



世鎧精密股份有限公司

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Dual-Hardness
Concrete Screw Anchors

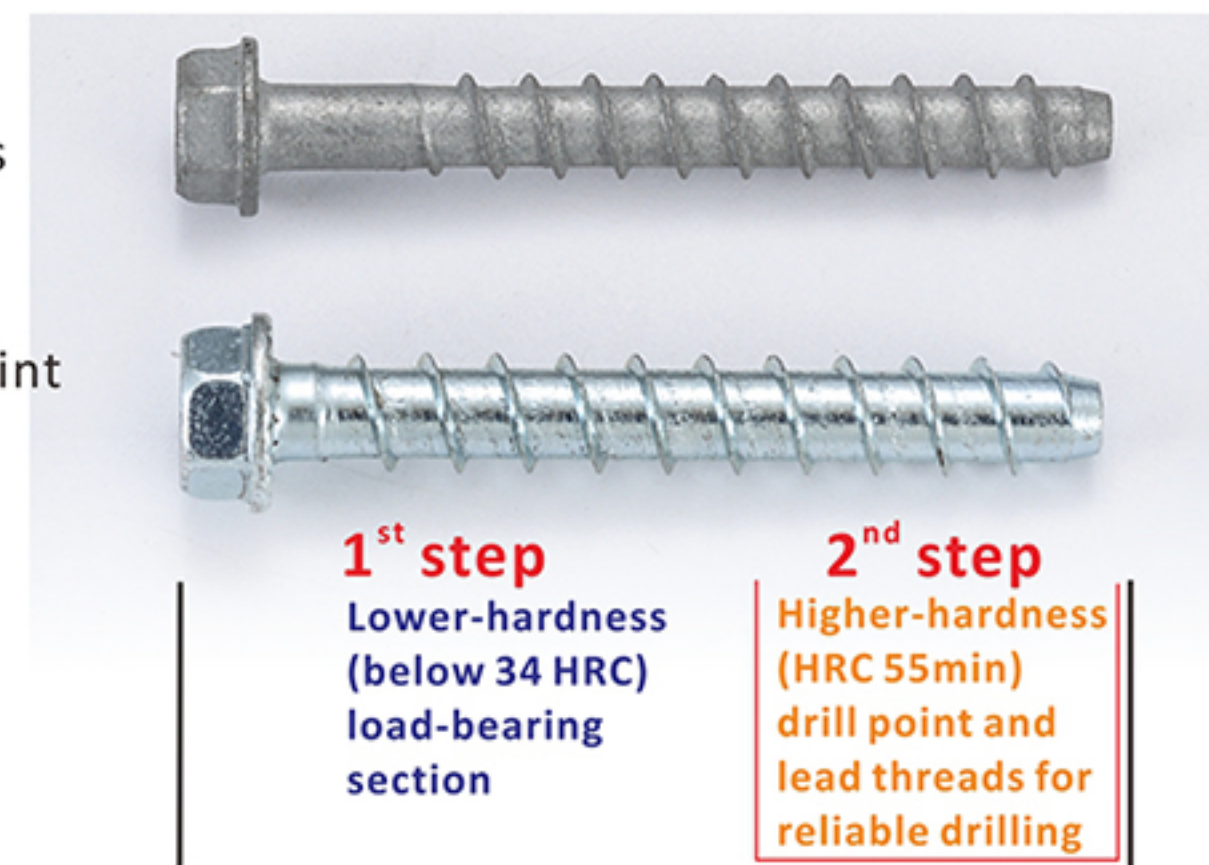


Advantages of Dual Hardness Concrete Screw Anchor

- Deter against hydrogen assisted corrosion cracking
- Hardness controlled below Rockwell C34 in the loading section to immune hydrogen embrittlement issues.
- Reliable loading performance for safety assurances
- Perfect for temporary fixing with removable capability on heavy duty items
- Option with Mechanical Galvanized Coating for better corrosion resistance

Two Steps Heat - Treatment

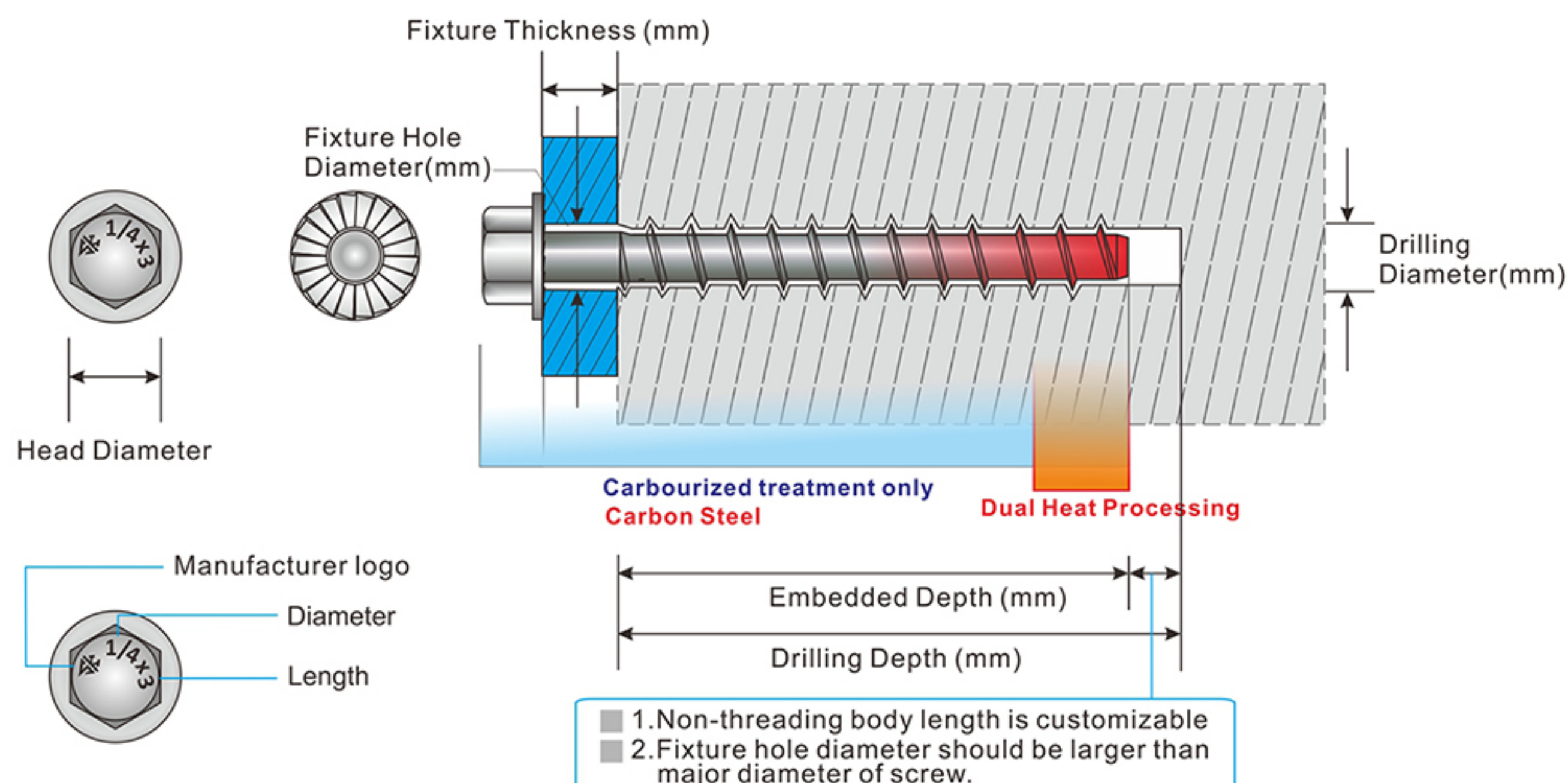
- **1st step**-Case hardening on the head and shank of the screws with ductile strength, more enduring, and hydrogen embrittlement resistant characteristics
- **2nd step**-Selective through hardening to provide the drill point and lead threads with good drilling and tapping performance.



Immune to Hydrogen embrittlement corrosion

Through diffusion of hydrogen into the metals as well corrosion in the application environment, the brittleness creates weakness, and cracks within the structure of the metal. Known as Hydrogen Assisted corrosion cracking, it fosters an environment with which the product could fail in an unpredictable manner, induces danger to the user of the product.

Product Specifications & Selection for Application



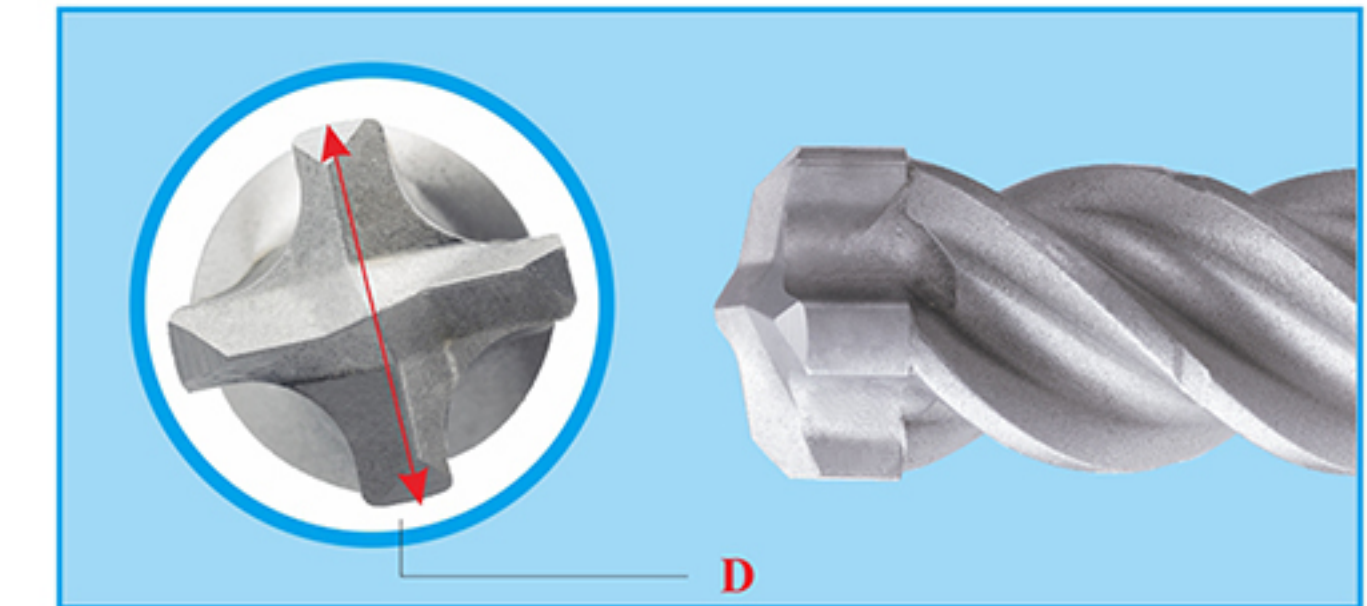
Dual Hardness Concrete Screw Anchor Technical Data

Drill Bits Information

Below are the drill bits used, with various type of concrete member, and the application of the screw anchor during testing.

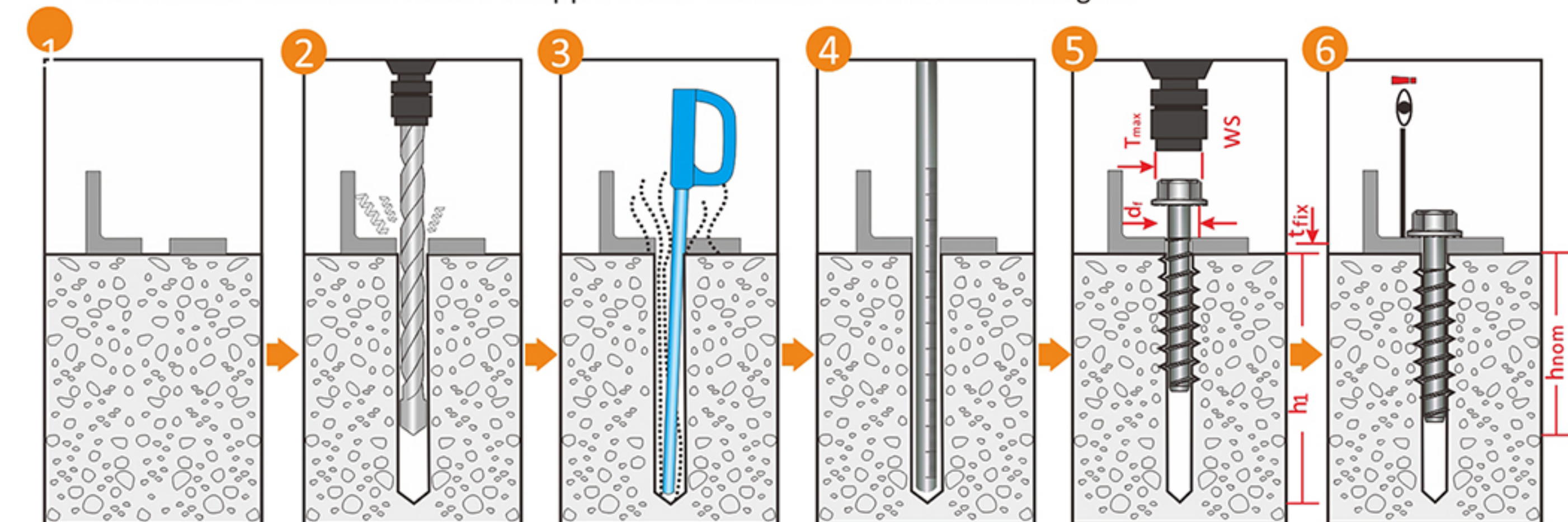
ANSI-B212.15

Anchor Size (in.)	Nominal Drill Diameter (in.)	Tolerance Range (in.)
1/4	1/4	0.260-0.268
3/8	3/8	0.390-0.398
1/2	1/2	0.520-0.530
5/8	5/8	0.650-0.660
3/4	3/4	0.775-0.787



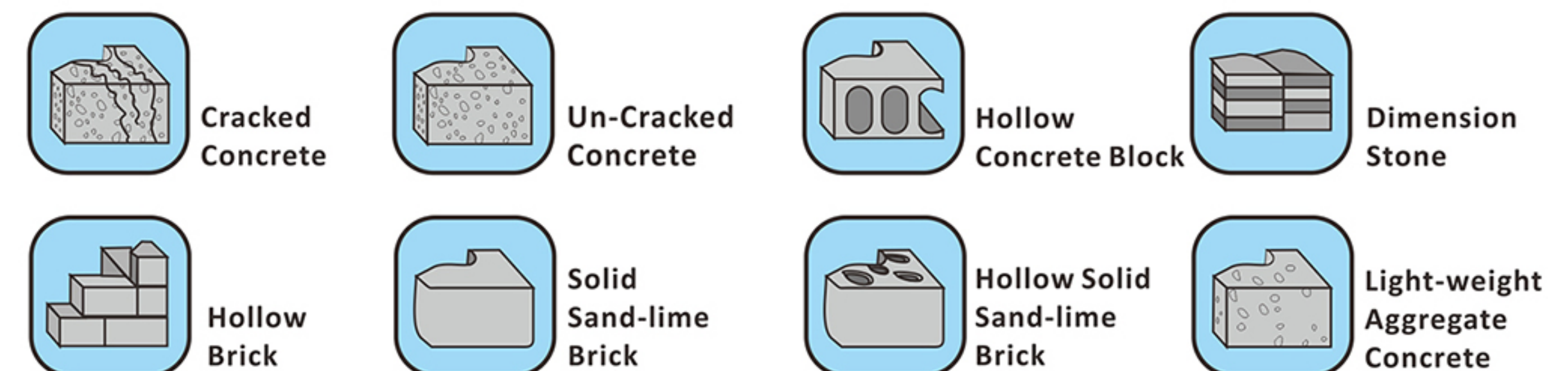
Installation Process

- Hammer drilling only: all sizes and all embedment depths.
- Anchor installation carried out by appropriately qualified personnel and under the supervision of the person responsible for technical matters of the site.
- In case of aborted hole: new drilling at a minimum distance away of twice the depth of the aborted hole or smaller distance if the aborted hole is filled with high strength mortar and if under shear or oblique tension load it is not the direction of the load application.
- After installation further turning of the anchor must not be possible.
- The head of the anchor must be supported on the fixture and is not damaged.



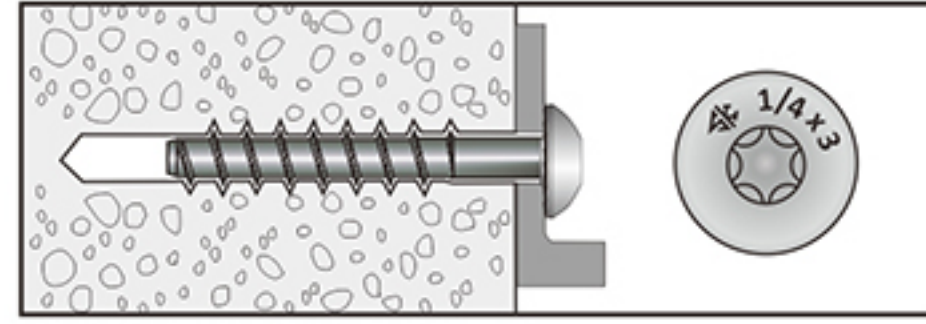
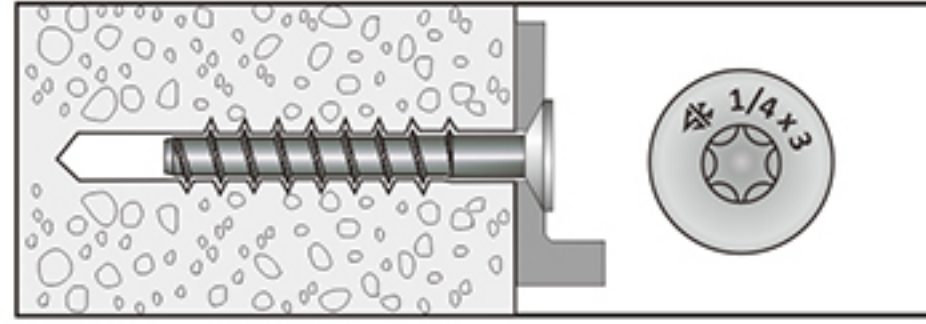
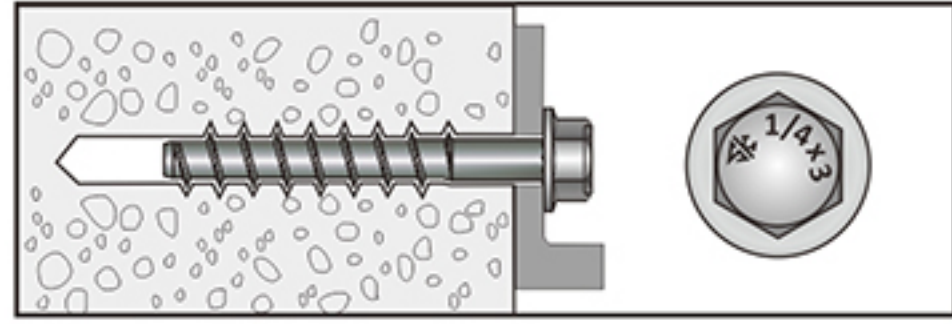
- 5. Wrench Installation-s=Screw in the anchor by hand or with impact screw driver. Torque moment T_{max} . WS=Wrench Size
- 6. Done-Control of complete setting, full contact of screw head with fixture part.

Base Applied (for cracked and uncracked concrete)





SK Concrete Anchor (Carbon Steel)/Hex Washer/Flat Head/Pan Head



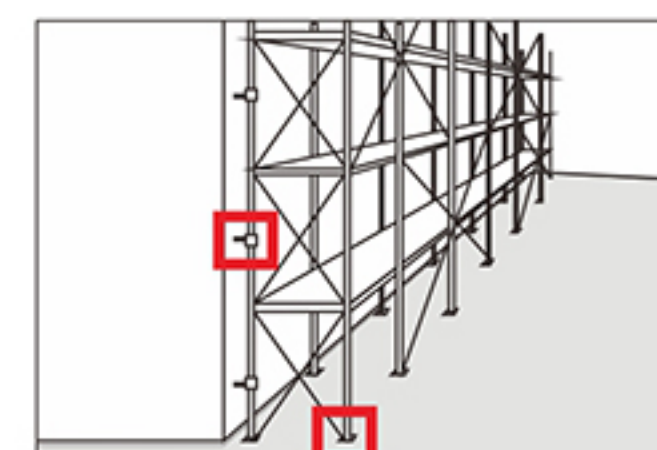
Part No.				Size (in.)	Drill Bit Diameter (in.)	Minimum Embedment Depth(in.)	Approved Embedment Depth(in.)	Qty (pcs) /Box
Hex Washer Head		Flat Head	Pan Head					
Zinc	Mechanical	Zinc	Zinc					
SKH14178Z			SKP14782Z	1/4x1-7/8	1/4	1-5/8▲	▲ 1-5/8 ● 2-1/2	100
		SKC14200Z		1/4x2	1/4	1-5/8▲		100
		SKC14212Z		1/4x2-1/2	1/4	1-5/8▲●		100
SKH14258Z			SKP14258Z	1/4x2-5/8	1/4	1-5/8▲●		100
SKH14300Z		SKC14300Z		1/4x3	1/4	1-5/8▲●		100
SKH14312Z				1/4x3-1/2	1/4	1-5/8▲●		100
SKH14400Z		SKC14400Z		1/4x4	1/4	1-5/8▲●		100
SKH38134Z				3/8x1-3/4	3/8	1-5/8▲	▲ 1-5/8 ● 2-1/2 ■ 3-1/4	50
SKH38212Z		SKC38212Z		3/8x2-1/2	3/8	1-5/8▲		50
SKH38300Z	SKH38300G	SKC38300Z		3/8x3	3/8	1-5/8▲●		50
SKH38400Z	SKH38400G	SKC38400Z		3/8x4	3/8	1-5/8▲●■		50
SKH38500Z	SKH38500G			3/8x5	3/8	1-5/8▲●■		50
SKH38600Z	SKH38600G			3/8x6	3/8	1-5/8▲●■		50
SKH12248Z				1/2x2-1/2	1/2	2-1/4▲	▲ 2-1/4 ● 3 ■ 4-1/4	25
SKH12300Z				1/2x3	1/2	2-1/4▲		25
SKH12400Z	SKH12400G			1/2x4	1/2	2-1/4▲●		25
SKH12500Z	SKH12500G			1/2x5	1/2	2-1/4▲●■		25
SKH12600Z	SKH12600G			1/2x6	1/2	2-1/4▲●■		25
SKH12800Z	SKH12800G			1/2x8	1/2	2-1/4▲●■		25
SKH58400Z				5/8x4	5/8	3-1/4▲	▲ 3-1/4 ● 4 ■ 5	15
SKH58500Z	SKH58500G			5/8x5	5/8	3-1/4▲●		15
SKH58600Z	SKH58600G			5/8x6	5/8	3-1/4▲●■		15
SKH58648Z	SKH58648G			5/8x6-1/2	5/8	3-1/4▲●■		15
SKH58800Z	SKH58800G			5/8x8	5/8	3-1/4▲●■		15
SKH34400Z				3/4x4	3/4	4▲	▲ 4 ● 5-1/2 ■ 6-1/4	10
SKH34500Z				3/4x5	3/4	4▲		10
SKH34600Z	SKH34600G			3/4x6	3/4	4▲●		10
SKH34700Z				3/4x7	3/4	4▲●■		10
SKH34800Z				3/4x8	3/4	4▲●■		10
SKH341000Z				3/4x10	3/4	4▲●■		10

Dual Hardness Concrete Screw Anchor Technical Data

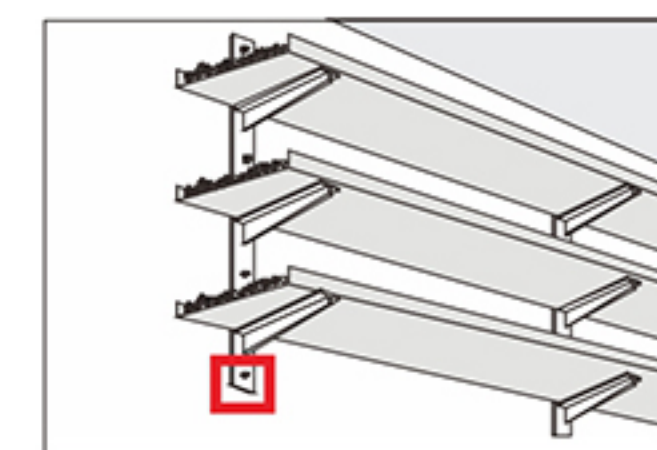
SK Concrete Anchor Installation Parameters Carbon Steel (10B21)

Characteristic	Symbol	Units	Nominal Anchor Size (inch)														
			1/4		3/8			1/2			5/8			3/4			
Installation Information																	
Head Style	—	—	Hex Head		Hex Head			Hex Head			Hex Head			Hex Head			
Drill Bit Diameter	d _{bit}	in.	1/4		3/8			1/2			5/8			3/4			
Nominal Embedment Depth	d _{nom}	in.	1-5/8	2-1/2	1-5/8	2-1/2	3-1/4	2-1/4	3	4-1/4	3-1/4	4	5-1/2	4	5-1/2	6-1/4	
Minimum Hole Depth	d _{hole}	in.	2	2-7/8	2	2-7/8	3-3/4	2-5/8	3-3/8	4-5/8	3-3/4	4-1/2	6	4-1/2	6	6-3/4	
Baseplate Clearance Hole Diameter	d _h	in.	3/8		1/2			5/8			3/4			7/8			
Maximum Installation Torque	T _{inst,max}	ft.-lbf	25		40			65			95			100			
Maximum Impact Wrench Torque Rating	T _{impact,max}	ft.-lbf	136		136	169		258	340		258	340		258	385		
Wrench Socket Size	WS	in.	7/16		9/16			3/4			15/16			1-1/8			
Minimum Concrete Thickness	h _{min}	in.	3-1/4	4-1/8	3-1/4	4-1/8	5	4-1/2	5	6-1/4	5-1/4	6	7-1/2	6	7-1/2	8-1/4	
Minimum Edge Distance	C _{min}	in.	1-1/2		1-1/2			1-3/4			1-3/4			1-3/4			
Minimum Spacing Distance	S _{min}	in.	1-1/2		2-1/4			3			3			3			
			Additional Data														
Effective Tensile Stress Area	A _{se}	in. ²	0.043		0.096			0.192			0.287			0.422			
Yield Strength	f _{uta}	psi	97,800														
Tensile Strength	f _{uta}	psi	123,000														
Axial Stiffness	Uncracked Concrete		β _{uncr}		lb/in.			—			—			—			
	Cracked Concrete		β _{uncr}		lb/in.			—			—			—			

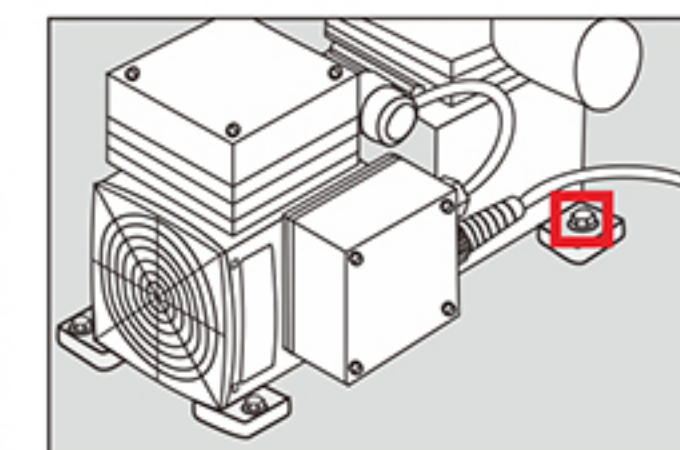
Applications



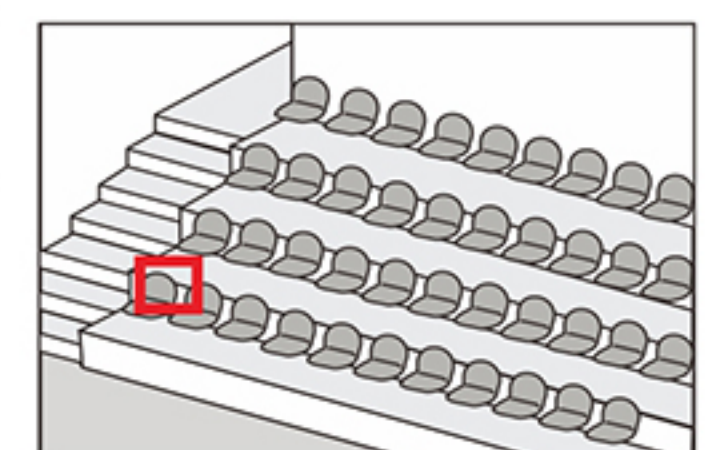
Scaffolding



Rack



Facility Fixing



Seat Fixing



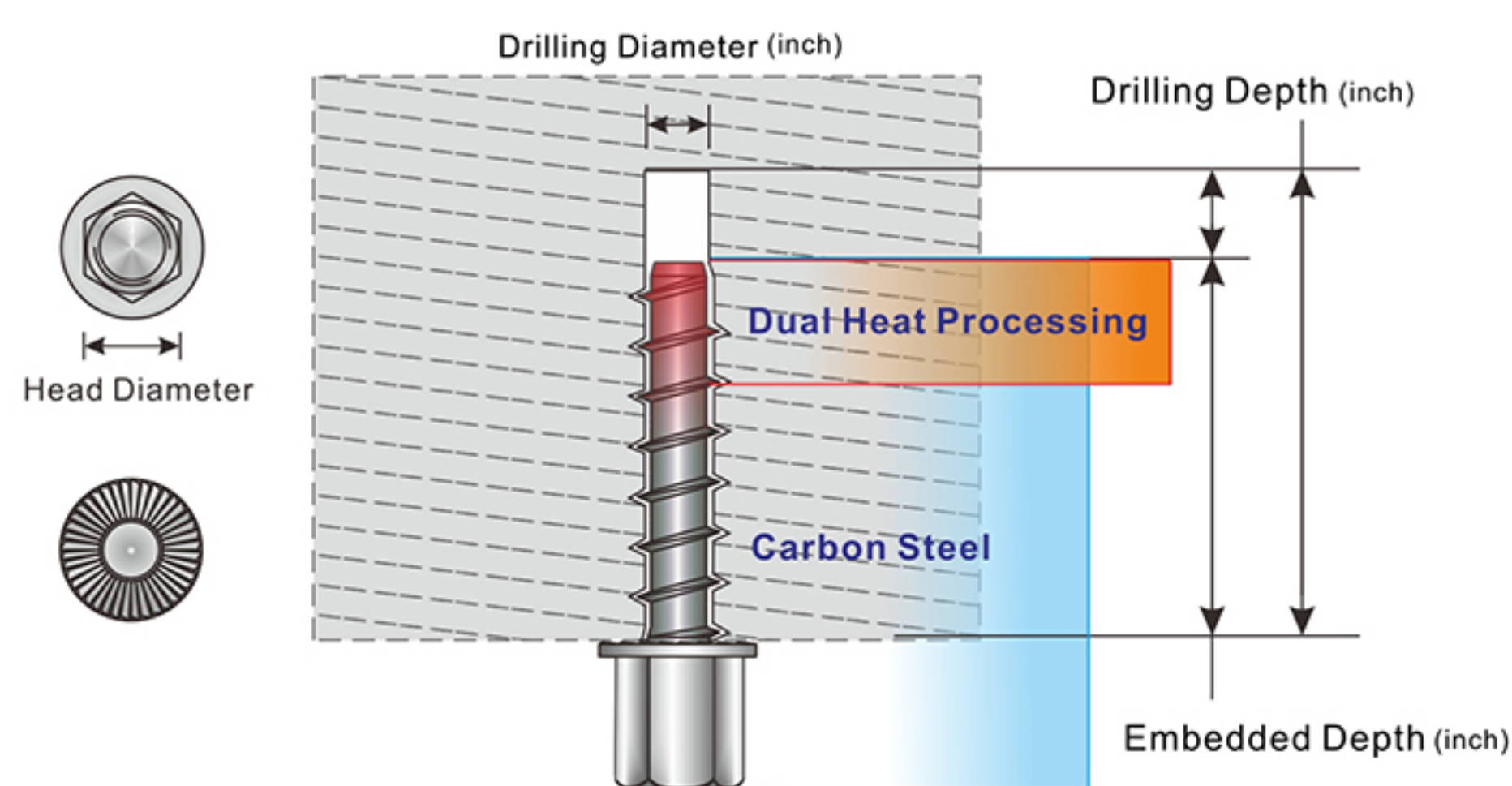
SK Concrete Screw (Carbon Steel) Internal Thread Head(Hanger Bolt)

Product description

- Suspension anchoring product for steel rods



Product Specifications & Selection for Application



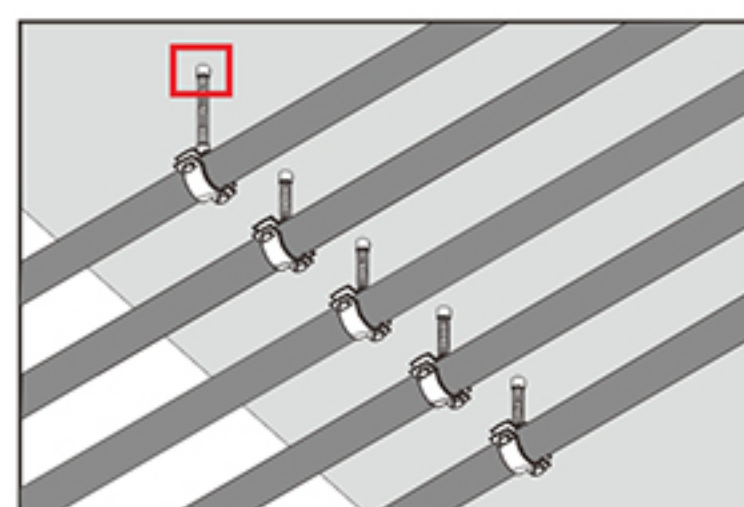
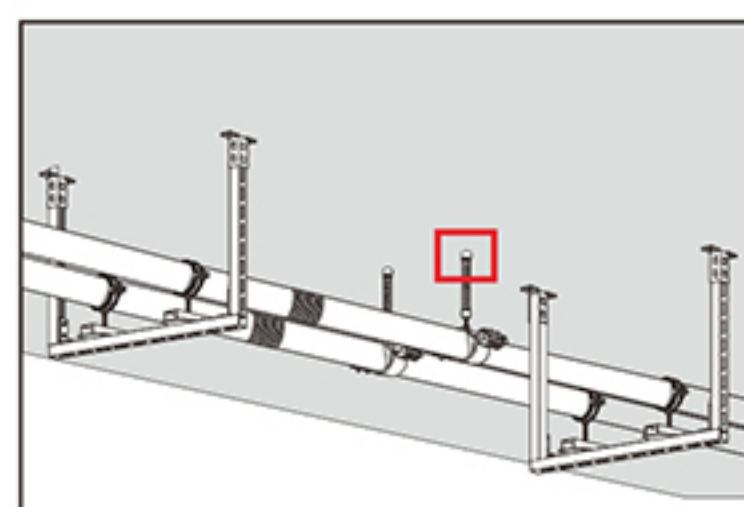
■ Reserve 3/8" drilling depth for installation.

Benefits

- Easy of installations with power tools
- One piece equipment
- Removable
- Used in various concrete materials

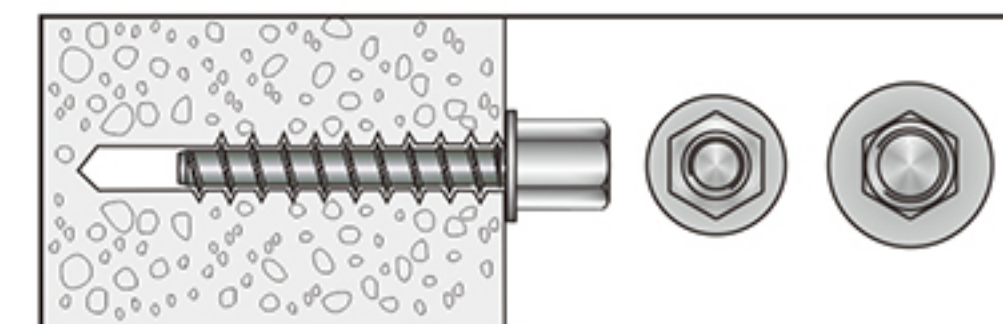
Applications

- Suspension for overhead ceilings
- Suspending air ducts and channels
- Suspending overhead equipment
- Overhanging Pipes
- Overhanging electrical systems and cables



Dual Hardness Concrete Screw Anchor Technical Data

SK Concrete Screw (Carbon Steel) Internal Thread Head(Hanger Bolt)



Part No.	Size (in.)	Rod Size (in.)	Drill Bit Diameter (in.)	Qty (pcs) /Box
SKI1415814Z	1/4"x1-5/8"	1/4"	1/4"	50
SKI1421214Z	1/4"x2-1/2"	1/4"	1/4"	50
SKI1415838Z	1/4"x1-5/8"	3/8"	1/4"	50
SKI1421238Z	1/4"x2-1/2"	3/8"	1/4"	50
SKI3815838Z	3/8"x1-5/8"	3/8"	3/8"	50
SKI3821238Z	3/8"x2-1/2"	3/8"	3/8"	50
SKI3815812Z	3/8"x1-5/8"	1/2"	3/8"	50
SKI3821212Z	3/8"x2-1/2"	1/2"	3/8"	50

Comparison Test 3cm from the side

