UltraGrip®

DN1200

Couplings & Flange Adaptors

GB – INSTALLATION INSTRUCTIONS

VIKING JOHNSON®

PIONEERS IN PIPE SOLUTIONS

ULTRAGRIP COUPLINGS DN1200

Pipe materials, insertion depths and bolt diameters for UltraGrip products

Table 1.

Nom Size	O.D. Range (mm)	Axial Fastener		Radial Fastener					Setting Gap (mm)		Insertion Depth (mm)		Pressure Rating for Water	
		Stud Size	Recommended Bolt Torque (Nm)	Bolt Size	Recommended Bolt Torque (Nm) for Ductile Iron	Recommended Bolt Torque (Nm) for PE	Recommended Bolt Torque (Nm) for Steel & Cast Iron*	Recommended Bolt Torque (Nm) for MOPVC	A (min)	B (max)	X (min)	M (max)	Gripping Product	Flex Product
DN1200	1190-1225	M20	190-210	M16	N/A	140-150	N/A	N/A	165	375	220	245	10 bar	

WARNING: Not conforming to torque requirements for different pipe materials can result in pipe slippage and / or pipe damage.

Table 2.

Pipe Materials	Gripping	Non-Gripping	Support Liner Required
Steel	✗	✗	
Ductile Iron	✗	✗	
Cast Iron	✗	✗	
MOPVC	✗	✗	
PE100	✓	✓	✓
PE Barrier Pipe	✗	✗	
Asbestos Cement	✗	✗	

NOTES

These instructions relate to the UltraGrip range of couplings for use on the pipe materials noted in the table. UltraGrip is supplied fully assembled for use as an end restraint (gripping) product and should not be dismantled prior to installation, unless it is to be used as a flexible (non gripping) product in which case the gripper bolts should not be torqued.

Site test pressure = 1.5 times working pressure
Thick pipe coatings and protective wrappings must always be removed.

Above ground exposed pipework is subject to both loads from the internal pressure and those from temperature changes / thermal expansion, which can be substantially higher than those from internal pressure and cannot always be safely determined. UltraGrip can be used in above ground applications, where it is not exposed to direct sunlight, and falls within the 40 degrees operating temperature range (between -20 and +60).

*110-120 torque rating for cast iron pipes assumes the cast iron has a wall thickness of 32mm and in a condition where the structural strength has not been compromised. For thinner wall cast iron pipes, please contact Viking Johnson for a recommended bolt torque.

Fig. 1

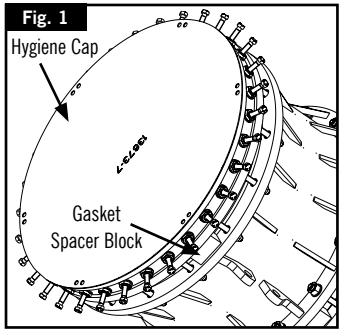


Fig. 2

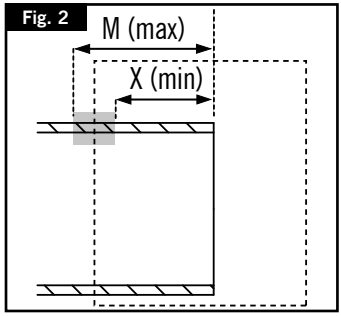


Fig. 3

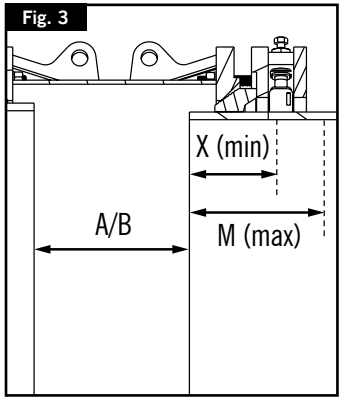
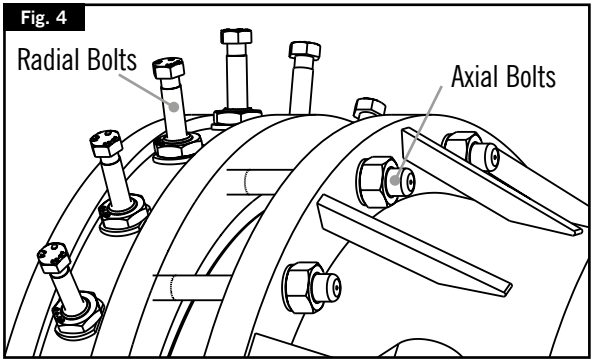


Fig. 4



ULTRAGRIP COUPLINGS DN1200

Installation Instructions

1. Check that pipe material and size are suitable for the UltraGrip Coupling. For PE always use a support liner. (See pages 8-9)

2. Examine pipe ends and ensure that pipe surfaces are clean and free from score marks, scale, rust or any loose debris or other surface defect that may affect fitting performance. Weld beads must be ground flush, maintaining correct surface profile. Thick pipe coatings or wrappings must always be removed. UltraGrip must sit either on to the bare pipe surface or on a thin paint film.

3. **Hazard Warning:** Lifting lugs, where provided, are designed/tested for lifting only the product to which they are attached. Failure to follow these instructions could result in serious personal injury or death, or property damage.

   Ensure that you are trained, competent and familiar with the lifting appliance and accessories to be used. Ensure that the correct equipment is used and is marked with its WLL (Working Load Limit) or tables are available to determine the WLL. Ensure that you visually inspect the lifting gear and accessories before proceeding with the lift, discarding defective equipment. Ensure work is within the WLL for the equipment. Do not use equipment that is faulty, or operate it beyond the WLL. It must be examined by a competent inspection engineer and re-certificated. Only undertake slinging and banksman's duties if you are competent and have been trained. This must be provided by a recognised training provider. Never walk underneath or slew a load over a person.

4. All UltraGrip couplings incorporate hygiene protective caps (which consist of bio-degradable tie-wraps and bio-degradable water resistant cardboard) to prevent contamination. This must be removed prior to fitment (Fig 1). Gasket spacer block (Fig 1) should NOT be removed at this point.

5. To ensure correct installation, mark the minimum and maximum pipe insertion depths obtained from Table 1 around the full circumference of both pipe ends as shown in Fig.2.

6. Align pipe to be laid with pipe already in position, taking care that pipe ends are concentric, adjusting support or trench bed as necessary.

7. Slide the mechanical coupling onto one of the pipe spigot ends. Once the coupling is slid over the pipe, reposition the coupling so the mechanical fitting is centrally placed over the gap between two pipes. Bring the pipes into position until the distance between X (min) and M (max) as shown in Fig 3 using depths obtained from Table 1. - adjust if necessary. Check that the two pipe ends and the coupling are on the same axis. Use supports if necessary.

8. All UltraGrip DN1200 couplings incorporate gasket spacer blocks (Fig.1) which prevent the end rings from collapsing during transportation. This must be removed prior to fitment at this stage.

9. Tighten diametrically opposed nuts of the axial fasteners as per Fig 4, giving each nut one or two turns at a time to draw up the end ring evenly. All nuts are required to be tightened up as many times as necessary to achieve the required torque (Ref Table 1). On completion, there should be an even radial gap between pipe and end ring of the fitting, with all of the M (max) line being visible and none of the X (min) line visible.

10. Decide now what type of connection is required: GRIPPING or NON-GRIPPING:-

    a. GRIPPING - When used as a gripping type, tighten diametrically opposed bolts of the radial fasteners as per Fig 4, giving each nut one or two turns at a time to engage the grippers evenly. All nuts are required to be tightened up as many times as necessary to achieve the required torque (Ref Table 1).

    b. NON-GRIPPING - When used as a non-gripping type, the radial fasteners must not be torqued. When installed as a flexible (non-gripping) product UltraGrip does not prevent pipe pull-out and adequate external restrain has to be provided.

ULTRAGRIP FLANGE ADAPTORS PN16 DN1200

Pipe materials, insertion depths and bolt diameters for UltraGrip products

Table 3.

Nom Size	O.D. Range (mm)	Flange Nom Size	Axial Fastener		Radial Fastener					Setting Gap (mm)		Insertion Depth (mm)		Pressure Rating for Water	
			Stud Size	Recommended Bolt Torque (Nm)	Bolt Size	Recommended Bolt Torque (Nm) for Ductile Iron	Recommended Bolt Torque (Nm) for PE	Recommended Bolt Torque (Nm) for Steel & Cast Iron*	Recommended Bolt Torque (Nm) for MOPVC	A (min)	B (max)	X (min)	M (max)	Gripping Product	Flex Product
DN1200	1090-1225	1200	M20	190-210	M16	N/A	140-150	N/A	N/A	375	400	220	245	10 bar	

WARNING: Not conforming to torque requirements for different pipe materials can result in pipe slippage and / or pipe damage.

Table 4.

Pipe Materials	Gripping	Non-Gripping	Support Liner Required
Steel	✗	✗	
Ductile Iron	✗	✗	
Cast Iron	✗	✗	
MOPVC	✗	✗	
PE100	✓	✓	✓
PE Barrier Pipe	✗	✗	
Asbestos Cement	✗	✗	

NOTES

These instructions relate to the UltraGrip range of Flange Adaptors for use on the pipe materials noted in the table. UltraGrip is supplied fully assembled for use as an end restraint (gripping) product and should not be dismantled prior to installation, unless it is to be used as a flexible (non gripping) product in which case the gripper bolts should not be torqued.

Site test pressure = 1.5 times working pressure
Thick pipe coatings and protective wrappings must always be removed.

Above ground exposed pipework is subject to both loads from the internal pressure and those from temperature changes / thermal expansion, which can be substantially higher than those from internal pressure and cannot always be safely determined. UltraGrip can be used in above ground applications, where it is not exposed to direct sunlight, and falls within the 40 degrees operating temperature range (between -20 and +60).

*110-120 torque rating for cast iron pipes assumes the cast iron has a wall thickness of 32mm and in a condition where the structural strength has not been compromised. For thinner wall cast iron pipes, please contact Viking Johnson for a recommended bolt torque.

Fig. 1

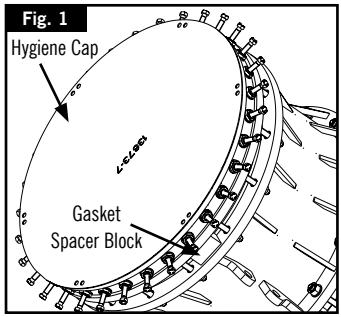


Fig. 2

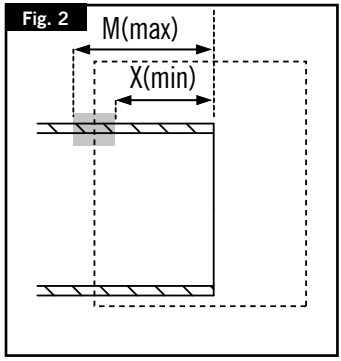


Fig. 4

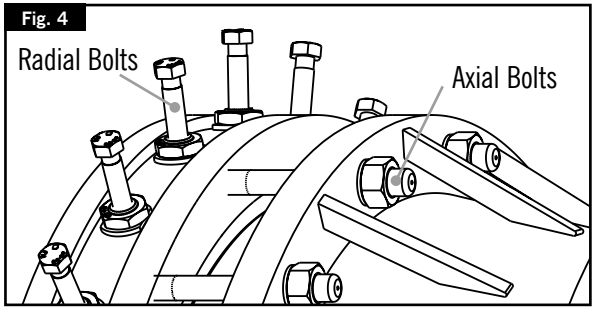
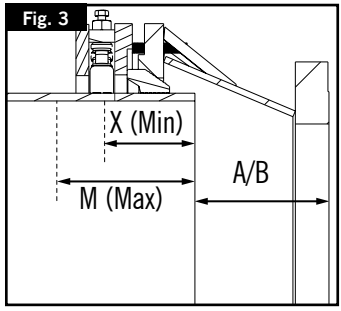


Fig. 3



ULTRAGRIP FLANGE ADAPTORS PN16 DN1200

Installation Instructions

1. Check that pipe material and size are suitable for the UltraGrip Flange Adaptor. For PE always use a support liner. (See pages 8-9)

2. Examine pipe ends and ensure that pipe surfaces are clean and free from score marks, scale, rust or any loose debris or other surface defect that may affect fitting performance. Weld beads must be ground flush, maintaining correct surface profile. Thick pipe coatings or wrappings must always be removed. UltraGrip must sit either on to the bare pipe surface or on a thin paint film.

3. **Hazard Warning:** Lifting lugs, where provided, are designed/tested for lifting only the product to which they are attached. Failure to follow these instructions could result in serious personal injury or death, or property damage.

   Ensure that you are trained, competent and familiar with the lifting appliance and accessories to be used. Ensure that the correct equipment is used and is marked with its WLL (Working Load Limit) or tables are available to determine the WLL. Ensure that you visually inspect the lifting gear and accessories before proceeding with the lift, discarding defective equipment. Ensure work is within the WLL for the equipment. Do not use equipment that is faulty, or operate it beyond the WLL. It must be examined by a competent inspection engineer and re-certificated. Only undertake slinging and banksman's duties if you are competent and have been trained. This must be provided by a recognised training provider. Never walk underneath or slew a load over a person.

4. All UltraGrip Flange Adaptors incorporate hygiene protective caps (which consist of bio-degradable tie-wraps and bio-degradable water resistant cardboard) to prevent contamination. This must be removed prior to fitment (Fig 1). Gasket spacer block (Fig 1) should NOT be removed at this point.

5. To ensure correct installation, mark the minimum and maximum pipe insertion depths obtained from Table 3 around the full circumference of both pipe ends as shown in Fig.2.

6. Slide the UltraGrip Flange Adaptor onto pipe end. Align the pipe and UltraGrip Flange Adaptor with mating flange, fit flange connecting gasket (Viking Johnson recommend using an IBC gasket for optimum sealing) and flange connecting bolts. Ensure pipe is inserted to a depth between X (min) and M (max) as shown in Fig 3 using depths obtained from Table 3. – adjust if necessary. Tighten flange connecting bolts using standard procedures. If the mechanical fitting is being installed on plain ended pipe. The end of the product should sit between the minimum and maximum insertion depth X (min) and M (max) (Refer table 3).

7. All UltraGrip flange adaptors incorporate gasket spacer blocks (Fig.1) which prevent the end rings from collapsing during transportation. These must be removed prior to fitment at this stage.

8. Tighten diametrically opposed nuts of the axial fasteners as per Fig 4, giving each nut one or two turns at a time to draw up the end ring evenly. All nuts are required to be tightened up as many times as necessary to achieve the required torque (Ref Table 3). On completion, there should be an even radial gap between pipe and end ring of the fitting, with all of the M (max) line being visible and none of the X (min) line visible.

9. Decide now what type of connection is required: GRIPPING or NON-GRIPPING:-

   a. GRIPPING - When used as a gripping type, tighten diametrically opposed bolts of the radial fasteners as per Fig 4, giving each bolt one or two turns at a time to engage the grippers evenly. All bolts are required to be tightened up as many times as necessary to achieve the required torque (Ref Table 3).

   b. NON-GRIPPING - When used as a non-gripping type, the radial fasteners must not be torqued. When installed as a flexible (non-gripping) product UltraGrip does not prevent pipe pull-out and adequate external restrain has to be provided.

ULTRAGRIP FLANGE ADAPTORS PN10 DN1200

Pipe materials, insertion depths and bolt diameters for UltraGrip products

Table 5.

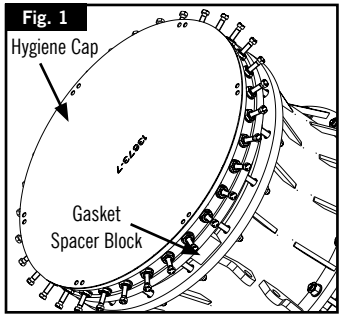
Nom Size	O.D. Range (mm)	Flange Nom Size	Axial Fastener		Radial Fastener					Setting Gap (mm)		Insertion Depth (mm)		Pressure Rating for Water	
			Stud Size	Recommended Bolt Torque (Nm)	Bolt Size	Recommended Bolt Torque (Nm) for Ductile Iron	Recommended Bolt Torque (Nm) for PE	Recommended Bolt Torque (Nm) for Steel & Cast Iron*	Recommended Bolt Torque (Nm) for MOPVC	A (min)	B (max)	X (min)	M (max)	Gripping Product	Flex Product
DN1200	1090-1225	1200	M20	190-210	M16	N/A	140-150	N/A	N/A	395	420	220	245	10 bar	

WARNING: Not conforming to torque requirements for different pipe materials can result in pipe slippage and / or pipe damage.

Table 6.

Pipe Materials	Gripping	Non-Gripping	Support Liner Required
Steel	✗	✗	
Ductile Iron	✗	✗	
Cast Iron	✗	✗	
MOPVC	✗	✗	
PE100	✓	✓	✓
PE Barrier Pipe	✗	✗	
Asbestos Cement	✗	✗	

Fig. 1



NOTES

These instructions relate to the UltraGrip range of Flange Adaptors for use on the pipe materials noted in the table. UltraGrip is supplied fully assembled for use as an end restraint (gripping) product and should not be dismantled prior to installation, unless it is to be used as a flexible (non gripping) product in which case the gripper bolts should not be torqued.

Site test pressure = 1.5 times working pressure
Thick pipe coatings and protective wrappings must always be removed.

Above ground exposed pipework is subject to both loads from the internal pressure and those from temperature changes / thermal expansion, which can be substantially higher than those from internal pressure and cannot always be safely determined. UltraGrip can be used in above ground applications, where it is not exposed to direct sunlight, and falls within the 40 degrees operating temperature range (between -20 and +60).

*110-120 torque rating for cast iron pipes assumes the cast iron has a wall thickness of 32mm and in a condition where the structural strength has not been compromised. For thinner wall cast iron pipes, please contact Viking Johnson for a recommended bolt torque.

Fig. 2

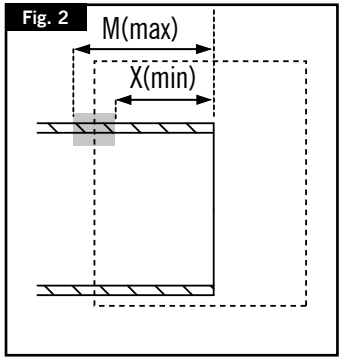


Fig. 4

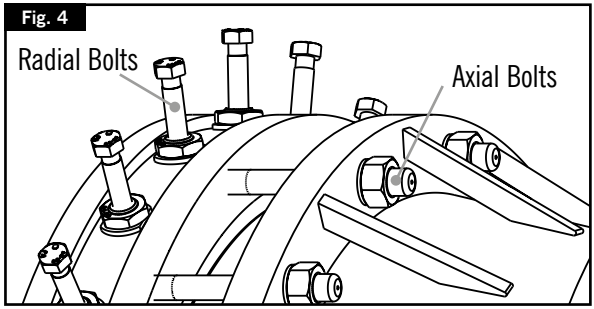
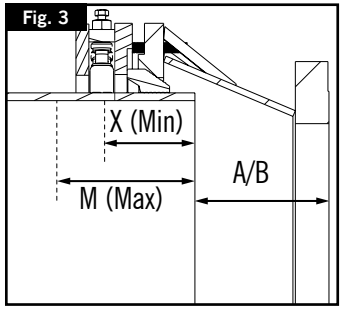


Fig. 3



ULTRAGRIP FLANGE ADAPTORS PN10 DN1200

Installation Instructions

1. Check that pipe material and size are suitable for the UltraGrip Flange Adaptor. For PE always use a support liner. (See pages 8-9)

2. Examine pipe ends and ensure that pipe surfaces are clean and free from score marks, scale, rust or any loose debris or other surface defect that may affect fitting performance. Weld beads must be ground flush, maintaining correct surface profile. Thick pipe coatings or wrappings must always be removed. UltraGrip must sit either on to the bare pipe surface or on a thin paint film.

3. **Hazard Warning:** Lifting lugs, where provided, are designed/tested for lifting only the product to which they are attached. Failure to follow these instructions could result in serious personal injury or death, or property damage.

   Ensure that you are trained, competent and familiar with the lifting appliance and accessories to be used. Ensure that the correct equipment is used and is marked with its WLL (Working Load Limit) or tables are available to determine the WLL. Ensure that you visually inspect the lifting gear and accessories before proceeding with the lift, discarding defective equipment. Ensure work is within the WLL for the equipment. Do not use equipment that is faulty, or operate it beyond the WLL. It must be examined by a competent inspection engineer and re-certificated. Only undertake slinging and banksman's duties if you are competent and have been trained. This must be provided by a recognised training provider. Never walk underneath or slew a load over a person.

4. All UltraGrip Flange Adaptors incorporate hygiene protective caps (which consist of bio-degradable tie-wraps and bio-degradable water resistant cardboard) to prevent contamination. This must be removed prior to fitment (Fig 1). Gasket spacer block (Fig 1) should NOT be removed at this point.

5. To ensure correct installation, mark the minimum and maximum pipe insertion depths obtained from Table 5 around the full circumference of both pipe ends as shown in Fig.2.

6. Slide the UltraGrip Flange Adaptor onto pipe end. Align the pipe and UltraGrip Flange Adaptor with mating flange, fit flange connecting gasket (Viking Johnson recommend using an IBC gasket for optimum sealing) and flange connecting bolts. Ensure pipe is inserted to a depth between X(min) and M(max) as shown in Fig 3 using depths obtained from Table 5 – adjust if necessary. Tighten flange connecting bolts using standard procedures. If the mechanical fitting is being installed on plain ended pipe. The end of the product should sit between the minimum and maximum insertion depth X(min) and M(max) (Refer table 5).

7. All UltraGrip flange adaptors incorporate gasket spacer blocks (Fig.1) which prevent the end rings from collapsing during transportation. These must be removed prior to fitment at this stage.

8. Tighten diametrically opposed nuts of the axial fasteners as per Fig 4, giving each nut one or two turns at a time to draw up the end ring evenly. All nuts are required to be tightened up as many times as necessary to achieve the required torque (Ref Table 5). On completion, there should be an even radial gap between pipe and end ring of the fitting, with all of the M(max) line being visible and none of the X(min) line visible.

9. Decide now what type of connection is required: GRIPPING or NON-GRIPPING:-

   a. GRIPPING - When used as a gripping type, tighten diametrically opposed bolts of the radial fasteners as per Fig 4, giving each bolt one or two turns at a time to engage the grippers evenly. All bolts are required to be tightened up as many times as necessary to achieve the required torque (Ref Table 5).

   b. NON-GRIPPING - When used as a non-gripping type, the radial fasteners must not be torqued. When installed as a flexible (non-gripping) product UltraGrip does not prevent pipe pull-out and adequate external restrain has to be provided.

ULTRAGRIP RILSAN COATED MILD STEEL SUPPORT LINERS FOR PE PIPE - DN1200

Fig. 1

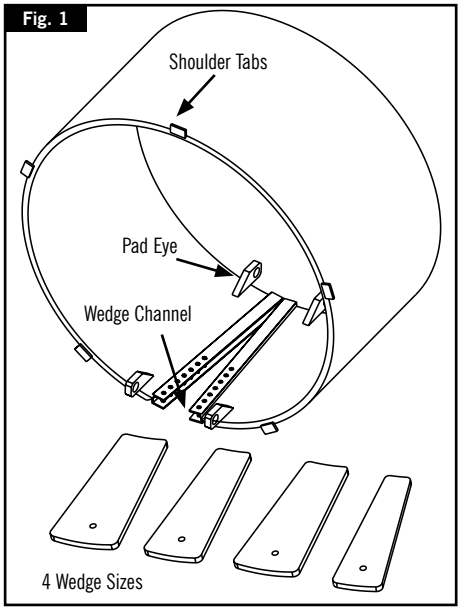


Fig. 2

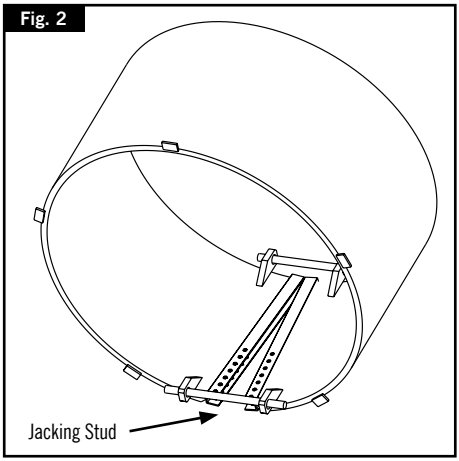


Fig. 3

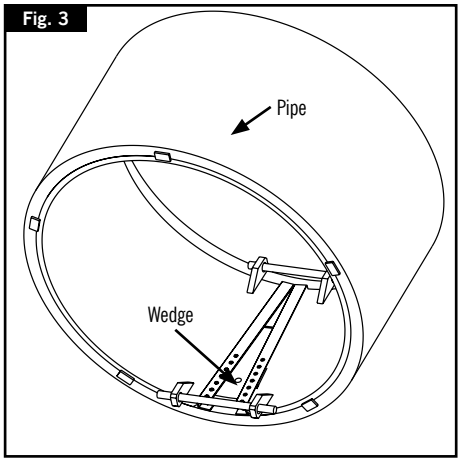
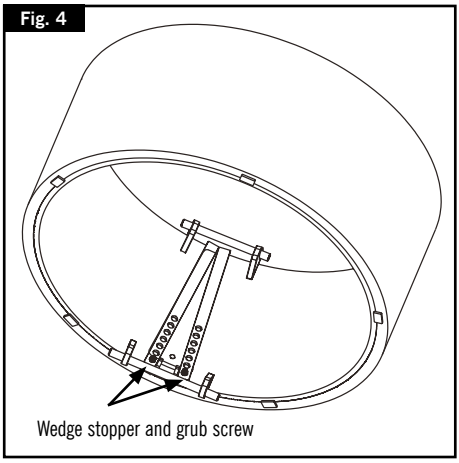


Fig. 4



ULTRAGRIP RILSAN COATED MILD STEEL SUPPORT LINERS FOR PE PIPE - DN1200

Installation Instructions

1. Check that the support liner and wedges are suitable for pipe OD and wall thickness.
2. Measure bore of pipe and select correct wedge from the set of 4 supplied (See Table 7 for PE).
3. Insert the liner into the bore of the pipe until the shoulder tabs butt against the pipe end.
4. Fit the appropriate jacking stud through the pad eyes in the liner (Fig 2).
5. Using the nuts on the studs, expand the liner until it contacts the pipe bore.
6. Insert the appropriate wedge into the channel of the liner.
7. Tap wedge until liner is fully expanded against pipe bore.(Fig 3)
8. Use the wedge stoppers and align the stopper with a hole in the channel.
9. Use a grub screw and the allen key to retain the stopper in place. (Fig 4)
10. Slacken off the nuts on the jacking studs and remove jacking studs and nuts.

WARNING: Damage to the wedge or liner coating will result into rusting of the product; utmost care must be taken when inserting the wedges in the liners to avoid damaging the coating.

Table 7.

Pipe code	Pipe size	Pipe OD		Pipe ID		Wedge 1				Wedge 2				Wedge 3				Wedge 4			
	(mm)	Min (mm)	Max (mm)	Min (mm)	Max (mm)	Min ID (mm)	Max ID (mm)	Short Edge (mm)	Long Edge (mm)	Min ID (mm)	Max ID (mm)	Short Edge (mm)	Long Edge (mm)	Min ID (mm)	Max ID (mm)	Short Edge (mm)	Long Edge (mm)	Min ID (mm)	Max ID (mm)	Short Edge (mm)	Long Edge (mm)
PE Support Liners																					
1200-SDR 17	1200	1200	1210	1031	1070	1032	1043	50	100	1044	1055	88	138	1050	1062	107	157	1056	1069	126	176
1200-SDR 21	1200	1200	1210	1074	1096	1063	1073	50	100	1074	1084	85	135	1079	1090	103	153	1085	1096	120	170
1200-SDR 26	1200	1200	1210	1098	1118	1088	1097	50	100	1098	1107	82	132	1103	1113	98	148	1108	1118	114	164
1200-SDR 33	1200	1200	1210	1111	1138	1112	1119	50	100	1120	1127	76	126	1124	1132	89	139	1128	1137	102	152

Notes

Notes

www.vikingjohnson.com/ultragrip

YouTube

To visit our Video Library go to:
http://www.youtube.com/user/CraneBSU

DR11915C_18_03_2026_C/FA_REV01_GB

VIKING JOHNSON®

46-48 WILBURY WAY
HITCHIN,
HERTFORDSHIRE
SG4 0UD. UK

TELEPHONE: +44 (0)1462 443322
FAX: +44 (0)1462 443311
EMAIL: info@vikingjohnson.com
www.vikingjohnson.com