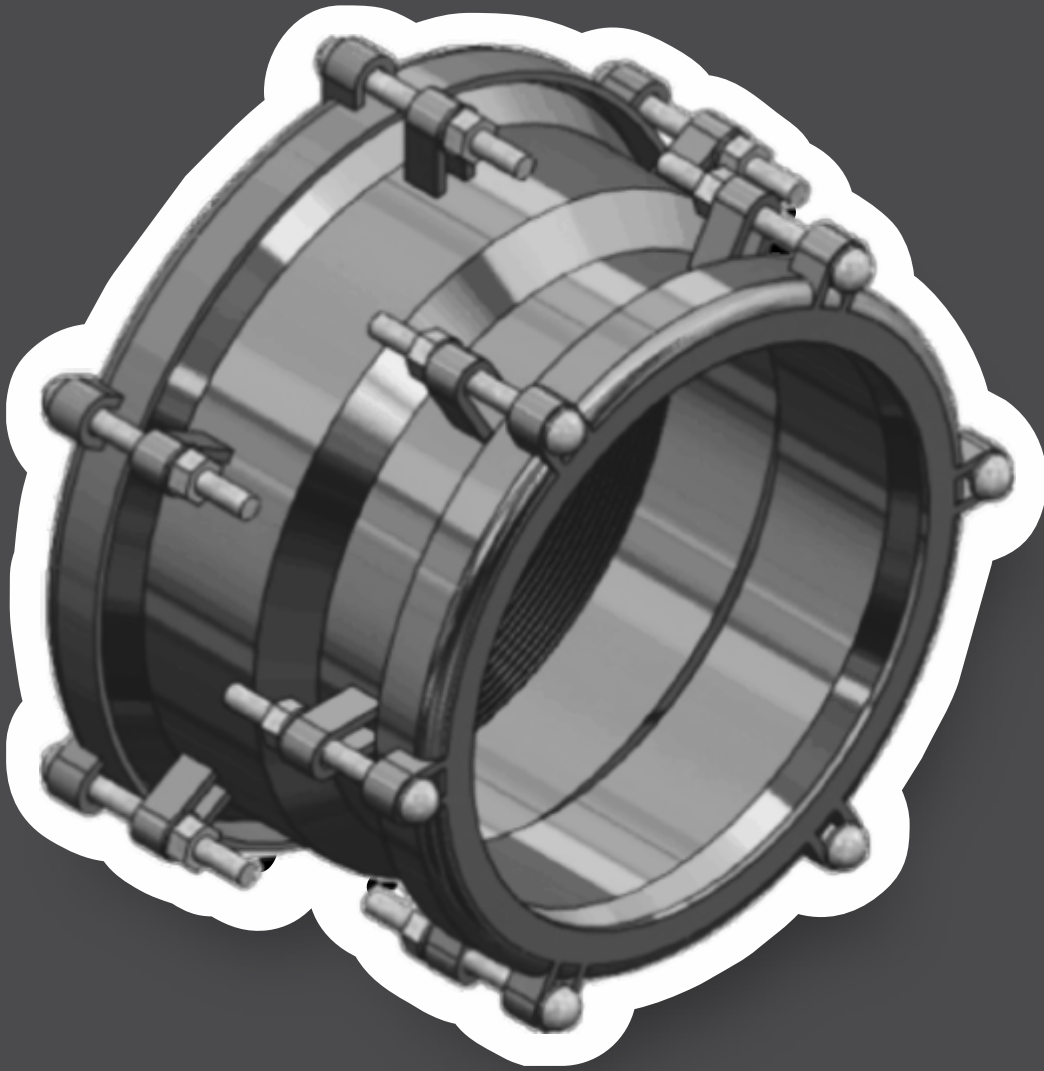


WELBRO
PIPE & COUPLING



WIDE RANGE STEP COUPLINGS TECHNICAL DATA

WELBRO Step Couplings are designed to connect plain ended pipes of different nominal bores to each other. The wide range tolerance of these couplings also allow for pipes of different materials to be connected, as it accommodates differing outside diameters for each nominal bore. This reduces the stockholding required to accommodate varying outside diameters. These couplings can be used in water, sewer and gas pipelines.

Pressure Rating

WELBRO Couplings up to 600mm are designed for a standard working pressure of 16 bar, and a test pressure of 24 bar. Larger pressure ratings can be accommodated upon request.

Temperature

WELBRO Couplings can be used in applications of between -40 °C and 90°C, but are not recommended for use in heating systems

Location

Above or below ground, subject to certain limitations according to product type and pipe material. Factories or any other pipe installation such as pump stations or treatment plants.

Range

WELBRO Couplings are available from 50mm to 600mm. Larger sizes can be accommodated upon request.

Angular Deflection

For pipe sizes between 50mm and 450mm:

- Angular deflections of up to 6 degrees.
- Inclination 1:10

For pipe sizes between 500 to 600mm:

- Angular deflection of up to 5 degrees.
- Inclination 1:12

Couplings are not designed to accommodate lateral displacement, and proper pipe alignment is critical for a successful coupling installation.

Pipe End Preparation

In order to ensure proper sealing and operation of an WELBRO Coupling, the pipe ends must be properly prepared to ensure that the pipe is smooth, clean, without grooves, weld beads or other protrusions or irregularities. This must be for a distance of at least 100mm for nominal bores up to 250mm, and 160mm for nominal bores above 250mm. Also ensure that the pipe is properly round as site handling often leads to pipe ovality

Pipe Setting Gap

For couplings up to 250mm nominal bore, a minimum setting gap of 16mm will be required. The setting gap may not exceed 32mm.
For couplings between 300mm and 600mm nominal bore, a minimum setting gap of 20mm will be required. The setting gap may not exceed 40mm.

Expansion and Contraction

The gasket on WELBRO Couplings allows for a significant amount of pipe movement due to thermal expansion and contraction. Up to 9mm of movement can be accommodated on a mechanical coupling without affecting sealing performance.

1. End Rings

Mild Steel to BS EN 10025:2004 or Grade CQ

2. Sleeve

Mild Steel to BS EN 10025:2004 or Grade CQ

3. Rubber Gasket

EPDM Grade E to BS 2494 1990 or SANS974 Related ISO4633

4. Bolts

Steel to BS970 Grade 070

M12 x 170 Bolts and Nuts

Studs are of square cup design to enable one-handed tightening

Bolts are hot dipped galvanised to SANS763

5. Coating

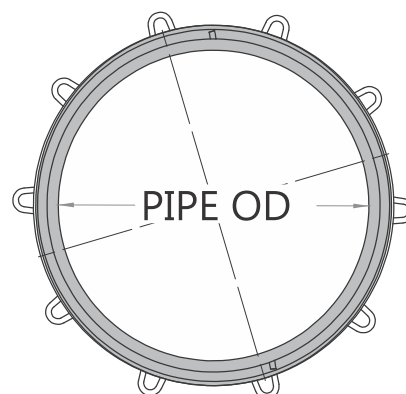
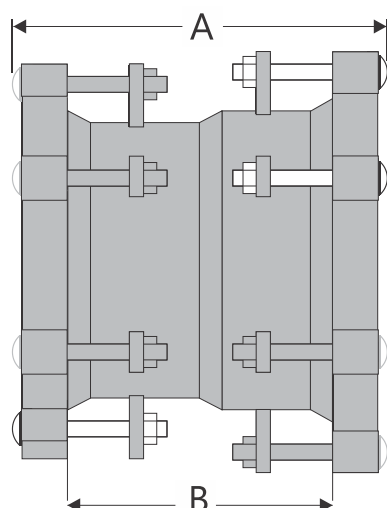
Fusion Bonded Epoxy to SABS 1217 to a minimum thickness of 250 microns

6. SABS Standard

Compliant with SANS1808-2: 2017

DIMENSIONS

WELBRO STEP COUPLINGS

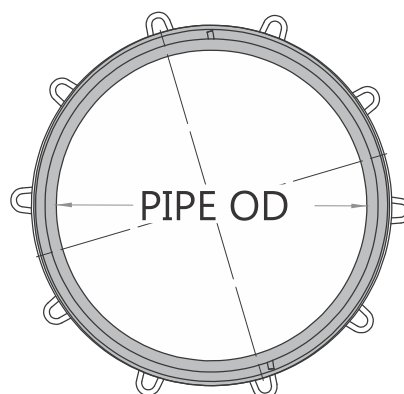
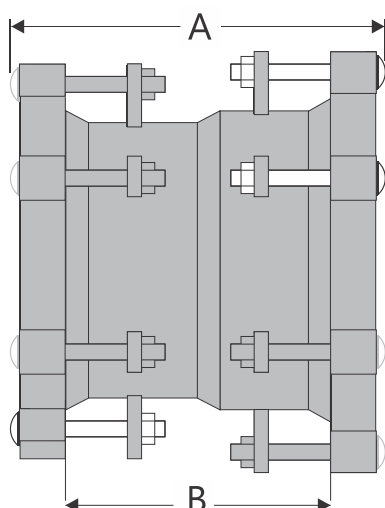


STEP COUPLINGS							HDG FASTENERS			
SMALL END			LARGE END			Product Code	Coupling Length		Fasteners	
DN	ID	RANGE	DN	ID	RANGE		A	B	Nr	Size
50	68	57-67	65	81	59-79	WBS0500x0650	280	200	4	M12x115
			80	95	74-93	WBS0500x0800	280	200	4	M12x115
65	81	59-79	80	95	74-93	WBS0650x0800	280	200	4	M12x115
			80/2	106	88-104	WBS0650x0802	280	200	4	M12x115
80	95	74-93	80/2	106	88-104	WBS0800x0802	280	200	4	M12x115
			100	121	98-118	WBS0800x1000	280	200	4	M12x115
80/2	106	88-104	100	121	98-118	WBS0800x1000	280	200	4	M12x115
			100/2	131	108-128	WBS0800x1002	280	200	4	M12x115
100	121	98-118	100/2	131	108-128	WBS1000x1002	280	200	4	M12x115
			125	156	132-154	WBS1000x1250	280	200	4	M12x115
100/2	131	108-128	125	156	132-154	WBS1002x1250	280	200	4	M12x115
			150	173.5	150-170	WBS1002x1500	280	200	4	M12x115
125	156	132-154	150	173.5	150-170	WBS1250x1500	280	200	4	M12x115
			150/2	191	159-187	WBS1250x1502	280	200	4	M12x115
150	173.5	150-170	150/2	191	159-187	WBS1500x1502	280	200	6	M12x115
			150/3	202	180-200	WBS1500x1503	280	200	6	M12x115

Any size up to DN600mm can be manufactured Standard Working Pressure WP=1600kPa | Test Pressure TP=1.5xWP=2400kPa

DIMENSIONS

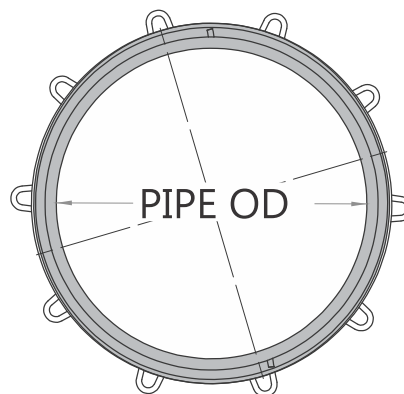
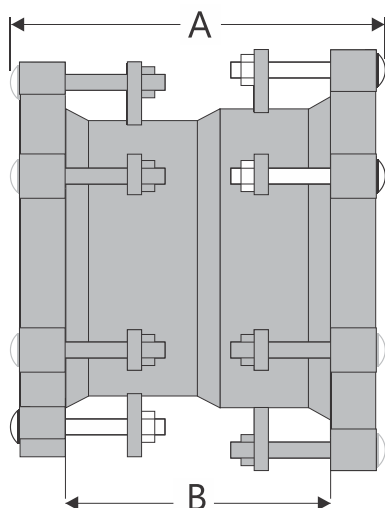
WELBRO STEP COUPLINGS



STEP COUPLINGS						HDG FASTENERS				
SMALL END			LARGE END			Product Code	Coupling Length		Fasteners	
DN	ID	RANGE	DN	ID	RANGE		A	B	Nr	Size
175	210	192-209	200	225	205-223	WBS1750x2000	280	200	6	M12x115
			200/2	245	218-243	WBS1750x2002	280	200	6	M12x115
200	225	205-223	200/2	245	218-243	WBS2000x2002	280	200	6	M12x115
			225	256	235-253	WBS2000x2250	280	200	8	M12x115
200/2	245	218-243	225	256	235-253	WBS2002x2250	280	200	8	M12x115
			250	280	268-278	WBS2002x2500	280	200	8	M12x115
225	256	235-253	250	280	268-278	WBS2250x2500	280	200	10	M12x115
			250/2	299	275-295	WBS2250x2502	280	200	10	M12x115
250	280	268-278	250/2	299	275-295	WBS2500x2502	280	200	10	M12x115
			275	321	302-318	WBS2500x2750	280	200	10	M12x115
250/2	299	275-295	275	321	302-318	WBS2502x2750	280	200	10	M12x115
			300	330	315-328	WBS2502x3000	280	200	12	M12x115
275	321	302-318	300	330	315-328	WBS2750x3000	280	200	12	M12x115
			300/2	354	334 - 350	WBS2750x3002	280	200	12	M12x115
			300/3	375	356 - 372	WBS2750x3003	280	200	12	M12x115
300	330	315-328	300/2	354	334 - 350	WBS3000x3002	280	200	14	M12x115
			300/3	375	356 - 372	WBS3000x3003	280	200	14	M12x115
350	363	344 - 360	350/2	394	374-392	WBS3500x3502	280	200	14	M12x115

DIMENSIONS

WELBRO STEP COUPLINGS



HDG FASTENERS

SMALL END			LARGE END			Product Code	Coupling Length		Fasteners	
DN	ID	RANGE	DN	ID	RANGE		A	B		
400	413		400/2	421	401-417	WBS4000x4002	280	200	14	M12x115
		391-410	400/3	440	417-437	WBS4000x4003	280	200	14	M12x115
			400/4	449	430-446	WBS4000x4004	280	200	14	M12x115
450	463	444-460	450/2	478	458-474	WBS4500x4502	280	200	14	M12x115
			450/3	496	477-493	WBS4500x4503	280	200	14	M12x115
			450/4	537	518-534	WBS4500x4504	280	200	14	M12x115
500	513	494-510	500/2	549	535-545	WBS5000x5002	280	200	14	M12x115
			500/3	596	583-593	WBS5000x5003	280	200	14	M12x115
			550	575	559-571	WBS5000x5500	280	200	14	M12x115
600	620	606-616	600/2	642	629-638	WBS6000x6002	280	200	14	M12x115

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