BIAX
Professional Power

Das Original

SWISS MADE

THE ORIGINAL BIAX SCRAPER AND ACCESSORIES

www.biax.de | 001 580 327

Production hall, Maulbronn plant

For over 100 years, Schmid & Wezel has striven to provide the highest level of precision, quality and collaborative ethos.

The four divisions of the company include BIAX pneumatic and electric tools, BIAX flexible shafts, BIAX carbide tools and EFA meat processing machinery. These are all manufactured in three state-of-the-art production facilities situated in Germany and Switzerland.

And when it comes to product quality, Schmid & Wezel is the market leader, not least thanks to the high level of vertical integration (up to 90%).

Sustainable customer satisfaction is our goal and the most important driving force for continuous innovation and quality. The strengths of Schmid & Wezel are in providing tailored solutions in high product quality and personalised customer support.

Schmid & Wezel is ISO certified:

TÜV SÜD SGS

Schmid & Wezel GmbH

ISO 9001:2015

SGS

BIAX-Maschinen GmbH

ISO 9001:2015

IAF

BIAX Maulbronn

BIAX Hilsbach

BIAX Thayngen (Switzerland)

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Electronic scraper **BS 40 M**

BIAX Universal scraper, heavy duty model, particularly suitable for:

- extreme heavy scraping work in large machine construction
- steel scraping work on guide beds and machine columns, in case of turbines, transmissions and in pump construction

Electronic scraper **BL 40 M**

BIAX Universal scraper, particularly suitable for:

- heavy scraping
- standard scraping
- fine scraping
- precision scraping and oil-tight scraping

In conjunction with special blades also suitable for dovetail guides and prisms.

Included accessories (for both machines)

1x hexagonal wrench SW 4 (001 363 503)
1x hexagonal wrench SW 6 (001 363 502)
1x plastic case (001 401 819)
1x set with 2 carbon brushes (001 328 362 for 230V or 001 982 601 for 120V)
1x special oil for adjustment gib (001 365 635)

Optional accessories

grab handle
Order no.: 003 004 748

ratchet screw
(2 pieces required)
Order no.: 001 324 905

Adjustable strokes:	500 - 1.850 min^{-1}
Adjustable stroke length:	0-20 mm
Power consumption:	800 Watt
Noise level:	71 dB(A)
Weight:	5,5 kg
Dimension L x W x H:	460 x 80 x 107 mm

230 Volt
Order no.: 200 040 400

120 Volt
Order no.: 200 040 410*

Adjustable strokes:	500 - 1.850 min^{-1}
Adjustable stroke length:	0-20 mm
Power consumption:	800 Watt
Noise level:	71 dB(A)
Weight:	4,0 kg
Dimension L x W x H:	460 x 80 x 107 mm

230 Volt
Order no.: 200 040 380

120 Volt
Order no.: 200 040 390*

* Expected to be available from 2025. Until then, the predecessor model BS 40 (200 040 110) and BL 40 (200 040 140) will be available.

Electronic scraper BL 10 M

BIAX Universal scraper, light model, particularly suitable for:

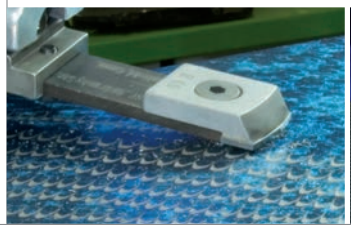
- plastic scraping
- standard scraping
- fine scraping
- precision scraping and oil-tight scraping

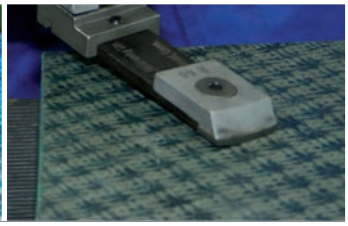
In conjunction with special blades also suitable for dovetail guides and prisms.

Electronic scraper HM 10 M

BIAX half moon pattern scraper, only suitable for:

- Scraping oil-pockets
- for optically pleasuring surfaces





Included accessories (for both machines)

1x hexagonal wrench SW 4 (001 363 503)
1x hexagonal wrench SW 6 (001 363 502) *not for HM 10*
1x plastic case (001 401 819)
1x set with 2 carbon brushes (001 328 362 for 230V or 001 982 601 for 120V)
1x special oil for adjustment gib (001 365 635)

Adjustable strokes:	500 - 1.850 min^{-1}
Adjustable stroke length:	0-10 mm
Power consumption:	800 Watt
Noise level:	71 dB(A)
Weight:	2,7 kg
Dimension L x W x H:	405 x 76 x 92 mm

230 Volt
Order no.: 200 040 360

120 Volt
Order no.: 200 040 370*

Adjustable strokes:	500 - 1.850 min^{-1}
Adjustable stroke length:	2 mm
Power consumption:	800 Watt
Noise level:	71 dB(A)
Weight:	2,7 kg
Dimension L x W x H:	405 x 76 x 92 mm

230 Volt
Order no.: 200 040 420

120 Volt
Order no.: 200 040 430*

* Expected to be available from 2025. Until then, the predecessor model BL 10 (200 040 310) and HM 10 (200 040 340) will be available.

Pneumatic scraper DL 40

BIAX universal pneumatic scraper for work in potentially explosive atmospheres:

- heavy scraping
- standard scraping
- fine scraping and oil-tight scraping

In conjunction with special blades also suitable for dovetail guides and prisms.

Connection via a maintenance unit with pressure reducing valve, filter and lubricator

Number of strokes at 6 bar:	1.400 min^{-1}
Adjustable stroke length:	0-20 mm
Power:	350 Watt
Noise level:	75 dB(A)
Weight:	3,6 kg
Dimension L x W x H:	425 x 80 x 107 mm

Order no.: 200 040 060

Included accessories

1x hexagonal wrench SW 4 (001 363 503)
1x hexagonal wrench SW 6 (001 363 502)
1x plastic case (001 401 819)
1x special oil for adjustment gib (001 365 635)

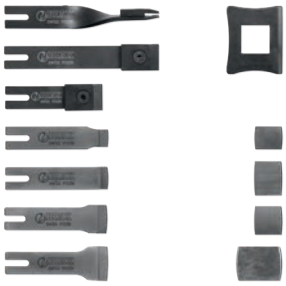
Optional accessories

Maintenance unit
Order no.: 001 367 045

Mobile holder for maintenance unit
(maintenance unit not included)
Order no.: 007 015 440

BIAX special oil (1l)
Order no.: 001 365 665

Hose unit with silencer
Order no.: 001 366 530



BIAX Blade Assortment **No. 10**

Order no.: 210 099 710

for scraper type BS 40 M, BL 40 M, BL 10 M and DL 40

Clamp holder: KL80, KL130, KL130V
Scraper inserts: 25/20 R60, 25/25 R90, 25/30 R180, 30/40 ST R60
Scraper blades: 15/90 R60, 20/90 R60, 25/90 R90, 30/90 R140
Control gauge

BIAX Blade Assortment **No. 20**

Order no.: 210 098 910

for scraper type BS 40 M, BL 40 M, BL 10 M and DL 40

Clamp holder: KL170
Scraper blades: 15/150 R60, 20/150 R60, 25/150 R90, 30/150 R140, 20/150 ST R60

Control gauge

BIAX Blade Assortment **No. 30**

Order no.: 210 099 510

for scraper type HM 10 M

Half moon pattern scraper blades: 20/90 R60, 20/90 R90, 20/90 R120, 20/90 R150

BIAX Blade Assortment **No. 31**

Order no.: 210 099 500

for scraper type HM 10 M

Clamp holder: KL70
Half moon scraper inserts: R60, R90, R120, R150

BIAX Blade Assortment **No. 40**

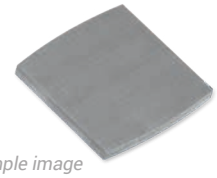
Order no.: 210 098 500

for scraping technique 40

Scraper blades: 15/90 R20, 20/90 R40, 15/150 R20, 20/150 R40

Control gauge

All scraper blade sets in practical leather case

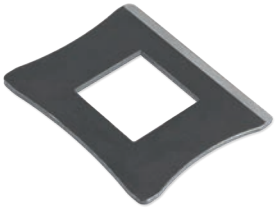


Sample image

BIAX Scraper Inserts

Carbide for pre- and finish scraping

Type:	25/20	25/25	25/30	25/20	25/25	25/30
Dimensions L x W:	25x20 mm	25x25 mm	25x30 mm	25x20 mm	25x25 mm	25x30 mm
Cutter radius:	60 mm	90 mm	140 mm	300 mm	300 mm	300 mm
Cutting angle:	-3,5°	-3,5°	-3,5°	-3,5°	-3,5°	-3,5°
Order no.:	001 400 203	001 400 205	001 400 207	001 400 219	001 400 220	001 400 221
Economy version:	001 400 224 (as above, but R180)	001 400 223 (as above, but R180)	001 400 222 (as above, but R180)			



Can be used as a grinding gauge, for controlling cutter radius and bearing points, as well as cleaning particles from the workpiece

Dimensions L x W: 60x50 mm

Order no.: 003 001 639

Sample image

HSS- especially for steel scraping

Type:	25/30 ST	30/40 ST
Dimensions L x W:	25x30 mm	30x40 mm
Cutter radius:	60 mm	60 mm
Cutting angle:	+32°	+32°
Order no.:	001 400 209	001 400 210

Clamp Holder for Scraper Inserts

Standard short type

Type: KL 80

L x W: 85x23 mm

Order no.: 007 004 696

Extended flexible

Type: KL 130

L x W: 135x23 mm

Order no.: 007 004 695

Turned, for places of difficult access

Type: KL 130 V

L x W: 134x23 mm

Order no.: 007 004 679

For scraping in hard to reach places with blades

Type: KL 170

L x W: 170x24 mm *

Order no.: 008 002 791

* (on the machine side, the first 50 mm are angled by 20°)

90° twisted blades on request

Sample image

Carbide-tipped blades 90 mm

	For narrow guides		For prescraping		
Type:	10/90	15/90	20/90	25/90	30/90
Dimensions L x W:	90x10 mm	90x15 mm	90x20 mm	90x25 mm	90x30 mm
Cutter radius:	60 mm	60 mm	60 mm	90 mm	140 mm
Cutting angle:	-3,5°	-3,5°	-3,5°	-3,5°	-3,5°
Order no.:	001 400 401	001 400 403	001 400 405	001 400 407	001 400 409
		001 400 413 (as above, but R20)	001 400 414 (as above, but R40)		

Sample image

Carbide-tipped blades 150 mm

	Special blades for finishing scraping, spring-mounted type					HSS blade for steel scraping
Type:	10/150	15/150	20/150	25/150	30/150	20/150 ST
Dimensions L x W:	150x10 mm	150x15 mm	150x20 mm	150x25 mm	150x30 mm	150x20 mm
Cutter radius:	60 mm	60 mm	60 mm	90 mm	140 mm	60 mm
Cutting angle:	-3,5°	-3,5°	-3,5°	-3,5°	-3,5°	+32°
Order no.:	001 401 901	001 401 902	001 401 903	001 401 904	001 401 905	001 401 906
		001 401 910 (as above, but R20)	001 401 911 (as above, but R40)			

Sample image

Scraper inserts for scraper type HM10

Carbide tipped - robust design for pattern scraping

Type:	R60	R90	R120	R150
Dimensions L x W:	34x23 mm	34x23 mm	34x23 mm	34x23 mm
Cutter radius:	60 mm	90 mm	120 mm	150 mm
Cutting angle:	-3,5°	-3,5°	-3,5°	-3,5°
Pattern size:	small	standard	large	extra large
Order no.:	001 400 902	001 400 905	001 400 907	001 400 908

Clamp holder KL 70 for blade inserts

Dimensions L x W: 75x20 mm

Order no.:	007 004 699

Sample image

Half moon pattern scraper blades for scraper type HM10

Carbide-tipped. Deep oil pockets guarantee the continuous flow of oil without rupturing of the oil film.

Type:	R 60/20	R 90/20	R 120/20	R 150/20
Dimensions L x W:	90x20 mm	90x20 mm	90x20 mm	90x20 mm
Cutter radius:	60 mm	90 mm	120 mm	150 mm
Cutting angle:	small	standard	large	extra large
Order no.:	001 400 415	001 400 416	001 400 417	001 400 418

Hand scraper

for the use of
scraper blades

Dimension length: 400 mm

Order no.: 200 004 201

Hand scraper

for the use of
scraper inserts

Dimension length: 445 mm

Order no.: 200 004 401

Spotting ink roller

for the application
of the spotting ink

35x120mm (molleton Ø x width)
Order no.: 001 402 302

50x150mm (Rubber Ø x width)
Order no.: 001 402 303

Spotting ink

for coloring spotting tools

Content: 60 g

Blue
Order no.: 001 402 201

Red
Order no.: 001 402 202

Coming soon:

Training document
“Scraping Correctly and Efficiently“

Order no.: 001 984 000

KSM

- 2 grinding rings on the grinding wheel with coarser grit for pre-grinding and very fine grit for „lapped“ finish of the cutting edge.
- Guided grinding of blade radii (20, 40, 60, 90 and 140 mm) for repeatable process-safe results in PPI and contact ratio.
- 230V power connection, no three-phase connection necessary.
- With 4400 RPM, optimal speed for the diamond grinding wheel (30m/s cutting speed).
- Ideal for mobile use with only 16kg total weight.
- Gooseneck LED Light.
- Prepared for grinding dust extraction.
- Fixture parts hardened and corrosion protected.

Accessories included

Diamond wheel with diameter 127mm, one grit for pre-grinding and one for lapping
Blade holder for blade radii 20, 40, 60, 90 and 140
Holder for Carbide Scraper inserts
Whetstone for diamond wheel
Accessories bag

Order no.: 001 984 003

The diamond grinding wheel can be relapped.

Technical data

Grinding support:	Pivoting range +5° to -20
Dimensions L x W x H:	225 x 370 x 250
Weight:	16Kg
Power connection:	230V 50Hz
Motor:	550W 4400 min^{-1}

other dimensions on request

Hard stone measuring plate

Usage: As a base for control, assembly and laboratory purposes.

Version: Made of granite, surface finely lapped, sides ground, edges chamfered on all sides. Provided with support point markings on the underside for statically determined support.

Accuracy: Standard: DIN 876/00, on request: DIN 876/000, DAkkS calibration

Available sizes (in mm): 630 x 400, 800 x 600, 1000 x 630, 1200 x 800, 1500 x 1000, 2000 x 1000

Hard stone measuring bar

Usage: For straightness and parallelism control.

Version: Made of granite, the two longitudinal faces lapped flat and parallel to each other, remaining faces ground. With threaded insert in the end faces and relief holes in all sizes.

Accuracy: Standard: DIN 874/00, on request: DIN 874/000, DAkkS calibration.

Available sizes (in mm): 500 x 90, 750 x140, 1000 x 160, 1250 x 190

Hard stone angle

Usage: For checking 90° angles.

Version: Made of granite, the two leg surfaces flat and lapped at right angles to each other, remaining surfaces ground. Provided with through holes for ease and better handling.

Accuracy: Standard: DIN 875/00, on request: DIN 875/000, DAkkS calibration. The angle accuracy is related to the longer leg.

Available sizes (in mm): 300 x 200, 400 x 250, 600 x 400

Hard stone angle plate

Usage: For checking 90° angles, very suitable for geometry inspection on machine tools.

Version: Made of granite, the four side faces flat, parallel and right-angled lapped, both flat sides ground. Provided with through holes for ease and better handling.

Accuracy: Standard: DIN 875/00, on request: DIN 875/000, DAkkS calibration. The angle accuracy is related to the longer leg.

Available sizes (in mm): 400 x 400, 600 x 400

Hard stone angle frame

Usage: For checking 90° angles, very suitable for geometry inspection on machine tools.

Version: Made of granite, the four side faces flat, parallel and right-angled lapped, both flat faces ground. Lightweight version.

Accuracy: Standard: DIN 875/00, on request: DIN 875/000, DAkkS calibration. The angle accuracy is related to the longer leg.

Available sizes (in mm): 300 x 300, 400 x 300, 500 x 400, 800 x 600

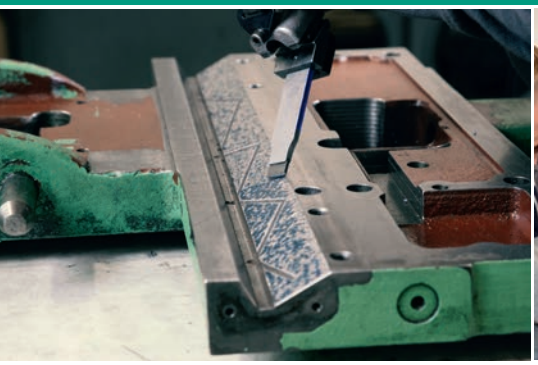
The DIN standards 874, 875 876 define which requirements regarding design and classification of accuracy the standard parts have to fulfill. DAkkS is the German accreditation body. It tests those who calibrate the standard parts to ensure that their results are reliable.

BIAX Professional Power + MASCHRATUR

KING-WAY SCRAPING CLASS

(For advanced and beginners)

Scan the QR CODE and watch the video of the training at the MASCHRATUR Youtube Channel



Trainer
DI(FH) Stefan Lüftinger
Franz Lüftinger

Participants
Max. 10 people per class

Course language:
German and English

More info: +49 7043-10232
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(Mr. Pachomow, Director Sales & Marketing)

„Scraping itself is easy to learn. The difficult thing when scraping is to recognize the right place and to remove the right amount of material."

About the contents of the training

- Each participant works on his own workbench on an individual project (95% practice)
- Theory and basics of scraping.
- Scraping by hand and with the BIAX power scraper
- Machine geometry and work with measuring equipment.

The trainers respond individually to each participant, show, watch, correct mistakes, give practical tips and assistance. Drinks, snacks and lunch are provided.
It is often assumed that the power scraper is only suitable for rough scraping. In the class the great aha effect comes: you will be surprised which fine work you can carry out with the power scraper very efficiently.
The KING-WAY scraping classes are currently the only option to learn to scrape professionally. Use the opportunity and secure yourself one of the limited places. The following applies: first come, first served!

Stage 1: Prescraping

The part to be scraped is prepared. The first scraping stage creates the basis. When using the power scraper, a blade or scraping insert (25 mm or 30 mm) with a large cutter radius and a stroke of 12 mm to 20 mm should be selected. The blade of the scraping tool is placed on the workpiece at a 45° angle. The selected stroke length with the horizontal guide of the scraper is so large that the strokes just overlap. After scraping the entire surface, the scraper is rotated 90° to the first pass.

Stage 2: Scraping to the plane

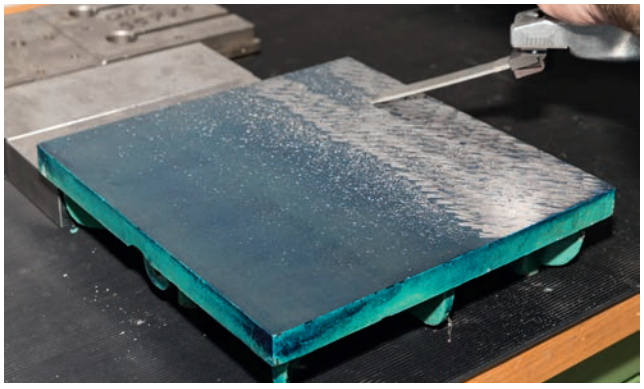
This involves scraping parallel to the opposite corners. This process requires a slightly shorter stroke (6 mm to 12 mm) and a narrow blade (15 mm, 20 mm, or 25 mm).
After the surface has been spotted, the high points are scraped for flatness or positional accuracy until the result is satisfactory.

Stage 3: Finishing

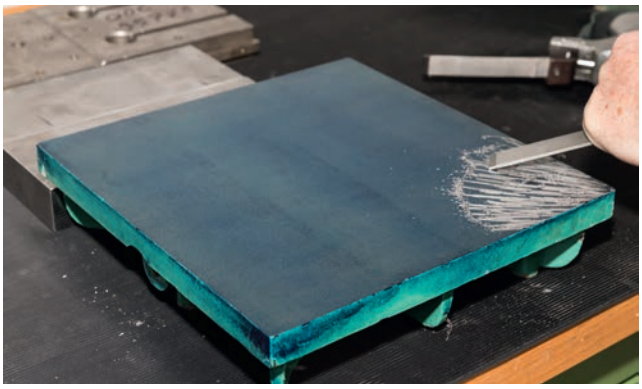
The quality of the surface to be scraped increases with the number of bearing points. Load-bearing points are large at the beginning and there are just few. If the stroke is reduced (2 mm to 6 mm) and a 15 mm or 20 mm scraping tool is used, the large bearing points are scraped off - provided that the scraper is moved over the surface without pressure (lifting is not necessary). A rhythm can be developed quickly and the result is multiple and smaller bearing points distributed over the entire surface.

Comparison:

Power scraper and hand scraper after one minute in use.



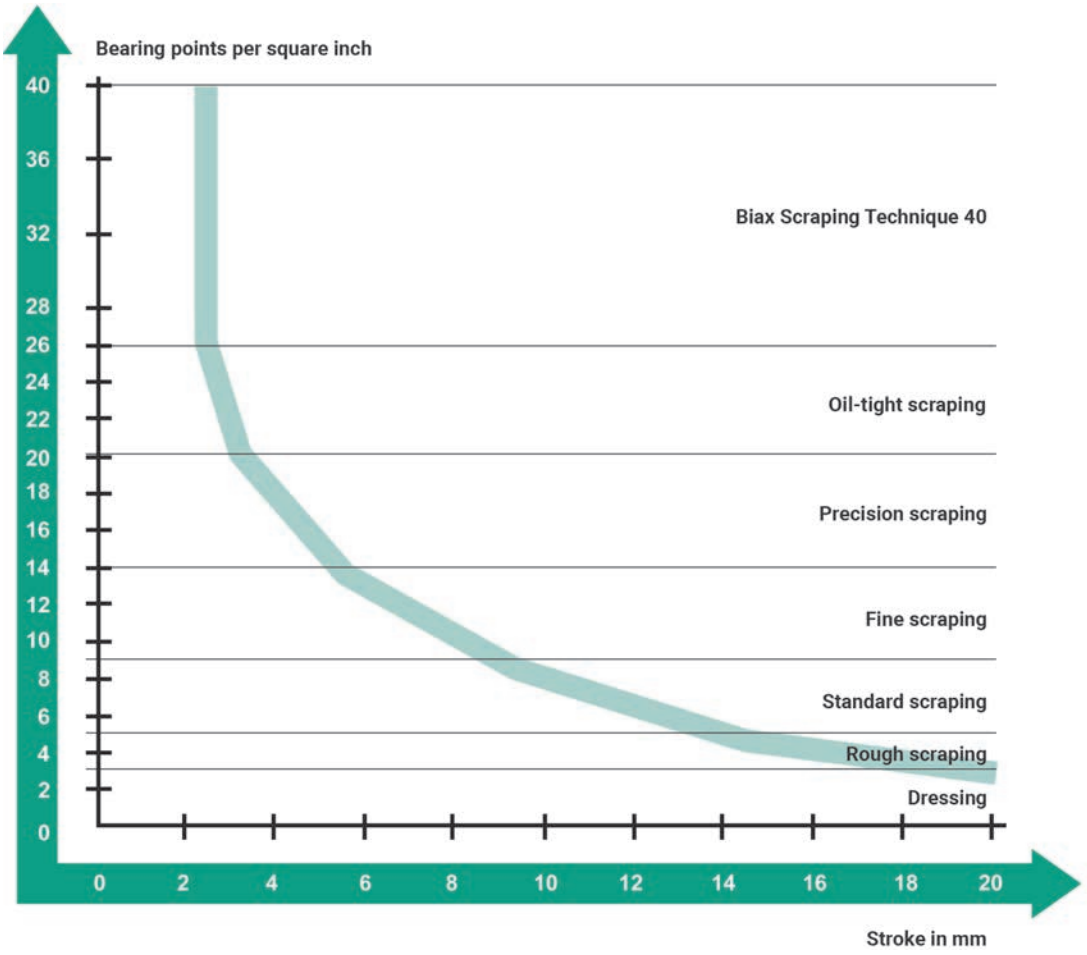
With the electric scraper you are up to 70% faster.
Not only with prescraping, but also with finishing.



The hand scraper requires a lot of force and is not more precise in the result.

10 Reference Values

Recommended value for bearing points



Recommended tools for applications

Scraper inserts (LxW)		30/40 ST	25/30 ST	25/35 ST	25/20 ST	-	-
Scraper blades (B)		-	30	25	20	-	15
Spring-mounted scraper blades (WxL)		-	30/150	25/150	20/150	20/150	15/150
Cast	Grey cast iron		x	x	x		x
	Malleable cast iron		x	x	x		x
	Cast steel	x	x	x	x	x	x
	Heavy metal casting		x	x	x		x
Metals	Steel	x	x	x	x	x	x
	Brass		x	x	x		x
	Copper		x	x	x		x
	Bronze		x	x	x		x
Synthetics	PE		x	x	x		x
	Polyamide		x	x	x		x
	PTFE		x	x	x		x
	PVC		x	x	x		x
	Laminated plastics		x	x	x		x
	Hard materials		x	x	x		x

For special cases, we will be happy to advise you on finding the right scraping tools.

Druckluftwerkzeuge
Pneumatic Tools
Outils pneumatiques

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