

PRODUCT CATALOGUE 2025/2026





Reliability has a name

Since 1964, we have been manufacturing high-quality dental equipment at our engineering plant, so that dental technicians can work in the lab with precision and efficiency.

It is important to us that every component and every work step is of the highest quality. In order to preserve this tradition, we have remained a family-run company to this day, and are currently in our second and third generation.

We have a flat organisational structure and encourage each employee to exchange ideas with our technical and sales managers. This gives our employees detailed knowledge of every step of production and creates and maintains a feeling of responsibility for quality in every individual employee.

This way, we can confidently provide all the support you need. We work hard on being your reliable partner – every day of the year.

Sincere greetings,
Birgit Harnisch, Sandra Harnisch, Mark Harnisch
Management

ALL-ROUND PROTECTION GUARANTEE

Just like a suit of armour back in the day, today all Harnisch+Rieth products stand for **robustness, durability and high quality.**

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Quality in every detail

We are aware of our great responsibility towards our customers. Therefore, for us quality not only means flawless products, but also smooth business processes. It is vital to us to monitor, review and improve all processes, so that we can achieve the best possible results for ourselves and our customers. Quality assurance is a top priority for us. All products are regularly monitored and checked against specifications throughout the entire production process. To maintain lasting customer loyalty, our goal is continuous further development. Each individual employee feels a responsibility for quality, and is therefore actively involved and sharing in the company's success.

Our quality promise in brief:

- All our components come from reputable, certified manufacturers
- Comprehensive incoming goods inspections
- Continuous quality assurance
- 100% made in Germany



PRODUCTION

“Precision in every detail” is in the minds of our qualified employees as they produce superior-quality dental equipment. We build to order, giving us the flexibility to configure equipment for customers. Each unit undergoes strict quality control after assembly to ensure that everything meets our quality standards.



LOGISTICS

Our logistics process encompasses everything from incoming goods through storage to delivery. An optimum process chain is our overriding objective. Our employees are assisted in this aim by ERP software that has been perfectly tailored to our needs.

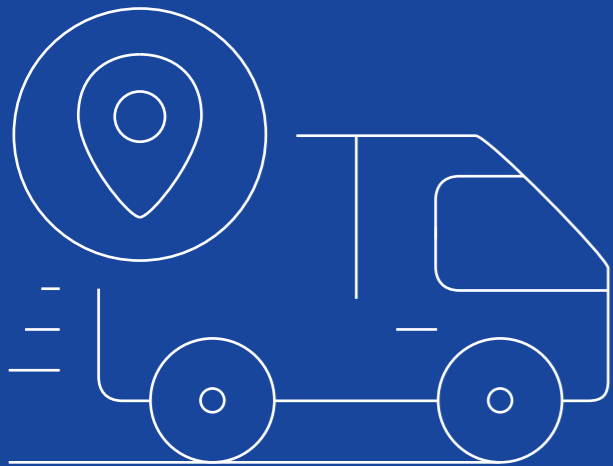
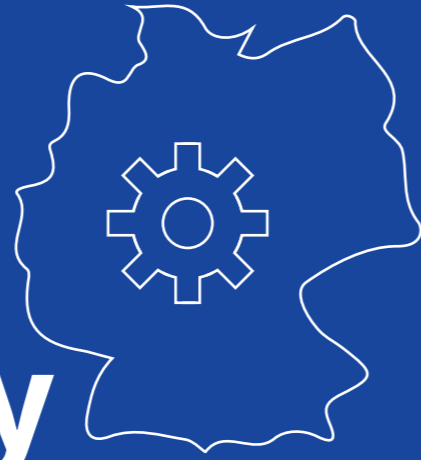


SALES

Our customers and users benefit from a strong sales team and network of distributors who not only offer local presence, but also guarantee first-class on-site service. We deliver our products to more than 100 countries worldwide. Our global reach is complemented by local service with comprehensive support from expert local contacts.

Fair, sustainable and future-oriented

Made in Germany



“Precision in every detail” is in the minds of our qualified and motivated employees as they produce superior-quality dental equipment day by day. Our equipment is manufactured exclusively at our Winterbach site in Germany. We use components of extremely high quality, to ensure our units perform exactly as they should, day in, day out, even under extreme conditions, making our customers’ work easier.

90% German suppliers

To achieve our mission, we set highly stringent requirements when selecting both our materials and our suppliers, as this is the only way to ensure our customers get only the very best products.

Saying no to plastic

Since 1964, we have been crafting stainless-steel dental equipment by hand to the highest standards here in Winterbach in south-west Germany. By using only proven components, we have created long-lasting equipment with high quality in every respect, whether new or used. Over time, these efforts benefit not only your wallet, but our environment as well.



Long-lasting

We build to order, which allows us a certain flexibility to configure products in line with customers’ wishes. Each unit undergoes strict quality control after assembly to ensure that everything meets our high quality standards. Reliability has a name – Harnisch+Rieth.



Workflow warranty

Manufacturer’s warranty – 3-year warranty

All Harnisch+Rieth units come with a statutory 12-month warranty, but we provide an additional 2-year guarantee starting from the verified date of purchase. We also issue a 12-month warranty for spare and wearing parts, as a pledge that these products are free from material, manufacturing and workmanship defects.

If, despite all this, a unit fails to work, you can still be sure that Harnisch+Rieth will find a solution as part of their warranty promise. In a very short time, Harnisch+Rieth will fix your unit in our own in-house repair department.

Warranty +

If you get a maintenance agreement when purchasing a new unit, the warranty of this unit will be extended to 5 years.

Equipment rental service

Harnisch+Rieth are at your side. Our rental equipment service will help you to keep downtimes to a minimum.

Uptime guarantee – Our service partners perform repairs in no time!

Are you in need of fast, on-site support when something goes wrong? Then look no further – our network of certified service partners is on hand. These partners are authorised to provide repairs or service. You can easily find your nearest service partner using our online Service Partner Search Tool.

Availability guarantee – 10-year spare parts warranty

All Harnisch+Rieth products are extremely durable and our spare parts supply service is ready and waiting. We guarantee that we will have genuine spare parts for every unit available for at least 10 years after your purchase.



Environmentally friendly

Even with the best quality, things can sometimes go awry. If something stops working, we purposely repair equipment instead of discarding it. That’s what our sturdy units are specially designed for.

Added value for more value

START-UP

This package offers you low-cost start-up by an authorised service partner.

To ensure trouble-free working, we regularly remind you of pending maintenance work. If you are unable to carry out maintenance yourself, we will happily provide a service partner to do this, which will be invoiced separately.

Package
01

INSPECTION

This package offers you reliability and peace of mind. You get an annual inspection by our specialists – travel and working time included – to have a regular look at the condition of your equipment. If maintenance or repair is necessary, this will be invoiced separately. If more extensive repairs are needed, you'll get a rental unit at a fixed price.

Package
02

MAINTENANCE

This package includes all maintenance work, including wearing/maintenance parts and a maintenance report. We grant you a discount on spare parts. Genuine H+R parts are exclusively used for maintenance. What's more, in an emergency you get on-site service by an H+R engineer, for no additional charge. You also benefit from an additional 2-year warranty for your H+R unit.

Package
03

If you use professional dental equipment from Harnisch+Rieth in your work, then you need to be able to rely on equipment that is completely ready to use, without limitations, at all times.

We are ready: Our Service is at your side throughout the life of your H+R equipment. We or one of our authorised service partners is there for you wherever you need us.

You need a service package that leaves no loose ends. With fast and reliable operative service at your premises. With all the necessary tools, spare and wearing parts. With ideally designed packages for start-up, inspection and maintenance.

In a word: H+R Service. **A service that gives you peace of mind.**



Further information

	Package 1 	Package 2 	Package 3
Cut down on the admin The service partner co-ordinates and supervises all the necessary measures and deadlines for maintenance and service. Care and maintenance by our service engineers at set intervals is provided automatically.	✓	✓	✓
Plug and play working Putting your equipment into operation correctly is the basis for a long service life and perfect work results. Our service partners are there to support you.	✓	✓	✓
Reliability Downtimes are dramatically reduced, because trained service engineers inspect and service all your equipment's components and wearing parts at regular intervals throughout the term of the maintenance contract. The early detection of signs of wear and technical defects prevents repairs that you would have to pay for, protects you from avoidable downtimes and guarantees that your equipment will maintain its value for a very long time.		✓	✓
Costs become predictable Depending on which package you decide on, the working hours and travel expenses may be included or invoiced based on the agreed flat rate, and some wearing parts are also included.		✓	✓
Regular inspection Our authorised specialists carry out inspections at regular intervals as per your maintenance schedule. You will therefore be able to regularly keep an eye on the condition of your equipment.		✓	✓
Extended warranty If you get a maintenance agreement when purchasing a new unit, the warranty of this unit will be extended to 5 years.			✓
Professional maintenance for optimum functionality Your equipment is serviced and inspected regularly by trained service engineers using genuine H+R spare parts. In all their service work, our service engineers have access to the knowledge base of every Harnisch+Rieth department.			✓
Cost advantages for spare parts We grant you a discount on spare parts.			✓

Premium service for first-class products



Further information

OUR SERVICE PARTNERS

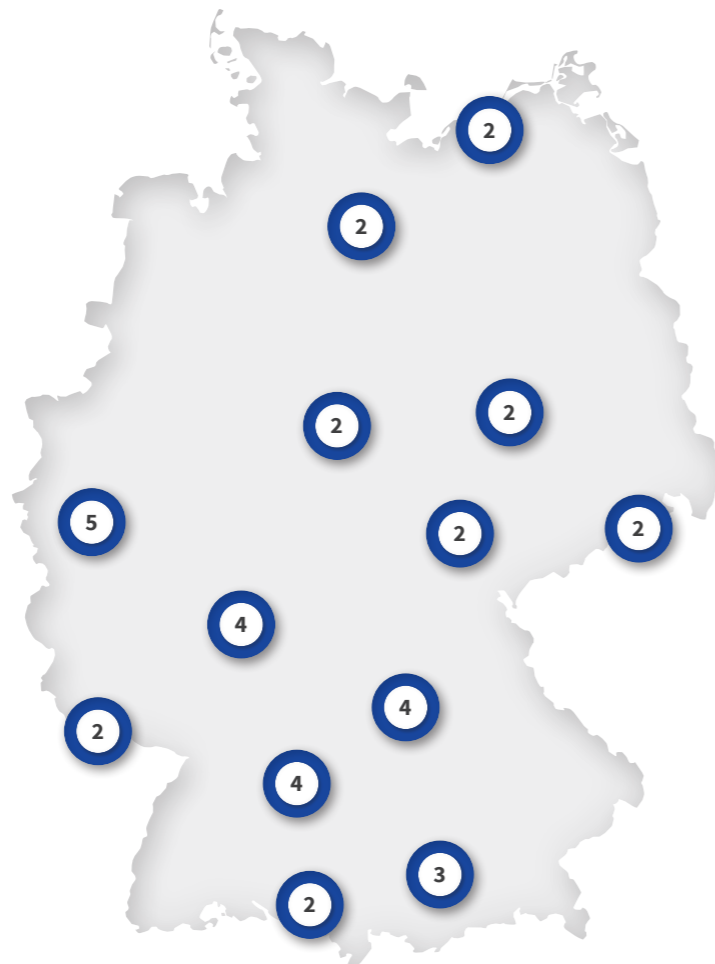
Our network of certified service partners is on hand to perform repairs in no time.

These partners are authorised to provide repairs or service.

Using our Service Partner Search Tool, you can easily find your nearest service partner at:

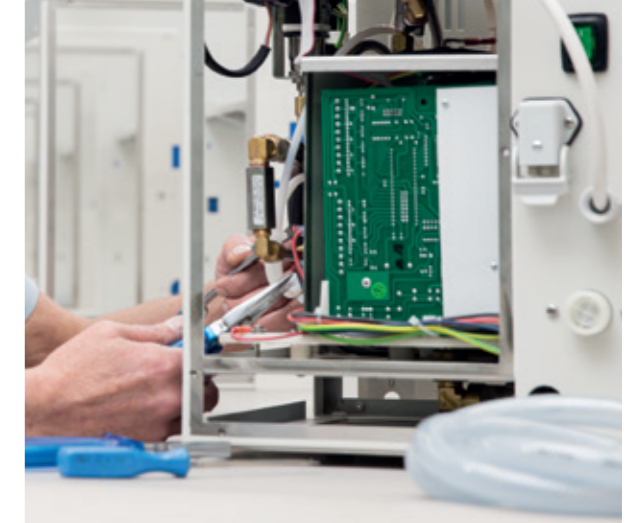
www.hr-dental.de/en/service-partners/

This keeps you cost effective.



ALL-ROUND REPAIR

Have your unit repaired by Harnisch+Rieth. Even with the best quality, things can sometimes go awry. Whether a product has been in intensive laboratory use for several years and no longer performs at 100% or you unexpectedly have to take advantage of the warranty – you've come to the right place.



In a very short time, Harnisch+Rieth will repair your unit in our in-house repair department. We will happily provide you with a rental unit to bridge the gap and minimise your downtimes.

Book a repair easily and conveniently online at www.hr-dental.de/en/repair-service



Further information



Little helper

Your port of call for all questions

A direct line to Harnisch+Rieth is always the best choice for getting answers to your questions quickly and easily. Be it advice, support or repairs – we're always pleased to hear from you.

Tel.: +49 7181 9678-0 · Email: info@hr-dental.de

Web: www.hr-dental.de/en/service



PRODUCT ADVICE

+49 7181 9678-0
vertrieb@hr-dental.de



ORDERING SPARE PARTS

+49 7181 9678-0
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ALL-ROUND REPAIR

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Why get a product from Harnisch+Rieth?

Here you'll find 11 reasons and advantages that have set us apart for decades. Because we work hard on being your reliable partner – every day of the year.



EASY TO USE

These products are especially easy to handle and make your work more straightforward.



COMPACT

These products have an especially compact design, to save space in your laboratory and give you room to manoeuvre.



QUIET

These products are especially quiet in operation. These units don't need to take centre stage to make your work easier. They ensure smoother, focused working. Powerful but quiet.



PRECISION

These units are especially precise to work with and exceptionally powerful. Harnisch+Rieth stands for quality in every detail – which is the key to perfect results every time.



OPTIMUM WORKFLOW

These products stand for easy working. Practical ergonomics and uncomplicated use make your work more straightforward.



SAVE ON BLASTING MATERIAL

These units lower the cost of blasting material by ensuring an ideal air/sand mixture, making you more cost effective.



POWERFUL SUCTION

What sets these units apart is their very powerful suction, short airflows, effective dust reduction and minimal air turbulence.



DURABILITY

Our product range has already lived up to its reputation in the industry multiple times. In a nutshell: Harnisch+Rieth offers peace of mind.



POWERFUL

These products are extremely powerful and productive in operation and facilitate your everyday work.



ENERGY SAVING

These products are particularly energy saving and therefore make you more cost effective.



HEALTH AND SAFETY

These products offer a very high level of health and safety thanks to a two-stage filter system, reducing the chance of occupational skin and lung diseases caused by fine dust particles in the air.



Blasting technology

Our extensive experience in the construction of sand blasting units, comprehensive laboratory testing, exclusive use of proven components and our robust steel plate design all help us to achieve perfect, high-quality, long-lasting sand blasting units.

Spot blasting unit P-G 400 Pro | Recirculating sand blasting unit D-H 22 S
Automatic blasting unit D-G 16 S / D-G 16 S 2 | Blasting technology consumables and accessories

We are very happy with the P-G 400 spot blasting unit. For many years, it has functioned reliably and been comfortable to work with, and it answers to all the demands of daily dental practice. Due to its precision settings for air pressure and blasting volume, it's also very suitable for scientific studies in which the treatment of surfaces has to be reproducible.

Reinhard Busch, Head of Prosthetics Laboratory, Schleswig-Holstein University Hospital, Kiel Campus

P-G 400 Pro

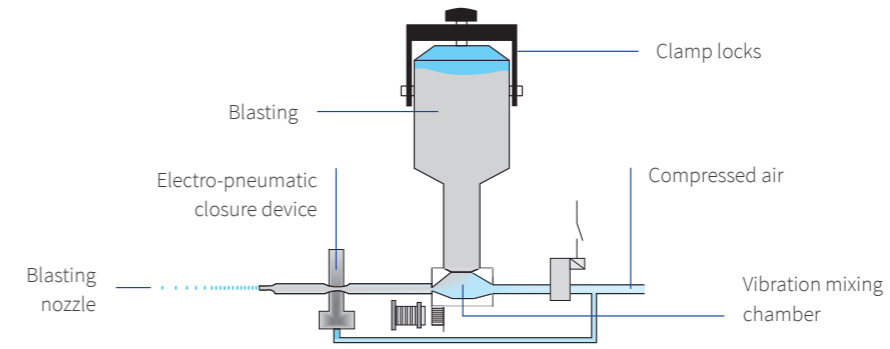
Spot blasting unit

High-end premium spot blasting unit with two to four blasting tanks and vibration mixing chamber system with rapid stopping technology for perfect results without blasting material afterflow.

NEW



PRODUCT HIGHLIGHTS



VIBRATION MIXING CHAMBER SYSTEM

The unique vibration mixing chamber system lowers the cost of blasting material by up to 90% by ensuring an ideal air/sand mixture, making you more cost effective. The vibration mixing chambers are equipped with infinitely variable dosing vibrators and pressure regulators, which control the quantity of blasting material and the blasting pressure. There are 40 programs with different levels of vibration intensity.

RAPID STOPPING TECHNOLOGY

The foot switch controls pneumatic valves that immediately end or trigger the blasting process. This technology offers controlled blasting of delicate objects with pinpoint accuracy, and prevents unwanted re-blasting (meaning less blasting material is used).

AUTOMATIC DETECTION SYSTEM

Removing the desired hand piece from the hand piece holder causes the work parameters (dosing of blasting material quantity, type of blasting material and working pressure) to be shown on the display and automatically enabled. The connected extraction unit starts up and ensures a clear view into the blasting chamber.

CONSISTENT QUALITY AND PRECISION IN EVERY DETAIL

Our P-G 400 spot blasting unit with a modern look has been designed and built to meet the highest standards in metal and precious metal ceramics and in plastics technology. The spot blasting unit is modular in design and allows the use of up to 4 blasting units. Blasting material of 25µ to 250µ can be used without difficulty. The robust, steel plate design and exclusive use of proven components ensure a very long service life. A new electronic part and control panel make the P-G 400 more economical than ever before. The vibration mixing chambers are controlled more precisely and allow even more precise sandblasting.

PRODUCT ADVANTAGES

- ✓ The technology of the P-G 400 enables precise, reliable and comfortable work, as well as using over 90% less blasting material compared to conventional systems, making it extremely cost effective.
- ✓ Set and store various work parameters: blasting material quantity and type, grain size, pressure, blasting time, signal duration, lighting.
- ✓ The set parameters are automatically enabled and displayed when the hand pieces are removed.
- ✓ Work quickly and safely with an optimum air and sand mixture, thanks to the individual settings of the dosing and pressure regulators.
- ✓ An absolutely uniform and reliable flow of blasting material is available at a working pressure of 0.5 bar and over.

PRODUCT DETAILS

CONTROL LOGIC

Clearly arranged controls and indicators ensure straightforward and precise working. The blasting pressure and blasting material supply quantity are set individually for each blasting system and shown on the LED display (type of blasting material, blasting system, grain size, dosing in 10 stages, blasting pressure in increments of 0.1 bar). The sand jet is triggered easily via the foot switch.

AUTOMATIC SWITCH-ON DEVICE

When any function is activated, the lighting and the connected extraction unit are switched on automatically. The unit switches itself off automatically if it is inactive for 15 seconds (this time can be adjusted), and therefore saves a great deal of energy. An extraction unit can be connected on the left or right side, as required.

LEVEL INDICATOR

If the blasting material falls to the reserve level, this is indicated by the relevant signal light on the panel flashing and is visible on the display. At this point, a reserve of blasting material is still available for approx. 10 minutes of blasting.

OUTLET NOZZLE

A practical outlet nozzle for cleaning hands and objects is attached and ready to hand in the blasting chamber.

BLASTING MATERIAL CONTAINER

Fast ventilation for speedy topping up of blasting material with safe and easy to use clamp lock system, preventing unnecessary jamming due to contamination

TECHNICAL DATA

	P-G 400 Pro/4	P-G 400 Pro/3	P-G 400 Pro/2
Blasting units	4	3	2
Hand openings	Right/left	Right/left	Right/left
Width	490 mm	490 mm	490 mm
Depth	680 mm	680 mm	680 mm
Height	400 mm	400 mm	400 mm
Electrical connection	230 V; 50 Hz	230 V; 50 Hz	230 V; 50 Hz
Power consumption	80 W	80 W	80 W
Compressed air connection	Approx. 9 bar	Approx. 9 bar	Approx. 9 bar
Air consumption	Approx. 80 l/min.	Approx. 80 l/min.	Approx. 80 l/min.
Weight	Approx. 45 kg	Approx. 42 kg	Approx. 39 kg
Housing	Durable, environmentally friendly steel plate housing, powder-coated RAL 9006	Durable, environmentally friendly steel plate housing, powder-coated RAL 9006	Durable, environmentally friendly steel plate housing, powder-coated RAL 9006

PRODUCT VERSIONS

All product versions are individually set (type of blasting material, grain size, vibration technology) depending on the desired configuration of the blasting chamber.

Article no.	Type	Four blasting containers	Three blasting containers	Two blasting containers
10370	P-G 400/4	✓	-	-
10371	P-G 400/3	-	✓	-
10372	P-G 400/2	-	-	✓

ACCESSORIES

- Blasting nozzles (page 32)
- Blasting material (page 31)
- Extraction unit (page 32)



For more product details

P-G 400 Pro spot blasting unit

THE NEW-LOOK SPOT BLASTING UNIT WITH ADDED BENEFITS:

- User-friendly control panel
- New electronics and magnetic valves allow more precise blasting than ever before. The vibration mixing chambers are now controlled more precisely
- Maximum blast material savings of up to 90% are achieved, thus increasing your economic efficiency
- Perfect illumination of the blast chamber using new LED technology
- Mechanical level adjustment (tank) is monitored by software
- Ring core transformer is replaced by a switching power supply unit



D-H 22 S

Manual blasting unit

The manual blasting unit is the perfect recirculating blasting unit for cost-effective and efficient blasting.



Durability



Powerful



Compact



Easy to use



Save on blasting material



Optimum workflow



Health and safety

Health and safety

Roomy blasting chamber with optimum lighting

Durable, environmentally friendly, powder-coated steel plate housing

Perfect air-flow routing keeps the work area permanently free of dust and sand and ensures an optimum view

The sand outlet plug makes it easier to change the blasting material

Pressure display via a manometer



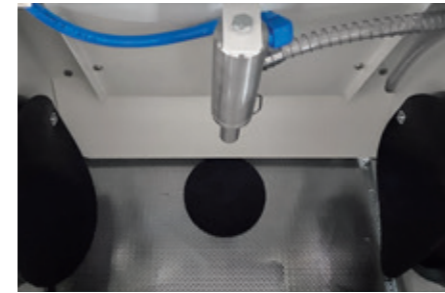
ROBUST STEEL PLATE DESIGN WITH A VERY LONG SERVICE LIFE AND HUGE BLASTING POWER

Our D-H 22 S manual blasting unit is ideal for intensive daily manual blasting with minimum maintenance. The manual blasting units are also available without integrated extraction unit.

PRODUCT ADVANTAGES

- ✓ The intelligent extraction system reduces blasting material consumption by 70% for cost-effective blasting – only unusable fine dust particles are extracted.
- ✓ Huge blasting power thanks to the injector unit with highly resistant boron carbide blasting nozzle.
- ✓ Very high level of health and safety thanks to a two-stage filter system with dust class H. The super-fine filter with its large area even traps up to 99.98% of micro-dust with a particle size of 0.5µ.

PRODUCT HIGHLIGHTS



BLASTING NOZZLE

The hugely powerful injector with highly resistant boron carbide blasting nozzle ensures problem-free, precise manual blasting and a long service life.



SCREEN TECHNOLOGY

Circulation of the blasting material is automatic and a screen that can be removed from the side keeps it free from investment material residues. The base of the unit contains an intake screen, which additionally purifies the blasting material. The blasting material can be emptied easily via the sand outlet plug.

FILTER TECHNOLOGY

The filter signal light indicates the fill level of the dual filter system and automatically switches the unit off. The filter bag capacity of approx. 10 kg is unique among recirculating sand blasting units. The filter bag can be tightly sealed when the mesh basket is removed, therefore guaranteeing dust-free and simple disposal with access from the side.

PRODUCT DETAILS

INTELLIGENT EXTRACTION SYSTEM

The perfect air-flow routing combined with the highly effective extraction motor guarantees you a continuous and clear view of your work and provides a clean and comfortable working environment. The unit's suction power is also intelligently controlled as it adapts itself to the preset power, depending on the level in the filter. This ensures constant power, regardless of the filter fill level. In addition, the extraction motor features regulated, automatic control with a run-on time of 7 seconds.

CONTROL LOGIC

Using the pressure regulator, you can set the working pressure to the desired value and adapt it to your requirements. The installed manometer indicates the set working pressure. The sand jet is triggered easily via the foot switch.

TECHNICAL DATA

Nozzle fittings	Boron carbide blasting nozzle
Extraction unit	Motor fan with automatic switch-off
Filter	Micro-filter and paper filter bag (10 kg)
Hand openings	Left and right
Width	420 mm
Depth	460 mm
Height	590 mm
Electrical connection	230 V; 50 Hz
Power consumption	200 W
Compressed air connection	Approx. 5-6 bar
Air consumption	Approx. 200 l/min.
Weight	Approx. 35 kg
Housing	Durable, environmentally friendly steel plate housing, powder-coated RAL 9002

PRODUCT VERSIONS

Article no.	Type	Integrated extraction unit	External
10320	D-H 22 S	✓	-
10321	D-H 22 SO	-	✓

ACCESSORIES

- Blasting nozzles (page 32)
- Blasting material (page 31)
- Filter technology (page 30)
- Extraction unit (page 32)



For more
product details

D-G 16 S / D-G 16 S 2

Automatic sand blasting unit

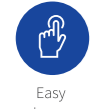
The automatic sand blasting unit D-G 16 is the perfect recirculating blasting unit for cost-effective blasting. It can be used in automatic, manual or dual mode.



Powerful



Durability



Easy to use



Save on blasting material



Optimum workflow



Health and safety

Pressure display via a manometer

Roomy blasting chamber with optimum LED lighting

Perfect air-flow routing keeps the work area permanently free of dust and sand and ensures an optimum view

Intuitive control logic

The important blasting parameters of pressure and time are precisely coordinated

Durable, environmentally friendly, powder-coated steel plate housing

The sand outlet plug makes it easier to change the blasting material



ROBUST STEEL PLATE DESIGN WITH A VERY LONG SERVICE LIFE

Our automatic sand blasting unit D-G 16 is indispensable for ensuring cost effectiveness in blasting technology. This high-performance unit can be used either in automatic mode or as a manual blasting unit, with minimal maintenance. The automatic blasting units are also available without integrated extraction unit.

PRODUCT ADVANTAGES

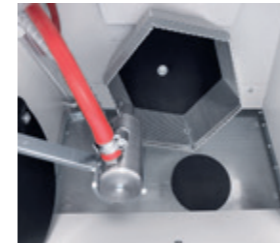
- ✓ The intelligent extraction system reduces blasting material consumption by 70% for cost-effective blasting – only unusable fine dust particles are extracted.
- ✓ Up to ten cast objects can be blasted simultaneously in the sand blasting basket.
- ✓ The important blasting parameters of pressure and time are precisely coordinated.
- ✓ Removable injector for large freedom of movement.
- ✓ Very high level of health and safety thanks to a two-stage filter system with dust class H. The super-fine filter with its large area even traps up to 99.98% of micro-dust with a particle size of 0.5µ.

PRODUCT HIGHLIGHTS



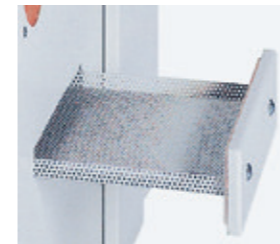
BLASTING UNIT

For manual blasting, the highly resistant boron carbide blasting nozzle with huge blasting power can be removed from the holder. The blasting process is initiated using the foot switch. In the S2 version, dual mode can be used for blasting.



SAND BLASTING BASKET

Rotates with a special geometry. Up to ten model castings can be blasted simultaneously. A rubber inlay in the basket protects the objects and the basket. On average, an object is blasted fully automatically in just 9 minutes.



SCREEN TECHNOLOGY

Circulation of the blasting material is automatic and a screen that can be removed from the side keeps it free from investment material residues. The base of the unit contains an intake screen, which additionally purifies the blasting material. The blasting material can be emptied easily via the sand outlet plug.



FILTER TECHNOLOGY

The filter signal light indicates the fill level of the two-stage filter system and automatically switches the unit off. The filter bags can be tightly sealed when the mesh basket is removed, ensuring dust-free and simple disposal. The filter bag capacity of approx. 10 kg is unique among recirculating sand blasting units.

PRODUCT DETAILS

INTELLIGENT EXTRACTION SYSTEM

70% less blasting material used. The perfect air-flow routing combined with the highly effective extraction motor guarantees you a continuous and clear view of your work and provides a clean and comfortable working environment. The unit's suction power is also intelligently controlled as it adapts itself to the preset power, depending on the level in the filter. This ensures constant power, regardless of the filter fill level. In addition, the extraction motor features regulated, automatic control with a run-on time of 7 seconds.

CONTROL LOGIC

Clearly arranged controls and indicators ensure straightforward and precise working. The blasting pressure and blasting time are individually set and shown on the LED display. The blasting pressure can be adjusted from 1-10 bar. The maximum blasting time is 60 minutes.

TECHNICAL DATA

	D-G 16 S	D-G 16 SO	D-G 16 S2	D-G 16 S2O
Nozzle fittings	Boron carbide blasting nozzle	Boron carbide blasting nozzle	Two boron carbide blasting nozzles	Two boron carbide blasting nozzles
Extraction unit	Motor fan with automatic switch-off	Connection for external extraction unit	Motor fan with automatic switch-off	Connection for external extraction unit
Filter	Super-fine filter and paper filter bag (10 kg)	-	Super-fine filter and paper filter bag (10 kg)	-
Hand openings	Left and right	Left and right	Right	Right
Width	480 mm	480 mm	480 mm	480 mm
Depth	570 mm	570 mm	570 mm	570 mm
Height	705 mm	705 mm	705 mm	705 mm
Electrical connection	230 V; 50 Hz	230 V; 50 Hz	230 V; 50 Hz	230 V; 50 Hz
Power consumption	460 W	200 W	460 W	200 W
Compressed air connection	Max. 10 bar	Max. 10 bar	Max. 10 bar	Max. 10 bar
Air consumption	Approx. 200 l/min.	Approx. 200 l/min.	200 l/min. (400 l/min.)	200 l/min. (400 l/min.)
Weight	Approx. 38 kg	Approx. 30 kg	Approx. 39 kg	Approx. 31 kg
Housing	Durable, environmentally friendly steel plate housing, powder-coated RAL 9002	Durable, environmentally friendly steel plate housing, powder-coated RAL 9002	Durable, environmentally friendly steel plate housing, powder-coated RAL 9002	Durable, environmentally friendly steel plate housing, powder-coated RAL 9002

PRODUCT VERSIONS

Article no.	Type	Integrated extraction unit	External	One blasting nozzle	Two blasting nozzles
10316	D-G 16 S	✓	-	✓	-
10317	D-G 16 S2	✓	-	-	✓
10318	D-G 16 SO	-	✓	✓	-
10319	D-G 16 S2O	-	✓	-	✓

ACCESSORIES

- Blasting nozzles (page 32)
- Blasting material (page 31)
- Filter technology (page 30)
- Extraction unit (page 32)



For more product details

Product comparison

	D-H 22 S	D-H 22 SO	D-G 16 S	D-G 16 SO	D-G 16 S2	D-G 16 S2O
Nozzle fittings	Boron carbide blasting nozzle	Boron carbide blasting nozzle	Boron carbide blasting nozzle	Boron carbide blasting nozzle	Boron carbide blasting nozzle	Boron carbide blasting nozzle
Extraction technology	Extraction motor	-	Extraction motor	-	Extraction motor	-
Dual filter technology	✓	-	✓	-	✓	-
Blasting parameters	Pressure	Pressure	Pressure and time	Pressure and time	Pressure and time	Pressure and time
Air consumption	200 l/min.	200 l/min.	200 l/min.	200 l/min.	200 l/min.	200 l/min.
Sand blasting basket	-	-	✓	✓	✓	✓
Blasting process	Foot switch	Foot switch	Automatic, foot switch	Automatic, foot switch	Automatic, foot switch	Automatic, foot switch
Hand openings	Left and right	Left and right	Left and right	Left and right	Right	Right

Consumables and accessories



Super-fine filter

Fine dust particles in the air are especially dangerous. Damaging effects on skin and respiratory organs have also been found with dental plaster, investment materials and non-classified mixed dust that reached the general dust threshold. For this reason, all Harnisch+Rieth extraction units and blasting units with integrated extraction unit are equipped with super-fine filter cassettes or cartridges.

PRODUCT ADVANTAGES

- ✓ Maximum health and safety protection.
- ✓ Up to 99.98% of micro-dust particles with a grain size of 0.5µ are filtered.

Art. no.	Dust class	D-H 22 S	D-G 16 S, S2
42204	H	✓	✓



Filter bags

All filter bags offered by Harnisch+Rieth are made of the highest quality materials. Extensive quality controls ensure consistently high quality, which is the prerequisite for good functionality and perfect extraction results.

PRODUCT ADVANTAGES

- ✓ Optimum closure system.
- ✓ Capacity of up to 10 kg.
- ✓ The practical mesh basket improves the degree of filling, stabilises the suction power and ensures easy and dust-free disposal.

Art. no.	D-H 22 S / D-G 16 S, S2	Material	Dust class	Volume
42015	✓	Paper	M	Approx. 10 kg
42303	✓	Fleece	M	Approx. 10 kg



Blasting material

The blasting material supplied is of the highest quality. Extensive quality controls and multiple special screens in the filling system developed in-house ensure consistently high quality, which is the prerequisite for good functionality and perfect blasting results. To maintain this high quality, Harnisch+Rieth blasting material is transported and stored in plastic canisters, preventing moisture from penetrating. The 6 kg bottles with handles and practical filler necks are really easy to handle.

Article no.	Grain size	Type	2 kg container	6 kg container	4 x 6 kg container
75552	50µ	Cl. 55A polish blasting material	✓	-	-
75556	50µ	Cl. 55A polish blasting material	-	✓	-
75157	50µ	Cl. 55A polish blasting material	-	-	✓
75155	150µ	Cl. 150A polish blasting material	✓	-	-
75156	150µ	Cl. 150A polish blasting material	-	✓	-
75160	150µ	Cl. 150A polish blasting material	-	-	✓
75207	25µ	Cl. 20B aluminium oxide	✓	-	-
75208	25µ	Cl. 20B aluminium oxide	-	✓	-
75302	50µ	Cl. 30B aluminium oxide	✓	-	-
75308	50µ	Cl. 30B aluminium oxide	-	✓	-
75309	50µ	Cl. 30B aluminium oxide	-	-	✓
75605	120µ	Cl. 60B aluminium oxide	✓	-	-
75606	120µ	Cl. 60B aluminium oxide	-	✓	-
75409	120µ	Cl. 60B aluminium oxide	-	-	✓
75808	180µ	Cl. EW80 aluminium oxide	✓	-	-
75806	180µ	Cl. EW80 aluminium oxide	-	✓	-
75807	180µ	Cl. EW80 aluminium oxide	-	-	✓
75249	250µ	Cl. EW60 aluminium oxide	✓	-	-
75250	250µ	Cl. EW60 aluminium oxide	-	✓	-
75251	250µ	Cl. EW60 aluminium oxide	-	-	✓

SPECIAL ALUMINIUM OXIDE AL2O3

Blasting material of **99.50%** anti-magnetic alpha-aluminium oxide with very high hardness. The blasting material retains its sharp edges until it is worn. Our blasting material undergoes a special screening process, giving it a very high purity.

POLISH BLASTING MATERIAL

Non-abrasive glass beads for smoothing and compressing the surface. For polishing and smoothing precious metal and non-precious metal alloys and devesting inlays and pressed ceramic without removing material. Also for removing plaster residues and tartar. Our blasting material undergoes a special screening process, giving it a very high purity.

PRODUCT ADVANTAGES

- ✓ High-quality material with a very high purity.
- ✓ Multiple special screening process in the filling system developed in-house.
- ✓ Extensive quality controls ensure consistently high quality.



Extraction units D-LE 255 S, D-LE 255 SB

We recommend our D-LE 255 S/SB single-place extraction units, which promise high suction power with maximum filter effectiveness, a dust collection capacity of approx. 10 kg and very quiet operation due to their optimum noise insulation. You can find more information on page 36 ff.

Blasting nozzles

By combining blasting material, blasting nozzles and sophisticated blasting technology from Harnisch+Rieth, you can be assured of quality, durability and speed during your blasting work. All our blasting nozzles are of the highest quality. Extensive quality controls ensure consistently high quality, which is the prerequisite for excellent functionality and perfect blasting results.



Article no.	Type	Material	Grain size	P-G 400	D-H 22 / D-G 16
27004	0.4 mm	Hard metal	25μ	✓	-
27006	0.6 mm	Hard metal	25μ-50μ	✓	-
27008	0.8 mm	Hard metal	50-120μ	✓	-
27010	1.0 mm	Hard metal	120-150μ	✓	-
27012	1.2 mm	Hard metal	150-250μ	✓	-
27015	1.5 mm	Hard metal	200-250μ	✓	-
27018	1.8 mm	Hard metal	250μ	✓	-
27035	2.2 mm	Hard metal	250μ	✓	-
27103	3.5 mm	Boron carbide	~250μ	-	✓



Extraction technology

Our range of models ensures you have the best possible unit for every type of use. It features extraction units with huge suction power, low noise levels and maximum filter effectiveness.

Single-place extraction unit D-LE 255 S/SB | CAM extraction unit D-LE 255 S/CAM SB/CAM

Two-place extraction unit D-LE 255 SD/SDB | Extraction technology consumables and accessories



The notable quality, endurance and precise functionality of Harnisch+Rieth equipment provide great support in my daily lab work.

Master dental technician and senior partner Jan Langner, Schwäbisch Gmünd

D-LE 255 S/SB

Single-place extraction unit

Extraction units for a single workplace, with huge suction power, low noise levels and highly effective filtration.



Durability



Compact



Easy to use



Health and safety



Quiet



Powerful suction



Energy saving



Intuitive and user-friendly operation with a large, clearly arranged multifunctional LED display

Optimum noise insulation for especially smooth running

Integrated castors make it very easy to move

Durable, environmentally friendly, powder-coated steel plate housing

SUPERIOR EXTRACTION RESULTS WITH ULTIMATE PROTECTION FROM FINE DUST.

Our range of models ensures you have the best possible unit for every type of use. The D-LE 255 S/SB single-place extraction unit is the equipment of choice for dust-generating equipment such as blasting units, saws and dental model grinders. Infinitely variable suction power can be selected via a regulator and maintained at a constant level by the automatic air-flow regulation. When the filter bag reaches the maximum fill level, the filter signal light comes on and the unit switches off automatically. High suction power from industrial high-pressure fan motors in various versions, highly effective filtration and optimum noise insulation make these units stand out from the crowd.

PRODUCT ADVANTAGES

- ✓ Automatic air-flow regulation ensures constant suction power regardless of the filter fill level.
- ✓ Automatic and intelligent communication when connected to a dust-generating device as the power source.
- ✓ Effective dust reduction thanks to a high flow rate of approx. 4000 l/min. with low power consumption.
- ✓ Two-stage, dust class H filter system ensures a very high level of health and safety.

PRODUCT HIGHLIGHTS



FLOW RATE CONTROL DEVICE

The air-flow rate is regulated automatically. The air-flow rate through the suction funnel remains constant, irrespective of the degree of soiling of the filter material. At specified time intervals, the extraction unit carries out a self-test, during which the air ducts are sucked clear. The air-flow rate can be adjusted for the type of collection device (suction muzzle), and its flow rate indicated on the display. The flow rate control device monitors not only the air-flow rate, but also the degree of soiling of the pre-filter and super-fine filter. The condition of the filter components and a reduction in the extracted air-flow rate through the collection device (suction muzzle) to below the prescribed threshold are indicated visually and acoustically. If the air-flow rate falls below the limit, all dust-generating devices connected to the extraction unit are switched off.

FILTER TECHNOLOGY

All the extraction units in our D-LE 255 model range are equipped with a two-stage filter system. The dust is collected in a large, two-ply filter bag with a capacity of up to 10 kg, trapped in a mesh basket and stabilised, which improves the maximum achievable fill level and optimises the unit's suction power. The filter bags can be tightly sealed when the mesh basket is removed, ensuring dust-free and simple disposal. The large-area, super-fine filter, which is downstream from

the filter bag, traps 99.98% of even micro-dust with a particle size of 0.5µ, offering additional health protection. The condition of the filter components and a reduction in the extracted air-flow rate through the suction funnel are indicated visually and acoustically.

PRODUCT DETAILS

HIGH ENERGY EFFICIENCY

Our extraction units achieve their high energy efficiency by very high suction combined with low power consumption. All units from the D-LE series are designed with exceptionally short air flows with minimal turbulence. The flow rate control device regulates the suction power with considerably less energy use and provides the user with an extraction system that is high-powered yet has low running costs.

MOTOR TECHNOLOGY

Harnisch+Rieth offer different versions to suit the running times and size of your devices. We recommend the D-LE 255 S with brushed motor for smaller devices, and the D-LE 255 SB with brushless motor for larger devices with long work intervals. The motor additionally has sound insulation, making the unit more comfortable to work with. Both extraction units guarantee extremely strong suction and render your laboratory a quiet and clean environment with high standards of health and safety.

OPERATING MODE

For the D-LE 255 S/SB series, the extraction parameters can be set as described below.

Continuous mode - In continuous mode, the extraction unit runs as soon as it is switched on, regardless of whether any dust-generating devices are connected. The suction power can be infinitely adjusted via potentiometers on the

operating panel. This means that the air-flow rate (l/s) is regulated automatically and always remains constant in the suction funnel, irrespective of the degree of soiling of the filter material. When the dust-generating device provides a power source for the extraction unit, the unit benefits from quick-fire automatic switch-on. That's why we recommend the P-G 400 spot blasting unit.

TECHNICAL DATA

Width	420 mm	Max. flow rate	3,900 l/min. (234 m ³ /h)
Depth	370 mm	Super-fine filter	Dust class H, DIN EN 60335-2-69
Height	543 mm	Filter area	1.7 m ²
Electrical connection	220-240 V/50 Hz	Suction hose connection	Ø 50 mm
Fuse	2x 16 A/T main fuse	Dust bag capacity	Up to 10 kg (depending on the type of dust)
Power consumption	Max. 1,100 (fan power)	Weight	Approx. 25 kg
Air throughput	Max. 55 l/sec.	Housing	Durable, environmentally friendly steel plate housing, powder coated RAL 9002
Sound pressure level	52 dB(A) with minimum suction 64 dB(A) with maximum suction		

PRODUCT VERSIONS

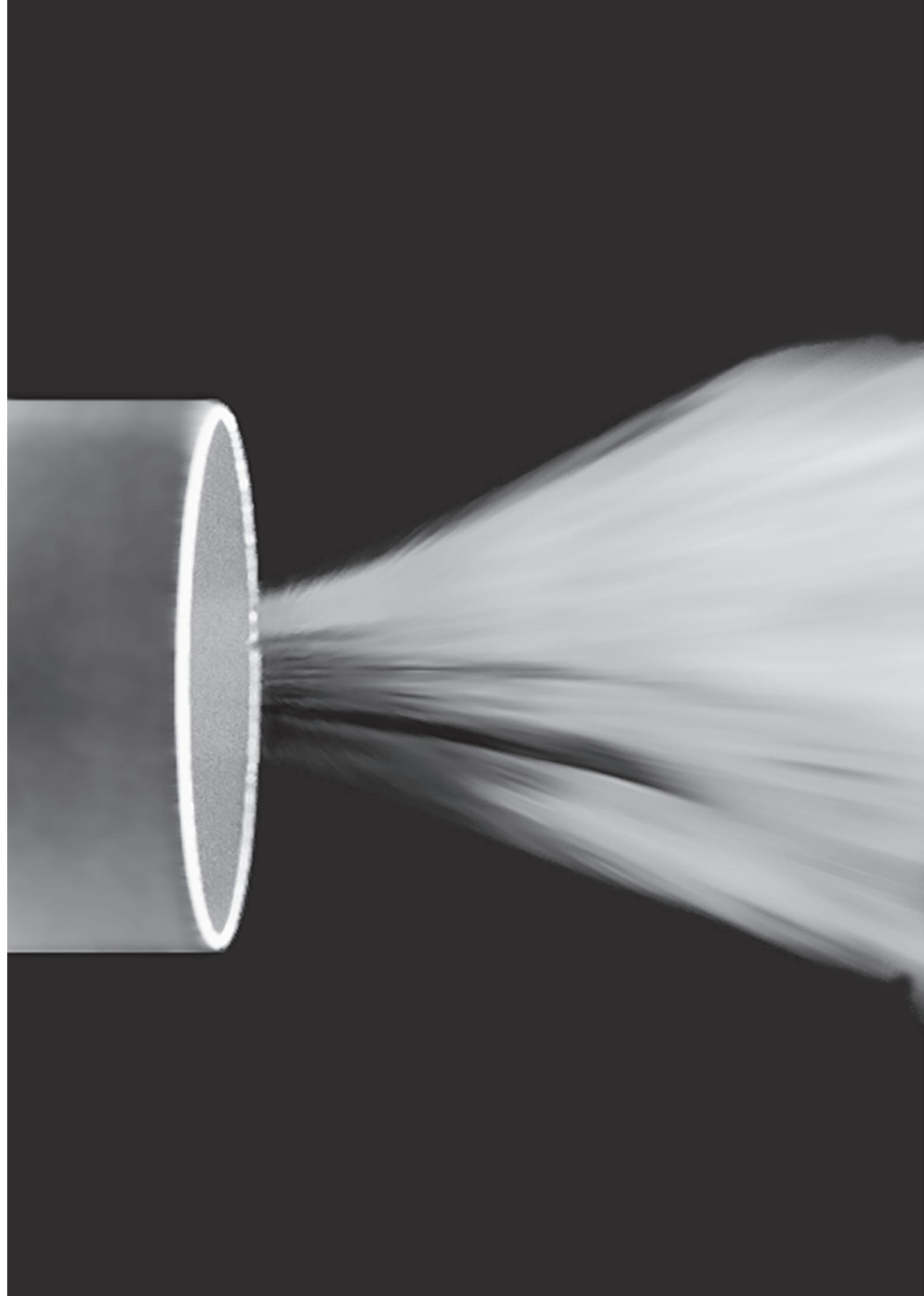
Article no.	Type	Motor technology	Filter material
10620	D-LE 255 S	Brushed motor	Paper
10621	D-LE 255 SB	Brushless motor	Fleece

ACCESSORIES

- Filter bags (page 48)
- Super-fine filters (page 48)
- Suction hoses (page 49)
- Connection pieces (page 49)



For more
product details



D-LE 255 SD / SDB

Two-place extraction unit

The ideal extraction units for two workplaces, with huge suction power, low noise levels and maximum filtration.



Durability



Compact



Easy to use



Health and safety



Quiet



Powerful suction



Energy saving



Intuitive and user-friendly operation with a large, clearly arranged multifunctional LED display

Optimum noise insulation for especially smooth running

Integrated castors make it very easy to move

Durable, environmentally friendly, powder-coated steel plate housing

SUPERIOR EXTRACTION RESULTS WITH ULTIMATE PROTECTION FROM FINE DUST.

Our range of models ensures you have the best possible unit for every type of use. The D-LE 255 SD/SDB two-place extraction units promise the optimum unit for every type of use. These extraction units are designed for one or two extraction points, with automatic switch-on device and state-of-the-art electronic air-flow rate regulation. As such, they are ideal for use at preparatory workplaces, but also for extraction for blasting units, saws, dental model grinders and other dust-generating devices. When the filter bag reaches the maximum fill level, the filter signal light comes on and the unit switches off automatically. High suction power from industrial high-pressure fan motors, highly effective filtration and optimum noise insulation make sure these units stand out from the crowd.

PRODUCT ADVANTAGES

- ✓ Automatic air-flow regulation ensures constant suction power regardless of the filter fill level.
- ✓ Automatic and intelligent automatic switch-on device for a maximum of two dust-generating devices.
- ✓ Effective dust reduction thanks to a high flow rate of approx. 4000 l/min. with low power consumption.
- ✓ Two-stage, dust class H filter system ensures a very high level of health and safety.

PRODUCT HIGHLIGHTS



FLOW RATE CONTROL DEVICE

The air-flow rate is regulated automatically. The air-flow rate through the suction funnel remains constant, irrespective of the degree of soiling of the filter material. At specified time intervals, the extraction unit carries out a self-test, during which the air ducts are sucked clear. The air-flow rate can be adjusted for the type of collection device (suction muzzle), and its flow rate indicated on the display. The flow rate control device monitors not only the air-flow rate, but also the degree of soiling of the pre-filter and super-fine filter. The condition of the filter components and a reduction in the extracted air-flow rate through the collection device (suction muzzle) to below the prescribed threshold are indicated visually and acoustically. If the air-flow rate falls below the limit, all dust-generating devices connected to the extraction unit are switched off.

FILTER TECHNOLOGY

All the extraction units in our D-LE 255 model range are equipped with a two-stage filter system. The dust is collected in a large, two-ply filter bag with a capacity of up to 10 kg, trapped in a mesh basket and stabilised, which improves the maximum achievable fill level and optimises the unit's suction power. The filter bags can be tightly sealed when the mesh basket is removed, ensuring dust-free and simple disposal. The large-area, super-fine filter, which is downstream from

the filter bag, traps 99.98% of even micro-dust with a particle size of 0.5µ, offering additional health protection. The condition of the filter components and a reduction in the extracted air-flow rate through the suction funnel are indicated visually and acoustically.

PRODUCT DETAILS

HIGH ENERGY EFFICIENCY

Our extraction units achieve their high energy efficiency by very high suction combined with low power consumption. All units from the D-LE series are designed with exceptionally short air flows with minimal turbulence. The flow rate control device regulates the suction power with considerably less energy use and provides the user with an extraction system that is high-powered yet has low running costs.

MOTOR TECHNOLOGY

Harnisch+Rieth offer different versions to suit the running times and size of your devices. We recommend the D-LE 255 SD with brushed motor for smaller devices, and the D-LE 255 SDB with brushless motor for larger devices with long work intervals. The motor additionally has sound insulation, making the unit more comfortable to work with. Both extraction units guarantee extremely strong suction and render your laboratory a quiet and clean environment with high standards of health and safety.

OPERATING MODE

For the D-LE 255 SD/SDB series, the extraction parameters can be set as described below.

Continuous mode - In continuous mode, the extraction unit runs as soon as it is switched on, regardless of whether any dust-generating devices are connected. The suction power can be infinitely adjusted via potentiometers on the operating panel.

Automatic mode - In automatic mode, the extraction unit only starts when a connected electrical device is switched on or operated. All commercially available hand pieces or dust-generating devices can be connected. In both operating modes, different types of control (l/s or m/s) can be set. The air-flow rate is regulated automatically and is always constant, regardless of the degree of soiling of the filter material.

TECHNICAL DATA

Width	420 mm	Max. flow rate	3,900 l/min. (234 m ³ /h)
Depth	370 mm	Super-fine filter	Dust class H, DIN EN 60335-2-69
Height	543 mm	Filter area	1.7 m ²
Electrical connection	220-240 V/50 Hz	Suction hose connection	Ø 50 mm
Fuse	2x 16 A/T main fuse	Dust bag capacity	Up to 10 kg (depending on the type of dust)
Power consumption	Max. 1,100 (fan power)	Weight	Approx. 25 kg
Air throughput	Max. 55 l/sec.	Housing	Durable, environmentally friendly steel plate housing, powder-coated RAL 9002
Sound pressure level	52 dB(A) with minimum suction 64 dB(A) with maximum suction		

PRODUCT VERSIONS

Article no.	Type	Motor technology	Filter material
10645	D-LE 255 SD	Brushed motor	Paper
10641	D-LE 255 SDB	Brushless motor	Fleece

ACCESSORIES

- Filter bags (page 48)
- Super-fine filters (page 48)
- Suction hoses (page 49)
- Connection pieces (page 49)



For more
product details



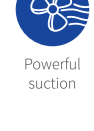
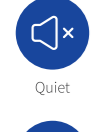
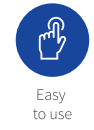
D-LE 255 S/CAM SB/CAM

CAM extraction unit

Extraction units for CAM machines, with huge suction power, low noise levels and maximum filtration.



Durable, environmentally friendly, powder-coated steel plate housing



SUPERIOR EXTRACTION RESULTS WITH ULTIMATE PROTECTION FROM FINE DUST.

These extraction units feature a powerful, noise-insulated high-pressure fan and also automatic air-flow regulation, automatic switch-on and switch-off and filter change indicator. The D-LE 255/CAM series has the option of computer numerical control (CNC machine) for adjusting the set air-flow rate, and is primarily used for the extraction of dust, metal dust, mineral dust, plastic dust, plaster dust, oxide ceramic and other ceramic dust.

PRODUCT ADVANTAGES

- ✓ Automatic and intelligent bidirectional communication with your CAM unit.
- ✓ Automatic air-flow regulation ensures constant suction power regardless of the filter fill level.
- ✓ Effective dust reduction thanks to a high flow rate of approx. 4000 l/min. with low power consumption.
- ✓ Two-stage, dust class H filter system ensures a very high level of health and safety.

PRODUCT HIGHLIGHTS



FLOW RATE CONTROL DEVICE

The air-flow rate is regulated automatically. The air-flow rate through the suction funnel remains constant, irrespective of the degree of soiling of the filter material. At specified time intervals, the extraction unit carries out a self-test, during which the air ducts are sucked clear. The air-flow rate can be adjusted for the type of collection device (suction muzzle), and its flow rate indicated on the display. The flow rate control device monitors not only the air-flow rate, but also the degree of soiling of the pre-filter and super-fine filter. The condition of the filter components and a reduction in the extracted air-flow rate through the collection device (suction muzzle) to below the prescribed threshold are indicated visually and acoustically. If the air-flow rate falls below the limit, all dust-generating devices connected to the extraction unit are switched off.

FILTER TECHNOLOGY

All the extraction units in our D-LE 255 model range are equipped with a two-stage filter system. The dust is collected in a large, two-ply filter bag with a capacity of up to 10 kg, trapped in a mesh basket and stabilised, which improves the maximum achievable fill level and optimises the unit's suction power. The filter bags can be tightly sealed when the mesh basket is removed, ensuring dust-free and simple disposal. The large-area, super-fine filter, which is downstream from

the filter bag, traps 99.98% of even micro-dust with a particle size of 0.5µ, offering additional health protection. The condition of the filter components and a reduction in the extracted air-flow rate through the suction funnel are indicated visually and acoustically.

BIDIRECTIONAL COMMUNICATION – SIMPLY CONNECT AND START EXTRACTION

The interface offers intelligent bidirectional communication with your CAM unit. It allows signals to be processed and the necessary action to be initiated, e.g. switching on and off, monitoring the filter status and functional status of extraction.

Extraction continues working even when the filter is full, until the ongoing production step in the CNC machine is complete. The extraction unit signals the filter status to the CNC machine and prevents another program from being started.

PRODUCT DETAILS

HIGH ENERGY EFFICIENCY

Our extraction units achieve their high energy efficiency by very high suction combined with low power consumption. All units from the D-LE series are designed with exceptionally short air flows with minimal turbulence. The flow rate control device regulates the suction power with considerably less energy use and provides the user with an extraction system that is high-powered yet has low running costs.

OPERATING MODE

For the D-LE 255 CAM series, the extraction parameters can be set as described below.

Automatic mode - The suction power can be set and regulated in increments in both units of measurement, "flow rate" (l/s) and "air speed" (m/s). The air-flow rate is regulated automatically and is always constant through the suction funnel, regardless of the degree of soiling of the filter material.

TECHNICAL DATA

Width	420 mm	Max. flow rate	3,900 l/min. (234 m ³ /h)
Depth	370 mm	Super-fine filter	Dust class H, DIN EN 60335-2-69
Height	543 mm	Filter area	1.7 m ²
Electrical connection	220-240 V/50 Hz	Suction hose connection	Ø 50 mm
Fuse	2x 16 A/T main fuse	Dust bag capacity	Up to 10 kg (depending on the type of dust)
Power consumption	Max. 1,100 (fan power)	Weight	Approx. 25 kg
Air throughput	Max. 55 l/sec.	Housing	Durable, environmentally friendly steel plate housing, powder-coated RAL 9002
Sound pressure level	52 dB(A) with minimum suction 64 dB(A) with maximum suction		

PRODUCT VERSIONS

Article no.	Type	Motor technology	Filter material
10622	D-LE 255 S/CAM	Brushed motor	Paper
10623	D-LE 255 SB/CAM	Brushless motor	Fleece

ACCESSORIES

- Filter bags (page 48)
- Suction hoses (page 49)
- Interface cables (page 49)
- Super-fine filters (page 48)
- Connection pieces (page 49)



For more product details

EXTRACTION TECHNOLOGY

Product comparison

	D-LE 255 S	D-LE 255 SB	D-LE 255 SD	D-LE 255 SDB	D-LE 255 S/ CAM	D-LE 255 SB/ CAM
CAM extraction	-	-	-	-	✓	✓
Device extraction	✓	✓	✓	✓	-	-
Single-place extraction	✓	✓	-	-	✓	✓
Two-place extraction	-	-	✓	✓	-	-
Dual filter technology	✓	✓	✓	✓	✓	✓
Filter bag (dust separation)	Paper bag	Fleece bag	Paper bag	Fleece bag	Paper bag	Fleece bag
Motor technology	Brushed motor	Brushless motor	Brushed motor	Brushless motor	Brushed motor	Brushless motor
Automatic switch-on device	*	*	✓	✓	✓	✓
Suction power in litres per second	10-55	10-55	10-55	10-55	10-55	10-55
Noise level in db(A)	52-64	52-64	52-64	52-64	52-64	52-64
Dimensions (LxDxH) in mm	420 x 370 x 543	420 x 370 x 543	420 x 370 x 543	420 x 370 x 543	420 x 370 x 543	420 x 370 x 543
Weight	25.0 kg	25.0 kg	25.0 kg	25.0 kg	25.0 kg	25.0 kg

*Only when the consumer is used as the power source (e.g. P-G 400 – D-LE 255 S/SB)

Consumables and accessories



Super-fine filter

Fine dust particles in the air are especially dangerous. Damaging effects on skin and respiratory organs have also been found with dental plaster, investment materials and non-classified mixed dust that reached the general dust threshold. For this reason, all Harnisch+Rieth extraction units and blasting units with integrated extraction unit are equipped with super-fine filter cassettes or cartridges.

PRODUCT ADVANTAGES

- ✓ Maximum health and safety protection.
- ✓ Up to 99.98% of micro-dust particles with a grain size of 0.5µ are filtered.

Art. no.	D-LE 255 S SB S/CAM SB/CAM SD SDB	Dust class	Test standard
42250	✓	H	DIN EN 60335-2-69



Filter bags

All filter bags offered by Harnisch+Rieth are made of the highest quality materials. Extensive quality controls ensure consistently high quality, which is the prerequisite for good functionality and perfect extraction results.

PRODUCT ADVANTAGES

- ✓ Optimum closure system.
- ✓ Capacity of up to 10 kg.
- ✓ The practical mesh basket improves the degree of filling, stabilises the suction power and ensures easy, dust-free disposal.



Art. no.	D-LE 255 S SB S/CAM SB/CAM SD SDB	Material	Dust class	Volume
42015	✓	Paper	M	Approx. 10 kg
42303	✓	Fleece	M	Approx. 10 kg

Adapters

Practical adapters ensure an optimum connection for the suction hose.



Reducing piece

Article no.	Type
72004	ø 40 mm
72007	ø 45 mm
72005	ø 50 mm
35655	ø 50 / 46 mm (conical)



Y-adapter

Article no.	Type
71850	Ø 50/2 x Ø 50
71853	Ø 50/2 x Ø 45
71855	Ø 50/2 x Ø 40



H+R extraction hoses

The highly flexible suction hoses have impressively low internal air resistance and are available in four sizes.

Article no.	Type
72040	ø 40 mm
72045	ø 45 mm
72050	ø 50 mm

Interface cables

The interface cables make sure your CAM unit and our extraction unit can interact seamlessly.

Article no.	Type
63133	Interface cable type 1 for vhf
63134	Interface cable type 2 for Roland DG
63135	Interface cable type 3 for Imes-Icore
63136	Interface cable type 4 for Amann Girrback
63137	Interface cable type 5 for Yenadent
63138	Interface cable type 6 for Zirkozahn
63139	Interface cable type 7 for vhf



Steam blasting technology

Our range of models ensures you have the best possible unit for every type of use: mobile, with tank, or tank with permanent water connection. All steam blasting units are equipped with identical heating elements and are ready to use in just **4 minutes**.

Compact, powerful and productive.

Steam blasting unit A-S 80 | Steam blasting unit D-S 100 | Steam blasting unit D-S 100 A
"Kalk free" filter system | Steam blasting technology consumables and accessories

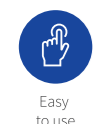
We've been working with equipment from the Harnisch+Rieth company every day for decades. The quality of the equipment and the excellent service are truly unique. For me, no other manufacturer in the market can compare.

Master dental technician Nico Riester, Hechinger Zahntechnik Riester GmbH, Hechingen

A-S 80

Mobile steam blasting unit

The compact and reliable steam blasting unit for all cleaning applications using dry steam.



YOU DON'T HAVE TO BE GREAT IN SIZE TO ACHIEVE GREAT THINGS.

Our new A-S 80 steam blasting unit achieves the highest level of quality and reliability. The steam blasting unit is supplied with water from an external container and has a large, rapidly heated boiler capacity of 2.3 l. It is ideal for rapid and thorough cleaning of instruments, and for the complete removal of wax, grease, paste, oil, chips, adhesive and other residues.

PRODUCT ADVANTAGES

- ✓ Portable and ideal for use in tight spaces.
- ✓ Can be wall-mounted.
- ✓ Extremely quick heating time due to a powerful heating system. The steam blasting unit is ready to use after just **4-5** minutes.
- ✓ A high and constant steam pressure of 5 bar guarantees that the steam temperature remains steady at 160 °C.
- ✓ Intelligent pump control to avoid interruptions to your work.

PRODUCT HIGHLIGHTS

CONTROL SYSTEM

The unit is equipped with an all-electronic control system that automatically and constantly monitors and regulates the temperature, pressure and water level. The high-performance pressure switch provided keeps the steam pressure constant. The unit features a pressure relief valve that automatically relieves excessive steam pressure at 8.5 bar.

HEATING ELEMENT

The steam is generated directly in an insulated stainless steel heating boiler by a powerful heating coil, which saves almost half the electricity compared to indirect heating in the base of the boiler. The pressure and temperature of the steam are constantly monitored by overpressure protection and temperature protection with automatic switch-off.

PRODUCT VERSIONS

Art. no.	Type	Hose length 1000 mm	Hose length 1500 mm	Hose length 2000 mm
10760	A-S 80-1	✓	-	-
10761	A-S 80-1,5	-	✓	-
10762	A-S 80-2	-	-	✓

PRODUCT DETAILS

CONTROL LOGIC

The boiler is filled by a robust high-pressure pump with thermal cut-out. Steam blasting is performed with the hand piece, which is fitted with a fine nozzle. The dry steam with very low moisture content is constantly at 160 °C. After use, the hand piece is placed back in the holder attached to the housing. The drain cock is used for cleaning the boiler, so that limescale is easily removed.

HAND PIECE

The ergonomically designed and easy-to-hold hand piece is made of special, heat insulating, solid plastic. The thermal steam hose connected to the hand piece is extremely flexible and has a textile protective sleeve.

TECHNICAL DATA

Width	240 mm	Safety valve	Opens at 7 bar
Depth	300 mm	Operating pressure	At 5 bar
Height	365 mm	Temperature limiter	170 °C
Electrical connection	230 V; 50 Hz	Weight	12.2 kg
Power consumption	2.6 kW	Housing	Durable, environmentally friendly stainless-steel housing, powder coated RAL 9002
Boiler volume	2.3 l		
Steam temperature	160 °C		

ACCESSORIES

- “Kalk free” descaling agent (page 66)
- Spray guard (page 66)



For more product details

D-S 100

Steam blasting unit

The powerful and reliable steam blasting unit for all tank-operated cleaning applications.



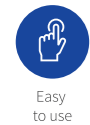
Indication and monitoring of operating states

When using wet steam, the water content can be adjusted via an infinitely variable valve

Selection button for wet and dry steam

Steam blasting is activated by the practical foot switch

Durable, environmentally friendly, powder-coated stainless-steel housing



TRUE GREATNESS COMES FROM WITHIN.

Our D-S 100 steam blasting unit achieves the highest level of quality and reliability. It is ideal for rapid and thorough cleaning of instruments, and for the complete removal of wax, grease, paste, oil, chips, adhesive and other residues. The steam blasting unit includes a water tank with manual filling.

PRODUCT ADVANTAGES

- ✓ Total capacity of 7.3 l for long-lasting use.
- ✓ The pressureless water tank can also be refilled during operation, and prevents time-consuming lowering of the boiler pressure.
- ✓ Intelligent pump control to avoid interruptions to your work.
- ✓ Extremely quick heating time due to a powerful heating system. The steam blasting unit is ready to use after just **4-5** minutes.
- ✓ A high and constant steam pressure of 5 bar guarantees that the steam temperature remains steady at 160 °C.

PRODUCT HIGHLIGHTS

CONTROL SYSTEM

The unit is equipped with an all-electronic control system that automatically and constantly monitors and regulates the temperature, pressure and water level. The high-performance pressure switch provided keeps the steam pressure constant. The unit features a pressure relief valve that automatically relieves excessive steam pressure at 8.5 bar.

HEATING ELEMENT

The steam is generated directly in an insulated stainless steel heating boiler by a powerful heating coil, which saves almost half the electricity compared to indirect heating in the base of the boiler. The pressure and temperature of the steam are constantly monitored by overpressure protection and temperature protection with automatic switch-off.

PRODUCT DETAILS

CONTROL LOGIC

The boiler is filled by a robust high-pressure pump with thermal cut-out. Steam blasting is performed with the hand piece, which is fitted with a fine nozzle. A choice of dry or wet steam can be used for blasting. Water is supplied manually via the water tank, which indicates the water level acoustically and visually. The signal persists until the water tank is refilled. The drain cock is used for cleaning the boiler, so that limescale is easily removed.

SAFETY

The unit is equipped with an electronic descaling system to prevent limescale deposits and the accumulation of limescale residues. Any deposits that do occur are easily removed using the integrated flushing mode. What's more, in the event of a leak the water monitor stops the water supply immediately, switches the unit off and therefore prevents potential water damage.

HAND PIECE

After use, the hand piece is placed back in the holder, which is attached to the spray guard or the housing. The ergonomically designed and easy-to-hold hand piece is made of special, heat insulating, solid plastic. The thermal steam hose connected to the hand piece is extremely flexible and has a textile protective sleeve.

TECHNICAL DATA

Width	325 mm
Depth	305 mm
Height	540 mm
Electrical connection	220 V; 50 Hz
Power consumption	2.6 KW
Boiler volume	2.3l
Steam temperature	160 °C
Sound pressure level	52 dB(A) with minimum suction 64 dB(A) with maximum suction


Water supply tank	5 l with manual filling during operation
Safety valve	Opens at 7 bar
Operating pressure	5 bar
Temperature limiter	170 °C
Weight	20 kg without spray guard
Housing	Durable, environmentally friendly stainless-steel housing, powder-coated RAL 9002
Required fusing for mains connection	16 A at 220 V

PRODUCT VERSIONS

Article no.	Type	Hose length 1000 mm	Hose length 1500 mm	Hose length 2000 mm	Spray guard
10770	D-S 100-1	✓	-	-	-
10771	D-S 100-1S	✓	-	-	✓
10772	D-S 100-1.5	-	✓	-	-
10773	D-S 100-1.5S	-	✓	-	✓
10774	D-S 100-2	-	-	✓	-
10777	D-S 100-2S	-	-	✓	✓

ACCESSORIES

- “Kalk free” descaling agent (page 66)
- Spray guard (page 66)



For more product details



D-S 100 A

Steam blasting unit

The powerful and reliable steam blasting unit for all cleaning applications with permanent water connection.



When using wet steam, the water content can be adjusted via an infinitely variable valve

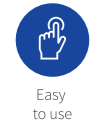
Indication and monitoring of operating states

Selection button for wet and dry steam

Steam blasting is activated by the practical foot switch

Durable, environmentally friendly, powder-coated stainless-steel housing

A large, clear manometer indicates the boiler pressure at any given time



HIGH-END STEAM BLASTING UNIT DESIGNED FOR CONTINUOUS USE

Our D-S 100 A steam blasting unit achieves the highest level of quality and reliability. It is ideal for rapid and thorough cleaning of instruments, and for the complete removal of wax, grease, paste, oil, chips, adhesive and other residues. The steam blasting unit has a permanent water connection and can also be refilled manually at any time.

PRODUCT ADVANTAGES

- ✓ Automatic water refilling via a permanent water connection.
- ✓ The pressureless water tank (5.0 l) can also be refilled during operation, and prevents time-consuming lowering of the boiler pressure.
- ✓ You can choose to have the water supplied from a tank or a permanent water connection.
- ✓ Intelligent pump control to avoid interruptions to your work.
- ✓ Extremely quick heating time due to a powerful heating system. The steam blasting unit is ready to use after just **4-5** minutes.
- ✓ A high and constant steam pressure of 5 bar guarantees that the steam temperature remains steady at 160 °C.

PRODUCT HIGHLIGHTS

CONTROL SYSTEM

The unit is equipped with an all-electronic control system that automatically and constantly monitors and regulates the temperature, pressure and water level. The high-performance pressure switch provided keeps the steam pressure constant. The unit features a pressure relief valve that automatically relieves excessive steam pressure at 8.5 bar.

HEATING ELEMENT

The steam is generated directly in an insulated stainless steel heating boiler by a powerful heating coil, which saves almost half the electricity compared to indirect heating in the base of the boiler. The pressure and temperature of the steam are constantly monitored by overpressure protection and temperature protection with automatic switch-off.

PRODUCT DETAILS

CONTROL LOGIC

The boiler is filled by a robust high-pressure pump with thermal cut-out. Steam blasting is performed with the hand piece, which is fitted with a fine nozzle. A choice of dry or wet steam can be used for blasting. Water is supplied either from an external water supply main or manually via the water tank, which indicates the water level acoustically and visually. The signal persists until the water tank is refilled. The drain cock is used for cleaning the boiler (desludging).

SAFETY

The unit is equipped with an electronic descaling system to prevent limescale deposits and the accumulation of limescale residues. Any deposits that do occur are easily removed using the integrated flushing mode. What's more, in the event of a leak the water monitor stops the water supply immediately, switches the unit off and therefore prevents potential water damage.

HAND PIECE

After use, the hand piece is placed back in the holder, which is attached to the spray guard or the housing. The ergonomically designed and easy-to-hold hand piece is made of special, heat insulating, solid plastic. The thermal steam hose connected to the hand piece is extremely flexible and has a textile protective sleeve.

TECHNICAL DATA

Width	325 mm	Safety valve	Opens at 7 bar
Depth	305 mm	Operating pressure	5 bar
Height	540 mm	Temperature limiter	170 °C
Electrical connection	220 V; 50 Hz	Weight	20 kg without spray guard
Power consumption	2.6 KW	Housing	Durable, environmentally friendly stainless steel housing, powder-coated RAL 9002
Boiler volume	2.3l	Required fusing for mains connection	16 A at 220 V
Steam temperature	160 °C		
Water supply tank	5 l + permanent water connection		

PRODUCT VERSIONS

Article no.	Type	Hose length 1000 mm	Hose length 1500 mm	Hose length 2000 mm	Spray guard
10775	D-S 100 A-1	✓	-	-	-
10778	D-S 100 A-1S	✓	-	-	✓
10779	D-S 100 A-1.5	-	✓	-	-
10783	D-S 100 A-1.5S	-	✓	-	✓
10784	D-S 100 A-2	-	-	✓	-
10785	D-S 100 A-2S	-	-	✓	✓

EMPFEHLUNG

For applications without a descaling system we recommend our “Kalk free” filter system. This combines outstanding efficiency with simple installation. Our filter system doesn’t need a power connection and reliably prevents the build-up of limescale. This saves energy, extends maintenance intervals and prevents your unit from premature ageing. Further information can be found on page 62.

SERVICE LIFE

To reduce maintenance and extend service intervals when mains water is used, we promise an extended service life when our “Kalk free” filter system (page 62) is used, and guarantee a reliable supply of clean, lime-free water.



ACCESSORIES

- “Kalk free” descaling agent (page 66)
- Spray guard (page 66)
- Filter system (page 62)



For more
product details

STEAM BLASTING TECHNOLOGY

Product comparison

	A-S 80	D-S 100	D-S 100 A
Tank operation	-	5 l	5 l
Permanent water connection	-	-	✓
Boiler volume	2.3 l	2.3 l	2.3 l
Ready to use	4-5 min	4-5 min	4-5 min
Steam temperature	165 °C	165 °C	165 °C
Operating pressure	5 bar	5 bar	5 bar
Dry steam	✓	✓	✓
Wet steam function	-	✓	✓
Leak protection	-	✓	✓
Electr. descaling system	-	✓	✓
Connection to “Kalk free” filter system	-	-	✓
Adaptive spray guard	-	✓	✓
Operation by foot switch	✓	✓	✓
Individual hose length	✓	✓	✓
Wall mounting	✓	✓	✓
Dimensions (WxDxH)	240 x 300 x 365 mm	325 x 305 x 540 mm	325 x 305 x 540 mm
Weight	12.2 kg	20 kg	20.2 kg

“Kalk free” filter system

Steam blasting accessory D-S 100 A and for any manufacturer

The Harnisch+Rieth filter system satisfies the exacting requirements of critical applications and can help to reduce costs.



Filter system for wall mounting

Simple installation with standard plumbing connections.

All filter candles fit in the filter head, making it easy to switch to a larger candle without any problems.



The filter head features valve technology that allows the candles to be replaced without turning off the water supply. A flush valve is also incorporated.

The wall fastener allows the filter head to be mounted on the wall with ease.



Durability



Easy to use



Compact



Optimum workflow

DURABILITY AND QUALITY FOR ALL STEAM BLASTING UNITS WITH PERMANENT WATER CONNECTION.

The Harnisch+Rieth filter cartridge system sets a new benchmark. It has been specially designed for our units and the kind of work they do. The unique water filter system combines sophisticated filter technology with intelligent engineering that could previously only be achieved in larger and more expensive installations. To a large extent, the efficiency of steam blasting units, disinfectant cleaners and wax extraction units, the level of safety when using sterilisers and the reliability of commercial equipment all depend on the water quality and hence also on the water treatment technology.

PRODUCT ADVANTAGES

- ✓ Optimised price/performance ratio
- ✓ Low investment and maintenance costs
- ✓ Units are reliably supplied with pure (lime-free) water
- ✓ Excellent cleaning and disinfection results
- ✓ Save on the cost of repairing damage caused by lime
- ✓ Easy to use

PRODUCT HIGHLIGHTS



FLOWMETER

The flowmeter measures the water flow rate and indicates pending filter replacement optically and acoustically.

- Programmable water hardness
- Visual and acoustic filter replacement warning
- Clear OLED display and intuitive menu-led navigation
- Battery operation up to 5 years, or via mains connection
- Attachment for mounting on the filter head, or wall mounting

PRODUCT DETAILS

INSTALLATION, MAINTENANCE AND REPLACEMENT

Harnisch+Rieth's filter cartridge system is modular in design. It consists of a head and filter candle with different configurations and treatment capacity levels. This system family has been designed for use in laboratories, medical centres and various commercial enterprises. Thanks to its compact dimensions and unique multi-valve connection head, the system can be installed and operated almost anywhere, in a vertical position, either as a free-standing unit or mounted on a wall.

- Replace cartridges in the network in a matter of seconds: unscrew, screw in, finished!
- Bleed and flush directly at the filter head with no need to disconnect hoses
- Automatic inlet and outlet check valves for safe cartridge replacement
- Pressure relief valves are automatically actuated during cartridge replacement
- All seals between the head and cartridge are replaced when a new cartridge is fitted
- Streamlined connection allows replacement in a tight space

TECHNICAL DATA

	S	M	L
Height of overall system	365 mm	475 mm	410 mm
Height of filter candle	315 mm	425 mm	360 mm
Diameter of filter candle	95 mm	95 mm	136 mm
Minimum ground clearance	40 mm	40 mm	40 mm
Weight of filter candle	1.3 kg	1.8 kg	3.2 kg
System pressure (without pressure surges)	2 – 8 bar	2 – 8 bar	2 – 8 bar
Water temperature/ambient temperature	4 – 30 °C	4 – 30 °C	4 – 30 °C

PRODUCT VERSIONS



BASIC* STARTER SET

Article no.: 10810

- "S" filter candle
- Filter head
- Water hardness test kit
- 2x connection hose 3/4" - 3/8"



PRO* STARTER SET

Article no.: 10811

- "S" filter candle
- Filter head
- Water hardness test kit
- 2x connection hose 3/4" - 3/8"
- Flowmeter

ACCESSORIES



Filter head

Article no.: 10801



Connection hose 3/4" - 3/8"

Article no.: 10808



Filter candle

Article no.	Type
10802	S
10803	M
10804	L



Water hardness test kit

Article no.: 10807



Flowmeter

Article no.: 10809



For more product details



Consumables and accessories



Descaling agent

Our descaling agent is specially designed for our units and the kind of work they do. When used correctly, it keeps our units functioning reliably and ensures their longevity.

- Ratio 1:10, i.e. add 250 ml descaling agent to 2,500 ml water.
- The exposure time depends on the degree of scaling. If there is a lot of limescale, the exposure time will be 8 hours minimum.

Article no.	Type
15271	1000 ml



Spray guard

A spray guard system made from stainless-steel and acrylic glass keeps the workplace clean. After use, the steam blasting hand piece is simply replaced in the holder. The acrylic glass is easily removed from the collection tray for easy cleaning.

Article no.	Type
16001	Spritzschutz

TECHNICAL DATA	
Width	335 mm
Depth	180 mm
Height	400 mm
Weight	2.8 kg





Model making

Our range of models ensures you have the best possible unit for every type of use. For stirring, mixing, drilling or grinding.

Pin drill unit D-PI 300 | Vacuum mixer D-VM 18 | Dental model grinder G-F 318

Model making consumables and accessories

The notable quality, endurance and precise functionality of Harnisch+Rieth equipment provide great support in my daily lab work.

Master dental technician and senior partner Jan Langner, Schwäbisch Gmünd

D-PI 300

Pin drill unit

Masterclass high-end pin drill unit

NEW



Precision



Compact



Optimum workflow



Health and safety



Easy to use



Durability



Powerful



CONSISTENT QUALITY AND PRECISION - NOW ALSO IN DIGITAL MODEL PRODUCTION

The new D-PI 300 pin drill unit is a revolution in dental market due to the technology and modern design. It perfectly matches all the requirements of pin drilling in modern dental technology. The D-PI 300 has been specially designed for drilling Baumann Dental 3D directprint working models - precision models can be produced quickly and easily. The ultra-modern drilling mechanism is matched to a dental system solution and is therefore unique, achieving optimum drilling precision and drilling performance that enables reliable, efficient work with comfortable use. With its unique advantages and as part of a complete, high-precision model manufacturing system, the D-PI 300 pin drill stands out from all other pin drills on the market.

PRODUCT ADVANTAGES

- ✓ 3D directprint models can be drilled quickly and easily
- ✓ Reduction of work steps in the laboratory guarantees a faster processing time – time savings
- ✓ Sustainable and resource-saving due to reduction of materials - cost savings
- ✓ Compatible with other model systems by freely programmable parameters
- ✓ Safe and fast working with free positioning of the plate holder
- ✓ User-friendly touch display
- ✓ Tool-free drill change

PRODUCT HIGHLIGHTS



DRILLING OF 3D DIRECTPRINT MODELS

To ensure pin friction, identical, smooth-walled and uniform holes are drilled in the 3D direct printing working models. The precise guidance of the unique drilling mechanism also ensures a uniform drilling depth. The revolutionary functional features guarantee precise, fast and economical model production.



HEALTH IN THE LABORATORY

The pin drill unit is equipped with a direct connection for extraction systems with automatic switch-on to extract the dusts. By printing the saw cuts directly in the software, we reduce the need for subsequent sanding processes, which results in a significantly healthier working environment due to reduced dust emissions.

PRODUCT DETAILS



MAGNETIC CLAMPING WITH LARGE SUCTION PORT

The drilling process is activated by the practical foot switch. The plate holder is magnetically fixed, the suction is activated and the drilling position is secured. The suction opening ensures dust-free working



INDIVIDUAL PIN SETTING

You have the option of placing the pins individually to position the segments exactly according to your specific requirements.

TECHNICAL DATA

Width	175 mm
Depth	397 mm
Height	491 mm
Electrical connection	220-240 V; 50/60 Hz
Power consumption	Max. 400 W
Laser-class	Classe 1
Speed	Up to 25.000 min-1
Permissible drill shank diameter	3,0 mm
Permissible drill bit length	39 mm
Feed rate	5 mm/s bis 100 mm/s
Weight	ca 16 kg
Housing	Aluminium

PRODUCT VERSION

Article no.	Type
10570	D-PI 300



For more product details

CONSUMABLES & ACCESSORIES FOR D-PI 300

Article no.	Type	Contents
10621	Extraction unit D-LE 255 SB „brushless“	1 pcs.
10620	Extraction unit D-LE 255 S	1 pcs.
200060ET	Combiflex pin drill conical	1 pcs.
200069	Directprint pins	1000 pcs.
200068	Combiflex Plus Directprint base plates premium - small -	100 pcs.
200066	Pin tool	1 pcs.
200061ET	Drilling plate for D-PI 300	1 pcs.
200065	Directprint build platform for Formlabs 3B	1 pcs.
200064	Directprint build platform for Phrozen Sonic XL 4K / 4K+	1 pcs.
200063	Directprint build platform for Elegoo Saturn 3 Ultra	1 pcs.
200067	Combiiflex Plus splitcast plates - small - L -	25 pcs.
200062	Plastic hammer for model systems	1 pcs.

DIRECTPRINT STARTER SET

FORMLABS 3B

In this package you will find everything you need to produce saw models directly on our Combiflex direct printing plates in combination with the MM3D (or other suitable model software), the Formlabs B3 and the D-PI 300 pin drill. This package is specially designed for the Formlabs B3 and includes: Direct print Combiflex Plus small gray, Direct print pins, Direct print plate holder for the pin drill D-PI 300, Direct print build platform for Formlabs 3B, Combiflex pin drill conical, pin tool, plastic hammer, Combiflex Plus split cast plates small 25 pcs.

Please note that the D-PI 300 pin drill unit, the Formlabs B3 and suitable model software (e.g. MM3D) are also required to produce the direct print models.

DIRECTPRINT STARTER SET

PHROZEN SONIC XL 4K / 4K+

In this package you will find everything you need to produce saw models directly on our Combiflex direct printing plates in combination with the MM3D (or other suitable model software), the Phrozen Sonic XL 4K Plus/2022 and the D-PI 300 pin drill. This package is specially designed for the Phrozen Sonic XL 4K Plus/2022 and includes: Direct print Combiflex Plus small gray, Direct print pins, Direct print plate holder for the pin drill D-PI 300, Direct print build platform for Phrozen Sonic XL 4K 2022/ Plus, Combiflex pin drill conical, Pin Tool, Plastic hammer, Combiflex Plus Splitcast plates small 25 pcs.

Please note that you also need the D-PI 300 pin drill unit, the Phrozen Sonic XL 4K Plus/2022 and suitable model software (e.g. MM3D) to produce the direct pressure models.

DIRECTPRINT STARTER SET ELEGOO

SATURN 3 ULTRA

In this package you will find everything you need to produce saw models directly on our CombiFlex direct printing plates in combination with the MM3D (or other suitable model software), the Elegoo Saturn 3 Ultra and the D-PI 300 pin drill. This package is specially designed for the Elegoo Saturn 3 Ultra and includes: Direct print Combiflex Plus small gray, direct print pins, direct print plate holder the pin drill D-PI 300, direct print build platform for Elegoo Saturn 3 Ultra, Combiflex pin drill conical, pin tool, plastic hammer, Combiflex Plus split cast plates small 25 pcs.

Please note that you also need the D-PI 300 pin drill unit, the Elegoo Saturn Ultra 3 and suitable model software (e.g. MM3D) to produce the direct print models.

Article no.	Type	Contents	Article no.	Type	Contents	Article no.	Type	Contents
200070	Directprint starter set Formlabs 3B	Set	200070	Directprint starter set Phrozen Sonic XL 4K / 4K+	Set	200072	Directprint starter set Elegoo Saturn 3 Ultra	Set

The revolution in digital model making

Traditionally pinned saw models produced on a 3D printer. With Harnisch+Rieth and Baumann Dental, you are returning to established basics - but digitally!

The innovative direct printing technique from Baumann Dental enables direct printing on the Combiflex Plus pin base plates. The holes for the pins will then be drilled with our D-PI 300 pin drill unit, the pins will be set, the model hardened, removed from the Combiflex plate and the segments will be cleaned -

and the saw-cut model is ready! Experience the accuracy of precision that you are already known from the plaster technique - the individual placement of the pins is guaranteed.

- Reduction of work steps in the laboratory – **faster processing time**
- Reduction of materials – **sustainable and resource-saving**



D-VM 18

Vacuum mixer

The perfect, bubble-free mixing results of this powerful and robust vacuum mixer cannot fail to impress.



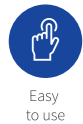
The display shows the selected mixing program and the advanced work process

Visual and acoustic signal at the end of the program

The mixing bowls are automatically guided into each other and coupled

A robust 300 ml acrylic mixing cup is included in the scope of delivery

Different cup sizes are available



Easy to use



Powerful



Optimum workflow

FOR THE MOST STRINGENT QUALITY REQUIREMENTS

With our D-VM 18, you can reliably stir a huge variety of plaster, investment materials, silicones and alginates. The unit's ease of use and extreme sturdiness simplify your work. The user interface allows you to set the relevant parameters quickly and easily. The vacuum mixer is supplied with a robust, coated 300 ml mixing cup. The stainless-steel agitators with solid metal cover are also designed for many years of use, preventing expensive lifecycle costs and therefore protecting the environment.

PRODUCT ADVANTAGES

- ✓ Maintenance-free, high-performance double-piston vacuum pump ensures vacuum is achieved rapidly without a compressed-air connection (max. 980 mbar).
- ✓ Large volumes can be reliably processed thanks to the high torque (0-600 rpm) and clockwise/anti-clockwise rotation.
- ✓ Reducing boiling/bubbling effect by incremental vacuum adjustment from 0% to 100%.
- ✓ Integrated, easily replaceable triple filter system with automatic filter test program.
- ✓ 15 individual agitation programs, 50 programmable memory locations and a manual setting.
- ✓ Various cup sizes available.

PRODUCT HIGHLIGHTS

PROGRAMMING

The vacuum mixer features two different types of operating program. The manual program, or manual mode, and the automated sequence (manual and user mode). It is also possible to use individual functions in manual mode, e.g. stirring only (mix button) or generating vacuum only (vac button). The agitation programs can be selected effortlessly using the buttons on the operating panel. As well as the agitation time, direction of rotation and speed, you can also individually set the vacuum. 15 programmable stirring functions can be set. Up to 50 programs can be individually named and retrieved as needed.

PUMP AND MOTOR

The heart of these units is the powerful, robust geared agitation motor and the maintenance-free high-powered double-piston vacuum pump, which quickly generates a vacuum of 970 mbar. An overload protection switch protects the agitation motor from overload.

PRODUCT DETAILS

CONTROL LOGIC

The filled agitator cup is automatically coupled to the agitator drive by a pneumatically assisted lifting device and pressed onto the sealing surface. The previously selected agitation program is initiated via the start button. The maintenance-free, high-powered double-vacuum pump quickly reaches a vacuum pressure of 980 mbar, as suitable for the selected program. When the mixing process is complete, a brief acoustic signal sounds and the agitator switches off. The vacuum pump continues to operate until the stop button is pressed, which also initiates the metered, speedy flooding of the mixing cup.

LIFTING PLATFORM

The lifting platform holds and guides the mixing cup. As it rises, the agitator coupling parts are automatically guided into each other and connected. At the same time, the mixing cup is pressed onto the sealing surfaces and held, even without vacuum. The work sequence can be run automatically or manually.

FILTER SYSTEM

The large extraction pre-chamber and three-stage filter unit (pre-filter, main filter and post-filter) guarantee the absolutely reliable function of the double-piston vacuum pump. An automatic filter test program shows the saturation level of the extraction filters. The super-fine filters are on the outside of the unit and are easy to change.

TECHNICAL DATA

D-VM 18 W

Width	380 mm
Depth	355 mm
Height	500 mm
Electrical connection	230 V; 50 Hz
Power consumption	Max. 420 W
Vacuum	Max. 980 mbar (adjustable)
Speed	0 – 600 rpm Anti-clockwise/clockwise rotation
Sound pressure level	52 dB(A)
Weight	Approx. 29 kg
Housing	Durable, environmentally friendly steel plate housing, RAL 9002, powder coated

PRODUCT VERSIONS

Article no.	Type
10415	D-VM 18 Wall unit

ACCESSORIES

- Mixing cup (page 83)



For more
product details



G-F 318

Dental model grinder

Compact dental model milling cutter with powerful, maintenance-free motor and height-adjustable worktable.



Easy to use



Powerful



Durability



Compact

TECHNICALLY SOPHISTICATED AND OF THE HIGHEST QUALITY.

With its extremely powerful, maintenance-free motor, our dental model grinder is an excellent companion for the fast and effortless grinding of dental models. Its precise grinding result and even conical surface in the dental model ensure functional reliability and a perfect fit. An external extraction unit can be connected to the G-F 318 O unit.

PRODUCT ADVANTAGES

- ✓ A high motor speed (~9,000 rpm) and perfectly true running thanks to the precision collet chuck ensure optimum grinding work and efficient working.
- ✓ Integrated tool kit for uncomplicated milling cutter replacement.
- ✓ Detachable worktable for easy cleaning.
- ✓ Connection to an external extraction system is available (max. 1000W)

PRODUCT HIGHLIGHTS



MILLING CUTTER

Diamond-toothed, hard metal milling cutter with a long service life and low noise levels ensures optimum grinding results for the fast and effortless grinding of dental models.



HEIGHT ADJUSTMENT

Our G-F 318 offers additional height adjustment of the work surface, enabling tricky tooth positions to be processed easily. The worktable is individually adapted to the grinding depth using the adjustment wheel. The millimetre scale shows the scale in 1 mm increments.

TECHNICAL DATA

	G-F 318 EO
Width	180 mm
Depth	315 mm
Height	310 mm
Electrical connection	230 V; 50 Hz
Power consumption	200 W
Speed	Approx. 9000 rpm
Clamping diameter	6 mm
Super-fine filter quality	-
Sound pressure level	68 dB(A)
Weight	9 kg
Housing	Durable, environmentally friendly steel plate housing, RAL 9002, powder coated

PRODUCT VERSIONS

Article no.	Type	Integrated extraction unit	External	Infinitely variable height adjustment
10531	G-F 318 O	-	✓	✓

ACCESSORIES

- Super-fine filter cartridge (page 82)
- Filter bags (page 82)
- Milling cutter (page 83)



For more
product details



Consumables and accessories



Super-fine filter

Fine dust particles in the air are especially dangerous. Damaging effects on skin and respiratory organs have also been found with dental plaster, investment materials and non-classified mixed dust that reached the general dust threshold. For this reason, all Harnisch+Rieth extraction units and blasting units with integrated extraction unit are equipped with super-fine filter cassettes or cartridges.

PRODUCT ADVANTAGES

- ✓ Maximum health and safety protection.
- ✓ Up to 99.98% of micro-dust particles with a grain size of 0.5µ are filtered.

	Art. no.	Material	Dust class	Test standard
D-BS 320 FM	42251	Super-fine filter	M	DIN EN 60335-2-69
G-F 318 E	42205ET	Super-fine filter cartridge	M	DIN EN 60335-2-69



Filter bags

All filter bags offered by Harnisch+Rieth are made of the highest quality materials. Extensive quality controls ensure consistently high quality, which is the prerequisite for good functionality and perfect extraction results.

PRODUCT ADVANTAGES

- ✓ Optimum closure system.
- ✓ Capacity of up to 10 kg.
- ✓ The practical mesh basket improves the degree of filling, stabilises the suction power and ensures easy, dust-free disposal.

	Art. no.	Material	Dust class	Volume
D-BS 320 FM	42100	Paper	M	Approx. 20 kg
G-F 318 E	42300	Fleece	M	Approx. 10 kg

Adapters

Practical adapters ensure an optimum connection for the suction hose.

Reducing piece

Article no.	Type
72004	ø 40 mm
72007	ø 45 mm
72005	ø 50 mm

Y-adapter

Article no.	Type
71850	Ø 50/2 x Ø 50
71853	Ø 50/2 x Ø 45
71855	Ø 50/2 x Ø 40

90° extraction angle available on request



Reducing piece

Y-adapter

Dental model milling



All Harnisch+Rieth dental model milling cutters are made of the highest quality materials. Extensive quality controls ensure consistently high quality, which is the prerequisite for good functionality, a long service life and perfect grinding results.

Article no.	Type	Shank 6 mm	Shank 8 mm	8 degrees	0 degrees
85148	"Blue-Tec" milling cutter, cross-cut tooting	✓	-	✓	-
85155	"Blue-Tec" milling cutter, cross-cut tooting	-	✓	✓	-
85163	"Blue-Tec" milling cutter, cross-cut tooting	✓	✓	-	✓
85165	"Blue-Tec" milling cutter, cross-cut tooting, cylindrical	-	✓	-	✓
85150*	"Diamond" toothed milling cutter with collet chuck and union nut	✓	-	✓	-
85170	Grinding cap holder	✓	-	-	-
85180	Grinding cap F60	✓	-	-	-
53008	Collet chuck	✓	-	-	-
53009	Collet chuck	-	✓	-	-



Grinding belts

Our grinding belts are made of the highest quality material. Intensive quality checks and special bonding technology achieve a consistent level of quality, which is the prerequisite for good functionality and perfect grinding results. The belts are available with various grain sizes.

Article no.	Type	D-BS 320 FM	D-BS 320 FO
52024	Grain size 24	✓	✓
52036	Grain size 36	✓	✓
52050*	Grain size 50	✓	✓
52080	Grain size 80	✓	✓
52120	Grain size 120	✓	✓



Mixing cup versions

The mixing cups have been specially developed by Harnisch+Rieth, with an extremely narrow gap between the agitator paddle and the side of the cup. The rounded bottom of the cup allows for easy cleaning.

Art. no.	60ml	150 ml	300 ml	600 ml	1,000 ml
15070	✓	-	-	-	-
15075	-	✓	-	-	-
15080*	-	-	✓	-	-
15085	-	-	-	✓	-
15090	-	-	-	-	✓



H+R extraction hoses

The highly flexible suction hoses have impressively low internal air resistance and are available in four sizes.

Article no.	Type
72040	ø 40 mm
72045	ø 45 mm
72050	ø 50 mm
72063	ø 63 mm



Wax extraction technology

Sturdy, stainless-steel wax extraction unit
for up to 6 cuvettes.

Wax extraction unit D-AB 240 | Wax extraction technology consumables and accessories

The notable quality, endurance and precise functionality of Harnisch+Rieth equipment provide great support in my daily lab work.

Master dental technician and senior partner Jan Langner, Schwäbisch Gmünd

D-AB 240

Wax extraction unit

Sturdy, superior-quality wax extraction unit guarantees trouble-free, highly efficient working.



TECHNICALLY SOPHISTICATED AND OF THE HIGHEST QUALITY.

Our automatic wax extraction unit enables automatic wax extraction of up to 6 cuvette holders. The relevant parameters are immediately recognisable on the user interface, and entry of parameters is intuitive. Infinitely adjustable temperature from 30 - 95 °C with manually adjustable spraying time of up to 15 minutes. Also suitable for the polymerisation of heat-cure acrylic resins.

PRODUCT ADVANTAGES

- ✓ Robust, maintenance-free technology.
- ✓ 6 highly effective nozzles for optimum spraying.
- ✓ Powerful heating rapidly gets the unit to wax extraction temperature.
- ✓ Low water cut-out to protect the heating system.

PRODUCT HIGHLIGHTS

PUMP

At the heart of our wax extraction unit is the powerful and resilient industrial immersible pump made of bronze, which operates with maximum reliability.

CLEANING

The spray pipe is easy to remove, giving you unobstructed access for cleaning the tray. A large-area dirt filter, tightly sealed at the sides with an easily replaceable filter mat, keeps the wax extraction water clean.

FLAP LID

The perforated flap lid is recessed. Smaller parts are easily de-waxed on this, using the integrated hand spray. An easy-to-fit spray guard can be supplied on request.

PRODUCT DETAILS

SENSOR TECHNOLOGY

The high-quality water level sensor, which is located outside the water basin and can therefore never get dirty, indicates water shortages immediately, protecting the heating element.

TECHNICAL DATA

Width	600 mm
Depth	420 mm
Height	425 mm
Electrical connection	230 V; 50 Hz
Power consumption	Heating system 2.3 kW/ pump 0.19 kW
Capacity	max. 18 l/min. 12 l
Weight	approx. 39.5 kg (empty)
Housing	Acid-resistant, rustproof stainless-steel housing

ACCESSORIES

- Wax solvent (page 88)
- Descaling agent (page 88)
- Filter mats (page 88)
- Spray guard article no. 15055



For more product details

Consumables and accessories



Wax solvent

Our wax solvent is perfectly designed for cleaning our wax extraction unit. Regular cleaning not only ensures the units' longevity, it also guarantees reproducible wax extraction results.

- PE bottles.
- Mixture ratio: 25 ccm WL (wax solvent) 104 to approx. 14 l water.

Article no.	Type	Litres
15050	WL 104	250ml
15051	WL 104	1,000 ml



Descaling agent

Our descaling agent is specially designed for our units and the kind of work they do. When used correctly, it keeps our units functioning reliably and ensures their longevity.

- Ratio 1:10, i.e. add 250 ml descaling agent to 2,500 ml water.
- The exposure time depends on the degree of scaling. If there is a lot of limescale, the exposure time will be 8 hours minimum.

Article no.	Litres
15271	1,000 ml

Filter mats

The fitted filter pad that traps wax residue is easy to replace and so keeps the water permanently clean.

Article no.	Size	Quantity
42312	WL 440 x 380 mm	piece





Milling technology

Introducing a new design for our proven precision!
The new D-F 45 precision milling unit. Durability,
precision and quality – high standards with a makeover.

Precision milling unit D-F 45 | Milling technology consumables and accessories

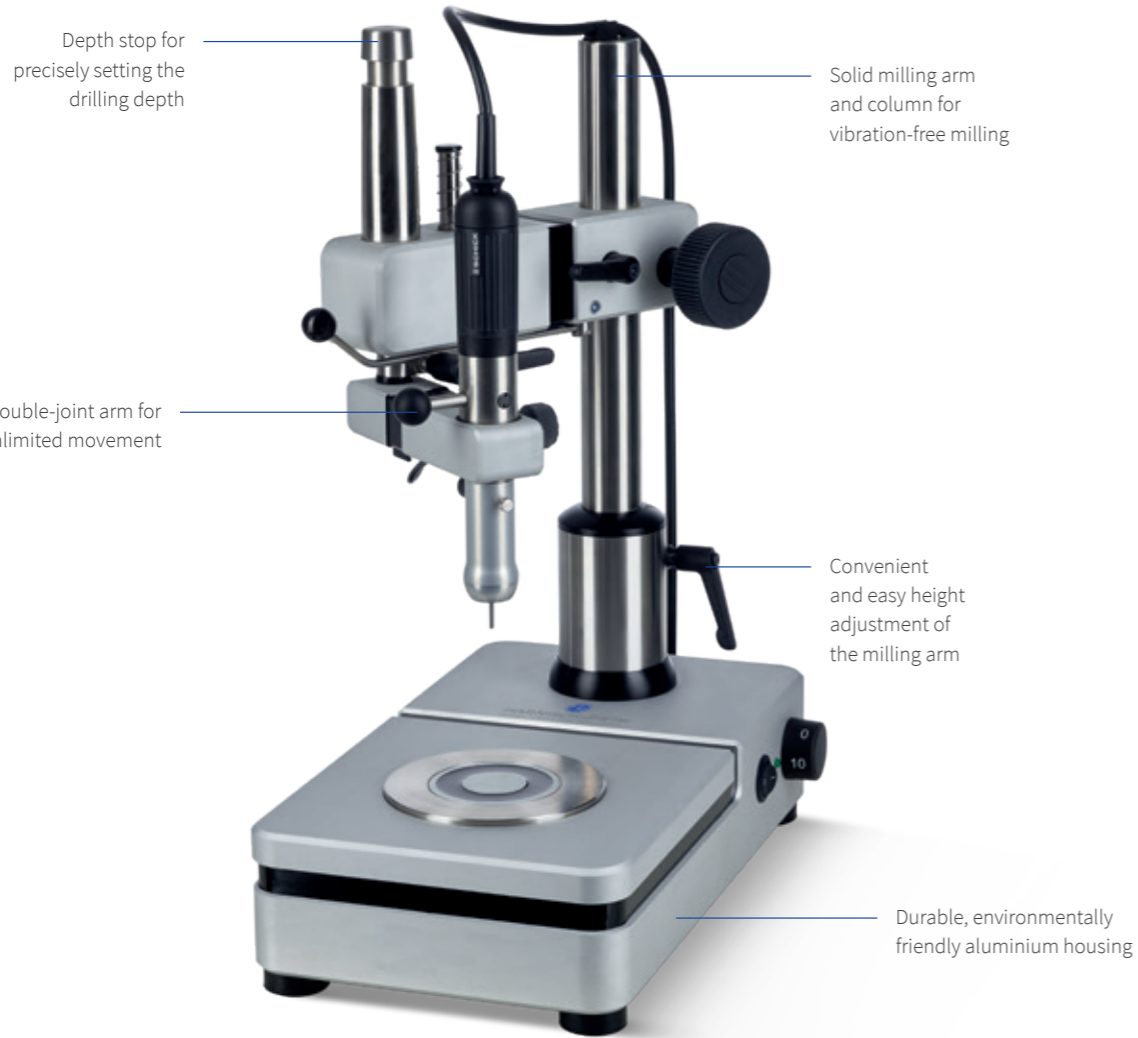
*The high quality and precision of Harnisch+Rieth equipment
continues to inspire my daily lab work.*

Master dental technician Andreas Kunz, Berlin

D-F 45

Precision milling unit

Durability, precision and quality – high standards with a makeover!



Powerful



Durability



Easy to use



Compact



Precision

INTRODUCING A NEW DESIGN FOR OUR PROVEN PRECISION!

The D-F 45 precision milling unit with its clear, robust construction and ease of operation is the ideal device for economical, quality milling in the dental laboratory. All milling processes can be completed quickly and precisely. Driven by a robust, state-of-the-art micro-motor and a very quiet milling spindle, the speed is infinitely adjusted from 1,000 to 40,000 rpm, with power remaining consistent.

PRODUCT ADVANTAGES

- ✓ Powerful, extremely quiet milling spindle.
- ✓ Magnetic clamp for the model table.
- ✓ Exceptionally stable design for vibration-free milling.
- ✓ LED light head for optimum illumination.

PRODUCT HIGHLIGHTS

QUALITY

Expectations for a Harnisch+Rieth product are high. That's why we purposefully dispensed with the use of plastics when developing the D-F 45. The exceptionally solid design of the column and milling arm prevent any kind of vibration and therefore produce the best milling results. The housing and jointed arms are made of high-quality aluminium with a robust anodised surface. The guide column and clamping table are made of stainless steel.

MAGNETIC CLAMP

Model tables, milling tables and milling discs can be moved as desired on the electromagnetic worktable or clamped electromagnetically in any position, quickly and securely.

PRODUCT DETAILS



OPTIMUM LIGHTING

With its 4 high-powered LEDs arranged in a circle, the LED light head ensures optimum, shadow-free lighting for the work area.

CONTROL LOGIC

The four-way, ball bearing-mounted double-joint arm moves very easily but is completely without play, It guarantees precise, three-dimensional working with ease of movement. The integrated depth stop enables precise limitation of the vertical range. The drilling jig has a vertically moveable sleeve controlled by a hand lever.

TECHNICAL DATA

Width	175 mm	Concentricity	0.015 mm
Depth	320 mm	Collet chuck	Ø 2.35 mm incl. stop (standard) Ø 3.00 mm (optional)
Height	500 mm	Weight	11.5 kg
Electrical connection	100-240 V; 50/60 Hz	Housing	Durable, environmentally friendly anodised aluminium housing
Power consumption	80 W		
Speed	1,000 to 40,000 rpm		
Motor torque	7 Ncm		

ACCESSORIES

- Measuring spindle clamping range 0.3-3 mm (page 94)
- Model table (page 94)
- Lead holders 2.35 mm and 3.00 mm (page 95)
- Set of milling cutters (page 95)



For more product details

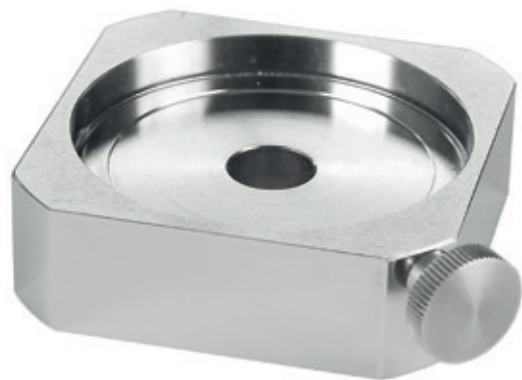
Consumables and accessories



Model table

Made entirely of non-rusting materials. With large, hardened support surface and 0° catch. The model is clamped quickly and securely in the desired position at an angle of inclination of up to 35° without damage.

Article no.	Type
15047	Model table with magnetic clamp



Milling table

The milling disc is clamped in the milling table. The milling table can either be clamped magnetically or moved manually.

Article no.	Type
15035	Milling table



Ney measuring set

For precisely measuring the denture undercut depth.

Set contents:

- 1x locating pin
- 1x undercut gauge 0.25 mm
- 1x undercut gauge 0.5 mm
- 1x undercut gauge 0.75 mm

Article no.	Type
15156	Set



Milling discs

The object to be worked is securely fixed in the milling disc with plaster. Our milling discs are available with a diameter of 64 mm.

Article no.	Type
15036	Milling table 64 mm

Set of milling cutters

The Harnisch+Rieth set of milling cutters consists of highly precise hard metal milling cutters with specially coordinated shank lengths. The set contains: punch, twist drill, tube bur, shoulder bur, longitudinal teeth milling cutters 0° and 2° for telescopic and conical crowns, and matching wax cutters.

Article no.	Set of milling cutters
15153	2.35 mm

Lead holder

Lead holder for measuring and marking. Suitable for all milling units.

Article no.	Type	Quantity
15151	Lead holder 2.35 mm	piece
15152	Lead holder 3.0 mm	piece

LED light head

For optimum illumination of the workpiece. The light is fastened directly to the milling spindle.

Article no.	Type
15158	LED light head



Transfer unit

Measuring spindle for measuring, marking and holding ready-made construction elements.

Article no.	Type
15154	Transfer unit Ø 2.35 mm
15155	Transfer unit Ø 3.00 mm

The revolution in digital model making – Trust in the established quality and precision of Harnisch+Rieth.

06343, www.reschundpartner.de



Further information can be read from **page 68**

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