

CHEMICAL
CAPSULE

Chemical Capsule CCS

Epoxy Acrylate



Description

The chemical capsule CCS is a high performance rapid cure spin-in chemical anchor system based on optimum measured proportions of high strength epoxy acrylate resin, chemical activator and quartz aggregate sealed in a glass capsule. It is a fast install, simple to use system requiring no special tools and provides high strength stress free anchoring in concrete and solid masonry. The system operates by spinning a chisel ended anchor stud using the required drive adaptor through the capsule using a rotary hammer drill which crushes and mixes the contents in the drill hole and initiates the curing process, the stud is left in position to fully cure and form a high strength bond which is stronger than the base material. Capsule sizes are drill hole specific from M8 to M30 diameters. The system can be used with longer than standard threaded bars combined with multiple down hole capsules, studs should be cut chisel ended and separate drive adapters are available for connection to a drilling machine.

Base Material

The system is designed for static and dynamic heavy duty anchoring of anchor studs into vertical and horizontal drill holes in reinforced and non-reinforced concrete, solid masonry, rock and stone.

Advantages

- Rapid cure.
- Consistent load behavior.
- Suitable for static and dynamic loading.
- Fast and simple to install.
- Vibrant Resistant
- Imparts no expansion stresses on the base material.
- Usable in wet drill holes (requires longer cure time).
- Drill hole cleanliness not as critical as injection systems.
- High-performance resin guarantees high loads in the base material.
- The resin anchoring is free of expansion forces and permits low axial spacing and edge distances.
- Flush finish, no projecting bolt after dismantling the fixture.

Typical Curing Time*

Base Material Temperature(°c)	30+	20-30	5-20	5	-5
TYPICAL CURE TIME(mins)DRY HOLES	10	20	60	300	300
TYPICAL CURE TIME(mins)DAMP HOLES	20	40	120	600	600

Approval :



DIBt



Applications

Primarily used where anchor consistency is required and injection resin use would be prohibitive or inconvenient. Due to the viscous nature chemical capsule CCS is not suitable for overhead installations or perforated and hollow substrates.

CHEMICAL CAPSULE CCS

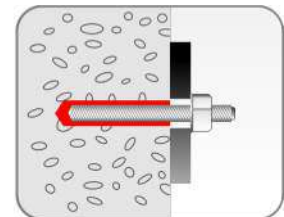
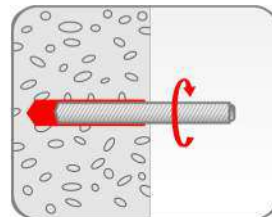
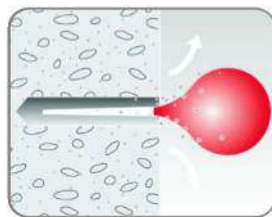
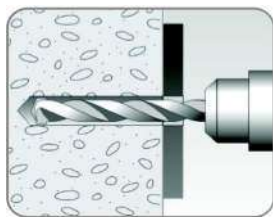
Variant spin-in two component glass capsule
Material epoxy acrylate



Product code	Capsule Size	Hole Diameter (mm)	Hole Depth (mm)	Anchorage Depth (mm)	Fits Threaded Rods	Package content
CCS08	M08	10	80	80	M08	10
CCS10	M10	12	90	90	M10	10
CCS12	M12	14	110	110	M12	10
CCS16	M16	18	125	125	M16	10
CCS20	M20	25	170	170	M20	6
CCS24	M24	28	210	210	M24	6
CCS30	M30	35	280	280	M30	6

Advice

Larger Anchoring depths are possible with the use of more than one capsule.



Installation

- Drill hole to correct diameter and depth, diamond cored drill holes should be roughened prior to installation.
- Clean drill hole thoroughly using wire brush / blow and remove all dust using a blow out pump or airline.
- Place the capsule in the drill hole ensuring fitting is below the surface.
- Attach the driver to the anchor stud, fit the drill and drive through the capsule until the stud reaches the base of the hole or the depth marker on the stud is reached.
- Detach the drive tool and leave stud undisturbed until cured and then attach fixture and torque to required setting.



Typical Performance data at standard Embedment Depth

Size	Concrete, $f_{ck, cube} = 25 \text{ N/mm}^2 \text{ (C20/25)}$									SETTING DATA IN SOLID SUBSTRATE			
	Characteristic Resistance(kN)			Recomanded Load(kN)			Characteristic Edge distance(mm)		Characteristic Spacing(mm)	Hole Diameter in concrete (mm)	Hole Diameter in Fixture (mm)	Standard embedment in concrete (mm)	Recommended Torque (Nm)
	Tension ($N_{t,r}$)	Shear 5.8 ($V_{t,r}$)	Shear 8.8 ($V_{t,r}$)	Tension ($N_{t,r}$)	Shear 5.8 ($V_{t,r}$)	Shear 8.8 ($V_{t,r}$)	Tension ($C_{t,r}$)	Shear 5.8 ($C_{t,r}$)					
M08	20.0	9.0	15.0	7.9	5.1	8.5	80	100	160	10	09	80	10
M10	30.0	14.0	23.0	11.9	8.0	13.1	90	130	180	12	11	90	20
M12	40.0	21.0	33.0	15.9	12.0	19.4	110	150	220	14	13	110	40
M16	50.0	39.0	63.0	19.8	22.3	36.0	125	170	250	18	17	125	80
M20	75.0	61.0	98.0	29.8	34.9	56.0	170	190	340	24	22	170	120
M24	90.0	88.0	141.0	37.7	50.3	80.6	210	240	420	28	26	210	180
M30*	150.0	140.0	224.0	60.0	60.0	—	280	350	560	35	33	280	400

Accessories for drill hole cleaning

Blow out pump **BP**

Description

The hand operated blow out pump BP is for drill hole cleaning prior to anchor installation.



Blow out pump

Variant Hand Operated
Material ABS

Product code	Overall length (mm)	Package content
BP280	280	1

Important Note :

Performance based on clean holes;
HAMMER DRILLED- blown and then brushed with a still metal brush & blown again.

Cleaning brush **CB**



Cleaning brush CB

Description

Wire brush CB is for thorough cleaning and hole preparation.

Variant Hand Operated
Material Steel body & head

Product code	Overall length (mm)	Overall length (mm)	Package content
CB0816	13	8-16	1
CB1824	18	18-24	1
CB2636	28	26-36	1



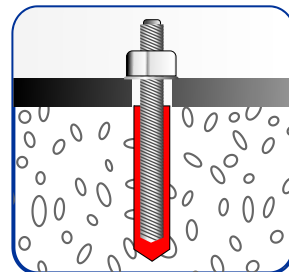
Chemical Anchor Stud CAS

Steel, Zinc Plated/Stainless Steel A4-316



Description

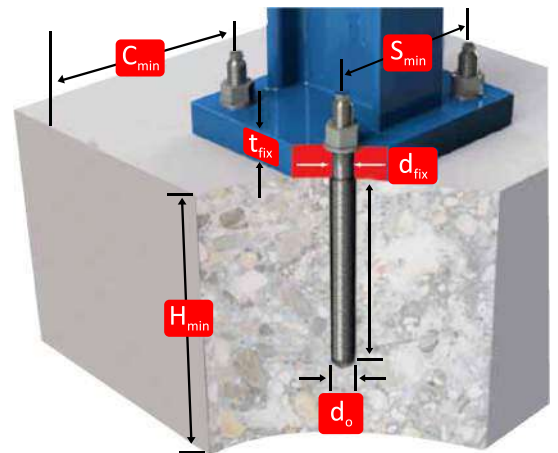
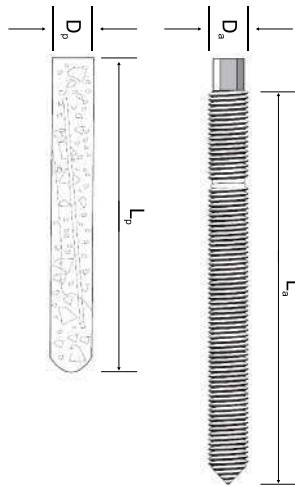
The chemical Capsule CAS is a chisel ended anchor for use with any of our injection systems and glass capsules in masonry and concrete. On installation the stud becomes chemically bonded to the base material. Notably the fixing method imposes no expansion stress on the base material and is ideal for shock or vibratory loading and for softer or low density building materials where expansion stresses would normally result in failure. The method also gives exceptional performance for close centre and close to edge fixing. The nut may be removed and replaced without affecting the anchorage. The chemical Capsule CAS is supplied complete with high tensile hex nut and plain washer in addition to one external hex drive adapter in each box.



Product code Zinc plated 5.8 Grade	Anchor thread size(mm)	Anchor Length (mm)	Hole Diameter (mm)	Effective anchoring depth (mm)	Max.usable Length (mm)	Width across nut (mm)	Hex nut (mm) SW	Washer in dia (mm)	Washer outer dia (mm)	Washer thickness (mm)	Package content pcs per Box
CAS08110E	M 08	110	10	80	13	5	13	9	15	1	25
CAS10130E	M 10	130	12	90	20	7	17	11	19	2	25
CAS10160E	M 10	160	12	90	52	7	17	11	19	2	25
CAS12160E	M 12	160	14	110	25	8	19	13	19.5	3	20
CAS12220E	M 12	220	14	110	90	8	19	13	19.5	3	20
CAS12250E	M 12	250	14	110	120	8	19	13	19.5	3	20
CAS16165E	M 16	165	18	125	13	12	24	17	29	4	10
CAS16190E	M 16	190	18	125	35	12	24	17	29	4	10
CAS16250E	M 16	250	18	125	98	12	24	17	29	4	10
CAS16300E	M 16	300	18	125	148	12	24	17	29	4	10
CAS16380E	M 16	380	18	125	235	12	24	17	29	4	10
CAS16500E	M 16	500	18	125	355	12	24	17	29	4	10
CAS20260E	M 20	260	25	170	65	12	30	21	36	4	10
CAS20350E	M 20	350	25	170	155	12	30	21	36	4	10
CAS20500E	M 20	500	25	170	305	12	30	21	36	4	10
CAS24300E	M 24	300	28	210	65	16	36	26	43	5	5
CAS24400E	M 24	400	28	210	165	16	36	26	43	5	5
CAS24600E	M 24	600	28	210	365	16	36	26	43	5	5
CAS27400E	M 27	400	32	210	165	18	41	28	49	5	5
CAS30380E	M 30	380	35	280	65	25	46	33	55	5	5
CAS30500E	M 30	500	35	280	185	25	46	33	55	5	5

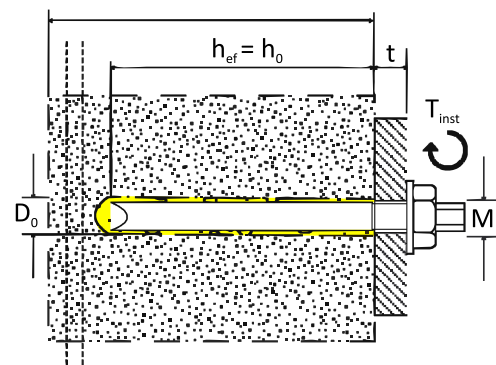


Super Cap Glass Capsule with Threaded Rod Applications



Dimensions

D_a	d_o (mm)	h_o (mm)	d_r (mm)	h_{min} (mm)	t_{fix} (mm)	T_{inst} Nm
M08	10	80	9	110	20	10
M10	12	90	12	120	30	20
M12	14	110	14	140	37	40
M16	18	125	18	160	49	80
M20	25	170	22	220	75	120
M24	28	210	26	260	67	180
M30*	35	280	33	350	52	300








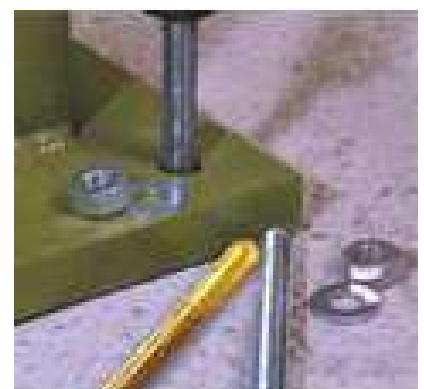
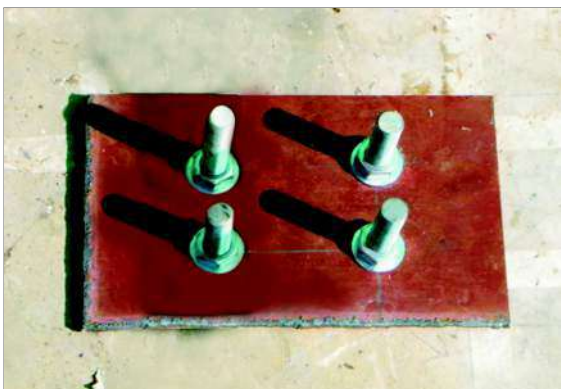
Installation



SDS Plus 13mm Chuck adaptor & Setting Tools



Capsule	Stud	Adaptor	Chuck Adaptor	Machine
				





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