

NEXT

Generation UltraGrip

Installation Instructions

DN40 to DN600



Reducing Couplings, Reducers & End Caps

INSTALLATION INSTRUCTIONS – GB



PIONEERS IN PIPE SOLUTIONS



Table 1 – Reducing Couplings

Nom Size		Size Range				Insertion Depth (T)				Bolts				Weight Kg
Small End	Large End	Small End		Large End		Small End		Large End		Small End		Large End		
		Min	Max	Min	Max	Min	Max	Min	Max	Size	Type	Size	Type	
32	40	36.0	46.0	43.5	63.5	65	95	65	95	3-M12x70	CSX	3-M12x70	CSX	5.1
80	100	85.7	107.0	107.0	133.2	65	95	90	125	3-M12x70	HRH	3-M16x93	CSX	11.4
100	125	107.0	133.2	132.2	160.2	90	125	90	115	3-M16x93	CSX	3-M16x93	CSX	14.9
100	150	107.0	133.2	158.2	192.2	90	115	90	135	3-M16x93	CSX	4-M16x93	CSX	17.9
125	150	132.2	160.2	158.2	192.2	90	115	90	135	3-M16x93	CSX	4-M16x93	CSX	18.3
150	175	158.2	192.2	192.2	226.9	90	125	125	165	4-M16x93	CSX	5-M16x93	CSX	27.2
175	200	192.2	226.9	218.1	256.0	125	155	125	165	5-M16x93	CSX	5-M16x93	CSX	34.7
200	250	218.1	256.0	266.2	310.0	125	165	125	165	5-M16x93	CSX	6-M16x120	CSX	44.5
250	300	266.2	310.0	315.0	356.0	125	165	125	200	6-M16x120	CSX	8-M16x120	CSX	58.4
400	450	398.2	440.0	448.0	492.0	125	200	125	200	10-M16x120	CSX	12-M16x140	HRH	117.2
500	500	498.0	552.0	558.0	608.0	140	215	140	215	9-M20x150	HRH	10-M20x150	HRH	167.8
600	600	604.0	648.0	676.0	726.0	195	255	195	255	12-M20x150	HRH	14-M20x150	HRH	259.0

Table 2.

Pipe Materials	Gripping	Non-Gripping	Support Liner Required
Steel	✓	✓	
Ductile Iron	✓	✓	
Cast Iron	✓	✓	
PVC Class 4 DIN8062	✓	✓	
PVC - all other classes	✓	✓	✓
PE80 & PE100	✓	✓	✓
PE Barrier Pipe	N/A	N/A	N/A
Asbestos Cement		✓	

Table 3 – End Caps

Nom Size	Size Range		Insertion Depth (T)		Boss				Bolts		Weight Kg
	Min	Max	Min	Max	Axial		Radial		No-size	Type	
					Min BSP	Max BSP	Min BSP	Max BSP			
40	43.5	63.5	65	95	1/2"	2"	1/2"	3/4"	3-M12x70	CSX	3.3
65	63.0	83.7	65	95	1/2"	2"	1/2"	3/4"	3-M12x70	CSX	3.9
80	85.7	107.0	65	110	1/2"	2"	1/2"	3/4"	3-M12x70	CSX	4.8
100	107.0	133.2	90	125	1/2"	2"	1/2"	1"	3-M16x93	CSX	8.4
125	132.2	160.2	90	125	1/2"	2"	1/2"	1"	3-M16x93	CSX	10.1
150	158.2	192.2	90	135	1/2"	2"	1/2"	1"	4-M16x93	CSX	12.6
175	192.2	226.9	125	165	1/2"	2"	1/2"	1"	5-M16x93	CSX	19.5
200	218.1	256.0	125	165	1/2"	2"	1/2"	1 1/2"	5-M16x93	CSX	21.4
250	266.2	310.0	125	165	1/2"	2"	1/2"	2"	6-M16x120	CSX	32.4
300	315.0	356.0	125	200	1/2"	2"	1/2"	2"	8-M16x120	CSX	39.2

Table 4.

Pipe Materials	Gripping	Non-Gripping	Support Liner Required
Steel	✓	✓	
Ductile Iron	✓	✓	
Cast Iron	✓	✓	
PVC Class 4 DIN8062	✓	✓	
PVC - all other classes	✓	✓	✓
PE80 & PE100	✓	✓	✓
PE Barrier Pipe	N/A	N/A	N/A
Asbestos Cement		✓	

Table 5 – Pecatadaptors

Nom Size	Size Range		PE		Insertion Depth (T)		Bolts		Weight Kg
	Min	Max	Size	Sdr	Min	Max	Size	Type	
80	85.7	107.0	90	11	65	95	3-M12x70	HRH	7.4
100	107.0	133.2	110	11	90	115	3-M16x93	CSX	12.2
100	107.0	133.2	125	11	90	115	3-M16x93	CSX	12.9
125	132.2	160.2	110	11	90	115	3-M16x93	CSX	13.8
125	132.2	160.2	125	11	90	115	3-M16x93	CSX	14.5
150	158.2	192.2	160	11	90	125	4-M16x93	CSX	20.7
150	158.2	192.2	180	11	90	125	4-M16x93	CSX	23.2
200	218.1	256.0	225	11	125	165	5-M16x93	CSX	36.2

Table 6.

Pipe Materials	Gripping	Non-Gripping	Support Liner Required
Steel	✓	✓	
Ductile Iron	✓	✓	
Cast Iron	✓	✓	
PVC Class 4 DIN8062	✓	✓	
PVC - all other classes	✓	✓	✓
PE80 & PE100	✓	✓	✓
PE Barrier Pipe	N/A	N/A	N/A
Asbestos Cement		✓	

Table 7 – Working Pressure & Temperature Ratings

Nominal Size	Gripping Product		Flex Product		Operating Temperature
	Gas	Water	Gas	Water	
DN40 to DN300	5bar	16bar	5bar	16bar	-20°C to +30°C
DN350 to DN400	5bar	10bar	5bar	10bar	
DN450 to DN600	N/A	10bar	N/A	10bar	

Bolt Torque	
	Nm
M12	55 - 70
M16	95 - 120
M20	200 - 230

NOTES

These instructions relate to the UltraGrip range of Reducing Couplings, PecatAdaptors and End Caps for use on the pipe materials noted in Table 2.

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 only components to be removed are the red grippers.

*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. For this reason it is recommended that the use of UltraGrip be restricted to buried pipelines, valve chambers and above ground indoor applications not exposed to direct sunlight or excessive temperature changes (e.g. pump houses).

INSTALLATION OF ULTRAGRIP REDUCING COUPLINGS, PECATADAPTORS & END CAPS

1. Check that pipe material and size are suitable for the UltraGrip Reducing Couplings/ PecatAdaptors / End Caps. For PE pipe always use a support liner, for PVC pipe use a support liner when required. See tables 1, 3 and 5.
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 seat either on to the bare pipe surface or on a thin paint film.
3. Safe Handling Measures: When manoeuvring the product from packaging to pipe surface, please ensure that correct manual handling procedures are adopted. When mechanical lifting aids are required, ensure that the use of safe working practices is adopted and all lifting equipment is rated for the loads.
4. All UltraGrip couplings incorporate hygiene protective caps to prevent contamination. This must be removed prior to fitment (Fig 1a).
5. For Reducing Couplings, align pipe to be laid with pipe already in position, taking care that pipe ends are concentric, adjusting support or trench bed as necessary.

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

GRIPPING - When used as a gripping type (only for buried applications), the fitting must be installed as supplied, with the gripper strips in position (Fig.1b). Check if all grippers are inserted correctly.

NON-GRIPPING - When used as a non-gripping type, the gripper strips have to be removed. Simply slide out the gripper strips, see sketch (Fig.1c).

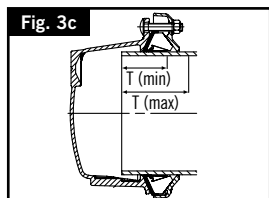
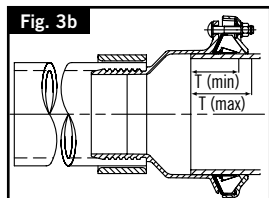
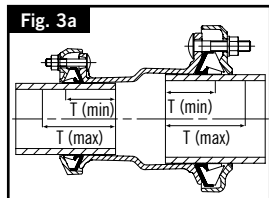
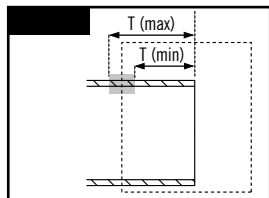
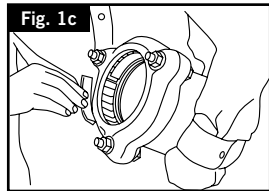
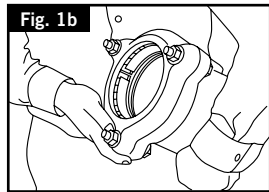
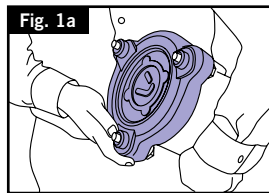
6. To aid installation, mark the minimum T (min) and maximum T (max) pipe insertion depths obtained from Table 1 (for Reducing Couplings), Table 3 (for End Caps) or Table 5 (for Pecatadaptors) on the pipe end as shown in Fig.2.

7. Installation of UltraGrip fitting on plain ended pipe:-

Reducing Couplings: Align the pipes and centralise the fitting over both ends, ensuring that both pipes are inserted to a depth between T (min) and T (max), as shown in Fig. 3a.

Pecatadaptor & End Caps: Slide the UltraGrip End Cap or Pecatadaptor onto pipe end. Ensure pipe is inserted to a depth between T (min) and T (max) as shown in Fig.3b & Fig.3c – adjust if necessary.

8. Before tightening the UltraGrip bolts ensure that each bolt head is captively secured. Tighten diametrically opposed bolts, giving each nut one or two turns at a time to draw up the end ring evenly, working around the fitting. Bolts to be tightened up as many times as necessary to achieve the required bolt torque (M12=55-70Nm / M16=95-120Nm / M20=200-230Nm). On completion, there should be an even radial gap between pipe and end ring of the fitting. Repeat the exercise on both ends of the Reducing Coupling.



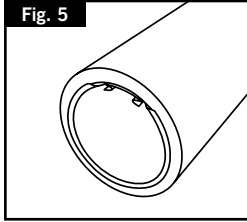
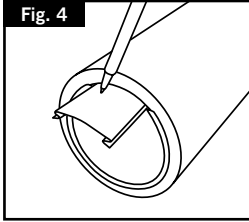
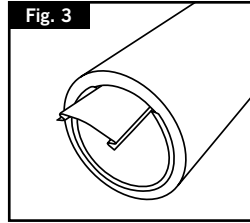
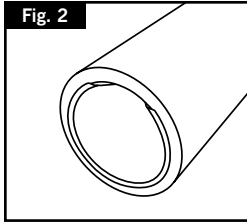
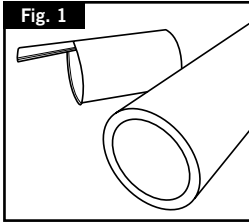
On completion only T (max) line must be visible





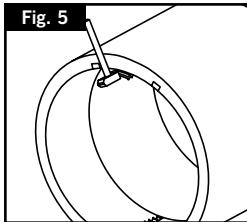
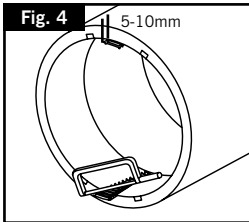
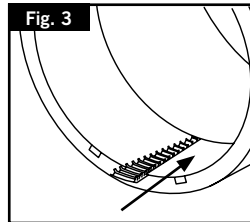
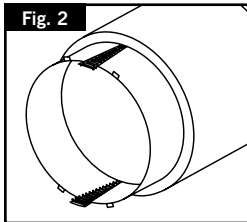
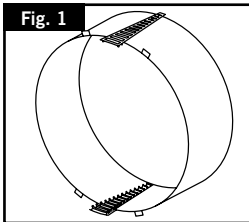
ULTRAGRIP STAINLESS STEEL SUPPORT LINERS FOR PE & PVC PIPE SIZES DN40 TO DN400

INSTALLATION INSTRUCTIONS - English



1. Check that the support liner and wedge are suitable for pipe OD and wall thickness.
2. Insert the liner body until the shoulder butts against the pipe end.
3. Insert the wedge until the body touches fully the pipe inside.
4. Mark the wedge 5-10mm from pipe surface. Remove wedge and cut off wedge at the mark.
5. Insert the wedge until face is equal to pipe surface.

SIZES DN450 & ABOVE



1. Check that the support liner and wedge assembly are suitable for pipe OD and wall thickness. (Liner specification details printed on wedge surface)
2. Offer the full assembly to the pipe, and insert until the shoulder tabs butt against the pipe end.
3. Slide each wedge evenly by hand into place, to the same distance, until the liner body makes contact with the inside pipe surface.
4. Mark both wedges 5-10mm from the pipe surface and cut to this line.
5. Very gently tap the wedges in place, evenly both sides, until the wedges are flush with the pipe surface.



ISO 14001 • EMS 51874



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