19015 Adjustable Circle Cutters

Type
Circle cutter fitted with 1 HSS-E bit (draw cut to 5 mm).
Use
For fixed drilling machines. For cutting out holes, discs and rings.

Note:
Do not use in high-speed machines!
Not for use with wood!

19015 101
Type Liliput
Type
Cutting range 18-80 mm, shank Ø 10 mm.

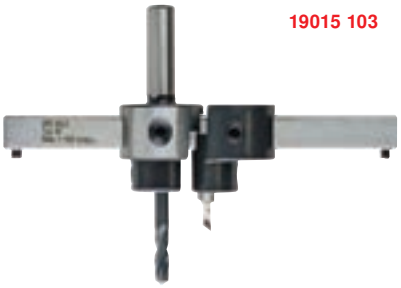
19015 103
Type 00
Type
Cutting range 30-200 mm, shank Ø 12 mm.

19015 104
Type 00
Type
Cutting range 30-200 mm, shank MT 2.

19015 105
Type 00
Type
Cutting range 30-200 mm, shank MT 3.

19015 106
Type 00a
Type
Cutting range 30-400 mm, shank MT 3.

19015 103



19015 104

Type	Cutting area Ø mm	Shank Ø mm	Shank MT	19015 ...
Liliput	18-80	10	–	101
00	30-200	12	–	103
00	30-200	–	2	104
00	30-200	–	3	105
00a	30-400	–	3	106

19026 - 19028 Spare Bits and Bit Holders for Circle Cutters

Use for type		Liliput		00 + 00a		00a	
Type		19026	...	19027	...	19028	...
Bit, with draw cut, for sheet metals to 5 mm, steel, non-ferrous or light metal, made of **HSS-E.**			101		101		
Bit, oblique, for metals to 5 mm, **with carbide tip**.	19026 101-102 19027 101-102		102		102		
Additional bit holder, for oblique bits end-no. 101 and 102.					104		
Bit, for sealing material, plastic plates, rubber, leather with a max. thickness of approx. 10 mm, made of **HSS-E.**	19026 105 19027 105		105		105		
Bit, for plastics to approx. 30 mm, as well as Novotex, Pertinax, Plexiglas, etc., made of **HSS-E.**			106		106		
Bit, for plastics to approx. 30 mm, as well as Novotex, Pertinax, Plexiglas, etc., **carbide-tipped**.	19026 106-107 19027 106-107		107		107		
Additional bit holder, for straight bits end no. 105, 106 and 107.					109		
Bit, in reinforced Type for sheet metals to approx. 12 mm and boreholes from approx. 34 up to approx. 150 mm Ø, made of **HSS-E.**	19028 111						111
Special bit holder, for reinforced HSS-E bits end-no. 111.							112

Al<10%Si	Al>10%Si	Cu	St<520N	St<750N	St<900N	St<1100N	St<1200N	St<1400N	<45HRC	<55HRC	<60HRC	<67HRC	VA-steel<900N	VA-steel>900N	Ti-alloy	GG(G)	Plastics
HSS-E																	
35-50	35-50	25-40	25-30	25-30	22-25	22-25	22-25	22-25	-	-	-	-	16-19	16-19	-	16-24	35-50
Carbide-tipped																	
60-90	60-90	45-70	45-54	45-54	40-45	40-45	40-45	40-45	-	-	-	-	28-34	28-34	-	28-42	70-90

19095 Jetspray minimum quantity lubrication system (MQL)

Type
Jetspray works without pump and is compact and saves space. The device is suitable for all machines (machining centres, milling machines, saws, etc.). Installation and connection can be executed within minutes.
- Optimal and economical use of circular cold saws
- Easy, separate adjustment of coolant quantity and air supply
- Precise tool lubrication through one or two nozzles
- Longer tool life travel
- Avoidance of KKS disposal costs
- All parts in stainless Type
- Different lengths of the suction hose
- Strong prismatic magnetic base with switch-on/switch-off

19095 101-109
Scope of supply:
1 single spray system with high-quality LOC-LINE hose, 1 control valve, 1 pressure line, 1 suction line for coolant and 1 strong magnet (can be switched on/off).

19095 201-209
Scope of supply:
1 double spray system with high-quality LOC-LINE hose, 1 control valve, 1 pressure line, 1 suction line for coolant and 1 strong magnet (can be switched on/off).

19095 101-109

19095 201-209

			Single spray system		Double spray system	
Multi link tube length mm	Compressed air hose m	Suction line m	19095	...	19095	...
203	2	2		101		201
273	2	2		105		205
375	2	2		109		209

19100 Microjet minimum quantity lubrication system (MQL)

microjet® GmbH
Minimalmengenschmiersysteme

Use
For lathes, drills, milling machines, saws, and for sheet metal work.

Type
Minimum quantity lubrication system for direct mounting on the machine.
The system may be controlled either by means of the machine's electric circuit (24V or 230V) or be driven by a separate pneumatic system.
The lubricant/air flow can be actuated and adjusted separately.
Connection - device outlet:
2-phase coupling plug D=25 mm.
Visual fill level indicator

Advantages:
- No costs for the disposal of the cooling lubricant
- No costs for maintained and cleaning
- Low lubricant consumption
- No residue
- Clean workspace
- Lower workload for operators
- Protection of the environment
- Easy, save, and clean handling
- Optimised application of the lubricant
- Good manufacturing quality

Scope of supply:
- 3/2-way hand slide valve
- Pressure-relief valve and manometer for the monitoring of the lubricant pressure
- Safety valve
- Opening for filling up G 1/2 inch
- Stand
- 1 litre of special lubricant

Accessories:
Mounting bracket, detailed operating manual incl. circuit diagram

Available as an option:
Electric fill-level monitoring via level switch

19100

Basic unit	19100	...
via 2x valve block 24 V DC		101
via 2x valve block 230 V DC		102
via 2x valve block pneumatic		103

19102 - 19105 Accessories for Microjet minimum quantity lubrication system (MQL)

microjet® GmbH
Minimalmengenschmiersysteme

19103 101
Manual selector switch
Type
With magnet and control connection 4-2 DUO hose, length 3000 mm.
Use
For manual controlling the Microjet minimum quantity lubrication system, cat.-no. 19100 101-103.

19102 101
Spray unit for turning, drilling, and milling
Type 1 for 1 spray location
Type
1x 2-phase coupling plug Ø 25 mm,
1x VA-steel pipes, length 180 mm with magnetic holder,
1x plastic flexible hose, length 250 mm,
1x nozzle holder straight,
1x nozzle Ø 8 mm.

19102 102
Spray unit for turning, drilling, and milling
Type 2 for 2 spray locations
Type
1x 2-phase coupling plug Ø 25 mm,
1x VA-steel pipes, length 180 mm with magnetic holder,
1x Y-junction,
2x plastic flexible hose, length 250 mm,
2x nozzle holders straight,
2x nozzles Ø 8 mm.

19102 103
Spray unit for band saw blades with a height of 27-34 mm
Type
1x 2-phase coupling Ø 25 mm,
3x capillary Ø 0,45 mm,
1x outer hose Ø 10 mm, length 3500 mm,
1x spray head with three exits.

19102 104
Spray unit for saw blades up to 400 mm
Type
1x 2-phase coupling Ø 25 mm,
1x capillary Ø 0,45 mm,
1x outer hose Ø 8 mm, length 2000 mm,
1x 90°-angle,
1x 2-phase nozzle Ø 10 mm.

19104 105-110
Extension 25/25
Type
1x Microjet hose,
1x capillary hose Ø 1 mm,
2x 2-phase coupling Ø 25 mm (two-way).

19105 101-102
Special lubricant

19103

19102 101-102

19102 103-104

19104

	Length m	Contents l	19103 ...	19102 ...	19104 ...	19105 ...
Manual selector switch	-	-	101			
Spray unit variant 1	-	-		101		
Spray unit variant 2	-	-		102		
Spray unit for band saw blades	-	-		103		
Spray unit for band saw blades	-	-		104		
Extension line	1	-			105	
Extension line	2	-			106	
Extension line	3	-			107	
Extension line	4	-			108	
Extension line	5	-			109	
Extension line	6	-			110	
Special oil	-	1				101
Special oil	-	5				102

19350 Coolant tap

Type
With magnet 260 N, flexible hose 300 mm long, adjustable stopcock. Hose coupling R1/4 inch and/or pipe socket LW 8.
Use
The coolant tap can be attached anywhere on the machine tool or directly on the workpiece.

19350

	19350 ...
	101

19357 - 19359 Flexible Plastic Coolant Hoses

LOC-LINE® FLEXI
DAS ORIGINAL

Type
For shortening and lengthening as required. Vibration-resistant, remains in position.
Corrosion-proof and resistant to chemicals and solvents. Easily exchangeable nozzles, junctions, and screw connectors.

19357 101

19357 101
1/4 inch set, 29-part,
in plastic box.

19357 102
1/2 inch set, 33-part,
in plastic box.

19357 102

Contents of 1/4 inch set
8 tube pieces of 90 mm
3 thread nipples NPT 1/8 inch
3 thread nipples NPT 1/4 inch
3 round nozzles Ø 1,5 mm
3 round nozzles Ø 3,0 mm
3 round nozzles Ø 6,0 mm
1 nozzle 5 x Ø 1,5 mm
1 nozzle 7 x Ø 1,0 mm
1 flat nozzle 25 x 0,8 mm
1 locking tap with segment connector
1 Y-junction
1 assembly plier

Contents of 1/2 inch set
6 tube pieces of 140 mm
4 thread nipples NPT 3/8 inch
4 thread nipples NPT 1/2 inch
2 round nozzles Ø 6 mm
2 round nozzles Ø 9 mm
2 round nozzles Ø 12 mm
1 90° nozzle Ø 9 mm
1 90° nozzle Ø 12 mm
2 flat nozzles 32 x 4,2 mm
2 flat nozzles 63 x 2,8 mm
1 locking tap with segment connector
2 extensions each 95 mm
2 clamping rings
1 Y-junction
1 assembly plier

Sets	Contents	19357 ...
1/4 inch set	29-part	101
1/2 inch set	33-part	102

19358 101
1/4 inch set, 7-part.

19358 104-145
1/4 inch single elements

set + single elements	1/4 inch 19358 ...
Set consisting of:	
2 hose pieces, each approx. 140 mm	
1 ea. each round nozzle Ø 1,5 / 3 and 6 mm	
1 each threaded connection NPT 1/8 inch and 1/4 inch	101
2 hose pieces, each approx. 140 mm	104
7,5 m hose in 55 sections, each 140 mm	106
1 pack with 4x threaded connection NPT 1/8 inch	110
1 pack with 4x threaded connection NPT 1/4 inch	111
1 pack with 4x round nozzle Ø 1,5 mm	112
1 pack with 4x round nozzle Ø 3,0 mm	113
1 pack with 4x round nozzle Ø 6,0 mm	114
1 pack with 2x flat nozzle 25 x 0,8 mm	115
1 pack with 2x articulated shower nozzle Ø 1 mm x 16	120
1 pack consisting of:	
1 each flat nozzle 12 x 1,0 and 12 x 1.5 mm	
1 each orifice nozzle 5 x Ø 1,5 and 7 x Ø 1,0 mm	124
1 pack with 2x Y-branch	128
1 pack with 4x extension, each 95 mm with clamp ring	131
1 ring system with 15 side nozzles	132
1 pack with 2x check valve	135
1 pack with 2x shut-off valve with external thread 1/4 inch	136
1 pack with 2x shut-off valve with segment connection	138
1 pack with 4x hose elbow 1/4 inch	139
1 pack with 4x extension with clamp ring 1/4 inch	140
1 pack with 4x hose element with flush bore 1/4 inch	141
1x circlip pliers for clamping and disconnecting joint pieces	145

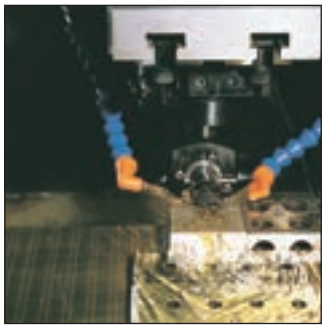
Continuation ▶

Continuation ▶

19359 101
1/2 inch set, 7-part.

19359 104-145
1/2 inch single elements

Set + single elements	1/2 inch 19359 ...
Set consisting of:	
2 hose pieces, each approx. 140 mm	
1 each round nozzle Ø 6 / 9 and 12 mm	
1 each threaded connection NPT 3/8 inch and 1/2 inch	101
2 hose pieces, each approx. 140 mm	104
7,5 m hose in 59 sections, each 140 mm	106
1 pack with 4x threaded connection NPT 3/8 inch	110
1 pack with 4x threaded connection NPT 1/2 inch	111
1 pack with 4x round nozzle Ø 6 mm	112
1 pack with 4x round nozzle Ø 9 mm	113
1 pack with 4x round nozzle Ø 12 mm	114
1 pack with 2x flat nozzle 32 x 4,2 mm	115
1 pack with 2x flat nozzle 63 x 2,8 mm	116
1 pack consisting of:	
1 each flat nozzle 18 x 2,0 and 18 x 3.2 mm	
1 each orifice nozzle 7 x Ø 2,0 and 5 x Ø 3,2 mm	124
1 pack consisting of:	
1 each 90° nozzles Ø 6 / 9 and 12 mm	
1x 90° shower nozzle	125
1 pack with 2x Y-branch	127
1 pack with 2x reducer to 1/4 inch	129
1 pack with 2x Y-branch to 1/4 inch	130
1 pack with 4x extension, each 95 mm with clamp ring	131
1 ring system with 15 side nozzles	132
1 pack with 2x check valve	135
1 pack with 2x shut-off valve with external thread 1/2 inch	136
1 pack with 2x shut-off valve with segment connection	138
1 pack with 4x hose elbow 1/2 inch	139
1 pack with 4x extension with clamp ring 1/2 inch	140
1 pack with 4x hose element with flush bore 1/2 inch	141
1x circlip pliers for clamping and disconnecting joint pieces	145



19356 Cold Air Nozzle

Type
- Single air connection (3-8 bar)
- Escape cold air on the blue component (- 48°)
- Escape hot air on the red component (+ 100°)

Scope of supply:
- Air nozzle with magnetic plate
- Ball valve
- Connection for quick-release compressed air coupling 3/8 inch
- Silencer
- Joint hose 1/2 inch with round nozzle

Use
Point-specific cooling / warming.
Implement cooling efficiently where lubricants or cooling fluids are not desired.

19356

Articulated hose connection Inch	Compressed air connection Inch	19356 ...
1/2	3/8	101

19300 Cooling lubricant

Type
Cooling and machining agent with high corrosion protection that satisfies the highest requirements. Semi-transparent emulsion. Increased service life compared to standard coolants. Adapted to HHW track oils 68 and 220 (demulsifying). Very easy on the skin, pH at 5 % approx. 9,3.

Use
Long-lasting foam, very well suited for high-pressure CNC-machines. Suitable for all materials. Application 1:25 (4 %) for light-duty machining up to 1:10 (10 %) for very heavy-duty machining.

Note:
Non-hazardous substance, free of chlorine, nitrite and formaldehyde. Very good corrosion protection even at lower concentrations (starting at 3 %). Refractometer value 1,3. Water contaminant class 2.

19300

Contents l	19300 ...
10	101
25	102

19302 Track Oils

Type
Adapted to HHW cooling lubricants, demulsifying, therefore it cannot be mixed with the emulsion. No sticky residues on the guideways, considerably extends the service life of the emulsion.

Use
Demulsifying special oil for tracks and guides. Also suitable as hydraulic oil in compliance with DIN 51524/2 and transmission oil.

19302

Contents l	Kinematic Viscosity	Density at 15°C	Flash point °C	19302 ...
10	68	0,876	230	101
10	220	0,891	240	102

19304 Stainless Steel Lubricating Sticks/Cutting Pastes

Use
For heavy-duty machining for tapping, broaching, and reaming. Application range: High-alloy carbon steels, chromium-nickel alloys, VA-steel, austenitic, ferritic chromium-nickel steels, titanium, manganese.

19304 101
Lubricating stick
Type
Sticks to the cutting edge.

19304 102-103
Cutting Paste
Type
In container.

19304 101

19304 102-103

	Contents g	19304 ...
Lubricating stick	300	101
Cutting paste	120	102
Cutting paste	750	103

19306 Multi-Purpose Cutting Oils

Type
Without chlorine and mineral oil. High-quality multi-purpose cutting oil, based on natural raw materials. Low tool wear, efficient.
Use
For medium up to heavy-duty machining.

Note:
Also suitable for minimum quantity lubrication system (MQL).

19306 101

19306 102

19306 103-104

	Contents ml	Contents l	19306 ...
Aerosol can	300	–	101
Spray bottle	500	–	102
Container	–	5	103
Container	–	10	104

19308 Grinding Concentrates

Type
Synthetic grinding concentrate with high corrosion protection **that satisfies the highest requirements**. The emulsion is **transparent** and fulfils the requirements of **clear-view grinding.** Increased service life compared to standard coolants. Very easy on the skin. Very good corrosion protection even at lower concentrations (starting at 2 %).
Use
For grinding projects of different materials. Application 1:40 (2,5 %). Also suitable as additive to pressure water, as additional corrosion protection and as stabiliser.

Note:
Free of chlorine, nitrite and formaldehyde. Not classified as hazardous material. Refractometer value 2,1. Water contaminant class 2.

19308

Contents l	19308 ...
10	101
25	102

19360 Concentrated Cooling Lubricants

Type
Water-emulsive universal coolant and cutting liquid.
Use
For all cutting, machining, and forming processes.

Note:
Free of nitrite, silicone and phenol.

19360 101

	Contents l	19360 ...
Container	10	101
Drum	210	102

19366 Container and drum mixer

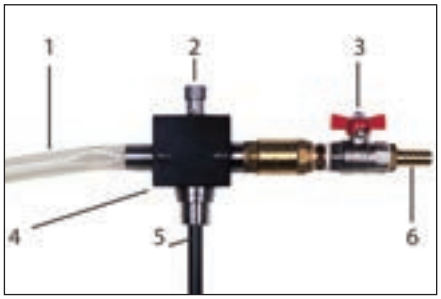
Type
- One mixer for all container sizes.
- Very effective and with easy handling.
- All water-soluble cooling lubricant concentrates can be mixed (concentration from 1 - 16 %).
- Thanks to the 5 different lengths of suction pipes and screw coupling, it can easily be fastened to containers of the following sizes: 5 kg, 10 kg, 25 kg, 60 kg, 200 kg.
- Follows the Venturi principle and does not need electrical power.

Scope of supply:
5 suction pipes,
2 screw cap adapters for containers,
1 screw cap for drums,
1, 5 m transparent hose

Use
Economic use of emulsions is enabled through precise dosing.
The mixing ratio can be precisely adjusted on the adjustment wheel (concentration is determined via the manual refractometer, see cat. no. 19370 101).

19366

1. Emulsion drain line
2. Concentration regulator
3. Ball valve
4. Aluminium housing
5. Intake pipe (5 different lengths)
6. Mains supply water coupling



	19366 ...
	101

19367 - 19368 Emulsion test case incl. of test sticks

19367 101
Type
Contents:
- Specimen thermometer
- Plastic specimen cup
- Specimen bottles, 3 pcs.
- Nitrite test sticks, 100 pcs.
- Nitrate test sticks, 100 pcs.
- Overall hardness test sticks, 100 pcs.
- pH test sticks, 100 pcs.
- Test protocol
- Plastic case with foam insert and cut-out for housing a refractometer (not included, see cat.-no. 19370 101).

Use
For all measurements in compliance with TRGS 611.

19368 101
Nitrite test sticks
Type
Pack = 100 pcs.

19368 102
Nitrate test sticks
Type
Pack = 100 pcs.

19368 103
Overall hardness test sticks
Type
Pack = 100 pcs.

19368 104
pH test sticks
Type
Pack = 100 pcs.

19367 101

19368 101

19368 102

19368 103

19368 104

	Pack = Piece	19367 ...	19368 ...
Emulsion care case	-	101	
Nitrite test sticks	100		101
Nitrate test sticks	100		102
Total hardness test sticks	100		103
ph. test sticks	100		104

19370 Refractometers

Type
Measuring range 0-32%. With adjustable eyepiece, accuracy of reading 0,2%, in protective pouch.

Use
For fast and accurate measurement of the concentration of water-mixed cooling lubricants and many other solutions in various areas of application.

19370

	19370 ...
	101

33970 pH measuring instrument for liquids TESTO 206-pH1

Type
- Combination °C and pH
- Quick, precise, simple
- Reliable thanks to automatic final value determination
- Robust, very low soiling tendency

Use
Deviations of the cooling lubricant quality can be detected by means of self monitoring and, if applicable, can be corrected. One of the values to be recorded is pH. The pH of the cooling lubricant should be, dependent on the manufacturer's data, between 7,7 and 9,2. This measurement needs to be done while mixing the concentrate as well as once a week for emulsions.
In the case of a significant drop in pH value there is danger of corrosion, deficient bio-stability combined with insufficient service life (additional costs), irritating odours and health hazards.
Measures must be initiated at a drop in pH value of 0,2 pH, change the cooling lubricant at a drop of 0,5 pH.

33970 101
Set TESTO 206-pH1
Scope of supply:
One-hand pH/°C measurement device, pH1 probe head for fluid media, storage cap with gel, TopSafe and belt holder / wall holder.

33970 102
Starter set TESTO 206-pH1
Scope of supply:
One-hand pH/°C measurement device, pH1 probe head for fluid media, storage cap with gel, calibrated dosing bottle 250 ml pH 4+7, TopSafe, belt holder / wall holder, and aluminium case.

33970

Technical data:	TESTO 206-pH1	
Measurement transducer:		pH electrode NTC
Measuring range:	0...14 pH	0...60 °C (briefly to +80 °C max. 5 min.)
Accuracy +/- 1 digit:	+/- 0,02 pH	+/- 0,4 °C
Resolution	0,01 pH	0,1 °C
Compensation:	Auto.. Temperature compensation	Auto. Temperature compensation
Measurement cycle:	2 measurements per second	2 measurements per second
Dimensions:	197 x 33 x 20 mm	197 x 33 x 20 mm

Type	33970 ...
Device set TESTO 206-pH1	101
Starter set TESTO 206-pH1	102

19372 - 19374 Band Skimmers and Spare Bands

19372
Type
Compact construction, vertical fixing position or up to 30° angled.
Endless skimmer band, 45 mm width, magnetic stand, flow capacity approx. 2 - 6 l/h on surface.
Advantages:
- longer service life for the cooling lubricants
- extended exchange intervals
- significantly lower operating costs

Use
For care of coolant lubrications on on machine tools, machining centres, CNC lathes, etc.

19372

19374

Technical data:	
Electric connection:	230 V, 50 Hz, AC
Power cable:	1,3 m with 12 V mains adapter
Drive:	Gear motor 12 V, 4 W, 100% ED
Mounting depth (ET):	Optionally 160 mm, 260 mm
optionally available:	Retroactive change of the ID through replacement of the lower telescopic rod and of the belt
Band capacity:	approx. 2 - 6 l/h surface oil
Outflow:	Joint hose 1/2 inch
Weight:	approx. kg 2

	Band skimmer		Spare skimmer bands	
Immersion depth (ID) mm	19372	...	19374	...
160		101		101
260		102		102

19378 Thread lubricant

Type
Handy stick.
Use
Greases threads in order to achieve a better sliding result. Prevents the threads from breaking.

19378

Contents g	19378	...
600		101

19379 Thread Cutting Oils and Greases

Type
Mineral-Based Thread Cutting Oils and Greases
Chlorine-free, silicone-free, PCB-free and solvent-free.
Use
For the machining of steels and stainless steel.

19379 101
Akafil
Cutting Oil
Use
Outstanding capacities particularly for thread cutting, thread forming and abrading in manual processing.

19379 102
Akawax
High-performance cutting grease
Use
Indispensable if it is not possible to lubricate with liquid oils, particularly for overhead thread-cutting and overhead sawing. No mess, no dripping.

19379 101

19379 102

Type	Contents ml	Contents g	19379	...
Akafil	210	–		101
Akawax	–	350		102

21495 - 21496 Cutting Fluids

TAPMATIC

Type
Ferrofluid and Alufluid cutting fluids cool and lubricate at the same time. The cutting fluids are free of sulphur and chlorine and fulfil the EU-directives in compliance with TRGS. They are not classified as being toxic in compliance with Schweizerischem Giftgesetz (Swiss toxic law). Free of VOC.
Advantages:
- No build-up edges
- Longer service life of the tools
- Better surfaces

21495
Ferrofluid
Use
Cutting fluid **for steel.**
Prevents build-up edges.

21496
Alufluid
Use
Cutting fluid **for aluminium, aluminium alloys, copper, brass, bronze, German silver, etc.**

21495 21496

Container litre	21495 ...	21496 ...
0,5	201	201
5,0	202	202

19380 - 19381 Chip Safety Shields

19380
Type
With magnetic prism base with a chucking force of 40 kg and adjustable parabolic acrylic shield. Extremely flexible and adjustable in all directions.

19381
Spare safety shield

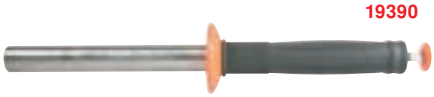
19380

Shield size mm	19380 ...	19381 ...
200 x 250	101	101
250 x 300	102	102
300 x 400	103	103

19390 Magnetic Metal Chip Remover

Use
1 tool - 2 purposes:
1. Removing chips,
2. Retrieving small parts.
In a stainless round bar you move a magnet up and down. The strong magnet attracts the metal chips. Push the button and the chips fall off.

19390



Length mm	19390 ...
400	101

19397 Chip Hooks

Type
With round protective shield.

19397

Total length approx. mm	Hook length mm	19397 ...
420	300	201
620	500	202