



ZEISS OmniFix air

Quick and easy clamping with vacuum



ZEISS OmniFix air

is a surprisingly versatile, flexible clamping system for inherently stable components. Vacuum technology allows very fast and stress-free clamping of a wide variety of components without interfering contours, i.e. the measuring field remains completely free. The vacuum clamping system reduces both the clamping and the measuring effort and thus enables the fast and flexible collection of quality data.

With the vacuum clamp system OmniFix air, ZEISS is launching a solution with which inherently stable workpieces can be fixed and measured easily and at the push of a button using a vacuum instead of the usual holding devices. The mobile system in the convenient trolley can be moved to the place of use and then stored in a space-saving manner. This allows inspection processes to be accelerated and made more flexible.

Easy clamping

Clamping test parts is a difficult and often very timeconsuming task, especially when you're dealing with complex components or large component series where you need to mount each part one at a time. The ZEISS vacuum clamp system was designed with the unique demands of the modern industry in mind. It provides noticeably faster component mounting by doing away with time-consuming and complicated mounting devices. Instead, components are clamped and held in place by a vacuum system and a series of pins which are specially designed to adapt to the shape of the workpiece.

OmniFix air: mobile vacuum clamp system in handy trolley



Universal application

The ZEISS system's mounting unit is designed to adapt to the contour of the measurement object within a fraction of a second, making it ideal for fixing a wide range of different components. To do this, the metrologist merely places the workpiece on the compressed-air-operated workpiece pins on the vacuum column. When supplied with compressed air, the pins move to adapt to the contour of the component. When the compressed air supply is interrupted via the switch on the control box, the pins become immediately immobile and maintain their current position.

At the rear, cables and columns are stowed in the mobile control unit.



Unlike individual measuring devices, ZEISS OmniFix air can be applied universally, and hence provides users with a high level of investment security.

No interfering contours

The use of vacuum enables metrologists to clamp workpieces into place in just half the amount of time on average as compared to mountbased systems. Plus, there's no need to program the system to avoid interfering contours. And since styli and sensors are no longer forced to make blind runs around the interfering contours, measurements can be completely in about onethird less time.

Mobile and flexible

The basic version of the vacuum clamp system OmniFix air includes three vacuum columns. Each column is supplied with compressed air individually and can be precisely adjusted via the device's control box. This allows the system to mount either three small components (one on each of the three columns) or a medium to large-sized component, without the need to apply tension. In the area of automotive applications, the system is especially ideal for clamping inherently stable car body parts such as fenders, tailgates and side panels. The ZEISS system can also be upgraded with up to three extra columns to provide additional support for large components with complex shapes. Especially useful: the mobile trolley offers space to move and store all components of the basic system in a space-saving way and is movable from one place to another.

Flexible pins pick up the contour of the component, a vacuum holds and fixes the workpiece securely and immovably.



Each vacuum column is screwed onto a hole grid.

Works with tactile and optical measuring machines

The new vacuum clamp system can be used with a range of different measuring machines. The device can be mounted to a hole pattern plate, as well as to the measuring machine or a profile, using a variety of ZEISS accessories such as adapter plates with threaded bases and magnetic plates. For tactile measurements of identical components, stops can be attached to the vacuum column. These allow the metrologist to place each workpiece on the pin support in exactly the same position after the pins are appropriately arranged. So there's no need to position each component from zero before performing a tactile measurement.

Surprisingly quiet

Vacuum clamp technology has been in use in manufacturing for years to provide reliable workpiece clamping. In metrology, systems such as these are only used on an individual basis for special cases. Despite the efficiency gains they offer, many potential customers have decided against using vacuum clamp systems because of the noise they generate. The ZEISS vacuum clamp system is the quiet alternative. This is made possible by the system's ability to generate a start vacuum in a matter of seconds. Once the required vacuum has been reached, vacuum generation is interrupted and automatically restarted once the set limit value has been exceeded. The noise level is correspondingly low.

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System description

Device name	Vacuum clamp system ZEISS OmniFix air
Year of manufacture	2021
Weight	approx. 112 kg (92 kg control unit, 6,5 kg per column)
Sound pressure level (LPA)	< 70 dB (A)
Total dimensions (WxDxH)	Control unit: 1020 mm x 440 mm x 815 mm Single column: 275 mm x 250 mm x 250 mm
Rated load capacity / max test object weight	50 kg per vacuum cup
Suction power, vacuum cup	Max. 61 N (preset, lower suction force adjustable)
Pull-off strength, vacuum cup	100 N

Electrical equipment

Operating voltage	230 V AC
Frequency	50 Hz
Control voltage	24 V DC

Pneumatic equipment

Operating pressure	6 bar
Air pressure quality	Dry, unoled and purified

Optional accessories



Foot plate, star-shaped
(standard grid, 200 x 200)
SAP No.: 600062-0001-302



Adapter plate, small, with
thread
SAP No.: 600062-0001-300



Magnetic base
SAP No.:
600062-0001-299



Adapter plate, classic (for 2 CARFIT profiles: hole grid
profile and extruded profile)
SAP No.: 600062-0001-301

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