

Fräsen Per Plex®

KUNSTSTOFF-FRÄSEN MIT SYSTEM

MILLING PLASTIC WITH A SYSTEM

- HSC-Fräser Z1 Gerade / Rechts / Links auch abgesetzt
- HSC-Fräser Z2 Gerade / Rechts / Links auch abgesetzt
- HSC-Fräser Z3 Gerade / Rechts / Links auch abgesetzt
- Gewindefräser Z1
- Schaumfräser Z3, Schaft- und Halbradiusfräser
- HSC-Fräser Z4 für medizinische Anwendungen
- Kunststoffbohrwerkzeuge Z2
- Form- und Scheibenfräser



- *HSC-End mill 1F straight / right / left also set free*
- *HSC-End mill 2F straight / right / left also set free*
- *HSC-End mill 3F straight / right / left also set free*
- *Threadmill 1F*
- *Foam mill 3F, end mill and half circle end mill*
- *HSC-End mill 4F for medical technology*
- *Plastic drill tools 2F*
- *Form and disc mill*

- HSC-Fräser Z1 Gerade / Rechts / Links auch abgesetzt
- HSC-Fräser Z2 Rechts / Links auch abgesetzt



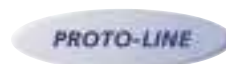
- *HSC-End mill 1F straight / right / left also set free*
- *HSC-End mill 2F right / left also set free*

- FPE-Fräser Z1 Rechts, auch abgesetzt
- FPP A1-MINI Z1
- FPE-Vollradiusfräser Z1
- Formfräser Z2
- V-Nutenfräser Z1



- *FPE-End mill 1F right, also set free*
- *FPP A1-MINI 1F*
- *FPE-Ball end mill 1F*
- *Form mill 2F*
- *Slot milling 1F*

- MINI-Fräser Z2 Vollradius / Torus
- HSC-Fräser Z2 Vollradius / Torus



- *MINI end mill 2F Ball end mill / Toric end mill*
- *HSC-end mill 2F Ball end mill / Toric end mill*

DIP® Diamond for Industrial Production - patented

Fräsen Per Plex®

KUNSTSTOFF-FRÄSEN MIT SYSTEM

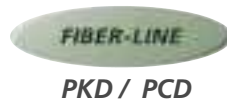
MILLING PLASTIC WITH A SYSTEM

- Carbon-Fräser N / WD / GR-verzahnt
- Honeycombs-Fräser
- HEXA CUT®-Fräser
- SMC-Fräser
- CARB STAR®-Fräser Z10 / Z12
- Kompression-Fräser
- FIBER-DRILLS
- FIBER-DRILLS FVK / Metall



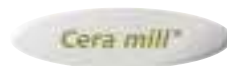
- Carbon-mill N / WD / GR-toothed
- Honeycombs-mill
- HEXA CUT®-mill
- SMC-mill
- CARB STAR®-mill 10F / 12F
- Compression-mill
- FIBER-DRILLS
- FIBER-DRILLS FRP / Metal

- PKD-Vollradius-Fräser Z2
- PKD-Schaftfräser Z2 / Z3
- PKD-Fräser mit TEC SHARK®-Lasierung
- gedrollte PKD-Fräser
- PKD-Mehrzahnfräser
- PKD-Spiralbohrer mit Voll-PKD-Kopf
- PKD-Bohrsenker



- PCD-Ball end mill 2F
- PCD-End mill 2F / 3F
- PCD-mill with TEC SHARK®-lasering
- PCD-mill with helix
- PCD-Multi tooth mill 4F
- PCD-Top drill bit with full-PCD-head
- PCD-drill and counter sinks

- Fräser Z1 / Z2
- Fräser WD-verzahnt
- Fräser HEXA CUT®-Geometrie



- Mill 1F / 2F
- Mill WD-toothed
- Mill with HEXA CUT®-geometry

- Airbag-Schneidklingen
- Trennklingen



- Airbag cutting blades
- Peel blades

Optimale Fräserauswahl · How to choose the best tool

| Material material | | UNIVERSAL-LINE | SHARP-LINE | Oberfläche surface | Standzeit life path | Oberfläche surface | Standzeit life path |
|----------------------|-------------------|----------------|------------|-----------------------|------------------------|-----------------------|------------------------|
| Polyolefine | PE | | | ● ● ● | ● ● | ● ● | ● ● |
| | PP | | | ● ● ● | ● ● ● | ● ● ● | ● ● ● |
| | PVC | | | ● ● ● | ● ● ● | | |
| Styrol | PS | | | ● ● | ● ● | ● ● ● | ● ● ● |
| | SAN | | | ● ● | ● ● | ● ● ● | ● ● ● |
| | ABS | | | ● ● ● | ● ● ● | ● ● ● | ● ● ● |
| | PMMA | | | ● ● | ● ● | | |
| | Acryl | | | ● ● | ● ● | | |
| | PC | | | ● ● | ● ● | | |
| | POM | | | ● ● ● | ● ● ● | | |
| Fluor | PTFE | | | ● ● | ● ● | | |
| | FEP | | | ● ● | ● ● | | |
| | PVDF | | | ● ● ● | ● ● | | |
| Polyamide | PA | | | ● ● | ● ● ● | ● ● ● | ● ● ● |
| Polyester | PET | | | ● ● | ● ● | | |
| Thermoplaste | PPE | | | ● ● | ● ● ● | | |
| | PEEK | | | | | | |
| | PU | | | ● ● ● | ● ● | ● ● ● | ● ● ● |
| Polysulfon | PSU | | | ● ● ● | ● ● ● | | |
| | PES | | | ● ● | ● ● ● | | |
| | PPS | | | ● ● | ● ● | | |
| | PI | | | ● ● | ● ● | | |
| | PAI | | | ● ● | ● ● | | |
| | PEI | | | ● ● | ● ● ● | | |
| Duroplaste | PF | | | ● ● | ● ● | | |
| | MF | | | ● ● ● | ● ● | | |
| | MPF | | | ● ● | ● ● | | |
| | UF | | | ● ● | ● ● | | |
| | SI | | | ● ● | ● ● | | |
| Elastomere | Gummi | | | | | ● ● ● | ● ● |
| | Latex | | | ● ● | | ● ● | ● ● |
| | Kautschuk | | | ● ● | ● ● | ● ● | ● ● |
| Epoxid | EP | | | ● ● | ● ● | | |
| Ureol | Phenolharze | | | ● ● | | | |
| | PUR | | | ● ● ● | ● ● ● | | |
| | Weichschäume | | | ● ● ● | ● ● | | |
| | Hartschäume | | | ● ● ● | ● ● ● | | |
| Aluminium | Aluminium Dibond® | | | ● ● ● | ● ● ● | | |

Optimale Fräserauswahl · How to choose the best tool

| Material material | | UNIVERSAL-LINE | | SHARP-LINE | | |
|----------------------------|---|------------------------|------------------------|-----------------------|------------------------|--|
| | | Oberfläche surface | Standzeit life path | Oberfläche surface | Standzeit life path | |
| GFK | Faser- verbund- werkstoffe | GFK-pulverspanend | | | | |
| | | GFK-kurzspanend | | | | |
| | | GFK-langspanend | | | | |
| | | Organoblech | | | | |
| | | Glasgewebe | | | | |
| | | GMT | | | | |
| | | LFT | ● ● ● ● | ● ● | | |
| | | LFI | ● ● ● ● | ● ● | | |
| | | SMC | | | | |
| | CFK | | Hartgewebe | ● ● | ● ● | |
| CFK bis 30% | | | ● ● ● ● | ● ● | | |
| CFK 30%- 60% | | | | | | |
| | | CFK über 60% | | | | |
| | | CFK-Duroplast-Matrix | | | | |
| | | CFK-Thermoplast-Matrix | ● ● ● ● | ● ● | ● ● ● ● | |
| | | Struktur-CFK | | | | |
| | | Prepreg | ● ● | ● ● | | |
| | | RTM | ● ● | ● ● | | |
| | | SMC-CF | | | | |
| | | BMC | | | | |
| Mineral gefüllt | | Reincarbon | | | | |
| | | NF-PU | | | | |
| | | CFC | | | | |
| | | CMC | | | | |
| | Grünlinge Hartmetall | | | | | |
| | Grünlinge Keramik | | | | | |
| | Korian | ● ● ● ● | ● ● ● ● | | | |
| | Aramidfasern | | | | | |
| | KEVLAR | ● ● ● ● | ● ● ● ● | | | |
| Honycomb | Papier | | | | | |
| | Glas | | | | | |
| Holz | MDF | | | | | |
| | | | | | | |

