



www.alfra.de



PUNCHING



DRILLING



CUTTING



DEBURRING

QUALITY TOOLS AND MACHINES

100

PART B



WELCOME!

We take pride in our achievement - over 60% in-house manufacturing in four locations in Germany and a further 35.000 m² production facility in France. From our home town in the motorcar race city of Hockenheim, we ship our products on a regular basis to over 120 countries around the world. Our network of agents ensures that practically anybody - really anybody - can use our high-quality products and benefit from their various advantages.

What do we do at ALFRA? - To put it simple: We make holes!

This means, that we manufacture and sell implements, machines and tools for punching and drilling. These are mainly intended for applications in the field of metal-working, with material thickness ranging from 0.8 to more than 100 mm.

On top of that, our product range includes many supplementary items, e.g. in the field of cutting and deburring technology, etc.

Come and test us - we look forward to seeing you among our many satisfied customers.

Made in Germany - Made by ALFRA

Don't be satisfied with less!

Get our latest news from **www.alfra.de**.

Visit our new YouTube channel,

www.youtube.com/alfratools,

for the latest product and application videos.

Simply scan this QR code with your smartphone or tablet:



Made in Germany

JOIN US IN PROMOTING "MADE IN GERMANY", FOR REASONS WHICH ARE TODAY EVEN MORE IMPORTANT AND VALID THAN EVER BEFORE:

- JOB SECURITY
- PROMOTION OF JOB TRAINING
- COMMUNICATION
- QUALITY MANAGEMENT
- ENVIRONMENTAL AWARENESS
- SAFEGUARDING THE FUTURE





Metal Core Drilling Machines
Pages B/4 - B/19



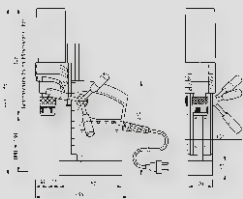
Cutters - HSS-Basic
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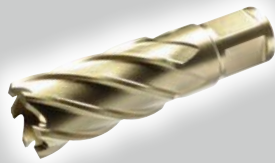
Cutters - TCT Weldon
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**Deburring Machines/
Bevel milling machines**
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Dimensions
Pages B/20 - B/21



Cutters - HSS-Co-Eco
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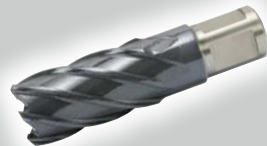
Cutters - TCT AL
Cutters - Rail TCT
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Milling Cutters
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Accessories - Arbor
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Cutters - HSS-Co RQX
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**Cutters - TCT suitable
for FEIN + Hitachi**
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Deburring Machine SKS-15 Auto
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Accessories - Counterbore/Coolant
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Cutters ASP-30 Rail
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RotaSpeed® - Metal Cutting Saw
RotaCut® - Mobile Band Saw Machine
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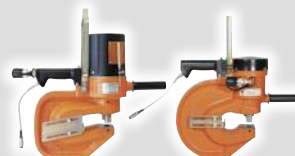
HSS-Bi-Metal- and TCT-Hole Saws
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Accessories - Tapping attachment/Drill Bits
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**Cutters - HSS-Co Eco Suitable
for FEIN + Hitachi**
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**Hydraulic Punching Units,
Single and Double Acting**
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**Multi-Step Drills
Precision Conical One-Lip Bits**
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**Accessories -
Chip remover/Pipe Clamp/Vacuum Plate**
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HSS Twist Drills with Weldon Shank
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Hydraulic Pumps
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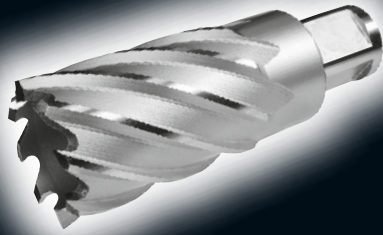
**Astroflex® Sabre Saw Blades
Sabre Saw and Jigsaw Blades**
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Metal Core Drilling with

ALFRA ROTABEST®



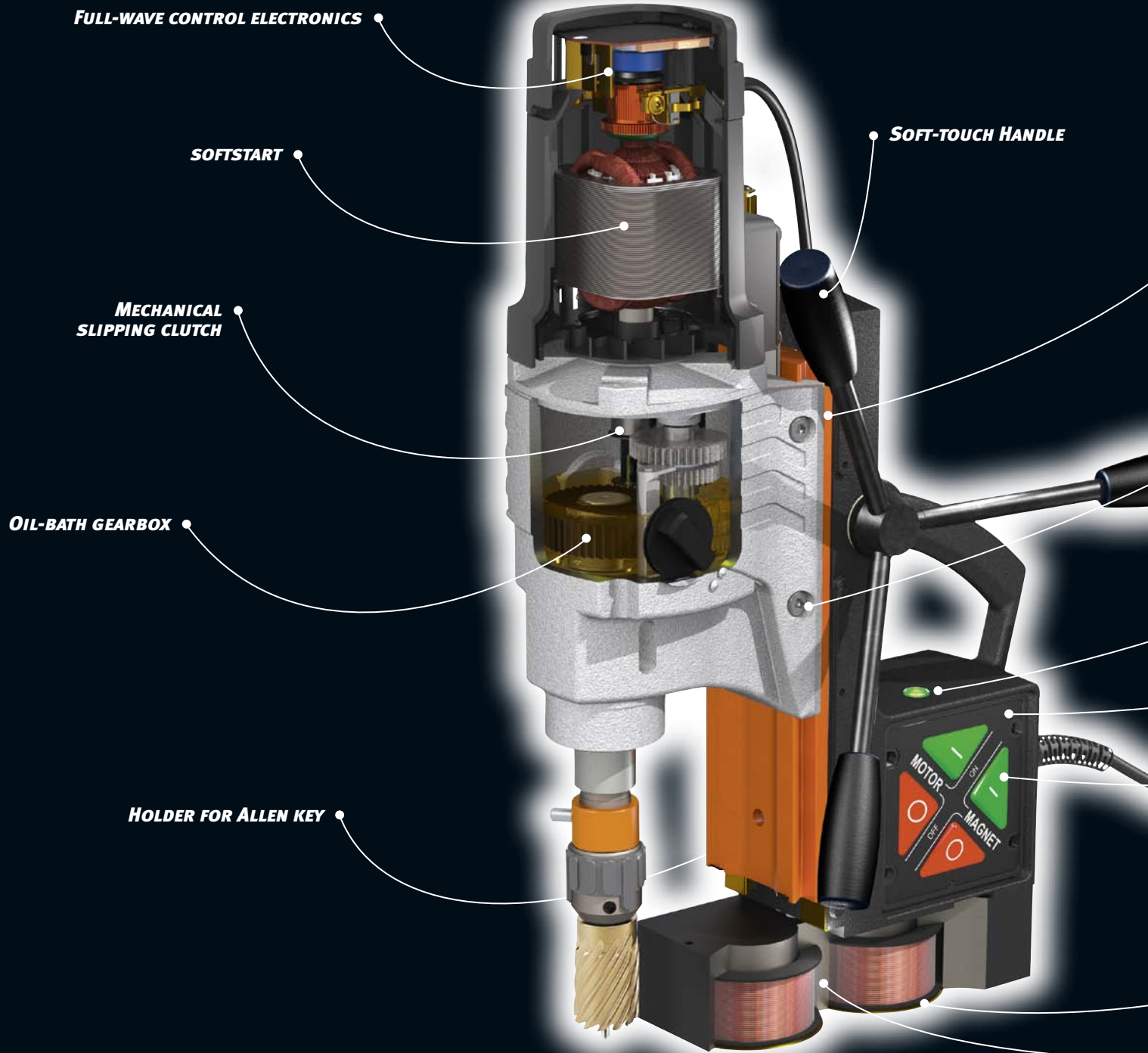
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B

Metal Core Drilling with

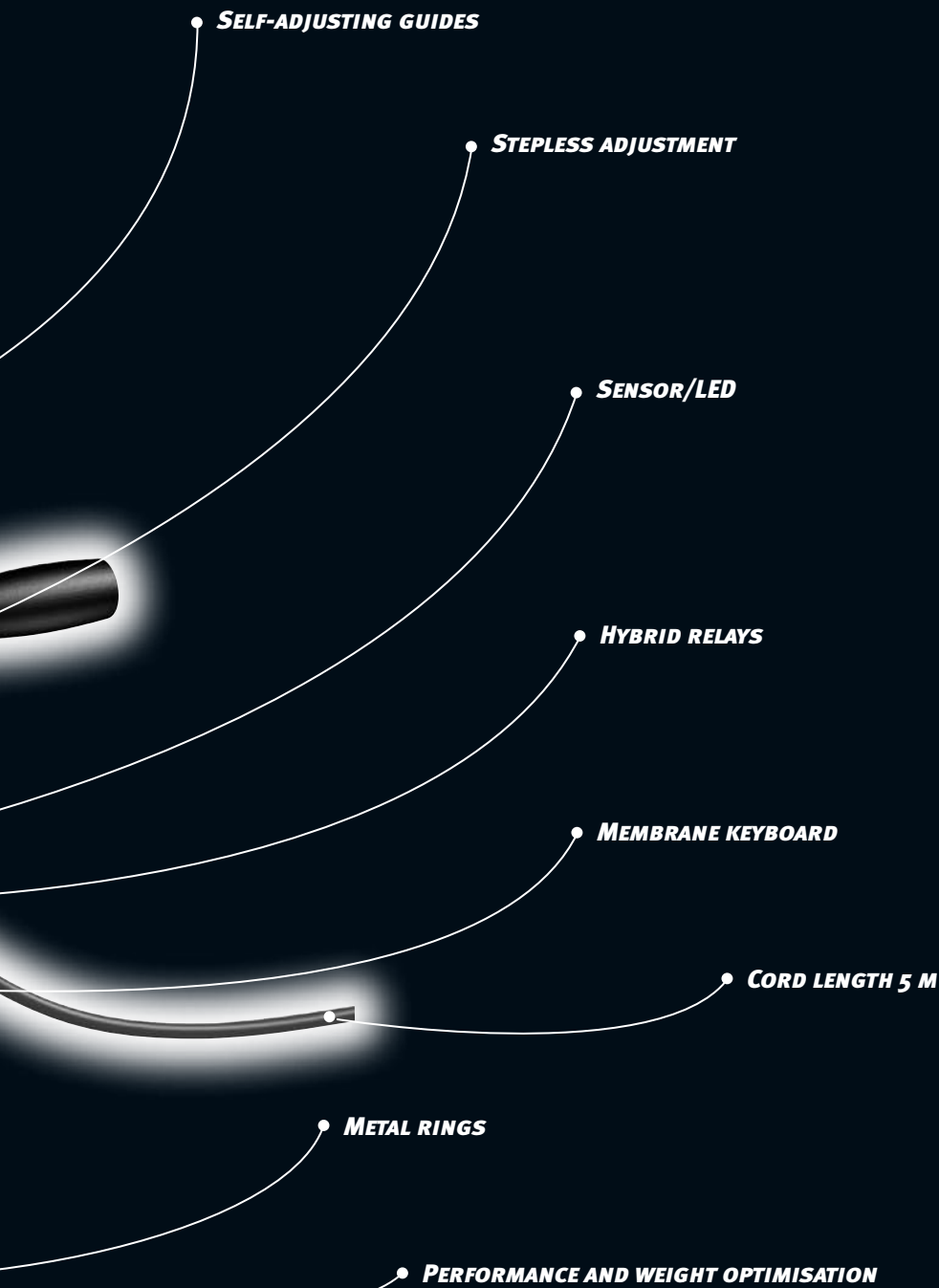
ALFRA ROTABEST®



PERFORMANCE GLOSSARY

Motor	
Smooth start	Minimises wear of motor, gearbox and electronics.
Hybrid relays	Drastically reduces contact burning on the relays. The life of the switching elements is significantly increased. Voltage fluctuations are reduced by approx. 10%.
Full-wave control electronics	Allow maximum power output from the motor.
Right/left run	Extends the range of application.

Gearbox	
Oil-bath gearbox	Reduces wear on the gearbox significantly, even under extreme conditions.
Mechanical slipping clutch	Protects the gearbox from overload and comes into action automatically.
Slide	
Stepless adjustment	The stroke can be increased continuously.
Self-adjusting guides	Self-locking comes into action automatically for perfect guiding.



B

Operation	
Soft-touch grips	Perfect "grip" on the handles - even with oily gloves.
Membrane keyboard	Perfect ergonomics with large keys. The entire keyboard is located in a protected area (even if the machine dops).
Holder for Allen key	Integrated Allen key-holder. No searching for the key.
Cord length 5 m	Extension cord and cable drums mostly not required.

Magnet	
Sensor/LED	Is there sufficient magnetic material under the drill? Are you pressing too hard, or is the tool blunt? Various LED displays on states of switching protect you and your machine.
Metal rings	Perfect protection for the magnets against penetration by metallic objects (chips, welding sputter, milling dust, etc...)
Performance and weight optimisation	Weight, dimensioning and coil sizing are ideally matched. This maximises the ToolForce (TM).



ALFRA ROTABEST® METAL CORE DRILLING MACHINES – OVERVIEW



RB 35 X



PICCOLO 32/50



RB 50 X



40 RL-E

Page	B/10		B/11		B/12		B/13	
Prod.-No.	230 V: 18700	110 V: 18700.110	230 V: 18500	110 V: 18500.110	230 V: 18750	110 V: 18750.110	230 V: 18611	110 V: 18611.110
Cutter dimension	Ø 12.0 - 35.0 mm		Ø 12.0 - 35.0 mm		Ø 12.0 - 50.0 mm		Ø 12.0 - 50.0 mm	
Cutting depth	50.0 mm		50.0 mm		50.0 mm		50.0 mm	
Twist drill	Ø 1.0 - 13.0 mm DIN 1897 short		Ø 1.0 - 13.0 mm DIN 338		Ø 1.0 to 16.0 mm with MT 2 quick-release chuck to Ø 20.0 mm with MT 2 DIN 345 direct		Ø 1.0 to 16.0 mm with MT 2 quick-release chuck to Ø 20.0 mm with MT 2 DIN 345 direct	
Counterbore	Ø 10.0 - 40.0 mm		Ø 10.0 - 40.0 mm		Ø 10.0 - 40.0 mm		Ø 10.0 - 40.0 mm	
Tapping	-		-		with tapping attachment: M3 - M20		with tapping chuck: M3 - M14 with tapping attachment: M3 - M20	
Arbor	19 mm Weldon shank		19 mm Weldon shank		MT2		MT 2	
Stroke	120 mm		129 mm		190 mm		170 mm	
Height adjustment	-		86 mm		100 mm		100 mm	
Gearbox – on-load speed	450 rpm.		450 rpm.		1. Gear 250 rpm. 2. Gear 450 rpm.		Right/left 1. Gear 100 - 250 rpm. 2. Gear 180 - 450 rpm.	
Power consumption	1.100 W		1.100 W		1.200 W		1.200 W	
Voltage	230 V 50/60 Hz / 110 V 50/60 Hz		230 V 50/60 Hz / 110 V 50/60 Hz		230 V 50/60 Hz / 110 V 50/60 Hz		230 V 50/60 Hz / 110 V 50/60 Hz	
Tool Force (10 mm) / magnetic holding force	2.100 N / 9.000 N		1.300 N / 8.000 N		3.500 N / 11.000 N		3.800 N / 16.000 N	
Magnet foot	70 x 185 mm		70 x 160 mm		92 x 220 mm		80 x 230 mm	
Weight	10.6 kg		10.4 kg		15.0 kg		16.0 kg	

Motor								
Smooth start	✓		-		✓		✓	
Hybrid relays	✓		-		✓		-	
Full-wave control electronics	-		-		-		✓	
Right/left run	-		-		-		✓	
Gearbox								
Oil-bath gearbox	-		-		✓		✓	
Mechanical slipping clutch	-		-		-		✓	
Slide								
Stepless adjustment	-		✓		✓		✓	
Self-adjusting guides	-		-		✓		-	
Operation								
Soft-touch grips	✓		✓		✓		✓	
Membrane keyboard	✓		✓		✓		✓	
Holder for Allen key	-		-		✓		-	
Cord length 5 m	-		-		✓		-	
Magnet								
Sensor/LED	-		-		✓		-	
Metal rings	✓		✓		✓		✓	
Performance and weight optimisation	✓		-		✓		-	
	✓		✓		✓		✓	



RB 80 X



60 RL-E



100 RL-E



130



V 32

B/14		B/15		B/16		B/18		B/17	
230 V: 18780	110 V: 18780.110	230 V: 18626	110 V: 18626.110	230 V: 18634	110 V: 18634.110	230 V: 18645	110 V: 18645.110	230 V: 18710	110 V: 18710.110
Ø 12.0 - 80.0 mm / Ø 20.0 - 50.0 mm (extra long 110 mm)		Ø 12.0 - 80.0 mm / Ø 20.0 - 50.0 mm (extra long 110 mm)		Ø 12.0 - 100.0 mm / Ø 20.0 - 50.0 mm (extra long 110 mm)		Ø 12.0 - 130.0 mm / Ø 20.0 - 50.0 mm (extra long 110 mm)		Ø 12.0 - 32.0 mm	
50.0 mm / 110.0 mm		50.0 mm / 110.0 mm		50.0 mm / 110.0 mm		50.0 mm / 110.0 mm		25.0 mm	
Ø 1.0 - 16.0 mm with chuck to Ø 32.0 mm with MT 3 DIN 345		Ø 1.0 - 16.0 mm with chuck to Ø 32.0 mm with MT 3 DIN 345		Ø 1.0 - 16.0 mm with chuck to Ø 32.0 mm with MT 3 DIN 345		to Ø 45.0 mm with MT 4 DIN 345		-	
Ø 10.0 - 55.0 mm		Ø 10.0 - 55.0 mm		Ø 10.0 - 55.0 mm		Ø 10.0 - 80.0 mm		Ø 10.0 - 32.0 mm	
with tapping attachment: to M30		with tapping chuck: to M30 with tapping attachment: to M30		with tapping chuck: to M30 with tapping attachment: to M30		with tapping attachment: to M42		-	
MT3		MT 3		MT 3		MT 4		19 mm Weldon	
190 mm		190 mm		245 mm		230 mm		-	
100 mm		60 mm		116 mm		100 mm		-	
1. Gear	110 rpm.	1. Gear	right/left 50 - 110 rpm.	1. Gear	right/left 50 - 110 rpm.	1. Gear	30 - 80 rpm.	450 rpm.	
2. Gear	175 rpm.	2. Gear	75 - 175 rpm.	2. Gear	75 - 175 rpm.	2. Gear	50 - 120 rpm.		
3. Gear	245 rpm.	3. Gear	105 - 245 rpm.	3. Gear	105 - 245 rpm.	3. Gear	130 - 350 rpm.		
4. Gear	385 rpm.	4. Gear	165 - 385 rpm.	4. Gear	165 - 385 rpm.	4. Gear	210 - 550 rpm.		
1.800 W		1.800 W		2.500 W (230 V) 2.400 W (110 V)		2.500 W		900 W	
230 V 50/60 Hz / 110 V 50/60 Hz		230 V 50/60 Hz / 110 V 50/60 Hz		230 V 50/60 Hz / 110 V 50/60 Hz		230 V 50/60 Hz / 110 V 50/60 Hz		230 V 50/60 Hz / 110 V 50/60 Hz	
4.000 N / 13.000 N		4.200 N / 20.000 N		4.000 N / 20.000 N		5.000 N / 32.000 N		- / 16.000 N	
92 x 220 mm		80 x 230 mm, 30° adjustable, right and left, 10 mm front and rear		80 x 230 mm, 30° adjustable, right and left, 10 mm front and rear		90 x 400 mm		95 x 200 mm	
19.5 kg		22.0 kg		28.0 kg		34.5 kg		12.5 kg	

✓	-	-	-	Compact, horizontal
✓	-	-	-	
-	✓	✓	-	
-	✓	✓	-	
✓	✓	✓	✓	Compact mitre gear
✓	✓	✓	✓	
✓	✓	✓	-	2-sided pillar guidance
✓	-	-	-	
✓	✓	✓	✓	Space-saving – via ratchet
✓	✓	✓	✓	
✓	-	-	-	
✓	-	-	-	
✓	-	-	-	-
✓	✓	✓	✓	
✓	-	-	-	
✓	✓	✓	✓	



ALFRA ROTABEST® - RB 35 X

35 mm



DRILLING RANGE UP TO Ø 35 MM

RB 35 X

Cutter dimension	Ø 12.0 - 35.0 mm
Cutting depth	50.0 mm
Twist drill	Ø 1.0 - 13.0 mm DIN 1897 short
Counterbore	Ø 10.0 - 40.0 mm
Tapping	-
Arbor	19 mm Weldon shank
Stroke	120 mm
Height adjustment	-
1-speed gearbox On-load speed	450 rpm.
Power consumption	1.100 W
Voltage	230 V 50/60 Hz / 110 V 50/60 Hz
Tool Force (10 mm) / magnetic holding force	2.100 N / 9.000 N
Magnet foot	70 x 185 mm
Weight	10.6 kg

Motor	
Smooth start	✓
Hybrid relays	✓
Operation	
Soft-touch grips	✓
Membrane keyboard	✓
Magnet	
Metal rings	✓
Performance and weight optimisation	✓
	✓



Scope of Supply:

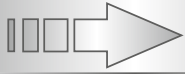
- Metal core drilling machine RB 35 x
- Carrying case
- Safety belt
- Coolant equipment
- Operating manual

Prod.-No.

ALFRA Rotabest® RB 35 X	230 Volt	18700
ALFRA Rotabest® RB 35 X	110 Volt	18700.110



ALFRA ROTABEST® - PICCOLO 32/50



35 mm

DRILLING RANGE UP TO Ø 35 MM



PICCOLO 32/50

Cutter dimension	Ø 12.0 - 35.0 mm
Cutting depth	50.0 mm
Twist drill	Ø 1.0 - 13.0 mm DIN 338
Counterbore	Ø 10.0 - 40.0 mm
Tapping	-
Arbor	19 mm Weldon shank
Stroke	129 mm
Height adjustment	86 mm
1-speed gearbox On-load speed	450 rpm.
Power consumption	1.100 W
Voltage	230 V 50/60 Hz / 110 V 50/60 Hz
Tool Force (10 mm) / magnetic holding force	1.300 N / 8.000 N
Magnet foot	70 x 160 mm
Weight	10.4 kg

Slide	
Stepless adjustment	✓
Operation	
Soft-touch grips	✓
Membrane keyboard	✓
Magnet	
Metal rings	✓
	✓

Scope of Supply:

- Metal core drilling machine Piccolo 32/50
- Carrying case
- Safety belt
- Coolant equipment
- Operating manual

Prod.-No.

ALFRA Rotabest® Piccolo 32/50	230 Volt	18500
ALFRA Rotabest® Piccolo 32/50	110 Volt	18500.110



ALFRA ROTABEST®-RB 50 X


50 mm



DRILLING RANGE UP TO Ø 50 MM

RB 50 X

Cutter dimension dimension	Ø 12.0 - 50.0 mm
Cutting depth	50.0 mm
Twist drill	Ø 1.0 to 16.0 mm with MT 2 quick-release chuck to Ø 20.0 mm with MT 2 DIN 345 direct
Counterbore	Ø 10.0 - 40.0 mm
Tapping	with tapping attachment: M3 - M20
Arbor	MT2
Stroke	190 mm
Height adjustment	100 mm
2-speed gearbox On-load speed	1. Gear 250 rpm. 2. Gear 450 rpm.
Power consumption	1.200 W
Voltage	230 V 50/60 Hz / 110 V 50/60 Hz
Tool Force (10 mm) / magnetic holding force	3.500 N / 11.000N
Magnet foot	92 x 220 mm
Weight	15.0 kg

Motor	
Smooth start	✓
Hybrid relays	✓
Gearbox	
Oil-bath gearbox	✓
Slide	
Stepless adjustment	✓
Self-adjusting guides	✓
Operation	
Soft-touch grips	✓
Membrane keyboard	✓
Holder for Allen key	✓
Cord length 5 m	✓
Magnet	
Sensor/LED	✓
Metal rings	✓
Performance and weight optimisation	✓
	✓



Scope of Supply:

- Metal core drilling machine RB 50 x
- MT 2 tool holder with no internal cooling (Prod.-No. 18001)
- Carrying case
- Safety belt
- Operating manual

Prod.-No.

ALFRA Rotabest® RB 50 X	230 Volt	18750
ALFRA Rotabest® RB 50 X	110 Volt	18750.110

Accessories:

Coolant container	189412029
Tool holder AMT 2 with internal cooling	18003



ALFRA ROTABEST®-40 RL-E



50 mm

DRILLING RANGE UP TO Ø 50 MM




Scope of Supply:

- Metal core drilling machine 40 RL-E
- Carrying case
- Coolant equipment
- Drilling spray
- Quick-release chuck, 1 to 16 mm, MT 2
- Chip hook
- Safety belt
- Operating manual

40 RL-E

Cutter dimension	Ø 12.0 - 50.0 mm
Cutting depth	50.0 mm
Twist drill	Ø 1.0 to 16.0 mm with MT 2 quick-release chuck to Ø 20.0 mm with MT 2 DIN 345 direct
Counterbore	Ø 10.0 - 40.0 mm
Tapping	with tapping chuck: M3 - M14 with tapping attachment: M3 - M20
Arbor	MT 2
Stroke	170 mm
Height adjustment	100 mm
2-speed gearbox	right/left 1. Gear 100 - 250 rpm. 2. Gear 180 - 450 rpm.
Power consumption	1.200 W
Voltage	230 V 50/60 Hz / 110 V 50/60 Hz
Tool Force (10 mm) / magnetic holding force	3.800 N / 16.000 N
Magnet foot	80 x 230 mm
Weight	16.0 kg

Motor	
Smooth start	✓
Full-wave control electronics	✓
Right/left run	✓
Gearbox	
Oil-bath gearbox	✓
Mechanical slipping clutch	✓
Slide	
Stepless adjustment	✓
Operation	
Soft-touch grips	✓
Membrane keyboard	✓
Magnet	
Metal rings	✓
	✓

Prod.-No.

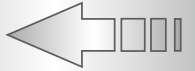
ALFRA Rotabest® 40 RL-E	230 Volt	18611
ALFRA Rotabest® 40 RL-E	110 Volt	18611.110

B



ALFRA ROTABEST®-RB 80 X


80 mm



DRILLING RANGE UP TO Ø 80 MM

RB 80 X

Cutter dimension	Ø 12.0 - 80.0 mm / Ø 20.0 - 50.0 mm (extra long 110 mm)
Cutting depth	50.0 mm / 110.0 mm
Twist drill	Ø 1.0 - 16.0 mm with chuck to Ø 32.0 mm with MT 3 DIN 345
Counterbore	Ø 10 - 55.0 mm
Tapping	with tapping attachment: to M30
Arbor	MT3
Stroke	190 mm
Height adjustment	100 mm
4-speed gearbox On-load speed	1. Gear 110 rpm. 2. Gear 175 rpm. 3. Gear 245 rpm. 4. Gear 385 rpm.
Power consumption	1.800 W
Voltage	230 V 50/60 Hz / 110 V 50/60 Hz
Tool Force (10 mm) / magnetic holding force	4.000 N / 13.000 N
Magnet foot	92 x 220 mm
Weight	19.5 kg

Motor	
Smooth start	✓
Hybrid relays	✓
Gearbox	
Oil-bath gearbox	✓
Mechanical slipping clutch	✓
Slide	
Stepless adjustment	✓
Self-adjusting guides	✓
Operation	
Soft-touch grips	✓
Membrane keyboard	✓
Holder for Allen key	✓
Cord length 5 m	✓
Magnet	
Sensor/LED	✓
Metal rings	✓
Performance and weight optimisation	✓
	✓



Scope of Supply:

- Metal core drilling machine RB 80 x
- AMT 3 tool holder with no internal cooling (Prod.-No. 18002)
- Carrying case
- Safety belt
- Operating manual

		Prod.-No.
ALFRA Rotabest® RB 80 X	230 Volt	18780
ALFRA Rotabest® RB 80 X	110 Volt	18780.110

Accessories:

Coolant container	189412029
Tool holder AMT 3 with internal cooling	18025



ALFRA ROTABEST®-60 RL-E



80 mm

DRILLING RANGE UP TO Ø 80 MM



Scope of Supply:

- Metal core drilling machine 60 RL-E
- Carrying case
- Coolant equipment
- Drilling spray
- Quick-release chuck, 1 to 16 mm, MT 3
- Chip hook
- Safety belt
- Operating manual

60 RL-E

Cutter dimension	Ø 12.0 - 80.0 mm / Ø 20.0 - 50.0 mm (extra long 110 mm)
Cutting depth	50.0 mm / 110.0 mm
Twist drill	Ø 1.0 - 16.0 mm with chuck to Ø 32.0 mm with MT 3 DIN 345
Counterbore	Ø 10 - 55.0 mm
Tapping	with tapping chuck: to M30 with tapping attachment: to M30
Arbor	MT 3
Stroke	190 mm
Height adjustment	60 mm
4-speed gearbox	right/left 1. Gear 50 - 110 rpm. 2. Gear 75 - 175 rpm. 3. Gear 105 - 245 rpm. 4. Gear 165 - 385 rpm.
Power consumption	1.800 W
Voltage	230 V 50/60 Hz / 110 V 50/60 Hz
Tool Force (10 mm) / magnetic holding force	4.200 N / 20.000 N
Magnet foot	80 x 230 mm, 30° adjustable, right and left, 10 mm front and rear
Weight	22.0 kg

Motor	
Full-wave control electronics	✓
Right/left run	✓
Gearbox	
Oil-bath gearbox	✓
Mechanical slipping clutch	✓
Slide	
Stepless adjustment	✓
Operation	
Soft-touch grips	✓
Membrane keyboard	✓
Magnet	
Metal rings	✓
	✓

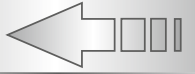
Prod.-No.

ALFRA Rotabest® 60 RL-E	230 Volt	18626
ALFRA Rotabest® 60 RL-E	110 Volt	18626.110



ALFRA ROTABEST®-100 RL-E

100 mm



DRILLING RANGE UP TO Ø 100 MM

100 RL-E

Cutter dimension	Ø 12.0 - 100.0 mm / Ø 20.0 - 50.0 mm (extra long 110 mm)
Cutting depth	50.0 mm / 110.0 mm
Twist drill	Ø 1.0 - 16.0 mm with chuck to Ø 32.0 mm with MT 3 DIN 345
Counterbore	Ø 10.0 - 55.0 mm
Tapping	with tapping chuck: to M30 with tapping attachment: to M30
Arbor	MT 3
Stroke	245 mm
Height adjustment	116 mm
4-speed gearbox	right/left 1. Gear 50 - 110 rpm. 2. Gear 75 - 175 rpm. 3. Gear 105 - 245 rpm. 4. Gear 165 - 385 rpm.
Power consumption	2.500 W (230 V) 2.400 W (110 V)
Voltage	230 V 50/60 Hz / 110 V 50/60 Hz
Tool Force (10 mm) / magnetic holding force	4.000 N / 20.000 N
Magnet foot	80 x 230 mm, 30° adjustable, right and left, 10 mm front and rear
Weight	28.0 kg

Motor	
Full-wave control electronics	✓
Right/left run	✓
Gearbox	
Oil-bath gearbox	✓
Mechanical slipping clutch	✓
Slide	
Stepless adjustment	✓
Operation	
Soft-touch grips	✓
Membrane keyboard	✓
Magnet	
Metal rings	✓
	✓



Scope of Supply:

- Metal core drilling machine 100 RL-E
- Carrying case
- Coolant equipment
- Chip hook
- Safety belt
- Drilling spray
- Quick-release chuck

Prod.-No.

ALFRA Rotabest® 100 RL-E	230 Volt	18634
ALFRA Rotabest® 100 RL-E	110 Volt	18634.110



ALFRA ROTABEST®-V32



32 mm

DRILLING RANGE UP TO Ø 32 MM



V32	
Core drill	Ø 12.0 - 32.0 mm
Cutting depth	25.0 mm
Counterbore	Ø 10.0 - 32.0 mm
Arbor	19 mm Weldon
1-speed gearbox	450 rpm.
Power consumption	900 W
Voltage	230 V 50/60 Hz / 110 V 50/60 Hz
Tool Force (10 mm) / magnetic holding force	- / 16.000 N
Magnet foot	95 x 200 mm
Weight	12.5 kg

Motor	
Compact, horizontal	
Gearbox	
Compact mitre gear	
Slide	
2-sided pillar guidance	
Operation	
Space-saving – via ratchet	
Magnet	
Metal rings	✓
Performance and weight optimisation	✓
	✓

Scope of Supply:

- Metal core drilling machine V 32
- Coolant pressure flask
- Carrying case
- Allen key for Weldon shank
- Safety belt
- HSS Co cutter Ø 18 mm, cutting depth 25 mm
- Ejector pin 6.35 x 74 mm (specially for Rotabest® V32)
- Operating manual

Prod.-No.

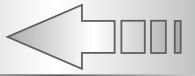
ALFRA Rotabest® V32	230 Volt	18710
ALFRA Rotabest® V32	110 Volt	18710.110

B



ALFRA ROTABEST®-130

130
mm



DRILLING RANGE UP TO Ø 130 MM



B

SICHERHEITSHINWEISE

SAFETY ADVICE

CONSULTE DE SÉCURITÉ

AVISO DE SEGURIDAD



130
mm

DRILLING RANGE UP TO Ø 130 MM



Scope of Supply:

- Metal core drilling machine 130
- Carrying case
- Coolant container
- Chip hook
- Safety belt
- Operating manual

130	
Cutter dimension	Ø 12.0 - 130.0 mm / Ø 20.0 - 50.0 mm (extra long 110 mm)
Cutting depth	50.0 mm / 110.0 mm
Twist drill	to Ø 45.0 mm with MT 4 DIN 345
Counterbore	Ø 10.0 - 80.0 mm
Tapping	with tapping attachment: To M42
Arbor	MT 4
Stroke	230 mm
Height adjustment	100 mm
4-speed gearbox	1. Gear 30 - 80 rpm. 2. Gear 50 - 120 rpm. 3. Gear 130 - 350 rpm. 4. Gear 210 - 550 rpm.
Power consumption	2,500 W
Voltage	230 V 50/60 Hz / 110 V 50/60 Hz
Tool Force (10 mm) / magnetic holding force	5,000 N / 32,000 N
Magnet foot	90 x 400 mm
Weight	34.5 kg

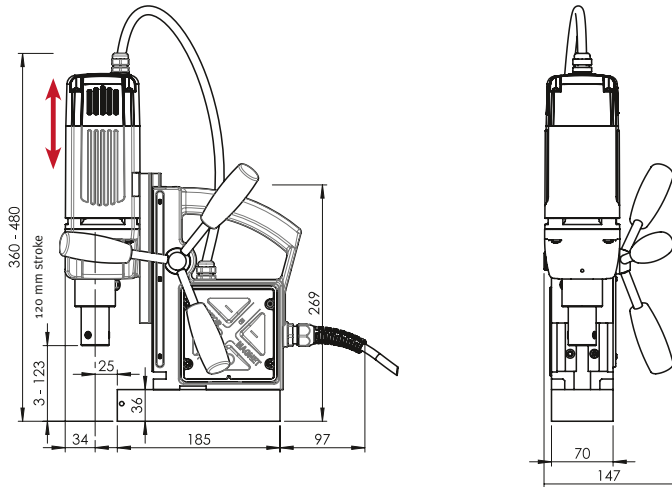
Gearbox	
Oil-bath gearbox	✓
Mechanical slipping clutch	✓
Operation	
Soft-touch grips	✓
Membrane keyboard	✓
Magnet	
Metal rings	✓
	✓

Prod.-No.

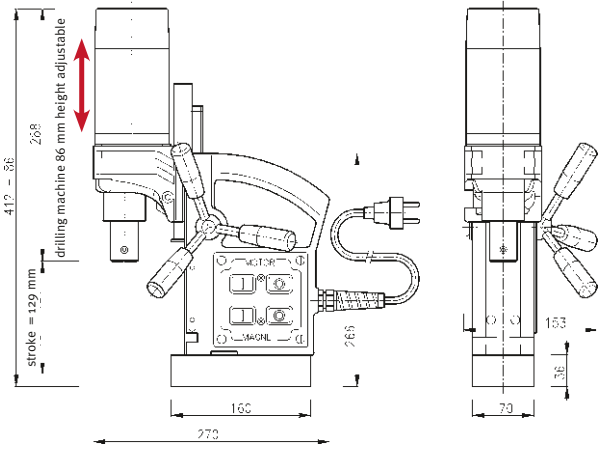
ALFRA Rotabest® 130	230 Volt	18645
ALFRA Rotabest® 130	110 Volt	18645.110



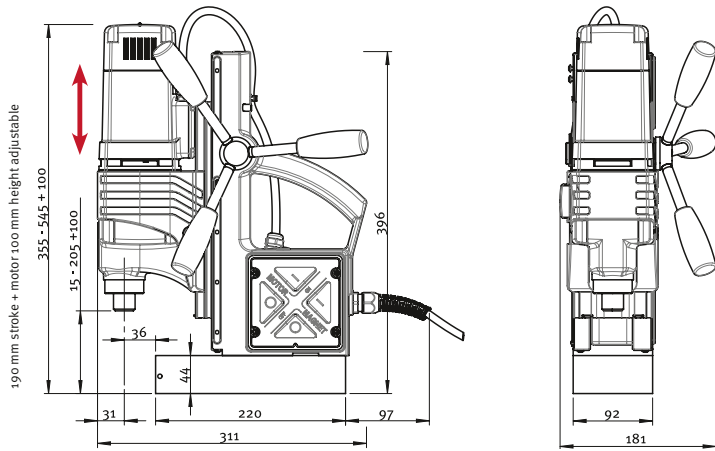
RB 35 X



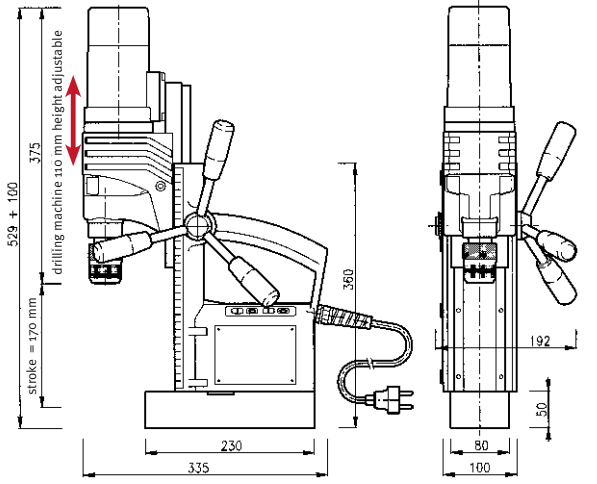
Piccolo 32/50



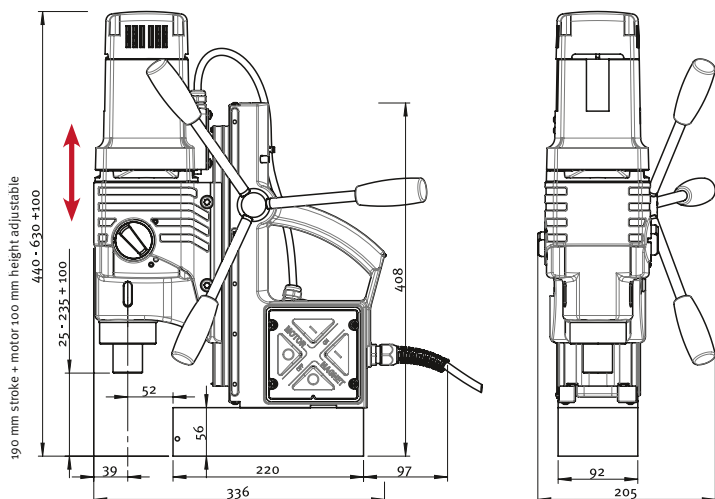
RB 50 X



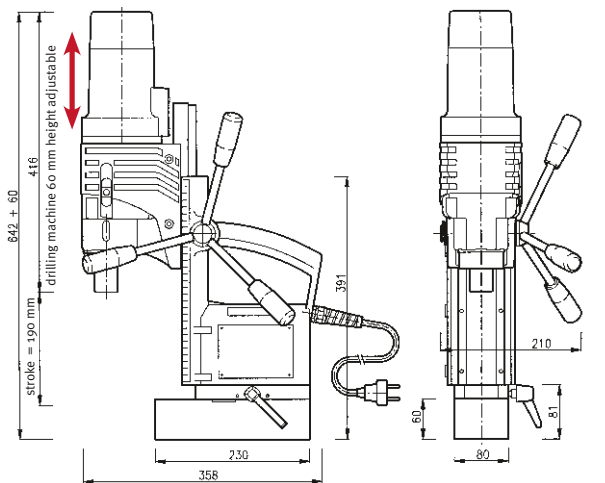
40 RL-E



RB 80 X



60 RL-E

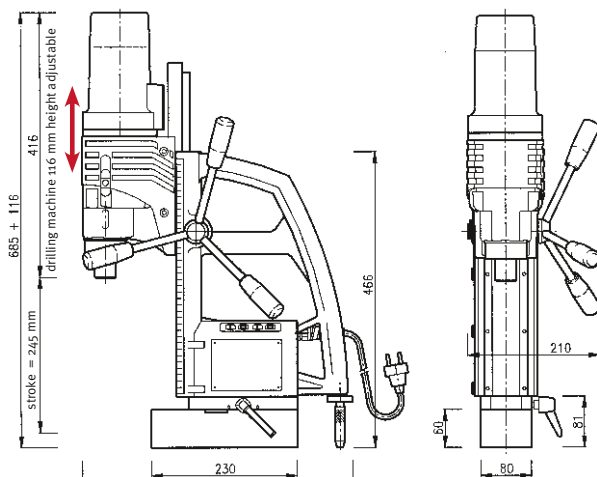




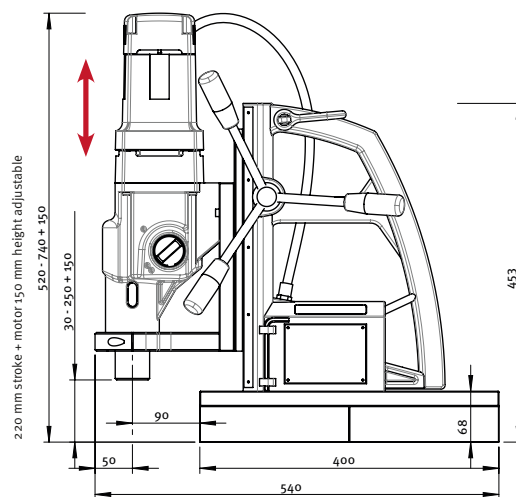
MACHINE DIMENSIONS - ALFRA ROTABEST®



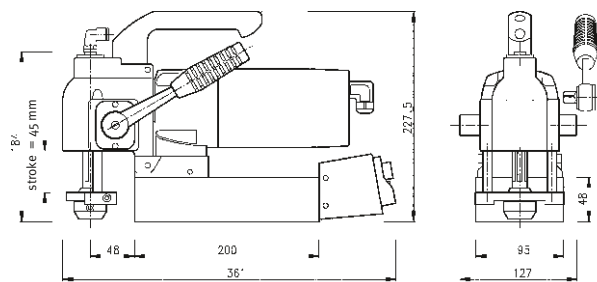
100 RL-E



130













V 32



B



ACCESSORIES = ARBORS

Description	Prod.-No.	RB 35 X Piccolo 32/50	RB 50 X 40 RL-E	RB 80 X 60 RL-E	100 RL-E	
Quick-release chuck with Weldon shank for twist drill Ø 1 - 13 mm	18107	■				 Prod.-No. 18107
Quick-release chuck with Morse taper 2 for twist drill Ø 1 - 16 mm	18008		■	■ With Adapter sleeve MT 3/2	■ With Adapter sleeve MT 3/2	 Prod.-No. 18008 / 18009
Quick-release chuck with Morse taper 3 for twist drill Ø 1 - 16 mm	18009			■	■	 Prod.-No. 18003 / 18025
AMT-2 tool holder – Morse taper 2 for cutter With Weldon shank Ø 12 - 60 mm With automatic internal cooling – Suitable for all machines with MT 2 drill spindle	18003		■	■ With Adapter sleeve MT 3/2	■ With Adapter sleeve MT 3/2	 Prod.-No. 18001 / 18002
AMT-2 tool holder with no internal cooling	18001		■	■ With Adapter sleeve MT 3/2	■ With Adapter sleeve MT 3/2	 Prod.-No. 18001 / 18002
MT 3/2 adapter sleeve	18023			■	■	 Prod.-No. 18023
AMT-3 tool holder with no internal cooling	18002		■	■		
AMT-3 tool holder – Morse taper 3 for cutter with Weldon shank Ø 12 - 60 mm with automatic internal cooling – suitable for all machines with MT 3 drill spindle	18025		■	■		
AMT-3 tool holder – extended version with Weldon shank Ø 12 - 50 mm, cutting depth 110 mm with automatic internal cooling – suitable for all machines with MT 3 drill spindle	18025L			■	■	 Prod.-No. 18025L
AL3 tool holder - Morse taper 3 for heavy-duty cutters, Ø 51 - 100 mm, with keyway with automatic internal cooling	20230			■	■	 Prod.-No. 20230
Rota-Quick ® quick-change tool-holder Morse taper 2 with automatic internal cooling – suitable for all machines with MT 2 drill spindle Application range up to maximum 40 mm of cutter Ø	18650		■	■ With Adapter sleeve MT 3/2	■ With Adapter sleeve MT 3/2	 Prod.-No. 18650 + 18651
Rota-Quick ® quick-change tool-holder Morse taper 3 with automatic internal cooling – suitable for all machines with MT 3 drill spindle Application range up to maximum 40 mm of cutter Ø	18651			■	■	 Prod.-No. 18650 + 18651

B



ACCESSORIES – ADAPTORS

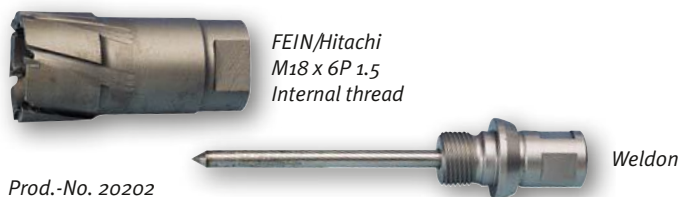


- You use FEIN Magnet Drilling Machines?
- You do not want to do without **ALFRA Rotabest® Cutters**?
- **No Problem** – we have the suitable adaptors

Prod.-No. 20201
 Adapter with internal thread, M18 x 6P 1.5
 Adapter for use with Rotabest® HSS-Co-Eco and HSS-Co RQX cutters with Ø 12.0 - 32.0 mm and Rotabest carbide-cutters with Ø 14.0 - 32.0 mm on: FEIN core drilling machines, type KBM 542



Prod.-No. 20202
 Adapter with external thread (incl. ejector pin)
 Adapter for use with FEIN cutters with internal thread, M18 x 6P 1.5 on metal core drilling machines with Weldon shank.



Prod.-No. 20203
 Ejector pin suitable for Prod.-No. 20202 – individual

Prod.-No. 20204
 Adapter
 Adapter for use with all cutters with Weldon shank on Fein Quick IN quick-change system.



This adapter eliminates the need to use our HSS-Eco cutter series prod.-no. 1909... and 2009...

Prod.-No. 1950500
 Ejector pin for HSS cutter cutting depth 25 mm
Prod.-No. 1975500
 Ejector pin for HSS cutter cutting depth 50 mm

Prod.-No. 20206
 Extension adapter
 With Weldon shank and ejector pin.



For use with cutters with 25 – 35 – 50 mm cutting depths, when the outer surface of the material to be drilled is lower than the standing surface of the machine. The first ejector pin triggers the second ejector pin, and the coolant flows through the bore hole to the cutter.

Total length of adapter: 80 mm
 Diameter: 30 mm
 Ejector pin: 6.35 x 77 mm Prod.-No. 1926500

Prod.-No. 20210
 Adapter cpl. with ejector pin + Allen key
 Adapter for use with cutters with FEIN-Quick IN shank on metal core drilling machines with Weldon holder.



Prod.-No. 1936501
 Replacement ejector pin (for adapter only) 6.35 x 125 mm

Prod.-No. 060WD
 Adapter for carbide-tipped compass saws, type MBS on metal core drilling machines with Weldon holder (including ejector pin Prod.-No. 1950500)



B



ACCESSORIES – COUNTERBORE // COOLANT

Description	Prod.-No.	RB 35 X Piccolo 32/50	RB 50 X 40 RL-E	RB 80 X 60 RL-E	100 RL-E
HSS taper and deburring counterbore with Weldon shank Ø 25 mm	18533	■	■ With tool holder 18003/18025 18650+18651	■ With tool holder 18003/18025 18650+18651	■ With tool holder 18003/18025 18650+18651
HSS taper and deburring counterbore with Weldon shank Ø 30 mm	18536	■	■ With tool holder 18003/18025 18650+18651	■ With tool holder 18003/18025 18650+18651	■ With tool holder 18003/18025 18650+18651
HSS taper and deburring counterbore with Weldon shank Ø 40 mm	18534	■	■ With tool holder 18003/18025 18650+18651	■ With tool holder 18003/18025 18650+18651	■ With tool holder 18003/18025 18650+18651
HSS taper and deburring counterbore with Weldon shank Ø 55 mm	18537			■	■
Coolant system for Piccolo 32/50, 40 RL-E, 60 RL-E, 100 RL-E, 130	18104	■	■	■	■
Coolant system for RB 35 X	189311241	■			
Coolant system for RB 50 X and 80 X Suitable for tool holder with internal cooling AMT-2 (Prod.-No. 18003) and AMT-3 (Prod.-No. 18025)	189412029		■	■	
Coolant pressure bottle, 0.5 litre suitable for Rotabest® V32	18103				
ALFRA 2000 Cutting and drilling spray Tin, 405 ml	21010				
ALFRA 4000 High-performance cutting oil spray Tin, 300 ml	21040				
High-performance wax crayon Ideal for core-drilled holes in walls or ceilings (overhead drilling), as paste adheres to the cutting edge.	09012				



Prod.-No. 18533



Prod.-No. 18104



Prod.-No. 189311241



Prod.-No. 189412029



Prod.-No. 18103



Prod.-No. 21010, 21040, 09012

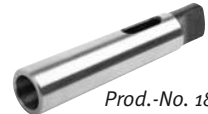


ACCESSORIES – TAPPING



Description	Shank	Prod.-No.
Tapping attachment M3 - M12 Scope of Supply: With Rota-Quick® and MT 2, replaceable, plastic case, operating manual	MT2 + RotaQuick®	18652
Tapping attachment M10 - M20 Scope of Supply: with Rota-Quick® and MT 2, replaceable, plastic case, operating manual	MT2 + RotaQuick®	18653
Adapter sleeve for Tapping attachment		18023

RB 50 X	RB 80 X	100
■	■ With Adapter sleeve MT 3/2	■ With Adapter sleeve MT 3/2
■	■ With Adapter sleeve MT 3/2	■ With Adapter sleeve MT 3/2



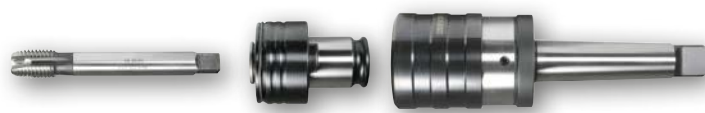
Tapping chuck with quick-change inserts for Rotabest® RL-E, models with right/left rotation.

Tapping set Gr. 1 in wooden case Consisting of: Tapping quick-change chuck Gr. 1 MT 2 Per 1 x quick-change insert Gr. 1 M3 – M4 – M5 – M6 – M8 – M10 – M12 – M14	18660
Tapping set Gr. 2 in wooden case Consisting of: Tapping quick-change chuck Gr. 2 MT 3 Per 1 x quick-change insert Gr. 2 M6 – M8 – M10 – M12 – M14 – M16 – M18 – M20 – M22	18680
Tapping quick-change chuck Gr. 1 MT 2, individual	18661
Tapping quick-change chuck Gr. 2 MT 3, individual	18681

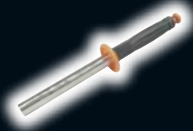


Tap Collets with clutch

	Shank Ø	Square	Screw tap	
Gr. 1 M3	3.5	2.7	DIN 371	18662
Gr. 1 M4	4.5	3.4	DIN 371	18663
Gr. 1 M5	6.0	4.9	DIN 371	18664
Gr. 1 M6	6.0	4.9	DIN 371	18678
Gr. 1 M8	8.0	6.2	DIN 371	18665
Gr. 1 M10	10.0	8.0	DIN 371	18666
Gr. 1 M12	9.0	7.0	DIN 376	18667
Gr. 1 M14	11.0	9.0	DIN 376	18668
Gr. 2 M6	6.0	4.9	DIN 371	18682
Gr. 2 M8	8.0	6.2	DIN 371	18683
Gr. 2 M10	10.0	8.0	DIN 371	18684
Gr. 2 M12	9.0	7.0	DIN 376	18685
Gr. 2 M14	11.0	9.0	DIN 376	18686
Gr. 2 M16	12.0	9.0	DIN 376	18687
Gr. 2 M18	14.0	11.0	DIN 376	18688
Gr. 2 M20	16.0	12.0	DIN 376	18689
Gr. 2 M22	18.0	14.5	DIN 376	18690



B



ALFRA - MAGNETIC CHIP REMOVER

Based on a magnet moving in a stainless cylindrical pipe. The powerful magnet attracts the metal chips - pull the rod on top and the chips fall off. For greater cleanliness on your worksite.

Prod.-No.

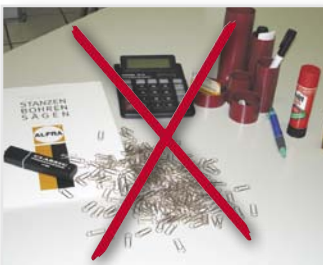
ALFRA magnetic chip remover, length 400 mm

18654



Prod.-No. 18654

B





ACCESSORIES – MECHANICAL PIPE-FIXING SYSTEM



For all types

Description

For application on round surfaces.
Our mechanical attachment for clamping pipes with tension chains enables the use of Magnetic Core Drilling Machines on pipes from \varnothing 80 mm. The adjustment is carried out by means of clamping jaws. For pipes of various \varnothing .

Prod.-No.

Attachment for Clamping Pipes with 1 tension chain \varnothing 80 - 300 mm
Base plate for magnet foot 100 x 235 mm, Weight 7.5 kg

18019

Attachment for Clamping Pipes with 2 tension chains \varnothing 80 - 900 mm
Base plate for magnet foot 100 x 280 mm, Weight 12 kg

18020

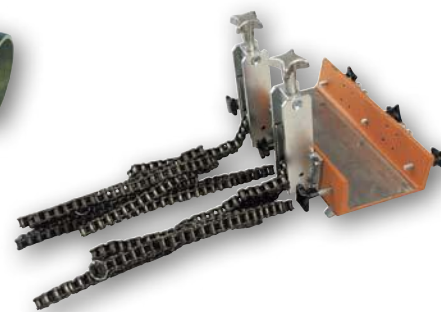
Attachment for Clamping Pipes with tension belt \varnothing 80 - 900 mm
Base plate for magnet foot 100 x 235 mm, Weight 6.5 kg

18021

Tension range with double tension belt up to 2000 mm pipe \varnothing on request Prod.-No. 18022



Prod.-No. 18019



Prod.-No. 18020



Prod.-No. 18021

ROTABEST® – VACUBEST VACUUM ATTACHMENT

For all types

Description

Vacuum Attachment Vacubest

Prod.-No.

18150

Application on **non-magnetic** surfaces such as aluminium, copper, brass, stainless steel, plastics, structured materials (e.g. bulb or checker plate)

Vacuum capacity: 1.5 m³/h - 25 l/min.
Max vacuum: 200 mbar (abs)
Overpressure: 300 mbar
Dimension of vacuum plate: 400 x 200 mm

Scope of Supply:

Pump (230 V, 50Hz), vacuum plate, vacuum hose 3m

TIP:

Name your application problem - we will be pleased to advise.



Vacuum plate



Pump



B

Metal Core Cutters have got a name

ALFRA ROTABEST®



- ▶ HSS-BASIC
- ▶ HSS-CO-Eco
- ▶ HSS-CO RQX COATED
- ▶ ASP-30 RAIL
- ▶ TWIST DRILL WITH WELDON SHANK



B

Advantages of ALFRA ROTABEST® Cutters

- Design** Specially designed cutting geometry
- Advantages**
- Immediate centering
 - No running off center
 - Good concentricity
 - Suitable for NC and CNC machines



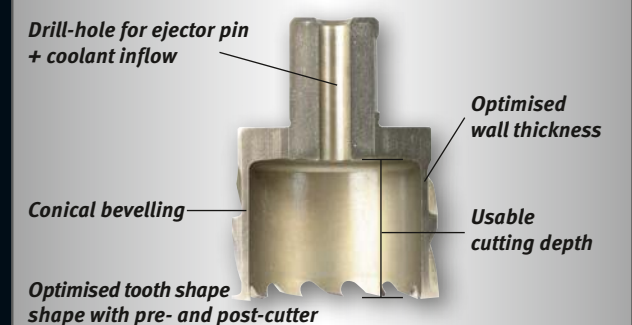
- Design** Optimum regular chip break
- Advantages**
- Smooth cutting
 - Excellent cutting capacity
 - Good chip production at each tooth
 - Regular chip flow

- Design** Minimum cross section of chip removing surface
- Advantages**
- Easy cutting
 - Low torque
 - Minimum demand for energy

- Design** High tooth hardness due to optimum raw material and special heat treatment
- Advantages**
- Long tool life
 - Also suitable for material difficult to cut

- Design** High tenacity of cutter, specially graduated hardness
- Advantages**
- Low risk of tool break, especially under rough working conditions

- Industrial scale manufacturing by state-of-the-art CNC technology**
- Best reproducibility
 - Constant quality





ALFRA ROTABEST® – HSS BASIC CUTTERS

With 19.0 mm Weldon shank

- With 19.0 mm Weldon shank, 2 clamping surfaces, 1 counterbore for RotaQuick®
- Internal bore 6.35 mm
- Steel quality: Special super-high performance high-speed steel
- Polished section: with pre- and post-cutting

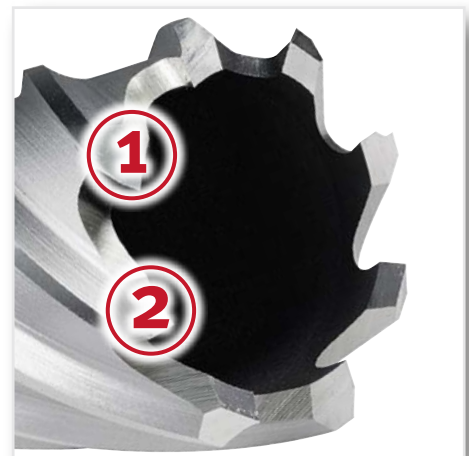
Suitable for:

ALFRA-Rotabest® (Weldon), ALFRA-RotaQuick® quick-change system, BDS, Bux, Ruko, Magnetor, Euroboor, Universal, Nitto, Jancy, Hougen, Magtron, Promac, Rotabroach and all other magnetic drilling machines with Weldon shank.

Ø in mm Cutting depth	Prod.-No.	Prod.-No.
	25 mm	50 mm
12.0	1907012025	1907012050
13.0	1907013025	1907013050
13.5	1907013525	1907013550
14.0	1907014025	1907014050
15.0	1907015025	1907015050
15.5	1907015525	1907015550
16.0	1907016025	1907016050
17.0	1907017025	1907017050
17.5	1907017525	1907017550
18.0	1907018025	1907018050
19.0	1907019025	1907019050
19.5	1907019525	1907019550
20.0	1907020025	1907020050
21.0	1907021025	1907021050
22.0	1907022025	1907022050
23.0	1907023025	1907023050
24.0	1907024025	1907024050
25.0	1907025025	1907025050
26.0	1907026025	1907026050
26.5	1907026525	1907026550
27.0	1907027025	1907027050
28.0	1907028025	1907028050
29.0	1907029025	1907029050
30.0	1907030025	1907030050
31.0	1907031025	1907031050
32.0	1907032025	1907032050
33.0	1907033025	1907033050
34.0	1907034025	1907034050
35.0	1907035025	1907035050
36.0	1907036025	1907036050
37.0	1907037025	1907037050
38.0	1907038025	1907038050
39.0	1907039025	1907039050
40.0	1907040025	1907040050
41.0	1907041025	1907041050
42.0	1907042025	1907042050
43.0	1907043025	1907043050
44.0	1907044025	1907044050
45.0	1907045025	1907045050
46.0	1907046025	1907046050
47.0	1907047025	1907047050
48.0	1907048025	1907048050
49.0	1907049025	1907049050
50.0	1907050025	1907050050
51.0	–	1907051050
52.0	1907052025	1907052050
53.0	–	1907053050
54.0	–	1907054050
55.0	1907055025	1907055050
56.0	–	1907056050
57.0	–	1907057050
58.0	–	1907058050
59.0	–	1907059050
60.0	1907060025	1907060050
Ejector pin	1926500	1950500
Dimensions	6.35 x 77	6.35 x 102



Counterbore for RotaQuick® Weldon



High-performance tooting with pre- (1) and post-cutting (2)





ALFRA ROTABEST® – HSS BASIC CUTTER SETS



With 19.0 mm Weldon shank

- An assortment of commonly used cutters in a sturdy plastic case.
- Effective protection for the teeth during rough use during assembly and in the workshop.
- Upon request we can make individual sets with diameters ranging from Ø 12.0 mm to 30.0 mm.

Dimensions in inches available upon request



Prod.-No. 1907125

HSS BASIC Cutter Set

Cutting depth **25 mm**

Prod.-No.

1907125

3-pc cutter set:

comprising 1 x Ø 14.0 - 18.0 - 22.0 mm

In a robust box

Including 1 ejector pin Prod.-No. 1926500

HSS BASIC Cutter Set

Cutting depth **25 mm**

Prod.-No.

1907003025

6-pc cutter set:

comprising 1 x Ø 12.0 - 14.0 - 16.0 - 18.0 - 20.0 - 22.0 mm

in a sturdy case

including 1 ejector pin Prod.-No. 1926500



Prod.-No. 1907003025

HSS BASIC Cutter Set

Cutting depth **25 mm**

Prod.-No.

1907001025

10-pc cutter set:

Comprising Ø 2 x 14.0 - 2 x 12.0 - 2 x 14.0 - 1 x 16.0 - 2 x 18.0 - 1 x 20.0 - 2 x 22.0 mm

in a sturdy case

Including 2 ejector pins Prod.-No. 1926500



Prod.-No. 1907001025

HSS BASIC Cutter Set

Cutting depth **50 mm**

Prod.-No.

1907003050

6-pc cutter set:

comprising 1 x Ø 14.0 - 16.0 - 18.0 - 20.0 - 22.0 - 26.0 mm

in a sturdy case

including 1 ejector pin Prod.-No. 1950500



Prod.-No. 1907003050

HSS BASIC Cutter Set

Cutting depth **50 mm**

Prod.-No.

1907001050

10-pc cutter set:

Comprising Ø 2 x 14.0 - 1 x 16.0 - 2 x 18.0 - 1 x 20.0 - 2 x 22.0 - 1 x 24.0 - 1 x 26.0 mm

in a sturdy case

including 2 ejector pins Prod.-No. 1950500



Prod.-No. 1907001050

B



ALFRA ROTABEST® – HSS-Co-Eco CUTTERS

With 19.0 mm Weldon shank

Dimensions in inches available upon request

- With 19.0 mm Weldon shank, 2 clamping surfaces, 1 counterbore for RotaQuick®
- Internal bore 6.35 mm
- Steel quality: Special high-capacity speed steel, cobalt
- Polished section: with pre- and post-cutting

Suitable for:

ALFRA-Rotabest® (Weldon), ALFRA-RotaQuick® quick-change system, BDS, Bux, Ruko, Magnetor, Euroboor, Universal, Nitto, Jancy, Hougen, Magtron, Promac, Rotabroach and all other magnetic drilling machines with Weldon shank.

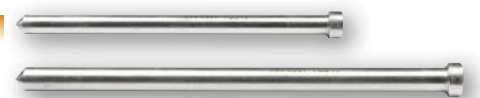
Ø in mm	Prod.-No.	Prod.-No.	Prod.-No.	Prod.-No.*
Cutting depth	25 mm	35 mm	50 mm	110 mm
12.0	1901012025	1901012035	1901012050	–
13.0	1901013025	1901013035	1901013050	–
13.5	1901013525	–	1901013550	–
14.0	1901014025	1901014035	1901014050	–
15.0	1901015025	1901015035	1901015050	–
15.5	1901015525	–	1901015550	–
16.0	1901016025	1901016035	1901016050	–
17.0	1901017025	1901017035	1901017050	–
17.5	1901017525	–	1901017550	–
18.0	1901018025	1901018035	1901018050	–
19.0	1901019025	1901019035	1901019050	–
19.5	1901019525	–	1901019550	–
20.0	1901020025	1901020035	1901020050	1901020110
21.0	1901021025	1901021035	1901021050	–
22.0	1901022025	1901022035	1901022050	1901022110
23.0	1901023025	1901023035	1901023050	–
24.0	1901024025	1901024035	1901024050	1901024110
25.0	1901025025	1901025035	1901025050	1901025110
26.0	1901026025	1901026035	1901026050	1901026110
26.5	1901026525	–	1901026550	–
27.0	1901027025	1901027035	1901027050	–
28.0	1901028025	1901028035	1901028050	1901028110
29.0	1901029025	1901029035	1901029050	–
30.0	1901030025	1901030035	1901030050	1901030110
31.0	1901031025	1901031035	1901031050	–
32.0	1901032025	1901032035	1901032050	1901032110
33.0	1901033025	1901033035	1901033050	–
34.0	1901034025	1901034035	1901034050	–
35.0	1901035025	1901035035	1901035050	1901035110
36.0	1901036025	1901036035	1901036050	–
37.0	1901037025	1901037035	1901037050	–
38.0	1901038025	1901038035	1901038050	–
39.0	1901039025	1901039035	1901039050	–
40.0	1901040025	1901040035	1901040050	1901040110
41.0	1901041025	–	1901041050	–
42.0	1901042025	–	1901042050	–
43.0	1901043025	–	1901043050	–
44.0	1901044025	–	1901044050	–
45.0	1901045025	–	1901045050	1901045110
46.0	1901046025	–	1901046050	–
47.0	1901047025	–	1901047050	–
48.0	1901048025	–	1901048050	–
49.0	1901049025	–	1901049050	–
50.0	1901050025	–	1901050050	1901050110
51.0	–	–	1901051050	–
52.0	1901052025	–	1901052050	–
53.0	–	–	1901053050	–
54.0	–	–	1901054050	–
55.0	1901055025	–	1901055050	–
56.0	–	–	1901056050	–
57.0	–	–	1901057050	–
58.0	–	–	1901058050	–
59.0	–	–	1901059050	–
60.0	1901060025	–	1901060050	–
Ejector pin	1926500	1935500	1950500	2001502
Dimensions	6.35 x 77	6.35 x 87	6.35 x 102	8 x 160



Counterbore for RotaQuick® Weldon



High-performance tooting with pre- (1) and post-cutting (2)



* Important: HSS-Co-Eco cutters with a cutting depth of 110 mm can now be used with AMT 2 L (Prod.-No. 18003 L) or AMT 3 L (Prod.-No. 18025 L) tool holders.



ALFRA ROTABEST® – HSS-Co-Eco CUTTER SETS



With 19.0 mm Weldon shank

- An assortment of commonly used cutters in a sturdy plastic case.
- Effective protection for the teeth during rough use during assembly and in the workshop.
- Upon request we can make individual sets with diameters ranging from Ø 12.0 mm to 30.0 mm.

Dimensions in inches available upon request



Prod.-No. 1901125

HSS-Co-Eco Cutter Set

Cutting depth **25 mm**

Prod.-No.

1901125

3-pc cutter set:
comprising 1 x Ø 14.0 - 18.0 - 22.0 mm
in a robust box
including 1 ejector pin Prod.-No. 1926500

HSS-Co-Eco Cutter Set

Cutting depth **25 mm**

Prod.-No.

1901003025

6-pc cutter set:
comprising 1 x Ø 12.0 - 14.0 - 16.0 - 18.0 - 20.0 - 22.0 mm
in a sturdy case
including 1 ejector pin Prod.-No. 1926500



Prod.-No. 1901003025

HSS-Co-Eco Cutter Set

Cutting depth **25 mm**

Prod.-No.

1901001025

10-pc cutter set:
comprising 1 x Ø 2 x 12.0 - 2 x 14.0 - 1 x 16.0 - 2 x 18.0 - 1 x 20.0 - 2 x 22.0 mm
in a sturdy case
including 2 ejector pins Prod.-No. 1926500



Prod.-No. 1901001025

HSS-Co-Eco Cutter Set

Cutting depth **50 mm**

Prod.-No.

1901003050

6-pc cutter set:
comprising 1 x Ø 14.0 - 16.0 - 18.0 - 20.0 - 22.0 - 26.0 mm
in a sturdy case
including 1 ejector pin Prod.-No. 1950500

HSS-Co-Eco Cutter Set

Cutting depth **50 mm**

Prod.-No.

1901001050

10-pc cutter set:
Comprising Ø 2 x 14.0 - 1 x 16.0 - 2 x 18.0 - 1 x 20.0 - 2 x 22.0 - 1 x 24.0 -
1 x 26.0 mm
in a sturdy case
including 2 ejector pins Prod.-No. 1950500



Prod.-No. 1901003050



Prod.-No. 1901001050

B



ALFRA ROTABEST® – HSS-Co CUTTERS RQX COATED

With 19.0 mm Weldon shank

- With 19.0 mm Weldon shank, 2 clamping surfaces, 1 counterbore for RotaQuick®
- Internal bore 6.35 mm
- Steel quality: Special super-high performance high-speed steel cobalt, **coated**
- Polished section: with pre- and post-cutting

Suitable for:

ALFRA-Rotabest® (Weldon), ALFRA-RotaQuick® quick-change system, BDS, Bux, Ruko, Magnetor, Euroboor, Universal, Nitto, Jancy, Hougen, Magtron, Promac, Rotabroach and all other magnetic drilling machines with Weldon shank.



Counterbore for RotaQuick® Weldon

Ø in mm Cutting depth 25 mm Prod.-No.

12.0	1902012025
13.0	1902013025
14.0	1902014025
15.0	1902015025
16.0	1902016025
17.0	1902017025
18.0	1902018025
19.0	1902019025
20.0	1902020025
21.0	1902021025
22.0	1902022025
23.0	1902023025
24.0	1902024025
25.0	1902025025
26.0	1902026025
27.0	1902027025
28.0	1902028025
29.0	1902029025
30.0	1902030025
31.0	1902031025
32.0	1902032025
33.0	1902033025
34.0	1902034025
35.0	1902035025
36.0	1902036025
37.0	1902037025
38.0	1902038025
39.0	1902039025
40.0	1902040025
41.0	1902041025
42.0	1902042025
43.0	1902043025
44.0	1902044025
45.0	1902045025
46.0	1902046025
47.0	1902047025
48.0	1902048025
49.0	1902049025
50.0	1902050025
51.0	
52.0	
53.0	
54.0	
55.0	
56.0	
57.0	
58.0	
59.0	
60.0	

Ejector pin 6.35 x 77 mm 1926500

Ø in mm Cutting depth 50 mm Prod.-No.

12.0	1902012050
13.0	1902013050
14.0	1902014050
15.0	1902015050
16.0	1902016050
17.0	1902017050
18.0	1902018050
19.0	1902019050
20.0	1902020050
21.0	1902021050
22.0	1902022050
23.0	1902023050
24.0	1902024050
25.0	1902025050
26.0	1902026050
27.0	1902027050
28.0	1902028050
29.0	1902029050
30.0	1902030050
31.0	1902031050
32.0	1902032050
33.0	1902033050
34.0	1902034050
35.0	1902035050
36.0	1902036050
37.0	1902037050
38.0	1902038050
39.0	1902039050
40.0	1902040050
41.0	1902041050
42.0	1902042050
43.0	1902043050
44.0	1902044050
45.0	1902045050
46.0	1902046050
47.0	1902047050
48.0	1902048050
49.0	1902049050
50.0	1902050050
51.0	1902051050
52.0	1902052050
53.0	1902053050
54.0	1902054050
55.0	1902055050
56.0	1902056050
57.0	1902057050
58.0	1902058050
59.0	1902059050
60.0	1902060050

Ejector pin 6.35 x 102 mm 1950500



High-performance tooting with pre- (1) and post-cutting (2)





ALFRA ROTABEST® - HSS-Co CUTTER RQX SETS



With 19.0 mm Weldon shank

- An assortment of commonly used cutters in a sturdy plastic case.
- Effective protection for the teeth during rough use during assembly and in the workshop.
- Upon request we can make individual sets with diameters ranging from Ø 12.0 mm to 30.0 mm.

Dimensions in inches available upon request

HSS-Co Cutter RQX Set

Cutting depth **25 mm**

Prod.-No.

1902003025

6-pc cutter set:
comprising 1 x Ø 12.0 - 14.0 - 16.0 - 18.0 - 22.0 - 26.0 mm
in a plastic case
including 1 ejector pin Prod.-No. 1926500

Prod.-No. 1902003025



HSS-Co Cutter RQX Set

Cutting depth **25 mm**

Prod.-No.

1902001025

10-pc cutter set:
comprising Ø 2 x 12.0 - 2 x 14.0 - 1 x 16.0 - 2 x 18.0 - 2 x 22.0 - 1 x 26.0 mm
In plastic case
including 2 ejector pins Prod.-No. 1926500

Prod.-No. 1902001025



HSS-Co Cutter RQX Set

Cutting depth **50 mm**

Prod.-No.

1902003050

6-pc cutter set:
comprising 1 x Ø 14.0 - 16.0 - 18.0 - 20.0 - 22.0 - 26.0 mm
In a plastic case
including 1 ejector pin Prod.-No. 1950500

Prod.-No. 1902003050



HSS-Co Cutter RQX Set

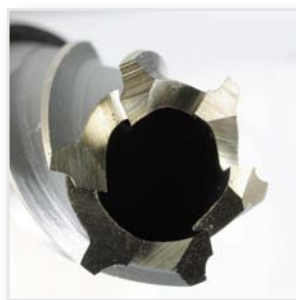
Cutting depth **50 mm**

Prod.-No.

1902001050

10-pc cutter set:
comprising Ø 2 x 14.0 - 1 x 16.0 - 2 x 18.0 - 1 x 20.0 - 2 x 22.0 - 1 x 24.0 - 1 x 26.0 mm
In plastic case
including 2 ejector pins Prod.-No. 1950500

Prod.-No. 1902001050



HSS-Co cutter with special geometries for processing stacked metal plates (multi-layer drill) upon request! (Standard-cutters are not suitable for this purpose.)

B



ALFRA ROTABEST® - ASP-30 RAIL



With 19.0 mm Weldon shank

- With 19.0 mm Weldon shank,
- Internal bore 6.35 mm
- Steel quality: Powder-metallurgical based cobalt high-performance high-speed steel with optimal purity and improved toughness compared to traditional powder steel.
- Excellently suitable for intensive-use applications such as on railway tracks.
- These tools can also be used on all magnet drilling machines, especially with Weldon shank.

Suitable for:

All portable magnetic drilling machines with 19 mm Weldon shank, especially for rail drilling units from the following manufacturers:

- Cembre
- Erico
- KKT
- Dubuis
- Universal
- Magtron
- Rotabroach

Dimensions in inches available upon request



Ø in mm Cutting depth 25 mm Prod.-No.

14.0	1905014025
16.0	1905016025
17.0	1905017025
18.0	1905018025
19.0	1905019025
20.0	1905020025
22.0	1905022025
23.0	1905023025
24.0	1905024025
25.0	1905025025
26.0	1905026025
27.0	1905027025
27.5	1905027525
28.0	1905028025
30.0	1905030025
31.0	1905031025
32.0	1905032025
33.0	1905033025
34.0	1905034025
36.0	1905036025
Ejector pin 6.35 x 77 mm	1926500

Ø in mm Cutting depth 50 mm Prod.-No.

14.0	1905014050
16.0	1905016050
17.0	1905017050
18.0	1905018050
19.0	1905019050
20.0	1905020050
22.0	1905022050
23.0	1905023050
24.0	1905024050
25.0	1905025050
26.0	1905026050
27.0	1905027050
27.5	1905027550
28.0	1905028050
30.0	1905030050
31.0	1905031050
32.0	1905032050
33.0	1905033050
34.0	1905034050
36.0	1905036050
Ejector pin 6.35 x 102 mm	1950500

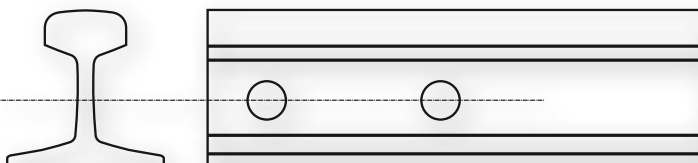


Tip:

Well-proven for drilling Hardox and similar high-tensile steels. Name your drilling problem, we will be pleased to advise.

And another tip:

ASP-60 for "impossible" drilling applications upon request.



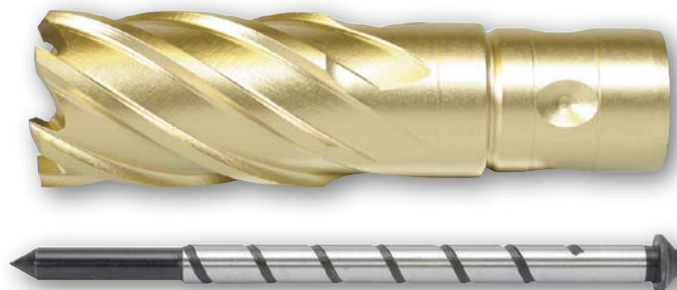


ALFRA – HSS-Co-Eco CUTTERS FOR FEIN-QUICKIN



Suitable for FEIN magnetic drilling machines

- Suitable for FEIN magnetic drilling machines with Quick IN arbor.
- You are using FEIN magnetic drilling machines and do not want to do without your ALFRA-Rotabest® cutters? Take a look at our selection of HSS and carbide-tipped cutters suitable for the various types of FEIN machines.
- Special shank, 18.0 mm with 4 bearing recesses
- Steel quality: Special high-capacity speed steel, cobalt
- Internal bore 6.4 mm
- Suitable for: FEIN Quick-IN quick-change arbor, FEIN core drilling machines with KBM 32 Q, KBM 50 Q, KBM 65 Q, KBM 65 QF Quick-IN quick-change systems



Prod.-No. 1936500



Ø in mm	Cutting depth 35 mm	Prod.-No.
12.0		1909012035
13.0		1909013035
14.0		1909014035
15.0		1909015035
16.0		1909016035
17.0		1909017035
18.0		1909018035
19.0		1909019035
20.0		1909020035
21.0		1909021035
22.0		1909022035
23.0		1909023035
24.0		1909024035
25.0		1909025035
26.0		1909026035
27.0		1909027035
28.0		1909028035
29.0		1909029035
30.0		1909030035
31.0		1909031035
32.0		1909032035
Ejector pin 6.35 x 106 mm		1936500



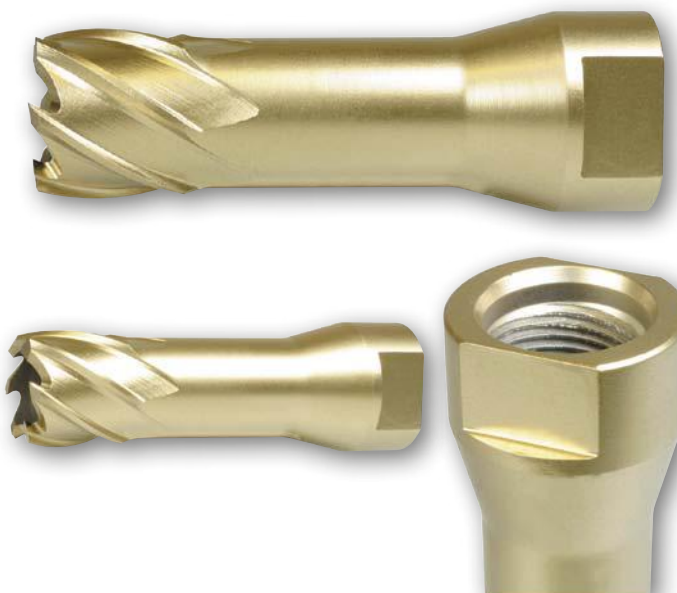
High-performance toothing with pre- and post-cutting

B

ALFRA – HSS-Co-Eco CUTTERS SUITABLE FOR FEIN + HITACHI

- Threaded arbor, internal thread, M18 x 6P 1.5.
- Also compatible with Hitachi machines.

Ø in mm	Cutting depth 50 mm	Prod.-No.
12.0		1908012050
13.0		1908013050
14.0		1908014050
15.0		1908015050
16.0		1908016050
17.0		1908017050
18.0		1908018050
19.0		1908019050
20.0		1908020050
21.0		1908021050
22.0		1908022050
23.0		1908023050
24.0		1908024050
25.0		1908025050
26.0		1908026050
27.0		1908027050
28.0		1908028050
29.0		1908029050
30.0		1908030050





HSS-TWIST DRILLS

With 19.0 mm Weldon shank

- Suitable for magnetic drilling machines with Weldon shank.
- Ideal for drilling smaller diameters, $\lt; \varnothing 12 \text{ mm}$.

HSS twist drill

\varnothing in mm HSS twist drill with Weldon shank

Prod.-No.

6.0	0802606
8.0	0802608
9.0	0802609
10.0	0802610
11.0	0802611
12.0	0802612

Prod.-No. 0802606



Prod.-No. 0802608



Prod.-No. 0802609



Prod.-No. 0802610



Prod.-No. 0802611



Prod.-No. 0802612



HSS twist drill set

6-pc HSS twist drill set with Weldon shank
comprising 1 x \varnothing 6.0 - 8.0 - 9.0 - 10.0 - 11.0 - 12.0 mm
In a plastic case

Prod.-No.

08026



Prod.-No. 08026

B

Metal Core Cutters have got a name

ALFRA ROTABEST®



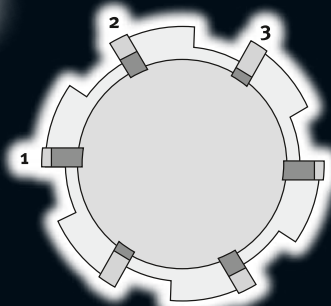
► CARBIDE-TIPPED



Applicable on magnetic and column drills. For structural steels, difficult-to-machine materials such as chrome-nickel steels and for non-ferrous metals such as aluminium or Cu-Zn alloys, and much more.

Advantages of ALFRA ROTABEST® TCT Cutters

- High concentricity due to solid design
- CAD-optimised cutting geometry for steady flow of chips
- Uniquely shaped chip grooves to prevent chip jamming
- Instant centring
- No running off center
- Minimal torque
- Low energy consumption
- Rapid drill core removal by ejector pin
- Extended tool life



ALFRA "Chip-Breaker System"

Extremely precise drilling in 3 simple steps.

- 1 Pre-cutter
- 2 Middle cutter
- 3 Post-cutter



ALFRA ROTABEST® – TGT CUTTERS

With 19.0 mm Weldon shank

- With 19.0 mm Weldon shank,
- Internal bore: $\varnothing 14 - 17 \text{ mm} = 6.35 \text{ mm}$
 $\varnothing 18 - 50 \text{ mm} = 8.0 \text{ mm}$
- Polished section: pre-, middle- and post-cutters
- For the highest standards in cutting and lifespan.

Suitable for:

All magnetic drilling machines with Weldon shank. ALFRA-Rotabest® (Weldon), ALFRA-RotaQuick® quick-change system, for BDS, Bux, Ruko, Magnetor, Euroboor, Universal, Nitto, Jancy, Hougen, Magtron, Promac, Rotabroach, etc.



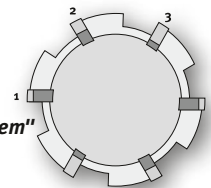
\varnothing in mm Cutting depth 35 mm Prod.-No.

14.0	2003014035
15.0	2003015035
16.0	2003016035
17.0	2003017035
18.0	2003018035
19.0	2003019035
20.0	2003020035
21.0	2003021035
22.0	2003022035
23.0	2003023035
24.0	2003024035
25.0	2003025035
26.0	2003026035
27.0	2003027035
28.0	2003028035
29.0	2003029035
30.0	2003030035
31.0	2003031035
32.0	2003032035
33.0	2003033035
34.0	2003034035
35.0	2003035035
36.0	-
37.0	-
38.0	-
39.0	-
40.0	-
41.0	-
42.0	-
43.0	-
44.0	-
45.0	-
46.0	-
47.0	-
48.0	-
49.0	-
50.0	-
-	-
Ejector pin for $\varnothing 14 - 17 \text{ mm}$, 6.35 x 87 mm	1935500
Ejector pin for $\varnothing 18 - 50 \text{ mm}$, 8 x 87 mm	2001500



\varnothing in mm Cutting depth 50 mm Prod.-No.

14.0	2003014050
15.0	2003015050
16.0	2003016050
17.0	2003017050
18.0	2003018050
19.0	2003019050
20.0	2003020050
21.0	2003021050
22.0	2003022050
23.0	2003023050
24.0	2003024050
25.0	2003025050
26.0	2003026050
27.0	2003027050
28.0	2003028050
29.0	2003029050
30.0	2003030050
31.0	2003031050
32.0	2003032050
33.0	2003033050
34.0	2003034050
35.0	2003035050
36.0	2003036050
37.0	2003037050
38.0	2003038050
39.0	2003039050
40.0	2003040050
41.0	2003041050
42.0	2003042050
43.0	2003043050
44.0	2003044050
45.0	2003045050
46.0	2003046050
47.0	2003047050
48.0	2003048050
49.0	2003049050
50.0	2003050050
-	-
Ejector pin for $\varnothing 14 - 17 \text{ mm}$, 6.35 x 102	1950500
Ejector pin for $\varnothing 18 - 50 \text{ mm}$, 8 x 102 mm	2001501



ALFRA "Chip-Breaker System"

- 1 Pre-cutter
- 2 Middle cutter
- 3 Post-cutter



ALFRA ROTABEST® – TCT CUTTERS



Suitable for all core drilling, pillar drilling and milling machines

- Heavy industry design with **keyway and feather key**
- Long-term tests series have shown that this specialised design with keyway and feather key has proved outstanding compared to a standard 32 mm Weldon shank. Optimal containment of high torsion forces.
- Polished section: pre-, middle- and post-cutters.
- Required: Tool holder with internal cooling

AL 3	MT 3	Prod.-No. 20230
AL 4	MT 4	Prod.-No. 20240
AL 5	MT 5	Prod.-No. 20250
- Upon request, cutting depth of 100 mm with ejector pin 8 x 160 mm Prod.-No. 2001502

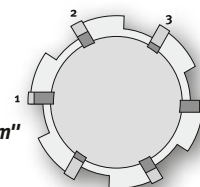
Dimensions in inches available upon request



Shorter and sturdier tool design. ALFRA design. Excellent running precision.

ALFRA "Chip-Breaker System"

- 1 Pre-cutter
- 2 Middle cutter
- 3 Post-cutter



Ø in mm	Cutting depth 50 mm	Prod.-No.
51.0	■	2002051050
52.0	■	2002052050
53.0	■	2002053050
54.0	■	2002054050
55.0	■	2002055050
56.0	■	2002056050
57.0	■	2002057050
58.0	■	2002058050
59.0	■	2002059050
60.0	■	2002060050
61.0	■	2002061050
62.0	■	2002062050
63.0	■	2002063050
64.0	■	2002064050
65.0	■	2002065050
66.0	■	2002066050
67.0	■	2002067050
68.0	■	2002068050
69.0	■	2002069050
70.0	■	2002070050
71.0	■	2002071050
72.0	■	2002072050
73.0	■	2002073050
74.0	■	2002074050
75.0	■	2002075050
76.0	■	2002076050
77.0	■	2002077050
78.0	■	2002078050
79.0	■	2002079050
80.0	■	2002080050
81.0	■	2002081050
82.0	■	2002082050
83.0	■	2002083050
84.0	■	2002084050
85.0	■	2002085050
86.0	■	2002086050
87.0	■	2002087050
88.0	■	2002088050
89.0	■	2002089050
90.0	■	2002090050
91.0	■	2002091050
92.0	■	2002092050
93.0	■	2002093050
94.0	■	2002094050
95.0	■	2002095050
96.0	■	2002096050
97.0	■	2002097050
98.0	■	2002098050
99.0	■	2002099050
100.0	■	2002100050

- No mass production

Ejector pin 8 x 102 mm	2001501
AL 2/MT 2 tool holder	20220
AL 3/MT 3 tool holder	20230
AL 4/MT 4 tool holder	20240
AL 5/MT 5 tool holder	20250

Advantages of "Heavy Industry Design" ALFRA TCT Cutters

- Perfect cutting behaviour – even at the first drill-hole
- Excellent centring properties
- Low cutting pressure – low power use
- Vibration-free working
- Chip distribution – no chip jamming
- Drilling depth can be reached in a single operation
- Drill core can be easily ejected



Prod.-No. 20230



ALFRA ROTABEST® – TGT CUTTERS RAIL

With 19.0 mm Weldon shank



- With 19.0 mm Weldon shank,
- Internal bore 6.35 mm
- For the highest standards in cutting and lifespan when drilling railway tracks
- Polished section: pre-, middle- and post-cutters

Suitable for:

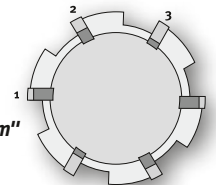
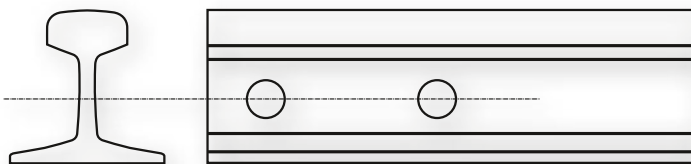
All portable magnetic drilling machines with 19 mm Weldon shank, especially for rail drilling units from the following manufacturers:

- Cembre
- Erico
- KKT
- Dubuis
- Universal
- Magtron
- Rotabroach



Ø in mm	Cutting depth 25 mm	Prod.-No.
19.0		2005019025
20.0		2005020025
21.0		2005021025
22.0		2005022025
23.0		2005023025
24.0		2005024025
25.0		2005025025
26.0		2005026025
27.5		2005027525
28.0		2005028025
30.0		2005030025
31.0		2005031025
32.0		2005032025
33.0		2005033025
34.0		2005034025
36.0		2005036025
Ejector pin 6.35 x 77 mm		1926500

Ø in mm	Cutting depth 50 mm	Prod.-No.
19.0		2005019050
20.0		2005020050
21.0		2005021050
22.0		2005022050
23.0		2005023050
24.0		2005024050
25.0		2005025050
26.0		2005026050
27.5		2005027550
28.0		2005028050
30.0		2005030050
31.0		2005031050
32.0		2005032050
33.0		2005033050
34.0		2005034050
36.0		2005036050
Ejector pin 6.35 x 102 mm		1950500



ALFRA "Chip-Breaker System"

- 1 Pre-cutter
- 2 Middle cutter
- 3 Post-cutter



ALFRA - TGT CUTTERS SUITABLE FOR FEIN + HITACHI



- 2008... with Threaded arbor, internal thread, M18 x 6P 1.5.
- Also compatible with Hitachi machines.
- 2009... with Quick IN Arbor.
- Suitable for FEIN magnetic drilling machines with Quick IN arbor.

Ø in mm	Prod.-No.	Prod.-No.
	M18 x 6P 1.5 Cutting depth 50 mm	Quick IN Cutting depth 35 mm
12.0	2008012050	2009012035
13.0	2008013050	2009013035
14.0	2008014050	2009014035
15.0	2008015050	2009015035
16.0	2008016050	2009016035
17.0	2008017050	2009017035
18.0	2008018050	2009018035
19.0	2008019050	2009019035
20.0	2008020050	2009020035
21.0	2008021050	2009021035
22.0	2008022050	2009022035
23.0	2008023050	2009023035
24.0	2008024050	2009024035
25.0	2008025050	2009025035
26.0	2008026050	2009026035
27.0	2008027050	2009027035
28.0	2008028050	2009028035
29.0	2008029050	2009029035
30.0	2008030050	2009030035
31.0	2008031050	2009031035
32.0	2008032050	2009032035
33.0	2008033050	2009033035
34.0	2008034050	2009034035
35.0	2008035050	2009035035
36.0	2008036050	2009036035
37.0	2008037050	2009037035
38.0	2008038050	2009038035
39.0	2008039050	2009039035
40.0	2008040050	2009040035
41.0	2008041050	2009041035
42.0	2008042050	2009042035
43.0	2008043050	2009043035
44.0	2008044050	2009044035
45.0	2008045050	2009045035
46.0	2008046050	2009046035
47.0	2008047050	2009047035
48.0	2008048050	2009048035
49.0	2008049050	2009049035
50.0	2008050050	2009050035
51.0	2008051050	2009051035
52.0	2008052050	2009052035
53.0	2008053050	2009053035
54.0	2008054050	2009054035
55.0	2008055050	2009055035
57.0	2008057050	2009057035
58.0	2008058050	2009058035
59.0	2008059050	2009059035
60.0	2008060050	2009060035
61.0	2008061050	2009061035
62.0	2008062050	2009062035
63.0	2008063050	2009063035
64.0	2008064050	2009064035
65.0	2008065050	2009065035
Ejector pin 6.35 x 106 mm	-	1936500



Prod.-No. 2008...



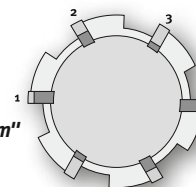
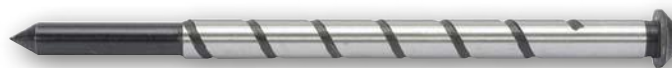
Threaded arbor, M18 x 6P1,5



Prod.-No. 2009...



Prod.-No. 1936500



ALFRA "Chip-Breaker System"

- 1 Pre-cutter
- 2 Middle cutter
- 3 Post-cutter

B





ALFRA-ROTA SPEED® – METAL CIRCULAR SAW RS 230A



Hand-operated

The ideal machine for construction sites and workshops, for low-burr cutting without cooling.

For rapid, clean cuts in tubes, threaded rods, profiles, cable ducts, corrugated and trapezoid sheeting, sandwich sheets, drywall profiles and much more.

The advantages at a glance:

- 1.800 Watt high-performance motor for exact cutting without cooling.
- Quick, easy saw-blade change.
- Continuously adjustable cutting depth up to 82 mm.
- The saw shoe can be adjusted for mitre cuts of up to 45°.
- Chip collection container.
- The ideal machine for side assembly companies, facade builders, repair shops, locksmitheries, rack builders, roofers, booth builders, welding shops, and heating and ventilation contractors.
- Ideal applicable where angle grinders are not strong enough, or clean enough.
- Mitre cutting also makes it deal for weld preparation.
- With optical laser for proper alignment of cuts.



Prod.-No. 22411

ALFRA RotaSpeed® RS 230A

Saw blade diameter:	230 (9")
Saw blade arbor:	25.4 mm (1")
Rating:	1.800 Watt
RPM min ⁻¹ :	2.700
Mitre:	0 - 45°
Cutting capacity, mm 0°:	82
Cutting capacity, mm 45°:	56
Max. material thickness (dependent on material):	8 mm
Volt:	230 - 50 Hz
Weight:	9.8 kg

Alfra RotaSpeed® RS 230A

Prod.-No.
22411



Scope of Supply:

Machine with 2 TCT Saw blades (premium quality), operating manual, rip fence, tool set, spacer piece for saw blade arbor, carrying case.

B



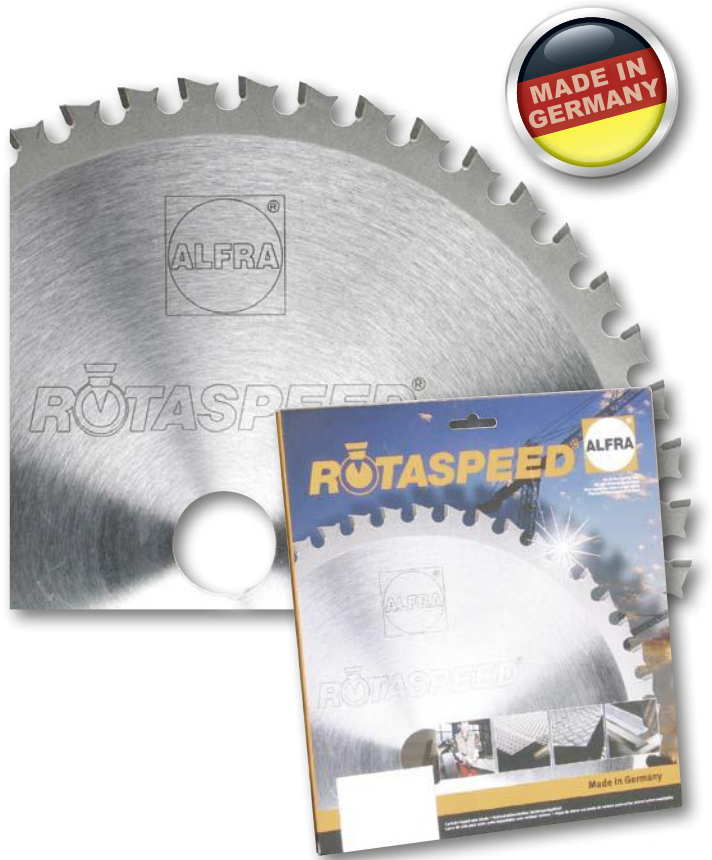
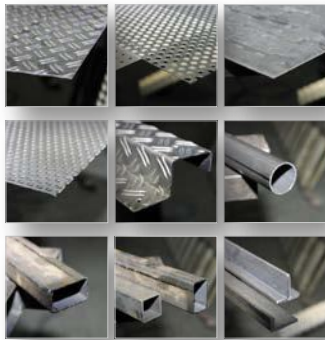
ALFRA-CIRCULAR SAW BLADES – ROTASPEED®

Carbide-tipped • Made in Germany

- Tungsten carbide tipped, suitable for metal cutting saws from: ALFRA, Flex, Euroboor, Evolution, Hitech, Jepson, Metallkraft, Ridgid, etc.
- These special TCT circular saws ensure fast and clean cuts in pipes, threaded rods, profiles, corrugated and trapezoidal sheets, wire ducts, sandwich panels, dry mortarless construction profiles, fastening profiles (DIN rails), grates using dry cutting method.
- For use on metals, CrNi steel*, aluminium.
- High cutting performance and tool life. The excellent price/performance ratio makes these saws highly economical.
- The corresponding manufacturer's machine guidelines and notes on use must be observed when using these saw blades.

Premium quality

Cutting- Ø mm	Application	Dimensions mm	No. of teeth	Prod.-No.
180/7"	Steel	180 x 20	34	22205
200/8"	Steel	200 x 20	42	22255
230/9"	Steel	230 x 25.4	48	22305
230/9"	Aluminium	230 x 25.4	62	22306
230/9"	For trapezoid sheeting	230 x 25.4	80	22307



MAGNETIC CHIP REMOVER

In a stainless steel round rod, you can move a magnet back and forth. The strong magnet picks up metal chips - pull a knob and the chips fall off. For more cleanliness in the work place.

Prod.-No.
18654

ALFRA magnetic chip remover, length 400 mm



Prod.-No. 18654





ALFRA-ROTA DRY® – METAL DRY CUTTER 355



Overwhelming quality, performance and price:

- for low-burr cutting of profiles and tubes, in steel, iron, copper, brass, aluminium, plastics, composites and stainless steel with no cooling.
- for use in applications such as metal-working, in joineries, for interior construction, etc.
- with depth adjustment for precise cutting
- angle and rip fence for mitre cuts of up to 45°
- with removable chip collection box
- with arbor adjustment for changing the saw blade
- easy to transport

ALFRA RotaDry® 355

Motor	230 V/50 Hz	
Power consumption	2.200 W	
RPM	1.300 min ⁻¹	
Cutting area 90°	13 mm wall thickness	180 x 105 mm ☐
Cutting area 90°	13 mm wall thickness	120 x 120 mm ☐
Cutting area 90°	13 mm wall thickness	135 mm ∅
Cutting area 45°	13 mm wall thickness	110 x 100 mm ☐
Cutting area 45°	13 mm wall thickness	100 x 100 mm ☐
Cutting area 45°	13 mm wall thickness	105 mm ∅
Saw blade diameter	355 mm	
Weight	23 kg	



Prod.-No. 22420

Alfra RotaDry® 355, with 1 TCT Saw blade 72 T	Prod.-No. 22420
---	---------------------------

Accessories:

Robust prismatic jaws The ideal assistant, especially when cutting tubes with thin walls	22421
Work table RCT 6542	22601



Prod.-No. 22601

Spare TCT saw blades

Also suitable for cutters such as:

Jepson/Global/Ridgid/Ryobi

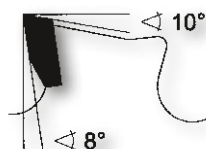
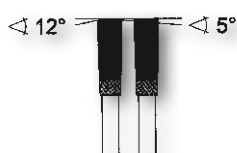
The universal TCT Saw blade for rapid cutting in:

Steel – Copper – Aluminium – Profiles – Cables – Sheeting – Solid materials

- without coolant
- regrindable
- low noise thanks to laser ornaments

Dimensions		Steel	Stainless steel	Prod.-No.
305 x 2.2 x 25.4 mm	60 T	•		32100
305 x 2.2 x 25.4 mm	80 T	•		32101
355 x 2.4/2.0 x 25.4 mm	72 T	•		32108
355 x 2.6 x 25.4 mm	80 T	•		32103
355 x 2.6 x 25.4 mm	90 T	•		32102
355 x 2.6 x 25.4	90 T	coated	•	32105

Other tooth counts upon request.



355 x 2.6 x 25.4 • 90 Z • coated

B



ALFRA ROTACUT®

BAND SAW BLADE TENSIONING
WITH OVERLOAD PROTECTION

ERGONOMICALLY-SHAPED
HANDLE

CLAMPING VICE

TORSION-FREE,
PRECISION-MILLED SAW FRAME

HIGH-PERFORMANCE
SINGLE-PHASE-MOTOR

CONTINUOUSLY ADJUSTABLE
MITRE CUT 0 - 45° (60°)

ROBUST BASE WITH FEET



Portable Band Saw Machines for Professionals

There is a variety of portable band saw machines, but only a few of them are suitable for industrial applications or at a construction site. Pricing is usually being more important than reliability and durability.

Our new machines have an excellent price-performance-ratio and are setting new standards. The robust and compact design makes it ideal for handling in the machine shop or the construction site.

Ideally qualified for locksmiths, plumbing, metal-, heating-, pipeline- and mechanical workshops. Also for construction companies, public utilities with or without mobile workshops, power stations, schools, technical learning and teaching facilities.

Special features:

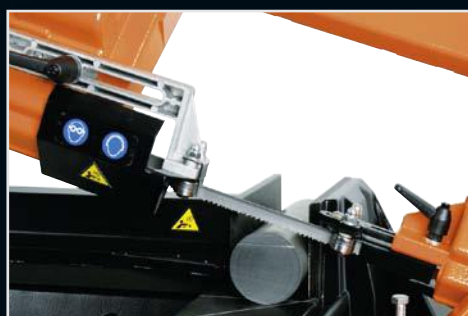
- Fully portable
- For mitre cuts 0 - 45° (60°) continuously adjustable
- Extremely rapid saw belt replacement
- Secure material tensioning
- Robust high-performance motor, RPM continuously adjustable (also ideal for stainless steel)
- Adjustable ball-bearing belt-guide for exact, precise angle-cutting
- Patented belt-tensioning with overload protection



Practical carrying handle



Mitring, continuously adjustable to 45° (60°)



Fine-tuned, adjustable belt guide



Patented belt-tensioning



ALFRA BAND SAW-RC105



Prod.-No. 22600

Band saw RC 105

Prod.-No.
22600

Band saw RC 105

Technical specifications:

Single-phase motor	950 W
Voltage	230 Volt
Cutting speed	30 to 80 min ⁻¹
(continuously adjustable with thermal and overload protection)	
Mitring	0 - 45°
Belt dimensions	1.335 x 13 x 0.65 mm
Weight	16 kg

Scope of Supply:

- Portable Band Saw Machine RC 105 - 230 V
- Complete with HSS bi-metal saw band
- Operating manual

CUTTING CAPACITY

	∅	∇	∇
0°	105 mm	95 x 95 mm	100 x 85 mm
45°	65 mm	65 x 65 mm	65 x 60 mm

BAND SAW BLADES HSS BI-METAL FOR RC 105

Prod.-No.	Dimensions
341-13065-1335-0600	1335x13x0.65 mm 6 Z
341-13065-1335-0812	1335x13x0.65 mm 8/12 Z
341-13065-1335-1400	1335x13x0.65 mm 14 Z



ALFRA BAND SAW - RCP 120



Prod.-No. 22620

Band saw RCP 120

Band saw RCP 120

Prod.-No.
22620

Technical specifications:

Single-phase motor	1.300 W
Voltage	230 Volt
Cutting speed	35 to 80 min ⁻¹
(continuously adjustable with thermal and overload protection)	
Mitring	0 - 60°
Belt dimensions	1.440 x 13 x 0.65 mm
Weight	18 kg

Scope of Supply:

- Portable Band Saw Machine RCP 120 - 230 V
- Complete with HSS bi-metal saw band
- Operating manual

CUTTING CAPACITY

	∅	∇	∇
0°	120 mm	112 x 112 mm	120 x 102 mm
45°	80 mm	78 x 78 mm	78 x 78 mm
60°	50 mm	43 x 43 mm	50 x 43 mm

BAND SAW BLADES HSS BI-METAL FOR RCP 120

Prod.-No.	Dimensions
341-13065-1440-0600R	1440x13x0.65 mm 6 Z
341-13065-1440-0812R	1440x13x0.65 mm 8/12 Z
341-13065-1440-1400R	1440x13x0.65 mm 14 Z

B



ALFRA BAND SAW - RCP 150



Prod.-No. 22630

Band saw RCP 150

Band saw RCP 150

Prod.-No.

22630

Technical specifications:

Single-phase motor	2.000 W
Voltage	230 Volt
Cutting speed	35 to 80 min ⁻¹
(continuously adjustable with thermal and overload protection)	
Mitring	0 - 45°
Belt dimensions	1.735 x 13 x 0.9 mm
Weight	35 kg

Scope of Supply:

- Portable Band Saw Machine RCP 150 - 230 V
- complete with HSS bi-metal saw band
- Operating manual

CUTTING CAPACITY

	∅	∇	∇
0°	150 mm	150 x 150 mm	160 x 140 mm
45°	100 mm	100 x 100 mm	120 x 100 mm

BAND SAW BLADES HSS BI-METAL FOR RCP 150

Prod.-No.	Dimensions
341-13090-1735-0600R	1735x13x0.9 mm 6 Z
341-13090-1735-0610R	1735x13x0.9 mm 6/10 Z
341-13090-1735-1400R	1735x13x0.9 mm 14 Z



ALFRA BAND SAW - RC 210



Prod.-No. 22660



Band saw

Band saw RC 210

Prod.-No.
22660

Technical specifications:

Single-phase motor	1.850 W
Voltage	230 Volt
Cutting speed (constant due to electr. control)	60 / 80 min ⁻¹
Mitring	0 - 45°
Belt dimensions	2.140 x 20 x 0.9 mm
Weight	59 kg

Mobile Band Saw Machine, ideal for use on the move in a construction site.

Scope of Supply:

- Portable Band Saw Machine RC 210 - 230 V
- complete with HSS bi-metal saw band
- Operating manual

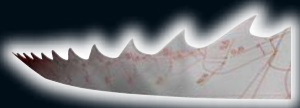
CUTTING CAPACITY

	∅	∇	∇
0°	175 mm	150 x 150 mm	213 x 150 mm
45°	140 mm	140 x 140 mm	145 x 80 mm





BAND SAW BLADES HSS BI-METAL FOR RC 210

Prod.-No.	Dimensions
341-20090-2140-0406	2140x20x0.9 mm 4/6 Z
341-20090-2140-0610	2140x20x0.9 mm 6/10 Z
341-20090-2140-1400	2140x20x0.9 mm 14 Z

B



ALFRA BAND SAW BLADES HSS-BI-METAL

Suitable for	Dimensions	Prod.-No.
 ROTACUT RC 105	1335x13x0.65 mm 6 Z	341-13065-1335-0600
	1335x13x0.65 mm 8/12 Z	341-13065-1335-0812
	1335x13x0.65 mm 14 Z	341-13065-1335-1400
 ROTACUT RCP 120	1440x13x0.65 mm 6 Z	341-13065-1440-0600R
	1440x13x0.65 mm 8/12 Z	341-13065-1440-0812R
	1440x13x0.65 mm 14 Z	341-13065-1440-1400R
 ROTACUT RCP 150	1735x13x0.9 mm 6 Z	341-13090-1735-0600R
	1735x13x0.9 mm 6/10 Z	341-13090-1735-0610R
	1735x13x0.9 mm 14 Z	341-13090-1735-1400R
 ROTACUT RC 210	2140x20x0.9 mm 4/6 Z	341-20090-2140-0406
	2140x20x0.9 mm 6/10 Z	341-20090-2140-0610
	2140x20x0.9 mm 14 Z	341-20090-2140-1400

B



ALFRA WORKBENCH – RCT 6542



Prod.-No. 22601

Work table RCT 6542

Work bench RCT 6542

Prod.-No.

22601

The advantages at a glance:

- cost-effective, sturdy, fully collapsible work bench
- ideal for the construction site
- made of steel profiles
- height-adjustable in three steps: 740 - 820 - 870 mm
- for a wide variety of applications
- table size 650 x 420 mm
- for all portable Rotacut® and RotaDry® band saws
- fully collapsible, portable
- weight 11 kg

Scope of Supply:

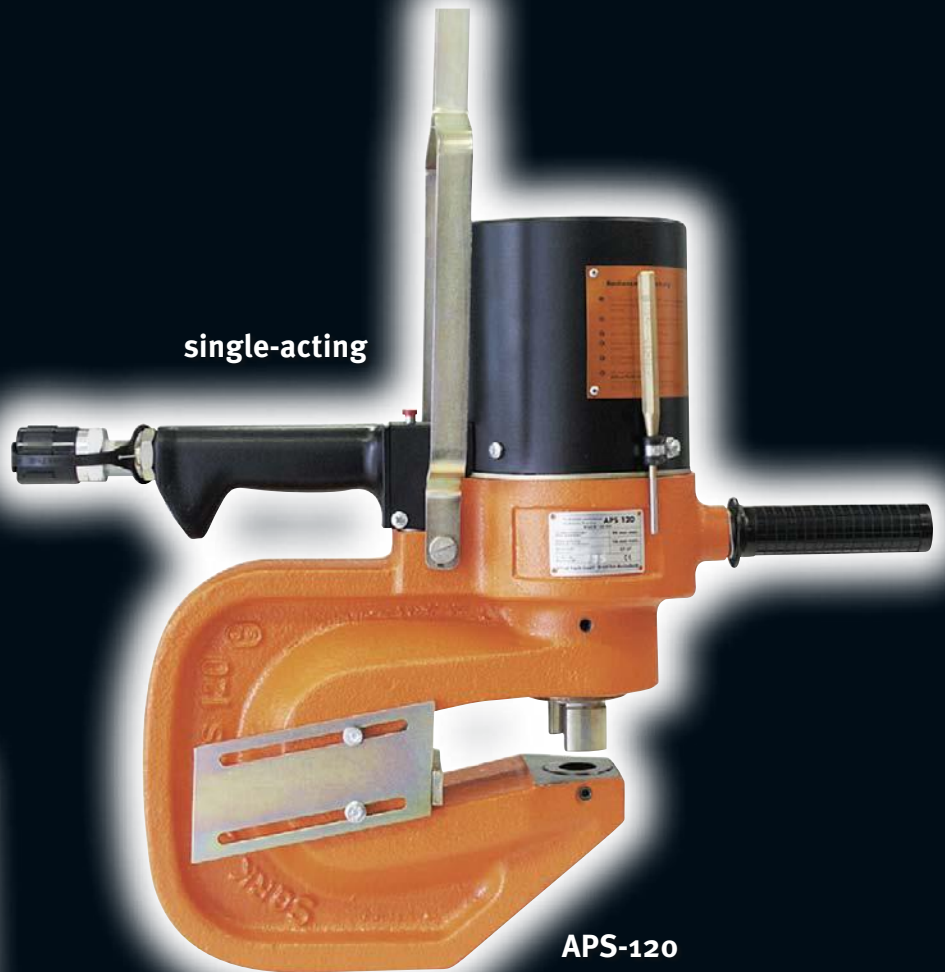
- Portable work bench RCT 6542
- Operating manual

B



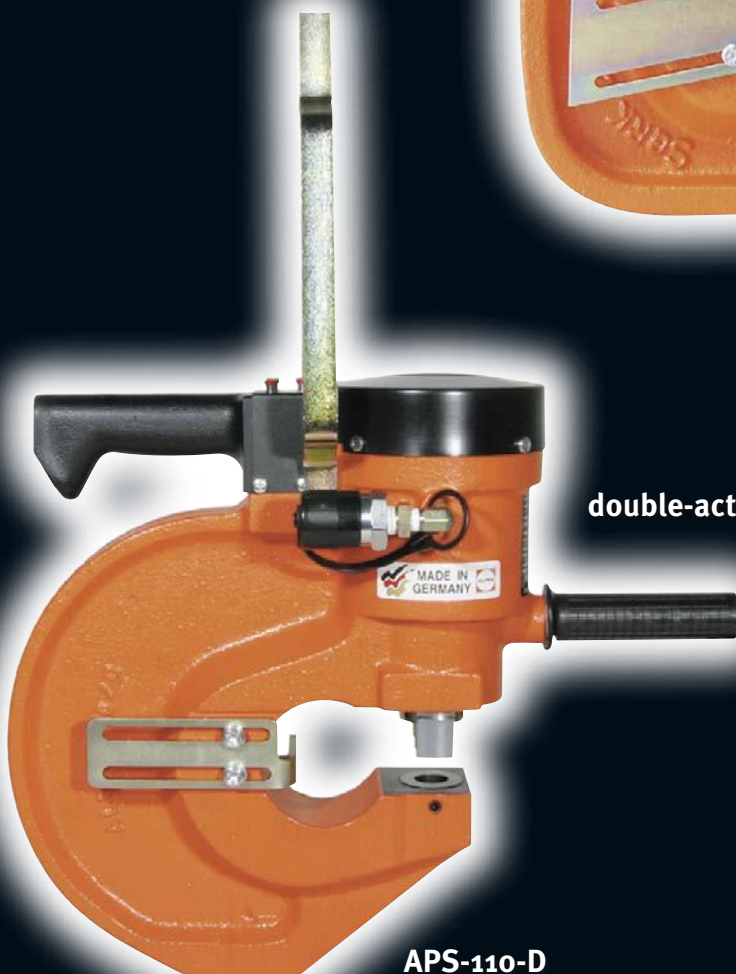
ALFRA PRESS

single-acting



APS-120

double-acting



APS-110-D

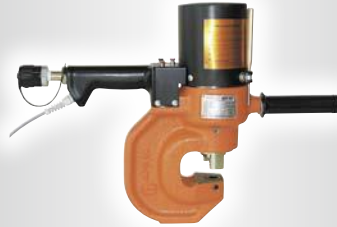
B

- ▶ **EASILY PORTABLE, FULLY AUTOMATIC HYDRAULIC PUNCHING UNITS FOR STEEL-, BRIDGE-, CONTAINER, CRANE- AND METAL CONSTRUCTION**
- ▶ **MOBILE USE, NO TRANSPORT OF MATERIAL**
- ▶ **ALMOST NOISELESS PUNCHING**
- ▶ **EASY POSITIONING THROUGH STOP-FUNCTION OF PUNCH**
- ▶ **FOR CHOICE:
SINGLE OR DOUBLE ACTION**



ALFRA-PRESS HYDRAULIC PUNCHES – @OVERVIEW

Made in Germany by ALFRA



APS 60



APS 70

Page	B/60
Prod.-No.	23001
Max. hole Ø	18 mm 11/16"
Max. oblong hole	–
Max. material thickness (S235)	10 mm 3/8"
Overall punch time with pump ...	SC 05 II-B: approx. 7 sec. SC 17: approx. 4 sec.
Throat depth	60 mm 2-3/8"
Max. pressure	700 bar 10.150 psi
Punching force	22 t
Punch stroke	16 mm 5/8"
Weight	17 kg / 37 lbs
Scope of Supply	Hydraulic hose, 5 m / spanner Punch/die Ø 14 mm

Page	B/60
Prod.-No.	23002
Max. hole Ø	22 mm 7/8"
Max. oblong hole	22 x 14 mm 7/8" x 9/16"
Max. material thickness (S235)	13 mm 1/2"
Overall punch time with pump ...	SC 05 II-B: approx. 10 sec. SC 17: approx. 4 sec.
Throat depth	70 mm 2-3/4"
Max. pressure	700 bar 10.150 psi
Punching force	30 t
Punch stroke	18 mm 11/16"
Weight	21 kg / 46 lbs
Scope of Supply	Hydraulic hose, 5 m / spanner Punch/die Ø 18 mm Depth adjustment, suspension bracket

Page	B/61
Prod.-No.	23007
Max. pressure	750 bar / 10.670 psi
Pumping capacity	0.94 l/min at 2.770 rpm
Motor power	1.100 W, 230V (50 Hz)* * upon request: 230V (60 Hz); 110 V (50 Hz); 110V (60 Hz)
Oil flow	5 l
Weight including oil fill volume	27 kg / 60 lbs



HYDRAULIC PUMPS FOR



SC 05 II-B



ALFRA-PRESS HYDRAULIC PUNCHES – OVERVIEW



Made in Germany by ALFRA



APS 120

B/60
23004
25 mm
1-1/16"
25 x 18 mm
1" x 11/16"
16 mm
5/8"
SC 05 II-B: approx. 16 sec.
SC 17: approx. 5 sec.

110 mm
4-3/8"

700 bar
10.150 psi

44 t

25 mm
15/16"

35 kg / 77 lbs

Hydraulic hose, 5 m / spanner
Punch/die Ø 22 mm
Depth adjustment, suspension bracket



APS 110 D

B/62
23181
25 mm
1-1/16"
25 x 18 mm
1" x 11/16"
16 mm
5/8"
SC 17 D: approx. 8 sec.

110 mm
4-3/8"

700 bar
10.150 psi

44 t

25 mm
15/16"

35 kg / 77 lbs

Hydraulic hose, 5 m / spanner
Punch/die Ø 22 mm
Depth adjustment, suspension bracket

APS 60 / 70 / 120



SC 17

B/61

23170

750 bar / 10.670 psi

1.5 l/min at 1.370 rpm

1.500 W, 230V (50 Hz)*

* upon request:

230V (60 Hz); 110V (50 Hz); 110V (60 Hz)

17 l

45 kg / 100 lbs

HYDRAULIC PUMPS FOR APS 110D



SC 17 D

B/62

23186

750 bar / 10.670 psi

1.4 l/min at 1.370 rpm

1.500 W, 230V (50 Hz)*

* upon request:

230V (60 Hz); 110V (50 Hz); 110V (60 Hz)

17 l

47 kg / 103 lbs



B



ALFRA-PRESS – HYDRAULIC PUNCHES, SINGLE-ACTION

Made in Germany by ALFRA

ALFRA-Press APS 60

Hydraulic punching unit with Automatic return using Neoprene spring

Prod.-No.

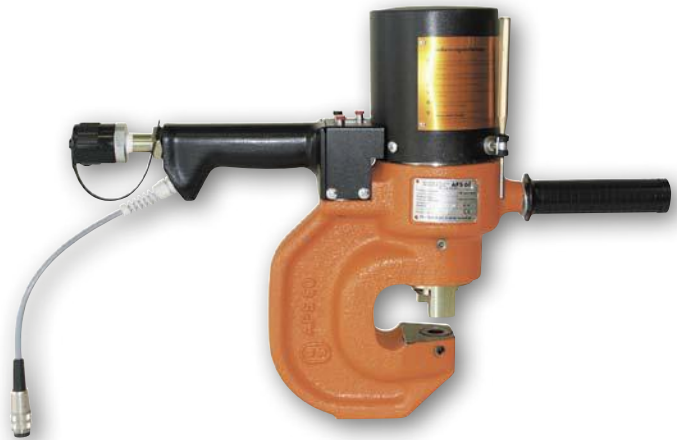
23001

Technical specifications:

max. hole Ø mm	18 mm
max. material thickness as per DIN S275	10 mm
total punch time	
with pump SC 05 II B	approx. 7 sec.
with pump SC 17	approx. 4 sec.
throat depth	60 mm
max. pressure	700 bar (10.000 psi)
punching force	22 t
punch stroke	16 mm
weight	17 kg

Scope of Supply:

Punching unit, control cable, hydraulic hose 5 m, spanner, 1 x punch and die each, Ø 14 mm



Prod.-No. 23001

ALFRA-Press APS 70

Hydraulic punching unit with Automatic return using Neoprene spring

Prod.-No.

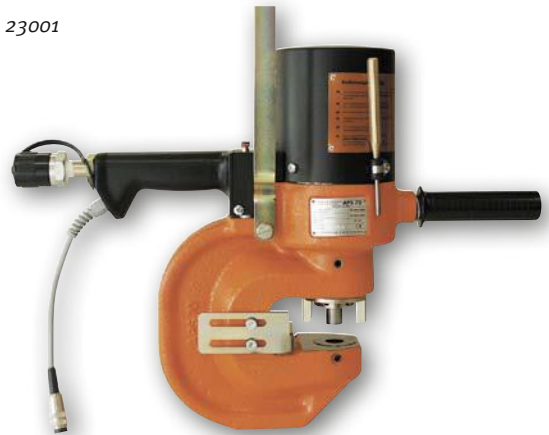
23002

Technical specifications

max. hole Ø mm	22 mm
max. oblong holes	22 x 14 mm
max. material thickness as per DIN S275	13 mm
total punch time	
with pump SC 05 II B	10 sec.
with pump SC 17	4 sec.
throat depth	70 mm
max. pressure	700 bar (10.000 psi)
punching force	30 t
punch stroke	18 mm
weight	21 kg

Scope of Supply:

Punching unit, control cable, hydraulic hose 5 m, spanner, 1 x punch and die each Ø 18 mm, 1 depth adjustment, 1 suspension bracket



Prod.-No. 23002

ALFRA-Press APS 120

Hydraulic punching unit with automatic return using Neoprene spring

Prod.-No.

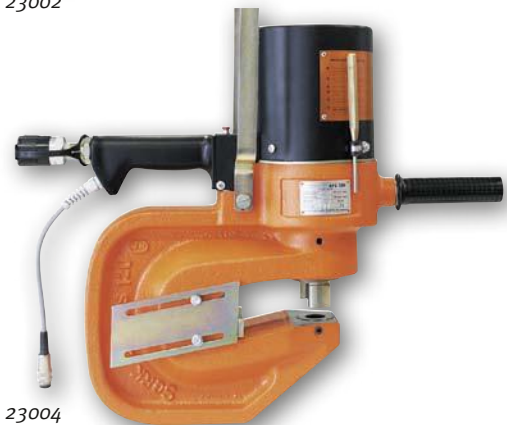
23004

Technical specifications

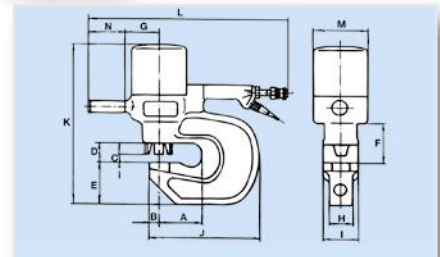
max. hole Ø mm	25 mm
max. oblong holes	25 x 18 mm
max. material thickness as per DIN S275	16 mm
total punch time	
with pump SC 05 II B	16 sec.
with pump SC 17	5 sec.
throat depth	110 mm
max. pressure	700 bar (10.000 psi)
punching force	44 t
punch stroke	25 mm
weight	35 kg

Scope of Supply:

Punching unit, control cable, hydraulic hose 5 m, spanner, 1 x punch and die each Ø 22 mm, 1 depth adjustment, 1 suspension bracket



Prod.-No. 23004



Type	A	B	C	D	E	F	G	H	I	J	K	L	M	N
APS 60	60	17	12	51	73	92	75	40	74	162	360	552	110	135
APS 70	70	24	15	51	85	100	80	40	80	204	382	562	125	135
APS 120	110	25	18	51	111	110	90	68	100	285	442	585	144	135

Important technical notice:

Standard punching units are not normally suitable for punching high-strength tooling steel, stainless steels or boiler-plate steel. Refer to us for technical advice for punching work in this application range.



Two hydraulic pumps are fitted to operate the punching unit

ALFRA Hydraulic Pump SC 05 II-B for APS 60, 70, 120

		Prod.-No.
ALFRA hydraulic pump SC 05 II-B	230V 50 Hz	23007
ALFRA hydraulic pump SC 05 II-B	230V 60 Hz	23007.230-60Hz*
ALFRA hydraulic pump SC 05 II-B	110V 50 Hz	23007.110-50Hz*
ALFRA hydraulic pump SC 05 II-B	110V 60 Hz	23007.110-60Hz*

Technical specifications:

max. operating pressure	750 bar (10.670 psi)
pump output	0.94 l/min at 2.770 rpm.
oil fill amount	5.0 l
single-phase motor, 2.770 rpm.	1.100 W 110V or 230V 50 Hz or 60 Hz
weight incl. oil fill volume	27 kg

* Upon request



Prod.-No. 23007

ALFRA Hydraulic Pump SC 17 for APS 60, 70, 120

		Prod.-No.
ALFRA hydraulic pump SC 17	230V 50 Hz	23170
ALFRA hydraulic pump SC 17	230V 60 Hz	23170.230-60Hz*
ALFRA hydraulic pump SC 17	110V 50 Hz	23170.110-50Hz*
ALFRA hydraulic pump SC 17	110V 60 Hz	23170.110-60Hz*

Complete with control system and switching cases.

These new hydraulic pumps were developed in order to drastically reduce punching times. These are particularly suited to workshop use.

Technical specifications:

max. operating pressure	750 bar (10.670 psi)
pump output	at 50 Hz, 1.50 l/min. at 1.370 rpm.
oil fill amount	17 l
single-phase motor, 1.450 rpm.	1.500 W 230 V 50 Hz
weight including oil fill volume and transport rollers	45 kg
dimensions L x W x H	550 x 370 x 560 mm

* Upon request



SC 17

Prod.-No. 23170



ALFRA-PRESS – HYDRAULIC HOLE PUNCHES, DOUBLE-ACTION

Made in Germany by ALFRA

ALFRA-Press APS 110D

Hydraulic punching unit with automatic return

Prod.-No.

23181

Technical specifications

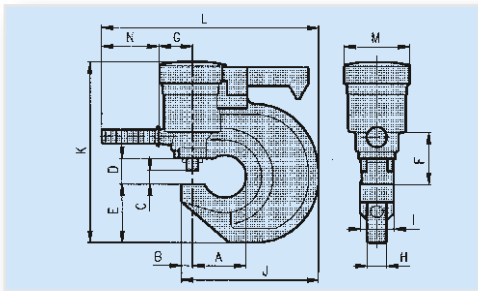
max. hole Ø mm	25 mm
max. oblong holes	25 x 18 mm
max. material thickness as per DIN S275	16 mm
total punch time with pump SC 17-D	8 sec.
throat depth	110 mm
max. pressure	700 bar (10.000 psi)
punching force	44 t
punch stroke	25 mm
weight	35 kg

Scope of Supply:

Punching unit, control cable, hydraulic hose 5 m, spanner, 1 x punch and die each Ø 22 mm, 1 depth adjustment, 1 suspension bracket



Prod.-No. 23181



Type	A	B	C	D	E	F	G	H	I	J	K	L	M	N
APS 110D	110	24	18	55	90	112	73	41	78	295	387	468	141	124



Important technical notice:

Standard punching units are not normally suitable for punching high-strength tooling steel, stainless steels or boiler-plate steel. Refer to us for technical advice for punching work in this range of application.

ALFRA Hydraulic Pump SC 17D for APS 110D

Dual-action

Prod.-No.

ALFRA hydraulic pump SC 17D	230V 50 Hz	23186
ALFRA hydraulic pump SC 17D	230V 60 Hz	23186.230-60Hz*
ALFRA hydraulic pump SC 17D	110V 50 Hz	23186.110-50Hz*
ALFRA hydraulic pump SC 17D	110V 60 Hz	23186.110-60Hz*

* Complete with control system and switching cases.
* Upon request

With connection for double hose package

These new hydraulic pumps were developed in order to drastically reduce punching times. These are particularly suited to workshop use.

Technical specifications:

max. operating pressure	750 bar (10.670 psi)
pump output	50 Hz 1.40 l/min. at 1.370 rpm.
oil fill amount	17 l
single-phase motor, 1.450 rpm.	1.500 W 230 V 50 Hz
weight including oil fill volume and transport rollers	47 kg
dimensions L x W x H	550 x 370 x 560 mm



Connection for double hose package



Prod.-No. 23186

SC 17 D



APS Go



For all types of APS hydraulic punching units.

For all types of APS hydraulic punching units

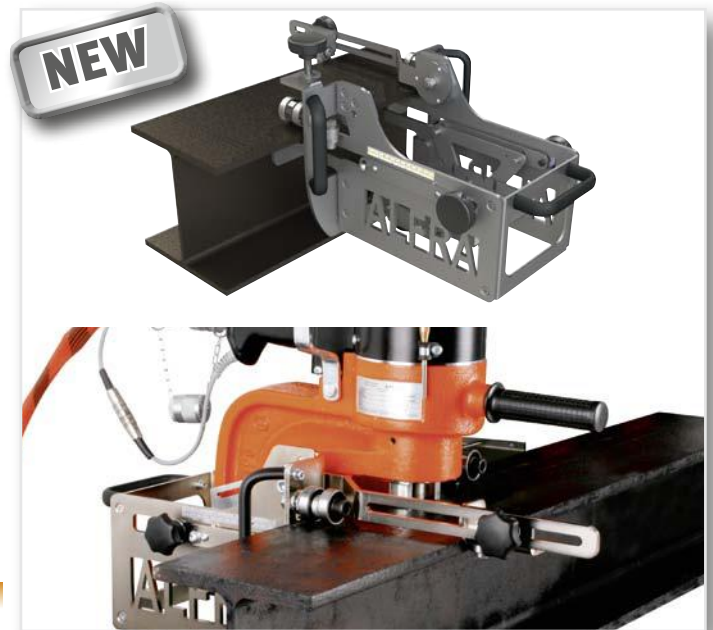
APS GO enables you to easily move our punching units over the steel bar.

An adapter plate connects the punching unit to the moving system, and allows this to be removed at any time.

This generates enormous time savings, especially when punching at identical space intervals, as the measurement needs only to be set once, and the interval lengths are easy to measure.

Massive, solid heavy-duty rollers and the side-mounted hand grips enable completely effortless movement over the steel bar.

Dimensions (L x W x H): 700 x 355 x 280 mm
Weight: 6 kg / 13 lbs



APS Go

Prod.-No.
23155

SERVICE-BOY

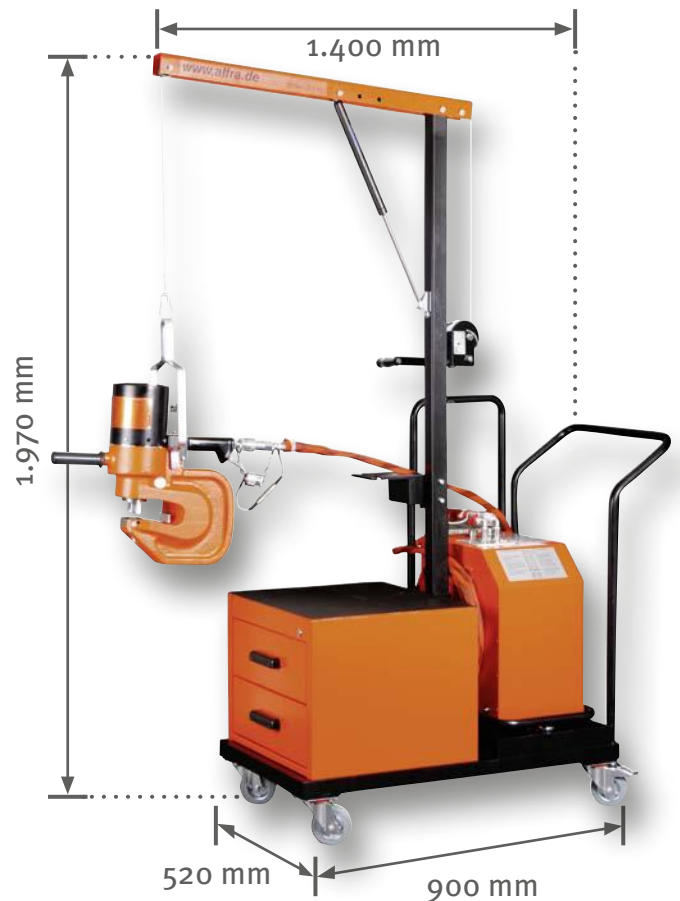
For all types of APS hydraulic punching units

This practical, time and energy-saving trolley makes handling of our ALFRA Press hydraulic punching units much easier. Absolutely necessary for every steel and metal worker wherever punching units are already in use.

- Gas pressure shock absorbers allow the easy positioning of the punching head on the steel bar.
- The hydraulic pump remains on the trolley, and must not be dragged along behind you.
- Work tool cabinet with drawers for the clear arrangement of punching work tools and accessories.
- Solid and secure, TÜV-tested design – and more cost-effective than any "DIY-build".
- Dimensions (L x W x H): 900 x 520 x 1.970 mm

Service-Boy
Complete with tool cabinet and drawers

Prod.-No.
23160



Prod.-No. 23160 (no punching unit / pump + accessories)



ALFRA - SPRING BALANCERS

For ALFRA-Press hydraulic hole punches

Prod.-No.

With **clamping device**, spring fracture safety device, wire rope hoist, 2.0 m

9362 B	15 - 20 kg	23150
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9363 B	20 - 25 kg	23151
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9366 B	35 - 45 kg	23152
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Note:

The spring balancer should only be operated when the punching unit is suspended and/or under load.



Prod.-No. 23152



Punch for

APS 120 / APS 110D	APS 70	APS 60	Ø mm	Ø Inches	Prod.-No.
■	■	■	7	1/4"	23-01-06-IN
■	■	■	8	5/16"	23-01-07
■	■	■	9	3/8"	23-01-08-IN
■	■	■	10		23-01-08
■	■	■	11		23-01-09
■	■	■	12	7/16"	23-01-10-IN
■	■	■	13	1/2"	23-01-10
■	■	■	14		23-01-11
■	■	■	15		23-01-11-IN
■	■	■	16		23-01-12
■	■	■	17		23-01-12
■	■	■	18		23-01-13-IN
■	■	■	19		23-01-13
■	■	■	20	3/4"	23-01-14
■	■	■	21		23-01-14-IN
■	■	■	22		23-01-15
■	■	■	23	5/8"	23-01-16-IN
■	■	■	24		23-01-16
■	■	■	25		23-01-17
■	■	■	26	11/16"	23-01-17-IN
■	■	■	27		23-01-18
■	■	■	28		23-01-18
■	■	■	29		23-01-19
■	■	■	30	3/4"	23-01-19-IN
■	■	■	31		23-01-20
■	■	■	32		23-01-20
■	■	■	33	13/16"	23-01-21-IN
■	■	■	34		23-01-21
■	■	■	35		23-01-21
■	■	■	36		23-01-22
■	■	■	37	7/8"	23-01-23-IN
■	■	■	38		23-01-23
■	■	■	39		23-01-23
■	■	■	40	15/16"	23-01-24-IN
■	■	■	41		23-01-24
■	■	■	42		23-01-24
■	■	■	43		23-01-25
■	■	■	44	1"	23-01-25-IN
■	■	■	45		23-01-25
■	■	■	46	1-1/16"	23-01-27-IN

*) with lock nut, Prod.-No. 23004-056 B



Prod.-No. 23-01-..



Prod.-No. 23-02-..

Dies for

APS 120 / APS 110D	APS 70	Ø mm	Ø Inches	Prod.-No.
■	■	7	1/4"	23-02-06-IN
■	■	8	5/16"	23-02-07
■	■	9	3/8"	23-02-08-IN
■	■	10		23-02-08
■	■	11		23-02-09
■	■	12	7/16"	23-02-10-IN
■	■	13	1/2"	23-02-10
■	■	14		23-02-11
■	■	15		23-02-11-IN
■	■	16		23-02-12
■	■	17		23-02-12
■	■	18		23-02-13-IN
■	■	19		23-02-13
■	■	20	3/4"	23-02-14
■	■	21		23-02-14-IN
■	■	22		23-02-15
■	■	23	5/8"	23-02-16-IN
■	■	24		23-02-16
■	■	25		23-02-17
■	■	26	11/16"	23-02-17-IN
■	■	27		23-02-18
■	■	28		23-02-18
■	■	29		23-02-19
■	■	30	3/4"	23-02-19-IN
■	■	31		23-02-20
■	■	32		23-02-20
■	■	33	13/16"	23-02-21-IN
■	■	34		23-02-21
■	■	35		23-02-21
■	■	36		23-02-22
■	■	37	7/8"	23-02-23-IN
■	■	38		23-02-23
■	■	39		23-02-23
■	■	40	15/16"	23-02-24-IN
■	■	41		23-02-24
■	■	42		23-02-24
■	■	43		23-02-25
■	■	44	1"	23-02-25-IN
■	■	45		23-02-25
■	■	46	1-1/16"	23-02-27-IN

Dies for

APS 60	Ø mm	Ø Inches	Prod.-No.
■	7		23-03-07
■	8		23-03-08
■	9		23-03-09
■	10		23-03-10
■	11		23-03-11
■	12		23-03-12
■	13		23-03-13
■	14		23-03-14
■	15		23-03-15
■	16		23-03-16
■	17		23-03-17
■	18		23-03-18

When selecting your tool, please note:

For material DIN S233: maximum material thickness = 0.8 x hole Ø
 For material DIN S275: maximum material thickness = 0.5 x hole Ø

Tip:

Punches and dies can be replaced and used for Nitto / Selfer Punching systems.

Tip:

Please oil punch from time to time, when material is heavily oxidized.





ALFRA = ORIGINAL TOOLS

Made in Germany by ALFRA

5°-bevelled dies for

APS 120 APS 110D	APS 70	Ø mm	Prod.-No.
■	■	10	23-04-10
■	■	11	23-04-11
■	■	12	23-04-12
■	■	13	23-04-13
■	■	14	23-04-14
■	■	15	23-04-15
■	■	16	23-04-16
■	■	17	23-04-17
■	■	18	23-04-18
■	■	19	23-04-19
■	■	20	23-04-20
■	■	21	23-04-21
■	■	22	23-04-22
■	-	23	23-04-23
■	-	24	23-04-24
■	-	25	23-04-25



Prod.-No. 23-04-.. (For girders with angled flanges)

Oblong punches for

mm	APS 120 APS 110D	APS 70	Punch Prod.-No.	Die Prod.-No.
16 x 8	■	■	23-01-1608	23-02-1608
18 x 9	■	■	23-01-1809	23-02-1809
18 x 11	■	■	23-01-1811	23-02-1811
20 x 10	■	■	23-01-2010	23-02-2010
20 x 12	■	■	23-01-2012	23-02-2012
20 x 14	■	■	23-01-2014	23-02-2014
22 x 11	■	■	23-01-2211	23-02-2211
22 x 14	■	■	23-01-2214	23-02-2214
24 x 12	■	-	23-01-2412	23-02-2412
25 x 9*	■	-	23-01-2509	23-02-2509
25 x 12*	■	-	23-01-2512	23-02-2512
25 x 13*	■	-	23-01-2513	23-02-2513
25 x 14*	■	-	23-01-2514	23-02-2514
25 x 18*	■	-	23-01-2518	23-02-2518



Prod.-No. 23-02-..



Prod.-No. 23-01-..

*) with lock nut, Prod.-No. 23004-56B
Other dimensions are available upon request

Spare parts

	Prod.-No.
Spare HD connection cable, 5 m complete with control cable and coupling	23015
Spare HD connection cable, *10 m complete with control cable and coupling	23016
Spare HD connection cable, *15 m complete with control cable and coupling	23017
Spare HD connection cable, 5 m For APS 110D (dual-action) complete with control cable and coupling	23020

Note:

The pressure build-up extends at 10 m to approx. 4 sec., and at 15 m to approx. 6 sec.

Lock nut for punch Ø 7 - 24 mm	23004-056A
Lock nut for punch Ø 25 mm (APS 120 / 110D only)	23004-056B
Lock nut for punch Ø 26 mm (upon request)	23004-056C



Prod.-No. 23015



Prod.-No. 23020



Prod.-No. 23004-056A
For punches Ø 7 - 24 mm



Prod.-No. 23004-056B
for punches Ø 25 mm

► UNIVERSAL EDGE-MILLING AND DEBURRING DEVICE



B



ALFRA EDGE-MILLING AND DEBURRING DEVICES – OVERVIEW

Made in Germany by ALFRA



KfV



KfH 150

Page	B/72	B/74
Prod.-No.	25260	25100
Prism mounting	–	L = 150 mm / B = 20/40 mm
End mill Ø	45° or straight Ø 6 mm or 8 mm	TCT as per DIN, Ø 8 mm
Maximum bevel width ▶ in multiple operations	1 - 3 mm	1 - 5 mm, depending on material, with fine adjustment
Edge angle	45° and radii	45°
High-performance motor	✓	✓
Motor power	500 Watt	1.050 Watt
Stepless RPM control	11.000 - 25.000 min ⁻¹ with softstart	8.000 – 25.000 min ⁻¹
Full-wave control electronics	✓	✓
Clamping neck Ø	43 mm	43 mm
Voltage	230 V, 50 – 60 Hz + 110 V, 50 – 60 Hz	230 V, 50 – 60 Hz + 110 V, 50 – 60 Hz
Weight	1.8 kg	3.5 kg
Dimensions (L x W x H)	260 x 190 x 150 mm	340 x 150 x 110 mm
Cord length	3.0 m	3.0 m

MOTORS



Prod.-No.	230V: 25193	110V: 25193.110	230V: 25191	110V: 25191.110
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ALFRA EDGE-MILLING AND DEBURRING DEVICES – OVERVIEW



Made in Germany by ALFRA



KFT 250



KFH 250



KFT 500

B/76	B/78	B/80
25110	25130	25140
L = 250 mm / B = 40 mm	L = 250 mm / B = 70 mm	L = 500 mm / B = 70 mm
TCT as per DIN, Ø 8 mm	TCT as per DIN, Ø 12 mm	TCT as per DIN, Ø 12 mm
1 - 5 mm, depending on material	14 mm DIN S233-S235 6.5 mm stainless steel	1.5 - 14 mm
45°	Continuously adjustable, 30° - 45° - 30° Right and left for 60° welding bevels. Also for radii R = 3.0, 4.0 and 5.0 using radius TCT cutter	45°
✓	✓	✓
1.050 Watt	1.800 Watt	1.800 Watt
8.000 – 25.000 min ⁻¹	2.500 – 22.500 min ⁻¹	2.500 – 22.500 min ⁻¹
✓	✓	✓
43 mm	63 mm	63 mm
230 V, 50 – 60 Hz + 110 V, 50 – 60 Hz	230 V, 50 – 60 Hz + 110 V, 50 – 60 Hz	230 V, 50 – 60 Hz + 110 V, 50 – 60 Hz
5.0 kg	12.8 kg	18 kg
360 x 250 x 110 mm	480 x 315 x 145 mm	450 x 500 x 160 mm
3.0 m	3.0 m	3.0 m

MOTORS



230V: 25191

110V: 25191.110



230V: 25192

110V: 25192.110



230V: 25192

110V: 25192.110

B



ALFRA EDGE-MILLING AND DEBURRING DEVICES – OVERVIEW

Made in Germany by ALFRA



KFK 5



SKF 63-15

Page	B/84	B/86
Prod.-No.	25200	25010
Prism mounting	–	Guide mounting with rollers 240 x 80 mm / 220 x 75 mm
End mill Ø	Inserts	Inserts
Maximum bevel width ▶ in multiple operations	45°: Steel 0 - 5 mm, aluminium 0 - 8 mm 30°: Steel 0 - 4 mm, aluminium 0 - 6 mm	15 mm max
Edge angle	45° (optional 30°, 60°) Radii R = 2.5	15° - 20° - 30° - 45° - 60° adjustable
High-performance motor	✓	✓
Motor power	1.300 Watt	1.100 Watt
Stepless RPM control	4200 - 11.000 min ⁻¹ with softstart	2870 min ⁻¹
Full-wave control electronics	✓ with thermal and overload protection	✓ with thermal and overload protection
Right/left run	–	–
Voltage	230 V, 50 - 60 Hz + 110 V, 50 - 60 Hz	230 V, 50 Hz + 110 V, 50 - 60 Hz
Weight	4.2 kg	21.0 kg
Dimensions (L x W x H)	L = 450 mm	440 x 200 x 280 mm
Cord length	3.0 m	3.0 m

B



ALFRA EDGE-MILLING AND DEBURRING DEVICES – OVERVIEW



Made in Germany by ALFRA



SKS-15 AUTO

	B/88
	25950
	-
	Shearing blades: \varnothing 100 mm
	0.5 - 15 mm
	15° - 50° continuously adjustable
	-
	1.500 Watt
	2800 min ⁻¹
	-
	-
	220/380V, 50 – 60 Hz
	88 kg
	450 x 400 x 820 mm
	-

B

Four applications – one device



Prisms, free-hand



Prisms, stationary



Contours, stationary



Contours, free-hand

KFV



• ADJUSTMENT OF BEVEL WIDTH

• WITH THERMAL AND OVERLOAD PROTECTION

• ON/OFF SWITCH

B

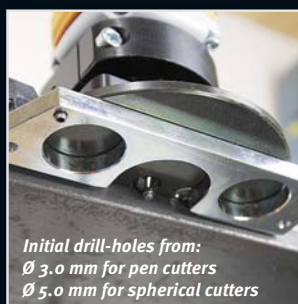
ALFRA KVV EDGE DEBURRING UNIT



Made in Germany by ALFRA

Drive motor (with clamping flange \varnothing 43 mm) 500 Watt, RPM control 11.000 - 25.000 rpm, quick-change-fitting for use with attachments.

- Contour milling fitting with support table, 72 x 64 mm
- Table milling fitting with support plate, \varnothing 120 mm
- Tool-less milling height setting.
- Handy and powerful.
- For construction steel, stainless steel, aluminium and other material.
- Also for radii



Initial drill-holes from:
 \varnothing 3.0 mm for pen cutters
 \varnothing 5.0 mm for spherical cutters



B

Technical specifications:

Bevel angle:	45°
Bevel width 45°:	1 - 3 mm, continuously adjustable
Radius:	R = 1.0 - 1.5 - 2.0
Motor voltage:	230 V 50-60Hz; 110V 50-60Hz
Rating:	500 W
Speed:	11.000 - 25.000 min ⁻¹ with softstart with thermal and overload protection manual
Feed:	
Weight:	1.8 kg

Scope of Supply:

- KVV deburring and bevelling device, drive motor with clamping flange, \varnothing 43 mm
- Quick-change fitting for use with attachments
- Contour milling fitting with support table, 72 x 64 mm
- Table milling fitting with support plate, \varnothing 120 mm
- Prism milling fitting with guide rails, 150 mm length
- Tensioning shank for vice
- Collet 6 mm (mounted), collet 8 mm (included)
- One set of operating tools
- Carrying case
- Guide stop for outer edges
- 1 Operational manual



Prod.-No.

Edge-milling unit, KVV, complete	230V 50-60Hz	25260
Edge-milling unit, KVV, complete	110V 50-60Hz	25260.110



ALFRA EDGE DEBURRING UNIT

KFH 150



B

ALFRA EDGE DEBURRING UNIT - KFH 150



Made in Germany by ALFRA

The unit enables work pieces to be worked wherever machined edge milling is too expensive.

Hand-operated model for 45° deburring of larger work pieces, profiles, supports, sheet metal panels, with 90° mounting.

- Hand-operated, for 45° bevels.
- Optimal guidance and safe handling.
- Commercially available solid carbide cutter Ø 8 mm.

FULL-WAVE
CONTROL ELECTRONICS



Technical specifications:

Prism mounting 45°:	L = 150 mm
	W = 20/40 mm
End mill:	Solid carbide as per DIN, Ø 8 mm
Maximum bevel width:	1 - 5 mm, dependent on material with fine adjustment
High-performance motor	With full-wave control electronics
Motor voltage:	230V 50-60Hz; 110V 50-60Hz
Motor power:	1.050 W
Electronics:	8.000 – 25.000 min ⁻¹
Clamping neck Ø:	43 mm
Weight:	3.5 kg

Scope of Supply:

- Deburring unit KFH 150
- 1 set of guide rails
- 1 collet 8 mm Ø and clamping nut
- 1 set of operating manual

Prod.-No.

Deburring unit KFH 150	230V 50-60Hz	25100
Deburring unit KFH 150	110V 50-60Hz	25100.110
Adapter head for deburring unit KFH 150		25109

Cost reduction:

Most of the cutting area can be accessed by moving the milling cutter in the collet.



B



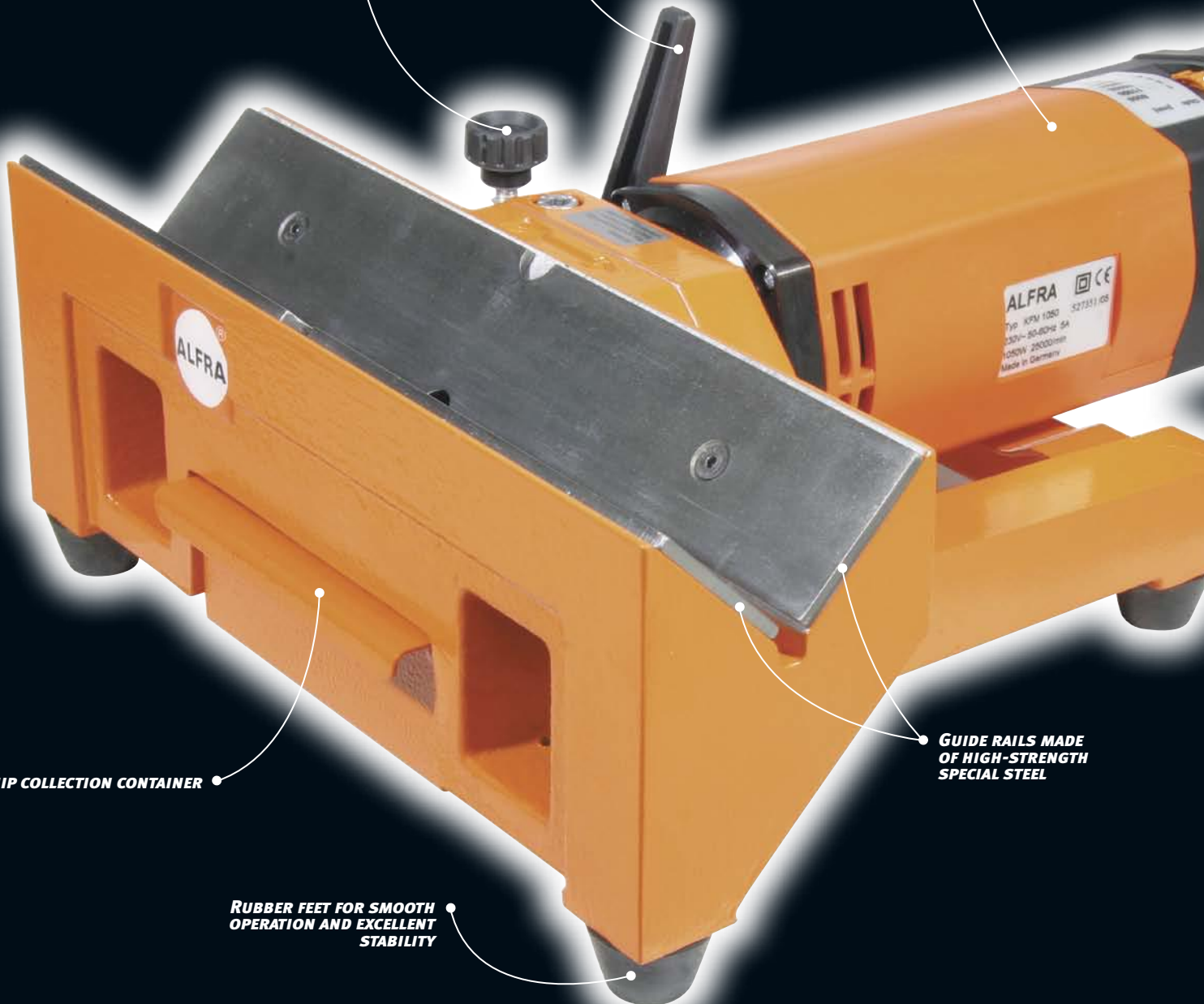
ALFRA EDGE DEBURRING UNIT

KFT 250

CLAMPING GRIP
FOR RAPID ADJUSTMENT

HIGH-PERFORMANCE MOTOR
WITH DOUBLE BEARING-MOUNTED
MILLING SPINDLE

FINE ADJUSTMENT TO
BEVEL DEPTH / WIDTH



GUIDE RAILS MADE
OF HIGH-STRENGTH
SPECIAL STEEL

CHIP COLLECTION CONTAINER

RUBBER FEET FOR SMOOTH
OPERATION AND EXCELLENT
STABILITY

B

ALFRA EDGE DEBURRING UNIT - KFT 250



Made in Germany by ALFRA

Simple, cost-effective deburring unit for light to medium use.

To obtain perfectly milled surfaces with DIN 6527 solid carbide end mills in rolling sections with no secondary milling.



Technical specifications:

- Milling area: Bevel angle 45°
- Prism mounting position I: Material thickness from 4.5 mm
- Position II: Material thickness from 1.0 mm
- Prism mounting: L = 250 mm
- Guide rail: W = 40 mm
- Maximum bevel width: 5 mm, dependent on the material.
- Also for stainless steel when selecting a suitable-milling cutter and RPM control, and cuts (spray edges with cutting oil).
- Weight: 5.0 kg
- High-performance drive motor: 1.050 W
- Triple bearing
- Double bearing-mounted milling spindle
- Spindle bearings with high-speed lubrication
- Standard clamping flange Ø: 43 mm
- Stepless RPM control: 8.000 - 25.000 min⁻¹
- Motor voltage: 230V 50-60Hz; 110V 50-60Hz
- Full-wave control electronics –
- When under load, the tachogenerator provides additional power.

FULL-WAVE
CONTROL ELECTRONICS



Position I: Material thickness from 4.5 mm



Position II: Material thickness from 1.0 mm



Foot switch (optional)
Prod.-No. 25116

Scope of Supply:

- Deburring unit KFT 250 with fine milling depth adjustment
- 1 set of guide rails
- 1 collet 8 mm Ø and clamping nut
- 1 chip collection container
- 1 set of operating tools
- 1 set of operating manual

Prod.-No.

Deburring unit KFT 250	230V 50-60Hz	25110
Deburring unit KFT 250	110V 50-60Hz	25110.110

Table for deburring unit KFT 250	25111
----------------------------------	-------

Special Accessories:

ALFRA foot switch with device cable socket	230V	25116
ALFRA foot switch with device cable socket	110V	25116.110

Cost reduction:

Most of the cutting area can be accessed by moving the milling cutter in the collet.



B



ALFRA EDGE DEBURRING UNIT

KFH 250



ERGONOMICALLY SHAPED
GUIDE HAND GRIP

FINE ADJUSTMENT TO
MILLING DEPTH / BEVEL WIDTH

HIGH-PERFORMANCE MOTOR WITH
DOUBLE BEARING-MOUNTED MILLING SPINDLE

30° - 45° - 30°
SWIVELLING

GUIDE RAILS MADE OF
HIGH-STRENGTH SPECIAL STEEL

B

ALFRA EDGE DEBURRING UNIT – KFH 250



Made in Germany by ALFRA

Hand-held model specially developed for working on edges (visible edges) and bevelling up to 60° on large rectangular work pieces.

- A vital accessory for mechanical engineering.
- Wide speed range for different materials.
- Individually adjustable milling depth.
- Easy to handle and guide with two support rollers.

CLAMPING GRIP FOR RAPID ADJUSTMENT



GUIDE ROLLERS FACILITATE FEEDING



Fine adjustments to milling depth/bevel width



Technical specifications:

Prism mounting:	L = 250 mm W = 70 mm
Shank cutter Ø:	12 mm DIN 6527
Maximum bevel width:	14 mm (dependent on the material)
Edge angle:	continuously adjustable swivelling, 30°-45°-30°, right and left. Also for radii r = 3,0, 4,0, 5,0 using radius-solid-carbide milling cutter
Rating:	1.800 W (high-quality motor for difficult deburring tasks)
Stepless RPM control:	2.500 – 22.500 min ⁻¹
Full-wave control electronics –	When under load, the tachogenerator provides additional power.
Clamping neck Ø:	63 mm
Motor voltage:	230V 50-60Hz; 110V 50-60Hz
Weight:	12.8 kg

Scope of Supply:

- Deburring unit KFH 250 with fine milling depth adjustment
- 1 set of guide rails with two support rollers
- 1 collet Ø 12 mm and clamping nut
- 1 set of operating tools
- 1 set of operating manual

Prod.-No.

Deburring unit KFH 250	230V 50-60Hz	25130
Deburring unit KFH 250	110V 50-60Hz	25130.110
Adapter head for deburring unit KFH 250		25131

Cost reduction:

Most of the cutting area can be accessed by moving the milling cutter in the collet.



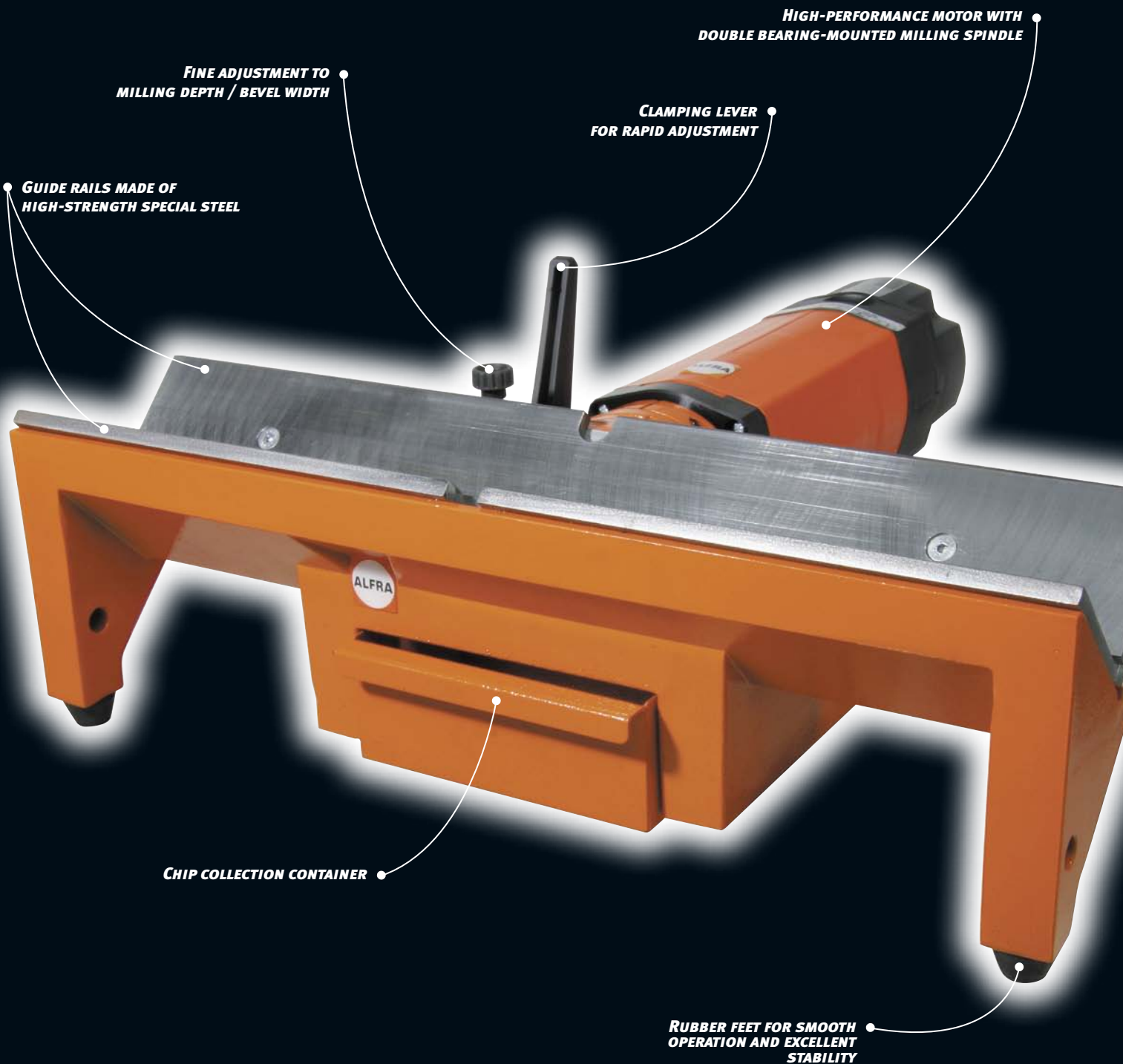
Prism mounting and support rollers made of wear-resistant plastic upon request.

B



ALFRA EDGE DEBURRING UNIT

KFT 500



B

ALFRA EDGE DEBURRING UNIT - KFT 500



Made in Germany by ALFRA

For medium- and large-sized work pieces.
Maximum bevel width 14 mm

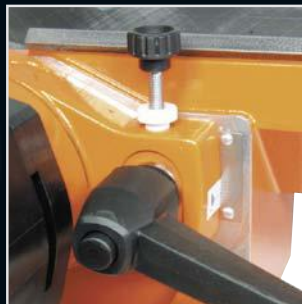
To obtain perfectly milled surfaces with solid carbide end mills in rolling sections with no secondary milling.



Exact deburring with self-generating milling cutter



Foot switch (optional)
Prod.-No. 25116



Fine adjustments to milling depth/
bevel width



Position I: Material thickness 6 - 14 mm



Position II: Material thickness from 1.5 mm



Cost reduction:

Most of the cutting area can be accessed by moving the milling cutter in the collet.



Technical specifications:

Deburring area:	Bevel angle 45°
Prism mounting position I:	Material thickness 6 - 14 mm
Position II:	Material thickness from 1.5 mm
Prism mounting:	L = 500 mm
Guide rail:	W = 70 mm
Maximum bevel width:	14 mm, dependent on the material
	Also for stainless steel when selecting a suitable milling cutter and RPM control, and cut division (spray edges with cutting oil).
	Also for radii R 3.0, 4.0, 5.0 using radius solid carbide cutter
High-performance drive motor:	1.800 W
Triple bearing, double bearing-mounted milling spindle	
Spindle bearings with high-speed lubrication	
Clamping neck Ø:	63 mm
Stepless RPM control:	2.500 – 22.500 min ⁻¹
Motor voltage:	230V 50-60Hz; 110V 50-60Hz
Full-wave control electronics –	
when under load, the tachogenerator provides additional power	
Weight:	18 kg

Scope of Supply:

- Deburring unit KFT 500 with fine milling depth adjustment
- 1 set of guide rails
- 1 collet Ø 12 mm and clamping nut DIN 6499
- 1 chip collection container
- 1 set of operating tools
- 1 set of operating manual

		Prod.-No.
Deburring unit KFT 500	230V 50-60Hz	25140
Deburring unit KFT 500	110V 50-60Hz	25140.110
Table for deburring unit KFT 500		25141
ALFRA foot switch with device cable socket	230V	25116
ALFRA foot switch with device cable socket	110V	25116.110

Shorter run times and motor-saving work.

Function: Foot switch pressed – socket is live

Foot switch released – power supply interrupted

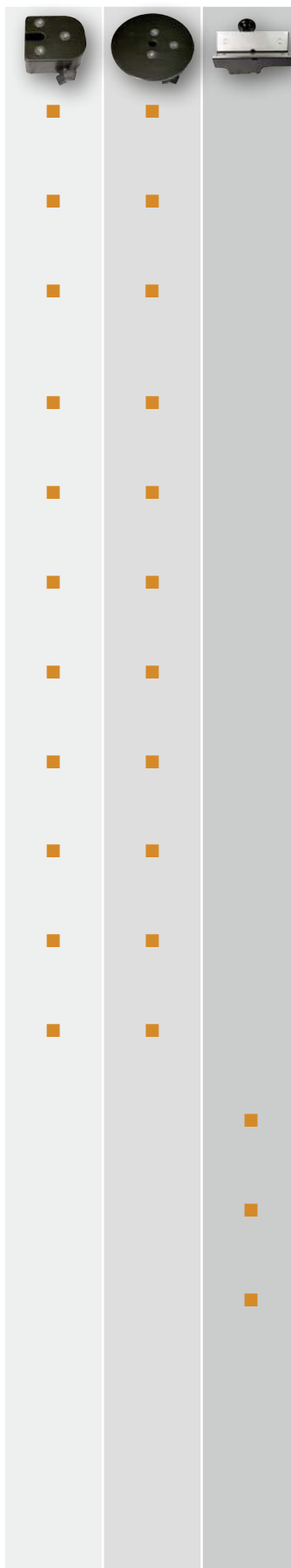


ALFRA - CARBIDE DEBURRING END MILLS FOR KFY

Made in Germany

Description

Prod.-No.



Deburring end mill 45°
 Ø 6 mm, tip Ø 2.5 mm, length 31 mm, 3 cuts
 Suitable for: stainless steel, cast iron

25270-A



Prod.-No.
25270-A

Deburring end mill 45°
 Ø 6 mm, tip Ø 2.5 mm, length 31 mm, 5 cuts
 Suitable for: stainless steel, cast iron

25271-A



Prod.-No. 25271-A

Deburring end mill, radius R = 0.5
 Ø 6 mm, tip Ø 2.9 mm, length 31 mm, 3 cuts
 Radius R = 0.5
 Suitable for: stainless steel, cast iron

25272-A



Prod.-No. 25272-A

Deburring end mill, radius R = 1.0
 Ø 6 mm, tip Ø 2.9 mm, length 31 mm, 3 cuts
 Suitable for: stainless steel, cast iron

25273-A



Prod.-No. 25273-A

Deburring end mill, radius R = 1.5
 Ø 6 mm, tip Ø 2.9 mm, length 31 mm, 3 cuts
 Suitable for: stainless steel, cast iron

25274-A



Prod.-No. 25274-A

Deburring end mill, radius R = 1.0
 Ø 10 mm, tip Ø 4.8 mm, length 30 mm, 6 cuts
 Suitable for: stainless steel, cast iron

25275-A



Prod.-No. 25275

Deburring end mill, radius R = 1.5
 Ø 10 mm, tip Ø 4.8 mm, length 30 mm, 6 cuts
 Suitable for: stainless steel, cast iron

25276-A



Prod.-No. 25276-A

Deburring end mill, radius R = 2.0
 Ø 10 mm, tip Ø 4.8 mm, length 30 mm, 6 cuts
 Suitable for: stainless steel, cast iron

25277-A



Prod.-No. 25277-A

Deburring end mill 45°
 Ø 10 mm, tip Ø 4.8 mm, length 30 mm, 6 cuts
 Suitable for: stainless steel, cast iron

25278-A



Prod.-No. 25278-A

Axes with thrust bearing
 (Axis: Ø 1.5 mm - bearing: Ø 3.0 mm)
 Suitable for deburring mills with tips - Ø 2.5 - 2.9 mm

25279-A



Prod.-No. 25279-A

Axes with thrust bearing
 (Axis: Ø 1.5 mm - bearing: Ø 5.0 mm)
 Suitable for deburring mills with tips - Ø 4.8 mm

25280-A



Prod.-No. 25280-A

Deburring end mill with serration
 Ø 8 mm, 4 cuts
 Suitable for: Steel, stainless steel, cast iron

25281



Prod.-No. 25281

Deburring end mill with serration
 Ø 8 mm, 6 cuts
 Suitable for: Steel, stainless steel, cast iron

25282



Prod.-No. 25282

Deburring end mill with serration
 Ø 8 mm, 12 cuts
 Suitable for: Steel, stainless steel, cast iron

25283



Prod.-No. 25283

B



ALFRA – CARBIDE DEBURRING END MILLS FOR KFH/KFT



Made in Germany

ALFRA Solid Carbide End Mill - Deburring End Mill (similar to DIN 6527)

- This solid carbide end mill was developed for perfect deburring.
- The chips are removed from the motor spindle into the chip collection container or the chip duct.
- Total length 60 mm or 80 mm.
- Coated design



	Ø	Cutting edges	Prod.-No.	Prod.-No.	Prod.-No.	Prod.-No.
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TCT mill

End mill with larger chip spaces, suitable for large bevels on soft materials such as **aluminium**, as well as brass, copper, and plastics. Universal application for steel and stainless steel.



8 mm

3

25150P

25150P



12 mm

3

25160P

25160P

TCT mill

End mill with larger chip spaces, suitable for larger bevels. Universal application such as for **stainless steel**, as well as steel, cast iron, non-ferrous metals, plastics



8 mm

4

25151P

25151P



12 mm

4

25161P

25161P

TCT mill

Roughing, fine cord. For attaching welding bevels. For **steel**, as well as cast iron, stainless steel (universal milling cutter)



8 mm

4

25154P

25154P



12 mm

4

25163P

25163P

Solid Carbide Radius End Mill*

- Solid Carbide Radius End Mill with 2 radius grooves for dual use
- For rounding off work piece edges
- Universally applicable. For hard materials, the radii should be created in successive steps with increasing milling depths.
- The fine adjustment of the contour of the radii to the edge of the work piece is achieved using the axial displacement of the motor in the clamping holes.



*Delivery time upon request.

R 3.0	12 mm	5	-	-	25165	25165
R 4.0	12 mm	5	-	-	25166	25166
R 5.0	12 mm	5	-	-	25167	25167



ALFRA EDGE DEBURRING UNIT

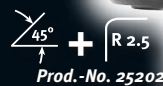
KFK 5

HIGH-PERFORMANCE MOTOR
WITH SOFT START MOTOR

WITH THERMAL AND
OVERLOAD PROTECTION

ERGONOMICALLY SHAPED
HAND GRIP WITH
ON-/ OFF-SWITCH

CONTINUOUSLY ADJUSTABLE
BEVEL WIDTH SETTING USING SCALE



ALFRA EDGE DEBURRING UNIT – KFK 5



Made in Germany by ALFRA

For deburring inner and outer edges, bevelling metal parts, milling radii and holes from \varnothing 20 mm. Specially developed to produce clean visible edges and weld preparation.

- Tool-less bevel height setting.
- Handy and powerful.
- For structural steel, stainless steel, aluminium and other materials.
- Multiple insert holders, 45° (optional 30°).
- Also for radii R = 2.5



Start holes from \varnothing 20 mm.



Technical specifications:

Bevel angle:	45° (optional 30°, 60°)
Bevel width 45°:	Steel 0 – 5 mm 400 N/mm ² continuously adjustable Aluminium 0 – 8 mm 250 N/mm ² continuously adjustable
Bevel width 30°:	Steel 0 – 4 mm 400 N/mm ² continuously adjustable Aluminium 0 – 6 mm 250 N/mm ² continuously adjustable
Radius:	R = 2.5
Motor voltage:	230V 50-60Hz; 110V 50-60Hz
Rating:	1.530 W
Speed:	4.200 - 11.000 min ⁻¹ with softstart with thermal and overload protection
Feed:	manual
Weight:	4 kg

Scope of Supply:

- KFK 5 – Deburring and bevelling unit
- 1 pc. 45° milling tool with inserts
- 1 tool set
- Carrying case
- 1 set of operating manual



Prod.-No. 25207



		Prod.-No.
Deburring unit KFK 5 – with 45° milling head	230V 50-60Hz	25200
Deburring unit KFK 5 – with 45° milling head	110V 50-60Hz	25200.110
Deburring unit KFK 5 – with 30° milling head	230V 50-60Hz	25201
Deburring unit KFK 5 – with 30° milling head	110V 50-60Hz	25201.110

Additional accessories:

45° replacement milling head/radius R=2.5 (no inserts)	25202
30° replacement milling head (no inserts)	25203
60° replacement milling head (no inserts) upon request	25213

Adjustable guide stop for outer edges	25207
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Tools:

Insert PM25M for steel 13.47 x 3 coated	25206
Radius insert 2.5 mm	25205
Insert K10 for aluminium/cast iron	25208
Insert BK84 for steel/stainless steel	25209
Torx screws, individual, for replacement inserts	25210

B



ALFRA BEVEL MILLING MACHINE

SKF 63-15



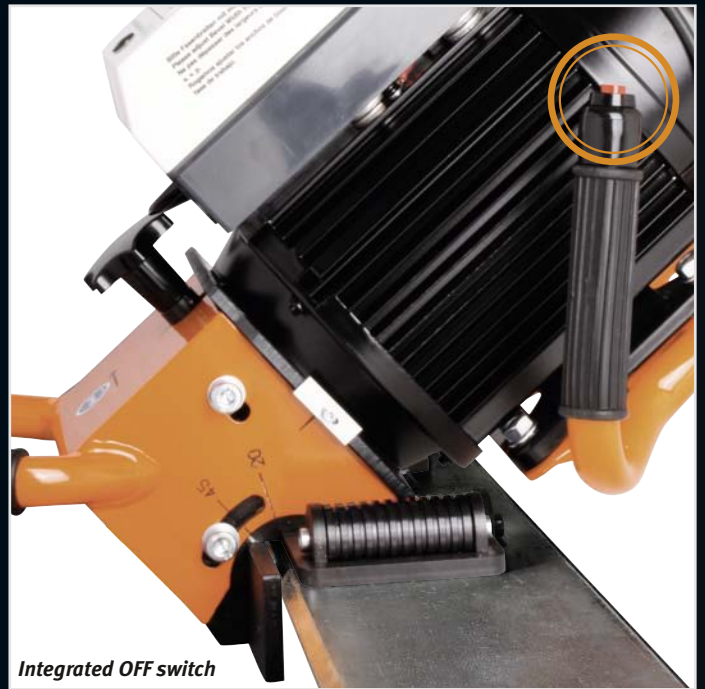
B

ALFRA BEVEL MILLING MACHINE – SKF 63-15



Made in Germany by ALFRA • For bevel widths up to maximum 15 mm and with continuously variable angle adjustment 15 - 60°

- The ALFRA bevel milling machine was specially developed for weld preparation and for milling metallic materials.
- Universally applicable in construction areas thanks to its light weight and direct use on the work piece.
- Designed for one-man operation, the machine is placed on a 90° angle on the work piece, a light downward pressure applied, and guided along manually.
- The design of this side milling cutter, which uses commercially available inserts and a rotation speed of 2.870 rpm, guarantees chatter-free, uniform bevel milling.
- The roller guide rails are made of hardened steel and guarantee excellent feed rates.
- Simple, safe operation with overload protection and restart interlock.
- OFF switch integrated into the right-side hand grip (illustration).
- Pipes from Ø 160 mm to 390 mm can be externally milled by means of an additional device.
- Optional device for larger pipes, Ø of 1.000 - 1.500 - 2.000 mm upon request.



Integrated OFF switch

Technical specifications:

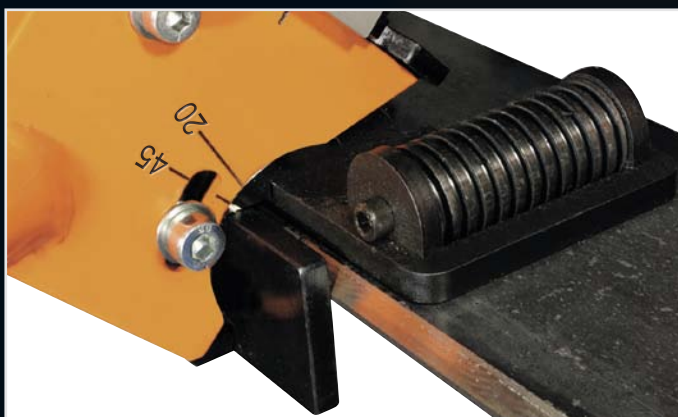
Motor voltage:	230 V 50Hz; 230 V 60Hz; 110V 50Hz; 110V 60Hz
Rating:	1.100 Watt
Speed:	2.870 min ⁻¹
Bevel width:	15 mm max.
Bevel angle:	15 - 20 - 30 - 45 - 60° adjustable
Weight:	21 kg
Dimensions (L x W x H):	440 x 200 x 280 mm

Scope of Supply:

- Deburring unit SKF 63-15
- 1 Set of operating tools
- Operating manual
- Carrying case



2 milling disks together with 6 inserts each



Prod.-No.

Bevel milling machine SKF 63-15	230V 50Hz	25010
Bevel milling machine SKF 63-15	230V 60Hz	25010.230-60Hz
Bevel milling machine SKF 63-15	110V 50Hz	25010.110-50Hz
Bevel milling machine SKF 63-15	110V 60Hz	25010.110-60Hz

Options:

SKF 63/15 with reduced RPM of 1.400 rpm for use on stainless steel available upon request.

Optional accessories:

Tube insert for processing tube outer bevelling from Ø 160 mm to 390 mm	25014
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Optional device for larger Ø up to 1.000 - 1.500 - 2.000 mm upon request.

Replacement parts:

Replacement milling head	25011
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Consisting of: 2 milling disks and 6 high-speed inserts

Replacement milling disks, individual, with no insert	25012
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Carbide insert, TiAlN/TiN-PVD multi-layer coating	25013
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Universal for steel and inox, clearance angle 11°

Carbide insert, TiAlN/TiN-PVD multi-layer coating	25010.15036B
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For steel < 850 N/mm²; inox < 900 N/mm², clearance angle 20°

Carbide insert, TiAlN/TiN-PVD multi-layer coating	25010.15036E
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For steel < 1400 N/mm²; inox < 900 N/mm², clearance angle 11°

Auxiliary assembly device	25019
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For equipping the milling disks with inserts.



ALFRA AUTOMATIC WELD EDGE SHEARING MACHINE

SKS-15 AUTO



B

ALFRA AUTOMATIC WELD EDGE SHEARING MACHINE

SKS-15 AUTO



For producing weld edges in mechanical engineering, boilers, apparatus, ship-building, welding technology teaching, container construction, etc.

In the development of our machines we are guided by our many years of practical experience. Many details come more or less straight from the user.

The result is a transportable, compact and extremely powerful weld edge shearing machine with a bevel width capacity of up to 15 mm and a continuously adjustable milling angle of 15° - 50°.

The weld is prepared by shearing the material using a shearing blade. The unit's operating principle is very efficient, and it runs smoothly and silently.

Universally applicable:

- Stationary or self-feeding on long steel plates. The machine works by itself along the edge of the work piece.
- The following are required for this: Crane attachment or running, mobile lifting table XT (optional).
- For steel with a tensile strength of approx. 370 N/mm² up to 520 N/mm² - also for stainless steel and aluminium. As the tensile strength of the material to be processed increases, the bevel width must be reduced, and/or the final "target bevel width" must if necessary be created in multiple steps.

Technical specifications:

Maximum bevel width:	0.5 to 15 mm for S235, the maximum bevel width of 8 mm should not be exceeded in any single work step
Feed:	approx. 3 m/min.
Bevel angle:	15° - 50°, continuously adjustable
Material thickness:	min. 6 mm to max. 40 mm
Minimum material width:	70 mm With hand wheel for material thickness Rapidly adjustable
Minimum material length:	150 mm
Shearing blade:	regrindable
Lifespan of shearing blade:	approx. 1.500 - 2.000 m with 5x regrinding and grinding removal of approx. 7/10 (S235 and 8 mm bevel width)
Motor power:	220/380 V / 50/60 Hz / 1500 Watt, 2800 min ⁻¹ dust-protected, EC-compliant
Electric:	L = 450 mm, W = 400 mm, H = 820 mm
Dimensions:	88 kg
Weight:	The data given above is dependent on the material being processed, and the bevel width.

Scope of Supply:

- SKS-15 Auto, 220/380 V, ready to use, with
- 1 shearing blade, Eco quality
- 1 wrench for angle adjustments
- 1 stripping tool for blade replacement
- 1 set of spacer disks * 0.5, 1.0, 2.0 mm
- Operating manual
- * The mass removed during regrinding must be compensated for using appropriate spacer disks.

Prod.-No.

SKS-15 AUTO, 220/380 V 25950

Accessories:

XT Mobile lift table, swivelling 180° 25960

- Unevenness is compensated for by "floating" mounting.
- Access to the underside also when the floor height is very small, but extremely wide height adjustment range.
- 180° adjustable for topside/underside grinding in two passes.
- Simple height levelling
- Manual control for machine operation during overhead milling.

Remote control - only for older models! 25961

Complete with cable and connector, including box)

Shearing blades

Shearing blades, premium quality 25951

Serrated, HSS steel, coated
Ø = 100 mm, e = 29 mm

Shearing blades, Eco quality 25952

Serrated, HSS steel
Ø = 100 mm, e = 29 mm

Shearing blades for other brands

Shearing blades, suitable for 25954

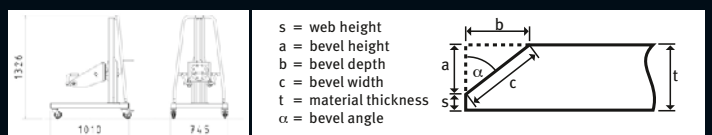
CEVISA (CHP6, CH-12, CHP12G)

GBC (CHALLENGE 15)

GERIMA (MSA200, MSA400)

Serrated, Ø 93.2 mm (D)

Blade thickness = 20 mm (E)





ALFRA HSS BI-METAL

HOLE SAWS

Features:

- M42
- High concentricity
- With solid base plate, thus more threads and higher stability as well as concentric running exactness.
- For material from 2 mm – with positive chipping and cutting angles as well as combi-toothing 4/6 tpi. This variable spacing provides a more even cut, for a minor generation of vibrations and heat. Lower expenditure of energy when cutting.
- Cutting Depth: 38 mm (1-1/2").
- Lateral slots help to remove the core.
- Suitable for unalloyed steel (up to 700 N/mm²), nonferrous metals, light metals, plastics, gypsum, pulp wood- and plywood boards, lightweight building boards and general wood processing.
- Drill bit exchangeable with other commercially available arbors.





B



Also steel/stainless steel up to approx. 3 mm, can be worked easily (for frequent use, we recommend our TCT Hole Saws).



... designed to work on softwoods.



ALFRA – HSS-BI-METAL HOLE SAWS

ALFRA HSS-Bi-Metal Hole Saws are applicable in portable and pillar drilling machines. When using pillar drilling machines, use manual feed only.

Features:

- M42
- High concentricity.
- With solid base plate, thus more threads and higher stability as well as concentric running exactness.
- With positive chipping and cutting angles as well as combi-toothing 4/6 tpi. This variable spacing provides a more even cut, for a minor generation of vibrations and heat. Lower expenditure of energy when cutting.
- Cutting Depth: 38 mm (1-1/2").
- Lateral slots help to remove the core.
- Suitable for unalloyed steel (up to 700 N/mm²), nonferrous metals, light metals, plastics, gypsum, pulp wood- and plywood boards, lightweight building boards and general wood processing.
- Drill bit exchangeable with other commercially available arbors.

Tip:

Start drilling operation with light pressure. Continue with light and steady pressure, avoid pendulum motion, follow the speed chart, use coolant. When cutting wood or wood substitutes, remove drill dust in time.



Combi toothing 4/6 tpi



from Ø 14.0 to 210 mm available

Saw Ø mm	Inches	Prod.-No.
14.0	9/16"	0500014
16.0	5/8"	0500016
17.0	11/16"	0500017
19.0	3/4"	0500019
20.0	15/16"	0500020
21.0	13/16"	0500021
22.0	7/8"	0500022
24.0	15/16"	0500024
25.0	1"	0500025
27.0	11/16"	0500027
29.0	1-1/8"	0500029
30.0	1-3/16"	0500030
32.0	1-1/4"	0500032
33.0	1-5/16"	0500033
35.0	1-3/8"	0500035
37.0	1-7/16"	0500037
38.0	1-1/2"	0500038
40.0	1-9/16"	0500040
41.0	1-5/8"	0500041
43.0	1-11/16"	0500043
44.0	1-3/4"	0500044
46.0	1-13/16"	0500046
48.0	1-7/8"	0500048
51.0	2"	0500051
52.0	2-1/16"	0500052
54.0	2-1/8"	0500054
57.0	2-1/4"	0500057
59.0	2-5/16"	0500059
60.0	2-3/8"	0500060
64.0	2-1/2"	0500064
65.0	2-9/16"	0500065
67.0	2-5/8"	0500067
68.0	2-11/16"	0500068
70.0	2-3/4"	0500070
73.0	2-7/8"	0500073

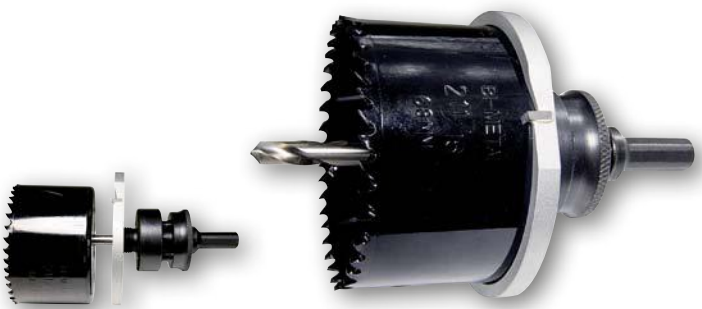




ALFRA - HSS BI-METAL HOLE SAWS



Saw Ø mm	Inches	Prod.-No.
74.0	2-11/12"	0500074
76.0	3"	0500076
79.0	3-1/8"	0500079
83.0	3-1/4"	0500083
86.0	3-3/8"	0500086
89.0	3-1/2"	0500089
92.0	3-5/8"	0500092
95.0	3-3/4"	0500095
98.0	3-7/8"	0500098
102.0	4"	0500102
105.0	4-1/8"	0500105
108.0	4-1/4"	0500108
111.0	4-3/8"	0500111
114.0	4-1/2"	0500114
121.0	4-3/4"	0500121
127.0	5"	0500127
140.0	5-1/2"	0500140
152.0	6"	0500152
From Ø 160.0 mm only suitable for wood and wood substitutes.		
160.0	6-5/16"	0500160
168.0	6-10/16"	0500168
177.0	7"	0500177
210.0	8-5/16"	0500210



Prod.-No. 0501013 with bi-metal hole saw Ø 68 mm + A2-SS

Arbors

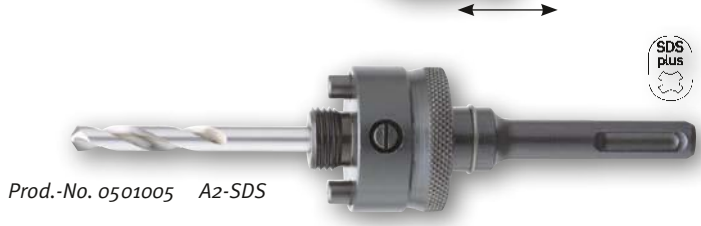
with pilot drill

Saw-Ø mm	Saw-Ø inch	Type	Shank-Ø	Prod.-No.
14 - 30	9/16 - 1 3/16	A 6-SS	9.5 hexagon	0501001
14 - 30	9/16 - 1 3/16	A 6-SDS	SDS	0501002
32 - 152	1 1/4 - 6	A 2-SS	9.5 hexagon	0501003
32 - 152	1 1/4 - 6	A 2-SDS	SDS	0501005
32 - 210	1 1/4 - 8 5/16	A 3-SS	11.11 hexagon	0501006
32 - 210	1 1/4 - 8 5/16	A 5-SS	16.0 hexagon	0501008

Accessories:

Rim countersink for Ø 68 mm (with TCT-teeth)	0501013
Extension shaft 300 mm x 9.5 mm for A 6-SS + A 2-SS, A3-SS	0501010
Spare Center Drill HSS Ø 6.35 mm x 80 mm for A 6-SS + A 6-SDS + A 2-SS + A 2-SDS + A 3-SS + A 5-SS	0502001
Ejector Spring	0502004

Important: Disable impact drill position when using SDS-shanks!



B



ALFRA – HSS BI-METAL HOLE SAW SETS

The following HSS-Bi-Metal Hole Saw Sets enlarge our range. These sets were especially compiled for electricians, mechanics, plumbers and for general, universal applications. These sets improve the presentation. Storage in solid tool cases.

Hole Saw Set Standard

Prod.-No.

0503006

Contents:

- Ø 16 mm ($\frac{5}{8}$ "
- Ø 19 mm ($\frac{3}{4}$ "
- Ø 22 mm ($\frac{7}{8}$ "
- Ø 29 mm ($1 \frac{1}{8}$ "
- Ø 35 mm ($1 \frac{3}{8}$ "
- Ø 44 mm ($1 \frac{3}{4}$ "
- Ø 52 mm ($2 \frac{1}{16}$ "
- Ø 57 mm ($2 \frac{1}{4}$ "
- Ø 67 mm ($2 \frac{5}{8}$ "

Arbor A6-SS, Arbor A2-SS, Spare Twist Drill



Prod.-No. 0503006

Hole Saw Set Professional

Prod.-No.

0503007

Contents:

- Ø 16 mm ($\frac{5}{8}$ "
- Ø 19 mm ($\frac{3}{4}$ "
- Ø 22 mm ($\frac{7}{8}$ "
- Ø 25 mm (1")
- Ø 29 mm ($1 \frac{1}{8}$ "
- Ø 32 mm ($1 \frac{1}{4}$ "
- Ø 35 mm ($1 \frac{3}{8}$ "
- Ø 38 mm ($1 \frac{1}{2}$ "
- Ø 44 mm ($1 \frac{3}{4}$ "
- Ø 51 mm (2")
- Ø 64 mm ($2 \frac{1}{2}$ "
- Ø 76 mm (3")

Arbor A6-SS, Arbor A2-SS, Spare Twist Drill



Prod.-No. 0503007

Hole Saw Set Electro

Prod.-No.

0503008

Contents:

- Ø 22 mm ($\frac{7}{8}$ "
- Ø 29 mm ($1 \frac{1}{8}$ "
- Ø 35 mm ($1 \frac{3}{8}$ "
- Ø 44 mm ($1 \frac{3}{4}$ "
- Ø 51 mm (2")
- Ø 64 mm ($2 \frac{1}{2}$ "
- Ø 68 mm ($2 \frac{11}{16}$ "

Arbor A6-SS, Arbor A2-SS, Spare Twist Drill



Prod.-No. 0503008

Hole Saw Set Sanitary

Prod.-No.

0503009

Contents:

- Ø 16 mm ($\frac{5}{8}$ "
- Ø 19 mm ($\frac{3}{4}$ "
- Ø 24 mm ($\frac{15}{16}$ "
- Ø 29 mm ($1 \frac{1}{8}$ "
- Ø 38 mm ($1 \frac{1}{2}$ "
- Ø 44 mm ($1 \frac{3}{4}$ "
- Ø 57 mm ($2 \frac{1}{4}$ "
- Ø 67 mm ($2 \frac{5}{8}$ "

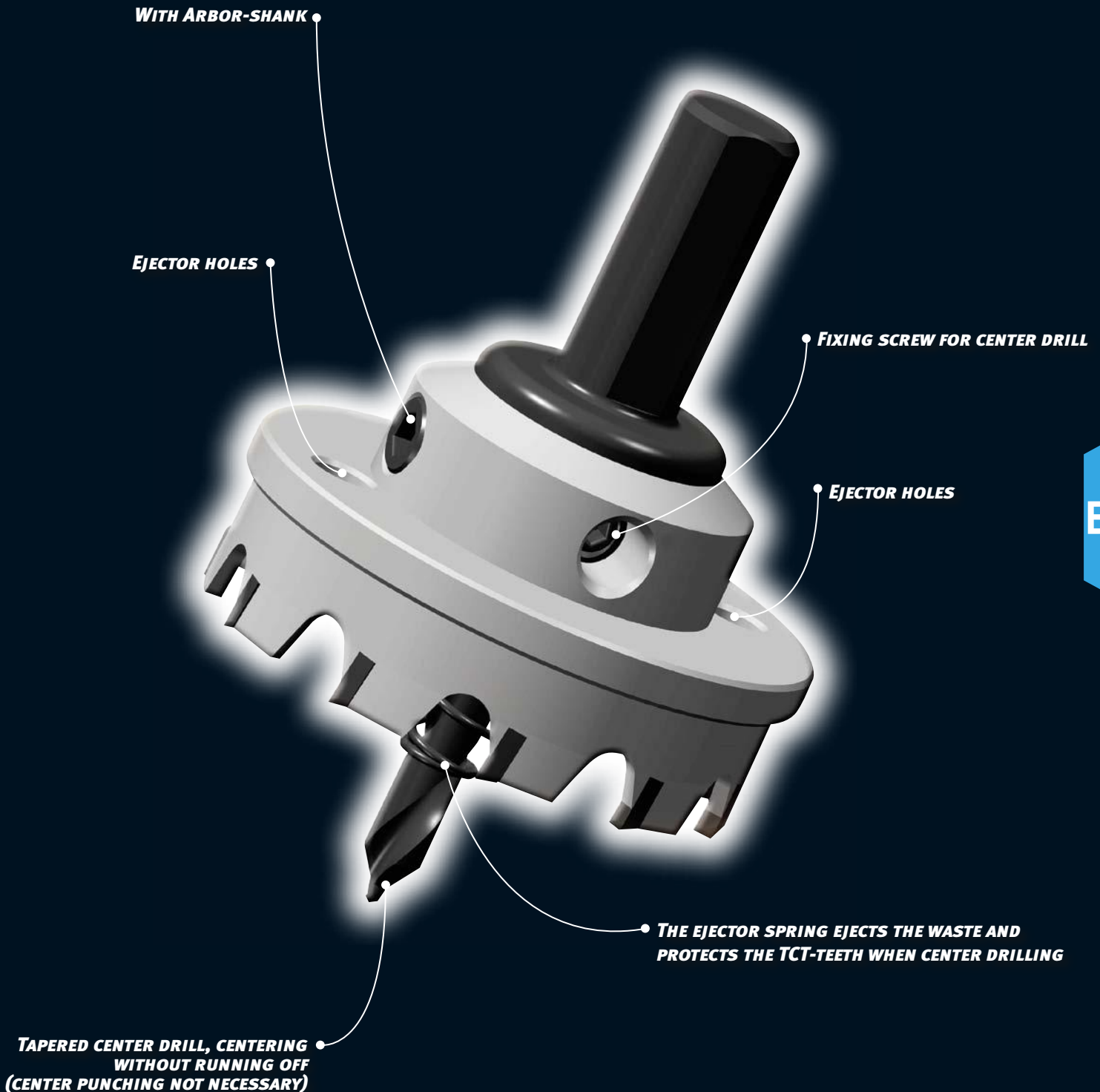
Arbor A6-SS, Arbor A2-SS, Spare Twist Drill



Prod.-No. 0503009

ALFRA HOLE SAWS

The quality is in the detail



B



TCT-HOLE SAWS IN USE



TCT-Hole Saws – short-/long type



Stainless steel



Plastic



Poroton brick stone



TCT-Hole Saws – FRP type



TCT-Hole Saws – MBS type



Sanitary pipes – type SML



*MBS Pro
Use on Rotabest Magnetic Drilling Machine
with MT3 – Arbor Prod.-No.: 0734003*



Checker plate (stainless steel)

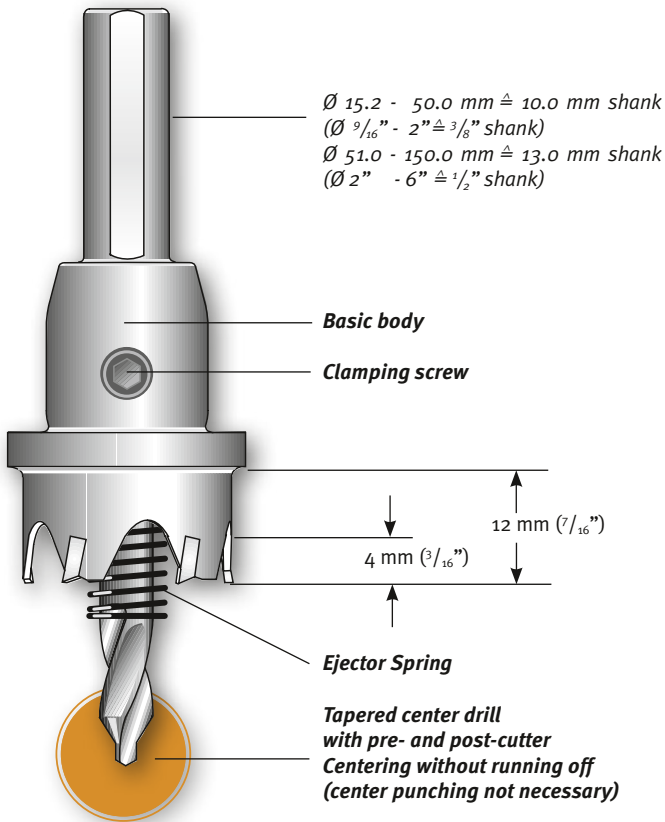


Sanitary pipes – type SML



ALFRA TGT-HOLE SAWS – SHORT TYPE

Made in Germany by ALFRA



The application area of TCT Hole Saws differs from HSS-Bi-Metal Hole Saws. With ALFRA TCT Hole Saws, suitable to economically process stainless steel up to 2 mm (1/16"), unalloyed steels up to 4 mm (3/16"), plastics, PVC, aluminium, zinc, gypsum plaster boards and lightweight building boards, as well as asbestos. Do not use automatic feed, when working with pillar drilling machines. For the use on portable- and pillar drilling machines. Do not use automatic feed, when working with pillar drilling machines.

Features:

- High concentric running exactness through solid construction.
- CAD-optimized cutting angles with specially ground section ensures high cutting capacity and long tool life.
- Quick removal of drilled core through ejector spring for all hole saws up to 150 mm (5-29/32") \varnothing .
- Carbide tipping enables repeated re-grinding.
- ALFRA hole saws are repairable. In the event of a tooth breaking, it can easily be replaced and resharpened.
- Exchangeable center pin.
- Use of MT tool holders from $\varnothing 31 \text{ mm}$ (1-7/32").
- For use on hand drilling machines (recommended up to max. $\varnothing 40 \text{ mm}$; 1-9/16") or stationary machines.

Tips:

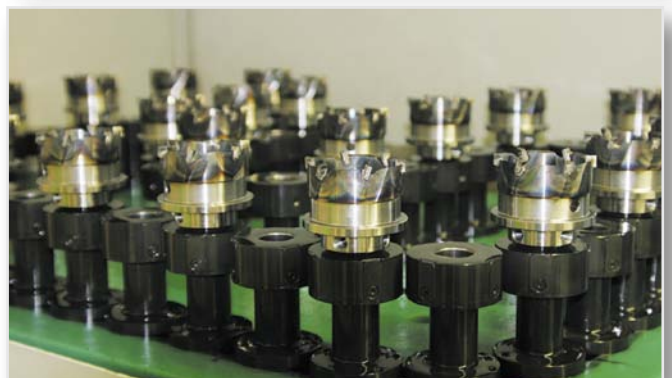
- At thicker materials: cut 2-3 mm per cutting process, remove chips afterwards.
- When cutting metals, a high- grade cutting oil should be used. Exception: Do not use cutting oil when using cast iron, use paraffin instead of oil when cutting aluminium.
- **Keep in mind: Always wear safety goggles.**

Another special technical feature:

From $\varnothing 15.2 \text{ mm}$ (3/16") to 30.0 mm (1 1/8"), the hole saw is made of one piece.

From $\varnothing 31.0 \text{ mm}$ (1-3/16") we use specially hardened tool holders to compensate for the torsional power in case of heavy operation, which avoids early shearing off of the tool holder shank.

In terms of construction not comparable with any other make.





ALFRA TGT-HOLE SAWS - SHORT TYPE

Made in Germany by ALFRA



Ø mm	Ø Inches	No. of teeth	Prod.-No. mm
Ø 15.2	15	4	0600152
Ø 16.0	5/8"	4	0600160
Ø 17.0		4	0600170
Ø 18.0	11/16"	4	0600180
Ø 18.6		4	0600186
Ø 19.0	3/4"	4	0600190
Ø 20.0		5	0600200
Ø 20.4		5	0600204
Ø 21.0	13/16"	5	0600210
Ø 22.0		5	0600220
Ø 22.5		5	0600225
Ø 23.0	7/8"	5	0600230
Ø 24.0	15/16"	5	0600240
Ø 25.0		5	0600250
Ø 26.0	1"	5	0600260
Ø 27.0	1-1/16"	5	0600270
Ø 28.0		5	0600280
Ø 28.3		5	0600283
Ø 29.0	1-1/8"	5	0600290
Ø 30.0	1-3/16"	5	0600300
Ø 31.0		6	0600310
Ø 32.0	1-1/4"	6	0600320
Ø 33.0		6	0600330
Ø 34.0	1-5/16"	6	0600340
Ø 35.0	1-3/8"	6	0600350
Ø 36.0		6	0600360
Ø 37.0	1-7/16"	7	0600370
Ø 38.0		7	0600380
Ø 39.0	1-1/2"	7	0600390
Ø 40.0	1-9/16"	7	0600400
Ø 41.0		8	0600410
Ø 42.0	1-5/8"	8	0600420
Ø 43.0	1-11/16"	8	0600430
Ø 44.0		8	0600440
Ø 45.0	1-3/4"	8	0600450
Ø 46.0		8	0600460
Ø 47.0	1-13/16"	9	0600470
Ø 48.0	1-7/8"	9	0600480
Ø 49.0		9	0600490
Ø 50.0	1-15/16"	9	0600500
Ø 51.0	2"	9	0600510
Ø 52.0		10	0600520
Ø 53.0	2-1/16"	10	0600530
Ø 54.0	2-1/8"	10	0600540
Ø 55.0		10	0600550
Ø 56.0	2-3/16"	10	0600560
Ø 57.0	2-1/4"	10	0600570
Ø 58.0		10	0600580
Ø 59.0	2-5/16"	10	0600590
Ø 60.0	2-3/8"	10	0600600
Ø 61.0		11	0600610
Ø 62.0	2-7/16"	11	0600620
Ø 63.0		11	0600630
Ø 64.0	2-1/2"	11	0600640
Ø 65.0		11	0600650
Ø 66.0	2-9/16"	12	0600660
Ø 67.0	2-5/8"	12	0600670
Ø 68.0		12	0600680
Ø 69.0	2-11/16"	12	0600690
Ø 70.0	2-3/4"	12	0600700
Ø 71.0		12	0600710
Ø 72.0	2-13/16"	13	0600720
Ø 73.0	2-7/8"	13	0600730
Ø 74.0	2-15/16"	13	0600740
Ø 75.0		13	0600750
Ø 76.0	3"	13	0600760

Ø mm	Ø Inches	No. of teeth	Prod.-No. mm
Ø 77.0		13	0600770
Ø 78.0	3-1/16"	14	0600780
Ø 79.0	3-1/8"	14	0600790
Ø 80.0		14	0600800
Ø 81.0	3-3/16"	14	0600810
Ø 82.0		14	0600820
Ø 83.0	3-1/4"	14	0600830
Ø 84.0	3-5/16"	15	0600840
Ø 85.0		15	0600850
Ø 86.0	3-3/8"	15	0600860
Ø 87.0	3-7/16"	15	0600870
Ø 88.0		15	0600880
Ø 89.0	3-1/2"	16	0600890
Ø 90.0	3-9/16"	16	0600900
Ø 91.0		16	0600910
Ø 92.0	3-5/8"	16	0600920
Ø 93.0		16	0600930
Ø 94.0	3-11/16"	16	0600940
Ø 95.0	3-3/4"	17	0600950
Ø 96.0		17	0600960
Ø 97.0	3-13/16"	17	0600970
Ø 98.0	3-7/8"	17	0600980
Ø 99.0		17	0600990
Ø 100.0	3-15/16"	17	0601000
Ø 105.0	4"	18	0601050
Ø 110.0		18	0601100
Ø 115.0	4-1/2"	20	0601150
Ø 120.0		20	0601200
Ø 125.0		20	0601250
Ø 130.0	5"	20	0601300
Ø 135.0		24	0601350
Ø 140.0	5-1/2"	24	0601400
Ø 145.0		24	0601450
Ø 150.0		24	0601500

HSS-Spare Drill with tapered center tip

from Ø 15.2 - 100.0	Ø 6x50 mm	0602650
from Ø 101.0 - 150.0	Ø 8x50 mm	0602850

MT Arbors

MT-2 (Ø 31.0 - 100.0 mm)	0734002
MT-3 (Ø 31.0 - 150.0 mm)	0734003

SDS Arbor

SDS arbor shank (for use with Ø 31.0 - 100.0 mm)	060sds6
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Spare Ejector

from Ø 15.2 - 150.0	Ø 6 mm	0602006
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Coolant ALFRA

ALFRA BIO 2000 For mild steel DIN S233, 405 ml	21010
ALFRA 3000 For chromium nickel steel 520 ml	21030
ALFRA 4000 For titanium and manganese-carbon steels 300 ml	21040



Prod.-No. 0600001

Set Metric

Set Metric

Prod.-No.
0600001

Contents:

1 each of Ø 16/20/25/32/40 mm
2 Allen Keys



Prod.-No. 21010

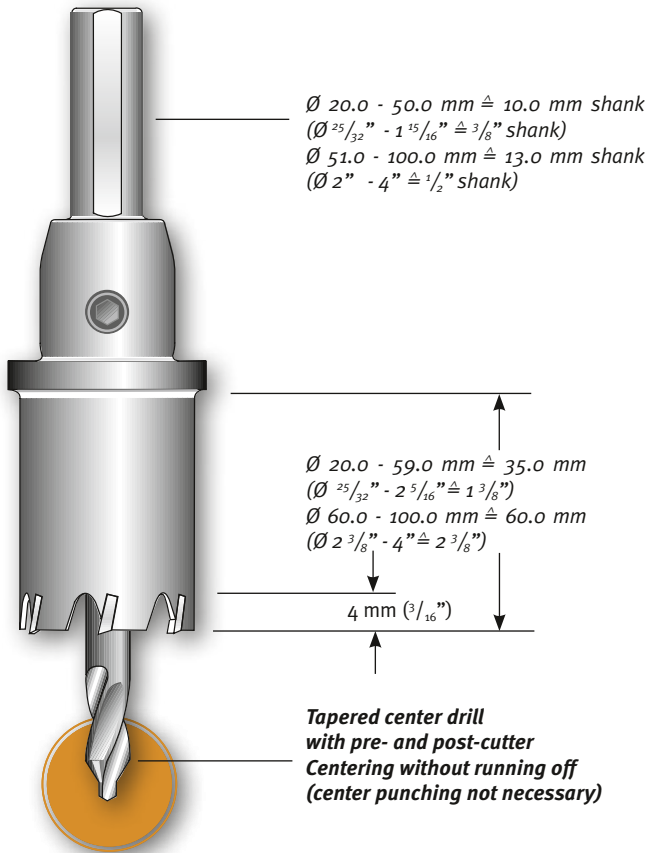
Prod.-No. 21030

Prod.-No. 21040



ALFRA TGT-HOLE SAWS – LONG TYPE

Made in Germany by ALFRA



stainless steel

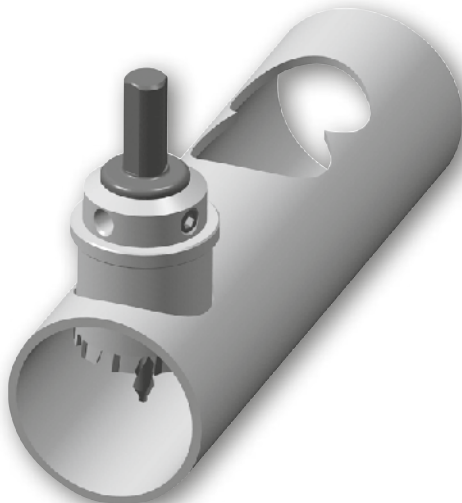


Features:

- Especially developed for the use on pipes, vaulted materials, for unalloyed and alloyed steels, nonferrous metals, plastics as well as glass fibre reinforced plastic.
- For material thickness up to 4 mm ($\frac{3}{16}''$), 2 mm ($\frac{1}{16}''$) stainless steel.
- For use on hand drilling machines, recommended up to max. $\varnothing 40 \text{ mm}$ ($1\text{-}9/16''$) or stationary machines.

Tips:

- Start drilling operation with light pressure, when drilling pipes. Avoid pendulum motions.
- Keep in mind: Always wear safety goggles.



Special tools for special applications on request!



ALFRA TGT-HOLE SAWS – LONG TYPE



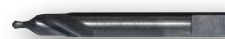
Made in Germany by ALFRA

Ø mm	Ø Inches	No. of teeth	Prod.-No. mm
Ø 16.0	5/8"	4	0700160
Ø 17.0		4	0700170
Ø 18.0	11/16"	4	0700180
Ø 19.0	3/4"	4	0700190
Ø 20.0		5	0700200
Ø 21.0	13/16"	5	0700210
Ø 22.0		5	0700220
Ø 23.0	7/8"	5	0700230
Ø 24.0	15/16"	6	0700240
Ø 25.0		6	0700250
Ø 26.0	1"	6	0700260
Ø 27.0	1-1/16"	6	0700270
Ø 28.0		6	0700280
Ø 29.0	1-1/8"	6	0700290
Ø 30.0	1-3/16"	6	0700300
Ø 31.0		8	0700310
Ø 32.0	1-1/4"	8	0700320
Ø 33.0		8	0700330
Ø 34.0	1-5/16"	8	0700340
Ø 35.0	1-3/8"	8	0700350
Ø 36.0		8	0700360
Ø 37.0	1-7/16"	8	0700370
Ø 38.0		8	0700380
Ø 39.0	1-1/2"	8	0700390
Ø 40.0	1-9/16"	10	0700400
Ø 41.0		10	0700410
Ø 42.0	1-5/8"	10	0700420
Ø 43.0	1-11/16"	10	0700430
Ø 44.0		10	0700440
Ø 45.0	1-3/4"	10	0700450
Ø 46.0		10	0700460
Ø 47.0	1-13/16"	10	0700470
Ø 48.0	1-7/8"	10	0700480
Ø 49.0		10	0700490
Ø 50.0	1-15/16"	12	0700500
Ø 51.0	2"	12	0700510
Ø 52.0		12	0700520
Ø 53.0	2-1/16"	12	0700530

Ø mm	Ø Inches	No. of teeth	Prod.-No. mm
Ø 54.0	2-1/8"	12	0700540
Ø 55.0		12	0700550
Ø 56.0	2-3/16"	12	0700560
Ø 57.0	2-1/4"	12	0700570
Ø 58.0		12	0700580
Ø 59.0	2-5/16"	12	0700590
Ø 60.0	2-3/8"	14	0700600
Ø 61.0		14	0700610
Ø 62.0	2-7/16"	14	0700620
Ø 63.0		14	0700630
Ø 64.0	2-1/2"	14	0700640
Ø 65.0		14	0700650
Ø 66.0	2-9/16"	14	0700660
Ø 67.0	2-5/8"	16	0700670
Ø 68.0		16	0700680
Ø 69.0	2-11/16"	16	0700690
Ø 70.0	2-3/4"	16	0700700
Ø 71.0		16	0700710
Ø 72.0	2-13/16"	16	0700720
Ø 73.0	2-7/8"	16	0700730
Ø 74.0	2-15/16"	16	0700740
Ø 75.0		16	0700750
Ø 76.0	3"	18	0700760
Ø 77.0		18	0700770
Ø 78.0	3-1/16"	18	0700780
Ø 79.0	3-1/8"	18	0700790
Ø 80.0		18	0700800
Ø 81.0	3-3/16"	18	0700810
Ø 82.0		18	0700820
Ø 83.0	3-1/4"	18	0700830
Ø 84.0	3-5/16"	20	0700840
Ø 85.0		20	0700850
Ø 86.0	3-3/8"	20	0700860
Ø 87.0	3-7/16"	20	0700870
Ø 88.0		20	0700880
Ø 89.0	3-1/2"	20	0700890
Ø 90.0	3-9/16"	20	0700900
Ø 91.0		20	0700910

Ø mm	Ø Inches	No. of teeth	Prod.-No. mm
Ø 92.0	3-5/8"	20	0700920
Ø 93.0		20	0700930
Ø 94.0	3-11/16"	22	0700940
Ø 95.0	3-3/4"	22	0700950
Ø 96.0		22	0700960
Ø 97.0	3-13/16"	22	0700970
Ø 98.0	3-7/8"	22	0700980
Ø 99.0		22	0700990
Ø 100.0	3-15/16"	22	0701000

HSS-Spare Drill with tapered center tip



von Ø 20.0 - 59.0	Ø 6x80 mm	0702680
von Ø 60.0 - 100.0	Ø 8x100 mm	0702800

MT Arbors



MT-2 (ab Ø 31.0)	0734002
MT-3 (ab Ø 31.0)	0734003

SDS Arbor



SDS arbor shank (for use with Ø 31 - 59 mm)	060sds6
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HIGHLY RECOMMENDED ACCESSORIES – COOLANT AND LUBRICANT!

ALFRA 2000

ALFRA 2000 is a fully synthetic cutting oil, developed for high-quality cutting, threading and drilling of metals of any degree of hardness, ferrous metal, steel alloys, stainless steel, copper, aluminium and their alloys.

ALFRA BIO 2000 is free of hydrocarbon, sulphur and chlorine.



ALFRA 3000

Universal metal working oil free of chlorine. High-performance drilling, broaching and cutting fluid, petroleum-based, for moderately difficult and difficult to cut steels. With a high proportion of active ingredients to ensure optimum cutting performance and significantly reduced tool wear. It meets occupational health and safety requirements.

We recommend to use ALFRA 3000 especially for the drilling and threading of high-alloy steel and chrome nickel steel.



ALFRA 4000

Suitable for core drilling applications with ALFRA cutters. Also ideal for twist drilling, thread tapping, reaming, countersinking, and difficult cutting applications. It meets to the requirements of work hygiene and safety.

ALFRA 4000 is a pump spray, free from propellant gas ideal for drilling and tapping of high-alloy, stainless steels; chromium nickel steels; titanium and manganese-carbon steels



	Prod.-No.
Aerosol can 405 ml	21010
5 ltr. Plastic container	21012
60 ltr. Barrel	21021

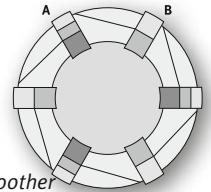
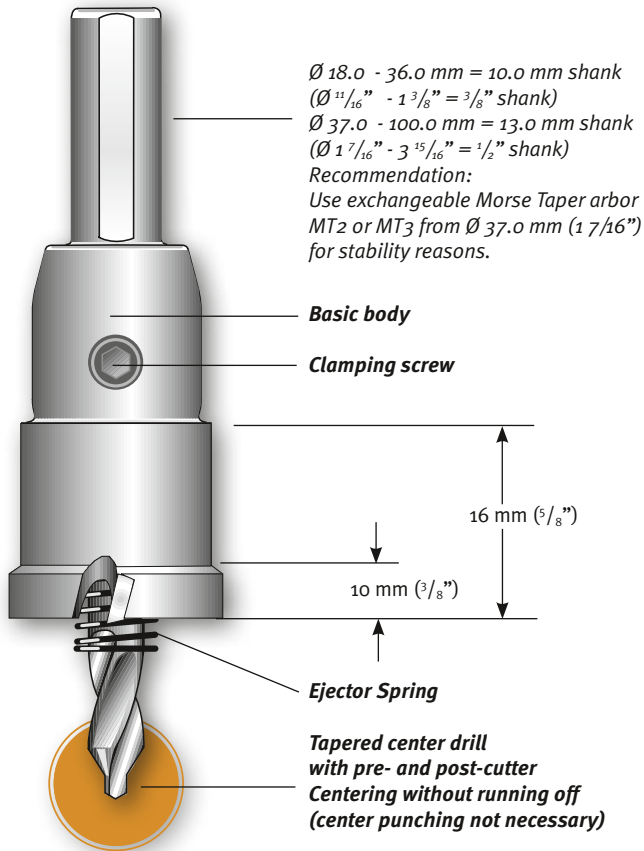
	Prod.-No.
Aerosol can 520 ml	21030
5 ltr. Plastic container	21031
60 ltr. Barrel	21032

	Prod.-No.
Aerosol can 300 ml	21040



ALFRA TGT-HOLE SAWS – MBS-LIGHT

The TCT Multirange Hole Saw • Registered Utility Model No. 202 03 232 9 • Made in Germany by ALFRA



Cutting geometries
 Variable teeth, less
 Vibration, longer tool life, smoother
 cutting.

MBS – for almost limitless use

This TCT Hole Saw is a multi-range Hole Saw for the universal use up to a material thickness of max. 10 mm (3/8") (without ejector spring). Through its solid construction and an enhanced cutting geometry (Registered Utility Model No. 202 03 232 9), an improved cutting behaviour combined with a high cutting capacity and tool life, is achieved.

For the use on flat steel, as well as on pipes and vaulted materials. Cutting of overlapping holes is possible.

For use on stationary and hand drilling machines (recommended up to max. $\varnothing 40 \text{ mm}$; 1 9/16").

- **Portable drilling Machines:** up to 4 mm (1/8") material thickness
- **Stationary drilling Machines:** up to 10 mm (3/8") material thickness (for material thickness over 6 mm (15/64"), it is necessary to settle and empty the chips several times).

In case of heavy operation, we recommend Morse Taper Tool Holders, which are suitable from $\varnothing 37 \text{ mm}$ (1 7/16").

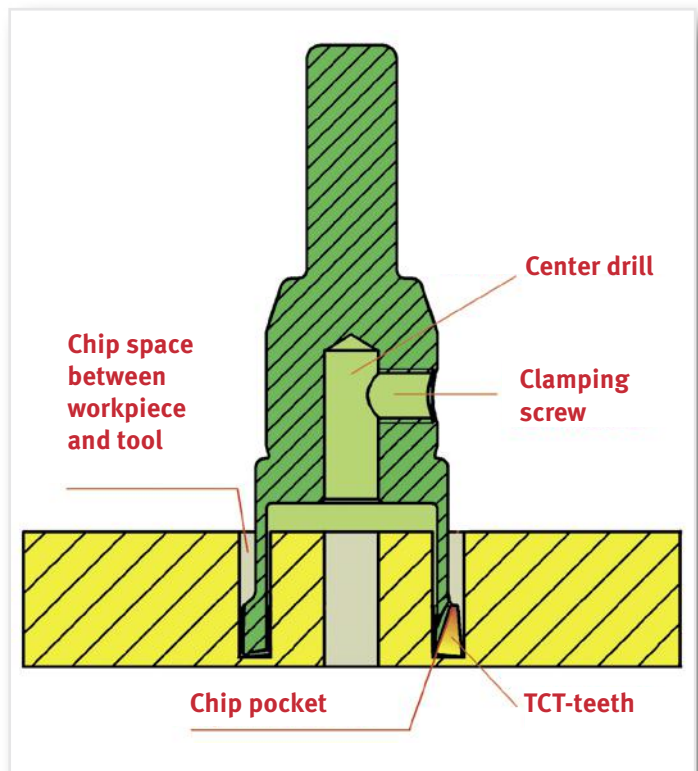
Advantage: All MBS-Light type TCT Hole Saws are equipped with an ejector spring.

The cut material is self-ejecting. The cut material is self-ejecting.

Another special technical feature:

From $\varnothing 37 \text{ mm}$ (1 7/16"), specially hardened tool holders are used to compensate for the torsional power in case of heavy operation which avoids early shearing off of the tool holder shank.

In terms of construction not comparable with any other make.





ALFRA TGT-HOLE SAWS – MBS-LIGHT



The TCT Multirange Hole Saw • Registered Utility Model No. 202 03 232 9 • Made in Germany by ALFRA

Ø mm	Ø Inches	No. of teeth	Prod.-No. mm
Ø 18.0	11/16"	6	0730018
Ø 19.0	3/4"	6	0730019
Ø 20.0		6	0730020
Ø 21.0	13/16"	6	0730021
Ø 22.0		6	0730022
Ø 23.0	7/8"	6	0730023
Ø 24.0	15/16"	6	0730024
Ø 25.0		6	0730025
Ø 26.0	1"	6	0730026
Ø 27.0	1-1/16"	6	0730027
Ø 28.0		6	0730028
Ø 29.0	1-1/8"	6	0730029
Ø 30.0	1-3/16"	6	0730030
Ø 31.0		6	0730031
Ø 32.0	1-1/4"	6	0730032
Ø 33.0		6	0730033
Ø 34.0	1-5/16"	6	0730034
Ø 35.0	1-3/8"	6	0730035
Ø 36.0		6	0730036

From Ø 37.0 mm (1-7/16") we recommend the use of MT arbors

Ø 37.0	1-7/16"	6	0730037
Ø 38.0		6	0730038
Ø 39.0	1-1/2"	6	0730039
Ø 40.0	1-9/16"	6	0730040
Ø 41.0		6	0730041
Ø 42.0	1-5/8"	6	0730042
Ø 43.0	1-11/16"	6	0730043
Ø 44.0		6	0730044
Ø 45.0	1-3/4"	6	0730045
Ø 46.0		6	0730046
Ø 47.0	1-13/16"	6	0730047
Ø 48.0	1-7/8"	6	0730048
Ø 49.0		6	0730049
Ø 50.0	1-15/16"	6	0730050
Ø 51.0	2"	6	0730051
Ø 52.0		6	0730052
Ø 53.0	2-1/16"	6	0730053
Ø 54.0	2-1/8"	6	0730054
Ø 55.0		6	0730055
Ø 56.0	2-3/16"	6	0730056
Ø 57.0	2-1/4"	6	0730057
Ø 58.0		6	0730058
Ø 59.0	2-5/16"	6	0730059
Ø 60.0	2-3/8"	8	0730060
Ø 61.0		8	0730061
Ø 62.0	2-7/16"	8	0730062
Ø 63.0		8	0730063
Ø 64.0	2-1/2"	8	0730064
Ø 65.0		8	0730065
Ø 66.0	2-9/16"	8	0730066
Ø 67.0	2-5/8"	8	0730067
Ø 68.0		8	0730068
Ø 69.0	2-11/16"	8	0730069
Ø 70.0	2-3/4"	8	0730070
Ø 71.0		10	0730071
Ø 72.0	2-13/16"	10	0730072
Ø 73.0	2-7/8"	10	0730073
Ø 74.0	2-15/16"	10	0730074
Ø 75.0		10	0730075
Ø 76.0	3"	10	0730076
Ø 77.0		12	0730077
Ø 78.0	3-1/16"	12	0730078
Ø 79.0	3-1/8"	12	0730079
Ø 80.0		12	0730080
Ø 81.0	3-3/16"	12	0730081

Ø mm	Ø Inches	No. of teeth	Prod.-No. mm
Ø 82.0		12	0730082
Ø 83.0	3-1/4"	12	0730083
Ø 84.0	3-5/16"	12	0730084
Ø 85.0		12	0730085
Ø 86.0	3-3/8"	14	0730086
Ø 87.0	3-7/16"	14	0730087
Ø 88.0		14	0730088
Ø 89.0	3-1/2"	14	0730089
Ø 90.0	3-9/16"	14	0730090
Ø 91.0		14	0730091
Ø 92.0	3-5/8"	14	0730092
Ø 93.0		14	0730093
Ø 94.0	3-11/16"	14	0730094
Ø 95.0	3-3/4"	14	0730095
Ø 96.0		14	0730096
Ø 97.0	3-13/16"	14	0730097
Ø 98.0	3-7/8"	14	0730098
Ø 99.0		14	0730099
Ø 100.0	3-15/16"	14	0730100



Drilling in checker sheet



Drilling in square profiles



Drilling in flat steel



Drilling in pipes

HSS-Spare Drill

with tapered center tip

from Ø 18.0 - 60.0	Ø 6x50 mm	0602650
from Ø 61.0 - 100.0	Ø 8x50 mm	0602850

(old design)

MT Arbors



MT-2 (Ø 31.0 - 100.0 mm)	0734002
MT-3 (Ø 31.0 - 150.0 mm)	0734003

Weldon adaptor



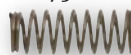
from Ø 37.0 mm	060WD
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(inc. ejector pin Prod. No. 1950500)

Spare Ejector

For tapered center drill

from Ø 18.0 - 100.0 mm Ø 6 mm	0732006
from Ø 61.0 - 100.0 mm Ø 8 mm	0732008

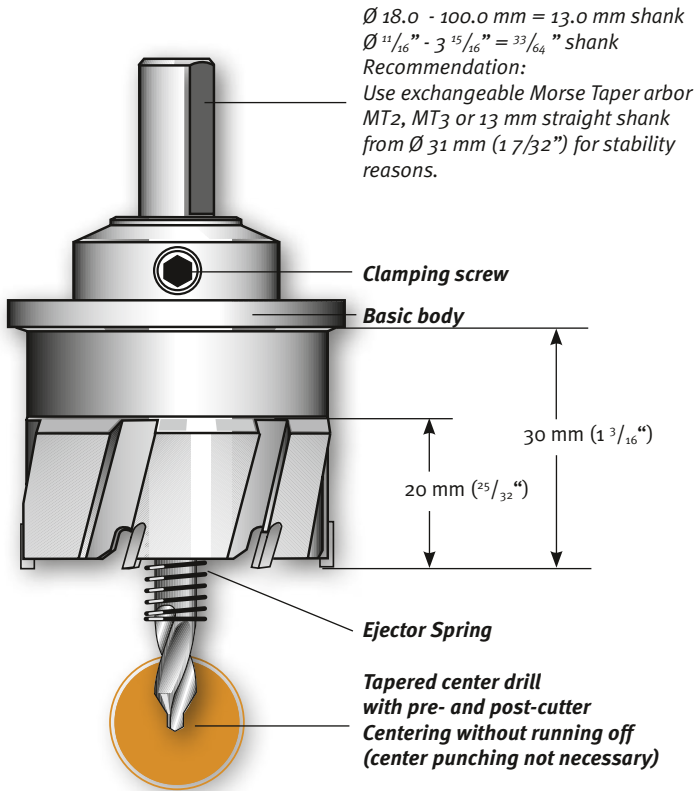


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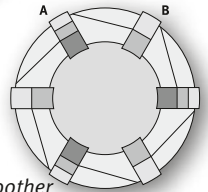


ALFRA TCT-HOLE SAWS – MBS-PRO

The TCT Multi-Range Hole Saw • Made in Germany by ALFRA



Cutting geometries
 Variable teeth, less
 Vibration, longer tool life, smoother
 cutting.



MBS-Multirange Hole Saws for universal use. **Max. cutting depth 20 mm** ($25/32"$)

Suitable for flat materials but also for pipes and curved surfaces. Cutting of overlapping holes is possible. CAD optimized precision tools with high cutting performance and durability.

For use on stationary and portable drilling machines (recommended up to max. $\varnothing 40 \text{ mm}$; $1 9/16"$)

- **Portable drilling Machines:** up to 6 mm ($15/64"$) material thickness
- **Stationary drilling Machines:** up to 20 mm ($25/32"$) material thickness at cutting depths from 6 mm ($15/64"$) we recommend clearing the chips.

MBS hole saws can be resharpened, and it is possible to replace broken out teeth depending on the condition of the hole saw.

Advantages: All Alfra TCT Hole Saws MBS-Pro type are equipped with an ejector spring.

The cut material is self-ejecting. The cut material is self-ejecting.

Another special technical feature:

From $\varnothing 31 \text{ mm}$ ($1 7/32"$), we use specially hardened tool holders to compensate for the torsional power in case of heavy operation, which avoids early shearing off of the tool holder shank.

In terms of construction not comparable with any other make.

MBS – for almost limitless use

e.g., on Rotabest Magnetic Drilling Machine (with MT2 or MT3 – arbors) and Weldon adaptor Prod.-No. o6oWD on Machines with Weldon Shank.





ALFRA TGT-HOLE SAWS – MBS-PRO



The TGT Multi-Range Hole Saw • Made in Germany by ALFRA

Ø mm	Ø Inches	No. of teeth	Prod.-No. mm
Ø 18.0	11/16"	6	0760018
Ø 18.6		6	07600186
Ø 19.0	3/4"	6	0760019
Ø 20.0		6	0760020
Ø 20.4		6	07600204
Ø 21.0	13/16"	6	0760021
Ø 22.0		6	0760022
Ø 22.5		6	07600225
Ø 23.0	7/8"	6	0760023
Ø 24.0	15/16"	6	0760024
Ø 25.0		6	0760025
Ø 26.0	1"	6	0760026
Ø 27.0	1-1/16"	6	0760027
Ø 28.0		6	0760028
Ø 28.3		6	07600283
Ø 29.0	1-1/8"	6	0760029
Ø 30.0	1-3/16"	6	0760030
As from Ø 31.0 mm (1-7/32") we recommend the use of MT arbors			
Ø 31.0		6	0760031
Ø 32.0	1-1/4"	6	0760032
Ø 33.0		6	0760033
Ø 34.0	1-5/16"	6	0760034
Ø 35.0	1-3/8"	6	0760035
Ø 36.0		6	0760036
Ø 37.0	1-7/16"	6	0760037
Ø 38.0		6	0760038
Ø 39.0	1-1/2"	6	0760039
Ø 40.0	1-9/16"	6	0760040
Ø 41.0		6	0760041
Ø 42.0	1-5/8"	6	0760042
Ø 43.0	1-11/16"	6	0760043
Ø 44.0		6	0760044
Ø 45.0	1-3/4"	6	0760045
Ø 46.0		6	0760046
Ø 47.0	1-13/16"	6	0760047
Ø 48.0	1-7/8"	6	0760048
Ø 49.0		6	0760049
Ø 50.0	1-15/16"	6	0760050
Ø 51.0	2"	6	0760051
Ø 52.0		6	0760052
Ø 53.0	2-1/16"	6	0760053
Ø 54.0	2-1/8"	6	0760054
Ø 55.0		6	0760055
Ø 56.0	2-3/16"	6	0760056
Ø 57.0	2-1/4"	6	0760057
Ø 58.0		6	0760058
Ø 59.0	2-5/16"	6	0760059
Ø 60.0	2-3/8"	8	0760060
Ø 61.0		8	0760061
Ø 62.0	2-7/16"	8	0760062
Ø 63.0		8	0760063
Ø 64.0	2-1/2"	8	0760064
Ø 65.0		8	0760065
Ø 66.0	2-9/16"	8	0760066
Ø 67.0	2-5/8"	8	0760067
Ø 68.0		8	0760068
Ø 69.0	2-11/16"	8	0760069
Ø 70.0	2-3/4"	8	0760070
Ø 71.0		10	0760071
Ø 72.0	2-13/16"	10	0760072
Ø 73.0	2-7/8"	10	0760076
Ø 74.0	2-15/16"	10	0760074
Ø 75.0		10	0760075

Ø mm	Ø Inches	No. of teeth	Prod.-No. mm
Ø 76.0	3"	10	0760076
Ø 77.0		12	0760077
Ø 78.0	3-1/16"	12	0760078
Ø 79.0	3-1/8"	12	0760079
Ø 80.0		12	0760080
Ø 81.0	3-3/16"	12	0760081
Ø 82.0		12	0760082
Ø 83.0	3-1/4"	12	0760083
Ø 84.0	3-5/16"	12	0760084
Ø 85.0		12	0760085
Ø 86.0	3-3/8"	14	0760086
Ø 87.0	3-7/16"	14	0760087
Ø 88.0		14	0760088
Ø 89.0	3-1/2"	14	0760089
Ø 90.0	3-9/16"	14	0760090
Ø 91.0		14	0760091
Ø 92.0	3-5/8"	14	0760092
Ø 93.0		14	0760093
Ø 94.0	3-11/16"	14	0760094
Ø 95.0	3-3/4"	14	0760095
Ø 96.0		14	0760096
Ø 97.0	3-13/16"	14	0760097
Ø 98.0	3-7/8"	14	0760098
Ø 99.0		14	0760099
Ø 100.0	3-15/16"	14	0760100

For drilling stainless steel from Ø 76.0 mm we recommend using Rotabest AL cutters (Prod.-No. 200205....)

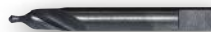


Drilling structured sheet metals



Drilling tubes

HSS-Spare Drill with tapered center tip



from Ø 18.0 - 60.0 Ø 6x80 mm 0732680
 from Ø 61.0 - 100.0 Ø 8x80 mm 0732880
 (old design)

MT Arbors



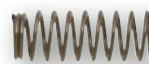
MT-2 (Ø 31.0 - 100.0 mm) 0734002
 MT-3 (Ø 31.0 - 100.0 mm) 0734003

Weldon adapter



from Ø 31.0 mm 060WD
 (incl. ejector pin Prod. No. 1950500)

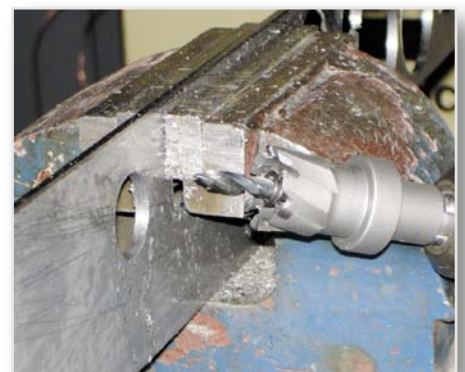
Spare Ejector



For tapered center drill
 from Ø 15.2 - 100.0 Ø 6 mm 0762006
 suitable for spare drill Ø 6 mm



Drilling flat steels



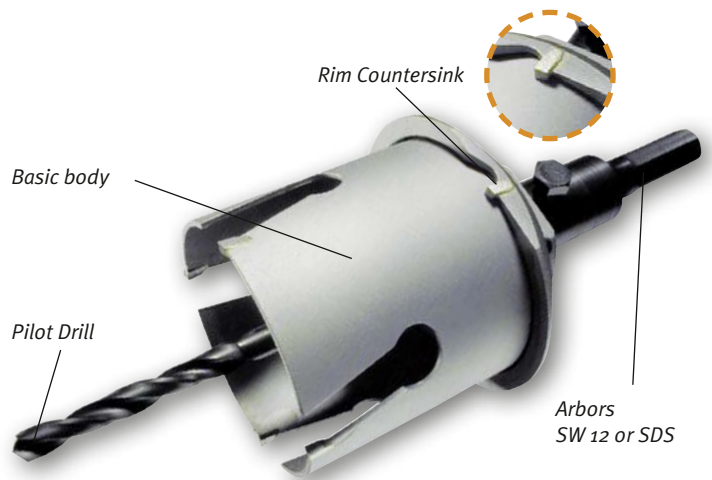
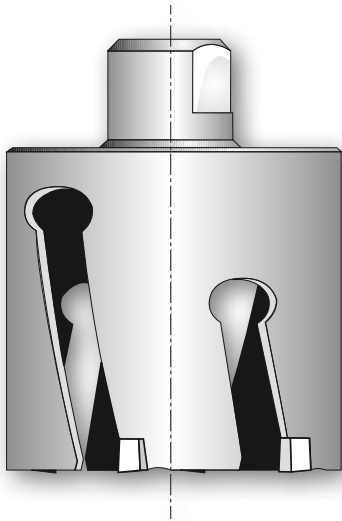
Free-hand drilling up to Ø 30 mm

B



ALFRA TGT-HOLE SAWS – FRP TYPE

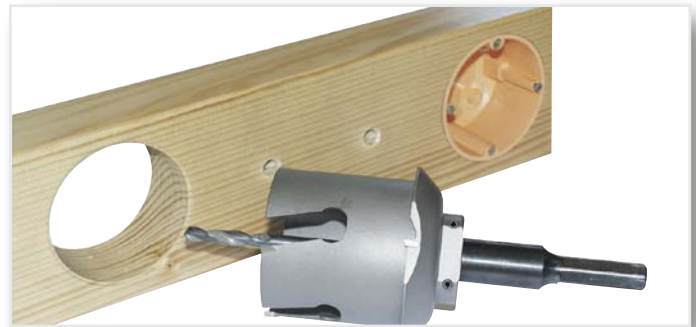
The TCT Multi-Range Hole Saw • Made in Germany by ALFRA



Prod.-No. 0740068060 – FRP Ø 68 mm with tool holder and rim countersink

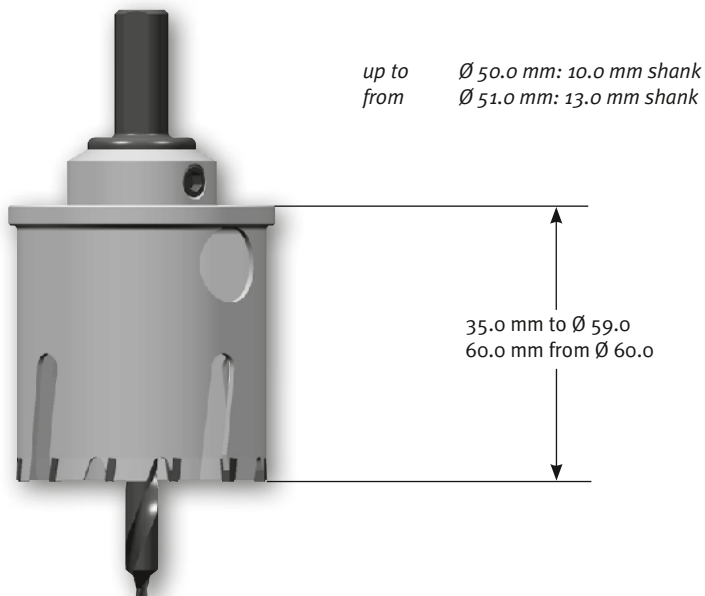
Cutting depth 60 mm (2-3/8")

- Specially designed for wood, plain, laminated and coated chip board, plywood, paper-base laminate, PVC, glass fibre reinforced plastic, gas concrete, Ytong stone, plasterboard, hollow gauged brick/stones.
- No blocking due to optimal cutting geometry.
- Simple drill core removal based on new chip space design.
- In the event of a tooth breaking, it can easily be replaced and re-sharpened.
- Only use when rotating, switch off hammer action.
- Ideal for electricians, plumbers and heating engineers, carpenters and cabinet makers, stair construction and kitchen furniture fitters.



Perfect assembly of sockets in e.g. wood, gypsum plaster board,...

ALFRA TGT-HOLE SAWS – FRP MULTI-TOOTH



with arbor shank

- Cutting depth 35.0/60.0 for sandwich-composite material, wood and chipboard coated with insulation and sheet metal (also stainless), e.g., counters and refrigerators.



Please indicate material and thickness!



ALFRA TCT-HOLE SAWS - FRP TYPE



The TCT Multi-Range Hole Saw • Made in Germany by ALFRA

Ø mm	TCT-Hole Saws FRP inch	single drill bit, cutting depth 60 mm	Prod.-No.	Ø mm	TCT-Hole Saws FRP Multi-tooth	Prod.-No.
25.0		Sanitary and heating pipes	0740025060	40.0	Sanitary drain pipes	0750040040
25.0		Sanitary and heating pipes	0740025060	40.0	Water and heating pipes	0750045040
35.0	1-3/8"	Sanitary and heating pipes	0740035060	50.0	with insulation	0750050040
		Cavity wall branch box, halogen reflector lamp		55.0		0750055040
40.0		Sanitary drain pipes	0740040060	60.0		0750060060
45.0		Water and heating pipes	0740045060	63.0	Switch boxes, diameter 60 mm	0750063060
50.0		with insulation	0740050060	65.0		0750065060
55.0		Recessed lights Ø 55 mm	0740055060	68.0	socket drill	0750068060
58.0		Recessed lights Ø 58 mm	0740058060	70.0		0750070060
60.0		Recessed lights Ø 60 mm	0740060060	74.0	Junction boxes, diameter 70 + 74 mm	0750074060
63.0		Switch box Ø 60 mm	0740063060	75.0		0750075060
65.0		Cavity wall box Ø 65 mm	0740065060	80.0	Junction boxes	0750080060
68.0		Cavity wall box Ø 68 mm	0740068060	85.0		0750085060
70.0		Cavity wall branch boxes Ø 70 mm	0740070060	90.0		0750090060
74.0		Cavity wall branch box Ø 74 mm	0740074060	95.0		0750095060
				100.0		0750100060
80.0		Junction boxes, cable gland covers, Recessed lights Ø 80 mm	0740080060	105.0	Discharge air pipes	0750105060
85.0		Recessed lights Ø 85 mm	0740085060		Intermediate sizes and other cutting depths on request	0759
90.0		Recessed lights Ø 90 mm	0740090060			
105.0		Discharge air pipes	0740105060			

HSS spare drill for FRP Multi-tooth

Ø 30.0 - 59.0 mm = 8 x 80	0752880
Ø 61.0 - 105.0 mm = 8 x 100	0752800



Rim countersink for Ø 68 mm 0741068000



Tool Holder wrench size 12 0742000001



Tool Holder SDS 0742000002



Spare center drill HSS 7.2 mm 0742000003

FRP Hole Saw Set Electrician

Content: 0743000001
 1 each of Ø 35/ 68/74
 1 Tool Holder wrench size 12
 1 HSS drill

FRP Hole Saw Set Lighting

Content: 0743000002
 1 each of Ø 35/60/68/80/85 mm
 1 Tool Holder wrench size 12
 1 HSS drill



Prod.-No. 0743000001



Prod.-No. 0743000002

B



ALFRA PRECISION MULTI-STEP DRILLS

- ▶ SPIRAL GROOVED, EACH STEP WITH AXIAL AND RADIAL RELIEF GRINDING ACCORDING TO ITS DIAMETER
- ▶ LASER-ETCHED SCALE IN THE CHIP SPACE
- ▶ SPECIAL DRILL TIP ENABLES CENTERING AND DRILLING EVEN THROUGH THIN-WALLED MATERIALS
- ▶ BURR-FREE DRILLING WITH NO DEFORMATION OF THE SHEET
- ▶ REGRINDABLE
- ▶ AVAILABLE IN HSS AND HSS WITH TiAIN COATING

B





MULTI-STEP DRILLS – HSS DM 03



More precise hole diameter through cylindrical steps. Hole deburring through the next step.

Application area:

The ideal tool for sheet metal forming, for the electrical industry, HVAC or the common engineering or the switchboard industry.

Suitable for all materials such as nonferrous metals, stainless steel sheets, thermoplastic and thermosetting plastics, as well as for steel sheets up to a max. material thickness of 6 mm.

With the Multi-Step Drills, sheet metals can be centered, drilled and subsequently deburred in one work step.

- A break of the drill tip mostly occurs through high feed forces at the start of the drilling operation. Multi-step drills with fixed drill tips are worthless then. A broken center drill in an ALFRA multi-step drill can be easily replaced. This more than compensates for the higher price.
- Each stage is equipped with a radially adjusted relief grinding corresponding to its diameter.
- Each stage is provided with an axial relief grinding and a relief angle on its cutting edge.
- All step diameters are laser marked on the tool.

Benefits of multi-step drills with keyway and 3 cutting edges:

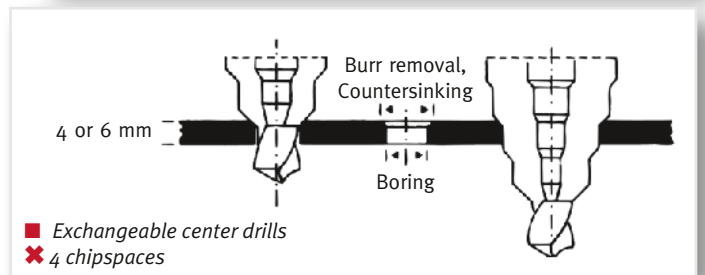
- The keyway allows the drill to make a chipping cut during drilling for better chip removal.
- The special keyway geometry, arranged around the drill, makes for a longer cutting edge compared to the usual straight groove and noticeably easier cutting.
- Spiral cut chip spaces guarantee an absolute running smoothness and a high cutting capacity.

Tip:

The tool life can be considerably prolonged by using of ALFRA Cutting Spray or ALFRA Coolant Stick.

Advantages of TiAlN hard coating:

- Suitable for use on very hard materials (VA).
- Offers optimal tool life with the same use at the highest cutting speeds.
- Very high microhardness HV 0.05 of 3200 – so that the blue-black hard coating is more than 20% harder than conventional gold-yellow TIN coating.
- Maximum working temperature: 800°C.



Description	Shank Ø	Prod.-No.
AMS	10.0	08080

For general machine construction, drills circular holes in metals up to 4 mm thick, through application with hand drills, indispensable on the work-site.
 3 chip spaces, spiral grooved, replaceable center drill
Steps Ø 9 - 12 - 15 - 18 - 21 - 24 - 27 - 30 - 33 - 36 mm
 (Step „40“ is for deburring)

AMS – TiAlN coated	10.0	08081
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3 chip spaces, spiral grooved, replaceable center drill
 TiAlN coated
Steps Ø 9 - 12 - 15 - 18 - 21 - 24 - 27 - 30 - 33 - 36 mm
 (Step „40“ is for deburring)

AM 1	12.0	08002
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Steps Ø 25 - 28 - 31 - 34 - 37 - 40 - 43 - 46 - 49 - 52 - 55 - 58 mm

PVD	10.0	08003
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For the electrical industry, matched to holes for armoured conduit thread clearance holes, saves considerable time when producing borings for PG
Steps Ø PG 7 - PG 9 - PG 11 - PG 13 - PG 16 - PG 21 - 33 mm - PG 29 - 40 mm



Prod.-No. 08080 ■



Prod.-No. 08081 ■



Prod.-No. 08002 ■ ✘



Prod.-No. 08003 ■ ✘



MULTI-STEP DRILLS - HSS DM 03

More precise hole diameter through cylindrical steps. Hole deburring through the next step.

Description	Shank Ø	Prod.-No.
PVD-TiN-coated	10.0	08004
PVK Like PVD, but for armoured conduit thread core hole PG Steps Ø PG 7 - PG 9 - PG 11 - PG 13 - PG 16 - PG 21	10.0	08005
SVB Pre-drill specifically for punches & dies Steps Ø 8.5 - 11.5 - 12.5 - 16.5 - 21.0	10.0	08016
DKS 32 3 chip spaces, spiral grooved, replaceable center drill Clearance holes Ø 12.5 - 16.5 - 20.5 - 25.5 - 32.5 Core holes Ø 10.5 - 14.5 - 18.5 - 23.5 - M12 - M16 - M20 - M25 - M32	12.0	08082
DKS 32 TiAlN coated 3 chip spaces, spiral grooved, replaceable center drill Clearance holes Ø 12.5 - 16.5 - 20.5 - 25.5 - 32.5 Core holes Ø 10.5 - 14.5 - 18.5 - 23.5 - M12 - M16 - M20 - M25 - M32	12.0	08083
DKS 40 3 chip spaces, spiral grooved, replaceable center drill, for metric borings acc. to EN, Core - and clearance holes M 10 - M 40 Steps Ø 10.5 - 12.5 - 14.5 - 16.5 - 18.5 - 20.5 - 25.5 - 32.5 - 38.5 - 40.5	10.0	08084
DKS 40 - TiAlN coated 3 chip spaces, spiral grooved, replaceable center drill For metric borings acc. to EN 50262 Core - and clearance holes M 10 - M 40 Steps Ø 10.5 - 12.5 - 14.5 - 16.5 - 18.5 - 20.5 - 23.5 - 25.5 - 32.5 - 38.5 - 40.5	10.0	08085
DKI-VA 4 chip spaces, replaceable center drill of HSS-Co 5 steel. For stainless steel to 3 mm thick Core - and clearance holes M 10 - M 40 Steps Ø 10.5 - 12.5 - 14.5 - 16.5 - 18.5 - 20.5 - 23.5 - 25.5 - 32.5 - 38.5 - 40.5	10.0	08032
Spare center drill suitable for AMS - PVD - PVK - DKI - DKS		08007
Spare center drill TiAlN suitable for AMS - PVD - PVK - DKI - DKS		08008



Prod.-No. 08004 ■ ✕



Prod.-No. 08005 ■ ✕



Prod.-No. 08016

Pre-drill specifically for punches & dies



Prod.-No. 08082 ■



Prod.-No. 08083 ■



Prod.-No. 08084 ■



Prod.-No. 08085 ■



Prod.-No. 08032 ■ ✕



Prod.-No. 08007



Prod.-No. 08008

■ Replaceable center drill ✕ 6 With 4 chip spaces





MULTI-STEP DRILLS – HSS DM 03



More precise hole diameter through cylindrical steps. Hole deburring through the next step.

Standard execution with 2 chip spaces, spiral grooved.

- More precise hole diameter through cylindrical steps.
- Immediate deburring through the next step
- Drilling of sheet metals as thin as 4 mm possible.
- Use coolant stick!
- The keyway allows the drill to make a chipping cut during drilling for better chip removal.
- Longer cutting edge compared to the usual straight groove and noticeably easier cutting.
- Laser-etched scale in the chip space to indicate the bore diameter achieved.

Description	Bore range	Shank Ø	Length	Prod.-No.
AM-12	4 - 12 mm x 1 mm	6.0	70 mm	08070
AM-20	6 - 20 mm x 2 mm	9.0	77 mm	08071
AM-30	6 - 30 mm x 2 mm	10.0	98 mm	08072

Set in plastic case 08073

Contents:

1 of each Type AM-12/AM-20/AM-30

High-performance coolant stick 09012



Prod.-No. 08072

Prod.-No. 09012

Standard values for the use of ALFRA Multi-step drills

This drill was developed to bore perfectly round and deburred holes in sheet metal from 4 - 6 mm thick. The transition forms a radius which serves to deburr or bevel the hole at the same time. While conical one-lip bits drill a slightly tapered hole, our ALFRA multi-step drill achieves a cylindrical hole. The tools have axial-radial relief grindings and can be lightly reground on the breast of the cutting tooth.

We recommend the use of pillar drilling machines, however, the small ALFRA Multi-step drills can be used on adjustable hand drilling machines. Sufficient cooling using ALFRA coolant stick or a bore emulsion is imperative.

Speed chart rpm

Type		sheet steel S235	stainless steel sheets	non-ferrous metals	plastics (soft)
AM	drill	800	360	1000	1000
	countersink	500 - 180	50 - 70	800 - 400	1000 - 400
AM-1	drill	800	360	1000	1000
	countersink	200 - 100	100 - 50	500 - 200	600 - 250
PVD+PVK+DKI	drill	800	360	1000	1000
	PVD-VA + SVB	countersink	400 - 200	200 - 100	800 - 500



Prod.-No. 08073

B



PRECISION CONICAL ONE-LIP BITS - HSS DM 05

With laser-etched scale

ALFRA Precision Conical One-Lip Bits are the ideal tools for general sheet metal working. Fields of applications include HVAC, electronic industries, engineering and panel building.

To be used on non-ferrous metals, stainless steels, thermo- and duroplastic plastics, as well as on all common sheet steels up to a material thickness of max. 4 mm. With ALFRA Conical One-Lip Bits, you can center, spot drill and bore up in one work step.

If treated carefully, can be reground many times.

The tool life can considerably be prolonged by using ALFRA Cutting Oil or Coolant Stick.

Packing: separately in plastic box with operation manual.

Size	Range	Shank-Ø	Prod.-No.
1	3.0 - 14.0	6.0	09001
2	6.0 - 20.0	8.0	09002
3	16.0 - 30.5	10.0	09003
4	26.0 - 40.0	12.0	09004
5	35.0 - 50.0	12.0	09005
6	46.0 - 60.0	13.0	09006
7 L	4.0 - 30.5	10.0	09007
8*	6.0 - 22.5	8.0	09008
Set 1	Size. 1 + 2 + 3 + Stiff		09009

Coolant stick, separately 09011

*Special Antenna-Bit

- Conical one-lip bit with cylindrical end section to drill holes for car antennas.
- Burr-free, no deformation, no countersinking, dimensional accuracy
- Size 6.0 - 22.5 mm.

Precision Conical One-Lip Bit Set

Prod.-No.
09009

Tin box

Contents:

- 1 x Size 1
- 1 x Size 2
- 1 x Size 3



Prod.-No. 09001

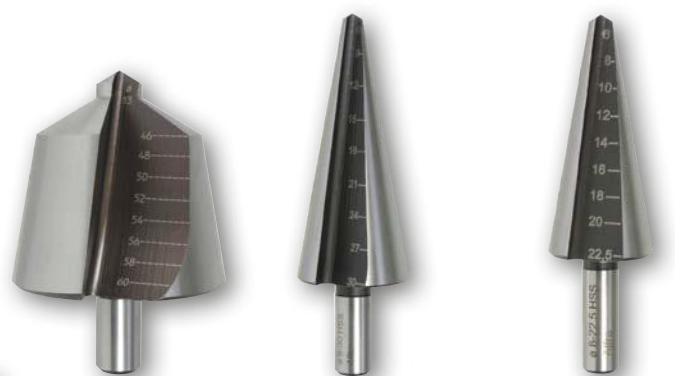
Prod.-No. 09002

Prod.-No. 09003



Prod.-No. 09004

Prod.-No. 09005



Prod.-No. 09006

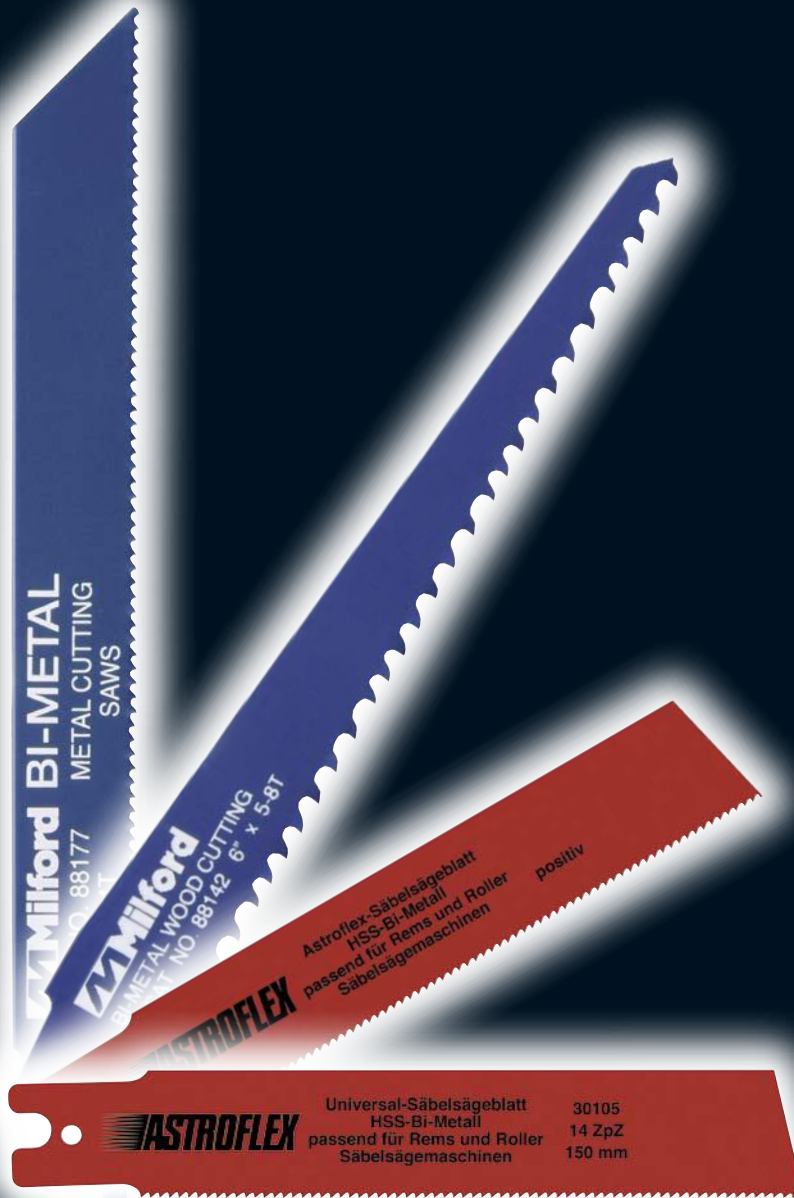
Prod.-No. 09007

Prod.-No. 09008*



Prod.-No. 09009

ALFRA SABRE SAW BLADES FOR PROFESSIONAL USE



B





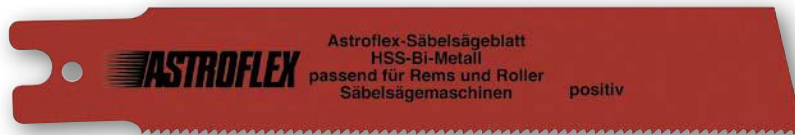
ORIGINAL ASTROFLEX® - HSS-BI-METAL SABRE SAW BLADES

For Rems- and Roller Sabre Sawing Machines

ALFRA-Special-Sabre-Saw Blades can be used problem-free on these machines. Made of HSS-Bi-Metal, heat treated to the point.

- Made of high alloy HSS-Bi-Metal
- Heat treated to the point
- Highest heat hardness and wear resistance
- Tothing in crossed version

For pipes



Application range	Steel quality	Length	Width	Thickness	Teeth per inch	Blade No.	Alfra Prod.- No.
Pipes up to Ø 2"	HSS-Bi-Metal	140 mm	25 mm	1.6 mm	8	88140-8	30089

for free-hand and flush cutting



For free-hand and flush cutting	HSS-Bi-Metal	150 mm	25 mm	1.1 mm	14		30105
	HSS-Bi-Metal	200 mm	25 mm	1.1 mm	14		30103
e. g. refurbishing, on walls and overhead	HSS-Bi-Metal	300 mm	25 mm	1.1 mm	14		30104

Packaging unit: 5 pieces

ALFRA - JIGSAW BLADES

Suitable for pneumatic saws as e. g. SIG and Flex-sheet Metal-Tiger Saws

Made of HSS Bi-Metal for burr- and distortion-free cutting of thin sheet metals and plates, as well as for pipes in ventilation and air condition constructions. Precise crossing, highest endurance.



Prod.-No. 31014 - 31017



Prod.-No. 31018 - 31021

Application range	Length mm	Thickness mm	Width mm	Teeth inch	Prod.-No.
For sheet metals as from 1.1 mm thickness, plastic up to 3 mm, wood up to 5 mm	96	0.6	12.5	14	} 31014
	96	0.6	12.5	18	
For sheet metals 0.7 - 1.1 mm thickness	96	0.6	12.5	24	31016
For sheet metals up to 0.7 mm thickness	96	0.6	12.5	32	31017
For sheet metals as from 1.1 mm thickness, plastic up to 3 mm, wood up to 5 mm	97	0.6	12.5	14	} 31018
	97	0.6	12.5	18	
For sheet metals 0.7 - 1.1 mm thickness	97	0.6	12.5	24	31020
For sheet metals up to 0.7 mm thickness	97	0.6	12.5	32	31021

Attention: do not use any pressure, feed only with dead weight of machine.

ULTRA – METAL HAND SAW BLADES



Types

FLEX: High-Carbon Steel Blade

Economical blade, especially designed for aluminium profiles or wood.

MAJOR: High-Speed Steel

Universally usable and partially heat treated blade, particularly made for aluminium, steel sheets and steel profiles.

RECORD: HSS-Cobalt steel

Fully hardened blade for guided, precise cuts made of HSS steel with a high cobalt content.

BI-HARD: High-Speed Cobalt Steel

Blade with hardened tooth tips, therefore semi-flexible with high hardness, made from HSS steel with high Cobalt content. Designed for stainless steel sheets and steel profiles.

BI-METAL: High-Speed Steel with Bi-Metal Strip

Blade with high durability and heat resistance for flexible and robust applications, such as for steel pipes and stainless steel sheets.



Type	No. of teeth/Inches	Prod.-No.
FLEX	18 T Wavy Set	3300F18
FLEX	24 T Wavy Set	3300F24
FLEX	32 T Wavy Set	3300F32
MAJOR	18 T Raker Set	3300M18
MAJOR	24 T Raker Set	3300M24
MAJOR	32 T Raker Set	3300M32
RECORD	18 T Raker Set	3300R18
RECORD	24 T Raker Set	3300R24
RECORD	32 T Raker Set	3300R32

Type	No. of teeth/Inches	Prod.-No.
BI-HARD	18 T Raker Set	3300BIH18
BI-HARD	24 T Raker Set	3300BIH24
BI-HARD	32 T Raker Set	3300BIH32
BI-METAL	18 T Wavy Set	3300BiM18
BI-METAL	24 T Wavy Set	3300BiM24
BI-METAL	32 T Wavy Set	3300BiM32

- Customer brand execution in colour, imprint and packaging from 5.000 pieces possible
- Packaging unit: 100 pieces

ALFRA MACHINE SAW BLADES – HSS DM 05

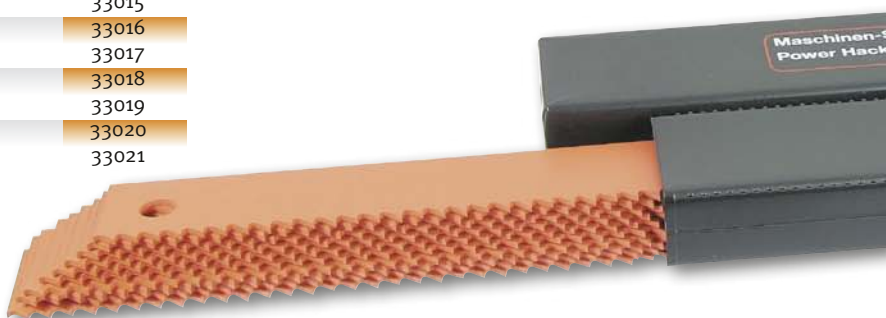
For Hacksawing machines

- You can use the efficiency of the whole machine with these machine saw blades.
- For sawing solid material, pipes and profiles of all strengths.
- Also for high-strength steels
- With parabolic tooth against early break
- Sharp-edged and wear-resistant, with fine carbide repartition in micro structure
- Straightened by master hand
- For all types of machines



Dimension mm	available toothing tpt	Prod.-No.
300 x 25 x 1.5	8 10 14	33010
350 x 30 x 1.5	6 8 10 14	33011
350 x 30 x 2.0	4 6 8 10	33012
400 x 30 x 1.5	6 8 10 14 18	33013
400 x 30 x 2.0	4 6 8 10	33014
450 x 30 x 2.0	4 6 8 10	33015
450 x 35 x 2.0	4 6 8 10	33016
450 x 40 x 2.0K	4 6 8 10	33017
500 x 40 x 2.0	4 6 8 10	33018
575 x 50 x 2.5K	3 4 6	33019
650 x 55 x 2.5K	3 4 6	33020
700 x 55 x 2.5K	3 4 6	33021

K = Kasto with displaced side holes
 Other dimensions and toothings on request.
 Length measured from hole center to center.
 Packaging unit: 10 pieces



B



COOLANT-CUTTING, DRILLING, BROACHING OILS

RIXOL-2000

Coolant concentrate

- Universal use for sawing and drilling of steel, stainless steel, cast iron, nonferrous metal and aluminium alloys.
- Water emulsive, contains mineral oil, rot-proof, stable solution.
- Provides good rust protection and lubrication. Causes no irritation of the skin.
- No smoke development and no coagulation.
- Factor I for hand refractometer.
- Mixture: Cutters 8 - 10%, Circular saws 5 - 12%, Band saws 6 - 20 %

Prod.-No.

20 ltr. Plastic container

21001

ALFRA 2000

High performance cutting oil

- ALFRA BIO 2000 is an entirely synthetic cutting oil, developed for the metal working industry for core drilling, turning, drilling, milling, reaming, countersink, rubbing, tapping
- Ideally qualified for all steel and steel alloys, chrome-nickel steel, copper, aluminium alloys.
- ALFRA BIO 2000 doesn't contain any hydrocarbon and is chlorine free.
- With special high pressure and anti wear additives.
- With corrosion and rust protection.
- Increases tool life up to 200 % and shortens operating time, reduces the number of rejects.

Prod.-No.

Can 405 ml

21010

5 ltr. Plastic container

21012

60 ltr. Barrel

21021

High-performance coolant stick

09012

ALFRA 3000

High performance Cutting Oil Spray

- For the most difficult working procedures like core drilling, drilling, turning, tapping, reaming, countersink, rubbing
- With special high pressure and anti wear additives.
- For usage of high alloyed stainless steel, chrome-nickel steel and its alloys, titanium and manganese carbon steel.
- Qualified for non-ferrous- and light metals.
- Increases tool life up to 200 %, shortens operating time. Reduces the number of rejects.
- Sticks on surfaces, therefore it's qualified for "over head works" on walls and ceilings.

Prod.-No.

Tin 520 ml

21030

5 ltr. Plastic container

21031

60 ltr. Barrel

21032

ALFRA 4000

High Performance Cutting Oil Spray

- Suitable for core drilling applications with ALFRA cutters. Also ideal for twist drilling, thread tapping, reaming, countersinking, and difficult cutting applications
- For use on: common steels; high-alloy, stainless steels; chromium nickel steels; titanium and manganese-carbon steels
- 100% pure active substance
- Optimal cutting performance
- For working on walls and ceilings
- Free from propellant gas
- Free from chlorine and solvent
- No dangerous substance
- Pump spray
- Optimal dosing quantity

Prod.-No.

Can 300 ml

21040



Prod.-No. 21001



Excellently suited for Rotabest® magnetic drills, as it is water-mixable.



Prod.-No. 09012



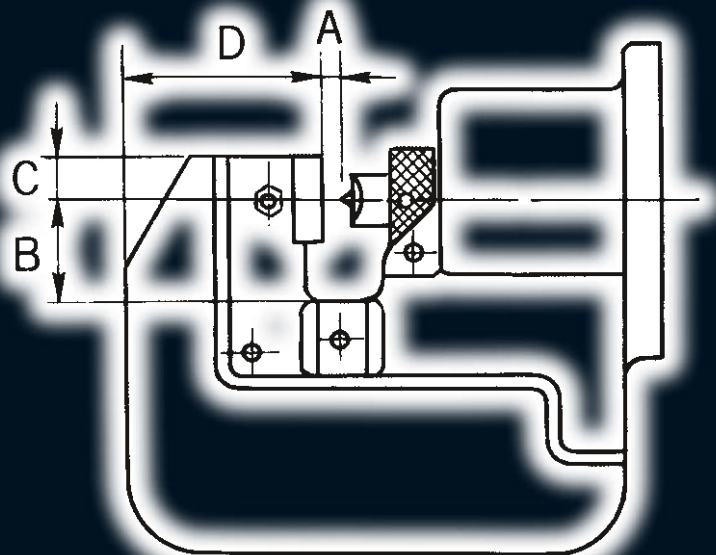
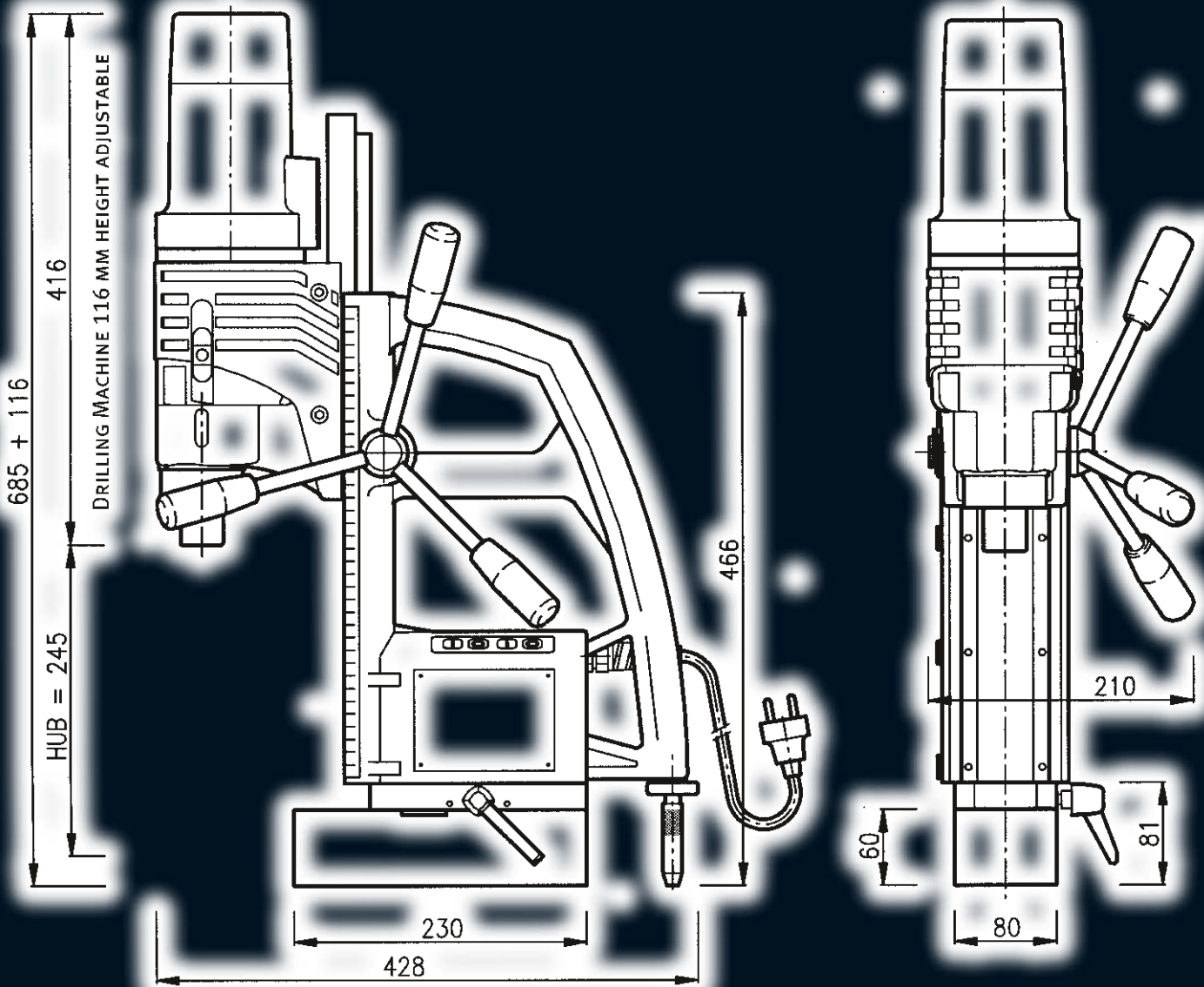
Prod.-No. 21010



Prod.-No. 21030



Prod.-No. 21040





THE CORE DRILLING PRINCIPLE

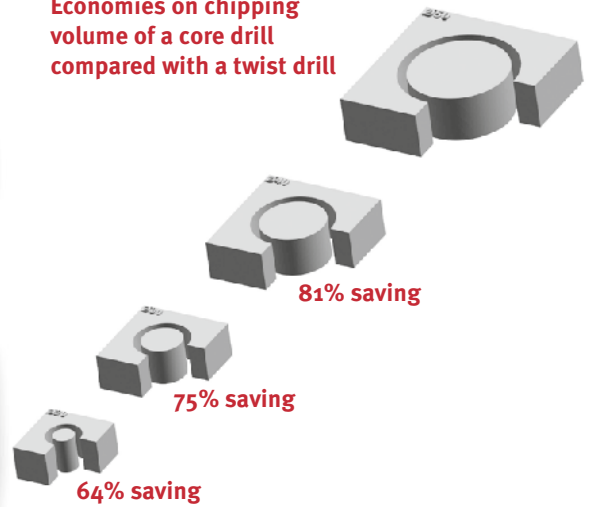
Metal core drilling was introduced in Germany by ALFRA

- Core Drills machine only a fraction of the material at the same bore diameter than a twist drill
- The remaining core is ejected after finishing the drilling process.
- Thereby minor power and feed pressures are required.
- When using twist drills, it is possibly required to pre-drill. This is entirely omitted when using core drills, you can directly drill with the requested diameter.

The primary drilling time is abbreviated considerably depending on the cutting diameter.



Economies on chipping volume of a core drill compared with a twist drill



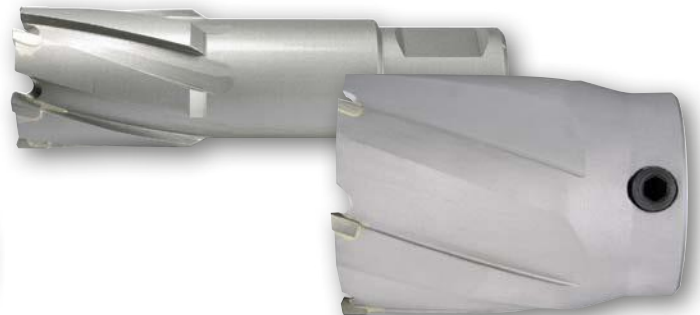
B

ALFRA CUTTERS - RPM-CHART



For HSS and HSS-Co Cutter

For TCT Cutter



Material	Unalloyed steel up to 700 N/mm ²	Alloyed steel up to 1000 N/mm ²	Alu- alloy
Vc=m/min Lubricants Ø mm Ø inch	30 Cutting oil rpm	20 Cutting oil rpm	30 Cutting oil rpm

Material	Unalloyed steel up to 700 N/mm ²	Alloyed steel up to 1000 N/mm ²	Alu- alloy
Vc=m/min Lubricants Ø mm Ø inch	50 Cutting oil rpm	35 Cutting oil rpm	60 Cutting oil rpm

Not suitable for automatic feed!

12	¹⁵ / ₃₂	796	531	796
13	³³ / ₆₄	735	490	735
14	³⁵ / ₆₄	682	455	682
15	¹⁹ / ₃₂	637	425	637
16	⁵ / ₈	597	398	597
17	⁴³ / ₆₄	562	375	562
18	⁴⁵ / ₆₄	531	354	531
19	³ / ₄	503	335	503
20	²⁵ / ₃₂	478	318	478
21	⁵³ / ₆₄	455	303	455
22	⁷ / ₈	434	290	434
23	²⁹ / ₃₂	415	277	415
24	¹⁵ / ₁₆	398	265	398
25	⁶³ / ₆₄	382	255	382
26	1 ¹ / ₃₂	367	245	367
27	1 ¹ / ₁₆	354	236	354
28	1 ³ / ₃₂	341	227	341
29	1 ⁹ / ₆₄	329	220	329
30	1 ³ / ₁₆	318	212	318
31	1 ⁷ / ₃₂	308	205	308
32	1 ¹⁷ / ₆₄	299	199	299
33	1 ¹⁹ / ₆₄	290	193	290
34	1 ¹¹ / ₃₂	281	187	281
35	1 ³ / ₈	273	182	273
36	1 ²⁷ / ₆₄	265	177	265
37	1 ²⁹ / ₆₄	258	172	258
38	1 ¹ / ₂	251	168	251
39	1 ¹⁷ / ₃₂	245	163	245
40	1 ³⁷ / ₆₄	239	159	239
41	1 ³⁹ / ₆₄	233	155	233
42	1 ²¹ / ₃₂	227	152	227
43	1 ¹¹ / ₁₆	222	148	222
44	1 ⁴⁷ / ₆₄	217	145	217
45	1 ²⁵ / ₃₂	212	142	212
46	1 ¹³ / ₁₆	208	138	208
47	1 ⁵⁵ / ₆₄	203	136	203
48	1 ⁵⁷ / ₆₄	199	133	199
49	1 ¹⁵ / ₁₆	195	130	195
50	1 ³¹ / ₃₂	191	127	191
60	2 ³ / ₈	159	106	159

Not suitable for automatic feed!

18	⁴⁵ / ₆₄	885	619	1062
19	³ / ₄	838	587	1006
20	²⁵ / ₃₂	796	557	955
21	⁵³ / ₆₄	758	531	910
22	⁷ / ₈	724	507	869
23	²⁹ / ₃₂	692	485	831
24	¹⁵ / ₁₆	663	464	796
25	⁶³ / ₆₄	637	446	764
26	1 ¹ / ₃₂	612	429	735
27	1 ¹ / ₁₆	590	413	708
28	1 ³ / ₃₂	569	398	682
29	1 ⁹ / ₆₄	549	384	659
30	1 ³ / ₁₆	531	372	637
31	1 ⁷ / ₃₂	514	360	616
32	1 ¹⁷ / ₆₄	498	348	597
33	1 ¹⁹ / ₆₄	483	338	579
34	1 ¹¹ / ₃₂	468	328	562
35	1 ³ / ₈	455	318	546
36	1 ²⁷ / ₆₄	442	310	531
37	1 ²⁹ / ₆₄	430	301	531
38	1 ¹ / ₂	419	293	503
39	1 ¹⁷ / ₃₂	408	286	490
40	1 ³⁷ / ₆₄	398	279	478
41	1 ³⁹ / ₆₄	388	272	466
42	1 ²¹ / ₃₂	379	265	455
43	1 ¹¹ / ₁₆	370	259	444
44	1 ⁴⁷ / ₆₄	362	253	434
45	1 ²⁵ / ₃₂	354	248	425
46	1 ¹³ / ₁₆	346	242	415
47	1 ⁵⁵ / ₆₄	339	237	407
48	1 ⁵⁷ / ₆₄	332	232	398
49	1 ¹⁵ / ₁₆	325	227	390
50	1 ³¹ / ₃₂	318	223	382
55	2 ⁵ / ₃₂	290	203	347
60	2 ³ / ₈	265	186	318
65	2 ⁹ / ₁₆	245	171	294
70	2 ³ / ₄	227	159	273
75	2 ⁶¹ / ₆₄	212	149	255
80	3 ⁵ / ₃₂	199	139	239
85	3 ¹¹ / ₃₂	187	131	225
90	3 ³⁵ / ₆₄	177	124	212
95	3 ⁴⁷ / ₆₄	168	117	201
100	3 ¹⁵ / ₁₆	159	111	191

While drilling Hardox, we recommend the use of our ASP 30/ASP 60 cutters. Please use while drilling Hardox, pure cutting oil and reduce the rotation speed by 10%. Consult the column „alloyed steel“ until 1.000 N/mm². Please, use only magnet drilling machines with a high adhesion force or pillar drilling machines or milling machines.



TAPPING – RECOMMENDED DIMENSIONS (ISO 26H-TOLERANCE)

Recommended characteristics for the use of drills with tapping attachments

Tapping: the tap must be adjusted on the prepared boring in the workpiece. Put down spindle, until the tap touches the surface and the process can be started. Please comply with below chart for metric ISO thread.

Bore Hole Chart metric ISO-thread

Dimension	Thread Pitch	drill-Ø
M3	0.5	2.5
M4	0.7	3.3
M5	0.8	4.2
M6	1	5
M8	1.25	6.8
M10	1.5	8.5
M12	1.75	10.2
M14	2	12
M16	2	14
M18	2.5	15.5
M20	2.5	17.5

Metric Fine Thread

Dimension	Thread Pitch	drill-Ø
M8x1	1	7
M10x1	1	9
M12x1	1	11
M12x1.5	1.5	10.5
M14x1	1	13
M14x1.5	1.5	12.5
M16x1	1	15
M16x1.5	1.5	14.5
M20x1	1	19
M20x1.5	1.5	18.5

Tips for tapping

1. Clearance Hole

For Clearance Holes we recommend alongside mentioned taps, which safely conveys the chips out of the hole. The specially shaped grinding guarantees a safe re-mounting, when the tap opted out of the thread hole and returns in left hand rotation.

2. Tapped Blind Holes

For Tapped Blind Holes we recommend alongside mentioned taps. The chips are conveyed out of the hole contrary to the cutting direction. Important: do not run aground with tap, as otherwise the automatic return run won't be activated. A correspondingly larger pre-drilling depth must be carried out.

In case of a disregard, the tap must be manually released.

3. Pocket Holes up to 1.5 x D

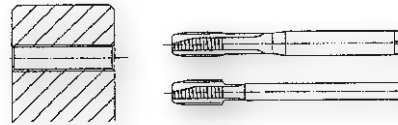
Taps according to alongside mentioned image are suitable. Here as well, the chips are conveyed out of the hole contrary to the cutting direction. Important: do not run aground with tap. A correspondingly larger pre-drilling depth must be carried out.

In case of a disregard, the tap must be manually released.

Beside our taps with reinforced shanks, other taps according to DIN 376 with taper shank are suitable as well

Please work with sufficient recommended for tapping by the corresponding manufacturer.

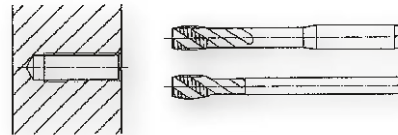
Chip ejection downwards trough the bore



DIN 371 with reinforced shank Shape B, with spiral face inclination, 3.5 to 5 convolutions.

DIN 376 with taper shank Tap depth 3 x D

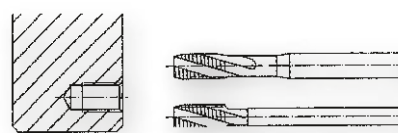
Chip ejection alongside the tool



DIN 371 with reinforced shank spiral grooved, ca. 35° right hand twist, Section chape C, ca. 3 convolutions

DIN 376 with taper shank Tap depth 2.5 x D

Chip ejection alongside the tool



DIN 371 with reinforced shank spiral grooved, ca. 17° right hand twist, Section chape C, ca. 3 convolutions

DIN 376 with taper shank Tap depth 1.5 x D

The choice of the proper tool size at a given material thickness is a usual question in daily practice.

For customary punch models, an old rule says that the minimum tool size is the material thickness.

This rule is no more valid for our hydraulically actuated punches.

The rule only still applies for fast moving mechanical presses: Thicker materials could cause the punch to break.

With our ALFRA PRESS APS-punches, the process is carried out by a smooth, slow motion allowing the punching of holes with a diameter smaller than the material thickness.

But still, a certain minimum diameter has to be respected. For that reason, we have carried out tests, and the results are demonstrated in fig.1. Example:

You want to punch holes into a steel plate made from DIN S233. Which is the correct ratio of material thickness to tool size?

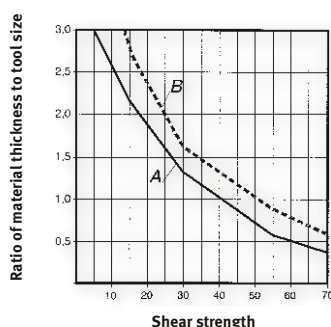
The shear strength of the material is at 30 kg/mm² approx. The recommended ratio is represented by line A. The corresponding value on the ordinate is 1.3.

Result: The recommended ratio is 1.3.

The upper tolerance limit for that ratio is represented by line B which at this point gives an ordinate value of 1.7. Hence, it is possible to punch holes with a diameter of only 1/1.7 of the material thickness. You may use this tolerance value for exception, but the service life of the tool will be significantly reduced.

We would like to remind you only to use line A for the correct determination of the ratio of material thickness to hole size.

Proper ratio at a given shear strength



1

Minimum tool size at a given material thickness

At a given material thickness, fig. 2 can be used for the rapid determination of the tool size. The values for Al, Cu, DIN S233 and St 70 are indicated.

Example:

You want to punch holes into a steel plate of DIN S233; the material thickness is 20 mm. Which is the minimum hole diameter to be punched?

Look for the corresponding value on the solid line.

Result: Minimum hole diameter is 15 mm.

The dashed line represents the upper tolerance values, which can be used only for exception (reduced tool life).

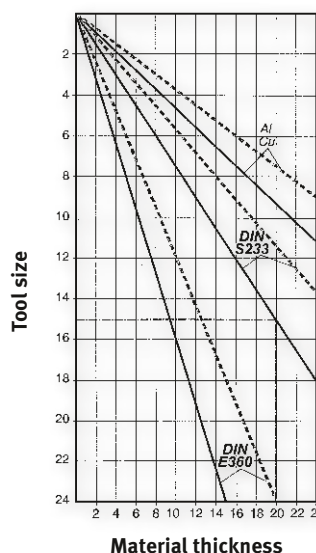
We recommend you to select the hole size by means of the solid line.

ALFRA punches and dies are made of high-quality materials. But still, sometimes a tool may break.

The following reasons have to be taken into account:

1. Incorrect selection of the ratio of tool size to material thickness.
2. The material is not aligned straight on the die.
3. Disturbing movements during the punch process.
4. The hold-down is damaged, or its height is not adjusted correctly, so that the material will be tilted during the removing of the punch.
5. The distance between hold-down and tool is too large. Thin sheets can be bended during the removing of the punch. In such cases, the tool breaks at the cutting edge in the form of thin leaves.

In that case we recommend the hold-down to be equipped with a bridge or the utilization of a special hold-down.



2

B



ALFRA PUNCHING UNIT APS – WORKING RANGE

Material DIN S275

	Material thickness mm Material DIN S233	Required force for punching [kN] (10 kN ... approx. 1 ton) • Punch diameter (mm)																					
		7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
		APS 60										APS 70/70D					APS 120/110D						
APS 60 (DIN S275)	3	25	28	32	35	39	43	46	50	53	57	60	64	67	71	74	78	82	85	89	92	96	99
	4	33	38	43	47	52	57	61	66	71	76	80	85	90	94	99	104	109	113	118	123	128	132
	5	41	47	53	59	65	71	77	83	89	94	100	106	112	118	124	130	136	142	148	154	159	165
	6	50	57	64	71	78	85	92	99	106	113	120	128	135	142	149	156	163	170	177	184	191	198
	7	58	66	74	83	91	99	107	116	124	132	141	149	157	165	174	182	190	198	207	215	223	232
	8		76	85	94	104	113	123	132	142	151	161	170	180	189	198	208	217	227	236	246	255	265
	9			96	106	117	128	138	149	159	170	181	191	202	213	223	234	245	255	266	276	287	298
APS 70 APS 70D (DIN S275)	10				118	130	142	154	165	177	189	201	213	224	236	248	260	272	283	295	307	319	331
	11					143	156	169	182	195	208	221	234	247	260	273	286	299	312	325	338	351	364
	12						170	184	198	213	227	241	255	269	283	298	312	326	340	354	369	383	397
APS 120 APS 110D (DIN S275)	13						200	215	230	246	261	276	292	307	322	338	353	369	384	399	415	430	
	14							232	248	265	281	298	314	331	347	364	380	397	413	430	447	463	
	15								266	283	301	319	337	354	372	390	408	425	443	461	478	496	
	16									302	321	340	359	378	397	416	435	454	472	491	510	529	
	17										341	361	382	402	422	442	462	482	502	522	542	562	
	18											383	404	425	447	468	489	510	532	553	574	595	

Actual punching force

APS	60	70	120	70D	110D
in kN	225	313	470	454	508

Rm max (sheet metal)	470	510	630	710	600	700	800	900
Tau max = 0.85 * Rm max	376	408	504	568	480	560	640	720
coeff. (Steel X / DIN S233)	1.00	1.09	1.34	1.51	1.28	1.49	1.70	1.91

DIN S233	DIN S275	DIN S355	DIN E335	C 25	C 35	C 45	C 60
470	510	630	710	600	700	800	900
376	408	504	568	480	560	640	720
1.00	1.09	1.34	1.51	1.28	1.49	1.70	1.91

Example 1: punching instrument APS 70D, F max=454 kN
Punch diameter Ø=20 mm
Material thickness T=8 mm
Material C 45, R_m max=800 N/mm²

Example 2: punching instrument APS 70, F max=313 kN
Punch diameter Ø=21 mm
Material thickness T=12 mm
Material DIN S275, R_m max=510 N/mm²

Calculation 1: F = F(DIN S233) * coeff.(C 45/DIN S233)
F = 189 * 1.70 = 321.3 kN
F is smaller than F max, punching force is sufficient

Calculation 2: F = F(DIN S233) * coeff.DIN S275/DIN S233)
F = 298 * 1.09 = 324.8 kN
F is smaller than F max;
Punching force is not sufficient;
Please select our APS 120

CONVERSION – PRESSURE

- Pascal (pa) = 1 Newton (N) / m²
- 1 Bar (bar) = 10 hoch 5 Pa = 10 hoch 5 N/m² = 10 N/m² = 750.06 Quecksilbersäule (QS)
- 1 bar = 1.019 bar = 0.1 N/mm² = 14.5 psi
- 1 kg /cm² (atu) = 0.981 bar = 0.0981 N/mm² = 14.2234 psi
- 1 bar = 1.02 technical atmospheres (at) = 1.02 kp/cm² = 10 N/cm²
- 1 physical atmospheres (atm) = 1.013 bar = 1.033 bar = 760 mm WC = 760 torr
- 1 torr = 1.332 mbar
- 1 m water column (mWC = 0.0980665 bar
- 1 mmWC = 0.0980665 mbar = 9.80655 Pa
- 1 N/mm² = 10 bar = 10.19 bar = 145 psi
- 1 psi = 0.069 bar = 0.0703 bar 00.0069 N/mm²

CONVERSION TABLE – UNITS OF PRESSURE

Converting the pressure units “bar” and “psi”

bar	psi	psi	bar
1	14.5	1	0.068965517
10	145	100	6.896551724
100	1450	100	6.896551724
500	7250	5000	344.8275862
1000	14500	10000	689.6551724
1200	17400	10500	724.137931

Our precision high performance motors are continuously adjustable. We recommend to start with a low engine speed and to raise it continuously when milling.

The optimal engine speed can be detected by the running noise of the milling cutter and by the infeed.

The tool depending cutting speed, can be found out with the help of a well known formula and therefore the revolution can be adjusted in advance:

$$n = \frac{V_c \cdot 1000}{d \cdot 3.14} \text{ U/min} \quad d = \text{cutter-}\varnothing, n = \text{rpm}, 3.14 = \text{Pi}$$

Responsible for the milling cutter speed (N) and the cutting speed (Vc) are first of all the used material, the bevel height and the cutting geometry of the solid carbide-milling cutter.

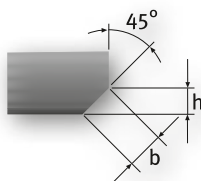
The bevel height (h)

For choosing the right solid carbide-milling cutter the bevel height is determining. When using the table based models KFT 250 and KFT 500 it must be considered, that the tool needs to be hold and controlled manually. If the milling power is too high, especially for little work pieces, the bevel height should be reached by several production steps.

Don't do bigger bevels in one go!

Bevel width (b)

The bevel width can be measured by use of the formula ($b = h \times 1.414$)



Rotating direction

When machining the work pieces on the table based models, the rotating direction must be obeyed.

When using the hand operated models (KFH 150, KFH 250) the running direction (compare arrow) must be considered. Synchronous milling is only applicable for a very small bevel height.

Surface finish

The surface finish of the bevel is depending on the used solid carbide milling cutter and the material as well as on the chosen infeed. If the chips start to glow, the infeed was too high or the milling cutters too thin.

Tool saving costs

In combination with the above mentioned models also standard solid carbide-end mill with face grinding can be used. By moving the milling cutter inside the arbor, the milling cutter can be consumed totally.



Cost reduction:
The bigger part of the End Mill's cutting range can be used by moving the End Mill in the collet.

ALFRA BEVEL MILLING MACHINE – SKF 63-15

Material	Advance Recommendation
General construction steels up to 850 N/mm ²	0.8 - 1.0 m/min
Hardened steels over 850 N/mm ²	0.75 m/min
Stainless and acid-proof steels up to 600 N/mm ²	0.5 m/min
Steel casting up to 450 N/mm ²	0.6 m/min
Cast iron up to 400 N/mm ²	0.8 - 1.0 m/min
Aluminium	0.4 m/min
(special indexable inserts required, available on separate request)	

ALFRA – Carbide Milling Plates for Bevel Milling Machine SKF-63-15

	Prod.-No.		Prod.-No.
Carbide Milling plates, TiAlN/TiN-PVD multilayer coating Universal for steel and stainless steel Clearance angle 11°	25013	Carbide Milling plates, TiAlN/TiN-PVD multilayer coating for steel < 1400 N/mm ² ; stainless steel < 900 N/mm ² Clearance angle 11°	25010.15036E
Carbide Milling plates, TiAlN/TiN-PVD multilayer coating for steel < 850 N/mm ² ; stainless steel < 900 N/mm ² Clearance angle 20°	25010.15036B	Carbide Milling plates, high gloss polished for aluminium and NE-metals Clearance angle 11°	25010.15036.C



Clearance Angle

Is the angle between the TCT tooth and the material to be cut.
ALFRA TCT Cutters are equipped with several clearance angles at a cutting edge.

Cutting Depth

Is the maximum material thickness which might be cut with the particular tool (not to be mistaken with the constructive height of the tool).

Chip Flute

Takes the generated chips and advances this out of the bore.

Chip Forwarding Pitch

Forwards the chips from the TCT tooth to the chip flute.

Chip Surface

On this surface the chip is formed.

Chip Angle

Is the angle between tool axis and chip surface.

Tooth Excess Length

Is the carbide excess to the basic body.

Tooth Height Difference

Acts as a chip breaker.

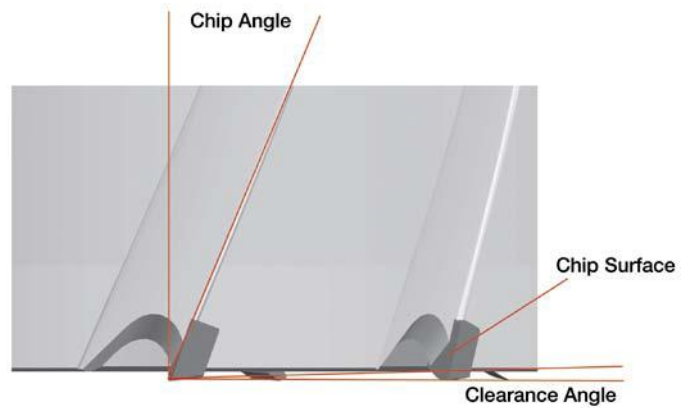
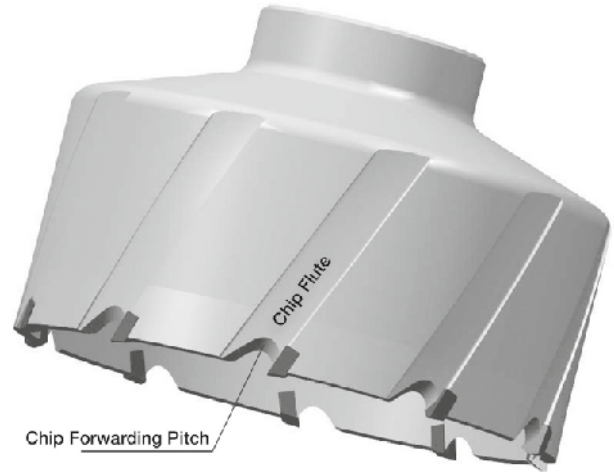
RPM, cutting speed and feed (approximate value)

Rotabest®-TCT cutter

Not suitable for automatic feed

Material	m/min	mm/rpm
Constructional steel 50 kp/m ²	40-60	0.08-0.12
Steel 50-70 kp/m ²	30-50	0.08-0.12
Stainless steel	18-45	0.8-0.10
Cast iron	65-95	0.12-0.20
Non-ferrous metals, Aluminium	100-550	0.22-0.45
Exotic alloys	10-30	0.05-0.08

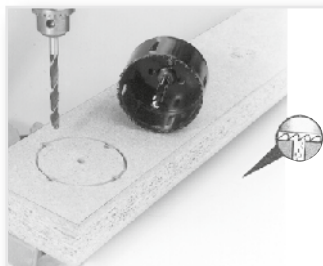
Exactness (approximate value)/input/+ 0.10 mm Output /±0 mm



To achieve the best results:

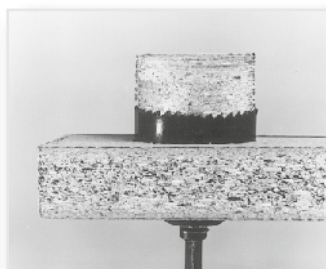
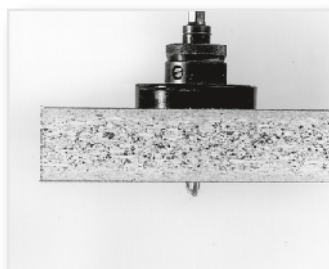
1. Use the hole saws at the recommended cutting speed, see guide table on the packaging.
2. Do not apply excess pressure. Apply a little more pressure for a harder material and less pressure for a softer material.
3. In order to achieve good centring, the centre drill must project approximately 6 mm beyond the teeth. It is recommended that the hole is first predrilled with a twist drill and then the centre drill is used in the adapter as a centring pin.
4. Use a good cutting oil when drilling metal. This extends the hole saw's service life and prevents premature blunting of the tooth tips.
5. The arbor of the adapter must be firmly clamped with the flattened sides correctly seated in the chuck.
6. The hole saw must cut into the workpiece at a right angle. Avoid tilting. Risk of accident.
7. If large hole saw diameters are used in hand-held drills, the hand-held drill must be held particularly firmly. A drill stand should be used where possible.
8. The adapter must be firmly screwed into the hole saw with all its thread and the driver pins must be firmly seated in the driver holes.
9. Secure the driver pins with the rotating ring or lock in the case of a quick-change adapter.
10. Wear protective goggles when working with the bi-metal hole saws and keep hands away in case saw runs out. Never attempt to stop with your hands a saw that is running off.
11. Lift the saw clear frequently, especially when cutting timber, chipboard and wood substitutes and remove the sawdust and chips. If this is not done, the tooth tips can burn and the hole saw will jam in the cut.
12. We recommend the following procedure when drilling timber, chipboard and wood substitutes:

Drill a number of holes immediately inside the cut. This helps carry the chips away and avoids frequent interruptions in cutting to clean the tooth tips.



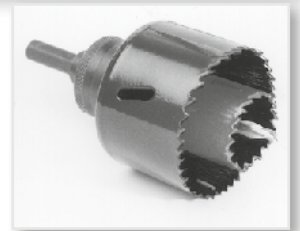
If the workpiece is especially thick ...

... it is also recommended that you cut from both sides, or drill a number of holes immediately inside the circular cut. This helps carry the chips away and avoids frequent interruptions in cutting to clean the tooth tips.



Enlarging existing holes

Existing holes 32 mm (1-1/4") or more in diameter may be enlarged with a simple trick: Take a 32 mm diameter hole saw and screw this inside the hole saw on the projecting thread of the A2 adapter. The inner hole saw then acts as a kind of guiding hole saw for extending existing holes, see photo.



What you absolutely must avoid:

1. Drilling at too fast or too slow a cutting speed. The teeth will glide over the material and become prematurely blunt.
2. Avoid bringing the saw teeth abruptly down on the workpiece, the teeth will break off.
3. Never cut metallic materials dry. Always use a cutting oil.
4. Never bring the saw up to the workpiece on a slant. There is a risk of injury when hand drills are used. The saw can break up or the arbor could be damaged.
5. Ensure that the hole saw is running true. Check the chuck as necessary.
6. Never screw the adapter's guide pins only partially into the hole saw guide holes. The thread of the hole saw could be torn out.
7. Never regrind the hole saw freely by hand. Have hole saws reground by a specialist. Care must be taken to ensure sufficient residual setting and a uniform tooth height.
8. If the tool arbor is pushed into the chuck or if the arbor shears off, the advance pressure is too great.
9. If the hole saw is unevenly worn on the outside, then the saw is not running true or the material to be sawn was not correctly clamped.
10. If the tooth tips are blued, the saw has been used without cutting oil, or at too high a cutting speed.



HSS BI-METAL HOLE SAWS – SPEED CHART

Recommended Speed for various materials (RPM)

Diameter mm	Mild Steel	Cast Iron	Tool steel + stainless steels	Brass	Aluminium	Wood
14	580	400	300	790	900	3000
16	550	365	275	730	825	3000
17	500	330	250	665	750	3000
19	460	300	230	600	690	3000
20	440	290	220	580	660	3000
21	425	280	210	560	635	3000
22	390	260	195	520	585	3000
24	370	245	185	495	555	3000
25	350	235	175	470	525	2700
27	325	215	160	435	480	2700
29	300	200	150	400	450	2700
30	285	190	145	380	425	2400
32	275	180	140	380	410	2400
33	260	175	135	345	390	2400
35	250	165	125	330	375	2400
37	240	160	120	315	360	2400
38	230	150	115	300	345	2400
40	220	145	110	290	330	2100
41	210	140	105	280	315	2100
43	205	135	100	270	305	2100
44	195	130	95	260	295	2100
46	190	125	95	250	285	2100
48	180	120	90	240	270	2100
51	170	115	85	230	255	2000
52	165	110	80	220	245	2000
54	160	105	80	210	240	2000
57	150	100	75	200	225	2000
59	145	100	75	195	225	2000
60	140	95	70	190	220	2000
64	135	90	65	180	205	1800
65	130	85	65	175	200	1800
67	130	85	65	170	195	1800
70	125	80	60	160	185	1800
73	120	80	60	160	180	1800
76	115	75	55	150	170	1500
79	110	70	55	140	165	1500
83	105	70	50	140	155	1500
86	100	65	50	130	150	1200
89	95	65	45	130	145	1200
92	95	60	45	120	140	1200
95	90	60	45	120	135	1200
98	90	60	45	120	135	1200
102	85	55	40	110	130	1000
105	80	55	40	110	120	1000
108	80	55	40	110	120	900
111	80	50	40	100	120	900
114	75	50	35	100	105	900
121	75	50	35	95	95	900
127	65	45	30	90	90	800
133	60	40	25	86	85	800
140	60	40	25	85	85	800
146	55	35	25	75	75	800
152	55	35	25	75	75	800



These speeds are benchmarks. The speed can be higher or lower, this depends on the material type and the cutting behaviour.

Attention: Do not use cutting oil, if you are cutting cast iron. If you are cutting aluminium use paraffin wax or paraffin.

Calculation of the Cutting Speed

n = Speed (1/min)

v_c = Cutting speed (m/min)

d = Tool diameter (mm)

$$v_c = \frac{\pi \times d \times n}{1000}$$

Speed calculation

n = Speed (1/min)
 v_c = Cutting Speed (m/min)
 d = Tool diameter (mm)

$$n = \frac{v_c \times 1000}{d \cdot \pi}$$

d = 20 mm
 v_c = 50 m/min

$$n = \frac{50000}{20 \cdot \pi} = 795.77 \text{ 1/min}$$

Worked sample:

Tool Ø	Cutting speed (m/min)												
	Stainless steel material						Mild steel - ST material						
	20	25	30	35	40	45	50	55	60	65	70	75	80
16	398	498	597	697	796	896	995	1095	1194	1294	1393	1493	1592
18	354	442	531	619	708	796	885	973	1062	1150	1238	1327	1415
20	318	398	478	557	637	717	796	876	955	1035	1115	1194	1274
22	290	362	434	507	579	651	724	796	869	941	1013	1086	1158
24	265	332	398	464	531	597	663	730	796	863	929	995	1062
26	245	306	367	429	490	551	612	674	735	796	857	919	980
28	227	284	341	398	455	512	569	626	682	739	796	853	910
30	212	265	318	372	425	478	531	584	637	690	743	796	849
32	199	249	299	348	398	448	498	547	597	647	697	746	796
34	187	234	281	328	375	422	468	515	562	609	656	703	749
36	177	221	265	310	354	398	442	487	531	575	619	663	708
38	168	210	251	293	335	377	419	461	503	545	587	629	670
40	159	199	239	279	318	358	398	438	478	518	557	597	637
42	152	190	227	265	303	341	379	417	455	493	531	569	607
44	145	181	217	253	290	326	362	398	434	470	507	543	579
46	138	173	208	242	277	312	346	381	415	450	485	519	554
48	133	166	199	232	265	299	332	365	398	431	464	498	531
50	127	159	191	223	255	287	318	350	382	414	446	478	510
52	122	153	184	214	245	276	306	337	367	398	429	459	490
54	118	147	177	206	236	265	295	324	354	383	413	442	472
56	114	142	171	199	227	256	284	313	341	370	398	427	455
58	110	137	165	192	220	247	275	302	329	357	384	412	439
60	106	133	159	186	212	239	265	292	318	345	372	398	425
62	103	128	154	180	205	231	257	283	308	334	360	385	411
64	100	124	149	174	199	224	249	274	299	323	348	373	398
66	97	121	145	169	193	217	241	265	290	314	338	362	386
68	94	117	141	164	187	211	234	258	281	304	328	351	375
70	91	114	136	159	182	205	227	250	273	296	318	341	364
72	88	111	133	155	177	199	221	243	265	288	310	332	354
74	86	108	129	151	172	194	215	237	258	280	301	323	344
76	84	105	126	147	168	189	210	230	251	272	293	314	335
78	82	102	122	143	163	184	204	225	245	265	286	306	327
80	80	100	119	139	159	179	199	219	239	259	279	299	318
82	78	97	117	136	155	175	194	214	233	252	272	291	311
84	76	95	114	133	152	171	190	209	227	246	265	284	303
86	74	93	111	130	148	167	185	204	222	241	259	278	296
88	72	90	109	127	145	163	181	199	217	235	253	271	290
90	71	88	106	124	142	159	177	195	212	230	248	265	283
92	69	87	104	121	138	156	173	190	208	225	242	260	277
94	68	85	102	119	136	152	169	186	203	220	237	254	271
96	66	83	100	116	133	149	166	182	199	216	232	249	265
98	65	81	97	114	130	146	162	179	195	211	227	244	260
100	64	80	96	111	127	143	159	175	191	207	223	239	255



FRP Hole Saws

Ø mm	Timber Chipboard	Plastics	Masonry	Wall tiles*
25/30/35	1000	800	800	500
40/45/50	800	600	700	400
58 to 74	600	400	600	400
80/105	400	300	300	300

* Drilling in tiles only up to a scratch hardness of 6, mark centre, set the centre drill and drill through the glaze with a low speed, allow the saw teeth to penetrate the glazing uniformly, running as smoothly and level as possible, so that the edge of the hole is made without chipping. Continue drilling at a normal drilling speed. Tiles with a scratch hardness greater than 6 may only be cut with diamond or carbide hole saws.

Notes on use

- Use rotation only. Switch off impact or hammer drill.
- Impact and shock on the sharp, ground carbide cutters can lead to small carbide splinters and thus to a severe loss of performance.
- Do not tilt the hole saw in the hole.
- Remove the drill core after each operation. Remove the sawdust when drilling timber and timber products.

Notes on use

- For multipurpose hole saw with rim countersink
- The rim countersink is placed between hole saw and adapter and the carbide cutter is used to make a countersink in timber and timber substitutes. This makes it possible to fit sockets flush.

Important notes on use

- The hole saw with rim countersink may not be stopped before it is removed.
- Advance with care, to prevent the cut edges tearing.



SPEED CHART – MULTI-STEP DRILLS/CONICAL ONE-LIP BITS

ALFRA-Multi-step drills

These drills were especially to drill perfectly round and simultaneously deburred holes in sheet metals of 4 - 6 mm. The radius transition simultaneously deburrs or bevels the holes. While conical one-lip bits drill slightly conical holes, cylindrical holes can be drilled with ALFRA Multi-step drills. The tools are axial-radially relief ground and can be resharpened at the breast of the cutting tooth.

We recommend the use of pillar drilling machines, however, the small ALFRA Multi-step drills can be used on adjustable hand drilling machines. Imperatively use sufficient cooling (ALFRA coolant stick or bore emulsion)?

ALFRA HSS DM 05 precision Multistep Drill

- Take notice of the cutting speed
- Grease the cutting lips in case of application

The holes are deburred on both sides by the multistep drills. The multistep drill drills holes in thin materials, enlarges existing holes, makes inclined holes, drills pipes, makes holes penetrating each other. Suitable for any hand drill. For steel – PVC – polystrol – polyester – Plexiglas – card – plywood and similar materials. Can be reground many times, if treated carefully.

Material	Mild steel	Mild steel	Alloy steel	Cast iron	Cast iron	Stainless steel	CuZn alloy brittle	CuZn alloy tough	Al alloy	Thermo-plastic	Duro-plastic	Wood
	< 700 N/mm ²	> 700 N/mm ²	< 1000 N/mm ²	< 250 N/mm ²	> 250 N/mm ²							
Material gauge	5.0 mm		5.0 mm	5.0 mm	5.0 mm	3.0 mm	5.0 mm	5.0 mm	5.0 mm	5.0 mm	5.0 mm	25.0 mm
Lubricant	Drilling paste	Drilling paste	Drilling paste	Air	Air	Drilling paste	Air	Air	Drilling paste	H ₂ O	Air	Air
Vc = m/min	25	20 - 25	20	15	10	5	60	35	30	20	15	> 40
Ø mm	rpm	rpm	rpm	rpm	rpm	rpm	rpm	rpm	rpm	rpm	rpm	rpm
4.0 - 12.0	1900 - 600	1700 - 580	1550 - 520	1190 - 400	800 - 250	400 - 130	4700 - 1550	2750 - 920	2350 - 790	1550 - 520	1190 - 400	3000 - 1000
4.0 - 20.0	1900 - 400	1700 - 350	1550 - 300	1190 - 240	800 - 160	400 - 80	4700 - 950	2750 - 550	2350 - 470	1550 - 300	1190 - 240	3000 - 650
12.0 - 20.0	600 - 400	600 - 350	520 - 300	400 - 240	250 - 160	130 - 80	1550 - 950	920 - 550	790 - 470	520 - 300	400 - 240	1000 - 650
4.0 - 24.0	1900 - 300	1700 - 280	1550 - 250	1190 - 200	800 - 130	400 - 65	4700 - 790	2750 - 460	2350 - 400	1550 - 250	1190 - 200	3000 - 550
6.0 - 30.0	1300 - 250	1200 - 230	1000 - 200	780 - 150	530 - 100	250 - 50	3150 - 630	1850 - 370	1590 - 310	1000 - 200	780 - 150	2100 - 420
20.0 - 30.0	400 - 250	350 - 230	300 - 200	230 - 150	160 - 100	80 - 50	950 - 630	550 - 370	470 - 310	300 - 200	230 - 150	650 - 420
6.0 - 36.0	1300 - 220	1200 - 200	1000 - 170	780 - 130	530 - 90	250 - 45	3150 - 530	1850 - 300	1590 - 260	1000 - 170	780 - 130	2100 - 350
30.0 - 40.0	250 - 200	230 - 180	200 - 150	150 - 120	100 - 80	50 - 40	630 - 470	370 - 280	310 - 240	200 - 150	150 - 120	420 - 310
40.0 - 50.0	200 - 160	180 - 140	150 - 125	120 - 90	80 - 65	40 - 30	470 - 380	280 - 220	240 - 190	150 - 125	120 - 90	310 - 250
50.0 - 60.0	160 - 130	140 - 110	125 - 100	90 - 80	65 - 50	30 - 25	380 - 310	220 - 185	190 - 150	125 - 100	90 - 80	250 - 210

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Issued: September 2013

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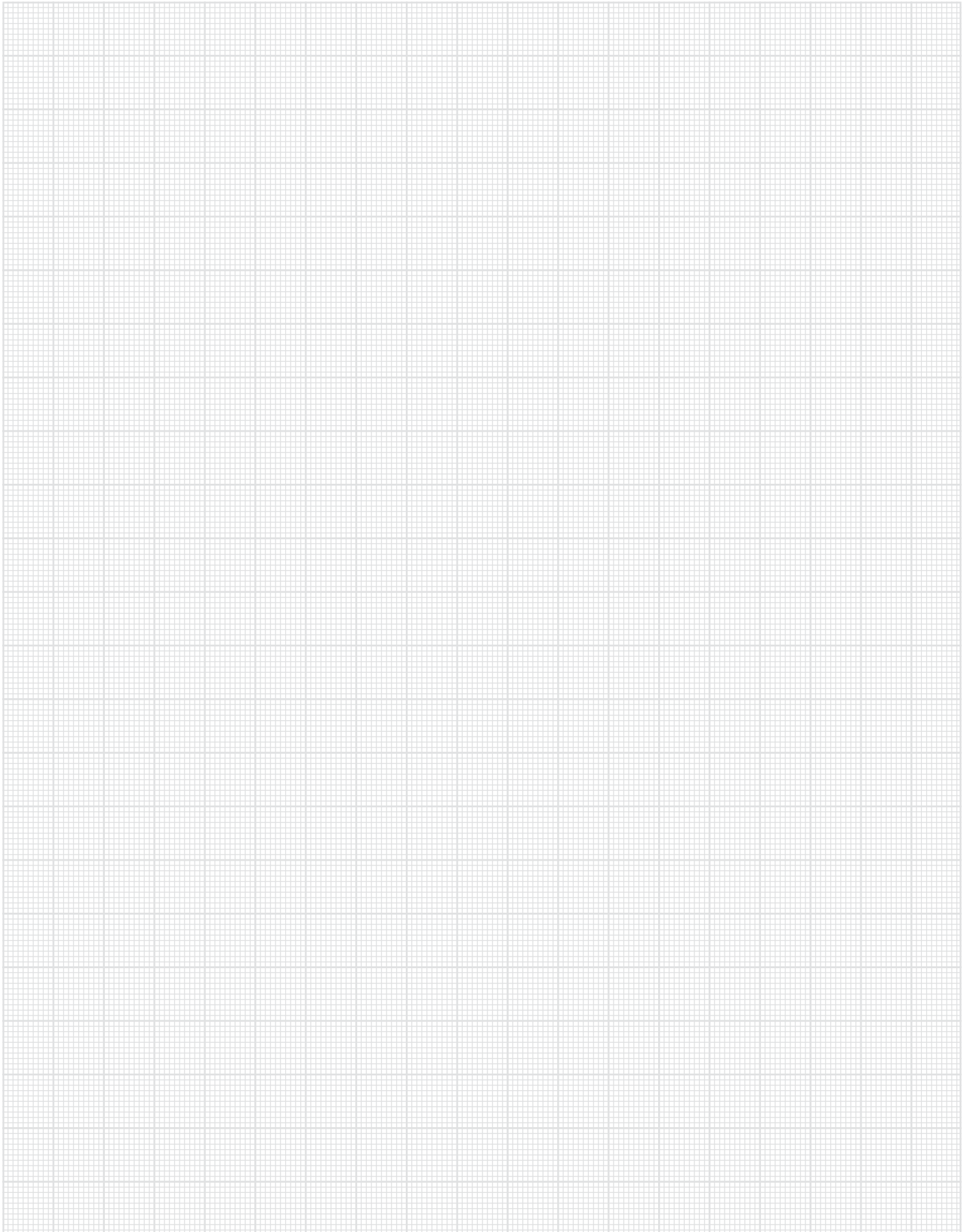
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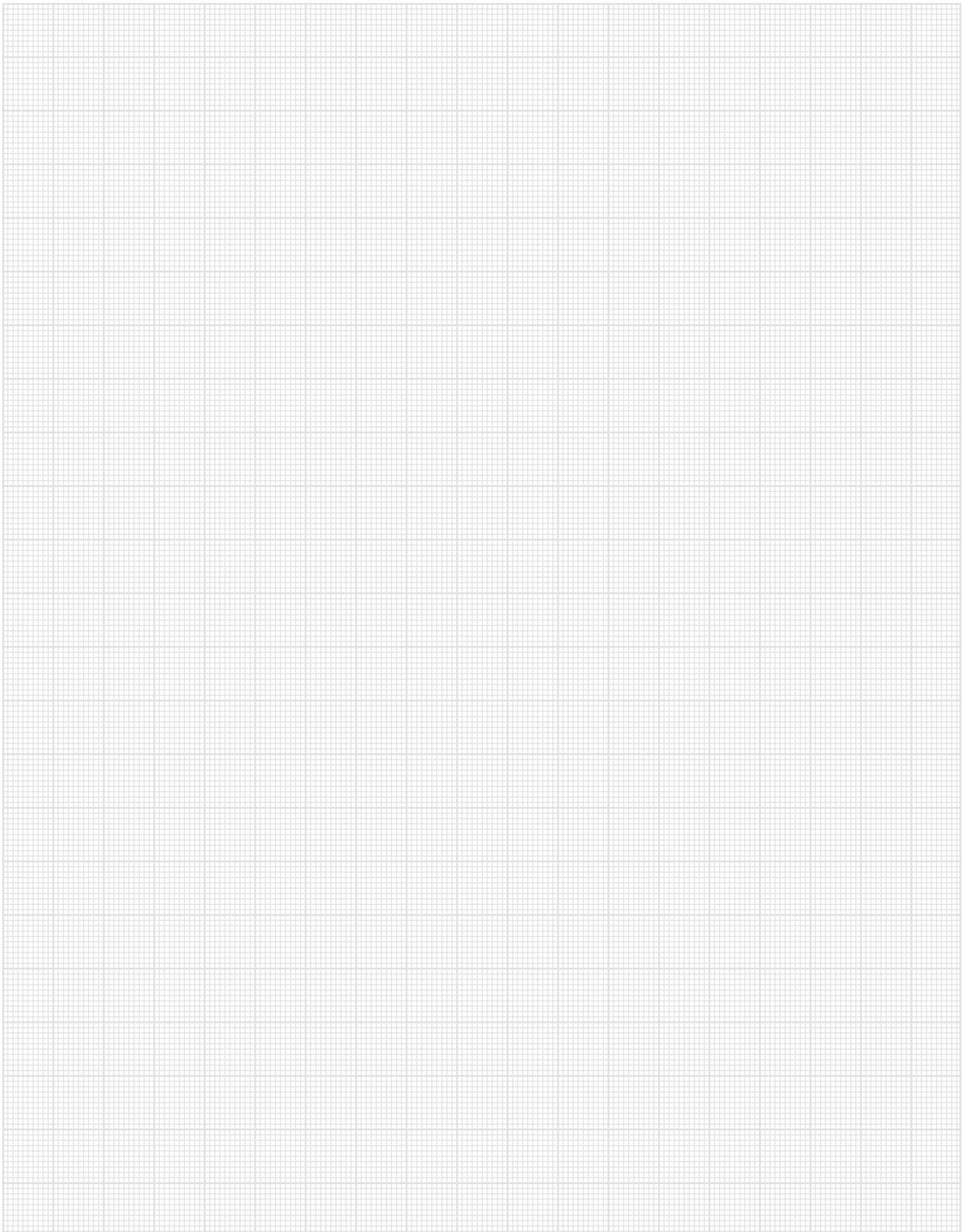
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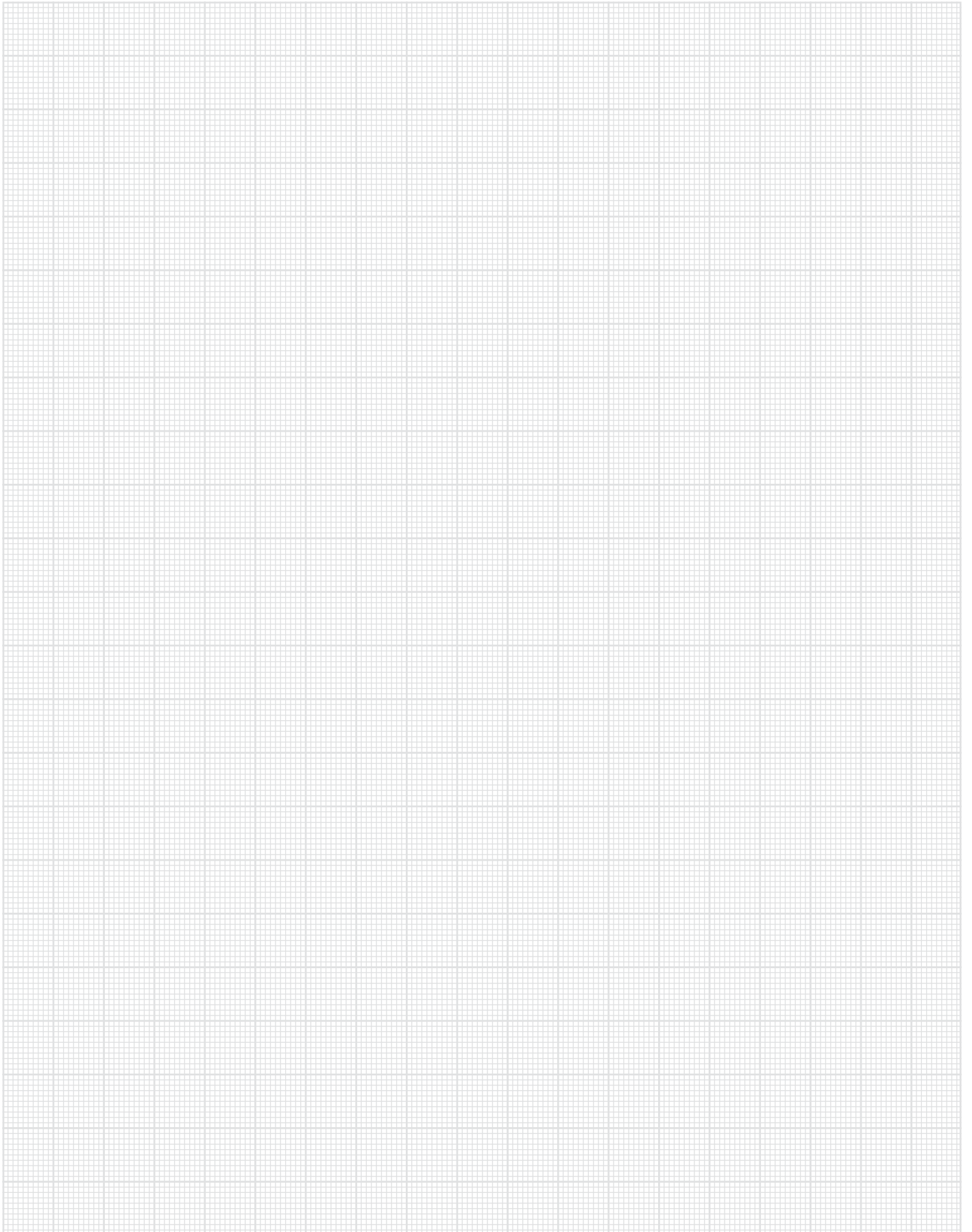
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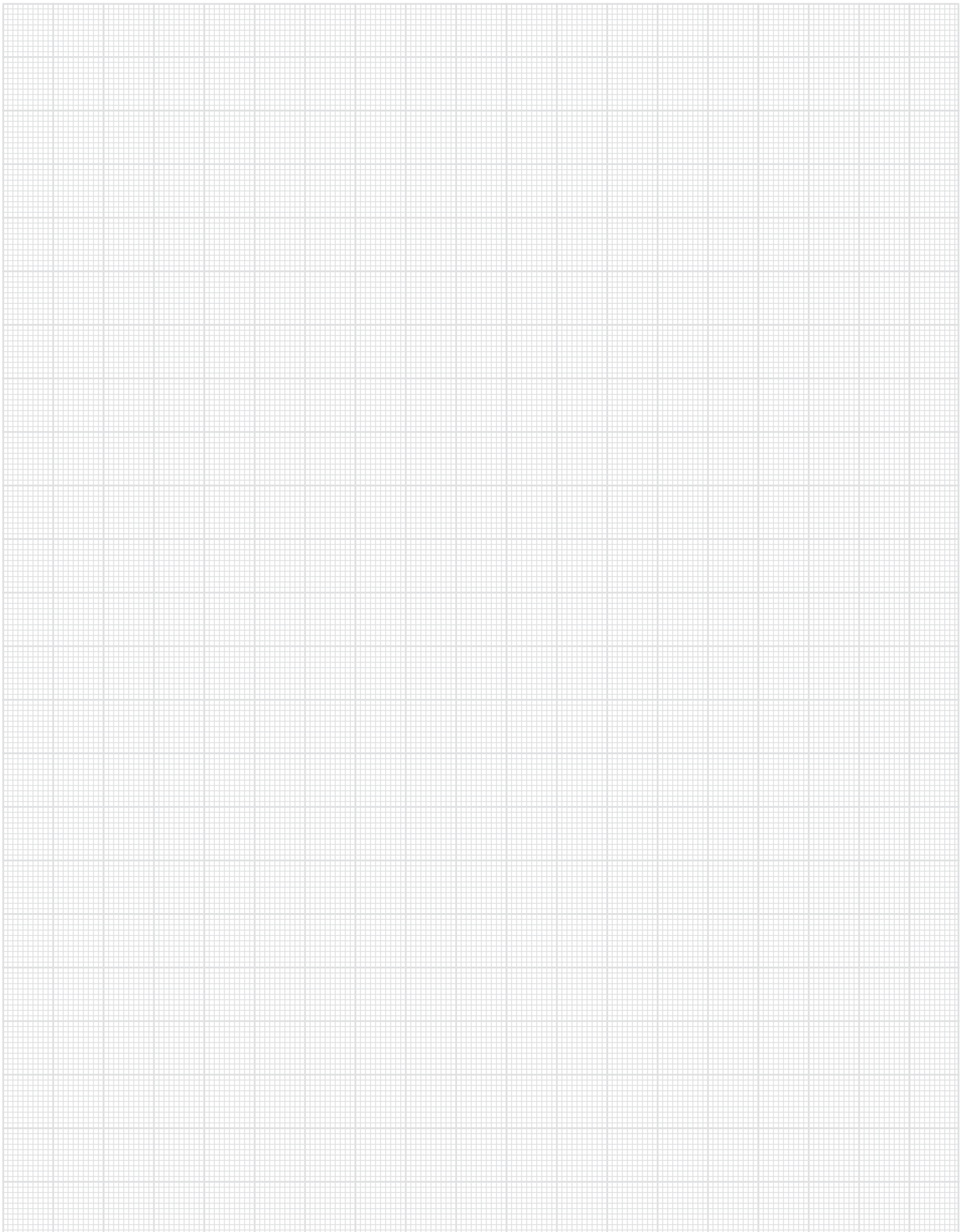






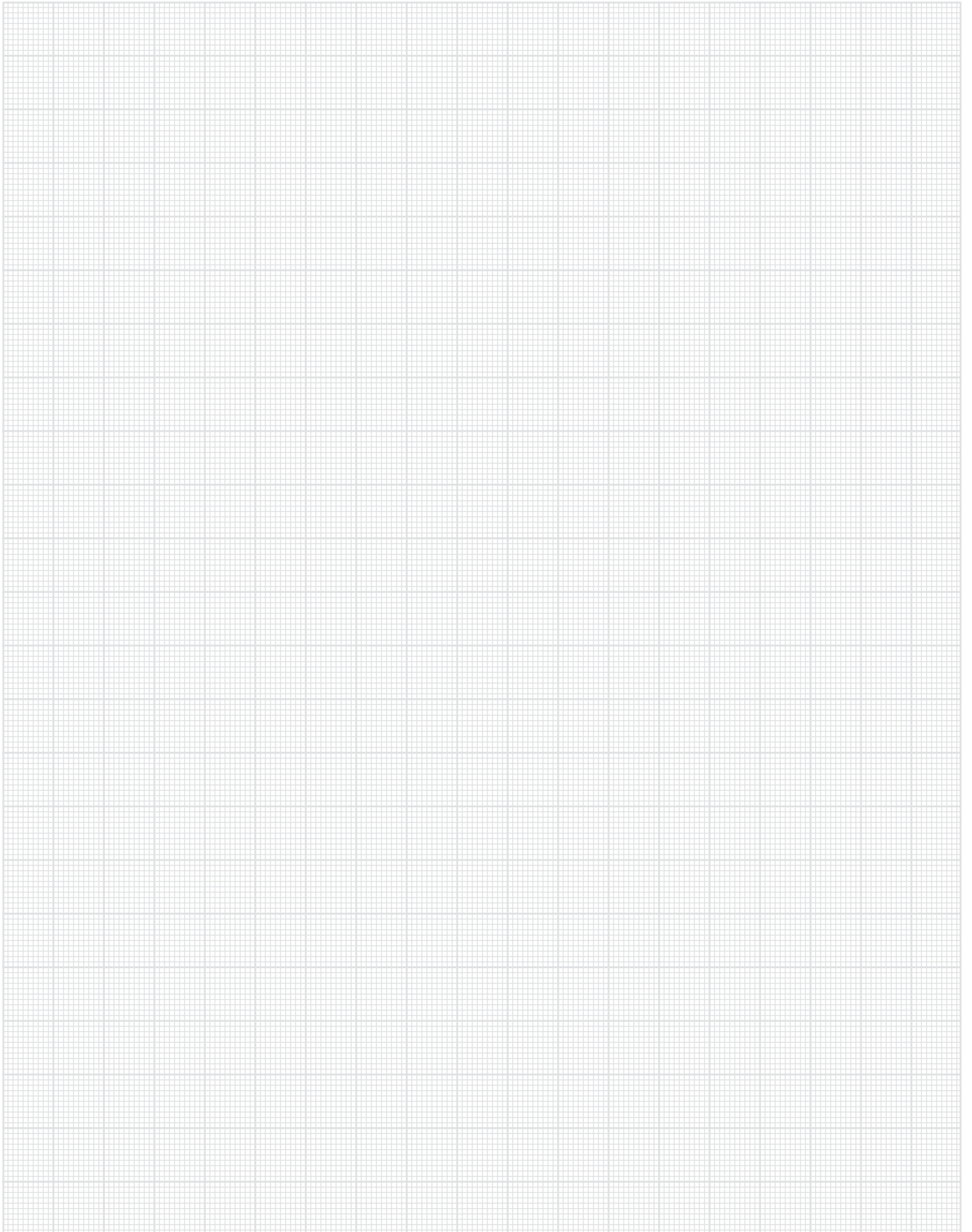
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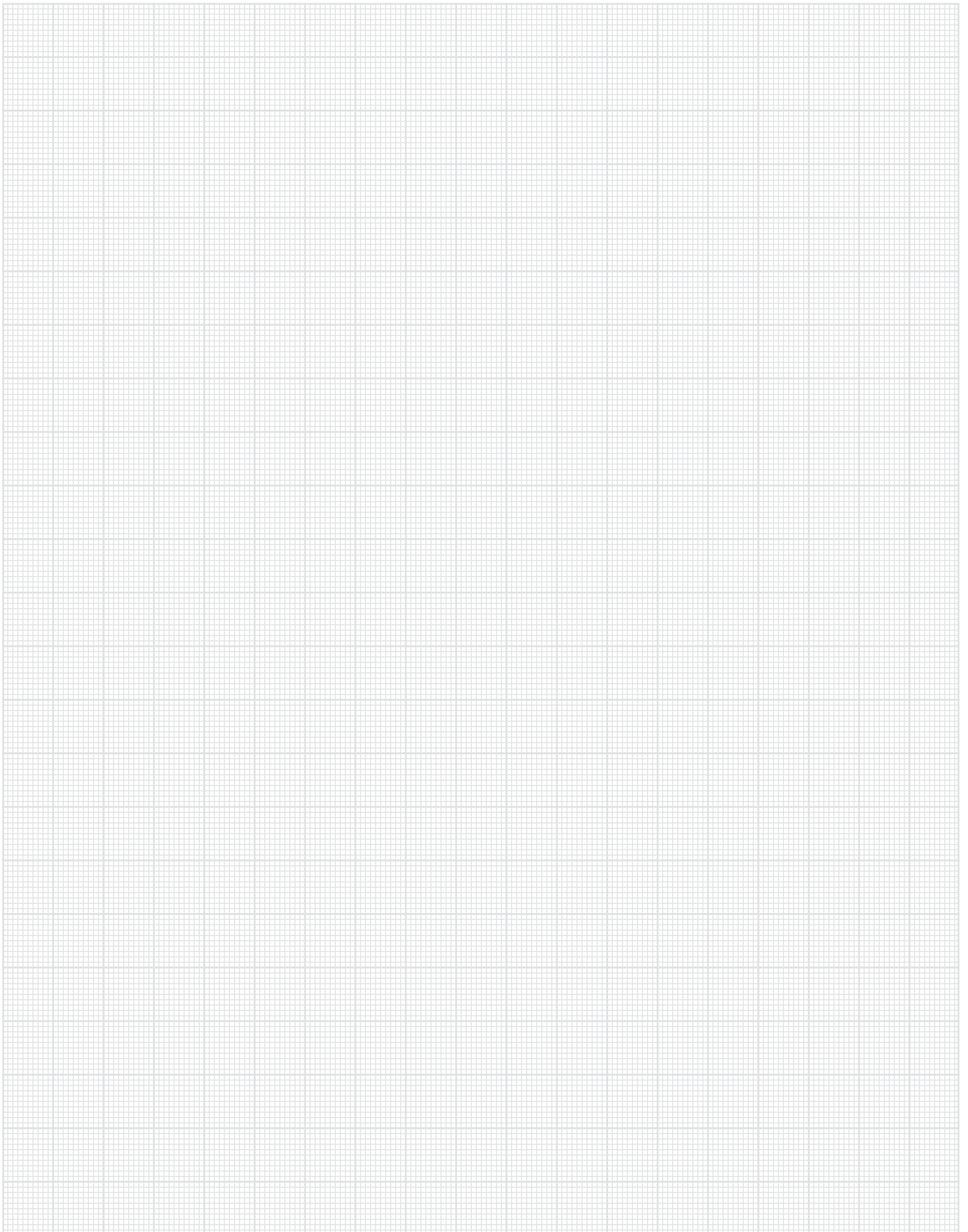






B





A

PUNCHING – BENDING – CUTTING



B

DRILLING – PUNCHING – CUTTING – DEBURRING

