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## **MMI-SERIES**

**MAN MACHINE INTERFACE  
MECHANICAL, ERGONOMIC**

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# SPECIALIST FIXTURE SOLUTIONS

ATX is Europe's market leader in the manufacture of test fixtures for electronic test procedures.

Why you too should choose an ATX fixture - it's simple:

## TECHNICAL KNOW-HOW

Our sales team is technically well versed - our consultants are selected from the design team or other technical departments.

## PROJECT KNOW-HOW

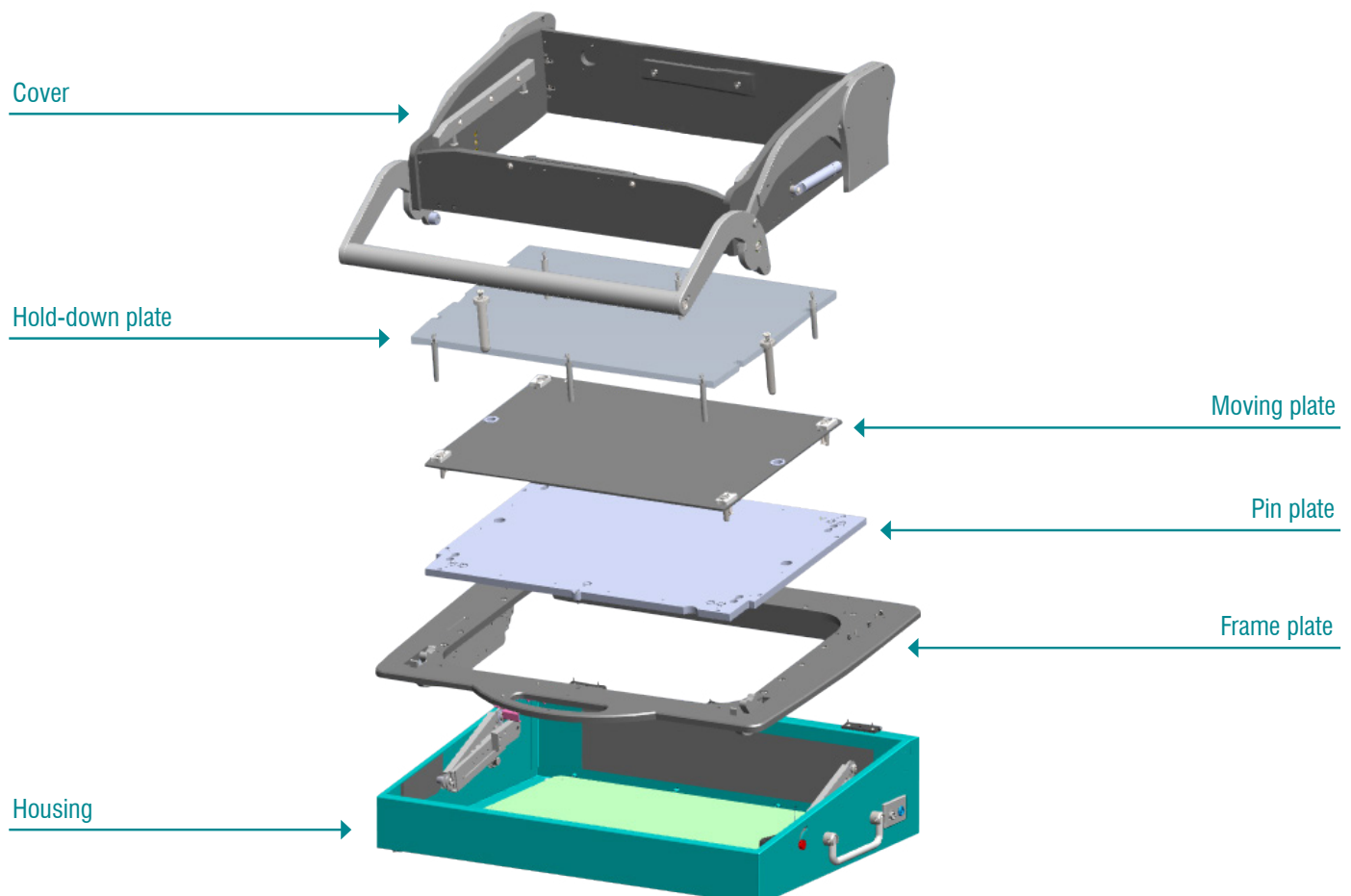
We work together with you towards a common goal: to find and implement the optimal solution for your individual testing requirements.

## KNOWLEDGE BASE

Our employees bring well over 1,000 man-years of fixture building experience to the team.

# SINCE 1997

## FIXTURE ASSEMBLY



# INNOVATIVE LEVER MECHANISM

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## HIGHLIGHTS

- Maximum ease of use
- Ergonomic
- Robust & durable

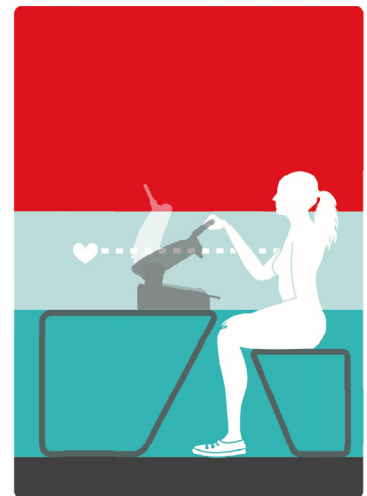
## A NEW CONCEPT IN A NUTSHELL

The MMI is optimally adjust to the operator

The MMI is the reliable ergonomic, mechanical fixture system developed by ATX. With our new design, we adapt perfectly to the interaction between man and machine. This property was also the inspiration for the name:

### Man Machine Interface

Its new lever mechanism, which has been filed as a utility patent, is specially adapted to the movement of the human hand and enables lightweight, ergonomic work for the operator. The all-new lever drive brings the control lever into an easily accessible position as soon as the fixture is fully open. This ensures a natural position while working, both standing and sitting. A sophisticated guide mechanism ensures low operating forces even at high probe forces and allows fatigue-free operation, especially with high volumes of units.



# FIXTURE CONFIGURATOR

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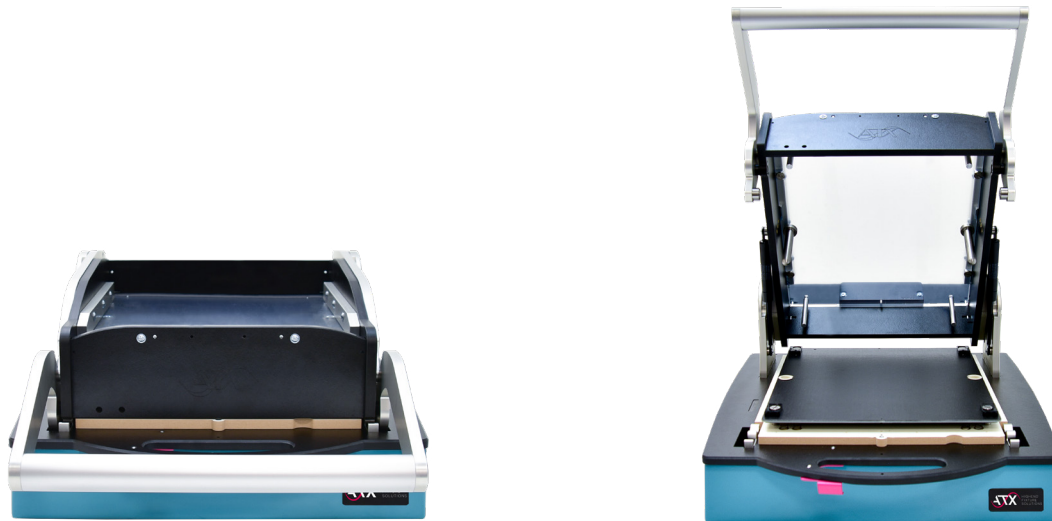
## CONFIGURE YOUR INDIVIDUAL TEST FIXTURE

### MMI-Series

Our fixture configurator was developed especially for you. Together with our sales specialists and designers, it is constantly adapted and further developed. Configure your individual test fixture now, which is specially adapted to your needs, on our homepage and receive your exclusive offer.

➔ [Go to the configurator](https://www.atx-hardware.de/en/product-category/mechanical_fixtures/mmi-mechanical-ergonomic/) (https://www.atx-hardware.de/en/product-category/mechanical\_fixtures/mmi-mechanical-ergonomic/)

# MECHANICAL STANDALONE FIXTURE



## MMI - MAN MACHINE INTERFACE

### Standalone Fixture

With the MMI from ATX, you have the ideal fixture solution for function test, final test and ICT applications for up to 1600 N (approximately 800 needles á 2 N). Our new system combines optimal ergonomics with high performance, durability and precision, ensuring your investment over the long term.

The new mechanism allows free access to the moving plate, because on the frame plate there is no front structure. We facilitate the operator in loading the test object. Through the precentered hold-down plate a more accurate hit pattern of the top-sided removal is generally conveyed. This allows more precise hold-downs in closely mounted assemblies. Another benefit of the MMI - it is prepared for a safety switch with guard locking, and an electrical interlock.

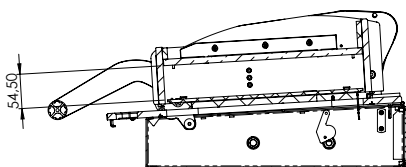
## STARTER PACKS

### Expansion I Needles

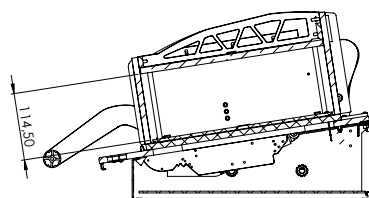
Take advantage of our exclusive starter packs now and get selected accessories for your new standalone fixture. Available is the **Starter Pack Expansion** (includes push fingers, PCB plates and pilot bolts) and the **Starter Pack Needles** (includes 100 probes, 100 daggers, 100 crowns and 100 sleeves).

## STANDALONE FIXTURE LEGEND

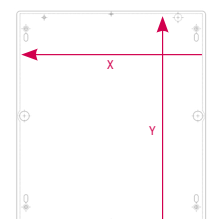
### Mechanical standalone fixture



MMI-Standard height






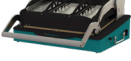
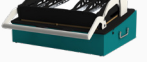
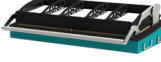
MMI-Special height



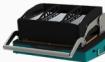
Moving plate dimension X x Y

# MECHANICAL STAND ALONE FIXTURE

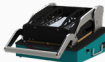
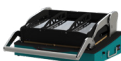
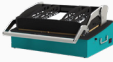
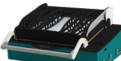
## STANDARD - 1200 N (MAX. 600 PROBES Á 2 N)

| Designation    | Fixture   | Moving plate (X x Y) | Standard housing | Order number |
|----------------|---|----------------------|------------------|--------------|
| MMI-L I Light* |  | 255 x 255            | E01-00001        | 100660       |
| MMI-A          |  | 185 x 310            | E01-00145        | 100683       |
| MMI-B*         |  | 275 x 310            | E01-00115        | 100639       |
| MMI-C*         |  | 445 x 310            | E01-00117        | 100640       |
| MMI-D*         |  | 530 x 330            | E01-00125        | 100668       |
| MMI-E          |  | 890 x 330            | E01-00032        | 100232       |

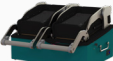
## SPECIAL HEIGHT - 1200 N (MAX. 600 PROBES Á 2 N)

| Designation | Fixture   | Moving plate (X x Y) | Standard housing | Order number |
|-------------|---|----------------------|------------------|--------------|
| MMI-CH*     |  | 445 x 310            | E01-00117        | 100691       |

## AMPLIFIED - 1600 N (MAX. 800 PROBES Á 2 N)

| Designation | Fixture   | Moving plate (X x Y) | Standard housing | Order number |
|-------------|---|----------------------|------------------|--------------|
| MMI-BV      |  | 275 x 310            | E01-00115        | 100642       |
| MMI-CV*     |  | 445 x 310            | E01-00117        | 100641       |
| MMI-DV*     |  | 530 x 330            | E01-00125        | 100669       |
| MMI-GV      |  | 545 x 400            | E01-00132        | 100687       |

## TANDEM FIXTURE WITH 2 MECHANISMS IN ONE HOUSING

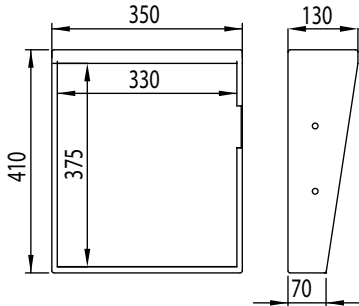
| Designation | Fixture   | Moving plate (X x Y) | Standard housing | Order number |
|-------------|---|----------------------|------------------|--------------|
| MMI-A-DO*   |  | 185 x 310            | E01-00117        | 100659       |

All fixtures marked with \* are also available with a high housing.

# AVAILABLE HOUSING TYPES

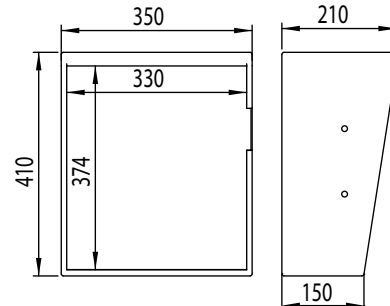
## FOR MMI TO FIT FLEXIBLY INTO YOUR TEST ENVIRONMENT

Housing with back panel (connectors can be mounted as required)



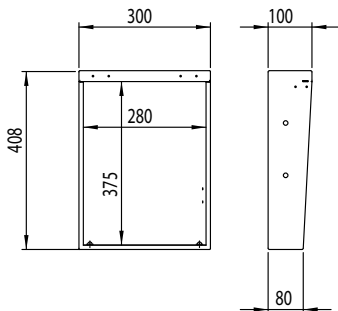
**E01-00001**

Standard housing for MMI-L Light



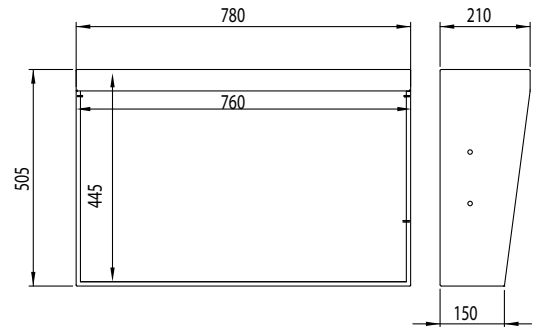
**E01-00012**

High housing for MMI-L Light



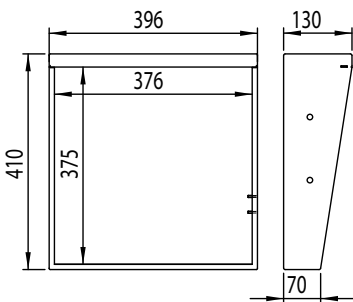
**E01-00145**

Standard housing for MMI-A



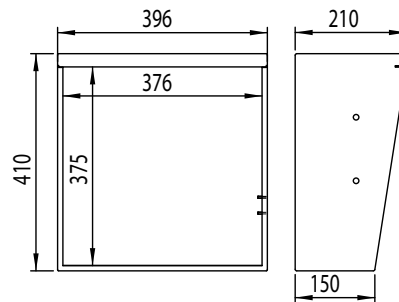
**E01-00132**

Standard housing for MMI-GV



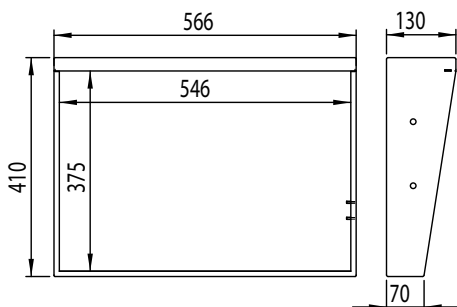
**E01-00115**

Standard housing for MMI-B, MMI-BV



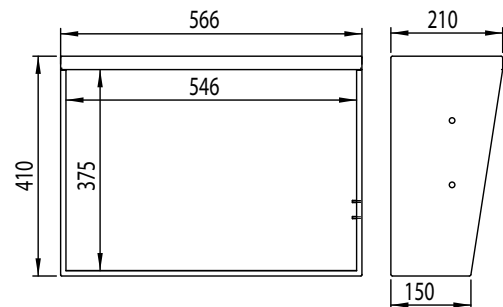
**E01-00116**

High housing for MMI-B, MMI-BV



**E01-00117**

Standard housing for MMI-C, MMI-A-DO, MMI-CH, MMI-CV



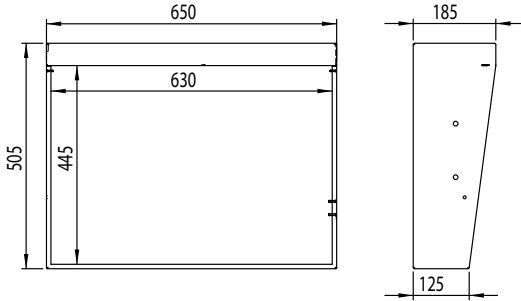
**E01-00118**

High housing for MMI-C, MMI-A-DO, MMI-CH, MMI-CV

# AVAILABLE HOUSING TYPES

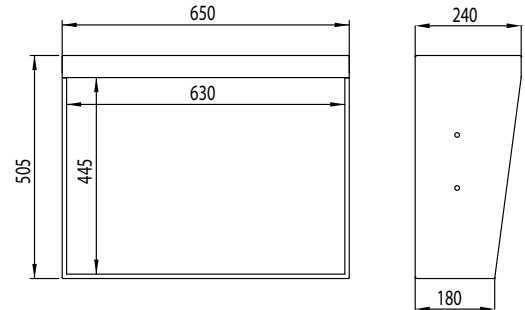
## FOR MMI TO FIT FLEXIBLY INTO YOUR TEST ENVIRONMENT

Housing with back panel (connectors can be mounted as required)



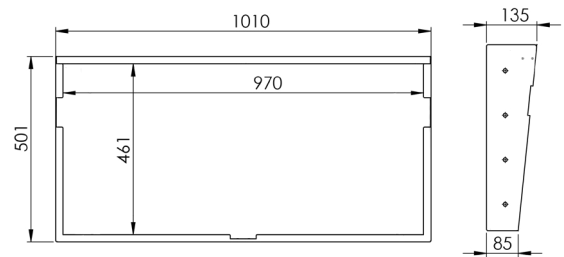
### E01-00125

Standard housing for MMI-D, MMI-DV



### E01-00133

High housing for MMI-D, MMI-DV



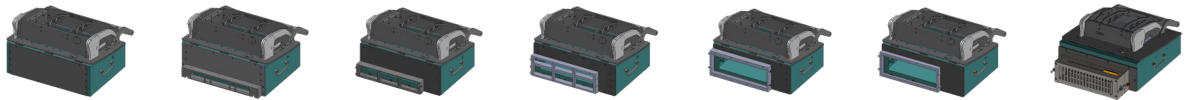
### E01-00032

Standard housing for MMI-E

## INTERFACE

## POSSIBILITY OF MOUNTING AN INTERFACE ON THE REAR WALL

The GFK-Aperture is installed in our test fixtures as standard. All other interface mounting options can be ordered with or without the respective interface.

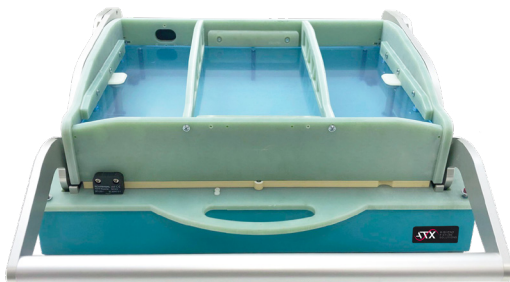


| Interface Housing | GFK-Aperture | Pylon | VPC G12 | VPC G12X | VPC G20 | VPC 9025 | Reinhardt |
|-------------------|--------------|-------|---------|----------|---------|----------|-----------|
| E01-00001         | x            |       |         |          |         |          |           |
| E01-00012         | x            |       |         |          |         |          |           |
| E01-00115         | x            |       |         |          |         |          |           |
| E01-00116         | x            |       |         |          |         |          |           |
| E01-00117         | x            | x     | x       |          |         |          |           |
| E01-00118         | x            | x     | x       | x        | x       | x        | x         |
| E01-00125         | x            | x     | x       |          |         |          |           |
| E01-00132         | x            | x     | x       |          |         |          |           |
| E01-00133         | x            | x     | x       |          |         | x        |           |
| E01-00145         | x            |       |         |          |         |          |           |

The E01-00032 housing has a vacuum interface for „Teradyne Spectrum 8855“ in the bottom of the housing. The assignments shown above are standard designs. However, due to our high variety of housings, special designs can be made after consultation.



# MECHANICAL STANDALONE FIXTURE - ISOLATED



## ISOLATED MMI-SERIES

### Standalone fixture

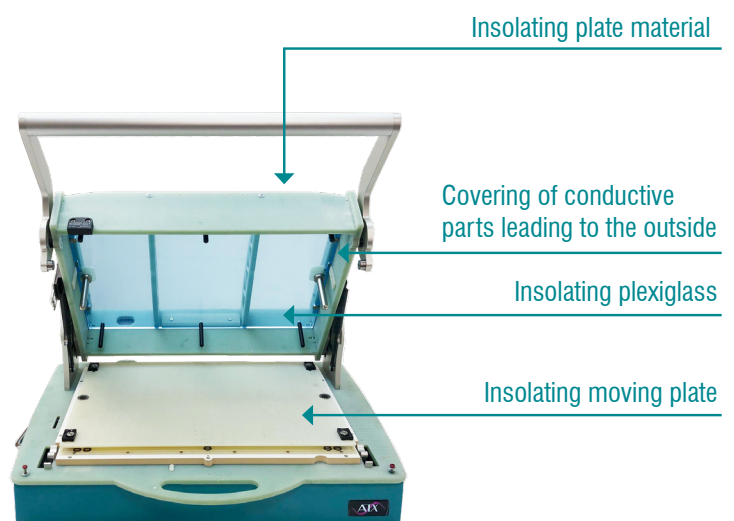
For fixtures with higher voltages, the isolated MMI-series is a good basis. The isolated MMI-series is made of NON-dissipative plate material and can therefore be used in the low-voltage range (up to 1000 V AC/1500 C DC).

The grounding package included is an important component. This is because the housing earthing, the earthing connection and the earthing test ensure that the safety standards are met. The safety locking and the safety switch, which are also included, ensure access protection. The optional safety box (safety switch relay) has the order number: **120516**

## SIMPLY ISOLATED

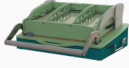

### Your advantages

- Ergonomic operation
- Adaption possible on both sides
- Incl. grounding package, safety locking and safety switch
- For max. 600 needles á 2 N (1200 N)
- Linear stroke 23 mm
- Moving plate
- Panel in the rear wall (made of aluminium) for plug mounting
- Plastic hold-down device
- 1x fixture down detection



# MECHANICAL STANDALONE FIXTURE - ISOLATED

## MECHANICAL STANDALONE FIXTURE - ISOLATED

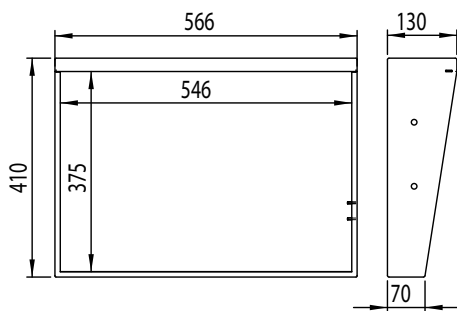
| Designation        | Fixture   | Moving plate (X x Y) | Standard housing | Order number |
|--------------------|---|----------------------|------------------|--------------|
| MMI-CI I Isolated* |  | 445 x 310            | E01-00117        | 100694       |
| MMI-DI I Isolated* |  | 530 x 330            | E01-00125        | 100290       |

All fixtures marked with \* are also available with a high housing.

## AVAILABLE HOUSING TYPES

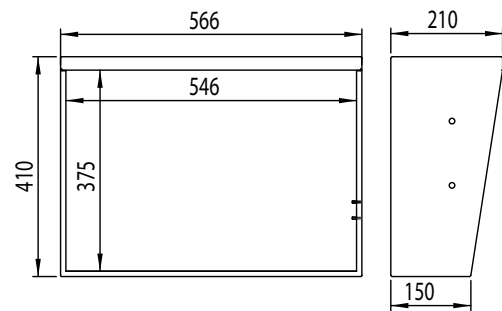
### FOR MMI TO FIT FLEXIBLY INTO YOUR TEST ENVIRONMENT

Housing with back panel (connectors can be mounted as required)



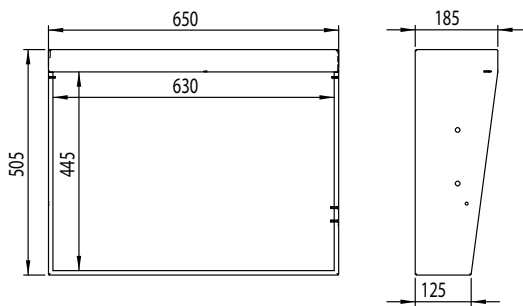
**E01-00117**

Standard housing for MMI-CI



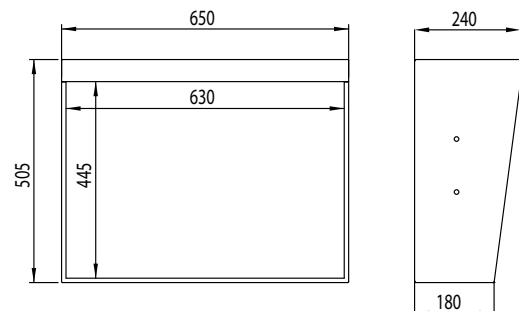
**E01-00118**

High housing for MMI-CI



**E01-00125**

Standard housing for MMI-DI



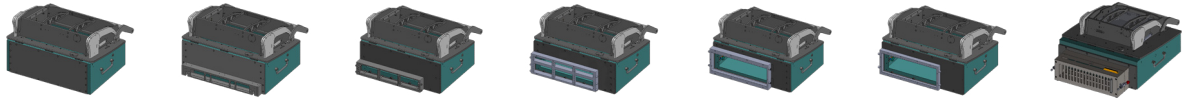
**E01-00133**

High housing for MMI-DI

# INTERFACE

## POSSIBILITY OF MOUNTING AN INTERFACE ON THE REAR WALL

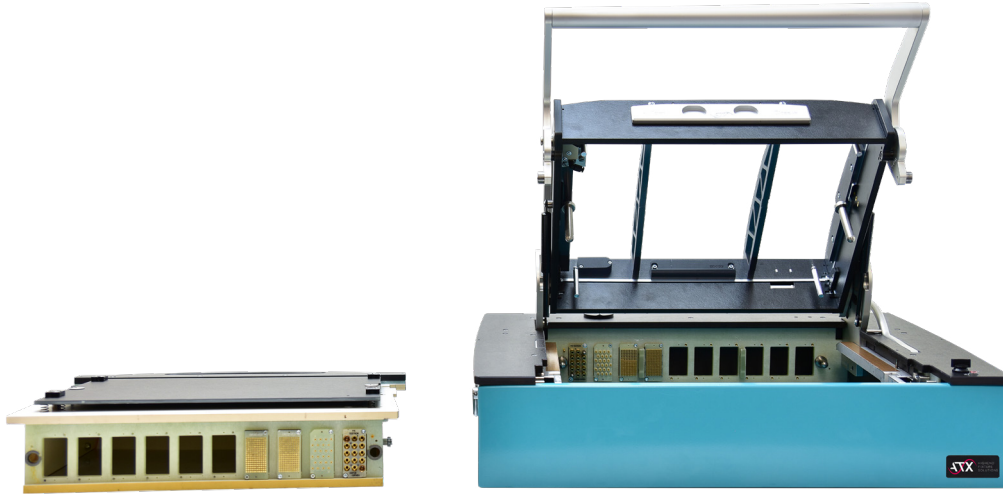
The GFK-Aperture is installed in our test fixtures as standard. All other interface mounting options can be ordered with or without the respective interface.



| Interface Housing | GFK-Aperture | Pylon | VPC G12 | VPC G12X | VPC G20 | VPC 9025 | Reinhardt |
|-------------------|--------------|-------|---------|----------|---------|----------|-----------|
| E01-00117         | x            | x     | x       |          |         |          |           |
| E01-00118         | x            | x     | x       | x        | x       | x        | x         |
| E01-00125         | x            | x     | x       |          |         |          |           |
| E01-00133         | x            | x     | x       |          |         | x        |           |

The E01-00032 housing has a vacuum interface for „Teradyne Spectrum 8855“ in the bottom of the housing.  
 The assignments shown above are standard designs. However, due to our high variety of housings, special designs can be made after consultation.

# MECHANICAL EXCHANGEABLE CASSETTE SYSTEM



## MMIW2 - MAN MACHINE INTERFACE EXCHANGEABLE CASSETTE SYSTEM

### Compact, ergonomic MMIW2 exchangeable cassette system with Top Loader function

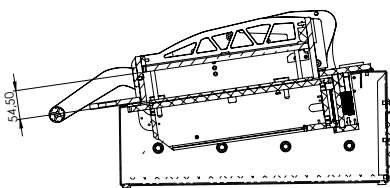
The new MMIW2 mechanical exchangeable cassette system consisting of the MMIWG2 basic unit and the MMIWK2 cassette provides you with even more convenience and efficiency. In your testing centre the low-cost cassette solution based on the MMI mechanism is ideal for frequently changing products. In switching between products you save time because no tools are required, while also benefiting from minimal maintenance requirements and short retooling times thanks to the additional hard-wearing interface.

The MMIW2 offers you even more ergonomics thanks to our new Top Loader function. After unlocking the cassette, it can be removed upwards; it is no longer necessary to open the housing to change the cassette. The simple and time-saving cassette change enables you to further reduce setup times and guarantees even faster further work on the test specimen.

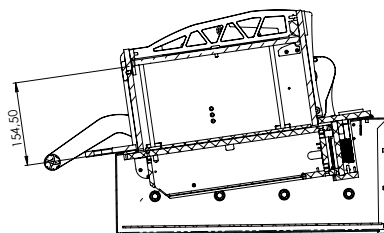
For the change system we use a pylon block interface that individually transfers the signals with 170-pin signal blocks, power and coaxial blocks as needed, as well as blocks for fibre optic cables and compressed air.

## EXCHANGEABLE SYSTEM LEGEND

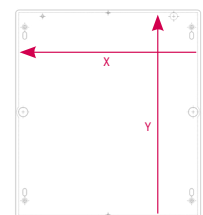
### Mechanical exchangeable cassette system



MMIW2-Standard height





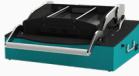
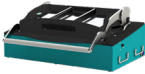
MMIW2-Special height







Moving plate dimension X x Y

# MECHANICAL EXCHANGEABLE CASSETTE SYSTEM

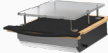
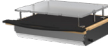

## BASIC UNIT WITH STANDARD HEIGHT

| Designation | Fixture   | Moving plate (X x Y) | Standard housing | Order number |
|-------------|---|----------------------|------------------|--------------|
| MMIWGT-A    |  | 185 x 310            | E01-00145        | 100247       |
| MMIWG2-A*   |  | 294 x 310            | E01-00124        | 100276       |
| MMIWG2-B*   |  | 424 x 310            | E01-00125        | 100277       |
| MMIWG2-C    |  | 554 x 310            | E01-00132        | 100278       |

## EXCHANGEABLE CASSETTE - STANDARD 1200 N (MAX. 600 PROBES Á 2 N)

| Designation | Cassette  | Moving plate (X x Y) | Interface block | Order number |
|-------------|---|----------------------|-----------------|--------------|
| MMIWKT-A    |  | 185 x 310            | 4 blocks        | 100248       |
| MMIWK-A     |  | 294 x 310            | 6 blocks        | 100638       |
| MMIWK-B     |  | 424 x 310            | 10 blocks       | 100998       |
| MMIWK-C     |  | 554 x 310            | 12 blocks       | 100661       |


## EXCHANGEABLE CASSETTE - AMPLIFIED 1600 N (MAX. 800 PROBES Á 2 N)

| Designation | Cassette  | Moving plate (X x Y) | Interface block | Order number |
|-------------|---|----------------------|-----------------|--------------|
| MMIWK-AV    |  | 294 x 310            | 6 blocks        | 100643       |
| MMIWK-BV    |  | 424 x 310            | 10 blocks       | 100999       |
| MMIWK-CV    |  | 554 x 310            | 12 blocks       | 100662       |

All fixtures marked with \* are also available with a high housing.

# MECHANICAL EXCHANGEABLE CASSETTE SYSTEM


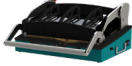
## BASIC UNIT WITH SPECIAL HEIGHT

| Designation | Fixture   | Moving plate (X x Y) | Standard housing | Order number |
|-------------|---|----------------------|------------------|--------------|
| MMIWG-CH    |  | 554 x 310            | E01-00132        | 100692       |



## EXCHANGEABLE CASSETTE - SPECIAL HEIGHT 1200 N (MAX. 600 PROBES Á 2 N)

| Designation | Cassette  | Moving plate (X x Y) | Interface block | Order number |
|-------------|---|----------------------|-----------------|--------------|
| MMIWK-CH    |  | 554 x 310            | 12 blocks       | 100693       |

## BASIC UNIT - SUITABLE FOR MEWK-CASSETTE

| Designation | Fixture   | Moving plate (X x Y) | Standard housing | Order number |
|-------------|---|----------------------|------------------|--------------|
| MMI-MEWG-A* |   | 275 x 240            | E01-00115        | 100646       |
| MMI-MEWG-B* |  | 445 x 240            | E01-00117        | 100647       |

## EXCHANGEABLE CASSETTE

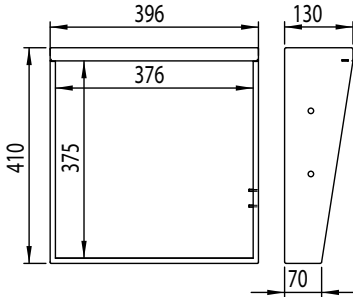
| Designation | Cassette  | Moving plate (X x Y) | Interface block | Order number |
|-------------|---|----------------------|-----------------|--------------|
| MEWK-A      |  | 275 x 240            | -               | 100767       |
| MEWK-B      |  | 445 x 240            | -               | 100768       |

All fixtures marked with \* are also available with a high housing.

# AVAILABLE HOUSING TYPES

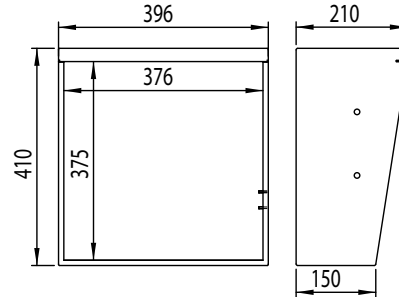
## FOR MMIW2 TO FIT FLEXIBLY INTO YOUR TEST ENVIRONMENT

Housing with back panel (connectors can be mounted as required)



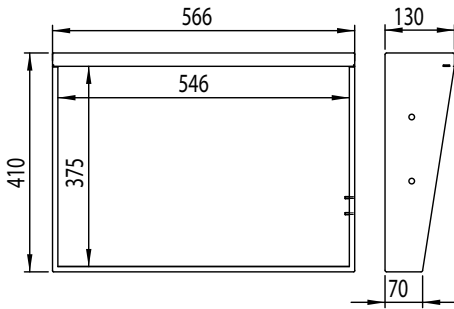
### E01-00115

Standard housing for MMI-MEWG-A



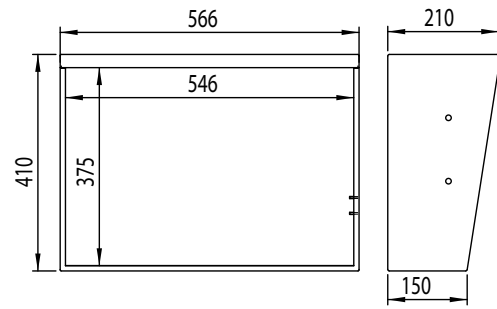
### E01-00116

High housing for MMI-MEWG-A



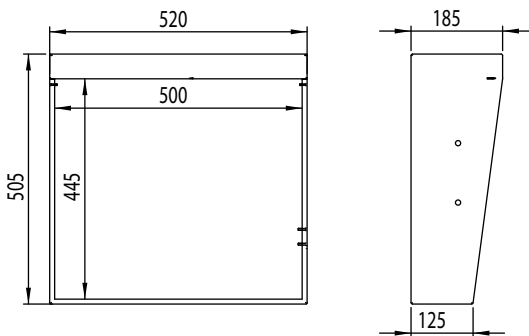
### E01-00117

Standard housing for MMI-MEWG-B



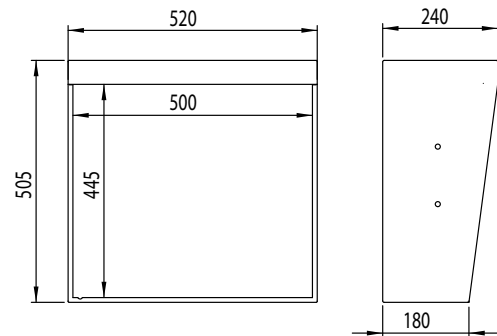
### E01-00118

High housing for MMI-MEWG-B



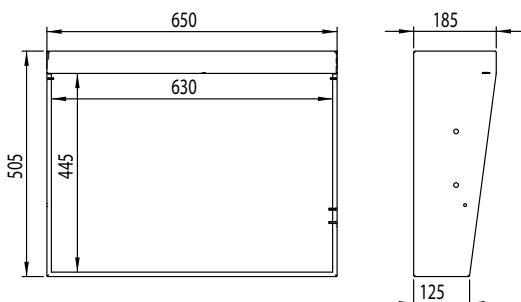
### E01-00124

Standard housing for MMIWG2-A, MMIWG-A-VPC



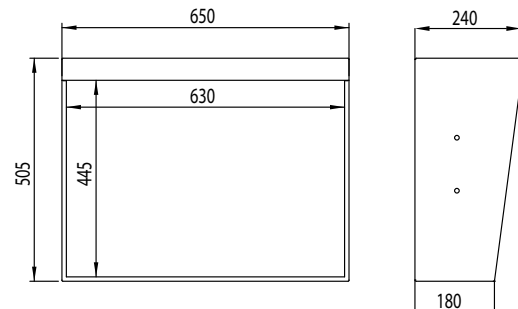
### E01-00123

High housing for MMIWG2-A, MMIWG-A-VPC



### E01-00125

Standard housing for MMIWG2-B



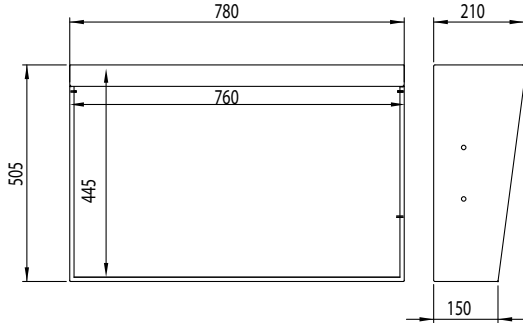
### E01-00133

High housing for MMIWG2-B

# AVAILABLE HOUSING TYPES

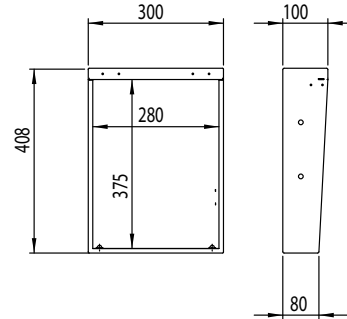
## FOR MMIW2 TO FIT FLEXIBLY INTO YOUR TEST ENVIRONMENT

Housing with back panel (connectors can be mounted as required)



### E01-00132

Standard housing for MMIWG2-C, MMIWG-CH



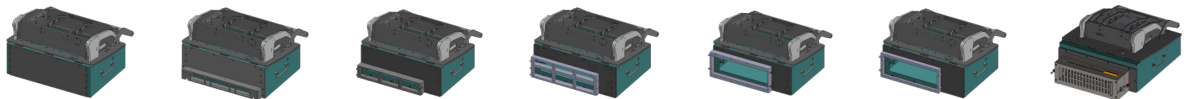
### E01-00145

Standard housing for MMIWGT-A

# INTERFACE

## POSSIBILITY OF MOUNTING AN INTERFACE ON THE REAR WALL

The GFK-Aperture is installed in our test fixtures as standard. All other interface mounting options can be ordered with or without the respective interface.



| Interface Housing | GFK-Aperture | Pylon | VPC G12 | VPC G12X | VPC G20 | VPC 9025 | Reinhardt |
|-------------------|--------------|-------|---------|----------|---------|----------|-----------|
| E01-00115         | x            |       |         |          |         |          |           |
| E01-00116         | x            |       |         |          |         |          |           |
| E01-00117         | x            | x     | x       |          |         |          |           |
| E01-00118         | x            | x     | x       | x        | x       | x        | x         |
| E01-00123         | x            | x     | x       |          |         |          |           |
| E01-00124         | x            | x     | x       |          |         |          |           |
| E01-00125         | x            | x     | x       |          |         |          |           |
| E01-00132         | x            | x     | x       |          |         |          |           |
| E01-00133         | x            | x     | x       |          |         | x        |           |
| E01-00145         | x            |       |         |          |         |          |           |

The assignments shown above are standard designs. However, due to our high variety of housings, special designs can be made after consultation.



# SPARE PARTS FOR THE MMI

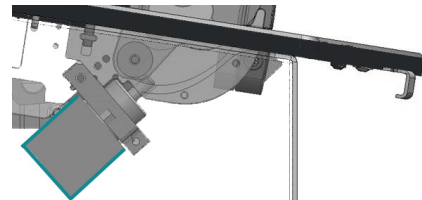
## INTERLOCKS FOR MANUAL TEST STATIONS AND BASIC UNITS

These interlocks are not used as solenoid interlocks for safety-relevant projects.

### Electrical interlocks for MMI-A/B/C/D

- locked -

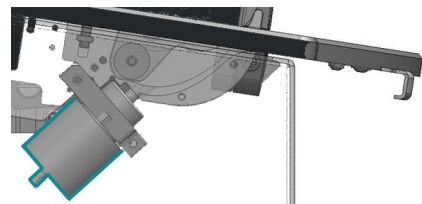
| Order number | Designation  |
|--------------|--|
| 269029       | Electr. interlocks left, 12 V currentless, locked  |
| 269030       | Electr. interlocks right, 12 V currentless, locked |
| 269001       | Electr. interlocks left, 24 V currentless, locked  |
| 269002       | Electr. interlocks right, 24 V currentless, locked |



### Electrical interlocks for MMI-A/B/C/D

- open -

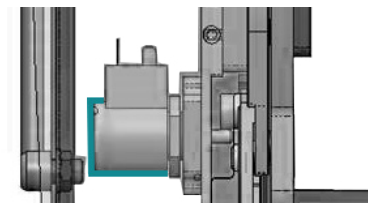
| Order number | Designation                                      |
|--------------|--|
| 269031       | Electr. interlocks left, 12 V currentless, open  |
| 269032       | Electr. interlocks right, 12 V currentless, open |
| 269027       | Electr. interlocks left, 24 V currentless, open  |
| 269028       | Electr. interlocks right, 24 V currentless, open |



### Electrical interlocks for MMIWG2

- locked -

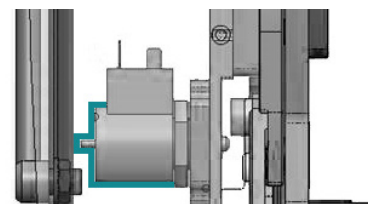
| Order number | Designation  |
|--------------|--|
| 269034       | Electr. interlocks left, 12 V currentless, locked  |
| 269035       | Electr. interlocks right, 12 V currentless, locked |
| 269011       | Electr. interlocks left, 24 V currentless, locked  |
| 269033       | Electr. interlocks right, 24 V currentless, locked |



### Electrical interlocks for MMIWG2

- open -

| Order number | Designation                                      |
|--------------|--|
| 269038       | Electr. interlocks left, 12 V currentless, open  |
| 269039       | Electr. interlocks right, 12 V currentless, open |
| 269036       | Electr. interlocks left, 24 V currentless, open  |
| 269037       | Electr. interlocks right, 24 V currentless, open |



# SPARE PARTS FOR THE MMI

## Pneumatic interlocks

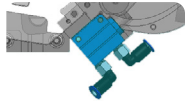
| Order number | Designation                       |
|--------------|-----------------------------------|
| 269022       | Pneumatic interlock for MMI-B/C/L |

| Order number | Designation                          |
|--------------|--------------------------------------|
| 269021       | Pneumatic interlock for MMIWG2-A/B/C |

The pneumatic locking system includes the following accessories, which are supplied fully assembled:

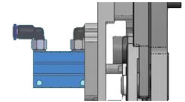
### Pneumatic interlock I MMI-B/C/L

- 2x compact cylinder CDUJB10-6D
- 1x 3/2-way valve SYJ1314M-5LOU-Q
- 2x signal transmitter D-F8P



### Pneumatic interlock I MMIWG2-A/B/C

- 2x compact cylinder CDUJB6-6S
- 1x 3/2-way valve SYJ1314M-5LOU-Q
- 2x signal transmitter D-F8P

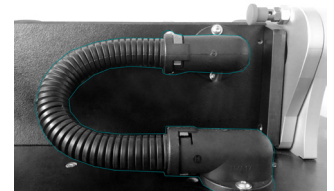


## Transfer Option

| Order number       | Designation   |
|--------------------|---|
| 100861             | Drag chain for cable routing from the hood into the housing       |
| + 498011<br>498012 | Armoured conduit for laying cables from the hood into the housing |



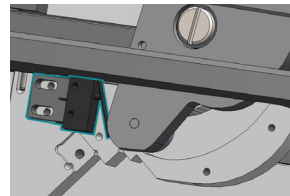
Drag chain



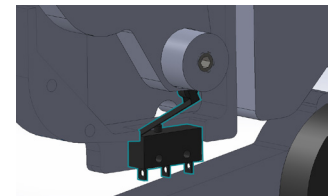
Armoured conduit

## Micro Switch

| Order number | Designation                        |
|--------------|------------------------------------|
| 269006       | Micro switch left/right for MMI    |
| 269016       | Micro switch left/right for MMIWG2 |



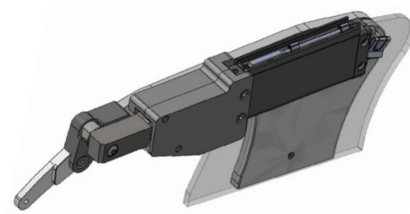
MMI-Variant



MMIWG2-Variant

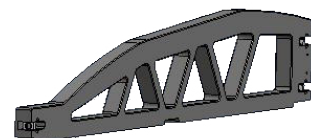
## Auto-Open-Function

| Order number | Designation  |
|--------------|--|
| 100679       | Automatic opening for MMI-A/B (1x pneumatic cylinder)  |
| 100681       | Automatic opening for MMI-C/D (2x pneumatic cylinders) |



## Strut

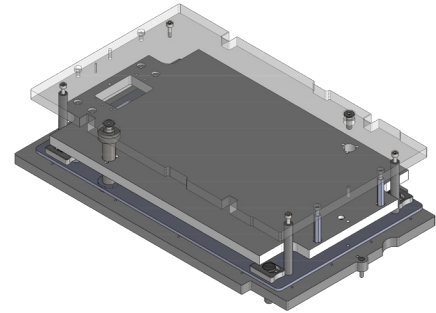
| Order number | Designation                                 |
|--------------|---|
| 264012       | Strut drawing no. E90-01304, Hornitex 10 mm |



# SPARE PARTS FOR THE MMI

## Set of plates - MMI versions

| Order number | Designation         | Moving plate |
|--------------|---------------------|--------------|
| 100685       | MMI-A set of plates | 185 x 310    |
| 100649       | MMI-B set of plates | 275 x 310    |
| 100648       | MMI-C set of plates | 310 x 445    |
| 100671       | MMI-LS floating     | 255 x 255    |
| 100672       | MMI-L not floating  | 255 x 255    |



## EXPANSION TENSIONS

Our fixtures guarantee safety as standard for voltages below 25 V AC (effective value) and 60 V DC (harmonic-free). For higher voltages, we therefore recommend a safety package that upgrades our fixtures accordingly.

Do you have questions about our security packages? Please contact us for your personal consultation.

## ACCESSORIES FOR ALL MECHANICAL FIXTURES

All other accessories can be found in our brochure: „Fixture Accessories“.



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projekte@atx-hardware.de