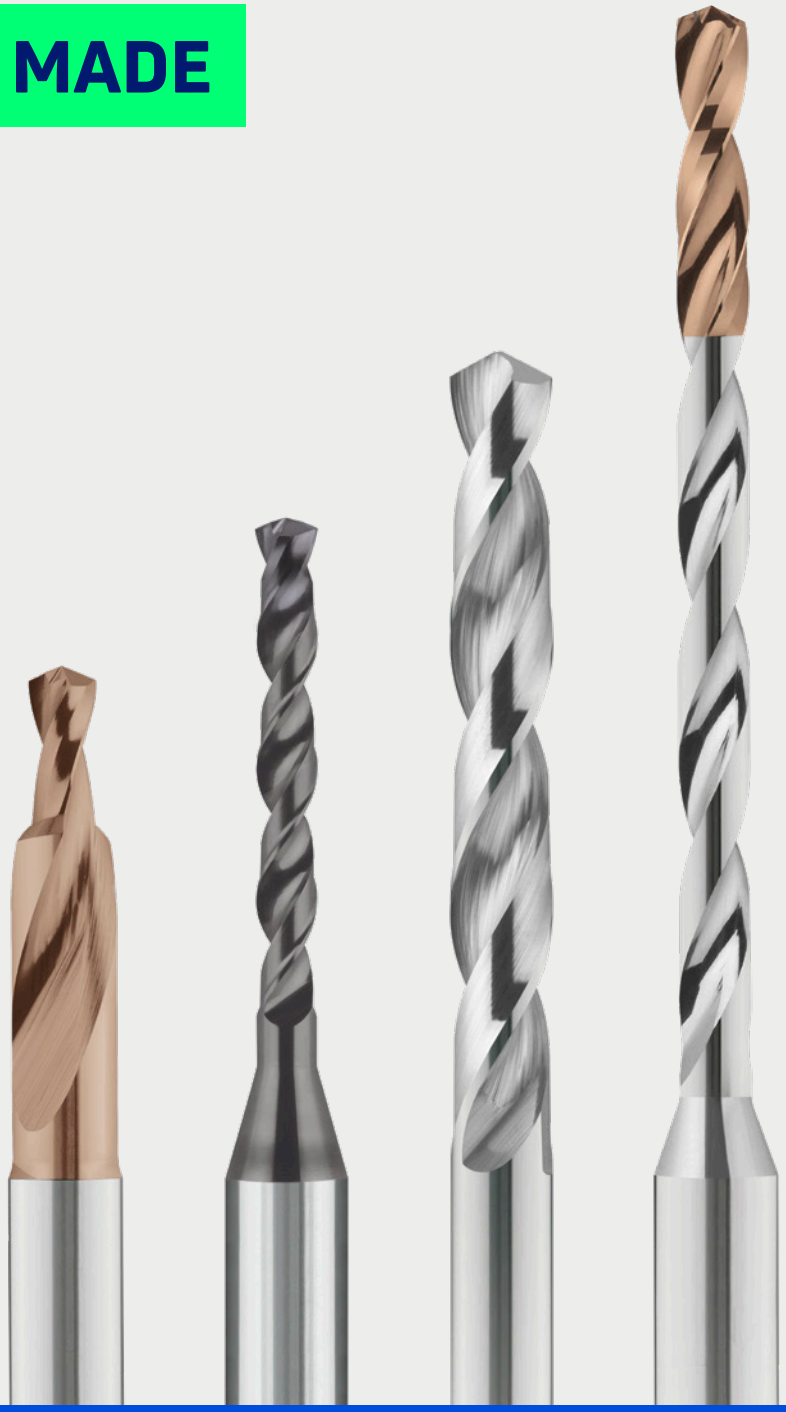
SWISS MADE

PFERD TOOLS



Präzisionswerkzeuge
Precision tools
Outils de précision

pferd.com

Unsere Kompetenzen | Our Expertise

Made in Deutschland, Italien und der Schweiz

- Zerspanungs- und Schleifexpertise in Deutschland seit 1799.
- SILMAX-Fertigungs-Know-How in Italien seit 1819.
- TUSA-Präzisionswerkzeuge-Know-How in der Schweiz seit 1967.
- Gebündelte PFERD TOOLS Expertise in den Bereichen Werkzeugschleifen, Schneidkantenpräparation, Beschichtungstechnologie und Oberflächenbehandlung.

Made in Germany, Italy and Switzerland

- Machining and grinding expertise in Germany since 1799.
- SILMAX production expertise in Italy since 1819.
- TUSA precision tooling expertise in Switzerland since 1967.
- Pooled PFERD TOOLS expertise in the fields of tool grinding, cutting edge preparation, coating technology and surface treatment.

High-End Fertigungsanlagen und Beschichtungstechnologie

- Innovative Inhouse-Beschichtungstechnologie.
- 93 hochmoderne CNC-Werkzeugschleifmaschinen.
- State-of-the-art Produktions- und Messtechnik für mikrometergenaue Toleranzen.

High-end production facilities and coating technology

- Innovative in-house coating technology.
- 93 cutting-edge CNC tool grinding machines.
- State-of-the-art production and measuring technology for super-accurate tolerances down to the last micrometre.

Geringste Fertigungstoleranzen für exakte Produkte nach Maß

- Technisch versierte Beratung auf Augenhöhe.
- Fertigung von passgenauen, kundenspezifischen Lösungen mit geringsten Toleranzen.
- Prozesskompetenz von der Auslegung bis zum effizienten Einsatz der Werkzeuge.

Very tight production tolerances for precise, custom-made products

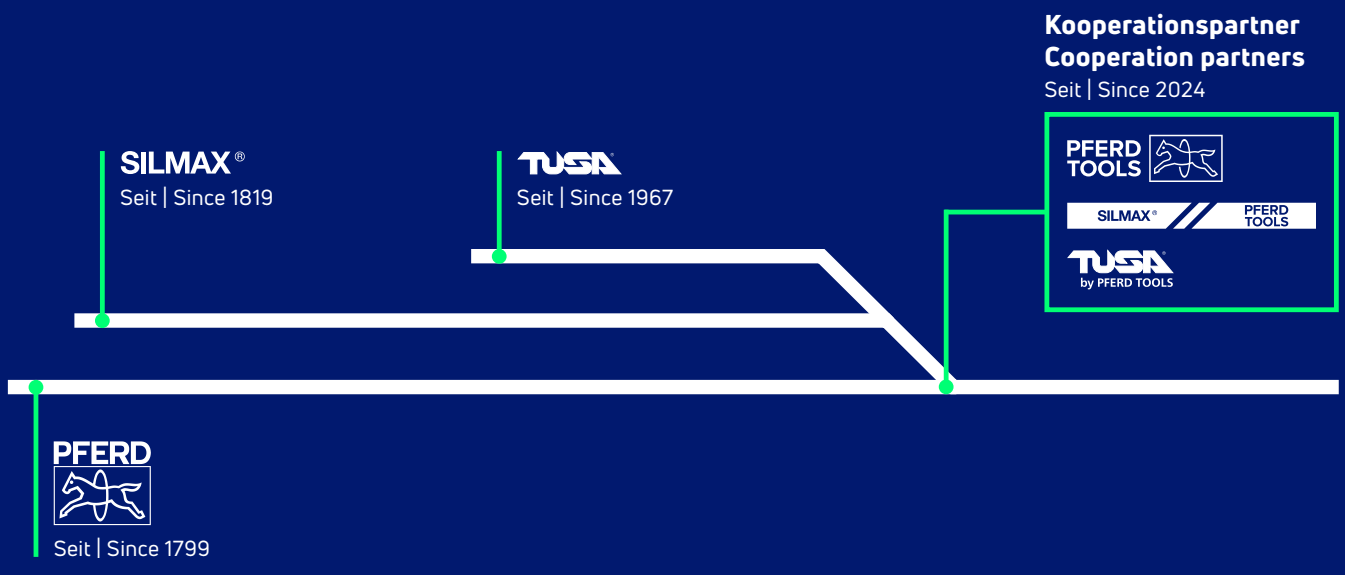
- Expert technical advice from a true partner.
- Production of precise, customer-specific solutions with very tight tolerances.
- Process expertise from the design stage all the way to the efficient use of the tools.

Drei starke Partner, vereint durch dieselben Werte

- Verwurzelt in Tradition, geprägt von Innovation.
- Zuverlässige Partnerschaft, erstklassige Beratung.
- Fundiertes Fachwissen, praxisnahe Lösungen.

Three strong partners, united by shared values

- Rooted in tradition, shaped by innovation.
- A reliable partnership, first-class advice.
- In-depth expertise, practical solutions.



Innovative by Tradition

PFERD TOOLS ist **seit über 225 Jahren Wegbereiter für innovative Werkzeuglösungen** in den Bereichen Oberflächenbearbeitung, Trennen und Zerspanen von Werkstoffen. Wir bieten Ihnen **Premium-Produkte in konstanter Qualität**, **zuverlässige Lieferung, umfassende Beratung** und **erstklassigen Service**. Als international ausgerichtetes Familienunternehmen sind wir immer dort, wo Sie uns brauchen – persönlich und digital.

PFERD TOOLS has been a **pioneer in innovative tool solutions** for work on surfaces and for cutting and machining of materials **for over 225 years**. We offer you **premium products, consistent quality together with reliable delivery, comprehensive advice** and **first-class service**. As an internationally oriented family business, we are active wherever you need us – with personal and digital support.

Vollhartmetallwerkzeuge von PFERD TOOLS

Sie wollen **Kosten senken** und Ihre **Produktivität steigern**? PFERD TOOLS ist Ihr zuverlässiger und kompetenter Partner für die Optimierung von Fräs- und Bohranwendungen. Unsere Vollhartmetallwerkzeuge vereinen das Beste aus über zwei Jahrhunderten Erfahrung im Werkzeugbau mit einer großen Leidenschaft für Innovation. **Das Ergebnis:** Leistungsstarke und kosteneffiziente Premiumwerkzeuge mit messbarem Mehrwert für die Fertigung von morgen.

Solid carbide tools from PFERD TOOLS

Want to **reduce costs** and **boost your productivity**? PFERD TOOLS is your dependable and expert partner when it comes to optimising milling and drilling applications. Our solid carbide tools combine the very best of over two centuries' experience in tool construction with a passion for innovation. **The result?** High-Performance and cost-efficient premium tools with measurable added value for the manufacturing of tomorrow.

Premiumqualität ohne Kompromisse

Mit **modernster Produktions- und Messtechnik** stellen wir mikrometergenaue Toleranzen sicher, um höchste Ansprüche an Prozesssicherheit, Produktivität und Präzision zu erfüllen und zu übertreffen.

Premium quality without compromises

We use **state-of-the-art production and measuring equipment** to ensure accurate tolerances down to the last micrometer, which enables us to meet and exceed the highest demands for process reliability, productivity and precision.

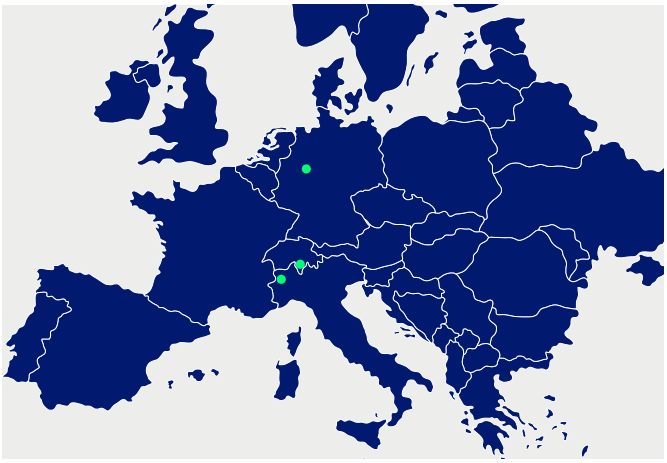
Innovation made in Europe

In unseren europäischen Kompetenzzentren in **Deutschland, Italien** und der **Schweiz** entwickeln und fertigen wir Vollhartmetallwerkzeuge nach dem **neuesten Stand der Technik**. Unser Maschinenpark umfasst derzeit **93 hochmoderne CNC-Werkzeugschleifmaschinen**.
Von der **Werkzeugpräparation**, über das **Beschichten** bis hin zur **Schichtnachbehandlung** überlassen wir nichts dem Zufall. Jeder einzelne Prozessschritt ist darauf ausgerichtet, Ihnen die bestmögliche Werkzeuglösung für Ihre Zerspanungsprozesse zu bieten.

Innovation made in Europe

In our European centres of expertise in **Germany, Italy** and **Switzerland**, we develop and manufacture solid carbide tools according to the **very latest standards**. Our equipment currently includes **93 state-of-the-art CNC tool grinding machines**.
Whether it's **tool preparation**, the **coating stage** or the **post-treatment of the layer**, we don't leave anything to chance. Each individual process step is designed to provide the best possible tool solution for your machining processes.

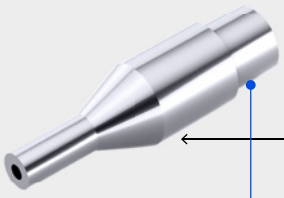




Anwendungsbereiche/
Fields of application/Usinages

PFERD TOOLS

Schreibgeräte | Writing



Drehen | Turning

1 

Turning tool ø 2.00, coated



Drehen | Turning

3 

Turning tool ø 2.00, coated

Uhrenherstellung | Watchmaking

Bohren | Hole drilling

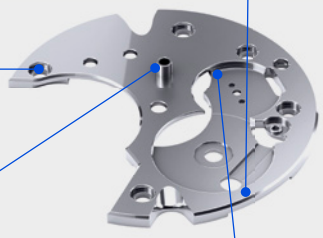
1 

Drill ø 2.005 0/-0.001

Fräsen | Milling

2 

End mill ø 0.50, Z=3



Fräsen | Milling

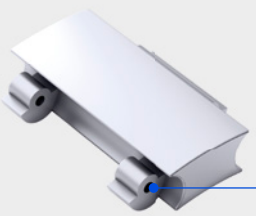
3 

Form cutter ø 1.20

Senken | Countersinking

4 

Drill–countersink ø 0.28/1.30



Bohren | Hole drilling

1 

Drill ø 1.25, coated

Automobil & Hydraulik |



Bohren | Hole drilling

1 

Drill ø 7.80, with IC, coated

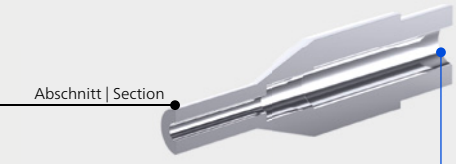
Feinbearbeitung | Finishing

2 

Reamer ø 8.098, Z=4, with IC, coated

Anwendungsbereiche/
Fields of application/Usinages

Elektronik | Electronics



Bohren | Hole drilling

2 

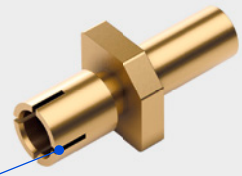
Dome drill ø 1.55x38°



Bohren | Hole drilling

1 

Combined drill ø 1.73, with IC

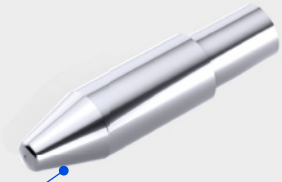


Nuten | Slotting

2 

Circular saw with extra fine teeth
ø 25.00, thickness 0.40

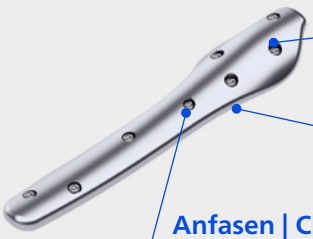
Medizintechnik | Medical



Formen | Shaping

4 

Turning tool 4x3, coated



Bohren | Hole drilling

1 

Drill ø 1.20, with IC, coated

Anfasen | Chamfering

2 

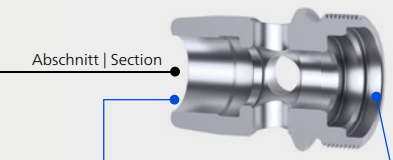
Radius chamfer ø 1.00, coated

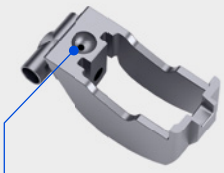
Fräsen | Milling

3 

Coner radius end mill ø 1.20, Z=3

Automotive & Hydraulics





Erweiterung | Extension

4 

Counterbore ø 9.35, Z=2, coated

Schruppen | Roughing

1 

Roughing cutter ø 7.989, R5.45, Z=3

Schlichten | Finishing

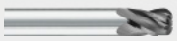
3 

Reamer ø 5.94, Z=6, with IC, coated

Implantate | Implantology



Fräsen | Milling

1 

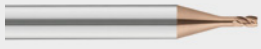
End mill ø 2.10, R0.95, Z=4

Bohren | Hole drilling

1 

Torx® pilot drill ø 2.30, coated

Fräsen | Milling

2 

Micro-milling cutter Torx® ø 0.50, coated



Fräsen | Milling

1 

Profile cutter ø 2.00, 90°×44°, Z=2–4, coated



Bohren | Hole drilling

1 

Drill ø 2.50, coated

NEUE Generation von Bohrern mit Kühlkanälen, die auch für die Bearbeitung zäher Werkstoffe ausgelegt sind

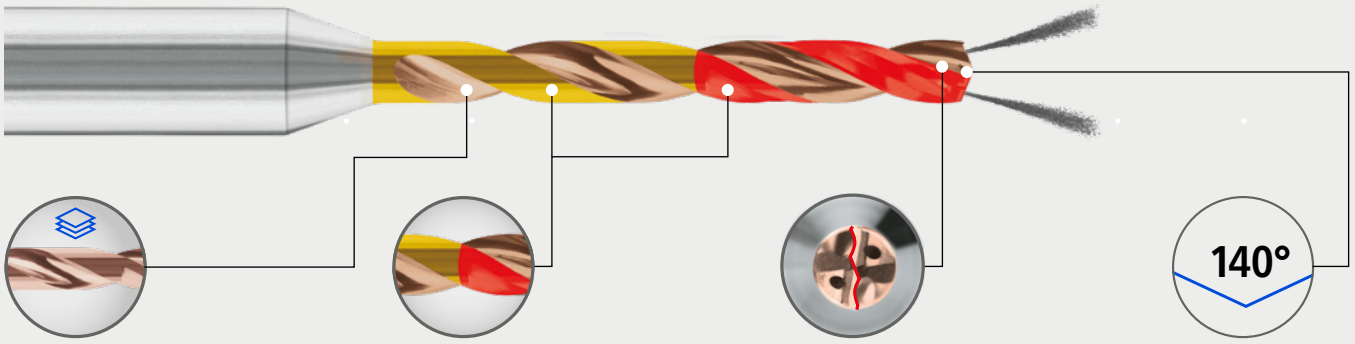
PFERD TOOLS präsentiert die neuen TTDS-Bohrer **(SWISS MADE)** – eine Produktlinie mit interner Kühlmittelzufuhr, die auch bei der Bearbeitung schwieriger Materialien wie Titan und Superlegierungen sehr gute Ergebnisse ermöglicht. Dank interner Kühlkanäle werden eine effiziente Kühlung und verbesserte Spanabfuhr gewährleistet. Die fortschrittliche Geometrie sorgt für Präzision, Stabilität und Kontrolle beim Bohren, während spezielle Oberflächenbehandlungen die Reibung reduzieren und die Standzeit verlängern. Die PVD-Beschichtung der neuesten Generation bietet eine hohe Wärme- und Verschleißbeständigkeit.

NEW generation of drills with coolant holes, also designed for machining tough materials

PFERD TOOLS introduces the new TTDS drills **(SWISS MADE)**, a line featuring internal coolant holes that enable excellent results even when machining difficult materials such as titanium and superalloys. Equipped with internal lubrication channels, they ensure effective cooling and improved chip evacuation. The advanced geometry guarantees precision, stability, and control during drilling, while surface treatments reduce friction and extend tool life. The latest-generation PVD coating provides high resistance to heat and wear.

NOUVELLE génération de forets avec trous de lubrification, conçus aussi pour l'usinage de matériaux tenaces

PFERD TOOLS présente les nouveaux forets TTDS **(SWISS MADE)**, une gamme dotée de canaux de lubrification internes permettant d'obtenir d'excellents résultats, même lors de l'usinage de matériaux difficiles tels que le titane et les superalliages. Grâce à leur système de lubrification interne, ils assurent un refroidissement efficace et une meilleure évacuation des copeaux. La géométrie avancée garantit précision, stabilité et contrôle lors du perçage, tandis que le traitement de surface réduit les frottements et prolonge la durée de vie de l'outil.



Spezielle Beschichtung für Mikrowerkzeuge

Specific coating for microtools

Zweiteiliges Bohrerprofil für verbesserte Präzision der Bohrung

Two-sectors sharpening for better hole precision

Stirngeometrie
- Selbstzentrierend
- Präparierte Stirngeometrie

Front geometry
- Self centering
- Front honing

Spitzenwinkel 140°

Frontal Angle 140°

TTDE

Bohrerserie mit Kühlkanälen, entwickelt für die Bearbeitung von Stahl und Edelstahl

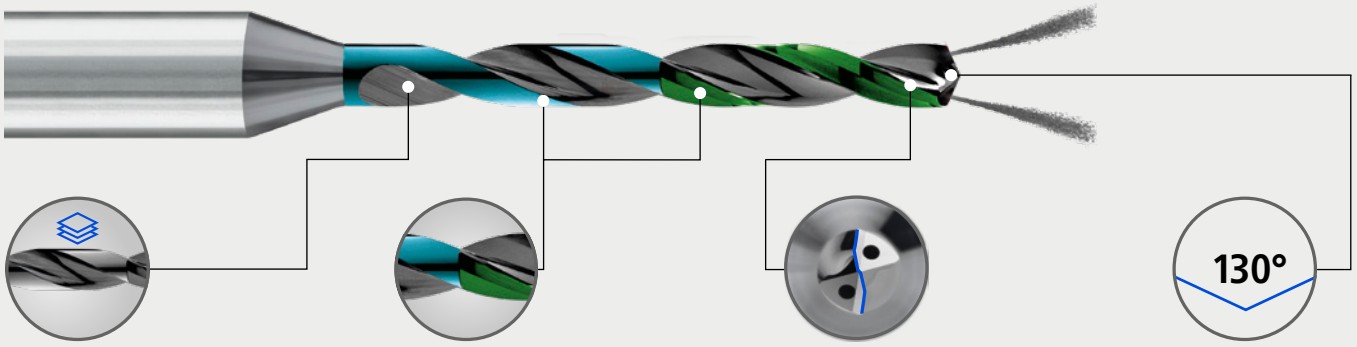
Unsere TTDE-Linie **(SWISS MADE)** wurde entwickelt, um maximale Produktivität und Zuverlässigkeit selbst bei den anspruchsvollsten und unbeaufsichtigten Bearbeitungen zu gewährleisten. Die optimierten Geometrien sorgen für eine gleichmäßige und stabile Spanbildung, während die Oberflächenbeschaffenheit geringe Torsionskräfte und höchste Präzision bei einer Vielzahl von Materialien ermöglicht. Besonders überzeugt diese Linie durch ihre hervorragende Leistung beider Bearbeitung von Stählen, Gusseisen und rostfreien Stählen und zeigt gleichzeitig eine hohe Effizienz bei der Bearbeitung von Titanlegierungen und Superlegierungen. Jedes Werkzeug ist mit einer speziell ausgewählten PVD-Beschichtung ausgestattet, die die Wärmeentwicklung reduziert, die Spanabfuhr verbessert und die Standzeit deutlich erhöht.

Drill line with coolant holes designed for machining steels and stainless steels

Our TTDE line **(SWISS MADE)** is designed to deliver maximum productivity and reliability, even in the most critical and unattended machining operations. The advanced geometries ensure smooth and consistent chip formation, while the surface finish reduces torsional stress and provides high precision across a wide range of materials. This line stands out for its excellent performance on steels, cast irons, and stainless steels, while also proving highly effective in machining titanium alloys and superalloys. Each tool features a carefully selected PVD coating to minimise heat generation, improve chip evacuation, and significantly extend tool life.

Génération de forets conçus pour l'usinage de matériaux tenaces

Notre gamme TTDE **(SWISS MADE)** est conçue pour offrir une productivité et une fiabilité maximales, même dans les opérations d'usinage les plus critiques et sans surveillance. Les géométries optimisées assurent une formation de copeaux fluide et régulière, tandis que la finition de surface réduit les efforts de torsion et garantit une grande précision sur une large gamme de matériaux. Cette gamme se distingue par d'excellentes performances sur les aciers, fontes et aciers inoxydables, tout en étant très efficace dans l'usinage des alliages de titane et des superalliages. Chaque outil bénéficie d'un revêtement PVD soigneusement sélectionné pour limiter la génération de chaleur, améliorer l'évacuation des copeaux et prolonger significativement la durée de vie de l'outil.



Spezielle Beschichtung für Mikrowerkzeuge

Specific coating for microtools

Zweiteiliges Bohrerprofil für verbesserte Präzision der Bohrung

Two-sectors sharpening for better hole precision

Stirngeometrie
- Selbstzentrierend
- Präparierte Stirngeometrie

Front geometry
- Self centering
- Front honing

Spitzenwinkel 130°

Frontal Angle 130°

Symbole | Icons | Symboles

PFERD TOOLS

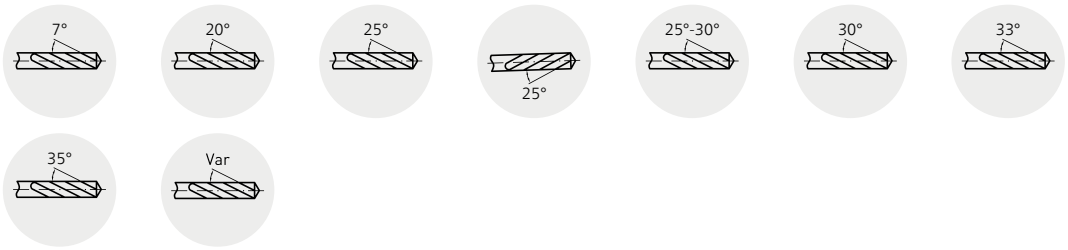
Zähnezahl
N° of teeth
N° dents



Normung
Norm
Normes



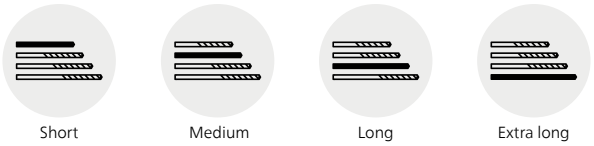
Spiralwinkel
Flute angle
Angle d'hélice



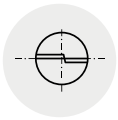
Spitzenwinkel
Point angle
Angle de pointe



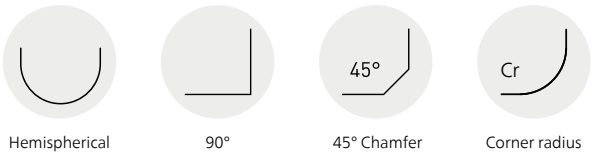
Länge
Length
Longueur



Zentrumschnitt
Center cutting
Coupe au centre



Stirngeometrie
Profile geometry
Géometrie en bout



Symbole | Icons | Symboles

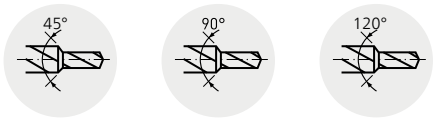
PFERD TOOLS

Bohrungstiefe
Depth of drilling
Profondeur de perçage

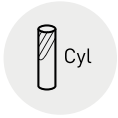
2xD | 3xD | 3,5xD | 4xD | 5xD | 6xD | 7xD

9xD | 12xD | 15xD | 18xD

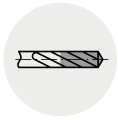
Fase
Chamfer
Chanfrein



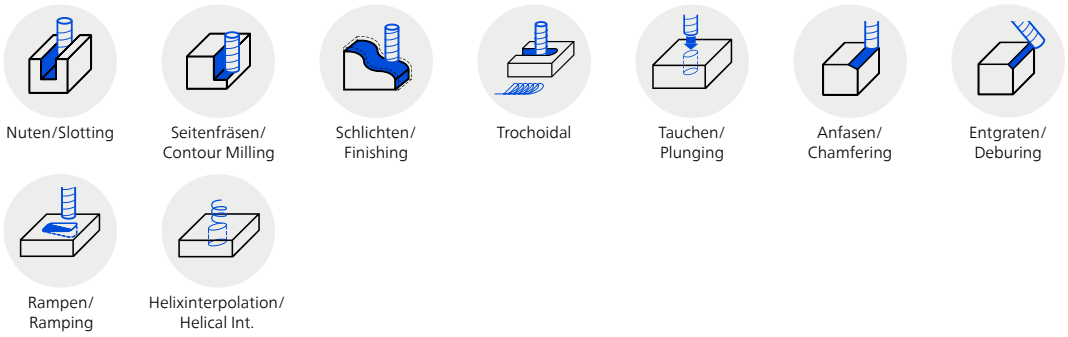
Schaft
Shank
Queue



Beschichtung
Coating
Revêtement



Bearbeitung
Machining
Usinage



Materialien
Materials
Matériaux



Empfohlen | Recommended | Recommandé



Teilweise empfohlen | Partially recommended | Partiellement recommandé

Bearbeitete Materialien | Machined materials | Matériaux usinés

P00

Stahl, langspanend, niedriger Kohlenstoffanteil
Long chipping Low Carbon Steels

P01

Stahl, kurzspanend, niedriger Kohlenstoffanteil
Short chipping Low Carbon Steels

P02

Stahl mit mittlerem und hohem Kohlenstoffanteil
Medium and High Carbon Steels

P03

Legierte Stähle, Werkzeugstähle
Alloy Steels, Tool Steels
(N/mm^2 600-850)

P04

Legierte Stähle, Werkzeugstähle
Alloy Steels, Tool Steels
(N/mm^2 850-1400)

P05

Ferritisch, Martensitisch
Ferritic, Martensitic, PH SS

P06

Hochfester ferritischer, martensitischer PH Stahl
High Strength Ferritic, Martensitic, PH SS

M01

Austenitischer nichtrostender Stahl
Austenitic Stainless Steel

M02

Hochfester austenitischer nichtrostender Stahl, Stahlguss
High Strength Austenitic SS, Cast SS

M03

Duplex SS

K01

Grauguss
Grey Cast Iron

K02

Guss mit niedriger und mittlerer Festigkeit GJV, duktiles Gusseisen
Low and Medium Strength CGI, Ductile Irons

K03

Hochfestes Gusseisen (ADI)
High Strength Ductile and Austempered Ductile Iron

N01

Aluminiumknetlegierungen
Wrought Aluminium

N02

Al- und Mg-Legierungen mit niedrigem Silizium-Gehalt (Si<12%)
Low Si Al Alloys and Magnesium Alloys Si<12%

N03

Aluminiumlegierungen mit hohem Silizium-Gehalt (Si>12%)
High Si Al Alloys Si>12%

N04

Kupfer, Messing, zinkbasierte Legierungen
Copper, Brass, Zinc Based Alloys

S01

Fe-basierte Legierungen
Iron Based | HRSA

S02

Co-basierte Legierungen
Co Based | HRSA

S03

Ni-basierte Legierungen
Ni Based | HRSA

S04

Ti and Ti Alloys

H01

Gehärtete Werkstoffe
Hardened Materials | HRC 44-48

H02

Hardened Materials | HRC 48-55

H03

Hardened Materials | HRC 56-60

O01

Thermo- und duroplastische Werkstoffe
Thermoplastic and Thermosetting Materials

O02

Verbundwerkstoffe (Glasfaser)
Composite Materials (Glass Fibers)

O03

Verbundwerkstoffe (Kohlefaser)
Composite Materials (Carbon Fibers)

O04

Verbundwerkstoffe (Aramidfaser)
Composite Materials (Aramid Fibers)

O05

Graphit
Graphite

*Konsultieren Sie Titan und Titanlegierungen die Materialliste auf Seite 187.
*Consult the list of materials on page 187.
*Consultez la liste des matériaux à la page 187.

Leitfaden zur Katalogdurchsicht | Catalog consultation guide | Guide de consultation du catalogue

PFERD TOOLS

Werkzeugdetail
Tool detail
Détail de l'outil

Technische Eigenschaften
Technical features
Caractéristiques techniques

Werkzeugbeschreibung
Tool description
Description de l'outil

Familie
Family
Famille

Zeichnung
Drawing
Dessin

Materialien
Materials
Matériaux

Frontgeometrie
Frontal geometry
Géométrie frontale

NEW

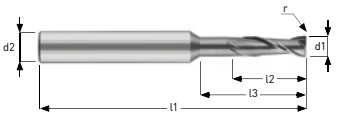
Navigationsmenü
Navigation menu
Menu de navigation

Hochleistungsfräser | High-Performance cutters | Fraises haute performance

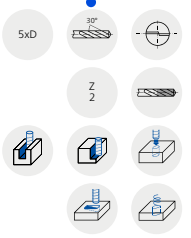
PFERD TOOLS

TTM250E **Mikrofräser** Micro-milling cutter / Micro fraise

TTM250T **Eckradius – Mikrofräser** Corner radius micro-milling cutter / Micro fraise toriques







P M K N S H O

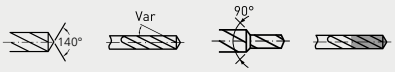
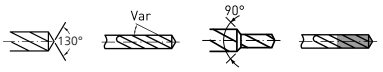
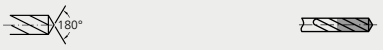
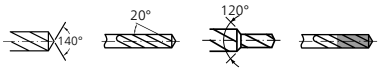
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23023507	1,00	4,00	40	3,00	5,00
23023508	1,20	4,00	40	3,60	6,00
23023509	1,50	4,00	40	4,50	7,50
23023510	1,58	4,00	40	4,70	8,00
23023511	1,80	4,00	40	5,40	9,00
23023512	2,00	4,00	40	6,00	10,00
23023513	2,38	4,00	40	7,15	12,00
23023514	2,50	6,00	50	7,50	12,50
23023515	3,00	6,00	50	9,00	15,00
23023516	3,17	6,00	50	9,50	16,00
23023517	3,50	6,00	50	10,50	18,00
23023518	3,97	6,00	50	12,00	20,00
23023519	4,00	6,00	50	12,00	20,00
23023520	4,50	6,00	50	13,50	23,00
23023521	4,76	6,00	50	14,30	24,00
23023522	5,00	6,00	50	15,00	25,00
23023523	5,56	6,00	50	16,70	28,00
23023524	6,00	6,00	50	18,00	30,00

Art. No.	d1 +/-0.01	d2 h6	l1 +/-0.2	l2 0/+0.5	l3 -0/+1	r 0/-0.02
23023525	1,00	4,00	40	3,00	5,00	0,10
23023526	1,00	4,00	40	3,00	5,00	0,20
23023527	1,20	4,00	40	3,60	6,00	0,10
23023528	1,20	4,00	40	3,60	6,00	0,20
23023529	1,50	4,00	40	4,50	7,50	0,10
23023530	1,50	4,00	40	4,50	7,50	0,30
23023531	1,80	4,00	40	5,40	9,00	0,10
23023532	1,80	4,00	40	5,40	9,00	0,30
23023533	2,00	4,00	40	6,00	10,00	0,10
23023534	2,00	4,00	40	6,00	10,00	0,50
23023535	2,50	6,00	50	7,50	12,50	0,20
23023536	2,50	6,00	50	7,50	12,50	0,50
23023537	3,00	6,00	50	9,00	15,00	0,20
23023538	3,00	6,00	50	9,00	15,00	0,50
23023539	4,00	6,00	50	12,00	20,00	0,20
23023540	4,00	6,00	50	12,00	20,00	0,50
23023541	6,00	6,00	50	18,00	30,00	0,50
23023542	6,00	6,00	50	18,00	30,00	1,00

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HOLE MAKING
MILLING
CHAMFERING
SPECIAL TOOLS
ACCESSORIES AND SERVICES

Pilotbohrer | Pilot drills | Forets pilote

Produktcode Product code	ø D mm	Max. Tiefe Max depth	Beschreibung Description
NEW **MTB27** 	1,00 ÷ 4,00	2xD	
MTB27E 	1,00 ÷ 6,00	2xD	
TTD180E 	0,80 ÷ 6,00	3,5xD	
TWP 	0,90 ÷ 3,80 T4/T30	-	

Zentrierbohrer | Centering drills | Forets de centrage

Produktcode Product code	ø D mm	Max. Tiefe Max depth	Beschreibung Description
MTB43 	0,60 ÷ 2,00	-	
MTB44 	0,60 ÷ 2,00	-	
MTB40 	3,00 ÷ 16,00	-	
MTB41 	3,00 ÷ 16,00	-	

Bohren | Hole making | Perçage

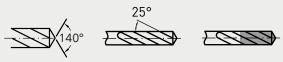
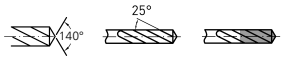
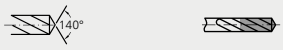
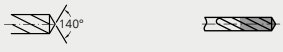
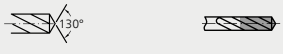
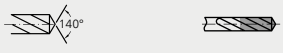
PFERD TOOLS

Best performance	Stahl Steel Acier P	Nichtrostende Stähle Stainless Steel Acier inoxydable M	Gusseisen Cast Iron Fonte K	NE-Metalle Non-ferrous metals Matières non ferreuses N	HRSA - Titan HRSA - Titanium HRSA - Titane S	Gehärteter Stahl Hardened Steel Acier trempé H	Keine ISO No ISO Pas d'ISO O	Seite Page Page	Schnittwerte Working parameters Paramètres
Stahl, Gusseisen Steel, cast iron Acier, fonte	●	◑	●	◑	◑	◑	○	30	38
Nichtrostender Stahl, CoCr Stainless steel, CoCr Acier inoxydable, CoCr	◑	●	●	◑	◑	○	○	32	39
Stahl, nichtrostender Stahl, Gusseisen Steel, stainless steel, cast iron Acier, acier inoxydable, fonte	●	●	●	◑	◑	◑	○	34	40
Nichtrostender Stahl, Titan, CoCr Stainless steel, titanium, CoCr Acier inoxydable, titane, CoCr	◑	●	○	○	●	○	○	36	41

Best performance	P	M	K	N	S	H	O	Seite Page Page	Schnittwerte Working parameters Paramètres
Werkstoffübergreifend Multi-material Multi-matériaux	●	●	◑	●	●	●	◑	42	44
Werkstoffübergreifend Multi-material Multi-matériaux	●	●	◑	●	●	●	◑	42	44
Werkstoffübergreifend Multi-material Multi-matériaux	●	◑	◑	●	○	○	◑	43	45
Werkstoffübergreifend Multi-material Multi-matériaux	●	◑	◑	●	○	○	◑	43	45

● Empfohlen | Recommended | Recommandé
◑ Teilweise empfohlen | Partially recommended | Partiellement recommandé
○ Nicht empfohlen | Not recommended | Non recommandé

Hochleistungsbohrer | High-performance drills | Forets haute performance

Produktcode Product code	ø D mm	Max. Tiefe Max depth	Beschreibung Description	
NEW **TTD203** 	1,00 ÷ 4,00	3xD		MTB27 TTD180
NEW **TTD207** 	1,00 ÷ 4,00	7xD		MTB27 TTD180
TTD204 	1,00 ÷ 4,00	4xD		MTB27 TTD180
TTD209 	1,00 ÷ 4,00	9xD		MTB27 TTD180
TTD215 	1,00 ÷ 4,00	15xD		MTB27 TTD180
TTD206E 	1,00 ÷ 6,00	6xD		MTB27E TTD180E
TTD212E 	1,00 ÷ 6,00	12xD		MTB27E TTD180E
TTD218E 	1,00 ÷ 6,00	18xD		MTB27E TTD180E
NEW **TTD203S** 	1,00 ÷ 4,00	3xD		MTB27 TTD180E
NEW **TTD206S** 	1,00 ÷ 4,00	6xD		MTB27 TTD180E

Bohren | Hole making | Perçage

PFERD TOOLS

Best performance	Stahl Steel Acier P	Nichtrostende Stähle Stainless Steel Acier inoxydable M	Gusseisen Cast Iron Fonte K	NE-Metalle Non-ferrous metals Matières non ferreuses N	HRSA - Titan HRSA - Titanium HRSA - Titane S	Gehärteter Stahl Hardened Steel Acier trempé H	Keine ISO No ISO Pas d'ISO O	Seite Page Page	Schnittwerte Working parameters Paramètres
Stahl, Gusseisen Steel, cast iron Acier, fonte	●	●	●	◑	◑	◑	○	46	66
Stahl, Gusseisen Steel, cast iron Acier, fonte	●	●	●	◑	◑	◑	○	48	67
Stahl, Gusseisen Steel, cast iron Acier, fonte	●	◑	●	◑	◑	◑	○	50	68
Stahl, Gusseisen Steel, cast iron Acier, fonte	●	◑	●	◑	◑	◑	○	52	69
Stahl, Gusseisen Steel, cast iron Acier, fonte	●	◑	●	◑	◑	◑	○	54	70
Nichtrostender Stahl Stainless steel Acier inoxydable	◑	●	●	◑	◑	◑	○	56	71
Nichtrostender Stahl Stainless steel Acier inoxydable	◑	●	●	◑	◑	◑	○	58	72
Nichtrostender Stahl Stainless steel Acier inoxydable	◑	●	●	◑	◑	◑	○	60	73
HRSAs, PH, Titan HRSAs, PH, titanium HRSAs, PH, titane	◑	●	○	○	●	○	○	62	74
HRSAs, PH, Titan HRSAs, PH, titanium HRSAs, PH, titane	◑	●	○	○	●	○	○	64	75

● Empfohlen | Recommended | Recommandé
◑ Teilweise empfohlen | Partially recommended | Partiellement recommandé
○ Nicht empfohlen | Not recommended | Non recommandé

Bohrer | Drills | Forets

Produktcode Product code	Ausführung Series	ø D mm	Beschreibung Description	Empfohlener Pilotbohrer Suggested pilot drill
TA803	Hundredth	0,30 ÷ 3,00	130° 35°	MTB43 MTB40
MTB25N	Hundredth	0,30 ÷ 13,00	118° 25° Cyl	MTB43 MTB40
TA35	Short	0,20 ÷ 2,00	118° 35°	MTB43 MTB40
MTB25	Short	0,50 ÷ 20,00	118° 25° Cyl	MTB43 MTB40
MTB33	Short	1,00 ÷ 12,00	118° 30° Cyl	MTB43 MTB40
TA303B	Short	0,50 ÷ 3,00	130° 25°	-
TC35	Medium	0,30 ÷ 2,00	130° 35° Cyl	MTB43 MTB40
MTB30	Medium	0,80 ÷ 16,00	118° 25° Cyl	MTB43 MTB40
MTB35	Medium	0,30 ÷ 6,00	118° 25° Cyl	MTB43 MTB40
MTB35L	Medium	0,50 ÷ 6,00	118° 25° Cyl	MTB43 MTB40
MTB45	Long	0,30 ÷ 13,00	120° 30° Cyl	MTB43 MTB40
MTB50	Long	1,00 ÷ 13,00	118° 130° 25°- 30° Cyl	MTB43 MTB40
MTB60	Extra Long	1,00 ÷ 10,00	118° 130° 25°- 30° Cyl	MTB43 MTB40

Reibahlen
Auf Wunsch fertigt PFERD TOOLS Reibahlen in leistungsstarker PFERD TOOLS Qualität. Bitte sprechen Sie uns an. Unsere erfahrenen technischen Kundenberater helfen Ihnen gerne weiter.

Reamers
Upon request, PFERD TOOLS can manufacture reamers in the excellent PFERD TOOLS quality, specifically for your application. Please contact us for further information. Our experienced technical advisers will be pleased to assist you.

Alésoirs
Sur demande, PFERD TOOLS fabrique des alésoirs dans la qualité et la performance de PFERD TOOLS. N'hésitez pas à nous consulter. Nos conseillers techniques expérimentés sont à votre entière disposition.



Scannen Sie den QR-Code, um zum Kontaktformular zu gelangen.
Scan the QR code to access the contact form.
Scannez le code QR pour accéder au formulaire de contact.

PFERD TOOLS

Best performance	Stahl Steel Acier P	Nichtrostende Stähle Stainless Steel Acier inoxydable M	Gusseisen Cast Iron Fonte K	NE-Metalle Non-ferrous metals Matières non ferreuses N	HRSA - Titan HRSA - Titanium HRSA - Titane S	Gehärteter Stahl Hardened Steel Acier trempé H	Keine ISO No ISO Pas d'ISO O	Seite Page Page	Schnittwerte Working parameters Paramètres
Werkstoffübergreifend Multi-material Multi-matériaux	●	●	●	●	◑	○	◑	76	104
Stahl mit niedrigem Kohlenstoffanteil, NE-Metalle Low carbon steel, non-ferrous metals	●	◑	◑	●	○	◑	◑	80	105
Stahl mit niedrigem Kohlenstoffanteil, NE-Metalle Low carbon steel, non-ferrous metals	●	◑	◑	●	○	◑	◑	84	106
Stahl mit niedrigem Kohlenstoffanteil, NE-Metalle Low carbon steel, non-ferrous metals	●	◑	◑	●	○	○	◑	85	107
Stahl mit niedrigem Kohlenstoffanteil, NE-Metalle Low carbon steel, non-ferrous metals	●	◑	◑	●	○	○	◑	88	108
Werkstoffübergreifend Multi-material Multi-matériaux	●	●	●	●	○	○	◑	90	109
Stahl mit niedrigem Kohlenstoffanteil, NE-Metalle Low carbon steel, non-ferrous metals	●	◑	◑	●	◑	○	◑	91	110
Stahl mit niedrigem Kohlenstoffanteil, NE-Metalle Low carbon steel, non-ferrous metals	●	◑	◑	●	○	○	◑	92	111
Stahl mit niedrigem Kohlenstoffanteil, NE-Metalle Low carbon steel, non-ferrous metals	●	◑	◑	●	○	○	◑	94	112
Stahl mit niedrigem Kohlenstoffanteil, NE-Metalle Low carbon steel, non-ferrous metals	●	◑	◑	●	○	◑	◑	96	113
Stahl mit niedrigem Kohlenstoffanteil, NE-Metalle Low carbon steel, non-ferrous metals	●	◑	◑	●	○	◑	◑	98	114
Stahl mit niedrigem Kohlenstoffanteil, NE-Metalle Low carbon steel, non-ferrous metals	●	◑	◑	●	○	◑	◑	100	115
Stahl mit niedrigem Kohlenstoffanteil, NE-Metalle Low carbon steel, non-ferrous metals	●	◑	◑	●	○	◑	◑	102	116

● Empfohlen | Recommended | Recommandé
◑ Teilweise empfohlen | Partially recommended | Partiellement recommandé
○ Nicht empfohlen | Not recommended | Non recommandé

PFERD TOOLS

Hochleistungsfräser | High-performance cutters | Fraises haute performance

Produktcode Product code	ø D mm	M. depth	Z	Nutenfräsen Slotting	Seitenfräsen Contour Milling	Schlichten Finishing	Trochoidal	Tauchen Plunging	Anfasen Chamfering	Entgraten Deburing	Rampen Ramping	Helical Int.
TTM225E  Auch mit Eckenausführung Radius erhältlich (TTM225T) Available also with corner-radius geometry (TTM225T)	1,00 ÷ 6,00	3xD	2	●	●	–	–	●	–	–	●	●
TTM250E  Auch mit Eckenausführung Radius erhältlich (TTM250T) Available also with corner-radius geometry (TTM250T)	1,00 ÷ 6,00	5xD	2	●	●	–	–	●	–	–	●	●
MS320 	0,30 ÷ 6,00	2xD	3	●	●	–	●	–	–	–	●	●
MS330 	0,30 ÷ 6,00	3xD	3	●	●	–	●	–	–	–	●	●
TTM325E  Auch mit Eckenausführung Radius erhältlich (TTM325T) Available also with corner-radius geometry (TTM325T)	1,00 ÷ 6,00	3xD	3	●	●	–	●	●	–	–	●	●
TTM350E  Auch mit Eckenausführung Radius erhältlich (TTM350T) Available also with corner-radius geometry (TTM350T)	1,00 ÷ 6,00	5xD	3	●	●	–	●	●	–	–	●	●
TWF3 	0,20 ÷ 1,00 T4/ T30	3xD	ø0.20-ø0.30 = 3 ø0.40-ø1.00 = 4	●	●	–	–	–	–	–	–	●
TWF5 	0,20 ÷ 1,00 T4/ T30	5xD	ø0.20-ø0.30 = 3 ø0.40-ø1.00 = 4	●	●	–	–	–	–	–	–	●

Milling | Fräsbearbeitung | Fraisage

Best performance	Stahl Steel Acier P	Nichtrostende Stähle Stainless Steel Acier inoxydable M	Gusseisen Cast Iron Fonte K	NE-Metalle Non-ferrous metals Matières non ferreuses N	HRSA - Titan HRSA - Titanium HRSA - Titane S	Gehärteter Stahl Hardened Steel Acier trempé H	Keine ISO No ISO Pas d'ISO O	Seite Page Page	Schnittwerte Working parameters Paramètres
Nichtrostender Stahl, PH, Titan, CoCr Stainless steel, PH, titanium, CoCr Acier inoxydable, PH, titane, CoCr	◑	●	●	●	●	◑	◑	120	128
Nichtrostender Stahl, PH, Titan, CoCr Stainless steel, PH, titanium, CoCr Acier inoxydable, PH, titane, CoCr	◑	●	●	●	●	◑	◑	121	129
Stahl, nichtrostender Stahl Steel, stainless steel Acier, acier inoxydable	●	●	◑	●	●	◑	◑	122	130
Stahl, nichtrostender Stahl Steel, stainless steel Acier, acier inoxydable	●	●	◑	●	●	◑	◑	123	130
Nichtrostender Stahl, PH, Titan, CoCr Stainless steel, PH, titanium, CoCr Acier inoxydable, PH, titane, CoCr	◑	●	●	●	●	◑	◑	124	131
Nichtrostender Stahl, PH, Titan, CoCr Stainless steel, PH, titanium, CoCr Acier inoxydable, PH, titane, CoCr	◑	●	●	●	●	◑	◑	125	132
Nichtrostender Stahl, Titan, CoCr Stainless steel, titanium, CoCr Acier inoxydable, titane, CoCr	◑	●	○	○	●	○	○	126	133
Nichtrostender Stahl, Titan, CoCr Stainless steel, titanium, CoCr Acier inoxydable, titane, CoCr	◑	●	○	○	●	○	○	127	133

● Empfohlen | Recommended | Recommandé
◑ Teilweise empfohlen | Partially recommended | Partiellement recommandé
○ Nicht empfohlen | Not recommended | Non recommandé

PFERD TOOLS

Fräser | Cutters | Fraises

Produktcode Product code	ø D mm	Z	Nutenfräsen Slotting	Seitenfräsen Contour Milling	Schlichten Finishing	Trochoidal	Tauchen Plunging	Anfasen Chamfering	Entgraten Deburing	Rampen Ramping	Helical Int.
MS122 	2,00 ÷ 20,00	2	●	●	–	–	●	–	–	●	●
MS122XL 	3,00 ÷ 20,00	2	●	●	–	–	●	–	–	●	●
MS122XLS 	4,00 ÷ 20,00	2	●	●	–	–	●	–	–	●	●
MS123 	2,00 ÷ 20,00	2	–	–	●	–	–	–	–	–	–
MS123XL 	3,00 ÷ 20,00	2	–	–	●	–	–	–	–	–	–
MS123XLS 	4,00 ÷ 20,00	2	–	–	●	–	–	–	–	–	–
MS124 	2,00 ÷ 20,00	2	●	●	–	–	●	–	–	●	●
MS131 	2,00 ÷ 20,00	3	●	●	–	–	●	–	–	●	●
MS131XL 	3,00 ÷ 20,00	3	●	●	–	–	●	–	–	●	●
MS131XLS 	4,00 ÷ 20,00	3	●	●	–	–	●	–	–	●	●
MS141 	2,00 ÷ 20,00	4	●	●	–	●	–	–	–	–	–
MS141XL 	3,00 ÷ 20,00	4	●	●	–	●	–	–	–	–	–
MS141XLS 	4,00 ÷ 20,00	4	●	●	–	●	–	–	–	–	–

Milling | Fräsbearbeitung | Fraisage

PFERD TOOLS

Best performance	Stahl Steel Acier P	Nichtrostende Stähle Stainless Steel Acier inoxydable M	Gusseisen Cast Iron Fonte K	NE-Metalle Non-ferrous metals Matières non ferreuses N	HRSA - Titan HRSA - Titanium HRSA - Titane S	Gehärteter Stahl Hardened Steel Acier trempé H	Keine ISO No ISO Pas d'ISO O	Seite Page Page	Schnittwerte Working parameters Paramètres
Stahl, nichtrostender Stahl Steel, stainless steel Acier, acier inoxydable	●	◑	◑	○	○	○	○	134	144
Stahl, nichtrostender Stahl Steel, stainless steel Acier, acier inoxydable	●	◑	◑	○	○	○	○	135	145
Stahl, nichtrostender Stahl Steel, stainless steel Acier, acier inoxydable	●	◑	◑	○	○	○	○	135	146
Stahl, nichtrostender Stahl Steel, stainless steel Acier, acier inoxydable	●	◑	◑	○	○	○	○	136	147
Stahl, nichtrostender Stahl Steel, stainless steel Acier, acier inoxydable	●	◑	◑	○	○	○	○	137	148
Stahl, nichtrostender Stahl Steel, stainless steel Acier, acier inoxydable	●	◑	◑	○	○	○	○	137	149
Aluminum	○	○	○	●	○	○	◑	138	150
Stahl, nichtrostender Stahl Steel, stainless steel Acier, acier inoxydable	●	◑	◑	○	○	○	○	140	151
Stahl, nichtrostender Stahl Steel, stainless steel Acier, acier inoxydable	●	◑	◑	○	○	○	○	141	152
Stahl, nichtrostender Stahl Steel, stainless steel Acier, acier inoxydable	●	◑	◑	○	○	○	○	141	153
Stahl, nichtrostender Stahl Steel, stainless steel Acier, acier inoxydable	●	◑	◑	○	○	○	○	142	154
Stahl, nichtrostender Stahl Steel, stainless steel Acier, acier inoxydable	●	◑	◑	○	○	○	○	143	155
Stahl, nichtrostender Stahl Steel, stainless steel Acier, acier inoxydable	●	◑	◑	○	○	○	○	143	156

● Empfohlen | Recommended | Recommandé
◑ Teilweise empfohlen | Partially recommended | Partiellement recommandé
○ Nicht empfohlen | Not recommended | Non recommandé

Entgrat-/Faswerkzeuge | Chamfer tools | Outils de chanfrein

Produktcode Product code	ø D mm	M. depth	Z	Nutenfräsen Slotting	Seitenfräsen Contour Milling	Schlichten Finishing	Trochoidalfräsen Trochoidal	Tauchen Plunging	Anfasen Chamfering	Entgraten Deburing	Rampen Ramping	Int. Elicoidale Helical Int.
TTMCA90 	1,00 ÷ 6,00	3xD	ø1.00-ø2.00 = 4 ø3.00 = 5 ø4.00-ø6.00 =6	–	–	–	–	–	●	–	–	–
TTMCD90 	0,90 ÷ 5,70	3xD	ø0.90 = 4 ø1.40-ø4.70 = 5 ø5.70 = 6	–	–	–	–	–	●	–	–	–
TTMCR90 	1,00 ÷ 6,00	3xD	3	–	–	–	–	–	–	●	–	–

Best performance	Stahl Steel Acier P	Nichtrostende Stähle Stainless Steel Acier inoxydable M	Gusseisen Cast Iron Fonte K	NE-Metalle Non-ferrous metals Matières non ferreuses N	HRSA - Titan HRSA - Titanium HRSA - Titane S	Gehärteter Stahl Hardened Steel Acier trempé H	Keine ISO No ISO Pas d'ISO 0	Seite Page Page	Schnittwerte Working parameters Paramètres
Werkstoffübergreifend Multi-material Multi-matériaux	●	●	●	●	●	○	◑	160	162
Werkstoffübergreifend Multi-material Multi-matériaux	●	●	●	●	●	○	◑	160	163
Werkstoffübergreifend Multi-material Multi-matériaux	●	●	●	●	●	○	◑	161	164

● Empfohlen | Recommended | Recommandé
◑ Teilweise empfohlen | Partially recommended | Partiellement recommandé
○ Nicht empfohlen | Not recommended | Non recommandé

Sonderwerkzeuge | Special tools | Outils spéciaux

Nicht-Standardwerkzeuge, die speziell nach Kundenbedürfnissen gefertigt werden
Non-standard tools manufactured according to the customer's specific requirements
Outils spéciaux conçus sur mesure en fonction des exigences du client

HM-Werkzeuge | HM Tools | Outils en carbure monobloc 170

Durchmesserbereich Diameter range Gamme de diamètres	Minimal beherrschbare Toleranz Minimum manageable toleranc Tolérance minimale gérable	Konzentrizität der Schaftdurchmesser Concentricity in the shanks' diameters Concentricité des diamètres des tiges	Empfohlene Materialien Recommended materials Matériaux recommandés
0.10-18.00 mm	+/-0.5 µm	0.002 mm	**Werkstoffübergreifend** Multi-material Multi-matériaux



SWISS MADE

Keramikwerkzeuge | Ceramic tools | Outils en céramique 172

Durchmesserbereich Diameter range Gamme de diamètres	Minimal beherrschbare Toleranz Minimum manageable toleranc Tolérance minimale gérable	Konzentrizität der Schaftdurchmesser Concentricity in the shanks' diameters Concentricité des diamètres des tiges	Empfohlene Materialien Recommended materials Matériaux recommandés
0.30-3.00 mm	+/-0.5 µm	0.002 mm	**NE-Metalle** Non-ferrous metals, HRSAs Métaux non ferreux



Zubehör und Dienstleistungen | Accessories and services | Accessoires et services

Zubehör | Accessories | Accessoires 175

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- Werkzeuge mit Innenkühlung | Tools with internal coolant holes | Outils avec arrosage interne 177
- Empfehlungen zur Prozessoptimierung | Recommendations for process optimization | Recommandations pour l'optimisation du processus 178
- Empfohlener Druck | Recommended pressure | Pression recommandée 178
- Bearbeitungsverfahren Hochleistungsbohren | Machining process for high performance drilling | Procédé d'usinage à grand rendement 179



PFERD TOOLS



Bohren
Hole making
Perçage

Pilotbohrer | Pilot drills | Forets pilote

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Zentrierbohrer | Centering drills | Forets de centrage

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TTD207	48
TTD204	50
TTD209	52
TTD215	54
TTD206E	56
TTD212E	58
TTD218E	60
TTD203S	62
TTD206S	64

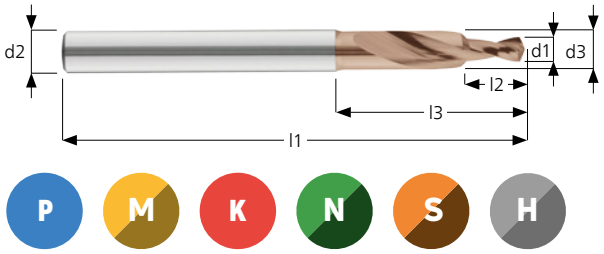
Bohrer | Drills | Forets

TA803	76
MTB25N	80
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MTB25	85
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TA303B	90
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MTB30	92
MTB35	94
MTB35L	96
MTB45	98
MTB50	100
MTB60	102

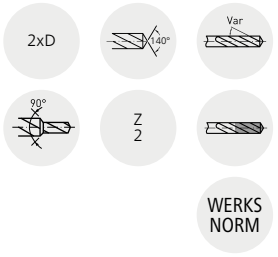
PFERD TOOLS

MTB27

140° Pilotbohrer
140° pilot drill
Foret pilote 140°







Art. No.	d1 m5	d2 h6	d3 +/-0.02	l1 +/-0.2	l2 +/-0.2	l3 0/+0.5
23021848	1,00	4,00	1,80	45	2,00	7,30
23021849	1,05	4,00	1,80	45	2,10	7,70
23021850	1,10	4,00	1,80	45	2,20	8,05
23021851	1,15	4,00	1,80	45	2,30	8,40
23021852	1,20	4,00	2,10	45	2,40	8,80
23021853	1,25	4,00	2,10	45	2,50	9,15
23021854	1,30	4,00	2,10	45	2,60	9,50
23021855	1,35	4,00	2,10	45	2,70	9,90
23021856	1,40	4,00	2,10	45	2,80	10,25
23021857	1,45	4,00	2,45	45	2,90	10,60
23021858	1,50	4,00	2,45	48	3,00	10,95
23021859	1,55	4,00	2,45	48	3,10	11,35
23021860	1,60	4,00	2,45	48	3,20	11,70
23021861	1,65	4,00	2,45	48	3,30	12,05
23021862	1,70	4,00	2,80	48	3,40	12,45
23021863	1,75	4,00	2,80	48	3,50	12,80
23021864	1,80	4,00	2,80	48	3,60	13,15
23021865	1,85	4,00	2,80	48	3,70	13,55
23021866	1,90	4,00	2,80	48	3,80	13,90
23021867	1,95	4,00	2,80	48	3,90	14,25
23021868	2,00	4,00	3,30	52	4,00	14,60
23021869	2,05	4,00	3,30	52	4,10	15,00
23021870	2,10	4,00	3,30	52	4,20	15,35
23021871	2,15	4,00	3,30	52	4,30	15,70
23021872	2,20	4,00	3,30	52	4,40	16,10
23021873	2,25	4,00	3,30	52	4,50	16,45
23021874	2,30	4,00	3,60	52	4,60	16,80
23021875	2,35	4,00	3,60	52	4,70	17,20
23021876	2,40	4,00	3,60	52	4,80	17,55
23021877	2,45	4,00	3,60	52	4,90	17,90
23021878	2,50	4,00	3,60	56	5,00	18,25
23021879	2,55	4,00	3,60	56	5,10	18,65
23021880	2,60	4,00	4,00	56	5,20	19,00
23021881	2,65	4,00	4,00	56	5,30	19,35
23021882	2,70	4,00	4,00	56	5,40	19,75
23021883	2,75	4,00	4,00	56	5,50	20,10
23021884	2,80	4,00	4,00	56	5,60	20,45
23021885	2,85	4,00	4,00	56	5,70	20,85
23021886	2,90	4,00	4,00	56	5,80	21,20

Pilotbohrer | Pilot drills | Forets pilote

PFERD TOOLS

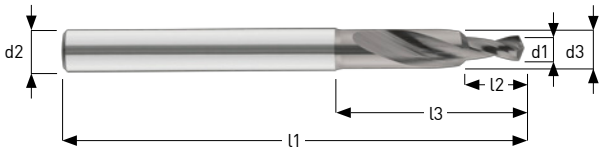
Art. No.	d1 m5	d2 h6	d3 +/-0.02	l1 +/-0.2	l2 +/-0.2	l3 0/+0.5
23021887	2,95	4,00	4,00	56	5,90	21,55
23021888	3,00	6,00	4,80	60	6,00	21,90
23021889	3,05	6,00	4,80	60	6,10	22,30
23021890	3,10	6,00	4,80	60	6,20	22,65
23021891	3,15	6,00	4,80	60	6,30	23,00
23021892	3,20	6,00	4,80	60	6,40	23,40
23021893	3,25	6,00	4,80	60	6,50	23,75
23021894	3,30	6,00	4,80	60	6,60	24,10
23021895	3,35	6,00	4,80	60	6,70	24,50
23021896	3,40	6,00	4,80	60	6,80	24,85
23021897	3,45	6,00	4,80	60	6,90	25,20
23021898	3,50	6,00	5,50	65	7,00	25,55
23021899	3,55	6,00	5,50	65	7,10	25,95
23021900	3,60	6,00	5,50	65	7,20	26,30
23021901	3,65	6,00	5,50	65	7,30	26,65
23021902	3,70	6,00	5,50	65	7,40	27,05
23021903	3,75	6,00	5,50	70	7,50	27,40
23021904	3,80	6,00	5,50	70	7,60	27,75
23021905	3,85	6,00	5,50	70	7,70	28,15
23021906	3,90	6,00	5,50	70	7,80	28,50
23021907	3,95	6,00	5,50	70	7,90	28,85
23021908	4,00	6,00	5,50	70	8,00	29,20

Notes

PFERD TOOLS

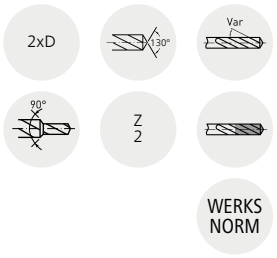
MTB27E

130° Pilotbohrer
130° Pilot drill
Foret pilote 130°









Art. No.	d1 m5	d2 h6	d3 +/-0.02	l1 +/-0.2	l2 +/-0.2	l3 0/+0.5
23001348	1,00	4,00	1,80	45	2,00	7,30
23021909	1,05	4,00	1,80	45	2,10	7,70
23021910	1,10	4,00	1,80	45	2,20	8,05
23021911	1,15	4,00	1,80	45	2,30	8,40
23021912	1,20	4,00	2,10	45	2,40	8,80
23021913	1,25	4,00	2,10	45	2,50	9,15
23021914	1,30	4,00	2,10	45	2,60	9,50
23021915	1,35	4,00	2,10	45	2,70	9,90
23021916	1,40	4,00	2,10	45	2,80	10,25
23021917	1,45	4,00	2,45	45	2,90	10,60
23021918	1,50	4,00	2,45	48	3,00	10,95
23021919	1,55	4,00	2,45	48	3,10	11,35
23021920	1,60	4,00	2,45	48	3,20	11,70
23021921	1,65	4,00	2,45	48	3,30	12,05
23021922	1,70	4,00	2,80	48	3,40	12,45
23021923	1,75	4,00	2,80	48	3,50	12,80
23021924	1,80	4,00	2,80	48	3,60	13,15
23021925	1,85	4,00	2,80	48	3,70	13,55
23021926	1,90	4,00	2,80	48	3,80	13,90
23021927	1,95	4,00	2,80	48	3,90	14,25
23021928	2,00	4,00	3,30	52	4,00	14,60
23021929	2,05	4,00	3,30	52	4,10	15,00
23021930	2,10	4,00	3,30	52	4,20	15,35
23021931	2,15	4,00	3,30	52	4,30	15,70
23021932	2,20	4,00	3,30	52	4,40	16,10
23021933	2,25	4,00	3,30	52	4,50	16,45
23021934	2,30	4,00	3,60	52	4,60	16,80
23021935	2,35	4,00	3,60	52	4,70	17,20
23021936	2,40	4,00	3,60	52	4,80	17,55
23021937	2,45	4,00	3,60	52	4,90	17,90
23001286	2,50	4,00	3,60	56	5,00	18,25
23021938	2,55	4,00	3,60	56	5,10	18,65
23021939	2,60	4,00	-	56	5,20	-
23021940	2,65	4,00	-	56	5,30	-
23021941	2,70	4,00	-	56	5,40	-
23021942	2,75	4,00	-	56	5,50	-
23021943	2,80	4,00	-	56	5,60	-
23021944	2,85	4,00	-	56	5,70	-
23021945	2,90	4,00	-	56	5,80	-
23021946	2,95	4,00	-	56	5,90	-

Pilotbohrer | Pilot drills | Forets pilote

PFERD TOOLS

Art. No.	d1 m5	d2 h6	d3 +/-0.02	l1 +/-0.2	l2 +/-0.2	l3 0/+0.5
23021947	3,00	6,00	4,80	60	6,00	21,90
23021948	3,05	6,00	4,80	60	6,10	22,30
23021949	3,10	6,00	4,80	60	6,20	22,65
23021950	3,15	6,00	4,80	60	6,30	23,00
23021951	3,20	6,00	4,80	60	6,40	23,40
23021952	3,25	6,00	4,80	60	6,50	23,75
23021953	3,30	6,00	4,80	60	6,60	24,10
23021954	3,35	6,00	4,80	60	6,70	24,50
23021955	3,40	6,00	4,80	60	6,80	24,85
23021956	3,45	6,00	4,80	60	6,90	25,20
23021957	3,50	6,00	5,50	65	7,00	25,55
23021958	3,55	6,00	5,50	65	7,10	25,95
23021959	3,60	6,00	5,50	65	7,20	26,30
23021960	3,65	6,00	5,50	65	7,30	26,65
23021961	3,70	6,00	5,50	65	7,40	27,05
23021962	3,75	6,00	5,50	70	7,50	27,40
23021963	3,80	6,00	5,50	70	7,60	27,75
23021964	3,85	6,00	5,50	70	7,70	28,15
23021965	3,90	6,00	5,50	70	7,80	28,50
23021966	3,95	6,00	5,50	70	7,90	28,85
23021967	4,00	6,00	5,50	70	8,00	29,20
23021968	4,10	6,00	6,00	75	8,20	-
23021969	4,20	6,00	6,00	75	8,40	-
23021970	4,30	6,00	6,00	75	8,60	-
23021971	4,40	6,00	6,00	75	8,80	-
23021972	4,50	6,00	6,00	75	9,00	-
23021973	4,60	6,00	6,00	75	9,20	-
23021974	4,70	6,00	6,00	75	9,40	-
23021975	4,80	6,00	6,00	75	9,60	-
23021976	4,90	6,00	6,00	75	9,80	-
23021977	5,00	8,00	8,00	80	10,00	-
23021978	5,10	8,00	8,00	80	10,20	-
23021979	5,20	8,00	8,00	80	10,40	-
23021980	5,30	8,00	8,00	80	10,60	-
23021981	5,40	8,00	8,00	80	10,80	-
23021982	5,50	8,00	8,00	80	11,00	-
23021983	5,60	8,00	8,00	80	11,20	-
23021984	5,70	8,00	8,00	80	11,40	-
23021985	5,80	8,00	8,00	80	11,60	-
23021986	5,90	8,00	8,00	80	11,80	-
23021987	6,00	8,00	8,00	80	12,00	-

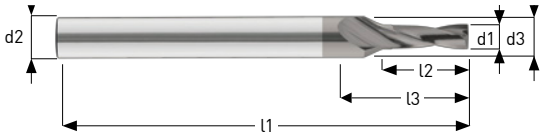
Notes

PFERD TOOLS

TTD180E

180° Pilotbohrer
180° pilot drill
Foret pilote 180°

3,5xD | 180° | Z 2 | WERKS NORM



P M K N S H



Art. No.	d1 m5	d2 h6	d3 +/-0.02	l1 +/-0.2	l2 +/-0.5	l3 0/+0.2
23022757	0,80	4,00	1,70	40	2,80	6,00
23022758	0,85	4,00	1,70	40	3,00	6,00
23022759	0,90	4,00	1,80	40	3,20	6,30
23022760	0,95	4,00	1,90	40	3,30	6,70
23022761	1,00	4,00	2,00	40	3,50	7,00
23022762	1,05	4,00	2,10	40	3,70	7,40
23022763	1,10	4,00	2,20	40	3,90	7,70
23022764	1,15	4,00	2,30	40	4,00	8,10
23022765	1,20	4,00	2,40	40	4,20	8,40
23022766	1,25	4,00	2,50	40	4,40	8,80
23022767	1,30	4,00	2,60	40	4,60	9,10
23002008	1,35	4,00	2,70	40	4,70	9,50
23022768	1,40	4,00	2,80	40	4,90	9,80
23022769	1,45	4,00	2,90	40	5,10	10,20
23022770	1,50	4,00	3,00	40	5,30	10,50
23022771	1,55	4,00	3,05	40	5,40	10,70
23022772	1,60	4,00	3,10	40	5,60	10,90
23022773	1,65	4,00	3,15	40	5,80	11,00
23022774	1,70	4,00	3,20	40	6,00	11,20
23022775	1,75	4,00	3,25	40	6,10	11,40
23022776	1,80	4,00	3,30	40	6,30	11,60
23022777	1,85	4,00	3,35	40	6,50	11,70
23022778	1,90	4,00	3,40	40	6,70	11,90
23022779	1,95	4,00	3,45	40	6,80	12,10
23022780	2,00	6,00	3,50	50	7,00	12,30
23022781	2,05	6,00	3,55	50	7,20	12,40
23022782	2,10	6,00	3,60	50	7,40	12,60
23022783	2,15	6,00	3,65	50	7,50	12,80
23022784	2,20	6,00	3,70	50	7,70	13,00
23022785	2,25	6,00	3,75	50	7,90	13,10
23022786	2,30	6,00	3,80	50	8,10	13,30
23022787	2,35	6,00	3,85	50	8,20	13,50
23022788	2,40	6,00	3,90	50	8,40	13,70
23022789	2,45	6,00	3,95	50	8,60	13,80
23001289	2,50	6,00	4,00	50	8,80	14,00
23022790	2,55	6,00	4,05	50	8,90	14,20
23001974	2,60	6,00	4,10	50	9,10	14,40
23022791	2,65	6,00	4,15	50	9,30	14,50
23022792	2,70	6,00	4,20	50	9,40	14,70
23022793	2,75	6,00	4,25	50	9,60	14,90

Pilotbohrer | Pilot drills | Forets pilote

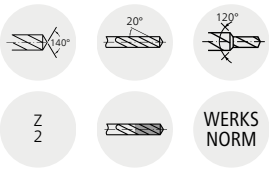
PFERD TOOLS

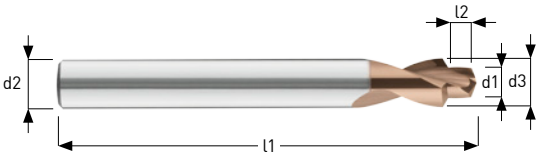
Art. No.	d1 m5	d2 h6	d3 +/-0.02	l1 +/-0.2	l2 +/-0.5	l3 0/+0.2
23022794	2,80	6,00	4,30	50	9,80	15,10
23022795	2,85	6,00	4,35	50	10,00	15,20
23022796	2,90	6,00	4,40	50	10,20	15,40
23022797	2,95	6,00	4,45	50	10,30	15,60
23001290	3,00	6,00	4,50	60	10,50	15,80
23022798	3,10	6,00	4,60	60	10,90	16,10
23001350	3,20	6,00	4,70	60	11,20	16,50
23022799	3,30	6,00	4,80	60	11,60	16,80
23022800	3,40	6,00	4,90	60	11,90	17,20
23022801	3,50	6,00	5,00	60	12,30	17,50
23022802	3,60	6,00	-	60	12,60	-
23022803	3,70	6,00	-	60	13,00	-
23022804	3,80	6,00	-	60	13,30	-
23022805	3,90	6,00	-	60	13,70	-
23022806	4,00	6,00	-	60	14,00	-
23022807	4,10	6,00	-	60	14,40	-
23022808	4,20	6,00	-	60	14,70	-
23022809	4,30	6,00	-	60	15,10	-
23022810	4,40	6,00	-	60	15,40	-
23022811	4,50	6,00	-	60	15,80	-
23022812	4,60	6,00	-	60	16,10	-
23022813	4,70	6,00	-	60	16,50	-
23022814	4,80	6,00	-	60	16,80	-
23022815	4,90	6,00	-	60	17,20	-
23022816	5,00	6,00	-	60	17,50	-
23022817	5,10	8,00	-	70	17,90	-
23022818	5,20	8,00	-	70	18,20	-
23022819	5,30	8,00	-	70	18,60	-
23022820	5,40	8,00	-	70	18,90	-
23022821	5,50	8,00	-	70	19,30	-
23022822	5,60	8,00	-	70	19,60	-
23022823	5,70	8,00	-	70	20,00	-
23022824	5,80	8,00	-	70	20,30	-
23022825	5,90	8,00	-	70	20,70	-
23022826	6,00	8,00	-	70	21,00	-

Notes

TWP

Torx® Pilotbohrer
Torx® pilot drill
Foret pilote Torx®





P M S



Art. No.	Torx®	d1 +/- 0.01	d2 h5	d3 +/- 0.01	l1 0/+2	l2 +/- 0.01
23023642	T4	0,90	3,00	2,20	39	0,54
23023643	T5	1,00	3,00	2,20	39	0,70
23023644	T6	1,20	3,00	2,30	39	0,84
23023645	T7	1,40	3,00	3,00	39	0,80
23023646	T8	1,60	3,00	3,00	39	1,12
23023647	T10	1,90	4,00	4,00	50	1,07
23023648	T15	2,30	4,00	4,00	50	1,38
23023649	T20	2,70	6,00	5,00	50	1,66
23023650	T25	3,10	6,00	6,00	50	2,28
23023651	T30	3,80	6,00	6,00	50	2,83

Notes

Notes

MTB27

Schnittwerte für das Bohren | Standard values for drilling | Paramètres indicatifs pour perçage

		Schnittgeschwindigkeit Cutting Speed Vitesse de coupe	Vorschub mm/Umdrehung Feed mm/rev Avance mm/tour			
ISO Class	Adv	m/min	ø 1.00-1.95	ø 2.00-2.95	ø 3.00-3.95	ø 4,00
P00	●	60-90	0.025-0.04	0.04-0.055	0.055-0.07	0.07-0.1
P01	●	60-90	0.025-0.04	0.04-0.055	0.055-0.07	0.07-0.1
P02	●	60-90	0.025-0.04	0.04-0.055	0.055-0.07	0.07-0.1
P03	●	50-70	0.023-0.036	0.036-0.05	0.05-0.065	0.065-0.08
P04	●	40-60	0.015-0.025	0.025-0.04	0.04-0.055	0.055-0.07
P05	●	35-50	0.013-0.023	0.023-0.035	0.035-0.05	0.05-0.065
P06	●	35-50	0.013-0.023	0.023-0.035	0.035-0.05	0.05-0.065
M01	●	30-45	0.01-0.02	0.02-0.032	0.032-0.046	0.046-0.06
M02	●	30-45	0.01-0.02	0.02-0.032	0.032-0.046	0.046-0.06
M03	●	30-45	0.01-0.02	0.02-0.032	0.032-0.046	0.046-0.06
K01	●	100-150	0.025-0.038	0.038-0.055	0.055-0.075	0.075-0.13
K03	●	80-130	0.022-0.035	0.038-0.055	0.05-0.07	0.07-0.09
K02	●	80-130	0.022-0.035	0.038-0.055	0.05-0.07	0.07-0.09
N01	◑	90-120	0.025-0.035	0.035-0.05	0.05-0.07	0.07-0.085
N02	◑	120-150	0.027-0.042	0.042-0.06	0.06-0.08	0.08-0.11
N03	◑	120-150	0.025-0.035	0.035-0.05	0.05-0.07	0.07-0.085
N04	◑	120-150	0.025-0.035	0.035-0.05	0.05-0.07	0.07-0.1
S01	◑	15-25	0.02-0.03	0.04-0.05	0.06-0.07	0.07-0.08
S02	◑	30-40	0.045-0.06	0.07-0.08	0.09-0.10	0.10-0.11
S03	◑	15-25	0.02-0.03	0.04-0.05	0.06-0.07	0.07-0.08
S04	◑	40-70	0.022-0.035	0.035-0.05	0.05-0.07	0.07-0.09
H01	◑	20-35	0.01-0.02	0.02-0.03	0.03-0.04	0.04-0.055
H02	◑	20-35	0.01-0.02	0.02-0.03	0.03-0.04	0.04-0.055
H03	○	-	-	-	-	-
O01	◑	120-150	0.027-0.042	0.042-0.06	0.06-0.08	0.08-0.11
O02	○	-	-	-	-	-
O03	○	-	-	-	-	-
O04	○	-	-	-	-	-
O05	○	-	-	-	-	-

● Empfohlen | Recommended | Recommandé
◑ Teilweise empfohlen | Partially recommended | Partiellement recommandé
○ Nicht empfohlen | Not recommended | Non recommandé

PFERD TOOLS

MTB27E

Schnittwerte für das Bohren | Standard values for drilling | Paramètres indicatifs pour perçage

		Schnittgeschwindigkeit Cutting Speed Vitesse de coupe	Vorschub mm/Umdrehung Feed mm/rev Avance mm/tour			
ISO Class	Adv	m/min	ø 1.00-1.95	ø 2.00-2.95	ø 3.00-3.95	ø 4.00-6.00
P00	●	60-90	0.025-0.04	0.04-0.055	0.055-0.07	0.07-0.1
P01	●	60-90	0.025-0.04	0.04-0.055	0.055-0.07	0.07-0.1
P02	●	60-90	0.025-0.04	0.04-0.055	0.055-0.07	0.07-0.1
P03	●	50-70	0.023-0.036	0.036-0.05	0.05-0.065	0.065-0.08
P04	●	40-60	0.015-0.025	0.025-0.04	0.04-0.055	0.055-0.07
P05	●	35-50	0.013-0.023	0.023-0.035	0.035-0.05	0.05-0.065
P06	●	35-50	0.013-0.023	0.023-0.035	0.035-0.05	0.05-0.065
M01	●	30-45	0.01-0.02	0.02-0.032	0.032-0.046	0.046-0.06
M02	●	30-45	0.01-0.02	0.02-0.032	0.032-0.046	0.046-0.06
M03	●	30-45	0.01-0.02	0.02-0.032	0.032-0.046	0.046-0.06
K01	●	100-150	0.025-0.038	0.038-0.055	0.055-0.075	0.075-0.13
K03	●	80-130	0.022-0.035	0.038-0.055	0.05-0.07	0.07-0.09
K02	●	80-130	0.022-0.035	0.038-0.055	0.05-0.07	0.07-0.09
N01	◑	90-120	0.025-0.035	0.035-0.05	0.05-0.07	0.07-0.085
N02	◑	120-150	0.027-0.042	0.042-0.06	0.06-0.08	0.08-0.11
N03	◑	120-150	0.025-0.035	0.035-0.05	0.05-0.07	0.07-0.085
N04	◑	120-150	0.025-0.035	0.035-0.05	0.05-0.07	0.07-0.1
S01	◑	15-25	0.01-0.02	0.03-0.04	0.05-0.06	0.07-0.08
S02	◑	30-40	0.03-0.045	0.06-0.07	0.08-0.09	0.10-0.11
S03	◑	15-25	0.01-0.02	0.03-0.04	0.05-0.06	0.07-0.08
S04	◑	40-70	0.022-0.035	0.035-0.05	0.05-0.07	0.07-0.09
H01	○	-	-	-	-	-
H02	○	-	-	-	-	-
H03	○	-	-	-	-	-
O01	◑	120-150	0.027-0.042	0.042-0.06	0.06-0.08	0.08-0.11
O02	○	-	-	-	-	-
O03	○	-	-	-	-	-
O04	○	-	-	-	-	-
O05	○	-	-	-	-	-

● Empfohlen | Recommended | Recommandé
◑ Teilweise empfohlen | Partially recommended | Partiellement recommandé
○ Nicht empfohlen | Not recommended | Non recommandé

TTD180E

Schnittwerte für das Bohren | Standard values for drilling | Paramètres indicatifs pour perçage

		Schnittgeschwindigkeit Cutting Speed Vitesse de coupe	Vorschub mm/Umdrehung Feed mm/rev Avance mm/tour										
ISO Class	Adv	m/min	ø 0.80-1.00	ø 1.05-1.45	ø 1.50-2.00	ø 2.05-2.45	ø 2.50-3.00	ø 3.10-3.50	ø 3.60-4.00	ø 4.10-4.50	ø 4.60-5.00	ø 5.10-5.50	ø 5.60-6.00
P00	●	65-80	0.08-0.10	0.010-0.015	0.015-0.02	0.02-0.025	0.025-0.03	0.030-0.035	0.035-0.040	0.040-0.045	0.045-0.050	0.050-0.055	0.055-0.060
P01	●	65-80	0.08-0.10	0.010-0.015	0.015-0.02	0.02-0.025	0.025-0.03	0.030-0.035	0.035-0.040	0.040-0.045	0.045-0.050	0.050-0.055	0.055-0.060
P02	●	65-80	0.08-0.10	0.010-0.015	0.015-0.02	0.02-0.025	0.025-0.03	0.030-0.035	0.035-0.040	0.040-0.045	0.045-0.050	0.050-0.055	0.055-0.060
P03	●	50-60	0.006-0.008	0.008-0.013	0.013-0.018	0.018-0.023	0.023-0.028	0.028-0.033	0.033-0.038	0.038-0.043	0.043-0.048	0.048-0.053	0.048-0.053
P04	●	40-50	0.006 -0.008	0.008-0.013	0.013-0.018	0.018-0.023	0.023-0.028	0.028-0.033	0.033-0.038	0.038-0.043	0.043-0.048	0.048-0.053	0.048-0.053
P05	●	35-50	0.003-0.004	0.010-0.012	0.014-0.016	0.018-0.020	0.018-0.020	0.028-0.033	0.034-0.038	0.040-0.044	0.044-0.048	0.050-0.055	0.050-0.055
P06	●	35-50	0.003-0.004	0.005-0.006	0.007-0.008	0.009-0.010	0.009-0.010	0.014-0.016	0.017-0.019	0.020-0.022	0.022-0.024	0.026-0.028	0.026-0.028
M01	●	25-30	0.003-0.004	0.005-0.006	0.007-0.008	0.009-0.010	0.009-0.010	0.014-0.016	0.017-0.019	0.020-0.022	0.022-0.024	0.026-0.028	0.026-0.028
M02	●	25-30	0.003-0.004	0.005-0.006	0.007-0.008	0.009-0.010	0.009-0.010	0.014-0.016	0.017-0.019	0.020-0.022	0.022-0.024	0.026-0.028	0.026-0.028
M03	●	25-30	0.003-0.004	0.005-0.006	0.007-0.008	0.009-0.010	0.009-0.010	0.014-0.016	0.017-0.019	0.020-0.022	0.022-0.024	0.026-0.028	0.026-0.028
K01	●	70-80	0.008-0.010	0.010-0.015	0.015-0.02	0.02-0.025	0.025-0.03	0.030-0.035	0.035-0.040	0.040-0.045	0.045-0.050	0.050-0.055	0.055-0.060
K03	●	60-70	0.008-0.010	0.010-0.015	0.015-0.02	0.02-0.025	0.025-0.03	0.030-0.035	0.035-0.040	0.040-0.045	0.045-0.050	0.050-0.055	0.055-0.060
K02	●	60-70	0.008-0.010	0.010-0.015	0.015-0.02	0.02-0.025	0.025-0.03	0.030-0.035	0.035-0.040	0.040-0.045	0.045-0.050	0.050-0.055	0.055-0.060
N01	◑	115-125	0.010-0.015	0.015-0.020	0.020-0.025	0.025-0.035	0.035-0.045	0.045-0.055	0.055-0.065	0.065-0.075	0.075-0.085	0.085-0.095	0.095-0.011
N02	◑	115-125	0.010-0.015	0.015-0.020	0.020-0.025	0.025-0.035	0.035-0.045	0.045-0.055	0.055-0.065	0.065-0.075	0.075-0.085	0.085-0.095	0.095-0.011
N03	◑	115-125	0.010-0.015	0.015-0.020	0.020-0.025	0.025-0.035	0.035-0.045	0.045-0.055	0.055-0.065	0.065-0.075	0.075-0.085	0.085-0.095	0.095-0.011
N04	◑	65-100	0.006-0.015	0.008-0.020	0.013-0.025	0.018-0.035	0.023-0.045	0.028-0.055	0.033-0.065	0.038-0.075	0.043-0.085	0.048-0.095	0.048-0.11
S01	◑	15-20	0.002-0.003	0.004-0.005	0.006-0.007	0.008-0.009	0.010-0.011	0.012-0.013	0.014-0.015	0.016-0.017	0.018-0.019	0.020-0.022	0.020-0.022
S02	◑	15-20	0.003-0.004	0.005-0.006	0.007-0.008	0.009-0.010	0.009-0.010	0.014-0.016	0.017-0.019	0.020-0.022	0.022-0.024	0.026-0.028	0.026-0.028
S03	◑	15-20	0.002-0.003	0.004-0.005	0.006-0.007	0.008-0.009	0.010-0.011	0.012-0.013	0.014-0.015	0.016-0.017	0.018-0.019	0.020-0.022	0.020-0.022
S04	◑	20-30	0.006-0.008	0.010-0.012	0.014-0.016	0.018-0.020	0.022-0.026	0.028-0.032	0.034-0.038	0.040-0.044	0.044-0.048	0.050-0.055	0.050-0.055
H01	◑	15-20	0.002-0.003	0.004-0.005	0.006-0.007	0.008-0.009	0.010-0.011	0.012-0.013	0.014-0.015	0.016-0.017	0.018-0.019	0.020-0.022	0.020-0.022
H02	◑	15-20	0.002-0.003	0.004-0.005	0.006-0.007	0.008-0.009	0.010-0.011	0.012-0.013	0.014-0.015	0.016-0.017	0.018-0.019	0.020-0.022	0.020-0.022
H03	○	-	-	-	-	-	-	-	-	-	-	-	-
O01	◑	115-125	0.010-0.015	0.015-0.020	0.020-0.025	0.025-0.035	0.035-0.045	0.045-0.055	0.055-0.065	0.065-0.075	0.075-0.085	0.085-0.095	0.095-0.011
O02	○	-	-	-	-	-	-	-	-	-	-	-	-
O03	○	-	-	-	-	-	-	-	-	-	-	-	-
O04	○	-	-	-	-	-	-	-	-	-	-	-	-
O05	○	-	-	-	-	-	-	-	-	-	-	-	-

● Empfohlen | Recommended | Recommandé
◑ Teilweise empfohlen | Partially recommended | Partiellement recommandé
○ Nicht empfohlen | Not recommended | Non recommandé

PFERD TOOLS

TWP

Schnittwerte für das Bohren | Standard values for drilling | Paramètres indicatifs pour perçage

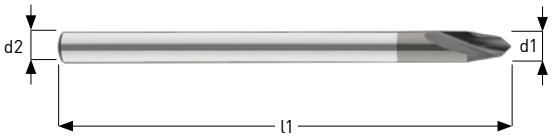
		Schnittgeschwindigkeit Cutting Speed Vitesse de coupe	Vorschub mm/Umdrehung Feed mm/rev Avance mm/tour		
ISO Class	Adv	m/min	ø 0.90-1.60	ø 1.90-2.30	ø 2.70-3.80
P00	○	-	-	-	-
P01	○	-	-	-	-
P02	○	-	-	-	-
P03	○	-	-	-	-
P04	○	-	-	-	-
P05	●	20-30	0.020-0.035	0.040-0.060	0.060-0.080
P06	●	20-30	0.020-0.035	0.040-0.060	0.060-0.080
M01	●	20-30	0.020-0.035	0.040-0.060	0.060-0.080
M02	●	20-30	0.020-0.035	0.040-0.060	0.060-0.080
M03	●	20-30	0.020-0.035	0.040-0.060	0.060-0.080
K01	○	-	-	-	-
K03	○	-	-	-	-
K02	○	-	-	-	-
N01	○	-	-	-	-
N02	○	-	-	-	-
N03	○	-	-	-	-
N04	○	-	-	-	-
S01	●	20-30	0.010-0.020	0.020-0.030	0.030-0.060
S02	○	-	-	-	-
S03	●	20-30	0.010-0.020	0.020-0.030	0.030-0.060
S04	●	20-30	0.010-0.020	0.020-0.030	0.030-0.060
H01	○	-	-	-	-
H02	○	-	-	-	-
H03	○	-	-	-	-
O01	○	-	-	-	-
O02	○	-	-	-	-
O03	○	-	-	-	-
O04	○	-	-	-	-
O05	○	-	-	-	-

● Empfohlen | Recommended | Recommandé
◑ Teilweise empfohlen | Partially recommended | Partiellement recommandé
○ Nicht empfohlen | Not recommended | Non recommandé

Zentrierbohrer | Centering drills | Forets de centrage

MTB43

118° Mikro-Zentrierbohrer
118° micro-centering drill
Micro-foret de centrage 118°



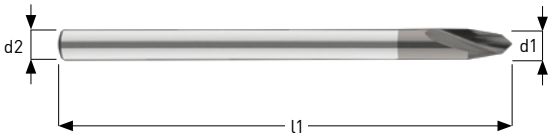
P M K N S H O



Art. No.	d1 +/-0.03	d2 h6	l1 +/-0.2
23022294	0,60	2,00	28
23022295	1,20	2,00	28
23022296	2,00	2,00	28

MTB44

90° Mikro-Zentrierbohrer
90° micro-centering drill
Micro-foret de centrage 90°



P M K N S H O



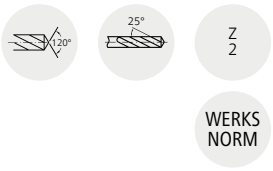
Art. No.	d1 +/-0.03	d2 h6	l1 +/-0.2
23022297	0,60	2,00	28
23022298	1,20	2,00	28
23022299	2,00	2,00	28

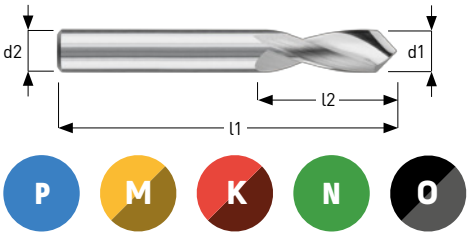
Zentrierbohrer | Centering drills | Forets de centrage

PFERD TOOLS

MTB40

120° Zentrierbohrer
120° centering drill
Foret de centrage 120°



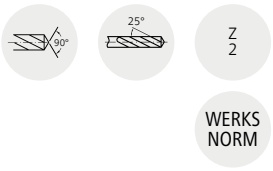


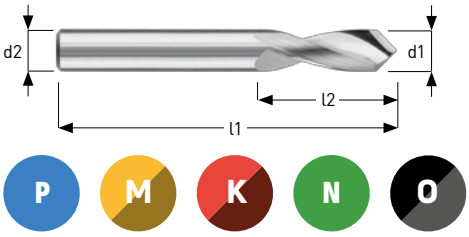


Art. No.	d1 h6	d2 h6	l1 0/+1	l2 0/+1
23022278	3,00	3,00	45	12,00
23022279	4,00	4,00	50	15,00
23022280	5,00	5,00	50	18,00
23022281	6,00	6,00	50	21,00
23022282	8,00	8,00	60	25,00
23022283	10,00	10,00	70	27,00
23022284	12,00	12,00	70	27,00
23022285	14,00	14,00	75	30,00
23022286	16,00	16,00	75	30,00

MTB41

90° Zentrierbohrer
90° centering drill
Foret de centrage 90°







Art. No.	d1 h6	d2 h6	l1 0/+1	l2 0/+1
23022287	3,00	3,00	45	12,00
23001095	4,00	4,00	50	15,00
23022288	5,00	5,00	50	18,00
23022289	6,00	6,00	50	21,00
23001106	8,00	8,00	60	25,00
23022290	10,00	10,00	70	27,00
23022291	12,00	12,00	70	27,00
23022292	14,00	14,00	75	30,00
23022293	16,00	16,00	75	30,00

Zentrierbohrer | Centering drills | Forets de centrage

MTB43 - MTB44

Schnittwerte für das Bohren | Standard values for drilling | Paramètres indicatifs pour perçage

		Schnittgeschwindigkeit m/min Cutting Speed m/min Vitesse de coupe m/min			Vorschub mm/Umdrehung Feed mm/rev Avance mm/tour		
ISO Class	Adv	ø 0.60	ø 1.20	ø 2.00	ø 0.60	ø 1.20	ø 2.00
P00	●	20-35	35-50	35-50	0.010-0.03	0.03-0.05	0.03-0.05
P01	●	20-35	30-50	30-50	0.010-0.03	0.03-0.05	0.03-0.05
P02	●	20-35	30-50	30-50	0.010-0.03	0.03-0.05	0.03-0.05
P03	●	15-30	30-45	30-45	0.01-0.025	0.025-0.045	0.025-0.045
P04	●	12-25	25-40	25-40	0.01-0.02	0.02-0.04	0.02-0.04
P05	●	10-20	20-35	20-35	0.01-0.02	0.02-0.035	0.02-0.035
P06	●	10-20	20-35	20-35	0.01-0.02	0.02-0.035	0.02-0.035
M01	●	8-16	16-30	16-30	0.01-0.02	0.02-0.03	0.02-0.03
M02	●	8-16	16-30	16-30	0.01-0.02	0.02-0.03	0.02-0.03
M03	●	8-16	16-30	16-30	0.01-0.02	0.02-0.03	0.02-0.03
K01	◑	20-35	35-50	35-50	0.01-0.035	0.035-0.055	0.035-0.055
K03	◑	15-30	30-45	30-45	0.01-0.03	0.03-0.05	0.03-0.05
K02	◑	15-30	30-45	30-45	0.01-0.03	0.03-0.05	0.03-0.05
N01	●	35-50	50-65	50-65	0.02-0.04	0.04-0.06	0.04-0.06
N02	●	25-40	40-55	40-55	0.02-0.05	0.05-0.07	0.05-0.07
N03	●	20-35	35-50	35-50	0.02-0.04	0.04-0.06	0.04-0.06
N04	●	20-50	35-65	35-65	0.01-0.05	0.03-0.07	0.03-0.07
S01	●	10-15	15-25	15-25	0.01-0.02	0.02-0.035	0.02-0.035
S02	●	10-15	15-25	15-25	0.01-0.02	0.02-0.035	0.02-0.035
S03	●	10-15	15-25	15-25	0.01-0.02	0.02-0.035	0.02-0.035
S04	●	25-35	35-50	35-50	0.01-0.03	0.03-0.05	0.03-0.05
H01	●	10-15	15-25	15-25	0.01-0.02	0.02-0.03	0.02-0.03
H02	●	10-15	15-25	15-25	0.01-0.02	0.02-0.03	0.02-0.03
H03	◑	20-40	20-40	20-40	0.001-0.004	0.002-0.005	0.002-0.005
O01	●	20-35	30-45	30-45	0.02-0.05	0.05-0.075	0.05-0.075
O02	○	-	-	-	-	-	-
O03	○	-	-	-	-	-	-
O04	○	-	-	-	-	-	-
O05	○	-	-	-	-	-	-

● Empfohlen | Recommended | Recommandé
◑ Teilweise empfohlen | Partially recommended | Partiellement recommandé
○ Nicht empfohlen | Not recommended | Non recommandé

Zentrierbohrer | Centering drills | Forets de centrage

PFERD TOOLS

MTB40 - MTB41

Schnittwerte für das Bohren | Standard values for drilling | Paramètres indicatifs pour perçage

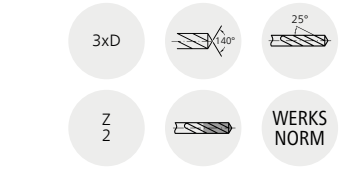
		Schnittgeschwindigkeit m/min Cutting Speed m/min Vitesse de coupe m/min	Vorschub mm/Umdrehung Feed mm/rev Avance mm/tour		
ISO Class	Adv	ø 3.00-16.00	ø 3.00-5.00	ø 6.00-10.00	ø 12.00-16.00
P00	●	25-40	0.12-0.25	0.25-0.3	0.3-0.4
P01	●	25-40	0.12-0.25	0.25-0.3	0.3-0.4
P02	●	25-40	0.12-0.25	0.25-0.3	0.3-0.4
P03	●	20-35	0.1-0.2	0.2-0.25	0.25-0.3
P04	○	-	-	-	-
P05	◑	10-20	0.05-0.15	0.15-0.2	0.2-0.25
P06	◑	10-20	0.05-0.15	0.15-0.2	0.2-0.25
M01	◑	8-16	0.04-0.08	0.08-0.14	0.14-0.2
M02	◑	8-16	0.04-0.08	0.08-0.14	0.14-0.2
M03	◑	8-16	0.04-0.08	0.08-0.14	0.14-0.2
K01	◑	25-40	0.07-0.15	0.15-0.2	0.2-0.35
K03	◑	20-35	0.05-0.1	0.1-0.15	0.15-0.25
K02	◑	20-35	0.05-0.1	0.1-0.15	0.15-0.25
N01	●	45-60	0.1-0.25	0.25-0.35	0.35-0.4
N02	●	30-45	0.15-0.3	0.3-0.4	0.4-0.6
N03	●	25-40	0.1-0.25	0.25-0.35	0.35-0.55
N04	●	25-60	0.06-0.25	0.1-0.35	0.15-0.45
S01	○	-	-	-	-
S02	○	-	-	-	-
S03	○	-	-	-	-
S04	◑	30-45	0.04-0.15	0.15-0.2	0.2-0.3
H01	○	-	-	-	-
H02	○	-	-	-	-
H03	○	-	-	-	-
O01	●	30-45	0.1-0.25	0.25-0.4	0.4-0.8
O02	○	-	-	-	-
O03	○	-	-	-	-
O04	○	-	-	-	-
O05	○	-	-	-	-

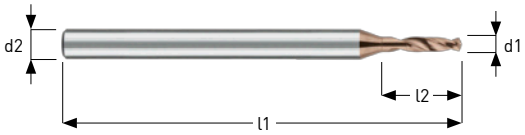
● Empfohlen | Recommended | Recommandé
◑ Teilweise empfohlen | Partially recommended | Partiellement recommandé
○ Nicht empfohlen | Not recommended | Non recommandé

PFERD TOOLS

TTD203

Wendelbohrer ohne innere Kühlkanäle
Twist drill without internal coolant holes
Foret hélicoïdal sans arrosage interne









Art. No.	d1 k5	d2 h6	l1 +/-0.2	l2 0/+0.5
23022827	1,00	3,00	44	5,25
23022828	1,05	3,00	44	5,55
23022829	1,10	3,00	44	5,80
23022830	1,15	3,00	44	6,05
23022831	1,20	3,00	44	6,30
23022832	1,25	3,00	44	6,60
23022833	1,30	3,00	44	6,85
23022834	1,35	3,00	44	7,10
23022835	1,40	3,00	44	7,35
23022836	1,45	3,00	44	7,65
23001436	1,50	3,00	44	7,90
23022837	1,55	3,00	44	8,15
23022838	1,60	3,00	44	8,40
23022839	1,65	3,00	44	8,70
23022840	1,70	3,00	44	8,95
23022841	1,75	3,00	44	9,20
23022842	1,80	3,00	44	9,45
23022843	1,85	3,00	44	9,75
23022844	1,90	3,00	44	10,00
23022845	1,95	3,00	44	10,25
23001892	2,00	4,00	53	10,50
23022846	2,05	4,00	53	10,80
23001485	2,10	4,00	53	11,05
23022847	2,15	4,00	53	11,30
23022848	2,20	4,00	53	11,55
23022849	2,25	4,00	53	11,85
23022850	2,30	4,00	53	12,10
23022851	2,35	4,00	53	12,35
23022852	2,40	4,00	53	12,60
23022853	2,45	4,00	53	12,90
23001489	2,50	4,00	53	13,15
23022854	2,55	4,00	53	13,40
23022855	2,60	4,00	53	13,65
23022856	2,65	4,00	53	13,95
23022857	2,70	4,00	53	14,20
23022858	2,75	4,00	53	14,45
23022859	2,80	4,00	53	14,70
23022860	2,85	4,00	53	15,00
23022861	2,90	4,00	53	15,25
23022862	2,95	4,00	53	15,50

PFERD TOOLS

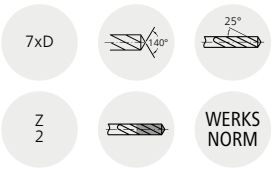
Art. No.	d1 k5	d2 h6	l1 +/-0.2	l2 0/+0.5
23022863	3,00	6,00	60	15,75
23022864	3,05	6,00	60	16,05
23022865	3,10	6,00	60	16,30
23022866	3,15	6,00	60	16,55
23022867	3,20	6,00	60	16,80
23022868	3,25	6,00	60	17,10
23022869	3,30	6,00	60	17,35
23022870	3,35	6,00	60	17,60
23022871	3,40	6,00	60	17,85
23022872	3,45	6,00	60	18,15
23022873	3,50	6,00	60	18,40
23022874	3,55	6,00	60	18,65
23022875	3,60	6,00	60	18,90
23022876	3,65	6,00	60	19,20
23022877	3,70	6,00	60	19,45
23022878	3,75	6,00	60	19,70
23022879	3,80	6,00	60	19,95
23022880	3,85	6,00	60	20,25
23022881	3,90	6,00	60	20,50
23022882	3,95	6,00	60	20,75
23022883	4,00	6,00	60	21,00

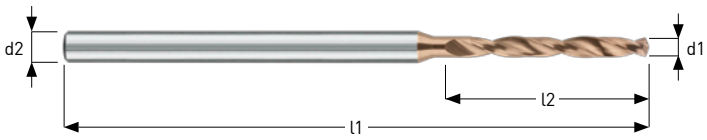
Notes

PFERD TOOLS

TTD207

Wendelbohrer ohne innere Kühlkanäle
Twist drill without internal coolant holes
Foret hélicoïdal sans arrosage interne









Art. No.	d1 k5	d2 h6	l1 +/-0.2	l2 0/+0.5
23023143	1,00	3,00	53	9,25
23023144	1,05	3,00	53	9,75
23023145	1,10	3,00	53	10,20
23023146	1,15	3,00	53	10,65
23023147	1,20	3,00	53	11,10
23023148	1,25	3,00	53	11,60
23023149	1,30	3,00	53	12,05
23023150	1,35	3,00	53	12,50
23023151	1,40	3,00	53	12,95
23023152	1,45	3,00	53	13,45
23023153	1,50	3,00	53	13,90
23023154	1,55	3,00	53	14,35
23023155	1,60	3,00	53	14,80
23023156	1,65	3,00	53	15,30
23023157	1,70	3,00	53	15,75
23023158	1,75	3,00	53	16,20
23023159	1,80	3,00	53	16,65
23023160	1,85	3,00	53	17,15
23023161	1,90	3,00	53	17,60
23023162	1,95	3,00	53	18,05
23023163	2,00	4,00	60	18,50
23023164	2,05	4,00	60	19,00
23023165	2,10	4,00	60	19,45
23023166	2,15	4,00	60	19,90
23023167	2,20	4,00	60	20,35
23023168	2,25	4,00	60	20,85
23001180	2,30	4,00	60	21,30
23023169	2,35	4,00	60	21,75
23023170	2,40	4,00	60	22,20
23023171	2,45	4,00	60	22,70
23023172	2,50	4,00	60	23,15
23023173	2,55	4,00	60	23,60
23023174	2,60	4,00	60	24,05
23023175	2,65	4,00	60	24,55
23023176	2,70	4,00	60	25,00
23023177	2,75	4,00	60	25,45
23023178	2,80	4,00	60	25,90
23023179	2,85	4,00	60	26,40
23023180	2,90	4,00	60	26,85
23023181	2,95	4,00	60	27,30

Art. No.	d1 k5	d2 h6	l1 +/-0.2	l2 0/+0.5
23023182	3,00	6,00	70	27,75
23023183	3,05	6,00	70	28,25
23023184	3,10	6,00	70	28,70
23023185	3,15	6,00	70	29,15
23023186	3,20	6,00	70	29,60
23023187	3,25	6,00	70	30,10
23023188	3,30	6,00	70	30,55
23023189	3,35	6,00	70	31,00
23023190	3,40	6,00	70	31,45
23023191	3,45	6,00	70	31,95
23023192	3,50	6,00	70	32,40
23023193	3,55	6,00	70	32,85
23023194	3,60	6,00	70	33,30
23023195	3,65	6,00	70	33,80
23023196	3,70	6,00	70	34,25
23023197	3,75	6,00	70	34,70
23023198	3,80	6,00	70	35,15
23023199	3,85	6,00	70	35,65
23023200	3,90	6,00	70	36,10
23023201	3,95	6,00	70	36,55
23023202	4,00	6,00	70	37,00

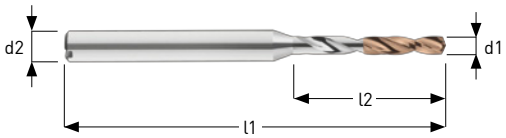
Notes

PFERD TOOLS

TTD204

Wendelbohrer mit inneren Kühlkanälen
Twist drill with internal coolant holes
Foret hélicoïdal avec arrosage interne

4xD | 140° | Z 2 | WERKS NORM



P M K N S H



Art. No.	d1 k5	d2 h6	l1 +/-0.2	l2 0/+0.5
23022944	1,00	3,00	38	6,25
23022945	1,05	3,00	38	6,60
23022946	1,10	3,00	38	6,90
23022947	1,15	3,00	38	7,20
23022948	1,20	3,00	38	7,50
23022949	1,25	3,00	38	7,85
23022950	1,30	3,00	42	8,15
23022951	1,35	3,00	42	8,45
23022952	1,40	3,00	42	8,75
23022953	1,45	3,00	42	9,10
23022954	1,50	3,00	42	9,40
23022955	1,55	3,00	44	9,70
23022956	1,60	3,00	44	10,00
23022957	1,65	3,00	44	10,35
23022958	1,70	3,00	44	10,65
23022959	1,75	3,00	44	10,95
23022960	1,80	3,00	46	11,25
23022961	1,85	3,00	46	11,60
23022962	1,90	3,00	46	11,90
23022963	1,95	3,00	46	12,20
23022964	2,00	4,00	46	12,50
23022965	2,05	4,00	48	12,85
23001074	2,10	4,00	48	13,15
23022967	2,15	4,00	48	13,45
23022968	2,20	4,00	48	13,75
23022969	2,25	4,00	48	14,10
23001016	2,30	4,00	53	14,40
23022970	2,35	4,00	53	14,70
23022971	2,40	4,00	53	15,00
23022972	2,45	4,00	53	15,35
23001413	2,50	4,00	53	15,65
23022973	2,55	4,00	53	15,95
23022974	2,60	4,00	53	16,25
23022975	2,65	4,00	53	16,60
23022976	2,70	4,00	53	16,90
23022977	2,75	4,00	55	17,20
23022978	2,80	4,00	55	17,50
23022979	2,85	4,00	55	17,85
23022980	2,90	4,00	55	18,15
23022981	2,95	4,00	58	18,45

Hochleistungsbohrer | High-performance drills | Forets haute performance

PFERD TOOLS

Art. No.	d1 k5	d2 h6	l1 +/-0.2	l2 0/+0.5
23022982	3,00	6,00	58	18,75
23022983	3,05	6,00	58	19,10
23022984	3,10	6,00	58	19,40
23022985	3,15	6,00	58	19,70
23022986	3,20	6,00	58	20,00
23022987	3,25	6,00	58	20,35
23022988	3,30	6,00	60	20,65
23022989	3,35	6,00	60	20,95
23022990	3,40	6,00	60	21,25
23022991	3,45	6,00	60	21,60
23022992	3,50	6,00	60	21,90
23022993	3,55	6,00	63	22,20
23022994	3,60	6,00	63	22,50
23022995	3,65	6,00	63	22,85
23022996	3,70	6,00	63	23,15
23022997	3,75	6,00	63	23,45
23022998	3,80	6,00	65	23,75
23022999	3,85	6,00	65	24,10
23023000	3,90	6,00	65	24,40
23023001	3,95	6,00	65	24,70
23023002	4,00	6,00	65	25,00

Notes

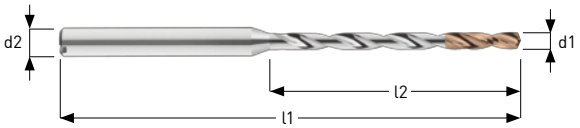
Hochleistungsbohrer | High-performance drills | Forets haute performance

PFERD TOOLS

TTD209

Wendelbohrer mit inneren Kühlkanälen
Twist drill with internal coolant holes
Foret hélicoïdal avec arrosage interne

9xD | 140° | Z 2 | WERKS NORM



P M K N S H



Art. No.	d1 k5	d2 h6	l1 +/-0.2	l2 0/+0.5
23023203	1,00	3,00	45	11,25
23023204	1,05	3,00	45	11,85
23004151	1,10	3,00	45	12,40
23023205	1,15	3,00	45	12,95
23004152	1,20	3,00	45	13,50
23023206	1,25	3,00	45	14,10
23004153	1,30	3,00	48	14,65
23023207	1,35	3,00	48	15,20
23004155	1,40	3,00	48	15,75
23023208	1,45	3,00	48	16,35
23004157	1,50	3,00	48	16,90
23023209	1,55	3,00	51	17,45
23004158	1,60	3,00	51	18,00
23023210	1,65	3,00	51	18,60
23004160	1,70	3,00	51	19,15
23023211	1,75	3,00	51	19,70
23004161	1,80	3,00	53	20,25
23023212	1,85	3,00	53	20,85
23004163	1,90	3,00	53	21,40
23023213	1,95	3,00	53	21,95
23004165	2,00	4,00	53	22,50
23023214	2,05	4,00	55	23,10
23004167	2,10	4,00	55	23,65
23023215	2,15	4,00	55	24,20
23023216	2,20	4,00	55	24,75
23023217	2,25	4,00	55	25,35
23023218	2,30	4,00	60	25,90
23023219	2,35	4,00	60	26,45
23023220	2,40	4,00	60	27,00
23023221	2,45	4,00	60	27,60
23023222	2,50	4,00	60	28,15
23023223	2,55	4,00	65	28,70
23023224	2,60	4,00	65	29,25
23023225	2,65	4,00	65	29,85
23023226	2,70	4,00	65	30,40
23023227	2,75	4,00	65	30,95
23023228	2,80	4,00	70	31,50
23023229	2,85	4,00	70	32,10
23023230	2,90	4,00	70	32,65
23023231	2,95	4,00	75	33,20

Hochleistungsbohrer | High-performance drills | Forets haute performance

PFERD TOOLS

Art. No.	d1 k5	d2 h6	l1 +/-0.2	l2 0/+0.5
23023232	3,00	6,00	75	33,75
23023233	3,05	6,00	75	34,35
23023234	3,10	6,00	75	34,90
23023235	3,15	6,00	75	35,45
23023236	3,20	6,00	75	36,00
23023237	3,25	6,00	75	36,60
23023238	3,30	6,00	80	37,15
23023239	3,35	6,00	80	37,70
23023240	3,40	6,00	80	38,25
23023241	3,45	6,00	80	38,85
23023242	3,50	6,00	80	39,40
23023243	3,55	6,00	85	39,95
23023244	3,60	6,00	85	40,50
23023245	3,65	6,00	85	41,10
23023246	3,70	6,00	85	41,65
23023247	3,75	6,00	85	42,20
23023248	3,80	6,00	90	42,75
23023249	3,85	6,00	90	43,35
23023250	3,90	6,00	90	43,90
23023251	3,95	6,00	90	44,45
23023252	4,00	6,00	90	45,00

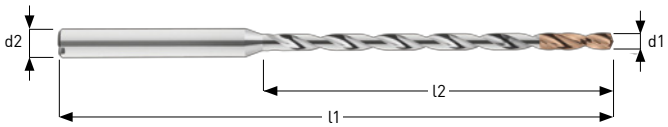
Notes

PFERD TOOLS

TTD215

Wendelbohrer mit inneren Kühlkanälen
Twist drill with internal coolant holes
Foret hélicoïdal avec arrosage interne

15xD | 140° | Z 2 | WERKS NORM



P M K N S H



Art. No.	d1 k5	d2 h6	l1 +/-0.2	l2 0/+0.5
23023333	1,00	3,00	54	17,25
23023334	1,05	3,00	54	18,15
23023335	1,10	3,00	54	19,00
23023336	1,15	3,00	54	19,85
23023337	1,20	3,00	54	20,70
23023338	1,25	3,00	54	21,60
23023339	1,30	3,00	60	22,45
23023340	1,35	3,00	60	23,30
23023341	1,40	3,00	60	24,15
23023342	1,45	3,00	60	25,05
23023343	1,50	3,00	60	25,90
23023344	1,55	3,00	65	26,75
23023345	1,60	3,00	65	27,60
23023346	1,65	3,00	65	28,50
23023347	1,70	3,00	65	29,35
23023348	1,75	3,00	65	30,20
23023349	1,80	3,00	70	31,05
23023350	1,85	3,00	70	31,95
23023351	1,90	3,00	70	32,80
23023352	1,95	3,00	70	33,65
23023353	2,00	4,00	70	34,50
23023354	2,05	4,00	75	35,40
23023355	2,10	4,00	75	36,25
23023356	2,15	4,00	75	37,10
23023357	2,20	4,00	75	37,95
23023358	2,25	4,00	75	38,85
23023359	2,30	4,00	78	39,70
23023360	2,35	4,00	78	40,55
23023361	2,40	4,00	78	41,40
23023362	2,45	4,00	78	42,30
23023363	2,50	4,00	78	43,15
23023364	2,55	4,00	83	44,00
23023365	2,60	4,00	83	44,85
23023366	2,65	4,00	83	45,75
23023367	2,70	4,00	83	46,60
23023368	2,75	4,00	83	47,45
23023369	2,80	4,00	88	48,30
23023370	2,85	4,00	88	49,20
23023371	2,90	4,00	88	50,05
23023372	2,95	4,00	88	50,90

Hochleistungsbohrer | High-performance drills | Forets haute performance

PFERD TOOLS

Art. No.	d1 k5	d2 h6	l1 +/-0.2	l2 0/+0.5
23023373	3,00	6,00	93	51,75
23023374	3,05	6,00	93	52,65
23023375	3,10	6,00	93	53,50
23023376	3,15	6,00	93	54,35
23023377	3,20	6,00	93	55,20
23023378	3,25	6,00	93	56,10
23023379	3,30	6,00	98	56,95
23023380	3,35	6,00	98	57,80
23023381	3,40	6,00	98	58,65
23023382	3,45	6,00	98	59,55
23023383	3,50	6,00	98	60,40
23023384	3,55	6,00	103	61,25
23023385	3,60	6,00	103	62,10
23023386	3,65	6,00	103	63,00
23023387	3,70	6,00	103	63,85
23023388	3,75	6,00	103	64,70
23023389	3,80	6,00	108	65,55
23023390	3,85	6,00	108	66,45
23023391	3,90	6,00	108	67,30
23023392	3,95	6,00	108	68,15
23023393	4,00	6,00	108	69,00

Notes

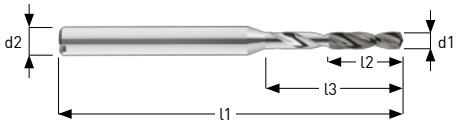
Hochleistungsbohrer | High-performance drills | Forets haute performance

PFERD TOOLS

TTD206E

Wendelbohrer mit inneren Kühlkanälen
Twist drill with internal coolant holes
Foret hélicoïdal avec arrosage interne

6xD | 130° | Z 2 | WERKS NORM



P M K N S H



Art. No.	d1 k5	d2 h6	l1 +/-0.2	l2 0/+0.5	l3 0/+0.5
23023003	1,00	3,00	50	4,40	9,30
23023004	1,05	3,00	50	4,65	9,80
23023005	1,10	3,00	50	4,85	10,25
23023006	1,15	3,00	50	5,10	10,70
23023007	1,20	3,00	50	5,30	11,20
23023008	1,25	3,00	50	5,50	11,65
23023009	1,30	3,00	52	5,75	12,10
23023010	1,35	3,00	52	5,95	12,60
23023011	1,40	3,00	52	6,20	13,05
23023012	1,45	3,00	52	6,40	13,50
23023013	1,50	3,00	52	6,60	13,95
23023014	1,55	3,00	55	6,85	14,45
23023015	1,60	3,00	55	7,05	14,90
23023016	1,65	3,00	55	7,30	15,35
23023017	1,70	3,00	55	7,50	15,85
23023018	1,75	3,00	55	7,70	16,30
23023019	1,80	3,00	57	7,95	16,75
23023020	1,85	3,00	57	8,15	17,25
23023021	1,90	3,00	57	8,40	17,70
23023022	1,95	3,00	57	8,60	18,15
23023023	2,00	4,00	57	8,80	18,60
23023024	2,05	4,00	60	9,05	19,10
23023025	2,10	4,00	60	9,25	19,55
23023026	2,15	4,00	60	9,50	20,00
23023027	2,20	4,00	60	9,70	20,50
23023028	2,25	4,00	60	9,90	20,95
23001003	2,30	4,00	62	10,15	21,40
23023029	2,35	4,00	62	10,35	21,90
23023030	2,40	4,00	62	10,60	22,35
23023031	2,45	4,00	62	10,80	22,80
23001059	2,50	4,00	62	11,00	23,25
23023032	2,55	4,00	65	11,25	23,75
23023033	2,60	4,00	65	11,45	24,20
23023034	2,65	4,00	65	11,70	24,65
23023035	2,70	4,00	65	11,90	25,15
23023036	2,75	4,00	65	12,10	25,60
23023037	2,80	4,00	67	12,35	26,05
23023038	2,85	4,00	67	12,55	26,55
23023039	2,90	4,00	67	12,80	27,00
23023040	2,95	4,00	67	13,00	27,45

Hochleistungsbohrer | High-performance drills | Forets haute performance

PFERD TOOLS

Art. No.	d1 k5	d2 h6	l1 +/-0.2	l2 0/+0.5	l3 0/+0.5
23023041	3,00	6,00	70	13,20	27,90
23023042	3,05	6,00	70	13,45	28,40
23023043	3,10	6,00	70	13,65	28,85
23023044	3,15	6,00	70	13,90	29,30
23023045	3,20	6,00	70	14,10	29,80
23023046	3,25	6,00	70	14,30	30,25
23023047	3,30	6,00	72	14,55	30,70
23023048	3,35	6,00	72	14,75	31,20
23023049	3,40	6,00	72	15,00	31,65
23023050	3,45	6,00	72	15,20	32,10
23023051	3,50	6,00	72	15,40	32,55
23023052	3,55	6,00	75	15,65	33,05
23023053	3,60	6,00	75	15,85	33,50
23023054	3,65	6,00	75	16,10	33,95
23023055	3,70	6,00	75	16,30	34,45
23023056	3,75	6,00	75	16,50	34,90
23023057	3,80	6,00	77	16,75	35,35
23023058	3,85	6,00	77	16,95	35,85
23023059	3,90	6,00	77	17,20	36,30
23023060	3,95	6,00	77	17,40	36,75
23023061	4,00	6,00	80	17,60	37,20
23023062	4,10	6,00	80	18,05	38,15
23023063	4,20	6,00	80	18,50	39,10
23023064	4,30	6,00	80	18,95	40,00
23023065	4,40	6,00	80	19,40	40,95
23023066	4,50	6,00	80	19,80	41,85
23023067	4,60	6,00	85	20,25	42,80
23023068	4,70	6,00	85	20,70	43,75
23023069	4,80	6,00	85	21,15	44,65
23023070	4,90	6,00	85	21,60	45,60
23023071	5,00	6,00	85	22,00	46,50
23023072	5,10	6,00	90	22,45	47,45
23023073	5,20	6,00	90	22,90	48,40
23023074	5,30	6,00	90	23,35	49,30
23023075	5,40	6,00	90	23,80	50,25
23023076	5,50	6,00	90	24,20	51,15
23023077	5,60	6,00	95	24,65	52,10
23023078	5,70	6,00	95	25,10	53,05
23023079	5,80	6,00	95	25,55	53,95
23023080	5,90	6,00	95	26,00	54,90
23023081	6,00	6,00	95	26,40	55,80

Notes

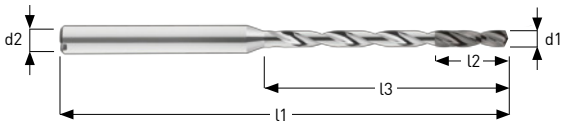
Hochleistungsbohrer | High-performance drills | Forets haute performance

PFERD TOOLS

TTD212E

Wendelbohrer mit inneren Kühlkanälen
Twist drill with internal coolant holes
Foret hélicoïdal avec arrosage interne

12xD | 130° | Z 2 | WERKS NORM



P M K N S H



Art. No.	d1 k5	d2 h6	l1 +/-0.2	l2 0/+0.5	l3 0/+0.5
23023253	1,00	3,00	58	4,40	15,30
23023254	1,05	3,00	58	4,65	16,10
23023255	1,10	3,00	58	4,85	16,85
23023256	1,15	3,00	58	5,10	17,60
23023257	1,20	3,00	58	5,30	18,40
23023258	1,25	3,00	58	5,50	19,15
23023259	1,30	3,00	64	5,75	19,90
23023260	1,35	3,00	64	5,95	20,70
23023261	1,40	3,00	64	6,20	21,45
23023262	1,45	3,00	64	6,40	22,20
23023263	1,50	3,00	64	6,60	22,95
23023264	1,55	3,00	68	6,85	23,75
23023265	1,60	3,00	68	7,05	24,50
23023266	1,65	3,00	68	7,30	25,25
23001181	1,70	3,00	68	7,50	26,05
23023267	1,75	3,00	68	7,70	26,80
23023268	1,80	3,00	72	7,95	27,55
23023269	1,85	3,00	72	8,15	28,35
23023270	1,90	3,00	72	8,40	29,10
23023271	1,95	3,00	72	8,60	29,85
23023272	2,00	4,00	72	8,80	30,60
23023273	2,05	4,00	76	9,05	31,40
23023274	2,10	4,00	76	9,25	32,15
23023275	2,15	4,00	76	9,50	32,90
23023276	2,20	4,00	76	9,70	33,70
23023277	2,25	4,00	76	9,90	34,45
23023278	2,30	4,00	80	10,15	35,20
23023279	2,35	4,00	80	10,35	36,00
23023280	2,40	4,00	80	10,60	36,75
23023281	2,45	4,00	80	10,80	37,50
23023282	2,50	4,00	80	11,00	38,25
23023283	2,55	4,00	84	11,25	39,05
23023284	2,60	4,00	84	11,45	39,80
23023285	2,65	4,00	84	11,70	40,55
23023286	2,70	4,00	84	11,90	41,35
23023287	2,75	4,00	84	12,10	42,10
23023288	2,80	4,00	88	12,35	42,85
23023289	2,85	4,00	88	12,55	43,65
23023290	2,90	4,00	88	12,80	44,40
23023291	2,95	4,00	88	13,00	45,15

Hochleistungsbohrer | High-performance drills | Forets haute performance

PFERD TOOLS

Art. No.	d1 k5	d2 h6	l1 +/-0.2	l2 0/+0.5	l3 0/+0.5
23023292	3,00	6,00	92	13,20	45,90
23023293	3,05	6,00	92	13,45	46,70
23023294	3,10	6,00	92	13,65	47,45
23023295	3,15	6,00	92	13,90	48,20
23023296	3,20	6,00	92	14,10	49,00
23023297	3,25	6,00	92	14,30	49,75
23023298	3,30	6,00	96	14,55	50,50
23023299	3,35	6,00	96	14,75	51,30
23023300	3,40	6,00	96	15,00	52,05
23023301	3,45	6,00	96	15,20	52,80
23023302	3,50	6,00	96	15,40	53,55
23023303	3,55	6,00	100	15,65	54,35
23023304	3,60	6,00	100	15,85	55,10
23023305	3,65	6,00	100	16,10	55,85
23023306	3,70	6,00	100	16,30	56,65
23023307	3,75	6,00	100	16,50	57,40
23023308	3,80	6,00	104	16,75	58,15
23023309	3,85	6,00	104	16,95	58,95
23023310	3,90	6,00	104	17,20	59,70
23023311	3,95	6,00	104	17,40	60,45
23023312	4,00	6,00	108	17,60	61,20
23023313	4,10	6,00	108	18,05	62,75
23023314	4,20	6,00	108	18,50	64,30
23023315	4,30	6,00	108	18,95	65,80
23023316	4,40	6,00	108	19,40	67,35
23023317	4,50	6,00	108	19,80	68,85
23023318	4,60	6,00	115	20,25	70,40
23023319	4,70	6,00	115	20,70	71,95
23023320	4,80	6,00	115	21,15	73,45
23023321	4,90	6,00	115	21,60	75,00
23023322	5,00	6,00	115	22,00	76,50
23023323	5,10	6,00	122	22,45	78,05
23023324	5,20	6,00	122	22,90	79,60
23023325	5,30	6,00	122	23,35	81,10
23023326	5,40	6,00	122	23,80	82,65
23023327	5,50	6,00	122	24,20	84,15
23023328	5,60	6,00	130	24,65	85,70
23023329	5,70	6,00	130	25,10	87,25
23023330	5,80	6,00	130	25,55	88,75
23023331	5,90	6,00	130	26,00	90,30
23023332	6,00	6,00	130	26,40	91,80

Notes

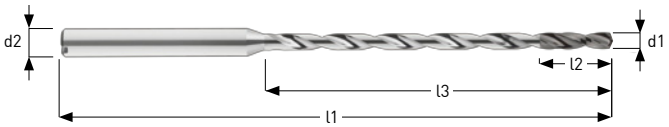
Hochleistungsbohrer | High-performance drills | Forets haute performance

PFERD TOOLS

TTD218E

Wendelbohrer mit inneren Kühlkanälen
Twist drill with internal coolant holes
Foret hélicoïdal avec arrosage interne

18xD | 130° | Z 2 | WERKS NORM



P M K N S H



Art. No.	d1 k5	d2 h6	l1 +/-0.2	l2 0/+0.5	l3 0/+0.5
23001349	1,00	3,00	64	4,40	21,30
23023394	1,05	3,00	64	4,65	22,40
23023395	1,10	3,00	64	4,85	23,45
23023396	1,15	3,00	64	5,10	24,50
23023397	1,20	3,00	64	5,30	25,60
23023398	1,25	3,00	64	5,50	26,65
23023399	1,30	3,00	72	5,75	27,70
23023400	1,35	3,00	72	5,95	28,80
23023401	1,40	3,00	72	6,20	29,85
23023402	1,45	3,00	72	6,40	30,90
23023403	1,50	3,00	72	6,60	31,95
23023404	1,55	3,00	80	6,85	33,05
23023405	1,60	3,00	80	7,05	34,10
23023406	1,65	3,00	80	7,30	35,15
23023407	1,70	3,00	80	7,50	36,25
23023408	1,75	3,00	80	7,70	37,30
23023409	1,80	3,00	88	7,95	38,35
23023410	1,85	3,00	88	8,15	39,45
23023411	1,90	3,00	88	8,40	40,50
23023412	1,95	3,00	88	8,60	41,55
23023413	2,00	4,00	88	8,80	42,60
23023414	2,05	4,00	94	9,05	43,70
23023415	2,10	4,00	94	9,25	44,75
23023416	2,15	4,00	94	9,50	45,80
23023417	2,20	4,00	94	9,70	46,90
23023418	2,25	4,00	94	9,90	47,95
23023419	2,30	4,00	100	10,15	49,00
23023420	2,35	4,00	100	10,35	50,10
23023421	2,40	4,00	100	10,60	51,15
23023422	2,45	4,00	100	10,80	52,20
23023423	2,50	4,00	100	11,00	53,25
23023424	2,55	4,00	106	11,25	54,35
23023425	2,60	4,00	106	11,45	55,40
23023426	2,65	4,00	106	11,70	56,45
23023427	2,70	4,00	106	11,90	57,55
23023428	2,75	4,00	106	12,10	58,60
23023429	2,80	4,00	110	12,35	59,65
23023430	2,85	4,00	110	12,55	60,75
23023431	2,90	4,00	110	12,80	61,80
23023432	2,95	4,00	110	13,00	62,85

Hochleistungsbohrer | High-performance drills | Forets haute performance

PFERD TOOLS

Art. No.	d1 k5	d2 h6	l1 +/-0.2	l2 0/+0.5	l3 0/+0.5
23023433	3,00	6,00	114	13,20	63,90
23023434	3,05	6,00	114	13,45	65,00
23023435	3,10	6,00	114	13,65	66,05
23023436	3,15	6,00	114	13,90	67,10
23023437	3,20	6,00	114	14,10	68,20
23023438	3,25	6,00	114	14,30	69,25
23023439	3,30	6,00	118	14,55	70,30
23023440	3,35	6,00	118	14,75	71,40
23023441	3,40	6,00	118	15,00	72,45
23023442	3,45	6,00	118	15,20	73,50
23023443	3,50	6,00	118	15,40	74,55
23023444	3,55	6,00	122	15,65	75,65
23023445	3,60	6,00	122	15,85	76,70
23023446	3,65	6,00	122	16,10	77,75
23023447	3,70	6,00	122	16,30	78,85
23023448	3,75	6,00	122	16,50	79,90
23023449	3,80	6,00	126	16,75	80,95
23023450	3,85	6,00	126	16,95	82,05
23023451	3,90	6,00	126	17,20	83,10
23023452	3,95	6,00	126	17,40	84,15
23023453	4,00	6,00	130	17,60	85,20
23023454	4,10	6,00	130	18,05	87,35
23023455	4,20	6,00	130	18,50	89,50
23023456	4,30	6,00	130	18,95	91,60
23023457	4,40	6,00	130	19,40	93,75
23001178	4,50	6,00	130	19,80	95,85
23023458	4,60	6,00	142	20,25	98,00
23023459	4,70	6,00	142	20,70	100,15
23023460	4,80	6,00	142	21,15	102,25
23023461	4,90	6,00	142	21,60	104,40
23023462	5,00	6,00	142	22,00	106,50
23023463	5,10	6,00	153	22,45	108,65
23023464	5,20	6,00	153	22,90	110,80
23023465	5,30	6,00	153	23,35	112,90
23023466	5,40	6,00	153	23,80	115,05
23023467	5,50	6,00	153	24,20	117,15
23023468	5,60	6,00	165	24,65	119,30
23023469	5,70	6,00	165	25,10	121,45
23023470	5,80	6,00	165	25,55	123,55
23023471	5,90	6,00	165	26,00	125,70
23023472	6,00	6,00	165	26,40	127,80

Notes

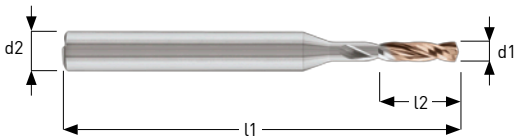
Hochleistungsbohrer | High-performance drills | Forets haute performance

PFERD TOOLS

TTD203S

Wendelbohrer mit inneren Kühlkanälen
Twist drill with internal coolant holes
Foret hélicoïdal avec arrosage interne

3xD | 140° | Z 2 | WERKS NORM



P M S



Art. No.	d1 k5	d2 h6	l1 +/-0.3	l2 0/+0.3
23022884	1,00	3,00	40	7,00
23022885	1,05	3,00	40	7,30
23022886	1,10	3,00	40	7,60
23022887	1,15	3,00	40	7,90
23022888	1,20	3,00	40	8,20
23022889	1,25	3,00	40	8,50
23022890	1,30	3,00	42	8,80
23022891	1,35	3,00	42	9,10
23022892	1,40	3,00	42	9,40
23022893	1,45	3,00	42	9,70
23022894	1,50	3,00	42	10,00
23022895	1,55	3,00	45	10,30
23022896	1,60	3,00	45	10,60
23022897	1,65	3,00	45	10,90
23022898	1,70	3,00	45	11,20
23022899	1,75	3,00	45	11,50
23022900	1,80	3,00	47	11,80
23022901	1,85	3,00	47	12,10
23022902	1,90	3,00	47	12,40
23022903	1,95	3,00	47	12,70
23022904	2,00	4,00	47	13,00
23022905	2,05	4,00	50	13,30
23022906	2,10	4,00	50	13,60
23022907	2,15	4,00	50	13,90
23022908	2,20	4,00	50	14,20
23022909	2,25	4,00	50	14,50
23022910	2,30	4,00	52	14,80
23022911	2,35	4,00	52	15,10
23022912	2,40	4,00	52	15,40
23022913	2,45	4,00	52	15,70
23022914	2,50	4,00	52	16,00
23022915	2,55	4,00	55	16,30
23022916	2,60	4,00	55	16,60
23022917	2,65	4,00	55	16,90
23022918	2,70	4,00	55	17,20
23022919	2,75	4,00	55	17,50
23022920	2,80	4,00	57	17,80
23022921	2,85	4,00	57	18,10
23022922	2,90	4,00	57	18,40
23022923	2,95	4,00	57	18,70

Hochleistungsbohrer | High-performance drills | Forets haute performance

PFERD TOOLS

Art. No.	d1 k5	d2 h6	l1 +/-0.3	l2 0/+0.3
23022924	3,00	6,00	60	19,00
23022925	3,05	6,00	60	19,30
23022926	3,10	6,00	60	19,60
23022927	3,15	6,00	60	19,90
23022928	3,20	6,00	60	20,20
23022929	3,25	6,00	60	20,50
23022930	3,30	6,00	62	20,80
23022931	3,35	6,00	62	21,10
23022932	3,40	6,00	62	21,40
23022933	3,45	6,00	62	21,70
23022934	3,50	6,00	62	22,00
23023731	3,55	6,00	65	22,30
23022935	3,60	6,00	65	22,60
23022936	3,65	6,00	65	22,90
23022937	3,70	6,00	65	23,20
23022938	3,75	6,00	65	23,50
23022939	3,80	6,00	67	23,80
23022940	3,85	6,00	67	24,10
23022941	3,90	6,00	67	24,40
23022942	3,95	6,00	67	24,70
23022943	4,00	6,00	70	25,00

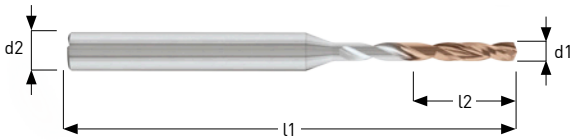
Notes

PFERD TOOLS

TTD206S

Wendelbohrer mit inneren Kühlkanälen
Twist drill with internal coolant holes
Foret hélicoïdal avec arrosage interne

6xD | 140° | Z 2 | WERKS NORM



P M S



Art. No.	d1 k5	d2 h6	l1 +/-0.3	l2 0/+0.3
23023082	1,00	3,00	50	10,00
23023083	1,05	3,00	50	10,45
23023084	1,10	3,00	50	10,90
23023085	1,15	3,00	50	11,35
23023086	1,20	3,00	50	11,80
23023087	1,25	3,00	50	12,25
23023088	1,30	3,00	52	12,70
23023089	1,35	3,00	52	13,15
23023090	1,40	3,00	52	13,60
23023091	1,45	3,00	52	14,05
23023092	1,50	3,00	52	14,50
23023093	1,55	3,00	55	14,95
23023094	1,60	3,00	55	15,40
23023095	1,65	3,00	55	15,85
23023096	1,70	3,00	55	16,30
23023097	1,75	3,00	55	16,75
23023098	1,80	3,00	57	17,20
23023099	1,85	3,00	57	17,65
23023100	1,90	3,00	57	18,10
23023101	1,95	3,00	57	18,55
23023102	2,00	4,00	57	19,00
23023103	2,05	4,00	60	19,45
23023104	2,10	4,00	60	19,90
23023105	2,15	4,00	60	20,35
23023106	2,20	4,00	60	20,80
23023107	2,25	4,00	60	21,25
23023108	2,30	4,00	62	21,70
23023109	2,35	4,00	62	22,15
23023110	2,40	4,00	62	22,60
23023111	2,45	4,00	62	23,05
23023112	2,50	4,00	62	23,50
23023113	2,55	4,00	65	23,95
23023114	2,60	4,00	65	24,40
23023115	2,65	4,00	65	24,85
23023116	2,70	4,00	65	25,30
23023117	2,75	4,00	65	25,75
23023118	2,80	4,00	67	26,20
23023119	2,85	4,00	67	26,65
23023120	2,90	4,00	67	27,10
23023121	2,95	4,00	67	27,55

PFERD TOOLS

Art. No.	d1 k5	d2 h6	l1 +/-0.3	l2 0/+0.3
23023122	3,00	6,00	70	28,00
23023123	3,05	6,00	70	28,45
23023124	3,10	6,00	70	28,90
23023125	3,15	6,00	70	29,35
23023126	3,20	6,00	70	29,80
23023127	3,25	6,00	70	30,25
23023128	3,30	6,00	72	30,70
23023129	3,35	6,00	72	31,15
23023130	3,40	6,00	72	31,60
23023131	3,45	6,00	72	32,05
23023132	3,50	6,00	72	32,50
23023133	3,55	6,00	75	32,95
23023134	3,60	6,00	75	33,40
23023135	3,65	6,00	75	33,85
23023136	3,70	6,00	75	34,30
23023137	3,75	6,00	75	34,75
23023138	3,80	6,00	77	35,20
23023139	3,85	6,00	77	35,65
23023140	3,90	6,00	77	36,10
23023141	3,95	6,00	77	36,55
23023142	4,00	6,00	80	37,00

Notes

PFERD TOOLS

TTD203

Schnittwerte für das Bohren | Standard values for drilling | Paramètres indicatifs pour perçage

		Schnittgeschwindigkeit Cutting Speed Vitesse de coupe	Vorschub mm/Umdrehung Feed mm/rev Avance mm/tour	
ISO Class	Adv	m/min	ø 1.00-1.95	ø 2.00-4.00
P00	●	70-110	0.025-0.055	0.05-0.13
P01	●	70-110	0.025-0.055	0.05-0.13
P02	●	70-110	0.025-0.055	0.05-0.13
P03	●	60-100	0.02-0.05	0.045-0.12
P04	●	60-100	0.02-0.05	0.045-0.12
P05	●	60-100	0.02-0.05	0.045-0.12
P06	●	60-100	0.02-0.05	0.045-0.12
M01	●	50-90	0.015-0.045	0.04-0.1
M02	●	50-90	0.015-0.045	0.04-0.1
M03	●	50-90	0.015-0.045	0.04-0.1
K01	●	90-140	0.05-0.11	0.1-0.27
K03	●	80-120	0.04-0.1	0.09-0.25
K02	●	80-120	0.04-0.1	0.09-0.25
N01	◑	120-170	0.05-0.11	0.1-0.25
N02	◑	150-200	0.05-0.11	0.1-0.25
N03	◑	200-250	0.05-0.11	0.1-0.25
N04	◑	60-200	0.02-0.11	0.045-0.25
S01	◑	20-50	0.02-0.05	0.045-0.12
S02	◑	20-50	0.02-0.05	0.045-0.12
S03	◑	20-50	0.02-0.05	0.045-0.12
S04	◑	30-60	0.015-0.035	0.03-0.085
H01	◑	30-60	0.02-0.03	0.03-0.1
H02	◑	30-60	0.02-0.03	0.03-0.1
H03	○	-	-	-
O01	◑	70-110	0.025-0.055	0.05-0.13
O02	○	-	-	-
O03	○	-	-	-
O04	○	-	-	-
O05	○	-	-	-

● Empfohlen | Recommended | Recommandé
◑ Teilweise empfohlen | Partially recommended | Partiellement recommandé
○ Nicht empfohlen | Not recommended | Non recommandé

PFERD TOOLS

TTD207

Schnittwerte für das Bohren | Standard values for drilling | Paramètres indicatifs pour perçage

		Schnittgeschwindigkeit Cutting Speed Vitesse de coupe	Vorschub mm/Umdrehung Feed mm/rev Avance mm/tour	
ISO Class	Adv	m/min	ø 1.00-1.95	ø 2.00-4.00
P00	●	70-110	0.025-0.055	0.05-0.13
P01	●	70-110	0.025-0.055	0.05-0.13
P02	●	70-110	0.025-0.055	0.05-0.13
P03	●	60-100	0.02-0.05	0.045-0.12
P04	●	60-100	0.02-0.05	0.045-0.12
P05	●	60-100	0.02-0.05	0.045-0.12
P06	●	60-100	0.02-0.05	0.045-0.12
M01	●	50-90	0.015-0.045	0.04-0.1
M02	●	50-90	0.015-0.045	0.04-0.1
M03	●	50-90	0.015-0.045	0.04-0.1
K01	●	90-140	0.05-0.11	0.1-0.27
K03	●	80-120	0.04-0.1	0.09-0.25
K02	●	80-120	0.04-0.1	0.09-0.25
N01	◑	120-170	0.05-0.11	0.1-0.25
N02	◑	150-200	0.05-0.11	0.1-0.25
N03	◑	200-250	0.05-0.11	0.1-0.25
N04	◑	60-200	0.02-0.11	0.045-0.25
S01	◑	20-50	0.02-0.05	0.045-0.12
S02	◑	20-50	0.02-0.05	0.045-0.12
S03	◑	20-50	0.02-0.05	0.045-0.12
S04	◑	30-60	0.015-0.035	0.03-0.085
H01	◑	30-60	0.02-0.03	0.03-0.1
H02	◑	30-60	0.02-0.03	0.03-0.1
H03	○	-	-	-
O01	◑	70-110	0.025-0.055	0.05-0.13
O02	○	-	-	-
O03	○	-	-	-
O04	○	-	-	-
O05	○	-	-	-

● Empfohlen | Recommended | Recommandé
◑ Teilweise empfohlen | Partially recommended | Partiellement recommandé
○ Nicht empfohlen | Not recommended | Non recommandé

PFERD TOOLS

TTD204

Schnittwerte für das Bohren | Standard values for drilling | Paramètres indicatifs pour perçage

		Schnittgeschwindigkeit Cutting Speed Vitesse de coupe	Vorschub mm/Umdrehung Feed mm/rev Avance mm/tour	
ISO Class	Adv	m/min	ø 1.00-1.95	ø 2.00-4.00
P00	●	70-110	0.025-0.055	0.05-0.13
P01	●	70-110	0.025-0.055	0.05-0.13
P02	●	70-110	0.025-0.055	0.05-0.13
P03	●	60-100	0.02-0.05	0.045-0.12
P04	●	60-100	0.02-0.05	0.045-0.12
P05	●	60-100	0.02-0.05	0.045-0.12
P06	●	60-100	0.02-0.05	0.045-0.12
M01	●	50-90	0.015-0.045	0.04-0.1
M02	●	50-90	0.015-0.045	0.04-0.1
M03	●	50-90	0.015-0.045	0.04-0.1
K01	●	90-140	0.05-0.11	0.1-0.27
K03	●	80-120	0.04-0.1	0.09-0.25
K02	●	80-120	0.04-0.1	0.09-0.25
N01	◑	120-170	0.05-0.11	0.1-0.25
N02	◑	150-200	0.05-0.11	0.1-0.25
N03	◑	200-250	0.05-0.11	0.1-0.25
N04	◑	60-200	0.02-0.11	0.045-0.25
S01	◑	20-50	0.02-0.05	0.045-0.12
S02	◑	20-50	0.02-0.05	0.045-0.12
S03	◑	20-50	0.02-0.05	0.045-0.12
S04	◑	30-60	0.015-0.035	0.03-0.085
H01	◑	30-60	0.02-0.03	0.03-0.1
H02	◑	30-60	0.02-0.03	0.03-0.1
H03	○	-	-	-
O01	◑	70-110	0.025-0.055	0.05-0.13
O02	○	-	-	-
O03	○	-	-	-
O04	○	-	-	-
O05	○	-	-	-

● Empfohlen | Recommended | Recommandé
◑ Teilweise empfohlen | Partially recommended | Partiellement recommandé
○ Nicht empfohlen | Not recommended | Non recommandé

PFERD TOOLS

TTD209

Schnittwerte für das Bohren | Standard values for drilling | Paramètres indicatifs pour perçage

		Schnittgeschwindigkeit Cutting Speed Vitesse de coupe	Vorschub mm/Umdrehung Feed mm/rev Avance mm/tour	
ISO Class	Adv	m/min	ø 1.00-1.95	ø 2.00-4.00
P00	●	70-110	0.025-0.055	0.05-0.13
P01	●	70-110	0.025-0.055	0.05-0.13
P02	●	70-110	0.025-0.055	0.05-0.13
P03	●	60-100	0.02-0.05	0.045-0.12
P04	●	60-100	0.02-0.05	0.045-0.12
P05	●	60-100	0.02-0.05	0.045-0.12
P06	●	60-100	0.02-0.05	0.045-0.12
M01	●	50-90	0.015-0.045	0.04-0.1
M02	●	50-90	0.015-0.045	0.04-0.1
M03	●	50-90	0.015-0.045	0.04-0.1
K01	●	90-140	0.05-0.11	0.1-0.27
K03	●	80-120	0.04-0.1	0.09-0.25
K02	●	80-120	0.04-0.1	0.09-0.25
N01	◑	120-170	0.05-0.11	0.1-0.25
N02	◑	150-200	0.05-0.11	0.1-0.25
N03	◑	200-250	0.05-0.11	0.1-0.25
N04	◑	60-200	0.02-0.11	0.045-0.25
S01	◑	20-50	0.02-0.05	0.045-0.12
S02	◑	20-50	0.02-0.05	0.045-0.12
S03	◑	20-50	0.02-0.05	0.045-0.12
S04	◑	30-60	0.015-0.035	0.03-0.085
H01	◑	30-60	0.02-0.03	0.03-0.1
H02	◑	30-60	0.02-0.03	0.03-0.1
H03	○	-	-	-
O01	◑	70-110	0.025-0.055	0.05-0.13
O02	○	-	-	-
O03	○	-	-	-
O04	○	-	-	-
O05	○	-	-	-

● Empfohlen | Recommended | Recommandé
◑ Teilweise empfohlen | Partially recommended | Partiellement recommandé
○ Nicht empfohlen | Not recommended | Non recommandé

PFERD TOOLS

TTD215

Schnittwerte für das Bohren | Standard values for drilling | Paramètres indicatifs pour perçage

		Schnittgeschwindigkeit Cutting Speed Vitesse de coupe	Vorschub mm/Umdrehung Feed mm/rev Avance mm/tour	
ISO Class	Adv	m/min	ø 1.00-2.40	ø 2.45-4.00
P00	●	70-110	0.03-0.08	0.060-0.130
P01	●	70-110	0.03-0.08	0.060-0.130
P02	●	70-110	0.03-0.08	0.060-0.130
P03	●	60-100	0.020-0.060	0.050-0.120
P04	●	50-90	0.015-0.050	0.040-0.100
P05	●	50-90	0.015-0.050	0.040-0.100
P06	●	50-90	0.015-0.050	0.040-0.100
M01	●	40-80	0.010-0.045	0.030-0.090
M02	●	40-80	0.010-0.045	0.030-0.090
M03	●	40-80	0.010-0.045	0.030-0.090
K01	●	90-140	0.030-0.080	0.080-0.150
K03	●	80-120	0.040-0.100	0.060-0.130
K02	●	80-120	0.040-0.100	0.060-0.130
N01	◑	150-200	0.050-0.110	0.100-0.250
N02	◑	150-200	0.050-0.110	0.100-0.250
N03	◑	200-250	0.050-0.110	0.100-0.250
N04	◑	80-170	0.040-0.100	0.100-0.250
S01	◑	30-55	0.010-0.040	0.040-0.100
S02	◑	30-55	0.010-0.040	0.040-0.100
S03	◑	30-55	0.010-0.040	0.040-0.100
S04	◑	50-90	0.020-0.060	0.030-0.070
H01	◑	30-60	0.015-0.050	0.040-0.100
H02	◑	30-60	0.015-0.050	0.040-0.100
H03	○	-	-	-
O01	◑	70-110	0.025-0.050	0.050-0.130
O02	○	-	-	-
O03	○	-	-	-
O04	○	-	-	-
O05	○	-	-	-

● Empfohlen | Recommended | Recommandé
◑ Teilweise empfohlen | Partially recommended | Partiellement recommandé
○ Nicht empfohlen | Not recommended | Non recommandé

PFERD TOOLS

TTD206E

Schnittwerte für das Bohren | Standard values for drilling | Paramètres indicatifs pour perçage

		Schnittgeschwindigkeit Cutting Speed Vitesse de coupe	Vorschub mm/Umdrehung Feed mm/rev Avance mm/tour		
ISO Class	Adv	m/min	ø 1.00-1.95	ø 2.00-5.00	ø 5.10-6.00
P00	●	70-110	0.025-0.055	0.05-0.13	0.125-0.17
P01	●	70-110	0.025-0.055	0.05-0.13	0.125-0.17
P02	●	70-110	0.025-0.055	0.05-0.13	0.125-0.17
P03	●	60-100	0.02-0.05	0.045-0.12	0.115-0.15
P04	●	60-100	0.02-0.05	0.045-0.12	0.115-0.15
P05	●	60-100	0.02-0.05	0.045-0.12	0.115-0.15
P06	●	60-100	0.02-0.05	0.045-0.12	0.115-0.15
M01	●	50-90	0.015-0.045	0.04-0.1	0.09-0.13
M02	●	50-90	0.015-0.045	0.04-0.1	0.09-0.13
M03	●	50-90	0.015-0.045	0.04-0.1	0.09-0.13
K01	●	90-140	0.05-0.11	0.1-0.27	0.26-0.34
K03	●	80-120	0.04-0.1	0.09-0.25	0.26-0.34
K02	●	80-120	0.04-0.1	0.09-0.25	0.24-0.3
N01	◑	120-170	0.05-0.11	0.1-0.25	0.24-0.34
N02	◑	150-200	0.05-0.11	0.1-0.25	0.24-0.34
N03	◑	200-250	0.05-0.11	0.1-0.25	0.24-0.34
N04	◑	60-200	0.02-0.11	0.045-0.25	0.115-0.34
S01	◑	20-50	0.02-0.05	0.045-0.12	0.115-0.15
S02	◑	20-50	0.02-0.05	0.045-0.12	0.115-0.15
S03	◑	20-50	0.02-0.05	0.045-0.12	0.115-0.15
S04	◑	30-60	0.015-0.035	0.03-0.085	0.08-0.11
H01	◑	30-60	0.02-0.03	0.03-0.1	0.09-0.14
H02	◑	30-60	0.02-0.03	0.03-0.1	0.09-0.14
H03	○	-	-	-	-
O01	◑	70-110	0.025-0.055	0.05-0.13	0.125-0.17
O02	○	-	-	-	-
O03	○	-	-	-	-
O04	○	-	-	-	-
O05	○	-	-	-	-

● Empfohlen | Recommended | Recommandé
◑ Teilweise empfohlen | Partially recommended | Partiellement recommandé
○ Nicht empfohlen | Not recommended | Non recommandé

Hochleistungsbohrer | High-performance drills | Forets haute performance

TTD212E

Schnittwerte für das Bohren | Standard values for drilling | Paramètres indicatifs pour perçage

		Schnittgeschwindigkeit Cutting Speed Vitesse de coupe	Vorschub mm/Umdrehung Feed mm/rev Avance mm/tour		
ISO Class	Adv	m/min	ø 1.00-2.40	ø 2.45-5.00	ø 5.10-6.00
P00	●	70-110	0.03-0.080	0.060-0.130	0.125-0.17
P01	●	70-110	0.03-0.080	0.060-0.130	0.125-0.17
P02	●	70-110	0.03-0.080	0.060-0.130	0.125-0.17
P03	●	60-100	0.020-0.060	0.050-0.120	0.115-0.15
P04	●	50-90	0.015-0.050	0.040-0.100	0.08-0.13
P05	●	50-90	0.015-0.050	0.040-0.100	0.08-0.13
P06	●	50-90	0.015-0.050	0.040-0.100	0.08-0.13
M01	●	40-80	0.010-0.045	0.030-0.090	0.07-0.12
M02	●	40-80	0.010-0.045	0.030-0.090	0.07-0.12
M03	●	40-80	0.010-0.045	0.030-0.090	0.07-0.12
K01	●	90-140	0.030-0.080	0.080-0.150	0.15-0.28
K03	●	80-120	0.040-0.100	0.060-0.130	0.13-0.22
K02	●	80-120	0.040-0.100	0.060-0.130	0.13-0.22
N01	◑	150-200	0.050-0.110	0.100-0.250	0.24-0.34
N02	◑	150-200	0.050-0.110	0.100-0.250	0.24-0.34
N03	◑	200-250	0.050-0.110	0.100-0.250	0.24-0.34
N04	◑	80-170	0.040-0.100	0.100-0.250	0.24-0.3
S01	◑	30-55	0.010-0.040	0.040-0.100	0.08-0.13
S02	◑	30-55	0.010-0.040	0.040-0.100	0.08-0.13
S03	◑	30-55	0.010-0.040	0.040-0.100	0.08-0.13
S04	◑	50-90	0.020-0.060	0.030-0.070	0.1-0.2
H01	◑	30-60	0.015-0.050	0.040-0.100	0.09-0.14
H02	◑	30-60	0.015-0.050	0.040-0.100	0.09-0.14
H03	○	-	-	-	-
O01	◑	70-110	0.025-0.050	0.050-0.130	0.13-0.17
O02	○	-	-	-	-
O03	○	-	-	-	-
O04	○	-	-	-	-
O05	○	-	-	-	-

● Empfohlen | Recommended | Recommandé
◑ Teilweise empfohlen | Partially recommended | Partiellement recommandé
○ Nicht empfohlen | Not recommended | Non recommandé

PFERD TOOLS

TTD218E

Schnittwerte für das Bohren | Standard values for drilling | Paramètres indicatifs pour perçage

		Schnittgeschwindigkeit Cutting Speed Vitesse de coupe	Vorschub mm/Umdrehung Feed mm/rev Avance mm/tour		
ISO Class	Adv	m/min	ø 1.00-2.40	ø 2.45-5.00	ø 5.10-6.00
P00	●	70-110	0.0255-0.068	0.051-0.1105	0.102-0.1445
P01	●	70-110	0.0255-0.068	0.051-0.1105	0.102-0.1445
P02	●	70-110	0.0255-0.068	0.051-0.1105	0.102-0.1445
P03	●	60-100	0.017-0.051	0.0425-0.102	0.0935-0.1275
P04	●	50-90	0.0085-0.0425	0.034-0.085	0.068-0.1105
P05	●	50-90	0.0085-0.0425	0.034-0.085	0.068-0.1105
P06	●	50-90	0.0085-0.0425	0.034-0.085	0.068-0.1105
M01	●	40-80	0.0085-0.03825	0.0255-0.0765	0.0595-0.102
M02	●	40-80	0.0085-0.03825	0.0255-0.0765	0.0595-0.102
M03	●	40-80	0.0085-0.03825	0.0255-0.0765	0.0595-0.102
K01	●	90-140	0.0255-0.068	0.068-0.1275	0.1275-0.238
K03	●	80-120	0.034-0.085	0.051-0.1105	0.1105-0.187
K02	●	80-120	0.034-0.085	0.051-0.1105	0.1105-0.187
N01	◑	150-200	0.0425-0.0935	0.085-0.2125	0.204-0.289
N02	◑	150-200	0.0425-0.0935	0.085-0.2125	0.204-0.289
N03	◑	200-250	0.0425-0.0935	0.085-0.2125	0.204-0.289
N04	◑	80-170	0.034-0.085	0.085-0.2125	0.204-0.255
S01	◑	30-55	0.0085-0.034	0.034-0.085	0.068-0.1105
S02	◑	30-55	0.0085-0.034	0.034-0.085	0.068-0.1105
S03	◑	30-55	0.0085-0.034	0.034-0.085	0.068-0.1105
S04	◑	50-90	0.017-0.051	0.0255-0.0595	0.085-0.17
H01	◑	30-60	0.0085-0.0425	0.034-0.085	0.0765-0.119
H02	◑	30-60	0.0085-0.0425	0.034-0.085	0.0765-0.119
H03	○	-	-	-	-
O01	◑	70-110	0.017-0.0425	0.0425-0.1105	0.1105-0.1445
O02	○	-	-	-	-
O03	○	-	-	-	-
O04	○	-	-	-	-
O05	○	-	-	-	-

● Empfohlen | Recommended | Recommandé
◑ Teilweise empfohlen | Partially recommended | Partiellement recommandé
○ Nicht empfohlen | Not recommended | Non recommandé

PFERD TOOLS

TTD203S

Schnittwerte für das Bohren | Standard values for drilling | Paramètres indicatifs pour perçage

		Schnittgeschwindigkeit Cutting Speed Vitesse de coupe	Vorschub mm/Umdrehung Feed mm/rev Avance mm/tour					
ISO Class	Adv	m/min	ø 1.00-1.50	ø 1.55-2.00	ø 2.05-2.50	ø 2.55-3.00	ø 3.05-3.50	ø 3.55-4.00
P00	○	-	-	-	-	-	-	-
P01	○	-	-	-	-	-	-	-
P02	○	-	-	-	-	-	-	-
P03	○	-	-	-	-	-	-	-
P04	○	-	-	-	-	-	-	-
P05	●	70-90	0.04-0.06	0.062-0.08	0.082-0.1	0.102-0.12	0.122-0.14	0.142-0.16
P06	●	70-90	0.03-0.045	0.047-0.06	0.062-0.075	0.077-0.09	0.091-0.105	0.106-0.12
M01	●	70-90	0.03-0.05	0.055-0.07	0.071-0.087	0.089-0.105	0.106-0.122	0.124-0.14
M02	●	70-90	0.027-0.04	0.041-0.053	0.054-0.066	0.067-0.079	0.08-0.092	0.093-0.105
M03	●	70-90	0.027-0.04	0.041-0.053	0.054-0.066	0.067-0.079	0.08-0.092	0.093-0.105
K01	○	-	-	-	-	-	-	-
K03	○	-	-	-	-	-	-	-
K02	○	-	-	-	-	-	-	-
N01	○	-	-	-	-	-	-	-
N02	○	-	-	-	-	-	-	-
N03	○	-	-	-	-	-	-	-
N04	○	-	-	-	-	-	-	-
S01	●	35-45	0.015-0.022	0.023-0.03	0.031-0.037	0.038-0.045	0.045-0.052	0.053-0.06
S02	●	65-75	0.03-0.045	0.047-0.06	0.062-0.075	0.077-0.09	0.091-0.105	0.106-0.12
S03	●	35-45	0.015-0.022	0.023-0.03	0.031-0.037	0.038-0.045	0.045-0.052	0.053-0.06
S04	●	45-55	0.02-0.03	0.03-0.035	0.035-0.045	0.045-0.05	0.05-0.055	0.055-0.06
H01	○	-	-	-	-	-	-	-
H02	○	-	-	-	-	-	-	-
H03	○	-	-	-	-	-	-	-
O01	○	-	-	-	-	-	-	-
O02	○	-	-	-	-	-	-	-
O03	○	-	-	-	-	-	-	-
O04	○	-	-	-	-	-	-	-
O05	○	-	-	-	-	-	-	-

● Empfohlen | Recommended | Recommandé
◑ Teilweise empfohlen | Partially recommended | Partiellement recommandé
○ Nicht empfohlen | Not recommended | Non recommandé

Hochleistungsbohrer | High-performance drills | Forets haute performance

PFERD TOOLS

TTD206S

Schnittwerte für das Bohren | Standard values for drilling | Paramètres indicatifs pour perçage

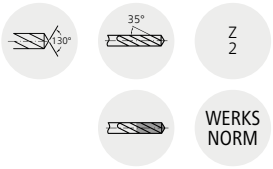
		Schnittgeschwindigkeit Cutting Speed Vitesse de coupe	Vorschub mm/Umdrehung Feed mm/rev Avance mm/tour					
ISO Class	Adv	m/min	ø 1.00-1.50	ø 1.55-2.00	ø 2.05-2.50	ø 2.55-3.00	ø 3.05-3.50	ø 3.55-4.00
P00	○	-	-	-	-	-	-	-
P01	○	-	-	-	-	-	-	-
P02	○	-	-	-	-	-	-	-
P03	○	-	-	-	-	-	-	-
P04	○	-	-	-	-	-	-	-
P05	●	70-90	0.04-0.06	0.062-0.08	0.082-0.1	0.102-0.12	0.122-0.14	0.142-0.16
P06	●	70-90	0.03-0.045	0.047-0.06	0.062-0.075	0.077-0.09	0.091-0.105	0.106-0.12
M01	●	70-90	0.03-0.05	0.055-0.07	0.071-0.087	0.089-0.105	0.106-0.122	0.124-0.14
M02	●	70-90	0.027-0.04	0.041-0.053	0.054-0.066	0.067-0.079	0.08-0.092	0.093-0.105
M03	●	70-90	0.027-0.04	0.041-0.053	0.054-0.066	0.067-0.079	0.08-0.092	0.093-0.105
K01	○	-	-	-	-	-	-	-
K03	○	-	-	-	-	-	-	-
K02	○	-	-	-	-	-	-	-
N01	○	-	-	-	-	-	-	-
N02	○	-	-	-	-	-	-	-
N03	○	-	-	-	-	-	-	-
N04	○	-	-	-	-	-	-	-
S01	●	35-45	0.015-0.022	0.023-0.03	0.031-0.037	0.038-0.045	0.045-0.052	0.053-0.06
S02	●	65-75	0.03-0.045	0.047-0.06	0.062-0.075	0.077-0.09	0.091-0.105	0.106-0.12
S03	●	35-45	0.015-0.022	0.023-0.03	0.031-0.037	0.038-0.045	0.045-0.052	0.053-0.06
S04	●	45-55	0.02-0.03	0.03-0.035	0.035-0.045	0.045-0.05	0.05-0.055	0.055-0.06
H01	○	-	-	-	-	-	-	-
H02	○	-	-	-	-	-	-	-
H03	○	-	-	-	-	-	-	-
O01	○	-	-	-	-	-	-	-
O02	○	-	-	-	-	-	-	-
O03	○	-	-	-	-	-	-	-
O04	○	-	-	-	-	-	-	-
O05	○	-	-	-	-	-	-	-

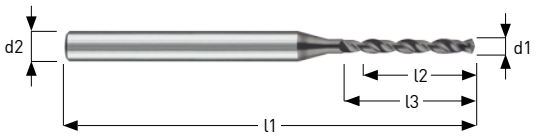
● Empfohlen | Recommended | Recommandé
◑ Teilweise empfohlen | Partially recommended | Partiellement recommandé
○ Nicht empfohlen | Not recommended | Non recommandé

PFERD TOOLS

TA803

Hundertstel-Bohrer ohne innere Kühlkanäle
Hundredth drill without coolant holes
Foret centésimales sans arrosage interne







P M K N S O

Art. No.	d1 h6	d2 h6	l1 +/-0.2	l2 0/+0.5	l3 0/+0.5
23022562	0,30	3,00	38	1,50	1,95
23022563	0,31	3,00	38	1,50	1,95
23022564	0,32	3,00	38	1,50	1,95
23022565	0,33	3,00	38	1,50	1,95
23022566	0,34	3,00	38	1,50	1,95
23022567	0,35	3,00	38	1,50	1,95
23022568	0,36	3,00	38	1,50	1,95
23022569	0,37	3,00	38	1,50	1,95
23001282	0,38	3,00	38	1,50	1,95
23022570	0,39	3,00	38	1,50	1,95
23001945	0,40	3,00	38	2,00	2,50
23001283	0,41	3,00	38	2,00	2,50
23022572	0,42	3,00	38	2,00	2,50
23022573	0,43	3,00	38	2,00	2,50
23001470	0,44	3,00	38	2,00	2,50
23022574	0,45	3,00	38	3,50	4,15
23022575	0,46	3,00	38	3,50	4,15
23001468	0,47	3,00	38	3,50	4,15
23022576	0,48	3,00	38	3,50	4,15
23022577	0,49	3,00	38	4,00	4,70
23001977	0,50	3,00	38	4,00	4,70
23001469	0,51	3,00	38	4,00	4,70
23022578	0,52	3,00	38	4,00	4,70
23022579	0,53	3,00	38	4,00	4,70
23022580	0,54	3,00	38	4,50	5,25
23022581	0,55	3,00	38	4,50	5,25
23022582	0,56	3,00	38	4,50	5,25
23022583	0,57	3,00	38	4,50	5,25
23022584	0,58	3,00	38	4,50	5,25
23022585	0,59	3,00	38	4,50	5,25
23022586	0,60	3,00	38	4,50	5,25
23022587	0,61	3,00	38	5,00	5,80
23022588	0,62	3,00	38	5,00	5,80
23022589	0,63	3,00	38	5,00	5,80
23022590	0,64	3,00	38	5,00	5,80
23001912	0,65	3,00	38	5,00	5,80
23022591	0,66	3,00	38	5,00	5,80
23022592	0,67	3,00	38	5,00	5,80
23022593	0,68	3,00	38	5,50	6,35

PFERD TOOLS

Art. No.	d1 h6	d2 h6	l1 +/-0.2	l2 0/+0.5	l3 0/+0.5
23022594	0,69	3,00	38	5,60	6,45
23022595	0,70	3,00	38	5,60	6,45
23022596	0,71	3,00	38	5,60	6,45
23022597	0,72	3,00	38	5,60	6,45
23022598	0,73	3,00	38	5,60	6,45
23001022	0,74	3,00	38	5,60	6,45
23022599	0,75	3,00	38	5,60	6,45
23022600	0,76	3,00	38	6,50	7,45
23022601	0,77	3,00	38	6,50	7,45
23022602	0,78	3,00	38	6,50	7,45
23022603	0,79	3,00	38	6,50	7,45
23022604	0,80	3,00	38	6,50	7,45
23022605	0,81	3,00	38	6,50	7,45
23022606	0,82	3,00	38	6,50	7,45
23022607	0,83	3,00	38	6,50	7,45
23022608	0,84	3,00	38	6,50	7,45
23022609	0,85	3,00	38	6,50	7,45
23022610	0,86	3,00	38	7,00	8,00
23022611	0,87	3,00	38	7,00	8,00
23022612	0,88	3,00	38	7,00	8,00
23022613	0,89	3,00	38	7,00	8,00
23022614	0,90	3,00	38	7,00	8,00
23022615	0,91	3,00	38	7,00	8,00
23022616	0,92	3,00	38	7,00	8,00
23022617	0,93	3,00	38	7,00	8,00
23022618	0,94	3,00	38	7,00	8,00
23001123	0,95	3,00	38	7,00	8,00
23022619	0,96	3,00	38	8,00	9,10
23022620	0,97	3,00	38	8,00	9,10
23022621	0,98	3,00	38	8,00	9,10
23022622	0,99	3,00	38	8,00	9,10
23001497	1,00	3,00	38	9,00	10,20
23022623	1,01	3,00	38	9,00	10,20
23022624	1,02	3,00	38	9,00	10,20
23022625	1,03	3,00	38	9,00	10,20
23022626	1,04	3,00	38	9,00	10,20
23022627	1,05	3,00	38	9,00	10,20
23022628	1,06	3,00	38	9,00	10,20
23022629	1,07	3,00	38	9,00	10,20
23022630	1,08	3,00	38	9,00	10,20
23022631	1,09	3,00	38	9,00	10,20
23001464	1,10	3,00	38	9,00	10,20
23022632	1,11	3,00	38	9,00	10,20
23022633	1,12	3,00	38	9,00	10,20
23022634	1,13	3,00	38	9,00	10,20
23022635	1,14	3,00	38	9,00	10,20
23001122	1,15	3,00	38	9,00	10,20
23022636	1,16	3,00	38	9,00	10,20
23022637	1,17	3,00	38	9,00	10,20
23022638	1,18	3,00	38	9,00	10,20
23022639	1,19	3,00	38	10,00	11,30
23001498	1,20	3,00	38	10,00	11,30
23022640	1,21	3,00	38	10,00	11,30
23022641	1,22	3,00	38	10,00	11,30
23022642	1,23	3,00	38	10,00	11,30
23022643	1,24	3,00	38	10,00	11,30

Art. No.	d1 h6	d2 h6	l1 +/-0.2	l2 0/+0.5	l3 0/+0.5
23022644	1,25	3,00	38	10,00	11,30
23022645	1,26	3,00	38	10,00	11,30
23022646	1,27	3,00	38	10,00	11,30
23022647	1,28	3,00	38	10,00	11,30
23022648	1,29	3,00	38	10,00	11,30
23001222	1,30	3,00	38	10,00	11,30
23022649	1,31	3,00	38	10,00	11,30
23022650	1,32	3,00	38	10,00	11,30
23022651	1,33	3,00	38	11,00	12,95
23022652	1,34	3,00	38	11,00	12,95
23022653	1,35	3,00	38	11,00	12,95
23022654	1,36	3,00	38	11,00	12,95
23022655	1,37	3,00	38	11,00	12,95
23022656	1,38	3,00	38	11,00	12,95
23022657	1,39	3,00	38	11,00	12,95
23004154	1,40	3,00	38	11,00	12,95
23022658	1,41	3,00	38	11,00	12,95
23022659	1,42	3,00	38	11,00	12,95
23022660	1,43	3,00	38	11,00	12,95
23022661	1,44	3,00	38	11,00	12,95
23004156	1,45	3,00	38	11,00	12,95
23022662	1,46	3,00	38	11,00	12,95
23022663	1,47	3,00	38	11,00	12,95
23022664	1,48	3,00	38	11,00	12,95
23022665	1,49	3,00	38	11,00	12,95
23001975	1,50	3,00	38	11,00	12,95
23022666	1,51	3,00	38	12,00	13,50
23022667	1,52	3,00	38	12,00	13,50
23022668	1,53	3,00	38	12,00	13,50
23022669	1,54	3,00	38	12,00	13,50
23022670	1,55	3,00	38	12,00	13,50
23022671	1,56	3,00	38	12,00	13,50
23022672	1,57	3,00	38	12,00	13,50
23022673	1,58	3,00	38	12,00	13,50
23022674	1,59	3,00	38	12,00	13,50
23004159	1,60	3,00	38	12,00	13,50
23022675	1,61	3,00	38	12,00	13,50
23022676	1,62	3,00	38	12,00	13,50
23022677	1,63	3,00	38	12,00	13,50
23022678	1,64	3,00	38	12,00	13,50
23022679	1,65	3,00	38	12,00	13,50
23022680	1,66	3,00	38	12,00	13,50
23022681	1,67	3,00	38	12,00	13,50
23022682	1,68	3,00	38	12,00	13,50
23022683	1,69	3,00	38	12,00	13,50
23001465	1,70	3,00	38	12,00	13,50
23022684	1,71	3,00	38	12,00	13,50
23022685	1,72	3,00	38	12,00	13,50
23022686	1,73	3,00	38	12,00	13,50
23022687	1,74	3,00	38	12,00	13,50
23022688	1,75	3,00	38	12,00	13,50
23022689	1,76	3,00	38	12,00	13,50
23022690	1,77	3,00	38	12,00	13,50
23022691	1,78	3,00	38	12,00	13,50
23022692	1,79	3,00	38	12,00	13,50
23001223	1,80	3,00	38	12,00	13,50

PFERD TOOLS

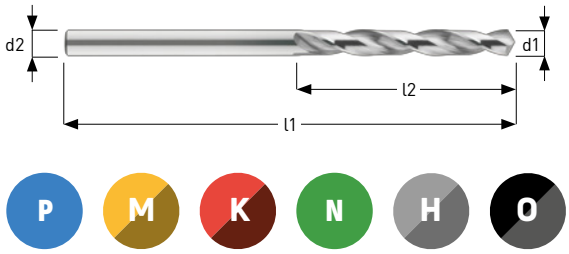
Art. No.	d1 h6	d2 h6	l1 +/-0.2	l2 0/+0.5	l3 0/+0.5
23022693	1,81	3,00	38	12,00	13,50
23022694	1,82	3,00	38	12,00	13,50
23022695	1,83	3,00	38	12,00	13,50
23022696	1,84	3,00	38	12,00	13,50
23022697	1,85	3,00	38	12,00	13,50
23022698	1,86	3,00	38	12,00	13,50
23022699	1,87	3,00	38	12,00	13,50
23022700	1,88	3,00	38	12,00	13,50
23022701	1,89	3,00	38	12,00	13,50
23004162	1,90	3,00	38	12,00	13,50
23022702	1,91	3,00	38	12,00	13,50
23022703	1,92	3,00	38	12,00	13,50
23022704	1,93	3,00	38	12,00	13,50
23022705	1,94	3,00	38	12,00	13,50
23022706	1,95	3,00	38	12,00	13,50
23022707	1,96	3,00	38	12,00	13,50
23022708	1,97	3,00	38	12,00	13,50
23022709	1,98	3,00	38	12,00	13,50
23022710	1,99	3,00	38	12,00	13,50
23004164	2,00	3,00	50	12,00	13,50
23001466	2,05	3,00	50	15,00	16,80
23004166	2,10	3,00	50	15,00	16,80
23022711	2,15	3,00	50	15,00	16,80
23001224	2,20	3,00	50	15,00	16,80
23022712	2,25	3,00	50	15,00	16,80
23001225	2,30	3,00	50	15,00	16,80
23022713	2,35	3,00	50	15,00	16,80
23022714	2,40	3,00	50	15,00	16,80
23022715	2,45	3,00	50	15,00	16,80
23000844	2,50	3,00	50	15,00	16,80
23001931	2,55	3,00	50	18,00	20,10
23004168	2,60	3,00	50	18,00	20,10
23022716	2,65	3,00	50	18,00	20,10
23022717	2,70	3,00	50	18,00	20,10
23022718	2,75	3,00	50	18,00	20,10
23004169	2,80	3,00	50	18,00	20,10
23022719	2,85	3,00	50	18,00	20,10
23022720	2,90	3,00	50	18,00	20,10
23022721	2,95	3,00	50	18,00	20,10
23004170	3,00	3,00	50	18,00	20,10

Notes

PFERD TOOLS

MTB25N

Hundertstel-Bohrer ohne innere Kühlkanäle
Hundredth drill without coolant holes
Foret centésimales sans arrosage interne





Art. No.	d1 h6	d2 h6	l1 0/+1.0	l2 0/+1.0
23021497 - 23021506	0,30-0,39	0,30-0,39	30	4,00
23021507 - 23021516	0,40-0,49	0,40-0,49	30	5,00
23021517 - 23021526	0,50-0,59	0,50-0,59	30	6,00
23001351 - 23021535	0,60-0,69	0,60-0,69	30	6,00
23021536 - 23021544	0,70-0,79	0,70-0,79	40	12,00
23021545 - 23021554	0,80-0,89	0,80-0,89	40	12,00
23021555 - 23021564	0,90-0,99	0,90-0,99	40	12,00
23021565 - 23021574	1,00-1,09	1,00-1,09	40	15,00
23021575 - 23021584	1,10-1,19	1,10-1,19	40	15,00
23021585 - 23021594	1,20-1,29	1,20-1,29	40	15,00
23021595 - 23021604	1,30-1,39	1,30-1,39	40	16,00
23021605 - 23021614	1,40-1,49	1,40-1,49	40	16,00
23021615 - 23021624	1,50-1,59	1,50-1,59	40	16,00
23021625 - 23021634	1,60-1,69	1,60-1,69	40	18,00
23021635 - 23021644	1,70-1,79	1,70-1,79	40	18,00
23021645 - 23021654	1,80-1,89	1,80-1,89	40	18,00
23021655 - 23021664	1,90-1,99	1,90-1,99	40	18,00
23021665 - 23021674	2,00-2,09	2,00-2,09	40	18,00
23021675 - 23021684	2,10-2,19	2,10-2,19	40	20,00
23021685 - 23021694	2,20-2,29	2,20-2,29	40	20,00
23021695 - 23021704	2,30-2,39	2,30-2,39	40	20,00
23021705 - 23021714	2,40-2,49	2,40-2,49	40	20,00
23021715 - 23021724	2,50-2,59	2,50-2,59	40	20,00
23021725 - 23021734	2,60-2,69	2,60-2,69	45	20,00
23021735 - 23021744	2,70-2,79	2,70-2,79	45	20,00
23021745 - 23021754	2,80-2,89	2,80-2,89	45	20,00
23021755 - 23021764	2,90-2,99	2,90-2,99	45	20,00
23021765	3,00	3,00	45	20,00
23021766	3,05	3,05	45	20,00
23021767	3,10	3,10	50	25,00
23021768	3,15	3,15	50	25,00
23021769	3,20	3,20	50	25,00
23021770	3,25	3,25	50	25,00
23021771	3,30	3,30	50	25,00
23021772	3,35	3,35	50	25,00
23021773	3,40	3,40	50	25,00
23021774	3,45	3,45	50	25,00
23021775	3,50	3,50	50	25,00
23021776	3,55	3,55	50	25,00
23021777	3,60	3,60	55	27,00

PFERD TOOLS

Art. No.	d1 h6	d2 h6	l1 0/+1.0	l2 0/+1.0
23021778	3,65	3,65	55	27,00
23021779	3,70	3,70	55	27,00
23021780	3,75	3,75	55	27,00
23021781	3,80	3,80	55	27,00
23021782	3,85	3,85	55	27,00
23021783	3,90	3,90	55	27,00
23021784	3,95	3,95	55	27,00
23021785	4,00	4,00	55	27,00
23021786	4,05	4,05	55	27,00
23021787	4,10	4,10	60	30,00
23021788	4,15	4,15	60	30,00
23021789	4,20	4,20	60	30,00
23021790	4,25	4,25	60	30,00
23021791	4,30	4,30	60	30,00
23021792	4,35	4,35	60	30,00
23021793	4,40	4,40	60	30,00
23021794	4,45	4,45	60	30,00
23021795	4,50	4,50	60	30,00
23021796	4,55	4,55	60	30,00
23021797	4,60	4,60	60	30,00
23021798	4,65	4,65	60	30,00
23021799	4,70	4,70	60	30,00
23021800	4,75	4,75	60	30,00
23021801	4,80	4,80	60	30,00
23021802	4,85	4,85	60	30,00
23021803	4,90	4,90	60	30,00
23021804	4,95	4,95	60	30,00
23021805	5,00	5,00	60	30,00
23001930	5,05	5,05	60	30,00
23021806	5,10	5,10	65	40,00
23021807	5,15	5,15	65	40,00
23021808	5,20	5,20	65	40,00
23021809	5,25	5,25	65	40,00
23021810	5,30	5,30	65	40,00
23021811	5,35	5,35	65	40,00
23021812	5,40	5,40	65	40,00
23021813	5,45	5,45	65	40,00
23021814	5,50	5,50	65	40,00
23021815	5,55	5,55	65	40,00
23021816	5,60	5,60	65	40,00
23021817	5,65	5,65	65	40,00
23021818	5,70	5,70	65	40,00
23021819	5,75	5,75	65	40,00
23021820	5,80	5,80	65	40,00
23021821	5,85	5,85	65	40,00
23021822	5,90	5,90	65	40,00
23021823	5,95	5,95	65	40,00
23021824	6,00	6,00	65	40,00
23021825	6,10	6,10	65	40,00
23021826	6,20	6,20	65	40,00
23021827	6,30	6,30	65	40,00
23021828	6,40	6,40	65	40,00
23021829	6,50	6,50	65	40,00
23021830	6,60	6,60	65	40,00
23021831	6,70	6,70	65	40,00
23021832	6,80	6,80	65	40,00

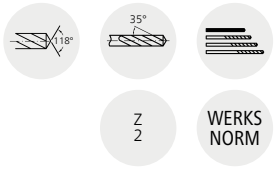
Art. No.	d1 h6	d2 h6	l1 0/+1.0	l2 0/+1.0
23021833	6,90	6,90	65	40,00
23021834	7,00	7,00	65	40,00
23021835	7,20	7,20	80	40,00
23021836	7,50	7,50	80	40,00
23021837	8,00	8,00	80	40,00
23021838	8,50	8,50	80	40,00
23021839	9,00	9,00	80	40,00
23021840	9,50	9,50	80	40,00
23021841	10,00	10,00	100	50,00
23021842	10,50	10,50	100	50,00
23021843	11,00	11,00	100	50,00
23021844	11,50	11,50	100	50,00
23021845	12,00	12,00	100	50,00
23021846	12,50	12,50	100	50,00
23021847	13,00	13,00	100	50,00

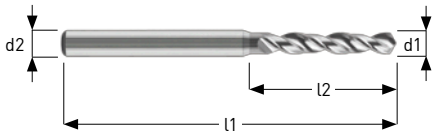
Notes

PFERD TOOLS

TA35

Mikro-Wendelbohrer – kurze Ausführung
Micro twist drill – short series
Micro-foret hélicoïdal – série courte







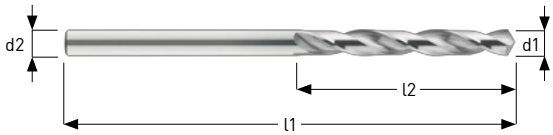


Art. No.	d1 h6	d2 h6	l1 0/+1.0	l2 0/+1.0
23022525	0,20	1,00	30	3,00
23022526	0,25	1,00	30	3,00
23022527	0,30	1,00	30	3,00
23022528	0,35	1,00	30	4,00
23022529	0,40	1,00	30	4,00
23022530	0,45	1,00	30	6,00
23022531	0,50	1,00	30	6,00
23022532	0,55	1,00	30	6,00
23022533	0,60	1,00	30	6,00
23022534	0,65	1,00	30	7,00
23022535	0,70	1,00	30	7,00
23022536	0,75	1,50	30	8,00
23022537	0,80	1,50	30	8,00
23022538	0,85	1,50	30	8,00
23022539	0,90	1,50	30	8,00
23022540	0,95	1,50	30	10,00
23022541	1,00	1,50	30	10,00
23022542	1,05	1,50	30	10,00
23022543	1,10	1,50	30	10,00
23022544	1,13	1,50	30	10,00
23022545	1,15	1,50	30	12,00
23022546	1,20	1,50	30	12,00
23001899	1,25	1,50	30	12,00
23022547	1,30	1,50	30	12,00
23022548	1,35	1,50	30	12,00
23022549	1,40	1,50	30	12,00
23022550	1,45	1,50	30	12,00
23022551	1,50	2,00	30	12,00
23022552	1,55	2,00	30	12,00
23022553	1,60	2,00	30	12,00
23022554	1,65	2,00	30	12,00
23022555	1,70	2,00	30	12,00
23022556	1,75	2,00	30	12,00
23022557	1,80	2,00	30	12,00
23022558	1,85	2,00	30	12,00
23022559	1,90	2,00	30	12,00
23022560	1,95	2,00	30	12,00
23022561	2,00	2,50	30	12,00

PFERD TOOLS

MTB25

Mikro-Wendelbohrer – kurze Ausführung
Micro twist drill – short series
Micro-foret hélicoïdal – série courte



P M K N O



Art. No.	d1 h6	d2 h6	l1 0/+1.0	l2 0/+1.0
23021387	0,50	0,50	20	3,00
23021388	0,60	0,60	21	4,00
23021389	0,70	0,70	23	5,00
23021390	0,80	0,80	24	5,00
23021391	0,90	0,90	25	6,00
23021392	1,00	1,00	26	6,00
23021393	1,10	1,10	28	7,00
23021394	1,20	1,20	30	8,00
23021395	1,30	1,30	30	8,00
23021396	1,40	1,40	32	9,00
23001419	1,50	1,50	32	9,00
23021397	1,60	1,60	34	10,00
23021398	1,70	1,70	34	10,00
23021399	1,80	1,80	36	11,00
23021400	1,90	1,90	36	11,00
23021401	2,00	2,00	38	12,00
23021402	2,10	2,10	38	12,00
23021403	2,20	2,20	40	13,00
23021404	2,30	2,30	40	13,00
23021405	2,40	2,40	43	14,00
23001383	2,50	2,50	43	14,00
23021407	2,60	2,60	43	14,00
23021408	2,70	2,70	46	16,00
23021409	2,80	2,80	46	16,00
23021410	2,90	2,90	46	16,00
23021411	3,00	3,00	46	16,00
23021412	3,10	3,10	49	18,00
23021413	3,20	3,20	49	18,00
23021414	3,30	3,30	49	18,00
23021415	3,40	3,40	52	20,00
23021416	3,50	3,50	52	20,00
23021417	3,60	3,60	52	20,00
23021418	3,70	3,70	52	20,00
23021419	3,80	3,80	55	22,00
23021420	3,90	3,90	55	22,00
23021421	4,00	4,00	55	22,00
23021422	4,10	4,10	55	22,00
23021423	4,20	4,20	55	22,00
23021424	4,30	4,30	58	24,00
23021425	4,40	4,40	58	24,00

PFERD TOOLS

Art. No.	d1 h6	d2 h6	l1 0/+1.0	l2 0/+1.0
23021426	4,50	4,50	58	24,00
23021427	4,60	4,60	58	24,00
23021428	4,70	4,70	58	24,00
23021429	4,80	4,80	62	26,00
23021430	4,90	4,90	62	26,00
23021431	5,00	5,00	62	26,00
23021432	5,10	5,10	62	26,00
23021433	5,20	5,20	62	26,00
23021434	5,30	5,30	62	26,00
23021435	5,40	5,40	66	28,00
23021436	5,50	5,50	66	28,00
23021437	5,60	5,60	66	28,00
23021438	5,70	5,70	66	28,00
23021439	5,80	5,80	66	28,00
23021440	5,90	5,90	66	28,00
23021441	6,00	6,00	66	28,00
23021442	6,10	6,10	70	31,00
23021443	6,20	6,20	70	31,00
23021444	6,30	6,30	70	31,00
23021445	6,40	6,40	70	31,00
23021446	6,50	6,50	70	31,00
23000983	6,60	6,60	70	31,00
23021447	6,70	6,70	70	31,00
23021448	6,80	6,80	74	34,00
23021449	6,90	6,90	74	34,00
23021450	7,00	7,00	74	34,00
23021451	7,10	7,10	74	34,00
23021452	7,20	7,20	74	34,00
23021453	7,30	7,30	74	34,00
23021454	7,40	7,40	74	34,00
23021455	7,50	7,50	74	34,00
23021456	7,60	7,60	79	37,00
23021457	7,70	7,70	79	37,00
23021458	7,80	7,80	79	37,00
23021459	7,90	7,90	79	37,00
23021460	8,00	8,00	79	37,00
23021461	8,10	8,10	79	37,00
23021462	8,20	8,20	79	37,00
23021463	8,30	8,30	79	37,00
23021464	8,40	8,40	79	37,00
23021465	8,50	8,50	79	37,00
23021466	8,60	8,60	84	40,00
23021467	8,70	8,70	84	40,00
23021468	8,80	8,80	84	40,00
23021469	8,90	8,90	84	40,00
23021470	9,00	9,00	84	40,00
23021471	9,10	9,10	84	40,00
23021472	9,20	9,20	84	40,00
23021473	9,30	9,30	84	40,00
23021474	9,40	9,40	84	40,00
23021475	9,50	9,50	84	43,00
23021476	9,60	9,60	89	43,00
23021477	9,70	9,70	89	43,00
23021478	9,80	9,80	89	43,00
23021479	9,90	9,90	89	43,00
23021480	10,00	10,00	89	43,00

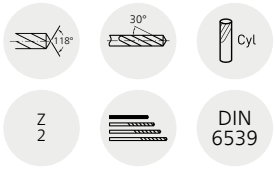
Art. No.	d1 h6	d2 h6	l1 0/+1.0	l2 0/+1.0
23021481	10,10	10,10	89	43,00
23021482	10,50	10,50	89	43,00
23021483	11,00	11,00	95	47,00
23021484	11,50	11,50	95	47,00
23021485	11,80	11,80	95	47,00
23021486	12,00	12,00	102	51,00
23021487	12,50	12,50	102	51,00
23021488	12,70	12,70	102	51,00
23021489	13,00	13,00	102	51,00
23021490	13,50	13,50	102	51,00
23021491	14,00	14,00	107	54,00
23021492	14,50	14,50	107	56,00
23021493	15,00	15,00	111	56,00
23021494	16,00	16,00	115	58,00
23021495	18,00	18,00	123	62,00
23021496	20,00	20,00	131	66,00

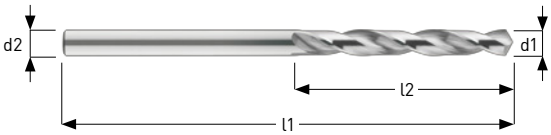
Notes

PFERD TOOLS

MTB33

Mikro-Wendelbohrer – kurze Ausführung
Micro twist drill – short series
Micro-foret hélicoïdal – série courte





P M K N O



Art. No.	d1 h6	d2 h6	l1 0/+1.0	l2 0/+1.0
23022055	1,00	1,00	26	6,00
23022056	1,05	1,05	26	6,00
23022057	1,10	1,10	28	7,00
23022058	1,15	1,15	28	7,00
23022059	1,20	1,20	30	8,00
23022060	1,25	1,25	30	8,00
23022061	1,30	1,30	30	8,00
23022062	1,35	1,35	32	9,00
23022063	1,40	1,40	32	9,00
23022064	1,45	1,45	32	9,00
23022065	1,50	1,50	32	9,00
23022066	1,55	1,55	34	10,00
23022067	1,60	1,60	34	10,00
23022068	1,65	1,65	34	10,00
23022069	1,70	1,70	34	10,00
23022070	1,75	1,75	36	11,00
23022071	1,80	1,80	36	11,00
23022072	1,85	1,85	36	11,00
23022073	1,90	1,90	36	11,00
23022074	1,95	1,95	38	12,00
23022075	2,00	2,00	38	12,00
23022076	2,05	2,05	38	12,00
23022077	2,10	2,10	38	12,00
23022078	2,15	2,15	40	13,00
23022079	2,20	2,20	40	13,00
23022080	2,25	2,25	40	13,00
23022081	2,30	2,30	40	13,00
23022082	2,35	2,35	40	13,00
23022083	2,40	2,40	43	14,00
23022084	2,45	2,45	43	14,00
23022085	2,50	2,50	43	14,00
23022086	2,55	2,55	43	14,00
23022087	2,60	2,60	43	14,00
23022088	2,65	2,65	43	14,00
23022089	2,70	2,70	46	16,00
23022090	2,75	2,75	46	16,00
23022091	2,80	2,80	46	16,00
23022092	2,85	2,85	46	16,00
23022093	2,90	2,90	46	16,00
23022094	2,95	2,95	46	16,00

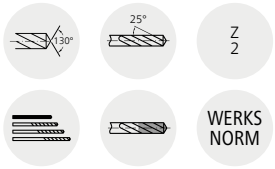
Art. No.	d1 h6	d2 h6	l1 0/+1.0	l2 0/+1.0
23022095	3,00	3,00	46	16,00
23022096	3,50	3,50	52	20,00
23022097	4,00	4,00	55	22,00
23022098	4,50	4,50	58	24,00
23022099	5,00	5,00	62	26,00
23022100	5,50	5,50	66	28,00
23022101	6,00	6,00	70	28,00
23022102	6,50	6,50	70	31,00
23022103	7,00	7,00	74	34,00
23022104	7,50	7,50	74	34,00
23022105	8,00	8,00	79	37,00
23022106	8,50	8,50	79	37,00
23022107	9,00	9,00	84	40,00
23022108	9,50	9,50	84	40,00
23022109	10,00	10,00	89	43,00
23022110	10,50	10,50	89	43,00
23022111	11,00	11,00	95	47,00
23022112	12,00	12,00	102	51,00

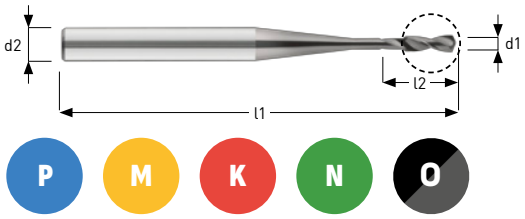
Notes

PFERD TOOLS

TA303B

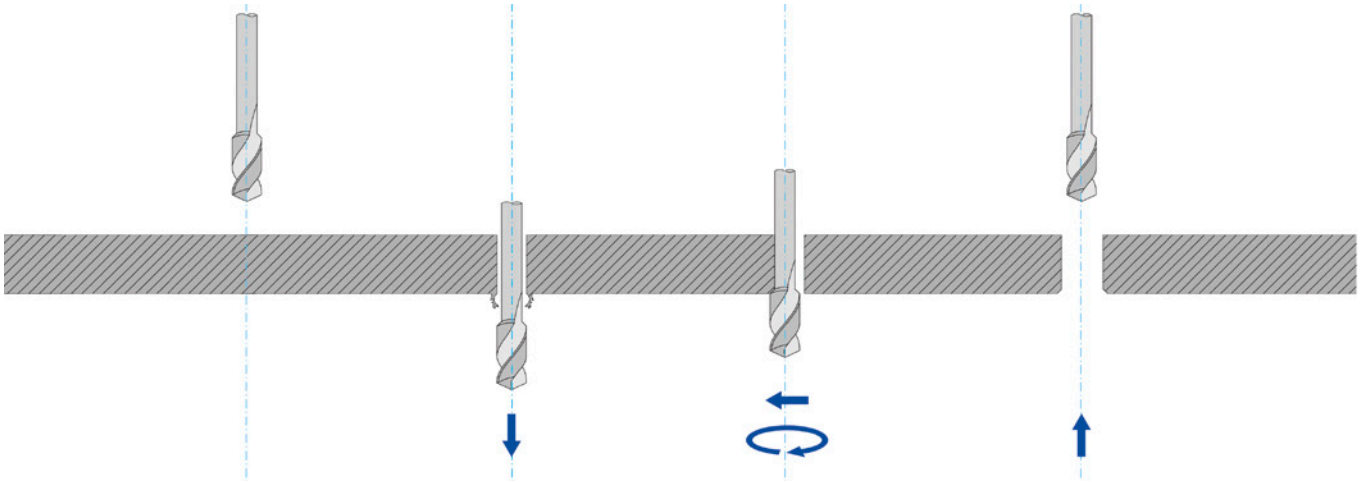
Mikrobohrer mit Rückwärtsentgrater – kurze Ausführung
Combination drill with back chamfer – short series
Micro-foret hélicoïdal avec chanfrein postérieur – série courte







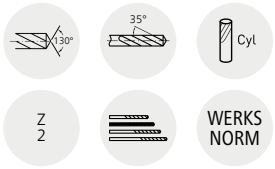
Art. No.	d1 h5	d2 h6	d3 0/0.0025	l1 0/+0.5	l2 0/+0.5	l3 +/-0.1
23022499	0,50	3,00	0,34	50	3,00	1,50
23022500	0,60	3,00	0,40	50	3,60	1,80
23022501	0,70	3,00	0,47	50	4,20	2,10
23022502	0,80	3,00	0,54	50	4,80	2,40
23022503	0,90	3,00	0,60	50	5,40	2,70
23022504	1,00	3,00	0,67	50	6,00	3,00
23022505	1,10	3,00	0,74	50	6,60	3,30
23022506	1,20	3,00	0,80	50	7,20	3,60
23022507	1,30	3,00	0,87	50	7,80	3,90
23022508	1,40	3,00	0,94	50	8,40	4,20
23022509	1,50	3,00	1,01	50	9,00	4,50
23022510	1,60	4,00	1,07	60	9,60	4,80
23022511	1,70	4,00	1,14	60	10,20	5,10
23022512	1,80	4,00	1,21	60	10,80	5,40
23022513	1,90	4,00	1,27	60	11,40	5,70
23022514	2,00	4,00	1,34	60	12,00	6,00
23022515	2,10	6,00	1,41	70	12,60	6,30
23022516	2,20	6,00	1,47	70	13,20	6,60
23022517	2,30	6,00	1,54	70	13,80	6,90
23022518	2,40	6,00	1,61	70	14,40	7,20
23022519	2,50	6,00	1,68	70	15,00	7,50
23022520	2,60	6,00	1,74	70	15,60	7,80
23022521	2,70	6,00	1,81	70	16,20	8,10
23022522	2,80	6,00	1,88	70	16,80	8,40
23022523	2,90	6,00	1,94	70	17,40	8,70
23022524	3,00	6,00	2,01	70	18,00	9,00

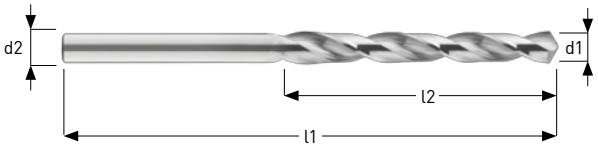


PFERD TOOLS

TC35

Mikro-Wendelbohrer – mittlere Ausführung
Micro twist drill – medium series
Micro-foret hélicoïdal – série moyenne







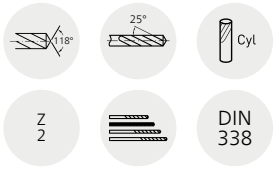


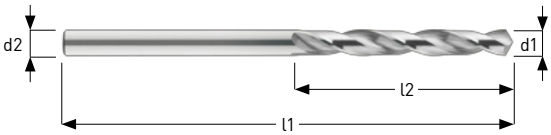
Art. No.	d1 h6	d2 h6	l1 0/+1.0	l2 0/+1.0
23022722	0,30	0,30	30	6,00
23022723	0,35	0,35	30	6,00
23022724	0,40	0,40	30	6,00
23022725	0,45	0,45	38	9,00
23022726	0,50	0,50	38	9,00
23022727	0,55	0,55	38	9,00
23022728	0,60	0,60	38	9,00
23022729	0,65	0,65	38	13,00
23022730	0,70	0,70	38	13,00
23022731	0,75	0,75	38	13,00
23022732	0,80	0,80	38	13,00
23022733	0,85	0,85	38	16,00
23022734	0,90	0,90	38	16,00
23022735	0,95	0,95	38	16,00
23022736	1,00	1,00	38	16,00
23022737	1,05	1,05	38	16,00
23022738	1,10	1,10	38	16,00
23022739	1,15	1,15	38	16,00
23022740	1,20	1,20	38	16,00
23022741	1,25	1,25	38	16,00
23022742	1,30	1,30	38	16,00
23022743	1,35	1,35	38	16,00
23022744	1,40	1,40	38	16,00
23022745	1,45	1,45	38	16,00
23022746	1,50	1,50	38	16,00
23022747	1,55	1,55	38	16,00
23022748	1,60	1,60	38	16,00
23022749	1,65	1,65	38	16,00
23022750	1,70	1,70	38	16,00
23022751	1,75	1,75	38	16,00
23022752	1,80	1,80	38	16,00
23022753	1,85	1,85	38	16,00
23022754	1,90	1,90	38	16,00
23022755	1,95	1,95	38	16,00
23022756	2,00	2,00	38	16,00

PFERD TOOLS

MTB30

Mikro-Wendelbohrer – mittlere Ausführung
Micro twist drill – medium series
Micro-foret hélicoïdal – série moyenne









Art. No.	d1 h6	d2 h6	l1 0/+1.0	l2 0/+1.0
23021988	0,80	0,80	30	10,00
23021989	0,90	0,90	32	11,00
23021990	1,00	1,00	34	12,00
23021991	1,10	1,10	36	14,00
23021992	1,20	1,20	38	16,00
23021993	1,30	1,30	38	16,00
23021994	1,40	1,40	40	18,00
23021995	1,50	1,50	40	18,00
23021996	1,60	1,60	43	20,00
23021997	1,70	1,70	43	20,00
23021998	1,80	1,80	46	22,00
23021999	1,90	1,90	46	22,00
23022000	2,00	2,00	49	24,00
23022001	2,10	2,10	49	24,00
23022002	2,20	2,20	53	27,00
23022003	2,30	2,30	53	27,00
23022004	2,40	2,40	57	30,00
23022005	2,50	2,50	57	30,00
23022006	2,60	2,60	57	30,00
23022007	2,70	2,70	61	33,00
23022008	2,80	2,80	61	33,00
23022009	2,90	2,90	61	33,00
23022010	3,00	3,00	61	33,00
23022011	3,10	3,10	65	36,00
23022012	3,20	3,20	65	36,00
23022013	3,30	3,30	65	36,00
23022014	3,40	3,40	70	39,00
23022015	3,50	3,50	70	39,00
23022016	3,60	3,60	70	39,00
23022017	3,70	3,70	70	39,00
23022018	3,80	3,80	75	43,00
23022019	3,90	3,90	75	43,00
23022020	4,00	4,00	75	43,00
23022021	4,10	4,10	75	43,00
23022022	4,20	4,20	75	43,00
23022023	4,30	4,30	80	47,00
23022024	4,40	4,40	80	47,00
23022025	4,50	4,50	80	47,00
23022026	4,60	4,60	80	47,00
23022027	4,70	4,70	80	47,00

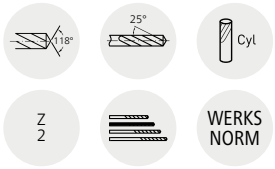
Art. No.	d1 h6	d2 h6	l1 0/+1.0	l2 0/+1.0
23022028	4,80	4,80	86	52,00
23022029	4,90	4,90	86	52,00
23022030	5,00	5,00	86	52,00
23022031	5,10	5,10	86	52,00
23022032	5,20	5,20	86	52,00
23022033	5,30	5,30	86	52,00
23022034	5,40	5,40	93	57,00
23022035	5,50	5,50	93	57,00
23022036	5,60	5,60	93	57,00
23022037	5,70	5,70	93	57,00
23022038	5,80	5,80	93	57,00
23022039	5,90	5,90	93	57,00
23001085	6,00	6,00	93	57,00
23001084	6,50	6,50	101	63,00
23022040	7,00	7,00	109	69,00
23022041	7,50	7,50	109	69,00
23022042	8,00	8,00	117	75,00
23001086	8,50	8,50	117	75,00
23022043	9,00	9,00	125	81,00
23022044	9,50	9,50	125	81,00
23022045	10,00	10,00	133	87,00
23022046	10,50	10,50	133	87,00
23022047	11,00	11,00	142	94,00
23022048	11,50	11,50	142	94,00
23022049	12,00	12,00	151	101,00
23022050	12,50	12,50	151	101,00
23022051	13,00	13,00	151	101,00
23022052	14,00	14,00	160	108,00
23022053	15,00	15,00	160	114,00
23022054	16,00	16,00	160	120,00

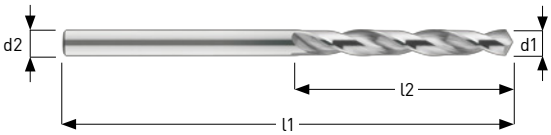
Notes

PFERD TOOLS

MTB35

Mikro-Wendelbohrer – mittlere Ausführung
Micro twist drill – medium series
Micro-foret hélicoïdal – série moyenne





P M K N O



Art. No.	d1 h6	d2 h6	l1 0/+1.0	l2 0/+1.0
23022113	0,30	0,30	28	4,00
23022114	0,35	0,35	30	5,00
23022115	0,40	0,40	30	5,00
23022116	0,45	0,45	30	5,00
23022117	0,50	0,50	30	5,00
23022118	0,55	0,55	30	5,00
23022119	0,60	0,60	30	5,00
23022120	0,65	0,65	30	6,00
23022121	0,70	0,70	30	6,00
23022122	0,75	0,75	30	8,00
23022123	0,80	0,80	30	8,00
23022124	0,85	0,85	30	9,00
23022125	0,90	0,90	30	9,00
23022126	0,95	0,95	30	10,00
23022127	1,00	1,00	30	10,00
23022128	1,05	1,05	30	10,00
23022129	1,10	1,10	30	10,00
23022130	1,15	1,15	30	12,00
23022131	1,20	1,20	30	12,00
23022132	1,25	1,25	30	12,00
23022133	1,30	1,30	30	12,00
23022134	1,35	1,35	30	12,00
23022135	1,40	1,40	30	12,00
23022136	1,45	1,45	30	12,00
23022137	1,50	1,50	30	12,00
23022138	1,55	1,55	40	16,00
23022139	1,60	1,60	40	16,00
23022140	1,65	1,65	40	16,00
23022141	1,70	1,70	40	16,00
23022142	1,75	1,75	40	16,00
23022143	1,80	1,80	40	16,00
23022144	1,85	1,85	40	16,00
23022145	1,90	1,90	40	16,00
23022146	1,95	1,95	40	16,00
23022147	2,00	2,00	40	16,00
23022148	2,05	2,05	40	18,00
23022149	2,10	2,10	40	18,00
23022150	2,15	2,15	40	18,00
23022152	2,30	2,30	40	18,00
23022153	2,35	2,35	40	18,00

PFERD TOOLS

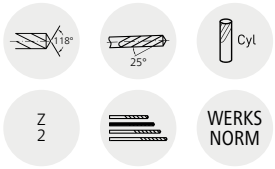
Art. No.	d1 h6	d2 h6	l1 0/+1.0	l2 0/+1.0
23000219	2,40	2,40	40	18,00
23022154	2,45	2,45	40	18,00
23022155	2,50	2,50	40	18,00
23022156	2,55	2,55	45	18,00
23022157	2,60	2,60	45	18,00
23022158	2,65	2,65	45	18,00
23022159	2,70	2,70	45	18,00
23022160	2,75	2,75	45	18,00
23022161	2,80	2,80	45	18,00
23022162	2,85	2,85	45	18,00
23022163	2,90	2,90	45	18,00
23022164	2,95	2,95	45	18,00
23022165	3,00	3,00	45	18,00
23022166	3,10	3,10	50	20,00
23022167	3,15	3,15	50	20,00
23022168	3,17	3,17	50	20,00
23022169	3,20	3,20	50	20,00
23022170	3,30	3,30	50	20,00
23022171	3,40	3,40	50	20,00
23022172	3,50	3,50	50	20,00
23022173	3,60	3,60	50	20,00
23022174	3,70	3,70	50	20,00
23022175	3,80	3,80	50	20,00
23022176	3,90	3,90	50	20,00
23022177	4,00	4,00	50	20,00
23022178	4,10	4,10	50	25,00
23022179	4,20	4,20	50	25,00
23022180	4,30	4,30	50	25,00
23022181	4,40	4,40	50	25,00
23022182	4,50	4,50	50	25,00
23022183	4,60	4,60	50	25,00
23022184	4,70	4,70	50	25,00
23022185	4,80	4,80	50	25,00
23022186	4,90	4,90	50	25,00
23022187	5,00	5,00	50	25,00
23022188	5,10	5,10	50	25,00
23022189	5,20	5,20	50	25,00
23022190	5,30	5,30	50	25,00
23022191	5,40	5,40	50	25,00
23022192	5,50	5,50	50	25,00
23022193	5,60	5,60	50	25,00
23022194	5,70	5,70	50	25,00
23022195	5,80	5,80	50	25,00
23022196	5,90	5,90	50	25,00
23022197	6,00	6,00	50	25,00

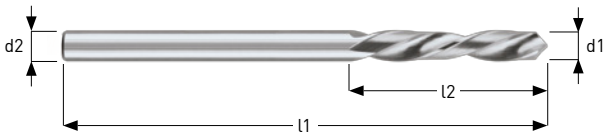
Notes

PFERD TOOLS

MTB35L

Linksdrall-Mikro-Wendelbohrer – mittlere Ausführung
Left-hand micro twist drill – medium series
Micro foret hélicoïdal gauche – série moyenne









Art. No.	d1 h6	d2 h6	l1 0/+1.0	l2 0/+1.0
23022198	0,50	0,50	30	5,00
23022199	0,55	0,55	30	5,00
23022200	0,60	0,60	30	5,00
23022201	0,65	0,65	30	6,00
23022202	0,70	0,70	30	6,00
23022203	0,75	0,75	30	8,00
23022204	0,80	0,80	30	8,00
23022205	0,85	0,85	30	9,00
23022206	0,90	0,90	30	9,00
23022207	0,95	0,95	30	10,00
23022208	1,00	1,00	30	10,00
23022209	1,05	1,05	30	10,00
23022210	1,10	1,10	30	10,00
23022211	1,15	1,15	30	12,00
23022212	1,20	1,20	30	12,00
23022213	1,25	1,25	30	12,00
23022214	1,30	1,30	30	12,00
23022215	1,35	1,35	30	12,00
23022216	1,40	1,40	30	12,00
23022217	1,45	1,45	30	12,00
23022218	1,50	1,50	30	12,00
23022219	1,55	1,55	40	16,00
23022220	1,60	1,60	40	16,00
23022221	1,65	1,65	40	16,00
23022222	1,70	1,70	40	16,00
23022223	1,75	1,75	40	16,00
23022224	1,80	1,80	40	16,00
23022225	1,85	1,85	40	16,00
23022226	1,90	1,90	40	16,00
23022227	1,95	1,95	40	16,00
23022228	2,00	2,00	40	16,00
23022229	2,05	2,05	40	18,00
23022230	2,10	2,10	40	18,00
23022231	2,15	2,15	40	18,00
23022232	2,20	2,20	40	18,00
23022233	2,25	2,25	40	18,00
23022234	2,30	2,30	40	18,00
23022235	2,35	2,35	40	18,00
23022236	2,40	2,40	40	18,00
23022237	2,45	2,45	40	18,00

PFERD TOOLS

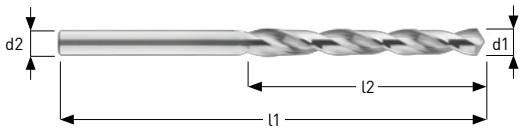
Art. No.	d1 h6	d2 h6	l1 0/+1.0	l2 0/+1.0
23022238	2,50	2,50	40	18,00
23022239	2,55	2,55	45	18,00
23022240	2,60	2,60	45	18,00
23022241	2,65	2,65	45	18,00
23022242	2,70	2,70	45	18,00
23022243	2,75	2,75	45	18,00
23022244	2,80	2,80	45	18,00
23022245	2,85	2,85	45	18,00
23022246	2,90	2,90	45	18,00
23022247	2,95	2,95	45	18,00
23022248	3,00	3,00	45	18,00
23022249	3,10	3,10	50	20,00
23022250	3,20	3,20	50	20,00
23022251	3,30	3,30	50	20,00
23022252	3,40	3,40	50	20,00
23022253	3,50	3,50	50	20,00
23022254	3,60	3,60	50	20,00
23022255	3,70	3,70	50	20,00
23022256	3,80	3,80	50	20,00
23022257	3,90	3,90	50	20,00
23001226	4,00	4,00	50	20,00
23022258	4,10	4,10	50	25,00
23022259	4,20	4,20	50	25,00
23022260	4,30	4,30	50	25,00
23022261	4,40	4,40	50	25,00
23022262	4,50	4,50	50	25,00
23022263	4,60	4,60	50	25,00
23022264	4,70	4,70	50	25,00
23022265	4,80	4,80	50	25,00
23022266	4,90	4,90	50	25,00
23022267	5,00	5,00	50	25,00
23022268	5,10	5,10	50	25,00
23022269	5,20	5,20	50	25,00
23022270	5,30	5,30	50	25,00
23022271	5,40	5,40	50	25,00
23022272	5,50	5,50	50	25,00
23022273	5,60	5,60	50	25,00
23022274	5,70	5,70	50	25,00
23022275	5,80	5,80	50	25,00
23022276	5,90	5,90	50	25,00
23022277	6,00	6,00	50	25,00

Notes

PFERD TOOLS

MTB45

Mikro-Wendelbohrer – lange Ausführung
Micro twist drill – long series
Micro-foret hélicoïdal – série longue







Art. No.	d1 h6	d2 h6	l1 0/+1.0	l2 0/+1.0
23022300	0,30	0,30	40	8,00
23022301	0,40	0,40	40	8,00
23004191	0,50	0,50	40	8,00
23022302	0,60	0,60	40	8,00
23022303	0,70	0,70	50	15,00
23022304	0,80	0,80	50	15,00
23022305	0,90	0,90	50	15,00
23022306	1,00	1,00	50	16,00
23022307	1,10	1,10	50	16,00
23022308	1,20	1,20	50	18,00
23022309	1,30	1,30	50	18,00
23022310	1,40	1,40	50	18,00
23022311	1,50	1,50	50	24,00
23022312	1,60	1,60	55	24,00
23022313	1,70	1,70	55	24,00
23022314	1,80	1,80	55	24,00
23004194	1,90	1,90	55	24,00
23004193	2,00	2,00	55	24,00
23022315	2,10	2,10	55	24,00
23022316	2,20	2,20	58	26,00
23022317	2,30	2,30	58	26,00
23022318	2,40	2,40	61	26,00
23022319	2,50	2,50	61	26,00
23022320	2,60	2,60	64	28,00
23022321	2,70	2,70	64	28,00
23022322	2,80	2,80	67	30,00
23022323	2,90	2,90	71	30,00
23022324	3,00	3,00	71	30,00
23022325	3,10	3,10	71	32,00
23022326	3,20	3,20	71	32,00
23022327	3,30	3,30	73	35,00
23022328	3,40	3,40	73	35,00
23022329	3,50	3,50	73	35,00
23022330	3,60	3,60	76	37,00
23022331	3,70	3,70	76	37,00
23022332	3,80	3,80	76	37,00
23022333	3,90	3,90	79	37,00
23022334	4,00	4,00	83	40,00
23022335	4,10	4,10	83	40,00
23022336	4,20	4,20	83	40,00

PFERD TOOLS

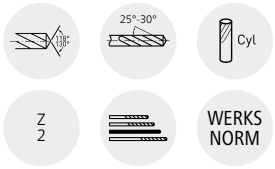
Art. No.	d1 h6	d2 h6	l1 0/+1.0	l2 0/+1.0
23022337	4,30	4,30	83	40,00
23022338	4,40	4,40	86	42,00
23022339	4,50	4,50	86	42,00
23022340	4,60	4,60	86	42,00
23022341	4,70	4,70	89	42,00
23022342	4,80	4,80	89	42,00
23022343	4,90	4,90	92	45,00
23022344	5,00	5,00	92	45,00
23022345	5,10	5,10	92	45,00
23022346	5,20	5,20	95	45,00
23022347	5,30	5,30	95	45,00
23022348	5,40	5,40	95	45,00
23022349	5,50	5,50	95	45,00
23022350	5,60	5,60	98	45,00
23022351	5,70	5,70	98	45,00
23022352	5,80	5,80	98	45,00
23022353	5,90	5,90	98	45,00
23022354	6,00	6,00	102	50,00
23022355	6,10	6,10	102	50,00
23022356	6,20	6,20	102	50,00
23022357	6,30	6,30	102	50,00
23022358	6,40	6,40	105	50,00
23022359	6,50	6,50	105	50,00
23022360	6,60	6,60	105	50,00
23022361	6,70	6,70	105	50,00
23022362	6,80	6,80	105	50,00
23022363	6,90	6,90	105	50,00
23022364	7,00	7,00	105	50,00
23022365	7,10	7,10	108	52,00
23022366	7,20	7,20	108	52,00
23022367	7,30	7,30	108	52,00
23022368	7,40	7,40	111	52,00
23022369	7,50	7,50	111	52,00
23022370	7,60	7,60	111	52,00
23022371	7,70	7,70	114	55,00
23022372	7,80	7,80	114	55,00
23022373	7,90	7,90	114	55,00
23022374	8,00	8,00	117	60,00
23022375	8,50	8,50	121	60,00
23022376	9,00	9,00	124	65,00
23022377	9,50	9,50	127	65,00
23022378	10,00	10,00	130	70,00
23022379	10,50	10,50	137	70,00
23022380	11,00	11,00	140	70,00
23022381	11,50	11,50	143	70,00
23022382	12,00	12,00	149	70,00
23022383	12,50	12,50	149	70,00
23022384	13,00	13,00	149	70,00

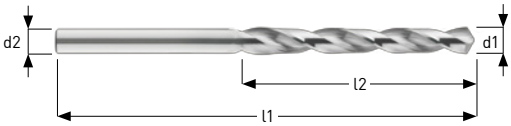
Notes

PFERD TOOLS

MTB50

Mikro-Wendelbohrer – lange Ausführung
Micro twist drill – long series
Micro-foret hélicoïdal – série longue









Art. No.	d1 h6	d2 h6	l1 0/+1.0	l2 0/+1.0
23022385	1,00	1,00	75	25,00
23022386	1,10	1,10	75	25,00
23022387	1,20	1,20	75	25,00
23022388	1,30	1,30	75	25,00
23022389	1,40	1,40	75	30,00
23022390	1,50	1,50	75	30,00
23022391	1,60	1,60	75	30,00
23022392	1,70	1,70	75	30,00
23022393	1,80	1,80	75	30,00
23022394	1,90	1,90	75	30,00
23022395	2,00	2,00	75	30,00
23022396	2,10	2,10	75	30,00
23022397	2,20	2,20	75	30,00
23022398	2,30	2,30	75	30,00
23022399	2,40	2,40	100	35,00
23022400	2,50	2,50	100	35,00
23022401	2,60	2,60	100	35,00
23022402	2,70	2,70	100	35,00
23022403	2,80	2,80	100	35,00
23022404	2,90	2,90	100	35,00
23022405	3,00	3,00	100	50,00
23022406	3,10	3,10	100	50,00
23001895	3,20	3,20	100	50,00
23022407	3,30	3,30	100	50,00
23022408	3,40	3,40	100	50,00
23022409	3,50	3,50	100	50,00
23022410	3,60	3,60	100	50,00
23022411	3,70	3,70	100	50,00
23022412	3,80	3,80	100	50,00
23022413	3,90	3,90	100	50,00
23022414	4,00	4,00	100	50,00
23022415	4,10	4,10	100	50,00
23022416	4,20	4,20	100	50,00
23022417	4,30	4,30	100	50,00
23022418	4,40	4,40	100	50,00
23022419	4,50	4,50	100	50,00
23022420	4,60	4,60	100	50,00
23022421	4,70	4,70	100	50,00
23022422	4,80	4,80	100	50,00
23022423	4,90	4,90	100	50,00

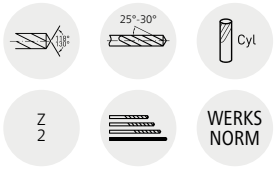
Art. No.	d1 h6	d2 h6	l1 0/+1.0	l2 0/+1.0
23022424	5,00	5,00	150	75,00
23022425	5,10	5,10	150	75,00
23022426	5,20	5,20	150	75,00
23022427	5,30	5,30	150	75,00
23022428	5,40	5,40	150	75,00
23022429	5,50	5,50	150	75,00
23022430	5,60	5,60	150	75,00
23022431	5,70	5,70	150	75,00
23022432	5,80	5,80	150	75,00
23022433	5,90	5,90	150	75,00
23022434	6,00	6,00	150	75,00
23022435	6,50	6,50	150	75,00
23022436	7,00	7,00	150	75,00
23022437	7,50	7,50	150	75,00
23022438	8,00	8,00	150	75,00
23022439	8,50	8,50	150	75,00
23022440	9,00	9,00	150	75,00
23022441	9,50	9,50	150	75,00
23022442	10,00	10,00	150	75,00
23022443	10,50	10,50	200	90,00
23022444	11,00	11,00	200	90,00
23022445	11,50	11,50	200	90,00
23022446	12,00	12,00	200	90,00
23022447	12,50	12,50	200	90,00
23022448	13,00	13,00	200	90,00

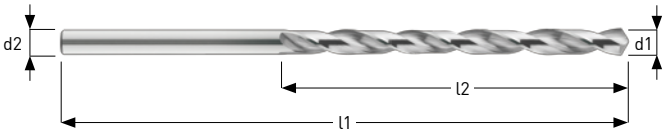
Notes

PFERD TOOLS

MTB60

Mikro-Wendelbohrer – extra lange Ausführung
Micro twist drill – extra long series
Micro-foret hélicoïdal – série extra longue





P M K N H O



Art. No.	d1 h6	d2 h6	l1 0/+1.0	l2 0/+1.0
23004195	1,00	1,00	100	50,00
23022449	1,10	1,10	100	50,00
23022450	1,20	1,20	100	50,00
23022451	1,30	1,30	100	50,00
23022452	1,40	1,40	100	50,00
23022453	1,50	1,50	100	50,00
23022454	1,60	1,60	100	50,00
23001366	1,70	1,70	100	50,00
23022455	1,80	1,80	100	50,00
23022456	1,90	1,90	100	50,00
23001896	2,00	2,00	100	50,00
23022457	2,10	2,10	100	50,00
23022458	2,20	2,20	100	50,00
23022459	2,30	2,30	100	50,00
23022460	2,40	2,40	150	75,00
23000389	2,50	2,50	150	75,00
23000391	2,60	2,60	150	75,00
23022461	2,70	2,70	150	75,00
23022462	2,80	2,80	150	75,00
23022463	2,90	2,90	150	75,00
23022464	3,00	3,00	150	75,00
23022465	3,10	3,10	150	75,00
23022466	3,20	3,20	150	75,00
23022467	3,30	3,30	150	75,00
23022468	3,40	3,40	150	75,00
23022469	3,50	3,50	150	75,00
23022470	3,60	3,60	150	75,00
23022471	3,70	3,70	150	75,00
23022472	3,80	3,80	150	75,00
23022473	3,90	3,90	150	75,00
23022474	4,00	4,00	150	75,00
23022475	4,10	4,10	150	75,00
23022476	4,20	4,20	150	75,00
23022477	4,30	4,30	150	75,00
23022478	4,40	4,40	150	75,00
23022479	4,50	4,50	150	75,00
23022480	4,60	4,60	150	75,00
23022481	4,70	4,70	150	75,00
23022482	4,80	4,80	150	75,00
23022483	4,90	4,90	150	75,00

PFERD TOOLS

Art. No.	d1 h6	d2 h6	l1 0/+1.0	l2 0/+1.0
23000393	5,00	5,00	200	100,00
23022484	5,10	5,10	200	100,00
23022485	5,20	5,20	200	100,00
23022486	5,30	5,30	200	100,00
23022487	5,40	5,40	200	100,00
23022488	5,50	5,50	200	100,00
23022489	5,60	5,60	200	100,00
23000395	5,70	5,70	200	100,00
23022490	5,80	5,80	200	100,00
23022491	5,90	5,90	200	100,00
23001083	6,00	6,00	200	100,00
23000397	6,50	6,50	200	105,00
23022492	7,00	7,00	200	105,00
23022493	7,50	7,50	200	105,00
23022494	8,00	8,00	200	105,00
23022495	8,50	8,50	250	130,00
23022496	9,00	9,00	250	130,00
23022497	9,50	9,50	250	145,00
23022498	10,00	10,00	250	145,00

Notes

PFERD TOOLS

TA803

Schnittwerte für das Bohren | Standard values for drilling | Paramètres indicatifs pour perçage

		Schnittgeschwindigkeit m/min Cutting Speed m/min Vitesse de coupe m/min				Vorschub mm/Umdrehung Feed mm/rev Avance mm/tour			
ISO Class	Adv	ø 0.30-0.50	ø 0.51-1.00	ø 1.01-2.00	ø 2.05-3.00	ø 0.30-0.50	ø 0.51-1.00	ø 1.01-2.00	ø 2.05-3.00
P00	●	5-12	12-35	35-65	35-60	0.003-0.008	0.007-0.015	0.014-0.025	0.023-0.035
P01	●	5-12	12-35	35-65	35-60	0.003-0.008	0.007-0.015	0.014-0.025	0.023-0.035
P02	●	5-12	12-35	35-65	35-60	0.003-0.008	0.007-0.015	0.014-0.025	0.023-0.035
P03	●	4-9	9-28	28-55	28-55	0.002-0.007	0.006-0.014	0.012-0.023	0.021-0.032
P04	●	3,3-7	7-23	23-50	23-50	0.002-0.006	0.005-0.013	0.011-0.02	0.018-0.030
P05	●	4-9	9-28	28-55	28-55	0.002-0.005	0.004-0.011	0.01-0.018	0.016-0.028
P06	●	4-9	9-28	28-55	28-55	0.002-0.005	0.004-0.011	0.01-0.018	0.016-0.028
M01	●	3-8	8-20	18-35	18-35	0.002-0.004	0.003-0.009	0.008-0.016	0.016-0.028
M02	●	3-8	8-20	18-35	18-35	0.002-0.004	0.003-0.009	0.008-0.016	0.016-0.028
M03	●	3-8	8-20	18-35	18-35	0.002-0.004	0.003-0.009	0.008-0.016	0.016-0.028
K01	●	5-12	12-35	35-65	35-60	0.003-0.008	0.007-0.015	0.014-0.025	0.023-0.035
K03	●	4-10	10-30	30-55	30-50	0.002-0.007	0.006-0.014	0.012-0.022	0.02-0.035
K02	●	4-10	10-30	30-55	30-50	0.002-0.007	0.006-0.014	0.012-0.022	0.02-0.035
N01	●	6-19	19-45	45-80	45-80	0.002-0.006	0.005-0.013	0.012-0.02	0.018-0.03
N02	●	5,5-17	17-45	45-70	45-70	0.003-0.007	0.006-0.015	0.014-0.022	0.02-0.035
N03	●	5,5-15	15-35	35-65	35-65	0.003-0.006	0.006-0.013	0.012-0.02	0.018-0.032
N04	◑	5,5-18	15-40	35-70	35-70	0.002-0.006	0.004-0.013	0.009-0.02	0.015-0.032
S01	●	2,5-7	8-18	18-35	18-35	0.002-0.004	0.003-0.007	0.006-0.011	0.01-0.018
S02	●	2,5-7	8-18	18-35	18-35	0.002-0.004	0.003-0.007	0.006-0.011	0.01-0.018
S03	●	2,5-7	8-18	18-35	18-35	0.002-0.004	0.003-0.007	0.006-0.011	0.01-0.018
S04	◑	5-8	6-12	11-20	11-20	0.002-0.006	0.005-0.013	0.012-0.02	0.018-0.03
H01	○	-	-	-	-	-	-	-	-
H02	○	-	-	-	-	-	-	-	-
H03	○	-	-	-	-	-	-	-	-
O01	●	5-12	12-35	35-65	35-60	0.003-0.01	0.009-0.018	0.016-0.028	0.026-0.04
O02	○	-	-	-	-	-	-	-	-
O03	○	-	-	-	-	-	-	-	-
O04	○	-	-	-	-	-	-	-	-
O05	○	-	-	-	-	-	-	-	-

● Empfohlen | Recommended | Recommandé
◑ Teilweise empfohlen | Partially recommended | Partiellement recommandé
○ Nicht empfohlen | Not recommended | Non recommandé

PFERD TOOLS

MTB25N

Schnittwerte für das Bohren | Standard values for drilling | Paramètres indicatifs pour perçage

		Schnittgeschwindigkeit Cutting Speed Vitesse de coupe	Vorschub mm/Umdrehung Feed mm/rev Avance mm/tour						
ISO Class	Adv	m/min	ø 0.30-0.75	ø 0.76-0.99	ø 1.00-2.00	ø 2.01-4.00	ø 4.05-6.00	ø 6.10-8.50	ø 9.00-13.00
P00	●	10-20	0.005-0.012	0.01-0.02	0.015-0.03	0.02-0.04	0.03-0.06	0.04-0.08	0.06-0.120
P01	●	10-20	0.005-0.012	0.01-0.02	0.015-0.03	0.02-0.04	0.03-0.06	0.04-0.08	0.06-0.120
P02	●	10-20	0.005-0.012	0.01-0.02	0.015-0.03	0.02-0.04	0.03-0.06	0.04-0.08	0.06-0.120
P03	●	10-20	0.003-0.008	0.08-0.018	0.012-0.025	0.02-0.04	0.03-0.06	0.04-0.08	0.06-0.120
P04	◑	8-15	0.002-0.006	0.006-0.015	0.010-0.018	0.015-0.030	0.025-0.040	0.035-0.060	0.050-0.090
P05	◑	8-15	0.002-0.006	0.006-0.015	0.010-0.018	0.015-0.030	0.025-0.040	0.035-0.060	0.050-0.090
P06	◑	8-15	0.002-0.006	0.006-0.015	0.010-0.018	0.015-0.030	0.025-0.040	0.035-0.060	0.050-0.090
M01	◑	5-15	0.002-0.006	0.005-0.014	0.008-0.016	0.012-0.025	0.020-0.035	0.030-0.050	0.040-0.080
M02	◑	5-15	0.002-0.006	0.005-0.014	0.008-0.016	0.012-0.025	0.020-0.035	0.030-0.050	0.040-0.080
M03	◑	5-15	0.002-0.006	0.005-0.014	0.008-0.016	0.012-0.025	0.020-0.035	0.030-0.050	0.040-0.080
K01	◑	20-40	0.005-0.012	0.01-0.02	0.015-0.03	0.02-0.04	0.03-0.06	0.04-0.08	0.06-0.120
K03	◑	20-40	0.003-0.008	0.08-0.018	0.012-0.025	0.02-0.04	0.03-0.06	0.04-0.08	0.06-0.120
K02	◑	20-40	0.003-0.008	0.08-0.018	0.012-0.025	0.02-0.04	0.03-0.06	0.04-0.08	0.06-0.120
N01	●	30-50	0.01-0.02	0.015-0.040	0.03-0.06	0.04-0.08	0.060-0.100	0.080-0.140	0.100-0.200
N02	●	30-50	0.01-0.02	0.015-0.040	0.03-0.06	0.04-0.08	0.060-0.100	0.080-0.140	0.100-0.200
N03	●	30-50	0.008-0.018	0.010-0.030	0.020-0.050	0.035-0.070	0.060-0.100	0.080-0.140	0.100-0.200
N04	●	10-50	0.006-0.018	0.010-0.030	0.025-0.050	0.030-0.070	0.065-0.100	0.080-0.140	0.100-0.200
S01	○	-	-	-	-	-	-	-	-
S02	○	-	-	-	-	-	-	-	-
S03	○	-	-	-	-	-	-	-	-
S04	◑	8-15	0.002-0.006	0.006-0.015	0.010-0.018	0.015-0.030	0.025-0.040	0.035-0.060	0.050-0.090
H01	◑	8-15	0.01-0.02	0.015-0.040	0.03-0.06	0.04-0.08	0.060-0.100	0.080-0.140	0.100-0.200
H02	◑	8-15	0.01-0.02	0.015-0.040	0.03-0.06	0.04-0.08	0.060-0.100	0.080-0.140	0.100-0.200
H03	○	-	-	-	-	-	-	-	-
O01	●	30-50	0.01-0.02	0.015-0.040	0.03-0.06	0.04-0.08	0.060-0.100	0.080-0.140	0.100-0.200
O02	○	-	-	-	-	-	-	-	-
O03	○	-	-	-	-	-	-	-	-
O04	○	-	-	-	-	-	-	-	-
O05	○	-	-	-	-	-	-	-	-

● Empfohlen | Recommended | Recommandé
◑ Teilweise empfohlen | Partially recommended | Partiellement recommandé
○ Nicht empfohlen | Not recommended | Non recommandé

PFERD TOOLS

TA35

Schnittwerte für das Bohren | Standard values for drilling | Paramètres indicatifs pour perçage

		Schnittgeschwindigkeit Cutting Speed Vitesse de coupe	Vorschub mm/Umdrehung Feed mm/rev Avance mm/tour	
ISO Class	Adv	m/min	ø 0.20-0.50	ø 0.55-2.00
P00	●	20-40	0.002-0.008	0.01-0.02
P01	●	20-40	0.002-0.008	0.01-0.02
P02	●	20-40	0.002-0.008	0.01-0.02
P03	●	20-40	0.002-0.008	0.01-0.02
P04	◑	15-35	0.002-0.006	0.008-0.016
P05	◑	10-20	0.001-0.006	0.005-0.012
P06	◑	10-20	0.001-0.006	0.003-0.01
M01	◑	10-20	0.001-0.006	0.003-0.01
M02	◑	10-20	0.001-0.006	0.003-0.01
M03	◑	10-20	0.001-0.006	0.003-0.01
K01	◑	15-35	0.002-0.008	0.01-0.02
K03	◑	15-35	0.002-0.008	0.01-0.02
K02	◑	15-35	0.002-0.008	0.01-0.02
N01	●	80-120	0.005-0.010	0.020-0.040
N02	●	80-120	0.005-0.010	0.020-0.040
N03	●	60-100	0.005-0.010	0.020-0.040
N04	●	30-70	0.005-0.010	0.010-0.025
S01	○	-	-	-
S02	○	-	-	-
S03	○	-	-	-
S04	◑	10-20	0.001-0.006	0.003-0.01
H01	◑	10-20	0.001-0.006	0.003-0.01
H02	◑	10-20	0.001-0.006	0.003-0.01
H03	○	-	-	-
O01	●	80-120	0.005-0.010	0.020-0.040
O02	○	-	-	-
O03	○	-	-	-
O04	○	-	-	-
O05	○	-	-	-

● Empfohlen | Recommended | Recommandé
◑ Teilweise empfohlen | Partially recommended | Partiellement recommandé
○ Nicht empfohlen | Not recommended | Non recommandé

PFERD TOOLS

MTB25

Schnittwerte für das Bohren | Standard values for drilling | Paramètres indicatifs pour perçage

		Schnittgeschwindigkeit Cutting Speed Vitesse de coupe	Vorschub mm/Umdrehung Feed mm/rev Avance mm/tour				
ISO Class	Adv	m/min	ø 0.50-4.00	ø 4.10-8.00	ø 8.10-12.00	ø 12.50-16-00	ø 18.00-20.00
P00	●	40-60	0.01-0.03	0.02-0.05	0.05-0.08	0.08-0.12	0.12-0.15
P01	●	40-60	0.01-0.03	0.02-0.05	0.05-0.08	0.08-0.12	0.12-0.15
P02	●	40-60	0.01-0.03	0.02-0.05	0.05-0.08	0.08-0.12	0.12-0.15
P03	●	30-50	0.01-0.02	0.02-0.03	0.03-0.06	0.06-0.08	0.08-0.10
P04	◑	20-40	0.01-0.02	0.02-0.03	0.03-0.06	0.06-0.08	0.08-0.10
P05	◑	15-30	0.01-0.02	0.02-0.04	0.04-0.08	0.06-0.10	0.10-0.12
P06	◑	15-30	0.01-0.02	0.02-0.04	0.04-0.08	0.06-0.10	0.10-0.12
M01	◑	15-30	0.01-0.02	0.02-0.04	0.04-0.08	0.06-0.10	0.10-0.12
M02	◑	15-30	0.01-0.02	0.02-0.04	0.04-0.08	0.06-0.10	0.10-0.12
M03	◑	15-30	0.01-0.02	0.02-0.04	0.04-0.08	0.06-0.10	0.10-0.12
K01	◑	30-50	0.04-0.06	0.04-0.06	0.06-0.09	0.09-0.14	0.14-0.18
K03	◑	30-50	0.04-0.06	0.04-0.06	0.06-0.09	0.09-0.14	0.14-0.18
K02	◑	30-50	0.04-0.06	0.04-0.06	0.06-0.09	0.09-0.14	0.14-0.18
N01	●	60-100	0.06-0.08	0.06-0.08	0.08-0.13	0.13-0.16	0.16-0.20
N02	●	60-100	0.06-0.08	0.06-0.08	0.08-0.13	0.13-0.16	0.16-0.20
N03	●	50-80	0.04-0.06	0.04-0.06	0.06-0.09	0.09-0.14	0.12-0.14
N04	●	30-70	0.06-0.08	0.06-0.08	0.08-0.13	0.13-0.16	0.16-0.20
S01	○	-	-	-	-	-	-
S02	○	-	-	-	-	-	-
S03	○	-	-	-	-	-	-
S04	○	-	-	-	-	-	-
H01	○	-	-	-	-	-	-
H02	○	-	-	-	-	-	-
H03	○	-	-	-	-	-	-
O01	●	60-100	0.06-0.08	0.06-0.08	0.08-0.13	0.13-0.16	0.16-0.20
O02	○	-	-	-	-	-	-
O03	○	-	-	-	-	-	-
O04	○	-	-	-	-	-	-
O05	○	-	-	-	-	-	-

● Empfohlen | Recommended | Recommandé
◑ Teilweise empfohlen | Partially recommended | Partiellement recommandé
○ Nicht empfohlen | Not recommended | Non recommandé

PFERD TOOLS

MTB33

Schnittwerte für das Bohren | Standard values for drilling | Paramètres indicatifs pour perçage

		Schnittgeschwindigkeit Cutting Speed Vitesse de coupe	Vorschub mm/Umdrehung Feed mm/rev Avance mm/tour		
ISO Class	Adv	m/min	ø 1.00-4.00	ø 4.50-8.00	ø 8.50-12.00
P00	●	40-60	0.01-0.03	0.02-0.05	0.05-0.08
P01	●	40-60	0.01-0.03	0.02-0.05	0.05-0.08
P02	●	40-60	0.01-0.03	0.02-0.05	0.05-0.08
P03	◑	30-50	0.01-0.02	0.02-0.03	0.03-0.06
P04	○	-	-	-	-
P05	◑	15-30	0.003-0.01	0.02-0.04	0.04-0.08
P06	◑	15-30	0.003-0.01	0.02-0.04	0.04-0.08
M01	◑	15-30	0.003-0.01	0.02-0.04	0.04-0.08
M02	◑	15-30	0.003-0.01	0.02-0.04	0.04-0.08
M03	◑	15-30	0.003-0.01	0.02-0.04	0.04-0.08
K01	◑	30-50	0.01-0.02	0.04-0.06	0.06-0.09
K03	◑	30-50	0.01-0.02	0.04-0.06	0.06-0.09
K02	◑	30-50	0.01-0.02	0.04-0.06	0.06-0.09
N01	●	60-100	0.03-0.06	0.06-0.08	0.08-0.13
N02	●	60-100	0.03-0.06	0.06-0.08	0.08-0.13
N03	●	50-80	0.01-0.04	0.04-0.06	0.06-0.09
N04	●	30-70	0.03-0.06	0.06-0.08	0.08-0.13
S01	○	-	-	-	-
S02	○	-	-	-	-
S03	○	-	-	-	-
S04	◑	30-50	0.005-0.01	0.008-0.015	0.01-0.02
H01	○	-	-	-	-
H02	○	-	-	-	-
H03	○	-	-	-	-
O01	●	60-100	0.03-0.06	0.06-0.08	0.08-0.13
O02	○	-	-	-	-
O03	○	-	-	-	-
O04	○	-	-	-	-
O05	○	-	-	-	-

● Empfohlen | Recommended | Recommandé
◑ Teilweise empfohlen | Partially recommended | Partiellement recommandé
○ Nicht empfohlen | Not recommended | Non recommandé

PFERD TOOLS

TA303B

Schnittwerte für das Bohren | Standard values for drilling | Paramètres indicatifs pour perçage

		Schnittgeschwindigkeit Cutting Speed Vitesse de coupe	Vorschub mm/Umdrehung Feed mm/rev Avance mm/tour		
ISO Class	Adv	m/min	ø 0.50-1.00	ø 1.10-2.00	ø 2.10-3.00
P00	●	40-70	0.010-0.016	0.015-0.023	0.020-0.030
P01	●	40-70	0.010-0.016	0.015-0.023	0.020-0.030
P02	●	40-70	0.010-0.016	0.015-0.023	0.020-0.030
P03	●	30-60	0.010-0.016	0.015-0.023	0.020-0.030
P04	◑	25-40	0.010-0.016	0.015-0.023	0.020-0.030
P05	●	25-40	0.010-0.016	0.015-0.023	0.020-0.030
P06	●	25-40	0.010-0.016	0.015-0.023	0.020-0.030
M01	●	25-40	0.010-0.016	0.015-0.023	0.020-0.030
M02	●	25-40	0.010-0.016	0.015-0.023	0.020-0.030
M03	●	25-40	0.010-0.016	0.015-0.023	0.020-0.030
K01	●	25-40	0.010-0.016	0.015-0.023	0.020-0.030
K03	●	25-40	0.010-0.016	0.015-0.023	0.020-0.030
K02	●	25-40	0.010-0.016	0.015-0.023	0.020-0.030
N01	●	80-150	0.015-0.023	0.020-0-038	0.035-0.050
N02	●	80-150	0.015-0.023	0.020-0-038	0.035-0.050
N03	●	80-150	0.015-0.023	0.020-0-038	0.035-0.050
N04	●	40-100	0.010-0.020	0.015-0.032	0.020-0.045
S01	○	-	-	-	-
S02	○	-	-	-	-
S03	○	-	-	-	-
S04	○	-	-	-	-
H01	○	-	-	-	-
H02	○	-	-	-	-
H03	○	-	-	-	-
O01	●	80-150	0.015-0.023	0.020-0-038	0.035-0.050
O02	○	-	-	-	-
O03	○	-	-	-	-
O04	○	-	-	-	-
O05	○	-	-	-	-

● Empfohlen | Recommended | Recommandé
◑ Teilweise empfohlen | Partially recommended | Partiellement recommandé
○ Nicht empfohlen | Not recommended | Non recommandé

PFERD TOOLS

TC35

Schnittwerte für das Bohren | Standard values for drilling | Paramètres indicatifs pour perçage

		Schnittgeschwindigkeit m/min Cutting Speed m/min Vitesse de coupe m/min		Vorschub mm/Umdrehung Feed mm/rev Avance mm/tour			
ISO Class	Adv	ø 0.30-0.50	ø 0.55-2.00	ø 0.30-0.50	ø 0.55-0.80	ø 0.85-1.20	ø 1.25-2.00
P00	●	8-20	20-40	0.001-0.1	0.01-0.018	0.018-0.025	0.025-0.035
P01	●	8-20	20-40	0.001-0.1	0.01-0.018	0.018-0.025	0.025-0.035
P02	●	8-20	20-40	0.001-0.1	0.01-0.018	0.018-0.025	0.025-0.035
P03	●	6-18	18-38	0.001-0.008	0.008-0.016	0.016-0.023	0.023-0.033
P04	◑	5-14	14-30	0.001-0.007	0.007-0.015	0.015-0.02	0.02-0.03
P05	◑	5-14	14-30	0.001-0.008	0.008-0.016	0.016-0.023	0.023-0.033
P06	◑	5-14	14-30	0.001-0.008	0.008-0.016	0.016-0.023	0.023-0.033
M01	◑	3-12	12-25	0.001-0.005	0.005-0.01	0.01-0.016	0.016-0.02
M02	◑	3-12	12-25	0.001-0.005	0.005-0.01	0.01-0.016	0.016-0.02
M03	◑	3-12	12-25	0.001-0.005	0.005-0.01	0.01-0.016	0.016-0.02
K01	◑	8-20	20-40	0.001-0.01	0.01-0.018	0.018-0.025	0.025-0.035
K03	◑	6-18	6-18	0.001-0.008	0.008-0.016	0.016-0.023	0.023-0.033
K02	◑	6-18	6-18	0.001-0.008	0.008-0.016	0.016-0.023	0.023-0.033
N01	●	6-18	18-38	0.001-0.007	0.007-0.015	0.015-0.02	0.02-0.03
N02	●	10-25	25-55	0.001-0.010	0.01-0.018	0.018-0.025	0.025-0.035
N03	●	8-22	22-50	0.001-0.08	0.008-0.016	0.016-0.023	0.023-0.033
N04	●	5-25	15-55	0.001-0.01	0.005-0.018	0.010-0.025	0.016-0.035
S01	◑	15-30	15-30	0.001-0.005	0.001-0.005	0.003-0.007	0.003-0.007
S02	◑	30-50	30-50	0.001-0.005	0.001-0.005	0.003-0.007	0.003-0.007
S03	◑	30-50	30-50	0.001-0.005	0.001-0.005	0.003-0.007	0.003-0.007
S04	◑	6-10	10-20	0.001-0.005	0.005-0.01	0.01-0.016	0.016-0.02
H01	○	-	-	-	-	-	-
H02	○	-	-	-	-	-	-
H03	○	-	-	-	-	-	-
O01	●	15-30	15-30	0.005-0.015	0.015-0.03	0.03-0.045	0.045-0.06
O02	○	-	-	-	-	-	-
O03	○	-	-	-	-	-	-
O04	○	-	-	-	-	-	-
O05	○	-	-	-	-	-	-

● Empfohlen | Recommended | Recommandé
◑ Teilweise empfohlen | Partially recommended | Partiellement recommandé
○ Nicht empfohlen | Not recommended | Non recommandé

PFERD TOOLS

MTB30

Schnittwerte für das Bohren | Standard values for drilling | Paramètres indicatifs pour perçage

ISO Class	Adv	Schnittgeschwindigkeit Cutting Speed Vitesse de coupe m/min	Vorschub mm/Umdrehung Feed mm/rev Avance mm/tour ø 0.80 - 0.90	ø 1.00-4.00	ø 4.10-8.50	ø 9.00-16.00
P00	●	40-60	0.01-0.02	0.01-0.03	0.02-0.05	0.05-0.08
P01	●	40-60	0.01-0.02	0.01-0.03	0.02-0.05	0.05-0.08
P02	●	40-60	0.01-0.02	0.01-0.03	0.02-0.05	0.05-0.08
P03	●	30-50	0.007-0.015	0.01-0.02	0.02-0.03	0.03-0.04
P04	◑	20-40	0.006-0.013	0.008-0.017	0.015-0.025	0.02-0.03
P05	◑	15-30	0.003-0.01	0.005-0.015	0.01-0.02	0.015-0.025
P06	◑	15-30	0.003-0.01	0.005-0.015	0.01-0.02	0.015-0.025
M01	◑	15-30	0.003-0.01	0.005-0.015	0.01-0.02	0.015-0.025
M02	◑	15-30	0.003-0.01	0.005-0.015	0.01-0.02	0.015-0.025
M03	◑	15-30	0.003-0.01	0.005-0.015	0.01-0.02	0.015-0.025
K01	◑	30-50	0.01-0.02	0.01-0.03	0.02-0.05	0.05-0.08
K03	◑	30-50	0.01-0.02	0.01-0.03	0.02-0.05	0.05-0.08
K02	◑	30-50	0.01-0.02	0.01-0.03	0.02-0.05	0.05-0.08
N01	●	60-100	0.01-0.04	0.04-0.07	0.04-0.07	0.06-0.08
N02	●	60-100	0.01-0.04	0.04-0.07	0.04-0.07	0.06-0.08
N03	●	50-80	0.005-0.02	0.02-0.05	0.02-0.05	0.04-0.06
N04	●	30-70	0.01-0.04	0.04-0.07	0.04-0.07	0.06-0.08
S01	○	-	-	-	-	-
S02	○	-	-	-	-	-
S03	○	-	-	-	-	-
S04	○	-	-	-	-	-
H01	○	-	-	-	-	-
H02	○	-	-	-	-	-
H03	○	-	-	-	-	-
O01	●	60-100	0.01-0.04	0.04-0.07	0.04-0.07	0.06-0.08
O02	○	-	-	-	-	-
O03	○	-	-	-	-	-
O04	○	-	-	-	-	-
O05	○	-	-	-	-	-

● Empfohlen | Recommended | Recommandé
◑ Teilweise empfohlen | Partially recommended | Partiellement recommandé
○ Nicht empfohlen | Not recommended | Non recommandé

PFERD TOOLS

MTB35

Schnittwerte für das Bohren | Standard values for drilling | Paramètres indicatifs pour perçage

		Schnittgeschwindigkeit Cutting Speed Vitesse de coupe	Vorschub mm/Umdrehung Feed mm/rev Avance mm/tour		
ISO Class	Adv	m/min	ø 0,30-1,00	ø 1,05-4,00	ø 4,10-6,00
P00	●	40-60	0.005-0.01	0.01-0.03	0.015-0.05
P01	●	40-60	0.005-0.01	0.01-0.03	0.015-0.05
P02	●	40-60	0.005-0.01	0.01-0.03	0.015-0.05
P03	◑	30-50	0.005-0.01	0.01-0.02	0.015-0.03
P04	○	-	-	-	-
P05	◑	15-30	0.003-0.008	0.003-0.01	0.015-0.04
P06	◑	15-30	0.003-0.008	0.003-0.01	0.015-0.04
M01	◑	15-30	0.003-0.008	0.003-0.01	0.015-0.04
M02	◑	15-30	0.003-0.008	0.003-0.01	0.015-0.04
M03	◑	15-30	0.003-0.008	0.003-0.01	0.015-0.04
K01	◑	30-50	0.005-0.01	0.01-0.02	0.03-0.05
K03	◑	30-50	0.005-0.01	0.01-0.02	0.03-0.05
K02	◑	30-50	0.005-0.01	0.01-0.02	0.03-0.05
N01	●	60-100	0.005-0.015	0.015-0.040	0.03-0.05
N02	●	60-100	0.005-0.015	0.015-0.040	0.03-0.05
N03	●	50-80	0.005-0.015	0.01-0.03	0.02-0.04
N04	●	30-70	0.005-0.015	0.01-0.03	0.04-0.06
S01	○	-	-	-	-
S02	○	-	-	-	-
S03	○	-	-	-	-
S04	◑	30-50	0.002-0.007	0.005-0.01	0.008-0.015
H01	○	-	-	-	-
H02	○	-	-	-	-
H03	○	-	-	-	-
O01	●	60-100	0.005-0.015	0.015-0.040	0.03-0.05
O02	○	-	-	-	-
O03	○	-	-	-	-
O04	○	-	-	-	-
O05	○	-	-	-	-

● Empfohlen | Recommended | Recommandé
◑ Teilweise empfohlen | Partially recommended | Partiellement recommandé
○ Nicht empfohlen | Not recommended | Non recommandé

PFERD TOOLS

MTB35L

Schnittwerte für das Bohren | Standard values for drilling | Paramètres indicatifs pour perçage

		Schnittgeschwindigkeit m/min Cutting Speed m/min Vitesse de coupe m/min			Vorschub mm/Umdrehung Feed mm/rev Avance mm/tour		
ISO Class	Adv	ø 0,50-1,95	ø 2,00-3,90	ø 4,00-6,00	ø 0,50-1,95	ø 2,00-3,90	ø 4,00-6,00
P00	●	30-50	40-60	50-70	0.01-0.02	0.020-0.035	0.040-0.060
P01	●	30-50	40-60	50-70	0.01-0.02	0.020-0.035	0.040-0.060
P02	●	30-50	40-60	50-70	0.01-0.02	0.020-0.035	0.040-0.060
P03	●	30-50	40-60	50-70	0.01-0.02	0.020-0.035	0.040-0.060
P04	◑	30-50	40-60	50-70	0.01-0.02	0.020-0.035	0.040-0.060
P05	◑	20-40	30-50	30-50	0.005-0.012	0.020-0.040	0.035-0.050
P06	◑	15-30	25-45	25-45	0.003-0.01	0.016-0.035	0.028-0.042
M01	◑	15-30	25-45	25-45	0.003-0.01	0.016-0.035	0.028-0.042
M02	◑	15-30	25-45	25-45	0.003-0.01	0.016-0.035	0.028-0.042
M03	◑	15-30	25-45	25-45	0.003-0.01	0.016-0.035	0.028-0.042
K01	◑	30-60	30-60	50-70	0.01-0.02	0.020-0.035	0.040-0.060
K03	◑	30-60	30-60	50-70	0.01-0.02	0.020-0.035	0.040-0.060
K02	◑	30-60	30-60	50-70	0.01-0.02	0.020-0.035	0.040-0.060
N01	●	40-60	40-60	60-100	0.020-0.040	0.030-0.050	0.040-0.070
N02	●	40-60	40-60	60-100	0.020-0.040	0.030-0.050	0.040-0.070
N03	●	40-60	40-60	60-100	0.020-0.040	0.030-0.050	0.040-0.070
N04	●	15-60	15-60	30-100	0.010-0.025	0.020-0.050	0.030-0.065
S01	○	-	-	-	-	-	-
S02	○	-	-	-	-	-	-
S03	○	-	-	-	-	-	-
S04	◑	10-20	10-20	25-45	0.003-0.008	0.006-0.015	0.016-0.035
H01	◑	10-20	10-20	25-45	0.003-0.008	0.006-0.015	0.016-0.035
H02	◑	10-20	10-20	25-45	0.003-0.008	0.006-0.015	0.016-0.035
H03	○	-	-	-	-	-	-
O01	●	40-60	40-60	60-100	0.020-0.040	0.030-0.050	0.040-0.070
O02	○	-	-	-	-	-	-
O03	○	-	-	-	-	-	-
O04	○	-	-	-	-	-	-
O05	○	-	-	-	-	-	-

● Empfohlen | Recommended | Recommandé
◑ Teilweise empfohlen | Partially recommended | Partiellement recommandé
○ Nicht empfohlen | Not recommended | Non recommandé

PFERD TOOLS

MTB45

Schnittwerte für das Bohren | Standard values for drilling | Paramètres indicatifs pour perçage

		Schnittgeschwindigkeit m/min Cutting Speed m/min Vitesse de coupe m/min			Vorschub mm/Umdrehung Feed mm/rev Avance mm/tour							
ISO Class	Adv	ø 0.30-2.00	ø 2.10-6.00	ø 6.10-13.00	ø 0.30-0.50	ø 0.60-2.00	ø 2.10-3.00	ø 3.10-4.00	ø 4.10-6.00	ø 6.10-8.00	ø 8.50-10.00	ø 10.50-13.00
P00	●	20-40	30-50	40-60	0.002-0.008	0.01-0.02	0.020-0.035	0.030-0.050	0.040-0.060	0.060-0.100	0.080-0.120	0.120-0.200
P01	●	20-40	30-50	40-60	0.002-0.008	0.01-0.02	0.020-0.035	0.030-0.050	0.040-0.060	0.060-0.100	0.080-0.120	0.120-0.200
P02	●	20-40	30-50	40-60	0.002-0.008	0.01-0.02	0.020-0.035	0.030-0.050	0.040-0.060	0.060-0.100	0.080-0.120	0.120-0.200
P03	●	20-40	30-50	40-60	0.002-0.008	0.01-0.02	0.020-0.035	0.030-0.050	0.040-0.060	0.060-0.100	0.080-0.120	0.120-0.200
P04	◑	10-20	15-30	15-30	0.001-0.006	0.005-0.012	0.020-0.040	0.020-0.040	0.035-0.050	0.040-0.065	0.070-0.100	0.100-0.140
P05	◑	10-20	15-30	15-30	0.001-0.006	0.005-0.012	0.020-0.040	0.020-0.040	0.035-0.050	0.040-0.065	0.070-0.100	0.100-0.140
P06	◑	10-20	15-30	15-30	0.001-0.006	0.003-0.01	0.016-0.035	0.016-0.035	0.028-0.042	0.035-0.050	0.060-0.080	0.080-0.120
M01	◑	10-20	15-30	15-30	0.001-0.006	0.003-0.01	0.016-0.035	0.016-0.035	0.028-0.042	0.035-0.050	0.060-0.080	0.080-0.120
M02	◑	10-20	15-30	15-30	0.001-0.006	0.003-0.01	0.016-0.035	0.016-0.035	0.028-0.042	0.035-0.050	0.060-0.080	0.080-0.120
M03	◑	10-20	15-30	15-30	0.001-0.006	0.003-0.01	0.016-0.035	0.016-0.035	0.028-0.042	0.035-0.050	0.060-0.080	0.080-0.120
K01	◑	15-35	30-60	30-60	0.002-0.008	0.01-0.02	0.020-0.035	0.030-0.050	0.040-0.060	0.060-0.100	0.080-0.120	0.120-0.200
K03	◑	15-35	20-50	20-50	0.002-0.008	0.01-0.02	0.020-0.035	0.030-0.050	0.040-0.060	0.060-0.100	0.080-0.120	0.120-0.200
K02	◑	15-35	20-50	20-50	0.002-0.008	0.01-0.02	0.020-0.035	0.030-0.050	0.040-0.060	0.060-0.100	0.080-0.120	0.120-0.200
N01	●	80-120	90-140	90-140	0.005-0.010	0.020-0.040	0.030-0.050	0.030-0.050	0.040-0.070	0.070-0.110	0.070-0.110	0.130-0.200
N02	●	80-120	90-140	90-140	0.005-0.010	0.020-0.040	0.030-0.050	0.030-0.050	0.040-0.070	0.070-0.110	0.070-0.110	0.130-0.200
N03	●	60-100	80-120	80-120	0.005-0.010	0.020-0.040	0.030-0.050	0.030-0.050	0.040-0.070	0.070-0.110	0.070-0.110	0.130-0.200
N04	●	30-70	50-100	50-100	0.005-0.010	0.010-0.025	0.020-0.050	0.020-0.050	0.030-0.065	0.040-0.110	0.040-0.110	0.075-0.150
S01	○	-	-	-	-	-	-	-	-	-	-	-
S02	○	-	-	-	-	-	-	-	-	-	-	-
S03	○	-	-	-	-	-	-	-	-	-	-	-
S04	◑	10-20	15-30	15-30	0.001-0.006	0.005-0.012	0.020-0.040	0.020-0.040	0.035-0.050	0.040-0.065	0.070-0.100	0.100-0.140
H01	◑	10-20	15-30	15-30	0.001-0.006	0.005-0.012	0.020-0.040	0.020-0.040	0.035-0.050	0.040-0.065	0.070-0.100	0.100-0.140
H02	◑	10-20	15-30	15-30	0.001-0.006	0.005-0.012	0.020-0.040	0.020-0.040	0.035-0.050	0.040-0.065	0.070-0.100	0.100-0.140
H03	○	-	-	-	-	-	-	-	-	-	-	-
O01	●	80-120	90-140	90-140	0.005-0.010	0.020-0.040	0.030-0.050	0.030-0.050	0.040-0.070	0.070-0.110	0.070-0.110	0.130-0.200
O02	○	-	-	-	-	-	-	-	-	-	-	-
O03	○	-	-	-	-	-	-	-	-	-	-	-
O04	○	-	-	-	-	-	-	-	-	-	-	-
O05	○	-	-	-	-	-	-	-	-	-	-	-

● Empfohlen | Recommended | Recommandé
◑ Teilweise empfohlen | Partially recommended | Partiellement recommandé
○ Nicht empfohlen | Not recommended | Non recommandé

PFERD TOOLS

MTB50

Schnittwerte für das Bohren | Standard values for drilling | Paramètres indicatifs pour perçage

		Schnittgeschwindigkeit m/min Cutting Speed m/min Vitesse de coupe m/min			Vorschub mm/Umdrehung Feed mm/rev Avance mm/tour					
ISO Class	Adv	ø 1.00-2.00	ø 2.10-6.00	ø 6.50-13.00	ø 1.00-2.00	ø 2,10-4,00	ø 4.10-6.00	ø 6.50-8.00	ø 8.50-10.00	ø 10.50-13.00
P00	●	20-40	30-50	40-60	0.01-0.02	0.020-0.035	0.040-0.060	0.060-0.100	0.080-0.120	0.120-0.200
P01	●	20-40	30-50	40-60	0.01-0.02	0.020-0.035	0.040-0.060	0.060-0.100	0.080-0.120	0.120-0.200
P02	●	20-40	30-50	40-60	0.01-0.02	0.020-0.035	0.040-0.060	0.060-0.100	0.080-0.120	0.120-0.200
P03	●	20-40	30-50	40-60	0.01-0.02	0.020-0.035	0.040-0.060	0.060-0.100	0.080-0.120	0.120-0.200
P04	◑	10-20	15-30	15-30	0.005-0.012	0.020-0.040	0.020-0.040	0.035-0.050	0.040-0.065	0.070-0.100
P05	◑	10-20	15-30	15-30	0.005-0.012	0.020-0.040	0.035-0.050	0.040-0.065	0.070-0.100	0.100-0.140
P06	◑	10-20	15-30	15-30	0.003-0.01	0.016-0.035	0.028-0.042	0.035-0.050	0.060-0.080	0.080-0.120
M01	◑	10-20	15-30	15-30	0.003-0.01	0.016-0.035	0.028-0.042	0.035-0.050	0.060-0.080	0.080-0.120
M02	◑	10-20	15-30	15-30	0.003-0.01	0.016-0.035	0.028-0.042	0.035-0.050	0.060-0.080	0.080-0.120
M03	◑	10-20	15-30	15-30	0.003-0.01	0.016-0.035	0.028-0.042	0.035-0.050	0.060-0.080	0.080-0.120
K01	◑	15-35	30-60	30-60	0.01-0.02	0.020-0.035	0.040-0.060	0.060-0.100	0.080-0.120	0.120-0.200
K03	◑	15-35	20-50	20-50	0.01-0.02	0.020-0.035	0.040-0.060	0.060-0.100	0.080-0.120	0.120-0.200
K02	◑	15-35	20-50	20-50	0.01-0.02	0.020-0.035	0.040-0.060	0.060-0.100	0.080-0.120	0.120-0.200
N01	●	80-120	90-140	90-140	0.020-0.040	0.030-0.050	0.040-0.070	0.070-0.110	0.070-0.110	0.130-0.200
N02	●	80-120	90-140	90-140	0.020-0.040	0.030-0.050	0.040-0.070	0.070-0.110	0.070-0.110	0.130-0.200
N03	●	60-100	80-120	80-120	0.020-0.040	0.030-0.050	0.040-0.070	0.070-0.110	0.070-0.110	0.130-0.200
N04	●	30-70	50-100	50-100	0.010-0.025	0.020-0.050	0.030-0.065	0.040-0.110	0.040-0.110	0.075-0.150
S01	○	-	-	-	-	-	-	-	-	-
S02	○	-	-	-	-	-	-	-	-	-
S03	○	-	-	-	-	-	-	-	-	-
S04	◑	10-20	15-30	15-30	0.005-0.012	0.020-0.040	0.035-0.050	0.040-0.065	0.070-0.100	0.100-0.140
H01	◑	10-20	15-30	15-30	0.005-0.012	0.020-0.040	0.035-0.050	0.040-0.065	0.070-0.100	0.100-0.140
H02	◑	10-20	15-30	15-30	0.005-0.012	0.020-0.040	0.035-0.050	0.040-0.065	0.070-0.100	0.100-0.140
H03	○	-	-	-	-	-	-	-	-	-
O01	●	80-120	90-140	90-140	0.020-0.040	0.030-0.050	0.040-0.070	0.070-0.110	0.070-0.110	0.130-0.200
O02	○	-	-	-	-	-	-	-	-	-
O03	○	-	-	-	-	-	-	-	-	-
O04	○	-	-	-	-	-	-	-	-	-
O05	○	-	-	-	-	-	-	-	-	-

● Empfohlen | Recommended | Recommandé
◑ Teilweise empfohlen | Partially recommended | Partiellement recommandé
○ Nicht empfohlen | Not recommended | Non recommandé

PFERD TOOLS

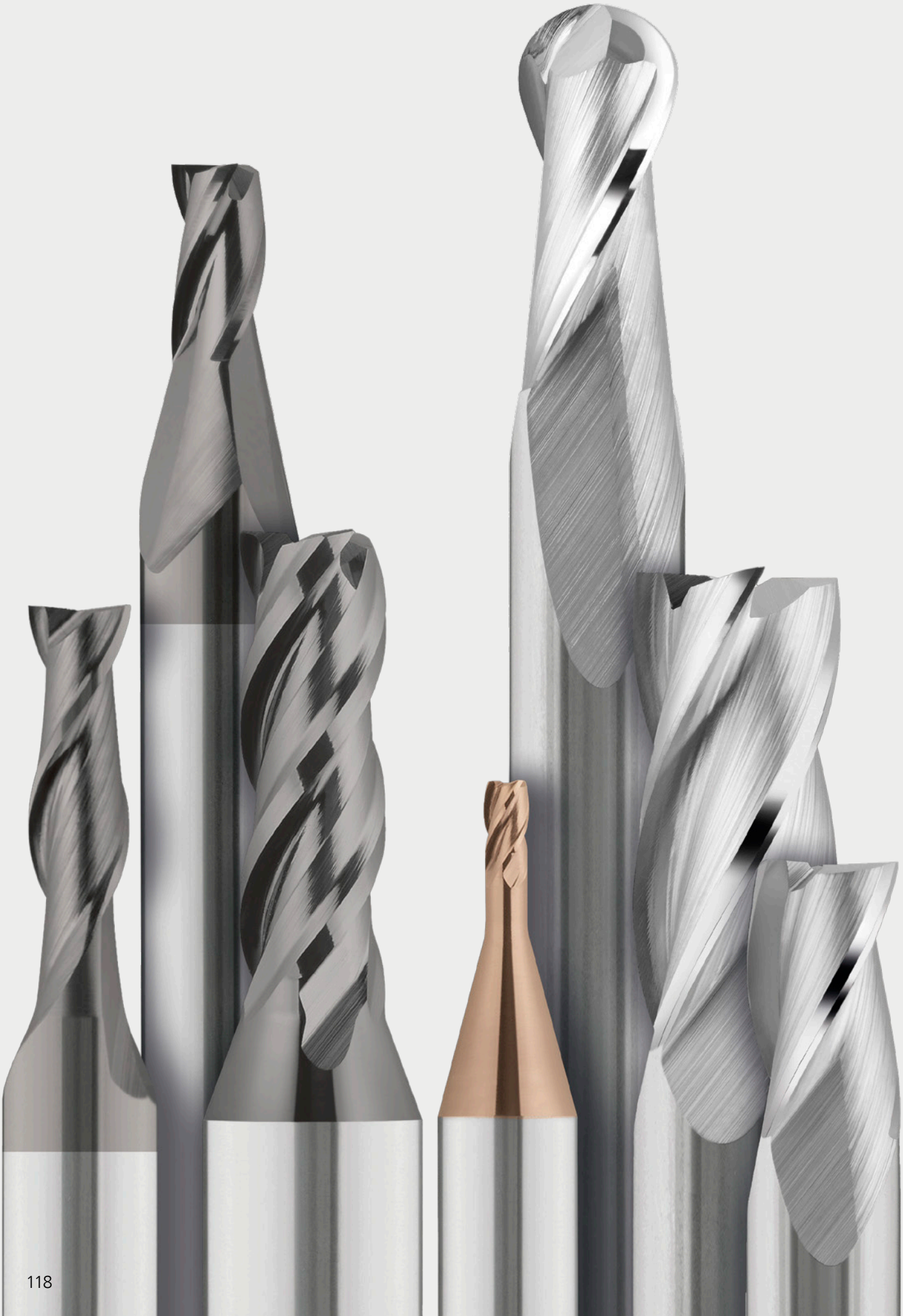
MTB60

Schnittwerte für das Bohren | Standard values for drilling | Paramètres indicatifs pour perçage

		Schnittgeschwindigkeit m/min Cutting Speed m/min Vitesse de coupe m/min			Vorschub mm/Umdrehung Feed mm/rev Avance mm/tour					
ISO Class	Adv	ø 1.00-2.00	ø 2.00-6.00	ø 6.50-10.00	ø 1.00-2.00	ø 2.10-2.90	ø 3.00-4.00	ø 4.10-6.00	ø 6.50-8.00	ø 8.50-10.00
P00	●	15-35	25-45	35-55	0.01-0.02	0.020-0.035	0.030-0.050	0.040-0.060	0.060-0.100	0.080-0.120
P01	●	15-35	25-45	35-55	0.01-0.02	0.020-0.035	0.030-0.050	0.040-0.060	0.060-0.100	0.080-0.120
P02	●	15-35	25-45	35-55	0.01-0.02	0.020-0.035	0.030-0.050	0.040-0.060	0.060-0.100	0.080-0.120
P03	●	15-35	25-45	35-55	0.01-0.02	0.020-0.035	0.030-0.050	0.040-0.060	0.060-0.100	0.080-0.120
P04	◑	10-20	15-30	15-30	0.005-0.012	0.020-0.040	0.020-0.040	0.035-0.050	0.040-0.065	0.070-0.100
P05	◑	10-20	15-30	15-30	0.005-0.012	0.020-0.040	0.020-0.040	0.035-0.050	0.040-0.065	0.070-0.100
P06	◑	10-20	15-30	15-30	0.003-0.01	0.016-0.035	0.016-0.035	0.028-0.042	0.035-0.050	0.060-0.080
M01	◑	10-20	15-30	15-30	0.003-0.01	0.016-0.035	0.016-0.035	0.028-0.042	0.035-0.050	0.060-0.080
M02	◑	10-20	15-30	15-30	0.003-0.01	0.016-0.035	0.016-0.035	0.028-0.042	0.035-0.050	0.060-0.080
M03	◑	10-20	15-30	15-30	0.003-0.01	0.016-0.035	0.016-0.035	0.028-0.042	0.035-0.050	0.060-0.080
K01	◑	15-35	25-45	35-55	0.01-0.02	0.020-0.035	0.030-0.050	0.040-0.060	0.060-0.100	0.080-0.120
K03	◑	15-35	25-45	35-55	0.01-0.02	0.020-0.035	0.030-0.050	0.040-0.060	0.060-0.100	0.080-0.120
K02	◑	15-35	25-45	35-55	0.01-0.02	0.020-0.035	0.030-0.050	0.040-0.060	0.060-0.100	0.080-0.120
N01	●	80-120	90-140	90-140	0.020-0.040	0.030-0.050	0.030-0.050	0.040-0.070	0.070-0.110	0.070-0.110
N02	●	80-120	90-140	90-140	0.020-0.040	0.030-0.050	0.030-0.050	0.040-0.070	0.070-0.110	0.070-0.110
N03	●	60-100	80-120	80-120	0.020-0.040	0.030-0.050	0.030-0.050	0.040-0.070	0.070-0.110	0.070-0.110
N04	●	30-70	30-70	30-70	0.010-0.025	0.020-0.050	0.020-0.050	0.030-0.065	0.040-0.110	0.040-0.110
S01	○	-	-	-	-	-	-	-	-	-
S02	○	-	-	-	-	-	-	-	-	-
S03	○	-	-	-	-	-	-	-	-	-
S04	◑	10-20	15-30	15-30	0.005-0.012	0.020-0.040	0.020-0.040	0.035-0.050	0.040-0.065	0.070-0.100
H01	◑	10-20	15-30	15-30	0.005-0.012	0.020-0.040	0.020-0.040	0.035-0.050	0.040-0.065	0.070-0.100
H02	◑	10-20	15-30	15-30	0.005-0.012	0.020-0.040	0.020-0.040	0.035-0.050	0.040-0.065	0.070-0.100
H03	○	-	-	-	-	-	-	-	-	-
O01	●	80-120	90-140	90-140	0.020-0.040	0.030-0.050	0.030-0.050	0.040-0.070	0.070-0.110	0.070-0.110
O02	○	-	-	-	-	-	-	-	-	-
O03	○	-	-	-	-	-	-	-	-	-
O04	○	-	-	-	-	-	-	-	-	-
O05	○	-	-	-	-	-	-	-	-	-

● Empfohlen | Recommended | Recommandé
◑ Teilweise empfohlen | Partially recommended | Partiellement recommandé
○ Nicht empfohlen | Not recommended | Non recommandé

Notes



Fräsbearbeitung
Milling
Fraisage

Hochleistungsfräser
High-Performance milling tools
Fraises haute performance

TTM225E	120
TTM225T	120
TTM250E	121
TTM250T	121
MS320	122
MS330	123
TTM325E	124
TTM325T	124
TTM350E	125
TTM350T	125
TWF3	126
TWF5	127

Basisfräser
Basic milling tools
Fraises standard

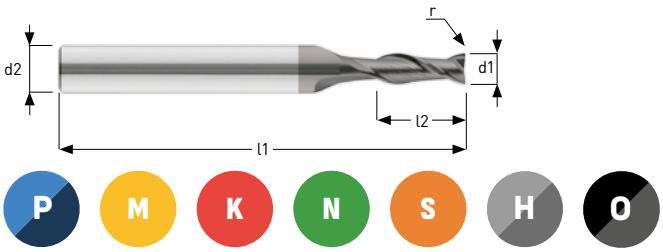
MS122	136
MS122XL	137
MS122XLS	137
MS123	138
MS123XL	139
MS123XLS	139
MS124	140
MS131	142
MS131XL	143
MS131XLS	143
MS141	144
MS141XL	145
MS141XLS	145

Hochleistungsfräser | High-performance cutters | Fraises haute performance

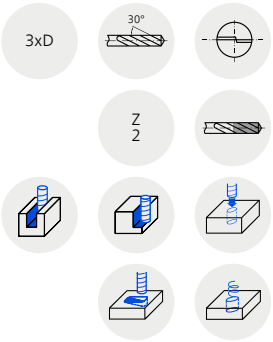
PFERD TOOLS

TTM225E **Mikrofräser** Micro-milling cutter / Micro fraise

TTM225T **Eckradius – Mikrofräser** Corner radius micro-milling cutter / Micro fraise toriques







P M K N S H O

45°

Art. No.	d1 +/-0.01	d2 h6	l1 +/-0.2	l2 0/+0.5
23023473	1,00	4,00	40	3,00
23023474	1,20	4,00	40	3,60
23023475	1,50	4,00	40	4,50
23023476	1,58	4,00	40	4,70
23001171	1,80	4,00	40	5,40
23023477	2,00	4,00	40	6,00
23023478	2,38	4,00	40	7,15
23004206	2,50	4,00	50	7,50
23023479	3,00	6,00	50	9,00
23023480	3,17	6,00	50	9,50
23023481	3,50	6,00	50	10,50
23023482	3,97	6,00	50	12,00
23023483	4,00	6,00	50	12,00
23023484	4,50	6,00	50	13,50
23023485	4,76	6,00	50	14,30
23023486	5,00	6,00	50	15,00
23023487	5,56	6,00	50	16,70
23023488	6,00	6,00	50	18,00

Cr

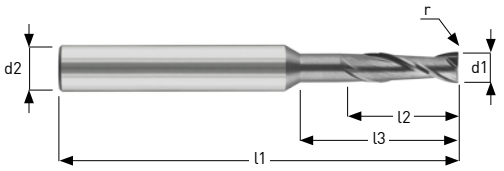
Art. No.	d1 +/-0.01	d2 h6	l1 +/-0.2	l2 0/+0.5	r 0/-0.02
23023489	1,00	4,00	40	3,00	0,10
23023490	1,00	4,00	40	3,00	0,20
23023491	1,20	4,00	40	3,60	0,10
23023492	1,20	4,00	40	3,60	0,20
23023493	1,50	4,00	40	4,50	0,10
23023494	1,50	4,00	40	4,50	0,30
23023495	1,80	4,00	40	5,40	0,10
23023496	1,80	4,00	40	5,40	0,30
23023497	2,00	4,00	40	6,00	0,10
23023498	2,00	4,00	40	6,00	0,50
23023499	2,50	4,00	50	7,50	0,20
23023500	2,50	4,00	50	7,50	0,50
23023501	3,00	6,00	50	9,00	0,20
23023502	3,00	6,00	50	9,00	0,50
23023503	4,00	6,00	50	12,00	0,20
23023504	4,00	6,00	50	12,00	0,50
23023505	6,00	6,00	50	18,00	0,50
23023506	6,00	6,00	50	18,00	1,00

Hochleistungsfräser | High-performance cutters | Fraises haute performance

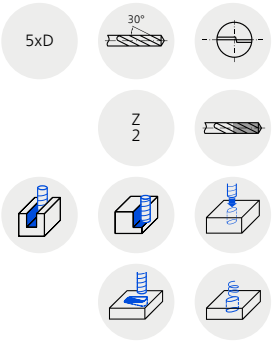
PFERD TOOLS

TTM250E **Mikrofräser** Micro-milling cutter / Micro fraise

TTM250T **Eckradius – Mikrofräser** Corner radius micro-milling cutter / Micro fraise toriques







P M K N S H O

45°

Art. No.	d1 +/-0.01	d2 h6	l1 +/-0.2	l2 0/+0.5	l3 -0/+1
23023507	1,00	4,00	40	3,00	5,00
23023508	1,20	4,00	40	3,60	6,00
23023509	1,50	4,00	40	4,50	7,50
23023510	1,58	4,00	40	4,70	8,00
23023511	1,80	4,00	40	5,40	9,00
23023512	2,00	4,00	40	6,00	10,00
23023513	2,38	4,00	40	7,15	12,00
23023514	2,50	4,00	50	7,50	12,50
23023515	3,00	6,00	50	9,00	15,00
23023516	3,17	6,00	50	9,50	16,00
23023517	3,50	6,00	50	10,50	18,00
23023518	3,97	6,00	50	12,00	20,00
23023519	4,00	6,00	50	12,00	20,00
23023520	4,50	6,00	50	13,50	23,00
23023521	4,76	6,00	50	14,30	24,00
23023522	5,00	6,00	50	15,00	25,00
23023523	5,56	6,00	50	16,70	28,00
23023524	6,00	6,00	50	18,00	30,00

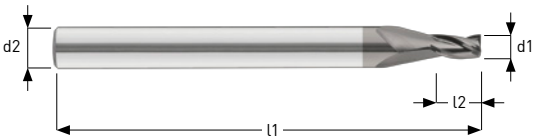
Cr

Art. No.	d1 +/-0.01	d2 h6	l1 +/-0.2	l2 0/+0.5	l3 -0/+1	r 0/-0.02
23023525	1,00	4,00	40	3,00	5,00	0,10
23023526	1,00	4,00	40	3,00	5,00	0,20
23023527	1,20	4,00	40	3,60	6,00	0,10
23023528	1,20	4,00	40	3,60	6,00	0,20
23023529	1,50	4,00	40	4,50	7,50	0,10
23023530	1,50	4,00	40	4,50	7,50	0,30
23023531	1,80	4,00	40	5,40	9,00	0,10
23023532	1,80	4,00	40	5,40	9,00	0,30
23023533	2,00	4,00	40	6,00	10,00	0,10
23023534	2,00	4,00	40	6,00	10,00	0,50
23023535	2,50	4,00	50	7,50	12,50	0,20
23023536	2,50	4,00	50	7,50	12,50	0,50
23023537	3,00	6,00	50	9,00	15,00	0,20
23023538	3,00	6,00	50	9,00	15,00	0,50
23023539	4,00	6,00	50	12,00	20,00	0,20
23023540	4,00	6,00	50	12,00	20,00	0,50
23023541	6,00	6,00	50	18,00	30,00	0,50
23023542	6,00	6,00	50	18,00	30,00	1,00

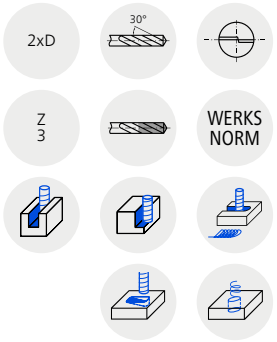
PFERD TOOLS

MS320

Mikrofräser
Micro-milling cutter
Micro fraise







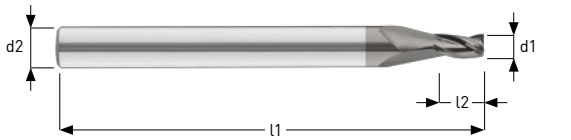
P M K N S H O

Art. No.	d1 -0.01/+0.005	d2 h5	l1 0/+1	l2 0/+0.5
23021229	0,30	3,00	39	0,60
23001467	0,40	3,00	39	0,80
23021230	0,50	3,00	39	1,00
23021231	0,60	3,00	39	1,20
23021232	0,70	3,00	39	1,40
23021233	0,75	3,00	39	1,50
23021234	0,80	3,00	39	1,60
23021235	0,90	3,00	39	1,80
23021236	1,00	3,00	39	2,00
23021237	1,10	3,00	39	2,20
23021238	1,20	3,00	39	2,40
23021239	1,30	3,00	39	2,60
23021240	1,40	3,00	39	2,80
23021241	1,50	3,00	39	3,00
23021242	1,60	3,00	39	3,20
23021243	1,70	3,00	39	3,40
23021244	1,80	3,00	39	3,60
23021245	1,90	3,00	39	3,80
23021246	2,00	3,00	39	4,00
23021247	2,10	3,00	39	4,20
23021248	2,20	3,00	39	4,40
23021249	2,30	3,00	39	4,60
23004149	2,40	3,00	39	4,80
23021250	2,50	3,00	39	5,00
23021251	2,60	3,00	39	5,20
23021252	2,70	3,00	39	5,40
23021253	2,80	3,00	39	5,60
23021254	2,90	3,00	39	5,80
23021255	3,00	5,00	51	6,00
23021256	4,00	5,00	51	8,00
23021257	5,00	6,00	57	10,00
23021258	6,00	6,00	57	12,00

PFERD TOOLS

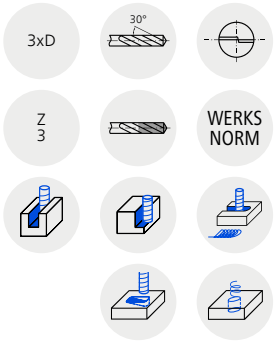
MS330

Mikrofräser
Micro-milling cutter
Micro fraise



P M K N S H





Art. No.	d1 -0.01/+0.005	d2 h5	l1 0/+1	l2 0/+0.5
23021259	0,30	3,00	39	0,90
23001471	0,40	3,00	39	1,20
23021260	0,50	3,00	39	1,50
23021261	0,60	3,00	39	1,80
23021262	0,70	3,00	39	2,10
23021263	0,75	3,00	39	2,30
23021264	0,80	3,00	39	2,40
23021265	0,90	3,00	39	2,70
23021266	1,00	3,00	39	3,00
23021267	1,10	3,00	39	3,30
23021268	1,20	3,00	39	3,60
23021269	1,30	3,00	39	3,90
23021270	1,40	3,00	39	4,20
23021271	1,50	3,00	39	4,50
23021272	1,60	3,00	39	4,80
23021273	1,70	3,00	39	5,10
23021274	1,80	3,00	39	5,40
23021275	1,90	3,00	39	5,70
23021276	2,00	3,00	39	6,00
23021277	2,10	3,00	39	6,30
23021278	2,20	3,00	39	6,60
23021279	2,30	3,00	39	6,90
23021280	2,40	3,00	39	7,20
23021281	2,50	3,00	39	7,50
23021282	2,60	3,00	39	7,80
23021283	2,70	3,00	39	8,10
23021284	2,80	3,00	39	8,40
23021285	2,90	3,00	39	8,70
23021286	3,00	5,00	51	9,00
23021287	4,00	5,00	51	12,00
23021288	5,00	6,00	57	15,00
23021289	6,00	6,00	57	18,00

Hochleistungsfräser | High-performance cutters | Fraises haute performance

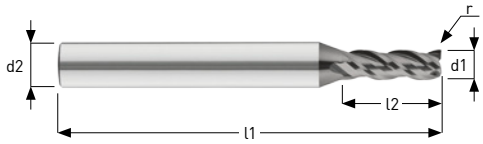
PFERD TOOLS

TTM325E **Mikrofräser**

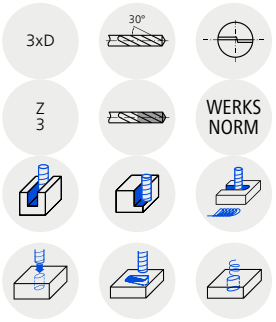
Micro-milling cutter
Micro fraise

TTM325T **Eckradius Mikrofräser**

Corner radius micro-milling cutter
Micro fraise toriques







O M K N S H

45°

Art. No.	d1 +/-0.01	d2 h6	l1 +/-0.2	l2 0/+0.5
23001904	1,00	4,00	40	3,00
23023543	1,20	4,00	40	3,60
23001905	1,50	4,00	40	4,50
23023544	1,58	4,00	40	4,70
23023545	1,80	4,00	40	5,40
23001906	2,00	4,00	40	6,00
23023546	2,38	4,00	40	7,15
23001907	2,50	4,00	50	7,50
23023547	3,00	6,00	50	9,00
23023548	3,17	6,00	50	9,50
23023549	3,50	6,00	50	10,50
23023550	3,97	6,00	50	12,00
23023551	4,00	6,00	50	12,00
23023552	4,50	6,00	50	13,50
23023553	4,76	6,00	50	14,30
23023554	5,00	6,00	50	15,00
23023555	5,56	6,00	50	16,70
23023556	6,00	6,00	50	18,00

Cr

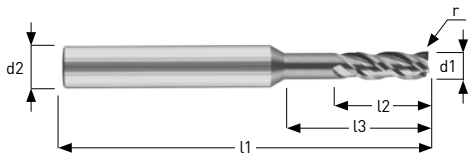
Art. No.	d1 +/-0.01	d2 h6	l1 +/-0.2	l2 0/+0.5	r 0/-0.02
23023557	1,00	4,00	40	3,00	0,10
23023558	1,00	4,00	40	3,00	0,20
23023559	1,20	4,00	40	3,60	0,10
23023560	1,20	4,00	40	3,60	0,20
23023561	1,50	4,00	40	4,50	0,10
23023562	1,50	4,00	40	4,50	0,30
23023563	1,80	4,00	40	5,40	0,10
23023564	1,80	4,00	40	5,40	0,30
23023565	2,00	4,00	40	6,00	0,10
23023566	2,00	4,00	40	6,00	0,50
23023567	2,50	4,00	50	7,50	0,20
23023568	2,50	4,00	50	7,50	0,50
23023569	3,00	6,00	50	9,00	0,20
23023570	3,00	6,00	50	9,00	0,50
23023571	4,00	6,00	50	12,00	0,20
23023572	4,00	6,00	50	12,00	0,50
23023573	6,00	6,00	50	18,00	0,50
23023574	6,00	6,00	50	18,00	1,00

Hochleistungsfräser | High-performance cutters | Fraises haute performance

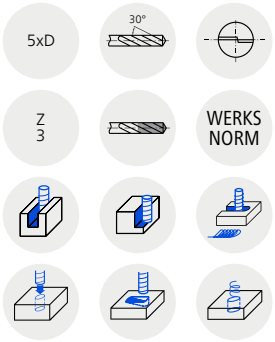
PFERD TOOLS

TTM350E **Mikrofräser** Micro-milling cutter / Micro fraise

TTM350T **Eckradius Mikrofräser** Corner radius micro-milling cutter / Micro fraise toriques







P M K N S H O

45°

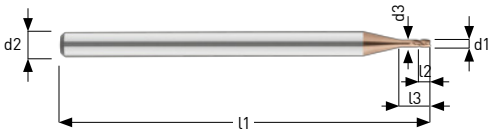
Art. No.	d1 +/-0.01	d2 h6	l1 +/-0.2	l2 0/+0.5	l3 -0/+1
23023575	1,00	4,00	40	3,00	5,00
23023576	1,20	4,00	40	3,60	6,00
23023577	1,50	4,00	40	4,50	7,50
23023578	1,58	4,00	40	4,70	8,00
23023579	1,80	4,00	40	5,40	9,00
23023580	2,00	4,00	40	6,00	10,00
23023581	2,38	4,00	40	7,15	12,00
23023582	2,50	4,00	50	7,50	12,50
23023583	3,00	6,00	50	9,00	15,00
23023584	3,17	6,00	50	9,50	16,00
23023585	3,50	6,00	50	10,50	18,00
23023586	3,97	6,00	50	12,00	20,00
23023587	4,00	6,00	50	12,00	20,00
23023588	4,50	6,00	50	13,50	23,00
23023589	4,76	6,00	50	14,30	24,00
23023590	5,00	6,00	50	15,00	25,00
23023591	5,56	6,00	50	16,70	28,00
23023592	6,00	6,00	50	18,00	30,00

Cr

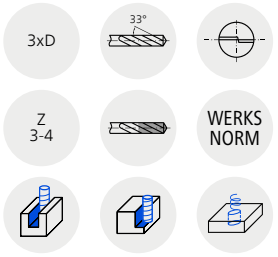
Art. No.	d1 +/-0.01	d2 h6	l1 +/-0.2	l2 0/+0.5	l3 -0/+1	r 0/-0.02
23023593	1,00	4,00	40	3,00	5,00	0,10
23023594	1,00	4,00	40	3,00	5,00	0,20
23023595	1,20	4,00	40	3,60	6,00	0,10
23023596	1,20	4,00	40	3,60	6,00	0,20
23023597	1,50	4,00	40	4,50	7,50	0,10
23023598	1,50	4,00	40	4,50	7,50	0,30
23023599	1,80	4,00	40	5,40	9,00	0,10
23023600	1,80	4,00	40	5,40	9,00	0,30
23023601	2,00	4,00	40	6,00	10,00	0,10
23023602	2,00	4,00	40	6,00	10,00	0,50
23023603	2,50	4,00	50	7,50	12,50	0,20
23023604	2,50	4,00	50	7,50	12,50	0,50
23023605	3,00	6,00	50	9,00	15,00	0,20
23023606	3,00	6,00	50	9,00	15,00	0,50
23023607	4,00	6,00	50	12,00	20,00	0,20
23023608	4,00	6,00	50	12,00	20,00	0,50
23023609	6,00	6,00	50	18,00	30,00	0,50
23023610	6,00	6,00	50	18,00	30,00	1,00

TWF3

Mikrofräser Torx®
Micro-milling cutter Torx®
Micro fraise Torx®







P M S

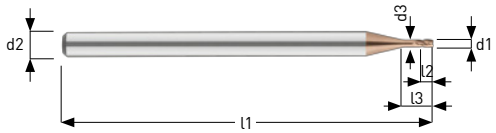
Art. No.	Torx®	d1 0/-0.01	d2 h5	d3 0/-0.02	l1 0/+2	l2 0/+0.1	l3 0/-0.01	Z
23023626	T4	0,20	3,00	0,18	39	0,30	0,60	3
23023627	T5	0,25	3,00	0,24	39	0,38	0,75	3
23023628	T6/T7	0,30	3,00	0,28	39	0,45	0,90	3
23023629	T8/T10	0,40	3,00	0,38	39	0,60	1,20	4
23023630	T10/T15	0,50	3,00	0,47	39	0,75	1,50	4
23023631	T20	0,60	3,00	0,56	39	0,90	1,80	4
23023632	T25	0,80	3,00	0,75	39	1,20	2,40	4
23023633	T30	1,00	3,00	0,94	39	1,50	3,00	4

Notes

PFERD TOOLS

TWF5

Mikrofräser Torx®
Micro-milling cutter Torx®
Micro fraise Torx®



P M S



5xD | 33° | Z 3-4 | WERKS NORM

Art. No.	Torx®	d1 0/-0.01	d2 h5	d3 0/-0.02	l1 0/+2	l2 0/+0.1	l3 0/-0.01	Z
23023634	T4	0,20	3,00	0,18	39	0,30	1,00	3
23023635	T5	0,25	3,00	0,24	39	0,38	1,25	3
23023636	T6/T7	0,30	3,00	0,28	39	0,45	1,50	3
23023637	T8/T10	0,40	3,00	0,38	39	0,60	2,00	4
23023638	T10/T15	0,50	3,00	0,47	39	0,75	2,50	4
23023639	T20	0,60	3,00	0,56	39	0,90	3,00	4
23023640	T25	0,80	3,00	0,75	39	1,20	4,00	4
23023641	T30	1,00	3,00	0,94	39	1,50	5,00	4

Notes

PFERD TOOLS

TTM225E – TTM225T

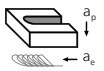
Schnittwerte für das Fräsen | Standard values for milling | Paramètres indicatifs pour fraisage



a_p	≤ 1xD$_1$
a_e	≤ 0,4xD$_1$
V_c	x1
f_z	x1



a_p	≤ 0,50xD$_1$
a_e	≤ 1xD$_1$
V_c	x0,7
f_z	x0,6



a_p	≤ 1,5xD$_1$
a_e	≤ 0,2xD$_1$
V_c	x1,2
f_z	x1,2



Angle	8^0	
a_e	≤ 1xD$_1$	
f_z	x0,7	



Angle	8^0
D$_e$	1,7xD$_1$

		Schnittgeschwindigkeit m/min Cutting Speed m/min Vitesse de coupe m/min							Vorschub mm/Umdrehung Feed mm/rev Avance mm/tour							
ISO Class	Adv	ø 1.00-1.20	ø 1.50-1.80	ø 2.00-2.50	ø 3.00-3.50	ø 3.97-4.00	ø 4.50-5.00	ø 5.56-6.00	ø 1.00	ø 1.20	ø 1.50-1.58	ø 1.80	ø 2.00	ø 2.38-2.50	ø 3.00-3.50	ø 3.97-6.00
P00	●	140	200	220	240	250	260	280	0.015	0.017	0.024	0.026	0.034	0.036	0.042	0.05
P01	●	140	200	220	240	250	260	280	0.015	0.017	0.024	0.026	0.034	0.036	0.042	0.05
P02	●	140	180	200	220	230	240	250	0.015	0.017	0.022	0.026	0.034	0.036	0.042	0.05
P03	●	140	200	220	240	250	260	280	0.014	0.016	0.022	0.024	0.032	0.034	0.04	0.048
P04	●	140	200	220	240	250	260	280	0.011	0.013	0.022	0.022	0.03	0.032	0.036	0.042
P05	●	140	200	220	240	250	260	280	0.015	0.016	0.022	0.024	0.032	0.034	0.038	0.046
P06	●	140	200	220	240	250	260	280	0.012	0.014	0.022	0.018	0.03	0.032	0.036	0.044
M01	●	140	200	220	240	250	260	280	0.012	0.014	0.016	0.018	0.03	0.032	0.036	0.044
M02	●	140	200	220	240	250	260	280	0.01	0.012	0.013	0.015	0.025	0.027	0.031	0.038
M03	●	140	200	220	240	250	260	280	0.01	0.012	0.013	0.015	0.025	0.027	0.031	0.038
K01	●	140	160	180	200	220	230	230	0.011	0.022	0.024	0.026	0.028	0.036	0.04	0.05
K03	●	120	140	160	180	220	200	200	0.009	0.02	0.021	0.023	0.025	0.032	0.038	0.044
K02	●	120	140	160	180	220	200	200	0.009	0.02	0.021	0.023	0.025	0.032	0.038	0.044
N01	●	140	200	200	220	250	260	280	0.018	0.02	0.026	0.028	0.036	0.04	0.052	0.06
N02	●	140	200	200	220	250	260	280	0.018	0.02	0.026	0.028	0.036	0.04	0.052	0.06
N03	●	140	200	200	220	250	260	280	0.018	0.02	0.026	0.028	0.036	0.04	0.052	0.06
N04	●	140	200	200	240	250	260	280	0.02	0.02	0.026	0.028	0.036	0.04	0.05	0.06
S01	●	120	130	140	150	160	170	170	0.007	0.008	0.009	0.01	0.01	0.012	0.015	0.018
S02	●	140	180	200	220	230	230	240	0.007	0.008	0.009	0.01	0.01	0.012	0.015	0.018
S03	●	120	130	140	150	160	170	170	0.007	0.008	0.009	0.01	0.01	0.012	0.015	0.018
S04	●	120	130	140	150	160	170	170	0.016	0.018	0.02	0.022	0.028	0.03	0.036	0.044
H01	●	140	140	180	200	210	220	220	0.01	0.012	0.014	0.018	0.02	0.026	0.029	0.04
H02	●	140	140	180	200	210	220	220	0.01	0.012	0.014	0.018	0.02	0.026	0.029	0.04
H03	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
O01	●	140	200	200	220	250	260	280	0.018	0.02	0.026	0.028	0.036	0.04	0.052	0.06
O02	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
O03	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
O04	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
O05	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

● Empfohlen | Recommended | Recommandé
◑ Teilweise empfohlen | Partially recommended | Partiellement recommandé
○ Nicht empfohlen | Not recommended | Non recommandé

PFERD TOOLS

TTM250E – TTM250T

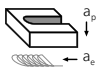
Schnittwerte für das Fräsen | Standard values for milling | Paramètres indicatifs pour fraisage



a_p	≤ 1xD$_1$
a_e	≤ 0,4xD$_1$
V_c	x1
f_z	x1



a_p	≤ 0,50xD$_1$
a_e	≤ 1xD$_1$
V_c	x0,7
f_z	x0,6



a_p	≤ 1,5xD$_1$
a_e	≤ 0,2xD$_1$
V_c	x1,2
f_z	x1,2



Angle	8^0	
a_e	≤ 1xD$_1$	
f_z	x0,7	



Angle	8^0
D$_e$	1,7xD$_1$

		Schnittgeschwindigkeit m/min Cutting Speed m/min Vitesse de coupe m/min							Vorschub mm/Umdrehung Feed mm/rev Avance mm/tour							
ISO Class	Adv	ø 1.00-1.20	ø 1.50-1.80	ø 2.00-2.50	ø 3.00-3.50	ø 3.97-4.00	ø 4.50-5.00	ø 5.56-6.00	ø 1.00	ø 1.20	ø 1.50-1.58	ø 1.80	ø 2.00	ø 2.38-2.50	ø 3.00-3.50	ø 3.97-6.00
P00	●	140	200	220	240	250	260	280	0.012	0.0136	0.0192	0.0208	0.0272	0.0288	0.0336	0.04
P01	●	140	200	220	240	250	260	280	0.012	0.0136	0.0192	0.0208	0.0272	0.0288	0.0336	0.04
P02	●	140	180	200	220	230	240	250	0.012	0.0136	0.0176	0.0208	0.0272	0.0288	0.0336	0.04
P03	●	140	200	220	240	250	260	280	0.0112	0.0128	0.0176	0.0192	0.0256	0.0272	0.032	0.0384
P04	●	140	200	220	240	250	260	280	0.0088	0.0104	0.0176	0.0176	0.024	0.0256	0.0288	0.0336
P05	●	140	200	220	240	250	260	280	0.012	0.0128	0.0176	0.0192	0.0256	0.0272	0.0304	0.0368
P06	●	140	200	220	240	250	260	280	0.0096	0.0112	0.0176	0.0144	0.024	0.0256	0.0288	0.0352
M01	●	140	200	220	240	250	260	280	0.0096	0.0112	0.0128	0.0144	0.024	0.0256	0.0288	0.0352
M02	●	140	200	220	240	250	260	280	0.008	0.0096	0.0104	0.012	0.02	0.0216	0.0248	0.0304
M03	●	140	200	220	240	250	260	280	0.008	0.0096	0.0104	0.012	0.02	0.0216	0.0248	0.0304
K01	●	140	160	180	200	220	230	230	0.0088	0.0176	0.0192	0.0208	0.0224	0.0288	0.032	0.04
K03	●	120	140	160	180	220	200	200	0.0072	0.016	0.0168	0.0184	0.02	0.0256	0.0304	0.0352
K02	●	120	140	160	180	220	200	200	0.0072	0.016	0.0168	0.0184	0.02	0.0256	0.0304	0.0352
N01	●	140	200	200	220	250	260	280	0.0144	0.016	0.0208	0.0224	0.0288	0.032	0.0416	0.048
N02	●	140	200	200	220	250	260	280	0.0144	0.016	0.0208	0.0224	0.0288	0.032	0.0416	0.048
N03	●	140	200	200	220	250	260	280	0.0144	0.016	0.0208	0.0224	0.0288	0.032	0.0416	0.048
N04	●	140	200	200	240	250	260	280	0.016	0.016	0.0208	0.0224	0.0288	0.032	0.04	0.048
S01	●	120	130	140	150	160	170	170	0.0056	0.0064	0.0072	0.008	0.008	0.0096	0.012	0.0144
S02	●	140	180	200	220	230	230	240	0.0056	0.0064	0.0072	0.008	0.008	0.0096	0.012	0.0144
S03	●	120	130	140	150	160	170	170	0.0056	0.0064	0.0072	0.008	0.008	0.0096	0.012	0.0144
S04	●	120	130	140	150	160	170	170	0.0128	0.0144	0.016	0.0176	0.0224	0.024	0.0288	0.0352
H01	●	140	140	180	200	210	220	220	0.008	0.0096	0.0112	0.0144	0.016	0.0208	0.0232	0.032
H02	●	140	140	180	200	210	220	220	0.008	0.0096	0.0112	0.0144	0.016	0.0208	0.0232	0.032
H03	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
O01	●	140	200	200	220	250	260	280	0.0144	0.016	0.0208	0.0224	0.0288	0.032	0.0416	0.048
O02	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
O03	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
O04	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
O05	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

● Empfohlen | Recommended | Recommandé
◑ Teilweise empfohlen | Partially recommended | Partiellement recommandé
○ Nicht empfohlen | Not recommended | Non recommandé

PFERD TOOLS

MS320 – MS330

Schnittwerte für das Fräsen | Standard values for milling | Paramètres indicatifs pour fraisage



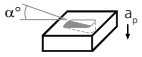
a_p	≤ 1 x D_1
a_e	≤ 0,4 x D_1
V_c	x1
f_z	x1



a_p	≤ 0,51 x D_1
a_e	≤ 1 x D_1
V_c	x 0,7
f_z	x 0,6



a_p	≤ 1,5 x D_1
a_e	≤ 0,2 x D_1
V_c	x1,2
f_z	x1,2



Angle	8⁰
a_e	≤ 1 x D_1
f_z	x 0,7



Angle	8⁰
D_e	1,7 x D_1

		Schnittgeschwindigkeit Cutting Speed Vitesse de coupe	Vorschub mm/Umdrehung Feed mm/rev Avance mm/tour			
ISO Class	Adv	m/min	ø 0.30-0.60	ø 0.70-1.40	ø 1.50-2.90	ø 3.00-6.00
P00	●	60-80	0.005-0.01	0.008-0.02	0.018-0.04	0.020-0.040
P01	●	60-80	0.005-0.01	0.008-0.2	0.018-0.04	0.020-0.040
P02	●	60-80	0.005-0.01	0.008-0.02	0.018-0.04	0.020-0.040
P03	●	50-70	0.005-0.01	0.008-0.02	0.018-0.04	0.020-0.040
P04	●	40-60	0.004-0.01	0.006-0.02	0.015-0.035	0.020-0.040
P05	●	30-50	0.004-0.01	0.006-0.02	0.015-0.035	0.015-0.035
P06	●	30-50	0.004-0.01	0.006-0.02	0.015-0.035	0.015-0.035
M01	●	25-40	0.004-0.008	0.005-0.016	0.014-0.028	0.015-0.035
M02	●	25-40	0.004-0.008	0.005-0.016	0.014-0.028	0.015-0.035
M03	●	25-40	0.004-0.008	0.005-0.016	0.014-0.028	0.015-0.035
K01	●	40-70	0.005-0.01	0.008-0.02	0.018-0.04	0.030-0.060
K03	●	30-60	0.004-0.01	0.006-0.02	0.015-0.035	0.030-0.060
K02	●	30-60	0.004-0.01	0.006-0.02	0.015-0.035	0.030-0.060
N01	●	70-100	0.004-0.01	0.006-0.02	0.015-0.035	0.030-0.060
N02	●	80-120	0.005-0.01	0.008-0.02	0.018-0.04	0.030-0.060
N03	●	60-100	0.005-0.01	0.008-0.02	0.018-0.04	0.030-0.060
N04	●	25-80	0.004-0.01	0.006-0.02	0.015-0.04	0.030-0.060
S01	●	25-40	0.003-0.008	0.015-0.03	0.015-0.03	0.025-0.045
S02	●	25-40	0.003-0.008	0.015-0.03	0.015-0.03	0.025-0.045
S03	●	25-40	0.003-0.008	0.015-0.03	0.015-0.03	0.025-0.045
S04	●	25-50	0.003-0.008	0.006-0.015	0.012-0.03	0.025-0.045
H01	●	25-40	0.002-0.004	0.004-0.006	0.004-0.006	0.005-0.008
H02	●	25-40	0.002-0.004	0.004-0.006	0.004-0.006	0.005-0.008
H03	○	-	-	-	-	-
O01	●	80-120	0.005-0.01	0.008-0.02	0.018-0.04	0.030-0.060
O02	○	-	-	-	-	-
O03	○	-	-	-	-	-
O04	○	-	-	-	-	-
O05	○	-	-	-	-	-

● Empfohlen | Recommended | Recommandé
◑ Teilweise empfohlen | Partially recommended | Partiellement recommandé
○ Nicht empfohlen | Not recommended | Non recommandé

PFERD TOOLS

TTM325E – TTM325T

Schnittwerte für das Fräsen | Standard values for milling | Paramètres indicatifs pour fraisage

		Schnittgeschwindigkeit m/min Cutting Speed m/min Vitesse de coupe m/min					Vorschub mm/Umdrehung Feed mm/rev Avance mm/tour						
ISO Class	Adv	ø 1.00-1.20	ø 1.50-2.50	ø 3.00-4.76	ø 5.00-5.56	ø 6.00	ø 1.00-1.20	ø 1.50-1.80	ø 2.00-2.50	ø 3.00-3.97	ø 4.00-4.76	ø 5.00-5.56	ø 6.00
P00	●	100	120	140	150	160	0.0046	0.0065	0.0091	0.013	0.02	0.026	0.033
P01	●	100	120	140	150	160	0.0046	0.0065	0.0091	0.013	0.02	0.026	0.033
P02	●	100	120	140	150	160	0.0046	0.0065	0.0091	0.013	0.02	0.026	0.033
P03	●	100	120	140	150	160	0.0049	0.007	0.0098	0.014	0.021	0.027	0.034
P04	●	100	120	140	150	160	0.0042	0.006	0.0084	0.012	0.017	0.022	0.028
P05	●	100	120	140	150	160	0.0035	0.005	0.007	0.01	0.015	0.02	0.025
P06	●	100	120	140	150	160	0.0035	0.005	0.007	0.01	0.015	0.02	0.025
M01	●	100	120	140	150	160	0.0035	0.005	0.007	0.01	0.015	0.02	0.025
M02	●	100	120	140	150	160	0.0035	0.005	0.007	0.01	0.015	0.02	0.025
M03	●	100	120	140	150	160	0.0035	0.005	0.007	0.01	0.015	0.02	0.025
K01	●	100	120	140	150	160	0.0042	0.006	0.0084	0.012	0.017	0.022	0.028
K03	●	100	120	140	150	160	0.0042	0.006	0.0084	0.012	0.017	0.022	0.028
K02	●	100	120	140	150	160	0.0042	0.006	0.0084	0.012	0.017	0.022	0.028
N01	●	100	120	150	170	180	0.01	0.016	0.021	0.034	0.035	0.036	0.037
N02	●	100	120	150	170	180	0.01	0.016	0.021	0.034	0.035	0.036	0.037
N03	●	100	120	150	170	180	0.01	0.016	0.021	0.034	0.035	0.036	0.037
N04	●	100	120	150	170	180	0.01	0.016	0.021	0.034	0.035	0.036	0.037
S01	●	40	50	50	80	80	0.0035	0.005	0.007	0.01	0.014	0.018	0.021
S02	●	60	60	80	100	120	0.0035	0.005	0.007	0.01	0.014	0.018	0.021
S03	●	40	50	50	80	80	0.0035	0.005	0.007	0.01	0.014	0.018	0.021
S04	●	80	90	110	120	120	0.0032	0.0045	0.0063	0.01	0.013	0.016	0.019
H01	○	-	-	-	-	-	-	-	-	-	-	-	-
H02	○	-	-	-	-	-	-	-	-	-	-	-	-
H03	○	-	-	-	-	-	-	-	-	-	-	-	-
O01	●	100	120	150	170	180	0.01	0.016	0.021	0.034	0.035	0.036	0.037
O02	○	-	-	-	-	-	-	-	-	-	-	-	-
O03	○	-	-	-	-	-	-	-	-	-	-	-	-
O04	○	-	-	-	-	-	-	-	-	-	-	-	-
O05	○	-	-	-	-	-	-	-	-	-	-	-	-

● Empfohlen | Recommended | Recommandé
◑ Teilweise empfohlen | Partially recommended | Partiellement recommandé
○ Nicht empfohlen | Not recommended | Non recommandé

TTM350E – TTM350T

Schnittwerte für das Fräsen | Standard values for milling | Paramètres indicatifs pour fraisage

		Schnittgeschwindigkeit m/min Cutting Speed m/min Vitesse de coupe m/min					Vorschub mm/Umdrehung Feed mm/rev Avance mm/tour						
ISO Class	Adv	ø 1.00-1.20	ø 1.50-2.50	ø 3.00-4.76	ø 5.00-5.56	ø 6.00	ø 1.00-1.20	ø 1.50-1.80	ø 2.00-2.50	ø 3.00-3.97	ø 4.00-4.76	ø 5.00-5.56	ø 6.00
P00	●	100	120	140	150	160	0,004	0,005	0,007	0,010	0,016	0,021	0,026
P01	●	100	120	140	150	160	0,004	0,005	0,007	0,010	0,016	0,021	0,026
P02	●	100	120	140	150	160	0,004	0,005	0,007	0,010	0,016	0,021	0,026
P03	●	100	120	140	150	160	0,004	0,006	0,008	0,011	0,017	0,022	0,027
P04	●	100	120	140	150	160	0,003	0,005	0,007	0,010	0,014	0,018	0,022
P05	●	100	120	140	150	160	0,003	0,004	0,006	0,008	0,012	0,016	0,020
P06	●	100	120	140	150	160	0,003	0,004	0,006	0,008	0,012	0,016	0,020
M01	●	100	120	140	150	160	0,003	0,004	0,006	0,008	0,012	0,016	0,020
M02	●	100	120	140	150	160	0,003	0,004	0,006	0,008	0,012	0,016	0,020
M03	●	100	120	140	150	160	0,003	0,004	0,006	0,008	0,012	0,016	0,020
K01	●	100	120	140	150	160	0,003	0,005	0,007	0,010	0,014	0,018	0,022
K03	●	100	120	140	150	160	0,003	0,005	0,007	0,010	0,014	0,018	0,022
K02	●	100	120	140	150	160	0,003	0,005	0,007	0,010	0,014	0,018	0,022
N01	●	100	120	160	170	180	0,008	0,013	0,017	0,027	0,028	0,029	0,030
N02	●	100	120	160	170	180	0,008	0,013	0,017	0,027	0,028	0,029	0,030
N03	●	100	120	160	170	180	0,008	0,013	0,017	0,027	0,028	0,029	0,030
N04	●	100	120	160	170	180	0,008	0,013	0,017	0,027	0,028	0,029	0,030
S01	●	40	50	60	80	80	0,003	0,004	0,006	0,008	0,011	0,014	0,017
S02	●	60	80	100	100	120	0,003	0,004	0,006	0,008	0,011	0,014	0,017
S03	●	40	50	60	80	80	0,003	0,004	0,006	0,008	0,011	0,014	0,017
S04	●	80	100	120	120	120	0,003	0,004	0,005	0,008	0,010	0,013	0,015
H01	○	-	-	-	-	-	-	-	-	-	-	-	-
H02	○	-	-	-	-	-	-	-	-	-	-	-	-
H03	○	-	-	-	-	-	-	-	-	-	-	-	-
O01	●	100	120	160	170	180	0,008	0,013	0,017	0,027	0,028	0,029	0,030
O02	○	-	-	-	-	-	-	-	-	-	-	-	
O03	○	-	-	-	-	-	-	-	-	-	-	-	-
O04	○	-	-	-	-	-	-	-	-	-	-	-	-
O05	○	-	-	-	-	-	-	-	-	-	-	-	-

● Empfohlen | Recommended | Recommandé
◑ Teilweise empfohlen | Partially recommended | Partiellement recommandé
○ Nicht empfohlen | Not recommended | Non recommandé

PFERD TOOLS

TWF3 – TWF5

Schnittwerte für das Fräsen | Standard values for milling | Paramètres indicatifs pour fraisage





a_p	≤ 0.5 x D_1	Ramp angle (helix interpolation)	0.2-0.8 D_1
a_e	≤ 0.1 x D_1	-	-
V_c	x 1	-	-
f_z	x 1	-	-

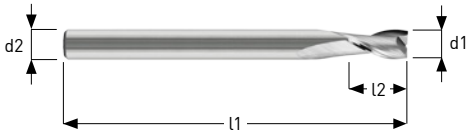
		Schnittgeschwindigkeit m/min Cutting Speed m/min Vitesse de coupe m/min								Vorschub mm/Umdrehung Feed mm/rev Avance mm/tour			
ISO Class	Adv	ø 0.20	ø 0.25	ø 0.30	ø 0.40	ø 0.50	ø 0.60	ø 0.80	ø 1.00	ø 0.20-0.25	ø 0.30-0.40	ø 0.50-0.60	ø 0.80-1.00
P00	○	-	-	-	-	-	-	-	-	-	-	-	-
P01	○	-	-	-	-	-	-	-	-	-	-	-	-
P02	○	-	-	-	-	-	-	-	-	-	-	-	-
P03	○	-	-	-	-	-	-	-	-	-	-	-	-
P04	○	-	-	-	-	-	-	-	-	-	-	-	-
P05	●	30	40	50	60	70	80	110	120	0.0015-0.0025	0.003-0.0045	0.006-0.0065	0.008-0.01
P06	●	30	40	50	60	70	80	110	120	0.0015-0.0025	0.003-0.0045	0.006-0.0065	0.008-0.01
M01	●	30	40	50	60	70	80	110	120	0.0015-0.0025	0.003-0.0045	0.006-0.0065	0.008-0.01
M02	●	30	40	50	60	70	80	110	120	0.0015-0.0025	0.003-0.0045	0.006-0.0065	0.008-0.01
M03	●	30	40	50	60	70	80	110	120	0.0015-0.0025	0.003-0.0045	0.006-0.0065	0.008-0.01
K01	○	-	-	-	-	-	-	-	-	-	-	-	-
K03	○	-	-	-	-	-	-	-	-	-	-	-	-
K02	○	-	-	-	-	-	-	-	-	-	-	-	-
N01	○	-	-	-	-	-	-	-	-	-	-	-	-
N02	○	-	-	-	-	-	-	-	-	-	-	-	-
N03	○	-	-	-	-	-	-	-	-	-	-	-	-
N04	○	-	-	-	-	-	-	-	-	-	-	-	-
S01	●	30	40	50	60	70	80	110	120	0.0015-0.0025	0.003-0.0045	0.006-0.0065	0.008-0.01
S02	○	-	-	-	-	-	-	-	-	-	-	-	-
S03	●	30	40	50	60	70	80	110	120	0.0015-0.0025	0.003-0.0045	0.006-0.0065	0.008-0.01
S04	●	30	40	50	60	70	80	110	120	0.0015-0.0025	0.003-0.0045	0.006-0.0065	0.008-0.01
H01	○	-	-	-	-	-	-	-	-	-	-	-	-
H02	○	-	-	-	-	-	-	-	-	-	-	-	-
H03	○	-	-	-	-	-	-	-	-	-	-	-	-
O01	○	-	-	-	-	-	-	-	-	-	-	-	-
O02	○	-	-	-	-	-	-	-	-	-	-	-	-
O03	○	-	-	-	-	-	-	-	-	-	-	-	-
O04	○	-	-	-	-	-	-	-	-	-	-	-	-
O05	○	-	-	-	-	-	-	-	-	-	-	-	-

● Empfohlen | Recommended | Recommandé
◑ Teilweise empfohlen | Partially recommended | Partiellement recommandé
○ Nicht empfohlen | Not recommended | Non recommandé

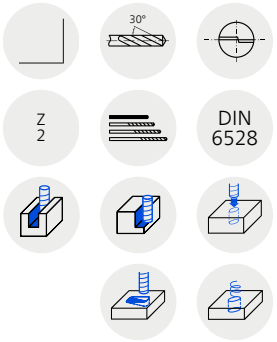
PFERD TOOLS

MS122

Fräser – kurze Ausführung
Twist cutter – short series
Fraise hélicoïdal – série courte







P M K

Art. No.	d1 h11	d2 h6	l1 +1/0	l2 +1/0
23021052	2,00	2,00	42	6,00
23021053	2,50	2,50	42	7,00
23021054	3,00	3,00	45	7,00
23021055	3,50	3,50	50	7,00
23021056	4,00	4,00	50	8,00
23021057	4,50	4,50	50	8,00
23021058	5,00	5,00	50	10,00
23021059	5,50	5,50	57	10,00
23021060	6,00	6,00	57	10,00
23021061	7,00	7,00	60	13,00
23021062	8,00	8,00	63	16,00
23021063	9,00	9,00	67	16,00
23021064	10,00	10,00	72	19,00
23021065*	11,00	11,00	83	22,00
23021066*	12,00	12,00	83	22,00
23021067*	14,00	14,00	83	22,00
23021068*	16,00	16,00	92	26,00
23021069*	18,00	18,00	92	26,00
23021070*	20,00	20,00	101	32,00

* Verfügbar auf Anfrage, Mindestmenge 5 Stk.
* Available on request, minimum qty 5 pcs.
* Disponible sur demande, au moins 5 pièces.

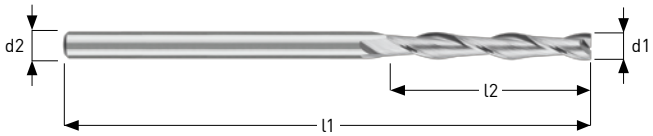
Schnittwerte | Working parameters | Paramètres | **146**

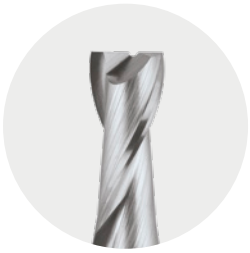
Hochleistungsfräser | High-performance cutters | Fraises haute performance

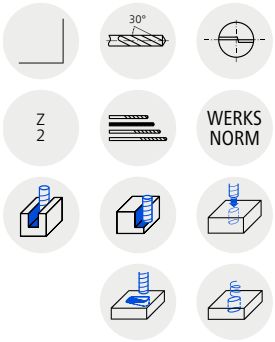
PFERD TOOLS

MS122XL

Spiralfräser – mittlere Ausführung
Twist cutter – medium series
Fraise hélicoïdal – série moyenne





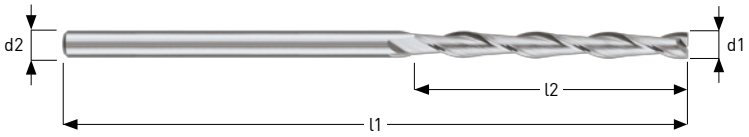


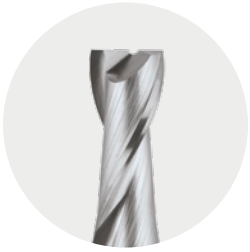
P M K

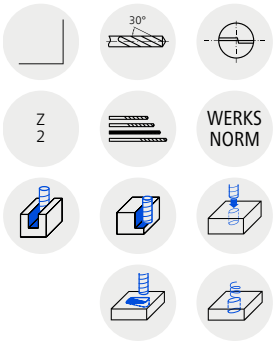
Art. No.	d1 h11	d2 h6	l1 +1/0	l2 +1/0
23021071	3,00	3,00	55	20,00
23021072	4,00	4,00	60	20,00
23021073	5,00	5,00	60	20,00
23021074	6,00	6,00	65	24,00
23021075	8,00	8,00	80	32,00
23021076	10,00	10,00	80	32,00
23021077*	12,00	12,00	100	50,00
23021078*	14,00	14,00	100	50,00
23021079*	16,00	16,00	100	50,00
23021080*	18,00	18,00	100	50,00
23021081*	20,00	20,00	100	50,00

MS122XLS

Spiralfräser – lange Ausführung
Twist cutter – long series
Fraise hélicoïdal – série longue







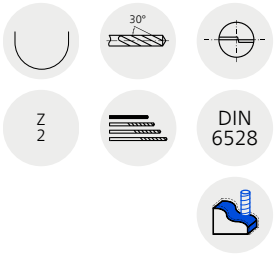
P M K

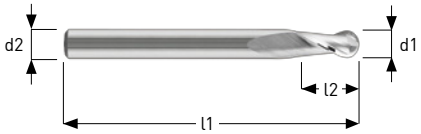
Art. No.	d1 h11	d2 h6	l1 +/-1	l2 +/-0.2
23021082	4,00	4,00	75	40,00
23021083	5,00	5,00	80	40,00
23021084	6,00	6,00	80	45,00
23021085	8,00	8,00	100	50,00
23021086	10,00	10,00	100	50,00
23021087*	12,00	12,00	150	70,00
23021088*	14,00	14,00	150	75,00
23021089*	16,00	16,00	150	75,00
23021090*	18,00	18,00	150	75,00
23021091*	20,00	20,00	150	75,00

Schnittwerte | Working parameters | Paramètres | **147-148**

MS123

Kugelfräser – kurze Ausführung
Ball nose end mill – short series
Fraise hémisphérique – série courte









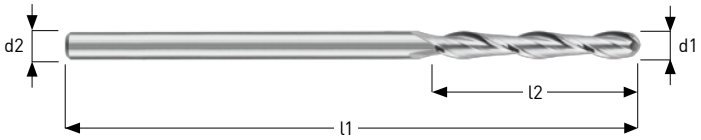
Art. No.	d1 h11	d2 h6	l1 +1/0	l2 +1/0	r +/- 0.04/0.05
23021092	2,00	2,00	42	6,00	1,00
23021093	2,50	2,50	42	7,00	1,25
23021094	3,00	3,00	45	7,00	1,50
23021095	4,00	4,00	50	8,00	2,00
23021096	5,00	5,00	50	10,00	2,50
23021097	6,00	6,00	57	10,00	3,00
23021098	7,00	7,00	60	13,00	3,50
23021099	8,00	8,00	63	16,00	4,00
23021100	9,00	9,00	67	16,00	4,50
23021101	10,00	10,00	72	19,00	5,00
23021102*	11,00	11,00	83	22,00	5,50
23021103*	12,00	12,00	83	22,00	6,00
23021104*	14,00	14,00	83	22,00	7,00
23021105*	16,00	16,00	92	26,00	8,00
23021106*	18,00	18,00	92	26,00	9,00
23021107*	20,00	20,00	101	32,00	10,00

* Verfügbar auf Anfrage, Mindestmenge 5 Stk.
* Available on request, minimum qty 5 pcs.
* Disponible sur demande, au moins 5 pièces.

PFERD TOOLS

MS123XL

Kugelfräser – mittlere Ausführung
Ball nose end mill – medium series
Fraise hémisphérique – série moyenne



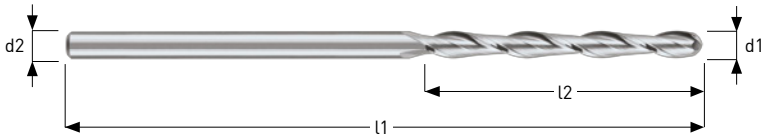


P M K

Art. No.	d1 h11	d2 h6	l1 +1/0	l2 +1/0	r +/- 0.04/0.05
23021108	3,00	3,00	55	20,00	1,50
23021109	4,00	4,00	60	20,00	2,00
23021110	5,00	5,00	60	20,00	2,50
23021111	6,00	6,00	65	24,00	3,00
23021112	8,00	8,00	80	32,00	4,00
23021113	10,00	10,00	80	32,00	5,00
23021114*	12,00	12,00	100	50,00	6,00
23021115*	14,00	14,00	100	50,00	7,00
23021116*	16,00	16,00	100	50,00	8,00
23021117*	20,00	20,00	100	50,00	10,00

MS123XLS

Kugelfräser – lange Ausführung
Ball nose end mill – long series
Fraise hémisphérique – série longue





P M K

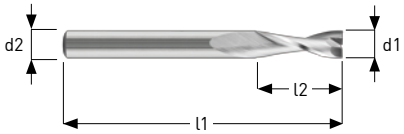
Art. No.	d1 h11	d2 h6	l1 +1/0	l2 +1/0	r +/- 0.04/0.05
23021118	4,00	4,00	75	40,00	2,00
23021119	5,00	5,00	80	40,00	2,50
23021120	6,00	6,00	80	45,00	3,00
23021121	8,00	8,00	100	50,00	4,00
23021122	10,00	10,00	100	50,00	5,00
23021123*	12,00	12,00	150	70,00	6,00
23021124*	14,00	14,00	150	75,00	7,00
23021125*	16,00	16,00	150	75,00	8,00
23021126*	20,00	20,00	150	75,00	10,00

Schnittwerte | Working parameters | Paramètres | **150-151**

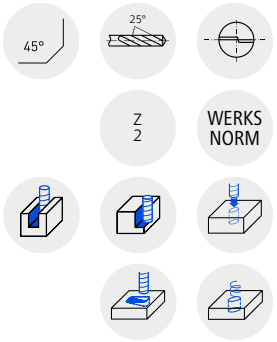
PFERD TOOLS

MS124

Spiralfräser – kurze Ausführung
Twist cutter – short series
Fraise hélicoïdal – série courte







N O

Art. No.	d1 h11	d2 h6	l1 +1/0	l2 +1/0
23021127	2,00	2,00	40	10,00
23021128	3,00	3,00	40	12,00
23021129	4,00	4,00	40	12,00
23021130	5,00	5,00	50	15,00
23021131	6,00	6,00	60	18,00
23021132	7,00	7,00	60	18,00
23021133	8,00	8,00	60	18,00
23021134	9,00	9,00	70	22,00
23021135	10,00	10,00	70	22,00
23021136*	12,00	12,00	70	22,00
23021137*	14,00	14,00	80	25,00
23021138*	16,00	16,00	80	25,00
23021139*	18,00	18,00	100	30,00
23021140*	20,00	20,00	100	35,00

* Verfügbar auf Anfrage, Mindestmenge 5 Stk.
* Available on request, minimum qty 5 pcs.
* Disponible sur demande, au moins 5 pièces.

Schnittwerte | Working parameters | Paramètres | **152**

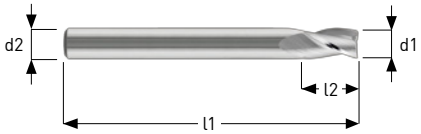
Notes

Hochleistungsfräser | High-performance cutters | Fraises haute performance

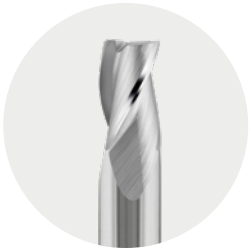
PFERD TOOLS

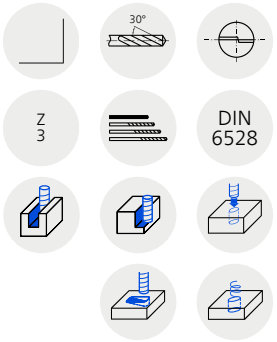
MS131

Spiralfräser – kurze Ausführung
Twist cutter – short series
Fraise hélicoïdal – série courte









Art. No.	d1 h11	d2 h6	l1 +1/0	l2 +1/0
23021141	2,00	2,00	42	6,00
23021142	2,50	2,50	42	7,00
23021143	3,00	3,00	45	7,00
23021144	3,50	3,50	50	7,00
23021145	4,00	4,00	50	8,00
23021146	4,50	4,50	50	8,00
23021147	5,00	5,00	50	10,00
23021148	5,50	5,50	57	10,00
23021149	6,00	6,00	57	10,00
23021150	7,00	7,00	60	13,00
23021151	8,00	8,00	63	16,00
23021152	9,00	9,00	67	16,00
23021153	10,00	10,00	72	19,00
23021154*	11,00	11,00	83	22,00
23021155*	12,00	12,00	83	22,00
23021156*	13,00	13,00	83	22,00
23021157*	14,00	14,00	83	22,00
23021158*	15,00	15,00	92	26,00
23021159*	16,00	16,00	92	26,00
23021160*	18,00	18,00	92	26,00
23021161*	20,00	20,00	101	32,00

* Verfügbar auf Anfrage, Mindestmenge 5 Stk.
* Available on request, minimum qty 5 pcs.
* Disponible sur demande, au moins 5 pièces.

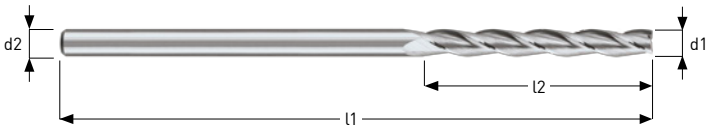
Schnittwerte | Working parameters | Paramètres | **153**

Hochleistungsfräser | High-performance cutters | Fraises haute performance

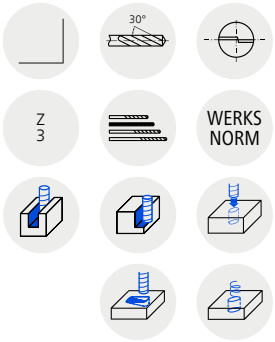
PFERD TOOLS

MS131XL

Spiralfräser – mittlere Ausführung
Twist cutter – medium series
Fraise hélicoïdal – série moyenne





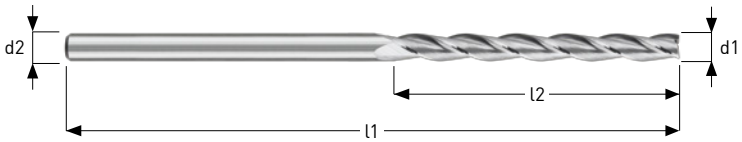


P M K

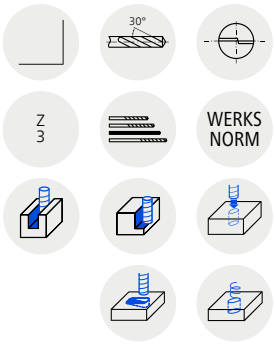
Art. No.	d1 h11	d2 h6	l1 +1/0	l2 +1/0
23021162	3,00	3,00	55	20,00
23021163	4,00	4,00	60	20,00
23021164	5,00	5,00	60	20,00
23021165	6,00	6,00	65	24,00
23021166	8,00	8,00	80	32,00
23021167	10,00	10,00	80	32,00
23021168*	12,00	12,00	100	50,00
23021169*	14,00	14,00	100	50,00
23021170*	16,00	16,00	100	50,00
23021171*	18,00	18,00	100	50,00
23021172*	20,00	20,00	100	50,00

MS131XLS

Spiralfräser – lange Ausführung
Twist cutter – long series
Fraise hélicoïdal – série longue







P M K

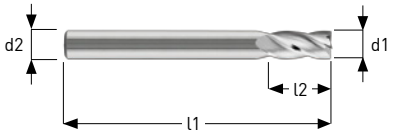
Art. No.	d1 h11	d2 h6	l1 +1/0	l2 +1/0
23021173	4,00	4,00	75	40,00
23021174	5,00	5,00	80	40,00
23021175	6,00	6,00	80	45,00
23021176	8,00	8,00	100	50,00
23021177	10,00	10,00	100	50,00
23021178*	12,00	12,00	150	70,00
23021179*	14,00	14,00	150	75,00
23021180*	16,00	16,00	150	75,00
23021181*	18,00	18,00	150	75,00
23021182*	20,00	20,00	150	75,00

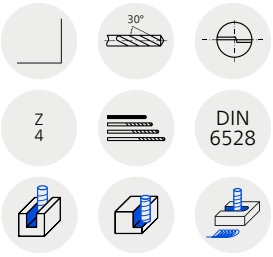
Schnittwerte | Working parameters | Paramètres | **154-155**

PFERD TOOLS

MS141

Spiralfräser – kurze Ausführung
Twist cutter – short series
Fraise hélicoïdal – série courte





P M K



Art. No.	d1 h11	d2 h6	l1 +1/0	l2 +1/0
23021183	2,00	2,00	42	7,00
23021184	2,50	2,50	42	8,00
23021185	3,00	3,00	45	8,00
23021186	3,50	3,50	50	10,00
23021187	4,00	4,00	50	11,00
23021188	4,50	4,50	50	11,00
23021189	5,00	5,00	50	13,00
23021190	5,50	5,50	57	13,00
23021191	6,00	6,00	57	13,00
23021192	6,50	6,50	60	16,00
23021193	7,00	7,00	60	16,00
23021194	7,50	7,50	63	19,00
23021195	8,00	8,00	63	19,00
23021196	8,50	8,50	67	19,00
23021197	9,00	9,00	67	19,00
23021198	9,50	9,50	72	22,00
23021199	10,00	10,00	72	22,00
23021200*	11,00	11,00	83	26,00
23021201*	12,00	12,00	83	26,00
23021202*	13,00	13,00	83	26,00
23021203*	14,00	14,00	83	26,00
23021204*	15,00	15,00	92	32,00
23021205*	16,00	16,00	92	32,00
23021206*	18,00	18,00	92	32,00
23021207*	20,00	20,00	101	38,00

* Verfügbar auf Anfrage, Mindestmenge 5 Stk.
* Available on request, minimum qty 5 pcs.
* Disponible sur demande, au moins 5 pièces.

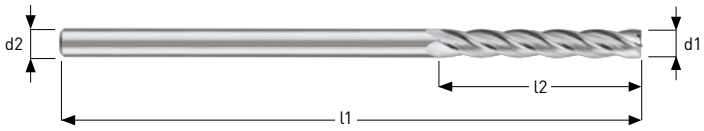
Schnittwerte | Working parameters | Paramètres | **156**

Hochleistungsfräser | High-performance cutters | Fraises haute performance

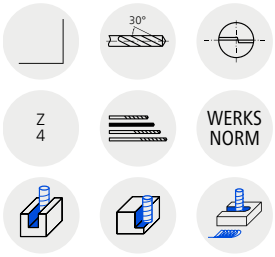
PFERD TOOLS

MS141XL

Spiralfräser – mittlere Ausführung
Twist cutter – medium series
Fraise hélicoïdal – série moyenne





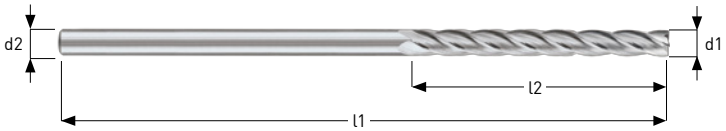


P M K

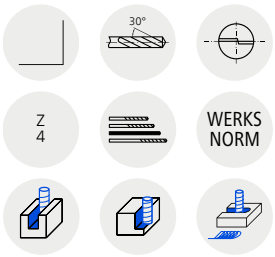
Art. No.	d1 h6	d2 h6	l1 +/-1	l2 +/-0.2
23021208	3,00	3,00	55	20,00
23021209	4,00	4,00	60	20,00
23021210	5,00	5,00	60	20,00
23021211	6,00	6,00	65	24,00
23021212	8,00	8,00	80	32,00
23021213	10,00	10,00	80	32,00
23021214*	12,00	12,00	100	50,00
23021215*	14,00	14,00	100	50,00
23021216*	16,00	16,00	100	50,00
23021217*	18,00	18,00	100	50,00
23021218*	20,00	20,00	100	50,00

MS141XLS

Spiralfräser – lange Ausführung
Twist cutter – long series
Fraise hélicoïdal – série longue







P M K

Art. No.	d1 h6	d2 h6	l1 +/-1	l2 +/-0.2
23021219	4,00	4,00	75	40,00
23021220	5,00	5,00	80	40,00
23021221	6,00	6,00	80	45,00
23021222	8,00	8,00	100	50,00
23021223	10,00	10,00	100	50,00
23021224*	12,00	12,00	150	70,00
23021225*	14,00	14,00	150	75,00
23021226*	16,00	16,00	150	75,00
23021227*	18,00	18,00	150	75,00
23021228*	20,00	20,00	150	75,00

Schnittwerte | Working parameters | Paramètres | **157-159**

MS122

Schnittwerte für das Bohren | Standard values for drilling | Paramètres indicatifs pour perçage

		Schnittgeschwindigkeit Cutting Speed Vitesse de coupe	Vorschub mm/Umdrehung Feed mm/rev Avance mm/tour				
ISO Class	Adv	m/min	ø 2.00-3.50	ø 4.00-5.50	ø 6.00-9.00	ø 10.00-14.00	ø 16.00-20.00
P00	●	160-200	0.012-0.021	0.024-0.033	0.036-0.054	0.06-0.084	0.096-0.12
P01	●	160-200	0.012-0.021	0.024-0.033	0.036-0.054	0.06-0.084	0.096-0.12
P02	●	140-180	0.012-0.021	0.024-0.033	0.036-0.054	0.06-0.084	0.096-0.12
P03	●	100-140	0.012-0.021	0.024-0.033	0.036-0.054	0.06-0.084	0.096-0.12
P04	●	80-120	0.012-0.021	0.024-0.033	0.036-0.054	0.06-0.084	0.096-0.12
P05	◑	60-100	0.012-0.021	0.024-0.033	0.036-0.054	0.06-0.084	0.096-0.12
P06	◑	60-80	0.012-0.021	0.024-0.033	0.036-0.054	0.06-0.084	0.096-0.12
M01	◑	80-120	0.012-0.021	0.024-0.033	0.036-0.054	0.06-0.084	0.096-0.12
M02	◑	60-100	0.012-0.021	0.024-0.033	0.036-0.054	0.06-0.084	0.096-0.12
M03	◑	40-80	0.012-0.021	0.024-0.033	0.036-0.054	0.06-0.084	0.096-0.12
K01	◑	140-180	0.012-0.021	0.024-0.033	0.036-0.054	0.06-0.084	0.096-0.12
K03	◑	100-140	0.012-0.021	0.024-0.033	0.036-0.054	0.06-0.084	0.096-0.12
K02	◑	80-120	0.012-0.021	0.024-0.033	0.036-0.054	0.06-0.084	0.096-0.12
N01	○	-	-	-	-	-	-
N02	○	-	-	-	-	-	-
N03	○	-	-	-	-	-	-
N04	○	-	-	-	-	-	-
S01	○	-	-	-	-	-	-
S02	○	-	-	-	-	-	-
S03	○	-	-	-	-	-	-
S04	○	-	-	-	-	-	-
H01	○	-	-	-	-	-	-
H02	○	-	-	-	-	-	-
H03	○	-	-	-	-	-	-
O01	○	-	-	-	-	-	-
O02	○	-	-	-	-	-	-
O03	○	-	-	-	-	-	-
O04	○	-	-	-	-	-	-
O05	○	-	-	-	-	-	-

● Empfohlen | Recommended | Recommandé
◑ Teilweise empfohlen | Partially recommended | Partiellement recommandé
○ Nicht empfohlen | Not recommended | Non recommandé

PFERD TOOLS

MS122XL

Schnittwerte für das Bohren | Standard values for drilling | Paramètres indicatifs pour perçage

		Schnittgeschwindigkeit Cutting Speed Vitesse de coupe	Vorschub mm/Umdrehung Feed mm/rev Avance mm/tour			
ISO Class	Adv	m/min	ø 3.00-5.00	ø 6.00-10.00	ø 12.00-16.00	ø 18.00-20.00
P00	●	160-200	0.013-0.021	0.025-0.042	0.050-0.067	0.075-0.084
P01	●	160-200	0.013-0.021	0.025-0.042	0.050-0.067	0.075-0.084
P02	●	140-180	0.013-0.021	0.025-0.042	0.050-0.067	0.075-0.084
P03	●	100-140	0.013-0.021	0.025-0.042	0.050-0.067	0.075-0.084
P04	●	80-120	0.013-0.021	0.025-0.042	0.050-0.067	0.075-0.084
P05	◑	60-100	0.013-0.021	0.025-0.042	0.050-0.067	0.075-0.084
P06	◑	60-80	0.013-0.021	0.025-0.042	0.050-0.067	0.075-0.084
M01	◑	80-120	0.013-0.021	0.025-0.042	0.050-0.067	0.075-0.084
M02	◑	60-100	0.013-0.021	0.025-0.042	0.050-0.067	0.075-0.084
M03	◑	40-80	0.013-0.021	0.025-0.042	0.050-0.067	0.075-0.084
K01	◑	140-180	0.013-0.021	0.025-0.042	0.050-0.067	0.075-0.084
K03	◑	100-140	0.013-0.021	0.025-0.042	0.050-0.067	0.075-0.084
K02	◑	80-120	0.013-0.021	0.025-0.042	0.050-0.067	0.075-0.084
N01	○	-	-	-	-	-
N02	○	-	-	-	-	-
N03	○	-	-	-	-	-
N04	○	-	-	-	-	-
S01	○	-	-	-	-	-
S02	○	-	-	-	-	-
S03	○	-	-	-	-	-
S04	○	-	-	-	-	-
H01	○	-	-	-	-	-
H02	○	-	-	-	-	-
H03	○	-	-	-	-	-
O01	○	-	-	-	-	-
O02	○	-	-	-	-	-
O03	○	-	-	-	-	-
O04	○	-	-	-	-	-
O05	○	-	-	-	-	-

● Empfohlen | Recommended | Recommandé
◑ Teilweise empfohlen | Partially recommended | Partiellement recommandé
○ Nicht empfohlen | Not recommended | Non recommandé

MS122XLS

Schnittwerte für das Bohren | Standard values for drilling | Paramètres indicatifs pour perçage

		Schnittgeschwindigkeit Cutting Speed Vitesse de coupe	Vorschub mm/Umdrehung Feed mm/rev Avance mm/tour		
ISO Class	Adv	m/min	ø 4.00-6.00	ø 8.00-14.00	ø 16.00-20.00
P00	●	160-200	0.013-0.020	0.027-0.040	0.052-0.066
P01	●	160-200	0.013-0.020	0.027-0.040	0.052-0.066
P02	●	140-180	0.013-0.020	0.027-0.040	0.052-0.066
P03	●	100-140	0.013-0.020	0.027-0.040	0.052-0.066
P04	●	80-120	0.013-0.020	0.027-0.040	0.052-0.066
P05	◑	60-100	0.013-0.020	0.027-0.040	0.052-0.066
P06	◑	60-80	0.013-0.020	0.027-0.040	0.052-0.066
M01	◑	80-120	0.013-0.020	0.027-0.040	0.052-0.066
M02	◑	60-100	0.013-0.020	0.027-0.040	0.052-0.066
M03	◑	40-80	0.013-0.020	0.027-0.040	0.052-0.066
K01	◑	140-180	0.013-0.020	0.027-0.040	0.052-0.066
K03	◑	100-140	0.013-0.020	0.027-0.040	0.052-0.066
K02	◑	80-120	0.013-0.020	0.027-0.040	0.052-0.066
N01	○	-	-	-	-
N02	○	-	-	-	-
N03	○	-	-	-	-
N04	○	-	-	-	-
S01	○	-	-	-	-
S02	○	-	-	-	-
S03	○	-	-	-	-
S04	○	-	-	-	-
H01	○	-	-	-	-
H02	○	-	-	-	-
H03	○	-	-	-	-
O01	○	-	-	-	-
O02	○	-	-	-	-
O03	○	-	-	-	-
O04	○	-	-	-	-
O05	○	-	-	-	-

● Empfohlen | Recommended | Recommandé
◑ Teilweise empfohlen | Partially recommended | Partiellement recommandé
○ Nicht empfohlen | Not recommended | Non recommandé

PFERD TOOLS

MS123

Schnittwerte für das Bohren | Standard values for drilling | Paramètres indicatifs pour perçage

		Schnittgeschwindigkeit Cutting Speed Vitesse de coupe	Vorschub mm/Umdrehung Feed mm/rev Avance mm/tour					
ISO Class	Adv	m/min	ø 2.00-3.00	ø 4.00-6.00	ø 7.00-9.00	ø 10.00-12.00	ø 14.00-16.00	ø 18.00-20.00
P00	●	160-200	0.060-0.090	0.12-0.18	0.208-0.263	0.288-0.334	0.374-0.404	0.424-0.432
P01	●	160-200	0.060-0.090	0.12-0.18	0.208-0.263	0.288-0.334	0.374-0.404	0.424-0.432
P02	●	140-180	0.060-0.090	0.12-0.18	0.208-0.263	0.288-0.334	0.374-0.404	0.424-0.432
P03	●	100-140	0.060-0.090	0.12-0.18	0.208-0.263	0.288-0.334	0.374-0.404	0.424-0.432
P04	●	80-120	0.060-0.090	0.12-0.18	0.208-0.263	0.288-0.334	0.374-0.404	0.424-0.432
P05	◑	60-100	0.060-0.090	0.12-0.18	0.208-0.263	0.288-0.334	0.374-0.404	0.424-0.432
P06	◑	60-80	0.060-0.090	0.12-0.18	0.208-0.263	0.288-0.334	0.374-0.404	0.424-0.432
M01	◑	80-120	0.060-0.090	0.12-0.18	0.208-0.263	0.288-0.334	0.374-0.404	0.424-0.432
M02	◑	60-100	0.060-0.090	0.12-0.18	0.208-0.263	0.288-0.334	0.374-0.404	0.424-0.432
M03	◑	40-80	0.060-0.090	0.12-0.18	0.208-0.263	0.288-0.334	0.374-0.404	0.424-0.432
K01	◑	140-180	0.060-0.090	0.12-0.18	0.208-0.263	0.288-0.334	0.374-0.404	0.424-0.432
K03	◑	100-140	0.060-0.090	0.12-0.18	0.208-0.263	0.288-0.334	0.374-0.404	0.424-0.432
K02	◑	80-120	0.060-0.090	0.12-0.18	0.208-0.263	0.288-0.334	0.374-0.404	0.424-0.432
N01	○	-	-	-	-	-	-	-
N02	○	-	-	-	-	-	-	-
N03	○	-	-	-	-	-	-	-
N04	○	-	-	-	-	-	-	-
S01	○	-	-	-	-	-	-	-
S02	○	-	-	-	-	-	-	-
S03	○	-	-	-	-	-	-	-
S04	○	-	-	-	-	-	-	-
H01	○	-	-	-	-	-	-	-
H02	○	-	-	-	-	-	-	-
H03	○	-	-	-	-	-	-	-
O01	○	-	-	-	-	-	-	-
O02	○	-	-	-	-	-	-	-
O03	○	-	-	-	-	-	-	-
O04	○	-	-	-	-	-	-	-
O05	○	-	-	-	-	-	-	-

● Empfohlen | Recommended | Recommandé
◑ Teilweise empfohlen | Partially recommended | Partiellement recommandé
○ Nicht empfohlen | Not recommended | Non recommandé

MS123XL

Schnittwerte für das Bohren | Standard values for drilling | Paramètres indicatifs pour perçage

		Schnittgeschwindigkeit Cutting Speed Vitesse de coupe	Vorschub mm/Umdrehung Feed mm/rev Avance mm/tour			
ISO Class	Adv	m/min	ø 3.00-5.00	ø 6.00-8.00	ø 10.00-12.00	ø 14.00-20.00
P00	●	160-200	0.072-0.12	0.143-0.188	0.23-0.267	0.30-0.345
P01	●	160-200	0.072-0.12	0.143-0.188	0.23-0.267	0.30-0.345
P02	●	140-180	0.072-0.12	0.143-0.188	0.23-0.267	0.30-0.345
P03	●	100-140	0.072-0.12	0.143-0.188	0.23-0.267	0.30-0.345
P04	●	80-120	0.072-0.12	0.143-0.188	0.23-0.267	0.30-0.345
P05	◑	60-100	0.072-0.12	0.143-0.188	0.23-0.267	0.30-0.345
P06	◑	60-80	0.072-0.12	0.143-0.188	0.23-0.267	0.30-0.345
M01	◑	80-120	0.072-0.12	0.143-0.188	0.23-0.267	0.30-0.345
M02	◑	60-100	0.072-0.12	0.143-0.188	0.23-0.267	0.30-0.345
M03	◑	40-80	0.072-0.12	0.143-0.188	0.23-0.267	0.30-0.345
K01	◑	140-180	0.072-0.12	0.143-0.188	0.23-0.267	0.30-0.345
K03	◑	100-140	0.072-0.12	0.143-0.188	0.23-0.267	0.30-0.345
K02	◑	80-120	0.072-0.12	0.143-0.188	0.23-0.267	0.30-0.345
N01	○	-	-	-	-	-
N02	○	-	-	-	-	-
N03	○	-	-	-	-	-
N04	○	-	-	-	-	-
S01	○	-	-	-	-	-
S02	○	-	-	-	-	-
S03	○	-	-	-	-	-
S04	○	-	-	-	-	-
H01	○	-	-	-	-	-
H02	○	-	-	-	-	-
H03	○	-	-	-	-	-
O01	○	-	-	-	-	-
O02	○	-	-	-	-	-
O03	○	-	-	-	-	-
O04	○	-	-	-	-	-
O05	○	-	-	-	-	-

● Empfohlen | Recommended | Recommandé
◑ Teilweise empfohlen | Partially recommended | Partiellement recommandé
○ Nicht empfohlen | Not recommended | Non recommandé

PFERD TOOLS

MS123XLS

Schnittwerte für das Bohren | Standard values for drilling | Paramètres indicatifs pour perçage

		Schnittgeschwindigkeit Cutting Speed Vitesse de coupe	Vorschub mm/Umdrehung Feed mm/rev Avance mm/tour				
ISO Class	Adv	m/min	ø 4.00-5.00	ø 6.00-8.00	ø 10.00-12.00	ø 14.00-16.00	ø 20.00
P00	●	160-200	0.084-0.105	0.125-0.165	0.201-0.233	0.261-0.282	0.302
P01	●	160-200	0.084-0.105	0.125-0.165	0.201-0.233	0.261-0.282	0.302
P02	●	140-180	0.084-0.105	0.125-0.165	0.201-0.233	0.261-0.282	0.302
P03	●	100-140	0.084-0.105	0.125-0.165	0.201-0.233	0.261-0.282	0.302
P04	●	80-120	0.084-0.105	0.125-0.165	0.201-0.233	0.261-0.282	0.302
P05	◑	60-100	0.084-0.105	0.125-0.165	0.201-0.233	0.261-0.282	0.302
P06	◑	60-80	0.084-0.105	0.125-0.165	0.201-0.233	0.261-0.282	0.302
M01	◑	80-120	0.084-0.105	0.125-0.165	0.201-0.233	0.261-0.282	0.302
M02	◑	60-100	0.084-0.105	0.125-0.165	0.201-0.233	0.261-0.282	0.302
M03	◑	40-80	0.084-0.105	0.125-0.165	0.201-0.233	0.261-0.282	0.302
K01	◑	140-180	0.084-0.105	0.125-0.165	0.201-0.233	0.261-0.282	0.302
K03	◑	100-140	0.084-0.105	0.125-0.165	0.201-0.233	0.261-0.282	0.302
K02	◑	80-120	0.084-0.105	0.125-0.165	0.201-0.233	0.261-0.282	0.302
N01	○	-	-	-	-	-	-
N02	○	-	-	-	-	-	-
N03	○	-	-	-	-	-	-
N04	○	-	-	-	-	-	-
S01	○	-	-	-	-	-	-
S02	○	-	-	-	-	-	-
S03	○	-	-	-	-	-	-
S04	○	-	-	-	-	-	-
H01	○	-	-	-	-	-	-
H02	○	-	-	-	-	-	-
H03	○	-	-	-	-	-	-
O01	○	-	-	-	-	-	-
O02	○	-	-	-	-	-	-
O03	○	-	-	-	-	-	-
O04	○	-	-	-	-	-	-
O05	○	-	-	-	-	-	-

● Empfohlen | Recommended | Recommandé
◑ Teilweise empfohlen | Partially recommended | Partiellement recommandé
○ Nicht empfohlen | Not recommended | Non recommandé

MS124

Schnittwerte für das Bohren | Standard values for drilling | Paramètres indicatifs pour perçage

		Schnittgeschwindigkeit Cutting Speed Vitesse de coupe	Vorschub mm/Umdrehung Feed mm/rev Avance mm/tour					
ISO Class	Adv	m/min	ø 2.00-3.00	ø 4.00-5.00	ø 6.00-8.00	ø 9.00-10.00	ø 12.00-14.00	ø 16.00-20.00
P00	○	-	-	-	-	-	-	-
P01	○	-	-	-	-	-	-	-
P02	○	-	-	-	-	-	-	-
P03	○	-	-	-	-	-	-	-
P04	○	-	-	-	-	-	-	-
P05	○	-	-	-	-	-	-	-
P06	○	-	-	-	-	-	-	-
M01	○	-	-	-	-	-	-	-
M02	○	-	-	-	-	-	-	-
M03	○	-	-	-	-	-	-	-
K01	○	-	-	-	-	-	-	-
K03	○	-	-	-	-	-	-	-
K02	○	-	-	-	-	-	-	-
N01	●	200-400	0.007-0.011	0.02-0.025	0.030-0.040	0.030-0.040	0.07-0.085	0.096-0.12
N02	●	200-400	0.007-0.011	0.02-0.025	0.030-0.040	0.030-0.040	0.07-0.085	0.096-0.12
N03	●	160-200	0.007-0.011	0.02-0.025	0.030-0.040	0.030-0.040	0.07-0.085	0.096-0.12
N04	●	160-200	0.007-0.011	0.02-0.025	0.030-0.040	0.030-0.040	0.07-0.085	0.096-0.12
S01	○	-	-	-	-	-	-	-
S02	○	-	-	-	-	-	-	-
S03	○	-	-	-	-	-	-	-
S04	○	-	-	-	-	-	-	-
H01	○	-	-	-	-	-	-	-
H02	○	-	-	-	-	-	-	-
H03	○	-	-	-	-	-	-	-
O01	●	200-400	0.007-0.011	0.02-0.025	0.030-0.040	0.030-0.040	0.07-0.085	0.096-0.12
O02	○	-	-	-	-	-	-	-
O03	○	-	-	-	-	-	-	-
O04	○	-	-	-	-	-	-	-
O05	○	-	-	-	-	-	-	-

● Empfohlen | Recommended | Recommandé
◑ Teilweise empfohlen | Partially recommended | Partiellement recommandé
○ Nicht empfohlen | Not recommended | Non recommandé

PFERD TOOLS

MS131

Schnittwerte für das Bohren | Standard values for drilling | Paramètres indicatifs pour perçage

		Schnittgeschwindigkeit Cutting Speed Vitesse de coupe	Vorschub mm/Umdrehung Feed mm/rev Avance mm/tour							
ISO Class	Adv	m/min	ø 2.00-3.00	ø 3.50-4.50	ø 5.00-6.00	ø 7.00-9.00	ø 10.00-12.00	ø 13.00-14.00	ø 15.00-16.00	ø 18.00-20.00
P00	●	160-200	0.011-0.016	0.019-0.024	0.027-0.033	0.038-0.050	0.055-0.066	0.071-0.077	0.082-0.088	0.099-0.11
P01	●	160-200	0.011-0.016	0.019-0.024	0.027-0.033	0.038-0.050	0.055-0.066	0.071-0.077	0.082-0.088	0.099-0.11
P02	●	140-180	0.011-0.016	0.019-0.024	0.027-0.033	0.038-0.050	0.055-0.066	0.071-0.077	0.082-0.088	0.099-0.11
P03	●	100-140	0.011-0.016	0.019-0.024	0.027-0.033	0.038-0.050	0.055-0.066	0.071-0.077	0.082-0.088	0.099-0.11
P04	●	80-120	0.011-0.016	0.019-0.024	0.027-0.033	0.038-0.050	0.055-0.066	0.071-0.077	0.082-0.088	0.099-0.11
P05	◑	60-100	0.011-0.016	0.019-0.024	0.027-0.033	0.038-0.050	0.055-0.066	0.071-0.077	0.082-0.088	0.099-0.11
P06	◑	60-80	0.011-0.016	0.019-0.024	0.027-0.033	0.038-0.050	0.055-0.066	0.071-0.077	0.082-0.088	0.099-0.11
M01	◑	80-120	0.011-0.016	0.019-0.024	0.027-0.033	0.038-0.050	0.055-0.066	0.071-0.077	0.082-0.088	0.099-0.11
M02	◑	60-100	0.011-0.016	0.019-0.024	0.027-0.033	0.038-0.050	0.055-0.066	0.071-0.077	0.082-0.088	0.099-0.11
M03	◑	40-80	0.011-0.016	0.019-0.024	0.027-0.033	0.038-0.050	0.055-0.066	0.071-0.077	0.082-0.088	0.099-0.11
K01	◑	140-180	0.011-0.016	0.019-0.024	0.027-0.033	0.038-0.050	0.055-0.066	0.071-0.077	0.082-0.088	0.099-0.11
K03	◑	100-140	0.011-0.016	0.019-0.024	0.027-0.033	0.038-0.050	0.055-0.066	0.071-0.077	0.082-0.088	0.099-0.11
K02	◑	80-120	0.011-0.016	0.019-0.024	0.027-0.033	0.038-0.050	0.055-0.066	0.071-0.077	0.082-0.088	0.099-0.11
N01	○	-	-	-	-	-	-	-	-	-
N02	○	-	-	-	-	-	-	-	-	-
N03	○	-	-	-	-	-	-	-	-	-
N04	○	-	-	-	-	-	-	-	-	-
S01	○	-	-	-	-	-	-	-	-	-
S02	○	-	-	-	-	-	-	-	-	-
S03	○	-	-	-	-	-	-	-	-	-
S04	○	-	-	-	-	-	-	-	-	-
H01	○	-	-	-	-	-	-	-	-	-
H02	○	-	-	-	-	-	-	-	-	-
H03	○	-	-	-	-	-	-	-	-	-
O01	○	-	-	-	-	-	-	-	-	-
O02	○	-	-	-	-	-	-	-	-	-
O03	○	-	-	-	-	-	-	-	-	-
O04	○	-	-	-	-	-	-	-	-	-
O05	○	-	-	-	-	-	-	-	-	-

● Empfohlen | Recommended | Recommandé
◑ Teilweise empfohlen | Partially recommended | Partiellement recommandé
○ Nicht empfohlen | Not recommended | Non recommandé

MS131XL

Schnittwerte für das Bohren | Standard values for drilling | Paramètres indicatifs pour perçage

		Schnittgeschwindigkeit Cutting Speed Vitesse de coupe	Vorschub mm/Umdrehung Feed mm/rev Avance mm/tour				
ISO Class	Adv	m/min	ø 3.00-4.00	ø 5.00-6.00	ø 8.00-10.00	ø 12.00-14.00	ø 16.00-20.00
P00	●	160-200	0.016-0.022	0.027-0.033	0.044-0.055	0.066-0.077	0.088-0.10
P01	●	160-200	0.016-0.022	0.027-0.033	0.044-0.055	0.066-0.077	0.088-0.10
P02	●	140-180	0.016-0.022	0.027-0.033	0.044-0.055	0.066-0.077	0.088-0.10
P03	●	100-140	0.016-0.022	0.027-0.033	0.044-0.055	0.066-0.077	0.088-0.10
P04	●	80-120	0.016-0.022	0.027-0.033	0.044-0.055	0.066-0.077	0.088-0.10
P05	◑	60-100	0.016-0.022	0.027-0.033	0.044-0.055	0.066-0.077	0.088-0.10
P06	◑	60-80	0.016-0.022	0.027-0.033	0.044-0.055	0.066-0.077	0.088-0.10
M01	◑	80-120	0.016-0.022	0.027-0.033	0.044-0.055	0.066-0.077	0.088-0.10
M02	◑	60-100	0.016-0.022	0.027-0.033	0.044-0.055	0.066-0.077	0.088-0.10
M03	◑	40-80	0.016-0.022	0.027-0.033	0.044-0.055	0.066-0.077	0.088-0.10
K01	◑	140-180	0.016-0.022	0.027-0.033	0.044-0.055	0.066-0.077	0.088-0.10
K03	◑	100-140	0.016-0.022	0.027-0.033	0.044-0.055	0.066-0.077	0.088-0.10
K02	◑	80-120	0.016-0.022	0.027-0.033	0.044-0.055	0.066-0.077	0.088-0.10
N01	○	-	-	-	-	-	-
N02	○	-	-	-	-	-	-
N03	○	-	-	-	-	-	-
N04	○	-	-	-	-	-	-
S01	○	-	-	-	-	-	-
S02	○	-	-	-	-	-	-
S03	○	-	-	-	-	-	-
S04	○	-	-	-	-	-	-
H01	○	-	-	-	-	-	-
H02	○	-	-	-	-	-	-
H03	○	-	-	-	-	-	-
O01	○	-	-	-	-	-	-
O02	○	-	-	-	-	-	-
O03	○	-	-	-	-	-	-
O04	○	-	-	-	-	-	-
O05	○	-	-	-	-	-	-

● Empfohlen | Recommended | Recommandé
◑ Teilweise empfohlen | Partially recommended | Partiellement recommandé
○ Nicht empfohlen | Not recommended | Non recommandé

PFERD TOOLS

MS131XLS

Schnittwerte für das Bohren | Standard values for drilling | Paramètres indicatifs pour perçage

		Schnittgeschwindigkeit Cutting Speed Vitesse de coupe	Vorschub mm/Umdrehung Feed mm/rev Avance mm/tour			
ISO Class	Adv	m/min	ø 4.00-6.00	ø 8.00-12.00	ø 14.00-16.00	ø 18.00-20.00
P00	●	160-200	0.022-0.033	0.044-0.066	0.077-0.088	0.099-0.11
P01	●	160-200	0.022-0.033	0.044-0.066	0.077-0.088	0.099-0.11
P02	●	140-180	0.022-0.033	0.044-0.066	0.077-0.088	0.099-0.11
P03	●	100-140	0.022-0.033	0.044-0.066	0.077-0.088	0.099-0.11
P04	●	80-120	0.022-0.033	0.044-0.066	0.077-0.088	0.099-0.11
P05	◑	60-100	0.022-0.033	0.044-0.066	0.077-0.088	0.099-0.11
P06	◑	60-80	0.022-0.033	0.044-0.066	0.077-0.088	0.099-0.11
M01	◑	80-120	0.022-0.033	0.044-0.066	0.077-0.088	0.099-0.11
M02	◑	60-100	0.022-0.033	0.044-0.066	0.077-0.088	0.099-0.11
M03	◑	40-80	0.022-0.033	0.044-0.066	0.077-0.088	0.099-0.11
K01	◑	140-180	0.022-0.033	0.044-0.066	0.077-0.088	0.099-0.11
K03	◑	100-140	0.022-0.033	0.044-0.066	0.077-0.088	0.099-0.11
K02	◑	80-120	0.022-0.033	0.044-0.066	0.077-0.088	0.099-0.11
N01	○	-	-	-	-	-
N02	○	-	-	-	-	-
N03	○	-	-	-	-	-
N04	○	-	-	-	-	-
S01	○	-	-	-	-	-
S02	○	-	-	-	-	-
S03	○	-	-	-	-	-
S04	○	-	-	-	-	-
H01	○	-	-	-	-	-
H02	○	-	-	-	-	-
H03	○	-	-	-	-	-
O01	○	-	-	-	-	-
O02	○	-	-	-	-	-
O03	○	-	-	-	-	-
O04	○	-	-	-	-	-
O05	○	-	-	-	-	-

● Empfohlen | Recommended | Recommandé
◑ Teilweise empfohlen | Partially recommended | Partiellement recommandé
○ Nicht empfohlen | Not recommended | Non recommandé

PFERD TOOLS

MS141

Schnittwerte für das Bohren | Standard values for drilling | Paramètres indicatifs pour perçage

		Schnittgeschwindigkeit Cutting Speed Vitesse de coupe	Vorschub mm/Umdrehung Feed mm/rev Avance mm/tour							
ISO Class	Adv	m/min	ø 2.00-3.00	ø 3.50-4.50	ø 5.00-6.00	ø 6.50-7.50	ø 8.00-9.50	ø 10.00-12.00	ø 13.00-15.00	ø 16.00-20.00
P00	●	160-200	0.01-0.015	0.017-0.022	0.025-0.030	0.032-0.037	0.04-0.047	0.05-0.06	0.065-0.075	0.08-0.1
P01	●	160-200	0.01-0.015	0.017-0.022	0.025-0.030	0.032-0.037	0.04-0.047	0.05-0.06	0.065-0.075	0.08-0.1
P02	●	140-180	0.01-0.015	0.017-0.022	0.025-0.030	0.032-0.037	0.04-0.047	0.05-0.06	0.065-0.075	0.08-0.1
P03	●	100-140	0.01-0.015	0.017-0.022	0.025-0.030	0.032-0.037	0.04-0.047	0.05-0.06	0.065-0.075	0.08-0.1
P04	●	80-120	0.01-0.015	0.017-0.022	0.025-0.030	0.032-0.037	0.04-0.047	0.05-0.06	0.065-0.075	0.08-0.1
P05	◑	60-100	0.01-0.015	0.017-0.022	0.025-0.030	0.032-0.037	0.04-0.047	0.05-0.06	0.065-0.075	0.08-0.1
P06	◑	60-80	0.01-0.015	0.017-0.022	0.025-0.030	0.032-0.037	0.04-0.047	0.05-0.06	0.065-0.075	0.08-0.1
M01	◑	80-120	0.01-0.015	0.017-0.022	0.025-0.030	0.032-0.037	0.04-0.047	0.05-0.06	0.065-0.075	0.08-0.1
M02	◑	60-100	0.01-0.015	0.017-0.022	0.025-0.030	0.032-0.037	0.04-0.047	0.05-0.06	0.065-0.075	0.08-0.1
M03	◑	40-80	0.01-0.015	0.017-0.022	0.025-0.030	0.032-0.037	0.04-0.047	0.05-0.06	0.065-0.075	0.08-0.1
K01	◑	140-180	0.01-0.015	0.017-0.022	0.025-0.030	0.032-0.037	0.04-0.047	0.05-0.06	0.065-0.075	0.08-0.1
K03	◑	100-140	0.01-0.015	0.017-0.022	0.025-0.030	0.032-0.037	0.04-0.047	0.05-0.06	0.065-0.075	0.08-0.1
K02	◑	80-120	0.01-0.015	0.017-0.022	0.025-0.030	0.032-0.037	0.04-0.047	0.05-0.06	0.065-0.075	0.08-0.1
N01	○	-	-	-	-	-	-	-	-	-
N02	○	-	-	-	-	-	-	-	-	-
N03	○	-	-	-	-	-	-	-	-	-
N04	○	-	-	-	-	-	-	-	-	-
S01	○	-	-	-	-	-	-	-	-	-
S02	○	-	-	-	-	-	-	-	-	-
S03	○	-	-	-	-	-	-	-	-	-
S04	○	-	-	-	-	-	-	-	-	-
H01	○	-	-	-	-	-	-	-	-	-
H02	○	-	-	-	-	-	-	-	-	-
H03	○	-	-	-	-	-	-	-	-	-
O01	○	-	-	-	-	-	-	-	-	-
O02	○	-	-	-	-	-	-	-	-	-
O03	○	-	-	-	-	-	-	-	-	-
O04	○	-	-	-	-	-	-	-	-	-
O05	○	-	-	-	-	-	-	-	-	-

● Empfohlen | Recommended | Recommandé
◑ Teilweise empfohlen | Partially recommended | Partiellement recommandé
○ Nicht empfohlen | Not recommended | Non recommandé

PFERD TOOLS

MS141XL

Schnittwerte für das Bohren | Standard values for drilling | Paramètres indicatifs pour perçage

		Schnittgeschwindigkeit Cutting Speed Vitesse de coupe	Vorschub mm/Umdrehung Feed mm/rev Avance mm/tour				
ISO Class	Adv	m/min	ø 3.00-5.00	ø 6.00-8.00	ø 10.00-12.00	ø 14.00-16.00	ø 14.00-16.00
P00	●	160-200	0.01-0.017	0.021-0.028	0.035-0.042	0.050-0.056	0.063-0.07
P01	●	160-200	0.01-0.017	0.021-0.028	0.035-0.042	0.050-0.056	0.063-0.07
P02	●	140-180	0.01-0.017	0.021-0.028	0.035-0.042	0.050-0.056	0.063-0.07
P03	●	100-140	0.01-0.017	0.021-0.028	0.035-0.042	0.050-0.056	0.063-0.07
P04	●	80-120	0.01-0.017	0.021-0.028	0.035-0.042	0.050-0.056	0.063-0.07
P05	◑	60-100	0.01-0.017	0.021-0.028	0.035-0.042	0.050-0.056	0.063-0.07
P06	◑	60-80	0.01-0.017	0.021-0.028	0.035-0.042	0.050-0.056	0.063-0.07
M01	◑	80-120	0.01-0.017	0.021-0.028	0.035-0.042	0.050-0.056	0.063-0.07
M02	◑	60-100	0.01-0.017	0.021-0.028	0.035-0.042	0.050-0.056	0.063-0.07
M03	◑	40-80	0.01-0.017	0.021-0.028	0.035-0.042	0.050-0.056	0.063-0.07
K01	◑	140-180	0.01-0.017	0.021-0.028	0.035-0.042	0.050-0.056	0.063-0.07
K03	◑	100-140	0.01-0.017	0.021-0.028	0.035-0.042	0.050-0.056	0.063-0.07
K02	◑	80-120	0.01-0.017	0.021-0.028	0.035-0.042	0.050-0.056	0.063-0.07
N01	○	-	-	-	-	-	-
N02	○	-	-	-	-	-	-
N03	○	-	-	-	-	-	-
N04	○	-	-	-	-	-	-
S01	○	-	-	-	-	-	-
S02	○	-	-	-	-	-	-
S03	○	-	-	-	-	-	-
S04	○	-	-	-	-	-	-
H01	○	-	-	-	-	-	-
H02	○	-	-	-	-	-	-
H03	○	-	-	-	-	-	-
O01	○	-	-	-	-	-	-
O02	○	-	-	-	-	-	-
O03	○	-	-	-	-	-	-
O04	○	-	-	-	-	-	-
O05	○	-	-	-	-	-	-

● Empfohlen | Recommended | Recommandé
◑ Teilweise empfohlen | Partially recommended | Partiellement recommandé
○ Nicht empfohlen | Not recommended | Non recommandé

MS141XLS

Schnittwerte für das Bohren | Standard values for drilling | Paramètres indicatifs pour perçage

		Schnittgeschwindigkeit Cutting Speed Vitesse de coupe	Vorschub mm/Umdrehung Feed mm/rev Avance mm/tour			
ISO Class	Adv	m/min	ø 4.00-6.00	ø 8.00-12.00	ø 14.00-16.00	ø 18.00-20.00
P00	●	160-200	0.011-0.016	0.022-0.033	0.038-0.044	0.05-0.055
P01	●	160-200	0.011-0.016	0.022-0.033	0.038-0.044	0.05-0.055
P02	●	140-180	0.011-0.016	0.022-0.033	0.038-0.044	0.05-0.055
P03	●	100-140	0.011-0.016	0.022-0.033	0.038-0.044	0.05-0.055
P04	●	80-120	0.011-0.016	0.022-0.033	0.038-0.044	0.05-0.055
P05	◑	60-100	0.011-0.016	0.022-0.033	0.038-0.044	0.05-0.055
P06	◑	60-80	0.011-0.016	0.022-0.033	0.038-0.044	0.05-0.055
M01	◑	80-120	0.011-0.016	0.022-0.033	0.038-0.044	0.05-0.055
M02	◑	60-100	0.011-0.016	0.022-0.033	0.038-0.044	0.05-0.055
M03	◑	40-80	0.011-0.016	0.022-0.033	0.038-0.044	0.05-0.055
K01	◑	140-180	0.011-0.016	0.022-0.033	0.038-0.044	0.05-0.055
K03	◑	100-140	0.011-0.016	0.022-0.033	0.038-0.044	0.05-0.055
K02	◑	80-120	0.011-0.016	0.022-0.033	0.038-0.044	0.05-0.055
N01	○	-	-	-	-	-
N02	○	-	-	-	-	-
N03	○	-	-	-	-	-
N04	○	-	-	-	-	-
S01	○	-	-	-	-	-
S02	○	-	-	-	-	-
S03	○	-	-	-	-	-
S04	○	-	-	-	-	-
H01	○	-	-	-	-	-
H02	○	-	-	-	-	-
H03	○	-	-	-	-	-
O01	○	-	-	-	-	-
O02	○	-	-	-	-	-
O03	○	-	-	-	-	-
O04	○	-	-	-	-	-
O05	○	-	-	-	-	-

● Empfohlen | Recommended | Recommandé
◑ Teilweise empfohlen | Partially recommended | Partiellement recommandé
○ Nicht empfohlen | Not recommended | Non recommandé

Notes



Entgraten
Deburring
Ébavurage

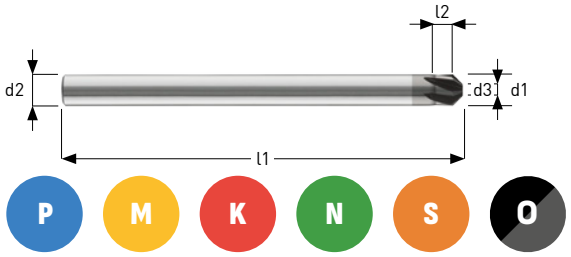
Entgrat-/ Faswerkzeuge
Chamfer tools
Outils de chanfrein

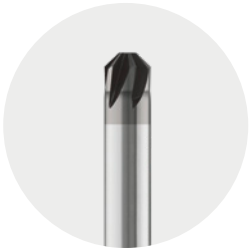
TTMCA90	160
TTMCD90	160
TTMCR90	161

Faswerkzeuge | Chamfer tools | Outils de chanfrein

TTMCA90

90° vordere Fase
90° front chamfer
Chanfrein avant 90°

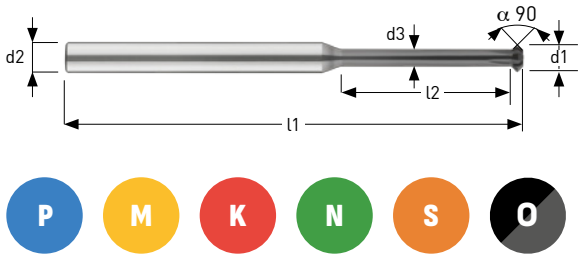




Art. No.	d1 0/+0.05	d2 h6	d3 +/-0.02	l1 +/-0.2	l2 0/+0.1	Z
23023611	1,00	3,00	0,30	40	1,50	4
23001330	2,00	3,00	0,60	40	3,00	4
23023612	3,00	3,00	1,00	50	4,20	5
23023613	4,00	4,00	1,50	50	5,00	6
23000220	6,00	6,00	2,00	50	7,50	6

TTMCD90

90° Doppelfase
90° double chamfer
Double chanfrein 90°





Art. No.	d1 +/-0.025	d2 h6	d3 +/-0.015	l1 +/-0.2	l2 +/-0.05	Z
23023614	0,90	4,00	0,45	50	3,30	4
23023615	1,40	4,00	0,70	50	5,00	5
23023616	1,80	4,00	0,90	50	6,50	5
23023617	2,80	4,00	1,40	60	10,00	5
23023618	3,70	4,00	1,85	60	13,00	5
23023619	4,70	6,00	2,35	70	16,50	5
23023620	5,70	6,00	2,85	70	20,00	6

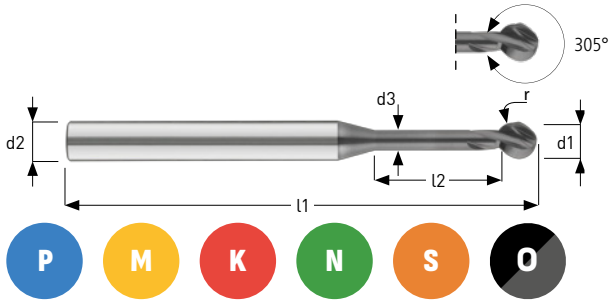
Schnittwerte | Working parameters | Paramètres | **162-163**

PFERD TOOLS

TTMCR90

Radius Fase
Radius chamfer
Chanfrein de rayon

3xD | Z 3 | WERKS NORM



P M K N S O



Art. No.	d1 0/-0.04	d2 h6	d3 0/-0.05	l1 +/-0.2	l2 +/-0.5	r +/-0.02
23023621	1,00	4,00	0,50	50	3,00	0,50
23001252	1,50	4,00	0,75	50	4,50	0,75
23023622	2,00	4,00	1,00	60	6,00	1,00
23023623	2,50	4,00	1,25	64	7,50	1,25
23023624	3,00	4,00	1,50	64	9,00	1,50
23023625	4,00	6,00	2,00	70	12,00	2,00
23001402	6,00	6,00	3,00	70	18,00	3,00

Notes

PFERD TOOLS

TTMCA90

Schnittwerte für das Bohren | Standard values for drilling | Paramètres indicatifs pour perçage

		Schnittgeschwindigkeit Cutting Speed Vitesse de coupe	Vorschub mm/Umdrehung Feed mm/rev Avance mm/tour	
ISO Class	Adv	m/min	ø 1.00-2.00	ø 3.00-6.00
P00	●	120	0.01-0.04	0.03-0.05
P01	●	120	0.01-0.04	0.03-0.05
P02	●	120	0.01-0.04	0.03-0.05
P03	●	100	0.01-0.03	0.02-0.04
P04	●	80	0.01-0.02	0.01-0.02
P05	●	80	0.01-0.02	0.02-0.03
P06	●	50	0.01-0.02	0.01-0.03
M01	●	50	0.01-0.02	0.02-0.03
M02	●	50	0.01-0.02	0.02-0.03
M03	●	50	0.01-0.02	0.02-0.03
K01	●	60	0.01-0.02	0.01-0.03
K03	●	60	0.01-0.02	0.01-0.03
K02	●	60	0.01-0.02	0.01-0.03
N01	●	200	0.02-0.05	0.03-0.07
N02	●	200	0.02-0.05	0.03-0.07
N03	●	200	0.02-0.05	0.03-0.07
N04	●	120	0.02-0.05	0.03-0.07
S01	●	40	0.01-0.02	0.02-0.03
S02	●	50	0.01-0.02	0.02-0.03
S03	●	40	0.01-0.02	0.02-0.03
S04	●	40	0.01-0.02	0.02-0.03
H01	●	60	0.01-0.02	0.01-0.03
H02	●	60	0.01-0.02	0.01-0.03
H03	○	-	-	-
O01	●	200	0.02-0.05	0.03-0.07
O02	○	-	-	-
O03	○	-	-	-
O04	○	-	-	-
O05	○	-	-	-

● Empfohlen | Recommended | Recommandé
◑ Teilweise empfohlen | Partially recommended | Partiellement recommandé
○ Nicht empfohlen | Not recommended | Non recommandé

Faswerkzeuge | Chamfer tools | Outils de chanfrein

PFERD TOOLS

TTMCD90

Schnittwerte für das Bohren | Standard values for drilling | Paramètres indicatifs pour perçage

		Schnittgeschwindigkeit Cutting Speed Vitesse de coupe	Vorschub mm/Umdrehung Feed mm/rev Avance mm/tour	
ISO Class	Adv	m/min	ø 0.90-1.80	ø 2.80-5.70
P00	●	120	0.03	0.04
P01	●	120	0.03	0.04
P02	●	120	0.03	0.04
P03	●	100	0.020	0.030
P04	●	80	0.050	0.030
P05	●	50	0.010	0.030
P06	●	50	0.015	0.030
M01	●	50	0.015	0.030
M02	●	50	0.015	0.030
M03	●	50	0.015	0.030
K01	●	60	0.015	0.030
K03	●	60	0.015	0.030
K02	●	60	0.015	0.030
N01	●	200	0.030	0.040
N02	●	200	0.030	0.040
N03	●	200	0.030	0.040
N04	●	200	0.030	0.040
S01	●	40	0.020	0.030
S02	●	50	0.020	0.030
S03	●	40	0.020	0.030
S04	●	40	0.020	0.030
H01	●	60	0.015	0.02
H02	●	60	0.015	0.02
H03	○	-	-	-
O01	●	200	0.030	0.040
O02	○	-	-	-
O03	○	-	-	-
O04	○	-	-	-
O05	○	-	-	-

● Empfohlen | Recommended | Recommandé
◑ Teilweise empfohlen | Partially recommended | Partiellement recommandé
○ Nicht empfohlen | Not recommended | Non recommandé

PFERD TOOLS

TTMCR90

Schnittwerte für das Bohren | Standard values for drilling | Paramètres indicatifs pour perçage

		Schnittgeschwindigkeit Cutting Speed Vitesse de coupe	Vorschub mm/Umdrehung Feed mm/rev Avance mm/tour		
ISO Class	Adv	m/min	ø 1.00-2.50	ø 3.00-4.00	ø 6.00
P00	●	80-120	0.02-0.03	0.03-0.04	0.04-0.05
P01	●	80-120	0.02-0.03	0.03-0.04	0.04-0.05
P02	●	80-120	0.02-0.03	0.03-0.04	0.04-0.05
P03	●	80-100	0.01-0.02	0.02-0.03	0.03-0.04
P04	●	50-80	0.005-0.015	0.015-0.025	0.025-0.035
P05	●	60-100	0.01-0.015	0.015-0.025	0.025-0.035
P06	●	60-100	0.01-0.015	0.015-0.025	0.025-0.035
M01	●	40-70	0.015-0.025	0.025-0.035	0.025-0.045
M02	●	40-70	0.015-0.025	0.025-0.035	0.025-0.045
M03	●	40-70	0.015-0.025	0.025-0.035	0.025-0.045
K01	●	100-150	0.01-0.02	0.02-0.03	0.03-0.04
K03	●	60-100	0.005-0.015	0.015-0.025	0.025-0.035
K02	●	60-100	0.005-0.015	0.015-0.025	0.025-0.035
N01	●	150-200	0.02-0.03	0.03-0.04	0.04-0.05
N02	●	150-200	0.02-0.03	0.03-0.05	0.05-0.06
N03	●	130-200	0.02-0.03	0.03-0.05	0.05-0.06
N04	●	80-200	0.01-0.025	0.02-0.035	0.03-0.045
S01	●	20-40	0.005-0.015	0.015-0.025	0.02-0.035
S02	●	20-40	0.005-0.015	0.015-0.025	0.02-0.035
S03	●	20-40	0.005-0.015	0.015-0.025	0.02-0.035
S04	●	40-70	0.01-0.025	0.02-0.035	0.03-0.045
H01	●	20-45	0.005-0.015	0.015-0.025	0.025-0.035
H02	●	20-30	0.005-0.01	0.01-0.015	0.015-0.02
H03	○	-	-	-	-
O01	●	100-150	0.01-0.02	0.02-0.03	0.03-0.04
O02	○	-	-	-	-
O03	○	-	-	-	-
O04	○	-	-	-	-
O05	○	-	-	-	-

● Empfohlen | Recommended | Recommandé
◑ Teilweise empfohlen | Partially recommended | Partiellement recommandé
○ Nicht empfohlen | Not recommended | Non recommandé

Notes

PFERD TOOLS



Sonderwerkzeuge
Special tools
Outils spéciaux

Fertigungsprozess
Production process
Processus de fabrication 168-169

Vollhartmetallwerkzeuge
HM Tools
Outils en carbure monobloc 170-171

- Low cobalt content
- Medium cobalt content
- High cobalt content

Keramikwerkzeuge
Ceramic tools
Outils en céramique 172-175

- White ceramic
- Pink ceramic
- Green ceramic

Spezialwerkzeuge, maßgeschneidert nach kundenspezifischen Vorgaben

Ablauf für Angebotsanfrage und Auftragserteilung

Schritte zur Angebotserstellung

- Erfassung technischer und kaufmännischer Daten.
- Interne Machbarkeitsanalyse.
- Lösungsdefinition.
- Erstellung und Übermittlung des Angebots an den Kunden innerhalb von 24 Stunden.

Werkzeugherstellungsschritte

- Zeichnungserstellung.
- Maschinensimulation.
- Werkzeugherstellung.
- Maßkontrolle des Werkzeugs.

Tools manufactured according to the customer's specific requirements

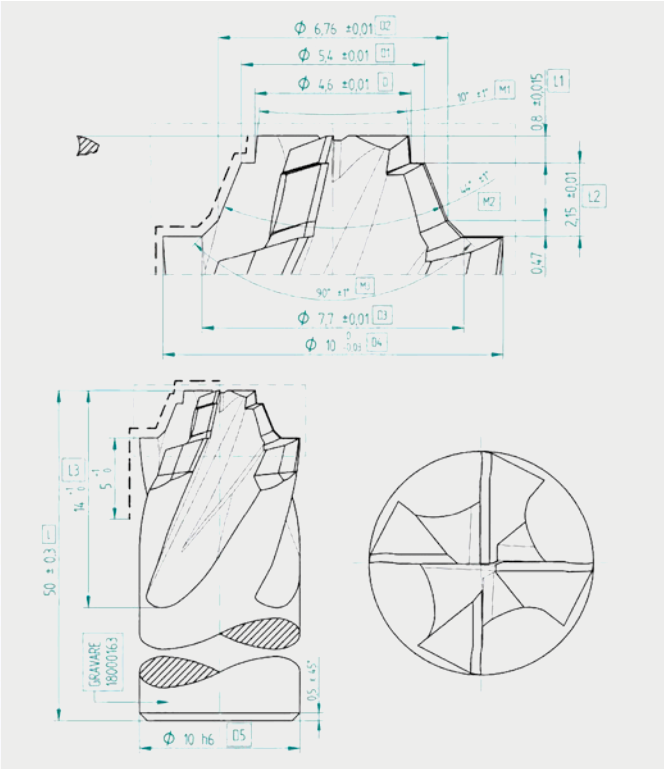
Process of request for quotation and order issuance

Steps for Quotation Preparation

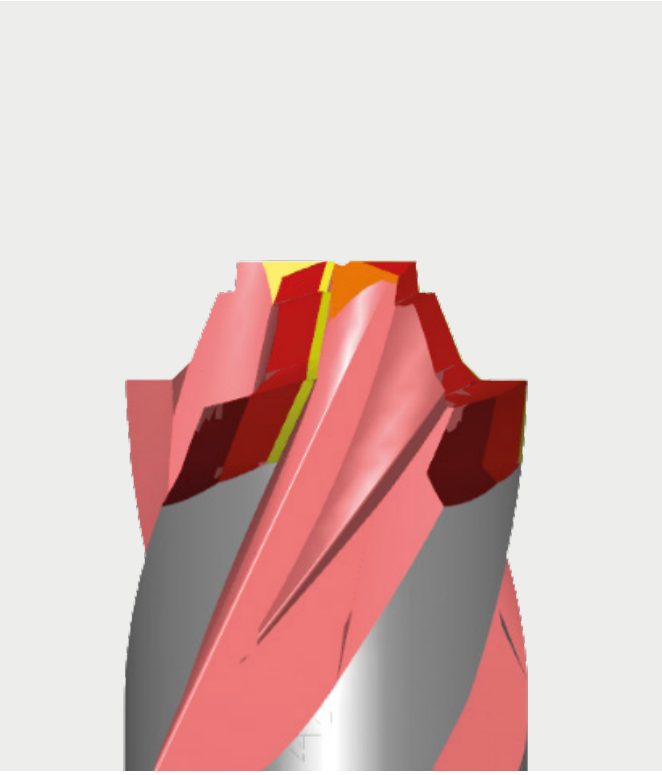
- Collection of technical and commercial data.
- Internal feasibility analysis.
- Definition of the solution.
- Preparation and submission of the quotation to the customer within 24 hours.

Tool manufacturing steps

- Drawing creation.
- Machine simulation.
- Tool production.
- Dimensional inspection of the tool.



Zeichnung
Drawing
Dessin



Simulation

PFERD TOOLS

Outils spéciaux conçus sur mesure en fonction des exigences du client

Processus de demande de devis et d'émission de commande

Étapes de préparation du devis

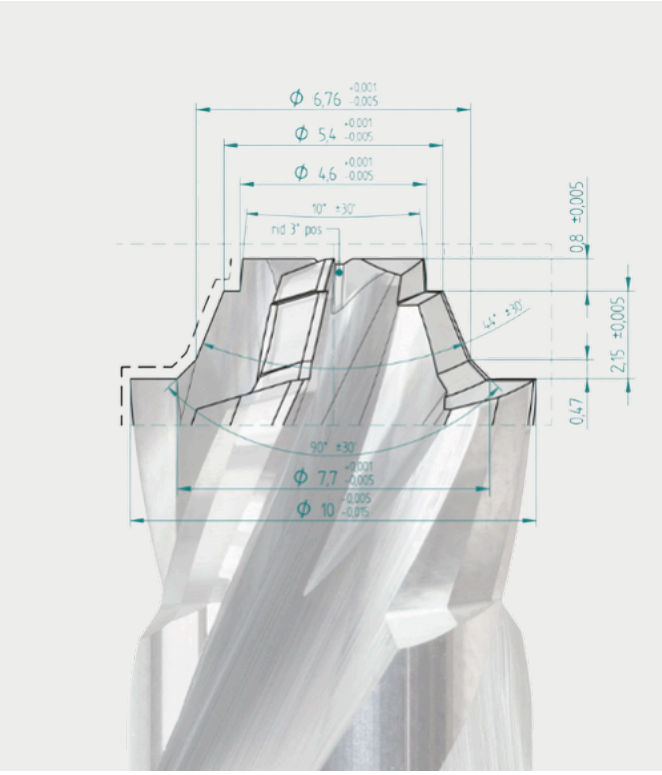
- Collecte des données techniques et commerciales.
- Analyse interne de faisabilité.
- Définition de la solution.
- Élaboration et envoi du devis au client sous 24 heures.

Étapes de production de l'outil

- Création du dessin.
- Simulation sur machine.
- Fabrication de l'outil.
- Contrôle dimensionnel de l'outil.



Produktion
Production
Production



Kontrolle
Control
Contrôle

Hartmetalltypen für Werkzeuge und ihre Eigenschaften

Niedriger Kobaltgehalt (4 – 6%)
- Hohe Härte.
- Hohe Verschleißfestigkeit.
- Geringe Zähigkeit.

Verwendet für:
- Hochgeschwindigkeitsbearbeitung.
- Harte und abrasive Materialien (Gusseisen, harte NE-Metalle).
- Schneidklingen mit scharfen Geometrien.

Mittlerer Kobaltgehalt (6 – 10%)
- Kompromiss zwischen Härte und Zähigkeit.
- Gute Vielseitigkeit.

Verwendet für:
- Allgemeine Bearbeitungen.
- Fräsen, Drehen, Bohren.
- Mittelharte Materialien (unbehandelte Stähle, legierte Stähle).

Hoher Kobaltgehalt (10 – 20%)
- Höhere Zähigkeit.
- Geringere Härte.
- Bessere Stoß- und Bruchfestigkeit.

Verwendet für:
- Unterbrochene Schnitte (diskontinuierliche Bearbeitung).
- Zähe Materialien (rostfreie Stähle, wärmebehandelte Stähle).
- Schwere oder vibrationsanfällige Bearbeitungen.

Types of hard metal for tools and their properties

Low cobalt content (4 – 6%)
- High hardness.
- High wear resistance.
- Low toughness.

Used for:
- High-speed machining.
- Hard and abrasive materials (cast iron, hard non-ferrous metals).
- Cutting blades with sharp geometries.

Medium cobalt content (6 – 10%)
- Balance between hardness and toughness.
- Good versatility.

Used for:
- General-purpose machining.
- Milling, turning, drilling.
- Medium-difficulty materials (unhardened steels, alloy steels).

High cobalt content (10 – 20%)
- Higher toughness.
- Lower hardness.
- Better resistance to impact and breakage.

Used for:
- Interrupted cutting (discontinuous operations).
- Tough materials (stainless steels, heat-treated steels).
- Heavy-duty or vibrating operations.

Eigenschaften

Hitzebeständigkeit
- Gut (bis zu 800 – 1000°C)

Schnittgeschwindigkeit
- Mittel

Abriebfestigkeit
- Hoch

Härte (HV)
- 1400 – 1800 HV

Chemische Stabilität
- Mittel

Ideale Anwendungen
- Breites Spektrum, inkl. Stahl und Edelstahl

Characteristics

Heat resistance
- Good (up to 800 – 1000°C)

Cutting speed
- Medium

Abrasive wear resistance
- High

Hardness (HV)
- 1400 – 1800 HV

Chemical stability
- Moderate

Ideal applications
- Wide range, inc. steels and stainless steels

Caractéristique

Résistance à la chaleur
- Bonne (jusqu'à 800 – 1000°C)

Vitesse de coupe
- Moyenne

Résistance à l'usure abrasive
- Élevée

Dureté (HV)
- 1400 – 1800 HV

Stabilité chimique
- Moyenne

Usinages idéaux
- Large éventail, y compris aciers et inox

Types de métal dur pour outils et leurs propriétés

Faible teneur en cobalt (4 – 6%)

- Haute dureté.
- Excellente résistance à l'usure.
- Faible ténacité.

Utilisé pour:

- Usinage à grande vitesse.
- Matériaux durs et abrasifs (fonte, métaux non ferreux durs).
- Lames de coupe avec géométries tranchantes.

Teneur moyenne en cobalt (6 – 10%)

- Bon compromis entre dureté et ténacité.
- Bonne polyvalence.

Utilisé pour:

- Usinage général.
- Fraisage, tournage, perçage.
- Matériaux de difficulté moyenne (aciers non traités, aciers alliés).

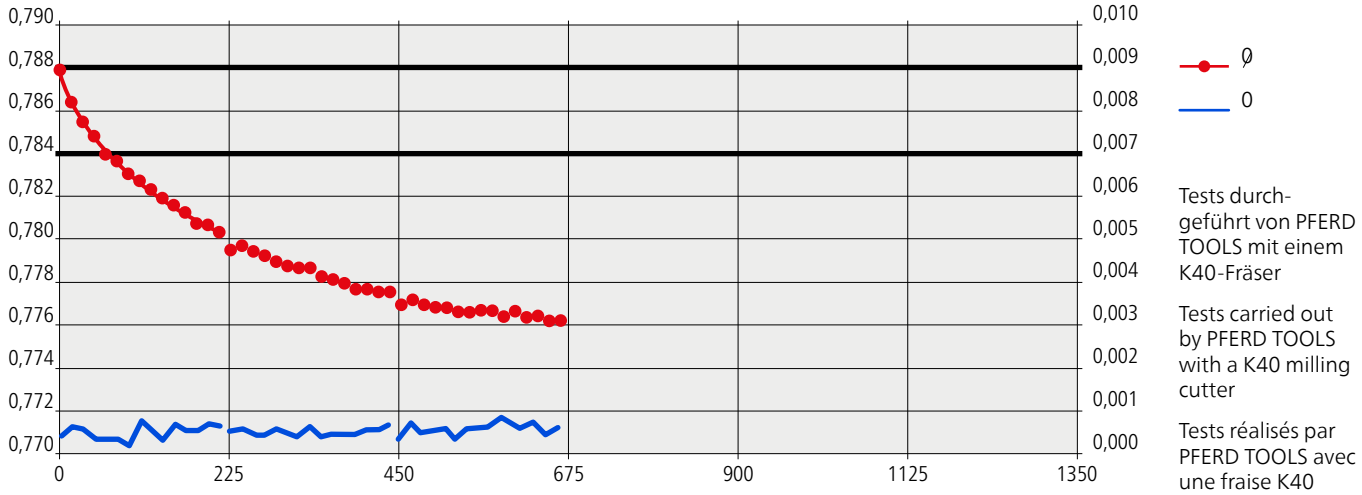
Forte teneur en cobalt (10 – 20%)

- Ténacité accrue.
- Dureté réduite.
- Meilleure résistance aux chocs et à la rupture.

Utilisé pour:

- Coupes interrompues (usinage discontinu).
- Matériaux tenaces (aciers inoxydables, aciers traités thermiquement).
- Usinages lourds ou soumis à vibrations.

Testergebnisse eines Hartmetallfräsers, hergestellt von PFERD TOOLS | Test results of a solid carbide milling cutter produced by PFERD TOOLS | Résultats du test d'une fraise en carbure produite par PFERD TOOLS



Arbeitsparameter: vf = 230 mm/min; fz = 0,005 mm/t
Working parameters: vf = 230 mm/min; fz = 0.005 mm/t
Paramètres de travail: vf = 230 mm/min; fz = 0,005 mm/t

Testergebnis: Toleranzabweichung von 4µ nach 100 Bohrungen
Test result: Tolerance variation of 4µ after 100 holes
Résultat du test: Variation de tolérance de 4µ après 100 perçages

Keramikarten für Werkzeuge und ihre Eigenschaften

Weiße Keramik (Al_2O_3 – reine Aluminiumoxid)
- Sehr hart, thermisch stabil, geringe Zähigkeit.
- Härte: ~1800 – 2000 HV

Verwendet für:
- Bearbeitung von Schnellarbeitsstahl und rostfreiem Stahl.

Rosa Keramik (Al_2O_3 + Cr_2O_3)
- Ähnlich der weißen Keramik, aber etwas zäher und verschleißfester.
- Härte: ~1800 – 2000 HV

Verwendet für:
- Bearbeitung von Stahl und gehärteten Stählen

Grüne Keramik (Siliziumnitrid – Si_3N_4)
- Sehr zäh und deutlich widerstandsfähiger gegen thermischen Schock als Aluminiumoxid.
- Härte: ~1500 – 1600 HV

Verwendet für:
- Bearbeitung von Glas, Keramik, Hartmetall und gesinterten Werkstoffen.

Types of ceramics for tools and their properties

White ceramic (Al_2O_3 – pure alumina)
- Very hard, thermally stable, low toughness.
- Hardness: ~1800 – 2000 HV

Used for:
- Machining of high-speed steels and stainless steels.

Pink ceramic (Al_2O_3 + Cr_2O_3)
- Similar to white ceramic, but slightly tougher and more wear-resistant.
- Hardness: ~1800 – 2000 HV

Used for:
- Machining of steels and hardened steels

Green ceramic (Silicon nitride – Si_3N_4)
- Very tough and significantly more resistant to thermal shock than alumina.
- Hardness: ~1500 – 1600 HV

Used for:
- Machining of glass, ceramics, hard metals, and sintered materials.

Eigenschaften

Hitzebeständigkeit
- Sehr hoch (bis zu 1200 – 1400°C)

Schnittgeschwindigkeit
- Extrem hoch (bis zu 5 – 10× höher als Hartmetall)

Abriebfestigkeit
- Hoch

Härte (HV)
- 1800 – 2500 HV (je nach Typ)

Chemische Stabilität
- Ausgezeichnet bei Hochtemperaturmaterialien

Ideale Anwendungen
- Gusseisen, Superlegierungen, harte Werkstoffe

Characteristics

Heat resistance
- Very high (up to 1200 – 1400°C)

Cutting speed
- Extremely high (up to 5 – 10× higher than carbide)

Abrasive wear resistance
- High

Hardness (HV)
- 1800 – 2500 HV (depending on the type)

Chemical stability
- Excellent on high-temperature materials

Ideal applications
- Cast iron, superalloys, hard materials

Caractéristique

Résistance à la chaleur
- Très élevée (jusqu'à 1200 – 1400°C)

Vitesse de coupe
- Extrêmement élevée (jusqu'à 5 à 10× supérieure au carbure)

Résistance à l'usure abrasive
- Élevée

Dureté (HV)
- 1800 – 2500 HV (selon le type)

Stabilité chimique
- Excellente sur les matériaux à haute température

Usinages idéaux
- Fonte, superalliages, matériaux durs

Types de céramiques pour outils et leurs propriétés

Céramique blanche (Al_2O_3 – alumine pure)

- Très dure, stable thermiquement, faible ténacité.
- Dureté: ~1800 – 2000 HV

Utilisée pour:

- Usinage des aciers rapides et des aciers inoxydables.

Céramique rose ($Al_2O_3 + Cr_2O_3$)

- Similaire à la blanche, mais légèrement plus tenace et résistante à l'usure.
- Dureté: ~1800 – 2000 HV

Utilisée pour:

- Usinage des aciers et des aciers trempés.

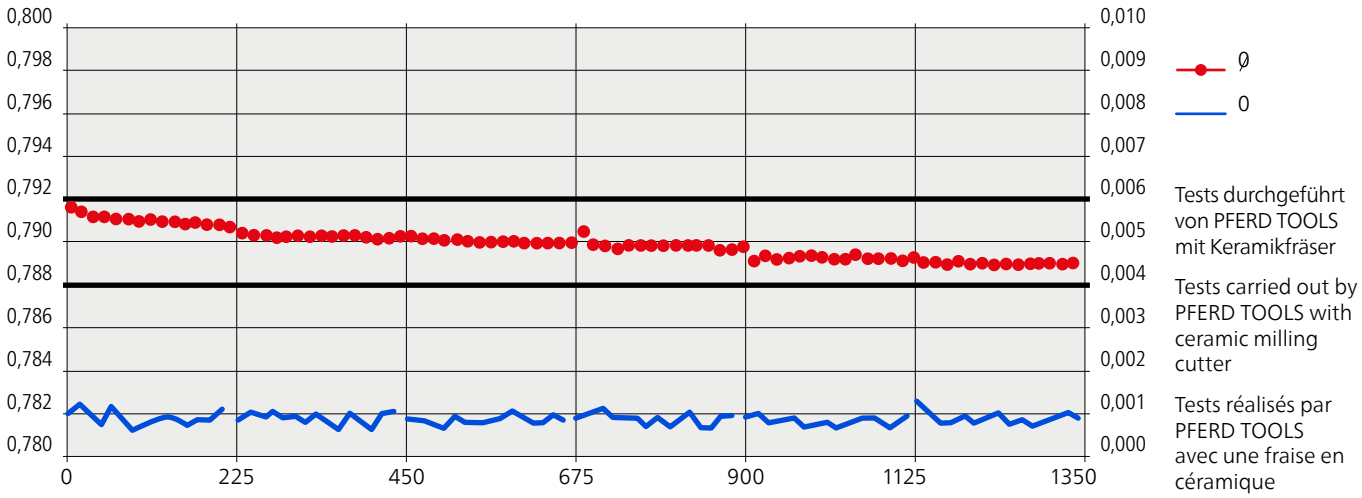
Céramique verte (nitrure de silicium – Si_3N_4)

- Très tenace et nettement plus résistante aux chocs thermiques que l'alumine.
- Dureté: ~1500 – 1600 HV

Utilisée pour:

- Usinage du verre, de la céramique, du métal dur et des matériaux frittés.

Testergebnisse eines Keramikfräsers, hergestellt von PFERD TOOLS | Test results of a ceramic milling cutter produced by PFERD TOOLS | Résultats du test d'une fraise en céramique produite par PFERD TOOLS



Arbeitsparameter: vf = 230 mm/min; fz = 0,005 mm/t
Working parameters: vf = 230 mm/min; fz = 0.005 mm/t
Paramètres de travail: vf = 230 mm/min; fz = 0,005 mm/t

Testergebnis: Toleranzabweichung von 4µ nach 1350 Bohrungen
Test result: Tolerance variation of 4µ after 1350 holes
Résultat du test: Variation de tolérance de 4µ après 1350 perçages



Zubehör und Dienstleistungen
Accessories and services
Accessoires et services

Best Working Practices 177-179

Werkzeuge mit inneren Kühlkanälen
Tools with internal coolant holes
Outils avec arrosage interne

Empfehlungen für die Prozessoptimierung
Recommendations for process optimization
Recommandations pour l'optimisation du processus

Empfohlener Druck
Recommended pressure
Pression recommandée

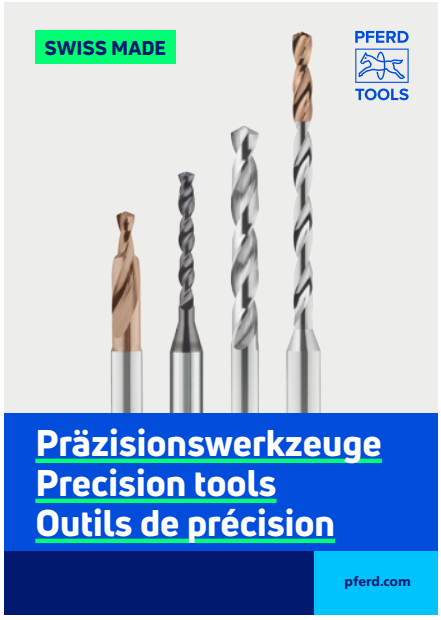
Bearbeitungsverfahren beim Hochleistungsbohren
Machining process for high performance drilling
Procédé d'usinage à grand rendement

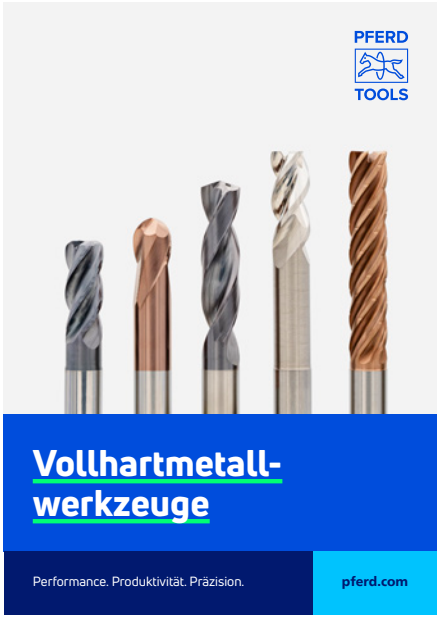
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All tools and more information
Tous les outils et plus d'infos

Werkzeuge mit Innenkühlung

Beim Bohren mit Innenkühlung ist eine gute Filterung sehr wichtig, da sonst Restpartikel oder Späne die Bohrungen verstopfen könnten.

- Wendelbohrer mit Durchmesser < 2 mm
  Qualität Filtrationsrate ≤ 0,010 mm.
- Wendelbohrer mit Durchmesser < 3 mm
  Qualität Filtrationsrate ≤ 0,020 mm.
- Wendelbohrer mit Durchmesser < 6 mm
  Qualität Filtrationsrate ≤ 0,050 mm.

Für einen sicheren Prozess sind bei den Bohrungsdurchmessern 4 bis 6 mm mindestens 30 bar Schmierdruck erforderlich. Für kleinere Durchmesser sind höhere Drücke erforderlich. Höhere Drücke sind im Allgemeinen optimaler für eine Kühl- und Spülwirkung.

Tools with internal coolant holes

Good filter is important in drilling tools with through-tool cooling, so that no dirt particles or chips reach the tool through the coolant supply and jeopardize coolant flow in the tool. The following filter qualities must be complied for small diameters.

- Spiral drill types with diameter < 2 mm
  filter quality ≤ 0,010 mm.
- Spiral drill types with diameter < 3 mm
  filter quality ≤ 0,020 mm.
- Spiral drill types with diameter < 6 mm
  filter quality ≤ 0,050 mm.

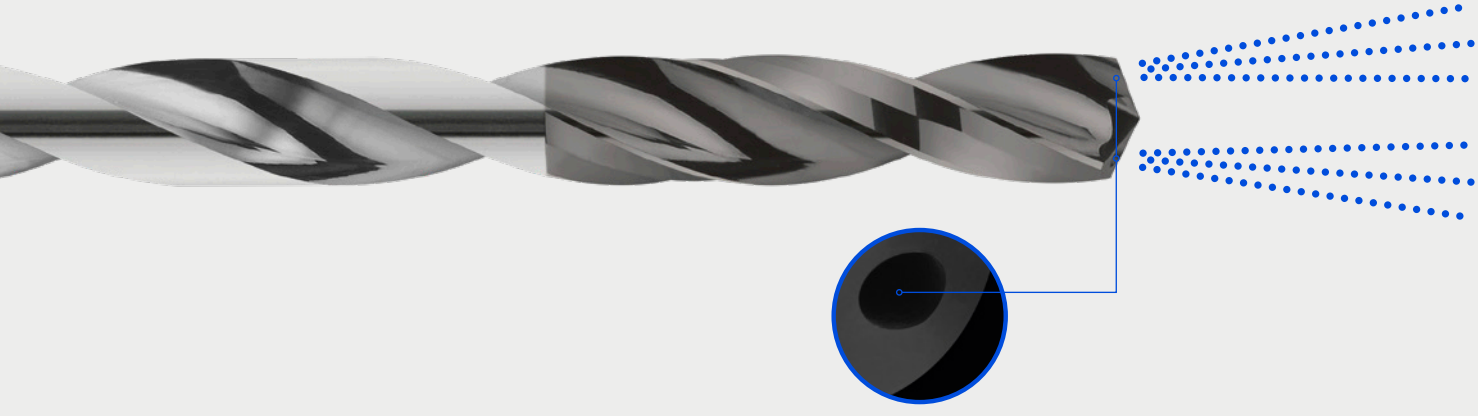
At least 30 bar coolant pressure is requested for drilling diameter 4 to 6 mm for a reliable drilling process. Higher pressures are needed for smaller drill diameters. High pressure is generally better for the cooling and flushing effect.

Outils avec arrosage interne

Un bon filtre est très important dans le perçage avec arrosage interne afin d'éviter que des particules résiduelles ou des copeaux arrivent dans les canaux de lubrification interne. Les filtres doivent être appliqués comme suit.

- Forets hélicoïdaux de diamètre < 2 mm
  qualité taux de filtration ≤ 0,010 mm.
- Forets hélicoïdaux de diamètre qualité < 3 mm
  taux de filtration ≤ 0,020 mm.
- Forets hélicoïdaux de diamètre < 6 mm
  qualité taux de filtration ≤ 0,050 mm.

Une pression d'au moins 30 bars par canal, est nécessaire pour assurer un processus de perçage fiable. Des pressions plus élevées sont nécessaires pour des petits diamètres. Des hautes pressions sont généralement plus optimales pour le refroidissement et le rinçage.



Empfehlungen zur Prozessoptimierung

Kühlmittel:

PFERD TOOLS Precision Tools empfiehlt die Verwendung von Vollöl als Schmiermittel. Alternativ können auch Emulsionen mit spezifischen Additiven verwendet werden.

Filterqualität:
Ein gutes Filtersystem ist besonders wichtig für kleine Durchmesser:
- Filter < 0,01 für Durchmesser ø < 1 mm
- Filter < 0,02 für Durchmesser zwischen ø 1 und ø 3 mm

Recommendations for process optimization

Coolant:

PFERD TOOLS Precision Tools recommends using full oil as a lubricant. Alternatively, emulsions with specific additives can also be used.

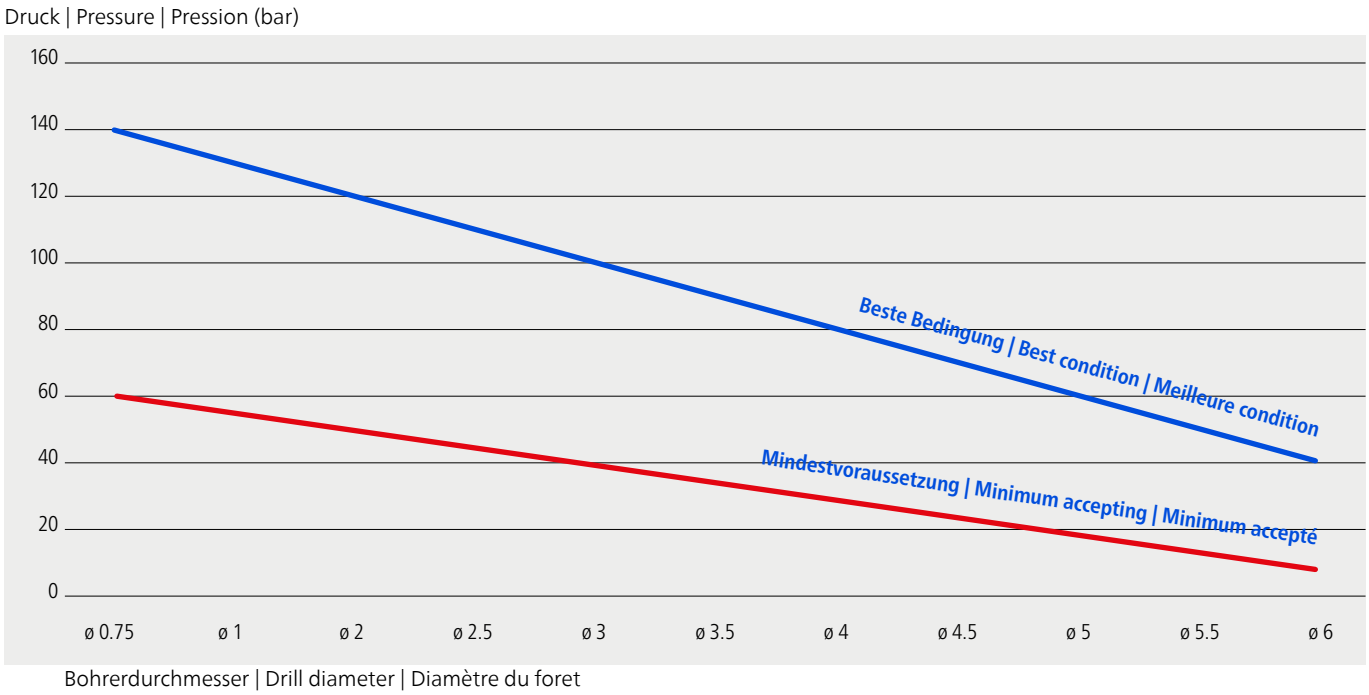
Filter quality:
A good filtration system is particularly important for small diameters:
- Filter < 0.01 for diameters ø < 1 mm
- Filter < 0.02 for diameters between ø 1 and ø 3 mm

Recommandations pour l'optimisation du processus

Liquide de lubrification-réfrigération:
PFERD TOOLS Precision Tools recommande l'utilisation d'huile complète comme lubrifiant. En alternative, des émulsions avec des additifs spécifiques peuvent également être utilisées.

Qualité du filtre:
Un bon système de filtration est particulièrement important pour les petits diamètres:
- Filtre < 0,01 pour des diamètres ø < 1 mm
- Filtre < 0,02 pour des diamètres entre ø 1 et ø 3 mm

Empfohlener Druck | Recommended pressure | Pression recommandée

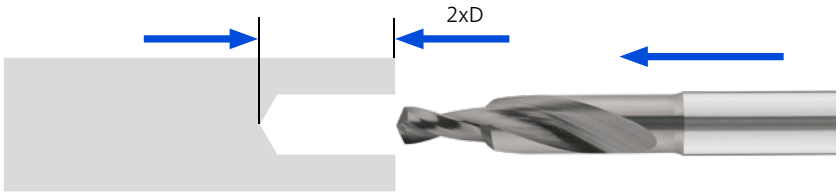


PFERD TOOLS

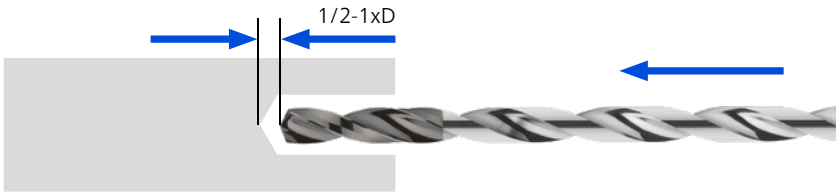
Bearbeitungsverfahren Hochleistungsbohren
Machining process for high performance drilling
Procédé d'usinage à grand rendement

Bohrstrategie > 9xD | Drilling strategy > 9xD | Stratégie de perçage > 9xD

1



2



n = max 500 min^{-1} / vf = 25% – 50%

3



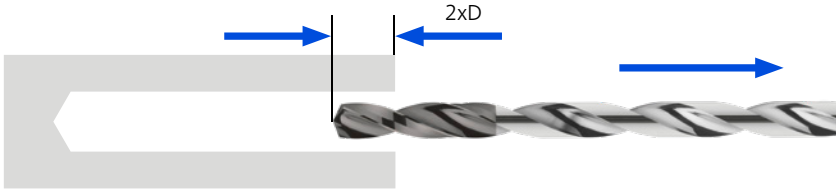
vc = 100% → start vf / vc = 100% / vf = 100%

4



vc = 100% / vf = 100%

5



vc = 100% / vf = 200%-500%

6



n = max. 500 min^{-1} / vf = max

Werkstoffgruppen | Materials group | Groupe de matériaux

PFERD TOOLS

Stahl, langspanend, niedriger Kohlenstoffanteil

Long chipping Low Carbon Steels (< 120 HB)

Wrknr	DIN
1.0214	C10C
1.1121	C10E
1.0037	S235JR

Stahl, kurzspanend, niedriger Kohlenstoffanteil

Short chipping Low Carbon Steels (< 120 HB)

Wrknr	DIN
1.0402	C22
1.0406	C25

Stahl mit mittlerem und hohem Kohlenstoffanteil

Medium and High Carbon Steels (< 220 HB)

Wrknr	DIN
1.0501	C35
1.0503	C45
1.0535	C55
1.0601	C60

Legierte Stähle, Werkzeugstähle

Alloy Steels, Tool Steels (N/mm² 600-850)

Wrknr	DIN
1.3505	100Cr6
1.5752	14NiCr14
1.5919	15CrNi6
1.6523	21NiCrMo2
1.6587	17CrNiMo6
1.7015	15Cr3
1.7131	16MnCr5
1.7176	55Cr3
1.7218	25CrMo4
1.7220	34CrMo4
1.7223	41CrMo4
1.1157	40Mn4
1.1167	36Mn5
1.1170	28Mn6
1.6511	36CrNiMo4
1.7033	34Cr4
1.7034	37Cr4
1.7035	41Cr4
1.7218	25CrMo4
1.7220	34CrMo4
1.7223	41CrMo4
1.7225	42CrMo4
1.8507	34CrAlMo5
1.8509	41CrAlMo7
1.8515	31CrMo12
1.2332	47CrMo4
1.2510	100MnCrW4
1.2516	120WV4
1.2542	45WCrV7
1.2833	100V1
1.2842	90MnCrV8
1.6511	36CrNiMo4
1.6580	30CrNiMo8
1.6582	34CrNiMo6
1.7220	34CrMo4
1.7223	41CrMo4
1.7225	42CrMo4
1.7361	32CrMo12
1.2311	40CrMnMo7
1.2709	X3NiCrMoTi18 9 5
1.2376	X96CrMoV12
1.2601	X165CrMoV12
1.2609	X165CrVMo12 1

Legierte Stähle, Werkzeugstähle

Alloy Steels, Tool Steels (N/mm² 850-1400)

Wrknr	DIN
1.2343	X38CrMoV5 1
1.2344	X40CrMoV5 1
1.2365	X32CrMoV3 3
1.2581	X30WCrV9 3
1.2080	X210Cr12
1.2379	X155CrMo12 1
1.2631	X50CrMoW9 1 1
1.2201	X165CrV12
1.2436	X210CrW12
1.2706	X3NiCrMo18 8 5
1.2880	X165CrCoMo12

Ferritisch, Martensitisch

Ferritic, Martensitic, PH SS (600-900 N/mm²)

Wrknr	AISI	Std	DIN
1.4742			X10CrAl18
1.4923			X22CrMoV12 1
1.4057	AISI 431		X20CrNi17 2
1.4000	AISI 403		X6Cr13
1.005	AISI 416		X12CrS13
1.4006	AISI 410		X10Cr13
1.4057	AISI 431		X20CrNi17 2
1.4104	AISI 430 F		X12CrMoS17
1.4113	AISI 434		X6CrMo17
1.4021	AISI 420		X20Cr13
1.4112	AISI 440 B		X90CrMoV18

Hochfester ferritischer, martensitischer PH Stahl

High Strength Ferritic, Martensitic, PH SS (900-1350 N/mm²)

Wrknr	AISI	Std	DIN
1.4718			X45CrSi9 3
1.4021	AISI 420		X20Cr13
1.4112	AISI 440 B		X90CrMoV18
1.4125	AISI 440 C		X105CrMo17
1.4504		17-7 PH	
1.4545		15-5 PH	
1.4564		17-7 PH	
1.4542	AISI630	17-4 PH	X5CrNiCuNb16-4
1.4113	AISI 434		X6CrMo17
1.4021	AISI 420		X20Cr13
1.4112	AISI 440 B		X90CrMoV18

Werkstoffgruppen | Materials group | Groupe de matériaux

PFERD TOOLS

Austenitischer nichtrostender Stahl

Austenitic Stainless Steel (130-200 HB)

Wrknr	AISI	DIN
1.4878		X12CrNiTi18 9
1.4301	AISI 304	X5CrNi18 9
1.4303	AISI 308	X5CrNi18 12
1.4305	AISI 303	X10CrNiS18 9
1.4306	AISI 304 L	X2CrNi19 11
1.4310	AISI 301	X12CrNi17 7
1.4401	AISI 316	ZX5CrNiMo18 10
1.4404	AISI 316 L	X2CrNiMo17 13 2
1.4406	AISI 316 LN	X2CrNiMoN17 12 2
1.4435	AISI 316 L	X2CrNiMo18 14 3
1.4436	AISI 316	X5CrNiMo17 13 3
1.4438	AISI 317 L	X2CrNiMo18 16 4
1.4571	AISI 316 Ti	X6CrNiMoTi17 12 2
1.4573	AISI 316 Ti	X10CrNiMoTi18 12
1.4580	AISI 316 Cb	X6CrNiMoNb17 12 2
1.4583	AISI 318	X10CrNiMoNb18 12
1.4541	AISI 321	X6CrNiTi18 10
1.4550	AISI 347-348	X6CrNiNb18 10
1.4845	AISI 310S	X12CrNi25 21
1.4945		X6 CrNiWNb16 16
1.4962		X12CrNiWTi 16 3

Hochfester austenitischer nichtrostender Stahl, Edelstahlguss

High Strength A ustenitic SS, Cast SS (150-230 HB)

Wrknr	AISI	DIN
1.4878		X12CrNiTi18 9
1.4301	AISI 304	X5CrNi18 9
1.4303	AISI 308	X5CrNi18 12
1.4305	AISI 303	X10CrNiS18 9
1.4306	AISI 304 L	X2CrNi19 11
1.4310	AISI 301	X12CrNi17 7
1.4401	AISI 316	ZX5CrNiMo18 10
1.4404	AISI 316 L	X2CrNiMo17 13 2
1.4406	AISI 316 LN	X2CrNiMoN17 12 2
1.4435	AISI 316 L	X2CrNiMo18 14 3
1.4436	AISI 316	X5CrNiMo17 13 3
1.4438	AISI 317 L	X2CrNiMo18 16 4
1.4571	AISI 316 Ti	X6CrNiMoTi17 12 2
1.4573	AISI 316 Ti	X10CrNiMoTi18 12
1.4580	AISI 316 Cb	X6CrNiMoNb17 12 2
1.4583	AISI 318	X10CrNiMoNb18 12
1.4541	AISI 321	X6CrNiTi18 10
1.4550	AISI 347-348	X6CrNiNb18 10
1.4845	AISI 310S	X12CrNi25 21
1.4945		X6 CrNiWNb16 16
1.4962		X12CrNiWTi 16 3

Duplex SS (135-275 HB)

Wrknr	AISI	DIN
1.4460	AISI 329	X8CrNiMo27 5
	A240 (S31200)	
1.4410		
1.4462		

Grauguss

Grey Cast Iron (135-275 HB)

Wrknr	DIN
0.6010	GG-15
0.6015	GG-10
0.6020	GG-20
0.6030	GG-30

Guss mit niedriger und mittlerer Festigkeit GJV, duktiles Gusseisen

Low and Medium Strength CGI, Ductile Irons (130-260 HB)

Wrknr	DIN
0.6040	GG-40

Hochfestes Gusseisen (ADI)

High Strength Ductile and Austempered Ductile Iron (180-350 HB)

Wrknr	DIN
0.6040	GG-40

Aluminiumknetlegierungen

Wrought Aluminium

Wrknr	DIN
3.0205	Al99

Aluminium- und Magnesium-legierungen mit niedrigem Silizium-Gehalt (Si<12%)

Low Si Al Alloys and Magnesium Alloys Si<12%

Wrknr	DIN
3.0505	AlMn0.5Mg0.5
3.0506	AlMn0.6
3.0515	AlMn1
3.0517	AlMnCu
3.0525	AlMn1Mg0.5
3.0526	AlMn1Mg1
3.0915	AlFeSi
3.3307	Al99.85Mg0.5
3.3308	Al99.5Mg0.5
3.3315	AlMg1
3.3316	AlMg1.5
3.3317	Al99.85Mg1
3.3318	Al99.9Mg1
3.3326	AlMg1.8
3.3345	AlMg4.5
3.3523	AlMg2.5
3.3525	AlMg2Mn03
3.3527	AlMg2Mn0.8
3.3535	AlMg3
3.3537	AlMg2.7Mn
3.3545	AlMg4Mn
3.3547	AlMg4.5Mn
3.3549	AlMg5Mn
3.3555	AlMg5
3.0615	AlMgSiPb
3.1255	AlCuSiMn
3.1305	AlCu2.5Mg0.5
3.1325	AlCuMg1
3.1355	AlCuMg2
3.1645	AlCuMgPb
3.1655	AlCuBiPb
3.2307	Al99.85MgSi
3.2315	AlMgSi1
3.3206	AlMgSi0.5
3.3208	Al99.9MgSi
3.3210	AlMgSi0.7
3.3211	AlMg1SiCu
3.4335	AlZn4.5Mg1
3.4337	Al99.8ZnMg
3.4345	AlZnMgCu0.5
3.4365	AlZnMgCu1.5
3.1371	G-AlCu4TiMg

Aluminiumlegierungen mit hohem Silizium-Gehalt (Si>12%)

High Si Al alloys Si>12%

Wrknr	DIN
	AlSi17Cu4Mg
	AlSi18CuNiMg
	AlSi21CuNiMg
	AlSi25CuNiMg

Kupfer, Messing, zinkbasierte Legierungen

Copper, brass, zinc based alloys

Wrknr	DIN
2.0040	0F-Cu
2.0205	CuZn0.5
2.0850	CuNi2Be
2.0220	CuZn5
2.0331	CuZn36Pb1.5
2.0730	CuNi12Zn24
2.0830	CuNi25

Fe-basierte Legierungen

Iron based HRSA

Wrknr	Std	DIN
1.4943	Z6NCTDV	X4NiCrTi 25 15
1.4980	A-286	X5NiCrTi

Co-basierte Legierungen

Co based HRSA

Wrknr	Std	DIN
	ASTM F75	Co28Cr6Mo
	ASTM F99	Co28Cr6Mo
	ASTM F90	Co20Cr15W10Ni
	ASTM F562	Co35Ni20Cr10Mo
	Alacrite 601	
	Alacrite 602	
	AMS 5759	

Ni-basierte Legierungen

Ni based HRSA

Wrknr	Std	DIN
1.4876	Incoloy 800	X10NiCrAlTi32 20
2.4360	Monel 400	NiCu30Fe
2.4375	Monel K500	NiCu30Al
2.4603	Hastelloy X	NiCr30FeMo
2.4617	Hastelloy B-2	
2.4630	Nimonic 75	NiCr20Ti
2.4631	Nimonic 80A	NiCr20TiAl
2.4634	Nimonic 105	NiCo20Cr15MoAlTi
2.4640	Inconel 600	NiCr15Fe
2.4668	Inconel 718	NiCr19Fe18Nb5Mg
2.4670	Nimocast 713	
2.4674	Nimocast PK24	
2.4816	Inconel 600	NiCr15Fe
2.4856	Inconel 625	NiCr22Mo9Nb
2.4858	Inconel 600	NiCr21Mo
2.4603	Hastelloy X	NiCr30FeMo
2.4617	Hastelloy B-2	
2.4632	Nimonic 90	NiCr20Co18Ti
2.4668	Inconel 718	NiCr19Fe18Nb5Mg
2.4670	Nimocast 713	
2.4674	Nimocast PK24	
2.4812	Hastelloy C	
2.4856	Inconel 625	NiCr22Mo9Nb
2.4983	Udimet 500	
	MAR-M200	
	MAR-M246	
	MAR-M302	
	MAR-M322	
	MAR-M432	
	MAR-M509	
2.4654	Rene 41	
	Rene 77	
	Rene 95	
	Rene 100	
	Rene 220	
	Stellite	
2.6554	Waspaloy	
	IN-738	

Titan und Titanlegierungen
Ti and Ti alloys

Wrknr	DIN
3.7124	TiCu2
3.7144	TiAl6Sn2Zr4Mo2
3.7154	TiAl6Zr5
3.7165	TiAl6V4
3.7174	TiAl6V6Sn2
3.7184	TiAl4Mo4Sn2

Gehärtete Werkstoffe
Hardened materials (44-48 HRC)

Wrknr	AISI	DIN
		16MnCr5 (44-48HRC)
		34CrNiMo6 (44-48HRC)
		C75 (44-48HRC)
	1080 (44-48HRC)	

Gehärtete Werkstoffe
Hardened materials (48-55 HRC)

Wrknr	Commercial	DIN
		16MnCr5 (48-55HCR)
	D2 (48-55)	
		C80 (48-55HRC)
		Ck67 (48-55HRC)

Gehärtete Werkstoffe
Hardened materials (56-60 HRC)

Wrknr	AISI	DIN
	D2 (56-60HRC)	
		16MnCr5 (56-60HRC)
		C100S (56-60HRC)
		Ck67 (56-60HRC)

Thermo- und duroplastische Werkstoffe
Thermoplastic and thermosetting materials

Wrknr	DIN
P E	Baylon
P P	Daplen
P V C	Coroplast
P S	Hostyron
P M M A	Acrylglas
P T F E	Hostaflon
P A	Akulon
P C	Makralon
P I	
P F	Alberit
M F	Albanit
U F	Bakelite
P U R	Baydur
S I	Baysilon
U P	Alpolit
U P	Viapal
E P	Araldit
B F K	
C F K	
G F K	
M F K	
S F K	

Verbundwerkstoffe (Glasfaser)
Composite materials (glass fibers)

Verbundwerkstoffe (Kohlefaser)
Composite materials (carbon fibers)

Verbundwerkstoffe (Aramidfaser)
Composite materials (aramid fibers)

Graphit
Graphite

Wrknr	Std	DIN
	IG-11	
	IG-45	
	IG - 70	
	ISO - 63	
	Technograph 30	

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Notes

Notes

PFERD TOOLS

Technische Änderungen vorbehalten.
Subject to technical changes.
Sous réserve de modifications techniques.

09/2026 818 913
4 069478 255509

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Center of expertise TUSA by PFERD TOOLS
Centre de compétence TUSA by PFERD TOOLS

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