

TRANSLATION

“Translation of the German original version not checked by the Material Testing Institute (MPA) NRW”

General Building Authority Test Certificate

Test Certification Number:

P-MPA-E-18-002

Subject:

SHA with circuit integrity maintenance of the circuit maintenance class „E30“, „E60“ and „E90“ according to DIN 4102-12: 1998-11 for SHA to ensure the power supply to electrical systems in the event of fire acc. to VVTB of the state of Baden-Württemberg, Section C4, No. C.4.9

Applicant:

fischerwerke GmbH & Co. KG
Klaus-Fischer-Straße 1
72178 Waldachtal

Date of issue:

07.05.2024

Period of validity from:

07.05.2024

Period of validity until:

06.05.2029

On basis of this general authority test certificate issued by the building authorities, the above-mentioned product is applicable within the meaning of the state building regulations.

This general building authority test certificate comprises of 13 pages and 5 attachment(s).

1 Subject and Application

1.1 Subject

1.1.1

The general building authority test certificate applies to the production and application of the cable system with circuit integrity maintenance as a design. The cable system with circuit integrity maintenance ensures classification into the circuit maintenance classes depending on the cable types „E 30“, „E 60“ and „E 90“ according to DIN4102-12 (Issue 11/1998).

1.1.2

The cable system with circuit integrity maintenance must consist of cable types according to section 2.1 and a cable support structure according to section 2.2.

1.2 Application

1.2.1

The range of application is limited to cables with nominal voltages ≤ 1 kV. When dimensioning cable systems with circuit integrity maintenance, a possible functional impairment of the cables due to thermal resistance increases must be considered.

1.2.2

In the case of inclined or vertical cable systems (e.g. riser or single installation) with circuit integrity maintenance, the cables must be supported vertically-horizontally in the transition area so that slipping or bending of the cables at edges is prevented.

If the cables are laid vertically throughout (e.g. riser or single installation), care must be taken to ensure effective support (distance $a \leq 3500$ mm).

1.2.3

A combination of different installation types is permitted if the same circuit maintenance classes exist.

1.2.4

If further requirements are demanded, these must be proven separately.

2 Provisions for Execution

The design of the cable system must comply with the following detailed specifications.

2.1 Types of Cables

Only cable types of

Dätwyler AG Kabel + Systeme, Gotthardstraße 31, CH- 6460 Altdorf,
LEONI Studer AG, Herrenmattstraße 20, CH-4658 Däniken,
PRYSMIAN Kabel und Systeme GmbH, Siemensstraße 1, D-19057 Schwerin and
Kabelwerk Eupen AG, Malmedyer Straße 9, B-4700 Eupen,

according to Table 1 with a valid VDE approval may be used.
The design of the cable types is stored at the MPA NRW.

2.2 Cable Support Structures

The cable support structure must be made of steel (minimum steel grade: S 235). The cable support structures or clamps may be coated with plastics or fire protection paint up to a layer thickness of 1.5 mm. Paint coatings and varnishes with commercially available layer thicknesses of up to 150 µm are permissible.

The following conditions must be observed:

Tensile stressed components must be dimensioned in such a way that their calculated tensile stress not greater than 9 N/mm² (classifications "E30" and "E60") or not greater than 6 N/mm² (classification "E90") in accordance with Table 11.1 of DIN 4102-4:2016-05.

Anchors must comply with the specifications of valid national technical approval of the Deutsches Institut für Bautechnik, Berlin, and must also be installed twice as deep as specified in the approval notice - but at least 6 cm deep, unless otherwise stated in the approval; the calculated tensile load per anchor shall not exceed 500 N, cf. DIN 4102-4:1994-03, Section 8.5.7.5. Anchors may be used whose suitability for fire protection has been confirmed by a national technical approval, a European technical approval a general building authority test certificate. They must be installed in accordance with the specifications in the general building approval or in the general building authority test certificate.

The general building authority test certificate is only valid if:

- the cables or lines are designed without connecting elements,
- it is ensured that the cable systems with integrated functional integrity in the functional integrity class is not negatively affected by surrounding components.

2.2.1 Supporting Structure Multi-Cable Support

The cables must be laid in collective supports in accordance with the following table and the annexes to this general building inspection test certificate.

Table 1: Classification of cable types on cable support structures under ceilings or on walls according to DIN 4102-12

Installation type			
1. Bundle installation with multi-cable support SHA-M-15		3. Bundle installation with multi-cable support SHA-M-70	
1.1 Bundle installation with collective support on ceilings or horizontally on the wall (a ≤ 500 mm) ²⁾ , (g ≤ 1.1 kg/m) ³⁾		3.1 Bundle installation with collective support on ceilings or horizontally on the wall (a ≤ 800 mm) ²⁾ , (g ≤ 6.0 kg/m) ³⁾	
1.2 Bundle installation with collective support on ceilings or horizontally on the wall (a ≤ 800 mm) ²⁾ , (g ≤ 1.5 kg/m) ³⁾		3.2 Bundle installation with collective support on ceilings or horizontally on the wall (a ≤ 800 mm) ²⁾ , (g ≤ 7.0 kg/m) ³⁾	
1.3 Bundle installation with collective support on ceilings or horizontally on the wall (a ≤ 500 mm) ²⁾ , (g ≤ 1.5 kg/m) ³⁾		3.3 Bundle installation with collective support on ceilings or horizontally on the wall (a ≤ 600 mm) ²⁾ , (g ≤ 6.0 kg/m) ³⁾	
		3.4 Bundle installation with collective support on ceilings or horizontally on the wall (a ≤ 800 mm) ²⁾ , (g ≤ 3.0 kg/m) ³⁾	
2. Bundle installation with multi-cable support SHA-M-30			
2.1 Bundle installation with collective support on ceilings or horizontally on the wall (a ≤ 500 mm) ²⁾ , (g ≤ 2.5 kg/m) ³⁾			
2.2 Bundle installation with collective support on ceilings or horizontally on the wall (a ≤ 800 mm) ²⁾ , (g ≤ 3.5 kg/m) ³⁾			
2.3 Bundle installation with collective support on ceilings or horizontally on the wall (a ≤ 600 mm) ²⁾ , (g ≤ 3.0 kg/m) ³⁾			
Type of cable: Designation according to the manufacturer's specification	Installation type no.:	Dimension: No. of cores x cross-section [n x mm ²] or No. of cores x 2 x diameter [n x 2 mm]	Classification: According to DIN 4102-12 1998-11
Dätwyler Pyrofil KERAM	(N)HXH... FE180 E30-E60 VDE Reg. Nr. 7780	1.2	n x 1,5 – 4
		2.1	n x 1,5 – 16
		3.1	n x 1,5 ≥ 1,5
		2.1	n x 16
		1.2	n x 1,5 – 4
		3.1	n x 50
(N)HXCH... FE180 E30-E60 VDE Reg. Nr. 7780	2.1	n x 1,5/1,5 - 16/16	E30
	3.1	n x ≥ 1,5/1,5	E30
	2.1	n x 1,5/1,5 - 16/16	E60
	3.1	n x ≥ 1,5/1,5	E60
	2.1	n x 1,5/1,5	E90
(N)HXH... FE180 E90 VDE Reg. Nr. 7780	1.3	n x 1,5 - 4	E30
	1.2	n x 4	E30
	2.1	n x 1,5 - 16	E30
	3.1	n x ≥ 1,5	E30
	1.3	n x 1,5 - 4	E60
	1.2	n x 4	E60

	2.1	n x 1,5 - 16	E60
	3.3	n x 50	E60
	1.3	n x 1,5 - 4	E90
	1.2	n x 4	E90
	2.1	n x 1,5 - 16	E90
	3.3	n x 50	E90
(N)HXCH... FE180 E90 VDE Reg. Nr. 7780	2.3	n x 1,5/1,5 - 16/16	E30
	3.1	n x ≥ 1,5/1,5	E30
	2.3	n x 1,5/1,5 - 16/16	E60
	3.1	n x 50/25	E60
	2.3	n x 16/16	E90
	3.1	n x 50/25	E90
JE-H(St)H... FE180 E30-E90 VDE Reg. Nr. 9361	2.1; 3.1	n x 2 x 0,8	E30
JE-H(St)HRH... FE180 E30-E90 VDE Reg. Nr. 9361	2.1; 3.1	n x 2 x 0,8	E30
JE-H(St)H... FE180 E30 L VDE Reg. Nr. 9361	1.2; 2.3; 3.4	n x 2 x 0,8	E30

2) Supporting distance

3) Load

Table 1 (continued): Classification of cable types on cable support structures under ceilings or on walls according to DIN 4102-12

Installation type			
1. Bundle installation with multi-cable support SHA-M-15		3. Bundle installation with multi-cable support SHA-M-70	
1.1 Bundle installation with collective support on ceilings or horizontally on the wall (a ≤ 500 mm) ²⁾ , (g ≤ 1.1 kg/m) ³⁾		3.1 Bundle installation with collective support on ceilings or horizontally on the wall (a ≤ 800 mm) ²⁾ , (g ≤ 6.0 kg/m) ³⁾	
1.2 Bundle installation with collective support on ceilings or horizontally on the wall (a ≤ 800 mm) ²⁾ , (g ≤ 1.5 kg/m) ³⁾		3.2 Bundle installation with collective support on ceilings or horizontally on the wall (a ≤ 800 mm) ²⁾ , (g ≤ 7.0 kg/m) ³⁾	
1.3 1.3 Bundle installation with collective support on ceilings or horizontally on the wall (a ≤ 500 mm) ²⁾ , (g ≤ 1.5 kg/m) ³⁾		3.3 Bundle installation with collective support on ceilings or horizontally on the wall (a ≤ 600 mm) ²⁾ , (g ≤ 6.0 kg/m) ³⁾	
		3.4 Bundle installation with collective support on ceilings or horizontally on the wall (a ≤ 800 mm) ²⁾ , (g ≤ 3.0 kg/m) ³⁾	
2. Bundle installation with multi-cable support SHA-M-30			
2.1 Bundle installation with collective support on ceilings or horizontally on the wall (a ≤ 500 mm) ²⁾ , (g ≤ 2.5 kg/m) ³⁾			
2.2 Bundle installation with collective support on ceilings or horizontally on the wall (a ≤ 800 mm) ²⁾ , (g ≤ 3.5 kg/m) ³⁾			
2.3 Bundle installation with collective support on ceilings or horizontally on the wall (a ≤ 600 mm) ²⁾ , (g ≤ 3.0 kg/m) ³⁾			
Type of cable: Designation according to the manufacturer's specification EUPEN EUCASAFE	Installation type no.:	Dimension: No. of cores x cross-section [n x mm ²] or No. of cores x 2 x diameter [n x 2 mm]	Classification: According to DIN 4102-12 1998-11
(N)HXH... FE180 E30 VDE Reg. Nr. 7581 VDE Reg. Nr. 8512	1.2	n x 1,5 - 4	E30
	2.2	n x 1,5 - 16	E30
	3.1	n x ≥ 1,5	E30
	1.2	n x 1,5 - 4	E60
	2.2	n x 1,5 - 16	E60
	3.1	n x 50	E60
	3.1	n x 50	E90
(N)HXCH... FE180 E30 VDE Reg. Nr. 8566 VDE Reg. Nr. 8513	2.3	n x 1,5/1,5 - 16/16	E30
	3.1	n x ≥ 1,5/1,5	E30
	2.3	n x 16/16	E60
	3.1	n x 50/25	E60
(N)HXH... FE180 E90 VDE Reg. Nr. 8513 VDE Reg. Nr. 8566	1.2	n x 1,5	E30
	2.1	n x 1,5 - 6	E30
	3.3	n x ≥ 1,5	E30
	1.2	n x 1,5	E60
	2.1	n x 1,5 - 6	E60
	3.3	n x ≥ 1,5	E60
	1.2	n x 1,5	E90

	2.1	n x 1,5 - 6	E90
	3.1	n x 50	E90
(N)HXCH... FE180 E90 VDE Reg. Nr. 8513	2.3	n x 1,5/1,5 - 16/16	E30
	3.1	n x ≥ 1,5/1,5	E30
	2.3	n x 1,5/1,5 - 16/16	E60
	3.1	n x ≥ 1,5/1,5	E60
	2.3	n x 1,5/ 1,5 -16/16	E90
	3.1	n x ≥ 1,5/1,5	E90
JE-H(St)H... FE180 E30 VDE Reg. Nr. 7510	1.2; 2.2	n x 2 x 0,8	E30
JE-H(St)H... FE180 E90 VDE Reg. Nr. 7510	1.2; 2.3	n x 2 x 0,8	E30
	1.2; 2.3	n x 2 x 0,8	E60

2) Supporting distance

3) Load

Table 1 (continued): Classification of cable types on cable support structures under ceilings or on walls according to DIN 4102-12

Installation type			
1. Bundle installation with multi-cable support SHA-M-15		3. Bundle installation with multi-cable support SHA-M-70	
1.1 Bundle installation with collective support on ceilings or horizontally on the wall (a ≤ 500 mm) ²⁾ , (g ≤ 1.1 kg/m) ³⁾		3.1 Bundle installation with collective support on ceilings or horizontally on the wall (a ≤ 800 mm) ²⁾ , (g ≤ 6.0 kg/m) ³⁾	
1.2 Bundle installation with collective support on ceilings or horizontally on the wall (a ≤ 800 mm) ²⁾ , (g ≤ 1.5 kg/m) ³⁾		3.2 Bundle installation with collective support on ceilings or horizontally on the wall (a ≤ 800 mm) ²⁾ , (g ≤ 7.0 kg/m) ³⁾	
1.3 Bundle installation with collective support on ceilings or horizontally on the wall (a ≤ 500 mm) ²⁾ , (g ≤ 1.5 kg/m) ³⁾		3.3 Bundle installation with collective support on ceilings or horizontally on the wall (a ≤ 600 mm) ²⁾ , (g ≤ 6.0 kg/m) ³⁾	
		3.4 Bundle installation with collective support on ceilings or horizontally on the wall (a ≤ 800 mm) ²⁾ , (g ≤ 3.0 kg/m) ³⁾	
2. Bundle installation with multi-cable support SHA-M-30			
2.1 Bundle installation with collective support on ceilings or horizontally on the wall (a ≤ 500 mm) ²⁾ , (g ≤ 2.5 kg/m) ³⁾			
2.2 Bundle installation with collective support on ceilings or horizontally on the wall (a ≤ 800 mm) ²⁾ , (g ≤ 3.5 kg/m) ³⁾			
2.3 Bundle installation with collective support on ceilings or horizontally on the wall (a ≤ 600 mm) ²⁾ , (g ≤ 3.0 kg/m) ³⁾			
Type of cable: Designation according to the manufacturer's specification	Installation type no.:	Dimension: No. of cores x cross-section [n x mm ²] or No. of cores x 2 x 2 x diameter [n x 2 mm]	Classificati According to DIN 4102-12 1998-11
Studer Cables AG BETAflam (N)HXH... FE180 E30-E60 S VDE Reg. Nr. 8849	1.1	n x 1,5 - 4	E30
	1.2	n x 1,5	E30
	3.1	n x 1,5 - 16	E30
(N)HXH... FE180 / E30-E60 VDE Reg. Nr. 9803	3.1	n x ≥ 16	E30
(N)HXCH... FE180 / E30-E60 VDE Reg. Nr. 9803	1.1	n x 1,5/1,5 – 4/4	E30
	2.3	n x 1,5/1,5 – 16/16	E30
	3.1	n x ≥ 1,5/1,5	E30
	1.1	n x 1,5/1,5	E60
	2.3	n x 1,5/1,5 – 16/16	E60
	3.1	n x ≥ 1,5/1,5	E60
(N)HXCH... FE180 / E30-E60 VDE Reg. Nr. 9803	1.1	n x 1,5 – 16	E30
	2.3	n x 1,5 - 16	E30
	3.1	n x ≥ 1,5	E30
	1.1	n x 1,5 - 16	E60
	2.3	n x 1,5 - 16	E60
	3.1	n x ≥ 1,5	E60

	1.1	$n \times 1,5 - 16$	E90
	2.3	$n \times 1,5 - 16$	E90
	3.1	$n \times \geq 1,5$	E90
(N)HXCH... FE180 / E90 VDE Reg. Nr. 9803	1.1	$n \times 1,5/1,5 - 16/16$	E30
	2.3	$n \times 1,5/1,5 - 16/16$	E30
	3.1	$n \times \geq 1,5/1,5$	E30
	1.1	$n \times 1,5/1,5 - 16/16$	E60
	2.3	$n \times 1,5/1,5 - 16/16$	E60
	3.1	$n \times \geq 1,5/1,5$	E60
	1.1	$n \times 1,5/1,5 - 16/16$	E90
	2.3	$n \times 1,5/1,5 - 16/16$	E90
	3.1	$n \times \geq 1,5/1,5$	E90
JE-H(St)H... FE180 / E30 S VDE Reg. Nr. 8447	3.1	$n \times 2 \times 0,8$	E30
JE-HH... FE180 / E30 S VDE Reg. Nr. 8619	2.3	$n \times 2 \times 0,8$	E30
JE-H(St)H... FE180 / E30-E90 VDE Reg. Nr. 9593	1.2; 2.3; 3.4	$n \times 2 \times 0,8$	E30
	1.2; 2.3; 3.4	$n \times 2 \times 0,8$	E60
JE-H(St)HRH .. FE180 / E30-E90 VDE Reg. Nr. 8238	1.2; 2.3; 3.4	$n \times 2 \times 0,8$	E30
	1.2; 2.3; 3.4	$n \times 2 \times 0,8$	E60

2) Supporting distance

3) Load

Table 1 (continued): Classification of cable types on cable support structures under ceilings or on walls according to DIN 4102-12

Installation type			
1. Bundle installation with multi-cable support SHA-M-15		3. Bundle installation with multi-cable support SHA-M-70	
1.1 Bundle installation with collective support on ceilings or horizontally on the wall (a ≤ 500 mm) ²⁾ , (g ≤ 1.1 kg/m) ³⁾		3.1 Bundle installation with collective support on ceilings or horizontally on the wall (a ≤ 800 mm) ²⁾ , (g ≤ 6.0 kg/m) ³⁾	
1.2 Bundle installation with collective support on ceilings or horizontally on the wall (a ≤ 800 mm) ²⁾ , (g ≤ 1.5 kg/m) ³⁾		3.2 Bundle installation with collective support on ceilings or horizontally on the wall (a ≤ 800 mm) ²⁾ , (g ≤ 7.0 kg/m) ³⁾	
1.3 Bundle installation with collective support on ceilings or horizontally on the wall (a ≤ 500 mm) ²⁾ , (g ≤ 1.5 kg/m) ³⁾		3.3 Bundle installation with collective support on ceilings or horizontally on the wall (a ≤ 600 mm) ²⁾ , (g ≤ 6.0 kg/m) ³⁾	
		3.4 Bundle installation with collective support on ceilings or horizontally on the wall (a ≤ 800 mm) ²⁾ , (g ≤ 3.0 kg/m) ³⁾	
2. Bundle installation with multi-cable support SHA-M-30			
2.1 Bundle installation with collective support on ceilings or horizontally on the wall (a ≤ 500 mm) ²⁾ , (g ≤ 2.5 kg/m) ³⁾			
2.2 Bundle installation with collective support on ceilings or horizontally on the wall (a ≤ 800 mm) ²⁾ , (g ≤ 3.5 kg/m) ³⁾			
2.3 Bundle installation with collective support on ceilings or horizontally on the wall (a ≤ 600 mm) ²⁾ , (g ≤ 3.0 kg/m) ³⁾			
Type of cable: Designation according to the manufacturer's specification PRYSMIAN SIENOPYR-PLUS	Installation type no.:	Dimension: No. of cores x cross-section [n x mm ²] or No. of cores x 2 x diameter [n x 2 mm]	Classification: According to DIN 4102-12 1998-11
(N)HXH... FE180 E30 VDE Reg. Nr. 7551	2.1	n x 1,5	E30
JE-H(St)H... FE180 E30 VDE Reg. Nr. 7787	1.1; 2.1; 3.1	n x 2 x 0,8	E30
JE-H(St)HRH... Bd FE180 E30 VDE Reg. Nr. 7787	3.1	n x 2 x 0,8	E30

2) Supporting distance

3) Load

2.3 Labeling

2.3.1 Cable types

The cable must be marked in accordance with VDE regulations.

2.3.2 Cable system with integrated functional integrity

Each cable system must be permanently marked with a label or sticker, which must be attached to the cable support structure and must contain the following information:

- | Name of the contractor who manufactured the cable system with integrated functional integrity
- | Cable system with integrated functional integrity "E 90" or "E60" or "E30" in accordance with DIN 4102-12:1998-11,
- | General building authority test certificate no. P-MPA-E-18-002 dated 07.05.2024, MPA Erwitte,
- | Holder of the general building authority test certificate
fischerwerke GmbH & Co.KG, Klaus-Fischer-Straße 1, 72178 Waldachtal and
- | Year of manufacture

3 Certificate of conformity

The type of construction listed in this general building authority test certificate requires proof of conformity (certificate of conformity) in accordance with the requirements of VVTB C 4 (No. C.4.9). This requires a declaration of conformity from the manufacturer (contractor) must be made.

The contractor who manufactures the cable system must provide the client with a written declaration of conformity to the client, in which he certifies that the cable system he has the provisions of this general building inspectorate test certificate.

4 Legal foundation

This general building authority test certificate is issued on the basis of §16a III of the State Building Regulations for the State of Baden-Württemberg in the version dated 05.03.2010, last amended on 07.02.2023, in conjunction with VwV TB BW C4, in each case as amended in the valid version. The building regulations of the other federal states contain corresponding legal bases.

5 Information on legal remedies

An appeal against this decision may be lodged within one month of its notification with the Administrative Court of Karlsruhe, P.O. Box 11 14 51, 76064 Karlsruhe, in writing or by post recorded by the clerk of the registry of this court.

The action must identify the plaintiff, the defendant and the subject matter of the claim and should contain a specific request.

The facts and evidence serving as grounds should be stated and the original, or a copy of the contested decision, should be attached. Copies for the other parties involved should be attached.

6 General information

The general building authority test certificate verifies the usability of the construction product of the applicability of the type of construction within the meaning of the state building regulations.

The general building authority test certificate does not replace the approvals, consents and certificates permits, approvals and certificates required by law for the implementation of construction projects.

The general building authority test certificate is issued without prejudice to the rights of third parties, in particular private property rights.

Manufacturers and distributors of the construction product/type of construction shall provide the user of the construction product/type of construction with copies of the general building authority test certificate and point out that the general building authority test certificate must be available at the place of use, notwithstanding any further regulations in the "Special Provisions". On request, the authorities involved must be provided with copies of the general building authority test certificate to the authorities involved.

The general building authority test certificate may only be reproduced in full. Any publication of extracts requires the approval of the test center. Texts and drawings of advertising material must not contradict the general building inspection test certificate. Translations of the general building inspectorate test certificate must contain the note "Translation of the original German version not tested by the Materialprüfungsamt NRW".

The general building authority test certificate is issued on a revocable basis. The provisions of the general building authority test certificate can be subsequently supplemented and amended, particularly if in particular if technical findings make this necessary.

The test reports on which this general building authority test certificate is based have been named by the client.

Erwitte, den 07.05.2024

on behalf of

Diekmann

Head of the test laboratory

Markwart

person responsible

Pattern for

Declaration of compliance

- Name and address of the company that created the cable system with integrated functional integrity
- Construction site or building:
- Date of manufacture:
- Required functional integrity class of the cable system (n) with circuit integrity maintenance: "E ..."

It is hereby confirmed that the cable system (n) with circuit integrity maintenance of the circuit integrity maintenance class "E..." has been manufactured and installed professionally with regard to all details and in compliance with all provisions of the supplementary decision to the general building authority test certificate no. PMA-18-002 of the MPA NRW of 07.05.2024

For construction products or individual parts (e.g. cable types) not manufactured by the signatory himself, this is also hereby confirmed on the basis of:

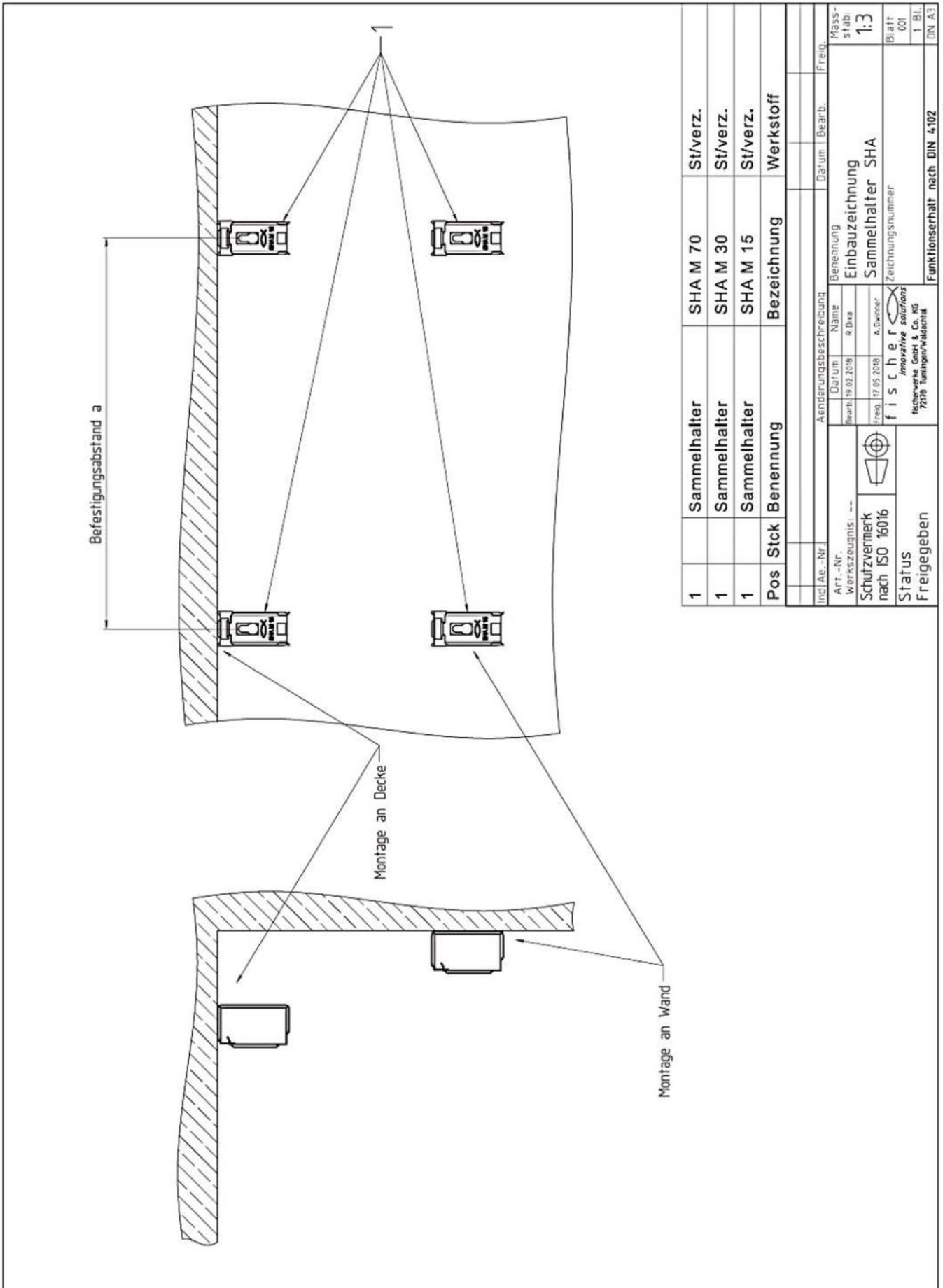
- the existing marking of the parts in accordance with the provisions of the general building authority test certificate *)
- own control *)
- corresponding written confirmations of the manufacturers of the construction products or parts which the signatory has taken on his files *)

Location, date

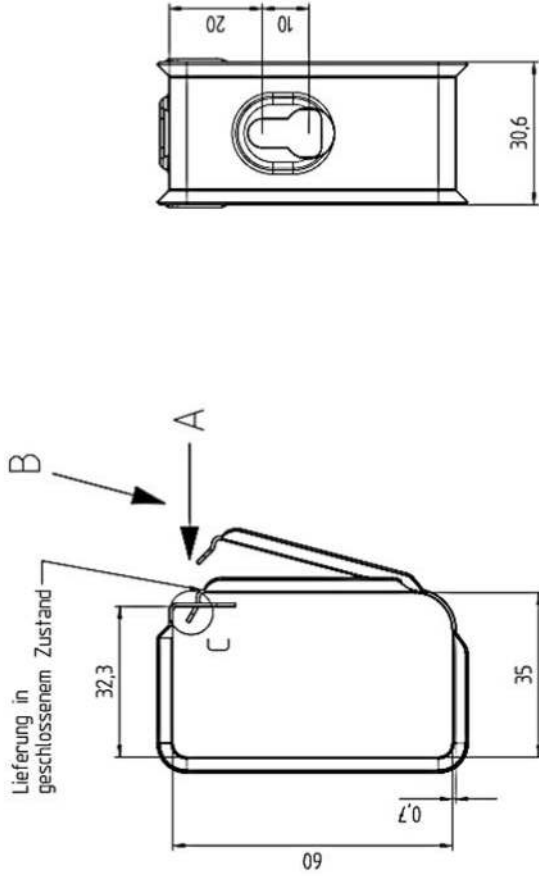
Stamp and signature

(This certificate has to be handed over to the awarding authority for passing on to the responsible building supervisory authority)

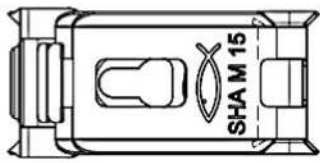
*) Delete as applicable



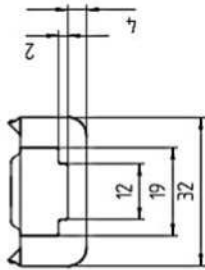
1	Sammelhalter	SHA M 70	St/verz.																																											
1	Sammelhalter	SHA M 30	St/verz.																																											
1	Sammelhalter	SHA M 15	St/verz.																																											
Pos	Stück	Benennung	Bezeichnung	Werkstoff																																										
<table border="1"> <tr> <td>Incl. Ar.-Nr.</td> <td colspan="2">Änderungsbeschreibung</td> <td>Datum</td> <td>Bearb.</td> <td>Freig.</td> </tr> <tr> <td>Art.-Nr.</td> <td>Name</td> <td colspan="2">Benennung</td> <td colspan="2">Massstab</td> </tr> <tr> <td>Werkzeugnis: --</td> <td>19.02.2019</td> <td>R. Dura</td> <td colspan="2">Einbauzeichnung</td> <td>1:3</td> </tr> <tr> <td>Schutzvermerk nach ISO 16016</td> <td>17.05.2019</td> <td>A. D. Werner</td> <td colspan="2">Sammelhalter SHA</td> <td>Blatt 001</td> </tr> <tr> <td>Status Freigegeben</td> <td colspan="2">fischer innovative solutions</td> <td colspan="2">Zeichnungsnummer</td> <td>1 Bl.</td> </tr> <tr> <td></td> <td colspan="2">fischerwerkzeuge GmbH & Co. KG</td> <td colspan="2">Funktionserhalt nach DIN 4102</td> <td>DIN A3</td> </tr> <tr> <td></td> <td colspan="2">72176 Tümmingen/Waldschütz</td> <td colspan="3"></td> </tr> </table>					Incl. Ar.-Nr.	Änderungsbeschreibung		Datum	Bearb.	Freig.	Art.-Nr.	Name	Benennung		Massstab		Werkzeugnis: --	19.02.2019	R. Dura	Einbauzeichnung		1:3	Schutzvermerk nach ISO 16016	17.05.2019	A. D. Werner	Sammelhalter SHA		Blatt 001	Status Freigegeben	fischer innovative solutions		Zeichnungsnummer		1 Bl.		fischerwerkzeuge GmbH & Co. KG		Funktionserhalt nach DIN 4102		DIN A3		72176 Tümmingen/Waldschütz				
Incl. Ar.-Nr.	Änderungsbeschreibung		Datum	Bearb.	Freig.																																									
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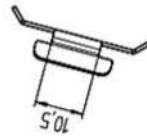
Lieferung in geschlossenem Zustand



Ansicht A

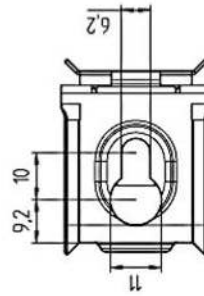
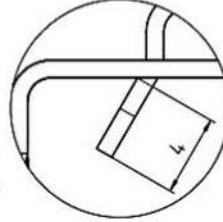


Ansicht B

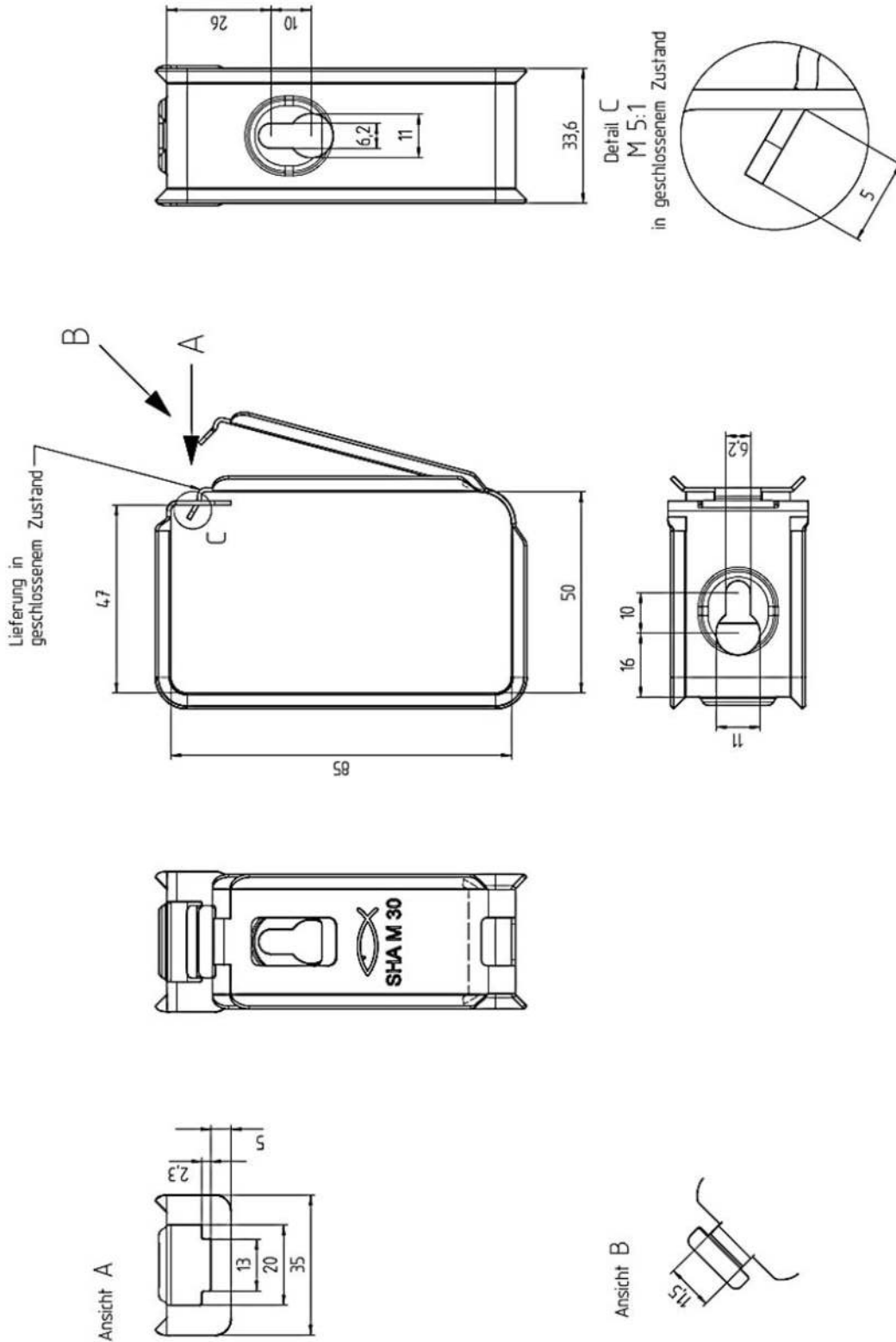


Detail C
M 5:1

in geschlossenem Zustand



Aenderungsbeschreibung		Datum	Bearb.	Freig.								
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Benennung	Sammelhalter											
Zeichnungsnummer	SHA M 15											
Status Freigegeben		<table border="1"> <tr> <td>Blatt</td> <td>001</td> </tr> <tr> <td>1. Bl.</td> <td>1</td> </tr> <tr> <td>DN</td> <td>A3</td> </tr> </table>			Blatt	001	1. Bl.	1	DN	A3		
Blatt	001											
1. Bl.	1											
DN	A3											
<table border="1"> <tr> <td>Name</td> <td>R.Diva</td> </tr> <tr> <td>A. Delineat</td> <td></td> </tr> </table>		Name	R.Diva	A. Delineat		<table border="1"> <tr> <td>Benennung</td> <td>Sammelhalter</td> </tr> <tr> <td>Zeichnungsnummer</td> <td>SHA M 15</td> </tr> </table>			Benennung	Sammelhalter	Zeichnungsnummer	SHA M 15
Name	R.Diva											
A. Delineat												
Benennung	Sammelhalter											
Zeichnungsnummer	SHA M 15											
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Name	innovative solutions											
fisherweine GmbH & Co. KG												
72118 Tübingen/Wachsthal												

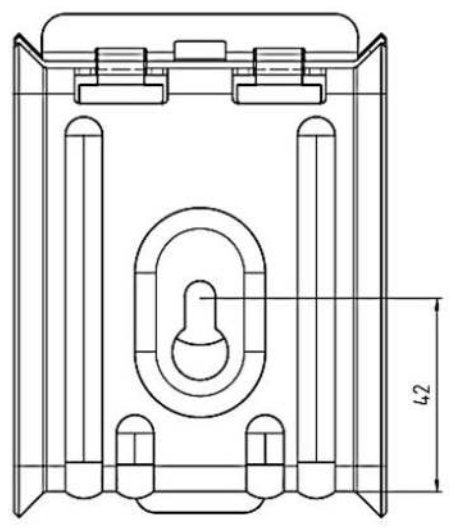
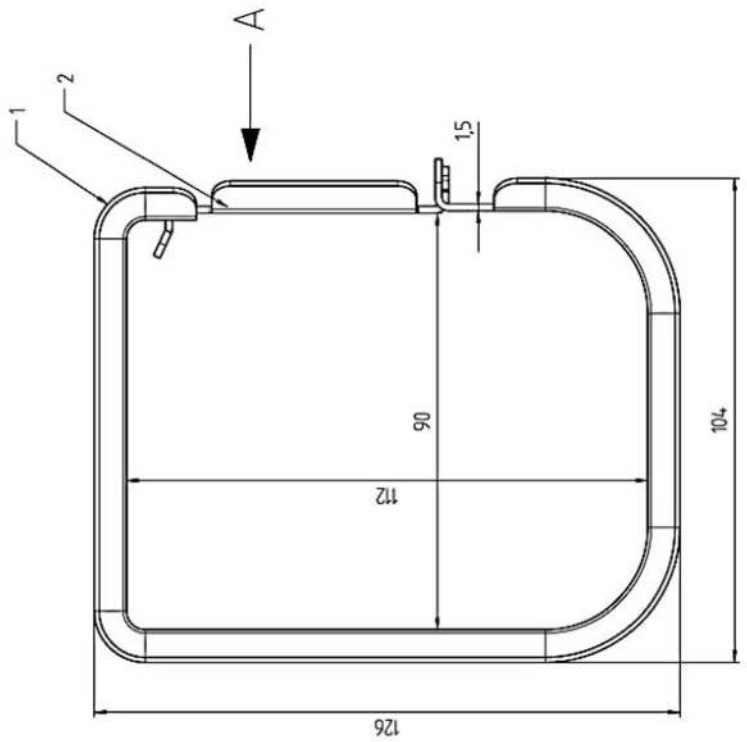
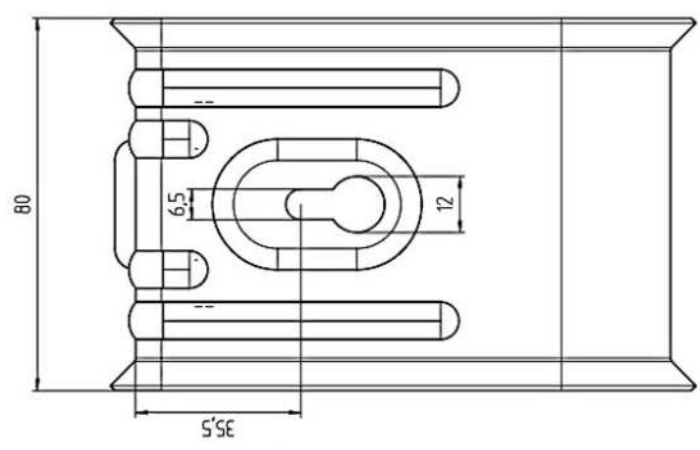
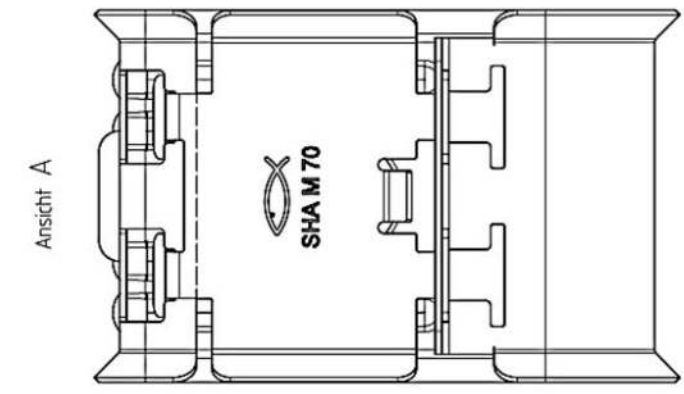


Detail C
M 5:1
in geschlossenem Zustand

Ansicht B

Ansicht A

Indl. Ae.-Nr.		Aenderungsbeschreibung		Datum	Bearb.	Freig.
Art.-Nr. 544934		Name				
Werkzeugnis: --		R.Dra				
Schutzvermerk nach ISO 16016		Sammelhalter SHA M 30				Messstab: 1:1
Status Freigegeben		Zeichnungsnummer				Blatt 001
		fischer innovative solutions				1 Bl.
		fischer GmbH & Co. KG				DIN A3
		72176 Tümmingen/Württemberg				



Pos	Stk	Benennung
2	1	Klappe
1	1	Buegel

Aenderungsbeschreibung		Datum	Bearb.	Freig.
Ind./Ae.-Nr.	Art.-Nr.	54.4935		
	Werkzeugnis:	--		
Schutzvermerk	nach ISO 16016			
Status	Freigegeben			
Benennung		Sammelhalter		
SHA M 70		Zeichnungsnummer		
Fischer		innovative solutions		
fischer GmbH & Co. KG		72176 Tübingen/Waibling		
Massstab:	1:1			
Blatt	001			
1 Bl.				
DN	A3			