

## Typical fracture loads with the KEIL undercut facade anchor

material of slabs	fracture load [KN]	hS [mm]	thickness [mm]	picture of fracture ( diameter in mm )
VSG laminated glass	1,20	7	10	fracture of slab
Float-Glas	2,35	7	10	fracture of slab
ESG tempered safety glass	4,80	5	10	slab crumbled
ESG tempered safety glass	1,98	4	10	slab crumbled
Technoplate	2,35	7	13	excavation cone
Mega Ceram Super	1,30	6	6,5	fracture of slab
Keramik	1,30	6	8	excavation cone
porcelain tiles	2,95	7	13	fracture of slab
porcelain tiles	2,40	7	9,5	fracture of slab
Pelicolor	2,28	8	12	excavation cone ( 50x50 )
Fulguplan plus	2,55	9	12	excavation cone
Eterplan N	2,00	6	10,1	excavation cone
Trespa G2	7,21	9	13	excavation cone
Resoplan	5,55	7	10	excavation cone ( 60x60 )
Resoplan	1,90	4	6	excavation cone ( 100x80 )
Max	2,95	6	8	excavation cone
Glaskeramik	2,40	12	16	excavation cone ( 66x72 )
Neoparies	3,45	9	18	excavation cone
Serizzo Gneis	7,83	15		excavation cone
Iragna Gneis	5,03	15	30	excavation cone ( 90x130 )
Waldstein Granit	8,50	15		excavation cone
Verde Moritaca	10,80	15	20	excavation cone ( 74x74 )
Striegauer Granit	5,75	15	35	excavation cone
Serizzo Antigorio	9,53	15	20	excavation cone ( 74x74 )
Rösseiner Granit	9,80	15		excavation cone
Rosso Balmoral	8,90	15	20	excavation cone ( 74x74 )
Rosa Porrinho	7,10	15	20	excavation cone ( 74x74 )
Rosa Ghiandone	2,05	7	8,5	excavation cone ( 35x55 )
Red Royal	10,55	15	20	excavation cone ( 75x75 )
Paradiso	9,30	15	30	excavation cone ( 90x95 )

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Paradiso	4,05	9	30	excavation cone ( 55x65 )
Onsernone	6,08	15	30	excavation cone
New Rubin	9,05	15	20	excavation cone ( 80x80 )
Nero Assoluto	12,05	15	21	excavation cone ( 115x85 )
Kristall Blau	8,05	15	19	excavation cone ( 70x100 )
Giallo Bras	5,15	15	30	excavation cone ( 80x120 )
Blanc Perla	8,44	15	30	excavation cone ( 70x110 )
Bianco Sardo	6,80	15	20	excavation cone ( 80x80 )
Baltic Brown	7,65	15	20	excavation cone ( 74x74 )
Balmoral	2,70	7	20	excavation cone
Nero Impala	3,22	7	9(+1)	excavation cone
Tuff Mayen ( gelb )	4,35	20	55	excavation cone ( 115x130 )
Kirchheimer Muschelkalk	5,40	15	30	excavation cone ( 72x115 )
Kalkstein Auer (porös)	6,95	15	30	excavation cone ( 83x80 )
franz. Kalkstein	4,85	15	30	excavation cone ( 75x85 )
Marmor	1,25	6	7,5	excavation cone ( 50x50 )
Thüringer Travertin	5,90	15	32	excavation cone ( 80x80 )
Azul Macaubas	8,50	15	20	excavation cone ( 85x90 )
Spanischer Schiefer	3,50	10	25	excavation cone
Theumaer Fruchtschiefer	7,03	15	20	excavation cone ( 110x110 )
Seeberger Sandstein	6,15	15	41	excavation cone ( 75x75 )
Sandstein rot	9,41	22	42	excavation cone ( 20 )
Sandstein (Main)	4,25	15	42	excavation cone ( 85x64 )
Jerusalem Stone	5,95	15	20	excavation cone
Eichenbühler Sandstein	3,30	20	40	excavation cone (85x135 )
Mastercarpet (ä.Bianco S	2,05	7	11	

Remarks: fracture load = received fracture load    hS= setting depth of anchors  
thickness = thickness of slabs

Approval from the General Construction Supervision with the KEIL facade anchors are given for fine stone (Mirage) ceramics (Gail-INAX), natural stone (hard stones), fiber reinforced resin-composed pannels (Trespa), glass ceramics(Structuran), fiber cement (Eternit) and further approvals are to be applied for. Approvals for individual cases had been given to all common facade panels.