
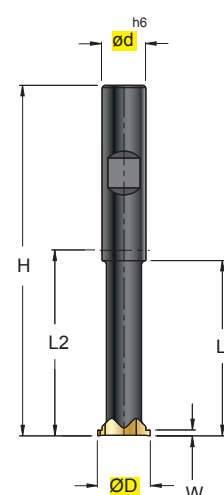
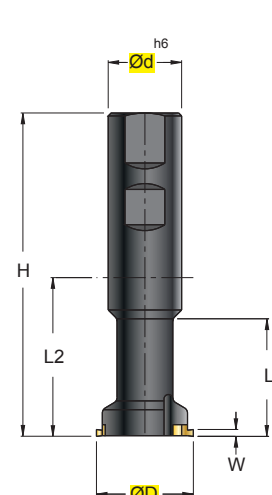
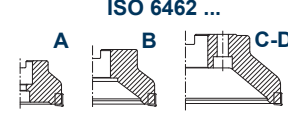
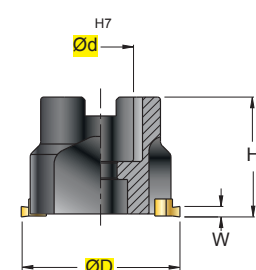














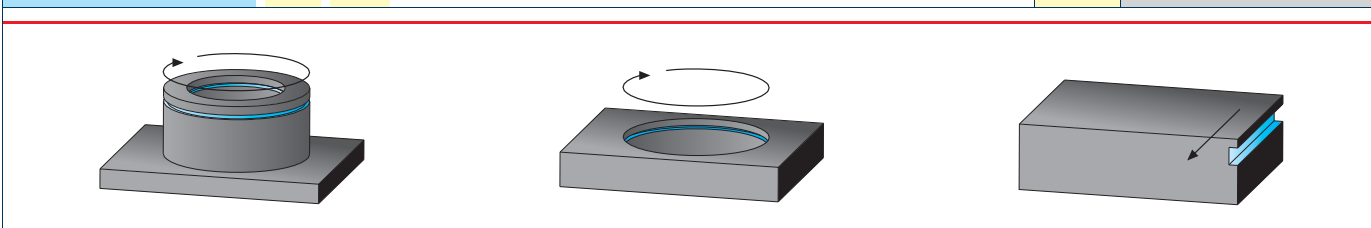


FW .. 00	FW .. 01	FA .. 01 FA .. 02	NFL 00 ...
Ø 12	Ø 21-33	Ø 48-83	
		<p style="text-align: center;">ISO 6462 ...</p>  	NFL 01 ... 
			NFL 02 ... 
			 INSERTI - INSERTS PAG. B 265

(mm)												ISO 6462			
ART.	ØD	Ød	H	L	L2	Z	K	W	kg						
FW - 1210 RNAS - 00	12	10	80	40	40	2	2	1,35	0,05	1,2+1,5	-	00	123010	5508	

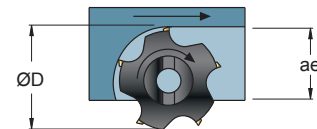
(mm)												ISO 6462				
ART.	ØD	Ød	H	L	L2	Z	K	W	kg							
FW - 2116 RNAS - 01	21	16	75	15	27	2	2	2,70	0,12	1,2+1,5	-	01	123010	5508	-	
FW - 3325 RNAS - 01	33	25	110	29	54	3	3	2,70	0,41	1,2+1,5	-					
FA - 4816 RNAS - 01	48	16	26	-	-	4	4	2,70	0,11	1,2+1,5	B	01	123010	5508	VBSF08	
FA - 8327 RNAS - 02	83	27	32	-	-	6	6	4,20	0,50	5,5+7,0	B	02	125016	5520	VBSF12	



SCelta VELOCE - QUICK PICK							HT	HW	HC									
							CERMET	NON RIV. CEMENTED CARBIDE GRADES	RIVESTITI COATED GRADES BESCHICHTET RECOUVERTS		00/01			02				
COD.	P	M	K	N	S	H	T120	T225				l	B	s	d1	W	a°	
NFL-00-115-AL		○		○	○		□					6	0,7	4	3,4	1,15	-	
NFL-00-135-AL		○		○	○		□					6	1,0	4	3,4	1,35	-	
NFL-01-115-AL		○		○	○		□					7	0,7	4	3,4	1,15	-	
NFL-01-135-AL		○		○	○		□					7	1,0	4	3,4	1,35	-	
NFL-01-165-AL		○		○	○		□					7	1,1	4	3,4	1,65	-	
NFL-01-190-AL		○		○	○		□					7	1,4	4	3,4	1,90	-	
NFL-01-220-AL		○		○	○		□					7	1,6	4	3,4	2,20	-	
NFL-01-270-AL		○		○	○		□					7	1,9	4	3,4	2,70	-	
NFL-02-320-AL		○		○	○		□					10	2,1	6	5,5	3,20	-	
NFL-02-420-AL		○		○	○		□					10	2,5	6	5,5	4,20	-	
NFL-00-115-GE			●				□					6	0,7	4	3,4	1,15	-	
NFL-00-135-GE			●				□					6	1,0	4	3,4	1,35	-	
NFL-01-115-GE			●				□					7	0,7	4	3,4	1,15	-	
NFL-01-135-GE			●				□					7	1,0	4	3,4	1,35	-	
NFL-01-165-GE			●				□					7	1,1	4	3,4	1,65	-	
NFL-01-190-GE			●				□					7	1,4	4	3,4	1,90	-	
NFL-01-220-GE			●				□					7	1,6	4	3,4	2,20	-	
NFL-01-270-GE			●				□					7	1,9	4	3,4	2,70	-	
NFL-02-320-GE			●				□					10	2,1	6	5,5	3,20	-	
NFL-02-420-GE			●				□					10	2,5	6	5,5	4,20	-	
NFL-00-115-ST	●	○	○				□					6	0,7	4	3,4	1,15	-	
NFL-00-135-ST	●	○	○				□					6	1,0	4	3,4	1,35	-	
NFL-01-115-ST	●	○	○				□					7	0,7	4	3,4	1,15	-	
NFL-01-135-ST	●	○	○				□					7	1,0	4	3,4	1,35	-	
NFL-01-165-ST	●	○	○				□					7	1,1	4	3,4	1,65	-	
NFL-01-190-ST	●	○	○				□					7	1,4	4	3,4	1,90	-	
NFL-01-220-ST	●	○	○				□					7	1,6	4	3,4	2,20	-	
NFL-01-270-ST	●	○	○				□					7	1,9	4	3,4	2,70	-	
NFL-02-320-ST	●	○	○				□					10	2,1	6	5,5	3,20	-	
NFL-02-420-ST	●	○	○				□					10	2,5	6	5,5	4,20	-	
CON ADDUZIONE LUBROREFRIGERANTE - WITH COOLANT SUPPLY								○ ●										
SENZA ADDUZIONE LUBROREFRIGERANTE - WITHOUT COOLANT SUPPLY								○ ○										

MATERIALI - MATERIALS Pag. H 73		VDI 3323 GR.	HB Rm1) HRC2)	fz0 mm	Vc m/min Pag. B 254	
					T120	T225
P	ACCIAIO NON LEGATO - NOT ALLOY STEEL	1--5	125-300	0,1		150
	ACCIAIO POCO LEGATO - LOW ALLOY STEEL	6--9	180-350	0,08		110
	ACCIAIO ALTO LEGATO - ALLOY STEEL	10-11	200-325	0,08		100
	INOX MARTENS. - STAINLESS STEEL MART	12-13	200-240	0,06		120
M	INOX AUST. DUPLEX - STAINLESS STEEL AUST	14.1-14.2	180-230	0,06	100	110
K	GHISA GRIGIA - GREY CAST IRON	15-16	180-260	0,12	120	120
	GHISA SFEROIDALE - SPHEROIDAL GRAPHITE	17-18	160-250	0,1	110	110
	GHISA MALLEABILE - MALLEABLE CAST IRON	19-20	130-230	0,1	120	120
N	ALLUMINIO E SUE LEGHE - ALUMINIUM	21--25	60-130	0,1	500	
	RAME E SUE LEGHE - COPPER	26--28	90-110	0,08	300	
	NON METALLICI - PLASTICS	29-30	/	0,08		
S	LEGHE RESIST. CALORE - HIG. TEMP. ALLOY	31--35	200-320	0,06	20	
	TITANIO E SUE LEGHE - TITANIUM	36-37	400-1050 ^b	0,06	30	
H	ACCIAIO TEMPRATO - HARDENED STEEL	38--41	45-60 ^a			

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



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

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

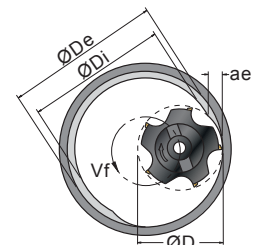
$$fz = fz0 \cdot Kae = \text{mm}$$

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

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

$$ae = \frac{\text{ØDe}^2 - \text{ØDi}^2}{4 \cdot (\text{ØDe} - \text{ØD})} = \text{mm}$$

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

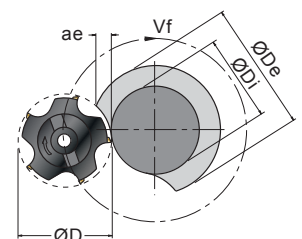


F = FINITURA, LAV. LEGGERA - FINISHING, LIGHT MACHINING
M = LAV. MEDIA, GENERICA - MEDIUM MACHINING, GENERIC
R = SGROSSATURA, LAV. PESANTE - ROUGHING, HEAVY MACHINING

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

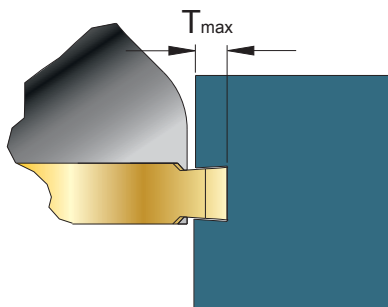
$$ae = \frac{\text{ØDe}^2 - \text{ØDi}^2}{4 \cdot (\text{ØDi} + \text{ØD})} = \text{mm}$$

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

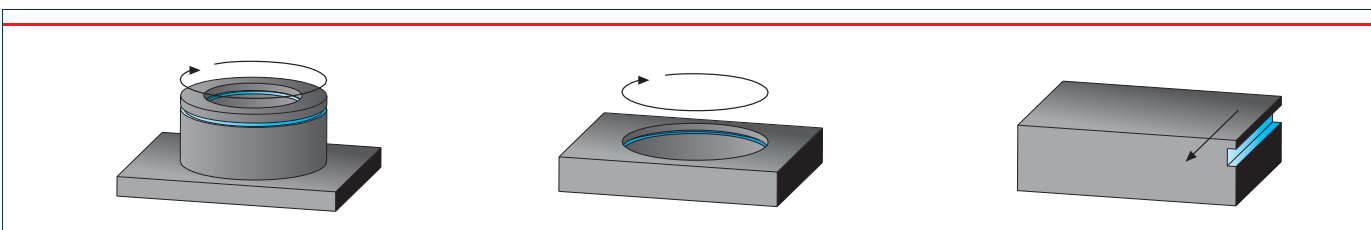


S 666W .. 16	\varnothing 19-34	S 668W .. 16	\varnothing 48-63	156.15.16.. .C54	
		ISO 6462 ...		156.15.16.. .C57	
				154.15.16..	
				INSERTI - INSERTS PAG. B 261	

(mm)																
ART.	\varnothing D	\varnothing d	H	L	L2	Z	K	W			ISO 6462					
S 666W	019-16	19	16	100	20	52	1	1	1,1-1,3	0,15	3,5+4,0	-	155.15-16	FS244P	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	155.15-16	FS244P	5515P	VBSF08
S 668W	063-16	63	22	40	-	-	5	5	2,65-4,15	0,44	3,5+4,0	A	155.15-16	FS244P	5515P	VBSF10



\varnothing D	T max
19	1,8
34 - 48 - 63	2,3

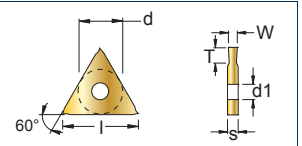


K = FATTORE D 'AVANZAMENTO - FACTOR OF FEED - VORSCHUBFAKTOR - FACTEUR D' AVANCE

SCelta VELOCE - QUICK PICK



HT	HW	HC	
CERMET	NON RIV. CEMENTED GRADES CARBIDE GRADES	RIVESTITI COATED GRADES BESCHICHTET RECOUVERTS	
N6315	F6315		



COD.	P	M	K	N	S	H	N6315	F6315	I	d	s	TOLLERANZA W - W TOLERANCE			
												d1	T	r/W	+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	

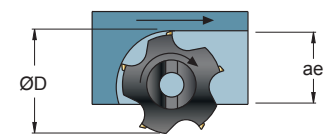
É POSSIBILE UTILIZZARE INSERTI 154.. NON RETTIFICATI, PAG B 261
 154.. INSERTS CAN BE USED.. NOT GROUND, PAGE B 261
 DIE VERWENDUNG NICHT GESCHLIFFENER WENDEPLATTEN 154.. IST MÖGLICH, S. SEITE B 261
 IL EST POSSIBLE D'UTILISER DES PLAQUETTES 154.. NON RECTIFIÉES, PAGE B 261

CON ADDUZIONE LUBROREFRIGERANTE - WITH COOLANT SUPPLY

SENZA ADDUZIONE LUBROREFRIGERANTE - WITHOUT COOLANT SUPPLY

MATERIALI - MATERIALS Pag. H 73		VDI 3323 GR.	HB Rm1) HRC2)	fz0 mm			Vc m/min Pag.B 254		
				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 ^a						
H	ACCIAIO TEMPRATO - HARDENED STEEL	38--41	45-60 ^a						

ae/D	0,5-1 50-100%	0,2 20%	0,1 10%	0,05 5%
Vc Pag. B 254	Vc (min)-----Vc(max)			
	R-----M-----F			



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

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

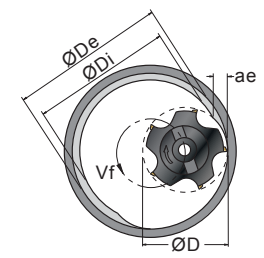
$$fz = fz0 \cdot Kae = \text{mm}$$

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

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

$$ae = \frac{\text{ØDe}^2 - \text{ØDi}^2}{4 \cdot (\text{ØDe} - \text{ØD})} = \text{mm}$$

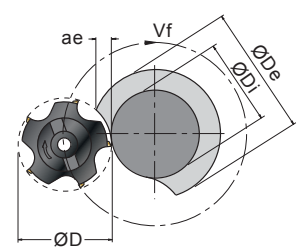
$$Vf = \left(1 - \frac{\text{ØD}}{\text{ØDe}}\right) \cdot n \cdot fz \cdot z = \text{mm/min}$$



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

$$ae = \frac{\text{ØDe}^2 - \text{ØDi}^2}{4 \cdot (\text{ØDi} + \text{ØD})} = \text{mm}$$

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



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

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