

Z2 / Z4

Multi-station suction systems



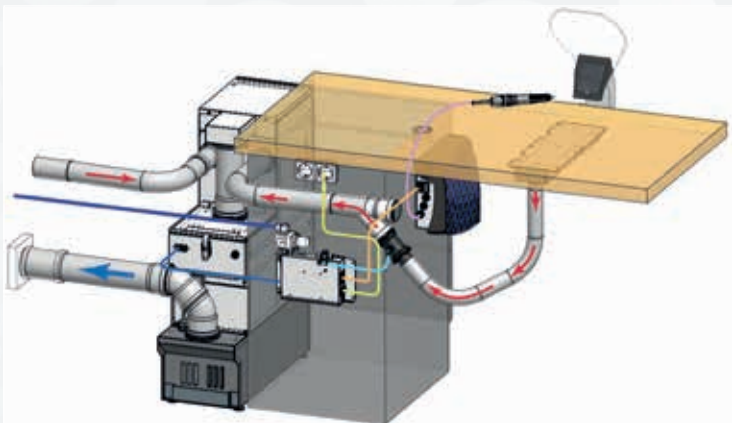
Z2 suction system

The **Z2** suction system is suitable for universal use in the laboratory and workshop area. The powerful suction machine generates the air flow required for up to two simultaneously used work stations or more dust-intensive functional appliances.

A particularly flexible concept enables the connection of many alternative suction stations, which are controlled by individual modules.

In practices or small laboratories with one or two technicians, dust can thus be extracted from the entire equipment space or work station area with one **Z2**. Use in alternative operation is particularly convenient. As long as only one suction station is in operation, the suction level can be selected as with a single-station suction system and can be individually saved for each work station.

The VARIO control system operates at the same time and keeps the air quantity constant irrespective of the current filter condition.



Z4 suction system

The **Z4** was specially developed for use in smaller dental laboratories. It offers a particularly reliable and powerful suction solution even for particularly dust-intensive work stations in the work preparation area or on functional appliances such as belt grinders. It is also possible with one **Z4** to extract dust from up to two milling machines in continuous operation.

As the "big brother" of the **Z2**, the suction turbine generates an air flow rate sufficient for up to four simultaneously used suction stations and can be connected to all existing suction stations as a small central unit in a laboratory with 5 – 6 technicians. Each individual suction station opens automatically and independently of the other connected stations. The VARIO control system and power levels with alternative operation of the suction stations are also standard with the **Z4**.



Product comparison:

	Z2 suction system	Z4 suction system
Simultaneous suction stations	2	4
Bus system expandable by means of suction station opener		
Permanent filter system with container		
Brushless motor		
CAD/CAM compatible		
Recirculating air mode	with diffusor system	with diffusor system
Exhaust connection to open air		
Bluetooth /Android APP		

Technical data:

	Z2 suction system	Z4 suction system
Dimensions (width x height x depth)	225 x 770 x 600 mm	330 x 810 x 600 mm
Weight	33 kg	61 kg
Rated power consumption	max. 1200 W	1800 W
Total air flow rate	65 l	100 l
Dust container volume	4,5 l	12 l
Dust class	M	M
Effective filter surface area	1,6 m²	2,7 m²
Filter system	Vibration cleaning	Compressed air purge
Sound pressure level	44-67 db(A)	45-65 db(A)
Suction connections	2 x 50 mm	2 x 75 mm
Exhaust air connection	75 mm	75 mm
Compressed air connection, suction machine	---	min. 5 bar
Compressed air connection, suction station opener	min. 2 bar	min. 2 bar

Z2 suction system

*The 2-station suction system
with extension options*

- **Quiet and low on maintenance thanks to brushless suction turbine**
- **Bypass air cooling and highly efficient exhaust air noise insulation**
- **Permanent filter system with automatic filter cleaning**
- **Durable and easy to maintain thanks to high-quality components and modular design**



Extendable

The **Z2** suction system was designed to allow suction at several stations with one appliance, simultaneous suction being possible at two of these suction stations.

In the standard case, suction station openers are installed at two work stations and connected to the **Z2**.

Additional suction stations can be integrated in the bus system via the network by means of further suction station openers.



Cleaning the filter cartridge

The filter in the system housing is mounted in a freely swinging arrangement. This mechanism enables the high-quality shaking device to generate an extremely strong convolution oscillation, which periodically frees the filter surface of dust deposits.



Z2 - the system with outstanding motors

Brushless motors have a long service life.

We offer you a 3-year guarantee, even in the case of daily operation for long periods.

A cooling air circulation that is separate from the working air ensures efficiency and operating reliability. If a fault should occur, e.g. due to a blockage in the intake area or an excessively dirty filter, this technology protects the motor against overheating. Long maintenance intervals for our motors save time and money in the long run.



Dust container instead of disposable filter

This filter system demonstrates its high performance in areas with very high levels of dust.

The long-life filter cartridge and the elimination of disposable filter bags reduce the operating costs of the system. The dust from all the connected suction stations is collected in a container, which is emptied according to the amount of dust produced. The efficiency of the filter system is so high that the filtered air can be returned to the work room. The feeding of the exhaust air to the outdoors is provided for via a nozzle and is recommended on account of the high flow rate and for an ideal laboratory climate.



Suction performance

If two suction stations are activated at the same time, the **Z2** suction system operates with a performance of up to 60 l/s.

The system can be extended by several alternatively used suction stations. So that there is no drop in performance at the opened suction stations when activating a further suction station, a "secured mode" can be set.



Z4 suction system

*The 4-station suction system
with extension options*

- **Quiet and low on maintenance thanks to brushless suction turbine**
- **Permanent filter with automatic cleaning system**
- **Ideal for use where large quantities of dust are produced thanks to controlled 3-filter cleaning system**
- **Infinitely extendable by installing additional suction station openers (bus system)**
- **Possibility to feed exhaust air to the outdoors to improve the room climate**



Filter cleaning

The three filters in the housing of the **Z4** are cleaned at regular intervals. The filter cartridges are cleaned automatically by the system controller by blowing compressed air from the inside through the filter walls.

The accumulated dust falls into a container placed underneath. The use of several filters offers the advantage of high cleaning efficiency and enables the cleaning of the filters during suction operation. The filter cleaning interval can be set separately both in offline and online mode (offline/online – during or after the suction operation) and thus adapted to the amount of dust produced.



Suction performance

If four suction stations are activated at the same time, the **Z4** suction system operates with a performance of up to 90 l/s. Additional suction stations are possible in alternative operation. The "secured mode" allows a further suction station to be activated only as long as the blower has not yet reached the maximum performance.



Z4 - the system with outstanding motors

Brushless motors have a long service life.

We offer you a 3-year guarantee, even in the case of daily operation for long periods.

A cooling air circulation that is separate from the working air ensures efficiency and operating reliability. If a fault should occur, e.g. due to a blockage in the intake area or an excessively dirty filter, this technology protects the motor against overheating. Long maintenance intervals for our motors save time and money in the long run.



Dust container instead of disposable filter

This excellent performance of this filter system is demonstrated to the full at workstations with very high levels of dust.

The dust from all the connected suction stations is collected centrally in a container, which is emptied according to the amount of dust produced.

The long service life of the filter cartridges ensures low operating costs in relation to the amount of dust produced.



Exhaust air

The exhaust air from the **Z4** can be fed outdoors via a pipe connector with a diameter of 75 mm and a commercially available pipe. The feeding of high-quality filtered air into the open air is an ideal solution with regard to noise, air quality and room climate in the work area. If the option to feed the exhaust air to the outdoors is not possible, we recommend mounting an additional diffuser for the return of the filtered air to the work room.



Dust container or filter bag?

The production of larger quantities of dust impairs the efficiency of suction systems with filter bags. While a filter bag is a tried-and-tested, very quiet and clean solution for single suction systems and a long exchange interval is usually possible, only permanent filter systems are used with Zubler multi-station systems where the total quantities of air and dust are higher.

The higher acquisition costs can quickly be compensated by lower operating costs here, which is often not possible with single-station systems at work stations with a low amount of dust.

The dust in the collecting container can be disposed of at adjustable time intervals.



Where should the exhaust air go?

The interaction of powerful motors, adequately dimensioned filter systems and pipework is the prerequisite for the perfect operation of a suction system.

Filters with a large surface area are installed in the **Z4** systems, these ensure that large quantities of air can be transported without loss of performance when extracting from four workstations. The quality of the filters is responsible for the fact that 99.9% of the dusts are trapped in the filter system.



The installation of the system to feed the exhaust air outdoors means that no further filtration measures are necessary. The diffuser reduces the speed and sound of the exhaust air if it has to be returned to the room.

A version with a class H14 filter is available as an option.

With a degree of separation of 99.995% the **Z2** and **Z4** multi-station systems thus achieve dust class H. Both versions reduce the exhaust air speed to less than 1 m/s* and reduce noise by around 5 dB(A)*.

Automatic suction station opener

AP601 / AP601-R

With the additional AP601 / AP601-R modules, the **Z2** and **Z4** multi-station suction systems can be installed for several suction stations.

The AP601 is suitable for the connection of all technical machines and appliances with a power consumption of up to 1000 W. The electronics features a sensitivity setting for adaptation to the respective dust-producing appliance, switches the suction station valve and is connected to the suction machine by a network cable. The valve and control unit are always located at the work station. This makes the installation very simple and tidy. Several suction stations can be connected to a common pipeline.

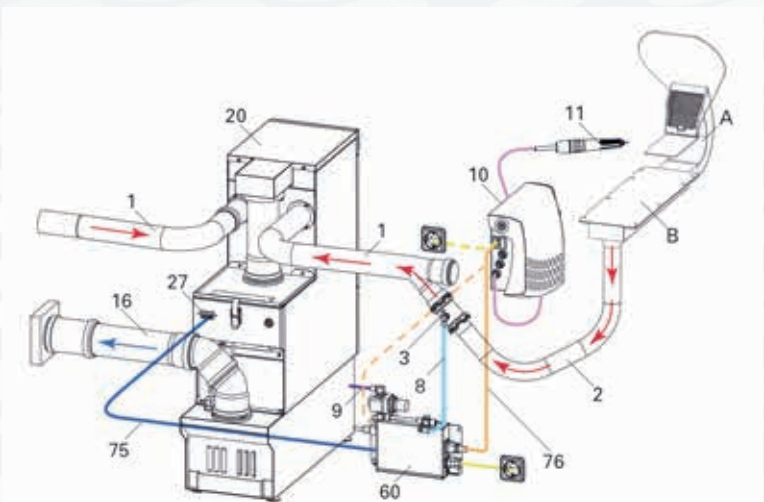
Automatic suction station openers belong to the standard equipment of the Zubler multi-station and central suction system. They make a decisive contribution to the cost-effective functional principle of the system, as suction power is only available at the work station for the period of dust generation. When a handpiece or an appliance (e.g. sandblaster) is actuated, the suction station opens automatically and closes with a short overrun time to extract the residual dust.

This automation, through the coupling of the dust generator to the electronics of the suction station opener, is a device for protecting your health and meets the legal requirements for occupational health and safety.



For more convenience in the handling of the suction system, we have developed an external operating module that you can install in a freely selectable place at your work station (optional accessory).

Schematic layout of a work station with multi-station suction (in this case Z2)



1	Pipe system	20	Z2 multi-station suction system
2	Work station suction hose	27	Z2 network connections
3	Suction station valve	60	AP601 automatic switch
8	Compressed air hose to valve	75	Network cable
9	Compressed air supply line	76	power cord from dust generator to AP601
10	Handpiece control/dust generator	A	Suction funnel
11	Handpiece	B	Rectangular pipe
16	Exhaust air line		

*max. suction performance at standard distance 1 m.

Installation

The **Z2** and **Z4** multi-station suction systems both work with AP601 external suction station openers and the same control logic.

In the long run this can be an economic advantage for your laboratory if changes to the performance of the suction system become necessary. For example, if the existing system has reached its performance limit due to the addition of a work station or an appliance, you can switch to a larger suction unit with minor modifications to the pipe system and continue to use components and cabling.

Although the modular system requires higher initial installation effort, it is very flexible and easy to maintain.



The bus system

The separation of suction system with filter system and the suction stations with suction station openers requires a complex control system. This is done via a network, similar to those used in IT. Via a patch cable connection from the suction system, the connection goes from module to module and can be continued up to the desired number of suction stations. Thanks to two RJ45 ports, distribution is possible in both directions starting from the suction machine.

The suction system recognizes all connected suction station openers and controls them as in an integrated system.

The user defines parameters such as suction level, overrun time, priority and response sensitivity for the handpiece on the AP601 suction station opener and all these parameters remain individually stored there. The requirements coming from the suction station opener are processed by the suction machine in the same way as by a CPU.

Example:

On starting the system, the hoses of all connected suction stations are vacuumed out for several seconds in succession. If an additional suction station is installed, it takes part automatically in this procedure.

Understanding multi-station suction technology

On the foregoing pages we have described the properties of the multi-station systems and their many advantages. What's decisive, however, is that a suitable solution is selected from the various suction equipment options for the right applications and laboratory layouts.

If you wish to work individually with different suction performance levels, you should ask yourself the question: what should happen if more than one suction station is open at the same time?

Should the suction level apply to the first requirement, the highest or a fixed multi-station suction level?

With our system you can adjust and adapt all of this.

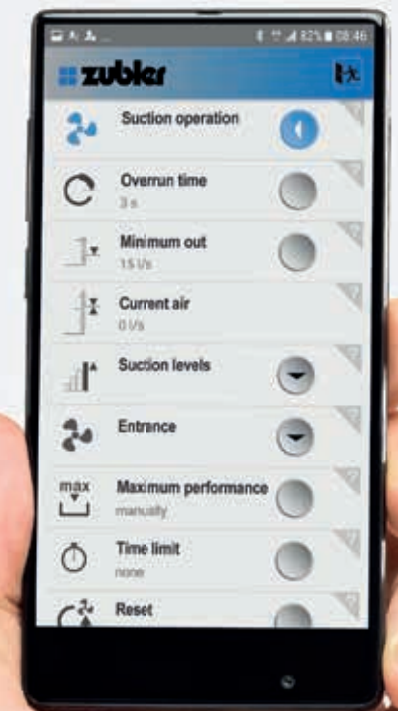
We'll be glad to advise you and help you find the best possible solution for your laboratory.

ZUBLER SUCTION TECHNIQUE APP

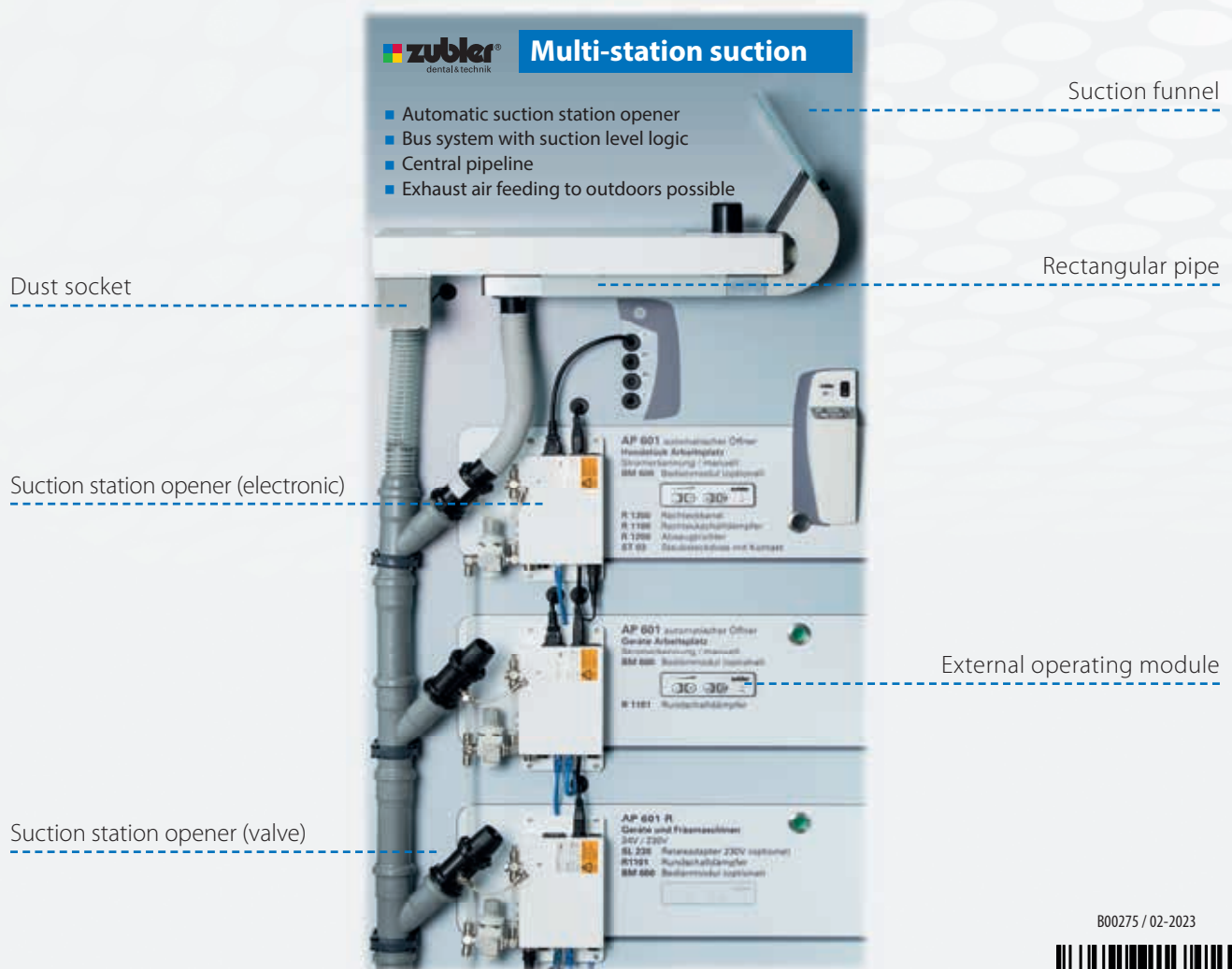
Information about the condition of individual components is important for checking the trouble-free use of your suction system.

By means of the **ZUBLER SUCTION TECHNIQUE APP** and a Bluetooth connection to the appliance, you can view and if necessary adjust information such as the motor running time, the filter condition or the current air flow rate of the **Z2/Z4** system.

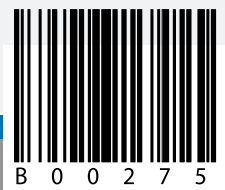
Optimum system setting is possible via the app, especially with complex multi-station systems.



Schematic layout of a multi-station suction system



B00275 / 02-2023



Subject to technical modifications.

Distributed by:



Zubler Gerätebau GmbH
Buchbrunnenweg 26
D - 89081 Ulm-Jungingen

Tel.: + 49 (0) 731 - 14 52 0
Fax: + 49 (0) 731 - 14 52 13
www.zubler.de