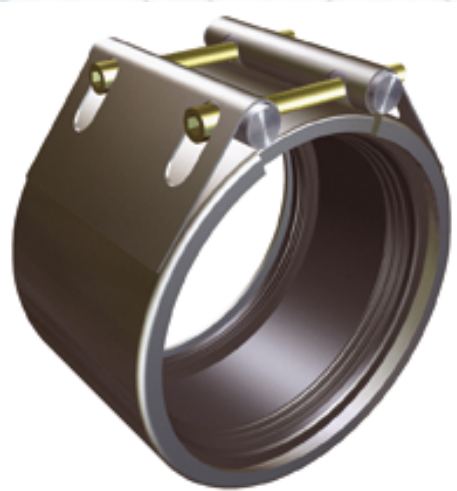


▼ I N S T A L L A T I O N

i n s t r u c t i o n s

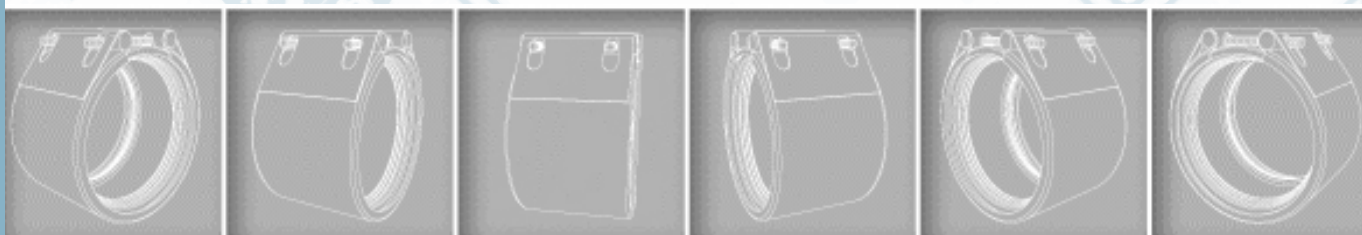
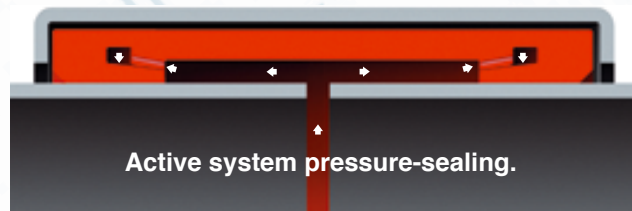


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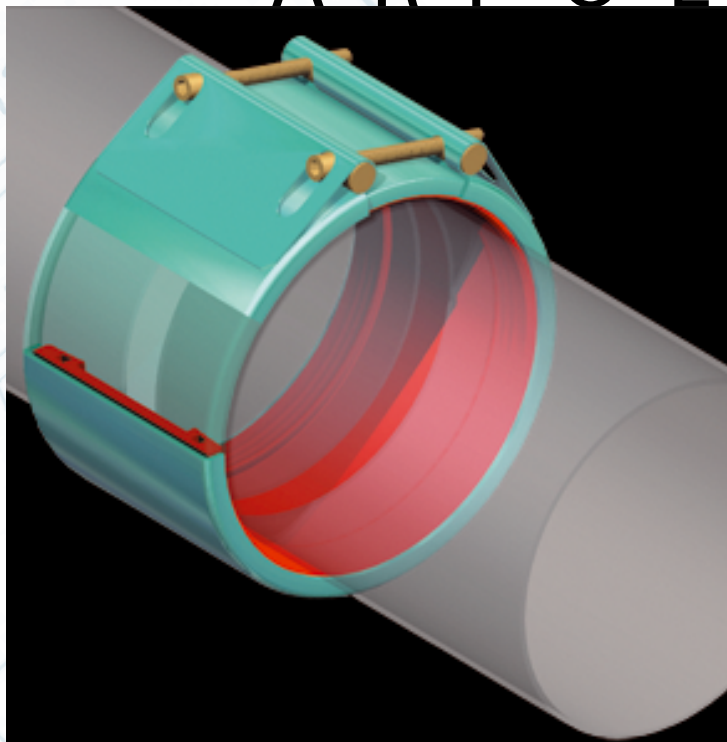


SEALING ▼

As the pressure rises, the seal is increased proportionately.
The coupling adapts automatically to internal pressure changes.



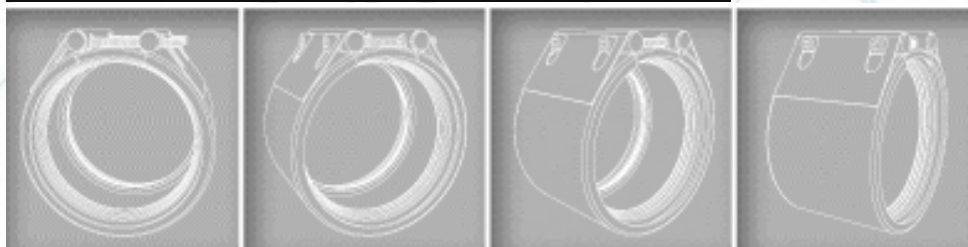
ARPOL-INSTAL



The flexible coupling for pipe connections of:
Steel, Fiberglass Reinforced Plastics, Cast &
Ductile Iron, HDPE, PVC, Asbestos Cement,
Concrete, etc...

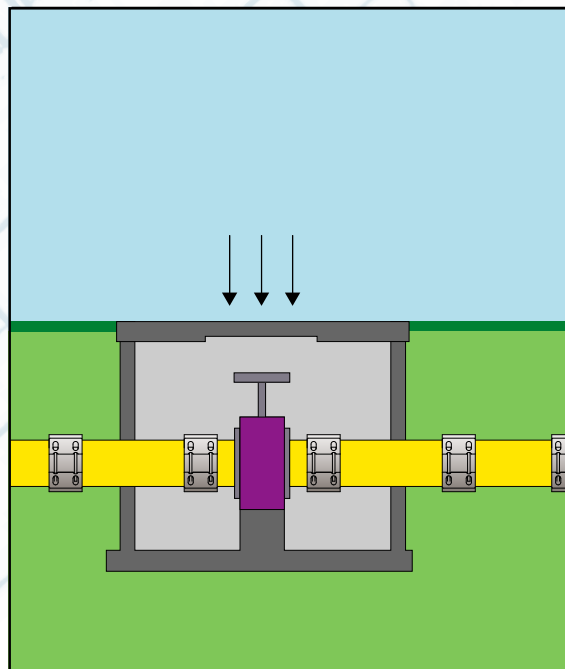
Suitable for:
Water treatment and distribution, industry,
shipbuilding, construction and power stations.

- 1 Casing**
Stainless steel
Carbon steel with corrosion resistant coating.
- 2 Locking bolts and bars**
Stainless steel
Carbon steel with corrosion resistant coating.
- 3 Sealing gasket**
Synthetic rubber E.P.D.M. or N.B.R.
Other materials on request.



ARPOL-INSTAL

APPLICATIONS



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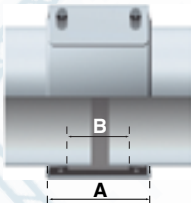
TECHNICAL CHARACTERISTICS

N.D. Nominal pipe diameter.

O.D. Outside pipe diameter.

bar Working pressure.

Test pressure = 1.5 x working pressure.



Nominal width 95 mm

O.D. mm	INOX Casing				
	Tolerance mm	Ref. IBX bar	A mm	B mm	
48	47 - 49	16	78	31	
54	53 - 55	16	78	31	
57	56 - 58	16	78	31	
60	59 - 61	16	78	31	
63	62 - 65	16	78	31	
76	74 - 77	16	94	45	
84	82 - 85	16	94	45	
89	87 - 91	16	94	45	
104	102 - 106	16	94	45	
108	107 - 111	16	94	45	
114	112 - 117	16	95	45	
125	124 - 127	16	95	45	
129	127 - 131	16	95	45	
133	131 - 136	16	95	45	
139	137 - 142	16	95	45	
154	152 - 156	16	95	45	
159	156 - 161	16	95	45	
168	166 - 171	16	95	45	

Nominal width 200 mm

N.D. mm	INOX Casing					STEEL casing		
	Ref. IBZ bar	Ref. ICZ bar	Ref. IDZ bar	Ref. IEZ bar	Ref. IFZ bar	Ref. ACZ bar	Ref. AEZ bar	Ref. AFZ bar
150	18	24	-	-	-	-	-	-
200	14	19	23	-	-	32	-	-
250	11	15	19	-	-	26	-	-
300	10	13	16	19	26	22	33	-
350	8	11	14	17	22	19	29	-
400	7	10	12	15	20	17	25	-
450	7	9	11	13	18	15	23	-
500	6	8	-	12	16	14	21	27
550	5	7	-	11	15	13	19	25
600	5	7	-	10	13	12	17	23
650	5	6	-	9	12	11	16	21
700	4	6	-	9	12	10	15	20
750	4	5	-	8	11	9	14	19
800	4	5	-	8	10	9	13	17
850	4	5	-	7	10	8	12	16
900	-	5	-	7	9	8	12	16
950	-	4	-	6	9	7	11	15
1000	-	4	-	6	8	7	11	14
1100	-	4	-	6	7	6	10	13
1200	-	3	-	5	7	6	9	12
1300	-	-	-	5	6	-	8	11
1400	-	-	-	4	6	-	8	10
1500	-	-	-	4	6	-	7	9
1600	-	-	-	4	5	-	7	9
1700	-	-	-	4	5	-	6	8
1800	-	-	-	3	5	-	6	8
1900	-	-	-	3	4	-	6	7
2000	-	-	-	3	4	-	5	7
A	199	200	201	202	204	200	202	204
B	142	142	142	142	142	142	142	142

Nominal width 140 mm

N.D. mm	INOX Casing					STEEL casing		
	Ref. IBY bar	Ref. ICY bar	Ref. IDY bar	Ref. IEY bar	Ref. IFY bar	Ref. ACY bar	Ref. AEY bar	Ref. AFY bar
150	18	24	-	-	-	-	-	-
200	14	19	23	-	-	32	-	-
250	11	15	19	-	-	26	-	-
300	10	13	16	19	26	22	33	-
350	8	11	14	17	22	19	29	-
400	7	10	12	15	20	17	25	-
450	7	9	11	13	18	15	23	-
500	6	8	-	12	16	14	21	27
550	5	7	-	11	15	13	19	25
600	5	7	-	10	13	12	17	23
650	5	6	-	9	12	11	16	21
700	4	6	-	9	12	10	15	20
750	4	5	-	8	11	9	14	19
800	4	5	-	8	10	9	13	17
850	4	5	-	7	10	8	12	16
900	-	5	-	7	9	8	12	16
950	-	4	-	6	9	7	11	15
1000	-	4	-	6	8	7	-	-
1100	-	4	-	6	7	6	-	-
1200	-	3	-	6	7	6	-	-
A	139	140	141	142	144	140	142	144
B	86	86	86	86	86	86	86	86

MATERIALS

Casing:

- Stainless steel AISI 304L or 316L.
- Carbon steel Copolymer coated.

Locking bolts:

- Stainless steel AISI 316.
- Carbon steel Dacromet coated.

Locking bars:

- Stainless steel AISI 304L or 316L.
- Carbon steel Dacromet coated.

Inner steel bridge:

- Stainless steel AISI 304L or 316L.

Rubber sealing gasket:

- Synthetic rubber E.P.D.M. (ethylene-propylene).
Suitable for water, air and chemical products.
Temperature range from -20°C to +100°C.
- Synthetic rubber N.B.R. (nitrile-butadiene).
Suitable for gas, oil, fuel and other hydrocarbons.
Temperature range from -20°C to +80°C.



A R P O L G Series

Nominal Width 200 mm

O.D. mm		INOX Casing				STEEL Casing			
min.	máx.	Ref. IGZ	Ref. IGZR	Ref. IGZ3	Ref. IGZ4	Ref. AGZ	Ref. AGZR	Ref. AGZ3	Ref. AGZ4
		bar				bar			
600	649	17				29			
650	699	16				27			
700	749	14				25			
750	799	14				23			
800	849	13				22			
850	899	12				21			
900	949	11				19			
950	999	11				18			
1000	1049	10				18			
1050	1099	10				18			
1100	1149	9				16			
1150	1199	9				16			
1200	1249	9				15			
1250	1299	9				15			
1300	1349	8				14			
1350	1399	8				14			
1400	1449	7				13			
1450	1499	7				13			
1500	1549	7				12			
1550	1599	7				11			
1600	1699	6				10			
1700	1799	6				10			
1800	1899	6				9			
1900	1999	5				9			
2000	2099	5				8			
2100	2199	5				8			
2200	2299	5				8			
2300	2399	5				7			
2400	2499	4				7			
2500	2599	4				7			
2600	2699	4				7			
2700	2799	4				-			
2800	2899	4				-			
2900	2999	4				-			

O.D. : Outside pipe diameter.

bar: Working pressure.

Test pressure = 1.5 x working pressure.



M A T E R I A L S

Casing:

- Stainless steel AISI 304L or 316L.
- Carbon steel Copolymer coated.

Locking bolts:

- Stainless steel AISI 316.
- Carbon steel Dacromet coated.

Locking bars:

- Stainless steel AISI 304L or 316L.
- Carbon steel Dacromet coated.

Inner steel bridge:

- Stainless steel AISI 304L or 316L.

Rubber sealing gasket:

- Synthetic rubber E.P.D.M. (ethylene-propylene).
Suitable for water, air and chemical products.
Temperature range from -20°C to +100°C.
- Synthetic rubber N.B.R. (nitrile-butadiene).
Suitable for gas, oil, fuel and other hydrocarbons.
Temperature range from -20°C a +80°C.



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ARPOL INSTAL - Material specifications

Casing:

- f Stainless steel according to DIN 14301 (AISI 304) or DIN 14401 (AISI 316).
- f Carbon steel according to ST. 52.3 or equivalent, with Copolymer coating. The thermoplastic coating material chemical basis is an ethylene-vinyl-alcohol copolymer. Minimum film thickness: 0.250 mm.

Locking bolts:

- f Stainless steel according to DIN 912, quality A2 or A4 (AISI 304 or AISI 316) coated to facilitate the fitting/removing process.
- f Stainless steel according to DIN 912, quality A2 or A4 (AISI 304 or AISI 316).

Locking bars:

- f Stainless steel according to DIN 14301 (AISI 304) or DIN 14401 (AISI 316).
- f Gaged Carbon steel, quality C45K with additional Dacromet coating protection.

Inner Steel bridge (lock):

- f Stainless steel according to DIN 14301 (AISI 304) or DIN 14401 (AISI 316).

Rubber sealing sleeve:

- f Synthetic rubber E.P.D.M. (ethylene-propylene).
 - Suitable for water, air and chemical products.
 - Temperature range: from -20°C to +100°C.
- f Synthetic rubber N.B.R. (nitrile-butadiene).
 - Suitable for gas, oil, fuel and other hydrocarbons.
 - Temperature range: from -20°C to +80°C.



ARPOL INSTAL - Permitted gaps between pipe ends

ARPOL couplings provide a flexible solution to join pipes. They can absorb:

- different outside diameters (please check limits in section “Joining Different O.D.”)
- angular deflections (please check limits in section “Angular Deflections”)
- axial movements (please check limits in section “Axial Movements”)
- misalignment between pipe ends being joined (please check limits in section “Misalignment”)
- gaps between pipe ends due to other reasons (please check limits in section “Permitted Gaps”).

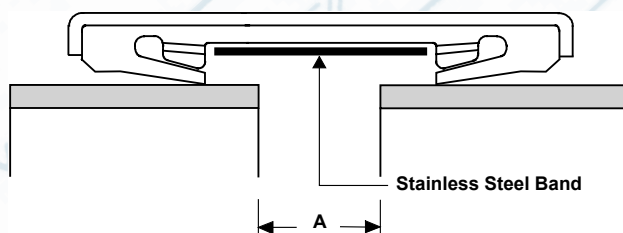
In all these cases, a gap between pipe ends is produced inside the coupling. If both the limits provided in the above mentioned sections and the following chart are met, the ARPOL coupling will absorb such gaps.

If gaps between pipes exceed certain limits (please check chart “Permitted gaps”) a stainless steel band will have to be placed inside the coupling between the rubber sealing sleeve lips (see drawing).

Moreover, **such band is also required in vacuum lines or with vacuum risk**, unless gaps between pipe ends can be avoided.

Should you need the stainless steel band, please consult us.

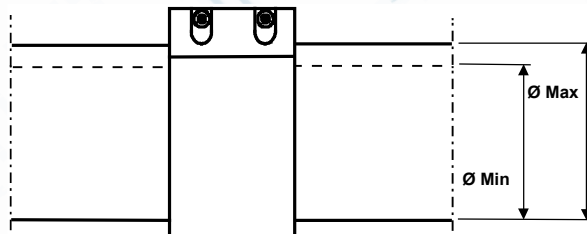
PERMITTED GAPS A		
Coupling Width (mm)	No Insert (mm)	With Insert (mm)
75	5	15
95	5	15
140	10	35
200	15	60



ARPOL INSTAL - Maximum admissible tolerance

When joining pipes of the same O.D., ARPOL INSTAL maximum admissible tolerances are as follows:

MAXIMUM TOLERANCE Joining pipes of the same O.D.		
Coupling Width (mm)	Outside Diameter (mm)	Tolerance Range (mm)
75 - 95	48 a 171	Standard Values
140 - 200	156 a 499	6
140 - 200	> 499	8



For information on standard sizes for 75 – 95 mm width couplings, please check the ARPOL INSTAL catalogue.

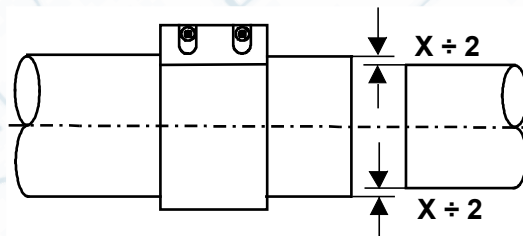
Should you need higher tolerances, please consult the possibilities of ARPOL REP-2 or ARPOL REP-3 as they offer higher values (see technical documentation or please consult us).

When using ARPOL INSTAL couplings to join different O.D., please check the “Joining Different O.D. Pipes” section on the maximum admissible tolerances.

ARPOL INSTAL - Joining Different O.D.

O.D. differences between adjacent and CONCENTRIC pipes to be joined should not exceed:

JOINING DIFFERENT O.D.	
Outside Diameter (mm)	Maximum Difference X (mm)
48	0,5
54 a 63	1,0
76 a 104	1,5
106 a 499	2,5
> 499	3,0

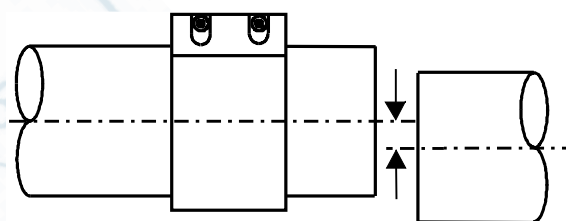


Should you have higher O.D. differences, please consult the possibilities of other ARPOL couplings

ARPOL INSTAL - Misalignment

Joining misaligned pipes with ARPOL INSTAL:

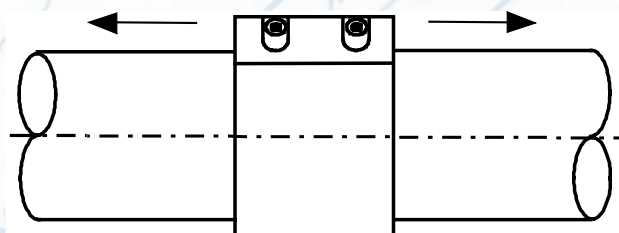
MISALIGNMENT	
Outside Diameter (mm)	Maximum Difference (mm)
<300	1%
≥300	3 mm



ARPOL INSTAL - Permitted axial movements

The sum of axial movements caused by pipe extension or contraction between **two fix points** should not exceed:

AXIAL MOVEMENT	
Coupling Width (mm)	Max. Movement (mm)
75 - 95	5
140	10
200	15



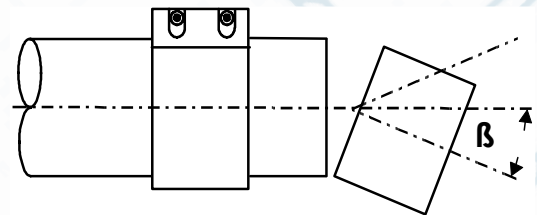
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ARPOL INSTAL - Angular deflection

ARPOL INSTAL couplings allow certain amount of angular deflection between pipe ends. The maximum admissible tolerance permitted by ARPOL couplings depends on the O.D. of pipes (see enclosed chart).

ANGULAR DEFLECTION	
Outside Diameter (mm)	Maximum Deflection * β
<1500	2°
≥ 1500	1°

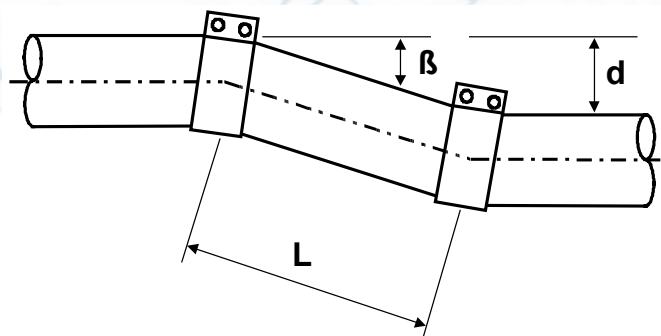
* Please consult for higher rates



ARPOL INSTAL - Lateral displacement

Lateral displacement between two pipes can be accommodated using two ARPOL couplings and a closing pipe. The length of the closing pipe can be calculated as follows:

d = lateral displacement to be accommodated
 L = length of the closing pipe
 β = deviation (check maximum limits in "Angular Deflection")

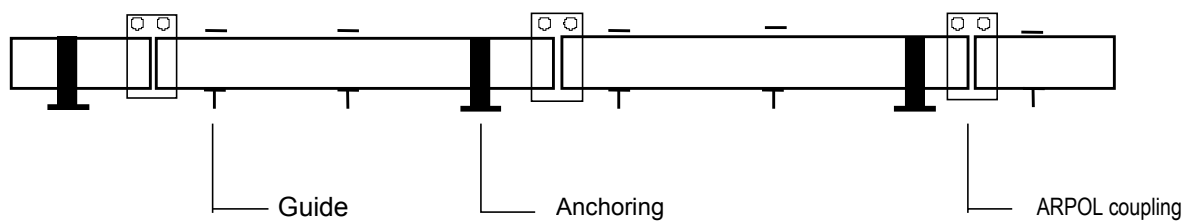


ARPOL INSTAL - Pipe holders

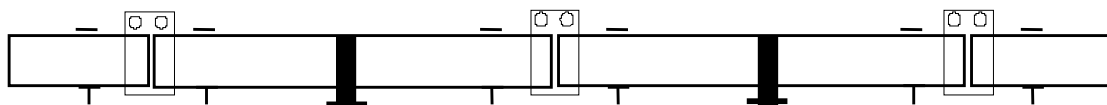
Aerial pipelines require holders on both sides of the coupling.

ARPOL INSTAL couplings **are not designed to stand neither weight nor axial stress of pipes, therefore the pipeline must be properly fixed and supported.** Should you need more information, please consult us.

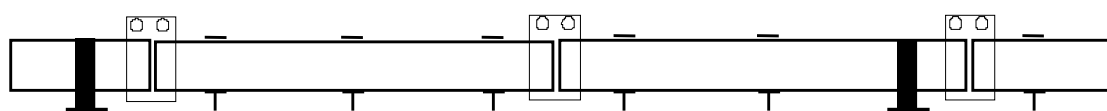
Application 1



Application 2



Application 3



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ARPOL INSTAL - Fitting instructions

All ARPOL couplings are supplied with the following basic fitting instructions on the label:

- f ARPOL reference which includes the tolerance. Should different O.D. be joined, please check admissible values.
- f Working Pressure (bar)
- f Test Pressure = **1,5** working pressure
- f Torque value (N/m)

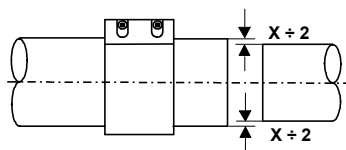
In order to enable the ARPOL coupling to work correctly it is very important to respect the torque value.

To fit the ARPOL INSTAL couplings, we recommend following these steps:

- 1 f Clean pipe ends and eliminate any irregularity.
- 2 f Mark both pipe ends symmetrically at a distance from the edge equivalent to half of the coupling width.
- 3 f Slide the coupling over one pipe end.
- 4 f Bring the other pipe end to a facing position. Make sure the alignment limits as well as angular deflection, etc., are respected and that both pipe ends are correctly held.
- 5 f Place the coupling between the marks and check that the inner steel bridge is correctly placed under the lock.
- 6 f Tighten screws:
 - 6.1. Start the tightening of screws using a click wrench with a nozzle.
 - **2 screws lock:** tighten both screws by alternative short movements until you nearly reach the end, but **do not exceed the torque value.**
 - **3 screws lock:** First tighten the central screw up to **10 mm**. Then tighten exterior screws positioning them at the same level as the central screw. Keep tightening the three screws by alternative short movements until you nearly reach the end, but **do not exceed the torque value.**
 - 6.2. Finish the tightening with a dynamometric wrench with sound signal.
 - Adjust the wrench to **the torque value printed on the coupling label**. Keep tightening screws alternatively with the dynamometric wrench until you can hear the 'click sound' at the beginning of the tightening.
- 7 f If necessary, you may hydraulically test the coupling up to 1.5 the working pressure (see label).



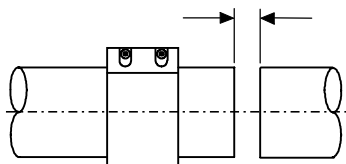
ARPOL INSTAL



**Outside Diameter
(mm)**

**Maximum Difference X
(mm)**

48	0,5
54 a 63	1,0
76 a 104	1,5
106 a 499	2,5
> 499	3,0

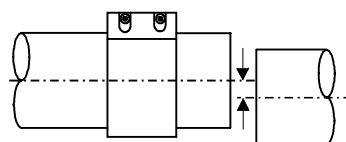


**Coupling Width
(mm)**

**No Internal
Band (mm)**

**With Internal
Band (mm)**

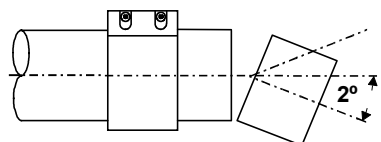
75 - 95	5	15
140	10	35
200	15	60



**Outside Diameter
(mm)**

**Maximum
Misalignment**

< 300	1%
≥ 300	3 mm

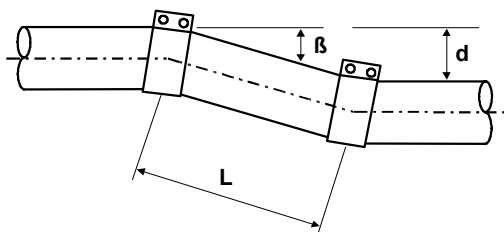


**Outside Diameter
(mm)**

**Max. Angular
Deflection ***

< 1500	2°
≥ 1500	1°

* Please consult for higher values



$$L = \frac{d}{\text{Sen } \beta}$$

d = wished displacement

L = length of the closing pipe

β = deviation (check limits)

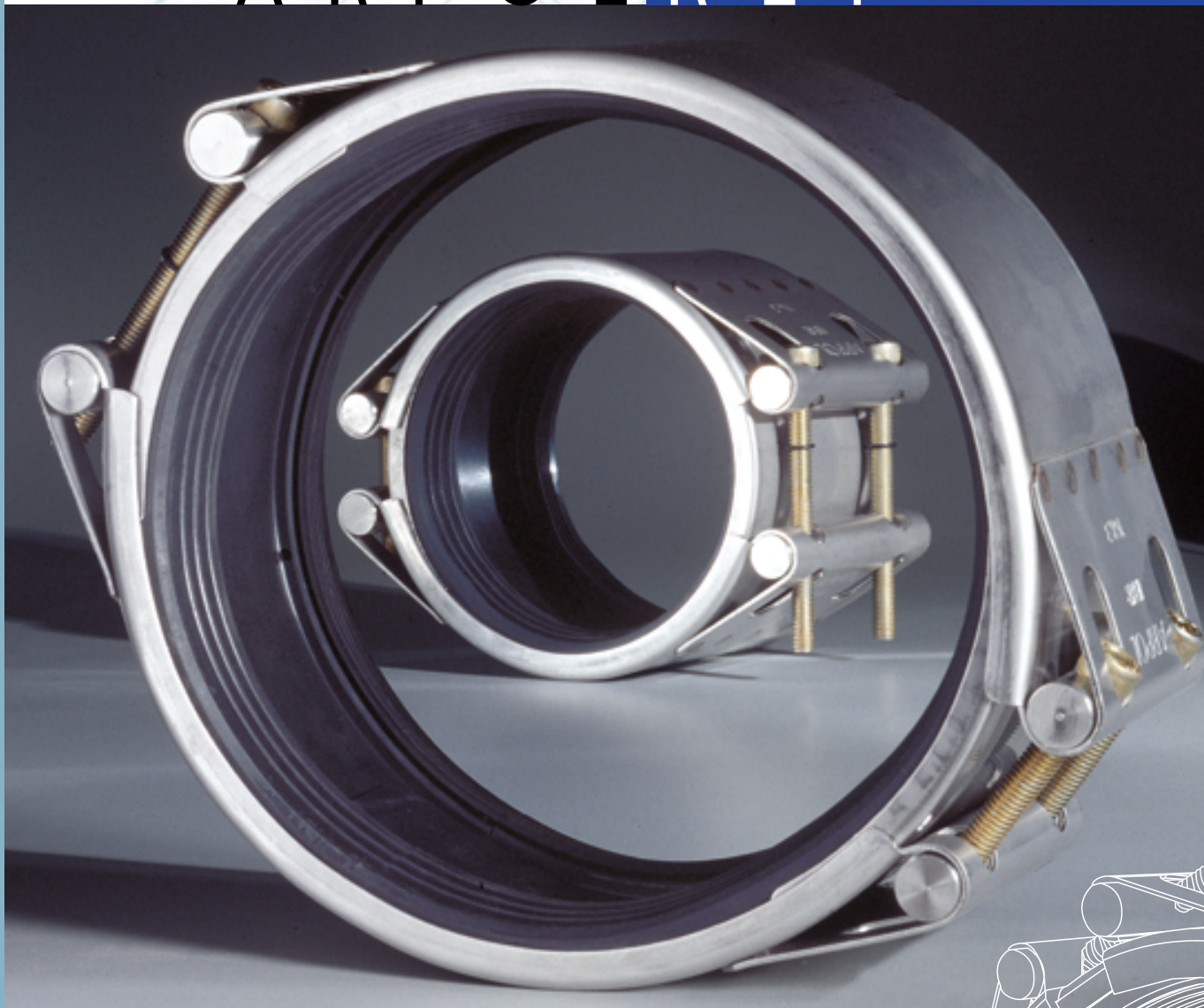
ARPOL INSTAL couplings are not designed to support the pipe or to prevent axial movements. Therefore, the pipe must be properly supported and anchored.

Couplings applied on vacuum lines or with vacuum risk require an internal band unless gaps between pipes can be avoided. Please consult us in this situation.



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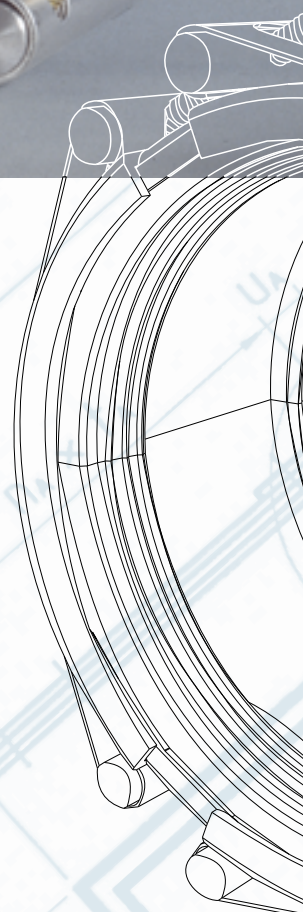
ARPOL REP



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flexible couplings
for pipe
repair



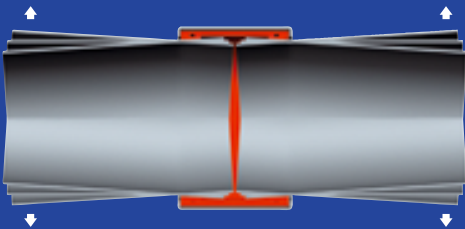
▼ ADVANTAGES

SIMPLICITY OF INSTALLATION

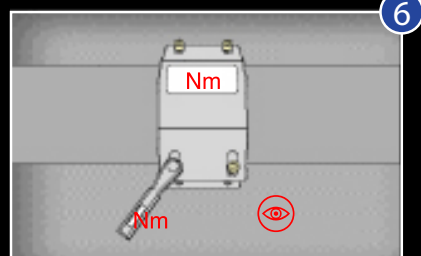
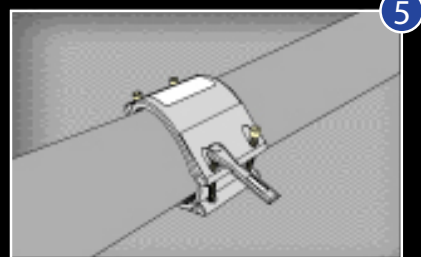
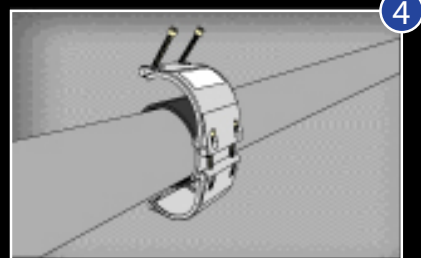
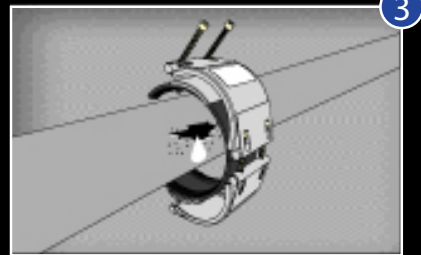
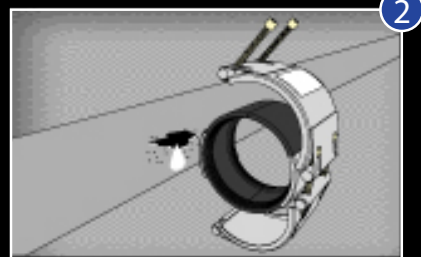
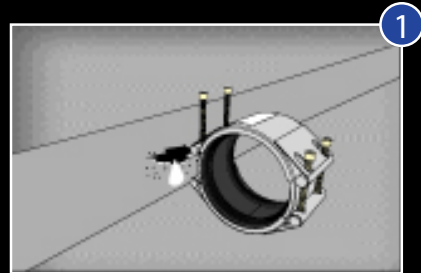
Repair without pipe replacement.
Low weight.
Quick assembly.
Minimum space required.
Economic solution.

FLEXIBILITY

Rough surfaces.
Radial deformation.
Angular deflections.
Axial movements.
Absorbs vibrations.



▼ INSTALLATION instructions



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ARPOL REPAIR SYSTEM

1. By mounting the ARPOL coupling around the damaged pipe surface.



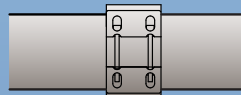
faulty welding



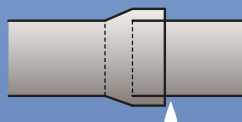
break / crack



damaged wall



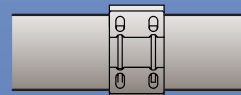
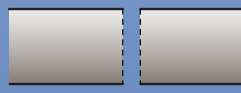
2. By eliminating the damaged joint and mounting the ARPOL on both pipe ends.



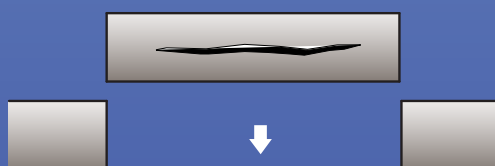
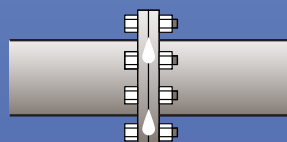
cut and remove the socket



remove the joint



3. By using two ARPOL couplings and a new piece of pipe when it is necessary to replace the damaged pipe.



SEALING

As the pressure rises, the seal is increased proportionately. The coupling adapts automatically to internal pressure changes.

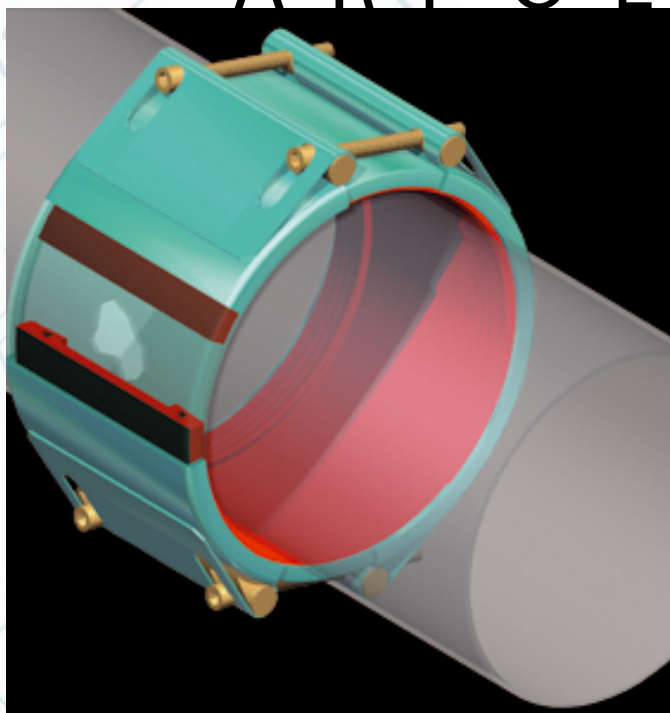


ARPOL - REP
with cuts

APPLICATIONS



ARPOL REP



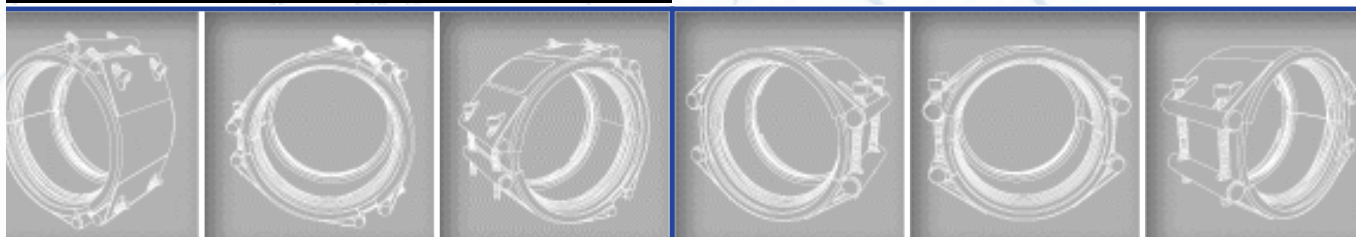
The flexible coupling for pipe repairs of:
Steel, Fiberglass Reinforced Plastics, Cast & Ductile Iron, HDPE, PVC, Asbestos Cement, Concrete, etc...

Maintenance for:
Water treatment and distribution, industry, ship repair, construction and power stations.

- 1 Casing**
Stainless steel.
Carbón steel with corrosion resistant coating.
- 2 Locking bolts and bars**
Stainless steel.
Carbón steel with corrosion resistant coating.
- 3 Sealing gasket**
Synthetic rubber E.P.D.M. or N.B.R.
Other materials on request.



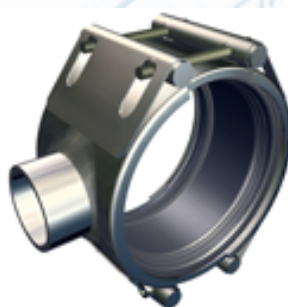
n.v. P. Boonen & Co S.A.



ARPOL - REP
with 3 - locks



ARPOL - REP
with 2 - locks



ARPOL - REP
with outlet

- Outlet: with inside thread.
- Working pressure: up to 10 bar.
- Available from O.D. 250 mm.
- Only available as 2 or 3-lock stainless steel couplings AISI 304L or 316L.

Outlet	ARPOL REP WITH OUTLET					
	1"	1,5"	2"	2,5"	3"	4"
Width of coupling	140 mm	140 mm	140 mm	200 mm	200 mm	200 mm
	200 mm	200 mm	200 mm			

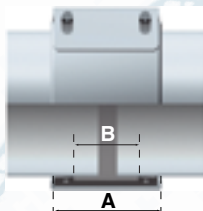
TECHNICAL CHARACTERISTICS

N.D. Nominal pipe diameter.

O.D. Outside pipe diameter.

bar Working pressure.

Test pressure = 1.5 x working pressure.



Nominal width 95 mm

O.D. mm	INOX Casing				
	Ref. IBXR Tolerance mm	Ref. IBXC Tolerance mm	bar	A mm	B mm
48	- -	47 - 49	16	78	31
54	- -	53 - 55	16	78	31
57	- -	56 - 58	16	78	31
60	- -	59 - 61	16	78	31
63	60 - 64	62 - 65	16	78	31
76	74 - 78	74 - 77	16	94	45
84	80 - 86	82 - 85	16	94	45
89	87 - 93	87 - 91	16	94	45
104	98 - 106	102 - 106	16	94	45
108	107 - 111	107 - 111	16	94	45
114	110 - 116	112 - 117	16	94	45
125	118 - 125	124 - 127	16	94	45
129	125 - 131	127 - 131	16	94	45
133	131 - 136	131 - 136	16	94	45
139	137 - 144	137 - 142	16	94	45
154	147 - 156	152 - 156	16	94	45
159	156 - 162	156 - 161	16	94	45
168	166 - 171	166 - 171	16	94	45

Nominal width 140 mm

N.D. mm	INOX Casing					STEEL casing		
	Ref. IBYR bar	Ref. ICYR bar	Ref. IDYR bar	Ref. IEYR bar	Ref. IFYR bar	Ref. ACYR bar	Ref. AEYR bar	Ref. AFYR bar
150	18	24	-	-	-	-	-	-
200	14	19	23	-	-	32	-	-
250	11	15	19	-	-	26	-	-
300	10	13	16	19	26	22	33	-
350	8	11	14	17	22	19	29	-
400	7	10	12	15	20	17	25	-
450	7	9	11	13	18	15	23	-
500	6	8	10	12	16	14	21	27
550	5	7	9	11	15	13	19	25
600	5	7	8	10	13	12	17	23
650	5	6	8	9	12	11	16	21
700	4	6	7	9	12	10	15	20
750	4	5	-	8	11	9	14	19
800	4	5	-	8	10	9	13	17
850	4	5	-	7	10	8	12	16
900	3	5	-	7	9	8	12	16
950	3	4	-	6	9	7	11	15
1000	-	4	-	6	8	7	-	-
1100	-	4	-	6	7	6	-	-
1200	-	3	-	5	7	6	-	-
A	139	140	141	142	144	140	142	144
B	86	86	86	86	86	86	86	86

Nominal width 200 mm

N.D. mm	INOX Casing					STEEL casing	
	Ref. IBZR bar	Ref. ICZR bar	Ref. IDZR bar	Ref. IEZR bar	Ref. IFZR bar	Ref. ACZR bar	Ref. AEZR bar
150	18	24	-	-	-	-	-
200	14	19	23	-	-	32	-
250	11	15	19	-	-	26	-
300	10	13	16	19	26	22	33
350	8	11	14	17	22	19	29
400	7	10	12	15	20	17	25
450	7	9	11	13	18	15	23
500	6	8	10	12	16	14	21
550	5	7	9	11	15	13	19
600	5	7	8	10	13	12	17
650	5	6	8	9	12	11	16
700	4	6	7	9	12	10	15
750	4	5	-	8	11	9	14
800	4	5	-	8	10	9	13
850	4	5	-	7	10	8	12
900	3	5	-	7	9	8	12
950	3	4	-	6	9	7	11
1000	-	4	-	6	8	7	11
1100	-	4	-	6	7	6	10
1200	-	3	-	5	7	6	9
1300	-	3	-	5	6	5	8
1400	-	3	-	4	6	5	8
1500	-	3	-	4	6	5	7
1600	-	2	-	4	5	4	7
1700	-	2	-	4	5	4	6
1800	-	2	-	3	5	-	6
1900	-	-	-	3	4	-	6
2000	-	-	-	3	4	-	5
A	199	200	201	202	204	200	202
B	142	142	142	142	142	142	142

Please consult us for sizes bigger than 2000 mm.

MATERIALS

Casing:

- Stainless steel AISI 304L or 316L.
- Carbon steel Copolymer coated.

Locking bolts:

- Stainless steel AISI 316.
- Carbon steel Dacromet coated.

Locking bars:

- Stainless steel AISI 304L or 316L.
- Carbon steel Dacromet coated.

Inner steel bridge:

- Stainless steel AISI 304L or 316L.

Rubber sealing gasket:

- Synthetic rubber E.P.D.M. (ethylene-propylene). Suitable for water, air and chemical products. Temperature range from -20°C to +100°C.
- Synthetic rubber N.B.R. (nitrile-butadiene). Suitable for gas, oil, fuel and other hydrocarbons. Temperature range from -20°C to +80°C.



A R P O L G Series

Nominal Width 200 mm

O.D. mm		INOX Casing				STEEL Casing			
		Ref. IGZ	Ref. IGZR	Ref. IGZ3	Ref. IGZ4	Ref. AGZ	Ref. AGZR	Ref. AGZ3	Ref. AGZ4
min.	máx.	bar				bar			
600	649	17				29			
650	699	16				27			
700	749	14				25			
750	799	14				23			
800	849	13				22			
850	899	12				21			
900	949	11				19			
950	999	11				18			
1000	1049	10				18			
1050	1099	10				18			
1100	1149	9				16			
1150	1199	9				16			
1200	1249	9				15			
1250	1299	9				15			
1300	1349	8				14			
1350	1399	8				14			
1400	1449	7				13			
1450	1499	7				13			
1500	1549	7				12			
1550	1599	7				11			
1600	1699	6				10			
1700	1799	6				10			
1800	1899	6				9			
1900	1999	5				9			
2000	2099	5				8			
2100	2199	5				8			
2200	2299	5				8			
2300	2399	5				7			
2400	2499	4				7			
2500	2599	4				7			
2600	2699	4				7			
2700	2799	4				-			
2800	2899	4				-			
2900	2999	4				-			

O.D. : Outside pipe diameter.

bar: Working pressure.

Test pressure = 1.5 x working pressure.

MATERIALS

Casing:

- Stainless steel AISI 304L or 316L.
- Carbon steel Copolymer coated.

Locking bolts:

- Stainless steel AISI 316.
- Carbon steel Dacromet coated.

Locking bars:

- Stainless steel AISI 304L or 316L.
- Carbon steel Dacromet coated.

Inner steel bridge:

- Stainless steel AISI 304L or 316L.

Rubber sealing gasket:

- Synthetic rubber E.P.D.M. (ethylene-propylene).
Suitable for water, air and chemical products.
Temperature range from -20°C to +100°C.
- Synthetic rubber N.B.R. (nitrile-butadiene).
Suitable for gas, oil, fuel and other hydrocarbons.
Temperature range from -20°C a +80°C.



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ARPOL REP 2 - Material specifications

Casing:

- f Stainless steel according to DIN 14301 (AISI 304) or DIN 14401 (AISI 316).
- f Carbon steel according to ST. 52.3 or equivalent, with Copolymer coating. The thermoplastic coating material chemical basis is an ethylene-vinyl-alcohol copolymer. Minimum film thickness: 0.250 mm.

Locking Bolts:

- f Stainless steel according to DIN 912, quality A2 or A4 (AISI 304 or AISI 316) coated to facilitate the fitting/removing process.
- f Stainless steel according to DIN 912 with additional Dacromet coating protection.

Locking Bars:

- f Stainless steel according to DIN 14301 (AISI 304) or DIN 14401 (AISI 316).
- f Gaged Carbon steel, quality C45K with additional Dacromet coating protection.

Inner Steel bridge:

- f Stainless steel according to DIN 14301 (AISI 304) or DIN 14401 (AISI 316).

Rubber sealing sleeve:

- f Synthetic rubber **E.P.D.M.** (ethylene-propylene)
 - Suitable for water, air and some chemical products.
 - Temperature range: from -20°C to +100°C.
- f Synthetic rubber **N.B.R.** (nitrile-butadiene)
 - Suitable for gas, fuel and other hydrocarbons.
 - Temperature range: from -20°C to +80°C.

ARPOL REP 2 - Permitted gaps between pipe ends

ARPOL couplings provide a flexible solution to join pipes. They can absorb:

- different outside diameters (please check limits in section “Joining Different O.D.”)
- angular deflections (please check limits in section “Angular Deflections”)
- axial movements (please check limits in section “Axial Movements”)
- misalignment between pipe ends being joined (please check limits in section “Misalignment”)
- gaps between pipe ends due to other reasons (please check limits in section “Permitted Gaps”)

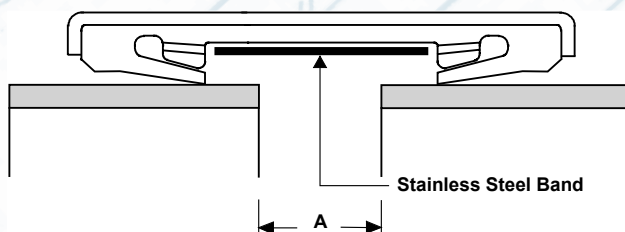
In all these cases, a gap between pipe ends is produced inside the coupling. If both the limits provided in the above mentioned sections and the following chart are met, the ARPOL coupling will absorb such gaps.

If gaps between pipes exceed certain limits (please check chart “Permitted gaps”) a stainless steel band will have to be placed inside the coupling between the rubber sealing sleeve lips (see drawing).

Moreover, **such band is also required in vacuum lines or with vacuum risk**, unless gaps between pipe ends can be avoided.

Should you need the stainless steel band, please consult us. 5

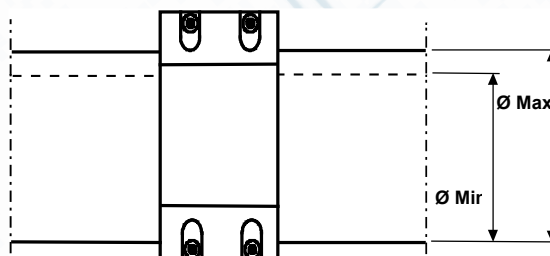
PERMITTED GAPS A		
Coupling Width (mm)	No Internal Band (mm)	With Internal Band (mm)
75	5	15
95	5	15
140	10	35
200	15	60



ARPOL REP 2 - Maximum admissible tolerance

When joining pipes of the same O.D., ARPOL REP 2 maximum admissible tolerances are as follows:

MAXIMUM TOLERANCE Joining pipes of the same o.d.		
Coupling With (mm)	Outside Diameter (mm)	Tolerance Range (mm)
75 - 95	60 a 171	Standard Values
140 - 200	156 a 499	12
140 - 200	> 499	16



For information on standard sizes for 75 – 95 mm width couplings, please check the ARPOL REP catalogue.

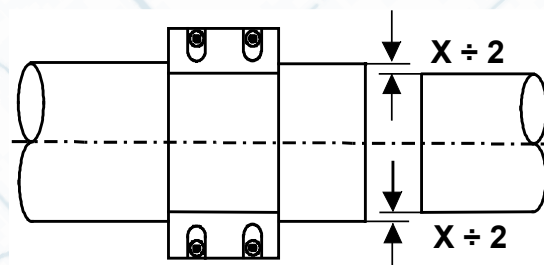
Should you need higher tolerances, please consult the possibilities of ARPOL REP-3 as it offers higher values (see technical documentation or please consult us).

When using ARPOL REP 2 couplings to join different O.D., please check the “Joining Different O.D. Pipes” section on the maximum admissible tolerances.

ARPOL REP 2 - Joining Different O.D.

O.D. differences between adjacent and **concentric** pipes to be joined should not exceed:

JOINING DIFFERENT O.D.	
Outside Diameter (mm)	Maximum Difference X (mm)
60 a 64	2,0
76 a 104	3,0
106 a 499	5,0
> 499	6,0

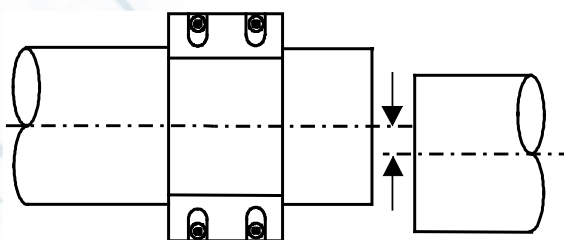


Should you have higher O.D. differences, please consult the possibilities of ARPOL REP-3 as it offers higher values (see technical documentation or please consult us).

ARPOL REP 2 - Joining misaligned pipes

Joining misaligned pipes with ARPOL REP 2:

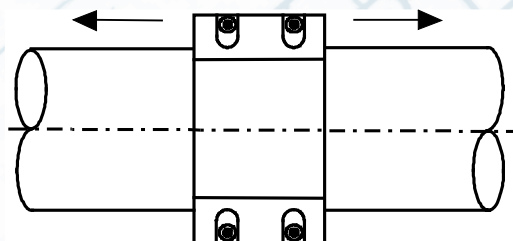
MISALIGNMENT	
Outside Diameter (mm)	Maximum Difference (mm)
< 300	1,0 %
> 300	3 mm



ARPOL REP 2 - Permitted axial movements

The sum of axial movements caused by pipe extension or contraction between **two fixed points** should not exceed:

AXIAL MOVEMENT	
Coupling Width (mm)	Max. Movement (mm)
75 - 95	5
140	10
200	15

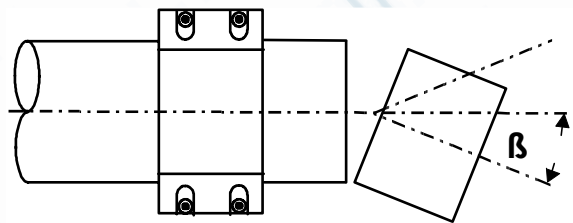


ARPOL REP 2 - Angular deflection

ARPOL REP 2 couplings allow certain amount of angular deflection between pipe ends. The maximum admissible tolerance permitted by ARPOL couplings depends on the O.D. of pipes (see enclosed chart).

ANGULAR DEFLECTION	
Outside Diameter (mm)	Maximum Deflection *
<1500	2°
≥ 1500	1°

* Please consult for higher rates

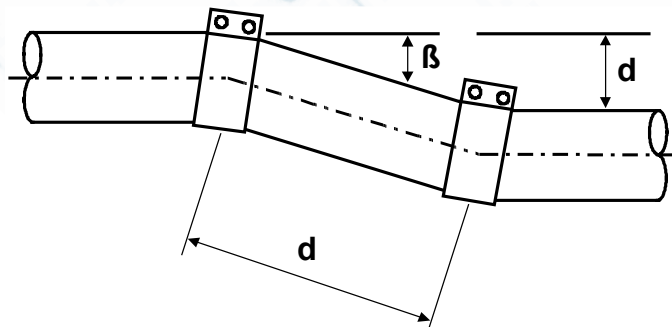


ARPOL REP 2 - Lateral displacement

Lateral displacement between two pipes can be accommodated using two ARPOL couplings and a closing pipe. The length of the closing pipe can be calculated as follows:

d = lateral displacement to be accommodated
 L = length of the closing pipe
 β = deviation (check maximum limits in "Angular Deflection")

$L = \frac{d}{\sin \beta}$
 Sen β



ARPOL REP 2 - Pipe holders

ARPOL-REP 2 couplings **are not designed to stand neither weight nor axial stress of pipes, therefore the pipeline must be properly fixed and supported.** Should you need more information, please consult us.

ARPOL REP 2 - Fitting and removing couplings

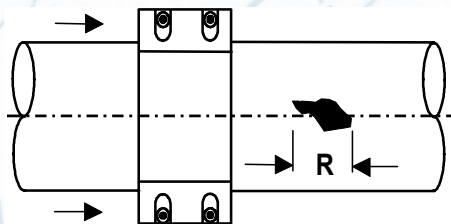
One of the main characteristics of ARPOL couplings is they can be fitted and removed several times. Should the removal take place after a year of working performance, we recommend having the rubber substituted.

ARPOL REP 2 - Permitted break widths

ARPOL REP 2 couplings are not fitted by sliding them from the pipe end. Instead, they can be fitted directly on the break point without having to cut the pipe.

For this application the maximum permitted break widths are as follows:

MAXIMUM BREAK WIDTH	
Coupling Width A (mm)	Max. Break R (mm)
75	20
95	35
140	50
200	100



ARPOL REP 2 - FITTING INSTRUCTIONS

All ARPOL couplings are supplied with the following basic fitting instructions on the label:

- f* ARPOL reference which includes the tolerance. Should different O.D. be joined, please check admissible values.
- f* Working Pressure (bar)
- f* Test Pressure = **1,5** working pressure
- f* Torque value (N/m)

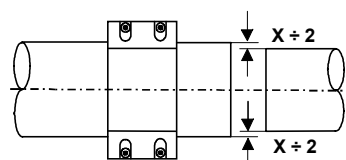
In order to enable the ARPOL coupling to work correctly it is very important to respect the torque value.

To fit the ARPOL REP 2 couplings, we recommend following these steps:

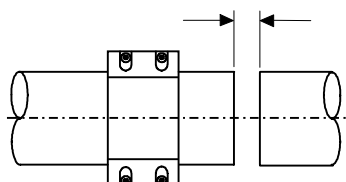
- 1 *f* Clean and eliminate any irregularity that may be on the break area or the pipe ends.
- 2 *f* Unfasten the coupling by the lock with o-ring seals on the screws. Slide the rubber band around the pipe. Following the rubber line, make sure the rubber ends are correctly aligned on the upper side, **not overlapped**. Hold the rubber band (with some adhesive tape, for instance). **DO NOT CUT THE RUBBER BAND.**
- 3 *f* Place the inner steel bridge on the rubber band. Make sure they are correctly imbedded and facing each other at both sides of the coupling. The line of the rubber ends should be perpendicular to the lock.
- 4 *f* Place both parts of the casing on the rubber band. The inner steel bridge should rest under the locks. Fit screws and anchors. When locking the coupling, double-check the rubber band is aligned, not overlapped, and the steel bridges are correctly placed under the lock.
- 5 *f* Tighten screws:
 - 5.1. Start the tightening of screws using a click wrench with a nozzle.
 - **2 screws lock:** tighten both screws by alternative short movements until you nearly reach the end, but **do not exceed the torque value**.
 - **3 screws lock:** First tighten the central screw up to **10 mm**. Then tighten exterior screws positioning them at the same level as the central screw. Keep tightening the three screws by alternative short movements until you nearly reach the end, but **do not exceed the torque value**.
 - 5.2. Finish the tightening with a dynamometric wrench with sound signal.
 - Adjust the wrench to **the torque value printed on the coupling label**. Keep tightening screws alternatively with the dynamometric wrench until you can hear the 'click sound' at the beginning of the tightening.
- 6 *f* If necessary, you may hydraulically test the coupling up to 1.5 the working pressure (see label).



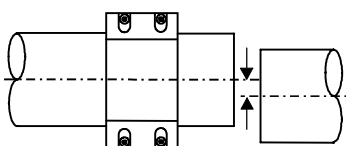
ARPOL REP 2



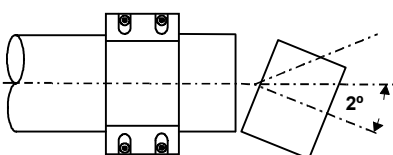
Outside Diameter (mm)	Maximum Difference X (mm)
76 a 168	3,0
169 a 499	5,0
> 499	6,0



Coupling Width (mm)	No Internal Band (mm)	With Internal Band (mm)
75 - 95	5	15
140	10	35
200	15	60

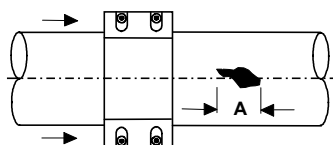


Outside Diameter (mm)	Maximum Misalignment
< 300	1%
≥ 300	3 mm



Outside Diameter (mm)	Max. Angular Deflection *
< 1500	2°
≥ 1500	1°

* Please consult for higher values



Coupling Width (mm)	Max. Break A (mm)
75	20
95	35
140	50
200	100

ARPOL REP 2 couplings are not designed to support the pipe or to prevent axial movements. Therefore, the pipe must be properly supported and anchored.

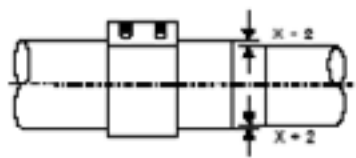
Couplings applied on vacuum lines or with vacuum risk require an internal band unless gaps between pipes can be avoided. Please consult us in this situation.

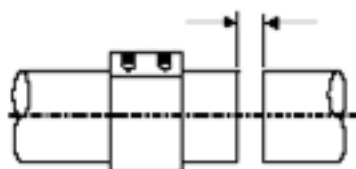


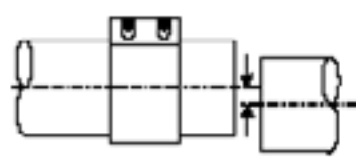
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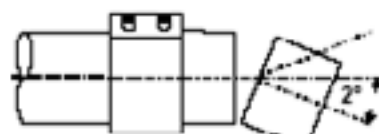


ARPOL REP C

	Outside Diameter (mm)	Maximum Difference X (mm)
	48	0,5
	54 a 63	1,0
	76 a 104	1,5
	106 a 499	2,5
	> 499	3,0

	Coupling Width (mm)	No Internal Band (mm)	With Internal Band (mm)
	75 - 95	5	15
	140	10	35
	200	15	60

	Outside Diameter (mm)	Maximum Misalignment
	< 300	1%
	≥ 300	3 mm

	Outside Diameter (mm)	Max. Angular Deflection *
	< 1500	2°
	≥ 1500	1°

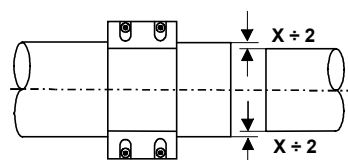
* Please consult for higher values

	Coupling Width (mm)	Max. Break A (mm)
	75	20
	95	35
	140	50
	200	100

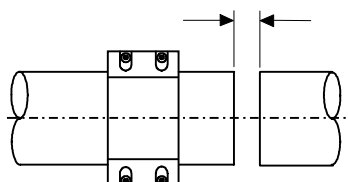
ARPOL REP C couplings are not designed to support the pipe or to prevent axial movements. Therefore, the pipe must be properly supported and anchored.

Couplings applied on vacuum lines or with vacuum risk require an internal band unless gaps between pipes can be avoided. Please consult us in this situation.

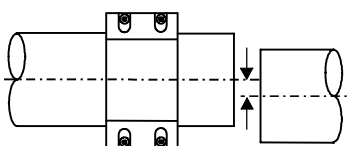
ARPOL REP 3



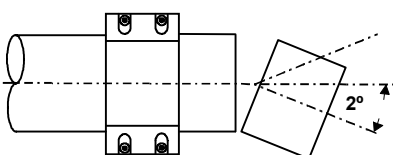
Outside Diameter (mm)	Maximum Difference X (mm)
220 a 499	7,0
> 499	8,0



Coupling Width (mm)	No Internal Band (mm)	With Internal Band (mm)
140	10	35
200	15	60

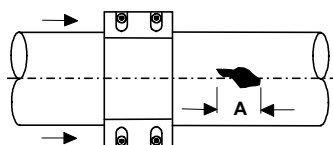


Outside Diameter (mm)	Maximum Misalignment
220 a 499	2,5 mm
> 499	3,0 mm



Outside Diameter (mm)	Max. Angular Deflection *
< 1500	2°
≥ 1500	1°

* Please consult for higher values



Coupling Width (mm)	Max. Break A (mm)
140	50
200	100

ARPOL REP 3 couplings are not designed to support the pipe or to prevent axial movements. Therefore, the pipe must be properly supported and anchored.

Couplings applied on vacuum lines or with vacuum risk require an internal band unless gaps between pipes can be avoided. Please consult us in this situation.



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ARPOLFIX



flexible couplings
for pipe
connections with
axial restraint



▼ ADVANTAGES

SIMPLICITY OF INSTALLATION

Complete unit.
Ready for use.
Low weight.
Only one locking point.
Quick assembly.

REPLACES:

Welding.
Flanging.
Threading.
Screwing.

MORE ECONOMICAL

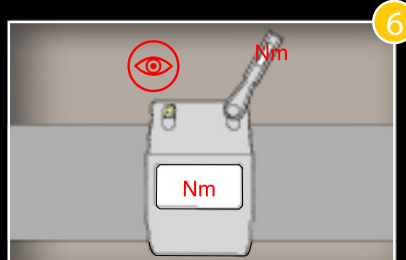
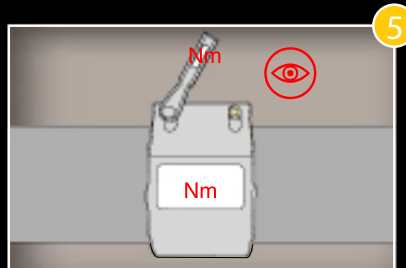
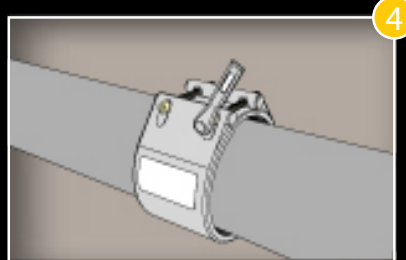
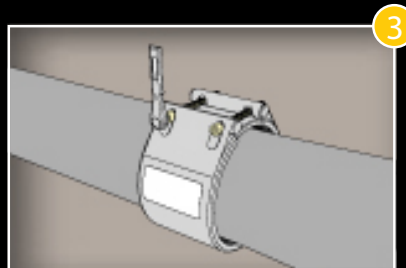
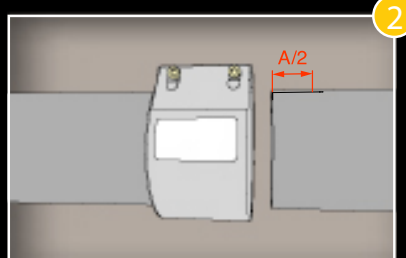
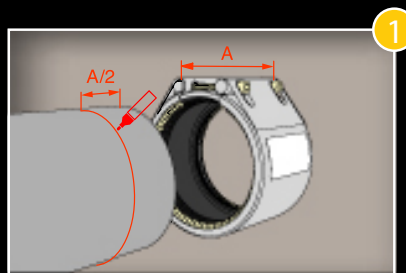
Quick assembly.
Minimum space required.

FLEXIBILITY

Angular deflections.
Axial movements.
Absorbs vibration.
Conducts electricity.



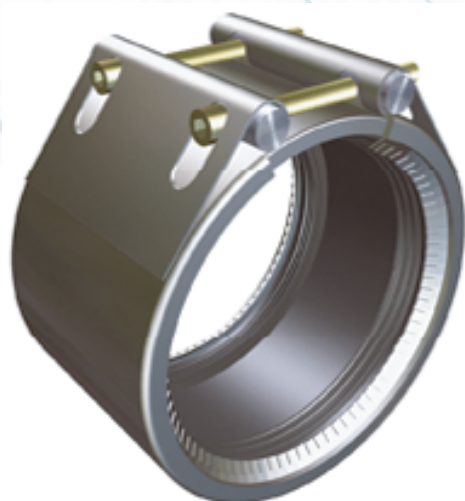
▼ INSTALLATION instructions



n.v. P. Boonen & Co s.a.



APPLICATIONS

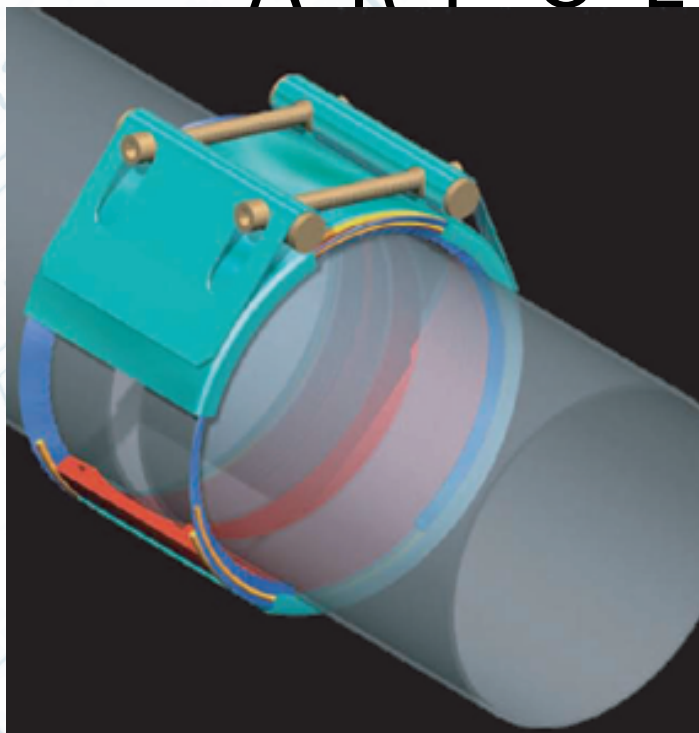


SEALING

As the pressure rises, the seal is increased proportionately.
The coupling adapts automatically to internal pressure changes.



ARPOL FIX



Axial restraint couplings.

Suitable for:
Water treatment and distribution, industry,
shipbuilding, construction, power stations.

- 1 Casing**
Stainless steel.
- 2 Locking bolts and bars**
Stainless steel.
Carbon steel with corrosion resistant coating.
- 3 Axial restraint internal parts**
Stainless steel.
- 4 Sealing gasket**
Synthetic rubber E.P.D.M. or N.B.R.
Other materials on request.



ARPOL-FIX

MATERIALS

Casing:

- Stainless steel AISI 304L or AISI 316L.

Locking bolts:

- Stainless steel AISI 316.
- Carbon steel Dacromet coated.

Locking bars:

- Stainless steel AISI 304L or AISI 316L.
- Carbon steel Dacromet coated.

Inner steel bridge:

- Stainless steel AISI 304L or AISI 316L.

Internal rings:

- Stainless steel.

Rubber sealing gasket:

- Synthetic rubber E.P.D.M. (ethylene-propylene).
Suitable for water, air and chemical products.
Temperature range from -20°C to +100°C.
- Synthetic rubber N.B.R. (nitrile-butadiene).
Suitable for gas, oil, fuel and other hydrocarbons.
Temperature range from -20°C to +80°C.

ANCHORING

When the locking bolts are tightened to the indicated torque,
the anchor teeth grip into the surface of the pipe.



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TECHNICAL CHARACTERISTICS

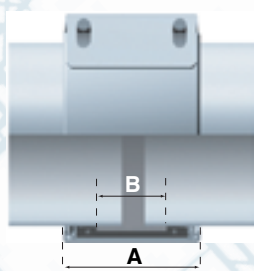
O.D. = Outside pipe diameter.

Suitable for higher working pressures (please consult us).

Test pressure = 1,5 x working pressure.

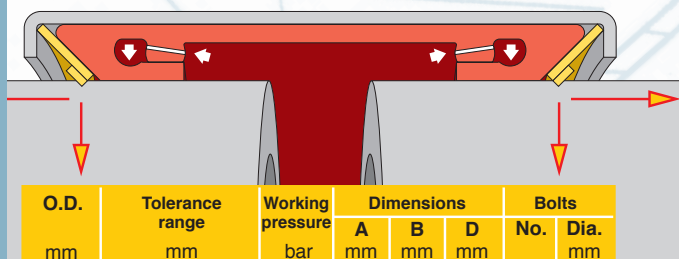
Intermediate size from O.D. 200 mm available (upon request).

Angular deflections permitted: 2° in any direction.



AR POL - FIX - L

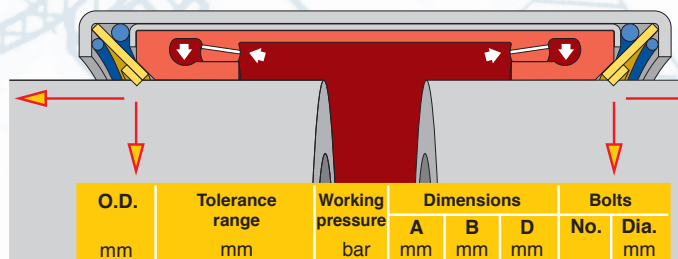
METAL PIPES



O.D. mm	Tolerance range mm	Working pressure bar	Dimensions			Bolts	
			A mm	B mm	D mm	No.	Dia. mm
48,3	47,8 - 48,9	16	78	31	68	2	M8
54,0	53,5 - 54,5	16	78	31	74	2	M8
57,0	56,4 - 57,6	16	78	31	77	2	M8
60,3	59,7 - 60,9	16	78	31	80	2	M8
76,1	75,3 - 76,9	16	94	45	96	2	M8
84,0	83,1 - 84,9	16	94	45	104	2	M8
88,9	88,0 - 89,8	16	94	45	112	2	M8
104,0	102,9 - 105,1	16	94	45	127	2	M8
108,0	106,9 - 109,1	16	94	45	131	2	M8
114,3	113,2 - 115,4	16	95	45	137	2	M8
129,0	127,8 - 130,2	16	95	45	152	2	M10
133,0	131,7 - 134,3	16	95	45	156	2	M10
139,7	138,3 - 141,1	16	95	45	163	2	M10
154,0	152,4 - 155,6	14	96	45	178	2	M10
159,0	157,4 - 160,6	14	96	45	183	2	M10
168,3	166,6 - 170,0	13	96	45	191	2	M10
219,1	216,9 - 221,3	10	141	86	251	3	M12
244,5	242,0 - 247,0	5,5	141	86	276	3	M12
267,0	264,5 - 269,5	5	141	86	299	3	M12
273,0	270,5 - 275,5	4,5	141	86	305	3	M12
323,9	320,5 - 327,0	3	141	86	356	3	M12
355,6	352,0 - 359,0	2,5	141	86	387	3	M12
406,4	402,5 - 410,5	2	141	86	438	3	M12
457,0	455,6 - 461,7	2	141	86	489	3	M12
508,0	504,2 - 512,5	1,5	141	86	540	3	M12
558,0	553,4 - 564,2	1,5	141	86	590	3	M12
609,0	604,2 - 615,0	1	141	86	641	3	M12

AR POL - FIX - M

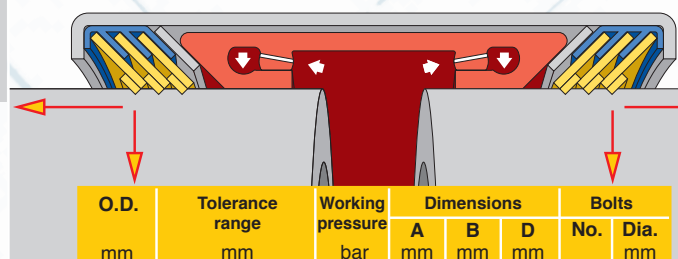
METAL PIPES



O.D. mm	Tolerance range mm	Working pressure bar	Dimensions			Bolts	
			A mm	B mm	D mm	No.	Dia. mm
48,3	47,8 - 48,9	16	93	31	76	2	M8
54,0	53,5 - 54,5	16	93	31	82	2	M8
57,0	56,4 - 57,6	16	93	31	85	2	M8
60,3	59,7 - 60,9	16	93	31	88	2	M8
76,1	75,3 - 76,9	16	112	45	104	2	M10
84,0	83,1 - 84,9	16	112	45	112	2	M10
88,9	88,0 - 89,8	16	112	45	119	2	M10
104,0	102,9 - 105,1	16	113	45	137	2	M10
108,0	106,9 - 109,1	16	113	45	141	2	M10
114,3	113,2 - 115,4	16	113	45	147	2	M10
129,0	127,8 - 130,2	16	113	45	163	2	M10
133,0	131,7 - 134,3	16	114	45	167	2	M10
139,7	138,3 - 141,1	16	114	45	184	2	M10
154,0	152,4 - 155,6	16	114	45	188	2	M10
159,0	157,4 - 160,6	16	114	45	193	2	M10
168,3	166,6 - 170,0	16	114	45	202	2	M10
219,1	216,9 - 221,3	16	144	86	255	3	M12
244,5	242,0 - 247,0	9	144	86	280	3	M12
267,0	264,5 - 269,5	8	144	86	303	3	M12
273,0	270,5 - 275,5	8	144	86	309	3	M12
323,9	320,5 - 327,0	6	144	86	360	3	M12
355,6	352,0 - 359,0	6	144	86	391	3	M12
406,4	402,5 - 410,5	5	144	86	441	3	M12

AR POL - FIX - U

METAL AND PLASTIC PIPES



O.D. mm	Tolerance range mm	Working pressure bar	Dimensions			Bolts	
			A mm	B mm	D mm	No.	Dia. mm
63	62,0 - 64,0	16	99	31	89	2	M8
75	74,0 - 76,0	16	117	45	103	2	M8
90	89,0 - 91,0	16	117	45	118	2	M8
110	108,0 - 111,0	16	117	45	138	2	M8
125	123,0 - 126,0	16	118	45	153	2	M10
140	138,0 - 142,0	16	118	45	168	2	M10
160	158,0 - 162,0	16	118	45	188	2	M10
180	178,0 - 182,0	16	200	100	227	3	M12
200	198,0 - 203,0	16	201	100	247	3	M12
225	222,0 - 227,0	16	201	100	272	3	M12
250	247,0 - 253,0	16	201	100	297	3	M12
280	277,0 - 283,0	10	202	100	328	3	M12
315	311,0 - 317,0	10	202	100	363	3	M12
355	351,0 - 357,0	10	204	100	405	3	M16
400	396,0 - 402,0	10	204	100	450	3	M16
450	446,0 - 452,0	6	204	100	500	3	M16
500	496,0 - 503,0	4	204	100	550	3	M16

VALUES FOR PLASTIC PIPES

Flexible pipes may require reinforcing inserts.

For use on metal pipes or for joining different pipe materials, please consult.



ARPOL FIX - Material specifications

Casing:

- f Stainless steel according to DIN 14301 (AISI 304) or DIN 14401 (AISI 316).
- f Carbon steel according to ST. 52.3 or equivalent, with Copolymer coating. The thermoplastic coating material chemical basis is an ethylene-vinyl-alcohol copolymer. Minimum film thickness: 0.250 mm.

Locking Bolts:

- f Stainless steel according to DIN 912, quality A2 or A4 (AISI 304 or AISI 316) coated to facilitate the fitting/removing process.
- f Stainless steel according to DIN 912 with additional Dacromet coating protection.

Locking Bars:

- f Stainless steel according to DIN 14301 (AISI 304) or DIN 14401 (AISI 316).
- f Gaged Carbon steel, quality C45K with additional Dacromet coating protection.

Inner Steel bridge:

- f Stainless steel according to DIN 14301 (AISI 304) or DIN 14401 (AISI 316).

Anchor Ring:

- f Stainless steel (AISI 302)

Support Ring:

- f FIX-M: Stainless steel (AISI 301)
- f FIX-U: Stainless steel (AISI 316)

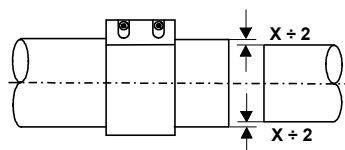
Rubber sealing sleeve:

- f Synthetic rubber **E.P.D.M.** (ethylene-propylene)
 - Suitable for water, air and some chemical products.
 - Temperature range: from -20°C to +100°C.
- f Synthetic rubber **N.B.R.** (nitrile-butadiene)
 - Suitable for gas, fuel and other hydrocarbons.
 - Temperature range: from -20°C to +80°C.

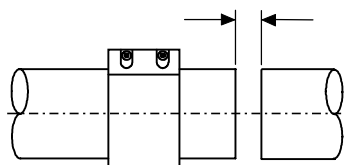




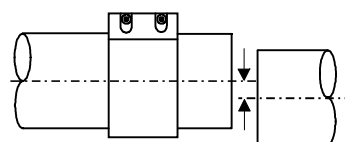
ARPOL FIX-L



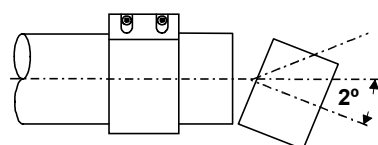
Outside Diameter (mm)	Maximum Difference X (mm)
48	0,5
54 a 63	1,0
76 a 104	1,5
106 a 499	2,5
> 499	3,0



Coupling Width (mm)	No Internal Band (mm)	With Internal Band (mm)
75 - 95	5	15
140	10	35

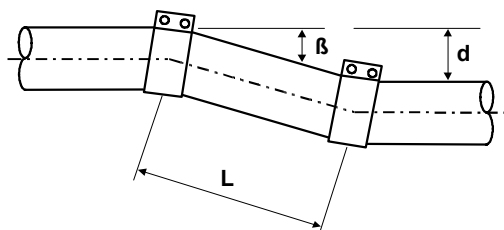


Outside Diameter (mm)	Maximum Misalignment
< 300	1%
≥ 300	3 mm



Outside Diameter (mm)	Max. Angular Deflection *
48 a 600	2°

* Please consult for higher values



$$L = \frac{d}{\sin \beta}$$

d = wished displacement

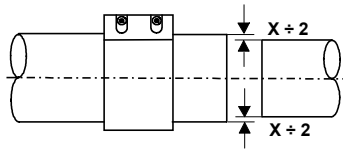
L = length of the closing pipe

β = deviation (check limits)

ARPOL FIX-L couplings are designed to stand axial stress of metallic pipes, however the pipeline must be properly supported. Should you need more information, please consult us

Couplings applied on vacuum lines or with vacuum risk require an internal band unless gaps between pipes can be avoided. Please consult us in this situation.

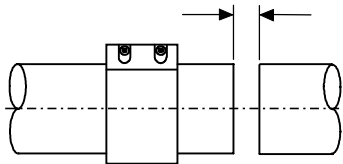
ARPOL FIX-M



Outside Diameter
(mm)

Maximum Difference X
(mm)

48	0,5
54 a 63	1,0
76 a 104	1,5
106 a 499	2,5
> 499	3,0

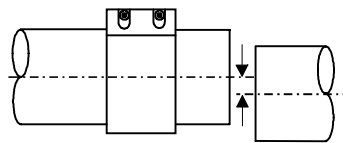


Coupling Width
(mm)

No Internal
Band (mm)

With Internal
Band (mm)

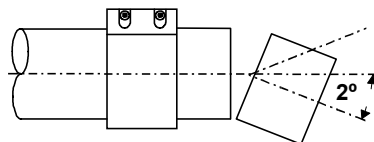
93 - 114	5	15
140	10	35



Outside Diameter
(mm)

Maximum
Misalignment

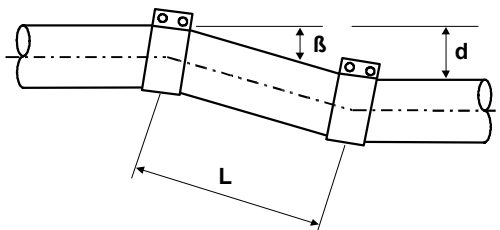
< 300	1%
≥ 300	3 mm



Outside Diameter
(mm)

Max. Angular
Deflection *

48 a 600	2°
----------	----



$$L = \frac{d}{\text{Sen } \beta}$$

d = wished displacement

L = length of the closing pipe

β = deviation (check limits)

ARPOL FIX-M couplings are designed to stand axial stress of metallic pipes, however the pipeline must be properly supported. Should you need more information, please consult us

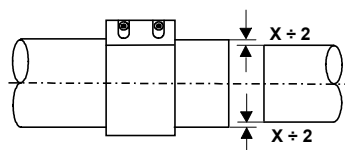
Couplings applied on vacuum lines or with vacuum risk require an internal band unless gaps between pipes can be avoided. Please consult us in this situation.



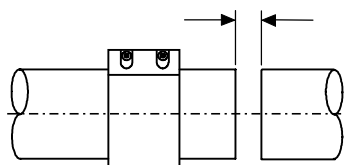
n.v. P. Boonen & Co s.a.



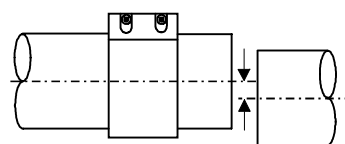
ARPOL FIX-U



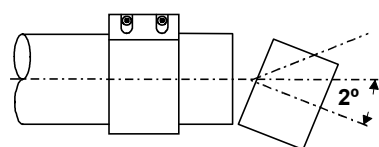
Outside Diameter (mm)	Maximum Difference X (mm)
63	1,0
75 a 60	1,5
110 a 355	2,5
355 a 600	3,0



Coupling Width (mm)	No Internal Band (mm)	With Internal Band (mm)
99 - 118	5	15
200	10	35

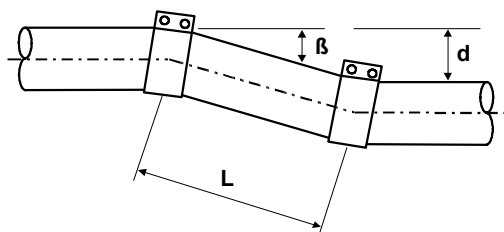


Outside Diameter (mm)	Maximum Misalignment
< 300	1%
≥ 300	3 mm



Outside Diameter (mm)	Max. Angular Deflection *
63 a 600	2°

* Please consult for higher values



$$L = \frac{d}{\sin \beta}$$

d = wished displacement
L = length of the closing pipe
β = deviation (check limits)

ARPOL FIX-U couplings are designed to stand axial stress of pipes, however the pipeline must be properly supported. Should you need more information, please consult us

Couplings applied on vacuum lines or with vacuum risk require an internal band unless gaps between pipes can be avoided. Please consult us in this situation.

ARPOL FIX-L - FITTING INSTRUCTIONS

INFORMATION INCLUDED ON THE LABEL:

- ARPOL reference.
- Outside diameter of the pipes to be joined.
- Working Pressure (bar)
- Test Pressure = 1,5 x working pressure
- Torque value (N/m)

STEPS TO ADEQUATELY FIT ARPOL FIX-L COUPLING:

1. Clean pipe ends and eliminate any irregularity.
2. Mark both pipe ends symmetrically at a distance from the edge equivalent to half of the coupling width.
3. Slide the coupling over one pipe end.
4. Bring the other pipe end to a facing position. Make sure the alignment limits as well as angular deflection, etc., are respected and that both pipe ends are correctly held.
5. Place the coupling between the marks and check that the inner steel bridge is correctly placed under the lock.
6. Tighten screws:
DO NOT TURN THE COUPLING WHEN SCREWS ARE BEEING TIGHTENED
 - 6.1. Start the tightening of screws using a click wrench with a nozzle.
 - **2 screws lock:** tighten both screws by alternative short movements until you nearly reach the end, but **do not exceed the torque value.**
 - **3 screws lock:** First tighten the central screw up to **10 mm**. Then tighten exterior screws positioning them at the same level as the central screw. Keep tightening the three screws by alternative short movements until you nearly reach the end, but **do not exceed the torque value.**
 - 6.2. Finish the tightening with a dynamometric wrench with sound signal.
 - Adjust the wrench to **the torque value printed on the coupling label**. Keep tightening screws alternatively with the dynamometric wrench until you can hear the 'click sound' at the beginning of the tightening.
7. If necessary, you may hydraulically test the coupling up to 1,5 the working pressure (see label).



ARPOL FIX- M - FITTING INSTRUCTIONS

INFORMATION INCLUDED ON THE LABEL:

- ARPOL reference.
- Outside diameter of the pipes to be joined.
- Working Pressure (bar)
- Test Pressure = 1,5 x working pressure
- Torque value (N/m)

STEPS TO ADEQUATELY FIT ARPOL FIX-M COUPLING:

1. Clean pipe ends and eliminate any irregularity.
2. Mark both pipe ends symmetrically at a distance from the edge equivalent to half of the coupling width.
3. Slide the coupling over one pipe end.
4. Bring the other pipe end to a facing position. Make sure the alignment limits as well as angular deflection, etc., are respected and that both pipe ends are correctly held.
5. Place the coupling between the marks and check that the inner steel bridge is correctly placed under the lock.

6. Tighten screws:

DO NOT TURN THE COUPLING WHEN SCREWS ARE BEEING TIGHTENED

- 6.1. Start the tightening of screws using a click wrench with a nozzle.

- **2 screws lock:** tighten both screws by alternative short movements until you nearly reach the end, but **do not exceed the torque value**.
- **3 screws lock:** First tighten the central screw up to **10 mm**. Then tighten exterior screws positioning them at the same level as the central screw. Keep tightening the three screws by alternative short movements until you nearly reach the end, but **do not exceed the torque value**.

- 6.2. Finish the tightening with a dynamometric wrench with sound signal.

- Adjust the wrench to **the torque value printed on the coupling label**. Keep tightening screws alternatively with the dynamometric wrench until you can hear the 'click sound' at the beginning of the tightening.

7. If necessary, you may hydraulically test the coupling up to 1,5 the working pressure (see label).



ARPOL FIX- U - FITTING INSTRUCTIONS

INFORMATION INCLUDED ON THE LABEL:

- ARPOL reference.
- Outside diameter of the pipes to be joined.
- Working Pressure (bar)
- Test Pressure = 1,5 x working pressure
- Torque value (N/m)

STEPS TO ADEQUATELY FIT ARPOL FIX-U COUPLING:

1. Clean pipe ends and eliminate any irregularity.
2. Mark both pipe ends symmetrically at a distance from the edge equivalent to half of the coupling width.
3. Slide the coupling over one pipe end.
4. Bring the other pipe end to a facing position. Make sure the alignment limits as well as angular deflection, etc., are respected and that both pipe ends are correctly held.
5. Place the coupling between the marks and check that the inner steel bridge is correctly placed under the lock.

6. Tighten screws:

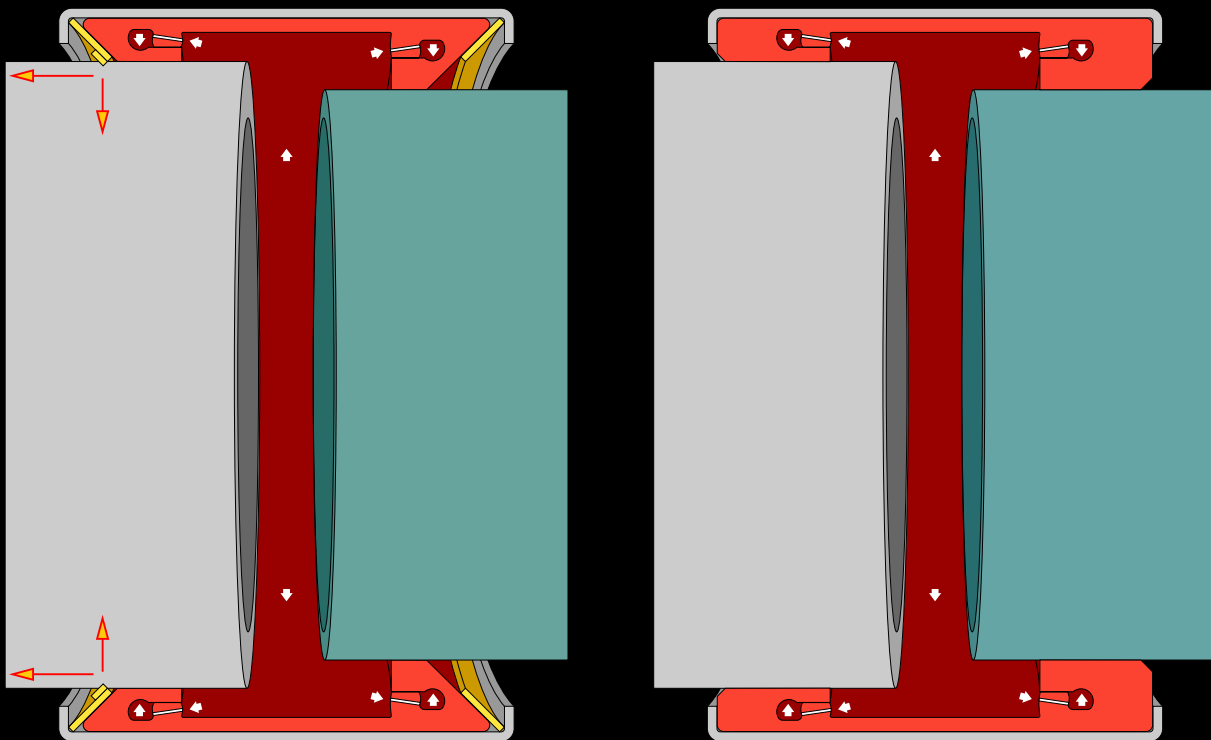
DO NOT TURN THE COUPLING WHEN SCREWS ARE BEEING TIGHTENED

- 6.1. Start the tightening of screws using a click wrench with a nozzle.
 - **2 screws lock:** tighten both screws by alternative short movements until you nearly reach the end, but **do not exceed the torque value.**
 - **3 screws lock:** First tighten the central screw up to **10 mm**. Then tighten exterior screws positioning them at the same level as the central screw. Keep tightening the three screws by alternative short movements until you nearly reach the end, but **do not exceed the torque value.**
- 6.2. Finish the tightening with a dynamometric wrench with sound signal.
 - Adjust the wrench to **the torque value printed on the coupling label**. Keep tightening screws alternatively with the dynamometric wrench until you can hear the 'click sound' at the beginning of the tightening.

7. If necessary, you may hydraulically test the coupling up to 1,5 the working pressure (see label).



ARPOL TRANS



TECHNICAL SPECIFICATIONS:

- 1, 2 or 3 - look casing
- Specially designed rubber gasket (various models)
- Steps of up to 38 mm between outside diameters
- Working pressures up to 10 bar

www.arpol.com

Flexible couplings
for connecting pipes with
different outside diameter











ARPOLTRANS



n.v. P. Boonen & C° s.a.

ARPOL-TRANS Difference (mm) between outside diameters

O.D. mm	ARPOLTRANS-5		ARPOLTRANS-10		ARPOLTRANS-20		ARPOLTRANS-30	
								
	Min. Max.	Min. Max.	Min. Max.	Min. Max.	Min. Max.	Min. Max.	Min. Max.	Min. Max.
47 to 159	please consult		- -	- -	- -	- -	- -	- -
160 to 230	2 10	- -	- -	- -	- -	- -	- -	- -
230 to 250	2 10	2 11	- -	- -	- -	- -	- -	- -
251 to 299	2 10	2 11	5 15	4 16	15 25	14 26	- -	- -
300 to 349	2 10	2 11	5 15	4 16	15 25	14 26	25 35	24 36
350 to 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



ARPOL TRANS - Fitting instructions

All ARPOL couplings are supplied with the following basic fitting instructions on the label:

- f ARPOL reference which includes the tolerance. Should different O.D. be joined, please check admissible values.
- f Working Pressure (bar)
- f Test Pressure = **1,5** working pressure
- f Torque value (N/m)

In order to enable the ARPOL coupling to work correctly it is very important to respect the torque value.

To fit the ARPOL trans couplings, we recommend following these steps:

- 1 f Clean pipe ends and eliminate any irregularity.
- 2 f Mark both pipe ends symmetrically at a distance from the edge equivalent to half of the coupling width.
- 3 f Confirm that the coupling orientation is the adequate: The thicker rubber end is place at the smaller diameter.
- 4 f Slide the coupling over one pipe end without opening the coupling.
- 5 f Bring the other pipe end to a facing position. Make sure the pipes are aligned concentrically and that both pipe ends are correctly supported.
- 6 f Place the coupling between the marks and confirm that the inner steel bridge is correctly placed under the lock.
- 7 f Tighten screws:

When the coupling has more than one lock, it is important to confirm that all the locks are equally open, even if the different bolts in each lock are not identically tightened.

7.1. Start the tightening of screws using a click wrench with a nozzle.

- **2 screws lock:** tighten both screws by alternative short movements until you nearly reach the end, but **do not exceed the torque value**.
- **3 screws lock:** First tighten the central screw up to **10 mm**. Then tighten exterior screws positioning them at the same level as the central screw. Keep tightening the three screws by alternative short movements until you nearly reach the end, but **do not exceed the torque value**.

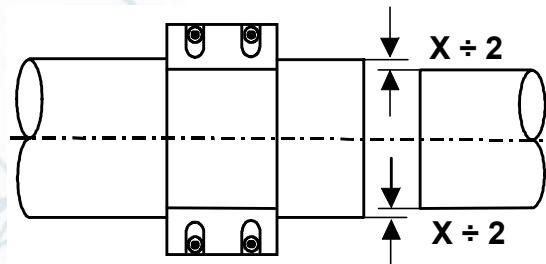
7.2. Finish the tightening with a dynamometric wrench with sound signal.

- Adjust the wrench to **the torque value printed on the coupling label**. Keep tightening screws alternatively with the dynamometric wrench until you can hear the 'click sound' at the beginning of the tightening.

- 8 f If necessary, you may hydraulically test the coupling up to 1.5 the working pressure (see label).



ARPOL TRANS COUPLINGS:



THE DIFFERENCE IN O.D. MUST BE EQUALLY DISTRIBUTED

The locks absorb part of the difference between O.D.s (A). Furthermore, couplings are fitted with a special rubber gasket that balances the remaining difference.



It is important that gaps between locks must be uniform.

ARPOL TRANS COUPLINGS ARE NOT DESIGNED TO SUPPORT THE PIPE OR TO PREVENT AXIAL MOVEMENTS. THEREFORE, THE PIPE MUST BE PROPERLY SUPPORTED AND ANCHORED.





P. Boonen & Co n.v. werd opgericht in 1987.

ONZE DOELSTELLING:

Fabricatie van geconfectioneerde rubberstukken en algemene rubberstukken
Ontwerp en verkoop van flexibele leidingen en compensatoren
Fabricatie en plaatsing van inkommaten en antislipmaten, voornamelijk in rubber

P. Boonen zorgt voor een permanente kwaliteitsverbetering en klantvriendelijke service. Ook wordt er efficiënt ingespeeld op de vragen van de klant. Advies, research en technische bijstand leiden tot een vlotte samenwerking bij het ontwikkelen van nieuwe producten en het verbeteren van bestaande producten.



s.a. P. Boonen & Cy a été fondé en 1987.

NOTRE OBJECTIF:

Fabrication de pièces moulées et pièces manufacturées en caoutchouc
Etude et réalisation de tuyaux flexibles et compensateurs
Fabrication et placement de tapis d'entrées et recouvrements de sol anti-dérapants en caoutchouc

P. Boonen & Cy s'efforcent d'améliorer en permanence la qualité et le service aux clients. La recherche, les recommandations et l'assistance technique aident à réaliser une bonne collaboration pour le développement et la mise au point de nouveaux produits.

n.v. P. Boonen & C° s.a.

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