

ARNO®

WERKZEUGE



WE LIVE QUALITY TOOLING

ATS-System – vielseitig bei kurzen, präzisen Einstichen.

ATS System – versatile for short precision grooves.

Sistema ATS – versatile nella realizzazione di scanalature corte e precise.

SYSTEM ATS

HERAUSRAGEND FÜR MEHR PRODUKTIVITÄT IN IHRER FERTIGUNG.

Sie haben herausfordernde Zerspanungsaufgaben? Wir haben herausragende Lösungen! Bereits seit drei Generationen entwickeln wir Werkzeugsysteme, die durch Qualität, Langlebigkeit und Prozesssicherheit überzeugen. Als ARNO Kunde profitieren Sie von der Mischung aus Erfahrung und Pioniergeist, die unser Familienunternehmen seit jeher auszeichnet. Wir sind typisch schwäbische Tüftler und stolz darauf, unseren Kunden mit cleveren Neu- und Weiterentwicklungen auch in Zukunft entscheidende Wettbewerbsvorteile zu sichern.

OUTSTANDING FOR MORE PRODUCTIVITY IN YOUR PRODUCTION.

Do you have challenging machining tasks? We have outstanding solutions. For three generations, we have been developing tool systems which have outstanding quality, long tool life and process reliability. As an ARNO customer you benefit from a combination of experience and pioneering spirit. Besides these values we are also influenced by the typical Swabian talent for inventiveness. We are proud to assist our customers to secure that extra competitive advantage with clever new developments and advancements and we will continue along this path in the future.

ECCEZIONALE PER UNA MIGLIORE PRODUTTIVITÀ NELLA TUA PRODUZIONE.

Avete obiettivi di lavorazione macchina ambiziosi? Noi abbiamo soluzioni eccezionali adatte ai tuoi scopi. Per tre generazioni abbiamo sviluppato sistemi utensili di qualità eccezionale, lunga durata dell'utensile e affidabilità del processo. Come clienti ARNO avete la possibilità di beneficiare di una combinazione di esperienza e di spirito pionieristico. Oltre a questi valori siamo anche influenzati dal tipico talento Svevo per l'inventiva. Siamo orgogliosi di supportare i nostri clienti assicurando questo vantaggio competitivo con sempre nuove ed innovative soluzioni e lo faremo sempre anche in futuro.

SYSTEM ATS

| | |
|---------|--|
| 04 – 07 | Systemvorstellung / <i>System presentation</i> / Caratteristiche del sistema |
| 08 | Bezeichnungssystem / <i>Designation system</i> / Sistema di identificazione |
| 09 | Werkzeugauswahl / <i>Tool shank options</i> / Tipologie di corpo utensil |
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| 18 | Klemmhalter mit Schraubenklemmung für Langdrehautomaten / <i>Holders with screw clamping for sliding head auto lathes</i> / Steli con fissaggio a vite per fantina mobile |
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| 36 | Monoblockhalter / <i>Monoblock holders</i> / Utensili monoblocco |
| 37 – 40 | Monoblockhalter auf KMH-Werkzeugaufnahmen (VDI) / <i>Monoblock holders with KMH-holder (VDI)</i> / Adattatore KMH (VDI) per utensili monoblocco |
| 41 – 43 | Anfrage Halter ATS mit Sonderabmessungen / <i>Enquiry holder ATS with special dimensions</i> / Richiesta utensili ATS con dimensioni speciali |

Vielseitig bei präzisen Einstichen: das neue ATS-System von ARNO.

Versatile for precise parting off: the new ATS System from ARNO.

Versatile nella realizzazione di scanalature precise: il nuovo sistema ATS di ARNO.

Wirtschaftlich dank dreischneidiger Schneidplatten, schnell beim Werkzeugwechsel und stabil durch die Torx-Plus Schraubenklemmung mit optimalem Form- und Kraftschluss: Das ATS Werkzeugsystem zum Außenstechen hat viele Stärken. Vielseitigkeit gehört ebenfalls dazu: Durch die versenkten Klemmschraube und die kompakte Bauform können Sie das ATS-System auch beim Schulterstechen oder im Langdrehbereich einsetzen. Für eine reibungslose Spanabfuhr und hohe Standzeiten sorgt die optimierte Kühlmittelzufuhr der Halter auf die Span- und Freifläche.

Efficient thanks to 3-edged inserts; fast tool changes and rigid due to the Torx-Plus screw clamping system to offer optimised clamping and insert location: The ATS tool system for external parting off has many strengths. One of them is versatility: the countersunk clamping screw and the compact design make the ATS system ideal for applications like shoulder grooving or Swiss type machining. The optimised coolant supply to the cutting edge and tool flank ensure smooth chip evacuation and long tool life.

Economico grazie agli inserti a tre taglienti, veloce al cambio utensile e stabile grazie al bloccaggio a vite Torx-Plus con bloccaggio con accoppiamento dinamico e geometrico ottimale: Il sistema per utensili ATS per l'incisione esterna ha molti punti di forza. Uno di questi è la versatilità: Grazie alla vite di serraggio a testa svasata e alla struttura compatta, è possibile utilizzare il sistema ATS anche per scanalatura di spallamenti o nella tornitura cilindrica. L'adduzione del refrigerante ottimizzata, integrata nel supporto sulla superficie di spoglia superiore e sul fianco garantisce una evacuazione dei trucioli regolare e una lunga durata.

Standard: direkte Kühlung der Spanfläche

Standard: direct cooling of the cutting edge

Standard: raffreddamento diretto della superficie di spoglia superiore

Optimale Positioniergenauigkeit durch komplett geschliffene Ausführung

Optimal positioning accuracy due to the completely periphery grinding
Precisione di posizionamento ottimale grazie al design completamente rettificato

Standard: optimale Kühlung der Freifläche

Standard: optimised cooling of the tool flank

Standard: raffreddamento ottimale del fianco

Geeignet zum Stechen an der Schulter

Suitable for grooving at the shoulder

Adatto per la scanalatura degli spallamenti

Stechsystem mit 3-schneidiger T-Wendeschneidplatte

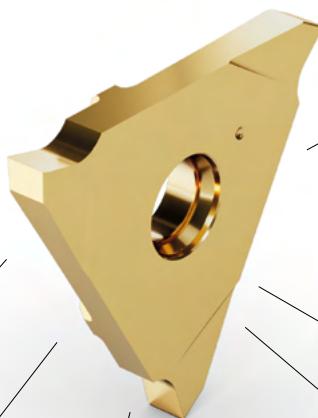
Grooving system with T-shaped indexable insert with 3 cutting edges

Sistema di scanalatura con inserto a 3 taglienti

Einstechbreite EB ± 0,02 mm
Groove width EB ± 0,02 mm
Larghezza gola EB ± 0,02 mm

Geometrie -GA mit 8° Spanwinkel
Geometry -GA with 8° rake angle
Geometria -GA, angolo di spoglia superiore di 8°

Geschliffene Auflageflächen
Ground contact surface
Superficie di appoggio rettificata



Standard Universal-Sorte AP5020

Standard universal grade AP5020
Standard varietà universale AP5020

NEU: Universelle Hochleistungs-Sorte AP7220 mit neuster Beschichtungstechnologie

NEW: Universal high-performance grade AP7220 with the latest coating technology

NUOVO: Varietà universale ad alte prestazioni AP7220 con la più recente tecnologia di rivestimento

Einstechtiefe ET max. 6,5 mm
Cutting depths up to ET = 6.5 mm
Profondità di scanalatura fino a ET = 6,5 mm

Geschliffene Anlageflächen
Ground contact surfaces
Superfici di contatto al suolo

Standard: direkte Kühlung der Spanfläche
Standard: direct cooling of the cutting edge
Standard: raffreddamento diretto della superficie di spoglia superiore



Standard: optimale Kühlung der Freifläche
Standard: optimised cooling of the tool flank
Standard: raffreddamento ottimale del fianco

Erhältlich für Einstechtiefen von 6,5 mm und Stechbreiten von 2 bis 4 mm
Available for cutting depths of 6.5 mm and groove widths of 2 to 4 mm
Disponibile per profondità di taglio da 6,5 mm e per larghezze di taglio da 2 a 4 mm

Optimal in Verbindung mit den ARNO Direktaufnahmen
Perfect in combination with ARNO flange mounted holders
Si abbina in maniera ottimale agli adattatori diretti ARNO

Lang drehen, schnell Wechseln.

Swiss type machining, fast changes.

Tornitura cilindrica, cambio utensile rapido.

AFC-Trägerwerkzeug: die Revolution für den schnellen Werkzeugwechsel – angemeldet zum Patent.

Ihre Lösung für einen komfortablen Werkzeugwechsel trotz engem Innenraum bei Langdrehmaschinen: Der zweiteilige AFC-Träger, mit dem selbst ungerichtetes Personal Werkzeuge schnell und sicher austauschen kann.

So funktioniert's: Der hintere Teil des Trägerwerkzeugs (AHA-Anschlag) wird einmal fixiert. Für den Austausch des Werkzeugs muss nur das Vorderteil abgenommen werden. Ein erneutes Anfahren und Einstellen des Nullpunkts entfällt durch die immer gleiche Länge zur Spitze des Schneideinsatzes damit komplett – egal, ob er das Drehsystem oder das Stechsystem benutzt. Verbunden werden beide Trägerteile einfach über ein Stecksystem mit O-Ring. Dadurch ist das Vorderteil beim Aufsetzen auf die Steckverbindung sofort gesichert – nichts fällt versehentlich in die Maschine. Gleichzeitig bleibt durch eine schwimmend gelagerte Halterung genug Spielraum für einen Ausgleich des Winkelversatzes, die beiden Teile schmiegen sich optimal aneinander. So profitieren Sie von einer hohen Wechselgenauigkeit und einer dichten Kühlmittelübergabe.

AFC tool holders: the revolution in fast tool changes – patent applied.

Your solution for easy tool changes despite space constraints in Swiss type machines: the two-part AFC holder – even untrained staff can replace tools fast and reliably.

This is how it works: The rear part of the tool holder (AHA fixed stop) is first fixed in place. Only the front part is removed to replace the tool. This eliminates the need to restart and recalibrate the zero point since the length to the insert tip is always the same – whether the grooving system or the turning system is used. The two holder parts are simply joined by a connector system with O-ring. The front part is then secured immediately it is placed in the connector – nothing drops into the machine accidentally. At the same time, the floating mount provides enough clearance to compensate for angle offset. The two parts then fit together perfectly. Now you benefit from a high level of precision when changing tools and a leak-proof coolant hole.

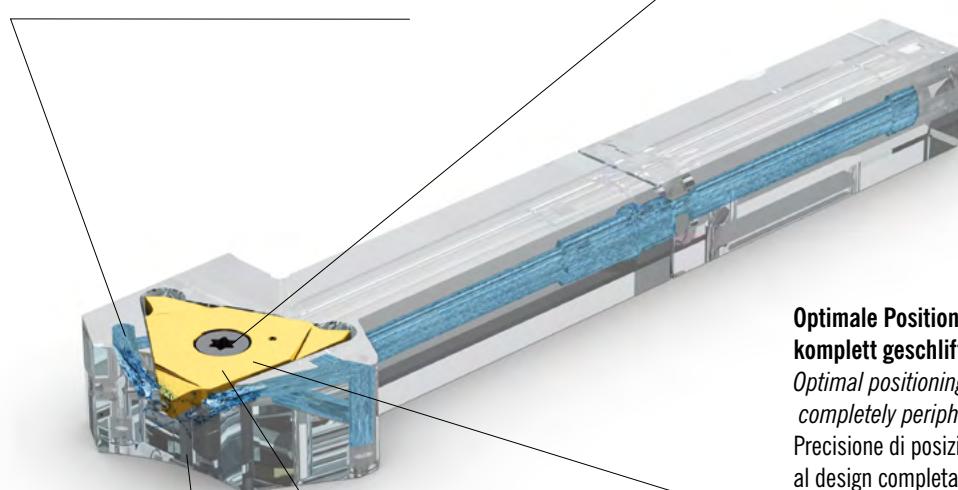
Portautensili AFC: la rivoluzione per il cambio utensile rapido – in attesa di brevetto.

La vostra soluzione per un cambio utensili confortevole nonostante il ridotto spazio interno nei torni a fantina mobile: Il supporto AFC in due parti con il quale anche il personale non addestrato può sostituire gli utensili in modo rapido e sicuro.

Funziona così: la parte posteriore dell'utensile (arresto AHA) viene fissata. Per sostituire l'utensile, deve essere rimossa solo la parte anteriore. Non è necessario un nuovo avviamento e una nuova regolazione del punto zero dal momento che la punta dell'inserto ha sempre la medesima lunghezza, indipendentemente dal fatto che si utilizzi un sistema di tornitura o un sistema di scanalatura. Le due parti del supporto vengono collegate mediante un sistema ad innesto con o-ring. La parte anteriore viene subito assicurata quando viene posizionata sull'innesto a spina – nulla può cadere inavvertitamente all'interno della macchina. Allo stesso tempo, un supporto flottante lascia gioco sufficiente per compensare il disallineamento angolare, le due parti si incastrano in modo ottimale l'una nell'altra. Approfittate anche voi di un'elevata precisione di cambio e di un canale ermetico del refrigerante.

Standard: optimale Kühlung der Freifläche
Standard: optimised cooling of the tool flank
Standard: raffreddamento ottimale del fianco

Geeignet zum Stechen an der Schulter
Suitable for grooving at the shoulder
Adatto per la scanalatura degli spallamenti

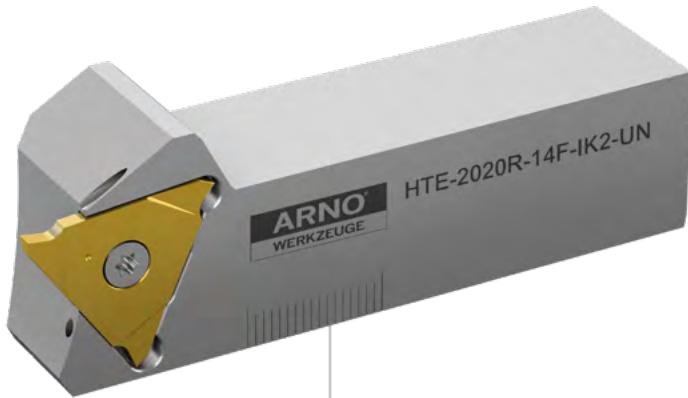


Optimale Positioniergenauigkeit durch komplett geschliffene Ausführung
Optimal positioning accuracy due to the completely periphery grinding
Precisione di posizionamento ottimale grazie al design completamente rettificato

Standard: direkte Kühlung der Spanfläche
Standard: direct cooling of the cutting edge
Standard: raffreddamento diretto della superficie di spoglia superiore

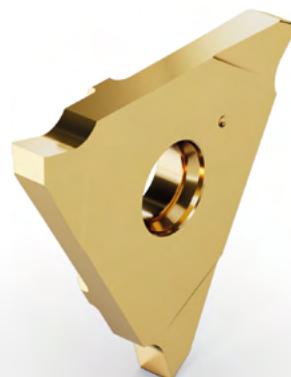
Stechsystem mit 3-schneidiger T-Wendeschneidplatte
Grooving system with T-shaped indexable insert with 3 cutting edges
Sistema di scanalatura con inserto a 3 taglienti

Monoblockhalter / Monoblock holders / Utensili monoblocco



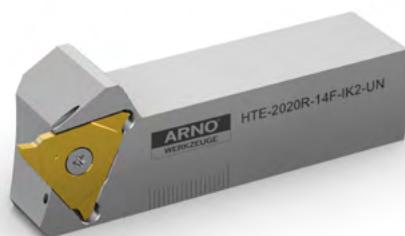
| | | | | | | |
|---|---|---|--|--|--|---|
| H | TE | 2020 | L | 14F | IK2 | UN |
| Schnittstelle Maschinenseitig <i>Interface machine-side</i> Interfaccia lato macchina | System <i>System</i> Sistema | Schaftgröße <i>Shank size</i> Taglia dello stelo | Ausrichtung <i>Orientation</i> Allineamento | Schneideinsatz <i>Insert</i> Inserito | Kühlmittelaustritt IK2 = Span- und Freifläche <i>Coolant outlet IK2 = polishing sur- face and tool flank</i> Fluoriuscita del refrigerante IK2 = Superficie di spoglia superiore e fianco | Kühlmittelzufuhr <i>Coolant supply</i> Adduzione del refrigerante |

Schneideinsätze / Inserts / Inserti



| | | | | | | | | |
|---|--|---|--|--|---|--|--|--|
| TE | 14F | 200 | 65 | 03 | E | L | -GA | AP5020 |
| System <i>System</i> Sistema | Schneideinsatz <i>Insert</i> Inserito | Einstechbreite EB = 2 mm <i>Groove width EB = 2 mm</i> Larghezza gola EB = 2 mm | Einstechtiefe ET = 6,5 mm <i>Grooving depth ET = 6,5 mm</i> Larghezza di taglio ET = 6,5 mm | Eckenradius R = 0,3 mm <i>Corner radius R = 0,3 mm</i> Raggio R = 0,3 mm | Schneidkante E= verrundet <i>Cutting edge E= rounded</i> Tagliente E= arrotondato | Ausrichtung <i>Orientation</i> Allineamento | Geometrie <i>Geometry</i> Geometria | ARNO®- Einsatzgebiet (AP) + Schneidstoff- code (ISO- Gruppierung) <i>ARNO®- Application area (AP) + Grade code (ISO)</i> |

Tool shank options
Tipologie di corpo utensile



Monoblockhalter HTE / Monoblock holders HTE / Utensili monoblocco HTE

Seite/Page/Pagina **10 – 17 & 36**



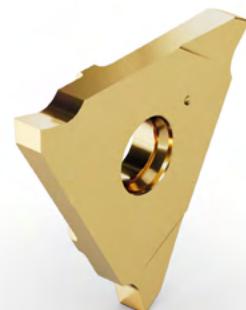
**Klemmhalter mit Schraubenklemmung
für Langdrehautomaten HTE-...-AFC /
Holders with screw clamping
for sliding head auto lathes HTE-...-AFC /
Steli con fissaggio a vite per fantina mobile HTE-...-AFC**

Seite/Page/Pagina **18**



Module MTE / Modules MTE / Moduli MTE

Seite/Page/Pagina **19**



Schneideinsätze TE / Inserts TE / Inserti TE

Seite/Page/Pagina **24 – 29**

HTE-...-IK2-H.

Monoblockhalter mit Innenkühlung IK2 von hinten / Monoblock holder with through tool coolant (IK2) access from the back / Utensile monoblocco con adduzione interna IK2 posteriore

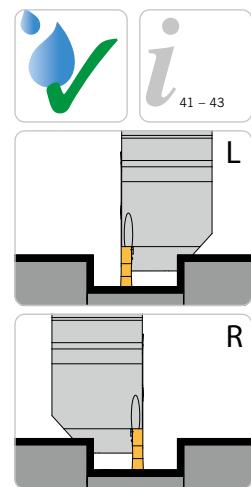
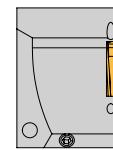
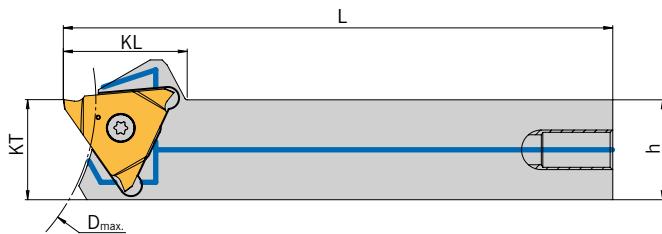


Abbildung ähnlich
Similar to illustration
Simile all'illustrazione

Trägerwerkzeuge / Holders / Utensili

Ausführung H1 / Execution H1 / Esecuzione H1

| Bezeichnung Designation Articolo | ET _{max} | D _{max} | h | L | f ₁ | KL | KT | G1 | Drehmoment Nm Torque Nm Coppia Nm | Größe Size Grandezza | Schneideinsatz Insert Inserto |
|--|-------------------|------------------|----|-----|----------------|----|----|------|--|----------------------------|-------------------------------------|
| HTE-1212L/R-14H-IK2-H1 | 6,5 | 80 | 12 | 110 | 8,95 | 25 | 20 | M8x1 | 2,5 | H | T...14H... |
| HTE-1212L/R-14K-IK2-H1 | 6,5 | 80 | 12 | 110 | 7,95 | 25 | 20 | M8x1 | 2,5 | K | T...14K... |
| HTE-1212R/R-14F-IK2-H1 | 6,5 | 80 | 12 | 110 | 9,95 | 25 | 20 | M8x1 | 2,5 | F | T...14F... |
| HTE-1616L/R-14F-IK2-H1 | 6,5 | 80 | 16 | 110 | 13,95 | 25 | 20 | M8x1 | 2,5 | F | T...14F... |
| HTE-1616L/R-14H-IK2-H1 | 6,5 | 80 | 16 | 110 | 12,95 | 25 | 20 | M8x1 | 2,5 | H | T...14H... |
| HTE-1616L/R-14K-IK2-H1 | 6,5 | 80 | 16 | 110 | 11,95 | 25 | 20 | M8x1 | 2,5 | K | T...14K... |
| HTE-1616L/R-14P-IK2-H1 | 6,5 | 80 | 16 | 110 | 11,00 | 25 | 25 | M8x1 | 2,5 | P | T...14P... |
| HTE-2020L/R-14F-IK2-H1 | 6,5 | 80 | 20 | 110 | 17,95 | 25 | 20 | M8x1 | 2,5 | F | T...14F... |
| HTE-2020L/R-14H-IK2-H1 | 6,5 | 80 | 20 | 110 | 16,95 | 25 | 20 | M8x1 | 2,5 | H | T...14H... |
| HTE-2020L/R-14K-IK2-H1 | 6,5 | 80 | 20 | 110 | 15,95 | 25 | 20 | M8x1 | 2,5 | K | T...14K... |
| HTE-2020L/R-14P-IK2-H1 | 6,5 | 80 | 20 | 110 | 15,00 | 25 | 25 | M8x1 | 2,5 | P | T...14P... |
| HTE-2525L/R-14F-IK2-H1 | 6,5 | 150 | 25 | 110 | 22,95 | 25 | 25 | M8x1 | 2,5 | F | T...14F... |
| HTE-2525L/R-14H-IK2-H1 | 6,5 | 150 | 25 | 110 | 21,95 | 25 | 25 | M8x1 | 2,5 | H | T...14H... |
| HTE-2525L/R-14K-IK2-H1 | 6,5 | 150 | 25 | 110 | 20,95 | 25 | 25 | M8x1 | 2,5 | K | T...14K... |
| HTE-2525L/R-14P-IK2-H1 | 6,5 | 150 | 25 | 110 | 19,95 | 25 | 25 | M8x1 | 2,5 | P | T...14P... |
| HTE-2525L/R-14S-IK2-H1 | 6,5 | 150 | 25 | 110 | 18,95 | 25 | 25 | M8x1 | 2,5 | S | T...14S... |

Trägerwerkzeuge / Holders / Utensili

Ausführung H2 / Execution H2 / Esecuzione H2

| Bezeichnung Designation Articolo | ET _{max} | D _{max} | h | L | f ₁ | KL | KT | G1 | Drehmoment Nm | | Größe Size Grandezza | Schneideinsatz Insert Inserto |
|--|-------------------|------------------|----|-----|----------------|----|----|-------|------------------|-----------|----------------------------|-------------------------------------|
| | | | | | | | | | Torque Nm | Coppia Nm | | |
| HTE-1212L/R-14F-IK2-H2 | 6,5 | 80 | 12 | 110 | 9,95 | 25 | 20 | G1/8" | 2,5 | | F | T...14F... |
| HTE-1212L/R-14H-IK2-H2 | 6,5 | 80 | 12 | 110 | 8,95 | 25 | 20 | G1/8" | 2,5 | | H | T...14H... |
| HTE-1212L/R-14K-IK2-H2 | 6,5 | 80 | 12 | 110 | 7,95 | 25 | 20 | G1/8" | 2,5 | | K | T...14K... |
| HTE-1616L/R-14F-IK2-H2 | 6,5 | 80 | 16 | 110 | 13,95 | 25 | 20 | G1/8" | 2,5 | | F | T...14F... |
| HTE-1616L/R-14H-IK2-H2 | 6,5 | 80 | 16 | 110 | 12,95 | 25 | 20 | G1/8" | 2,5 | | H | T...14H... |
| HTE-1616L/R-14K-IK2-H2 | 6,5 | 80 | 16 | 110 | 11,95 | 25 | 20 | G1/8" | 2,5 | | K | T...14K... |
| HTE-1616L/R-14P-IK2-H2 | 6,5 | 80 | 16 | 110 | 11,00 | 25 | 25 | G1/8" | 2,5 | | P | T...14P... |
| HTE-2020L/R-14F-IK2-H2 | 6,5 | 80 | 20 | 110 | 17,95 | 25 | 20 | G1/8" | 2,5 | | F | T...14F... |
| HTE-2020L/R-14H-IK2-H2 | 6,5 | 80 | 20 | 110 | 16,95 | 25 | 20 | G1/8" | 2,5 | | H | T...14H... |
| HTE-2020L/R-14K-IK2-H2 | 6,5 | 80 | 20 | 110 | 15,95 | 25 | 20 | G1/8" | 2,5 | | K | T...14K... |
| HTE-2020L/R-14P-IK2-H2 | 6,5 | 80 | 20 | 110 | 15,00 | 25 | 25 | G1/8" | 2,5 | | P | T...14P... |
| HTE-2525L/R-14F-IK2-H2 | 6,5 | 150 | 25 | 110 | 22,95 | 25 | 25 | G1/8" | 2,5 | | F | T...14F... |
| HTE-2525L/R-14H-IK2-H2 | 6,5 | 150 | 25 | 110 | 21,95 | 25 | 25 | G1/8" | 2,5 | | H | T...14H... |
| HTE-2525L/R-14K-IK2-H2 | 6,5 | 150 | 25 | 110 | 20,95 | 25 | 25 | G1/8" | 2,5 | | K | T...14K... |
| HTE-2525L/R-14P-IK2-H2 | 6,5 | 150 | 25 | 110 | 19,95 | 25 | 25 | G1/8" | 2,5 | | P | T...14P... |
| HTE-2525L/R-14S-IK2-H2 | 6,5 | 150 | 25 | 110 | 18,95 | 25 | 25 | G1/8" | 2,5 | | S | T...14S... |

Trägerwerkzeuge / Holders / Utensili

Ausführung H3 / Execution H3 / Esecuzione H3

| Bezeichnung Designation Articolo | ET _{max} | D _{max} | h | L | f ₁ | KL | KT | G1 | Drehmoment Nm | | Größe Size Grandezza | Schneideinsatz Insert Inserto |
|--|-------------------|------------------|----|-----|----------------|----|----|-------|------------------|-----------|----------------------------|-------------------------------------|
| | | | | | | | | | Torque Nm | Coppia Nm | | |
| HTE-1616L/R-14F-IK2-H3 | 6,5 | 80 | 16 | 110 | 13,95 | 25 | 20 | G1/4" | 2,5 | | F | T...14F... |
| HTE-1616L/R-14H-IK2-H3 | 6,5 | 80 | 16 | 110 | 12,95 | 25 | 20 | G1/4" | 2,5 | | H | T...14H... |
| HTE-1616L/R-14K-IK2-H3 | 6,5 | 80 | 16 | 110 | 11,95 | 25 | 20 | G1/4" | 2,5 | | K | T...14K... |
| HTE-1616L/R-14P-IK2-H3 | 6,5 | 80 | 16 | 110 | 11,00 | 25 | 25 | G1/4" | 2,5 | | P | T...14P... |
| HTE-2020L/R-14F-IK2-H3 | 6,5 | 80 | 20 | 110 | 17,95 | 25 | 20 | G1/4" | 2,5 | | F | T...14F... |
| HTE-2020L/R-14H-IK2-H3 | 6,5 | 80 | 20 | 110 | 16,95 | 25 | 20 | G1/4" | 2,5 | | H | T...14H... |
| HTE-2020L/R-14K-IK2-H3 | 6,5 | 80 | 20 | 110 | 15,95 | 25 | 20 | G1/4" | 2,5 | | K | T...14K... |
| HTE-2020L/R-14P-IK2-H3 | 6,5 | 80 | 20 | 110 | 15,00 | 25 | 25 | G1/4" | 2,5 | | P | T...14P... |
| HTE-2525L/R-14F-IK2-H3 | 6,5 | 150 | 25 | 110 | 22,95 | 25 | 25 | G1/4" | 2,5 | | F | T...14F... |
| HTE-2525L/R-14H-IK2-H3 | 6,5 | 150 | 25 | 110 | 21,95 | 25 | 25 | G1/4" | 2,5 | | H | T...14H... |
| HTE-2525L/R-14K-IK2-H3 | 6,5 | 150 | 25 | 110 | 20,95 | 25 | 25 | G1/4" | 2,5 | | K | T...14K... |
| HTE-2525L/R-14P-IK2-H3 | 6,5 | 150 | 25 | 110 | 19,95 | 25 | 25 | G1/4" | 2,5 | | P | T...14P... |
| HTE-2525L/R-14S-IK2-H3 | 6,5 | 150 | 25 | 110 | 18,95 | 25 | 25 | G1/4" | 2,5 | | S | T...14S... |

 ARNO® SpecialDesign

Diese Monoblockhalter bekommen Sie mit Ihren spezifischen Kühlanschlüssen. Ein Anfrageblatt hierzu finden Sie auf Seite 41.

The coolant inlet can be supplied to your specification. Please complete enquiry sheet on page 42.

Questi corpi utensile sono fornibili con specifiche connessioni del refrigerante. Vedere modulo richiesta a Pagina 43.

Auf Anfrage liefern wir Ihnen Schneideinsätze in Sondergrößen mit den hierfür passenden Haltern. Dabei sind Einstechbreiten von bis zu 15 mm möglich.

On request, we can supply you with inserts in special sizes with the appropriate holders. Plunge widths of up to 15 mm are possible.

A richiesta possiamo fornirvi inserti in misure speciali con gli appositi supporti. Sono possibili larghezze di tuffo fino a 15 mm.

Passende Schneideinsätze finden Sie auf Seite 24 – 29.

For inserts to suit please see page 24 – 29.

Per i inserti abbinabili vedere pagina 24 – 29.

Ersatzteile / Spare Parts / Ricambi

| Trägerwerkzeug Holder Utensile | Schraube Screw Vite | Schlüssel Key Chiave |
|--------------------------------------|---------------------------|----------------------------|
| HTE-...-14... | AS 0005 | T5210-IP |

Monoblock holders
Utensili monoblocco

HTE-...-IK2-S.

Monoblockhalter mit Innenkühlung IK2 von der Seite / Monoblock holder with through tool coolant (IK2) access from the side / Utensile monoblocco con adduzione interna IK2 laterale

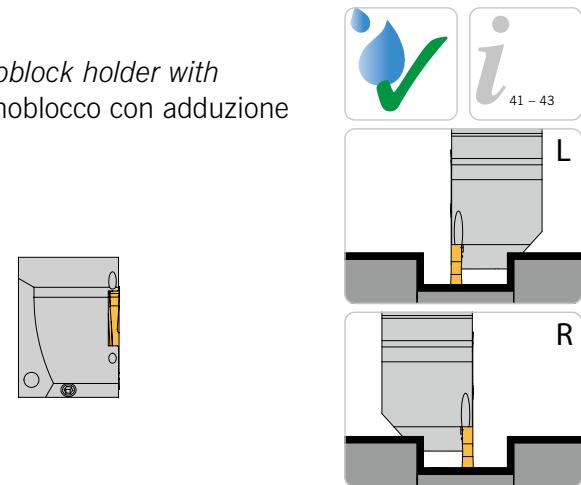
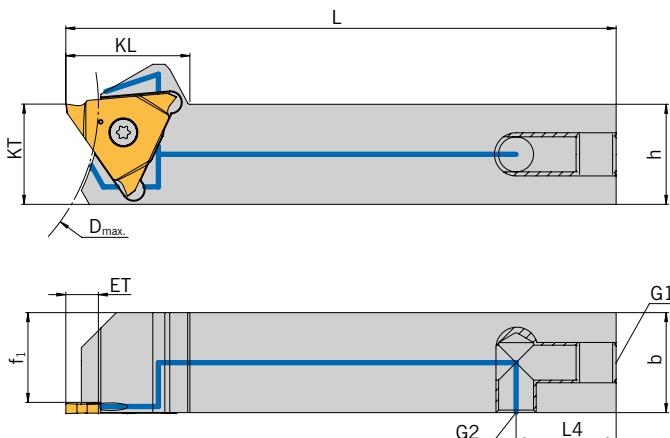


Abbildung ähnlich
Similar to illustration
Simile all'illustrazione

Trägerwerkzeuge / Holders / Utensili

Ausführung S1 / Execution S1 / Esecuzione S1

| Bezeichnung Designation Articolo | ET _{max} | D _{max} | h | L | f ₁ | KL | KT | L ₄ | G1 | G2 | Drehmoment Nm Torque Nm Coppia Nm | Größe Size Grandezza | Schneideinsatz Insert Inserto |
|--|-------------------|------------------|----|-----|----------------|----|----|----------------|------|------|--|----------------------------|-------------------------------------|
| HTE-1212L/R-14F-IK2-S1 | 6,5 | 80 | 12 | 110 | 9,95 | 25 | 20 | 20 | M8x1 | M8x1 | 2,5 | F | T...14F... |
| HTE-1212L/R-14H-IK2-S1 | 6,5 | 80 | 12 | 110 | 8,95 | 25 | 20 | 20 | M8x1 | M8x1 | 2,5 | H | T...14H... |
| HTE-1212L/R-14K-IK2-S1 | 6,5 | 80 | 12 | 110 | 7,95 | 25 | 20 | 20 | M8x1 | M8x1 | 2,5 | K | T...14K... |
| HTE-1616L/R-14F-IK2-S1 | 6,5 | 80 | 16 | 110 | 13,95 | 25 | 20 | 20 | M8x1 | M8x1 | 2,5 | F | T...14F... |
| HTE-1616L/R-14H-IK2-S1 | 6,5 | 80 | 16 | 110 | 12,95 | 25 | 20 | 20 | M8x1 | M8x1 | 2,5 | H | T...14H... |
| HTE-1616L/R-14K-IK2-S1 | 6,5 | 80 | 16 | 110 | 11,95 | 25 | 20 | 20 | M8x1 | M8x1 | 2,5 | K | T...14K... |
| HTE-1616L/R-14P-IK2-S1 | 6,5 | 80 | 16 | 110 | 11,00 | 25 | 25 | 20 | M8x1 | M8x1 | 2,5 | P | T...14P... |
| HTE-2020L/R-14F-IK2-S1 | 6,5 | 80 | 20 | 110 | 17,95 | 25 | 20 | 20 | M8x1 | M8x1 | 2,5 | F | T...14F... |
| HTE-2020L/R-14H-IK2-S1 | 6,5 | 80 | 20 | 110 | 16,95 | 25 | 20 | 20 | M8x1 | M8x1 | 2,5 | H | T...14H... |
| HTE-2020L/R-14K-IK2-S1 | 6,5 | 80 | 20 | 110 | 15,95 | 25 | 20 | 20 | M8x1 | M8x1 | 2,5 | K | T...14K... |
| HTE-2020L/R-14P-IK2-S1 | 6,5 | 80 | 20 | 110 | 15,00 | 25 | 25 | 20 | M8x1 | M8x1 | 2,5 | P | T...14P... |
| HTE-2525L/R-14F-IK2-S1 | 6,5 | 150 | 25 | 110 | 22,95 | 25 | 25 | 20 | M8x1 | M8x1 | 2,5 | F | T...14F... |
| HTE-2525L/R-14H-IK2-S1 | 6,5 | 150 | 25 | 110 | 21,95 | 25 | 25 | 20 | M8x1 | M8x1 | 2,5 | H | T...14H... |
| HTE-2525L/R-14K-IK2-S1 | 6,5 | 150 | 25 | 110 | 20,95 | 25 | 25 | 20 | M8x1 | M8x1 | 2,5 | K | T...14K... |
| HTE-2525L/R-14P-IK2-S1 | 6,5 | 150 | 25 | 110 | 19,95 | 25 | 25 | 20 | M8x1 | M8x1 | 2,5 | P | T...14P... |
| HTE-2525L/R-14S-IK2-S1 | 6,5 | 150 | 25 | 110 | 18,95 | 25 | 25 | 20 | M8x1 | M8x1 | 2,5 | S | T...14S... |

Trägerwerkzeuge / Holders / Utensili

Ausführung S2 / Execution S2 / Esecuzione S2

| Bezeichnung Designation Articolo | ET _{max} | D _{max} | h | L | f ₁ | KL | KT | L ₄ | G1 | G2 | Drehmoment Nm Torque Nm Coppia Nm | Größe Size Grandezza | Schneideinsatz Insert Inserto |
|--|-------------------|------------------|----|-----|----------------|----|----|----------------|------|-------|--|----------------------------|-------------------------------------|
| | | | | | | | | | | | | | |
| HTE-1212L/R-14F-IK2-S2 | 6,5 | 80 | 12 | 110 | 9,95 | 25 | 20 | 20 | M8x1 | G1/8" | 2,5 | F | T...14F... |
| HTE-1212L/R-14H-IK2-S2 | 6,5 | 80 | 12 | 110 | 8,95 | 25 | 20 | 20 | M8x1 | G1/8" | 2,5 | H | T...14H... |
| HTE-1212L/R-14K-IK2-S2 | 6,5 | 80 | 12 | 110 | 7,95 | 25 | 20 | 20 | M8x1 | G1/8" | 2,5 | K | T...14K... |
| HTE-1616L/R-14F-IK2-S2 | 6,5 | 80 | 16 | 110 | 13,95 | 25 | 20 | 20 | M8x1 | G1/8" | 2,5 | F | T...14F... |
| HTE-1616L/R-14H-IK2-S2 | 6,5 | 80 | 16 | 110 | 12,95 | 25 | 20 | 20 | M8x1 | G1/8" | 2,5 | H | T...14H... |
| HTE-1616L/R-14K-IK2-S2 | 6,5 | 80 | 16 | 110 | 11,95 | 25 | 20 | 20 | M8x1 | G1/8" | 2,5 | K | T...14K... |
| HTE-1616L/R-14P-IK2-S2 | 6,5 | 80 | 16 | 110 | 11,00 | 25 | 25 | 20 | M8x1 | G1/8" | 2,5 | P | T...14P... |
| HTE-2020L/R-14F-IK2-S2 | 6,5 | 80 | 20 | 110 | 17,95 | 25 | 20 | 20 | M8x1 | G1/8" | 2,5 | F | T...14F... |
| HTE-2020L/R-14H-IK2-S2 | 6,5 | 80 | 20 | 110 | 16,95 | 25 | 20 | 20 | M8x1 | G1/8" | 2,5 | H | T...14H... |
| HTE-2020L/R-14K-IK2-S2 | 6,5 | 80 | 20 | 110 | 15,95 | 25 | 20 | 20 | M8x1 | G1/8" | 2,5 | K | T...14K... |
| HTE-2020L/R-14P-IK2-S2 | 6,5 | 80 | 20 | 110 | 15,00 | 25 | 25 | 20 | M8x1 | G1/8" | 2,5 | P | T...14P... |
| HTE-2525L/R-14F-IK2-S2 | 6,5 | 150 | 25 | 110 | 22,95 | 25 | 25 | 20 | M8x1 | G1/8" | 2,5 | F | T...14F... |
| HTE-2525L/R-14H-IK2-S2 | 6,5 | 150 | 25 | 110 | 21,95 | 25 | 25 | 20 | M8x1 | G1/8" | 2,5 | H | T...14H... |
| HTE-2525L/R-14K-IK2-S2 | 6,5 | 150 | 25 | 110 | 20,95 | 25 | 25 | 20 | M8x1 | G1/8" | 2,5 | K | T...14K... |
| HTE-2525L/R-14P-IK2-S2 | 6,5 | 150 | 25 | 110 | 19,95 | 25 | 25 | 20 | M8x1 | G1/8" | 2,5 | P | T...14P... |
| HTE-2525L/R-14S-IK2-S2 | 6,5 | 150 | 25 | 110 | 18,95 | 25 | 25 | 20 | M8x1 | G1/8" | 2,5 | S | T...14S... |

 ARNO® SpecialDesign

Diese Monoblockhalter bekommen Sie mit Ihren spezifischen Kühlanschlüssen. Ein Anfrageblatt hierzu finden Sie auf Seite 41.

The coolant inlet can be supplied to your specification. Please complete enquiry sheet on page 42.

Questi corpi utensile sono fornibili con specifiche connessioni del refrigerante. Vedere modulo richiesta a Pagina 43.

Auf Anfrage liefern wir Ihnen Schneideinsätze in Sondergrößen mit den hierfür passenden Haltern. Dabei sind Einstechbreiten von bis zu 15 mm möglich.

On request, we can supply you with inserts in special sizes with the appropriate holders. Plunge widths of up to 15 mm are possible.

A richiesta possiamo fornirvi inserti in misure speciali con gli appositi supporti. Sono possibili larghezze di tuffo fino a 15 mm.

Passende Schneideinsätze finden Sie auf Seite 24 – 29.

For inserts to suit please see page 24 – 29.

Per i inserti abbinabili vedere pagina24 – 29.

Ersatzteile / Spare Parts / Ricambi

| Trägerwerkzeug Holder Utensile | Schraube Screw Vite | Schlüssel Key Chiave |
|--------------------------------------|---------------------------|----------------------------|
| HTE-...-14... | AS 0005 | T5210-IP |

HTE-...-IK2-S.G

Monoblockhalter mit Innenkühlung IK2 von der gegenüberliegenden Seite der Schneide / Monoblock holder with through tool coolant (IK2) access from the opposite side of the cutting edge / Utensile monoblocco con adduzione interna IK2 laterale dal lato opposto all'inserto

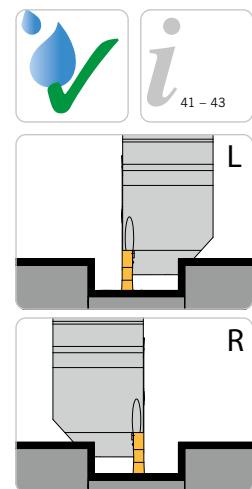
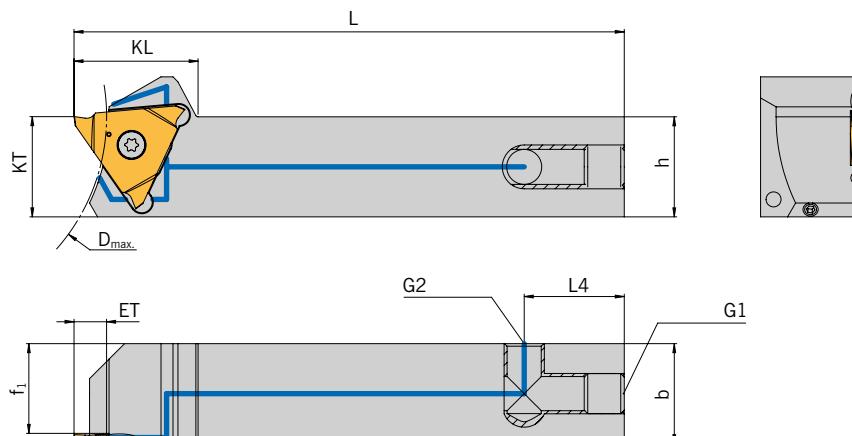


Abbildung ähnlich
Similar to illustration
Simile all'illustrazione

Trägerwerkzeuge / Holders / Utensili

Ausführung S1G / Execution S1G / Esecuzione S1G

| Bezeichnung Designation Articolo | ET _{max} | D _{max} | h | L | f ₁ | KL | KT | L ₄ | G1 | G2 | Drehmoment Nm Torque Nm Coppia Nm | Größe Size Grandezza | Schneideinsatz Insert Inserito |
|--|-------------------|------------------|----|-----|----------------|----|----|----------------|------|------|--|----------------------------|--------------------------------------|
| HTE-1212L/R-14F-IK2-S1G | 6,5 | 80 | 12 | 110 | 9,95 | 25 | 20 | 20 | M8x1 | M8x1 | 2,5 | F | T...14F... |
| HTE-1212L/R-14H-IK2-S1G | 6,5 | 80 | 12 | 110 | 8,95 | 25 | 20 | 20 | M8x1 | M8x1 | 2,5 | H | T...14H... |
| HTE-1212L/R-14K-IK2-S1G | 6,5 | 80 | 12 | 110 | 7,95 | 25 | 20 | 20 | M8x1 | M8x1 | 2,5 | K | T...14K... |
| HTE-1616L/R-14F-IK2-S1G | 6,5 | 80 | 16 | 110 | 13,95 | 25 | 20 | 20 | M8x1 | M8x1 | 2,5 | F | T...14F... |
| HTE-1616L/R-14H-IK2-S1G | 6,5 | 80 | 16 | 110 | 12,95 | 25 | 20 | 20 | M8x1 | M8x1 | 2,5 | H | T...14H... |
| HTE-1616L/R-14K-IK2-S1G | 6,5 | 80 | 16 | 110 | 11,95 | 25 | 20 | 20 | M8x1 | M8x1 | 2,5 | K | T...14K... |
| HTE-1616L/R-14P-IK2-S1G | 6,5 | 80 | 16 | 110 | 11,00 | 25 | 25 | 20 | M8x1 | M8x1 | 2,5 | P | T...14P... |
| HTE-2020L/R-14F-IK2-S1G | 6,5 | 80 | 20 | 110 | 17,95 | 25 | 20 | 20 | M8x1 | M8x1 | 2,5 | F | T...14F... |
| HTE-2020L/R-14H-IK2-S1G | 6,5 | 80 | 20 | 110 | 16,95 | 25 | 20 | 20 | M8x1 | M8x1 | 2,5 | H | T...14H... |
| HTE-2020L/R-14K-IK2-S1G | 6,5 | 80 | 20 | 110 | 15,95 | 25 | 20 | 20 | M8x1 | M8x1 | 2,5 | K | T...14K... |
| HTE-2020L/R-14P-IK2-S1G | 6,5 | 80 | 20 | 110 | 15,00 | 25 | 25 | 25 | M8x1 | M8x1 | 2,5 | P | T...14P... |
| HTE-2525L/R-14F-IK2-S1G | 6,5 | 150 | 25 | 110 | 22,95 | 25 | 25 | 20 | M8x1 | M8x1 | 2,5 | F | T...14F... |
| HTE-2525L/R-14H-IK2-S1G | 6,5 | 150 | 25 | 110 | 21,95 | 25 | 25 | 20 | M8x1 | M8x1 | 2,5 | H | T...14H... |
| HTE-2525L/R-14K-IK2-S1G | 6,5 | 150 | 25 | 110 | 20,95 | 25 | 25 | 20 | M8x1 | M8x1 | 2,5 | K | T...14K... |
| HTE-2525L/R-14P-IK2-S1G | 6,5 | 150 | 25 | 110 | 19,95 | 25 | 25 | 20 | M8x1 | M8x1 | 2,5 | P | T...14P... |
| HTE-2525L/R-14S-IK2-S1G | 6,5 | 150 | 25 | 110 | 18,95 | 25 | 25 | 20 | M8x1 | M8x1 | 2,5 | S | T...14S... |

Trägerwerkzeuge / Holders / Utensili

Ausführung S2G / Execution S2G / Esecuzione S2G

| Bezeichnung Designation Articolo | ET _{max} | D _{max} | h | L | f ₁ | KL | KT | L ₄ | G1 | G2 | Drehmoment Nm Torque Nm Coppia Nm | Größe Size Grandezza | Schneideinsatz Insert Inserto |
|--|-------------------|------------------|----|-----|----------------|----|----|----------------|------|-------|--|----------------------------|-------------------------------------|
| HTE-1212L/R-14F-IK2-S2G | 6,5 | 80 | 12 | 110 | 9,95 | 25 | 20 | 20 | M8x1 | G1/8" | 2,5 | F | T...14F... |
| HTE-1212L/R-14H-IK2-S2G | 6,5 | 80 | 12 | 110 | 8,95 | 25 | 20 | 20 | M8x1 | G1/8" | 2,5 | H | T...14H... |
| HTE-1212L/R-14K-IK2-S2G | 6,5 | 80 | 12 | 110 | 7,95 | 25 | 20 | 20 | M8x1 | G1/8" | 2,5 | K | T...14K... |
| HTE-1616L/R-14F-IK2-S2G | 6,5 | 80 | 16 | 110 | 13,95 | 25 | 20 | 20 | M8x1 | G1/8" | 2,5 | F | T...14F... |
| HTE-1616L/R-14H-IK2-S2G | 6,5 | 80 | 16 | 110 | 12,95 | 25 | 20 | 20 | M8x1 | G1/8" | 2,5 | H | T...14H... |
| HTE-1616L/R-14K-IK2-S2G | 6,5 | 80 | 16 | 110 | 11,95 | 25 | 20 | 20 | M8x1 | G1/8" | 2,5 | K | T...14K... |
| HTE-1616L/R-14P-IK2-S2G | 6,5 | 80 | 16 | 110 | 11,00 | 25 | 25 | 20 | M8x1 | G1/8" | 2,5 | P | T...14P... |
| HTE-2020L/R-14F-IK2-S2G | 6,5 | 80 | 20 | 110 | 17,95 | 25 | 20 | 20 | M8x1 | G1/8" | 2,5 | F | T...14F... |
| HTE-2020L/R-14H-IK2-S2G | 6,5 | 80 | 20 | 110 | 16,95 | 25 | 20 | 20 | M8x1 | G1/8" | 2,5 | H | T...14H... |
| HTE-2020L/R-14K-IK2-S2G | 6,5 | 80 | 20 | 110 | 15,95 | 25 | 20 | 20 | M8x1 | G1/8" | 2,5 | K | T...14K... |
| HTE-2020L/R-14P-IK2-S2G | 6,5 | 80 | 20 | 110 | 15,00 | 25 | 25 | 20 | M8x1 | G1/8" | 2,5 | P | T...14P... |
| HTE-2525L/R-14F-IK2-S2G | 6,5 | 150 | 25 | 110 | 22,95 | 25 | 25 | 20 | M8x1 | G1/8" | 2,5 | F | T...14F... |
| HTE-2525L/R-14H-IK2-S2G | 6,5 | 150 | 25 | 110 | 21,95 | 25 | 25 | 20 | M8x1 | G1/8" | 2,5 | H | T...14H... |
| HTE-2525L/R-14K-IK2-S2G | 6,5 | 150 | 25 | 110 | 20,95 | 25 | 25 | 20 | M8x1 | G1/8" | 2,5 | K | T...14K... |
| HTE-2525L/R-14P-IK2-S2G | 6,5 | 150 | 25 | 110 | 19,95 | 25 | 25 | 20 | M8x1 | G1/8" | 2,5 | P | T...14P... |
| HTE-2525L/R-14S-IK2-S2G | 6,5 | 150 | 25 | 110 | 18,95 | 25 | 25 | 20 | M8x1 | G1/8" | 2,5 | S | T...14S... |

 ARNO® SpecialDesign

Diese Monoblockhalter bekommen Sie mit Ihren spezifischen Kühlanschlüssen. Ein Anfrageblatt hierzu finden Sie auf Seite 41.

The coolant inlet can be supplied to your specification. Please complete enquiry sheet on page 42.

Questi corpi utensile sono fornibili con specifiche connessioni del refrigerante. Vedere modulo richiesta a Pagina 43.

Auf Anfrage liefern wir Ihnen Schneideinsätze in Sondergrößen mit den hierfür passenden Haltern. Dabei sind Einstechbreiten von bis zu 15 mm möglich.

On request, we can supply you with inserts in special sizes with the appropriate holders. Plunge widths of up to 15 mm are possible.

A richiesta possiamo fornirvi inserti in misure speciali con gli appositi supporti. Sono possibili larghezze di tuffo fino a 15 mm.

Passende Schneideinsätze finden Sie auf Seite 24 – 29.

For inserts to suit please see page 24 – 29.

Per i inserti abbinabili vedere pagina 24 – 29.

Ersatzteile / Spare Parts / Ricambi

| Trägerwerkzeug Holder Utensile | Schraube Screw Vite | Schlüssel Key Chiave |
|--------------------------------------|---------------------------|----------------------------|
| HTE-...-14... | AS 0005 | T5210-IP |

Monoblock holders
Utensili monoblocco

HTE-....-09...

Monoblockhalter ohne Innenkühlung / *Monoblock holder without through tool coolant* / Utensile monoblocco senza adduzione interna

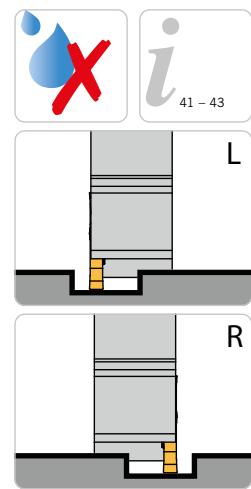
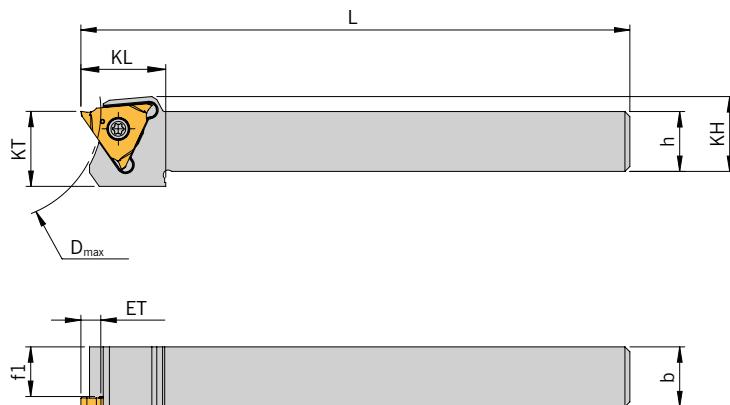


Abbildung ähnlich
Similar to illustration
Simile all'illustrazione



Trägerwerkzeuge / Holders / Utensili

| Bezeichnung Designation Articolo | ET _{max} | D _{max} | h | b | L | f ₁ | KL | KT | Größe Size Grandezza | Drehmoment Nm Torque Nm Coppia Nm | Schneidein- satz Insert Inserto |
|--|-------------------|------------------|----|----|-----|----------------|----|----|----------------------------|--|--|
| HTE-1010L/R-09F | 4 | 44 | 10 | 10 | 110 | 7,95 | 17 | 15 | F | 1,5 | T...09F... |
| HTE-1010L/R-09H | 4 | 44 | 10 | 10 | 110 | 6,95 | 17 | 15 | H | 1,5 | T...09H... |
| HTE-1212L/R-09F | 4 | 44 | 12 | 12 | 110 | 9,95 | 17 | 15 | F | 1,5 | T...09F... |
| HTE-1212L/R-09H | 4 | 44 | 12 | 12 | 110 | 8,95 | 17 | 15 | H | 1,5 | T...09H... |
| HTE-1616L/R-09F | 4 | 80 | 16 | 16 | 110 | 13,95 | 17 | 16 | F | 1,5 | T...09F... |

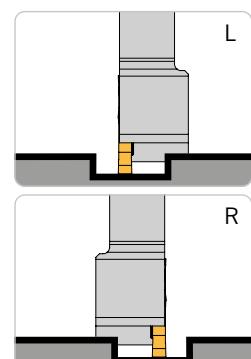
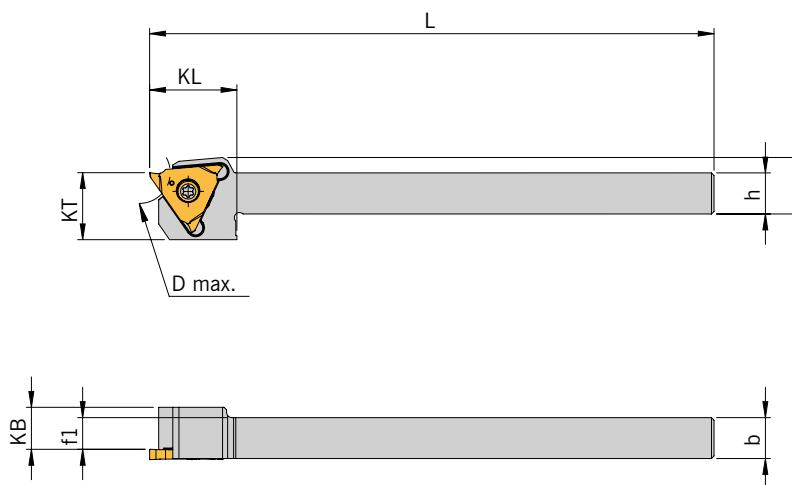


Abbildung ähnlich
Similar to illustration
Simile all'illustrazione

Trägerwerkzeuge / Holders / Utensili

| Bezeichnung Designation Articolo | ET _{max} | D _{max} | h | KB | L | f ₁ | KL | KT | Größe Size Grandezza | Drehmoment Nm Torque Nm Coppia Nm | Schneidein- satz Insert Inserto | |
|--|-------------------|------------------|---|----|------|----------------|------|----|----------------------------|--|--|------------|
| HTE-0808L/R-09F | 4 | 12 | 8 | 8 | 7,95 | 110 | 5,95 | 17 | 13 | F | 1,5 | T...09F... |

Ersatzteile / Spare Parts / Ricambi

| Trägerwerkzeug Holder Utensile | Schraube Screw Vite | Schlüssel Key Chiave |
|--------------------------------------|---------------------------|----------------------------|
| HTE-....-09... | AS 0004 | T5208-IP |

Monoblock holders
Utensili monoblocco

HTE-...

Monoblockhalter ohne Innenkühlung / Monoblock holder without through tool cooling / Utensile monoblocco senza adduzione interna

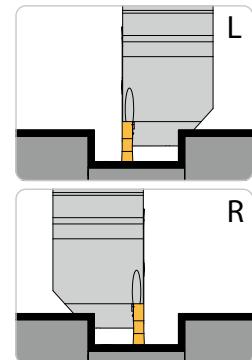
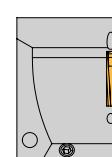
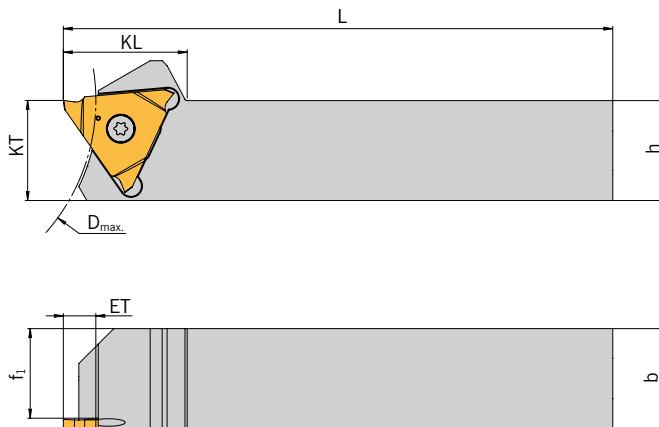


Abbildung ähnlich
Similar to illustration
Simile all'illustrazione

Trägerwerkzeuge / Holders / Utensili

| Bezeichnung Designation Articolo | ET _{max} | D _{max} | h | L | f ₁ | KL | KT | Drehmoment Nm Torque Nm Coppia Nm | Größe Size Grandezza | Schneideinsatz Insert Inserto |
|--|-------------------|------------------|----|-----|----------------|----|----|--|----------------------------|-------------------------------------|
| HTE-1212L/R-14F | 6,5 | 80 | 12 | 110 | 9,95 | 25 | 20 | 2,5 | F | T...14F-... |
| HTE-1212L/R-14H | 6,5 | 80 | 12 | 110 | 8,95 | 25 | 20 | 2,5 | H | T...14H-... |
| HTE-1212L/R-14K | 6,5 | 80 | 12 | 110 | 7,95 | 25 | 20 | 2,5 | K | T...14K-... |
| HTE-1616L/R-14F | 6,5 | 80 | 16 | 110 | 13,95 | 25 | 20 | 2,5 | F | T...14F-... |
| HTE-1616L/R-14H | 6,5 | 80 | 16 | 110 | 12,95 | 25 | 20 | 2,5 | H | T...14H-... |
| HTE-1616L/R-14K | 6,5 | 80 | 16 | 110 | 11,95 | 25 | 20 | 2,5 | K | T...14K-... |
| HTE-1616L/R-14P | 6,5 | 80 | 16 | 110 | 11,00 | 25 | 25 | 2,5 | P | T...14P-... |
| HTE-2020L/R-14F | 6,5 | 80 | 20 | 110 | 17,95 | 25 | 20 | 2,5 | F | T...14F-... |
| HTE-2020L/R-14H | 6,5 | 80 | 20 | 110 | 16,95 | 25 | 20 | 2,5 | H | T...14H-... |
| HTE-2020L/R-14K | 6,5 | 80 | 20 | 110 | 15,95 | 25 | 20 | 2,5 | K | T...14K-... |
| HTE-2020L/R-14P | 6,5 | 80 | 20 | 110 | 15,00 | 25 | 25 | 2,5 | P | T...14P-... |
| HTE-2525L/R-14F | 6,5 | 150 | 25 | 110 | 22,95 | 25 | 25 | 2,5 | F | T...14F-... |
| HTE-2525L/R-14H | 6,5 | 150 | 25 | 110 | 21,95 | 25 | 25 | 2,5 | H | T...14H-... |
| HTE-2525L/R-14K | 6,5 | 150 | 25 | 110 | 20,95 | 25 | 25 | 2,5 | K | T...14K-... |
| HTE-2525L/R-14P | 6,5 | 150 | 25 | 110 | 19,95 | 25 | 25 | 2,5 | P | T...14P-... |
| HTE-2525L/R-14S | 6,5 | 150 | 25 | 110 | 18,95 | 25 | 25 | 2,5 | S | T...14S-... |

ARNO® SpecialDesign

Auf Anfrage liefern wir Ihnen Schneideinsätze in Sondergrößen mit den hierfür passenden Haltern. Dabei sind Einstechbreiten von bis zu 15 mm möglich.

On request, we can supply you with inserts in special sizes with the appropriate holders. Plunge widths of up to 15 mm are possible.

A richiesta possiamo fornirvi inserti in misure speciali con gli appositi supporti. Sono possibili larghezze di tuffo fino a 15 mm.

Passende Schneideinsätze finden Sie auf Seite 24 – 29.

For inserts to suit please see page 24 – 29.

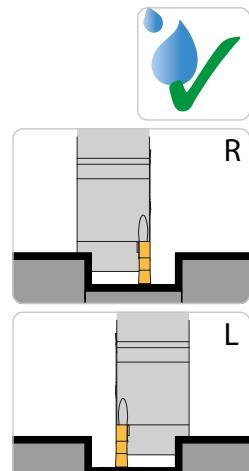
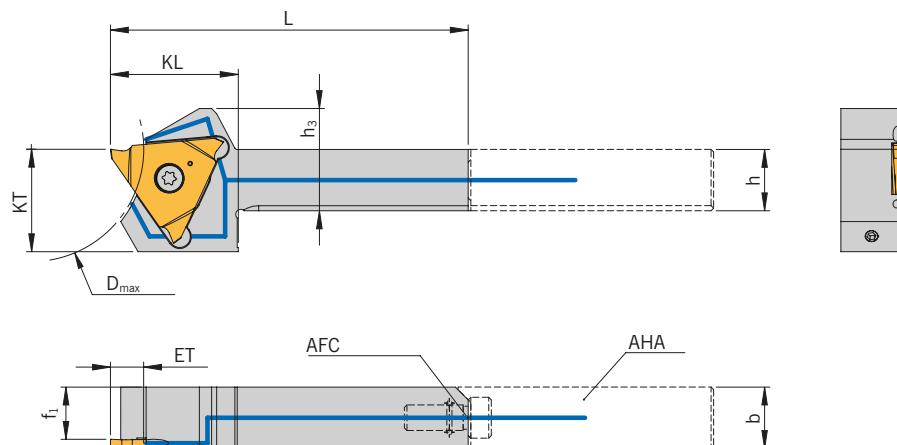
Per i inserti abbinabili vedere pagina 24 – 29.

Ersatzteile / Spare Parts / Ricambi

| | | |
|--------------------------------------|---------------------------|----------------------------|
| Trägerwerkzeug Holder Utensile | Schraube Screw Vite | Schlüssel Key Chiave |
| HTE-...-14... | AS 0005 | T5210-IP |

Holders with screw clamping for sliding head auto lathes
Steli con fissaggio a vite per fantina mobile

HTE-...-IK2-AFC



Rechte Ausführung abgebildet
Right-hand execution shown
Versione destra in figura



Trägerwerkzeuge / Holders / Utensili

| Bezeichnung Designation Articolo | ET _{max} | D _{max} | h | b | h ₃ | L | f ₁ | KL | KT | Drehmoment Nm Torque Nm Coppia Nm | Größe Size Ampiezza | Schneide- einsatz Insert Inserto |
|--|-------------------|------------------|----|----|----------------|----|----------------|----|----|--|---------------------------|---|
| HTE-1012L/R-09F-IK2-AFC | 4 | 44 | 10 | 12 | 17 | 65 | 9,95 | 21 | 15 | 1,5 | F | T...09F... |
| HTE-1012L/R-14F-IK2-AFC | 6,5 | 44 | 10 | 12 | 18 | 65 | 9,95 | 25 | 19 | 2,5 | F | T...14F... |
| HTE-1212L/R-09F-IK2-AFC | 4 | 44 | 12 | 12 | 19 | 65 | 9,95 | 21 | 15 | 1,5 | F | T...09F... |
| HTE-1212L/R-14F-IK2-AFC | 6,5 | 44 | 12 | 12 | 20 | 70 | 9,95 | 25 | 20 | 2,5 | F | T...14F... |
| HTE-1212L/R-14H-IK2-AFC | 6,5 | 44 | 12 | 12 | 20 | 70 | 8,95 | 25 | 20 | 2,5 | H | T...14H... |
| HTE-1212L/R-14K-IK2-AFC | 6,5 | 44 | 12 | 12 | 20 | 70 | 7,95 | 25 | 20 | 2,5 | K | T...14K... |
| HTE-1616L/R-14F-IK2-AFC | 6,5 | 44 | 16 | 16 | 24 | 70 | 13,95 | 25 | 20 | 2,5 | F | T...14F... |
| HTE-1616L/R-14H-IK2-AFC | 6,5 | 44 | 16 | 16 | 24 | 70 | 12,95 | 25 | 20 | 2,5 | H | T...14H... |
| HTE-1616L/R-14K-IK2-AFC | 6,5 | 44 | 16 | 16 | 24 | 70 | 11,95 | 25 | 20 | 2,5 | K | T...14K... |

Passende Schneideinsätze finden Sie auf Seite 24 – 29.

For inserts to suit please see page 24 – 29.

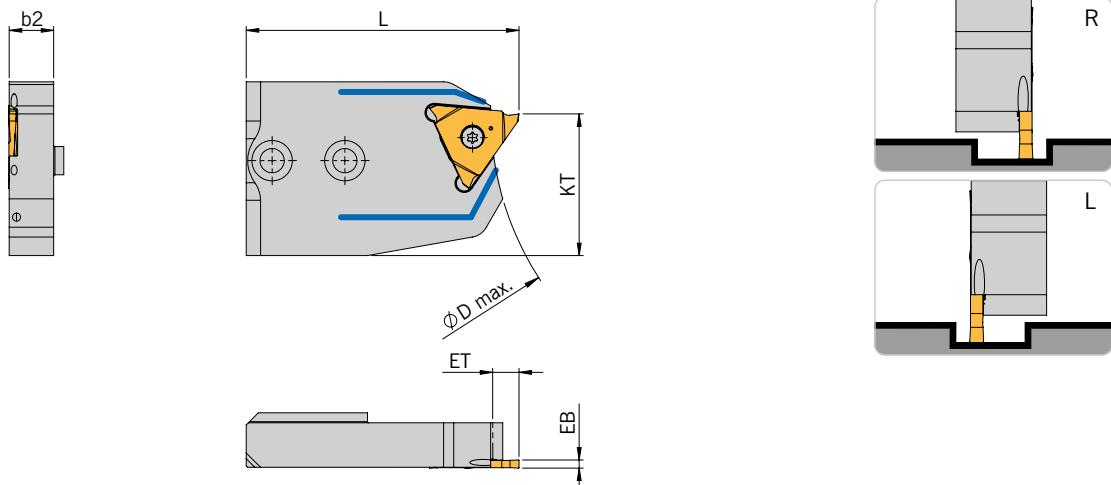
Per i inserti abbinabili vedere pagina 24 – 29.

Ersatzteile / Spare Parts / Ricambi

| Trägerwerkzeug Holder Utensile | Schraube Screw Vite | Schlüssel Key Chiave | O-Ring O-ring O-ring |
|--------------------------------------|---------------------------|----------------------------|--|
| HTE-...-09... | AS 0004 | T5208-IP | Auf Anfrage / On Reques / Su richiesta |
| HTE-...-14... | AS 0005 | T5210-IP | Auf Anfrage / On Reques / Su richiesta |

MTE-IK2

Modul mit Innenkühlung - IK2 / Module with through tool coolant - IK2 /
Modulo con adduzione interna - IK2

**Trägerwerkzeuge / Holders / Utensili**

| Artikel Article Articolo | EB | ET | D _{max} | b ₂ | L | KT | Drehmoment Nm Torque Nm Coppia Nm | Schneideinsatz Insert Inserto |
|--------------------------------|----|-----|------------------|----------------|------|----|--|-------------------------------------|
| MTE-SL/R-14F-IK2 | 2 | 6,5 | 150 | 11 | 67,5 | 35 | 2,5 | T...14F... |
| MTE-SL/R-14H-IK2 | 3 | 6,5 | 150 | 11 | 67,5 | 35 | 2,5 | T...14H... |
| MTE-SL/R-14K-IK2 | 4 | 6,5 | 150 | 11 | 67,5 | 35 | 2,5 | T...14K... |

Passende Schneideinsätze finden Sie auf Seite 24 – 29.

For inserts to suit please see page 24 – 29.

Per i inserti abbinabili vedere pagina 24 – 29.

Passende Halter (HSA7...) sowie Direktanfahrnahmen finden Sie im Katalog Ein- und Abstechen.

Suitable holders (HSA7...) and flange mounted holders with VDI can be found in the catalogue parting and grooving.

Per combinazioni adattatore e attacco VDI vedere catalogo troncatura e scanalatura.

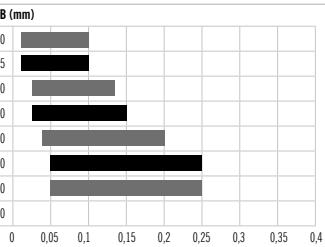
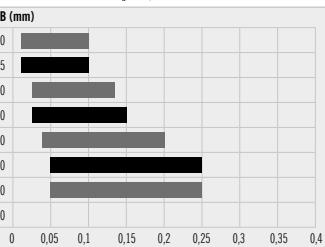
Die Abmaße für AKL und DF_{max} können Sie je nach Aufnahme aus der Tabellenzeile von MSA-...-65-ACS... (Katalog Stechen, Kapitel 10) entnehmen.

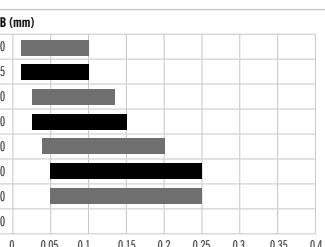
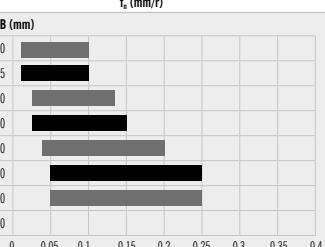
The dimensions for AKL and DF_{max} can be taken from the table line of MSA-...-65-ACS... depending on the specific flange mounted holder (parting and grooving catalogue, chapter 10).

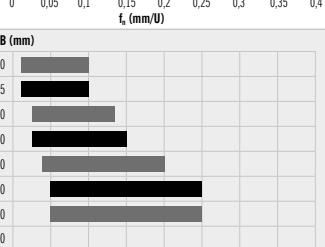
Le dimensioni per AKL e DF_{max} possono essere ricavate dalla riga della tabella di MSA-...-65-ACS... a seconda dell'attacchi base (catalogo di troncatura e scanalatura, capitolo 10).

Ersatzteile / Spare Parts / Ricambi

| Trägerwerkzeug Holder Utensile | Schraube Screw Vite | Schlüssel Key Chiave |
|--------------------------------------|---------------------------|----------------------------|
| MTE-SL/R-14...-IK2 | AS 0005-10 | T5210-IP |

| Geometrie | Eigenschaften | Werkstoffgruppe | Ansicht/Schnitt | Basis Schnittdatendiagramm | |
|-----------|--|--|--|---|---|
| | | | | P | M |
| -GA | <ul style="list-style-type: none"> Hervorragend geeignet für die Bearbeitung von Stahl und nichtrostendem Stahl Komplett geschliffene Geometrie Hohe Präzision und Wiederholgenauigkeit | ● ○ ○ ○ ○ |  |  | |
| -GB | <ul style="list-style-type: none"> Sehr weichschneidende Geometrie Komplett geschliffene Geometrie Geringe Schnittkräfte | ● ○ ○ ○ ○ |  |  | |

| Geometry | Properties | Material group | View/Cut | Basic cutting data diagram | |
|----------|---|--|--|---|---|
| | | | | P | M |
| -GA | <ul style="list-style-type: none"> Excellent for machining steel and stainless steel Completely ground geometry High precision and repeatability | ● ○ ○ ○ ○ |  |  | |
| -GB | <ul style="list-style-type: none"> Very soft cutting geometry Completely ground geometry Low cutting forces | ● ○ ○ ○ ○ |  |  | |

| Geometria | Caratteristiche | Gruppo materiale | Vista/taglio | Base diagramma dati di taglio | |
|-----------|--|--|--|---|---|
| | | | | P | M |
| -GA | <ul style="list-style-type: none"> Eccellente alla lavorazione di acciaio e acciaio inossidabile Geometria completamente rettificata Elevata precisione e accuratezza di ripetibilità | ● ○ ○ ○ ○ |  |  | |
| -GB | <ul style="list-style-type: none"> Geometria morbida Geometria completamente rettificata Ridotte forze di taglio | ● ○ ○ ○ ○ |  |  | |

Grade description
Descrizione della Qualità

HC – HARTMETALL BESCHICHTET

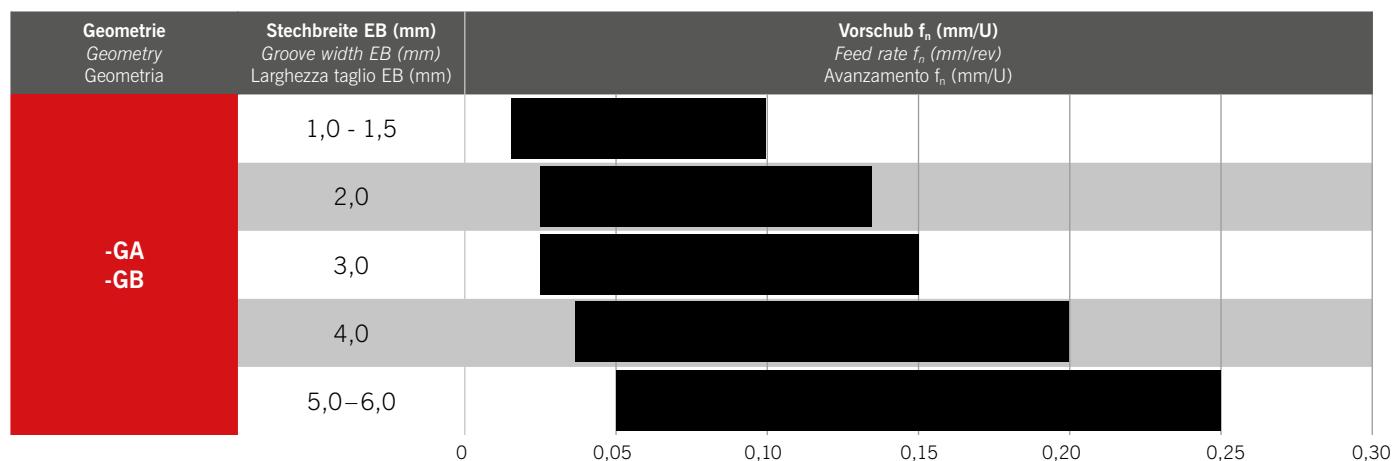
| Sorte | Beschichtungs-farbe | Eigenschaften | Werkstoffgruppe | | | | | | Anwendungsbereich | | | | | | | | | | | |
|---|---|---|-----------------|---|---|---|----|----|---|----|----|-----------|----|----|---|---|---|--|--|--|
| | | | P | M | K | N | S | H | VERSCHLEISSFESTIGKEIT | | | ZÄHIGKEIT | | | ● | ● | ✖ | | | |
| | | | | | | 5 | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | | | | | | |
| AP5020  |  | <ul style="list-style-type: none"> Universell einsetzbare Sorte Gutes Zusammenspiel von Verschleißfestigkeit und Zähigkeit Hohe Beständigkeit gegen Oxidation | ● | ○ | | ○ | ○ | |  | | | | | |  | | | | | |
| AP7220  |  | <ul style="list-style-type: none"> Neueste PVD-Beschichtungsgeneration ALTIN-basiert Universell einsetzbare Sorte im Hochleistungsbereich Gutes Zusammenspiel von Verschleißfestigkeit und Zähigkeit | ● | ○ | | ○ | ○ | |  | | | | | |  | | | | | |

HC – SOLID CARBIDE COATED

| Grade | Coating colour | Properties | Material group | | | | | | Scope of application | | | | | | | | | | | |
|---|---|---|----------------|---|---|---|----|----|---|----|----|-----------|----|----|---|---|---|--|--|--|
| | | | P | M | K | N | S | H | WEAR RESISTANCE | | | TOUGHNESS | | | ● | ● | ✖ | | | |
| | | | | | | 5 | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | | | | | | |
| AP5020  |  | <ul style="list-style-type: none"> Universally applicable grade Good interplay between wear resistance and toughness High resistance to oxidation | ● | ○ | | ○ | ○ | |  | | | | | |  | | | | | |
| AP7220  |  | <ul style="list-style-type: none"> Latest PVD coating generation ALTIN-based. Universally applicable grade in the high-performance range. Good interaction of wear resistance and toughness. | ● | ○ | | ○ | ○ | |  | | | | | |  | | | | | |

HC - METALLO DURO RIVESTITO

| Varietà | Colore rivestimento | Caratteristiche | Gruppo materiale | | | | | | Campo di applicazione | | | | | | | | | | | |
|---|---|--|------------------|---|---|---|----|----|---|----|----|----------|----|----|---|---|---|--|--|--|
| | | | P | M | K | N | S | H | RESISTENZA ALL'USURA | | | TENACITÀ | | | ● | ● | ✖ | | | |
| | | | | | | 5 | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | | | | | | |
| AP5020  |  | <ul style="list-style-type: none"> Varietà utilizzabile universalmente Buona interazione tra resistenza all'usura e tenacità Elevata resistenza all'ossidazione | ● | ○ | | ○ | ○ | |  | | | | | |  | | | | | |
| AP7220  |  | <ul style="list-style-type: none"> Rivestimento PVD di ultima generazione a base di ALTIN. Grado universalmente applicabile nella gamma ad alte prestazioni. Buona interazione tra resistenza all'usura e tenacità. | ● | ○ | | ○ | ○ | |  | | | | | |  | | | | | |

Einsatzempfehlung / Application recommendations / Consigli di utilizzo**Stechtiefe in Abhängigkeit von D_{max}** Cutting depth dependent on D_{max} Larghezza gola in funzione di D_{max} **Drehen / Turning / Tornitura – 14**

| Stechtiefe (mm) Groove depth (mm) Larghezza gola (mm) | HTE-1212-14... | HTE-1616-14... | HTE-2020-14... | HTE-2525-14... |
|---|----------------|----------------|----------------|----------------|
| ET | D_{max} | | | |
| 2,0 | ∞ | ∞ | ∞ | ∞ |
| 2,5 | ∞ | ∞ | ∞ | ∞ |
| 3,0 | 935 | 935 | 935 | ∞ |
| 3,5 | 360 | 360 | 360 | ∞ |
| 4,0 | 220 | 220 | 220 | 945 |
| 4,5 | 160 | 160 | 160 | 450 |
| 5,0 | 125 | 125 | 125 | 300 |
| 5,5 | 105 | 105 | 105 | 220 |
| 6,0 | 90 | 90 | 90 | 180 |
| 6,5 | 80 | 80 | 80 | 150 |

Drehen / Turning / Tornitura – 09

| Stechtiefe (mm) Groove depth (mm) Larghezza gola (mm) | HTE-0808-09... | HTE-1010-09... | HTE-1212-09... | HTE-1616-09... |
|---|----------------|----------------|----------------|----------------|
| ET | D_{max} | | | |
| 1,0 | ∞ | ∞ | ∞ | ∞ |
| 1,5 | 105 | 450 | ∞ | ∞ |
| 2,0 | 38 | 160 | 175 | ∞ |
| 2,5 | 23 | 100 | 100 | 360 |
| 3,0 | 17 | 70 | 70 | 160 |
| 3,5 | 14 | 53 | 53 | 105 |
| 4,0 | 12 | 44 | 44 | 80 |

Stechtiefe in Abhangigkeit von D_{max}*Cutting depth dependent on D_{max}*Larghezza gola in funzione di D_{max}**Langdrehen / Sliding head auto lathes / Fantina mobile – (AFC) 09 & 14**

| Stechtiefe (mm) Groove depth (mm) Larghezza gola (mm) | HTE-1012-09...- AFC | HTE-1212-09...- AFC | HTE-1012-14...- AFC | HTE-1212-14...- AFC | HTE-1616-14...- AFC |
|---|------------------------|------------------------|------------------------|------------------------|------------------------|
| ET | D _{max} | | | | |
| 1,0 | ∞ | ∞ | ∞ | ∞ | ∞ |
| 1,5 | ∞ | ∞ | ∞ | ∞ | ∞ |
| 2,0 | 220 | 220 | 450 | 450 | 450 |
| 2,5 | 105 | 105 | 220 | 220 | 220 |
| 3,0 | 70 | 70 | 140 | 140 | 140 |
| 3,5 | 53 | 53 | 105 | 105 | 105 |
| 4,0 | 44 | 44 | 85 | 85 | 85 |
| 4,5 | - | - | 70 | 70 | 70 |
| 5,0 | - | - | 60 | 60 | 60 |
| 5,5 | - | - | 53 | 53 | 53 |
| 6,0 | - | - | 48 | 48 | 48 |
| 6,5 | - | - | 44 | 44 | 44 |

Module / Modules / Moduli

| Stechtiefe (mm) Groove depth (mm) Larghezza gola (mm) | MTE....14... |
|---|------------------|
| ET | D _{max} |
| 1,0 | ∞ |
| 1,5 | ∞ |
| 2,0 | ∞ |
| 2,5 | ∞ |
| 3,0 | ∞ |
| 3,5 | ∞ |
| 4,0 | 945 |
| 4,5 | 450 |
| 5,0 | 300 |
| 5,5 | 220 |
| 6,0 | 180 |
| 6,5 | 150 |

TE09...

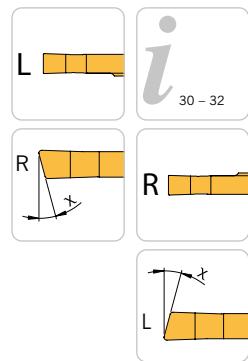
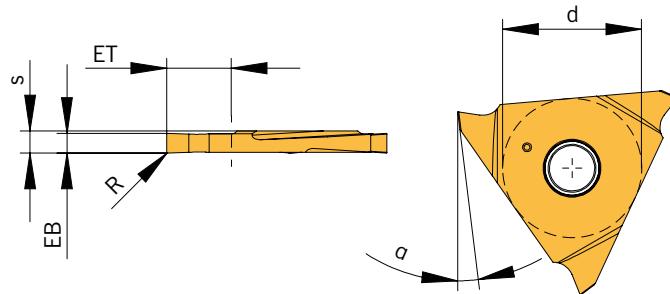


Abbildung ähnlich
Similar to illustration
Simile all'illustrazione



| Bezeichnung Designation Articolo | EB | R | ET | d | s | α | χ | Größe Size Grandezza | HC AP7220 |
|--|-----|------|----|---|------|----------|--------|----------------------------|--------------|
| TE09F-050-20005EL-GA | 0,5 | 0,05 | 2 | 9 | 2,15 | 7° | 0° | F | N |
| TE09F-050-20005ER-GA | 0,5 | 0,05 | 2 | 9 | 2,15 | 7° | 0° | F | N |
| TE09F-080-20005EL-GA | 0,8 | 0,05 | 2 | 9 | 2,15 | 7° | 0° | F | N |
| TE09F-080-20005ER-GA | 0,8 | 0,05 | 2 | 9 | 2,15 | 7° | 0° | F | N |
| TE09F-090-20005EL-GA | 0,9 | 0,05 | 2 | 9 | 2,15 | 7° | 0° | F | N |
| TE09F-090-20005ER-GA | 0,9 | 0,05 | 2 | 9 | 2,15 | 7° | 0° | F | N |
| TE09F-100-2001EL-GA | 1 | 0,1 | 2 | 9 | 2,15 | 7° | 0° | F | N |
| TE09F-100-2001ER-GA | 1 | 0,1 | 2 | 9 | 2,15 | 7° | 0° | F | N |
| TE09F-110-4001EL-GA | 1,1 | 0,1 | 4 | 9 | 2,15 | 7° | 0° | F | N |
| TE09F-110-4001ER-GA | 1,1 | 0,1 | 4 | 9 | 2,15 | 7° | 0° | F | N |
| TE09F-130-4001EL-GA | 1,3 | 0,1 | 4 | 9 | 2,15 | 7° | 0° | F | N |
| TE09F-130-4001ER-GA | 1,3 | 0,1 | 4 | 9 | 2,15 | 7° | 0° | F | N |
| TE09F-150-4001EL-GA | 1,5 | 0,1 | 4 | 9 | 2,15 | 7° | 0° | F | N |
| TE09F-150-4001ER-GA | 1,5 | 0,1 | 4 | 9 | 2,15 | 7° | 0° | F | N |
| TE09F-160-4001EL-GA | 1,6 | 0,1 | 4 | 9 | 2,15 | 7° | 0° | F | N |
| TE09F-160-4001ER-GA | 1,6 | 0,1 | 4 | 9 | 2,15 | 7° | 0° | F | N |
| TE09F-200-2001EL-GA | 2 | 0,1 | 2 | 9 | 2,15 | 7° | 0° | F | N |
| TE09F-200-2001ER-GA | 2 | 0,1 | 2 | 9 | 2,15 | 7° | 0° | F | N |
| TE09F-200-4001EL-GA | 2 | 0,1 | 4 | 9 | 2,15 | 7° | 0° | F | N |
| TE09F-200-4001ER-GA | 2 | 0,1 | 4 | 9 | 2,15 | 7° | 0° | F | N |

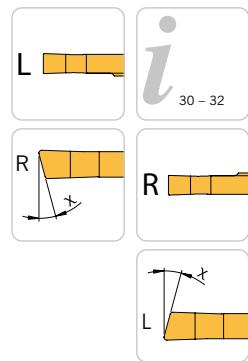
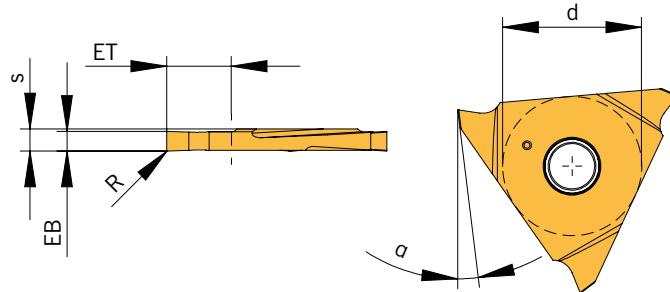
HC = Hartmetall beschichtet / Carbide coated / Metallo duro rivestito

| | |
|---|---|
| P | ● |
| M | ○ |
| K | ○ |
| N | ○ |
| S | ○ |
| H | ○ |

● Hauptanwendung
Main application
Applicazione principale
○ Nebenanwendung
Secondary application
Applicazione secondaria

Inserts
Inserti

TE14 ...



N NEU/NEW/
NUOVO

| Bezeichnung Designation Articolo | EB $\pm 0,02$ | R | ET | d | s | α | χ | Größe Size Grandezza | HC AP5020 |
|--|------------------|-----|-----|----|------|----------|--------|----------------------------|--------------|
| TE14F-080-3001EL-GA | 0,8 | 0,1 | 3 | 14 | 2,25 | 7° | 0° | F | ◆ |
| TE14F-080-3001ER-GA | 0,8 | 0,1 | 3 | 14 | 2,25 | 7° | 0° | F | ◆ |
| TE14F-100-3001EL-GA | 1 | 0,1 | 3 | 14 | 2,25 | 7° | 0° | F | ◆ |
| TE14F-100-3001EL-GA-15L | 1 | 0,1 | 3 | 14 | 2,25 | 7° | 15° | F | ◆ |
| TE14F-100-3001ER-GA | 1 | 0,1 | 3 | 14 | 2,25 | 7° | 0° | F | ◆ |
| TE14F-100-6501EL-GA | 1 | 0,1 | 6,5 | 14 | 2,25 | 7° | 0° | F | ◆ |
| TE14F-100-6501ER-GA | 1 | 0,1 | 6,5 | 14 | 2,25 | 7° | 0° | F | ◆ |
| TE14F-150-3001EL-GA | 1,5 | 0,1 | 3 | 14 | 2,25 | 7° | 0° | F | ◆ |
| TE14F-150-3001ER-GA | 1,5 | 0,1 | 3 | 14 | 2,25 | 7° | 0° | F | ◆ |
| TE14F-150-6501EL-GA | 1,5 | 0,1 | 6,5 | 14 | 2,25 | 7° | 0° | F | ◆ |
| TE14F-150-6501ER-GA | 1,5 | 0,1 | 6,5 | 14 | 2,25 | 7° | 0° | F | ◆ |
| TE14F-150-6501ER-GA-5R | 1,5 | 0,1 | 6,5 | 14 | 2,25 | 7° | 5° | F | ◆ |
| TE14F-200-6501EL-GA | 2 | 0,1 | 6,5 | 14 | 2,25 | 7° | 0° | F | ◆ |
| TE14F-200-6501ER-GA | 2 | 0,1 | 6,5 | 14 | 2,25 | 7° | 0° | F | ◆ |
| TE14F-200-6502EL-GA | 2 | 0,2 | 6,5 | 14 | 2,25 | 7° | 0° | F | ◆ |
| TE14F-200-6502ER-GA | 2 | 0,2 | 6,5 | 14 | 2,25 | 7° | 0° | F | ◆ |
| TE14F-200-6502ER-GA-15R | 2 | 0,2 | 6,5 | 14 | 2,25 | 7° | 15° | F | ◆ |
| TE14F-200-6504ER-GA | 2 | 0,4 | 6,5 | 14 | 2,25 | 7° | 0° | F | ◆ |
| TE14H-250-6502EL-GA | 2,5 | 0,2 | 6,5 | 14 | 3,25 | 7° | 0° | H | ◆ |
| TE14H-250-6502ER-GA | 2,5 | 0,2 | 6,5 | 14 | 3,25 | 7° | 0° | H | ◆ |
| TE14H-250-6504EL-GA | 2,5 | 0,4 | 6,5 | 14 | 3,25 | 7° | 0° | H | ◆ |
| TE14H-250-6504ER-GA | 2,5 | 0,4 | 6,5 | 14 | 3,25 | 7° | 0° | H | ◆ |
| TE14H-300-6502EL-GA | 3 | 0,2 | 6,5 | 14 | 3,25 | 7° | 0° | H | ◆ |
| TE14H-300-6502ER-GA | 3 | 0,2 | 6,5 | 14 | 3,25 | 7° | 0° | H | ◆ |
| TE14H-300-6504EL-GA | 3 | 0,4 | 6,5 | 14 | 3,25 | 7° | 0° | H | ◆ |
| TE14H-300-6504ER-GA | 3 | 0,4 | 6,5 | 14 | 3,25 | 7° | 0° | H | ◆ |
| TE14K-400-6502EL-GA | 4 | 0,2 | 6,5 | 14 | 4,25 | 7° | 0° | K | ◆ |
| TE14K-400-6502ER-GA | 4 | 0,2 | 6,5 | 14 | 4,25 | 7° | 0° | K | ◆ |
| TE14K-400-6504EL-GA | 4 | 0,4 | 6,5 | 14 | 4,25 | 7° | 0° | K | ◆ |
| TE14K-400-6504ER-GA | 4 | 0,4 | 6,5 | 14 | 4,25 | 7° | 0° | K | ◆ |
| TE14P-500-6502EL-GA | 5 | 0,2 | 6,5 | 14 | 5,25 | 7° | 0° | P | ◆ |

TE14 ...

| Bezeichnung <i>Designation</i> Articolo | EB <i>± 0,02</i> | R | ET | d | s | α | χ | Größe <i>Size</i> Grandezza | HC <i>AP5020</i> |
|---|---------------------|-----|-----|----|------|----|----|-----------------------------------|---------------------|
| TE14P-500-6502ER-GA | 5 | 0,2 | 6,5 | 14 | 5,25 | 7° | 0° | P | ◆ |
| TE14P-500-6504EL-GA | 5 | 0,4 | 6,5 | 14 | 5,25 | 7° | 0° | P | ◆ |
| TE14P-500-6504ER-GA | 5 | 0,4 | 6,5 | 14 | 5,25 | 7° | 0° | P | ◆ |
| TE14S-600-6504EL-GA | 6 | 0,4 | 6,5 | 14 | 6,25 | 7° | 0° | S | ◆ |
| TE14S-600-6504ER-GA | 6 | 0,4 | 6,5 | 14 | 6,25 | 7° | 0° | S | ◆ |

HC = Hartmetall beschichtet / Carbide coated / Metallo duro rivestito

| | |
|---|---|
| P | ● |
| M | ○ |
| K | |
| N | ○ |
| S | ○ |
| H | |

● Hauptanwendung
Main application
Aplicazione principale

○ Nebenanwendung
Secondary application
Applicazione secondaria

TV14...

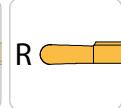
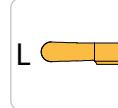
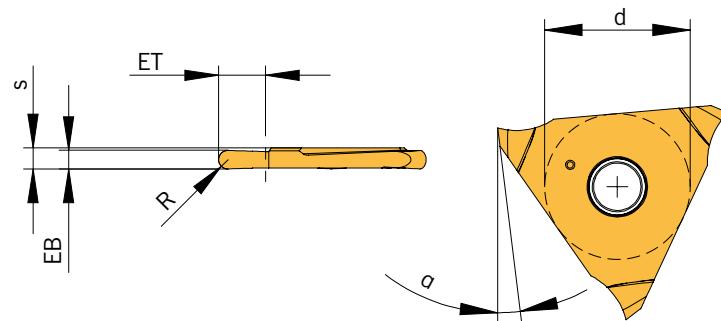


Abbildung ähnlich
Similar to illustration
Simile all'illustrazione



Schneideinsätze Vollradius / Full radius inserts / Inserti per gole a raggio completo

| Bezeichnung Designation Articolo | EB $\pm 0,02$ | R | ET | d | s | α | Größe Size Ampiezza | HC AP5020 |
|--|------------------|------|-----|----|------|----------|---------------------------|--------------|
| TV14F-050-15025ER-GB | 0,5 | 0,25 | 1,5 | 14 | 2,25 | 7° | F | ● |
| TV14F-100-3005EL-GB | 1,0 | 0,5 | 3,0 | 14 | 2,25 | 7° | F | ◆ |
| TV14F-100-3005ER-GB | 1,0 | 0,5 | 3,0 | 14 | 2,25 | 7° | F | ◆ |
| TV14F-200-5010EL-GB | 2,0 | 1,0 | 5,0 | 14 | 2,25 | 7° | F | ◆ |
| TV14F-200-5010ER-GB | 2,0 | 1,0 | 5,0 | 14 | 2,25 | 7° | F | ◆ |
| TV14H-300-5015EL-GB | 3,0 | 1,5 | 5,0 | 14 | 3,25 | 7° | H | ◆ |
| TV14H-300-5015ER-GB | 3,0 | 1,5 | 5,0 | 14 | 3,25 | 7° | H | ◆ |
| TV14K-400-5020EL-GB | 4,0 | 2,0 | 5,0 | 14 | 4,25 | 7° | K | ◆ |
| TV14K-400-5020ER-GB | 4,0 | 2,0 | 5,0 | 14 | 4,25 | 7° | K | ◆ |

HC = Hartmetall beschichtet / Carbide coated / Metallo duro rivestito

| | |
|---|---|
| P | ● |
| M | ○ |
| K | ◆ |
| N | ○ |
| S | ○ |
| H | |

● Hauptanwendung
Main application
Applicazione principale
○ Nebenanwendung
Secondary application
Applicazione secondaria

TS14...

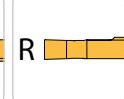
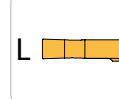
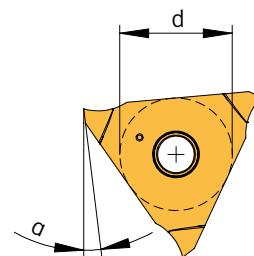
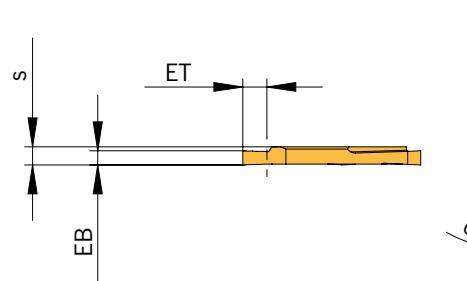


Abbildung ähnlich
Similar to illustration
Simile all'illustrazione

Schneideinsätze für Seegerringnuten DIN 471/472 / Inserts for circlip grooves to DIN 471/472 /
Inserti per gole sedi seeger DIN 471/472

| Bezeichnung Designation Articolo | EB – 0,05 | m* H13 | ET | d | s | α | Größe Size Ampiezza | HC AP5020 |
|--|--------------|-----------|-----|----|------|----|---------------------------|--------------|
| TS14F-050-070EL-GB | 0,57 | 0,50 | 0,7 | 14 | 2,25 | 7° | F | ◆ |
| TS14F-050-070ER-GB | 0,57 | 0,50 | 0,7 | 14 | 2,25 | 7° | F | ◆ |
| TS14F-060-080EL-GB | 0,67 | 0,60 | 0,8 | 14 | 2,25 | 7° | F | ◆ |
| TS14F-060-080ER-GB | 0,67 | 0,60 | 0,8 | 14 | 2,25 | 7° | F | ◆ |
| TS14F-070-110EL-GB | 0,77 | 0,70 | 1,1 | 14 | 2,25 | 7° | F | ◆ |
| TS14F-070-110ER-GB | 0,77 | 0,70 | 1,1 | 14 | 2,25 | 7° | F | ◆ |
| TS14F-080-120EL-GB | 0,87 | 0,80 | 1,2 | 14 | 2,25 | 7° | F | ◆ |
| TS14F-080-120ER-GB | 0,87 | 0,80 | 1,2 | 14 | 2,25 | 7° | F | ◆ |
| TS14F-090-140EL-GB | 0,97 | 0,90 | 1,4 | 14 | 2,25 | 7° | F | ◆ |
| TS14F-090-140ER-GB | 0,97 | 0,90 | 1,4 | 14 | 2,25 | 7° | F | ◆ |
| TS14F-100-160EL-GB | 1,07 | 1,00 | 1,6 | 14 | 2,25 | 7° | F | ◆ |
| TS14F-100-160ER-GB | 1,07 | 1,00 | 1,6 | 14 | 2,25 | 7° | F | ◆ |
| TS14F-110-200EL-GB | 1,24 | 1,10 | 2,0 | 14 | 2,25 | 7° | F | ◆ |
| TS14F-110-200ER-GB | 1,24 | 1,10 | 2,0 | 14 | 2,25 | 7° | F | ◆ |
| TS14F-130-200EL-GB | 1,44 | 1,30 | 2,0 | 14 | 2,25 | 7° | F | ◆ |
| TS14F-130-200ER-GB | 1,44 | 1,30 | 2,0 | 14 | 2,25 | 7° | F | ◆ |
| TS14F-160-300EL-GB | 1,74 | 1,60 | 3,0 | 14 | 2,25 | 7° | F | ◆ |
| TS14F-160-300ER-GB | 1,74 | 1,60 | 3,0 | 14 | 2,25 | 7° | F | ◆ |
| TS14F-185-300EL-GB | 1,99 | 1,85 | 3,0 | 14 | 2,25 | 7° | F | ◆ |
| TS14F-185-300ER-GB | 1,99 | 1,85 | 3,0 | 14 | 2,25 | 7° | F | ◆ |
| TS14H-215-400EL-GB | 2,29 | 2,15 | 4,0 | 14 | 3,25 | 7° | H | ◆ |
| TS14H-215-400ER-GB | 2,29 | 2,15 | 4,0 | 14 | 3,25 | 7° | H | ◆ |
| TS14H-265-400EL-GB | 2,79 | 2,65 | 4,0 | 14 | 3,25 | 7° | H | ◆ |
| TS14H-265-400ER-GB | 2,79 | 2,65 | 4,0 | 14 | 3,25 | 7° | H | ◆ |
| TS14K-315-500EL-GB | 3,29 | 3,15 | 5,0 | 14 | 4,25 | 7° | K | ◆ |
| TS14K-315-500ER-GB | 3,29 | 3,15 | 5,0 | 14 | 4,25 | 7° | K | ◆ |

HC = Hartmetall beschichtet / Carbide coated / Metallo duro rivestito

* Nutbreite „m“ / Groove width "m" / Larghezza di scanalatura "m"

| | |
|---|---|
| P | ● |
| M | ○ |
| K | ● |
| N | ○ |
| S | ○ |
| H | ● |

● Hauptanwendung
Main application
Applicazione principale
○ Nebenanwendung
Secondary application
Applicazione secondaria

TS14....F...

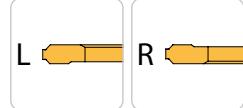
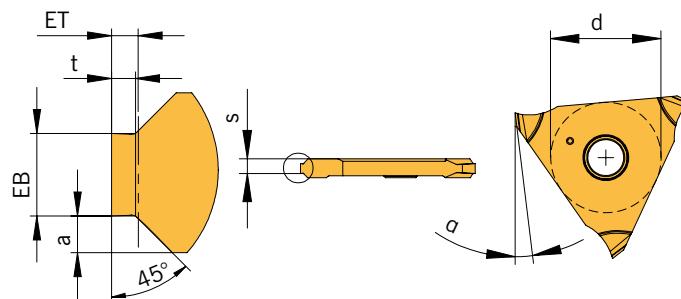


Abbildung ähnlich
Similar to illustration
Simile all'illustrazione

Schneideinsätze für Seegerringnuten nach DIN 471/472 Vollprofil / Inserts for circlip grooves to DIN 471/472 full profile / Inserti per gole sedi seeger DIN 471/472 profilo completo

| Bezeichnung Designation Articolo | EB - 0,05 | m* H13 | ET | a | t | s | d | α | Größe Size Ampiezza | HC AP5020 |
|--|--------------|-----------|------|------|------|------|----|----|---------------------------|--------------|
| TS14F-110-F020EL-GB | 1,24 | 1,10 | 0,20 | 0,55 | 0,19 | 1,85 | 14 | 7° | F | ◆ |
| TS14F-110-F020ER-GB | 1,24 | 1,10 | 0,20 | 0,55 | 0,19 | 1,85 | 14 | 7° | F | ◆ |
| TS14F-110-F025EL-GB | 1,24 | 1,10 | 0,25 | 0,55 | 0,24 | 1,85 | 14 | 7° | F | ◆ |
| TS14F-110-F025ER-GB | 1,24 | 1,10 | 0,25 | 0,55 | 0,24 | 1,85 | 14 | 7° | F | ◆ |
| TS14F-110-F030EL-GB | 1,24 | 1,10 | 0,30 | 0,55 | 0,29 | 1,85 | 14 | 7° | F | ◆ |
| TS14F-110-F030ER-GB | 1,24 | 1,10 | 0,30 | 0,55 | 0,29 | 1,85 | 14 | 7° | F | ◆ |
| TS14F-110-F035EL-GB | 1,24 | 1,10 | 0,35 | 0,55 | 0,33 | 1,85 | 14 | 7° | F | ◆ |
| TS14F-110-F035ER-GB | 1,24 | 1,10 | 0,35 | 0,55 | 0,33 | 1,85 | 14 | 7° | F | ◆ |
| TS14F-110-F040EL-GB | 1,24 | 1,10 | 0,40 | 0,55 | 0,36 | 1,85 | 14 | 7° | F | ◆ |
| TS14F-110-F040ER-GB | 1,24 | 1,10 | 0,40 | 0,55 | 0,36 | 1,85 | 14 | 7° | F | ◆ |
| TS14F-130-F055EL-GB | 1,44 | 1,30 | 0,55 | 0,55 | 0,45 | 1,85 | 14 | 7° | F | ◆ |
| TS14F-130-F055ER-GB | 1,44 | 1,30 | 0,55 | 0,55 | 0,45 | 1,85 | 14 | 7° | F | ◆ |
| TS14H-160-F070EL-GB | 1,74 | 1,60 | 0,70 | 0,55 | 0,60 | 2,85 | 14 | 7° | H | ◆ |
| TS14H-160-F070ER-GB | 1,74 | 1,60 | 0,70 | 0,55 | 0,60 | 2,85 | 14 | 7° | H | ◆ |
| TS14H-160-F085EL-GB | 1,74 | 1,60 | 0,85 | 0,55 | 0,75 | 2,85 | 14 | 7° | H | ◆ |
| TS14H-160-F085ER-GB | 1,74 | 1,60 | 0,85 | 0,55 | 0,75 | 2,85 | 14 | 7° | H | ◆ |
| TS14H-160-F100EL-GB | 1,74 | 1,60 | 1,00 | 0,55 | 0,85 | 2,85 | 14 | 7° | H | ◆ |
| TS14H-160-F100ER-GB | 1,74 | 1,60 | 1,00 | 0,55 | 0,85 | 2,85 | 14 | 7° | H | ◆ |
| TS14H-185-F100EL-GB | 1,99 | 1,85 | 1,00 | 0,55 | 0,85 | 2,85 | 14 | 7° | H | ◆ |
| TS14H-185-F100ER-GB | 1,99 | 1,85 | 1,00 | 0,55 | 0,85 | 2,85 | 14 | 7° | H | ◆ |
| TS14H-185-F125EL-GB | 1,99 | 1,85 | 1,25 | 0,55 | 1,10 | 2,85 | 14 | 7° | H | ◆ |
| TS14H-185-F125ER-GB | 1,99 | 1,85 | 1,25 | 0,55 | 1,10 | 2,85 | 14 | 7° | H | ◆ |
| TS14H-215-F150EL-GB | 2,29 | 2,15 | 1,50 | 0,55 | 1,35 | 2,85 | 14 | 7° | H | ◆ |
| TS14H-215-F150ER-GB | 2,29 | 2,15 | 1,50 | 0,55 | 1,35 | 2,85 | 14 | 7° | H | ◆ |
| TS14K-265-F150EL-GB | 2,79 | 2,65 | 1,50 | 0,55 | 1,35 | 3,85 | 14 | 7° | K | ◆ |
| TS14K-265-F150ER-GB | 2,79 | 2,65 | 1,50 | 0,55 | 1,35 | 3,85 | 14 | 7° | K | ◆ |
| TS14K-265-F175EL-GB | 2,79 | 2,65 | 1,75 | 0,55 | 1,60 | 3,85 | 14 | 7° | K | ◆ |
| TS14K-265-F175ER-GB | 2,79 | 2,65 | 1,75 | 0,55 | 1,60 | 3,85 | 14 | 7° | K | ◆ |
| TS14K-315-F175EL-GB | 3,29 | 3,15 | 1,75 | 0,55 | 1,60 | 3,85 | 14 | 7° | K | ◆ |
| TS14K-315-F175ER-GB | 3,29 | 3,15 | 1,75 | 0,55 | 1,60 | 3,85 | 14 | 7° | K | ◆ |

HC = Hartmetall beschichtet / Carbide coated / Metallo duro rivestito

* Nutbreite „m“ / Groove width “m” / Larghezza di scanalatura “m”

| | |
|---|---|
| P | ● |
| M | ○ |
| K | ■ |
| N | ○ |
| S | ○ |
| H | ○ |

● Hauptanwendung
Main application
Applicazione principale
○ Nebenanwendung
Secondary application
Applicazione secondaria

| Werkstoffgruppe | Gliederung der Werkstoffhauptgruppen und Kennbuchstaben | | Brinell-Härte | Zugfestigkeit (N/mm²) | Zerspanungsgruppe | Schnittgeschwindigkeit Vc (m/min) | | | |
|-----------------------------|--|---|---------------|-----------------------|-------------------|-----------------------------------|-----------------|-----------------|--|
| | | | | | | HC | | | |
| | | | | | | AP5020 | AP7220 | | |
| P | Unlegierter Stahl | C ≤ 0,25 % | geglüht | 125 | 428 | P1 | 120 - 150 - 180 | 120 - 150 - 180 | |
| | | C > 0,25 ... ≤ 0,55 % | geglüht | 190 | 639 | P2 | 80 - 115 - 150 | 80 - 115 - 150 | |
| | | C > 0,25 ... ≤ 0,55 % | vergütet | 210 | 708 | P3 | 60 - 100 - 140 | 60 - 100 - 140 | |
| | | C > 0,55 % | geglüht | 190 | 639 | P4 | 80 - 115 - 150 | 80 - 115 - 150 | |
| | | C > 0,55 % | vergütet | 300 | 1013 | P5 | 60 - 100 - 140 | 60 - 100 - 140 | |
| | Niedrig legierter Stahl | Automatenstahl (kurzspanend) | geglüht | 220 | 745 | P6 | 80 - 115 - 150 | 80 - 115 - 150 | |
| | | geglüht | | 175 | 591 | P7 | 80 - 125 - 170 | 80 - 125 - 170 | |
| | | vergütet | | 300 | 1013 | P8 | 60 - 95 - 130 | 60 - 95 - 130 | |
| | Hochlegierter Stahl und hochlegierter Werkzeugstahl | vergütet | | 380 | 1282 | P9 | 60 - 95 - 130 | 60 - 95 - 130 | |
| | | vergütet | | 430 | 1477 | P10 | 60 - 90 - 120 | 60 - 90 - 120 | |
| | | geglüht | | 200 | 675 | P11 | 80 - 110 - 140 | 80 - 110 - 140 | |
| M | Nichtrostender Stahl | gehärtet und angelassen | | 300 | 1013 | P12 | 50 - 85 - 120 | 50 - 85 - 120 | |
| | | gehärtet und angelassen | | 400 | 1361 | P13 | 50 - 85 - 120 | 50 - 85 - 120 | |
| | | ferretisch / martensitisch, glüht | | 200 | 675 | P14 | 60 - 115 - 170 | 60 - 115 - 170 | |
| K | Nichtrostender Stahl | martensitisch, vergütet | | 330 | 1114 | P15 | 50 - 75 - 100 | 50 - 75 - 100 | |
| | | austenitisch, abgeschreckt | | 200 | 675 | M1 | 60 - 90 - 120 | 60 - 90 - 120 | |
| | | ausenitisch, ausscheidungsgehärtet (PH) | | 300 | 1013 | M2 | 50 - 70 - 90 | 50 - 70 - 90 | |
| N | Temperguss | austenitisch-ferritisches, Duplex | | 230 | 778 | M3 | 50 - 70 - 90 | 50 - 70 - 90 | |
| | | ferritisches | | 200 | 675 | K1 | - | - | |
| | Grauguss | perlitisch | | 260 | 867 | K2 | - | - | |
| | | niedrige Festigkeit | | 180 | 602 | K3 | - | - | |
| | Gusseisen mit Kugelgraphit | hohe Festigkeit / austenitisch | | 245 | 825 | K4 | - | - | |
| | | ferritisches | | 155 | 518 | K5 | - | - | |
| | GGV (CGI) | perlitisch | | 265 | 885 | K6 | - | - | |
| | | | | 200 | 675 | K7 | - | - | |
| | Aluminium-Knetlegierung | nicht aushärtbar | | 30 | - | N1 | 100 - 300 - 500 | 100 - 300 - 500 | |
| | | ausgehärtet | | 100 | 343 | N2 | 100 - 200 - 300 | 100 - 200 - 300 | |
| | | ≤ 12 % Si, nicht aushärtbar | | 75 | 260 | N3 | 100 - 300 - 500 | 100 - 300 - 500 | |
| | | ≤ 12 % Si, aushärtbar, ausgehärtet | | 90 | 314 | N4 | 100 - 200 - 300 | 100 - 200 - 300 | |
| | | > 12 % Si, nicht aushärtbar | | 130 | 447 | N5 | 100 - 150 - 200 | 100 - 150 - 200 | |
| S | Warmfeste Legierungen | > 12 % Si, nicht aushärtbar | | 70 | 250 | N6 | - | - | |
| | | unlegiert, Elektolykupfer | | 100 | 343 | N7 | 100 - 200 - 300 | 100 - 200 - 300 | |
| | | Messing, Bronze, Rotguss | | 90 | 314 | N8 | 100 - 300 - 500 | 100 - 300 - 500 | |
| | | Cu-Legierung, kurzspanend | | 110 | 382 | N9 | 100 - 200 - 300 | 100 - 200 - 300 | |
| | | hochfest, Ampco | | 300 | 1013 | N10 | - | - | |
| | Nichtmetallische Werkstoffe | Thermoplaste (ohne abrasive Füllstoffe) | | - | - | N11 | 80 - 130 - 180 | 80 - 130 - 180 | |
| | | Duroplaste (ohne abrasive Füllstoffe) | | - | - | N12 | 80 - 130 - 180 | 80 - 130 - 180 | |
| | | Kunststoff glasfiberstärkt GFRP | | - | - | N13 | 60 - 105 - 150 | 60 - 105 - 150 | |
| | | Kunststoff kohlefaserstärkt CFRP | | - | - | N14 | 60 - 105 - 150 | 60 - 105 - 150 | |
| | | Kunststoff aramidfaserverstärkt AFRP | | - | - | N15 | 60 - 105 - 150 | 60 - 105 - 150 | |
| H | Gehärteter Stahl | Graphit (technisch) | 80 Shore | - | N16 | - | - | - | |
| | | Fe-Basis | geglüht | 200 | 675 | S1 | 20 - 35 - 50 | 20 - 35 - 50 | |
| | | Fe-Basis | ausgehärtet | 280 | 943 | S2 | 20 - 30 - 40 | 20 - 30 - 40 | |
| | | Ni- oder Co-Basis | geglüht | 250 | 839 | S3 | 15 - 20 - 25 | 15 - 20 - 25 | |
| | | Ni- oder Co-Basis | ausgehärtet | 350 | 1177 | S4 | 10 - 15 - 20 | 10 - 15 - 20 | |
| | | Ni- oder Co-Basis | gegossen | 320 | 1076 | S5 | 10 - 15 - 20 | 10 - 15 - 20 | |
| | | Reintitan | | 200 | 675 | S6 | 50 - 85 - 120 | 50 - 85 - 120 | |
| | | a- und β-Legierungen, ausgehärtet | | 375 | 1262 | S7 | 30 - 40 - 50 | 30 - 40 - 50 | |
| | | β-Legierungen | | 410 | 1396 | S8 | 25 - 35 - 45 | 25 - 35 - 45 | |
| | | Wolframlegierungen | | 300 | 1013 | S9 | - | - | |
| Molybdänlegierungen | | | | 300 | 1013 | S10 | - | - | |
| | | gehärtet und angelassen | | 50 HRC | - | H1 | - | - | |
| | | gehärtet und angelassen | | 55 HRC | - | H2 | - | - | |
| | | gehärtet und angelassen | | 60 HRC | - | H3 | - | - | |
| Gehärtetes Gusseisen | | gehärtet und angelassen | | 55 HRC | - | H4 | - | - | |

Die Tabellenwerte sind Richtwerte.

Es kann notwendig sein, die Werte den jeweiligen Bearbeitungsumständen anzupassen.

HC = Hartmetall beschichtet

| Material group | Structure of the material groups and identification letters | Brinell hardness HB | Tensile strength Rm (N/mm²) | Chipping group | Cutting speed Vc (m/min) | | |
|----------------|---|---|--------------------------------|----------------|--------------------------|-----------------|-----------------|
| | | | | | HC | | |
| | | | | | AP5020 | AP7220 | |
| P | Unalloyed steel | C ≤ 0.25 % annealed | 125 | 428 | P1 | 120 - 150 - 180 | 120 - 150 - 180 |
| | | C > 0.25 ... ≤ 0.55 % annealed | 190 | 639 | P2 | 80 - 115 - 150 | 80 - 115 - 150 |
| | | C > 0.25 ... ≤ 0.55 % hardened and tempered | 210 | 708 | P3 | 60 - 100 - 140 | 60 - 100 - 140 |
| | | C > 0.55 % annealed | 190 | 639 | P4 | 80 - 115 - 150 | 80 - 115 - 150 |
| | | C > 0.55 % hardened and tempered | 300 | 1013 | P5 | 60 - 100 - 140 | 60 - 100 - 140 |
| | Machining steel (short-clipping) | annealed | 220 | 745 | P6 | 80 - 115 - 150 | 80 - 115 - 150 |
| L | Low alloyed steel | annealed | 175 | 591 | P7 | 80 - 125 - 170 | 80 - 125 - 170 |
| | | hardened and tempered | 300 | 1013 | P8 | 60 - 95 - 130 | 60 - 95 - 130 |
| | | hardened and tempered | 380 | 1282 | P9 | 60 - 95 - 130 | 60 - 95 - 130 |
| | High alloyed steel and high alloyed tool steel | hardened and tempered | 430 | 1477 | P10 | 60 - 90 - 120 | 60 - 90 - 120 |
| | | annealed | 200 | 675 | P11 | 80 - 110 - 140 | 80 - 110 - 140 |
| S | Stainless steel | hardened | 300 | 1013 | P12 | 50 - 85 - 120 | 50 - 85 - 120 |
| | | hardened | 400 | 1361 | P13 | 50 - 85 - 120 | 50 - 85 - 120 |
| | | ferretic / martensitic, annealed | 200 | 675 | P14 | 60 - 115 - 170 | 60 - 115 - 170 |
| M | Stainless steel | martensitic, hardened and tempered | 330 | 1114 | P15 | 50 - 75 - 100 | 50 - 75 - 100 |
| | | austenitic, chilled | 200 | 675 | M1 | 60 - 90 - 120 | 60 - 90 - 120 |
| | | austenitic, precipitation-hardened (PH) | 300 | 1013 | M2 | 50 - 70 - 90 | 50 - 70 - 90 |
| K | Malleable cast iron | ferritic | 200 | 675 | K1 | - | - |
| | | pearlitic | 260 | 867 | K2 | - | - |
| | Cast iron | low tensile strength | 180 | 602 | K3 | - | - |
| | | high tensile strength / austenitic | 245 | 825 | K4 | - | - |
| | Cast iron with nodular graphite | ferritic | 155 | 518 | K5 | - | - |
| N | GGV (CGI) | pearlitic | 265 | 885 | K6 | - | - |
| | | | 200 | 675 | K7 | - | - |
| | Aluminium alloys long chipping | not heat treatable | 30 | - | N1 | 100 - 300 - 500 | 100 - 300 - 500 |
| | | heat treatable, heat treated | 100 | 343 | N2 | 100 - 200 - 300 | 100 - 200 - 300 |
| | Casted aluminium alloys | ≤ 12 % Si, not heat treatable | 75 | 260 | N3 | 100 - 300 - 500 | 100 - 300 - 500 |
| | | ≤ 12 % Si, heat treatable, heat treated | 90 | 314 | N4 | 100 - 200 - 300 | 100 - 200 - 300 |
| | Magnesium alloys | > 12 % Si, not heat treatable | 130 | 447 | N5 | 100 - 150 - 200 | 100 - 150 - 200 |
| | | > 12 % Si, not heat treatable | 70 | 250 | N6 | - | - |
| | Copper and copper alloys (Brass / Bronze) | Unalloyed, electrolyte copper | 100 | 343 | N7 | 100 - 200 - 300 | 100 - 200 - 300 |
| | | Brass, Bronze | 90 | 314 | N8 | 100 - 300 - 500 | 100 - 300 - 500 |
| | | Cu-alloys, short-chipping | 110 | 382 | N9 | 100 - 200 - 300 | 100 - 200 - 300 |
| S | Non-ferrous materials | | 300 | 1013 | N10 | - | - |
| | | Lead alloys (without abrasive filling material) | - | - | N11 | 80 - 130 - 180 | 80 - 130 - 180 |
| | | Duroplastic (without abrasive filling material) | - | - | N12 | 80 - 130 - 180 | 80 - 130 - 180 |
| | | Plastic glas fibre reinforced GFRP | - | - | N13 | 60 - 105 - 150 | 60 - 105 - 150 |
| | | Plastic carbon fibre reinforced CFRP | - | - | N14 | 60 - 105 - 150 | 60 - 105 - 150 |
| | High temperature resistant alloys | Plastic aramid fibre reinforced AFRP | - | - | N15 | 60 - 105 - 150 | 60 - 105 - 150 |
| | | Graphite (tech.) | 80 Shore | - | N16 | - | - |
| | Titanium alloys | Fe-based annealed | 200 | 675 | S1 | 20 - 35 - 50 | 20 - 35 - 50 |
| | | Fe-based heat treated | 280 | 943 | S2 | 20 - 30 - 40 | 20 - 30 - 40 |
| | | Ni- or Co-alloyed annealed | 250 | 839 | S3 | 15 - 20 - 25 | 15 - 20 - 25 |
| | | Ni- or Co-alloyed heat treated | 350 | 1177 | S4 | 10 - 15 - 20 | 10 - 15 - 20 |
| | | Ni- or Co-alloyed casting | 320 | 1076 | S5 | 10 - 15 - 20 | 10 - 15 - 20 |
| H | Wolfram alloys | Pure titan | 200 | 675 | S6 | 50 - 85 - 120 | 50 - 85 - 120 |
| | | α- and β-alloys, heat treated | 375 | 1262 | S7 | 30 - 40 - 50 | 30 - 40 - 50 |
| | Molybdän alloys | β-alloys | 410 | 1396 | S8 | 25 - 35 - 45 | 25 - 35 - 45 |
| | | | 300 | 1013 | S9 | - | - |
| H | Hardened steel | hardened | 50 HRC | - | H1 | - | - |
| | | hardened | 55 HRC | - | H2 | - | - |
| | | hardened | 60 HRC | - | H3 | - | - |
| | Hardened cast iron | hardened | 55 HRC | - | H4 | - | - |

The recommended cutting data are only approximate values.

It may be necessary to adjust them to each individual machining application.

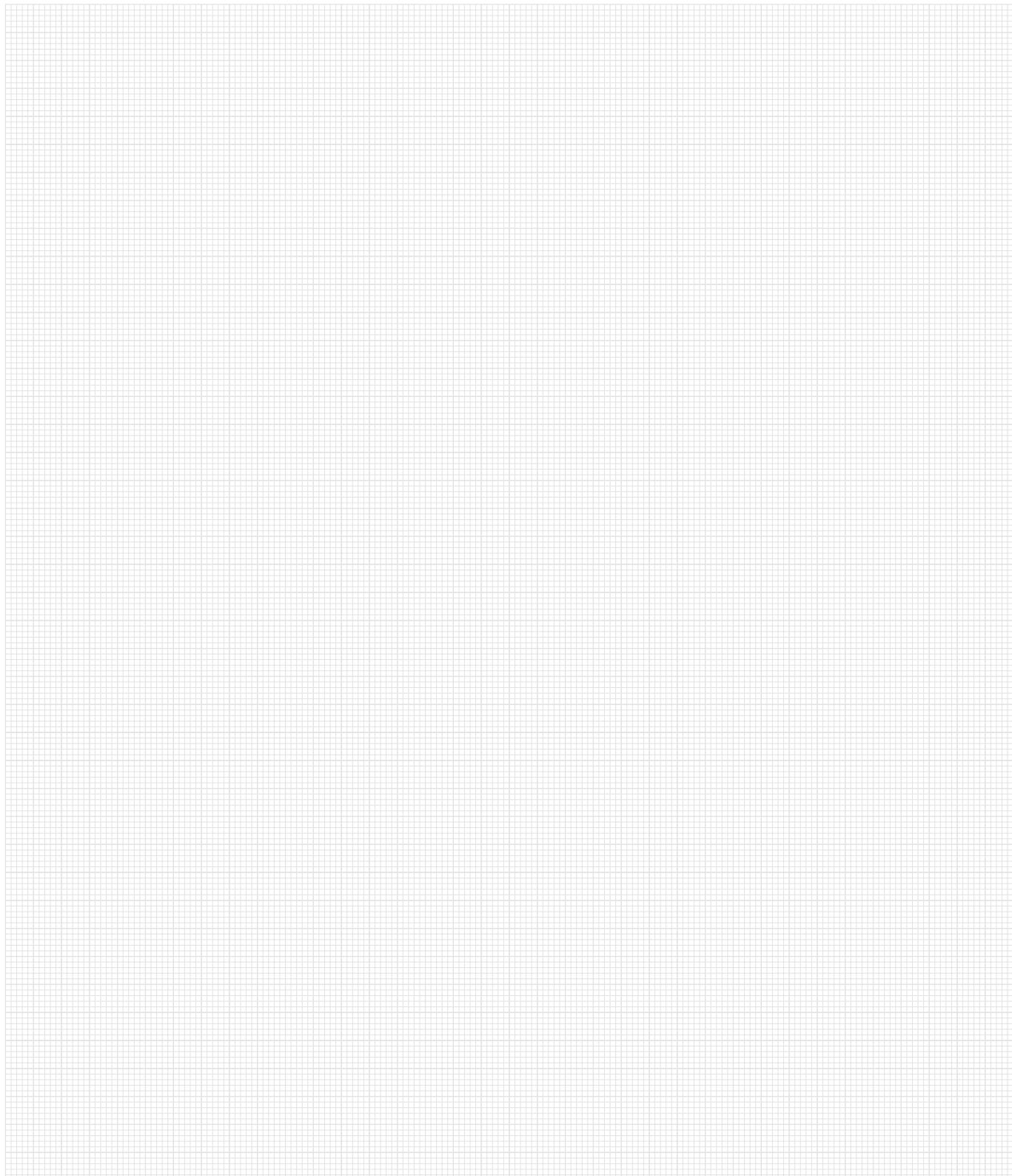
HC = Carbide coated

| Gruppo materiale | Struttura dei gruppi di materiali e lettere di riferimento | Durezza Brinell | Resistenza Rm (N/mm²) | Gruppo di lavoro | Velocità di taglio Vc (m/min) | |
|------------------|--|---|-----------------------|------------------|-------------------------------|-----------------|
| | | | | | HC | |
| | | | | | AP5020 | AP7220 |
| P | Acciai non legato | C ≤ 0,25 % ricotto | 125 428 | P1 | 120 - 150 - 180 | 120 - 150 - 180 |
| | | C > 0,25 ... ≤ 0,55 % ricotto | 190 639 | P2 | 80 - 115 - 150 | 80 - 115 - 150 |
| | | C > 0,25 ... ≤ 0,55 % bonificato | 210 708 | P3 | 60 - 100 - 140 | 60 - 100 - 140 |
| | | C > 0,55 % ricotto | 190 639 | P4 | 80 - 115 - 150 | 80 - 115 - 150 |
| | | C > 0,55 % bonificato | 300 1013 | P5 | 60 - 100 - 140 | 60 - 100 - 140 |
| | Acciai debolmente legati | Acciaio (truciolo corto) ricotto | 220 745 | P6 | 80 - 115 - 150 | 80 - 115 - 150 |
| | | ricotto | 175 591 | P7 | 80 - 125 - 170 | 80 - 125 - 170 |
| | | bonificato | 300 1013 | P8 | 60 - 95 - 130 | 60 - 95 - 130 |
| | Acciai fortemente legati e acciai da utensili | bonificato | 380 1282 | P9 | 60 - 95 - 130 | 60 - 95 - 130 |
| | | bonificato | 430 1477 | P10 | 60 - 90 - 120 | 60 - 90 - 120 |
| | | ricotto | 200 675 | P11 | 80 - 110 - 140 | 80 - 110 - 140 |
| M | Acciai inossidabili | temprato e rinvenuto | 300 1013 | P12 | 50 - 85 - 120 | 50 - 85 - 120 |
| | | temprato e rinvenuto | 400 1361 | P13 | 50 - 85 - 120 | 50 - 85 - 120 |
| | | ferritico / martensitico, ricotto | 200 675 | P14 | 60 - 115 - 170 | 60 - 115 - 170 |
| K | Acciai inossidabili | martensitico, bonificato | 330 1114 | P15 | 50 - 75 - 100 | 50 - 75 - 100 |
| | | austenitico, trattato o temerato | 200 675 | M1 | 60 - 90 - 120 | 60 - 90 - 120 |
| | | austenitico, indurimento per precipitazione (PH) | 300 1013 | M2 | 50 - 70 - 90 | 50 - 70 - 90 |
| N | Ghisa temprata | austenitico-ferritico, Duplex | 230 778 | M3 | 50 - 70 - 90 | 50 - 70 - 90 |
| | | ferritico | 200 675 | K1 | - | - |
| | Ghisa grigia | perlitica | 260 867 | K2 | - | - |
| | | bassa resistenza | 180 602 | K3 | - | - |
| | Ghisa sferoidale | alta resistenza / austenitico | 245 825 | K4 | - | - |
| S | GVA (CGI) | ferritico | 155 518 | K5 | - | - |
| | | perlitica | 265 885 | K6 | - | - |
| | Leghe di Alluminio stampato | 200 675 | K7 | - | - | - |
| | | non invecchiato | 30 - | N1 | 100 - 300 - 500 | 100 - 300 - 500 |
| | Leghe di Alluminio da fusione | rinvenuto, invecchiato | 100 343 | N2 | 100 - 200 - 300 | 100 - 200 - 300 |
| | | ≤ 12 % Si, non invecchiato | 75 260 | N3 | 100 - 300 - 500 | 100 - 300 - 500 |
| | Leghe di magnesio | ≤ 12 % Si, rinvenuto, invecchiato | 90 314 | N4 | 100 - 200 - 300 | 100 - 200 - 300 |
| | | > 12 % Si, non invecchiato | 130 447 | N5 | 100 - 150 - 200 | 100 - 150 - 200 |
| | Rame e Leghe di Rame (Bronzo / Ottone) | > 12 % Si, non invecchiato | 70 250 | N6 | - | - |
| | | Non legati, Rame Elettrolitico | 100 343 | N7 | 100 - 200 - 300 | 100 - 200 - 300 |
| | | Ottone, Bronzo | 90 314 | N8 | 100 - 300 - 500 | 100 - 300 - 500 |
| H | Materiali non metallici | Leghe Cu, truciolo corto | 110 382 | N9 | 100 - 200 - 300 | 100 - 200 - 300 |
| | | 300 1013 | N10 | - | - | - |
| | Leghe resistenti al calore | Leghe al piombo (senza materiale di riempimento abrasivo) | - - | N11 | 80 - 130 - 180 | 80 - 130 - 180 |
| | | Duroplastico (senza materiale di riempimento abrasivo) | - - | N12 | 80 - 130 - 180 | 80 - 130 - 180 |
| | | Plastica rinforzata in fibra di vetro GFRP | - - | N13 | 60 - 105 - 150 | 60 - 105 - 150 |
| | | Plastica rinforzata in fibra di carbonio CFRP | - - | N14 | 60 - 105 - 150 | 60 - 105 - 150 |
| | | Plastica rinforzata in fibra aramidica AFRP | - - | N15 | 60 - 105 - 150 | 60 - 105 - 150 |
| | Leghe di Titanio | Grafite (tecnico) | 80 Shore | N16 | - | - |
| | | Base-Fe ricotto | 200 675 | S1 | 20 - 35 - 50 | 20 - 35 - 50 |
| | | Base-Fe invecchiato | 280 943 | S2 | 20 - 30 - 40 | 20 - 30 - 40 |
| | Leghe di tungsteno | Base Ni o Co ricotto | 250 839 | S3 | 15 - 20 - 25 | 15 - 20 - 25 |
| | | Base Ni o Co invecchiato | 350 1177 | S4 | 10 - 15 - 20 | 10 - 15 - 20 |
| | | Base Ni o Co da fusione | 320 1076 | S5 | 10 - 15 - 20 | 10 - 15 - 20 |
| | Leghe di molibdeno | Titanio puro | 200 675 | S6 | 50 - 85 - 120 | 50 - 85 - 120 |
| | | Leghe α e β, invecchiato | 375 1262 | S7 | 30 - 40 - 50 | 30 - 40 - 50 |
| | | Leghe β | 410 1396 | S8 | 25 - 35 - 45 | 25 - 35 - 45 |
| H | Acciaio Temprato | 300 1013 | S9 | - | - | - |
| | | 300 1013 | S10 | - | - | - |
| | Ghisa Temprata | 50 HRC | - | H1 | - | - |
| | | 55 HRC | - | H2 | - | - |
| | | 60 HRC | - | H3 | - | - |
| | | 55 HRC | - | H4 | - | - |

I dati indicati in tabella sono valori approssimati.

Può essere necessario adattarli alle singole applicazioni di lavorazione.

HC = Metallo duro rivestito



Weitere Informationen finden Sie unter:

For more information see:

Per maggiori informazioni visita il sito:

ARNO®
WERKZEUGE

www.arno.de

Die Verbindung zu maximaler Stabilität. *the connection for maximum stability.* Il collegamento per la massima stabilità.

Eine Schnittstelle weniger für mehr

**Prozesssicherheit: mit Direktaufnahmen
für Monoblockhalter und Stechmodule.**

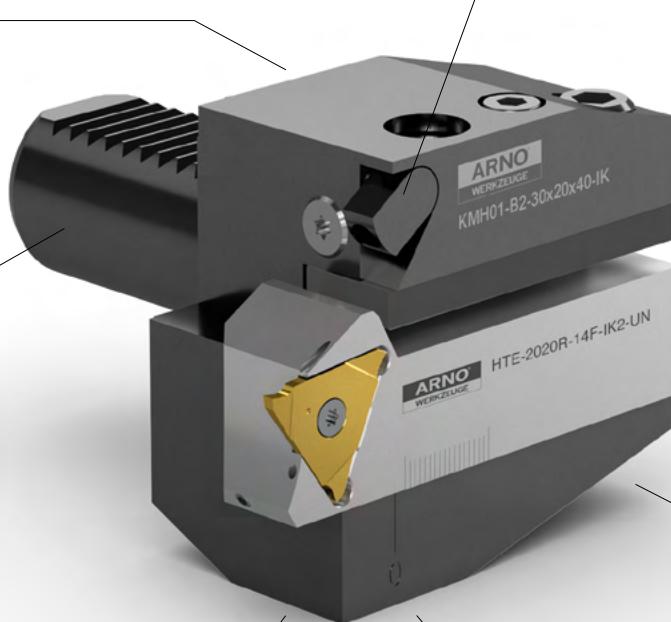
Sicherheit geht bei Ein- und Abstechoperationen vor. Hier sind unsere speziell an die jeweiligen Maschinen angepassten Direktaufnahmen optimal, mit denen eine Schnittstelle und damit eine Fehlerquelle entfällt. Sie sind perfekt ausgelegt und garantieren so maximale Stabilität. Ob mit Monoblockhalter, Stechmodul oder Stechklinge – für jeden Bedarf und viele Maschinentypen bieten wir Ihnen die passenden Direktaufnahmen. Und weil begeisterte Kunden immer mehr Maschinen damit bestücken möchten, kommen ständig Neue hinzu.

One interface less for more process reliability: with flange mounted holders for monoblock holders and part-off modules.

Reliability is the top priority in grooving and parting off operations. On this point our flange mounted holders are specially optimised for each machine to eliminate an interface and therefore get rid of one more error source. They are perfectly designed to guarantee maximum rigidity. Whether your requirement is for a monoblock holder, grooving module or grooving blade – we offer you the matching flange mounted holder for every application and for many machine types. And because satisfied customers want to equip more and more machines with them, we are constantly designing new types.

Un'interfaccia in meno per garantire maggiore sicurezza di processo: adattatori a montaggio diretto per supporti monoblocco e moduli per scanalatura.

La sicurezza viene prima delle operazioni di realizzazione di gole e di troncatura. Ecco i nostri adattatori diretti, studiati appositamente per ogni tipologia di macchina, grazie ai quali non è necessaria un'interfaccia e quindi viene meno anche una sorgente di errore. Sono realizzati in maniera perfetta per garantire la massima stabilità. Sia che si tratti di supporti monoblocco, di un modulo per troncatura o di una lama per troncatura – per ogni necessità e per molti tipi di macchine siamo in grado di offrirvi gli adattatori diretti adeguati. E dal momento che clienti estremamente soddisfatti desiderano equipaggiare un numero sempre più crescente di macchine con i nostri utensili, se ne aggiungono sempre di nuovi.

Verfügbar in den Formen B1 bis B4 und C1 bis C4*Available in a variety of shapes from B1 to B4 and from C1 to C4**Disponibile in diverse forme da B1 a B4 e da C1 a C4***VDI-Schaft**
VDI-Shank
Attacco VDI**Längeneinstellung über definierten Bereich***The tool holder can be adjusted within the defined scales**Regolazione della lunghezza attraverso marcatura sul portautensile***Zusätzliche Kühlung über Kühlmitteldüse***Coolant jet for additional cooling**Refrigerante addizionale attraverso il ugello***Eine Schnittstelle weniger für mehr Prozesssicherheit: Trägerwerkzeug und KMH-Werkzeugaufnahme passen perfekt zusammen***One interface less for more process reliability: Tool holder and KMH holder fit together perfectly**Un elemento in meno per garantire maggiore sicurezza di processo:
L'utensile e il adattori KMH si adattano perfettamente***Sichere Prozesse – maximale Stabilität dank perfekt angepasster Aufnahmen***Processi sicuri – massima stabilità grazie ad adattatori perfettamente studiati**Reliable processes – maximum rigidity thanks to perfectly matched holders***Vielseitig – normal oder Überkopf montierbar***Versatile – for normal or overhead fitin**Versatile – montabile in posizione normale o invertita***Mit Innenkühlung – verringelter Verschleiß der Stechplatte***With through tool cooling – reduced wear of the insert**Con adduzione interna del refrigerante – usura ridotta dell'inserto per troncatura***Zusätzliche Kühlung über Kühlmitteldüse***Coolant jet for additional cooling**Refrigerante addizionale attraverso il ugello***Zielgerichtete Kühlmittelübergabe für sichere Prozesse***Efficient coolant supply for reliable processes**Passaggio mirato del liquido refrigerante, processi sicuri*

Passende Halter (HSA7...) sowie Direktaufnahmen finden Sie im Katalog Ein- und Abstechen. Die Abmaße für AKL und DF_{max} können Sie je nach Aufnahme aus der Tabellenzeile von MSA-...-65-ACS... (Katalog Stechen, Kapitel 10) entnehmen.

Suitable holders (HSA7...) and flange mounted holders with VDI can be found in the catalogue parting and grooving.

The dimensions for AKL and DF_{max} can be taken from the table line of MSA-...-65-ACS... depending on the specific flange mounted holder (parting and grooving catalogue, chapter 10).

Per combinazioni adattatore e attacco VDI vedere catalogo troncatura e scanalatura.

Le dimensioni per AKL e DF_{max} possono essere ricavate dalla riga della tabella di MSA-...-65-ACS... a seconda dell'attacchi base (catalogo di troncatura e scanalatura, capitolo 10).

Monoblock holders
Utensili monoblocco

HTE-...-IK2-UN

Monoblockhalter mit Innenkühlung IK2 von unten (Nut) / Monoblock holder with coolant supply IK2 from the bottom (Notch) / Utensili monoblocco con refrigerazione interna IK2 da sotto (Asola)

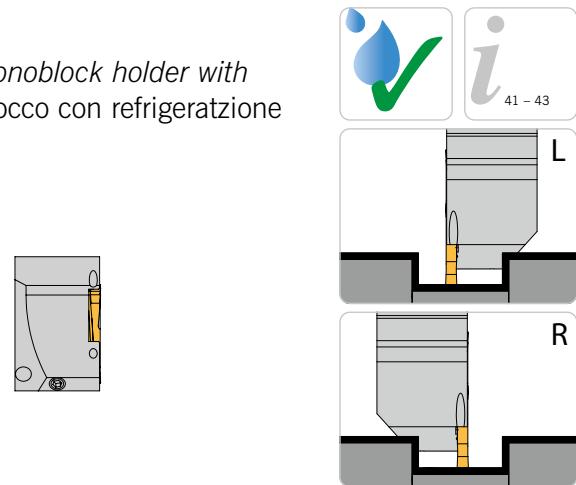
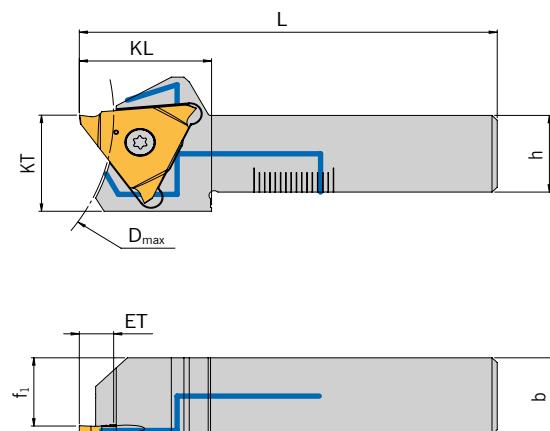


Abbildung ähnlich
Similar to illustration
Simile all'illustrazione

Trägerwerkzeuge / Holders / Utensili

Ausführung UN / Execution UN / Esecuzione UN

| Bezeichnung Designation Articolo | ET _{max} | D _{max} | h | L | f ₁ | KL | KT | Drehmoment Nm Torque Nm Coppia Nm | Größe Size Grandezza | Schneideinsatz Insert Inserto |
|--|-------------------|------------------|----|----|----------------|----|----|---|----------------------------|-------------------------------------|
| HTE-1616L/R-14F-IK2-UN | 6,5 | 80 | 16 | 79 | 13,95 | 25 | 20 | 2,5 | F | T...14F-... |
| HTE-1616L/R-14H-IK2-UN | 6,5 | 80 | 16 | 79 | 12,95 | 25 | 20 | 2,5 | H | T...14H-... |
| HTE-1616L/R-14K-IK2-UN | 6,5 | 80 | 16 | 79 | 11,95 | 25 | 20 | 2,5 | K | T...14K-... |
| HTE-1616L/R-14P-IK2-UN | 6,5 | 80 | 16 | 79 | 11,00 | 25 | 25 | 2,5 | P | T...14P-... |
| HTE-2020L/R-14F-IK2-UN | 6,5 | 80 | 20 | 94 | 17,95 | 25 | 20 | 2,5 | F | T...14F-... |
| HTE-2020L/R-14H-IK2-UN | 6,5 | 80 | 20 | 94 | 16,95 | 25 | 20 | 2,5 | H | T...14H-... |
| HTE-2020L/R-14K-IK2-UN | 6,5 | 80 | 20 | 94 | 15,95 | 25 | 20 | 2,5 | K | T...14K-... |
| HTE-2020L/R-14P-IK2-UN | 6,5 | 80 | 20 | 94 | 15,00 | 25 | 25 | 2,5 | P | T...14P-... |
| HTE-2525L/R-14F-IK2-UN | 6,5 | 150 | 25 | 97 | 22,95 | 25 | 25 | 2,5 | F | T...14F-... |
| HTE-2525L/R-14H-IK2-UN | 6,5 | 150 | 25 | 97 | 21,95 | 25 | 25 | 2,5 | H | T...14H-... |
| HTE-2525L/R-14K-IK2-UN | 6,5 | 150 | 25 | 97 | 20,95 | 25 | 25 | 2,5 | K | T...14K-... |
| HTE-2525L/R-14P-IK2-UN | 6,5 | 150 | 25 | 97 | 19,95 | 25 | 25 | 2,5 | P | T...14P-... |
| HTE-2525L/R-14S-IK2-UN | 6,5 | 150 | 25 | 97 | 18,95 | 25 | 25 | 2,5 | S | T...14S-... |

ARNO® SpecialDesign

Diese Monoblockhalter bekommen Sie mit Ihren spezifischen Kühlanschlüssen. Ein Anfrageblatt hierzu finden Sie auf Seite 41.

The coolant inlet can be supplied to your specification. Please complete enquiry sheet on page 42.

Questi corpi utensile sono fornibili con specifiche connessioni del refrigerante. Vedere modulo richiesta a Pagina 43.

Auf Anfrage liefern wir Ihnen Schneideinsätze in Sondergrößen mit den hierfür passenden Haltern. Dabei sind Einstechbreiten von bis zu 15 mm möglich.

On request, we can supply you with inserts in special sizes with the appropriate holders. Plunge widths of up to 15 mm are possible.

A richiesta possiamo fornirvi inserti in misure speciali con gli appositi supporti. Sono possibili larghezze di tuffo fino a 15 mm.

Passende Schneideinsätze finden Sie auf Seite 24 – 29.

For inserts to suit please see page 24 – 29.

Per i inserti abbinabili vedere pagina24 – 29.

Ersatzteile / Spare Parts / Ricambi

| Trägerwerkzeug Holder Utensile | Schraube Screw Vite | Schlüssel Key Chiave |
|--------------------------------------|---------------------------|----------------------------|
| HTE-...-14... | AS 0005 | T5210-IP |

Monoblock holders with KMH-holder (VDI)
Adattatore KMH (VDI) per utensili monoblocco

ATS Monoblockhalter -UN auf KMH-Werkzeugaufnahme - Form B

ATS Monoblock holder -UN with KMH-holder – Form B

ATS Utensili monoblocco -UN con adattatore KMH – Forma B

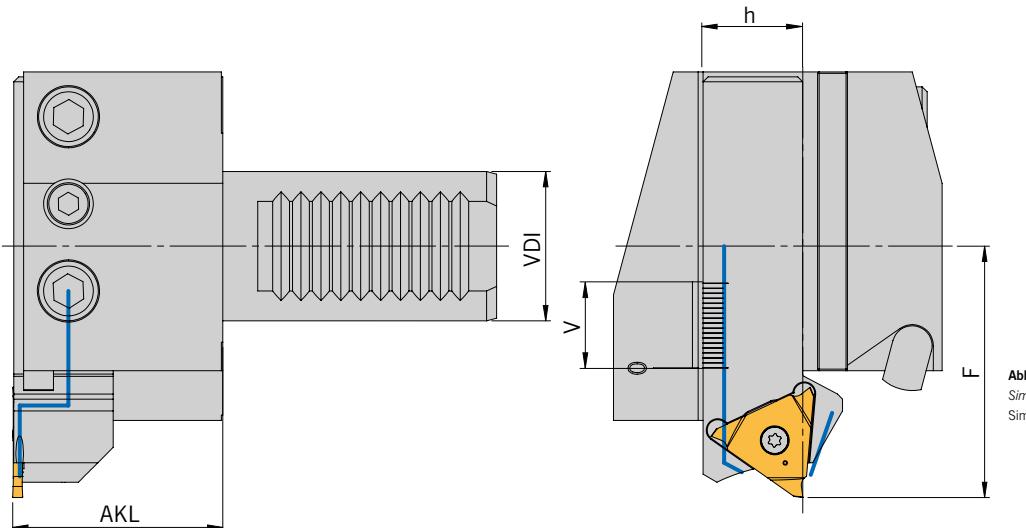


Abbildung ähnlich
Similar to illustration
Simile all'illustrazione

HANDLING:

In Tabelle 1 den benötigten KMH-Werkzeughalter (VDI) und den Halter-Typ auswählen.

Entsprechend dem Halter-Typ den benötigten Halter und die Schneidplatte mit Tabelle 2 bestimmen.

HANDLING:

Please select the KMH holder (VDI) and holder type from table 1.

According to holder type please select suitable holder and insert from table 2.

GUIDA ALLA LETTURA: Scegliere l'adattatore KMH (VDI) e tipologia di forma dalla tabella 1. Dalla tabella 2 scegliere il relativo utensile ed inserto.

KMH-Werkzeugaufnahmen mit KMD und IK-Form B...

KMH holder with coolant jet and through tool coolant – form B...

Adattatore tipo KMH con ugello (KMD) ed lubrificazione interna (IK) – Versione B...

| | Form | VDI | h | AKL | V* | KMH Werkzeugaufnahme (VDI) KMH Holder (VDI) Adattatore KMH (VDI) | Monoblockhalter Monoblock holder Utensili monoblocco |
|----|------|-----|------|-----|----|--|--|
| B1 | 20 | 16 | 32,2 | 15 | 15 | KMH01-B1-20x16x30-IK | HTE-1616L-... |
| | 25 | 16 | 32,2 | 15 | 15 | KMH01-B1-25x16x30-IK | HTE-1616L-... |
| | 30 | 20 | 42,2 | 17 | 17 | KMH01-B1-30x20x40-IK | HTE-2020L-... |
| | 40 | 25 | 47,2 | 22 | 22 | KMH01-B1-40x25x44-IK | HTE-2525L-... |
| B2 | 25 | 16 | 32,2 | 15 | 15 | KMH01-B2-25x16x30-IK | HTE-1616R-... |
| | 30 | 20 | 42,2 | 17 | 17 | KMH01-B2-30x20x40-IK | HTE-2020R-... |
| | 40 | 25 | 47,2 | 22 | 22 | KMH01-B2-40x25x44-IK | HTE-2525R-... |
| B3 | 20 | 16 | 32,2 | 15 | 15 | KMH01-B3-20X16X30-IK | HTE-1616L-... |
| | 25 | 16 | 32,2 | 15 | 15 | KMH01-B3-25x16x30-IK | HTE-1616R-... |
| | 30 | 20 | 42,2 | 17 | 17 | KMH01-B3-30x20x40-IK | HTE-2020R-... |
| | 40 | 25 | 47,2 | 22 | 22 | KMH01-B3-40x25x44-IK | HTE-2525R-... |
| B4 | 25 | 16 | 32,2 | 15 | 15 | KMH01-B4-25x16x30-IK | HTE-1616L-... |
| | 30 | 20 | 42,2 | 17 | 17 | KMH01-B4-30x20x40-IK | HTE-2020L-... |
| | 40 | 25 | 47,2 | 22 | 22 | KMH01-B4-40x25x44-IK | HTE-2525L-... |

* Der Halter kann um den Wert „V“ in der VDI-Aufnahme nach vorne geschoben werden. Die Kühlmittelversorgung ist innerhalb der Skala sichergestellt. Das „F-Maß“ ändert sich entsprechend.

* The holder be adjusted forward bei the „V“ value. The coolant flow is guaranteed according to the adjustment range. The „F“ dimension changes accordingly.

* L'utensile può essere estratto del valore „V“. Il passaggio del refrigerante viene garantito all'interno del campo di registrazione. La dimensione "F" cambia di conseguenza.

*Monoblock holders with KMH-holder (VDI)
Adattatore KMH (VDI) per utensili monoblocco*

ATS Monoblockhalter mit Innenkühlung – Übergabe von unten (Nut)

ATS Monoblock holders with through tool coolant – with coolant supply from the bottom (Notch)

ATS Utensili monoblocco con refrigerazione interna - trasferimento dal basso (Asola)

| | Monoblockhalter Monoblock holder Utensili monoblocco | EB | ET | D _{max} | Bezeichnung Designation Articolo | F | h | Schneideinsatz Insert Inserito |
|---------------|--|-------|-----|----------------------|--|----|---|--------------------------------------|
| HTE-1616L.... | ≤ 2 | ≤ 6,5 | 80 | HTE-1616L-14F-IK2-UN | 55 | 16 | | T...14F... |
| | 2,5 - 3,0 | ≤ 6,5 | 80 | HTE-1616L-14H-IK2-UN | 55 | | | T...14H... |
| | 4,0 | ≤ 6,5 | 80 | HTE-1616L-14K-IK2-UN | 55 | | | T...14K... |
| | 5,0 | ≤ 6,5 | 80 | HTE-1616L-14P-IK2-UN | 55 | | | T...14P... |
| HTE-1616R.... | ≤ 2 | ≤ 6,5 | 80 | HTE-1616R-14F-IK2-UN | 55 | 16 | | T...14F... |
| | 2,5 - 3,0 | ≤ 6,5 | 80 | HTE-1616R-14H-IK2-UN | 55 | | | T...14H... |
| | 4,0 | ≤ 6,5 | 80 | HTE-1616R-14K-IK2-UN | 55 | | | T...14K... |
| | 5,0 | ≤ 6,5 | 80 | HTE-1616R-14P-IK2-UN | 55 | | | T...14P... |
| HTE-2020L.... | ≤ 2 | ≤ 6,5 | 80 | HTE-2020L-14F-IK2-UN | 50,5 | 20 | | T...14F... |
| | 2,5 - 3,0 | ≤ 6,5 | 80 | HTE-2020L-14H-IK2-UN | 50,5 | | | T...14H... |
| | 4,0 | ≤ 6,5 | 80 | HTE-2020L-14K-IK2-UN | 50,5 | | | T...14K... |
| | 5,0 | ≤ 6,5 | 80 | HTE-2020L-14P-IK2-UN | 60,0 | | | T...14P... |
| HTE-2020R.... | ≤ 2 | ≤ 6,5 | 80 | HTE-2020R-14F-IK2-UN | 50,5 | 20 | | T...14F... |
| | 2,5 - 3,0 | ≤ 6,5 | 80 | HTE-2020R-14H-IK2-UN | 50,5 | | | T...14H... |
| | 4,0 | ≤ 6,5 | 80 | HTE-2020R-14K-IK2-UN | 50,5 | | | T...14K... |
| | 5,0 | ≤ 6,5 | 80 | HTE-2020R-14P-IK2-UN | 60,0 | | | T...14P... |
| HTE-2525L.... | ≤ 2 | ≤ 6,5 | 150 | HTE-2525L-14F-IK2-UN | 55,5 | 25 | | T...14F... |
| | 2,5 - 3,0 | ≤ 6,5 | 150 | HTE-2525L-14H-IK2-UN | 55,5 | | | T...14H... |
| | 4,0 | ≤ 6,5 | 150 | HTE-2525L-14K-IK2-UN | 55,5 | | | T...14K... |
| | 5,0 | ≤ 6,5 | 150 | HTE-2525L-14P-IK2-UN | 55,5 | | | T...14P... |
| | 6,0 | ≤ 6,5 | 150 | HTE-2525L-14S-IK2-UN | 55,5 | | | T...14S... |
| HTE-2525R.... | ≤ 2 | ≤ 6,5 | 150 | HTE-2525R-14F-IK2-UN | 55,5 | 25 | | T...14F... |
| | 2,5 - 3,0 | ≤ 6,5 | 150 | HTE-2525R-14H-IK2-UN | 55,5 | | | T...14H... |
| | 4,0 | ≤ 6,5 | 150 | HTE-2525R-14K-IK2-UN | 55,5 | | | T...14K... |
| | 5,0 | ≤ 6,5 | 150 | HTE-2525R-14P-IK2-UN | 55,5 | | | T...14P... |
| | 6,0 | ≤ 6,5 | 150 | HTE-2525R-14S-IK2-UN | 55,5 | | | T...14S... |

Tabelle 2 / Table 2 / Tabella 2

Ersatzteile / Spare Parts / Ricambi

| Trägerwerkzeug Holder Utensile | Schraube Screw Vite | Drehmoment Torque Coppia | Schlüssel Key Chiave |
|--------------------------------------|---------------------------|--------------------------------|----------------------------|
| HTE-...-14... | AS 0005 | 2,5 Nm | T5210-IP |

Einbaumöglichkeiten / Assembly options / Combinazioni di montaggio

| Aufnahme KMH01-B...-IK mit linkem Monoblockhalter Holder KMH01-B...-IK with left monoblock holder Adattatore KMH01-B...-IK con utensile monoblocco sinistro | Aufnahme KMH01-B...-IK mit rechtem Monoblockhalter Holder KMH01-B...-IK with right monoblock holder Adattatore KMH01-B...-IK con utensile monoblocco destro | | |
|---|---|--|---|
| KMH01-B1...-IK | KMH01-B4...-IK | KMH01-B2...-IK | KMH01-B3...-IK |
|  |  |  |  |
| Einbaulage normal Normal assembly Montaggio normale | Einbaulage Überkopf Upside down assembly Montaggio invertito | Einbaulage normal Normal assembly Montaggio normale | Einbaulage Überkopf Upside down assembly Montaggio invertito |

Monoblock holders with KMH-holder (VDI)
Adattatore KMH (VDI) per utensili monoblocco

ATS Monoblockhalter -UN auf KMH-Werkzeugaufnahme - Form C

ATS Monoblock holder -UN with KMH-holder – Form C

ATS Utensili monoblocco -UN con adattatore KMH – Forma C

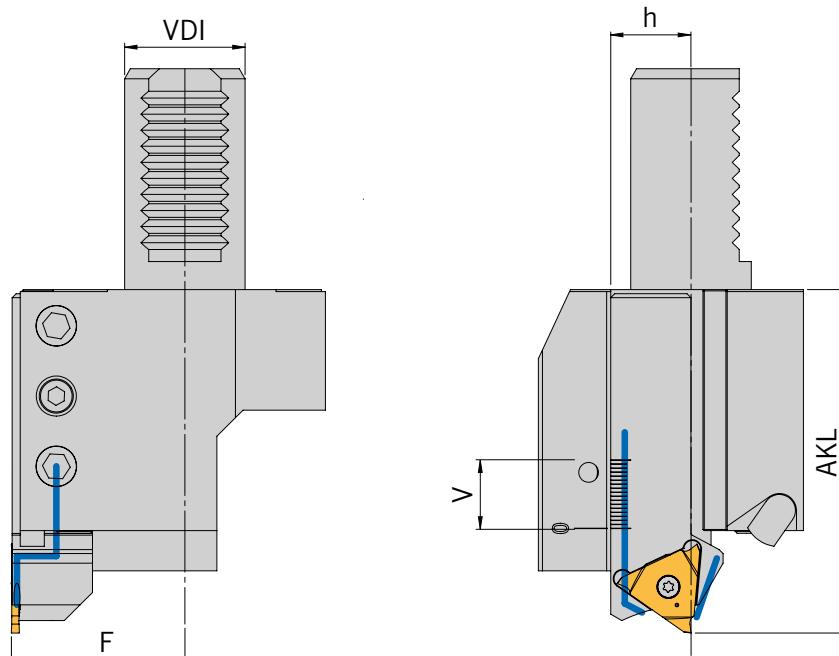


Abbildung ähnlich
Similar to illustration
Simile all'illustrazione

HANDLING:

In Tabelle 1 den benötigten KMH-Werkzeughalter (VDI) und den Halter-Typ auswählen.

Entsprechend dem Halter-Typ den benötigten Halter und die Schneidplatte mit Tabelle 2 bestimmen.

HANDLING:

Please select the KMH holder (VDI) and holder type from table 1.

According to holder type please select suitable holder and insert from table 2.

GUIDA ALLA LETTURA: Scegliere l'adattatore KMH (VDI) e tipologia di forma dalla tabella 1. Dalla tabella 2 scegliere il relativo utensile ed inserto.

KMH-Werkzeugaufnahmen mit KMD und IK-Form C...

KMH holder with coolant jet and through tool coolant – form C...

Adattatore tipo KMH con ugello (KMD) ed lubrificazione interna (IK) – Versione C...

| | Form | VDI | h | F | V* | KMH Werkzeugaufnahme (VDI) KMH Holder (VDI) Adattatore KMH (VDI) | Monoblockhalter Monoblock holder Utensili monoblocco |
|----|------|-----|------|----|----|--|--|
| C1 | 25 | 16 | 35,2 | 15 | | KMH01-C1-25x16x55-IK | HTE-1616R-... |
| | 30 | 20 | 37,2 | 17 | | KMH01-C1-30x20x70-IK | HTE-2020R-... |
| | 40 | 25 | 46,2 | 22 | | KMH01-C1-40x25x85-IK | HTE-2525R-... |
| C2 | 25 | 16 | 35,2 | 15 | | KMH01-C2-25x16x55-IK | HTE-1616L-... |
| | 30 | 20 | 43,2 | 17 | | KMH01-C2-30x20x70-IK | HTE-2020L-... |
| | 40 | 25 | 50,7 | 22 | | KMH01-C2-40x25x85-IK | HTE-2525L-... |
| C3 | 25 | 16 | 35,2 | 15 | | KMH01-C3-25x16x55-IK | HTE-1616L-... |
| | 30 | 20 | 37,2 | 17 | | KMH01-C3-30x20x70-IK | HTE-2020L-... |
| | 40 | 25 | 46,2 | 22 | | KMH01-C3-40x25x85-IK | HTE-2525L-... |
| C4 | 25 | 16 | 35,2 | 15 | | KMH01-C4-25x16x55-IK | HTE-1616R-... |
| | 25 | 20 | 39,2 | 17 | | KMH01-C4-25x20x70-IK | HTE-2020R-... |
| | 30 | 20 | 43,2 | 17 | | KMH01-C4-30x20x70-IK | HTE-2020R-... |
| | 40 | 25 | 50,7 | 22 | | KMH01-C4-40x25x85-IK | HTE-2525R-... |

Tabelle 1 / Table 1 / Tabella 1

* Der Halter kann um den Wert „V“ in der VDI-Aufnahme nach vorne geschoben werden. Die Kühlmittelversorgung ist innerhalb der Skala sichergestellt. Das „AKL-Maß“ ändert sich entsprechend.

* The holder be adjusted forward by the „V“ value. The coolant flow is guaranteed according to the adjustment range. The „AKL“ dimension changes accordingly.

* L'utensile può essere estratto del valore „V“. Il passaggio del refrigerante viene garantito all'interno del campo di regolazione. La dimensione "AKL" cambia di conseguenza.

*Monoblock holders with KMH-holder (VDI)
Adattatore KMH (VDI) per utensili monoblocco*

ATS Monoblockhalter mit Innenkühlung – Übergabe von unten (Nut)

*ATS Monoblock holders with through tool coolant – with coolant supply from the bottom (Notch)
ATS Utensili monoblocco con refrigerazione interna - trasferimento dal basso (Asola)*

| | Monoblockhalter Monoblock holder Utensili monoblocco | EB | ET | D _{max} | Bezeichnung Designation Articolo | AKL | h | Schneideinsatz Insert Inserito |
|---------------|--|-------|-----|----------------------|--|-----|---|--------------------------------------|
| HTE-1616L.... | ≤ 2 | ≤ 6,5 | 80 | HTE-1616L-14F-IK2-UN | 80,0 | 16 | | T...14F... |
| | 2,5 - 3,0 | ≤ 6,5 | 80 | HTE-1616L-14H-IK2-UN | 80,0 | | | T...14H... |
| | 4,0 | ≤ 6,5 | 80 | HTE-1616L-14K-IK2-UN | 80,0 | | | T...14K... |
| | 5,0 | ≤ 6,5 | 80 | HTE-1616L-14P-IK2-UN | 80,0 | | | T...14P... |
| HTE-1616R.... | ≤ 2 | ≤ 6,5 | 80 | HTE-1616R-14F-IK2-UN | 80,0 | 16 | | T...14F... |
| | 2,5 - 3,0 | ≤ 6,5 | 80 | HTE-1616R-14H-IK2-UN | 80,0 | | | T...14H... |
| | 4,0 | ≤ 6,5 | 80 | HTE-1616R-14K-IK2-UN | 80,0 | | | T...14K... |
| | 5,0 | ≤ 6,5 | 80 | HTE-1616R-14P-IK2-UN | 80,0 | | | T...14P... |
| HTE-2020L.... | ≤ 2 | ≤ 6,5 | 80 | HTE-2020L-14F-IK2-UN | 85,5 | 20 | | T...14F... |
| | 2,5 - 3,0 | ≤ 6,5 | 80 | HTE-2020L-14H-IK2-UN | 85,5 | | | T...14H... |
| | 4,0 | ≤ 6,5 | 80 | HTE-2020L-14K-IK2-UN | 85,5 | | | T...14K... |
| | 5,0 | ≤ 6,5 | 80 | HTE-2020L-14P-IK2-UN | 95,0 | | | T...14P... |
| HTE-2020R.... | ≤ 2 | ≤ 6,5 | 80 | HTE-2020R-14F-IK2-UN | 85,5 | 20 | | T...14F... |
| | 2,5 - 3,0 | ≤ 6,5 | 80 | HTE-2020R-14H-IK2-UN | 85,5 | | | T...14H... |
| | 4,0 | ≤ 6,5 | 80 | HTE-2020R-14K-IK2-UN | 85,5 | | | T...14K... |
| | 5,0 | ≤ 6,5 | 80 | HTE-2020R-14P-IK2-UN | 95,0 | | | T...14P... |
| HTE-2525L.... | ≤ 2 | ≤ 6,5 | 150 | HTE-2525L-14F-IK2-UN | 98,0 | 25 | | T...14F... |
| | 2,5 - 3,0 | ≤ 6,5 | 150 | HTE-2525L-14H-IK2-UN | 98,0 | | | T...14H... |
| | 4,0 | ≤ 6,5 | 150 | HTE-2525L-14K-IK2-UN | 98,0 | | | T...14K... |
| | 5,0 | ≤ 6,5 | 150 | HTE-2525L-14P-IK2-UN | 98,0 | | | T...14P... |
| | 6,0 | ≤ 6,5 | 150 | HTE-2525L-14S-IK2-UN | 98,0 | | | T...14S... |
| HTE-2525R.... | ≤ 2 | ≤ 6,5 | 150 | HTE-2525R-14F-IK2-UN | 98,0 | 25 | | T...14F... |
| | 2,5 - 3,0 | ≤ 6,5 | 150 | HTE-2525R-14H-IK2-UN | 98,0 | | | T...14H... |
| | 4,0 | ≤ 6,5 | 150 | HTE-2525R-14K-IK2-UN | 98,0 | | | T...14K... |
| | 5,0 | ≤ 6,5 | 150 | HTE-2525R-14P-IK2-UN | 98,0 | | | T...14P... |
| | 6,0 | ≤ 6,5 | 150 | HTE-2525R-14S-IK2-UN | 98,0 | | | T...14S... |

Tabelle 2 / Table 2 / Tabella 2

Ersatzteile / Spare Parts / Ricambi

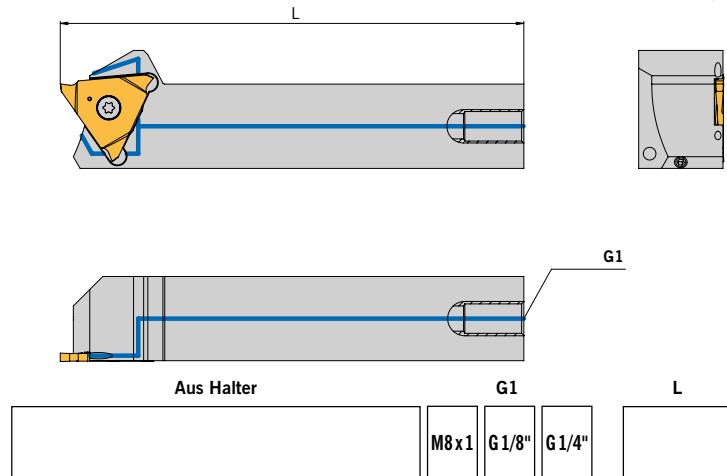
| Trägerwerkzeug Holder Utensile | Schraube Screw Vite | Drehmoment Torque Coppia | Schlüssel Key Chiave |
|--------------------------------------|---------------------------|--------------------------------|----------------------------|
| HTE-...-14... | AS 0005 | 2,5 Nm | T5210-IP |

Einbaumöglichkeiten / Assembly options / Combinazioni di montaggio

| Aufnahme KMH01-C....-IK mit linkem Monoblockhalter Holder KMH01-C...-IK with left monoblock holder Adattatore KMH01-C...-IK con utensile monoblocco sinistro | Aufnahme KMH01-C....-IK mit rechtem Monoblockhalter Holder KMH01-C...-IK with right monoblock holder Adattatore KMH01-C...-IK con utensile monoblocco destro | | |
|--|--|--|---|
| KMH01-C2....-IK | KMH01-C3....-IK | KMH01-C1....-IK | KMH01-C4....-IK |
|  |  |  |  |
| Einbaulage normal Normal assembly Montaggio normale | Einbaulage Überkopf Upside down assembly Montaggio invertito | Einbaulage normal Normal assembly Montaggio normale | Einbaulage Überkopf Upside down assembly Montaggio invertito |

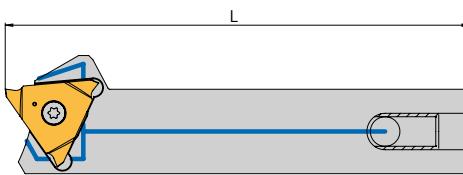
Monoblockhalter mit Innenkühlung IK2 von hinten

 ARNO® SpecialDesign



Diese Halter fertigen
wir Ihnen zum Preis des
Standardwerkzeuges.

Monoblockhalter mit Innenkühlung IK2 von der Seite

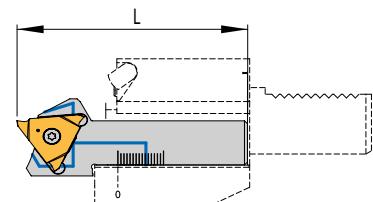
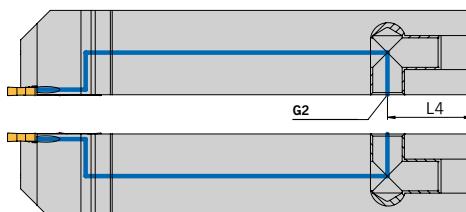


Ausführung S. – Das Gewinde G2 ist auf der gleichen Seite wie die Schneide

Bitte ankreuzen:

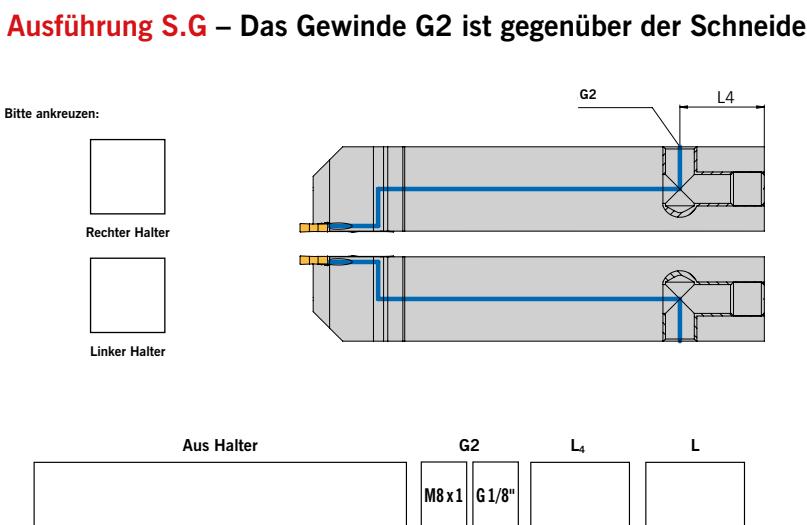
Rechter Halter

Linker Halter



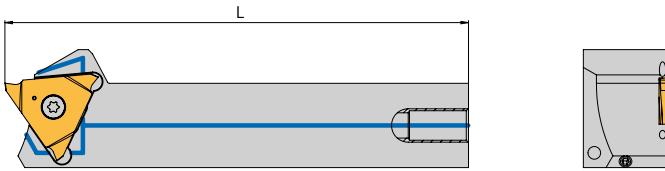
Hinweis bei Verwendung auf KMH-Werkzeugaufnahme (VDI) Form C

Beim Einsatz der Halter in VDI-Aufnahmen Form C bitte die Gesamtlänge (L) nach folgender Maximallänge festlegen:

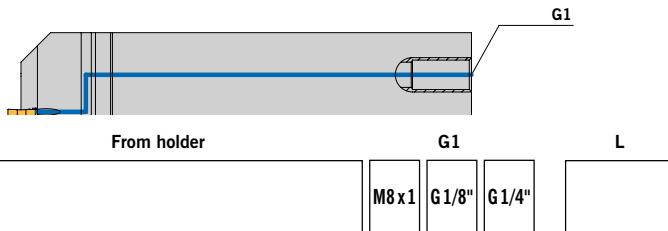


Monoblock holder with through tool coolant IK2 access from the back

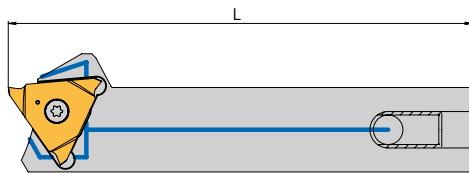
 **ARNO® SpecialDesign**



This tool we produce
to the price of the
standard tool.



Monoblock holder with through tool coolant IK2 access from the side



Design S. – Thread G2 is on the same side as the cutting edge

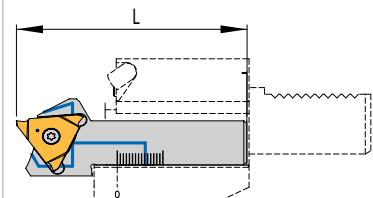
Please select:



Right-hand holder



Left-hand holder



Remark by using the KMH holders
(VDI) Form C

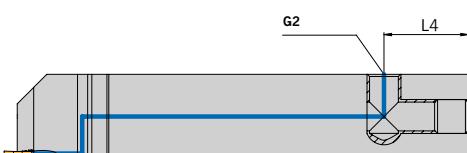
When using VDI holders Form C, please set overall length (L) by following maximum lengths:

Design S.G – Thread G2 is on the opposite side of the cutting edge

Please select:



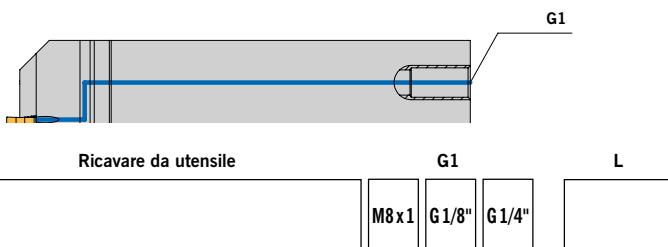
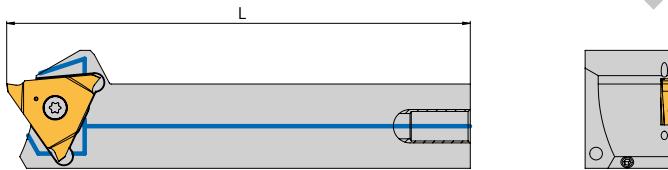
Right-hand holder



Left-hand holder



| Designation | L |
|------------------------|------|
| HTE-1616L/R-14F-IK2... | |
| HTE-1616L/R-14H-IK2... | 80,0 |
| HTE-1616L/R-14K-IK2... | |
| HTE-1616L/R-14P-IK2... | |
| HTE-2020L/R-14F-IK2... | |
| HTE-2020L/R-14H-IK2... | 85,5 |
| HTE-2020L/R-14K-IK2... | |
| HTE-2020L/R-14P-IK2... | 95,0 |
| HTE-2525L/R-14F-IK2... | |
| HTE-2525L/R-14H-IK2... | |
| HTE-2525L/R-14K-IK2... | 98,0 |
| HTE-2525L/R-14P-IK2... | |
| HTE-2525L/R-14S-IK2... | |


Utensile monoblocco con adduzione interna IK2

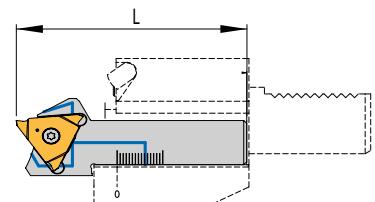
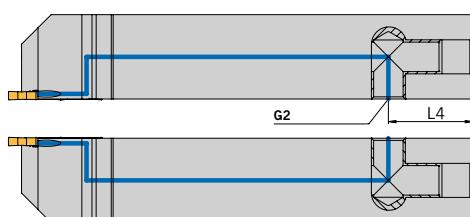
Questi utensili vengono realizzati al prezzo dello standard.

Utensile monoblocco con adduzione interna IK2 laterale**Versione S. – Filettatura G2 sul medesimo lato dell'inserto**

Prego indicare:



Utensile destro in figura



Nota sull'utilizzo adattatori KMH (VDI) Forma C

Con l'utilizzo di adattatori VDI forma C impostare la lunghezza totale (L) secondo la seguente tabella:

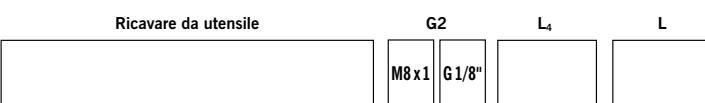
| Articolo | L |
|------------------------|------|
| HTE-1616L/R-14F-IK2... | |
| HTE-1616L/R-14H-IK2... | 80,0 |
| HTE-1616L/R-14K-IK2... | |
| HTE-1616L/R-14P-IK2... | |
| HTE-2020L/R-14F-IK2... | |
| HTE-2020L/R-14H-IK2... | 85,5 |
| HTE-2020L/R-14K-IK2... | |
| HTE-2020L/R-14P-IK2... | 95,0 |
| HTE-2525L/R-14F-IK2... | |
| HTE-2525L/R-14H-IK2... | |
| HTE-2525L/R-14K-IK2... | 98,0 |
| HTE-2525L/R-14P-IK2... | |
| HTE-2525L/R-14S-IK2... | |

Versione S.G – Filettatura G2 sul lato opposto l'inserto

Prego indicare:



Utensile destro in figura



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