

MA 20xx Series

Manual stand-alone test fixtures – testing made easy

The manual test fixtures in the **MA 20xx series** are designed as stand-alone test fixtures rather than exchangeable test fixtures and do not feature an internal interface. They are used for industrial testing to contact electronic devices with medium-sized volumes of the same version.

The MA 20xx test fixtures offer the well-known innovations of the MA 21xx series, such as high contact force and the precise, parallel closing drive unit, as well as the modular upgrade of the optionally available additional components.

The MA 20xx test fixtures are available in the standard sizes MA 2011, -12 and -13 with the same range of common test system interfaces as available for the MA 21xx series.

Features:

- Stand-alone test fixtures without internal interface
- Precise, safe and reliable contacting
- High contact force of up to 2,000 N
- Modularly upgradable with optionally available additional components of the MA 21xx series
- Available with the same range of common test system interfaces as available for the MA 21xx series
- Single-sided or double-sided contacting

General technical information:

- | | |
|--|--------------------|
| - Contact force: | up to 2,000 N |
| - Parallel contact stroke: | approx. 15 mm |
| - Max. component height on PCB: | approx. 58 mm |
| - Opening angle of pressure frame unit: | approx. 75° |
| - Standard installation height GKS bottom: | 10.5 mm |
| - Standard installation height GKS top: | 16.0 mm |
| - Temperature range: | + 10 °C to + 60 °C |

MA 20xx series



MA 20xx Series

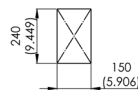
Manual stand-alone test fixtures – testing made easy

Manual stand-alone test fixture MA 2011/D/H *

Ordering information:
MA 2011/D/H Part no.: **48590**
 (Including exchangeable kit ATS MA11 - Part no. 45900-KIT)

Technical information:

- Outer dim. (closed): approx. 320 x 515 x 270 mm (w x d x h)
- Outer dim. (opened): approx. 320 x 446 x 587 mm (w x d x h)
- Usable area: approx. 150 x 240 mm (w x d)



- Weight: approx. 12.00 kg



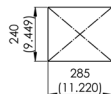
MA 2011/D/H

Manual stand-alone test fixture MA 2012/D/H *

Ordering information:
MA 2012/D/H Part no.: **48530**
 (Including exchangeable kit ATS MA12 - Part no. 45904-KIT)

Technical information:

- Outer dim. (closed): approx. 492 x 515 x 270 mm (w x d x h)
- Outer dim. (opened): approx. 492 x 446 x 583 mm (w x d x h)
- Usable area: approx. 285 x 240 mm (w x d)



- Weight: approx. 15.50 kg



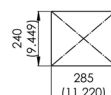
MA 2012/D/H

Manual stand-alone test fixture MA 2012/D/H/Pylon *

Ordering information:
MA 2012/D/H/Pylon Part no.: **51865**
 (Including exchangeable kit ATS MA12 - Part no. 45904-KIT)

Technical information:

- Outer dim. (closed): approx. 501 x 548 x 262 mm (w x d x h)
- Outer dim. (opened): approx. 501 x 480 x 576 mm (w x d x h)
- Usable area: approx. 285 x 240 mm (w x d)



- Weight: approx. 17.00 kg



MA 2012/D/H/Pylon

MA 20xx Series

Manual stand-alone test fixtures – testing made easy

Manual stand-alone test fixture MA 2012/D/H/GR2270/71 *

Ordering information:

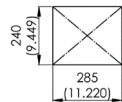
MA 2012/D/H/GR2270/71

Part no.: **53350**

(Including exchangeable kit ATS MA12 - Part no. 45904-KIT)

Technical information:

- Outer dim. (closed): approx. 501 x 548 x 262 mm (w x d x h)
- Outer dim. (opened): approx. 501 x 480 x 576 mm (w x d x h)
- Usable area: approx. 285 x 240 mm (w x d)



- Weight: approx. 17.00 kg



MA 2012/D/H/GR2270/71

Manual stand-alone test fixture MA 2012/D/H/VPC-G12x-18 *

Ordering information:

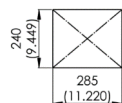
MA 2012/D/H/VPC-G12x-18

Part no.: **53388**

(Including exchangeable kit ATS MA12 - Part no. 45904-KIT)

Technical information:

- Outer dim. (closed): approx. 493 x 548 x 262 mm (w x d x h)
- Outer dim. (opened): approx. 493 x 480 x 576 mm (w x d x h)
- Usable area: approx. 285 x 240 mm (w x d)



- Weight: approx. 17.50 kg



MA 2012/D/H/VPC-G12x-18

Manual stand-alone test fixture MA 2013/D/H *

Ordering information:

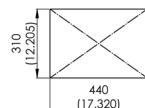
MA 2013/D/H

Part no.: **48620**

(Including exchangeable kit ATS MA13 - Part no. 45980-KIT)

Technical information:

- Outer dim. (closed): approx. 647 x 584 x 270 mm (w x d x h)
- Outer dim. (opened): approx. 647 x 516 x 656 mm (w x d x h)
- Usable area: approx. 440 x 310 mm (w x d)



- Weight: approx. 22.00 kg



MA 2013/D/H

MA 20xx Series

Manual stand-alone test fixtures – testing made easy

Manual stand-alone test fixture MA 2013/D/H/Pylon *

Ordering information:

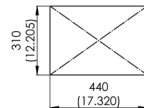
MA 2013/D/H/Pylon

Part no.: **53230**

(Including exchangeable kit ATS MA13 - Part no. 45980-KIT)

Technical information:

- Outer dim. (closed): approx. 653 x 618 x 262 mm (w x d x h)
- Outer dim. (opened): approx. 653 x 550 x 649 mm (w x d x h)
- Usable area: approx. 440 x 310 mm (w x d)



- Weight: approx. 24.00 kg



MA 2013/D/H/Pylon

Manual stand-alone test fixture MA 2013/D/H/VPC-G12x-18 *

Ordering information:

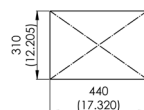
MA 2013/D/H/VPC-G12x-18

Part no.: **53390**

(Including exchangeable kit ATS MA13 - Part no. 45980-KIT)

Technical information:

- Outer dim. (closed): approx. 649 x 618 x 262 mm (w x d x h)
- Outer dim. (opened): approx. 649 x 550 x 649 mm (w x d x h)
- Usable area: approx. 440 x 310 mm (w x d)



- Weight: approx. 25.00 kg



MA 2013/D/H/VPC-G12x-18

MA 20xx Series

Manual stand-alone test fixtures – testing made easy

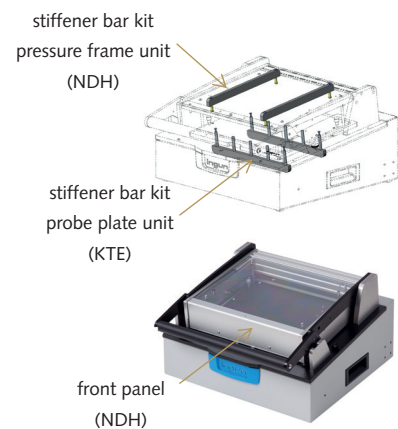
Recommended accessories:

Stiffener bars and NDH front panels

In case of complex customising with more than 300 test probes or a force greater than 500 N, we recommend the usage of stiffener bars and front panels to prevent unwanted bending of the pressure frame unit or the probe plate unit.

Ordering information:

- | | |
|-------------------------------------|------------------------|
| - Stiffener bar kit NDH ATS MA11/12 | Part no.: 46014 |
| - Stiffener bar kit NDH ATS MA13/14 | Part no.: 46013 |
| - Stiffener bar kit KTE ATS MA12 | Part no.: 45719 |
| - Stiffener bar kit KTE ATS MA13 | Part no.: 46861 |
| - Front panel NDH MA 2011 | Part no.: 51866 |
| - Front panel NDH MA 2012 | Part no.: 51867 |
| - Front panel NDH MA 2013 | Part no.: 51868 |



Start-up kits

Customising can be done by INGUN or by the customers themselves. We offer matching start-up kits with all common components for individual customising.

Ordering information:

- | | |
|------------------------------------|------------------------|
| - Start-up kit SK-A-60-10,5-Small: | Part no.: 34730 |
|------------------------------------|------------------------|



start-up kit SK-A-60-10,5-Small

*: Manual stand-alone test fixtures MA 20xx are delivered in two separate units (1x basic unit GG MA 20xx and 1x exchangeable kit ATS MAxx).

Please contact us for further information.
 Prices and delivery time on request.
 Technical changes possible without prior notification.

Further innovative products can be found on our homepage and in our catalogue. Don't miss our additional components for manual test fixture series MA xxxx.

