

STAINLESS STEEL PIPE RESTRAINTS

STAINLESS STEEL PIPE COUPLINGS

STAINLESS STEEL PIPE REPAIR CLAMPS

STAINLESS STEEL REPAIR CLAMPS

STAINLESS STEEL TAPPING SADDLES

STAINLESS STEEL SPLIT SLEEVES

AXIALLY RESTRAINED



AXIALLY FLEXIBLE



General Information for Pipe Couplings, Restraint Clamps

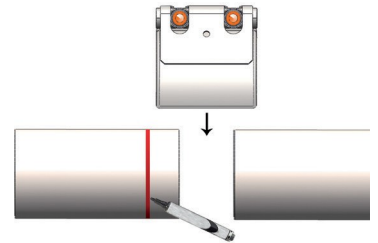
For sizing and selection Contact Westatlantic Tech Corp

General Information for Pipe Couplings, Restraint Clamps

For sizing and selection Contact Westatlantic Tech Corp.

1. Universal use

- + Suitable for any pipe material
- + Compatible with any traditional jointing system
- + Joins pipes of the same or dissimilar materials
- + Leak-proof joint for liquids, gas and for solids
- + Quick and simple repairs of damaged pipes without service interruptions
- + Installation and sealing principle consistent throughout the range
- + Axially restrained or axially flexible available

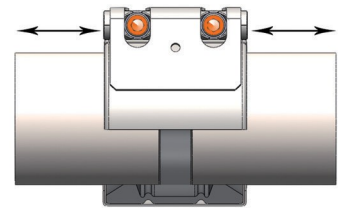


2. Economical

- + Pre-assembled design ensures simple and rapid installation
- + For use on plain-end pipes without the need for costly pipe-end preparation
- + Simply cut pipes to length, center coupling and tighten bolts
- + Suitable for thick or thin wall pipes
- + No expensive installation tools required

3. Reliable

- + Stress-free, flexible pipe joint
- + Compensates axial movement and angular deflection
- + Pressure-resistant and leak-proof even with inaccurate pipe assembly
- + Dampens water-hammer, vibration and structure-borne noise



4. Easy handling

- + Detachable and re-usable
- + Maintenance-free and trouble-free
- + No time-consuming alignment and fitting work
- + Easy installation technology
- + No heat or fire hazard: can be fitted in fire risk or confined spaces without special equipment

5. Durable

- + Progressive sealing effect
- + Progressive anchoring effect
- + Corrosion resistant and temperature resistant
- + Good resistance to chemicals
- + Long service life

6. Space-saving

- + Compact design for space-saving installation of pipes
- + Lean insulation, small openings, needs little space
- + Choice of mounting position
- + Lightweight
- + Increases the payload

Join Restraint steel pipe, PVC Pipes, PVC to Steel pipe, Pipeline repair clamps

Safe

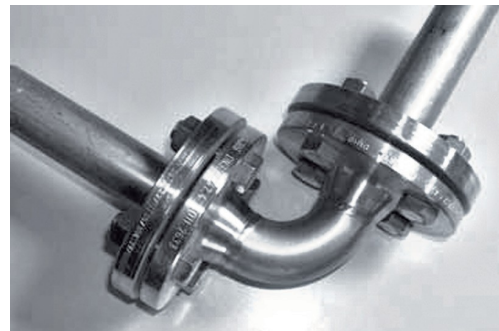
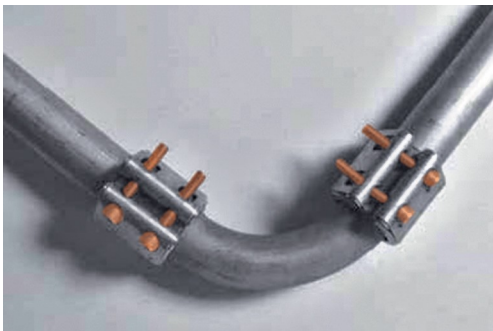
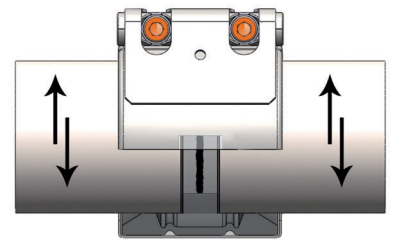
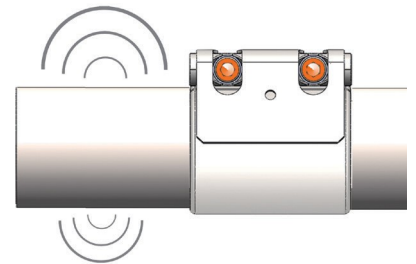
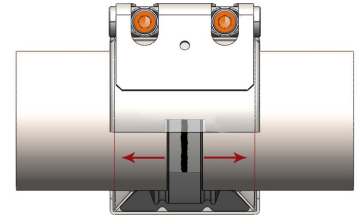
- + Rubber absorbs vibrations / oscillations
- + Reduces pressure shocks
- + Reduces fatigue fractures
- + Noise reduction increases the comfort for passengers
- + No fire or explosion hazard during installation
- + No cost for protective measures
- + Quadruple safety factor
- + Absorbs overloading through flexibility

Damping

- + Increases the life of valves and systems
- + Compensates axial offset and angles
- + Coupling and compensator in one

Long-lasting stress free

- + Corrosion Resistant
- + Good resistance to temperature and chemicals
- + Deep torque guarantees long service life



General Information for Pipe Couplings, Restraint Clamps

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Flex Couplings



Grip Couplings



PVC Couplings



PVC to Steel Couplings



Repair Couplings

	mm	Width mm	Pressure bar	Temperature °C
	21 -172	45 - 110	16 bis 25	-30° bis +125°
	180 - 4000	137 / 206 280 / 420	2,5 bis 25	-20° bis +80°
(Silicone or Viton on request)	21 -172	45 - 110	16 bis 60	-30° bis +125°
	180-750	137 / 206 other widths on request	2,5 bis 25	-20° bis +80°
For safe installation on PE / PP pipes, use Inserts				
EPDM / NBR	40-160	60 - 110	16	-30° bis +125°
	180-400	137/206 andere Breiten auf Anfrage	2,5 bis 16	-20° bis +80°
For safe installation on PE / PP pipes, use Inset				
Selection sealing materials	35-172	60 - 110	16	-30° bis +125°
	180-400	137/206 other widths on request	2,5 bis 16	-20° bis +80°
	35-172	60 - 110	16 bis 25	-30° bis +125°
	180-4000	137/206 280/420	2,5 bis 25	-20° bis +80°

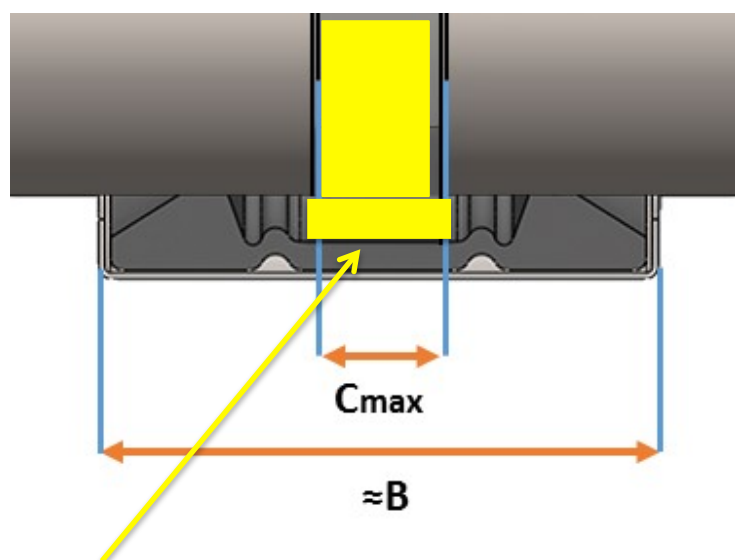
Strip inserts

Strip inserts protect the sealing sleeve against mechanical or chemical damage in the pipe end area.

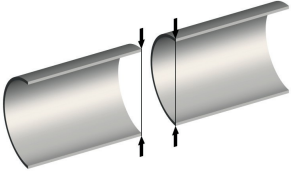
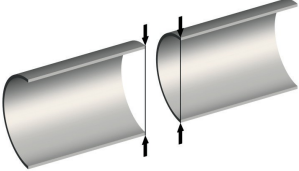
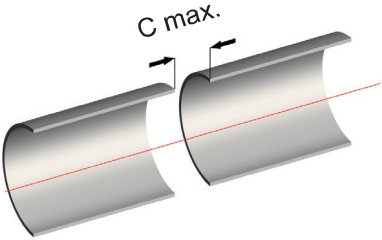
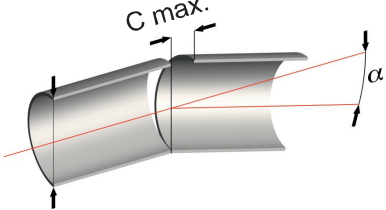
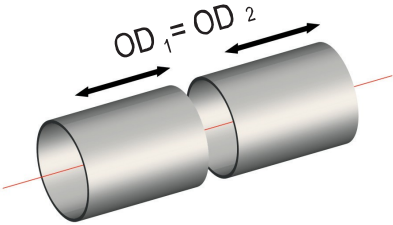
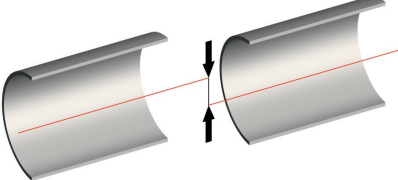

Strip inserts are required for:

- External pressure (e.g. underwater pipeline)
- Axial movement (expansion, contraction) **T-Strip Inserts**
- Vacuum $\geq 0,5$ bar absolute pressure (e.g. suction line)
- Swelling of the rubber caused by contact with chemicals

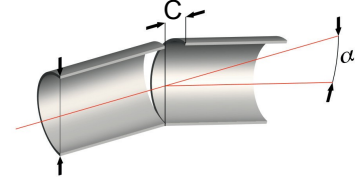
Subsequent installation of strip inserts for all types of couplings is possible. Strip insert quality depends on the medium and temperature. Steel strip inserts for higher temperatures, vacuum and external pressure are made from 316 Ti (1.4571). T-Strip Inserts are made from PE



Strip inserts are required for special application

	<p>clamping range Connecting two pipes with equal outside diameter. For clamping range see product datasheets.</p>										
	<p>different diameters Connecting two pipes with different outside diameters:</p> <ul style="list-style-type: none"> • FLEX / IREP +/- 1% OD max +/- 4 mm OD-difference • GRIP +/- 1% OD max +/- 2 mm 										
	<p>setting gap between pipe ends / C_{max}. Setting gap of 5 mm is recommended for gap range see product data sheets. Strip inserts are required for gap range above 5 mm</p> <ul style="list-style-type: none"> • External pressure (e.g. underwater pipeline) • Axial movement (expansion, contraction) • Vacuum (e.g. suction line) • Swelling of the rubber caused by contact with chemicals 										
	<p>angular deflection α Setting gap between pipe ends due to angular deflection</p> <p>Up to 60,3 α=5° From 66,0 α=4° From 219,1 α=2° From 609,6 α=1°</p>										
	<p>axial movement Flex and Rep couplings act as expansion joints T-Strip Insert is recommended</p> <p>max. axial movement</p> <table border="1" data-bbox="794 1473 1201 1615"> <thead> <tr> <th>COUPLING</th> <th>ΔL mm</th> </tr> </thead> <tbody> <tr> <td>Group 1 up to OD 172 mm</td> <td>5</td> </tr> <tr> <td>Group 2 FLEX / REP (140)</td> <td>10</td> </tr> <tr> <td>Group 3 FLEX / REP (210)</td> <td>15</td> </tr> <tr> <td>Group 4 FLEX / REP (280)</td> <td>20</td> </tr> </tbody> </table>	COUPLING	ΔL mm	Group 1 up to OD 172 mm	5	Group 2 FLEX / REP (140)	10	Group 3 FLEX / REP (210)	15	Group 4 FLEX / REP (280)	20
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Group 2 FLEX / REP (140)	10										
Group 3 FLEX / REP (210)	15										
Group 4 FLEX / REP (280)	20										
	<p>axial misalignment Connecting of two pipes with axial misalignment. Maximum allowed 1% of outside diameter (max. 3 mm)</p>										
	<p>Do not work beyond limits or add them together! Limits are for static loads and radially rigid pipes only. For dynamic forces like pressure surges and thrust, apply a safety factor (contact your local partner or the manufacturer).</p>										


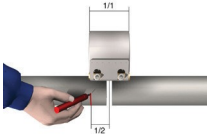

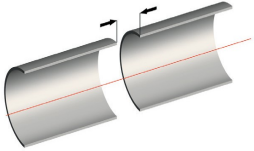
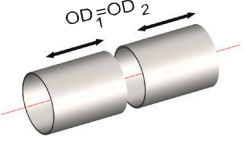
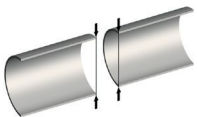
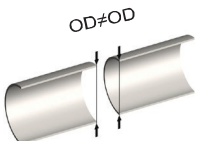

Setting gap between pipe ends due to angular deflection α

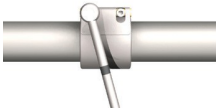

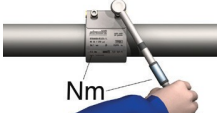
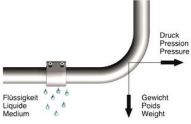


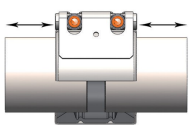




Od Ø mm	α in degrees						
	1 C mm	2 C mm	4 C mm	6 C mm	8 C mm	10 C mm	12 C mm
26,9	0,5	1	2	3	4	5	6
30	0,5	1	2	3	4	5	6
33,7	0,5	1	2	3	4	6	7
38	1	1	3	4	5	7	8
40	1	2	3	4	6	7	8
42,4	1	2	3	4	6	7	9
44,5	1	2	3	5	6	8	9
48,3	1	2	3	5	7	8	10
50	1	2	4	5	7	9	11
54	1	2	4	6	8	9	11
57	1	2	4	6	8	10	12
60,3	1	2	4	6	8	11	13
63	1	2	4	7	9	11	13
75	1	3	5	8	11	13	16
76,1	1	3	5	8	11	13	16
84	2	3	6	9	12	15	18
88,9	2	3	6	9	12	16	19
90	2	3	6	9	13	16	19
104	2	4	7	11	15	18	22
108	2	4	8	11	15	19	23
110	2	4	8	12	15	19	23
114,3	2	2	8	12	16	20	24
125	2	2	9	13	17	22	26
129	2	5	9	14	18	23	27
133	2	5	9	14	19	23	28
139,7	2	5	10	15	20	24	29
140	2	5	10	15	20	24	29
154	3	5	11	16	22	27	32
159	3	6	11	17	22	28	33
160	3	6	11	17	22	28	33
168,3	3	6	12	18	24	30	35

Od Ø mm	α in degrees					
	1 C mm	2 C mm	3 C mm	4 C mm	6 C mm	8 C mm
180	3	6	9	13	19	25
200	4	7	11	14	21	28
219,1	4	8	12	15	23	31
244,5	4	9	13	17	26	34
250	4	9	13	17	26	35
267	5	9	14	19	28	37
273	5	10	14	19	29	38
304	5	11	16	21	32	42
323,9	6	11	17	23	34	45
355,6	6	12	19	25	37	50
406,4	7	14	21	28	43	57
457,2	8	16	24	32	48	
508	9	18	27	36	53	
559	10	20	29	39	59	
575	10	20	30	40		
609,6	11	21	32	43		
711,2	12	25	37	50		
762	13	27	40	53		
812,8	14	28	43	57		
914,4	16	32	48			
1016	18	36	53			
1117,6	20	39	59			
1219,2	21	43				
1320,8	23	46				
1422,4	25	50				
1524	27	53				
1625,6	28	57				
1727,2	30					
1828,8	32					
1930,4	34					
2032	36					

Angular deflection, inaccurate assembly and changes in length create gaps between pipe ends. This gap must not exceed the value C_{max} . (C_{max} = pipe end gap / may be obtained from product data sheet). Using a strip insert, the pipe and gap can be enlarged. This maximum value depends on the design of each coupling type and may be obtained from the relevant product data sheet.

	<p>preparation</p> <p>Deburr and remove sharp edges from pipe ends. Clean the pipe surface of impurities (bad coating) → No loose matter under sealing lips.</p>													
	<p>Mark half-width of pipe coupling on both pipe ends as fitting guide</p>													
	<p>Remove plastic packing straps and fit the pipe coupling over the pipe end</p> <ul style="list-style-type: none"> • Do not dismantle the pipe joint • Do not drop the pipe joint 													
<p>pipe alignment</p>														
	<p>setting gap between pipe ends</p> <p>A space between pipe ends can arise through misalignment, inaccurate assembly or changes in length. COUPLINGS can bridge spaces between pipe ends; please note the C max. value given in the technical datasheets.</p>													
	<p>axial movement ΔL Flex and Rep couplings act as expansion joints within stated limits</p>	<p>max. axial movement</p> <table border="1" data-bbox="922 1211 1305 1384"> <thead> <tr> <th>COUPLING</th> <th>ΔL mm</th> </tr> </thead> <tbody> <tr> <td>Group 1 up to OD 172 mm</td> <td>5</td> </tr> <tr> <td>Group 2 FLEX / REP (140)</td> <td>10</td> </tr> <tr> <td>Group 3 FLEX / REP (210)</td> <td>15</td> </tr> <tr> <td>Group 4 FLEX / REP (280)</td> <td>20</td> </tr> <tr> <td>Group 5 FLEX / REP (420)</td> <td>20</td> </tr> </tbody> </table>	COUPLING	ΔL mm	Group 1 up to OD 172 mm	5	Group 2 FLEX / REP (140)	10	Group 3 FLEX / REP (210)	15	Group 4 FLEX / REP (280)	20	Group 5 FLEX / REP (420)	20
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	<p>clamping range</p> <p>Connecting two pipes with equal outside diameter (see also datasheets)</p>													
	<p>Outside diameter difference</p> <p>Connecting two pipes with different outside diameters:</p> <ul style="list-style-type: none"> • FLEX / REP +/- 1% OD max +/- 4 mm OD-difference • GRIP +/- 1% OD max +/- 2 mm 													
	<p>Do not work beyond limits or add them together!</p> <p>Limits are for static loads and radially rigid pipes only. For dynamic forces like pressure surges and thrust, apply a safety factor (contact your local partner or the manufacturer).</p>													

	<p>bolting</p> <p>Adjust pipe coupling then tighten bolts lightly and alternately with a ratched wrench or power wrench</p>
	<p>Do not rotate pipe coupling on the pipe once teeth are engaged</p>
	<p>Tighten the locking bolts with a torque wrench to the final prescribed torque rate engraved on the pipe coupling's outer surface; the torque wrench must be set accordingly</p>
<p>Failure prevention: Do not tighten bolts above prescribed torque rate. Troubleshooting: In case of leakage, clean pipe and sealing lips surface before installing pipe coupling again. Detachable and reusable (see disassembly instruction).</p>	
<p>Safety measures before removing pipe joint</p>	
	<p>Verify that there is no pressure inside the coupling. Discharge the pipeline. Protect yourself against the medium. Make sure that the coupling does not hold the pipes.</p>
<p>Disassembly</p>	
	<p>Clean and Relubricate bolts with an appropriate lubricant before Disassembly Loosen bolts alternately but do not remove completely. Do not rotate pipe coupling on pipe as long as teeth are engaged.</p>
<p>Loosen teeth engagement (applicate for Grip couplings only)</p>	
	<p>Insert tool underneath casing and lift. Caution - Do not harm sealing sleeve!</p>
<p>Remove pipe joint</p>	
	<p>Slide pipe coupling to the side. Caution! Sealing lip may touch pipe end. Turn and move pipe joint smoothly. Clean pipe coupling and relubricate bolts with an appropriate lubricant before refitting.</p>
<p>Caution</p>	
	<p>Pipe couplings cannot take shearing forces (see installation consideration). UNI-Coupling pipe couplings are maintenance-free, i.e. never retighten bolts; contact factory for minimum wall thickness of pipe.</p>
	<p>Additional corrosion protection If risk of corrosion exists, for long term pipe coupling protection use shrink sleeves or protection tapes. This is especially necessary where couplings are used underground.</p>



Dimensions and minimum wall thickness at nominal pressure PN

Pipe Ø		Nominal Ø		Minimum Pipe wall thickness	
Metric (mm)	ips (inch)	Metric (dn)	ips (nom)	Stainless steel tube	CuNi10Fe (DIN) CuNi10Mn1Fe (ISO)
				UNI GRIP (mm)	UNI GRIP (mm)
26.9	1.050	20	¾	1.5	1.5
30.0	1.180	25	1.2	1.5	1.5
33.7	1.325	25	1	1.5	2.0
38.0	1.495	32	1.5	1.5	2.0
42.4	1.670	32	1 ¼	1.5	2.0
44.5	1.750	40	1.75	1.5	2.0
48.3	1.900	40	1 ½	1.5	2.0
54.0	2.125	50	2.125	1.5	2.0
57.0	2.245	50	2.25	1.5	2.0
60.3	2.375	50	2	1.5	2.0
66.6	2.625	65	2 ½	2.0	2.0
70.0	2.756	65	2 ½	2.0	2.0
73.0	2.875	65	2 ½	2.0	2.0
76.1	(3.000)	65		2.0	2.0
79.5	3.125	65	3	2.0	2.0
84.0	3.305	80	3.3	2.0	2.0
88.9	3.500	80	3	2.0	2.0
100.6	3.960	80	(3)	2.0	2.3
101.6	(4.000)	90	(3 ½)	2.0	2.3
104.0	4.095	100	4.1	2.0	2.3
104.8	4.125	100	(4)	2.0	2.3
108.0	4.250	100	4 ¼	2.0	2.3
114.3	4.500	100	4	2.0	2.3
127.0	5.000	100	4 ½	2.6	3.0
129.0	5.080	125	5	2.6	3.0
130.2	5.125	125	(5)	2.6	3.0
131.0				3.0	
133.0	5.235	125	5 ¼	2.6	3.0
139.7	(5.500)	125	(5 ½)	2.6	3.0
141.3	5.565	125	5	2.6	3.0
154.0	6.065	150	6.1	2.6	3.0
155.0				2.5	
159.0	6.260	150	6 ¼	2.6	3.0
168.3	6.625	150	6	2.6	3.5
193.7	7.625	200	7.6	3.0	3.5
206.0				3.0	
219.1	8.625	200	8	3.0	3.5
244.5	9.625	225	9	on request	4.5
256.0				on request	
267.0	10.510	250	10.5	on request	4.5
273.0	10.750	250	10	on request	5.0
306.0				on request	
323.9	12.750	300	12	on request	5.5
355.6	14.000	350	14	on request	6.0
406.4	16.000	400	16	on request	8.0
457.2	18.000	450	18	on request	9.0
508.0	20.000	500	20	on request	10.0
558.8	22.000	550	22	on request	10.0
609.6	24.000	600	24	on request	12.0

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Assembly set-up time and dimension comparison

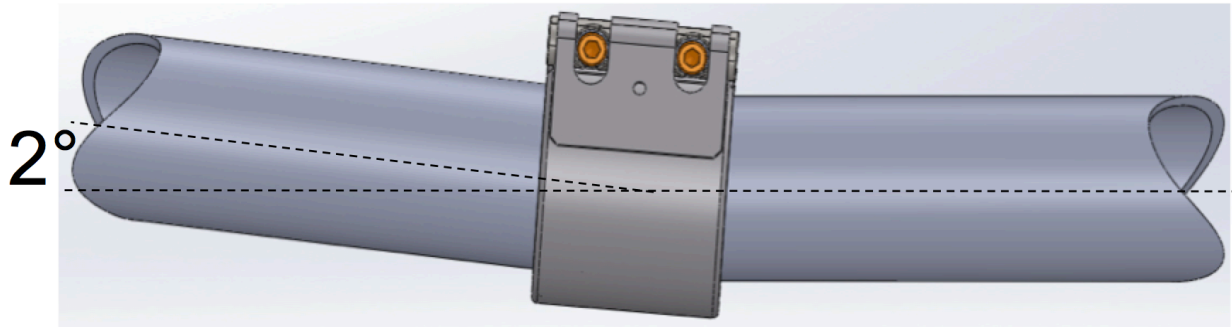
The installation time includes:

- Marking of half the coupling width on both pipe ends
- Fitting the coupling over pipe ends and correct alignment
- Tightening the bolts with a torque wrench

Pipe Ø		Nominal Ø		Instalation time per Coupling [min]
Metric [mm]	ips [inch]	Metric [dn]	ips [nom]	
26,9	1.050	20	3/4	2
30	1.180	25	1.2	2
33,7	1.325	25	1	2
38	1.495	32	1.5	2
42,4	1.670	32	1 1/4	2
44,5	1.750	40	1.75	2
48,3	1.900	40	1 1/2	2
54	2.125	50	2.125	3
57	2.245	50	2.25	3
60,3	2.375	50	2	3
66,6	2.625	65	2 1/2	4
73	2.875	65	2 1/2	4
76,1	(3.000)	65	3	4
79,5	3.125	65	3	4
84	3.305	80	3.3	4
88,9	3.500	80	3	4
100,6	3.960	80	(3)	5
101,6	(4.000)	90	(3 1/2)	5
104	4.095	100	4.1	5
104,8	4.125	100	(4)	5
108	4.250	100	4 1/4	5
114,3	4.500	100	4	5
127	5.000	100	4 1/2	6
129	5.080	125	5	6
130,2	5.125	125	(5)	6
133	5.235	125	5 1/4	6
139,7	(5.500)	125	(5 1/2)	6
141,3	5.565	125	5	6
154	6.065	150	6.1	7
159	6.260	150	6 1/4	7
168,3	6.625	150	6	7
219,1	8.625	200	8	9
244,5	9.625	225	9	10
267	10.510	250	10.5	10
273	10.750	250	10	10
323,9	12.750	300	12	12
355,6	14.000	350	14	12
406,4	16.000	400	16	12
457,2	18.000	450	18	12
508	20.000	500	20	12
558,8	22.000	550	22	12
609,6	24.000	600	24	12

Angular deflection

Coupling pipe couplings cover angular deflection of pipes up to 2° (4°) in any direction.

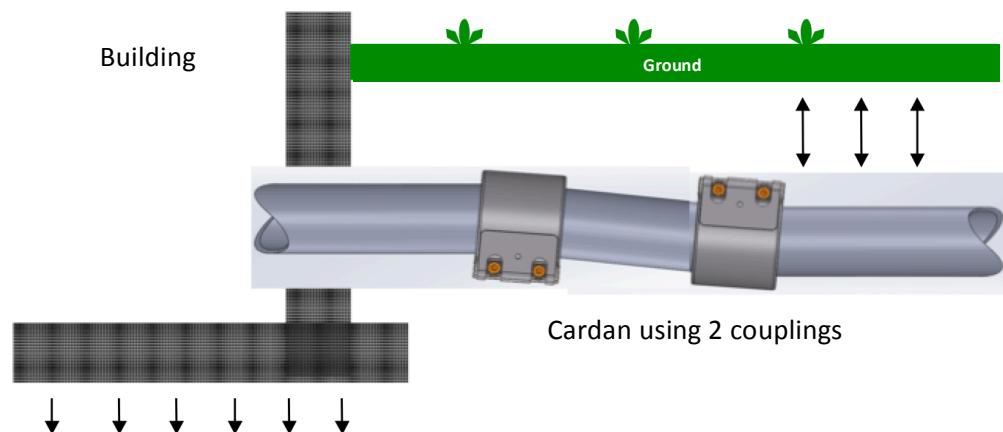


The 2° angular deflection corresponds to 35 mm per meter pipe length.

The installation is very easy and there is no need of costly pipe alignment.

It is possible to fit the pipe with angular deflection and to use the joint for dynamic angular movement, after fitting under working conditions of the pipe system.

Example: Ground settlement

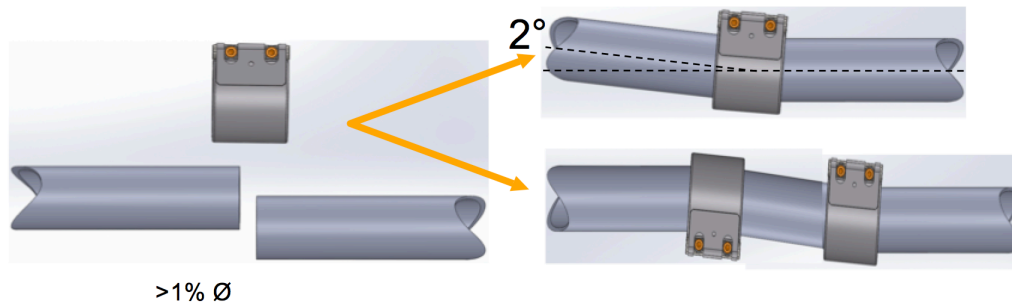


Note: Pipe end gap Cmax must always be kept.

Axial misalignment

Pipe couplings generally allow misalignment of pipe axis.

Our fitting instructions however recommend rectification of possible out-of-line sections with angular deflection or minimization of misalignment to a maximum of 2° (see Fitting- / Disassembly Instructions) or either use an intermediate piece.



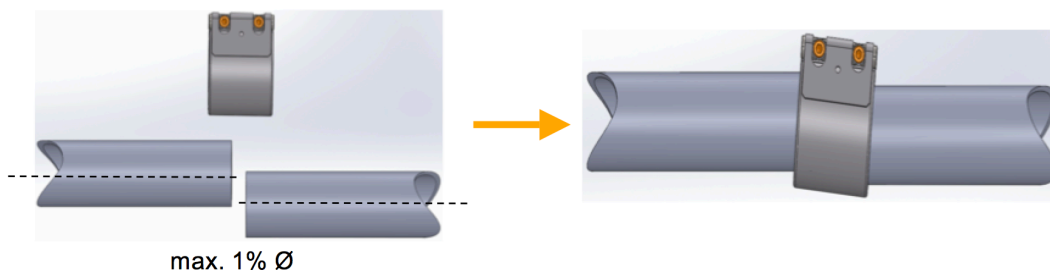
Since a „zero misalignment“ is not practicable, a minimal misalignment is tolerated „de facto“. The following rule of thumb will explain the value of tolerable misalignment; aimed to be kept as small as possible:

‘For fixed pipe ends, a misalignment of up to 1% (max. 3mm) of corresponding pipe OD can be tolerated without any restrictions. It does not affect the correct fitting of the pipe coupling’.

Where the line guides are sufficiently spaced from pipe ends so that the butt ends of the pipes can be rectified by hand with little force, approx. 500 N, the remaining axial misalignment after tightening the lock bolts is low. In connection with such an application a larger misalignment before fitting the pipe joint can be admitted:

A misalignment up to 1% in fitted position has no negative influence to the function ability of Flex and Rep couplings and therefore is tolerable up to pipe OD of 300 mm.

Under such conditions a slight sloping of the coupling on the pipe ends has to be expected.



Retrofitting of pipe sections and fittings

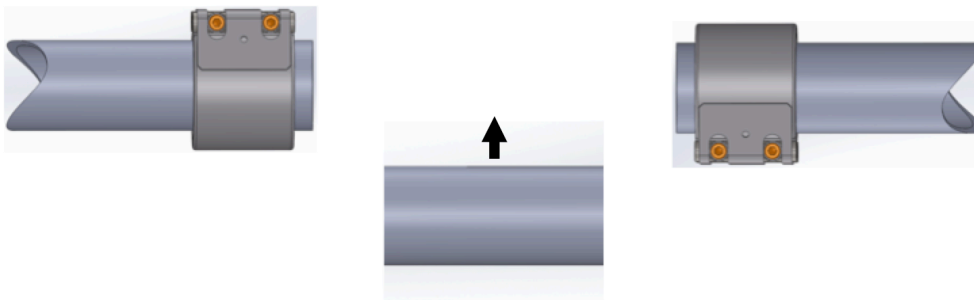
The large scale of clearance and tolerance of pipe couplings make them into an ideal construction element for retrofitting of pipe sections and fittings during repair work or change of pipeline direction.



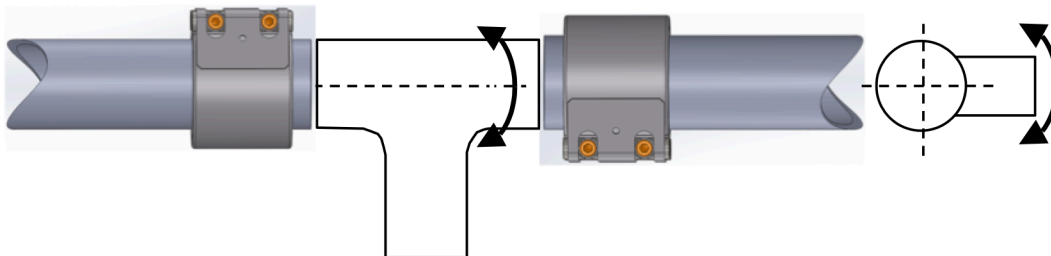
Pipe couplings do not take over Bending or Torsion forces.
Pressure lines must be supported, anchored and guided.



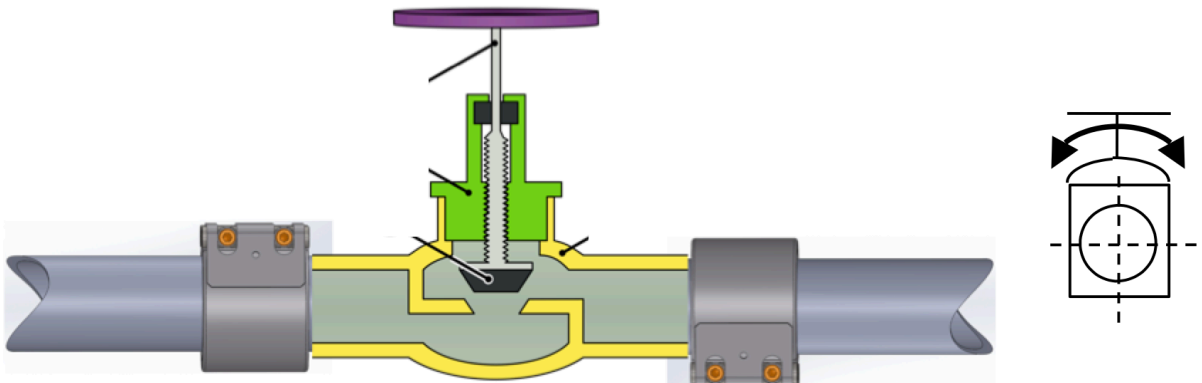
Pipe section for existing or new pipelines



Fitting (T), position and direction of leaving stud to any choice



Valve with plain ends, rotatable to any position



Axial movement / change in length (Dilatation)

Change of temperature in pipeline systems cause axial movement and tensile or pressure stress which must be compensated by adequate countermeasures.

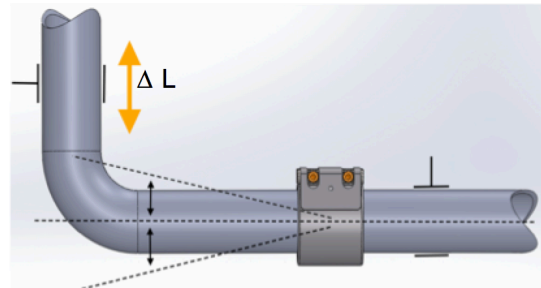
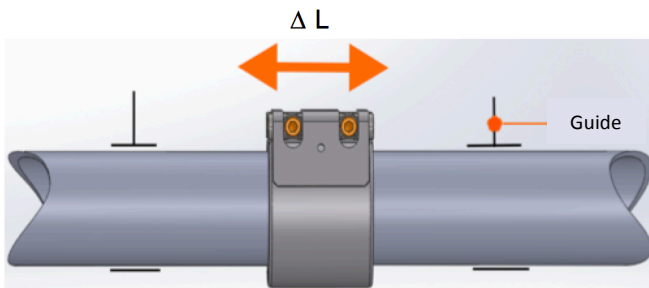


Pipe couplings do not take over Bending or Torsion forces
Pressure lines must be supported, anchored and guided.



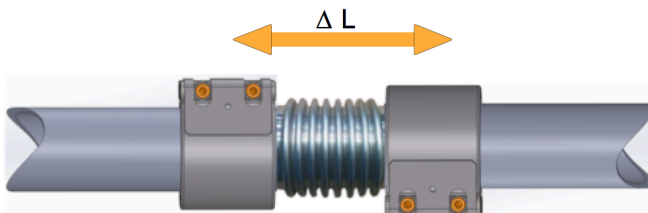
Coupling pipe series **Flex and Rep** are able to compensate axial movement of straight pipe sections. According to size of coupling between 5 up to 20 mm **It is recommended to use a T-Strip Insert to prevent axial moving of the Pipe coupling on the Pipe.**

- compensation of axial movement
- no abrasion on the sealing sleeve
- escaping space for rubber expansion under temperature
- stress-free pipeline without additional means (see below)



Note: Pipe end gap C_{max} must always be kept.

Larger axial movements need compensation like: Traditional compensation



Axial movement / change in length (Dilatation)

Anchor points and guides with axial movement

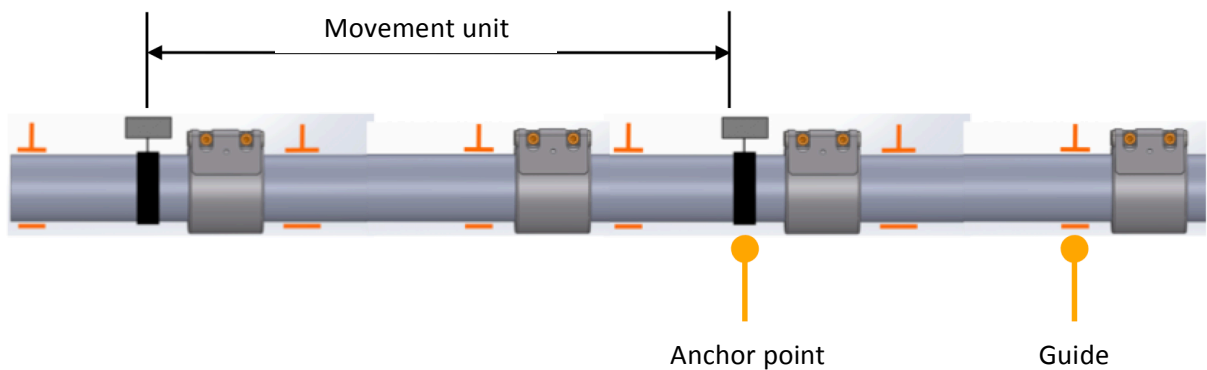
Clever fastening of pipe sections which are exposed to axial movement due to temperature influences can be divided into 'movement units' and be joined very economically with **UNI-Flex and UNI-Rep** pipe couplings as compensator.



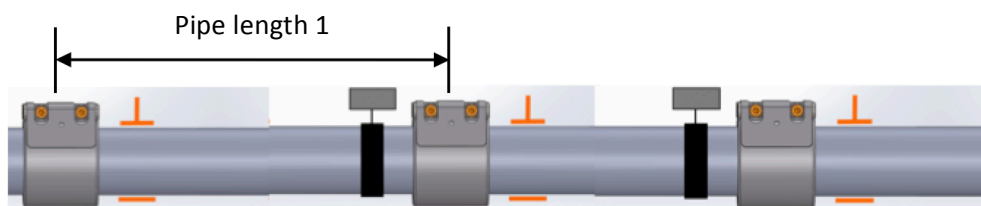
**Pipe couplings do not take over axial forces.
Pressure lines must be supported, anchored and guided.**



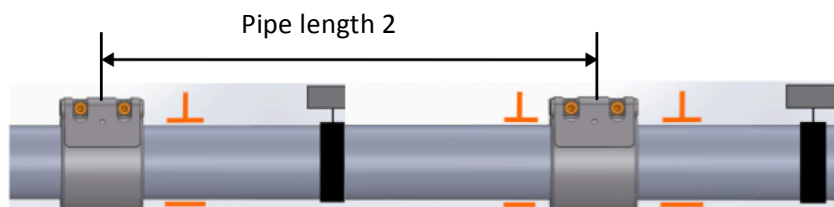
The distance between 2 anchor points forms a movement unit.



The movement between the 2 anchor points shall not exceed the admissible value given for one joint.

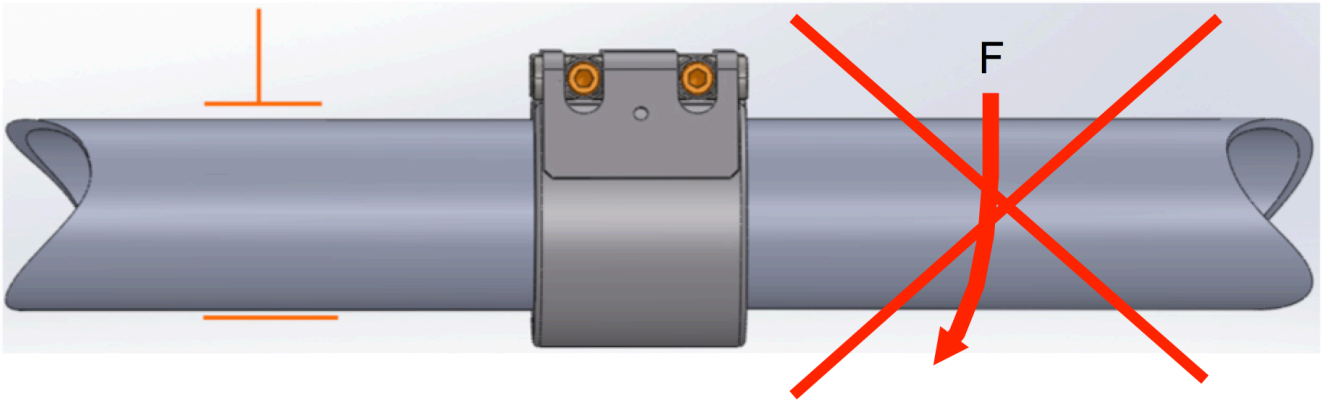


Depending on the value of axial movement every second anchor point can be replaced by guidance.



Bending / Torsion

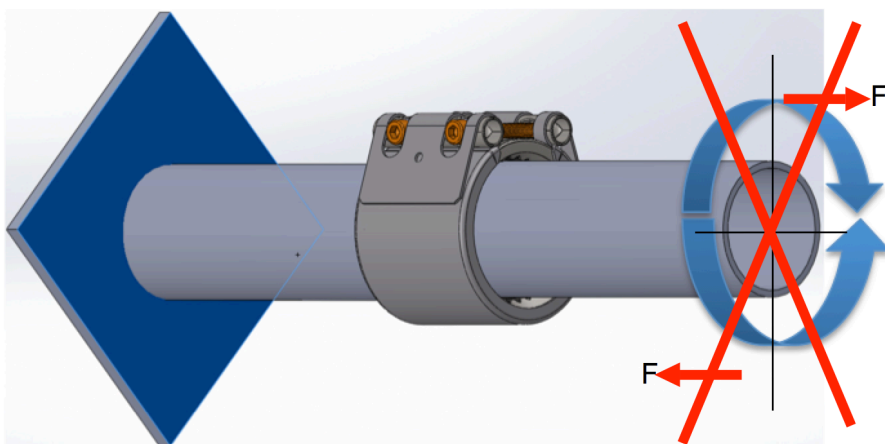
Bending



Pipe couplings do not take over axial (Bending) or radial forces (Torsion). **Pressure lines must be supported, anchored and guided.**



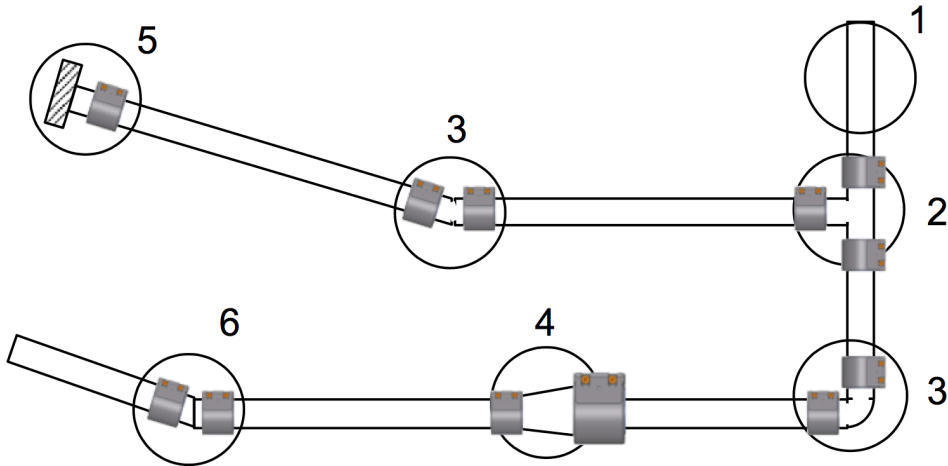
Torsion



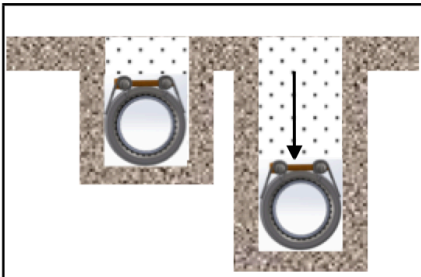
Buried pipelines



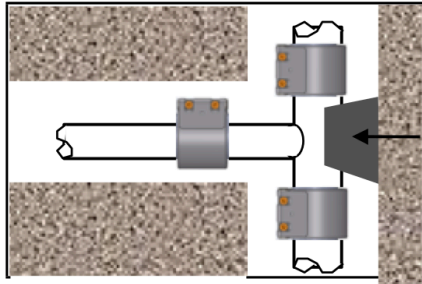
Structural measures for buried pipelines must be taken in order to take up axial forces (e.g. lean concrete abutment)



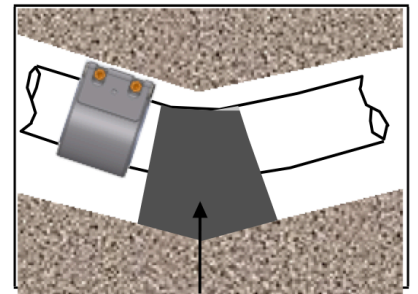
1 sufficient back fill weight to prevent side thrust or buckling



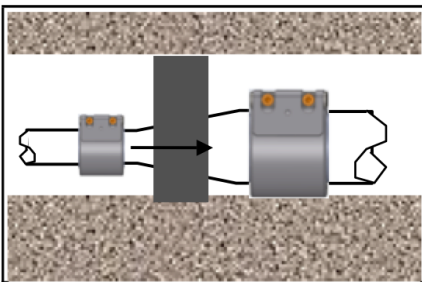
2 Tees (e.g. concrete thrust blocks)



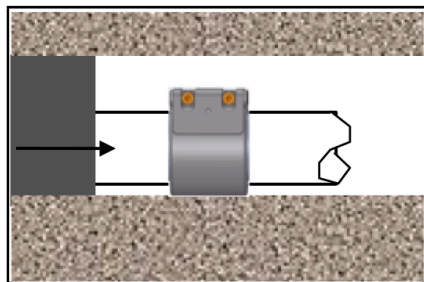
3 bends, direction changes



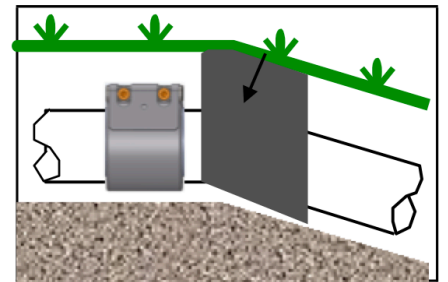
4 OD reductions



5 blanc ends



6 inclination changes



The arrows indicate the counterforce of the abutment.

Open layed pipelines



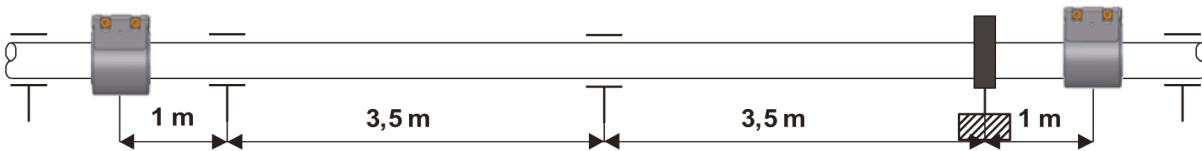
Pipe couplings do **not** take over axial forces.



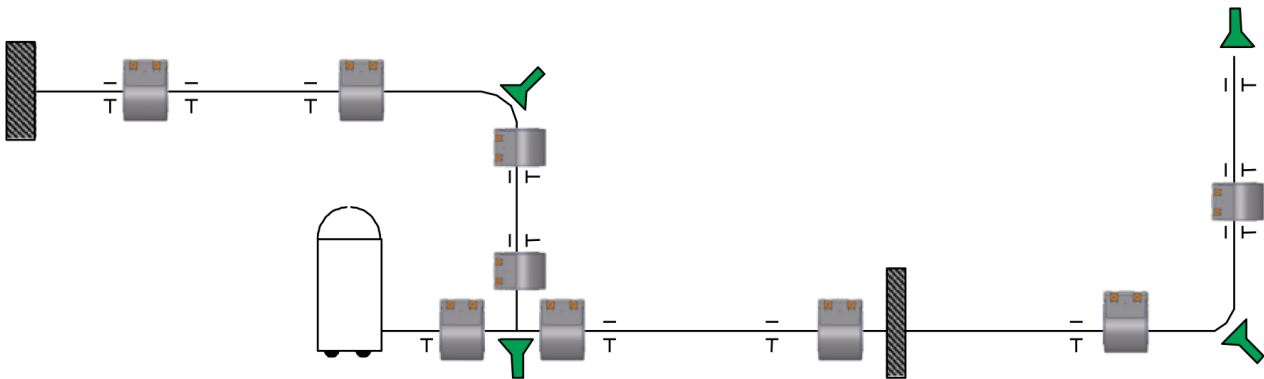
Important: **Pressure lines must be supported, anchored and guided. Depending on laying situation supports have to be changed to anchor points.**

Thumb rule: One anchor point and one guide per each pipe section!

Structural measures for open layed pipelines – example for a 9 m pipe length:



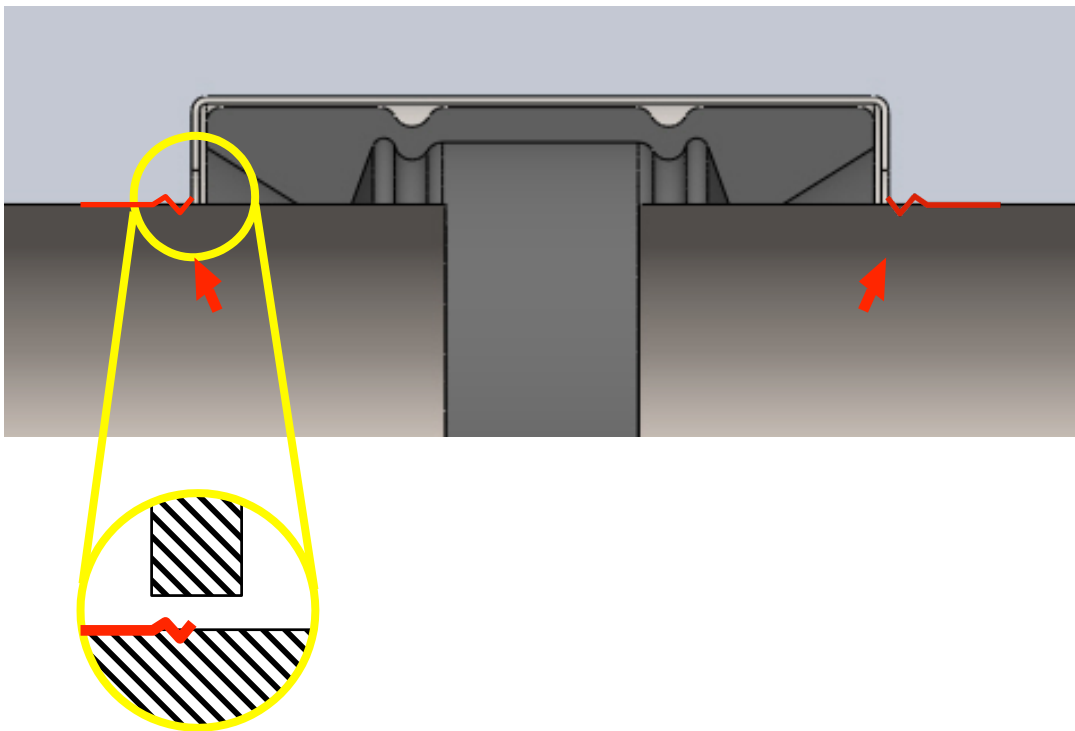
Application example:





If **electrical conductivity** is required it can be achieved by bridging over the coupling from pipe to pipe with an earthing strap.

Is there a positive need to **prevent electrical conductivity** of the pipe joint (insulation), the electrical insulation of the pipeline elements can be achieved by coupling-in a section of plastic pipe of one metre in length with 2 couplings.

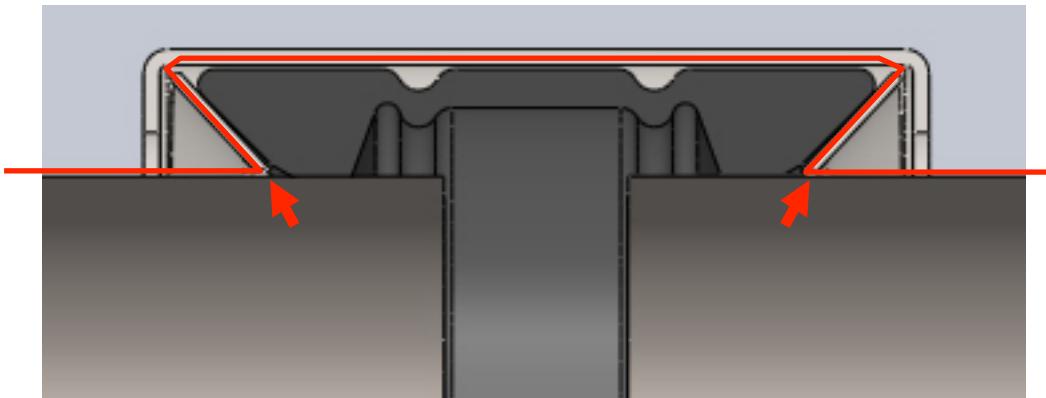


WESTATLANTIC Tech Corp.

www.westatlantictech.com / www.pipelinecoupling.com

sales@westatlantictech.com + 902 455 4455

Pipe couplings of Grip series guarantee electrical conductivity for Metal to Metal pipe by bridging over from pipe to pipe through the metallic anchoring mechanism.



Electrical conductivity is ensured due to the anchoring rings gripping into the metallic pure surface of the pipe.

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Installation of vertical pipelines

Grip coupling units are the ideal joints to keep plain-ended metal pipe sections in vertical installations perfectly tight and axially restrained.

In the extreme case of a free hanging pump pressure main the appearing forces for each coupling shall be calculated on the basis of the following values:

- weight of pipe sections
- weight of couplings (joints)
- weight of pump
- weight of water column in pipes
- force factor resulting from internal pressure and possible pressure surges

Coupling series **GRIP**, **COMBI GRIP**, **PLASTGRIP** pipe couplings apply sufficient resistance against up-coming torsion, resulting from switching on or off the pump (please ask pump manufacturer for details).

Application examples

- drilling hole pump lines
- fresh water pump lines
- heat pumps
- shaft pipelines
- charge and discharge systems of silos, tanks and containers

