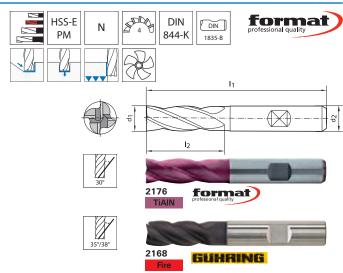
## Schaftfräser

| ortsetzung            |                               |                |                                         |           |                          | format | format) |          |
|-----------------------|-------------------------------|----------------|-----------------------------------------|-----------|--------------------------|--------|---------|----------|
|                       |                               |                |                                         |           | STAHL                    | 2169   | 2175    | Bestell- |
|                       |                               |                |                                         |           | < 1400 N/mm <sup>2</sup> | blank  | TiAIN   | Nr.      |
| $\emptyset d_1 = k10$ | Schneidenlänge I <sub>2</sub> | Gesamtlänge I₁ | Schaft- $\emptyset$ d <sub>2</sub> = h6 |           | f <sub>z</sub>           |        |         |          |
| mm                    | mm                            | mm             | mm                                      | Zähnezahl | mm                       | €      | €       |          |
| 12                    | 26                            | 83             | 12                                      | 4         | 0,047                    | 18,10  | 24,70   | 1200     |
| 13                    | 26                            | 83             | 12                                      | 4         | 0,047                    | 20,20  | 26,60   | 1300     |
| 14                    | 26                            | 83             | 12                                      | 4         | 0,054                    | 20,20  | 27,40   | 1400     |
| 15                    | 26                            | 83             | 12                                      | 4         | 0,054                    | 23,50  | 30,60   | 1500     |
| 16                    | 32                            | 92             | 16                                      | 4         | 0,058                    | 24,60  | 32,00   | 1600     |
| 18                    | 32                            | 92             | 16                                      | 4         | 0,065                    | 30,50  | 39,20   | 1800     |
| 20                    | 38                            | 104            | 20                                      | 4         | 0,074                    | 36,30  | 51,60   | 2000     |
| 22                    | 38                            | 104            | 20                                      | 6         | 0,049                    | 39,60  | 56,80   | 2200     |
| 24                    | 45                            | 121            | 25                                      | 6         | 0,049                    | _      | 73,00   | 2400     |
| 25                    | 45                            | 121            | 25                                      | 6         | 0,046                    | 58,40  | 73,70   | 2500     |
| 30                    | 45                            | 121            | 25                                      | 6         | 0,047                    | 98,50  | _       | 3000     |
| 32                    | 53                            | 133            | 32                                      | 6         | 0,054                    | 111,00 | _       | 3200     |
| 2 1 646 !!            |                               |                |                                         |           |                          | (W206) | (W208)  |          |

## Schaftfräser

Ausführung: Mit Zentrumschnitt, zum Bohren geeignet.
Anwendung: Einsetzbar zum Umfangs- und Stirnfräsen.



| Einsatz                | STAHL                      |                             | INOX                        |                      | GUSS              |        | SONDLEG.   | ONDLEG. NE-N |                      |                | METALLE        |                            | GEHÄRTETER STAHL                |             |             |            |                 |
|------------------------|----------------------------|-----------------------------|-----------------------------|----------------------|-------------------|--------|------------|--------------|----------------------|----------------|----------------|----------------------------|---------------------------------|-------------|-------------|------------|-----------------|
|                        | < 700<br>N/mm <sup>2</sup> | < 1000<br>N/mm <sup>2</sup> | < 1400<br>N/mm <sup>2</sup> | ferrit./<br>martens. | austeni-<br>tisch | Duplex | GG/<br>GTS | GGG          | Titan ><br>850 N/mm² | Alu <<br>8% Si | Alu ><br>8% Si | Kupfer/<br>Kupfer-<br>Leg. | Graphit/<br>GFK/CFK/<br>Duropl. | < 55<br>HRC | < 60<br>HRC | >60<br>HRC | Bestell-<br>Nr. |
| \/ [==/==!=1           | 65                         | 45                          | 25                          | _                    | _                 | -      | 60         | -            | _                    | _              | -              | -                          | _                               | -           | _           | _          | 2176            |
| V <sub>c</sub> [m/min] | 66                         | 53                          | 42                          | _                    | _                 | 42     | 45         | 36           | 26                   | 144            | 132            | 108                        | _                               | _           | _           | _          | 2168            |

|                        |                       |                               |                |                                         |                | format puly | GUHRING |          |
|------------------------|-----------------------|-------------------------------|----------------|-----------------------------------------|----------------|-------------|---------|----------|
| $\emptyset d_1 = js12$ | $\emptyset d_1 = k10$ |                               |                |                                         | STAHL          | 2176        | 2168    | Bestell- |
| y u₁ = js12<br>mm      | mm                    |                               |                |                                         | < 1400 N/      | TIAIN       | Fire    | Nr.      |
| 111111                 |                       |                               |                |                                         | mm²            |             |         |          |
|                        |                       | Schneidenlänge I <sub>2</sub> | Gesamtlänge I₁ | Schaft- $\emptyset$ d <sub>2</sub> = h6 | f <sub>z</sub> |             |         |          |
| 2176                   | 2168                  | mm                            | mm             | mm                                      | mm             | €           | €       |          |
| 1                      | -                     | 3                             | 49             | 6                                       | 0,006          | 22,40       | _       | 0100     |
| 2                      | -                     | 7                             | 51             | 6                                       | 0,008          | 20,30       | _       | 0200     |
| 3                      | -                     | 8                             | 52             | 6                                       | 0,017          | 20,30       | _       | 0300     |
| 4                      | _                     | 11                            | 55             | 6                                       | 0,022          | 20,30       | _       | 0400     |
| 5                      | -                     | 13                            | 57             | 6                                       | 0,028          | 20,30       | _       | 0500     |
| 6                      | _                     | 13                            | 57             | 6                                       | 0,032          | 20,30       | _       | 0600     |
| -                      | 8                     | 19                            | 69             | 10                                      | 0,043          | _           | 63,80   | 0080     |
| 8                      | _                     | 19                            | 69             | 10                                      | 0,043          | 30,50       | _       | 0800     |
| -                      | 10                    | 22                            | 72             | 10                                      | 0,066          | _           | 65,20   | 0100     |
| 10                     | _                     | 22                            | 72             | 10                                      | 0,066          | 30,90       | _       | 1000     |
| -                      | 12                    | 26                            | 83             | 12                                      | 0,067          | _           | 73,60   | 0120     |
| -                      | 14                    | 26                            | 83             | 12                                      | 0,073          | _           | 98,90   | 0140     |
| 12                     | -                     | 26                            | 83             | 12                                      | 0,067          | 42,00       | _       | 1200     |
| 14                     | -                     | 26                            | 83             | 12                                      | 0,073          | 46,60       | _       | 1400     |
| -                      | 16                    | 32                            | 92             | 16                                      | 0,081          | _           | 97,60   | 0160     |
| 16                     | -                     | 32                            | 92             | 16                                      | 0,081          | 55,50       | _       | 1600     |
| 18                     | -                     | 32                            | 92             | 16                                      | 0,077          | 69,40       | _       | 1800     |
| -                      | 20                    | 38                            | 104            | 20                                      | 0,083          | _           | 119,50  | 0200     |
| 20                     | _                     | 38                            | 104            | 20                                      | 0,083          | 90,20       | _       | 2000     |
| 25                     | _                     | 45                            | 121            | 25                                      | 0,089          | 133,50      | _       | 2500     |
|                        |                       |                               |                |                                         |                | (W208)      | (W205)  |          |