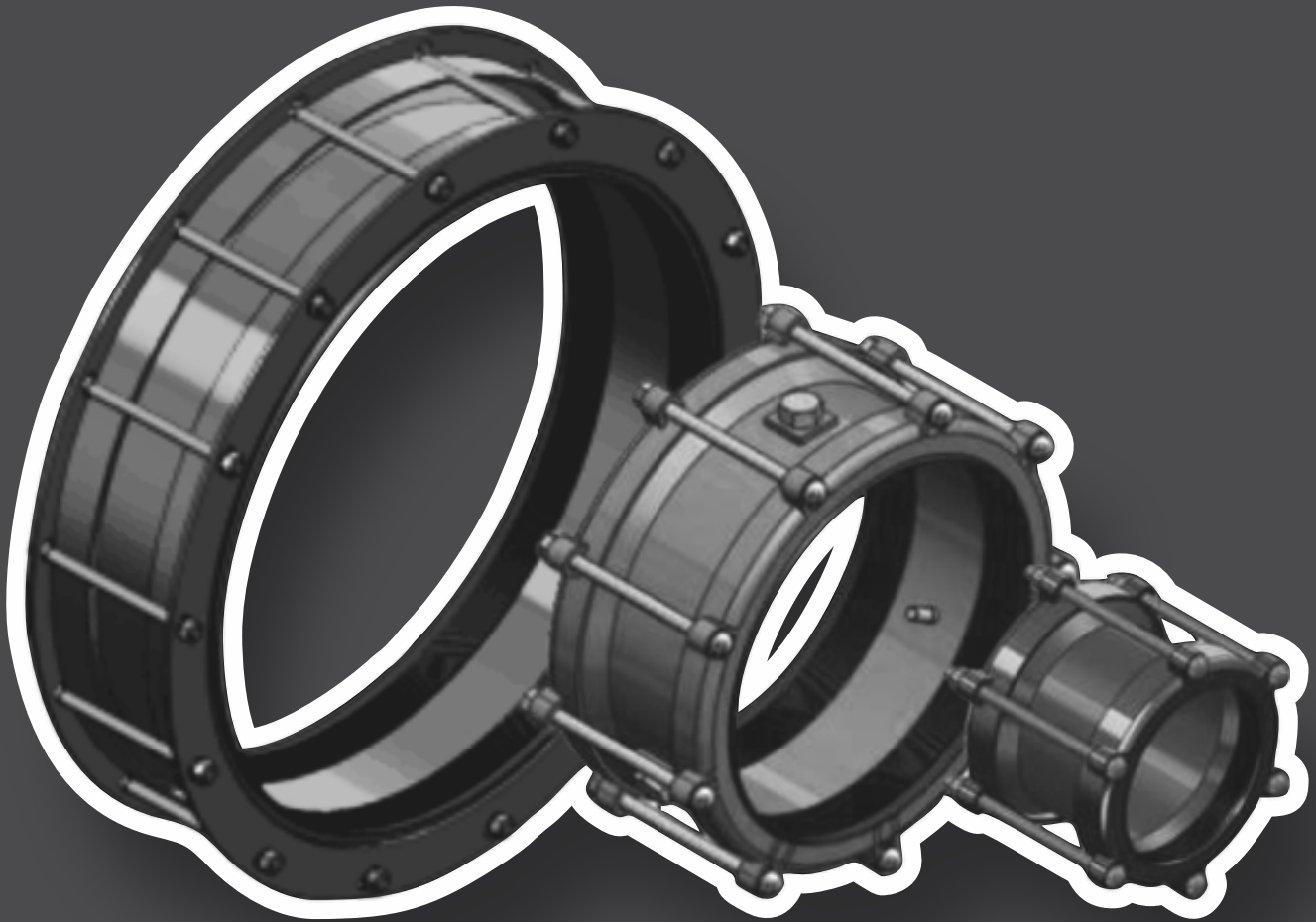


**WELBRO**  
PIPE & COUPLING



**WIDE RANGE  
COUPLINGS  
TECHNICAL DATA**

The following abbreviations are used in this brochure:

**OD** Pipe outside diameter

**NB** Nominal bore

**DN** Nominal diameter, in millimetres

**PN** Nominal pressure, in bar

**CI** Grey cast iron

**DI** Ductile iron

**PE** Polyethylene

**MDPE** Medium density polyethylene (PE80)

**HDPE** High density polyethylene (PE100)

**AC** Asbestos cement

**GRP** Glass reinforced plastics

**uPVC** Unplasticised polyvinyl chloride

**PVC-u** Metric uPVC pipe (including Molecular Oriented and Impact Modified)

**EPDM** Ethylene propylene diene monomer

**PCD** Pitch circle diameter

## Application

WELBRO Couplings are designed to connect plain ended pipes 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

## Lateral Displacement

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

DN50 to DN150: M12 x 170 Bolts and Nuts

DN175 to DN300: M12 x 210 Bolts and Nuts

DN300/2 to DN600/2: M12 x 260 Bolts and Nuts

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

Bolts are hot dipped galvanised to SANS763

## 5. Coating

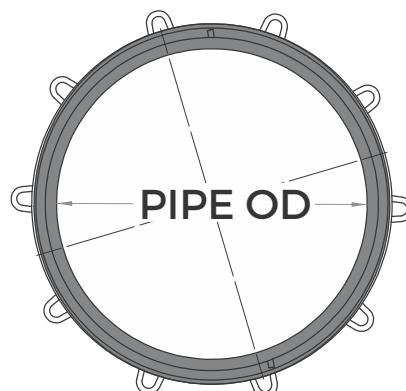
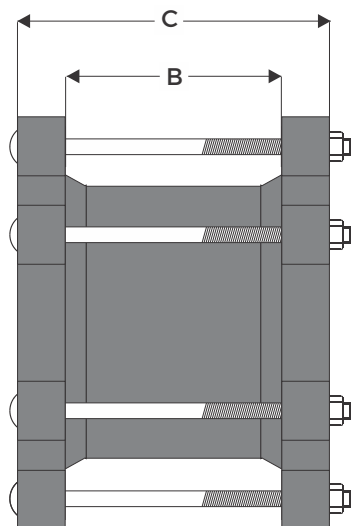
Fusion Bonded Epoxy to SABS 1217 to a minimum thickness of 250 microns

## 6. SABS Standard

WELBRO couplings are manufactured to SABS 1808-2: 2017

## DIMENSIONS

## WELBRO COUPLINGS



STANDARD BARREL COUPLINGS HDG Bolts								LONG BARREL COUPLINGS HDG Bolts				Gasket Section
Nominal Bore (mm)	Product Code	Pipe OD Range (mm)	Coupling ID	Sleeve Length B	Coupling Height C	Fasteners (Single Bolt Set)		Product Code	Sleeve Length	Fasteners (Double Bolt Set)		
						Nr	Size			Nr	Size	
65	WB0065	58-72	74.5	105	170	4	M12 x 170	WB0065LB	180	4	M12 x 115	Small
70	WB0070	58-78	81.8	105	170	4	M12 x 170	WB0070LB	180	4	M12 x 115	Small
75	WB0075	88-103	106.4	105	170	4	M12 x 170	WB0075LB	180	4	M12 x 115	Small
80	WB0080	98-118	121.5	105	170	4	M12 x 170	WB0080LB	180	4	M12 x 115	Small
100	WB0100	109-128	131.8	105	170	4	M12 x 170	WB0100LB	180	4	M12 x 115	Small
100	WB0100/2	109-128	131.8	105	170	4	M12 x 170	WB0100/2LB	180	4	M12 x 115	Small
125	WB0125	132-154	156.6	105	170	4	M12 x 170	WB0125LB	180	4	M12 x 115	Small
150	WB0150	150-170	173.5	105	170	4	M12 x 170	WB0150LB	180	4	M12 x 115	Small
150	WB0150/2	159-187	191	130	170	4	M12 x 210	WB0150/2LB	180	4	M12 x 115	Medium
150	WB0150/3	180-200	196	130	170	4	M12 x 210	WB0150/3LB	180	4	M12 x 115	Medium
175	WB0175	193-209	207.5	130	210	4	M12 x 210	WB0175LB	180	4	M12 x 115	Medium
200	WB0200	210-223	236	130	260	4	M12 x 210	WB0200LB	180	4	M12 x 115	Medium
225	WB0200/2	228-243	253	130	260	6	M12 x 210	WB0200/2LB	200	6	M12 x 115	Medium
225	WB0225	235-252	271	130	260	6	M12 x 210	WB0225LB	200	6	M12 x 115	Medium
250	WB0250	268-278	289	130	260	6	M12 x 210	WB0250LB	200	6	M12 x 115	Medium
250	WB0250/2	280-295	308	130	260	6	M12 x 210	WB0250/2LB	200	6	M12 x 115	Medium
275	WB0275	302-318	321	130	260	6	M12 x 210	WB0275LB	300	6	M12 x 115	Medium
300	WB0300	315-328	330	130	260	6	M12 x 210	WB0300LB	300	6	M12 x 115	Medium

Standard working pressure PN16

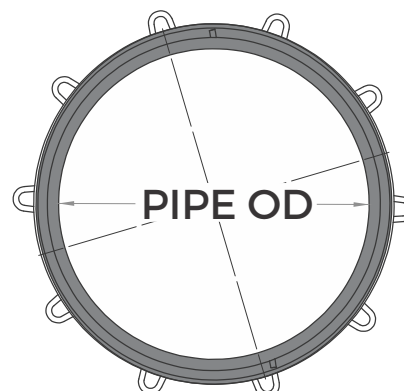
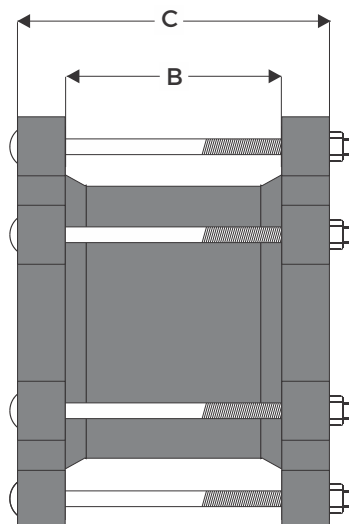
Test pressure = 1.5 x WP = PN24

Higher pressures available on request

Long barrel sleeves available on request

## DIMENSIONS

## WELBRO COUPLINGS



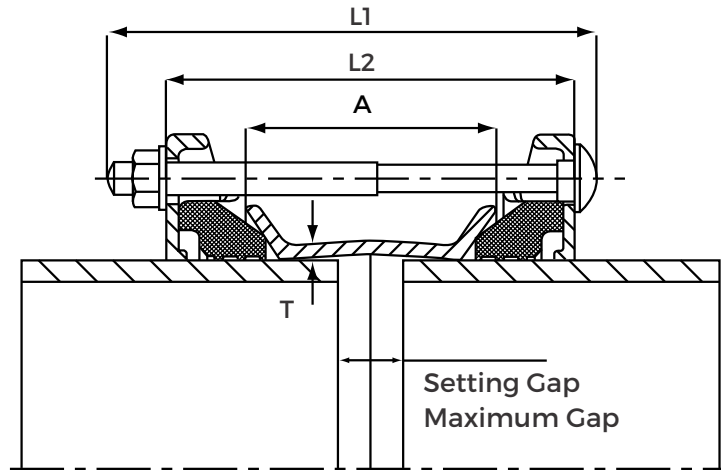
STANDARD BARREL COUPLINGS HDG Bolts								LONG BARREL COUPLINGS HDG Bolts				Gasket Section
Nominal Bore (mm)	Product Code	Pipe OD Range (mm)	Coupling ID	Sleeve Length B	Coupling Height C	Fasteners (Single Bolt Set)		Product Code	Sleeve Length	Fasteners (Double Bolt Set)		
						Nr	Size			Nr	Size	
300	WB0300/2	340-350	354	160	260	8	M12 x 260	WB0300/2LB	300	8	M12 x 115	Large
300	WB0300/3	360-370	374	160	260	8	M12 x 260	WB0300/3LB	300	8	M12 x 115	Large
350	WB0350	350-360	363	160	260	8	M12 x 260	WB0350LB	300	8	M12 x 115	Large
350	WB0350/2	376-387	390	160	260	10	M12 x 260	WB0350/2LB	300	10	M12 x 115	Large
400	WB0400	396-410	410	160	260	10	M12 x 260	WB0400LB	300	10	M12 x 115	Large
400	WB0400/2	407-417	421	160	260	10	M12 x 260	WB0400/2LB	300	10	M12 x 115	Large
400	WB0400/3	426-436	440	160	260	10	M12 x 260	WB0400/3LB	300	10	M12 x 115	Large
400	WB0400/4	436-446	449	160	260	10	M12 x 260	WB0400/4LB	300	10	M12 x 115	Large
450	WB0450	450-460	463	160	260	10	M12 x 260	WB0450LB	300	10	M12 x 115	Large
450	WB0450/2	464-474	478	160	260	12	M12 x 260	WB0450/2LB	300	12	M12 x 115	Large
450	WB0450/3	478-488	492	160	260	12	M12 x 260	WB0450/3LB	300	12	M12 x 115	Large
450	WB0450/4	524-534	534	160	260	12	M12 x 260	WB0450/4LB	300	12	M12 x 115	Large
500	WB0500	500-510	513	160	260	12	M12 x 260	WB0500LB	300	12	M12 x 115	Large
500	WB0500/2	535-545	549	160	260	12	M12 x 260	WB0500/2LB	300	12	M12 x 115	Large
500	WB0500/3	583-593	596	160	260	14	M12 x 260	WB0500/3LB	300	14	M12 x 115	Large
550	WB0550	559-571	575	160	260	14	M12 x 260	WB0550LB	300	14	M12 x 115	Large
600	WB0600	606-616	620	160	260	14	M12 x 260	WB0600LB	300	14	M12 x 115	Large
600	WB0600/2	629-638	642	160	260	14	M12 x 260	WB0600/2LB	300	14	M12 x 115	Large

Standard working pressure PN16

Test pressure = 1.5 x WP = PN24

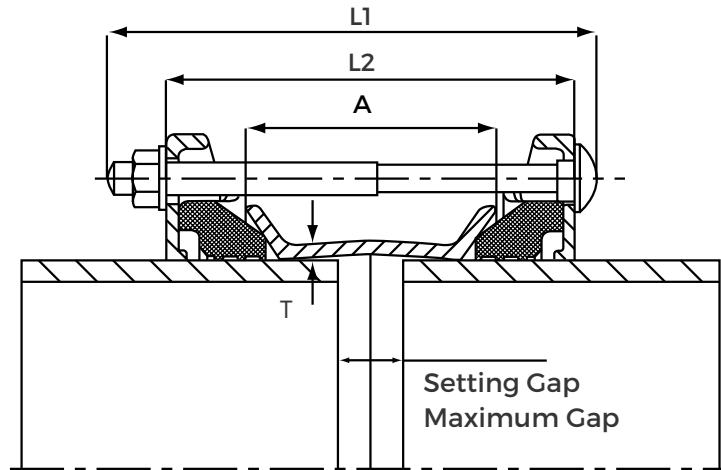
Higher pressures available on request

Long barrel sleeves available on request



1	MEDIUM DETAILS	REF	UNIT	SPECIFICATION					
1.01	Medium			Potable					
1.02	Operating Temperature		deg C	-40 to +90					
2	PRODUCT DETAILS		UNIT	SPECIFICATION					
2.01	Model			WB0065	WB0070	WB0075	WB0080	WB0100	WB0100/2
2.02	Type			Wide range mechanical coupling					
2.03	Standard Rated Pressure		kPa	1600	1600	1600	1600	1600	1600
2.04	Face to Face Length (FTF)	L2	mm	210	260	260	260	260	260
2.05	Bolt Length	L1	mm	210	260	260	260	260	260
2.06	Sleeve Length and thickness	A x T	mm	130 x 4.5	130 x 4.5	130 x 4.5	130 x 4.5	130 x 4.5	130 x 4.5
2.07	Setting Gap Minimum Straight line		mm	20	20	20	20	20	20
2.08	Setting Gap Maximum Straight line		mm	40	40	40	40	40	40
3	CONSTRUCTION MATERIALS		UNIT	SPECIFICATION					
3.01	Clamping Rings			Mild Steel to BS EN 10025:2004 or Grade CQ					
3.02	Sleeve			Mild Steel to BS EN 10025:2004 or Grade CQ					
3.03	Clamping Bolts			Steel to BS970 Grade 070, hot dipped galvanised to SANS763					
3.04	Rubber Rings			EPDM Grade E to BS 2494 1990 or SANS974 Related ISO4633					
3.05	Coating Material			Fusion Bonded Epoxy to SABS 1217 to a minimum thickness of 250 microns					
3.06	Lining Material			Fusion Bonded Epoxy to SABS 1217 to a minimum thickness of 250 microns					
4	GENERAL DETAILS		UNIT	SPECIFICATION					
4.01	Total Weight		kg	3.6	3.9	4.7	4.7	5.7	5.7
4.02	Uninstalled length including bolts	L1	mm	170	170	170	170	170	170
4.03	Uninstalled length excluding bolts	L2	mm	180	190	190	190	190	190

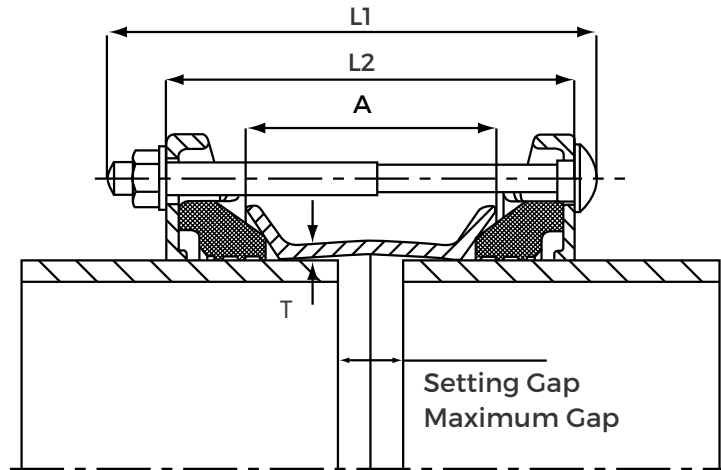
Standard working pressure PN16  
 Test pressure = 1.5 x WP = PN24  
 Higher pressures available on request  
 Long barrel sleeves available on request



1 MEDIUM DETAILS	REF	UNIT	SPECIFICATION						
1.01 Medium			Potable						
1.02 Operating Temperature		deg C	-40 to +90						
2 PRODUCT DETAILS		UNIT	SPECIFICATION						
2.01 Model			WB0125	WB0150	WB0150/2	WB0150/3	WB0175	WB0200	
2.02 Type			Wide range mechanical coupling						
2.03 Standard Rated Pressure		kPa	1600	1600	1600	1600	1600	1600	
2.04 Face to Face Length (FTF)	L2	mm	260	260	260	260	260	260	
2.05 Bolt Length	L1	mm	260	260	260	260	260	260	
2.06 Sleeve Length and thickness	A x T	mm	160 x 4.5	160 x 4.5	160 x 4.5	160 x 4.5	160 x 4.5	160 x 4.5	
2.07 Setting Gap Minimum Straight line		mm	20	20	20	20	20	20	
2.08 Setting Gap Maximum Straight line		mm	40	40	40	40	40	40	
3 CONSTRUCTION MATERIALS		UNIT	SPECIFICATION						
3.01 Clamping Rings			Mild Steel to BS EN 10025:2004 or Grade CQ						
3.02 Sleeve			Mild Steel to BS EN 10025:2004 or Grade CQ						
3.03 Clamping Bolts			Steel to BS970 Grade 070, hot dipped galvanised to SANS763						
3.04 Rubber Rings			EPDM Grade E to BS 2494 1990 or SANS974 Related ISO4633						
3.05 Coating Material			Fusion Bonded Epoxy to SABS 1217 to a minimum thickness of 250 microns						
3.06 Lining Material			Fusion Bonded Epoxy to SABS 1217 to a minimum thickness of 250 microns						
4 GENERAL DETAILS		UNIT	SPECIFICATION						
4.01 Total Weight		kg	38	38	38	38	38	38	
4.02 Uninstalled length including bolts	L1	mm	260	260	260	260	260	260	
4.03 Uninstalled length excluding bolts	L2	mm	190	190	190	190	190	190	

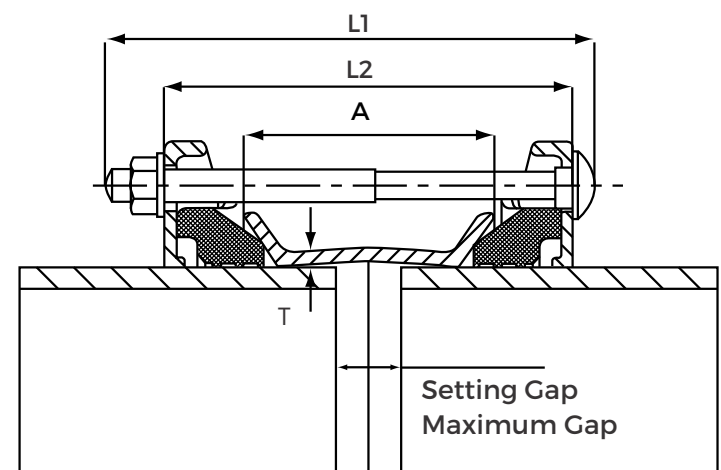
Standard working pressure PN16  
 Test pressure = 1.5 x WP = PN24  
 Higher pressures available on request





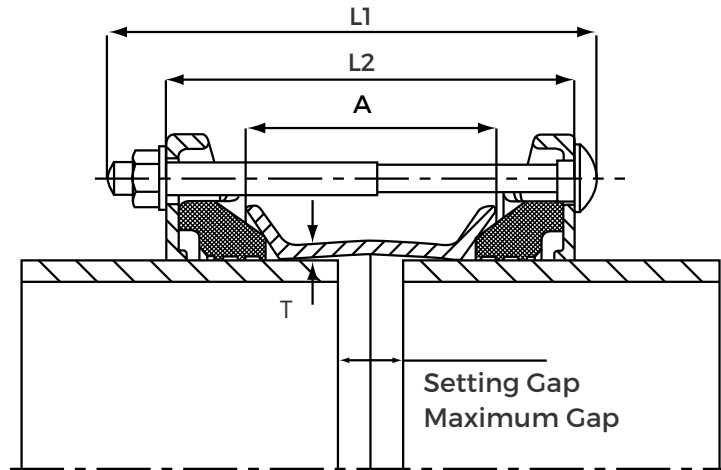
1	MEDIUM DETAILS	REF	UNIT	SPECIFICATION					
1.01	Medium			Potable					
1.02	Operating Temperature		deg C	-40 to +90					
2	PRODUCT DETAILS		UNIT	SPECIFICATION					
2.01	Model			WB0225	WB0225/2	WB0250	WB0250/2	WB0275	WB0300
2.02	Type			Wide range mechanical coupling					
2.03	Standard Rated Pressure		kPa	1600	1600	1600	1600	1600	1600
2.04	Face to Face Length (FTF)	L2	mm	260	260	260	260	260	260
2.05	Bolt Length	L1	mm	260	260	260	260	260	260
2.06	Sleeve Length and thickness	A x T	mm	160 x 4.5	160 x 4.5	160 x 4.5	160 x 4.5	160 x 4.5	160 x 4.5
2.07	Setting Gap Minimum Straight line		mm	20	20	20	20	20	20
2.08	Setting Gap Maximum Straight line		mm	40	40	40	40	40	40
3	CONSTRUCTION MATERIALS		UNIT	SPECIFICATION					
3.01	Clamping Rings			Mild Steel to BS EN 10025:2004 or Grade CQ					
3.02	Sleeve			Mild Steel to BS EN 10025:2004 or Grade CQ					
3.03	Clamping Bolts			Steel to BS970 Grade 070, hot dipped galvanised to SANS763					
3.04	Rubber Rings			EPDM Grade E to BS 2494 1990 or SANS974 Related ISO4633					
3.05	Coating Material			Fusion Bonded Epoxy to SABS 1217 to a minimum thickness of 250 microns					
3.06	Lining Material			Fusion Bonded Epoxy to SABS 1217 to a minimum thickness of 250 microns					
4	GENERAL DETAILS		UNIT	SPECIFICATION					
4.01	Total Weight		kg	38	38	38	38	38	38
4.02	Uninstalled length including bolts	L1	mm	260	260	260	260	260	260
4.03	Uninstalled length excluding bolts	L2	mm	190	190	190	190	190	190

Standard working pressure PN16  
 Test pressure = 1.5 x WP = PN24  
 Higher pressures available on request  
 Long barrel sleeves available on request



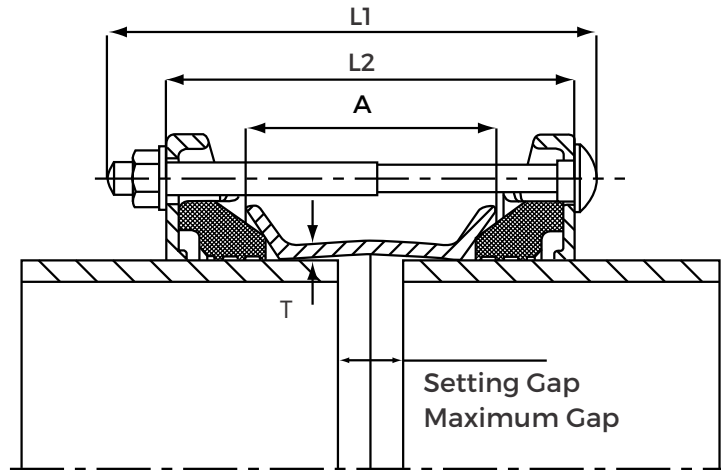
1 MEDIUM DETAILS	REF	UNIT	SPECIFICATION					
1.01 Medium			Potable					
1.02 Operating Temperature		deg C	-40 to +90					
2 PRODUCT DETAILS		UNIT	SPECIFICATION					
2.01 Model			WB0300/2	WB0300/3	WB0350	WB0350/2	WB0400	WB0400/2
2.02 Type			Wide range mechanical coupling					
2.03 Standard Rated Pressure		kPa	1600	1600	1600	1600	1600	1600
2.04 Face to Face Length (FTF)	L2	mm	260	260	260	260	260	260
2.05 Bolt Length	L1	mm	260	260	260	260	260	260
2.06 Sleeve Length and thickness	A x T	mm	160 x 4.5	160 x 4.5	160 x 4.5	160 x 4.5	160 x 4.5	160 x 4.5
2.07 Setting Gap Minimum Straight line		mm	20	20	20	20	20	20
2.08 Setting Gap Maximum Straight line		mm	40	40	40	40	40	40
3 CONSTRUCTION MATERIALS		UNIT	SPECIFICATION					
3.01 Clamping Rings			Mild Steel to BS EN 10025:2004 or Grade CQ					
3.02 Sleeve			Mild Steel to BS EN 10025:2004 or Grade CQ					
3.03 Clamping Bolts			Steel to BS970 Grade 070, hot dipped galvanised to SANS763					
3.04 Rubber Rings			EPDM Grade E to BS 2494 1990 or SANS974 Related ISO4633					
3.05 Coating Material			Fusion Bonded Epoxy to SABS 1217 to a minimum thickness of 250 microns					
3.06 Lining Material			Fusion Bonded Epoxy to SABS 1217 to a minimum thickness of 250 microns					
4 GENERAL DETAILS		UNIT	SPECIFICATION					
4.01 Total Weight		kg	38	38	38	38	38	38
4.02 Uninstalled length including bolts	L1	mm	260	260	260	260	260	260
4.03 Uninstalled length excluding bolts	L2	mm	190	190	190	190	190	190

Standard working pressure PN16  
 Test pressure = 1.5 x WP = PN24  
 Higher pressures available on request



1	MEDIUM DETAILS	REF	UNIT	SPECIFICATION					
1.01	Medium			Potable					
1.02	Operating Temperature		deg C	-40 to +90					
2	PRODUCT DETAILS		UNIT	SPECIFICATION					
2.01	Model			WB0400/3	WB0400/4	WB0450	WB0450/2	WB0450/3	WB0450/4
2.02	Type			Wide range mechanical coupling					
2.03	Standard Rated Pressure		kPa	1600	1600	1600	1600	1600	1600
2.04	Face to Face Length (FTF)	L2	mm	260	260	260	260	260	260
2.05	Bolt Length	L1	mm	260	260	260	260	260	260
2.06	Sleeve Length and thickness	A x T	mm	160 x 4.5	160 x 4.5	160 x 4.5	160 x 4.5	160 x 4.5	160 x 4.5
2.07	Setting Gap Minimum Straight line		mm	20	20	20	20	20	20
2.08	Setting Gap Maximum Straight line		mm	40	40	40	40	40	40
3	CONSTRUCTION MATERIALS		UNIT	SPECIFICATION					
3.01	Clamping Rings			Mild Steel to BS EN 10025:2004 or Grade CQ					
3.02	Sleeve			Mild Steel to BS EN 10025:2004 or Grade CQ					
3.03	Clamping Bolts			Steel to BS970 Grade 070, hot dipped galvanised to SANS763					
3.04	Rubber Rings			EPDM Grade E to BS 2494 1990 or SANS974 Related ISO4633					
3.05	Coating Material			Fusion Bonded Epoxy to SABS 1217 to a minimum thickness of 250 microns					
3.06	Lining Material			Fusion Bonded Epoxy to SABS 1217 to a minimum thickness of 250 microns					
4	GENERAL DETAILS		UNIT	SPECIFICATION					
4.01	Total Weight		kg	38	38	38	38	38	38
4.02	Uninstalled length including bolts	L1	mm	260	260	260	260	260	260
4.03	Uninstalled length excluding bolts	L2	mm	190	190	190	190	190	190

Standard working pressure PN16  
 Test pressure = 1.5 x WP = PN24  
 Higher pressures available on request  
 Long barrel sleeves available on request



1	MEDIUM DETAILS	REF	UNIT	SPECIFICATION					
1.01	Medium			Potable					
1.02	Operating Temperature		deg C	-40 to +90					
2	PRODUCT DETAILS		UNIT	SPECIFICATION					
2.01	Model			WB0500	WB0500/2	WB0500/3	WB0550	WB0600	WB0600/2
2.02	Type			Wide range mechanical coupling					
2.03	Standard Rated Pressure		kPa	1600	1600	1600	1600	1600	1600
2.04	Face to Face Length (FTF)	L2	mm	260	260	260	260	260	260
2.05	Bolt Length	L1	mm	260	260	260	260	260	260
2.06	Sleeve Length and thickness	A x T	mm	160 x 4.5	160 x 4.5	160 x 4.5	160 x 4.5	160 x 4.5	160 x 4.5
2.07	Setting Gap Minimum Straight line		mm	20	20	20	20	20	20
2.08	Setting Gap Maximum Straight line		mm	40	40	40	40	40	40
3	CONSTRUCTION MATERIALS		UNIT	SPECIFICATION					
3.01	Clamping Rings			Mild Steel to BS EN 10025:2004 or Grade CQ					
3.02	Sleeve			Mild Steel to BS EN 10025:2004 or Grade CQ					
3.03	Clamping Bolts			Steel to BS970 Grade 070, hot dipped galvanised to SANS763					
3.04	Rubber Rings			EPDM Grade E to BS 2494 1990 or SANS974 Related ISO4633					
3.05	Coating Material			Fusion Bonded Epoxy to SABS 1217 to a minimum thickness of 250 microns					
3.06	Lining Material			Fusion Bonded Epoxy to SABS 1217 to a minimum thickness of 250 microns					
4	GENERAL DETAILS		UNIT	SPECIFICATION					
4.01	Total Weight		kg	38	38	38	38	38	38
4.02	Uninstalled length including bolts	L1	mm	260	260	260	260	260	260
4.03	Uninstalled length excluding bolts	L2	mm	190	190	190	190	190	190

Standard working pressure PN16  
 Test pressure = 1.5 x WP = PN24  
 Higher pressures available on request  
 Long barrel sleeves available on request

While every effort has been made to ensure that the information in this document is correct and accurate at the time of publishing, WELBRO assumes no responsibility or liability for typographical errors or omissions or of for any misinterpretation of the information contained within the publication and reserves the right to change any information contained herein without notice.

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Alberton North

### **Website**

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