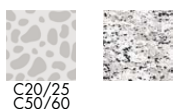


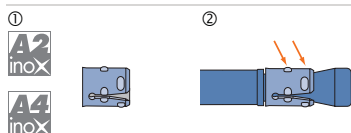
No.	Name	Material
1	Internally threaded sleeve	Zinc plated steel / A4
2	Expansion sleeve	A2 / A4

Building materials

Qualities



Characteristics



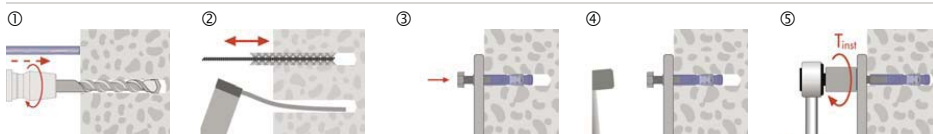
- ① Clip in stainless steel for a durable fixing.
- ② The special design of the clip gives a guaranteed hold in the base material.
- Economical and time saving solution for complex serial assemblies.

Applications



- ① Fixing of consoles on concrete.
- ② Fixing of consoles on pressure-resistant natural stone.

Installation



- Take drill hole- \varnothing and drill hole depth from the table.
- Clean the drill hole with a brush, then blow it out with a purging pump.
- Turn the screw with washer into the internally threaded sleeve.
- Drive in the internally threaded sleeve, until e_{min} is under the top edge of the building materials.
- Tighten the nut with a torque spanner to the predetermined value T_{inst} .

All information detailed in our data sheets is based on technical approvals, formulas and site and laboratory testing under optimum conditions and include a stated safety factor. As we have no direct or indirect control over where or how our products are applied or installed, we do not accept any liability either directly or indirectly arising from the use of our products, whether or not in accordance with any advice, specification or recommendation given by us and we recommend site testing of all products for suitability.

Anchor size		M6	M 8	M 10	M 12	
N_{Emp}	Recommended tension loads concrete C25 - C55 ¹⁾	kN	2.2	3	3.5	5
V_{Emp}	Recommended shear loads ²⁾	kN	1.9	3.4	5.5	7.9
c	Min. distance to the edge	mm	60	71	75	89
s	Min. distance betw. anchors	mm	117	141	150	177
h_{min}	Min. thickness of foundation	mm	120	140	150	180
h_{ef}	Effective anchorage depth	mm	39	47	50	59
T_{inst}	Torque at anchoring	Nm	7	10	20	35
$h_{s_{min}}$	Min. screw-in depth	mm				
e_{min}	Min. drive-in depth	mm	6	9	10	12
h_1	Drill hole depth	mm	60	69	75	96
d_0	Drill hole-Ø in the building material	mm	8	10	12	16
d_f	Hole-Ø in the attached part	mm	7	10	12	14.5
l_G	Thread length	mm	15	17	17	20
d_{nom}	Outside-Ø Bolt	mm	8.5	10	12	16
l	Bolt length	mm	45	51	55	69



Internally Threaded Bolt

- 1) Without influence of anchor and edge distance / Safety factor 3
- 2) Shear load if using screws with steel grade 5.8

Reduction factors

Distance betw. anchors

		M6	M 8	M 10	M 12
Distance betw. anchors s	50 mm	0.89			
	55 mm	0.95			
	60 mm	1	0.88		
	63 mm		0.92	0.88	
	71 mm		1	0.96	
	75 mm			1	0.88
	80 mm				0.93
	89 mm				1

Distance to the edge

		M6	M 8	M 10	M 12
Distance to the edge c	40 mm	0.67			
	47 mm	0.70	0.67		
	50 mm	0.71	0.68	0.67	
	60 mm	0.76	0.71	0.70	0.67
	70 mm	0.80	0.75	0.73	0.70
	100 mm	0.93	0.85	0.83	0.78
	117 mm	1	0.91	0.89	0.83
	125 mm		0.94	0.92	0.85
	141 mm		1	0.97	0.90
	150 mm			1	0.92
	160 mm				0.95
177 mm				1	