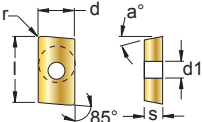


SCELTA VELOCE - QUICK PICK																HT		HW	HC																										
																CERMET	NON RIV. CEMENTED CARBIDE GRADES		RIVESTITI COATED GRADES BESCHICHTET RECOUVERTS																										
COD.				P		M		K		N		S		H																															
				F	M	R	F	M	R	F	M	R	F	M	R	F	M	R	F	M	R	F	M	R																					
APKT	1003	PDR	.S52	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○																					
APKT	1003	PDTR	.S52	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○																					
APKX	1003	PDR	.S52	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○																					
APKT	1003	PDSR	.Z54	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○																					
APKT	1003	PDER	.Z54	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○																					
APKT	1003	PDER	.T55	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○																					
APHT	100312SR		.Z53	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○																					
APHT	100320SR		.Z53	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○																					
APHT	1003	PDFR	.S57	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○																					
CON ADDUZIONE LUBROREFRIGERANTE - WITH COOLANT SUPPLY																	○			●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○									
SENZA ADDUZIONE LUBROREFRIGERANTE - WITHOUT COOLANT SUPPLY																	○			●	○	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○								

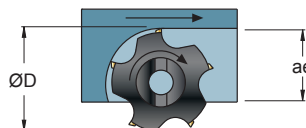
MATERIALI - MATERIALS Pag. 1119			VDI 3323 GR.	HB Rm1) HRC2)	fz0 mm			Vc m/min Pag. 500									
					F	M	R	T120	T516	T525	T526	T528N	T530	F2330	F1035	F2335	F2140
P	ACCIAIO NON LEGATO - NOT ALLOY STEEL		1-5	125-300	0,1	0,15	0,2			250	220	220	230	270	125	250	200
	ACCIAIO POCO LEGATO - LOW ALLOY STEEL		6-9	180-350	0,06	0,1	0,15			200	160	160	180	220	120	200	170
	ACCIAIO ALTO LEGATO - ALLOY STEEL		10-11	200-325	0,06	0,1	0,15			170	150	150	150	200	100	180	120
	INOX MARTENS. - STAINLESS STEEL MART		12-13	200-240	0,06	0,08	0,1			150	140	140	140	180	100	150	120
M	INOX AUST. DUPLEX - STAINLESS STEEL AUST		14.1-14.2	180-230	0,06	0,08	0,1	100		140	130	120	120	150		130	140
K	GHISA GRIGIA - GREY CAST IRON		15-16	180-260	0,1	0,15	0,2	120	250	200		180	160			240	
	GHISA SFEROIDALE - SPHEROIDAL GRAPHITE		17-18	160-250	0,06	0,12	0,15	110	200	180		160	150			200	
	GHISA MALLEABILE - MALLEABLE CAST IRON		19-20	130-230	0,06	0,12	0,15	120	220	200		170	160			200	
N	ALLUMINIO E SUE LEGHE - ALUMINIUM		21-25	60-130	0,06	0,15	0,2	500					600				
	RAME E SUE LEGHE - COPPER		26-28	90-110	0,06	0,12	0,18	300					300				
	NON METALLICI - PLASTICS		29-30	/	0,06	0,12	0,18										
S	LEGHE RESIST. CALORE - HIG. TEMP. ALLOY		31-35	200-320	0,06	0,08	0,1	20		40		40	40	40		40	50
	TITANIO E SUE LEGHE - TITANIUM		36-37	400-1050 ¹⁾	0,06	0,08	0,1	30		50		60	50	50		50	50
H	ACCIAIO TEMPRATO - HARDENED STEEL		38-41	45-60 ²⁾	0,06	0,08	0,1			40							

$$n = \frac{Vc \cdot 1000}{\varnothing D \cdot 3,14} = \text{giri/min (min}^{-1}\text{)}$$

$$fz = fz0 \cdot Kae = \text{mm}$$

$$fn = fz \cdot z = \text{mm}$$

$$Vf = fz \cdot z \cdot n = \text{mm/min}$$



ae/D	0,5-1 50-100%	0,3 30%	0,2 20%	0,1 10%	0,05 5%	0,02 2%
Kae	1	1,2	1,5	2,1	3	4,8

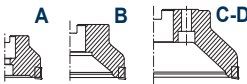
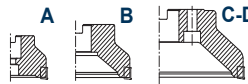
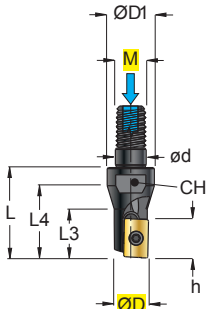
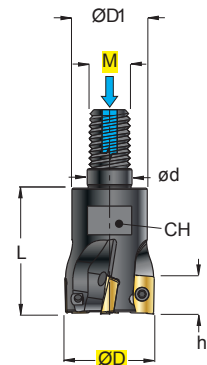
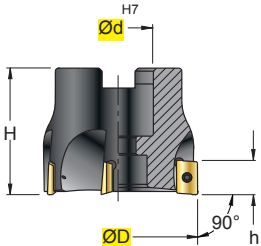
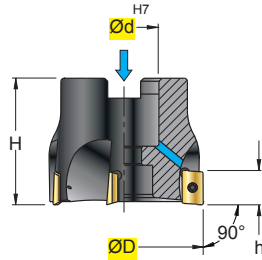
ae/D	0,5-1 50-100%	0,2 20%	0,1 10%	0,05 5%
Vc	Vc (min)-----Vc(max)			
Pag. 500				

F = FINITURA, LAV. LEGGERA - FINISHING, LIGHT MACHINING
M = LAV. MEDIA, GENERICA - MEDIUM MACHINING, GENERIC
R = SGROSSATURA, LAV. PESANTE - ROUGHING, HEAVY MACHINING

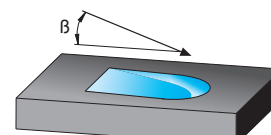
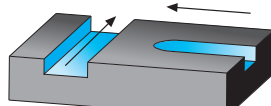
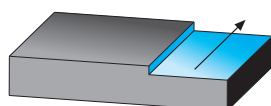
Vc = m/min VELOCITÀ DI TAGLIO - CUTTING SPEED
n = giri/min (min⁻¹) NUMERO DI GIRI - NUMBER OF REVOLUTIONS
fz = mm AVANZAMENTO AL DENTE - TOOTH FEED
fn = mm AVANZAMENTO AL GIRO - FEED / REVOLUTION
Vf = mm/min VELOCITÀ DI AVANZAMENTO - FEED SPEED
Kae = FATTORE DI CORREZIONE - CORRECTION FACTOR

Raggio Inserto Insert Radius (mm)	Raggio Fresa Milling cutter Radius (mm)
1,2	R1,0
2,0	

- Per usare inserti con $r \geq 1,2\text{mm}$, bisogna modificare il corpo fresa come indicato in figura.
- To use inserts with $r \geq 1,2\text{mm}$, it is necessary to modify the milling cutting body as illustrated in the figure
- Um wendeschneidplatten mit $r \geq 1,2\text{mm}$, muss der fräserkörper wie in der abbildung angegeben verändert werden
- Pour utiliser les plaquettes avec $r \geq 1,2\text{mm}$, il faut modifier le corps de la fraise comme il est indiqué dans l'illustration.

S 1088 .. 10		S 1088W .. 10 S 1088GW .. 10		S 1089W ..		QUALITY TOOLS ENGINEERING	
Ø 40-63		Ø 40-63		Ø 10-32			
γ_p +11°/+12° γ_f -10°/-8° γ_o -10°/-8°		γ_p +11°/+12° γ_f -10°/-8° γ_o -10°/-8°				γ_p -1,5°/+10° γ_f -21°/-11,5° γ_o -21°/-11,5°	
ISO 6462 ...		ISO 6462 ...		FORM A		FORM B	
							
							
						APKT 1003 .I52	
						APKT 1003 .S52	
						APKX 1003 .S52	
						APHT 1003 .Z53	
						APKT 1003 .Z54	
						APKT 1003 .T55	
						APHT 1003 .S57	
						INSERTI - INSERTS PAG. 508	

(mm)																				
ART.	FORM	ØD	M	Ød	ØD1	H	h	L	L3	L4	β	Z	CH	kg	Nm	ISO 6462				
S 1088 040 - 10	—	40	—	22	—	40	10	—	—	—	—	6	—	0,210	1,1+1,3	A	1003		12255P	5608P
S 1088 050 - 10	—	50	—	22	—	40	10	—	—	—	—	7	—	0,320	1,1+1,3	A	1003		12255P	5608P
S 1088 063 - 10	—	63	—	22	—	40	10	—	—	—	—	8	—	0,550	1,1+1,3	A	1003		12255P	5608P
S 1088W 040 - 10	—	40	—	22	—	40	10	—	—	—	—	6	—	0,210	1,1+1,3	A	1003		12255P	5608P
S 1088W 050 - 10	—	50	—	22	—	40	10	—	—	—	—	7	—	0,320	1,1+1,3	A	1003		12255P	5608P
S 1088W 063 - 10	—	63	—	22	—	40	10	—	—	—	—	8	—	0,350	1,1+1,3	A	1003		12255P	5608P
S 1088GW 040 - 10	—	40	—	22	—	40	10	—	—	—	—	5	—	0,210	1,1+1,3	A	1003		12255P	5608P
S 1088GW 050 - 10	—	50	—	22	—	40	10	—	—	—	—	6	—	0,320	1,1+1,3	A	1003		12255P	5608P
S 1088GW 063 - 10	—	63	—	22	—	40	10	—	—	—	—	7	—	0,550	1,1+1,3	A	1003		12255P	5608P
S 1089W 10 25 01.10	A	10	8	8,5	13	—	10	25	13,5	20	11°	1	/	10	0,017	1,1+1,3	—	1003	12255P	5608P
S 1089W 12 25 01.10	A	12	8	8,5	13	—	10	25	13	20	9°	1	/	10	0,020	1,1+1,3	—	1003	12255P	5608P
S 1089W 16 25 02.10	B	16	8	8,5	13	—	10	25	—	—	3,5°	2	—	10	0,023	1,1+1,3	—	1003	12255P	5608P
S 1089W 20 30 03.10	B	20	10	10,5	18	—	10	30	—	—	1,5°	3	—	15	0,049	1,1+1,3	—	1003	12255P	5608P
S 1089W 25 35 03.10	B	25	12	12,5	21	—	10	35	—	—	0,9°	3	—	17	0,090	1,1+1,3	—	1003	12255P	5608P
S 1089W 25 35 04.10	B	25	12	12,5	21	—	10	35	—	—	0,9°	4	—	17	0,089	1,1+1,3	—	1003	12255P	5608P
S 1089W 32 43 05.10	B	32	16	17	29	—	10	43	—	—	0,6°	5	—	24	0,212	1,1+1,3	—	1003	12255P	5608P



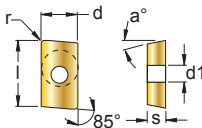
W = FORO PER LIQUIDO REFRIGERANTE - COOLANT BORE - KÜHLMITTELBOHRUNG - TROU DU LIQUIDE D'ARROSAGE
G = PASSO GROSSO - LARGE TEETH DISTANCE - NORMALE ZAHNTEILUNG - GRANDE DISTANCE DENTS.
⌚ = PASSO DIFFERENZIATO - DIFFERENTIAL PITCH - UNGLEICHE TEILUNG - PAS DIFFERENCIE

SCELTA VELOCE - QUICK PICK

Tenacità +
Toughness -



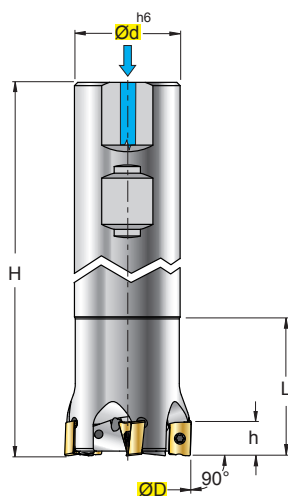
Pag. 486

HT		HW		HC															
CERMET		NON RIV. CEMENTED CARBIDE GRADES		RIVESTITI COATED GRADES BESCHICHTET RECOUVERTS															
		T120	F2140 	T516	T526	T528N	T530	T525	F2330 	F1035	F2335 	l	d	s	d1	r	a°		
												10,5	6,70	3,50	2,8	0,5	11		
												10,5	6,70	3,50	2,8	0,5	11		
												10,5	6,70	3,50	2,8	0,5	11		
												10,5	6,70	3,50	2,8	0,5	11		
												10,5	6,70	3,50	2,8	0,5	11		
												11,0	6,70	3,50	2,8	0,5	11		
												10,5	6,70	3,50	2,8	1,2	11		
												10,5	6,70	3,50	2,8	2,0	11		
												10,5	6,70	3,50	2,8	0,5	11		

S 9001-6W..-10

Ø 20-40

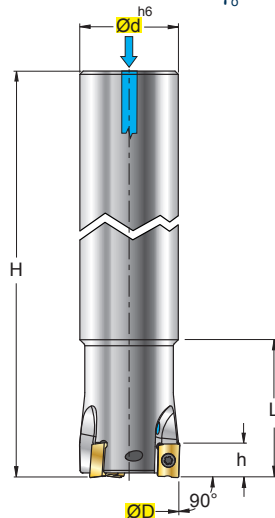
γ_p -6°
 γ_f -27°/-17,5°
 γ_o -27°/-17,5°



S 9001-6XLW.. -10 S 9001-6XLMW.. -10

Ø 20-32

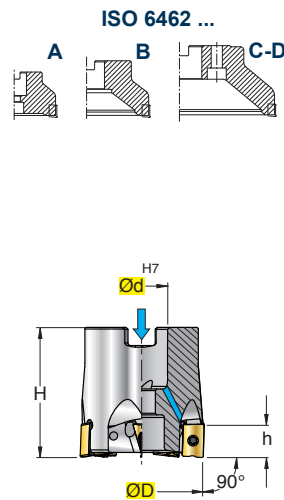
γ_p -6°
 γ_f -27°/-19°
 γ_o -27°/-19°



S 9001-8W..-10

Ø 40-63

γ_p -6,35°/-6°
 γ_f -17,5°/-13°
 γ_o -17,5°/-13°



LNMM 1006
.F56

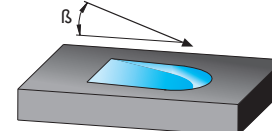
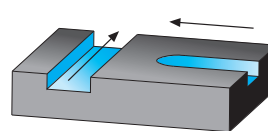
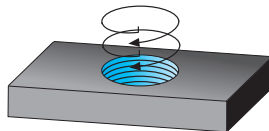
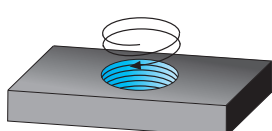


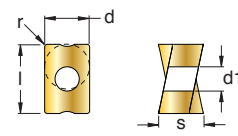
LNMM 1006
.F61



INSERTI - INSERTS
PAG. 510

(mm)															
ART.	ØD	Ød	H	h	L	β	Z		 kg	 Nm	ISO 6462				
S9001-6W-020-02-10	20	20	100	9	30	4°	2	–	0,20	1,5+2,0	–	1006			
S9001-6W-020-03-10	20	20	100	9	30	4°	3	–	0,20	1,5+2,0	–				
S9001-6W-025-02-10	25	25	115	9	35	3,5°	2	–	0,41	1,5+2,0	–				
S9001-6W-025-03-10	25	25	115	9	35	3,5°	3	–	0,41	1,5+2,0	–				
S9001-6W-032-03-10	32	32	125	9	42	3°	3	–	0,76	1,5+2,0	–				
S9001-6W-032-04-10	32	32	125	9	42	3°	4	–	0,76	1,5+2,0	–				
S9001-6W-040-04-10	40	32	130	9	42	2°	4	–	0,87	1,5+2,0	–				
S9001-6W-040-05-10	40	32	130	9	42	2°	5	–	0,87	1,5+2,0	–				
S9001-6XLW-020-02-10	20	20	150	9	30	4°	2	–	0,31	1,5+2,0	–	1006			
S9001-6XLW-025-02-10	25	25	150	9	35	3,5°	2	–	0,51	1,5+2,0	–				
S9001-6XLW-032-03-10	32	32	180	9	42	3°	3	–	0,99	1,5+2,0	–				
S9001-6XLMW-020-02-10	20	19	150	9	30	4°	2	–	0,31	1,5+2,0	–	1006			
S9001-6XLMW-025-02-10	25	24	150	9	35	3,5°	2	–	0,51	1,5+2,0	–				
S9001-6XLMW-032-03-10	32	30	180	9	42	3°	3	–	0,99	1,5+2,0	–				
S9001-8W-040-04-10	40	16	40	9	–	2°	4	–	0,24	1,5+2,0	A	1006			
S9001-8W-040-05-10	40	16	40	9	–	2°	5	–	0,24	1,5+2,0	A				
S9001-8W-050-05-10	50	22	40	9	–	1,5°	5	–	0,35	1,5+2,0	A	1006			
S9001-8W-050-07-10	50	22	40	9	–	1,5°	7	–	0,35	1,5+2,0	A				
S9001-8W-063-06-10	63	22	40	9	–	1°	6	–	0,60	1,5+2,0	A				
S9001-8W-063-08-10	63	22	40	9	–	1°	8	–	0,60	1,5+2,0	A				



SCELTA VELOCE - QUICK PICK																		HT	HW	HC												
																		CERMET	NON RIV. CEMENTED CARBIDE GRADES	RIVESTITI COATED GRADES BESCHICHTET RECOUVERTS						l	d	s	d1	r	a°	
COD.		P			M			K			N			S			H			T3116	F3120	F3420	F1325	F1335	F4345							
		F	M	R	F	M	R	F	M	R	F	M	R	F	M	R	F	M	R													
LNMM	100605 .F56	○	●	●	○	○	○	○	○	○																	10	6,5	6,5	3,5	0,5	—
LNMM	100605 .F61	○	○					●	●																		10	6,5	6,5	3,5	0,5	—
CON ADDUZIONE LUBROREFRIGERANTE - WITH COOLANT SUPPLY																																
SENZA ADDUZIONE LUBROREFRIGERANTE - WITHOUT COOLANT SUPPLY																																

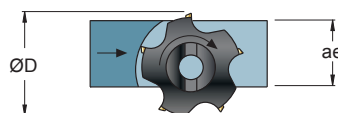
MATERIALI - MATERIALS Pag. 1119			VDI 3323 GR.	HB Rm1) HRC2)	fz0 mm			Vc m/min Pag. 500									
					F	M	R	T3116	F3120	F3420	F1325	F1335	F4345				
P	ACCIAIO NON LEGATO - NOT ALLOY STEEL		1-5	125-300	0,08	0,15	0,25		200		230	220	200				
	ACCIAIO POCO LEGATO - LOW ALLOY STEEL		6-9	180-350	0,08	0,15	0,2		180		190	180	170				
	ACCIAIO ALTO LEGATO - ALLOY STEEL		10-11	200-325	0,06	0,12	0,16		160		170	160	160				
	INOX MARTENS. - STAINLESS STEEL MART		12-13	200-240	0,08	0,12	0,15		120								
M	INOX AUST. DUPLEX - STAINLESS STEEL AUST		14.1-14.2	180-230	0,08	0,12	0,15				100	90	80				
K	GHISA GRIGIA - GREY CAST IRON		15-16	180-260	0,08	0,18	0,25	310	280	250	220						
	GHISA SFEROIDALE - SPHEROIDAL GRAPHITE		17-18	160-250	0,08	0,15	0,2	180	260	260	180						
	GHISA MALLEABILE - MALLEABLE CAST IRON		19-20	130-230	0,08	0,15	0,2	280	240	240	160						
N	ALLUMINIO E SUE LEGHE - ALUMINIUM		21-25	60-130													
	RAME E SUE LEGHE - COPPER		26-28	90-110													
	NON METALLICI - PLASTICS		29-30	/													
S	LEGHE RESIST. CALORE - HIG. TEMP. ALLOY		31-35	200-320													
	TITANIO E SUE LEGHE - TITANIUM		36-37	400-1050 ¹⁾													
H	ACCIAIO TEMPRATO - HARDENED STEEL		38-41	45-60 ²⁾													

$$n = \frac{Vc \cdot 1000}{\phi D \cdot 3,14} = \text{giri/min (min}^{-1}\text{)}$$

$$fz = fz0 \cdot Kae = \text{mm}$$

$$fn = fz \cdot z = \text{mm}$$

$$Vf = fz \cdot z \cdot n = \text{mm/min}$$

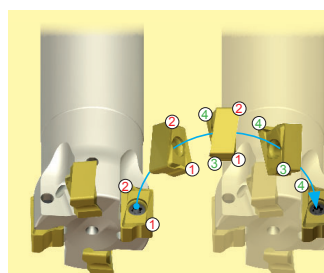


ae/D	0,5-1 50-100%	0,2 20%	0,1 10%	0,05 5%	0,02 2%
Kae	1	1,1	1,2	1,3	1,5

ae/D	0,5-1 50-100%	0,2 20%	0,1 10%	0,05 5%
Vc Pag. 500	Vc (min)-----Vc(max)			

F = FINITURA, LAV. LEGGERA - FINISHING, LIGHT MACHINING
M = LAV. MEDIA, GENERICA - MEDIUM MACHINING, GENERIC
R = SGROSSATURA, LAV. PESANTE - ROUGHING, HEAVY MACHINING

Vc = m/min VELOCITÀ DI TAGLIO - CUTTING SPEED
n = giri/min (min⁻¹) NUMERO DI GIRI - NUMBER OF REVOLUTIONS
fz = mm AVANZAMENTO AL DENTE - TOOTH FEED
fn = mm AVANZAMENTO AL GIRO - FEED / REVOLUTION
Vf = mm/min VELOCITÀ DI AVANZAMENTO - FEED SPEED
Kae = FATTORE DI CORREZIONE - CORRECTION FACTOR

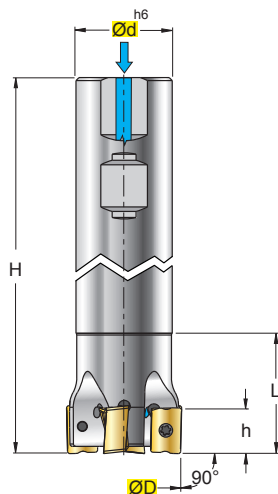


- 4 Taglienti "Utili" disponibili grazie all'inserto bilaterale.
- 4 "Useful" cutting-edges thanks to two-sided insert
- "Nützliche" schneidkanten dank zweiseitiger wendeschneidplatten
- Tranchants "Utiles" disponibles grace a la plaque bilaterale

S 9001-6W..-15

Ø 32-40

γ_p -6°
 γ_f -24°/-20°
 γ_o -24°/-20°

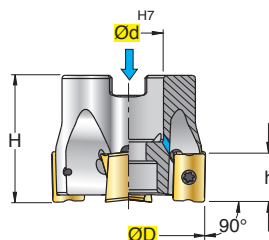
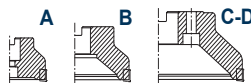


S 9001-8W..-15

Ø 50-80

γ_p -6,35°/-6°
 γ_f -17°
 γ_o -17°

ISO 6462 ...



LNMM 1510
.F56

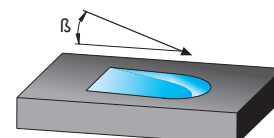
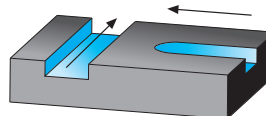
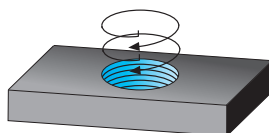
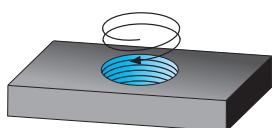


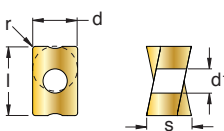
LNMM 1510
.F61

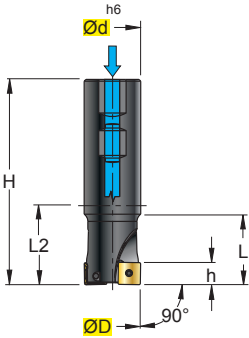
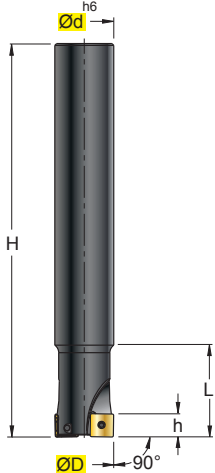
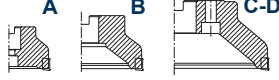
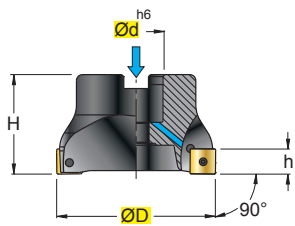


INSERTI - INSERTS
PAG. 510

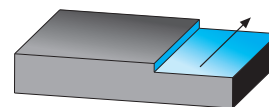
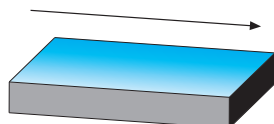
(mm)															
ART.	ØD	Ød	H	h	L	β	Z		 kg	 Nm	ISO 6462				
S9001-6W-032-02-15	32	32	125	14	40	2,5°	2	–	0,71	3,8+5	–		1240P	5615P	–
S9001-6W-032-03-15	32	32	125	14	40	2,5°	3	–	0,71	3,8+5	–				
S9001-6W-040-03-15	40	32	130	14	40	2°	3	–	0,78	3,8+5	–				
S9001-6W-040-04-15	40	32	130	14	40	2°	4	–	0,78	3,8+5	–				
													1240P	5615P	VBSF10
S9001-8W-050-03-15	50	22	40	14	–	2°	3	–	0,31	3,8+5	A				
S9001-8W-050-04-15	50	22	40	14	–	2°	4	–	0,31	3,8+5	A				
S9001-8W-063-04-15	63	22	40	14	–	2°	4	–	0,54	3,8+5	A				
S9001-8W-063-06-15	63	22	40	14	–	2°	6	–	0,54	3,8+5	A		1240P	5615P	AL12x35
S9001-8W-080-05-15	80	27	50	14	–	1,5°	5	–	1,0	3,8+5	A-B				
S9001-8W-080-07-15	80	27	50	14	–	1,5°	7	–	1,0	3,8+5	A-B				



SCELTA VELOCE - QUICK PICK																	Tenacità + Toughness -						Pag. 486		HT	HW	HC																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
COD.			P			M			K			N			S			H			CERMET	NON RIV. CEMENTED CARBIDE GRADES	T3116	F3120	F3420	F1325	F1335	F4345							l	d	s	d1	r	a°																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
F	M	R	F	M	R	F	M	R	F	M	R	F	M	R	F	M	R	F	M	R																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
LNMM	151008	.F56	○	●	●	○	○	○	○	○	○	○																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	

S 1296W .. 12		S 1296XLZ .. 12		S 1298W ..12 S 1298GW..12 S 1298G..12		SDMT 1205 .F58	
Ø 32-40	$\gamma_p +8^\circ/+7^\circ$ $\gamma_f -9^\circ/-8^\circ$ $\gamma_o -9^\circ/-8^\circ$	Ø 32-40	$\gamma_p +8^\circ/+7^\circ$ $\gamma_f -9^\circ/-8^\circ$ $\gamma_o -9^\circ/-8^\circ$	Ø 50-250	$\gamma_p +7^\circ/+8^\circ$ $\gamma_f -8^\circ/-1,6^\circ$ $\gamma_o -8^\circ/-1,6^\circ$		
				ISO 6462 ... 			
							
						 INSERTI - INSERTS PAG. 513	

(mm)												ISO 6462				
ART.	ØD	Ød	H	h	L	L2	Z	↺								
S 1296W 032 - 12	32	32	110	10,5	40	50	2	—		0,545	3,8+5,0	—	1205	124011P	5620P	—
S 1296W 040 - 12	40	32	115	10,5	45	45	3	—		0,618	3,8+5,0	—				
S 1296XLZ 032 - 12	32	32	250	10,5	40	—	2	—		1,432	3,8+5,0	—	1205	124011P	5620P	—
S 1296XLZ 040 - 12	40	40	250	10,5	45	—	3	—		2,247	3,8+5,0	—				
S 1298W 050 - 12	50	22	40	10,5	—	—	5	✓		0,295	3,8+5,0	A	1205	124011P	5620P	VBSF10
S 1298W 063 - 12	63	22	40	10,5	—	—	6	✓		0,470	3,8+5,0	A				
S 1298W 080 - 12	80	27	50	10,5	—	—	6	✓		1,040	3,8+5,0	A	1205	124011P	5620P	VBSF12
S 1298W 100 - 12	100	32	50	10,5	—	—	8	✓		1,600	3,8+5,0	A	1205	124011P	5620P	VBSF16
S 1298W 125 - 12	125	40	63	10,5	—	—	9	✓		3,300	3,8+5,0	A	1205	124011P	5620P	VBSF20
S 1298GW 050 - 12	50	22	40	10,5	—	—	3	—		0,289	3,8+5,0	A	1205	124011P	5620P	VBSF10
S 1298GW 063 - 12	63	22	40	10,5	—	—	4	✓		0,474	3,8+5,0	A				
S 1298GW 080 - 12	80	27	50	10,5	—	—	5	✓		1,04	3,8+5,0	A	1205	124011P	5620P	VBSF12
S 1298GW 100 - 12	100	32	50	10,5	—	—	6	✓		1,61	3,8+5,0	A-B	1205	124011P	5620P	VBSF16
S 1298GW 125 - 12	125	40	63	10,5	—	—	7	✓		3,275	3,8+5,0	A-B	1205	124011P	5620P	VBSF20
S 1298G 160 - 12	160	40	63	10,5	—	—	8	✓		3,74	3,8+5,0	C	1205	124011P	5620P	—
S 1298G 200 - 12	200	60	63	10,5	—	—	10	✓		7,07	3,8+5,0	D				
S 1298G 250 - 12	250	60	63	10,5	—	—	12	✓		10,06	3,8+5,0	D				



W = FORO PER LIQUIDO REFRIGERANTE - COOLANT BORE - KÜHLMITTELBOHRUNG - TROU DU LIQUIDE D'ARROSAGE
 XLZ = EXTRALUNGA, STELO CILINDRICO - EXTRALONG, CYLINDRICAL SHANK - EXTRALANG, ZYLINDERSCHAFT - EXTRALONGUE, QUEUE CYLINDRIQUE
 G = PASSO GROSSO - LARGE TEETH DISTANCE - NORMALE ZAHNTEILUNG - GRANDE DISTANCE DENTS.
 ↺ = PASSO DIFFERENZIATO - DIFFERENTIAL PITCH - UNGLEICHE TEILUNG - PAS DIFFERENCIE

Tenacità + ↑
Toughness - ↓

Pag. 486

[illegible]

$$n = \frac{V_c \cdot 1000}{\varnothing D \cdot 3,14} = \text{giri/min (min}^{-1}\text{)}$$

ae/D	0,5-1 50-100%	0,3 30%	0,2 20%	0,1 10%	0,05 5%	0,02 2%
Kae	1	1,2	1,5	2,1	3	4,8

ae/D	0,5-1 50-100%	0,2 20%	0,1 10%	0,05 5%
Vc Pag. 500	Vc (min)-----Vc(max)			

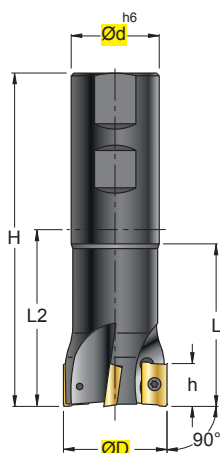
Vc = m/min VELOCITÀ DI TAGLIO - CUTTING SPEED
n = giri/min (min^{-1}) NUMERO DI GIRI - NUMBER OF REVOLUTIONS
fz = mm AVANZAMENTO AL DENTE - TOOTH FEED
fn = mm AVANZAMENTO AL GIRO - FEED / REVOLUTION
Vf = mm/min VELOCITÀ DI AVANZAMENTO - FEED SPEED
Kae = FATTORE DI CORREZIONE - CORRECTION FACTOR

437

S 1696 .. 16

Ø 25-40

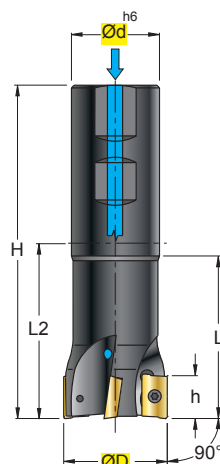
γ_p +4°/+8°
 γ_f -13,5°/-12,5°
 γ_o -13,5°/-12,5°



S 1696W .. 16

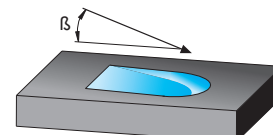
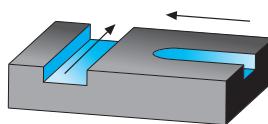
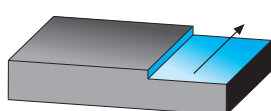
Ø 25-40

γ_p +4°/+8°
 γ_f -13,5°/-12,5°
 γ_o -13,5°/-12,5°



APKT 1604 .S51/.S54	
APKT 1604 .S52	
APMT 1604 .I52	
APFT 1604 .S52	
APKX 1604 .S52	
APFX 1604 .S52	
APKT 1604 .Z54	
APKT 1604 .T55	
APKT 1604 .K57P	
INSERTI - INSERTS PAG. 509	

(mm)																	
ART.		ØD	Ød	H	h	L	L2	β	Z		kg	Nm					
S 1696	025 - 16	25	25	100	16	44	44	3,5°	2	✓	0,29	3,8±5,0	1604	C04008P	5615P		
S 1696	032 - 16	32	32	110	16	50	50	2,0°	3	✓	0,54	3,8±5,0	1604	C04011P	5615P		
S 1696	040 - 16	40	32	115	16	55	55	1,5°	4	✓	0,64	3,8±5,0					
S 1696W	025 - 16	25	25	100	16	44	44	3,5°	2	✓	0,29	3,8±5,0	1604	C04008P	5615P		
S 1696W	032 - 16	32	32	110	16	50	50	2,0°	3	✓	0,54	3,8±5,0	1604	C04011P	5615P		
S 1696W	040 - 16	40	32	115	16	55	55	1,5°	4	✓	0,64	3,8±5,0					



W = FORO PER LIQUIDO REFRIGERANTE - COOLANT BORE - KÜHLMITTELBOHRUNG - TROU DU LIQUIDE D'ARROSAGE

XLZ = EXTRALUNGA, STELO CILINDRICO - EXTRALONG, CYLINDRICAL SHANK - EXTRALANG, ZYLINDERSCHAFT - EXTRALONGUE, QUEUE CYLINDRIQUE

= PASSO DIFFERENZIATO - DIFFERENTIAL PITCH - UNGLEICHE TEILUNG - PAS DIFFERENCIE

SCELTA VELOCE - QUICK PICK

Tenacità +
Toughness -



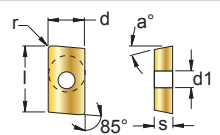
Pag. 486

HW

NON RIV.
CEMENTED
CARBIDE
GRADES

HC

RIVESTITI
COATED GRADES
BESCHICHTET
RECOUVERTS



COD.				P			M			K			N			S			H			T110	T120			T516	T526	T528N	T530	T525	F2330	F2335	T544	l	d	s	d1	r	a°
				F	M	R	F	M	R	F	M	R	F	M	R	F	M	R	F	M	R																		
APKT	1604	PDR	.S51																																				
APMT	1604	PDR	.I52	○	●	●		○	○	○	○	○	○	○	○												■												
APKT	1604	PDTR	.S52	○	●	●		○	○	○	○	○	○	○	○																								
APFT	1604	PDTR	.S52	○	●	●		○	○	○	○	○	○	○	○																								
APKX	1604	PDR	.S52																																				
				○	●	●		○	○	○	○	○	○	○	○																								
				○	●	●		○	○	○	○	○	○	○	○																								
APFX	160416	R	.S52	○	●	●		○	○	○	○	○	○	○	○																								
APFX	160424	R	.S52	○	●	●		○	○	○	○	○	○	○	○																								
APFX	160430	R	.S52	○	●	●		○	○	○	○	○	○	○	○																								
APFX	160440	R	.S52	○	●	●		○	○	○	○	○	○	○	○																								
APFX	160448	R	.S52	○	●	●		○	○	○	○	○	○	○	○																								
APFX	160460	R	.S52	○	●	●		○	○	○	○	○	○	○	○																								
APKT	1604	PDTR	.S54	●	●	○		○	○	○	○	○	○	○	○																								
APKT	1604	PDSR	.Z54		●	●																																	
APKT	1604	PDR	.T55		○			●																															
					○			●			○																												
APKT	1604	PDFR	.K57P									●	●	●									■																

CON ADDUZIONE LUBROREFRIGERANTE - WITH COOLANT SUPPLY

SENZA ADDUZIONE LUBROREFRIGERANTE - WITHOUT COOLANT SUPPLY

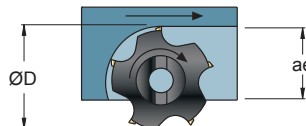
MATERIALI - MATERIALS Pag. 1119			VDI 3323 GR.	HB Rm1) HRC2)	fz0 mm			Vc m/min Pag. 500															
P	ACCIAIO NON LEGATO - NOT ALLOY STEEL		1-5	125-300	0,1	0,2	0,3																
	ACCIAIO POCO LEGATO - LOW ALLOY STEEL		6-9	180-350	0,08	0,15	0,25																
	ACCIAIO ALTO LEGATO - ALLOY STEEL		10-11	200-325	0,08	0,15	0,25																
	INOX MARTENS. - STAINLESS STEEL MART		12-13	200-240	0,06	0,12	0,2																
M	INOX AUST. DUPLEX - STAINLESS STEEL AUST		14.1-14.2	180-230	0,06	0,1	0,15																
K	GHISA GRIGIA - GREY CAST IRON		15-16	180-260	0,12	0,25	0,35	120	120	250	200												
	GHISA SFEROIDALE - SPHEROIDAL GRAPHITE		17-18	160-250	0,1	0,2	0,3	120	110	200	180												
	GHISA MALLEABILE - MALLEABLE CAST IRON		19-20	130-230	0,1	0,2	0,3	120	120	220	200												
N	ALLUMINIO E SUE LEGHE - ALUMINIUM		21-25	60-130	0,08	0,2	0,35	950	500														
	RAME E SUE LEGHE - COPPER		26-28	90-110	0,06	0,18	0,3	400	300														
	NON METALLICI - PLASTICS		29-30	/	0,06	0,18	0,3	300															
S	LEGHE RESIST. CALORE - HIG. TEMP. ALLOY		31-35	200-320	0,05	0,08	0,12	20	20														
	TITANIO E SUE LEGHE - TITANIUM		36-37	400-1050 ¹⁾	0,05	0,08	0,12	30	30														
H	ACCIAIO TEMPRATO - HARDENED STEEL		38-41	45-60 ²⁾	0,05	0,08																	

$$n = \frac{Vc \cdot 1000}{\varnothing D \cdot 3,14} = \text{giri/min (min}^{-1}\text{)}$$

$$fz = fz0 \cdot Kae = \text{mm}$$

$$fn = fz \cdot z = \text{mm}$$

$$Vf = fz \cdot z \cdot n = \text{mm/min}$$



ae/D	0,5-1 50-100%	0,3 30%	0,2 20%	0,1 10%	0,05 5%	0,02 2%
Kae	1	1,2	1,5	2,1	3	4,8

ae/D	0,5-1 50-100%	0,2 20%	0,1 10%	0,05 5%
Vc	Vc (min)-----Vc(max)			
Pag. 500				

F = FINITURA, LAV. LEGGERA - FINISHING, LIGHT MACHINING
M = LAV. MEDIA, GENERICA - MEDIUM MACHINING, GENERIC
R = SGROSSATURA, LAV. PESANTE - ROUGHING, HEAVY MACHINING

Vc = m/min VELOCITÀ DI TAGLIO - CUTTING SPEED
n = giri/min (min⁻¹) NUMERO DI GIRI - NUMBER OF REVOLUTIONS
fz = mm AVANZAMENTO AL DENTE - TOOTH FEED
fn = mm AVANZAMENTO AL GIRO - FEED / REVOLUTION
Vf = mm/min VELOCITÀ DI AVANZAMENTO - FEED SPEED
Kae = FATTORE DI CORREZIONE - CORRECTION FACTOR



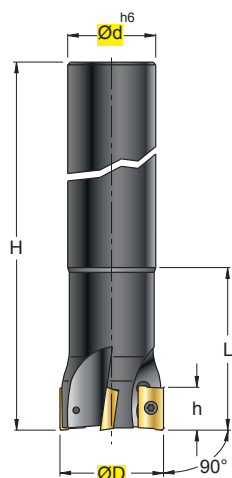
Raggio Inserto Insert Radius (mm)	Raggio Fresa Milling Cutter Radius (mm)
1,6	R1,0
2,4	R1,2
3,0	R1,6
4,0	R2,5
4,8	R3,3
6,0	R4,5

- Per usare inserti con $r \geq 1,6\text{mm}$, bisogna modificare il corpo fresa come indicato in figura.
- To use inserts with $r \geq 1,6\text{mm}$, it is necessary to modify the milling cutting body as illustrated in the figure
- Um wendeschneidplatten mit $r \geq 1,6\text{mm}$, muss der fräserkörper wie in der abbildung angegeben verändert werden
- Pour utiliser les plaquettes avec $r \geq 1,6\text{mm}$, il faut modifier le corps de la fraise comme il est indiqué dans l'illustration.

S 1696XLZ .. 16

Ø 25-40

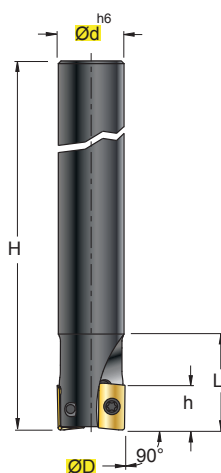
γ_p +4°/+8°
 γ_f -13,5°/-12,5°
 γ_o -13,5°/-12,5°



S 1696XLZ^M..16

Ø 25-32

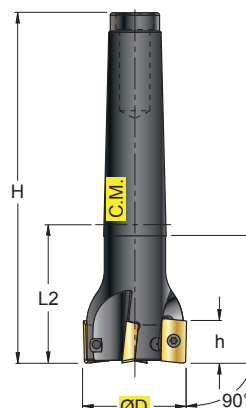
γ_p +4°/+8°
 γ_f -13,5°/-12,5°
 γ_o -13,5°/-12,5°



S 1697 .. 16

Ø 25-40

γ_p +4°/+8°
 γ_f -13,5°/-12,5°
 γ_o -13,5°/-12,5°



APKT 1604
.S51/.S54



APKT 1604
.S52



APMT 1604
.I52



APFT 1604
.S52



APKX 1604
.S52



APFX 1604
.S52



APKT 1604
.Z54



APKT 1604
.T55



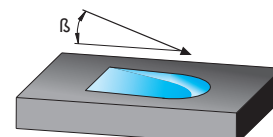
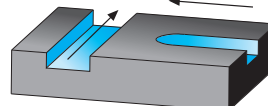
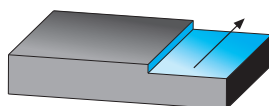
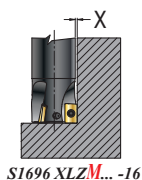
APKT 1604
.K57P



INSERTI - INSERTS
PAG. 509

(mm)

ART.	ØD	Ød/CM	H	h	L	L2	β	Z	↺	X	kg	Nm			
S 1696XLZ 025 - 16	25	25	200	16	44	—	3,5°	2	✓	—	0,69	3,8÷5,0	1604	C04008P	5615P
S 1696XLZ 032 - 16	32	32	250	16	50	—	2,0°	3	✓	—	1,44	3,8÷5,0	1604	C04011P	5615P
S 1696XLZ 040 - 16	40	32	250	16	50	—	1,5°	4	✓	—	2,30	3,8÷5,0			
S 1696XLZM 025 - 16	25	24	200	16	35	—	3,5°	2	✓	0,5	0,67	3,8÷5,0	1604	C04008P	5615P
S 1696XLZM 032 - 16	32	30	250	16	35	—	2,0°	3	✓	1,0	1,51	3,8÷5,0	1604	C04011P	5615P
S 1697 025 - 16	25	CM3	124	16	38	43	3,5°	2	✓	—	0,30	3,8÷5,0	1604	C04008P	5615P
S 1697 032 - 16	32	CM3	124	16	38	43	2,0°	3	✓	—	0,34	3,8÷5,0	1604	C04011P	5615P
S 1697 040 - 16	40	CM3	135	16	49	54	1,5°	4	✓	—	0,43	3,8÷5,0			



W = FORO PER LIQUIDO REFRIGERANTE - COOLANT BORE - KÜHLMITTELBOHRUNG - TROU DU LIQUIDE D'ARROSAGE

GXL = PASSO GROSSO EXTRALUNGA - EXTRALONG WITH LARGE TEETH DISTANCE - EXTRALANG MIT NORMAL ZUHNTLEUNG - EXTRALONGUE AVEC GRANDE DISTANCE DENTS

↺ = PASSO DIFFERENZIATO - DIFFERENTIAL PITCH - UNGLEICHE TEILUNG - PAS DIFFERENCIE

SCELTA VELOCE - QUICK PICK

Tenacità +
Toughness -



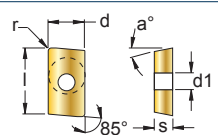
Pag. 486

HW

NON RIV.
CEMENTED
CARBIDE
GRADES

HC

RIVESTITI
COATED GRADES
BESCHICHTET
RECOUVERTS



COD.				P			M			K			N			S			H			T110	T120			T516	T526	T528N	T530	T525	F2330	F2335	T544	l	d	s	d1	r	a°
				F	M	R	F	M	R	F	M	R	F	M	R	F	M	R	F	M	R																		
APKT	1604	PDR	.S51																																				
APMT	1604	PDR	.I52	○	●	●		○	○	○	○	○	○	○	○												■												
APKT	1604	PDTR	.S52	○	●	●		○	○	○	○	○	○	○	○																								
APFT	1604	PDTR	.S52	○	●	●		○	○	○	○	○	○	○	○																								
APKX	1604	PDR	.S52																																				
				○	●	●		○	○	○	○	○	○	○	○																								
				○	●	●		○	○	○	○	○	○	○	○																								
APFX	160416 R		.S52	○	●	●		○	○	○	○	○	○	○	○																								
APFX	160424 R		.S52	○	●	●		○	○	○	○	○	○	○	○																								
APFX	160430 R		.S52	○	●	●		○	○	○	○	○	○	○	○																								
APFX	160440 R		.S52	○	●	●		○	○	○	○	○	○	○	○																								
APFX	160448 R		.S52	○	●	●		○	○	○	○	○	○	○	○																								
APFX	160460 R		.S52	○	●	●		○	○	○	○	○	○	○	○																								
APKT	1604	PDTR	.S54	●	●	○		○	○	○	○	○	○	○	○																								
APKT	1604	PDSR	.Z54	●	●																																		
APKT	1604	PDR	.T55		○			●																															
				○				●																															
APKT	1604	PDFR	.K57P																																				

CON ADDUZIONE LUBROREFRIGERANTE - WITH COOLANT SUPPLY

SENZA ADDUZIONE LUBROREFRIGERANTE - WITHOUT COOLANT SUPPLY

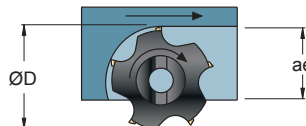
MATERIALI - MATERIALS Pag. 1119			VDI 3323 GR.	HB Rm1) HRC2)	fz0 mm			Vc m/min Pag. 500															
P	ACCIAIO NON LEGATO - NOT ALLOY STEEL		1-5	125-300	0,1	0,2	0,3							250	220	220	230	270	250	230			
	ACCIAIO POCO LEGATO - LOW ALLOY STEEL		6-9	180-350	0,08	0,15	0,25							200	160	160	180	220	200	180			
	ACCIAIO ALTO LEGATO - ALLOY STEEL		10-11	200-325	0,08	0,15	0,25							170	150	150	150	200	180	150			
	INOX MARTENS. - STAINLESS STEEL MART		12-13	200-240	0,06	0,12	0,2							150	140	140	140	180	150	140			
M	INOX AUST. DUPLEX - STAINLESS STEEL AUST		14.1-14.2	180-230	0,06	0,1	0,15		100					140	130	120	120	150	130	120			
K	GHISA GRIGIA - GREY CAST IRON		15-16	180-260	0,12	0,25	0,35	120	120	250	200			180	160			240	160				
	GHISA SFEROIDALE - SPHEROIDAL GRAPHITE		17-18	160-250	0,1	0,2	0,3	120	110	200	180			160	150			200	150				
	GHISA MALLEABILE - MALLEABLE CAST IRON		19-20	130-230	0,1	0,2	0,3	120	120	220	200			170	160			200	160				
N	ALLUMINIO E SUE LEGHE - ALUMINIUM		21-25	60-130	0,08	0,2	0,35	950	500								600			600			
	RAME E SUE LEGHE - COPPER		26-28	90-110	0,06	0,18	0,3	400	300								300			300			
	NON METALLICI - PLASTICS		29-30	/	0,06	0,18	0,3	300															
S	LEGHE RESIST. CALORE - HIG. TEMP. ALLOY		31-35	200-320	0,05	0,08	0,12	20	20					40			40	40	40	40			
	TITANIO E SUE LEGHE - TITANIUM		36-37	400-1050 ¹⁾	0,05	0,08	0,12	30	30					50			60	50	50	50			
H	ACCIAIO TEMPRATO - HARDENED STEEL		38-41	45-60 ²⁾	0,05	0,08								40									

$$n = \frac{Vc \cdot 1000}{\varnothing D \cdot 3,14} = \text{giri/min (min}^{-1}\text{)}$$

$$fz = fz0 \cdot Kae = \text{mm}$$

$$fn = fz \cdot z = \text{mm}$$

$$Vf = fz \cdot z \cdot n = \text{mm/min}$$



ae/D	0,5-1 50-100%	0,3 30%	0,2 20%	0,1 10%	0,05 5%	0,02 2%
Kae	1	1,2	1,5	2,1	3	4,8

ae/D	0,5-1 50-100%	0,2 20%	0,1 10%	0,05 5%
Vc	Vc (min)-----Vc(max)			
Pag. 500				

F = FINITURA, LAV. LEGGERA - FINISHING, LIGHT MACHINING
M = LAV. MEDIA, GENERICA - MEDIUM MACHINING, GENERIC
R = SGROSSATURA, LAV. PESANTE - ROUGHING, HEAVY MACHINING

Vc = m/min VELOCITÀ DI TAGLIO - CUTTING SPEED
n = giri/min (min⁻¹) NUMERO DI GIRI - NUMBER OF REVOLUTIONS
fz = mm AVANZAMENTO AL DENTE - TOOTH FEED
fn = mm AVANZAMENTO AL GIRO - FEED / REVOLUTION
Vf = mm/min VELOCITÀ DI AVANZAMENTO - FEED SPEED
Kae = FATTORE DI CORREZIONE - CORRECTION FACTOR



Raggio Inserto Insert Radius (mm)	Raggio Fresa Milling Cutter Radius (mm)
1,6	R1,0
2,4	R1,2
3,0	R1,6
4,0	R2,5
4,8	R3,3
6,0	R4,5

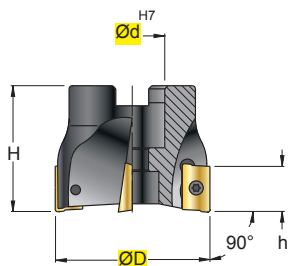
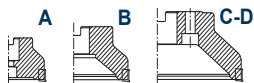
- Per usare inserti con $r \geq 1,6\text{mm}$, bisogna modificare il corpo fresa come indicato in figura.
- To use inserts with $r \geq 1,6\text{mm}$, it is necessary to modify the milling cutting body as illustrated in the figure
- Um wendeschneidplatten mit $r \geq 1,6\text{mm}$, muss der fräserkörper wie in der abbildung angegeben verändert werden
- Pour utiliser les plaquettes avec $r \geq 1,6\text{mm}$, il faut modifier le corps de la fraise comme il est indiqué dans l'illustration.

S 1698 .. 16

Ø 40-125

γ_p +6°/+9°
 γ_f -12,5°/-3°
 γ_o -12,5°/-3°

ISO 6462 ...

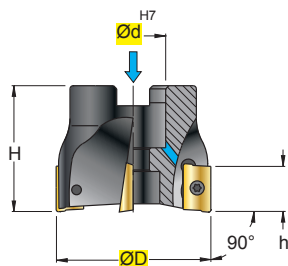
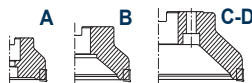


S 1698W ..16 S 1698GW..16

Ø 40-125

γ_p +6°/+9°
 γ_f -12,5°/-3°
 γ_o -12,5°/-3°

ISO 6462 ...



APKT 1604
.S51/.S54



APKT 1604
.S52



APMT 1604
.I52



APFT 1604
.S52



APKX 1604
.S52



APFX 1604
.S52



APKT 1604
.Z54



APKT 1604
.T55



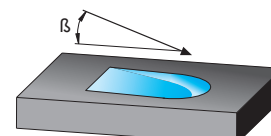
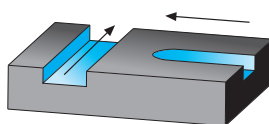
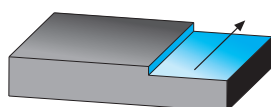
APKT 1604
.K57P



INSERTI - INSERTS
PAG. 509

(mm)

ART.	ØD	Ød	H	h	β	Z		kg	Nm	ISO 6462				
S 1698 040 - 16	40	16	40	16	1,8°	4	Y	0,18	3,8+5,0	A	1604	C04011P	5615P	VBSF08
S 1698 050 - 16	50	22	40	16	1,0°	5	Y	0,25	3,8+5,0	A	1604	C04011P	5615P	VBSF10
S 1698 063 - 16	63	22	40	16	0,7°	6	Y	0,47	3,8+5,0	A				
S 1698 080 - 16	80	27	50	16	0,6°	7	Y	0,94	3,8+5,0	A-B	1604	C04011P	5615P	VBSF12
S 1698 100 - 16	100	32	50	16	0,4°	8	Y	1,55	3,8+5,0	A-B	1604	C04011P	5615P	VBSF16
S 1698 125 - 16	125	40	63	16	0,3°	9	Y	3,43	3,8+5,0	A-B	1604	C04011P	5615P	VBSF20
S 1698W 040 - 16	40	16	40	16	1,8°	4	Y	0,18	3,8+5,0	A	1604	C04011P	5615P	VBSF08
S 1698W 050 - 16	50	22	40	16	1,0°	5	Y	0,25	3,8+5,0	A	1604	C04011P	5615P	VBSF10
S 1698W 063 - 16	63	22	40	16	0,7°	6	Y	0,47	3,8+5,0	A				
S 1698W 080 - 16	80	27	50	16	0,6°	7	Y	0,94	3,8+5,0	A-B	1604	C04011P	5615P	VBSF12
S 1698W 100 - 16	100	32	50	16	0,4°	8	Y	1,55	3,8+5,0	A-B	1604	C04011P	5615P	VBSF16
S 1698W 125 - 16	125	40	63	16	0,3°	9	Y	3,43	3,8+5,0	A	1604	C04011P	5615P	VBSF20
S 1698GW 040 - 16	40	16	40	16	1,8°	3	Y	0,17	3,8+5,0	A	1604	C04011P	5615P	VBSF08
S 1698GW 050 - 16	50	22	40	16	1,0°	4	Y	0,24	3,8+5,0	A	1604	C04011P	5615P	VBSF10
S 1698GW 063 - 16	63	22	40	16	0,7°	5	Y	0,45	3,8+5,0	A				
S 1698GW 080 - 16	80	27	50	16	0,6°	6	Y	0,92	3,8+5,0	A-B	1604	C04011P	5615P	VBSF12
S 1698GW 100 - 16	100	32	50	16	0,4°	7	Y	1,52	3,8+5,0	A-B	1604	C04011P	5615P	VBSF16
S 1698GW 125 - 16	125	40	63	16	0,3°	8	Y	3,10	3,8+5,0	A-B	1604	C04011P	5615P	VBSF20



W = FORO PER LIQUIDO REFRIGERANTE - COOLANT BORE - KÜHLMITTELBOHRUNG - TROU DU LIQUIDE D'ARROSAGE

G = PASSO GROSSO - LARGE TEETH DISTANCE - NORMALE ZAHNTEILUNG - GRANDE DISTANCE DENTS.

P = PASSO DIFFERENZIATO - DIFFERENTIAL PITCH - UNGLEICHE TEILUNG - PAS DIFFERENCIE



SCELTA VELOCE - QUICK PICK

Tenacità +
Toughness -



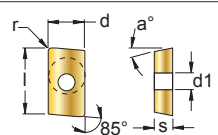
Pag. 486

HW

NON RIV.
CEMENTED
CARBIDE
GRADES

HC

RIVESTITI
COATED GRADES
BESCHICHTET
RECOUVERTS



COD.		P		M		K		N		S		H		T110	T120	T516	T526	T528N	T530	T525	F2330	F2335	F244	l	d	s	d1	r	a°
APKT	1604	PDR	.S51																					17,0	9,45	5,26	4,4	0,4	11
APMT	1604	PDR	.I52																					17,0	9,45	5,26	4,4	0,8	11
APKT	1604	PDTR	.S52																					17,0	9,45	5,26	4,4	0,8	11
APFT	1604	PDTR	.S52																					17,0	9,45	4,76	4,4	0,8	11
APKX	1604	PDR	.S52																					17,0	9,45	5,76	4,4	0,8	11
APFX	160416	R	.S52																					17,0	9,45	4,76	4,4	1,6	11
APFX	160424	R	.S52																					17,0	9,45	4,76	4,4	2,4	11
APFX	160430	R	.S52																					17,0	9,45	4,76	4,4	3,0	11
APFX	160440	R	.S52																					17,0	9,45	4,76	4,4	4,0	11
APFX	160448	R	.S52																					17,0	9,45	4,76	4,4	4,8	11
APFX	160460	R	.S52																					17,0	9,45	4,76	4,4	6,0	11
APKT	1604	PDTR	.S54																					17,0	9,45	5,26	4,4	0,4	11
APKT	1604	PDSR	.Z54																					17,0	9,45	5,26	4,4	0,8	11
APKT	1604	PDR	.T55																					17,0	9,45	5,76	4,5	0,8	11
APKT	1604	PDFR	.K57P																					16,4	9,53	4,76	4,4	0,2	11

CON ADDUZIONE LUBROREFRIGERANTE - WITH COOLANT SUPPLY

SENZA ADDUZIONE LUBROREFRIGERANTE - WITHOUT COOLANT SUPPLY

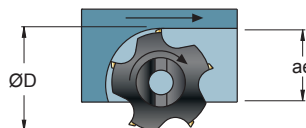
MATERIALI - MATERIALS Pag. 1119		VDI 3323 GR.	HB Rm1) HRC2)	fz0 mm			Vc m/min Pag. 500															
P	ACCIAIO NON LEGATO - NOT ALLOY STEEL	1-5	125-300	0,1	0,2	0,3	T110	T120	T516	T525	T526	T528N	T530	F2330	F2335	T544						
	ACCIAIO POCO LEGATO - LOW ALLOY STEEL	6-9	180-350	0,08	0,15	0,25				200	160	160	180	220	200	180						
	ACCIAIO ALTO LEGATO - ALLOY STEEL	10-11	200-325	0,08	0,15	0,25				170	150	150	150	200	180	150						
	INOX MARTENS. - STAINLESS STEEL MART	12-13	200-240	0,06	0,12	0,2				150	140	140	140	180	150	140						
M	INOX AUST. DUPLEX - STAINLESS STEEL AUST	14.1-14.2	180-230	0,06	0,1	0,15		100		140	130	120	120	150	130	120						
K	GHISA GRIGIA - GREY CAST IRON	15-16	180-260	0,12	0,25	0,35	120	120	250	200		180	160		240	160						
	GHISA SFEROIDALE - SPHEROIDAL GRAPHITE	17-18	160-250	0,1	0,2	0,3	120	110	200	180		160	150		200	150						
	GHISA MALLEABILE - MALLEABLE CAST IRON	19-20	130-230	0,1	0,2	0,3	120	120	220	200		170	160		200	160						
N	ALLUMINIO E SUE LEGHE - ALUMINIUM	21-25	60-130	0,08	0,2	0,35	950	500					600			600						
	RAME E SUE LEGHE - COPPER	26-28	90-110	0,06	0,18	0,3	400	300					300			300						
	NON METALLICI - PLASTICS	29-30	/	0,06	0,18	0,3	300															
S	LEGHE RESIST. CALORE - HIG. TEMP. ALLOY	31-35	200-320	0,05	0,08	0,12	20	20		40		40	40	40	40	40						
	TITANIO E SUE LEGHE - TITANIUM	36-37	400-1050 ⁹⁾	0,05	0,08	0,12	30	30		50		60	50	50	50	50						
H	ACCIAIO TEMPRATO - HARDENED STEEL	38-41	45-60 ⁸⁾	0,05	0,08					40												

$$n = \frac{Vc \cdot 1000}{\varnothing D \cdot 3,14} = \text{giri/min (min}^{-1}\text{)}$$

$$fz = fz0 \cdot Kae = \text{mm}$$

$$fn = fz \cdot z = \text{mm}$$

$$Vf = fz \cdot z \cdot n = \text{mm/min}$$



ae/D	0,5-1 50-100%	0,3 30%	0,2 20%	0,1 10%	0,05 5%	0,02 2%
Kae	1	1,2	1,5	2,1	3	4,8

ae/D	0,5-1 50-100%	0,2 20%	0,1 10%	0,05 5%
Vc	Vc (min)-----Vc(max)			
Pag. 500				

F = FINITURA, LAV. LEGGERA - FINISHING, LIGHT MACHINING
M = LAV. MEDIA, GENERICA - MEDIUM MACHINING, GENERIC
R = SGROSSATURA, LAV. PESANTE - ROUGHING, HEAVY MACHINING

Vc = m/min VELOCITÀ DI TAGLIO - CUTTING SPEED
n = giri/min (min⁻¹) NUMERO DI GIRI - NUMBER OF REVOLUTIONS
fz = mm AVANZAMENTO AL DENTE - TOOTH FEED
fn = mm AVANZAMENTO AL GIRO - FEED / REVOLUTION
Vf = mm/min VELOCITÀ DI AVANZAMENTO - FEED SPEED
Kae = FATTORE DI CORREZIONE - CORRECTION FACTOR

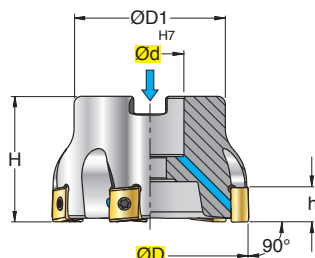
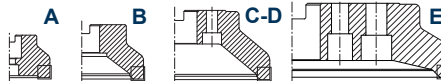
Raggio Inserto Insert Radius (mm)	Raggio Fresa Milling Cutter Radius (mm)
1,6	R1,0
2,4	R1,2
3,0	R1,6
4,0	R2,5
4,8	R3,3
6,0	R4,5

- Per usare inserti con $r \geq 1,6\text{mm}$, bisogna modificare il corpo fresa come indicato in figura.
- To use inserts with $r \geq 1,6\text{mm}$, it is necessary to modify the milling cutting body as illustrated in the figure
- Um wendeschneidplatten mit $r \geq 1,6\text{mm}$, muss der fräserkörper wie in der abbildung angegeben verändert werden
- Pour utiliser les plaquettes avec $r \geq 1,6\text{mm}$, il faut modifier le corps de la fraise comme il est indiqué dans l'illustration.

S 9003.8W .. 13

Ø 50-160

γ_p -5°
 γ_f -15,8°/-9°
 γ_o -15,8°/-9°



LNMX
131308..
.F58

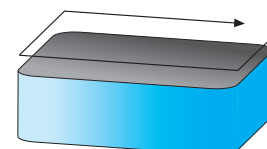
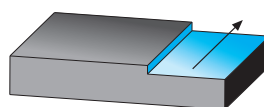
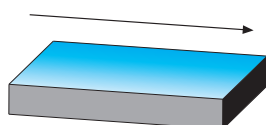


LNMX
131308..
.F61



INSERTI - INSERTS
PAG. 511

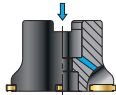
(mm)								kg	Nm	ISO 6462				
ART.	ØD	Ød	ØD1	H	h	Z								
S 9003.8W-050-05-13	50	22	42	40	12	5	—	0,30	3,8+5,0	A	1313			VBSF10
S 9003.8W-050-06-13	50	22	42	40	12	6	—	0,29	3,8+5,0	A				
S 9003.8W-063-06-13	63	22	48	40	12	6	—	0,51	3,8+5,0	A				
S 9003.8W-063-08-13	63	22	48	40	12	8	—	0,50	3,8+5,0	A				
S 9003.8W-080-07-13	80	27	60	50	12	7	—	1,00	3,8+5,0	A	1313			AL 12x35
S 9003.8W-080-10-13	80	27	60	50	12	10	—	1,00	3,8+5,0	A				
S 9003.8W-100-09-13	100	32	80	50	12	9	—	1,66	3,8+5,0	A	1313			AL 16x35
S 9003.8W-100-13-13	100	32	80	50	12	13	—	1,64	3,8+5,0	A				
S 9003.8W-125-11-13	125	40	95	63	12	11	—	3,20	3,8+5,0	A-B	1313			AL 20x45
S 9003.8W-125-17-13	125	40	95	63	12	17	—	3,17	3,8+5,0	A-B				
S 9003.8-160-12-13 New	160	40	115	63	12	12	—	4,00	3,8+5,0	C-D	1313			—
S 9003.8-160-19-13 New	160	40	115	63	12	19	—	3,98	3,8+5,0	C-D				

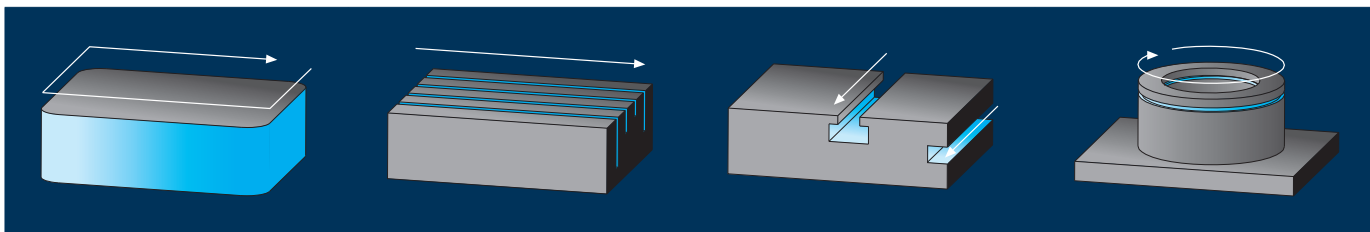


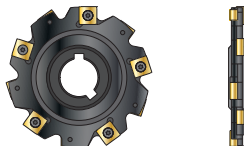
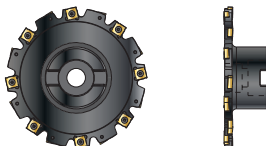
W = FORO PER LIQUIDO REFRIGERANTE - COOLANT BORE - KÜHLMITTELBOHRUNG - TROU DU LIQUIDE D'ARROSAGE
 = PASSO DIFFERENZIATO - DIFFERENTIAL PITCH - UNGLEICHE TEILUNG - PAS DIFFERENCIE



SCELTA VELOCE - QUICK PICK																		Tenacità + Toughness -						Pag. 486		HT		HW		HC									
COD.			P			M			K			N			S			H			CERMET	NON RIV. CEMENTED CARBIDE GRADES	RIVESTITI COATED GRADES BESCHICHTET RECOUVERTS				l	d	s	d1	r	a°							
F	M	R	F	M	R	F	M	R	F	M	R	F	M	R	F	M	R	F	M	R			F3120	F1325	F1335														
LNMX	131308	.F58	○	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○																			
LNMX	131308	.F61	○	○					●	●											■			■															

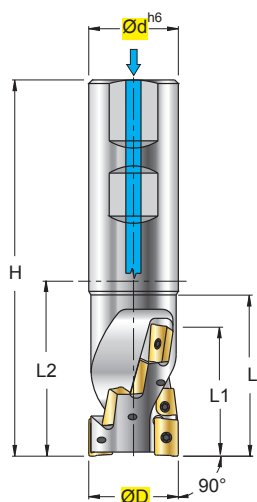
S1056 Pag. 448		S1058 Pag. 448		S666 Pag. 452		S668 Pag. 452			
									
S 1056W .. 10		S 1058W .. 10 S 1058WF .. 10		S 666 .. 16		S 668 .. 16			
		AP..1003				156.15.16..			
S1656 Pag. 450		S1658 Pag. 450		S976 Pag. 454					
									
S 1656W .. 16		S 1658 .. 16		S 976W ..					
		AP..1604				SP..0603 SP..09T3 SP..1204			



S950		Pag. 456	S905		Pag. 462		
		ØD = 63 - 250			ØD = 20 - 32		
S 950 ..			S 905W ..				
		SNHX..11.. SNHX..12..			AP..1003 AP..1604		
S955		Pag. 458					
		ØD = 50 - 160					
S 955 .. S 955M ..							
		SNHX..11.. SNHX..12..					
S959		Pag. 460					
		ØD = 50 - 80					
S 959 ..							
		SNHX..11.. SNHX..12..					

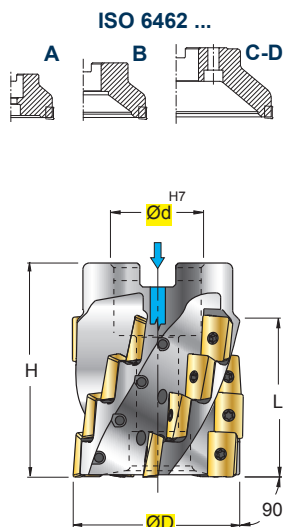
S 1056W .. 10

Ø 20-40



**S 1058W .. 10
S 1058WF .. 10**

Ø 40-63



APKT 1003
.I52



APKT 1003
.S52



APKX 1003
.S52



APKT 1003
.Z54



APKT 1003
.T55

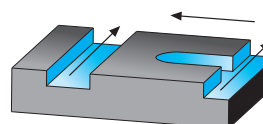
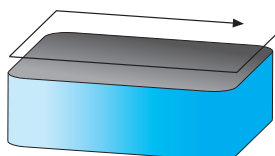


APKT 1003
.S57



INSERTI - INSERTS
PAG. 508

(mm)																	
ART.		ØD	Ød	H	L	L1	L2	Z	N	K	 kg	 Nm	ISO 6462				
S 1056W	020-10	20	20	87	37	28	37	2	4	1	0,200	1,1÷1,3	–				
S 1056W	020.2-10(**)	20	20	87	37	28	37	2	6	2	0,200	1,1÷1,3	–				
S 1056W	025-10	25	25	105	49	37	49	2	8	2	0,340	1,1÷1,3	–				
S 1056W	032-10(***)	32	32	115	55	46	55	4	12	2	0,605	1,1÷1,3	–				
S 1056W	032.2-10(**)	32	32	115	55	46	55	2	10	2	0,605	1,1÷1,3	–				
S 1056W	032.3-10(*)	32	32	115	55	46	55	3	15	3	0,600	1,1÷1,3	–				
S 1056W	040-10	40	32	130	70	55	70	3	18	3	0,810	1,1÷1,3	–				
S 1056W	040.2-10(**)	40	32	130	70	55	70	2	12	2	0,810	1,1÷1,3	–				
S 1058W	040-10	40	16	50	–	37	–	3	12	3	0,250	1,1÷1,3	A	1003	12255P	5608P	VBSF08L
S 1058W	050-10	50	22	60	–	46	–	3	15	3	0,510	1,1÷1,3	A	1003	12255P	5608P	VBSF10L
S 1058W	063-10	63	27	60	–	46	–	4	20	4	0,800	1,1÷1,3	A	1003	12255P	5608P	VBSF12L
S 1058WF	040-10	40	16	50	–	37	–	5	20	5	0,240	1,1÷1,3	A	1003	12255P	5608P	VBSF08L
S 1058WF	050-10	50	22	60	–	46	–	5	25	5	0,510	1,1÷1,3	A	1003	12255P	5608P	VBSF10L
S 1058WF	063-10	63	27	60	–	46	–	7	35	7	0,840	1,1÷1,3	A	1003	12255P	5608P	VBSF12L



(*) 3 ELICHE

(*) 3 FLUTES

(*) 3 SPIRALEN

(*) 3 HÉLICES

(**) 2 ELICHE

(**) 2 FLUTES

(**) 2 SPIRALEN

(**) 2 HÉLICES

(***) 2 ELICHE N°4 INSERTI IN TESTA

(***) 2 FLUTES 4 FRONT INSERTS

(***) 2 SPIRALEN A STIRNWEINDEPLATTEN

(***) 2 HÉLICES 4 PLAQUETTES À L'EXTREMITÉ

Z = NUMERO DI ELICHE - NUMBER OF FLUTES - SPIRALENANZAHL - NOMBRE D'HELICES

K = FATTORE D'AVANZAMENTO - FACTOR OF FEED - VORSCHUBFAKTOR - FACTEUR D'AVANCE

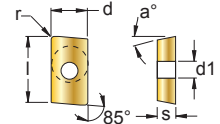
N = NUMERO D'INSERTI - INSERT NUMBER - WEINDEPLATTENANZAHL - NOMBRE DES PLAQUETTES

W = FORO PER LIQUIDO REFRIGERANTE - COOLLANT BORE - KÜHLMITTELBOHRUNG - TROU DU LIQUIDE D'ARROSAGE

F = PASSO FINE - FINE PITCH - FEINE ZUHNTILUNG - PAS FIN

Tenacità +
Toughness -

Pag. 486



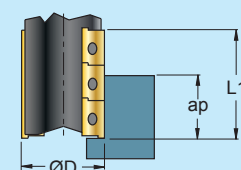
MATERIALI - MATERIALS Pag. 1119		VDI 3323 GR.	HB Rm ¹⁾ HRC ²⁾	fz0 mm			Vc m/min Pag. 500											
				F	M	R	T120	T516	T525	T526	T528N	T530	F2330	F1035	F2335			
P	ACCIAIO NON LEGATO - NOT ALLOY STEEL	1---5	125-300	0,1	0,15	0,2				250	220	220	230	270	125	250		
	ACCIAIO POCO LEGATO - LOW ALLOY STEEL	6-9	180-350	0,06	0,1	0,15				200	160	160	180	220	120	200		
	ACCIAIO ALTO LEGATO - ALLOY STEEL	10-11	200-325	0,06	0,1	0,15				170	150	150	150	200	100	180		
	INOX MARTENS. - STAINLESS STEEL MART	12-13	200-240	0,06	0,08	0,1				150	140	140	140	180	100	150		
M	INOX AUST. DUPLEX - STAINLESS STEEL AUST	14.1-14.2	180-230	0,06	0,08	0,1	100		140	130	120	120	150		130			
K	GHISA GRIGIA - GREY CAST IRON	15-16	180-260	0,1	0,15	0,2	120	250	200		180	160			240			
	GHISA SFEROIDALE - SPHEROIDAL GRAPHITE	17-18	160-250	0,06	0,12	0,15	110	200	180		160	150			200			
	GHISA MALLEABILE - MALLEABLE CAST IRON	19-20	130-230	0,06	0,12	0,15	120	220	200		170	160			200			
N	ALLUMINIO E SUE LEGHE - ALUMINIUM	21---25	60-130	0,06	0,15	0,2	500					600						
	RAME E SUE LEGHE - COPPER	26--28	90-110	0,06	0,12	0,18	300					300						
	NON METALLICI - PLASTICS	29-30	/	0,06	0,12	0,18												
S	LEGHE RESIST. CALORE - HIG. TEMP. ALLOY	31---35	200-320	0,06	0,08	0,1	20		40		40	40	40		40			
	TITANIO E SUE LEGHE - TITANIUM	36-37	400-1050 ¹⁾	0,06	0,08	0,1	30		50		60	50	50		50			
H	ACCIAIO TEMPRATO - HARDENED STEEL	38--41	45-60 ²⁾	0,06	0,08	0,1			40									

ae/D	0,5-1 50-100%	0,3 30%	0,2 20%	0,1 10%	0,05 5%	0,02 2%
Kae	1	1,2	1,5	2,1	3	4,8

ae/D	0,5-1 50-100%	0,2 20%	0,1 10%	0,05 5%
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Vc
Pag. 500

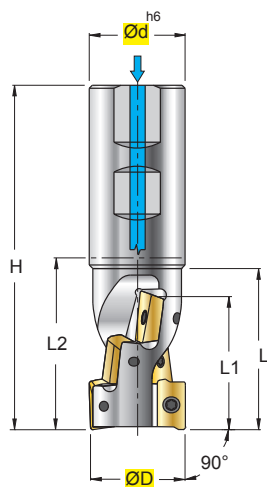
Vc (min)-----Vc(max)



ap/D	0,25	0,5	0,75	1,0	ap max=L1
Kap	1	1	0,8	0,7	0,5

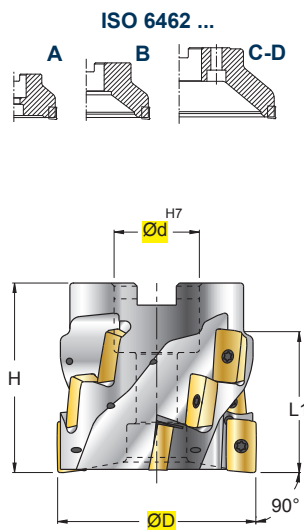
S 1656W .. 16

Ø 25-40



S 1658 .. 16

Ø 50-125



APKT 1604
.S51/.S54



APMT 1604
.I52



APFT 1604
.S52



APKX 1604
.S52



APKT 1604
.Z54



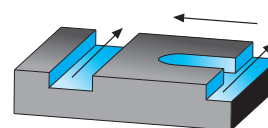
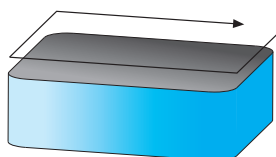
APKT 1604
.K57P



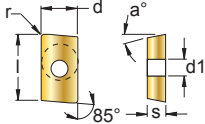
INSERTI - INSERTS
PAG. 509

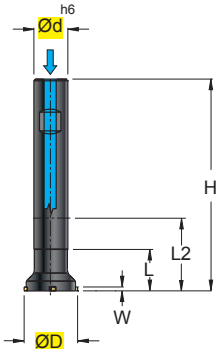
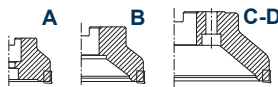
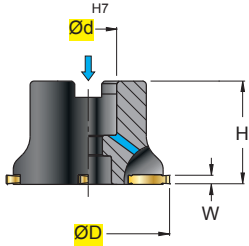
(mm)

ART.		ØD	Ød	H	L	L1	L2	Z	N	K	kg	Nm	ISO 6462				
S 1656W	025-16	25	25	95	38	29	39	1	2	1	0,29	3,8+5,0	—	1604	C04008P	5615P	—
S 1656W	032-16	32	32	115	53	44	55	2	6	2	0,52	3,8+5,0	—	1604	C04011P	5615P	—
S 1656W	040-16	40	32	130	65	58	70	2	8	2	0,73	3,8+5,0	—	1604	C04011P	5615P	—
S 1658	050-16	50	27	50	—	30	—	3	6	3	0,36	3,8+5,0	A	1604	C04011P	5615P	VBSF12
S 1658	063-16	63	27	60	—	44	—	4	12	4	0,74	3,8+5,0	A	1604	C04011P	5615P	VBSF12L
S 1658	080-16	80	32	60	—	44	—	5	15	5	1,20	3,8+5,0	A	1604	C04011P	5615P	VBSF16L
S 1658	100-16	100	40	60	—	44	—	6	18	6	1,70	3,8+5,0	A-B	1604	C04011P	5615P	VBSF20
S 1658	125-16	125	40	60	—	44	—	7	21	7	3,15	3,8+5,0	A-B	1604	C04011P	5615P	VBSF20

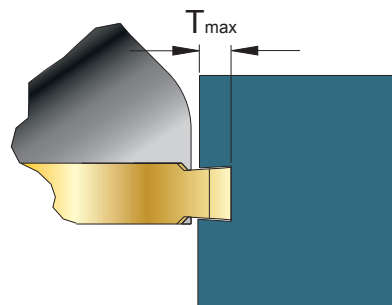


Z = NUMERO DI ELICHE - NUMBER OF FLUTES - SPIRALENANZAHL - NOMBRE D'HELICES
K = FATTORE D'AVANZAMENTO - FACTOR OF FEED - VORSCHUBFAKTOR - FACTEUR D'AVANCE
N = NUMERO D'INSERTI - INSERT NUMBER - WENDEPLATTENANZAHL - NOMBRE DES PLAQUETTES
W = FORO PER LIQUIDO REFRIGERANTE - COOLLANT BORE - KÜHLMITTELBOHRUNG - TROU DU LIQUIDE D'ARROSAGE

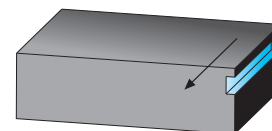
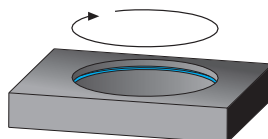
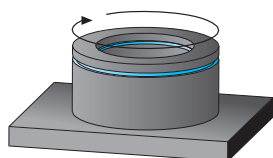
SCELTA VELOCE - QUICK PICK															HT		HW	HC																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
Tenacità + Toughness -  Pag. 486															CERMET		NON RIV. CEMENTED CARBIDE GRADES		RIVESTITI COATED GRADES BESCHICHTET RECOUVERTS																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
COD.				P		M		K		N		S		H																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															

S 666W .. 16	Ø 19-34	S 668W .. 16	Ø 48-63	156.15.16.. .C54	
		ISO 6462 ... 		156.15.16.. .C57	
				154.15.16..	
 INSERTI - INSERTS PAG. 507					

(mm)															ISO 6462				
ART.		ØD	Ød	H	L	L2	Z	K	W										
S 666W	019-16	19	16	100	20	52	1	1	1,1-1,3	0,15	3,5÷4,0	–	156.15-16		5615P	–			
S 666W	034-16	34	20	125	25	75	3	3	1,6-2,15	0,31	3,5÷4,0	–							
S 668W	048-16	48	16	40	–	–	4	4	2,15-3,15	0,35	3,5÷4,0	A	156.15-16	FS244P	5515P	VBSF08			
S 668W	063-16	63	22	40	–	–	5	5	2,65-4,15	0,44	3,5÷4,0	A	156.15-16	FS244P	5515P	VBSF10			



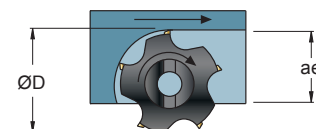
ØD	T max
19	1,8
34 - 48 - 63	2,3



SCELTA VELOCE - QUICK PICK							Tenacità + Toughness -				HT	HW	HC												
							CERMET	NON RIV. CEMENTED CARBIDE GRADES	RIVESTITI COATED GRADES BESCHICHTET RECOUVERTS																
Pag. 486																									
COD.	P	M	K	N	S	H	N6315					F6315						I	d	s	d1	T	W		
TOLLERANZA W - W TOLERANCE																								+0.05 +0.01	
156.15-16110 .C54	●	●	●									■						16,0	9,52	3	4,5	3,0	1,10		
156.15-16130 .C54	●	●	●									■						16,0	9,52	3	4,5	3,0	1,30		
156.15-16160 .C54	●	●	●									■						16,0	9,52	3	4,5	3,0	1,60		
156.15-16185 .C54	●	●	●									■						16,0	9,52	3	4,5	3,0	1,85		
156.15-16215 .C54	●	●	●									■						16,0	9,52	3	4,5	3,0	2,15		
156.15-16265 .C54	●	●	●									■						16,0	9,52	3	4,5	3,0	2,65		
156.15-16315 .C54	●	●	●									■						16,0	9,52	3,5	4,5	3,3	3,15		
156.15-16415 .C54	●	●	●									■						16,0	9,52	4,5	4,5	3,3	4,15		
156.15-16110 .C57				●			■											16,0	9,52	3	4,5	3,0	1,10		
156.15-16130 .C57				●			■											16,0	9,52	3	4,5	3,0	1,30		
156.15-16160 .C57				●			■											16,0	9,52	3	4,5	3,0	1,60		
156.15-16185 .C57				●			■											16,0	9,52	3	4,5	3,0	1,85		
156.15-16215 .C57				●			■											16,0	9,52	3	4,5	3,0	2,15		
156.15-16265 .C57				●			■											16,0	9,52	3	4,5	3,0	2,65		
156.15-16315 .C57				●			■											16,0	9,52	3,5	4,5	3,3	3,15		
156.15-16415 .C57				●			■											16,0	9,52	4,5	4,5	3,3	4,15		
È POSSIBILE UTILIZZARE INSERTI 154.. NON RETTIFICATI, PAG 507 154.. INSERTS CAN BE USED.. NOT GROUND, PAGE 507 DIE VERWENDUNG NICHT GESCHLIFFENER WENDEPLATTEN 154.. IST MÖGLICH, S. SEITE 507 IL EST POSSIBLE D'UTILISER DES PLAQUETTES 154.. NON RECTIFIÉES, PAGE 507																									
CON ADDUZIONE LUBROREFRIGERANTE - WITH COOLANT SUPPLY							●					●													
SENZA ADDUZIONE LUBROREFRIGERANTE - WITHOUT COOLANT SUPPLY							○					○													

MATERIALI - MATERIALS Pag. 1119		VDI 3323 GR.	HB Rm ¹⁾ HRC ²⁾	fz0 mm			Vc m/min Pag.500		
				F	M	R	N6315	F6315	
P	ACCIAIO NON LEGATO - NOT ALLOY STEEL	1-5	125-300	0,06	0,08	0,1	140		
	ACCIAIO POCO LEGATO - LOW ALLOY STEEL	6-9	180-350	0,06	0,08	0,1	130		
	ACCIAIO ALTO LEGATO - ALLOY STEEL	10-11	200-325	0,06	0,08	0,1	130		
	INOX MARTENS. - STAINLESS STEEL MART	12-13	200-240	0,06	0,08	0,1	130		
M	INOX AUST. DUPLEX - STAINLESS STEEL AUST	14.1-14.2	180-230	0,06	0,08	0,1	110		
K	GHISA GRIGIA - GREY CAST IRON	15-16	180-260	0,08	0,1	0,12	110		
	GHISA SFEROIDALE - SPHEROIDAL GRAPHITE	17-18	160-250	0,08	0,1	0,12	110		
	GHISA MALLEABILE - MALLEABLE CAST IRON	19-20	130-230	0,08	0,1	0,12	110		
N	ALLUMINIO E SUE LEGHE - ALUMINIUM	21-25	60-130	0,06	0,08	0,1	340		
	RAME E SUE LEGHE - COPPER	26-28	90-110	0,06	0,08	0,1	300		
	NON METALLICI - PLASTICS	29-30	/	0,06	0,08	0,1	290		
S	LEGHE RESIST. CALORE - HIG. TEMP. ALLOY	31-35	200-320						
	TITANIO E SUE LEGHE - TITANIUM	36-37	400-1050 ¹⁾						
H	ACCIAIO TEMPRATO - HARDENED STEEL	38-41	45-60 ²⁾						

ae/D	0,5-1 50-100%	0,2 20%	0,1 10%	0,05 5%
Vc	Vc (min)-----Vc(max)			



ae/D	0,1 10%	0,05 5%	0,04 4%	0,03 3%	0,02 2%
Kae	2,1	3	3,5	4	4,8

$$n = \frac{Vc \cdot 1000}{\phi D \cdot 3,14} = \text{giri/min (min}^{-1}\text{)}$$

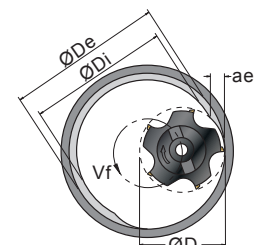
$$fz = fz0 \cdot Ka = \text{mm}$$

$$fn = fz \cdot z = \text{mm}$$

$$Vf = fz \cdot z \cdot n = \text{mm/min}$$

$$ae = \frac{\phi De^2 - \phi Di^2}{4 \cdot (\phi De - \phi Di)} = \text{mm}$$

$$Vf = \left(1 - \frac{\phi D}{\phi De}\right) \cdot n \cdot fz \cdot z = \text{mm/min}$$

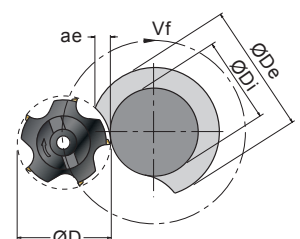


F = FINITURA, LAV. LEGGERA - FINISHING, LIGHT MACHINING
M = LAV. MEDIA, GENERICA - MEDIUM MACHINING, GENERIC
R = SGROSSATURA, LAV. PESANTE - ROUGHING, HEAVY MACHINING

Vc = m/min VELOCITÀ DI TAGLIO - CUTTING SPEED
n = giri/min (min⁻¹) NUMERO DI GIRI - NUMBER OF REVOLUTIONS
fz = mm AVANZAMENTO AL DENTE - TOOTH FEED
fn = mm AVANZAMENTO AL GIRO - FEED / REVOLUTION
Vf = mm/min VELOCITÀ DI AVANZAMENTO - FEED SPEED
Kae = FATTORE DI CORREZIONE - CORRECTION FACTOR

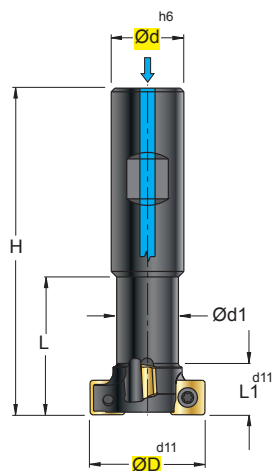
$$ae = \frac{\phi De^2 - \phi Di^2}{4 \cdot (\phi Di + \phi D)} = \text{mm}$$

$$Vf = \left(1 + \frac{\phi D}{\phi Di}\right) \cdot n \cdot fz \cdot z = \text{mm/min}$$



S 976W ..

Ø 21-50



SPMT ...
.N54



SPMW..
.N51



SPMW..
.N59

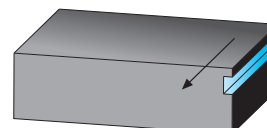
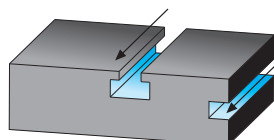


INSERTI - INSERTS
PAG. 517

(mm)															
ART.		ØD	Ød	Ød1	H	L	L1	Z	K						
S 976W	021-06	21	16	11	76	24	9	2	1	0,10	1,1+1,3	060304	12256P	5608P	
S 976W	025-06	25	16	13	82	28	11	4	2	0,11	1,1+1,3				
S 976W	032-09	32	20	17	88	35	14	4	2	0,15	3,0+3,5	09T308	123509P	5615P	
S 976W	040-09	40	25	21	108	44	17	4	2	0,37	3,0+3,5				
S 976W	050-12	50	32	27	120	59	21	4	2	0,65	4,0+5,0	120408	124510P	5620P	

NOTE:

- Per cave a "T" secondo norme DIN 650-UNI 4788-ISO 299
- For "T" slot cutters according to DIN 650-UNI 4788-ISO 299 norms
- Fuer "T" Nuten nach DIN 650-UNI 4788-ISO 299 Normen
- Pour rainures à "T" selon les normes DIN 650-UNI 4788-ISO 299

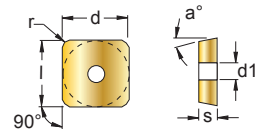


Z = NUMERO DI ELICHE - NUMBER OF FLUTES - SPIRALENANZAHL - NOMBRE D' HELICES
 K = FATTORE D 'AVANZAMENTO - FACTOR OF FEED - VORSCHUBFAKTOR - FACTEUR D' AVANCE
 W = FORO PER LIQUIDO REFRIGERANTE - COOLLANT BORE - KÜHLMITTELBOHRUNG - TROU DU LIQUIDE D'ARROSAGE

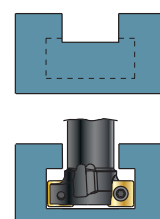
Tenacità +
Toughness -

Pag. 486

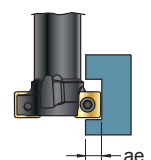
HT	HW	HC
CERMET	NON RIV. CEMENTED CARBIDE GRADES	RIVESTITI COATED GRADES BESCHICHTET RECOUVERTS

[illegible]

ae/D	0,5-1 50-100%	0,2 20%	0,1 10%	0,05 5%
Vc Pag. 500	Vc (min)-----Vc(max)			



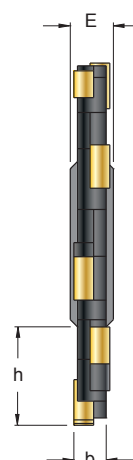
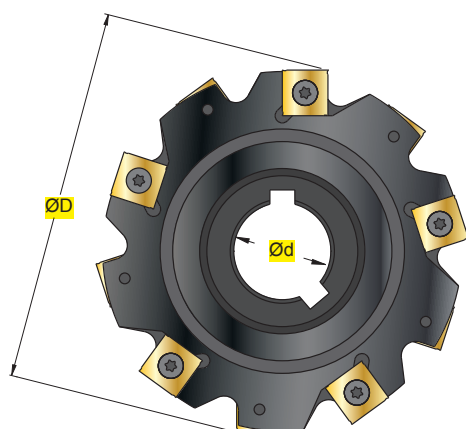
1°



2°

S 950 ..

Ø 63-250



SNHX..
.Z47



SNHX..
.Z52

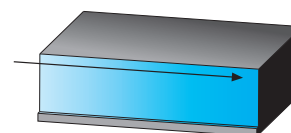
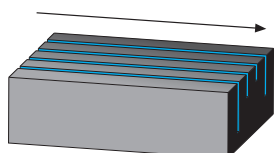


SNHX..
.Z62



INSERTI - INSERTS
PAG. 516

(mm)									kg	Nm				
ART.		ØD	Ød	h	b	E	Z	K						
S 950	063 - 04	63	22	14	4	8	8	4	0,06	1,8+2,0	1102	C93504	5609	
S 950	063 - 05	63	22	14	5	8	8	4	0,07	1,8+2,0	1103	C93505P	5609P	
S 950	063 - 06	63	22	14	6	8	6	3	0,07	2,0+2,2	1203	C94005P	5615P	
S 950	080 - 04	80	22	22	4	8	10	5	0,10	1,8+2,0	1102	C93504	5609	
S 950	080 - 05	80	22	22	5	8	10	5	0,12	1,8+2,0	1103	C93505P	5609P	
S 950	080 - 06	80	22	22	6	8	8	4	0,13	2,0+2,2	1203	C94005P	5615P	
S 950	100 - 04	100	27	25	4	12	12	6	0,20	1,8+2,0	1102	C93504	5609	
S 950	100 - 05	100	27	25	5	12	12	6	0,23	1,8+2,0	1103	C93505P	5609P	
S 950	100 - 06	100	27	25	6	12	10	5	0,26	2,0+2,2	1203	C94005P	5615P	
S 950	100 - 07/08	100	27	25	7/8	12	10	5	0,30	2,0+2,2	1204/12045	C94006P	5615P	
S 950	100 - 10	100	27	25	10	12	10	5	0,37	2,0+2,2	1205	C94008P	5615P	
S 950	125 - 04	125	40	31	4	12	12	6	0,31	1,8+2,0	1102	C93504	5609	
S 950	125 - 05	125	40	31	5	12	12	6	0,35	1,8+2,0	1103	C93505P	5609P	
S 950	125 - 06	125	40	31	6	12	12	6	0,40	2,0+2,2	1203	C94005P	5615P	
S 950	125 - 07/08	125	40	31	7/8	12	12	6	0,45	2,0+2,2	1204/12045	C94006P	5615P	
S 950	125 - 10	125	40	31	10	12	12	6	0,57	2,0+2,2	1205	C94008P	5615P	
S 950	125 - 12	125	40	31	12	12	12	6	0,67	2,0+2,2	1207	C94010	5615	
S 950	160 - 04	160	40	44	4	12	18	9	0,56	1,8+2,0	1102	C93504	5609	
S 950	160 - 05	160	40	44	5	12	18	9	0,64	1,8+2,0	1103	C93505P	5609P	
S 950	160 - 06	160	40	44	6	12	16	8	0,74	2,0+2,2	1203	C94005P	5615P	
S 950	160 - 07/08	160	40	44	7/8	12	16	8	0,82	2,0+2,2	1204/12045	C94006P	5615P	
S 950	160 - 10	160	40	44	10	12	16	8	1,03	2,0+2,2	1205	C94008P	5615P	
S 950	160 - 12	160	40	44	12	12	16	8	1,30	2,0+2,2	1207	C94010	5615	
S 950	160 - 14	160	40	44	14	14	15	5	1,50	2,0+2,2	1205	C94008P	5615P	
S 950	200 - 04	200	50	62	4	12	18	9	0,76	1,8+2,0	1102	C93504	5609	
S 950	200 - 05	200	50	62	5	12	18	9	0,89	1,8+2,0	1103	C93505P	5609P	
S 950	200 - 06	200	50	62	6	12	18	9	1,10	2,0+2,2	1203	C94005P	5615P	
S 950	200 - 07/08	200	50	62	7/8	12	18	9	1,30	2,0+2,2	1204/12045	C94006P	5615P	
S 950	200 - 10	200	50	62	10	12	18	9	1,70	2,0+2,2	1205	C94008P	5615P	
S 950	200 - 12	200	50	62	12	12	18	9	2,00	2,0+2,2	1207	C94010	5615	
S 950	200 - 14	200	50	62	14	14	18	6	2,40	2,0+2,2	1205	C94008P	5615P	
S 950	250 - 10	250	50	87	10	12	24	12	2,70	2,0+2,2	1205	C94008P	5615P	
S 950	250 - 12	250	50	87	12	12	20	10	3,40	2,0+2,2	1207	C94010	5615	



K = FATTORE D'AVANZAMENTO - FACTOR OF FEED - VORSCHUBFAKTOR - FACTEUR D'AVANCE

SCELTA VELOCE - QUICK PICK

Tenacità +
Toughness -

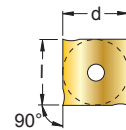


Pag. 486

HT
CERMET

HW
NON RIV.
CEMENTED
CARBIDE
GRADES

HC
RIVESTITI
COATED GRADES
BESCHICHTET
RECOUVERTS



COD.			P		M		K		N		S		H		T115	T5020	T528N	F1035	I	d	s	d1	r	a°
			F	M	R	F	M	R	F	M	R	F	M	R										
SNHX	1102	.Z47																	11,0	11,0	2,3	4,4	-	-
SNHX	1103	.Z47																	11,0	11,0	2,7	4,4	-	-
SNHX	1203	.Z47																	12,7	12,7	3,2	5,0	-	-
SNHX	1204	.Z47																	12,7	12,7	4,0	5,0	-	-
SNHX	12045	.Z47																	12,7	12,7	4,5	5,0	-	-
SNHX	1205	.Z47																	12,7	12,7	5,4	5,0	-	-
SNHX	1207	.Z47																	12,7	12,7	7,0	5,0	-	-
SNHX	1102	.Z52																	11,0	11,0	2,3	4,4	-	-
SNHX	1103	.Z52																	11,0	11,0	2,7	4,4	-	-
SNHX	1203	.Z52																	12,7	12,7	3,2	5,0	-	-
SNHX	1204	.Z52																	12,7	12,7	4,0	5,0	-	-
SNHX	12045	.Z52																	12,7	12,7	4,5	5,0	-	-
SNHX	1205	.Z52																	12,7	12,7	5,4	5,0	-	-
SNHX	1207	.Z52																	12,7	12,7	7,0	5,0	-	-
SNHX	1102	.Z62																	11,0	11,0	2,3	4,4	-	-
SNHX	1103	.Z62																	11,0	11,0	2,7	4,4	-	-
SNHX	1203	.Z62																	12,7	12,7	3,2	5,0	-	-
SNHX	1204	.Z62																	12,7	12,7	4,0	5,0	-	-
SNHX	12045	.Z62																	12,7	12,7	4,5	5,0	-	-
SNHX	1205	.Z62																	12,7	12,7	5,4	5,0	-	-
SNHX	1207	.Z62																	12,7	12,7	7,0	5,0	-	-

CON ADDUZIONE LUBROREFRIGERANTE - WITH COOLANT SUPPLY

SENZA ADDUZIONE LUBROREFRIGERANTE - WITHOUT COOLANT SUPPLY

MATERIALI - MATERIALS Pag. 1119			VDI 3323 GR.	HB Rm ¹⁾ HRC ²⁾	fz0 mm			Vc m/min Pag. 500									
					F	M	R	T115	T5020	T528N	F1035						
P	ACCIAIO NON LEGATO - NOT ALLOY STEEL		1-5	125-300	0,08	0,12	0,16		220	220	125						
	ACCIAIO POCO LEGATO - LOW ALLOY STEEL		6-9	180-350	0,06	0,11	0,15		150	160	120						
	ACCIAIO ALTO LEGATO - ALLOY STEEL		10-11	200-325	0,06	0,11	0,15		140	150	100						
	INOX MARTENS. - STAINLESS STEEL MART		12-13	200-240	0,05	0,07	0,1		150	140	100						
M	INOX AUST. DUPLEX - STAINLESS STEEL AUST		14.1-14.2	180-230	0,05	0,07	0,1			120	90						
K	GHISA GRIGIA - GREY CAST IRON		15-16	180-260	0,1	0,14	0,18	120	160	180							
	GHISA SFEROIDALE - SPHEROIDAL GRAPHITE		17-18	160-250	0,08	0,12	0,16	120	150	160							
	GHISA MALLEABILE - MALLEABLE CAST IRON		19-20	130-230	0,08	0,12	0,16	120	160	170							
N	ALLUMINIO E SUE LEGHE - ALUMINIUM		21-25	60-130	0,08	0,12	0,16	950									
	RAME E SUE LEGHE - COPPER		26-28	90-110	0,06	0,1	0,15	400									
	NON METALLICI - PLASTICS		29-30	/	0,06	0,1	0,15	300									
S	LEGHE RESIST. CALORE - HIG. TEMP. ALLOY		31-35	200-320	0,06	0,08	0,12			40							
	TITANIO E SUE LEGHE - TITANIUM		36-37	400-1050 ¹⁾	0,06	0,08	0,12			60							
H	ACCIAIO TEMPRATO - HARDENED STEEL		38-41	45-60 ²⁾													

$$n = \frac{Vc \cdot 1000}{\phi D \cdot 3,14} = \text{giri/min (min}^{-1}\text{)}$$

$$fz = fz0 \cdot Kae = \text{mm}$$

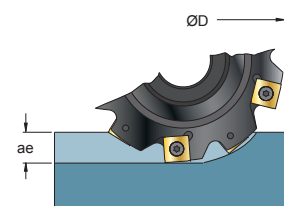
$$fn = fz \cdot K = \text{mm}$$

$$Vf = fz \cdot K \cdot n = \text{mm/min}$$

F = FINITURA, LAV. LEGGERA - FINISHING, LIGHT MACHINING
M = LAV. MEDIA, GENERICA - MEDIUM MACHINING, GENERIC
R = SGROSSATURA, LAV. PESANTE - ROUGHING, HEAVY MACHINING

Vc = m/min VELOCITÀ DI TAGLIO - CUTTING SPEED
n = giri/min (min⁻¹) NUMERO DI GIRI - NUMBER OF REVOLUTIONS
fz = mm AVANZAMENTO AL DENTE - TOOTH FEED
fn = mm AVANZAMENTO AL GIRO - FEED / REVOLUTION
Vf = mm/min VELOCITÀ DI AVANZAMENTO - FEED SPEED
Kae = FATTORE DI CORREZIONE - CORRECTION FACTOR

ae/D	0,5-1 50-100%	0,2 20%	0,1 10%	0,05 5%
Vc	Vc (min)-----Vc(max)			
Pag. 500				



ae/D	0,3 30%	0,2 20%	0,1 10%	0,05 5%	0,02 2%
Kae	1,2	1,5	2,1	3	4,8

S 955 ..
S 955M ..

Ø 50-160

ISO 6462 ...



SNHX..
.Z47



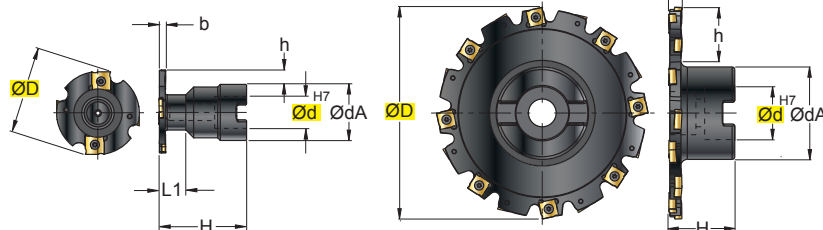
SNHX..
.Z52



SNHX..
.Z62



INSERTI - INSERTS
PAG. 516



Ø50

Ø63÷Ø160

(mm)

ART.	ØD	Ød	b	ØdA	H	L1	h	Z	K	kg	Nm	ISO 6462					
S 955 050 - 04	50	16	4	32	50	15	8,5	4	2	0,20	1,8÷2,0	—	1102	C93504	5609	VDST2008	—
S 955 050 - 05	50	16	5	32	50	15	8,5	4	2	0,21	1,8÷2,0	—	1103	C93505P	5609P	VDST2008	—
S 955 050 - 06	50	16	6	32	50	15	8,5	4	2	0,21	2,0÷2,2	—	1203	C94005P	5615P	VDST2008	—
S 955 050 - 07/08	50	16	7/8	32	50	15	8,5	4	2	0,22	2,0÷2,2	—	1204/12045	C94006P	5615P	VDST2008	—
S 955 050 - 10	50	16	10	32	50	15	8,5	4	2	0,25	2,0÷2,2	—	1205	C94008P	5615P	VDST2008	—
S 955 050 - 12	50	16	12	32	50	15	8,5	4	2	0,26	2,0÷2,2	—	1207	C94010	5615	VDST2008	—
S 955 063 - 04	63	22	4	40	50	—	10,5	8	4	0,34	1,8÷2,0	A	1102	C93504	5609	—	AL10x40
S 955 063 - 05	63	22	5	40	50	—	10,5	8	4	0,35	1,8÷2,0	A	1103	C93505P	5609P	—	AL10x40
S 955 063 - 06	63	22	6	40	50	—	10,5	6	3	0,35	2,0÷2,2	A	1203	C94005P	5615P	—	AL10x40
S 955 063 - 07/08	63	22	7/8	40	50	—	10,5	6	3	0,37	2,0÷2,2	A	1204/12045	C94006P	5615P	—	AL10x40
S 955 063 - 10	63	22	10	40	50	—	10,5	6	3	0,39	2,0÷2,2	A	1205	C94008P	5615P	—	AL10x40
S 955 063 - 12	63	22	12	40	50	—	10,5	6	3	0,40	2,0÷2,2	A	1207	C94010	5615	—	AL10x40
S 955 063 - 14	63	22	14	40	50	—	10,5	6	2	0,43	2,0÷2,2	A	1205	C94008P	5615P	—	AL10x40
S 955 063 - 16	63	22	16	40	50	—	10,5	6	2	0,45	2,0÷2,2	A	1207	C94008P	5615	—	AL10x40
S 955 080 - 04	80	22	4	40	50	—	20	10	5	0,38	1,8÷2,0	A	1102	C93504	5609	—	AL10x40
S 955 080 - 05	80	22	5	40	50	—	20	10	5	0,40	1,8÷2,0	A	1103	C93505P	5609P	—	AL10x40
S 955 080 - 06	80	22	6	40	50	—	20	8	4	0,41	2,0÷2,2	A	1203	C94005P	5615P	—	AL10x40
S 955 080 - 07/08	80	22	7/8	40	50	—	20	8	4	0,44	2,0÷2,2	A	1204/12045	C94006P	5615P	—	AL10x40
S 955 080 - 10	80	22	10	40	50	—	20	8	4	0,49	2,0÷2,2	A	1205	C94008P	5615P	—	AL10x40
S 955 080 - 12	80	22	12	40	50	—	20	8	4	0,53	2,0÷2,2	A	1207	C94010	5615	—	AL10x40
S 955 080 - 14	80	22	14	40	50	—	20	6	2	0,59	2,0÷2,2	A	1205	C94008P	5615P	—	AL10x40
S 955 080 - 16	80	22	16	40	50	—	20	6	2	0,63	2,0÷2,2	A	1207	C94008P	5615P	—	AL10x40
S 955 100 - 04	100	27	4	48	50	—	24,2	12	6	0,64	1,8÷2,0	A	1102	C93504	5609	—	VBSF12L
S 955 100 - 05	100	27	5	48	50	—	24,2	12	6	0,68	1,8÷2,0	A	1103	C93505P	5609P	—	VBSF12L
S 955 100 - 06	100	27	6	48	50	—	24,2	10	5	0,69	2,0÷2,2	A	1203	C94005P	5615P	—	VBSF12L
S 955 100 - 07/08	100	27	7/8	48	50/50,5	—	24,2	10	5	0,73	2,0÷2,2	A	1204/12045	C94006P	5615P	—	VBSF12L
S 955 100 - 10	100	27	10	48	50	—	24,2	10	5	0,79	2,0÷2,2	A	1205	C94008P	5615P	—	VBSF12L
S 955 100 - 12	100	27	12	48	50	—	24,2	10	5	0,85	2,0÷2,2	A	1207	C94010	5615	—	VBSF12L
S 955 100 - 14	100	27	14	48	50	—	24,2	9	3	0,95	2,0÷2,2	A	1205	C94008P	5615P	—	VBSF12L
S 955 100 - 16	100	27	16	48	50	—	24,2	9	3	1,00	2,0÷2,2	A	1207	C94008P	5615P	—	VBSF12L
S 955M 125 - 04	125	32	4	59	50	—	31	12	6	0,98	1,8÷2,0	A	1102	C93504	5609	—	VBSF16
S 955M 125 - 05	125	32	5	59	50	—	31	12	6	1,02	1,8÷2,0	A	1103	C93505P	5609P	—	VBSF16
S 955M 125 - 06	125	32	6	59	50	—	31	12	6	1,05	2,0÷2,2	A	1203	C94005P	5615P	—	VBSF16
S 955M 125 - 07/08	125	32	7/8	59	50/50,5	—	31	12	6	1,09	2,0÷2,2	A	1204/12045	C94006P	5615P	—	VBSF16
S 955M 125 - 10	125	32	10	59	50	—	31	12	6	1,19	2,0÷2,2	A	1205	C94008P	5615P	—	VBSF16
S 955M 125 - 12	125	32	12	59	50	—	31	12	6	1,28	2,0÷2,2	A	1207	C94010	5615	—	VBSF16
S 955 125 - 04	125	40	4	70	50	—	23,7	12	6	0,95	1,8÷2,0	A	1102	C93504	5609	—	—
S 955 125 - 05	125	40	5	70	50	—	23,7	12	6	0,99	1,8÷2,0	A	1103	C93505P	5609P	—	—
S 955 125 - 06	125	40	6	70	50	—	23,7	12	6	1,02	2,0÷2,2	A	1203	C94005P	5615P	—	—
S 955 125 - 07/08	125	40	7/8	70	50/50,5	—	23,7	12	6	1,06	2,0÷2,2	A	1204/12045	C94006P	5615P	—	—
S 955 125 - 10	125	40	10	70	50	—	23,7	12	6	1,16	2,0÷2,2	A	1205	C94008P	5615P	—	—
S 955 125 - 12	125	40	12	70	50	—	23,7	12	6	1,25	2,0÷2,2	A	1207	C94010	5615	—	—
S 955 125 - 14	125	40	14	70	50	—	23,7	12	4	1,35	2,0÷2,2	A	1205	C94008P	5615P	—	—
S 955 125 - 16	125	40	16	70	50	—	23,7	12	4	1,43	2,0÷2,2	A	1207	C94008P	5615P	—	—
S 955 160 - 04	160	40	4	70	50	—	41,2	16	8	1,14	1,8÷2,0	B	1102	C93504	5609	—	—
S 955 160 - 05	160	40	5	70	50	—	41,2	16	8	1,21	1,8÷2,0	B	1103	C93505P	5609P	—	—
S 955 160 - 06	160	40	6	70	50	—	41,2	16	8	1,41	2,0÷2,2	B	1203	C94005P	5615P	—	—
S 955 160 - 07/08	160	40	7/8	70	50/50,5	—	41,2	16	8	1,41	2,0÷2,2	B	1204/12045	C94006P	5615P	—	—
S 955 160 - 10	160	40	10	70	50	—	41,2	16	8	1,62	2,0÷2,2	B	1205	C94008P	5615P	—	—
S 955 160 - 12	160	40	12	70	50	—	41,2	16	8	1,81	2,0÷2,2	B	1207	C94010	5615	—	—
S 955 160 - 14	160	40	14	70	50	—	41,2	15	5	2,04	2,0÷2,2	B	1205	C94008P	5615P	—	—
S 955 160 - 16	160	40	16	70	50	—	41,2	15	5	2,23	2,0÷2,2	B	1207	C94008P	5615P	—	—

K = FATTORE D 'AVANZAMENTO - FACTOR OF FEED - VORSCHUBFAKTOR - FACTEUR D' AVANCE

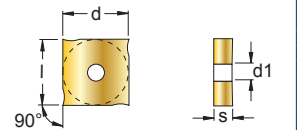
SCELTA VELOCE - QUICK PICK

Tenacità +
Toughness -



Pag. 486

HT HW HC
CERMET NON RIV. CEMENTED CARBIDE GRADES
RIVESTITI COATED GRADES BESCHICHTET RECOUVERTS



COD.	P				M				K				N				S				H				I	d	s	d1	r	a°
	F	M	R		F	M	R		F	M	R		F	M	R		F	M	R		F	M	R							
SNHX 1102 .Z47																									11,0	11,0	2,3	4,4	-	-
SNHX 1103 .Z47																									11,0	11,0	2,7	4,4	-	-
SNHX 1203 .Z47																									12,7	12,7	3,2	5,0	-	-
SNHX 1204 .Z47																									12,7	12,7	4,0	5,0	-	-
SNHX 12045 .Z47																									12,7	12,7	4,5	5,0	-	-
SNHX 1205 .Z47																									12,7	12,7	5,4	5,0	-	-
SNHX 1207 .Z47																									12,7	12,7	7,0	5,0	-	-
SNHX 1102 .Z52																									11,0	11,0	2,3	4,4	-	-
SNHX 1103 .Z52																									11,0	11,0	2,7	4,4	-	-
SNHX 1203 .Z52																									12,7	12,7	3,2	5,0	-	-
SNHX 1204 .Z52																									12,7	12,7	4,0	5,0	-	-
SNHX 12045 .Z52																									12,7	12,7	4,5	5,0	-	-
SNHX 1205 .Z52																									12,7	12,7	5,4	5,0	-	-
SNHX 1207 .Z52																									12,7	12,7	7,0	5,0	-	-
SNHX 1102 .Z62																									11,0	11,0	2,3	4,4	-	-
SNHX 1103 .Z62																									11,0	11,0	2,7	4,4	-	-
SNHX 1203 .Z62																									12,7	12,7	3,2	5,0	-	-
SNHX 1204 .Z62																									12,7	12,7	4,0	5,0	-	-
SNHX 12045 .Z62																									12,7	12,7	4,5	5,0	-	-
SNHX 1205 .Z62																									12,7	12,7	5,4	5,0	-	-
SNHX 1207 .Z62																									12,7	12,7	7,0	5,0	-	-

CON ADDUZIONE LUBROREFRIGERANTE - WITH COOLANT SUPPLY

SENZA ADDUZIONE LUBROREFRIGERANTE - WITHOUT COOLANT SUPPLY

MATERIALI - MATERIALS Pag. 1119		VDI 3323 GR.	HB Rm ¹⁾ HRC ²⁾	fz0 mm			Vc m/min Pag. 500									
P	ACCIAIO NON LEGATO - NOT ALLOY STEEL	1-5	125-300	0,08	0,12	0,16	T115	T5020	T528N	F1035						
	ACCIAIO POCO LEGATO - LOW ALLOY STEEL	6-9	180-350	0,06	0,11	0,15		150	160	120						
	ACCIAIO ALTO LEGATO - ALLOY STEEL	10-11	200-325	0,06	0,11	0,15		140	150	100						
	INOX MARTENS. - STAINLESS STEEL MART	12-13	200-240	0,05	0,07	0,1		150	140	100						
M	INOX AUST. DUPLEX - STAINLESS STEEL AUST	14.1-14.2	180-230	0,05	0,07	0,1			120	90						
K	GHISA GRIGIA - GREY CAST IRON	15-16	180-260	0,1	0,14	0,18	120	160	180							
	GHISA SFEROIDALE - SPHEROIDAL GRAPHITE	17-18	160-250	0,08	0,12	0,16	120	150	160							
	GHISA MALLEABILE - MALLEABLE CAST IRON	19-20	130-230	0,08	0,12	0,16	120	160	170							
N	ALLUMINIO E SUE LEGHE - ALUMINIUM	21-25	60-130	0,08	0,12	0,16	950									
	RAME E SUE LEGHE - COPPER	26-28	90-110	0,06	0,1	0,15	400									
	NON METALLICI - PLASTICS	29-30	/	0,06	0,1	0,15	300									
S	LEGHE RESIST. CALORE - HIG. TEMP. ALLOY	31-35	200-320	0,06	0,08	0,12			40							
	TITANIO E SUE LEGHE - TITANIUM	36-37	400-1050 ¹⁾	0,06	0,08	0,12			60							
H	ACCIAIO TEMPRATO - HARDENED STEEL	38-41	45-60 ²⁾													

$$n = \frac{Vc \cdot 1000}{\phi D \cdot 3,14} = \text{giri/min (min}^{-1}\text{)}$$

$$fz = fz0 \cdot Kae = \text{mm}$$

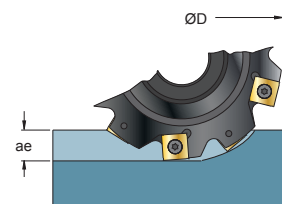
$$fn = fz \cdot K = \text{mm}$$

$$Vf = fz \cdot K \cdot n = \text{mm/min}$$

F = FINITURA, LAV. LEGGERA - FINISHING, LIGHT MACHINING
M = LAV. MEDIA, GENERICA - MEDIUM MACHINING, GENERIC
R = SGROSSATURA, LAV. PESANTE - ROUGHING, HEAVY MACHINING

Vc = m/min VELOCITÀ DI TAGLIO - CUTTING SPEED
n = giri/min (min⁻¹) NUMERO DI GIRI - NUMBER OF REVOLUTIONS
fz = mm AVANZAMENTO AL DENTE - TOOTH FEED
fn = mm AVANZAMENTO AL GIRO - FEED / REVOLUTION
Vf = mm/min VELOCITÀ DI AVANZAMENTO - FEED SPEED
Kae = FATTORE DI CORREZIONE - CORRECTION FACTOR

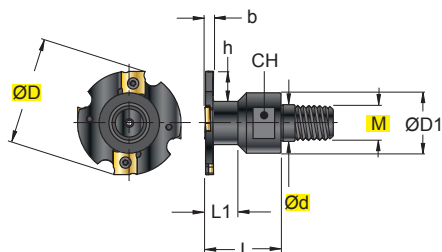
Vc Pag. 500	ae/D	0,5-1 50-100%	0,2 20%	0,1 10%	0,05 5%
	Vc (min)-----Vc(max)				



ae/D	0,3 30%	0,2 20%	0,1 10%	0,05 5%	0,02 2%
Kae	1,2	1,5	2,1	3	4,8

S 959 ..

Ø 50-80



SNHX..
.Z47



SNHX..
.Z52

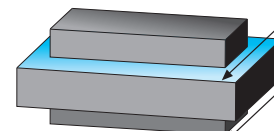
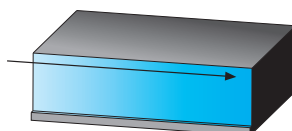
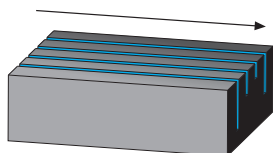


SNHX..
.Z62



INSERTI - INSERTS
PAG. 516

(mm)																	
ART.		ØD	M	Ød	b	ØD1	h	L	L1	Z	K	CH	kg	Nm			
S 959	050 - 04	50	16	17	4	29	14	35	15	4	2	24	0,19	1,8+2,0	1102	C93504	5609
S 959	050 - 05	50	16	17	5	29	14	35	15	4	2	24	0,20	1,8+2,0	1103	C93505P	5609P
S 959	050 - 06	50	16	17	6	29	14	35	15	4	2	24	0,20	2,0+2,2	1203	C94005P	5615P
S 959	063 - 04	63	16	17	4	29	14	35	—	8	4	24	0,26	1,8+2,0	1102	C93504	5609
S 959	063 - 05	63	16	17	5	29	14	35	—	8	4	24	0,27	1,8+2,0	1103	C93505P	5609P
S 959	063 - 06	63	16	17	6	29	14	35	—	6	3	24	0,28	2,0+2,2	1203	C94005P	5615P
S 959	080 - 04	80	16	17	4	29	22,5	35	—	10	5	24	0,31	1,8+2,0	1102	C93504	5609
S 959	080 - 05	80	16	17	5	29	22,5	35	—	10	5	24	0,32	1,8+2,0	1103	C93505P	5609P
S 959	080 - 06	80	16	17	6	29	22,5	35	—	8	4	24	0,34	2,0+2,2	1203	C94005P	5615P



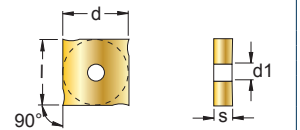
SCELTA VELOCE - QUICK PICK

Tenacità +
Toughness -



Pag. 486

HT HW HC
CERMET NON RIV. CEMENTED CARBIDE GRADES RIVESTITI COATED GRADES BESCHICHTET RECOUVERTS



COD.	P				M				K				N				S				H				I	d	s	d1	r	a°
	F	M	R		F	M	R		F	M	R		F	M	R		F	M	R		F	M	R							
SNHX 1102 .Z47																									11,0	11,0	2,3	4,4	-	-
SNHX 1103 .Z47																									11,0	11,0	2,7	4,4	-	-
SNHX 1203 .Z47																									12,7	12,7	3,2	5,0	-	-
SNHX 1204 .Z47																									12,7	12,7	4,0	5,0	-	-
SNHX 12045 .Z47																									12,7	12,7	4,5	5,0	-	-
SNHX 1205 .Z47																									12,7	12,7	5,4	5,0	-	-
SNHX 1207 .Z47																									12,7	12,7	7,0	5,0	-	-
SNHX 1102 .Z52																									11,0	11,0	2,3	4,4	-	-
SNHX 1103 .Z52																									11,0	11,0	2,7	4,4	-	-
SNHX 1203 .Z52																									12,7	12,7	3,2	5,0	-	-
SNHX 1204 .Z52																									12,7	12,7	4,0	5,0	-	-
SNHX 12045 .Z52																									12,7	12,7	4,5	5,0	-	-
SNHX 1205 .Z52																									12,7	12,7	5,4	5,0	-	-
SNHX 1207 .Z52																									12,7	12,7	7,0	5,0	-	-
SNHX 1102 .Z62																									11,0	11,0	2,3	4,4	-	-
SNHX 1103 .Z62																									11,0	11,0	2,7	4,4	-	-
SNHX 1203 .Z62																									12,7	12,7	3,2	5,0	-	-
SNHX 1204 .Z62																									12,7	12,7	4,0	5,0	-	-
SNHX 12045 .Z62																									12,7	12,7	4,5	5,0	-	-
SNHX 1205 .Z62																									12,7	12,7	5,4	5,0	-	-
SNHX 1207 .Z62																									12,7	12,7	7,0	5,0	-	-

CON ADDUZIONE LUBROREFRIGERANTE - WITH COOLANT SUPPLY

SENZA ADDUZIONE LUBROREFRIGERANTE - WITHOUT COOLANT SUPPLY

MATERIALI - MATERIALS Pag. 1119			VDI 3323 GR.	HB Rm ¹⁾ HRC ²⁾	fz0 mm			Vc m/min Pag. 500									
P	ACCIAIO NON LEGATO - NOT ALLOY STEEL		1-5	125-300	0,08	0,12	0,16	T115	T5020	T528N	F1035						
	ACCIAIO POCO LEGATO - LOW ALLOY STEEL		6-9	180-350	0,06	0,11	0,15		150	160	120						
	ACCIAIO ALTO LEGATO - ALLOY STEEL		10-11	200-325	0,06	0,11	0,15		140	150	100						
	INOX MARTENS. - STAINLESS STEEL MART		12-13	200-240	0,05	0,07	0,1		150	140	100						
M	INOX AUST. DUPLEX - STAINLESS STEEL AUST		14.1-14.2	180-230	0,05	0,07	0,1			120	90						
K	GHISA GRIGIA - GREY CAST IRON		15-16	180-260	0,1	0,14	0,18	120	160	180							
	GHISA SFEROIDALE - SPHEROIDAL GRAPHITE		17-18	160-250	0,08	0,12	0,16	120	150	160							
	GHISA MALLEABILE - MALLEABLE CAST IRON		19-20	130-230	0,08	0,12	0,16	120	160	170							
N	ALLUMINIO E SUE LEGHE - ALUMINIUM		21-25	60-130	0,08	0,12	0,16	950									
	RAME E SUE LEGHE - COPPER		26-28	90-110	0,06	0,1	0,15	400									
	NON METALLICI - PLASTICS		29-30	/	0,06	0,1	0,15	300									
S	LEGHE RESIST. CALORE - HIG. TEMP. ALLOY		31-35	200-320	0,06	0,08	0,12			40							
	TITANIO E SUE LEGHE - TITANIUM		36-37	400-1050 ¹⁾	0,06	0,08	0,12			60							
H	ACCIAIO TEMPRATO - HARDENED STEEL		38-41	45-60 ²⁾													

$$n = \frac{Vc \cdot 1000}{\phi D \cdot 3,14} = \text{giri/min (min}^{-1}\text{)}$$

$$fz = fz0 \cdot Kae = \text{mm}$$

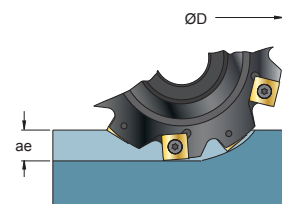
$$fn = fz \cdot K = \text{mm}$$

$$Vf = fz \cdot K \cdot n = \text{mm/min}$$

F = FINITURA, LAV. LEGGERA - FINISHING, LIGHT MACHINING
M = LAV. MEDIA, GENERICA - MEDIUM MACHINING, GENERIC
R = SGROSSATURA, LAV. PESANTE - ROUGHING, HEAVY MACHINING

Vc = m/min VELOCITÀ DI TAGLIO - CUTTING SPEED
n = giri/min (min⁻¹) NUMERO DI GIRI - NUMBER OF REVOLUTIONS
fz = mm AVANZAMENTO AL DENTE - TOOTH FEED
fn = mm AVANZAMENTO AL GIRO - FEED / REVOLUTION
Vf = mm/min VELOCITÀ DI AVANZAMENTO - FEED SPEED
Kae = FATTORE DI CORREZIONE - CORRECTION FACTOR

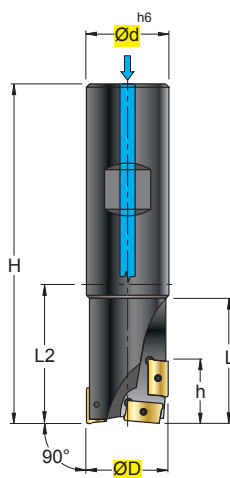
ae/D	0,5-1 50-100%	0,2 20%	0,1 10%	0,05 5%
Vc	Vc (min)-----Vc(max)			
Pag. 500				



ae/D	0,3 30%	0,2 20%	0,1 10%	0,05 5%	0,02 2%
Kae	1,2	1,5	2,1	3	4,8

S 905W ..

Ø 20-32



APKT 1003
.S52

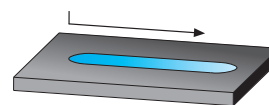
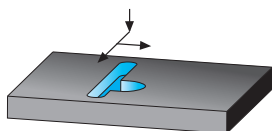


APKT 1604
.S52



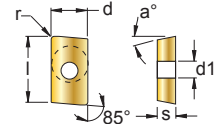
INSERTI - INSERTS
PAG. 508/509

(mm)															
ART.		ØD	Ød	H	h	L	L2	Z	K						
S 905W	020 - 10	20	20	90	19	35	40	2	1	0,17	1,1+1,3	N°3 1003	12255P	5608P	
S 905W	025 - 10	25	25	110	19	50	54	2	1	0,32	1,1+1,3				
S 905W	032 - 16	32	32	130	29	50	70	2	1	0,64	3,8+5,0	N°3 1604	C04011P	5615P	



Z = NUMERO DI ELICHE - NUMBER OF FLUTES - SPIRALENANZAHL - NOMBRE D' HELICES
K = FATTORE D 'AVANZAMENTO - FACTOR OF FEED - VORSCHUBFAKTOR - FACTEUR D' AVANCE
W = FORO PER LIQUIDO REFRIGERANTE - COOLLANT BORE - KÜHLMITTELBOHRUNG - TROU DU LIQUIDE D'ARROSAGE

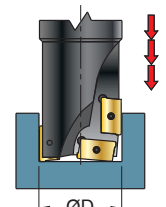
HT	HW	HC
CERMET NON RIV. CEMENTED CARBIDE GRADES		RIVESTITI COATED GRADES BESCHICHTET RECOUVERTS

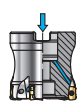
[illegible]

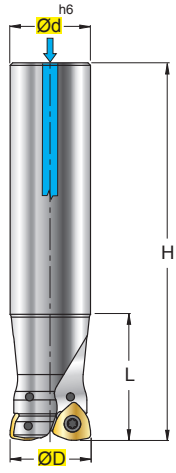
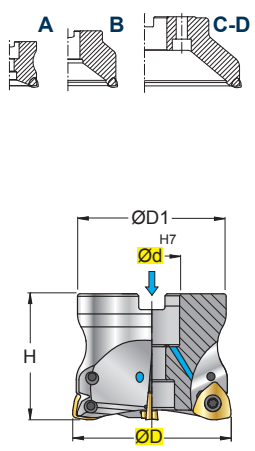
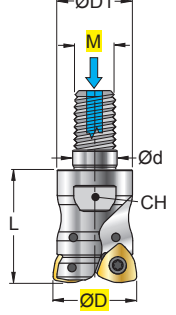
ae/D	0,5-1 50-100%	0,2 20%	0,1 10%	0,05 5%
Vc Pag. 500	Vc (min)-----Vc(max)			

-IN FORATURA AVANZARE CON PASSI DI 1-1,5 mm PER ROMPERE IL TRUCIOLO

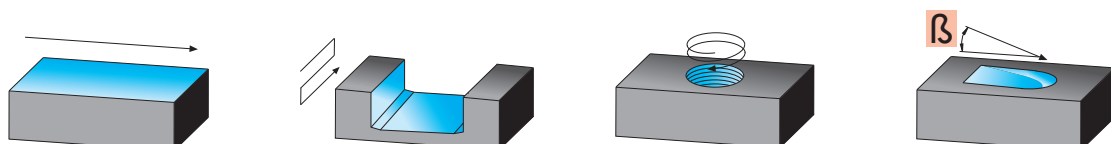
-FOR DRILLING FEED WITH 1-1,5 mm STEP TO BREAK THE CHIP



S846W		Pag. 466		S848W		Pag. 466		S849W		Pag. 466		S806		Pag. 472					
		ØD = 25 - 40				ØD = 40 - 100				ØD = 25 - 40				ØD = 12,5 - 20				ØD = 15 - 16	
S 846LW .. 06 S 846XLW .. 06 S 846LW .. 08 S 846GLW .. 08 S 846XLW .. 08 S 846GXLW .. 08				S 848W .. 06 S 848W .. 08 S 848WF .. 08				S 849W .. 06 S 849W .. 08 S 849W .. 08				S 806W ..							
		WP..06.. WP..08..		h = 1,5						RD.. 0701 RD.. 0702 RD.. 1003		h = 3,5 h = 3,5 h = 5							
S1502		Pag. 468		S808		Pag. 474													
		ØD = 50 - 80				ØD = 40 - 160													
S 1502.8W ..				S 808W ..															
		WN.. 1405		h = 2				RD.. 1003 RD.. 12T3 RD.. 1604		h = 5 h = 6 h = 8									
S1503. 6LW		Pag. 470		S1503. 8W		Pag. 470		S1503. 9W		Pag. 470		S809		Pag. 476					
		ØD = 16 - 40				ØD = 40 - 63				ØD = 16 - 35				ØD = 10 - 32				ØD = 15 - 42	
S 1503.6LW ..				S 1503.8W ..				S 1503.9W ..				S 809W ..							
		LNMT 060312		h = 1				RD.. 0501 h = 2,5 RD.. 0701 h = 3,5 RD.. 0702 h = 3,5		RD.. 1003 h = 5 RD.. 12T3 h = 6 RD.. 1604 h = 8									

S 846..W .. 06 S 846..W .. 08		S 848..W .. 06 S 848..W .. 08		S 849..W .. 06 S 849..W .. 08		WPMT .. .N42	
Ø 25-40		Ø 40-100		Ø 25-40		WPMW .. .N52	
$\gamma_p +5^\circ/-4^\circ$ $\gamma_f -2,8^\circ$ $\gamma_o -5,8^\circ$		$\gamma_p +5^\circ$ $\gamma_f -3,5^\circ$ $\gamma_o -6,2^\circ$		$\gamma_p +4^\circ/+5^\circ$ $\gamma_f -2,8^\circ$ $\gamma_o -5,7^\circ$			
		ISO 6462 ... 					
						 INSERTI - INSERTS PAG. 519	

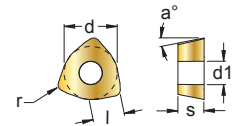
(mm)																		
ART.	ØD	M	Ød	ØD1	H	L	β	Z		CH	 kg	 Nm	ISO 6462					
S 846LW 025 - 06	25	–	25	–	140	60	5°	2	–	–	0,43	3,8±5,0	–	06...	C04008P	5615P	–	2440
S 846LW 026 - 06	26	–	25	–	140	60	4,5°	2	–	–	0,44	3,8±5,0	–					
S 846LW 032 - 06	32	–	32	–	150	70	3,5°	3	–	–	0,79	3,8±5,0	–					
S 846LW 033 - 06	33	–	32	–	150	70	3°	3	–	–	0,80	3,8±5,0	–					
S 846XLW 025 - 06	25	–	25	–	200	120	5°	2	–	–	0,60	3,8±5,0	–	06...	C04008P	5615P	–	2440
S 846XLW 026 - 06	26	–	25	–	200	120	4,5°	2	–	–	0,62	3,8±5,0	–					
S 846XLW 032 - 06	32	–	32	–	250	170	3,5°	3	–	–	1,29	3,8±5,0	–					
S 846XLW 033 - 06	33	–	32	–	250	170	3°	3	–	–	1,32	3,8±5,0	–					
S 846LW 032 - 08	32	–	32	–	150	50	10°	2	–	–	0,77	4,0±5,0	–	08...	124512P	5620P	–	2445
S 846LW 033 - 08	33	–	32	–	150	50	8°	2	–	–	0,78	4,0±5,0	–					
S 846LW 040 - 08	40	–	32	–	150	50	6°	3	–	–	0,84	4,0±5,0	–					
S 846GLW 040 - 08	40	–	32	–	150	50	6°	2	–	–	0,85	4,0±5,0	–	08...	124512P	5620P	–	2445
S 846XLW 032 - 08	32	–	32	–	250	50	10°	2	–	–	1,38	4,0±5,0	–	08...	124512P	5620P	–	2445
S 846XLW 033 - 08	33	–	32	–	250	50	8°	2	–	–	1,40	4,0±5,0	–					
S 846XLW 040 - 08	40	–	32	–	250	50	6°	3	–	–	1,45	4,0±5,0	–					
S 846GXLW 040 - 08	40	–	32	–	250	50	6°	2	–	–	1,46	4,0±5,0	–	08...	124512P	5620P	–	2445
S 848W 040 - 06	40	–	16	38	40	–	2°	3	–	–	0,21	3,8±5,0	A	06...	C04008P	5615P	VBSF08L	2440
S 848W 050 - 08	50	–	22	48	50	–	4°	3	–	–	0,39	4,0±5,0	A	08...	124513P	5520P	VBSF10AV	2445
S 848W 052 - 08	52	–	22	50	50	–	4°	3	–	–	0,45	4,0±5,0	A					
S 848W 063 - 08	63	–	22	59	50	–	2,5°	4	–	–	0,65	4,0±5,0	A					
S 848W 066 - 08	66	–	27	63	50	–	2,5°	4	–	–	0,70	4,0±5,0	A	08...	124513P	5520P	VBSF12	2445
S 848W 080 - 08	80	–	27	76	63	–	1,5°	5	–	–	1,47	4,0±5,0	A	08...	124513P	5520P	VBSF12L	2445
S 848W 100 - 08	100	–	32	96	63	–	1°	6	–	–	2,45	4,0±5,0	A	08...	124513P	5520P	VBSF16L	2445
S 848WF 050 - 08	50	–	22	48	50	–	4°	4	–	–	0,38	4,0±5,0	A	08...	124513P	5520P	VBSF10AV	2445
S 848WF 052 - 08	52	–	22	50	50	–	4°	4	–	–	0,43	4,0±5,0	A					
S 848WF 063 - 08	63	–	22	59	50	–	2,5°	5	–	–	0,67	4,0±5,0	A					
S 848WF 066 - 08	66	–	27	63	50	–	2,5°	5	–	–	0,73	4,0±5,0	A	08...	124513P	5520P	VBSF10	2445
S 848WF 080 - 08	80	–	27	76	63	–	1,5°	6	–	–	1,51	4,0±5,0	A	08...	124513P	5520P	VBSF12L	2445
S 848WF 100 - 08	100	–	32	96	63	–	1°	8	–	–	2,49	4,0±5,0	A	08...	124513P	5520P	VBSF16L	2445
S 849W 025 - 06	25	12	12,5	21	–	35	5°	2	–	17	0,09	3,8±5,0	–	06...	C04008P	5615P	–	2440
S 849W 026 - 06	26	12	12,5	21	–	35	4,5°	2	–	17	0,09	3,8±5,0	–					
S 849W 032 - 06	32	16	17	29	–	43	3,5°	3	–	24	0,20	3,8±5,0	–					
S 849W 033 - 06	33	16	17	29	–	43	3°	3	–	24	0,20	3,8±5,0	–					
S 849W 032 - 08	32	16	17	29	–	43	10°	2	–	24	0,17	4,0±5,0	–	08...	124512P	5620P	–	2445
S 849W 033 - 08	33	16	17	29	–	43	8°	2	–	24	0,18	4,0±5,0	–					
S 849W 040 - 08	40	16	17	29	–	43	6°	3	–	24	0,22	4,0±5,0	–					
S 849GW 040 - 08	40	16	17	29	–	43	6°	2	–	24	0,24	4,0±5,0	–	08...	124512P	5620P	–	2445



Tenacità +
Toughness -

Pag. 486

HT	HW	HC
ERMET	NON RIV. CEMENTED CARBIDE GRADES	RIVESTITI COATED GRADES BESCHICHTET RECOUVERTS



FORMA DEL TAGLIANTE
CUTTING EDGE SHAPE



.N52

Diagram illustrating the relationship between cutting speed (V_c), feed (f), and chip thickness (t).

Left side: A single chip with radius R and thickness t .

Right side: A chip with radius $r\ 1,5$, thickness t , and width W . A red box indicates $1,5\ ap\ max.$

Ins
Ins
WPM
WPM

t = Materiale residuo
 t = Residual Material

ap = Profondità massima di passata
 ap = Maximum cutting depth

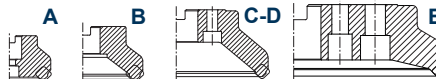
Inserto Insert	W (mm)	t (mm)	R (mm)
WPM..06	4,3	0,7	2,5
WPM..08	5,7	0,7	2,0

S 1502.8W .. 14

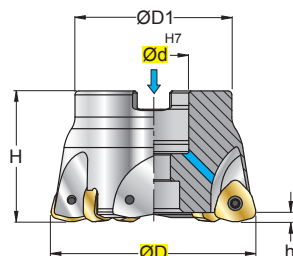
Ø 50-80

$\gamma_p +15^\circ$
 $\gamma_f -12^\circ/-9^\circ$
 $\gamma_o +12^\circ$

ISO 6462 ...

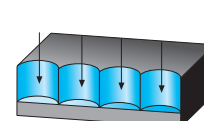
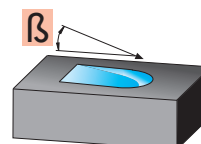
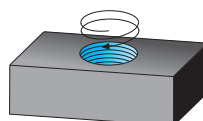
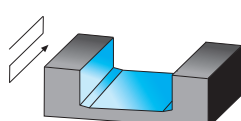
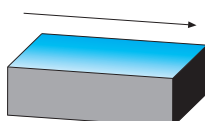


WNMT
1405..
.X52

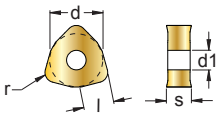


INSERTI - INSERTS
PAG. 519

(mm)												ISO 6462				
ART.	ØD	Ød	ØD1	H	h	β	Z									
S 1502.8W-050-03-14	50	22	40	40	2	4,3°	3	—	0,24	3,8+5,0	A	1405				
S 1502.8W-050-04-14	50	22	40	40	2	4,3°	4	—	0,21	3,8+5,0	A					
S 1502.8W-052-03-14	52	22	40	40	2	4°	3	—	0,27	3,8+5,0	A					
S 1502.8W-052-04-14	52	22	40	40	2	4°	4	—	0,24	3,8+5,0	A					
S 1502.8W-063-04-14	63	22	49	40	2	2,7°	4	—	0,44	3,8+5,0	A					
S 1502.8W-063-05-14	63	22	49	40	2	2,7°	5	—	0,42	3,8+5,0	A					
S 1502.8W-066-04-14	66	22	49	40	2	2,5°	4	—	0,48	3,8+5,0	A					
S 1502.8W-066-05-14	66	22	49	40	2	2,5°	5	—	0,46	3,8+5,0	A					
S 1502.8W-080-05-14	80	27	60	50	2	1,9°	5	—	1,02	3,8+5,0	A	1405				
S 1502.8W-080-06-14	80	27	60	50	2	1,9°	6	—	0,99	3,8+5,0	A					



W = FORO PER LIQUIDO REFRIGERANTE - COOLANT BORE - KÜHLMITTELBOHRUNG - TROU DU LIQUIDE D'ARROSAGE
P = PASSO DIFFERENZIATO - DIFFERENTIAL PITCH - UNGLEICHE TEILUNG - PAS DIFFERENCIE

SCELTA VELOCE - QUICK PICK										Tenacità + Toughness -						Pag. 486																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
COD.			P			M			K			N			S			H			HT	HW	HC																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
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S 1503.6LW .. 06

Ø 16-40

$\gamma_p -6^\circ$
 $\gamma_r -13^\circ/-10^\circ$
 $\gamma_o -10^\circ/-9^\circ$

S 1503.8W .. 06

Ø 40-63

$\gamma_p -6^\circ$
 $\gamma_r -10^\circ/-7,5^\circ$
 $\gamma_o -9^\circ/-8^\circ$

ISO 6462 ...

A B C-D

S 1503.9W .. 06

Ø 16-35

$\gamma_p -6^\circ$
 $\gamma_r -13^\circ/-10^\circ$
 $\gamma_o -10^\circ/-9^\circ$

LNMT 060312 .X52

INSERTI - INSERTS
PAG. 511

(mm)																		
ART.	ØD	M	Ød	ØD1	H	L	h	β	Z		CH			ISO 6462				
S 1503.6LW-016-02-06	16	—	16	—	100	30	1	3,5°	2	—	—	0,13	1,1+1,3	—	0603	122564P	5608P	—
S 1503.6LW-018-02-06	18	—	16	—	100	30	1	2,7°	2	—	—	0,14	1,1+1,3	—				
S 1503.6LW-020-03-06	20	—	20	—	130	50	1	2,3°	3	—	—	0,26	1,1+1,3	—				
S 1503.6LW-020-04-06	20	—	20	—	130	50	1	2,3°	4	—	—	0,26	1,1+1,3	—				
S 1503.6LW-022-03-06	22	—	20	—	130	50	1	1,9°	3	—	—	0,27	1,1+1,3	—				
S 1503.6LW-022-04-06	22	—	20	—	130	50	1	1,9°	4	—	—	0,28	1,1+1,3	—				
S 1503.6LW-025-04-06	25	—	25	—	140	60	1	1,6°	4	—	—	0,46	1,1+1,3	—				
S 1503.6LW-025-05-06	25	—	25	—	140	60	1	1,6°	5	—	—	0,45	1,1+1,3	—				
S 1503.6LW-028-04-06	28	—	25	—	140	60	1	1,3°	4	—	—	0,48	1,1+1,3	—				
S 1503.6LW-028-05-06	28	—	25	—	140	60	1	1,3°	5	—	—	0,48	1,1+1,3	—				
S 1503.6LW-030-04-06	30	—	32	—	150	70	1	1,2°	4	—	—	0,80	1,1+1,3	—				
S 1503.6LW-030-05-06	30	—	32	—	150	70	1	1,2°	5	—	—	0,80	1,1+1,3	—				
S 1503.6LW-032-05-06	32	—	32	—	150	70	1	1,1°	5	—	—	0,81	1,1+1,3	—				
S 1503.6LW-032-06-06	32	—	32	—	150	70	1	1,1°	6	—	—	0,81	1,1+1,3	—				
S 1503.6LW-035-05-06	35	—	32	—	150	35	1	1,0°	5	—	—	0,88	1,1+1,3	—				
S 1503.6LW-035-06-06	35	—	32	—	150	35	1	1,0°	6	—	—	0,88	1,1+1,3	—				
S 1503.6LW-040-06-06 New	40	—	32	—	160	45	1	0,8°	6	—	—	0,96	1,1+1,3	—				
S 1503.6LW-040-08-06 New	40	—	32	—	160	45	1	0,8°	8	—	—	0,96	1,1+1,3	—				
S 1503.8W-040-06-06	40	—	16	35	50	—	1	0,8°	6	—	—	0,21	1,1+1,3	A	0603	122564P	5608P	VBSF08L
S 1503.8W-040-08-06	40	—	16	35	50	—	1	0,8°	8	—	—	0,20	1,1+1,3	A				
S 1503.8W-050-07-06	50	—	22	48	50	—	1	0,6°	7	—	—	0,46	1,1+1,3	A	0603	122564P	5608P	VBSF10L
S 1503.8W-050-09-06	50	—	22	48	50	—	1	0,6°	9	—	—	0,45	1,1+1,3	A				
S 1503.8W-052-07-06 New	52	—	22	48	50	—	1	0,6°	7	—	—	0,50	1,1+1,3	A				
S 1503.8W-052-09-06 New	52	—	22	48	50	—	1	0,6°	9	—	—	0,50	1,1+1,3	A				
S 1503.8W-063-09-06 New	63	—	22	48	50	—	1	0,5°	9	—	—	0,67	1,1+1,3	A				
S 1503.8W-063-11-06 New	63	—	22	48	50	—	1	0,5°	11	—	—	0,66	1,1+1,3	A				
S 1503.9W-016-02-06	16	8	8,5	13	42	25	1	3,5°	2	—	10	0,03	1,1+1,3	—	0603	122564P	5608P	—
S 1503.9W-018-02-06	18	8	8,5	13	42	25	1	2,7°	2	—	10	0,03	1,1+1,3	—				
S 1503.9W-020-03-06	20	10	10,5	17,8	49	30	1	2,3°	3	—	15	0,06	1,1+1,3	—				
S 1503.9W-020-04-06	20	10	10,5	17,8	49	30	1	2,3°	4	—	15	0,05	1,1+1,3	—				
S 1503.9W-022-03-06	22	10	10,5	18	49	30	1	1,9°	3	—	15	0,06	1,1+1,3	—				
S 1503.9W-022-04-06	22	10	10,5	18	49	30	1	1,9°	4	—	15	0,06	1,1+1,3	—				
S 1503.9W-025-04-06	25	12	12,5	21	57	35	1	1,6°	4	—	17	0,10	1,1+1,3	—				
S 1503.9W-025-05-06	25	12	12,5	21	57	35	1	1,6°	5	—	17	0,09	1,1+1,3	—				
S 1503.9W-028-04-06	28	12	12,5	21	57	35	1	1,3°	4	—	17	0,11	1,1+1,3	—				
S 1503.9W-028-05-06	28	12	12,5	21	57	35	1	1,3°	5	—	17	0,10	1,1+1,3	—				
S 1503.9W-030-04-06	30	16	17	27	64	40	1	1,2°	4	—	24	0,20	1,1+1,3	—				
S 1503.9W-030-05-06	30	16	17	27	64	40	1	1,2°	5	—	24	0,19	1,1+1,3	—				
S 1503.9W-032-05-06	32	16	17	29	64	40	1	1,1°	5	—	24	0,21	1,1+1,3	—				
S 1503.9W-032-06-06	32	16	17	29	64	40	1	1,1°	6	—	24	0,21	1,1+1,3	—				
S 1503.9W-035-05-06 New	35	16	17	29	64	40	1	1,0°	5	—	24	0,23	1,1+1,3	—				
S 1503.9W-035-06-06 New	35	16	17	29	64	40	1	1,0°	6	—	24	0,23	1,1+1,3	—				

W = FORO PER LIQUIDO REFRIGERANTE - COOLANT BORE - KÜHLMITTELBOHRUNG - TROU DU LIQUIDE D'ARROSAGE
L = LUNGA, STELO CILINDRICO - LONG, CYLINDRICAL SHANK - LANG, ZYLINDERSCHAFT - LONGUE, QUEUE CYLINDRIQUE
↺ = PASSO DIFFERENZIATO - DIFFERENTIAL PITCH - UNGLEICHE TEILUNG - PAS DIFFERENCIE



SCELTA VELOCE - QUICK PICK													Tenacità + Toughness -						Pag. 486																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
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LNMT 060312 .X52			●	●	●	●	●		●	○	●	●															■																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										</

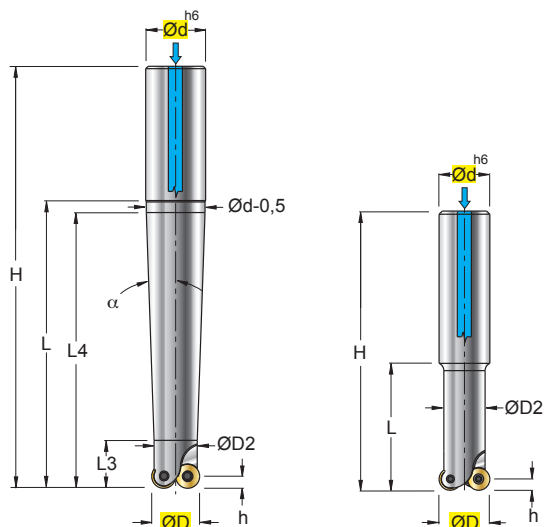
S 806W ..

Ø 12,5-20

FORM A

FORM B

γ_p 0°
 γ_f 0°



**RDHX..
.T42**



**RDET..
.T56**



**RDEW..
.T56**

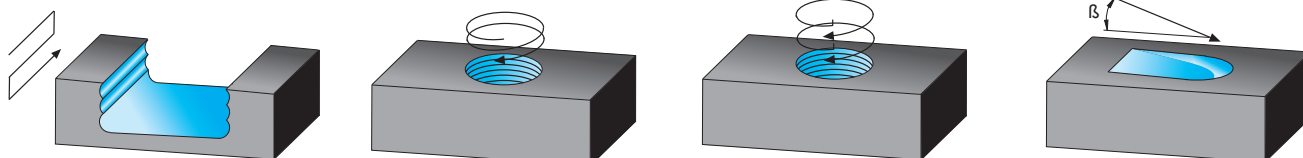


**RDHT..
.T57P**



INSERTI - INSERTS
PAG. 512

(mm)																
ART.	FORM	ØD	Ød	ØD2	H	h	L	L3	L4	α	β	Z	↺↻	kg	Nm	
S 806W 12,5 40 02.71	A	12,5	16	10	88	3,5	40	20	35	10,4°	22,7°	2	—	0,102	1,0÷1,2	07T1
S 806W 12,5 60 02.71	A	12,5	16	10	108	3,5	60	20	55	4,3°	22,7°	2	—	0,120	1,0÷1,2	
S 806W 12,5 80 02.71	A	12,5	16	10	128	3,5	80	20	75	2,9°	22,7°	2	—	0,139	1,0÷1,2	
S 806W 15 40 02.72	B	15	16	13	88	3,5	40	—	—	—	20°	2	—	0,106	1,0÷1,2	0702
S 806W 15 60 02.72	A	15	16	13	108	3,5	60	20	55	2,0°	20°	2	—	0,135	1,0÷1,2	
S 806W 15 80 02.72	A	15	20	13	130	3,5	80	20	75	3,4°	20°	2	—	0,232	1,0÷1,2	
S 806W 15 100 02.72	A	15	20	13	150	3,5	100	20	95	2,5°	20°	2	—	0,263	1,0÷1,2	
S 806W 15 120 02.72	A	15	25	13	176	3,5	120	20	115	3,5°	20°	2	—	0,447	1,0÷1,2	
S 806W 16 40 02.72	B	16	16	13	88	3,5	40	—	—	—	16,8°	2	—	0,107	1,0÷1,2	0702
S 806W 16 60 02.72	A	16	16	13	108	3,5	60	20	55	2,0°	16,8°	2	—	0,135	1,0÷1,2	
S 806W 16 80 02.72	A	16	20	13	130	3,5	80	20	75	3,4°	16,8°	2	—	0,232	1,0÷1,2	
S 806W 16 100 02.72	A	16	20	13	150	3,5	100	20	95	2,5°	16,8°	2	—	0,263	1,0÷1,2	
S 806W 16 120 02.72	A	16	25	13	176	3,5	120	20	115	3,5°	16,8°	2	—	0,449	1,0÷1,2	
S 806W 20 40 02.10	A	20	20	18	90	5	40	20	35	2,9°	39°	2	—	0,181	3,0÷3,5	1003
S 806W 20 60 02.10	A	20	20	18	110	5	60	20	55	1,3°	39°	2	—	0,222	3,0÷3,5	
S 806W 20 80 02.10	A	20	25	18	136	5	80	20	75	3,4°	39°	2	—	0,396	3,0÷3,5	
S 806W 20 100 02.10	A	20	25	18	156	5	100	20	95	2,5°	39°	2	—	0,450	3,0÷3,5	
S 806W 20 120 02.10	A	20	25	18	176	5	120	20	115	2,0°	39°	2	—	0,503	3,0÷3,5	

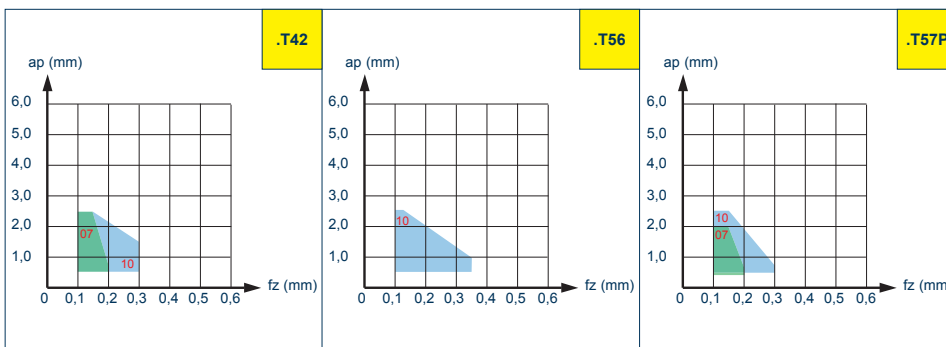


W = FORO PER LIQUIDO REFRIGERANTE - COOLANT BORE - KÜHLMITTELBOHRUNG - TROU DU LIQUIDE D'ARROSAGE

↺↻ = PASSO DIFFERENZIATO - DIFFERENTIAL PITCH - UNGLEICHE TEILUNG - PAS DIFFERENCIE

Tenacità +
Toughness -

Pag. 486

[illegible]

$$n = \frac{V_c \cdot 1000}{\varnothing D \cdot 3.14} = \text{giri/min (min}^{-1}\text{)}$$

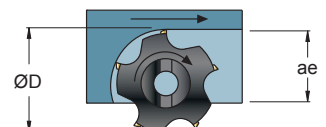
$$f_z = f_{z0} \cdot K_{ae} \cdot K_m = \text{mm}$$

$$f_n = f_z \cdot z = \text{mm}$$

$$V_f = f_z \cdot z \cdot n = \text{mm/min}$$

ae/D	0,5-1 50-100%	0,2 20%	0,1 10%	0,05 5%	0,02 2%
Kae	1	1,2	1,5	1,8	2

n = giri/min (min^{-1}) NUMERO DI GIRI - NUMBER OF REV.
fz = mm AVANZAMENTO AL DENTE -TOOTH FEED
fn = mm AVANZAMENTO AL GIRO - FEED / REVOLUTION
Vf = mm/min VELOCITÀ DI AVANZAMENTO - FEED SPEED
K_{ae} = FATTORE DI CORREZIONE - CORRECTION FACTOR



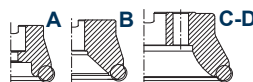
☐ A RICHIESTA - ON REQUEST - AUF ANFRAGE - SUR DEMANDE / ☐ NEW
☐ APPLICAZIONE POSSIBILE - POSSIBLE APPLICATION
 MÖGLICHE ANWENDUNG - APPLICATION POSSIBLE

S 808W ..

Ø 40-160

γ_p 0°
 γ_f 0°

ISO 6462 ...



RDHX..
.T42



RDET..
.T56



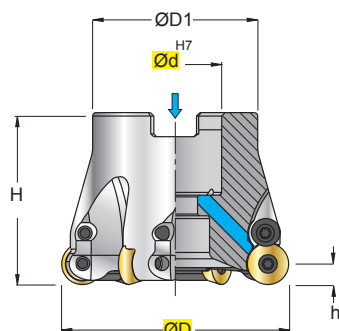
RDEX..
.T56



RDEW..
.T56



RDHT..
.T57P



INSERTI - INSERTS
PAG. 512

ART.	ØD	Ød	ØD1	H	h	β	Z		kg	Nm	ISO 6462			*		
S 808W 40 40 05.10 New	40	16	32	40	5	7°	5	—	0,164	3,0÷3,5	A	1003	123507P	—	5615P	VBSF08L
S 808W 42 40 05.10 New	42	16	32	40	5	6,7°	5	—	0,182	3,0÷3,5	A	1003	123507P	—	5615P	VBSF10
S 808W 52 50 05.10 New	52	22	40	50	5	5,5°	5	—	0,385	3,0÷3,5	A	1003	123507P	—	5615P	VBSF10
S 808W 52 50 07.10 New	52	22	40	50	5	5,5°	7	—	0,394	3,0÷3,5	A	1003	123507P	—	5615P	VBSF10
S 808W 42 40 04.12 New	42	16	32	40	6	7,5°	4	—	0,156	3,0÷3,5	A	12T3	123509P	2435P	5615P	VBSF08L
S 808W 48 50 04.12 New	48	22	40	50	6	6,5°	4	—	0,319	3,0÷3,5	A	12T3	123509P	2435P	5615P	VBSF10
S 808W 50 50 05.12	50	22	40	50	6	6,1°	5	—	0,308	3,0÷3,5	A	12T3	123509P	2435P	5615P	VBSF10
S 808W 52 50 05.12	52	22	40	50	6	5,7°	5	—	0,337	3,0÷3,5	A	12T3	123509P	2435P	5615P	VBSF12
S 808W 63 50 06.12	63	27	48	50	6	4,3°	6	—	0,477	3,0÷3,5	A	12T3	123509P	2435P	5615P	VBSF12
S 808W 66 50 06.12	66	27	48	50	6	4,1°	6	—	0,524	3,0÷3,5	A	12T3	123509P	2435P	5615P	VBSF12
S 808W 80 52 07.12	80	27	60	52	6	3,2°	7	—	0,889	3,0÷3,5	A-B	12T3	123509P	2435P	5615P	VBSF12
S 808W 50 50 04.16	50	22	40	50	8	9,5°	4	—	0,273	4,0÷5,0	A	1604	124510P	2445	5620P	VBSF10
S 808W 52 50 04.16	52	22	40	50	8	8,8°	4	—	0,299	4,0÷5,0	A	1604	124510P	2445	5620P	VBSF10
S 808W 63 50 05.16	63	27	48	50	8	7,1°	5	—	0,443	4,0÷5,0	A	1604	124510P	2445	5620P	VBSF12
S 808W 66 50 05.16	66	27	48	50	8	6,0°	5	—	0,493	4,0÷5,0	A	1604	124510P	2445	5620P	VBSF12
S 808W 66 50 06.16 New	66	27	48	50	8	6,0°	6	—	0,450	4,0÷5,0	A	1604	124510P	2445	5620P	VBSF12
S 808W 80 52 06.16	80	27	60	52	8	4,5°	6	—	0,833	4,0÷5,0	A-B	1604	124510P	2445	5620P	VBSF16
S 808W 80 52 07.16 New	80	27	60	52	8	4,5°	7	—	0,797	4,0÷5,0	A-B	1604	124510P	2445	5620P	VBSF16
S 808W 100 52 07.16	100	32	75	52	8	3,7°	7	—	1,276	4,0÷5,0	A-B	1604	124510P	2445	5620P	VBSF16
S 808W 125 63 08.16	125	40	90	63	8	2,8°	8	—	2,664	4,0÷5,0	A-B	1604	124510P	2445	5620P	VBSF20
S 808 160 63 09.16	160	40	120	63	8	1,8°	9	—	4,183	4,0÷5,0	C	1604	124510P	2445	5620P	—



* CON INSERTI RDET.. .T56 / RDEX.. .T56 / RDHT.. .T57P NON È POSSIBILE UTILIZZARE LA STAFFA 24..



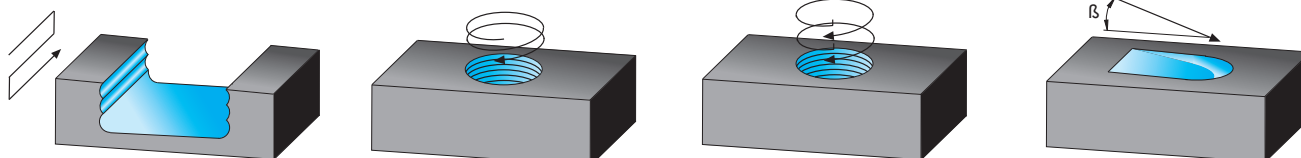
* WITH RDET.. .T56 / RDEX.. .T56 / RDHT.. .T57P INSERTS THE CLAMPING SCREW 24.. CANNOT BE USED.



* MIT RDET.. .T56 / RDEX.. .T56 / RDHT.. .T57P-WENDEPLATTEN IST DIE AUFSPANNSCHRAUBE 24.. NICHT EINSETZBAR.



* AVEC LES PLAQUETTES RDET.. .T56 / RDEX.. .T56 / RDHT.. .T57P ON NE PEUT PAS UTILISER LA VIS DE BRIDAGE 24..



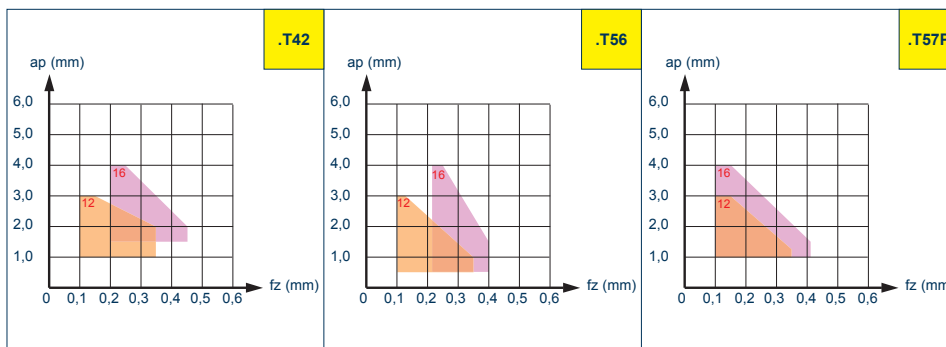
W = FORO PER LIQUIDO REFRIGERANTE - COOLANT BORE - KÜHLMITTELBOHRUNG - TROU DU LIQUIDE D'ARROSAGE

↻ = PASSO DIFFERENZIATO - DIFFERENTIAL PITCH - UNGLEICHE TEILUNG - PAS DIFFERENCIE

Tenacità +
Toughness -

Pag. 486

Pag. 486

[illegible]

$$n = \frac{V_c \cdot 1000}{\varnothing D \cdot 3,14} = \text{giri/min (min}^{-1}\text{)}$$

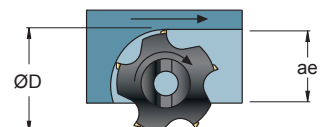
$$f_z = f_{z0} \cdot K_{ae} \cdot K_m = \text{mm}$$

$$f_n = f_z \cdot z = \text{mm}$$

$$V_f = f_z \cdot z \cdot n = \text{mm/min}$$

ae/D	0,5-1 50-100%	0,2 20%	0,1 10%	0,05 5%	0,02 2%
Kae	1	1,2	1,5	1,8	2

n = giri/min (min^{-1}) NUMERO DI GIRI - NUMBER OF REV.
fz = mm AVANZAMENTO AL DENTE - TOOTH FEED
fn = mm AVANZAMENTO AL GIRO - FEED / REVOLUTION
Vf = mm/min VELOCITÀ DI AVANZAMENTO - FEED SPEED
K_{ae} = FATTORE DI CORREZIONE - CORRECTION FACTOR



☐ A RICHIESTA - ON REQUEST - AUF ANFRAGE - SUR DEMANDE / ☐ NEW
☐ APPLICAZIONE POSSIBILE - POSSIBLE APPLICATION
 MÖGLICHE ANWENDUNG - APPLICATION POSSIBLE

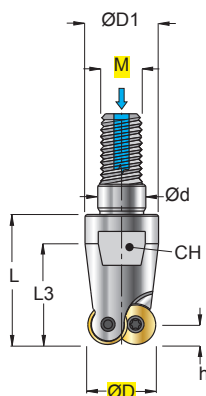
S 809W ..

Ø 10-42

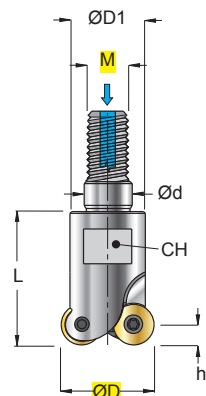
CON INSERTI RDET.. T56 / RDEX.. T56 / RDHT.. T57P NON È POSSIBILE UTILIZZARE LA STAFFA 24..
WITH RDET.. T56 / RDEX.. T56 / RDHT.. T57P INSERTS THE CLAMPING SCREW 24.. CANNOT BE USED.D..
MIT RDET.. T56 / RDEX.. T56 / RDHT.. T57P-WENDEPLATTEN IST DIE AUFSPANNSCHRAUBE 24.. NICHT EINSETZBAR.
AVEC LES PLAQUETTES RDET.. T56 / RDEX.. T56 / RDHT.. T57P ON NE PEUT PAS UTILISER LA VIS DE BRIDAGE 24..

γ_p 0°
 γ_f 0°

FORM A



FORM B



RDHX..
.T42



RDET..
.T56



RDEX..
.T56



RDEW..
.T56

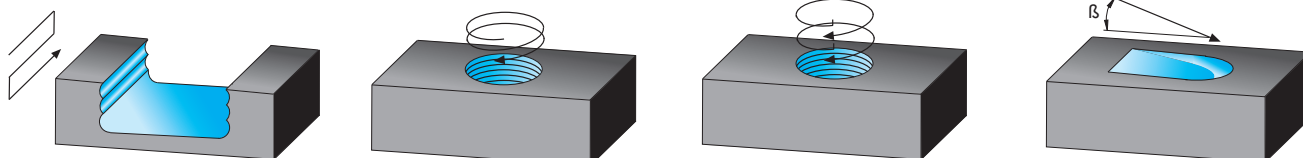


RDHT..
.T57P



INSERTI - INSERTS
PAG. 512

ART.	FORM	ØD	M	Ød	ØD1	h	L	L3	β	Z	↺	CH	kg	Nm			*	
S 809W 10 23 02.05	A	10	8	8,5	13	2,5	23	17	28,9°	2	—	10	0,019	0,4+0,5	0501	121837P	—	5606P
S 809W 12 23 03.05	A	12	8	8,5	13	2,5	23	17	13,8°	3	—	10	0,020	0,4+0,5				
S 809W 15 23 04.05	B	15	8	8,5	13	2,5	23	—	8,6°	4	—	10	0,023	0,4+0,5				
S 809W 16 23 04.05	B	16	8	8,5	13	2,5	23	—	7,7°	4	—	10	0,025	0,4+0,5				
S 809W 20 30 05.05	B	20	10	10,5	18	2,5	30	—	6,9°	5	—	15	0,059	0,4+0,5				
S 809W 25 35 06.05	B	25	12	12,5	21	2,5	35	—	4,0°	6	—	17	0,099	0,4+0,5	07T1	12254P	—	5607P
S 809W 12,5 23 02.71	A	12,5	8	8,5	13	3,5	23	17	22,7°	2	—	10	0,019	1,0+1,2				
S 809W 15 23 02.72	B	15	8	8,5	13	3,5	23	—	20,0°	2	—	10	0,020	1,0+1,2	0702	12254P	—	5607P
S 809W 15 23 03.72	B	15	8	8,5	13	3,5	23	—	20,0°	3	—	10	0,021	1,0+1,2				
S 809W 16 23 02.72	B	16	8	8,5	13	3,5	23	—	16,8°	2	—	10	0,022	1,0+1,2				
S 809W 16 23 03.72	B	16	8	8,5	13	3,5	23	—	16,8°	3	—	10	0,022	1,0+1,2				
S 809W 20 30 04.72	B	20	10	10,5	18	3,5	30	—	11,0°	4	—	15	0,054	1,0+1,2	1003	123507P	—	5615P
S 809W 25 35 05.72	B	25	12	12,5	21	3,5	35	—	7,3°	5	—	17	0,093	1,0+1,2				
S 809W 30 43 05.72	A	30	16	17	29	3,5	43	43	5,4°	5	—	24	0,208	1,0+1,2				
S 809W 32 43 06.72	B	32	16	17	29	3,5	43	—	4,9°	6	—	24	0,219	1,0+1,2				
S 809W 35 43 06.72	B	35	16	17	29	3,5	43	—	4,3°	6	—	24	0,233	1,0+1,2				
S 809W 20 30 02.10	B	20	10	10,5	18	5	30	—	39,0°	2	—	15	0,048	3,0+3,5	12T3	123509P	2435P	5615P
S 809W 25 35 03.10	B	25	12	12,5	21	5	35	—	14,3°	3	—	17	0,083	3,0+3,5				
S 809W 30 43 04.10	A	30	16	17	29	5	43	43	9,3°	4	—	24	0,196	3,0+3,5				
S 809W 32 43 04.10	A	32	16	17	29	5	43	43	8,6°	4	—	24	0,200	3,0+3,5				
S 809W 35 43 04.10	B	35	16	17	29	5	43	—	7,3°	4	—	24	0,215	3,0+3,5				
S 809W 35 43 05.10	B	35	16	17	29	5	43	—	7,3°	5	—	24	0,216	3,0+3,5	1604	124510P	2445	5620P
S 809W 40 43 05.10	B	40	16	17	29	5	43	—	5,8°	5	—	24	0,232	3,0+3,5				
S 809W 42 43 05.10	B	42	16	17	29	5	43	—	5,4°	5	—	24	0,243	3,0+3,5				
S 809W 42 43 06.10	B	42	16	17	29	5	43	—	5,4°	6	—	24	0,245	3,0+3,5				
S 809W 25 35 02.12	B	25	12	12,5	21	6	35	—	26,0°	2	—	17	0,076	3,0+3,5	12T3	123509P	2435P	5615P
S 809W 32 43 03.12	A	32	16	17	29	6	43	43	14,3°	3	—	24	0,178	3,0+3,5				
S 809W 35 43 03.12	B	35	16	17	29	6	43	—	11,9°	3	—	24	0,194	3,0+3,5				
S 809W 40 43 04.12	B	40	16	17	29	6	43	—	9,3°	4	—	24	0,212	3,0+3,5				
S 809W 42 43 04.12	B	42	16	17	29	6	43	—	8,3°	4	—	24	0,224	3,0+3,5				
S 809W 32 43 02.16	A	32	16	17	29	8	43	43	29,6°	2	—	24	0,169	4,0+5,0	1604	124510P	2445	5620P
S 809W 40 43 02.16	B	40	16	17	29	8	43	—	15°	2	—	24	0,226	4,0+5,0				



W = FORO PER LIQUIDO REFRIGERANTE - COOLANT BORE - KÜHLMITTELBOHRUNG - TROU DU LIQUIDE D'ARROSAGE

↺ = PASSO DIFFERENZIATO - DIFFERENTIAL PITCH - UNGLEICHE TEILUNG - PAS DIFFERENCE

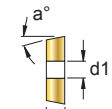
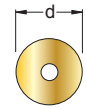
SCELTA VELOCE - QUICK PICK

Tenacità +
Toughness -

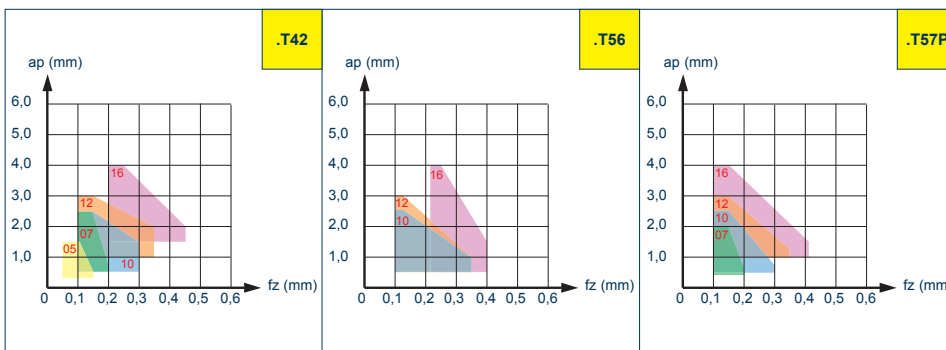


Pag. 486

		HT		HW		HC							
		CERMET		NON RIV. CEMENTED CARBIDE GRADES		RIVESTITI COATED GRADES BESCHICHTET RECOUVERTS							
		N3620		F5105		F2331 F2335							
COD.		P		M		K		N		S		H	
		F	M	HSC	F	M	HSC	F	M	HSC	F	M	HSC
RDHX 0501 MOE .T42		●	●			●	●	●	●		●	●	
RDHX 07T1 MOT .T42		●	●			●	●	●	●		●	●	
RDHX 0702 MOT .T42		●	●			●	●	●	●		●	●	
RDHX 1003 MOT .T42		●	●			●	●	●	●		●	●	
RDHX 12T3 MOT .T42		●	●			●	●	●	●		●	●	
RDHX 1604 MOT .T42		●	●			●	●	●	●		●	●	
RDET 1003 MOSN .T56		●	●	●	●	○	○			○	○		
RDET 12T3 MOSN .T56		●	●	●	●	○	○			○	○		
RDEX 1604 MOSN .T56		●	●	●	●	○	○			○	○		
RDEW 1003 MOSN .T56		●	●	●	●								
RDEW 12T3 MOSN .T56		●	●	●	●								
RDEW 1604 MOSN .T56		●	●	●	●								
RDHT 07T1 MO .T57P						●	●						
RDHT 0702 MO .T57P						●	●						
RDHT 1003 MO .T57P						●	●						
RDHT 12T3 MO .T57P						●	●						
RDHT 1604 MO .T57P						●	●						
CON ADDUZIONE LUBROREFRIGERANTE - WITH COOLANT SUPPLY													
SENZA ADDUZIONE LUBROREFRIGERANTE - WITHOUT COOLANT SUPPLY													



MATERIALI - MATERIALS Pag. 1119		VDI 3323 GR.	HB Rm ¹ HRC ²	Km	F5105 Vc (m/min)			N3620 Vc (m/min)			F2331 Vc (m/min)			F2335 Vc (m/min)					
					F	R	HSC	F	R	HSC	F	R	HSC	F	R	HSC			
P	ACCIAIO NON LEGATO - NOT ALLOY STEEL	1-5	125-300	1	260	220	310				280	240		260	220				
	ACCIAIO POCO LEGATO - LOW ALLOY STEEL	6-9	180-350	0,9	280	270	300				300	260		280	250				
	ACCIAIO ALTO LEGATO - ALLOY STEEL	10-11	200-325	0,8	230	210	250				240	220		220	200				
	INOX MARTENS. - STAINLESS STEEL MART	12-13	200-240	1	200	150	180				180	150		180	160				
M	INOX AUST. DUPLEX - STAINLESS STEEL AUST	14.1-14.2	180-230	1							160	120		150	120				
K	GHISA GRIGIA - GREY CAST IRON	15-16	180-260	1	300	260	330							290	250				
	GHISA SFEROIDALE - SPHEROIDAL GRAPHITE	17-18	160-250	1,1	240	230	280							240	220				
	GHISA MALLEABILE - MALLEABLE CAST IRON	19-20	130-230	1,2	260	230	280							250	220				
N	ALLUMINIO E SUE LEGHE - ALUMINIUM	21-25	60-130	1,3				430	400	450									
	RAME E SUE LEGHE - COPPER	26-28	90-110	1,2				280	250	335									
	NON METALLICI - PLASTICS	29-30	/	1,3				380	350	400									
S	LEGHE RESIST. CALORE - HIG. TEMP. ALLOY	31-35	200-320	0,9										70	40				
	TITANIO E SUE LEGHE - TITANIUM	36-37	400-1050 ¹	0,8										70	40				
H	ACCIAIO TEMPRATO - HARDENED STEEL	38-41	45-60 ³	0,8	120	80	140												



$$n = \frac{Vc \cdot 1000}{\phi D \cdot 3,14} = \text{giri/min (min}^{-1}\text{)}$$

$$fz = fz0 \cdot Kae \cdot Km = \text{mm}$$

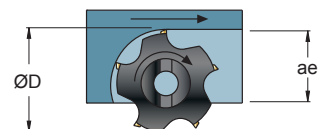
$$fn = fz \cdot z = \text{mm}$$

$$Vf = fz \cdot z \cdot n = \text{mm/min}$$

ae/D	0,5-1 50-100%	0,2 20%	0,1 10%	0,05 5%	0,02 2%
Kae	1	1,2	1,5	1,8	2

F = FINITURA, LAV. LEGGERA - FINISHING, LIGHT MACHINING
R = SGROSSATURA, LAV. PESANTE - ROUGHING, HEAVY MACHINING
HSC = LAVORAZIONE ALTA VELOCITÀ - HIGH SPEED CUTTING
Km = FATTORE DI AVANZAMENTO PER MATERIALE - FEED FACTOR FOR MATERIAL
Vc = m/min VELOCITÀ DI TAGLIO - CUTTING SPEED

n = giri/min (min⁻¹) NUMERO DI GIRI - NUMBER OF REV.
fz = mm AVANZAMENTO AL DENTE - TOOTH FEED
fn = mm AVANZAMENTO AL GIRO - FEED / REVOLUTION
Vf = mm/min VELOCITÀ DI AVANZAMENTO - FEED SPEED
Kae = FATTORE DI CORREZIONE - CORRECTION FACTOR



■ DISPONIBILI - IN STOCK - LIEFERBAR - DISPONIBLES / ■ NEW
●● APPLICAZIONE CONSIGLIATA - RECOMMENDED APPLICATION
EMPFOHLENER EINSATZ - APPLICATION CONSEILLÉE

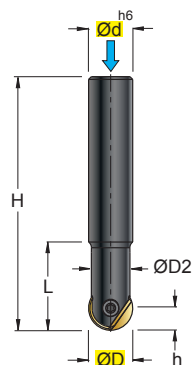
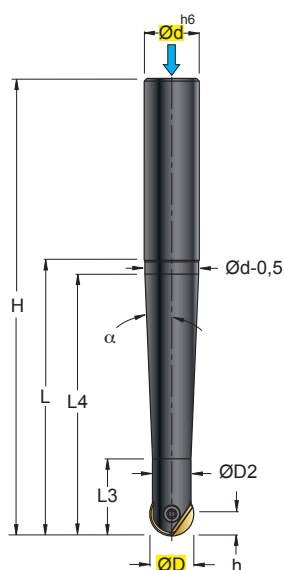
□ A RICHIESTA - ON REQUEST - AUF ANFRAGE - SUR DEMANDE / □ NEW
○● APPLICAZIONE POSSIBILE - POSSIBLE APPLICATION
MÖGLICHE ANWENDUNG - APPLICATION POSSIBLE

S 926W ..

Ø 8-32

FORM A

FORM B



RA..
.F42



RAET..
.F42



INSERTI - INSERTS
PAG. 512

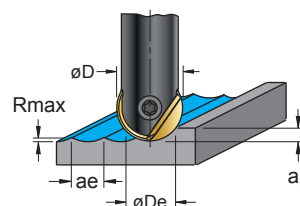
(mm)																			
ART.	FORM	ØD	Ød	ØD2	H	h	L	L3	L4	α	N	Z	kg	Nm					
S 926W 08 35 12	A	8	12	6,5	92	4	35	19	35	9,8°	1	2	0,062	0,8+1,0	08	12RA08	5407		
S 926W 08 53 12	A	8	12	6,5	110	4	53	19	48	5,0°	1	2	0,072	0,8+1,0					
S 926W 08 75 12	A	8	12	6,5	132	4	75	19	70	2,8°	1	2	0,083	0,8+1,0					
S 926W 10 35 12	A	10	12	8	92	5	35	22	35	8,9°	1	2	0,065	1,8+2,0	10	12RA10	5408		
S 926W 10 53 12	A	10	12	8	110	5	53	22	48	3,9°	1	2	0,076	1,8+2,0					
S 926W 10 75 12	A	10	12	8	132	5	75	22	70	2,1°	1	2	0,088	1,8+2,0					
S 926W 12 26 12	B	12	12	10	83	6	26	–	–	–	1	2	0,062	2,8+3,0	12	12RA12	5410		
S 926W 12 53 12	B	12	12	10	110	6	53	–	–	–	1	2	0,078	2,8+3,0					
S 926W 12 85 16	A	12	16	10	145	6	85	22	80	2,8°	1	2	0,167	2,8+3,0					
S 926W 16 32 16	B	16	16	14	92	8	32	–	–	–	1	2	0,123	4,5+5,5	16	12RA16	5415		
S 926W 16 63 16	B	16	16	14	123	8	63	–	–	–	1	2	0,159	4,5+5,5					
S 926W 16 100 20	A	16	20	14	166	8	100	28	95	2,4°	1	2	0,312	4,5+5,5					
S 926W 20 38 20	B	20	20	17	104	10	38	–	–	–	1	2	0,211	5,5+7,0	20	12RA20	5420		
S 926W 20 75 20	B	20	20	17	141	10	75	–	–	–	1	2	0,277	5,5+7,0					
S 926W 20 115 25	A	20	25	17	191	10	115	34	110	2,8°	1	2	0,553	5,5+7,0					
S 926W 25 45 25	B	25	25	21	121	12,5	45	–	–	–	1	2	0,379	10+13	25	12RA25	5430		
S 926W 25 90 25	B	25	25	21	166	12,5	90	–	–	–	1	2	0,501	10+13					
S 926W 25 135 32	A	25	32	21	215	12,5	135	41	130	2,9°	1	2	0,962	10+13					
S 926W 32 53 32	B	32	32	26	133	16	53	–	–	–	1	2	0,660	24+30	32	12RA32	5440		
S 926W 32 106 32	B	32	32	26	186	16	106	–	–	–	1	2	0,879	24+30					
S 926W 32 160 32	A	32	32	26	240	16	160	49	155	1,5°	1	2	1,207	24+30					

$$n = \frac{V_c \cdot 1000}{\phi D_e \cdot 3,14} = \text{giri/min (min}^{-1}\text{)}$$

$$f_z = f_{z0} \cdot K_m = \text{mm}$$

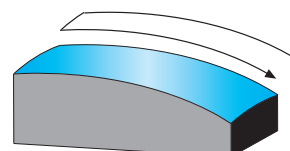
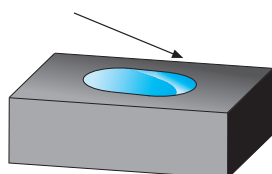
$$V_f = f_{z0} \cdot K_m \cdot z \cdot n = \text{mm/min}$$

F = FINITURA , LAV. LEGGERA - FINISHING , LIGHT MACHINING
HSC = LAVORAZIONE ALTA VELOCITÀ - HIGH SPEED CUTTING
Vc = m/min VELOCITÀ DI TAGLIO - CUTTING SPEED
n = giri/min (min⁻¹) NUMERO DI GIRI - NUMBER OF REVOLUTIONS
fz = mm AVANZAMENTO AL DENTE -TOOTH FEED
Vf = mm/min VELOCITÀ DI AVANZAMENTO - FEED SPEED
Km = FATTORE DI AVANZAMENTO PER MATERIALE -FEED FACTOR FOR MATERIAL
De = mm DIAMETRO EFFETTIVO - EFFECTIVE DIAMETER
Rmax = mm RUGOSITÀ TEORICA MASSIMA - THEORICAL MAXIMUM ROUGHNESS

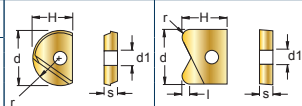


$$\phi D_e = 2 \cdot \sqrt{D \cdot a_p - a_p^2} = \text{mm}$$

$$R_{max} = 0,5 \cdot \left(\phi D - \sqrt{\phi D^2 - a_e^2} \right) = \text{mm}$$



N = NUMERO D'INSERTI / INSERT NUMBER / WENDEPLATTENANZAHL / NOMBRE DES PLAQUETTES
Z = NUMERO TAGLIENTI / NUMBER OF CUTTING EDGES / SCHNEIDENANZAHL / NOMBRE DU COUPANTS

SCELTA VELOCE - QUICK PICK												HT	HW	HC						
												CERMET	NON RIV. CEMENTED CARBIDE GRADES	RIVESTITI COATED GRADES BESCHICHTET RECOUVERTS	RA			RAET		
															l	d	s	d1	H	r
COD.	P	M	K	N	S	H	F	HSC	F	HSC	F	HSC	F	HSC	F	HSC	F	HSC	F	HSC
RA 08.04 .F42	●	●	○	○	●	●														
RA 10.04 .F42	●	●	○	○	●	●														
RA 12.04 .F42	●	●	○	○	●	●														
RA 16.04 .F42	●	●	○	○	●	●														
RA 20.04 .F42	●	●	○	○	●	●														
RA 25.04 .F42	●	●	○	○	●	●														
RA 32.04 .F42	●	●	○	○	●	●														
RAET 080006 .F42	●	●	○	○	●	●														
RAET 080010 .F42	●	●	○	○	●	●														
RAET 100005 .F42	●	●	○	○	●	●														
RAET 100008 .F42	●	●	○	○	●	●														
RAET 100010 .F42	●	●	○	○	●	●														
RAET 120005 .F42	●	●	○	○	●	●														
RAET 120010 .F42	●	●	○	○	●	●														
RAET 120020 .F42	●	●	○	○	●	●														
RAET 160010 .F42	●	●	○	○	●	●														
RAET 160030 .F42	●	●	○	○	●	●														
RAET 200010 .F42	●	●	○	○	●	●														
RAET 200040 .F42	●	●	○	○	●	●														
RAET 250010 .F42	●	●	○	○	●	●														
RAET 250050 .F42	●	●	○	○	●	●														
CON ADDUZIONE LUBROREFRIGERANTE - WITH COOLANT SUPPLY																				
SENZA ADDUZIONE LUBROREFRIGERANTE - WITHOUT COOLANT SUPPLY																				

TOLLERANZE TOLERANCE RANGE	D
RA..	± 0,01
RAET..	± 0,025

MATERIALI - MATERIALS Pag. 1119		VDI 3323 GR.	HB Rm ¹⁾ HRC ²⁾	F7810 Vc (m/min)			
P	ACCIAIO NON LEGATO - NOT ALLOY STEEL	1---5	125-300	200-320			
	ACCIAIO POCO LEGATO - LOW ALLOY STEEL	6-9	180-350	180-290			
	ACCIAIO ALTO LEGATO - ALLOY STEEL	10-11	200-325	160-260			
	INOX MARTENS. - STAINLESS STEEL MART	12-13	200-240	130-200			
M	INOX AUST. DUPLEX - STAINLESS STEEL AUST	14.1-14.2	180-230	150-250			
K	GHISA GRIGIA - GREY CAST IRON	15-16	180-260	250-340			
	GHISA SFEROIDALE - SPHEROIDAL GRAPHITE	17-18	160-250	230-310			
	GHISA MALLEABILE - MALLEABLE CAST IRON	19-20	130-230	270-380			
N	ALLUMINIO E SUE LEGHE - ALUMINIUM	21---25	60-130				
	RAME E SUE LEGHE - COPPER	26-28	90-110				
	NON METALLICI - PLASTICS	29-30	/				
S	LEGHE RESIST. CALORE - HIG. TEMP. ALLOY	31---35	200-320				
	TITANIO E SUE LEGHE - TITANIUM	36-37	400-1050 ¹⁾				
H	ACCIAIO TEMPRATO - HARDENED STEEL	38-41	45-60 ²⁾	50-240			
G	GRAFITE - GRAPHITE	45	/				
R	RESINA PER MODELLI, LEGNO - RESIN, WOOD	43	/				

RA..							
D				D			
fz0 (mm)				ap max (mm)			
8	0,10	0,15	0,20	8	0,10	0,15	0,20
10	0,15	0,20	0,25	10	0,12	0,20	0,24
12	0,15	0,25	0,35	12	0,15	0,30	0,40
16	0,20	0,30	0,35	16	0,20	0,35	0,45
20	0,30	0,40	0,45	20	0,25	0,40	0,50
25	0,30	0,40	0,45	25	0,30	0,45	0,55
32	0,40	0,50	0,55	32	0,35	0,50	0,60

RAET..							
D				D			
fz0 (mm)				ap max (mm)			
8	0,10	0,20	0,30	8	0,10	0,25	★ I ¹⁾
10	0,10	0,20	0,30	10	0,10	0,30	★ I ¹⁾
12	0,10	0,20	0,35	12	0,10	0,30	★ I ¹⁾
16	0,10	0,25	0,40	16	0,15	0,35	★ I ¹⁾
20	0,20	0,27	0,45	20	0,20	0,40	★ I ¹⁾
25	0,20	0,35	0,50	25	0,20	0,45	★ I ¹⁾

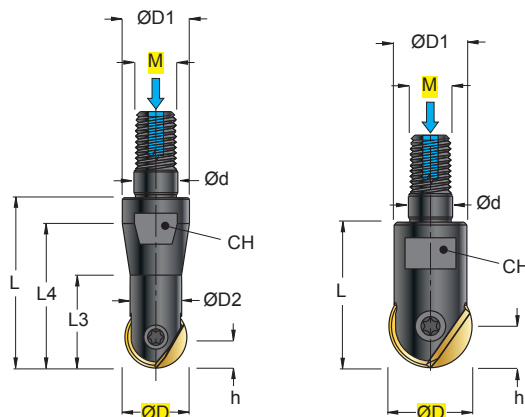
¹⁾ I = vedere tabella dimensioni inserti
see insert size table

S 929W ..

FORM A

FORM B

Ø 10-32



RA..
.F42



RAET..
.F42



INSERTI - INSERTS
PAG. 512

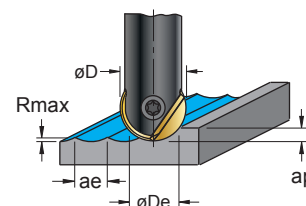
(mm)																	
ART.	FORM	ØD	M	Ød	ØD1	ØD2	h	L	L3	L4	N	Z	CH	kg	Nm		
S 929W 10 33 08	A	10	8	8,5	13	8	5	33	18	28	1	2	10	0,022	1,8÷2,0	10	12RA10 5408
S 929W 12 33 08	A	12	8	8,5	13	10	6	33	18	28	1	2	10	0,026	2,8÷3,0	12	12RA12 5410
S 929W 16 28 08	B	16	8	8,5	14	14	8	28	-	-	1	2	10	0,029	4,5÷5,5	16	12RA16 5415
S 929W 20 28 10	B	20	10	10,5	17	17	10	28	-	-	1	2	15	0,042	5,5÷7,0	20	12RA20 5420
S 929W 25 41 12	B	25	12	12,5	21	21	12,5	41	-	-	1	2	17	0,093	10÷13	25	12RA25 5430
S 929W 32 49 16	B	32	16	17	26	26	16	49	-	-	1	2	24	0,174	24÷30	32	12RA32 5440

$$n = \frac{V_c \cdot 1000}{\phi_{De} \cdot 3,14} = \text{giri/min (min}^{-1}\text{)}$$

$$f_z = f_{z0} \cdot K_m = \text{mm}$$

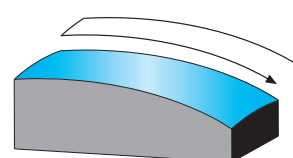
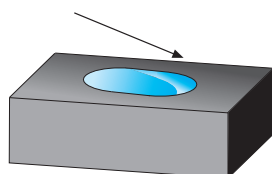
$$V_f = f_{z0} \cdot K_m \cdot z \cdot n = \text{mm/min}$$

- F = FINITURA, LAV. LEGGERA - FINISHING, LIGHT MACHINING
HSC = LAVORAZIONE ALTA VELOCITÀ - HIGH SPEED CUTTING
Vc = m/min VELOCITÀ DI TAGLIO - CUTTING SPEED
n = giri/min (min⁻¹) NUMERO DI GIRI - NUMBER OF REVOLUTIONS
fz = mm AVANZAMENTO AL DENTE - TOOTH FEED
Vf = mm/min VELOCITÀ DI AVANZAMENTO - FEED SPEED
Km = FATTORE DI AVANZAMENTO PER MATERIALE - FEED FACTOR FOR MATERIAL
De = mm DIAMETRO EFFETTIVO - EFFECTIVE DIAMETER
Rmax = mm RUGOSITÀ TEORICA MASSIMA - THEORETICAL MAXIMUM ROUGHNESS



$$\phi_{De} = 2 \cdot \sqrt{D \cdot a_p - a_p^2} = \text{mm}$$

$$R_{max} = 0,5 \cdot (\phi_D - \sqrt{\phi_D^2 - a_e^2}) = \text{mm}$$



N = NUMERO D'INSERTI / INSERT NUMBER / WENDEPLATTENANZAHL / NOMBRE DES PLAQUETTES
Z = NUMERO TAGLIENTI / NUMBER OF CUTTING EDGES / SCHNEIDENANZAHL / NOMBRE DU COUPANTS

SCELTA VELOCE - QUICK PICK												Tenacità + Toughness -				HT	HW	HC																			
												CERMET	NON RIV. CEMENTED CARBIDE GRADES	RIVESTITI COATED GRADES BESCHICHTET RECOUVERTS																							
																		RA			RAET																
COD.												P		M		K		N		S		H		l	d	s	d1	H	r								
												F	HSC	F	HSC	F	HSC	F	HSC	F	HSC	F	HSC														
RA 10.04 .F42												●	●	○	○	●	●																				
RA 12.04 .F42												●	●	○	○	●	●																				
RA 16.04 .F42												●	●	○	○	●	●																				
RA 20.04 .F42												●	●	○	○	●	●																				
RA 25.04 .F42												●	●	○	○	●	●																				
RA 32.04 .F42												●	●	○	○	●	●																				
RAET 100005 .F42												●	●	○	○	●	●																				
RAET 100008 .F42												●	●	○	○	●	●																				
RAET 100010 .F42												●	●	○	○	●	●																				
RAET 120005 .F42												●	●	○	○	●	●																				
RAET 120010 .F42												●	●	○	○	●	●																				
RAET 120020 .F42												●	●	○	○	●	●																				
RAET 160010 .F42												●	●	○	○	●	●																				
RAET 160030 .F42												●	●	○	○	●	●																				
RAET 200010 .F42												●	●	○	○	●	●																				
RAET 200040 .F42												●	●	○	○	●	●																				
RAET 250010 .F42												●	●	○	○	●	●																				
RAET 250050 .F42												●	●	○	○	●	●																				
CON ADDUZIONE LUBROREFRIGERANTE - WITH COOLANT SUPPLY																																					
SENZA ADDUZIONE LUBROREFRIGERANTE - WITHOUT COOLANT SUPPLY																																					

TOLLERANZE TOLERANCE RANGE	D
RA..	± 0,01
RAET..	± 0,025

MATERIALI - MATERIALS Pag. 1119		VDI 3323 GR.	HB Rm ¹⁾ HRC ²⁾	F7810 Vc (m/min)			
P	ACCIAIO NON LEGATO - NOT ALLOY STEEL	1---5	125-300	200-320			
	ACCIAIO POCO LEGATO - LOW ALLOY STEEL	6-9	180-350	180-290			
	ACCIAIO ALTO LEGATO - ALLOY STEEL	10-11	200-325	160-260			
	INOX MARTENS. - STAINLESS STEEL MART	12-13	200-240	130-200			
M	INOX AUST. DUPLEX - STAINLESS STEEL AUST	14.1-14.2	180-230	150-250			
K	GHISA GRIGIA - GREY CAST IRON	15-16	180-260	250-340			
	GHISA SFEROIDALE - SPHEROIDAL GRAPHITE	17-18	160-250	230-310			
	GHISA MALLEABILE - MALLEABLE CAST IRON	19-20	130-230	270-380			
N	ALLUMINIO E SUE LEGHE - ALUMINIUM	21---25	60-130				
	RAME E SUE LEGHE - COPPER	26-28	90-110				
	NON METALLICI - PLASTICS	29-30	/				
S	LEGHE RESIST. CALORE - HIG. TEMP. ALLOY	31---35	200-320				
	TITANIO E SUE LEGHE - TITANIUM	36-37	400-1050 ¹⁾				
H	ACCIAIO TEMPRATO - HARDENED STEEL	38-41	45-60 ²⁾	50-240			
G	GRAFITE - GRAPHITE	45	/				
R	RESINA PER MODELLI, LEGNO - RESIN, WOOD	43	/				

RA..							
D				D			
fz0 (mm)				ap max (mm)			
10	0,15	0,20	0,25	10	0,12	0,20	0,24
12	0,15	0,25	0,35	12	0,15	0,30	0,40
16	0,20	0,30	0,35	16	0,20	0,35	0,45
20	0,30	0,40	0,45	20	0,25	0,40	0,50
25	0,30	0,40	0,45	25	0,30	0,45	0,55
32	0,40	0,50	0,55	32	0,35	0,50	0,60

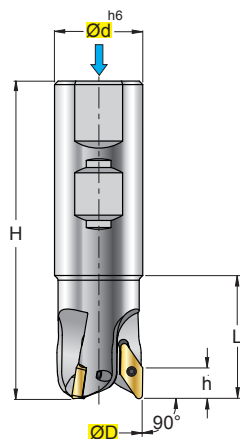
RAET..							
D				D			
fz0 (mm)				ap max (mm)			
10	0,10	0,20	0,30	10	0,10	0,30	* I ¹⁾
12	0,10	0,20	0,35	12	0,10	0,30	* I ¹⁾
16	0,10	0,25	0,40	16	0,15	0,35	* I ¹⁾
20	0,20	0,27	0,45	20	0,20	0,40	* I ¹⁾
25	0,20	0,35	0,50	25	0,20	0,45	* I ¹⁾

¹⁾ I = vedere tabella dimensioni inserti
see insert size table

S 9002-6W...-11

Ø 16-25

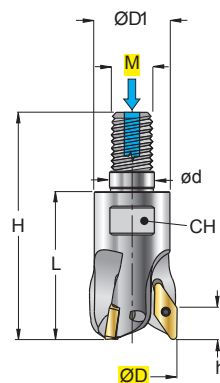
γ_p +10°
 γ_f -8°/-11°
 γ_o -8°/-11°



S 9002-9W...-11

Ø 16-25

γ_p +10°
 γ_f -8°/-11°
 γ_o -8°/-11°

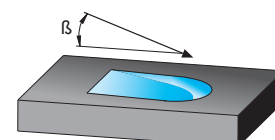
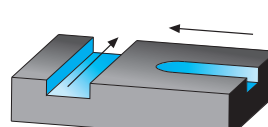
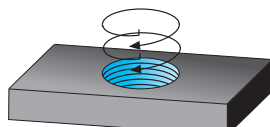
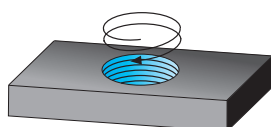


VDKT
11T2..
.K57P



INSERTI - INSERTS
PAG. 519

(mm)															ISO 6462			
ART.	ØD	M	Ød	ØD1	H	h	L	β	Z	 CH	 kg	 Nm						
S9002-6W-016-02-11	16	–	16	–	80	8	30	35°	2	–	–	0,10	1+1,2	–	11T2..	122545	5607	
S9002-6W-020-02-11	20	–	20	–	85	8	35	26°	2	–	–	0,15	1+1,2	–	11T2..	122555PK	5608	
S9002-6W-025-03-11	25	–	25	–	90	8	35	19,5°	3	–	–	0,25	1+1,2	–				
S9002-9W-016-02-11	16	8	8,5	12,7	52	8	35	35°	2	–	10	0,03	1+1,2	–	11T2..	122545	5607	
S9002-9W-020-02-11	20	10	10,5	17,7	54	8	35	26°	2	–	15	0,05	1+1,2	–	11T2..	122555PK	5608	
S9002-9W-025-03-11	25	12	12,5	20,7	57	8	35	19,5°	3	–	17	0,07	1+1,2	–				

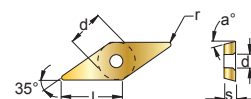


W = FORO PER LIQUIDO REFRIGERANTE - COOLANT BORE - KÜHLMITTELBOHRUNG - TROU DU LIQUIDE D'ARROSAGE

Tenacità +
Toughness -

Pag. 486

Pag. 486

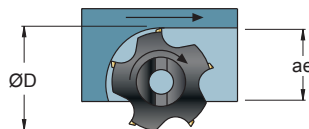
[illegible]

$$n = \frac{V_c \cdot 1000}{\varnothing D \cdot 3,14} = \text{giri/min (min}^{-1}\text{)}$$

$$f_z = f_{z0} \cdot K_{ae} = \text{mm}$$

$$f_n = f_z \cdot z = \text{mm}$$

$$V_f = f_z \cdot z \cdot n = \text{mm/min}$$



ae/D	0,5-1 50-100%	0,2 20%	0,1 10%	0,05 5%	0,02 2%
Kae	1	1,1	1,2	1,3	1,5

ae/D	0,5-1 50-100%	0,2 20%	0,1 10%	0,05 5%
------	------------------	------------	------------	------------

V_c
Pag. 500

V_c (min)-----V_c(max)

F = FINITURA , LAV. LEGGERA - FINISHING , LIGHT MACHINING
M = LAV. MEDIA , GENERICA - MEDIUM MACHINING , GENERIC
R = SGROSSATURA , LAV. PESANTE - ROUGHING , HEAVY MACHINING

Vc = m/min VELOCITÀ DI TAGLIO - CUTTING SPEED
n = giri/min (min^{-1}) NUMERO DI GIRI - NUMBER OF REVOLUTIONS
fz = mm AVANZAMENTO AL DENTE - TOOTH FEED
fn = mm AVANZAMENTO AL GIRO - FEED / REVOLUTION
Vf = mm/min VELOCITÀ DI AVANZAMENTO - FEED SPEED
Kae = FATTORE DI CORREZIONE - CORRECTION FACTOR

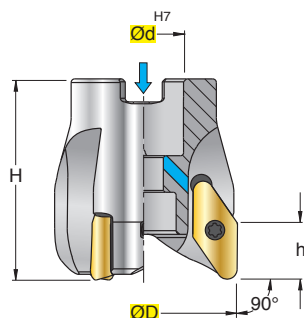
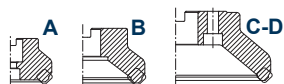
☐ A RICHIESTA - ON REQUEST - AUF ANFRAGE - SUR DEMANDE / ☐ NEW
☐ APPLICAZIONE POSSIBILE - POSSIBLE APPLICATION
 MÖGLICHE ANWENDUNG - APPLICATION POSSIBLE

S 9002-8W...-22

Ø 42-80

γ_p 0°
 γ_f -2,5°/-6°
 γ_o -2,5°/-6°

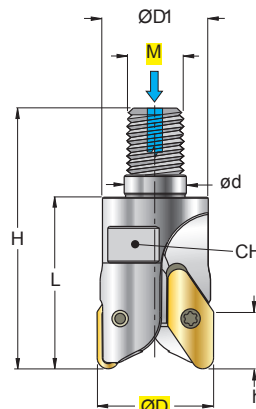
ISO 6462 ...



S 9002-9W...-22

Ø 32-42

γ_p 0°
 γ_f -5°/-6°
 γ_o -5°/-6°

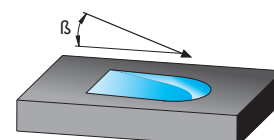
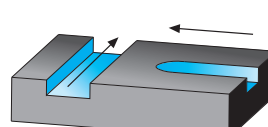
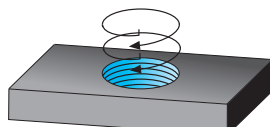
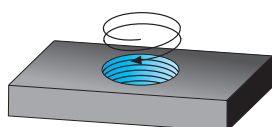


VCKT
2205..
.K57P

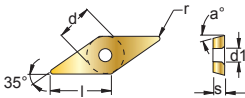


INSERTI - INSERTS
PAG. 519

(mm)														ISO 6462	2205..	124511P	5620P	VBSF08L
ART.	ØD	M	Ød	ØD1	H	h	L	β	Z	CH	kg	Nm						
S9002-8W-042-03-22	42	-	16	-	55	15	-	23°	3	-	0,20	4+5	A	2205..		124511P	5620P	VBSF08L
S9002-8W-052-03-22	52	-	22	-	55	15	-	17°	3	-	0,35	4+5	A	2205..		124511P	5620P	VBSF10
S9002-8W-066-04-22	66	-	27	-	56	15	-	12,5°	4	-	0,55	4+5	A	2205..		124511P	5620P	VBSF12
S9002-8W-080-04-22	80	-	27	-	56	15	-	10°	4	-	0,95	4+5	A					
S9002-9W-032-02-22	32	16	17	29	71	15	47	35°	2	-	0,15	4+5	-	2205..		124511P	5620P	-
S9002-9W-042-03-22	42	16	17	29	71	15	47	23°	3	-	0,20	4+5	-					



W = FORO PER LIQUIDO REFRIGERANTE - COOLANT BORE - KÜHLMITTELBOHRUNG - TROU DU LIQUIDE D'ARROSAGE

SCELTA VELOCE - QUICK PICK																		Tenacità + Toughness -						Pag. 486		HT	HW	HC																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
COD.																		P			M			K			N			S			H			T110																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								

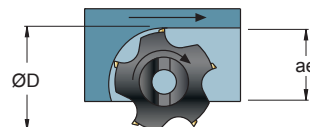
MATERIALI - MATERIALS		VDI 3323 GR.	HB Rm 1) HRC2)	fz0 mm			Vc m/min Pag. 500									
Pag. 1119				F	M	R	T110									
P	ACCIAIO NON LEGATO - NOT ALLOY STEEL	1-5	125-300													
	ACCIAIO POCO LEGATO - LOW ALLOY STEEL	6-9	180-350													
	ACCIAIO ALTO LEGATO - ALLOY STEEL	10-11	200-325													
	INOX MARTENS. - STAINLESS STEEL MART	12-13	200-240													
M	INOX AUST. DUPLEX - STAINLESS STEEL AUST	14.1-14.2	180-230													
K	GHISA GRIGIA - GREY CAST IRON	15-16	180-260													
	GHISA SFEROIDALE - SPHEROIDAL GRAPHITE	17-18	160-250													
	GHISA MALLEABILE - MALLEABLE CAST IRON	19-20	130-230													
N	ALLUMINIO E SUE LEGHE - ALUMINIUM	21-25	60-130	0,08	0,2	0,35	950									
	RAME E SUE LEGHE - COPPER	26-28	90-110	0,06	0,18	0,3	400									
	NON METALLICI - PLASTICS	29-30	/	0,06	0,18	0,3	300									
S	LEGHE RESIST. CALORE - HIG. TEMP. ALLOY	31-35	200-320													
	TITANIO E SUE LEGHE - TITANIUM	36-37	400-1050 ¹⁾													
H	ACCIAIO TEMPRATO - HARDENED STEEL	38-41	45-60 ²⁾													

$$n = \frac{Vc \cdot 1000}{\varnothing D \cdot 3,14} = \text{giri/min (min}^{-1}\text{)}$$

$$fz = fz0 \cdot Kae = \text{mm}$$

$$fn = fz \cdot z = \text{mm}$$

$$Vf = fz \cdot z \cdot n = \text{mm/min}$$



ae/D	0,5-1 50-100%	0,2 20%	0,1 10%	0,05 5%	0,02 2%
Kae	1	1,1	1,2	1,3	1,5

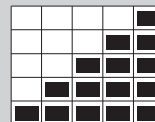
ae/D	0,5-1 50-100%	0,2 20%	0,1 10%	0,05 5%
Vc Pag. 500	Vc (min)-----Vc(max)			

F = FINITURA, LAV. LEGGERA - FINISHING, LIGHT MACHINING
M = LAV. MEDIA, GENERICA - MEDIUM MACHINING, GENERIC
R = SGROSSATURA, LAV. PESANTE - ROUGHING, HEAVY MACHINING

Vc = m/min VELOCITÀ DI TAGLIO - CUTTING SPEED
n = giri/min (min⁻¹) NUMERO DI GIRI - NUMBER OF REVOLUTIONS
fz = mm AVANZAMENTO AL DENTE - TOOTH FEED
fn = mm AVANZAMENTO AL GIRO - FEED / REVOLUTION
Vf = mm/min VELOCITÀ DI AVANZAMENTO - FEED SPEED
Kae = FATTORE DI CORREZIONE - CORRECTION FACTOR

SCELTA VELOCE QUICK PICK

Tenacità +
Toughness -



- METODO PER LA SCELTA VELOCE DEL GRADO DI METALLO DURO PIÙ IDONEO. CONTARE IL NUMERO DI RETTANGOLI COLORATI
- METHOD FOR A QUICK CHOICE OF THE MOST SUITABLE SOLID CARBIDE GRADE. COUNT THE NUMBER OF COLORED RECTANGLES
- METHODE ZUR RASCHEN AUSWAHL DER GEEIGNETSTEN HARTMETALLSORTE. DIE ANZAHL DER BUNTEN RECHTECKE ZÄHLEN
- METHODE POUR CHOISIR RAPIDEMENT LE DEGRÉ LE PLUS APPROPRIÉ DU METAL DUR. COMPTER LES RECTANGLES EN COULEURS
- METODO PARA LA ELECCION RAPIDA DE EL GRADO MAS ADECUADO DE METAL DURO. CONTAR LOS NUMEROS DE RECTANGULOS COLORADOS



- GRADO MOLTO RESISTENTE ALL'USURA, SOLO PER FINITURA, LAVORAZIONI AD ALTE VELOCITÀ DI TAGLIO E CONDIZIONI MOLTO RIGIDE E STABILI
- GRADE WITH HIGH RESISTANCE TO WEAR; ONLY FOR FINISHING, MACHINING AT HIGH CUTTING SPEEDS, AND VERY RIGID AND STABLE CONDITIONS



- GRADO CON ALTA RESISTENZA ALL'USURA, DISCRETA TENACITÀ PER LAVORAZIONI A VELOCITÀ MEDIO ALTE ED AVANZAMENTI MEDI, IN CONDIZIONI NORMALI
- GRADE WITH HIGH RESISTANCE TO WEAR, GOOD TOUGHNESS, FOR MEDIUM-HIGH MACHINING AND MEDIUM FEED UNDER NORMAL CONDITIONS



- GRADO CON BUONA RESISTENZA ALL'USURA UNITA A BUONA TENACITÀ, PER LAVORAZIONI GENERICHE IN CONDIZIONI NORMALI
- GRADE WITH GOOD RESISTANCE TO WEAR; COMBINED WITH A GOOD DEGREE OF TOUGHNESS, FOR GENERAL MACHINING UNDER NORMAL CONDITIONS



- GRADO CON OTTIMA TENACITÀ PER LAVORAZIONI MEDIO PESANTI O IN CONDIZIONI POCO STABILI
- GRADE WITH EXCELLENTE TOUGHNESS, FOR MEDIUM HEAVY MACHINING OR MACHINING UNDER CONDITIONS OF LOW STABILITY



- GRADO CON ECCEZIONALE TENACITÀ PER LAVORAZIONI PESANTI CON BASSE VELOCITÀ DI TAGLIO, ALTI AVANZAMENTI O IN CONDIZIONI SFAVOREVOLI
- GRADE WITH EXCELLENTE TOUGHNESS, FOR HEAVY MACHINING WITH LOW CUTTING SPEEDS, HIGH FEED, OR UNDER UNFAVORABLE CONDITIONS

GUIDA FACILE EASY GUIDE

APKT 1604 PDTR .S54 T525

F	M	R	fz = 0,1-0,3 mm
●	●	●	P Vc = 100-200 m/min
○	○	○	M Vc = 90-160 m/min
○	○	○	K Vc = 120-250 m/min
			N
			S
			H

SAU QUALITY TOOLS ENGINEERING

APKT 1604 PDTR .S54 - T525

P15-35 / M20-35/ K30-40

T525

- GUIDA ALL'USO DELL'INSERTO. PRESENTE ANCHE SU OGNI ETICHETTA
- GUIDE FOR THE USE OF THE INSERT. ALSO LISTED ON EACH LABEL
- LEITFADEN ZUR VERWENDUNG DER WENDEPLATTE, AUCH AUF JEDEM AUFKLEBER VORHANDEN
- INSTRUCTIONS POUR L'UTILISATION DE LA PLAQUETTE. SE TROUVANT EGALEMENT SUR CHAQUE ETIQUETTE
- GUIA POR EL UTILIZO DE LA PLAQUITA, PRESENTE TAMBIEN EN CADA ETIQUETA

GR. VDI 3323	6	P	= ACCIAIO BASSO LEGATO HB 180	- LOW STEEL ALLOY
	14.1	M	= ACCIAIO INOSSIDABILE AUSTENITICO HB 180	- AUSTENITIC STAINLESS STEEL HB 180
	16	K	= GHISA GRIGIA HB 260	- GRAY CAST IRON HB 260
	21	N	= LEGHE DI ALLUMINIO HB 60	- ALUMINUM ALLOYS HB 60
	33	S	= LEGHE RESISTENTI AL CALORE (INCONEL) HB 250	- HEAT RESISTANT ALLOYS (INCONEL) HB 250
	38	H	= ACCIAIO TEMPRATO HRC 55	- TEMPERED STEEL HRC 55

F	= FINITURA, LAVORAZIONI LEGGERE	- FINISHING, LIGHT MACHINING
M	= LAVORAZIONI MEDIE, IMPIEGO GENERICO	- MEDIUM MACHINING, GENERAL USE
R	= SGROSSATURA, LAVORAZIONI PESANTI	- ROUGHING, HEAVY MACHINING

fn (mm)	= AVANZAMENTO PER TORNITURA	- FEED FOR TURNING
fz (mm/z)	= AVANZAMENTO PER FRESATURA	- FEED FOR MILLING
Vc (m/min)	= VELOCITÀ DI TAGLIO	- CUTTING SPEED
●	= APPLICAZIONE CONSIGLIATA	- RECOMMENDED APPLICATION
○	= APPLICAZIONE POSSIBILE	- POSSIBLE APPLICATION



INSERTI PER FRESATURA

MILLING INSERTS / WENDEPLATTEN ZUM FRÄSEN
PLAQUÉTTES DE FRAISAGE / PLAQUITAS DE FRESADO



	COME SCEGLIERE I PARAMETRI DI LAVORO	Pag. 489
	PANORAMICA QUALITÀ DI FRESATURA	Pag. 491
	IMPIEGO DELLE QUALITÀ DI FRESATURA	Pag. 492
	VELOCITÀ DI TAGLIO DELLE QUALITÀ DI FRESATURA	Pag. 500
	DENOMINAZIONI DEGLI INSERTI PER FRESATURA	Pag. 506
	CATALOGO DISPONIBILITÀ INSERTI	Pag. 507

	HOW TO CHOOSE CUTTING DATA	Pag. 489
	GENERAL VIEW OF THE MILLING GRADE	Pag. 491
	APPLICATION OF THE MILLING GRADE	Pag. 492
	CUTTING SPEED OF MILLING GRADES	Pag. 500
	INSERTS DESIGNATION FOR MILLING	Pag. 506
	INSERTS STOCK CATALOGUE	Pag. 507

	EINSTELLUNG DER SCHNITTDATEN	Pag. 489
	FRÄSORTEN-ÜBERSICHT	Pag. 491
	EINSATZ DER FRÄSORTEN	Pag. 492
	SCHNITTGESCHWINDIGKEIT DER FRÄSORTEN (VC)	Pag. 500
	BEZEICHNUNG DER FRÄSWENDEPLATTEN	Pag. 506
	WENDEPLATTEN-KATALOG	Pag. 507

	COMMENT CHOISIR LES PARAMETRES DE SERVICE	Pag. 489
	VUE D'ENSEMBLE QUALITÉ DE FRAISAGE	Pag. 491
	UTILISATION DE LES QUALITÉS DE FRAISAGE	Pag. 492
	VITESSE DECOUPE DE LA QUALITÉ DE PLAQUETTES DE FRAISAGE	Pag. 500
	DÉNOMINATION DE LES PLAQUETTES POUR LE FRAISAGE	Pag. 506
	CATALOGUE DE DISPONIBILITÉ PLAQUETTES	Pag. 507

COME SCEGLIERE I PARAMETRI DI LAVORO
HOW TO CHOOSE CUTTING DATA
EINSTELLUNG DER SCHNITTDATEN
COMMENT CHOISIR LES PARAMETRES DE SERVICE

FASE 1 - PHASE 1

SCELTA GR. VDI IN FUNZIONE DEL MATERIALE
 CHOICE OF VDI GR. DEPENDING ON MATERIAL
 WAHL VDI-SORTE JE NACH WERKSTOFF
 CHOIX GR. VDI EN FONCTION DU MATERIEL

Tabella comparativa dei materiali - Materials comparison table
Materialvergleichstabelle - Tableau comparatif des matériaux

SAU
QUALITY TOOLS ENGINEERING

UNI	WISTOFF	DIN	SAE	BS	AFNOR	JIS	ktf.1	mc	VDI 3323 GR.
ACCIAIO NON LEGATO RICOTTO ANNEALED NOT-ALLOY STEEL									
C < 0,15% 125 HB									
CF 10 SPb 20	1.0722	10 SPb 20	11 L 08	-	10 PUF 2	-	SUM22	135	0,22
CF 9 SMO 28	1.0715	9 SMO 28	12 L 13	230 M 07	S 250	-	SUM22	140	0,22
CF 9 SMO 36	1.0736	9 SMO 36	12 L 14	240 M 07	S 300	-	SUM22	145	0,22
CF 9 SMO 28	1.0718	9 SMO 28	12 L 13	-	S 350 Pb	-	SUM22	145	0,22
CF 9 SMO 36	1.0737	9 SMO 36	12 L 14	-	S 350 Pb	-	SUM22	145	0,22
C15 C16	1.0401	C 15	1015	080 M 15	AF 37 C 12, XC 18	-	AF 37 C 12, XC 18	145	0,22
C20 C21	1.0402	C 20	1020	080 A 20	AF 42 C 20	-	AF 42 C 20	150	0,22
C45	1.1141	Ck 45	1015	080 M 15	XC 15, XC 18	-	XC 15, XC 18	150	0,22
ACCIAIO NON LEGATO RICOTTO ANNEALED NOT-ALLOY STEEL									
C 0,15-0,55% 180 HB									
-	-	28 Mn 6	1330	150 M 28	20 M 5	-	-	160	0,22
-	-	35 S 20	1140	212 M 36	35 MF 4	-	-	160	0,22
-	-	38 Mn S	1039	150 M 36	35 M 5	-	-	160	0,22
-	-	40 Mn 4	1035	080 A 35	AF 35 C 35	-	-	160	0,22
-	-	45 Ck 45	1045	080 M 45	AF 45 C 45	-	-	160	0,22
-	-	50 Ck 50	1045	080 M 45	XC 42	-	-	160	0,22
-	-	55 Ck 55	1045	080 M 45	XC 42	-	-	160	0,22
-	-	60 Ck 60	1045	080 M 45	XC 42	-	-	160	0,22
-	-	65 Ck 65	1045	080 M 45	XC 42	-	-	160	0,22
-	-	70 Ck 70	1045	080 M 45	XC 42	-	-	160	0,22
-	-	75 Ck 75	1045	080 M 45	XC 42	-	-	160	0,22
-	-	80 Ck 80	1045	080 M 45	XC 42	-	-	160	0,22
-	-	85 Ck 85	1045	080 M 45	XC 42	-	-	160	0,22
-	-	90 Ck 90	1045	080 M 45	XC 42	-	-	160	0,22
-	-	95 Ck 95	1045	080 M 45	XC 42	-	-	160	0,22
-	-	100 Ck 100	1045	080 M 45	XC 42	-	-	160	0,22
-	-	105 Ck 105	1045	080 M 45	XC 42	-	-	160	0,22
-	-	110 Ck 110	1045	080 M 45	XC 42	-	-	160	0,22
-	-	115 Ck 115	1045	080 M 45	XC 42	-	-	160	0,22
-	-	120 Ck 120	1045	080 M 45	XC 42	-	-	160	0,22
-	-	125 Ck 125	1045	080 M 45	XC 42	-	-	160	0,22
-	-	130 Ck 130	1045	080 M 45	XC 42	-	-	160	0,22
-	-	135 Ck 135	1045	080 M 45	XC 42	-	-	160	0,22
-	-	140 Ck 140	1045	080 M 45	XC 42	-	-	160	0,22
-	-	145 Ck 145	1045	080 M 45	XC 42	-	-	160	0,22
-	-	150 Ck 150	1045	080 M 45	XC 42	-	-	160	0,22
-	-	155 Ck 155	1045	080 M 45	XC 42	-	-	160	0,22
-	-	160 Ck 160	1045	080 M 45	XC 42	-	-	160	0,22
-	-	165 Ck 165	1045	080 M 45	XC 42	-	-	160	0,22
-	-	170 Ck 170	1045	080 M 45	XC 42	-	-	160	0,22
-	-	175 Ck 175	1045	080 M 45	XC 42	-	-	160	0,22
-	-	180 Ck 180	1045	080 M 45	XC 42	-	-	160	0,22
-	-	185 Ck 185	1045	080 M 45	XC 42	-	-	160	0,22
-	-	190 Ck 190	1045	080 M 45	XC 42	-	-	160	0,22
-	-	195 Ck 195	1045	080 M 45	XC 42	-	-	160	0,22
-	-	200 Ck 200	1045	080 M 45	XC 42	-	-	160	0,22
-	-	205 Ck 205	1045	080 M 45	XC 42	-	-	160	0,22
-	-	210 Ck 210	1045	080 M 45	XC 42	-	-	160	0,22
-	-	215 Ck 215	1045	080 M 45	XC 42	-	-	160	0,22
-	-	220 Ck 220	1045	080 M 45	XC 42	-	-	160	0,22
-	-	225 Ck 225	1045	080 M 45	XC 42	-	-	160	0,22
-	-	230 Ck 230	1045	080 M 45	XC 42	-	-	160	0,22
-	-	235 Ck 235	1045	080 M 45	XC 42	-	-	160	0,22
-	-	240 Ck 240	1045	080 M 45	XC 42	-	-	160	0,22
-	-	245 Ck 245	1045	080 M 45	XC 42	-	-	160	0,22
-	-	250 Ck 250	1045	080 M 45	XC 42	-	-	160	0,22
-	-	255 Ck 255	1045	080 M 45	XC 42	-	-	160	0,22
-	-	260 Ck 260	1045	080 M 45	XC 42	-	-	160	0,22
-	-	265 Ck 265	1045	080 M 45	XC 42	-	-	160	0,22
-	-	270 Ck 270	1045	080 M 45	XC 42	-	-	160	0,22
-	-	275 Ck 275	1045	080 M 45	XC 42	-	-	160	0,22
-	-	280 Ck 280	1045	080 M 45	XC 42	-	-	160	0,22
-	-	285 Ck 285	1045	080 M 45	XC 42	-	-	160	0,22
-	-	290 Ck 290	1045	080 M 45	XC 42	-	-	160	0,22
-	-	295 Ck 295	1045	080 M 45	XC 42	-	-	160	0,22
-	-	300 Ck 300	1045	080 M 45	XC 42	-	-	160	0,22
-	-	305 Ck 305	1045	080 M 45	XC 42	-	-	160	0,22
-	-	310 Ck 310	1045	080 M 45	XC 42	-	-	160	0,22
-	-	315 Ck 315	1045	080 M 45	XC 42	-	-	160	0,22
-	-	320 Ck 320	1045	080 M 45	XC 42	-	-	160	0,22
-	-	325 Ck 325	1045	080 M 45	XC 42	-	-	160	0,22
-	-	330 Ck 330	1045	080 M 45	XC 42	-	-	160	0,22
-	-	335 Ck 335	1045	080 M 45	XC 42	-	-	160	0,22
-	-	340 Ck 340	1045	080 M 45	XC 42	-	-	160	0,22
-	-	345 Ck 345	1045	080 M 45	XC 42	-	-	160	0,22
-	-	350 Ck 350	1045	080 M 45	XC 42	-	-	160	0,22
-	-	355 Ck 355	1045	080 M 45	XC 42	-	-	160	0,22
-	-	360 Ck 360	1045	080 M 45	XC 42	-	-	160	0,22
-	-	365 Ck 365	1045	080 M 45	XC 42	-	-	160	0,22
-	-	370 Ck 370	1045	080 M 45	XC 42	-	-	160	0,22
-	-	375 Ck 375	1045	080 M 45	XC 42	-	-	160	0,22
-	-	380 Ck 380	1045	080 M 45	XC 42	-	-	160	0,22
-	-	385 Ck 385	1045	080 M 45	XC 42	-	-	160	0,22
-	-	390 Ck 390	1045	080 M 45	XC 42	-	-	160	0,22
-	-	395 Ck 395	1045	080 M 45	XC 42	-	-	160	0,22
-	-	400 Ck 400	1045	080 M 45	XC 42	-	-	160	0,22
-	-	405 Ck 405	1045	080 M 45	XC 42	-	-	160	0,22
-	-	410 Ck 410	1045	080 M 45	XC 42	-	-	160	0,22
-	-	415 Ck 415	1045	080 M 45	XC 42	-	-	160	0,22
-	-	420 Ck 420	1045	080 M 45	XC 42	-	-	160	0,22
-	-	425 Ck 425	1045	080 M 45	XC 42	-	-	160	0,22
-	-	430 Ck 430	1045	080 M 45	XC 42	-	-	160	0,22
-	-	435 Ck 435	1045	080 M 45	XC 42	-	-	160	0,22
-	-	440 Ck 440	1045	080 M 45	XC 42	-	-	160	0,22
-	-	445 Ck 445	1045	080 M 45	XC 42	-	-	160	0,22
-	-	450 Ck 450	1045	080 M 45	XC 42	-	-	160	0,22
-	-	455 Ck 455	1045	080 M 45	XC 42	-	-	160	0,22
-	-	460 Ck 460	1045	080 M 45	XC 42	-	-	160	0,22
-	-	465 Ck 465	1045	080 M 45	XC 42	-	-	160	0,22
-	-	470 Ck 470	1045	080 M 45	XC 42	-	-	160	0,22
-	-	475 Ck 475	1045	080 M 45	XC 42	-	-	160	0,22
-	-	480 Ck 480	1045	080 M 45	XC 42	-	-	160	0,22
-	-	485 Ck 485	1045	080 M 45	XC 42	-	-	160	0,22
-	-	490 Ck 490	1045	080 M 45	XC 42	-	-	160	0,22
-	-	495 Ck 495	1045	080 M 45	XC 42	-	-	160	0,22
-	-	500 Ck 500	1045	080 M 45	XC 42	-	-	160	0,22
-	-	505 Ck 505	1045	080 M 45	XC 42	-	-	160	0,22
-	-	510 Ck 510	1045	080 M 45	XC 42	-	-	160	0,22
-	-	515 Ck 515	1045	080 M 45	XC 42	-	-	160	0,22
-	-	520 Ck 520	1045	080 M 45	XC 42	-	-	160	0,22
-	-	525 Ck 525	1045	080 M 45	XC 42	-	-	160	0,22
-	-	530 Ck 530	1045	080 M 45	XC 42	-	-	160	0,22
-	-	535 Ck 535	1045	080 M 45	XC 42	-	-	160	0,22
-	-	540 Ck 540	1045	080 M 45	XC 42	-	-	160	0,22
-	-	545 Ck 545	1045	080 M 45	XC 42	-	-	160	0,22
-	-	550 Ck 550	1045	080 M 45	XC 42	-	-	160	0,22
-	-	555 Ck 555	1045	080 M 45	XC 42	-	-	160	0,22
-	-	560 Ck 560	1045	080 M 45	XC 42	-	-	160	0,22
-	-	565 Ck 565	1045	080 M 45	XC 42	-	-	160	0,22
-	-	570 Ck 570	1045	080 M 45	XC 42	-	-	160	0,22
-	-	575 Ck 575	1045	080 M 45	XC 42	-	-	160	0,22
-	-	580 Ck 580	1045	080 M 45	XC 42	-	-	160	0,22
-	-	585 Ck 585	1045	080 M 45	XC 42	-	-	160	0,22
-	-	590 Ck 590	1045	080 M 45	XC 42	-	-	160	0,22
-	-	595 Ck 595	1045	080 M 45	XC 42	-	-	160	0,22
-	-	600 Ck 600	1045	080 M 45	XC 42	-	-	160	0,22
-	-	605 Ck 605	1045	080 M 45	XC 42	-	-	160	0,22
-	-	610 Ck 610	1045	080 M 45	XC 42	-	-	160	0,22
-	-	615 Ck 615	1045	080 M 45	XC 42	-	-	160	0,22
-	-	620 Ck 620	1045</						

FASE 3 - PHASE 3

SCELTA VELOCE DEI PARAMETRI
QUICK CHOICE OF PARAMETERS
SCHNELLWAHL DER PARAMETER
TRIAGE RAPIDE DES PARAMÈTRES

Scelta dell'inserto e parametri di lavoro - Choice of the insert and machining parameters
Auswahl der Platte und Schnittdaten - Choix de la plaquette et paramètres de travail

SCELTA VELOCE - QUICK PICK

HT HW HC

SEKX 1305 252

PROFONDITÀ MASSIMA DI LAVORO = 2 (mm) PER ALTI AVANZAMENTI
PROFONDITÀ MASSIMA DI LAVORO = 6 (mm) PER AVANZAMENTI STANDARD
MAXIMUM MACHINING DEPTH = 2 (mm) FOR HIGH FEED
MAXIMUM MACHINING DEPTH = 6 (mm) FOR STANDARD FEED

Vc m/min

fz mm

ae/D

Vc (min) - Vc (max)

401

FASE 4 - PHASE 4

SCELTA DI VC IN FUNZIONE DEL GR. VDI
CHOICE OF VC DEPENDING ON VDI GR.
WAHL VC JE NACH WERKSTOFF
CHOIX DE VC EN FONCTION DU GR. VDI

Vc(m/min)

SAU

VDI 3323

HB HRC

T1120

T3220 F3420 T5020 T1025 T1425 F4725 T526 T528N

1 125 190-250 200-340 150-250 120-240 170-240 120-250 130-300 160-260

2 180 190-250 200-340 150-250 120-240 170-240 120-250 110-320 130-220

3 250 190-250 200-340 150-250 110-190 170-240 120-250 100-280 90-160

4 220 190-250 200-340 150-250 110-190 170-240 120-250 90-280 80-160

5 300 190-250 200-340 150-250 110-190 170-240 120-250 80-280 70-160

10 200 140-210 150-250 100-190 120-210 100-220 60-210 110-190

11 350 140-210 150-250 100-190 120-210 100-220 60-210 110-190

12 200 110-170 150-250 100-190 120-210 100-220 60-210 110-190

13 330 110-170 150-250 100-190 120-210 100-220 60-210 110-190

14.1 180 150-250 100-190 120-210 100-220 60-210 110-190

14.2 230-280 150-250 100-190 120-210 100-220 60-210 110-190

15 180 180-300 180-300 150-400 130-210 120-220 160-220

16 280 140-280 180-300 150-400 130-210 120-220 160-220

17 160 130-250 140-230 200-450 100-250 120-240 80-200 110-210

18 250 100-200 140-250 200-450 180-340 120-240 70-180 90-180

19 130 110-320 110-220 200-550 180-340 120-250 70-180 90-180

20 230 120-250 110-220 200-550 150-300 120-250 70-180 80-160

21 60 150-250 100-190 120-210 100-220 60-210 110-190

22 100 150-250 100-190 120-210 100-220 60-210 110-190

23 75 150-250 100-190 120-210 100-220 60-210 110-190

24 90 150-250 100-190 120-210 100-220 60-210 110-190

25 130 150-250 100-190 120-210 100-220 60-210 110-190

26 110 150-250 100-190 120-210 100-220 60-210 110-190

27 90 150-250 100-190 120-210 100-220 60-210 110-190

28 100 150-250 100-190 120-210 100-220 60-210 110-190

29 100 150-250 100-190 120-210 100-220 60-210 110-190

30 100 150-250 100-190 120-210 100-220 60-210 110-190

31 200 150-250 100-190 120-210 100-220 60-210 110-190

32 280 150-250 100-190 120-210 100-220 60-210 110-190

33 250 150-250 100-190 120-210 100-220 60-210 110-190

34 350 150-250 100-190 120-210 100-220 60-210 110-190

35 320 150-250 100-190 120-210 100-220 60-210 110-190

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37 1000 150-250 100-190 120-210 100-220 60-210 110-190

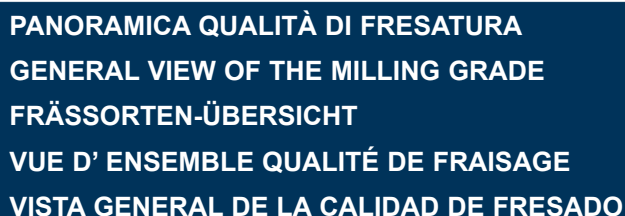
38 55mnc 150-250 100-190 120-210 100-220 60-210 110-190

39 60mnc 150-250 100-190 120-210 100-220 60-210 110-190

40 400 150-250 100-190 120-210 100-220 60-210 110-190

41 55mnc 150-250 100-190 120-210 100-220 60-210 110-190

502

491

SAU	DIN ISO 513		MATERIALE - MATERIAL MATERIALIEN - MATÉRIAUX PAG. 1119						QUICK PICK PAG. 486	Tecnità Toughness	INDICAZIONI - USO
			P	M	K	N	S	H			
			ACCIAI STEELS STAHL ACIER	ACCIAI INOX STAINLESS STEELS ROSTFREIER STAHL ACIER INOXYDABLE	GHISA CAST IRON GRAUGUSS FONTE GRISE	MATERIALI NON FERROSI NON FERROUS MAT. NICHT-EISENMATERIALIEN MAT. FERREUX	MATERIALI DIFFICILI DIFFICULT MATERIAL SCHWERGE MATERIALIEN MAT. DIFCILES	MATERIALI DURI HARD MATERIALS HARTE MATERIALIEN MATÉRIAUX DURS			
C4010	HT	P10-20 M05-15 K05-15	○	●	○						- QUALITÀ UNIVERSALE - ALTA RESISTENZA AL CALORE E ALL'USURA, BUONA TENACITÀ - INDICATO PER LE ALTE VELOCITÀ DI TAGLIO
DT63	HT	P05-20 M05-20 K05-20	●	●	●						- QUALITÀ MICROGRANO MOLTO RESISTENTE ALLA ROTTURA ED ALL'USURA - INDICATO PER MEDIO-ALTE VELOCITÀ DI TAGLIO IN FINITURA.
N3005	HW	K01-10			●						- QUALITÀ ADATTA ALLA LAVORAZIONE DELLE GHISE IN GENERE - INDICATO PER LAVORAZIONI DI FINITURA A TAGLIO CONTINUO
N3015	HW	N01-20 S05-25				●	○				- QUALITÀ ADATTA ALLA LAVORAZIONE DI LEGHE IN ALLUMINIO
N3815 NEW	HW	N10-20				●					- GRADO LUCIDATO NON RIVESTITO SPECIFICO PER LA LAVORAZIONE DELL' ALLUMINIO E DEI MATERIALI NON FERROSI
N6315	HW	N05-25				●					- QUALITÀ PER LA LAVORAZIONE DI MATERIALI NON FERROSI
N3620	HW	N10-30				●					- SUBSTRATO IN NANOSTRUTTURA NON RIVESTITO. - INDICATO PER LAVORAZIONI CON SEZIONE DEL TRUCIOLO MEDIO, CON CONDIZIONI DI TAGLIO STABILE.
N3440	HW	K20-40 N20-30			●	●					- QUALITÀ UNIVERSALE PER GHISA E MATERIALI NON FERROSI - OTTIME PRESTAZIONI A UMIDO
T110	HW	K05-15			○	●					- QUALITÀ MICROGRANO CON ALTA RESISTENZA ALL' USURA E OTTIMA STABILITÀ DEI TAGLIENTI - INDICATO PER MEDIE VELOCITÀ DI TAGLIO SU GHISA GRIGIA E ALTE PER MATERIALI NON FERROSI. PER ASPORTAZIONI MEDIE IN SGROSSATURA
T115	HW	K10-25			●	●					- QUALITÀ MICROGRANO CON ALTA RESISTENZA ALL' USURA E BUONA TENACITÀ - INDICATO PER MEDIO-BASSE VELOCITÀ DI TAGLIO SU GHISA GRIGIA E MEDIO-ALTE PER MATERIALI NON FERROSI. PER ASPOR-TAZIONI MEDIE IN SGROSSATURA
T120	HW	M10-20 K10-25		○	●	●	○				- QUALITÀ MICROGRANO CON ELEVATA RESISTENZA ALL' USURA E BUONA TENACITÀ - INDICATO PER MEDIO-BASSE VELOCITÀ DI TAGLIO SU ACCIAI INOSSIDABILI AUSTENITICI E MEDIE PER GHISE GRIGIE E MATERIALI NON FERROSI. PER ASPORTAZIONI MEDIE IN SGROSSATURA
F7810 NEW	HC PVD	P05-20 M05-20 K05-20 H05-20	●	○	●			●			- RIVESTIMENTO IN PVD PER LA LAVORAZIONE DI ACCIAI CON GAMMA MAX. 58 HRC - QUALITÀ MICROGRANO STANDARD CON RIVESTIMENTO IN PVD MICROCRISTALLINO RESISTENTE ALL'USURA.
F3120	HC PVD	P05-15 K15-25	○		●						- RIVESTIMENTO SPESSO INDICATO ALLA LAVORAZIONE DI GHISE ANCHE IN CONDIZIONE DI LUNGHE SPORGENZE. - BUONA LAVORABILITÀ DI ACCIAI DURI.
F2425	HC PVD	P30-40 M15-35	○	●							- SUBSTRATO DI CARBURO APPPOSITAMENTE SVILUPPATO, RIVESTIMENTO IN PVD INNOVATIVO. - QUALITÀ CON UN'ECCELLENTI ROBUSTEZZA SENZA PREGIUDICARE LA DUREZZA A CALDO E LA RESISTENZA ALL'USURA SIA A BASSE CHE AD ALTE VELOCITÀ DI TAGLIO

● APPLICAZIONE CONSIGLIATA
RECOMMENDED APPLICATION
EMPFOHLENER EINSATZ
APPLICATION CONSEILLÉE

○ APPLICAZIONE POSSIBILE
POSSIBLE APPLICATION
MÖGLICHE ANWENDUNG
APPLICATION POSSIBLE

● APPLICAZIONE CONSIGLIATA
RECOMMENDED APPLICATION
EMPFOHLENER EINSATZ
APPLICATION CONSEILLÉE

○ APPLICAZIONE POSSIBILE
POSSIBLE APPLICATION
MÖGLICHE ANWENDUNG
APPLICATION POSSIBLE

 INDICATIONS - USE	 GEBRAUCHSANWEISUNGEN	 INDICATION - USAGE
- UNIVERSAL GRADE - HIGH HEAT AND WEAR RESISTANCE, GOOD TOUGHNESS - SUITABLE FOR HIGH CUTTING SPEEDS	- UNIVERSALSORTE - HOHE HITZE- UND VERSCHLEISSBESTÄNDIGKEIT, GUTE ZÄHIGKEIT - FÜR HOHE SCHNITTGESCHWINDIGKEITEN GEEIGNET	- QUALITE UNIVERSELLE - HAUTE RESISTANCE A LA CHALEUR ET A L'USURE, BONNE TENACITE - INDIQUE POUR LES HAUTES VITESSES DE COUPE
- MICROGRAIN GRADE WITH VERY HIGH ULTIMATE STRENGTH AND RESISTANCE TO WEAR - SUITABLE FOR MEDIUM-HIGH CUTTING SPEEDS FOR FINISHING	- MIKROKORNSORTE MIT SEHR HOHER BRUCH - UND VERSCHLEISSFESTIGKEIT - FÜR HOHE SCHNITTGESCHWINDIGKEITEN BEIM SCHLICHTEN GEEIGNET	- QUALITÉ DE MICROGRAIN TRÈS RÉSISTANT À LA RUPTURE ET À L'USURE - INDIQUÉE POUR HAUTE VITESSE DE COUPE EN FINISSAGE
- GRADE SUITABLE FOR CAST IRON IN GENERAL - SUITABLE FOR FINISHING WITH CONTINUOUS CUT	- ALLGEMEINE SORTE ZUR GUSSBEARBEITUNG - ZUM SCHLICHTEN MIT UNUNTERBROCHENEM SCHNITT GEEIGNET	- QUALITÉ INDIQUÉ POUR USINAGE DE LA FONTE EN GENERAL - INDIQUÉE POUR FINISSAGE À COUPE CONTINU
- GRADE SUITABLE FOR ALUMINIUM ALLOYS	- SORT E FÜR ALUMINIUMLEGIERUNGEN GEEIGNET	- QUALITÉ INDIQUÉE POUR L'USINAGE DES ALLIAGE D'ALUMINIUM
- POLISHED UNCOATED GRADE, SPECIALLY DEVELOPED FOR ALUMINIUM AND NON-FERROUS MATERIALS	- UNBESCHICHTETE SORT E, POLIERT UND SPEZIFISCH FÜR ALUMINIUM UND NICHT-EISERNE MATERIALIEN	- NUANCE POLIE NON REVETUE SPECIFIQUE POUR L'USINAGE DE L'ALUMINIUM ET DES MATERIAUX NON FERREUX
- DEGREE FOR NON-FERROUS MATERIALS	- SORT E FÜR NICHT-EISENMATERIALIEN	- QUALITÉ POUR L'USINAGE DE MATERIAUX NON FERREUX
- UNCOATED NANOSTRUCTURE SUBSTRATE. - SUITABLE FOR MEDIUM SECTION CHIP MACHINING, UNDER STABLE CUTTING CONDITIONS.	- UNBESCHICHTETES NANOSTRUKTURIERTES SUBSTRAT. - FÜR BEARBEITUNGEN MIT MITTLEREM SPANQUERSCHNITT, UNTER STABILEN SCHNITTBEDINGUNGEN GEEIGNET.	- SUBSTRAT EN NANOSTRUCTURE NON REVETU. - INDIQUE POUR DES USINAGES AVEC SECTION DU COPEAU MOYENNE, AVEC DES CONDITIONS DE COUPE STABLE.
- ALL-PURPOSE QUALITY FOR CAST IRON AND NON-FERROUS MATERIALS - EXCELLENT WET PERFORMANCE	- UNIVERSALE QUALITÄT FÜR GUSS UND NICHT-EISENMATERIALIEN - AUSGEZEICHNETE NASSLEISTUNGEN	- QUALITÉ UNIVERSELLE POUR FONTE ET MATÉRIAUX NON FERREUX - PERFORMANCES EXCEPTIONNELLES À L'EAU
- MICROGRAIN GRADE WITH HIGH RESISTANCE TO WEAR AND EXCELLENT STABILITY OF THE CUTTING EDGES - SUITABLE FOR MEDIUM CUTTING SPEEDS ON GRAY IRON AND HIGH CUTTING SPEEDS ON NONFERROUS MATERIALS, FOR ROUGHING WITH MEDIUM REMOVAL OF MATERIAL.	- MIKROKORNSORTE MIT HOHER VERSCHLEISSFESTIGKEIT UND AUSGEZEICHNETER STABILITÄT DER SCHNEIDEN - FÜR MITTLERE SCHNITTGESCHWINDIGKEITEN BEI GRAUGUSS UND FÜR HOHE SCHNITTGESCHWINDIGKEITEN BEI NE-MATERIALIEN FÜR MITTLERE ZERSPANUNG BEIM SCHRUPPEN GEEIGNET.	- QUALITÉ DE MICROGRAIN AVEC HAUTE RÉSISTANCE À L'USURE ET TRÈS BONNE STABILITÉ DE LES COUPANTS. - INDIQUÉE POUR MOYENNE VITESSE DE COUPE SUR FONTE GRISE ET HAUTE SUR MATERIAL NON FERROUX, POUR MOYEN EMPORTATION EN ÉBAUCHAGE
- MICROGRAIN GRADE WITH HIGH RESISTANCE TO WEAR AND GOOD TOUGHNESS - SUITABLE FOR MEDIUM - LOW CUTTING SPEEDS ON AUSTENITIC STAINLESS STEEL AND MEDIUM-HIGH CUTTING SPEEDS FOR GRAY IRON AND NONFERROUS MATERIALS, FOR ROUGHING WITH MEDIUM REMOVAL OF MATERIAL.	- MIKROKORNSORTE MIT HOHER VERSCHLEISSFESTIGKEIT UND GUTER ZÄHIGKEIT - FÜR MITTEL-NIEDRIGE SCHNITTGESCHWINDIGKEITEN BEI GRAUGUSS UND FÜR MITTEL-HOHE SCHNITTGESCHWINDIGKEITEN BEI NE-MATERIALIEN FÜR MITTLERE ZERSPANUNG BEIM SCHRUPPEN GEEIGNET	- QUALITÉ DE MICROGRAIN AVEC HAUTE RÉSISTANCE À L'USURE ET BONNE TENACITÉ - INDIQUÉE POUR MOYENNE - FAIBLE VITESSE DE COUPE SUR ACIER INOX AUSTÉNITIQUE, MOYENNE-HAUTE POUR FONTE GRISE ET MATERIAL NON FERROUX, POUR MOYEN EMPORTATION EN ÉBAUCHAGE
- MICROGRAIN GRADE WITH HIGH RESISTANCE TO WEAR AND GOOD TOUGHNESS - SUITABLE FOR MEDIUM - LOW CUTTING SPEEDS ON AUSTENITIC STAINLESS STEEL AND MEDIUM CUTTING SPEEDS FOR GRAY IRON AND NONFERROUS MATERIALS, FOR ROUGHING WITH MEDIUM REMOVAL OF MATERIAL.	- MIKROKORNSORTE MIT SEHR HOHER BRUCH UND GUTE ZÄHIGKEIT - SUITABLE FOR MEDIUM - LOW CUTTING SPEEDS ON AUSTENITIC STAINLESS STEEL AND MEDIUM CUTTING SPEEDS FOR GRAY IRON AND NONFERROUS MATERIALS, FOR ROUGHING WITH MEDIUM REMOVAL OF MATERIAL.	- QUALITÉ DE MICROGRAIN AVEC HAUTE RÉSISTANCE À L'USURE ET BONNE TENANCITÉ - QUALITÉ DE MICROGRAIN AVEC HAUTE RÉSISTANCE À L'USURE ET BONNE TENANCITÉ
- PVD COATING FOR STEEL WITH MAX. 58 HRC - STANDARD MICROGRAIN GRADE WITH WEAR-RESISTANT MICROCRYSTALLINE PVD COATING	- PVD-BESCHICHTUNG FÜR STAHL MIT MAX. 58 HRC - STANDARD-FEINSTKORN-SORTE MIT VERSCHLEISSFESTER MIKROKRISTALLINER PVD-BESCHICHTUNG	- REVETEMENT EN PVD POUR L'USINAGE D'ACIERS AVEC GAMME MAX. 58 HRC - QUALITE MICROGRAIN STANDARD AVEC REVETEMENT EN PVD MICROCRISTALLIN RESISTANT A L'USURE.
- THIS COATING IS FREQUENTLY USED FOR CAST IRON MACHINING, ALSO WITH LONG PROJECTIONS. - GOOD MACHINABILITY OF HARD STEEL.	- BESCHICHTUNG, DIE HÄUFIG ZUR BEARBEITUNG VON GUSS, AUCH MIT GROSSEM ÜBERSTAND, VERWENDET WIRD. - GUTE BEARBEITBARKEIT VON HARTSTÄHLN.	- REVÊTEMENT ÉPAIS S'ADAPTANT SOUVENT À L'USINAGE DE FONTES MÊME DANS LE CAS DE LONGUES SAILLIES. - BONNE MANIABILITÉ D'ACIERS DURS.
- SPECIALLY DEVELOPED CARBIDE SUBSTRATE, INNOVATIVE PVD COATING - GRADE WITH EXCELLENT TOUGHNESS WHICH DOES NOT AFFECT RED HARDNESS AND WEAR RESISTANCE, AT BOTH LOW AND HIGH CUTTING SPEEDS	- SPEZIELL ENTWICKELTES KARBIDSUBSTRAT, INNOVATIVE PVD-BESCHICHTUNG. - SORT E MIT HERVORRAGENDER ROBUSTHEIT BEI UNVERÄNDERTER WARMHÄRTE UND VERSCHLEISSBESTÄNDIGKEIT SOWOHL MIT NIEDRIGEN ALS AUCH MIT HOHEN SCHNITTGESCHWINDIGKEITEN	- SUBSTRAT DE CARBURE SPÉCIALEMENT DÉVELOPPÉ, REVÊTEMENT EN PVD INNOVANT. - QUALITÉ AVEC UNE ROBUSTESSE EXCELLENTE SANS PORTER PRÉJUDICE À LA DURETÉ À CHAUD ET À LA RÉSISTANCE À L'USURE À BASSES VITESSES COMME À HAUTES VITESSES DE COUPE

SAU	DIN ISO 513		MATERIALE - MATERIAL MATÉRIEL - MATÉRIAUX						QUICK PICK		 INDICAZIONI - USO	
			PAG. 1119						PAG. 486			
			P	M	K	N	S	H				
			ACCIAI STEELS STAHL ACIER	ACCIAI INOX STAINLESS STEELS ROSTFREIER STAHL ACIER INOXYDABLE	GHISA CAST IRON GRAUGUSS FONTE GRISE	MAT NON FERROSI NON FERROUS MAT. NICHT-EISENMATERIALIEN MAT. FERREUX	MAT DIFFICILI DIFFICULT MATERIAL SCHWERGE MATERIALIEN MAT. DIFCILES	MATERIALI DURI HARD MATERIALS HARTE MATERIALIEN MATÉRIAUX DURS	Tenacità + Toughness -		 	
T2035 NEW	HC	M20-40		●				●				- PARTICOLARMENTE IDONEO PER LA LAVORAZIONE DI ACCIAI RESISTENTI AL CALORE E LEGHE A BASE DI FERRO
	CVD	S20-45										
F2135 NEW	HC	M25-40		●				○				- RIVESTIMENTO IN PVD A GRANA FINE, RESISTENTE ALL'USURA - ADATTO PER LAVORAZIONI DI ACCIAIO INOX
	PVD	S25-40										
F2435	HC	P35-45	○	●								- SUBSTRATO DI CARBURO APPPOSITAMENTE SVILUPPATO - RIVESTIMENTO IN PVD INNOVATIVO, FORNISCE UN'ECCELLENTE ROBUSTEZZA E OTTIMA TENACITÀ SENZA PREGIUDICARE LA DUREZZA A CALDO SIA A BASSE CHE AD ALTE VELOCITÀ DI TAGLIO
	PVD	M25-45										
F2635 NEW	HC	P20-40	○	●								- IDEALE PER LE LAVORAZIONI SU ACCIAIO INOX
	PVD	M20-40										
F2140	HC	P35-45	○	●				○				- CON LA SUA STRUTTURA TENACE IN MICROGRANO È INDICATO ALLA LAVORAZIONE DI ACCIAI AUSTENICI. - OTTIMO COMPORTAMENTO ANCHE AD ALTE VELOCITÀ DI TAGLIO DOVE SI CONSIGLIA LA LAVORAZIONE A SECCO.
	PVD	M35-45										
F2740	HC	M30-45		●								- GRADO IN MICROGRANO MOLTO TENACE, PERFORMANTE IN LAVORAZIONI DI SGROSSATURA A TAGLIO INTERROTTO. - INDICATO PER LA LAVORAZIONE DI ACCIAI INOSSIDABILI AUSTENITICI. - INDICATO PER LAVORAZIONI A UMIDO ANCHE MQL.
	PVD											
F5105	HC	P01-10	●	○	○			●				- SUBSTRATO IN MICROGRANO CON RIVESTIMENTO MULTISTRATO TiAlSiN. - INDICATO IN CONDIZIONI DI TAGLIO STABILE PER LAVORAZIONI MEDIE E DI FINITURA.
	PVD	K01-10 H05-15										
F3710	HC				●			○				- ALTA RESISTENZA ALL' USURA E BUONA TENACITÀ - INDICATO PER MEDIO-ALTE VELOCITÀ DI TAGLIO IN FINITURA E SGROSSATURA PREVALENTEMENTE SU GHISA GRIGIA
	PVD	K05-25 S05-25										
T1415	HC	P05-25	●		○							- GRADO INSERTO IDEALE PER LA PRODUZIONE AD ALTO VOLUME - BUONA RESISTENZA AL CALORE CHE LO RENDE PERFETTAMENTE ADATTO PER LA LAVORAZIONE A SECCO ANCHE AD ALTE VELOCITÀ DI TAGLIO
	CVD	K10-35										
T3115	HC				●							- ALTA RESISTENZA ALL' USURA E BUONA TENACITÀ - INDICATO PER MEDIO-ALTE VELOCITÀ DI TAGLIO IN FINITURA E SGROSSATURA PREVALENTEMENTE SU GHISA
	CVD	K05-20										
T516	HC				●							- ALTA RESISTENZA ALL' USURA E BUONA TENACITÀ - INDICATO PER MEDIO-ALTE VELOCITÀ DI TAGLIO IN FINITURA E SGROSSATURA PREVALENTEMENTE SU GHISA GRIGIA
	CVD	K05-25										
T3116	HC				●							- MATERIE PRIME SELEZIONATE, PER GARANTIRE UN SUBSTRATO DURO E RESISTENTE ALL'USURA. - RIVESTIMENTO MULTISTRATO, LE MIGLIORI PRESTAZIONI SI OTTENGONO LAVORANDO A SECCO.
	CVD	K10-20										
T1120 NEW	HC	P15-30	●									- ALTA RESISTENZA ALL'USURA, ADATTO PER LAVORAZIONI DI SPIANATURA IN CONDIZIONI STABILI
	CVD											
T3220	HC	P01-20	○		●							- GRADO DA TORNITURA PER LA LAVORAZIONE DELLA GHIA GRIGIA E SFEROIDALE
	CVD	K10-30										

● APPLICAZIONE CONSIGLIATA
RECOMMENDED APPLICATION
EMPFOHLENER EINSATZ
APPLICATION CONSEILLÉE

○ APPLICAZIONE POSSIBILE
POSSIBLE APPLICATION
MÖGLICHE ANWENDUNG
APPLICATION POSSIBLE

● APPLICAZIONE CONSIGLIATA
RECOMMENDED APPLICATION
EMPFOHLENER EINSATZ
APPLICATION CONSEILLÉE

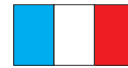
○ APPLICAZIONE POSSIBILE
POSSIBLE APPLICATION
MÖGLICHE ANWENDUNG
APPLICATION POSSIBLE



INDICATIONS - USE



GEBRAUCHSANWEISUNGEN



INDICATION - USAGE

- SPECIALLY SUITED FOR HEAT RESISTANT STEELS AND IRON-BASED ALLOYS	- BESONDERS GEEIGNET FÜR HITZEBESTÄNDIGE STÄHLE UND EISENBASIERTE LEGIERUNGEN	- PARTICULIEREMENT INDIQUE POUR L'USINAGE D'ACIERS RESISTANTS A LA CHALEUR ET AUX ALLIAGES A BASE DE FER
- FINE-GRAIN PVD COATING, RESISTANT TO WEAR - SUITABLE FOR MACHINING STAINLESS STEEL	- FEINKORN-PVD-BESCHICHTUNG, VERSCHLEISSFEST - FÜR DIE BEARBEITUNG VON INOX-STAHL GEEIGNET	- REVETEMENT EN PVD A GRAIN FIN, RESISTANT A L'USURE - PREVU POUR LES USINAGES D'ACIER INOX
- SPECIALLY DEVELOPED CARBIDE SUBSTRATE - INNOVATIVE PVD COATING PROVIDING EXCELLENT STRENGTH AND VERY GOOD TOUGHNESS WITHOUT AFFECTING RED HARDNESS AT BOTH LOW AND HIGH CUTTING SPEED	- SPEZIELL ENTWICKELTES KARBID-SUBSTRAT - INNOVATIVE PVD-BESCHICHTUNG FÜR EXCELLENTE ROBUSTHEIT UND OPTIMALE ZÄHIGKEIT OHNE BEEINTRÄCHTIGUNG DER WARMHÄRTE BEI SOWOHL HOHEN ALS AUCH NIEDRIGEN SCHNITTGESCHWINDIGKEITEN	- SUBSTRAT DE CARBURE SPECIALEMENT DEVELOPPE - REVETEMENT EN PVD INNOVANT, FOURNIT UNE ROBUSTESSE ET TENACITE EXCELLENTE, SANS POUR AUTANT PORTER PREJUDICE A LA DURETE A CHAUD A DE BASSES COMME A DE HAUTES VITESSES DE COUPE.
- IDEAL SOLUTION FOR STAINLESS STEEL APPLICATIONS	- IDEALE LÖSUNG FÜR INOX-STAHL-ANWENDUNGEN	- PREVU POUR LES USINAGES SUR ACIER INOX
- WITH ITS MICRO GRAIN STRUCTURE IT IS SUITABLE FOR AUSTENITIC STEEL. - EXCELLENT PERFORMANCE ALSO WITH HIGH CUTTING SPEED, WHERE DRY MACHINING IS RECOMMENDED.	- DANK DER ZÄHEN MIKROKORN-STRUKTUR AUCH ZUR BEARBEITUNG VON AUSTENITISCHEN STÄHLEN GEEIGNET. - SEHR GUTES VERHALTEN AUCH BEI HOHEN SCHNITTGESCHWINDIGKEITEN, WO DIE TROCKENBEARBEITUNG EMPFOHLEN IST.	- SA STRUCTURE TENACE EN MICROGRAIN LE REND PARTICULIEREMENT INDIQUE POUR L'USINAGE DES ACIERS AUSTENIQUES - COMPORTEMENT EXCELLENT MEME A DES VITESSES DE COUPE ELEVEES, OU L'USINAGE A SEC EST CONSEILLE.
- VERY TOUGH MICROGRAIN GRADE, PERFORMING IN INTERRUPTED-CUTTING ROUGHING MACHINING. - SUITABLE FOR THE MACHINING OF AUSTENITIC STAINLESS STEEL. - SUITABLE FOR WET GRINDING ALSO MQL.	- SEHR ZÄHE MIKROKORNSORTE MIT HOHER LEISTUNG BEIM SCHRUPPEN IM UNTERBROCHENEN SCHNITT. - GEEIGNET FÜR DIE BEARBEITUNG VON ROSTFREIEN, AUSTENITISCHEN STÄHLEN. - GEEIGNET FÜR NASSBEARBEITUNGEN, AUCH BEI MINIMALSCHMIERUNG MQL.	- DEGRÉ EN MICRO GRAIN TRÈS TENACE, PERFORMANT DANS LES USINAGES DE DÉGROSSISSAGE À COUPE INTERROMPUE. - INDICÉ POUR L'USINAGE D'ACIERS INOXYDABLES AUSTÉNITIQUES. - INDICÉ POUR LES USINAGES PAR VOIE HUMIDE MÊME MQL.
- MICROGRAIN SUBSTRATE WITH MULTILAYER TiAlSiN COATING. - SUITABLE FOR MEDIUM APPLICATIONS AND FINISHING UNDER STABLE CUTTING CONDITIONS.	- MIKORKORNSUBSTRAT MIT MEHRFACH- TiAlSiN – BESCHICHTUNG. - FÜR MITTLERE- BIS SCHLICHTBEARBEITUNGEN UNTER STABILEN BEDINGUNGEN GEEIGNET.	- SUBSTRAT EN MICROGRAIN AVEC REVETEMENT MULTICOUCHE TiAlSiN. - INDICÉ DANS DES CONDITIONS DE COUPE STABLE POUR USINAGES MOYENS ET DE FINITION.
-HIGH RESISTANCE TO WEAR, GOOD TOUGHNESS -SUITABLE FOR MEDIUM – HIGH CUTTING SPEEDS FOR FINISHING AND ROUGHING MAINLY ON GRAY IRON	-HOHE VERSCHLEISSFESTIGKEIT UND GUTE ZÄHIGKEIT -FÜR MITTEL – HOHE SCHNITTGESCHWINDIGKEITEN BEIM SCHLICHTEN UND SCHRUPPEN, ÜBERWIEGEND BEI GRAUGUSS, GEEIGNET	-HAUTE RESISTANCE À L'USURE ET BONNE TENACITÉ -INDIQUÉE POUR MOYENNE – HAUTE VITESSE DE COUPE EN FINISSAGE ET ÉBAUCHAGE SURTOUT POUR FONTE GRISE
- IDEAL GRADE FOR HIGH VOLUME MACHINING - GOOD HEAT RESISTANCE AND THEREFORE PERFECTLY SUITABLE FOR DRY MACHINING, EVEN AT HIGH CUTTING SPEEDS	- IDEALE SORTE FÜR HOCHVOLUMENFERTIGUNG - GUTE HITZEBESTÄNDIGKEIT UND DAHER PERFEKT FÜR DIE TROCKENBEARBEITUNG, AUCH MIT HOHEN SCHNITTGESCHWINDIGKEITEN	- DEGRÉ PLAQUETTE IDÉAL POUR LA PRODUCTION À HAUT VOLUME - BONNE RÉSISTANCE À LA CHALEUR, QUI LE REND PARFAITEMENT INDICÉ POUR L'USINAGE À SEC MEME A DE HAUTES VITESSES DE COUPE
- EXTREMELY TOUGH WITH HIGH WEAR RESISTANCE - IDEAL FOR MEDIUM TO HIGH CUTTING SPEEDS FOR FINISHING AND ROUGHING WORK MAINLY ON CAST IRON	- HOHE VERSCHLEISSFESTIGKEIT UND GUTE ZÄHIGKEIT - GEEIGNET FÜR MITTELHOHE UND HOHE SCHNITTGESCHWINDIGKEIT BEIM SCHLICHTEN UND SCHRUPPEN, ÜBERWIEGEND BEI GUSS	- HAUTE RÉSISTANCE À L'USURE ET BONNE TÉNACITÉ - INDICÉ POUR DES VITESSES HAUTES ET MOYENNES DE COUPE EN FINITION ET DÉGROSSISSAGE PRINCIPALEMENT SUR FONTE
-HIGH RESISTANCE TO WEAR, GOOD TOUGHNESS -SUITABLE FOR MEDIUM – HIGH CUTTING SPEEDS FOR FINISHING AND ROUGHING MAINLY ON GRAY IRON	-HOHE VERSCHLEISSFESTIGKEIT UND GUTE ZÄHIGKEIT -FÜR MITTEL – HOHE SCHNITTGESCHWINDIGKEITEN BEIM SCHLICHTEN UND SCHRUPPEN, ÜBERWIEGEND BEI GRAUGUSS, GEEIGNET	-HAUTE RESISTANCE À L'USURE ET BONNE TENACITÉ -INDIQUÉE POUR MOYENNE – HAUTE VITESSE DE COUPE EN FINISSAGE ET ÉBAUCHAGE SURTOUT POUR FONTE GRISE
- CHOICE RAW MATERIALS, TO GUARANTEE A HARD AND WEAR-RESISTANT SUBSTRATE. - MULTILAYER COATING, BEST PERFORMANCE IS ACHIEVED THROUGH DRY-MACHINING.	- AUSGEWÄHLTE ROHSTOFFE, UM EIN HARTES UND VERSCHLEISSFESTES SUBSTRAT ZU GEWÄHRLEISTEN. - MEHRSCHICHT-BESCHICHTUNG, BESTE LEISTUNGEN WERDEN BEI TROCKENBEARBEITUNGEN ERZIELT.	- MATIÈRES PREMIÈRES SÉLECTIONNÉES, AFIN D'ASSURER UN SUBSTRAT DUR ET RÉSISTANT À L'USURE. - REVÊTEMENT MULTICOUCHE, LES MEILLEURES PERFORMANCES SONT OBTENUES, EN TRAVAILLANT À SEC.
- HIGH RESISTANCE TO WEAR, SUITABLE FOR FACING UNDER STABLE CONDITIONS	- HOHER VERSCHLEISSWIDERSTAND, FÜR DIE PLANBEARBEITUNG UNTER STABILEN BEDINGUNGEN GEEIGNET	- HAUTE RESISTANCE A L'USURE, APPROPRIE POUR USINAGES DE PLANAGE DANS UN ETAT STABLE
- GRADO DA TORNITURA PER LA LAVORAZIONE DELLA GHIA GRIGIA E SFEROIDALE	- TURNING GRADE FOR GREY CAST IRON AND NODULAR CAST IRON	- DEGRE DE TOURNAGE POUR L'USINAGE DE LA FONTE GRISE ET SPHEROÏDALE

HT CERMET

HW

METALLO DURO NON RICOPERTO
UNCOATED CARBIDE
UNBESCHICHTETES HARTMETALL
MÉTAL DUR PAS RECOUVERT

HC

METALLO DURO RICOPERTO
COATED CARBIDE
BESCHICHTETES HARTMETALL
MÉTAL DUR RECOUVERT

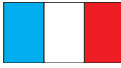
SAU	DIN ISO 513		MATERIALE - MATERIAL MATERIALIEN - MATÉRIAUX							QUICK PICK		 INDICAZIONI - USO	
			PAG. 1119							PAG. 486			
			P	M	K	N	S	H	Tenacità Toughness				
			ACCIAI STEELS STAHL ACIER	ACCIAI INOX STAINLESS STEELS ROSTFREIER STAHL ACIER INOXYDABLE	GHISA CAST IRON GRAUGUSS FONTE GRISE	MAT.NON FERROSI NON-FERROUS MAT. NICHT-EISENMATERIALIEN MAT. FERREUX	MAT.DIFFICILI DIFFICULT MATERIAL SCHWERIGE MATERIALIEN MAT. DIFCILES	MATERIALI DURI HARD MATERIALS HARTE MATERIALIEN MATÉRIAUX DURS					
F3420	HC	K15-30			●					●	●	- QUALITA' CON ALTA RESISTENZA ALL'USURA, INDICATO PER ALTE VELOCITA' DI TAGLIO - IDEALE PER LA LAVORAZIONE DI GHISA SFEROIDALE	
	PVD												
T5020	HC	P10-30	●		●			○		●	●	- QUALITÀ CON ALTA RESISTENZA ALL' USURA - INDICATO PER SGROSSATURA E MEDIE LAVORAZIONI CON CONDIZIONI STABILI ED ELEVATE VELOCITÀ DI TAGLIO	
	CVD	K15-35											
T1025	HC	P15-35	●							●	●	-GRADO INSERTO RESISTENTE ALL'USURA -IDEALE CON LAVORAZIONI AD ELEVATE VELOCITA' DI TAGLIO	
	CVD												
T1425	HC	P15-35	●	○	○					○	●	- VASTA GAMMA DI IMPIEGHI, IDEALE PER TUTTE LE LEGHE DI ACCIAIO E GHISA, BUONE PRESTAZIONI ANCHE SU INOX	
	CVD	M10-25 K25-35											
F4725	HC	P10-30 M10-35	●	●						○	○	- ALTA TENACITÀ E OTTIMA RESISTENZA ALL'USURA TERMICA GRAZIE A UNO SPECIALE RIVESTIMENTO - INDICATO PER MEDIE VELOCITÀ DI TAGLIO IN FINITURA E SGROSSATURA	
	PVD												
T526	HC	P10-35 M20-35	●	○	●		○			●	○	- ALTA TENACITÀ , RESISTENZA ALL' USURA E ALLO SHOCK TERMICO - INDICATO PER MEDIO-ALTE VELOCITÀ DI TAGLIO E CON AVANZAMENTI MEDI IN CONDIZIONI NORMALI. OTTIMO SU ACCIAI LEGATI E GHISE SFEROIDALI	
	CVD	K10-25											
T528N	HC	P25-35 M35-45	●	●	○		○			●	○	- ALTA TENACITÀ, OTTIMA RESISTENZA ALLO SHOCK TERMICO E ALL'USURA - INDICATO PER MEDIO BASSE VELOCITÀ DI TAGLIO E CON MEDIO ALTI AVANZAMENTI ANCHE IN CONDIZIONI STABILI IN FINITURA E SGROSSATURA	
	CVD	K25-35 S35-45											
T530	HC	P30-40 M20-25	●	●	○	○	●			○	●	- BUONA TENACITÀ E RESISTENZA ALLA SCHEGGIATURA - INDICATO PER MEDIO-BASSE VELOCITÀ DI TAGLIO E ALTI AVANZAMENTI	
	CVD	S20-30											
T1730	HC	P25-35	●							●	○	- GRADO UNIVERSALE INDICATO PER SPIANATURA, ESSENDO TENACE GARANTISCE UNA STABILITÀ DI LAVORAZIONE. - MOLTO PERFORMANTE SU ACCIAIO CEMENTATO CON LAVORAZIONE A SECCO, MENTRE SU ACCIAI TENACI È CONSIGLIATO L'USO DELL'EMULSIONE.	
	CVD												
F4130	HC	P20-40 M20-30	●	●	○			○		●	●	- QUALITÀ ALTAMENTE RESISTENTE ALL'USURA	
	PVD												
F4140	HC	P30-50 M25-40	●	●	○	○	●			●	●	- QUALITÀ PER FINITURA E MEDIA SGROSSATURA. PRIMA SCELTA PER OPERAZIONI CON BASSI AVANZAMENTI E/O BASSE VELOCITÀ DI TAGLIO - ECCELLENTE PER LAVORAZIONI IN CONDIZIONI POCO STABILI E CON REFRIGERANTE. - CONSIGLIATO PER LAVORARE LE SUPERLEGHE	
	PVD	S20-30											
F4340	HC	P20-40 M20-30	●	●						●		- PER LA LAVORAZIONE DI ACCIAI E ACCIAI INOSSIDABILI A BASSE VELOCITÀ DI TAGLIO, CON AMPIO CAMPO APPLICATIVO - OTTIME PRESTAZIONI A UMIDO	
	PVD												
T1435	HC	P25-45 M20-30	●	○						●	●	- GRADO INSERTO TENACE, PER LAVORAZIONI DIFFICILI IN CONDIZIONI INSTABILI E A TAGLIO INTERROTTO	
	CVD												
F3010	HC	K05-20			●					●	●	- QUALITÀ PER LA FRESATURA DI GHISE - RIVESTIMENTO ULTRAFINE PER ELEVATE VELOCITÀ DI TAGLIO ADATTO ANCHE IN CONDIZIONI DI TAGLIO INSTABILI	
	PVD												

● APPLICAZIONE CONSIGLIATA
RECOMMENDED APPLICATION
EMPFOHLENER EINSATZ
APPLICATION CONSEILLÉE

○ APPLICAZIONE POSSIBILE
POSSIBLE APPLICATION
MÖGLICHE ANWENDUNG
APPLICATION POSSIBLE

● APPLICAZIONE CONSIGLIATA
RECOMMENDED APPLICATION
EMPFOHLENER EINSATZ
APPLICATION CONSEILLÉE

○ APPLICAZIONE POSSIBILE
POSSIBLE APPLICATION
MÖGLICHE ANWENDUNG
APPLICATION POSSIBLE

 INDICATIONS - USE	 GEBRAUCHSANWEISUNGEN	 INDICATION - USAGE
- DEGREE WITH HIGH RESISTANCE TO WEAR, SUITABLE FOR HIGH CUTTING SPEEDS - IDEAL FOR NODULAR CAST IRON	- SORTE MIT HOHER VERSCHLEISSFESTIGKEIT, FÜR HOHE SCHNITTGESCHWINDIGKEITEN GEEIGNET - IDEAL FÜR DIE BEARBEITUNG VON SPHÄROGUSS	- QUALITE AVEC RESISTANCE ELEVEE A L'USURE, INDIQUE POUR DE HAUTES VITESSES DE COUPE - IDEAL POUR L'USINAGE DE FONTE SPHEROIDALE
- GRADE WITH HIGH RESISTANCE TO WEAR. - SUITABLE FOR ROUGHING AND MEDIUM MACHINING UNDER STABLE CONDITIONS AND AT HIGH CUTTING SPEEDS	- SORTE MIT HOHER VERSCHLEISSBESTÄNDIGKEIT - ZUM SCHRUPPEN UND ZUR MITTLEREN ZERSPANUNG UNTER STABILEN BEDINGUNGEN UND MIT HOHEN SCHNITTGESCHWINDIGKEITEN	- QUALITÉ AVEC HAUTE RÉSISTANCE À L'USURE - INDIQUÉE POUR ÉBAUCHAGE ET USINAGES MOYENS AVEC CONDITIONS STABLES ET ÉLEVÉE VITESSE DE COUPE.
- WEAR RESISTANT QUALITY INSERT - IDEAL FOR HIGH CUTTING SPEED WORK	- VERSCHLEISSFESTE WENDEPLATTE - IDEAL FÜR BEARBEITUNGEN MIT HOHER SCHNITTGESCHWINDIGKEIT	- DEGRÉ PLAQUETTE RÉSISTANT À L'USURE - IDÉAL EN CAS D'USINAGES À DES VITESSES DE COUPE ÉLEVÉES
- WIDE RANGE OF APPLICATIONS, IDEAL FOR ALL STEEL AND CAST IRON ALLOYS, GOOD PERFORMANCE ALSO ON INOX	- HOHE VIELSEITIGKEIT, IDEAL FÜR ALLE STAHL- UND GUSLEGIERUNGEN, GUTE LEISTUNG AUCH MIT INOXSTAHL	- VASTE GAMME D'EMPLOIS, IDÉAL POUR TOUS LES ALLIAGES EN ACIER ET FONTE, BONNES PERFORMANCES MÊME SUR INOX
- HIGH TOUGHNESS AND EXCELLENT RESISTANCE TO THERMAL WEAR DUE TO THE SPECIAL COATING - SUITABLE FOR FINISHING AND ROUGHING AT MEDIUM CUTTING SPEEDS	- HOHE ZÄHIGKEIT UND SEHR GUTE BESTÄNDIGKEIT GEGEN THERMISCHEN VERSCHLEISS AUFGRUND DER SPEZIALBESCHICHTUNG - FÜR MITTLERE SCHNITTGESCHWINDIGKEITEN ZUM SCHLICHTEN UND SCHRUPPEN GEEIGNET	- HAUTE TÉNACITÉ ET TRÈS BONNE RÉSISTANCE À L'USURE THERMIQUE DÙ À UN SPÉCIAL REVÊTEMENT - INDIQUÉE POUR MOYENNE VITESSE DE COUPE EN FINISSAGE ET ÉBAUCHAGE
- HIGH TOUGHNESS, RESISTANCE TO WEAR AND TO THERMAL SHOCK - SUITABLE FOR MEDIUM – HIGH CUTTING SPEEDS AND WITH MEDIUM FEED UNDER NORMAL CONDITIONS - EXCELLENT ON STEEL ALLOYS AND SPHEROIDAL CAST IRON	- HOHE ZÄHIGKEIT, VERSCHLEISSFESTIGKEIT UND TEMPERATURWECHSELBESTÄNDIGKEIT - FÜR MITTEL-HOHE SCHNITTGESCHWINDIGKEITEN UND BEI MITTLEREN VORSCHÜBEN UNTER NORMALEN BEDINGUNGEN GEEIGNET - FÜR EDELSTAHL UND SPHÄROGUSS OPTIMAL GEEIGNET	- HAUTE TENACITÉ, RÉSISTANCE À L'USURE ET AU SHOCK THERMIQUE - INDIQUÉE POUR MOYENNE – HAUTE VITESSE DE COUPE ET MOYEN DÉPLACEMENT EN CONDITIONS NORMALES - OPTIMUM SUR ACIER ALLIÉ ET FONTE SPHÉROÏDAL
- HIGH TOUGHNESS, EXCELLENT THERMAL SHOCK AND WEAR RESISTANCE - SUITABLE FOR MEDIUM-LOW CUTTING SPEEDS AND WITH MEDIUM-HIGH FEED FACTORS, ALSO UNDER STABLE MACHINING CONDITIONS FOR FINISHING AND ROUGHING	- HOHE ZÄHIGKEIT, SEHR GUTE TEMPERATURWECHSELBESTÄNDIGKEIT UND VERSCHLEISSFESTIGKEIT - GEEIGNET FÜR MITTLERE BIS GERINGE SCHNITTGESCHWINDIGKEITEN UND MITTLERE UND HOHE VORSCHÜBE, AUCH UNTER STABILEN BEARBEITUNGSBEDINGUNGEN ZUM SCHLICHTEN UND SCHRUPPEN	- HAUTE TENACITÉ, TRÈS BONNE RÉSISTANCE AU CHOC THERMIQUE ET À L'USURE - INDIQUÉE POUR MOYENNE BASSES VITESSE DE COUPE ET AVEC MOYENNES HAUTES AVANCES MÊME AVEC DE CONDITIONS STABLES EN FINISSAGE ET DÉGROSSISSAGE
- GOOD TOUGHNESS AND RESISTANCE TO CHIPPING - SUITABLE FOR MEDIUM-LOW CUTTING SPEEDS AND HIGH FEED	- GUTER ZÄHIGKEIT UND AUSBRUCHFESTIGKEIT - FÜR MITTEL-NIEDRIGE SCHNITTGESCHWINDIGKEITEN UND HOHE VORSCHÜBE GEIGNEET	- BONNE TENACITÉ ET RÉSISTANCE À L'ÉBRÈCHEMENT - INDIQUÉE POUR MOYENNE-FAIBLE VITESSE DE COUPE
- UNIVERSAL GRADE SUITABLE FOR FACE MILLING, ENSURING MACHINING STABILITY GIVEN ITS TOUGHNESS. - HIGHLY PERFORMING ON CASE-HARDENED STEEL WITH DRY-MACHINING, WHILE IT IS ADVISABLE TO USE THE EMULSION ON TOUGH STEELS.	- UNIVERSALE, ZUM PLANFRÄSEN GEEIGNETE SORTE, DIE AUFGRUND IHRER ZÄHHEIT DIE BEARBEITUNGSSTABILITÄT GARANTIERT. - HOHE LEISTUNGEN BEI EINSATZSTAHL MIT TROCKENBEARBEITUNG; BEI ZÄHEN STÄHLEN WIRD HINGEGEN DER GEBRAUCH DER EMULSION EMPFOHLEN.	- DEGRÉ UNIVERSEL INDIQUÉ POUR LE PLANAGE, ÉTANT TENACE IL GARANTIT UNE STABILITÉ D'USINAGE. - TRÈS PERFORMANT SUR ACIER CÉMENTÉ AVEC USINAGE À SEC, TANDIS QUE SUR DES ACIERS TENACES IL EST CONSEILLÉ D'AVOIR RECOURS À L'ÉMULSION.
- HIGH WEAR RESISTANCE QUALITY	- HOCH VERSCHLEISSFESTE QUALITÄT	- QUALITÉ HAUTEMENT RÉSISTANTE À L'USURE
- PREMIUM QUALITY FOR MEDIUM ROUGHING AND FINISHING. FIRST CHOICE FOR SLOW FEED AND/OR SLOW CUTTING SPEEDS - OUTSTANDING FOR WORKING IN UNSTABLE CONDITIONS WITH COOLANT - RECOMMENDED FOR MACHINING SUPER ALLOYS	- QUALITÄT ZUM SCHLICHTEN UND MITTLEREM SCHRUPPEN. ERSTE WAHL FÜR ARBEITSSCHRITTE MIT NIEDRIGEM VORSCHUB U/O NIEDRIGER SCHNITTGESCHWINDIGKEIT. - AUSGEZEICHNET FÜR BEARBEITUNGEN UNTER UNSTABILEN BEDINGUNGEN UND MIT KÜHLMITTEL. - EMPFOHLEN ZUR BEARBEITUNG VON SUPERLEGIERUNGEN	- QUALITÉ POUR FINITION ET DÉGROSSISSAGE MOYEN. PREMIER CHOIX POUR DES OPÉRATIONS AVEC DES AVANCES MODIQUES ET/OU DE FAIBLES VITESSES DE COUPE. - PARFAIT POUR DES USINAGES DANS DES CONDITIONS PEU STABLES ET AVEC RÉFRIGÉRANT. - CONSEILLÉ POUR USINER LES SUPERALLIAGES
- FOR MACHINING STEELS AND STAINLESS STEELS AT SLOW CUTTING SPEEDS FOR A VAST RANGE OF APPLICATIONS - EXCELLENT WET PERFORMANCE	- FÜR DIE BEARBEITUNG VON STAHL UND EDELSTAHL MIT NIEDRIGER SCHNITTGESCHWINDIGKEIT, GROSSER ANWENDUNGSBEREICH - AUSGEZEICHNETE NASSLEISTUNGEN	- POUR L'USINAGE D'ACIERS ET ACIERS INOXYDABLES À DE FAIBLES VITESSES DE COUPE, AVEC AMPLÉ PLAGE D'APPLICATION - PERFORMANCES EXCEPTIONNELLES À L'EAU
- TOUGH DEGREE FOR DIFFICULT MACHINING UNDER UNSTABLE CONDITIONS AND WITH INTERRUPTED CUT	- ZÄHE SORTE FÜR SCHWERE BEARBEITUNGEN UNTER UNSTABILEN BEDINGUNGEN UND MIT UNTERBROCHENEM SCHNITT	- DEGRÉ PLAQUETTE TENACE POUR USINAGES DIFFICILES DANS DES CONDITIONS INSTABLES ET À COUPE INTERROMPUE
- MILLING GRADE FOR CAST-IRON - ULTRA-FINE COATING FOR HIGH CUTTING SPEEDS, ALSO SUITABLE UNDER UNSTABLE CUTTING CONDITIONS	- SORTE ZUM FRÄSEN VON GUSSEISEN - ULTRAFEINE BESCHICHTUNG FÜR HOHE SCHNITTGESCHWINDIGKEITEN, AUCH UNTER UNSTABILEN SCHNITTBEDINGUNGEN GEEIGNET	- QUALITÉ POUR LE FRAISAGE DES FONTES - REVÊTEMENT TRÈS FINE POUR ÉLEVÉE VITESSE DE COUPE APPROPRIÉ MÊME AVEC CONDITIONS DE COUPE INSTABLES

HT CERMET

HW METALLO DURO NON RICOPERTO
UNCOATED CARBIDE
UNBESCHICHTETES HARTMETALL
MÉTAL DUR PAS RECOUVERT

HC METALLO DURO RICOPERTO
COATED CARBIDE
BESCHICHTETES HARTMETALL
MÉTAL DUR RECOUVERT

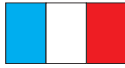
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			P	M	K	N	S	H						
			ACCIAI STEELS STAHL ACIER	ACCIAI INOX STAINLESS STEELS ROSTFREIER STAHL ACIER INOXYDABLE	GHISA CAST IRON GRAUGUSS FONTE GRISE	MAT NON FERROSI NON FERROUS MAT. NICHT FERREUSE MATERIALIEN	MAT. DIFFICILI DIFFICULT MATERIAL SCHWERIGE MATERIALIEN	MATERIALI DURI HARD MATERIALS HARTE MATERIALIEN MATÉRIAUX DURS						
										Tenacità + Toughness -				
F6315	HC	P10-30	●	●	●								- OTTIMA RESISTENZA ALL'USURA - QUALITÀ UNIVERSALE PER VARI TIPI DI MATERIALE - INDICATO PER MEDIE-ALTE VELOCITÀ DI TAGLIO	
	PVD	M05-25 K05-25												
T5120	HC	P10-30	●		●								- QUALITÀ PER SGROSSATURA E MEDIA SGROSSATURA CON CONDIZIONI STABILI AD ELEVATE VELOCITÀ DI TAGLIO. - QUALITÀ ECCELLENTE PER ACCIAI DURI. OTTIMO COMPORTAMENTO ANCHE NELLA SGROSSATURA DI GHISA GRIGIA E GHISA SFEROIDALE	
	CVD	K15-35							○					
T525	HC	P15-35	●	●	○								- OTTIMO EQUILIBRIO TRA TENACITÀ E RESISTENZA ALL' USURA - INDICATO PER MEDIE VELOCITÀ DI TAGLIO E CON AVANZAMENTI MEDIO ALTI IN SGROSSATURA ANCHE IN CONDIZIONI INSTABILI	
	CVD	M20-35 K30-40							○					
F1325	HC	P15-30	●	○	○								- LAVORAZIONE GENERICHE DI ACCIAIO, ACCIAIO INOX E ANCHE BUONA LAVORABILITÀ PER GHISA. - CONSIGLIATO PER LA LAVORAZIONE CON VELOCITÀ DI TAGLIO ELE- VATE SE IN CONDIZIONI DI LAVORO STABILI.	
	PVD	M20-30 K20-30												
F2330 NEW	HC	P20-35	○	●									- LA SUA STRUTTURA IN MICROGRANO, LA COMPOSIZIONE E IL RIVESTIMENTO, RENDONO QUESTO GRADO MOLTO PERFORMANTE NELLE LAVORAZIONI DI MATERIALI ISO M E S. - INSERTO TENACE CHE PERMETTE LAVORAZIONI MEDIAMENTE INTERROTTE ANCHE DI MATERIALI ISO S.	
	PVD	M20-35 S10-30							○					
F2331 NEW	HC	P20-40	●	●									- SUBSTRATO RESISTENTE ALL'USURA - INSERTO VERSATILE ADATTO SIA PER SGROSSATURA CHE FINITURA ANCHE IN CONDIZIONI SFAVOREVOLI	
	PVD	M20-35												
F1035	HC	P25-40	●	○									- QUALITÀ MOLTO TENACE - OTTIMA RESISTENZA ALL'USURA	
	PVD	M20-35							○					
F1335	HC	P25-45	●	○									- LAVORAZIONI DI ACCIAIO GENERICHE - INDICATO PER LAVORAZIONI SUI PIÙ COMUNI ACCIAI A MEDIO BASSE VELOCITÀ DI TAGLIO E IN CONDIZIONI DI INSTABILITÀ.	
	PVD	M30-40												
F2335 NEW	HC	P25-50	●	●	○								- LA SUA STRUTTURA E IL SUO RIVESTIMENTO RENDE QUESTO GRADO MOLTO TENACE E RESISTENTE ALLE ALTE TEMPERATURE. - PARTICOLARMENTE ADATTO A LAVORAZIONI DI FORTE TAGLIO INTERROTTO E LAVORAZIONI GRAVOSE.	
	PVD	M20-40 K20-40 S20-30							○					
T540	HC	P25-45	●	●									- ALTA TENACITÀ , BUONA RESISTENZA ALL' USURA E ALLO SHOCK TERMICO - INDICATO PER BASSE VELOCITÀ DI TAGLIO E ALTI AVANZAMENTI IN SGROSSATURA E SGROSSATURA PESANTE ANCHE IN CONDIZIONI PRECARIE	
	CVD	M25-40				○			○					
T544	HC	P20-40	●	●	○	○							- ALTA TENACITÀ MEDIA RESISTENZA ALL' USURA - INDICATO PER MEDIO-BASSE VELOCITÀ DI TAGLIO IN MEDIA SGROSSATURA ANCHE IN CONDIZIONI INSTABILI	
	CVD	M20-35							●					
F4345	HC	P35-45	●	○									- GRADO MOLTO TENACE PER LAVORAZIONE DI INSTABILITÀ E LAVO- RAZIONE A TAGLIO MOLTO INTERROTTO. - INDICATO PER SGROSSATURA DI ACCIAI GENERICI.	
	PVD	M40-45												

● APPLICAZIONE CONSIGLIATA
RECOMMENDED APPLICATION
EMPFOHLENER EINSATZ
APPLICATION CONSEILLÉE

○ APPLICAZIONE POSSIBILE
POSSIBLE APPLICATION
MÖGLICHE ANWENDUNG
APPLICATION POSSIBLE

● APPLICAZIONE CONSIGLIATA
RECOMMENDED APPLICATION
EMPFOHLENER EINSATZ
APPLICATION CONSEILLÉE

○ APPLICAZIONE POSSIBILE
POSSIBLE APPLICATION
MÖGLICHE ANWENDUNG
APPLICATION POSSIBLE

 INDICATIONS - USE	 GEBRAUCHSANWEISUNGEN	 INDICATION - USAGE
- EXCELLENT RESISTANCE TO WEAR - UNIVERSAL DEGREE FOR DIFFERENT TYPES OF MATERIALS - SUITABLE FOR MEDIUM TO HIGH CUTTING SPEEDS	- SEHR HOHE VERSCHLEISSFESTIGKEIT - UNIVERSALSORTE FÜR VERSCHIEDENE MATERIALIEN - FÜR MITTLERE BIS HOHE SCHNITTGESCHWINDIGKEITEN GEEIGNET	- RESISTANCE EXCELLENTE A L'USURE - QUALITE UNIVERSELLE POUR DIFFERENTS TYPES DE MATERIAU - INDIQUE EN CAS DE VITESSES DE COUPE HAUTES-MOYENNES
- QUALITY FOR ROUGHING AND MEDIUM ROUGHING IN STABLE CONDITIONS WITH HIGH CUTTING SPEEDS - OUTSTANDING QUALITY FOR HARD STEELS. EXCELLENT BEHAVIOUR ALSO IN ROUGHING GREY CAST IRON AND SPHEROIDAL GRAPHITE CAST IRON	- QUALITÄT ZUM SCHRUPPEN UND MITTLEREM SCHRUPPEN UNTER STABILEN BEDINGUNGEN UND BEI HOHER SCHNITTGESCHWINDIGKEIT. - HERVORRAGENDE QUALITÄT FÜR HARTSTAHL. AUSGEZEICHNETES VERHALTEN AUCH BEIM SCHRUPPEN VON GRAUGUSS UND SPHÄROGUSS	- QUALITÉ POUR DÉGROSSISSAGE ET DÉGROSSISSAGE MOYEN DANS DES CONDITIONS STABLES À DES VITESSES DE COUPE ÉLEVÉES. - QUALITÉ EXCELLENTE POUR ACIERS DURS. COMPORTEMENT PARFAIT MÊME DANS LE DÉGROSSISSAGE DE FONTE GRISE ET FONTE SPHÉROÏDALE
- EXCELLENT BALANCE BETWEEN TOUGHNESS AND RESISTANCE TO WEAR - SUITABLE FOR MEDIUM CUTTING SPEEDS AND WITH MEDIUM-HIGH FEED FOR ROUGHING UNDER STABLE CONDITIONS	- OPTIMALE AUSGEWOGENHEIT ZWISCHEN ZÄHIGKEIT UND VERSCHLEISSFESTIGKEIT - FÜR MITTEL SCHNITTGESCHWINDIGKEITEN UND BEI MITTEL-GROSSEN VORSCHÜBEN, UNTER STABILEN BEDINGUNGEN, ZUM SCHRUPPEN GEEIGNET	- TRÈS BON ÉQUILIBRE ENTRE TENACITÉ ET RÉSISTANCE À L'USURE - INDIQUÉE POUR MOYENNE VITESSE DE COUPE ET MOYENNE-HAUT DÉPLACEMENT POUR ÉBAUCHAGE EN CONDITION STABLE
- GENERAL MACHINING OF STEEL, STAINLESS STEEL AND GOOD MACHINABILITY FOR CAST IRON. - RECOMMENDED FOR HIGH CUTTING SPEED UNDER STABLE MACHINING CONDITIONS.	- ALLGEMEINE BEARBEITUNG VON STAHL, EDELSTAHL UND GUTE BEARBEITBARKEIT VON GUSS. - EMPFOHLEN ZUR BEARBEITUNG MIT HOHEN SCHNITTGESCHWINDIGKEITEN, WENN DIE ARBEITSBEDINGUNGEN STABIL SIND.	- USINAGES GÉNÉRIQUES D'ACIER, ACIER INOX ET ÉGALEMENT BONNE MANIABILITÉ POUR LA FONTE. - CONSEILLÉ POUR L'USINAGE AVEC DES VITESSES DE COUPE ÉLEVÉES, DANS LE CAS DE CONDITIONS DE TRAVAIL STABLES.
- THANKS TO ITS MICROGRAIN STRUCTURE, COMPOSITION AND COATING, THIS GRADE IS HIGHLY PERFORMING IN THE MACHINING OF ISO M E S MATERIALS. - TOUGH INSERT THAT ALLOWS AVERAGE INTERRUPTED MACHINING ALSO OF ISO S MATERIALS.	- AUFGRUND SEINER FEINKÖRNIGEN STRUKTUR, ZUSAMMENSETZUNG UND BESCHICHTUNG IST DIESER TYP BEI DER BEARBEITUNG VON ISO-M- UND S-MATERIALIEN BESONDERS LEISTUNGSFÄHIG. - ZÄHE WENDESCHNEIDPLATTE, DIE AUCH DURCHSCHNITTlich UNTERBROCHENE BEARBEITUNGEN VON ISO-MATERIALIEN ERMÖGLICHT.	- SA STRUCTURE EN MICROGRAIN, LA COMPOSITION ET LE REVETEMENT RENDENT CE DEGRE TRES PERFORMANT DANS LES USINAGES DE MATERIAUX ISO M E S. - PLAQUETTE A HAUTE RESISTANCE AUTORISANT DES USINAGES MOYENEMENT INTERROMPUS MEME DE MATERIAUX ISO S.
- WEAR-RESISTANT SUBSTRATE - VERSATILE INSERT, SUITABLE FOR BOTH ROUGHING AND FINISHING, ALSO UNDER UNFAVOURABLE CONDITIONS	- VERSCHLEISSFESTES SUBSTRAT - VIELSEITIGE WENDEPLATTE, SOWOHL ZUM SCHRUPPEN ALS AUCH ZUM SCHLICHTEN GEEIGNET, AUCH UNTER UNGÜNSTIGEN BEDINGUNGEN	- SUBSTRAT RÉSISTANT À L'USURE - PLAQUETTE POLYVALENTE, POUR ÉBAUCHE ET FINITION, MÊME EN CAS DE CONDITIONS DÉFAVORABLES
- VERY TOUGH GRADE - EXCELLENT RESISTANCE TO WEAR	- SEHR ZÄHE SORTE - OPTIMALE VERSCHLEISSFESTIGKEIT	- QUALITÉ TRES TENACE - TRES BONNE RESISTANCE À L'USURE
- GENERAL MACHINING OF STEEL. SPECIALLY - SUITABLE FOR MACHINING THE MOST COMMON STEEL TYPES WITH LOW-MEDIUM CUTTING SPEED UNDER STABLE MACHINING CONDITIONS.	- ALLGEMEINE STAHLBEARBEITUNG - GEEIGNET FÜR DIE BEARBEITUNG DER GÄNGIGSTEN STAHLSORTEN MIT NIEDRIG-MITTLEREN SCHNITTGESCHWINDIGKEITEN UNTER STABILEN ARBEITSBEDINGUNGEN.	- USINAGES D'ACIER GÉNÉRIQUES - PRÉVU POUR DES USINAGES SUR LES ACIERS LES PLUS COMMUNS À DES VITESSES DE COUPE BASSES-MOYENNES ET DANS UN ÉTAT D'INSTABILITÉ.
- THIS GRADE'S STRUCTURE AND COATING MAKE IT VERY TOUGH AND HIGH TEMPERATURE-RESISTANT. - ESPECIALLY SUITED FOR STRONG INTERRUPTED-CUTTING MACHINING AND STRENUOUS MACHINING	- AUFGRUND SEINER FEINKÖRNIGEN STRUKTUR, ZUSAMMENSETZUNG UND BESCHICHTUNG IST DIESER TYP BEI DER BEARBEITUNG VON ISO-M- UND S-MATERIALIEN BESONDERS LEISTUNGSFÄHIG. - ZÄHE WENDESCHNEIDPLATTE, DIE AUCH DURCHSCHNITTlich UNTERBROCHENE BEARBEITUNGEN VON ISO-MATERIALIEN ERMÖGLICHT.	- SA STRUCTURE ET SON REVETEMENT RENDENT CE DEGRE TRES TENACE ET RESISTANT AUX TEMPERATURES ELEVEES. - PARTICULIEREMENT INDIQUE AUX USINAGES D'UNE COUPE FORTE INTERROMPUE ET D'USINAGES PENIBLES.
- HIGH TOUGHNESS, RESISTANCE TO WEAR AND TO THERMAL SHOCK - SUITABLE FOR LOW CUTTING SPEEDS AND HIGH FEED FOR ROUGHING AND HEAVY ROUGHING, EVEN UNDER UNSTABLE CONDITIONS	- FÜR MITTEL-HOHE SCHNITTGESCHWINDIGKEITEN UND BEI MITTLEREN VORSCHÜBEN UNTER NORMALEN BEDINGUNGEN GEEIGNET - FÜR NIEDRIGE SCHNITTGESCHWINDIGKEITEN UND GROSSVORSCHÜBE BEIM SCHRUPPEN UND STARKEN SCHRUPPEN, AUCH UNTER UNSTABILEN BEDINGUNGEN, GEEIGNET.	- HAUTE TENACITÉ, RÉSISTANCE À L'USURE ET AU SHOCK THERMIQUE - INDIQUÉE POUR FAIBLE VITESSE DE COUPE ET HAUT DÉPLACEMENT POUR ÉBAUCHAGE ET ÉBAUCHAGE LOURD, MÊME AVEC CONDITIONS INSTABLES.
- HIGH TOUGHNESS, MEDIUM RESISTANCE TO WEAR - SUITABLE FOR MEDIUM - LOW CUTTING SPEEDS FOR MEDIUM ROUGHING, EVEN UNDER UNSTABLE CONDITIONS	- FÜR MITTEL-HOHE SCHNITTGESCHWINDIGKEITEN UND BEI MITTLEREN VORSCHÜBEN - FÜR MITTEL - NIEDRIGE SCHNITTGESCHWINDIGKEITEN BEIM MITTEL - STARKEN SCHRUPPEN, AUCH UNTER UNSTABILEN BEDINGUNGEN, GEEIGNET	- HAUTE TENACITÉ, MOYENNE RÉSISTANCE À L'USURE - INDIQUÉE POUR MOYENNE - FAIBLE VITESSE DE COUPE EN ÉBAUCHAGE MOYEN MÊME AVEC CONDITIONS INSTABLES
- VERY TOUGH GRADE FOR INSTABILITY MACHINING AND VERY INTERRUPTED-CUTTING MACHINING. - SUITABLE FOR ROUGHING OF GENERAL STEELS.	- SEHR ZÄHE SORTE FÜR INSTABILE BEARBEITUNGEN UND BEARBEITUNGEN MIT STARK UNTERBROCHENEM SCHNITT. - GEEIGNET ZUM SCHRUPPEN VON ALLGEMEINEN STÄHLEN.	- DEGRÉ TRÈS TENACE POUR L'USINAGE D'INSTABILITÉ ET L'USINAGE À COUPE TRES INTERROMPUE. - INDIQUÉ POUR LE DÉGROSSISSAGE D'ACIERS GÉNÉRIQUES.

MATERIALE MATERIAL MATERIALIEN MATÉRIAUX PAG 1119	VDI 3323 GR.	HB HRC Rm	C4010	N3015	N3815 NEW	N6315	N3620	N3440	T110	T115	T120	F7810 NEW	F3120
P ACCIAI STEELS STAHL ACIER	1	125	300-420									220-300	200-300
	2	180	280-350									220-300	200-300
	3	250	220-320									220-300	200-300
	4	220	250-300									220-300	200-300
	5	300	180-260									220-300	200-300
	6	180	140-200									180-250	180-250
	7-8	250-300	160-220									180-250	180-250
	9	350	100-160									180-250	180-250
	10	200	100-160									160-220	160-220
	11	350	240-350									160-220	160-220
	12	200	140-250									120-200	120-180
	13	330	140-250									120-200	120-180
M ACCIAI INOX STAINLESS STEELS ROSTFREIER STAHL ACIER INOXYDABLE	14.1	180	100-280								80-120	80-150	
	14.2	230-260	100-220									80-150	
K GHISA CAST IRON GROUJUSS FONTE GRISE	15	180	180-400					100-200	90-160	90-160	90-145	180-320	150-320
	16	260	180-400					90-150	80-130	80-130	90-135	180-320	150-320
	17	160	150-250					100-180	90-160	100-160	90-135	180-300	150-320
	18	250	150-300					70-140	70-150	90-150	70-100	180-300	110-180
	19	130	150-300					90-180	90-160	100-160	90-145	180-300	110-180
	20	230	150-300					70-160	70-150	70-150	80-120	180-300	110-180
N MATTON FERROSI NON FERROUS MAT. NICHT-EISENMATERIALIEN MAT. FERREUX	21	60		200-800	300-950	250-350	400-450	100-800	200-950	200-950	300-950		
	22	100		200-800	300-950	250-350	400-450	80-800	200-950	200-950	300-950		
	23	75		200-800	300-950	250-350	400-450	80-500	200-950	200-950	300-950		
	24	90		200-800	300-950	250-350	400-450	100-450	200-950	200-950	300-800		
	25	130		200-800	300-950	250-350	400-450	100-450	200-950	200-950	300-600		
	26	110		200-300	120-400	250-350	250-335	80-400	200-600	200-600	150-500		
	27	90		200-300	120-400	250-350	250-335	200-600	250-950	250-950	300-600		
	28	100		200-300	120-400	250-350	250-335	100-300	150-600	150-600	150-450		
	29			200-300	120-400	250-350	350-400	80-500	70-500	70-500			
	30			200-300	120-400	250-350	350-400	100-250	80-300	80-300			
S MAT DIFFICILI DIFFICULT MATERIAL SCHWIERIGE MATERIALIEN MAT. DIFICILES	31	200		30-130									
	32	280		30-130					20-30				
	33	250		30-130					16-24		20-25		
	34	350		30-130					13-20		10-20		
	35	320		30-130							10-20		
	36	Rm400		30-130							25-30		
	37	Rm1050		30-130									
H MATERIALI DURI HARD MATERIALS HARTE MATERIALIEN MATÉRIAUX DURS	38	55HRC									25-30	65-145	
	39	60HRC										65-95	
	40	400										65-95	
	41	55HRC										65-95	

MATERIALE MATERIAL MATERIALIEN MATÉRIAUX PAG 1119	VDI 3323 GR.	HB HRC Rm	F2425	T2035 NEW	F2135 NEW	F2435	F2635 NEW	F2140	F2740	F5105	F3710	T1415	T3115
P ACCIAI STEELS STAHL ACIER	1	125	130-250			170-190	60-280	100-250		220-310		220-400	
	2	180	130-250			170-190	60-280	100-250		220-310		220-400	
	3	250	130-250			170-190	60-280	100-250		220-310		220-400	
	4	220	130-250			170-190	60-280	100-250		220-310		220-400	
	5	300	130-250			170-190	60-280	100-250		220-310		220-400	
	6	180	130-250			90-150	60-220	80-200		270-300		220-400	
	7-8	250-300	60-180			90-150	60-220	80-200		270-300		200-320	
	9	350	60-180			90-150	60-220	80-200		270-300		200-320	
	10	200	80-200			120-200	60-200	80-150		210-250		180-320	
	11	350	80-200			120-200	60-200	80-150		210-250		180-320	
	12	200	120-250			140-180	60-200	80-150		150-200		200-320	
	13	330	120-250			140-180	60-200	80-150		150-200		200-320	
M ACCIAI INOX STAINLESS STEELS ROSTFREIER STAHL ACIER INOXYDABLE	14.1	180	100-250	60-200	110-180	110-200	60-200	90-170	100-160	100-180			
	14.2	230-260	40-160	60-200	80-130	55-150	60-200	90-170	70-120	100-180			
K GHISA CAST IRON GRAUGUSS FONTE GRISE	15	180								260-330	120-250	140-370	180-350
	16	260								260-330	120-250	140-370	140-250
	17	160								230-280	120-250	190-430	130-250
	18	250								230-280	100-200	190-430	100-200
	19	130								230-280	100-200	180-520	150-320
	20	230								230-280	100-200	180-520	120-250
N MATIRON FERROSI NONFERROUS MAT. NICHT-EISENMATERIALIEN MAT. FERREUX	21	60											
	22	100											
	23	75											
	24	90											
	25	130											
	26	110											
	27	90											
	28	100											
	29												
	30												
S MATDIFFICILI DIFFICULT MATERIAL SCHWIERIGE MATERIALIEN MAT. DIFFICILES	31	200		25-75	30-65			30-70		40-80	30-70		
	32	280		25-75	30-65			30-70		40-80	30-70		
	33	250		25-75	30-65			30-70		40-80	30-70		
	34	350		25-75	30-65			30-70		40-80	30-70		
	35	320		25-75	30-65			30-70		40-80	30-70		
	36	Rm400		25-75	30-65			30-70		40-80	30-70		
	37	Rm1050		25-75	30-65			30-70		40-80	30-70		
H MATERIALI DURI HARD MATERIALS HARTE MATERIALIEN MATÉRIAUX DURS	38	55HRC								80-140			
	39	60HRC								80-140			
	40	400								80-140			
	41	55HRC								80-140			

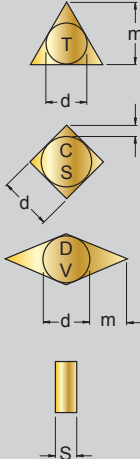
MATERIALE MATERIAL MATERIALEN MATERIAUX PAG 1119	VDI 3323 GR.	HB HRC Rm	T516	T3116	T1120 NEW	T3220	F3420	T5020	T1025	T1425	F4725	T526	T528N
P ACCAI STEELS STAHL ACIER	1	125			190-290	200-340		150-250	120-240	170-240	120-250	130-350	160-260
	2	180			190-290	200-340		150-250	120-240	170-240	120-250	110-320	130-220
	3	250			190-290	200-340		150-250	150-220	170-240	120-250	90-280	90-160
	4	220			190-290	200-340		150-250	110-190	170-240	120-250	100-280	
	5	300			190-290	200-340		150-250	110-190	170-240	120-250	90-250	
	6	180			160-230	200-340		150-250	110-190	170-240	120-250	80-250	150-220
	7-8	250-300			160-230	150-290		150-250	100-220	100-190	120-250	60-210	110-190
	9	350			145-210	150-290		150-250	80-180	130-210	100-220	60-180	90-160
	10	200			145-210	160-290		150-250	70-160	130-210	100-220	60-210	120-200
	11	350			145-210	160-290		150-250	70-160	130-220	100-220	60-170	90-140
	12	200			110-170	160-290		150-250	90-160	130-220	80-180	80-190	110-220
	13	330			110-170	160-290		150-250	90-160	130-220	80-180	70-170	90-180
M ACCAI INOX STAINLESS STEELS ROSTFREIER STAHL ACIER INOXYDABLE	14.1	180								100-210	120-250	110-200	120-180
	14.2	230-260								70-100	120-250	120-210	80-120
K GHISA CAST IRON GRAUGUSS FONTE GRISSE	15	180	180-350	180-360		150-400	200-320	100-250		130-210		120-220	160-220
	16	260	140-280	180-360		150-400	160-250	100-250		130-210		80-170	120-180
	17	160	130-250	140-230		200-450	180-350	100-250		120-240		80-200	110-210
	18	250	100-200	140-250		200-450	180-340	100-250		120-240		70-180	90-180
	19	130	150-320	110-220		200-550	180-340	100-250		150-250		70-180	90-180
	20	230	120-250	110-220		200-550	150-300	100-250		150-250		70-160	80-160
N MATIRON FERROSI NONFERROUS MAT. NICHT-EISENMATERIALIEN MAT. FERREUX	21	60											
	22	100											
	23	75											
	24	90											
	25	130											
	26	110											
	27	90											
	28	100											
	29												
	30												
S MATDIFFICILI DIFFICULT MATERIAL SCHWIERIGE MATERIALIEN MAT. DIFICILES	31	200										60-90	40-70
	32	280										60-90	30-40
	33	250											30-50
	34	350											30-50
	35	320											40-50
	36	Rm400											60-80
	37	Rm1050											
H MATERIALI DURI HARD MATERIALS HARTE MATERIALIEN MATERIAUX DURS	38	55HRC											
	39	60HRC											
	40	400										70-130	
	41	55HRC											

MATERIALE MATERIAL MATÉRIEL PAG 1119	VDI 3323 GR.	HB HRC Rm	T530	T1730	F4130	F4140	F4340	T1435	F3010	F6315	T5120	T525	F1325
P ACCIAI STEELS STAHL ACIER	1	125	170-260	150-230	180-300	210-345	150-300	170-190		110-160	200-400	200-400	175-265
	2	180	150-240	150-230	180-300	210-345	100-250	170-190		110-160	200-400	170-320	175-265
	3	250	130-180	150-230	180-300	210-345	100-200	170-190		110-160	200-400	170-280	175-265
	4	220	120-170	150-230	180-300	175-290	100-220	170-190		110-160	200-400	180-280	175-265
	5	300	120-160	130-180	180-300	175-290	70-170	170-190		110-160	190-270	140-230	145-215
	6	180	140-200	130-180	130-250	145-240	100-220	170-190		110-160	190-270	190-310	145-215
	7-8	250-300	120-180	130-180	130-250	145-240	100-180	90-150		110-160	190-270	130-240	145-215
	9	350	100-120	130-180	130-250	145-240	100-160	120-200		110-160	190-270	100-170	145-215
	10	200	110-160	110-160	150-250	125-205	90-150	120-200		110-160	170-240	170-240	130-190
	11	350	80-100	110-160	150-250	125-205	70-150	140-180		110-160	170-240	100-160	130-190
	12	200	120-150	110-160	130-190	105-170	120-250	140-180		110-160	150-220	200-300	130-190
	13	330	80-120	110-160	130-190	105-170	60-120	140-200		110-160	150-220	100-150	130-190
M ACCIAI INOX STAINLESS STEELS ROSTFREIER STAHL ACIER INOXYDABLE	14.1	180	100-150		130-270	110-235	80-160			90-120		160-260	90-150
	14.2	230-260	80-120		100-180	85-150	70-130			90-120		130-220	60-110
K GHISA CAST IRON GRAUGUSS FONTE GRISE	15	180	160-190		120-220	110-180			130-200	80-120	200-280	150-250	140-300
	16	260	100-120		120-220	110-180			130-200	80-120	200-280	150-200	140-300
	17	160	140-180		120-220	95-150			130-200	80-120	190-240	150-220	140-300
	18	250	120-150		120-220	95-150			130-200	80-120	160-230	120-160	140-300
	19	130	140-200		100-170	85-130			100-150	80-120	150-220	150-240	100-160
	20	230	130-165		100-170	85-110			100-150	80-120	150-220	120-180	100-160
N MATIRON FERROSI NON FERROUS MAT. NICHT-EISENMATERIALIEN MAT. FERREUX	21	60	300-1000			500-900							
	22	100	300-1000			500-900							
	23	75	150-1000			500-900							
	24	90	150-1000			500-700							
	25	130	150-700			500-700							
	26	110	100-400			330-550							
	27	90	100-400			330-550							
	28	100	100-400			330-550							
	29					500-900							
	30					500-900							
S MATDIFFICILI DIFFICULT MATERIAL SCHWIERIGE MATERIALIEN MAT. DIFFICILES	31	200				30-50							
	32	280				30-50							
	33	250	40-60			30-50						35-40	
	34	350	30-40			25-50						35-40	
	35	320	40-50			25-50						35-40	
	36	Rm400	40-70			50-80						50-75	
	37	Rm1050	30-50			50-80							
H MATERIALI DURI HARD MATERIALS HARTE MATERIALIEN MATÉRIEL DURS	38	55HRC			40-90	100-140						40-70	
	39	60HRC			30-60	80-110							
	40	400			50-100	100-140							
	41	55HRC			40-90	100-140							

MATERIALE MATERIAL MATERIALIEN MATÉRIEL PAG 1119	VDI 3323 GR.	HB HRC Rm	F2330 NEW	F2331 NEW	F1035	F1335	F2335 NEW	T540	T544	F4345			
P ACCIAI STEELS STAHL ACIER	1	125	220-290	220-300	70-180	150-230	220-280	170-250	170-260	100-220			
	2	180	220-290	220-300	70-180	150-230	220-280	140-200	150-240	100-220			
	3	250	220-290	220-300	70-180	150-230	220-280	120-150	130-180	100-220			
	4	220	220-290	220-300	70-180	150-230	220-280	110-150	120-170	100-220			
	5	300	220-290	220-300	70-170	130-180	220-280	100-120	120-160	140-215			
	6	180	180-240	170-240	70-170	130-180	180-220	140-200	140-200	140-215			
	7-8	250-300	180-240	170-240	70-170	130-180	180-220	100-140	120-180	140-215			
	9	350	180-240	170-240	70-170	130-180	180-220	70-100	100-120	140-215			
	10	200	160-220	140-220	60-140	110-160	140-200	90-130	110-160	130-190			
	11	350	160-220	140-220	60-140	110-160	140-200	60-100	80-100	130-190			
	12	200	140-200	140-220	60-140	110-160	120-180	120-170	120-150	130-190			
	13	330	140-200	140-220	60-140	110-160	120-180	80-130	80-120	130-190			
M ACCIAI INOX STAINLESS STEELS ROSTFREIER STAHL ACIER INOXYDABLE	14.1	180	155-190	120-180	40-140	80-140	135-165	70-180	100-150	70-130			
	14.2	230-260	120-150	100-160	40-140	80-140	100-140	60-130	80-120				
K GHISA CAST IRON GRAUGUSS FONTE GRISE	15	180					215-265		160-190				
	16	260					215-265		100-120				
	17	160					180-240		140-180				
	18	250					180-240		120-150				
	19	130					180-240		140-200				
	20	230					180-240		130-165				
N MAT NON FERROS NON FERROUS MAT NICH-TEISENMATERIALIEN MAT. FERREUX	21	60						300-1000	300-1000				
	22	100						300-700	300-1000				
	23	75						300-700	150-1000				
	24	90						300-500	150-1000				
	25	130						250-350	150-700				
	26	110						400-500	100-400				
	27	90						250-350	100-400				
	28	100							100-400				
	29												
	30												
S MAT DIFFICILI DIFFICULT MATERIAL SCHWIERIGE MATERIALIEN MAT. DIFCILES	31	200	40-75				40-65	35-100					
	32	280	40-75				40-65	35-70					
	33	250	40-75				40-65		40-60				
	34	350	40-75				40-65	20-60	30-40				
	35	320	40-75				40-65	40-60	40-50				
	36	Rm400	40-75				40-65	40-60	40-70				
	37	Rm1050	40-75				40-65		30-50				
H MATERIALI DURI HARD MATERIALS HARTE MATERIALIEN MATÉRIEL DURS	38	55HRC											
	39	60HRC											
	40	400											
	41	55HRC											

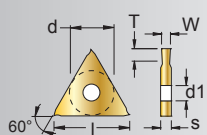
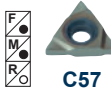
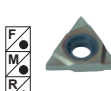
MATERIALE MATERIAL MATERIALIEN MATÉRIAUX PAG 1119	VDI 3323 GR.	HB HRC Rm											
P ACCIAI STEELS STAHL ACIER	1	125											
	2	180											
	3	250											
	4	220											
	5	300											
	6	180											
	7-8	250-300											
	9	350											
	10	200											
	11	350											
	12	200											
	13	330											
M ACCIAI INOX STAINLESS STEELS ROSTFREIER STAHL ACIER INOXYDABLE	14.1	180											
	14.2	230-260											
K GHISA CAST IRON GRAUGUSS FONTE GRISE	15	180											
	16	260											
	17	160											
	18	250											
	19	130											
	20	230											
N MAT. NON FERROSI NONFERROUS MAT. NICHT-EISENMATERIALIEN MAT. FERREUX	21	60											
	22	100											
	23	75											
	24	90											
	25	130											
	26	110											
	27	90											
	28	100											
	29												
	30												
S MAT. DIFFICILI DIFFICULT MATERIAL SCHWIERIGE MATERIALIEN MAT. DIFCILES	31	200											
	32	280											
	33	250											
	34	350											
	35	320											
	36	Rm400											
	37	Rm1050											
H MATERIALI DURI HARD MATERIALS HARTE MATERIALIEN MATÉRIAUX DURS	38	55HRC											
	39	60HRC											
	40	400											
	41	55HRC											

A	P	K	T		10	03		P	D	T	R	.	-	-	-	P
1	2	3	4		5	6		7a/7b	8	9			10	11	12	13

1	FORMA INSERTO SHAPE OF INSERT		2	SPOGLIA INFER. RELIEF ANGLE		3	TOLLERANZA+/-{mm} TOLERANCE+/-{mm}				4	TIPO INSERTO TYPE OF INSERT		
A		B		A				m	s	d	A		N	
C		D		B			A	+/-0,005	+/-0,025	+/-0,025	C		Q	
E		H		C			E	+/-0,025	+/-0,025	+/-0,025	E		R	
K		L		D			F	+/-0,005	+/-0,025	+/-0,013	F		T	
M		O		E			G	+/-0,025	+/-0,05	+/-0,025	G		U	
R		S		F			H	+/-0,013	+/-0,025	+/-0,013	H		W	
T		V		G			J	+/-0,005	+/-0,025	+/-0,05 +/-0,13	J		X	SPECIALE SPECIAL
W				N			K	+/-0,013	+/-0,025	+/-0,05 +/-0,13	K			
				O	altro other		L	+/-0,05	+/-0,013	+/-0,025	L			
				P			M	+/-0,08 +/-0,18	+/-0,13	+/-0,05 +/-0,18	M			
						N	+/-0,08 +/-0,18	+/-0,025	+/-0,05 +/-0,13	N				
						U	+/-0,13 +/-0,38	+/-0,05 +/-0,13	+/-0,08 +/-0,32	U				

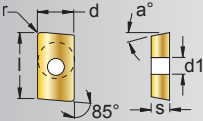
5	LUNGHEZZA TAGLIANTE CUTTING EDGE LENGTH	6	SPESORE THICKNESS	7a	RAGGIO RADIUS	8		9	
gd CERCHIO INSCRITTO CIRCLE	A C D E K L M O R S T V W								
3,97									
4,76									
5,56	05								
6,00									
6,35	06 07 06								
6,70	10								
7,94									
8,00									
9,45	16								
9,52	15-16 09 11 09 16 15 09								
10,00									
11,00									
11,50									
12,00									
12,62									
12,70	12 15 12 15-20 05 12 22 08								
15,87	16								
19,05	19								

10	LETTERA DI IDENTIF. IDENTIFICATION LETTER	11	CAMPO DI LAVORAZIONE MACHINING TYPES	12	PREPARAZIONE TAGLIANTE CUTTING EDGE PREPARATION	13	LUCIDATO POLISH
A	M			1 =	SPECIFICO PER GHISA SPECIFIC FOR CAST IRON		
C	N			3 =	SPECIFICO PER ACCIAIO INOX SPECIFIC FOR STAINLESS STEEL		
D	P			7 =	SPECIFICO PER LEGHE DI ALLUMINIO SPECIFIC FOR ALUMINIUM ALLOYS		
E	R			9 =	SPECIFICO PER ACCIAIO SPECIFIC FOR STEEL		
F	S			2 =			
G	T			4 =			
H	U			5 =	INTERMEDI DI USO GENERICO INTERMEDIATE FOR GENERAL USE		
I	W			6 =			
J	Y			8 =			
K	Z						
L							

156.15.. 154.15..									HT	HW	HC										
									CERMET	NON RIVESTITI CEMENTED CARBIDE GRADES		RIVESTITI COATED GRADES BESCHICHTET RECOUVERTS									
ART.	COD.	l	d	s	d1	W	T		N6315 N3440				F4340							F6315	
 C54	TOLLERANZA W - W TOLERANCE																				
	156.15-16110	.C54	16,0	9,52	3	4,5	1,10	3,0													
	156.15-16130	.C54	16,0	9,52	3	4,5	1,30	3,0													
	156.15-16160	.C54	16,0	9,52	3	4,5	1,60	3,0													
	156.15-16185	.C54	16,0	9,52	3	4,5	1,85	3,0													
	156.15-16215	.C54	16,0	9,52	3	4,5	2,15	3,0													
	156.15-16265	.C54	16,0	9,52	3	4,5	2,65	3,0													
	156.15-16315	.C54	16,0	9,52	3,5	4,5	3,15	3,3													
	156.15-16415	.C54	16,0	9,52	4,5	4,5	4,15	3,3													
	 C57	156.15-16110	.C57	16,0	9,52	3	4,5	1,10	3,0		■										
		156.15-16130	.C57	16,0	9,52	3	4,5	1,30	3,0		■										
		156.15-16160	.C57	16,0	9,52	3	4,5	1,60	3,0		■										
		156.15-16185	.C57	16,0	9,52	3	4,5	1,85	3,0		■										
156.15-16215		.C57	16,0	9,52	3	4,5	2,15	3,0		■											
156.15-16265		.C57	16,0	9,52	3	4,5	2,65	3,0		■											
156.15-16315		.C57	16,0	9,52	3,5	4,5	3,15	3,3		■											
156.15-16415		.C57	16,0	9,52	4,5	4,5	4,15	3,3		■											
	TOLLERANZA W - W TOLERANCE																				
	154.15-16110		16,0	9,52	2,5	4,5	1,25	1,2		■		■									
	154.15-16130		16,0	9,52	2,5	4,5	1,45	1,5		■		■									
	154.15-16160		16,0	9,52	2,5	4,5	1,80	1,8		■		■									
	154.15-16185		16,0	9,52	2,5	4,5	2,00	3		■		■									
	154.15-16215		16,0	9,52	2,8	4,5	2,30	3		■		■									
	154.15-16265		16,0	9,52	3,3	4,5	2,80	3		■		■									
	154.15-16315		16,0	9,52	3,8	4,5	3,35	3		■		■									
MATERIALE - MATERIAL - MATERIALIEN - MATÉRIAUX										N6315 N3440		F4340							F6315		
P	ACCIAIO - STEEL - STAHL - ACIER											●							●		
M	ACCIAIO INOX - STAINLESS STEEL - ROSTFREIER STAHL - ACIER INOXYDABLE											●							●		
K	GHISA - CAST IRON - GRAUGUSS - FONTE GRISE									●									●		
N	LEGHE DI ALLUMINIO - ALUMINIUM ALLOYS - ALUMINIUM-LEGIERUNGEN - ALLIAGES D'ALUMINIUM									● ●											
S	LEGHE RESISTENTI AL CALORE - HEAT RESISTANT ALLOYS - WÄRMEBESTÄNDIGE LEGIERUNGEN - ALLIAGES RÉISTANTES À LA CHALEUR																				
H	MATERIALI DURI E TEMPRATI - HARD AND HARDENED MATERIAL - HARTE UND GEHÄRTETE MATERIALIEN - MATERIAUX DURS ET TREMPÉS																				
■ DISPONIBILI - IN STOCK - LIEFERBAR - DISPONIBLES / ■ NEW ● APPLICAZIONE CONSIGLIATA-RECOMMENDED APPLICATION- EMPFOHLENER EINSATZ - APPLICATION CONSEILLÉE								□ A RICHIESTA - ON REQUEST - AUF ANFRAGE - SUR DEMANDE / □ NEW ○ APPLICAZIONE POSSIBILE - POSSIBLE APPLICATION - MÖGLICHE ANWENDUNG - APPLICATION POSSIBLE													

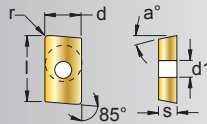
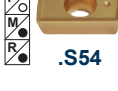
■ DISPONIBILI - IN STOCK - LIEFERBAR - DISPONIBLES / ■ NEW
 ● APPLICAZIONE CONSIGLIATA - RECOMMENDED APPLICATION -
 EMPFOHLENER EINSATZ - APPLICATION CONSEILLÉE

□ A RICHIESTA - ON REQUEST - AUF ANFRAGE - SUR DEMANDE / □ NEW
 ○ APPLICAZIONE POSSIBILE - POSSIBLE APPLICATION -
 MÖGLICHE ANWENDUNG - APPLICATION POSSIBLE

APHT APKT APKX									HT	HW					HC																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
									CERMET	NON RIVESTITI CEMENTED CARBIDE GRADES					RIVESTITI COATED GRADES BESCHICHTET RECOUVERTS																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				

■ DISPONIBILI - IN STOCK - LIEFERBAR - DISPONIBLES / ■ **NEW**
 ● APPLICAZIONE CONSIGLIATA-RECOMMENDED APPLICATION-
 EMPFOHLENER EINSATZ - APPLICATION CONSEILLÉE

□ A RICHIESTA - ON REQUEST - AUF ANFRAGE - SUR DEMANDE / □ **NEW**
 ○ APPLICAZIONE POSSIBILE - POSSIBLE APPLICATION -
 MÖGLICHE ANWENDUNG - APPLICATION POSSIBLE

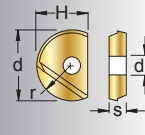
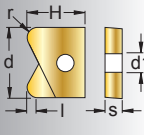
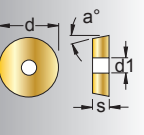
APMT APFT APFX APKT APKX									HT	HW	HC																	
									CERMET	NON RIVESTITI CEMENTED CARBIDE GRADES				RIVESTITI COATED GRADES BESCHICHTET RECOUVRETS														
ART.	COD.	l	d	s	d1	r	a°			T110	T120		F4635	T516	T526	T528N	T530							T525	F2330 €m2	F2335 €m2	T544	
 .S51	APKT 1604 PDR .S51	17,0	9,45	5,26	4,4	0,4	11			■																		
 .I52	APMT 1604 PDR .I52	17,0	9,45	5,26	4,4	0,8	11								■													
 .S52	APKT 1604 PDTR .S52	17,0	9,45	5,26	4,4	0,8	11								■	■												
 .S52	APFT 1604 PDTR .S52	17,0	9,45	4,76	4,4	0,8	11																	■				
 .S52	APKX 1604 PDR .S52	17,0	9,45	5,76	4,4	0,8	11							■										■		■		
 .S52	APFX 160416R .S52	17,0	9,45	4,76	4,4	1,6	11																	■				
	APFX 160424R .S52	17,0	9,45	4,76	4,4	2,4	11																	■				
	APFX 160430R .S52	17,0	9,45	4,76	4,4	3,0	11																	■				
	APFX 160440R .S52	17,0	9,45	4,76	4,4	4,0	11																	■				
	APFX 160448R .S52	17,0	9,45	4,76	4,4	4,8	11																	■				
	APFX 160460R .S52	17,0	9,45	4,76	4,4	6,0	11																			■		
 .S54	APKT 1604 PDTR .S54	17,0	9,45	5,26	4,4	0,4	11																	■				
 .Z54	APKT 1604 PDSR .Z54	17,0	9,45	5,26	4,4	0,8	11								■													
 .T55	APKT 1604 PDR .T55 NEW	17,0	9,45	5,76	4,5	0,8	11																		■	■		
 .K57P	APKT 1604 PDFR .K57P	16,4	9,53	4,76	4,4	0,2	11			■																		
MATERIALE - MATERIAL - MATERIALIEN - MATÉRIAUX										T110	T120		F4635	T516	T526	T528N	T530						T525	F2330 €m2	F2335 €m2	T544		
P	ACCIAIO - STEEL - STAHL - ACIER												●		●	●	●						●	○	○	●		
M	ACCIAIO INOX - STAINLESS STEEL - ROSTFREIER STAHL - ACIER INOXYDABLE									○			●		○	○							●	●	●	●		
K	GHISA - CAST IRON - GRAUGUSS - FONTE GRISE									●			○	●	●	○	○						○	○	○			
N	LEGHE DI ALLUMINIO - ALUMINIUM ALLOYS - ALUMINIUM-LEGIERUNGEN - ALLIAGES D'ALUMINIUM									●	○						○									○		
S	LEGHE RESISTENTI AL CALORE - HEAT RESISTANT ALLOYS - WÄRMEBESTÄNDIGE LEGIERUNGEN - ALLIAGES RÉISTANTES À LA CHALEUR									○					○	○	○						○	●	●	○		
H	MATERIALI DURI E TEMPRATI - HARD AND HARDENED MATERIAL - HARTE UND GEHÄRTETE MATERIALIEN - MATERIAUX DURS ET TREMPÉS																						○					

■ DISPONIBILI - IN STOCK - LIEFERBAR - DISPONIBLES / ■ NEW
 ● APPLICAZIONE CONSIGLIATA - RECOMMENDED APPLICATION - EMPFOHLENER EINSATZ - APPLICATION CONSEILLÉE

□ A RICHIESTA - ON REQUEST - AUF ANFRAGE - SUR DEMANDE / □ NEW
 ○ APPLICAZIONE POSSIBILE - POSSIBLE APPLICATION - MÖGLICHE ANWENDUNG - APPLICATION POSSIBLE

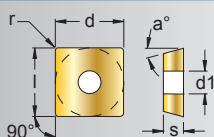
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■ A RICHIESTA - ON REQUEST - AUF ANFRAGE - SUR DEMANDE / ■ NEW
○ APPLICAZIONE POSSIBILE - POSSIBLE APPLICATION -
 MÖGLICHE ANWENDUNG - APPLICATION POSSIBLE

RA		RAET		RDET RDEW RDEX RDHT RDHX		HT		HW		HC	
						CERMET		NON RIVESTITI CEMENTED CARBIDE GRADES		RIVESTITI COATED GRADES BESCHICHTET RECOUVERTS	
ART	COD.	d	s	d1	H	r	l/a°	N3620		F5105 F7810 €m2	F2331 €m2 F2335 €m2
	RA 08. 04 .F42	8,0	2,4	2,5	7	4	—				
	RA 10. 04 .F42	10,0	2,6	3,0	8,5	5	—				
	RA 12. 04 .F42	12,0	3,0	3,5	10	6	—				
	RA 16. 04 .F42	16,0	4,0	4,0	12	8	—				
	RA 20. 04 .F42	20,0	5,0	5,0	15	10	—				
	RA 25. 04 .F42	25,0	6,0	6,0	18,5	12,5	—				
	RA 32. 04 .F42	32,0	7,0	8,0	23,5	16	—				
	NEW										
	RAET 080006 .F42	8,0	2,4	2,5	7,0	0,6	1,6				
	RAET 080010 .F42	8,0	2,4	2,5	7,0	1,0	2,0				
	RAET 100005 .F42	10,0	2,6	3,0	8,5	0,5	1,5				
	RAET 100008 .F42	10,0	2,6	3,0	8,5	0,8	1,8				
	RAET 100010 .F42	10,0	2,6	3,0	8,5	1,0	2,0				
	RAET 120005 .F42	12,0	3,0	3,5	10,0	0,5	1,5				
	RAET 120010 .F42	12,0	3,0	3,5	10,0	1,0	2,0				
	RAET 120020 .F42	12,0	3,0	3,5	10,0	2,0	3,0				
	RAET 160010 .F42	16,0	4,0	4,0	12,0	1,0	2,0				
	RAET 160030 .F42	16,0	4,0	4,0	12,0	3,0	4,0				
	RAET 200010 .F42	20,0	5,0	5,0	15,0	1,0	2,0				
	RAET 200040 .F42	20,0	5,0	5,0	15,0	4,0	5,0				
	RAET 250010 .F42	25,0	6,0	6,0	18,5	1,0	2,0				
	RAET 250050 .F42	25,0	6,0	6,0	18,5	5,0	6,0				
	NEW										
	RDHX 0501 MOE .T42	5,0	1,51	2,2	—	—	15				
	RDHX 07T1 MOT .T42	7,0	1,98	2,8	—	—	15				
	RDHX 0702 MOT .T42	7,0	2,38	2,8	—	—	15				
	RDHX 1003 MOT .T42	10,0	3,18	3,9	—	—	15				
	RDHX 12T3 MOT .T42	12,0	3,97	3,9	—	—	15				
	RDHX 1604 MOT .T42	16,0	4,76	5,2	—	—	15				
	RDET 1003 MOSN .T56	10,0	3,18	4,4	—	—	15				
	RDET 12T3 MOSN .T56	12,0	3,97	4,4	—	—	15				
	RDEX 1604 MOSN .T56	16,0	4,76	5,5	—	—	15				
	RDEW 1003 MOSN .T56	10,0	3,18	4,4	—	—	15				
	RDEW 12T3 MOSN .T56	12,0	3,97	4,4	—	—	15				
	RDEW 1604 MOSN .T56	16,0	4,76	5,5	—	—	15				
	RDHT 07T1 MO .T57P	7,0	1,98	2,8	—	—	15				
	RDHT 0702 MO .T57P	7,0	2,38	2,8	—	—	15				
	RDHT 1003 MO .T57P	10,0	3,18	3,9	—	—	15				
	RDHT 12T3 MO .T57P	12,0	3,97	3,9	—	—	15				
	RDHT 1604 MO .T57P	16,0	4,76	5,2	—	—	15				
MATERIALE - MATERIAL - MATERIALIEN - MATÉRIAUX								N3620		F5105 F7810 €m2	F2331 €m2 F2335 €m2
P	ACCIAIO - STEEL - STAHL - ACIER									● ●	● ○
M	ACCIAIO INOX - STAINLESS STEEL - ROSTFREIER STAHL - ACIER INOXYDABLE									○	● ●
K	GHISA - CAST IRON - GRAUGUSS - FONTE GRISE									● ●	○
N	LEGHE DI ALLUMINIO - ALUMINIUM ALLOYS - ALUMINIUM-LEGIERUNGEN - ALLIAGES D'ALUMINIUM							●			
S	LEGHE RESISTENTI AL CALORE - HEAT RESISTANT ALLOYS - WÄRMEBESTÄNDIGE LEGIERUNGEN - ALLIAGES RÉISTANTES À LA CHALEUR										●
H	MATERIALI DURI E TEMPRATI - HARD AND HARDENED MATERIAL - HARTE UND GEHÄRTETE MATERIALIEN - MATERIAUX DURS ET TREMPÉS									● ●	

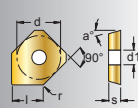
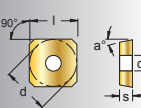
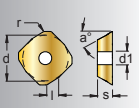
■ DISPONIBILI - IN STOCK - LIEFERBAR - DISPONIBLES / ■ NEW
 ● APPLICAZIONE CONSIGLIATA-RECOMMENDED APPLICATION-
 EMPFOHLENER EINSATZ - APPLICATION CONSEILLÉE

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 MÖGLICHE ANWENDUNG - APPLICATION POSSIBLE

SCMX SDMT									HT	HW	HC																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
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□ A RICHIESTA - ON REQUEST - AUF ANFRAGE - SUR DEMANDE / □ **NEW**
 ○ APPLICAZIONE POSSIBILE - POSSIBLE APPLICATION -
 MÖGLICHE ANWENDUNG - APPLICATION POSSIBLE

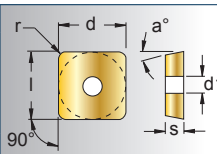
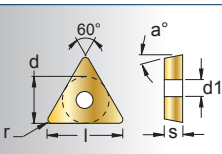
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□ A RICHIESTA - ON REQUEST - AUF ANFRAGE - SUR DEMANDE / □ NEW
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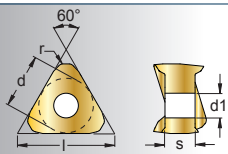
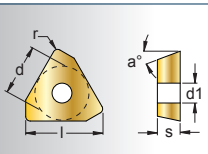
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