Multi-strand Anchor Systems

Multi-strand Anchors are an actively tensioned ground anchor system. Tensioning minimizes or eliminates anticipated deformations of the system and deformations at the civil engineering measure. This applies both to temporary structures (e.g. pit support systems) and permanent tie backs.

The strand anchors are produced with double corrosion protection (DCP), each individual strand is covered by corrosion protection compound and inserted into an individual duct in the factory. As long as the grout used for anchoring is load-bearing, the anchor force is unlimited because the number of strands that can be combined in the anchorage is variable at will.

By definition, an anchor consists of the following three main components:

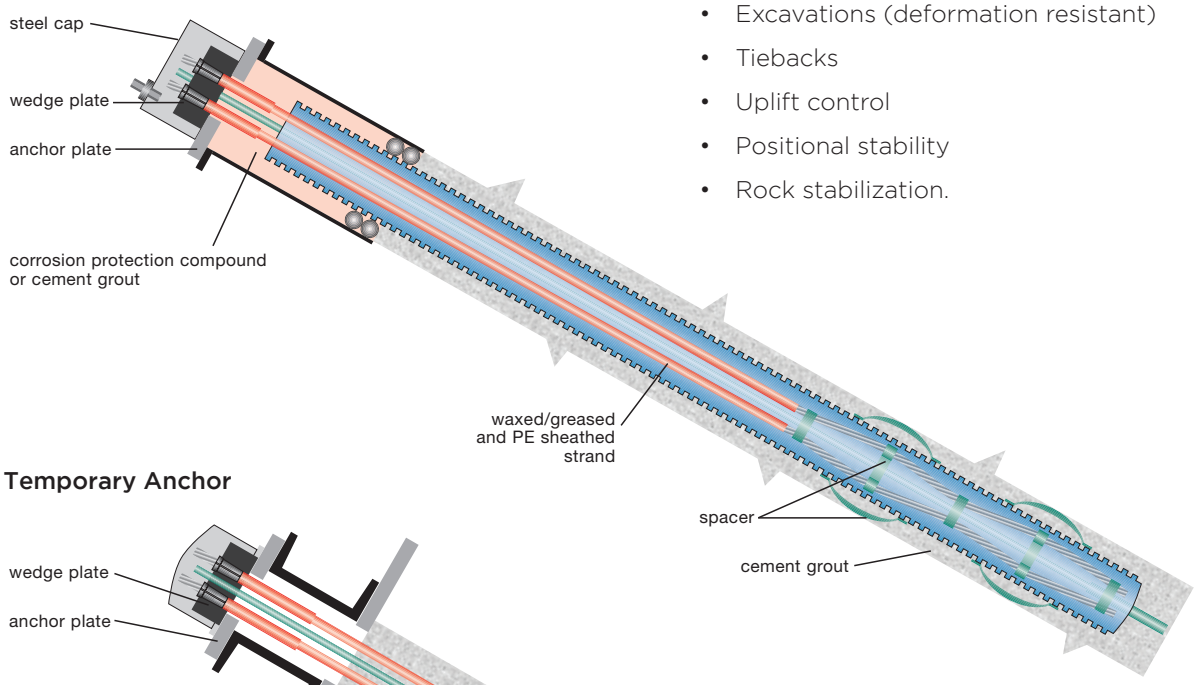
- Bonded Length – Anchor is fixed in the borehole using grout (cement grout) and can transfer the forces to the loadbearing soil via bond and skin friction.
- Unbonded Length – Each strand is uncoupled from the borehole using individual sleeves so that it can freely extend in the unbonded length. This way, tension can be applied to the anchor system.
- Anchor Head – Anchor head transfers the anchor force to the substructure and thus to the structure that needs to be anchored.

If required, anchors can be supplied retensionable.

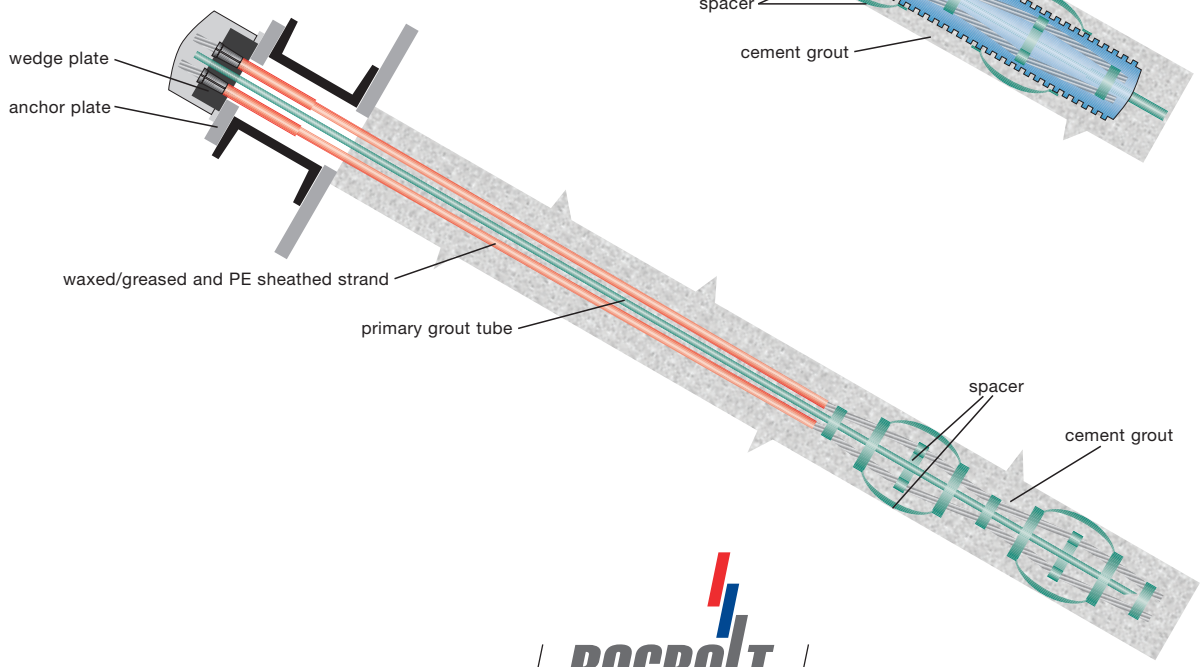
Applications

- Excavations (deformation resistant)
- Tiebacks
- Uplift control
- Positional stability
- Rock stabilization.

Permanent (DCP) Anchor acc. to DIN 4125



Temporary Anchor



Multi-strand Anchor Systems

Features

- Large degree of flexibility: force, length, transport, installation
- Practically no restrictions in terms of length: 150m
- Small pack size for transportation
- Minimal space required during installation
- Retensionable due to exterior thread at wedge plates
- Permanent strand anchor can be supplied in many variations (standard, EI-Iso, TWIN-Corr).

No.	Cross Sectional Area, mm²	Weight, kg/m	Y1860 High Grade	
			Yield Load, kN	Ultimate Load, kN
1	140	1.09	230	260
2	280	2.19	459	521
3	420	3.28	689	781
4	560	4.37	918	1042
5	700	5.47	1148	1302
6	840	6.56	1378	1562
7	980	7.65	1607	1823
8	1120	8.74	1837	2083
9	1260	9.84	2066	2344
10	1400	10.93	2296	2604
11	1540	12.02	2526	2864
12	1680	13.12	2755	3125
13	1820	14.21	2985	3385
14	1960	15.30	3214	3646
15	2100	16.40	3444	3906
16	2240	17.49	3674	4166
17	2380	18.58	3903	4427
18	2520	19.67	4133	4687
19	2660	20.77	4362	4948
20	2800	21.86	4592	5208
21	2940	22.95	4822	5468
22	3080	24.05	5051	5729