

Permanent Strand Anchor MCA-P

Characteristics

The reinforcement of a strand anchor MCA-P is composed from 7-wire strand, steel class 1570/1770 MPa or 1670/1860 MPa lead in protective corrugated sheathing. The anchorage is composed from anchor head with wedges, plate and cover. The grouting of fixed length in the sheathing is done through injection hose, grouting of the external part (outside of the sheathing) is done through sleeved pipes.

The fixed length is equipped with centralizers, intermediate sections of strands are tied up with steel bands. Strands from pre-stressing steel of nominal diameter 15,7 mm (0,62") are delivered in standard with single corrosion protection and HDPE protection sleeve of free length. In case of usage in aggressive environment strands can be delivered with special anti-corrosion protection (wires coated with epoxy resin + HDPE sheath for free length).

According to EN 1537 strand anchors MCA-P are considered as permanent anchors for a life span longer than 2 years.



Usage

Strand anchors are widely used in geotechnics and underground construction. They are used for execution of anchoring members with very high loads and for members with length exceeding 12 m.

Typical applications of MCA-T strand anchor are:

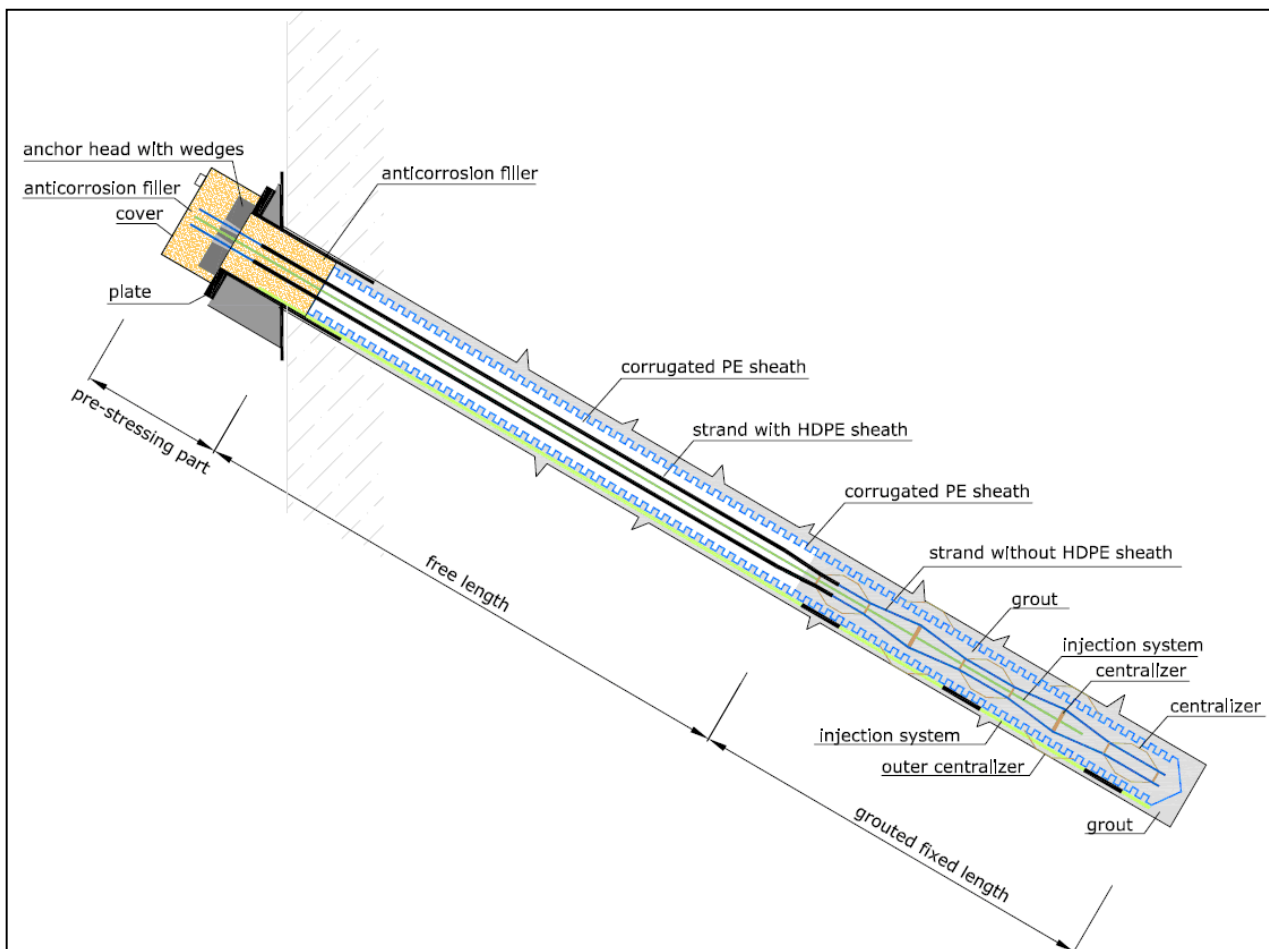
- anchoring of excavation pits support
- anchoring of tunnel portals
- stabilization of steep slopes and cuts
- anchoring of rock mass

Technical parameters of strands

Steel class		1570/1770 MPa	1670/1860 MPa
Diameter of strand	mm (")	15,7 (0,62)	
Cross section area	mm ²	150	
Unit weigth	kg/m	1,18	
Ultimate load	kN	265	279
Yield load	kN	235	250

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MCA-P strand anchor composition



Proofed anchor loads [kN] and recommended borehole diameter

N	15,7 mm (0,62")			
	Steel class 1570/1770 MPa	Steel class 1670/1860 MPa	Outer anchor diameter (mm)	Minimal recommended diameter of borehole (mm)
2	315	335	80	90
3	475	500	80	90
4	635	670	80	90
5	795	835	80	90
6	955	1005	90	100
7	1115	1170	90	100

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Advantages of MCA-P strand anchors

- high load capacity due to anchor construction and steel class used
- optional number of strands allows optimal design of anchor based on requested tensile load
- easy manipulation in limited working space, easy transport and storage
- variable length of strands / anchor
- possibility to deliver strands with increased anti-corrosion protection for longer life-span

Installation

The anchor is inserted into a pre-drilled borehole of required diameter. Strands are lead in protective corrugated sheathing from mouth of the borehole up to the bottom. Distance between strands itself and from surrounding soil / rock is ensured by using external and internal centralizers each 1 m in the fixed length.

Grouting of the fixed length inside of the sheathing is done through injection hose, grouting of the external part (outside of the sheathing) is done through sleeved pipes. Grouting is done using cementitious or chemical materials.

Strands of chosen diameter and length are secured in corresponding anchor head with given number of holes for strands. Anti-corrosion filler of anchorage and sealing of HDPE sheath against water ingress is done once pre-stressing has been finished.

Packaging, Transport, Storage Conditions

Anchors are delivered unpacked in lengths according to request of the buyer. Protective sheathing, plates, anchor heads with wedges and other optional accessories for installation of strand anchor is delivered as unpacked goods.

In order to prevent mechanical damage manipulation has to take appropriate measures.

Anchors including accessories have to be stored all time in dry conditions preventing influence of climate, chemical, mechanical or other external effects to its quality.

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