

VA 30xx

PRODUCT INFORMATION Vacuum Test Fixture

- Robust and low-maintenance
- Intuitive, easy handling
- Tool-free access to the probe plate (KTP)
- Easy access to housing interior
- Modularly configurable with upgrade kits

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MODULARLY-CONFIGURABLE, ROBUST, AND EASY TO MAINTAIN

Application

Vacuum test fixtures (VA) are intended for contacting a small number of printed circuit boards versions in high quantities. The new **vacuum test fixtures** in the VA 30xx series are robust, low-maintenance, and designed for a long service life.

The intuitive design makes the series easy to use ensuring reliable operation. The fixtures offer tool-free access to the probe plate and easy access to the inside of the housing; the latter can be disabled. Each standardised VA 30xx test fixture is modularly configurable with **VA upgrade kits** and can be individually upgraded for the test requirement at hand. They are designed as a stand-alone system without an interchangeable exchangeable kit, equipped for dual-stage contacting and testing with vacuum-free zone, and are available in VA 3030, VA 3040 and VA 3060 sizes for all common test systems. The housing is hinged and is securely supported by two gas pressure springs. Compared to the previous versions, the VA 30xx test fixtures have a usable area that is at least 7% larger.

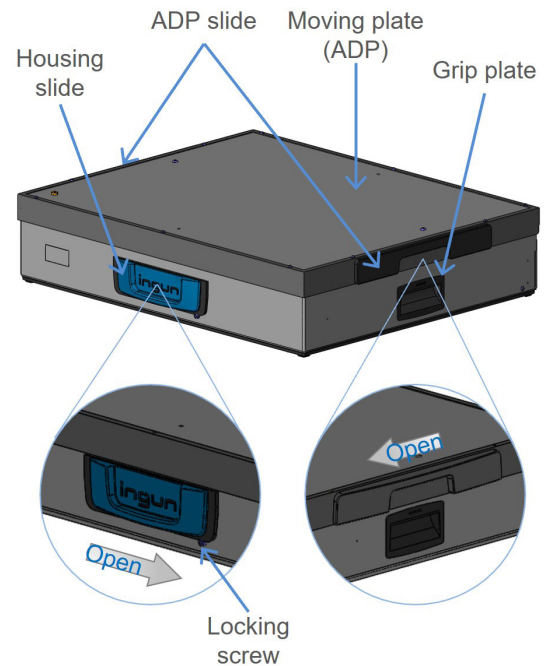
Features

- Robust, low-maintenance design
- Intuitive, easy handling
- Access to probe plate without the need for tools
ADP slides guarantee quick, easy access to the probe plate (KTP) without the needs for tools. The ADP slides automatically lock into place upon the first contacting stroke.
- Easy access to housing interior
The innovative housing slide enables quick, easy access to the inner housing assisted by gas pressure springs. The housing slide can be secured in place to disable access quickly and easily using a tool (TORX screwdriver T20).
- Modularly configurable with VA upgrade kits
 - Additional housing - flat
To provide VA 30xx fixtures with flat housing
 - Additional housing - desk
To provide VA 30xx fixtures with desk housing
- Dual-stage shifting unit
To provide dual-stage contacting (ICT/FCT) from bottom side
- Vacuum-free zone seal
For testing with vacuum-free zone
- Large usable area
VA 30xx test fixtures have a usable area at least 7% larger compared to the previous versions.
- Incl. 6 mm thick moving plate (ADP) with ESD-conductive surface
- Incl. 10 mm thick probe plate made from deflection-resistant FR4

Delivery

The VA 30xx test fixture is delivered fully assembled.

Function



Technical data

- Available sizes & maximum theoretical contact force:
 - VA 3030: 9,000 N
 - VA 3040: 14,000 N
 - VA 3060: 22,000 N
- Parallel stroke: 13.0 mm
- Installation height of GKS, 1-stage, bottom: 16.0 mm
- Installation height of GKS, 2-stage, bottom: 21.5 mm
- Theoretical GKS working stroke: 4.3 mm
- Opening angle of housing: approx. 58°
- Force of gas pressure springs: 400 N
- Operating temperature range: + 10 °C to + 60 °C
- Service life (lab conditions.): > 2,000,000 load cycles

Note:

- The customising guidelines document (**INFO 4240**) is used for the professional customisation of VA 30xx test fixtures.
- The service life was determined in the laboratory using fully automatic, computer-controlled endurance test stations. As the service life depends on many factors, particularly on the individual test application, INGUN does not guarantee the actual service life in the test field.

VA 30xx

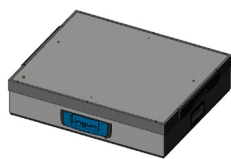
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VA mounted units and VA upgrade kits



Vacuum test fixture
VA 30xx/F/H

Vacuum test fixture mounted units (VA)

Pressure frame (NDH)	Drive unit (ATE VA)	Vacuum cover (VKH)	Additional contacting unit (ZSK)
Testing with vacuum-free zone	Testing with vacuum-free zone	Testing without vacuum-free zone	Testing without vacuum-free zone
Contacting: Single-stage, bottom Dual-stage, bottom	Contacting: Single-stage, bottom Dual-stage, bottom Single-stage, top (with functional unit)	Contacting: Single-stage, bottom Dual-stage, bottom	Contacting: Single-stage, bottom Dual-stage, bottom Single-stage, top

Note:

More information about the VA mounted units can be found in the test fixture catalogue from page 132.

Vacuum test fixtures upgrade kits (VA upgrade kits)

	Additional housing, flat (ZGF VA30xx)	- To upgrade VA 30xx fixtures with high, flat housing - Additional height = approx. 90 mm - Available for VA 3030, VA 3040 and VA 3060
	Additional housing, desk (ZGP VA30xx)	- To upgrade VA 30xx fixtures with desk housing - Additional height = approx. 90 mm (7° incline) - Available for VA 3030, VA 3040 and VA 3060
	Dual-stage shifting unit (FB-2VE-VA30xx)	- To upgrade VA 30xx fixtures to enable dual-stage contacting from bottom side (FCT/ ICT combined) - Available for VA 3030, VA 3040 and VA 3060
	Vacuum seal vacuum-free zone (VD-Z-21-300-200-2)	- To upgrade VA 30xx fixtures to enable testing with vacuum-free zone - Available for VA 3030 - Other sizes can be cut

Notes:

- Any combination of the VA upgrade kits is possible for each fixture size.
- When using the dual-stage shifting unit, both the width and depth of the typical usable area are reduced by approx. 50 mm.
- For the professional customisation of the dual-stage shifting unit, refer to customising guidelines documents **INFO 4297** (mechanics) and **INFO 4523** (electronics), for the professional customisation of the vacuum-free zone, refer to customising guidelines documents **INFO 4297** (page 3).

VA 30xx

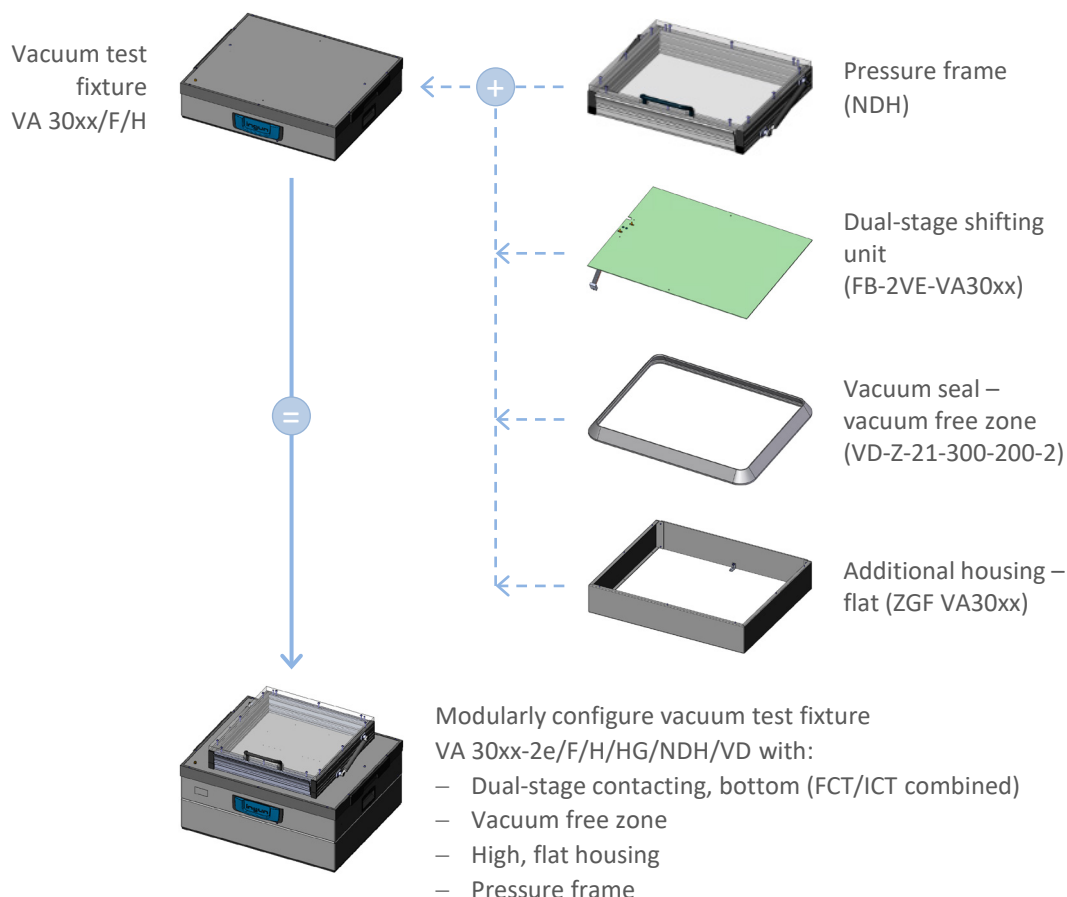
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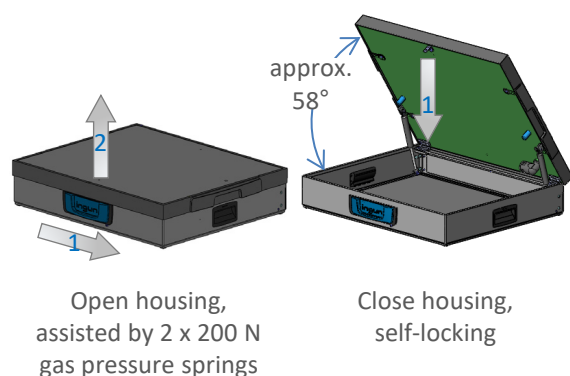
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VA mounted units and VA upgrade kits: upgrade example

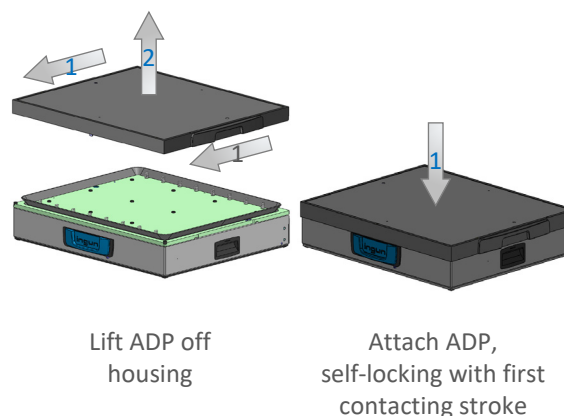


Operation

Housing



Moving plate (ADP)



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Ordering information for VA 3030 series

VA 3030 vacuum test fixtures						
Part no.	Designation	Version	Test system interface	Contacting from bottom side	Outer dimensions (W x D x H mm)	Typical useable area (W x D mm)
104338	VA 3030/F/H	Flat housing	-	- Single-stage - Equipped for 2-stage	476 x 362 x 122	370 x 250
107560	VA 3030/F/H/Pylon	Flat housing	PYLON	- Single-stage - Equipped for 2-stage	484 x 404 x 122	370 x 250
107590	VA 3030/F/H/GR2270/71	Flat housing	TERADYNE	- Single-stage - Equipped for 2-stage	484 x 404 x 122	370 x 250
107689	VA 3030/F/H/GR228x15/07	Flat housing	TERADYNE	- Single-stage - Equipped for 2-stage	476 x 362 x 125	370 x 250
107700	VA 3030/F/H/GR228x15/15	Flat housing	TERADYNE	- Single-stage - Equipped for 2-stage	476 x 362 x 125	370 x 250
111232	VA 3030/F/H/VPC-S6	Flat housing	VPC	- Single-stage - Equipped for 2-stage	476 x 400 x 125	370 x 250

VA 3030 vacuum test fixtures upgrade kits				
Part no.	Designation	Version	Outer dimensions (W x D x H mm)	Maximum useable area (W x D mm)
107600	ZGF VA3030	Additional housing, flat, including rear panel for VA 3030	460 x 342 x 90	-
111501	ZGP VA3030	Additional housing, desk (7° incline), including rear panel for VA 3060	460 x 342 x 90	-
109637	FB-2VE-VA3030	Dual-stage shifting unit for VA 3030	402 x 262 x 54	321 x 202
104093	VD-V-3030-2	Vacuum seal, external, for VA 3030	445 x 328 x 21	370 x 250
107048	VD-Z-21-300-200-2	Vacuum seal vacuum-free zone - fixed dimensions	300 x 200 x 21	273 x 154
109501	VD-Z-21-XX0-XX0-2	Vacuum seal vacuum-free zone - Variable outer dimensions, size adjustable in 10 mm increments	100 x 100 x 21 to 510 x 300 x 21	Dependent on size cute

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Ordering information for VA 3040 series

VA 3040 vacuum test fixtures						
Part no.	Designation	Version	Test system interface	Contacting from bottom side	Outer dimensions (W x D x H mm)	Typical useable area (W x D mm)
101517	VA 3040/F/H	Flat housing	-	- Single-stage - Equipped for 2-stage	566 x 472 x 122	450 x 350
104088	VA 3040/F/H/Pylon	Flat housing	PYLON	- Single-stage - Equipped for 2-stage	566 x 514 x 122	450 x 350
104282	VA 3040/F/H/GR2270/71	Flat housing	TERADYNE	- Single-stage - Equipped for 2-stage	566 x 514 x 122	450 x 350
104193	VA 3040/F/H/GR228x15/07	Flat housing	TERADYNE	- Single-stage - Equipped for 2-stage	566 x 472 x 125	450 x 350
104279	VA 3040/F/H/GR228x15/15	Flat housing	TERADYNE	- Single-stage - Equipped for 2-stage	566 x 472 x 125	450 x 350
104281	VA 3040/F/H/GR228x18/18	Flat housing	TERADYNE	- Single-stage - Equipped for 2-stage	566 x 472 x 125	450 x 350
104434	VA 3040/F/H/TD88xx-S	Flat housing	TERADYNE	- Single-stage - Equipped for 2-stage	566 x 472 x 150	450 x 350

VA 3040 vacuum test fixtures upgrade kits				
Part no.	Designation	Version	Outer dimensions (W x D x H mm)	Maximum useable area (W x D mm)
103228	ZGF VA3040	Additional housing, flat, including rear panel for VA 3040	550 x 452 x 90	-
109788	ZGP VA3040	Additional housing, desk (7° incline), including rear panel for VA 3060	550 x 452 x 90	-
110368	FB-2VE-VA3040	Dual-stage shifting unit for VA 3040	492 x 372 x 54	411 x 312
100974	VD-V-3040-2	Vacuum seal, external VA 3040	535 x 438 x 21	450 x 350
107048	VD-Z-21-300-200-2	Vacuum seal vacuum-free zone - fixed dimensions	300 x 200 x 21	273 x 154
109501	VD-Z-21-XX0-XX0-2	Vacuum seal vacuum-free zone - Variable outer dimensions, size adjustable in 10 mm increments	100 x 100 x 21 to 510 x 300 x 21	Dependent on size cute

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Ordering information for VA 3060 series

VA 3060 vacuum test fixtures						
Part no.	Designation	Version	Test system interface	Contacting from bottom side	Outer dimensions (W x D x H mm)	Typical useable area (W x D mm)
104832	VA 3060/F/H	Flat housing	-	- Single-stage - Equipped for 2-stage	666 x 562 x 122	560 x 450
106199	VA 3060/F/H/ITA-14	Flat housing	ITA-14	- Single-stage - Equipped for 2-stage	666 x 604 x 122	560 x 450
107561	VA 3060/F/H/Pylon	Flat housing	PYLON	- Single-stage - Equipped for 2-stage	666 x 604 x 122	560 x 450
107710	VA 3060/F/H/GR228x15/07	Flat housing	TERADYNE	- Single-stage - Equipped for 2-stage	666 x 562 x 125	560 x 450
107713	VA 3060/F/H/GR228x15/15	Flat housing	TERADYNE	- Single-stage - Equipped for 2-stage	666 x 562 x 125	560 x 450

VA 3060 vacuum test fixtures upgrade kits				
Part no.	Designation	Version	Outer dimensions (W x D x H mm)	Maximum useable area (W x D mm)
107603	ZGF VA3060	Additional housing, flat, including rear panel for VA 3060	650 x 542 x 90	-
111426	ZGP VA3060	Additional housing, desk (7° incline), including rear panel for VA 3060	650 x 542 x 90	-
110390	FB-2VE-VA3060	Dual-stage shifting unit for VA 3060	592 x 462 x 54	511 x 402
107216	VD-V-3060-2	Vacuum seal, external, VA 3060	635 x 528 x 21	560 x 450
107048	VD-Z-21-300-200-2	Vacuum seal vacuum-free zone - fixed dimensions	300 x 200 x 21	273 x 154
109501	VD-Z-21-XX0-XX0-2	Vacuum seal vacuum-free zone - Variable outer dimensions, size adjustable in 10 mm increments	100 x 100 x 21 to 510 x 300 x 21	Dependent on size cute

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Ordering information for accessories

VA 30xx accessories					
Part no.	Designation	Version	Length (mm)	Force (N)	Stroke (mm)
31788	GDF-185-60-200N-A6-A6	Gas pressure spring	185	200	60
37967	GDF-185-60-200N-A6-A6-D	Dynamic shock-absorbing gas pressure spring	185	200	60
105791	FED-10,0-24,5-103N-11,6	Pressure spring	24,5	103	-

Notes:

- More customising accessories can be found in the test fixture catalogue from page 152.
- Gas pressure springs must be stored with the piston rod pointing downwards so that the sealing is kept moistened from within. It makes no difference whether the plunger is extended (unloaded) or retracted (loaded). An annual pressure loss of approx. 5% is within the tolerance.