
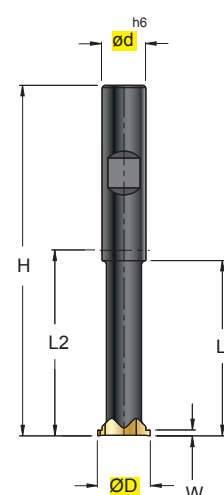
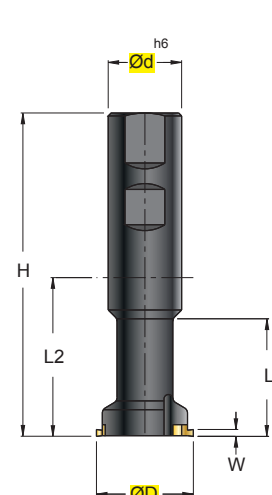
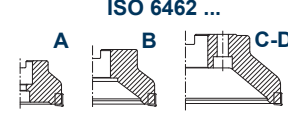
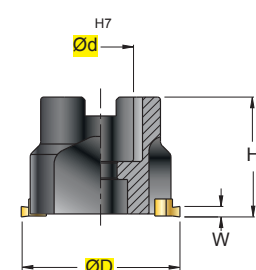














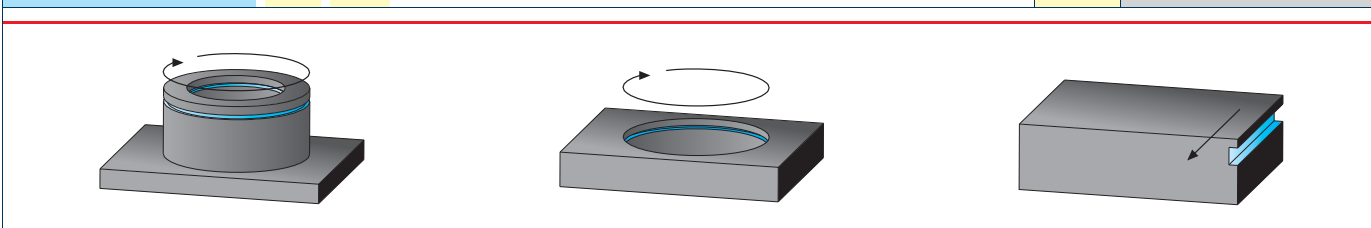


FW .. 00	FW .. 01	FA .. 01 FA .. 02	NFL 00 ...	
<p>Ø 12</p> 	<p>Ø 21-33</p> 	<p>Ø 48-83</p> <p>ISO 6462 ...</p>  	NFL 01 ...	
			NFL 02 ...	
			 INSERTI - INSERTS PAG. B 265	

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

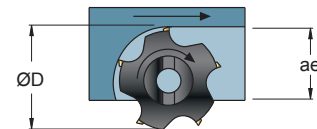
(mm)												ISO 6462				
ART.	ØD	Ød	H	L	L2	Z	K	W		kg	Nm					
FW - 2116 RNAS - 01	21	16	75	15	27	2	2	2,70		0,12	1,2+1,5	-	01	123010	5508	-
FW - 3325 RNAS - 01	33	25	110	29	54	3	3	2,70		0,41	1,2+1,5	-				
FA - 4816 RNAS - 01	48	16	26	-	-	4	4	2,70		0,11	1,2+1,5	B	01	123010	5508	VBSF08
FA - 8327 RNAS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



SCelta VELOCE - QUICK PICK							Toughness	Pag. B 238	HT	HW	HC		00/01		02		
									CERMET	NON RIV. CEMENTED CARBIDE GRADES	RIVESTITI COATED GRADES BESCHICHTET RECOUVERTS		l	B	s	d1	W
COD.	P	M	K	N	S	H		T120	T225								
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		VDI 3323 GR.	HB Rm1) HRC2)	fz0 mm	Vc m/min		Pag. B 254	
P	M				T120	T225		
	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 ^a	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

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

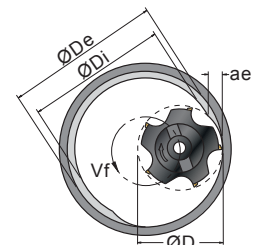
$$fz = fz0 \cdot Kae = \text{mm}$$

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

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

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

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

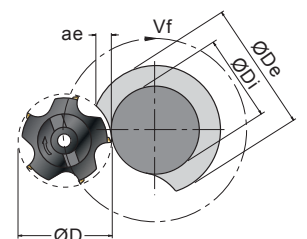


- F = FINITURA, LAV. LEGGERA - FINISHING, LIGHT MACHINING
M = LAV. MEDIA, GENERICA - MEDIUM MACHINING, GENERIC
R = SGROSSATURA, LAV. PESANTE - ROUGHING, HEAVY MACHINING

- 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

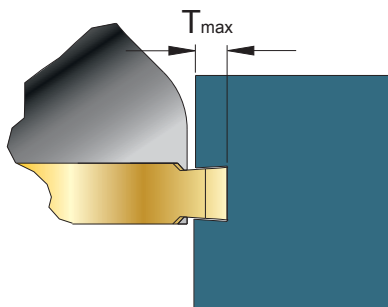
$$ae = \frac{\text{ØDe}^2 - \text{ØDi}^2}{4 \cdot (\text{ØDi} + \text{ØD})} = \text{mm}$$

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

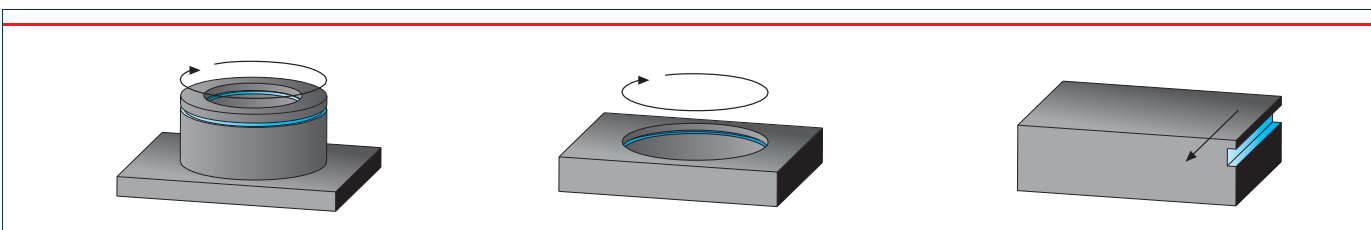


S 666W .. 16	\varnothing 19-34	S 668W .. 16	\varnothing 48-63	156.15.16.. .C54	
		ISO 6462 ...		156.15.16.. .C57	
				154.15.16..	
				INSERTI - INSERTS PAG. B 261	

(mm)																
ART.	\varnothing D	\varnothing d	H	L	L2	Z	K	W	kg	Nm				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	RIVESTITI COATED GRADES									
							N6315	FMZ	F6315									
COD.	P	M	K	N	S	H							l	d	s	d1	T	r/W
Tenacità + ↑ Toughness - ↓ Pag. B 238																		
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

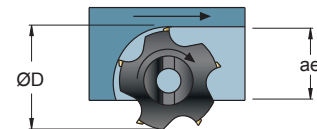
É POSSIBILE UTILIZZARE INSERTI 154.. NON RETTIFICATI, PAG B 261
 154.. INSERTS CAN BE USED.. NOT GROUND, PAGE B 261
 DIE VERWENDUNG NICHT GESCHLIFFENER WENDEPLATTEN 154.. IST MÖGLICH, S. SEITE B 261
 IL EST POSSIBLE D'UTILISER DES PLAQUETTES 154.. NON RECTIFIÉES, PAGE B 261

CON ADDUZIONE LUBROREFRIGERANTE - WITH COOLANT SUPPLY

SENZA ADDUZIONE LUBROREFRIGERANTE - WITHOUT COOLANT SUPPLY

MATERIALI - MATERIALS		VDI 3323 GR.	HB Rm1) HRC2)	fz0 mm			Vc m/min Pag.B 254		
Pag. H 73				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

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

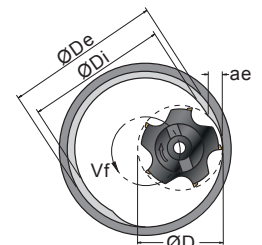
$$fz = fz0 \cdot Kae = \text{mm}$$

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

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

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

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



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

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

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

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

