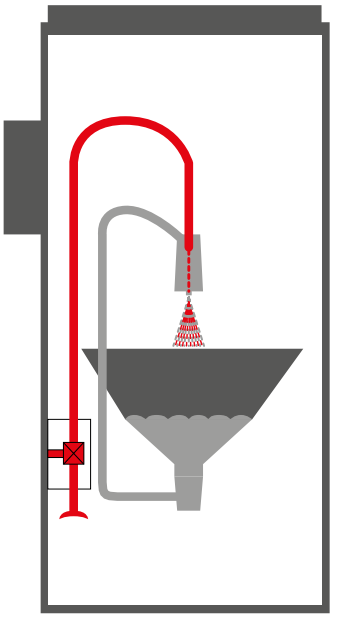
Injection and pressure blasting

Injection blasting



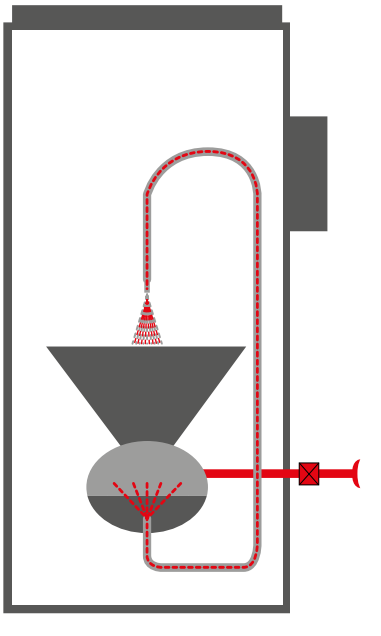
Injection blasting creates a negative pressure within a blasting gun, which sucks in the blasting shot via a separate supply line and guides it into the compressed air. The compressed air then accelerates the blasting shot up to its exit from the blasting nozzle.

Injection blasting is particularly suited to achieving uniform small to medium-sized surfaces. This method allows spot-on application (important for sensitive workpiece geometries).

During **pressure blasting**, the blasting shot is pressurised with compressed air in an enclosed container (pressure tank) from which it is forced through the attached blasting hose with blasting nozzle. Owing to this long acceleration path, the blasting shot achieves a much higher blasting and impact velocity than with injection blasting.

This method is particularly suited for blasting large areas and removing stubborn impurities. Extremely light (i.e. plastic, walnut shells) or heavy (i.e. high-carbon steel grit, metallic blasting shots) blasting media can be used, that do not achieve the required impact velocity or require a long blasting process with the injection method.

Pressure blasting



Blasting is a surface treatment in which blasting shot is aimed at the workpieces at high velocity. **Compressed air, hydraulic fluid or wheels** are available as carrier energy. The blasting result essentially depends on the type of blasting shot selected, in addition to different machine types and configuration para-meters. (Translation of the German definition according to www.wikipedia.de)

In selecting our blasting systems, we at joke have decided on compressed air as the carrier energy. On the one hand, the risk of possible corrosion in case of non-corrosion-resistant materials is ruled out as a result; above all however, **precise point blastings** are possible using our compressed-air fine blasting systems. For this purpose, we have compiled a selection of blasting units from the **mikromat series** on the following pages.

You will find **injector and pressure blasting systems** (on request) from us that distinctly differ in their performance and are therefore capable of catering for the most diverse applications (refer to the explanation on the left).

We offer you a matching **range of blasting shots** in many different versions.

Fine blasting units
Series “eco”

Fine blasting units “eco” series
The new, budget-priced entry level blasting unit offering professional quality for workshop and factory.
It is highly recommended for deburring, derusting, cleaning, roughening, matting, descaling and removing of lacquer.
This unit offers modern technology with many practical features at an attractive price.

Highlights:
- Compact, space-saving design
- Integrated dust exhaust for perfect visibility during the blasting process
- Blasting shot is processed in a closed loop, i. e. only dust etc. is removed, the blasting shot is recycled
- High-performance filter cartridge (up to 8 m² filter space)
- Large window
- Adjustable blasting pressure via pressure regulator
- Easy exchange of blasting shot thanks to steep funnel
- Grid with high loading capacity
- Integrated safety device
- LED work chamber illumination
- Easy self-installation of the optional equipment, even as retrofitting

	Fine blasting unit mikromat 50 eco
Working chamber dimensions (W x D x H)	approx. 500 x 450 x 470 mm
Device dimensions (W x H x D)	approx. 705 x 760 x 1,520 mm
Load bearing capacity of work area	50 kg
Air consumption	approx. 700 l/min at 7 bars
Compressed-air connection	Rapid-release coupling 1/2“
Compressed-air adjustment range	0.5 – 10 bars
Fan output	approx. 350 m³/h
Filter area	4.0 m²
Lighting	LED
Weight	approx. 85 kg
Supply voltage	230 V / 50–60 Hz Euro plug
Scope of delivery	Blasting nozzle made of hardened steel (Ø 7 mm), safety switch (no blasting shot supply when hood open), pressure controller with water separator, foot switch for starting and stopping the blasting process
Order No.	**0 951 100-8**
Price	

Fine blasting units
Series “eco”

	Fine blasting unit mikromat 1000 eco
Working chamber dimensions (W x D x H)	approx. 1,000 x 900 x 750 mm
Device dimensions (W x H x D)	approx. 1,110 x 1,300 x 1,650 mm
Load bearing capacity of work area	approx. 130 kg
Air consumption	approx. 700 l/min at 7 bars
Compressed-air connection	Rapid-release coupling 1/2“
Compressed-air adjustment range	0.5 – 10 bars
Fan output	approx. 1,000 m³/h
Filter area	8.0 m²
Lighting	LED
Weight	approx. 300 kg
Supply voltage	230/400 V, 5-pin plug
Scope of delivery	Scope of delivery refer to Order No. 0 952 100-8, additionally with an exhaust air duct of an afterfilter system or with an exhaust air connector for connection
Order No.	**0 952 200**
Price	

Fine blasting units
Series “pro”

Fine blasting units Series “pro”
The fine blasting units from the pro series are perfectly prepared ex-works for optional equipment. This allows ideal working conditions. They are state of the art with their LED working chamber lights. We offer every worker ergonomically adaptable working conditions in the form of the “ERGOSIZE” height-adjustable working chamber. Other highlights: fully automatic filter cleaning and frequency-controlled extraction together with the afterfilter system allow minutest quantities of residual dusts with a very low noise level.

Highlights:
- LED lighting
- compact, space-saving design
- High-efficiency filter cartridges with 8 m² filter area
- Large viewing window with easily replaceable elements
- Sensible additional equipment
- Remnants are reduced to a minimum
- also retrofittable with the following accessories: Blow-out gun, blasting gun holder, fine blasting unit microblast-A, afterfilter system and blasting shot and blasting shot control

	Fine blasting unit mikromat 600 pro
Working chamber dimensions (W x D x H)	620 x 500 x 250 mm
Device dimensions (W x H x D)	800 x 850 x 1,650 mm
Load bearing capacity of work area	approx. 100 kg
Air consumption	max. 700 l/min at 7 bars
Compressed-air connection	1/2“ rapid-release coupling
Compressed-air adjustment range	0,5 – 10 bars
Noise level	75–76 dB(A), with afterfilter < 70 dB(A)
Fan output	approx. 1,000 m³/h
Filter area	8.0 m²
Lighting	LED
Weight	approx. 150 kg
Supply voltage	230/400 V, 5-pin plug
Scope of delivery	Blasting nozzle made of hardened steel (Ø 7 mm), safety switch (no blasting shot supply when hood open), pressure controller with water separator, foot switch for starting/stopping the blasting process, exhaust air connector for connection or with an exhaust air duct of an afterfilter system, blasting gun holder
Order No.	**0 952 400**
Price	

Fine blasting units
Series “pro”

similar picture

	Fine blasting unit mikromat 1100 pro
Working chamber dimensions (W x D x H)	approx. 920 x 900 x 750 mm
Device dimensions (W x H x D)	approx. 1,090 x 1,300 x 1,650 mm
Load bearing capacity of work area	approx 130 kg
Air consumption	max. 700 l/min at 7 bars
Compressed-air connection	1/2“ rapid-release coupling
Compressed-air adjustment range	0,5 – 10 bars
Noise level	75–76 dB(A), with afterfilter < 70 dB(A)
Fan output	approx. 1,000 m³/h
Filter area	8.0 m²
Lighting	LED
Weight	approx. 300 kg
Supply voltage	230/400 V, 5-pin plug
Scope of delivery	Scope of deliver, refer to Order No. 0 952 400, but without blasting gun holder
Order No.	**0 952 500**
Price	

Fine blasting units
Matching accessories at a glance

Accessories / spare parts

	Dimensions	mikromat 50 eco	mikromat 1000 eco	mikromat 600 pro	mikromat 1100 pro	Order No.	Price
Blow-out gun							
		x	x	x	x	**0 952 023**	
Blasting gun holder							
		x				**0 952 039**	
			x	x	x	**0 952 112**	
Micro fine blasting unit microblast A							
		x	x	x	x	**0 951 110-1**	
Push-through system							
	150 x 150 mm	x		x		**0 952 113**	
	250 x 250 mm		x		x	**0 952 828**	
Blasting shot accelearation							
				x	x	**0 952 111**	
Mobile design							
				x		**0 952 114**	
Dust bag							
		x	x	x	x	**0 952 037**	
Blasting gun housing							
		x	x	x	x	**0 952 016**	
Air nozzle							
	Ø 2.5 mm	x	x	x	x	**0 952 010-1**	
	Ø 3.5 mm	x	x	x	x	**0 952 010**	
Blasting nozzle							
	Ø 5.0 mm	x	x	x	x	**0 952 011-1**	
	Ø 7.0 mm	x	x	x	x	**0 952 011**	
Boron carbide blasting nozzle							
	Ø 7.0 mm	x	x	x	x	**0 952 018**	
Gloves, pair, size 10							
		x		x		**0 952 024**	
Glove, left only, size 10							
		x		x		**0 952 025**	
Filter cartridge							
	230 x 620 mm	x	x	x	x	**0 952 012**	
Glass pane							
	420 x 205 mm			x		**0 952 034**	
	420 x 320 mm	x	x		x	**0 952 026**	
Plexiglass pane							
	420 x 205 mm			x		**0 952 035**	
	420 x 320 mm	x	x		x	**0 952 027**	

Work chamber height adjustment, frequency control and secondary filter system
for the mikromat 600 pro and 1100 pro fine blasting units

Work chamber height adjustment, frequency control of the fan speed and secondary filter system
These optional equipment variants let you adapt the mikromat series fine blasting units even more closely to your requirements, working conditions and/or spatial circumstances. Other equipment variants are furthermore possible as well as construction of special solutions based on the tried and trusted mikromat systems.

		Suitable for	Order No.	Price from 1 piece
Afterfilter system				
	Using the afterfilter system, the cleaned air can be discharged into the environment at the equipment location, since the residual dust content is reduced to < 2 mg/m³ exhaust air. The afterfilter system is simply installed on the exhaust air nozzle of the blasting unit. This system dispenses with additional exhaust air piping and/or ceiling openings. Furthermore, the afterfilter system also reduces the noise level of the blasting unit.	mikromat 1100 pro mikromat 600 pro	**0 952 002**	
Aspiration frequency control				
	The optional fan frequency control allows modification of aspiration by ca. ± 25%. Modification of output allows optimum adjustment of the aspiration performance to the respective blasting conditions for example, less aspiration when using light blasting shot, in order to avoid sucking the latter out of the blast-ing circuit. Alternatively, an increased aspiration performance will guarantee an optimum view of the blasting process in the chamber with blasting shot that contains dust.	mikromat 1100 pro mikromat 600 pro	**0 952 003**	
Manual filter cleaning				
	For cleaning the filter cartridges by manual operating the pneumatic filter cleaning. The filter cartridges are moved by a roller vibrator in this case. This loosens filter deposits and a free filter area is restored.	mikromat 1000 eco mikromat 1100 pro mikromat 600 pro	**0 952 031**	
Fully automatic filter cleaning				
	For cleaning the filter cartridges by automatic operating the pneumatic filter cleaning. The filter cartridges are moved by a roller vibrator in this case. This loosens filter deposits and a free filter area is restored.	mikromat 1100 pro mikromat 600 pro	**0 952 082**	
Working chamber height adjustment ERGOSIZE				
	Infinitely variable ergonomic adjustment of the work chamber height. 200 mm travel, electrically driven.	mikromat 600 pro	**0 952 110**	
		mikromat 1100 pro	**0 952 132**	

Fine blasting unit
microblast

Micro fine blasting unit microblast Basic
The compact solution for finest blasting jobs. The microblast fine blasting unit allows you to work on finest contours, narrow ribs, slots etc.

Available in two versions:
- The mobile version with carrying straps (order no. 0 951 110) as an open system without its own blasting chamber lends itself to fine work in the field of renovation for stripping wall painting

- With the add-on version (order no. 0 951 110-1), the blasting chamber, extraction and illumination of the large device are used to carry out highly intricate work with the microblast.

		Design	Order No.	Price from 1 piece
Micro fine blasting unit microblast A				
	Dimensions (W x D x H): approx. 110 x 240 x 270 mm Weight: approx. 3 kg Compressed-air range: 3 – 6 bars Application of blasting shot: 150 – 250 µm (GPM) Supplied with: handpiece with 1.2 mm tungsten carbide blasting gun, foot switch, blasting shot container (2 kg), pressure controller, pressure gauge and air filter (Order-No. 0 951 110 with carrier straps)	for connecting with mikromat 50, 600, 1000, 1100	**0 951 110-1**	
Micro fine blasting unit microblast				
	Dimensions (W x D x H): approx. 110 x 240 x 270 mm Weight: approx. 3 kg Compressed-air range: 3 – 6 bars Application of blasting shot: 150 – 250 µm (GPM) Supplied with: handpiece with 1.2 mm tungsten carbide blasting gun, foot switch, blasting shot container (2 kg), pressure controller, pressure gauge and air filter (Order-No. 0 951 110 with carrier straps)	for maximum mobility	**0 951 110**	

Accessories / spare parts

	Size	Order No.	Price from 1 piece
Tungsten carbide blasting gun			
	Ø 0.8 mm	**0 951 112**	
	Ø 1.0 mm	**0 951 113**	
	Ø 1.2 mm	**0 951 114**	
	Ø 1.5 mm	**0 951 147**	

microblast A adapted to mikromat 50 eco
Order no. 0 951 110-1

joke recommendation:

We recommend the following blasting nozzles:

Ø 0.8 mm	glass beads	GPFF 70 – 40 µm
Ø 1.0 mm	glass beads	GPF 110 – 70 µm
Ø 1.2 mm	glass beads	GPM 200 – 100 µm

Tabletop fine blasting device
microjet

Tabletop fine blasting device joke-microjet
The microjet is a blasting device developed for surface treatment of metals. Particularly suitable for removing residues and oxide layers or when using glass beads for polishing the precious metal surfaces

Highlights:
- Depending on equipment, a choice of one, two or three blasting shots is available during work.
- Handpiece can be used with a Ø 0.8, 1 or 1.2 mm fine blasting nozzle.
- Wide viewing window with easily replaceable protective film.
- Steel housing with stove-enamel finish
- Pneumatic foot switch
- Tank with 2 kg capacity (approx. 1 litre)
- Compact, space-saving construction
- Switches for light and external extractor provided.

joke recommendation:

We recommend the following blasting nozzles on Page 452:

Ø 0.8 mm	glass beads	GPFF 70 – 40 µm
Ø 1.0 mm	glass beads	GPF 110 – 70 µm
Ø 1.2 mm	glass beads	GPM 200 – 100 µm

The possibilities are numerous...

The blasting shot containers listed below are supplied as standard. A selection of other blasting shot container combinations is also available.

Please consult us!

Artikel-Bezeichnung	**Tabletop fine blasting device joke-microjet 1, Cabin with 1 blasting cabin**	**Tabletop unit joke-microjet 2, Cabine with 2 blasting shot container**	**Tabletop unit joke-microjet 3, Cabine with 3 blasting shot container**
Device dimensions (W x H x D)	approx. 380 x 570 x 280 mm	approx. 380 x 570 x 280 mm	approx. 380 x 570 x 280 mm
Air consumption	max. 80 l/min at max. 6 bars	max. 80 l/min at max. 6 bars	max. 80 l/min at max. 6 bars
Compressed-air adjustment range	0.5 – 6 bar	0.5 – 6 bar	0.5 – 6 bar
Lighting	9 W (fluorescent tubes in housing)	9 W (fluorescent tubes in housing)	9 W (fluorescent tubes in housing)
Weight	approx. 9 kg	approx. 11 kg	approx. 13 kg
Supply voltage	230 V, 50/60 Hz	230 V, 50/60 Hz	230 V, 50/60 Hz
Scope of delivery	1 handpiece with Ø 1.2 mm blasting nozzle made of hardened steel, foot switch, 1 container for blasting shot of grit size 150–250 µm, compressed air controller with filter and gloves (installed)	2 handpieces with Ø 1.2 mm blasting nozzle made of hardened steel, foot switch, 1 container respectively for blasting shot of grit size 90–120 µm and 150–250 µm (switchable), compressed air controller with filter and gloves (installed)	3 handpieces with Ø 1.2 mm blasting nozzle made of hardened steel, foot switch, 1 container respectively for blasting shot of grit size 50–80 µm, 90–125 µm and 150–250 µm (switchable), compressed air controller with filter and gloves (installed)
Order No.	**0 951 210**	**0 951 220**	**0 951 223**
Price			

You want to protect the glass from blasting scratches?
You can order a protective film (Order no. 0 951 222) - please contact us!

Suction unit
EUR

		Order No.	Price from 1 piece
Suction unit EUR			
	Dust extractor with paper bag and polyester filter. Suction power continuously adjustable Dimensions (B x H): approx. Ø 360 x 580 mm Weight: approx. 8 kg Noise level: max 71 dB(A) (at 1 m distance) Voltage: 230 V, 50 Hz (s. specification plate)	**0 951 224**	

Blasting shots

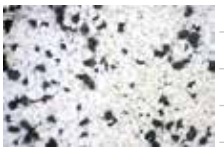
Blasting shots
We have the right blasting shot for every application. For almost all blasting shots, you have a choice between the handy 5-litre can and the economical bag containing 25 kg. We carry other blasting shots too in the range in addition to the selection indication on the following pages.

Consult us!

Blasting shots
Plastic granulate with antistatic agent

Applications / Materials:
- Cleaning of Steel and aluminium moulds, GFK-parts, wooden surfaces, copper, bronze, marble, granite etc.
- Paint stripping of powder coated parts, automotive parts, aluminium rims, aircraft parts
- Deburring of zinc die casting and aluminium parts
- Paint preparation of plastic surfaces
- No electrostatic charge

Perfectly suitable for use of pressure blasting systems!

	Grit size	Content	Type	Order No.	Price from 1 piece
Blasting shots plastic granulate with antistatic agent					
	250 - 150 µm	25 kg bag	Premium	**0 955 266**	
	500 - 250 µm	25 kg bag	Premium	**0 955 267**	
	800 - 500 µm	25 kg bag	Premium	**0 955 265**	
	1200 - 800 µm	25 kg bag	Premium	**0 955 268**	
	1500 - 1200 µm	25 kg bag	Premium	**0 955 269**	

Blasting shots
Mixed grits

Improving of surfaces, cleaning, deburring, descaling and preparation of surfaces.

	Grit size	Content	Type	Order No.	Price from 1 piece
Blasting shots mixed grits					
	50 - 40 µm	5 l can	MK 300	**0 955 142**	
	70 - 50 µm	5 l can	MK 245	**0 955 132**	
	110 - 40 µm	5 l can	MK-GPF/SI	**0 955 232**	
	110 - 70 µm	25 kg pail	MK 245/S/G	**0 955 222-1**	
	150 - 75 µm	5 l can	MK 90/150	**0 955 122**	
		25 kg pail	MK 90/150	**0 955 122-1**	
	200 - 100 µm	5 l can	RM K	**0 955 202**	
		25 kg pail	RM K	**0 955 205-1**	
	300 - 150 µm	5 l can	MK 60/90	**0 955 112**	
		25 kg pail	MK 60/90	**0 955 112-1**	
	500 -150 µm	5 l can	MK 40/90	**0 955 102**	
		25 kg pail	MK 40/90	**0 955 102-1**	

Blasting shots
Glass beads

Polishing, decorating, deburring, surface hardening of all materials including non-ferrous and precious metals and plastics.

	Grit size	Content	Type	Order No.	Price from 1 piece
Blasting shots glass beads					
	50 - 0 µm	5 l can	GP/0 - 50	**0 955 352**	
		25 kg bag	GP/0 - 50	**0 955 354**	
	70 - 40 µm	5 l can	GPFF	**0 955 342**	
		25 kg bag	GPFF	**0 955 344**	
	110 - 70 µm	5 l can	GPF	**0 955 332**	
		25 kg bag	GPF	**0 955 334**	
	200 - 100 µm	5 l can	GPM	**0 955 322**	
		25 kg bag	GPM	**0 955 324**	
	400 - 300 µm	5 l can	GPG	**0 955 312**	
		25 kg bag	GPG	**0 955 314**	
	600 - 400 µm	5 l can	GPSG	**0 955 302-1**	
		25 kg bag	GPSG	**0 955 304-1**	

Blasting shots
Hard blasting shot

Cleaning, descaling, deburring of metals, mainly steels – no formation of dust.

	Grit size	Content	Type	Order No.	Price from 1 piece
Hard blasting shot					
	150 - 100 µm	5 l can	HST 120 (round)	**0 955 402**	
		25 kg bag	HST 120 (round)	**0 955 404**	
	200 - 100 µm	5 l can	HST 121 (edged)	**0 955 412**	
		25 kg bag	HST 121 (edged)	**0 955 414**	

Blasting shots
Ruby

For deburring, cleaning and descaling.

	Grit size	Content	Type	Order No.	Price from 1 piece
Blasting shots ruby					
	74 - 53 µm	5 l can	RUB 220	**0 955 522**	
		25 kg bag	RUB 220	**0 955 525-1**	
	100 - 75 µm	5 l can	RUB 150	**0 955 512**	
		25 kg bag	RUB 150	**0 955 515-1**	
	150 - 125 µm	5 l can	RUB 100	**0 955 502**	
		25 kg bag	RUB 100	**0 955 505-1**	

Blasting shots
Silicon carbide

Aggressive shot, high stock removal. Cleaning of hardened surfaces.

	Grit size	Content	Type	Order No.	Price from 1 piece
Blasting shots silicon carbide					
	25 - 21 µm	5 l can	SIC 360	**0 955 932**	
		25 kg bag	SIC 360	**0 955 935**	
	75 - 53 µm	5 l can	SIC 220	**0 955 922**	
		25 kg bag	SIC 220	**0 955 925**	
	90 - 63 µm	5 l can	SIC 180	**0 955 912**	
		25 kg bag	SIC 180	**0 955 915-1**	
	106 - 63 µm	5 l can	SIC 150	**0 955 902**	
		25 kg bag	SIC 150	**0 955 905-1**	

Blasting shots
Ceramic beads

Synthetic, pearl-shaped zirconbased blasting shot. Hardness and density much higher than glass beads, resulting in a significantly longer service life. Ceramic beads are particularly suitable for cleaning, hardening, smoothing, deburring and polishing of various surfaces.

	Grit size	Content	Type	Order No.	Price from 1 piece
Blasting shots ceramic beads					
	125 - 70 µm	5 l can	KPFF	**0 955 380-1**	
		25 kg can	KPFF	**0 955 380**	
	250 - 125 µm	5 l can	KPF	**0 955 381-1**	
		25 kg can	KPF	**0 955 381**	
	425 - 250 µm	5 l can	KPM	**0 955 382-1**	
		25 kg can	KPM	**0 955 382**	

Blasting shots
Corundum

General cleaning jobs, descaling, decorating, matting, good stock removal, medium hard.

	Grit size	Content	Type	Order No.	Price from 1 piece
Blasting shots corundum					
	75 - 53 µm	5 l can	KOR 220	**0 955 622**	
		25 kg bag	KOR 220	**0 955 625-1**	
	90 - 63 µm	5 l can	KOR 180	**0 955 612**	
		25 kg bag	KOR 180	**0 955 615-1**	
	106 - 63 µm	5 l can	KOR 150	**0 955 602**	
		25 kg bag	KOR 150	**0 955 605-1**	
	150 - 106 µm	25 kg bag	KOR 100	**0 955 875-1**	
	250 - 180 µm	25 kg bag	KOR 70	**0 955 874-1**	
	355 - 250 µm	25 kg bag	KOR 54	**0 955 873-1**	
	425 - 300 µm	25 kg bag	KOR 46	**0 955 872-1**	
	850 - 600 µm	25 kg bag	KOR 24	**0 955 871-1**	
	2000 - 1400 µm	25 kg bag	KOR 12	**0 955 870-1**	

Blasting shots
Walnut shells

Cleaning and deburring of soft metals and plastics, especially duroplastics.

	Grit size	Content	Type	Order No.	Price from 1 piece
Blasting shots walnut shells					
	≤ 300 µm	5 l can	WS 3	**0 955 722**	
		25 kg bag	WS 3	**0 955 725-1**	
	750 - 300 µm	5 l can	WS 2	**0 955 712**	
		25 kg bag	WS 2	**0 955 715-1**	