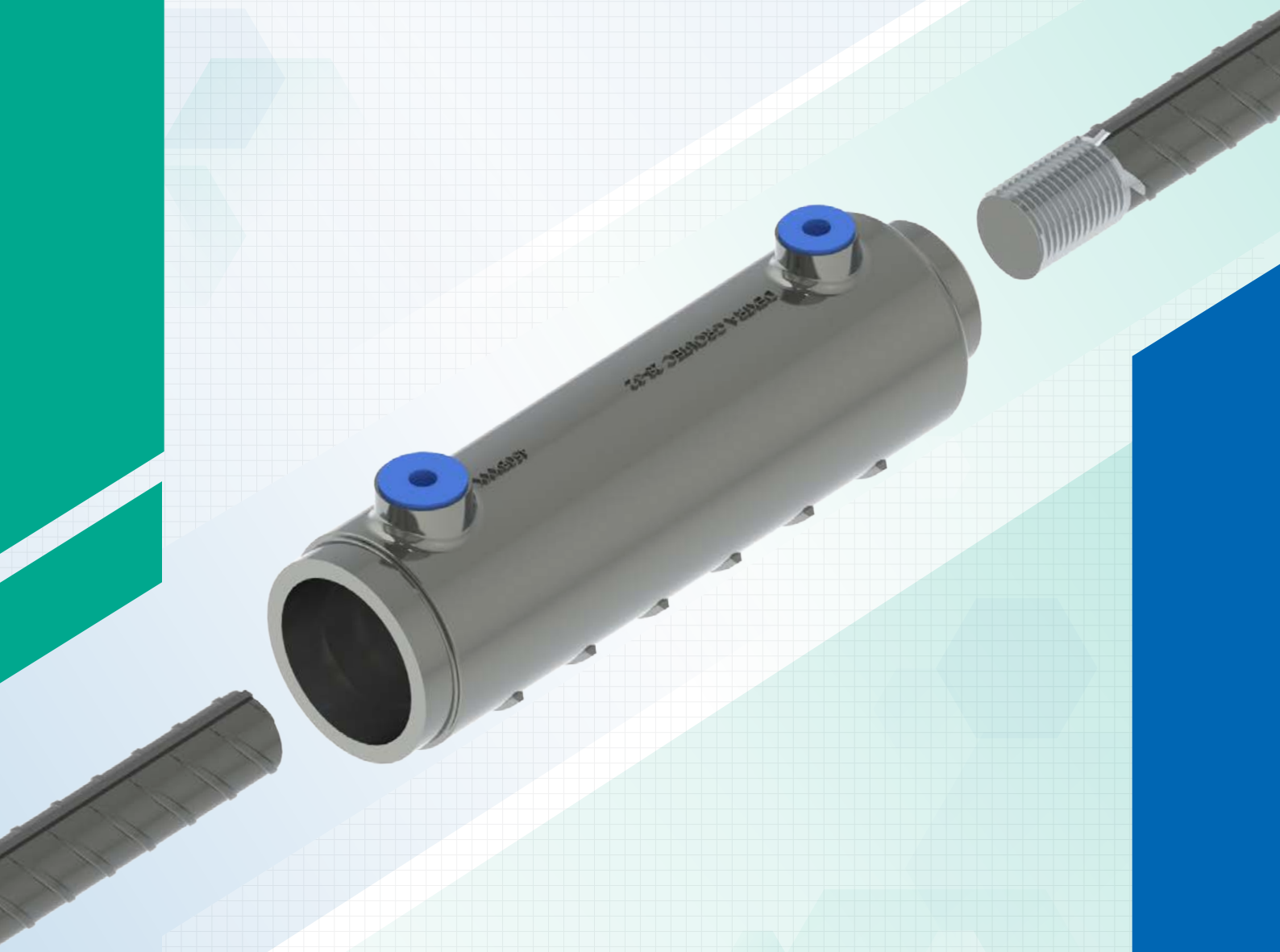
GROUTEC

PRODUCT DATASHEET

DM-PDS010-GROUTEC–Rev-01-December 2017



Dextra

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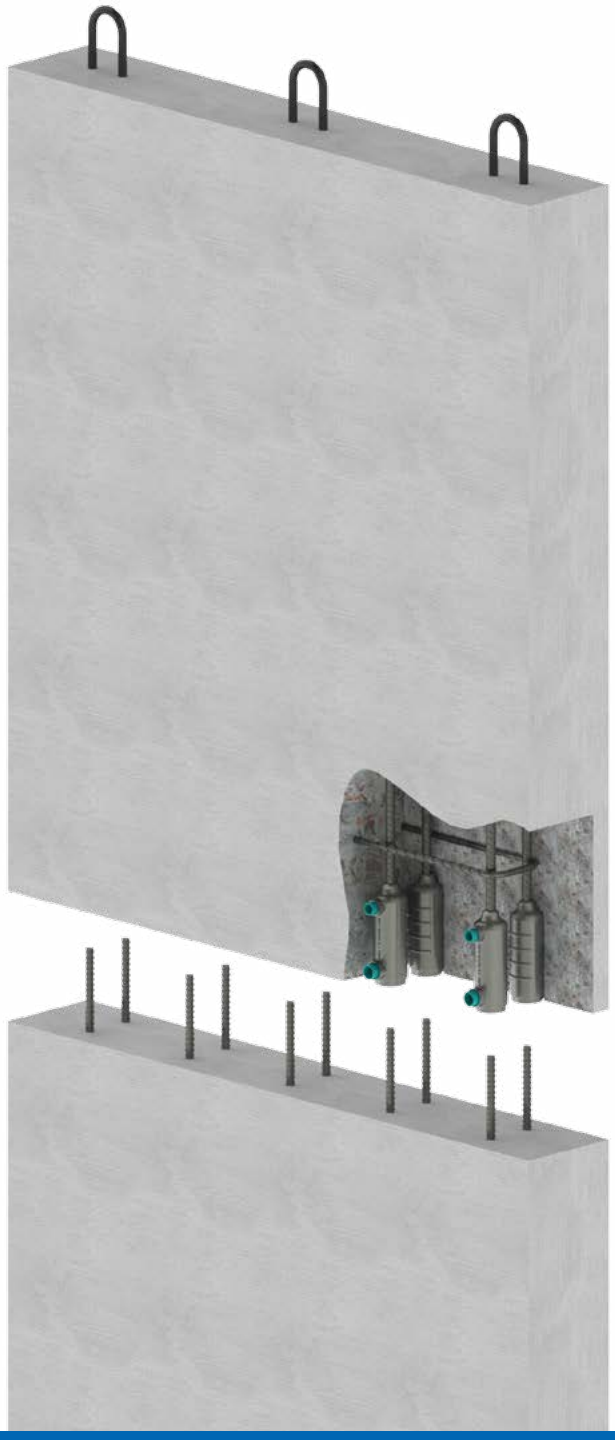
CONTENT

Introduction

Groutec is a mechanical splicing system with one threaded end specially designed for the connection of pre-cast concrete elements. Ribbed or deformed reinforcing bars of grades up to 550 MPa (80 ksi) can be spliced with Groutec.

Splicing is usually done in two steps: the Groutec coupler is first screwed onto the reinforcement prepared at the precast factory, installed flush with the formwork, after which the element is concreted.

The connection is then completed at the construction site, where the precast element is positioned next to the adjacent element so that its protruding bars enter the cavities inside the Groutec couplers. The cavities are then filled with grout, either by gravity or by means of a grouting pump.



Typical wall connection

Groutec couplers have been designed to work with grouts commonly-available on the market place. Grouts must be non-shrink types, with a minimum compressive strength of 70 MPa.

Two alternative models are available.

Groutec L with has a wide body allowing for some axial misalignment of the dowel bar.

Groutec S (slim body) can be used in compact applications such as slim panels or narrow columns.

Groutec has been tested with grouts from major manufacturers such as Sika, Parex-Davco, Fosroc and BASF, which have a worldwide distribution network. However, attention is raised to the fact that such cement-based products are often produced locally from local raw materials, and that their properties vary depending not only on their origin, but also on climate conditions.

For first-time users, we strongly recommend that prior tests be carried in order to confirm the suitability of the selected grout.

Email us at thailand@dextragroup.com for any assistance. Dextra's liability is in any case limited to the value of the couplers alone.

CAD & BIM

CAD & BIM tools to support design engineers in the drawing and modeling of structures are available in the download section of www.dextragroup.com

For designer tools support, contact us at: cadbim@dextragroup.com

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Coupler dimensions

Groutec is available in two versions:

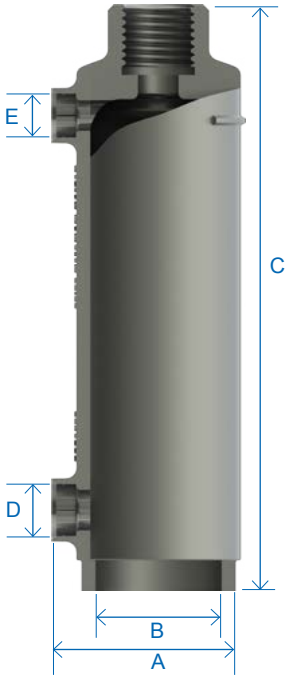
- **Groutec L**, which allow for larger misalignment tolerances thanks to a wide cavity.
- **Groutec S**, which accomodate slim panels and narrow columns thanks a longer more compact design.

For both L and S models and all rebar diameters, the inlet & outlet holes are designed to fit with PE pipes (PE80/PN12.5) as per ISO 4427-2 and BS EN12201-2:2003 standards.

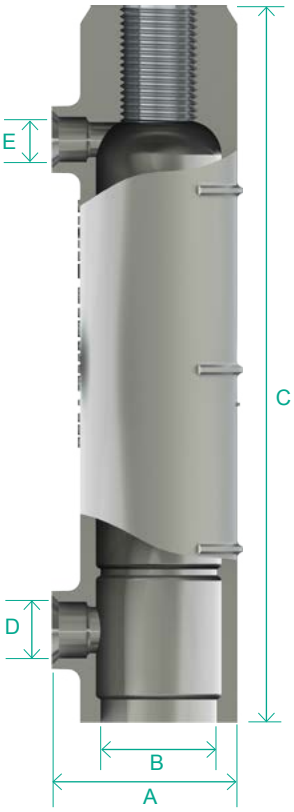
The threaded bar is used a reference for the rebar diameter.
In case of Transition Splicing, please refer to the table in rebar cutting section to verify the model in use.

Groutec L
« Large tolerance »

Groutec S
» Slim outside diameter «



Model	Bar size	A	B	C	D	E
	mm	mm	mm	mm	mm	mm
Groutec L	12	73	44	182		
	16	73	44	182		
	20	77	48	195		
	25	80	50	220	25	20
	28	93	62	290		
	32	93	62	290		
	40	107	72	340		



Model	Bar size	A	B	C	D	E
	mm	mm	mm	mm	mm	mm
Groutec S	12	52	25	155		
	16	57	30	184		
	20	61	34	204		
	25	67	40	240	25	20
	28	80	50	310		
	32	80	50	310		
	40	95	60	377		

Packing

Groutec products are packed in wooden crates that can be lifted by a forklift. All products must be stored under a roof and protected from the elements.

Please ensure that order quantities are a multiple of the packaging quantities stated in the table.

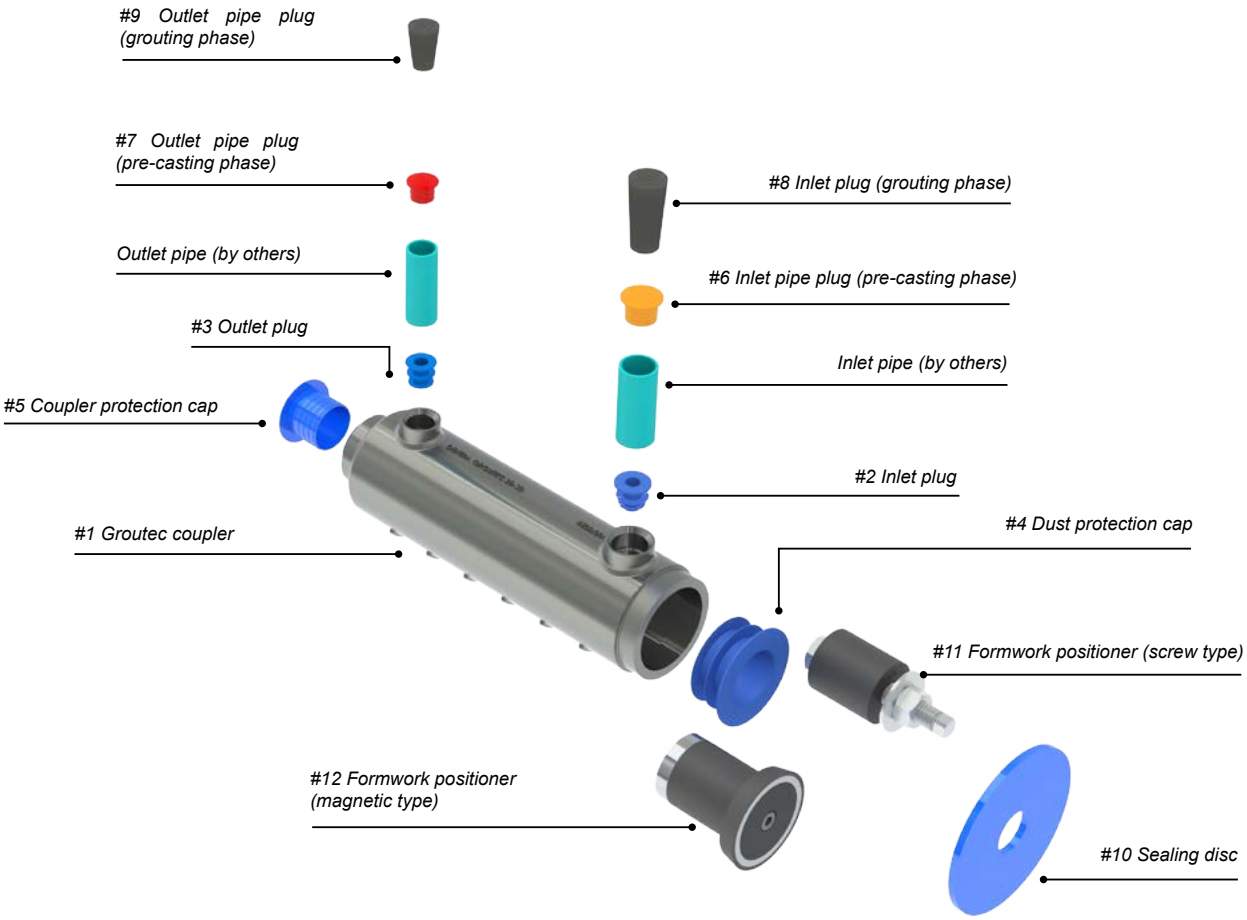
Model	Bar size	Quantity	Unit weight	Net weight	Gross weight*
	(mm)	(pcs)	(kg)	(kg)	(kg)
Groutec L	12	500	1.5	750	800
	16	500	1.5	750	800
	20	400	1.8	720	770
	25	300	2.4	720	770
	28	200	4.3	860	925
	32	200	4.3	860	925
	40	125	6.7	838	903

Model	Bar size	Quantity	Unit weight	Net weight	Gross weight*
	(mm)	(pcs)	(kg)	(kg)	(kg)
Groutec S	12	200	0.8	163	188
	16	200	1.1	220	245
	20	250	1.4	340	379
	25	200	2.0	395	434
	28	250	3.8	958	1,018
	32	250	3.8	958	1,018
	40	100	7.0	702	750

Note *: The weight of the crates may vary depending on ambient humidity.

Order codes

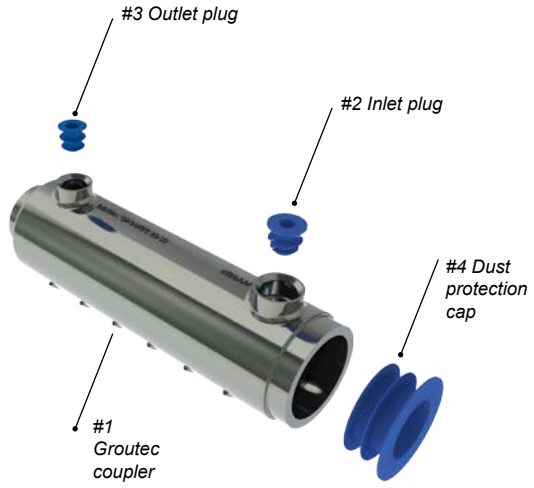
Scope of supply



Item No.	Description	Standard scope of supply	Optional items available upon request
1	Groutec coupler	x	
2	Inlet plug	x	x
3	Outlet plug	x	x
4	Dust protection cap	x	x
5	Coupler protection cap		x
6	Inlet pipe plug (pre-casting phase, orange)		x
7	Outlet pipe plug (pre-casting phase, red)		x
8	Inlet Coupler plastic cap plug (grouting phase)		x
9	Outlet Coupler plastic cap plug (grouting phase)		x
10	Sealing disc		x
11	Formwork positioner (screw type)		x
12	Formwork positioner (magnetic type)		x

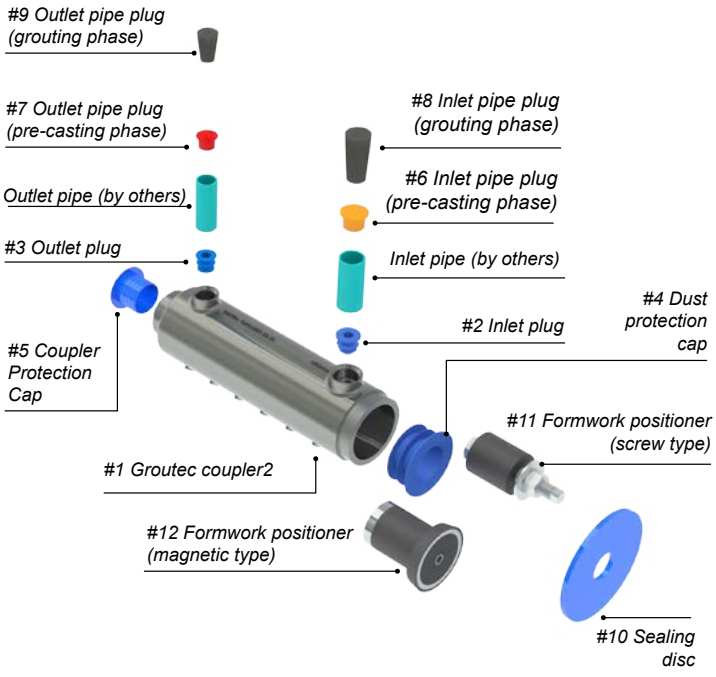
Couplers

Protection accessories coming on couplers.
Can also be delivered separately.



Coupler (#1)	Bar size (mm)	Compatible with Bartec and Fortec threaded bars	Compatible with Griptec threaded bars	Compatible with Rolltec threaded bars
Groutec L	12	FPPC1214201	FPPC1214201	FPPC1213153
	16	FPPC1620251	FPPC1618255	FPPC1617173
	20	FPPC2024301	FPPC2022255	FPPC2021203
	25	FPPC2530351	FPPC2527305	FPPC2526253
	28	FPPC2833351	FPPC2830355	FPPC2829303
	32	FPPC3236401	FPPC2833351	FPPC3233303
	40	FPPC4045451	FPPC4042455	FPPC4041303
Groutec S	12	FPPC1214207	-	FPPC1213157
	16	FPPC1620257	-	FPPC1617177
	20	FPPC2024307	-	FPPC2021207
	25	FPPC2530357	-	FPPC2526257
	28	FPPC3233357	-	FPPC3229307
	32	FPPC3236407	-	FPPC3233307
	40	FPPC4045457	-	FPPC4041307

Optional items available upon request



Model	Bar size (mm)	Formwork Positioner		Dust Protection Cap (#4)
		Screw type (#11)	Magnetic type (#12)	
Groutec L	12	GACC2090046	GACC2090012	GACC0990009
	16	GACC2090046	GACC2090012	GACC0990009
	20	GACC2090033	GACC2090013	GACC0990010
	25	GACC2090033	GACC2090014	GACC0990006
	28	GACC2090034	GACC2090015	GACC0990001
	32	GACC2090034	GACC2090015	GACC0990001
	40	GACC2090047	GACC2090016	GACC0990002
Groutec S	12	GACC2090027	-	GACC0990018
	16	GACC2090028	GACC2090051	GACC0990019
	20	GACC2090029	GACC2090052	GACC0990020
	25	GACC2090030	GACC2090053	GACC0990021
	28	GACC2090033	GACC2090054	GACC0990006
	32	GACC2090033	GACC2090054	GACC0990006
	40	GACC2090034	GACC2090055	GACC0990001

Bar size (mm)	Coupler Protection Cap (#5)		Sealing disc (#10)
	Bartec & Fortec threads	Rolltec threads	
12	GMEC0002808	GMEC0010919	GMEC0900143
16	GMEC0002818	GMEC0002817	GMEC0900147
20	GMEC0002820	GMEC0002819	GMEC0900153
25	GMEC0002822	GMEC0002821	GMEC0900145
28	GMEC0002823	GMEC0002822	GMEC0900142
32	GMEC0002824	GMEC0002823	GMEC0900154
40	GMEC0002827	GMEC0002826	GMEC0900141

Bar size (mm)	Inlet plug (#2)	Outlet plug (#3)
All models	GACC0990011	GACC0990012

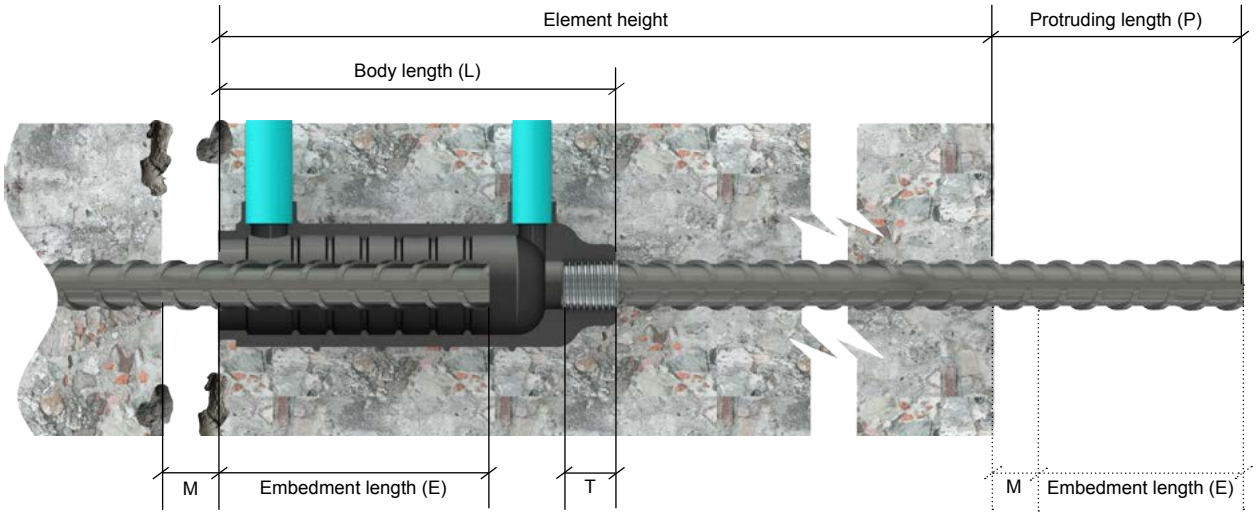
Bar size (mm)	Inlet pipe plug (#8)	Outlet pipe plug (#9)
All models (Grouting phase)	GACC2090002	GACC2090001

Bar size (mm)	Inlet coupler plastic cap plug (#7)	Outlet coupler plastic cap plug (#6)
All models (Pre casting phase)	GMEC0002820	GMEC0900071

How to determine the rebar cutting length?

Standard splicing

This is the standard case when Groutec connected by thread and by grout are of the same diameter.



Protruding length (P)	Embedment length (E) + Sealing mortar height (M)
Rebar length after threading	Element height + Sealing mortar height (M) + E – L + Thread engagement (T)

Note: The above calculations assume that the sealing mortar height (M) is the same between each concrete element.

Bartec Thread - Standard Splice

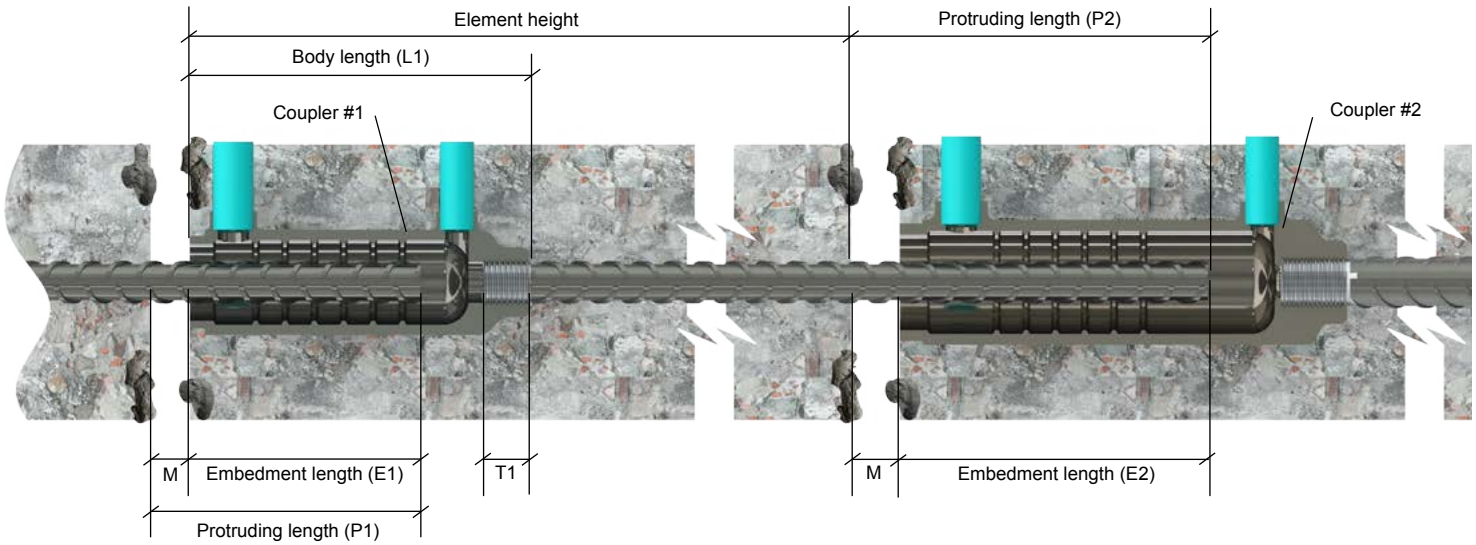
Model	Rebar Diameter	Groutec model	Product Reference	L (mm)	E min (mm)	E max (mm)	T (mm)
Groutec L	12	12	FPPC1214201	182	143	155	14
	16	16	FPPC1620251	182	145	155	20
	20	20	FPPC2024301	195	150	160	24
	25	25	FPPC2530351	220	165	180	30
	28	28	FPPC2833351	290	225	240	33
	32	32	FPPC3236401	290	225	240	36
	40	40	FPPC4045451	340	270	285	45
Groutec S	12	S12	FPPC1214207	155	115	130	14
	16	S16	FPPC1620257	184	140	155	20
	20	S20	FPPC2024307	204	150	170	24
	25	S25	FPPC2530357	240	170	200	30
	28	S32	FPPC3233357	310	230	260	36
	32	S32	FPPC3236407	310	230	260	36
	40	S40	FPPC4045457	377	280	320	45

Rolltec Thread - Standard Splice

Model	Rebar Diameter	Groutec model	Product Reference	L (mm)	E min (mm)	E max (mm)	T (mm)
Groutec L	12	12	FPPC1213153	182	143	155	19
	16	16	FPPC1617173	182	145	155	23
	20	20	FPPC2021203	195	150	160	28
	25	25	FPPC2526253	220	165	180	33
	28	28	FPPC2829303	290	225	240	33
	32	32	FPPC3233303	290	225	240	43
	40	40	FPPC4041303	340	270	285	50
Groutec S	12	S12	FPPC1213157	155	115	130	19
	16	S16	FPPC1617177	184	140	155	23
	20	S20	FPPC2021207	204	150	170	28
	25	S25	FPPC2526257	240	170	200	33
	28	S32	FPPC3229307	310	230	260	33
	32	S32	FPPC3233307	310	230	260	43
	40	S40	FPPC4041307	377	280	320	50

Transition splicing

This is the case when the inserted rebar in the cavity is of different diameter of the one screwed on the threaded side. In this case, if multiple concrete elements are assembled, embedment lengths may vary: E1 ≠ E2. Extra care should be taken in the design to ensure the dimensions of the correct coupler are taken into account.



Protruding length (P1)	Embedment length of coupler #1 (E1) + Sealing mortar height (M)
Protruding length (P2)	Embedment length of coupler #2 (E2) + Sealing mortar height (M)
Rebar length after threading	Element height + Sealing Mortar Length (M) + E2 - L1 + Thread engagement coupler #1 (T1)

Note: The above calculations assume that the sealing mortar height (M) is the same between each concrete element.

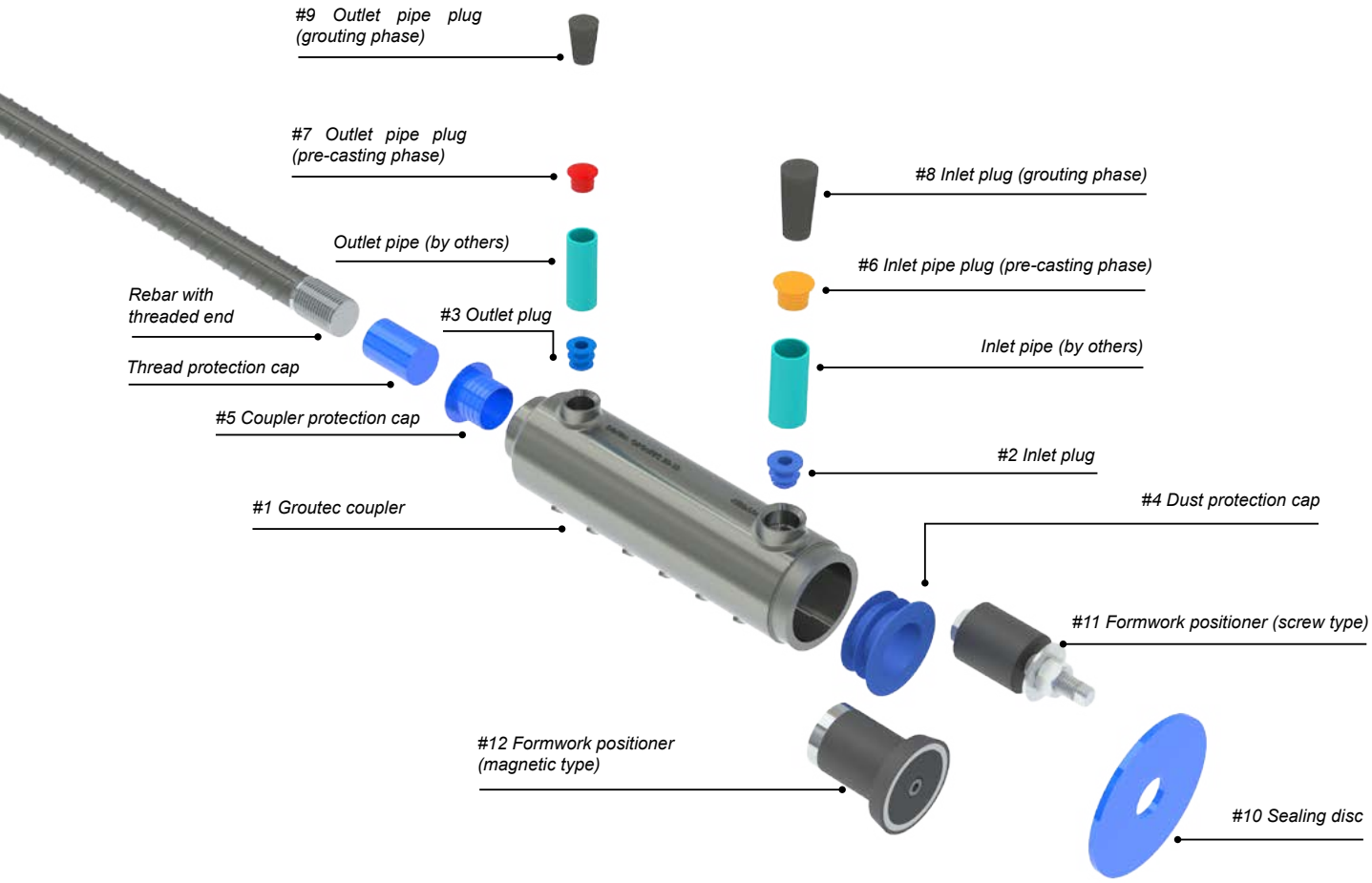
Bartec Thread - Transition Splice

Model	Rebar diameter		Groutec model	Product Reference	L	E min	E max	T
	Threaded bar	Insertion bar			(mm)	(mm)	(mm)	(mm)
Groutec L	16	12	16	FPPC1620251	182	143	155	20
	20	16	20	FPPC2024301	195	145	160	24
	25	20	25	FPPC2530351	220	150	180	30
	28	25	28	FPPC2833351	290	165	240	33
	32	25	32	FPPC3236401	290	165	240	36
	32	28	32	FPPC3236401	290	225	240	36
	40	32	40	FPPC4045451	340	225	285	45

Rolltec Thread - Transition Splice

Model	Rebar diameter		Groutec model	Product Reference	L	E min	E max	T
	Threaded bar	Insertion bar			(mm)	(mm)	(mm)	(mm)
Groutec L	16	12	16	FPPC1617173	182	143	155	23
	20	16	20	FPPC2021203	195	145	160	28
	25	20	25	FPPC2526253	220	150	180	33
	28	25	28	FPPC2829303	290	165	240	33
	32	25	32	FPPC3233303	290	165	240	43
	32	28	32	FPPC3233303	290	225	240	43
	40	32	40	FPPC4041303	340	225	285	50

Installation procedure at the precast factory



A. Connect the coupler to the bar

1. Check from the coupler marking that the coupler (#1) corresponds to the bar size.
2. Remove the Thread Protection Cap from the threaded bar (if any) and the Coupler Protection Cap (#5, if any).
3. Inspect the threads of both the bar end and the coupler (#1). Clean any rust or dirt with a wire brush.
4. Screw the coupler (#1) onto the threaded bar until no thread remains visible.

B1. If no positioner is used

1. If no positioner is used, make sure that the Dust Protection Cap (#4) is present and tight. Position coupler flush with formwork.
2. Rotate coupler so that holes face the right direction. Tightly lock coupler together with the reinforcement by the use of wires.

B2. If formwork can be drilled

3. Install the screw type positioner (#11) through the formwork at the correct location. Rotate coupler so that holes face the right direction.
4. Then fit the coupler and bar onto the positionner (#11).
5. Finally tighten the positioner by the use of the locknut (#11) to firmly lock the assembly.

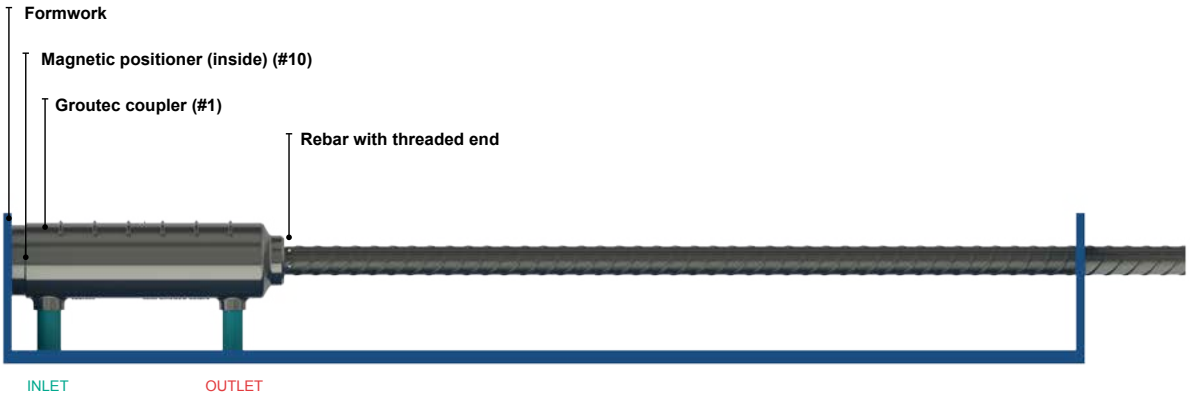
B3. If steel formwork is used

1. Lock the magnetic type positioner (#12) inside the coupler (#1) first,
2. Pre-position coupler and bar onto the formwork at the correct position, rotate accordingly so that holes face the right direction.
3. Tightly lock coupler together with the reinforcement by the use of wires.

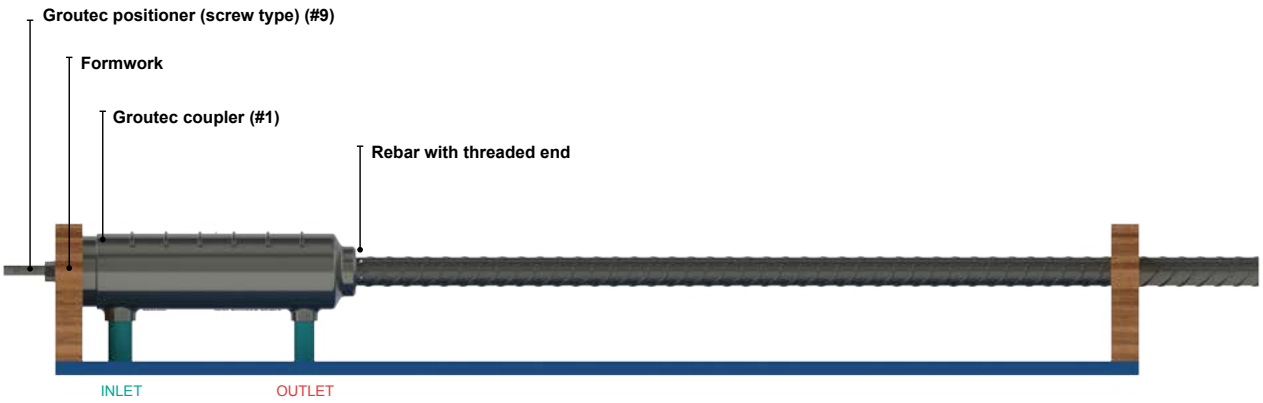
C. Install the inlet and outlet pipes

If the couplers are intended to be filled by gravity pouring, skip this part.

1. For each coupler, make sure that the inlet and outlet pipes have the proper length to reach the internal face of the formwork at the desired location.
2. Remove the plugs (#2, #3) and insert the pipes into the coupler holes. A mallet may be used to facilitate insertion. At this stage, it should not be possible to remove the pipes by hand anymore.
3. Check that there is no gap between the pipes and their holes. Use any kind of sealant or glue to close any gap.
4. Close the opposite end of both pipes with inlet/outlet pipe plug (#6, #7) or adhesive tape.
5. Check that the pipe plugs (#6, #7) are tight enough so that they won't fall off during handling.



Groutec installation in steel formwork
Note: pipes may face upwards or downwards flush with formwork depending on prefered production method.



Groutec installation in wooden formwork
Note: pipes may face upwards or downwards flush with formwork depending on prefered production method.

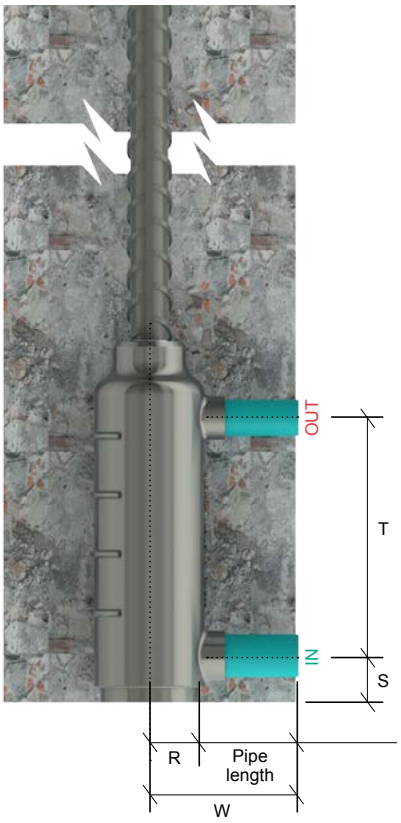
D. Casting of the concrete element

1. Close the formwork.
2. Check that the couplers (#1) are tightly fixed, so that vibration won't cause them to move.
3. Check that the couplers (#1) are orthogonal to the formwork and that no thread is visible between the coupler and the bar.
4. Check that the inlet and outlet pipes are facing the direction that is intended for their grout injection, that they are tightly fixed so that vibration won't cause them to move, and that there is no gap between them and the coupler that could allow cement paste to penetrate into the coupler.
5. Check that the Dust Proteciton Cap (#5) (or the Groutec positioner, #11 or #12) and the pipe plugs (#6, #7) are flush with the formwork, and that they are tight enough to prevent cement paste penetrating into the coupler.
6. Mark the location of all couplers (#1) and their inlet and outlet pipes on the external face of the formwork.
7. Check the length of reinforcing bar that emerges from the formwork on the opposite side (taking into account the thickness of the formwork). Make sure it is within the minimum embedment length and maximum protrusion length specified on page 5.
8. Pour the concrete, making sure not to displace any pipes.

E. Formwork removal & inspection

1. Once the concrete is cured, remove the formwork and locate all couplers (#1).
2. Remove the Dust Protection Cap (#5), positioners (#11, #12) and pipe plugs (#8, #9) and check that no cement paste has penetrated.
3. Immediately clean any unwanted material by water.
4. After inspection, seal with grouting plugs (#8, #9).

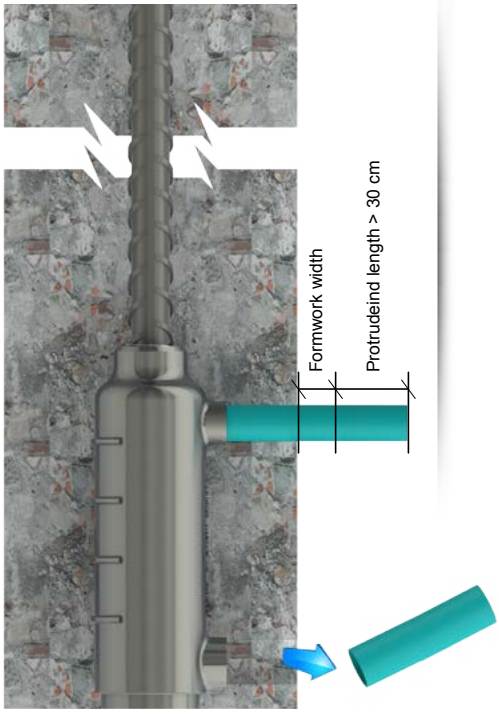
Preparing the injection and air vent pipes



L = distance from center of couplers to internal face concrete
Pipe Length = W - R

Model	Bar size	R (mm)	S (mm)	T (mm)
Groutec L	12	28	29	115
	16	28	29	115
	20	30	34.5	120
	25	30	28.5	145
	28	38	40	195
	32	38	40	195
	40	45	40.5	238
Groutec S	12	19	27	95
	16	22	32	115
	20	24	33	129
	25	27	40	152
	28	34	40	212
	32	34	40	212
	40	41	40	272

Special case of removable pipes



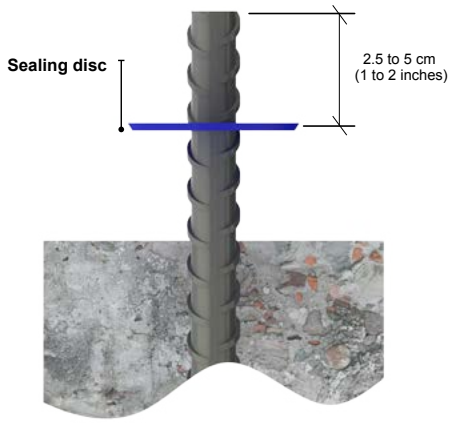
In case the formwork can be drilled to let the pipes go through, letting them protrude at least 30cm out of the formwork may permit to pull them out after the concrete has set. The grout injection can then be done through the holes left in the concrete, but larger pipe plugs are then necessary.

Installation procedure at the construction site

1. Vertical applications – By injection

A. Prepare the foundation/bottom element

1. Compare the dimensions of the foundation with the drawings. Make sure that any misalignment is within the tolerances allowed.
2. Check that the protruding lengths of the rebars are within the range given at chapter 1.2 of this document.
3. Clean the protruding bars of any cement or dirt.
4. Make sure that the surface of the foundation is clean. Sweep out any dust and residues.
5. Put the sealing discs over the top of the protruding rebars and push them down by 2.5 to 5 cm (1 to 2 inches) from the bar ends.



6. Ensure that the sealing discs are not in contact with the foundation before installation.

B. Install the top panel

1. Select the panel to install and check that the protruding lengths of its bars are also within the range given at chapter 1.2.
2. Lift the panel and position it on top of the foundation.
3. Check that the cavities inside the Groutec couplers are clean. (Rust is no problem) Clean them with compressed air if necessary.
4. Prepare the bedding mortar and place the shim plates on the top of the foundation as required.
5. Lower the panel down and check its verticality with a spirit level.

6. Once the bedding mortar has hardened, inject cement grout into the Groutec couplers.

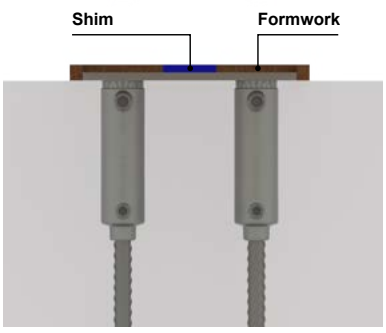
2. Vertical applications – By gravity

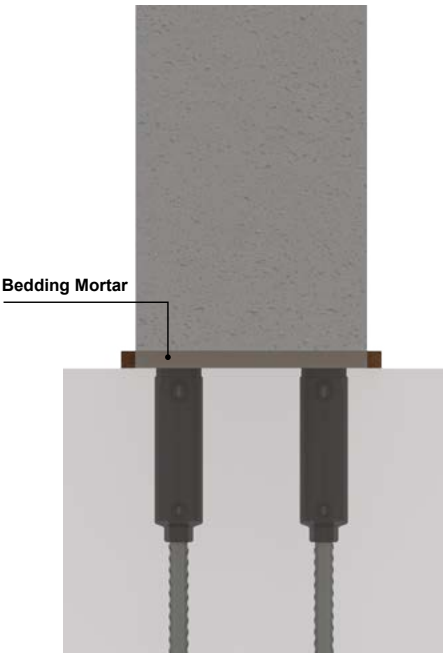
A. Prepare the foundation/bottom element

1. Compare the dimensions of the foundation with the drawings. Make sure that any misalignment is within the tolerances allowed.
2. Remove the protection caps from the Groutec couplers and check that the coupler cavities are clean. (Rust is no problem) Clean them with compressed air if necessary.
3. Make sure that the surface of the foundation is clean. Sweep out any dust and residues.

B. Install the top element

1. Select the top element to install and check that the protruding lengths of its bars are within the range given at chapter 1.2.
2. Lift the element and position it on top of the foundation.
3. Prepare the formwork around the grouting area.
4. Put the bedding mortar and place the shim plates on top of the foundation as required.
5. Pour the grout into the Groutec couplers, up to the level L shown in the table of page 11.
6. Lower the element down and check its verticality with a spirit level.
7. Clean the excess grout after installation.





3. Horizontal applications – by injection

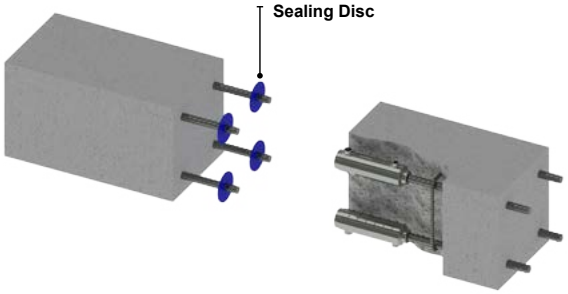
A. Prepare the precast elements

1. Compare the dimensions of the precast elements to the drawings. Make sure that any misalignment is within the tolerances allowed.
2. Check that the protruding lengths of the rebars are within the range given at chapter 1.2 of this document.
3. Check that the cavities inside the Groutec couplers are clean. (Rust is no problem) Clean them with compressed air if necessary.
4. Make sure that the surfaces of both elements are clean. Wipe out any dust and residues.

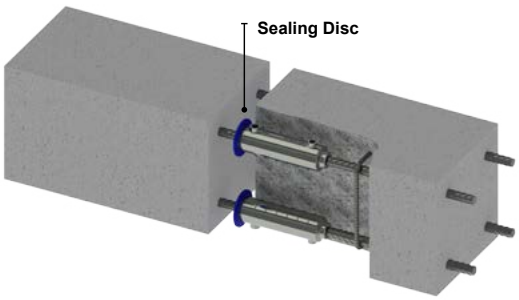
B. Install the sealing discs

1. Put the sealing discs over the top of the protruding rebars and push them down by 1”- 2” from the bar ends.
2. Make sure that the sealing discs are not in contact with the concrete face.

A



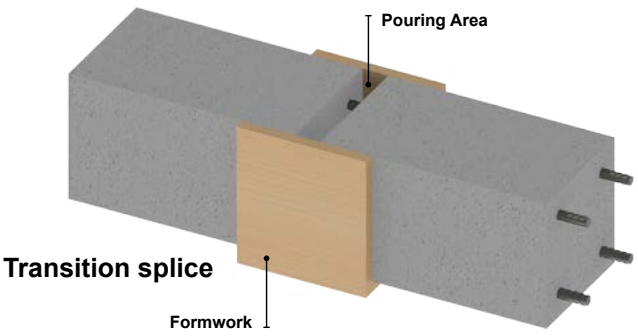
B



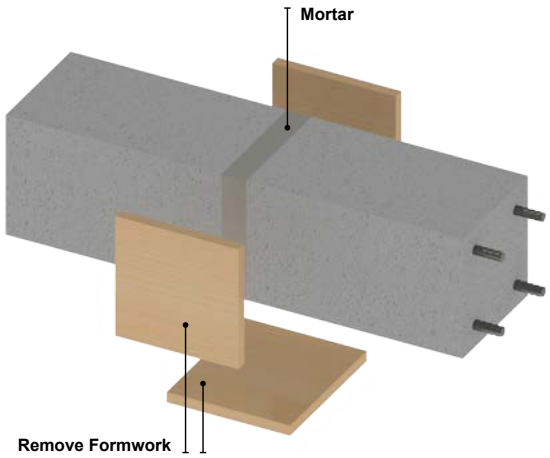
C. Connect the 2 elements

1. Lift the second concrete element and position it in front of the first element.
2. Move the sealing discs completely against the mouth of the Groutec couplers.
3. Push the second element to its final position against the first element.
4. Check the level and alignment of both elements.
5. Prepare the formwork around the grouting area.
6. Put bedding mortar to seal the gap between the two elements.
7. Once the bedding mortar has hardened, inject cement grout into the Groutec couplers.

C



D



4. Grout consumption

These figures of grout consumption are theoretical computations of the cavity inside the coupler.

For practical purpose they should be increased by between 10% and 20% in order to take into account :

1. The volume used in the inlet and outlet pipes.
2. The volume used to join the two precast elements.
3. The volume that stays in the mixing tool.
4. The volume that stays in the injection tool.
5. Any other wastage.
6. The effect of climatic conditions (Ambient temperature, relative humidity, etc)
7. The actual bar embedment length.

Standard splices

Model	Rebar size	Theoretical volume of grout required to fill a coupler (mL)	Number of couplers per 25 kg/bag
Groutec L	12	270	45
	16	250	48
	20	400	30
	25	500	25
	28	800	14
	32	800	14
	40	1,275	8
Groutec S	12	100	130
	16	160	86
	20	210	65
	25	330	37
	28, 32	630	19
	40	1,200	11

Transition splice

Model	Rebar size		Theoretical volume of grout required to fill a coupler (ml)	Estimated quantity of couplers per 25 kg/bag
	Threaded bar	Grouted bar		
Groutec L	12	16	246	49
	16	20	222	54
	20	25	286	42
	25	28	287	42
	25	32	224	54
	28	32	755	16
	32	40	1127	11

5. Grouting process

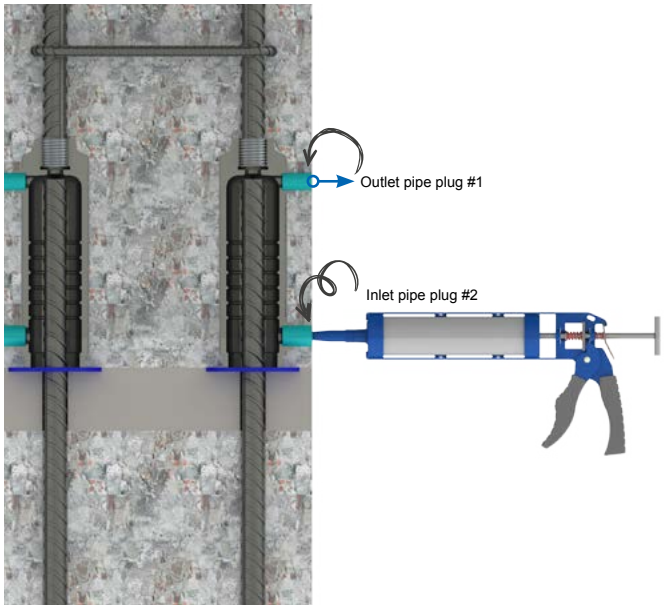
A. Mixing

1. Make sure to strictly follow the work instructions provided by the grout manufacturer in the product datasheet and printed on the bag. Particularly, do not exceed the recommended water content. Always start with the median value of water content specified by the manufacturer.
2. Check the manufacturing date of grouts before use. Do not use bags that are past their expiry date.
3. Do not use bags that have previously been opened, or are damaged, unless they have been protected with a plastic stretch film to prevent contamination with moisture.
4. Use mixers with a speed of not over 500 rpm to avoid the creation of air bubbles inside the grout.
5. In parallel, prepare the cube specimens (around 6 - 12 at a time) and record the details such as date of preparation, testing date, batch no. of cement grout, water ratio, name or number of building, etc.

B. Grouting

1. Remove all residues from inside the coupler by water or air. In case you use water ensure that the couplers are dry before you start grouting .

2. Inject the cement grout by pump through the bottom hole (Inlet).
3. If the cement grout flows out from the top hole (Outlet), the inside of the coupler is completely filled.
4. Tightly close the top hole (Outlet) with a pipe plug. Then inject more grout during approx. 3 seconds. After that remove the injection valve and quickly close the bottom hole (Inlet).



C. Bracing

1. You must install the bracing equipment before grouting.
2. The fixing of the bracing equipment must be completed before the grouted cement has hardened.
3. You can remove the bracing equipment after 28 days which is when the cement grout has achieved the maximum strength.

Recommended non-shrink grouts

Manufacturer :
FOSROC.
www.fosroc.com

Grade: Conbextra GP

Manufacturer :
PAREX-DAVCO.
www.parexdavco.com

Grade: Lanko 701

Manufacturer :
BASF.
www.basf.com

Grade: MasterFlow 870

Manufacturer :
SIKA.
www.sika.com

Grade: SikaGrout 214

Manufacturer :
POZAMENT.
www.pozament.com.uk

Grade: Cemrok Easi Flow

Remark: Dextra is not the owner of the brands mentioned here. Any protected trademark rights remain entirely exclusive to their respective owners and are only mentioned here as a reference in relation to Dextra products. Please contact Dextra at thailand@dextragroup.com for more information on cement grout to be used with Groutec couplers.

Troubleshooting

Topic	Method	Picture
1/ Inlet and/or Outlet port(s) do not reach the surface.	1. Check and mark the position of the ports according to the drawings. 2. Chip out the concrete at the marked positions to find the embedded ports. 3. Blow out the ports with air compressors or water and confirm that there is a clear passage from the inlet to outlet port.	
2/ Due to dirt on the protruding rebar, the sealing disc gets stuck, slides into the coupler and reduces the gap of inlet port.	1. Try to clear the Inlet port by inserting a steel rod into it. 2. Follow step 3 of item 1.	
3/ The sealing disc was forgotten, and the bedding mortar from the joint clogs the Inlet port.	1. Try to clear the Inlet port by inserting a steel rod into it. 2. Follow step 3 of item 1.	
4/ Inlet and/or Outlet port(s) are clogged.	Due to debris etc.: Insert a steel rod into the port and hammer it to clean the port. Due to plugs: 1. Use a hooked rod to scrape plugs out of the ports. 2. Repeat step 3 of item 1.	
5/ Leakage during pumping of grout through the joint due to incomplete grouting of the joint.	1. Seal the joint with polyurethane, mortar, etc. 2. Clean the inside of coupler with water. (Preferably high pressure). 3. Confirm a clear passage by blowing air through the ports. 4. Re-grout.	
6/ Clogging has occurred inside the coupler.	1. Clean the inside with high pressure water. 2. After confirm a clear passage by blowing air through the ports, start re-grouting at about half the speed of normal operation.	
7/ Protruding rebar is too close to the inlet and/or outlet port(s), restricting grout flow.	Insert e.g. a steel rod into the inlet or outlet port(s) and strike with sledge hammer to bend the rebar away from the ports and reduce restriction.	

Example of inspection sheet

Dextra

Inspection Sheet

Project .....
Location .....
Date of Grouting .....
Date of Inspection .....

Report By .....

Approved By .....

Tempreture

Ambient ..... °C
Dry Grout ..... °C
Mixing Water ..... °C
Mixed Grout ..... °C

Grout Cement

Brand .....
Model .....
Batch No. .....
MFG Date .....
EXP Date .....

Coupler Size	Q'ty/pcs.	Plan	Action	Balance	Remark

Quality assessment form

Dextra

Groutec Quality Assessment Form

Where did it occur?

Company name: _____

Problem observed & Reported by: _____

Project for which the production was done: _____

Details of Production Parameters

Bar used when the problem occurred:

Dia: _____ Grade: _____

Mill: _____

Threading parameter

Type of products ☐ Bartec ☐ Rolltec ☐ Griptec

Type of thread _____

Actual thread diameter _____ mm M_____ x _____pitch

(measuring by vernier caliper)

GO gauge ☐ Can go ☐ Can not go

NO GO gauge ☐ Can go ☐ Can not go

Grouting

Cement & Sample preparation

Brand of grout cement _____ Model _____

Batch no. _____ MFG date _____ EXP date _____

Mixing ratio: Grout cement _____ kgs Water _____ ml

Mixing times _____ mins Aging time _____ days

Temperature(Surface) _____ °C Temperature(Inside) _____ °C

Slump test diameter _____ mm

Water pH of water _____ Temperature _____ °C

Specimen Dimension _____ cm Aging time _____ days

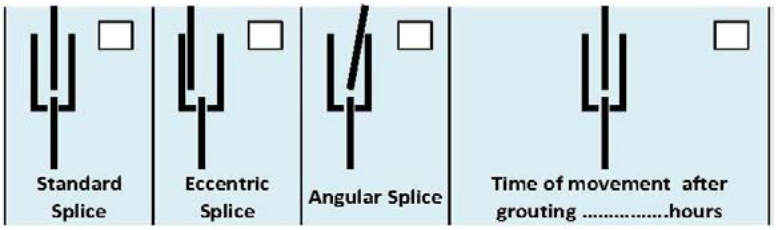
Storage Temperature _____ °C

Alignment For sample ☐ Alignment ☐ Mis-alignment

Filling method ☐ Gravity ☐ Injection

Tooling Mixer _____ rpm

Assembly conditions



Coupler on which the problem occurred:

Marking: _____

Box No. : _____

Packaging Information (Sampling vs Box label)

☐ All couplers marking numbers are recorded in the box lable

☐ Some couplers marking numbers are not recorded in the box label

Other information (if have) _____

Steel mechanical testing report

Total samples length: _____ meter

Who prepared the samples: _____

	Item	Yield Strength (MPa)	Tensile Strength (MPa)	Failure mode (tick the boxes)					
				Bar				Coupler	
				Thread cross		Thread pull out	Bar break	Cross section	Thread pull out
				Brittle	Ductite				
Control bar	-								
Groutec sample	1								
	2								
	3								

Please send back this form to

Attn: QA Manager

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RCC-081-A Issue 01

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