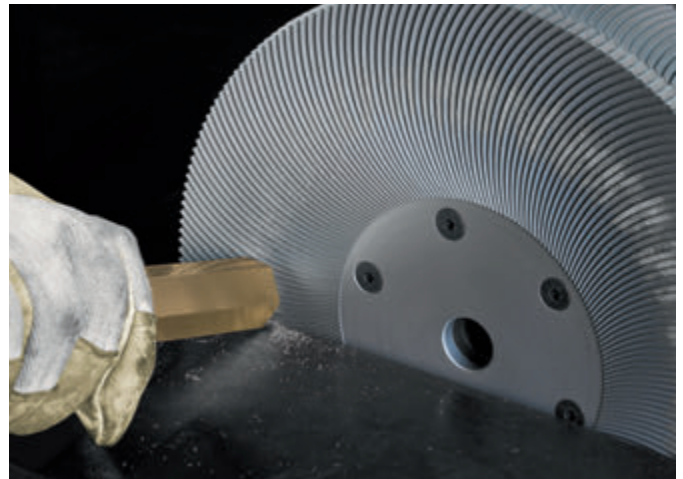


Filing Discs and Rings Tailor-made solution

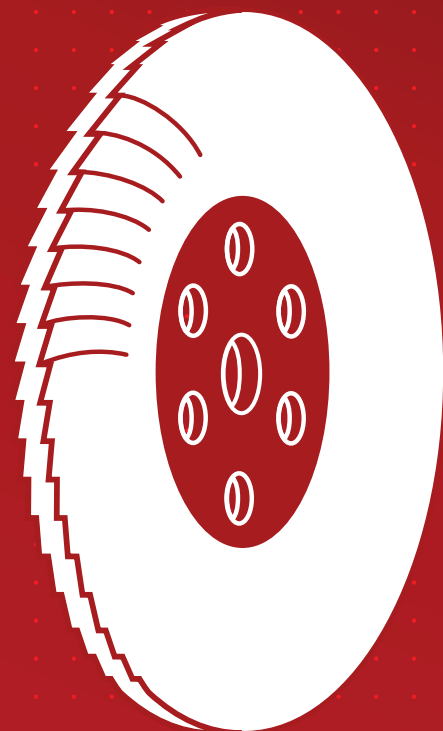
84 Technical Information

85 Filing Discs and Rings Special production



Product line marking

Product lines are labelled in the table header with the appropriate tabs. Further information on page **14** and **15**.

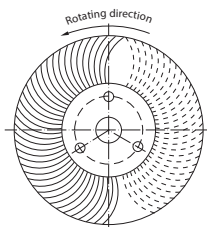


Types of cut and their application

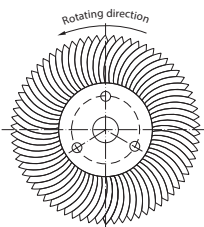
| | Z1 | Z2 | Z3 |
|--|--|---|---|
| | Aluminium alloys, plastics v = 38–150 m/min Wood v = 150–300 m/min | Aluminium alloys, plastics v = 38–150 m/min Bronze, brass v = 150–300 m/min | Steel up to 450 N/mm ² v = 38–75 m/min Cast and malleable iron v = 38–150 m/min |

Number of teeth

| Disc-Ø Ring-Ø | Z1 cut coarse | | Z2 cut medium | | Z3 cut fine | |
|------------------|------------------|------|------------------|------|----------------|------|
| | Disc | Ring | Disc | Ring | Disc | Ring |
| 160 | 120 | 160 | 160 | 200 | 200 | 240 |
| 210 | 160 | 200 | 200 | 240 | 240 | 280 |
| 260 | 200 | 240 | 240 | 280 | 280 | 320 |
| 310 | 240 | 280 | 280 | 320 | 320 | 360 |



Cut design 1
Right-hand cutting,
usable both sides



Cut design 4
One-sided cutting with
teeth on periphery

Recommended speeds

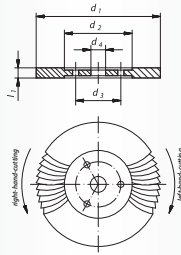
| Material | speeds approx. RPM |
|-----------------------------------|--------------------|
| Cast iron | 75/150 |
| Steel up to 450 N/mm ² | 75 |
| Aluminium alloys | 75/150 |
| Bronze, brass | 300 |
| Plastics | 75/150 |
| Wood | 300 |



Industry

Filing discs

Ordering example: F 16-R-1 Z3



Packing unit:

1 pc. per type

If left-hand-cutting is desired for cut design 1 and cut design 4 please replace R by L in the Lukas-No.

Further dimensions on request.

| Description | Cut | d ₁ mm | d ₂ mm | d ₃ mm | d ₄ mm | l ₁ mm | Number of bores | recommended for | | | | | |
|-------------|-----|----------------------|----------------------|----------------------|----------------------|----------------------|-----------------|-----------------|--|---|---|---|---|
| F 16-R-1 | Z1 | 160 | 80 | 60 | 15 | 7 | 3 | ① | | ⑤ | ⑥ | ⑧ | ▲ |
| F 16-R-1 | Z2 | 160 | 80 | 60 | 15 | 7 | 3 | ① | | ⑤ | ⑥ | ⑧ | ▲ |
| F 16-R-1 | Z3 | 160 | 80 | 60 | 15 | 7 | 3 | ① | | ⑤ | ⑥ | ⑧ | ▲ |
| F 16-R-4 | Z1 | 160 | 80 | 60 | 15 | 7 | 3 | ① | | ⑤ | ⑥ | ⑧ | ▲ |
| F 16-R-4 | Z2 | 160 | 80 | 60 | 15 | 7 | 3 | ① | | ⑤ | ⑥ | ⑧ | ▲ |
| F 16-R-4 | Z3 | 160 | 80 | 60 | 15 | 7 | 3 | ① | | ⑤ | ⑥ | ⑧ | ▲ |
| F 21-R-1 | Z1 | 210 | 80 | 60 | 15 | 8 | 3 | ① | | ⑤ | ⑥ | ⑧ | ▲ |
| F 21-R-1 | Z2 | 210 | 80 | 60 | 15 | 8 | 3 | ① | | ⑤ | ⑥ | ⑧ | ▲ |
| F 21-R-1 | Z3 | 210 | 80 | 60 | 15 | 8 | 3 | ① | | ⑤ | ⑥ | ⑧ | ▲ |
| F 21-R-4 | Z1 | 210 | 80 | 60 | 15 | 8 | 3 | ① | | ⑤ | ⑥ | ⑧ | ▲ |
| F 21-R-4 | Z2 | 210 | 80 | 60 | 15 | 8 | 3 | ① | | ⑤ | ⑥ | ⑧ | ▲ |
| F 21-R-4 | Z3 | 210 | 80 | 60 | 15 | 8 | 3 | ① | | ⑤ | ⑥ | ⑧ | ▲ |
| F 26-R-1 | Z1 | 260 | 110 | 90 | 20 | 9 | 6 | ① | | ⑤ | ⑥ | ⑧ | ▲ |
| F 26-R-1 | Z2 | 260 | 110 | 90 | 20 | 9 | 6 | ① | | ⑤ | ⑥ | ⑧ | ▲ |
| F 26-R-1 | Z3 | 260 | 110 | 90 | 20 | 9 | 6 | ① | | ⑤ | ⑥ | ⑧ | ▲ |
| F 26-R-4 | Z1 | 260 | 110 | 90 | 20 | 9 | 6 | ① | | ⑤ | ⑥ | ⑧ | ▲ |
| F 26-R-4 | Z2 | 260 | 110 | 90 | 20 | 9 | 6 | ① | | ⑤ | ⑥ | ⑧ | ▲ |
| F 26-R-4 | Z3 | 260 | 110 | 90 | 20 | 9 | 6 | ① | | ⑤ | ⑥ | ⑧ | ▲ |
| F 31-R-1 | Z1 | 310 | 125 | 90 | 20 | 10 | 6 | ① | | ⑤ | ⑥ | ⑧ | ▲ |
| F 31-R-1 | Z2 | 310 | 125 | 90 | 20 | 10 | 6 | ① | | ⑤ | ⑥ | ⑧ | ▲ |
| F 31-R-1 | Z3 | 310 | 125 | 90 | 20 | 10 | 6 | ① | | ⑤ | ⑥ | ⑧ | ▲ |
| F 31-R-4 | Z1 | 310 | 125 | 90 | 20 | 10 | 6 | ① | | ⑤ | ⑥ | ⑧ | ▲ |
| F 31-R-4 | Z2 | 310 | 125 | 90 | 20 | 10 | 6 | ① | | ⑤ | ⑥ | ⑧ | ▲ |
| F 31-R-4 | Z3 | 310 | 125 | 90 | 20 | 10 | 6 | ① | | ⑤ | ⑥ | ⑧ | ▲ |

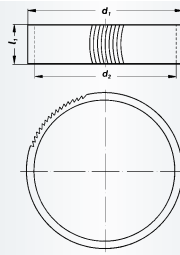
Made of alloyed tool steel (WS) for all machinable materials with tensile strength up to approx. 450 N/mm². Particularly suitable for the machining of aluminium and non-ferrous metals. Filing discs in cut design 1 can be used on

both sides. For the severest conditions, filing discs in HSS are also available on request.



Filing rings

Ordering example: FR 16 Z3



Packing unit:

1 pc. per type

Further dimensions on request.

| Description | Cut | d ₁ mm | l ₁ mm | d ₂ mm | recommended for | | | | | | | | | |
|-------------|-----|----------------------|----------------------|----------------------|-----------------|--|--|--|---|---|--|---|--|---|
| FR 16 | Z1 | 160 | 40 | 145 | ① | | | | ⑤ | ⑥ | | ⑧ | | ▲ |
| FR 16 | Z2 | 160 | 40 | 145 | ① | | | | ⑤ | ⑥ | | ⑧ | | ▲ |
| FR 16 | Z3 | 160 | 40 | 145 | ① | | | | ⑤ | ⑥ | | ⑧ | | ▲ |
| FR 21 | Z1 | 210 | 40 | 195 | ① | | | | ⑤ | ⑥ | | ⑧ | | ▲ |
| FR 21 | Z2 | 210 | 40 | 195 | ① | | | | ⑤ | ⑥ | | ⑧ | | ▲ |
| FR 21 | Z3 | 210 | 40 | 195 | ① | | | | ⑤ | ⑥ | | ⑧ | | ▲ |
| FR 26 | Z1 | 260 | 40 | 245 | ① | | | | ⑤ | ⑥ | | ⑧ | | ▲ |
| FR 26 | Z2 | 260 | 40 | 245 | ① | | | | ⑤ | ⑥ | | ⑧ | | ▲ |
| FR 26 | Z3 | 260 | 40 | 245 | ① | | | | ⑤ | ⑥ | | ⑧ | | ▲ |
| FR 31 | Z1 | 310 | 40 | 295 | ① | | | | ⑤ | ⑥ | | ⑧ | | ▲ |
| FR 31 | Z2 | 310 | 40 | 295 | ① | | | | ⑤ | ⑥ | | ⑧ | | ▲ |
| FR 31 | Z3 | 310 | 40 | 295 | ① | | | | ⑤ | ⑥ | | ⑧ | | ▲ |

Filing rings of WS are seamless forged. If correctly used, they will not crack even under the most severe conditions. **Application – similar to filing discs.**

Not available in high speed steel.