MADE IN GERMANY

Product programme
Dental equipment

HARNISCH+RIETH

DENTAL LABORATORY TECHNOLOGY

Birgit Harnisch
Managing director

Dear business partners,

As an engineering company, we have been manufacturing high quality dental equipment since 1964.

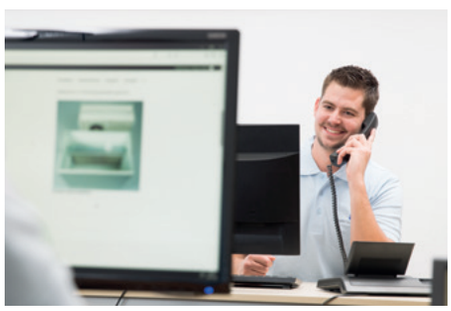
Our clearly designed, technologically advanced equipment is expertly developed using proven components of the highest quality alongside precise processes. The resulting, well-established reliability of our equipment is the prerequisite for trouble-free and efficient operation in your business.

Based on this we are able to offer you reliable support – particularly with the integration of digital technology into your daily business processes.

In order to be a dependable partner to you – especially in the digital age – we focus on aligning our products with the latest technical developments.

Birgit Harnisch

Harnisch+Rieth
Quality in every detail


Since 1964, we have been manufacturing high quality dental equipment for dentists and dental technicians to ensure precise and effective lab work.

Every aspect and every step are characterised by the highest quality:

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

For us, quality means not only flawless products but also smooth business processes.

It is very important to us to continue to monitor, review and improve all processes in order to achieve the best possible results for ourselves and our customers.

All products are regularly monitored and checked against specifications throughout the production process.

Our logistics process is holistic, from incoming goods through to storage and up to delivery to our customers. Our employees are supported by perfectly tailored ERP software, allowing us to achieve a perfect process.

We offer a comprehensive network of distributors and service partners.
For further information, visit our website hr-dental.de

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

Master dental technician
Andreas Kunz, Berlin

Steam blasting technology

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Steam blasting technology

D-S 100 A

Steam blasting unit with permanent water connection

Can be used either wall-mounted or table-mounted.

1. A large, clear manometer indicates the boiler pressure at any given time. The highly effective electronic descaling system enables the D-S 100 A to be operated with normal tap water.

2. A push-button is used to switch between dry steam and wet steam. When using wet steam, the water content can be adjusted using an infinitely variable valve.

3. If the “boiler cleaning” notification appears, the lime scale deposit in the pressure boiler can be easily disposed of.

4. A leakage protection system switches the unit off automatically in case of malfunction.

5. Stainless-steel housing, powder coated.

Description

The D-S 100 A steam blasting unit achieves the highest level of quality and reliability.
It enables straightforward and rapid cleaning, wax extraction or thorough degreasing for all laboratory tasks. The D-S 100 A steam blasting unit has a permanent water connection and can also be refilled manually at any time. A highly effective heating system enables the unit to be ready to operate after only approximately 4-5 minutes of heating time.

Details

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

Product variants

Article no.	Type	Hose length 1.000 mm	Hose length 1.500 mm	Hose length 2.000 mm	Spray guard
10775	D-S 100 A-1	✓			
10778	D-S 100 A-1S	✓			✓
10779	D-S 100 A-1.5		✓		
10780	D-S 100 A-1.5S		✓		✓
10781	D-S 100 A-2			✓	
10782	D-S 100 A-2S			✓	✓

Technical data

Width	325 mm
Depth	305 mm
Height	540 mm
Electrical connection	230 V, 50 Hz
Power consumption	2.6 kW
Steam temperature	165 °C
Boiler volume	2.3 l
Water supply tank	5 l + permanent water connection

Safety valve	Opens at 7 bar
Operating pressure	5 bar
Temperature limiter	175 °C
Weight	20 kg without spray guard
Housing	Durable, environmentally friendly stainless steel housing, powder coated RAL 9002.
Required fusing for mains network connection	16 A at 220 V

D-S 100

Steam blasting unit with manually refillable water tank

Can be used either wall-mounted or table-mounted.

1. Normal tap water can be used for topping up at any time during operation. Time-consuming boiler pressure reduction is no longer needed.

2. Stainless-steel housing, powder coated.

3. A push-button is used to switch between dry steam and wet steam. When using wet steam, the water content can be adjusted using an infinitely variable valve.

Description

The D-S 100 steam blasting unit achieves the highest level of quality and reliability. It enables straightforward and rapid cleaning, wax extraction or thorough degreasing for all laboratory tasks. The D-S 100 steam blasting unit includes a manually refillable water tank.
The water tank is equipped with level sensors. The unit produces an acoustic signal and illuminates an indicator as soon as the minimal fill level is reached.

Details

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

Product variants

Article no.	Type	Hose length 1.000 mm	Hose length 1.500 mm	Hose length 2.000 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			✓	✓

Technical data

Width	325 mm
Depth	305 mm
Height	540 mm
Electrical connection	230 V, 50 Hz
Power consumption	2.6 kW
Steam temperature	165 °C
Boiler volume	2.3 l
Water supply tank	5 l with manual refilling

Safety valve	Opens at 7 bar
Operating pressure	5 bar
Temperature limiter	175 °C
Weight	20 kg without spray guard
Housing	Durable, environmentally friendly stainless steel housing, powder coated RAL 9002.
Required fusing for mains network connection	16 A at 220 V

A-S 80

Steam blasting unit

Can be used either wall-mounted or table-mounted.

1. Signal lights on the panel provide reliable information about heating status, steam readiness and water level.

2. Extremely quick heating time due to powerful heating system. The steam jet is ready to use after only 4-5 minutes.

3. Water is supplied via a suction hose. Water is sucked from an external container (e.g. canister) by a water pump.

4. Stainless-steel housing, powder coated.

Description

The new A-S 80 steam blasting unit achieves the highest level of quality and reliability. It is ideal for rapid and thorough cleaning of instruments, as well as for complete removal of wax, grease, paste, adhesive and other residues. The steam blasting unit is supplied with water from an external container and has a large, rapidly heated boiler volume of 2.3 l. In just 4-5 minutes, the unit is ready to operate. A consistently high steam pressure is achieved by a powerful heating system. Dry steam with a low water content remains consistently at 160 °C. The A-S 80 housing is made of easy to clean, powder coated stainless steel. Lime scale can be removed from the boiler easily.

Details

The ergonomically designed and easy-to-hold hand piece is made from 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
Depth	300 mm
Height	365 mm
Electrical connection	230 V, 50 Hz
Power consumption	2.6 kW
Boiler volume	2.3 l
Steam temperature	165 °C

Safety valve	Opens at 7 bar
Operating pressure	At 5 bar
Temperature limiter	175°C
Weight	12,2 kg
Housing	Durable, environmentally friendly stainless steel housing, powder coated RAL 9002.

Consumables and accessories

Steam blasting technology

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.

Technical data

Dimensions:		Depth:	180 mm	Weight:	2.8 kg
Width:	335 mm	Height:	400 mm		

Descaling agent

Kalk Clean 1.000 ml bottle

Blasting technology

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Spot blasting unit

F-S 40 18
Fine blasting unit

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Manual blasting unit

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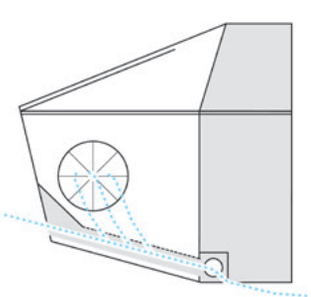
Blasting technology

P-G 400

Spot blasting unit

Available with up to four blasting units.



1. Perfect air-flow routing keeps the working area permanently free of dust and sand (see illustration).

2. A practical outlet nozzle is attached and on-hand. The spacious blasting chamber provides freedom of movement and is excellently lit by a flicker-free, bright strip light.

3. Clearly arranged controls and indicators provide a comfortable working environment. Blasting pressure and blasting material supply quantity are adjusted individually and simply for each blasting system and shown on the display.

4. To ensure perfect functioning of the unit, a water separator with a pre-pressure regulator, manometer and micro-filter is fitted.

5. An extraction unit can be connected on the left or right side as required.

Description

Our P-G 400 spot blaster is designed and constructed to meet the highest demands in metal and precious metal ceramics as well as in plastics technology. The robust, steel plate design and exclusive use of proven components ensure a long service life.

This spot blasting unit is modularly built. It can be fitted with two, three or four blasting units. Blasting material of 25 µ to 250 µ can be used without difficulty (polish blasting material, aluminium oxide and special blasting material). The optimum adhesion conditions for ceramics and plastics onto metal and precious metal are achieved, and all processes can be carried out without issue.

The unit is particularly suitable for blasting before coating, polishing, removal of oxide and ceramics residue after baking, as well as for designing veneers and preparing ceramic chewing surfaces.

The elaborate P-G 400 technology enables precise, reliable and comfortable work, as well as over 70% reduction in blasting material in comparison to conventional systems.

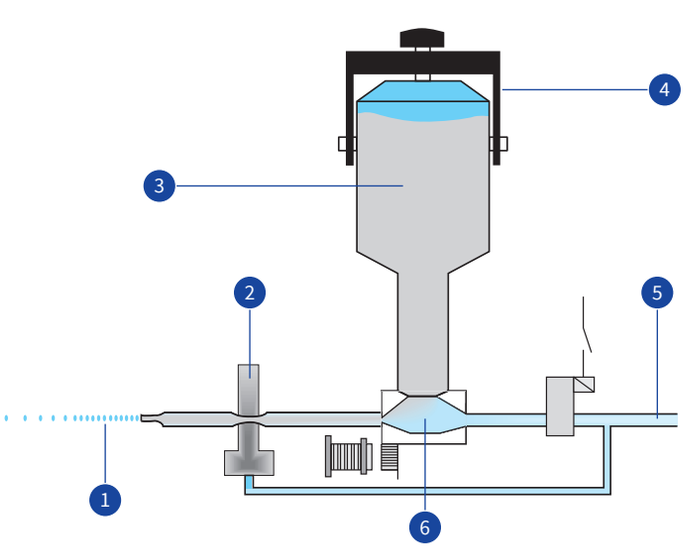
Details

Each blasting unit consists of a blasting material container with a vibration mixing chamber and the associated blasting hose and respective hand piece. The sand jet is initiated and stopped precisely by an electro-pneumatic closure device activated by the foot switch.

The sand blasting unit has infinitely variable dosing and pressure regulators, which control the blasting material quantity and blasting pressure in the vibration mixing chambers. A uniform and reliable sand jet is available above a working pressure of 0.5 bar.

If the blasting material in the container falls to the reserve level, this is indicated by the flashing of the corresponding signal light on the panel.

Blasting material container with mixing chamber

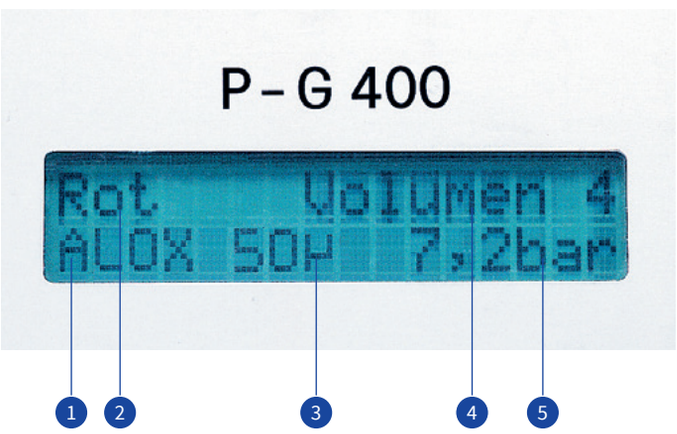


1. Blasting nozzle
2. Electro-pneumatic closure device
3. Blasting material
4. Clamp lock
5. Compressed air
6. Vibration mixing chamber

P-G 400

Spot blasting unit

Display indication



Information regarding the currently activated blasting system

1. Blasting material type
2. Blasting system (red, green, white, yellow)
3. Grain size
4. Basting material dosing in 10 stages
5. Blasting pressure in 0.1 bar steps

Product variants

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			✓

Technical data

	P-G 400/4	P-G 400/3	P-G 400/2
Blasting units	4	3	2
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	120 W	120 W	120 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 9002.	Durable, environmentally friendly steel plate housing, powder coated RAL 9002.	Durable, environmentally friendly steel plate housing, powder coated RAL 9002.

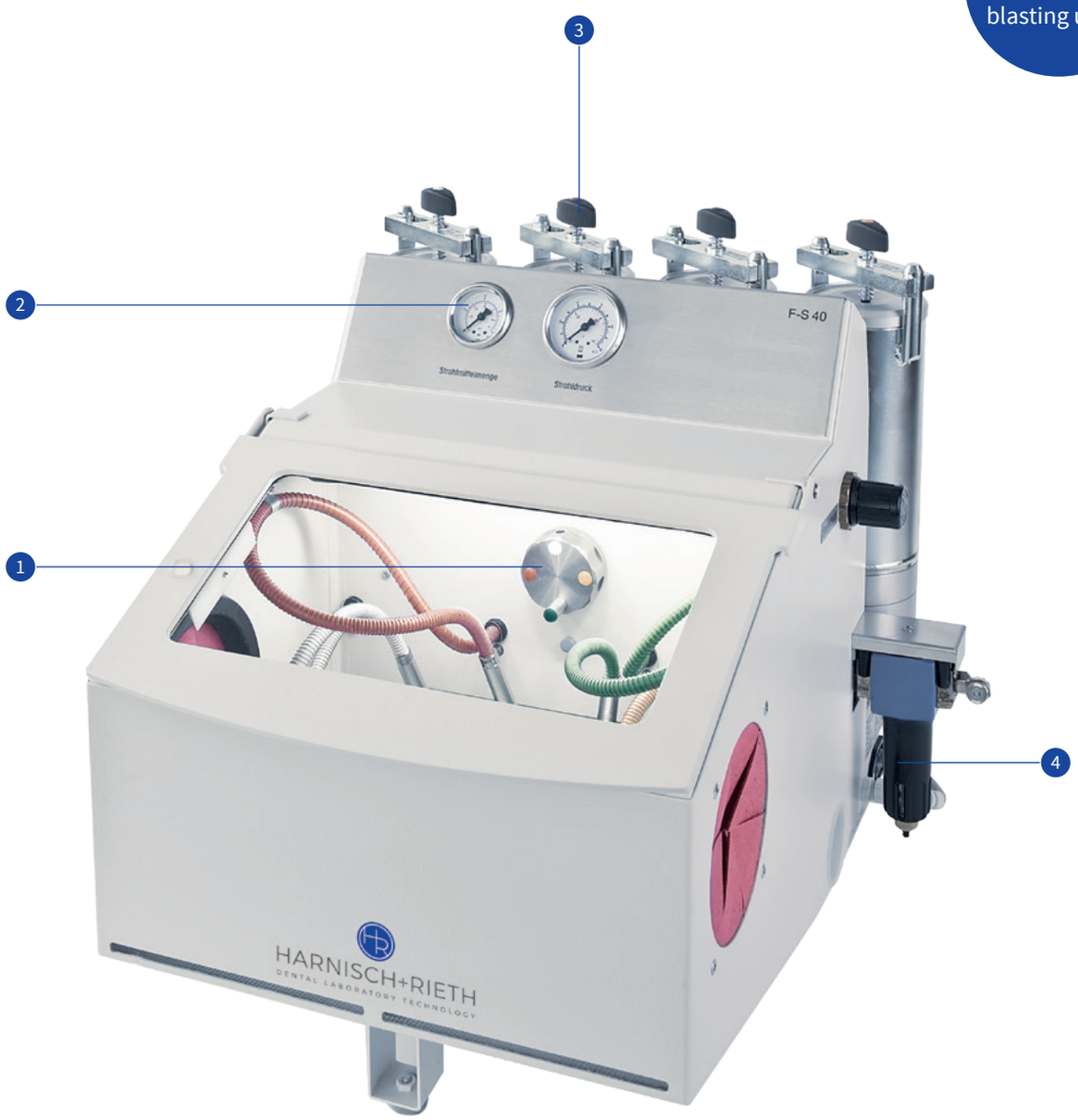
The notable quality, endurance and precise functionality of Harnisch+Rieth equipment provide great support in my daily lab work.

Master dental technician / senior partner
Jan Langner, Schwäbisch Gmünd

F-S 40

Fine blasting unit

Available with up to four blasting units.



1. Easy selection of the desired blasting material container by a selector switch in the well-illuminated interior.

2. Easy-to-read display for blasting material quantity and working pressure.

3. Safe and easy-to-operate blasting material container closure system.

4. An upstream water separator with a pre-pressure regulator and manometer ensures perfect functionality.

Description

The new F-S 40 fine blasting unit is ideal for everyday usage in your laboratory.
Our high-quality and reliable technology guarantees perfect functionality. The highest level of blasting precision and effectiveness are guaranteed.

A uniform and reliable sand jet is available above a working pressure of 0.5 bar. The pneumatically controlled mixing chamber system allows us to achieve up to 70% reductions in blasting material. The spacious and ideally lit interior remains dust-free due to optimum air-flow routing.

Blasting material quantity and blasting pressure can be set using regulators and are displayed on manometers.
The selection of each blasting container is made by simple switching within the blasting chamber.
The new F-S 40 fine blasting unit is available with two, three and four containers.

Details

The optimally lit blasting chamber enables perfect, effortless work.

The hand pieces are ergonomically attached, and the required blasting material container is easy to select using the selector switch fitted in the blasting chamber.

Product variants

Article no.	Type	Four sand containers	Three sand containers	Two sand containers
10375	F-S 40/4	✓		
10376	F-S 40/3		✓	
10377	F-S 40/2			✓

Technical data

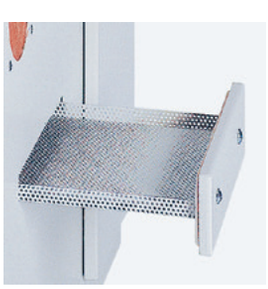
	F-S 40/4	F-S 40/3	F-S 40/2
Blasting units	4	3	2
Hand openings	Right/left	Right/left	Right/left
Width	340 mm	340 mm	340 mm
Depth	480 mm	480 mm	480 mm
Height	410 mm	410 mm	410 mm
Electrical connection	230 V, 50 Hz	230 V, 50 Hz	230 V, 50 Hz
Power consumption	60 W	60 W	60 W
Compressed air connection	Approx. 9 bar	Approx. 9 bar	Approx. 9 bar
Air consumption	Approx. 80 l/min.	Approx. 80 l/min.	Approx. 80 l/min.
Weight	25.75 kg	22.75 kg	19.75 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.

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

Automatic blasting unit

Available with up to two boron carbide blasting nozzles.

1. Filter changing is extremely simplified due to lateral access.



2. In all of our blasting units, the blasting material circulation is automatic and is kept free of investment material residue by an easily removable screen. All of the listed blasting units are suitable for use with all blasting material types used in dental technology.

Description

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

The automatic blasting units are also available without the extraction unit. This automatic blasting unit is paramount to remaining up to date with blasting technology. Up to ten moulded items can be blasted in the carousel simultaneously. This high-performance unit can be used either in automatic mode or as a manual blasting unit. The D-G 16 S 2 is of similar design to the D-G 16 S, but with a second, fixed boron carbide blasting nozzle, which also permits automatic and manual blasting.

Details

The large area super-fine filter, which is located downstream of the filter bag, catches 99.98% of micro-dust particles with a grain size 0.5 µ. This is significantly better than the 0.1% let-through value required by the trade association. The extraction unit of the D-G 16 S, -S 2 and D-H 22 S blasting units consists of a powerful, very quiet extraction fan, combined with a large-volume paper filter bag with approx. 10 kg dust collection capacity and a downstream ultra-fine filter.
When the dust in the paper filter bag reaches the maximum level, the filter change signal light will illuminate and the device will switch off automatically. The paper filter bag must then be replaced. It is located in an easily removable mesh basket, allowing for simple and clean disposal.

Product variants

Article no.	Type	Integrated extraction unit	External extraction	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		✓		✓

Technical data

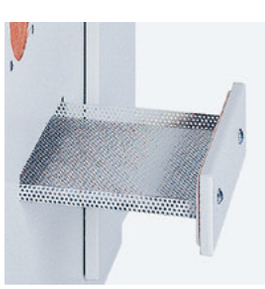
	D-G 16 S	D-G 16 S2
Nozzle fittings	Boron carbide blasting nozzle	Two boron carbide blasting nozzles
Extraction	Motor fan with automatic switch-off	Motor fan with automatic switch-off
Filter	Micro-filter and paper filter bag (10 kg)	Micro-filter and paper filter bag (10 kg)
Hand openings	Left and right	Right
Width	410 mm	410 mm
Depth	550 mm	550 mm
Height	700 mm	700 mm
Electrical connection	230 V, 50 Hz	230 V, 50 Hz
Power consumption	200 W	200 W
Compressed air connection	Approx. 5-6 bar	Approx. 5-6 bar
Air consumption	Approx. 200 l/min.	Approx. 200 l/min.
Weight	Approx. 38 kg	Approx. 39 kg
Housing	Durable, environmentally friendly steel plate housing, powder coated RAL 9002.	Durable, environmentally friendly steel plate housing, powder coated RAL 9002.

D-H 22 S

Manual blasting unit for steel and precious metals

Available with integrated extraction unit or with connection for external extraction.

1. Filter changing is extremely simplified due to lateral access.



2. In all of our blasting units, the blasting material circulation is automatic and is kept free of investment material residue by an easily removable screen.
All of the listed blasting units are suitable for use with all blasting material types used in dental technology.

Description

The D-H 22 S is the ideal unit for intensive daily manual blasting use with minimum maintenance. In addition to the enormous blasting power achieved via the robust injector with boron carbide nozzle, it has a further strength in its very powerful and quiet motor-fan extractor and filter system (of similar design to the D-G 16 S), which requires very infrequent maintenance. The sand jet is activated by the foot switch. The D-H 22 SO has no extraction unit.

Details

The large area super-fine filter, which is located downstream of the filter bag, catches 99.98% of micro-dust particles with a grain size 0.5 µ. This is significantly better than the 0.1% let-through value required by the trade association. The extraction unit of the D-G 16 S, -S 2 and D-H 22 S blasting units consists of a powerful, very quiet extraction fan, combined with a large-volume paper filter bag with approx. 10 kg dust collection capacity and a downstream ultra-fine filter.
When the dust in the paper filter bag reaches the maximum level, the filter change signal light will illuminate and the device will switch off automatically. The paper filter bag must then be replaced. It is located in an easily removable mesh basket, allowing for simple and clean disposal.

Product variants

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

Technical data

Nozzle fittings	Boron carbide blasting nozzle
Extraction	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.

M-S 355

Manual blasting unit

Available with integrated extraction unit or with connection for external extraction.

1. Easily removable screen that keeps the circulating blasting material free of impurities.

2. The efficient injector with nozzle provides a continuous flow of blasting material.

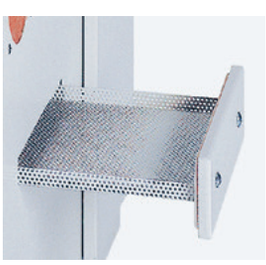
3. The blasting process is easily activated by a push-button.

4. Powerful and quiet injector extraction.

Description

For laboratory and practice laboratory. With powerful injector extraction and super-fine filter technology. The filter signal light indicates if cleaning of the super-fine filter is required. The sand jet is activated using the conveniently fitted manual switch. A pressure regulator adjusts the blasting strength to your requirements. The compact, single-opening design of this quality product means it takes up minimal space.

Details



In all of our blasting units, the blasting material circulation is automatic and is kept free of investment material residue by an easily removable screen. All of the listed blasting units are suitable for use with all blasting material types used in dental technology.

Product variants

Article no.	Type	Integrated extraction unit	External extraction
10350	M-S 355 O		✓
10355	M-S 355	✓	

Technical data

Nozzle fittings	Hard metal blasting nozzle
Extraction	Injector extraction
Filter	Micro-filter and PE film bag
Hand openings	Right
Width	340 mm
Depth	350 mm
Height	505 mm

Electrical connection	230 V, 50 Hz
Power consumption	45 W
Compressed air connection	Approx. 5-6 bar
Air consumption	Approx. 200 l/min.
Weight	Approx. 19.5 kg
Housing	Durable, environmentally friendly steel plate housing, powder coated RAL 9002.

Consumables and accessories
Blasting technology

Filter bags

All Harnisch+Rieth filter bags are made of the highest quality materials. Extensive quality controls and secure bonding ensure consistently high quality, providing the best prerequisite for good functionality and perfect extraction results.

Article no.	Type	M-S355	D-G 16 S D-G 16 S2	D-H 22 S	D-LE 280 SD	D-LE 255 SD D-LE 255 S	D-BS 320 FM	G-F 318 E
42012	Film bag	✓						
42015	Paper bag		✓	✓		✓		
42100	Paper bag						✓	
42300	Fleece bag							✓
42303	Fleece bag		✓	✓		✓		
42305	Fleece bag				✓			

R-W 80 trolley

Trolley for spot blasting unit and D-LE 255 S extraction unit with a stable, height-adjustable design.

D-LE 255 S extraction unit

We recommend our D-LE 255 S extraction unit, which features high extraction power with maximum filtration effectiveness, a dust collection capacity of approx. 10 kg, and very quiet operation due to its optimum noise insulation (see page 34).

Micro-nozzles

with very long service life.
Bores: 0.4 / 0.6 / 0.8 / 1.0 / 1.2 / 1.5 and 1.8 mm

Blasting material

All blasting material supplied by Harnisch+Rieth is of the highest quality. Intensive quality checks and special screening achieve a consistent level of quality, which is the prerequisite for good functionality and perfect blasting results.

Article no.	Type	2 kg container	6 kg container
75552	Kl. 55A/50µ	✓	
75556	Kl. 55A/50µ		✓
75155	Kl. 150A/150µ	✓	
75156	Kl. 150A/150µ		✓
75207	Kl. 20B/25µ	✓	
75208	Kl. 20B/25µ		✓
75302	Kl. 30B/50µ	✓	
75308	Kl. 30B/50µ		✓
75605	Kl. 60B/120µ	✓	
75606	Kl. 60B/120µ		✓
75808	Kl. EW80/180µ	✓	
75806	Kl. EW80/180µ		✓
75249	Kl. EW60/250µ	✓	
75250	Kl. EW60/250µ		✓

I have been using Harnisch+Rieth equipment for over 30 years and I am always impressed!

Why? Because only the best is good enough for me.

Using quality for an attractive smile.

Master dental technician and oral designer
Johannes Müller, Neustadt

Extraction technology

D-LE 280 SD 30
Three-place extraction unit

D-LE 255 SD 32
Extraction for maximum two workplaces

D-LE 255 S 34
Extraction for a single workplace

Consumables and accessories 36
Extraction technology

D-LE 280 SD

Three-place extraction unit

1. The integrated ball castors provide complete position flexibility.

2. Opening the front plate enables easy access to the filtration materials.

3. The D-LE 280 SD three-place extraction unit has an automatic switch-on device and regulates the air volume automatically.

4. The display provides information about the number of channels, their extraction power and the condition of the filters.

5. A maintenance-free, brushless, two-stage, high-pressure fan provides a dust-free working environment, and is also extremely quiet (this motor has no carbon brushes).

6. The extraction power is between 25 and 37 litres per second (dependent upon the number of users in operation).

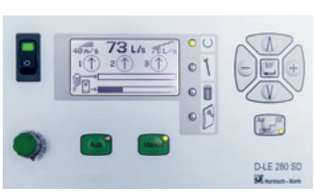
Description

Construction in accordance with the principles for the testing and certification of extraction units of the German Social Accident Insurance (DGUV) (GS-IFA-M20). The extraction unit consists of a powerful, very quiet, brushless extraction fan, combined with a large-volume fleece bag with approx. 10 kg dust collection capacity, downstream of which there is an “M” category super-fine filter. This catches 99.98% of micro-dust particles with a grain size 0.5 µ. This is significantly better than the 0.1% let-through value required by the trade association.

The extraction unit is fitted with an electronic, automatic switch-on device with filter change indication for pre-filter and super-fine filter, and automatic air volume regulation. The level of the air-flow volume can be set according to the type of collection device (suction muzzle) and can be read from the display.

The flow volume control device not only monitors the air-flow volume, but also the degree of soiling of the pre-filter and the super-fine filter. The condition of the filter components, as well as reduction of the extracted air-flow volume at the collection device (suction muzzle) to below the prescribed minimum value, is indicated via a black bar display, in real negative pressure numerical values, or acoustically. If the air-flow volume falls below the minimum value, all of the dust-generating devices connected to the extraction unit are switched off.

Details



The level of the air-flow volume, as well as information about the degree of soiling of the filter materials, can be read from the display.

Volume flow control device
The air-flow volume is regulated automatically. The volume of air at the suction funnel remains constant, irrespective of the degree of soiling of the filter medium. In a fraction of a second, the electronic control system detects a turning hand piece and initiates extraction immediately. At specified time intervals, the extraction unit carries out a self-test, during which the air ducts are sucked clear. The level of the air-flow volume can be set according to the type of collection device (suction muzzle) and its associated volume of air, and can be read from the display.

The flow volume control device not only monitors the air-flow volume, but also the degree of soiling of the pre-filter and the super-fine filter. The condition of the filter components, as well as reduction of the extracted air-flow volume at the collection device (suction muzzle) to below the prescribed minimum value, is indicated visually and acoustically. If the air-flow volume falls below the minimum value, all of the dust-generating devices connected to the extraction unit are switched off.

Technical data

Width	200 mm
Depth	600 (620) mm
Height	675 mm
Electrical connection	230 V, 50 Hz

Power consumption	1.100 W
Air throughput	Max. 75 l/sec.
Weight	33.5 kg

D-LE 255 SD

Extraction for maximum two workplaces

1. Especially comfortable running smoothness due to optimum noise insulation.

2. The dust is collected in a large volume, two-ply disposable filter bag with up to 10 kg capacity, dependent upon the nature of the dust. It is easy to change and is located in a practical mesh basket for easy disposal.. The large area super-fine filter, which is located downstream of the filter bag, catches 99.98% of micro-dust particles with a grain size 0.5 µ. This is significantly better than the 0.1% let-through value required by the trade association.

3. The integrated castors make the D-LE 255 extraction units highly mobile.

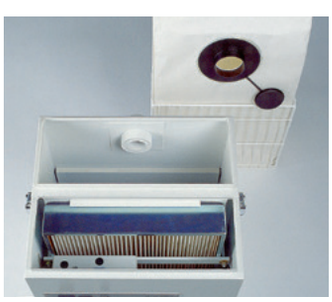
Description

High extraction power from industrial high-pressure fan motors, high filtration effectiveness and optimum noise insulation ensure these units stand out from the crowd. Our range of models provides the best possible device for any application. The D-LE 255 SD is designed for one and two extraction points. Best suited for use in preparation stations, it is fitted with an automatic switch-on device and the latest electronic air-volume regulation.

Details

Volume flow control device
The air-flow volume is regulated automatically. The volume of air at the suction funnel remains constant, irrespective of the degree of soiling of the filter medium. In a fraction of a second, the electronic control system detects a turning hand piece and initiates extraction immediately. At specified time intervals, the extraction unit carries out a self-test, during which the air ducts are sucked clear.
The level of the air-flow volume can be set according to the type of collection device (suction muzzle) and its associated volume of air, and can be read from the display.

The flow volume control device not only monitors the air-flow volume, but also the degree of soiling of the pre-filter and the super-fine filter. The condition of the filter components, as well as reduction of the extracted air-flow volume at the collection device (suction muzzle) to below the prescribed minimum value, is indicated visually and acoustically. If the air-flow volume falls below the minimum value, all of the dust-generating devices connected to the extraction unit are switched off.



Extraction unit
The extraction unit consists of a powerful, very quiet extraction fan, combined with a large-volume, paper filter bag with approx. 10 kg dust collection capacity, downstream of which there is a super-fine filter.

This catches 99.98% of micro-dust particles with a grain size 0.5 µ.
This is significantly better than the 0.1% let-through value required by the trade association.

Technical data

Width	420 mm
Depth	390 mm
Height	542 mm
Electrical connection	230 V, 50 Hz
Power consumption	Max. 1.100 W
Air throughput	Max. 60 l/sec.
Hose connection	50 mm diam.

Dust bag capacity	Approx. 10 kg
Weight	25 kg
Housing	Durable, environmentally friendly steel plate housing, powder coated RAL 9002.

D-LE 255 S

Extraction for a single workplace

Automatic air volume regulation!

1. Especially comfortable running smoothness due to optimum noise insulation.

2. The dust is collected in a large volume, two-ply disposable filter bag with up to 10 kg capacity, dependent upon the nature of the dust. It is easy to change and is located in a practical mesh basket for easy disposal.. The large area super-fine filter, which is located downstream of the filter bag, catches 99.98% of micro-dust particles with a grain size 0.5 µ. This is significantly better than the 0.1% let-through value required by the trade association.

3. The integrated castors make the D-LE 255 extraction units highly mobile.

Description

High extraction power from industrial high-pressure fan motors, high filtration effectiveness and optimum noise insulation ensure these units stand out from the crowd. Our range of models provides the best possible device for any application. The D-LE 255 S is optimised for extraction use with dust-generating equipment, including blasting units, saws and dental model grinders amongst others. The unit's high extraction power and effective filtration (similar to the D-LE 255 SD unit) are especially advantageous. Infinitely variable extraction 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 illuminates and the unit switches off automatically.

Details

Extraction unit
The extraction unit consists of a powerful, very quiet extraction fan, combined with a large-volume, paper filter bag with approx. 10 kg dust collection capacity, downstream of which there is a super-fine filter.

This catches 99.98% of micro-dust particles with a grain size 0.5 µ.
This is significantly better than the 0.1% let-through value required by the trade association.

Technical data

Width	420 mm
Depth	390 mm
Height	542 mm
Electrical connection	230 V, 50 Hz
Power consumption	Max. 1.100 W
Air throughput	Max. 60 l/sec.
Hose connection	50 mm diam.

Dust bag capacity	Approx. 10 kg
Weight	25 kg
Housing	Durable, environmentally friendly steel plate housing, powder coated RAL 9002.

Consumables and accessories

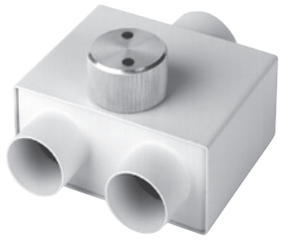
Extraction technology

Filter bags

All Harnisch+Rieth filter bags are made of the highest quality materials. Extensive quality controls and secure bonding ensure consistently high quality, providing the best prerequisite for good functionality and perfect extraction results.

Article no.	Type	M-S355	D-G 16 S D-G 16 S2	D-H 22 S	D-LE 280 SD	D-LE 255 SD D-LE 255 S	D-BS 320 FM	G-F 318 E
42012	Film bag	✓						
42015	Paper bag		✓	✓		✓		
42100	Paper bag						✓	
42300	Fleece bag							✓
42303	Fleece bag		✓	✓		✓		
42305	Fleece bag				✓			

W-2 extraction switch



The W-2 extraction switch connects two dust-generating devices or workplaces to a common extraction unit.
Turning the rotating knob selects individual or simultaneous extraction at the dust generators.

Technical data

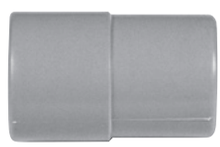
Width: 335 mm
Depth: 180 mm
Height: 400 mm
Weight: 2.8 kg
Connection diameter in the extraction direction: diam. 50 mm
Connection diameter in the dust generator direction: 40 mm diam., 45 mm diam. or combined.

H+R suction hoses

The highly flexible suction hoses are set apart by their very low internal air resistance and are available in four sizes.

Available internal diameters
40 mm diam., 45 mm diam., 50 mm diam., 63 mm diam.

H+R connection pieces



Connection pieces ensure that the suction hose connection has a tight seal.

Available diameters
40 mm diam., 45 mm diam., 50 mm diam.

Model making

D-VM 18 T / D-VM 18 W 38
Vacuum mixer

D-R 644 40
Vibrating unit

D-BS 320 F 42
Plaster model belt grinding unit

G-F 318 E / G-F 318 EO 44
Dental model grinder

Consumables and accessories 46
Model making

D-VM 18 T / D-VM 18 W

Vacuum mixer

Also as a space-saving wall unit **D-VM 18 W**.

1. When the mixing cup is being raised, the agitator coupling parts are automatically guided into each other and connected.

2. A robust 300 ml acrylic mixing cup with metal cover and agitator is included.

3. The large extraction pre-chamber and the three-stage filter unit (pre-filter, main filter and post-filter) ensure absolute functional reliability of the double-piston vacuum pump.

4. Starts the automatic sequence of the selected agitation program.

5. Provides information about the selected agitation program and the progress of the work sequence.

6. 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. Keypad for selection of one of the twelve agitation programs.

7. Vacuum button provides vacuum without agitation (e.g. for rinsing models). Mixing button for agitation only (without vacuum).

8. A heavy, cast foot provides the table unit with good stability.

Description

Investment material, plaster and silicone are processed by our highly developed D-VM 18 vacuum mixer under optimum conditions. An exceptionally powerful vacuum compressor and a highly robust and powerful agitator motor along with 12 individually storable agitation programs satisfy the highest quality level demands in day-to-day practice.

Details

Automatic sequence
The filled agitator cup is automatically coupled to the agitator drive by a pneumatically assisted lifting device and pressed onto the sealing surface.

Using the start button, the previously selected agitation program is initiated. Dependent upon the type of program, the maintenance-free, high-power double-piston pump quickly reaches a vacuum pressure of 980 mbar. After the mixing process is complete, there is a short sound indication and the agitator switches off. The vacuum pump continues to operate until the stop button is pressed, which at the same time initiates the metered, speedy flooding of the mixing cup.

Programming
The agitation programs are simple to select using the keypad on the operating panel. In addition to agitation time, rotation direction and speed, it is similarly possible to independently adjust the vacuum.

Motor and pump
At the heart of these units is the powerful, robust geared agitation motor as well as the maintenance-free high-performance double-piston vacuum pump, which quickly generates a vacuum of 980 mbar.

Product variants

Article no.	Type	Table unit	Wall unit
10410	D-VM 18 T	✓	
10415	D-VM 18 W		✓

Technical data

	D-VM 18 T table unit	D-VM 18 W wall model
Width	380 mm	380 mm
Depth	355 mm	355 mm
Height	520 mm	500 mm
Electrical connection	230 V, 50 Hz	230 V, 50 Hz
Power consumption	Max. 420 W	Max. 420 W
Vacuum	Max. 980 mbar (adjustable)	Max. 980 mbar (adjustable)
Agitator speed	0 - 600 rpm. Left and right rotation	0 - 600 rpm. Left and right rotation
Weight	Approx. 30 kg	Approx. 25 kg
Colour	Durable, environmentally friendly steel plate housing, powder coated RAL 9002.	Durable, environmentally friendly steel plate housing, powder coated RAL 9002.

D-R 644

Vibrating unit

Optionally available with vibration insulation plate.

1. The easy-to-operate switching lever on the left selects setting 1 (50 vibrations per second) or setting 2 (100 vibrations per second). Moving the lever to the centre position switches the unit off.

2. Two solid stainless steel vibration bars attached to the aluminium vibration plate are useful when filling impressions.

3. The rubber plates of the vibration tables are easy to remove for cleaning. To prevent soiling of the controls, the plates have a drip guard that protrudes well over the front edge.

4. The knob on the right adjusts the vibration intensity continuously as required.

Description

The D-R 644 vibrating unit is constructed according to the most up-to-date specifications, taking account of the unit's intense working conditions. Intensive vibration and the highest quality standards guarantee consistently perfect functionality. Robust, high power vibration magnets transmit the preselected vibration force to the aluminium vibration table, supported by the heavy cast iron housing which acts as a counterweight. The housing stands stably and firmly on strong rubber feet.

Details

The vibrating unit consists of an aluminium vibration tray with a rubber plate and a heavy cast housing containing a strong vibration magnet activated by a reliable and vibration-resistant control system.

The vibrating unit has consistently excellent vibration properties. This guarantees that even the smallest and deepest recesses in the processed object will be free of air pockets (bubbles).

Vibration insulation plate (optional)

The vibration insulation plate absorbs almost all vibrations generated by a vibrating unit and transferred to the surface. The vibration insulation plate prevents vibration in the furniture. This prevents stored materials, such as investment material, being disturbed. Freshly emplaced plaster models do not sag.

When the vibration insulation plate is being used only the sound of the vibrating unit itself can be heard, thus guaranteeing extremely low noise emissions.

The vibration insulation plate is suitable for all currently commercially available vibrating units.

Technical data
Dimensions: Width 340 mm · Height 200 mm

Technical data

Width	310 mm
Depth	215 mm
Height	145 mm
Electrical connection	230 V, 50 Hz
Power	Level 1: 136 W, level 2: 220 W

Weight	14.6 kg
Housing	Durable, environmentally friendly cast steel housing, powder coated RAL 9002.

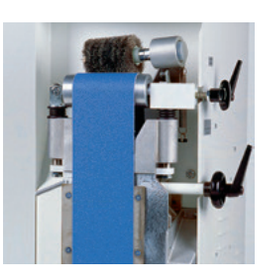
D-BS 320 F

Plaster model belt grinding unit

With integrated extraction unit or for connection to external extraction.

1. The workpiece table can be variably adjusted according to scale. Inclination from +15° to -15°.

2. The special grinding belt, supplied in various coarseness grades, produces a perfectly even, clean and straight grinding result. Optimum noise insulation achieves particularly quiet operation.



3. Optimally designed belt guidance, together with an ingeniously arranged rotating brush roller, cleans the grinding belt continuously, ensuring that clogging, even with wet plaster, is impossible.

4. Changing of the grinding belt is carried out quickly and easily with minimum effort. A particular advantage is that removal of the complete front component allows unhindered access to the grinding belt and brush.

Description

The D-BS 320 F belt grinder is especially designed for the dry grinding of denture models. All the materials found in the laboratory, from super-hard plaster and investment materials to Plexiglas, can be processed simply and easily. By grinding without water, the highest quality and accuracy of the model achieved by the dental technician is retained.

Details

Filter system
The external, highly effective filter system with large-area super-fine filter guarantees a completely dust-free and comfortable working environment. The grinding dust is collected in a single-use paper filter bag, held in a mesh basket.
On reaching the maximum filling quantity (approximately 20 kg) the belt grinder switches off automatically. The filter bag can then be taken dust-free in the mesh basket to the disposal point.

Product variants

Article no.	Type	Integrated extraction unit	External extraction
10500	D-BS 320 FM	✓	
10505	D-BS 320 FO		✓

Technical data

	D-BS 320 FM	**with filter system**	**D-BS 320 FO** with connection diameter of 45 mm for external extraction
Width	320 mm	540 mm	320 mm
Depth	425 mm	340 mm	425 mm
Height	640 mm	650 mm	640 mm
Electrical connection	230 V, 50 Hz		230 V, 50 Hz
Power consumption	1.650 W		500 W
Grinding area	100 x 100 mm		100 x 100 mm
Weight	59 kg	29 kg	57 kg
Housing	Durable, environmentally friendly steel plate housing, powder coated RAL 9002.		Durable, environmentally friendly steel plate housing, powder coated RAL 9002.

G-F 318 E / G-F 318 EO

Dental model grinder

Integrated or external extraction.

1. Adjustment wheel and millimetre scale for infinitely variable height adjustment of the working table for individual adaptation of the grinding depth to the plaster model height (only for G-F 318 E/EO) (see illustration).

2. Conical, diamond-toothed, hard metal milling cutter for optimal grinding result and straightforward working. Precise concentricity due to precision collet chuck.

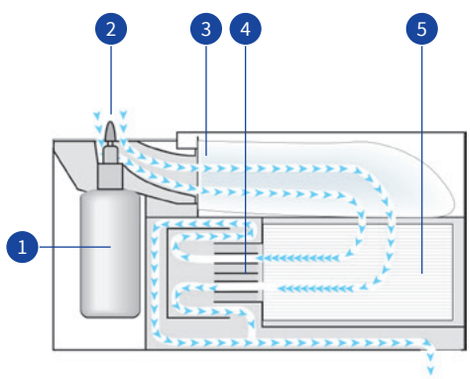
Description

These dental model grinders are especially optimised for grinding dental models.
The G-F 318 E models with integrated extraction unit are remarkable for their extremely high filtration effectiveness and optimum noise insulation. An external extraction unit can be connected to the G-F 318 EO unit.

These units are particularly suitable for grinding dental models. Prior to drilling and insertion of pins into the dental model, it is ground on the inside and outside at an angle of approximately 8°, so that it tapers downwards. The dental model, or the stubs to be sawn out later, is thus given optimal guidance in the plaster base added later. Due to the conical grinding, the sawn stubs can also be removed easily.

Details

Extraction unit
The dust generated is sucked away directly at the tool by the integrated extraction unit and collected in an easily changeable, single-use fleece bag.
A filter cartridge downstream traps the small amount of residual dust, thereby guaranteeing a completely dust-free working environment.



Air-flow routing Extraction
1. Drive motor
2. Air intake
3. Fleece bag
4. Clamp lock
5. Fan motor
6. Filter cartridge

Product variants

Article no.	Type	Integrated extraction unit	External extraction	Infinitely variable height adjustment
10530	G-F 318 E	✓		✓
10531	G-F 318 EO		✓	✓

Technical data

	G-F 318 E with integrated extraction	**G-F 318 EO** with 40 mm diameter connection for external extraction
Working table	Working table with infinitely adjustable height adjustment	Working table with infinitely adjustable height adjustment
Width	180 mm	180 mm
Depth	520 mm	315 mm
Height	310 mm	310 mm
Electrical connection	230 V, 50 Hz	230 V, 50 Hz
Power	700 W	200 W
Speed	Approx. 9.000 rpm	Approx. 9.000 rpm
Weight	20.5 kg	10 kg
Housing	Durable, environmentally friendly steel plate housing, powder coated RAL 9002.	Durable, environmentally friendly steel plate housing, powder coated RAL 9002.

Consumables and accessories

Model making

Filter bags

All Harnisch+Rieth filter bags are made of the highest quality materials. Extensive quality controls and secure bonding ensure consistently high quality, providing the best prerequisite for good functionality and perfect extraction results.

Article no.	Type	M-S355	D-G 16 S D-G 16 S2	D-H 22 S	D-LE 280 SD	D-LE 255 SD D-LE 255 S	D-BS 320 FM	G-F 318 E
42012	Film bag	✓						
42015	Paper bag		✓	✓		✓		
42100	Paper bag						✓	
42300	Fleece bag							✓
42303	Fleece bag		✓	✓		✓		
42305	Fleece bag				✓			

Grinding belts

All Harnisch+Rieth grinding belts are made of the highest quality materials. Intensive quality checks and special screening achieve a consistent level of quality, which is the prerequisite for good functionality and perfect grinding results.

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 types

60 ml, 150 ml, 300 ml, 600 ml and 1.000 ml.
All Harnisch+Rieth mixing cups are specially designed with narrow edge gap between the stirring spatula and cup wall. The rounded cup bottom allows for easy cleaning.

Article no.	60 ml	150 ml	300 ml	600 ml	1.000 ml
15070	✓				
15075		✓			
15080			✓		
15085				✓	
15090					✓

Wax extraction technology

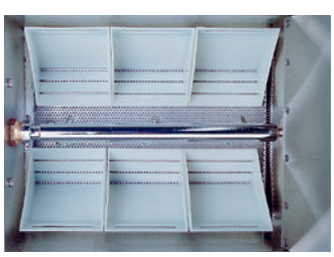
D-AB 240 48
Wax extraction unit

Consumables and accessories 50
Wax extraction technology

D-AB 240

Wax extraction unit

With optional spray guard.



1. The spray tube is easy to remove, allowing much easier access to the bath during cleaning. The fitted filter pad that traps wax residue is easy to replace and so keeps the water permanently clean.

2. The core is the powerful and durable industrial immersible pump made of bronze, which operates immensely reliably.

Description

These devices are in line with the latest expertise and specifications for dental laboratories. They are technically developed and of the highest quality. The exclusive use of proven and reliable components guarantees malfunction-free and efficient working, even in the harshest conditions.

The housing of the D-AB 240 wax extraction unit is made completely of acid- and corrosion-resistant steel plate. The device is designed to be easy to maintain and use. It accommodates six cuvette baskets made of chemically and thermally resistant special plastic, suitable for all conventional cuvettes. Cuvette baskets are also available for the Ivocap system

Details

Nozzles
The cuvette halves are sprayed optimally from six highly effective nozzles. The powerful 2.300 W heating system rapidly brings the water content of approximately 14 litres to the wax extraction temperature.

Flap lid
The perforated flap lid is recessed. Using the integrated hand spray, smaller parts are easily de-waxed on it.
Subject to request, an easy-to-fit spray guard can be supplied.

Technical data

Width	600 mm
Depth	420 mm
Height	425 mm
Electrical connection	230 V, 50 Hz
Power	Heating system 2,300 W / pump 190 W

Capacity	14 l
Weight	Approx. 38.5 kg
Housing	Acid- and corrosion-resistant stainless steel housing
Supplied	Six cuvette baskets

Consumables and accessories

Wax extraction technology

Wax solvent WL 104 for D-AB 240 wax extraction unit

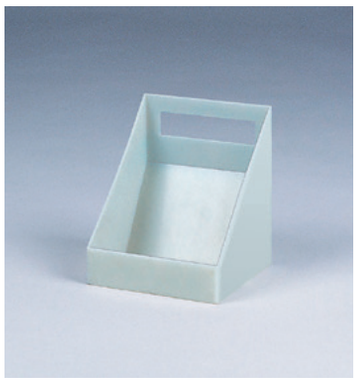
The Harnisch+Rieth wax solvent is perfectly adapted for cleaning of wax extraction units. Regular cleaning ensures not only the longevity of the units but also guarantees reproducible wax extraction results.

PE bottles: 250 cc · 1.000 cc
Mixing ratio: 25 cc of WL 104 for one filling with water (approx. 14 l)

Article no.	Type	250 ml	1.000 ml
15050	WL 104	✓	
15051	WL 104		✓

Cuvette holder for D-AB 240 wax extraction unit

Technical data
Width: 123 mm
Depth: 113 mm
Height: 140 mm



Milling and measuring technology

D-F 44 52
Precision milling unit with micro-motor

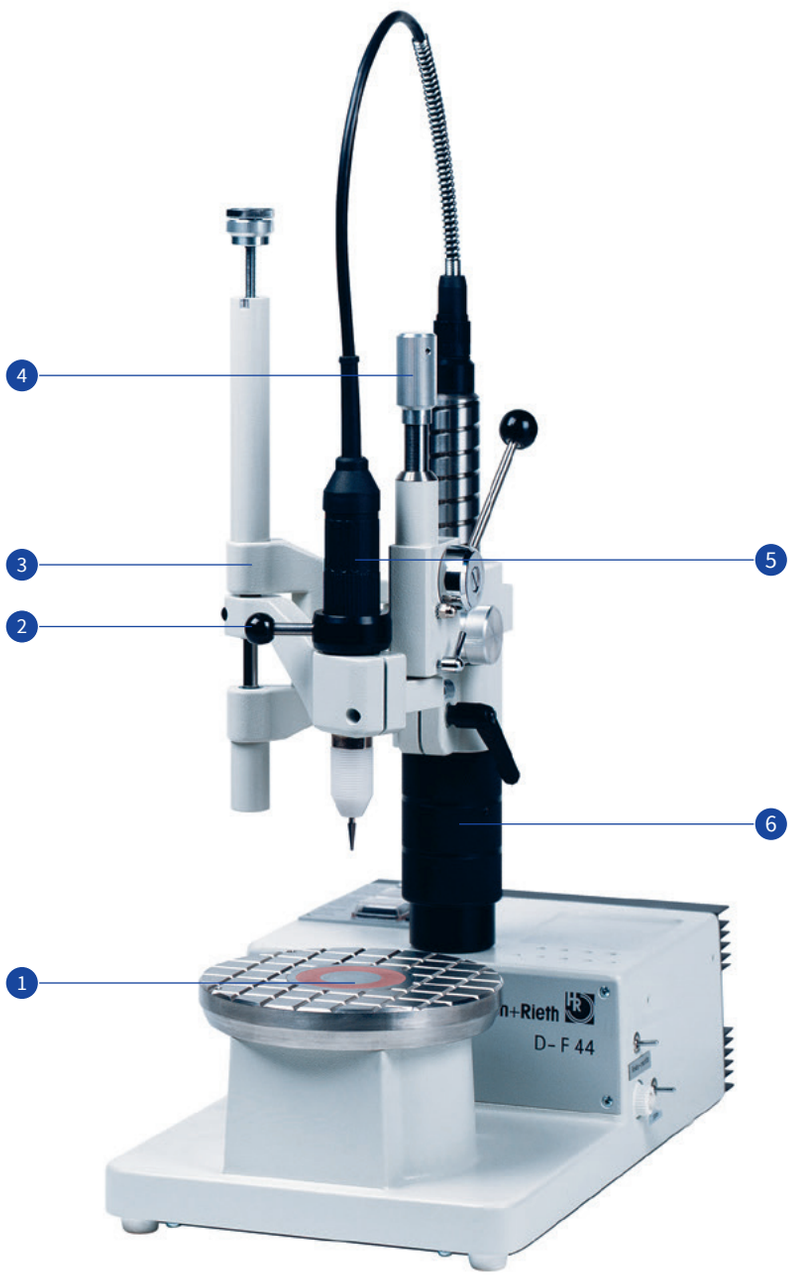
D-26 VM 54
Blocking and measuring units

Consumables and accessories 56
Milling and measuring technology

D-F 44

Precision milling unit with micro-motor

Can be supplied with an optional measuring arm and LED illumination.



1. Model tables, milling tables and milling discs can be freely moved on the electromagnetic working table, or quickly and securely electromagnetically clamped in any position.

2. With the D-F 44, tools are changed using the handy quick-clamping lever.

3. The four-way, ball bearing mounted, freely movable, double-joint arm is absolutely play free and ensures precise, three-dimensional working with ease of movement. The integrated depth stop enables precise limitation of the vertical range.

4. The drilling jig has a vertically movable sleeve controlled by a hand lever. A scale with 1 mm graduations and a stop nut with 0.1 mm graduations are used for reference.

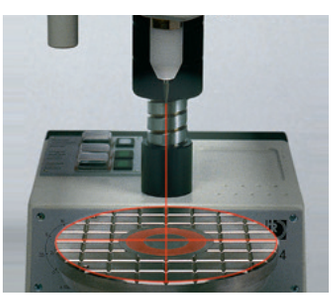
5. The vertical coarse setting of the working range is achieved by turning the threaded sleeve on the fixed column of the device.

6. Optionally, the milling unit can be augmented by a parallelometer double-joint arm combined with LED illumination.

Description

The D-F 44 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 work processes can be completed quickly and precisely. Driven by a robust micro-motor of advanced technology and a very quiet milling spindle, speed can be set steplessly from 2.400 to 40.000 rpm, with power remaining consistent. Both left-hand and right-hand rotation are available.

Details



Intensive manufacturing and set up adjustment processes have achieved the highest levels of precision, providing the prerequisites for high quality milling tasks.

Accessories

The milling unit can be augmented by a parallelometer double-joint arm combined with LED illumination.

Technical data

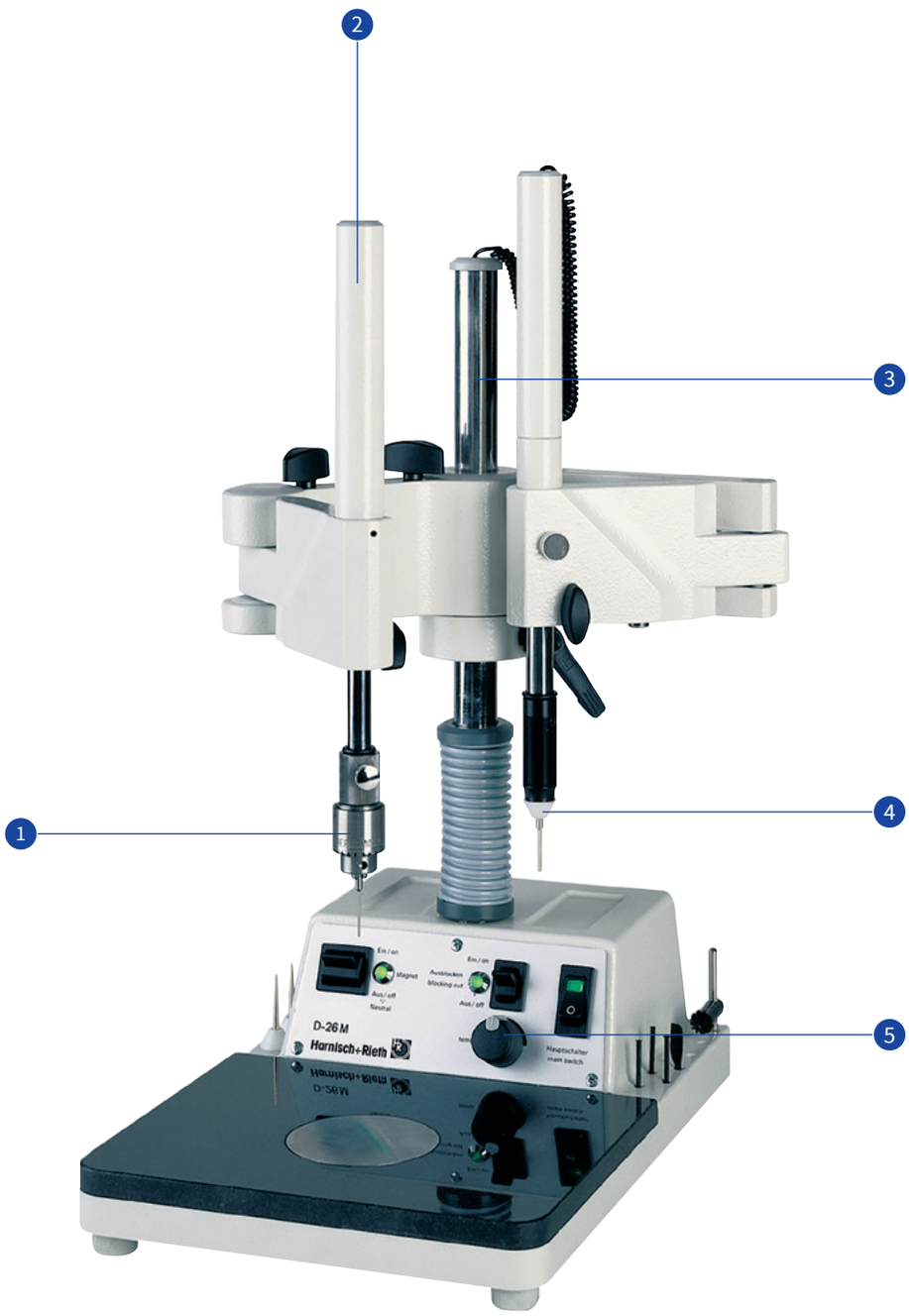
Width	260 mm
Depth	385 mm
Height	Min. 480 mm Max. 590 mm
Connection	230 V, 50 Hz
Power consumption	Max. 200 W
Speed in rpm	2.400 to 40.000

Weight	Approx. 16 kg
Housing	Durable, environmentally friendly aluminium housing, powder coated RAL 9002.

D-26 VM

Blocking and measuring units

Including blocking tips 0°, 2°, 4° and 6°.



1. The tools are held in a three-jaw precision chuck with a clamping range of 0 - 4 mm.

2. The three-dimensional, freely moving measuring arm can be fixed simply and securely in any position required.

3. The height setting of the working range is achieved by pushing the guide housing on the fixed column of the device.

4. The working temperature is selected by means of a finely adjustable heating element.

5. The set temperature remains constant throughout the length of the tip. The tips are simply placed on the thermal chuck and can therefore be changed very quickly.

Description

The D-26 VM blocking and measuring unit with two double-joint arms. One joint arm is for blocking and can be fitted with various blocking tips of different inclination angles.

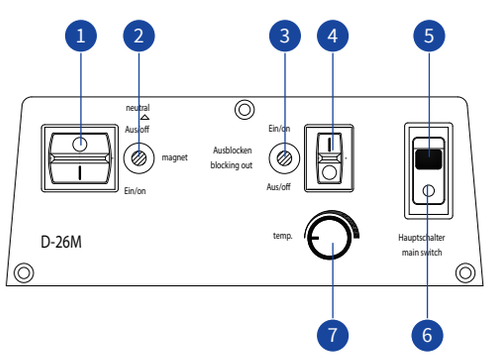
These are made of hard silver with optimum thermal conductivity. The heating time of the silver tips is only two minutes.

The second joint arm is for measuring and transfer. The blocking and measuring unit has a powerful, electromagnetic working table.

The D-26 series is of the highest precision and ease of operation for your day-to-day laboratory work. The ball bearing mounted, double-joint arm is play-free, and its excellent construction provides the greatest possible freedom of movement.

The freely moving and maintenance free guide rods are precisely mounted in linear rotation ball bearing guides.

Details



1. Switch for magnet
2. Signal light for magnet
3. Signal light for blocking
4. Blocking switch
5. Signal light for main switch
6. Main switch
7. Rotating knob for blocking temperature

Technical data

Width	200 mm
Depth	285 mm
Height	Min. 400 mm Max. 530 mm
Connection	230 V, 50 Hz
Power consumption	11 W

Weight	6 kg
Housing	Durable, environmentally friendly aluminium housing, powder coated RAL 9002.

Consumables and accessories

Milling and measuring technology

Conometer

Precision tool for angular modelling and shaving primary crowns.
Angle setting range of 0° - 14°. Includes a wax shaver.

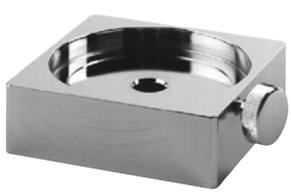
Model table, pivoting

Made entirely from oxidation-free 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. The model table is very stable and manageable.

Magnetisable: with stainless steel baseplate for clamping to a magnetic table.
Non-magnetisable: with solid aluminium plinth.

Milling table

The milling disc is clamped into it. The milling table can either be clamped magnetically or moved manually.



Milling disc

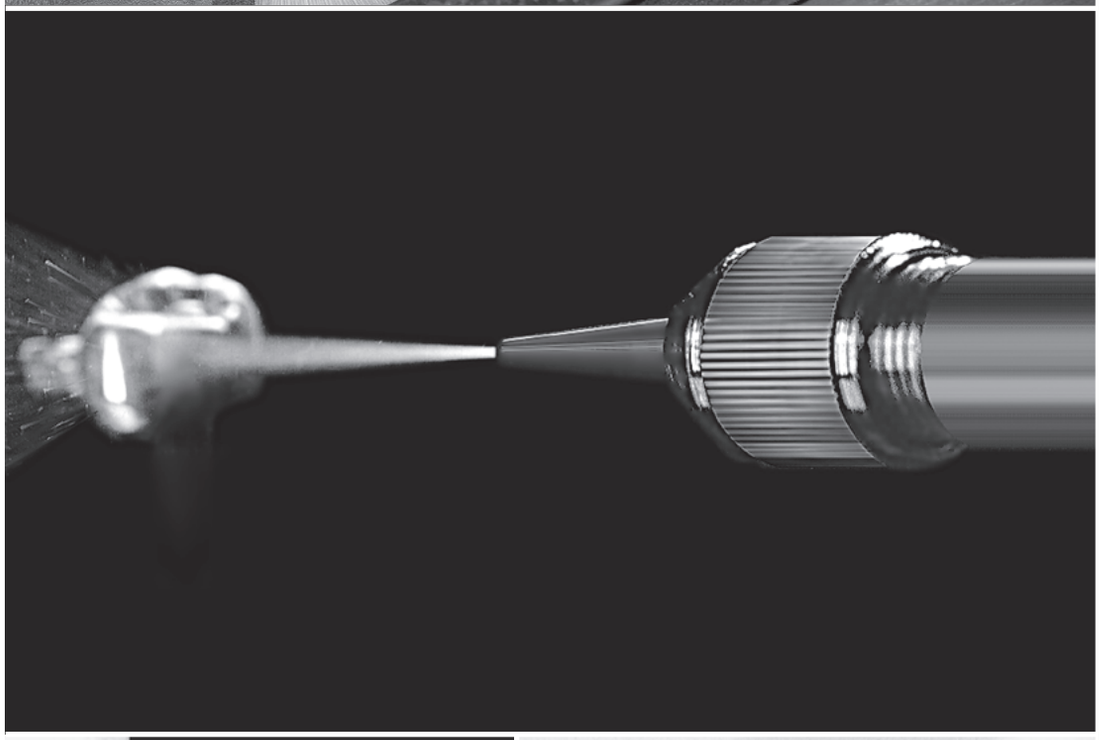
The object to be worked is fixed securely in the milling disc with plaster.

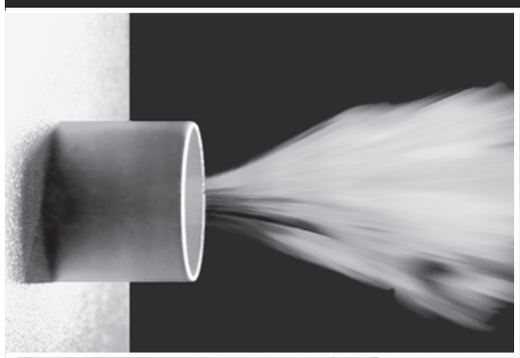
Milling disc, large: Ø 93 mm · **Milling disc, small:** diam. 64 mm

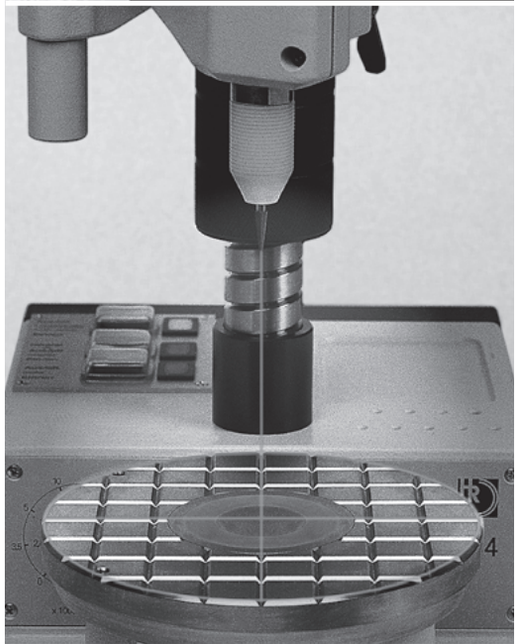
Blocking tips

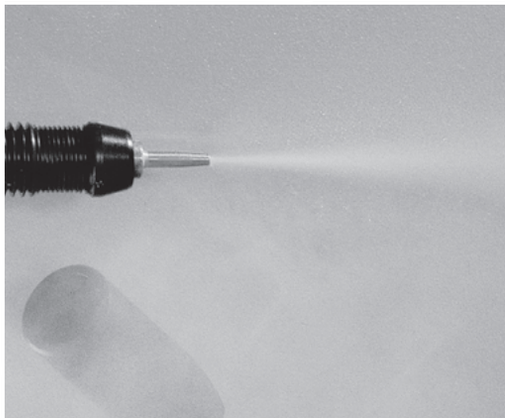
Blocking tips are available with inclination angles of 0°, 2°, 4° and 6°.


start
vacuum
mix
vibrator
vacuum
vac
stop
timer
sec
Harnisch+Rieth









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