



Expanded range

We have revised and expanded the entire lapping range for you!

See for yourself!

Complete pricing transparency

Prices markedly reduced in some cases. All prices can be directly consulted in the brochure.

Polishing and lapping technology

Polishing and lapping technology Overview



Polishing and lapping machines



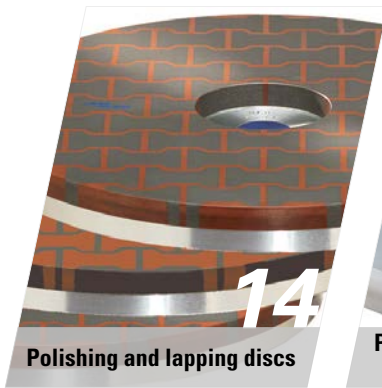
Spray unit



Hand lapping discs, incl. diamond stick



Accessories for polishing and lapping machines



Polishing and lapping discs



Polishing and lapping disc accessories



Dressing systems



Polishing cloths



Lapping Consumables



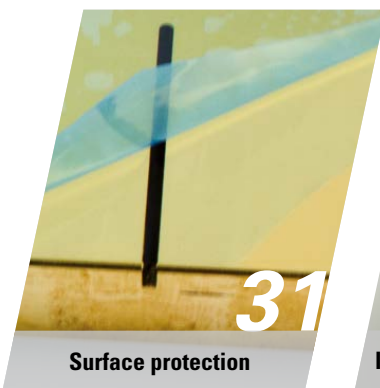
Lapping medium powder



Lapping fluids



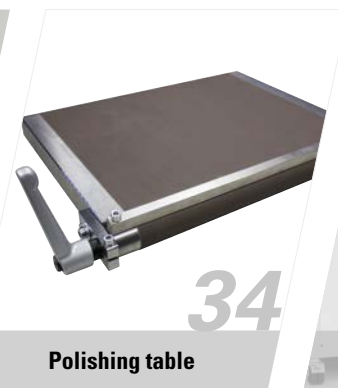
Surface cleaning



Surface protection



Interference testing devices



Polishing table



Ultrasonic cleaners

04 Polishing and lapping machines

joke EL 380
joke EL 600
joke EL 700
joke EL 1000
joke EL 1200
Contact pressure devices EL380 - 1200
Lapping medium dosing devices
Spray unit

09 Hand lapping discs, incl. diamond stick

10 Accessories for polishing and lapping machines

Dressing rings
Workpiece holders and Compensation washers
Pellets made of ceramic and plastic
Hand weights

14 Polishing and lapping discs

Bi-Composite polishing and lapping discs
Fixed-grit and cast material lapping discs
Polishing and lapping discs bronze, copper and tin

17

Polishing and lapping disc accessories

Polishing cloth carrier discs
Dressing systems
Polishing cloths

21

Consumables

Lapping medium powder
Lapping oil, Lapping fluids

Suspensionen

Suspension Siliciumcarbid and Aluminiumoxid
Diamond lapping suspension joke Magic
Diamond lapping suspension Eco-Lap
Diamond sprays
Rust protection • Preservation • Cleaning

32

Workplace equipment

Interference testing devices
Optical plane glasses, Flatness gauges
Polishing table, Polishing paper
Ultrasonic cleaners

Polishing and lapping machines

joke EL 380, 600 and 700

The series EL 380 to EL 1200 polishing and lapping machines from joke have stood for quality and reliability for professional use, incl. "Made-in-Germany" machine building, for many years.

The EL 380 has been specially developed for processing small workpieces and individual components in small series. This variant has been successfully used for many years in laboratories and research institutes, etc. The series EL 380 machines can be equipped with a pendulum arm. Furthermore, a base unit is optionally available or it can be positioned on an appropriate table.

The large EL 600 to EL 1200 machines are designed for serial production. The highly robust machines in the conventional EL series have a comparatively low acquisition price.

All machines feature infinitely variable speed control as standard and a pneumatic contact pressure device is available as an accessory.



The joke EL 380 is customized to suit your needs!

The lapping machine EL 380 can be modified for special applications, for example for processing concave and convex surfaces.

Please discuss the wide range of options with **Hardy Möckl**:
Tel. +49 2204 - 839 0 • h.moeckl@joke.de

| Polishing and lapping machines | EL 380/N | EL 600 | EL 700 |
|---|--------------------|--------------------------|--------------------------|
| Weight | approx. 150 kg | approx. 720 kg | approx. 720 kg |
| Device dimensions (W x D x H) | 620 x 720 x 400 mm | 1.300 x 1.375 x 1.160 mm | 1.300 x 1.375 x 1.160 mm |
| Connected load | 1.2 kVA | 3.7 kVA | 3.7 kVA |
| Cooling | no | no | no |
| Fuse | 16 A, slow-blow | 16 A, slow-blow | 16 A, slow-blow |
| Supply voltage | 400 V, 50/60 Hz | 400 V, 50/60 Hz | 400 V, 50/60 Hz |
| Output | 0.55 kW | 2.2 kW | 2.2 kW |
| Lapping medium waste tank volume | 6 l | 12 l | 12 l |
| matching dressing ring diameter, internal | Ø 140 mm | Ø 248 mm | Ø 275 mm |
| Number of roller yokes | 3 | 3 | 3 |
| matching lapping disc dimensions | Ø 380 mm / 15" | Ø 610 mm / 24" | Ø 700 mm / 28" |
| Order No. | 3 635 021-2 | 3 635 221 | 3 635 421 |
| Price | | | |

Polishing and lapping machines joke EL 1000 and 1200



| Polishing and lapping machines | EL 1000 | EL 1200 |
|---|----------------------|----------------------|
| Weight | approx. 2,400 kg | approx. 2,700 kg |
| Device dimensions (W x D x H) | 1700 x 1550 x 950 mm | 1775 x 1720 x 950 mm |
| Connected load | 7.7 kVA | 9.4 kVA |
| Cooling | no | no |
| Fuse | 16 A, slow-blow | 25 A, slow-blow |
| Supply voltage | 3 x 400 V, 50/60Hz | 3 x 400 V, 50/60Hz |
| Output | 5.5 kW | 7.5 kW |
| Lapping medium waste tank volume | 12 l | 12 l |
| matching dressing ring diameter, internal | Ø 406 - 408 mm | Ø 480 mm |
| Number of roller yokes | 3 | 3 |
| matching lapping disc dimensions | Ø 1.000 mm / 39" | Ø 1.200 mm / 47" |
| Order No. | 3 635 621 | 3 635 812 |
| Price | | |

Contact pressure devices

EL 380 bis EL 1200

Contact pressure devices for lapping machines EL 380 to 1200

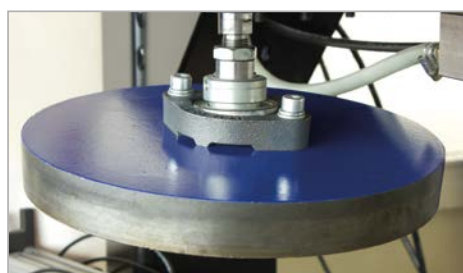
In order to optimise your polishing work, joke recommends, depending on the application, a pneumatic contact pressure device. This can be used to generate high contact pressures that cannot be achieved using hand weights. High contact pressure allows high stock removal and moreover with a good surface. Using an aid of this kind allows you to achieve optimum results while saving time and effort.

The pressure on the workpieces required for processing can be optionally generated by a contact pressure device or by using hand or ballast weights. This contact pressure device has 3 cylinders; these allow an infinitely adjustable contact pressure and can also be activated individually.

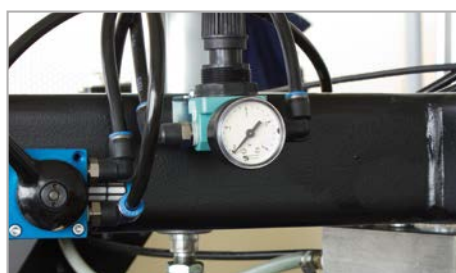
The contact pressure plates required are included in the scope of delivery.



| <i>Lapping medium dosing devices</i> | Order No. | Price |
|--|-------------------|-------|
| Pneumatic contact pressure device for EL 380/N | 3 200 3622 | |
| Lapping pressure at 1 bar 155 N Operating pressure max. 2.5 bars Weight approx. 50 kg | | |
| Pneumatic contact pressure device for EL 600 | 3 200 5004 | |
| Lapping pressure at 1 bar 300 N Operating pressure max. 3 bars Weight approx. 140 kg | | |
| Pneumatic contact pressure device for EL 700 | 3 200 5005 | |
| Lapping pressure at 1 bar 331 N Operating pressure max. 3 bars Weight approx. 140 kg | | |
| Pneumatic contact pressure device for EL 1000 | 3 200 7439 | |
| Lapping pressure at 1 bar 802 N Operating pressure max. 3 bars Weight approx. 460 kg | | |
| Pneumatic contact pressure device for EL 1200 | 3 200 7974 | |
| Lapping pressure at 1 bar 922 N Operating pressure max. 3 bars Weight approx. 490 kg | | |



Detail: contact pressure plate with bearing



Detail: pressure indicator

The new premium series

Polishing and lapping machine ELX

The advantages

- Latest-generation "high-end" machine
- Consistent, reproducible manufacturing results owing to the PLC controller
- With water cooling = less heat increase = greater stock removal



Find out more about our new Premium series; contact our product manager

Hardy Möckl

Lapping product manager

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Email: h.moeckl@joke.de

Lapping medium dosing devices • Spray units

Accessories for polishing and lapping machines



| <i>Lapping medium dosing devices</i> | Order No. | Price |
|--|------------------|-------|
| Lapping medium dosing device for EL 380 | 3 635 150 | |

Lapping medium tank volume 6 litres
Pump motor output 0.08 kW

| | | |
|---|------------------|--|
| Lapping medium dosing device for EL 600 to EL 1200 | 3 635 350 | |
|---|------------------|--|

Lapping medium supply via dosing block from above
Lapping medium tank volume 12 litres
Pump motor output 0.08 kW

| <i>Accessories / spare parts</i> | Order no. | Price |
|--|---------------------|-------|
| Mounting for lapping medium dosing device EL 600 / EL 700 | 3 200 4344-1 | |

Holder not required for machines with a pneumatic contact pressure device.

Mounting for EL 1000 to EL 1200 on request.

| <i>Spray units and accessories</i> | Order No. | Price |
|------------------------------------|--------------------|-------|
| Spray unit 809 B | 3 645 810-2 | |

with built-in agitator for diamond suspension, 2 timers for spraying times and breaks, automatic and manual operation, container volume 0.5 litres



| | | |
|---------------------------------------|------------------|--|
| Glass container for spray unit | 3 645 812 | |
|---------------------------------------|------------------|--|

| | | |
|---|--------------------|--|
| Spray arm with 2 spray nozzles for 809 B | 3 645 814-1 | |
|---|--------------------|--|



| | | |
|-----------------------|------------------|--|
| Spray unit 909 | 3 645 817 | |
|-----------------------|------------------|--|

with peristalsis (hose pump), incl. spray arm



| | | |
|---|------------------|--|
| Spray arm with 3 spray nozzles for 909 | 3 645 818 | |
|---|------------------|--|



| | | |
|--|--------------------|--|
| Linear forward feed unit with controller for EL 1000 to EL 1200 | 3 635 735-1 | |
|--|--------------------|--|





Hand lapping discs

Hand lapping discs

These discs are ideal for on-site refurbishing or also for use in small series production. They are suitable for example for polishing and lapping gaskets made of carbon, carbide, ceramic and silicon carbide, etc.

The discs (Ø 300 mm) are available in coarse, fine and superfine grades. Solid-surface components of up to Ø 40 mm and rings up to Ø 70 mm can be processed.

| Hand lapping discs, incl. diamond stick 10 g and fluid 25 ml | Type | Colour | Dimensions | Scope of delivery | Order No. | Price |
|---|------------------|--------|----------------|-----------------------------------|------------------|-------|
|  | superfine | yellow | Ø 300 mm / 12" | diamond stick 6 µm + fluid 25 ml | 3 645 653 | |
| | fine | green | Ø 300 mm / 12" | diamond stick 9 µm + fluid 25 ml | 3 645 654 | |
| | coarse | blue | Ø 300 mm / 12" | diamond stick 25 µm + fluid 25 ml | 3 645 655 | |

| Hand lapping disc case with 3 lapping discs, incl. diamond stick and fluid | Type | Dimensions | Contents | Order No. | Price |
|--|-----------------------------------|---------------|------------------|------------------|-------|
|  | coarse, fine and superfine | each Ø 140 mm | 3 sticks + fluid | 3 645 656 | |

This case contains three lapping discs (Ø 140 mm) for preliminary and final polishing in the working stages. Work pieces of up to a diameter of 40 mm can be processed.

Useful items for reordering!

| Diamond sticks | Processing | Type | Grit | Contents | Order No. | Price |
|---|----------------------|----------|-------|----------|--------------------|-------|
|  | Finishing | MM 145 | 1 µm | 10 g | 3 645 680 | |
| | | MM 144 | 2 µm | 10 g | 3 645 681 | |
| | | MM 143 | 3 µm | 10 g | 3 645 682 | |
| | | MM 142 | 6 µm | 10 g | 3 645 683 | |
| | | MM 141 | 9 µm | 10 g | 3 645 684 | |
|  | Rough working | MM 134 | 10 µm | 10 g | 3 645 686 | |
| | | MM 132 | 15 µm | 10 g | 3 645 688 | |
| | | MM 131 | 25 µm | 10 g | 3 645 689 | |
|  | Fluid | Contents | | | Order No. | Price |
| | | 1 litre | | | 3 645 646-3 | |

Illustration similar.

Accessories for polishing and lapping machines

Dressing rings made of plastic and ceramic

Dressing rings

Dressing rings essentially perform three functions:

- Receiving the workpieces to be processed
- Assisting lapping medium distribution
- Keeping the lapping disc flat by appropriate positioning

| Plastic dressing rings | Dressing ring diameter, internal | For disc dimensions | Order No. | Price |
|---|----------------------------------|---------------------|------------------|-------|
| Plastic dressing rings are ideal for use on polishing cloths as well as polishing and lapping discs. <ul style="list-style-type: none"> • Wear of the polishing cloths is reduced to a minimum • Little contamination due to abrasion • Minimal heat generation owing to very low-friction plastic | 108 mm | Ø 300 mm / 12 " | 3 637 353 | |
| | 140 mm | Ø 380 mm / 15 " | 3 637 352 | |
| | 248 mm | Ø 600 mm / 24 " | 3 637 355 | |
| | 275 mm | Ø 700 mm / 28 " | 3 637 354 | |
| | 406 mm | Ø 1000 mm / 40 " | 3 637 357 | |
| | 480 mm | Ø 1200 mm / 48 " | 3 637 356 | |

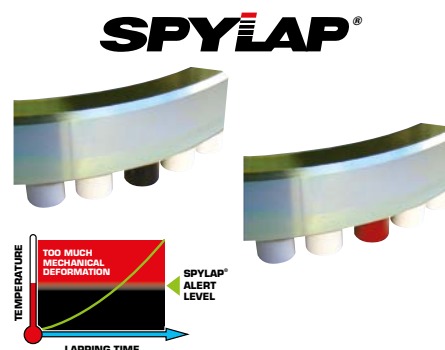


Ceramic dressing rings with SPYLAP® control system

The patented SPYLAP® system allows control over the temperature of the lapping disc (and the resulting flatness) during dressing in the simplest possible manner.

Each ceramic dressing ring is equipped with SPYLAP® elements that change colour from black to red as a result of temperature increase during processing. Changes can therefore be detected at an early stage and the process parameters such as pressure and diamond fluid, etc. can be adjusted. The temperature can thus be decreased again and the flatness of the lapping disc can be retained.

| Ceramic dressing rings with SPYLAP® control system | Dressing ring diameter, internal | For disc dimensions | Order No. | Price |
|--|----------------------------------|---------------------|------------------|-------|
| Ceramic dressing rings are suitable for steel lapping discs, composite lapping discs and Bi-Composite lapping discs. <ul style="list-style-type: none"> • Low lapping medium consumption • Reduced contamination due to abrasion • Durable ceramic pellets • Temperature control | 107 mm | Ø 300 mm / 12 " | 3 637 341 | |
| | 140 mm | Ø 380 mm / 15 " | 3 637 342 | |
| | 248 mm | Ø 610 mm / 24 " | 3 637 343 | |
| | 275 mm | Ø 700 mm / 28 " | 3 637 344 | |
| | 406 mm | Ø 1.000 mm / 40 " | 3 637 346 | |
| | 480 mm | Ø 1.200 mm / 48 " | 3 637 347 | |



Accessories for polishing and lapping machines

Dressing rings made of fixed grit, cast material and stainless steel

| Dressing rings for fixed grit lapping discs, silicon carbide | Dimensions | Für Scheibenmaß | Grit size | Order No. | Price |
|---|----------------------|-----------------|-----------|------------------|-------|
| Fixed-grit dressing rings are generally used on fixed-grit lapping discs. The fixed-grit lapping discs and dressing rings consist of a silicon carbide mixture bonded in synthetic resin. They are available in different grit sizes. Water is sufficient as a lubricant. For optimum results dressing rings and fixed-grit discs with the same grit size should be used. | Ø 143 / 108 x 55 mm | 300 mm | SIC 400 | 3 637 541 | |
| | | | SIC 1200 | 3 637 542 | |
| | Ø 178 / 140 x 55 mm | 380 mm | SIC 400 | 3 637 543 | |
| | | | SIC 1200 | 3 637 544 | |
| | Ø 286 / 248 x 90 mm | 600 mm | SIC 400 | 3 637 545 | |
| | | | SIC 1200 | 3 637 546 | |
| | Ø 314 / 275 x 90 mm | 700 mm | SIC 400 | 3 637 555 | |
| | | | SIC 1200 | 3 637 562 | |
| | Ø 457 / 408 x 102 mm | 1000 mm | SIC 400 | 3 637 549 | |
| | | | SIC 1200 | 3 637 550 | |
| | Ø 545 / 480 x 102 mm | 1200 mm | SIC 400 | 3 637 551 | |
| | | | SIC 1200 | 3 637 552 | |



Other sizes and with a groove available on request!

| Cast material dressing rings | Design | Dimensions | For disc dimensions | Order No. | Price |
|---|----------------|----------------------|---------------------|------------------|-------|
| Cast material dressing rings are well suited to work on cast material lapping discs, composite lapping discs and Bi-Composite lapping discs. • Economically priced alternative • Good dressing effect | grooved | Ø 143 / 108 x 35 mm | 300 mm | 3 637 301 | |
| | | Ø 178 / 140 x 45 mm | 380 mm | 3 637 303 | |
| | | Ø 286 / 248 x 70 mm | 600 mm | 3 637 304 | |
| | | Ø 314 / 275 x 70 mm | 700 mm | 3 637 305 | |
| | | Ø 457 / 408 x 102 mm | 1,000 mm | 3 637 311 | |
| | | Ø 545 / 480 x 102 mm | 1,200 mm | 3 637 312 | |



Other sizes and without a groove available on request!

| Stainless steel dressing rings | Design | Dimensions | For disc dimensions | Order No. | Price |
|--|----------------|---------------------|---------------------|---------------------|-------|
| Optimum for use on composite lapping discs and Bi-Composite lapping discs. • Rustproof • Effective dressing effect • Little contamination due to abrasion | grooved | Ø 143 / 108 x 35 mm | 300 mm | 3 637 301V2A | |
| | | Ø 178 / 140 x 45 mm | 380 mm | 3 637 303V2A | |
| | | Ø 286 / 248 x 70 mm | 600 mm | 3 637 304V2A | |
| | | Ø 314 / 275 x 70 mm | 700 mm | 3 637 305V2A | |
| | | Ø 457 / 408 x 102mm | 1,000 mm | 3 637 311V2A | |
| | | Ø 545 / 480 x 102mm | 1,200 mm | 3 637 312V2A | |



Other sizes and without a groove available on request!

Accessories for polishing and lapping machines

Compensation washers

| Compensation washers | Dimensions | For disc dimensions | Order No. | Price |
|--|---------------|---------------------|------------------|-------|
| Soft, adaptable rubber material for compensating any discrepancies in workpiece height. It also protects the workpieces against damage and has a vibration-absorbing effect. | Ø 107 x 6 mm | 300 mm / 12" | 3 635 105 | |
| | Ø 139 x 6 mm | 380 mm / 15" | 3 635 107 | |
| | Ø 247 x 10 mm | 610 mm / 24" | 3 635 302 | |
| | Ø 274 x 10 mm | 700 mm / 28" | 3 635 502 | |
| | Ø 407 x 10 mm | 1.000 mm / 40" | 3 635 704 | |
| | Ø 479 x 10 mm | 1.200 mm / 48" | 3 635 909 | |



Accessories for polishing and lapping machines

Workpiece holders made of laminated paper and plastic

| Workpiece holders made of plastic | Dimensions | For disc dimensions | Order No. | Price |
|--|--------------|---------------------|------------------|-------|
| Workpiece holders made of laminated paper for safely guiding the workpieces. | Ø 107 x 3 mm | 300 mm / 12" | 3 635 112 | |
| | Ø 139 x 3 mm | 380 mm / 15" | 3 635 110 | |
| | Ø 247 x 5 mm | 610 mm / 24" | 3 635 309 | |
| | Ø 274 x 5 mm | 700 mm / 28" | 3 635 509 | |
| | Ø 406 x 6 mm | 1.000 mm / 40" | 3 635 705 | |
| | Ø 478 x 6 mm | 1.200 mm / 48" | 3 635 910 | |



| Workpiece holders made of plastic | Dimensions | For disc dimensions | Order No. | Price |
|--|--------------|---------------------|------------------|-------|
| Workpiece holders made of plastic for safely guiding the workpieces. | Ø 107 x 3 mm | 300 mm / 12" | 3 635 134 | |
| | Ø 139 x 3 mm | 380 mm / 15" | 3 635 135 | |
| | Ø 247 x 5 mm | 610 mm / 24" | 3 635 136 | |
| | Ø 274 x 5 mm | 700 mm / 28" | 3 635 137 | |
| | Ø 406 x 6 mm | 1.000 mm / 40" | 3 635 138 | |
| | Ø 478 x 6 mm | 1.200 mm / 48" | 3 635 139 | |



On request, we produce workpiece receptacles according to your drawing using water jet technology.

Accessories for polishing and lapping machines

Pellets made of ceramic and plastic

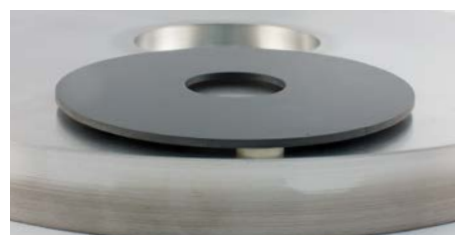
Pellets made of ceramic and plastic

Ceramic pellets or plastic pellets can be used as spacers for templates, workpiece carriers and dressing rings. Optimises the process and reduces aquaplaning behaviour.

| Ceramic pellets | Shape | Dimensions | Order No. | Price |
|--|-------|---------------|------------------|-------|
| Highlights <ul style="list-style-type: none"> • little temperature increase • no contamination • long service life | round | Ø 15 x 4 mm | 3 635 140 | |
| | | Ø 16 x 2 mm | 3 635 141 | |
| | | Ø 16 x 5.5 mm | 3 635 142 | |
| | | Ø 30 x 1 mm | 3 635 143 | |



Application examples



| Plastic pellets, self-adhesive | Dimensions | Packaging unit | Order No. | Price |
|--|-------------|----------------|------------------|-------|
| Highlights <ul style="list-style-type: none"> • little contamination due to abrasion • good sliding properties • reduces polishing cloth and lapping disc wear | Ø 12 x 1 mm | 600 pces. | 3 637 597 | |



Accessories for polishing and lapping machines

Hand weights

| Hand weights | Dimensions | Weight | Suitable for | Order No. | Price |
|--|------------|---------|--------------|-------------------|-------|
| The hand weights are made of cast material. They are used as an alternative to the pneumatic contact pressure devices. | Ø 107 mm | 1.9 kg | EL 300 | 3 201 0850 | |
| | Ø 139 mm | 3.3 kg | EL 380 | 3 635 108 | |
| | Ø 247 mm | 11 kg | EL 600 | 3 635 308 | |
| | Ø 274 mm | 13.5 kg | EL 700 | 3 635 508 | |
| | Ø 406 mm | 32 kg | EL 1000 | 3 635 703 | |
| | Ø 478 mm | 45 kg | EL 1200 | 3 635 908 | |

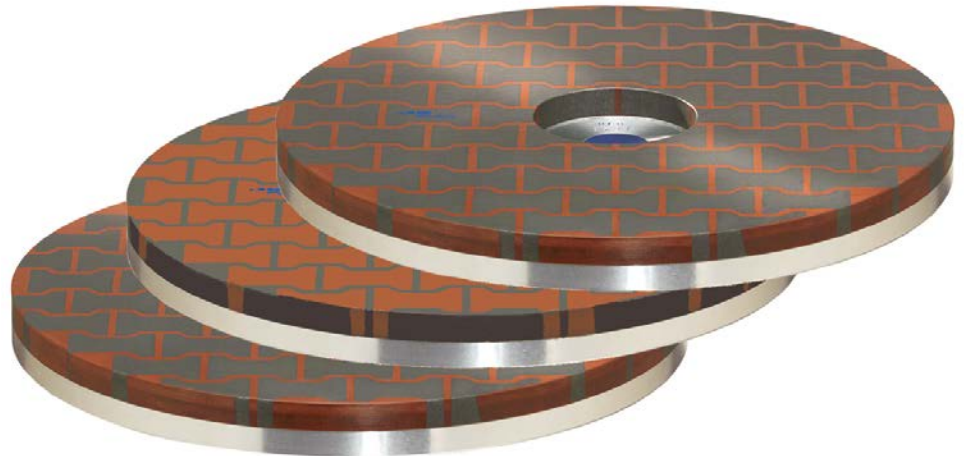


Bi-Composite polishing and lapping discs

Bi-Composite polishing and lapping discs

Bi-Composite polishing and lapping discs consists of two different materials in a synthetic resin bond. Water- and oil-soluble diamond fluids are used as lapping media. The diamond grit is subjected to a constant change of speed by the polishing and lapping segments of different hardness. This means a high stock removal and a polished surface - in just one processing stage! To put it plainly: You process your workpieces within a markedly shorter time and with fewer processing stages using these polishing and lapping discs. That is not the end of the advantages: The flatness of the polishing and lapping disc is distinctly improved by the dual-component technology and is maintained for considerably longer.

All discs can also be recoated in our company!



Lapping discs with a groove or in other sizes upon request.

Please consult **Hardy Möckl**
about the options:
Tel. +49 (0) 22 04 / 8 39-0
h.moeckl@joke.de

| Bi-Composite polishing and lapping discs | Type | Suitable for | Dimensions | Order No. | Price |
|---|-----------------|---------------------------------|---|------------------|------------------|
| <i>rough preliminary work</i>  <i>fine finishing</i> | MM 9-980 | Rough work, abrasive 15 - 45 µm |  | Ø 300 mm / 12" | 3 644 030 |
| | | | | Ø 380 mm / 15" | 3 644 038 |
| | | | | Ø 610 mm / 24" | 3 644 061 |
| | | | | Ø 700 mm / 28" | 3 644 070 |
| | | | | Ø 1,000 mm / 40" | 3 644 093 |
| | | | | Ø 1,200 mm / 48" | 3 644 095 |
| | MM 9-991 | Fine work, abrasive 3 - 15 µm |  | Ø 300 mm / 12" | 3 644 130 |
| | | | | Ø 380 mm / 15" | 3 644 138 |
| | | | | Ø 610 mm / 24" | 3 644 161 |
| | | | | Ø 700 mm / 28" | 3 644 170 |
| | | | | Ø 1,000 mm / 40" | 3 644 193 |
| | | | | Ø 1,200 mm / 48" | 3 644 195 |
| | MM 9-992 | Final work, abrasive 1 - 6 µm |  | Ø 300 mm / 12" | 3 644 430 |
| | | | | Ø 380 mm / 15" | 3 644 438 |
| | | | | Ø 610 mm / 24" | 3 644 461 |
| Ø 700 mm / 28" | | | | 3 644 470 | |
| Ø 1,000 mm / 40" | | | | 3 644 493 | |
| Ø 1,200 mm / 48" | | | | 3 644 495 | |

Fixed-grit lapping discs



Firm grit disks for flat honing

The firm grit disks and rings consist of a resin-bound silicon carbide mixture. They are available in various grit sizes. Water is sufficient as a lubricant. For optimum results, dressing rings of the same grit size should also always be used in this process.

Areas of use:

- Composite materials
- Glass
- Reinforced plastics
- Work in which minimum contamination is essential.

Fixed-grit discs



Fixed-grit disc made of aluminium oxide available on request.

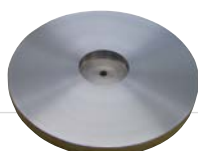
| Dimensions | Grit size | Suitable for | Order No. | Price |
|-----------------------|-----------------|--------------|------------------|-------|
| Ø 300 / 84 x 24 mm | SIC 400 / 17 µm | EL 300 | 3 637 521 | |
| Ø 300 / 84 x 24 mm | SIC 1200 / 3 µm | EL 300 | 3 637 522 | |
| Ø 380 / 100 x 24 mm | SIC 400 / 17 µm | EL 380 | 3 637 523 | |
| Ø 380 / 100 x 24 mm | SIC 1200 / 3 µm | EL 380 | 3 637 524 | |
| Ø 610 / 113 x 27 mm | SIC 400 / 17 µm | EL 600 | 3 637 525 | |
| Ø 610 / 113 x 27 mm | SIC 1200 / 3 µm | EL 600 | 3 637 526 | |
| Ø 700 / 150 x 27 mm | SIC 400 / 17 µm | EL 700 | 3 637 527 | |
| Ø 700 / 150 x 27 mm | SIC 1200 / 3 µm | EL 700 | 3 637 528 | |
| Ø 1,000 / 189 x 27 mm | SIC 400 / 17 µm | EL 1000 | 3 637 501 | |
| Ø 1,000 / 189 x 27 mm | SIC 1200 / 3 µm | EL 1000 | 3 637 502 | |
| Ø 1,200 / 240 x 27 mm | SIC 400 / 17 µm | EL 1200 | 3 637 503 | |
| Ø 1,200 / 240 x 27 mm | SIC 1200 / 3 µm | EL 1200 | 3 637 504 | |

Lapping discs made of cast material

Lapping discs made of cast material

The lapping disc forms the lapping tool in conjunction with the lapping medium. Cast discs have proven advantageous in practice and guarantee maximum precision, flatness and surface quality during processing.

| Lapping discs | Type | Dimensions | Suitable for | Order No. | Price |
|---------------|----------------|------------------|--------------|------------------|-------|
| | grooved | Ø 300 mm / 12" | EL 300 | 3 637 001 | |
| | | Ø 380 mm / 15" | EL 380 | 3 637 003 | |
| | | Ø 610 mm / 24" | EL 600 | 3 637 004 | |
| | | Ø 700 mm / 28" | EL 700 | 3 637 005 | |
| | | Ø 1,000 mm / 40" | EL 1000 | 3 637 009 | |
| | | Ø 1,200 mm / 48" | EL 1200 | 3 637 010 | |




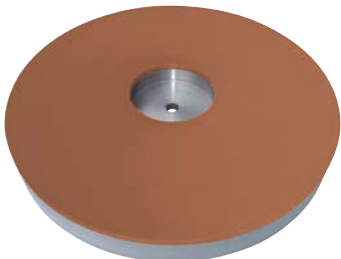

ungrooved cast lapping discs available on request!

Polishing and lapping discs with coating made of bronze, copper and tin

When high or very high surface quality needs to be achieved, lapping discs made of tin, copper and bronze are used. Stock removal occupies less of a forefront position in this case. These lapping discs are suitable for almost all materials. The base body is made of aluminium.

i *Lapping discs with a groove or in other sizes upon request.*

Please consult **Hardy Möckl**
about the options:
Tel. +49 (0) 22 04 / 8 39-0
h.moeckl@joke.de

| Polishing and lapping discs | Design | Dimensions | Order No. | Price |
|---|-----------------------|------------|------------------|-------|
|  | Bronze coating | Ø 380 mm | 3 644 570 | |
| | | Ø 610 mm | 3 644 571 | |
| | | Ø 700 mm | 3 644 572 | |
| | | Ø 1.000 mm | 3 644 573 | |
| | | Ø 1.200 mm | 3 644 574 | |
|  | Copper coating | Ø 380 mm | 3 644 550 | |
| | | Ø 610 mm | 3 644 551 | |
| | | Ø 700 mm | 3 644 552 | |
| | | Ø 1.000 mm | 3 644 553 | |
| | | Ø 1.200 mm | 3 644 554 | |
|  | Tin coating | Ø 380 mm | 3 644 560 | |
| | | Ø 610 mm | 3 644 561 | |
| | | Ø 700 mm | 3 644 562 | |
| | | Ø 1.000 mm | 3 644 563 | |
| | | Ø 1.200 mm | 3 644 564 | |

Polishing and lapping disc accessories

Polishing and lapping discs / Polishing cloth carrier discs made of aluminium

If one wishes to achieve first-rate surface quality with polishing cloths, polishing cloth carrier discs are used.

| Polishing cloth carrier discs made of aluminium | Dimensions | Suitable for | Order No. | Price |
|---|------------------|--------------|------------------|-------|
| As a rule, polishes are performed on polishing cloths. These special carrier discs are used in this case instead of the standard lapping discs. | Ø 300 mm / 12" | EL 300 | 3 630 052 | |
| | Ø 380 mm / 15" | EL 380 | 3 630 501 | |
| | Ø 610 mm / 24" | EL 600 | 3 630 502 | |
| | Ø 700 mm / 28" | EL 700 | 3 630 503 | |
| | Ø 1,000 mm / 40" | EL 1000 | 3 630 504 | |
| | Ø 1,200 mm / 48" | EL 1200 | 3 630 505 | |



Non-adhesive discs self-adhesive

| FAS discs with non-adhesive coating | Dimensions | Order No. | Price |
|--|------------------|------------------|-------|
| These discs are glued to aluminium polishing cloth carriers. Their non-adhesive coating makes it possible for the user to easily replace self-adhesive polishing cloths. | Ø 300 mm / 12" | 3 630 510 | |
| | Ø 380 mm / 15" | 3 630 511 | |
| | Ø 610 mm / 24" | 3 630 512 | |
| | Ø 700 mm / 28" | 3 630 513 | |
| | Ø 1,000 mm / 40" | 3 630 514 | |
| | Ø 1,200 mm / 48" | 3 630 515 | |



Dressing systems for lapping discs

| Aluminium carrier disc for dressing system | Dimensions | For disc dimensions | Order No. | Price |
|---|---------------|---------------------|------------------|-------|
| Using this system, polishing and lapping discs are quickly and safely dressed in the simplest possible manner. The system consists of an aluminium carrier disc with a star screw. Diamond pellets are glued to this disc, which are also simple to replace when worn. A dressing ring for guiding and weighting is applied on the back. In conjunction with the diamond fluid WS as lubrication, the dressing process is completed within a short space of time. | Ø 179 x 24 mm | Ø 380 mm / 15" | 3 645 711 | |
| | Ø 287 x 24 mm | Ø 610 mm / 24" | 3 645 715 | |
| | Ø 315 x 24 mm | Ø 700 mm / 28" | 3 645 718 | |
| | Ø 457 x 24 mm | Ø 1,000 mm / 40" | 3 645 727 | |
| | Ø 545 x 24 mm | Ø 1,200 mm / 48" | 3 645 728 | |



* Supplied without diamond pellets.

| Diamond pellets for recoating | Type | Dimensions | Order no. | Price from 20 pces | Price from 10 pces | Price from 1 pces |
|---|--------|------------|------------------|--------------------|--------------------|-------------------|
| Number of pellets required: Disk Ø 300 mm: 12 pieces Disk Ø 380 mm: 15 pieces Disk Ø 610 mm: 24 pieces Disk Ø 700 mm: 24 pieces Disk Ø 1000 mm: 36 pieces Disk Ø 1200 mm: 36 pieces | fine | Ø 20 mm | 3 645 755 | | | |
| | coarse | Ø 20 mm | 3 645 756 | | | |



Ready-to-use dressing fluid for dressing, sharpening or neutralising of lapping discs

| Lapping medium BIOLAM BIOLAM | Type | Grit size | Contents | Order no. | Price |
|---|------------------------|------------------|------------------|--------------------|-------|
| Using aluminium oxide, lapping discs made of cast, light-weight and non-ferrous metal for example can be dressed. Using silicon carbide, lapping discs made of composite, bi-composite or steel can be dressed. | Aluminium oxide | FEPA 500 / 13 µm | 2 litres | 3 638 724 | |
| | | | 20 litres | 3 638 724-1 | |
| | Silicon carbide | FEPA 360 / 23 µm | 2 litres | 3 638 722 | |
| | | | 20 litres | 3 638 722-1 | |
| The medium is water-soluble, therefore simple to clean and environment-friendly. The medium is used undiluted or as a two-fold dilution depending on the dressing task. | Silicon carbide | FEPA 500 / 13 µm | 2 litres | 3 638 764 | |
| | | | 20 litres | 3 638 764-1 | |
| | FEPA 360 / 23 µm | 2 litres | 3 638 762 | | |
| | | | 20 litres | 3 638 762-1 | |



Lapping discs can also be dressed with powder.

See page 22 onwards for silicon carbide and aluminium oxide and aluminium oxide

Polishing cloths Polyurethane • silk

Polishing cloths

High gloss surfaces are achieved quickly and safely using our polishing cloths in combination with joke Magic or joke Eco-Lap diamond emulsions.

Our polyurethane cloths interspersed with fine abrasives are particularly efficient. We supply you cloths for use on the widest variety of materials and for the widest array of applications. Cloths with different characteristics are used depending on the desired result: Soft cloths for a perfect high gloss with slight edge rounding and hard cloths for a perfectly sharp edge.

Consult our lapping expert **Hardy Möckl** to find the ideal polishing cloth for your application:

Tel. +49 (0) 22 04 / 8 39-39

Email: h.moeckl@joke.de



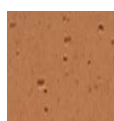
| Polishing cloths, self-adhesive | Material | Type | Dimensions | Packaging unit | Order No. | Price |
|---|--------------------|-------|------------------|----------------|------------------|-------|
| Polyurethane is excellent for final polishing of precision optics, mirrors, glass, spectacle material and for ceramic surfaces. Stability is more than 10 times that of the actual polishing pitch. | Polyurethan | 6617C | Ø 300 mm / 12" | 1 piece | 3 681 689 | |
| | | | Ø 380 mm / 15" | 1 piece | 3 681 690 | |
| | | | Ø 610 mm / 24" | 1 piece | 3 681 691 | |
| | | | Ø 700 mm / 28" | 1 piece | 3 681 692 | |
| | | | Ø 914 mm / 36" | 1 piece | 3 681 693 | |
| | | | Ø 1,000 mm / 40" | 1 piece | 3 681 694 | |
| | | | Ø 1,200 mm / 40" | 1 piece | 3 681 695 | |

- Hardness 26 shore D
- special microcell structure - millions of pores in the polyurethane foam
- Thickness 1.27 mm
- resistant against water and oil



Usable with cerium oxide and material-specific polishing media 1 - 3 µm

Other sizes available on request!



Millions of pores in the polyurethane foam

| Polishing cloths, self-adhesive | Material | Type | Dimensions | Packaging unit | Order No. | Price |
|---|-------------|------|------------------|----------------|--------------------|-------|
| The polishing cloth made of silk fabric forms a flexible carrier. It is used for final polishing of all materials and provides only slight stock removal. | silk | 9450 | Ø 300 mm / 12" | 10 pieces | 3 681 509-1 | |
| | | | Ø 380 mm / 15" | 10 pieces | 3 681 510-1 | |
| | | | Ø 610 mm / 24" | 10 pieces | 3 681 511-1 | |
| | | | Ø 700 mm / 28" | 10 pieces | 3 681 512-1 | |
| | | | Ø 914 mm / 36" | 10 pieces | 3 681 513-1 | |
| | | | Ø 1,000 mm / 40" | 10 pieces | 3 681 514-1 | |

Usable with diamond fluid 1 - 6 µm. The silk polishing cloth can be used on an oil and water basis.



Other sizes available on request!

Polishing cloths

Flock (standard • soft • supersoft)

| Flock polishing cloths, self-adhesive | Design | Dimensions | Type | Packaging unit | Order No. | Price |
|---|-----------------|------------------|------|----------------|------------------|-------|
| <ul style="list-style-type: none"> Flocked, flexible carrier Superfinish, very little stock removal <p>Application examples:</p> <ul style="list-style-type: none"> Superfinish of hard and moderately hard materials <p>Usable with diamond fluid 1/10 - 3 µm, can also be used with aluminium oxide or colloidal silicon dioxide, water-based.</p> | standard | Ø 300 mm / 12" | 9432 | 10 pieces | 3 681 831 | |
| | | Ø 380 mm / 15" | 9432 | 10 pieces | 3 681 832 | |
| | | Ø 610 mm / 24" | 9432 | 10 pieces | 3 681 833 | |
| | | Ø 700 mm / 28" | 9432 | 10 pieces | 3 681 834 | |
| | | Ø 914 mm / 36" | 9432 | 10 pieces | 3 681 835 | |
| | | Ø 1,000 mm / 40" | 9432 | 10 pieces | 3 681 836 | |

Other sizes available on request!



| Flock polishing cloths, self-adhesive | Design | Dimensions | Type | Packaging unit | Order No. | Price |
|---|-------------|------------------|------|----------------|------------------|-------|
| <ul style="list-style-type: none"> Flocked, flexible Superfinish, very little stock removal <p>Application examples:</p> <ul style="list-style-type: none"> Superfinish of moderately hard and soft materials <p>Usable with diamond fluid 1 - 6 µm, water-based</p> | soft | Ø 300 mm / 12" | 9437 | 10 pieces | 3 681 851 | |
| | | Ø 380 mm / 15" | 9437 | 10 pieces | 3 681 852 | |
| | | Ø 610 mm / 24" | 9437 | 10 pieces | 3 681 853 | |
| | | Ø 700 mm / 28" | 9437 | 10 pieces | 3 681 854 | |
| | | Ø 914 mm / 36" | 9437 | 10 pieces | 3 681 855 | |
| | | Ø 1,000 mm / 40" | 9437 | 10 pieces | 3 681 856 | |

Other sizes available on request!



| Flock polishing cloths, self-adhesive | Design | Dimensions | Type | Packaging unit | Order No. | Price |
|--|------------------|------------------|------|----------------|--------------------|-------|
| <ul style="list-style-type: none"> Flocked, flexible Superfinish, very little stock removal <p>Application examples:</p> <ul style="list-style-type: none"> Superfinish of soft and very soft materials <p>Usable with diamond fluid 1/10 - 1 µm, can also be used with aluminium oxide or colloidal silicone dioxide, water-based.</p> | supersoft | Ø 300 mm / 12" | 9431 | 5 pieces | 3 681 871-1 | |
| | | Ø 380 mm / 15" | 9431 | 5 pieces | 3 681 872-1 | |
| | | Ø 610 mm / 24" | 9431 | 5 pieces | 3 681 873-1 | |
| | | Ø 700 mm / 28" | 9431 | 5 pieces | 3 681 874-1 | |
| | | Ø 914 mm / 36" | 9431 | 5 pieces | 3 681 875-1 | |
| | | Ø 1,000 mm / 40" | 9431 | 5 pieces | 3 681 876-1 | |

Other sizes available on request!



Lapping Consumables

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9



Lapping medium powder

Lapping medium powder


The choice of the lapping medium used depends on the materials to be processed. The size and type of grit are geared to the hardness of the material and the requirements in terms of surface roughness. The most frequently used grit sizes are FEPA 400 to FEPA 800.

The lapping fluid serves as a carrier medium and sliding agent. It conveys the lapping grit on the lapping disc and cools the latter during the lapping process. The guideline value for the mixing ratio between the lapping grit and lapping fluid is approx. 200 g/litre. For water-soluble lapping fluids, the mixing ratio should be increased to approx. 300 g/litre.




| Lapping powder | Grit size | Contents | Order No. | Price |
|-------------------------------|-------------------|----------|------------------|-------|
| Silicon carbide, green | FEPA 1200 / 3 µm | 5 kg | 3 638 101 | |
| | | 25 kg | 3 638 102 | |
| | FEPA 800 / 7 µm | 5 kg | 3 638 111 | |
| | | 25 kg | 3 638 112 | |
| | FEPA 600 / 9 µm | 5 kg | 3 638 121 | |
| | | 25 kg | 3 638 122 | |
| | FEPA 500 / 13 µm | 5 kg | 3 638 211 | |
| | | 25 kg | 3 638 212 | |
| | FEPA 400 / 17 µm | 5 kg | 3 638 131 | |
| | | 25 kg | 3 638 132 | |
| | FEPA 360 / 23 µm | 5 kg | 3 638 141 | |
| | | 25 kg | 3 638 142 | |
| | FEPA 320 / 29 µm | 5 kg | 3 638 151 | |
| | | 25 kg | 3 638 152 | |
| | FEPA 280 / 37 µm | 5 kg | 3 638 161 | |
| | | 25 kg | 3 638 162 | |
| | FEPA 230 / 53 µm | 5 kg | 3 638 171 | |
| | | 25 kg | 3 638 172 | |
| | FEPA 120 / 105 µm | 5 kg | 3 638 201 | |
| | | 25 kg | 3 638 202 | |



| Lapping powder | Grit size | Contents | Order No. | Price |
|---|------------------|-----------|-----------|-------|
| Aluminium oxide  | FEPA 1200 / 3 µm | 5 kg | 3 638 025 | |
| | | 25 kg | 3 638 026 | |
| | FEPA 800 / 7 µm | 5 kg | 3 638 027 | |
| | | 25 kg | 3 638 028 | |
| | FEPA 600 / 9 µm | 5 kg | 3 638 029 | |
| | | 25 kg | 3 638 030 | |
| | FEPA 500 / 13 µm | 5 kg | 3 638 050 | |
| | | 25 kg | 3 638 051 | |
| | FEPA 400 / 17 µm | 5 kg | 3 638 033 | |
| | | 25 kg | 3 638 034 | |
| | FEPA 360 / 23 µm | 5 kg | 3 638 038 | |
| | | 25 kg | 3 638 039 | |
| | FEPA 320 / 29 µm | 5 kg | 3 638 040 | |
| | | 25 kg | 3 638 041 | |
| | FEPA 280 / 37 µm | 5 kg | 3 638 042 | |
| | | 25 kg | 3 638 043 | |
| | FEPA 230 / 53 µm | 5 kg | 3 638 044 | |
| | | 25 kg | 3 638 045 | |
| FEPA 120 / 105 µm | 5 kg | 3 638 048 | | |
| | 25 kg | 3 638 049 | | |

Lapping powder

| Lapping powder | Grit size | Contents | Order No. | Price |
|--|------------------|----------|-------------|-------|
| Boron carbide Boron carbide from Joke is a high-performance lapping medium, with a hardness and chemical resistance comparable to diamond. Boron carbide is eminently suitable for processing hard to very hard materials. Applications: Ceramic and carbide  | FEPA 1200 / 3 µm | 1 kg | 3 638 551 | |
| | | 5 kg | 3 638 551-5 | |
| | FEPA 1000 / 5 µm | 1 kg | 3 638 541 | |
| | | 5 kg | 3 638 541-5 | |
| | FEPA 800 / 7 µm | 1 kg | 3 638 531 | |
| | | 5 kg | 3 638 531-5 | |
| | FEPA 600 / 9 µm | 1 kg | 3 638 521 | |
| | | 5 kg | 3 638 521-5 | |
| | FEPA 500 / 13 µm | 1 kg | 3 638 505 | |
| | | 5 kg | 3 638 505-5 | |
| | FEPA 400 / 17 µm | 1 kg | 3 638 511 | |
| | | 5 kg | 3 638 511-5 | |
| | FEPA 360 / 23 µm | 1 kg | 3 638 504 | |
| | | 5 kg | 3 638 504-5 | |
| | FEPA 320 / 29 µm | 1 kg | 3 638 503 | |
| | | 5 kg | 3 638 503-5 | |
| | FEPA 280 / 37 µm | 1 kg | 3 638 501 | |
| | | 5 kg | 3 638 501-5 | |

Cerium oxide lapping medium-polishing powder

Cerium oxide powder from joke is a high quality, chemical-mechanical powder concentrate. It can for example be used in conjunction with water (mixing ratio 30 - 90 g/litre) on natural and synthetic felts, polyurethane and other synthetic polishing discs.

Use: Preliminary and final polishing

The cerium oxide lapping powder is suitable for soft to hard materials in fine and precision optics, spectacle optics and glass production. Furthermore, it is ideal for processing related substances such as hard/brittle and crystalline materials.

Other grit sizes on request.

| Cerium oxide polishing powder | Type | Grit size | Content | Order No. | Price |
|--|----------------------------|-----------|---------|------------------|-------|
| Very good for preliminary polishing of soft and hard materials in fine and precision optics. | Cerium oxide 401 JO | fine | 1 kg | 3 681 720 | |
| | | | 25 kg | 3 681 721 | |

| Cerium oxide polishing powder | Type | Grit size | Content | Order No. | Price |
|---|----------------------------|-----------|---------|------------------|-------|
| Suitable for final polishing of soft materials in fine and precision optics, spectacle optics and glass production. | Cerium oxide 601 JO | 2,5 µm | 1 kg | 3 681 722 | |
| | | | 25 kg | 3 681 723 | |

| Cerium oxide polishing powder | Type | Grit size | Content | Order No. | Price |
|---|----------------------------|-----------|---------|------------------|-------|
| Ideal for final polishing of hard materials in fine and precision optics, spectacle optics and glass production in addition LCD and quartz glass. | Cerium oxide 901 JQ | 2,5 µm | 1 kg | 3 681 724 | |
| | | | 25 kg | 3 681 725 | |

| Cerium oxide polishing powder | Type | Grit size | Content | Order No. | Price |
|--|-----------------------------|-----------|---------|------------------|-------|
| For cleaning mirror glass before coating. The soiling, grease and adhering particles are removed in a gentle process. This ensures that the subsequent coating adheres uniformly and permanently to the glass. | Cerium oxide 2641 JS | 2,5 µm | 1 kg | 3 681 726 | |
| | | | 25 kg | 3 681 727 | |



Lapping medium powder

Premium diamond powder

Premium diamond powder for the most sophisticated, high-precision lapping and polishing applications

Premium diamond powder can be used on almost all materials. Diamond powder can for example be used in conjunction with lapping oil. The combination with fluid and the grit concentration is determined accordingly depending on the application.

This diamond powder is available with a monocrystalline (MCD, single-crystal) structure and a polycrystalline (PCD, multiple-crystal) structure.

Monocrystalline diamonds have, in addition to the uniform structure, sharp cutting edges with which the majority of materials can be successfully processed.

Polycrystalline diamonds consist of a large number of tiny diamond particles that break away under load, so that new, sharp cutting edges are constantly produced (self-sharpening effect). Owing to this characteristic, polycrystalline diamonds are used for extremely hard materials.

Advantages

- Narrowly sized
- Tested grit quality
- For maximum stock removal with a perfect surface
- For scratch-free processing of soft, hard, brittle-hard and crystalline materials

| Premium diamond powder | Grit size | Contents | Order No. | Price |
|------------------------|-----------|------------------|------------------|-------|
| monocrystalline | 25 µm | 10 ct | 3 638 335 | |
| | | 100 ct | 3 638 336 | |
| | | 500 ct | 3 638 337 | |
| | 14 µm | 10 ct | 3 638 332 | |
| | | 100 ct | 3 638 333 | |
| | 9 µm | 500 ct | 3 638 334 | |
| | | 10 ct | 3 638 329 | |
| | 6 µm | 100 ct | 3 638 330 | |
| | | 500 ct | 3 638 331 | |
| | 3 µm | 10 ct | 3 638 326 | |
| | | 100 ct | 3 638 327 | |
| | 1 µm | 500 ct | 3 638 328 | |
| | | 10 ct | 3 638 323 | |
| | 1 µm | 100 ct | 3 638 324 | |
| 500 ct | | 3 638 325 | | |
| 1 µm | 10 ct | 3 638 320 | | |
| | 100 ct | 3 638 321 | | |
| | | 500 ct | 3 638 322 | |

Note: 1 ct = 0.2 g

| Premium diamond powder | Grit size | Contents | Order No. | Price |
|------------------------|-----------|------------------|------------------|-------|
| polycrystalline | 25 µm | 10 ct | 3 638 356 | |
| | | 100 ct | 3 638 357 | |
| | | 500 ct | 3 638 358 | |
| | 14 µm | 10 ct | 3 638 353 | |
| | | 100 ct | 3 638 354 | |
| | 9 µm | 500 ct | 3 638 355 | |
| | | 10 ct | 3 638 350 | |
| | 6 µm | 100 ct | 3 638 351 | |
| | | 500 ct | 3 638 352 | |
| | 3 µm | 10 ct | 3 638 347 | |
| | | 100 ct | 3 638 348 | |
| | 1 µm | 500 ct | 3 638 349 | |
| | | 10 ct | 3 638 344 | |
| | 1 µm | 100 ct | 3 638 345 | |
| 500 ct | | 3 638 346 | | |
| 1 µm | 10 ct | 3 638 341 | | |
| | 100 ct | 3 638 342 | | |
| | | 500 ct | 3 638 343 | |

Note: 1 ct = 0.2 g

Lapping media • Lapping fluids

The lapping fluid used as the carrier medium, together with grit size and grit density of the lapping medium, has a major influence on the achievable stock removal and surface roughness depth.


Depending on the grit size, lapping fluids are used in different compositions and at different viscosity levels. Special additives prevent agglomeration (adhesion).

| Lapping and polishing oils | Type | Grit size | Viscosity range | Contents | Bestell-Nr | Price |
|---|--------------------|-----------------|-----------------|------------|--------------------|-------|
| The lapping and polishing oils from joke are a tried and trusted carrier fluid for all lapping work and the abrasives used in practice. | JL05 | superfine | very low | 5 litres | 3 637 606 | |
| | | | | 25 litres | 3 637 606-2 | |
| | | | | 200 litres | 3 637 606-3 | |
| | JL10 | fine | low | 5 litres | 3 637 607 | |
| | | | | 25 litres | 3 637 607-2 | |
| | | | | 200 litres | 3 637 607-3 | |
| | JL20 | medium - coarse | moderate | 5 litres | 3 637 608 | |
| | | | | 25 litres | 3 637 608-2 | |
| | | | | 200 litres | 3 637 608-3 | |
| | JL5-20 Plus | fine - coarse | multi-purpose | 5 litres | 3 637 609 | |
| | | | | 25 litres | 3 637 609-2 | |
| | | | | 200 litres | 3 637 609-3 | |



| Lapping and polishing fluid, water-soluble | Type | Suitable for | Contents | Order No. | Price |
|--|---------------------------|----------------------------|--------------------|--------------------|-------|
| The lapping and polishing fluid is used in a mixing ratio of 1:20 to 1:30 diluted with water. The fluid offers excellent corrosion protection, e.g. on cast discs. | WS 210 | superfine grit size - fine | 5 litres | 3 637 611 | |
| | | | 25 litres | 3 637 611-1 | |
| | | | 200 litres | 3 637 611-2 | |
| | WS 410 | medium grit size | 5 litres | 3 637 613 | |
| | | | 25 litres | 3 637 613-1 | |
| | | | 200 litres | 3 637 613-2 | |
| WS 110 | medium - coarse grit size | 5 litres | 3 637 610 | | |
| | | 25 litres | 3 637 610-1 | | |
| | | 200 litres | 3 637 610-2 | | |
| WS 310 | fine - coarse grit size | 5 litres | 3 637 612 | | |
| | | 25 litres | 3 637 612-1 | | |
| | | 200 litres | 3 637 612-2 | | |



| Diamond fluids joke Magic | Contents | Order No. | Price |
|--|--|-----------|--------------------|
| Diamond fluid from joke is suitable for the following suspensions: • joke Magic • joke Eco-Lap | Diamond fluid joke Magic, oil soluble | 0.5 l | 0 590 451 |
| | | 2.5 l | 0 590 451-1 |
| | | 10 l | 0 590 452 |
|  | Diamond fluid joke Magic, water soluble | 0.5 l | 3 645 645 |
| | | 2.5 l | 3 645 645-1 |
| | | 10 l | 3 645 645-2 |

Lapping media „ready to use“



Lapping medium BIOLAM® „ready-to-use“

This ready-to-use lapping fluid is very easy to handle, provides an extremely stable lubricant film and owing to its bio formula, does not contain any hazardous ingredients.

Owing to its composition and very little settling of the lapping medium in the fluid, the latter only needs to be stirred for approx. 5 minutes once a day.

Depending on the application, the lapping medium is used undiluted or diluted two-fold. The medium is water-soluble and therefore easy to clean.

| Lapping medium BIOLAM® | Type | Grit size | Contents | Order no. | Price | |
|------------------------|------------------------|------------------------|--------------------|--------------------|--------------------|--|
| | Aluminium oxide | FEPA 320 / 29 µm | 2 litres | 3 638 721 | | |
| | | | 20 litres | 3 638 721-1 | | |
| | | FEPA 360 / 23 µm | 2 litres | 3 638 722 | | |
| | | | 20 litres | 3 638 722-1 | | |
| | | FEPA 400 / 17 µm | 2 litres | 3 638 723 | | |
| | | | 20 litres | 3 638 723-1 | | |
| | | FEPA 500 / 13 µm | 2 litres | 3 638 724 | | |
| | | | 20 litres | 3 638 724-1 | | |
| | | FEPA 600 / 9 µm | 2 litres | 3 638 725 | | |
| | | | 20 litres | 3 638 725-1 | | |
| | | FEPA 800 / 7 µm | 2 litres | 3 638 726 | | |
| | | | 20 litres | 3 638 726-1 | | |
| | | FEPA 1000 / 5 µm | 2 litres | 3 638 727 | | |
| | | | 20 litres | 3 638 727-1 | | |
| | | FEPA 1200 / 3 µm | 2 litres | 3 638 728 | | |
| | | | 20 litres | 3 638 728-1 | | |
| | | Silicon carbide | FEPA 320 / 29 µm | 2 litres | 3 638 761 | |
| | | | | 20 litres | 3 638 761-1 | |
| | | | FEPA 360 / 23 µm | 2 litres | 3 638 762 | |
| | | | | 20 litres | 3 638 762-1 | |
| | FEPA 400 / 17 µm | | 2 litres | 3 638 763 | | |
| | | | 20 litres | 3 638 763-1 | | |
| | FEPA 500 / 13 µm | | 2 litres | 3 638 764 | | |
| | | | 20 litres | 3 638 764-1 | | |
| | FEPA 600 / 9 µm | | 2 litres | 3 638 765 | | |
| | | | 20 litres | 3 638 765-1 | | |
| | FEPA 800 / 7 µm | | 2 litres | 3 638 766 | | |
| | | | 20 litres | 3 638 766-1 | | |
| | FEPA 1000 / 5 µm | | 2 litres | 3 638 767 | | |
| | | | 20 litres | 3 638 767-1 | | |
| | FEPA 1200 / 3 µm | 2 litres | 3 638 768 | | | |
| | | 20 litres | 3 638 768-1 | | | |

Diamond lapping suspension

joke Magic Star

Diamond lapping suspensions joke Magic Star

The tried and trusted quality product! The diamond lapping suspensions joke Magic Star WS and OS can be used without additional fluid. In doing so, they achieve a very high stock removal – the lubricant film is finer than the diamond grit and the viscosity very low – the grit grains are therefore able to roll unhindered. The cutting action of the diamond grits thus develops its full effect.

Very good results are achieved with the suspension on almost all materials. Owing to the very strong and highly concentrated grit, a high contact pressure is no problem. A uniform grit distribution over the entire duration of use guarantees a stable and reproducible process.

Water-soluble suspensions are environment-friendly and easily disposed of. They likewise emit less odour when sprayed using compressed-air dispensing systems than conventional products.

Oil-soluble suspensions can be used with high contact pressure or a high load without the lubricating film tearing.

Highlights

- Ready to use, completely without fluid, which saves time and money.
- Very high stock removal
- Highest claim to quality, tried and tested over many years and approved
- Concentration: extra strong
- Continuous grit distribution



joke Magic Star water-soluble

| Contents | Grit size | Order no. | Price |
|----------|-----------|--------------|-------|
| 350 ml | 45 µm | 3 645 5501 | |
| | 25 µm | 3 645 5511 | |
| | 14 µm | 3 645 5521 | |
| | 9 µm | 3 645 5611 | |
| | 6 µm | 3 645 5621 | |
| | 3 µm | 3 645 5631 | |
| | 1 µm | 3 645 5651 | |
| | 1/4 µm | 3 645 5661 | |
| 2,500 ml | 45 µm | 3 645 5501-1 | |
| | 25 µm | 3 645 5511-1 | |
| | 14 µm | 3 645 5521-1 | |
| | 9 µm | 3 645 5611-1 | |
| | 6 µm | 3 645 5621-1 | |
| | 3 µm | 3 645 5631-1 | |
| | 1 µm | 3 645 5651-1 | |
| | 1/4 µm | 3 645 5661-1 | |
| 10 l | 45 µm | 3 645 5501-2 | |
| | 25 µm | 3 645 5511-2 | |
| | 14 µm | 3 645 5521-2 | |
| | 9 µm | 3 645 5611-2 | |
| | 6 µm | 3 645 5621-2 | |
| | 3 µm | 3 645 5631-2 | |
| | 1 µm | 3 645 5651-2 | |
| | 1/4 µm | 3 645 5661-2 | |

joke Magic Star oil-soluble

| Contents | Grit size | Order no. | Price |
|----------|-----------|--------------|-------|
| 350 ml | 45 µm | 3 645 5301 | |
| | 25 µm | 3 645 5311 | |
| | 14 µm | 3 645 5321 | |
| | 9 µm | 3 645 5411 | |
| | 6 µm | 3 645 5421 | |
| | 3 µm | 3 645 5431 | |
| | 1 µm | 3 645 5451 | |
| | 1/4 µm | 3 645 5461 | |
| 2,500 ml | 45 µm | 3 645 5301-1 | |
| | 25 µm | 3 645 5311-1 | |
| | 14 µm | 3 645 5321-1 | |
| | 9 µm | 3 645 5411-1 | |
| | 6 µm | 3 645 5421-1 | |
| | 3 µm | 3 645 5431-1 | |
| | 1 µm | 3 645 5451-1 | |
| | 1/4 µm | 3 645 5461-1 | |
| 10 l | 45 µm | 3 645 5301-2 | |
| | 25 µm | 3 645 5311-2 | |
| | 14 µm | 3 645 5321-2 | |
| | 9 µm | 3 645 5411-2 | |
| | 6 µm | 3 645 5421-2 | |
| | 3 µm | 3 645 5431-2 | |
| | 1 µm | 3 645 5451-2 | |
| | 1/4 µm | 3 645 5461-2 | |

Diamond lapping suspension Eco-Lap

Diamond lapping suspensions joke Eco-Lap

The diamond lapping suspensions joke Eco-Lap WS and OS are good products at a lower price, yet are highly concentrated.

With a high stock removal, low viscosity and a thin lubricating film they achieve good surfaces. They can be used on almost any material. This product is very good for use in cases in which through high consumption, the material removed needs to be washed away. The good sliding properties allow use of a high contact pressure.

Highlights

- Ready to use, completely without fluid, which saves time and money.
- High stock removal



joke Eco-Lap water-soluble

| Contents | Grit size | Order no. | Price |
|----------|-----------|--------------|-------|
| 350 ml | 45 µm | 3 645 408 | |
| | 35 µm | 3 645 407 | |
| | 25 µm | 3 645 406 | |
| | 14 µm | 3 645 405 | |
| | 9 µm | 3 645 404 | |
| | 6 µm | 3 645 403 | |
| | 3 µm | 3 645 402 | |
| | 1 µm | 3 645 401 | |
| | 1/4 µm | 3 645 400 | |
| 5 l | 45 µm | 3 645 408-5 | |
| | 35 µm | 3 645 407-5 | |
| | 25 µm | 3 645 406-5 | |
| | 14 µm | 3 645 405-5 | |
| | 9 µm | 3 645 404-5 | |
| | 6 µm | 3 645 403-5 | |
| | 3 µm | 3 645 402-5 | |
| | 1 µm | 3 645 401-5 | |
| | 1/4 µm | 3 645 400-5 | |
| 10 l | 45 µm | 3 645 408-10 | |
| | 35 µm | 3 645 407-10 | |
| | 25 µm | 3 645 406-10 | |
| | 14 µm | 3 645 405-10 | |
| | 9 µm | 3 645 404-10 | |
| | 6 µm | 3 645 403-10 | |
| | 3 µm | 3 645 402-10 | |
| | 1 µm | 3 645 401-10 | |
| | 1/4 µm | 3 645 400-10 | |

joke Eco-Lap oil-soluble

| Contents | Grit size | Order no. | Price |
|----------|-----------|--------------|-------|
| 350 ml | 45 µm | 3 645 418 | |
| | 35 µm | 3 645 417 | |
| | 25 µm | 3 645 416 | |
| | 14 µm | 3 645 415 | |
| | 9 µm | 3 645 414 | |
| | 6 µm | 3 645 413 | |
| | 3 µm | 3 645 412 | |
| | 1 µm | 3 645 411 | |
| | 1/4 µm | 3 645 410 | |
| 5 l | 45 µm | 3 645 418-5 | |
| | 35 µm | 3 645 417-5 | |
| | 25 µm | 3 645 416-5 | |
| | 14 µm | 3 645 415-5 | |
| | 9 µm | 3 645 414-5 | |
| | 6 µm | 3 645 413-5 | |
| | 3 µm | 3 645 412-5 | |
| | 1 µm | 3 645 411-5 | |
| | 1/4 µm | 3 645 410-5 | |
| 10 l | 45 µm | 3 645 418-10 | |
| | 35 µm | 3 645 417-10 | |
| | 25 µm | 3 645 416-10 | |
| | 14 µm | 3 645 415-10 | |
| | 9 µm | 3 645 414-10 | |
| | 6 µm | 3 645 413-10 | |
| | 3 µm | 3 645 412-10 | |
| | 1 µm | 3 645 411-10 | |
| | 1/4 µm | 3 645 410-10 | |

Diamond sprays joke Magic

soluble in alcohol

| Diamond sprays joke Magic, alcohol soluble | Content | Grit size | Material | Order No. | Price |
|--|------------------|-----------|-------------------------|------------------|-------|
| These diamond sprays contain extremely hard, synthetically manufactured diamonds in an alcohol soluble carrier. Also ideal for hard materials such as ceramic and carbide. | 200 ml, CFC-free | 1 µm | polycrystalline diamond | 0 590 910 | |
| | | 3 µm | polycrystalline diamond | 0 590 913 | |
| | | 6 µm | polycrystalline diamond | 0 590 914 | |
| | | 9 µm | polycrystalline diamond | 0 590 915 | |
| | | 15 µm | polycrystalline diamond | 0 590 916 | |



Surface cleaning Cleaning fluid • refill bottle

Cleaning fluid X 73016-A

For all metals, glass, ceramic and many plastics. Use: cleaning moulds, cleaning machine components, pretreatment of glue points, pretreatment for lacquering. The spray cleaner rapidly evaporates and works without leaving residues. Unlike during use of solvent, no residual layer is left behind. Even removes resinated lubricants. Thermoplastics such as PVC, Plexiglas, polystyrene and simple paint strokes can be dissolved.



| Contents | Order no. | Price |
|----------------|------------------|-------|
| 500 ml aerosol | 0 580 521 | |



| Spray bottles | Order no. | Price |
|----------------------------------|--------------------|-------|
| Spray bottle, 100 ml | 0 580 515-2 | |
| Pump spray bottle, 250 ml | 0 580 455 | |
| Spray bottle, 500 ml | 3 645 600 | |

Spray bottles

for transferring cleaners and other liquids from large containers. Particularly suitable for diamond fluids or lapping fluids such as diamond suspensions soluble in oil or water.

Surface protection

Rust protection • Preservation • Cleaning

Preservatives

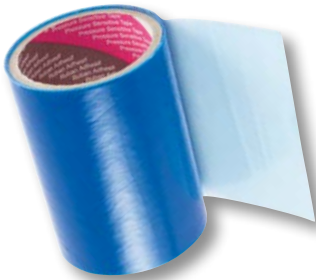
Workpieces need to be protected against corrosion before and particularly after lapping. The preservatives Multicon 1 to 3 are suitable for all types of steel in addition to non-ferrous metals. Multicon 2 is particularly suitable for glass or glass-like products.



| Preservatives | Storage period | Version | Content | Order No. | Price |
|---------------|----------------|---------------|---------|--------------------|-------|
| Multicon 1 | up to 2 months | water-soluble | 0.5 l | 3 637 755 | |
| | | | 1.0 l | 3 637 755-1 | |
| | | | 5.0 l | 3 637 755-5 | |
| Multicon 2 | up to 5 months | water-soluble | 0.5 l | 3 637 756 | |
| | | | 1.0 l | 3 637 756-1 | |
| | | | 5.0 l | 3 637 756-5 | |
| Multicon 3 | up to 6 months | oil-soluble | 0.5 l | 3 637 757 | |
| | | | 1.0 l | 3 637 757-1 | |
| | | | 5.0 l | 3 637 757-5 | |

Surface protection film

The simplest way of protecting scratch and dirt-sensitive surfaces during further processing, transport or storage. This film is fixed to the workpiece like an adhesive tape and can be detached again, above all absolutely without leaving residues. Suitable for steel, copper, anodised aluminium and glass, etc., etc. Heat-resistant between -20°C and +60°C.



| Width | Overall length | Thickness | Packing unit | Order no. | Price |
|--------|----------------|-----------|--------------|------------------|-------|
| 250 mm | 100 m | 50 µm | 1 roll | 0 960 380 | |



Corrosion protection X 73030

With a composition based on synthetic wax and special additives, this spray offers both temporary corrosion protection and preservation of uncoated bright metals. Adheres to all metal surfaces, leaving behind a tacky, flexible protective film, free of silicone or silicone-based products. Seawater-resistant and therefore also suitable for corrosion protection during shipping by sea for example. Ideal for preserving stock items (injection moulds, etc.) and precision components, tools, etc...



| Corrosion protection joke X 73030 | Content | Order No. | Price from 12 pieces | Price from 1 pieces |
|-----------------------------------|----------------|------------------|----------------------|---------------------|
| | 400 ml aerosol | 0 580 525 | | |

Interference testing devices



Plane glasses and interference testing devices for flatness testing

Reflective surfaces are required in order to measure the surface quality achieved. Lapped, matt surfaces are therefore semi-polished for testing on the polishing table. The flatness is reliably checked using optical plane glasses. Our plane glasses are manufactured from glass ceramic. This material retains its flatness even under major temperature fluctuations and is very scratch-resistant. Plane glasses are used in conjunction with an interference testing device. The monochromatic light generated by a sodium vapour lamp has a wavelength of exactly 0.0006 mm. Since only half the wavelength is used during measurement, the measurement accuracy is 0.3 µm.

| | Order No. | Price |
|---|--------------------|-------|
| Interference testing device 18 W | 3 639 552 | |
| Max. plane glass size | Ø 150 mm | |
| Dimensions (W x H x D) | 280 x 330 x 390 mm | |
| Supply voltage | 230 V, 50/60 Hz | |
| Power consumption: | 18 W | |
| Weight | 4.2 kg | |



| | Order No. | Price |
|---|--------------------|-------|
| Interference testing device 35 W | 3 639 553 | |
| • height adjustable and pivoting | | |
| • Base plate made of granite | | |
| • including sodium vapour low-pressure lamp | | |
| • Max. plane glass size Ø 300 mm | | |
| Dimensions (W x H x D) | 400 x 250 x 480 mm | |
| Connected load | 230 V, 50/60 Hz | |
| Power consumption | 35 W | |
| Weight | 27 kg | |

| <i>Spare parts / accessories</i> | Order No. | Price |
|----------------------------------|------------------|-------|
| Spare lamp | 3 639 587 | |



Optical plane glasses made of glass ceramic

| Optical plane glasses made of glass ceramic | Dimensions | Wavelength | Order No. | Price |
|---|------------|-------------|-----------|-------|
| <ul style="list-style-type: none"> • in double-sided versions (two measuring surfaces) • Ø tolerance ± 5 mm • incl. calibration certificate • Other dimensions available • Plane glasses in single-sided versions available on request | Ø 25 mm | 1/4 Lambda | 3 639 846 | |
| | | 1/10 Lambda | 3 639 845 | |
| | Ø 50 mm | 1/4 Lambda | 3 639 832 | |
| | | 1/10 Lambda | 3 639 831 | |
| | Ø 75 mm | 1/4 Lambda | 3 639 834 | |
| | | 1/10 Lambda | 3 639 833 | |
| | Ø 100 mm | 1/4 Lambda | 3 639 836 | |
| | | 1/10 Lambda | 3 639 835 | |
| | Ø 125 mm | 1/4 Lambda | 3 639 848 | |
| | | 1/10 Lambda | 3 639 847 | |
| | Ø 150 mm | 1/4 Lambda | 3 639 838 | |
| | | 1/10 Lambda | 3 639 837 | |
| | Ø 200 mm | 1/4 Lambda | 3 639 840 | |
| | | 1/10 Lambda | 3 639 839 | |
| | Ø 250 mm | 1/4 Lambda | 3 639 842 | |
| | | 1/10 Lambda | 3 639 841 | |
| | Ø 300 mm | 1/4 Lambda | 3 639 844 | |
| | | 1/10 Lambda | 3 639 843 | |



Special productions are possible on request.

Please discuss the wide range of options with **Hardy Möckl**:
Tel. 0 22 04 / 8 39-0 • h.moeckl@joke.de

Flatness gauges

Flatness gauges

Flatness gauges are used to check the flatness of lapping discs. The profile rail incl. dial gauge is positioned on the reference stone and the dial gauge is set to "0". The rail is subsequently placed on the lapping disc. The flatness deviation can be read on the dial gauge.

- Fine dial gauge 0.001 mm with impact protection
- Profile rail with adjustable support feet
- Hard stone reference stone
- processed on one side according to DIN 876100

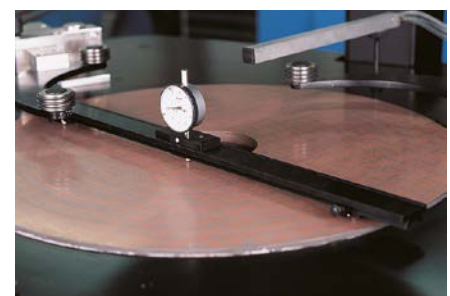
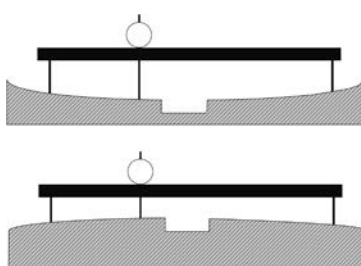


Illustration similar.

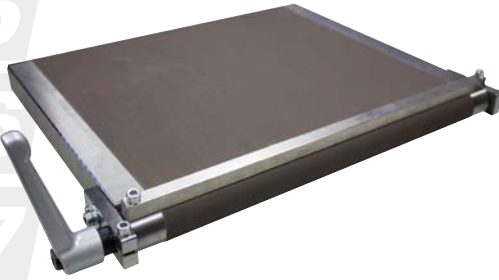


| Unit measuring gauge with reference stone | Dimensions | Weight | Order No. | Price |
|---|--------------------|-----------|-----------|-------|
| for discs Ø 380 mm | 400 x 50 x 70 mm | ca. 6 kg | 3 637 595 | |
| for discs Ø 700 mm | 630 x 50 x 70 mm | ca. 11 kg | 3 637 596 | |
| for discs Ø 1,000 mm | 1.000 x 60 x 70 mm | ca. 23 kg | 3 637 594 | |
| for discs Ø 1,200 mm | 1.200 x 60 x 70 mm | ca. 27 kg | 3 637 599 | |

Polishing table • Polishing paper

In order to obtain the reflective surface required for flatness testing with plan glasses, the lapped workpieces (with a matt surface following the lapping process) are honed on a polishing table covered with polishing paper.


| Polishing table | Order No. | Price |
|--|------------------|-------|
| Dimensions (W x H x D) 430 x 70 x 300 mm Weight 20 kg Scope of supply: Polishing table on four rubber feet, including clamping device | 3 639 002 | |



Polishing papers

The matching polishing paper rolls for the polishing table.

- Grit, narrowly graded
- Soft and polishing grinding
- First-rate surface quality, no scratches

| Polishing paper rolls 300 mm wide | Design | Grit size | Overall length | Order No. | Price |
|---|-----------------------------|-----------|----------------|--------------------|-------|
|  | Synthetic resin bond | 1200 | 10 m | 3 639 013 | |
| | | | 50 m | 3 639 014 | |
| | Elutriated grit | 2000 | 10 m | 3 639 011-0 | |
| | | | 50 m | 3 639 012-0 | |

Modular ultrasonic cleaning system joke Flex-Line

Modular ultrasonic cleaning system joke Flex-Line

Built to cope with any cleaning task. Owing to the modular construction, the new joke Flex-Line cleaning devices offer a wide range of configuration possibilities. Ultrasonic cleaning in modern multifrequency devices forms the basis of this module line with the joke Flex-Line 1. Equipped with an oscillation unit that already results in a cleansing rinsing effect with its up-and-down movements. The joke Flex-Line 2 includes a rinsing module in addition to the ultrasonic cleaning device. Consequently, in the combination of ultrasound, oscillation and rinsing, a three-stage cleaning process in two chambers results. Maximum cleaning performance guaranteed! The high flexibility of the joke Flex-Line also makes subsequent additions or adaptations to the cleaning process possible at any time.

The structure of the optionally available accessories is also modular. A matching circulating air dryer is available for each size. Likewise, an oil separator, a showering device and a filter-pump unit are available. These components optimise the cleaning result and markedly extend the period of use of the cleaner by optimised filtering.



We will be pleased to advise you!

You will achieve optimum results following comprehensive advice. Please consult us in order to individually compile the components of the Flex-Line system in the right combination:

**Markus Abstoß • Tel. +49 (0) 2204 / 839-577
• m.abstoss@joke.de**



Flex-Line 1
Cleaning



Flex-Line 2
Cleaning and rinsing

| Ultrasonic cleaners joke Flex-Line 1 | Flex-Line 1 - 300 | Flex-Line 1 - 550 | Flex-Line 1 - 800 | Flex-Line 1 - 1200 | |
|---|----------------------|----------------------|----------------------|------------------------|--|
| Recommended useful volume | 32 l | 55 l | 84 l | 112 l | |
| Internal trough dimensions (W x D x H) | 296 x 332 x 264 mm | 296 x 501 x 309 mm | 296 x 501 x 459 mm | 519 x 600 x 321 mm | |
| Device dimensions (W x H x D) | 500 x 770 x 1,100 mm | 500 x 940 x 1,200 mm | 500 x 940 x 1,500 mm | 730 x 1,070 x 1.500 mm | |
| Frequency | 25/45 kHz | 25/45 kHz | 25/45 kHz | 25/45 kHz | |
| Ultrasonic output, effective | 600 W | 600 W | 1,000 W | 1,800 W | |
| Ultrasonic peak output, max. | 2,400 W | 2,400 W | 4,000 W | 7,200 W | |
| Drain | yes | yes | yes | yes | |
| Heater 30° - 80° controllable/heater output | 1,700 W | 3,000 W | 5,800 W | 7,500 W | |
| Supply voltage | 230 V, 50/60 Hz | 3 x 400 V/N/PE | 3 x 400 V/N/PE | 3 x 400 V/N/PE | |
| Power consumption | 2,310 W | 3,650 W | 6,810 W | 9,320 W | |
| Weight | 80 kg | 90 kg | 110 kg | 200 kg | |
| Order No. | 0 665 001 | 0 665 101 | 0 665 201 | 0 665 301 | |
| Price | | | | | |

| Suspension baskets | | | | | |
|-------------------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| Basket dimensions (W x D x H) | 248 x 258 x 193 mm | 244 x 424 x 204 mm | 244 x 424 x 340 mm | 438 x 524 x 210 mm | 436 x 509 x 372 mm |
| Order No. | 0 665 108 | 0 668 102 | 0 665 206 | 0 665 306 | 0 665 309 |
| Price | | | | | |

| Stainless steel lid | | | | | |
|---------------------|------------------|------------------|------------------|------------------|------------------|
| Order No. | 0 665 005 | 0 665 205 | 0 665 205 | 0 665 305 | 0 665 305 |
| Price | | | | | |

Ultrasonic cleaners

joke Multi-Clean Power

Ultrasonic cleaning device Multi-Clean Power

As the successor to the joke Multi-Clean Premium line, the new "power devices" are convincing in their customary high quality and are thus perfect when it comes to cleaning stubborn soiling and sensitive surfaces. Three different cleaning programs markedly increase your options. In "sweep function", frequency modulations ensure uniform distribution of the ultrasound waves in the cleaning fluid. At 25 kHz, you can free your workpieces intensively from coarse contamination; at 45 kHz, you can clean gently and finely into the tiniest openings and grooves. The "pulse function" increases your peak ultrasound performance, thereby removing particularly stubborn contamination. In the "dynamic function" both "sweep" and "pulse" functions are combined and run automatically in alternation, consequently the results can sometimes be increased by up to 20%.

Highlights:

- 3 different programs for maximum cleaning performance
- high heating output with temperature control between 30 - 80°C
- Oscillating tank made of particularly cavitation-proof special stainless steel
- Control panel with protection against projected water



| Ultrasonic cleaning devices Multi-Clean Power | Multi-Clean Power 300 | Multi-Clean Power 500 | Multi-Clean Power 600 | Multi-Clean Power 800 |
|--|--------------------------|--------------------------|--------------------------|--------------------------|
| Recommended useful volume | 22 l | 42 l | 45 l | 70 l |
| Internal trough dimensions (W x D x H) | 300 x 300 x 300 mm | 300 x 300 x 500 mm | 500 x 330 x 350 mm | 500 x 330 x 500 mm |
| Device dimensions (W x H x D) | 500 x 550 x 936 mm | 500 x 550 x 936 mm | 670 x 580 x 936 mm | 670 x 580 x 936 mm |
| Frequency | 25 + 45 kHz | 25 + 45 kHz | 25 + 45 kHz | 25 + 45 kHz |
| Ultrasonic output, effective | 480 W | 540 W | 800 W | 900 W |
| Ultrasonic peak output, max. | 600 W | 600 W | 1,000 W | 1,000 W |
| Drain | Ball valve | Ball valve | Ball valve | Ball valve |
| Heater 30° - 80° controllable/heater output | 1,400 W | 1,400 W | 1,400 W | 4,200 W |
| Supply voltage | 230 - 240 V | 230 - 240 V | 230 - 240 V | 3 x 400 V |
| Power consumption | 2,000 W | 2,000 W | 2,400 W | 5,200 W |
| Weight | 40 kg | 45 kg | 55 kg | 61 kg |
| Order No. | 0 690 100 | 0 690 110 | 0 690 120 | 0 690 130 |
| Price | | | | |

| Baskets | | | | |
|-------------------------------|--------------------|--------------------|--------------------|--------------------|
| Basket dimensions (W x D x H) | 255 x 230 x 170 mm | 255 x 230 x 370 mm | 400 x 255 x 220 mm | 400 x 255 x 370 mm |
| Order No. | 0 690 103 | 0 690 113 | 0 690 123 | 0 690 133 |
| Price | | | | |

| Cover | | | | |
|-----------|------------------|------------------|------------------|------------------|
| Order No. | 0 690 101 | 0 690 101 | 0 690 121 | 0 690 121 |
| Price | | | | |

| Noise protection cover | | | | |
|------------------------|------------------|------------------|------------------|------------------|
| Order No. | 0 690 102 | 0 690 102 | 0 690 122 | 0 690 122 |
| Price | | | | |

Ultrasonic cleaners joke Multi-Clean Power



| Ultrasonic cleaning devices Multi-Clean Power | Multi-Clean Power 1400 | Multi-Clean Power 1600 | Multi-Clean Power 2500 |
|--|------------------------|------------------------|------------------------|
| Recommended useful volume | 97 l | 133 l | 215 l |
| Internal trough dimensions (W x D x H) | 600 x 600 x 350 mm | 600 x 600 x 450 mm | 750 x 650 x 520 mm |
| Device dimensions (W x H x D) | 885 x 850 x 936 mm | 885 x 850 x 936 mm | 1035 x 900 x 936 mm |
| Frequency | 25 + 45 kHz | 25 + 45 kHz | 25 + 45 kHz |
| Ultrasonic output, effective | 1,440 W | 1,600 W | 1,600 W |
| Ultrasonic peak output, max. | 1,800 W | 2,000 W | 2,000 W |
| Drain | Ball valve | Ball valve | Ball valve |
| Heater 30° - 80° controllable/heater output | 5,000 W | 7,500 W | 7,500 W |
| Supply voltage | 3 x 400 V | 3 x 400 V | 3 x 400 V |
| Power consumption | 6,800 W | 9,500 W | 9,500 W |
| Weight | 87 kg | 93 kg | 107 kg |
| Order No. | 0 690 140 | 0 690 150 | 0 690 160 |
| Price | | | |
| Baskets | | | |
| Basket dimensions (W x D x H) | 490 x 525 x 210 mm | 480 x 525 x 300 mm | 630 x 575 x 370 mm |
| Order No. | 0 690 143 | 0 690 144 | 0 690 163 |
| Price | | | |
| Cover | | | |
| Order No. | 0 690 141 | 0 690 141 | 0 690 161 |
| Price | | | |
| Noise protection cover | | | |
| Order No. | 0 690 142 | 0 690 142 | 0 690 162 |
| Price | | | |

Lapping courses at joke

Achieving high gloss surfaces with simultaneous precise retention of the workpiece geometries is the challenge faced during polishing and lapping.

A lapping course at joke teaches you the differences between lapping, polishing and lapping and polishing. You gain basic knowledge of these types of processing and their different influencing variables. You familiarise yourself with the widest array of materials, the selection of appropriate lapping media and the principal settings / parameters of the lapping machine.

Many processing examples at the same time illustrate the theoretical bases. The process is rounded off by the topics "measuring and testing" and "flatness testing".

1-day training course – contents of the lapping course at joke

Order no.: 3 990 302

1. Bases

- General bases of lapping
- Advantages of lapping
- Distinction between lapping, polishing and lapping and polishing

2. Lapping

- Materials of the workpiece
- Materials of the lapping tool
- Lapping media
- Grit size and density of the lapping medium
- Contact pressure
- Lapping speed
- Lapping medium dosing and distribution

3. Polishing and lapping

- Materials of the workpiece
- Materials of the lapping tool
- Polishing and lapping media
- Grit sizes
- Contact pressure
- Lapping medium distribution

4. Measuring and testing

5. Flatness testing

- Costs: 418.00 € per person
- Participants: at least 2, up to a maximum of 5 persons
- Training venue: Bergisch Gladbach



In case of enquiries, **Hardy Möckl** is at your disposal with help and advice.

Tel.: +49 (0) 22 04 / 8 39-39 • Email: h.moeckl@joke.de



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A complex topic sometimes throws
up questions - get in touch!
We will be happy to help!

Your contact at joke:



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Lapping product manager

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