

GLÖTZL Baumeßtechnik

MEASURING ANCHORS for Swellex anchor system

Type: SMA . . .
Art. No: 92.10

Based on the system of the **SWELLEX anchors** of Atlas Copco, Glötzl has created a new instrumentation method which includes the advantages of this anchor system. The basic principle is a folded tube which has been modified for the measuring- and installation instruments of Glötzl which are important for tunnel advance.



Essential advantages compared with conventional and still known instruments:

- Immediate availability resp. standby for measurement after installation
- Uncomplicated installation in all meas. positions and -directions
- Very short installation periods in minutes, without mortar
- Standard boreholes, dependent on anchor 32-52 mm

For an application of the SWELLEX anchor systems in tunnelling, we have developed this measuring anchor for measurement technique support.

It consists of a standard SWELLEX anchor, which is modified by us to a measuring anchor. For this, pull bars are fitted in the interior, the length change of which is recorded at the head by measurement technique.

The anchor models are available in standard lengths of 2, 3, 4, 6 and 9 m, according to the anchor types SWELLEX and SUPER-SWELLEX. Further lengths on request.

Supplementary for the system, the measuring anchors are equipped with load cells.

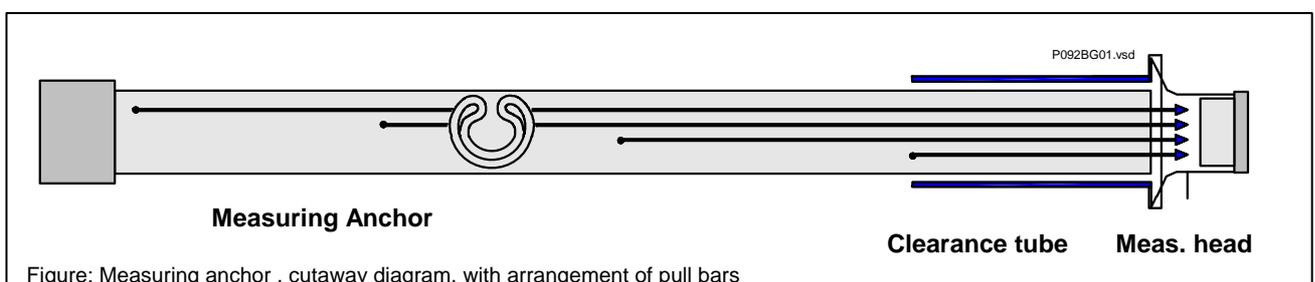
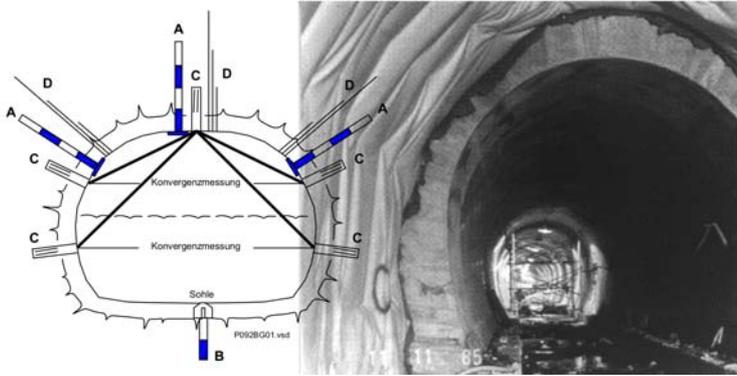
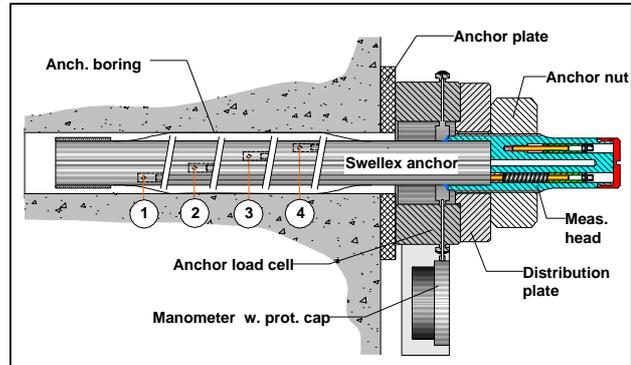


Figure: Measuring anchor , cutaway diagram, with arrangement of pull bars



- A Measuring anchor with load cells
- B Bottom surveying points
- C Hydraulic convergency bolts for mechanical and geodetic measurement
- D Extensometer with hydraulic anchor points

Models	Load [kN]	L [m]	Drill. Ø [mm]	Wgt. [kg]	Article Nos.:
SMA 11/2	110	2		4	92.10.01.02
SMA 11/3	110	3	32	6	92.10.01.03
SMA 11/4	110	4	up to	8	92.10.01.04
SMA 11/6	110	6	39	12	92.10.01.06
SMA 11/9	110	9		18	92.10.01.09
SMA 15/2	150	2		8	92.10.02.02
SMA 15/3	150	3	43	12	92.10.02.03
SMA 15/4	150	4	up to	16	92.10.02.04
SMA 15/6	150	6	52	24	92.10.02.06
SMA 15/9	150	9		36	92.10.02.09
SMA 22/2	220	2		8	92.10.03.02
SMA 22/3	220	3	43	12	92.10.03.03
SMA 22/4	220	4	up to	16	92.10.03.04
SMA 22/6	220	6	52	24	92.10.03.06
SMA 22/9	220	9		36	92.10.03.09



Anchor load cell with attachment piece and clamping nut f. SWELLEX anchor, mechanical model with manometer, or electrical output signal

Fig.: Anchor load cell



Fig.: Dial gauge set for mechanical or digital meas. value recording

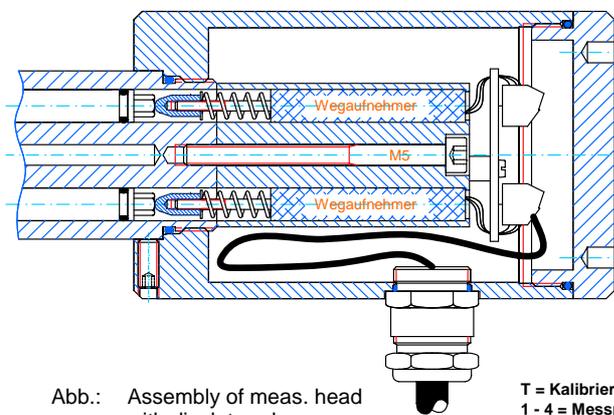
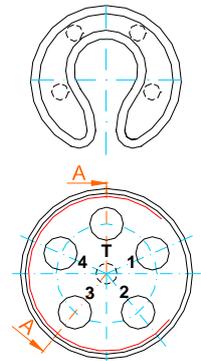


Abb.: Assembly of meas. head with displ. transducer

Querschnitt SWELLEX-Rohr



T = Kalibrieranschlag
1 - 4 = Messpunkte

The anchor part consists of a folded steel tube, widened by water pressure after installation in the borehole. By this, the outer covering gets into contact with the rock and is deformed according to its ruggedness. Thus, a high-tensile and permanent compound is ensured.

The essential advantage – compared with the already known procedures – is the immediate readiness to work without use of cement and plastics or working steps like strain and striking.



REMARK:

SWELLEX is a registered trademark of the company ATLAS-COPCO. The products of Glötzl based on the SWELLEX systems, are independent instruments which are manufactured on the basic material of the SWELLEX anchors. Each liability for the instruments presented in this prospectus, is on the part of Glötzl Gesellschaft für Baumeßtechnik mbH.

Subject to technical alterations

GLÖTZL Gesellschaft für Baumeßtechnik mbH · Forlenweg 11 · 76287 Rheinstetten · Germany

+49 (0)721 51 66 - 0 · +49 (0)721 51 66 - 30 · <http://www.gloetzl.com> · info@gloetzl.com