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European Technical Assessment Body  
for construction products



## European Technical Assessment

ETA-06/0168  
of 5 December 2025

English translation prepared by DIBt - Original version in German language

### General Part

Technical Assessment Body issuing the European Technical Assessment:

Deutsches Institut für Bautechnik

Trade name of the construction product

MUNGO ceiling anchor MAN

Product family to which the construction product belongs

Fasteners for use in concrete for redundant non-structural systems

Manufacturer

MUNGO Befestigungstechnik AG  
Webereiweg 6  
4802 Strengelbach  
SCHWEIZ

Manufacturing plant

MUNGO manufacturing plants

This European Technical Assessment contains

8 pages including 3 annexes which form an integral part of this assessment

This European Technical Assessment is issued in accordance with Regulation (EU) No 305/2011, on the basis of

EAD 330747-00-0601

This version replaces

ETA-06/0168 issued on 11 August 2016

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## Specific Part

### 1 Technical description of the product

The MUNGO ceiling anchor MAN is an anchor made of galvanized steel which is placed into a drilled hole and anchored by deformation-controlled expansion.

Product and product description is given in Annex A.

### 2 Specification of the intended use in accordance with the applicable European Assessment Document

The performances given in Section 3 are only valid if the anchor is used in compliance with the specifications and conditions given in Annex B.

The verifications and assessment methods on which this European Technical Assessment is based lead to the assumption of a working life of the anchor of at least 50 years. The indications given on the working life cannot be interpreted as a guarantee given by the producer, but are to be regarded only as a means for choosing the right products in relation to the expected economically reasonable working life of the works.

### 3 Performance of the product and references to the methods used for its assessment

#### 3.1 Safety in case of fire (BWR 2)

Essential characteristic	Performance
Reaction to fire	Class A1
Resistance to fire	See Annex C1

#### 3.2 Safety in use (BWR 4)

Essential characteristic	Performance
Characteristic resistance for all load directions and modes of failure for simplified design	See Annex C1
Durability	See Annex B1

### 4 Assessment and verification of constancy of performance (AVCP) system applied, with reference to its legal base

In accordance with European Assessment Document EAD No. 330747-00-0601, the applicable European legal act is: [97/161/EC].

The system to be applied is: 2+

**5 Technical details necessary for the implementation of the AVCP system, as provided for in the applicable EAD**

Technical details necessary for the implementation of the AVCP system are laid down in the control plan deposited with Deutsches Institut für Bautechnik.

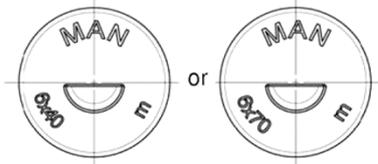
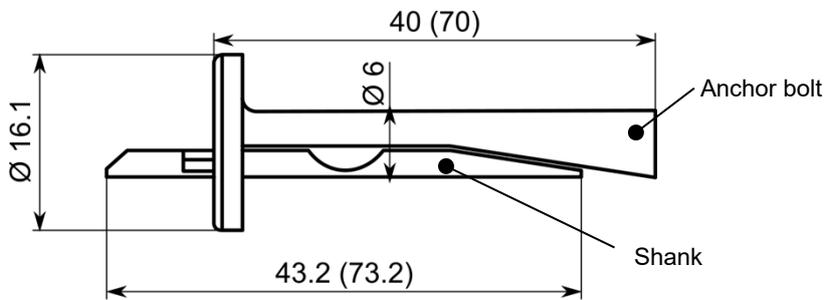
Issued in Berlin on 5 December 2025 by Deutsches Institut für Bautechnik

Dipl.-Ing. Beatrix Wittstock  
Head of Section

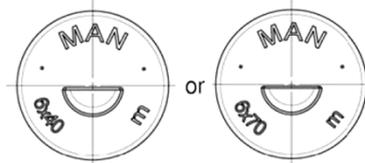
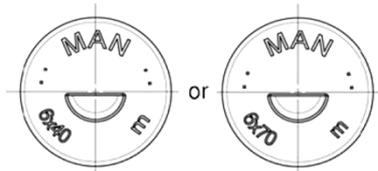
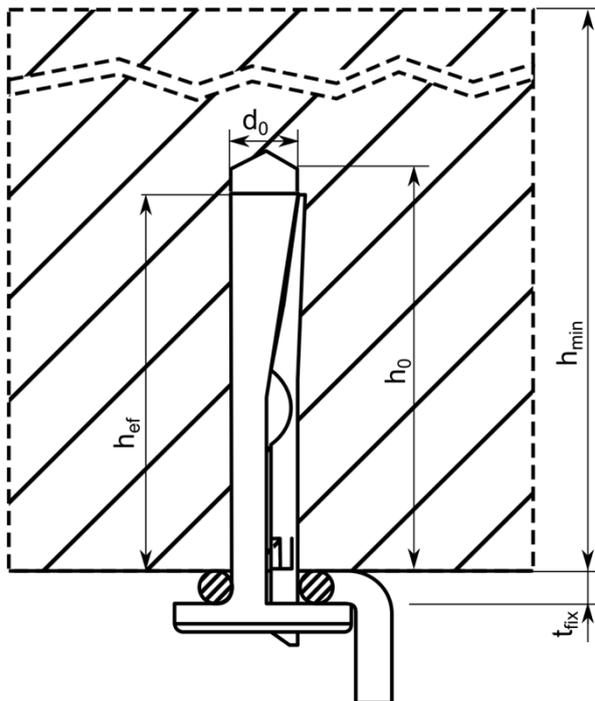
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Ziegler

**Only for use of redundant non-structural systems according to EAD 330747-00-0601**

**Head marking: Identifying mark of the producer and anchor type**



**Installed condition for MUNG0 MAN ceiling anchor**



**Table A1: Anchor dimension, marking and material**

MUNGO ceiling anchor MAN		6 x 40	6 x 70
Marking / embossing		MAN 6 x 40	MAN 6 x 70
Anchor length	[mm]	40	70
Material	Anchor bolt	Strength class 4.8 according to EN ISO 898-1:2013 galvanized steel, Zinc plating $\geq 5 \mu\text{m}$ according to EN ISO 4042:2022	
	Shank	Strength class 8.8 according to EN ISO 898-1:2013; galvanized steel, Zinc plating $\geq 5 \mu\text{m}$ according to EN ISO 4042:2022	

**MUNGO ceiling anchor MAN**

**Product description**

Installed condition, anchor types, dimensions and materials

**Annex A1**

## Specifications of intended use

### Anchorage subject to:

- Static and quasi-static loads.
- Redundant non-structural systems according to EN 1992-4:2018.
- Fire exposure.

### Base materials:

- Compacted reinforced and unreinforced normal weight concrete without fibres according to EN 206:2013+A2:2021.
- Strength classes C20/25 to C50/60 according to EN 206:2013+A2:2021.
- Cracked and uncracked concrete.

### Use conditions:

- Structures subject to dry internal conditions.

### Design:

- Anchorages are designed under the responsibility of an engineer experienced in anchorages and concrete work.
- Verifiable calculation notes and drawings have to be prepared taking account of the loads to be anchored. The position of the anchor is indicated on the design drawings (e.g. position of the anchor relative to reinforcement or to supports, etc.).
- Anchorages under static or quasi-static actions are designed in accordance with EN 1992-4:2018, design method C.
- In case of requirements to resistance to fire local spalling of the concrete cover must be avoided.

### Installation:

- Anchor installation carried out by appropriately qualified personnel and under the supervision of the person responsible for technical matters of the site.
- Dry or wet concrete.
- Hole drilling by hammer drilling.
- Anchor expansion by impact on the shank. The anchor is properly set, if no further driving by impact is possible and the excess of the shank is at maximum 2,5 mm.
- The anchor may only be set once.
- In case of aborted hole: new drilling at a minimum distance away of twice the depth of aborted hole or smaller distance if the aborted hole is filled with high strength mortar and if under shear or oblique tension load it is not on the direction of the load application.

**MUNGO ceiling anchor MAN**

**Intended use**  
Specifications

**Annex B1**

**Table B1: Installation parameters**

MUNGO ceiling anchor MAN			MAN 6 x 40	MAN 6 x 70
Effective anchorage depth	$h_{ef} \geq$	[mm]	32	
Thickness of fixture	$t_{fix}$	[mm]	0 - 5	0 - 35
Nominal drill hole diameter	$d_0$	[mm]	6	
Maximum drill bit diameter	$d_{cut}$	[mm]	6,4	
Drill hole depth	$h_0 \geq$	[mm]	40	
Minimum thickness of concrete member	$h_{min}$	[mm]	80	
Minimum spacing	$s_{min}$	[mm]	200	
Minimum edge distance	$c_{min}$	[mm]	150	

**Installation instructions:**



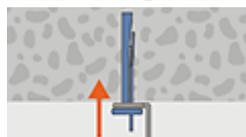
Make the drill hole.



Clean the drill hole from drill dust.



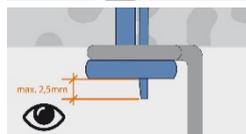
Place the fixture on the ceiling anchor.



Place the ceiling anchor with the fixture concisely into the hole.



Drive in the nail with a hammer.



Installed ceiling anchor; control of maximum overlap of shank:  
 $\leq 2,5 \text{ mm}$ .

**MUNGO ceiling anchor MAN**

**Intended use**

Installation parameters, edge distance and spacing, installation instructions

**Annex B2**

**Table C1: Characteristic resistance in all load directions (Design method C)**

MUNGO ceiling anchor MAN			MAN 6 x 40	MAN 6 x 70
<b>All load directions and for all failures modes</b>				
Characteristic resistance in concrete C20/25 to C50/60	$F_{Rk}$	[kN]	3,0	
Characteristic spacing	$s_{cr,N} = s_{min}$	[mm]	200	
Characteristic edge distance	$c_{cr,N} = c_{min}$	[mm]	150	
Partial safety factor	$\gamma_M^{1)}$	[-]	1,5	
<b>Shear load with lever arm</b>				
Characteristic bending moment	$M^0_{Rk,s}$	[Nm]	5,4	
Installation safety factor for steel failure	$\gamma_{Ms}^{2)}$	[-]	1,25	

- 1) The installation safety factor  $\gamma_2 = \gamma_{inst} = 1,0$  is included.  
2) In absence of other national regulations.

**Table C2: Characteristic values under fire exposure in concrete C20/25 to C50/60 in all load directions without lever arm**

Fire resistance class	MUNGO ceiling anchor MAN		MAN 6 x 40	MAN 6 x 70
<b>All load directions and for all failures modes</b>				
<b>R 30</b>	Characteristic resistance	$F_{Rk,fi30}$	[kN]	0,6
<b>R 60</b>		$F_{Rk,fi60}$		0,5
<b>R 90</b>		$F_{Rk,fi90}$		0,4
<b>R 120</b>		$F_{Rk,fi120}$		0,3
Partial safety factor under fire		$\gamma_{M,fi}^{1)}$	[-]	1,0
<b>R 30 - R 120</b>	Minimum spacing	$s_{min,fi}$	[mm]	200
	Minimum edge distance <sup>2)</sup>	$c_{min,fi}$	[mm]	150

- 1) In absence of other national regulations.  
2) In case of fire attack from more than one side of the concrete member, the edge distance shall be  $\geq 300$  mm.

**MUNGO ceiling anchor MAN**

**Performances**  
Characteristic resistances in concrete  
Characteristic resistances under fire exposure

**Annex C1**