



Passion for Tools



**APPLICATION SOLUTIONS  
STEEL AND METAL CONSTRUCTION**



# SOLUTIONS BY PRACTITIONERS FOR PRACTITIONERS

## Tools are our passion

ALFRA develops and produces tools and machines. Our promise: quality “made in Germany”. Solutions are therefore created by practitioners for practitioners on our sites in Hockenheim, Berlin/Stahnsdorf and Herborn – perfectly tailored to the requirements of our customers from the switchboard construction, machining, magnetic technology and metalworking industries.

After over five decades of experience, a long period as the sole supplier of metal core drilling machines in Europe, as a manufacturer, we have been shaping the entire production process since the mid-70s – with professional expertise and passion.

## Metal core drilling without limits

We listen to you. Our developers are therefore continuously working on further improving ALFRA products. An example: since 2014, drill stands from the ALFRA “SP” model range (see page 13) have facilitated drilling on sheet metals with reliable adhesion even from a material thickness of three millimetres. The basis: our patented, permanent magnetic technology not only guarantees extreme holding force but also functions independently of the power source in the place of use – the drill stand remains stuck to the material even in the case of a power failure. This means greater safety for the user.

## We speak your language

Is your specific application dependent on details? No problem! Our staff are always close to the development and manufacturing processes in our company. They therefore speak your “technical” language. We will find a solution that works for you.

The dedicated ALFRA team looks forward to your call.





# WE THINK AHEAD



## Certified energy awareness at ALFRA

Our products ensure smooth processes in the working environment of our customers. We are proud of this. However, it is not only quality that counts for us but also how we get there. Sustainability is therefore not an empty phrase for ALFRA; our commitment with regard to energy awareness has been certified in accordance with the ISO standard since 1997.

### 400 tonnes fewer CO<sub>2</sub> emissions

The figures prove it: we "are not just talking about it". With 400 tonnes fewer CO<sub>2</sub> emissions in four years, we are making our contribution in the fight against climate change.

### 600 megawatt hours of electricity for our own needs

As a manufacturer, we determine the entire production process in accordance with our philosophy. Specifically: ALFRA relies on alternative energies wherever this makes sense, for example with electricity from photovoltaics. 600 megawatt hours of energy from solar cells facilitate almost climate-neutral production.

We feel responsible – for the satisfaction of our customers and for environmentally friendly production. The aim: to do our best for both every day.



 **MADE IN GERMANY**



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## ALFRA sets new standards in magnet technology!

Our permanent magnets are activated according to a patented principle, completely independent from the power supply – 100% safe and permanently stable!

ALFRA is worldwide licensee of this patented system that allows you to drill, lift, position and transport 3 mm material thickness...



**US Patent no.  
8350663B1**

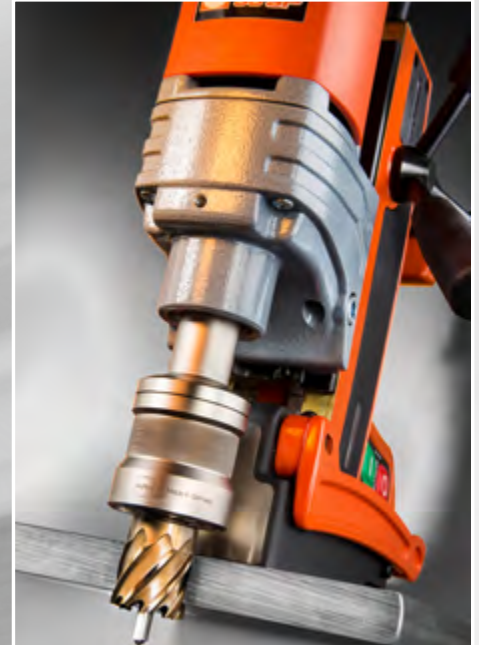


**MADE IN  
GERMANY**





**LIFTING**



**CORE DRILLING**



**SPECIAL/PROBLEM SOLUTIONS**



**POSITIONING**

# THE ALFRA-ROTABEST<sup>®</sup>-FAMILY – METAL CORE DRILLING IN EVERY POSITION



**MADE IN  
GERMANY**

## SP-LINE

The independent ones with permanent magnet

How do you imagine your ideal partner? Reliable in every situation and still independent? Then our core drilling machines from the SP-line are the perfect match for you. The basis: the patented permanent magnet with a safety sensor adheres horizontal and vertical, autonomous from power supply. Crashes are nearly impossible – and more: our premium products are holding nicely in your hand, too.

- Our premium line is convincing due to a permanent magnet with safety sensor to check the holding force – for maximum occupational safety.
- because of the patented magnetics technology the drill stand adheres from only 3 mm material thickness – for applications in every position.
- Hard facts, soft factors – the models from the SP-line are unifying all performance characteristics of metal core drilling with an ergonomically optimized operating comfort and sophisticated equipment.
- Core drill dimensions-Ø: 12 - 80 mm



## RL-E-LINE

The robust ones with the twist

The Rotabest models from the RL-E-line can do better than merely drilling holes. Because the solid ones with right/left run do not only work precisely, they are tapping threads, too. Furthermore they are very user friendly.

- Our professional line with right/left run for metal workers includes two reliable working devices with left/right run for coredrilling, thread tapping, counterboring and spiral drilling.
- The automatic safety cut off by MPI-system is stopping the machine as soon as the incorporated sensor is detecting that the magnet is not adhering on the material. The result: outstanding occupational safety.
- All at a glance: the clear operating concept is self-explanatory. Confusion or application errors are almost excluded.
- Core drill dimensions-Ø: 12 - 100 mm





## X-LINE



### The versatile ones with an extra

Would you like something extra? The Alfra metal core drilling machines from the X-line are a version of our Basic-line equipped with some special fittings. Devices made by Alfra are keeping up with the requirements of your work routine.

- As an „extra“ the models with an „X“ have a membrane keypad to ensure easy operability.
- Work safety all at a glance: the led-sensor is indicating, if the material has the required thickness to make the magnetic drill stand adhere reliably
- Core drill dimensions- $\varnothing$ : 12 - 80 mm

## B-LINE



### The solid ones with the strong price

The models from our Alfra Basic-line are real endurance runners. Unbeatable when it comes to service life, they are also standing out because of an exceptional price-performance. These advantages are delivering you to the line.

- Our Basic-line is combining proven Alfra-quality with an attractive purchase price. So you get good value for money and you remain economically flexible.
- No matter how many hours a core drilling machine from the Basic-line is in use for your business – the device is going to complete the task steadily. The winning combination: sturdiness and precision.
- Our Rotabest 130 B – when size matters. The XXL Version amongst our Alfra core drilling machines is the perfect match for metalworkers, who need more: More power, more drillhole diameter, more cutting depth. For cutting depths up to 130 mm.
- Core drill dimensions- $\varnothing$ : 12 - 130 mm

## S-LINE



### The duo for special operations

The „S“ in the name says it all: Core drilling machines belonging to our S-line are specialists – for example when things are literally getting tight. May we present: our super-heroes for particular challenges.

- V32: flat design for high demands. The compact model is operating at full capacity even in working areas which are difficult to access. For example when it comes to drilling close to vehicle frames, inside narrow T-beams and when core drilling machines with standard measures are running into their limits.

- SP-V: One for all: the slimly designed drill stand SP-V with a permanent magnet is adhering from a material thickness of only 3 mm. Furthermore: Due to the 43mm Euro standard collar, the lightweight is combinable with a broad variety of core drilling machines
- You haven't found what you've been looking for? There's a suitable core drilling machine for every challenging project. Please don't hesitate to ask for further solutions for your special applications.
- Core drill dimensions- $\varnothing$ : 12 - 35 mm
- More Dimensions

# ALFRA ROTABEST® CORE DRILLING MACHINES WITH PERMANENT MAGNET

**MADE IN  
GERMANY**

**SP-LINE**



|                                | Ø 35                             |                  | Ø 50                               |                  | Ø 80   |                  | Ø 80   |                  |
|--------------------------------|----------------------------------|------------------|------------------------------------|------------------|--|------------------|--|------------------|
| <b>Image</b>                   |                                  |                  |                                    |                  |  |                  |  |                  |
| <b>Model</b>                   | RB 35 SP                         |                  | RB 50 SP                           |                  | RB 80 SP   |                  | RB 80 SP RL-E  |                  |
| <b>Page</b>                    | 16 - 17                          |                  | 18 - 19                            |                  | 20   |                  | 21   |                  |
| <b>Prod.-No.</b>               | 230 V: 18801                     | 110 V: 18801.110 | 230 V: 18851                       | 110 V: 18851.110 | 230 V: 18627   | 110 V: 18627.110 | 230 V: 18628   | 110 V: 18628.110 |
| <b>Core drill dimensions</b>   | Ø 12.0 - 35.0 mm                 |                  | Ø 12.0 - 50.0 mm                   |                  | Ø 12.0 - 80.0 mm /<br>Ø 20.0 - 50.0 mm<br>(cutting depth 110 mm)         |                  | Ø 12.0 - 80.0 mm /<br>Ø 20.0 - 50.0 mm<br>(cutting depth 110 mm)   |                  |
| <b>Cutting depth</b>           | 50.0 mm                          |                  | 50.0 mm                            |                  | 50.0 mm / 110.0 mm   |                  | 50.0 mm / 110.0 mm   |                  |
| <b>Twist drill</b>             | Ø 1.0 - 13.0 mm                  |                  | Ø 1.0 - 20.0 mm                    |                  | Ø 1.0 - 16.0 mm with drill chuck up to Ø<br>32.0 mm with MT3 DIN 345     |                  | Ø 1.0 - 16.0 mm with drill chuck<br>up to Ø 32.0 mm with MT3 DIN 345   |                  |
| <b>Counterboring</b>           | Ø 10.0 - 40.0 mm                 |                  | Ø 10.0 - 40.0 mm                   |                  | Ø 10.0 - 55.0 mm   |                  | Ø 10.0 - 55.0 mm   |                  |
| <b>Tapping</b>                 | -                                |                  | -                                  |                  | with tapping attachment:<br>up to M30                                    |                  | with tapping chuck: up to M30<br>with tapping attachment: up to M30  |                  |
| <b>Arbor</b>                   | Quick-release chuck              |                  | MT2                                |                  | MT3  |                  | MT3  |                  |
| <b>Stroke</b>                  | 105 mm                           |                  | 100 mm                             |                  | 190 mm   |                  | 190 mm   |                  |
| <b>Height adjustment</b>       | 80 mm                            |                  | 47 mm                              |                  | 60 mm  |                  | 60 mm  |                  |
| <b>Gearbox - on-load speed</b> | 450 rpm                          |                  | 1. Step 250 rpm<br>2. Step 450 rpm |                  | 1. Step 110 rpm<br>2. Step 175 rpm<br>3. Step 245 rpm<br>4. Step 385 rpm |                  | right/left<br>1. Step 50 - 110 rpm<br>2. Step 75 - 175 rpm<br>3. Step 105 - 245 rpm<br>4. Step 165 - 385 rpm |                  |
| <b>Power consumption</b>       | 1,100 W                          |                  | 1,200 W                            |                  | 1,800 W  |                  | 1,800 W  |                  |
| <b>Voltage</b>                 | 230 V 50/60 Hz<br>110 V 50/60 Hz |                  | 230 V 50/60 Hz<br>110 V 50/60 Hz   |                  | 230 V 50/60 Hz<br>110 V 50/60 Hz   |                  | 230 V 50/60 Hz<br>110 V 50/60 Hz   |                  |
| <b>Magnetic holding force</b>  | 17,000 N                         |                  | 17,000 N                           |                  | 22,000 N   |                  | 22,000 N   |                  |
| <b>Tool-Force (10 mm)*</b>     | 2,800 N                          |                  | 2,800 N                            |                  | 2,500 N  |                  | 2,500 N  |                  |
| <b>Min. material thickness</b> | from 3 mm                        |                  | from 3 mm                          |                  | from 3 mm  |                  | from 3 mm  |                  |
| <b>Magnetic base</b>           | 72 x 190 mm                      |                  | 72 x 190 mm                        |                  | 94 x 255 mm  |                  | 94 x 255 mm  |                  |
| <b>Weight</b>                  | 9.9 kg                           |                  | 11.5 kg                            |                  | 22.6 kg  |                  | 22.6 kg  |                  |

| <b>Motor</b>               |   |  |   |  |   |  |   |  |
|----------------------------|---|--|---|--|---|--|---|--|
| Smooth start               | ✓ |  | ✓ |  | ✓ |  | ✓ |  |
| Hybrid relay               | ✓ |  | ✓ |  | - |  | - |  |
| Right/left run             | - |  | - |  | - |  | ✓ |  |
| Overload protection        | ✓ |  | ✓ |  | ✓ |  | ✓ |  |
| Motor emergency stop       | ✓ |  | ✓ |  | - |  | - |  |
| Oil bath gearbox           | - |  | ✓ |  | ✓ |  | ✓ |  |
| Mechanical slipping clutch | - |  | - |  | ✓ |  | ✓ |  |
| <b>Slide</b>               |   |  |   |  |   |  |   |  |
| Stepless adjustment        | ✓ |  | ✓ |  | ✓ |  | ✓ |  |
| Self-adjusting guide       | ✓ |  | ✓ |  | ✓ |  | ✓ |  |
| <b>Operation</b>           |   |  |   |  |   |  |   |  |
| Soft-touch grips           | ✓ |  | ✓ |  | ✓ |  | ✓ |  |
| Membrane keyboard          | ✓ |  | ✓ |  | - |  | - |  |
| Holder for Allen key       | ✓ |  | ✓ |  | - |  | - |  |
| Cord length 5 m            | ✓ |  | ✓ |  | ✓ |  | ✓ |  |
| <b>Magnet</b>              |   |  |   |  |   |  |   |  |
| Sensor/LED                 | ✓ |  | ✓ |  | - |  | - |  |
| Permanent magnet           | ✓ |  | ✓ |  | ✓ |  | ✓ |  |
| TiN-coating                | ✓ |  | ✓ |  | ✓ |  | ✓ |  |

\* Lift-off force directly on the tool/core drill machine







# ALFRA ROTABEST®

## CORE DRILLING MACHINES WITH ELECTROMAGNET WITH R/L-RUN

**MADE IN GERMANY**

**RL-E-LINE**

|   | Ø 50   |                  | Ø 80   |                  | Ø 100  |                  |
|---|--|------------------|--|------------------|--|------------------|
|  |  |                  |  |                  |  |                  |
|   |             |                  |                            |                  |                           |                  |
|   | <b>RB 50 B RL-E</b>  |                  | <b>RB 80 B RL-E</b>  |                  | <b>RB 100 RL-E</b>   |                  |
| <b>Page</b>   | 22   |                  | 23   |                  | 24   |                  |
| <b>Prod.-No.</b>  | 230 V: 18612   | 110 V: 18612.110 | 230 V: 18629   | 110 V: 18629.110 | 230 V: 18634   | 110 V: 18634.110 |
| <b>Core drill dimensions</b>  | Ø 12.0 - 50.0 mm   |                  | Ø 12.0 - 80.0 mm /<br>Ø 20.0 - 50.0 mm<br>(cutting depth 110 mm)   |                  | Ø 12.0 - 100.0 mm /<br>Ø 20.0 - 50.0 mm<br>(cutting depth 110 mm)  |                  |
| <b>Cutting depth</b>  | 50.0 mm  |                  | 50.0 mm / 110.0 mm   |                  | 50.0 mm / 110.0 mm   |                  |
| <b>Twist drill</b>  | Ø 1.0 bis 16.0 mm<br>with quick-release chuck MT2<br>up to Ø 20.0 mm with MT2 DIN 345 direct |                  | Ø 1.0 - 16.0 mm with drill chuck<br>up to Ø 32.0 mm with MT3 DIN 345   |                  | Ø 1.0 - 16.0 mm with drill chuck<br>up to Ø 32.0 mm with MT3 DIN 345   |                  |
| <b>Counterboring</b>  | Ø 10.0 - 40.0 mm   |                  | Ø 10.0 - 55.0 mm   |                  | Ø 10.0 - 55.0 mm   |                  |
| <b>Tapping</b>  | with tapping chucks: M3 - M14<br>with tapping attachment: M3 - M20                           |                  | with tapping chucks: up to M30<br>with tapping attachment: up to M30   |                  | with tapping chucks: up to M30<br>with tapping attachment: up to M30   |                  |
| <b>Arbor</b>  | MT2  |                  | MT3  |                  | MT3  |                  |
| <b>Stroke</b>   | 170 mm   |                  | 190 mm   |                  | 245 mm   |                  |
| <b>Height adjustment</b>  | 100 mm   |                  | 60 mm  |                  | 116 mm   |                  |
| <b>Gearbox - on-load speed</b>  | right/left<br>1. Step 100 - 250 rpm<br>2. Step 180 - 450 rpm                                 |                  | right/left<br>1. Step 50 - 110 rpm<br>2. Step 75 - 175 rpm<br>3. Step 105 - 245 rpm<br>4. Step 165 - 385 rpm |                  | right/left<br>1. Step 50 - 150 rpm<br>2. Step 75 - 230 rpm<br>3. Step 100 - 310 rpm<br>4. Step 160 - 490 rpm |                  |
| <b>Power consumption</b>  | 1,200 W  |                  | 1,800 W  |                  | 2,500 W (230 V)<br>2,400 W (110 V)   |                  |
| <b>Voltage</b>  | 230 V 50/60 Hz<br>110 V 50/60 Hz   |                  | 230 V 50/60 Hz<br>110 V 50/60 Hz   |                  | 230 V 50/60 Hz<br>110 V 50/60 Hz   |                  |
| <b>Magnetic holding force</b>   | 16,000 N   |                  | 20,000 N   |                  | 20,000 N   |                  |
| <b>Tool-Force (10 mm)*</b>  | 3,800 N  |                  | 4,200 N  |                  | 4,000 N  |                  |
| <b>Min. material thickness</b>  | 10 mm  |                  | 10 mm  |                  | 10 mm  |                  |
| <b>Magnetic base</b>  | 92 x 238 mm  |                  | 92 x 238 mm,<br>30° adjustable right and left,<br>10 mm front and back                                       |                  | 92 x 238 mm,<br>30° adjustable right and left,<br>10 mm front and back                                       |                  |
| <b>Weight</b>   | 16.0 kg  |                  | 22.0 kg  |                  | 28.0 kg  |                  |
| <b>Motor</b>  |  |                  |  |                  |  |                  |
| <b>Smooth start</b>   | -  |                  | -  |                  | ✓  |                  |
| <b>Full-wave control electronics</b>  | -  |                  | -  |                  | ✓  |                  |
| <b>Right/left run</b>   | ✓  |                  | ✓  |                  | ✓  |                  |
| <b>Overload protection</b>  | -  |                  | -  |                  | ✓  |                  |
| <b>Motor emergency stop</b>   | -  |                  | -  |                  | -  |                  |
| <b>Oil bath gearbox</b>   | ✓  |                  | ✓  |                  | ✓  |                  |
| <b>Mechanical slipping clutch</b>   | -  |                  | ✓  |                  | ✓  |                  |
| <b>Slide</b>  |  |                  |  |                  |  |                  |
| <b>Stepless adjustment</b>  | ✓  |                  | ✓  |                  | ✓  |                  |
| <b>Operation</b>  |  |                  |  |                  |  |                  |
| <b>Soft-touch grips</b>   | ✓  |                  | ✓  |                  | ✓  |                  |
| <b>Membrane keyboard</b>  | ✓  |                  | ✓  |                  | ✓  |                  |
| <b>Holder for Allen key</b>   | -  |                  | -  |                  | -  |                  |
| <b>Cord length 5 m</b>  | ✓  |                  | ✓  |                  | ✓  |                  |
| <b>Magnet</b>   |  |                  |  |                  |  |                  |
| <b>Sensor/LED</b>   | -  |                  | -  |                  | -  |                  |
| <b>Metal rings</b>  | ✓  |                  | ✓  |                  | ✓  |                  |

\* Abdrückkraft direkt am Werkzeug/Kernbohrer

# ALFRA ROTABEST® CORE DRILLING MACHINES WITH ELECTROMAGNET

**MADE IN  
GERMANY**

**X-LINE**

|                            | Ø 35                             |                  | Ø 50  |                  | Ø 80   |                  |
|----------------------------|----------------------------------|------------------|---|------------------|--|------------------|
|                            | RB 35/50 X PICCOLO               |                  | RB 50 X   |                  | RB 80 X  |                  |
| Page                       | 25                               |                  | 26  |                  | 27   |                  |
| Prod.-No.                  | 230 V: 18701                     | 110 V: 18701.110 | 230 V: 18751  | 110 V: 18751.110 | 230 V: 18781   | 110 V: 18781.110 |
| Core drill dimensions      | Ø 12.0 - 35.0 mm                 |                  | Ø 12.0 - 50.0 mm  |                  | Ø 12.0 - 80.0 mm /<br>Ø 20.0 - 50.0 mm<br>(cutting depth 110 mm)         |                  |
| Cutting depth              | 50.0 mm                          |                  | 50.0 mm   |                  | 50.0 mm / 110.0 mm   |                  |
| Twist drill                | Ø 1.0 - 13.0 mm                  |                  | Ø 1.0 to 16.0 mm with quick-release chuck MT2<br>up to Ø 20.0 mm with<br>MT2 DIN 345 direct |                  | Ø 1.0 - 16.0 mm with drill chuck<br>up to Ø 32.0 mm<br>with MT3 DIN 345  |                  |
| Counterboring              | Ø 10.0 - 40.0 mm                 |                  | Ø 10.0 - 40.0 mm  |                  | Ø 10.0 - 55.0 mm   |                  |
| Tapping                    | -                                |                  | with tapping attachment: M3 - M20   |                  | with tapping attachment:<br>up to M30                                    |                  |
| Arbor                      | Quick-release chuck              |                  | MT2   |                  | MT3  |                  |
| Stroke                     | 129 mm                           |                  | 190 mm  |                  | 190 mm   |                  |
| Height adjustment          | 86 mm                            |                  | 100 mm  |                  | 100 mm   |                  |
| Gearbox – on-load speed    | 450 rpm                          |                  | 1. Step 250 rpm<br>2. Step 450 rpm  |                  | 1. Step 110 rpm<br>2. Step 175 rpm<br>3. Step 245 rpm<br>4. Step 385 rpm |                  |
| Power consumption          | 1.100 W                          |                  | 1.200 W   |                  | 1.800 W  |                  |
| Voltage                    | 230 V 50/60 Hz<br>110 V 50/60 Hz |                  | 230 V 50/60 Hz<br>110 V 50/60 Hz  |                  | 230 V 50/60 Hz<br>110 V 50/60 Hz   |                  |
| Magnetic holding force     | 10,000 N                         |                  | 12,000 N  |                  | 16,000 N   |                  |
| Tool-Force (10 mm)*        | 2,100 N                          |                  | 3,500 N   |                  | 4,000 N  |                  |
| Min. material thickness    | 6 mm                             |                  | 6 mm  |                  | 10 mm  |                  |
| Magnetic base              | 70 x 185 mm                      |                  | 92 x 220 mm   |                  | 92 x 220 mm  |                  |
| Weight                     | 11.5 kg                          |                  | 15.0 kg   |                  | 21.8 kg  |                  |
| <b>Motor</b>               |                                  |                  |   |                  |  |                  |
| Motor emergency stop       | ✓                                |                  | ✓   |                  | ✓  |                  |
| Oil bath gearbox           | -                                |                  | ✓   |                  | ✓  |                  |
| Mechanical slipping clutch | -                                |                  | -   |                  | ✓  |                  |
| <b>Slide</b>               |                                  |                  |   |                  |  |                  |
| Stepless adjustment        | ✓                                |                  | ✓   |                  | ✓  |                  |
| Self-adjusting guide       | ✓                                |                  | ✓   |                  | ✓  |                  |
| <b>Operation</b>           |                                  |                  |   |                  |  |                  |
| Soft-touch grips           | ✓                                |                  | ✓   |                  | ✓  |                  |
| Membrane keyboard          | ✓                                |                  | ✓   |                  | ✓  |                  |
| Holder for Allen key       | ✓                                |                  | ✓   |                  | ✓  |                  |
| Cord length 5 m            | ✓                                |                  | ✓   |                  | ✓  |                  |
| <b>Magnet</b>              |                                  |                  |   |                  |  |                  |
| Sensor/LED                 | ✓                                |                  | ✓   |                  | ✓  |                  |
| Metal rings                | ✓                                |                  | ✓   |                  | ✓  |                  |





\* Lift-off force directly on the tool/core drill machine



# ALFRA ROTABEST® CORE DRILLING MACHINES WITH ELECTROMAGNET

**MADE IN  
GERMANY**

**B-LINE**

|   | Ø35   |                                  | Ø50  | Ø80  | Ø130  |
|---|---|----------------------------------|--|--|---|
|  |  |                                  |             |  |            |
|   | <b>RB 35 B</b>  | <b>RB 35/50 B PICCOLO</b>        | <b>RB 50 B</b>   | <b>RB 80 B</b>   | <b>RB 130 B</b>   |
| <b>Page</b>   | 28  | 29                               | 30   | 31   | 32  |
| <b>Prod.-No.</b>  | 230 V: 18400   110 V: 18400.110   | 230 V: 18401   110 V: 18401.110  | 230 V: 18451   110 V: 18451.110  | 230 V: 18781   110 V: 18781.110  | 230 V: 18646  |
| <b>Core drill dimensions</b>  | Ø 12.0 - 35.0 mm  | Ø 12.0 - 35.0 mm                 | Ø 12.0 - 50.0 mm   | Ø 12.0 - 80.0 mm /<br>Ø 20.0 - 50.0 mm<br>(cutting depth 110 mm)                   | Ø 12.0 - 130.0 mm /<br>Ø 20.0 - 50.0 mm<br>(cutting depth 110 mm)                             |
| <b>Cutting depth</b>  | 50.0 mm   | 50.0 mm                          | 50.0 mm  | 50.0 mm / 110.0 mm   | 50.0 mm / 110.0 mm  |
| <b>Twist drill</b>  | Ø 1.0 - 13.0 mm DIN 1897 short  | Ø 1.0 - 13.0 mm DIN 1897 short   | Ø 1.0 to 16.0 mm with quick-release chuck MT 2<br>up to Ø 20.0 mm with<br>MT2 DIN 345 direct | Ø 1.0 - 16.0 mm with drill chuck<br>up to Ø 32.0 mm<br>with MT3 DIN 345            | up to Ø 45.0 mm<br>with MT4 DIN 345   |
| <b>Counterboring</b>  | Ø 10.0 - 40.0 mm  | Ø 10.0 - 40.0 mm                 | Ø 10.0 - 40.0 mm   | Ø 10.0 - 55.0 mm   | Ø 10.0 - 80.0 mm  |
| <b>Tapping</b>  | -   | -                                | with tapping attachment: M3 - M20  | with tapping attachment:<br>up to M30  | with tapping attachment:<br>up to M42   |
| <b>Arbor</b>  | 19 mm Weldon shank  | 19 mm Weldon shank               | MT2  | MT3  | MT4   |
| <b>Stroke</b>   | 120 mm  | 129 mm                           | 190 mm   | 190 mm   | 230 mm  |
| <b>Height adjustment</b>  | -   | 86 mm                            | 100 mm   | 100 mm   | 100 mm  |
| <b>Gearbox – on-load speed</b>  | 450 rpm   | 450 rpm                          | 1. Step 250 rpm<br>2. Step 450 rpm   | 1. Step 110 rpm<br>2. Step 175 rpm<br>3. Step 245 rpm<br>4. Step 385 rpm           | 1. Step 30 - 80 rpm<br>2. Step 50 - 120 rpm<br>3. Step 130 - 350 rpm<br>4. Step 210 - 550 rpm |
| <b>Power consumption</b>  | 1,100 W   | 1,100 W                          | 1,200 W  | 1,800 W  | 2,500 W   |
| <b>Voltage</b>  | 230 V 50/60 Hz<br>110 V 50/60 Hz  | 230 V 50/60 Hz<br>110 V 50/60 Hz | 230 V 50/60 Hz<br>110 V 50/60 Hz   | 230 V 50/60 Hz<br>110 V 50/60 Hz   | 230 V 50/60 Hz  |
| <b>Magnetic holding force</b>   | 10,000 N  | 10,000 N                         | 12,000 N   | 16,000 N   | 33,000 N  |
| <b>Tool-Force (10 mm)*</b>  | 2,100 N   | 2,100 N                          | 3,500 N  | 4,000 N  | 5,000 N   |
| <b>Min. material thickness</b>  | 6 mm  | 6 mm                             | 6 mm   | 10 mm  | 10 mm   |
| <b>Magnetic base</b>  | 70 x 185 mm   | 70 x 185 mm                      | 92 x 220 mm  | 92 x 220 mm  | 90 x 400 mm   |
| <b>Weight</b>   | 10.6 kg   | 11.5 kg                          | 15.0 kg  | 19.5 kg  | 37.0 kg   |
| <b>Motor</b>  |   |                                  |  |  |   |
| <b>Oil bath gearbox</b>   | -   | -                                | ✓  | ✓  | ✓   |
| <b>Mechanical slipping clutch</b>   | -   | -                                | -  | ✓  | ✓   |
| <b>Slide</b>  |   |                                  |  |  |   |
| <b>Stepless adjustment</b>  | -   | ✓                                | ✓  | ✓  | -   |
| <b>Self-adjusting guide</b>   | ✓   | ✓                                | ✓  | ✓  | -   |
| <b>Operation</b>  |   |                                  |  |  |   |
| <b>Soft-touch grips</b>   | ✓   | ✓                                | ✓  | ✓  | ✓   |
| <b>Membrane keyboard</b>  | -   | -                                | -  | ✓  | ✓   |
| <b>Holder for Allen key</b>   | -   | -                                | -  | ✓  | -   |
| <b>Cord length 5 m</b>  | ✓   | ✓                                | ✓  | ✓  | ✓   |
| <b>Magnet</b>   |   |                                  |  |  |   |
| <b>Sensor/LED</b>   | -   | -                                | -  | ✓  | -   |
| <b>Metal rings</b>  | ✓   | ✓                                | ✓  | ✓  | ✓   |

\* Lift-off force directly on the tool/core drill machine



mm

Ø32



**DRILL STAND SP-V**



**V32**

| Seite                   | 34 - 35   | 33                               |
|-------------------------|---|----------------------------------|
| Prod.-No.               | 18343   | 230 V: 18710<br>110 V: 18710.110 |
| Core drill dimensions   | -   | Ø 12.0 - 32.0 mm                 |
| Cutting depth           | -   | 30.0 mm                          |
| Twist drill             | Ø depending on the respective drilling machine used |                                  |
| Counterboring           | -   | Ø 10.0 - 32.0 mm                 |
| Tapping                 | -   | -                                |
| Arbor                   | Ø 43 mm Euro Adaptor,<br>Ø 48,6 mm<br>Ø 61,7 mm     | 19 mm Weldon shank               |
| Stroke                  | 105 mm  | 45 mm                            |
| Height adjustment       | 80 mm   | -                                |
| Gearbox – on-load speed | -   | 450 rpm                          |
| Power consumption       | -   | 900 W                            |
| Voltage                 | -   | 230 V 50/60 Hz<br>110 V 50/60 Hz |
| Magnetic holding force  | 17,000 N  | 16,000 N                         |
| Tool-Force (10 mm)*     | 2,800 N   | 2,100 N                          |
| Min. material thickness | from 3 mm   | 6 mm                             |
| Magnetic base           | 72 x 190 mm   | 95 x 200 mm                      |
| Weight                  | 6.8 kg  | 12.5 kg                          |

| Motor                         |   |                                |
|-------------------------------|---|--------------------------------|
| Smooth start                  | - | Compact, lying                 |
| Hybrid relay                  | - |                                |
| Full-wave control electronics | - |                                |
| Right/left run                | - |                                |
| Overload protection           | - |                                |
| Motor emergency stop          | - |                                |
| Oil bath gearbox              | - |                                |
| Mechanical slipping clutch    | - |                                |
| Slide                         |   |                                |
| Stepless adjustment           | - | 2-sided column guide           |
| Self-adjusting guide          | - |                                |
| Operation                     |   |                                |
| Soft-touch grip               | ✓ | Space-saving – through ratchet |
| Membrane keyboard             | - |                                |
| Holder for Allen key          | - |                                |
| Cord length 5 m               | - |                                |
| Magnet                        |   |                                |
| Metal rings                   | - | ✓                              |
| TiN-coating                   | ✓ | -                              |

\* Lift-off force directly on the tool/core drill machine



Core drilling with


# ALFRA ROTABEST®



## POWER GLOSSARY

| Motor                              |   | Operation   |   |
|------------------------------------|---|---|---|
| <b>1</b> Temperature sensor        | The LED signal informs about a motor overheating due to overload. After cooling down, the motor can be activated again. | <b>9</b> Activation lever for magnet                | Ergonomic and easy to use. With perforated grip zone for perfect grip.  |
| <b>2</b> Carbon brush wear control | The motor LED flashes as soon as the carbon brushes are worn through mechanical abrasion. The motor continues to run.   | <b>10</b> 5 metre PUR connection cable              | Remains flexible even at low temperatures and is optimally protected against external influences.   |
| <b>3</b> Drive unit                | Height adjustable allows a larger, multiple stroke range.   | <b>11</b> Membrane keyboard                         | The keypad has been ergonomically designed and further offset in the housing so that it is less sensitive to moisture and mechanical influences.  |
| <b>4</b> Smooth start              | Protects the motor and extends its lifetime.  | <b>12</b> Circuit board with hybrid relay           | Extra long life. Voltage spikes are intercepted.  |
| <b>5</b> PUR Control line          | Remains flexible even at low temperatures and is optimally protected against external influences.                       | <b>13</b> Quick-release chuck                       | Weight-optimised to reduce the imbalance to a minimum. Is compatible for all core drills with standard Weldon arbor.  |
| Gearboxes                          |   | Permanent magnet                                    |   |
| <b>6</b> Special gearbox           | The wear of the gearbox wheels is reduced significantly even under extreme conditions.                                  | <b>14</b> Permanent magnet                          | 100% reliability (also in case of power failure) - already can be used from 3 mm thickness  |
| Operation                          |   | <b>15</b> LED for magnetic/adhesive power indicator | This shows various function statuses - "continuous green" for OK - "red flashing" with holding force which is just sufficient - "continuous red" with low holding force - (motor turns off automatically) |
| <b>7</b> Soft-touch grips          | Abrasion resistant for perfect grip. Including integrated Allen key tray  | <b>16</b> TiN coated magnetic undersurface          | Scratch-resistant and resistant to external influences.   |
| <b>8</b> Double dovetail slide     | Self-adjusting through innovative clamping system   |   |   |

**MADE IN GERMANY**



**“Our company has used core drilling machines by ALFRA for over 30 years.**

**Tools and equipment are top!**

**The new machine with a permanent magnet is awesome!**

**Finally, I can also drill thin-walled profiles, from as little as 3 mm material thickness!**

**...and all that made in Germany!”**



# ALFRA ROTABEST® – RB 35 SP

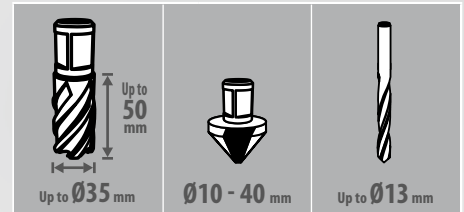
**SP-LINE**



**MADE IN GERMANY**



Can be used with a permanent magnet from 3 mm material thickness



## RB 35 SP

|  |                                  |
|--|----------------------------------|
| Core drill dimensions                        | Ø 12.0 - 35.0 mm                 |
| Cutting depth                                | 50.0 mm                          |
| Twist drill                                  | Ø 1.0 - 13.0 mm                  |
| Counterboring                                | Ø 10.0 - 40.0 mm                 |
| Arbors                                       | Quick-release chuck              |
| Stroke                                       | 105 mm                           |
| Height adjustment                            | 80 mm                            |
| Gearbox - on-load speed                      | 450 rpm                          |
| Power consumption                            | 1,100 W                          |
| Voltage                                      | 230 V 50/60 Hz<br>110 V 50/60 Hz |
| Tool Force (10 mm) / Magnetic adhesion force | 2,800 N/17,000 N                 |
| Tool force (6 mm S235)                       | 2,300 N                          |
| Magnetic base                                | 72 x 190 mm                      |
| Weight                                       | 9.9 kg                           |

|                      |   |
|----------------------|---|
| <b>Motor</b>         |   |
| Smooth start         | ✓ |
| Hybrid relay         | ✓ |
| Overload protection  | ✓ |
| Motor emergency stop | ✓ |

|                       |   |
|-----------------------|---|
| <b>Slide</b>          |   |
| Infinitely adjustable | ✓ |
| Self-adjusting guide  | ✓ |

|                      |   |
|----------------------|---|
| <b>Operation</b>     |   |
| Soft-touch grips     | ✓ |
| Membrane keyboard    | ✓ |
| Holder for Allen key | ✓ |
| Cable length 5 m     | ✓ |

|                                     |   |
|-------------------------------------|---|
| <b>Magnet</b>                       |   |
| Sensor/LED                          | ✓ |
| Metal rings                         | ✓ |
| Performance and weight optimisation | ✓ |

|                 |   |
|-----------------|---|
| Made in Germany | ✓ |
|-----------------|---|

|   |  |
|---|--|
| <b>Scope of delivery</b>  |  |
| <ul style="list-style-type: none"> <li>• Metal core drilling machine RB 35 SP with quick-release chuck</li> <li>• Carrying case</li> <li>• Seat belt</li> <li>• Coolant device</li> <li>• Operating Instructions</li> <li>• <b>incl. 1 core drill free</b></li> </ul> |  |

**Prod.-No.**

|                          |          |                  |
|--------------------------|----------|------------------|
| ALFRA Rotabest® RB 35 SP | 230 Volt | <b>18801</b>     |
| ALFRA Rotabest® RB 35 SP | 110 Volt | <b>18801.110</b> |





# ALFRA ROTABEST® – RB 50 SP

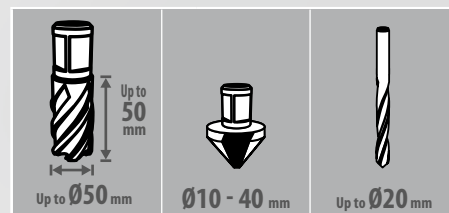
SP-LINE



MADE IN GERMANY



Can be used with a permanent magnet from 3 mm material thickness



## RB 50 SP

|  |                                    |
|--|------------------------------------|
| Core drill dimensions                        | Ø 12.0 - 50.0 mm                   |
| Cutting depth                                | 50.0 mm                            |
| Twist drill                                  | Ø 1.0 - 20.0 mm                    |
| Counterboring                                | Ø 10.0 - 40.0 mm                   |
| Arbors                                       | MT2                                |
| Stroke                                       | 100 mm                             |
| Height adjustment                            | 47 mm                              |
| Gearbox - on-load speed                      | 1. Step 250 rpm<br>2. Step 450 rpm |
| Power consumption                            | 1,200 W                            |
| Voltage                                      | 230 V 50/60 Hz<br>110 V 50/60 Hz   |
| Tool Force (10 mm) / Magnetic adhesion force | 2,800 N/17,000 N                   |
| Tool force (6 mm S235)                       | 2,000 N                            |
| Magnetic base                                | 72 x 190 mm                        |
| Weight                                       | 11.5 kg                            |

| Motor                |   |
|----------------------|---|
| Smooth start         | ✓ |
| Hybrid relay         | ✓ |
| Overload protection  | ✓ |
| Motor emergency stop | ✓ |
| Oil bath gearbox     | ✓ |

| Slide                 |   |
|-----------------------|---|
| Infinitely adjustable | ✓ |
| Self-adjusting guide  | ✓ |

| Operation            |   |
|----------------------|---|
| Soft-touch grips     | ✓ |
| Membrane keyboard    | ✓ |
| Holder for Allen key | ✓ |
| Cable length 5 m     | ✓ |

| Magnet                              |   |
|-------------------------------------|---|
| Sensor/LED                          | ✓ |
| TiN-coating                         | ✓ |
| Performance and weight optimisation | ✓ |

|                 |   |
|-----------------|---|
| Made in Germany | ✓ |
|-----------------|---|

| Scope of delivery   |  |
|---|--|
| • Metal core drilling machine RB 50 SP                                  |  |
| • Tool holder MT 2 with quick-release chuck, including internal cooling |  |
| • Carrying case   |  |
| • Seat belt   |  |
| • Coolant device  |  |
| • Operating Instructions  |  |
| • <b>incl. 1 core drill free</b>  |  |

Prod.-No.

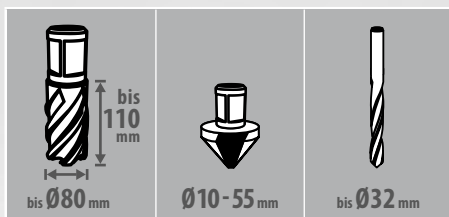
ALFRA Rotabest® RB 50 SP 230 Volt

18851

ALFRA Rotabest® RB 50 SP 110 Volt

18851.110





## RB 80 SP

|                               |  |
|-------------------------------|--|
| <b>Core drill dimensions</b>  | Ø 12.0 - 80.0 mm /<br>Ø 20.0 - 50.0 mm<br>(cutting depth 110 mm)         |
| <b>Cutting depth</b>          | 50.0 mm / 110.0 mm   |
| <b>Twist drill</b>            | Ø 1.0 - 16.0 mm with drill chuck<br>up to Ø 32.0 mm with MT3<br>DIN 345  |
| <b>Counterboring</b>          | Ø 10 - 55.0 mm   |
| <b>Tapping</b>                | with tapping attachment:<br>up to M30                                    |
| <b>Arbor</b>                  | MT3  |
| <b>Stroke</b>                 | 190 mm   |
| <b>Height adjustment</b>      | 60 mm  |
| <b>4-speed gear</b>           | 1. Step 110 rpm<br>2. Step 175 rpm<br>3. Step 245 rpm<br>4. Step 385 rpm |
| <b>Power consumption</b>      | 1,800 W  |
| <b>Voltage</b>                | 230 V 50/60 Hz<br>110 V 50/60 Hz   |
| <b>Magnetic holding force</b> | 22,000 N   |
| <b>Tool-Force (10 mm)</b>     | 2,500 N  |
| <b>Tool-Force (6 mm S235)</b> | 1,600 N  |
| <b>Magnetic base</b>          | 94 x 255 mm  |
| <b>Weight</b>                 | 22.6 kg  |

|                            |   |
|----------------------------|---|
| <b>Motor</b>               |   |
| Smooth start               | ✓ |
| Overload protection        | ✓ |
| Oil bath gearbox           | ✓ |
| Mechanical slipping clutch | ✓ |
| <b>Slide</b>               |   |
| Stepless adjustment        | ✓ |
| Self-adjusting guide       | ✓ |
| <b>Operation</b>           |   |
| Soft-touch grips           | ✓ |
| Cord length 5 m            | ✓ |
| <b>Magnet</b>              |   |
| Permanent magnet           | ✓ |
| TiN-coating                | ✓ |

**Made in Germany** ✓

### Scope of delivery

- Metal core drilling machine RB 80 SP
- Coolant device
- MT3 tool holder with internal cooling
- Carrying case
- Drill spray
- Seat belt
- Operating Instructions
- **incl. 1 core drill free**



**MADE IN GERMANY**

Can be used with a permanent magnet from 3 mm material thickness



### Prod.-No.

|                          |          |           |
|--------------------------|----------|-----------|
| ALFRA Rotabest® RB 80 SP | 230 Volt | 18627     |
| ALFRA Rotabest® RB 80 SP | 110 Volt | 18627.110 |



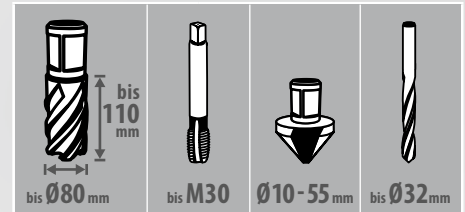
# ALFRA ROTABEST® – RB 80 SP RL-E

**SP-LINE**



**MADE IN GERMANY** 

Can be used with a permanent magnet from 3 mm material thickness



## RB 80 SP RL-E

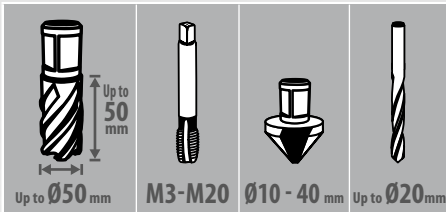
|                               |  |
|-------------------------------|--|
| <b>Core drill dimensions</b>  | Ø 12.0 - 80.0 mm /<br>Ø 20.0 - 50.0 mm<br>(cutting depth 110 mm)   |
| <b>Cutting depth</b>          | 50.0 mm / 110.0 mm   |
| <b>Twist drill</b>            | Ø 1.0 - 16.0 mm with drill chuck<br>up to Ø 32.0 mm with MT3<br>DIN 345                                      |
| <b>Counterboring</b>          | Ø 10 - 55.0 mm   |
| <b>Tapping</b>                | with tapping chucks:<br>up to M30<br>with tapping attachment:<br>up to M30                                   |
| <b>Arbor</b>                  | MT3  |
| <b>Stroke</b>                 | 190 mm   |
| <b>Height adjustment</b>      | 60 mm  |
| <b>4-speed gear</b>           | right/left<br>1. Step 50 - 110 rpm<br>2. Step 75 - 175 rpm<br>3. Step 105 - 245 rpm<br>4. Step 165 - 385 rpm |
| <b>Power consumption</b>      | 1.800 W  |
| <b>Voltage</b>                | 230 V 50/60 Hz<br>110 V 50/60 Hz   |
| <b>Magnetic holding force</b> | 22.000 N   |
| <b>Tool-Force (10 mm)</b>     | 2.500 N  |
| <b>Tool-Force (6 mm S235)</b> | 1.600 N  |
| <b>Magnetic base</b>          | 94 x 255 mm  |
| <b>Weight</b>                 | 22.6 kg  |

|                                   |   |
|-----------------------------------|---|
| <b>Motor</b>                      |   |
| <b>Smooth start</b>               | ✓ |
| <b>Right/left run</b>             | ✓ |
| <b>Overload protection</b>        | ✓ |
| <b>Oil bath gearbox</b>           | ✓ |
| <b>Mechanical slipping clutch</b> | ✓ |
| <b>Slide</b>                      |   |
| <b>Stepless adjustment</b>        | ✓ |
| <b>Self-adjusting guide</b>       | ✓ |
| <b>Operation</b>                  |   |
| <b>Soft-touch grips</b>           | ✓ |
| <b>Cord length 5 m</b>            | ✓ |
| <b>Magnet</b>                     |   |
| <b>Permanent magnet</b>           | ✓ |
| <b>TiN-coating</b>                | ✓ |
| <b>Made in Germany</b>            | ✓ |

|   |  |
|---|--|
| <b>Scope of delivery</b>  |  |
| <ul style="list-style-type: none"> <li>• Metal core drilling machine RB 80 SP RL-E</li> <li>• Coolant device</li> <li>• MT3 tool holder with internal cooling</li> <li>• Carrying case</li> <li>• Drill spray</li> <li>• Seat belt</li> <li>• Operating Instructions</li> <li>• <b>incl. 1 core drill free</b></li> </ul> |  |

**Prod.-No.**

|                               |          |                  |
|-------------------------------|----------|------------------|
| ALFRA Rotabest® RB 80 SP RL-E | 230 Volt | <b>18628</b>     |
| ALFRA Rotabest® RB 80 SP RL-E | 110 Volt | <b>18628.110</b> |



## RB 50 B RL-E

|                            |   |
|----------------------------|---|
| Core drill dimensions      | Ø 12.0 - 50.0 mm  |
| Cutting depth              | 50.0 mm   |
| Twist drill                | Ø 1.0 to 16.0 mm<br>with quick-release chuck MT2<br>up to Ø 20.0 mm<br>with MT 2 DIN 345 direct |
| Counterboring              | Ø 10.0 - 40.0 mm  |
| Tapping                    | with tapping chucks:<br>M3 - M14<br>with tapping attachment M3 - M20                            |
| Arbors                     | MT2   |
| Stroke                     | 170 mm  |
| Height adjustment          | 100 mm  |
| 2-speed gearbox            | right / left<br>1. Step 100 - 250 rpm<br>2. Step 180 - 450 rpm                                  |
| Power consumption          | 1,200 W   |
| Voltage                    | 230 V 50/60 Hz<br>110 V 50/60 Hz  |
| Magnetic adhesion strength | 16.000 N  |
| Tool force (10 mm)         | 3.800 N   |
| Magnetic base              | 92 x 238 mm   |
| Weight                     | 16.0 kg   |

|                       |   |
|-----------------------|---|
| Motor                 |   |
| Right/left run        | ✓ |
| Oil bath gearbox      | ✓ |
| Slides                |   |
| Infinitely adjustable | ✓ |
| Operation             |   |
| Soft-touch grips      | ✓ |
| Membrane keyboard     | ✓ |
| Magnet                |   |
| Metal rings           | ✓ |
| Made in Germany       | ✓ |

- Scope of delivery
- Metal core drilling machine RB 50 B RL-E
  - Coolant device
  - MT2 tool holder with internal cooling
  - Quick-release chuck for twist drills
  - Carrying case
  - Drill spray
  - Chip hook
  - Seat belt
  - Operating Instructions
  - **incl. 1 core drill free**



**MADE IN GERMANY**



**Prod.-No.**

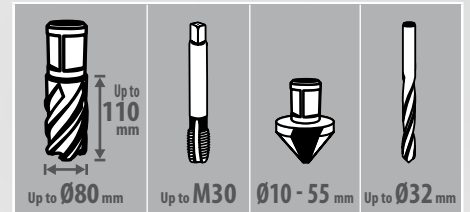
|                              |          |           |
|------------------------------|----------|-----------|
| ALFRA Rotabest® RB 50 B RL-E | 230 Volt | 18612     |
| ALFRA Rotabest® RB 50 B RL-E | 110 Volt | 18612.110 |

# ALFRA ROTABEST® – RB 80 B RL-E

## RL-E-LINE



**MADE IN GERMANY**



### RB 80 B RL-E

|                                   |  |
|-----------------------------------|--|
| <b>Core drill dimensions</b>      | Ø 12.0 - 80.0 mm /<br>Ø 20.0 - 50.0 mm<br>(cutting depth 110 mm)   |
| <b>Cutting depth</b>              | 50.0 mm / 110.0 mm   |
| <b>Twist drill</b>                | Ø 1.0 - 16.0 mm with drill chuck<br>Up to Ø 32.0 mm with MT <sub>3</sub> DIN 345                               |
| <b>Counterboring</b>              | Ø 10 - 55.0 mm   |
| <b>Tapping</b>                    | with tapping chucks:<br>Up to M30<br>with tapping attachment:<br>Up to M30                                     |
| <b>Arbors</b>                     | MT <sub>3</sub>  |
| <b>Stroke</b>                     | 190 mm   |
| <b>Height adjustment</b>          | 60 mm  |
| <b>4-speed gearbox</b>            | right / left<br>1. Step 50 - 110 rpm<br>2. Step 75 - 175 rpm<br>3. Step 105 - 245 rpm<br>4. Step 165 - 385 rpm |
| <b>Power consumption</b>          | 1,800 W  |
| <b>Voltage</b>                    | 230 V 50/60 Hz<br>110 V 50/60 Hz   |
| <b>Magnetic adhesion strength</b> | 20.000 N   |
| <b>Tool force (10 mm)</b>         | 4.200 N  |
| <b>Magnetic base</b>              | 92 x 238 mm,<br>30° adjustable right and left,<br>10 mm front and back   |
| <b>Weight</b>                     | 22.0 kg  |

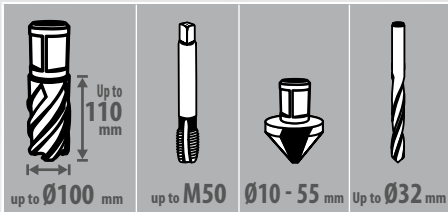
|                              |   |
|------------------------------|---|
| <b>Motor</b>                 |   |
| <b>Right/left run</b>        | ✓ |
| <b>Oil bath gearbox</b>      | ✓ |
| <b>Mech. Slip clutch</b>     | ✓ |
| <b>Slides</b>                |   |
| <b>Infinitely adjustable</b> | ✓ |
| <b>Operation</b>             |   |
| <b>Soft-touch grips</b>      | ✓ |
| <b>Membrane keyboard</b>     | ✓ |
| <b>Magnet</b>                |   |
| <b>Metal rings</b>           | ✓ |
| <b>Made in Germany</b>       | ✓ |

|                          |  |
|--------------------------|--|
| <b>Scope of delivery</b> | <ul style="list-style-type: none"> <li>• Metal core drilling machine RB 80 B RL-E</li> <li>• Coolant device</li> <li>• MT<sub>3</sub> tool holder with internal cooling</li> <li>• Quick-release chuck for twist drills</li> <li>• Carrying case</li> <li>• Drill spray</li> <li>• Chip hook</li> <li>• Seat belt</li> <li>• Operating Instructions</li> <li>• <b>incl. 1 core drill free</b></li> </ul> |
|--------------------------|--|

### Prod.-No.

|                              |          |           |
|------------------------------|----------|-----------|
| ALFRA Rotabest® RB 80 B RL-E | 230 Volt | 18629     |
| ALFRA Rotabest® RB 80 B RL-E | 110 Volt | 18629.110 |





## RB 100 RL-E

|                                   |  |
|-----------------------------------|--|
| <b>Core drill dimensions</b>      | Ø 12.0 - 100.0 mm /<br>Ø 20.0 - 50.0 mm<br>(cutting depth 110 mm)          |
| <b>Cutting depth</b>              | 50.0 mm / 110.0 mm   |
| <b>Twist drill</b>                | Ø 1.0 - 16.0 mm with drill chuck<br>Up to Ø 32.0 mm with MT3<br>DIN 345    |
| <b>Counterboring</b>              | Ø 10.0 - 55.0 mm   |
| <b>Tapping</b>                    | with tapping chucks:<br>Up to M30<br>with tapping attachment:<br>Up to M30 |
| <b>Arbors</b>                     | MT3  |
| <b>Stroke</b>                     | 245 mm   |
| <b>Height adjustment</b>          | 116 mm   |
| <b>4-speed gearbox</b>            | right / left   |
|                                   | 1. Step 50 - 150 rpm   |
|                                   | 2. Step 75 - 230 rpm   |
|                                   | 3. Step 100 - 310 rpm  |
|                                   | 4. Step 160 - 490 rpm  |
| <b>Power consumption</b>          | 2,500 W (230 V)<br>2,400 W (110 V)   |
| <b>Voltage</b>                    | 230 V 50/60 Hz<br>110 V 50/60 Hz   |
| <b>Magnetic adhesion strength</b> | 20.000 N   |
| <b>Tool force (10 mm)</b>         | 4.000 N  |
| <b>Magnetic base</b>              | 92 x 238 mm,<br>30° adjustable right and left,<br>10 mm front and back     |
| <b>Weight</b>                     | 28.0 kg  |

|                                      |   |
|--------------------------------------|---|
| <b>Motor</b>                         |   |
| <b>Smooth start</b>                  | ✓ |
| <b>Full-wave control electronics</b> | ✓ |
| <b>Right/left run</b>                | ✓ |
| <b>Overload protection</b>           | ✓ |
| <b>Oil bath gearbox</b>              | ✓ |
| <b>Mech. Slip clutch</b>             | ✓ |
| <b>Slides</b>                        |   |
| <b>Infinitely adjustable</b>         | ✓ |
| <b>Operation</b>                     |   |
| <b>Soft-touch grips</b>              | ✓ |
| <b>Membrane keyboard</b>             | ✓ |
| <b>Magnet</b>                        |   |
| <b>Metal rings</b>                   | ✓ |
| <b>Made in Germany</b>               | ✓ |

|  |  |
|--|--|
| <b>Scope of delivery</b>   |  |
| <ul style="list-style-type: none"> <li>• Metal core drilling machine RB 100 RL-E</li> <li>• Coolant device</li> <li>• MT3 tool holder with internal cooling</li> <li>• Carrying case</li> <li>• Chip hook</li> <li>• Seat belt</li> <li>• Drill spray</li> <li>• <b>incl. 1 core drill free</b></li> </ul> |  |



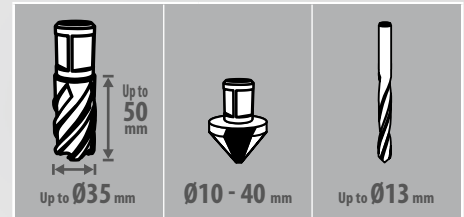
**MADE IN GERMANY**

**Prod.-No.**

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



**MADE IN GERMANY**



### RB 35/50 X PICCOLO

|                            |                                  |
|----------------------------|----------------------------------|
| Core drill dimensions      | Ø 12.0 - 35.0 mm                 |
| Cutting depth              | 50.0 mm                          |
| Twist drill                | Ø 1.0 - 13.0 mm                  |
| Counterboring              | Ø 10.0 - 40.0 mm                 |
| Arbors                     | Quick-release chuck              |
| Stroke                     | 129 mm                           |
| Height adjustment          | 86 mm                            |
| Gearbox - on-load speed    | 450 rpm                          |
| Power consumption          | 1,100 W                          |
| Voltage                    | 230 V 50/60 Hz<br>110 V 50/60 Hz |
| Magnetic adhesion strength | 10.000 N                         |
| Tool force (10 mm)         | 2.100 N                          |
| Magnetic base              | 70 x 185 mm                      |
| Weight                     | 11.5 kg                          |

|                                     |   |
|-------------------------------------|---|
| <b>Motor</b>                        |   |
| Motor emergency stop                | ✓ |
| <b>Slides</b>                       |   |
| Stepless adjustment                 | ✓ |
| Self-adjusting guide                | ✓ |
| <b>Operation</b>                    |   |
| Soft-touch grips                    | ✓ |
| Membrane keyboard                   | ✓ |
| Holder for Allen key                | ✓ |
| Cable length 5 m                    | ✓ |
| <b>Magnet</b>                       |   |
| Sensor/LED                          | ✓ |
| Metal rings                         | ✓ |
| Performance and weight optimisation | ✓ |
| Made in Germany                     | ✓ |

|  |  |
|--|--|
| <b>Scope of delivery</b>   |  |
| <ul style="list-style-type: none"> <li>• Metal core drilling machine RB 35/50 X Piccolo</li> <li>• Coolant device and quick-release chuck with internal cooling</li> <li>• Carrying case</li> <li>• Seat belt</li> <li>• Operating Instructions</li> <li>• <b>incl. 1 core drill free</b></li> </ul> |  |

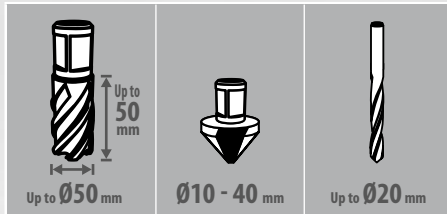
**Prod.-No.**

ALFRA Rotabest® RB 35/50 X Piccolo 230 Volt

18701

ALFRA Rotabest® RB 35/50 X Piccolo 110 Volt

18701.110



## RB 50 X

|                            |  |
|----------------------------|--|
| Core drill dimensions      | Ø 12.0 - 50.0 mm   |
| Cutting depth              | 50.0 mm  |
| Twist drill                | Ø 1.0 to 16.0 mm with quick-release chuck MT2 up to Ø 20.0 mm with MT 2 DIN 345 direct |
| Counterboring              | Ø 10.0 - 40.0 mm   |
| Tapping                    | with tapping attachment M3 - M20   |
| Arbors                     | MT2  |
| Stroke                     | 190 mm   |
| Height adjustment          | 100 mm   |
| 2-speed gearbox Load speed | 1. Step 250 rpm<br>2. Step 450 rpm   |
| Power consumption          | 1,200 W  |
| Voltage                    | 230 V 50/60 Hz<br>110 V 50/60 Hz   |
| Magnetic adhesion strength | 12.000 N   |
| Tool force (10 mm)         | 3.500 N  |
| Magnetic base              | 92 x 220 mm  |
| Weight                     | 15.0 kg  |

|                                     |   |
|-------------------------------------|---|
| <b>Motor</b>                        |   |
| Motor emergency stop                | ✓ |
| Oil bath gearbox                    | ✓ |
| <b>Slides</b>                       |   |
| Infinitely adjustable               | ✓ |
| Self-adjusting guide                | ✓ |
| <b>Operation</b>                    |   |
| Soft-touch grips                    | ✓ |
| Membrane keyboard                   | ✓ |
| Holder for Allen key                | ✓ |
| Cable length 5 m                    | ✓ |
| <b>Magnet</b>                       |   |
| Sensor/LED                          | ✓ |
| Metal rings                         | ✓ |
| Performance and weight optimisation | ✓ |

|                 |   |
|-----------------|---|
| Made in Germany | ✓ |
|-----------------|---|

|   |  |
|---|--|
| <b>Scope of delivery</b>  |  |
| <ul style="list-style-type: none"> <li>• Metal core drilling machine RB 50 X</li> <li>• Coolant device</li> <li>• MT2 tool holder with internal cooling</li> <li>• Carrying case</li> <li>• Drill spray</li> <li>• Seat belt</li> <li>• Operating Instructions</li> <li>• <b>incl. 1 core drill free</b></li> </ul> |  |



**MADE IN GERMANY**

## Prod.-No.

|                         |          |           |
|-------------------------|----------|-----------|
| ALFRA Rotabest® RB 50 X | 230 Volt | 18751     |
| ALFRA Rotabest® RB 50 X | 110 Volt | 18751.110 |

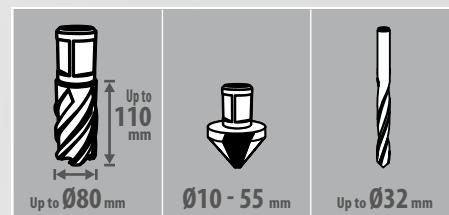


# ALFRA ROTABEST® – RB 80 X

## X-LINE



**MADE IN GERMANY**



### RB 80 X

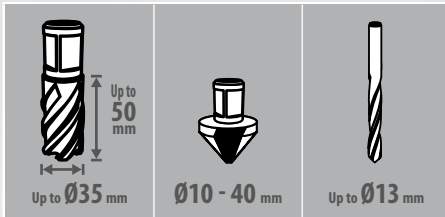
|                                       |  |
|---------------------------------------|--|
| <b>Core drill dimensions</b>          | Ø 12.0 - 80.0 mm /<br>Ø 20.0 - 50.0 mm<br>(cutting depth 110 mm)           |
| <b>Cutting depth</b>                  | 50.0 mm / 110.0 mm   |
| <b>Twist drill</b>                    | Ø 1.0 - 16.0 mm<br>with drill chuck<br>Up to Ø 32.0 mm<br>with MT3 DIN 345 |
| <b>Counterboring</b>                  | Ø 10 - 55.0 mm   |
| <b>Tapping</b>                        | with tapping attachment:<br>Up to M30                                      |
| <b>Arbors</b>                         | MT3  |
| <b>Stroke</b>                         | 190 mm   |
| <b>Height adjustment</b>              | 100 mm   |
| <b>4-speed gearbox<br/>Load speed</b> | 1. Step 110 rpm<br>2. Step 175 rpm<br>3. Step 245 rpm<br>4. Step 385 rpm   |
| <b>Power consumption</b>              | 1,800 W  |
| <b>Voltage</b>                        | 230 V 50/60 Hz<br>110 V 50/60 Hz   |
| <b>Magnetic adhesion<br/>strength</b> | 16.000 N   |
| <b>Tool force (10 mm)</b>             | 4.000 N  |
| <b>Magnetic base</b>                  | 92 x 220 mm  |
| <b>Weight</b>                         | 21.8 kg  |

|                                     |   |
|-------------------------------------|---|
| <b>Motor</b>                        |   |
| Motor emergency stop                | ✓ |
| Oil bath gearbox                    | ✓ |
| Mech. Slip clutch                   | ✓ |
| <b>Slides</b>                       |   |
| Infinitely adjustable               | ✓ |
| Self-adjusting guide                | ✓ |
| <b>Operation</b>                    |   |
| Soft-touch grips                    | ✓ |
| Membrane keyboard                   | ✓ |
| Holder for Allen key                | ✓ |
| Cable length 5 m                    | ✓ |
| <b>Magnet</b>                       |   |
| Sensor/LED                          | ✓ |
| Metal rings                         | ✓ |
| Performance and weight optimisation | ✓ |
| <b>Made in Germany</b>              |   |
|                                     | ✓ |

|   |  |
|---|--|
| <b>Scope of delivery</b>  |  |
| <ul style="list-style-type: none"> <li>• Metal core drilling machine RB 80 X</li> <li>• Coolant device</li> <li>• MT3 tool holder with internal cooling</li> <li>• Carrying case</li> <li>• Drill spray</li> <li>• Seat belt</li> <li>• Operating Instructions</li> <li>• <b>incl. 1 core drill free</b></li> </ul> |  |

**Prod.-No.**

|                         |          |           |
|-------------------------|----------|-----------|
| ALFRA Rotabest® RB 80 X | 230 Volt | 18781     |
| ALFRA Rotabest® RB 80 X | 110 Volt | 18781.110 |



## RB 35 B

|                            |                                  |
|----------------------------|----------------------------------|
| Core drill dimensions      | Ø 12.0 - 35.0 mm                 |
| Cutting depth              | 50.0 mm                          |
| Twist drill                | Ø 1.0 – 13.0 mm DIN 1897 short   |
| Counterboring              | Ø 10.0 - 40.0 mm                 |
| Arbors                     | 19 mm Weldon shank               |
| Stroke                     | 120 mm                           |
| Gearbox - on-load speed    | 450 rpm                          |
| Power consumption          | 1,100 W                          |
| Voltage                    | 230 V 50/60 Hz<br>110 V 50/60 Hz |
| Magnetic adhesion strength | 10.000 N                         |
| Tool force (10 mm)         | 2.100 N                          |
| Magnetic base              | 70 x 185 mm                      |
| Weight                     | 10.6 kg                          |

|   |   |
|---|---|
| Slide   |   |
| Self-adjusting guide  | ✓ |
| Operation   |   |
| Soft-touch grips  | ✓ |
| Ergonomic switch keyboard   | ✓ |
| Cable length 5 m  | ✓ |
| Magnet  |   |
| Metal rings   | ✓ |
| Performance and weight optimisation   | ✓ |
| Made in Germany   |   |
| Scope of delivery   |   |
| <ul style="list-style-type: none"> <li>• Metal core drilling machine RB 35 B</li> <li>• Coolant device</li> <li>• Carrying case</li> <li>• Seat belt</li> <li>• Operating Instructions</li> <li>• <b>incl. 1 core drill free</b></li> </ul> |   |



**MADE IN GERMANY**

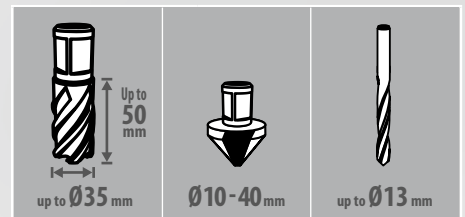


**Prod.-No.**

|                         |          |           |
|-------------------------|----------|-----------|
| ALFRA Rotabest® RB 35 B | 230 Volt | 18400     |
| ALFRA Rotabest® RB 35 B | 110 Volt | 18400.110 |



**MADE IN GERMANY**



| RB 35/50 B PICCOLO         |                                  |
|----------------------------|----------------------------------|
| Core drill dimensions      | Ø 12,0 - 35,0 mm                 |
| Cutting depth              | 50,0 mm                          |
| Twist drill                | Ø 1,0 - 13,0 mm                  |
| Counterboring              | Ø 10,0 - 40,0 mm                 |
| Arbors                     | 19 mm Weldon shank               |
| Stroke                     | 129 mm                           |
| Height adjustment          | 86 mm                            |
| Gearbox – on-load speed    | 450 U/min,                       |
| Power consumption          | 1,100 W                          |
| Voltage                    | 230 V 50/60 Hz<br>110 V 50/60 Hz |
| Magnetic adhesion strength | 9,000 N                          |
| Tool force (10 mm)         | 2,100 N                          |
| Magnetic base              | 70 x 185 mm                      |
| Weight                     | 11.5 kg                          |

| Motor                               |   |
|-------------------------------------|---|
| Grease drive                        | ✓ |
| Slides                              |   |
| Infinitely adjustable               | ✓ |
| Self-adjusting guide                | ✓ |
| Operation                           |   |
| Soft-touch grips                    | ✓ |
| Ergonomic switch keyboard           | ✓ |
| Cable length 5 m                    | ✓ |
| Magnet                              |   |
| Metal rings                         | ✓ |
| Performance and weight optimisation | ✓ |

**Made in Germany** ✓

| Scope of delivery                                |  |
|--|--|
| • Metal core drilling machine RB 35/50 B Piccolo |  |
| • Coolant device                                 |  |
| • Carrying case                                  |  |
| • Seat belt                                      |  |
| • Operating Instructions                         |  |

**Prod.-No.**

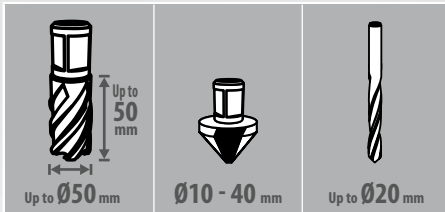
ALFRA Rotabest® RB 35/50 B Piccolo 230 Volt

18401

ALFRA Rotabest® RB 35/50 B Piccolo 110 Volt

18401.110





## RB 50 B

|                            |  |
|----------------------------|--|
| Core drill dimensions      | Ø 12.0 - 50.0 mm   |
| Cutting depth              | 50.0 mm  |
| Twist drill                | Ø 1.0 to 16.0 mm with quick-release chuck MT2 up to Ø 20.0 mm with MT 2 DIN 345 direct |
| Counterboring              | Ø 10.0 - 40.0 mm   |
| Tapping                    | with tapping attachment M3 - M20   |
| Arbors                     | MT2  |
| Stroke                     | 190 mm   |
| Height adjustment          | 100 mm   |
| 2-speed gearbox Load speed | 1. Step 250 rpm<br>2. Step 450 rpm   |
| Power consumption          | 1,200 W  |
| Voltage                    | 230 V 50/60 Hz<br>110 V 50/60 Hz   |
| Magnetic adhesion strength | 12.000 N   |
| Tool force (10 mm)         | 3.500 N  |
| Magnetic base              | 92 x 220 mm  |
| Weight                     | 15.0 kg  |

|                                     |   |
|-------------------------------------|---|
| Motor                               |   |
| Oil bath gearbox                    | ✓ |
| Slides                              |   |
| Infinitely adjustable               | ✓ |
| Self-adjusting guide                | ✓ |
| Operation                           |   |
| Soft-touch grips                    | ✓ |
| Ergonomic switch keyboard           | ✓ |
| Holder for Allen key                | ✓ |
| Cable length 5 m                    | ✓ |
| Magnet                              |   |
| Metal rings                         | ✓ |
| Performance and weight optimisation | ✓ |
| Made in Germany                     | ✓ |

|                   |   |
|-------------------|---|
| Scope of delivery | <ul style="list-style-type: none"> <li>• Metal core drilling machine RB 50 B</li> <li>• Coolant device</li> <li>• MT2 tool holder with internal cooling</li> <li>• Carrying case</li> <li>• Drill spray</li> <li>• Seat belt</li> <li>• Operating Instructions</li> <li>• <b>incl. 1 core drill free</b></li> </ul> |
|-------------------|---|



**MADE IN GERMANY**



**Prod.-No.**

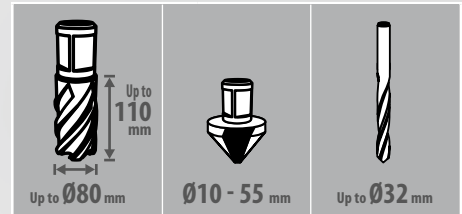
|                         |          |           |
|-------------------------|----------|-----------|
| ALFRA Rotabest® RB 50 B | 230 Volt | 18451     |
| ALFRA Rotabest® RB 50 B | 110 Volt | 18451.110 |

# ALFRA ROTABEST® – RB 80 B

## B-LINE



**MADE IN GERMANY**



### RB 80 B

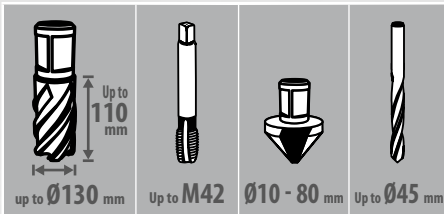
|                                       |  |
|---------------------------------------|--|
| <b>Core drill dimensions</b>          | Ø 12.0 - 80.0 mm /<br>Ø 20.0 - 50.0 mm<br>(cutting depth 110 mm)           |
| <b>Cutting depth</b>                  | 50.0 mm / 110.0 mm   |
| <b>Twist drill</b>                    | Ø 1.0 - 16.0 mm<br>with drill chuck<br>Up to Ø 32.0 mm<br>with MT3 DIN 345 |
| <b>Counterboring</b>                  | Ø 10 - 55.0 mm   |
| <b>Tapping</b>                        | with tapping attachment:<br>Up to M30                                      |
| <b>Arbors</b>                         | MT3  |
| <b>Stroke</b>                         | 190 mm   |
| <b>Height adjustment</b>              | 100 mm   |
| <b>4-speed gearbox<br/>Load speed</b> | 1. Step 110 rpm<br>2. Step 175 rpm<br>3. Step 245 rpm<br>4. Step 385 rpm   |
| <b>Power consumption</b>              | 1,800 W  |
| <b>Voltage</b>                        | 230 V 50/60 Hz<br>110 V 50/60 Hz   |
| <b>Magnetic adhesion<br/>strength</b> | 16.000 N   |
| <b>Tool force (10 mm)</b>             | 4.000 N  |
| <b>Magnetic base</b>                  | 92 x 220 mm  |
| <b>Weight</b>                         | 21.8 kg  |

|                                     |   |
|-------------------------------------|---|
| <b>Motor</b>                        |   |
| Motor emergency stop                | ✓ |
| Oil bath gearbox                    | ✓ |
| Mech. Slip clutch                   | ✓ |
| <b>Slides</b>                       |   |
| Infinitely adjustable               | ✓ |
| Self-adjusting guide                | ✓ |
| <b>Operation</b>                    |   |
| Soft-touch grips                    | ✓ |
| Membrane keyboard                   | ✓ |
| Holder for Allen key                | ✓ |
| Cable length 5 m                    | ✓ |
| <b>Magnet</b>                       |   |
| Sensor/LED                          | ✓ |
| Metal rings                         | ✓ |
| Performance and weight optimisation | ✓ |
| <b>Made in Germany</b>              |   |
|                                     | ✓ |

|   |  |
|---|--|
| <b>Scope of delivery</b>  |  |
| <ul style="list-style-type: none"> <li>• Metal core drilling machine RB 80 B</li> <li>• Coolant device</li> <li>• MT3 tool holder with internal cooling</li> <li>• Carrying case</li> <li>• Drill spray</li> <li>• Seat belt</li> <li>• Operating Instructions</li> <li>• <b>incl. 1 core drill free</b></li> </ul> |  |

### Prod.-No.

|                         |          |           |
|-------------------------|----------|-----------|
| ALFRA Rotabest® RB 80 B | 230 Volt | 18481     |
| ALFRA Rotabest® RB 80 B | 110 Volt | 18481.110 |



## RB 130 B

|                                   |   |
|-----------------------------------|---|
| <b>Core drill dimensions</b>      | Ø 12.0 - 130.0 mm /<br>Ø 20.0 - 50.0 mm<br>(cutting depth 110 mm)                             |
| <b>Cutting depth</b>              | 50.0 mm / 110.0 mm  |
| <b>Twist drill</b>                | Up to Ø 45.0 mm<br>with MT4 DIN 345 direct  |
| <b>Counterboring</b>              | Ø 10.0 - 80.0 mm  |
| <b>Tapping</b>                    | with tapping attachment<br>Up to M42  |
| <b>Arbors</b>                     | MT4   |
| <b>Stroke</b>                     | 230 mm  |
| <b>Height adjustment</b>          | 100 mm  |
| <b>4-speed gearbox</b>            | 1. Step 30 - 80 rpm<br>2. Step 50 - 120 rpm<br>3. Step 130 - 350 rpm<br>4. Step 210 - 550 rpm |
| <b>Power consumption</b>          | 2,500 W   |
| <b>Voltage</b>                    | 230 V 50/60 Hz<br>110 V 50/60 Hz  |
| <b>Magnetic adhesion strength</b> | 33.000 N  |
| <b>Tool force (10 mm)</b>         | 5.000 N   |
| <b>Magnetic base</b>              | 90 x 400 mm   |
| <b>Weight</b>                     | 37.0 kg   |

|                          |   |
|--------------------------|---|
| <b>Motor</b>             |   |
| Smooth start             | ✓ |
| Oil bath gearbox         | ✓ |
| Mech. Slip clutch        | ✓ |
| <b>Operation</b>         |   |
| Soft-touch grips         | ✓ |
| Membrane keyboard        | ✓ |
| <b>Magnet</b>            |   |
| Metal rings              | ✓ |
| <b>Made in Germany</b> ✓ |   |

|   |  |
|---|--|
| <b>Scope of delivery</b>  |  |
| <ul style="list-style-type: none"> <li>• Metal core drilling machine RB 130</li> <li>• Coolant device</li> <li>• Reduction sleeve MT4/3</li> <li>• Transportation packing</li> <li>• Drill spray</li> <li>• Chip hook</li> <li>• Seat belt</li> <li>• Operating instructions</li> </ul> |  |



**MADE IN GERMANY**



**Prod.-No.**

**ALFRA Rotabest® RB 130 B**

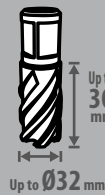
**230 Volt**

**18646**



# ALFRA ROTABEST® – V 32

**S-LINE**



Ø10 - 32 mm

## V 32

|                                   |                                  |
|-----------------------------------|----------------------------------|
| <b>Core drill dimensions</b>      | Ø 12.0 - 32.0 mm                 |
| <b>Cutting depth</b>              | 30.0 mm                          |
| <b>Counterboring</b>              | Ø 10.0 - 32.0 mm                 |
| <b>Arbors</b>                     | 19 mm Weldon shank               |
| <b>1-speed gearbox</b>            | 450 rpm                          |
| <b>Stroke</b>                     | 45 mm                            |
| <b>Power consumption</b>          | 900 W                            |
| <b>Voltage</b>                    | 230 V 50/60 Hz<br>110 V 50/60 Hz |
| <b>Magnetic adhesion strength</b> | 16.000 N                         |
| <b>Tool force (10 mm)</b>         | 2.100 N                          |
| <b>Magnetic base</b>              | 95 x 200 mm                      |
| <b>Weight</b>                     | 12.5 kg                          |

|  |   |
|--|---|
| <b>Motor</b>                               |   |
| Compact, lying                             |   |
| Compact mitre gear                         |   |
| Slide                                      |   |
| 2-sided column guide                       |   |
| Operation                                  |   |
| Space-saving - through ratchet             |   |
| Magnet                                     |   |
| <b>Metal rings</b>                         | ✓ |
| <b>Performance and weight optimisation</b> | ✓ |
| <b>Made in Germany</b>                     | ✓ |

|   |  |
|---|--|
| <b>Scope of delivery</b>  |  |
| <ul style="list-style-type: none"> <li>• Metal core drilling machine V 32</li> <li>• Coolant pressure bottle</li> <li>• Carrying case</li> <li>• Allen key for Weldon arbor</li> <li>• Seat belt</li> <li>• Ejector pin 6.35 x 74 mm (specially for Rotabest® V32)</li> <li>• Operating instructions</li> </ul> |  |
| • <b>incl. 1 core drill free</b>  |  |



**MADE IN GERMANY**



### Prod.-No.

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



**“ Compact, lightweight and always 100% adhesive reliability – even on thin sheet metals. The new SP-V is a must on every construction site! ”**

Already from 3 mm material thickness



# ALFRA – UNIVERSAL MAGNETIC DRILL STAND SP-V

**S-LINE**

Through variable mountings, different drilling machines can be used. Even cordless drill machines can be used as a cordless combination with the permanent magnetic stand for a virtually unlimited range of applications – from 3 mm thickness!



Can be used with a permanent magnet from 3 mm material thickness

**MADE IN GERMANY**  
US Patent No. 8350663B1



| SP-V   |   |
|--|---|
| Twist drill  | Ø depending on the used drill               |
| Arbor  | Ø 43 mm Eurobund,<br>Ø 48,6 mm<br>Ø 61,7 mm |
| Stroke   | 105 mm                                      |
| Height adjustment  | 80 mm                                       |
| Magnetic adhesion force  | 17.000 N                                    |
| Tool-Force (10 mm S235)  | 2.800 N                                     |
| Tool force (6 mm S235)   | 2.300 N                                     |
| Magnetic base  | 72 x 190 mm                                 |
| Weight   | 6,8 kg                                      |
| <b>Magnet</b>  |   |
| TiN-coating  | ✓   |
| Performance and weight optimisation  | ✓   |
| <b>Made in Germany</b>   |   |
| ✓  |   |
| <b>Scope of delivery</b>   |   |
| <ul style="list-style-type: none"> <li>• Universal Magnetic Drill Stand SP-V</li> <li>• Carrying case</li> <li>• Operating instructions</li> </ul> |   |



**Prod.-No.**

ALFRA universal magnetic drill stands SP-V

**18343**



# ACCESSORIES – ARBORS

| Description   | Prod.-No. | RB 35 B<br>RB 35/50 X<br>Piccolo | RB 50 SP<br>RB 50 X<br>RB 50 B<br>RB 50 B RL-E | RB 80 X<br>RB 80 B RL-E | RB 100 RL-E | RB 130 | RB 130 B                                       | Figure  |
|---|-----------|----------------------------------|--|-------------------------|-------------|--------|--|---|
| Quick-release tool holder Rota-Quick®<br>• Morse taper 2<br>• with automatic internal cooling<br>• suitable for all machines with drill spindle MT 2<br>• Application range to 40 mm core drill Ø | 18650     | -                                | ✓  | -                       | -           | -      | -  |    |
| Quick-release tool holder Rota-Quick®<br>• Morse taper 3<br>• with automatic internal cooling<br>• suitable for all machines with drill spindle MT 3<br>• Application range to 40 mm core drill Ø | 18651     | -                                | -  | ✓                       | ✓           | -      | -  |    |
| Quick-release chuck with Weldon arbor for twist drills<br>• Ø 1-13 mm   | 18107     | ✓                                | -  | -                       | -           | -      | -  |    |
| Quick-release chuck with Morse taper 2 for twist drills<br>• Ø 1-16 mm  | 18008     | -                                | ✓  | -                       | -           | -      | -  |    |
| Quick-release chuck with Morse taper 3 for twist drills<br>• Ø 1-16 mm  | 18009     | -                                | -  | ✓                       | ✓           | -      | -  |    |
| Tool holder AMT-2 - Morse taper 2 for core drills<br>• with Weldon shank<br>• Ø 12-60 mm<br>• with automatic internal cooling<br>• suitable for all machines with drill spindle MT 2              | 18003     | -                                | ✓  | -                       | -           | -      | -  |   |
| Tool holder AMT-2 - extended version<br>• with Weldon shank<br>• Ø 12-50 mm, cutting depth 110 mm<br>• with automatic internal cooling<br>• suitable for all machines with drill spindle MT 2     | 18003L    | -                                | ✓  | -                       | -           | -      | -  |  |
| Tool holder AMT-2 without internal cooling  | 18001     | -                                | ✓  | -                       | -           | -      | -  |  |
| Adapter sleeve MT 3/2   | 18023     | -                                | -  | ✓                       | ✓           | -      | -  |  |
| Adapter sleeve MT 4/3   | 18027     | -                                | -  | -                       | -           | -      | combined with<br>18002 &<br>18025 &<br>18025 L |  |
| Tool holder AMT-3 without internal cooling  | 18002     | -                                | -  | ✓                       | ✓           | -      | -  |  |
| Tool holder AMT-3 - Morse taper 3 for core drills<br>• with Weldon shank<br>• Ø 12-60 mm<br>• with automatic internal cooling<br>• suitable for all machines with drill spindle MT 3              | 18025     | -                                | -  | ✓                       | ✓           | -      | -  |  |
| Tool holder AMT-3 - extended version<br>• with Weldon shank<br>• Ø 12-50 mm, cutting depth 110 mm<br>• with automatic internal cooling<br>• suitable for all machines with drill spindle MT 3     | 18025L    | -                                | -  | ✓                       | ✓           | -      | -  |  |
| Tool holder AL3 - Morse taper 3<br>• for core drills heavy duty version<br>• Ø 51-100 mm with keyway with automatic<br>internal cooling   | 20230     | -                                | -  | ✓                       | ✓           | -      | -  |  |
| Tool holder AL 4 - Morse taper 4<br>• for core drills heavy duty version<br>• Ø 51-100 mm with keyway with automatic<br>internal cooling<br>• with Ejector pin<br>• suitable for RB 130 B         | 20240     | -                                | -  | -                       | -           | ✓      | ✓  |  |

# ACCESSORIES – ADAPTERS


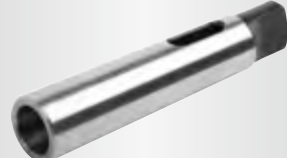


| Description   | Prod.-No. | Figure  |
|---|-----------|---|
| <p>Adapter with female thread M18 x 6 p 1.5<br/>                     Adapter for use on Rotabest® HSS-Co Eco and HSS-Co RQX core drills of Ø 12.0 mm to 32.0 mm and Rotabest® carbide core drills of Ø 14.0-32.0 mm on:<br/>                     FEIN core drilling machines of the type KBM 542</p>  | 20201     |  <p>Weldon</p> <p>FEIN/Hitachi<br/>M18 x 6P 1.5<br/>Internal thread</p> |
| <p>Adapter with external thread (including ejector pin)<br/>                     Adapter for use of FEIN core drills with internal thread M18 x 6 p 1.5 on metal core drill machines with Weldon shank.</p>   | 20202     |  <p>FEIN/Hitachi<br/>M18 x 6P 1.5<br/>Internal thread</p> <p>Weldon</p> |
| <p>Ejector pin suitable for Prod.-No. 20202 - single</p>  | 20203     |   |
| <p>Adapters<br/>                     Adapter for use of all core drills with a Weldon shank on FEIN Quick IN quick-release system.<br/><br/>                     This adapter is eliminated when you use our HSS-Eco core drill of series Prod.-No. 1909... and 2009...</p>   | 20204     |  <p>FEIN-QuickIN</p>  |
| <p>Adapter<br/>                     Adapter for use of all core drills with a Weldon shank on ALFRA-Rota-Quick® und Nitto quick-release systems.<br/><br/>                     (incl. 2 Ejector pins Prod.-No. 1950500 and 1975500 + Allen key)</p>   | 20205     |  <p>Weldon</p> <p>ALFRA-Rota-Quick®<br/>and Nitto</p>                  |
| <p>Ejector pin for HSS core drills cutting depth 30 mm, also suitable for adapter Prod.-No. 20204 among others</p>  | 1926500   |    |
| <p>Ejector pin for HSS core drills cutting depth 50 mm, also suitable for adapter Prod.-No. 20204 among others</p>  | 1950500   |   |
| <p>Extension adapter<br/>                     With Weldon shank and ejector pin.<br/><br/>                     For use on core drills 25 - 30 – 35 – 50 mm cutting depth in cases when the surface of the material to be drilled is deeper than the stand space of the machine. The first ejector pin triggers the second ejector pin; the coolant flows through the borehole to the core drill.<br/><br/>                     Total length adapters: 80 mm<br/>                     Diameter: 30 mm<br/>                     Ejector pin: 6.35 x 77 mm Prod.-No. 1926500</p> | 20206     |   |
| <p>Adapter complete with ejector pin + Allen key<br/>                     Adapter for use on core drills with FINE-Quick IN shaft on metal core drill machines with Weldon arbor.</p>   | 20210     |  <p>FEIN-QuickIN</p> <p>Weldon</p>                                    |
| <p>Replacement ejector pin (only for adapters) 6.35 x 125 mm</p>  | 1936501   |   |
| <p>Adapter for carbide hole saws, e.g. type MBS on metal core drill machines with Weldon arbor (incl. ejector pin Prod.-No. 1950500)</p>  | 060WD     |   |

# ACCESSORIES – COOLANT

| Description   | Prod.-No. | Figure  |
|---|-----------|---|
| Coolant system for RB 40 RL-E, RB 60 RL-E, RB 100 RL-E, RB 130, suitable for tool holder with internal cooling AMT-2 (Prod.-No. 18003) and AMT-3 (Prod.-No. 18025)  | 18104     |    |
| Coolant system for RB 35 B  | 189311241 |    |
| Coolant system for RB 35/50 X Piccolo, RB 35 SP, RB 50 SP, RB 35/50 B Piccolo, RB 50 B, RB 50 X, 80 X, 80 SP and 80 SP RL-E, suitable for tool holder with internal cooling AMT-2 (Prod.-No. 18003) and AMT-3 (Prod.-No. 18025) | 189412029 |   |
| Coolant pressure bottle 0.5 l, suitable for Rotabest® V32   | 18103     |  |
| ALFRA 2000<br>Cutting and drilling spray<br>250 ml can  | 21010     |  |
| ALFRA 4000<br>High performance cutting oil spray<br>300 ml can  | 21040     |  |
| High performance wax stick.<br>Ideal for core drill boreholes on the wall or ceiling (overhead drilling), as paste adheres to the cutting edge.   | 09012     |  |



# ACCESSORIES – TAPPING

| Description  | Shaft            | Prod.-No. | All models with MT2 arbor | All models with MT3 arbor    |   |
|--|------------------|-----------|---------------------------|------------------------------|---|
| Tapping attachment M3 - M12<br>Scope of delivery:<br>with Rota-Quick® and MT2, interchangeable,<br>Plastic case, manual  | MT2 + RotaQuick® | 18652     | ✓                         | With reduction sleeve MT 3/2 |    |
| Tapping attachment M10 - M20<br>Scope of delivery:<br>with Rota-Quick® and MT2, interchangeable,<br>Plastic case, manual | MT2 + RotaQuick® | 18653     | ✓                         | With adapter sleeve MT 3/2   |   |
| Reduction sleeve for tapping attachment – from MT3 to MT2  |                  | 18023     |                           |                              |    |
| Tapping quick-release chuck size 1 MT2, single, suitable for RB 50 B RL-E  |                  | 18661     |                           |                              |    |
| Tapping quick-release chuck size 2 MT 3, single, suitable for RB 80 B RL-E and RB 100 RL-E                               |                  | 18681     |                           |                              | <br><i>Prod.-No. 18681 - Installation instructions</i> |

## Quick change inserts with clutch

|        |     | Shank-Ø | Square | Tap drill | Prod.-No. |
|--------|-----|---------|--------|-----------|-----------|
| Size 1 | M3  | 3.5     | 2.7    | DIN 371   | 18662     |
| Size 1 | M4  | 4.5     | 3.4    | DIN 371   | 18663     |
| Size 1 | M5  | 6.0     | 4.9    | DIN 371   | 18664     |
| Size 1 | M6  | 6.0     | 4.9    | DIN 371   | 18678     |
| Size 1 | M8  | 8.0     | 6.2    | DIN 371   | 18665     |
| Size 1 | M10 | 10.0    | 8.0    | DIN 371   | 18666     |
| Size 1 | M12 | 9.0     | 7.0    | DIN 376   | 18667     |
| Size 1 | M14 | 11.0    | 9.0    | DIN 376   | 18668     |
| Size 2 | M6  | 6.0     | 4.9    | DIN 371   | 18682     |
| Size 2 | M8  | 8.0     | 6.2    | DIN 371   | 18683     |
| Size 2 | M10 | 10.0    | 8.0    | DIN 371   | 18684     |
| Size 2 | M12 | 9.0     | 7.0    | DIN 376   | 18685     |
| Size 2 | M14 | 11.0    | 9.0    | DIN 376   | 18686     |
| Size 2 | M16 | 12.0    | 9.0    | DIN 376   | 18687     |
| Size 2 | M18 | 14.0    | 11.0   | DIN 376   | 18688     |
| Size 2 | M20 | 16.0    | 12.0   | DIN 376   | 18689     |
| Size 2 | M22 | 18.0    | 14.5   | DIN 376   | 18690     |

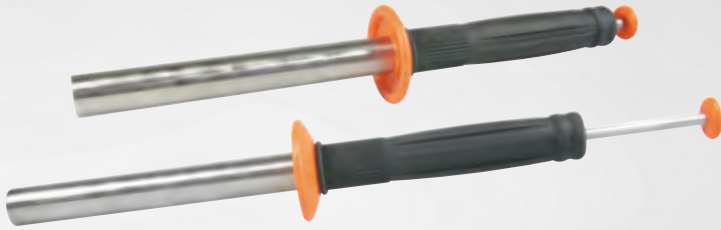


# ALFRA – MAGNETIC CHIP REMOVER

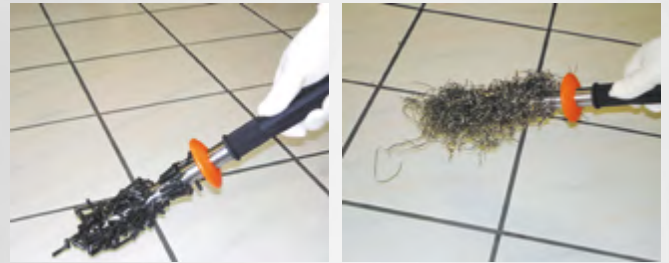
In a stainless steel round rod, you can move a magnet back and forth. The strong magnet attracts the metal chips – pull knob, chips fall out. For more cleanliness in the workplace.

ALFRA magnetic chip remover, length 400 mm

**Prod.-No.**  
18654



Prod.-No. 18654



# ALFRA – CHIP BRUSH

- ① Adjustable telescopic handle
- ② Up to 9 kg load capacity



- For practical cleaning of floors in various work areas
- Load capacity up to 9 kg
- Easy removal of picked up metal parts by simple release mechanism on a rod
- Sweeping with 400 mm
- 750-1050 mm adjustable telescopic handle



**Prod.-No.**  
18655

ALFRA chip brush

# ROTABEST® – RB 50 X VACUBEST

## Product features Rotabest® RB 50 X Vacubest:

- Automatic shut-off of motor in case of vacuum loss
- Adjustable laser cross
- Machine is mounted on the vacuum plate rotatable by 270°
- Vacuum pump can be controlled by the core drilling machine

Use on non-magnetic surfaces such as aluminium, copper, brass, stainless steel, plastics, wood and textured surface (e.g. corrugated and chequer plate)

## Technical specifications:

Core drilling in metal: Ø 12.0 - 50.0 mm

Drilling in wood: Ø 12.0 - 100.0 mm

Drilling depth: 50 mm

Power consumption: 1200 W

2 speed gearbox: 250/450 rpm

Arbor: available as 19 mm Weldon or MT2

Coolant feed: automatically integrated from the top through the spindle

Voltage: 230 volt or 110 volt  
(50-60 Hz)

Vacuum adhesion force: 9000 N

Tool force  
(at - 0.9 bar): 2300 N

Printing: - 0.9 bar / - 90kPa

## Description

ALFRA – Rotabest® RB 50 X Vacubest with MT 2 mounting

ALFRA – Rotabest® RB 50 X Vacubest with Weldon arbor

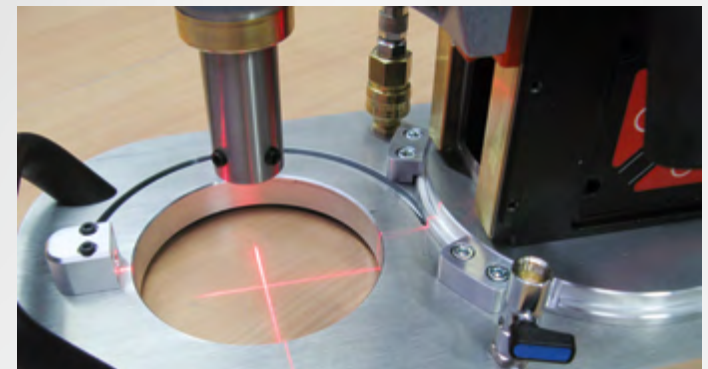
ALFRA – Rotabest® RB 50 X Vacubest with MT 2 arbor, 110v

## Prod.-No.

18740

18740.WD

18740.110.UL





# ROTABEST® – VACUUM SYSTEM VACUBEST

Use on **non-magnetic** surfaces such as copper, aluminium, brass, stainless steel, plastics and textured subsurface (e.g. corrugated and chequer plate)

Suction capacity: 1.5 m<sup>3</sup>/h – 25l/min  
Max. vacuum mbar (abs.): 200  
Overpressure mbar: 300  
Dimensions suction plate: 400 x 200 mm

## Scope of delivery:

Pump (230 V, 50 Hz), vacuum plate, 3. mtr. suction pipe



## Description

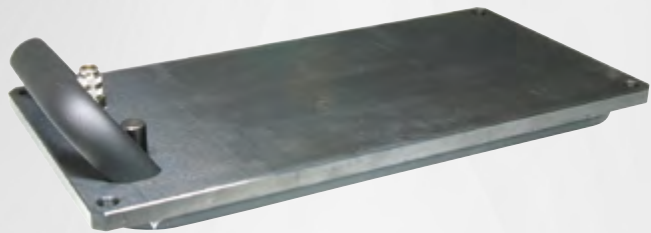
Vacuum system Vacubest

## Prod.-No.

18150



Pump



Vacuum plate

## TIP:

Name your application problem – we will be happy to advise you.



# HSS-CORE DRILLS **ALFRA ROTABEST<sup>®</sup>**



# ALFRA ROTABEST® HSS CORE DRILLS

## GRINDED SHARP – ALFRA HSS CORE DRILLS LOVE HEAVY METAL

Core drill against metal – a daily challenge on construction sites or in metal construction. ROTABEST® core drills are made of high tensile tool steel. Due to the model they ensure accurate holes with diameters from 12 mm up to 60 mm – with a cutting depth from 30 mm to 110 mm.

- 1 Product features  
e.g. pre- and post-cutter
- 2 Product number
- 3 Quality
  - HSS-Co RQX
  - HSS-Co ECO
  - HSS-Basic
- 4 Diameter
- 5 Cutting depth
- 6 Arbor type
  - WELDON
  - FEIN QUICK-IN
  - UNIVERSAL / NITTO KOHKI

**MADE IN GERMANY**

### More than just a shell

The high quality products belonging to our HSS-core-drill-family deserve a package, which is offering more than protection from environmental influences. On the label you find all important informations about our core drills „Made in Germany“ at a glance.

### Thought-out packages with extra information:

Our core drills are easy on the eye. That's why the sturdy package is offering you a look at the content. Special characteristics of the plastic case: It's transparent, informative and a guarantor regarding quality assurance.

### Your advantage:

- The potential buyers are not tempted to open the package any more..
- For this reason the risk for contamination is diminishing. Furthermore the drills are not going to be damaged by drying-out.
- The label also serves as a sealing, guaranteeing original packaging when it's intact.
- Due to the Alfra-colour code, your customers can see at a glance, which type of the HSS CORE DRILL is inside the package.

## DOWN-TO-EARTH INDIVIDUALISTS – ALFRA ROTABEST® CORE DRILLS

Within the ROTABEST core drill family everyone has their own strengths – but still the same roots: Passion for Tools, made by Alfra.

### WELDON

### HSS-BASIC



#### The solid one: Weldon HSS-BASIC

Reliable, robust, accurate – our ROTABEST® basis model is convincing with a solid performance at a small price.

- With Weldon shank 19.0 mm, 2 driving surfaces
- Internal bore 6.35 mm
- Steel quality: Special super high speed steel
- Polished section: with pre- and post-cutter



## WELDON

## HSS-CO-ECO



### The all-purpose-weapon: Weldon HSS-CO-ECO

The ROTABEST ECO-models are genuine golden boys – not only from a visual viewpoint. Due to the Weldon shank they are perfect partners for all core drilling machines with a weldon toolholder. Another advantage is the long service life

- With Weldon shank 19.0 mm, 2 driving surfaces
- Internal bore: 6.35 mm, cutting depth  $\varnothing$  110 mm: 8 mm
- Steel quality: Special super high speed steel cobalt
- Polished section: with pre- and post-cutter

## FEIN-QUICKIN

## HSS-CO-ECO



### The compatible one : FEIN-QUICKIN HSS-CO-ECO

For those, who doesn't like renouncing:

You are working with a Fein-metal core drilling device with QuickIn tool holder? Due to the ROTABEST ECO-models with FEIN-QUICKIN shank you can rely on proven Alfra-quality.

- Suitable for FEIN magnetic drilling machines with Quick-IN arbor.
- Special shank, 18.0 mm with 4 bearing recesses
- Steel quality: Special super high speed steel cobalt
- Internal hole 6.4 mm

## UNIVERSAL / NITTO KOHKI

## HSS-CO-ECO



### The universal one: UNIVERSAL/NITTO KOHKI HSS-CO-ECO

One for all: Because of the universal shank our allrounder is fitting with a variety of tool-holder-designs and especially with Nitto One Touch devices.

- New Combi universal shank specially for Nitto one touch machines
- Also suitable for all magnetic drilling machines with Weldon shank
- Internal bore up to  $\varnothing$  17.0 mm:  $\varnothing$  6.35 mm; from 18.0 mm:  $\varnothing$  8.0 mm
- Steel quality: Special super high speed steel cobalt
- Polished surface: with pre- and post-cutter

## WELDON

## HSS-CO-RQX



### The endurance runner: WELDON HSS-CO-RQX

When it's getting hot: The specially coated RQX Models are providing full performance even when the temperature is rising up to 1000 °C. For example when it comes to long lasting drilling processes or horizontal drilling without coolant.

- With Weldon shank 19.0 mm, 2 driving surfaces
- Internal bore 6.35 mm
- Steel quality: Special super high speed steel cobalt, coated
- Polished section: with pre- and post-cutter



**The solid one:**

**Core drill Weldon HSS-BASIC**

- With Weldon shank 19.0 mm, 2 driving surfaces
- Internal bore 6.35 mm
- Steel quality: Special super high speed steel
- Polished section: with pre- and post-cutter

**Suitable on:**

ALFRA Rotabest®, BDS, Bux, Ruko, Magnetor, Euroboor, Universal, Nitto, Jancy, Hougen, Magtron, Promac, Rotabroach and all other magnetic drills with Weldon shank.

**Cutting depth**

| Ø in mm | Cutting depth      |                    |
|---------|--------------------|--------------------|
|         | 30 mm<br>Prod.-No. | 50 mm<br>Prod.-No. |
| 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         |

**Cutting depth**

| Ø in mm     | Cutting depth      |                    |
|-------------|--------------------|--------------------|
|             | 30 mm<br>Prod.-No. | 50 mm<br>Prod.-No. |
| 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            |
| Dimension   | 6.35 x 77 mm       | 6.35 x 102 mm      |



Weldon



Heavy duty serration with pre- (1) and post-cutter (2)

HSS BASIC Core Drill Sets



- A range of the most commonly used core drills clearly arranged in a sturdy plastic case.
- Absolute protection of the teeth tips in the rough usage operation at installation and in the workshop.
- On request, we can assemble individual sets in 12.0 to 30.0 mm diameters.

| Ø mm                       | 12.0  | 14.0 | 16.0 | 18.0 | 20.0 | 22.0 | 24.0 | 26.0 |
|----------------------------|---|------|------|------|------|------|------|------|
| <b>Cutting depth 30 mm</b> |   |      |      |      |      |      |      |      |
| <b>Prod.-No.</b>           |   |      |      |      |      |      |      |      |
| <b>1907125</b>             | 3 pc. HSS BASIC core drill set: incl. 1 ejector pin Prod.-No. 1926500   |      |      |      |      |      |      |      |
|                            |   | ●    |      | ●    |      | ●    |      |      |
| <b>1907003025</b>          | 6 pc. HSS BASIC core drill set: incl. 1 ejector pin Prod.-No. 1926500   |      |      |      |      |      |      |      |
|                            | ●   | ●    | ●    | ●    | ●    | ●    |      |      |
| <b>1907001025</b>          | 10 pc. HSS BASIC core drill set: incl. 2 ejector pins Prod.-No. 1926500 |      |      |      |      |      |      |      |
|                            | ●●  | ●●   | ●    | ●●   | ●    | ●●   |      |      |
| <b>Cutting depth 50 mm</b> |   |      |      |      |      |      |      |      |
| <b>1907003050</b>          | 6 pc. HSS BASIC core drill set: incl. 1 ejector pin Prod.-No. 1950500   |      |      |      |      |      |      |      |
|                            |   | ●    | ●    | ●    | ●    | ●    |      | ●    |
| <b>1907001050</b>          | 10 pc. HSS BASIC core drill set: incl. 2 ejector pins Prod.-No. 1950500 |      |      |      |      |      |      |      |
|                            |   | ●●   | ●    | ●●   | ●    | ●●   | ●    | ●    |





**The all-purpose-weapon:**

**Core drill Weldon HSS-CO-ECO**

- With Weldon shank 19.0 mm, 2 driving surfaces
- Internal bore: 6.35 mm
- Steel quality: Special super high speed steel cobalt
- Polished section: with pre- and post-cutter

**Suitable on:**

ALFRA Rotabest®, BDS, Bux, Ruko, Magnetor, Euroboor, Universal, Nitto, Jancy, Hougen, Magtron, Promac, Rotabroach and all other magnetic drills with Weldon shank.

| Ø in mm | Cutting depth      |                    |
|---------|--------------------|--------------------|
|         | 30 mm<br>Prod.-No. | 50 mm<br>Prod.-No. |
| 12.0    | 1901012025         | 1901012050         |
| 13.0    | 1901013025         | 1901013050         |
| 13.5    | 1901013525         | 1901013550         |
| 14.0    | 1901014025         | 1901014050         |
| 15.0    | 1901015025         | 1901015050         |
| 15.5    | 1901015525         | 1901015550         |
| 16.0    | 1901016025         | 1901016050         |
| 17.0    | 1901017025         | 1901017050         |
| 17.5    | 1901017525         | 1901017550         |
| 18.0    | 1901018025         | 1901018050         |
| 19.0    | 1901019025         | 1901019050         |
| 19.5    | 1901019525         | 1901019550         |
| 20.0    | 1901020025         | 1901020050         |
| 21.0    | 1901021025         | 1901021050         |
| 22.0    | 1901022025         | 1901022050         |
| 23.0    | 1901023025         | 1901023050         |
| 24.0    | 1901024025         | 1901024050         |
| 25.0    | 1901025025         | 1901025050         |
| 26.0    | 1901026025         | 1901026050         |
| 26.5    | 1901026525         | 1901026550         |
| 27.0    | 1901027025         | 1901027050         |
| 28.0    | 1901028025         | 1901028050         |
| 29.0    | 1901029025         | 1901029050         |
| 30.0    | 1901030025         | 1901030050         |
| 31.0    | 1901031025         | 1901031050         |
| 32.0    | 1901032025         | 1901032050         |
| 33.0    | 1901033025         | 1901033050         |
| 34.0    | 1901034025         | 1901034050         |
| 35.0    | 1901035025         | 1901035050         |
| 36.0    | 1901036025         | 1901036050         |
| 37.0    | 1901037025         | 1901037050         |
| 38.0    | 1901038025         | 1901038050         |
| 39.0    | 1901039025         | 1901039050         |
| 40.0    | 1901040025         | 1901040050         |
| 41.0    | 1901041025         | 1901041050         |
| 42.0    | 1901042025         | 1901042050         |
| 43.0    | 1901043025         | 1901043050         |
| 44.0    | 1901044025         | 1901044050         |
| 45.0    | 1901045025         | 1901045050         |
| 46.0    | 1901046025         | 1901046050         |
| 47.0    | 1901047025         | 1901047050         |
| 48.0    | 1901048025         | 1901048050         |
| 49.0    | 1901049025         | 1901049050         |
| 50.0    | 1901050025         | 1901050050         |
| 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         |

| Ø in mm | Cutting depth        |
|---------|----------------------|
|         | 110 mm<br>Prod.-No.* |
| 20.0    | 1901020110           |
| 22.0    | 1901022110           |
| 24.0    | 1901024110           |
| 25.0    | 1901025110           |
| 26.0    | 1901026110           |
| 28.0    | 1901028110           |
| 30.0    | 1901030110           |
| 32.0    | 1901032110           |
| 35.0    | 1901035110           |
| 40.0    | 1901040110           |
| 45.0    | 1901045110           |
| 50.0    | 1901050110           |

\* Caution: HSS-Co Eco core drill cutting depth 110 mm can only be used with tool holder AMT 2 L (Prod.-No. 18003 L) or AMT 3 L (Prod.-No. 18025 L).

| Ejector pin at cutting depth |                            |                            |
|------------------------------|----------------------------|----------------------------|
| 30 mm<br>Prod.-No.           | 50 mm<br>Prod.-No.         | 110 mm<br>Prod.-No.*       |
| 1926500<br>(6.35 x 77 mm)    | 1950500<br>(6.35 x 102 mm) | 2001502<br>(6.35 x 160 mm) |



Weldon



Heavy duty serration with pre- (1) and post-cutter (2)

HSS-Co Eco Core Drill Sets



- A range of the most commonly used core drills clearly arranged in a sturdy plastic case.
- Absolute protection of the teeth tips in the rough usage operation at installation and in the workshop.
- On request, we can assemble individual sets in 12.0 to 30.0 mm diameters.

| Ø mm                       | 12.0   | 14.0 | 16.0 | 18.0 | 20.0 | 22.0 | 24.0 | 26.0 |
|----------------------------|--|------|------|------|------|------|------|------|
| <b>Cutting depth 30 mm</b> |  |      |      |      |      |      |      |      |
| <b>Prod.-No.</b>           |  |      |      |      |      |      |      |      |
| <b>1901125</b>             | 3 pc. HSS-Co Eco core drill set: incl. 1 ejector pin Prod.-No. 1926500   |      |      |      |      |      |      |      |
|                            |  | ●    |      | ●    |      | ●    |      |      |
| <b>1901003025</b>          | 6 pc. HSS-Co Eco core drill set: incl. 1 ejector pin Prod.-No. 1926500   |      |      |      |      |      |      |      |
|                            | ●  | ●    | ●    | ●    | ●    | ●    |      |      |
| <b>1901001025</b>          | 10 pc. HSS-Co Eco core drill set: incl. 2 ejector pins Prod.-No. 1926500 |      |      |      |      |      |      |      |
|                            | ●●   | ●●   | ●    | ●●   | ●    | ●●   |      |      |
| <b>Cutting depth 50 mm</b> |  |      |      |      |      |      |      |      |
| <b>1901003050</b>          | 6 pc. HSS-Co Eco core drill set: incl. 1 ejector pin Prod.-No. 1950500   |      |      |      |      |      |      |      |
|                            |  | ●    | ●    | ●    | ●    | ●    |      | ●    |
| <b>1901001050</b>          | 10 pc. HSS-Co Eco core drill set: incl. 2 ejector pins Prod.-No. 1950500 |      |      |      |      |      |      |      |
|                            |  | ●●   | ●    | ●●   | ●    | ●●   | ●    | ●    |



**The endurance runner:**

**Core drill WELDON HSS-CO-RQX**

- With Weldon shank 19.0 mm, 2 driving surfaces
- Internal bore 6.35 mm
- Steel quality: Special super high speed steel cobalt, coated
- polished section: with pre- and post-cutter

**Suitable on:**

ALFRA Rotabest®, BDS, Bux, Ruko, Magnetor, Euroboor, Universal, Nitto, Jancy, Hougen, Magtron, Promac, Rotabroach and all other magnetic drills with Weldon shank.

**Cutting depth 30 mm**

| Ø in 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    |

**Cutting depth 50 mm**

| Ø in 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    |



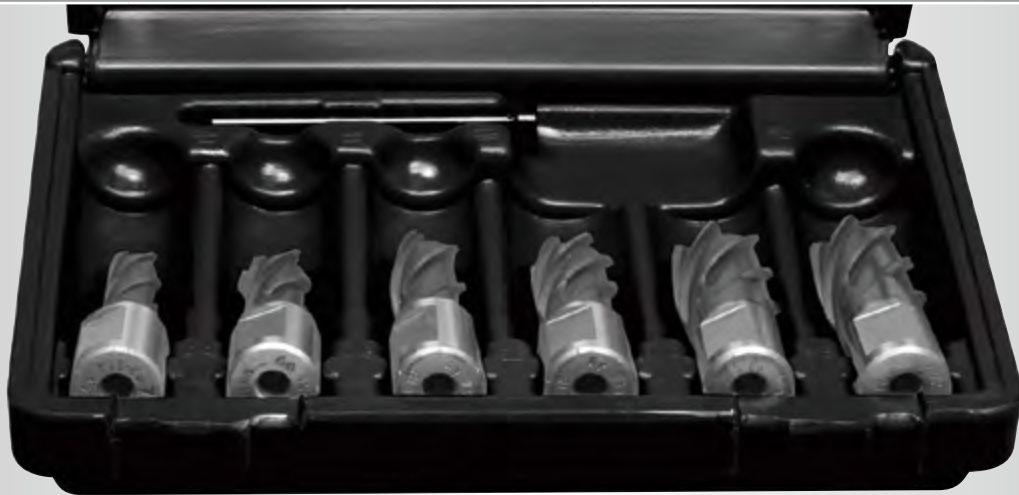
Weldon



Heavy duty serration with pre- (1) and post-cutter (2)

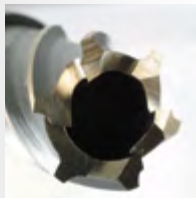
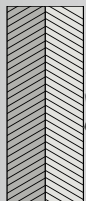


HSS-Co RQX CORE DRILL SETS

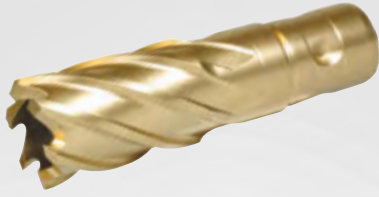


- A range of the most commonly used core drills clearly arranged in a sturdy plastic case.
- Absolute protection of the teeth tips in the rough usage operation at installation and in the workshop.
- On request, we can assemble individual sets in 12.0 to 30.0 mm diameters.

| Ø mm                       | 12.0  | 14.0 | 16.0 | 18.0 | 20.0 | 22.0 | 24.0 | 26.0 |
|----------------------------|---|------|------|------|------|------|------|------|
| <b>Cutting depth 30 mm</b> |   |      |      |      |      |      |      |      |
| <b>Prod.-No.</b>           |   |      |      |      |      |      |      |      |
| <b>1902003025</b>          | Set of 6 HSS-Co core drill RQX: incl. 1 ejector pin Prod.-No. 1926500   |      |      |      |      |      |      |      |
|                            | ●   | ●    | ●    | ●    |      | ●    |      | ●    |
| <b>1902001025</b>          | Set of 10 HSS-Co core drill RQX: incl. 2 ejector pins Prod.-No. 1926500 |      |      |      |      |      |      |      |
|                            | ●●  | ●●   | ●    | ●●   |      | ●●   |      | ●    |
| <b>Cutting depth 50 mm</b> |   |      |      |      |      |      |      |      |
| <b>1902003050</b>          | Set of 6 HSS-Co core drill RQX: incl. 1 ejector pin Prod.-No. 1950500   |      |      |      |      |      |      |      |
|                            |   | ●    | ●    | ●    | ●    | ●    |      | ●    |
| <b>1902001050</b>          | Set of 10 HSS-Co core drill RQX: incl. 2 ejector pins Prod.-No. 1950500 |      |      |      |      |      |      |      |
|                            |   | ●●   | ●    | ●●   | ●    | ●●   | ●    | ●    |



HSS-Co core drills with special geometry for the machining of superimposed metal plates (multi-layer drill) upon request! (Standard core drills are unsuitable for this.)



**The compatible one:**

**Core drill FEIN-QUICKIN HSS-CO-ECO**

Are you using FEIN magnetic drilling machines and don't want to do without your ALFRA-Rotabest® core drill? Take a look at our selection of HSS and carbide-tipped core drills suitable for the various types of FEIN machines.

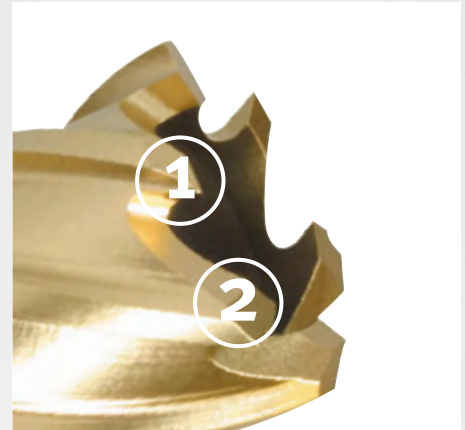
- Suitable for FEIN magnetic drilling machines with Quick-IN arbor.
- Special shank, 18.0 mm with 4 bearing recesses
- Steel quality: Special super high speed steel cobalt
- Internal hole 6.4 mm

**Cutting depth 35 mm**

| Ø in 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     |
| <b>Ejector pin 6.35 x 106 mm</b> |                |
|                                  | <b>1936500</b> |



FEIN-QUICKIN



Heavy duty serration with pre- (1) and post-cutter (2)



Prod.-No. 1936500



### The universal one:

#### Core drill UNIVERSAL/NITTO KOHKI HSS-CO-ECO

- New Combi universal shank specially for Nitto one touch machines
- Also suitable for all magnetic drilling machines with Weldon shank
- Internal bore up to Ø 17.0 mm: Ø 6.35 mm; from 18.0 mm: Ø 8.0 mm
- Steel quality: Special super high speed steel cobalt
- Polished surface: with pre- and post-cutter

### Suitable on:

ALFRA, ALFRA-RQ models with quick-change system, BDS (incl. keyless system), Bux, Ruko, Magnetor, Euroboor, Jancy, Hougen, Magtron, ProMag, Rotabroach, Jepson, Metallkraft, etc.

#### Cutting depth 30 mm

| Ø in mm                  | Prod.-No.  |
|--------------------------|------------|
| 12.0                     | 1913012025 |
| 13.0                     | 1913013025 |
| 14.0                     | 1913014025 |
| 15.0                     | 1913015025 |
| 16.0                     | 1913016025 |
| 17.0                     | 1913017025 |
| 18.0                     | 1913018025 |
| 19.0                     | 1913019025 |
| 20.0                     | 1913020025 |
| 21.0                     | 1913021025 |
| 22.0                     | 1913022025 |
| 23.0                     | 1913023025 |
| 24.0                     | 1913024025 |
| 25.0                     | 1913025025 |
| 26.0                     | 1913026025 |
| 27.0                     | 1913027025 |
| 28.0                     | 1913028025 |
| 29.0                     | 1913029025 |
| 30.0                     | 1913030025 |
| 31.0                     | 1913031025 |
| 32.0                     | 1913032025 |
| 33.0                     | 1913033025 |
| 34.0                     | 1913034025 |
| 35.0                     | 1913035025 |
| 36.0                     | 1913036025 |
| 37.0                     | 1913037025 |
| 38.0                     | 1913038025 |
| 39.0                     | 1913039025 |
| 40.0                     | 1913040025 |
| 41.0                     | 1913041025 |
| 42.0                     | 1913042025 |
| 43.0                     | 1913043025 |
| 44.0                     | 1913044025 |
| 45.0                     | 1913045025 |
| 46.0                     | 1913046025 |
| 47.0                     | 1913047025 |
| 48.0                     | 1913048025 |
| 49.0                     | 1913049025 |
| 50.0                     | 1913050025 |
| 52.0                     | 1913052025 |
| 55.0                     | 1913055025 |
| 60.0                     | 1913060025 |
| Ejector pin 6.35 x 77 mm | 1926500    |

#### Cutting depth 50 mm

| Ø in mm                   | Prod.-No.  |
|---------------------------|------------|
| 12.0                      | 1913012050 |
| 13.0                      | 1913013050 |
| 13.5                      | —          |
| 14.0                      | 1913014050 |
| 15.0                      | 1913015050 |
| 15.5                      | —          |
| 16.0                      | 1913016050 |
| 17.0                      | 1913017050 |
| 17.5                      | —          |
| 18.0                      | 1913018050 |
| 19.0                      | 1913019050 |
| 20.0                      | 1913020050 |
| 21.0                      | 1913021050 |
| 22.0                      | 1913022050 |
| 23.0                      | 1913023050 |
| 24.0                      | 1913024050 |
| 25.0                      | 1913025050 |
| 26.0                      | 1913026050 |
| 27.0                      | 1913027050 |
| 28.0                      | 1913028050 |
| 29.0                      | 1913029050 |
| 30.0                      | 1913030050 |
| 31.0                      | 1913031050 |
| 32.0                      | 1913032050 |
| 33.0                      | 1913033050 |
| 34.0                      | 1913034050 |
| 35.0                      | 1913035050 |
| 36.0                      | 1913036050 |
| 37.0                      | 1913037050 |
| 38.0                      | 1913038050 |
| 39.0                      | 1913039050 |
| 40.0                      | 1913040050 |
| 41.0                      | 1913041050 |
| 42.0                      | 1913042050 |
| 43.0                      | 1913043050 |
| 44.0                      | 1913044050 |
| 45.0                      | 1913045050 |
| 46.0                      | 1913046050 |
| 47.0                      | 1913047050 |
| 48.0                      | 1913048050 |
| 49.0                      | 1913049050 |
| 50.0                      | 1913050050 |
| 51.0                      | 1913051050 |
| 52.0                      | 1913052050 |
| 53.0                      | 1913053050 |
| 54.0                      | 1913054050 |
| 55.0                      | 1913055050 |
| 56.0                      | 1913056050 |
| 57.0                      | 1913057050 |
| 58.0                      | 1913058050 |
| 59.0                      | 1913059050 |
| 60.0                      | 1913060050 |
| Ejector pin 6.35 x 102 mm | 1950500    |



Heavy duty serration with pre- (1) and post-cutter (2)





# TCT CORE DRILLS *ALFRA ROTABEST*<sup>®</sup>



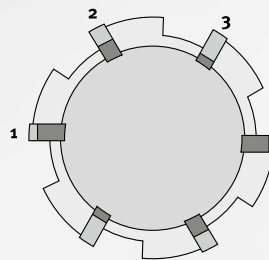
# ALFRA ROTABEST® – TCT CORE DRILLS



Applicable on magnetic and column drills. For structural steels, hard-to-machine materials such as chrome-nickel stainless steels and non-ferrous metals such as aluminium and CuZn alloy and many more.

Advantages of the ALFRA ROTABEST® Tungsten carbide-tipped core drills:

- 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 centre
- Small 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® – TCT CORE DRILLS

- with Weldon shank 19.0 mm
- Internal bore:  $\varnothing 14 - 17 \text{ mm} = 6.35 \text{ mm}$   
 $\varnothing 18 - 50 \text{ mm} = 8.0 \text{ mm}$
- Polished section: Pre- Middle - Post cutter
- For the highest standards in cutting and lifespan.

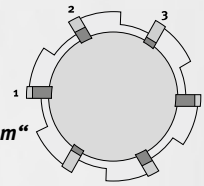
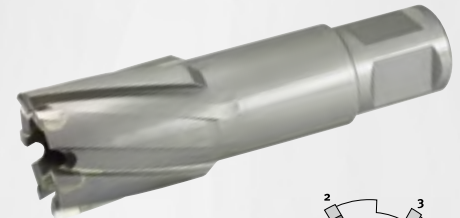
## Suitable on:

all magnetic drilling machines with Weldon shank. ALFRA-Rotabest® (Weldon), ALFRA-Rota-Quick® Quick-change system, for BDS, Bux, Ruko, Magnetor, Euroboor, Universal, Jancy, Hougen, Magtron, Promac, Rotabroach, among others.



| Ø 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   |                     | 1935500    |
| for $\varnothing 14 - 17 \text{ mm}$ , 6.35 x 87 mm |                     |            |
| Ejector pin   |                     | 2001500    |
| for $\varnothing 18 - 50 \text{ mm}$ , 8 x 87 mm    |                     |            |

| Ø 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  |                     | 1950500    |
| for $\varnothing 14 - 17 \text{ mm}$ , 6.35 x 102 mm |                     |            |
| Ejector pin  |                     | 2001501    |
| for $\varnothing 18 - 50 \text{ mm}$ , 8 x 102 mm    |                     |            |



ALFRA „Chip-Breaker System“

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

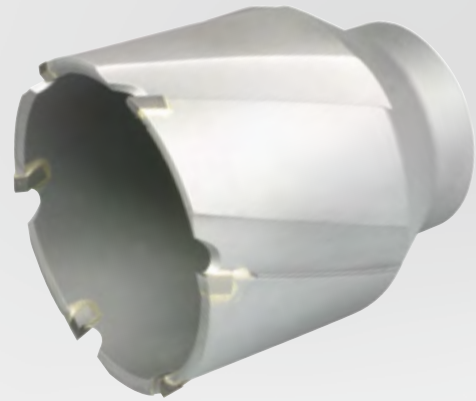
On request with shank for NITTO One-Touch



# ALFRA ROTABEST® – TCT CORE DRILLS WITH KEYWAY AND FEATHER KEY WITH KEYWAY AND FEATHER KEY

- Heavy industrial version **with keyway and feather key**
- Long-term tests series have shown that this specialised design with keyway and feather key has proven outstanding compared to a standard 32 mm Weldon shank. Optimal containment of high torsion forces.
- Polished section: Pre- Middle - Post cutter
- Required: Tool holder with internal cooling
 

|      |     |                 |
|------|-----|-----------------|
| AL 3 | MT3 | Prod.-No. 20230 |
| AL 4 | MT4 | Prod.-No. 20240 |
| AL 5 | MT5 | Prod.-No. 20250 |
- Upon request, cutting depth of 100 mm with ejector pin 8 x 160 mm Prod.-No. 2001502



| 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 |

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



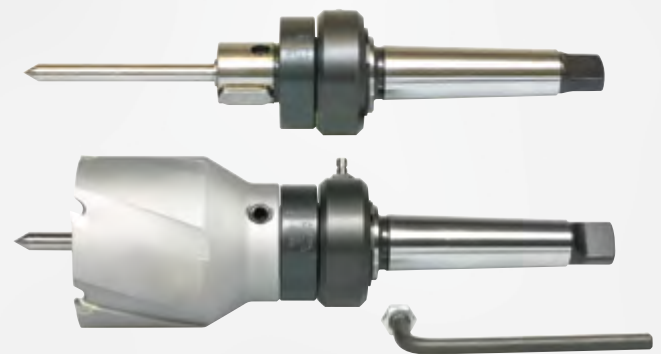
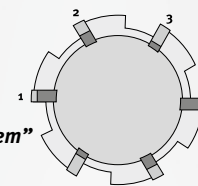
Shorter and more robust tool construction. ALFRA design. High concentricity.

### Advantages ALFRA carbide-tipped core drills “Heavy industrial version”

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

### ALFRA “Chip-Breaker System”

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



Prod.-No. 20230

Not suitable for automatic feed!

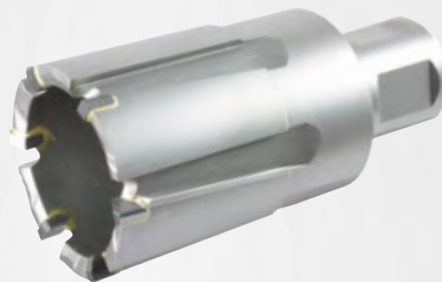
# ALFRA ROTABEST® – TCT RAIL CORE DRILLS FOR RAILWAY TRACKS

- With Weldon shank 19.0 mm
- Internal bore 6.35 mm
- For highest requirements in cutting and durability when drilling railway tracks
- Polished surface: Pre – Middle – Post cutter

## Suitable for:

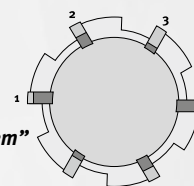
all portable magnetic drilling machines with 19 mm Weldon shank, especially for rail drilling units from the following manufacturers:

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



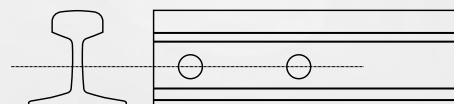
| Ø in mm                  | cutting depth 25 mm | Prod.-No.  |
|--------------------------|---------------------|------------|
| 19.0                     |                     | 2005019025 |
| 20.0                     |                     | 2005020025 |
| 21.0                     |                     | 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 ROTABEST® – TCT CORE DRILLS

## SUITABLE FOR FEIN + HITACHI

- 2008... with threaded arbor internal thread M18 x 6 p 1.5
- Also suitable for Hitachi machines
- 2009... with Quick-IN arbor
- Suitable on FEIN magnetic drilling machines with Quick-IN arbor

| Ø in mm                   | Prod.-No.                           | Prod.-No.                       |
|---------------------------|-------------------------------------|---------------------------------|
|                           | M18 x 6P 1.5<br>Cutting depth 50 mm | Quick IN<br>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...



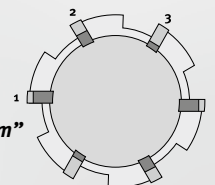
Threaded arbor M18 x 6P1.5



Prod.-No. 2009...



Prod.-No. 1936500



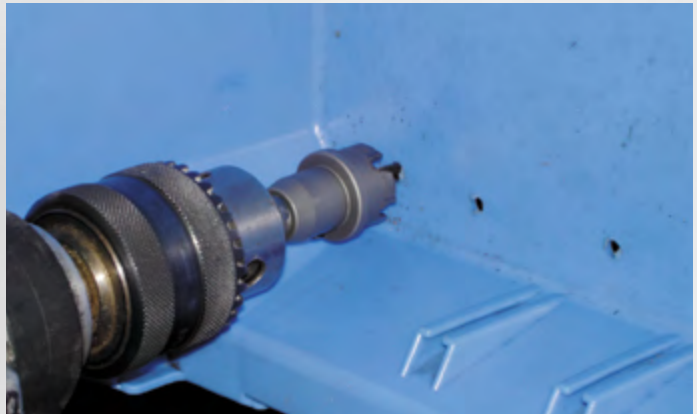
**ALFRA "Chip-Breaker System"**  
 1 Pre-cutter  
 2 Middle-cutter  
 3 Post-cutter



# TCT-HOLE SAWS IN USE



*TCT-Hole Saws – short-/long type*



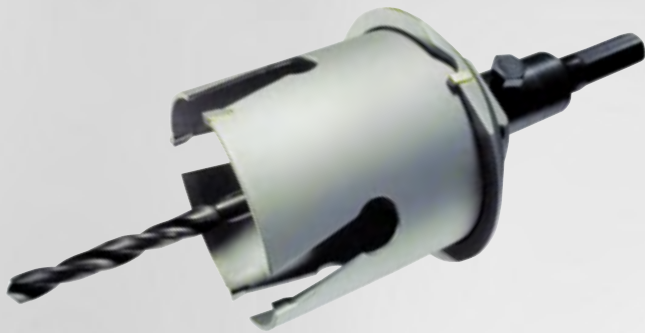
*Plastic*



*TCT-Hole Saws – FRP type*



*Poroton brick stone*



*Stainless steel*





**TCT-Hole Saws – MBS type**



**Sanitary pipes – type SML**



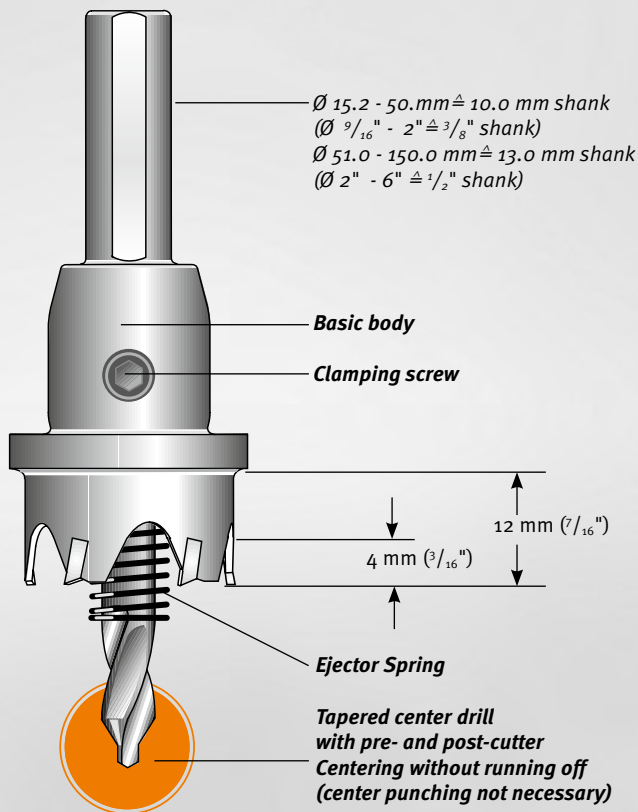
**Checker plate (stainless steel)**



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



# ALFRA TCT-HOLE SAWS – SHORT TYPE



**EDELSTAHL**  
**STAINLESS STEEL**



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 ( $\frac{1}{16}''$ ), unalloyed steels up to 4 mm ( $\frac{3}{16}''$ ), 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 ( $5-29\frac{32}{}''$ )  $\varnothing$ .
- 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  $\varnothing 31 \text{ mm}$  ( $1-7\frac{32}{}''$ ).
- For use on hand drilling machines (recommended up to max.  $\varnothing 40 \text{ mm}$ ;  $1-9\frac{16}{}''$ ) or stationary machines.

## Tips:

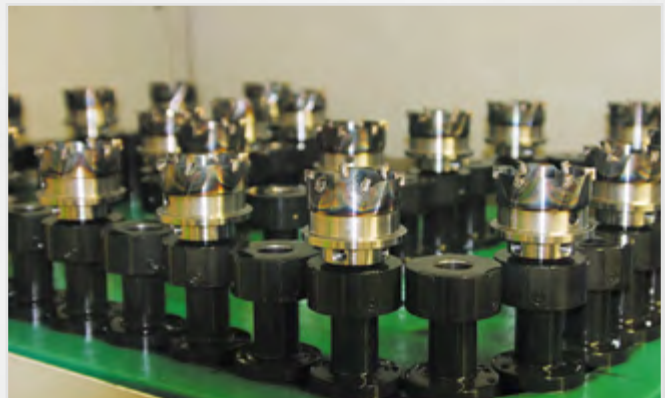
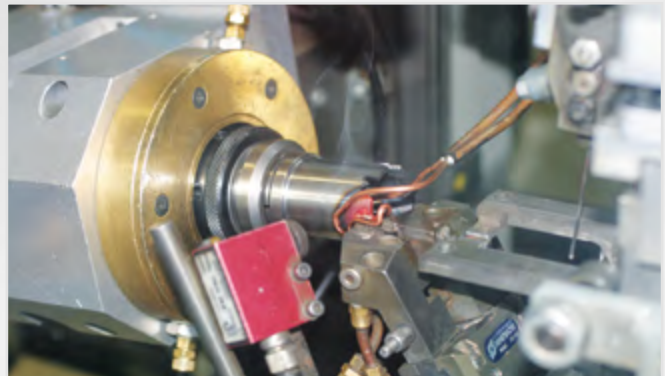
- At thicker materials: cut 2-3 mm ( $\frac{1}{16}'' - 7\frac{64}{}''$ ) per cutting process, remove chips afterwards.
- When cutting metals, a high- grade cutting oil should be used. Exception: Do not use cutting oil when using cast iron, use paraffin instead of oil when cutting aluminium.
- **Keep in mind: Always wear safety goggles.**

## Another special technical feature:

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

From  $\varnothing 31.0 \text{ mm}$  ( $1-3\frac{16}{}''$ ) 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 TCT-HOLE SAWS – SHORT TYPE

| Ø<br>mm | Ø<br>Inches | No. of<br>teeth | Prod.-No. | Ø<br>mm | Ø<br>Inches | No. of<br>teeth | Prod.-No. |
|---------|-------------|-----------------|-----------|---------|-------------|-----------------|-----------|
| Ø 15.2  |             | 4               | 0600152   | Ø 77.0  |             | 13              | 0600770   |
| Ø 16.0  | 5/8"        | 4               | 0600160   | Ø 78.0  | 3-1/16"     | 14              | 0600780   |
| Ø 17.0  |             | 4               | 0600170   | Ø 79.0  | 3-1/8"      | 14              | 0600790   |
| Ø 18.0  | 11/16"      | 4               | 0600180   | Ø 80.0  |             | 14              | 0600800   |
| Ø 18.6  |             | 4               | 0600186   | Ø 81.0  | 3-3/16"     | 14              | 0600810   |
| Ø 19.0  | 3/4"        | 4               | 0600190   | Ø 82.0  |             | 14              | 0600820   |
| Ø 20.0  |             | 5               | 0600200   | Ø 83.0  | 3-1/4"      | 14              | 0600830   |
| Ø 20.4  |             | 5               | 0600204   | Ø 84.0  | 3-5/16"     | 15              | 0600840   |
| Ø 21.0  | 13/16"      | 5               | 0600210   | Ø 85.0  |             | 15              | 0600850   |
| Ø 22.0  |             | 5               | 0600220   | Ø 86.0  | 3-3/8"      | 15              | 0600860   |
| Ø 22.5  |             | 5               | 0600225   | Ø 87.0  | 3-7/16"     | 15              | 0600870   |
| Ø 23.0  | 7/8"        | 5               | 0600230   | Ø 88.0  |             | 15              | 0600880   |
| Ø 24.0  | 15/16"      | 5               | 0600240   | Ø 89.0  | 3-1/2"      | 16              | 0600890   |
| Ø 25.0  |             | 5               | 0600250   | Ø 90.0  | 3-9/16"     | 16              | 0600900   |
| Ø 26.0  | 1"          | 5               | 0600260   | Ø 91.0  |             | 16              | 0600910   |
| Ø 27.0  | 1-1/16"     | 5               | 0600270   | Ø 92.0  | 3-5/8"      | 16              | 0600920   |
| Ø 28.0  |             | 5               | 0600280   | Ø 93.0  |             | 16              | 0600930   |
| Ø 28.3  |             | 5               | 0600283   | Ø 94.0  | 3-11/16"    | 16              | 0600940   |
| Ø 29.0  | 1-1/8"      | 5               | 0600290   | Ø 95.0  | 3-3/4"      | 17              | 0600950   |
| Ø 30.0  | 1-3/16"     | 5               | 0600300   | Ø 96.0  |             | 17              | 0600960   |
| Ø 31.0  |             | 6               | 0600310   | Ø 97.0  | 3-13/16"    | 17              | 0600970   |
| Ø 32.0  | 1-1/4"      | 6               | 0600320   | Ø 98.0  | 3-7/8"      | 17              | 0600980   |
| Ø 33.0  |             | 6               | 0600330   | Ø 99.0  |             | 17              | 0600990   |
| Ø 34.0  | 1-5/16"     | 6               | 0600340   | Ø 100.0 | 3-15/16"    | 17              | 0601000   |
| Ø 35.0  | 1-3/8"      | 6               | 0600350   | Ø 105.0 | 4"          | 18              | 0601050   |
| Ø 36.0  |             | 6               | 0600360   | Ø 110.0 |             | 18              | 0601100   |
| Ø 37.0  | 1-7/16"     | 7               | 0600370   | Ø 115.0 | 4-1/2"      | 20              | 0601150   |
| Ø 38.0  |             | 7               | 0600380   | Ø 120.0 |             | 20              | 0601200   |
| Ø 39.0  | 1-1/2"      | 7               | 0600390   | Ø 125.0 |             | 20              | 0601250   |
| Ø 40.0  | 1-9/16"     | 7               | 0600400   | Ø 130.0 | 5"          | 20              | 0601300   |
| Ø 41.0  |             | 8               | 0600410   | Ø 135.0 |             | 24              | 0601350   |
| Ø 42.0  | 1-5/8"      | 8               | 0600420   | Ø 140.0 | 5-1/2"      | 24              | 0601400   |
| Ø 43.0  | 1-11/16"    | 8               | 0600430   | Ø 145.0 |             | 24              | 0601450   |
| Ø 44.0  |             | 8               | 0600440   | Ø 150.0 |             | 24              | 0601500   |
| 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   |         |             |                 |           |



Prod.-No. 0600001

## Set Metric

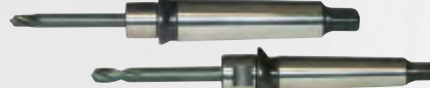
| Set Metric | Prod.-No. |
|------------|-----------|
| Set Metric | 0600001   |

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

## 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<br>(for use with Ø 31.0 - 100.0 mm) | 060sds6 |
|---|---------|

## Spare Ejector

|                     |        |         |
|---------------------|--------|---------|
| from Ø 15.2 - 150.0 | Ø 6 mm | 0602006 |
|---------------------|--------|---------|

## Coolant ALFRA

|  |       |
|--|-------|
| <b>ALFRA 2000</b><br>For mild steel DIN S233, 250 ml | 21010 |
|--|-------|

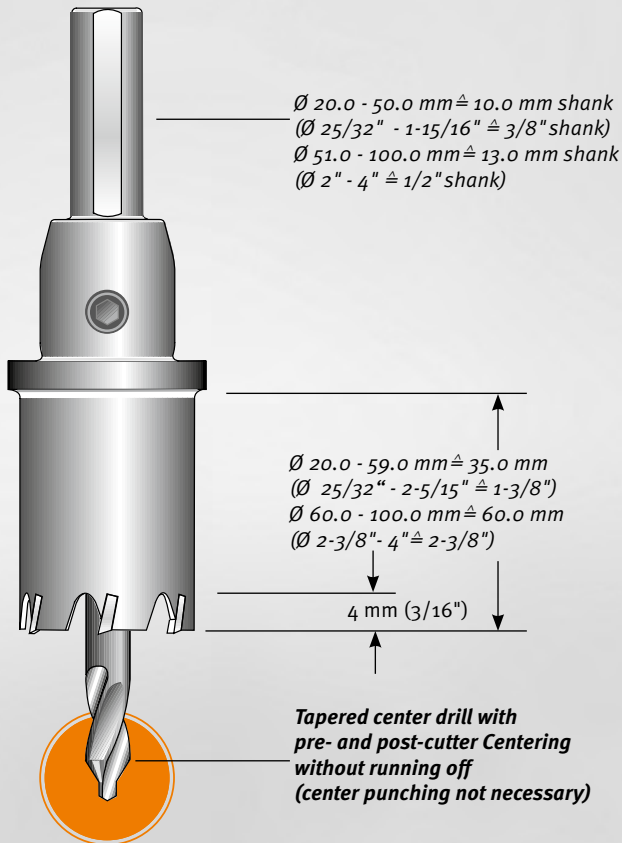
|   |       |
|---|-------|
| <b>ALFRA 4000</b><br>For titanium and manganese-carbon steels<br>300 ml | 21040 |
|---|-------|



Prod. No. 21010

Prod. No. 21040

# ALFRA TCT-HOLE SAWS – LONG TYPE



## 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 (3/16"), 2 mm (1/16") stainless steel.
- For use on hand drilling machines, recommended up to max.  $\varnothing 40 \text{ mm}$  (1-9/16") or stationary machines.

## Tips:

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



# ALFRA TCT-HOLE SAWS – LONG TYPE

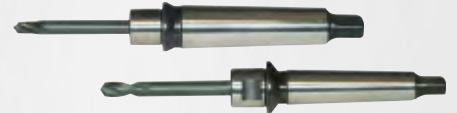
| Ø<br>mm | Ø<br>Inches | No. of<br>teeth | Prod.-No. | Ø<br>mm | Ø<br>Inches | No. of<br>teeth | Prod.-No. | Ø<br>mm | Ø<br>Inches | No. of<br>teeth | Prod.-No. |
|---------|-------------|-----------------|-----------|---------|-------------|-----------------|-----------|---------|-------------|-----------------|-----------|
| Ø 16.0  | 5/8"        | 4               | 0700160   | Ø 54.0  | 2-1/8"      | 12              | 0700540   | Ø 92.0  | 3-5/8"      | 20              | 0700920   |
| Ø 17.0  |             | 4               | 0700170   | Ø 55.0  |             | 12              | 0700550   | Ø 93.0  |             | 20              | 0700930   |
| Ø 18.0  | 11/16"      | 4               | 0700180   | Ø 56.0  | 2-3/16"     | 12              | 0700560   | Ø 94.0  | 3-11/16"    | 22              | 0700940   |
| Ø 19.0  | 3/4"        | 4               | 0700190   | Ø 57.0  | 2-1/4"      | 12              | 0700570   | Ø 95.0  | 3-3/4"      | 22              | 0700950   |
| Ø 20.0  |             | 5               | 0700200   | Ø 58.0  |             | 12              | 0700580   | Ø 96.0  |             | 22              | 0700960   |
| Ø 21.0  | 13/16"      | 5               | 0700210   | Ø 59.0  | 2-5/16"     | 12              | 0700590   | Ø 97.0  | 3-13/16"    | 22              | 0700970   |
| Ø 22.0  |             | 5               | 0700220   | Ø 60.0  | 2-3/8"      | 14              | 0700600   | Ø 98.0  | 3-7/8"      | 22              | 0700980   |
| Ø 23.0  | 7/8"        | 5               | 0700230   | Ø 61.0  |             | 14              | 0700610   | Ø 99.0  |             | 22              | 0700990   |
| Ø 24.0  | 15/16"      | 6               | 0700240   | Ø 62.0  | 2-7/16"     | 14              | 0700620   | Ø 100.0 | 3-15/16"    | 22              | 0701000   |
| Ø 25.0  |             | 6               | 0700250   | Ø 63.0  |             | 14              | 0700630   |         |             |                 |           |
| Ø 26.0  | 1"          | 6               | 0700260   | Ø 64.0  | 2-1/2"      | 14              | 0700640   |         |             |                 |           |
| Ø 27.0  | 1-1/16"     | 6               | 0700270   | Ø 65.0  |             | 14              | 0700650   |         |             |                 |           |
| Ø 28.0  |             | 6               | 0700280   | Ø 66.0  | 2-9/16"     | 14              | 0700660   |         |             |                 |           |
| Ø 29.0  | 1-1/8"      | 6               | 0700290   | Ø 67.0  | 2-5/8"      | 16              | 0700670   |         |             |                 |           |
| Ø 30.0  | 1-3/16"     | 6               | 0700300   | Ø 68.0  |             | 16              | 0700680   |         |             |                 |           |
| Ø 31.0  |             | 8               | 0700310   | Ø 69.0  | 2-11/16"    | 16              | 0700690   |         |             |                 |           |
| Ø 32.0  | 1-1/4"      | 8               | 0700320   | Ø 70.0  | 2-3/4"      | 16              | 0700700   |         |             |                 |           |
| Ø 33.0  |             | 8               | 0700330   | Ø 71.0  |             | 16              | 0700710   |         |             |                 |           |
| Ø 34.0  | 1-5/16"     | 8               | 0700340   | Ø 72.0  | 2-13/16"    | 16              | 0700720   |         |             |                 |           |
| Ø 35.0  | 1-3/8"      | 8               | 0700350   | Ø 73.0  | 2-7/8"      | 16              | 0700730   |         |             |                 |           |
| Ø 36.0  |             | 8               | 0700360   | Ø 74.0  | 2-15/16"    | 16              | 0700740   |         |             |                 |           |
| Ø 37.0  | 1-7/16"     | 8               | 0700370   | Ø 75.0  |             | 16              | 0700750   |         |             |                 |           |
| Ø 38.0  |             | 8               | 0700380   | Ø 76.0  | 3"          | 18              | 0700760   |         |             |                 |           |
| Ø 39.0  | 1-1/2"      | 8               | 0700390   | Ø 77.0  |             | 18              | 0700770   |         |             |                 |           |
| Ø 40.0  | 1-9/16"     | 10              | 0700400   | Ø 78.0  | 3-1/16"     | 18              | 0700780   |         |             |                 |           |
| Ø 41.0  |             | 10              | 0700410   | Ø 79.0  | 3-1/8"      | 18              | 0700790   |         |             |                 |           |
| Ø 42.0  | 1-5/8"      | 10              | 0700420   | Ø 80.0  |             | 18              | 0700800   |         |             |                 |           |
| Ø 43.0  | 1-11/16"    | 10              | 0700430   | Ø 81.0  | 3-3/16"     | 18              | 0700810   |         |             |                 |           |
| Ø 44.0  |             | 10              | 0700440   | Ø 82.0  |             | 18              | 0700820   |         |             |                 |           |
| Ø 45.0  | 1-3/4"      | 10              | 0700450   | Ø 83.0  | 3-1/4"      | 18              | 0700830   |         |             |                 |           |
| Ø 46.0  |             | 10              | 0700460   | Ø 84.0  | 3-5/16"     | 20              | 0700840   |         |             |                 |           |
| Ø 47.0  | 1-13/16"    | 10              | 0700470   | Ø 85.0  |             | 20              | 0700850   |         |             |                 |           |
| Ø 48.0  | 1-7/8"      | 10              | 0700480   | Ø 86.0  | 3-3/8"      | 20              | 0700860   |         |             |                 |           |
| Ø 49.0  |             | 10              | 0700490   | Ø 87.0  | 3-7/16"     | 20              | 0700870   |         |             |                 |           |
| Ø 50.0  | 1-15/16"    | 12              | 0700500   | Ø 88.0  |             | 20              | 0700880   |         |             |                 |           |
| Ø 51.0  | 2"          | 12              | 0700510   | Ø 89.0  | 3-1/2"      | 20              | 0700890   |         |             |                 |           |
| Ø 52.0  |             | 12              | 0700520   | Ø 90.0  | 3-9/16"     | 20              | 0700900   |         |             |                 |           |
| Ø 53.0  | 2-1/16"     | 12              | 0700530   | Ø 91.0  |             | 20              | 0700910   |         |             |                 |           |

## HSS-Spare Drill with tapered center tip



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

## MT Arbors



|                    |         |
|--------------------|---------|
| MT-2 (from Ø 31.0) | 0734002 |
| MT-3 (from Ø 31.0) | 0734003 |

## SDS Arbor



|  |         |
|--|---------|
| SDS arbor shank<br>(for use with Ø 31 - 59 mm) | 060sds6 |
|--|---------|

# 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 2000 is free of hydrocarbon, sulphur and chlorine.



## 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.

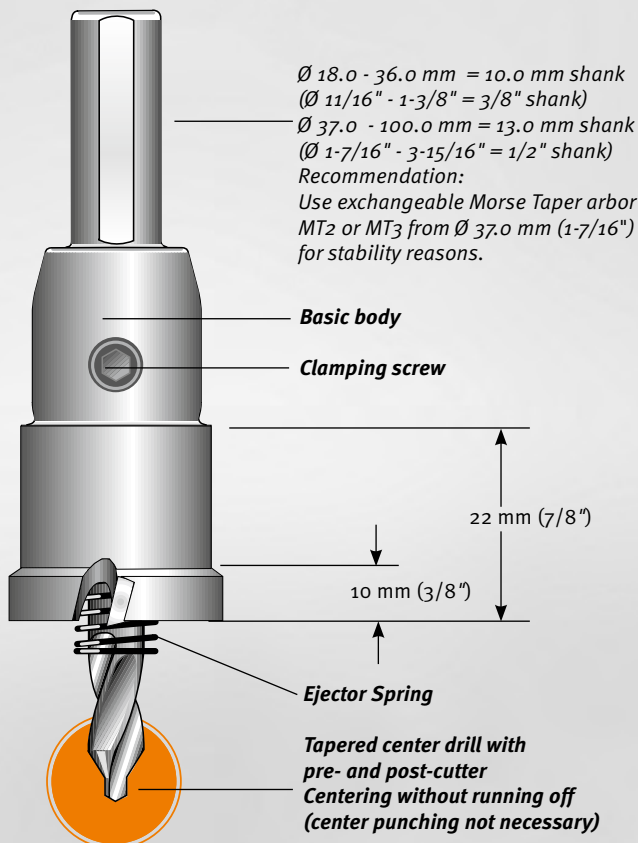
|                          |       |
|--------------------------|-------|
| Aerosol can 250 ml       | 21010 |
| 5 ltr. Plastic container | 21012 |
| 60 ltr. Barrel           | 21021 |

### Prod.-No.

|                    |       |
|--------------------|-------|
| Aerosol can 300 ml | 21040 |
|--------------------|-------|



# ALFRA TCT-HOLE SAWS – MBS-LIGHT



**EDELSTAHL**  
**STAINLESS STEEL**



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'').

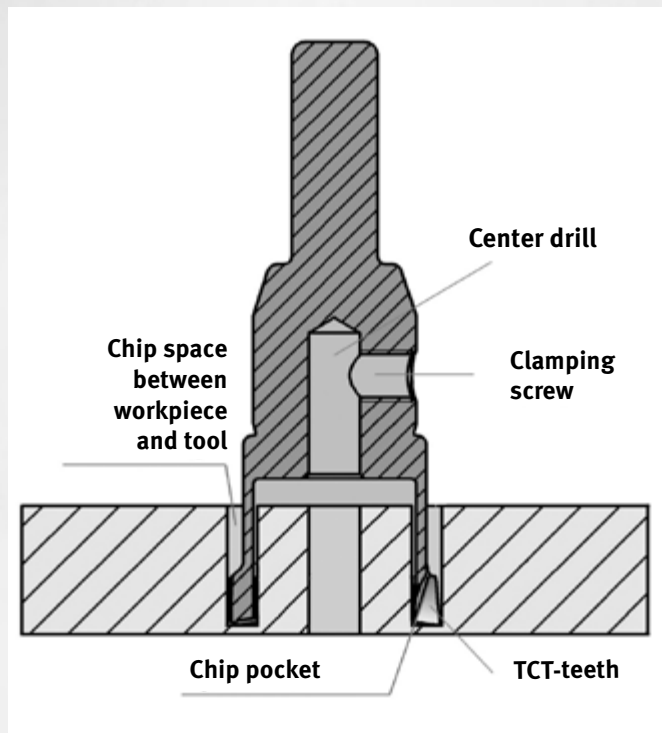
**Advantage:** All MBS-Light type TCT Hole Saws are equipped with an ejector spring. The cut material is self-ejecting.

**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.

## MBS – for almost limitless use



# ALFRA TCT-HOLE SAWS – MBS-LIGHT

| Ø<br>mm | Ø<br>Inches | No. of<br>teeth | Prod.-No. | Ø<br>mm | Ø<br>Inches | No. of<br>teeth | Prod.-No. |
|---------|-------------|-----------------|-----------|---------|-------------|-----------------|-----------|
| Ø 18.0  | 11/16"      | 4               | 0730018   | Ø 79.0  | 3-1/8"      | 12              | 0730079   |
| Ø 18.6  |             | 4               | 07300186  | Ø 80.0  |             | 12              | 0730080   |
| Ø 19.0  | 3/4"        | 4               | 0730019   | Ø 81.0  | 3-3/16"     | 12              | 0730081   |
| Ø 20.0  |             | 4               | 0730020   | Ø 82.0  |             | 12              | 0730082   |
| Ø 20.4  |             | 4               | 07300204  | Ø 83.0  | 3-1/4"      | 12              | 0730083   |
| Ø 21.0  | 13/16"      | 4               | 0730021   | Ø 84.0  | 3-5/16"     | 12              | 0730084   |
| Ø 22.0  |             | 4               | 0730022   | Ø 85.0  |             | 12              | 0730085   |
| Ø 22.5  |             | 4               | 07300225  | Ø 86.0  | 3-3/8"      | 14              | 0730086   |
| Ø 23.0  | 7/8"        | 4               | 0730023   | Ø 87.0  | 3-7/16"     | 14              | 0730087   |
| Ø 24.0  | 15/16"      | 4               | 0730024   | Ø 88.0  |             | 14              | 0730088   |
| Ø 25.0  |             | 4               | 0730025   | Ø 89.0  | 3-1/2"      | 14              | 0730089   |
| Ø 26.0  | 1"          | 6               | 0730026   | Ø 90.0  | 3-9/16"     | 14              | 0730090   |
| Ø 27.0  | 1-1/16"     | 6               | 0730027   | Ø 91.0  |             | 14              | 0730091   |
| Ø 28.0  |             | 6               | 0730028   | Ø 92.0  | 3-5/8"      | 14              | 0730092   |
| Ø 29.0  | 1-1/8"      | 6               | 0730029   | Ø 93.0  |             | 14              | 0730093   |
| Ø 30.0  | 1-3/16"     | 6               | 0730030   | Ø 94.0  | 3-11/16"    | 14              | 0730094   |
| Ø 31.0  |             | 6               | 0730031   | Ø 95.0  | 3-3/4"      | 14              | 0730095   |
| Ø 32.0  | 1-1/4"      | 6               | 0730032   | Ø 96.0  |             | 14              | 0730096   |
| Ø 33.0  |             | 6               | 0730033   | Ø 97.0  | 3-13/16"    | 14              | 0730097   |
| Ø 34.0  | 1-5/16"     | 6               | 0730034   | Ø 98.0  | 3-7/8"      | 14              | 0730098   |
| Ø 35.0  | 1-3/8"      | 6               | 0730035   | Ø 99.0  |             | 14              | 0730099   |
| Ø 36.0  |             | 6               | 0730036   | Ø 100.0 | 3-15/16"    | 14              | 0730100   |

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 |

## 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 (from Ø 37.0 mm) 0734002  
 MT-3 (from Ø 37.0 mm) 0734003

## Weldon adaptor



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

## Spare Ejector



For tapered center drill  
 from Ø 18.0 - 60.0 mm Ø 6 mm 0732006  
 from Ø 61.0 - 100.0 mm Ø 8 mm 0732008



Drilling in checker sheet



Drilling in square profiles

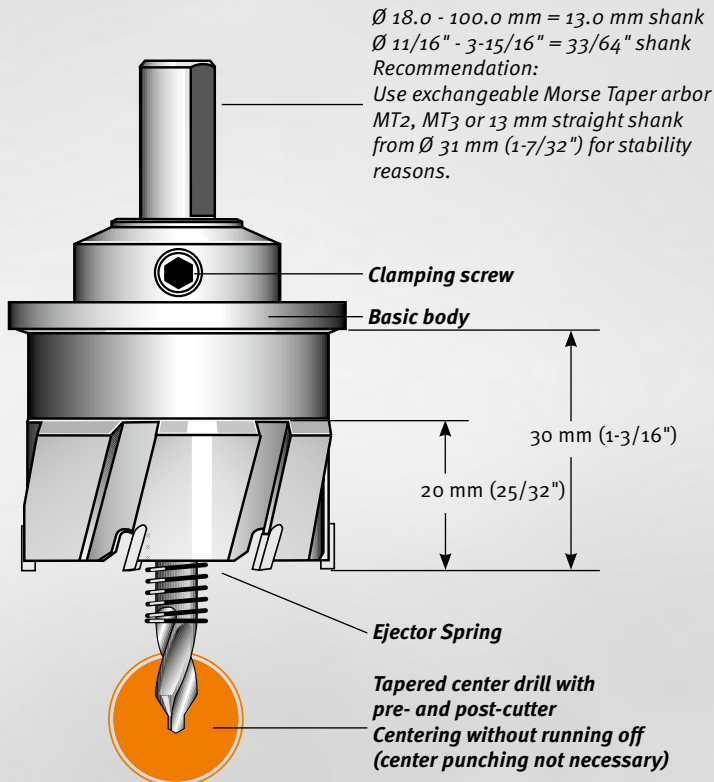


Drilling in flat steel

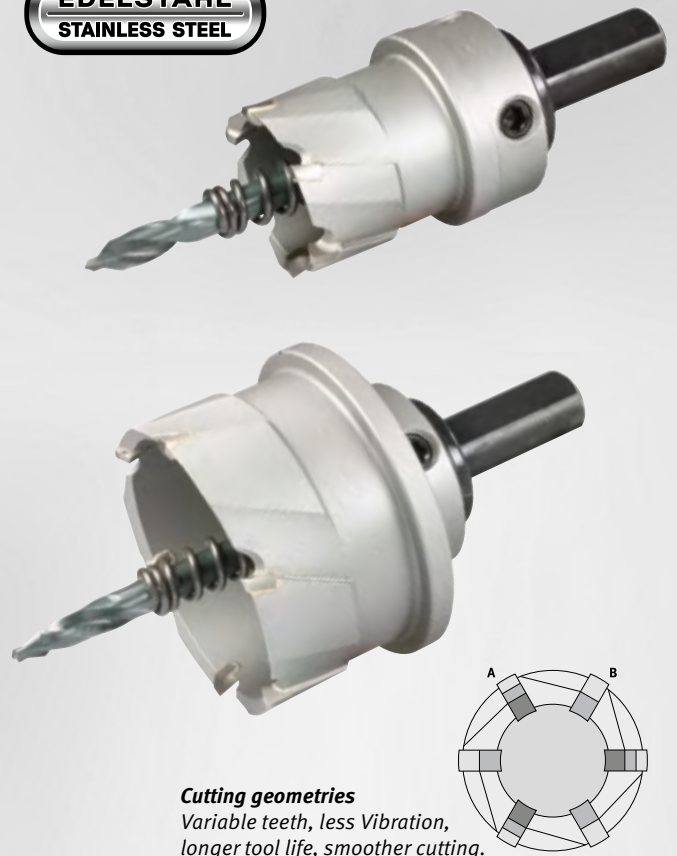


Drilling in pipes

# ALFRA TCT-HOLE SAWS – MBS-PRO



**EDELSTAHL**  
**STAINLESS STEEL**



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.

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. 060WD on Machines with Weldon Shank.



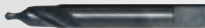


# ALFRA TCT-HOLE SAWS – MBS-PRO

| Ø<br>mm  | Ø<br>Inches | No. of<br>teeth | Prod.-No. |
|--|-------------|-----------------|-----------|
| 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   |
| <b>As from Ø 31.0 mm (1-7/32") we recommend the use of MT arbors</b> |             |                 |           |
| 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<br>mm   | Ø<br>Inches | No. of<br>teeth | Prod.-No. |
|---|-------------|-----------------|-----------|
| <b>For drilling stainless steel from Ø 76.0 mm we recommend using Rotabest AL cutters (Prod.-No. 200207...)</b> |             |                 |           |
| 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   |

## 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



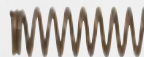
MT-2 (Ø 31.0 - 100.0 mm) 0734002  
 MT-3 (Ø 31.0 - 100.0 mm) 0734003

## Weldon adapter



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

## Spare Ejector For tapered center drill



from Ø 15.2 - 60.0 Ø 6 mm 0762006  
 suitable for spare drill Ø 6 mm



Drilling structured sheet metals



Drilling tubes

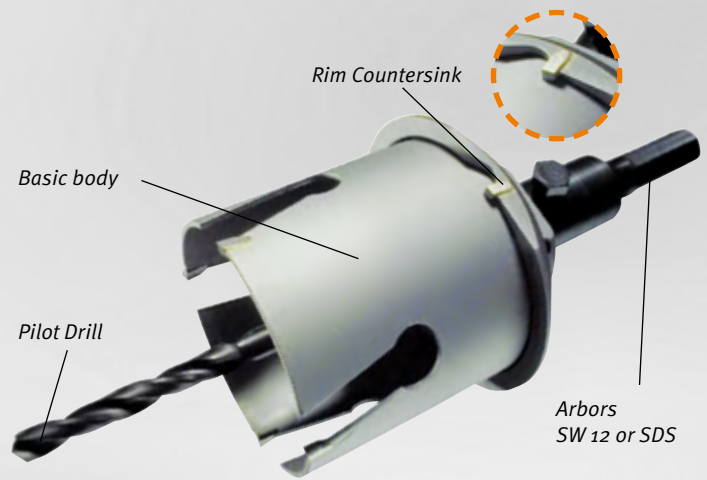
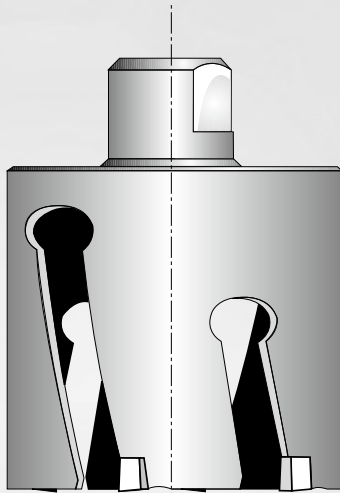


Drilling flat steels



Free-hand drilling up to Ø 30 mm

# ALFRA TCT-HOLE SAWS – FRP TYPE



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,...



Rim countersink for Ø 68 mm

0741068000



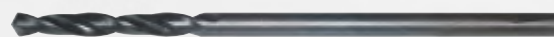
Tool Holder wrench size 12

0742000001



Arbor SDS

0742000002



Spare center drill HSS 7.2 mm

0742000003

## FRP Hole Saw Set Electrician

Content:

- 1 each of Ø 35 / 68 / 74 mm
- 1 Tool Holder wrench size 12
- 1 HSS drill

0743000001

## FRP Hole Saw Set Lighting

Content:

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

0743000002

### Ø TCT-Hole Saws FRP

### Prod.-No.

mm inch single drill bit, cutting depth 60 mm

|  |            |
|--|------------|
| Sanitary and heating pipes                                       | 0740025060 |
| 30.0 Sanitary and heating pipes                                  | 0740030060 |
| 35.0 Sanitary and heating pipes                                  | 0740035060 |
| Cavity wall branch box, halogen reflector lamp                   |            |
| 40.0 Sanitary drain pipes  | 0740040060 |
| 45.0 Water and heating pipes                                     | 0740045060 |
| 50.0 with insulation   | 0740050060 |
| 55.0 Recessed lights Ø 55 mm                                     | 0740055060 |
| 58.0 Recessed lights Ø 58 mm                                     | 0740058060 |
| 60.0 Recessed lights Ø 60 mm                                     | 0740060060 |
| 63.0 Switch box Ø 60 mm  | 0740063060 |
| 65.0 Cavity wall box Ø 65 mm                                     | 0740065060 |
| 68.0 Cavity wall box Ø 68 mm                                     | 0740068060 |
| 70.0 Cavity wall branch boxes Ø 70 mm                            | 0740070060 |
| 74.0 Cavity wall branch boxes Ø 74 mm                            | 0740074060 |
| 80.0 Junction boxes, cable gland covers, Recessed lights Ø 80 mm | 0740080060 |
| 85.0 Recessed lights Ø 85 mm                                     | 0740085060 |
| 90.0 Recessed lights Ø 90 mm                                     | 0740090060 |
| 105.0 Discharge air pipes  | 0740105060 |



# ALFRA HSS-BI-METAL HOLE SAWS

## Features:

- 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/mm<sup>2</sup>), 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.



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:

- 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/mm<sup>2</sup>), 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     | 15/19"   | 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   |

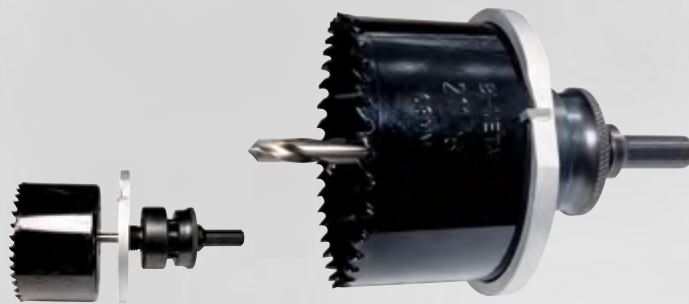


# ALFRA – HSS BI-METAL HOLE SAWS

| 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 hexago   | 0501001   |
| 14 - 30  | 9/16" - 1-3/16"  | A 6-SDS | SDS          | 0501002   |
| 32 - 152 | 1-1/4" - 6"      | A 2-SS  | 9.5 hexago   | 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 hexago | 0501006   |
| 32 - 210 | 1-1/4" - 8-5/16" | A 5-SS  | 16.0 hexago  | 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!**

9.5 mm  
3/8"



Prod.-No. 0501001 A6-SS



Prod.-No. 0501002 A6-SDS

9.5 mm  
3/8"

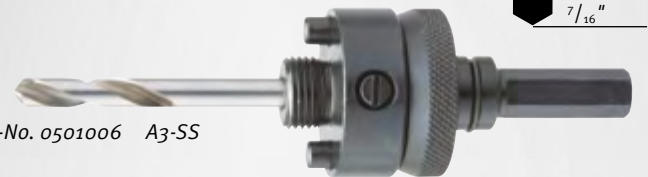


Prod.-No. 0501003 A2-SS



Prod.-No. 0501005 A2-SDS

11.11 mm  
7/16"



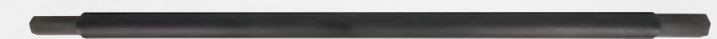
Prod.-No. 0501006 A3-SS



Prod.-No. 0501013

9.5 mm  
3/8"      11.11 mm  
7/16"

Diverse applications



Prod.-No. 0501010



Prod.-No. 0502001



Prod.-No. 0502004

# ALFRA – HSS BI-METAL HOLE SAW SETS

## 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.
- All sets are delivered in a robust and practical plastic case
- Incl. Arbor A6-SS, Arbor A2-SS, Spare Twist Drill

| Ø mm   | 16.0 | 19.0 | 22.0 | 24.0   | 25.0 | 29.0   | 32.0   | 35.0   | 38.0   | 44.0   | 51.0 | 52.0    | 57.0   | 64.0   | 67.0   | 68.0     | 76.0 |
|--------|------|------|------|--------|------|--------|--------|--------|--------|--------|------|---------|--------|--------|--------|----------|------|
| Ø Inch | 5/8" | 3/4" | 7/8" | 15/16" | 1"   | 1-1/8" | 1-1/4" | 1-3/8" | 1-1/2" | 1-3/4" | 2"   | 2-1/16" | 2-1/4" | 2-1/2" | 2-5/8" | 2-11/16" | 3"   |

| Prod.-No. | Hole Saw Set Standard     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|-----------|---------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0503006   | ●                         | ● | ● |   |   | ● |   | ● |   | ● |   | ● | ● |   | ● |   |   |
| Prod.-No. | Hole Saw Set Professional |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 0503007   | ●                         | ● | ● |   | ● | ● | ● | ● | ● | ● | ● |   |   | ● |   |   | ● |
| Prod.-No. | Hole Saw Set Electro      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 0503008   |                           |   | ● |   |   | ● |   | ● |   | ● | ● |   |   | ● |   | ● |   |
| Prod.-No. | Hole Saw Set Sanitary     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 0503009   | ●                         | ● |   | ● |   | ● |   |   | ● | ● |   |   | ● |   | ● |   |   |



# MULTI-STEP DRILLS – HSS DM 05

## 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:

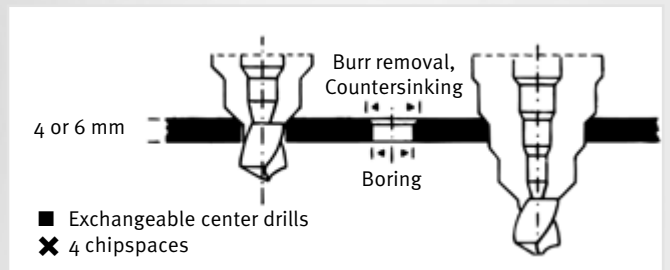
- The keyway allows the drill to make a chipping cut during drilling for better chip removal.
- The special keyway geometry, arranged around the drill, makes for a longer cutting edge compared to the usual straight groove and noticeably easier cutting.
- Spiral cut chip spaces guarantee an absolute running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



| DescriptioShank Ø             |      | Prod.-No. |
|-------------------------------|------|-----------|
| <b>Multi-Step Drill – AMS</b> | 10,0 | o8o8o     |

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)

|  |      |       |
|--|------|-------|
| <b>Multi-Step Drill – AMS – TiAlN coated</b> | 10,0 | o8o81 |
|--|------|-------|

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)

|                                |      |       |
|--------------------------------|------|-------|
| <b>Multi-Step Drill – AM 1</b> | 12,0 | o8o82 |
|--------------------------------|------|-------|

**Steps Ø 25 - 28 - 31 - 34 - 37 - 40 - 43 - 46 - 49 - 52 - 55 - 58 mm**

|                               |      |       |
|-------------------------------|------|-------|
| <b>Multi-Step Drill – PVD</b> | 10,0 | o8o03 |
|-------------------------------|------|-------|

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. o8o8o ■



Prod.-No. o8o81 ■



Prod.-No. o8o02 ■ X



Prod.-No. o8o03 ■ X

# MULTI-STEP DRILLS – HSS DM 05

| DescriptioShank Ø   | Prod.-No.     |
|---|---------------|
| <b>Multi-Step Drill – PVD-TiN-coated</b><br>Steps Ø PG 7 – PG 9 – PG 11 – PG 13 – PG 16 – PG 21 – 33 mm – PG 29 – 40 mm | 10,0<br>08004 |

|   |               |
|---|---------------|
| <b>Multi-Step Drill – SVB</b><br>Pre-drill specifically for punches & dies<br>Steps Ø 8.5 - 11.5 - 12.5 - 16.5 - 21.0 | 10,0<br>08016 |
|---|---------------|

|   |               |
|---|---------------|
| <b>Multi-Step Drill – DKS 40</b><br>3 chip spaces, spiral grooved, replaceable center drill,<br>for metric borings acc. to EN,<br>Core - and clearance holes M 10 - M 40<br>Steps Ø 10.5 - 12.5 - 14.5 - 16.5 - 18.5 - 20.5 - 25.5 - 32.5 - 38.5 - 40.5 | 10,0<br>08084 |
|---|---------------|

|  |               |
|--|---------------|
| <b>Multi-Step Drill – DKS 40-VA</b><br>4 chip spaces, replaceable center drill<br>of HSS-Co 5 steel. For stainless steel to 3 mm thick<br>Core - and clearance holes M 10 - M 40<br>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<br>08032 |
|--|---------------|

|   |       |
|---|-------|
| <b>Spare center drill TiN-beschichtet</b><br>suitable for AMS – PVD – PVK – DKI – DKS | 08006 |
|---|-------|

|   |       |
|---|-------|
| <b>Spare center drill</b><br>suitable for AMS – PVD – PVK – DKI – DKS | 08007 |
|---|-------|

|  |       |
|--|-------|
| <b>Spare center drill TiAlN coated</b><br>suitable for AMS – PVD – PVK – DKI – DKS | 08008 |
|--|-------|



Prod.-No. 08004 ■ X



Prod.-No. 08016



Prod.-No. 08084 ■

*Pre-drill specifically  
for punches & dies*



Prod.-No. 08032 ■ X



Prod.-No. 08007



Prod.-No. 08008

■ Replaceable center drill  
X With 4 chip spaces

# MULTI-STEP DRILLS – HSS DM 05

## 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.

| Descriptor | Bore range       | Shank Ø | Length | Prod.-No. |
|------------|------------------|---------|--------|-----------|
| AM-12      | 4 - 12 mm x 1 mm | 6.0     | 70 mm  | 08070     |
| AM-20      | 4 - 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

Content:

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.

## R.P.M. Guiding Values

| Type                     |             | sheet steel<br>S235 | V2A<br>sheets | non-ferrous<br>metals | plastics<br>(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<br>DKS + SVB | drill       | 800                 | 360           | 1000                  | 1000               |
|                          | countersink | 400 - 200           | 200 - 100     | 800 - 500             | 1000 - 600         |



Prod.-No. 08073



# PRECISION CONICAL ONE-LIP BITS – HSS DM 05

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 duro-plastic 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  | Bore Range mm          | 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 + Stick |         | 09009     |

Coolant stick, separately **09012**

## \*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

Content:

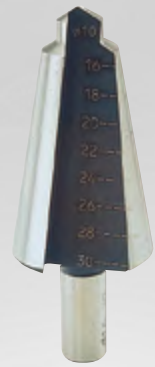
- 1 x Size 1
- 1 x Size 2
- 1 x Size 3



Prod.-No. 09001



Prod.-No. 09002



Prod.-No. 09003



Prod.-No. 09004



Prod.-No. 09005



Prod.-No. 09006



Prod.-No. 09007

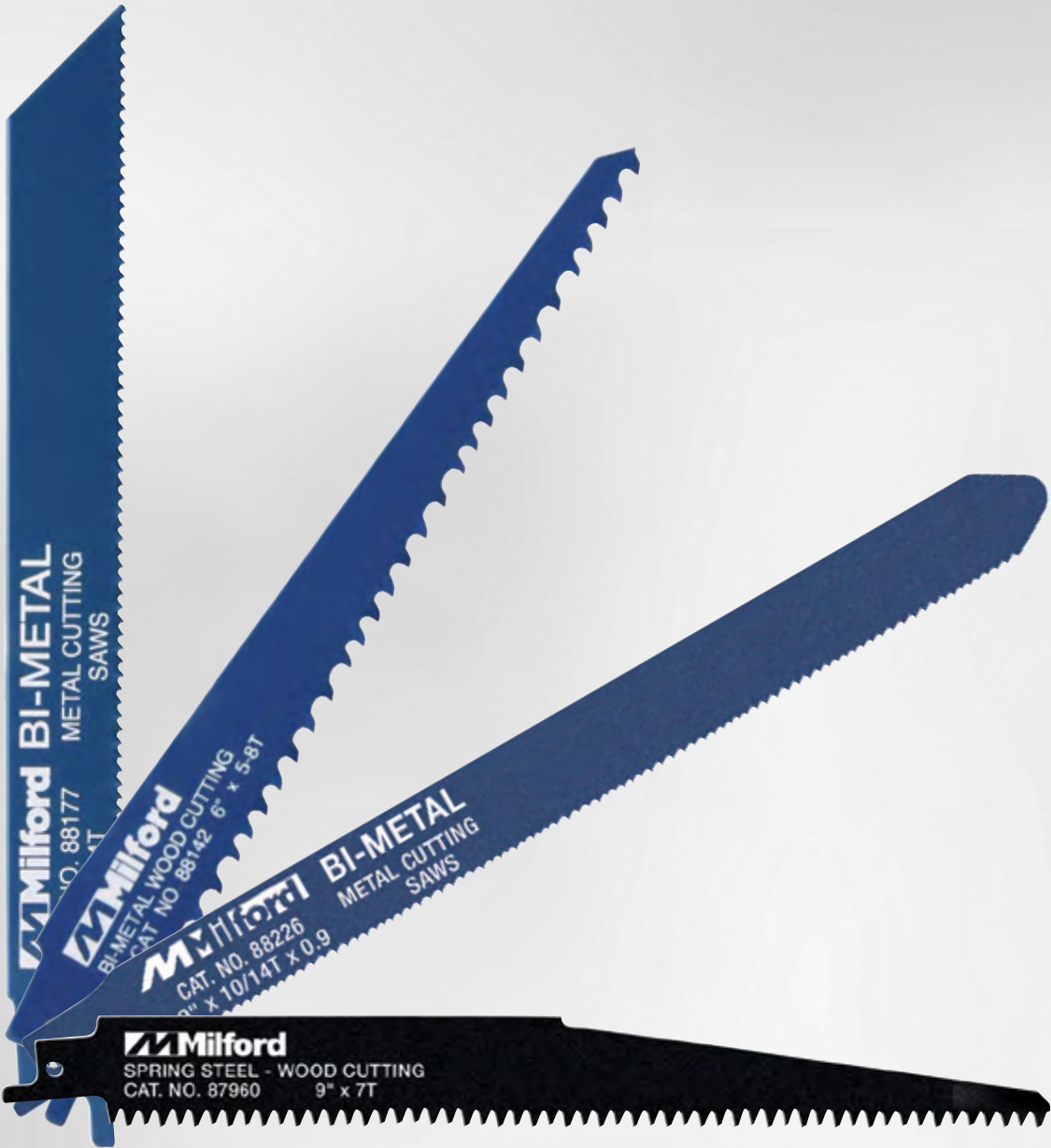


Prod.-No. 09008\*



Prod.-No. 09009













# ALFRA SABRE SAW BLADES FOR PROFESSIONAL USE





# ORIGINAL MILFORD SABRE SAW BLADES – EXKLUSIVE BY ALFRA

## for Metal flexible version



| Application Range<br>Metal processing   | Material<br>thickness mm  | Steel-<br>Quality | Length | Width | Thickness | Teeth<br>Inch | Milford<br>Prod.-No. | Alfra<br>Prod.-No. |
|---|---|-------------------|--------|-------|-----------|---------------|----------------------|--------------------|
| Metal processing; soft metals,<br>Copper-, aluminium-, brass-cables, wires and pipes                    |  > 3 mm      | HSS-Bi-Metal      | 100 mm | 16 mm | 0.9 mm    | 14            | 88161                | 30055              |
| Metal processing; soft metals,<br>Plastic, laminate and wood with nails                                 |  > 3 mm      | HSS-Bi-Metal      | 150 mm | 16 mm | 0.9 mm    | 8/12          | 88215                | 30040              |
| All kind of metals, stainless steel,<br>Steel pipes, cast iron, alloys, etc.                            |  > 6 mm      | HSS-Bi-Metal      | 150 mm | 16 mm | 0.9 mm    | 10            | 88176                | 30058              |
| All kind of metals, stainless steel,<br>Steel pipes, cast iron, alloys, etc.                            |  > 3 mm      | HSS-Bi-Metal      | 150 mm | 16 mm | 0.9 mm    | 14            | 88177                | 30059              |
| All kind of metals, stainless steel,<br>Steel pipes, cast iron, alloys, etc.                            |  > 1,15 mm   | HSS-Bi-Metal      | 150 mm | 16 mm | 0.9 mm    | 18            | 88178                | 30060              |
| All kind of metals, stainless steel,<br>Steel pipes, cast iron, alloys, etc.<br>With universal toothing |  3-6 mm      | HSS-Bi-Metal      | 150 mm | 16 mm | 0.9 mm    | 10/14         | 88216                | 30062              |
| Metal processing; soft metals,<br>Plastic, laminate and wood with nails                                 |  > 3 mm     | HSS-Bi-Metal      | 225 mm | 16 mm | 0.9 mm    | 8/12          | 88219                | 30041              |
| All kind of metals, stainless steel,<br>Steel pipes, cast iron, alloys, etc.                            |  > 6 mm    | HSS-Bi-Metal      | 225 mm | 16 mm | 0.9 mm    | 10            | 88174                | 30063              |
| All kind of metals, stainless steel,<br>Steel pipes, cast iron, alloys, etc.                            |  > 3 mm    | HSS-Bi-Metal      | 225 mm | 16 mm | 0.9 mm    | 14            | 88186                | 30064              |
| All kind of metals, stainless steel,<br>Steel pipes, cast iron, alloys, etc.                            |  > 1,15 mm | HSS-Bi-Metal      | 225 mm | 16 mm | 0.9 mm    | 18            | 88187                | 30065              |
| All kind of metals, stainless steel,<br>Steel pipes, cast iron, alloys, etc.<br>With universal toothing |  3-6 mm    | HSS-Bi-Metal      | 225 mm | 16 mm | 0.9 mm    | 10/14         | 88217                | 30066              |
| All kind of metals, stainless steel,<br>Steel pipes, cast iron, alloys, etc.<br>With universal toothing |  > 6 mm    | HSS-Bi-Metal      | 290 mm | 16 mm | 0.9 mm    | 10/14         | 88218                | 30072              |



|  |  |              |        |       |        |       |       |       |
|--|--|--------------|--------|-------|--------|-------|-------|-------|
| Metal processing; soft metals,<br>plastic, laminate an wood with nails –<br>particular for pallets |  > 3 mm  | HSS-Bi-Metal | 228 mm | 19 mm | 0.9 mm | 10/14 | 88226 | 30045 |
|--|--|--------------|--------|-------|--------|-------|-------|-------|



# ORIGINAL MILFORD SABRE SAW BLADES – EXKLUSIVE BY ALFRA

## For Wood



| Application Range<br>Meta processing   | Material | Steel-       | Length | Width | Thickness | Teeth | Milford | Alfra |
|--|----------|--------------|--------|-------|-----------|-------|---------|-------|
| Special sabre saw for wood with nails;<br>plasterboard<br>In particular for the refurbishing |          | HSS-Bi-Metal | 150 mm | 19 mm | 0.9 mm    | 5/8   | 88142   | 30085 |
| Special sabre saw for wood<br>Plastics or Laminates<br>-curve sections-                      |          | HSS-Bi-Metal | 150 mm |       | 0.9 mm    | 4/6   | 88143   | 30086 |
| Special sabre saw for wood, plasterboard<br>In particular for the refurbishing               |          | HSS-Bi-Metal | 210 mm | 19 mm | 0.9 mm    | 6     | 88144   | 30087 |
| Special sabre saw for wood, plasterboard<br>In particular for the refurbishing               |          | HSS-Bi-Metal | 290 mm | 19 mm | 0.9 mm    | 6     | 88145   | 30088 |

## For wood (coated)



|   |  |              |        |       |        |   |       |       |
|---|--|--------------|--------|-------|--------|---|-------|-------|
| Special sabre saw for wood<br>With a special lamination for minimum frictio |  | HSS-Bi-Metal | 228 mm | 19 mm | 1.0 mm | 7 | 87960 | 30031 |
|---|--|--------------|--------|-------|--------|---|-------|-------|

**“ I never have been able to bore holes so quickly and easily in steel beams!!  
With the APS 120 and the new pump, I finished my project ahead of time. ”**



# **ALFRA PRESS**

- **Easily portable, fully automatic, hydraulic punching equipment for steel, bridge, container, crane and metal construction**
- **Mobile usage, no material transport**
- **Virtually noiseless punching**
- **Easy positioning through stop function of the punch**





# ALFRA-PRESS HYDRAULIC PUNCHES – OVERVIEW



**APS 70**

|   |  |
|---|--|
| <b>Page</b>                             | 86   |
| <b>Prod.-No.</b>                        | 23002  |
| <b>Max. hole-Ø</b>                      | 22 mm<br>7/8"  |
| <b>Max. oblong hole</b>                 | 22 x 14 mm<br>7/8" x 9/16"   |
| <b>Max. material thickness (S235)</b>   | 13 mm<br>1/2"  |
| <b>Overall punch time with pump ...</b> | AHP-M: approx. 5 sec.<br>AHP-L: approx. 3 sec.   |
| <b>Jaw depth</b>                        | 70 mm<br>2-3/4"  |
| <b>Max. pressure</b>                    | 700 bar<br>10,150 psi  |
| <b>Punching force</b>                   | 30 t   |
| <b>Punch stroke</b>                     | 18 mm<br>11/16"  |
| <b>Weight</b>                           | 29.9 kg / 65.9 lbs   |
| <b>Scope of delivery</b>                | Hose assembly 5 m/spanner<br>Punch/die Ø 18 mm<br>Depth adjustment, suspension bracket |

## HYDRAULIC PUMP FOR APS 70 / 120



**AHP-M**

|                                     |                       |
|-------------------------------------|-----------------------|
| <b>Page</b>                         | 90                    |
| <b>Prod.-No.</b>                    | 23189                 |
| <b>Max. pressure</b>                | 700 bar               |
| <b>Maximum pumping capacity:</b>    | 1.1 l/min             |
| <b>Motor performance</b>            | 1300 W, 230 v (50 Hz) |
| <b>Fill volume</b>                  | 3.2 l                 |
| <b>Weight incl. oil fill volume</b> | 29 kg                 |



## APS 120

87

23004

25 mm  
1-1/16"

25 x 18 mm  
1" x 11/16"

16 mm  
5/8"

AHP-M: approx. 10 sec.  
AHP-L: approx. 7 sec.

110 mm  
4-3/8"

700 bar  
10,150 psi

44 t

25 mm  
15/16"

47.3 kg / 104.2 lbs

Hose assembly 5 m/spanner  
Punch/die Ø 22 mm  
Depth adjustment, suspension bracket

## HYDRAULIC PUMP FOR APS 70 / 120



## AHP-L

91

23190

700 bar

1.7 l/min

2,200 W, 230 v (50 Hz)

3.0 l

34 kg



# ALFRA-PRESS – HYDRAULIC PUNCHING

## ALFRA-Press - Hydraulic puncher APS 70

**Prod.-No.**

23002

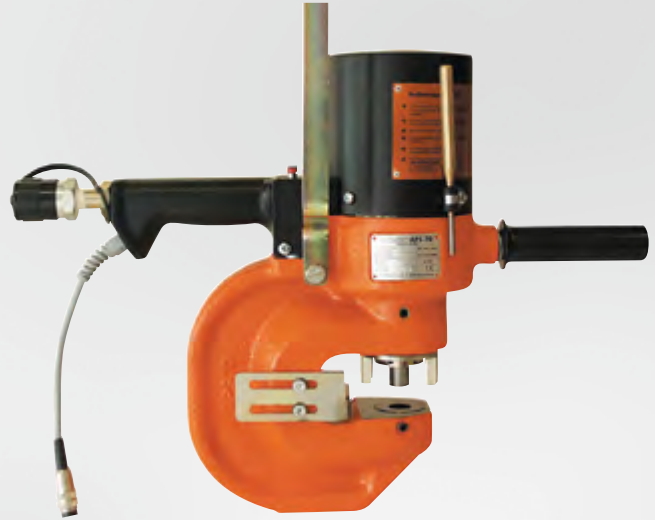
Hydraulic punching unit with  
Automatic return using neoprene spring

### Technical specifications:

|  |                      |
|--|----------------------|
| Max. hole Ø mm                             | 22 mm                |
| Max. oblong hole                           | 22 x 14 mm           |
| Max. material thickness<br>as per DIN S275 | 13 mm                |
| Total punch time<br>with pump AHP-M        | 5 sec.               |
| with pump AHP-L                            | 3 sec.               |
| Jaw depth                                  | 70 mm                |
| Max. pressure                              | 700 bar (10,150 psi) |
| Punching force                             | 30 t                 |
| Punching stroke                            | 18 mm                |
| Weight                                     | 29.9 kg              |

### Scope of delivery:

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

## Accessories

**Prod.-No.**

Replacement HP connection hose, **5 m**  
complete with control cable and coupling

23015

Replacement HP connection hose, **10 m**  
complete with control cable and coupling

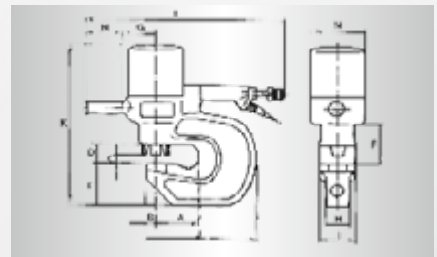
23016

Replacement HP connection hose, **\*15 m**  
complete with control cable and coupling

23017

### \*Note:

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



### Important technical note:

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.

| Type    | A   | B  | C  | D  | E   | F   | G  | H  | I   | J   | K   | L   | M   | N   |
|---------|-----|----|----|----|-----|-----|----|----|-----|-----|-----|-----|-----|-----|
| 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 |



## ALFRA-Press - Hydraulic puncher APS 120

Hydraulic punching unit with  
Automatic return using neoprene spring

Prod.-No.  
23004

### Technical specifications

|   |                      |
|---|----------------------|
| Max. hole Ø mm                          | 25 mm                |
| Max. oblong hole                        | 25 x 18 mm           |
| Max. material thickness as per DIN S275 | 16 mm                |
| Total punch time<br>with pump AHP-M     | 10 sec.              |
| with pump AHP-L                         | 7 sec.               |
| Jaw depth                               | 110 mm               |
| Max. pressure                           | 700 bar (10,150 psi) |
| Punching force                          | 44 t                 |
| Punching stroke                         | 25 mm                |
| Weight`                                 | 47.3 kg              |

### Scope of delivery:

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

## Accessories

Replacement HP connection hose, **5 m**  
complete with control cable and coupling

Prod.-No.  
23015

Replacement HP connection hose, **10 m**  
complete with control cable and coupling

23016

Replacement HP connection hose, **\*15 m**  
complete with control cable and coupling

23017

### \*Note:

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



# ALFRA – APS PUNCHES AND DIES

| Punch for |        |      |           | Dies for |        |      |           |
|-----------|--------|------|-----------|----------|--------|------|-----------|
| APS 120   | APS 70 | Ø mm | Prod.-No. | APS 120  | APS 70 | Ø mm | Prod.-No. |
| ■         | ■      | 7    | 23-01-07  | ■        | ■      | 7    | 23-02-07  |
| ■         | ■      | 8    | 23-01-08  | ■        | ■      | 8    | 23-02-08  |
| ■         | ■      | 9    | 23-01-09  | ■        | ■      | 9    | 23-02-09  |
| ■         | ■      | 10   | 23-01-10  | ■        | ■      | 10   | 23-02-10  |
| ■         | ■      | 11   | 23-01-11  | ■        | ■      | 11   | 23-02-11  |
| ■         | ■      | 12   | 23-01-12  | ■        | ■      | 12   | 23-02-12  |
| ■         | ■      | 13   | 23-01-13  | ■        | ■      | 13   | 23-02-13  |
| ■         | ■      | 14   | 23-01-14  | ■        | ■      | 14   | 23-02-14  |
| ■         | ■      | 15   | 23-01-15  | ■        | ■      | 15   | 23-02-15  |
| ■         | ■      | 16   | 23-01-16  | ■        | ■      | 16   | 23-02-16  |
| ■         | ■      | 17   | 23-01-17  | ■        | ■      | 17   | 23-02-17  |
| ■         | ■      | 18   | 23-01-18  | ■        | ■      | 18   | 23-02-18  |
| ■         | ■      | 19   | 23-01-19  | ■        | ■      | 19   | 23-02-19  |
| ■         | ■      | 20   | 23-01-20  | ■        | ■      | 20   | 23-02-20  |
| ■         | ■      | 21   | 23-01-21  | ■        | ■      | 21   | 23-02-21  |
| ■         | ■      | 22   | 23-01-22  | ■        | ■      | 22   | 23-02-22  |
| ■         | -      | 23   | 23-01-23  | ■        | -      | 23   | 23-02-23  |
| ■         | -      | 24   | 23-01-24  | ■        | -      | 24   | 23-02-24  |
| ■         | -      | 25*  | 23-01-25  | ■        | -      | 25*  | 23-02-25  |

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

**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



Prod.-No. 23-01-..



Prod.-No. 23-02-..



**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 – APS PUNCHES AND DIES

## 5°-bevelled dies for

| APS 120 | 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 carriers with angled flange)

## Oblong punches for

| mm       | APS 120 | 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-...

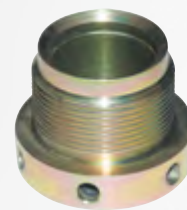


Prod.-No. 23-01-...

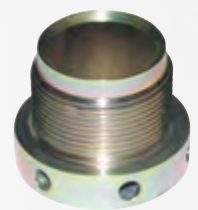
\*) with lock nut, Prod.-No. 23004-56B

## Replacement parts

|   | Prod.-No.   |
|---|-------------|
| Lock nut for punch Ø 7 - 24 mm            | 23004-056A  |
| Lock nut for punch Ø 25 mm (only APS 120) | 23004-056B  |
| Lock nut for punch Ø 26 mm (upon request) | 23004-056C. |



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



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

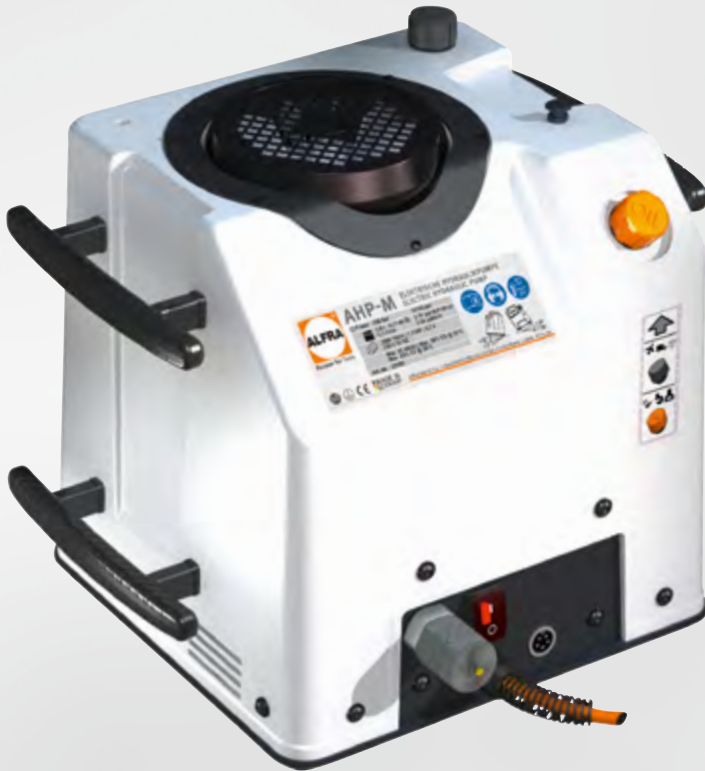


# ALFRA ELECTRIC HYDRAULIC PUMPS

- 1 Powerful, hydraulic drive unit for maximum punching performance and speed
- 2 Additional fan allows continuous use - even in warmer regions
- 3 Light housing made of impact-resistant plastic
- 4 Extra large, non-slip carrying handles on which the power cord can be wrapped
- 5 Extremely space-saving thanks to compact design



# ALFRA ELECTRIC HYDRAULIC PUMP AHP-M



## Technical specifications:

|                        |               |
|------------------------|---------------|
| Max. pressure:         | 700 bar       |
| Max. pumping capacity: | 1.1 l/min     |
| Oil type:              | HLP 46        |
| Fill volume:           | 3.2 l         |
| Active volume:         | 2.2 l         |
| Weight:                | 29 kg         |
| Operating voltage:     | 230 V / 50 Hz |
| Rating:                | 1.3 kW        |
| Power consumption:     | 5.65 A        |
| Motor speed:           | 2800 1/min    |

Electric hydraulic pump AHP M

**Prod.-No.**  
23189

# ALFRA ELECTRIC HYDRAULIC PUMP AHP-L



## Technical specifications:

|                        |               |
|------------------------|---------------|
| Max. pressure:         | 700 bar       |
| Max. pumping capacity: | 1.7 l/min     |
| Oil type:              | HLP 46        |
| Fill volume:           | 3.0 l         |
| Active volume:         | 2.2 l         |
| Weight:                | 34 kg         |
| Voltage, frequency:    | 230 V / 50 Hz |
| Rating:                | 2.2 kW        |
| Power consumption:     | 9.8 A         |
| Motor speed:           | 2860 1/min    |

Electric hydraulic pump AHP L

**Prod.-No.**  
23190

*Not available in 110V*

# SERVICE-BOY

## For hydraulic punching units APS of all types

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 – and more cost-effective than any "DIY-build"
- Dimensions (L x W x H): 900 x 520 x 1,970 mm



Prod.-No. 23160 (without punching unit / pump + accessories)

Service-Boy  
Complete with tool cabinet and drawers

Prod.-No.  
23160

# APS GO

## For all types of APS hydraulic punching units

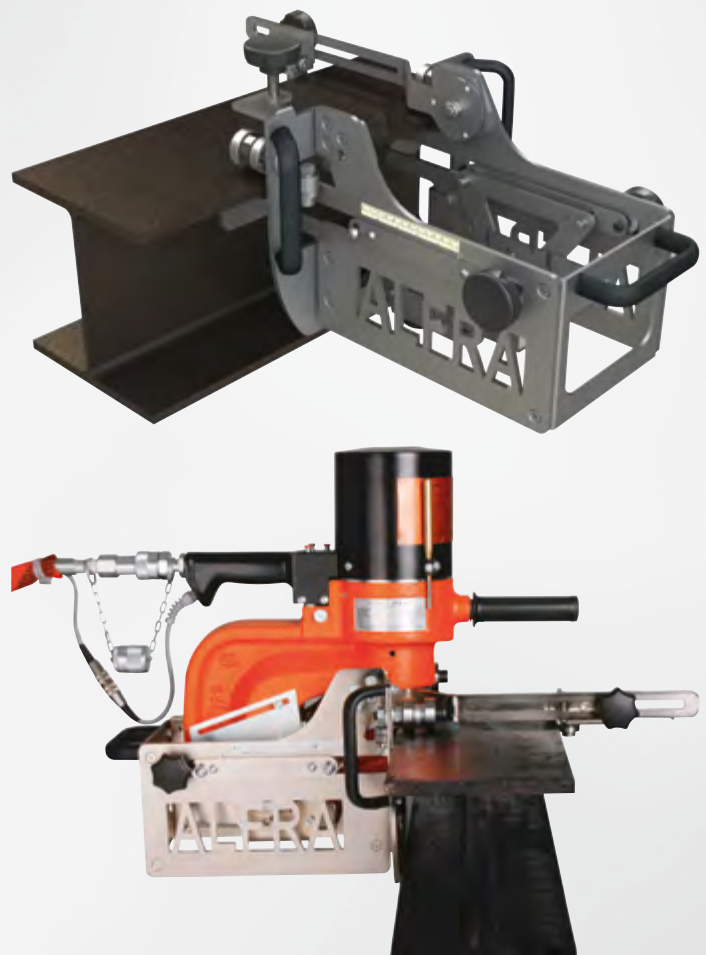
APS GO enables you to easily move our punching units over the steel bar

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: 14 kg / 30.8 lbs



APS Go

Prod.-No.  
23155



# ALFRA DEBURRING TECHNOLOGY

- **Edge-Milling and Deburring Devices for universal use**



# ALFRA EDGE-MILLING AND DEBURRING DEVICES – OVERVIEW



**KFV**



**KFH 150**

|  |  |  |
|--|--|--|
| <b>Pages</b>   | 98 - 99  | 100 - 101  |
| <b>Prod.-No.</b>                                     | 25260  | 25100  |
| <b>Prism mounting</b>                                | -  | L = 150 mm / W = 20/40 mm                                |
| <b>End mill Ø</b>                                    | 45° or straight<br>Ø 6 mm or 8 mm                      | TCT as per DIN, Ø 8 mm                                   |
| <b>Max. bevel width<br/>▶ in multiple work steps</b> | 1 - 3 mm   | 1 - 5 mm, depending on material,<br>with fine adjustment |
| <b>Edge angle</b>                                    | 45° and radii  | 45°  |
| <b>High-performance motor</b>                        | ✓  | ✓  |
| <b>Motor performance</b>                             | 500 watt   | 1,050 watt   |
| <b>Infinitely variable speed control</b>             | 11,000 - 25,000 min <sup>-1</sup><br>with smooth start | 8,000 - 25,000 min <sup>-1</sup>                         |
| <b>Full-wave control electronics</b>                 | ✓  | ✓  |
| <b>Clamping neck Ø</b>                               | 43 mm  | 43 mm  |
| <b>Voltage</b>                                       | 230 V, 50 - 60 Hz<br>+ 110 V, 50 - 60 Hz               | 230 V, 50 - 60 Hz<br>+ 110 V, 50 - 60 Hz                 |
| <b>Weight</b>  | 1.8 kg   | 3.5 kg   |
| <b>Dimensions: (L x W x H)</b>                       | 260 x 190 x 150 mm                                     | 340 x 150 x 110 mm                                       |
| <b>Cable length</b>                                  | 3.0 m  | 3.0 m  |

## MOTORS



|                  |             |                 |             |                 |
|------------------|-------------|-----------------|-------------|-----------------|
| <b>Prod.-No.</b> | 230V: 25193 | 110V: 25193.110 | 230V: 25191 | 110V: 25191.110 |
|------------------|-------------|-----------------|-------------|-----------------|



**KFT 250**



**KFH 250**



**KFT 500**

|  |   |  |
|--|---|--|
| 102 - 103                                | 104 - 105   | 106 - 107                                |
| 25110                                    | 25130   | 25140                                    |
| L = 250 mm / W = 40 mm                   | L = 250 mm / W = 70 mm  | L = 500 mm / W = 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<br>6.5 mm stainless steel   | 1.5 - 14 mm                              |
| 45°                                      | adjustable 30° - 45° - 30° swivelling<br>right and left for 60° welding bevel.<br>also for radii R = 3.0 4.0 and 5.0<br>using radius TCT milling cutter | 45°                                      |
| ✓  | ✓   | ✓  |
| 1,050 watt                               | 1,800 watt  | 1,800 watt                               |
| 8,000 – 25,000 min <sup>-1</sup>         | 2,500 – 23,500 min <sup>-1</sup>  | 2,500 – 23,500 min <sup>-1</sup>         |
| ✓  | ✓   | ✓  |
| 43 mm                                    | 63 mm   | 63 mm                                    |
| 230 V, 50 – 60 Hz<br>+ 110 V, 50 – 60 Hz | 230 V, 50 – 60 Hz<br>+ 110 V, 50 – 60 Hz  | 230 V, 50 – 60 Hz<br>+ 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



# ALFRA EDGE-MILLING AND DEBURRING DEVICES – OVERVIEW



**KFK 5**

|  |  |
|--|--|
| <b>Pages</b>   | 110 - 111  |
| <b>Prod.-No.</b>                                     | 25200  |
| <b>Prism mounting</b>                                | –  |
| <b>End mill Ø</b>                                    | Inserts  |
| <b>Max. bevel width<br/>▶ in multiple work steps</b> | <br>45°: Steel 0 - 5 mm, aluminium 0 - 8 mm<br>30°: Steel 0 - 4 mm, aluminium 0 - 6 mm |
| <b>Edge angle</b>                                    | 45°<br>(optional 30°, 60°)<br>Radii R = 2,5  |
| <b>High-performance motor</b>                        | ✓  |
| <b>Motor performance</b>                             | 1,530 watt   |
| <b>Infinitely variable speed control</b>             | 4,200 - 11,000 min <sup>-1</sup><br>with Smooth start  |
| <b>Full-wave control electronics</b>                 | ✓<br>with thermal and overload protection  |
| <b>Right/left run</b>                                | –  |
| <b>Voltage</b>                                       | 230 V, 50 – 60 Hz<br>+ 110 V, 50 – 60 Hz   |
| <b>Weight</b>  | 4.2 kg   |
| <b>Dimensions: (L x W x H)</b>                       | L = 450 mm   |
| <b>Cable length</b>                                  | 3.0 m  |



## SKF 63-15

112 - 113

25010

Guide mounting with rollers  
240 x 80 mm / 220 x 75 mm

Inserts

15 mm max

15° - 20° - 30° - 45° - 60°  
adjustable



1,100 watt

2,870 min<sup>-1</sup>

 with thermal and overload protection

-

230 V, 50 Hz  
+ 110 V, 50 - 60 Hz

21.0 kg

440 x 200 x 280 mm

3.0 m

# ALFRA *EDGE DEBURRING UNIT*

# KFV

4 applications – 1 device



Prisms, free-hand



Prisms, stationary

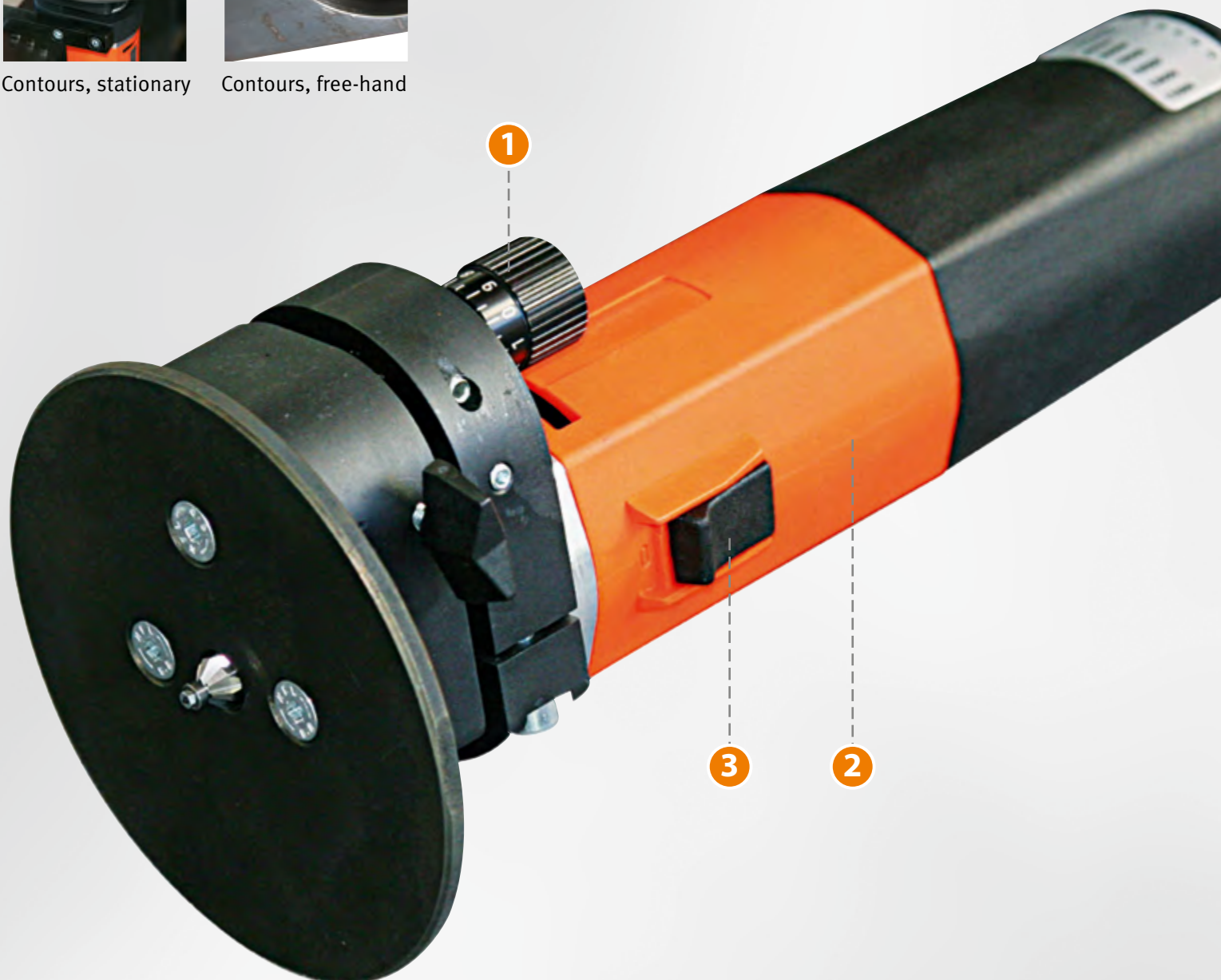


Contours, stationary



Contours, free-hand

- 1 Infinitely variable bevel width setting using scale
- 2 With thermal and overload protection
- 3 On/Off switch

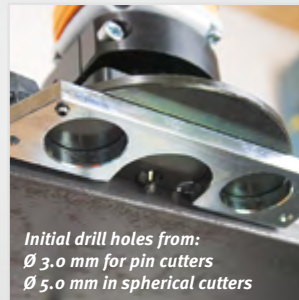




# ALFRA EDGE MILLING UNIT – KFV

Drive motor (with clamping flange  $\varnothing$  43 mm) 500 watts, speed control 11,000-25,000 rpm, quick-change fitting on the arbor of the attachments.

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



Initial drill holes from:  
 $\varnothing$  3.0 mm for pin cutters  
 $\varnothing$  5.0 mm in spherical cutters



## Technical specifications:

|                   |  |
|-------------------|--|
| Bevel angle:      | 45°  |
| Bevel width 45°:  | 1-3 mm infinitely adjustable   |
| Radius:           | R = 1.0 - 1.5 - 2.0  |
| Motor voltage:    | 230 V 50-60Hz; 110V 50-60Hz  |
| Rating:           | 500 W  |
| Rotational speed: | 11,000 - 25,000 min <sup>-1</sup> with Smooth start with thermal and overload protection |
| Feed:             | manual   |
| Weight:           | 1.8 kg   |

## Scope of delivery:

- KFV 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
- Clamping shank for vice
- Collet 6 mm (mounted), collet 8 mm (included)
- 1 set of operating tools
- Carrying case
- Guide stop for outer edges

|                                   |               | <b>Prod.-No.</b> |
|-----------------------------------|---------------|------------------|
| Edge deburring unit, KFV complete | 230V 50-60 Hz | 25260            |
| Edge deburring unit, KFV complete | 110V 50-60 Hz | 25260.110        |

# ALFRA *EDGE DEBURRING UNIT* **KFH 150**

- ① High-performance motor with double-bearing-mounted milling spindle
- ② Full-wave control electronics
- ③ Fine adjustment to milling depth/bevel width
- ④ Guidance handle
- ⑤ Clamping handle for quick adjustment
- ⑥ Guide rails made of high-strength special steel



# ALFRA EDGE DEBURRING UNIT – KFH 150

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



2

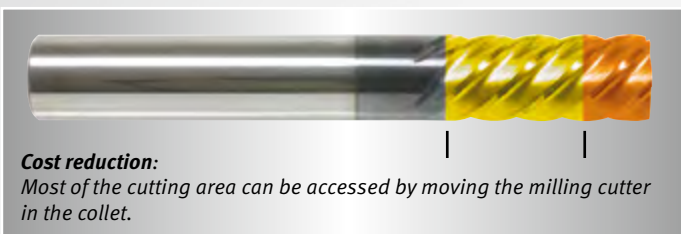
## Technical specifications:

|                        |  |
|------------------------|--|
| Prism mounting 45°:    | L = 150 mm<br>W = 20/40 mm                               |
| End mill:              | Solid carbide as per DIN, 8 mm Ø                         |
| Max. bevel width:      | 1 - 5 mm, depending on material,<br>with fine adjustment |
| High-performance motor | with full-wave control electronics                       |
| Motor voltage:         | 230 V 50-60Hz; 110V 50-60Hz                              |
| Motor performance:     | 1,050 W  |
| Electronics:           | 8,000 – 25,000 min <sup>-1</sup>                         |
| Clamping neck Ø:       | 43 mm  |
| Weight:                | 3.5 kg   |

## Scope of delivery:

- Edge deburring unit KFH 150
- 1 set of guide rails
- 1 collet 8 mm Ø and clamping nut
- 1 Operating instructions

|  |               | Prod.-No. |
|--|---------------|-----------|
| Edge deburring unit, KFH 150                 | 230V 50-60 Hz | 25100     |
| Edge deburring unit, KFH 150                 | 110V 50-60 Hz | 25100.110 |
| Adapter head for edge deburring unit KFH 150 |               | 25109     |



**Cost reduction:**  
Most of the cutting area can be accessed by moving the milling cutter in the collet.



# ALFRA EDGE DEBURRING UNIT KFT 250

- 1 High-performance motor with double-bearing-mounted milling spindle
- 2 Full-wave control electronics
- 3 Fine adjustment to milling depth/bevel width
- 4 Clamping handle for quick adjustment
- 5 Guide rails made of high-strength special steel
- 6 Chip collection container
- 7 Rubber feet for smooth operation and excellent stability



# ALFRA EDGE DEBURRING UNIT – KFT 250

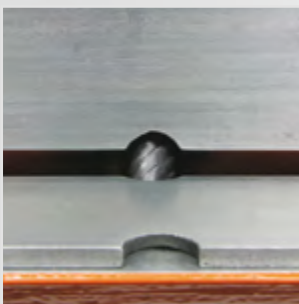
Simple, cost-effective deburring unit for light to medium use.

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



## Technical specifications:

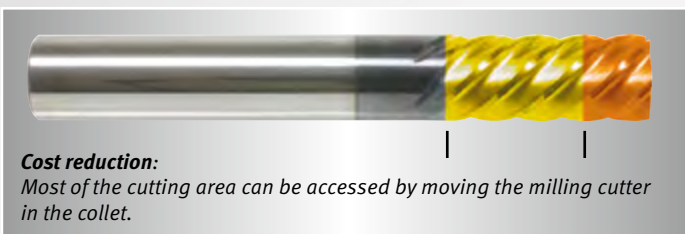
- Deburring area: Bevel angle 45°
- Prism mounting position I: Material thickness from 4.5 mm
- position II: Material thickness from 1.0 mm
- Prism mounting: L = 250 mm
- Guide rail: W = 40 mm
- Max. bevel width: 5 mm, depending on material.  
Also for stainless steel when selecting a suitable-milling 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
- Infinitely variable speed control: 8,000 - 25,000 min<sup>-1</sup>
- Motor voltage: 230 V 50-60Hz; 110V 50-60Hz
- Full-wave control electronics
- When under load, the tachogenerator provides additional power.



**Position I: Material thickness from 4.5 mm**



**Position II: Material thickness from 1.0 mm**



**Cost reduction:**

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



**Foot switch (optional)  
Prod.-No. 25116**

## Scope of delivery:

- Edge 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 Operating instructions

|  |               | <b>Prod.-No.</b> |
|--|---------------|------------------|
| Edge deburring unit, KFT 250               | 230V 50-60 Hz | 25110            |
| Edge deburring unit, KFT 250               | 110V 50-60 Hz | 25110.110        |
| Table for edge deburring unit KFT 250      |               | 25111            |
| <b>Special accessories:</b>                |               |                  |
| ALFRA foot switch with device cable socket | 230V          | 25116            |
| ALFRA foot switch with device cable socket | 110V          | 25116.110        |

# ALFRA *EDGE DEBURRING UNIT* **KFH 250**

- ① High-performance motor with double-bearing-mounted milling spindle
- ② Full-wave control electronics
- ③ Fine adjustment to milling depth/bevel width
- ④ 30° – 45° – 30° swivelling
- ⑤ Ergonomically shaped guide hand grip
- ⑥ Clamping handle for quick adjustment
- ⑦ Guide rails made of high-strength special steel
- ⑧ Guide rollers facilitate feeding





# ALFRA EDGE DEBURRING UNIT – KFH 250

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



Fine adjustment to milling depth/bevel width



**Cost reduction:**  
Most of the cutting area can be accessed by moving the milling cutter in the collet.

## Technical specifications:

|  |  |
|--|--|
| Prism mounting:  | L = 250 mm<br>W = 70 mm  |
| End mill Ø:  | 12 mm DIN 6527   |
| Max. bevel width:  | 14 mm (depending on the material)  |
| Edge angle:  | infinitely adjustable swivelling right and left. Also for radii r = 3.0, 4.0, 5.0 using radii solid-carbide milling cutter |
| Rating:  | 1,800 W (high-quality motor for difficult deburring tasks)   |
| Infinitely variable speed control:                             | 2,500 – 23,500 min <sup>-1</sup>   |
| Full-wave control electronics                                  |  |
| When under load, the tachogenerator provides additional power. |  |
| Clamping neck Ø:   | 63 mm  |
| Motor voltage:   | 230 V 50-60Hz; 110V 50-60Hz  |
| Weight:  | 12.8 kg  |

## Scope of delivery:

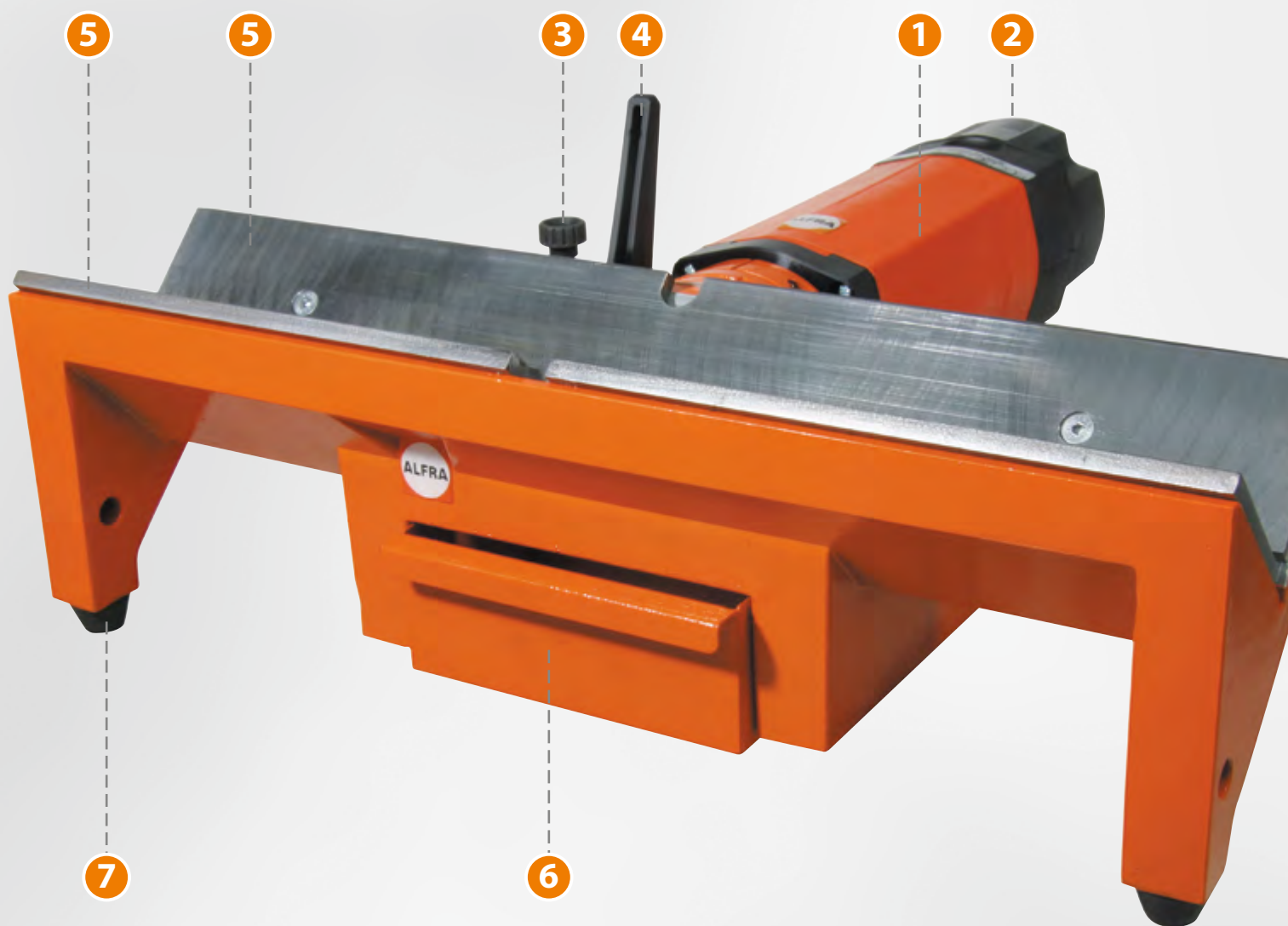
- Edge deburring unit KFH 250, with fine milling depth adjustment
- 1 set of guide rails with two support rollers
- 1 collet Ø 12 mm and clamping nut
- 1 set of operating tools
- 1 Operating instructions

|  |               | <b>Prod.-No.</b> |
|--|---------------|------------------|
| Edge deburring unit, KFH 250                 | 230V 50-60 Hz | 25130            |
| Edge deburring unit, KFH 250                 | 110V 50-60 Hz | 25130.110        |
| Adapter head for edge deburring unit KFH 250 |               | 25131            |

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

# ALFRA *EDGE DEBURRING UNIT* KFT 500

- ① High-performance motor with double-bearing-mounted milling spindle
- ② Full-wave control electronics
- ③ Fine adjustment to milling depth/bevel width
- ④ Clamping handle for quick adjustment
- ⑤ Guide rails made of high-strength special steel
- ⑥ Chip collection container
- ⑦ Rubber feet for smooth operation and excellent stability



# ALFRA EDGE DEBURRING UNIT – KFT 500

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

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



## 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

Max. bevel width: 14 mm, depending on material  
Also for stainless steel when selecting a suitable-milling cutter and RPM control, and cuts (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  
Infinitely variable speed control: 2,500 – 23,500 min<sup>-1</sup>  
Motor voltage: 230 V 50-60Hz; 110V 50-60Hz  
Full-wave control electronics  
When under load, the tachogenerator provides additional power.  
Weight: 18 kg



Precise deburring by rolling milling



Fine adjustment to milling depth/bevel width



Foot switch (optional)  
Prod.-No. 25116

## Scope of delivery:

- Edge 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 Operating instructions

### Prod.-No.

|  |               |           |
|--|---------------|-----------|
| Edge deburring unit, KFT 500               | 230V 50-60 Hz | 25140     |
| Edge deburring unit, KFT 500               | 110V 50-60 Hz | 25140.110 |
| Table for edge 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



Position I: Material thickness 6-14 mm






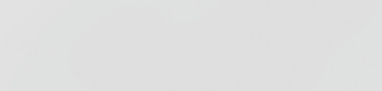
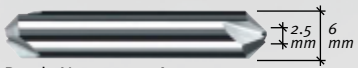
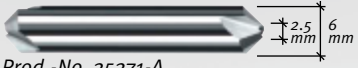






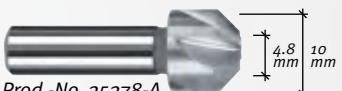


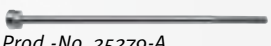
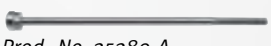



Position II: Material thickness from 1.5 mm



**Cost reduction:**  
Most of the cutting area can be accessed by moving the milling cutter in the collet.



# ALFRA – SOLID CARBIDE MILLING CUTTERS FOR KFV

| Description   | Prod.-No. |  |  |  |                         |
|---|-----------|---|---|--|--|
| Solid carbide milling cutter 90°<br>Ø 6 mm, tip Ø 2.5 mm, length 31 mm, 3 cuts<br>Suitable for: stainless steel, cast iron                                  | 25270-A   | ■   |   | ■  | <br>Prod.-No. 25270-A   |
| Solid carbide milling cutter 90°<br>Ø 6 mm, tip Ø 2.5 mm, length 31 mm, 5 cuts<br>Suitable for: stainless steel, cast iron                                  | 25271-A   | ■   | ■   |  | <br>Prod.-No. 25271-A   |
| Solid carbide milling cutter radius R = 0.5<br>Ø 6 mm, tip Ø 2.9 mm, length 31 mm, 3 cuts<br>Radius R = 0.5<br>Suitable for: stainless steel, cast iron     | 25272-A   | ■   | ■   |  | <br>Prod.-No. 25272-A   |
| Solid carbide milling cutter radius R = 1.0<br>Ø 6 mm, tip Ø 2.9 mm, length 31 mm, 3 cuts<br>Suitable for: stainless steel, cast iron                       | 25273-A   | ■   | ■   |  | <br>Prod.-No. 25273-A   |
| Solid carbide milling cutter radius R = 1.5<br>Ø 6 mm, tip Ø 2.9 mm, length 31 mm, 3 cuts<br>Suitable for: stainless steel, cast iron                       | 25274-A   | ■   | ■   |  | <br>Prod.-No. 25274-A   |
| Solid carbide milling cutter radius R = 1.0<br>Ø 10 mm, tip Ø 4.8 mm, length 30 mm, 6 cuts<br>Suitable for: stainless steel, cast iron                      | 25275-A   | ■   | ■   |  | <br>Prod.-No. 25275     |
| Solid carbide milling cutter radius R = 1.5<br>Ø 10 mm, tip Ø 4.8 mm, length 30 mm, 6 cuts<br>Suitable for: stainless steel, cast iron                      | 25276-A   | ■   | ■   |  | <br>Prod.-No. 25276-A   |
| Solid carbide milling cutter radius R = 2.0<br>Ø 10 mm, tip Ø 4.8 mm, length 30 mm, 6 cuts<br>Suitable for: stainless steel, cast iron                      | 25277-A   | ■   | ■   |  | <br>Prod.-No. 25277-A |
| Solid carbide milling cutter 90°<br>Ø 10 mm, tip Ø 4.8 mm, length 30 mm, 6 cuts<br>Suitable for: stainless steel, cast iron                                 | 25278-A   | ■   | ■   |  | <br>Prod.-No. 25278-A |
| Solid carbide milling cutter radius R = 2.0<br>Ø 10 mm, tip Ø 2.9 mm, length 30 mm, 3 cuts incl. thrust bearing<br>Suitable for: stainless steel, cast iron | 25284-A   | ■   | ■   |  | <br>Prod.-No. 25284-A |
| Solid carbide milling cutter 45°<br>Ø 10 mm, tip Ø 2.9 mm, length 30 mm, 3 cuts incl. thrust bearing<br>Suitable for: stainless steel, cast iron            | 25285-A   | ■   | ■   |  | <br>Prod.-No. 25285-A |
| Axes with thrust bearing<br>Axes: Ø 1.5 mm - KL: Ø 3.0 mm)<br>Suitable for deburring end mills with tips - Ø 2.5 - 2.9 mm                                   | 25279-A   | ■   | ■   |  | <br>Prod.-No. 25279-A |
| Axes with thrust bearing<br>Axes: Ø 1.5 mm - KL: Ø 5.0 mm)<br>Suitable for deburring end mills with tips - 4.8 mm   | 25280-A   | ■   | ■   |  | <br>Prod.-No. 25280-A |
| Solid carbide milling cutter with serration<br>Ø 8 mm, 4 cuts<br>Suitable for: Steel, stainless steel, cast iron  | 25281     | ■   |   |  | <br>Prod.-No. 25281   |
| Solid carbide milling cutter with serration<br>Ø 8 mm, 6 cuts<br>Suitable for: Steel, stainless steel, cast iron, brass, bronze                             | 25282     | ■   |   |  | <br>Prod.-No. 25282   |
| Solid carbide milling cutter with serration<br>Ø 8 mm, 12 cuts<br>Suitable for: Steel, stainless steel, cast iron   | 25283     | ■   |   |  | <br>Prod.-No. 25283   |

# ALFRA – SOLID CARBIDE MILLING CUTTERS FOR KFH / KFT

## ALFRA Solid Carbide Milling Cutters (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 in the chip duct
- Total length 60 mm or 80 mm
- Coated design



### Solid Carbide Milling Cutter

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.

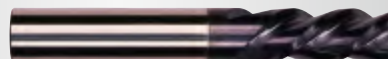


8 mm

3

25150P

25150P



12 mm

3

25160P

25160P

### Solid Carbide Milling Cutter

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

### Solid Carbide Milling Cutter

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 milling cutter\*

- 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



R 3.0

12 mm

5

25165

25165

R 4.0

12 mm

5

25166

25166

R 5.0

12 mm

5

25167

25167

\*Delivery time upon request.

# ALFRA *EDGE DEBURRING UNIT* **KFK 5**

- 1 High-performance motor with Smooth start
- 2 Infinitely variable bevel width setting using scale
- 3 Ergonomically shaped hand grip with on/off switch
- 4 With thermal and overload protection





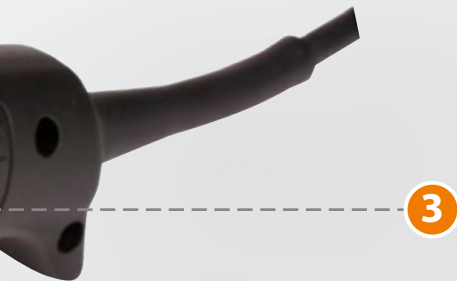
# ALFRA EDGE DEBURRING UNIT – KFK 5

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 <sup>2</sup> steel infinitely variable<br>Steel 0 - 8 mm 250 N/mm <sup>2</sup> steel infinitely variable |
| Bevel width 30°:  | Steel 0 - 4 mm 400 N/mm <sup>2</sup> steel infinitely variable<br>Steel 0 - 6 mm 250 N/mm <sup>2</sup> steel infinitely variable |
| Radius:           | R = 2.5  |
| Motor voltage:    | 230 V 50-60Hz; 110V 50-60Hz  |
| Rating:           | 1,530 W  |
| Rotational speed: | 4,200 - 11,000 min <sup>-1</sup> with Smooth start with thermal and overload protection  |
| Feed:             | manual   |
| Weight:           | 4 kg   |

## Scope of delivery:

- KFK 5 - Deburring and bevelling unit
- 1 pc. 45° milling tool with inserts
- 1 tool set
- Carrying case
- 1 Operating instructions

### Prod.-No.

|   |               |           |
|---|---------------|-----------|
| Edge deburring unit KFK 5 - with 45° milling head | 230V 50-60 Hz | 25200     |
| Edge deburring unit KFK 5 - with 45° milling head | 110V 50-60 Hz | 25200.110 |
| Edge deburring unit KFK 5 - with 30° milling head | 230V 50-60 Hz | 25201     |
| Edge deburring unit KFK 5 - with 30° milling head | 110V 50-60 Hz | 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 |

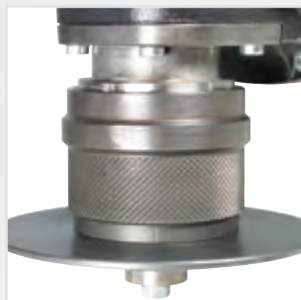
|                                       |       |
|---------------------------------------|-------|
| Adjustable guide stop for outer edges | 25207 |
|---------------------------------------|-------|

### 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 |



Prod.-No. 25207



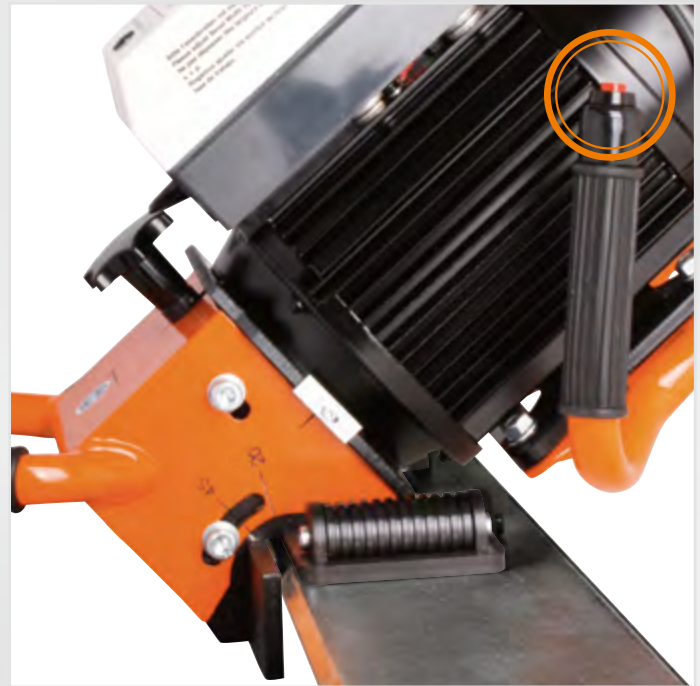
**ALFRA** BEVEL MILLING MACHINE

**SKF 63-15**



# ALFRA BEVEL MILLING MACHINE – SKF 63-15

- 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.



Built-in OFF switch

## Technical specifications:

|                         |   |
|-------------------------|---|
| Motor voltage:          | 230 V 50Hz; 230 V 60Hz;<br>110V 50Hz; 110V 60Hz |
| Rating:                 | 1,100 watt                                      |
| Rotational speed:       | 2,870 min <sup>-1</sup>                         |
| 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 delivery:

- Edge deburring machine SKF 63-15
- 1 set of operating tools
- Operating instructions
- Carrying case



2 milling disks together with 6 inserts each

### Prod.-No.

|                                 |            |                |
|---------------------------------|------------|----------------|
| Bevel milling machine SKF 63-15 | 230V 50 Hz | 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 |

### Option:

- 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 - 390 mm | 25014 |
|--|-------|

Optional device for larger Ø up to 1,000 - 1,500 - 2,000 mm upon request.

### Replacement parts:

|                          |       |
|--------------------------|-------|
| Replacement milling head | 25011 |
|--------------------------|-------|

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

|   |       |
|---|-------|
| Replacement milling disks, individual, with no insert | 25012 |
|---|-------|

|   |       |
|---|-------|
| Carbide insert, TiAlN/TiN-PVD multi-layer coating | 25013 |
|---|-------|

Universal for steel and inox, clearance angle 11°

|   |              |
|---|--------------|
| Carbide insert, TiAlN/TiN-PVD multi-layer coating | 25010.15036B |
|---|--------------|

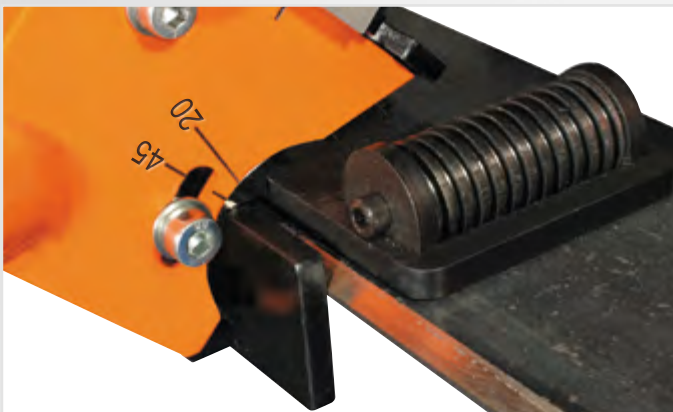
For steel < 850 N/mm<sup>2</sup>; inox <> 900 N/mm<sup>2</sup>, clearance angle 20°

|   |              |
|---|--------------|
| Carbide insert, TiAlN/TiN-PVD multi-layer coating | 25010.15036E |
|---|--------------|

For steel < 1400 N/mm<sup>2</sup>; inox <> 900 N/mm<sup>2</sup>, clearance angle 11°

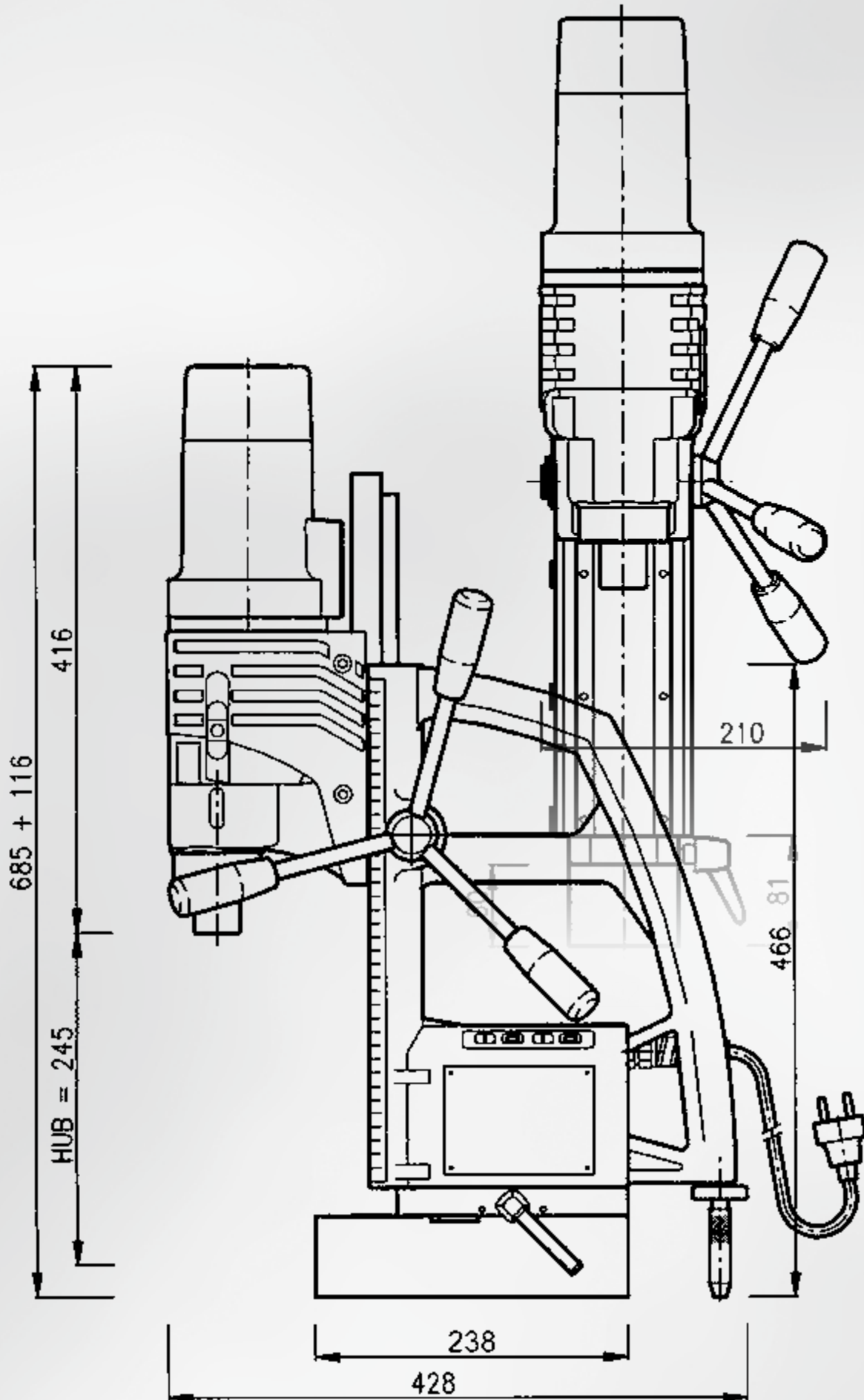
|                           |       |
|---------------------------|-------|
| Auxiliary assembly device | 25019 |
|---------------------------|-------|

For equipping the milling disks with inserts.



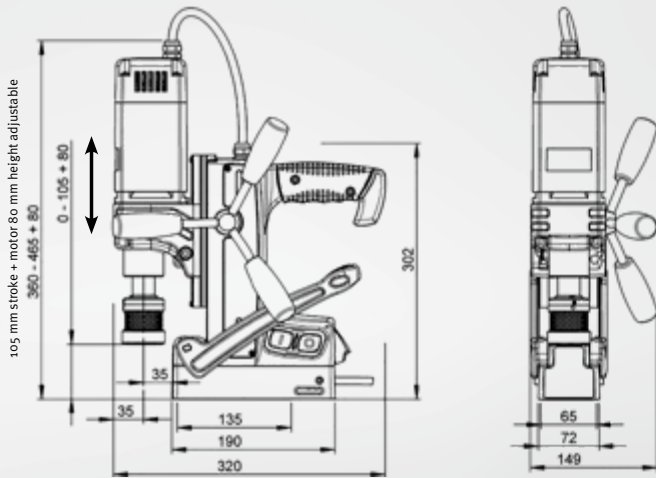


# TECHNICAL INFORMATION

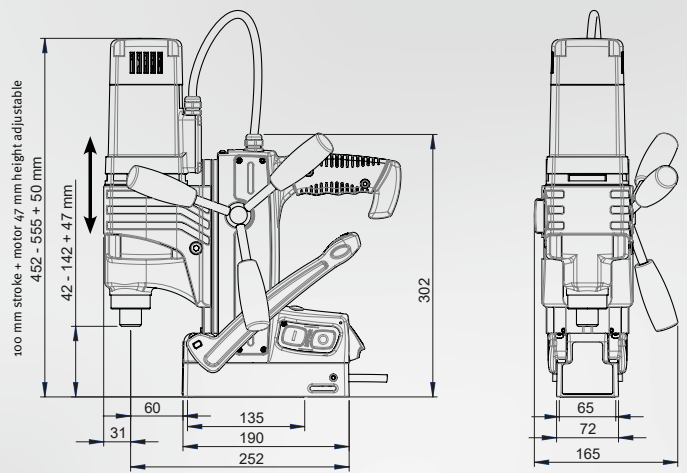


# MACHINE DIMENSIONING – ALFRA ROTABEST®

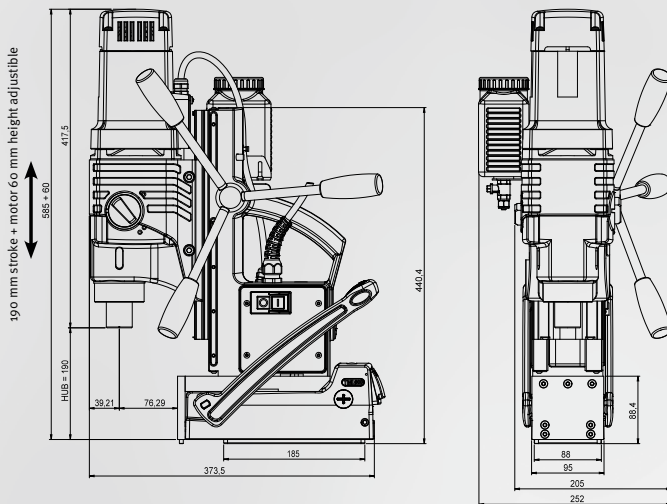
## RB 35 SP



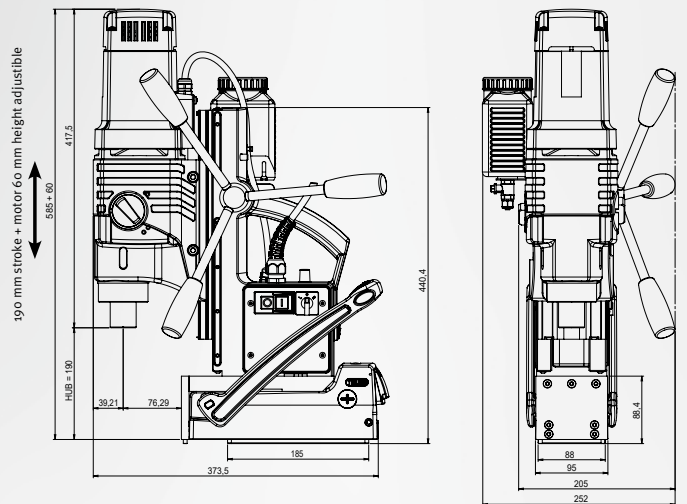
## RB 50 SP



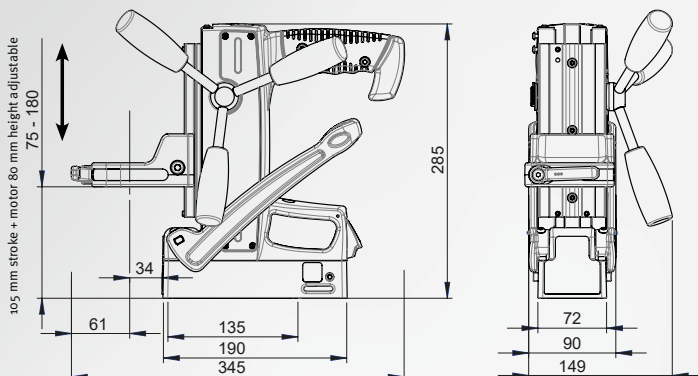
## RB 80 SP



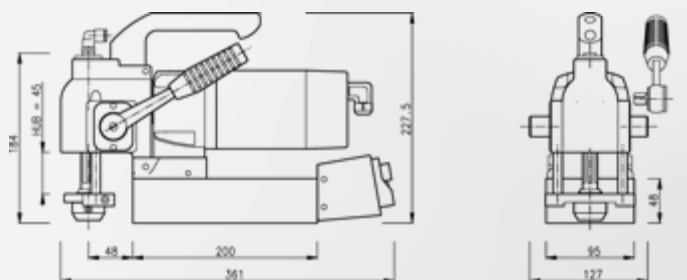
## RB 80 SP RL-E



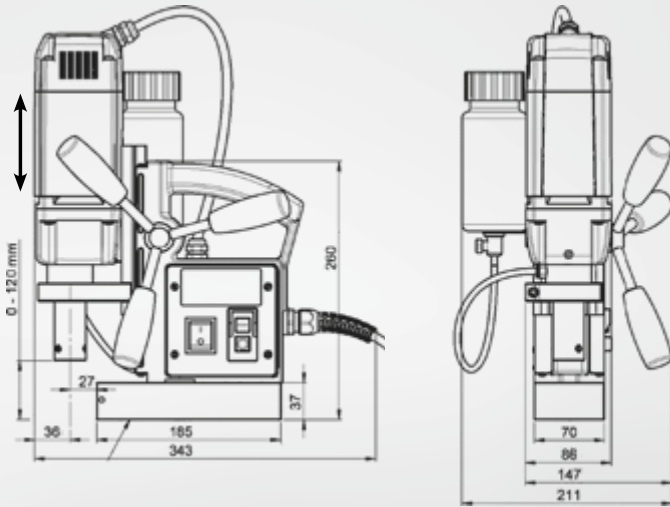
## SP-V



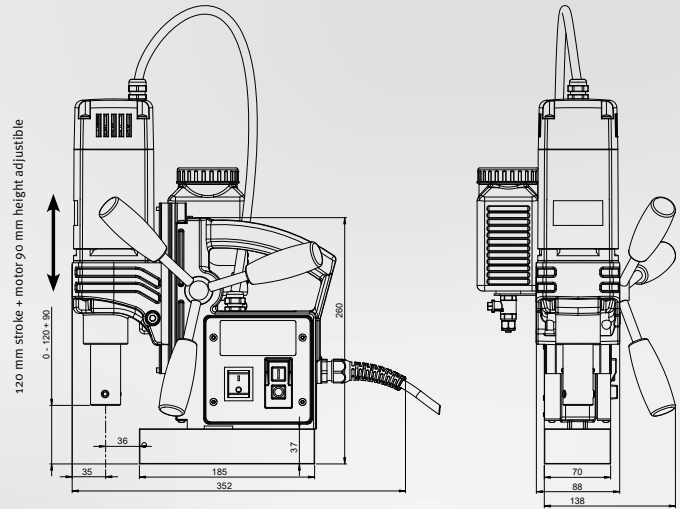
## V 32



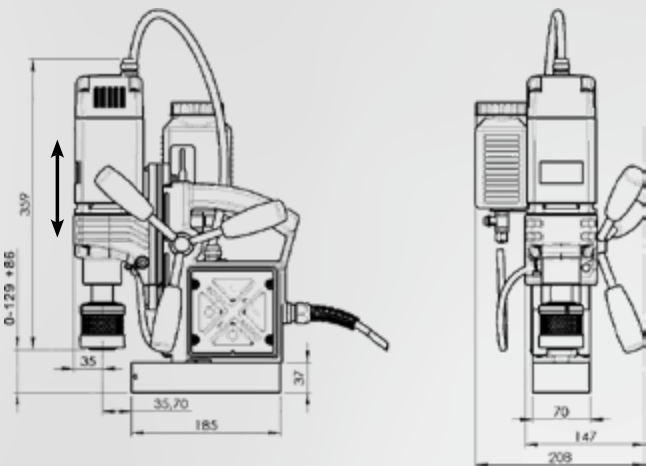
## RB 35 B



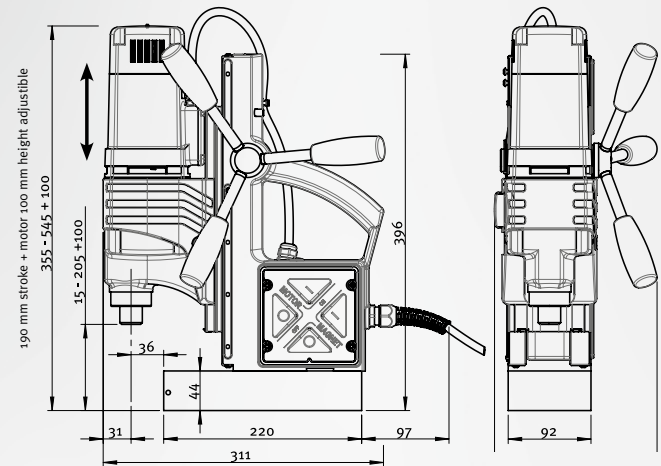
## RB 35/50 B Piccolo



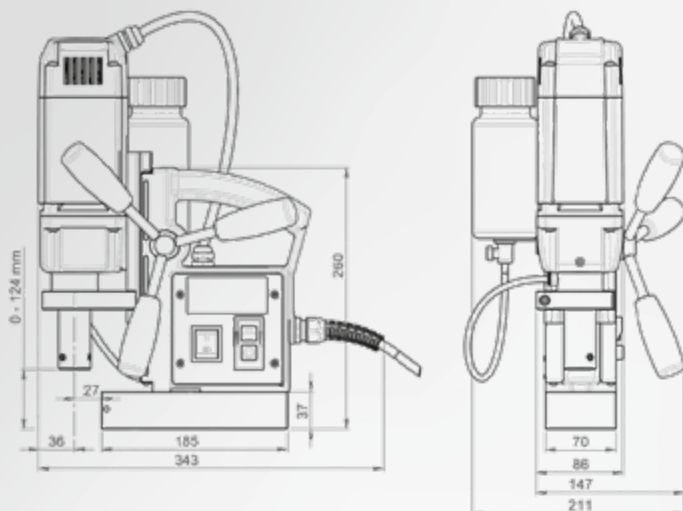
## RB 35/50 X Piccolo



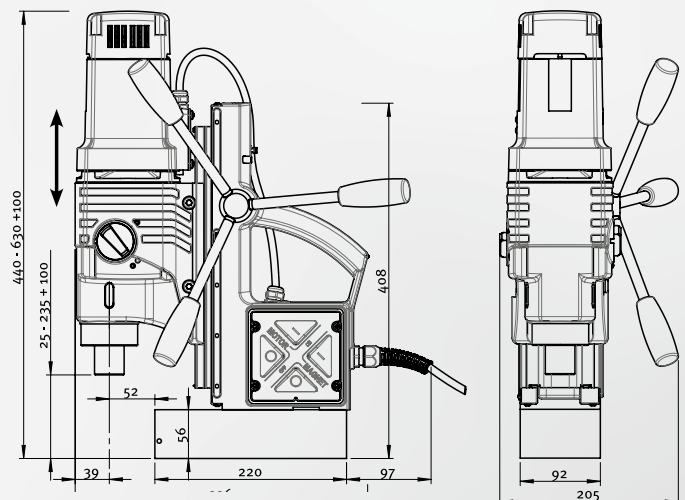
## RB 50 X



## RB 50 B



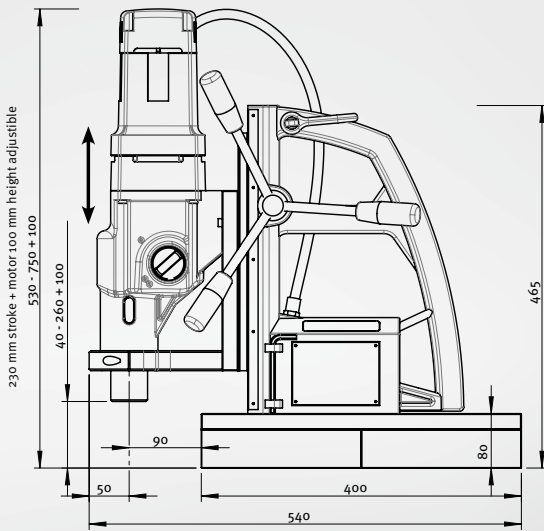
## RB 80 X



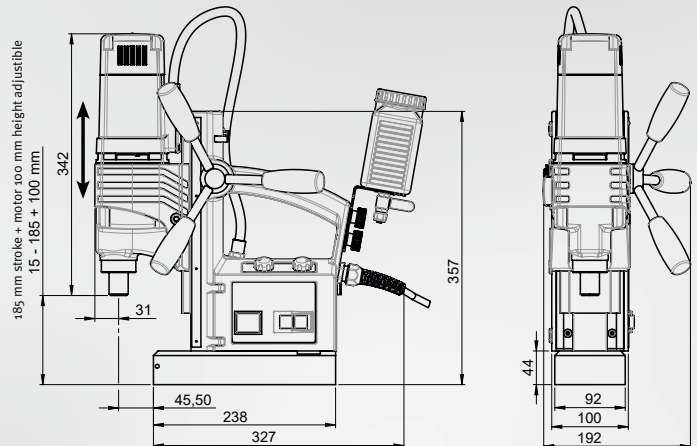


# MACHINE DIMENSIONING – ALFRA ROTABEST®

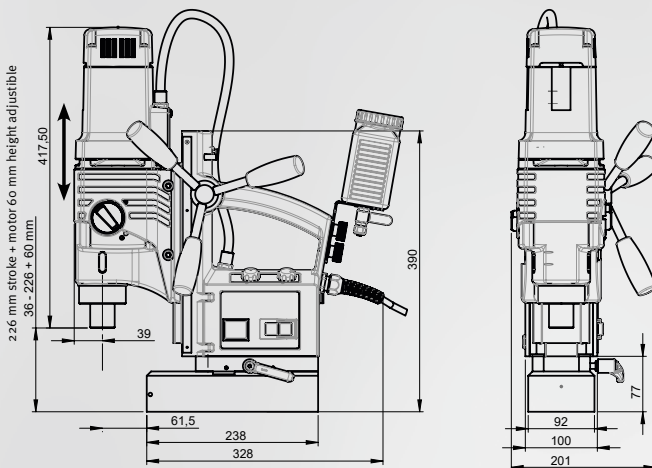
## RB 130 B



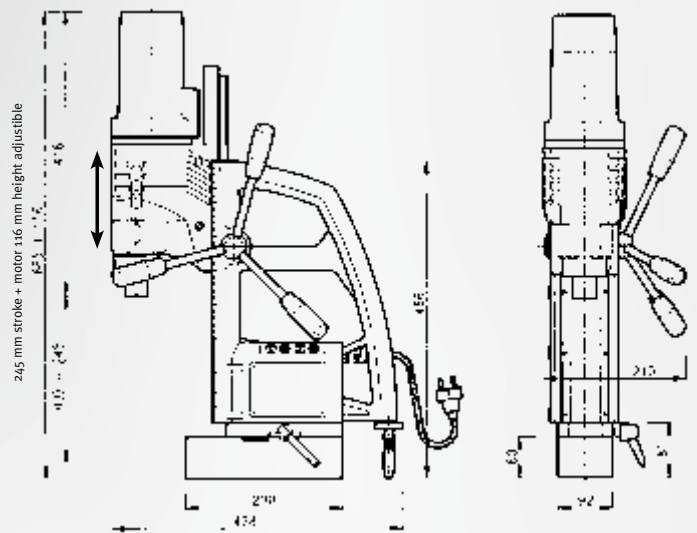
## RB 50 B RL-E



## RB 80 B RL-E



## RB 100 RL-E



## THE CORE DRILL PRINCIPLE

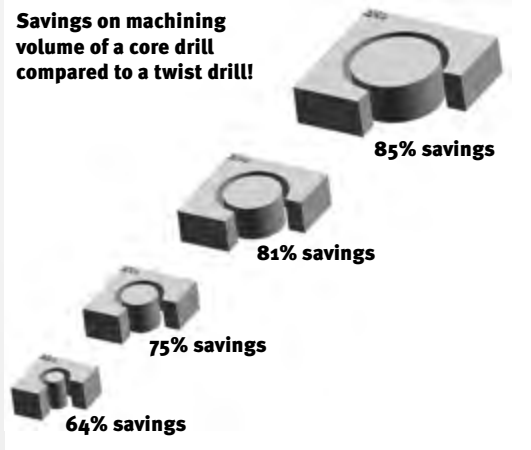
Metal core drilling in Germany was introduced by ALFRA

- Core drills only machine a fraction of the material which a twist drill machines with the same bore diameter.
- A drill core remains which is ejected unmachined after drilling.
- Therefore low drive power and feeding pressure are required.
- Pre-drilling must be done with twist drills which does not apply for core drilling and the desired diameter can be drilled directly.

**The main drilling times are significantly reduced depending on the bore diameter.**

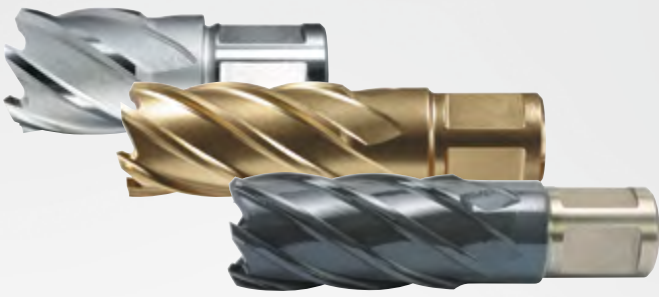


**Savings on machining volume of a core drill compared to a twist drill!**



# ALFRA CORE DRILLS – SPEED OVERVIEW

## FOR HSS AND HSS-CO CORE DRILLS



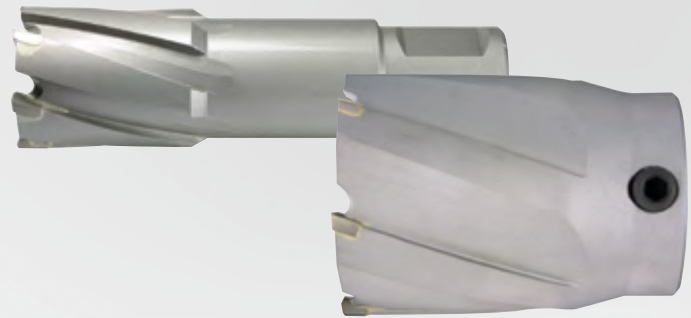
| Material          | unalloyed steel<br>Up to 700 N/mm <sup>2</sup> | alloyed steel<br>Up to 1000 N/mm <sup>2</sup> | aluminium alloy |
|-------------------|--|---|-----------------|
| Vc=m/min          | 30   | 20  | 30              |
| Cooling lubricant | Cutter oil                                     | Cutting oil                                   | Cutting oil     |
| Ø mm              | rpm  | rpm   | rpm             |

### Not suitable for automatic feed!

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

When drilling Hardox, we recommend using ASP 30 / ASP 60 core drills. Use pure cutting oil for the drilling of Hardox and reduce the speed by 10% appr., as in the column "Alloyed steel up to 1000 N/mm<sup>2</sup>". Use only magnetic drills with high holding force or column drilling and milling machines.

## FOR TCT CORE DRILLS



| Material          | unalloyed steel<br>Up to 700 N/mm <sup>2</sup> | alloyed steel<br>Up to 1000 N/mm <sup>2</sup> | aluminium alloy |
|-------------------|--|---|-----------------|
| Vc=m/min          | 50   | 35  | 60              |
| Cooling lubricant | Cutter oil                                     | Cutting oil                                   | Cutting oil     |
| Ø mm              | rpm  | rpm   | rpm             |

### Not suitable for automatic feed!

|     |                   |     |     |      |
|-----|-------------------|-----|-----|------|
| 18  | $\frac{45}{64}$   | 885 | 619 | 1062 |
| 19  | $\frac{3}{4}$     | 838 | 587 | 1006 |
| 20  | $\frac{25}{32}$   | 796 | 557 | 955  |
| 21  | $\frac{53}{64}$   | 758 | 531 | 910  |
| 22  | $\frac{7}{8}$     | 724 | 507 | 869  |
| 23  | $\frac{29}{32}$   | 692 | 485 | 831  |
| 24  | $\frac{15}{16}$   | 663 | 464 | 796  |
| 25  | $\frac{63}{64}$   | 637 | 446 | 764  |
| 26  | 1 $\frac{1}{32}$  | 612 | 429 | 735  |
| 27  | 1 $\frac{1}{16}$  | 590 | 413 | 708  |
| 28  | 1 $\frac{3}{32}$  | 569 | 398 | 682  |
| 29  | 1 $\frac{9}{64}$  | 549 | 384 | 659  |
| 30  | 1 $\frac{3}{16}$  | 531 | 372 | 637  |
| 31  | 1 $\frac{7}{32}$  | 514 | 360 | 616  |
| 32  | 1 $\frac{17}{64}$ | 498 | 348 | 597  |
| 33  | 1 $\frac{19}{64}$ | 483 | 338 | 579  |
| 34  | 1 $\frac{11}{32}$ | 468 | 328 | 562  |
| 35  | 1 $\frac{3}{8}$   | 455 | 318 | 546  |
| 36  | 1 $\frac{27}{64}$ | 442 | 310 | 531  |
| 37  | 1 $\frac{29}{64}$ | 430 | 301 | 515  |
| 38  | 1 $\frac{1}{2}$   | 419 | 293 | 503  |
| 39  | 1 $\frac{17}{32}$ | 408 | 286 | 490  |
| 40  | 1 $\frac{37}{64}$ | 398 | 279 | 478  |
| 41  | 1 $\frac{39}{64}$ | 388 | 272 | 466  |
| 42  | 1 $\frac{21}{32}$ | 379 | 265 | 455  |
| 43  | 1 $\frac{11}{16}$ | 370 | 259 | 444  |
| 44  | 1 $\frac{47}{64}$ | 362 | 253 | 434  |
| 45  | 1 $\frac{25}{32}$ | 354 | 248 | 425  |
| 46  | 1 $\frac{13}{16}$ | 346 | 242 | 415  |
| 47  | 1 $\frac{55}{64}$ | 339 | 237 | 407  |
| 48  | 1 $\frac{57}{64}$ | 332 | 232 | 398  |
| 49  | 1 $\frac{15}{16}$ | 325 | 227 | 390  |
| 50  | 1 $\frac{31}{32}$ | 318 | 223 | 382  |
| 55  | 2 $\frac{5}{32}$  | 290 | 203 | 347  |
| 60  | 2 $\frac{3}{8}$   | 265 | 186 | 318  |
| 65  | 2 $\frac{9}{16}$  | 245 | 171 | 294  |
| 70  | 2 $\frac{3}{4}$   | 227 | 159 | 273  |
| 75  | 2 $\frac{61}{64}$ | 212 | 149 | 255  |
| 80  | 3 $\frac{5}{32}$  | 199 | 139 | 239  |
| 85  | 3 $\frac{11}{32}$ | 187 | 131 | 225  |
| 90  | 3 $\frac{35}{64}$ | 177 | 124 | 212  |
| 95  | 3 $\frac{47}{64}$ | 168 | 117 | 201  |
| 100 | 3 $\frac{15}{16}$ | 159 | 111 | 191  |

# TAPPING – RECOMMENDED VALUES (TOLERANCE ACCORDING TO ISO 2 6H)

## RECOMMENDED VALUES FOR USE OF MACHINE TAP DRILLS WITH TAPPING ATTACHMENTS ON MAGNETIC DRILLS

Tapping: The tap drill to be used must be matched to the core hole prepared in the work piece. Please refer to the enclosed borehole table for metric ISO threads.

### Borehole table metric ISO threads

| Dimensions | Stg. | 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    |

### Fine thread

| Dimensions | Stg. | 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 the production of threads

### 1. Clearance hole

We recommend adjacent tap drills for the clearance holes which convey the chips out of the borehole in the cutting direction. The special polished section also allows a reliable re-threading when the tap drill is withdrawn from the tapped hole and moves back in an anticlockwise direction.

### 2. Blind holes

We recommend adjacent tap drills for blind holes. The chips are guided out of the borehole against the direction of the cutting. It is particularly important to ensure that the tap drill does not run aground, because otherwise the automatic return can no longer be activated. A correspondingly large pre-borehole depth must be planned.

If this is not done, the tap drill must be loosened manually.

### 3. Blind holes up to 1.5 x D

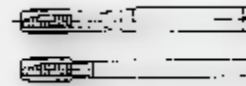
For this, our tap drills are suited to according to the adjacent figure. Also here, the chips are conveyed away out of the borehole against the cutting direction. Also here, it must be ensured that the tap drill does not run aground. A correspondingly large pre-borehole depth must be taken into account.

If this is not done, the tap drill must be loosened manually.

**Beside our tap drills with a reinforced shank, tap drills with a reduced shaft according to DIN 376 can, of course, also be used.**

**Please work with sufficient coolant that is recommended by the manufacturer for tapping.**

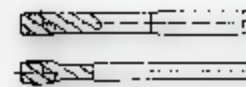
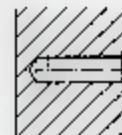
### Chip ejection downward through the hole



DIN 371 with a reinforced shank form B, with spiral point, 3.5 to 5 pitches

DIN 376 with a reduced shaft, thread depth 3 x D

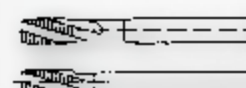
### Chip ejection along the tool



DIN 371 with reinforced shank with a spiral groove, approx. 35° right-hand twist bevel C, approx. 3 pitches

DIN 376 with reduced shaft Thread depth 2.5 x D

### Chip ejection along the tool



DIN 371 with reinforced shank with a spiral groove, approx. 17° right-hand twist, bevel C, approx. 2 to 3 pitches

DIN 376 with reduced shaft Thread depth 1.5 x D



# TCT TOOLS – TECHNICAL TERMS

## Clearance angle

is the angle between the carbide teeth and the material to be machined. ALFRA TCT core drills have several clearance angles on a cutting edge.

## Cutting depth

is the maximum material thickness that can be machined with the respective tool (should not be confused with the construction height of the tool).

## Chip flute

gathers up the chips generated or removes these from the borehole.

## Chip breaker

directs the chips from the carbide tooth into the chip flute.

## Cutting face

the chip is formed on this surface.

## Angle of rake

is the angle between the tool axis and the cutting face.

## Tooth projection

is the carbide projection to the core.

## Tooth height difference

is used for the chip splitting.

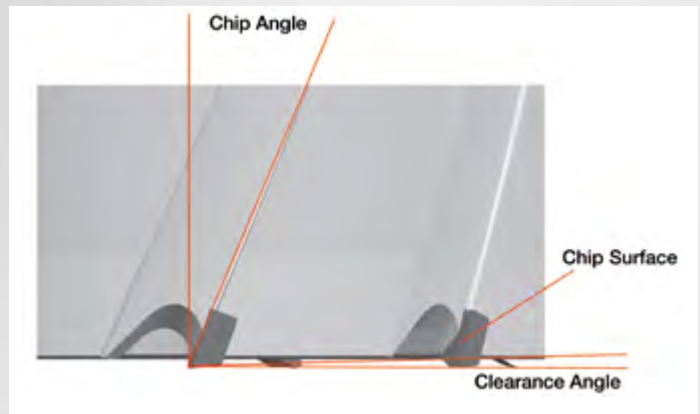
## Speed, cutting speed and feed rate (typical values)

Rotabest®- TCT hole cutters

Not suitable for automatic feed

| Material                                | m/min   | mm/r      |
|---|---------|-----------|
| Construction steel 50 kp/m <sup>2</sup> | 40-60   | 0.08-0.12 |
| Steel 50-70 kp/m <sup>2</sup>           | 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 |

Accuracy (reference value) / Input / + 0.10 mm Output / ± 0 mm



# TCT-HOLE SAWS – SPEED CHART

## Speed calculation

n = Speed (1/min)

$v_c = \text{Cutting Speed (m/min)}$   $n = \frac{v_c \times 1000}{d \cdot \pi}$

d = Tool diameter (mm)

## Worked sample:

d = 20 mm

$v_c = 50 \text{ m/min}$   $n = \frac{50000}{20 \cdot \pi} = 795,77 \text{ 1/min}$

| Tool<br>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 bis 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 at 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.

# HSS BI METAL HOLE SAWS – NOTES ON USE

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

| 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 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 3 - 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**).

| Type                          |           | Stahl-blech S235 | V2A Bleche | NE-Metalle | Kunststoff weich |
|-------------------------------|-----------|------------------|------------|------------|------------------|
| AM                            | anbohren  | 800              | 360        | 1000       | 1000             |
|                               | aufsenken | 500 - 180        | 50 - 70    | 800 - 400  | 1000 - 400       |
| AM-1                          | anbohren  | 800              | 360        | 1000       | 1000             |
|                               | aufsenken | 200 - 100        | 100 - 50   | 500 - 200  | 600 - 250        |
| PVD, PVK, DKI<br>PVD-VA + SVB | anbohren  | 800              | 360        | 1000       | 1000             |
|                               | aufsenken | 400 - 200        | 200 - 100  | 800 - 500  | 1000 - 600       |

## ALFRA HSS DM 05 Precision Multi-step drills

- 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       | unalloyed Mild steel<br>700 N/mm <sup>2</sup> | Mild steel<br>1000 N/mm <sup>2</sup> | Alloy steel<br>> 250 N/mm <sup>2</sup> | Stainless steel<br>< 1000 N/mm <sup>2</sup> | Al. alloy up to 11% Si | Thermo-plastic          | Duro-plastic | Wood        |
|----------------|---|--------------------------------------|--|---|------------------------|-------------------------|--------------|-------------|
| Material gauge | 4.0 mm X                                      | 4.0 mm X                             | 4.0 mm X                               | 3.0 mm X                                    | 4.0 mm X               | 4.0 mm H <sub>2</sub> O | 4.0 mm Air   | 25.0 mm     |
| Drilling paste | 20 - 25                                       | 10 - 16                              | 8 - 12                                 | 5 - 12                                      | 10 - 16                | 12 - 25                 | 8 - 12       | 40 - 100    |
| Ø mm           | U/min   | U/min                                | U/min                                  | U/min                                       | U/min                  | U/min                   | U/min        | U/min       |
| 3.0 - 14.0     | 2600 - 600                                    | 2100 - 450                           | 1060 - 230                             | 500 - 300                                   | 2600 - 550             | 2100 - 450              | 1500 - 340   | 3000 - 1000 |
| 6.0 - 20.0     | 1500 - 400                                    | 1200 - 320                           | 640 - 160                              | 400 - 250                                   | 1590 - 400             | 1270 - 320              | 950 - 240    | 2800 - 1000 |
| 6.0 - 22.5     | 1500 - 250                                    | 1200 - 280                           | 640 - 140                              | 400 - 250                                   | 1500 - 350             | 1270 - 280              | 950 - 210    | 2000 - 800  |
| 16.0 - 30.0    | 300 - 200                                     | 400 - 210                            | 200 - 100                              | 150 - 80                                    | 500 - 260              | 400 - 210               | 300 - 160    | 1500 - 800  |
| 26.0 - 40.0    | 330 - 200                                     | 270 - 160                            | 130 - 80                               | 100 - 60                                    | 330 - 200              | 270 - 160               | 200 - 120    | 1000 - 400  |
| 36.0 - 50.0    | 220 - 160                                     | 180 - 130                            | 90 - 60                                | 80 - 40                                     | 220 - 160              | 180 - 130               | 130 - 100    | 600 - 200   |
| 46.0 - 60.0    | 200 - 130                                     | 160 - 100                            | 80 - 50                                | 40 - 20                                     | 200 - 130              | 160 - 100               | 120 - 80     | 500 - 100   |

# PUNCHING UNITS APS 70/120 – USAGE INSTRUCTIONS

From the field, questions continue to be asked about the material thickness / hole diameter ratio ( $S/D = \emptyset$  ratio).

**Intermediate material thickness and the smallest hole or punch diameter must be a certain ratio.**

A specific ratio must exist between material thickness and the lowest hole or punch die  $\emptyset$ .

**An old rule of thumb is that the punch die must be as big or even bigger than the thickness of the material to be cut. The material thickness must be but never be greater than the punch die  $\emptyset$ .**

**This rule no longer applies to our hydraulic punching units.**

They are still used with fast-working, mechanical presses because the process takes place abruptly and the punch is loaded to the utmost.

For our ALFRA APS punching units, the punching process is carried out slowly and gently.

In this case, holes can also be punched the diameter of which is less than the thickness of the material to be cut.

**Chart 1 clarifies the right thickness/diameter ratio. This is based on trials such as:**

**Holes are to be punched in a steel plate made of S235. What is the recommended ratio?**

**The shear strength of S235 is about 30 kg/mm<sup>2</sup>. At 30, move vertically upwards in the chart to line A, from there to the left to the S/D diameter ratio scale.**

**Result: The recommended ratio is 1:1.3.**

The **upper limit** of the ratio is the dotted line B which specifies a ratio of 1:1.7. This would mean that the thickness of the material to be cut may be 1.7 times larger than the diameter of the punch die.

It goes without saying that the life expectancy of a punch with this diameter ratio should be considerably shorter than one with a ratio of 1: 1.3.

**We therefore recommend only working to line A so that sufficient reliability exists.**

**Minimal punch die  $\emptyset$  with existing material thickness**

With Chart 2, the smallest hole punch  $\emptyset$  can be easily determined.

Three varieties of material with different strength options are specified.

**Another example:**

Holes to be punched in a steel plate with a thickness of 20 mm made of S235. How large may the smallest punch die  $\emptyset$  be?

On the horizontal scale for material thickness, move vertically upward at 20 mm to the full line of S235. Then horizontally to the left up to the scale of the punch die  $\emptyset$ .

Result: = 15 mm  $\emptyset$ .

To get the breaking point of the stamp, move up to the second line.

**It is therefore advisable only to proceed according to the first method.**

**ALFRA punch dies and matrices are made from high quality material. Nevertheless, it may happen that a stamp breaks.**

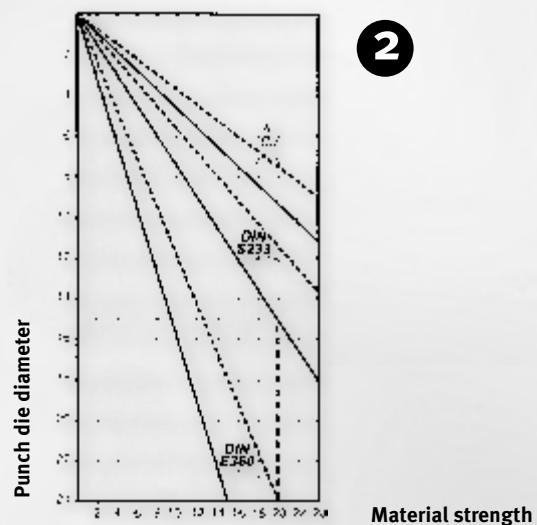
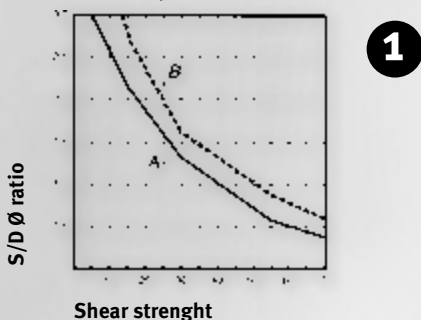
**This is caused by:**

1. S/D diameter ratio is not correct.
2. The material to be punched is not lying straight but wedged on the matrix.
3. The punching unit or the material is moved greatly during the punching process.
4. If the scraper is damaged or not properly set to the height, the material can be wedged when the punch die retracts.
5. The scraper is located too far from the punch die so that thin sheet metal bulges when scraping. In this case, the punch die breaks in flakes at the cutting edge.

In this case, we recommend providing the scraper with a bridge or possibly using a special change guide.

**We hope that you work easily and reliably with the ALFRA Press punch units with these usage instructions.**

**Diameter of the punched holes/material thickness**





# ALFRA PUNCHING UNITS APS – WORKING AREA

## Material St. 42

|                       | Material strength<br>mm<br>Material DIN S233 | Force needed for punching [kN] (10 kN... approximately 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 70  |    |    |     |     |     |     |     |     |     | APS 120 |     |     |     |     |     |     |     |     |     |     |     |
| APS 70<br>(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 |
|                       | 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 |
| 13                    |  |   |    |    |     |     | 200 | 215 | 230 | 246 | 261 | 276     | 292 | 307 | 322 | 338 | 353 | 369 | 384 | 399 | 415 | 430 |     |
| APS 120<br>(DIN S275) | 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 (sheets)  
Tau max = 0.85 \* Rm max  
coef. (Steel X / DIN S233)

| 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 unit APS 70, F max 454 = kN  
Punch diameter Ø=20 mm  
Material thickness T = 8 mm  
Material C 45, R<sub>m</sub> max=800 N/mm<sup>2</sup>

**Example 2:** Punching unit APS 70, F max = kN 313  
Punch diameter Ø = 21 mm  
Material thickness T = 12 mm  
Material DIN S275, R<sub>m</sub> max=510 N/mm<sup>2</sup>

**Calculation 1:** F = F(DIN S233) \* coef.(C 45/DIN S233)  
F = 189 \* 1.70 = 321.3 kN  
F is less than F max, punch force sufficient

**Calculation 2:** F = F(DIN S233) \* coef.(DIN S275/DIN S233)  
F = 298 \* 1.09 = 324.8 kN  
F is greater than F max;  
Punch power is not sufficient;  
Please opt for our APS 120

## CONVERSION – PRESSURE

- Pascal (pa) = 1 Newton (N)/m<sup>2</sup>
- 1 Bar (bar) = 10 to the power of 5 Pa = 10 to the power of 5 N/m<sup>2</sup> = 10 N/m<sup>2</sup> = 750.06 mercury column
- 1 bar = 1.019 kg/cm<sup>2</sup> = 0.1 N/mm<sup>2</sup> = 14.5 psi
- 1 kg/cm<sup>2</sup> (atm) = 0.981 bar = 0.0981 N/mm<sup>2</sup> = 14.2234 psi
- 1 bar = 1.02 technical atmospheres (at) = 1.02 kg/cm<sup>2</sup> = 10 N/cm<sup>2</sup>
- 1 physical atmosphere (atm) = 1.013 bar = 1.033 kg / cm<sup>2</sup> = 760 mm mercury column = 760 torr
- 1 torr = 1.332 mbar
- 1 m water column (mH<sub>2</sub>O, = 0.0980665 bar)
- 1 mm H<sub>2</sub>O = 0.0980665 mbar = 9.80655 Pa
- 1 N/mm<sup>2</sup> = 10 bar = 10.19 kg/cm<sup>2</sup> = 145 psi
- 1 psi = 0.069 bar = 0.0703 kg/cm<sup>2</sup> = 0.0069 N/mm<sup>2</sup>

## CONVERSION TABLE – PRESSURE UNITS

### Convert 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  |

# ALFRA – TIPS FOR CORRECT DEBURRING

## FOR THE MODELS KFH 150, KFH 250, KFT 250, KFT 500

Our precision high performance drive motors are infinitely variable. It is advisable to first start at low motor rpm, then continuously increase it during the milling.

You can see when the ideal rpm is reached on the running noise of the milling cutter and the feed.

The work material-based cutting speed can also be determined using the famous formula and the pre-set speed:

$$N = \frac{V_c}{d \cdot \pi}$$

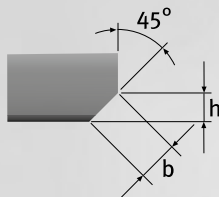
The type of material, the bevel height and the cutting edge geometry of the solid carbide milling cutters are primarily responsible for the The milling cutter speed (N), the cutting speed VC.

### The bevel height (H)

The bevel height is decisive for the choice of the solid carbide milling cutter. With the KFT 250 and 500 KFT table models, it must be noted that the work piece must be grasped and guided by hand. If the milling performance is too great especially for smaller work pieces, the bevel height should be made with several infeeds.

### The bevel width (B)

The bevel width can be calculated using the formula ( $B \times H = 1.414$ ).



### Rotation direction

When guiding the work piece on the table models, it is important to note the direction of rotation.

With hand-guided models (KFH 150, KFH 250), the direction of rotation (see arrow) must be observed. Climb milling is only suitable for very small bevel heights.

### Surface quality

The surface quality of the bevel is dependent on the solid carbide milling cutters used and the material as well as the selected feed rate. If the chips start to glow, the feed rate is too high or the milling cutters are too finely intermeshed.

### Tool cost savings

In the above models, commercially available solid carbide end mills with front cut can be used. By moving the milling cutter in the spindle, the cutter can be used in the full working length.



#### Cost reduction:

*The major part of the cutting area can be used by moving the cutter in the collet chuck!*

## ALFRA WELDING EDGE MILLING MACHINE – SKF 63-15

### Material

|  |                 |
|--|-----------------|
| General construction steel up to 850 N/mm <sup>2</sup>     | 0.8 - 1.0 m/min |
| Case-hardened steel over 850 N/mm <sup>2</sup>             | 0.75 m/min      |
| Rust and acid-resistant steels up to 600 N/mm <sup>2</sup> | 0.5 m/min       |
| Cast steel up to 450 N/mm <sup>2</sup>                     | 0.6 m/min       |
| Cast iron up to 400 N/mm <sup>2</sup>                      | 0.8 - 1.0 m/min |
| Aluminium  | 0.4 m/min       |

(Required: special inserts available on special request)

### Feed recommendations

### ALFRA – carbide inserts for the welding edge milling machine SKF-63-15

|   | Prod.-No.    |  | Prod.-No.    |
|---|--------------|--|--------------|
| Carbide insert, TiAlN/TiN-PVD multi-layer coating<br>Universal for steel and stainless steel<br>Clearance angle 11°                                     | 25013        | Carbide insert, TiAlN/TiN-PVD multi-layer coating<br>for steel < 1400 N/mm <sup>2</sup> ; stainless steel < 900 N/mm <sup>2</sup><br>Clearance angle 11° | 25010.15036E |
| Carbide insert, TiAlN/TiN-PVD multi-layer coating<br>for steel < 850 N/mm <sup>2</sup> ; stainless steel < 900 N/mm <sup>2</sup><br>Clearance angle 20° | 25010.15036B |  |              |

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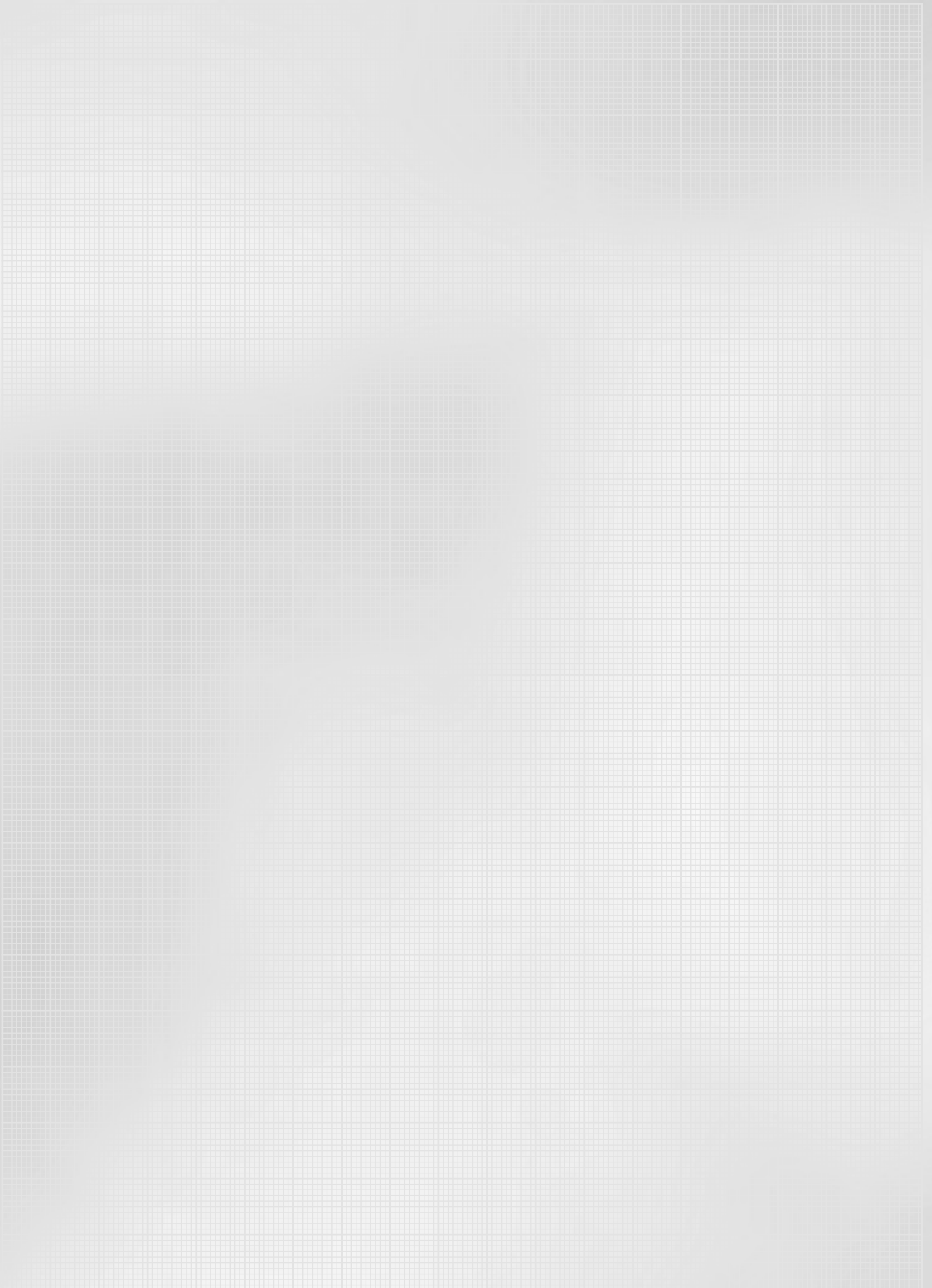
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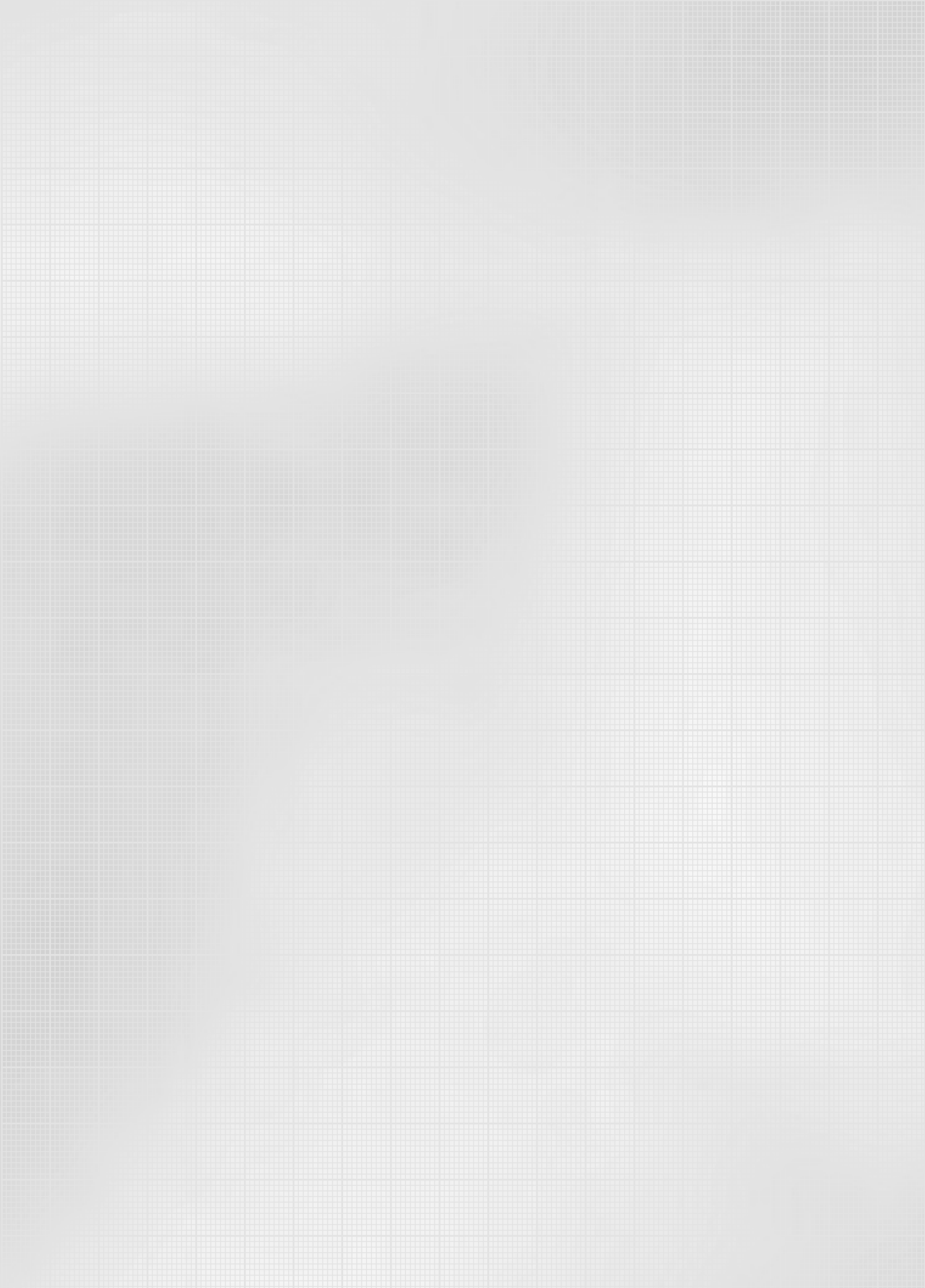
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# YOUR NOTES



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