



| Speedcut 4.0 | Speedcut | <sup>eco</sup> Speedcut  
| Speedtwister | HPC | MTC | STC | HSC

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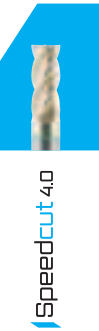
**D** VHM-Hochleistungsfräser

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**E** Solid carbide high performance end mills

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**I** Frese MDI ad alto rendimento



**D** Übersicht  
VHM-Fräser

**E** Overview  
Solid carbide milling cutters

**I** Sommario  
Frese in metallo duro integrale

**D** Die Schnittwerte für alle Werkzeuge entnehmen Sie bitte unserem separaten Zerspanungshandbuch.

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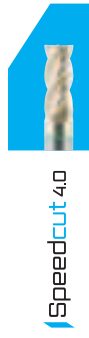
	Speedcut		Speedcut 4.0		Speedcut	
						
	Uni	Uni	Uni	Uni	Uni	Uni
Norm / Standard	DIN 6527K	DIN 6527L	DIN 6527K			
Typ / Type / Tipo	N	N	N	N	N	N
Länge / Length / Lunghezza	kurz-freigestellt	lang-freigestellt	kurz / short	kurz / short	kurz-freigestellt	kurz-freigestellt
Schneidenanzahl / No. of flutes / Nr. denti	3	3	4	4	4	4
Kopfform / Head type / Tipo di testa						
Drallwinkel / Spiral angle / Angolo elica	34-36°	34-36°	35-38°	35-38°	35-38°	35-38°
Schaftform / Shank type / Forma codolo	DIN 6535-HA	DIN 6535-HA	DIN 6535-HA	DIN 6535-HB	DIN 6535-HA	DIN 6535-HB
Kühlkanäle / Coolant supply / Fori lubrificazione						
Beschichtung / Coating / Rivestimento	ALUNIT-S*	ALUNIT-S*	TWINOUR	TWINOUR	ALUNIT-S*	ALUNIT-S*
Ø mm	2-10	3-10	3-20	3-20	3-20	3-20
Code / Codice	7367	7377	8207	8707	7387	7487
Seite / Page / Pagina	072	073	074	074	075	075
<b>Geeignet für / Suitable for / Adatte per</b>						
 <b>Stähle &lt; 400 N/mm<sup>2</sup></b> Steels < 400 N/mm <sup>2</sup> Acciai < 400 N/mm <sup>2</sup>						
 <b>Stähle &lt; 850 N/mm<sup>2</sup></b> Steels < 850 N/mm <sup>2</sup> Acciai < 850 N/mm <sup>2</sup>						
 <b>Stähle &lt; 1.100 N/mm<sup>2</sup></b> Steels < 1.100 N/mm <sup>2</sup> Acciai < 1.100 N/mm <sup>2</sup>						
 <b>Stähle &lt; 1.300 N/mm<sup>2</sup></b> Steels < 1.300 N/mm <sup>2</sup> Acciai < 1.300 N/mm <sup>2</sup>						
 <b>Stähle &gt; 45 HRC</b> Steels > 45 HRC Acciai > 45 HRC						
 <b>Rostfreie Stähle &lt; 850 N/mm<sup>2</sup></b> Stainless steels < 850 N/mm <sup>2</sup> Acciai inossidabili < 850 N/mm <sup>2</sup>						
 <b>Rostfreie Stähle &gt; 850 N/mm<sup>2</sup></b> Stainless steels > 850 N/mm <sup>2</sup> Acciai inossidabili > 850 N/mm <sup>2</sup>						
 <b>Grauguss, Temperguss</b> Cast iron, malleable cast iron Ghisa grigia, ghisa malleabile						
 <b>Nickel</b> Nickel Nickel						
 <b>Titan- und Titanlegierung</b> Titanium and titanium alloys Titanio e leghe di Titanio						
 <b>Kupfer, Messing</b> Copper, brass Rame, ottone						
 <b>Aluminium</b> Aluminium Alluminio						
 <b>Kunststoffe</b> Plastics Materie plastiche						

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Speedcut 4.0				Speedcut		Speedcut 4.0	
							
Uni	Uni	Uni	Uni	Uni	Uni	Uni	Uni
DIN 6527L							
N	N	N	N	N	N	N	N
lang / long	lang / long	lang / long	lang / long	lang / long	lang / long	lang-freigestellt	lang-freigestellt
4	4	3-4	4	3-4	4	4	4
							
35-38°	35-38°	35-38°	35-38°	35-38°	35-38°	35-38°	35-38°
DIN 6535-HA	DIN 6535-HB	DIN 6535-HA	DIN 6535-HB	DIN 6535-HA	DIN 6535-HB	DIN 6535-HA	DIN 6535-HB
ja / yes / si	ja / yes / si					ja / yes / si	ja / yes / si
<b>TWINDUR</b>	<b>TWINDUR</b>	<b>TWINDUR</b>	<b>TWINDUR</b>	<b>ALUNIT-S®</b>	<b>ALUNIT-S®</b>	<b>TWINDUR</b>	<b>TWINDUR</b>
6-20	6-20	2-20	3-20	2-20	3-20	6-20	6-20
8507	8517	8217	8717	7217	7717	8527	8537
076	076	077	077	078	078	079	079
							
							
							
							
							
							
							
							
							
							
							
							
							





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




































































































Norm / Standard	DIN 6527L				WN	
Typ / Type / Tipo	N	N	N	N	N	N
Länge / Length / Lunghezza	lang-freigestellt	lang-freigestellt	lang-freigestellt	lang-freigestellt	XL-freigestellt	XL-freigestellt
Schneidenanzahl / No. of flutes / Nr. denti	4	4	4	4	4	4
Kopfform / Head type / Tipo di testa						
Drallwinkel / Spiral angle / Angolo elica	35-38°	35-38°	35-38°	35-38°	35-38°	35-38°
Schaftform / Shank type / Forma codolo	DIN 6535-HA	DIN 6535-HB	DIN 6535-HA	DIN 6535-HB	DIN 6535-HA	DIN 6535-HB
Kühlkanäle / Coolant supply / Fori lubrificazione						
Beschichtung / Coating / Rivestimento	TWINDUR	TWINDUR	ALUNIT-S®	ALUNIT-S®	TWINDUR	TWINDUR
Ø mm	3-20	3-20	3-25	3-25	5-20	5-20
Code / Codice	8317	8417	7317	7417	8237	8737
Seite / Page / Pagina	080	080	081	081	082	082

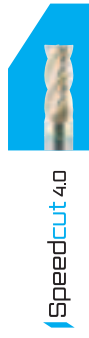
Geeignet für / Suitable for / Adatte per						
	Stähle < 400 N/mm <sup>2</sup> Steels < 400 N/mm <sup>2</sup> Acciai < 400 N/mm <sup>2</sup>					
	Stähle < 850 N/mm <sup>2</sup> Steels < 850 N/mm <sup>2</sup> Acciai < 850 N/mm <sup>2</sup>					
	Stähle < 1.100 N/mm <sup>2</sup> Steels < 1.100 N/mm <sup>2</sup> Acciai < 1.100 N/mm <sup>2</sup>					
	Stähle < 1.300 N/mm <sup>2</sup> Steels < 1.300 N/mm <sup>2</sup> Acciai < 1.300 N/mm <sup>2</sup>					
	Stähle > 45 HRC Steels > 45 HRC Acciai > 45 HRC					
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Speedcut				Speedcut 4.0	Speedcut			
								
Uni	Uni	Uni	Uni	Uni	Uni	Uni	Uni	Uni
WN		DIN 6527L	WN	DIN 6527L	DIN 6527L	WN	DIN 6527L	WN
N	N	N	N	N	N	N	N	N
XL-freigestellt	XL-freigestellt	lang / long	XL	lang-freigestellt	lang-freigestellt	XXL-freigestellt	lang-freigestellt	XXL-freigestellt
4	4	6-8	6-8	3-4	3-4	3-4	4	4
								
35-38°	35-38°	45°	45°	35-38°	35-38°	35-38°	35-38°	35-38°
DIN 6535-HA	DIN 6535-HB	DIN 6535-HA	DIN 6535-HA	DIN 6535-HA	DIN 6535-HA	DIN 6535-HA	DIN 6535-HA	DIN 6535-HA
<b>ALUNIT-S*</b>	<b>ALUNIT-S*</b>	<b>ALUNIT-S*</b>	<b>ALUNIT-S*</b>	<b>TWINDUR</b>	<b>ALUNIT-S*</b>	<b>ALUNIT-S*</b>	<b>ALUNIT-S*</b>	<b>ALUNIT-S*</b>
5-25	5-25	4-20	4-20	2-20	2-20	2-16	4-20	3-16
7237	7737	7327	7337	8547	6447	6947	7357	7857
083	083	084	085	086	087	088	090	091
								
								
								
								
								
								
								
								
								
								
								
								
								
								
								
								



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



































































































	Speedcut 4.0		Speedcut		Speedcut 4.0	
	Inox	Inox	Inox	Inox	Inox	Inox
Norm / Standard	DIN 6527K				DIN 6527L	
Typ / Type / Tipo	N	N	N	N	N	N
Länge / Length / Lunghezza	kurz-freigestellt	kurz-freigestellt	kurz-freigestellt	kurz-freigestellt	lang / long	lang / long
Schneidenanzahl / No. of flutes / Nr. denti	4	4	4	4	4	4
Kopfform / Head type / Tipo di testa						
Drallwinkel / Spiral angle / Angolo elica	39-42°	39-42°	39-42°	39-42°	39-42°	39-42°
Schaftform / Shank type / Forma codolo	DIN 6535-HA	DIN 6535-HB	DIN 6535-HA	DIN 6535-HB	DIN 6535-HA	DIN 6535-HB
Kühlkanäle / Coolant supply / Fori lubrificazione					ja / yes / si	ja / yes / si
Beschichtung / Coating / Rivestimento	ULTRADUR	ULTRADUR	ALUNIT-S®	ALUNIT-S®	ULTRADUR	ULTRADUR
Ø mm	3-16	3-16	3-16	3-16	6-20	6-20
Code / Codice	8397	8497	7397	7497	8557	8567
Seite / Page / Pagina	092	092	093	093	094	094
<b>Geeignet für / Suitable for / Adatte per</b>						
<b>Stähle &lt; 400 N/mm²</b> Steels < 400 N/mm² Acciai < 400 N/mm²						
<b>Stähle &lt; 850 N/mm²</b> Steels < 850 N/mm² Acciai < 850 N/mm²						
<b>Stähle &lt; 1.100 N/mm²</b> Steels < 1.100 N/mm² Acciai < 1.100 N/mm²						
<b>Stähle &lt; 1.300 N/mm²</b> Steels < 1.300 N/mm² Acciai < 1.300 N/mm²						
<b>Stähle &gt; 45 HRC</b> Steels > 45 HRC Acciai > 45 HRC						
<b>INOX &lt; 850 N/mm²</b> Stainless steels < 850 N/mm² Acciai inossidabili < 850 N/mm²						
<b>INOX &gt; 850 N/mm²</b> Stainless steels > 850 N/mm² Acciai inossidabili > 850 N/mm²						
<b>GRAUGUSS CAST IRON GHISA GRIGIA</b> Grauguss, Temperguss Cast iron, malleable cast iron Ghisa grigia, ghisa malleabile						
<b>Ni</b> Nickel Nickel						
<b>Ti</b> Titan- und Titanlegierung Titanium and titanium alloys Titanio e leghe di Titanio						
<b>Cu, Ms</b> Kupfer, Messing Copper, brass Rame, ottone						
<b>Al</b> Aluminium Alluminio						
<b>Kunststoffe</b> Plastics Materie plastiche	(1)	(1)	(1)	(1)	(1)	(1)

(1) GFK: glasfaser-verstärkte Kunststoffe | GRP: glass-fibre reinforced plastics | FRP: plastica rinforzata con fibra di vetro

**Übersicht**  
VHM-Fräser

**Overview**  
Solid carbide milling cutters

**Sommario**  
Frese in metallo duro integrale

Speedcut 4.0		Speedcut		Speedcut 4.0				Speedcut	
									
Inox	Inox	Inox	Inox	Inox	Inox	Inox	Inox	Inox	Inox
DIN 6527L									
N	N	N	N	N	N	N	N	N	N
lang / long	lang / long	lang / long	lang / long	lang-freigestellt	lang-freigestellt	lang-freigestellt	lang-freigestellt	lang-freigestellt	lang-freigestellt
3-4	4	3-4	4	4	4	4	4	4	4
									
39-42°	39-42°	39-42°	39-42°	39-42°	39-42°	39-42°	39-42°	39-42°	39-42°
DIN 6535-HA	DIN 6535-HB	DIN 6535-HA	DIN 6535-HB	DIN 6535-HA	DIN 6535-HB	DIN 6535-HA	DIN 6535-HB	DIN 6535-HA	DIN 6535-HB
				ja / yes / si	ja / yes / si				
<b>ULTRADUR</b>	<b>ULTRADUR</b>	<b>ALUNIT-S*</b>	<b>ALUNIT-S*</b>	<b>ULTRADUR</b>	<b>ULTRADUR</b>	<b>ULTRADUR</b>	<b>ULTRADUR</b>	<b>ALUNIT-S*</b>	<b>ALUNIT-S*</b>
2-20	3-20	2-20	3-20	6-20	6-20	3-20	3-20	3-20	3-20
8247	8747	7247	7747	8587	8597	8347	8447	7347	7447
095	095	096	096	097	097	098	098	099	099
									
									
									
									
									
									
									
									
									
									
									

Speedcut 4.0

<sup>(1)</sup> GFK: glasfaser-verstärkte Kunststoffe | GRP: glass-fibre reinforced plastics | FRP: plastica rinforzata con fibra di vetro

**D** Übersicht  
VHM-Fräser

**E** Overview  
Solid carbide milling cutters

**I** Sommario  
Frese in metallo duro integrale

**D** Die Schnittwerte für alle Werkzeuge entnehmen Sie bitte unserem separaten Zerspanungshandbuch.

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	Speedcut 4.0		Speedcut		Speedcut 4.0	Speedcut
	Inox	Inox	Inox	Inox	Inox	Inox
Norm / Standard	WN				DIN 6527L	
Typ / Type / Tipo	N	N	N	N	N	N
Länge / Length / Lunghezza	XL-freigestellt	XL-freigestellt	XL-freigestellt	XL-freigestellt	lang-freigestellt	lang-freigestellt
Schneidenanzahl / No. of flutes / Nr. denti	4	4	4	4	3-4	3-4
Kopfform / Head type / Tipo di testa						
Drallwinkel / Spiral angle / Angolo elica	39-42°	39-42°	39-42°	39-42°	39-42°	39-42°
Schaftform / Shank type / Forma codolo	DIN 6535-HA	DIN 6535-HB	DIN 6535-HA	DIN 6535-HB	DIN 6535-HA	DIN 6535-HA
Kühlkanäle / Coolant supply / Fori lubrificazione						
Beschichtung / Coating / Rivestimento	ULTRADUR	ULTRADUR	ALUNIT-S*	ALUNIT-S*	ULTRADUR	ALUNIT-S*
Ø mm	5-20	5-20	5-20	5-20	2-20	2-20
Code / Codice	8267	8767	7267	7767	8647	6547
Seite / Page / Pagina	100	100	101	101	102	103
<b>Geeignet für / Suitable for / Adatte per</b>						
<b>Stähle &lt; 400 N/mm²</b> Steels < 400 N/mm² Acciai < 400 N/mm²						
<b>Stähle &lt; 850 N/mm²</b> Steels < 850 N/mm² Acciai < 850 N/mm²						
<b>Stähle &lt; 1.100 N/mm²</b> Steels < 1.100 N/mm² Acciai < 1.100 N/mm²						
<b>Stähle &lt; 1.300 N/mm²</b> Steels < 1.300 N/mm² Acciai < 1.300 N/mm²						
<b>Stähle &gt; 45 HRC</b> Steels > 45 HRC Acciai > 45 HRC						
<b>Rostfreie Stähle &lt; 850 N/mm²</b> Stainless steels < 850 N/mm² Acciai inossidabili < 850 N/mm²						
<b>Rostfreie Stähle &gt; 850 N/mm²</b> Stainless steels > 850 N/mm² Acciai inossidabili > 850 N/mm²						
<b>Grauguss, Temperguss</b> Cast iron, malleable cast iron Ghisa grigia, ghisa malleabile						
<b>Nickel</b> Nickel Nickel						
<b>Titan- und Titanlegierung</b> Titanium and titanium alloys Titanio e leghe di Titanio						
<b>Kupfer, Messing</b> Copper, brass Rame, ottone						
<b>Aluminium</b> Aluminium Alluminio						
<b>Kunststoffe</b> Plastics Materie plastiche	(1)	(1)	(1)	(1)	(1)	(1)

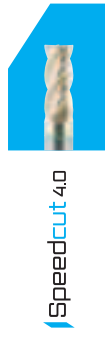
(1) GFK: glasfaser-verstärkte Kunststoffe | GRP: glass-fibre reinforced plastics | FRP: plastica rinforzata con fibra di vetro

**D** **Übersicht**  
VHM-Fräser

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Solid carbide milling cutters

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Frese in metallo duro integrale

Speedcut 4.0				Speedcut					
Titan				HRC				Alu	
WN				DIN 6527L	WN			DIN 6527L	
T+S	T+S	T+S	T+S	H	H	H	H	W	W
lang-freigestellt	lang-freigestellt	lang / long	lang / long	lang / long	XL-freigestellt	XL	lang-freigestellt	lang-freigestellt	lang-freigestellt
5	5	7	7	6-10	6-10	6-8	6-8	2	2
40°	40°	40°	40°	50°	50°	50°	50°	43-45°	43-45°
DIN 6535-HA	DIN 6535-HB	DIN 6535-HA	DIN 6535-HB	DIN 6535-HA	DIN 6535-HA	DIN 6535-HA	DIN 6535-HA	DIN 6535-HA	DIN 6535-HB
ja / yes / si	ja / yes / si	ja / yes / si	ja / yes / si						
<b>AEROOUR</b>	<b>AEROOUR</b>	<b>AEROOUR</b>	<b>AEROOUR</b>	<b>ALLUNIT-S®</b>	<b>ALLUNIT-S®</b>	<b>ALLUNIT-S®</b>	<b>ALLUNIT-S®</b>		
3-20	3-20	3-20	3-20	4-20	4-20	12-16	4-16	3-20	3-20
8127	8137	8147	8157	7277	7287	7287	6647	7035	7135
104	104	105	105	106	107	107	108	109	109



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Speedcut						
	6527L		WN			
Norm / Standard	W		W	W	W	W
Typ / Type / Tipo	lang-freigestellt		lang-freigestellt	XL-freigestellt	XL-freigestellt	XXL-freigestellt
Länge / Length / Lunghezza	3-4		3-4	3	3	3
Schneidenanzahl / No. of flutes / Nr. denti	3-4		3-4	3	3	3
Kopfform / Head type / Tipo di testa						
Drallwinkel / Spiral angle / Angolo elica	34-38°		34-38°	34-38°	34-38°	34-38°
Schaftform / Shank type / Forma codolo	DIN 6535-HA		DIN 6535-HB	DIN 6535-HA	DIN 6535-HB	DIN 6535-HA
Kühlkanäle / Coolant supply / Fori lubrificazione						
Beschichtung / Coating / Rivestimento						
Ø mm	3-25		3-25	3-20	3-20	3-20
Code / Codice	7250		7950	7220	7920	7290
Seite / Page / Pagina	110		110	111	111	112
Geeignet für / Suitable for / Adatte per						
<b>Stähle &lt; 400 N/mm<sup>2</sup></b> Steels < 400 N/mm <sup>2</sup> Acciai < 400 N/mm <sup>2</sup>						
<b>Stähle &lt; 850 N/mm<sup>2</sup></b> Steels < 850 N/mm <sup>2</sup> Acciai < 850 N/mm <sup>2</sup>						
<b>Stähle &lt; 1.100 N/mm<sup>2</sup></b> Steels < 1.100 N/mm <sup>2</sup> Acciai < 1.100 N/mm <sup>2</sup>						
<b>Stähle &lt; 1.300 N/mm<sup>2</sup></b> Steels < 1.300 N/mm <sup>2</sup> Acciai < 1.300 N/mm <sup>2</sup>						
<b>Stähle &gt; 45 HRC</b> Steels > 45 HRC Acciai > 45 HRC						
<b>INOX</b> <b>Rostfreie Stähle &lt; 850 N/mm<sup>2</sup></b> Stainless steels < 850 N/mm <sup>2</sup> Acciai inossidabili < 850 N/mm <sup>2</sup>						
<b>INOX</b> <b>Rostfreie Stähle &gt; 850 N/mm<sup>2</sup></b> Stainless steels > 850 N/mm <sup>2</sup> Acciai inossidabili > 850 N/mm <sup>2</sup>						
<b>GRAUGUSS</b> <b>CAST IRON</b> <b>GHISA GRIGIA</b> <b>Nickel</b> Nickel Nickel						
<b>Ti</b> <b>Titan- und Titanlegierung</b> Titanium and titanium alloys Titanio e leghe di Titanio						
<b>Cu, Ms</b> <b>Kupfer, Messing</b> Copper, brass Rame, ottone						
<b>Al</b> <b>Aluminium</b> Aluminium Alluminio						
<b>Kunststoffe</b> Plastics Materie plastiche						

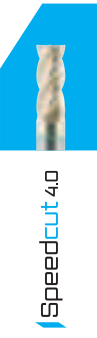


**D** Übersicht  
VHM-Fräser

**E** Overview  
Solid carbide milling cutters

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Frese in metallo duro integrale

Speedcut								eco Speedcut	
									
Alu	Alu	Alu	Alu	Alu	Alu	Alu	Alu	Uni	Uni
DIN 6527L	WN								
W	W	W	W	WR	WR	WR	WR	N	N
lang-freigestellt	XL-freigestellt	lang-freigestellt	XXL-freigestellt	lang-freigestellt	lang-freigestellt	XL-freigestellt	XL-freigestellt	kurz-freigestellt	kurz / short
3	3	2	2	3	3	3	3	4	4
									
34-38°	34-38°	43-45°	43-45°	35°	35°	35°	35°	35-38°	35-38°
DIN 6535-HA	DIN 6535-HA	DIN 6535-HA	DIN 6535-HA	DIN 6535-HA	DIN 6535-HB	DIN 6535-HA	DIN 6535-HB	DIN 6535-HA	DIN 6535-HB
								ALLUNIT-S®	ALLUNIT-S®
3-16	3-20	3-20	3-12	6-20	6-20	6-20	6-20	4-12	4-12
7230	7090	7240	7260	7015	7115	7055	7155	7627	7127
113	114	115	116	117	117	118	118	119	119
									
									
									
									
									
									
									
									
									
									
									
									



**D** Übersicht  
VHM-Fräser

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Solid carbide milling cutters





































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Speedtwister						
						
Uni	Uni	Uni	Inox	Inox	Inox	Inox
Norm / Standard	WN					
Typ / Type / Tipo	N	N	N	N	N	N
Länge / Length / Lunghezza	lang-freigestellt	XL	XL	lang-freigestellt	XL	XL
Schneidenanzahl / No. of flutes / Nr. denti	5	5	8-10	5	5	5
Kopfform / Head type / Tipo di testa						
Drallwinkel / Spiral angle / Angolo elica	45° VARIO	45° VARIO	50°	45° VARIO	45° VARIO	45° VARIO
Schaftform / Shank type / Forma codolo	DIN 6535-HB	DIN 6535-HB	DIN 6535-HA	DIN 6535-HB	DIN 6535-HB	DIN 6535-HB
Kühlkanäle / Coolant supply / Fori lubrificazione						ja / yes / si
Beschichtung / Coating / Rivestimento	TWINDUR	TWINDUR	ALUNIT-S®	ULTRADUR	ULTRADUR	ULTRADUR
Ø mm	3-20	6-16	6-16	3-20	6-16	6-16
Code / Codice	6117	6137	6199	6107	6197	6198
Seite / Page / Pagina	120	121	122	123	124	125

Geeignet für / Suitable for / Adatte per						
 <b>Stähle &lt; 400 N/mm<sup>2</sup></b> Steels < 400 N/mm <sup>2</sup> Acciai < 400 N/mm <sup>2</sup>						
 <b>Stähle &lt; 850 N/mm<sup>2</sup></b> Steels < 850 N/mm <sup>2</sup> Acciai < 850 N/mm <sup>2</sup>						
 <b>Stähle &lt; 1.100 N/mm<sup>2</sup></b> Steels < 1.100 N/mm <sup>2</sup> Acciai < 1.100 N/mm <sup>2</sup>						
 <b>Stähle &lt; 1.300 N/mm<sup>2</sup></b> Steels < 1.300 N/mm <sup>2</sup> Acciai < 1.300 N/mm <sup>2</sup>						
 <b>Stähle &gt; 45 HRC</b> Steels > 45 HRC Acciai > 45 HRC						
<b>INOX</b>  <b>Rostfreie Stähle &lt; 850 N/mm<sup>2</sup></b> Stainless steels < 850 N/mm <sup>2</sup> Acciai inossidabili < 850 N/mm <sup>2</sup>						
<b>INOX</b>  <b>Rostfreie Stähle &gt; 850 N/mm<sup>2</sup></b> Stainless steels > 850 N/mm <sup>2</sup> Acciai inossidabili > 850 N/mm <sup>2</sup>						
<b>GRAUGUSS</b>  <b>CAST IRON</b> <b>GHISA GRIGIA</b> Cast iron, malleable cast iron Ghisa grigia, ghisa malleabile						
<b>Ni</b> Nickel Nickel						
<b>Ti</b> Titan- und Titanlegierung Titanium and titanium alloys Titanio e leghe di Titanio						
<b>Cu, Ms</b> Kupfer, Messing Copper, brass Rame, ottone						
<b>AL</b> Aluminium Alluminio						
 <b>Kunststoffe</b> Plastics Materie plastiche						

**Übersicht**  
VHM-Fräser

**Overview**  
Solid carbide milling cutters

**Sommario**  
Frese in metallo duro integrale

HSC end mills				
				
WN				
H	H	H	H	H
kurz / short	lang / long	kurz / short	lang / long	kurz & lang
3-4	3-4	2	2	4
				
30°	30°	30°	30°	30°
DIN 6535-HA	DIN 6535-HA	DIN 6535-HA	DIN 6535-HA	DIN 6535-HA
<b>KUPRADUR</b>	<b>KUPRADUR</b>	<b>KUPRADUR</b>	<b>KUPRADUR</b>	<b>KUPRADUR</b>
2-16	2-16	3-16	3-12	4-16
7110	7210	7060	7160	7030
126	127	128	129	130
				
				
				
≤68 HRC	≤68 HRC	≤60 HRC	≤60 HRC	≤68 HRC
				



Speedcut 4.0

**D VHM-Schaftfräser Speedcut-Universal,**  
kurz, freigestellt,  
Dreischneider, ungleiche  
Drallsteigung

**Einsatzbereich:**  
VHM-Hochleistungsfräser für universellen Einsatz, besonders geeignet zum Nutfräsen und Taschenschruppen. Große Spanräume, aggressiver Schnitt und dynamischer Stirnspanraum zum verbesserten Spanabfluss. Ungleiche Drallsteigung bewirkt ruhigen, vibrationsarmen Lauf. Durch geringere Leistungsaufnahme auch sehr gut geeignet für angetriebene Werkzeuge.

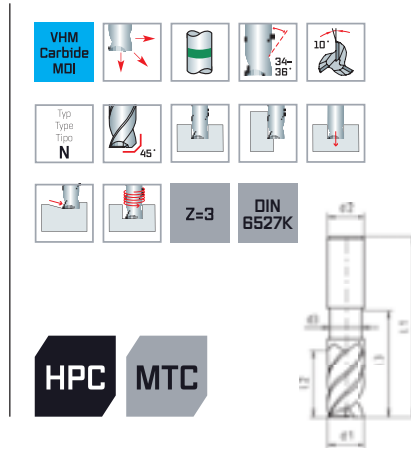
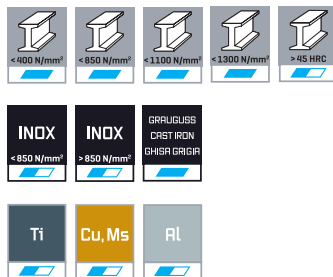
**E Solid carbide end mill Speedcut-Universal,**  
short series, neck,  
three flutes, different spiral  
angles

**Range of application:**  
High performance carbide end mill for universal applications, superbly suitable for slot milling and roughing pockets. High chip space, aggressive cut and dynamic front chip space for optimized chip transportation. Different spiral angles effect smooth, vibrationless running. Due to less power consumption also suitable for driven tools on CNC lathes [MTC].

**I Frese frontali MDI Speedcut-Universali,**  
serie corta, libero,  
3 taglienti, angolo elica  
disuguale

**Impiego:**  
Frese in MD ad alto rendimento per applicazioni universali, raccomandate per fresatura di scanalature e sgrossatura tasche. Elevato spazio per truciolo, taglio aggressivo e spazio frontale dinamico per ottimizzare l'evacuazione truciolo. Gli angoli di spirale differenzia- ti garantiscono un funzionamento silenzioso e senza vibrazioni.

## Speedcut



ALLUNIT-S®

d1 <sub>h10</sub> mm	d2 <sub>h6</sub> mm	d3 mm	l1 mm	l2 mm	l3 mm	Z	Code 7367 Art.-Nr.
2	4	1,95	40	3	10	0,06	0 7367002001 00
3	6	2,8	50	4	11	0,10	0 7367003001 00
4	6	3,8	54	5	12	0,10	0 7367004001 00
5	6	4,7	54	6	14	0,10	0 7367005001 00
6	6	5,6	54	7	16	0,20	0 7367006001 00
8	8	7,5	58	9	20	0,20	0 7367008001 00
10	10	9,5	66	11	24	0,20	0 7367010001 00

Optional ohne Aufpreis auch mit Weldon-Schaft (DIN 6535-HB) lieferbar. | Also available with Weldon-shank (DIN 6535-HB) without extra charge. |  
Anche disponibili con attacco Weldon (DIN 6535-HB) senza prezzo aggiuntivo.

**D VHM-Schafffräser**  
**Speedcut-Universal,**  
 lang, freigestellt,  
 Dreischneider, ungleiche  
 Drallsteigung

**Einsatzbereich:**

VHM-Hochleistungsfräser für universellen Einsatz, besonders geeignet zum Nutfräsen und Taschenschruppen. Große Spanräume, aggressiver Schnitt und dynamischer Stirnspanraum zum verbesserten Spanabfluss. Ungleiche Drallsteigung bewirkt ruhigen, vibrationsarmen Lauf. Durch geringere Leistungsaufnahme auch sehr gut geeignet für angetriebene Werkzeuge.

**E Solid carbide end mill**  
**Speedcut-Universal,**  
 long series, neck,  
 three flutes, different spiral  
 angles

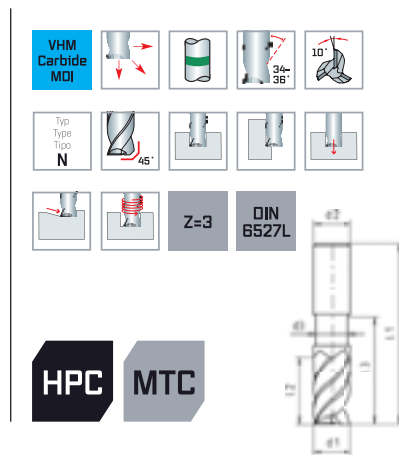
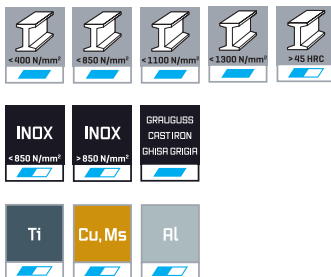
**Range of application:**

High performance carbide end mill for universal applications, superbly suitable for slot milling and roughing pockets. High chip space, aggressive cut and dynamic front chip space for optimized chip transportation. Different spiral angles effect smooth, vibrationless running. Due to less power consumption also suitable for driven tools on CNC lathes [MTC].

**I Frese frontali MDI**  
**Speedcut-Universali,**  
 serie lunga, libero,  
 3 taglienti, angolo elica  
 disuguale

**Impiego:**

Frese in MD ad alto rendimento per applicazioni universali, raccomandate per fresatura di scanalature e sgrossatura tasche. Elevato spazio per truciolo, taglio aggressivo e spazio frontale dinamico per ottimizzare l'evacuazione truciolo. Gli angoli di spirale differenzia-ti garantiscono un funzionamento silenzioso e senza vibrazioni.



d1 <sub>h10</sub> mm	d2 <sub>h6</sub> mm	d3 mm	l1 mm	l2 mm	l3 mm		Z	Code 7377 Art.-Nr.
3	6	2,9	57	8	14	0,10	3	0 7377003001 00
4	6	3,6	57	8	16	0,10	3	0 7377004001 00
5	6	4,6	57	10	18	0,10	3	0 7377005001 00
6	6	5,5	57	13	21	0,20	3	0 7377006001 00
8	8	7,5	63	19	27	0,20	3	0 7377008001 00
10	10	9,5	72	22	32	0,20	3	0 7377010001 00

Optional ohne Aufpreis auch mit Weldon-Schaft (DIN 6535-HB) lieferbar. | Also available with Weldon-shank (DIN 6535-HB) without extra charge. |  
 Anche disponibili con attacco Weldon (DIN 6535-HB) senza prezzo aggiuntivo.



**D HPC-Schaftfräser**  
**Speedcut 4.0-Universal,**  
 kurz, Vierschneider,  
 ungleiche Drallsteigung

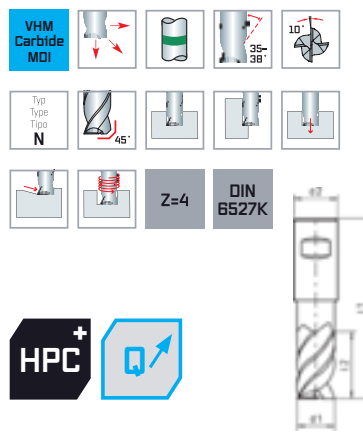
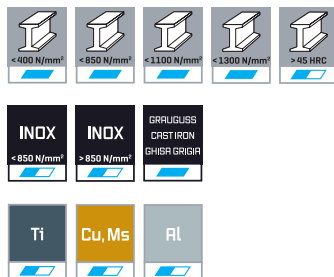
**Einsatzbereich:**  
 VHM-Hochleistungsfräser für universellen Einsatz: Schlichten, Schrupp-Schlichten und Schruppen mit einem Werkzeug. Ungleiche Drallsteigung bewirkt ruhigen, vibrationsarmen Lauf und sehr gute Oberflächengüte. Die Generation 4.0 setzt neue Maßstäbe in der Zerspanungsleistung.

**E HPC end mill**  
**Speedcut 4.0-Universal,**  
 short series, four flutes,  
 different spiral angles

**Range of application:**  
 High performance carbide end mill for universal applications. Finishing, rough finishing and roughing with the same tool. Different spiral angles effect smooth, vibrationless running and excellent surface. The Generation 4.0 sets new standards in cutting performance.

**I Frese frontali HPC**  
**Speedcut 4.0-Universali,**  
 serie corta, 4 taglienti,  
 angolo elica disuguale

**Impiego:**  
 Frese frontale MDI ad alto rendimento per applicazioni universali. In un solo utensile finitura, semi-finitura e sgrossatura, l'angolo dell'elica disuguale permette una lavorazione silenziosa senza vibrazioni, con un'ottima finitura della superficie. La generazione 4.0 stabilisce nuovi standard in rendimento.



d1 <sub>h10</sub> mm	d2 <sub>h6</sub> mm	l1 mm	l2 mm		Z	Code 8207 Art.-Nr.	Code 8707 Art.-Nr.
3	6	50	5	0,15	4	0 8207003001 00	0 8707003001 00
4	6	54	8	0,15	4	0 8207004001 00	0 8707004001 00
5	6	54	9	0,25	4	0 8207005001 00	0 8707005001 00
6	6	54	10	0,25	4	0 8207006001 00	0 8707006001 00
8	8	57	12	0,25	4	0 8207008001 00	0 8707008001 00
10	10	66	14	0,25	4	0 8207010001 00	0 8707010001 00
12	12	73	16	0,25	4	0 8207012001 00	0 8707012001 00
16	16	82	22	0,35	4	0 8207016001 00	0 8707016001 00
20	20	92	26	0,35	4	0 8207020001 00	0 8707020001 00

**D VHM-Schafffräser**  
**Speedcut-Universal,**  
 kurz, freigestellt,  
 Vierschneider, ungleiche  
 Drallsteigung

**Einsatzbereich:**  
 VHM-Hochleistungsfräser für universellen Einsatz: Schlichten, Schrapp-Schlichten und Schruppen mit einem Werkzeug. Ungleiche Drallsteigung bewirkt ruhigen, vibrationsarmen Lauf und sehr gute Oberflächengüte. Hohe Zerspanungsleistung.

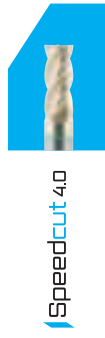
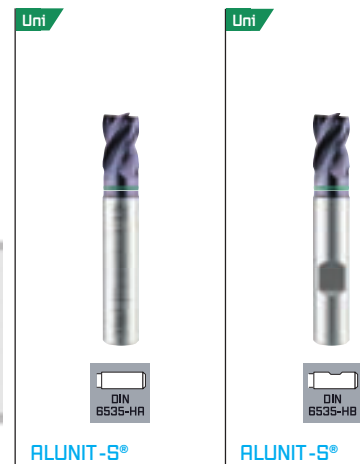
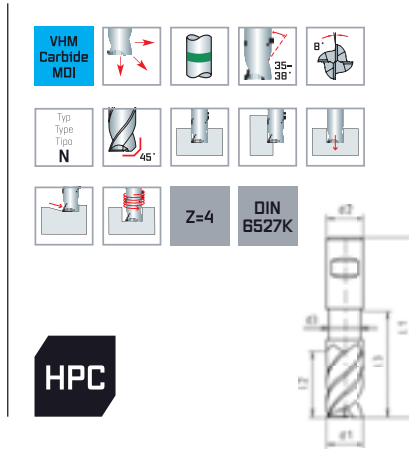
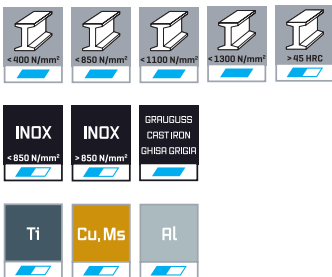
**E Solid carbide end mill**  
**Speedcut-Universal,**  
 short series, neck,  
 four flutes, different spiral  
 angles

**Range of application:**  
 High performance carbide end mill for universal applications. Finishing, rough finishing and roughing with the same tool. Different spiral angles effect smooth, vibrationless running and excellent surface. High cutting performance.

**I Frese frontali MDI**  
**Speedcut-Universali,**  
 serie corta, libero,  
 4 taglienti, angolo elica  
 disuguale

**Impiego:**  
 Frese frontale MDI ad alto rendimento per applicazioni universali. In un solo utensile finitura, semi-finitura e sgrassatura, l'angolo dell'elica disuguale permette una lavorazione silenziosa senza vibrazioni, con un'ottima finitura della superficie. Con un elevato rendimento.

**Speedcut**



d1 <sub>h10</sub> mm	d2 <sub>h6</sub> mm	d3 mm	l1 mm	l2 mm	l3 mm		Z	Code 7387 Art.-Nr.	Code 7487 Art.-Nr.
3	6	2,9	50	5	8	0,15	4	0 7387003001 00	0 7487003001 00
4	6	3,8	54	8	11	0,15	4	0 7387004001 00	0 7487004001 00
5	6	4,7	54	9	13	0,25	4	0 7387005001 00	0 7487005001 00
6	6	5,6	54	10	13	0,25	4	0 7387006001 00	0 7487006001 00
8	8	7,5	57	12	19	0,25	4	0 7387008001 00	0 7487008001 00
10	10	9,5	66	14	22	0,25	4	0 7387010001 00	0 7487010001 00
12	12	11,5	73	16	26	0,25	4	0 7387012001 00	0 7487012001 00
16	16	15,5	82	22	32	0,35	4	0 7387016001 00	0 7487016001 00
20	20	19,5	92	26	38	0,35	4	0 7387020001 00	0 7487020001 00



**D HPC-Schaftfräser**  
**Speedcut 4.0-Universal,**  
 lang, Vierschneider,  
 ungleiche Drallsteigung,  
 mit Innenkühlung

**Einsatzbereich:**

VHM-Hochleistungsfräser für universellen Einsatz: Schlichten, Schrupp-Schlichten und Schruppen mit einem Werkzeug. Ungleiche Drallsteigung bewirkt ruhigen, vibrationsarmen Lauf und sehr gute Oberflächengüte. Die Generation 4.0 setzt neue Maßstäbe in der Zerspanungsleistung.

**E HPC end mill**  
**Speedcut 4.0-Universal,**  
 long series, four flutes,  
 different spiral angles,  
 with internal coolant supply

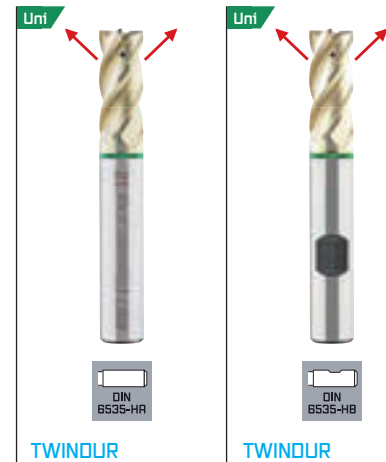
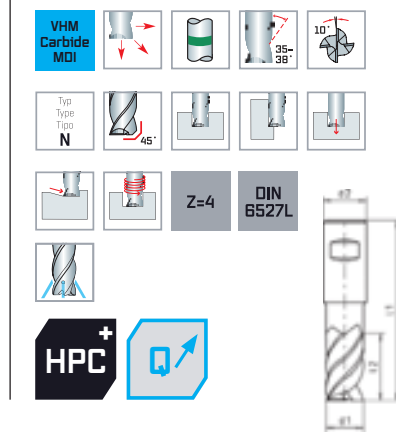
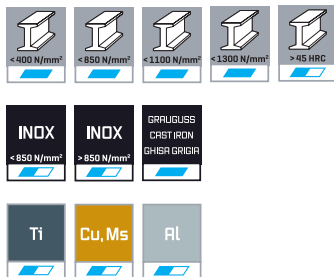
**Range of application:**

High performance carbide end mill for universal applications. Finishing, rough finishing and roughing with the same tool. Different spiral angles effect smooth, vibrationless running and excellent surface. The Generation 4.0 sets new standards in cutting performance.

**I Frese frontali HPC**  
**Speedcut 4.0-Universali,**  
 serie lunga, 4 taglienti,  
 angolo elica disuguale,  
 con fori lubrificazione

**Impiego:**

Frese frontale MDI ad alto rendimento per applicazioni universali. In un solo utensile finitura, semi-finitura e sgrossatura, l'angolo dell'elica disuguale permette una lavorazione silenziosa senza vibrazioni, con un'ottima finitura della superficie. La generazione 4.0 stabilisce nuovi standard in rendimento.



d1 <sub>h10</sub> mm	d2 <sub>h6</sub> mm	l1 mm	l2 mm		Z	Code 8507 Art.-Nr.	Code 8517 Art.-Nr.
6	6	57	13	0,25	4	08507006001 00	08517006001 00
8	8	63	19	0,25	4	08507008001 00	08517008001 00
10	10	72	22	0,25	4	08507010001 00	08517010001 00
12	12	83	26	0,25	4	08507012001 00	08517012001 00
14	14	83	26	0,35	4	08507014001 00	08517014001 00
16	16	92	32	0,35	4	08507016001 00	08517016001 00
20	20	104	38	0,35	4	08507020001 00	08517020001 00

**D HPC-Schaftfräser**  
**Speedcut 4.0-Universal,**  
 lang, Vierschneider,  
 ungleiche Drillsteigung

**Einsatzbereich:**

VHM-Hochleistungsfräser für universellen Einsatz: Schlichten, Schrupp-Schlichten und Schruppen mit einem Werkzeug. Ungleiche Drillsteigung bewirkt ruhigen, vibrationsarmen Lauf und sehr gute Oberflächengüte. Die Generation 4.0 setzt neue Maßstäbe in der Zerspanungsleistung.

**E HPC end mill**  
**Speedcut 4.0-Universal,**  
 long series, four flutes,  
 different spiral angles

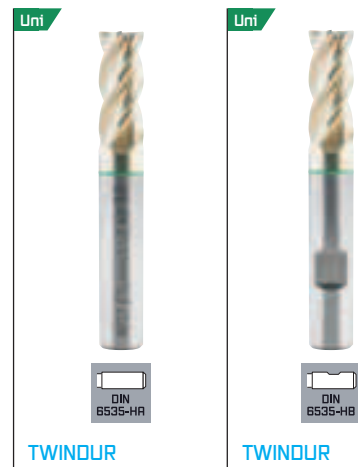
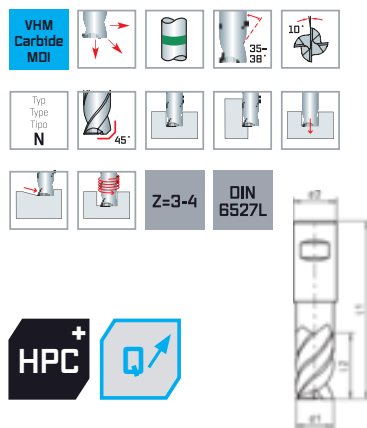
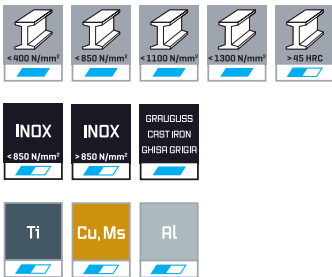
**Range of application:**

High performance carbide end mill for universal applications. Finishing, rough finishing and roughing with the same tool. Different spiral angles effect smooth, vibrationless running and excellent surface. The Generation 4.0 sets new standards in cutting performance.

**I Frese frontali HPC**  
**Speedcut 4.0-Universali,**  
 serie lunga, 4 taglienti,  
 angolo elica disuguale

**Impiego:**

Frese frontale MDI ad alto rendimento per applicazioni universali. In un solo utensile finitura, semi-finitura e sgrossatura, l'angolo dell'elica disuguale permette una lavorazione silenziosa senza vibrazioni, con un'ottima finitura della superficie. La generazione 4.0 stabilisce nuovi standard in rendimento.



d1 <sub>h10</sub> mm	d2 <sub>h6</sub> mm	l1 mm	l2 mm		Z	Code 8217 Art.-Nr.	Code 8717 Art.-Nr.
2	4	40	5	0,06	3	0 8217002001 00	
3	6	57	8	0,15	4	0 8217003001 00	0 8717003001 00
4	6	57	11	0,15	4	0 8217004001 00	0 8717004001 00
5	6	57	13	0,25	4	0 8217005001 00	0 8717005001 00
6	6	57	13	0,25	4	0 8217006001 00	0 8717006001 00
7	8	63	16	0,25	4	0 8217007001 00	0 8717007001 00
8	8	63	19	0,25	4	0 8217008001 00	0 8717008001 00
9	10	72	19	0,25	4	0 8217009001 00	0 8717009001 00
10	10	72	22	0,25	4	0 8217010001 00	0 8717010001 00
11	12	83	26	0,25	4	0 8217011001 00	0 8717011001 00
12	12	83	26	0,25	4	0 8217012001 00	0 8717012001 00
<b>New</b>	14	83	26	0,35	4	<b>0 8217014001 00</b>	<b>0 8717014001 00</b>
16	16	92	32	0,35	4	0 8217016001 00	0 8717016001 00
20	20	104	38	0,35	4	0 8217020001 00	0 8717020001 00



**D VHM-Schaftfräser Speedcut-Universal, lang, Vierschneider, ungleiche Drallsteigung**

**Einsatzbereich:**  
VHM-Hochleistungsfräser für universellen Einsatz: Schlichten, Schrupp-Schlichten und Schruppen mit einem Werkzeug. Ungleiche Drallsteigung bewirkt ruhigen, vibrationsarmen Lauf und sehr gute Oberflächengüte. Hohe Zerspanungsleistung.

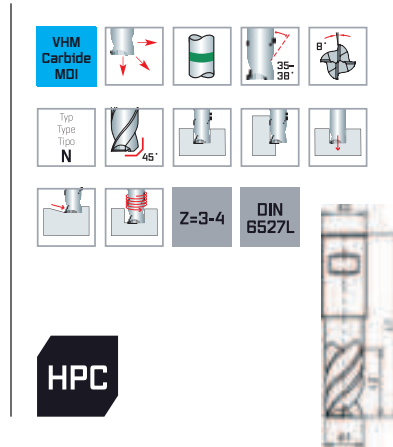
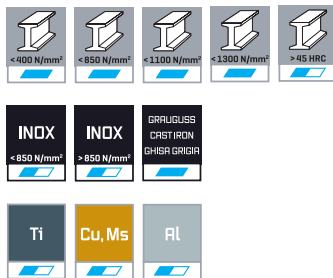
**E Solid carbide end mill Speedcut-Universal, long series, four flutes, different spiral angles**

**Range of application:**  
High performance carbide end mill for universal applications. Finishing, rough finishing and roughing with the same tool. Different spiral angles effect smooth, vibrationless running and excellent surface. High cutting performance.

**I Frese frontali MDI Speedcut-Universali, serie lunga, 4 taglienti, angolo elica disuguale**

**Impiego:**  
Frese frontale MDI ad alto rendimento per applicazioni universali. In un solo utensile finitura, semi-finitura e sgrossatura, l'angolo dell'elica disuguale permette una lavorazione silenziosa senza vibrazioni, con un'ottima finitura della superficie. Con un elevato rendimento.

Speedcut



d1 <sub>h10</sub> mm	d2 <sub>h6</sub> mm	l1 mm	l2 mm		Z	Code 7217 Art.-Nr.	Code 7717 Art.-Nr.
2	4	40	5	0,06	3	0 7217002001 00	
3	6	57	8	0,15	4	0 7217003001 00	0 7717003001 00
4	6	57	11	0,15	4	0 7217004001 00	0 7717004001 00
5	6	57	13	0,25	4	0 7217005001 00	0 7717005001 00
6	6	57	13	0,25	4	0 7217006001 00	0 7717006001 00
8	8	63	19	0,25	4	0 7217008001 00	0 7717008001 00
10	10	72	22	0,25	4	0 7217010001 00	0 7717010001 00
12	12	83	26	0,25	4	0 7217012001 00	0 7717012001 00
16	16	92	32	0,35	4	0 7217016001 00	0 7717016001 00
20	20	104	38	0,35	4	0 7217020001 00	0 7717020001 00

**D HPC-Schaftfräser**  
**Speedcut 4.0-Universal,**  
 lang, freigestellt, Vierschneider,  
 ungleiche Drallsteigung,  
 mit Innenkühlung

**Einsatzbereich:**  
 VHM-Hochleistungsfräser für universellen Einsatz: Schlichten, Schrump-Schlichten und Schruppen mit einem Werkzeug. Ungleiche Drallsteigung bewirkt ruhigen, vibrationsarmen Lauf und sehr gute Oberflächengüte. Die Generation 4.0 setzt neue Maßstäbe in der Zerspanungsleistung.

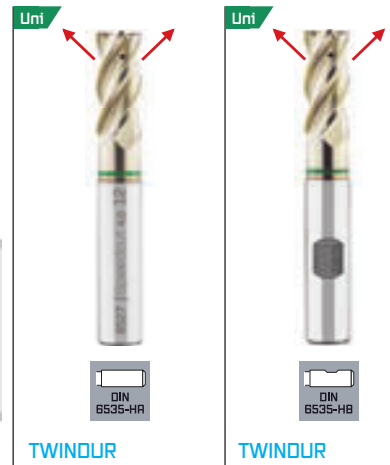
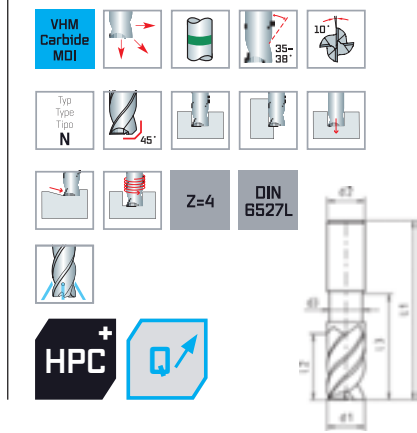
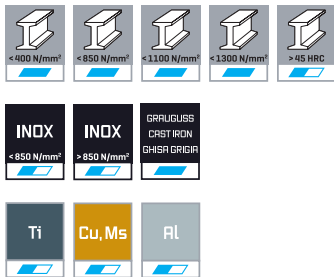
**E HPC end mill**  
**Speedcut 4.0-Universal,**  
 long series, neck, four flutes,  
 different spiral angles,  
 with internal coolant supply

**Range of application:**  
 High performance carbide end mill for universal applications. Finishing, rough finishing and roughing with the same tool. Different spiral angles effect smooth, vibrationless running and excellent surface. The Generation 4.0 sets new standards in cutting performance.

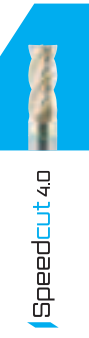
**I Frese frontali HPC**  
**Speedcut 4.0-Universali,**  
 serie lunga, libero, 4 taglienti,  
 angolo elica disuguale,  
 con fori lubrificazione

**Impiego:**  
 Frese frontale MDI ad alto rendimento per applicazioni universali. In un solo utensile finitura, semi-finitura e sgrossatura, l'angolo dell'elica disuguale permette una lavorazione silenziosa senza vibrazioni, con un'ottima finitura della superficie. La generazione 4.0 stabilisce nuovi standard in rendimento.

**Speedcut 4.0**



d1 <sub>h10</sub> mm	d2 <sub>h6</sub> mm	d3 mm	l1 mm	l2 mm	l3 mm	Z	Code 8527 Art.-Nr.	Code 8537 Art.-Nr.
6	6	5,50	57	13	21	0,25 4	0 8527006001 00	0 8537006001 00
8	8	7,50	63	19	27	0,25 4	0 8527008001 00	0 8537008001 00
10	10	9,50	72	22	32	0,25 4	0 8527010001 00	0 8537010001 00
12	12	11,50	83	26	38	0,25 4	0 8527012001 00	0 8537012001 00
14	14	13,50	83	26	38	0,35 4	0 8527014001 00	0 8537014001 00
16	16	15,00	92	32	44	0,35 4	0 8527016001 00	0 8537016001 00
20	20	19,00	104	38	54	0,35 4	0 8527020001 00	0 8537020001 00



**D HPC-Schaftfräser**  
**Speedcut 4.0-Universal,**  
 lang, freigestellt, Vierschneider,  
 ungleiche Drallsteigung

**Einsatzbereich:**

VHM-Hochleistungsfräser für universellen Einsatz: Schlichten, Schrubb-Schlichten und Schruppen mit einem Werkzeug. Ungleiche Drallsteigung bewirkt ruhigen, vibrationsarmen Lauf und sehr gute Oberflächengüte. Die Generation 4.0 setzt neue Maßstäbe in der Zerspanungsleistung.

**E HPC end mill**  
**Speedcut 4.0-Universal,**  
 long series, neck, four flutes,  
 different spiral angles

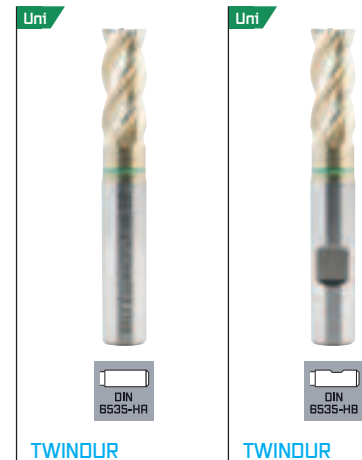
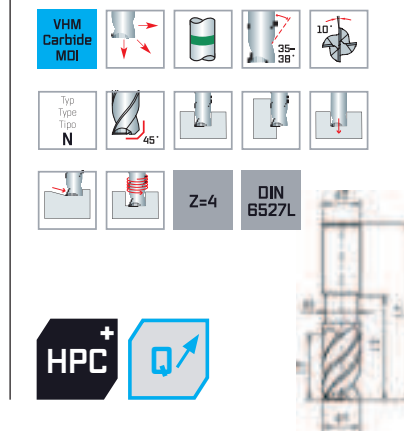
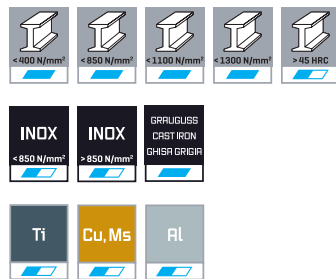
**Range of application:**

High performance carbide end mill for universal applications. Finishing, rough finishing and roughing with the same tool. Different spiral angles effect smooth, vibrationless running and excellent surface. The Generation 4.0 sets new standards in cutting performance.

**I Frese frontali HPC**  
**Speedcut 4.0-Universali,**  
 serie lunga, libero, 4 taglianti,  
 angolo elica disuguale

**Impiego:**

Frese frontale MDI ad alto rendimento per applicazioni universali. In un solo utensile finitura, semi-finitura e sgrossatura, l'angolo dell'elica disuguale permette una lavorazione silenziosa senza vibrazioni, con un'ottima finitura della superficie. La generazione 4.0 stabilisce nuovi standard in rendimento.



d1 <sub>h10</sub> mm	d2 <sub>h6</sub> mm	d3 mm	l1 mm	l2 mm	l3 mm		Z	Code 8317 Art.-Nr.	Code 8417 Art.-Nr.
3	6	2,9	57	8	14	0,15	4	0 8317003001 00	0 8417003001 00
4	6	3,6	57	11	16	0,15	4	0 8317004001 00	0 8417004001 00
5	6	4,6	57	13	18	0,25	4	0 8317005001 00	0 8417005001 00
6	6	5,5	57	13	21	0,25	4	0 8317006001 00	0 8417016001 00
8	8	7,5	63	19	27	0,25	4	0 8317008001 00	0 8417018001 00
10	10	9,5	72	22	32	0,25	4	0 8317010001 00	0 8417010001 00
12	12	11,5	83	26	38	0,25	4	0 8317012001 00	0 8417012001 00
14	14	13,5	83	26	38	0,35	4	0 8317014001 00	0 8417014001 00
16	16	15,0	92	32	44	0,35	4	0 8317016001 00	0 8417016001 00
20	20	19,0	104	38	54	0,35	4	0 8317020001 00	0 8417020001 00

**D VHM-Schafffräser**  
**Speedcut-Universal,**  
 lang, freigestellt,  
 Vierschneider, ungleiche  
 Drallsteigung

**Einsatzbereich:**

VHM-Hochleistungsfräser für universellen Einsatz: Schlichten, Schrupp-Schlichten und Schruppen mit einem Werkzeug. Ungleiche Drallsteigung bewirkt ruhigen, vibrationsarmen Lauf und sehr gute Oberflächengüte. Hohe Zerspanungsleistung.

**E Solid carbide end mill**  
**Speedcut-Universal,**  
 long series, neck,  
 four flutes, different spiral  
 angles

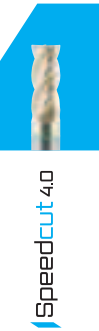
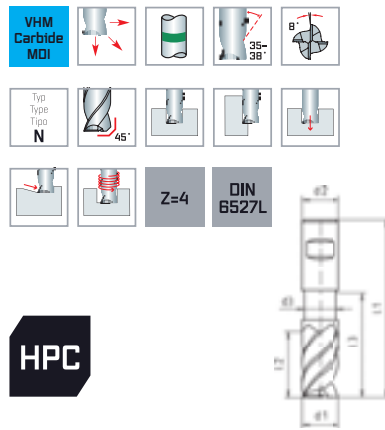
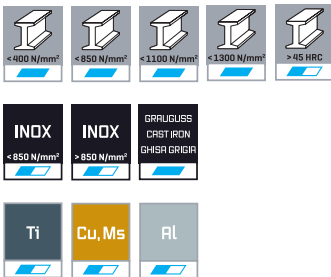
**Range of application:**

High performance carbide end mill for universal applications. Finishing, rough finishing and roughing with the same tool. Different spiral angles effect smooth, vibrationless running and excellent surface. High cutting performance.

**I Frese frontali MDI**  
**Speedcut-Universali,**  
 serie lunga, libero,  
 4 taglienti, angolo elica  
 disuguale

**Impiego:**

Frese frontale MDI ad alto rendimento per applicazioni universali. In un solo utensile finitura, semi-finitura e sgrossatura, l'angolo dell'elica disuguale permette una lavorazione silenziosa senza vibrazioni, con un'ottima finitura della superficie. Con un elevato rendimento.



d1 <sub>h10</sub> mm	d2 <sub>h6</sub> mm	d3 mm	l1 mm	l2 mm	l3 mm		Z	Code 7317 Art.-Nr.	Code 7417 Art.-Nr.
3	6	2,9	57	8	14	0,15	4	0 7317003001 00	0 7417003001 00
4	6	3,6	57	11	16	0,15	4	0 7317004001 00	0 7417004001 00
5	6	4,6	57	13	18	0,25	4	0 7317005001 00	0 7417005001 00
6	6	5,5	57	13	21	0,25	4	0 7317006001 00	0 7417006001 00
8	8	7,5	63	19	27	0,25	4	0 7317008001 00	0 7417008001 00
10	10	9,5	72	22	32	0,25	4	0 7317010001 00	0 7417010001 00
12	12	11,5	83	26	38	0,25	4	0 7317012001 00	0 7417012001 00
16	16	15,0	92	32	44	0,35	4	0 7317016001 00	0 7417016001 00
20	20	19,0	104	38	54	0,35	4	0 7317020001 00	0 7417020001 00
25	25	24,0	120	45	66	0,35	4	0 7317025001 00	0 7417025001 00

**D HPC-Schaftfräser**  
**Speedcut 4.0-Universal,**  
 extra lang XL, freigestellt,  
 Vierschneider, ungleiche  
 Drallsteigung

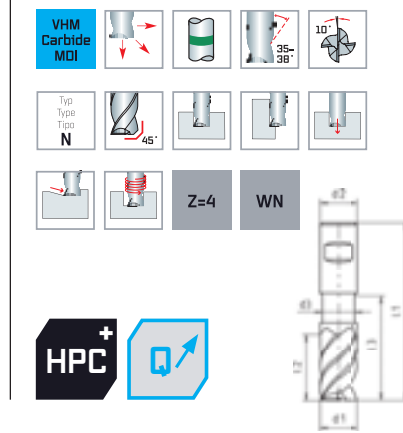
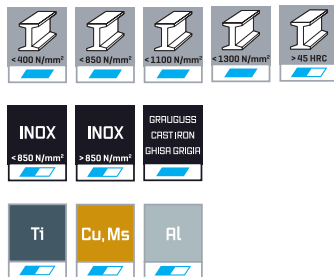
**Einsatzbereich:**  
 VHM-Hochleistungsfräser für universellen Einsatz: Schlichten, Schrupp-Schlichten und Schruppen mit einem Werkzeug. Ungleiche Drallsteigung bewirkt ruhigen, vibrationsarmen Lauf und sehr gute Oberflächengüte. Die Generation 4.0 setzt neue Maßstäbe in der Zerspanungsleistung.

**E HPC end mill**  
**Speedcut 4.0-Universal,**  
 extra long series XL, neck,  
 four flutes, different spiral  
 angles

**Range of application:**  
 High performance carbide end mill for universal applications. Finishing, rough finishing and roughing with the same tool. Different spiral angles effect smooth, vibrationless running and excellent surface. The Generation 4.0 sets new standards in cutting performance.

**I Frese frontali HPC**  
**Speedcut 4.0-Universali,**  
 serie extra lunga XL, libero,  
 4 taglienti, angolo elica  
 disuguale

**Impiego:**  
 Frese frontale MDI ad alto rendimento per applicazioni universali. In un solo utensile finitura, semi-finitura e sgrossatura, l'angolo dell'elica disuguale permette una lavorazione silenziosa senza vibrazioni, con un'ottima finitura della superficie. La generazione 4.0 stabilisce nuovi standard in rendimento.



d1 <sub>h10</sub> mm	d2 <sub>h6</sub> mm	d3 mm	l1 mm	l2 mm	l3 mm	Z	Code 8237 Art.-Nr.	Code 8737 Art.-Nr.
5	6	4,7	62	13	26	0,25 4	0 8237005001 00	0 8737005001 00
6	6	5,6	62	13	26	0,25 4	0 8237006001 00	0 8737006001 00
8	8	7,5	70	19	34	0,25 4	0 8237008001 00	0 8737008001 00
10	10	9,5	80	22	40	0,25 4	0 8237010001 00	0 8737010001 00
12	12	11,5	95	26	50	0,25 4	0 8237012001 00	0 8737012001 00
16	16	15,5	105	32	57	0,35 4	0 8237016001 00	0 8737016001 00
20	20	19,5	124	38	71	0,35 4	0 8237020001 00	0 8737020001 00



**D VHM-Schaftfräser Speedcut-Universal,**  
extra lang XL, freigestellt,  
Vierschneider, ungleiche  
Drallsteigung

**Einsatzbereich:**

VHM-Hochleistungsfräser für universellen Einsatz: Schlichten, Schrupp-Schlichten und Schruppen mit einem Werkzeug. Ungleiche Drallsteigung bewirkt ruhigen, vibrationsarmen Lauf und sehr gute Oberflächengüte. Hohe Zerspanungsleistung.

**E Solid carbide end mill Speedcut-Universal,**  
extra long series XL, neck,  
four flutes, different spiral  
angles

**Range of application:**

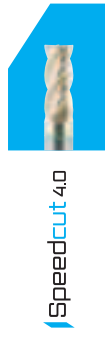
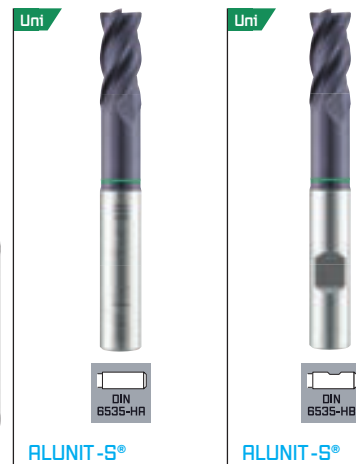
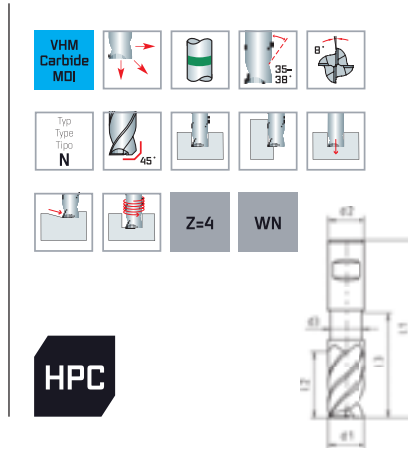
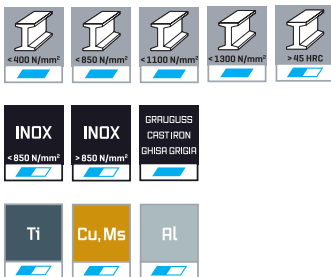
High performance carbide end mill for universal applications. Finishing, rough finishing and roughing with the same tool. Different spiral angles effect smooth, vibrationless running and excellent surface. High cutting performance.

**I Frese frontali MDI Speedcut-Universali,**  
serie extra lunga XL, libero,  
4 taglianti, angolo elica  
disuguale

**Impiego:**

Frese frontale MDI ad alto rendimento per applicazioni universali. In un solo utensile finitura, semi-finitura e sgrossatura, l'angolo dell'elica disuguale permette una lavorazione silenziosa senza vibrazioni, con un'ottima finitura della superficie. Con un elevato rendimento.

Speedcut



d1 <sub>h10</sub> mm	d2 <sub>h6</sub> mm	d3 mm	l1 mm	l2 mm	l3 mm		Z	Code 7237 Art.-Nr.	Code 7737 Art.-Nr.
5	6	4,7	62	13	26	0,25	4	0 7237005001 00	0 7737005001 00
6	6	5,6	62	13	26	0,25	4	0 7237006001 00	0 7737006001 00
8	8	7,5	70	19	34	0,25	4	0 7237008001 00	0 7737008001 00
10	10	9,5	80	22	40	0,25	4	0 7237010001 00	0 7737010001 00
12	12	11,5	95	26	50	0,25	4	0 7237012001 00	0 7737012001 00
14	14	13,5	95	26	50	0,35	4	0 7237014001 00	0 7737014001 00
16	16	15,5	105	32	57	0,35	4	0 7237016001 00	0 7737016001 00
20	20	19,5	124	38	71	0,35	4	0 7237020001 00	0 7737020001 00
<b>New</b>	25	24,5	148	45	91	0,35	4	0 7237025001 00	0 7737025001 00

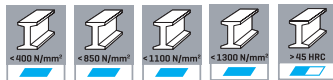
**D VHM-Mehrzahn Schlichtfräser Speedcut-Universal, lang**

**Einsatzbereich:**

VHM-Hochleistungsschlichtfräser für universellen Einsatz in Baustählen, Werkzeugstählen, Vergütungsstählen, aber auch rostfreien Stählen und Titanlegierungen bis 50 HRC.

Durch einen sehr starken Fräserkern und modifiziertem Stirnschliff mit kleiner Eckenschutzfase werden sehr hohe Zerspanungsleistungen mit exzellenter Oberflächengüte erzielt.

**Speedcut**

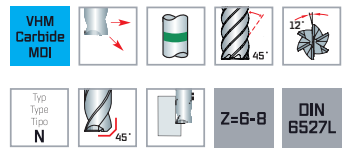


**E Solid carbide multi flute finishing end mill Speedcut-Universal, long series**

**Range of application:**

High performance carbide finishing end mill for universal applications into structural steels, tool steels, treatable steels but also for stainless steels and titanium alloys up to 50 HRC.

Due to a very strong core and an improved face grinding with small cutting edge chamfer, very high cutting performances with excellent surface quality will be achieved.



**I Fresa in metallo duro multitagliente per finitura Speedcut-Universale, serie lunga**

**Impiego:**

Fresa a finire in Metallo Duro ad alto rendimento per applicazioni universali idonea per acciai strutturali, acciai da utensili, acciai da tempra ma anche per acciai inossidabili e leghe di titanio fino a 50 HRC. Grazie al nocciolo rinforzato e ad una migliorata superficie rettificata con piccoli smussi di protezione e' possibile raggiungere rendimenti di taglio molto elevati ed eccellenti qualita' di finitura.

Uni



DIN 6535-HB

ALLUNIT-S®

d1 e8 mm	d2 h6 mm	l1 mm	l2 mm		Z	Code 7327 Art.-Nr.
4	6	57	11	0,05	6	0 7327004001 00
5	6	57	13	0,05	6	0 7327005001 00
6	6	57	15	0,05	6	0 7327006001 00
8	8	63	21	0,05	6	0 7327008001 00
10	10	72	25	0,05	6	0 7327010001 00
12	12	83	30	0,05	6	0 7327012001 00
16	16	92	36	0,10	8	0 7327016001 00
20	20	104	45	0,10	8	0 7327020001 00

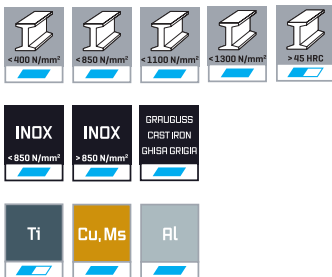
Optional ohne Aufpreis auch mit Weldon-Schaft [DIN 6535-HB] lieferbar. | Also available with Weldon-shank [DIN 6535-HB] without extra charge. | Anche disponibili con attacco Weldon [DIN 6535-HB] senza prezzo aggiuntivo.

**D VHM-Mehrzahn Schlichtfräser Speedcut-Universal, extra lang XL**

**Einsatzbereich:**

VHM-Hochleistungsschlichtfräser für universellen Einsatz in Baustähle, Werkzeugstähle, Vergütungsstähle, aber auch rostfreien Stählen und Titanlegierungen bis 50 HRC.

Durch einen sehr starken Fräserkern und modifiziertem Stirnschliff mit kleiner Eckenschutzfase werden sehr hohe Zerspanungsleistungen mit exzellenter Oberflächengüte erzielt.

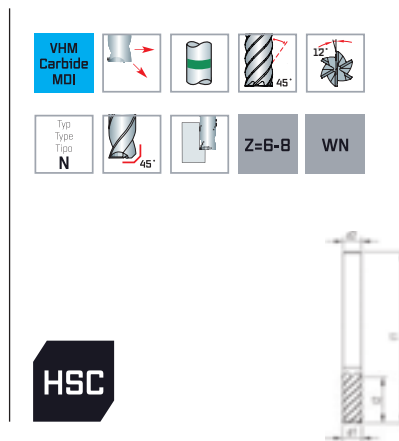


**E Solid carbide multi flute finishing end mill Speedcut-Universal, extra long series XL**

**Range of application:**

High performance carbide finishing end mill for universal applications into structural steels, tool steels, treatable steels but also for stainless steels and titanium alloys up to 50 HRC.

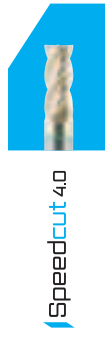
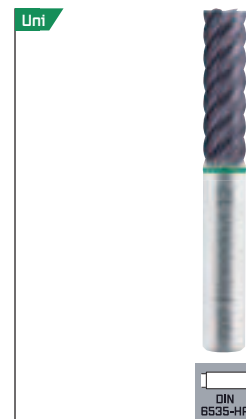
Due to a very strong core and an improved face grinding with small cutting edge chamfer, very high cutting performances with excellent surface quality will be achieved.



**I Fresa in metallo duro multitagliente per finitura Speedcut-Universale, extra serie lunga XL**

**Impiego:**

Fresa a finire in Metallo Duro ad alto rendimento per applicazioni universali idonea per acciai strutturali, acciai da utensili, acciai da tempra ma anche per acciai inossidabili e leghe di titanio fino a 50 HRC. Grazie al nocciolo rinforzato e ad una migliorata superficie rettificata con piccoli smussi di protezione e' possibile raggiungere rendimenti di taglio molto elevati ed eccellenti qualità di finitura.



d1 e8 mm	d2 h6 mm	l1 mm	l2 mm		Z	Code 7337 Art.-Nr.
4	6	57	14	0,05	6	0 7337004001 00
5	6	62	17	0,05	6	0 7337005001 00
6	6	62	20	0,05	6	0 7337006001 00
8	8	70	26	0,05	6	0 7337008001 00
10	10	80	32	0,05	6	0 7337010001 00
12	12	95	38	0,05	6	0 7337012001 00
16	16	105	50	0,10	8	0 7337016001 00
20	20	124	62	0,10	8	0 7337020001 00

Optional ohne Aufpreis auch mit Weldon-Schaft (DIN 6535-HB) lieferbar. | Also available with Weldon-shank (DIN 6535-HB) without extra charge. | Anche disponibili con attacco Weldon (DIN 6535-HB) senza prezzo aggiuntivo.

**D HPC-Schaftfräser mit Eckenradius Speedcut 4.0-Universal, lang, freigestellt, Vierschneider, ungleiche Drillsteigung**

**Einsatzbereich:**

VHM-Hochleistungsfräser für universellen Einsatz: Schlichten, Schrupp-Schlichten und Schruppen mit einem Werkzeug. Ungleiche Drillsteigung bewirkt ruhigen, vibrationsarmen Lauf und sehr gute Oberflächengüte. Die Generation 4.0 setzt neue Maßstäbe in der Zerspanungsleistung.

**E HPC corner radius end mill Speedcut 4.0-Universal, long series, neck, four flutes, different spiral angles**

**Range of application:**

High performance carbide end mill for universal applications. Finishing, rough finishing and roughing with the same tool. Different spiral angles effect smooth, vibrationless running and excellent surface. The Generation 4.0 sets new standards in cutting performance.

**I Frese frontali HPC con spigolo raggato Speedcut 4.0-Universali, serie lunga, libero, 4 taglienti, angolo elica disuguale**

**Impiego:**

Frese frontale MDI ad alto rendimento per applicazioni universali. In un solo utensile finitura, semi-finitura e sgrossatura, l'angolo dell'elica disuguale permette una lavorazione silenziosa senza vibrazioni, con un'ottima finitura della superficie. La generazione 4.0 stabilisce nuovi standard in rendimento.

TWINDUR

	d1 <sub>h10</sub> mm	R	d2 <sub>h6</sub> mm	d3 mm	l1 mm	l2 mm	l3 mm	Z	Code 8547 Art.-Nr.
New	2	0,2	4	1,95	40	5	10	3	0 8547002021 00
New	2	0,3	4	1,95	40	5	10	3	0 8547002031 00
New	3	0,3	6	2,9	57	8	14	4	0 8547003031 00
New	3	0,5	6	2,9	57	8	14	4	0 8547003051 00
New	4	0,5	6	3,6	57	11	16	4	0 8547004051 00
New	4	1	6	3,6	57	11	16	4	0 8547004101 00
New	4	0,5	6	4,6	57	13	18	4	0 8547005051 00
New	5	1	6	4,6	57	13	18	4	0 8547005101 00
New	5	1,5	6	4,6	57	13	18	4	0 8547005151 00
		0,5	6	5,5	57	13	21	4	0 8547006051 00
	6	1	6	5,5	57	13	21	4	0 8547006101 00
	6	1,5	6	5,5	57	13	21	4	0 8547006151 00
	6	2	6	5,5	57	13	21	4	0 8547006201 00
		0,5	8	7,5	63	19	27	4	0 8547008051 00
	8	1	8	7,5	63	19	27	4	0 8547008101 00
	8	1,5	8	7,5	63	19	27	4	0 8547008151 00
	8	2	8	7,5	63	19	27	4	0 8547008201 00
		0,5	10	9,5	72	22	32	4	0 8547010051 00
	10	1	10	9,5	72	22	32	4	0 8547010101 00
	10	1,5	10	9,5	72	22	32	4	0 8547010151 00
	10	2	10	9,5	72	22	32	4	0 8547010201 00
		0,5	12	11,5	83	26	38	4	0 8547012051 00
	12	1	12	11,5	83	26	38	4	0 8547012101 00
	12	1,5	12	11,5	83	26	38	4	0 8547012151 00
	12	2	12	11,5	83	26	38	4	0 8547012201 00
	12	2,5	12	11,5	83	26	38	4	0 8547012251 00
	12	3	12	11,5	83	26	38	4	0 8547012301 00
New	16	1	16	15,0	92	32	44	4	0 8547016101 00
New	16	1,5	16	15,0	92	32	44	4	0 8547016151 00
New	16	2	16	15,0	92	32	44	4	0 8547016201 00
New	16	3	16	15,0	92	32	44	4	0 8547016301 00
New	20	1	20	19,0	104	38	54	4	0 8547020101 00
New	20	1,5	20	19,0	104	38	54	4	0 8547020151 00
New	20	2	20	19,0	104	38	54	4	0 8547020201 00
New	20	2,5	20	19,0	104	38	54	4	0 8547020251 00
New	20	4	20	19,0	104	38	54	4	0 8547020401 00
New	20	5	20	19,0	104	38	54	4	0 8547020501 00

Optional ohne Aufpreis auch mit Weldon-Schaft [DIN 6535-HB] lieferbar. | Also available with Weldon-shank [DIN 6535-HB] without extra charge. | Anche disponibili con attacco Weldon [DIN 6535-HB] senza prezzo aggiuntivo.

**D VHM-Schafffräser mit Eckenradius Speedcut-Universal,** lang, freigestellt, Vierschneider, ungleiche Drallsteigung

**Einsatzbereich:**

VHM-Hochleistungsfräser für universellen Einsatz: Schlichten, Schrupp-Schlichten und Schruppen mit einem Werkzeug. Ungleiche Drallsteigung bewirkt ruhigen, vibrationsarmen Lauf und sehr gute Oberflächengüte. Hohe Zerspansungsleistung.

**E Solid carbide corner radius end mill Speedcut-Universal,** long series, neck, four flutes, different spiral angles

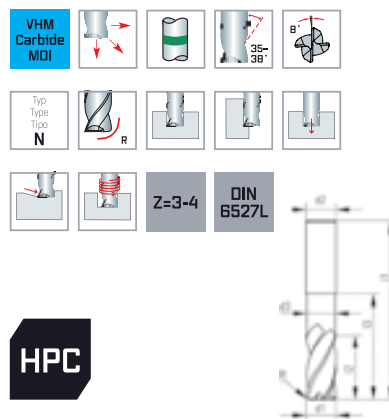
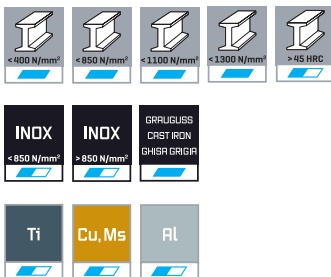
**Range of application:**

High performance carbide end mill for universal applications. Finishing, rough finishing and roughing with the same tool. Different spiral angles effect smooth, vibrationless running and excellent surface. High cutting performance.

**I Frese frontali MDI con spigolo raggato Speedcut-Universali,** serie lunga, libero, 4 taglienti, angolo elica disuguale

**Impiego:**

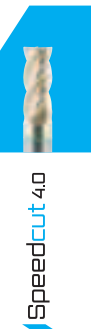
Frese frontale MDI ad alto rendimento per applicazioni universali. In un solo utensile finitura, semi-finitura e sgrossatura, l'angolo dell'elica disuguale permette una lavorazione silenziosa senza vibrazioni, con un'ottima finitura della superficie. Con un elevato rendimento.



ALLUNIT-S®

d1 h10 mm	R	d2 h6 mm	d3 mm	l1 mm	l2 mm	l3 mm	Z	Code 6447 Art.-Nr.
2	0,2	4	1,95	40	5	10	3	0 6447002021 00
	0,3	4	1,95	40	5	10	3	0 6447002031 00
3	0,3	6	2,9	57	8	14	4	0 6447003031 00
	0,5	6	2,9	57	8	14	4	0 6447003051 00
4	0,5	6	3,6	57	11	16	4	0 6447004051 00
	1	6	3,6	57	11	16	4	0 6447004101 00
5	0,5	6	4,6	57	13	18	4	0 6447005051 00
	1	6	4,6	57	13	18	4	0 6447005101 00
	1,5	6	4,6	57	13	18	4	0 6447005151 00
6	0,5	6	5,5	57	13	21	4	0 6447006051 00
	1	6	5,5	57	13	21	4	0 6447006101 00
	1,5	6	5,6	57	13	23	4	0 6447006151 00
8	2	6	5,5	57	13	21	4	0 6447006201 00
	0,5	8	7,5	63	19	27	4	0 6447008051 00
	1	8	7,5	63	19	27	4	0 6447008101 00
10	1,5	8	7,5	63	19	27	4	0 6447008151 00
	2	8	7,5	63	19	27	4	0 6447008201 00
	0,5	10	9,5	72	22	32	4	0 6447010051 00
12	1	10	9,5	72	22	32	4	0 6447010101 00
	1,5	10	9,5	72	22	32	4	0 6447010151 00
	2	10	9,5	72	22	32	4	0 6447010201 00
16	0,5	12	11,5	83	26	38	4	0 6447012051 00
	1	12	11,5	83	26	38	4	0 6447012101 00
	1,5	12	11,5	83	26	38	4	0 6447012151 00
	2	12	11,5	83	26	38	4	0 6447012201 00
	2,5	12	11,5	83	26	38	4	0 6447012251 00
20	3	12	11,5	83	26	38	4	0 6447012301 00
	1	16	15,0	92	32	44	4	0 6447016101 00
	1,5	16	15,0	92	32	44	4	0 6447016151 00
20	2	16	15,0	92	32	44	4	0 6447016201 00
	3	16	15,0	92	32	44	4	0 6447016301 00
	1	20	19,0	104	38	54	4	0 6447020101 00
	1,5	20	19,0	104	38	54	4	0 6447020151 00
	2	20	19,0	104	38	54	4	0 6447020201 00
20	2,5	20	19,0	104	38	54	4	0 6447020251 00
	4	20	19,0	104	38	54	4	0 6447020401 00
	5	20	19,0	104	38	54	4	0 6447020501 00

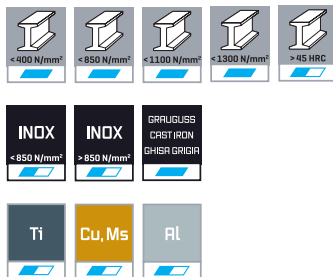
Optional ohne Aufpreis auch mit Weldon-Schaft (DIN 6535-HB) lieferbar. | Also available with Weldon-shank (DIN 6535-HB) without extra charge. | Anche disponibili con attacco Weldon (DIN 6535-HB) senza prezzo aggiuntivo.



**D VHM-Schaftfräser mit Eckenradius Speedcut-Universal, extra lang XXL, freigestellt, Vierschneider, ungleiche Drallsteigung**

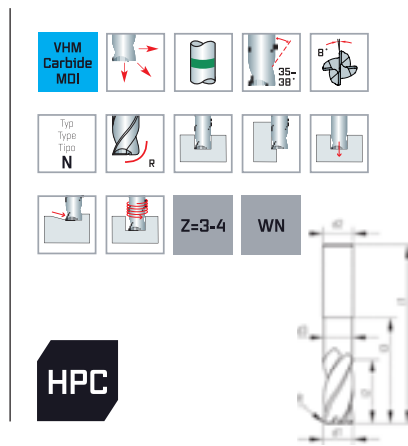
**Einsatzbereich:**  
VHM-Hochleistungsfräser für universellen Einsatz: Schlichten, Schrupp-Schlichten und Schruppen mit einem Werkzeug. Ungleiche Drallsteigung bewirkt ruhigen, vibrationsarmen Lauf und sehr gute Oberflächengüte. Hohe Zerspansungsleistung.

**Speedcut**



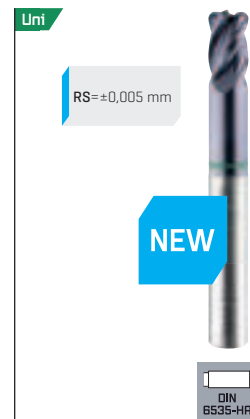
**E Solid carbide corner radius end mill Speedcut-Universal, extra long series XXL, relieved, four flutes, different spiral angles**

**Range of application:**  
High performance carbide end mill for universal applications. Finishing, rough finishing and roughing with the same tool. Different spiral angles effect smooth, vibrationless running and excellent surface. High cutting performance.



**I Frese frontali MDI con spigolo raggato Speedcut-Universali, serie extra lunga XXL, libero, 4 taglienti, angolo elica disuguale**

**Impiego:**  
Frese frontale MDI ad alto rendimento per applicazioni universali. In un solo utensile finitura, semi-finitura e sgrossatura, l'angolo dell'elica disuguale permette una lavorazione silenziosa senza vibrazioni, con un'ottima finitura della superficie. Con un elevato rendimento.



d1 <sub>h10</sub> mm	R	d2 <sub>h6</sub> mm	d3 mm	l1 mm	l2 mm	l3 mm	Z	Code 6947 Art.-Nr.
2	0,2	4	1,95	50	3	12	3	0 6947002 <b>021</b> 00
	0,3	6	2,9	59	5	15	4	0 6947003 <b>031</b> 00
3	0,5	6	2,9	59	5	15	4	0 6947003 <b>051</b> 00
	0,5	6	3,9	59	6	20	4	0 6947004 <b>051</b> 00
4	1	6	3,9	59	6	20	4	0 6947004 <b>101</b> 00
	0,5	6	4,9	69	8	25	4	0 6947005 <b>051</b> 00
5	1	6	4,9	69	8	25	4	0 6947005 <b>101</b> 00
	0,5	6	5,9	79	10	30	4	0 6947006 <b>051</b> 00
6	1	6	5,9	79	10	30	4	0 6947006 <b>101</b> 00
	1,5	6	5,9	79	10	30	4	0 6947006 <b>151</b> 00
8	2	6	5,9	79	10	30	4	0 6947006 <b>201</b> 00
	0,5	8	7,8	79	12	36	4	0 6947008 <b>051</b> 00
8	1	8	7,8	79	12	36	4	0 6947008 <b>101</b> 00
	1,5	8	7,8	79	12	36	4	0 6947008 <b>151</b> 00
8	2	8	7,8	79	12	36	4	0 6947008 <b>201</b> 00
	0,5	10	9,8	99	15	45	4	0 6947010 <b>051</b> 00
10	1	10	9,8	99	15	45	4	0 6947010 <b>101</b> 00
	1,5	10	9,8	99	15	45	4	0 6947010 <b>151</b> 00
10	2	10	9,8	99	15	45	4	0 6947010 <b>201</b> 00
	0,5	12	11,8	99	18	48	4	0 6947012 <b>051</b> 00
12	1	12	11,8	99	18	48	4	0 6947012 <b>101</b> 00
	1,5	12	11,8	99	18	48	4	0 6947012 <b>151</b> 00
12	2	12	11,8	99	18	48	4	0 6947012 <b>201</b> 00
	2,5	12	11,8	99	18	48	4	0 6947012 <b>251</b> 00
12	3	12	11,8	99	18	48	4	0 6947012 <b>301</b> 00
	1	16	15,8	125	24	64	4	0 6947016 <b>101</b> 00
16	2	16	15,8	125	24	64	4	0 6947016 <b>201</b> 00
	3	16	15,8	125	24	64	4	0 6947016 <b>301</b> 00

maykestag

PERFORMANCE  
IN PRECISION

Speedcut 4.0



# Speed creates profit.

Thanks to optimized tool geometry and new special coating more efficient than ever.

## Speedcut 4.0 sets new standards:

- Enormous toughness, hardness and bending strength
- Longer tool life than previously
- Significant reduced part-costs due to extremely high cutting volume
- Higher surface quality, stability and process security

Product video



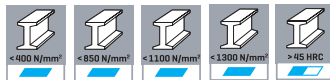


**D VHM-Vollradiusfräser Speedcut-Universal,**  
lang, freigestellt,  
Vierschneider, ungleiche  
Drallsteigung

**Einsatzbereich:**

VHM-Hochleistungsfräser für universellen Einsatz: Fein-Schlichten, Schlichten, Schrupp-Schlichten und Schruppen mit einem Werkzeug. Ungleiche Drallsteigung bewirkt ruhigen, vibrationsarmen Lauf und sehr gute Oberflächengüte. Hohe Zerspanungsleistung.

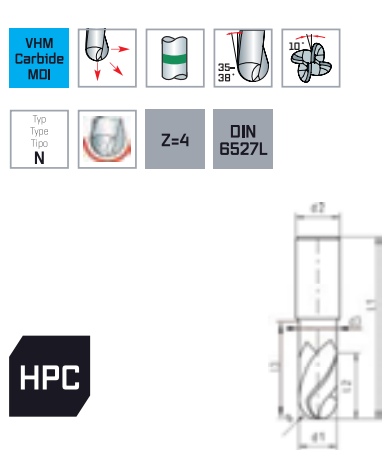
**Speedcut**



**E Solid carbide ballnose end mill Speedcut-Universal,**  
long series, neck, four flutes,  
different spiral angles

**Range of application:**

High performance carbide end mill for universal applications. Fine-finishing, finishing, rough finishing and roughing with the same tool. Different spiral angles effect smooth, vibrationless running and excellent surface. High cutting performance.



**I Frese cilindrica raggiata in metallo duro Speedcut-Universali,**  
serie lunga, libero, 4 taglienti,  
angolo dell'elica disuguale

**Impiego:**

Frese frontale MDI ad alto rendimento per applicazioni universali. In un solo utensile super finitura, finitura, semi-finitura e sgrossatura, l'angolo dell'elica disuguale permette una lavorazione silenziosa senza vibrazioni, con un'ottima finitura della superficie. Con un elevato rendimento.



ALUNIT-S®

d1 <sub>fg</sub> mm	d2 <sub>h6</sub> mm	d3 mm	l1 mm	l2 mm	l3 mm	R mm	Z	Code 7357 Art.-Nr.
4	6	3,8	57	6	13	2	4	0 7357004001 00
5	6	4,7	57	8	21	2,5	4	0 7357005001 00
6	6	5,6	57	10	21	3	4	0 7357006001 00
8	8	7,5	63	12	27	4	4	0 7357008001 00
10	10	9,5	72	15	32	5	4	0 7357010001 00
12	12	11,5	83	18	38	6	4	0 7357012001 00
16	16	15,5	92	24	44	8	4	0 7357016001 00
20	20	19,5	104	30	54	10	4	0 7357020001 00

Optional ohne Aufpreis auch mit Weldon-Schaft [DIN 6535-HB] lieferbar. | Also available with Weldon-shank [DIN 6535-HB] without extra charge. | Anche disponibili con attacco Weldon [DIN 6535-HB] senza prezzo aggiuntivo.

**D VHM-Vollradiusfräser Speedcut-Universal,** extra lang XXL, freigestellt, Vierschneider, ungleiche Drallsteigung

**Einsatzbereich:**

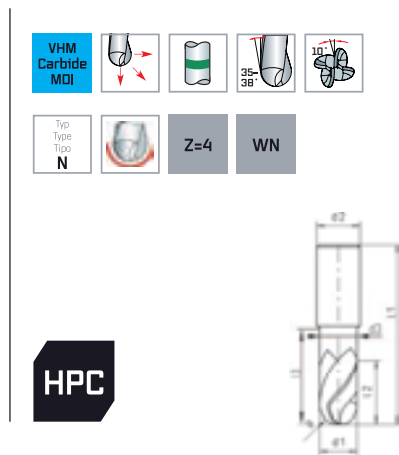
VHM-Hochleistungsfräser für universellen Einsatz: Fein-Schlichten, Schlichten, Schrupp-Schlichten und Schruppen mit einem Werkzeug. Ungleiche Drallsteigung bewirkt ruhigen, vibrationsarmen Lauf und sehr gute Oberflächengüte. Hohe Zerspanungsleistung.



**E Solid carbide ballnose end mill Speedcut-Universal,** extra long series XXL, neck, four flutes, different spiral angles

**Range of application:**

High performance carbide end mill for universal applications. Fine-finishing, finishing, rough finishing and roughing with the same tool. Different spiral angles effect smooth, vibrationless running and excellent surface. High cutting performance.



**I Frese cilindrica raggiata in metallo duro Speedcut-Universali,** serie extra lunga XXL, libero, 4 taglianti, angolo dell'elica disuguale

**Impiego:**

Frese frontale MDI ad alto rendimento per applicazioni universali. In un solo utensile super finitura, finitura, semi-finitura e sgrossatura, l'angolo dell'elica disuguale permette una lavorazione silenziosa senza vibrazioni, con un'ottima finitura della superficie. Con un elevato rendimento.



d1 <sub>f8</sub> mm	d2 <sub>h6</sub> mm	d3 mm	l1 mm	l2 mm	l3 mm	R mm	Z	Code 7857 Art.-Nr.
3	6	2,9	59	5	15	1,5	4	0 7857003001 00
4	6	3,9	59	6	20	2	4	0 7857004001 00
5	6	4,9	69	8	25	2,5	4	0 7857005001 00
6	6	5,9	79	10	30	3	4	0 7857006001 00
8	8	7,9	79	12	36	4	4	0 7857008001 00
10	10	9,8	99	15	45	5	4	0 7857010001 00
12	12	11,8	99	18	48	6	4	0 7857012001 00
16	16	15,8	125	24	64	8	4	0 7857016001 00

Optional ohne Aufpreis auch mit Weldon-Schaft (DIN 6535-HB) lieferbar. | Also available with Weldon-shank (DIN 6535-HB) without extra charge. | Anche disponibili con attacco Weldon (DIN 6535-HB) senza prezzo aggiuntivo.

**D HPC-Schaftfräser**  
**Speedcut 4.0-Inox,**  
 kurz, freigestellt,  
 Vierschneider, ungleiche  
 Drallsteigung

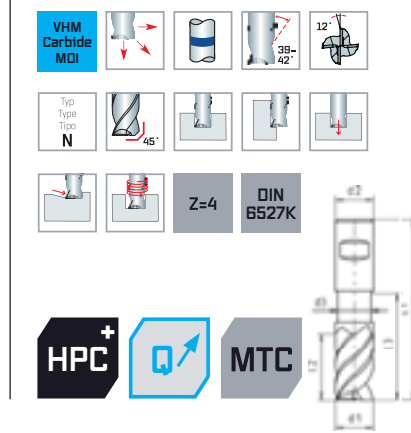
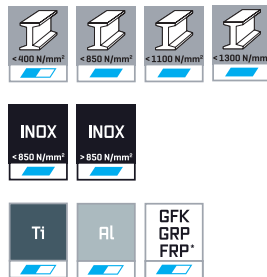
**Einsatzbereich:**  
 VHM-Hochleistungsfräser besonders geeignet zur Bearbeitung von austenitischen rostfreien Stählen: Schlichten, Schrapp-Schlichten und Schruppen mit einem Werkzeug. Ungleiche Drallsteigung bewirkt ruhigen, vibrationsarmen Lauf und sehr gute Oberflächengüte. Die Generation 4.0 setzt neue Maßstäbe in der Zerspanungsleistung.

**E HPC end mill**  
**Speedcut 4.0-Inox,**  
 short series, neck,  
 four flutes, different spiral  
 angles

**Range of application:**  
 High performance carbide end mill especially suitable for cutting in austenitic stainless steels: Finishing, rough finishing and roughing with the same tool. Different spiral angles effects smooth, vibrationless running and excellent surface. The Generation 4.0 sets new standards in cutting performance.

**I Frese frontali HPC**  
**Speedcut 4.0-Inox,**  
 serie corta, libero,  
 4 taglienti, angolo elica  
 disuguale

**Impiego:**  
 Frese MDI ad alto rendimento, particolarmente adatte per la lavorazione di acciai austenitici inossidabili: Fresatura di finitura, sgrassatura-finitura e sgrassatura con una sola fresa. L'angolo dell'elica disuguale permette una lavorazione silenziosa senza vibrazioni, con un'ottima finitura della superficie. La generazione 4.0 stabilisce nuovi standard in rendimento.



d1 <sub>h10</sub> mm	d2 <sub>h6</sub> mm	d3 mm	l1 mm	l2 mm	l3 mm	Z	Code 8397 Art.-Nr.	Code 8497 Art.-Nr.
3	6	2,9	50	5	8	0,15 4	0 8397003001 00	0 8497003001 00
4	6	3,8	54	8	11	0,15 4	0 8397004001 00	0 8497004001 00
5	6	4,7	54	9	13	0,25 4	0 8397005001 00	0 8497005001 00
6	6	5,6	54	10	13	0,25 4	0 8397006001 00	0 8497006001 00
8	8	7,5	57	12	19	0,25 4	0 8397008001 00	0 8497008001 00
10	10	9,5	66	14	22	0,25 4	0 8397010001 00	0 8497010001 00
12	12	11,5	73	16	26	0,25 4	0 8397012001 00	0 8497012001 00
16	16	15,5	82	22	32	0,35 4	0 8397016001 00	0 8497016001 00

<sup>(1)</sup> GFK: glasfaser-verstärkte Kunststoffe | GRP: glass-fibre reinforced plastics | FRP: plastica rinforzata con fibra di vetro

**D VHM-Schafftfräser**  
**Speedcut-Inox,**  
 kurz, freigestellt,  
 Vierschneider, ungleiche  
 Drallsteigung

**Einsatzbereich:**

VHM-Hochleistungsfräser besonders geeignet zur Bearbeitung von austenitischen rostfreien Stählen: Schlichten, Schrupp-Schlichten und Schruppen mit einem Werkzeug. Ungleiche Drallsteigung bewirkt ruhigen, vibrationsarmen Lauf und sehr gute Oberflächengüte. Hohe Zerspanungsleistung.

**E Solid carbide end mill**  
**Speedcut-Inox,**  
 short series, neck,  
 four flutes, different spiral  
 angles

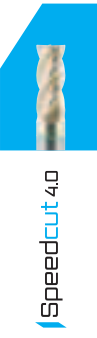
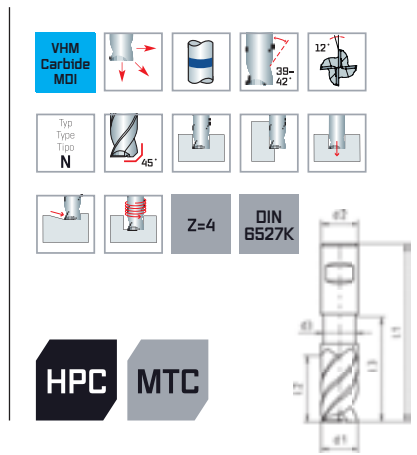
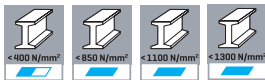
**Range of application:**

High performance carbide end mill especially suitable for cutting in austenitic stainless steels: Finishing, rough finishing and roughing with the same tool. Different spiral angles effects smooth, vibrationless running and excellent surface. High cutting performance.

**I Frese frontali MDI**  
**Speedcut-Inox,**  
 serie corta, libero,  
 4 taglianti, angolo elica  
 disuguale

**Impiego:**

Frese MDI ad alto rendimento, particolarmente adatte per la lavorazione di acciai austenitici inossidabili: Fresatura di finitura, sgrossatura-finitura e sgrossatura con una sola fresa. L'angolo dell'elica disuguale permette una lavorazione silenziosa senza vibrazioni, con un'ottima finitura della superficie. Con un elevato rendimento.



d1 <sub>h10</sub> mm	d2 <sub>h6</sub> mm	d3 mm	l1 mm	l2 mm	l3 mm		Z	Code 7397 Art.-Nr.	Code 7497 Art.-Nr.
3	6	2,9	50	5	8	0,15	4	0 7397003001 00	0 7497003001 00
4	6	3,8	54	8	11	0,15	4	0 7397004001 00	0 7497004001 00
5	6	4,7	54	9	13	0,25	4	0 7397005001 00	0 7497005001 00
6	6	5,6	54	10	13	0,25	4	0 7397006001 00	0 7497006001 00
8	8	7,5	57	12	19	0,25	4	0 7397008001 00	0 7497008001 00
10	10	9,5	66	14	22	0,25	4	0 7397010001 00	0 7497010001 00
12	12	11,5	73	16	26	0,25	4	0 7397012001 00	0 7497012001 00
16	16	15,5	82	22	32	0,35	4	0 7397016001 00	0 7497016001 00

<sup>(1)</sup> GFK: glasfaser-verstärkte Kunststoffe | GRP: glass-fibre reinforced plastics | FRP: plastica rinforzata con fibra di vetro

**D HPC-Schaftfräser Speedcut 4.0-Inox,**  
lang, Vierschneider,  
ungleiche Drallsteigung,  
mit Innenkühlung

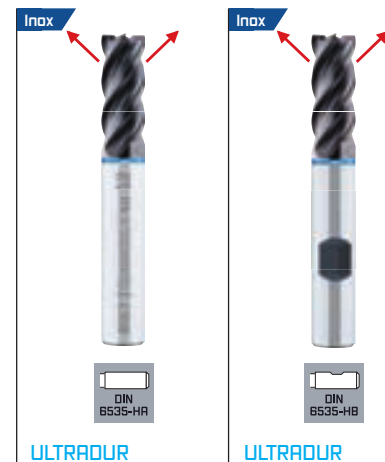
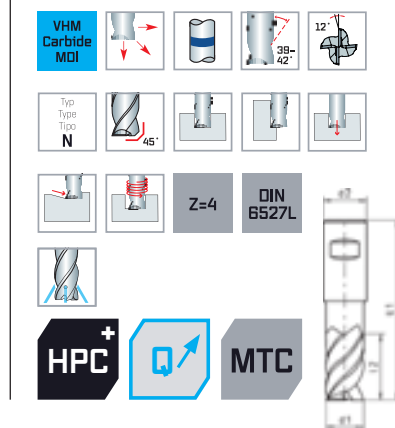
**Einsatzbereich:**  
VHM-Hochleistungsfräser besonders geeignet zur Bearbeitung von austenitischen rostfreien Stählen: Schlichten, Schrupp-Schlichten und Schruppen mit einem Werkzeug. Ungleiche Drallsteigung bewirkt ruhigen, vibrationsarmen Lauf und sehr gute Oberflächengüte. Die Generation 4.0 setzt neue Maßstäbe in der Zerspanungsleistung.

**E HPC end mill Speedcut 4.0-Inox,**  
long series, four flutes,  
different spiral angles,  
with internal coolant supply

**Range of application:**  
High performance carbide end mill especially suitable for cutting in austenitic stainless steels: Finishing, rough finishing and roughing with the same tool. Different spiral angles effects smooth, vibrationless running and excellent surface. The Generation 4.0 sets new standards in cutting performance.

**I Frese frontali HPC Speedcut 4.0-Inox,**  
serie lunga, 4 taglienti,  
angolo elica disuguale,  
con fori lubrificazione

**Impiego:**  
Frese MDI ad alto rendimento, particolarmente adatte per la lavorazione di acciai austenitici inossidabili: Fresatura di finitura, sgrossatura-finitura e sgrossatura con una sola fresa. L'angolo dell'elica disuguale permette una lavorazione silenziosa senza vibrazioni, con un'ottima finitura della superficie. La generazione 4.0 stabilisce nuovi standard in rendimento.



d1 <sub>h10</sub> mm	d2 <sub>h6</sub> mm	l1 mm	l2 mm		Z	Code 8557 Art.-Nr.	Code 8567 Art.-Nr.
6	6	57	13	0,25	4	0 8557006001 00	0 8567006001 00
8	8	63	19	0,25	4	0 8557008001 00	0 8567008001 00
10	10	72	22	0,25	4	0 8557010001 00	0 8567010001 00
12	12	83	26	0,25	4	0 8557012001 00	0 8567012001 00
14	14	83	26	0,35	4	0 8557014001 00	0 8567014001 00
16	16	92	32	0,35	4	0 8557016001 00	0 8567016001 00
20	20	104	38	0,35	4	0 8557020001 00	0 8567020001 00

<sup>(1)</sup> GFK: glasfaser-verstärkte Kunststoffe | GRP: glass-fibre reinforced plastics | FRP: plastica rinforzata con fibra di vetro

**D HPC-Schaftfräser**  
**Speedcut 4.0-Inox,**  
 lang, Vierschneider,  
 ungleiche Drallsteigung

**E HPC end mill**  
**Speedcut 4.0-Inox,**  
 long series, four flutes,  
 different spiral angles

**I Frese frontali HPC**  
**Speedcut 4.0-Inox,**  
 serie lunga, 4 taglienti,  
 angolo elica disuguale

**Einsatzbereich:**

VHM-Hochleistungsfräser besonders geeignet zur Bearbeitung von austenitischen rostfreien Stählen: Schlichten, Schrupp-Schlichten und Schruppen mit einem Werkzeug. Ungleiche Drallsteigung bewirkt ruhigen, vibrationsarmen Lauf und sehr gute Oberflächengüte. Die Generation 4.0 setzt neue Maßstäbe in der Zerspanungsleistung.

**Range of application:**

High performance carbide end mill especially suitable for cutting in austenitic stainless steels: Finishing, rough finishing and roughing with the same tool. Different spiral angles effects smooth, vibrationless running and excellent surface. The Generation 4.0 sets new standards in cutting performance.

**Impiego:**

Frese MDI ad alto rendimento, particolarmente adatte per la lavorazione di acciai austenitici inossidabili: Fresatura di finitura, sgrossatura-finitura e sgrossatura con una sola fresa. L'angolo dell'elica disuguale permette una lavorazione silenziosa senza vibrazioni, con un'ottima finitura della superficie. La generazione 4.0 stabilisce nuovi standard in rendimento.

d1 <sub>h10</sub> mm	d2 <sub>h6</sub> mm	l1 mm	l2 mm		Z	Code 8247 Art.-Nr.	Code 8747 Art.-Nr.
2	4	40	5	0,06	3	0 8247002001 00	
3	6	57	8	0,15	4	0 8247003001 00	0 8747003001 00
4	6	57	11	0,15	4	0 8247004001 00	0 8747004001 00
5	6	57	13	0,25	4	0 8247005001 00	0 8747005001 00
6	6	57	13	0,25	4	0 8247006001 00	0 8747006001 00
7	8	63	16	0,25	4	0 8247007001 00	0 8747007001 00
8	8	63	19	0,25	4	0 8247008001 00	0 8747008001 00
9	10	72	19	0,25	4	0 8247009001 00	0 8747009001 00
10	10	72	22	0,25	4	0 8247010001 00	0 8747010001 00
11	12	83	26	0,25	4	0 8247011001 00	0 8747011001 00
12	12	83	26	0,25	4	0 8247012001 00	0 8747012001 00
16	16	92	32	0,35	4	0 8247016001 00	0 8747016001 00
20	20	104	38	0,35	4	0 8247020001 00	0 8747020001 00

<sup>(1)</sup> GFK: glasfaser-verstärkte Kunststoffe | GRP: glass-fibre reinforced plastics | FRP: plastica rinforzata con fibra di vetro



**D VHM-Schaftfräser Speedcut-Inox,**  
lang, Vierschneider,  
ungleiche Drallsteigung

**E Solid carbide end mill Speedcut-Inox,**  
long series, four flutes,  
different spiral angles

**I Frese frontali MDI Speedcut-Inox,**  
serie lunga, 4 taglienti,  
angolo elica disuguale

**Einsatzbereich:**

VHM-Hochleistungsfräser besonders geeignet zur Bearbeitung von austenitischen rostfreien Stählen: Schlichten, Schrupp-Schlichten und Schruppen mit einem Werkzeug. Ungleiche Drallsteigung bewirkt ruhigen, vibrationsarmen Lauf und sehr gute Oberflächengüte. Hohe Zerspanungsleistung.

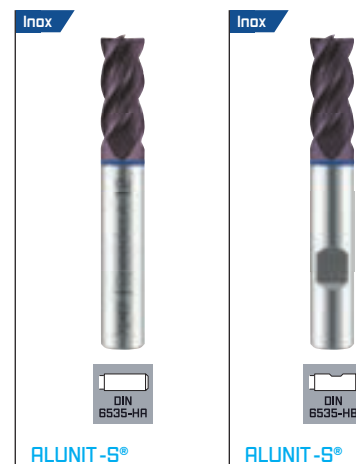
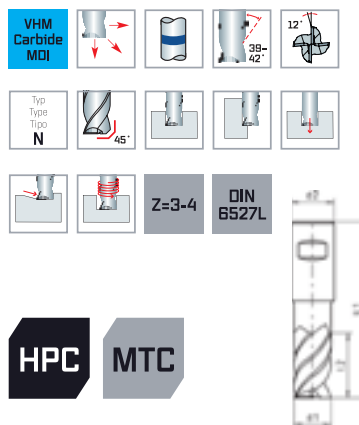
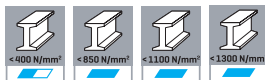
**Range of application:**

High performance carbide end mill especially suitable for cutting in austenitic stainless steels: Finishing, rough finishing and roughing with the same tool. Different spiral angles effects smooth, vibrationless running and excellent surface. High cutting performance.

**Impiego:**

Frese MDI ad alto rendimento, particolarmente adatte per la lavorazione di acciai austenitici inossidabili: Fresatura di finitura, sgrassatura-finitura e sgrassatura con una sola fresa. L'angolo dell'elica disuguale permette una lavorazione silenziosa senza vibrazioni, con un'ottima finitura della superficie. Con un elevato rendimento.

Speedcut



d1 <sub>h10</sub> mm	d2 <sub>h6</sub> mm	l1 mm	l2 mm		Z	Code 7247 Art.-Nr.	Code 7747 Art.-Nr.
2	4	40	5	0,06	3	0 7247002001 00	
3	6	57	8	0,15	4	0 7247003001 00	0 7747003001 00
4	6	57	11	0,15	4	0 7247004001 00	0 7747004001 00
5	6	57	13	0,25	4	0 7247005001 00	0 7747005001 00
6	6	57	13	0,25	4	0 7247006001 00	0 7747006001 00
8	8	63	19	0,25	4	0 7247008001 00	0 7747008001 00
10	10	72	22	0,25	4	0 7247010001 00	0 7747010001 00
12	12	83	26	0,25	4	0 7247012001 00	0 7747012001 00
16	16	92	32	0,35	4	0 7247016001 00	0 7747016001 00
20	20	104	38	0,35	4	0 7247020001 00	0 7747020001 00

<sup>(1)</sup> GFK: glasfaser-verstärkte Kunststoffe | GRP: glass-fibre reinforced plastics | FRP: plastica rinforzata con fibra di vetro

**D HPC-Schaftfräser**  
**Speedcut 4.0-Inox,**  
 lang, freigestellt,  
 Vierschneider, ungleiche  
 Drallsteigung,  
**mit Innenkühlung**

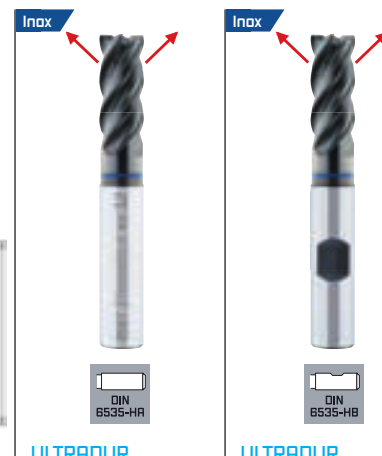
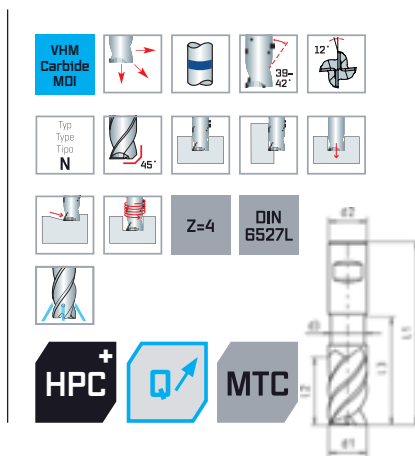
**E HPC end mill**  
**Speedcut 4.0-Inox,**  
 long series, neck,  
 four flutes, different  
 spiral angles,  
**with internal coolant supply**

**I Frese frontali HPC**  
**Speedcut 4.0-Inox,**  
 serie lunga, libero,  
 4 taglienti, angolo elica  
 disuguale,  
**con fori lubrificazione**

**Einsatzbereich:**  
 VHM-Hochleistungsfräser besonders geeignet zur Bearbeitung von austenitischen rostfreien Stählen: Schlichten, Schrupp-Schlichten und Schruppen mit einem Werkzeug. Ungleiche Drallsteigung bewirkt ruhigen, vibrationsarmen Lauf und sehr gute Oberflächengüte. Die Generation 4.0 setzt neue Maßstäbe in der Zerspanungsleistung.

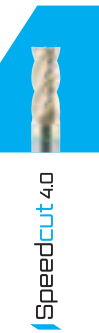
**Range of application:**  
 High performance carbide end mill especially suitable for cutting in austenitic stainless steels: Finishing, rough finishing and roughing with the same tool. Different spiral angles effects smooth, vibrationless running and excellent surface. The Generation 4.0 sets new standards in cutting performance.

**Impiego:**  
 Frese MDI ad alto rendimento, particolarmente adatte per la lavorazione di acciai austenitici inossidabili: Fresatura di finitura, sgrossatura-finitura e sgrossatura con una sola fresa. L'angolo dell'elica disuguale permette una lavorazione silenziosa senza vibrazioni, con un'ottima finitura della superficie. La generazione 4.0 stabilisce nuovi standard in rendimento.



d1 <sub>h10</sub> mm	d2 <sub>h6</sub> mm	d3 mm	l1 mm	l2 mm	l3 mm	Z	Code 8587 Art.-Nr.	Code 8597 Art.-Nr.
6	6	5,50	57	13	21	0,25 4	0 8587006001 00	08597006001 00
8	8	7,50	63	19	27	0,25 4	0 8587008001 00	08597008001 00
10	10	9,50	72	22	32	0,25 4	0 8587010001 00	08597010001 00
12	12	11,50	83	26	38	0,25 4	0 8587012001 00	08597012001 00
14	14	13,50	83	26	38	0,35 4	0 8587014001 00	08597014001 00
16	16	15,00	92	32	44	0,35 4	0 8587016001 00	08597016001 00
20	20	19,00	104	38	54	0,35 4	0 8587020001 00	08597020001 00

<sup>1)</sup> GFK: glasfaser-verstärkte Kunststoffe | GRP: glass-fibre reinforced plastics | FRP: plastica rinforzata con fibra di vetro





**D HPC-Schaftfräser Speedcut 4.0-Inox,**  
lang, freigestellt,  
Vierschneider, ungleiche  
Drallsteigung

**Einsatzbereich:**  
VHM-Hochleistungsfräser besonders geeignet zur Bearbeitung von austenitischen rostfreien Stählen: Schlichten, Schrupp-Schlichten und Schruppen mit einem Werkzeug. Ungleiche Drallsteigung bewirkt ruhigen, vibrationsarmen Lauf und sehr gute Oberflächengüte. Die Generation 4.0 setzt neue Maßstäbe in der Zerspanungsleistung.

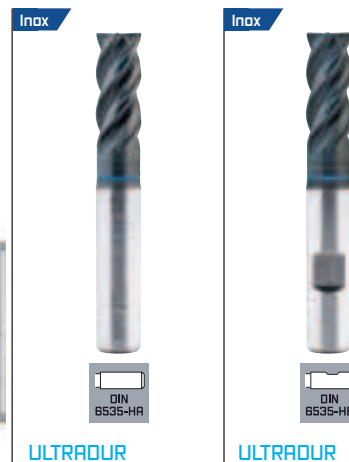
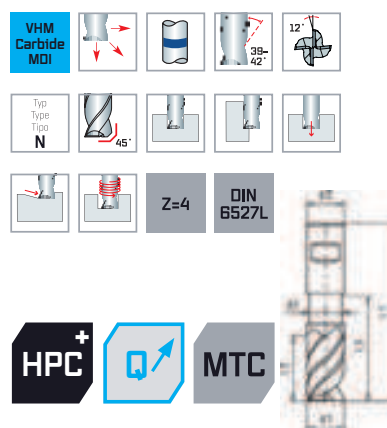
**E HPC end mill Speedcut 4.0-Inox,**  
long series, neck,  
four flutes, different spiral  
angles

**Range of application:**  
High performance carbide end mill especially suitable for cutting in austenitic stainless steels: Finishing, rough finishing and roughing with the same tool. Different spiral angles effects smooth, vibrationless running and excellent surface. The Generation 4.0 sets new standards in cutting performance.

**I Frese frontali HPC Speedcut 4.0-Inox,**  
serie lunga, libero,  
4 taglienti, angolo elica  
disuguale

**Impiego:**  
Frese MDI ad alto rendimento, particolarmente adatte per la lavorazione di acciai austenitici inossidabili: Fresatura di finitura, sgrossatura-finitura e sgrossatura con una sola fresa. L'angolo dell'elica disuguale permette una lavorazione silenziosa senza vibrazioni, con un'ottima finitura della superficie. La generazione 4.0 stabilisce nuovi standard in rendimento.

**Speedcut 4.0**



d1 <sub>h10</sub> mm	d2 <sub>h6</sub> mm	d3 mm	l1 mm	l2 mm	l3 mm	Z	Code 8347 Art.-Nr.	Code 8447 Art.-Nr.
3	6	2,8	57	8	20	0,15 4	0 8347003001 00	0 8447003001 00
4	6	3,8	57	11	21	0,15 4	0 8347004001 00	0 8447004001 00
5	6	4,7	57	13	22	0,25 4	0 8347005001 00	0 8447005001 00
6	6	5,6	57	13	23	0,25 4	0 8347006001 00	0 8447006001 00
8	8	7,5	63	19	29	0,25 4	0 8347008001 00	0 8447008001 00
10	10	9,5	72	22	34	0,25 4	0 8347010001 00	0 8447010001 00
12	12	11,5	83	26	40	0,25 4	0 8347012001 00	0 8447012001 00
16	16	15,5	92	32	46	0,35 4	0 8347016001 00	0 8447016001 00
20	20	19,5	104	38	56	0,35 4	0 8347020001 00	0 8447020001 00

<sup>(1)</sup> GFK: glasfaser-verstärkte Kunststoffe | GRP: glass-fibre reinforced plastics | FRP: plastica rinforzata con fibra di vetro

**D VHM-Schaftfräser**  
**Speedcut-Inox,**  
 lang, freigestellt,  
 Vierschneider, ungleiche  
 Drallsteigung

**Einsatzbereich:**  
 VHM-Hochleistungsfräser besonders geeignet zur Bearbeitung von austenitischen rostfreien Stählen: Schlichten, Schrupp-Schlichten und Schruppen mit einem Werkzeug. Ungleiche Drallsteigung bewirkt ruhigen, vibrationsarmen Lauf und sehr gute Oberflächengüte. Hohe Zerspanungsleistung.

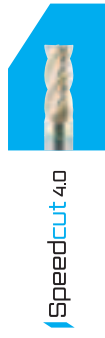
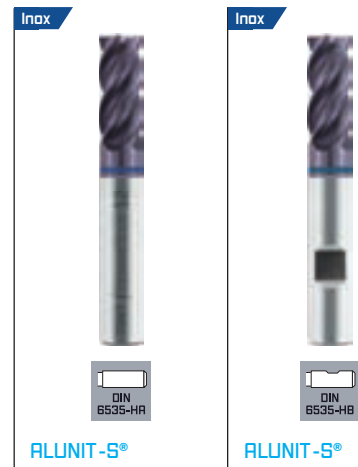
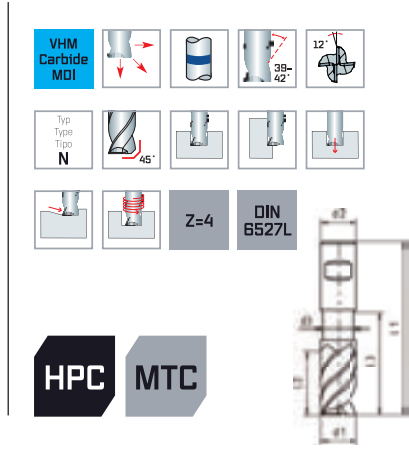
**E Solid carbide end mill**  
**Speedcut-Inox,**  
 long series, neck,  
 four flutes, different spiral  
 angles

**Range of application:**  
 High performance carbide end mill especially suitable for cutting in austenitic stainless steels: Finishing, rough finishing and roughing with the same tool. Different spiral angles effects smooth, vibrationless running and excellent surface. High cutting performance.

**I Frese frontali MDI**  
**Speedcut-Inox,**  
 serie lunga, libero,  
 4 taglienti, angolo elica  
 disuguale

**Impiego:**  
 Frese MDI ad alto rendimento, particolarmente adatte per la lavorazione di acciai austenitici inossidabili: Fresatura di finitura, sgrossatura-finitura e sgrossatura con una sola fresa. L'angolo dell'elica disuguale permette una lavorazione silenziosa senza vibrazioni, con un'ottima finitura della superficie. Con un elevato rendimento.

**Speedcut**



d1 <sub>h10</sub> mm	d2 <sub>h6</sub> mm	d3 mm	l1 mm	l2 mm	l3 mm		Z	Code 7347 Art.-Nr.	Code 7447 Art.-Nr.
3	6	2,9	57	8	14	0,15	4	0 7347003001 00	0 7447003001 00
4	6	3,6	57	11	16	0,15	4	0 7347004001 00	0 7447004001 00
5	6	4,6	57	13	18	0,25	4	0 7347005001 00	0 7447005001 00
6	6	5,5	57	13	21	0,25	4	0 7347006001 00	0 7447006001 00
8	8	7,5	63	19	27	0,25	4	0 7347008001 00	0 7447008001 00
10	10	9,5	72	22	32	0,25	4	0 7347010001 00	0 7447010001 00
12	12	11,5	83	26	38	0,25	4	0 7347012001 00	0 7447012001 00
16	16	15,0	92	32	44	0,35	4	0 7347016001 00	0 7447016001 00
20	20	19,0	104	38	54	0,35	4	0 7347020001 00	0 7447020001 00

<sup>(1)</sup> GFK: glasfaser-verstärkte Kunststoffe | GRP: glass-fibre reinforced plastics | FRP: plastica rinforzata con fibra di vetro

**D HPC-Schaftfräser Speedcut 4.0-Inox,**  
extra lang XL, freigestellt,  
Vierschneider, ungleiche  
Drallsteigung

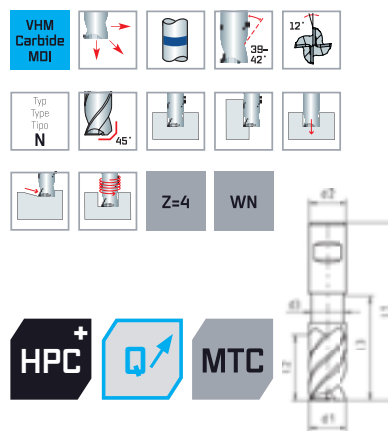
**Einsatzbereich:**  
VHM-Hochleistungsfräser besonders geeignet zur Bearbeitung von austenitischen rostfreien Stählen: Schlichten, Schrupp-Schlichten und Schruppen mit einem Werkzeug. Ungleiche Drallsteigung bewirkt ruhigen, vibrationsarmen Lauf und sehr gute Oberflächengüte. Die Generation 4.0 setzt neue Maßstäbe in der Zerspanungsleistung.

**E HPC end mill Speedcut 4.0-Inox,**  
extra long series XL, neck,  
four flutes, different spiral  
angles

**Range of application:**  
High performance carbide end mill especially suitable for cutting in austenitic stainless steels: Finishing, rough finishing and roughing with the same tool. Different spiral angles effects smooth, vibrationless running and excellent surface. The Generation 4.0 sets new standards in cutting performance.

**I Frese frontali HPC Speedcut 4.0-Inox,**  
serie extra lunga XL, libero,  
4 taglienti, angolo elica  
disuguale

**Impiego:**  
Frese MDI ad alto rendimento, particolarmente adatte per la lavorazione di acciai austenitici inossidabili: Fresatura di finitura, sgrossatura-finitura e sgrossatura con una sola fresa. L'angolo dell'elica disuguale permette una lavorazione silenziosa senza vibrazioni, con un'ottima finitura della superficie. La generazione 4.0 stabilisce nuovi standard in rendimento.



d1 <sub>h10</sub> mm	d2 <sub>h6</sub> mm	d3 mm	l1 mm	l2 mm	l3 mm	Z	Code 8267 Art.-Nr.	Code 8767 Art.-Nr.
5	6	4,7	62	13	26	0,25 4	0 8267005001 00	0 8767005001 00
6	6	5,6	62	13	26	0,25 4	0 8267006001 00	0 8767006001 00
8	8	7,5	70	19	34	0,25 4	0 8267008001 00	0 8767008001 00
10	10	9,5	80	22	40	0,25 4	0 8267010001 00	0 8767010001 00
12	12	11,5	95	26	50	0,25 4	0 8267012001 00	0 8767012001 00
16	16	15,5	105	32	57	0,35 4	0 8267016001 00	0 8767016001 00
20	20	19,5	124	38	71	0,35 4	0 8267020001 00	0 8767020001 00

<sup>(1)</sup> GFK: glasfaser-verstärkte Kunststoffe | GRP: glass-fibre reinforced plastics | FRP: plastica rinforzata con fibra di vetro

**D VHM-Schaftfräser**  
**Speedcut-Inox,**  
 extra lang XL, freigestellt,  
 Vierschneider, ungleiche  
 Drallsteigung

**Einsatzbereich:**

VHM-Hochleistungsfräser besonders geeignet zur Bearbeitung von austenitischen rostfreien Stählen: Schlichten, Schrupp-Schlichten und Schruppen mit einem Werkzeug. Ungleiche Drallsteigung bewirkt ruhigen, vibrationsarmen Lauf und sehr gute Oberflächengüte. Hohe Zerspanungsleistung.

**E Solid carbide end mill**  
**Speedcut-Inox,**  
 extra long series XL, neck,  
 four flutes, different spiral  
 angles

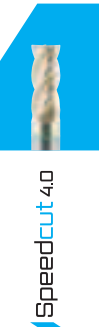
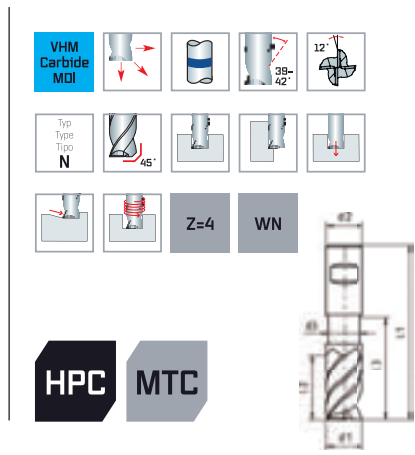
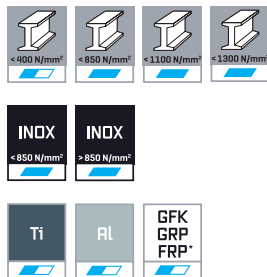
**Range of application:**

High performance carbide end mill especially suitable for cutting in austenitic stainless steels: Finishing, rough finishing and roughing with the same tool. Different spiral angles effects smooth, vibrationless running and excellent surface. High cutting performance.

**I Frese frontali MDI**  
**Speedcut-Inox,**  
 serie extra lunga XL, libero,  
 4 taglienti, angolo elica  
 disuguale

**Impiego:**

Frese MDI ad alto rendimento, particolarmente adatte per la lavorazione di acciai austenitici inossidabili: Fresatura di finitura, sgrossatura-finitura e sgrossatura con una sola fresa. L'angolo dell'elica disuguale permette una lavorazione silenziosa senza vibrazioni, con un'ottima finitura della superficie. Con un elevato rendimento.



d1 <sub>h10</sub> mm	d2 <sub>h6</sub> mm	d3 mm	l1 mm	l2 mm	l3 mm		Z	Code 7267 Art.-Nr.	Code 7767 Art.-Nr.
5	6	4,7	62	13	26	0,25	4	0 7267005001 00	0 7767005001 00
6	6	5,6	62	13	26	0,25	4	0 7267006001 00	0 7767006001 00
8	8	7,5	70	19	34	0,25	4	0 7267008001 00	0 7767008001 00
10	10	9,5	80	22	40	0,25	4	0 7267010001 00	0 7767010001 00
12	12	11,5	95	26	50	0,25	4	0 7267012001 00	0 7767012001 00
16	16	15,5	105	32	57	0,35	4	0 7267016001 00	0 7767016001 00
20	20	19,5	124	38	71	0,35	4	0 7267020001 00	0 7767020001 00

<sup>(1)</sup> GFK: glasfaser-verstärkte Kunststoffe | GRP: glass-fibre reinforced plastics | FRP: plastica rinforzata con fibra di vetro

**D HPC-Schaftfräser mit Eckenradius, Speedcut 4.0-Inox, lang, freigestellt, Vierschneider, ungleiche Drallsteigung**

**Einsatzbereich:**  
VHM-Hochleistungsfräser besonders geeignet zur Bearbeitung von austenitischen rostfreien Stählen: Schlichten, Schrupp-Schlichten und Schruppen mit einem Werkzeug. Ungleiche Drallsteigung bewirkt ruhigen, vibrationsarmen Lauf und sehr gute Oberflächengüte. Die Generation 4.0 setzt neue Maßstäbe in der Zerspanungsleistung.

**E HPC corner radius end mill Speedcut 4.0-Inox, long series, neck, four flutes, different spiral angles**

**Range of application:**  
High performance carbide end mill especially suitable for cutting in austenitic stainless steels: Finishing, rough finishing and roughing with the same tool. Different spiral angles effects smooth, vibrationless running and excellent surface. The Generation 4.0 sets new standards in cutting performance.

**I Frese frontali HPC con spigolo raggaiato Speedcut 4.0-Inox, serie lunga, libero, 4 taglienti, angolo elica disuguale**

**Impiego:**  
Frese MDI ad alto rendimento, particolarmente adatte per la lavorazione di acciai austenitici inossidabili: Fresatura di finitura, sgrossatura-finitura e sgrossatura con una sola fresa. L'angolo dell'elica disuguale permette una lavorazione silenziosa senza vibrazioni, con un'ottima finitura della superficie. La generazione 4.0 stabilisce nuovi standard in rendimento.

ULTRADUR

	d1 <sub>h10</sub> mm	d2 <sub>h6</sub> mm	d3 mm	l1 mm	l2 mm	l3 mm	Z	Code 8647 Art.-Nr.
New	2	0,2	4	1,95	40	5	10	0 8647002021 00
New	3	0,3	6	2,9	57	8	14	0 8647003031 00
New		0,5	6	2,9	57	8	14	0 8647003051 00
New	4	0,5	6	3,6	57	11	16	0 8647004051 00
New		1	6	3,6	57	11	16	0 8647004101 00
	5	0,5	6	4,6	57	13	18	0 8647005051 00
		1	6	4,6	57	13	18	0 8647005101 00
	6	0,5	6	5,5	57	13	21	0 8647006051 00
		1	6	5,5	57	13	21	0 8647006101 00
		1,5	6	5,5	57	13	21	0 8647006151 00
	8	2	6	5,5	57	13	21	0 8647006201 00
		0,5	8	7,5	63	19	27	0 8647008051 00
		1	8	7,5	63	19	27	0 8647008101 00
	10	1,5	8	7,5	63	19	27	0 8647008151 00
		2	8	7,5	63	19	27	0 8647008201 00
		0,5	10	9,5	72	22	32	0 8647010051 00
	12	1	10	9,5	72	22	32	0 8647010101 00
		1,5	10	9,5	72	22	32	0 8647010151 00
		2	10	9,5	72	22	32	0 8647010201 00
	16	0,5	12	11,5	83	26	38	0 8647012051 00
		1	12	11,5	83	26	38	0 8647012101 00
		1,5	12	11,5	83	26	38	0 8647012151 00
	20	2	12	11,5	83	26	38	0 8647012201 00
		1	16	15,0	92	32	44	0 8647016101 00
		2	16	15,0	92	32	44	0 8647016201 00
	20	3	16	15,0	92	32	44	0 8647016301 00
New		1	20	19,0	104	38	54	0 8647020101 00
New	20	2	20	19,0	104	38	54	0 8647020201 00
New		3	20	19,0	104	38	54	0 8647020301 00

(1) GFK: glasfaser-verstärkte Kunststoffe | GRP: glass-fibre reinforced plastics | FRP: plastica rinforzata con fibra di vetro

Optional ohne Aufpreis auch mit Weldon-Schaft [DIN 6535-HB] lieferbar. | Also available with Weldon-shank [DIN 6535-HB] without extra charge. | Anche disponibili con attacco Weldon [DIN 6535-HB] senza prezzo aggiuntivo.

**D VHM-Schafffräser mit Eckenradius**  
**Speedcut-Inox,**

lang, freigestellt, Vierschneider, ungleiche Drallsteigung

**Einsatzbereich:**

VHM-Hochleistungsfräser besonders geeignet zur Bearbeitung von austenitischen rostfreien Stählen: Schlichten, Schrupp-Schlichten und Schruppen mit einem Werkzeug. Ungleiche Drallsteigung bewirkt ruhigen, vibrationsarmen Lauf und sehr gute Oberflächengüte. Hohe Zerspanungsleistung.

**E Solid carbide corner radius end mill**  
**Speedcut-Inox,**

long series, neck, four flutes, different spiral angles

**Range of application:**

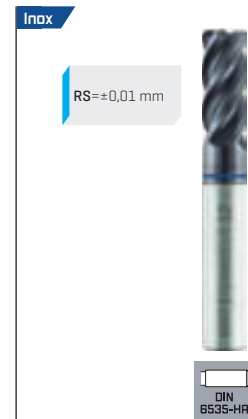
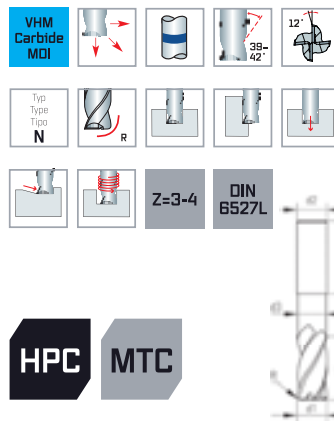
High performance carbide end mill especially suitable for cutting in austenitic stainless steels: Finishing, rough finishing and roughing with the same tool. Different spiral angles effects smooth, vibrationless running and excellent surface. High cutting performance.

**I Frese frontali MDI con spigolo raggato**  
**Speedcut-Inox,**

serie lunga, libero, 4 taglienti, angolo elica disuguale

**Impiego:**

Frese MDI ad alto rendimento, particolarmente adatte per la lavorazione di acciai austenitici inossidabili: Fresatura di finitura, sgrossatura-finitura e sgrossatura con una sola fresa. L'angolo dell'elica disuguale permette una lavorazione silenziosa senza vibrazioni, con un'ottima finitura della superficie. Con un elevato rendimento.



ALLUNIT-S®

d1 h10 mm	R	d2 h6 mm	d3 mm	l1 mm	l2 mm	l3 mm	Z	Code 6547 Art.-Nr.
2	0,2	4	1,95	40	5	10	3	0 6547002021 00
	0,3	6	2,9	57	8	14	4	0 6547003031 00
3	0,5	6	2,9	57	8	14	4	0 6547003051 00
	0,5	6	3,6	57	11	16	4	0 6547004051 00
4	1	6	3,6	57	11	16	4	0 6547004101 00
	0,5	6	4,6	57	13	18	4	0 6547005051 00
5	1	6	4,6	57	13	18	4	0 6547005101 00
	0,5	6	5,5	57	13	21	4	0 6547006051 00
6	1	6	5,5	57	13	21	4	0 6547006101 00
	1,5	6	5,5	57	13	21	4	0 6547006151 00
	2	6	5,5	57	13	21	4	0 6547006201 00
8	0,5	8	7,5	63	19	27	4	0 6547008051 00
	1	8	7,5	63	19	27	4	0 6547008101 00
	1,5	8	7,5	63	19	27	4	0 6547008151 00
	2	8	7,5	63	19	27	4	0 6547008201 00
10	0,5	10	9,5	72	22	32	4	0 6547010051 00
	1	10	9,5	72	22	32	4	0 6547010101 00
	1,5	10	9,5	72	22	32	4	0 6547010151 00
12	2	10	9,5	72	22	32	4	0 6547010201 00
	0,5	12	11,5	83	26	38	4	0 6547012051 00
	1	12	11,5	83	26	38	4	0 6547012101 00
	1,5	12	11,5	83	26	38	4	0 6547012151 00
16	2	12	11,5	83	26	38	4	0 6547012201 00
	1	16	15,0	92	32	44	4	0 6547016101 00
	2	16	15,0	92	32	44	4	0 6547016201 00
20	3	16	15,0	92	32	44	4	0 6547016301 00
	1	20	19,0	104	38	54	4	0 6547020101 00
20	2	20	19,0	104	38	54	4	0 6547020201 00
	3	20	19,0	104	38	54	4	0 6547020301 00

(1) GFK: glasfaser-verstärkte Kunststoffe | GRP: glass-fibre reinforced plastics | FRP: plastica rinforzata con fibra di vetro  
Optional ohne Aufpreis auch mit Weldon-Schaft [DIN 6535-HB] lieferbar. | Also available with Weldon-shank [DIN 6535-HB] without extra charge. |  
Anche disponibili con attacco Weldon [DIN 6535-HB] senza prezzo aggiuntivo.



**D HPC-Schaftfräser mit Eckenradius, Speedcut 4.0-Titanium,** lang, freigestellt, Fünfschneider, ungleiche Drallsteigung, mit Innenkühlung

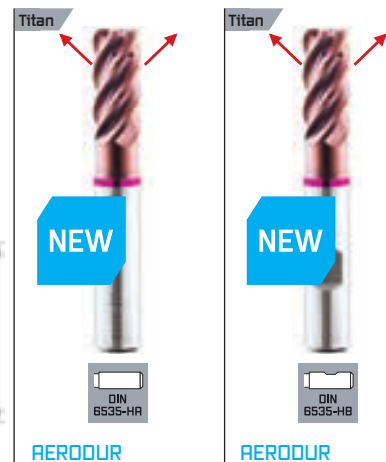
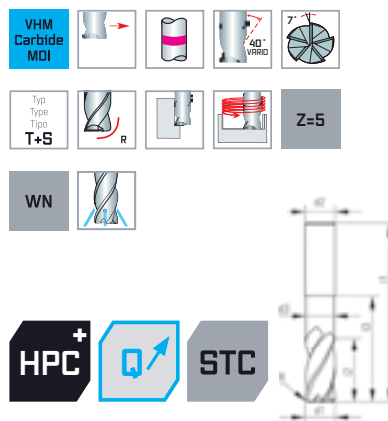
**Einsatzbereich:**  
VHM Hochleistungsfräser besonders geeignet zur Bearbeitung von Titan, Inconel und Sonderlegierungen. Ungleiche Drallsteigung bewirkt ruhigen, vibrationsarmen Lauf und sehr gute Oberflächengüte. Sehr hohe Zerspanungsleistung aufgrund des perfekten Zusammenspiels Material, Geometrie und Beschichtung.

**E HPC corner radius end mill Speedcut 4.0-Titanium,** long series, neck, five flutes, different spiral angles, with internal coolant supply

**Range of application:**  
High performance carbide end mill especially suitable for cutting titanium, Inconel and special alloys. Different spiral angles effects smooth, vibrationless running and excellent surface. Very high cutting performance due to the perfect interaction of material, geometry and coating.

**I Frese frontali HPC con spigolo raggato Speedcut 4.0-Titanium,** serie lunga, libero, 5 taglienti, angolo elica disuguale, con fori lubrificazione

**Impiego:**  
Frese MDI ad alto rendimento, particolarmente adatte per la lavorazione di titanio, Inconel e leghe speciali. L'angolo dell'elica disuguale permette una lavorazione silenziosa senza vibrazioni, con un'ottima finitura della superficie. Prestazioni di taglio molto elevate grazie alla perfetta interazione di materiale, geometria e rivestimento.



d1 h10 mm		d2 h6 mm	d3 mm	l1 mm	l2 mm	l3 mm	Z	Code 8127 Art.-Nr.	Code 8137 Art.-Nr.
3	0,25	6	2,9	57	8	10	5	0 8127003021 00	0 8137003021 00
	0,5	6	2,9	57	8	10	5	0 8127003051 00	0 8137003051 00
4	0,25	6	3,9	57	11	13	5	0 8127004021 00	0 8137004021 00
	0,5	6	3,9	57	11	13	5	0 8127004051 00	0 8137004051 00
5	0,25	6	4,9	57	13	16	5	0 8127005021 00	0 8137005021 00
	0,5	6	4,9	57	13	16	5	0 8127005051 00	0 8137005051 00
6	0,25	6	5,9	57	13	19	5	0 8127006021 00	0 8137006021 00
	0,5	6	5,9	57	13	19	5	0 8127006051 00	0 8137006051 00
8	1	6	5,9	57	13	19	5	0 8127006101 00	0 8137006101 00
	0,25	8	7,8	63	19	25	5	0 8127008021 00	0 8137008021 00
	0,5	8	7,8	63	19	25	5	0 8127008051 00	0 8137008051 00
	1	8	7,8	63	19	25	5	0 8127008101 00	0 8137008101 00
10	1,25	8	7,8	63	19	25	5	0 8127008121 00	0 8137008121 00
	2	8	7,8	63	19	25	5	0 8127008201 00	0 8137008201 00
12	0,5	10	9,8	72	22	31	5	0 8127010051 00	0 8137010051 00
	1	10	9,8	72	22	31	5	0 8127010101 00	0 8137010101 00
16	2	10	9,8	72	22	31	5	0 8127010201 00	0 8137010201 00
	0,5	12	11,5	83	26	38	5	0 8127012051 00	0 8137012051 00
20	1	12	11,5	83	26	38	5	0 8127012101 00	0 8137012101 00
	1,5	12	11,5	83	26	38	5	0 8127012151 00	0 8137012151 00
25	2,5	12	11,5	83	26	38	5	0 8127012251 00	0 8137012251 00
	3	12	11,5	83	26	38	5	0 8127012301 00	0 8137012301 00
30	4	12	11,5	83	26	38	5	0 8127012401 00	0 8137012401 00
	0,5	16	15,5	100	35	50	5	0 8127016051 00	0 8137016051 00
40	1	16	15,5	100	35	50	5	0 8127016101 00	0 8137016101 00
	1,5	16	15,5	100	35	50	5	0 8127016151 00	0 8137016151 00
50	2,5	16	15,5	100	35	50	5	0 8127016251 00	0 8137016251 00
	3	16	15,5	100	35	50	5	0 8127016301 00	0 8137016301 00
60	4	16	15,5	100	35	50	5	0 8127016401 00	0 8137016401 00
	1	20	19,5	112	40	62	5	0 8127020101 00	0 8137020101 00
80	2	20	19,5	112	40	62	5	0 8127020201 00	0 8137020201 00
	3	20	19,5	112	40	62	5	0 8127020301 00	0 8137020301 00
100	4	20	19,5	112	40	62	5	0 8127020401 00	0 8137020401 00

Spanbrecher 2 Stk. / Chip breaker 2 pcs. / Rompitruccioli 2 pz.  
Ø 3,4,5, Gerade Innenkühlung / Ø 3,4,5, Straight internal coolant supply / Ø 3,4,5, Fori lubrificazione diretto

**D HPC-Schaftfräser mit Eckenradius, Speedcut 4.0-Titanium, lang, Siebenschneider, ungleiche Drallsteigung, mit Innenkühlung**

**Einsatzbereich:**

VHM Hochleistungsfräser besonders geeignet zur Bearbeitung von Titan, Inconel und Sonderlegierungen. Ungleiche Drallsteigung bewirkt ruhigen, vibrationsarmen Lauf und sehr gute Oberflächengüte. Sehr hohe Zerspanungsleistung aufgrund des perfekten Zusammenspiels Material, Geometrie und Beschichtung.

**E HPC corner radius end mill Speedcut 4.0-Titanium, long series, seven flutes, different spiral angles, with internal coolant supply**

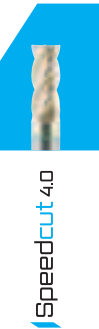
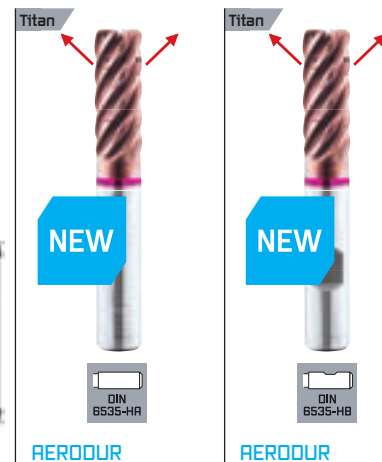
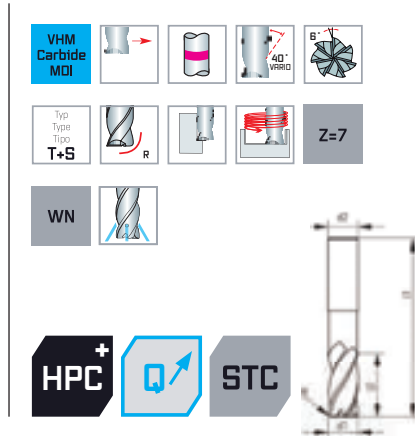
**Range of application:**

High performance carbide end mill especially suitable for cutting titanium, Inconel and special alloys. Different spiral angles effects smooth, vibrationless running and excellent surface. Very high cutting performance due to the perfect interaction of material, geometry and coating.

**I Frese frontali HPC con spigolo raggato Speedcut 4.0-Titanium, serie lunga, 7 taglienti, angolo elica disuguale, con fori lubrificazione**

**Impiego:**

Frese MDI ad alto rendimento, particolarmente adatte per la lavorazione di titanio, Inconel e leghe speciali. L'angolo dell'elica disuguale permette una lavorazione silenziosa senza vibrazioni, con un'ottima finitura della superficie. Prestazioni di taglio molto elevate grazie alla perfetta interazione di materiale, geometria e rivestimento.



d1 h10 mm	R	d2 h6 mm	l1 mm	l2 mm	Z	Code 8147 Art.-Nr.	Code 8157 Art.-Nr.
3	0,25	6	57	8	7	0 8147003021 00	0 8157003021 00
	0,5	6	57	8	7	0 8147003051 00	0 8157003051 00
4	0,25	6	57	11	7	0 8147004021 00	0 8157004021 00
	0,5	6	57	11	7	0 8147004051 00	0 8157004051 00
5	0,25	6	57	13	7	0 8147005021 00	0 8157005021 00
	0,5	6	57	13	7	0 8147005051 00	0 8157005051 00
6	0,25	6	57	13	7	0 8147006021 00	0 8157006021 00
	0,5	6	57	13	7	0 8147006051 00	0 8157006051 00
	1	6	57	13	7	0 8147006101 00	0 8157006101 00
8	0,25	8	63	19	7	0 8147008021 00	0 8157008021 00
	0,5	8	63	19	7	0 8147008051 00	0 8157008051 00
	1	8	63	19	7	0 8147008101 00	0 8157008101 00
	1,25	8	63	19	7	0 8147008121 00	0 8157008121 00
	2	8	63	19	7	0 8147008201 00	0 8157008201 00
10	0,5	10	72	22	7	0 8147010051 00	0 8157010051 00
	1	10	72	22	7	0 8147010101 00	0 8157010101 00
	2	10	72	22	7	0 8147010201 00	0 8157010201 00
12	0,5	12	83	26	7	0 8147012051 00	0 8157012051 00
	1	12	83	26	7	0 8147012101 00	0 8157012101 00
	1,5	12	83	26	7	0 8147012151 00	0 8157012151 00
	2,5	12	83	26	7	0 8147012251 00	0 8157012251 00
	3	12	83	26	7	0 8147012301 00	0 8157012301 00
16	0,5	16	100	35	7	0 8147016051 00	0 8157016051 00
	1	16	100	35	7	0 8147016101 00	0 8157016101 00
	1,5	16	100	35	7	0 8147016151 00	0 8157016151 00
	2,5	16	100	35	7	0 8147016251 00	0 8157016251 00
	3	16	100	35	7	0 8147016301 00	0 8157016301 00
20	0,5	20	112	40	7	0 8147020051 00	0 8157020051 00
	1	20	112	40	7	0 8147020101 00	0 8157020101 00
	2	20	112	40	7	0 8147020201 00	0 8157020201 00
	3	20	112	40	7	0 8147020301 00	0 8157020301 00
						0 8147020401 00	0 8157020401 00

Spanbrecher 2 Stk. / Chip breaker 2 pcs. / Rompitruccioli 2 pz. Ø 3,4,5, Gerade Innenkühlung / Ø 3,4,5, Straight internal coolant supply / Ø 3,4,5, Fori lubrificazione diretto

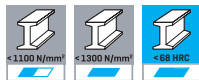


**D VHM-Schaftfräser**  
**Speedcut-Ultra Hard Steel**  
**68 HRC,**  
 lang

**Einsatzbereich:**

VHM-Hochleistungsschichtfräser speziell geeignet für die Bearbeitung von gehärteten und hochfesten Stählen. Die hohe Steifigkeit ermöglicht große Vorschübe und lange Standzeiten, der hohe Drallwinkel bewirkt dabei eine sehr gute Oberflächengüte am Werkstück. Verwendet wird der Fräser zum Umfangfräsen (Schichten). Bei geringen Tiefen ist auch ein Stirnschnitt möglich, wobei der Vorschub um 50% zu verringern ist.

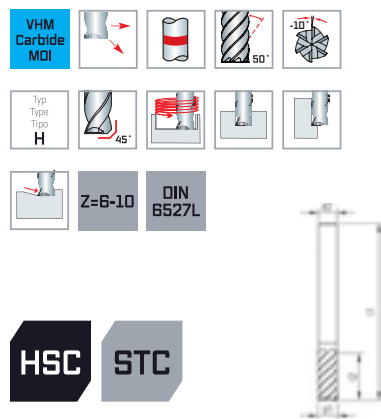
**Speedcut**



**E Solid carbide end mill**  
**Speedcut-Ultra Hard Steel**  
**68 HRC,**  
 long series

**Range of application:**

High performance carbide end mill especially suitable for machining hardened and high tensile steels. The high level of stiffness enables good feed rates and long service lives, whilst the spiral angle creates a very good surface quality on the work piece. The cutter is used for circumferential milling (finishing). For shallow depths, a face cut is also possible, in which case the feed rate should be reduced by 50%.



**I Frese frontali MDI**  
**Speedcut-Ultra Hard Steel**  
**68 HRC,**  
 serie lunga

**Impiego:**

Frese MDI ad alto rendimento per la lavorazione di acciai temprati e di elevata durezza. La notevole rigidità consente grandi avanzamenti e lunga durata, l'elevato angolo dell'elica garantisce ottima qualità delle superfici sul pezzo lavorato. La fresa è indicata per eseguire contornature (fresa a finire). In caso di basse profondità di lavorazione, è anche possibile eseguire tagli frontali, riducendo però l'avanzamento del 50%.



ALLUNIT-S®

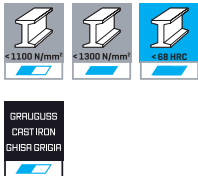
d1 <sub>e8</sub> mm	d2 <sub>h5</sub> mm	l1 mm	l2 mm		Z	Code 7277 Art.-Nr.
4	6	57	11	0,05	6	0 7277004001 00
5	6	57	13	0,05	6	0 7277005001 00
6	6	57	13	0,05	6	0 7277006001 00
8	8	63	19	0,05	6	0 7277008001 00
10	10	72	22	0,05	6	0 7277010001 00
12	12	83	26	0,05	6	0 7277012001 00
14	14	83	26	0,10	6	0 7277014001 00
16	16	92	32	0,10	8	0 7277016001 00
20	20	104	38	0,10	10	0 7277020001 00

Optional ohne Aufpreis auch mit Weldon-Schaft (DIN 6535-HB) lieferbar. | Also available with Weldon-shank (DIN 6535-HB) without extra charge. | Anche disponibili con attacco Weldon (DIN 6535-HB) senza prezzo aggiuntivo.

**D VHM-Schaftfräser**  
**Speedcut-Ultra Hard Steel**  
**68 HRC,**  
 extra lang XL, freigestellt

**Einsatzbereich:**

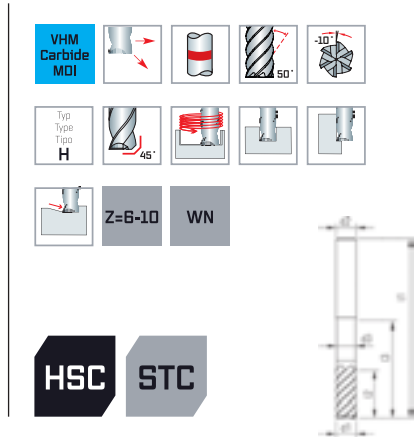
VHM-Hochleistungsschichtfräser speziell geeignet für die Bearbeitung von gehärteten und hochfesten Stählen. Die hohe Steifigkeit ermöglicht große Vorschübe und lange Standzeiten, der hohe Drallwinkel bewirkt dabei eine sehr gute Oberflächengüte am Werkstück. Verwendet wird der Fräser zum Umfangfräsen (Schlichten). Bei geringen Tiefen ist auch ein Stirnschnitt möglich, wobei der Vorschub um 50% zu verringern ist.



**E Solid carbide end mill**  
**Speedcut-Ultra Hard Steel**  
**68 HRC,**  
 extra long series XL, neck

**Range of application:**

High performance carbide end mill especially suitable for machining hardened and high tensile steels. The high level of stiffness enables good feed rates and long service lives, whilst the spiral angle creates a very good surface quality on the work piece. The cutter is used for circumferential milling [finishing]. For shallow depths, a face cut is also possible, in which case the feed rate should be reduced by 50%.



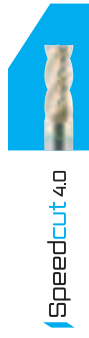
**I Frese frontali MDI**  
**Speedcut-Ultra Hard Steel**  
**68 HRC,**  
 serie extra lunga XL, libero

**Impiego:**

Frese MDI ad alto rendimento per la lavorazione di acciai temprati e di elevata durezza. La notevole rigidità consente grandi avanzamenti e lunga durata, l'elevato angolo dell'elica garantisce ottima qualità delle superfici sul pezzo lavorato. La fresa è indicata per eseguire contornature (fresa a finire). In caso di basse profondità di lavorazione, è anche possibile eseguire tagli frontali, riducendo però l'avanzamento del 50%.



ALLUNIT-S®



d1 <sub>e8</sub> mm	d2 <sub>h5</sub> mm	d3 mm	l1 mm	l2 mm	l3 mm		Z	Code 7287 Art.-Nr.
4	6	3,8	57	11	20	0,05	6	0 7287004001 00
5	6	4,7	62	13	25	0,05	6	0 7287005001 00
6	6	5,6	62	13	25	0,05	6	0 7287006001 00
8	8	7,5	70	19	32	0,05	6	0 7287008001 00
10	10	9,5	80	22	40	0,05	6	0 7287010001 00
12	12	11,5	95	26	48	0,05	6	0 7287012001 00
14	14	13,5	95	26	48	0,10	6	0 7287014001 00
16	16	15,5	105	32	56	0,10	8	0 7287016001 00
20	20	19,5	124	38	70	0,10	10	0 7287020001 00



ALLUNIT-S®

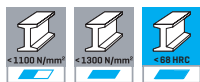
d1 <sub>e8</sub> mm	d2 <sub>h5</sub> mm	d3 mm	l1 mm	l2 mm	l3 mm		Z	Code 7287 Art.-Nr.
12	12	-	95	38	-	0,05	6	0 7287012101 00
16	16	-	105	50	-	0,10	8	0 7287016101 00

Optional ohne Aufpreis auch mit Weldon-Schaft (DIN 6535-HB) lieferbar. | Also available with Weldon-shank (DIN 6535-HB) without extra charge. | Anche disponibili con attacco Weldon (DIN 6535-HB) senza prezzo aggiuntivo.

**D VHM-Schaftfräser mit Eckenradius Speedcut-Ultra Hard Steel 68 HRC, lang, freigestellt**

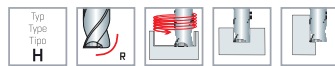
**Einsatzbereich:**  
VHM-Hochleistungsschichtfräser speziell geeignet für die Bearbeitung von gehärteten und hochfesten Stählen. Die hohe Steifigkeit ermöglicht große Vorschübe und lange Standzeiten, der hohe Drallwinkel bewirkt dabei eine sehr gute Oberflächengüte am Werkstück. Verwendet wird der Fräser zum Umfangfräsen (Schichten). Bei geringen Tiefen ist auch ein Stirnschnitt möglich, wobei der Vorschub um 50% zu verringern ist.

**Speedcut**



**E Solid carbide corner radius end mill Speedcut-Ultra Hard Steel 68 HRC, long series, neck**

**Range of application:**  
High performance carbide end mill especially suitable for machining hardened and high tensile steels. The high level of stiffness enables good feed rates and long service lives, whilst the spiral angle creates a very good surface quality on the work piece. The cutter is used for circumferential milling (finishing). For shallow depths, a face cut is also possible, in which case the feed rate should be reduced by 50%.



**I Frese frontali MDI con spigolo raggato Speedcut-Ultra Hard Steel 68 HRC, serie lunga, libero**

**Impiego:**  
Frese MDI ad alto rendimento per la lavorazione di acciai temprati e di elevata durezza. La notevole rigidità consente grandi avanzamenti e lunga durata, l'elevato angolo dell'elica garantisce ottima qualità delle superfici sul pezzo lavorato. La fresa è indicata per eseguire contornature (fresa a finire). In caso di basse profondità di lavorazione, è anche possibile eseguire tagli frontali, riducendo però l'avanzamento del 50%.

HRC



ALLUNIT-S®

d1 e8 mm	R	d2 h5 mm	d3 mm	l1 mm	l2 mm	l3 mm	Z	Code 6647 Art.-Nr.
4	0,2	6	3,9	57	6	10	6	0 6647004021 00
	0,5	6	3,9	57	6	10	6	0 6647004051 00
5	0,2	6	4,9	57	8	12	6	0 6647005021 00
	0,5	6	4,9	57	8	12	6	0 6647005051 00
6	0,2	6	5,9	57	10	15	6	0 6647006021 00
	0,3	6	5,9	57	10	15	6	0 6647006031 00
	0,5	6	5,9	57	10	15	6	0 6647006051 00
8	0,3	8	7,8	63	13	21	6	0 6647008031 00
	0,5	8	7,8	63	13	21	6	0 6647008051 00
10	0,3	10	9,8	72	16	25	6	0 6647010031 00
	0,5	10	9,8	72	16	25	6	0 6647010051 00
	1,0	10	9,8	72	16	25	6	0 6647010101 00
12	0,5	12	11,8	83	19	30	6	0 6647012051 00
	1,0	12	11,8	83	19	30	6	0 6647012101 00
16	0,5	16	15,8	92	25	38	8	0 6647016051 00
	1,0	16	15,8	92	25	38	8	0 6647016101 00

Optional ohne Aufpreis auch mit Weldon-Schaft [DIN 6535-HB] lieferbar. | Also available with Weldon-shank [DIN 6535-HB] without extra charge. | Anche disponibili con attacco Weldon [DIN 6535-HB] senza prezzo aggiuntivo.

**D VHM-Schaftfräser**  
**Speedcut-Aluminium,**  
 lang, freigestellt,  
 Zweischneider, ungleiche  
 Drallsteigung

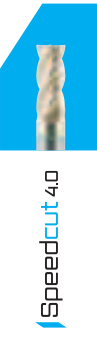
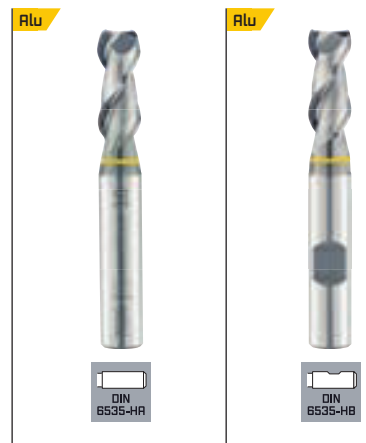
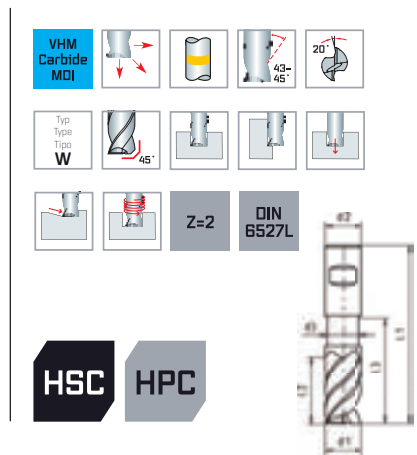
**Einsatzbereich:**  
 VHM-Hochleistungsfräser besonders geeignet zur Bearbeitung von Aluminium-Werkstoffen (sowohl für Guss- als auch Knetlegierungen). Kernantrieb für höchste Stabilität, bester Spanabfluss durch optimiertes Fertigungs-Schleifverfahren, dadurch extrem glatte Oberfläche. Höchstes Zerspanvolumen und beste Oberflächengüte durch einzigartige Schneidengeometrie.

**E Solid carbide end mill**  
**Speedcut-Aluminium,**  
 long series, neck,  
 two flutes, different spiral  
 angles

**Range of application:**  
 Solid carbide high performance end mill especially suitable for aluminium. Center web for highest stability, excellent chip breakage and chip transportation due to optimized manufacturing-grinding method, that is why extremely smooth surface. Highest cutting volume and superior surface quality due to unique cutting edge geometry.

**I Frese frontali MDI**  
**Speedcut-Alluminio,**  
 serie lunga, libero,  
 2 taglienti, angolo elica  
 disuguale

**Impiego:**  
 Fresa frontale MDI ad alto rendimento particolarmente adatta per alluminio. Nocciolo crescente per una maggiore stabilità, eccellente rottura ed evacuazione del truciolo grazie al processo di rettifica ottimizzato che rende la superficie dell'utensile estremamente liscia. Volumi asportati elevati ed eccellente qualità della superficie ottenuta grazie alla unicità della geometria dei taglienti.



d1 <sub>h10</sub> mm	d2 <sub>h6</sub> mm	d3 mm	l1 mm	l2 mm	l3 mm		Z	Code 7035 Art.-Nr.	Code 7135 Art.-Nr.
3	6	2,9	57	8	14	0,05	2	0 7035003001 00	0 7135003001 00
4	6	3,6	57	11	16	0,06	2	0 7035004001 00	0 7135004001 00
5	6	4,6	57	13	18	0,06	2	0 7035005001 00	0 7135005001 00
6	6	5,5	57	13	21	0,08	2	0 7035006001 00	0 7135006001 00
8	8	7,5	63	19	27	0,10	2	0 7035008001 00	0 7135008001 00
10	10	9,5	72	22	32	0,15	2	0 7035010001 00	0 7135010001 00
12	12	11,5	83	26	38	0,15	2	0 7035012001 00	0 7135012001 00
16	16	15,0	92	32	44	0,20	2	0 7035016001 00	0 7135016001 00
20	20	19,0	104	38	54	0,25	2	0 7035020001 00	0 7135020001 00

**D VHM-Schaftfräser Speedcut-Aluminium,**  
lang, freigestellt,  
Dreischneider, ungleiche  
Drallsteigung

**Einsatzbereich:**

VHM-Hochleistungsfräser besonders geeignet zur Bearbeitung von Aluminium-Werkstoffen (sowohl für Guss- als auch Knetlegierungen). Kernantrieb für höchste Stabilität, bester Spanabfluss durch optimiertes Fertigungs-Schleifverfahren, dadurch extrem glatte Oberfläche. Höchstes Zerspanvolumen und beste Oberflächengüte durch einzigartige Schneidengeometrie.

**E Solid carbide end mill Speedcut-Aluminium,**  
long series, neck,  
three flutes, different spiral  
angles

**Range of application:**

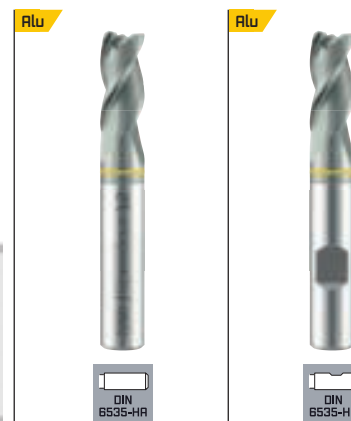
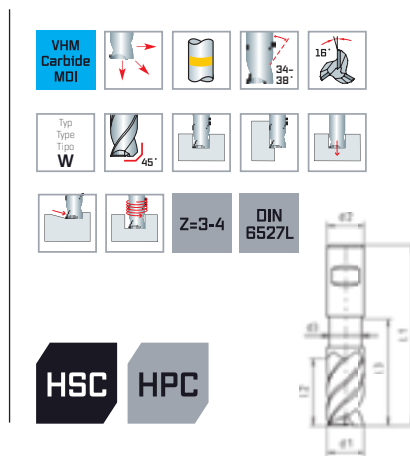
Solid carbide high performance end mill especially suitable for aluminium. Center web for highest stability, excellent chip breakage and chip transportation due to optimized manufacturing-grinding method, that is why extremely smooth surface. Highest cutting volume and superior surface quality due to unique cutting edge geometry.

**I Frese frontali MDI Speedcut-Alluminio,**  
serie lunga, libero,  
3 taglienti, angolo elica  
disuguale

**Impiego:**

Fresa frontale MDI ad alto rendimento particolarmente adatta per alluminio. Nocciolo crescente per una maggiore stabilità, eccellente rottura ed evacuazione del truciolo grazie al processo di rettifica ottimizzato che rende la superficie dell'utensile estremamente liscia. Volumi asportati elevati ed eccellente qualità della superficie ottenuta grazie alla unicità della geometria dei taglienti.

Speedcut



d1 <sub>h10</sub> mm	d2 <sub>h6</sub> mm	d3 mm	l1 mm	l2 mm	l3 mm		Z	Code 7250 Art.-Nr.	Code 7950 Art.-Nr.
3	6	2,9	57	8	14	0,05	3	0 7250003001 00	0 7950003001 00
4	6	3,6	57	11	16	0,06	3	0 7250004001 00	0 7950004001 00
5	6	4,6	57	13	18	0,06	3	0 7250005001 00	0 7950005001 00
6	6	5,5	57	13	21	0,08	3	0 7250006001 00	0 7950006001 00
8	8	7,5	63	19	27	0,10	3	0 7250008001 00	0 7950008001 00
10	10	9,5	72	22	32	0,15	3	0 7250010001 00	0 7950010001 00
12	12	11,5	83	26	38	0,15	3	0 7250012001 00	0 7950012001 00
16	16	15,0	92	32	44	0,20	3	0 7250016001 00	0 7950016001 00
20	20	19,0	104	38	54	0,25	3	0 7250020001 00	0 7950020001 00
25	25	24,0	120	45	62	0,30	4	0 7250025001 00	0 7950025001 00

**D VHM-Schafffräser**  
**Speedcut-Aluminium,**  
 extra lang XL, freigestellt,  
 Dreischneider, ungleiche  
 Drallsteigung

**Einsatzbereich:**

VHM-Hochleistungsfräser besonders geeignet zur Bearbeitung von Aluminium-Werkstoffen (sowohl für Guss- als auch Knetlegierungen). Kernanstieg für höchste Stabilität, bester Spanabfluss durch optimiertes Fertigungs-Schleifverfahren, dadurch extrem glatte Oberfläche. Höchstes Zerspanvolumen und beste Oberflächengüte durch einzigartige Schneidengeometrie.

**E Solid carbide end mill**  
**Speedcut-Aluminium,**  
 extra long series XL, neck,  
 three flutes, different spiral  
 angles

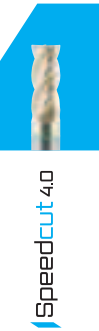
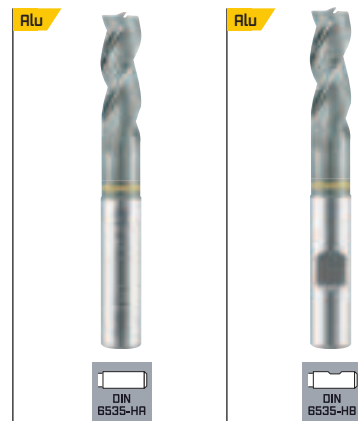
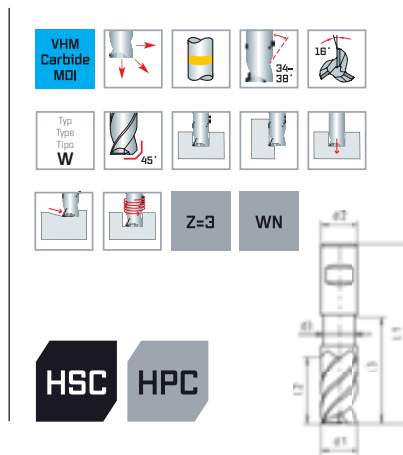
**Range of application:**

Solid carbide high performance end mill especially suitable for aluminium. Center web for highest stability, excellent chip breakage and chip transportation due to optimized manufacturing-grinding method, that is why extremely smooth surface. Highest cutting volume and superior surface quality due to unique cutting edge geometry.

**I Frese frontali MDI**  
**Speedcut-Alluminio,**  
 serie extra lunga XL, libero,  
 3 taglienti, angolo elica  
 disuguale

**Impiego:**

Fresa frontale MDI ad alto rendimento particolarmente adatta per alluminio. Nocciolo crescente per una maggiore stabilità, eccellente rottura ed evacuazione del truciolo grazie al processo di rettifica ottimizzato che rende la superficie dell'utensile estremamente liscia. Volumi asportati elevati ed eccellente qualità della superficie ottenuta grazie alla unicità della geometria dei taglienti.



d1 <sub>h10</sub> mm	d2 <sub>h6</sub> mm	d3 mm	l1 mm	l2 mm	l3 mm		Z	Code 7220 Art.-Nr.	Code 7920 Art.-Nr.
3	6	2,8	60	8	18	0,05	3	0 7220003001 00	0 7920003001 00
4	6	3,8	60	11	21	0,06	3	0 7220004001 00	0 7920004001 00
5	6	4,7	62	13	26	0,06	3	0 7220005001 00	0 7920005001 00
6	6	5,6	62	13	26	0,08	3	0 7220006001 00	0 7920006001 00
8	8	7,5	70	19	34	0,10	3	0 7220008001 00	0 7920008001 00
10	10	9,5	80	22	40	0,15	3	0 7220010001 00	0 7920010001 00
12	12	11,5	95	26	50	0,15	3	0 7220012001 00	0 7920012001 00
16	16	15,5	105	32	57	0,20	3	0 7220016001 00	0 7920016001 00
20	20	19,5	124	38	71	0,25	3	0 7220020001 00	0 7920020001 00

**D VHM-Schaftfräser Speedcut-Aluminium,** extra lang XXL, freigestellt, Dreischneider, ungleiche Drallsteigung

**E Solid carbide end mill Speedcut-Aluminium,** extra long series XXL, neck, three flutes, different spiral angles

**I Frese frontali MDI Speedcut-Alluminio,** serie extra lunga XXL, libero, 3 taglienti, angolo elica disuguale

**Einsatzbereich:**

VHM-Hochleistungsfräser besonders geeignet zur Bearbeitung von Aluminium-Werkstoffen (sowohl für Guss- als auch Knetlegierungen). Kernantrieb für höchste Stabilität, bester Spanabfluss durch optimiertes Fertigungs-Schleifverfahren, dadurch extrem glatte Oberfläche. Höchstes Zerspanvolumen und beste Oberflächengüte durch einzigartige Schneidengeometrie.

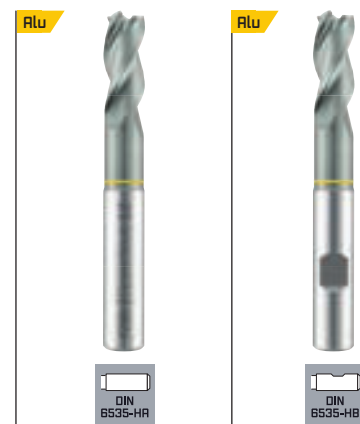
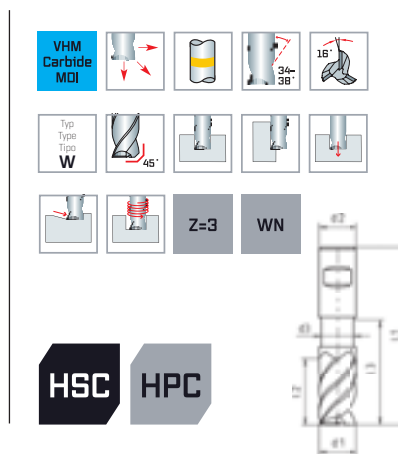
**Range of application:**

Solid carbide high performance end mill especially suitable for aluminium. Center web for highest stability, excellent chip breakage and chip transportation due to optimized manufacturing-grinding method, that is why extremely smooth surface. Highest cutting volume and superior surface quality due to unique cutting edge geometry.

**Impiego:**

Fresa frontale MDI ad alto rendimento particolarmente adatta per alluminio. Nocciolo crescente per una maggiore stabilità, eccellente rottura ed evacuazione del truciolo grazie al processo di rettifica ottimizzato che rende la superficie dell'utensile estremamente liscia. Volumi asportati elevati ed eccellente qualità della superficie ottenuta grazie alla unicità della geometria dei taglienti.

Speedcut



d1 <sub>h10</sub> mm	d2 <sub>h6</sub> mm	d3 mm	l1 mm	l2 mm	l3 mm		Z	Code 7290 Art.-Nr.	Code 7990 Art.-Nr.
3	6	2,8	60	8	20	0,05	3	0 7290003001 00	0 7990003001 00
4	6	3,8	65	11	26	0,06	3	0 7290004001 00	0 7990004001 00
5	6	4,7	76	13	39	0,06	3	0 7290005001 00	0 7990005001 00
6	6	5,6	76	13	39	0,08	3	0 7290006001 00	0 7990006001 00
8	8	7,5	100	19	62	0,10	3	0 7290008001 00	0 7990008001 00
10	10	9,5	100	22	58	0,15	3	0 7290010001 00	0 7990010001 00
12	12	11,5	120	26	73	0,15	3	0 7290012001 00	0 7990012001 00
16	16	15,5	150	32	100	0,20	3	0 7290016001 00	0 7990016001 00
20	20	19,5	150	38	100	0,25	3	0 7290020001 00	0 7990020001 00

**D VHM-Schafffräser mit Eckenradius Speedcut-Aluminium,** lang, freigestellt, Dreischneider, ungleiche Drallsteigung

**Einsatzbereich:**

VHM-Hochleistungsfräser besonders geeignet zur Bearbeitung von Aluminium-Werkstoffen (sowohl für Guss- als auch Knetlegierungen). Kernanstieg für höchste Stabilität, bester Spanabfluss durch optimiertes Fertigungs-Schleifverfahren, dadurch extrem glatte Oberfläche. Höchstes Zerspanvolumen und beste Oberflächengüte durch einzigartige Schneidengeometrie.

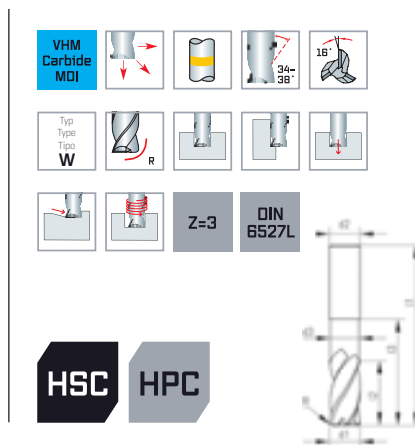
**Speedcut**



**E Solid carbide corner radius end mill Speedcut-Aluminium,** long series, neck, three flutes, different spiral angles

**Range of application:**

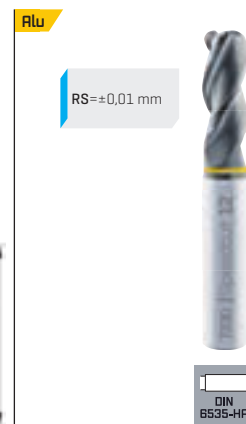
Solid carbide high performance end mill especially suitable for aluminium. Center web for highest stability, excellent chip breakage and chip transportation due to optimized manufacturing-grinding method, that is why extremely smooth surface. Highest cutting volume and superior surface quality due to unique cutting edge geometry.



**I Frese frontali MDI con spigolo raggiato Speedcut-Alluminio,** serie lunga, libero, 3 taglienti, angolo elica disuguale

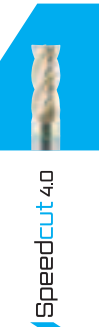
**Impiego:**

Fresa frontale MDI ad alto rendimento particolarmente adatta per alluminio. Nocciolo crescente per una maggiore stabilità, eccellente rottura ed evacuazione del truciolo grazie al processo di rettifica ottimizzato che rende la superficie dell'utensile estremamente liscia. Volumi asportati elevati ed eccellente qualità della superficie ottenuta grazie alla unicità della geometria dei taglienti.



d1 <sub>h10</sub> mm		d2 <sub>h6</sub> mm	d3 mm	l1 mm	l2 mm	l3 mm	Z	Code 7230 Art.-Nr.
3	0,5	6	2,9	57	8	14	3	0 7230003051 00
4	0,5	6	3,6	57	11	16	3	0 7230004051 00
5	0,5	6	4,6	57	13	18	3	0 7230005051 00
	1	6	4,6	57	13	18	3	0 7230005101 00
6	0,5	6	5,5	57	13	21	3	0 7230006051 00
	1	6	5,5	57	13	21	3	0 7230006101 00
8	0,5	8	7,5	63	19	27	3	0 7230008051 00
	1	8	7,5	63	19	27	3	0 7230008101 00
	2	8	7,5	63	19	27	3	0 7230008201 00
10	0,5	10	9,5	72	22	32	3	0 7230010051 00
	1	10	9,5	72	22	32	3	0 7230010101 00
	2	10	9,5	72	22	32	3	0 7230010201 00
12	1	12	11,5	83	26	38	3	0 7230012101 00
	2	12	11,5	83	26	38	3	0 7230012201 00
16	3	12	11,5	83	26	38	3	0 7230012301 00
	1	16	15,0	92	32	44	3	0 7230016101 00
	2	16	15,0	92	32	44	3	0 7230016201 00

Optional ohne Aufpreis auch mit Weldon-Schaft (DIN 6535-HB) lieferbar. | Also available with Weldon-shank (DIN 6535-HB) without extra charge. | Anche disponibili con attacco Weldon (DIN 6535-HB) senza prezzo aggiuntivo.





**D VHM-Schaftfräser mit Eckenradius Speedcut-Aluminium, extra lang XL, freigestellt, Dreischneider, ungleiche Drallsteigung**

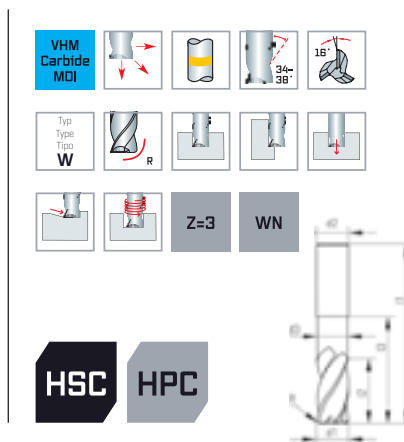
**Einsatzbereich:**  
VHM-Hochleistungsfräser besonders geeignet zur Bearbeitung von Aluminium-Werkstoffen (sowohl für Guss- als auch Knetlegierungen). Kernanstieg für höchste Stabilität, bester Spanabfluss durch optimiertes Fertigungs-Schleifverfahren, dadurch extrem glatte Oberfläche. Höchstes Zerspanvolumen und beste Oberflächengüte durch einzigartige Schneidengeometrie.

**Speedcut**



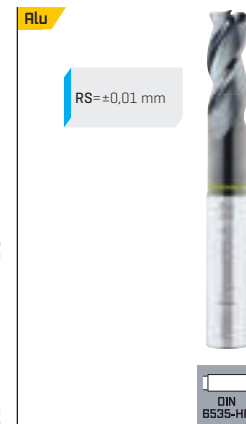
**E Solid carbide corner radius end mill Speedcut-Aluminium, extra long series XL, neck, three flutes, different spiral angles**

**Range of application:**  
Solid carbide high performance end mill especially suitable for aluminium. Center web for highest stability, excellent chip breakage and chip transportation due to optimized manufacturing-grinding method, that is why extremely smooth surface. Highest cutting volume and superior surface quality due to unique cutting edge geometry.



**I Frese frontali MDI con spigolo raggato Speedcut-Aluminium, serie extra lunga XL, libero, 3 taglienti, angolo elica disuguale**

**Impiego:**  
Fresa frontale MDI ad alto rendimento particolarmente adatta per alluminio. Nocciolo crescente per una maggiore stabilità, eccellente rottura ed evacuazione del truciolo grazie al processo di rettifica ottimizzato che rende la superficie dell'utensile estremamente liscia. Volumi asportati elevati ed eccellente qualità della superficie ottenuta grazie alla unicità della geometria dei taglienti.



d1 <sub>h10</sub> mm	R	d2 <sub>h6</sub> mm	d3 mm	l1 mm	l2 mm	l3 mm	Z	Code 7090 Art.-Nr.
3	0,5	6	2,8	60	8	18	3	0 7090003051 00
4	0,5	6	3,8	60	11	21	3	0 7090004051 00
5	0,5	6	4,7	62	13	26	3	0 7090005051 00
	1	6	4,7	62	13	26	3	0 7090005101 00
6	0,5	6	5,6	62	13	26	3	0 7090006051 00
	1	6	5,6	62	13	26	3	0 7090006101 00
8	0,5	8	7,5	70	19	34	3	0 7090008051 00
	1	8	7,5	70	19	34	3	0 7090008101 00
	2	8	7,5	70	19	34	3	0 7090008201 00
10	0,5	10	9,5	80	22	40	3	0 7090010051 00
	1	10	9,5	80	22	40	3	0 7090010101 00
	2	10	9,5	80	22	40	3	0 7090010201 00
12	1	12	11,5	95	26	50	3	0 7090012101 00
	2	12	11,5	95	26	50	3	0 7090012201 00
16	1	16	15,5	105	32	57	3	0 7090016101 00
	2	16	15,5	105	32	57	3	0 7090016201 00
20	2	20	19,5	124	38	71	3	0 7090020201 00
	4	20	19,5	124	38	71	3	0 7090020401 00

Optional ohne Aufpreis auch mit Weldon-Schaft [DIN 6535-HB] lieferbar. | Also available with Weldon-shank [DIN 6535-HB] without extra charge. | Anche disponibili con attacco Weldon [DIN 6535-HB] senza prezzo aggiuntivo.

**D VHM-Vollradiusfräser Speedcut-Aluminium,** lang, freigestellt, Zweischneider, ungleiche Drallsteigung

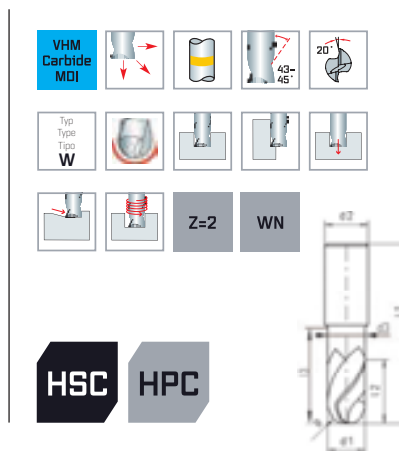
**Einsatzbereich:**  
VHM-Hochleistungsfräser besonders geeignet zur Bearbeitung von Aluminium-Werkstoffen (sowohl für Guss- als auch Knetlegierungen). Kernantrieb für höchste Stabilität, bester Spanabfluss durch optimiertes Fertigungs-Schleifverfahren, dadurch extrem glatte Oberfläche. Höchstes Zerspanvolumen und beste Oberflächengüte durch einzigartige Schneidengeometrie.

**Speedcut**



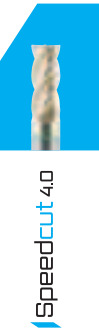
**E Solid carbide ballnose end mill Speedcut-Aluminium,** long series, neck, two flutes, different spiral angles

**Range of application:**  
Solid carbide high performance end mill especially suitable for aluminium. Center web for highest stability, excellent chip breakage and chip transportation due to optimized manufacturing-grinding method, that is why extremely smooth surface. Highest cutting volume and superior surface quality due to unique cutting edge geometry.



**I Frese cilindrica raggiata in metallo duro Speedcut-Aluminium,** serie lunga, libero, 2 taglienti, angolo elica disuguale

**Impiego:**  
Fresa frontale MDI ad alto rendimento particolarmente adatta per alluminio. Nocciolo crescente per una maggiore stabilità, eccellente rottura ed evacuazione del truciolo grazie al processo di rettifica ottimizzato che rende la superficie dell'utensile estremamente liscia. Volumi asportati elevati ed eccellente qualità della superficie ottenuta grazie alla unicità della geometria dei taglienti.



d1 <sub>h10</sub> mm	d2 <sub>h6</sub> mm	d3 mm	l1 mm	l2 mm	l3 mm	Z	Code 7240 Art.-Nr.
3	6	2,9	57	5	16	2	0 7240003001 00
4	6	3,9	57	6	18	2	0 7240004001 00
5	6	4,9	57	8	20	2	0 7240005001 00
6	6	5,9	57	10	20	2	0 7240006001 00
8	8	7,8	63	12	25	2	0 7240008001 00
10	10	9,8	72	15	30	2	0 7240010001 00
12	12	11,8	83	18	36	2	0 7240012001 00
16	16	15,8	92	24	42	2	0 7240016001 00
20	20	19,5	104	30	52	2	0 7240020001 00

Optional ohne Aufpreis auch mit Weldon-Schaft (DIN 6535-HB) lieferbar. | Also available with Weldon-shank (DIN 6535-HB) without extra charge. | Anche disponibili con attacco Weldon (DIN 6535-HB) senza prezzo aggiuntivo.

**D VHM-Vollradiusfräser Speedcut-Aluminium,** extra lang XXL, freigestellt, Zweischneider, ungleiche Drallsteigung

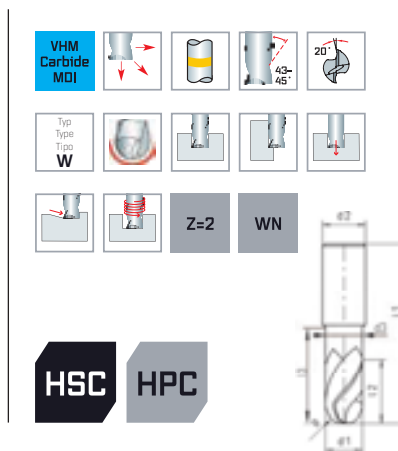
**Einsatzbereich:**  
VHM-Hochleistungsfräser besonders geeignet zur Bearbeitung von Aluminium-Werkstoffen (sowohl für Guss- als auch Knetlegierungen). Kernantrieb für höchste Stabilität, bester Spanabfluss durch optimiertes Fertigungs-Schleifverfahren, dadurch extrem glatte Oberfläche. Höchstes Zerspanvolumen und beste Oberflächengüte durch einzigartige Schneidengeometrie.

**Speedcut**



**E Solid carbide ballnose end mill Speedcut-Aluminium,** extra long series XXL, neck, two flutes, different spiral angles

**Range of application:**  
Solid carbide high performance end mill especially suitable for aluminium. Center web for highest stability, excellent chip breakage and chip transportation due to optimized manufacturing-grinding method, that is why extremely smooth surface. Highest cutting volume and superior surface quality due to unique cutting edge geometry.



**I Frese cilindrica raggiata in metallo duro Speedcut-Aluminium,** serie extra lunga XXL, libero, 2 taglienti, angolo elica disuguale

**Impiego:**  
Fresa frontale MDI ad alto rendimento particolarmente adatta per alluminio. Nocciolo crescente per una maggiore stabilità, eccellente rottura ed evacuazione del truciolo grazie al processo di rettifica ottimizzato che rende la superficie dell'utensile estremamente liscia. Volumi asportati elevati ed eccellente qualità della superficie ottenuta grazie alla unicità della geometria dei taglienti.



d1 <sub>h10</sub> mm	d2 <sub>h6</sub> mm	d3 mm	l1 mm	l2 mm	l3 mm	Z	Code 7260 Art.-Nr.
3	6	2,9	60	5	20	2	0 7260003001 00
4	6	3,9	65	6	26	2	0 7260004001 00
5	6	4,9	76	8	39	2	0 7260005001 00
6	6	5,9	76	10	39	2	0 7260006001 00
8	8	7,8	100	12	62	2	0 7260008001 00
10	10	9,8	100	15	58	2	0 7260010001 00
12	12	11,8	120	18	73	2	0 7260012001 00

Optional ohne Aufpreis auch mit Weldon-Schaft [DIN 6535-HB] lieferbar. | Also available with Weldon-shank [DIN 6535-HB] without extra charge. | Anche disponibili con attacco Weldon [DIN 6535-HB] senza prezzo aggiuntivo.

**D VHM-Schrupfräser 35°  
Speedcut-Aluminium,**  
lang, freigestellt,  
Dreischneider, ungleiche  
Drallsteigung

**E Solid carbide roughing  
end mill 35°  
Speedcut-Aluminium,**  
long series, neck,  
three flutes, different spiral  
angles

**I Frese frontali MDI a  
sgrossare 35°  
Speedcut-Alluminio,**  
serie lunga, libero,  
3 taglianti, angolo elica  
disuguale

**Einsatzbereich:**

VHM-Hochleistungs-Schrupfräser, besonders geeignet zur Bearbeitung von Aluminium-Werkstoffen (sowohl für Guss- als auch Knetlegierungen). Extrem glatte Oberfläche verhindert die Bildung von Aufbauschneiden.

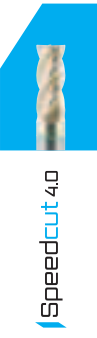
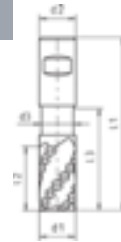
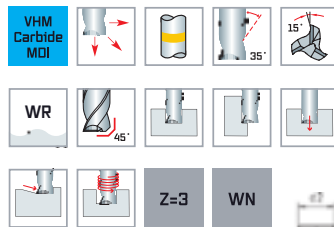
**Range of application:**

Solid carbide high performance roughing cutter especially suitable for aluminium. Extremely smooth surface prevents built-up edges.

**Impiego:**

Fresa a sgrossare MDI ad alto rendimento particolarmente adatta per alluminio. Superficie extra liscia previene il tagliante di riporto.

**Speedcut**



d1 <sub>h10</sub> mm	d2 <sub>h6</sub> mm	d3 mm	l1 mm	l2 mm	l3 mm		Z	Code 7015 Art.-Nr.	Code 7115 Art.-Nr.
6	6	5,6	57	10	20	0,35	3	0 7015006001 00	0 7115006001 00
8	8	7,5	63	13	25	0,35	3	0 7015008001 00	0 7115008001 00
10	10	9,5	72	16	30	0,45	3	0 7015010001 00	0 7115010001 00
12	12	11,5	83	19	36	0,45	3	0 7015012001 00	0 7115012001 00
16	16	15,5	92	25	42	0,65	3	0 7015016001 00	0 7115016001 00
20	20	19,5	104	31	52	0,65	3	0 7015020001 00	0 7115020001 00

**D VHM-Schrupfräser 35°  
Speedcut-Aluminium,**  
extra lang XL, freigestellt,  
Dreischneider, ungleiche  
Drallsteigung

**Einsatzbereich:**

VHM-Hochleistungs-Schrupfräser, besonders geeignet zur Bearbeitung von Aluminium-Werkstoffen (sowohl für Guss- als auch Knetlegierungen). Extrem glatte Oberfläche verhindert die Bildung von Aufbauschnitten.

**E Solid carbide roughing  
end mill 35°  
Speedcut-Aluminium,**  
extra long series XL, neck,  
three flutes, different spiral  
angles

**Range of application:**

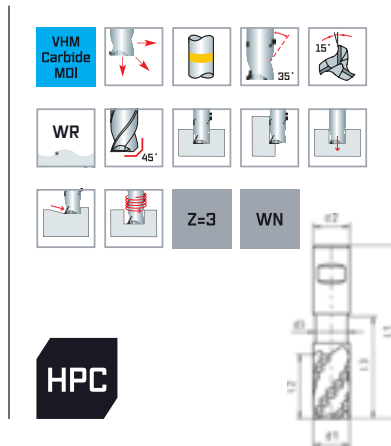
Solid carbide high performance roughing cutter especially suitable for aluminium. Extremely smooth surface prevents built-up edges.

**I Frese frontali MDI a  
sgrossare 35°  
Speedcut-Alluminio,**  
serie extra lunga XL, libero,  
3 taglienti, angolo elica  
disuguale

**Impiego:**

Fresa a sgrossare MDI ad alto rendimento particolarmente adatta per alluminio. Superficie extra liscia previene il tagliante di riporto.

Speedcut



d1 <sub>h10</sub> mm	d2 <sub>h6</sub> mm	d3 mm	l1 mm	l2 mm	l3 mm		Z	Code 7055 Art.-Nr.	Code 7155 Art.-Nr.
6	6	5,6	62	13	26	0,35	3	0 7055006001 00	0 7155006001 00
8	8	7,5	70	19	34	0,35	3	0 7055008001 00	0 7155008001 00
10	10	9,5	80	22	40	0,45	3	0 7055010001 00	0 7155010001 00
12	12	12	95	26	50	0,45	3	0 7055012001 00	0 7155012001 00
16	16	16	105	32	57	0,65	3	0 7055016001 00	0 7155016001 00
20	20	20	124	38	71	0,65	3	0 7055020001 00	0 7155020001 00

**D VHM-Schaftfräser ecoSpeedcut-Universal,** kurz, Vierschneider, ungleiche Drallsteigung

**E Solid carbide end mill ecoSpeedcut-Universal,** short series, four flutes, different spiral angles

**I Fresa in metallo duro ecoSpeedcut-Universali,** serie corta, 4 taglienti, angolo dell'elica variabile

**Einsatzbereich:**

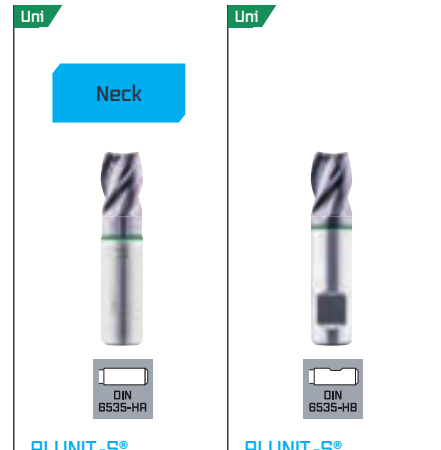
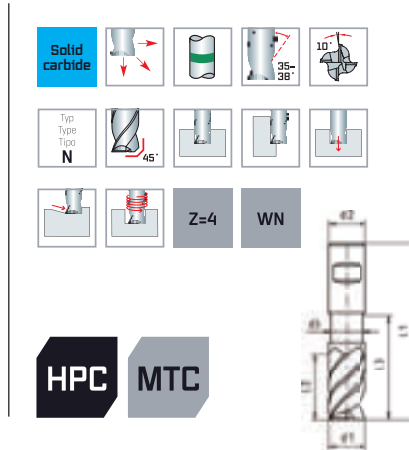
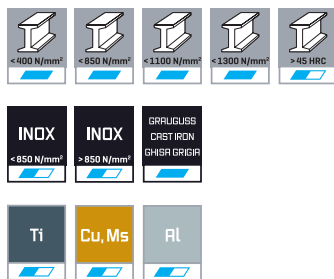
VHM-Hochleistungsfräser für universellen Einsatz: kurze, stabile Ausführung und weicher Schnitt [10 Grad]. Besonders geeignet zur Schruppbearbeitung, Schlichtbearbeitung und Nutbearbeitung in CNC Fräsbearbeitungszentren, in kombinierten Dreh- und Fräszentren sowie auf Drehautomaten. Ungleiche Drallsteigung bewirkt ruhigen, vibrationsarmen Lauf und sehr gute Oberflächengüte. Hohe Zerspanungsleistung.

**Range of application:**

High performance carbide end mill for universal applications: short, stable design and soft cut [10 degrees]. Especially suitable for roughing, finishing and groove machining in CNC milling centers, in combined turning and milling centers and automatic lathes. Different spiral angles effect smooth, vibrationless running and excellent surface. High cutting performance.

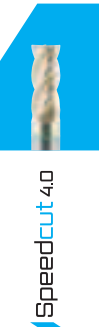
**Impiego:**

MDI Fresa ad alto rendimento per applicazioni universali: versione corta e stabile e taglio dolce (angolo di spoglia 10°). Particolarmente indicate per sgrossatura, finitura e lavorazioni di cave con centri di fresatura CNC, con centri combinati di fresatura e tornitura e torni automatici. Angolo dell'elica variabile che garantisce lavorazioni senza vibrazioni ed eccellenti superfici. Elevato asportazione truciolo.



d1 <sub>h10</sub> mm	d2 <sub>h6</sub> mm	d3* mm	l1 mm	l2 mm	l3* mm		Z	Code 7627 Art.-Nr.		Code 7127 Art.-Nr.	
4	6	3,8	40	6	10	0,20	4	0 7627004001 00	10	0 7127004001 00	10
6	6	5,6	40	8	12	0,20	4	0 7627006001 00	10	0 7127006001 00	10
8	8	7,5	50	12	16	0,25	4	0 7627008001 00	10	0 7127008001 00	10
10	10	9,5	50	13	20	0,25	4	0 7627010001 00	6	0 7127010001 00	6
12	12	11,5	50	15	24	0,25	4	0 7627012001 00	6	0 7127012001 00	6

\*Nur für Code 7627. | Only for Code 7627. | Solo per il Codice 7627.



Speedcut 4.0

**D** **STC-Schaftfräser**  
**Speedtwister-Universal,**  
 lang, freigestellt,  
 Fünfschneider, ungleiche  
 Drallsteigung, **3xD**

**Einsatzbereich:**  
 Trochoidaler Hochleistungsfräser für universellen Einsatz. Für statische und dynamische Bearbeitungen. Sehr hohe Laufruhe und perfekte Spankontrolle durch modernste Werkzeuggeometrien setzt neue Maßstäbe in der Zerspanungsleistung.

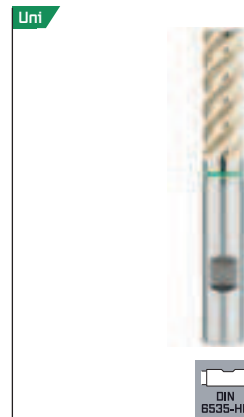
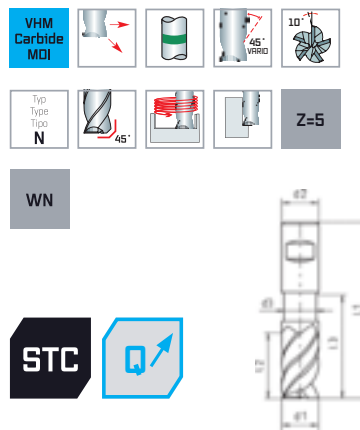
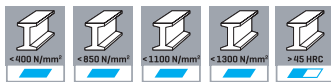
**E** **STC end mill**  
**Speedtwister-Universal,**  
 long series, neck,  
 five flutes, different spiral  
 angles, **3xD**

**Range of application:**  
 Trochoidal high performance carbide end mill for universal applications. For static and dynamic strategies. Very smooth operation and perfect chip control through modern tool geometry sets new standards in chip removal.

**I** **Fresa frontale STC**  
**Speedtwister-Universali,**  
 serie lunga, libero,  
 5 taglienti, angolo elica  
 disuguale, **3xD**

**Impiego:**  
 Fresa trocoidale ad alto rendimento per applicazioni universali. Idonea per fresatura statiche e dinamiche. Elevata silenziosità e un perfetto controllo del truciolo dalla più moderna geometria dell'utensile stabilisce nuove standard nell'trasporto truciolo.

**Speedtwister**



TWINDUR

d1 <sub>FB</sub> mm	d2 <sub>H6</sub> mm	d3 mm	l1 mm	l2 mm	l3 mm		Z	Code 6117 Art.-Nr.
3	6	2,8	54	10	14	0,05	5	0 6117003001 00
4	6	3,8	57	13	18	0,05	5	0 6117004001 00
5	6	4,8	59	16	22	0,05	5	0 6117005001 00
6	6	5,8	64	20	28	0,05	5	0 6117006001 00
8	8	7,8	72	26	34	0,05	5	0 6117008001 00
10	10	9,8	79	32	40	0,05	5	0 6117010001 00
12	12	11,8	92	38	46	0,05	5	0 6117012001 00
16	16	15,8	106	50	58	0,05	5	0 6117016001 00
20	20	19,8	125	62	70	0,05	5	0 6117020001 00

Spanbrecher 2 Stk. / Chip breaker 2 pcs. / Rompitrucioli 2 pz.

**D** **STC-Schaftfräser**  
**Speedtwister-Universal,**  
 extra lang XL,  
 Fünfschneider, ungleiche  
 Drallsteigung, **5xD**

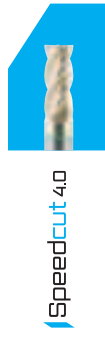
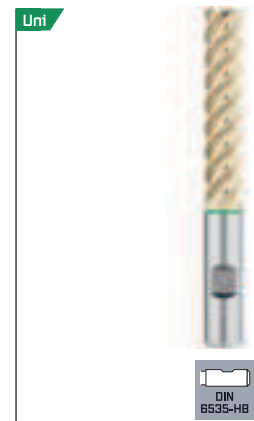
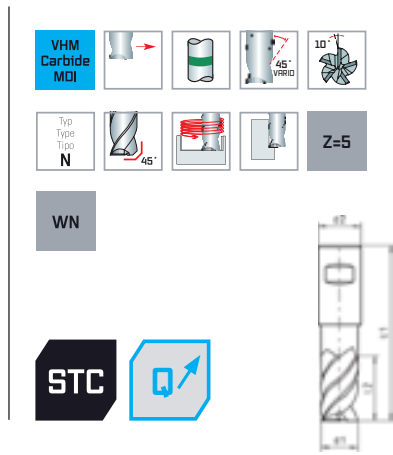
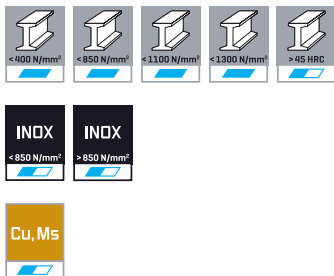
**Einsatzbereich:**  
 Trochoidaler Hochleistungsfräser für universellen Einsatz. Für statische und dynamische Bearbeitungen. Sehr hohe Laufruhe und perfekte Spankontrolle durch modernste Werkzeuggeometrien setzt neue Maßstäbe in der Zerspanungsleistung.

**E** **STC end mill**  
**Speedtwister-Universal,**  
 extra long series XL,  
 five flutes, different spiral  
 angles, **5xD**

**Range of application:**  
 Trochoidal high performance carbide end mill for universal applications. For static and dynamic strategies. Very smooth operation and perfect chip control through modern tool geometry sets new standards in chip removal.

**I** **Fresa frontale STC**  
**Speedtwister-Universali,**  
 serie extra lunga XL,  
 5 taglienti, angolo elica  
 disuguale, **5xD**

**Impiego:**  
 Fresa trocoidale ad alto rendimento per applicazioni universali. Idonea per fresatura statiche e dinamiche. Elevata silenziosità e un perfetto controllo del truciolo dalla più moderna geometria dell'utensile stabilisce nuove standard nell'trasporto truciolo.



d1 f8 mm	d2 h6 mm	l1 mm	l2 mm		Z	Code 6137 Art.-Nr.
6	6	70	32	0,05	5	0 6137006001 00
8	8	80	42	0,05	5	0 6137008001 00
10	10	99	52	0,05	5	0 6137010001 00
12	12	115	62	0,05	5	0 6137012001 00
16	16	140	82	0,05	5	0 6137016001 00

Spanbrecher 3 Stk. / Chip breaker 3 pcs. / Romptrucioli 3 pz.



**D VHM-Mehrzahn  
Schlichtfräser  
Speedtwister-Universal,  
extra lang 5xD**

**Einsatzbereich:**

VHM-Hochleistungsschlichtfräser für universellen Einsatz in Baustähle, Werkzeugstähle, Vergütungsstähle, aber auch rostfreien Stählen und Titanlegierungen bis 50 HRC.

Durch einen sehr starken Fräserkern und modifiziertem Stirnschliff mit kleiner Eckenschutzfase werden sehr hohe Zerspanungsleistungen mit exzellenter Oberflächengüte erzielt.

**Speedtwister**

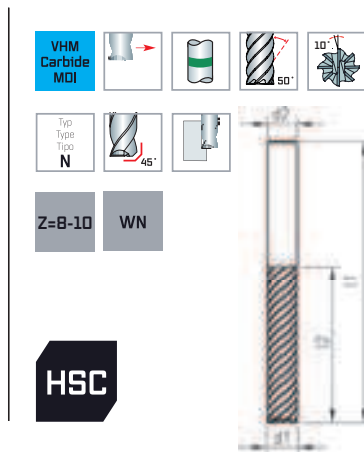


**E Solid carbide multi flute  
finishing end mill  
Speedtwister-Universal,  
extra long series 5xD**

**Range of application:**

High performance carbide finishing end mill for universal applications into structural steels, tool steels, treatable steels but also for stainless steels and titanium alloys up to 50 HRC.

Due to a very strong core and an improved face grinding with small cutting edge chamfer, very high cutting performances with excellent surface quality will be achieved.



**I Fresa in metallo duro  
multitagliente per finitura  
Speedtwister-Universale,  
extra serie lunga 5xD**

**Impiego:**

Fresa a finire in Metallo Duro ad alto rendimento per applicazioni universali idonea per acciai strutturali, acciai da utensili, acciai da tempra ma anche per acciai inossidabili e leghe di titanio fino a 50 HRC. Grazie al nocciolo rinforzato e ad una migliorata superficie rettificata con piccoli smussi di protezione e' possibile raggiungere rendimenti di taglio molto elevati ed eccellenti qualita' di finitura.



d1 e8 mm	d2 h6 mm	l1 mm	l2 mm		Z	Code 6199 Art.-Nr.
6	6	70	32	0,05	8	0 6199006001 00
8	8	80	42	0,05	8	0 6199008001 00
10	10	99	52	0,05	8	0 6199010001 00
12	12	115	62	0,05	8	0 6199012001 00
16	16	140	82	0,10	10	0 6199016001 00

**D** **STC-Schaftfräser**  
**Speedtwister-Inox,**  
lang, freigestellt,  
Fünfschneider, ungleiche  
Drallsteigung, **3xD**

**Einsatzbereich:**

Trochoidaler Hochleistungsfräser für austenitische rostfreie Stähle. Für statische und dynamische Bearbeitungen. Sehr hohe Laufruhe und perfekte Spankontrolle durch modernste Werkzeuggeometrien setzt neue Maßstäbe in der Zerspanungsleistung.

**E** **STC end mill**  
**Speedtwister-Inox,**  
long series, neck,  
five flutes, different spiral  
angles, **3xD**

**Range of application:**

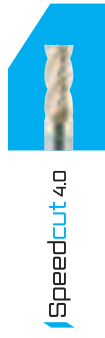
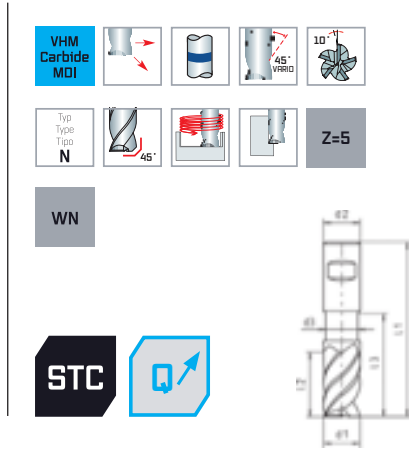
Trochoidal high performance carbide end mill for austenitic stainless steels. For static and dynamic strategies. Very smooth operation and perfect chip control through modern tool geometry sets new standards in chip removal.

**I** **Fresa frontale STC**  
**Speedtwister-Inox,**  
serie lunga, libero,  
5 taglienti, angolo elica  
disuguale, **3xD**

**Impiego:**

Fresa trocoidale ad alto rendimento per la lavorazione di acciai austenitici inossidabili. Idonea per fresatura statiche e dinamiche. Elevata silenziosità e un perfetto controllo del truciolo dalla più moderna geometria dell'utensile stabilisce nuove standard nell'trasporto truciolo.

**Speedtwister**



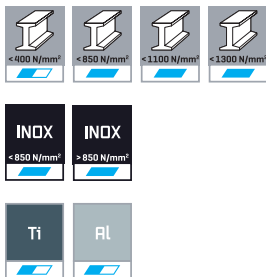
d1 <sub>f8</sub> mm	d2 <sub>h6</sub> mm	d3 mm	l1 mm	l2 mm	l3 mm		Z	Code 6107 Art.-Nr.
3	6	2,8	54	10	14	0,05	5	0 6107003001 00
4	6	3,8	57	13	18	0,05	5	0 6107004001 00
5	6	4,8	59	16	22	0,05	5	0 6107005001 00
6	6	5,8	64	20	28	0,05	5	0 6107006001 00
8	8	7,8	72	26	34	0,05	5	0 6107008001 00
10	10	9,8	79	32	40	0,05	5	0 6107010001 00
12	12	11,8	92	38	46	0,05	5	0 6107012001 00
16	16	15,8	106	50	58	0,05	5	0 6107016001 00
20	20	19,8	125	62	70	0,05	5	0 6107020001 00

Spanbrecher 2 Stk. / Chip breaker 2 pcs. / Romptrucioli 2 pz.

**D** **STC-Schaftfräser Speedtwister-Inox,**  
extra lang XL,  
Fünfschneider, ungleiche  
Drallsteigung, **5xD**

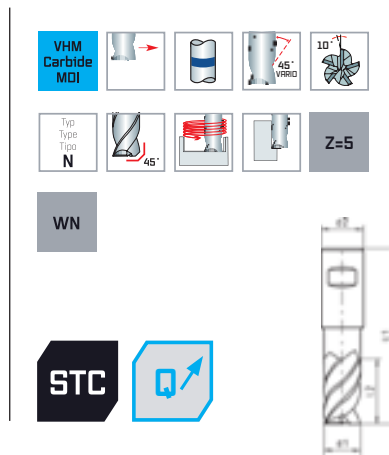
**Einsatzbereich:**  
Trochoidaler Hochleistungsfräser für austenitische rostfreie Stähle. Für statische und dynamische Bearbeitungen. Sehr hohe Laufruhe und perfekte Spankontrolle durch modernste Werkzeuggeometrien setzt neue Maßstäbe in der Zerspanungsleistung.

**Speedtwister**



**E** **STC end mill Speedtwister-Inox,**  
extra long series XL,  
five flutes, different spiral  
angles, **5xD**

**Range of application:**  
Trochoidal high performance carbide end mill for austenitic stainless steels. For static and dynamic strategies. Very smooth operation and perfect chip control through modern tool geometry sets new standards in chip removal.



**I** **Fresa frontale STC Speedtwister-Inox,**  
serie extra lunga XL,  
5 taglienti, angolo elica  
disuguale, **5xD**

**Impiego:**  
Fresa trocoidale ad alto rendimento per la lavorazione di acciai austenitici inossidabili. Idonea per fresatura statiche e dinamiche. Elevata silenziosità e un perfetto controllo del truciolo dalla più moderna geometria dell'utensile stabilisce nuove standard nell'trasporto truciolo.



ULTRADUR

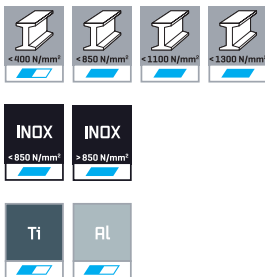
d1 <sub>f8</sub> mm	d2 <sub>H6</sub> mm	l1 mm	l2 mm		Z	Code 6197 Art.-Nr.
6	6	70	32	0,05	5	0 6197006001 00
8	8	80	42	0,05	5	0 6197008001 00
10	10	99	52	0,05	5	0 6197010001 00
12	12	115	62	0,05	5	0 6197012001 00
16	16	140	82	0,05	5	0 6197016001 00

Spanbrecher 3 Stk. / Chip breaker 3 pcs. / Rompitrucioli 3 pz.

**D** **STC-Schaftfräser Speedtwister-Inox,**  
extra lang XL,  
Fünfschneider, ungleiche  
Drallsteigung, **5xD,**  
**mit Innenkühlung**

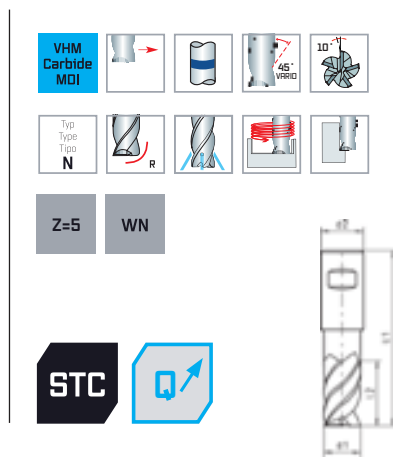
**Einsatzbereich:**  
Trochoidaler Hochleistungsfräser für austenitische rostfreie Stähle. Für statische und dynamische Bearbeitungen. Sehr hohe Laufruhe und perfekte Spankontrolle durch modernste Werkzeuggeometrien setzt neue Maßstäbe in der Zerspanungsleistung.

**Speedtwister**



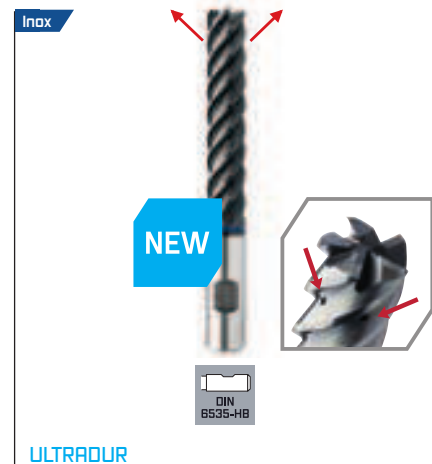
**E** **STC end mill Speedtwister-Inox,**  
extra long series XL,  
five flutes, different spiral  
angles, **5xD,**  
**with internal coolant supply**

**Range of application:**  
Trochoidal high performance carbide end mill for austenitic stainless steels. For static and dynamic strategies. Very smooth operation and perfect chip control through modern tool geometry sets new standards in chip removal.



**I** **Fresa frontale STC Speedtwister-Inox,**  
serie extra lunga XL,  
5 taglienti, angolo elica  
disuguale, **5xD,**  
**con fori lubrificazione**

**Impiego:**  
Fresa trocoidale ad alto rendimento per la lavorazione di acciai austenitici inossidabili. Idonea per fresatura statiche e dinamiche. Elevata silenziosità e un perfetto controllo del truciolo dalla più moderna geometria dell'utensile stabilisce nuove standard nell'trasporto truciolo.



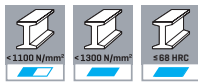
d1 $\pm 0.016$ mm	R	d2 $\pm 0.016$ mm	l1 mm	l2 mm	Z	Code 6198 Art.-Nr.
6	0,5	6	70	32	5	06198006001 00
8	0,5	8	80	42	5	06198008001 00
10	0,5	10	99	52	5	06198010001 00
12	0,5	12	115	62	5	06198012001 00
16	0,5	16	140	82	5	06198016001 00

Spanbrecher 3 Stk. / Chip breaker 3 pcs. / Rompitrucioli 3 pz.



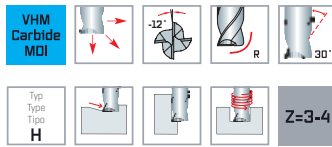
**D HSC-Torusfräser**  
kurz, Vierschneider

**Einsatzbereich:**  
HSC Hochleistungswerkzeuge für den Werkzeug- und Formenbau. Für hochlegierte und gehärtete Materialien.



**E HSC Torus end mill,**  
short series, four flutes

**Range of application:**  
HSC high-performance tools for tool and mold making. For high-alloy and hardened materials.



**I HSC Fresa toroidale,**  
serie corta, 4 taglienti

**Impiego:**  
HSC utensili ad alto rendimento per produzione utensili e stampi.

RS=±0,005 mm



KUPRADOUR

d1 e8 mm	d2 h5 mm	l1 mm	l2 mm	l3 mm	R mm	Z	Code 7110 Art.-Nr.
2	4	40	3	8	0,2	3	0 7110002021 00
2	4	40	3	8	0,3	3	0 7110002031 00
3	6	57	4	12	0,3	4	0 7110003031 00
3	6	57	4	12	0,5	4	0 7110003051 00
4	6	57	5	15	0,5	4	0 7110004051 00
4	6	57	5	15	1	4	0 7110004101 00
5	6	57	6	18	0,5	4	0 7110005051 00
5	6	57	6	18	1	4	0 7110005101 00
5	6	57	6	18	1,5	4	0 7110005151 00
6	6	57	7	21	0,5	4	0 7110006051 00
6	6	57	7	21	1	4	0 7110006101 00
6	6	57	7	21	1,5	4	0 7110006151 00
8	8	63	9	27	0,5	4	0 7110008051 00
8	8	63	9	27	1	4	0 7110008101 00
8	8	63	9	27	1,5	4	0 7110008151 00
8	8	63	9	27	2	4	0 7110008201 00
10	10	72	11	32	0,5	4	0 7110010051 00
10	10	72	11	32	1	4	0 7110010101 00
10	10	72	11	32	1,5	4	0 7110010151 00
10	10	72	11	32	2	4	0 7110010201 00
10	10	72	11	32	2,5	4	0 7110010251 00
12	12	83	12	38	0,5	4	0 7110012051 00
12	12	83	12	38	1	4	0 7110012101 00
12	12	83	12	38	1,5	4	0 7110012151 00
12	12	83	12	38	2	4	0 7110012201 00
12	12	83	12	38	3	4	0 7110012301 00
16	16	92	16	44	1	4	0 7110016101 00
16	16	92	16	44	2	4	0 7110016201 00
16	16	92	16	44	4	4	0 7110016401 00

**D** HSC-Torusfräser  
lang, Vierschneider

**E** HSC Torus end mill,  
long series, four flutes

**I** HSC Fresa toroidale,  
serie lunga, 4 taglienti

**Einsatzbereich:**

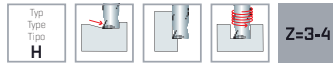
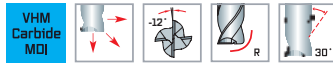
HSC Hochleistungswerkzeuge für den Werkzeug- und Formenbau. Für hochlegierte und gehärtete Materialien.

**Range of application:**

HSC high-performance tools for tool and mold making. For high-alloy and hardened materials.

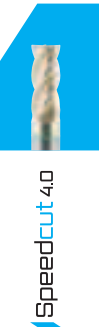
**Impiego:**

HSC utensili ad alto rendimento per produzione utensili e stampi.



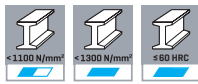
KUPRADOR

d1 <sub>e8</sub> mm	d2 <sub>h5</sub> mm	l1 mm	l2 mm	l3 mm	R mm	Z	Code 7210 Art.-Nr.
2	4	59	3	12	0,2	3	0 7210002021 00
3	6	69	4	18	0,3	4	0 7210003031 00
3	6	69	4	18	0,5	4	0 7210003051 00
4	6	69	5	24	0,5	4	0 7210004051 00
4	6	69	5	24	1	4	0 7210004101 00
5	6	69	6	30	0,5	4	0 7210005051 00
5	6	69	6	30	1	4	0 7210005101 00
6	6	80	7	44	0,5	4	0 7210006051 00
6	6	80	7	44	1	4	0 7210006101 00
6	6	80	7	44	1,5	4	0 7210006151 00
8	8	100	9	54	0,5	4	0 7210008051 00
8	8	100	9	54	1	4	0 7210008101 00
8	8	100	9	54	1,5	4	0 7210008151 00
8	8	100	9	54	2	4	0 7210008201 00
10	10	100	11	60	0,5	4	0 7210010051 00
10	10	100	11	60	1	4	0 7210010101 00
10	10	100	11	60	1,5	4	0 7210010151 00
10	10	100	11	60	2	4	0 7210010201 00
10	10	100	11	60	2,5	4	0 7210010251 00
12	12	120	12	75	0,5	4	0 7210012051 00
12	12	120	12	75	1	4	0 7210012101 00
12	12	120	12	75	1,5	4	0 7210012151 00
12	12	120	12	75	2	4	0 7210012201 00
12	12	120	12	75	3	4	0 7210012301 00
16	16	140	16	92	1	4	0 7210016101 00
16	16	140	16	92	2	4	0 7210016201 00
16	16	140	16	92	4	4	0 7210016401 00



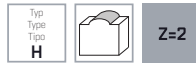
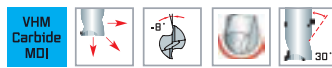
**D HSC-Vollradiusfräser**  
kurz, Zweischneider

**Einsatzbereich:**  
HSC Hochleistungswerkzeuge für den Werkzeug- und Formenbau. Für hochlegierte und gehärtete Materialien.



**E HSC ballnose end mill,**  
short series, two flutes

**Range of application:**  
HSC high-performance tools for tool and mold making. For high-alloy and hardened materials.



**I Frese cilindrica raggiata in metallo duro,**  
serie corta, 2 taglianti

**Impiego:**  
HSC utensili ad alto rendimento per produzione utensili e stampi.

RS=±0,005 mm



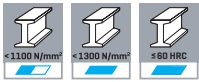
KUPRADUR

d1 <sub>e8</sub> mm	d2 <sub>h5</sub> mm	l1 mm	l2 mm	l3 mm	R mm	Z	Code 7060 Art.-Nr.
3	6	57	4	9	1,5	2	0 7060003001 00
4	6	57	5	12	2	2	0 7060004001 00
5	6	57	6	15	2,5	2	0 7060005001 00
6	6	57	7	20	3	2	0 7060006001 00
8	8	63	9	26	4	2	0 7060008001 00
10	10	72	11	31	5	2	0 7060010001 00
12	12	83	12	37	6	2	0 7060012001 00
16	16	92	16	43	8	2	0 7060016001 00

**D HSC-Vollradiusfräser**  
lang, Zweischneider

**Einsatzbereich:**

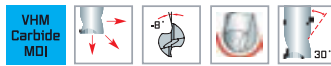
HSC Hochleistungswerkzeuge für den Werkzeug- und Formenbau. Für hochlegierte und gehärtete Materialien.



**E HSC ballnose end mill,**  
long series, two flutes

**Range of application:**

HSC high-performance tools for tool and mold making. For high-alloy and hardened materials.



**I Frese cilindrica raggiata in**  
**metallo duro,**  
serie lunga, 2 taglienti

**Impiego:**

HSC utensili ad alto rendimento per produzione utensili e stampi.



KUPRADUR



Speedcut 4.0

d1 <sub>e8</sub> mm	d2 <sub>h5</sub> mm	l1 mm	l2 mm	l3 mm	R mm	Z	Code 7160 Art.-Nr.
3	6	75	4	9	1,5	2	0 7160003001 00
4	6	75	5	12	2	2	0 7160004001 00
5	6	80	6	15	2,5	2	0 7160005001 00
6	6	80	7	20	3	2	0 7160006001 00
8	8	90	9	26	4	2	0 7160008001 00
10	10	100	11	31	5	2	0 7160010001 00
12	12	120	12	37	6	2	0 7160012001 00



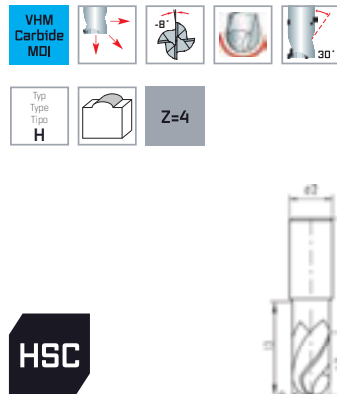
**D HSC-Vollradiusfräser**  
kurz & lang, Vierschneider

**Einsatzbereich:**  
HSC Hochleistungswerkzeuge für den Werkzeug- und Formenbau. Für hochlegierte und gehärtete Materialien.



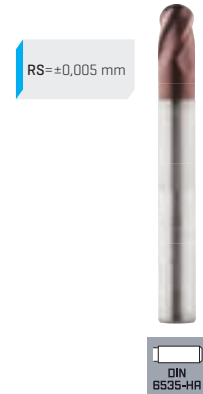
**E HSC ballnose end mill,**  
short & long series,  
four flutes

**Range of application:**  
HSC high-performance tools for tool and mold making. For high-alloy and hardened materials.



**I Frese cilindrica raggiata**  
in metallo duro,  
serie corta & lunga, 4 taglienti

**Impiego:**  
HSC utensili ad alto rendimento per produzione utensili e stampi.



d1 <sub>e8</sub> mm	d2 <sub>h5</sub> mm	l1 mm	l2 mm	l3 mm	R mm	Z	Code 7030 Art.-Nr.
4	6	60	5	12	2	4	0 7030004001 00
4	6	60	5	20	2	4	0 7030004051 00
6	6	60	10	20	3	4	0 7030006001 00
6	6	80	10	30	3	4	0 7030006051 00
8	8	75	12	26	4	4	0 7030008001 00
8	8	100	12	40	4	4	0 7030008101 00
10	10	75	16	28	5	4	0 7030010001 00
10	10	100	16	40	5	4	0 7030010101 00
12	12	100	16	30	6	4	0 7030012001 00
16	16	100	18	32	8	4	0 7030016001 00



Speedcut 4.0



## VHM-Fräser

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**E** Solid carbide milling cutters

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**I** Frese in metallo duro integrale



VHM-Fräser  
Solid carbide milling cutters  
Frese in metallo duro integrale

**D** Übersicht  
VHM-Fräser

**E** Overview  
Solid carbide  
milling cutters

**I** Sommario  
Frese in metallo  
duro integrale

**D** Die Schnittwerte für alle Werkzeuge entnehmen Sie bitte unserem separaten Zerspanungshandbuch.

**E** You will find the cutting conditions for all tools in our separate cutting manual.

**I** Per i parametri di lavorazione per tutti gli utensili richiedete il nostro manuale tecnico.

Schaftfräser / End mills / Frese frontali









































































Norm / Standard	WN						
Typ / Type / Tipo	N	N	W	N	N	N	N
Länge / Length / Lunghezza	kurz / short	kurz / short	kurz / short	lang / long	lang / long	kurz / short	kurz / short
Schneidanzahl / No. of flutes / Nr. denti	2	2	2	2	2	3	3
Kopfform / Head type / Tipo di testa							
Drallwinkel / Spiral angle / Angolo elica	30°	30°	30°	30°	30°	30°	30°
Schaftform / Shank type / Forma codolo	d1=d2	d1=d2	d1=d2	d1=d2	d1=d2	d1=d2	d1=d2
Beschichtung / Coating / Rivestimento		ALUNIT®			ALUNIT®		ALUNIT®
Ø mm	1-20	1-20	1-20	3-12	3-12	1-20	1-20
Code / Codice	6015	6017	6915	6025	6027	6055	6057
Seite / Page / Pagina	142	142	143	144	144	145	145

Geeignet für / Suitable for / Adatte per							
	Stähle < 400 N/mm² Steels < 400 N/mm² Acciai < 400 N/mm²						
	Stähle < 850 N/mm² Steels < 850 N/mm² Acciai < 850 N/mm²						
	Stähle < 1.100 N/mm² Steels < 1.100 N/mm² Acciai < 1.100 N/mm²						
	Stähle < 1.300 N/mm² Steels < 1.300 N/mm² Acciai < 1.300 N/mm²						
	Stähle > 45 HRC Steels > 45 HRC Acciai > 45 HRC						
	Rostfreie Stähle < 850 N/mm² Stainless steels < 850 N/mm² Acciai inossidabili < 850 N/mm²						
	Rostfreie Stähle > 850 N/mm² Stainless steels > 850 N/mm² Acciai inossidabili > 850 N/mm²						
	Grauguss, Temperguss Cast iron, malleable cast iron Ghisa grigia, ghisa malleabile						
	Titan- und Titanlegierung Titanium and titanium alloys Titanio e leghe di Titanio						
	Kupfer, Messing Copper, brass Rame, ottone						
	Aluminium Aluminium Alluminio						
	Kunststoffe Plastics Materie plastiche						

**D** **Übersicht**  
VHM-Fräser

**E** **Overview**  
Solid carbide  
milling cutters

**I** **Sommario**  
Frese in metallo  
duro integrale

Schaftfräser / End mills / Frese frontali						
						
WN			DIN 6527L			
N	N	N	N	N	N	N
lang / long	lang / long	kurz / short	kurz / short	lang / long	lang / long	lang / long
3	3	4	4	4	3	4
						
30°	30°	30°	30°	30°	30°	30°
d1=d2	d1=d2	d1=d2	d1=d2	d1=d2	DIN 6535-HB	DIN 6535-HB
	ALUNIT®		ALUNIT®	ALUNIT®	ALUNIT®	ALUNIT®
3-20	3-16	1-20	1-20	3-25	2-12	2-20
6065	6067	6075	6077	6087	7657	7677
146	146	147	147	148	149	150
						
						
						
						
						
						
						
						
						

VHM-Fräser  
Solid carbide milling cutters  
Frese in metallo duro integrale

**D** Übersicht  
VHM-Fräser

**E** Overview  
Solid carbide  
milling cutters

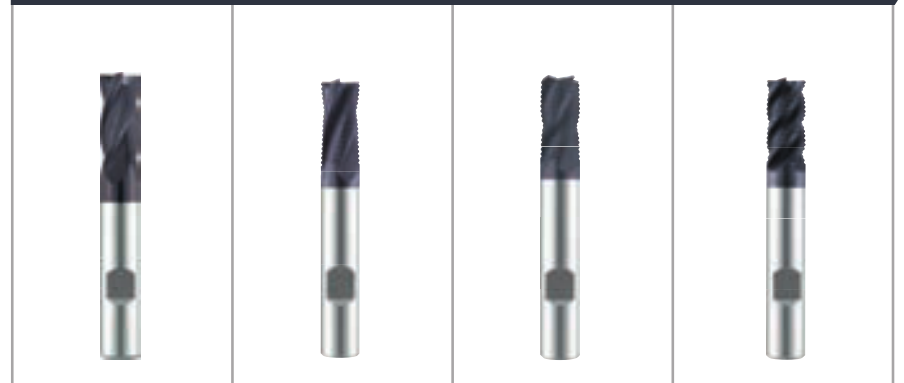
**I** Sommario  
Frese in metallo  
duro integrale

**D** Die Schnittwerte für alle Werkzeuge entnehmen Sie bitte unserem separaten Zerspanungshandbuch.

**E** You will find the cutting conditions for all tools in our separate cutting manual.

**I** Per i parametri di lavorazione per tutti gli utensili richiedete il nostro manuale tecnico.

Schaftfräser / End mills / Frese frontali































































Norm / Standard	DIN 6527L			
Typ / Type / Tipo	N	HR	HR	HR
Länge / Length / Lunghezza	lang / long	lang / long	lang / long	lang / long
Schneidenanzahl / No. of flutes / Nr. denti	4	3-5	3-4	4-5
Kopfform / Head type / Tipo di testa				
Drallwinkel / Spiral angle / Anglio elica	30°	20°	30°	45°
Schaftform / Shank type / Forma codolo	DIN 6535-HB	DIN 6535-HB	DIN 6535-HB	DIN 6535-HB
Beschichtung / Coating / Rivestimento	ALUNIT*	ALUNIT-S*	ALUNIT*	ALUNIT-S*
Ø mm	3-20	4-20	3-20	6-20
Code / Codice	7617	7047	7027	7087
Seite / Page / Pagina	151	152	153	154

Geeignet für / Suitable for / Adatte per				
	Stähle < 400 N/mm <sup>2</sup> Steels < 400 N/mm <sup>2</sup> Acciai < 400 N/mm <sup>2</sup>			
	Stähle < 850 N/mm <sup>2</sup> Steels < 850 N/mm <sup>2</sup> Acciai < 850 N/mm <sup>2</sup>			
	Stähle < 1.100 N/mm <sup>2</sup> Steels < 1.100 N/mm <sup>2</sup> Acciai < 1.100 N/mm <sup>2</sup>			
	Stähle < 1.300 N/mm <sup>2</sup> Steels < 1.300 N/mm <sup>2</sup> Acciai < 1.300 N/mm <sup>2</sup>			
	Stähle > 45 HRC Steels > 45 HRC Acciai > 45 HRC			
	Rostfreie Stähle < 850 N/mm <sup>2</sup> Stainless steels < 850 N/mm <sup>2</sup> Acciai inossidabili < 850 N/mm <sup>2</sup>			
	Rostfreie Stähle > 850 N/mm <sup>2</sup> Stainless steels > 850 N/mm <sup>2</sup> Acciai inossidabili > 850 N/mm <sup>2</sup>			
	Grauguss, Temperguss Cast iron, malleable cast iron Ghisa grigia, ghisa malleabile			
	Titan- und Titanlegierung Titanium and titanium alloys Titanio e leghe di Titanio			
	Kupfer, Messing Copper, brass Rame, ottone			
	Aluminium Aluminium Alluminio			
	Kunststoffe Plastics Materie plastiche			

**D** **Übersicht**  
VHM-Fräser

**E** **Overview**  
Solid carbide  
milling cutters

**I** **Sommario**  
Frese in metallo  
duro integrale

Schaftfräser / End mills / Frese frontali				Miniatur-Schaftfräser / Mini end mills / Frese in miniatura	
					
WN					
N	N	N	N	N	N
				kurz / short	lang / long
2	3	3	4	2	3
					
30°	30°	30°	30°	30°	30°
DIN 6535-HA	DIN 6535-HA	DIN 6535-HA	DIN 6535-HA	DIN 6535-HA	DIN 6535-HA
		ALUNIT®	ALUNIT®		ALUNIT®
1-6	1-6	1-6	1-6	0,4-3	1-3
6615	6315	6317	6517	6245	6477
155	156	156	157	158	159
					
					
					
					
					
					
					
					
					

VHM-Fräser  
Solid carbide milling cutters  
Frese in metallo duro integrale



**D** Übersicht  
VHM-Fräser

**E** Overview  
Solid carbide  
milling cutters

**I** Sommario  
Frese in metallo  
duro integrale

**D** Die Schnittwerte für alle Werkzeuge entnehmen Sie bitte unserem separaten Zerspanungshandbuch.

**E** You will find the cutting conditions for all tools in our separate cutting manual.

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Radiusfräser / Ball nose end mills / Frese cilindriche raggate











































































Norm / Standard	WN			
Typ / Type / Tipo	N	N	W	N
Länge / Length / Lunghezza	kurz / short	kurz / short	kurz / short	lang / long
Schneidenanzahl / No. of flutes / Nr. denti	2	2	2	2
Kopfform / Head type / Tipo di testa				
Drallwinkel / Spiral angle / Angolo elic	30°	30°	30°	30°
Schaftform / Shank type / Forma codolo	d1=d2	d1=d2	d1=d2	d1=d2
Beschichtung / Coating / Rivestimento		ALUNIT*		
Ø mm	1-20	1-20	1-12	3-12
Code / Codice	7525	7527	6925	7535
Seite / Page / Pagina	160	160	161	162

Geeignet für / Suitable for / Adatte per				
<b>Stähle &lt; 400 N/mm<sup>2</sup></b> Steels < 400 N/mm <sup>2</sup> Acciai < 400 N/mm <sup>2</sup>				
<b>Stähle &lt; 850 N/mm<sup>2</sup></b> Steels < 850 N/mm <sup>2</sup> Acciai < 850 N/mm <sup>2</sup>				
<b>Stähle &lt; 1.100 N/mm<sup>2</sup></b> Steels < 1.100 N/mm <sup>2</sup> Acciai < 1.100 N/mm <sup>2</sup>				
<b>Stähle &lt; 1.300 N/mm<sup>2</sup></b> Steels < 1.300 N/mm <sup>2</sup> Acciai < 1.300 N/mm <sup>2</sup>				
<b>Stähle &gt; 45 HRC</b> Steels > 45 HRC Acciai > 45 HRC				
<b>Rostfreie Stähle &lt; 850 N/mm<sup>2</sup></b> Stainless steels < 850 N/mm <sup>2</sup> Acciai inossidabili < 850 N/mm <sup>2</sup>				
<b>Rostfreie Stähle &gt; 850 N/mm<sup>2</sup></b> Stainless steels > 850 N/mm <sup>2</sup> Acciai inossidabili > 850 N/mm <sup>2</sup>				
<b>Grauguss, Temperguss</b> Cast iron, malleable cast iron Ghisa grigia, ghisa malleabile				
<b>Titan- und Titanlegierung</b> Titanium and titanium alloys Titanio e leghe di Titanio				
<b>Kupfer, Messing</b> Copper, brass Rame, ottone				
<b>Aluminium</b> Aluminium Alluminio				
<b>Kunststoffe</b> Plastics Materie plastiche				

**D** **Übersicht**  
VHM-Fräser

**E** **Overview**  
Solid carbide  
milling cutters

**I** **Sommario**  
Frese in metallo  
duro integrale

Radiusfräser / Ball nose end mills / Frese cilindriche raggate					Miniatur-Radiusfräser / Mini ball nose end mills / Frese in miniatura raggate	
						
WN				DIN 6527L	WN	
N	N	N	N	N	N	N
kurz / short	kurz / short	kurz / short	kurz / short	lang / long	kurz / short	lang / long
3	3	4	4	2	2	4
						
30°	30°	30°	30°	30°	30°	30°
d1=d2	d1=d2	d1=d2	d1=d2	DIN 6535-HB	DIN 6535-HA	DIN 6535-HA
	ALUNIT®		ALUNIT®	ALUNIT®		ALUNIT®
1-12	1-12	1-16	1-16	2-12	0,4-3	1-3
7555	7557	7075	7077	7517	6345	6387
163	163	164	164	165	166	167
						
						
						
						
						
						
						
						
						
						

VHM-Fräser  
Solid carbide milling cutters  
Frese in metallo duro integrale

**D** Übersicht  
VHM-Fräser
































































**E** Overview  
Solid carbide  
milling cutters

**I** Sommario  
Frese in metallo  
duro integrale

**D** Die Schnittwerte für alle Werkzeuge entnehmen Sie bitte unserem separaten Zerspanungshandbuch.

**E** You will find the cutting conditions for all tools in our separate cutting manual.


















































**I** Per i parametri di lavorazione per tutti gli utensili richiedete il nostro manuale tecnico.

	Miniatufräser / Mini end mills / Frese in miniatura		Viertelrund Profifräser / Quarter circle cutters / Frese a profilo raggato		Multifräser Multi end mills Multi frese MDI	Entgrater / Deburring mills / Frese a smussare	
<b>Norm / Standard</b>			WN			DIN 6527	
<b>Typ / Type / Tipo</b>	H	H	N	N	N	N   60°	N   60°
<b>Länge / Length / Lunghezza</b>							
<b>Schneidenanzahl / No. of flutes / Nr. denti</b>	2	2	4	4	2	4-6	4-6
<b>Kopfform / Head type / Tipo di testa</b>							
<b>Drallwinkel / Spiral angle / Angolo elica</b>	30°	30°					
<b>Schaftform / Shank type / Forma codolo</b>	DIN 6535-HA	DIN 6535-HA	DIN 6535-HA	DIN 6535-HA	DIN 6535-HA	DIN 6535-HB	DIN 6535-HB
<b>Beschichtung / Coating / Rivestimento</b>	ALUNIT*	ALUNIT*		ALUNIT*	ALUNIT*		ALUNIT*
<b>Ø mm</b>	0,4-3	0,4-3	1-12	1-12	3-12	4-16	4-16
<b>Code / Codice</b>	6257	6297	6415	6417	6397	7725	7727
<b>Seite / Page / Pagina</b>	168	169	170	170	171	172	172
<b>Geeignet für / Suitable for / Adatte per</b>							
 <b>Stähle &lt; 400 N/mm<sup>2</sup></b> Steels < 400 N/mm <sup>2</sup> Acciai < 400 N/mm <sup>2</sup>							
 <b>Stähle &lt; 850 N/mm<sup>2</sup></b> Steels < 850 N/mm <sup>2</sup> Acciai < 850 N/mm <sup>2</sup>							
 <b>Stähle &lt; 1.100 N/mm<sup>2</sup></b> Steels < 1.100 N/mm <sup>2</sup> Acciai < 1.100 N/mm <sup>2</sup>							
 <b>Stähle &lt; 1.300 N/mm<sup>2</sup></b> Steels < 1.300 N/mm <sup>2</sup> Acciai < 1.300 N/mm <sup>2</sup>							
 <b>Stähle &gt; 45 HRC</b> Steels > 45 HRC Acciai > 45 HRC							
 <b>INOX &lt; 850 N/mm<sup>2</sup></b> Stainless steels < 850 N/mm <sup>2</sup> Acciai inossidabili < 850 N/mm <sup>2</sup>							
 <b>INOX &gt; 850 N/mm<sup>2</sup></b> Stainless steels > 850 N/mm <sup>2</sup> Acciai inossidabili > 850 N/mm <sup>2</sup>							
 <b>Grauguss, Temperguss</b> Cast iron, malleable cast iron Ghisa grigia, ghisa malleabile							
 <b>Titan- und Titanlegierung</b> Titanium and titanium alloys Titanio e leghe di Titanio							
 <b>Kupfer, Messing</b> Copper, brass Rame, ottone							
 <b>Aluminium</b> Aluminium Alluminio							
 <b>Kunststoffe</b> Plastics Materie plastiche							

**D** **Übersicht**  
VHM-Fräser

**E** **Overview**  
Solid carbide  
milling cutters

**I** **Sommario**  
Frese in metallo  
duro integrale

Entgrater / Deburring mills / Frese a smussare		Vor- u. Rückwärtsentgrater / Forward and reverse deburring mills / Frese per sbavatura reversibili	Einzahnfräser / 1-flute end mills / Frese monoelica				Konturenfräser / Contour end mills / Frese a contornare	
								
DIN 6527			WN					
N   90°	N   90°	N	W	W	W	W	W	W
4-6	4-6	4	1	1	1	1		2
								
			30°	30°	30°	30°		
DIN 6535-HB	DIN 6535-HB	DIN 6535-HA	DIN 6535-HA	DIN 6535-HA	DIN 6535-HA	DIN 6535-HA	d1=d2	d1=d2
	ALUNIT*	ALUNIT-S*						
4-16	4-16	3-12	2-12	1-6	2-12	2-12	6-14	2-10
7755	7757	6507	6205	6935	6495	6215	7976	7986
173	173	174	175	176	177	178	179	180
								
								
								
								
								
								
								
								
								

VHM-Fräser  
Solid carbide milling cutters  
Frese in metallo duro integrale

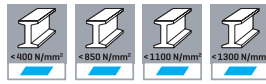
**D VHM-Schaftfräser**  
kurz, Zweischneider

**E Solid carbide end mills**  
short series, two flutes

**I Frese frontali MDI**  
serie corta, 2 taglienti

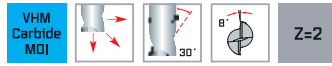
**Einsatzbereich:**

Empfohlen zum Fräsen von Werkstoffen mit mittlerer bis hoher Festigkeit bis ca. 1.300 N/mm<sup>2</sup>. Zum Bohren und anschließenden Längs- sowie Passnutenfräsen.



**Range of application:**

Recommended for milling in materials with medium and high tensile strength up to 1.300 N/mm<sup>2</sup>. For drilling continued by horizontal milling with exact tolerances.



**Impiego:**

Adatte per fresatura di materiali di media ed alta resistenza fino a 1.300 N/mm<sup>2</sup>. Foratura dal pieno e successiva fresatura di scanalature.



ALUNIT®

d1 <sub>h10</sub> mm	d2 <sub>h6</sub> mm	l1 mm	l2 mm		Z	Code 6015 Art.-Nr.	Code 6017 Art.-Nr.
1	1	38	5		2	0 6015001001 00	0 6017001001 00
1,5	1,5	38	5		2	0 6015001501 00	0 6017001501 00
2	2	38	8	0,04	2	0 6015002001 00	0 6017002001 00
2,5	2,5	38	8	0,05	2	0 6015002501 00	0 6017002501 00
3	3	38	12	0,05	2	0 6015003001 00	0 6017003001 00
3,5	3,5	40	12	0,05	2	0 6015003501 00	0 6017003501 00
4	4	40	12	0,06	2	0 6015004001 00	0 6017004001 00
4,5	4,5	50	14	0,06	2	0 6015004501 00	0 6017004501 00
5	5	50	14	0,06	2	0 6015005001 00	0 6017005001 00
6	6	50	16	0,08	2	0 6015006001 00	0 6017006001 00
7	7	60	20	0,10	2	0 6015007001 00	0 6017007001 00
8	8	63	20	0,10	2	0 6015008001 00	0 6017008001 00
9	9	67	20	0,12	2	0 6015009001 00	0 6017009001 00
10	10	72	22	0,15	2	0 6015010001 00	0 6017010001 00
12	12	73	22	0,15	2	0 6015012001 00	0 6017012001 00
14	14	75	25	0,20	2	0 6015014001 00	0 6017014001 00
16	16	82	28	0,20	2	0 6015016001 00	0 6017016001 00
18	18	84	28	0,20	2	0 6015018001 00	0 6017018001 00
20	20	104	35	0,25	2	0 6015020001 00	0 6017020001 00

**D VHM-Schaftfräser für Aluminium**

kurz, Zweischneider

**Einsatzbereich:**

Empfohlen zum Fräsen in Aluminium und Aluminiumlegierungen, Kunststoffen, Kupferlegierungen und NE-Metallen.



**E Solid carbide end mills for aluminium**

short series, two flutes

**Range of application:**

Recommended for milling aluminium and aluminium-alloys, plastics copper-alloys and non-ferrous metals.



**I Frese frontali MDI per alluminio**

serie corta, 2 taglianti

**Impiego:**

Adatte per fresatura di alluminio, leghe di alluminio, materie plastiche, leghe di rame e materiali non ferrosi.

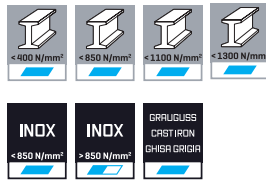


VHM-Fräser  
Solid carbide milling cutters  
Frese in metallo duro integrate

d1 <sub>h10</sub> mm	d2 <sub>h6</sub> mm	l1 mm	l2 mm	Z	Code 6915 Art.-Nr.
1	1	38	5	2	0 6915001001 00
1,5	1,5	38	5	2	0 6915001501 00
2	2	38	8	2	0 6915002001 00
2,5	2,5	38	8	2	0 6915002501 00
3	3	38	12	2	0 6915003001 00
4	4	40	12	2	0 6915004001 00
5	5	50	14	2	0 6915005001 00
6	6	50	16	2	0 6915006001 00
8	8	63	20	2	0 6915008001 00
10	10	72	22	2	0 6915010001 00
12	12	73	22	2	0 6915012001 00
14	14	75	25	2	0 6915014001 00
16	16	82	28	2	0 6915016001 00
18	18	84	28	2	0 6915018001 00
20	20	104	35	2	0 6915020001 00

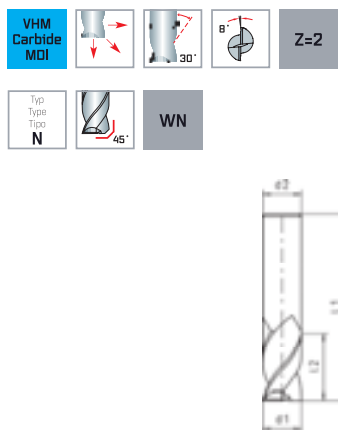
**D VHM-Schaftfräser**  
lang, Zweischneider

**Einsatzbereich:**  
Empfohlen zum Fräsen von Werkstoffen mit mittlerer bis hoher Festigkeit bis ca. 1.300 N/mm<sup>2</sup>. Zum Bohren und anschließenden Längs- sowie Passnutenfräsen.



**E Solid carbide end mills**  
long series, two flutes

**Range of application:**  
Recommended for milling in materials with medium and high tensile strength up to 1.300 N/mm<sup>2</sup>. For drilling continued by horizontal milling with exact tolerances.



**I Frese frontali MDI**  
serie lunga, 2 taglienti

**Impiego:**  
Adatte per fresatura di materiali di media ed alta resistenza fino a 1.300 N/mm<sup>2</sup>. Foratura dal pieno e successiva fresatura di scanalature.



d1 = d2



d1 = d2

ALLUNIT®

d1 <sub>h10</sub> mm	d2 <sub>h6</sub> mm	l1 mm	l2 mm		Z	Code 6025 Art.-Nr.	Code 6027 Art.-Nr.
3	3	60	25	0,05	2	0 6025003001 00	0 6027003001 00
4	4	60	25	0,06	2	0 6025004001 00	0 6027004001 00
5	5	70	30	0,06	2	0 6025005001 00	0 6027005001 00
6	6	70	30	0,08	2	0 6025006001 00	0 6027006001 00
8	8	80	35	0,10	2	0 6025008001 00	0 6027008001 00
10	10	100	45	0,15	2	0 6025010001 00	0 6027010001 00
12	12	100	45	0,15	2	0 6025012001 00	0 6027012001 00
12	12	150	75	0,15	2	0 6025012101 00	0 6027012101 00

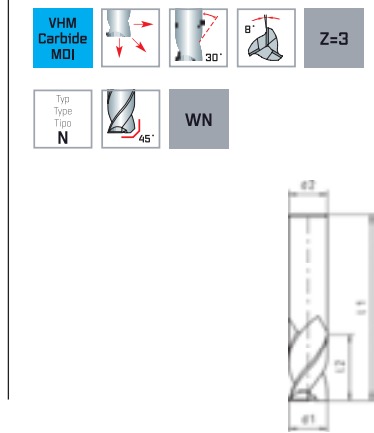
**D VHM-Schaftfräser**  
kurz, Dreischneider

**Einsatzbereich:**  
Empfohlen zum Fräsen von Werkstoffen mit mittlerer bis hoher Festigkeit bis ca. 1.300 N/mm<sup>2</sup>. Zum Bohren und anschließenden Längs- sowie Passnutenfräsen.



**E Solid carbide end mills**  
short series, three flutes

**Range of application:**  
Recommended for milling in materials with medium and high tensile strength up to 1.300 N/mm<sup>2</sup>. For drilling continued by horizontal milling with exact tolerances.



**I Frese frontali MDI**  
serie corta, 3 taglianti

**Impiego:**  
Adatte per fresatura di materiali di media ed alta resistenza fino a 1.300 N/mm<sup>2</sup>. Foratura dal pieno e successiva fresatura di scanalature.



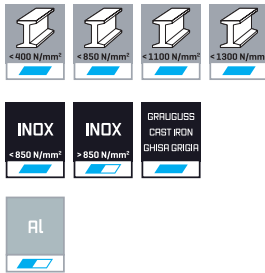
d1 <sub>h10</sub> mm	d2 <sub>h6</sub> mm	l1 mm	l2 mm		Z	Code 6055 Art.-Nr.	Code 6057 Art.-Nr.
1	1	38	5		3	0 6055001001 00	0 6057001001 00
1,5	1,5	38	5		3	0 6055001501 00	0 6057001501 00
2	2	38	8	0,04	3	0 6055002001 00	0 6057002001 00
2,5	2,5	38	8	0,05	3	0 6055002501 00	0 6057002501 00
3	3	38	12	0,05	3	0 6055003001 00	0 6057003001 00
3,5	3,5	40	12	0,05	3	0 6055003501 00	0 6057003501 00
4	4	40	12	0,06	3	0 6055004001 00	0 6057004001 00
4,5	4,5	50	14	0,06	3	0 6055004501 00	0 6057004501 00
5	5	50	14	0,06	3	0 6055005001 00	0 6057005001 00
6	6	50	16	0,08	3	0 6055006001 00	0 6057006001 00
7	7	60	20	0,10	3	0 6055007001 00	0 6057007001 00
8	8	63	20	0,10	3	0 6055008001 00	0 6057008001 00
9	9	67	20	0,12	3	0 6055009001 00	0 6057009001 00
10	10	72	22	0,15	3	0 6055010001 00	0 6057010001 00
12	12	73	22	0,15	3	0 6055012001 00	0 6057012001 00
14	14	75	25	0,20	3	0 6055014001 00	0 6057014001 00
16	16	82	28	0,20	3	0 6055016001 00	0 6057016001 00
18	18	84	28	0,20	3	0 6055018001 00	0 6057018001 00
20	20	104	35	0,25	3	0 6055020001 00	0 6057020001 00

VHM-Fräser  
Solid carbide milling cutters  
Frese in metallo duro integrate



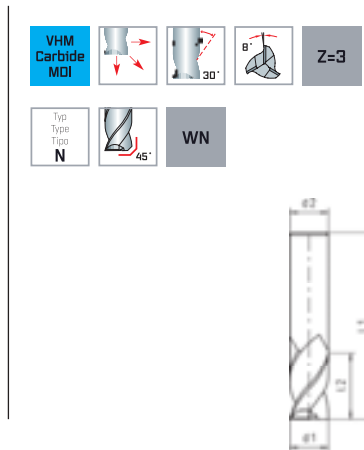
**D VHM-Schaftfräser**  
lang, Dreischneider

**Einsatzbereich:**  
Empfohlen zum Fräsen von Werkstoffen mit mittlerer bis hoher Festigkeit bis ca. 1.300 N/mm<sup>2</sup>.  
Zum Bohren und anschließenden Längs- sowie Passnutenfräsen.



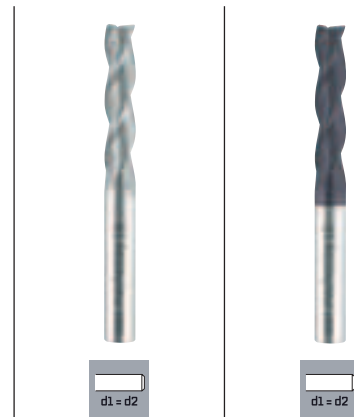
**E Solid carbide end mills**  
long series, three flutes

**Range of application:**  
Recommended for milling in materials with medium and high tensile strength up to 1.300 N/mm<sup>2</sup>.  
For drilling continued by horizontal milling with exact tolerances.



**I Frese frontali MDI**  
serie lunga, 3 taglianti

**Impiego:**  
Adatte per fresatura di materiali di media ed alta resistenza fino a 1.300 N/mm<sup>2</sup>. Foratura dal pieno e successiva fresatura di scanalature.

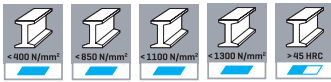


d1 <sub>h10</sub> mm	d2 <sub>h6</sub> mm	l1 mm	l2 mm		Z	Code 6065 Art.-Nr.	Code 6067 Art.-Nr.
3	3	60	25	0,05	3	0 6065003001 00	0 6067003001 00
4	4	60	25	0,06	3	0 6065004001 00	0 6067004001 00
5	5	70	30	0,06	3	0 6065005001 00	0 6067005001 00
6	6	70	30	0,08	3	0 6065006001 00	0 6067006001 00
8	8	80	35	0,10	3	0 6065008001 00	0 6067008001 00
10	10	100	45	0,15	3	0 6065010001 00	0 6067010001 00
12	12	100	45	0,15	3	0 6065012001 00	0 6067012001 00
12	12	150	75	0,15	3	0 6065012101 00	
16	16	100	45	0,20	3	0 6065016001 00	0 6067016001 00
20	20	125	55	0,25	3	0 6065020001 00	
20	20	150	75	0,25	3	0 6065020101 00	

**D VHM-Schaftfräser**  
kurz, Vierschneider

**Einsatzbereich:**

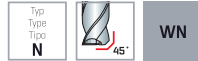
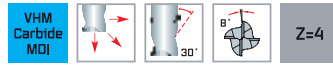
Empfohlen zum Fräsen von Werkstoffen mit mittlerer bis hoher Festigkeit. Fräsen von Nuten mit größerer Bohrtiefe, exakten Passungen, ebenso zum Stirn- und Umfangfräsen geeignet. Hoher Zerspanungsleistung und große Laufruhe ergeben exzellente Oberflächengüte.



**E Solid carbide end mills**  
short series, four flutes

**Range of application:**

Recommended for milling in materials with medium and high tensile strength. Milling of slots with large depth, accurate fits as well as face and surface milling. High cutting performance in chipping and a smooth run result an excellent surface.



**I Frese frontali MDI**  
serie corta, 4 taglianti

**Impiego:**

Adatte per fresatura di materiali di media ed alta resistenza. Fresatura di scanalature profonde, con accoppiamenti precisi, anche per fresatura frontale e tangenziale. Elevato rendimento, silenziosità di passata, eccellente finitura della superficie.



ALUNIT®

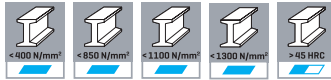
d1 <sub>h10</sub> mm	d2 <sub>h6</sub> mm	l1 mm	l2 mm		Z	Code 6075 Art.-Nr.	Code 6077 Art.-Nr.
1	1	38	5		4	0 6075001001 00	0 6077001001 00
1,5	1,5	38	5		4	0 6075001501 00	0 6077001501 00
2	2	38	8	0,04	4	0 6075002001 00	0 6077002001 00
2,5	2,5	38	8	0,05	4	0 6075002501 00	0 6077002501 00
3	3	38	12	0,05	4	0 6075003001 00	0 6077003001 00
3,5	3,5	40	12	0,05	4	0 6075003501 00	0 6077003501 00
4	4	40	12	0,06	4	0 6075004001 00	0 6077004001 00
4,5	4,5	50	14	0,06	4	0 6075004501 00	0 6077004501 00
5	5	50	14	0,06	4	0 6075005001 00	0 6077005001 00
6	6	50	16	0,08	4	0 6075006001 00	0 6077006001 00
7	7	60	20	0,10	4	0 6075007001 00	0 6077007001 00
8	8	63	20	0,10	4	0 6075008001 00	0 6077008001 00
9	9	67	20	0,12	4	0 6075009001 00	0 6077009001 00
10	10	72	22	0,15	4	0 6075010001 00	0 6077010001 00
12	12	73	22	0,15	4	0 6075012001 00	0 6077012001 00
14	14	75	25	0,20	4	0 6075014001 00	0 6077014001 00
16	16	82	28	0,20	4	0 6075016001 00	0 6077016001 00
18	18	84	28	0,20	4	0 6075018001 00	0 6077018001 00
20	20	104	35	0,25	4	0 6075020001 00	0 6077020001 00

VHM-Fräser  
Solid carbide milling cutters  
Frese in metallo duro integrate

**D VHM-Schaftfräser**  
lang, Vierschneider

**Einsatzbereich:**

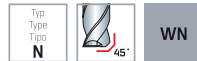
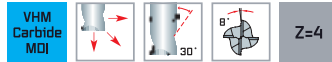
Zum Schlichten mit hoher Zerspanungsleistung bei gleichzeitig exzellenter Oberfläche von Stählen mit mittlerer bis hoher Festigkeit (z.B. Bau-, Einsatz-, Vergütungsstähle); NE-Metalle, rost- und säurebeständige Stähle. Bevorzugt Gleichlaufräsen.



**E Solid carbide end mills**  
long series, four flutes

**Range of application:**

Finishing with high cutting performance and excellent surface on steels with medium to high tensile strength (for example structural, case-hardening, heat-treatable steels); non-ferrous metals, stainless and acid resistant steels. Climb milling preferred.



**I Frese frontali MDI**  
serie lunga, 4 taglianti

**Impiego:**

Adatte per finitura ad alto rendimento realizzato di ottima superficie, in acciai di media fino ad elevata resistenza (es. acciai bonificati), materiali non ferrosi, acciai inox e resistenti agli acidi. Consigliata fresatura concorde.



ALLUNIT®

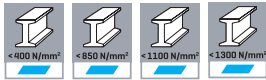
d1 <sub>h10</sub> mm	d2 <sub>h6</sub> mm	l1 mm	l2 mm		Z	Code 6087 Art.-Nr.
3	3	60	25	0,05	4	0 6087003001 00
4	4	60	25	0,06	4	0 6087004001 00
5	5	70	30	0,06	4	0 6087005001 00
6	6	70	30	0,08	4	0 6087006001 00
8	8	80	35	0,10	4	0 6087008001 00
10	10	100	45	0,15	4	0 6087010001 00
12	12	100	45	0,15	4	0 6087012001 00
12	12	150	75	0,15	4	0 6087012101 00
14	14	100	45	0,20	4	0 6087014001 00
14	14	150	75	0,20	4	0 6087014101 00
16	16	100	45	0,20	4	0 6087016001 00
16	16	150	75	0,20	4	0 6087016101 00
18	18	100	45	0,20	4	0 6087018001 00
18	18	150	75	0,20	4	0 6087018101 00
20	20	125	55	0,25	4	0 6087020001 00
20	20	150	75	0,25	4	0 6087020101 00
25	25	125	55	0,30	4	0 6087025001 00
25	25	150	75	0,30	4	0 6087025101 00

**D VHM-Schaftfräser**

lang, Dreischneider,  
DIN 6527L, mit verstärktem  
Schaft

**Einsatzbereich:**

Empfohlen zum Fräsen von Werkstoffen mit mittlerer bis hoher Festigkeit. Fräsen von Nuten mit größerer Bohrtiefe, genauen Passungen, ebenso zum Stirn- und Umfangfräsen geeignet. Hohe Zerspanungsleistung und große Laufruhe ergeben exzellente Oberflächengüte.

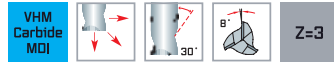


**E Solid carbide end mills**

long series, three flutes,  
DIN 6527L, with reinforced  
shank

**Range of application:**

Recommended for milling in materials with medium/high tensile strength. Milling of slots with large depth, accurate fits as well as face and surface milling. High cutting performance in chipping and a smooth run result in an excellent surface.



**I Frese frontali MDI**

serie lunga, 3 taglienti,  
DIN 6527L, codolo rinforzato

**Impiego:**

Adatte per fresatura di materiali di media ed alta resistenza. Fresatura di scanalature profonde, con accoppiamenti precisi, anche per fresatura frontale e tangenziale. Elevato rendimento, silenziosità di passata, eccellente finitura della superficie.



ALLUNIT®



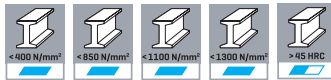
VHM-Fräser  
Solid carbide milling cutters  
Frese in metallo duro integrate

d1 <sub>h10</sub> mm	d1 <sub>h6</sub> mm	l1 mm	l2 mm		Z	Code 7657 Art.-Nr.
2	6	50	6	0,04	3	0 7657002001 00
2,5	6	50	6	0,05	3	0 7657002501 00
3	6	57	7	0,05	3	0 7657003001 00
3,5	6	57	7	0,05	3	0 7657003501 00
4	6	57	8	0,06	3	0 7657004001 00
4,5	6	57	8	0,06	3	0 7657004501 00
5	6	57	10	0,06	3	0 7657005001 00
5,5	6	57	10	0,08	3	0 7657005501 00
6	6	57	10	0,08	3	0 7657006001 00
7	8	63	13	0,10	3	0 7657007001 00
8	8	63	16	0,10	3	0 7657008001 00
9	10	72	16	0,12	3	0 7657009001 00
10	10	72	19	0,15	3	0 7657010001 00
11	12	83	22	0,15	3	0 7657011001 00
12	12	83	22	0,15	3	0 7657012001 00

**D VHM-Schaftfräser**  
lang, Vierschneider,  
DIN 6527L, mit verstärktem  
Schaft

**Einsatzbereich:**

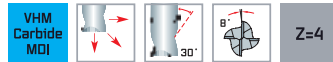
Zum Schlichten mit hoher Zerspanungsleistung bei gleichzeitig exzellenter Oberfläche von Stählen mit mittlerer bis hoher Festigkeit (z.B. Bau-, Einsatz-, Vergütungsstähle); NE-Metalle, rost- und säurebeständige Stähle. Bevorzugt Gleichlaufräsen.



**E Solid carbide end mills**  
long series, four flutes,  
DIN 6527L, with reinforced  
shank

**Range of application:**

Finishing with high cutting performance and excellent surface on steels with medium to high tensile strength (for example structural, case-hardening, heat-treatable steels); non-ferrous metals, stainless and acid resistant steels. Climb milling preferred.



**I Frese frontali MDI**  
serie lunga, 4 taglienti,  
DIN 6527L, codolo rinforzato

**Impiego:**

Adatte per finitura ad alto rendimento realizzato di ottima superficie, in acciai di media fino ad elevata resistenza (es. acciai bonificati), materiali non ferrosi, acciai inox e resistenti agli acidi. Consigliata fresatura concorde.



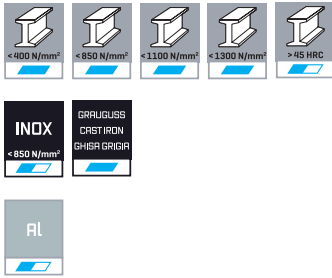
ALLUNIT®

d1 <sub>h10</sub> mm	d2 <sub>h6</sub> mm	l1 mm	l2 mm		Z	Code 7677 Art.-Nr.
2	6	50	7	0,04	4	0 7677002001 00
2,5	6	50	7	0,05	4	0 7677002501 00
3	6	57	8	0,05	4	0 7677003001 00
3,5	6	57	10	0,05	4	0 7677003501 00
4	6	57	11	0,06	4	0 7677004001 00
4,5	6	57	11	0,06	4	0 7677004501 00
5	6	57	13	0,06	4	0 7677005001 00
5,5	6	57	13	0,08	4	0 7677005501 00
6	6	57	13	0,08	4	0 7677006001 00
6,5	8	63	16	0,08	4	0 7677006501 00
7	8	63	16	0,10	4	0 7677007001 00
7,5	8	63	16	0,10	4	0 7677007501 00
8	8	63	19	0,10	4	0 7677008001 00
8,5	10	72	19	0,12	4	0 7677008501 00
9	10	72	19	0,12	4	0 7677009001 00
10	10	72	22	0,15	4	0 7677010001 00
11	12	83	26	0,15	4	0 7677011001 00
12	12	83	26	0,15	4	0 7677012001 00
13	14	83	26	0,18	4	0 7677013001 00
15	16	92	32	0,20	4	0 7677015001 00
16	16	92	32	0,20	4	0 7677016001 00
20	20	104	38	0,25	4	0 7677020001 00

**D VHM-Schaftfräser**  
lang, scharfkantig,  
Vierschneider, DIN 6527L,  
mit verstärktem Schaft

**Einsatzbereich:**

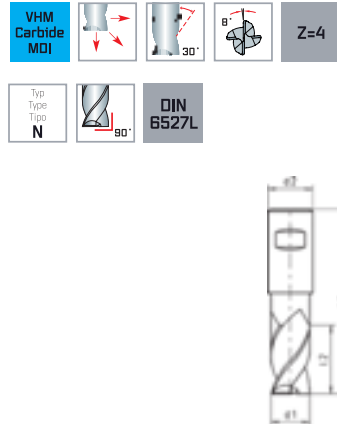
Zum Schlichten mit hoher Zerspanungsleistung bei gleichzeitig exzellenter Oberfläche von Stählen mit mittlerer bis hoher Festigkeit (z.B. Bau-, Einsatz-, Vergütungsstähle); NE-Metalle, rost- und säurebeständige Stähle. Bevorzugt Gleichlaufräsen.



**E Solid carbide end mills**  
long series, sharp cutting  
edges, four flutes, DIN 6527L,  
with reinforced shank

**Range of application:**

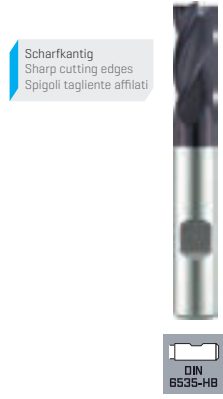
Finishing with high cutting performance and excellent surface on steels with medium to high tensile strength (for example structural, case-hardening, heat-treatable steels); non-ferrous metals, stainless and acid resistant steels. Climb milling preferred.



**I Frese frontali MDI**  
serie lunga, spigoli tagliente  
affilati, 4 taglienti, DIN 6527L,  
codolo rinforzato

**Impiego:**

Adatte per finitura ad alto rendimento realizzo di ottima superficie, in acciai di media fino ad elevata resistenza (es. acciai bonificati), materiali non ferrosi, acciai inox e resistenti agli acidi. Consigliata fresatura concorde.



ALLUNIT®

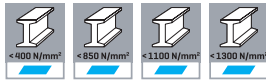
d1 <sub>h10</sub> mm	d2 <sub>h6</sub> mm	l1 mm	l2 mm	Z	Code 7617 Art.-Nr.
3	6	57	8	4	0 7617003001 00
4	6	57	11	4	0 7617004001 00
5	6	57	13	4	0 7617005001 00
6	6	57	13	4	0 7617006001 00
8	8	63	19	4	0 7617008001 00
10	10	72	22	4	0 7617010001 00
12	12	83	26	4	0 7617012001 00
16	16	92	32	4	0 7617016001 00
20	20	104	38	4	0 7617020001 00

VHM-Fräser  
 Solid carbide milling cutters  
 Frese in metallo duro integrate

**D VHM-Schrupfräser 20°**  
lang, DIN 6527L

**Einsatzbereich:**

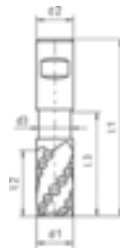
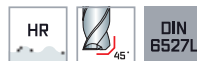
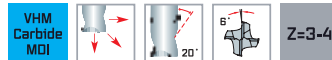
VHM-Hochleistungs-Schrupfräser, besonders geeignet für alle Stahlwerkstoffe bis 1.400 N/mm<sup>2</sup>, höherfeste rostfreie Stähle, Grauguss sowie kurzspanende Aluminiumwerkstoffe und Aluminiumguss. Hohe Zerspanungsleistung.



**E Solid carbide roughing end mills 20°**  
long series, DIN 6527L

**Range of application:**

Solid carbide high performance roughing cutter, especially suitable for all kind of steels up to 1.400 N/mm<sup>2</sup>, higher tensile stainless steels, grey cast iron as well as short chipping aluminium and aluminium cast. High cutting performance.




**I Frese frontali MDI a sgrossare 20°**  
serie lunga, DIN 6527L

**Impiego:**

Fresa a sgrossare MDI ad alto rendimento particolarmente adatta per tutti i tipi di acciaio fino a 1.400 N/mm<sup>2</sup>, acciai inossidabili ad alta resistenza e ghisa ed inoltre per alluminio a truciolo corto ed alluminio pressofuso. Alto rendimento di taglio.



ALLUNIT-S®

d1 <sub>h10</sub> mm	d2 <sub>h6</sub> mm	d3 mm	l1 mm	l2 mm	l3 mm		Z	Code 7047 Art.-Nr.
4	6	3,8	57	11	18	0,10	3	0 7047004001 00
5	6	4,7	57	13	20	0,20	3	0 7047005001 00
6	6	5,6	57	13	20	0,20	3	0 7047006001 00
8	8	7,5	63	19	25	0,20	3	0 7047008001 00
10	10	9,5	72	22	30	0,20	4	0 7047010001 00
12	12	11,5	83	26	36	0,35	4	0 7047012001 00
14	14	13,5	83	26	36	0,35	4	0 7047014001 00
16	16	15,5	92	32	42	0,35	4	0 7047016001 00
20	20	19,5	104	38	52	0,35	4	0 7047020001 00

ab Ø 6 mm: HR Schrappprofil / as of Ø 6 mm: HR roughing profile / da Ø 6 mm: Profilo di sgrassatura HR  
Ø 4 und 5 mm: Spanbrecher / Ø 4 and 5 mm: Chip breaker / Ø 4 e 5 mm: Rompitrucciolo

**D VHM-Schrupfräser 30°**  
lang, DIN 6527L

**E Solid carbide roughing end mills 30°**  
long series, DIN 6527L

**I Frese frontali MDI a grossare 30°**  
serie lunga, DIN 6527L

**Einsatzbereich:**

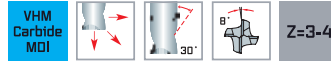
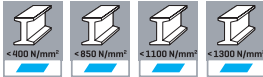
Universeller Anwendungsbereich bei Werkstoffen mit mittlerer bis hoher Festigkeit (ca. 900–1.400 N/mm<sup>2</sup>), z.B. Einsatz-, Vergütungsstähle, Werkzeugstahl legiert, vergütet, NE-Metalle, hochwärmfeste Werkstoffe sowie Gusseisen und Gusslegierungen.

**Range of application:**

Universal range of applications on materials of medium strength up to high tensile strength (~ 900–1.400 N/mm<sup>2</sup>), for example case-hardening, heat-treatable steels, alloyed tool steels; hardened and tempered non-ferrous metals, high temperature materials as well as cast iron and alloyed cast iron.

**Impiego:**

Impiego universale con materiali a media ed alta resistenza (~ 900–1.400 N/mm<sup>2</sup>), ad esempio acciai da cementazione, acciai bonificati, acciai legati da utensili; metalli non ferrosi temprati, materiali ad alta temperatura ed inoltre ghisa e leghe di ghisa.



ALLUNIT®

d1 <sub>h10</sub> mm	d2 <sub>h6</sub> mm	l1 mm	l2 mm		Z	Code 7027 Art.-Nr.
3	6	57	8	0,10	3	0 7027003001 00
4	6	57	11	0,10	3	0 7027004001 00
5	6	57	13	0,20	3	0 7027005001 00
6	6	57	13	0,20	3	0 7027006001 00
8	8	63	19	0,20	3	0 7027008001 00
10	10	72	22	0,35	4	0 7027010001 00
12	12	83	26	0,35	4	0 7027012001 00
16	16	92	32	0,35	4	0 7027016001 00
20	20	104	38	0,35	4	0 7027020001 00

ab Ø 6 mm: HR Schrappprofil / as of Ø 6 mm: HR roughing profile / da Ø 6 mm: Profilo di sgrossatura HR  
Ø 3,4 und 5 mm: Spanbrecher / Ø 3,4 and 5 mm: Chip breaker / Ø 3,4 e 5 mm: Rompitruciolo



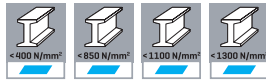
VHM-Fräser  
Solid carbide milling cutters  
Frese in metallo duro integrate



**D VHM-Schrupfräser 45°**  
lang, DIN 6527L

**Einsatzbereich:**

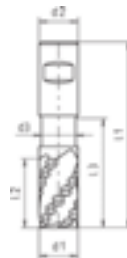
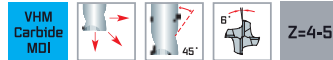
VHM-Hochleistungs-Schrupfräser, besonders geeignet für Stahlwerkstoffe von 500 bis 1.400 N/mm<sup>2</sup>, rostfreie Stähle, Grauguss und Titan. Hohe Zerspanungsleistung bei geringen Antriebsleistungen = MTC.



**E Solid carbide roughing end mills 45°**  
long series, DIN 6527L

**Range of application:**

Solid carbide high performance roughing cutter, especially suitable for steels from 500 to 1.400 N/mm<sup>2</sup>, stainless steels, grey cast iron and titanium. High cutting performance at less drive power = MTC.



**I Frese frontali MDI a sgrossare 45°**  
serie lunga, DIN 6527L

**Impiego:**

Fresa a sgrossare MDI ad alto rendimento particolarmente adatta per acciai da 500 a 1.400 N/mm<sup>2</sup>, acciai inossidabili, ghisa e titanio. Alto rendimento di taglio con minor potenza assorbita = MTC.



ALLUNIT-S®

d1 <sub>h10</sub> mm	d2 <sub>h6</sub> mm	d3 mm	l1 mm	l2 mm	l3 mm		Z	Code 7087 Art.-Nr.
6	6	5,6	57	13	20	0,20	4	0 7087006001 00
8	8	7,5	63	19	25	0,20	4	0 7087008001 00
10	10	9,5	72	22	30	0,20	4	0 7087010001 00
12	12	11,5	83	26	36	0,35	4	0 7087012001 00
16	16	15,5	92	32	42	0,35	5	0 7087016001 00
20	20	19,5	104	38	52	0,35	5	0 7087020001 00

**D VHM-Schaftfräser**  
mit verstärktem Schaft,  
Zweischneider

**E Solid carbide end mills**  
with reinforced straight  
shank, two flutes

**I Frese frontali MDI**  
codolo rinforzato, serie corta,  
2 taglianti

**Einsatzbereich:**

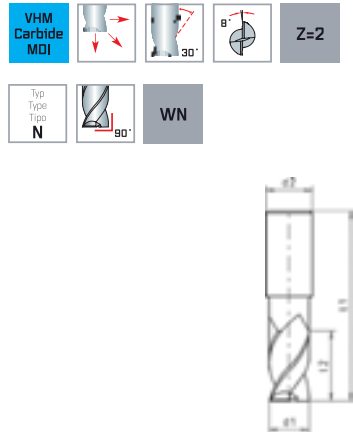
Empfohlen zum Fräsen von Werkstoffen mit mittleren und hohen Festigkeiten. Bohren auf volle Tiefe und Längsfräsen mit genauen Passungen.

**Range of application:**

Recommended for milling in materials with medium and high tensile strength. Vertical cutting to full depth and horizontal cutting with exact tolerances.

**Impiego:**

Adatte per fresatura di materiali di media ed alta resistenza. Foratura dal pieno e fresatura di scanalature con accoppiamenti precisi.



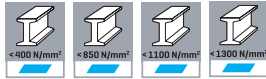
VHM-Fräser  
Solid carbide milling cutters  
Frese in metallo duro integrale

d1 <sub>h10</sub> mm	d2 <sub>h6</sub> mm	l1 mm	l2 mm	Z	Code 6615 Art.-Nr.
1	6	40	4	2	0 6615001001 00
1,5	6	40	4	2	0 6615001501 00
2	6	40	6	2	0 6615002001 00
2,5	6	40	6	2	0 6615002501 00
3	6	40	7	2	0 6615003001 00
3,5	6	40	7	2	0 6615003501 00
4	6	40	8	2	0 6615004001 00
4,5	6	40	8	2	0 6615004501 00
5	6	40	10	2	0 6615005001 00
5,5	6	40	10	2	0 6615005501 00
6	6	40	10	2	0 6615006001 00

**D VHM-Schaftfräser**  
mit verstärktem Schaft,  
Dreischneider

**Einsatzbereich:**

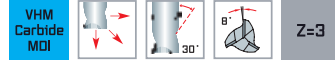
Empfohlen zum Fräsen von Werkstoffen mit mittlerer bis hoher Festigkeit. Fräsen von Nuten mit größerer Bohrtiefe, genauen Passungen, ebenso zum Stirn- und Umfangfräsen geeignet. Hohe Zerspanungsleistung und große Laufruhe ergeben exzellente Oberflächengüte.



**E Solid carbide end mills**  
with reinforced straight  
shank, three flutes

**Range of application:**

Recommended for milling in materials with medium/high tensile strength. Milling of slots with large depth, accurate fits as well as face and surface milling. High cutting performance in chipping and a smooth run result in an excellent surface.



**I Frese frontali MDI**  
codolo rinforzato, serie corta,  
3 taglianti

**Impiego:**

Adatte per fresatura di materiali di media ed alta resistenza. Fresatura di scanalature profonde, con accoppiamenti precisi, anche per fresatura frontale e tangenziale. Elevato rendimento, silenziosità di passata, eccellente finitura della superficie.



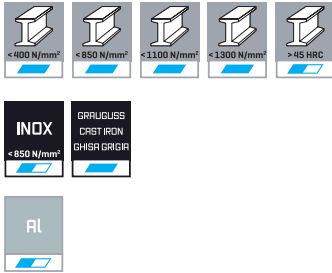
ALUNIT®

d1 <sub>h10</sub> mm	d2 <sub>h6</sub> mm	l1 mm	l2 mm	Z	Code 6315 Art.-Nr.	Code 6317 Art.-Nr.
1	6	40	4	3	0 6315001001 00	0 6317001001 00
1,5	6	40	4	3	0 6315001501 00	0 6317001501 00
2	6	40	6	3	0 6315002001 00	0 6317002001 00
2,5	6	40	6	3	0 6315002501 00	0 6317002501 00
3	6	40	7	3	0 6315003001 00	0 6317003001 00
3,5	6	40	7	3	0 6315003501 00	0 6317003501 00
4	6	40	8	3	0 6315004001 00	0 6317004001 00
4,5	6	40	8	3	0 6315004501 00	0 6317004501 00
5	6	40	10	3	0 6315005001 00	0 6317005001 00
5,5	6	40	10	3	0 6315005501 00	0 6317005501 00
6	6	40	10	3	0 6315006001 00	0 6317006001 00

**D VHM-Schaftfräser**  
mit verstärktem Schaft,  
Vierschneider

**Einsatzbereich:**

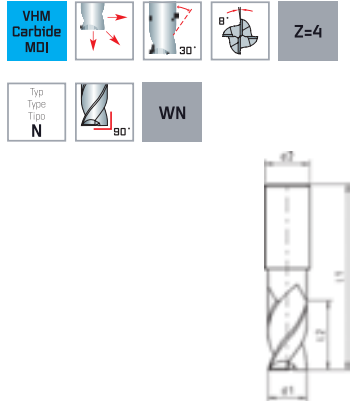
Empfohlen zum Fräsen von Werkstoffen mit mittlerer bis hoher Festigkeit. Fräsen von Nuten mit größerer Bohrtiefe, exakten Passungen, ebenso zum Stirn- und Umfangfräsen geeignet. Hoher Zerspanungsleistung und große Laufruhe ergeben exzellente Oberflächengüte.



**E Solid carbide end mills**  
with reinforced straight  
shank, four flutes

**Range of application:**

Recommended for milling in materials with medium and high tensile strength. Milling of slots with large depth, accurate fits as well as face and surface milling. High cutting performance in chipping and a smooth run result an excellent surface.



**I Frese frontali MDI,**  
codolo rinforzato, serie corta,  
4 taglienti

**Impiego:**

Adatte per fresatura di materiali di media ed alta resistenza. Fresatura di scanalature profonde, con accoppiamenti precisi, anche per fresatura frontale e tangenziale. Elevato rendimento, silenziosità di passata, eccellente finitura della superficie.



DIN 6535-HR

ALUNIT®



VHM-Fräser  
Solid carbide milling cutters  
Frese in metallo duro integrate

d1 <sub>h10</sub> mm	d2 <sub>h6</sub> mm	l1 mm	l2 mm	Z	Code 6517 Art.-Nr.
1	6	40	4	4	0 6517001001 00
1,5	6	40	4	4	0 6517001501 00
2	6	40	6	4	0 6517002001 00
2,5	6	40	6	4	0 6517002501 00
3	6	40	7	4	0 6517003001 00
3,5	6	40	7	4	0 6517003501 00
4	6	40	8	4	0 6517004001 00
4,5	6	40	8	4	0 6517004501 00
5	6	40	10	4	0 6517005001 00
5,5	6	40	10	4	0 6517005501 00
6	6	40	10	4	0 6517006001 00

**D VHM-Miniaturfräser**  
mit verstärktem Schaft,  
kurz, Zweischneider

**Einsatzbereich:**

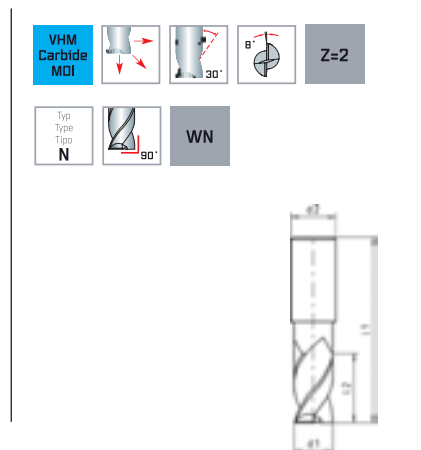
Empfohlen zum Fräsen von Werkstoffen mit mittlerer bis hoher Festigkeit bis ca. 1.300 N/mm<sup>2</sup>. Zum Bohren und anschließenden Längsfräsen, besonders zum Kopierfräsen geeignet.



**E Solid carbide mini end mills**  
with reinforced straight shank,  
short series, two flutes

**Range of application:**

Recommended for milling in materials with medium and high tensile strength up to 1.300 N/mm<sup>2</sup>. For drilling continued by horizontal milling, especially suited for copy milling.



**I Frese in miniatura MDI**  
codolo rinforzato, serie corta,  
2 taglienti

**Impiego:**

Adatte per fresatura di materiali di media ed alta resistenza fino a 1.300 N/mm<sup>2</sup>. Foratura dal pieno e successiva fresatura di scanalature, particolarmente indicate per fresatura a copiare.



d1 <sub>h10</sub> mm	d2 <sub>h6</sub> mm	l1 mm	l2 mm	Z	Code 6245 Art.-Nr.
0,4	3	38	1,5	2	0 6245000401 00
0,5	3	38	1,5	2	0 6245000501 00
0,6	3	38	2	2	0 6245000601 00
0,7	3	38	3	2	0 6245000701 00
0,8	3	38	3	2	0 6245000801 00
0,9	3	38	3	2	0 6245000901 00
1	3	38	3	2	0 6245001001 00
1,5	3	38	5	2	0 6245001501 00
2	3	38	6	2	0 6245002001 00
2,5	3	38	7	2	0 6245002501 00
3	3	38	8	2	0 6245003001 00

**D VHM-Miniaturfräser**  
mit verstärktem Schaft,  
lang, Dreischneider

**E Solid carbide mini end mills**  
with reinforced straight shank,  
long series, three flutes

**I Frese in miniatura MDI**  
codolo rinforzato, serie lunga,  
3 taglienti

**Einsatzbereich:**

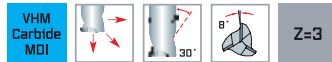
Empfohlen zum Fräsen von Werkstoffen mit mittlerer bis hoher Festigkeit bis ca. 1.300 N/mm<sup>2</sup>. Zum Bohren und anschließenden Längsfräsen, besonders zum Kopierfräsen geeignet.

**Range of application:**

Recommended for milling in materials with medium and high tensile strength up to 1.300 N/mm<sup>2</sup>. For drilling continued by horizontal milling, especially suited for copy milling.

**Impiego:**

Adatte per fresatura di materiali di media ed alta resistenza fino a 1.300 N/mm<sup>2</sup>. Foratura dal pieno e successiva fresatura di scanalature, particolarmente indicate per fresatura a copiare.



DN 6535-HR

ALLUNIT®

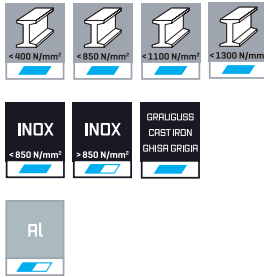
d1 <sub>h10</sub> mm	d2 <sub>h6</sub> mm	l1 mm	l2 mm	Z	Code 6477 Art.-Nr.
1	3	38	4	3	0 6477001001 00
1,5	3	38	6	3	0 6477001501 00
2	3	38	9	3	0 6477002001 00
2,5	3	38	12	3	0 6477002501 00
3	3	38	12	3	0 6477003001 00



VHM-Fräser  
Solid carbide milling cutters  
Frese in metallo duro integrate

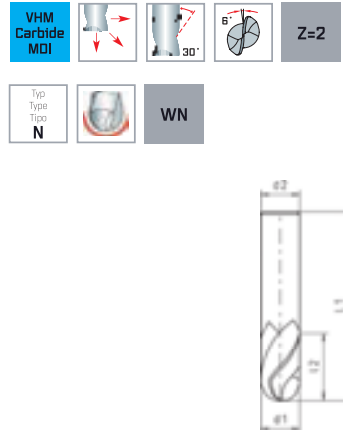
**D** VHM-Radiusfräser  
kurz, Zweischneider

**Einsatzbereich:**  
Empfohlen zum Fräsen von Werkstoffen mit mittlerer bis hoher Festigkeit. Besonders zum Kopierfräsen geeignet.



**E** Solid carbide ball nose end mills  
short series, two flutes

**Range of application:**  
Recommended for milling materials with medium/high tensile strength. Especially suited for copy milling.



**I** Frese cilindriche raggiate MDI  
serie corta, 2 taglienti

**Impiego:**  
Adatte per fresatura di materiali di media ed alta resistenza, particolarmente indicate per fresatura a copiare.



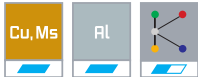
d1 <sub>h10</sub> mm	d2 <sub>h6</sub> mm	l1 mm	l2 mm	Z	Code 7525 Art.-Nr.	Code 7527 Art.-Nr.
1	1	38	5	2	0 7525001001 00	0 7527001001 00
1,5	1,5	38	5	2	0 7525001501 00	0 7527001501 00
2	2	38	8	2	0 7525002001 00	0 7527002001 00
2,5	2,5	38	8	2	0 7525002501 00	0 7527002501 00
3	3	38	12	2	0 7525003001 00	0 7527003001 00
3,5	3,5	40	12	2	0 7525003501 00	0 7527003501 00
4	4	40	12	2	0 7525004001 00	0 7527004001 00
4,5	4,5	50	14	2	0 7525004501 00	0 7527004501 00
5	5	50	14	2	0 7525005001 00	0 7527005001 00
6	6	50	16	2	0 7525006001 00	0 7527006001 00
8	8	63	20	2	0 7525008001 00	0 7527008001 00
10	10	72	22	2	0 7525010001 00	0 7527010001 00
12	12	73	22	2	0 7525012001 00	0 7527012001 00
16	16	82	28	2	0 7525016001 00	0 7527016001 00
20	20	104	35	2	0 7525020001 00	0 7527020001 00

**D VHM-Radiusfräser für Aluminium**

kurz, Zweischneider

**Einsatzbereich:**

Empfohlen zum Kopierfräsen in Aluminium und Aluminiumlegierungen, Kunststoffen, Kupferlegierungen und NE-Metallen.

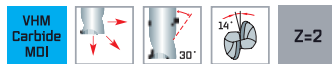


**E Solid carbide ball nose end mills for aluminium**

short series, two flutes

**Range of application:**

Recommended for copy milling aluminium and aluminium-alloys, plastics copper-alloys and non-ferrous metals.



**I Frese raggiate MDI per alluminio**

serie corta, 2 taglienti

**Impiego:**

Adatte per fresatura di alluminio, leghe di alluminio, materie plastiche, leghe di rame e materiali non ferrosi.



VHM-Fräser  
Solid carbide milling cutters  
Frese in metallo duro integrate

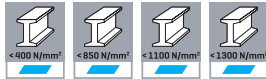
d1 <sub>h10</sub> mm	d2 <sub>h6</sub> mm	l1 mm	l2 mm	Z	Code 6925 Art.-Nr.
1	1	38	5	2	0 6925001001 00
2	2	38	8	2	0 6925002001 00
3	3	38	12	2	0 6925003001 00
4	4	40	12	2	0 6925004001 00
5	5	50	14	2	0 6925005001 00
6	6	50	16	2	0 6925006001 00
8	8	63	20	2	0 6925008001 00
10	10	72	22	2	0 6925010001 00
12	12	73	22	2	0 6925012001 00



**D** VHM-Radiusfräser  
lang, Zweischneider

**Einsatzbereich:**

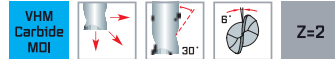
Empfohlen zum Fräsen von Werkstoffen mit mittlerer bis hoher Festigkeit. Besonders zum Kopierfräsen geeignet.



**E** Solid carbide ball nose  
end mills  
long series, two flutes

**Range of application:**

Recommended for milling materials with medium/high tensile strength. Especially suited for copy milling.



**I** Frese cilindriche raggiate MDI  
serie lunga, 2 taglienti

**Impiego:**

Adatte per fresatura di materiali di media ed alta resistenza, particolarmente indicate per fresatura a copiare.



d1 <sub>h10</sub> mm	d2 <sub>h6</sub> mm	l1 mm	l2 mm	Z	Code 7535 Art.-Nr.
3	3	60	25	2	0 7535003001 00
4	4	60	25	2	0 7535004001 00
5	5	70	30	2	0 7535005001 00
6	6	70	30	2	0 7535006001 00
8	8	80	35	2	0 7535008001 00
10	10	100	45	2	0 7535010001 00
12	12	100	45	2	0 7535012001 00

**D** VHM-Radiusfräser  
kurz, Dreischneider

**E** Solid carbide ball nose end mills  
short series, three flutes

**I** Frese cilindriche raggiate MDI  
serie corta, 3 taglienti

**Einsatzbereich:**

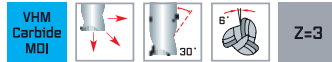
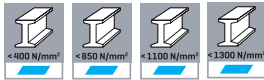
Empfohlen zum Fräsen von Werkstoffen mit mittlerer bis hoher Festigkeit. Besonders zum Kopierfräsen geeignet.

**Range of application:**

Recommended for milling materials with medium/high tensile strength. Especially suited for copy milling.

**Impiego:**

Adatte per fresatura di materiali di media ed alta resistenza, particolarmente indicate per fresatura a copiare.



d1 = d2



d1 = d2

ALUNITE®

d1 <sub>h10</sub> mm	d2 <sub>h6</sub> mm	l1 mm	l2 mm	Z	Code 7555 Art.-Nr.	Code 7557 Art.-Nr.
1	1	38	5	3	0 7555001001 00	0 7557001001 00
1,5	1,5	38	5	3	0 7555001501 00	0 7557001501 00
2	2	38	8	3	0 7555002001 00	0 7557002001 00
2,5	2,5	38	8	3	0 7555002501 00	0 7557002501 00
3	3	38	12	3	0 7555003001 00	0 7557003001 00
3,5	3,5	40	12	3	0 7555003501 00	0 7557003501 00
4	4	40	12	3	0 7555004001 00	0 7557004001 00
5	5	50	14	3	0 7555005001 00	0 7557005001 00
6	6	50	16	3	0 7555006001 00	0 7557006001 00
8	8	63	20	3	0 7555008001 00	0 7557008001 00
10	10	72	22	3	0 7555010001 00	0 7557010001 00
12	12	73	22	3	0 7555012001 00	0 7557012001 00

VHM-Fräser  
Solid carbide milling cutters  
Frese in metallo duro integrate

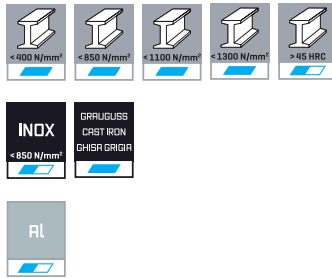
**D** VHM-Radiusfräser  
kurz, Vierschneider

**E** Solid carbide ball nose end mills  
short series, four flutes

**I** Frese cilindriche raggiate MDI  
serie corta, 4 taglienti

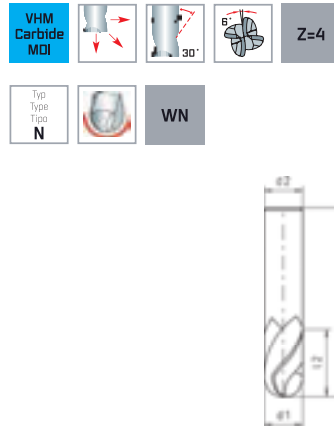
**Einsatzbereich:**

Empfohlen zum Fräsen von Werkstoffen mit mittlerer bis hoher Festigkeit. Besonders zum Kopierfräsen geeignet.



**Range of application:**

Recommended for milling materials with medium/high tensile strength. Especially suited for copy milling.



**Impiego:**

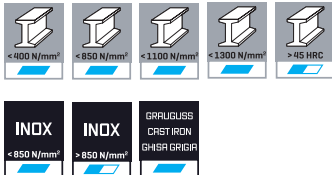
Adatte per fresatura di materiali di media ed alta resistenza, particolarmente indicate per fresatura a copiare.



d1 <sub>h10</sub> mm	d2 <sub>h6</sub> mm	l1 mm	l2 mm	Z	Code 7075 Art.-Nr.	Code 7077 Art.-Nr.
1	1	38	5	4	0 7075001001 00	0 7077001001 00
1,5	1,5	38	5	4	0 7075001501 00	0 7077001501 00
2	2	38	8	4	0 7075002001 00	0 7077002001 00
2,5	2,5	38	8	4	0 7075002501 00	0 7077002501 00
3	3	38	12	4	0 7075003001 00	0 7077003001 00
3,5	3,5	40	12	4	0 7075003501 00	0 7077003501 00
4	4	40	12	4	0 7075004001 00	0 7077004001 00
4,5	4,5	50	14	4	0 7075004501 00	0 7077004501 00
5	5	50	14	4	0 7075005001 00	0 7077005001 00
6	6	50	16	4	0 7075006001 00	0 7077006001 00
8	8	63	20	4	0 7075008001 00	0 7077008001 00
10	10	72	22	4	0 7075010001 00	0 7077010001 00
12	12	73	22	4	0 7075012001 00	0 7077012001 00
16	16	82	28	4	0 7075016001 00	0 7077016001 00

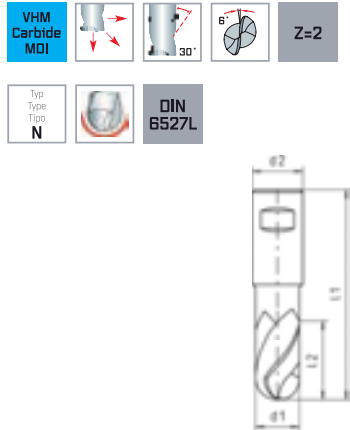
**D VHM-Radiusfräser**  
mit verstärktem Schaft,  
lang Zweischneider,  
DIN 6527L

**Einsatzbereich:**  
Empfohlen zum Fräsen von Werkstoffen mit  
mittlerer bis hoher Festigkeit. Besonders  
zum Kopierfräsen geeignet.



**E Solid carbide ball nose end mills**  
with reinforced shank,  
long series, two flutes,  
DIN 6527L

**Range of application:**  
Recommended for milling materials with medi-  
um/high tensile strength. Especially suited for  
copy milling.



**I Frese cilindriche raggiate MDI**  
codolo rinforzato, serie lunga,  
2 taglienti, DIN 6527L

**Impiego:**  
Adatte per fresatura di materiali di media ed alta  
resistenza, particolarmente indicate per fresatura  
a copiare.



ALLUNIT®

d1 <sub>h10</sub> mm	d2 <sub>h6</sub> mm	l1 mm	l2 mm	Z	Code 7517 Art.-Nr.
2	6	50	6	2	0 7517002001 00
3	6	57	7	2	0 7517003001 00
4	6	57	8	2	0 7517004001 00
5	6	57	10	2	0 7517005001 00
6	6	57	10	2	0 7517006001 00
7	8	63	13	2	0 7517007001 00
8	8	63	16	2	0 7517008001 00
9	10	72	16	2	0 7517009001 00
10	10	72	19	2	0 7517010001 00
12	12	83	22	2	0 7517012001 00

VHM-Fräser  
Solid carbide milling cutters  
Frese in metallo duro integrate

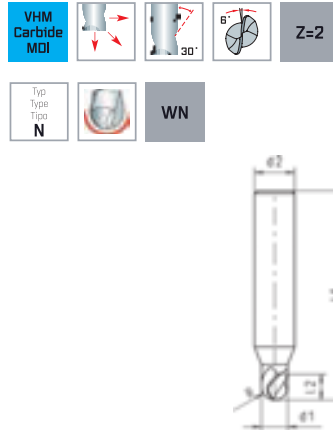
**D VHM-Miniatur-Radiusfräser**  
mit verstärktem Schaft,  
kurz, Zweischneider

**Einsatzbereich:**  
Empfohlen zum Fräsen von Werkstoffen mit  
mittlerer bis hoher Festigkeit. Besonders  
zum Kopierfräsen geeignet.



**E Solid carbide  
mini ball nose end mills**  
with reinforced shank,  
short series, two flutes

**Range of application:**  
Recommended for milling materials with medi-  
um/high tensile strength. Especially suited for  
copy milling.



**I Frese in miniatura  
raggiate MDI**  
codolo rinforzato, serie corta,  
2 taglienti

**Impiego:**  
Adatte per fresatura di materiali di media ed alta  
resistenza, particolarmente indicate per fresatura  
a copiare.



d1 <sub>h10</sub> mm	d2 <sub>h6</sub> mm	l1 mm	l2 mm	R mm	Z	Code 6345 Art.-Nr.
0,4	3	38	1,5	0,2	2	0 6345000401 00
0,5	3	38	1,5	0,25	2	0 6345000501 00
0,6	3	38	2	0,3	2	0 6345000601 00
0,7	3	38	3	0,35	2	0 6345000701 00
0,8	3	38	3	0,4	2	0 6345000801 00
0,9	3	38	3	0,45	2	0 6345000901 00
1	3	38	3	0,5	2	0 6345001001 00
1,5	3	38	5	0,75	2	0 6345001501 00
2	3	38	6	1	2	0 6345002001 00
2,5	3	38	7	1,25	2	0 6345002501 00
3	3	38	8	1,5	2	0 6345003001 00

**D** VHM-Miniatur Radiusfräser

mit verstärktem Schaft, lang, Vierschneider

**Einsatzbereich:**

Empfohlen zum Fräsen von Werkstoffen mit mittlerer bis hoher Festigkeit. Besonders zum Kopierfräsen geeignet.

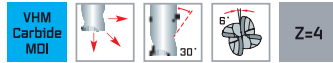


**E** Solid carbide mini ball nose end mills

with reinforced shank, long series, four flutes

**Range of application:**

Recommended for milling materials with medium/high tensile strength. Especially suited for copy milling.



**I** Frese in miniatura raggiate MDI

codolo rinforzato, serie lunga, 4 taglienti

**Impiego:**

Adatte per fresatura di materiali di media ed alta resistenza, particolarmente indicate per fresatura a copiare.



ALLUNIT®

d1 <sub>h10</sub> mm	d2 <sub>h6</sub> mm	l1 mm	l2 mm	R mm	Z	Code 6387 Art.-Nr.
1	3	38	4	0,5	4	0 6387001001 00
1,5	3	38	6	0,75	4	0 6387001501 00
2	3	38	9	1	4	0 6387002001 00
2,5	3	38	12	1,25	4	0 6387002501 00
3	3	38	12	1,5	4	0 6387003001 00



VHM-Fräser  
Solid carbide milling cutters  
Frese in metallo duro integrate

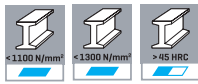
**D** VHM-Miniaturfräser  
Zweischneider

**E** Solid carbide mini end mills  
two flutes

**I** Frese in miniatura MDI  
2 taglienti

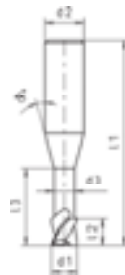
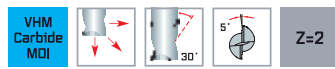
**Einsatzbereich:**

Empfohlen zum Fräsen von Werkstoffen mit mittleren und hohen Festigkeiten sowie zur HSC-Bearbeitung.



**Range of application:**

Recommended for milling materials with medium and high tensile strength, HSC-milling.



**Impiego:**

Adatte per fresatura di materiali di media ed alta resistenza, anche per alta velocità HSC.



ALLUNIT®

d1 <sub>h10</sub> mm	d2 <sub>h6</sub> mm	d3 mm	l1 mm	l2 mm	l3 mm	Z	Code 6257 Art.-Nr.
0,4	3	0,35	50	0,6	5	2	0 6257000401 00
0,5	3	0,45	50	0,7	6	2	0 6257000501 00
0,6	3	0,55	50	0,9	6	2	0 6257000601 00
0,7	3	0,65	50	0,8	7	2	0 6257000701 00
0,8	3	0,75	50	1,2	8	2	0 6257000801 00
0,9	3	0,85	50	1,3	9	2	0 6257000901 00
1	3	0,95	50	1,5	12	2	0 6257001001 00
1,2	3	1,15	50	1,8	12	2	0 6257001201 00
1,4	3	1,35	50	2,1	16	2	0 6257001401 00
1,5	3	1,45	50	2,3	20	2	0 6257001501 00
1,6	3	1,55	50	2,4	20	2	0 6257001601 00
1,8	3	1,75	50	2,7	20	2	0 6257001801 00
2	3	1,95	50	3	20	2	0 6257002001 00
2,5	3	2,45	50	3,7	20	2	0 6257002501 00
3	3	2,95	50	4	20	2	0 6257003001 00

**D** VHM-Miniatur-Radius-Fräser  
Zweischneider

**E** Solid carbide mini ball nose end mills  
two flutes

**I** Frese in miniatura con punta semisferica MDI  
2 taglienti

**Einsatzbereich:**

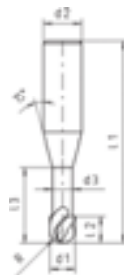
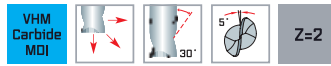
Für die Bearbeitung von Werkstoffen mit mittlerer bis hoher Festigkeit. Besonders zum HSC-Kopierfräsen geeignet.

**Range of application:**

For milling materials with medium/high tensile strength. Especially suited for HSC-copy milling.

**Impiego:**

Adatte per fresatura di materiali di media ed alta resistenza, serie alta velocità HSC particolarmente indicate per fresatura a copiare..



ALLUNIT®

d1 <sub>h10</sub> mm	d2 <sub>h6</sub> mm	d3 mm	l1 mm	l2 mm	l3 mm	R mm	Z	Code 6297 Art.-Nr.
0,4	3	0,35	50	0,6	5	0,2	2	0 6297000401 00
0,5	3	0,45	50	0,7	6	0,25	2	0 6297000501 00
0,6	3	0,55	50	0,9	6	0,3	2	0 6297000601 00
0,7	3	0,65	50	0,8	7	0,35	2	0 6297000701 00
0,8	3	0,75	50	1,2	8	0,4	2	0 6297000801 00
0,9	3	0,85	50	1,3	9	0,45	2	0 6297000901 00
1	3	0,95	50	1,5	12	0,5	2	0 6297001001 00
1,2	3	1,15	50	1,8	12	0,6	2	0 6297001201 00
1,4	3	1,35	50	2,1	16	0,6	2	0 6297001401 00
1,5	3	1,45	50	2,3	20	0,75	2	0 6297001501 00
1,6	3	1,55	50	2,4	20	0,8	2	0 6297001601 00
1,8	3	1,75	50	2,7	20	0,8	2	0 6297001801 00
2	3	1,95	50	3	20	1	2	0 6297002001 00
2,5	3	2,45	50	3,7	20	1,25	2	0 6297002501 00
3	3	2,95	50	4	20	1,5	2	0 6297003001 00

R = ± 0,01 mm

VHM-Fräser  
 Solid carbide milling cutters  
 Frese in metallo duro integrate



**D** VHM-Viertelrund-Profil-Fräser

**E** Solid carbide quarter circle cutters

**I** Frese a profilo raggiato MDI

**Einsatzbereich:**

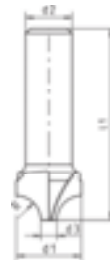
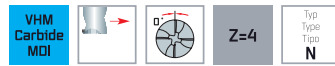
Empfohlen zum Fräsen von Bau-, Einsatz- und Vergütungsstählen mit normaler Festigkeit bis 1.100 N/mm<sup>2</sup> sowie für kurzspanende NE-Metalle.

**Range of application:**

Recommended for milling in construction steels, tempered steels and cementation steels with standard tensile strength up to 1.100 N/mm<sup>2</sup> and short-chipping of non-ferrous metals.

**Impiego:**

Adatte per lavorazioni di acciai da costruzione, acciai da cementazione, acciai bonificati con R fino a 1.100 N/mm<sup>2</sup>, e di materiali non ferrosi a truciolo corto.



ALLUNIT®

R mm	d1 <sub>h10</sub> mm	d2 <sub>h6</sub> mm	d3 mm	l1 mm	Z	Code 6415 Art.-Nr.	Code 6417 Art.-Nr.
1	8	8	6	64	4	0 6415001001 00	0 6417001001 00
1,5	8	8	5	64	4	0 6415001501 00	0 6417001501 00
2	8	8	4	64	4	0 6415002001 00	0 6417002001 00
2,5	10	10	5	67	4	0 6415002501 00	0 6417002501 00
3	10	10	4	67	4	0 6415003001 00	0 6417003001 00
3,5	12	12	5	74	4	0 6415003501 00	0 6417003501 00
4	12	12	4	74	4	0 6415004001 00	0 6417004001 00
5	16	16	6	83	4	0 6415005001 00	0 6417005001 00
6	16	16	4	83	4	0 6415006001 00	0 6417006001 00
8	26,5	20	10,5	85	4	0 6415008001 00	0 6417008001 00
10	32	20	12	85	4	0 6415010001 00	0 6417010001 00
12	38	20	14	90	4	0 6415012001 00	0 6417012001 00

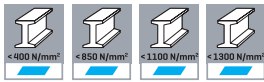
≤ R 6 = VHM / Solid carbide / MDI

> R 8 = nur VHM-Kopf / only solid carbide cutting part / parte taglienti metallo duro integrale

**D** VHM-Multifräser, 90°

**Einsatzbereich:**

Universeller Anwendungsbereich, besonders geeignet zum Fräsen, Anfasen, Entgraten, Anbohren und Bohren.



**E** Solid carbide multi end mills 90°

**Range of application:**

Universal range of application, especially suited for milling, chamfering, deburring, pre-drilling and drilling.



**I** Multi frese MDI, 90°

**Impiego:**

Adatte per impieghi universali, particolarmente raccomandate per fresatura, lavorazioni, smussatura, perforazione e foratura.



ALLUNIT®

d1 <sub>h9</sub> mm	d2 <sub>h6</sub> mm	l1 mm	l2 mm	α	Z	Code 6397 Art.-Nr.
3	6	50	6	90°	2	0 6397003001 00
4	6	54	8	90°	2	0 6397004001 00
5	6	57	10	90°	2	0 6397005001 00
6	6	57	12	90°	2	0 6397006001 00
8	8	63	16	90°	2	0 6397008001 00
10	10	72	18	90°	2	0 6397010001 00
12	12	83	20	90°	2	0 6397012001 00

VHM-Fräser  
Solid carbide milling cutters  
Frese in metallo duro integrate

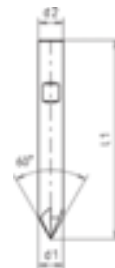
**D** VHM-Entgrater, 60°

**Einsatzbereich:**  
Universeller Anwendungsbereich, besonders geeignet zum Anfasen und Entgraten sowie Konturarbeiten.



**E** Solid carbide deburring mills, 60°

**Range of application:**  
Universal range of application, especially suited for chamfering and deburring as well as contouring.



**I** Frese a smussare MDI, 60°

**Impiego:**  
Adatte per impieghi universali, particolarmente raccomandate per lavorazioni di smussatura, sbavatura ed anche di contornatura.



ALUNIT®

d1 <sub>h10</sub> mm	d2 <sub>h6</sub> mm	l1 mm	Z	Code 7725 Art.-Nr.	Code 7727 Art.-Nr.
4	4	54	4	0 7725004001 00	0 7727004001 00
6	6	57	4	0 7725006001 00	0 7727006001 00
8	8	63	4	0 7725008001 00	0 7727008001 00
10	10	72	4	0 7725010001 00	0 7727010001 00
12	12	83	4	0 7725012001 00	0 7727012001 00
16	16	92	6	0 7725016001 00	0 7727016001 00

Ø 4 kein Weldon-Schaft / Ø 4 no weldon shaft / Ø 4 no gambo Weldon

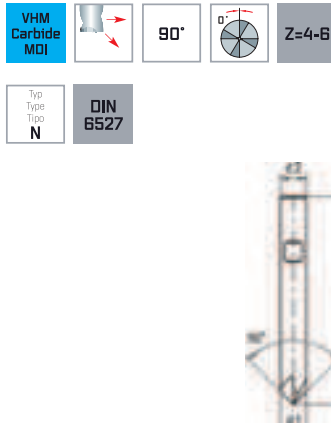
**D VHM-Entgrater, 90°**

**Einsatzbereich:**  
Universeller Anwendungsbereich, besonders geeignet zum Anfasen und Entgraten sowie Konturarbeiten.



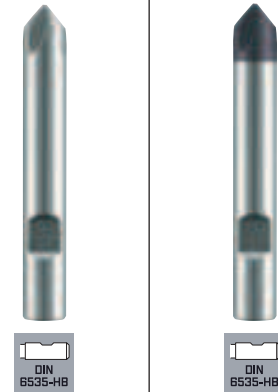
**E Solid carbide deburring mills, 90°**

**Range of application:**  
Universal range of application, especially suited for chamfering and deburring as well as contouring.



**I Frese a smussare MDI, 90°**

**Impiego:**  
Adatte per impieghi universali, particolarmente raccomandate per lavorazioni di smussatura, sbavatura ed anche di contornatura.



d1 <sub>h10</sub> mm	d2 <sub>h6</sub> mm	l1 mm	Z	Code 7755 Art.-Nr.	Code 7757 Art.-Nr.
4	4	54	4	0 7755004001 00	0 7757004001 00
6	6	57	4	0 7755006001 00	0 7757006001 00
8	8	63	4	0 7755008001 00	0 7757008001 00
10	10	72	4	0 7755010001 00	0 7757010001 00
12	12	83	4	0 7755012001 00	0 7757012001 00
16	16	92	6	0 7755016001 00	0 7757016001 00

Ø 4 kein Weldon-Schaft / Ø 4 no weldon shaft / Ø 4 no gambo Weldon

VHM-Fräser  
Solid carbide milling cutters  
Frese in metallo duro integrate

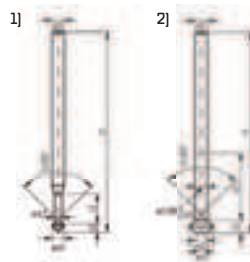
**D** VHM Vor- und Rückwärtsentgrater, 2 x 90°

**Einsatzbereich:**  
Universeller Anwendungsbereich, besonders geeignet zum Anfasen, Vor- und Rückwärtsentgraten sowie Konturarbeiten.



**E** Solid carbide forward and reverse deburring mills, 2 x 90°

**Range of application:**  
Universal range of application, especially suited for chamfering, forward and reverse deburring as well as contouring.



**I** Frese in metallo duro per sbavatura reversibili, 2 x 90°

**Impiego:**  
Adatte per impieghi universali, particolarmente raccomandate per lavorazioni di smussatura, sbavatura reversibili ed anche di contornatura.



ALUNIT-S®

d1 <sub>h10</sub> mm	d2 <sub>h6</sub> mm	d3 mm	l1 mm	l2 mm	l3 mm	Z	Code 6507 Art.-Nr.
3	4	2,2	75	1,9	10	4	0 6507003001 00
4	4	2,9	75	2,5	15	4	0 6507004001 00
5	5	3,9	75	3,0	15	4	0 6507005001 00
6	6	3,9	100	4,0	15	4	0 6507006001 00
8	6	4,8	100	2,7	35	4	0 6507008001 00
10	6	4,7	100	4,7	33	4	0 6507010001 00
12	6	5,4	100	6,4	31	4	0 6507012001 00

1] d1: Ø 3 - 6 mm  
2] d1: Ø 8 - 12 mm

**D** VHM-Einzahnfräser für Aluminium

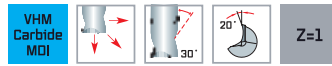
**E** Solid carbide 1-flute end mills for aluminium

**I** Frese monoelica MDI per alluminio

**Einsatzbereich:**  
Rechtsschneidend mit Rechtsdrall.  
Geeignet für die Bearbeitung von Aluminium und Aluminiumlegierungen.

**Range of application:**  
Right-hand cutting with right-hand spiral.  
Especially suited for cutting aluminium and aluminium-alloys.

**Impiego:**  
Taglio destro con elica destra. Adatte per fresatura di alluminio e leghe di alluminio.



VHM-Fräser  
Solid carbide milling cutters  
Frese in metallo duro integrate

d1 <sub>h10</sub> mm	d2 <sub>h6</sub> mm	l1 mm	l2 mm	Z	Code 6205 Art.-Nr.
2	2	38	10	1	0 6205002001 00
2,5	2,5	38	12	1	0 6205002501 00
3	3	38	12	1	0 6205003001 00
4	4	40	15	1	0 6205004001 00
5	5	50	16	1	0 6205005001 00
6	6	50	18	1	0 6205006101 00
6	6	57	25	1	0 6205006201 00
8	8	63	22	1	0 6205008201 00
8	8	80	40	1	0 6205008401 00
10	10	72	30	1	0 6205010001 00
12	12	73	30	1	0 6205012001 00

**D** VHM-Einzahn-Miniatur-Fräser für Aluminium

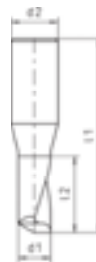
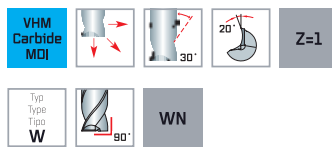
**E** Solid carbide 1-flute mini end mills for aluminium

**I** Frese in miniatura monoelica MDI per alluminio

**Einsatzbereich:**  
Rechtsschneidend mit Rechtsdrall.  
Geeignet für die Bearbeitung von Aluminium und Aluminiumlegierungen.



**Range of application:**  
Right-hand cutting with right-hand spiral.  
Especially suited for cutting aluminium and aluminium-alloys.



**Impiego:**  
Taglio destro con elica destra. Adatte per fresatura di alluminio e leghe di alluminio.



d1 <sub>h10</sub> mm	d2 <sub>h6</sub> mm	l1 mm	l2 mm	Z	Code 6935 Art.-Nr.
1	6	40	5	1	0 6935001001 00
1,5	6	40	7	1	0 6935001501 00
2	6	40	7	1	0 6935002001 00
2,5	6	40	8	1	0 6935002501 00
3	6	40	8	1	0 6935003001 00
3,5	6	40	10	1	0 6935003501 00
4	6	40	10	1	0 6935004001 00
4,5	6	50	12	1	0 6935004501 00
5	6	50	12	1	0 6935005001 00
5,5	6	50	14	1	0 6935005501 00
6	6	50	14	1	0 6935006001 00

**D VHM-Einzahnfräser für Kunststoffe,**  
Rechtsschneidend mit Rechtsdrall

**Einsatzbereich:**

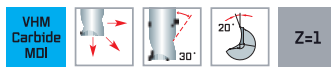
Geeignet für die Bearbeitung von sämtlichen Kunststoffen, glasfaserverstärkte Polyester und Grafit.



**E Solid carbide 1-flute end mills for plastics,**  
righthand cutting with righthand spiral

**Range of application:**

Especially suited for cutting all plastics, glass-fibre reinforced polyester as well as graphite.



**I Frese monoelica MDI per materie plastiche,**  
taglio destro elica destra

**Impiego:**

Adatte per fresatura di tutte le materie plastiche, poliesteri vetrosi, grafite.



VHM-Fräser  
Solid carbide milling cutters  
Frese in metallo duro integrate

d1 <sub>h10</sub> mm	d2 <sub>h6</sub> mm	l1 mm	l2 mm	Z	Code 6495 Art.-Nr.
2	2	38	10	1	0 6495002001 00
2,5	2,5	38	12	1	0 6495002501 00
3	3	38	12	1	0 6495003001 00
4	4	40	15	1	0 6495004001 00
5	5	50	16	1	0 6495005001 00
6	6	<b>50</b>	18	1	0 6495006001 00
6	6	<b>57</b>	25	1	0 6495006101 00
8	8	<b>63</b>	22	1	0 6495008001 00
8	8	<b>80</b>	40	1	0 6495008101 00
10	10	72	30	1	0 6495010001 00
12	12	73	30	1	0 6495012001 00



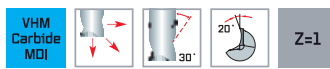
**D VHM-Einzahnfräser  
für Kunststoffe,  
Rechtsschneidend mit  
Linksdrall**

**Einsatzbereich:**  
Geeignet für die Bearbeitung von sämtlichen  
Kunststoffen, glasfaserverstärkte Polyester  
und Grafit.



**E Solid carbide 1-flute end  
mills for plastics,  
righthand cutting with  
lefthand spiral**

**Range of application:**  
Especially suited for cutting all plastics, glass-  
fibre reinforced polyester as well as graphite.



**I Frese monoelica MDI per  
materie plastiche,  
taglio destro elica destra**

**Impiego:**  
Adatte per fresatura di tutte le materie plastiche,  
poliesteri vetrosi, grafite.



d1 <sub>h10</sub> mm	d2 <sub>h6</sub> mm	l1 mm	l2 mm	Z	Code 6215 Art.-Nr.
2	2	38	10	1	0 6215002001 00
2,5	2,5	38	12	1	0 6215002501 00
3	3	38	12	1	0 6215003001 00
4	4	40	15	1	0 6215004001 00
5	5	50	16	1	0 6215005001 00
6	6	50	18	1	0 6215006001 00
6	6	57	25	1	0 6215006101 00
8	8	63	22	1	0 6215008001 00
8	8	80	40	1	0 6215008101 00
10	10	72	30	1	0 6215010001 00
12	12	73	30	1	0 6215012001 00

**D** VHM-Konturenfräser für Kunststoffe, mit Sitrverzahnung

**E** Solid carbide contour end mills for plastics, with front cut

**I** Frese a contornare MDI per materie plastiche, taglienti frontali

**Einsatzbereich:**

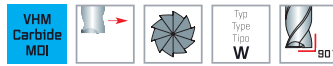
Geeignet zum Besäumen und Umrissfräsen von faserverstärkten Kunststoffen „GFK“ und „CFK“.

**Range of application:**

Especially suitable for cutting glass-fibre and carbon-fibre-reinforced plastics „GFP“ and „CFP“.

**Impiego:**

Adatte per fresatura di contornatura fibre di vetro, plastica, gomma dura.



WN



VHM-Fräser  
Solid carbide milling cutters  
Frese in metallo duro integrate

d1 <sub>h10</sub> mm	d2 <sub>h6</sub> mm	l1 mm	l2 mm	Code 7976 Art.-Nr.
6	6	50	18	0 7976006001 00
6	6	57	25	0 7976006101 00
8	8	63	25	0 7976008001 00
8	8	80	40	0 7976008101 00
10	10	72	30	0 7976010001 00
12	12	73	30	0 7976012001 00
14	14	75	30	0 7976014001 00

**D** VHM-Konturenfräser für  
Kunststoffe,  
Zweischneider

**E** Solid carbide contour end  
mills for plastics,  
two flutes

**I** Frese a contornare MDI per  
materie plastiche,  
2 taglianti

**Einsatzbereich:**

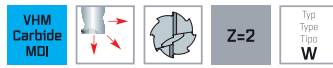
Geeignet zum Besäumen und Umrissfräsen von faserverstärkten Kunststoffen „GFK“ und „CFK“.

**Range of application:**

Especially suitable for cutting glass-fibre and carbon-fibre-reinforced plastics „GFP“ and „CFP“.

**Impiego:**

Adatte per fresatura di contornatura fibre di vetro, plastica, gomma dura.



d1 <sub>h10</sub> mm	d2 <sub>h6</sub> mm	l1 mm	l2 mm	Z	Code 7986 Art.-Nr.
2	2	38	10	2	0 7986002001 00
3	3	38	12	2	0 7986003001 00
4	4	40	15	2	0 7986004001 00
5	5	50	16	2	0 7986005001 00
6	6	50	18	2	0 7986006001 00
6	6	57	25	2	0 7986006101 00
8	8	63	25	2	0 7986008001 00
8	8	80	40	2	0 7986008101 00
10	10	72	30	2	0 7986010001 00