

SERIES CATALOGUE

unika



ANCHOR

Safety Precautions



WARNINGS

- ❑ Wear working clothes suitable for the operation. In particular, eye protection equipment must be worn to prevent shavings from getting into your eyes.
- ❑ Prepare the working environment before starting the job. Be careful to consider safety when working in high places, being close to inflammable materials, in dark places, in rain, in wet place, on scaffolding. Consider falling, fires, electric shock, etc.
- ❑ Be sure to check if there are any defects in the product before use. Never use the product if it has any defect.
- ❑ Be sure to turn off the main switch of the drill and disconnect the power supply plug from the socket before attaching and detaching the product.
- ❑ Do not touch the product, the shavings, or the drilled surface by hand because they may be hot by drilling friction.
- ❑ Never remodel or modify the product.
- ❑ Do not touch moving parts, especially the drill tip or blades.
- ❑ When you feel anything unusual in use, stop using the product and inspect it as well as the electrical drill.
- ❑ When using the product for any other application than is specified, be sure to contact UNIKA.
- ❑ Carefully read the instruction manual of the electrical drill used before using the product.



CAUTION

- ❑ Do not allow any person other than the working staff to enter the working place.
- ❑ Do not touch the blades by hand because they are very sharp.
- ❑ Please read handling description well when changing and assembling.
- ❑ Use spare parts that comply with the product specification.
- ❑ The product and its size must be appropriate for the specification of the electrical drill used.

The products carried by this catalog, specifications, etc. may be changed without preliminary announcement .
The products carried in this catalog may be different in color than the actual item.

ANCHORS

<p>Rooty Anchor C Type Nail-in anchor</p> 	4	<p>NON-plug Screw Screw Type</p> 	16
<p>Rooty Anchor SC Type (stainless steel) Nail-in anchor</p> 	5	<p>Hollow Plug NA Type Pin anchor</p> 	18
<p>Rooty Anchor C-D Type (hot dip galvanizing) Nail-in anchor</p> 	6	<p>NP ALC Anchor NBA Type Knock-in Type</p> 	18
<p>Rooty Anchor T/Y/ST Type Nail-in anchor</p> 	7	<p>NP Plug NAS Type Screw Type</p> 	19
<p>Unicon Anchor UC/UCS Type Drop-in anchor</p> 	8	<p>Bolt Plug Screw Type</p> 	19
<p>Rooty Cut CA/CAS Type Cut anchor</p> 	9	<p>Resin-A GE-165 Resin anchor</p> 	20
<p>Big One BG Type Wedge anchor</p> 	10	<p>Resin-A GE-410 Resin anchor</p> 	21
<p>Big One BGS Type (stainless steel) Wedge anchor</p> 	11	<p>Resin-A GE-825 Resin anchor</p> 	22
<p>Big One BGL/BGSL Type Wedge anchor</p> 	12	<p>Resin-A GE-410C Resin anchor</p> 	23
<p>Rooty Set B/BS Type Bolt anchor</p> 	13	<p>Resin-A PE-400N Resin anchor</p> 	24
<p>T-lock TL/TLS Type Pin anchor</p> 	14	<p>Resin-A PE-600N Resin anchor</p> 	25
<p>Weld Anchor AS Type Cut anchor</p> 	15	<p>Resin-A HC-U Type Resin anchor</p> 	28
<p>NP Anchor NP/NPS Type Hammer Screw Type</p> 	15	<p>Resin-A SE Type Resin anchor</p> 	29

Rooty Anchor **C** Type

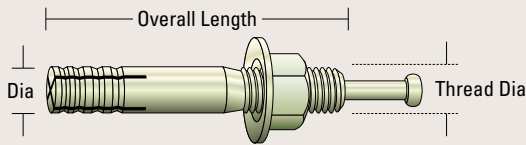


Nail-in anchor

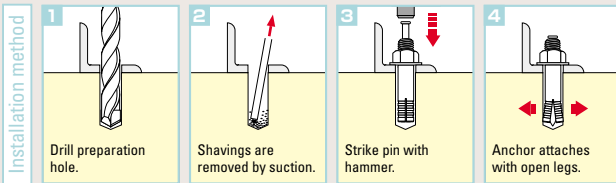
- Simply hammer in the pin. Just by looking at the pin, completion of anchor can be confirmed.
- As the thread and the anchor main body are the same in diameter, anchoring without rattling is possible by drilling from above fixture.

CONCRETE

STONE



Metal finishing = Chromate treatment | Thread Length



Chromate Treatment



Trivalent Chromate Treatment



Uses

Suited for all kinds of fixture attachments including construction, electrical, sanitation, airconditioning/heating, signboard attachment, seat attachment, and machine installation works.

C Type mm size (Chromate Treatment/Trivalent Chromate Treatment)

FC = 27N/mm²

Code	Diameter (outside dia)	Overall Length (mm)	Thread Length (mm)	Max. Use Thickness (mm)	Drilling Condition (mm)		Embedment Depth (mm)	Max. Extraction Strength (kN)	Pcs./Box	Pcs./Ctn
					Hole Dia	Hole Depth				
C-645	M6	45	15	5	6.4	35 or more	30	6.2	50	800
C-660		60	20	10					50	800
C-840	M8	40	15	5	8.5	30 or more	25	6.2	50	800
⊕C-850		50	20	5		40 or more	35	8.5	50	800
C-860		60	20	15					50	400
⊕C-870		70	25	25					50	400
⊕C-890		90	25	45					50	400
C-810		100	35	55					50	400
C-1050	M10	50	20	5	10.5	35 or more	30	11.5	50	400
⊕C-1060		60	25	5		45 or more	40	15.9	50	400
C-1070		70	25	15					50	300
⊕C-1080		80	25	25					50	300
⊕C-1090		90	30	35					50	300
⊕C-1010		100	30	45					50	300
⊕C-1012		120	30	65					50	200
C-1015		150	40	95					50	200
C-1260	M12	60	25	8	12.7	42 or more	35	16.0	30	240
⊕C-1270		70	25	8		52 or more	45	20.9	30	240
C-1280		80	25	18					30	180
⊕C-1290		90	30	28					30	180
⊕C-1210		100	30	38					30	180
⊕C-1212		120	50	58					30	120
⊕C-1215		150	50	88					30	120
C-1630	M16	80	30	8	17.0	60 or more	50	36.4	15	90
⊕C-1610		100	40	18		70 or more	60	41.0	15	90
⊕C-1612		120	40	38					15	90
⊕C-1615		150	40	68					15	60
⊕C-1619		190	50	108					15	60
⊕C-2013	M20	130	50	25	21.5	95 or more	80	54.5	10	40
⊕C-2015		150	50	45					10	40
⊕C-2019		190	50	85					10	40

C Type inch size (Chromate Treatment/Trivalent Chromate Treatment)

FC = 27N/mm²

Code	Diameter (outside dia)	Overall Length (mm)	Thread Length (mm)	Max. Use Thickness (mm)	Drilling Condition (mm)		Embedment Depth (mm)	Max. Extraction Strength (kN)	Pcs./Box	Pcs./Ctn
					Hole Dia	Hole Depth				
C-2045	W1/4	45	15	5	6.6	35 or more	30	6.6	50	800
⊕C-2550	W5/16	50	20	5	8.5	40 or more	35	7.8	50	800
⊕C-3060	W3/8	60	25	5	10.0	45 or more	40	15.2	50	400
⊕C-3090		90	30	35					50	300
⊕C-4070	W1/2	70	25	8	13.5	52 or more	45	19.7	30	240
C-5010	W5/8	100	40	18	17.0	70 or more	60	38.8	15	90
C-5012		120	40	38					15	90

*When ordering a trivalent chromate treated product, please specify. *Maximum extraction strength values are values measured by UNIKA and not standard values.

Rooty Anchor **SC Type** (Stainless Steel)

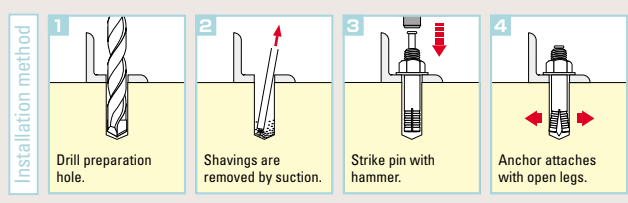
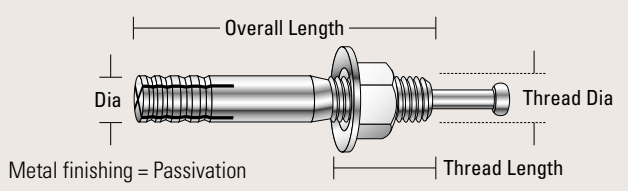


Nail-in anchor

- Simply hammer in the pin. Just by looking at the pin, completion of anchor can be confirmed.
- Screw diameter and anchor unit diameter are the same, allowing use in small drill bores.
- SC type is all stainless steel, making it highly corrosion resistant. Wide applications in high humidity locations.



CONCRETE **STONE**



Uses

Suited for all kinds of fixture attachments including construction, electrical, sanitation, airconditioning/heating, signboard attachment, seat attachment, and machine installation works.

SC Type mm size (Stainless Steel) FC=27N/mm²

Code	Diameter (outside dia)	Overall Length (mm)	Thread Length (mm)	Max. Use Thickness (mm)	Drilling Condition (mm)		Embedment Depth (mm)	Max. Extraction Strength (kN)	Pcs./Box	Pcs./Ctn	
					Hole Dia	Hole Depth					
SC-645	M6	45	15	5	6.4	35 or more	30	5.3	50	800	
SC-660		60	20	10					50	800	
SC-840	M8	40	15	5	8.5	30 or more	25	7.5	50	800	
② SC-850		50	20	5		40 or more	35	9.6	50	800	
SC-860		60	20	15					50	400	
② SC-870		70	25	25					50	400	
② SC-890		90	25	45					50	400	
SC-810		100	35	55					50	400	
SC-1050	M10	50	20	5	10.5	35 or more	30	13.1	50	400	
② SC-1060		60	25	5		45 or more	40	15.2	50	400	
SC-1070		70	25	15					50	300	
② SC-1080		80	25	25					50	300	
② SC-1090		90	30	35					50	300	
② SC-1010		100	30	45					50	300	
② SC-1012		120	30	65					50	200	
SC-1015		150	40	95					50	200	
SC-1260	M12	60	25	8	12.7	42 or more	35	14.9	30	240	
② SC-1270		70	25	8		52 or more	45	21.4	30	240	
SC-1280		80	25	18					30	180	
② SC-1290		90	30	28					30	180	
② SC-1210		100	30	38					30	180	
② SC-1212		120	50	58					30	120	
② SC-1215		150	50	88					30	120	
SC-1680	M16	80	30	8	17.0	60 or more	50	32.1	15	90	
② SC-1610		100	40	18		70 or more	60	34.0	15	90	
② SC-1612		120	40	38					15	90	
② SC-1615		150	40	68					15	60	
② SC-1619		190	50	108					15	60	
② SC-2013	M20	130	50	25	21.5	95 or more	80	54.1	10	40	
② SC-2015		150	50	45					10	40	
② SC-2019		190	50	85					10	40	

SC Type inch size (Stainless Steel) FC=27N/mm²

Code	Diameter (outside dia)	Overall Length (mm)	Thread Length (mm)	Max. Use Thickness (mm)	Drilling Condition (mm)		Embedment Depth (mm)	Max. Extraction Strength (kN)	Pcs./Box	Pcs./Ctn	
					Hole Dia	Hole Depth					
② SC-3060	W3/8	60	25	5	10.0	45 or more	40	17.5	50	400	
SC-4070	W1/2	70	25	8	13.5	52 or more	45	19.6	30	240	

*Maximum extraction strength values are values measured by UNIKA and not standard values.

*Special dimensions for both C and SC types can be produced to order.



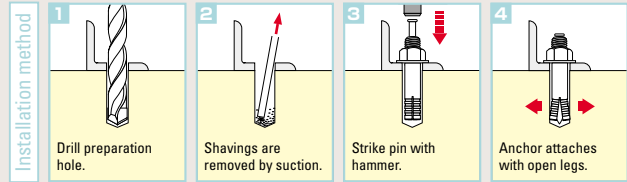
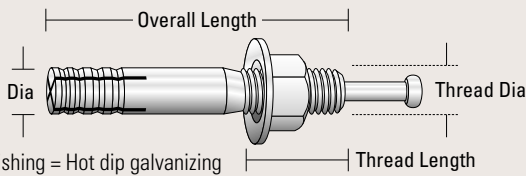
Rooty Anchor **C-D Type** (Hot Dip Galvanizing)

Nail-in anchor

- Simply hammer in the pin. Just by looking at the pin, completion of an anchor can be confirmed.
- Screw diameter and anchor unit diameter are the same, allowing for drilling after installation of equipment and anchoring without rattle.
- The C-D type is dip-brazed, which is excellent in corrosion resistance. (Spindle: stainless steel)

CONCRETE

STONE



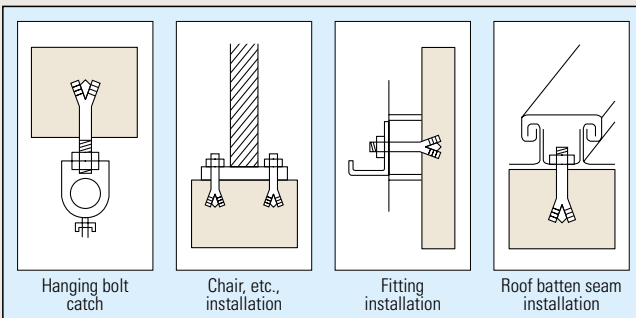
C-D Type mm size (Hot Dip Galvanizing)

FC = 27N/mm²

Code	Diameter (outside dia)	Overall Length (mm)	Thread Length (mm)	Max. Use Thickness (mm)	Drilling Condition (mm)		Embedment Depth (mm)	Max. Extraction Strength (kN)	Pcs./Box	Pcs./Ctn
					Hole Dia	Hole Depth				
C-850D	M8	50	20	5	8.5	40 or more	35	13.3	50	800
C-870D		70	25	25						
C-1050D	M10	50	20	5	10.5	35 or more	30	13.9	50	400
C-1060D		60	25	5						
C-1080D		80	25	25						
C-1090D		90	30	35						
C-1010D		100	30	45						
C-1012D		120	30	65						
C-1260D	M12	60	25	8	12.7	42 or more	35	24.2	30	240
C-1270D		70	25	8						
C-1290D		90	30	28						
C-1210D		100	30	38						
C-1212D		120	50	58						
C-1215D		150	50	88						
C-1610D	M16	100	40	18	17.0	70 or more	60	35.5	15	90
C-1612D		120	40	38						
C-1615D		150	40	68						
C-1619D		190	50	108						
C-2013D	M20	130	50	25	21.5	95 or more	80	55.6	10	40
C-2015D		150	50	45						

*Maximum extraction strength values are values measured by UNIKA and not standard values.

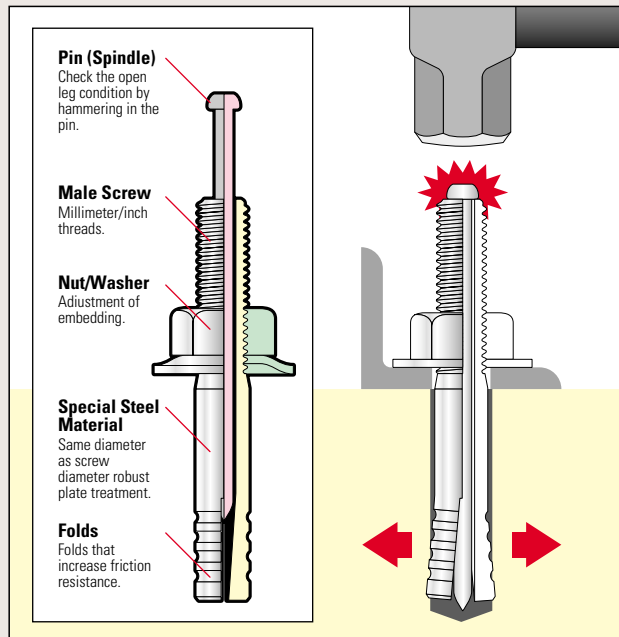
Use examples



Precautions on use

- Protective clothing including safety glasses and helmets must always be worn when installing.
- Drill perpendicularly into target surface.
- Compared with anchor insertion depth, drill holes should be 5mm deeper for M6, M8, M10; 7mm deeper for M12; 10mm deeper for M16, M20.
- Drilling preparation holes to a shallow will break or bend the pin.
- Sufficiently use blower.
- Always set nut before hammering.
- Use a hammer appropriate for the anchor size.

Structural Drawing



Rooty Anchor **T/Y/ST** Type

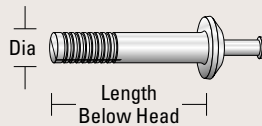
Nail-in anchor

- Simply hammer in the pin. Ideal as anchors for lightweight items such as saddle bands or flat bands.
- T-Type : pan head, Y-Type : flat head, ST-Type : corrosion resistant stainless steel types.

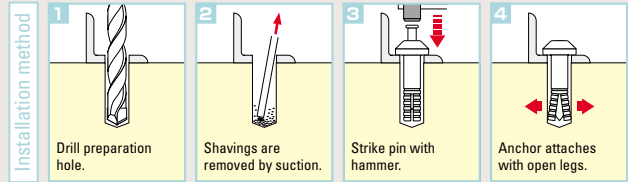
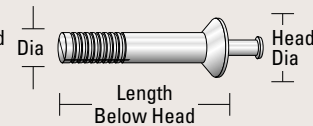


CONCRETE **BLOCK** **STONE**

● T/ST type



● Y type



● **Uses**

For attaching wiring, pipe saddle stop attachment, flat bar attachment, non-slip attachment and fixtures.

T Type (Unichromate Treatment)										FC=27N/mm ²
Code	Diameter (mm)	Length Below Head (mm)	Head Diameter (mm)	Max. Use Thickness (mm)	Drilling Condition (mm)		Embedment Depth (mm)	Max. Extraction Strength (kN)	Pcs./Box	Pcs./Ctn
					Hole Dia	Hole Depth				
T-420	4	20	8	5	4.3	20 or more	15	3.0	100	1,000
T-425		25		10						
T-525	5	25	10	5	5.4	25 or more	20	5.6	100	1,000
T-530		30		10						
T-630	6	30	11	5	6.4	30 or more	25	9.0	50	500
T-640		40		15						
T-650		50		25					100	1,000
T-660		60		35						
T-840	8	40	15	5	8.5	40 or more	35	7.9	30	300

ST Type (Stainless Steel)										FC=27N/mm ²
Code	Diameter (outside dia)	Length Below Head (mm)	Head Diameter (mm)	Max. Use Thickness (mm)	Drilling Condition (mm)		Embedment Depth (mm)	Max. Extraction Strength (kN)	Pcs./Box	Pcs./Ctn
					Hole Dia	Hole Depth				
ST-420	4	20	8	5	4.3	20 or more	15	2.4	100	1,000
ST-425		25		10						
ST-525	5	25	10	5	5.4	25 or more	20	5.3	100	1,000
ST-530		30		10						
ST-630	6	30	11	5	6.4	30 or more	25	6.8	50	500
ST-640		40		15						
ST-645		45		20					100	1,000
ST-650		50		25						
ST-660		60		35					100	1,000

Y Type (Unichromate Treatment)										FC=27N/mm ²
Code	Diameter (outside dia)	Length Below Head (mm)	Head Diameter (mm)	Max. Use Thickness (mm)	Drilling Condition (mm)		Embedment Depth (mm)	Max. Extraction Strength (kN)	Pcs./Box	Pcs./Ctn
					Hole Dia	Hole Depth				
Y-420	4	20	8	5	4.3	20 or more	15	4.1	100	1,000
Y-425		25		10						

*Maximum extraction strength values are values measured by UNIKA and not standard values.

⚠ Precautions on use

- Protective clothing including safety glasses and helmets must always be worn when installing.
- Drill hole must be 5mm deeper than insertion depth.

Unicon Anchor UC/UCS Type

Drop-in anchor

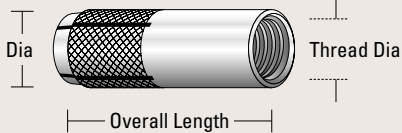
- The leading tapping anchor boasting a large contact area and excellent tensile strength.
- Operating performance is improved by the small preparation hole bore due to the collar outer diameter being narrower than the tap diameter. Overhead installation is also easier.
- Features inner cone. Eliminates loss of cone during installation or "drop-out" after installation.



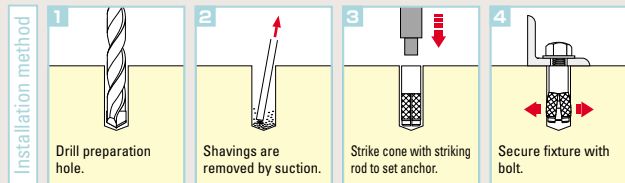
UC-3030B (With lip)

CONCRETE

STONE



Thread Dia	Tightening Torque
M6, W1/4	4 N·m
M8, W5/16	10 N·m
M10, W3/8 (3030B)	20 N·m (10 N·m)
M12, W1/2	35 N·m



Uses

Electrical, plumbing, air-conditioning/heating works.



JCAA Product Certification Mark

Products with this certification mark satisfy the evaluation and certification standards specified by the Japan Construction Anchor Association (JCAA).

UC Type inch size (Unichromate Treatment)

FC = 27N/mm²

Code	Thread Diameter	Diameter (mm)	Overall Length (mm)	Thread Length (mm)	Drilling Condition (mm)		Embedment Depth (mm)	Max. Extraction Strength (kN)	Pcs./Box	Pcs./Ctn
					Hole Dia	Hole Depth				
UC-2025	W1/4	8.0	25	10	8.5	25	25	8.6	100	1,000
UC-2530	W5/16	10.0	30	13	10.5	30	30	17.0	100	1,000
UC-3030B	W3/8	12.0	30	12	12.5	30	30	17.9	100	1,000
UC-3040			40	15		40	40	22.0	50	1,000
UC-4050	W1/2	16.0	50	20	16.5	50	50	23.8	50	500

UC Type mm size (Chromate Treatment)

FC = 27N/mm²

Code	Thread Diameter	Diameter (mm)	Overall Length (mm)	Thread Length (mm)	Drilling Condition (mm)		Embedment Depth (mm)	Max. Extraction Strength (kN)	Pcs./Box	Pcs./Ctn
					Hole Dia	Hole Depth				
UC-830	M8	10.0	30	13	10.5	30	30	17.4	100	1,000
UC-1030B	M10	12.5	30	10	13.0	30	30	17.0	100	1,000

UCS Type inch size (Stainless Steel)

FC = 27N/mm²

Code	Thread Diameter	Diameter (mm)	Overall Length (mm)	Thread Length (mm)	Drilling Condition (mm)		Embedment Depth (mm)	Max. Extraction Strength (kN)	Pcs./Box	Pcs./Ctn
					Hole Dia	Hole Depth				
UCS-3030B	W3/8	12.0	30	12	12.5	30	30	16.4	100	1,000
UCS-3040			40	15		40	40	26.7	50	1,000
UCS-4050	W1/2	16.0	50	20	16.5	50	50	33.5	50	500

*Maximum extraction strength values are values measured by UNIKA and not standard values.

Hammering Tool (Hand)

Code	Anchor Size (Part No.)	Overall Length (mm)
PT-20	UC-2025	160
PT-25	UC-2530 / 830	160
PT-30	UC-3040 / 1040	160
PT-30X1000		1,000
PT-30S	UC-3030B / 1030B	160
PT-30SX1000		1,000
PT-40	UC-4050	160



Hammering Tool (Hand)

Hammering Tool (Machine) SDS-plus

Code	Anchor Size (Part No.)	Overall Length (mm)
SD-30	UC-3040 / 1040	160
SD-30X500		500
SD-30X1000		1,000
SD-30S	UC-3030B / 1030B	160
SD-30SX500		500
SD-30SX1000		1,000
SD-40	UC-4050	160



Hammering Tool (Machine)

Unicon anchor bucket set

Code	Anchor Part No.	Prepared Hole Drill	Hammering Tool
UB-01	UC-3030B (500 pcs)	UX12.5 (2 pcs)	SD30S (1 pcs)
UB-02	UC-3040 (500 pcs)	UX12.5 (2 pcs)	SD30 (1 pcs)
UB-03	UCS3030B (200 pcs)	UX12.5 (1 pcs)	SD30S (1 pcs)

*For the set contents, please feel free to contact us.



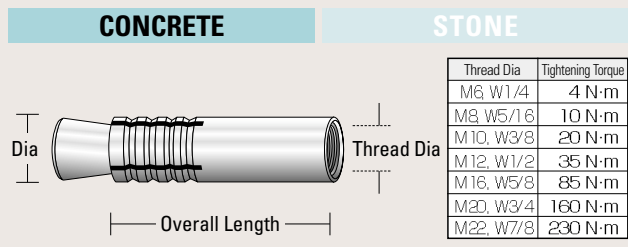
Rooty Cut CA/CAS Type



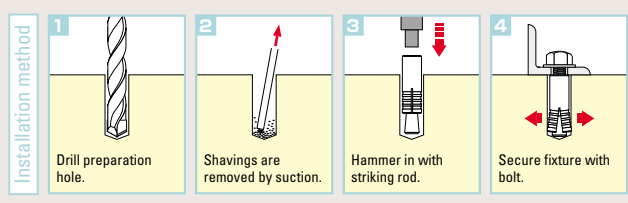
Cut anchor

- Most common, high-reliability tapped anchors.
- Enables installation of hexagonal bolts, push-in fittings, suspension bolts without protrusions from concrete surface after installation.

Uses
Air-conditioning work, signboard, interior/exterior works, electrical installation work, wiring work etc.



Thread Dia	Tightening Torque
M6, W1/4	4 N·m
M8, W5/16	10 N·m
M10, W3/8	20 N·m
M12, W1/2	35 N·m
M16, W5/8	85 N·m
M20, W3/4	160 N·m
M22, W7/8	230 N·m



CA Type inch size (Chromate Treatment) FC=27N/mm²

Code	Thread Diameter	Diameter (mm)	Overall Length (mm)	Thread Length (mm)	Drilling Condition (mm)		Embedment Depth (mm)	Max. Extraction Strength (kN)	Pcs./Box	Pcs./Ctn
					Hole Dia	Hole Depth				
28CA	W1/4	10.5	30	10	11.0	33	30	16.2	200	1,200
258CA	W5/16	12.0	35	14	12.5	39	35	17.7	150	900
38CA-12R (30L)	W3/8	12.0	30	10	12.5	35	30	14.3	150	900
38CA-12R		12.0	35	10	12.5	40	35	18.9	100	600
38CA		14.0	40	14	14.5	45	40	23.7	100	600
48CA	W1/2	17.5	50	22	18.0	56	50	40.7	50	300
58CA	W5/8	21.5	60	24	22.0	68	60	44.1	25	150
68CA	W3/4	25.5	80	30	26.0	90	80	72.0	15	90
78CA	W7/8	28.5	90	35	29.0	100	90	73.1	10	60

CA Type mm size (Chromate Treatment) FC=27N/mm²

Code	Thread Diameter	Diameter (mm)	Overall Length (mm)	Thread Length (mm)	Drilling Condition (mm)		Embedment Depth (mm)	Max. Extraction Strength (kN)	Pcs./Box	Pcs./Ctn
					Hole Dia	Hole Depth				
6CA	M6	10.5	30	10	11.0	33	30	14.7	200	1,200
8CA	M8	12.0	35	14	12.5	39	35	16.9	150	900
10CA	M10	14.0	40	14	14.5	45	40	25.7	100	600
12CA	M12	17.5	50	22	18.0	56	50	32.6	50	300
16CA	M16	21.5	60	24	22.0	68	60	50.4	25	150
20CA	M20	25.5	80	30	26.0	90	80	62.5	15	90
22CA	M22	28.5	90	35	29.0	100	90	64.5	10	60

CAS Type inch size (Stainless Steel) FC=27N/mm²

Code	Thread Diameter	Diameter (mm)	Overall Length (mm)	Thread Length (mm)	Drilling Condition (mm)		Embedment Depth (mm)	Max. Extraction Strength (kN)	Pcs./Box	Pcs./Ctn
					Hole Dia	Hole Depth				
28CAS	W1/4	10.5	30	10	11.0	33	30	15.1	200	1,200
258CAS	W5/16	12.0	35	14	12.5	39	35	14.7	150	900
38CAS	W3/8	14.0	40	14	14.5	45	40	18.4	100	600
48CAS	W1/2	17.5	50	22	18.0	56	50	37.0	50	300
58CAS	W5/8	21.5	60	24	22.0	68	60	50.7	25	150
68CAS	W3/4	25.5	80	30	26.0	90	80	71.8	15	90
78CAS	W7/8	28.5	90	35	29.0	100	90	73.3	10	60

CAS Type mm size (Stainless Steel) FC=27N/mm²

Code	Thread Diameter	Diameter (mm)	Overall Length (mm)	Thread Length (mm)	Drilling Condition (mm)		Embedment Depth (mm)	Max. Extraction Strength (kN)	Pcs./Box	Pcs./Ctn
					Hole Dia	Hole Depth				
6CAS	M6	10.5	30	10	11.0	33	30	11.6	200	1,200
8CAS	M8	12.0	35	14	12.5	39	35	20.4	150	900
10CAS	M10	14.0	40	14	14.5	45	40	26.3	100	600
12CAS	M12	17.5	50	22	18.0	56	50	30.9	50	300
16CAS	M16	21.5	60	24	22.0	68	60	43.1	25	150
20CAS	M20	25.5	80	30	26.0	90	80	68.6	15	90
22CAS	M22	28.5	90	35	29.0	100	90	79.5	10	60

*Maximum extraction strength values are values measured by UNIKA and not standard values.

Hammering Tool *mm/inch sizes.

Code	Anchor Size	Length (mm)
28C	M6, W1/4	150
258C	M8, W5/16	160
38C	M10, W3/8	170

Code	Anchor Size	Length (mm)
48C	M12, W1/2	195
58C	M16, W5/8	200
68C	M20, W3/4	230
78C	M22, W7/8	260



Big One **BG/BG-D** Type



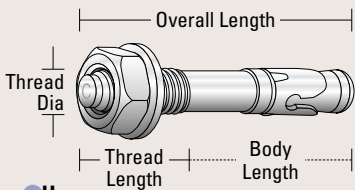
Wedge anchor

- Demonstrates reliable strength by installation through torque control and three-sided wedges.
- Demonstrates reliable installation strength with the torque control of the three-sided wedges. Installation can be done by either sides of the anchor as the diameter is the same.
- Overall length can be checked after installation by marking on the head.



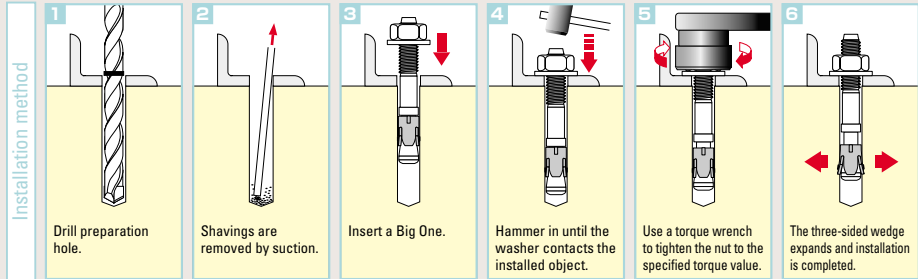
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● Uses

Electrical, plumbing, air-conditioning / heating duct works, elevator construction work, elevator installation work.



● Marking on head

Length (mm)	60	70	80	90	100	120	140	150
Marking	B	C	D	E	F	H	J	K

● Tightening torque

Thread diameter	M 8	M 10	M 12	M 16
Width across flat	13mm	17mm	19mm	24mm
Tightening torque	15 N·m	30 N·m	45 N·m	100 N·m

BG Type (Unichromate Treatment)

FC=27N/mm²

Code	Diameter (outside dia)	Overall Length (mm)	Marking on head	Thread Length (mm)	Max. Use Thickness (mm)	Drilling Condition (mm)		Nut Width Across Flat (mm)	Embedment Depth (mm)	Max. Extraction Strength (kN)	Pcs./Box	Pcs./Ctn	
						Hole Dia	Hole Depth						
BG-860	M8	60	B	25.0	5	8.0	52 or more	13	43	11.5	50	400	
BG-870		70	C	35.0	15						50	400	
BG-1070	M10	70	C	26.5	4	10.0	60 or more	17	52	18.4	30	240	
BG-1080		80	D	36.5	13						30	240	
BG-1090		90	E	46.5	22						30	240	
BG-1010		100	F	56.5	32						30	180	
BG-1280	M12	80	D	29.0	4	12.0	68 or more	19	61	22.5	25	150	
BG-1290		90	E	39.0	12						25	150	
BG-1210		100	F	49.0	22						25	150	
BG-1212		120	H	69.0	42						25	100	
BG-1215		150	K	99.0	72						25	100	
BG-1612	M16	120	H	59.0	25	16.0	80 or more	24	71	35.2	10	60	
BG-1614		140	J	79.0	45						10	60	

BG-D Type (Hot Dip Galvanizing) Wedge: Stainless Steel

FC=27N/mm²

Code	Diameter (outside dia)	Overall Length (mm)	Marking on head	Thread Length (mm)	Max. Use Thickness (mm)	Drilling Condition (mm)		Nut Width Across Flat (mm)	Embedment Depth (mm)	Max. Extraction Strength (kN)	Pcs./Box	Pcs./Ctn	
						Hole Dia	Hole Depth						
BG-1080D	M10	80	D	36.5	13	10.0	60 or more	17	52	22.3	30	240	
BG-1090D		90	E	46.5	22						30	240	
BG-1290D	M12	90	E	39.0	12	12.0	68 or more	19	61	27.5	25	150	
BG-1210D		100	F	49.0	22						25	150	
BG-1212D		120	H	69.0	42						25	100	
BG-1612D	M16	120	H	59.0	25	16.0	80 or more	24	71	47.4	10	60	

*Maximum extraction strength values are values measured by UNIKA and not standard values.

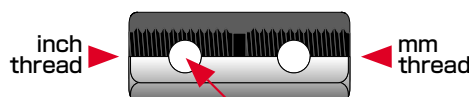
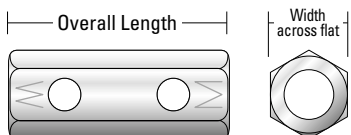


Thread diameter conversion nut for Big One (Unichromate Treatment)

Code	Thread Diameter	Overall Length (mm)	Width Across Flat (mm)	Pcs./Box	Pcs./Ctn
NBG-3010M	W3/8×M10	40	14	50	400
NBG-4012M	W1/2×M12	50	19	25	200

Thread diameter conversion nut for Big One (Stainless Steel)

Code	Thread Diameter	Overall Length (mm)	Width Across Flat (mm)	Pcs./Box	Pcs./Ctn
NBGS-3010M	W3/8×M10	40	14	50	400
NBGS-4012M	W1/2×M12	50	19	25	200



Reliable installation can be visually checked because holes are provided

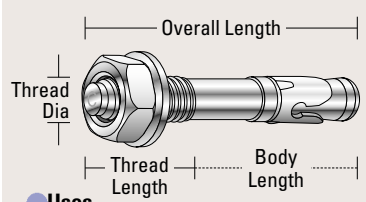
Big One **BGS Type** (Stainless Steel)

Wedge anchor

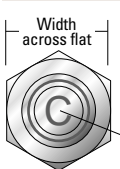
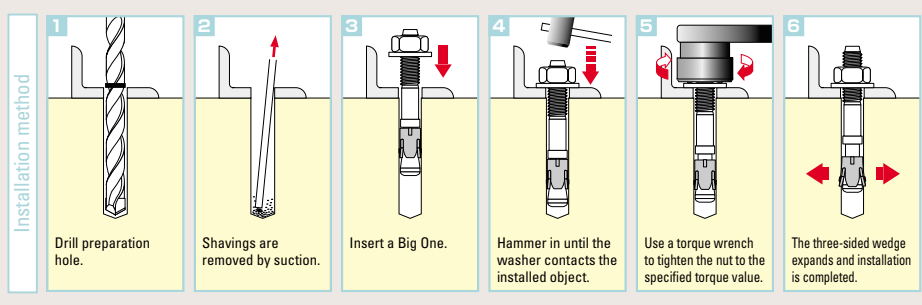
- Demonstrates reliable strength by installation with torque control and three-sided wedges.
- Overall length can be checked after installation by marking on the head.
- BGS type is completely made of stainless steel which is resistant to rust. Used extensively even in humid places.



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Uses
Electrical, plumbing, air-conditioning / heating duct works, elevator construction work, elevator installation work.



Marking on head

Length (mm)	60	70	80	90	100	120
Marking	B	C	D	E	F	H

Tightening torque

Thread diameter	M 8	M 10	M 12	M 16
Width across flat	13mm	17mm	19mm	24mm
Tightening torque	15 N·m	30 N·m	45 N·m	100 N·m

BGS Type (Stainless Steel) FC=27N/mm²

Code	Diameter (outside dia)	Overall Length (mm)	Marking on head	Thread Length (mm)	Max. Use Thickness (mm)	Drilling Condition (mm)		Nut Width Across Flat (mm)	Embedment Depth (mm)	Max. Extraction Strength (kN)	Pcs./Box	Pcs./Ctn
						Hole Dia	Hole Depth					
BGS-860	M8	60	B	25.0	5	8.0	52 or more	13	43	14.3	50	400
BGS-1070	M10	70	C	26.5	4	10.0	60 or more	17	52	19.9	30	240
BGS-1080		80	D	36.5	13						30	240
BGS-1090		90	E	46.5	22						30	240
BGS-1280	M12	80	D	29.0	4	12.0	68 or more	19	61	26.7	25	150
BGS-1290		90	E	39.0	12						25	150
BGS-1210	M16	100	F	49.0	22	16.0	80 or more	24	71	35.8	25	150
BGS-1212		120	H	69.0	42						25	100
BGS-1612		120	H	59.0	25						10	60

*Maximum extraction strength values are values measured by UNIKA and not standard values.

Hammering Tool (Machine) SDS-plus

Code	Anchor Size	Overall Length (mm)
BG-SD	M8, M10, M12	160
BG-16SD	M16	160



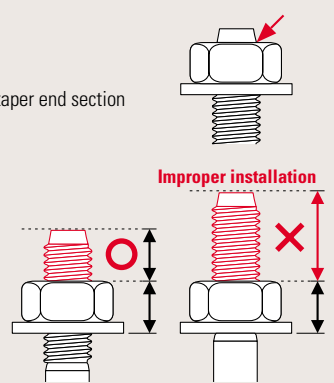
- Precautions on use**
- Set a nut on the specified position before hammering.
 - After hammering, make sure to tighten the nut with a torque wrench to the specified torque.
 - It cannot be used for BGL type.

Precautions Before installation

Install it after aligning the nut with the taper end section on the head of the anchor body.

Installation check

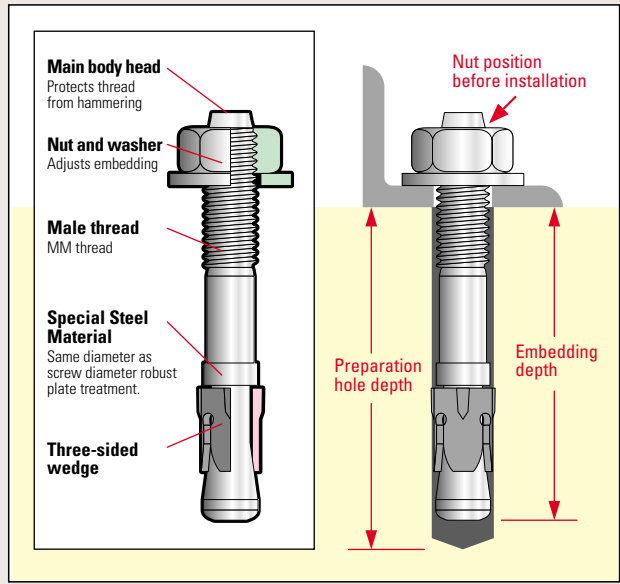
If the thread section is protruded by a height of one nut or more when the nut is tightened, it has been improperly installed. Check the preparation hole diameter and install in another position.



Precautions on use

- Select overall length of anchor in consideration of thickness of installed object.
- Align the end face of the nut with the end of the tape to set.
- For installation, use a torque wrench to tighten to the specified torque.

Structural Drawing



Big One BGL/BGSL Type

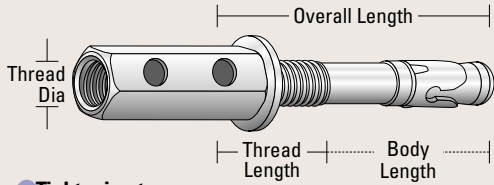
Wedge anchor

- Demonstrates reliable strength for installation of suspension objects by installation by torque control and large three-sided wedge.
- Reliable installation can be visually checked by a hole exposing the threads.
- Installation is also easy with small diameter preparation hole because thread diameter and preparation hole diameter are the same.
- Expands while increasing load and demonstrates stable strength.
- Working efficiency is also increased by an exclusive hammering rod.



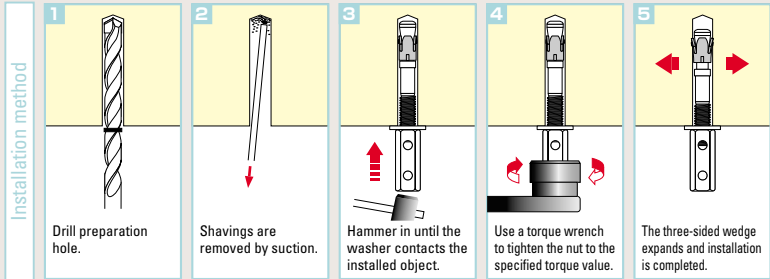
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Tightening torque

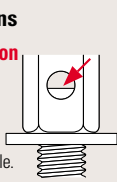
Thread diameter	M10	M12
Width across flat	14mm	19mm
Tightening torque	30 N·m	45 N·m



Precautions

Before installation

Set the anchor on a position where the head of the anchor body starts to be seen from the nut hole.



Installation check

Unless installed with the specified preparation hole diameter and preparation hole depth, torque cannot be applied and the installation will be made improperly. Check the preparation hole diameter and install in another position.



Big One bucket set

Code	Anchor Part No.	Prepared Hole Drill	Hammering Tool	
BB-05	BGL-3070M (150 pcs)	UX100(1 pcs)	—	
BB-02	BGL-4080M (60 pcs)	UX120(1 pcs)	—	
BB-03	BGL-3070M (150 pcs)	UX100(1 pcs)	NBG-30SD	

BGL Type (Unichromate Treatment)

FC=27N/mm²

Code	Diameter (outside dia)	Overall Length (mm)	Thread Length (mm)	Nut Thread Diameter	Drilling Condition (mm)		Nut Width Across Flat (mm)	Embedment Depth (mm)	Max. Extraction Strength (kN)	Pcs./Box	Pcs./Ctn	
					Hole Dia	Hole Depth						
BGL-3070M	M10	70	26.5	W3/8	10.0	60 or more	14	52	18.4	30	180	
BGL-4080M	M12	80	29.0	W1/2	12.0	68 or more	19	61	22.5	20	120	

BGSL Type (Stainless Steel)

FC=27N/mm²

Code	Diameter (outside dia)	Overall Length (mm)	Thread Length (mm)	Nut Thread Diameter	Drilling Condition (mm)		Nut Width Across Flat (mm)	Embedment Depth (mm)	Max. Extraction Strength (kN)	Pcs./Box	Pcs./Ctn	
					Hole Dia	Hole Depth						
BGSL-3070M	M10	70	26.5	W3/8	10.0	60 or more	14	52	19.9	30	180	
BGSL-4080M	M12	80	29.0	W1/2	12.0	68 or more	19	61	26.7	20	120	

*Maximum extraction strength values are values measured by UNIKA and not standard values.

Hammering Tool (Machine) SDS-plus

PAT.

Code	Anchor Part No.	Overall Length (mm)	
NBG-30SD	BGL-3070M	150	
NBG-40SD	BGL-4080M	166	



Precautions on use

- Set the high nut at the specified height to tap.
- When hammering, press the rotation stop bar against the handle of the motor, and use in a fixed state.
- Make sure to tighten to the specified torque value using a torque wrench after hammering.

*Note that some hammering rods cannot be used on the wedge type anchors (high nut) of other makers.

Torque Wrench for Big One

Tightening only

Code	Tightening Torque (Nm)	Overall Length (mm)	Drive Size (mm)	Head Width (mm)	Head Thickness (mm)
TBG-33045	30/45	302	9.5	32	15



Precautions on use

- Use for tightening only.
- When the proper tightness is reached using the torque wrench, there should be a click sound. At that time the proper tightness is achieved. Do not tighten any further, stop rotating and applying force at that time.

*The torque wrench has two settings (30N/m and 45N/m) which should be used depending on the wedge anchor size. Initially when you open the box the wrench is set at the 30N/m setting. Adjust it to the proper setting after you select the anchor.

Big One safety work set

Code	Anchor Part No.	Prepared Hole Drill	Hammering Tool	Torque Wrench	Socket
BC-01	BGL-3070M (30 pcs)	UX100(1 pcs)	NBG-30SD	TBG-33045	3S-14L
BC-02	BGL-3070M (30 pcs)	UX100(1 pcs)	—	TBG-33045	3S-14L
BC-03	BG-1070 (30 pcs)	UX100(1 pcs)	—	TBG-33045	3S-17



Socket

Code	Socket Size (mm)	Overall Length (mm)	Outside Diameter (mm)	Drive Size (mm)
3S-14L	14	54	20.0	9.5
3S-17L	17	54	24.0	9.5
3S-19L	19	54	26.0	9.5
3S-17	17	30	23.0	9.5
3S-19	19	32	26.0	9.5



Rooty Set **B/BS Type**



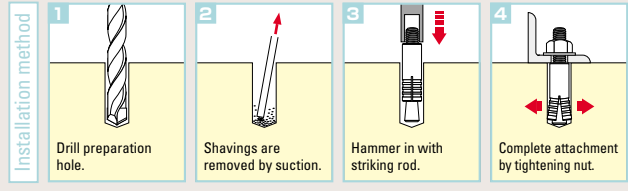
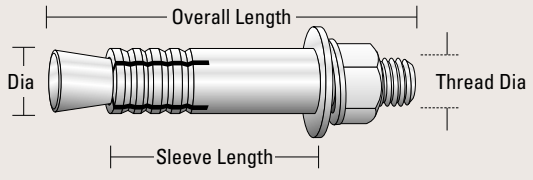
Bolt anchor

- Highly reliable threaded type anchor that extends in response to load.
- Offers stable strength, since nut is tightened after fastening with striking rod.

Uses
Machine installation, soundproof walls/air-conditioning equipment/signboard attachment, and elevator construction work, etc.



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B Type mm size (Chromate Treatment) FC=27N/mm²

Code	Thread Diameter	Diameter (mm)	Overall Length (mm)	Thread Length (mm)	Sleeve Length (mm)	Max. Use Thickness (mm)	Drilling Condition (mm)		Embedment Depth (mm)	Max. Extraction Strength (kN)	Pcs./Box	Pcs./Ctn	
							Hole Dia	Hole Depth					
B-650	M6	9.5	50	28	30	10	9.5	33	30	11.5	100	800	
⊕ B-865	M8	12.0	65	35	35	15	12.5	39	35	15.1	50	400	
⊕ B-1070	M10	13.8	70	35	40	10	14.5	45	40	24.6	50	300	
⊕ B-1080			80	45		20					50	300	
B-10100			100	65		40					50	200	
B-10120			120	85		60					50	200	
B-10150			150	115		90					50	200	
⊕ B-12100	M12	17.3	100	60	50	25	18.0	56	50	38.4	20	120	
⊕ B-12120			120	80		45					20	120	
⊕ B-12125			125	75	60	35		66	60	45.2	20	120	
⊕ B-12160			160	110		70					25	100	
B-12200			200	150		110					25	100	
B-16100	M16	21.7	100	60	50	20	22.5	58	50	41.7	15	60	
B-16120			120	70	60	30		68	60	49.4	15	60	
⊕ B-16125			125	75		35					15	60	
⊕ B-16160			160	110		70					15	60	
B-20170	M20	27.2	170	100	75	40	28.0	85	75	96.2	10	40	
B-20200			200	130		70					10	40	
B-22200	M22	31.8	200	110	90	60	33.0	100	90	142.8	5	20	
B-24200	M24	34.0	200	100	100	40	35.0	115	100	136.9	5	20	

B Type inch size (Chromate Treatment) FC=27N/mm²

Code	Thread Diameter	Diameter (mm)	Overall Length (mm)	Thread Length (mm)	Sleeve Length (mm)	Max. Use Thickness (mm)	Drilling Condition (mm)		Embedment Depth (mm)	Max. Extraction Strength (kN)	Pcs./Box	Pcs./Ctn	
							Hole Dia	Hole Depth					
⊕ B-3070	W3/8	13.8	70	35	40	10	14.5	45	40	26.0	50	300	
⊕ B-3080			80	45		20					50	300	
⊕ B-40100	W1/2	17.3	100	60	50	25	18.0	56	50	33.1	20	120	

BS Type mm size (Stainless Steel) FC=27N/mm²

Code	Thread Diameter	Diameter (mm)	Overall Length (mm)	Thread Length (mm)	Sleeve Length (mm)	Max. Use Thickness (mm)	Drilling Condition (mm)		Embedment Depth (mm)	Max. Extraction Strength (kN)	Pcs./Box	Pcs./Ctn	
							Hole Dia	Hole Depth					
BS-650	M6	9.5	50	28	30	10	9.5	33	30	12.5	100	800	
⊕ BS-865	M8	12.0	65	35	35	15	12.5	39	35	15.4	50	400	
⊕ BS-1070	M10	14.0	70	35	40	10	14.5	45	40	20.6	50	300	
⊕ BS-1080			80	45		20					50	300	
BS-10100			100	65		40					50	200	
BS-10120			120	85		60					50	200	
BS-10150			150	115		90					50	200	
⊕ BS-12100	M12	17.3	100	50	50	25	18.0	56	50	28.3	20	120	
BS-12120			120	70		45					20	120	
BS-12125			125	75	60	35		66	60	40.3	20	120	
BS-12160			160	110		70					25	100	
BS-12200			200	154		110					25	100	
BS-16100	M16	21.7	100	50	50	20	22.5	58	50	31.2	15	60	
BS-16120			120	70	60	30		68	60	38.4	15	60	
BS-16125			125	75		35					15	60	
BS-16160			160	110		70					15	60	
BS-20170	M20	27.2	170	100	75	40	28.0	85	75	67.8	10	40	
BS-20200			200	130		70					10	40	
BS-22200	M22	32.0	200	120	90	60	33.0	100	90	76.3	5	20	
BS-24200	M24	34.0	200	110	100	40	35.0	115	100	140.1	5	20	

*Maximum extraction strength values are values measured by UNIKA and not standard values.

Hammering Tool *mm/inch sizes.

Code	Anchor Size	Length (mm)
28S	M6, W1/4	155
258S	M8, W5/16	195
38S	M10, W3/8	200

Code	Anchor Size	Length (mm)
48S	M12, W1/2	225
58S	M16, W5/8	260
68S	M20, W3/4	275
78S	M22, W7/8	300



T-lock TL/TLS Type

Pin anchor

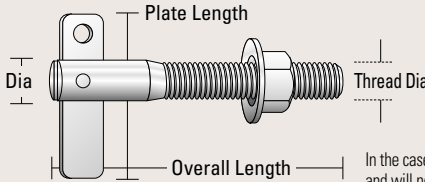
- As the main body diameter and the plate width are the same, anchoring is possible by drilling from above the fixture.
- TLS type is completely made of stainless steel which is resistant to rust. Used extensively even in humid places.

⚠ Precautions on use

Check necessary hollow width on the back of wall when installing.

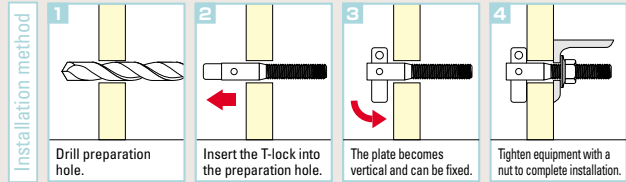
HOLLOW WALLS

EXTRUDED CEMENT PANEL



Thread Dia	Tightening Torque
M6	25 N·m
M8	65 N·m
M10	100 N·m
M12	200 N·m

In the case the hollow wall is strong enough and will not be deformed by tightening the nut.



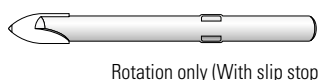
● Uses

Installation of bracket, equipment and handrail.

TL Type (Trivalent Chromate Treatment)											Max. extraction strength = Plate proof strength	
Code	Thread Diameter	Diameter (mm)	Overall Length (mm)	Thread Length (mm)	Use Thickness (mm)	Plate Length (mm)	Preparation Hole Diameter (mm)	Necessary Hollow Width (mm)	Max. Extraction Strength (kN)	Pcs./Box	Pcs./Ctn	
TL-630	M6	7.0	30	13	10~12	24	7.5	26	3.6	50	800	
TL-640			40	23	10~22					50	800	
TL-650			50	33	10~32					50	800	
TL-835	M8	8.0	35	15	12~13	30	9.0	32	4.1	50	400	
TL-840			40	20	12~18					50	400	
TL-845			45	25	12~23					50	400	
TL-850			50	30	12~28					50	400	
TL-855			55	35	12~33					50	400	
TL-860			60	40	12~38					50	400	
TL-865			65	45	12~43					50	400	
TL-870			70	50	12~48					50	400	
TL-875			75	55	12~53					50	400	
TL-880			80	60	12~58					50	400	
TL-890			90	60	22~68					50	400	
TL-810			100	70	22~78					50	400	
TL-1050	M10	10.0	50	26	14~25	36	11.0	38	5.4	50	300	
TL-1070			70	46	14~45					50	300	
TL-1090			90	66	14~65					50	300	
TL-1010			100	76	14~75					50	300	
TL-1250	M12	12.0	50	23	16~20	37	13.5	39	6.8	30	180	
TL-1270			70	43	16~40					30	180	
TL-1210			100	63	16~70					30	180	

TLS Type (Stainless Steel)											Max. extraction strength = Plate proof strength	
Code	Thread Diameter	Diameter (mm)	Overall Length (mm)	Thread Length (mm)	Use Thickness (mm)	Plate Length (mm)	Preparation Hole Diameter (mm)	Necessary Hollow Width (mm)	Max. Extraction Strength (kN)	Pcs./Box	Pcs./Ctn	
TLS-630	M6	7.0	30	13	10~12	24	7.5	26	3.8	50	800	
TLS-640			40	23	10~22					50	800	
TLS-650			50	33	10~32					50	800	
TLS-840	M8	8.0	40	20	12~18	30	9.0	32	4.2	50	400	
TLS-850			50	30	12~28					50	400	
TLS-860			60	40	12~38					50	400	
TLS-870			70	50	12~48					50	400	
TLS-880			80	60	12~58					50	400	
TLS-890			90	60	22~68					50	400	
TLS-810			100	70	22~78					50	400	
TLS-1050	M10	10.0	50	26	14~25	36	11.0	38	6.2	50	300	
TLS-1070			70	46	14~45					50	300	
TLS-1090			90	66	14~65					50	300	
TLS-1010			100	76	14~75					50	300	
TLS-1250	M12	12.0	50	23	16~20	37	13.5	39	7.4	30	180	
TLS-1270			70	43	16~40					30	180	
TLS-1210			100	63	16~70					30	180	

*The maximum extraction strength is our measurement value. Please consider the safety factor in accordance with base materials to be used.



Rotation only (With slip stop)

Drill for T-lock			(For Extruded Cement Panel)
Code	Anchor Size	Dia (mm)	
TLD-7.5	M6	7.5	
TLD-9.0	M8	9.0	
TLD-11.0	M10	11.0	
TLD-13.5	M12	13.5	

Weld Anchor **AS Type**

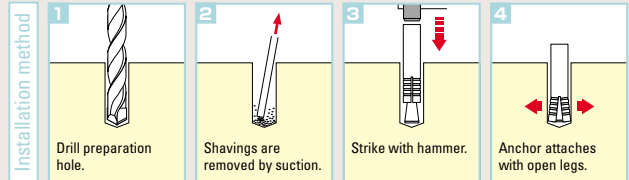
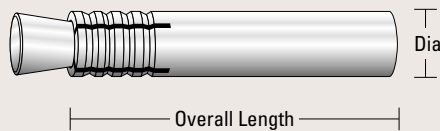
Cut anchor

- Weld anchor for use by hammering into target object and attaching equipment fixture by direct welding.
- Ideal for sash window frame retainers.



CONCRETE

STONE



● Uses

Attachment or repair work on sash or shutter frames.

AS Type										FC=27N/mm ²
Code	Diameter (mm)	Overall Length (mm)	Drilling Condition (mm)		Embedment Depth (mm)	Max. Extraction Strength (kN)	Pcs./Box	Pcs./Ctn		
			Hole Dia	Hole Depth						
AS-1040	10	40	10.5	32	30	14.2	150	900		
AS-1045		45					100	600		
AS-1050		50					100	600		
AS-1055		55					100	600		
AS-1060		60					100	600		

*Maximum extraction strength values are values measured by UNIKA and not standard values.

NP Anchor **NP/NPS Type**

Hammer Screw Type

- Easy operation simply by hammering in. Enables attachment without the use of wood screws or plugs.
- Body is made of nylon, eliminating corrosion worries.

⚠ Precautions on use

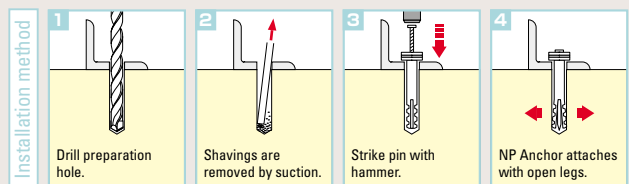
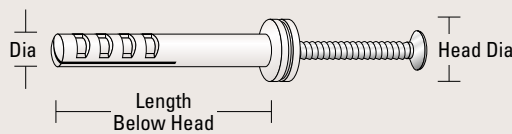
Preparation holes should be slightly deeper than the below-head length.
Not to be used for attaching heavy objects to ceiling surfaces.



CONCRETE

BLOCK

STONE



● Uses

Attaching wiring boards, saddle bands, and lighting fixtures, coping and signboard attachment.

NP Type											FC=27N/mm ²
Code	Diameter (mm)	Length Below Head (mm)	Head Diameter (mm)	Max. Use Thickness (mm)	Drilling Condition (mm)		Embedment Depth (mm)	Max. Extraction Strength (kN)	Pcs./Box	Pcs./Display Box	
					Hole Dia	Hole Depth					
NP-425	4	25	8.0	8	4.0	25以上	20	1.0	100	600	
NP-535	5	35	9.5	15	5.0	35以上	30	2.1	50	300	
NP-640	6	40	11.0	16	6.0	40以上	35	2.2	50	300	

NPS Type (Stainless Steel Screw)											FC=27N/mm ²
Code	Diameter (mm)	Length Below Head (mm)	Head Diameter (mm)	Max. Use Thickness (mm)	Drilling Condition (mm)		Embedment Depth (mm)	Max. Extraction Strength (kN)	Pcs./Box	Pcs./Display Box	
					Hole Dia	Hole Depth					
NPS-535	5	35	9.5	15	5.0	35以上	30	2.1	50	300	
NPS-640	6	40	11.0	16	6.0	40以上	35	2.2	50	300	
NPS-650		50		25		50以上	45		50	300	

NON-Plug Screw

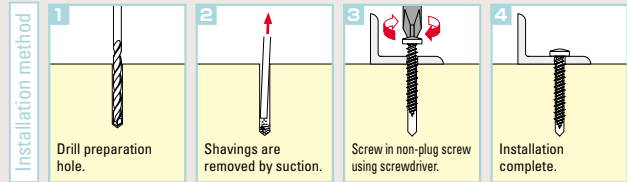
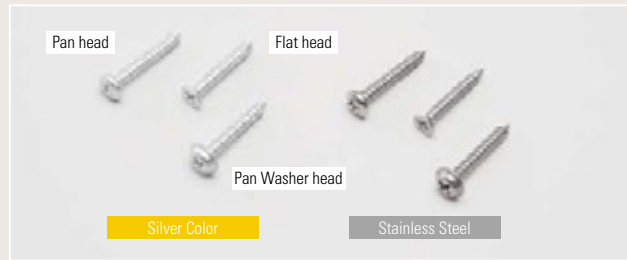
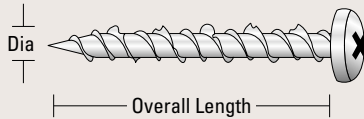
Screw Type

- Requires no plugs. Can be used to screw directly into concrete, and can be attached simply by using a normal screwdriver.
- 3 screw head types : flat head, pan head and pan washer head.

CONCRETE

BLOCK

BRICK



Silver Color
[Surface treatment]



Pack size (mm)
80 (W) x 130 (H) x 40 (D)

ANCHOR CASE SET

For the set contents, please feel free to contact us.

[Non-plug screw box set]
Non-plug screw (Silver color)
P-425-SDN x 1,000 pcs.
SDS plus drill bit 3.4 mm x 10 pcs.



Silver color (no drill)

Code	Head	Diameter (mm)	Overall Length (mm)	Hole Diameter (mm)	Pcs./Box	Middle-sized Box (Pack)	Pcs./Ctn		
P-425-SDN	Pan head	4	25	3.5	200	5	4,000 (200pcs. x 5packs x 4boxes)		
P-432-SDN			32		150	5	3,000 (150pcs. x 5packs x 4boxes)		
P-438-SDN			38		125	5	2,500 (125pcs. x 5packs x 4boxes)		
P-525-SDN	Flat head	5	25	4.3	80	5	1,600 (80pcs. x 5packs x 4boxes)		
F-425-SDN			4		25	3.5	200	5	4,000 (200pcs. x 5packs x 4boxes)
F-432-SDN			32		150	5	3,000 (150pcs. x 5packs x 4boxes)		
F-438-SDN		38	125	5	2,500 (125pcs. x 5packs x 4boxes)				
F-445-SDN		45	100	5	2,000 (100pcs. x 5packs x 4boxes)				
F-525-SDN		5	25	4.3	80	5	1,600 (80pcs. x 5packs x 4boxes)		
F-535-SDN		35	70	5	1,400 (70pcs. x 5packs x 4boxes)				
F-545-SDN		45	60	5	1,200 (60pcs. x 5packs x 4boxes)				
F-560-SDN		60	50	5	1,000 (50pcs. x 5packs x 4boxes)				
F-570-SDN		70	40	5	800 (40pcs. x 5packs x 4boxes)				
F-635-SDN		6	35	5.5	40	5	800 (40pcs. x 5packs x 4boxes)		
F-645-SDN		45	35	5	700 (35pcs. x 5packs x 4boxes)				
F-660-SDN		60	30	5	600 (30pcs. x 5packs x 4boxes)				
F-670-SDN		70	30	5	600 (30pcs. x 5packs x 4boxes)				
F-675-SDN		75	25	5	500 (25pcs. x 5packs x 4boxes)				
F-690-SDN	90	20	5	400 (20pcs. x 5packs x 4boxes)					
PW-425-SDN	Pan washer head	4	25	3.5	150	5	3,000 (150pcs. x 5packs x 4boxes)		
PW-432-SDN			32		125	5	2,500 (125pcs. x 5packs x 4boxes)		

Silver color

Code	Head	Attached drill	Pcs./Box	Middle-sized Box (Pack)	Pcs./Ctn
P-425BS	Pan head	Percussion drill x 1 pc. (B3.5 x 85)	200	5	4,000 (200pcs. x 5packs x 4boxes)
P-432BS			150	5	3,000 (150pcs. x 5packs x 4boxes)
P-438BS			125	5	2,500 (125pcs. x 5packs x 4boxes)
F-425BS	Flat head		200	5	4,000 (200pcs. x 5packs x 4boxes)
F-432BS			150	5	3,000 (150pcs. x 5packs x 4boxes)
F-438BS			125	5	2,500 (125pcs. x 5packs x 4boxes)
PW-425BS	Pan washer head	150	5	3,000 (150pcs. x 5packs x 4boxes)	
PW-432BS		125	5	2,500 (125pcs. x 5packs x 4boxes)	

● Uses

All kinds of attachments including pipe saddle retainers, switch boxes, curtain rails, storage units, air-conditioning equipment, lighting fixtures, and interior underground materials.

● Average Extraction Strength of Non-Plug Screw 425 (Pan Head)

Model FC=1.8kN	Block	Brick
2.1kN (210kgf)	1.5kN (160kgf)	1.1kN (120kgf)

*For installation, consider the safety ratio of 1/5 to 1/10.

● Prepared hole drill diameter

Non-plug Screw Diameter	Concrete	Block	Brick
4mm Type	3.4~3.5mm	3.4~3.5mm	3.2~3.3mm
5mm Type	4.2~4.3mm	4.2~4.3mm	4.0~4.1mm
6mm Type	5.3~5.5mm	5.3~5.5mm	5.0~5.3mm

● **Pan washer head** Washer faced type with no washer required. Improves the holding force and installation efficiency.

Stainless Steel

[Material]



Stainless Steel (no drill)								
Code	Head	Diameter (mm)	Overall Length (mm)	Hole Diameter (mm)	Pcs./Box	Middle-sized Box (Pack)	Pcs./Ctn	
PS-425DN	Pan head	4	25	3.5	150	5	3,000 (150pcs. × 5packs × 4boxes)	
PS-432DN			32		110	5	2,200 (110pcs. × 5packs × 4boxes)	
PS-438DN			38		85	5	1,700 (85pcs. × 5packs × 4boxes)	
FS-425DN	Flat head	4	25	3.5	150	5	3,000 (150pcs. × 5packs × 4boxes)	
FS-432DN			32		110	5	2,200 (110pcs. × 5packs × 4boxes)	
FS-438DN			38		85	5	1,700 (85pcs. × 5packs × 4boxes)	
FS-535DN		5	35	4.3	50	5	1,000 (50pcs. × 5packs × 4boxes)	
FS-545DN			45		45	5	900 (45pcs. × 5packs × 4boxes)	
FS-560DN			60		35	5	700 (35pcs. × 5packs × 4boxes)	
PWS-425DN	Pan washer head	4	25	3.5	110	5	2,200 (110pcs. × 5packs × 4boxes)	
PWS-432DN			32		95	5	1,900 (95pcs. × 5packs × 4boxes)	

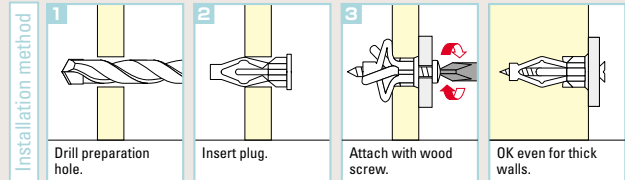
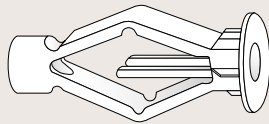
Stainless Steel						
Code	Head	Attached drill	Pcs./Box	Middle-sized Box (Pack)	Pcs./Ctn	
PS-425B	Pan head		150	5	3,000 (150pcs. × 5packs × 4boxes)	
PS-432B			110	5	2,200 (110pcs. × 5packs × 4boxes)	
PS-438B			85	5	1,700 (85pcs. × 5packs × 4boxes)	
FS-425B	Flat head	Percussion drill x 1 pc. (B3.5 × 85)	150	5	3,000 (150pcs. × 5packs × 4boxes)	
FS-432B			110	5	2,200 (110pcs. × 5packs × 4boxes)	
FS-438B			85	5	1,700 (85pcs. × 5packs × 4boxes)	
PWS-425B	Pan washer head		110	5	2,200 (110pcs. × 5packs × 4boxes)	
PWS-432B			95	5	1,900 (95pcs. × 5packs × 4boxes)	

Hollow Plug **NA Type**

Pin anchor

- For thick or thin walls more than 3mm thick. This is the plug for hollow construction walls.
- Unique nylon construction eliminates worries about corrosion, without destroying appearance.
- Excellent heat and cold resistance - does not fracture even when impacted at -30°C.

HOLLOW WALLS	CONCRETE
BLOCK	BRICK



Uses For attaching fixtures and equipment.

NA Type (Blister Pack)

Code	Board Thickness (mm)	Screw Size (mm)	Screw Length (mm)	Hole Diameter (mm)	Pcs./Pack	Packs./Box
NA-3P	3~8	4.0~4.5	30+thick	8~10	20	10
NA-9P	9~15		35+thick			
NA-16P	16~24		40+thick			

NA Type (Blister Pack with Screw)

Code	Attached Screw (mm)	Pcs./Pack	Packs./Box
NA-3SP	Pan 4x35	20	10
NA-9SP	Pan 4x40		

NA Type (Blister Pack with Stainless Steel Screw)

Code	Attached Screw (mm)	Pcs./Pack	Packs./Box
NA-3SPS	Pan 4x35	16	10
NA-9SPS	Pan 4x40	14	

NA Type (Blister Pack in Economy Cartons)

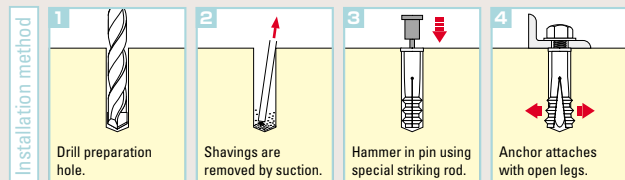
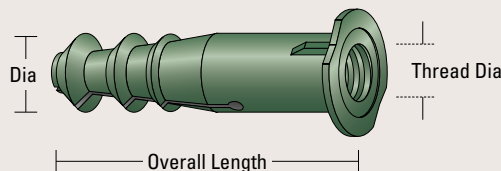
Code	Pcs./Pack	Packs./Box
NA-3	100	600
NA-9		
NA-16		

NP ALC Anchor **NBA Type**

Knock-in Type

- Tapped anchor specially for ALC panels, with 3-stage protrusions boasting high pull-out strength and retaining strength.
- Excellent weather and heat resistance. Unique corrosion resistant nylon design.

ALC



Uses For attaching fixtures and equipment to ALC panel.

NBA Type

Code	Thread Diameter	Diameter (mm)	Overall Length (mm)	Thread Length (mm)	Drilling Condition (mm)		Max. Extraction Strength (kN)	Pcs./Box
					Hole Dia	Hole Depth		
NBA-859	M8	11.5	59	25	11.5	59	1.8	35
NBA-1060	M10	14.0	60	20	14.0	60	2.7	30
NBA-2559	W5/16	11.5	59	25	11.5	59	1.8	35
NBA-3860	W3/8	14.0	60	20	14.0	60	2.7	30

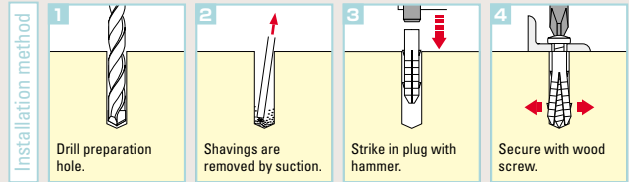
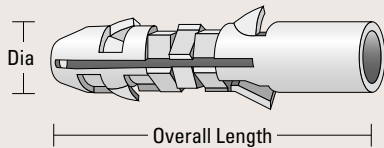
NP Plug **NAS** Type

Screw Type

- Uses special nylon material eliminating corrosion worries.
- Large range of available sizes matches wide range of wood screw sizes.
- 2-stage shape makes hammering in easy with reliable gripping.



CONCRETE **BLOCK** **A L C**



● Uses

For attaching coping fixtures, sashes, waterproof sheeting, electrical equipment interior decorations, etc.

NAS Type										FC=24N/mm ²
Code	Diameter (mm)	Overall Length (mm)	Screw Size (mm)	Drilling Condition (mm)		Embedment Depth (mm)	Max. Extraction Strength (kN)	Pcs./Box	Pcs./Ctn	
				Hole Dia	Hole Depth					
NAS-525	5	25	3.0~4.1	5.0	25	25	1.6	200	4,000	
NAS-630	6	30	4.0~5.1	6.0	30	30	2.6	100	2,000	
NAS-840	8	40	5.0~6.2	8.0	40	40	3.6	50	1,000	
NAS-1050	10	50	7.0~8.0	10.0	50	50	5.5	25	500	
NAS-1260	12	60	9.0~10.0	12.0	60	60	8.5	15	300	

Bolt Plug

Screw Type

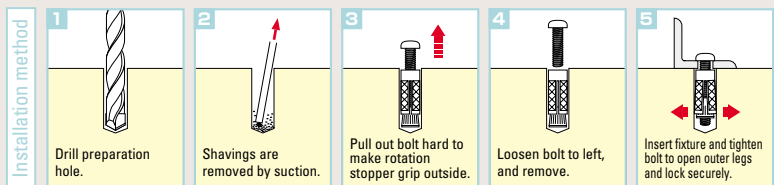
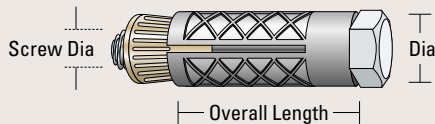
- This plug is ideal when installing into blocks.

CONCRETE **BLOCK**

- Round Bolt Configuration (#100 - 300)



- Hexagonal Bolt Configuration (#400 - 600)



● Uses

Water pipe, sanitation, air-conditioning/heating equipment attachment work, and general wiring, plumbing, interior/exterior work.

Bolt Plug											FC=27N/mm ²
Code	Screw Size	Head Form	Diameter (mm)	Overall Length (mm)	Drilling Condition (mm)		Embedment Depth (mm)	Max. Extraction Strength (kN)	Pcs./Box	Pcs./Ctn	
					Hole Dia	Hole Depth					
#100	M4	Round	7.0	17.5	7.5	25	17.5	2.3	100	1,500	
#200	M5		8.0	20.5	8.5	30	20.5	4.1	50	750	
#300	M6		10.0	27.0	10.5	35	27.0	7.0	50	600	
#400	M8	Hexagonal	13.5	32.0	14.0	45	32.0	5.7	50	250	
#500	M10		17.5	38.0	18.0	50	38.0	11.4	50	200	
#600	M12		19.2	45.0	20.0	60	45.0	17.4	25	100	

RESIN GE-165 (Cartridge Type)

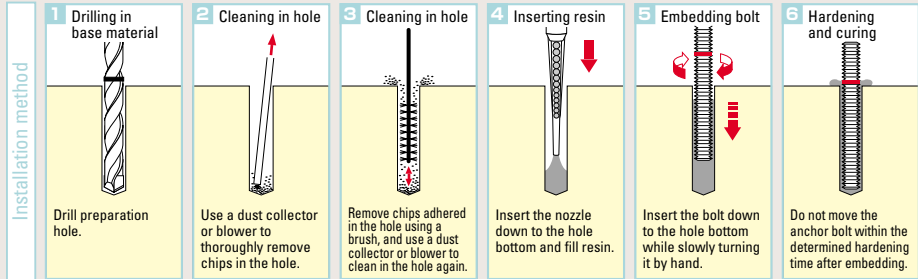
Resin anchor
(Injection System)

- Can be used for various bolts, sizes and shapes of different reinforced steels.
- Used extensively for concrete, brick, stone material and hollow base material.
- Demonstrates stable fixing strength because primary material and hardening agent are constantly mixed by mixing nozzle.
- Adopts a highly alkali resistant epoxy acrylate resin.



CONCRETE **STONE** **HOLLOW MATERIAL** **ALC**

GE-165 series



Uses

Foundation work for iron frame, Passage construction work, Tunnel construction work, Installation for vibrating machines.

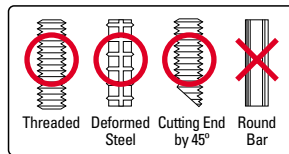
Guideline for hardening time

Temperature (°C)	-5	5	15	25	35
Use time (min)	40	20	9	5	3
Hardening time (min)	180	90	60	30	20

*Do not move the anchor reinforcement within the hardening time.

Shape of bolt used

Cannot be used for a round bar. Use bolts that have irregularity on a surface such as a continuous thread bolt and different shape bar steel.



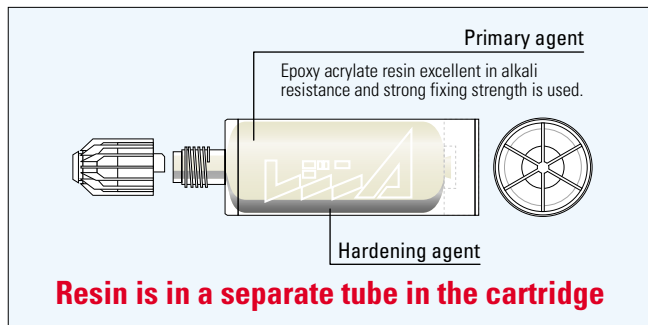
Installation specifications

Nominal diameter (mm)	M8	M10	M12	M16	M20	M22	M24
Hole diameter (mm)	100	120	140	180	240	250	280
Embedding depth (mm)	80	90	110	125	170	190	210
Required resin amount (ml)	4	6	9	15	42	43	66
Tightening torque (Nm)	11	22	38	95	170	210	260
Number of pieces installed (Pcs)	31	21	13	8	2	2	1

*The number of pieces installed indicates the target number taking into consideration a loss rate of 20%.



Structural Drawing



Plastic sleeve installation specifications

Nominal diameter (mm)	M8	M10	M12
Hole diameter (mm)	15.0	15.0	20.0
Matching sleeve (Code)	RA-P1585	RA-P1585	RA-P2085
Required resin amount (ml)	30	30	40

GE Type (Resin Cartridge)

Code	Capacity (ml)	Content (Pcs.)
GE-165	165	GE-165 Cartridge×1 Mixing nozzle×2

GE Type (Exclusive Parts)

Product Name	Code	Matching Cartridge
Mixing nozzle (3 Pcs.)	RA-MX3	GE Type
Injection gun 165	RA-GUNI 65	GE-165

GE-165 TOOL BOX SET

Code	Content (Pcs.)
TB-165D (with drill)	GE-165×4 Injection gun 165×1 SDS-plus UX (12/14)×each 1
Standard set product	Mixing nozzle×6 Plastic sleeve 1585×5 Push pump×1 Metal brush (10/13/18)×each 1

RESINA GE-410 (Cartridge Type)

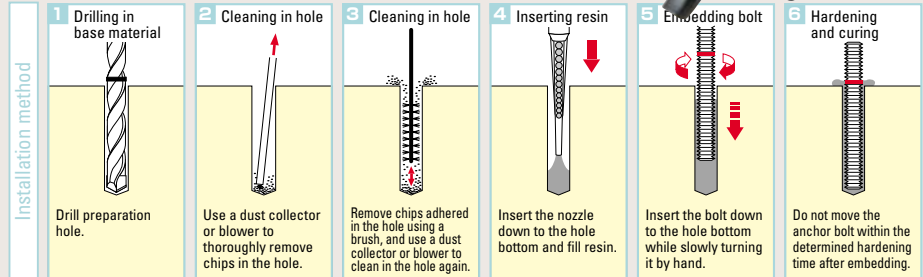
Resin anchor
(Injection System)

- Can be used for various bolts, sizes and shapes of different reinforced steels.
- Used extensively for concrete, brick, stone material and hollow base material.
- Demonstrates stable fixing strength because primary material and hardening agent are constantly mixed by mixing nozzle.
- Adopts a highly alkali resistant epoxy acrylate resin.



CONCRETE STONE HOLLOW MATERIAL A L C

GE-410 series



● Uses

Foundation work for iron frame, Passage construction work, Tunnel construction work, Installation for vibrating machines.

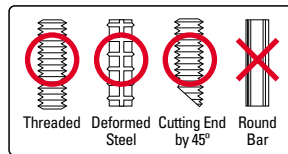
● Guideline for hardening time

Temperature (°C)	-5	5	15	25	35
Use time (min)	40	20	9	5	3
Hardening time (min)	180	90	60	30	20

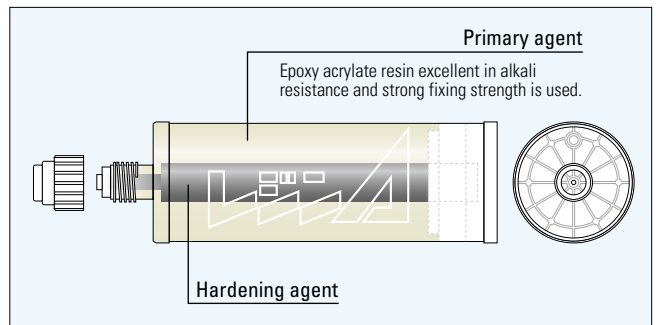
*Do not move the anchor reinforcement within the hardening time.

● Shape of bolt used

Cannot be used for a round bar. Use bolts which have irregularity on a surface such as a continuous thread bolt and different shape bar steel.



● Structural Drawing



● Installation specifications

Nominal diameter (mm)	M8	M10	M12	M16	M20	M22	M24
Hole diameter (mm)	10.0	12.0	14.0	18.0	24.0	25.0	28.0
Embedding depth (mm)	80	90	110	125	170	190	210
Required resin amount (ml)	4	6	9	15	42	43	66
Tightening torque (Nm)	11	22	38	95	170	210	260
Number of pieces installed (Pcs)	92	62	40	25	8	8	5

*The number of pieces installed indicates the target number taking into consideration a loss rate of 20%.

● Plastic sleeve installation specifications

Nominal diameter (mm)	M8	M10	M12
Hole diameter (mm)	15.0	15.0	20.0
Matching sleeve (Code)	RA-P1585	RA-P1585	RA-P2085
Required resin amount (ml)	30	30	40

GE Type (Resin Cartridge)

Code	Capacity (ml)	Content (Pcs.)
GE-410	410	GE-410 Cartridge×1 Mixing nozzle×2



GE Type (Exclusive Parts)

Product Name	Code	Matching Cartridge
Mixing nozzle (3 Pcs.)	RA-MX3	GE Type
Injection gun 410	RA-GUN410	GE-410
Air gun 410	RA-AGUN410	GE-410

*Used air pressure: 0.6~1MPa

GE-410 TOOL BOX SET

Code	Content (Pcs.)
TB-410D (with drill)	GE-410×4 Injection gun 410×1 SDS-plus UX(12/14)×each 1
Standard set product	Mixing nozzle×6 Plastic sleeve 1585×5 Push pump×1 Metal brush (10/13/18)×each 1



RESIN **GE-825** (Cartridge Type)

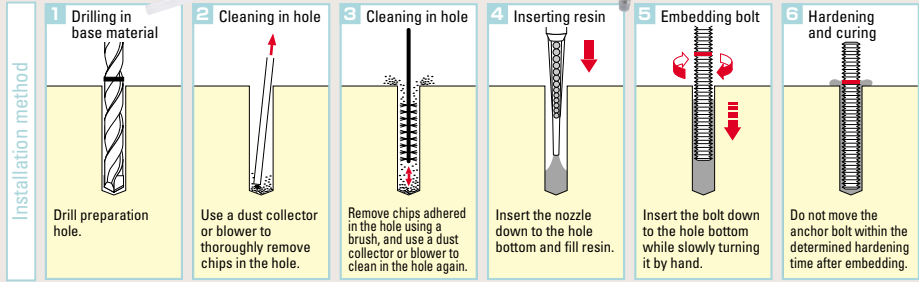
Resin anchor
(Injection System)

- Used for a large number of installations by large capacity and exclusive air gun.
- Can be used for various bolts, sizes and shapes of different reinforced steels.
- Demonstrates stable fixing strength because primary material and hardening agent are constantly mixed by mixing nozzle.
- Adopts a highly alkali resistant epoxy acrylate resin.



CONCRETE **STONE** **HOLLOW MATERIAL** **A L C**

GE-825 series



● Uses

Foundation work for iron frame, Passage construction work, Tunnel construction work, Installation for vibrating machines.

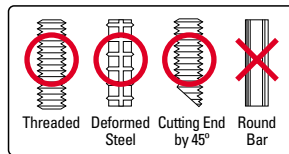
● Guideline for hardening time

Temperature (°C)	-5	5	15	25	35
Use time (min)	40	20	9	5	3
Hardening time (min)	180	90	60	30	20

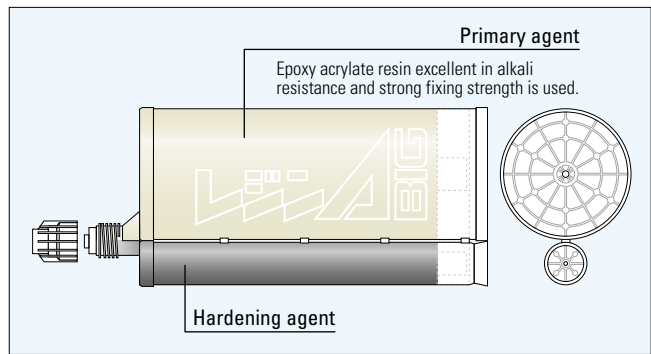
*Do not move the anchor reinforcement within the hardening time.

● Shape of bolt used

Cannot be used for a round bar. Use bolts which have irregularity on a surface such as a continuous thread bolt and different shape bar steel.



● Structural Drawing



● Installation specifications

Nominal diameter (mm)	M8	M10	M12	M16	M20	M22	M24
Hole diameter (mm)	100	120	140	180	240	250	280
Embedding depth (mm)	80	90	110	125	170	190	210
Required resin amount (ml)	4	6	9	15	42	43	66
Tightening torque (Nm)	11	22	38	95	170	210	260
Number of pieces installed (Pcs)	196	133	86	54	18	18	11

*The number of pieces installed indicates the target number taking into consideration a loss rate of 20%.

● Plastic sleeve installation specifications

Nominal diameter (mm)	M8	M10	M12
Hole diameter (mm)	150	150	200
Matching sleeve (Code)	RA-P1585	RA-P1585	RA-P2085
Required resin amount (ml)	30	30	40

GE Type (Resin Cartridge)

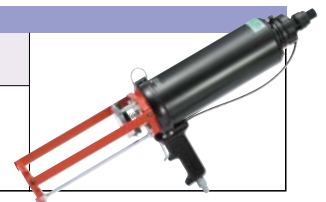
Code	Capacity (ml)	Content (Pcs.)
GE-825	825	GE-825 Cartridge×1 Mixing nozzle×2



Air Gun 825

Code	Maching Cartridge
RA-AGUN825	GE-825

*Used air pressure: 0.6~1MPa



Mixing Nozzle (3 pcs.)

Code	Maching Cartridge
RA-MX3	GE Type



RESIN GE-410C (Cartridge Type)

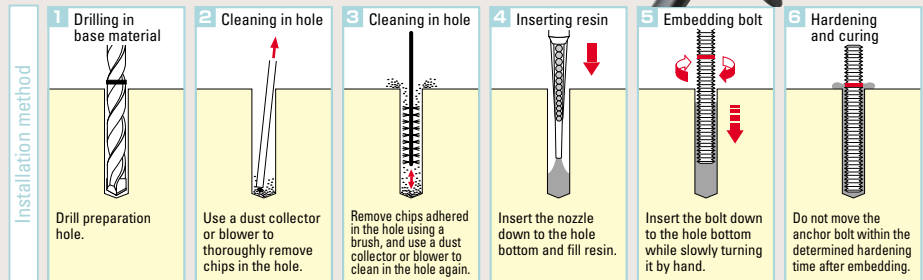
Resin anchor
(Injection System)

- Uses resin for cold area with short hardening time.
- Can be used for various bolts, sizes and shapes of different reinforced steels.
- Demonstrates stable fixing strength because primary material and hardening agent are constantly mixed by mixing nozzle.
- Adopts a highly alkali resistant epoxy acrylate resin.



CONCRETE **STONE** **HOLLOW MATERIAL** **A L C**

GE-410C series



● Uses

Foundation work for iron frame, Passage construction work, Tunnel construction work, Installation for vibrating machines.

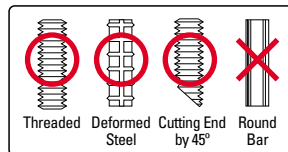
● Guideline for hardening time

Temperature (°C)	-18	-10	-5	0	15
Use time (min)	95	40	25	15	5
Hardening time (min)	540	150	75	45	15

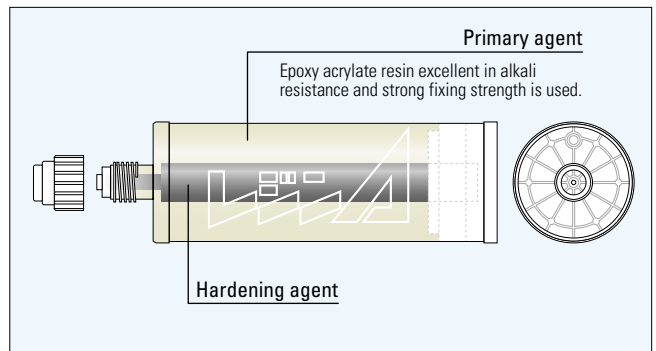
*Do not move the anchor reinforcement within the hardening time.

● Shape of bolt used

Cannot be used for a round bar. Use bolts which have irregularity on a surface such as a continuous thread bolt and different shape bar steel.



● Structural Drawing



● Installation specifications

Nominal diameter (mm)	M8	M10	M12	M16	M20	M22	M24
Hole diameter (mm)	10.0	12.0	14.0	18.0	24.0	25.0	28.0
Embedding depth (mm)	80	90	110	125	170	190	210
Required resin amount (ml)	4	6	9	15	42	43	66
Tightening torque (Nm)	11	22	38	95	170	210	260
Number of pieces installed (Pcs)	92	62	40	25	8	8	5

*The number of pieces installed indicates the target number taking into consideration a loss rate of 20%.

● Plastic sleeve installation specifications

Nominal diameter (mm)	M8	M10	M12
Hole diameter (mm)	15.0	15.0	20.0
Matching sleeve (Code)	RA-P1585	RA-P1585	RA-P2085
Required resin amount (ml)	30	30	40

Mixing Nozzle (3 pcs.)

Code	Maching Cartridge		
RA-MX3	GE Type		

GE-C Type (Resin Cartridge)

Code	Capacity (ml)	Content (Pcs.)	
GE-410C	410	GE-410C Cartridge×1 Mixing nozzle×2	

Injection Gun 410

Code	Maching Cartridge		
RA-GUN410	GE-410 GE-410C		

Air Gun 410

Code	Maching Cartridge		
RA-AGUN410	GE-410 GE-410C		

*Used air pressure: 0.6~1MPa

RESIN PE-400N (Cartridge Type)

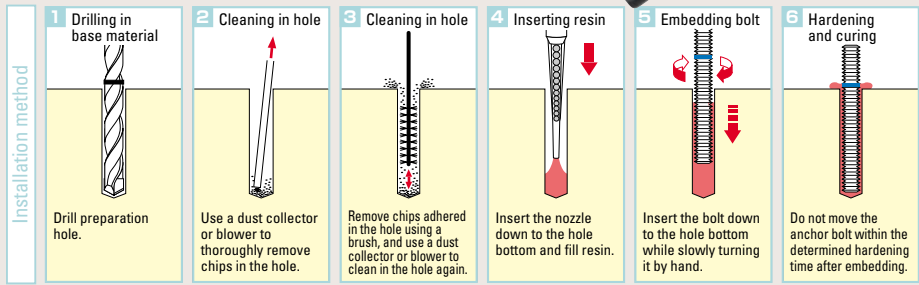
Resin anchor
(Injection System)

- Can be used for various bolts, sizes and shapes of different shape reinforced steels.
- Excellent in chemical resistance, and can be used for installation in water.
- Demonstrates stable fixing strength because primary material and hardening agent are constantly mixed by mixing nozzle.
- Adopts high performance epoxy resin with no resin contraction. Also less odor and toxicity.



CONCRETE ROCK BED

PE-400N series



● Uses

Foundation work for iron frame, Passage construction work, Tunnel construction work, Installation for vibrating machines.

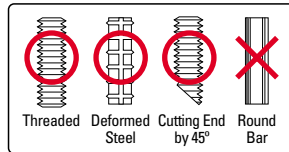
● Guideline for hardening time

Temperature (°C)	5	15	25	35
Use time (min)	120	60	20	12
Hardening time (min)	960	600	300	180

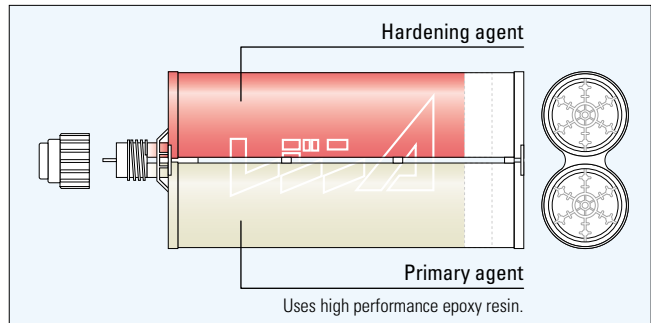
*Do not move the anchor reinforcement within the hardening time.

● Shape of bolt used

Cannot be used for a round bar. Use bolts which have irregularity on a surface such as a continuous thread bolt and different shape bar steel.



● Structural Drawing



● Installation specifications

Nominal diameter (mm)	M8	M10	M12	M16	M20	M22	M24
Hole diameter (mm)	10.0	12.0	14.0	18.0	24.0	25.0	28.0
Embedding depth (mm)	80	90	110	125	170	190	210
Required resin amount (ml)	4	6	9	15	42	43	66
Tightening torque (Nm)	11	22	38	95	170	210	260
Number of pieces installed (Pcs)	87	56	37	22	8	7	5

*The number of pieces installed indicates the target number taking into consideration a loss rate of 20%.

PE Type (Resin Cartridge)

Code	Capacity (ml)	Content (Pcs.)
PE-400N	400	PE-400N Cartridge × 1 Mixing nozzle × 1

Injection Gun 400

Code	Maching Cartridge
RA-GUN400	PE-400N

Air Gun 400

Code	Maching Cartridge
RA-AGUN400	PE-400N

*Used air pressure: 0.6~1MPa

Mixing Nozzle PE (2 pcs.)

Code	Maching Cartridge
RA-MX2PE	PE Type

RESIN PE-600N (Cartridge Type)

Resin anchor
(Injection System)

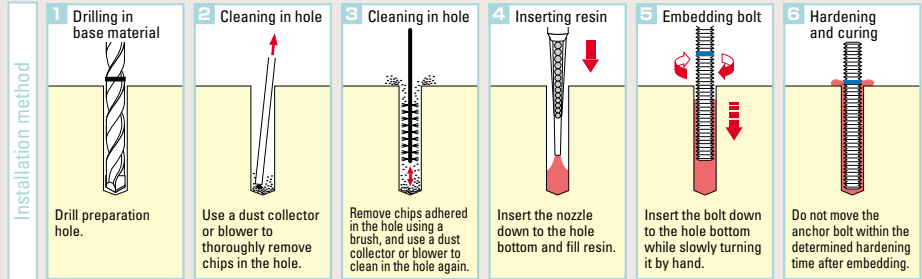
- Can be used for various bolts, sizes and shapes of different shape reinforced steels.
- Excellent in chemical resistance, and can be used for installation in water.
- Demonstrates stable fixing strength because primary material and hardening agent are constantly mixed by mixing nozzle.
- Adopts high performance epoxy resin with no resin contraction. Also less odor and toxicity.



CONCRETE

ROCK BED

PE-600N series



● Uses

Foundation work for iron frame, Passage construction work, Tunnel construction work, Installation for vibrating machines.

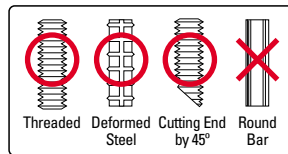
● Guideline for hardening time

Temperature (°C)	5	15	25	35
Use time (min)	120	60	20	12
Hardening time (min)	960	600	300	180

*Do not move the anchor reinforcement within the hardening time.

● Shape of bolt used

Cannot be used for a round bar. Use bolts which have irregularity on a surface such as a continuous thread bolt and different shape bar steel.

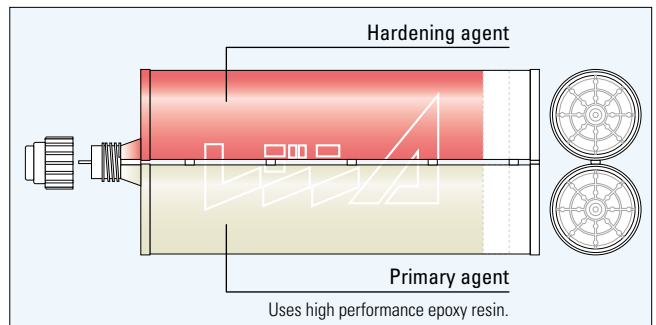


● Installation specifications

Nominal diameter (mm)	M8	M10	M12	M16	M20	M22	M24
Hole diameter (mm)	10.0	12.0	14.0	18.0	24.0	25.0	28.0
Embedding depth (mm)	80	90	110	125	170	190	210
Required resin amount (ml)	4	6	9	15	42	43	66
Tightening torque (Nm)	11	22	38	95	170	210	260
Number of pieces installed (Pcs)	134	89	59	35	12	12	8

*The number of pieces installed indicates the target number taking into consideration a loss rate of 20%.

● Structural Drawing



PE Type (Resin Cartridge)

Code	Capacity (ml)	Content (Pcs.)
PE-600N	600	PE-600N Cartridge×1 Mixing nozzle×1

Injection Gun 600

Code	Maching Cartridge
RA-GUN600	PE-600N

Air Gun 600

Code	Maching Cartridge
RA-AGUN600	PE-600N


*Used air pressure: 0.6~1MPa

Mixing Nozzle PE (2 pcs.)


Code	Maching Cartridge
RA-MX2PE	PE Type

RESINA GE/PE Related product list


Push Pump

Code	Specifications		
RA-PUP	(Nozzle dia) 10mm (Hose length) 270mm		


Mixing Nozzle (3 pcs.)

Code	Maching Cartridge		
RA-MX3	GE Type		


Metal Brush

Code	Specifications		
RA-MB10	φ10X300		
RA-MB13	φ13X300		
RA-MB18	φ18X300		
RA-MB28	φ28X300		


Mixing Nozzle PE (2 pcs.)

Code	Maching Cartridge		
RA-MX2PE	PE Type		


Plastic Sleeve (10 pcs.)

Code	Specifications		
RA-P1585	15X85 (M8/10)		
RA-P2085	20X85 (M12)		


Extension Nozzle (3 pcs.)

Code	Specifications		
RA-EXP3	φ8×1m		


Injection Gun 165

Code	Maching Cartridge		
RA-GUN165	GE-165		


Air Gun 825

Code	Maching Cartridge		
RA-AGUN825	GE-825		


Injection Gun 410

Code	Maching Cartridge		
RA-GUN410	GE-410 GE-410C		


Air Gun 410

Code	Maching Cartridge		
RA-AGUN410	GE-410 GE-410C		


Injection Gun 400

Code	Maching Cartridge		
RA-GUN400	PE-400N		


Air Gun 400

Code	Maching Cartridge		
RA-AGUN400	PE-400N		

Injection Gun 600

Code	Maching Cartridge		
RA-GUN600	PE-600N		

Air Gun 600

Code	Maching Cartridge		
RA-AGUN600	PE-600N		

RESINA GE/PE Installation specifications list

Installation Specifications

FC=27N/mm²

Use Bolt	Hole Diameter (mm)	Embedment Depth (mm)	Tightening Torque (Nm)	Resin Amount (ml)	Max. Extraction Strength (kN)		Number of Pieces Installed (Pcs.)				
					GE	PE	GE-165	GE-410	GE-B25	PE-400N	PE-600N
M8	10.0	80	11	4	—	—	31	92	196	87	134
M10	12.0	90	22	6	31.5	40.0	21	62	133	56	89
D10	13.0		—	7	30.7	36.1	18	55	119	48	76
M12	14.0	110	38	9	51.4	56.5	13	40	86	37	59
D13	15.0		—	7	53.8	62.9	19	56	119	48	76
M16	18.0	125	95	15	78.4	83.3	8	25	54	22	35
D16	20.0		—	17	60.8	97.0	7	21	45	19	31
M20	24.0	170	170	42	78.8	108.0	2	8	18	8	12
D19	25.0		—	42	99.6	137.0	3	8	18	8	12
M22	25.0	190	210	43	131.8	141.0	2	8	18	7	12
D22	28.0		—	52	181.1	186.6	2	7	15	6	10
M24	28.0	210	260	66	—	—	1	5	11	5	8
D25	32.0		—	75	—	—	1	4	10	4	7
M30	35.0	280	480	135	—	—	0	2	5	2	3
D29	38.0		—	165	—	—	0	2	4	2	3

*The Max. extraction strength is based on test reports from the Japan Testing Center for Construction Materials.

*Number of pieces installed is the reference number of pieces at a loss rate of 20%.

*M22 and D22 are based on in-house test data.

Plastic Sleeve Installation Specifications

Use Bolt	Hole Diameter (mm)	Matching Sleeve (code)	Resin Amount (ml)
M8	15.0	RA-P1585	30
M10	15.0	RA-P1585	30
M12	20.0	RA-P2085	40

Installation example



Thread Bolt



Plastic Sleeve

Precautions on use

⚠ Precautions on use

- Avoid direct sunlight and store in a well-ventilated place where the temperature does not rise so high. (Never raise the temperature above 40°C. Always keep the temperature in the range of 5 to 25°C.)
- Do not bring close to fire or high temperature objects.
- Cartridge can be stored until the expiration date for use under standard storage conditions.
- Wear protective equipment (such as protective glasses and mask) when using.
- When resin adheres to skin, irritation may occur in rare cases. Take action such as immediately wiping and rinsing with a hot soapy solution.
- In addition, if resin gets into eyes, immediately rinse with a large amount of water and seek medical attention.

⚠ Precautions on installation

- Make sure to provide the drilling diameter and drilling depth as described in the specifications.
- Make sure to use both a metallic brush and blower to sufficiently clean inside the hole.
- Make sure to mount the mixing nozzle with it just before use.
- Make sure to discard first approximately 10cc at a time of first use and nozzle replacement. (Mixing improperly may result in reduction in strength.)
- This cannot be used for a steel bar with no irregularity such as a round bar.
- Refer to the scale on the cartridge label for discharge resin amount.
- Do not move the bar steel nor apply load within the determined hardening time.

RESIN HC-U Type (Hammer-in)

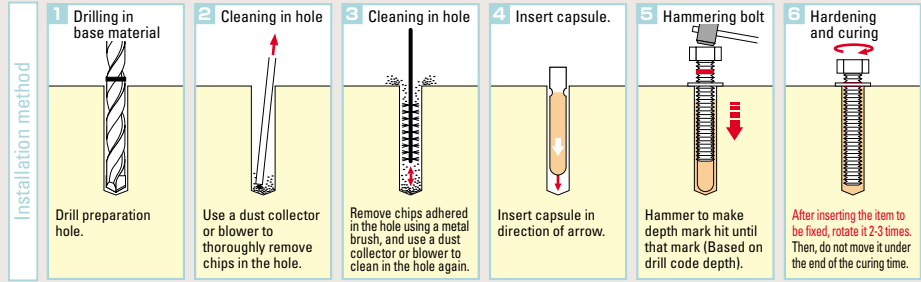
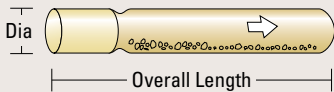
Resin anchor
(Glass Capsule)

- Hammering only to install. OK for different sized bolts and rebar
- Glass tube shape designed for fewer times to hammer
- Good holding of glass and vinyl ester resin with high alkali resistance. Long shelf life before use.



CONCRETE

STONE



Uses

Foundation work for iron frame, Passage construction work, Tunnel construction work, Installation for vibrating machines.

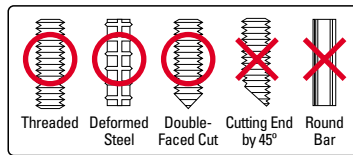
Guideline for hardening time

Temperature (°C)	-5	5	20	30
Hardening time (min)	300	60	30	15

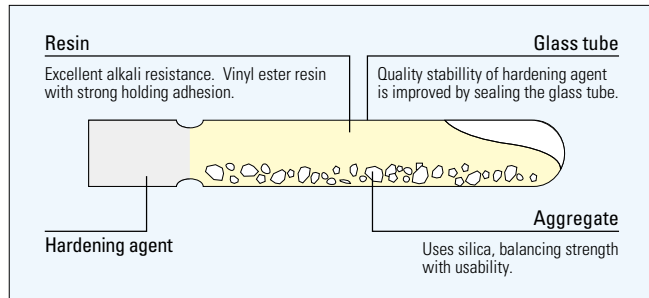
*Do not move the anchor reinforcement within the hardening time.

Shape of bolt used

Make sure to use one with an irregular surface for the edge of the anchor bar by flush cut. Use the hex head set screw or deformed steel bar.



Structural Drawing



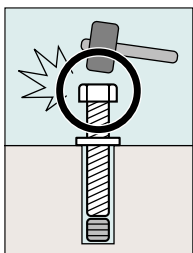
HC-U Type (Hammer-in)

FC=21N/mm²

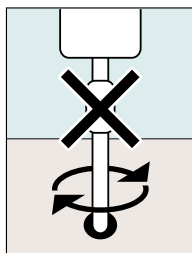
Code	Dia x Length (mm)	Volume (mm ³)	Use Bolt	Drilling Condition (mm)		Max. Extraction Strength (kN)	Pcs./Box	Pcs./Ctn	
				Hole Dia	Hole Depth				
HC-8U	9.3×80	4.0	M8, W5/16	10.0	80	24.5	10	200	
HC-10U	10.8×95	6.4	M10, W3/8	12.0	95	36.1	10	200	
				D10	12.5	32.9			
HC-12U	13.7×110	12.0	M12, W1/2	15.0	110	47.2	10	200	
				D13	16.0	56.1			
HC-16U	16.8×125	22.0	M16, W5/8	19.0	140	85.4	10	100	
				D16	20.0	85.6			
HC-20U	21.5×175	52.0	M20, W3/4	25.0	180	117.6	10	100	
				D19	25.0	124.7			

* The maximum pull-out strength is based on tests by the Center for Construction Materials Foundation.

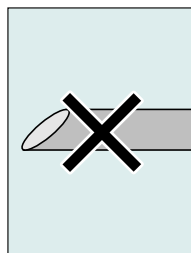
* M10, D10, M12, D13 results are from in-house test data.



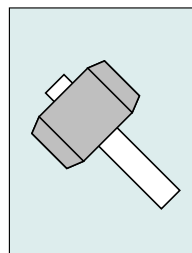
Reliably installed only by hammering in the flat cut bolt with a hammer!



No rotation required



Bolt end cut not required



Regarding the proper hammer what to use, a hammer of 1.3~1.5kg. for the M8/10/12 is best. For the M16/20, use a 1.8kg hammer.

RESINA SE Type (Spin-in)

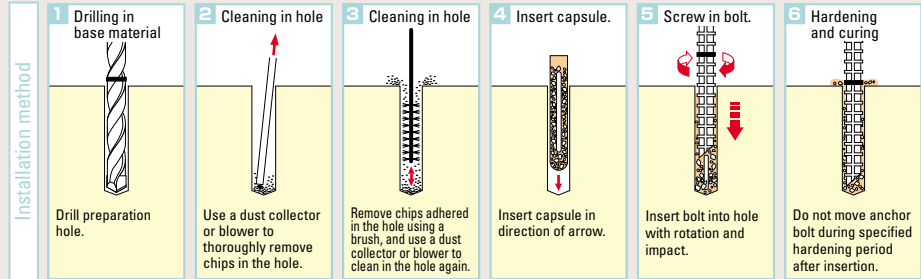
Resin anchor
(Glass Capsule)

- Excellent anchoring and earthquake resistance.
- Can adapt to construction material that is in a wet state.
- The sealed end of the glass tube has a high alkali resistance preventing leaks. Also, it offers a long shelf life.



CONCRETE

STONE



● Uses

Foundation work for iron frame, Passage construction work, Tunnel construction work, Installation for vibrating machines.

● Guideline for hardening time

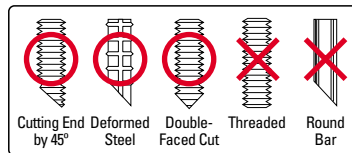
Temperature (°C)	-5	5	20	30
Hardening time (min)	300	60	20	10

*Do not move the anchor reinforcement within the hardening time.

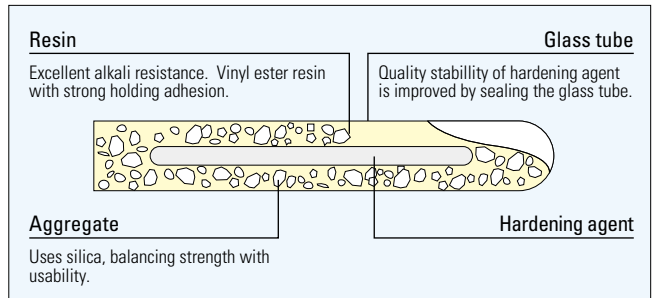
● Shape of bolt used

Make sure to cut the edge of the anchor bar 45° for use.

Use one with an irregular surface for the hex head set screw or deformed steel bar.



● Structural Drawing



SE Type (Spin-in)

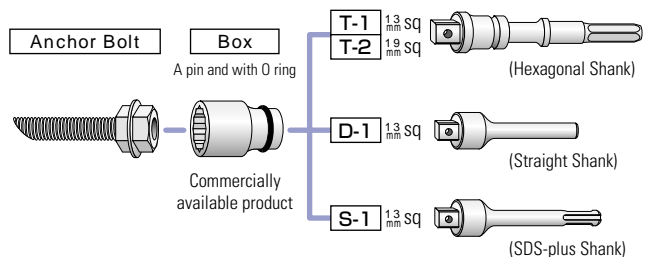
Code	Dia x Length (mm)	Volume (mm)	Use Bolt	Drilling Condition (mm)		Max. Extraction Strength (kN)	Pcs./Box	Pcs./Ctn	FC=21N/mm ²
				Hole Dia	Hole Depth				
SE-10	10.8×90	6.6	M10, W3/8	12.0	90	46.1	10	200	
			D10	13.0	35.6				
SE-12	12.7×100	9.8	M12, W1/2	14.0	110	69.7	10	200	
			D13	16.0	64.7				
SE-16	16.8×120	21.0	M16, W5/8	18.0	130	107.6	10	100	
			D16	20.0	97.9				
SE-20	21.5×175	53.0	M20, W3/4	25.0	180	170.1	10	100	
			D19	25.0	147.3				
SE-22	21.5×210	61.0	M22, W7/8	26.0	220	196.9	5	50	
			D22	28.0	185.7				
SE-24	25.0×180	76.0	M24, W1	28.0	220	225.2	5	50	
			D25	32.0	240.3				

* The maximum pull-out strength is based on tests by the Center for Construction Materials Foundation.

SE Type Hammering Attachments

Code	Convex Dimensions	Hammering Motor
T-1	13mm sq	Hammer drill
T-2	19mm sq	Hammer drill
S-1	13mm sq	Rotary hammer drill
D-1	13mm sq	Percussion drill

● Hammering Attachments



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