



FORATURA LAVORAZIONE FORI

DRILLING - MACHINING OF BORES / BOHREN - BEARBEITUNG VON BOHRUNGEN /
PERÇAGE - USINAGE DES TROUS / TALADRAR - TRABAJO DE LOS AGUJEROS



	PUNTE INTEGRALI IN METALLO DURO	
	SOLID CARBIDE DRILLS	
	HM VOLLBOHRER	
	FORETS EN CARBURE MONOBLOC	
	PUNTAS INTEGRALES EN METAL DURO	

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	PUNTE AD INSERTI	
	INDEXABLE INSERTS DRILLING TOOLS	
	WENDEPLATTEVOLLBOHRER	
	FORET À PLAQUETTES	
	BROCAS CON PLAQUITAS	

Pag. 602

	UTENSILI PER LAVORAZIONE FORI	
	TOOLS FOR MACHINING BORES	
	WERKZEUGE ZUR BEARBEITUNG VON BOHRUNGEN	
	OUTILS POUR USINAGE TROUS	
	HERRAMIENTAS PARA TRABAJO DE LOS AGUJEROS	

Pag. 618

	INSERTI PER FORATURA	
	DRILLING INSERTS	
	WENDEPLATTEN ZUM BOHREN	
	PLAQUÉTTES POUR PERÇAGE	
	PLAQUITAS DE TALADRADO	

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	INSERTI PER LAVORAZIONE FORI	
	INSERTS FOR MACHINING BORES	
	WENDEPLATTEN ZUR BEARBEITUNG VON BOHRUNGEN	
	PLAQUETTES POUR USINAGE TROUS	
	PLAQUITAS PARA TRABAJO DE LOS AGUJEROS	

Pag. 647

SAU SDF1201
PAG. 527

1 = DESCRIZIONE ARTICOLO
2 = PRESSIONE/VOLUME DEL REFRIGERANTE PER PUNTE FORATE
3 = CARATTERISTICHE TECNICHE (PAG. 527)
4 = TOLLERANZE COSTRUTTIVE
5 = ELENCO ARTICOLI
6 = MISURE E DATI
7 = ULTERIORI DATI TECNICI E CONSIGLIO D'USO

1B = LAVORAZIONI ESEGUIBILI
2B = GRUPPI MATERIALI
3B = INDICAZIONE MATERIALI LAVORABILI E CAMPI D'IMPIEGO
4B = PARAMETRI DI LAVORO
5B = FORMULE E PARAMETRI



- 1 = DESCRIZIONE ARTICOLO
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- 1 = ITEM DESCRIPTION
2 = COOLANT PRESSURE/VOLUME FOR DRILLS WITH COOLANT BORE
3 = TECHNICAL FEATURES (PAG. 527)
4 = CONSTRUCTIVE TOLERANCE
5 = ITEM
6 = MEASURES AND DATA
7 = FURTHER TECHNICAL DATA AND SUGGESTIONS
- 1B = POSSIBLE MACHINING OPERATIONS
2B = MATERIAL GROUPS
3B = INFORMATION ON WORKABLE MATERIALS AND FIELDS OF APPLICATION
4B = MACHINING PARAMETERS
5B = FORMULAS AND PARAMETERS



- 1 = ARTIKELBESCHREIBUNG
2 = SCHMIERSTOFFDRUCK/-VOLUMEN FÜR KÜHLKANALBOHRER
3 = TECHNISCHE HAUPTMERKMALE (PAG. 527)
4 = KONSTRUKTIONSTOLERANZEN
5 = ARTIKEL
6 = ABMESSUNGEN UND DATEN
7 = WEITERE TECHNISCHE DATEN UND TIPPS
- 1B = MÖGLICHE BEARBEITUNGEN
2B = MATERIALGRUPPEN
3B = ANGABE DER BEARBEITBAREN MATERIALIEN UND ANWENDUNGSGEBIETE
4B = SCHNITTDATEN
5B = FORMELN UND PARAMETER



- 1 = DESCRIPTION ARTICLES
2 = PRESSION/VOLUME DU RÉFRIGÉRANT POUR FORETS AVEC TROUS D'ARROSAGE
3 = CARACTERISTIQUES TECHNIQUES (PAG. 527)
4 = TOLERANCE CONSTRUCTIVES
5 = ARTICLES
6 = DIMENSIONS ET DONNÉES
7 = ULTÉRIEURES DONNÉES TECHNIQUE ET CONSEILLE D'USAGE
- 1B = USINAGES A EXECUTER
2B = GROUPES DE MATERIAUX
3B = INDICATION MATERIAUX A USINER ET PLACES D'APPLICATION
4B = PARAMÈTRES DE TRAVAIL
5B = FORMULES ET PARAMÈTRES

SAU SDF1201
PAG. 527

1 = ARTICOLO + GAMMA DIAMETRI
2 = INSERTI CONSIGLIATI
3 = ELENCO ARTICOLI
4 = MISURE, DATI, INDICAZIONI
5 = ACCESSORI IN DOTAZIONE
6 = ACCESSORI E RICAMBI OPZIONALI A RICHIESTA
7 = GRANDEZZA INSERTO
8 = LAVORAZIONI POSSIBILI
9 = PROFONDITÀ DI FORATURA L2/D
10 = DATI TECNICI E CONSIGLI D'USO

1B = ELENCO INSERTI
2B = INDICAZIONE MATERIALI LAVORABILI
3B = DISPONIBILITÀ GRADI
4B = MISURE E DATI
5B = SCELTA DEL GRADO (QUICK PICK)
6B = SCELTA DELL'INSERTO
7B = GRUPPI MATERIALI
8B = AVANZAMENTO AL GIRO f_n
9B = VELOCITÀ DI TAGLIO V_c
10B = FORMULE E PARAMETRI



- 1 = ARTICOLO + GAMMA DIAMETRI
2 = INSERTI CONSIGLIATI
3 = ELENCO ARTICOLI
4 = MISURE, DATI, INDICAZIONI
5 = ACCESSORI IN DOTAZIONE
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- 1B = ELENCO INSERTI
2B = INDICAZIONE MATERIALI LAVORABILI
3B = DISPONIBILITÀ GRADI
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5B = SCELTA DEL GRADO (QUICK PICK)
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7B = GRUPPI MATERIALI
8B = AVANZAMENTO AL GIRO f_n
9B = VELOCITÀ DI TAGLIO V_c
10B = FORMULE E PARAMETRI



- 1 = ITEM + DIAMETER RANGE
2 = RECOMMENDED INSERTS
3 = ITEMS
4 = MEASURES, DATA, INDICATIONS
5 = ACCESSORIES EQUIPMENT
6 = OPTIONAL ACCESSORIES AND SPARE PARTS ON REQUEST
7 = INSERT SIZE
8 = POSSIBLE TYPES OF MACHINING
9 = DRILLING DEPTH L2/D
10 = TECHNICAL DATA AND SUGGESTIONS
- 1B = AVAILABLE INSERTS
2B = RECOMMENDED MACHINING MATERIALS
3B = AVAILABLE GRADES
4B = MEASURES AND DATA
5B = GRADE CHOICE (QUICK PICK)
6B = INSERT CHOICE
7B = MATERIAL GROUPS
8B = f_n FEED/REVOLUTION
9B = CUTTING SPEED V_c
10B = FORMULAS AND PARAMETERS



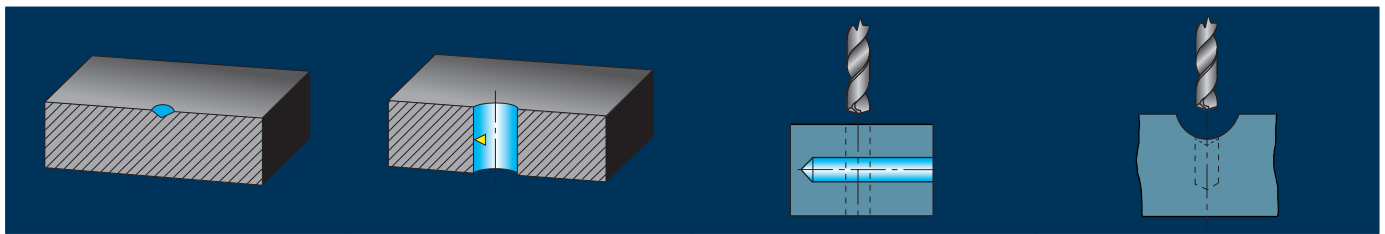
- 1 = ARTIKEL + DURCHMESSERBEREICH
2 = EMPFOHLENE WENDESCHNEIDPLATTEN
3 = ARTIKEL
4 = ABMESSUNGEN, DATEN, HINWEISE
5 = ZUBEHÖR AUSSTATTUNG
6 = OPTIONALZUBEHÖR UND ERSATZTEILE AUF ANFRAGE
7 = WENDEPLATTENGROSSE
8 = MÖGLICHE BEARBEITUNGSARTEN
9 = BOHRRTIEFE L2/D
10 = TECHNISCHE DATEN UND TIPPS
- 1B = LIEFERBARE WENDEPLATTEN
2B = EMPFOHLENE WERKMATERIALIEN
3B = LIEFERBARE HM-QUALITÄTEN
4B = ABMESSUNGEN UND DATEN
5B = SORTENAUSWAHL (QUICK PICK)
6B = WAHL DER PLATTE
7B = MATERIALGRUPPEN
8B = VORSCHUB/UMDREHUNG
9B = SCHNITTGESCHWINDIGKEIT V_c
10B = FORMELN UND PARAMETER



- 1 = ARTICLE + GAMME DE DIAMÈTRES
2 = PLAQUETTES CONSEILLÉES
3 = ARTICLES
4 = DIMENSIONS, DONNÉES, INDICATIONS
5 = ACCESSOIRES EN DOTATION
6 = ACCESSOIRES ET RECHANGE OPTIONNEL SUR DEMANDE
7 = DIMENSION DE LA PLAQUETTE
8 = USINAGES POSSIBLES
9 = PROFONDEUR DE PERÇAGE L2/D
10 = DONNÉES TECHNIQUES ET CONSEILLES D'USAGE
- 1B = PLAQUETTES DISPONIBLES
2B = INDICATIONS SUR LES MATERIAUX USINABLE
3B = DISPONIBILITÉ DE DEGRÉS
4B = DIMENSIONS ET DONNÉES
5B = CHOIX DU DEGRÉ (QUICK PICK)
6B = CHOIX DE LA PLAQUETTE
7B = GROUPES DE MATERIAUX
8B = DÉPLACEMENT PAR TOUR f_n
9B = VITESSE DE COUPE V_c
10B = FORMULES ET PARAMÈTRES



			ART.	LUNGHEZZA ELICA LENGTH FLUTES	ØD	Z	MATERIALE MATERIAL	Materiali - Materials Pag. 1119							Pag.	
								P	M	K	N	S	H	G		
MICROPUNTE - MICRO-DRILLS																
		TIALN		SDM0301	3xD	0,4-2,9	2	MG	●	●	●	●	○	○	○	530
				SDMN0301	3xD	0,4-2,9	2	MG	●	○	●	●			○	532
		TIALN		SDM0501	5xD	0,7-2,9	2	MG	●	●	●	●	○	○	○	534
				SDMN0501	5xD	0,7-2,9	2	MG	●	○	●	●			○	536
		TIALN		SDM0310	3xD	0,5-2,9	2	MG	●	●	●	●	○	○	○	538
				SDMN0310	3xD	0,5-2,9	2	MG	●	○	●	●			○	540
		TIALN		SDM0510	5xD	0,5-2,9	2	MG	●	●	●	●	○	○	○	542
				SDMN0510	5xD	0,5-2,9	2	MG	●	○	●	●			○	544
PUNTE INTEGRALI IN HM - SOLID CARBIDE DRILLS																
		TIALN		SDR0341	3xD	3-12	2	MG	●		○	○			○	548
		TIALN		SDR0302	3xD	3-20	2	MG	●	○	●				○	550
		TIALN		SDF0302	3xD	3-20	2	MG	●	●	●		○		○	552
		TIALN		SDR0502	5xD	3-20	2	MG	●	○	○				○	554
		TIALN		SDF0502	5xD	3-20	2	MG	●	○	○		○		○	556
		TIALN		SDF0802	8xD	3-16	2	MG	●	●	●				○	558
		TIALN		SDF1201	12xD	3-16	2	MG	●	●	●				○	560



			ART.	ANGOLO ELICA ANGLE FLUTES	ØD	Z	MATERIALE MATERIAL	Materiali - Materials Pag. 1119							Pag.
								P	M	K	N	S	H	G	
PUNTE A GRADINO - STEP DRILLS															
		TIALN		SDN0102	30°	3,4-11	2	MG	●		●				564
		TIALN		SDR0102	30°	2,5-14	2	MG	●		●				566
PUNTE A CENTRARE – PUNTA PILOTA - CENTER DRILLS – PILOT DRILL															
		TIALN		SCR0184	30°	3-20	2	MG	●	○	●	○			570
		TIALN		SCR0185	30°	6-20	2	MG	●	○	●	○			572
		TIALN		SCR0186	30°	6-20	2	MG	●	○	●	○			574
		TIALN		SDF0371	30°	2-12	2	MG	●	●	●				576
PUNTE FORALESA - REAMER-DRILLS															
		TIALN		SPFAR3	30°	2,97-20,02	2	MG	●		●				580
		TIALN		SPFAR5	30°	2,97-20,02	2	MG	●		●				582
ALESATORI - REAMERS															
				SAN0508	6°	3-18	4/8	MG	●	●	●	●			586
				SAN0509	6°	2,97-18,20	4/8	MG	●	●	●	●			588
				SAN0708	6°	1-20,2	4/8	MG	●	●	●	●			590
				SAN0709	6°	0,90-20,20	4/8	MG	●	●	●	●			592
				SAN0808	6°	1,5-12,2	4/6	MG	●	●	●	●			594
				SAN0809	6°	2,00-12,20	4/6	MG	●	●	●	●			596
	NEW			SAN0208	6°	1-35,2	4/10	HSSE	●	●	●	●			598
	NEW			SAN0209	6°	0,70-35,20	4/10	HSSE	●	●	●	●			600

SIMBOLOGIA - SYMBOL - SYMBOLE - SYMBOLES

RIVESTIMENTI - COATED - BESCHICHTUNG - RECOUVREMENT

RIVESTIM. COATED	TIALIN: Elevata durezza e resistenza al calore, basso coefficiente di attrito, si può usare con refrigerante oppure a secco con aria.
TIALIN	TIALIN: High degree of hardness and heat resistance, low friction coefficient; it can be used with coolant or with air and no coolant

AFFILATURA TESTA - HEAD SHARPENING - KOPFSCHLIFF - AFFUTAGE TETE

	- Autocentrante - Tipo S - Self centering - S Type - Selbstzentrierend - Type S - A centrage automatique - Type S		- Autocentrante - Tipo 4F - Self centering - 4F Type - Selbstzentrierend - Type 4F - A centrage automatique - Type 4F		- Autocentrante - refrigerata - Tipo 4F - Self centering - with coolant - 4F Type - Selbstzentrierend - gekühlt - Type 4F - A centrage automatique-refrigere - Type 4F
	- Doppio pattino - Tipo 4F - Double ski drills - 4F Type - Doppel-Ski-Bohrer - Type 4F - Double de ski perceuses - Type 4F		- Doppio pattino - refrigerata - Tipo 4F - Double ski drills - with coolant - 4F Type - Doppel-Ski-Bohrer - gekühlt - Type 4F - Double de ski perceuses - refrigere - Type 4F		- Punta a centrare - Center drills - Zentrierbohrer - Pointes a centrer
	- Punta Foralesa - Reamer-Drills - Reibahlen-Bohrer - Forets de perçage et alésage				

ANGOLO ELICA - FLUTES DEGREES - SPIRALWINKEL - ANGLE HELICE

	■ 30°		■ 6°
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ANGOLO DI TESTA - HEAD ANGLE - KOPFKEGELWINKEL - ANGLE DE TETE

	■ 90°		■ 118°		■ 120°
	■ 135°		■ 140°		■ 142°
	■ 145°				

NORME - STANDARDS - NORMEN - NORMES

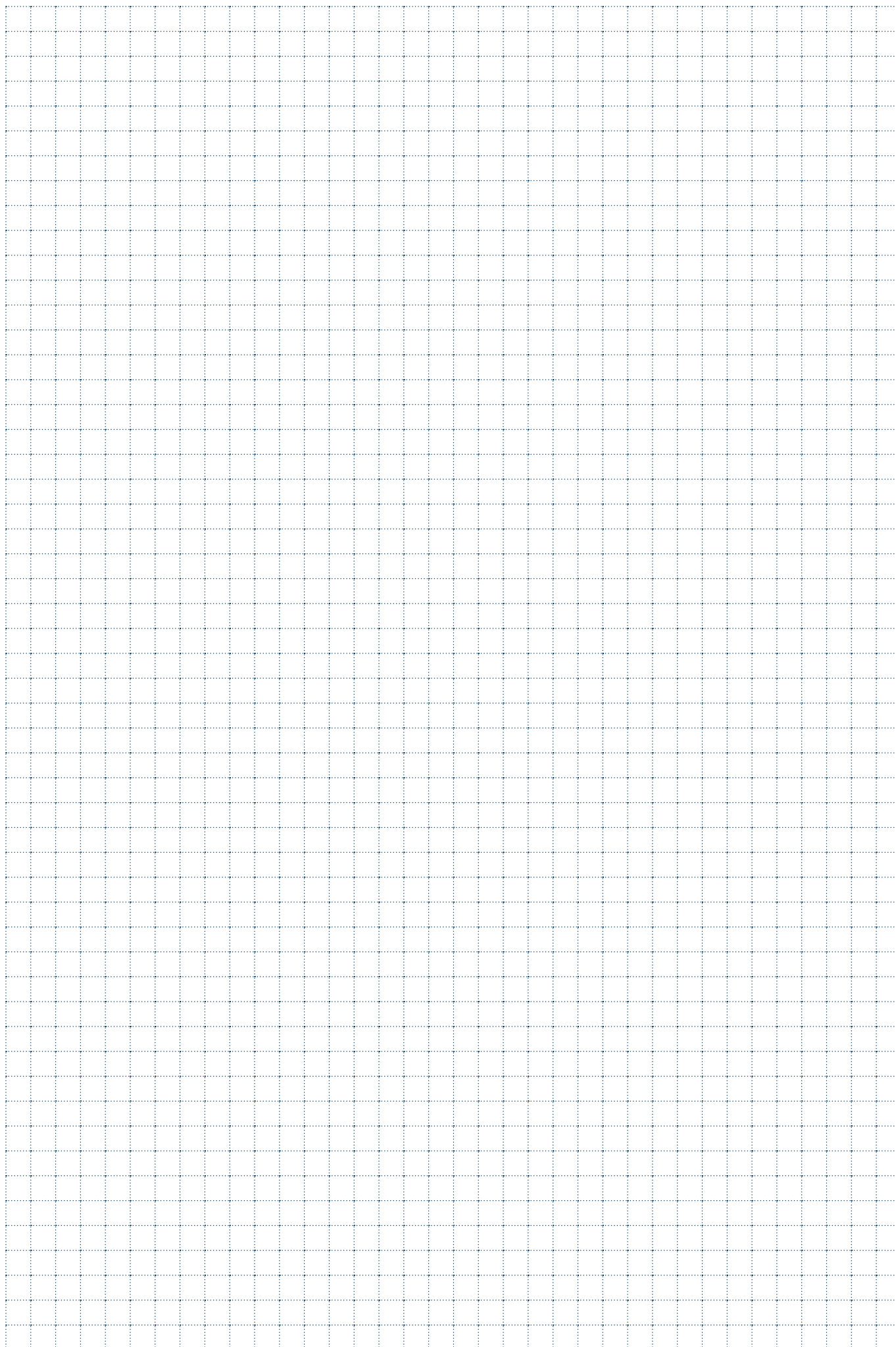
DIN 338	■ DIN 338	DIN 1897	■ DIN 1897	DIN 6535	■ DIN 6535
DIN 6537	■ DIN 6537	DIN 6539	■ DIN 6539		

LUNGHEZZA PUNTA - DRILL LENGHT - BOHRERLÄNGE - LONGUEUR POINTE

3xD	- 3 volte il diametro - Three times the diameter - Dreimal den durchmesser - 3 fois le diametre	5xD	- 5 volte il diametro - Five times the diameter - Fünfmal den durchmesser - 5 fois le diametre	8xD	- 8 volte il diametro - Eight times the diameter - Achtmal den durchmesser - 8 fois le diametre	12xD	- 12 volte il diametro - Twelve times the diameter - Zwölfmal den durchmesser - 12 fois le diametre
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SIMBOLI GENERALI - GENERAL SYMBOLS - ALLGEMEINE SYMBOLE - SYMBOLES GÉNÉRAUX

	- Punta autocentrante - Self-centering drill - Selbstzentrierender bohrer - Pointe a centrage automatique	MG	- Micrograno 0,7 µm (K 20) - Micrograin 0,7 µm (K 20) - Feinstkorn 0,7 µm (K 20) - Microgrenu 0,7 µm (K 20)	HSSE	- Acciaio rapido al Cobalto - Cobalt high speed steel - Kobaltschnellstahl - Acier rapide au cobalt
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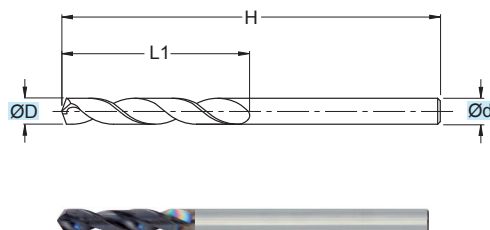


MICROPUNTE

MICRO-DRILLS / MIKROBOHRER / MICRO-FORETS / MICROBROCAS

SDM0301

$\varnothing D = 0,4 - 2,9$

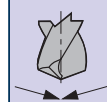
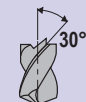


TOLLERANZE
 TOLERANCE RANGE

D	d
h7	h7

RIVESTIM.
 COATED
TIALN

3xD



**DIN
 6539**



MG

(mm)				
ART.	ØD	Ød	H	L1
SDM0301004	0,4	0,4	26	6
SDM0301005	0,5	0,5	26	6
SDM0301006	0,6	0,6	26	6
SDM0301007	0,7	0,7	26	6
SDM0301008	0,8	0,8	26	6
SDM0301009	0,9	0,9	26	6
SDM0301010	1,0	1,0	26	6
SDM0301011	1,1	1,1	28	7
SDM0301012	1,2	1,2	30	8
SDM0301013	1,3	1,3	30	8
SDM0301014	1,4	1,4	32	9
SDM0301015	1,5	1,5	32	9
SDM0301016	1,6	1,6	34	10
SDM0301017	1,7	1,7	34	10
SDM0301018	1,8	1,8	36	11
SDM0301019	1,9	1,9	36	11
SDM0301020	2,0	2,0	38	12
SDM0301021	2,1	2,1	38	12
SDM0301022	2,2	2,2	40	13
SDM0301023	2,3	2,3	40	13
SDM0301024	2,4	2,4	43	14
SDM0301025	2,5	2,5	43	14
SDM0301026	2,6	2,6	43	14
SDM0301027	2,7	2,7	46	16
SDM0301028	2,8	2,8	46	16
SDM0301029	2,9	2,9	46	16

Applicazione - Application

MATERIALI - MATERIALS Pag. 1119

P				M	K			N		S	H	G		
ACCIAIO NON LEGATO NOT ALLOY STEEL	ACCIAIO POCO LEGATO LOW ALLOY STEEL	ACCIAIO ALTO LEGATO ALLOY STEEL	INOX MARTENSITICO STAINLESS STEEL MART.	INOX AUST. DUPLEX STAINLESS STEEL AUST.	GHISA GRIGIA GREY CAST IRON	GHISA SFEROIDALE SPHEROIDAL GRAPHITE	GHISA MALLEABILE MALLEABLE CAST IRON	ALLUMINIO E SUE LEGHE ALUMINIUM	RAME E SUE LEGHE COPPER	NON METALLICI PLASTICS	LEGHE RESIST. CALORE HIGH TEMP. ALLOY	TITANIO E SUE LEGHE TITANIUM	ACCIAIO TEMPRATO HARDENED STEEL	GRAFITE GRAPHITE

(mm)	(m/min)	(mm)	(giri/min) (min ⁻¹)	(mm/min)
ØD	Vc	fn	n	Vf
0,4÷0,8	50	0,07	—	—
0,8÷1,2	50	0,07	—	—
1,2÷1,6	50	0,10	—	—
1,6÷2,0	50	0,10	—	—
2,0÷2,4	50	0,12	—	—
2,4÷2,9	50	0,14	—	—

		●												
		●												
		●												
		●												
		●												
		●												

0,4÷0,8	40	0,07	—	—
0,8÷1,2	40	0,07	—	—
1,2÷1,6	40	0,10	—	—
1,6÷2,0	40	0,10	—	—
2,0÷2,4	40	0,12	—	—
2,4÷2,9	40	0,14	—	—

				●										
				●										
				●										
				●										
				●										
				●										

0,4÷0,8	30	0,04	—	—
0,8÷1,2	30	0,04	—	—
1,2÷1,6	30	0,06	—	—
1,6÷2,0	30	0,06	—	—
2,0÷2,4	30	0,07	—	—
2,4÷2,9	30	0,08	—	—

					●									
					●									
					●									
					●									
					●									
					●									

0,4÷0,8	65	0,07	—	—
0,8÷1,2	65	0,07	—	—
1,2÷1,6	65	0,10	—	—
1,6÷2,0	65	0,10	—	—
2,0÷2,4	65	0,12	—	—
2,4÷2,9	65	0,14	—	—

								●						
								●						
								●						
								●						
								●						
								●						

0,4÷0,8	115	0,07	—	—
0,8÷1,2	115	0,07	—	—
1,2÷1,6	115	0,10	—	—
1,6÷2,0	115	0,10	—	—
2,0÷2,4	115	0,12	—	—
2,4÷2,9	115	0,14	—	—

										○				
										○				
										○				
										○				
										○				
										○				

0,4÷0,8	15	0,03	—	—
0,8÷1,2	15	0,03	—	—
1,2÷1,6	15	0,04	—	—
1,6÷2,0	15	0,04	—	—
2,0÷2,4	15	0,05	—	—
2,4÷2,9	15	0,06	—	—

											○			
											○			
											○			
											○			
											○			
											○			

0,4÷0,8	15	0,025	—	—
0,8÷1,2	15	0,025	—	—
1,2÷1,6	15	0,025	—	—
1,6÷2,0	15	0,025	—	—
2,0÷2,4	15	0,035	—	—
2,4÷2,9	15	0,035	—	—

												○		
												○		
												○		
												○		
												○		
												○		

0,4÷0,8	15	0,015	—	—
0,8÷1,2	15	0,015	—	—
1,2÷1,6	15	0,015	—	—
1,6÷2,0	15	0,015	—	—
2,0÷2,4	15	0,025	—	—
2,4÷2,9	15	0,025	—	—

- APPLICAZIONE CONSIGLIATA-RECOMMENDED APPLICATION
EMPFOHLENER EINSATZ - APPLICATION CONSEILLÉE
- APPLICAZIONE POSSIBILE - POSSIBLE APPLICATION
MÖGLICHE ANWENDUNG - APPLICATION POSSIBLE

Vc = m/min VELOCITÀ DI TAGLIO - CUTTING SPEED

n = giri/min (min^{-1}) NUMERO DI GIRI - NUMBER OF REVOLUTIONS

fn = mm AVANZAMENTO AL GIRO - FEED / REVOLUTION

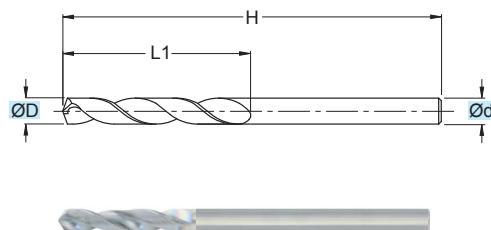
Vf = mm/min VELOCITÀ DI AVANZAMENTO - FEED SPEED

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

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

SDMN0301

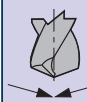
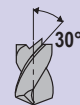
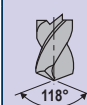
$\varnothing D = 0,4 - 2,9$



TOLLERANZE
 TOLERANCE RANGE

D	d
h7	h7

3xD



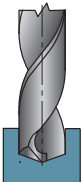
**DIN
 6539**



MG

(mm)				
ART.	$\varnothing D$	$\varnothing d$	H	L1
SDMN0301004	0,4	0,4	26	6
SDMN0301005	0,5	0,5	26	6
SDMN0301006	0,6	0,6	26	6
SDMN0301007	0,7	0,7	26	6
SDMN0301008	0,8	0,8	26	6
SDMN0301009	0,9	0,9	26	6
SDMN0301010	1,0	1,0	26	6
SDMN0301011	1,1	1,1	28	7
SDMN0301012	1,2	1,2	30	8
SDMN0301013	1,3	1,3	30	8
SDMN0301014	1,4	1,4	32	9
SDMN0301015	1,5	1,5	32	9
SDMN0301016	1,6	1,6	34	10
SDMN0301017	1,7	1,7	34	10
SDMN0301018	1,8	1,8	36	11
SDMN0301019	1,9	1,9	36	11
SDMN0301020	2,0	2,0	38	12
SDMN0301021	2,1	2,1	38	12
SDMN0301022	2,2	2,2	40	13
SDMN0301023	2,3	2,3	40	13
SDMN0301024	2,4	2,4	43	14
SDMN0301025	2,5	2,5	43	14
SDMN0301026	2,6	2,6	43	14
SDMN0301027	2,7	2,7	46	16
SDMN0301028	2,8	2,8	46	16
SDMN0301029	2,9	2,9	46	16

MATERIALI - MATERIALS Pag. 1119

Applicazione - Application		MATERIALI - MATERIALS														Pag. 1119						
		P				M	K			N			S	H	G							
		ACCIAIO NON LEGATO NOT ALLOY STEEL	ACCIAIO POCO LEGATO LOW ALLOY STEEL	ACCIAIO ALTO LEGATO ALLOY STEEL	INOX MARTENSITICO STAINLESS STEEL MART.	INOX AUST. DUPLEX STAINLESS STEEL AUST.	GHISA GRIGIA GREY CAST IRON	GHISA SFEROIDALE SPHEROIDAL GRAPHITE	GHISA MALLEABILE MALLEABLE CAST IRON	ALLUMINIO E SUE LEGHE ALUMINIUM	RAMME E SUE LEGHE COPPER	NON METALLICI PLASTICS	LEGHE RESIST. CALORE HIGH TEMP ALLOY	TITANIO E SUE LEGHE TITANIUM	ACCIAIO TEMPRATO HARDENED STEEL	GRAFITE GRAPHITE	(mm)	(m/min)	(mm)	(giri/min) (min ⁻¹)	(mm/min)	
																ØD	Vc	fn	n	Vf		
		●															0,4÷0,8	40	0,04	–	–	
		●															0,8÷1,2	40	0,04	–	–	
		●															1,2÷1,6	40	0,06	–	–	
		●															1,6÷2,0	40	0,06	–	–	
		●															2,0÷2,4	40	0,08	–	–	
		●															2,4÷2,9	40	0,08	–	–	
			●															0,4÷0,8	30	0,04	–	–
			●															0,8÷1,2	30	0,04	–	–
			●															1,2÷1,6	30	0,06	–	–
			●															1,6÷2,0	30	0,06	–	–
			●															2,0÷2,4	30	0,08	–	–
			●															2,4÷2,9	30	0,08	–	–
						○												0,4÷0,8	20	0,03	–	–
						○												0,8÷1,2	20	0,03	–	–
						○												1,2÷1,6	20	0,04	–	–
						○												1,6÷2,0	20	0,04	–	–
						○												2,0÷2,4	20	0,05	–	–
						○												2,4÷2,9	20	0,05	–	–
							●										0,4÷0,8	50	0,03	–	–	
							●										0,8÷1,2	50	0,03	–	–	
							●										1,2÷1,6	50	0,04	–	–	
							●										1,6÷2,0	50	0,04	–	–	
							●										2,0÷2,4	50	0,05	–	–	
							●										2,4÷2,9	50	0,05	–	–	
									●								0,4÷0,8	80	0,04	–	–	
									●								0,8÷1,2	80	0,04	–	–	
									●								1,2÷1,6	80	0,06	–	–	
									●								1,6÷2,0	80	0,06	–	–	
									●								2,0÷2,4	80	0,08	–	–	
									●								2,4÷2,9	80	0,08	–	–	

● APPLICAZIONE CONSIGLIATA-RECOMMENDED APPLICATION
EMPFOHLENER EINSATZ - APPLICATION CONSEILLÉE

○ APPLICAZIONE POSSIBILE - POSSIBLE APPLICATION
MÖGLICHE ANWENDUNG - APPLICATION POSSIBLE

Vc = m/min VELOCITÀ DI TAGLIO - CUTTING SPEED

n = giri/min (min⁻¹) NUMERO DI GIRI - NUMBER OF REVOLUTIONS

fn = mm AVANZAMENTO AL GIRO - FEED / REVOLUTION

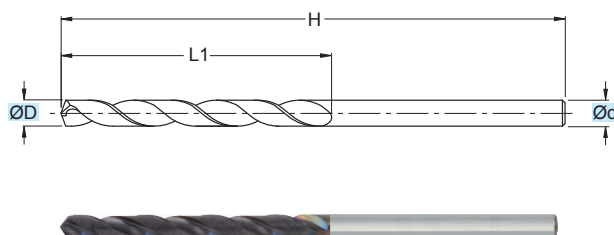
Vf = mm/min VELOCITÀ DI AVANZAMENTO - FEED SPEED

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

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

SDM0501

$\varnothing D = 0,7 - 2,9$

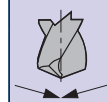
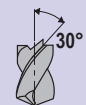


TOLLERANZE
 TOLERANCE RANGE

D	d
h7	h7

RIVESTIM.
 COATED
TIALN

5xD

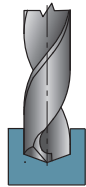


**DIN
 338**



MG

(mm)				
ART.	$\varnothing D$	$\varnothing d$	H	L1
SDM0501007	0,7	0,7	28	9
SDM0501008	0,8	0,8	30	10
SDM0501009	0,9	0,9	32	11
SDM0501010	1,0	1,0	34	12
SDM0501011	1,1	1,1	36	14
SDM0501012	1,2	1,2	38	16
SDM0501013	1,3	1,3	38	16
SDM0501014	1,4	1,4	40	18
SDM0501015	1,5	1,5	40	18
SDM0501016	1,6	1,6	43	20
SDM0501017	1,7	1,7	43	20
SDM0501018	1,8	1,8	46	22
SDM0501019	1,9	1,9	46	22
SDM0501020	2,0	2,0	49	24
SDM0501021	2,1	2,1	49	24
SDM0501022	2,2	2,2	53	27
SDM0501023	2,3	2,3	53	27
SDM0501024	2,4	2,4	57	30
SDM0501025	2,5	2,5	57	30
SDM0501026	2,6	2,6	57	30
SDM0501027	2,7	2,7	61	33
SDM0501028	2,8	2,8	61	33
SDM0501029	2,9	2,9	61	33

Applicazione - Application		MATERIALI - MATERIALS Pag. 1119																				
		P				M	K			N			S	H	G							
		ACCIAIO NON LEGATO NOT ALLOY STEEL	ACCIAIO POCO LEGATO LOW ALLOY STEEL	ACCIAIO ALTO LEGATO ALLOY STEEL	INOX MARTENSITICO STAINLESS STEEL MART.	INOX AUST. DUPLEX STAINLESS STEEL AUST.	GHISA GRIGIA GREY CAST IRON	GHISA SFEROIDALE SPHEROIDAL GRAPHITE	GHISA MALLEABILE MALLEABLE CAST IRON	ALLUMINIO E SUE LEGHE ALUMINIUM	RAME E SUE LEGHE COPPER	NON METALLICI PLASTICS	LEGHE RESIST. CALORE HIGH TEMP. ALLOY	TITANIO E SUE LEGHE TITANIUM	ACCIAIO TEMPRATO HARDENED STEEL	GRAFITE GRAPHITE	(mm)	(m/min)	(mm)	(giri/min) (min ⁻¹)	(mm/min)	
																ØD	Vc	fn	n	Vf		
	●																0,4÷0,8	50	0,07	–	–	
	●																0,8÷1,2	50	0,07	–	–	
	●																1,2÷1,6	50	0,10	–	–	
	●																1,6÷2,0	50	0,10	–	–	
	●																2,0÷2,4	50	0,12	–	–	
	●																2,4÷2,9	50	0,14	–	–	
			●															0,4÷0,8	40	0,07	–	–
			●															0,8÷1,2	40	0,07	–	–
			●															1,2÷1,6	40	0,10	–	–
			●															1,6÷2,0	40	0,10	–	–
			●															2,0÷2,4	40	0,12	–	–
			●															2,4÷2,9	40	0,14	–	–
						●												0,4÷0,8	30	0,04	–	–
						●												0,8÷1,2	30	0,04	–	–
						●												1,2÷1,6	30	0,06	–	–
						●												1,6÷2,0	30	0,06	–	–
						●												2,0÷2,4	30	0,07	–	–
						●												2,4÷2,9	30	0,08	–	–
						●											0,4÷0,8	65	0,07	–	–	
						●											0,8÷1,2	65	0,07	–	–	
						●											1,2÷1,6	65	0,10	–	–	
						●											1,6÷2,0	65	0,10	–	–	
						●											2,0÷2,4	65	0,12	–	–	
						●											2,4÷2,9	65	0,14	–	–	
								●									0,4÷0,8	115	0,07	–	–	
								●									0,8÷1,2	115	0,07	–	–	
								●									1,2÷1,6	115	0,10	–	–	
								●									1,6÷2,0	115	0,10	–	–	
								●									2,0÷2,4	115	0,12	–	–	
								●									2,4÷2,9	115	0,14	–	–	
												○					0,4÷0,8	15	0,03	–	–	
												○					0,8÷1,2	15	0,03	–	–	
												○					1,2÷1,6	15	0,04	–	–	
												○					1,6÷2,0	15	0,04	–	–	
												○					2,0÷2,4	15	0,05	–	–	
												○					2,4÷2,9	15	0,06	–	–	
													○				0,4÷0,8	15	0,025	–	–	
													○				0,8÷1,2	15	0,025	–	–	
													○				1,2÷1,6	15	0,025	–	–	
													○				1,6÷2,0	15	0,025	–	–	
													○				2,0÷2,4	15	0,035	–	–	
													○				2,4÷2,9	15	0,035	–	–	
														○			0,4÷0,8	15	0,015	–	–	
														○			0,8÷1,2	15	0,015	–	–	
														○			1,2÷1,6	15	0,015	–	–	
														○			1,6÷2,0	15	0,015	–	–	
														○			2,0÷2,4	15	0,025	–	–	
														○			2,4÷2,9	15	0,025	–	–	

● APPLICAZIONE CONSIGLIATA-RECOMMENDED APPLICATION
EMPFOHLENER EINSATZ - APPLICATION CONSEILLÉE

○ APPLICAZIONE POSSIBILE - POSSIBLE APPLICATION
MÖGLICHE ANWENDUNG - APPLICATION POSSIBLE

Vc = m/min VELOCITÀ DI TAGLIO - CUTTING SPEED

n = giri/min (min⁻¹) NUMERO DI GIRI - NUMBER OF REVOLUTIONS

fn = mm AVANZAMENTO AL GIRO - FEED / REVOLUTION

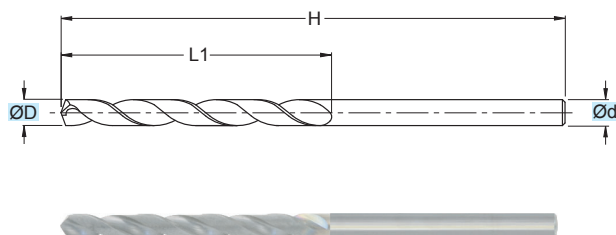
Vf = mm/min VELOCITÀ DI AVANZAMENTO - FEED SPEED

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

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

SDMN0501

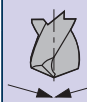
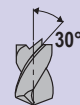
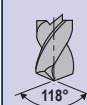
$\varnothing D = 0,7 - 2,9$



TOLLERANZE
 TOLERANCE RANGE

D	d
h7	h7

5xD



DIN
 338



MG

(mm)				
ART.	$\varnothing D$	$\varnothing d$	H	L1
SDMN0501007	0,7	0,7	28	9
SDMN0501008	0,8	0,8	30	10
SDMN0501009	0,9	0,9	32	11
SDMN0501010	1,0	1,0	34	12
SDMN0501011	1,1	1,1	36	14
SDMN0501012	1,2	1,2	38	16
SDMN0501013	1,3	1,3	38	16
SDMN0501014	1,4	1,4	40	18
SDMN0501015	1,5	1,5	40	18
SDMN0501016	1,6	1,6	43	20
SDMN0501017	1,7	1,7	43	20
SDMN0501018	1,8	1,8	46	22
SDMN0501019	1,9	1,9	46	22
SDMN0501020	2,0	2,0	49	24
SDMN0501021	2,1	2,1	49	24
SDMN0501022	2,2	2,2	53	27
SDMN0501023	2,3	2,3	53	27
SDMN0501024	2,4	2,4	57	30
SDMN0501025	2,5	2,5	57	30
SDMN0501026	2,6	2,6	57	30
SDMN0501027	2,7	2,7	61	33
SDMN0501028	2,8	2,8	61	33
SDMN0501029	2,9	2,9	61	33

MATERIALI - MATERIALS Pag. 1119

Applicazione - Application		MATERIALI - MATERIALS															Pag. 1119					
		P				M	K			N			S		H	G						
		ACCIAIO NON LEGATO NOT ALLOY STEEL	ACCIAIO POCO LEGATO LOW ALLOY STEEL	ACCIAIO ALTO LEGATO ALLOY STEEL	INOX MARTENSITICO STAINLESS STEEL MART.	INOX AUST. DUPLEX STAINLESS STEEL AUST.	GHISA GRIGIA GREY CAST IRON	GHISA SFEROIDALE SPHEROIDAL GRAPHITE	GHISA MALLEABILE MALLEABLE CAST IRON	ALLUMINIO E SUE LEGHE ALUMINIUM	RAMME E SUE LEGHE COPPER	NON METALLICI PLASTICS	LEGHE RESIST. CALORE HIGH TEMP. ALLOY	TITANIO E SUE LEGHE TITANIUM	ACCIAIO TEMPRATO HARDENED STEEL	GRAFITE GRAPHITE	(mm)	(m/min)	(mm)	(giri/min) (min ⁻¹)	(mm/min)	
																ØD	Vc	fn	n	Vf		
		●															0,4÷0,8	40	0,04	-	-	
		●																0,8÷1,2	40	0,04	-	-
		●																1,2÷1,6	40	0,06	-	-
		●																1,6÷2,0	40	0,06	-	-
		●																2,0÷2,4	40	0,08	-	-
		●																2,4÷2,9	40	0,08	-	-
																		0,4÷0,8	30	0,04	-	-
																		0,8÷1,2	30	0,04	-	-
																		1,2÷1,6	30	0,06	-	-
																		1,6÷2,0	30	0,06	-	-
																		2,0÷2,4	30	0,08	-	-
																		2,4÷2,9	30	0,08	-	-
						○												0,4÷0,8	20	0,03	-	-
						○												0,8÷1,2	20	0,03	-	-
						○												1,2÷1,6	20	0,04	-	-
						○												1,6÷2,0	20	0,04	-	-
						○												2,0÷2,4	20	0,05	-	-
						○												2,4÷2,9	20	0,05	-	-
																		0,4÷0,8	50	0,03	-	-
																		0,8÷1,2	50	0,03	-	-
																		1,2÷1,6	50	0,04	-	-
																		1,6÷2,0	50	0,04	-	-
																		2,0÷2,4	50	0,05	-	-
																		2,4÷2,9	50	0,05	-	-
																		0,4÷0,8	80	0,04	-	-
																		0,8÷1,2	80	0,04	-	-
																		1,2÷1,6	80	0,06	-	-
																		1,6÷2,0	80	0,06	-	-
																		2,0÷2,4	80	0,08	-	-
																		2,4÷2,9	80	0,08	-	-

● APPLICAZIONE CONSIGLIATA-RECOMMENDED APPLICATION
EMPFOHLENER EINSATZ - APPLICATION CONSEILLÉE

○ APPLICAZIONE POSSIBILE - POSSIBLE APPLICATION
MÖGLICHE ANWENDUNG - APPLICATION POSSIBLE

Vc = m/min VELOCITÀ DI TAGLIO - CUTTING SPEED

n = giri/min (min⁻¹) NUMERO DI GIRI - NUMBER OF REVOLUTIONS

fn = mm AVANZAMENTO AL GIRO - FEED / REVOLUTION

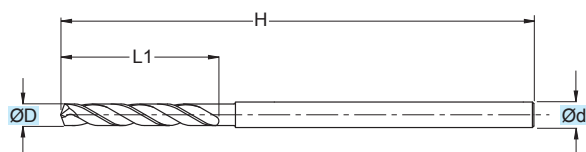
Vf = mm/min VELOCITÀ DI AVANZAMENTO - FEED SPEED

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

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

SDM0310

$\varnothing D = 0,5 - 2,9$

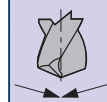
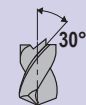


TOLLERANZE
TOLERANCE RANGE

D	d
h7	h7

RIVESTIM.
COATED
TIALN

3xD



**DIN
6537**



MG

ART.	ØD	Ød	H	L1
SDM0310005	0,5	3	38	6
SDM0310006	0,6	3	38	6
SDM0310007	0,7	3	38	6
SDM0310008	0,8	3	38	6
SDM0310009	0,9	3	38	6
SDM0310010	1,0	3	38	6
SDM0310011	1,1	3	38	12
SDM0310012	1,2	3	38	12
SDM0310013	1,3	3	38	12
SDM0310014	1,4	3	38	12
SDM0310015	1,5	3	50	12
SDM0310016	1,6	3	50	12
SDM0310017	1,7	3	50	12
SDM0310018	1,8	3	50	12
SDM0310019	1,9	3	50	12
SDM0310020	2,0	3	50	12
SDM0310021	2,1	3	60	18
SDM0310022	2,2	3	60	18
SDM0310023	2,3	3	60	18
SDM0310024	2,4	3	60	18
SDM0310025	2,5	3	60	18
SDM0310026	2,6	3	60	18
SDM0310027	2,7	3	60	18
SDM0310028	2,8	3	60	18
SDM0310029	2,9	3	60	18

Applicazione - Application		MATERIALI - MATERIALS Pag. 1119																				
		P				M	K			N		S	H	G								
		ACCIAIO NON LEGATO NOT ALLOY STEEL	ACCIAIO POCO LEGATO LOW ALLOY STEEL	ACCIAIO ALTO LEGATO ALLOY STEEL	INOX MARTENSITICO STAINLESS STEEL MART.	INOX AUST. DUPLEX STAINLESS STEEL AUST.	GHISA GRIGIA GREY CAST IRON	GHISA SFEROIDALE SPHEROIDAL GRAPHITE	GHISA MALLEABILE MALLEABLE CAST IRON	ALLUMINIO E SUE LEGHE ALUMINIUM	RAME E SUE LEGHE COPPER	NON METALLICI PLASTICS	LEGHE RESIST. CALORE HIGH TEMP. ALLOY	TITANIO E SUE LEGHE TITANIUM	ACCIAIO TEMPRATO HARDENED STEEL	GRAFITE GRAPHITE	(mm)	(m/min)	(mm)	(giri/min) (min ⁻¹)	(mm/min)	
		ØD	Vc	fn	n	Vf																
	●	0,5÷1,0	50	0,07	—	—																
	●	1,0÷1,5	50	0,10	—	—																
	●	1,5÷2,0	50	0,10	—	—																
	●	2,0÷2,5	50	0,12	—	—																
	●	2,5÷2,9	50	0,14	—	—																
		●	0,5÷1,0	40	0,07	—	—															
		●	1,0÷1,5	40	0,10	—	—															
		●	1,5÷2,0	40	0,10	—	—															
		●	2,0÷2,5	40	0,12	—	—															
		●	2,5÷2,9	40	0,14	—	—															
						●											0,5÷1,0	30	0,04	—	—	
						●											1,0÷1,5	30	0,06	—	—	
						●											1,5÷2,0	30	0,06	—	—	
						●											2,0÷2,5	30	0,07	—	—	
						●											2,5÷2,9	30	0,08	—	—	
								●										0,5÷1,0	65	0,07	—	—
								●										1,0÷1,5	65	0,10	—	—
								●										1,5÷2,0	65	0,10	—	—
								●										2,0÷2,5	65	0,12	—	—
								●										2,5÷2,9	65	0,14	—	—
										●								0,5÷1,0	115	0,07	—	—
										●								1,0÷1,5	115	0,10	—	—
										●								1,5÷2,0	115	0,10	—	—
										●								2,0÷2,5	115	0,12	—	—
										●								2,5÷2,9	115	0,14	—	—
														○				0,5÷1,0	15	0,03	—	—
														○				1,0÷1,5	15	0,04	—	—
														○				1,5÷2,0	15	0,04	—	—
														○				2,0÷2,5	15	0,05	—	—
														○				2,5÷2,9	15	0,06	—	—
															○			0,5÷1,0	15	0,025	—	—
															○			1,0÷1,5	15	0,025	—	—
															○			1,5÷2,0	15	0,025	—	—
															○			2,0÷2,5	15	0,035	—	—
															○			2,5÷2,9	15	0,035	—	—
																○		0,5÷1,0	15	0,015	—	—
																○		1,0÷1,5	15	0,015	—	—
																○		1,5÷2,0	15	0,015	—	—
															○		2,0÷2,5	15	0,025	—	—	
															○		2,5÷2,9	15	0,025	—	—	

● APPLICAZIONE CONSIGLIATA-RECOMMENDED APPLICATION
EMPFOHLENER EINSATZ - APPLICATION CONSEILLÉE

○ APPLICAZIONE POSSIBILE - POSSIBLE APPLICATION
MÖGLICHE ANWENDUNG - APPLICATION POSSIBLE

Vc = m/min VELOCITÀ DI TAGLIO - CUTTING SPEED

n = giri/min (min⁻¹) NUMERO DI GIRI - NUMBER OF REVOLUTIONS

fn = mm AVANZAMENTO AL GIRO - FEED / REVOLUTION

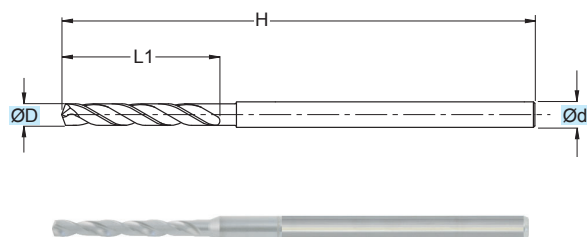
Vf = mm/min VELOCITÀ DI AVANZAMENTO - FEED SPEED

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

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

SDMN0310

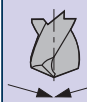
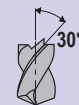
$\varnothing D = 0,5 - 2,9$



TOLLERANZE
 TOLERANCE RANGE

D	d
h7	h7

3xD



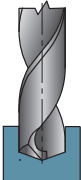
**DIN
 6537**



MG

(mm)				
ART.	ØD	Ød	H	L1
SDMN0310005	0,5	3	38	6
SDMN0310006	0,6	3	38	6
SDMN0310007	0,7	3	38	6
SDMN0310008	0,8	3	38	6
SDMN0310009	0,9	3	38	6
SDMN0310010	1,0	3	38	6
SDMN0310011	1,1	3	38	12
SDMN0310012	1,2	3	38	12
SDMN0310013	1,3	3	38	12
SDMN0310014	1,4	3	38	12
SDMN0310015	1,5	3	50	12
SDMN0310016	1,6	3	50	12
SDMN0310017	1,7	3	50	12
SDMN0310018	1,8	3	50	12
SDMN0310019	1,9	3	50	12
SDMN0310020	2,0	3	50	12
SDMN0310021	2,1	3	60	18
SDMN0310022	2,2	3	60	18
SDMN0310023	2,3	3	60	18
SDMN0310024	2,4	3	60	18
SDMN0310025	2,5	3	60	18
SDMN0310026	2,6	3	60	18
SDMN0310027	2,7	3	60	18
SDMN0310028	2,8	3	60	18
SDMN0310029	2,9	3	60	18

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Applicazione - Application																	
	P			M			K			N			S	H	G	(mm)	(m/min)
	ACCIAIO NON LEGATO NOT ALLOY STEEL	ACCIAIO POCO LEGATO LOW ALLOY STEEL	ACCIAIO ALTO LEGATO ALLOY STEEL	INOX MARTENSITICO STAINLESS STEEL MART.	INOX AUST. DUPLEX STAINLESS STEEL AUST.	GHISA GRIGIA GREY CAST IRON	GHISA SFEROIDALE SPHEROIDAL GRAPHITE	GHISA MALLEABILE MALLEABLE CAST IRON	ALLUMINIO E SUE LEGHE ALUMINIUM	RAMME E SUE LEGHE COPPER	NON METALLICI PLASTICS	LEGHE RESIST. CALORE HIGH TEMP. ALLOY	TITANIO E SUE LEGHE TITANIUM	ACCIAIO TEMPRATO HARDENED STEEL	GRAFITE GRAPHITE	ØD	Vc
	●															0,5÷1,0	40
	●															1,0÷1,5	40
	●															1,5÷2,0	40
	●															2,0÷2,5	40
	●															2,5÷2,9	40
		●														0,5÷1,0	30
		●														1,0÷1,5	30
		●														1,5÷2,0	30
		●														2,0÷2,5	30
		●														2,5÷2,9	30
					○											0,5÷1,0	20
					○											1,0÷1,5	20
					○											1,5÷2,0	20
					○											2,0÷2,5	20
					○											2,5÷2,9	20
						●										0,5÷1,0	50
						●										1,0÷1,5	50
						●										1,5÷2,0	50
						●										2,0÷2,5	50
						●										2,5÷2,9	50
								●								0,5÷1,0	80
								●								1,0÷1,5	80
								●								1,5÷2,0	80
								●								2,0÷2,5	80
								●								2,5÷2,9	80

● APPLICAZIONE CONSIGLIATA-RECOMMENDED APPLICATION
EMPFOHLENER EINSATZ - APPLICATION CONSEILLÉE

○ APPLICAZIONE POSSIBILE - POSSIBLE APPLICATION
MÖGLICHE ANWENDUNG - APPLICATION POSSIBLE

Vc = m/min VELOCITÀ DI TAGLIO - CUTTING SPEED

n = giri/min (min⁻¹) NUMERO DI GIRI - NUMBER OF REVOLUTIONS

fn = mm AVANZAMENTO AL GIRO - FEED / REVOLUTION

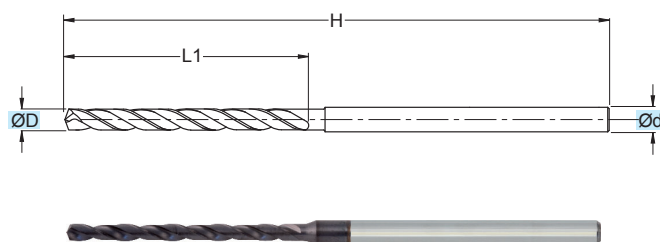
Vf = mm/min VELOCITÀ DI AVANZAMENTO - FEED SPEED

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

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

SDM0510

$\varnothing D = 0,5 - 2,9$

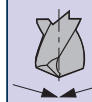
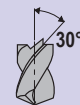
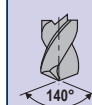


TOLLERANZE
 TOLERANCE RANGE

D	d
h7	h7

RIVESTIM.
 COATED
TIALN

5xD

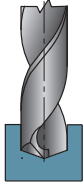


**DIN
 6537**



MG

(mm)				
ART.	ØD	Ød	H	L1
SDM0510005	0,5	3	50	10
SDM0510006	0,6	3	50	10
SDM0510007	0,7	3	50	10
SDM0510008	0,8	3	50	10
SDM0510009	0,9	3	50	10
SDM0510010	1,0	3	50	10
SDM0510011	1,1	3	60	20
SDM0510012	1,2	3	60	20
SDM0510013	1,3	3	60	20
SDM0510014	1,4	3	60	20
SDM0510015	1,5	3	60	20
SDM0510016	1,6	3	60	20
SDM0510017	1,7	3	60	20
SDM0510018	1,8	3	60	20
SDM0510019	1,9	3	60	20
SDM0510020	2,0	3	60	20
SDM0510021	2,1	3	66	28
SDM0510022	2,2	3	66	28
SDM0510023	2,3	3	66	28
SDM0510024	2,4	3	66	28
SDM0510025	2,5	3	66	28
SDM0510026	2,6	3	66	28
SDM0510027	2,7	3	66	28
SDM0510028	2,8	3	66	28
SDM0510029	2,9	3	66	28

MATERIALI - MATERIALS																					Pag. 1119				
Applicazione - Application	P				M	K			N			S	H	G											
	ACCIAIO NON LEGATO NOT ALLOY STEEL	ACCIAIO POCO LEGATO LOW ALLOY STEEL	ACCIAIO ALTO LEGATO ALLOY STEEL	INOX MARTENSITICO STAINLESS STEEL MART.	INOX AUST. DUPLEX STAINLESS STEEL AUST.	GHISA GRIGIA GREY CAST IRON	GHISA SFEROIDALE SPHEROIDAL GRAPHITE	GHISA MALLEABILE MALLEABLE CAST IRON	ALLUMINIO E SUE LEGHE ALUMINIUM	RAME E SUE LEGHE COPPER	NON METALLICI PLASTICS	LEGHE RESIST. CALORE HIGH TEMP. ALLOY	TITANIO E SUE LEGHE TITANIUM	ACCIAIO TEMPRATO HARDENED STEEL	GRAFITE GRAPHITE	(mm)	(m/min)	(mm)	(giri/min) n	(mm/min) Vf					
	ØD	Vc	fn																						
	●															0,5÷1,0	50	0,07	-	-					
	●																1,0÷1,5	50	0,10	-	-				
	●																1,5÷2,0	50	0,10	-	-				
	●																2,0÷2,5	50	0,12	-	-				
	●																2,5÷2,9	50	0,14	-	-				
			●														0,5÷1,0	40	0,07	-	-				
			●														1,0÷1,5	40	0,10	-	-				
			●														1,5÷2,0	40	0,10	-	-				
			●														2,0÷2,5	40	0,12	-	-				
			●														2,5÷2,9	40	0,14	-	-				
					●												0,5÷1,0	30	0,04	-	-				
					●												1,0÷1,5	30	0,06	-	-				
					●												1,5÷2,0	30	0,06	-	-				
					●												2,0÷2,5	30	0,07	-	-				
					●												2,5÷2,9	30	0,08	-	-				
							●										0,5÷1,0	65	0,07	-	-				
							●										1,0÷1,5	65	0,10	-	-				
							●										1,5÷2,0	65	0,10	-	-				
							●										2,0÷2,5	65	0,12	-	-				
							●										2,5÷2,9	65	0,14	-	-				
										●							0,5÷1,0	115	0,07	-	-				
										●							1,0÷1,5	115	0,10	-	-				
										●							1,5÷2,0	115	0,10	-	-				
										●							2,0÷2,5	115	0,12	-	-				
										●							2,5÷2,9	115	0,14	-	-				
													○				0,5÷1,0	15	0,03	-	-				
													○				1,0÷1,5	15	0,04	-	-				
													○				1,5÷2,0	15	0,04	-	-				
													○				2,0÷2,5	15	0,05	-	-				
													○				2,5÷2,9	15	0,06	-	-				
														○			0,5÷1,0	15	0,025	-	-				
														○			1,0÷1,5	15	0,025	-	-				
														○			1,5÷2,0	15	0,025	-	-				
														○			2,0÷2,5	15	0,035	-	-				
														○			2,5÷2,9	15	0,035	-	-				
															○		0,5÷1,0	15	0,015	-	-				
															○		1,0÷1,5	15	0,015	-	-				
														○		1,5÷2,0	15	0,015	-	-					
														○		2,0÷2,5	15	0,025	-	-					
														○		2,5÷2,9	15	0,025	-	-					

● APPLICAZIONE CONSIGLIATA-RECOMMENDED APPLICATION
EMPFOHLENER EINSATZ - APPLICATION CONSEILLÉE

○ APPLICAZIONE POSSIBILE - POSSIBLE APPLICATION
MÖGLICHE ANWENDUNG - APPLICATION POSSIBLE

Vc = m/min VELOCITÀ DI TAGLIO - CUTTING SPEED

n = giri/min (min⁻¹) NUMERO DI GIRI - NUMBER OF REVOLUTIONS

fn = mm AVANZAMENTO AL GIRO - FEED / REVOLUTION

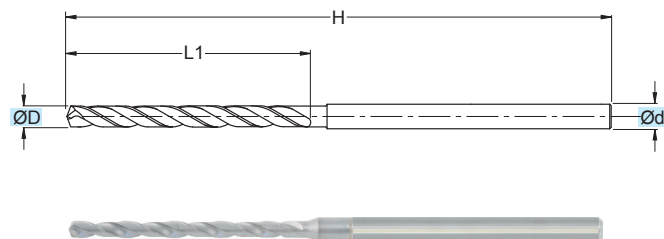
Vf = mm/min VELOCITÀ DI AVANZAMENTO - FEED SPEED

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

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

SDMN0510

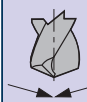
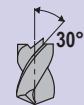
$\varnothing D = 0,5 - 2,9$



TOLLERANZE
 TOLERANCE RANGE

D	d
h7	h7

5xD



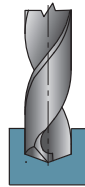
**DIN
 6537**



MG

(mm)				
ART.	ØD	Ød	H	L1
SDMN0510005	0,5	3	50	10
SDMN0510006	0,6	3	50	10
SDMN0510007	0,7	3	50	10
SDMN0510008	0,8	3	50	10
SDMN0510009	0,9	3	50	10
SDMN0510010	1,0	3	50	10
SDMN0510011	1,1	3	60	20
SDMN0510012	1,2	3	60	20
SDMN0510013	1,3	3	60	20
SDMN0510014	1,4	3	60	20
SDMN0510015	1,5	3	60	20
SDMN0510016	1,6	3	60	20
SDMN0510017	1,7	3	60	20
SDMN0510018	1,8	3	60	20
SDMN0510019	1,9	3	60	20
SDMN0510020	2,0	3	60	20
SDMN0510021	2,1	3	66	28
SDMN0510022	2,2	3	66	28
SDMN0510023	2,3	3	66	28
SDMN0510024	2,4	3	66	28
SDMN0510025	2,5	3	66	28
SDMN0510026	2,6	3	66	28
SDMN0510027	2,7	3	66	28
SDMN0510028	2,8	3	66	28
SDMN0510029	2,9	3	66	28

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Applicazione - Application		MATERIALI - MATERIALS													Pag. 1119						
		P				M	K			N		S	H	G							
		ACCIAIO NON LEGATO NOT ALLOY STEEL	ACCIAIO POCO LEGATO LOW ALLOY STEEL	ACCIAIO ALTO LEGATO ALLOY STEEL	INOX MARTENSITICO STAINLESS STEEL MART.	INOX AUST. DUPLEX STAINLESS STEEL AUST.	GHISA GRIGIA GREY CAST IRON	GHISA SFEROIDALE SPHEROIDAL GRAPHITE	GHISA MALLEABILE MALLEABLE CAST IRON	ALLUMINIO E SUE LEGHE ALUMINIUM	RAMME E SUE LEGHE COPPER	NON METALLICI PLASTICS	LEGHE RESIST. CALORE HIGH TEMP. ALLOY	TITANIO E SUE LEGHE TITANIUM	ACCIAIO TEMPRATO HARDENED STEEL	GRAFITE GRAPHITE	(mm)	(m/min)	(mm)	(giri/min) (min ⁻¹)	(mm/min)
																ØD	Vc	fn	n	Vf	
		●															0,5÷1,0	40	0,04	–	–
		●															1,0÷1,5	40	0,04	–	–
		●															1,5÷2,0	40	0,06	–	–
		●															2,0÷2,5	40	0,06	–	–
		●															2,5÷2,9	40	0,08	–	–
			●														0,5÷1,0	30	0,04	–	–
			●														1,0÷1,5	30	0,04	–	–
			●														1,5÷2,0	30	0,06	–	–
			●														2,0÷2,5	30	0,06	–	–
			●														2,5÷2,9	30	0,08	–	–
						○											0,5÷1,0	20	0,03	–	–
						○											1,0÷1,5	20	0,03	–	–
						○											1,5÷2,0	20	0,04	–	–
						○											2,0÷2,5	20	0,04	–	–
						○											2,5÷2,9	20	0,05	–	–
							●										0,5÷1,0	50	0,03	–	–
							●										1,0÷1,5	50	0,03	–	–
							●										1,5÷2,0	50	0,04	–	–
							●										2,0÷2,5	50	0,04	–	–
							●										2,5÷2,9	50	0,05	–	–
									●								0,5÷1,0	80	0,04	–	–
									●								1,0÷1,5	80	0,04	–	–
									●								1,5÷2,0	80	0,06	–	–
									●								2,0÷2,5	80	0,06	–	–
									●								2,5÷2,9	80	0,08	–	–

● APPLICAZIONE CONSIGLIATA-RECOMMENDED APPLICATION
EMPFOHLENER EINSATZ - APPLICATION CONSEILLÉE

○ APPLICAZIONE POSSIBILE - POSSIBLE APPLICATION
MÖGLICHE ANWENDUNG - APPLICATION POSSIBLE

Vc = m/min VELOCITÀ DI TAGLIO - CUTTING SPEED

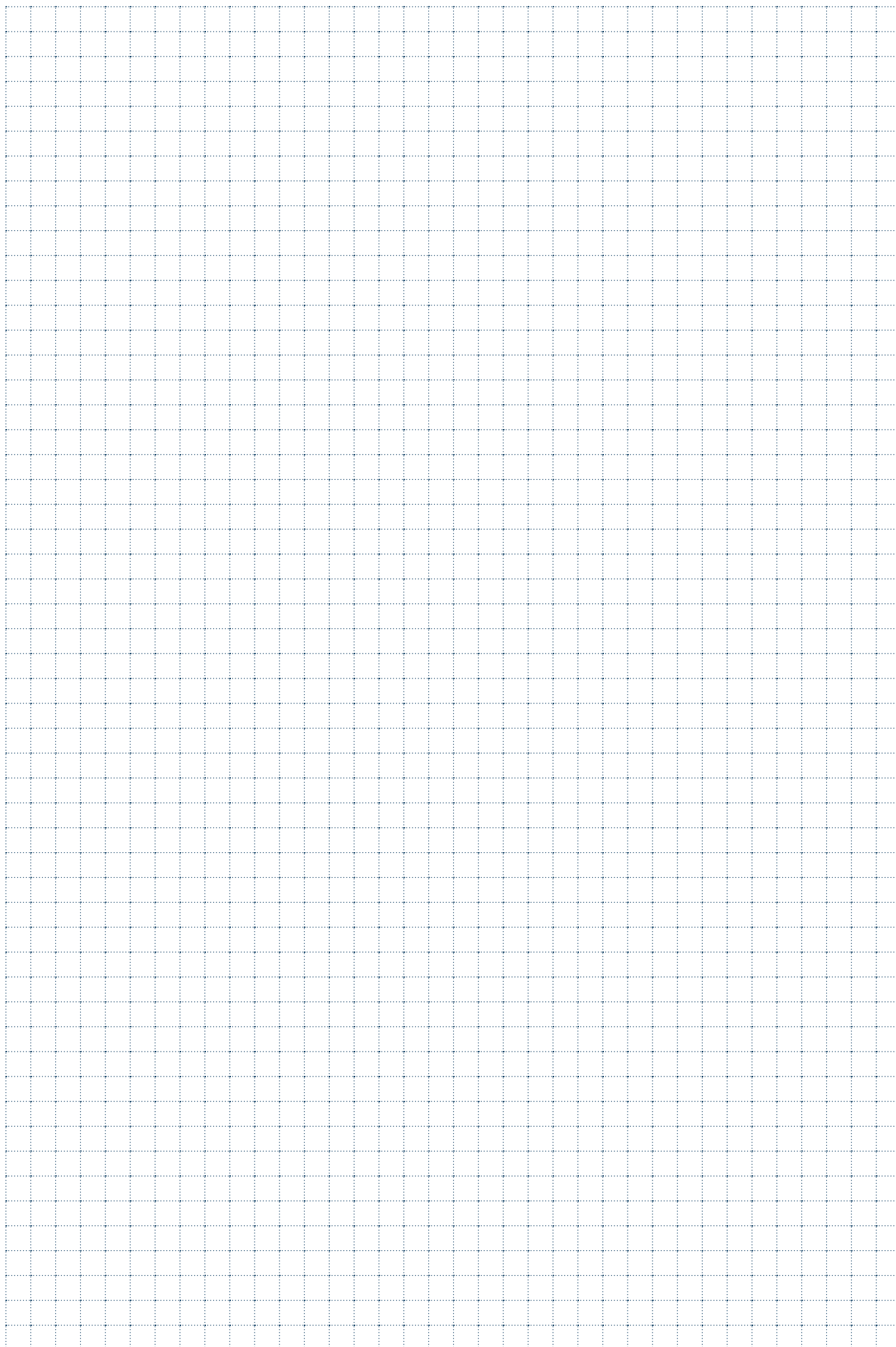
n = giri/min (min⁻¹) NUMERO DI GIRI - NUMBER OF REVOLUTIONS

fn = mm AVANZAMENTO AL GIRO - FEED / REVOLUTION

Vf = mm/min VELOCITÀ DI AVANZAMENTO - FEED SPEED

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

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



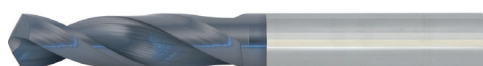
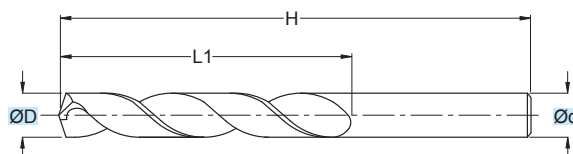


PUNTE INTEGRALI IN HM

SOLID CARBIDE DRILLS / HM VOLLBOHRER /
FORETS EN CARBURE MONOBLOC / PUNTAS INTEGRALES EN METAL DURO

SDR0341

$\varnothing D = 3 - 12$

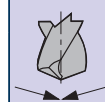
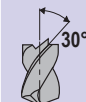


TOLLERANZE
TOLERANCE RANGE

D	d
h7	h7

RIVESTIM.
COATED
TIALN

3xD



**DIN
1897**



MG

ART.	ØD	Ød	H	L1
SDR0341030	3,0	3,0	46	16
SDR0341031	3,1	3,1	49	18
SDR0341032	3,2	3,2	49	18
SDR0341033	3,3	3,3	49	18
SDR0341034	3,4	3,4	52	20
SDR0341035	3,5	3,5	52	20
SDR0341036	3,6	3,6	52	20
SDR0341037	3,7	3,7	52	20
SDR0341038	3,8	3,8	55	22
SDR0341039	3,9	3,9	55	22
SDR0341040	4,0	4,0	55	22
SDR0341041	4,1	4,1	55	22
SDR0341042	4,2	4,2	55	22
SDR0341043	4,3	4,3	58	24
SDR0341044	4,4	4,4	58	24
SDR0341045	4,5	4,5	58	24
SDR0341046	4,6	4,6	58	24
SDR0341047	4,7	4,7	58	24
SDR0341048	4,8	4,8	62	26
SDR0341049	4,9	4,9	62	26
SDR0341050	5,0	5,0	62	26
SDR0341051	5,1	5,1	62	26
SDR0341052	5,2	5,2	62	26
SDR0341053	5,3	5,3	62	26
SDR0341054	5,4	5,4	66	28
SDR0341055	5,5	5,5	66	28
SDR0341056	5,6	5,6	66	28
SDR0341057	5,7	5,7	66	28
SDR0341058	5,8	5,8	66	28
SDR0341059	5,9	5,9	66	28
SDR0341060	6,0	6,0	66	28
SDR0341061	6,1	6,1	70	31
SDR0341062	6,2	6,2	70	31
SDR0341063	6,3	6,3	70	31
SDR0341064	6,4	6,4	70	31
SDR0341065	6,5	6,5	70	31
SDR0341066	6,6	6,6	70	31
SDR0341067	6,7	6,7	70	31
SDR0341068	6,8	6,8	74	34
SDR0341069	6,9	6,9	74	34
SDR0341070	7,0	7,0	74	34
SDR0341071	7,1	7,1	74	34
SDR0341072	7,2	7,2	74	34
SDR0341073	7,3	7,3	74	34
SDR0341074	7,4	7,4	74	34

ART.	ØD	Ød	H	L1
SDR0341075	7,5	7,5	74	34
SDR0341076	7,6	7,6	79	37
SDR0341077	7,7	7,7	79	37
SDR0341078	7,8	7,8	79	37
SDR0341079	7,9	7,9	79	37
SDR0341080	8,0	8,0	79	37
SDR0341081	8,1	8,1	79	37
SDR0341082	8,2	8,2	79	37
SDR0341083	8,3	8,3	79	37
SDR0341084	8,4	8,4	79	37
SDR0341085	8,5	8,5	79	37
SDR0341086	8,6	8,6	84	40
SDR0341087	8,7	8,7	84	40
SDR0341088	8,8	8,8	84	40
SDR0341089	8,9	8,9	84	40
SDR0341090	9,0	9,0	84	40
SDR0341091	9,1	9,1	84	40
SDR0341092	9,2	9,2	84	40
SDR0341093	9,3	9,3	84	40
SDR0341094	9,4	9,4	84	40
SDR0341095	9,5	9,5	84	40
SDR0341096	9,6	9,6	89	43
SDR0341097	9,7	9,7	89	43
SDR0341098	9,8	9,8	89	43
SDR0341099	9,9	9,9	89	43
SDR0341100	10,0	10,0	89	43
SDR0341102	10,2	10,2	89	43
SDR0341105	10,5	10,5	89	43
SDR0341110	11,0	11,0	95	47
SDR0341115	11,5	11,5	95	47
SDR0341120	12,0	12,0	102	51

MATERIALI - MATERIALS Pag. 1119

Applicazione - Application



MATERIALI - MATERIALS															Pag. 1119						
P				M	K			N			S	H	G								
ACCIAIO NON LEGATO NOT ALLOY STEEL	ACCIAIO POCO LEGATO LOW ALLOY STEEL	ACCIAIO ALTO LEGATO ALLOY STEEL	INOX MARTENSITICO STAINLESS STEEL MART.	INOX AUST. DUPLEX STAINLESS STEEL AUST.	GHISA GRIGIA GREY CAST IRON	GHISA SFEROIDALE SPHEROIDAL GRAPHITE	GHISA MALLEABILE MALLEABLE CAST IRON	ALLUMINIO E SUE LEGHE ALUMINIUM	RAME E SUE LEGHE COPPER	NON METALLICI PLASTICS	LEGHE RESIST. CALORE HIGH TEMP. ALLOY	TITANIO E SUE LEGHE TITANIUM	ACCIAIO TEMPRATO HARDENED STEEL	GRAFITE GRAPHITE	(mm)	(m/min)	(mm)	(giri/min) (min ⁻¹)	(mm/min)		
															ØD	Vc	fn	n	Vf		
●															3+4	80	0,040	7279	291		
●															4+5	80	0,050	5662	283		
●															5+6	80	0,075	4632	347		
●															6+7	80	0,090	3920	353		
●															7+8	80	0,110	3397	374		
●															8+9	80	0,125	2997	375		
●															9+10	80	0,135	2682	362		
●															10+12	80	0,150	2316	347		
	●														3+4	60	0,040	5460	218		
	●														4+5	60	0,050	4246	212		
	●														5+6	60	0,075	3474	261		
	●														6+7	60	0,090	2940	265		
	●														7+8	60	0,110	2548	280		
	●														8+9	60	0,125	2248	281		
	●														9+10	60	0,135	2011	272		
	●														10+12	60	0,150	1737	261		
						○									3+4	84	0,045	7643	344		
						○									4+5	84	0,070	5945	416		
						○									5+6	84	0,090	4864	438		
						○									6+7	84	0,110	4116	453		
						○									7+8	84	0,130	3567	464		
						○									8+9	84	0,145	3147	456		
						○									9+10	84	0,155	2816	436		
						○									10+12	84	0,170	2432	413		
						○									3+4	70	0,045	6369	287		
						○									4+5	70	0,070	4954	347		
						○									5+6	70	0,090	4053	365		
						○									6+7	70	0,110	3430	377		
						○									7+8	70	0,130	2972	386		
						○									8+9	70	0,145	2623	380		
						○									9+10	70	0,155	2347	364		
						○									10+12	70	0,170	2027	345		
								○							3+4	130	0,014	11829	166		
								○							4+5	130	0,018	9200	166		
								○							5+6	130	0,025	7528	188		
								○							6+7	130	0,045	6369	287		
								○							7+8	130	0,055	5520	304		
								○							8+9	130	0,065	4871	317		
								○							9+10	130	0,075	4358	327		
								○							10+12	130	0,090	3764	339		
								○							3+4	100	0,006	9099	55		
								○							4+5	100	0,012	7077	85		
								○							5+6	100	0,016	5790	93		
								○							6+7	100	0,025	4900	122		
								○							7+8	100	0,040	4246	170		
								○							8+9	100	0,055	3747	206		
								○							9+10	100	0,065	3352	218		
								○							10+12	100	0,085	2895	246		

● APPLICAZIONE CONSIGLIATA-RECOMMENDED APPLICATION
EMPFOHLENER EINSATZ - APPLICATION CONSEILLÉE

○ APPLICAZIONE POSSIBILE - POSSIBLE APPLICATION
MÖGLICHE ANWENDUNG - APPLICATION POSSIBLE

Vc = m/min VELOCITÀ DI TAGLIO - CUTTING SPEED

n = giri/min (min⁻¹) NUMERO DI GIRI - NUMBER OF REVOLUTIONS

fn = mm AVANZAMENTO AL GIRO - FEED / REVOLUTION

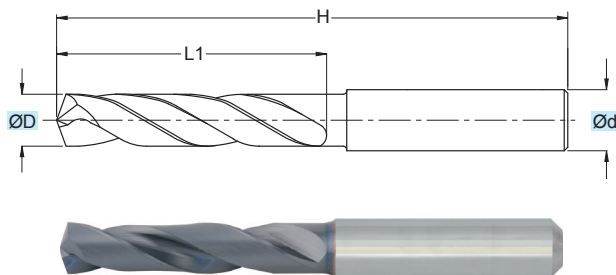
Vf = mm/min VELOCITÀ DI AVANZAMENTO - FEED SPEED

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

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

SDR0302

ØD = 3 - 20

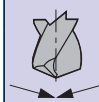
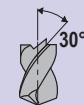


TOLLERANZE
TOLERANCE RANGE

D	d
m7	h6

RIVESTIM.
COATED
TIALN

3xD



**DIN
6535**



MG

ART.	ØD	Ød	H	L1
SDR0302030	3,0	6	62	20
SDR0302031	3,1	6	62	20
SDR0302032	3,2	6	62	20
SDR0302033	3,3	6	62	20
SDR0302034	3,4	6	62	20
SDR0302035	3,5	6	62	20
SDR0302036	3,6	6	62	20
SDR0302037	3,7	6	62	20
SDR0302038	3,8	6	66	24
SDR0302039	3,9	6	66	24
SDR0302040	4,0	6	66	24
SDR0302041	4,1	6	66	24
SDR0302042	4,2	6	66	24
SDR0302043	4,3	6	66	24
SDR0302044	4,4	6	66	24
SDR0302045	4,5	6	66	24
SDR0302046	4,6	6	66	24
SDR0302047	4,7	6	66	24
SDR0302048	4,8	6	66	28
SDR0302049	4,9	6	66	28
SDR0302050	5,0	6	66	28
SDR0302051	5,1	6	66	28
SDR0302052	5,2	6	66	28
SDR0302053	5,3	6	66	28
SDR0302054	5,4	6	66	28
SDR0302055	5,5	6	66	28
SDR0302056	5,6	6	66	28
SDR0302057	5,7	6	66	28
SDR0302058	5,8	6	66	28
SDR0302059	5,9	6	66	28
* SDR0302060	6,0	6	66	28
SDR0302061	6,1	8	79	34
SDR0302062	6,2	8	79	34
SDR0302063	6,3	8	79	34
SDR0302064	6,4	8	79	34
SDR0302065	6,5	8	79	34
SDR0302066	6,6	8	79	34
SDR0302067	6,7	8	79	34
SDR0302068	6,8	8	79	34
SDR0302069	6,9	8	79	34
SDR0302070	7,0	8	79	34
SDR0302071	7,1	8	79	41
SDR0302072	7,2	8	79	41
SDR0302073	7,3	8	79	41
SDR0302074	7,4	8	79	41

ART.	ØD	Ød	H	L1
SDR0302075	7,5	8	79	41
SDR0302076	7,6	8	79	41
SDR0302077	7,7	8	79	41
SDR0302078	7,8	8	79	41
SDR0302079	7,9	8	79	41
* SDR0302080	8,0	8	79	41
SDR0302081	8,1	10	89	47
SDR0302082	8,2	10	89	47
SDR0302083	8,3	10	89	47
SDR0302084	8,4	10	89	47
SDR0302085	8,5	10	89	47
SDR0302086	8,6	10	89	47
SDR0302087	8,7	10	89	47
SDR0302088	8,8	10	89	47
SDR0302089	8,9	10	89	47
SDR0302090	9,0	10	89	47
SDR0302091	9,1	10	89	47
SDR0302092	9,2	10	89	47
SDR0302093	9,3	10	89	47
SDR0302094	9,4	10	89	47
SDR0302095	9,5	10	89	47
SDR0302096	9,6	10	89	47
SDR0302097	9,7	10	89	47
SDR0302098	9,8	10	89	47
SDR0302099	9,9	10	89	47
* SDR0302100	10,0	10	89	47
SDR0302102	10,2	12	102	55
SDR0302105	10,5	12	102	55
SDR0302108	10,8	12	102	55
SDR0302110	11,0	12	102	55
SDR0302112	11,2	12	102	55
SDR0302115	11,5	12	102	55
SDR0302118	11,8	12	102	55
* SDR0302120	12,0	12	102	55
SDR0302122	12,2	14	107	60
SDR0302125	12,5	14	107	60
SDR0302128	12,8	14	107	60
SDR0302130	13,0	14	107	60
SDR0302135	13,5	14	107	60
SDR0302138	13,8	14	107	60
* SDR0302140	14,0	14	107	60
SDR0302142	14,2	16	115	65
SDR0302145	14,5	16	115	65
SDR0302148	14,8	16	115	65
SDR0302150	15,0	16	115	65

ART.	ØD	Ød	H	L1
SDR0302152	15,2	16	115	65
SDR0302155	15,5	16	115	65
SDR0302158	15,8	16	115	65
* SDR0302160	16,0	16	115	65
SDR0302165	16,5	18	123	73
SDR0302168	16,8	18	123	73
SDR0302170	17,0	18	123	73
SDR0302175	17,5	18	123	73
* SDR0302180	18,0	18	123	73
SDR0302185	18,5	20	131	79
SDR0302188	18,8	20	131	79
SDR0302190	19,0	20	131	79
SDR0302195	19,5	20	131	79
* SDR0302200	20,0	20	131	79

* = COSTRUITI IN TOLLERANZA h7
 * = MADE WITH h7 TOLERANCE
 * = GEBAUT MIT TOLERANZ h7
 * = RÉALISÉS EN TOLÉRANCE h7

A diagram of a double-flute drill bit. The cutting edge, which is the sharp edge at the tip of the bit, is highlighted in red. The bit is shown in a cross-sectional view, with a dashed line indicating the central axis.

MATERIALI - MATERIALS Pag. 1119

P				M	K			N			S	H	G						
ACCIAIO NON LEGATO NOT ALLOY STEEL	ACCIAIO POCO LEGATO LOW ALLOY STEEL	ACCIAIO ALTO LEGATO ALLOY STEEL	INOX MARTENSITICO STAINLESS STEEL MART.	INOX AUST. DUPLEX STAINLESS STEEL AUST.	GHISA GRIGIA GREY CAST IRON	GHISA SFEROIDALE SPHEROIDAL GRAPHITE	GHISA MALLEABILE MALLEABLE CAST IRON	ALLUMINIO E SUE LEGHE ALUMINIUM	RAMME E SUE LEGHE COPPER	NON METALLICI PLASTICS	LEGHE RESIST. CALORE HIGH TEMP. ALLOY	TITANIO E SUE LEGHE TITANIUM	ACCIAIO TEMPRATO HARDENED STEEL	GRAFITE GRAPHITE	(mm)	(m/min)	(mm)	(giri/min) (min ⁻¹)	(mm/min)
															ØD	Vc	fn	n	Vf
	●														3+4	90	0,035	8189	287
	●														4+5	90	0,045	6369	287
	●														5+6	90	0,060	5211	313
	●														6+7	90	0,070	4410	309
	●														7+8	90	0,080	3822	306
	●														8+9	90	0,100	3372	337
	●														9+10	90	0,110	3017	332
	●														10+12	90	0,120	2606	313
	●														12+14	90	0,130	2205	287
	●														14+16	90	0,165	1911	315
	●														16+18	90	0,190	1686	320
	●														18+20	90	0,210	1509	317
		●													3+4	80	0,035	7279	255
		●													4+5	80	0,045	5662	255
		●													5+6	80	0,060	4632	278
		●													6+7	80	0,070	3920	274
		●													7+8	80	0,080	3397	272
		●													8+9	80	0,100	2997	300
		●													9+10	80	0,110	2682	295
		●													10+12	80	0,120	2316	278
		●													12+14	80	0,130	1960	255
		●													14+16	80	0,165	1699	280
		●													16+18	80	0,190	1499	285
		●													18+20	80	0,210	1341	282
				○											3+4	40	0,080	3640	291
				○											4+5	40	0,080	2831	226
				○											5+6	40	0,120	2316	278
				○											6+7	40	0,120	1960	235
				○											7+8	40	0,120	1699	204
				○											8+9	40	0,150	1499	225

- APPLICAZIONE CONSIGLIATA-RECOMMENDED APPLICATION
EMPFOLHENER EINSATZ - APPLICATION CONSEILLÉE
- APPLICAZIONE POSSIBILE - POSSIBLE APPLICATION
MÖGLICHE ANWENDUNG - APPLICATION POSSIBLE

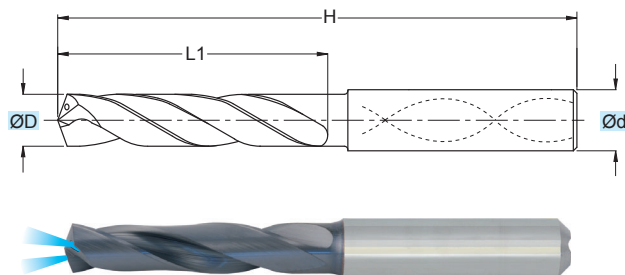
Vf = mm/min VELOCITÀ DI AVANZAMENTO - FEED SPEED

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

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

SDF0302

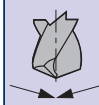
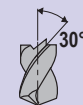
ØD = 3 - 20



TOLLERANZE	D	d
TOLERANCE RANGE	m7	h6

RIVESTIM.
COATED
TIALN

3xD



**DIN
6535**



MG

ART.	ØD	Ød	H	L1
SDF0302030	3,0	6,0	62,0	20,0
SDF0302031	3,1	6,0	62,0	20,0
SDF0302032	3,2	6,0	62,0	20,0
SDF0302033	3,3	6,0	62,0	20,0
SDF0302034	3,4	6,0	62,0	20,0
SDF0302035	3,5	6,0	62,0	20,0
SDF0302036	3,6	6,0	62,0	20,0
SDF0302037	3,7	6,0	62,0	20,0
SDF0302038	3,8	6,0	66,0	24,0
SDF0302039	3,9	6,0	66,0	24,0
SDF0302040	4,0	6,0	66,0	24,0
SDF0302041	4,1	6,0	66,0	24,0
SDF0302042	4,2	6,0	66,0	24,0
SDF0302043	4,3	6,0	66,0	24,0
SDF0302044	4,4	6,0	66,0	24,0
SDF0302045	4,5	6,0	66,0	24,0
SDF0302046	4,6	6,0	66,0	24,0
SDF0302047	4,7	6,0	66,0	24,0
SDF0302048	4,8	6,0	66,0	28,0
SDF0302049	4,9	6,0	66,0	28,0
SDF0302050	5,0	6,0	66,0	28,0
SDF0302051	5,1	6,0	66,0	28,0
SDF0302052	5,2	6,0	66,0	28,0
SDF0302053	5,3	6,0	66,0	28,0
SDF0302054	5,4	6,0	66,0	28,0
SDF0302055	5,5	6,0	66,0	28,0
SDF0302056	5,6	6,0	66,0	28,0
SDF0302057	5,7	6,0	66,0	28,0
SDF0302058	5,8	6,0	66,0	28,0
SDF0302059	5,9	6,0	66,0	28,0
* SDF0302060	6,0	6,0	66,0	28,0
SDF0302061	6,1	8,0	79,0	34,0
SDF0302062	6,2	8,0	79,0	34,0
SDF0302063	6,3	8,0	79,0	34,0
SDF0302064	6,4	8,0	79,0	34,0
SDF0302065	6,5	8,0	79,0	34,0
SDF0302066	6,6	8,0	79,0	34,0
SDF0302067	6,7	8,0	79,0	34,0
SDF0302068	6,8	8,0	79,0	34,0
SDF0302069	6,9	8,0	79,0	34,0
SDF0302070	7,0	8,0	79,0	34,0
SDF0302071	7,1	8,0	79,0	41,0
SDF0302072	7,2	8,0	79,0	41,0
SDF0302073	7,3	8,0	79,0	41,0
SDF0302074	7,4	8,0	79,0	41,0

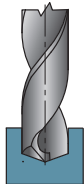
ART.	ØD	Ød	H	L1
SDF0302075	7,5	8,0	79,0	41,0
SDF0302076	7,6	8,0	79,0	41,0
SDF0302077	7,7	8,0	79,0	41,0
SDF0302078	7,8	8,0	79,0	41,0
SDF0302079	7,9	8,0	79,0	41,0
* SDF0302080	8,0	8,0	79,0	41,0
SDF0302081	8,1	10,0	89,0	47,0
SDF0302082	8,2	10,0	89,0	47,0
SDF0302083	8,3	10,0	89,0	47,0
SDF0302084	8,4	10,0	89,0	47,0
SDF0302085	8,5	10,0	89,0	47,0
SDF0302086	8,6	10,0	89,0	47,0
SDF0302087	8,7	10,0	89,0	47,0
SDF0302088	8,8	10,0	89,0	47,0
SDF0302089	8,9	10,0	89,0	47,0
SDF0302090	9,0	10,0	89,0	47,0
SDF0302091	9,1	10,0	89,0	47,0
SDF0302092	9,2	10,0	89,0	47,0
SDF0302093	9,3	10,0	89,0	47,0
SDF0302094	9,4	10,0	89,0	47,0
SDF0302095	9,5	10,0	89,0	47,0
SDF0302096	9,6	10,0	89,0	47,0
SDF0302097	9,7	10,0	89,0	47,0
SDF0302098	9,8	10,0	89,0	47,0
SDF0302099	9,9	10,0	89,0	47,0
* SDF0302100	10,0	10,0	89,0	47,0
SDF0302102	10,2	12,0	102,0	55,0
SDF0302105	10,5	12,0	102,0	55,0
SDF0302108	10,8	12,0	102,0	55,0
SDF0302110	11,0	12,0	102,0	55,0
SDF0302112	11,2	12,0	102,0	55,0
SDF0302115	11,5	12,0	102,0	55,0
SDF0302118	11,8	12,0	102,0	55,0
* SDF0302120	12,0	12,0	102,0	55,0
SDF0302122	12,2	14,0	107,0	60,0
SDF0302125	12,5	14,0	107,0	60,0
SDF0302128	12,8	14,0	107,0	60,0
SDF0302130	13,0	14,0	107,0	60,0
SDF0302135	13,5	14,0	107,0	60,0
SDF0302138	13,8	14,0	107,0	60,0
* SDF0302140	14,0	14,0	107,0	60,0
SDF0302142	14,2	16,0	115,0	65,0
SDF0302145	14,5	16,0	115,0	65,0
SDF0302148	14,8	16,0	115,0	65,0
SDF0302150	15,0	16,0	115,0	65,0

ART.	ØD	Ød	H	L1
SDF0302152	15,2	16,0	115,0	65,0
SDF0302155	15,5	16,0	115,0	65,0
SDF0302158	15,8	16,0	115,0	65,0
* SDF0302160	16,0	16,0	115,0	65,0
SDF0302165	16,5	18,0	123,0	73,0
SDF0302170	17,0	18,0	123,0	73,0
SDF0302175	17,5	18,0	123,0	73,0
* SDF0302180	18,0	18,0	123,0	73,0
SDF0302185	18,5	20,0	131,0	79,0
SDF0302190	19,0	20,0	131,0	79,0
SDF0302195	19,5	20,0	131,0	79,0
* SDF0302200	20,0	20,0	131,0	79,0

* = COSTRUITI IN TOLLERANZA h7
 * = MADE WITH h7 TOLERANCE
 * = GEBAUT MIT TOLERANZ h7
 * = RÉALISÉS EN TOLÉRANCE h7

MATERIALI - MATERIALS Pag. 1119

Applicazione - Application



MATERIALI - MATERIALS															Pag. 1119				
P				M	K			N			S	H	G						
ACCIAIO NON LEGATO NOT ALLOY STEEL	ACCIAIO POCO LEGATO LOW ALLOY STEEL	ACCIAIO ALTO LEGATO ALLOY STEEL	INOX MARTENSITICO STAINLESS STEEL MART.	INOX AUST. DUPLEX STAINLESS STEEL AUST.	GHISA GRIGIA GREY CAST IRON	GHISA SFEROIDALE SPHEROIDAL GRAPHITE	GHISA MALLEABILE MALLEABLE CAST IRON	ALLUMINIO E SUE LEGHE ALUMINIUM	RAME E SUE LEGHE COPPER	NON METALLICI PLASTICS	LEGHE RESIST. CALORE HIGH TEMP. ALLOY	TITANIO E SUE LEGHE TITANIUM	ACCIAIO TEMPRATO HARDENED STEEL	GRAFITE GRAPHITE	(mm)	(m/min)	(mm)	(giri/min) (min ⁻¹)	(mm/min)
															ØD	Vc	fn	n	Vf
●															3÷4	120	0,160	10919	1747
●															4÷5	120	0,160	8493	1359
●															5÷6	120	0,220	6948	1529
●															6÷7	120	0,220	5879	1293
●															7÷8	120	0,220	5096	1121
●															8÷9	120	0,280	4496	1259
●															9÷10	120	0,280	4023	1126
●															10÷12	120	0,280	3474	973
●															12÷14	120	0,340	2940	1000
●															14÷16	120	0,340	2548	866
●															16÷18	120	0,380	2248	854
●															18÷20	120	0,380	2011	764
															3÷4	110	0,080	10009	801
	●														4÷5	110	0,080	7785	623
	●														5÷6	110	0,120	6369	764
	●														6÷7	110	0,120	5390	647
	●														7÷8	110	0,120	4671	561
	●														8÷9	110	0,150	4121	618
	●														9÷10	110	0,150	3688	553
	●														10÷12	110	0,150	3185	478
	●														12÷14	110	0,200	2695	539
	●														14÷16	110	0,200	2335	467
	●														16÷18	110	0,250	2061	515
	●														18÷20	110	0,250	1844	461
															3÷4	70	0,080	6369	510
	●														4÷5	70	0,080	4954	396
	●														5÷6	70	0,120	4053	486
	●														6÷7	70	0,120	3430	412
	●														7÷8	70	0,120	2972	357
	●														8÷9	70	0,150	2623	393
	●														9÷10	70	0,150	2347	352
	●														10÷12	70	0,150	2027	304
	●														12÷14	70	0,200	1715	343
	●														14÷16	70	0,200	1486	297
	●														16÷18	70	0,250	1311	328
	●														18÷20	70	0,250	1173	293
															3÷4	45	0,080	4095	328
	●														4÷5	45	0,080	3185	255
	●														5÷6	45	0,120	2606	313
	●														6÷7	45	0,120	2205	265
	●														7÷8	45	0,120	1911	229
	●														8÷9	45	0,150	1686	253
	●														9÷10	45	0,150	1509	226
	●														10÷12	45	0,150	1303	195
	●														12÷14	45	0,200	1102	220
	●														14÷16	45	0,200	955	191
	●														16÷18	45	0,250	843	211
	●														18÷20	45	0,250	754	189
															3÷4	110	0,125	10009	1251
	●					●									4÷5	110	0,125	7785	973
	●														5÷6	110	0,175	6369	1115
	●														6÷7	110	0,175	5390	943
	●														7÷8	110	0,175	4671	817
	●														8÷9	110	0,225	4121	927
	●														9÷10	110	0,225	3688	830
	●														10÷12	110	0,225	3185	717
	●														12÷14	110	0,300	2695	808
	●														14÷16	110	0,300	2335	701
	●														16÷18	110	0,375	2061	773
	●														18÷20	110	0,375	1844	691
															3÷4	30	0,040	2730	109
	○											○			4÷5	30	0,040	2123	85
	○											○			5÷6	30	0,080	1737	139
	○											○			6÷7	30	0,080	1470	118
	○											○			7÷8	30	0,080	1274	102
	○											○			8÷9	30	0,120	1124	135
	○											○			9÷10	30	0,120	1006	121
	○											○			10÷12	30	0,120	869	104
	○											○			12÷14	30	0,160	735	118
	○											○			14÷16	30	0,160	637	102
	○											○			16÷18	30	0,200	562	112
	○											○			18÷20	30	0,200	503	101

● APPLICAZIONE CONSIGLIATA-RECOMMENDED APPLICATION
EMPFOHLENER EINSATZ - APPLICATION CONSEILLÉE○ APPLICAZIONE POSSIBILE - POSSIBLE APPLICATION
MÖGLICHE ANWENDUNG - APPLICATION POSSIBLE

Vc = m/min VELOCITÀ DI TAGLIO - CUTTING SPEED

n = giri/min (min⁻¹) NUMERO DI GIRI - NUMBER OF REVOLUTIONS

fn = mm AVANZAMENTO AL GIRO - FEED / REVOLUTION

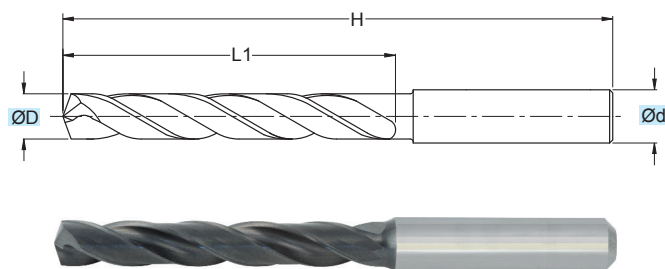
Vf = mm/min VELOCITÀ DI AVANZAMENTO - FEED SPEED

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

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

SDR0502

ØD = 3 - 20

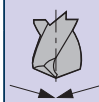
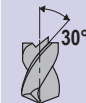


TOLLERANZE
TOLERANCE RANGE

D	d
m7	h6

RIVESTIM.
COATED
TIALN

5xD



**DIN
6535**



MG

ART.	ØD	Ød	H	L1
SDR0502030	3,0	6,0	66,0	28,0
SDR0502031	3,1	6,0	66,0	28,0
SDR0502032	3,2	6,0	66,0	28,0
SDR0502033	3,3	6,0	66,0	28,0
SDR0502034	3,4	6,0	66,0	28,0
SDR0502035	3,5	6,0	66,0	28,0
SDR0502036	3,6	6,0	66,0	28,0
SDR0502037	3,7	6,0	66,0	28,0
SDR0502038	3,8	6,0	74,0	36,0
SDR0502039	3,9	6,0	74,0	36,0
SDR0502040	4,0	6,0	74,0	36,0
SDR0502041	4,1	6,0	74,0	36,0
SDR0502042	4,2	6,0	74,0	36,0
SDR0502043	4,3	6,0	74,0	36,0
SDR0502044	4,4	6,0	74,0	36,0
SDR0502045	4,5	6,0	74,0	36,0
SDR0502046	4,6	6,0	74,0	36,0
SDR0502047	4,7	6,0	74,0	36,0
SDR0502048	4,8	6,0	82,0	44,0
SDR0502049	4,9	6,0	82,0	44,0
SDR0502050	5,0	6,0	82,0	44,0
SDR0502051	5,1	6,0	82,0	44,0
SDR0502052	5,2	6,0	82,0	44,0
SDR0502053	5,3	6,0	82,0	44,0
SDR0502054	5,4	6,0	82,0	44,0
SDR0502055	5,5	6,0	82,0	44,0
SDR0502056	5,6	6,0	82,0	44,0
SDR0502057	5,7	6,0	82,0	44,0
SDR0502058	5,8	6,0	82,0	44,0
SDR0502059	5,9	6,0	82,0	44,0
* SDR0502060	6,0	6,0	82,0	44,0
SDR0502061	6,1	8,0	91,0	53,0
SDR0502062	6,2	8,0	91,0	53,0
SDR0502063	6,3	8,0	91,0	53,0
SDR0502064	6,4	8,0	91,0	53,0
SDR0502065	6,5	8,0	91,0	53,0
SDR0502066	6,6	8,0	91,0	53,0
SDR0502067	6,7	8,0	91,0	53,0
SDR0502068	6,8	8,0	91,0	53,0
SDR0502069	6,9	8,0	91,0	53,0
SDR0502070	7,0	8,0	91,0	53,0
SDR0502071	7,1	8,0	91,0	53,0
SDR0502072	7,2	8,0	91,0	53,0
SDR0502073	7,3	8,0	91,0	53,0
SDR0502074	7,4	8,0	91,0	53,0

ART.	ØD	Ød	H	L1
SDR0502075	7,5	8,0	91,0	53,0
SDR0502076	7,6	8,0	91,0	53,0
SDR0502077	7,7	8,0	91,0	53,0
SDR0502078	7,8	8,0	91,0	53,0
SDR0502079	7,9	8,0	91,0	53,0
* SDR0502080	8,0	8,0	91,0	53,0
SDR0502081	8,1	10,0	103,0	61,0
SDR0502082	8,2	10,0	103,0	61,0
SDR0502083	8,3	10,0	103,0	61,0
SDR0502084	8,4	10,0	103,0	61,0
SDR0502085	8,5	10,0	103,0	61,0
SDR0502086	8,6	10,0	103,0	61,0
SDR0502087	8,7	10,0	103,0	61,0
SDR0502088	8,8	10,0	103,0	61,0
SDR0502089	8,9	10,0	103,0	61,0
SDR0502090	9,0	10,0	103,0	61,0
SDR0502091	9,1	10,0	103,0	61,0
SDR0502092	9,2	10,0	103,0	61,0
SDR0502093	9,3	10,0	103,0	61,0
SDR0502094	9,4	10,0	103,0	61,0
SDR0502095	9,5	10,0	103,0	61,0
SDR0502096	9,6	10,0	103,0	61,0
SDR0502097	9,7	10,0	103,0	61,0
SDR0502098	9,8	10,0	103,0	61,0
SDR0502099	9,9	10,0	103,0	61,0
* SDR0502100	10,0	10,0	103,0	61,0
SDR0502102	10,2	12,0	118,0	71,0
SDR0502105	10,5	12,0	118,0	71,0
SDR0502108	10,8	12,0	118,0	71,0
SDR0502110	11,0	12,0	118,0	71,0
SDR0502112	11,2	12,0	118,0	71,0
SDR0502115	11,5	12,0	118,0	71,0
SDR0502118	11,8	12,0	118,0	71,0
* SDR0502120	12,0	12,0	118,0	71,0
SDR0502122	12,2	14,0	124,0	77,0
SDR0502125	12,5	14,0	124,0	77,0
SDR0502128	12,8	14,0	124,0	77,0
SDR0502130	13,0	14,0	124,0	77,0
SDR0502132	13,2	14,0	124,0	77,0
SDR0502135	13,5	14,0	124,0	77,0
SDR0502138	13,8	14,0	124,0	77,0
* SDR0502140	14,0	14,0	124,0	77,0
SDR0502142	14,2	16,0	133,0	83,0
SDR0502145	14,5	16,0	133,0	83,0
SDR0502148	14,8	16,0	133,0	83,0

ART.	ØD	Ød	H	L1
SDR0502150	15,0	16,0	133,0	83,0
SDR0502152	15,2	16,0	133,0	83,0
SDR0502155	15,5	16,0	133,0	83,0
SDR0502158	15,8	16,0	133,0	83,0
* SDR0502160	16,0	16,0	133,0	83,0
SDR0502165	16,5	18,0	143,0	93,0
SDR0502170	17,0	18,0	143,0	93,0
SDR0502175	17,5	18,0	143,0	93,0
* SDR0502180	18,0	18,0	143,0	93,0
SDR0502185	18,5	20,0	153,0	101,0
SDR0502190	19,0	20,0	153,0	101,0
SDR0502195	19,5	20,0	153,0	101,0
* SDR0502200	20,0	20,0	153,0	101,0

* = COSTRUITI IN TOLLERANZA h7
 * = MADE WITH h7 TOLERANCE
 * = GEBAUT MIT TOLERANZ h7
 * = RÉALISÉS EN TOLÉRANCE h7

Pag. 1119

[illegible]

- APPLICAZIONE CONSIGLIATA-RECOMMENDED APPLICATION
EMPFOHLENER EINSATZ - APPLICATION CONSEILLÉE
- APPLICAZIONE POSSIBILE - POSSIBLE APPLICATION
MÖGLICHE ANWENDUNG - APPLICATION POSSIBLE

Vc = m/min VELOCITÀ DI TAGLIO - CUTTING SPEED

n = giri/min (min^{-1}) NUMERO DI GIRI - NUMBER OF REVOLUTIONS

fn = mm AVANZAMENTO AL GIRO - FEED / REVOLUTION

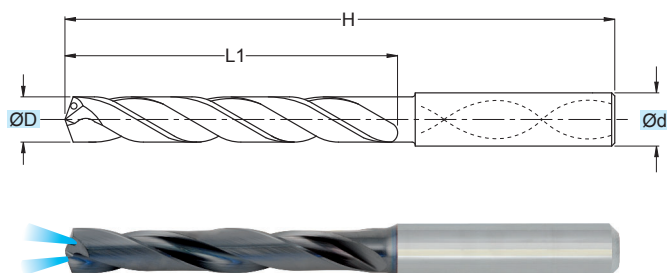
Vf = mm/min VELOCITÀ DI AVANZAMENTO - FEED SPEED

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

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

SDF0502

ØD = 3 - 20

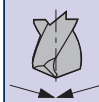
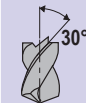


TOLLERANZE
TOLERANCE RANGE

D	d
m7	h6

RIVESTIM.
COATED
TIALN

5xD



**DIN
6535**



MG

ART.	ØD	Ød	H	L1
SDF0502030	3,0	6	66	28
SDF0502031	3,1	6	66	28
SDF0502032	3,2	6	66	28
SDF0502033	3,3	6	66	28
SDF0502034	3,4	6	66	28
SDF0502035	3,5	6	66	28
SDF0502036	3,6	6	66	28
SDF0502037	3,7	6	66	28
SDF0502038	3,8	6	74	36
SDF0502039	3,9	6	74	36
SDF0502040	4,0	6	74	36
SDF0502041	4,1	6	74	36
SDF0502042	4,2	6	74	36
SDF0502043	4,3	6	74	36
SDF0502044	4,4	6	74	36
SDF0502045	4,5	6	74	36
SDF0502046	4,6	6	74	36
SDF0502047	4,7	6	74	36
SDF0502048	4,8	6	82	44
SDF0502049	4,9	6	82	44
SDF0502050	5,0	6	82	44
SDF0502051	5,1	6	82	44
SDF0502052	5,2	6	82	44
SDF0502053	5,3	6	82	44
SDF0502054	5,4	6	82	44
SDF0502055	5,5	6	82	44
SDF0502056	5,6	6	82	44
SDF0502057	5,7	6	82	44
SDF0502058	5,8	6	82	44
SDF0502059	5,9	6	82	44
*SDF0502060	6,0	6	82	44
SDF0502061	6,1	8	91	53
SDF0502062	6,2	8	91	53
SDF0502063	6,3	8	91	53
SDF0502064	6,4	8	91	53
SDF0502065	6,5	8	91	53
SDF0502066	6,6	8	91	53
SDF0502067	6,7	8	91	53
SDF0502068	6,8	8	91	53
SDF0502069	6,9	8	91	53
SDF0502070	7,0	8	91	53
SDF0502071	7,1	8	91	53
SDF0502072	7,2	8	91	53
SDF0502073	7,3	8	91	53
SDF0502074	7,4	8	91	53
SDF0502075	7,5	8	91	53
SDF0502076	7,6	8	91	53
SDF0502077	7,7	8	91	53

ART.	ØD	Ød	H	L1
SDF0502078	7,8	8	91	53
SDF0502079	7,9	8	91	53
*SDF0502080	8,0	8	91	53
SDF0502081	8,1	10	103	61
SDF0502082	8,2	10	103	61
SDF0502083	8,3	10	103	61
SDF0502084	8,4	10	103	61
SDF0502085	8,5	10	103	61
SDF0502086	8,6	10	103	61
SDF0502087	8,7	10	103	61
SDF0502088	8,8	10	103	61
SDF0502089	8,9	10	103	61
SDF0502090	9,0	10	103	61
SDF0502091	9,1	10	103	61
SDF0502092	9,2	10	103	61
SDF0502093	9,3	10	103	61
SDF0502094	9,4	10	103	61
SDF0502095	9,5	10	103	61
SDF0502096	9,6	10	103	61
SDF0502097	9,7	10	103	61
SDF0502098	9,8	10	103	61
SDF0502099	9,9	10	103	61
*SDF0502100	10,0	10	103	61
SDF0502101 New	10,1	12	118	71
SDF0502102	10,2	12	118	71
SDF0502103	10,3	12	118	71
SDF0502104 New	10,4	12	118	71
SDF0502105	10,5	12	118	71
SDF0502106 New	10,6	12	118	71
SDF0502107 New	10,7	12	118	71
SDF0502108	10,8	12	118	71
SDF0502109 New	10,9	12	118	71
SDF0502110	11,0	12	118	71
SDF0502111 New	11,1	12	118	71
SDF0502112	11,2	12	118	71
SDF0502113 New	11,3	12	118	71
SDF0502114 New	11,4	12	118	71
SDF0502115	11,5	12	118	71
SDF0502116 New	11,6	12	118	71
SDF0502117 New	11,7	12	118	71
SDF0502118	11,8	12	118	71
SDF0502119 New	11,9	12	118	71
*SDF0502120	12,0	12	118	71
SDF0502121 New	12,1	14	124	77
SDF0502122	12,2	14	124	77
SDF0502123 New	12,3	14	124	77
SDF0502124 New	12,4	14	124	77
SDF0502125	12,5	14	124	77

ART.	ØD	Ød	H	L1
SDF0502126 New	12,6	14	124	77
SDF0502127 New	12,7	14	124	77
SDF0502128	12,8	14	124	77
SDF0502129 New	12,9	14	124	77
SDF0502130	13,0	14	124	77
SDF0502131 New	13,1	14	124	77
SDF0502132	13,2	14	124	77
SDF0502133 New	13,3	14	124	77
SDF0502134 New	13,4	14	124	77
SDF0502135	13,5	14	124	77
SDF0502136 New	13,6	14	124	77
SDF0502137 New	13,7	14	124	77
SDF0502138	13,8	14	124	77
SDF0502139 New	13,9	14	124	77
*SDF0502140	14,0	14	124	77
SDF0502141 New	14,1	16	133	83
SDF0502142	14,2	16	133	83
SDF0502143 New	14,3	16	133	83
SDF0502144 New	14,4	16	133	83
SDF0502145	14,5	16	133	83
SDF0502146 New	14,6	16	133	83
SDF0502147 New	14,7	16	133	83
SDF0502148	14,8	16	133	83
SDF0502149 New	14,9	16	133	83
SDF0502150	15,0	16	133	83
SDF0502151 New	15,1	16	133	83
SDF0502152	15,2	16	133	83
SDF0502153 New	15,3	16	133	83
SDF0502154 New	15,4	16	133	83
SDF0502155	15,5	16	133	83
SDF0502156 New	15,6	16	133	83
SDF0502157 New	15,7	16	133	83
SDF0502158	15,8	16	133	83
SDF0502159 New	15,9	16	133	83
*SDF0502160	16,0	16	133	83
SDF0502165	16,5	18	143	93
SDF0502170	17,0	18	143	93
SDF0502175	17,5	18	143	93
*SDF0502180	18,0	18	143	93
SDF0502185	18,5	20	153	101
SDF0502190	19,0	20	153	101
SDF0502195	19,5	20	153	101
*SDF0502200	20,0	20	153	101

* = COSTRUITI IN TOLLERANZA h7
 * = MADE WITH h7 TOLERANCE
 * = GEBAUT MIT TOLERANZ h7
 * = RÉALISÉS EN TOLÉRANCE h7

Applicazione - Application

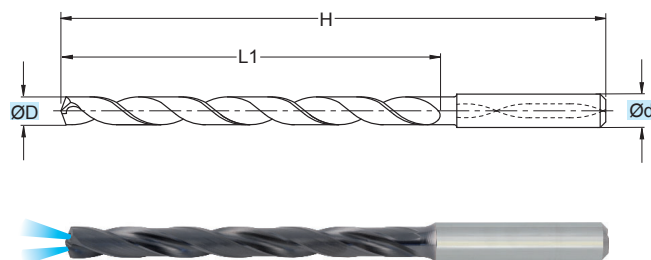
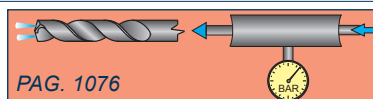
MATERIALI - MATERIALS											Pag. 1119								
P			M	K			N			S	H	G							
ACCIAIO NON LEGATO NOT ALLOY STEEL	ACCIAIO POCO LEGATO LOW ALLOY STEEL	ACCIAIO ALTO LEGATO ALLOY STEEL	INOX MARTENSITICO STAINLESS STEEL MART.	INOX AUST DUPLEX STAINLESS STEEL AUST.	GHISA GRIGIA GREY CAST IRON	GHISA SFEROIDALE SPHEROIDAL GRAPH-ITE	GHISA MALLEABILE MALLEABLE CAST IRON	ALLUMINIO E SUE LEGHE ALUMINIUM	RAMME E SUE LEGHE COPPER	NON METALLICI PLASTICS	LEGHE RESIST. CALORE HIGH TEMP ALLOY	TITANIO E SUE LEGHE TITANIUM	ACCIAIO TEMPRATO HARDENED STEEL	GRAFITE GRAPHITE					
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- APPLICAZIONE POSSIBILE - POSSIBLE APPLICATION
MÖGLICHE ANWENDUNG - APPLICATION POSSIBLE

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

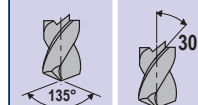
SDF0802

ØD = 3 - 16



TOLLERANZE	D	d
TOLERANCE RANGE	m7	h6

RIVESTIM.
COATED
TIALN **8xD**



DIN 6535

MG

ART.	ØD	Ød	H	L1
SDF0802030	3,0	6	74	34
SDF0802031	3,1	6	74	34
SDF0802032	3,2	6	74	34
SDF0802033	3,3	6	74	34
SDF0802034	3,4	6	74	34
SDF0802035	3,5	6	74	34
SDF0802036	3,6	6	74	34
SDF0802037	3,7	6	74	34
SDF0802038	3,8	6	85	45
SDF0802039	3,9	6	85	45
SDF0802040	4,0	6	85	45
SDF0802041	4,1	6	85	45
SDF0802042	4,2	6	85	45
SDF0802043	4,3	6	85	45
SDF0802044	4,4	6	85	45
SDF0802045	4,5	6	85	45
SDF0802046	4,6	6	85	45
SDF0802047	4,7	6	85	45
SDF0802048	4,8	6	97	57
SDF0802049	4,9	6	97	57
SDF0802050	5,0	6	97	57
SDF0802051	5,1	6	97	57
SDF0802052	5,2	6	97	57
SDF0802053	5,3	6	97	57
SDF0802054	5,4	6	97	57
SDF0802055	5,5	6	97	57
SDF0802056	5,6	6	97	57
SDF0802057	5,7	6	97	57
SDF0802058	5,8	6	97	57
SDF0802059	5,9	6	97	57
*SDF0802060	6,0	6	97	57
SDF0802061	6,1	8	106	66
SDF0802062	6,2	8	106	66
SDF0802063	6,3	8	106	66
SDF0802064	6,4	8	106	66
SDF0802065	6,5	8	106	66
SDF0802066	6,6	8	106	66
SDF0802067	6,7	8	106	66
SDF0802068	6,8	8	106	66
SDF0802069	6,9	8	106	66
SDF0802070	7,0	8	106	66
SDF0802071	7,1	8	116	76
SDF0802072	7,2	8	116	76
SDF0802073	7,3	8	116	76
SDF0802074	7,4	8	116	76

ART.	ØD	Ød	H	L1
SDF0802075	7,5	8	116	76
SDF0802076	7,6	8	116	76
SDF0802077	7,7	8	116	76
SDF0802078	7,8	8	116	76
SDF0802079	7,9	8	116	76
*SDF0802080	8,0	8	116	76
SDF0802081	8,1	10	139	95
SDF0802082	8,2	10	139	95
SDF0802083	8,3	10	139	95
SDF0802084	8,4	10	139	95
SDF0802085	8,5	10	139	95
SDF0802086	8,6	10	139	95
SDF0802087	8,7	10	139	95
SDF0802088	8,8	10	139	95
SDF0802089	8,9	10	139	95
SDF0802090	9,0	10	139	95
SDF0802091	9,1	10	139	95
SDF0802092	9,2	10	139	95
SDF0802093	9,3	10	139	95
SDF0802094	9,4	10	139	95
SDF0802095	9,5	10	139	95
SDF0802096	9,6	10	139	95
SDF0802097	9,7	10	139	95
SDF0802098	9,8	10	139	95
SDF0802099	9,9	10	139	95
*SDF0802100	10,0	10	139	95
SDF0802101	10,1	12	163	114
SDF0802102	10,2	12	163	114
SDF0802103	10,3	12	163	114
SDF0802104	10,4	12	163	114
SDF0802105	10,5	12	163	114
SDF0802106	10,6	12	163	114
SDF0802107	10,7	12	163	114
SDF0802108	10,8	12	163	114
SDF0802109	10,9	12	163	114
SDF0802110	11,0	12	163	114
SDF0802111	11,1	12	163	114
SDF0802112	11,2	12	163	114
SDF0802113	11,3	12	163	114
SDF0802114	11,4	12	163	114
SDF0802115	11,5	12	163	114
SDF0802116	11,6	12	163	114
SDF0802117	11,7	12	163	114
SDF0802118	11,8	12	163	114
SDF0802119	11,9	12	163	114

ART.	ØD	Ød	H	L1
*SDF0802120	12,0	12	163	114
SDF0802125	12,5	14	182	133
SDF0802128	12,8	14	182	133
SDF0802130	13,0	14	182	133
SDF0802135	13,5	14	182	133
SDF0802138	13,8	14	182	133
*SDF0802140	14,0	14	182	133
SDF0802145	14,5	16	204	152
SDF0802148	14,8	16	204	152
SDF0802150	15,0	16	204	152
SDF0802155	15,5	16	204	152
SDF0802158	15,8	16	204	152
*SDF0802160	16,0	16	204	152

* = COSTRUITI IN TOLLERANZA h7
 * = MADE WITH h7 TOLERANCE
 * = GEBAUT MIT TOLERANZ h7
 * = RÉALISÉS EN TOLÉRANCE h7

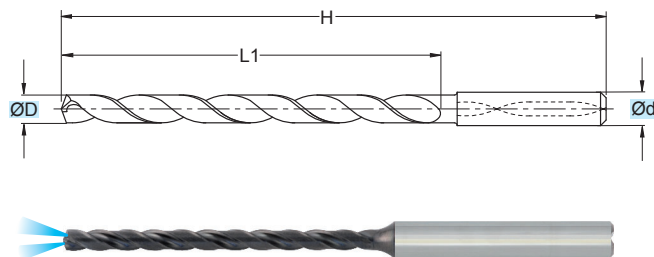
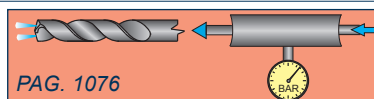
		MATERIALI - MATERIALS Pag. 1119																			
Applicazione - Application		P				M	K			N	S	H	G	(mm)	(m/min)	(mm)	(giri/min) (min ⁻¹)	(mm/min)			
		ACCIAIO NON LEGATO NOT ALLOY STEEL	ACCIAIO POCO LEGATO LOW ALLOY STEEL	ACCIAIO ALTO LEGATO ALLOY STEEL	INOX MARTENSITICO STAINLESS STEEL MART.	INOX AUST. DUPLEX STAINLESS STEEL AUST.	GHISA GRIGIA GREY CAST IRON	GHISA SFEROIDALE SPHEROIDAL GRAPHITE	GHISA MALLEABILE MALLEABLE CAST IRON	ALLUMINIO E SUE LEGHE ALUMINIUM	RAME E SUE LEGHE COPPER	NON METALLICI PLASTICS	LEGHE RESIST. CALORE HIGH TEMP. ALLOY	TITANIO E SUE LEGHE TITANIUM	ACCIAIO TEMPRATO HARDENED STEEL	GRAFITE GRAPHITE	ØD	Vc	fn	n	Vf
●																	3÷4	85	0,050	7734	387
●																	4÷5	85	0,080	6016	481
●																	5÷6	85	0,110	4922	541
●																	6÷7	85	0,130	4165	541
●																	7÷8	85	0,150	3609	541
●																	8÷9	85	0,170	3185	541
●																	9÷10	85	0,190	2849	541
●																	10÷11	85	0,200	2707	541
●																	11÷12	85	0,210	2461	517
●																	12÷13	85	0,220	2256	496
●																	13÷14	85	0,230	2082	479
●																	14÷15	85	0,240	1934	464
●																	15÷16	85	0,250	1805	451
	●																3÷4	75	0,035	6824	239
	●																4÷5	75	0,045	5308	239
	●																5÷6	75	0,060	4343	261
	●																6÷7	75	0,075	3675	276
	●																7÷8	75	0,085	3185	271
	●																8÷9	75	0,095	2810	267
	●																9÷10	75	0,105	2514	264
	●																10÷11	75	0,110	2275	250
	●																11÷12	75	0,115	2077	239
	●																12÷13	75	0,120	1911	229
	●																13÷14	75	0,130	1769	230
	●																14÷15	75	0,140	1647	231
	●																15÷16	75	0,150	1541	231
		●															3÷4	55	0,035	5005	175
		●															4÷5	55	0,045	3892	175
		●				</															

- APPLICAZIONE POSSIBILE - POSSIBLE APPLICATION
MÖGLICHE ANWENDUNG - APPLICATION POSSIBLE

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

SDF1201

ØD = 3 - 16



TOLLERANZE	D	d
TOLERANCE RANGE	h7	h6

RIVESTIM. COATED TIALN	12xD
	DIN 6535
	MG

ART.	ØD	Ød	H	L1
SDF1201030	3,0	6	92	54
SDF1201031	3,1	6	92	54
SDF1201032	3,2	6	92	54
SDF1201033	3,3	6	92	54
SDF1201034	3,4	6	92	54
SDF1201035	3,5	6	92	54
SDF1201036	3,6	6	92	54
SDF1201037	3,7	6	92	54
SDF1201038	3,8	6	102	64
SDF1201039	3,9	6	102	64
SDF1201040	4,0	6	102	64
SDF1201041	4,1	6	102	64
SDF1201042	4,2	6	102	64
SDF1201043	4,3	6	102	64
SDF1201044	4,4	6	102	64
SDF1201045	4,5	6	102	64
SDF1201046	4,6	6	102	64
SDF1201047	4,7	6	102	64
SDF1201048	4,8	6	116	78
SDF1201049	4,9	6	116	78
SDF1201050	5,0	6	116	78
SDF1201051	5,1	6	116	78
SDF1201052	5,2	6	116	78
SDF1201053	5,3	6	116	78
SDF1201054	5,4	6	116	78
SDF1201055	5,5	6	116	78
SDF1201056	5,6	6	116	78
SDF1201057	5,7	6	116	78
SDF1201058	5,8	6	116	78
SDF1201059	5,9	6	116	78
SDF1201060	6,0	6	116	78
SDF1201061	6,1	8	146	108
SDF1201062	6,2	8	146	108
SDF1201063	6,3	8	146	108
SDF1201064	6,4	8	146	108
SDF1201065	6,5	8	146	108
SDF1201066	6,6	8	146	108
SDF1201067	6,7	8	146	108
SDF1201068	6,8	8	146	108
SDF1201069	6,9	8	146	108
SDF1201070	7,0	8	146	108
SDF1201071	7,1	8	146	108
SDF1201072	7,2	8	146	108
SDF1201073	7,3	8	146	108
SDF1201074	7,4	8	146	108

ART.	ØD	Ød	H	L1
SDF1201075	7,5	8	146	108
SDF1201076	7,6	8	146	108
SDF1201077	7,7	8	146	108
SDF1201078	7,8	8	146	108
SDF1201079	7,9	8	146	108
SDF1201080	8,0	8	146	108
SDF1201081	8,1	10	162	120
SDF1201082	8,2	10	162	120
SDF1201083	8,3	10	162	120
SDF1201084	8,4	10	162	120
SDF1201085	8,5	10	162	120
SDF1201086	8,6	10	162	120
SDF1201087	8,7	10	162	120
SDF1201088	8,8	10	162	120
SDF1201089	8,9	10	162	120
SDF1201090	9,0	10	162	120
SDF1201091	9,1	10	162	120
SDF1201092	9,2	10	162	120
SDF1201093	9,3	10	162	120
SDF1201094	9,4	10	162	120
SDF1201095	9,5	10	162	120
SDF1201096	9,6	10	162	120
SDF1201097	9,7	10	162	120
SDF1201098	9,8	10	162	120
SDF1201099	9,9	10	162	120
SDF1201100	10,0	10	162	120
SDF1201101	10,1	12	204	156
SDF1201102	10,2	12	204	156
SDF1201103	10,3	12	204	156
SDF1201104	10,4	12	204	156
SDF1201105	10,5	12	204	156
SDF1201106	10,6	12	204	156
SDF1201107	10,7	12	204	156
SDF1201108	10,8	12	204	156
SDF1201109	10,9	12	204	156
SDF1201110	11,0	12	204	156
SDF1201111	11,1	12	204	156
SDF1201112	11,2	12	204	156
SDF1201113	11,3	12	204	156
SDF1201114	11,4	12	204	156
SDF1201115	11,5	12	204	156
SDF1201116	11,6	12	204	156
SDF1201117	11,7	12	204	156
SDF1201118	11,8	12	204	156
SDF1201119	11,9	12	204	156

ART.	ØD	Ød	H	L1
SDF1201120	12,0	12	204	156
SDF1201125	12,5	14	230	182
SDF1201128	12,8	14	230	182
SDF1201130	13,0	14	230	182
SDF1201135	13,5	14	230	182
SDF1201138	13,8	14	230	182
SDF1201140	14,0	14	230	182
SDF1201145	14,5	16	260	208
SDF1201148	14,8	16	260	208
SDF1201150	15,0	16	260	208
SDF1201155	15,5	16	260	208
SDF1201158	15,8	16	260	208
SDF1201160	16,0	16	260	208

ITALY -PRIMA DELL'UTILIZZO DELLA PUNTA
LEGGERE GLI ACCORGIMENTI DI PAG 1079
-PER ESEGUIRE IL PREFORO UTILIZZARE
ART. SDF0371 PAG 576

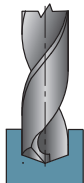
ENGLAND -BEFORE USING THE DRILL READ THE
TIPS ON PAGE 1079
-USE ART. SDF0371 PAGE 576 TO MAKE
THE PRE-BORE

GERMANY -VOR DEM GEBRAUCH SIEHE DIE
HINWEISE AUF SEITE 1079
-ZUM VORBOHREN ART. SDF0371, SEITE
576 VERWENDEN

FRANCE -AVANT D'UTILISER LA POINTE, LIRE LES
CONSIGNES DE PAGE 1079
-POUR EXECUTER LE PRE-TRou,
UTILISER ART. SDF0371 PAGE 576

MATERIALI - MATERIALS Pag. 1119

Applicazione - Application



MATERIALI - MATERIALS												Pag. 1119								
P				M	K			N			S	H	G							
ACCIAIO NON LEGATO NOT ALLOY STEEL	ACCIAIO POCO LEGATO LOW ALLOY STEEL	ACCIAIO ALTO LEGATO ALLOY STEEL	INOX MARTENSITICO STAINLESS STEEL MART.	INOX AUST. DUPLEX STAINLESS STEEL AUST.	GHISA GRIGIA GREY CAST IRON	GHISA SFEROIDALE SPHEROIDAL GRAPHITE	GHISA MALLEABILE MALLEABLE CAST IRON	ALLUMINIO E SUE LEGHE ALUMINIUM	RAME E SUE LEGHE COPPER	NON METALLICI PLASTICS	LEGHE RESIST. CALORE HIGH TEMP. ALLOY	TITANIO E SUE LEGHE TITANIUM	ACCIAIO TEMPRATO HARDENED STEEL	GRAFITE GRAPHITE	(mm)	(m/min)	(mm)	(giri/min) (min ⁻¹) n	(mm/min) Vf	
●																3÷4	80	0,050	7279	364
●																4÷5	80	0,080	5662	453
●																5÷6	80	0,110	4632	510
●																6÷7	80	0,130	3920	510
●																7÷8	80	0,150	3397	510
●																8÷9	80	0,170	2997	510
●																9÷10	80	0,190	2682	510
●																10÷11	80	0,200	2548	510
●																11÷12	80	0,210	2316	486
●																12÷13	80	0,220	2123	467
●																13÷14	80	0,230	1960	451
●																14÷15	80	0,240	1820	437
●																15÷16	80	0,250	1699	425
		●														3÷4	50	0,035	4550	159
		●														4÷5	50	0,045	3539	159
		●														5÷6	50	0,060	2895	174
		●														6÷7	50	0,075	2450	184
		●														7÷8	50	0,085	2123	180
		●														8÷9	50	0,095	1873	178
		●														9÷10	50	0,105	1676	176
		●														10÷11	50	0,110	1592	175
		●														11÷12	50	0,115	1448	166
		●														12÷13	50	0,120	1327	159
		●														13÷14	50	0,130	1225	159
		●														14÷15	50	0,140	1137	159
		●														15÷16	50	0,150	1062	159
			●													3÷4	30	0,035	2730	96
			●													4÷5	30	0,045	2123	96
			●													5÷6	30	0,060	1737	104
			●													6÷7	30	0,075	1470	110
			●													7÷8	30	0,085	1274	108
			●													8÷9	30	0,095	1124	107
			●													9÷10	30	0,105	1006	106
			●													10÷11	30	0,110	955	105
			●													11÷12	30	0,115	869	100
			●													12÷13	30	0,120	796	96
			●													13÷14	30	0,130	735	96
			●													14÷15	30	0,140	682	96
			●													15÷16	30	0,150	637	96
				●												3÷4	50	0,035	4550	159
				●												4÷5	50	0,045	3539	159
				●												5÷6	50	0,060	2895	174
				●												6÷7	50	0,075	2450	184
				●												7÷8	50	0,085	2123	180
				●												8÷9	50	0,095	1873	178
				●												9÷10	50	0,105	1676	176
				●												10÷11	50	0,110	1517	167
				●												11÷12	50	0,115	1385	159
				●												12÷13	50	0,120	1274	153
				●												13÷14	50	0,120	1180	142
				●												14÷15	50	0,125	1098	137
				●												15÷16	50	0,125	1027	128
					●	●										3÷4	75	0,075	6824	512
					●	●										4÷5	75	0,100	5308	531
					●	●										5÷6	75	0,130	4343	565
					●	●										6÷7	75	0,150	3675	551
					●	●										7÷8	75	0,170	3185	541
					●	●										8÷9	75	0,190	2810	534
					●	●										9÷10	75	0,215	2514	541
					●	●										10÷11	75	0,230	2389	549
					●	●										11÷12	75	0,255	2171	554
					●	●										12÷13	75	0,280	1990	557
					●	●										13÷14	75	0,290	1837	533
					●	●										14÷15	75	0,300	1706	512
					●	●										15÷16	75	0,310	1592	494

● APPLICAZIONE CONSIGLIATA-RECOMMENDED APPLICATION
EMPFOHLENER EINSATZ - APPLICATION CONSEILLÉE○ APPLICAZIONE POSSIBILE - POSSIBLE APPLICATION
MÖGLICHE ANWENDUNG - APPLICATION POSSIBLE

Vc = m/min VELOCITÀ DI TAGLIO - CUTTING SPEED

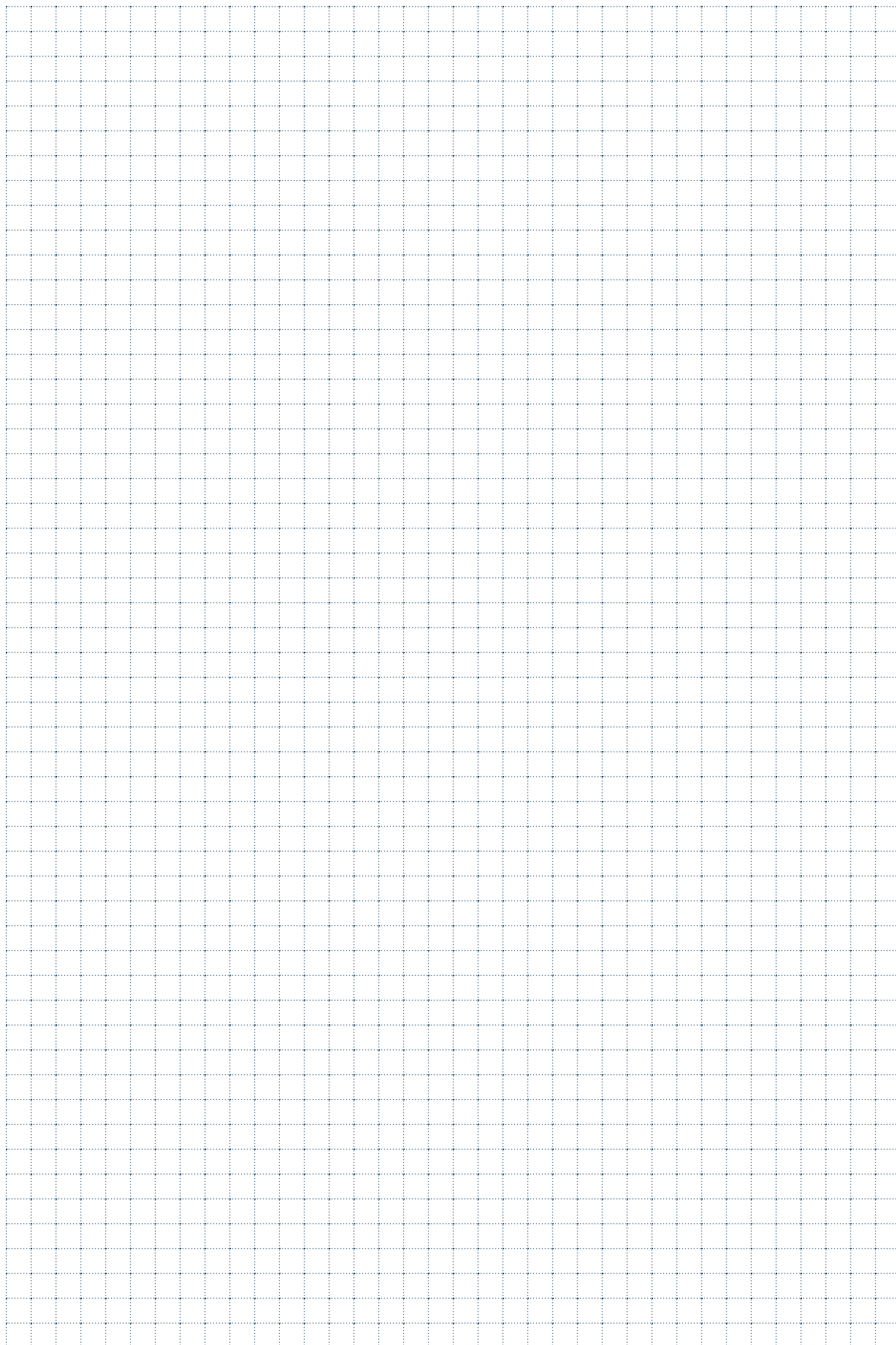
n = giri/min (min⁻¹) NUMERO DI GIRI - NUMBER OF REVOLUTIONS

fn = mm AVANZAMENTO AL GIRO - FEED / REVOLUTION

Vf = mm/min VELOCITÀ DI AVANZAMENTO - FEED SPEED

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

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





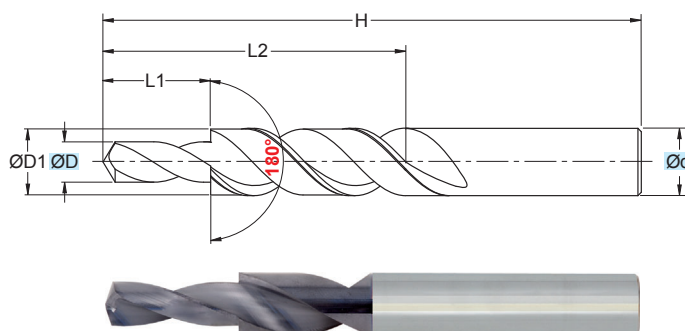
PUNTE A GRADINO

STEP DRILLS / STUFENBOHRER / POINTES A GRADIN /
PUNTAS ESCALÓN

SDN0102

GENERICO / ALL PURPOSE

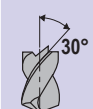
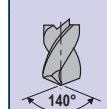
$\varnothing D = 3,4 - 11$



> ANGOLO DI SVASATURA 180°
 > PER ALLOGGIAMENTI TESTE VITI SECONDO DIN
 84-912-6912-7513-7984

> COUNTER SINK 180°
 > SFOR HEAD SCREW DIN 84-912-6912-7513-7984

RIVESTIM.
 COATED
TIALN



MG

(mm)						
ART.	ØD	Ød	ØD1	H	L1	L2
SDN0102030	3,4	6	6	66	9	28
SDN0102040	4,5	8	8	80	11	37
SDN0102050	5,5	10	10	89	13	43
SDN0102060	6,6	12	11	95	15	47
SDN0102080	9,0	16	15	110	19	56
SDN0102100	11,0	18	18	123	23	62

MATERIALI - MATERIALS Pag. 1119

Applicazione - Application		MATERIALI - MATERIALS														Pag. 1119				
		P			M	K			N			S		H	G					
		ACCIAIO NON LEGATO NOT ALLOY STEEL	ACCIAIO POCO LEGATO LOW ALLOY STEEL	ACCIAIO ALTO LEGATO ALLOY STEEL	INOX MARTENSITICO STAINLESS STEEL MART.	INOX AUST. DUPLEX STAINLESS STEEL AUST.	GHISA GRIGIA GREY CAST IRON	GHISA SFEROIDALE SPHEROIDAL GRAPHITE	GHISA MALLEABILE MALLEABLE CAST IRON	ALLUMINIO E SUE LEGHE ALUMINIUM	RAME E SUE LEGHE COPPER	NON METALLICI PLASTICS	LEGHE RESIST. CALORE HIGH TEMP. ALLOY	TITANIO E SUE LEGHE TITANIUM	ACCIAIO TEMPRATO HARDENED STEEL	GRAFITE GRAPHITE	(mm) ØD	(m/min) Vc	(mm) fn	(giri/min) n (min ⁻¹)
	●															3,4	80	0,180	7493	1349
	●															4,5	80	0,180	5662	1019
	●															5,5	80	0,240	4632	1112
	●															6,6	80	0,240	3860	926
	●															9,0	80	0,300	2831	849
	●															11,0	80	0,300	2316	695
	●															3,4	50	0,150	4683	703
	●															4,5	50	0,150	3539	531
	●															5,5	50	0,210	2895	608
	●															6,6	50	0,210	2413	507
	●															9,0	50	0,270	1769	478
	●															11,0	50	0,270	1448	391

● APPLICAZIONE CONSIGLIATA-RECOMMENDED APPLICATION
EMPFOHLENER EINSATZ - APPLICATION CONSEILLÉE

○ APPLICAZIONE POSSIBILE - POSSIBLE APPLICATION
MÖGLICHE ANWENDUNG - APPLICATION POSSIBLE

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

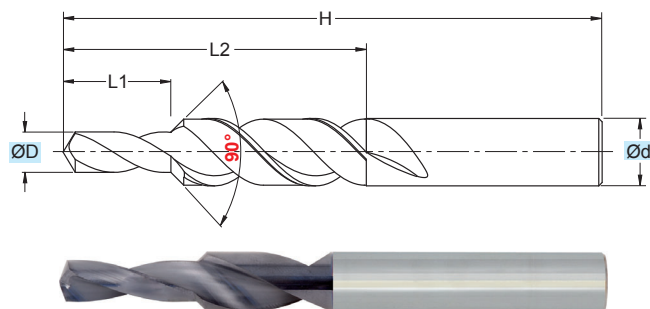
fn = mm AVANZAMENTO AL GIRO - FEED / REVOLUTION

Vf = mm/min VELOCITÀ DI AVANZAMENTO - FEED SPEED

SDR0102

GENERICO / ALL PURPOSE

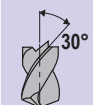
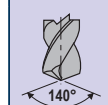
$\varnothing D = 2,5 - 14$



> ANGOLO DI SVASATURA 90°
 > RIVESTIMENTO TIALN

> CHAMFER 90°
 > TIALN COATED

RIVESTIM.
 COATED
TIALN



MG

(mm)					
ART.	ØD	Ød	H	L1	L2
SDR0102030	2,5	6	66	8,8	20
SDR0102040	3,3	6	66	11,4	24
SDR0102050	4,2	6	66	13,6	28
SDR0102060	5,0	8	79	16,5	34
SDR0102080	6,8	10	89	21,0	47
SDR0102100	8,5	12	102	25,5	55
SDR0102120	10,2	14	107	30,0	60
SDR0102140	12,0	16	115	34,5	65
SDR0102160	14,0	18	123	38,5	73

MATERIALI - MATERIALS Pag. 1119

Applicazione - Application		MATERIALI - MATERIALS														Pag. 1119					
		P			M	K			N			S		H	G						
		ACCIAIO NON LEGATO NOT ALLOY STEEL	ACCIAIO POCO LEGATO LOW ALLOY STEEL	ACCIAIO ALTO LEGATO ALLOY STEEL	INOX MARTENSITICO STAINLESS STEEL MART.	INOX AUST. DUPLEX STAINLESS STEEL AUST.	GHISA GRIGIA GREY CAST IRON	GHISA SFEROIDALE SPHEROIDAL GRAPHITE	GHISA MALLEABILE MALLEABLE CAST IRON	ALLUMINIO E SUE LEGHE ALUMINIUM	RAME E SUE LEGHE COPPER	NON METALLICI PLASTICS	LEGHE RESIST. CALORE HIGH TEMP. ALLOY	TITANIO E SUE LEGHE TITANIUM	ACCIAIO TEMPRATO HARDENED STEEL	GRAFITE GRAPHITE	(mm)	(m/min)	(mm)	(giri/min) (min ⁻¹)	(mm/min)
		ØD	Vc	fn	n	Vf															
	●																2,5	80	0,100	10191	1019
	●																3,3	80	0,180	7721	1390
	●																4,2	80	0,180	6066	1092
	●																5,0	80	0,240	5096	1223
	●																6,8	80	0,240	3747	899
	●																8,5	80	0,300	2997	899
	●																10,2	80	0,300	2498	749
	●																12,0	80	0,350	2123	743
	●																14,0	80	0,350	1820	637
	●																2,5	50	0,080	6369	510
	●																3,3	50	0,150	4825	724
	●																4,2	50	0,150	3791	569
	●																5,0	50	0,210	3185	669
	●																6,8	50	0,210	2342	492
	●																8,5	50	0,270	1873	506
	●																10,2	50	0,270	1561	422
	●																12,0	50	0,320	1327	425
	●																14,0	50	0,320	1137	364
						●											2,5	75	0,150	9554	1433
						●											3,3	75	0,230	7238	1665
						●											4,2	75	0,230	5687	1308
						●											5,0	75	0,335	4777	1600
						●											6,8	75	0,335	3513	1177
						●											8,5	75	0,425	2810	1194
						●											10,2	75	0,425	2342	995
						●											12,0	75	0,520	1990	1035
						●											14,0	75	0,520	1706	887
							●										2,5	75	0,125	9554	1194
							●										3,3	75	0,200	7238	1448
							●										4,2	75	0,200	5687	1137
							●										5,0	75	0,250	4777	1194
							●										6,8	75	0,250	3513	878
							●										8,5	75	0,350	2810	984
							●										10,2	75	0,350	2342	820
							●										12,0	75	0,400	1990	796
							●										14,0	75	0,400	1706	682

● APPLICAZIONE CONSIGLIATA-RECOMMENDED APPLICATION
EMPFOHLENER EINSATZ - APPLICATION CONSEILLÉE

○ APPLICAZIONE POSSIBILE - POSSIBLE APPLICATION
MÖGLICHE ANWENDUNG - APPLICATION POSSIBLE

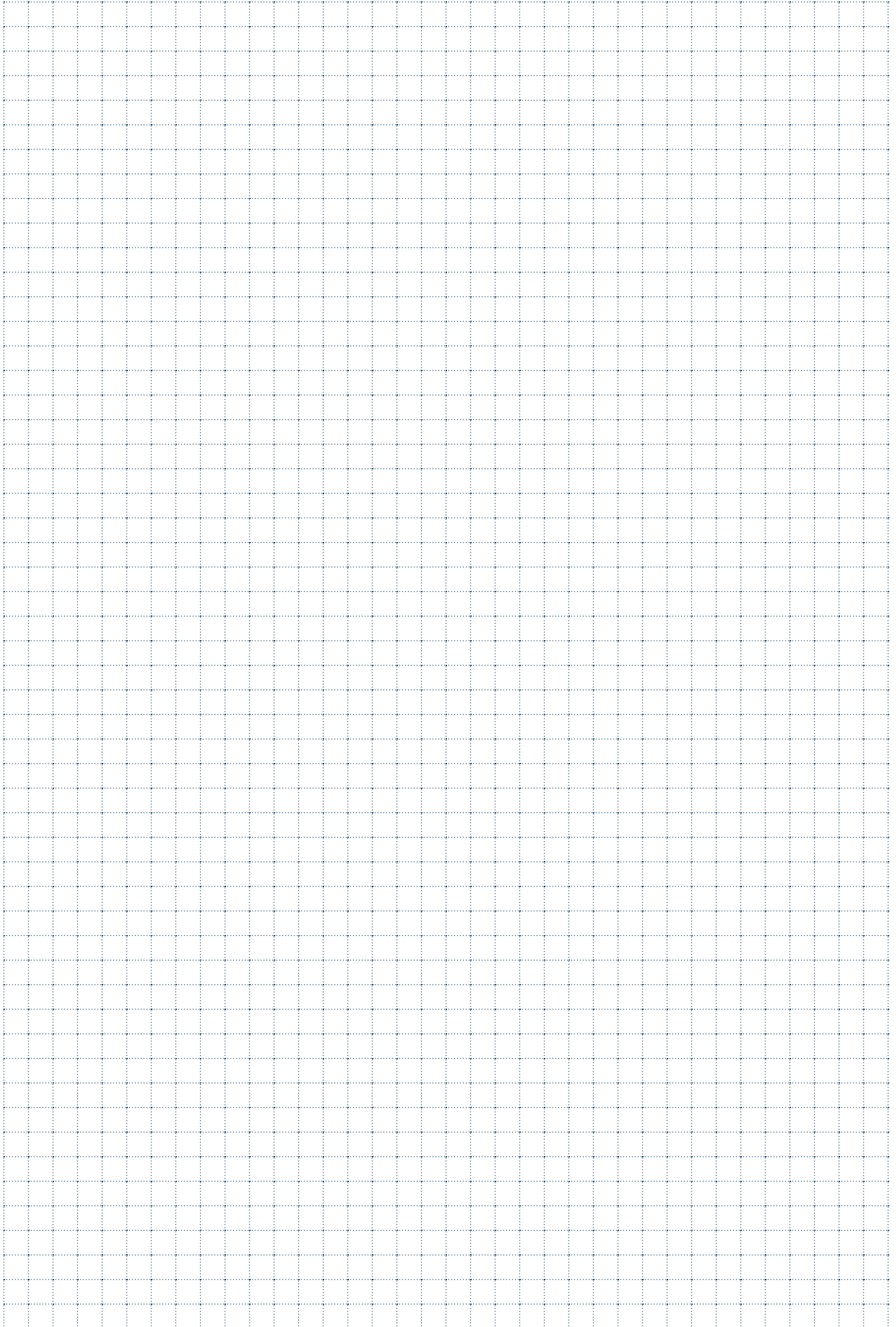
Vc = m/min VELOCITÀ DI TAGLIO - CUTTING SPEED

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





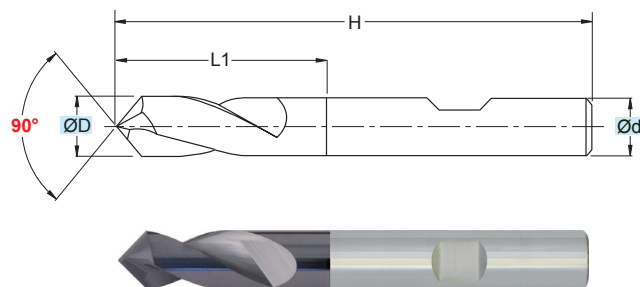
PUNTE A CENTRARE PUNTA PILOTA

CENTER DRILLS - PILOT DRILL / ZENTRIERBOHRER - PILOTBOHRER /
POINTES A CENTRER - POINTE PILOTE / BROCAS CENTRADORAS - BROCA PILOTO

SCR0184

GENERICO / ALL PURPOSE

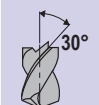
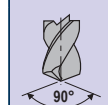
ØD = 3 - 20



> PUNTA A CENTRARE PER MACCHINE CN
 > ANGOLO DI TESTA 90°
 > ATTACCO DIN 6535 HB

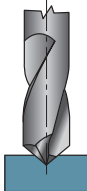
> CENTER DRILL ON NC-AND DRILLING MACHINES
 > HEAD ANGLE 90°
 > SHANK DIN 6535 HB

RIVESTIM.
 COATED
TIALN



MG

(mm)					
ART.	ØD	Ød	H	L1	Z
SCR0184030	3	3	38	8	2
SCR0184040	4	4	50	10	2
SCR0184050	5	5	50	13	2
SCR0184060	6	6	57	13	2
SCR0184080	8	8	63	19	2
SCR0184100	10	10	66	20	2
SCR0184120	12	12	73	22	2
SCR0184160	16	16	82	24	2
SCR0184200	20	20	92	30	2

Applicazione - Application	MATERIALI - MATERIALS															Pag. 1119				
	P				M	K			N			S	H	G						
	ACCIAIO NON LEGATO NOT ALLOY STEEL	ACCIAIO POCO LEGATO LOW ALLOY STEEL	ACCIAIO ALTO LEGATO ALLOY STEEL	INOX MARTENSITICO STAINLESS STEEL MART.	INOX AUST. DUPLEX STAINLESS STEEL AUST.	GHISA GRIGIA GREY CAST IRON	GHISA SFEROIDALE SPHEROIDAL GRAPHITE	GHISA MALLEABILE MALLEABLE CAST IRON	ALLUMINIO E SUE LEGHE ALUMINIUM	RAME E SUE LEGHE COPPER	NON METALLICI PLASTICS	LEGHE RESIST. CALORE HIGH TEMP. ALLOY	TITANIO E SUE LEGHE TITANIUM	ACCIAIO TEMPRATO HARDENED STEEL	GRAFITE GRAPHITE	(mm) ØD	(m/min) Vc	(mm) fn	(giri/min) (min ⁻¹) n	(mm/min) Vf
	●															3	80	0,100	8493	849
	●															4	80	0,140	6369	892
	●															5	80	0,140	5096	713
	●															6	80	0,200	4246	849
	●															8	80	0,200	3185	637
	●															10	80	0,275	2548	701
	●															12	80	0,275	2123	584
	●															16	80	0,350	1592	557
	●															20	80	0,450	1274	573
	●															3	50	0,075	5308	398
	●															4	50	0,100	3981	398
	●															5	50	0,100	3185	318
	●															6	50	0,150	2654	398
	●															8	50	0,150	1990	299
	●															10	50	0,200	1592	318
	●															12	50	0,200	1327	265
	●															16	50	0,260	995	259
	●															20	50	0,325	796	259
						●										3	70	0,075	7431	557
						●										4	70	0,125	5573	697
						●										5	70	0,125	4459	557
						●										6	70	0,175	3715	650
						●										8	70	0,175	2787	488
						●										10	70	0,225	2229	502
						●										12	70	0,225	1858	418
						●										16	70	0,300	1393	418
						●										20	70	0,375	1115	418
							●									3	70	0,075	7431	557
							●									4	70	0,100	5573	557
							●									5	70	0,100	4459	446
							●									6	70	0,150	3715	557
							●									8	70	0,150	2787	418
							●									10	70	0,200	2229	446
							●									12	70	0,200	1858	372
							●									16	70	0,260	1393	362
							●									20	70	0,325	1115	362
								○								3	200	0,020	21231	425
								○								4	200	0,030	15924	478
								○								5	200	0,030	12739	382
								○								6	200	0,070	10616	743
								○								8	200	0,070	7962	557
								○								10	200	0,110	6369	701
								○								12	200	0,110	5308	584
								○								16	200	0,150	3981	597
								○								20	200	0,200	3185	637

● APPLICAZIONE CONSIGLIATA-RECOMMENDED APPLICATION
EMPFOHLENER EINSATZ - APPLICATION CONSEILLÉE

○ APPLICAZIONE POSSIBILE - POSSIBLE APPLICATION
MÖGLICHE ANWENDUNG - APPLICATION POSSIBLE

Vc = m/min VELOCITÀ DI TAGLIO - CUTTING SPEED

n = giri/min (min⁻¹) NUMERO DI GIRI - NUMBER OF REVOLUTIONS

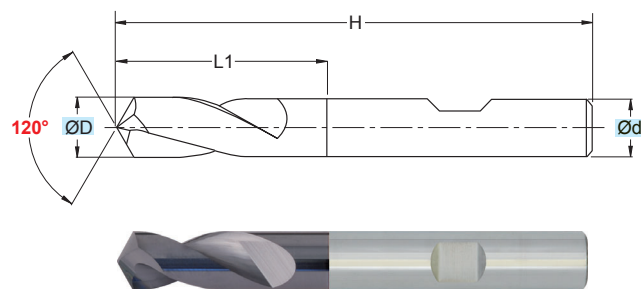
fn = mm AVANZAMENTO AL GIRO - FEED / REVOLUTION

Vf = mm/min VELOCITÀ DI AVANZAMENTO - FEED SPEED

SCR0185

GENERICO / ALL PURPOSE

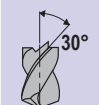
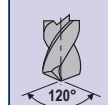
ØD = 6 - 20



> PUNTA A CENTRARE PER MACCHINE CN
 > ANGOLO DI TESTA 120°
 > ATTACCO DIN 6535 HB

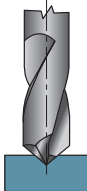
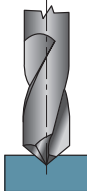
> CENTER DRILL ON NC-AND DRILLING MACHINES
 > HEAD ANGLE 120°
 > SHANK DIN 6535 HB

RIVESTIM.
COATED
TIALN



MG

(mm)					
ART.	ØD	Ød	H	L1	Z
SCR0185060	6	6	57	13	2
SCR0185080	8	8	63	19	2
SCR0185100	10	10	66	20	2
SCR0185120	12	12	73	22	2
SCR0185160	16	16	82	24	2
SCR0185200	20	20	92	30	2

		MATERIALI - MATERIALS												Pag. 1119							
Applicazione - Application		P				M	K			N			S	H	G						
		ACCIAIO NON LEGATO NOT ALLOY STEEL	ACCIAIO POCO LEGATO LOW ALLOY STEEL	ACCIAIO ALTO LEGATO ALLOY STEEL	INOX MARTENSITICO STAINLESS STEEL MART.	INOX AUST. DUPLEX STAINLESS STEEL AUST.	GHISA GRIGIA GREY CAST IRON	GHISA SFEROIDALE SPHEROIDAL GRAPHITE	GHISA MALLEABILE MALLEABLE CAST IRON	ALLUMINIO E SUE LEGHE ALUMINIUM	RAME E SUE LEGHE COPPER	NON METALLICI PLASTICS	LEGHE RESIST. CALORE HIGH TEMP. ALLOY	TITANIO E SUE LEGHE TITANIUM	ACCIAIO TEMPRATO HARDENED STEEL	GRAFITE GRAPHITE	(mm) ØD	(m/min) Vc	(mm) fn	(giri/min) (min ⁻¹) n	(mm/min) Vf
		●															6	50	0,035	2654	186
		●															8	50	0,040	1990	159
		●															10	50	0,045	1592	143
		●															12	50	0,050	1327	133
		●															16	50	0,055	995	109
		●															20	50	0,060	796	96
																		</			

● APPLICAZIONE CONSIGLIATA-RECOMMENDED APPLICATION
EMPFOHLENER EINSATZ - APPLICATION CONSEILLÉE

○ APPLICAZIONE POSSIBILE - POSSIBLE APPLICATION
MÖGLICHE ANWENDUNG - APPLICATION POSSIBLE

Vc = m/min VELOCITÀ DI TAGLIO - CUTTING SPEED

n = giri/min (min⁻¹) NUMERO DI GIRI - NUMBER OF REVOLUTIONS

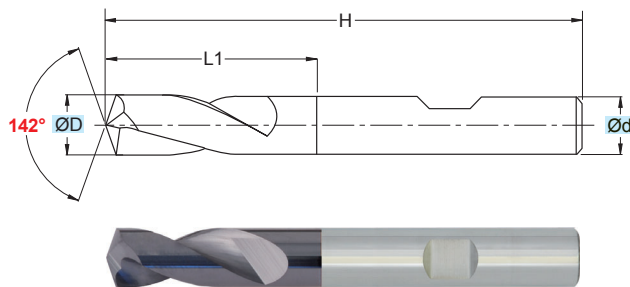
fn = mm AVANZAMENTO AL GIRO - FEED / REVOLUTION

Vf = mm/min VELOCITÀ DI AVANZAMENTO - FEED SPEED

SCR0186

GENERICO / ALL PURPOSE

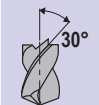
ØD = 6 - 20



> PUNTA A CENTRARE PER MACCHINE CN
 > ANGOLO DI TESTA 142°
 > ATTACCO DIN 6535 HB

> CENTER DRILL ON NC-AND DRILLING MACHINES
 > HEAD ANGLE 142°
 > SHANK DIN 6535 HB

RIVESTIM.
COATED
TIALN



MG

(mm)					
ART.	ØD	Ød	H	L1	Z
SCR0186060	6	6	57	11	2
SCR0186080	8	8	63	19	2
SCR0186100	10	10	66	20	2
SCR0186120	12	12	73	22	2
SCR0186160	16	16	82	24	2
SCR0186200	20	20	92	30	2

[illegible]

- APPLICAZIONE CONSIGLIATA-RECOMMENDED APPLICATION
EMPFOHLENER EINSATZ - APPLICATION CONSEILLÉE
- APPLICAZIONE POSSIBILE - POSSIBLE APPLICATION
MÖGLICHE ANWENDUNG - APPLICATION POSSIBLE

Vc = m/min VELOCITÀ DI TAGLIO - CUTTING SPEED

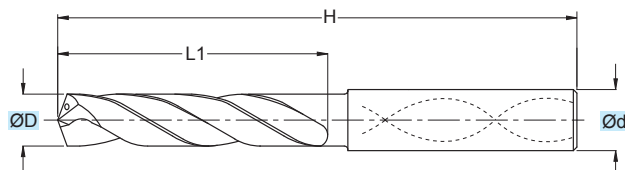
n = giri/min (min^{-1}) NUMERO DI GIRI - NUMBER OF REVOLUTIONS

fn = mm AVANZAMENTO AL GIRO - FEED / REVOLUTION

Vf = mm/min VELOCITÀ DI AVANZAMENTO - FEED SPEED

SDF0371

ØD = 2 - 12

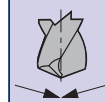
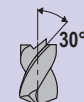


PER PREPARAZIONE FORI ≥ 12xD
FOR THE PREPARATION OF BORES ≥ 12xD
ZUR VORBEREITUNG VON BOHRUNGEN ≥ 12xD
POUR LA PRÉPARATION DE TROUS ≥ 12xD

TOLLERANZE	D	d
TOLERANCE RANGE	+0,030 +0,005	h6

RIVESTIM.
COATED
TIALN

3xD



**DIN
6535**



MG

(mm)				
ART.	ØD	Ød	H	L1
SDF0371020	2,0	4	50,0	12,0
SDF0371022	2,2	4	50,0	12,0
SDF0371023	2,3	4	50,0	12,0
SDF0371024	2,4	4	50,0	12,0
SDF0371025	2,5	4	50,0	12,0
SDF0371027	2,7	4	50,0	12,0
SDF0371028	2,8	4	50,0	12,0
SDF0371030	3,0	6	62,0	20,0
SDF0371032	3,2	6	62,0	20,0
SDF0371033	3,3	6	62,0	20,0
SDF0371035	3,5	6	62,0	20,0
SDF0371038	3,8	6	66,0	24,0
SDF0371040	4,0	6	66,0	24,0
SDF0371042	4,2	6	66,0	24,0
SDF0371045	4,5	6	66,0	24,0
SDF0371048	4,8	6	66,0	28,0
SDF0371050	5,0	6	66,0	28,0
SDF0371055	5,5	6	66,0	28,0
SDF0371058	5,8	6	66,0	28,0
SDF0371060	6,0	6	66,0	28,0
SDF0371065	6,5	8	79,0	34,0
SDF0371068	6,8	8	79,0	34,0
SDF0371070	7,0	8	79,0	34,0
SDF0371075	7,5	8	79,0	41,0
SDF0371078	7,8	8	79,0	41,0
SDF0371080	8,0	8	79,0	41,0
SDF0371085	8,5	10	89,0	47,0
SDF0371088	8,8	10	89,0	47,0
SDF0371090	9,0	10	89,0	47,0
SDF0371098	9,8	10	89,0	47,0
SDF0371100	10,0	10	89,0	47,0
SDF0371102	10,2	12	102,0	55,0
SDF0371108	10,8	12	102,0	55,0
SDF0371118	11,8	12	102,0	55,0
SDF0371120	12,0	12	102,0	55,0

MATERIALI - MATERIALS Pag. 1119

Applicazione - Application



MATERIALI - MATERIALS																	Pag. 1119						
P				M	K			N			S	H	G										
ACCIAIO NON LEGATO NOT ALLOY STEEL	ACCIAIO POCO LEGATO LOW ALLOY STEEL	ACCIAIO ALTO LEGATO ALLOY STEEL	INOX MARTENSITICO STAINLESS STEEL MART.	INOX AUST. DUPLEX STAINLESS STEEL AUST.	GHISA GRIGIA GREY CAST IRON	GHISA SFEROIDALE SPHEROIDAL GRAPHITE	GHISA MALLEABILE MALLEABLE CAST IRON	ALLUMINO ESUE LEGHE ALUMINIUM	RAMME E SUE LEGHE COPPER	NON METALLICI PLASTICS	LEGHE RESIST. CALORE HIGH TEMP. ALLOY	TITANIO E SUE LEGHE TITANIUM	ACCIAIO TEMPRATO HARDENED STEEL	GRAFITE GRAPHITE									
																(mm)	(m/min)	(mm)	(giri/min) (min ⁻¹) n	(mm/min) Vf			
●																2÷3	120	0,130	15287	1987			
●																3÷4	120	0,150	10919	1638			
●																4÷5	120	0,170	8493	1444			
●																5÷6	120	0,200	6948	1390			
●																6÷7	120	0,230	5879	1352			
●																7÷8	120	0,260	5096	1325			
●																8÷9	120	0,300	4496	1349			
●																9÷10	120	0,330	4023	1328			
●																10÷11	120	0,350	3640	1274			
●																11÷12	120	0,380	3323	1263			
	●															2÷3	110	0,130	14013	1822			
	●															3÷4	110	0,150	10009	1501			
	●															4÷5	110	0,170	7785	1323			
	●															5÷6	110	0,200	6369	1274			
	●															6÷7	110	0,230	5390	1240			
	●															7÷8	110	0,260	4671	1214			
	●															8÷9	110	0,300	4121	1236			
	●															9÷10	110	0,330	3688	1217			
	●															10÷11	110	0,350	3336	1168			
	●															11÷12	110	0,380	3046	1158			
					●											2÷3	45	0,100	5732	573			
					●											3÷4	45	0,110	4095	450			
					●											4÷5	45	0,130	3185	414			
					●											5÷6	45	0,150	2606	391			
					●											6÷7	45	0,170	2205	375			
					●											7÷8	45	0,200	1911	382			
					●											8÷9	45	0,220	1686	371			
					●											9÷10	45	0,250	1509	377			
					●											10÷11	45	0,270	1365	369			
					●											11÷12	45	0,280	1246	349			
						●										2÷3	120	0,130	15287	1987			
						●										3÷4	120	0,150	10919	1638			
						●										4÷5	120	0,170	8493	1444			
						●										5÷6	120	0,200	6948	1390			
						●										6÷7	120	0,230	5879	1352			
						●										7÷8	120	0,260	5096	1325			
						●										8÷9	120	0,300	4496	1349			
						●										9÷10	120	0,330	4023	1328			
						●										10÷11	120	0,350	3640	1274			
						●										11÷12	120	0,380	3323	1263			
							●									2÷3	110	0,100	14013	1401			
							●									3÷4	110	0,110	10009	1101			
							●									4÷5	110	0,130	7785	1012			
							●									5÷6	110	0,150	6369	955			
							●									6÷7	110	0,170	5390	916			
							●									7÷8	110	0,200	4671	934			
							●									8÷9	110	0,220	4121	907			
							●									9÷10	110	0,250	3688	922			
							●									10÷11	110	0,270	3336	901			
							●									11÷12	110	0,280	3046	853			

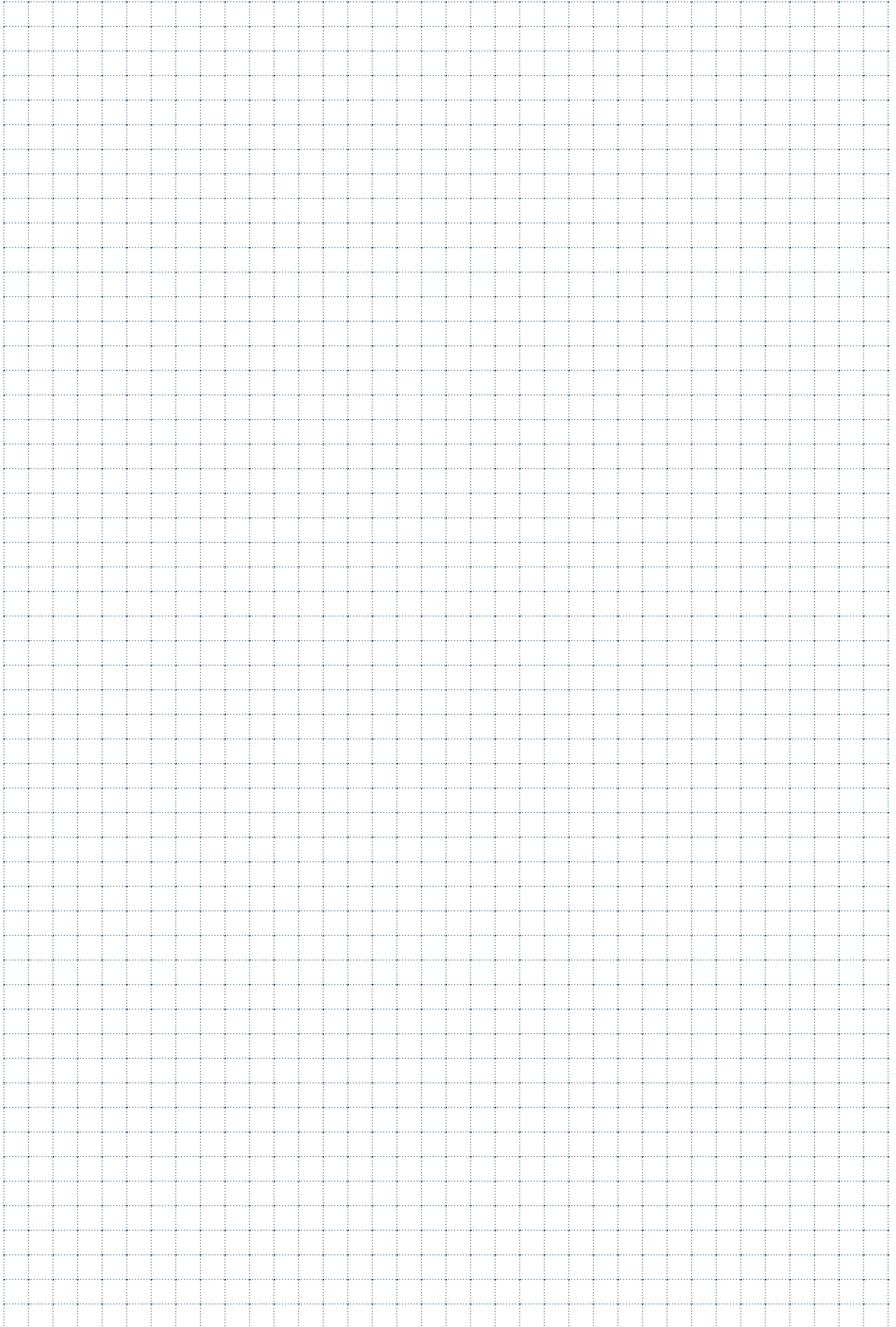
● APPLICAZIONE CONSIGLIATA-RECOMMENDED APPLICATION
EMPFOHLENER EINSATZ - APPLICATION CONSEILLÉE○ APPLICAZIONE POSSIBILE - POSSIBLE APPLICATION
MÖGLICHE ANWENDUNG - APPLICATION POSSIBLE

Vc = m/min VELOCITÀ DI TAGLIO - CUTTING SPEED

n = giri/min (min⁻¹) NUMERO DI GIRI - NUMBER OF REVOLUTIONS

fn = mm AVANZAMENTO AL GIRO - FEED / REVOLUTION

Vf = mm/min VELOCITÀ DI AVANZAMENTO - FEED SPEED





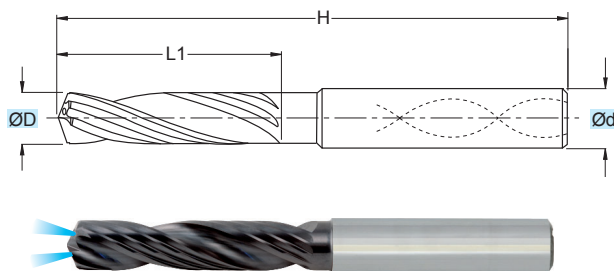
PUNTE FORALESA

REAMER-DRILLS / REIBAHLEN-BOHRER / FORETS DE PERÇAGE ET ALÉSAGE /
BROCAS ESCARIADORAS

SPFAR3

GENERIC / ALL PURPOSE

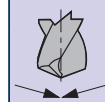
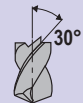
ØD = 2,97 - 20,02



TOLLERANZE	D	d
TOLERANCE RANGE	±0,003	h6

RIVESTIM.
COATED
TIALN

3xD



MG

ART.	ØD	Ød	H	L1
SPFAR3 2.97	2,97	6,0	62	20
SPFAR3 2.98	2,98	6,0	62	20
SPFAR3 2.99	2,99	6,0	62	20
SPFAR3 3.00	3,00	6,0	62	20
*SPFAR3 3.01	3,01	6,0	62	20
SPFAR3 3.02	3,02	6,0	62	20
SPFAR3 3.97	3,97	6,0	66	24
SPFAR3 3.98	3,98	6,0	66	24
SPFAR3 3.99	3,99	6,0	66	24
SPFAR3 4.00	4,00	6,0	66	24
*SPFAR3 4.01	4,01	6,0	66	24
SPFAR3 4.02	4,02	6,0	66	24
SPFAR3 4.97	4,97	6,0	66	28
SPFAR3 4.98	4,98	6,0	66	28
SPFAR3 4.99	4,99	6,0	66	28
SPFAR3 5.00	5,00	6,0	66	28
*SPFAR3 5.01	5,01	6,0	66	28
SPFAR3 5.02	5,02	6,0	66	28
SPFAR3 5.97	5,97	6,0	66	28
SPFAR3 5.98	5,98	6,0	66	28
SPFAR3 5.99	5,99	6,0	66	28
SPFAR3 6.00	6,00	6,0	66	28
*SPFAR3 6.01	6,01	6,0	66	28
SPFAR3 6.02	6,02	6,0	66	28
SPFAR3 6.97	6,97	8,0	79	34
SPFAR3 6.98	6,98	8,0	79	34
SPFAR3 6.99	6,99	8,0	79	34
SPFAR3 7.00	7,00	8,0	79	34
*SPFAR3 7.01	7,01	8,0	79	34
SPFAR3 7.02	7,02	8,0	79	34
SPFAR3 7.97	7,97	8,0	79	34
SPFAR3 7.98	7,98	8,0	79	34
SPFAR3 7.99	7,99	8,0	79	34
SPFAR3 8.00	8,00	8,0	79	34
*SPFAR3 8.01	8,01	8,0	79	34
SPFAR3 8.02	8,02	8,0	79	34
SPFAR3 8.97	8,97	10,0	89	47
SPFAR3 8.98	8,98	10,0	89	47
SPFAR3 8.99	8,99	10,0	89	47
SPFAR3 9.00	9,00	10,0	89	47
*SPFAR3 9.01	9,01	10,0	89	47
SPFAR3 9.02	9,02	10,0	89	47
SPFAR3 9.97	9,97	10,0	89	47
SPFAR3 9.98	9,98	10,0	89	47
SPFAR3 9.99	9,99	10,0	89	47

ART.	ØD	Ød	H	L1
SPFAR3 10.00	10,00	10,0	89	47
*SPFAR3 10.01	10,01	10,0	89	47
SPFAR3 10.02	10,02	10,0	89	47
SPFAR3 10.97	10,97	12,0	102	55
SPFAR3 10.98	10,98	12,0	102	55
SPFAR3 10.99	10,99	12,0	102	55
SPFAR3 11.00	11,00	12,0	102	55
*SPFAR3 11.01	11,01	12,0	102	55
SPFAR3 11.02	11,02	12,0	102	55
SPFAR3 11.97	11,97	12,0	102	55
SPFAR3 11.98	11,98	12,0	102	55
SPFAR3 11.99	11,99	12,0	102	55
SPFAR3 12.00	12,00	12,0	102	55
*SPFAR3 12.01	12,01	12,0	102	55
SPFAR3 12.02	12,02	12,0	102	55
SPFAR3 12.97	12,97	14,0	107	60
SPFAR3 12.98	12,98	14,0	107	60
SPFAR3 12.99	12,99	14,0	107	60
SPFAR3 13.00	13,00	14,0	107	60
*SPFAR3 13.01	13,01	14,0	107	60
SPFAR3 13.02	13,02	14,0	107	60
SPFAR3 13.97	13,97	14,0	107	60
SPFAR3 13.98	13,98	14,0	107	60
SPFAR3 13.99	13,99	14,0	107	60
SPFAR3 14.00	14,00	14,0	107	60
*SPFAR3 14.01	14,01	14,0	107	60
SPFAR3 14.02	14,02	14,0	107	60
SPFAR3 14.97	14,97	16,0	115	65
SPFAR3 14.98	14,98	16,0	115	65
SPFAR3 14.99	14,99	16,0	115	65
SPFAR3 15.00	15,00	16,0	115	65
*SPFAR3 15.01	15,01	16,0	115	65
SPFAR3 15.02	15,02	16,0	115	65
SPFAR3 15.97	15,97	16,0	115	65
SPFAR3 15.98	15,98	16,0	115	65
SPFAR3 15.99	15,99	16,0	115	65
SPFAR3 16.00	16,00	16,0	115	65
*SPFAR3 16.01	16,01	16,0	115	65
SPFAR3 16.02	16,02	16,0	115	65
SPFAR3 16.97	16,97	18,0	123	73
SPFAR3 16.98	16,98	18,0	123	73
SPFAR3 16.99	16,99	18,0	123	73
SPFAR3 17.00	17,00	18,0	123	73
*SPFAR3 17.01	17,01	18,0	123	73
SPFAR3 17.02	17,02	18,0	123	73

ART.	ØD	Ød	H	L1
SPFAR3 17.97	17,97	18,0	123	73
SPFAR3 17.98	17,98	18,0	123	73
SPFAR3 17.99	17,99	18,0	123	73
SPFAR3 18.00	18,00	18,0	123	73
*SPFAR3 18.01	18,01	18,0	123	73
SPFAR3 18.02	18,02	18,0	123	73
SPFAR3 18.97	18,97	20,0	131	79
SPFAR3 18.98	18,98	20,0	131	79
SPFAR3 18.99	18,99	20,0	131	79
SPFAR3 19.00	19,00	20,0	131	79
*SPFAR3 19.01	19,01	20,0	131	79
SPFAR3 19.02	19,02	20,0	131	79
SPFAR3 19.97	19,97	20,0	131	79
SPFAR3 19.98	19,98	20,0	131	79
SPFAR3 19.99	19,99	20,0	131	79
SPFAR3 20.00	20,00	20,0	131	79
*SPFAR3 20.01	20,01	20,0	131	79
SPFAR3 20.02	20,02	20,0	131	79

* = PER OTTENERE FORI IN TOLLERANZA H7
 * = TO OBTAIN BORES IN H7 TOLERANCE
 * = UM BOHRUNGEN IN H7-TOLERANZ ZU ERHALTEN
 * = POUR OBTENIR DES TROUS DANS LA TOLÉRANCE H7

[illegible]

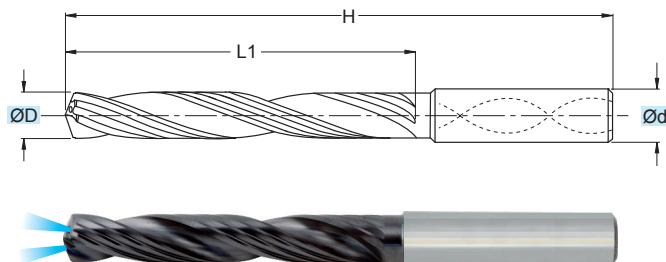
- APPLICAZIONE CONSIGLIATA-RECOMMENDED APPLICATION
EMPFOHLENER EINSATZ - APPLICATION CONSEILLÉE
- APPLICAZIONE POSSIBILE - POSSIBLE APPLICATION
MÖGLICHE ANWENDUNG - APPLICATION POSSIBLE

Vc = m/min VELOCITÀ DI TAGLIO - CUTTING SPEED
n = giri/(min (min⁻¹) NUMERO DI GIRI - NUMBER OF REVOLUTIONS
fn = mm AVANZAMENTO AL GIRO - FEED / REVOLUTION
Vf = mm/min VELOCITÀ DI AVANZAMENTO - FEED SPEED

SPFAR5

GENERIC / ALL PURPOSE

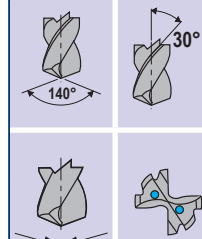
ØD = 2,97 - 20,02



TOLLERANZE	D	d
TOLERANCE RANGE	±0,003	h6

RIVESTIM.
COATED
TIALN

5xD



MG

ART.	ØD	Ød	H	L1
SPFAR5 2.97	2,97	6,0	66	28
SPFAR5 2.98	2,98	6,0	66	28
SPFAR5 2.99	2,99	6,0	66	28
SPFAR5 3.00	3,00	6,0	66	28
*SPFAR5 3.01	3,01	6,0	66	28
SPFAR5 3.02	3,02	6,0	66	28
SPFAR5 3.97	3,97	6,0	74	36
SPFAR5 3.98	3,98	6,0	74	36
SPFAR5 3.99	3,99	6,0	74	36
SPFAR5 4.00	4,00	6,0	74	36
*SPFAR5 4.01	4,01	6,0	74	36
SPFAR5 4.02	4,02	6,0	74	36
SPFAR5 4.97	4,97	6,0	82	44
SPFAR5 4.98	4,98	6,0	82	44
SPFAR5 4.99	4,99	6,0	82	44
SPFAR5 5.00	5,00	6,0	82	44
*SPFAR5 5.01	5,01	6,0	82	44
SPFAR5 5.02	5,02	6,0	82	44
SPFAR5 5.97	5,97	6,0	82	44
SPFAR5 5.98	5,98	6,0	82	44
SPFAR5 5.99	5,99	6,0	82	44
SPFAR5 6.00	6,00	6,0	82	44
*SPFAR5 6.01	6,01	6,0	82	44
SPFAR5 6.02	6,02	6,0	82	44
SPFAR5 6.97	6,97	8,0	91	53
SPFAR5 6.98	6,98	8,0	91	53
SPFAR5 6.99	6,99	8,0	91	53
SPFAR5 7.00	7,00	8,0	91	53
*SPFAR5 7.01	7,01	8,0	91	53
SPFAR5 7.02	7,02	8,0	91	53
SPFAR5 7.97	7,97	8,0	91	53
SPFAR5 7.98	7,98	8,0	91	53
SPFAR5 7.99	7,99	8,0	91	53
SPFAR5 8.00	8,00	8,0	91	53
*SPFAR5 8.01	8,01	8,0	91	53
SPFAR5 8.02	8,02	8,0	91	53
SPFAR5 8.97	8,97	10,0	103	61
SPFAR5 8.98	8,98	10,0	103	61
SPFAR5 8.99	8,99	10,0	103	61
SPFAR5 9.00	9,00	10,0	103	61
*SPFAR5 9.01	9,01	10,0	103	61
SPFAR5 9.02	9,02	10,0	103	61
SPFAR5 9.97	9,97	10,0	103	61
SPFAR5 9.98	9,98	10,0	103	61
SPFAR5 9.99	9,99	10,0	103	61

ART.	ØD	Ød	H	L1
SPFAR5 10.00	10,00	10,0	103	61
*SPFAR5 10.01	10,01	10,0	103	61
SPFAR5 10.02	10,02	10,0	103	61
SPFAR5 10.97	10,97	12,0	118	71
SPFAR5 10.98	10,98	12,0	118	71
SPFAR5 10.99	10,99	12,0	118	71
SPFAR5 11.00	11,00	12,0	118	71
*SPFAR5 11.01	11,01	12,0	118	71
SPFAR5 11.02	11,02	12,0	118	71
SPFAR5 11.97	11,97	12,0	118	71
SPFAR5 11.98	11,98	12,0	118	71
SPFAR5 11.99	11,99	12,0	118	71
SPFAR5 12.00	12,00	12,0	118	71
*SPFAR5 12.01	12,01	12,0	118	71
SPFAR5 12.02	12,02	12,0	118	71
SPFAR5 12.97	12,97	14,0	124	77
SPFAR5 12.98	12,98	14,0	124	77
SPFAR5 12.99	12,99	14,0	124	77
SPFAR5 13.00	13,00	14,0	124	77
*SPFAR5 13.01	13,01	14,0	124	77
SPFAR5 13.02	13,02	14,0	124	77
SPFAR5 13.97	13,97	14,0	124	77
SPFAR5 13.98	13,98	14,0	124	77
SPFAR5 13.99	13,99	14,0	124	77
SPFAR5 14.00	14,00	14,0	124	77
*SPFAR5 14.01	14,01	14,0	124	77
SPFAR5 14.02	14,02	14,0	124	77
SPFAR5 14.97	14,97	16,0	133	83
SPFAR5 14.98	14,98	16,0	133	83
SPFAR5 14.99	14,99	16,0	133	83
SPFAR5 15.00	15,00	16,0	133	83
*SPFAR5 15.01	15,01	16,0	133	83
SPFAR5 15.02	15,02	16,0	133	83
SPFAR5 15.97	15,97	16,0	133	83
SPFAR5 15.98	15,98	16,0	133	83
SPFAR5 15.99	15,99	16,0	133	83
*SPFAR5 16.01	16,01	16,0	133	83
SPFAR5 16.02	16,02	16,0	133	83
SPFAR5 16.97	16,97	18,0	143	93
SPFAR5 16.98	16,98	18,0	143	93
SPFAR5 16.99	16,99	18,0	143	93
SPFAR5 17.00	17,00	18,0	143	93
*SPFAR5 17.01	17,01	18,0	143	93
SPFAR5 17.02	17,02	18,0	143	93

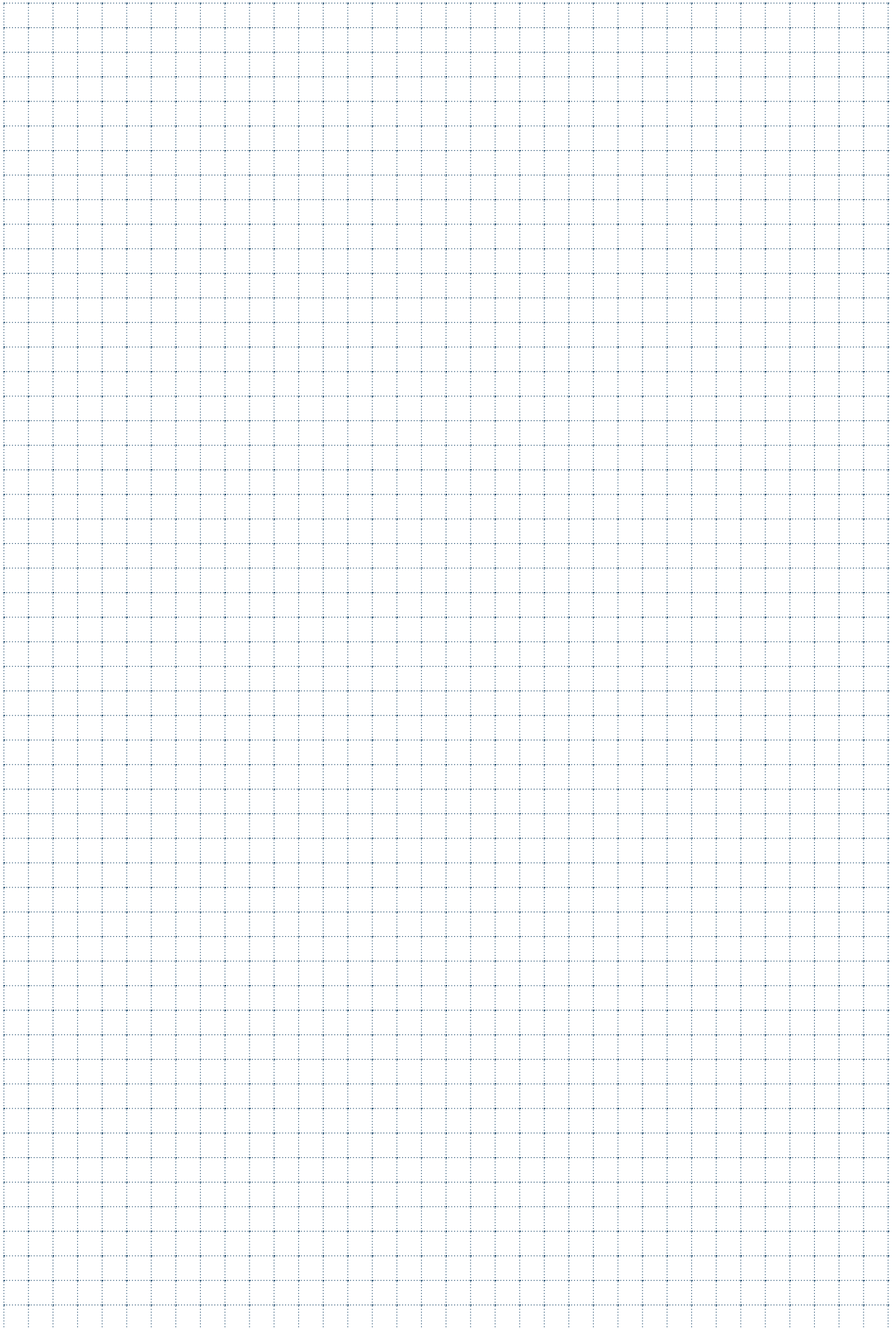
ART.	ØD	Ød	H	L1
SPFAR5 17.97	17,97	18,0	143	93
SPFAR5 17.98	17,98	18,0	143	93
SPFAR5 17.99	17,99	18,0	143	93
SPFAR5 18.00	18,00	18,0	143	93
*SPFAR5 18.01	18,01	18,0	143	93
SPFAR5 18.02	18,02	18,0	143	93
SPFAR5 18.97	18,97	20,0	153	101
SPFAR5 18.98	18,98	20,0	153	101
SPFAR5 18.99	18,99	20,0	153	101
SPFAR5 19.00	19,00	20,0	153	101
*SPFAR5 19.01	19,01	20,0	153	101
SPFAR5 19.02	19,02	20,0	153	101
SPFAR5 19.97	19,97	20,0	153	101
SPFAR5 19.98	19,98	20,0	153	101
SPFAR5 19.99	19,99	20,0	153	101
SPFAR5 20.00	20,00	20,0	153	101
*SPFAR5 20.01	20,01	20,0	153	101
SPFAR5 20.02	20,02	20,0	153	101

* = PER OTTENERE FORI IN TOLLERANZA H7
 * = TO OBTAIN BORES IN H7 TOLERANCE
 * = UM BOHRUNGEN IN H7-TOLERANZ ZU ERHALTEN
 * = POUR OBTENIR DES TROUS DANS LA TOLÉRANCE H7

[illegible]

- APPLICAZIONE CONSIGLIATA-RECOMMENDED APPLICATION
EMPFOHLENER EINSATZ - APPLICATION CONSEILLÉE
- APPLICAZIONE POSSIBILE - POSSIBLE APPLICATION
MÖGLICHE ANWENDUNG - APPLICATION POSSIBLE

Vc = m/min VELOCITÀ DI TAGLIO - CUTTING SPEED
n = giri/(min (min⁻¹) NUMERO DI GIRI - NUMBER OF REVOLUTIONS
fn = mm AVANZAMENTO AL GIRO - FEED / REVOLUTION
Vf = mm/min VELOCITÀ DI AVANZAMENTO - FEED SPEED





ALESATORI

REAMERS / REIBAHLEN / ALESOIRS / ESCARIADORES

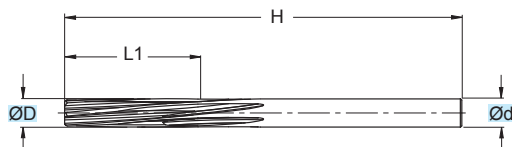
SAN0508

ØD = 3 - 18

* RIVESTIMENTO A RICHIESTA
 * COATING ON REQUEST

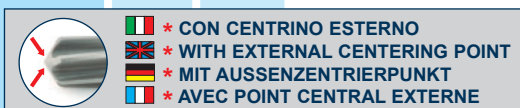


MG



TOLLERANZE	D	d
TOLERANCE RANGE	H7	h8

ART.	ØD	Ød	H	L1	Z
*SAN0508030 New	3,0	3,0	56	16	4
*SAN0508035 New	3,5	3,0	56	18	4
*SAN0508040	4,0	3,5	56	20	6
*SAN0508045	4,5	4,0	63	22	6
*SAN0508050	5,0	4,0	63	22	6
*SAN0508055	5,5	5,0	63	22	6
SAN0508060	6,0	5,0	63	22	6
SAN0508065	6,5	5,0	63	22	6
SAN0508070	7,0	6,0	71	25	6
SAN0508075	7,5	6,0	71	25	6
SAN0508080	8,0	6,0	71	25	6
SAN0508085	8,5	6,0	71	25	6
SAN0508090	9,0	8,0	71	25	6
SAN0508095	9,5	8,0	71	25	6
SAN0508100	10,0	8,0	71	25	6
SAN0508105	10,5	8,0	80	28	6
SAN0508110	11,0	10,0	80	28	6
SAN0508115	11,5	10,0	80	28	6
SAN0508120	12,0	10,0	80	28	6
SAN0508130	13,0	10,0	80	28	6
SAN0508140	14,0	12,0	90	32	6
SAN0508150	15,0	12,0	90	32	8
SAN0508160	16,0	14,0	90	32	8
SAN0508170	17,0	14,0	90	32	8
SAN0508180	18,0	16,0	100	36	8



ESEGUE FORI CON TOLLERANZA H7
 FOR BORES WITH H7 TOLERANCE
 FÜHRT BOHRUNGEN MIT TOLERANZ H7 AUS
 M.D.I. ALESOIR DECIMAL H7

Applicazione - Application	MATERIALI - MATERIALS Pag. 1119																				
	P				M	K		N			S	H	G	(mm)	(m/min)	(mm)	(giri/min) (min ⁻¹)	(mm/min)			
	ACCIAIO NON LEGATO NOT ALLOY STEEL	ACCIAIO POCO LEGATO LOW ALLOY STEEL	ACCIAIO ALTO LEGATO ALLOY STEEL	INOX MARTENSITICO STAINLESS STEEL MART.	INOX AUST. DUPLEX STAINLESS STEEL AUST.	GHISA GRIGIA GREY CAST IRON	GHISA SFEROIDALE SPHEROIDAL GRAPHITE	GHISA MALLEABILE MALLEABLE CAST IRON	ALLUMINIO E SUE LEGHE ALUMINIUM	RAME E SUE LEGHE COPPER	NON METALLICI PLASTICS	LEGHE RESIST. CALORE HIGH TEMP. ALLOY	TITANIO E SUE LEGHE TITANIUM	ACCIAIO TEMPRATO HARDENED STEEL	GRAFITE GRAPHITE	ØD	Vc	fn	n	Vf	
	●															1÷5	20-30	0,15	-	-	
	●															5÷10	20-30	0,25	-	-	
	●															10÷20	20-30	0,40	-	-	
		●														1÷5	10-15	0,12	-	-	
		●														5÷10	10-15	0,20	-	-	
		●														10÷20	10-15	0,30	-	-	
			●														1÷5	5-10	0,08	-	-
			●														5÷10	5-10	0,15	-	-
			●														10÷20	5-10	0,25	-	-
					●											1÷5	10-15	0,08	-	-	
					●											5÷10	10-15	0,15	-	-	
					●											10÷20	10-15	0,20	-	-	
						●										1÷5	10-12	0,15	-	-	
					●											5÷10	10-12	0,30	-	-	
					●											10÷20	10-12	0,50	-	-	
									●							1÷5	25-35	0,15	-	-	
									●							5÷10	25-35	0,25	-	-	
									●							10÷20	25-35	0,40	-	-	
										●						1÷5	25-35	0,20	-	-	
										●						5÷10	25-35	0,25	-	-	
										●						10÷20	25-35	0,40	-	-	
											●					1÷5	25-30	0,15	-	-	
											●					5÷10	25-30	0,25	-	-	
											●					10÷20	25-30	0,45	-	-	

● APPLICAZIONE CONSIGLIATA - RECOMMENDED APPLICATION
EMPFOHLENER EINSATZ - APPLICATION CONSEILLÉE

○ APPLICAZIONE POSSIBILE - POSSIBLE APPLICATION
MÖGLICHE ANWENDUNG - APPLICATION POSSIBLE

Vc = m/min VELOCITÀ DI TAGLIO - CUTTING SPEED

n = giri/min (min⁻¹) NUMERO DI GIRI - NUMBER OF REVOLUTIONS

fn = mm AVANZAMENTO AL GIRO - FEED / REVOLUTION

Vf = mm/min VELOCITÀ DI AVANZAMENTO - FEED SPEED

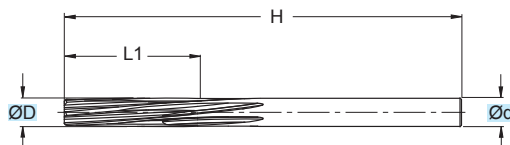
$$n = \frac{Vc \cdot 1000}{\varnothing D \cdot 3,14} = \text{giri/min (min}^{-1}\text{)}$$

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

SAN0509

ØD = 2,97 - 18,20

* RIVESTIMENTO A RICHIESTA
* COATING ON REQUEST

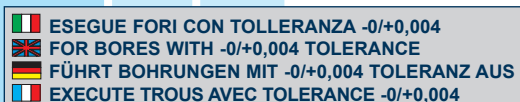
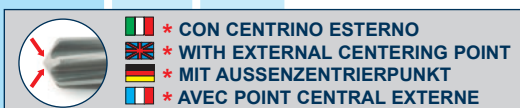


TOLLERANZE	D	d
TOLERANCE RANGE	-0/+0,004	h8



MG

ART.	ØD	Ød	H	L1	Z
*SAN0509 ... New	2,97-3,10	3,0	56	16	4
*SAN0509 ... New	3,11-3,60	3,0	56	18	4
*SAN0509 ... New	3,61-4,10	3,5	56	20	6
*SAN0509 ...	4,11-4,60	4,0	63	22	6
*SAN0509 ...	4,61-5,10	4,0	63	22	6
*SAN0509 ...	5,11-5,60	5,0	63	22	6
SAN0509 ...	5,61-6,15	5,0	63	22	6
SAN0509 ...	6,16-6,65	5,0	63	22	6
SAN0509 ...	6,66-7,15	6,0	71	25	6
SAN0509 ...	7,16-7,65	6,0	71	25	6
SAN0509 ...	7,66-8,15	6,0	71	25	6
SAN0509 ...	8,16-8,65	6,0	71	25	6
SAN0509 ...	8,66-9,20	8,0	71	25	6
SAN0509 ...	9,21-9,70	8,0	71	25	6
SAN0509 ...	9,71-10,20	8,0	71	25	6
SAN0509 ...	10,21-10,70	8,0	80	28	6
SAN0509 ...	10,71-11,20	10,0	80	28	6
SAN0509 ...	11,21-11,70	10,0	80	28	6
SAN0509 ...	11,71-12,20	10,0	80	28	6
SAN0509 ...	12,21-13,20	10,0	80	28	6
SAN0509 ...	13,21-14,20	12,0	90	32	6
SAN0509 ...	14,21-15,20	12,0	90	32	8
SAN0509 ...	15,21-16,20	14,0	90	32	8
SAN0509 ...	16,21-17,20	14,0	90	32	8
SAN0509 ...	17,21-18,20	16,0	100	36	8



* Nell'ordine inserire sempre il "Ø" scelto dopo il codice dell'alesatore
 * When ordering always indicate the chosen diameter after the reamer code
 * Bei der Bestellung bitte immer den gewählten "Ø" hinter dem Reibahlencode angeben
 * Entrer toujours dans la commande le "Ø" choisi après le code de l'alesoir

EX. Ø = 13,21 COD. = SAN05091321
 EX. Ø = 3,80 COD. = SAN05090380

[illegible]

- APPLICAZIONE CONSIGLIATA-RECOMMENDED APPLICATION
EMPFOHLENER EINSATZ - APPLICATION CONSEILLÉE
- APPLICAZIONE POSSIBILE - POSSIBLE APPLICATION
MÖGLICHE ANWENDUNG - APPLICATION POSSIBLE

Vc = m/min VELOCITÀ DI TAGLIO - CUTTING SPEED

n = giri/min (min^{-1}) NUMERO DI GIRI - NUMBER OF REVOLUTIONS

fn = mm AVANZAMENTO AL GIRO - FEED / REVOLUTION

Vf = mm/min VELOCITÀ DI AVANZAMENTO - FEED SPEED

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

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

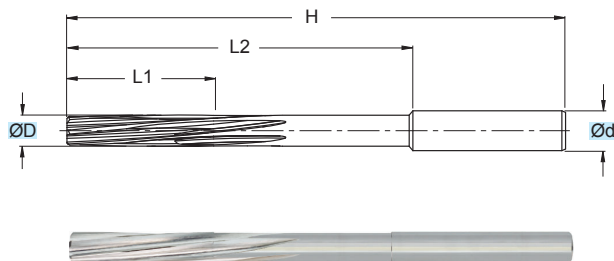
SAN0708

ØD = 1,0 - 20,2

* RIVESTIMENTO A RICHIESTA
COATING ON REQUEST



MG



TOLLERANZA	D	d
TOLERANCE RANGE	H7	h8

ART.	ØD	Ød	H	L1	L2	Z
*SAN07080010	1,0	1,0	40	8	—	4
*SAN0708 ...	1,1-1,4	—	40	8	—	4
*SAN07080015	1,5	1,5	40	8	—	4
*SAN0708 ...	1,6-1,9	—	43	9	—	4
*SAN07080020	2,0	2,0	49	11	—	4
*SAN07080021	2,1	2,0	49	11	—	4
*SAN0708 ...	2,2-2,3	2,0	53	12	—	4
*SAN07080024	2,4	2,3	57	14	—	4
*SAN07080025	2,5	2,5	57	14	—	4
*SAN07080026	2,6	2,5	57	14	—	4
*SAN0708 ...	2,7-2,9	2,5	61	15	—	4
*SAN07080030	3,0	3,0	65	16	—	4
*SAN0708 ...	3,1-3,3	3,0	65	16	—	4
*SAN07080034	3,4	3,5	70	18	45	4
*SAN07080035	3,5	3,5	70	18	45	4
*SAN0708 ...	3,6-3,7	3,5	70	18	45	4
*SAN0708 ...	3,8-3,9	4,0	75	19	47	6
*SAN07080040	4,0	4,0	75	19	47	6
*SAN0708 ...	4,1-4,2	4,0	75	19	47	6
*SAN0708 ...	4,3-4,4	4,5	80	21	51	6
*SAN07080045	4,5	4,5	80	21	51	6
*SAN0708 ...	4,6-4,7	4,5	80	21	51	6
*SAN0708 ...	4,8-4,9	5,0	86	23	56	6
*SAN07080050	5,0	5,0	86	23	56	6
*SAN07080051	5,1	5,0	86	23	56	6
SAN0708 ...	5,2-5,4	5,0	93	26	58	6
SAN07080055	5,5	5,0	93	26	58	6
SAN07080056	5,6	5,0	93	26	58	6
SAN0708 ...	5,7-5,9	6,0	93	26	58	6
SAN07080060	6,0	6,0	93	26	58	6
SAN07080061	6,1	6,0	93	26	58	6
SAN0708 ...	6,2-6,4	6,0	101	28	63	6
SAN07080065	6,5	6,0	101	28	63	6
SAN0708 ...	6,6-6,7	6,0	101	28	63	6
SAN0708 ...	6,8-6,9	7,0	109	31	71	6
SAN07080070	7,0	7,0	109	31	71	6
SAN0708 ...	7,1-7,4	7,0	109	31	71	6
SAN07080075	7,5	7,0	109	31	71	6
SAN07080076	7,6	7,0	109	31	71	6
SAN0708 ...	7,7-7,9	8,0	117	33	77	6
SAN07080080	8,0	8,0	117	33	77	6
SAN0708 ...	8,1-8,4	8,0	117	33	77	6
SAN07080085	8,5	8,0	117	33	77	6
SAN07080086	8,6	8,0	117	33	77	6

ART.	ØD	Ød	H	L1	L2	Z
SAN0708 ...	8,7-8,9	9,0	125	36	80	6
SAN07080090	9,0	9,0	125	36	80	6
SAN0708 ...	9,1-9,4	9,0	125	36	80	6
SAN07080095	9,5	9,0	125	36	80	6
SAN07080096	9,6	9,0	125	36	80	6
SAN0708 ...	9,7-9,9	10,0	133	38	85	6
SAN07080100	10,0	10,0	133	38	85	6
SAN0708 ...	10,1-10,4	10,0	133	38	85	6
SAN07080105	10,5	10,0	133	38	85	6
SAN07080106	10,6	10,0	133	38	85	6
SAN0708 ...	10,7-10,9	10,0	142	41	92	6
SAN07080110	11,0	10,0	142	41	92	6
SAN0708 ...	11,1-11,4	10,0	142	41	92	6
SAN07080115	11,5	10,0	142	41	92	6
SAN07080116	11,6	10,0	142	41	92	6
SAN0708 ...	11,7-11,9	12,0	151	44	99	6
SAN07080120	12,0	12,0	151	44	99	6
SAN0708 ...	12,1-12,2	12,0	151	44	99	6
SAN0708 ...	12,3-12,4	12,0	151	44	99	6
SAN07080125	12,5	12,0	151	44	99	6
SAN0708 ...	12,6-12,9	12,0	151	44	99	6
SAN07080130	13,0	12,0	151	44	99	6
SAN0708 ...	13,1-13,6	12,0	151	44	99	6
SAN0708 ...	13,7-13,9	14,0	160	47	105	6
SAN07080140	14,0	14,0	160	47	105	6
SAN0708 ...	14,1-14,2	14,0	160	47	105	6
SAN0708 ...	14,3-14,9	14,0	162	50	107	8
SAN07080150	15,0	14,0	162	50	107	8
SAN0708 ...	15,1-15,6	14,0	162	50	107	8
SAN0708 ...	15,7-15,9	16,0	170	52	115	8
SAN07080160	16,0	16,0	170	52	115	8
SAN0708 ...	16,1-16,2	16,0	170	52	115	8
SAN0708 ...	16,3-16,9	16,0	170	52	115	8
SAN07080170	17,0	16,0	170	52	115	8
SAN0708 ...	17,1-17,2	16,0	170	52	115	8
SAN0708 ...	17,3-17,9	16,0	170	52	115	8
SAN07080180	18,0	16,0	170	52	115	8
SAN0708 ...	18,1-18,2	16,0	170	52	115	8
SAN0708 ... New	18,3-18,9	18,0	170	52	115	8
SAN07080190 New	19,0	18,0	170	52	115	8
SAN0708 ... New	19,1-19,2	18,0	170	52	115	8
SAN0708 ... New	19,3-19,9	20,0	170	52	115	8
SAN07080200 New	20,0	20,0	170	52	115	8
SAN0708 ... New	20,1-20,2	20,0	170	52	115	8



- * CON CENTRINO ESTERNO
- * WITH EXTERNAL CENTERING POINT
- * MIT AUSSENZENTRIERPUNKT
- * AVEC POINT CENTRAL EXTERNE



- ESEGUE FORI CON TOLLERANZA H7
- FOR BORES WITH H7 TOLERANCE
- FÜHRT BOHRUNGEN MIT TOLERANZ H7 AUS
- M.D.I. ALESOIR DECIMAL H7

* Nell'ordine inserire sempre il "Ø" scelto dopo il codice dell'alesatore
* When ordering always indicate the chosen diameter after the reamer code
* Bei der Bestellung bitte immer den gewählten "Ø" hinter dem Reibahlencode angeben
* Entrer toujours dans la commande le "Ø" choisi après le code de l'alesoir

EX. Ø = 12,3 COD. = SAN07080123
EX. Ø = 3,1 COD. = SAN07080031



MATERIALI - MATERIALS
Pag. 1119

Applicazione - Application

	MATERIALI - MATERIALS																			
	P			M	K			N			S	H	G							
	ACCIAIO NON LEGATO NOT ALLOY STEEL	ACCIAIO POCO LEGATO LOW ALLOY STEEL	ACCIAIO ALTO LEGATO ALLOY STEEL	INOX MARTENSITICO STAINLESS STEEL MART.	INOX AUST. DUPLEX STAINLESS STEEL AUST.	GHISA GRIGIA GREY CAST IRON	GHISA SFEROIDALE SPHEROIDAL GRAPH-ITE	GHISA MALLEABILE MALLEABLE CAST IRON	ALLUMINIO E SUE LEGHE ALUMINIUM	RAMME E SUE LEGHE COPPER	NON METALLICI PLASTICS	LEGHE RESIST. CALORE HIGH TEMP. ALLOY	TITANIO E SUE LEGHE TITANIUM	ACCIAIO TEMPRATO HARDENED STEEL	GRAPITE GRAPHITE	(mm)	(m/min)	(mm)	(giri/min) (min ⁻¹)	(mm/min)
ØD	Vc	fn	n	Vf																
●																1÷5	20-30	0,15	-	-
●																5+10	20-30	0,25	-	-
●																10+20,2	20-30	0,40	-	-
	●															1÷5	10-15	0,12	-	-
●																5+10	10-15	0,20	-	-
●																10+20,2	10-15	0,30	-	-
		●														1÷5	5-10	0,08	-	-
●																5+10	5-10	0,15	-	-
●																10+20,2	5-10	0,25	-	-
					●											1÷5	10-15	0,08	-	-
●					●											5+10	10-15	0,15	-	-
●					●											10+20,2	10-15	0,20	-	-
						●										1÷5	10-12	0,15	-	-
●						●										5+10	10-12	0,30	-	-
●						●										10+20,2	10-12	0,50	-	-
									●							1÷5	25-35	0,15	-	-
●									●							5+10	25-35	0,25	-	-
●									●							10+20,2	25-35	0,40	-	-
										●						1÷5	25-35	0,20	-	-
●										●						5+10	25-35	0,25	-	-
●										●						10+20,2	25-35	0,40	-	-
											●					1÷5	25-30	0,15	-	-
●											●					5+10	25-30	0,25	-	-
●											●					10+20,2	25-30	0,45	-	-

● APPLICAZIONE CONSIGLIATA-RECOMMENDED APPLICATION
EMPFOHLENER EINSATZ - APPLICATION CONSEILLÉE

- APPLICAZIONE POSSIBILE - POSSIBLE APPLICATION
MÖGLICHE ANWENDUNG - APPLICATION POSSIBLE

Vc = m/min VELOCITÀ DI TAGLIO - CUTTING SPEED

n = giri/min (min^{-1}) NUMERO DI GIRI - NUMBER OF REVOLUTIONS

fn = mm AVANZAMENTO AL GIRO - FEED / REVOLUTION

Vf = mm/min VELOCITÀ DI AVANZAMENTO - FEED SPEED

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

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

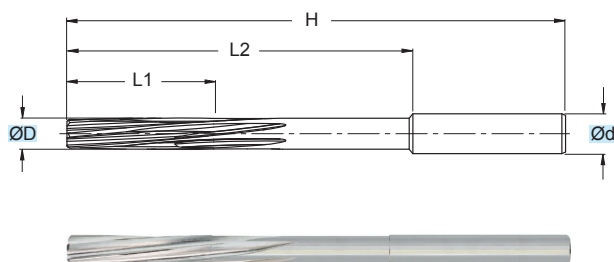
SAN0709

ØD = 0,90 - 20,20

* RIVESTIMENTO A RICHIESTA
COATING ON REQUEST



MG



TOLLERANZE	D	d
TOLERANCE RANGE	-0/+0,004	h8

ART.	ØD	Ød	H	L1	L2	Z
*SAN0709 ... New	0,90-0,99	—	40	8	—	4
*SAN0709 ...	1,00-1,50	—	40	8	—	4
*SAN0709 ...	1,51-1,90	—	43	9	—	4
*SAN0709 ...	1,91-2,12	2,0	49	11	26	4
*SAN0709 ...	2,13-2,36	2,0	53	12	—	4
*SAN0709 ...	2,37-2,48	2,3	57	14	—	4
*SAN0709 ...	2,49-2,65	2,5	57	14	—	4
*SAN0709 ...	2,66-2,96	2,5	61	15	—	4
*SAN0709 ...	2,97-3,35	3,0	65	16	40	4
*SAN0709 ...	3,36-3,75	3,5	70	18	45	4
*SAN0709 ...	3,76-4,25	4,0	75	19	47	6
*SAN0709 ...	4,26-4,75	4,5	80	21	51	6
*SAN0709 ...	4,76-5,15	5,0	86	23	56	6
*SAN0709 ...	5,16-5,65	5,0	93	26	58	6
SAN0709 ...	5,66-6,15	6,0	93	26	58	6
SAN0709 ...	6,16-6,70	6,0	101	28	63	6
SAN0709 ...	6,71-7,65	7,0	109	31	71	6
SAN0709 ...	7,66-8,65	8,0	117	33	77	6
SAN0709 ...	8,66-9,65	9,0	125	36	80	6
SAN0709 ...	9,66-10,65	10,0	133	38	85	6
SAN0709 ...	10,66-11,65	10,0	142	41	92	6
SAN0709 ...	11,66-12,20	12,0	151	44	99	6
SAN0709 ...	12,21-13,65	12,0	151	44	99	6
SAN0709 ...	13,66-14,20	14,0	160	47	105	6
SAN0709 ...	14,21-15,65	14,0	162	50	107	8
SAN0709 ...	15,66-16,20	16,0	170	52	115	8
SAN0709 ...	16,21-17,20	16,0	170	52	115	8
SAN0709 ...	17,21-18,20	16,0	170	52	115	8
SAN0709 ... New	18,21-19,20	18,0	170	52	115	8
SAN0709 ... New	19,21-20,20	20,0	170	52	115	8



- * CON CENTRINO ESTERNO
- * WITH EXTERNAL CENTERING POINT
- * MIT AUSSENZENTRIERPUNKT
- * AVEC POINT CENTRAL EXTERNE



- ESEGUE FORI CON TOLLERANZA -0/+0,004
- FOR BORES WITH -0/+0,004 TOLERANCE
- FÜHRT BOHRUNGEN MIT -0/+0,004 TOLERANZ AUS
- EXECUTE TROUS AVEC TOLERANCE -0/+0,004

* Nell'ordine inserire sempre il "Ø" scelto dopo il codice dell'alesatore
* When ordering always indicate the chosen diameter after the reamer code
* Bei der Bestellung bitte immer den gewählten "Ø" hinter dem Reibahlencode angeben
* Entrer toujours dans la commande le "Ø" choisi après le code de l'alesoir

EX. Ø = 10,66 COD. = **SAN07091066**
EX. Ø = 1,00 COD. = **SAN07090100**



MATERIALI - MATERIALS

Pag. 1119

Applicazione - Application

P	M	K	N	S	H	G								
ACCIAIO NON LEGATO NOT ALLOY STEEL	ACCIAIO POCO LEGATO LOW ALLOY STEEL	ACCIAIO ALTO LEGATO ALLOY STEEL	INOX MARTENSITICO STAINLESS STEEL MART.	INOX AUST. DUPLEX STAINLESS STEEL AUST.	GHISA GRIGIA GREY CAST IRON	GHISA SFEROIDALE SPHEROIDAL GRAPHITE	GHISA MALLEABILE MALLEABLE CAST IRON	ALLUMINIO E SUE LEGHE ALUMINIUM	RAME E SUE LEGHE COPPER	NON METALLICI PLASTICS	LEGHE RESIST. CALORE HIGH TEMP. ALLOY	TITANIO E SUE LEGHE TITANIUM	ACCIAIO TEMPRATO HARDENED STEEL	GRAFITE GRAPHITE
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- APPLICAZIONE CONSIGLIATA-RECOMMENDED APPLICATION
EMPFOHLENER EINSATZ - APPLICATION CONSEILLÉE
- APPLICAZIONE POSSIBILE - POSSIBLE APPLICATION
MÖGLICHE ANWENDUNG - APPLICATION POSSIBLE

Vc = m/min VELOCITÀ DI TAGLIO - CUTTING SPEED

n = giri/min (min^{-1}) NUMERO DI GIRI - NUMBER OF REVOLUTIONS

fn = mm AVANZAMENTO AL GIRO - FEED / REVOLUTION

Vf = mm/min VELOCITÀ DI AVANZAMENTO - FEED SPEED

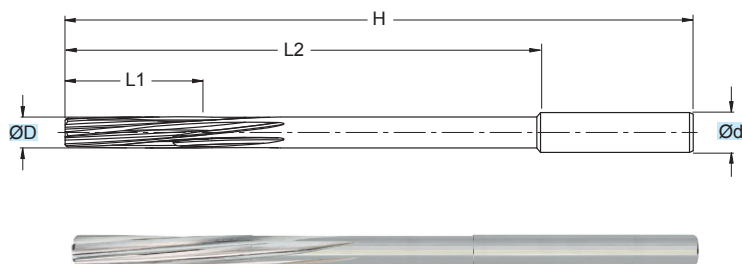
$$n = \frac{V_c \cdot 1000}{\varnothing D \cdot 3,14} = \text{giri/min (min}^{-1}\text{)}$$

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

SAN0808

ØD = 1,5 - 12,2

* RIVESTIMENTO A RICHIESTA
 * COATING ON REQUEST



TOLLERANZE	D	d
TOLERANCE RANGE	H7	h8

MG

ART.	ØD	Ød	H	L1	L2	Z
*SAN08080015	1,5	1,5	110	18	65	4
*SAN08080020	2,0	2,0	110	18	65	4
*SAN0808 ...	2,1-2,3	2,0	110	18	65	4
*SAN08080024	2,4	2,3	120	20	65	4
*SAN08080025	2,5	2,5	120	20	65	4
*SAN0808 ...	2,6-2,9	2,5	120	20	65	4
*SAN08080030	3,0	3,0	120	20	65	4
*SAN08080031	3,1	3,0	120	20	65	4
*SAN0808 ...	3,2-3,3	3,0	150	30	90	4
*SAN08080034	3,4	3,5	150	30	90	4
*SAN08080035	3,5	3,5	150	30	90	4
*SAN0808 ...	3,6-3,9	3,5	150	30	90	4
*SAN08080040	4,0	4,0	150	30	90	6
*SAN0808 ...	4,1-4,2	4,0	150	30	90	6
*SAN0808 ...	4,3-4,4	4,0	180	35	115	6
*SAN08080045	4,5	4,0	180	35	115	6
*SAN0808 ...	4,6-4,9	4,0	180	35	115	6
*SAN08080050	5,0	5,0	180	35	115	6
*SAN08080051	5,1	5,0	180	35	115	6
*SAN0808 ...	5,2-5,4	5,0	200	40	130	6
*SAN08080055	5,5	5,0	200	40	130	6
*SAN0808 ...	5,6-5,9	5,0	200	40	130	6
*SAN08080060	6,0	6,0	200	40	130	6
*SAN08080061	6,1	6,0	200	40	130	6
*SAN0808 ...	6,2-6,4	6,0	200	45	130	6
*SAN08080065	6,5	6,0	200	45	130	6
*SAN0808 ...	6,6-6,9	6,0	200	45	130	6
*SAN08080070	7,0	7,0	200	45	130	6
*SAN08080071	7,1	7,0	200	45	130	6
*SAN0808 ...	7,2-7,4	7,0	200	45	130	6
*SAN08080075	7,5	7,0	200	45	130	6
*SAN0808 ...	7,6-7,9	7,0	200	45	130	6
*SAN08080080	8,0	8,0	200	45	130	6
SAN08080081	8,1	8,0	200	45	130	6

ART.	ØD	Ød	H	L1	L2	Z
SAN0808 ...	8,2-8,4	8,0	220	50	145	6
SAN08080085	8,5	8,0	220	50	145	6
SAN0808 ...	8,6-8,9	8,0	220	50	145	6
SAN08080090	9,0	9,0	220	50	145	6
SAN08080091	9,1	9,0	220	50	145	6
SAN0808 ...	9,2-9,4	9,0	220	50	145	6
SAN08080095	9,5	9,0	220	50	145	6
SAN0808 ...	9,6-9,9	9,0	220	50	145	6
SAN08080100	10,0	10,0	220	50	145	6
SAN0808 ...	10,1-10,2	10,0	220	50	145	6
SAN0808 ...	10,3-10,4	10,0	250	55	170	6
SAN08080105	10,5	10,0	250	55	170	6
SAN0808 ...	10,6-10,7	10,0	250	55	170	6
SAN0808 ...	10,8-10,9	11,0	250	55	170	6
SAN08080110	11,0	11,0	250	55	170	6
SAN0808 ...	11,1-11,2	11,0	250	55	170	6
SAN0808 ...	11,3-11,4	11,0	250	55	170	6
SAN08080115	11,5	11,0	250	55	170	6
SAN0808 ...	11,6-11,7	11,0	250	55	170	6
SAN0808 ...	11,8-11,9	12,0	250	55	170	6
SAN08080120	12,0	12,0	250	55	170	6
SAN0808 ...	12,1-12,2	12,0	250	55	170	6



* CON CENTRINO ESTERNO
 * WITH EXTERNAL CENTERING POINT
 * MIT AUSSENZENTRIERPUNKT
 * AVEC POINT CENTRAL EXTERNE



ESEGUE FORI CON TOLLERANZA H7
 FOR BORES WITH H7 TOLERANCE
 FÜHRT BOHRUNGEN MIT TOLERANZ H7 AUS
 M.D.I. ALESOR DECIMAL H7

* Nell'ordine inserire sempre il "Ø" scelto dopo il codice dell'alesatore
 * When ordering always indicate the chosen diameter after the reamer code
 * Bei der Bestellung bitte immer den gewählten "Ø" hinter dem Reibahlencode angeben
 * Entrer toujours dans la commande le "Ø" choisi après le code de l'alesoir

EX. Ø = 11,3 COD. = SAN08080113
 EX. Ø = 2,6 COD. = SAN08080026

- APPLICAZIONE CONSIGLIATA-RECOMMENDED APPLICATION
EMPFOHLENER EINSATZ - APPLICATION CONSEILLÉE
- APPLICAZIONE POSSIBILE - POSSIBLE APPLICATION
MÖGLICHE ANWENDUNG - APPLICATION POSSIBLE

Vc = m/min VELOCITÀ DI TAGLIO - CUTTING SPEED

n = giri/min (min^{-1}) NUMERO DI GIRI - NUMBER OF REVOLUTIONS

fn = mm AVANZAMENTO AL GIRO - FEED / REVOLUTION

Vf = mm/min VELOCITÀ DI AVANZAMENTO - FEED SPEED

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

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

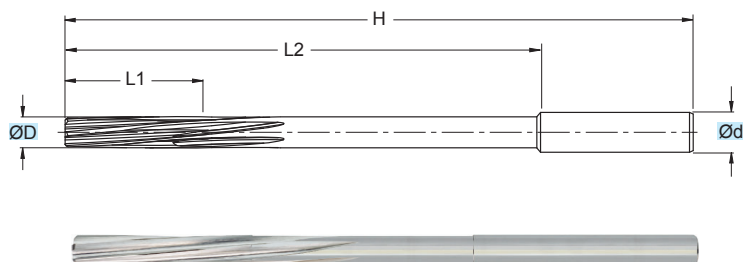
SAN0809

ØD = 2,00 - 12,20

* RIVESTIMENTO A RICHIESTA
COATING ON REQUEST

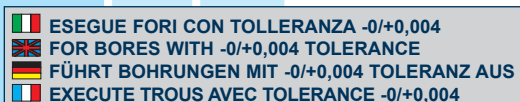
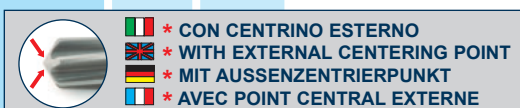


MG



TOLLERANZE	D	d
TOLERANCE RANGE	-0/+0,004	h8

ART.	ØD	Ød	H	L1	L2	Z
*SAN0809 ...	2,00-2,31	2,0	110	18	65	4
*SAN0809 ...	2,32-2,41	2,3	120	20	65	4
*SAN0809 ...	2,42-2,91	2,5	120	20	65	4
*SAN0809 ...	2,92-3,11	3,0	120	20	65	4
*SAN0809 ...	3,12-3,31	3,0	150	30	90	4
*SAN0809 ...	3,32-3,91	3,5	150	30	90	4
*SAN0809 ...	3,92-4,24	4,0	150	30	90	6
*SAN0809 ...	4,25-4,91	4,0	180	35	115	6
*SAN0809 ...	4,92-5,11	5,0	180	35	115	6
*SAN0809 ...	5,12-5,91	5,0	200	40	130	6
*SAN0809 ...	5,92-6,11	6,0	200	40	130	6
*SAN0809 ...	6,12-6,91	6,0	200	45	130	6
*SAN0809 ...	6,92-7,11	7,0	200	45	130	6
*SAN0809 ...	7,12-7,91	7,0	200	45	130	6
*SAN0809 ...	7,92-8,11	8,0	200	45	130	6
*SAN0809 ...	8,12-8,91	8,0	220	50	145	6
*SAN0809 ...	8,92-9,11	9,0	220	50	145	6
*SAN0809 ...	9,12-9,91	9,0	220	50	145	6
SAN0809 ...	9,92-10,20	10,0	220	50	145	6
SAN0809 ...	10,21-10,80	10,0	250	55	170	6
SAN0809 ...	10,81-11,20	11,0	250	55	170	6
SAN0809 ...	11,21-11,80	11,0	250	55	170	6
SAN0809 ...	11,81-12,20	12,0	250	55	170	6



* Nell'ordine inserire sempre il "Ø" scelto dopo il codice dell'alesatore
 * When ordering always indicate the chosen diameter after the reamer code
 * Bei der Bestellung bitte immer den gewählten "Ø" hinter dem Reibahlencode angeben
 * Entrer toujours dans la commande le "Ø" choisi après le code de l'alesoir

EX. Ø = 10,21 COD. = SAN08091021
 EX. Ø = 2,00 COD. = SAN08090200

Applicazione - Application	MATERIALI - MATERIALS Pag. 1119																				
	P			M	K			N			S		H	G	(mm)	(m/min)	(mm)	(giri/min) (min ⁻¹)	(mm/min)		
	ACCIAIO NON LEGATO NOT ALLOY STEEL	ACCIAIO POCO LEGATO LOW ALLOY STEEL	ACCIAIO ALTO LEGATO ALLOY STEEL	INOX MARTENSITICO STAINLESS STEEL MART.	INOX AUST. DUPLEX STAINLESS STEEL AUST.	GHISA GRIGIA GREY CAST IRON	GHISA SFEROIDALE SPHEROIDAL GRAPHITE	GHISA MALLEABILE MALLEABLE CAST IRON	ALLUMINIO E SUE LEGHE ALUMINIUM	RAME E SUE LEGHE COPPER	NON METALLICI PLASTICS	LEGHE RESIST. CALORE HIGH TEMP. ALLOY	TITANIO E SUE LEGHE TITANIUM	ACCIAIO TEMPRATO HARDENED STEEL	GRAFITE GRAPHITE	ØD	Vc	fn	n	Vf	
	●															1÷5	20-30	0,15	-	-	
	●															5÷10	20-30	0,25	-	-	
	●															10÷20	20-30	0,40	-	-	
		●														1÷5	10-15	0,12	-	-	
		●														5÷10	10-15	0,20	-	-	
		●														10÷20	10-15	0,30	-	-	
			●														1÷5	5-10	0,08	-	-
			●														5÷10	5-10	0,15	-	-
			●														10÷20	5-10	0,25	-	-
					●											1÷5	10-15	0,08	-	-	
				●												5÷10	10-15	0,15	-	-	
				●												10÷20	10-15	0,20	-	-	
						●										1÷5	10-12	0,15	-	-	
					●											5÷10	10-12	0,30	-	-	
					●											10÷20	10-12	0,50	-	-	
									●							1÷5	25-35	0,15	-	-	
									●							5÷10	25-35	0,25	-	-	
									●							10÷20	25-35	0,40	-	-	
										●						1÷5	25-35	0,20	-	-	
										●						5÷10	25-35	0,25	-	-	
										●						10÷20	25-35	0,40	-	-	
											●					1÷5	25-30	0,15	-	-	
											●					5÷10	25-30	0,25	-	-	
											●					10÷20	25-30	0,45	-	-	

● APPLICAZIONE CONSIGLIATA - RECOMMENDED APPLICATION
EMPFOHLENER EINSATZ - APPLICATION CONSEILLÉE

○ APPLICAZIONE POSSIBILE - POSSIBLE APPLICATION
MÖGLICHE ANWENDUNG - APPLICATION POSSIBLE

Vc = m/min VELOCITÀ DI TAGLIO - CUTTING SPEED

n = giri/min (min⁻¹) NUMERO DI GIRI - NUMBER OF REVOLUTIONS

fn = mm AVANZAMENTO AL GIRO - FEED / REVOLUTION

Vf = mm/min VELOCITÀ DI AVANZAMENTO - FEED SPEED

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

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

Applicazione - Application		MATERIALI - MATERIALS Pag. 1119																			
		P				M	K			N			S	H	G						
		ACCIAIO NON LEGATO NOT ALLOY STEEL	ACCIAIO POCO LEGATO LOW ALLOY STEEL	ACCIAIO ALTO LEGATO ALLOY STEEL	INOX MARTENSITICO STAINLESS STEEL MART.	INOX AUST. DUPLEX STAINLESS STEEL AUST.	GHISA GRIGIA GREY CAST IRON	GHISA SFEROIDALE SPHEROIDAL GRAPHITE	GHISA MALLEABILE MALLEABLE CAST IRON	ALLUMINIO E SUE LEGHE ALUMINIUM	RAME E SUE LEGHE COPPER	NON METALLICI PLASTICS	LEGHE RESIST. CALORE HIGH TEMP. ALLOY	TITANIO E SUE LEGHE TITANIUM	ACCIAIO TEMPRATO HARDENED STEEL	GRAFITE GRAPHITE	(mm)	(m/min)	(mm)	(giri/min) (min ⁻¹)	(mm/min)
		●	●	●	●												ØD	Vc	fn	n	Vf
		●															1÷5	10-12	0,10	–	–
		●															5÷10	10-12	0,15	–	–
		●															10÷20	10-12	0,25	–	–
		●															20÷35,2	10-12	0,30	–	–
		●															1÷5	8-10	0,10	–	–
		●															5÷10	8-10	0,15	–	–
		●															10÷20	8-10	0,25	–	–
		●															20÷35,2	8-10	0,30	–	–
			●														1÷5	4-6	0,08	–	–
			●														5÷10	4-6	0,10	–	–
			●														10÷20	4-6	0,20	–	–
			●														20÷35,2	4-6	0,30	–	–
					●												1÷5	3-5	0,10	–	–
					●												5÷10	3-5	0,15	–	–
					●												10÷20	3-5	0,20	–	–
					●												20÷35,2	3-5	0,30	–	–
						●											1÷5	8-10	0,18	–	–
						●											5÷10	8-10	0,23	–	–
						●											10÷20	8-10	0,30	–	–
						●											20÷35,2	8-10	0,35	–	–
							●										1÷5	4-6	0,12	–	–
							●										5÷10	4-6	0,17	–	–
							●										10÷20	4-6	0,25	–	–
							●										20÷35,2	4-6	0,30	–	–
									●								1÷5	18-20	0,15	–	–
									●								5÷10	18-20	0,20	–	–
									●								10÷20	18-20	0,30	–	–
									●								20÷35,2	18-20	0,35	–	–
										●							1÷5	10-15	0,20	–	–
										●							5÷10	10-15	0,30	–	–
										●							10÷20	10-15	0,40	–	–
										●							20÷35,2	10-15	0,45	–	–
											●						1÷5	4-6	0,20	–	–
											●						5÷10	4-6	0,30	–	–
											●						10÷20	4-6	0,40	–	–
											●						20÷35,2	4-6	0,45	–	–

● 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

Vc = m/min VELOCITÀ DI TAGLIO - CUTTING SPEED

n = giri/min (min⁻¹) NUMERO DI GIRI - NUMBER OF REVOLUTIONS

fn = mm AVANZAMENTO AL GIRO - FEED / REVOLUTION

Vf = mm/min VELOCITÀ DI AVANZAMENTO - FEED SPEED

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

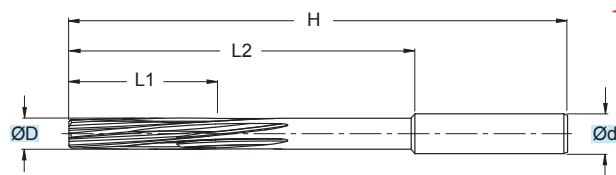
$$Vf = fn \cdot n = \text{mm/min}$$

SAN0209

ØD = 0,70 - 35,20 **NEW**

*** RIVESTIMENTO A RICHIESTA
* COATING ON REQUEST**

HSSE



TOLLERANZE	D	d
TOLERANCE RANGE	-0/+0,004	h8

ART.	ØD	Ød	H	L1	L2	Z
SAN0209 ...	0,70-0,79	—	40	8	—	4
SAN0209 ...	0,80-0,89	—	40	8	—	4
SAN0209 ...	0,90-0,96	—	40	8	—	4
SAN0209 ...	0,97-1,50	—	40	8	—	4
SAN0209 ...	1,51-1,93	—	43	9	—	4
SAN0209 ...	1,94-2,12	2,0	49	11	26	4
SAN0209 ...	2,13-2,36	2,0	53	12	—	4
SAN0209 ...	2,37-2,48	2,3	57	14	—	4
SAN0209 ...	2,49-2,65	2,5	57	14	—	4
SAN0209 ...	2,66-2,96	2,5	61	15	—	4
SAN0209 ...	2,97-3,35	3,0	65	16	40	4
SAN0209 ...	3,36-3,75	3,5	70	18	45	4
SAN0209 ...	3,76-4,25	4,0	75	19	47	6
SAN0209 ...	4,26-4,75	4,5	80	21	51	6
SAN0209 ...	4,76-5,15	5,0	86	23	56	6
SAN0209 ...	5,16-5,65	5,0	93	26	58	6
SAN0209 ...	5,66-6,15	6,0	93	26	58	6
SAN0209 ...	6,16-6,71	6,0	101	28	63	6
SAN0209 ...	6,72-7,65	7,0	109	31	71	6
SAN0209 ...	7,66-8,65	8,0	117	33	77	6
SAN0209 ...	8,66-9,65	9,0	125	36	80	6
SAN0209 ...	9,66-10,60	10,0	133	38	85	6
SAN0209 ...	10,61-11,80	10,0	142	41	92	6
SAN0209 ...	11,81-12,20	10,0	151	44	99	6
SAN0209 ...	12,21-13,20	10,0	151	44	99	6
SAN0209 ...	13,21-14,15	12,5	160	47	105	6
SAN0209 ...	14,16-15,15	12,5	162	50	107	6
SAN0209 ...	15,16-16,15	12,5	170	52	115	8
SAN0209 ...	16,16-17,15	14,0	175	54	119	8
SAN0209 ...	17,16-18,15	14,0	182	56	122	8
SAN0209 ...	18,16-19,15	16,0	189	58	127	8
SAN0209 ...	19,16-20,15	16,0	195	60	130	8
SAN0209 ...	20,16-21,20	16,0	195	60	130	8
SAN0209 ...	21,21-22,20	16,0	200	65	134	8
SAN0209 ...	22,21-24,20	20,0	200	65	134	10
SAN0209 ...	24,21-25,20	20,0	200	65	134	10
SAN0209 ...	25,21-26,20	20,0	200	65	134	10
SAN0209 ...	26,21-28,20	25,0	205	70	139	10
SAN0209 ...	28,21-30,20	25,0	205	70	139	10
SAN0209 ...	30,21-32,20	25,0	205	70	139	10
SAN0209 ...	32,21-35,20	25,0	205	70	139	10

* Nell'ordine inserire sempre il "Ø" scelto dopo il codice dell'alesatore
* When ordering always indicate the chosen diameter after the reamer code
* Bei der Bestellung bitte immer den gewählten "Ø" hinter dem Reibahlencode angeben
* Entrer toujours dans la commande le "Ø" choisi après le code de l'alesoir

EX. Ø = 13,21 COD. = **SAN02091321**
EX. Ø = 3,80 COD. = **SAN02090380**

🇮🇹 ESEGUE FORI CON TOLLERANZA -0/+0,004
🇬🇧 FOR BORES WITH -0/+0,004 TOLERANCE
🇩🇪 FÜHRT BOHRUNGEN MIT -0/+0,004 TOLERANZ AUS
🇫🇷 EXECUTE TROUS AVEC TOLERANCE -0/+0,004

Applicazione - Application		MATERIALI - MATERIALS Pag. 1119																				
		P				M	K			N			S	H	G							
		ACCIAIO NON LEGATO NOT ALLOY STEEL	ACCIAIO POCO LEGATO LOW ALLOY STEEL	ACCIAIO ALTO LEGATO ALLOY STEEL	INOX MARTENSITICO STAINLESS STEEL MART.	INOX AUST. DUPLEX STAINLESS STEEL AUST.	GHISA GRIGIA GREY CAST IRON	GHISA SFEROIDALE SPHEROIDAL GRAPHITE	GHISA MALLEABILE MALLEABLE CAST IRON	ALLUMINIO E SUE LEGHE ALUMINIUM	RAME E SUE LEGHE COPPER	NON METALLICI PLASTICS	LEGHE RESIST. CALORE HIGH TEMP. ALLOY	TITANIO E SUE LEGHE TITANIUM	ACCIAIO TEMPRATO HARDENED STEEL	GRAFITE GRAPHITE	(mm)	(m/min)	(mm)	(giri/min) (min ⁻¹)	(mm/min)	
		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	ØD	Vc	fn	n	Vf	
	●																0,7÷5	10-12	0,10	-	-	
	●																5÷10	10-12	0,15	-	-	
	●																10÷20	10-12	0,25	-	-	
	●																20÷35,2	10-12	0,30	-	-	
		●																0,7÷5	8-10	0,10	-	-
		●																5÷10	8-10	0,15	-	-
		●																10÷20	8-10	0,25	-	-
		●																20÷35,2	8-10	0,30	-	-
			●															0,7÷5	4-6	0,08	-	-
			●															5÷10	4-6	0,10	-	-
			●															10÷20	4-6	0,20	-	-
			●															20÷35,2	4-6	0,30	-	-
						●												0,7÷5	3-5	0,10	-	-
						●												5÷10	3-5	0,15	-	-
						●												10÷20	3-5	0,20	-	-
						●												20÷35,2	3-5	0,30	-	-
							●											0,7÷5	8-10	0,18	-	-
							●											5÷10	8-10	0,23	-	-
							●											10÷20	8-10	0,30	-	-
							●											20÷35,2	8-10	0,35	-	-
								●										0,7÷5	4-6	0,12	-	-
								●										5÷10	4-6	0,17	-	-
								●										10÷20	4-6	0,25	-	-
								●										20÷35,2	4-6	0,30	-	-
									●									0,7÷5	18-20	0,15	-	-
									●									5÷10	18-20	0,20	-	-
									●									10÷20	18-20	0,30	-	-
									●									20÷35,2	18-20	0,35	-	-
										●								0,7÷5	10-15	0,20	-	-
										●								5÷10	10-15	0,30	-	-
										●								10÷20	10-15	0,40	-	-
										●								20÷35,2	10-15	0,45	-	-
											●							0,7÷5	4-6	0,20	-	-
											●							5÷10	4-6	0,30	-	-
											●							10÷20	4-6	0,40	-	-
											●							20÷35,2	4-6	0,45	-	-

● 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

Vc = m/min VELOCITÀ DI TAGLIO - CUTTING SPEED

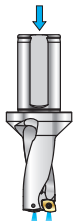
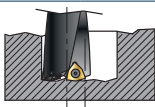
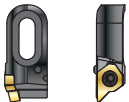
n = giri/min (min⁻¹) NUMERO DI GIRI - NUMBER OF REVOLUTIONS

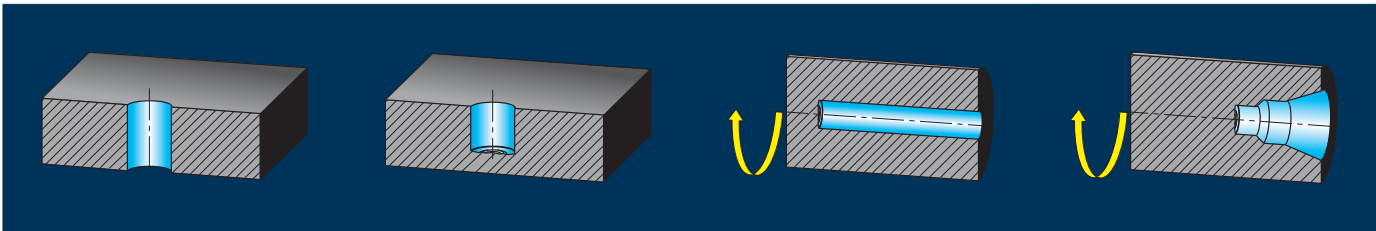
fn = mm AVANZAMENTO AL GIRO - FEED / REVOLUTION

Vf = mm/min VELOCITÀ DI AVANZAMENTO - FEED SPEED

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

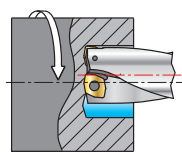
$$Vf = fn \cdot n = \text{mm/min}$$

SDQ...20		Pag. 604	TDC...30		Pag. 610	TDBC...25		Pag. 616
 2 x D SDQ...20 R - SDQM...20 R	ØD = 15 - 40	 QCMX 010204 020204 030308 040308 050412 060412	 3 x D TDC...30 R/L	 WCMX 06T308 080412	 2,5 x D TDBC...25 R/L	ØD = 19 - 54	 WCMX 040208 050308 06T308 080412 	
SDQ...30		Pag. 606	TDC...40		Pag. 612			
 3 x D SDQ...30 R - SDQM...30 R	ØD = 15 - 60	 QCMX 010204 020204 030308 040308 050412 060412 080412	 4 x D TDC...40 R/L	 WCMX 030208 040208 050308 06T308 080412				
SDQ...40		Pag. 608	TDCS...30		Pag. 614			
 4 x D SDQ...40 R	ØD = 15 - 50	 QCMX 010204 020204 030308 040308 050412 060412 080412	 3 x D TDCS... R/L	 WCMX 030208 040208 050308 06T308				
			SPU...		Pag. 615			
			 	 SM0702 -30 -45 -55				
			SPU 1840-07					

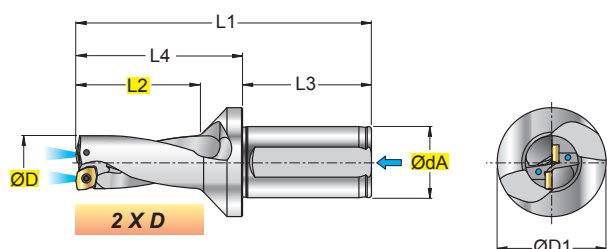


SDQ ..20 R
SDQM ..20 R

Ø 15-40



DISASSAMENTO TEORICO
THEORETICAL OFFSET



QCMX ...
.X36



QCMX ...
.X42



QCMX ...
.X52



INSERTI - INSERTS
PAG. 643

(mm)																
ART.			ØD	ØdA	ØD1	L1	L2	L3	L4	kg	Nm					
2 x D	SDQ	15020	R	15,0	20	32	90	35	40	50	0,18	0,9+1,0	010204	12225P	5607P	
	SDQ	15520	R	15,5	20	32	91	36	40	51	0,18	0,9+1,0				
	SDQ	16020	R	16,0	20	32	92	37	40	52	0,18	0,9+1,0				
	SDQ	16520	R	16,5	20	32	93	38	40	53	0,19	0,9+1,0				
	SDQ	17020	R	17,0	20	32	94	39	40	54	0,19	0,9+1,0				
	SDQ	17520	R	17,5	25	37	112	41	54	58	0,33	0,9+1,0				
	SDQ	18020	R	18,0	25	37	113	42	54	59	0,33	0,9+1,0				
	SDQ	18520	R	18,5	25	37	114	43	54	60	0,34	0,9+1,0				
	SDQ	19020	R	19,0	25	37	115	44	54	61	0,34	0,9+1,0				
	SDQ	19520	R	19,5	25	37	116	45	54	62	0,34	0,9+1,0				
	SDQ	20020	R	20,0	25	37	117	46	54	63	0,34	0,9+1,0	020204	12225P	5607P	
	SDQ	20520	R	20,5	25	37	118	47	54	64	0,34	0,9+1,0				
	SDQ	21020	R	21,0	25	37	119	48	54	65	0,35	0,9+1,0				
	SDQ	21520	R	21,5	25	37	120	49	54	66	0,35	0,9+1,0				
	SDQ	22020	R	22,0	25	37	121	50	54	67	0,36	0,9+1,0				
	SDQ	22520	R	22,5	25	37	122	51	54	68	0,36	0,9+1,0				
	SDQ	23020	R	23,0	25	37	123	52	54	69	0,37	0,9+1,0				
	SDQ	23520	R	23,5	25	37	124	53	54	70	0,37	1,2+1,5	030308	123008P	5608P	
	SDQ	24020	R	24,0	25	37	125	54	54	71	0,37	1,2+1,5				
	SDQ	24520	R	24,5	25	37	126	55	54	72	0,38	1,2+1,5				
	SDQ	25020	R	25,0	32	49	133	56	58	75	0,62	1,2+1,5				
	SDQ	25520	R	25,5	32	49	134	57	58	76	0,63	1,2+1,5				
	SDQ	26020	R	26,0	32	49	135	58	58	77	0,64	1,2+1,5				
	SDQ	26520	R	26,5	32	49	136	59	58	78	0,64	1,2+1,5				
	SDQ	27020	R	27,0	32	49	137	60	58	79	0,65	1,2+1,5				
	SDQ	27520	R	27,5	32	49	138	61	58	80	0,65	1,2+1,5				
	SDQ	28020	R	28,0	32	49	139	62	58	81	0,65	1,2+1,5				
	SDQ	28520	R	28,5	32	49	140	63	58	82	0,66	1,2+1,5	040308	123008P	5608P	
	SDQ	29020	R	29,0	32	49	141	64	58	83	0,67	1,2+1,5				
	SDQ	29520	R	29,5	32	49	142	65	58	84	0,68	1,2+1,5				
	SDQ	30020	R	30,0	32	49	143	66	58	85	0,68	1,2+1,5				
	SDQ	30520	R	30,5	32	49	144	67	58	86	0,69	1,2+1,5				
	SDQ	31020	R	31,0	32	49	145	68	58	87	0,69	1,2+1,5				
	SDQ	31520	R	31,5	32	49	146	69	58	88	0,71	1,2+1,5				
	SDQ	32020	R	32,0	40	59	161	71	68	93	1,11	1,2+1,5				
	SDQM	32020	R New	32,0	32	49	151	71	58	93	0,76	1,2+1,5				
	SDQ	32520	R	32,5	40	59	162	72	68	94	1,14	1,2+1,5				
	SDQ	33020	R	33,0	40	59	163	73	68	95	1,15	1,2+1,5	050412	123511P	5615P	
	SDQM	33020	R New	33,0	32	49	153	73	58	95	0,77	1,2+1,5				
	SDQ	33520	R	33,5	40	59	164	74	68	96	1,16	1,2+1,5				
	SDQ	34020	R	34,0	40	59	165	75	68	97	1,17	1,2+1,5				
	SDQM	34020	R New	34,0	32	49	155	75	58	97	0,81	1,2+1,5				
	SDQ	35020	R New	35,0	40	59	167	77	68	99	1,19	3,0+3,5				
	SDQM	35020	R New	35,0	32	49	157	77	58	99	0,82	3,0+3,5				
	SDQ	36020	R New	36,0	40	59	169	79	68	101	1,21	3,0+3,5				
	SDQM	36020	R New	36,0	32	49	159	79	58	101	0,85	3,0+3,5				
	SDQ	37020	R New	37,0	40	59	171	81	68	103	1,24	3,0+3,5				
	SDQM	37020	R New	37,0	32	49	161	81	58	103	0,87	3,0+3,5				
	SDQ	38020	R New	38,0	40	59	173	83	68	105	1,25	3,0+3,5				
	SDQM	38020	R New	38,0	32	49	163	83	58	105	0,89	3,0+3,5				
	SDQ	39020	R New	39,0	40	59	175	85	68	107	1,29	3,0+3,5				
	SDQM	39020	R New	39,0	32	49	165	85	58	107	0,93	3,0+3,5				
	SDQ	40020	R New	40,0	40	59	177	87	68	109	1,30	3,0+3,5	060412	123511P	5615P	
	SDQM	40020	R New	40,0	32	49	167	87	58	109	0,94	3,0+3,5				

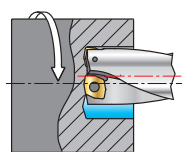


(■) LAVORAZIONE OTTIMALE - OPTIMUM MACHINING - OPTIMALE BEARBEITUNG - USINAGE OPTIMALE
(□) LAVORAZIONE POSSIBILE - POSSIBLE MACHINING - MOEGICHE BEARBEITUNG - USINAGE POSSIBLE

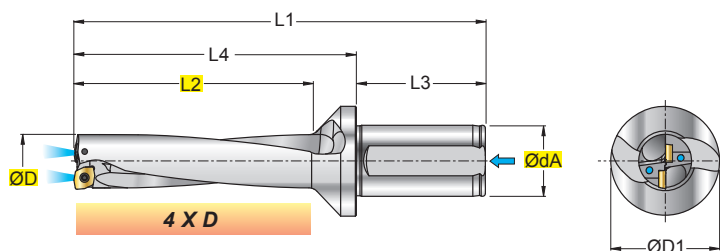


SDQ ..40 R

Ø 15-50



DISASSAMENTO TEORICO
THEORETICAL OFFSET



QCMX ...
.X36



QCMX ...
.X42

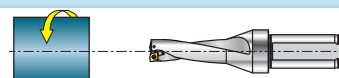
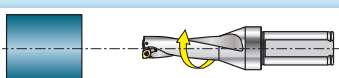


QCMX ...
.X52



INSERTI - INSERTS
PAG. 643

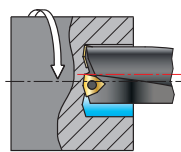
(mm)												
ART.	ØD ^{+/-0,1}	ØdA	ØD1	L1	L2	L3	L4	kg	Nm			
SDQ 15040 R	15,0	20	32	120	65	40	80	0,20	0,9+1,0	010204	12225P	5607P
SDQ 15540 R	15,5	20	32	122	67	40	82	0,20	0,9+1,0			
SDQ 16040 R	16,0	20	32	124	69	40	84	0,20	0,9+1,0			
SDQ 16540 R	16,5	20	32	126	71	40	86	0,21	0,9+1,0			
SDQ 17040 R	17,0	20	32	128	73	40	88	0,21	0,9+1,0			
SDQ 17540 R	17,5	25	37	147	76	54	93	0,37	0,9+1,0			
SDQ 18040 R	18,0	25	37	149	78	54	95	0,38	0,9+1,0			
SDQ 18540 R	18,5	25	37	151	80	54	97	0,38	0,9+1,0			
SDQ 19040 R	19,0	25	37	153	82	54	99	0,39	0,9+1,0			
SDQ 19540 R	19,5	25	37	155	84	54	101	0,39	0,9+1,0	020204	12225P	5607P
SDQ 20040 R	20,0	25	37	157	86	54	103	0,39	0,9+1,0			
SDQ 20540 R	20,5	25	37	159	88	54	105	0,40	0,9+1,0			
SDQ 21040 R	21,0	25	37	161	90	54	107	0,41	0,9+1,0			
SDQ 21540 R	21,5	25	37	163	92	54	109	0,41	0,9+1,0			
SDQ 22040 R	22,0	25	37	165	94	54	111	0,42	0,9+1,0			
SDQ 22540 R	22,5	25	37	167	96	54	113	0,43	0,9+1,0			
SDQ 23040 R	23,0	25	37	169	98	54	115	0,44	0,9+1,0			
SDQ 23540 R	23,5	25	37	170	99	54	116	0,44	1,2+1,5	030308	123008P	5608P
SDQ 24040 R	24,0	25	37	173	102	54	119	0,45	1,2+1,5			
SDQ 24540 R	24,5	25	37	175	104	54	121	0,47	1,2+1,5			
SDQ 25040 R	25,0	32	49	184	107	58	126	0,72	1,2+1,5			
SDQ 25540 R	25,5	32	49	186	109	58	128	0,73	1,2+1,5			
SDQ 26040 R	26,0	32	49	188	111	58	130	0,74	1,2+1,5			
SDQ 26540 R	26,5	32	49	190	113	58	132	0,75	1,2+1,5			
SDQ 27040 R	27,0	32	49	192	115	58	134	0,75	1,2+1,5			
SDQ 27540 R	27,5	32	49	194	117	58	136	0,76	1,2+1,5			
SDQ 28040 R	28,0	32	49	196	119	58	138	0,77	1,2+1,5	040308	123008P	5608P
SDQ 28540 R	28,5	32	49	198	121	58	140	0,78	1,2+1,5			
SDQ 29040 R	29,0	32	49	200	123	58	142	0,80	1,2+1,5			
SDQ 29540 R	29,5	32	49	202	125	58	144	0,82	1,2+1,5			
SDQ 30040 R	30,0	32	49	204	127	58	146	0,82	1,2+1,5			
SDQ 31040 R	31,0	32	49	208	131	58	150	0,84	1,2+1,5	050412	123511P	5615P
SDQ 32040 R	32,0	40	59	226	136	68	158	1,33	1,2+1,5			
SDQ 33040 R	33,0	40	59	230	140	68	162	1,36	1,2+1,5			
SDQ 34040 R	34,0	40	59	234	144	68	166	1,42	1,2+1,5			
SDQ 35040 R	35,0	40	59	238	148	68	170	1,45	3,0+3,5			
SDQ 36040 R	36,0	40	59	242	152	68	174	1,49	3,0+3,5	060412	123511P	5615P
SDQ 37040 R	37,0	40	59	246	156	68	178	1,52	3,0+3,5			
SDQ 38040 R	38,0	40	59	250	160	68	182	1,57	3,0+3,5			
SDQ 39040 R	39,0	40	59	254	164	68	186	1,62	3,0+3,5			
SDQ 40040 R	40,0	40	59	258	168	68	190	1,62	3,0+3,5			
SDQ 41040 R	41,0	40	59	262	172	68	194	1,70	3,0+3,5			
SDQ 42040 R	42,0	40	59	266	176	68	198	1,76	3,0+3,5			
SDQ 43040 R	43,0	40	59	270	180	68	202	1,85	3,0+3,5			
SDQ 44040 R	44,0	40	59	274	184	68	206	1,90	3,0+3,5			
SDQ 45040 R	45,0	40	59	278	188	68	210	1,95	3,0+3,5			
SDQ 46040 R	46,0	40	59	290	192	68	222	2,01	3,0+3,5			
SDQ 47040 R	47,0	40	59	294	196	68	226	2,10	3,0+3,5	080412	123511P	5615P
SDQ 48040 R	48,0	40	59	298	200	68	230	2,18	3,0+3,5			
SDQ 49040 R	49,0	40	59	302	204	68	234	2,32	3,0+3,5			
SDQ 50040 R	50,0	40	59	306	211	68	238	2,38	3,0+3,5			



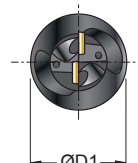
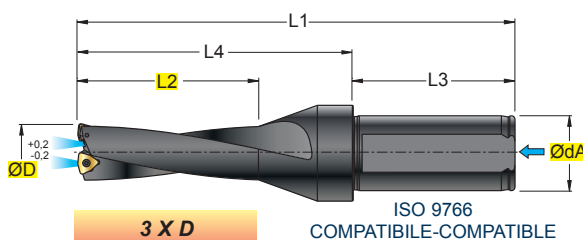
(■) LAVORAZIONE OTTIMALE - OPTIMUM MACHINING - OPTIMALE BEARBEITUNG - USINAGE OPTIMALE
(□) LAVORAZIONE POSSIBILE - POSSIBLE MACHINING - MOEGICHE BEARBEITUNG - USINAGE POSSIBLE

TDC ..30 R/L

Ø 17,5-59



DISASSAMENTO TEORICO
THEORETICAL OFFSET



WCMX ...
.S42



WCMX ...
.S62/.062



INSERTI - INSERTS
PAG. 643

(mm)														
ART.			ØD $+/-0,2$	ØdA	ØD1	L1	L2	L3	L4	kg	Nm			
3 x D	TDC 17530 R/L		17,5	25	32	138,5	54,5	54	84,5	0,38	1,1+1,3	030208	12256P	5608P
	TDC 18030 R/L		18	25	32	140	56	54	86	0,38	1,1+1,3			
	TDC 18530 R/L		18,5	25	32	141,5	57,5	54	87,5	0,38	1,1+1,3			
	TDC 19030 R/L		19	25	32	143	59	54	89	0,38	1,1+1,3			
	TDC 19530 R/L		19,5	25	32	144,5	60,5	54	90,5	0,39	1,1+1,3			
	TDC 20030 R/L		20	25	32	146	62	54	92	0,39	1,1+1,3			
	TDC 20530 R/L		20,5	25	32	147,5	63,5	54	93,5	0,40	1,1+1,3	040208	12256P	5608P
	TDC 21030 R/L		21	25	32	149	65	54	95	0,41	1,1+1,3			
	TDC 21530 R/L		21,5	25	32	150,5	66,5	54	96,5	0,41	1,1+1,3			
	TDC 22030 R/L		22	25	32	152	68	54	98	0,42	1,1+1,3			
	TDC 22530 R/L		22,5	25	32	153,5	69,5	54	99,5	0,42	1,1+1,3			
	TDC 23030 R/L		23	25	32	155	71	54	101	0,43	1,1+1,3			
	TDC 23530 R/L		23,5	25	32	156,5	72,5	54	102,5	0,44	1,1+1,3			
	TDC 24030 R/L		24	25	32	158	74	54	104	0,45	1,1+1,3			
	TDC 24530 R/L		24,5	25	32	159,5	75,5	54	105,5	0,45	1,1+1,3			
	TDC 25030 R/L		25	25	32	161	77	54	107	0,46	1,1+1,3			
	TDC 25530 R/L		25,5	25	32	162,5	78,5	54	108,5	0,47	1,1+1,3	050308	123008P	5608P
	TDC 26030 R/L		26	25	32	164	80	54	110	0,48	1,2+1,5			
	TDC 26530 R/L		26,5	25	32	165,5	81,5	54	111,5	0,49	1,2+1,5			
	TDC 27030 R/L		27	25	32	167	83	54	113	0,50	1,2+1,5			
	TDC 28030 R/L		28	25	32	170	86	54	116	0,52	1,2+1,5			
	TDC 29030 R/L		29	25	32	173	89	54	119	0,55	1,2+1,5			
	TDC 30030 R/L		30	32	49	180	92	58	122	0,84	1,2+1,5	050308	123008P	5608P
	TDC 31030 R/L		31	32	49	183	95	58	125	0,87	2,0+3,0	06T308	123009P	5610P
	TDC 32030 R/L		32	32	49	186	98	58	128	0,88	2,0+3,0			
	TDC 33030 R/L		33	32	49	189	101	58	131	0,91	2,0+3,0			
	TDC 34030 R/L		34	32	49	192	104	58	134	0,95	2,0+3,0			
	TDC 35030 R/L		35	32	49	195	107	58	137	0,98	2,0+3,0			
	TDC 36030 R/L		36	32	49	198	110	58	140	1,02	2,0+3,0			
	TDC 37030 R/L		37	32	49	201	113	58	143	1,06	2,0+3,0			
	TDC 38030 R/L		38	32	49	204	116	58	146	1,09	2,0+3,0			
	TDC 39030 R/L		39	32	49	207	119	58	149	1,13	2,0+3,0			
	TDC 40030 R/L		40	32	49	210	122	58	152	1,18	2,0+3,0			
	TDC 41030 R/L		41	32	49	213	125	58	155	1,23	2,0+3,0	080412	C04011P	5615P
	TDC 42030 R/L		42	32	49	216	128	58	158	1,27	3,8+5,0			
	TDC 43030 R/L		43	32	49	219	131	58	161	1,31	3,8+5,0			
	TDC 44030 R/L		44	32	49	222	134	58	164	1,35	3,8+5,0			
	TDC 45030 R/L		45	40	59	240	137	68	172	1,91	3,8+5,0	080412	C04011P	5615P
	TDC 46030 R/L		46	40	59	243	140	68	175	1,93	3,8+5,0			
	TDC 47030 R/L		47	40	59	246	143	68	178	2,02	3,8+5,0			
	TDC 48030 R/L		48	40	59	249	146	68	181	2,09	3,8+5,0			
	TDC 49030 R/L		49	40	59	252	149	68	184	2,12	3,8+5,0			
	TDC 50030 R/L		50	40	59	255	152	68	187	2,22	3,8+5,0			
	TDC 51030 R/L		51	40	59	258	155	68	190	2,27	3,8+5,0			
	TDC 52030 R/L		52	40	59	261	158	68	193	2,32	3,8+5,0			
	TDC 53030 R/L		53	40	59	264	161	68	196	2,52	3,8+5,0			
	TDC 54030 R/L		54	40	59	267	164	68	199	2,57	3,8+5,0			
	TDC 55030 R/L		55	40	59	270	167	68	202	2,82	3,8+5,0			
	TDC 56030 R/L		56	40	59	273	170	68	205	2,92	3,8+5,0			
	TDC 57030 R/L		57	40	59	276	173	68	208	3,02	3,8+5,0			
	TDC 58030 R/L		58	40	59	279	176	68	211	3,12	3,8+5,0			
	TDC 59030 R/L		59	40	59	282	179	68	214	3,22	3,8+5,0			



(■) LAVORAZIONE OTTIMALE - OPTIMUM MACHINING - OPTIMALE BEARBEITUNG - USINAGE OPTIMALE
(○) LAVORAZIONE POSSIBILE - POSSIBLE MACHINING - MOEGICHE BEARBEITUNG - USINAGE POSSIBLE

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			T120	T538N											
WCMX 030208 .S62			○	●	○				■							3,46	5,56	2,38	2,5	0,8	7°
WCMX 040208 .S62			○	●	○				■							3,99	6,35	2,38	2,8	0,8	7°
WCMX 050308 .S62			○	●	○				■							5,07	7,94	3,18	3,4	0,8	7°
WCMX 06T308 .O62			○	●	○				■							6,14	9,52	3,97	3,8	0,8	7°
WCMX 080412 .S62			○	●	○				■							8,14	12,7	4,76	4,4	1,2	7°
WCMX 030208 .S62	●	●	○							■						3,46	5,56	2,38	2,5	0,8	7°
WCMX 040208 .S62	●	●	○							■						3,99	6,35	2,38	2,8	0,8	7°
WCMX 050308 .S62	●	●	○							■						5,07	7,94	3,18	3,4	0,8	7°
WCMX 06T308 .S62	●	●	○							■						6,14	9,52	3,97	3,8	0,8	7°
WCMX 080412 .S62	●	●	○							■						8,14	12,7	4,76	4,4	1,2	7°
WCMX 040208 .S42	●	●		○	●					■						3,99	6,35	2,38	2,8	0,8	7°
WCMX 050308 .S42	●	●		○	●					■						5,07	7,94	3,18	3,4	0,8	7°
WCMX 06T308 .S42	●	●		○	●					■						6,14	9,52	3,97	3,8	0,8	7°
WCMX 080412 .S42	●	●		○	●					■						8,14	12,7	4,76	4,4	1,2	7°



WCMX .S62/O62 = 1° SCELTA PER IMPIEGO GENERICO

1° CHOICE FOR GENERIC USE



WCMX ... S42 = CONTROLLO DEL TRUCIOLO A BASSI AVANZAMENTI CHIP CONTROL WITH LOW FEEDS

MATERIALI - MATERIALS Pag. 1119			VDI 3323 GR.	HB Rm ¹⁾ HRC ²⁾	fn mm					Vc m/min Pag. 640				
					Ø17,5-20,5	Ø21-25,5	Ø26-30	Ø31-41	Ø42-59	T120	T538N			
P	ACCIAIO NON LEGATO - NOT ALLOY STEEL		1-5	125-300	0,04-0,12	0,06-0,14	0,10-0,18	0,12-0,2	0,12-0,20					
	ACCIAIO POCO LEGATO - LOW ALLOY STEEL		6-9	180-350	0,04-0,12	0,06-0,14	0,10-0,18	0,12-0,2	0,12-0,20		170			
	ACCIAIO ALTO LEGATO - ALLOY STEEL		10-11	200-325	0,04-0,12	0,06-0,14	0,10-0,18	0,12-0,2	0,12-0,20		120			
	INOX MARTENS. - STAINLESS STEEL MART		12-13	200-240	0,04-0,12	0,06-0,14	0,10-0,18	0,12-0,2	0,12-0,20		170			
M	INOX AUST. DUPLEX - STAINLESS STEEL AUST		14.1-14.2	180-230	0,04-0,12	0,06-0,12	0,10-0,14	0,12-0,16	0,12-0,18		120			
K	GHISA GRIGIA - GREY CAST IRON		15-16	180-260	0,08-0,16	0,08-0,18	0,12-0,2	0,14-0,26	0,15-0,28	80				
	GHISA SFEROIDALE - SPHEROIDAL GRAPHITE		17-18	160-250	0,08-0,14	0,08-0,14	0,12-0,18	0,14-0,2	0,15-0,22					
	GHISA MALLEABILE - MALLEABLE CAST IRON		19-20	130-230	0,08-0,16	0,08-0,18	0,12-0,2	0,14-0,26	0,15-0,28		80			
N	ALLUMINIO E SUE LEGHE - ALUMINIUM		21-25	60-130	0,06-0,16	0,06-0,16	0,10-0,18	0,12-0,22	0,14-0,26	350	300			
	RAME E SUE LEGHE - COPPER		26-28	90-110	0,06-0,16	0,06-0,16	0,10-0,18	0,12-0,22	0,14-0,26	200	230			
	NON METALLICI - PLASTICS		29-30	/	-	-	-	-	-					
S	LEGHE RESIST. CALORE - HIG. TEMP. ALLOY		31-35	200-320	0,04-0,08	0,04-0,08	0,06-0,1	0,08-0,12	0,09-0,14		40			
	TITANIO E SUE LEGHE - TITANIUM		36-37	400-1050 ³⁾	0,08-0,14	0,08-0,14	0,12-0,16	0,14-0,18	0,16-0,2	80	50			
H	ACCIAIO TEMPRATO - HARDENED STEEL		38-41	45-60 ²⁾										

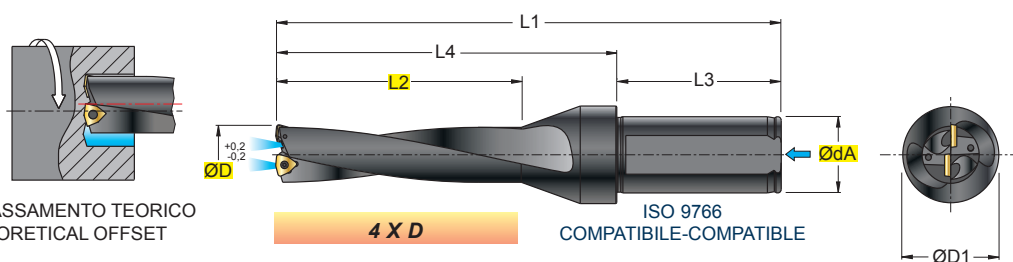
Vc = m/min VELOCITÀ DI TAGLIO - CUTTING SPEED
n = giri/min (min⁻¹) NUMERO DI GIRI - NUMBER OF REVOLUTIONS
fn = mm AVANZAMENTO AL GIRO - FEED / REVOLUTION
Vf = mm/min VELOCITÀ DI AVANZAMENTO - FEED SPEED

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

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

TDC ..40 R/L

Ø 17,5-50



WCMX ...
.S42



WCMX ...
.S62/.062



INSERTI - INSERTS
PAG. 643

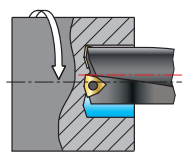
(mm)													
ART.		ØD ^{+0,2 -0,2}	ØdA	ØD1	L1	L2	L3	L4	kg	Nm			
4 x D	TDC 17540 R/L	17,5	25	32	156	72	54	102	0,41	1,1+1,3	030208	12256P	5608P
	TDC 18040 R/L	18	25	32	158	74	54	104	0,41	1,1+1,3			
	TDC 18540 R/L	18,5	25	32	160	76	54	106	0,42	1,1+1,3			
	TDC 19040 R/L	19	25	32	162	78	54	108	0,42	1,1+1,3			
	TDC 19540 R/L	19,5	25	32	164	80	54	110	0,44	1,1+1,3			
	TDC 20040 R/L	20	25	32	166	82	54	112	0,44	1,1+1,3			
	TDC 20540 R/L	20,5	25	32	168	84	54	114	0,45	1,1+1,3			
	TDC 21040 R/L	21	25	32	170	86	54	116	0,45	1,1+1,3	040208	12256P	5608P
	TDC 21540 R/L	21,5	25	32	172	88	54	118	0,47	1,1+1,3			
	TDC 22040 R/L	22	25	32	174	90	54	120	0,47	1,1+1,3			
	TDC 22540 R/L	22,5	25	32	176	92	54	122	0,49	1,1+1,3			
	TDC 23040 R/L	23	25	32	178	94	54	124	0,49	1,1+1,3			
	TDC 23540 R/L	23,5	25	32	180	96	54	126	0,49	1,1+1,3			
	TDC 24040 R/L	24	25	32	182	98	54	128	0,49	1,1+1,3			
	TDC 24540 R/L	24,5	25	32	184	100	54	130	0,53	1,1+1,3			
	TDC 25040 R/L	25	25	32	186	102	54	132	0,53	1,1+1,3			
	TDC 25540 R/L	25,5	25	32	188	104	54	134	0,55	1,1+1,3			
	TDC 26040 R/L	26	25	32	190	106	54	136	0,55	1,2+1,5	050308	123008P	5608P
	TDC 26540 R/L	26,5	25	32	192	108	54	138	0,57	1,2+1,5			
	TDC 27040 R/L	27	25	32	194	110	54	140	0,57	1,2+1,5			
	TDC 28040 R/L	28	25	32	198	114	54	144	0,60	1,2+1,5			
	TDC 29040 R/L	29	25	32	202	118	54	148	0,63	1,2+1,5			
	TDC 30040 R/L	30	32	49	210	122	58	152	0,96	1,2+1,5	050308	123008P	5608P
	TDC 31040 R/L	31	32	49	214	126	58	156	1,00	2,0+3,0	06T308	123009P	5610P
	TDC 32040 R/L	32	32	49	218	130	58	160	1,02	2,0+3,0			
	TDC 33040 R/L	33	32	49	222	134	58	164	1,06	2,0+3,0			
	TDC 34040 R/L	34	32	49	226	138	58	168	1,10	2,0+3,0			
	TDC 35040 R/L	35	32	49	230	142	58	172	1,15	2,0+3,0			
	TDC 36040 R/L	36	32	49	234	146	58	176	1,19	2,0+3,0			
	TDC 37040 R/L	37	32	49	238	150	58	180	1,24	2,0+3,0			
	TDC 38040 R/L	38	32	49	242	154	58	184	1,30	2,0+3,0			
	TDC 39040 R/L	39	32	49	246	158	58	188	1,35	2,0+3,0			
	TDC 40040 R/L	40	32	49	250	162	58	192	1,41	2,0+3,0			
	TDC 41040 R/L	41	32	49	254	166	58	196	1,47	2,0+3,0			
	TDC 42040 R/L	42	32	49	258	170	58	200	1,54	3,8+5,0	080412	C04011P	5615P
	TDC 43040 R/L	43	32	49	262	174	58	204	1,58	3,8+5,0			
	TDC 44040 R/L	44	32	49	266	178	58	208	1,66	3,8+5,0	080412	C04011P	5615P
	TDC 45040 R/L	45	40	59	285	182	68	217	2,22	3,8+5,0			
	TDC 46040 R/L	46	40	59	289	186	68	221	2,31	3,8+5,0			
	TDC 47040 R/L	47	40	59	293	190	68	225	2,38	3,8+5,0			
	TDC 48040 R/L	48	40	59	297	194	68	229	2,42	3,8+5,0			
	TDC 49040 R/L	49	40	59	301	198	68	233	2,52	3,8+5,0			
	TDC 50040 R/L	50	40	59	305	202	68	237	2,62	3,8+5,0			



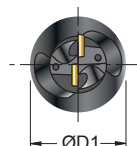
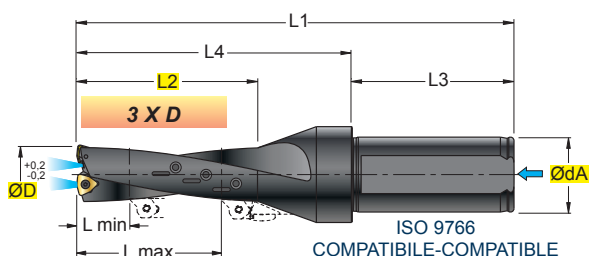
(■) LAVORAZIONE OTTIMALE - OPTIMUM MACHINING - OPTIMALE BEARBEITUNG - USAGE OPTIMALE
(□) LAVORAZIONE POSSIBILE - POSSIBLE MACHINING - MOEGICHE BEARBEITUNG - USAGE POSSIBLE

TDCS ..30 R

Ø 17,5-40



DISASSAMENTO TEORICO
THEORETICAL OFFSET



WCMX ...
.S42

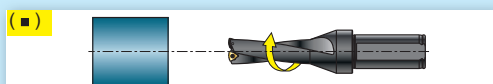


WCMX ...
.S62/.062

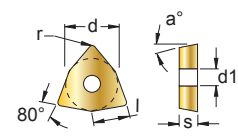


INSERTI - INSERTS
PAG. 643

ART.	ØD	ØdA	ØD1	Lmin	Lmax	L1	L2	L3	L4	kg	Nm						
TDCS 17530 R	17,5	25	32	12,0	48,0	138,5	54,5	54	84,5	0,38	1,1+1,3	030208	12256P	5608P	n°6 12404P	—	
TDCS 18030 R	18,0	25	32	13,5	49,5	140,0	56,0	54	86,0	0,38	1,1+1,3						
TDCS 18530 R	18,5	25	32	15,0	51,0	141,5	57,5	54	87,5	0,38	1,1+1,3						
TDCS 19030 R	19,0	25	32	16,5	52,5	143,0	59,0	54	89,0	0,38	1,1+1,3						
TDCS 19530 R	19,5	25	32	12,0	54,0	144,5	60,5	54	90,5	0,39	1,1+1,3	030208	12256P	5608P	n°7 12404P	—	
TDCS 20030 R	20,0	25	32	13,5	55,5	146,0	62,0	54	92,0	0,39	1,1+1,3						
TDCS 20530 R	20,5	25	32	15,0	57,0	147,5	63,5	54	93,5	0,40	1,1+1,3						
TDCS 21030 R	21,0	25	32	16,5	58,5	149,0	65,0	54	95,0	0,41	1,1+1,3	040208	12256P	5608P	n°7 12404P	—	
TDCS 21530 R	21,5	25	32	18,0	60,0	150,5	66,5	54	96,5	0,41	1,1+1,3						
TDCS 22030 R	22,0	25	32	19,5	61,5	152,0	68,0	54	98,0	0,42	1,1+1,3						
TDCS 22530 R	22,5	25	32	15,0	63,0	153,5	69,5	54	99,5	0,42	1,1+1,3	040208	12256P	5608P	n°8 12404P	—	
TDCS 23030 R	23,0	25	32	16,5	64,5	155,0	71,0	54	101,0	0,43	1,1+1,3						
TDCS 23530 R	23,5	25	32	18,0	66,0	156,5	72,5	54	102,5	0,44	1,1+1,3						
TDCS 24030 R	24,0	25	32	19,5	67,5	158,0	74,0	54	104,0	0,45	1,1+1,3						
TDCS 24530 R	24,5	25	32	21,0	69,0	159,5	75,5	54	105,5	0,45	1,1+1,3						
TDCS 25030 R	25,0	25	32	22,5	70,5	161,0	77,0	54	107,0	0,46	1,1+1,3						
TDCS 25530 R	25,5	25	32	18,0	72,0	162,5	78,5	54	108,5	0,47	1,1+1,3	040208	12256P	5608P	n°9 12404P	—	
TDCS 26030 R	26,0	25	32	19,5	73,5	164,0	80,0	54	110,0	0,48	1,2+1,5	050308	123008P	5608P	n°10 12404P	—	
TDCS 26530 R	26,5	25	32	21,0	75,0	165,5	81,5	54	111,5	0,49	1,2+1,5						
TDCS 27030 R	27,0	25	32	22,5	76,5	167,0	83,0	54	113,0	0,50	1,2+1,5						
TDCS 27530 R	27,5	25	32	24,0	78,0	168,5	84,5	54	114,5	0,51	1,2+1,5						
TDCS 28030 R	28,0	25	32	25,5	79,5	170,0	86,0	54	116,0	0,52	1,2+1,5						
TDCS 28530 R	28,5	25	32	21,0	81,0	171,5	87,5	54	117,5	0,53	1,2+1,5	050308	123008P	5608P	n°10 12404P	—	
TDCS 29030 R	29,0	25	32	22,5	82,5	173,0	89,0	54	119,0	0,55	1,2+1,5						
TDCS 29530 R	29,5	25	32	24,0	84,5	174,5	90,5	54	120,5	0,56	1,2+1,5						
TDCS 30030 R	30,0	32	49	25,5	85,5	180,0	92,0	58	122,0	0,84	1,2+1,5	050308	123008P	5608P	n°10 12404P	—	
TDCS 30530 R	30,5	32	49	27,0	87,0	181,5	93,5	58	123,5	0,85	1,2+1,5						
TDCS 31030 R	31,0	32	49	28,5	88,5	183,0	95,0	58	125,0	0,87	2,0+3,0	06T308	123009P	5610P	n°10 12404P	5608P	
TDCS 31530 R	31,5	32	49	24,0	90,0	184,5	96,5	58	126,5	0,87	2,0+3,0	06T308	123009P	5610P	n°11 12404P	5608P	
TDCS 32030 R	32,0	32	49	25,5	91,5	186,0	98,0	58	128,0	0,88	2,0+3,0						
TDCS 32530 R	32,5	32	49	27,0	93,0	187,5	99,5	58	129,5	0,90	2,0+3,0						
TDCS 33030 R	33,0	32	49	28,5	94,5	189,0	101,0	58	131,0	0,91	2,0+3,0						
TDCS 33530 R	33,5	32	49	30,0	96,0	190,5	102,5	58	132,5	0,92	2,0+3,0						
TDCS 34030 R	34,0	32	49	31,5	97,5	192,0	104,0	58	134,0	0,95	2,0+3,0						
TDCS 34530 R	34,5	32	49	27,0	99,0	193,5	105,5	58	135,5	0,96	2,0+3,0	06T308	123009P	5610P	n°12 12404P	5608P	
TDCS 35030 R	35,0	32	49	28,5	100,5	195,0	107,0	58	137,0	0,98	2,0+3,0						
TDCS 35530 R	35,5	32	49	30,0	102,0	196,5	108,5	58	138,5	1,00	2,0+3,0						
TDCS 36030 R	36,0	32	49	31,5	103,5	198,0	110,0	58	140,0	1,02	2,0+3,0						
TDCS 36530 R	36,5	32	49	33,0	105,0	199,5	111,5	58	141,5	1,04	2,0+3,0						
TDCS 37030 R	37,0	32	49	34,5	106,5	201,0	113,0	58	143,0	1,06	2,0+3,0						
TDCS 37530 R	37,5	32	49	30,0	108,0	202,5	114,5	58	144,5	1,07	2,0+3,0	06T308	123009P	5610P	n°13 12404P	5608P	
TDCS 38030 R	38,0	32	49	31,5	109,5	204,0	116,0	58	146,0	1,09	2,0+3,0						
TDCS 38530 R	38,5	32	49	33,0	111,0	205,5	117,5	58	147,5	1,11	2,0+3,0						
TDCS 39030 R	39,0	32	49	34,5	112,5	207,0	119,0	58	149,0	1,13	2,0+3,0						
TDCS 39530 R	39,5	32	49	36,0	114,0	208,5	120,5	58	150,5	1,15	2,0+3,0						
TDCS 40030 R	40,0	32	49	37,5	115,5	210,0	122,0	58	152,0	1,18	2,0+3,0						



(■) LAVORAZIONE OTTIMALE - OPTIMUM MACHINING - OPTIMALE BEARBEITUNG - USAGE OPTIMALE
(○) LAVORAZIONE POSSIBILE - POSSIBLE MACHINING - MOEGICHE BEARBEITUNG - USAGE POSSIBLE

SCELTA VELOCE - QUICK PICK							HT	HW	HC											
							 Tenacità + Toughness -		Pag. 632											
COD.	P	M	K	N	S	H	T120	T538N							l	d	s	d1	r	a°
WCMX 030208 .S62			○	●	○		■								3,46	5,56	2,38	2,5	0,8	7°
WCMX 040208 .S62			○	●	○		■								3,99	6,35	2,38	2,8	0,8	7°
WCMX 050308 .S62			○	●	○		■								5,07	7,94	3,18	3,4	0,8	7°
WCMX 06T308 .O62			○	●	○		■								6,14	9,52	3,97	3,8	0,8	7°
WCMX 080412 .S62			○	●	○		■								8,14	12,7	4,76	4,4	1,2	7°
WCMX 030208 .S62	●	●	○					■							3,46	5,56	2,38	2,5	0,8	7°
WCMX 040208 .S62	●	●	○					■							3,99	6,35	2,38	2,8	0,8	7°
WCMX 050308 .S62	●	●	○					■							5,07	7,94	3,18	3,4	0,8	7°
WCMX 06T308 .S62	●	●	○					■							6,14	9,52	3,97	3,8	0,8	7°
WCMX 080412 .S62	●	●	○					■							8,14	12,7	4,76	4,4	1,2	7°
WCMX 040208 .S42	●	●		○	●			■							3,99	6,35	2,38	2,8	0,8	7°
WCMX 050308 .S42	●	●		○	●			■							5,07	7,94	3,18	3,4	0,8	7°
WCMX 06T308 .S42	●	●		○	●			■							6,14	9,52	3,97	3,8	0,8	7°
WCMX 080412 .S42	●	●		○	●			■							8,14	12,7	4,76	4,4	1,2	7°



WCMX.S62/O62 = 1° SCELTA PER IMPIEGO GENERICO
1° CHOICE FOR GENERIC USE



WCMX ... S42 = CONTROLLO DEL TRUCIOLO A BASSI AVANZAMENTI
CHIP CONTROL WITH LOW FEEDS

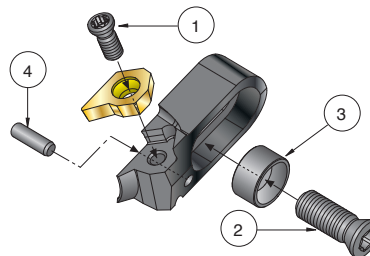
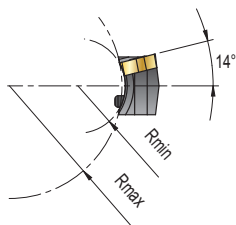
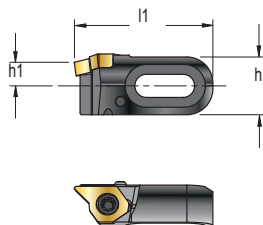


QUANDO LO SMUSSATORE "SPU 1840-07" SI AVVICINA AL MATERIALE DA LAVORARE, RIDURRE L'AVANZAMENTO DEL 50%
AS THE "SPU 1840-07" CHAMFERING TOOL APPROACHES THE WORKPIECE, REDUCE FEED BY 50%

MATERIALI - MATERIALS Pag. 1119		VDI 3323 GR.	HB Rm ¹⁾ HRC ²⁾	fn mm				Vc m/min Pag. 640			
				Ø17,5-20,5	Ø21-25,5	Ø26-30,5	Ø31-40	T120	T538N		
P	ACCIAIO NON LEGATO - NOT ALLOY STEEL	1-5	125-300	0,04-0,12	0,06-0,14	0,10-0,18	0,12-0,2				
	ACCIAIO POCO LEGATO - LOW ALLOY STEEL	6-9	180-350	0,04-0,12	0,06-0,14	0,10-0,18	0,12-0,2		170		
	ACCIAIO ALTO LEGATO - ALLOY STEEL	10-11	200-325	0,04-0,12	0,06-0,14	0,10-0,18	0,12-0,2		120		
	INOX MARTENS. - STAINLESS STEEL MART	12-13	200-240	0,04-0,12	0,06-0,14	0,10-0,18	0,12-0,2		170		
M	INOX AUST. DUPLEX - STAINLESS STEEL AUST	14.1-14.2	180-230	0,04-0,12	0,06-0,12	0,10-0,14	0,12-0,16		120		
K	GHISA GRIGIA - GREY CAST IRON	15-16	180-260	0,08-0,16	0,08-0,18	0,12-0,2	0,14-0,26	80			
	GHISA SFEROIDALE - SPHEROIDAL GRAPHITE	17-18	160-250	0,08-0,14	0,08-0,14	0,12-0,18	0,14-0,2				
	GHISA MALLEABILE - MALLEABLE CAST IRON	19-20	130-230	0,08-0,16	0,08-0,18	0,12-0,2	0,14-0,26		80		
N	ALLUMINIO E SUE LEGHE - ALUMINIUM	21-25	60-130	0,06-0,16	0,06-0,16	0,10-0,18	0,12-0,22	350	300		
	RAME E SUE LEGHE - COPPER	26-28	90-110	0,06-0,16	0,06-0,16	0,10-0,18	0,12-0,22	200	230		
	NON METALLICI - PLASTICS	29-30	/	-	-	-	-				
S	LEGHE RESIST. CALORE - HIG. TEMP. ALLOY	31-35	200-320	0,04-0,08	0,04-0,08	0,06-0,1	0,08-0,12	40			
	TITANIO E SUE LEGHE - TITANIUM	36-37	400-1050 ¹⁾	0,08-0,14	0,08-0,14	0,12-0,16	0,14-0,18	80	50		
H	ACCIAIO TEMPRATO - HARDENED STEEL	38-41	45-60 ²⁾								

Smussatore - Chamfering tool - Werkzeug zum abschrägen - Outil à chanfreiner

SPU 1840-07



SM0702
-30



SM0702
-45



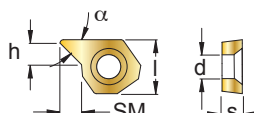
SM0702
-55



INSERTI - INSERTS
PAG. 644

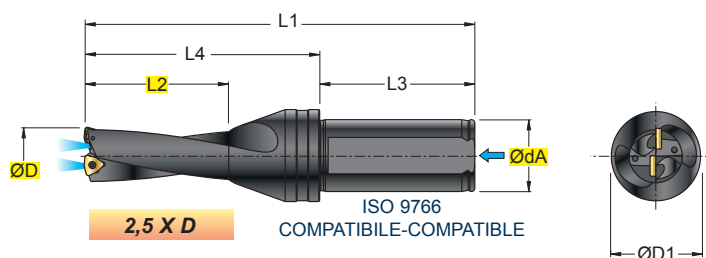
(mm)							kg	Nm		①	②	③		
ART.	l1	h	h1	Rman	Rmix									
SPU 1840-07	24	10	4	19,5	8,2	0,03	1,1-1,3	SM0702	12256P	5608P	1240P	5615P	RSPU04	2063

Inserti per Smussatore - Inserts for Chamfering tool - Wendeplatten für Werkzeug zum abschrägen - Plaquettes pour Outil à chanfreiner

ART.	α	S	l	d	h	SM		GRADO GRADE	QUICK PICK	MATERIALI-MATERIALS Pag.1119					
										P	M	K	N	S	H
SM 0702 - 30	30°	2,38	6,35	2,8	1,3	2,2		T519D HC							
SM 0702 - 45	45°	2,38	6,35	2,8	2,3	2,3				●	○	●	○		
SM 0702 - 55	55°	2,38	6,35	2,8	5,6	3,9									

TDBC ..25 R/L

Ø 19-54



WCMX ...
.S42

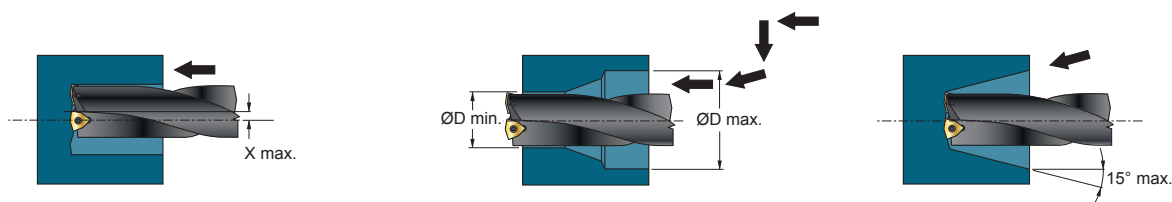


WCMX ...
.S62/.062

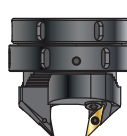


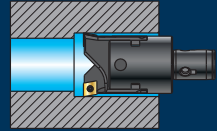
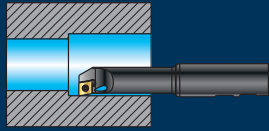
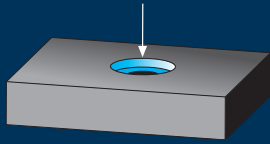
INSERTI - INSERTS
PAG. 643

(mm)																
ART.			ØD min-max	ØdA	ØD1	X max	L1	L2	L3	L4	kg	Nm				
2,5 x D	TDBC 19025 R/L		19-24	25	32	2,5	134	50	54	80	0,39	1,1÷1,3	040208	12256P	5608P	
	TDBC 24025 R/L		24-30	25	32	3,0	146	62	54	92	0,45	1,2÷1,5	050308	123008P	5608P	
	TDBC 30025 R/L		30-38	32	49	4,0	165	77	58	107	0,84	2,0÷3,0	06T308	123009P	5610P	
	TDBC 38025 R/L		38-48	32	49	5,0	185	95	58	127	1,07	3,8÷5,0	080412	C04011P	5615P	
	TDBC 48025 R/L		48-54	40	59	3,0	223	120	68	155	1,99	3,8÷5,0	080412	C04011P	5615P	



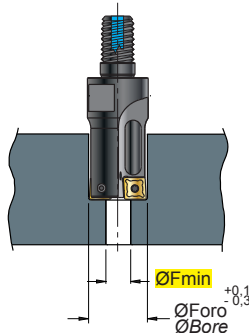
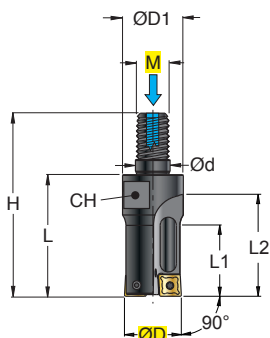
(■) LAVORAZIONE OTTIMALE - OPTIMUM MACHINING - OPTIMALE BEARBEITUNG - USINAGE OPTIMALE
(□) LAVORAZIONE POSSIBILE - POSSIBLE MACHINING - MOEGLICHE BEARBEITUNG - USINAGE POSSIBLE

S656		Pag. 620	S636		Pag. 624	SMT ... R/L		Pag. 628			
	ØD = 11 - 50			ØD = 9,8 - 31,8			ØD = 8 - 26				
											
	XCNT XCET			CC.. 060202			0401 05T1 0602 0703 0903 10T3 1305 1705				
	S656W ..			S636W .. 06			SMT ... R/L ..				
S659		Pag. 621	S646		Pag. 625	S626		Pag. 630			
	ØD = 11 - 30			ØD = 15 - 32			ØD = 10 - 33				
											
	XCNT XCET			CC.. 0602..			CC.. 0602.. 09T3..				
	S659W ..			S646W .. 05			S626 ..				
S662W		Pag. 622	SMU.C...10W		Pag. 626						
	ØD = 18 - 33										
											
	CC.. 0602.. 09T3..			SMU45.. 10T2..							
	S662W ..			SMU.C... 10W							
S663W		Pag. 623	SMU.ER...10		Pag. 627						
	ØD = 15 - 31										
											
	TC.. 0802 1102			SMU45.. 10T2..							
	S663W ..			SMU.ER... 10							



S 659W ..

Ø 11-30



XCET ...
.N57P



XCET ...
.N53



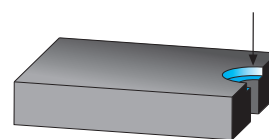
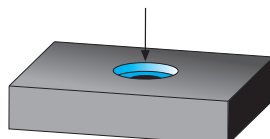
XCNT ...
.N54



INSERTI - INSERTS
PAG. 667

(mm)

ART.	ØD	M	Ød	ØFmin	ØD1	H	L	L1	L2	Z	CH	kg	Nm				
S 659W 011-04	11	8	8,5	3,0	13	43	26	15,0	22	2	10	0,02	0,4+0,5	M6	0401..	121837P	5506P
S 659W 012-04	12	8	8,5	4,0	13	44	27	16,0	23	2	10	0,02	0,4+0,5				
S 659W 013-04	13	8	8,5	5,0	13	45	28	17,0	24	2	10	0,03	0,4+0,5				
S 659W 014-05	14	10	10,5	3,4	18	52	33	18,6	27	2	15	0,04	0,5+0,6	M8	0502..	12204P	5506P
S 659W 015-05	15	10	10,5	4,5	18	53	34	19,6	28	2	15	0,05	0,5+0,6				
S 659W 016-06	16	10	10,5	4,1	18	54	35	20,0	29	2	15	0,05	0,9+1,0		0602..	12225P	5507P
S 659W 017-06	17	10	10,5	5,1	18	55	36	21,0	30	2	15	0,05	0,9+1,0				
S 659W 018-07	18	12	12,5	3,9	21	60	38	23,0	33	2	17	0,06	1,0+1,2	M10	0703..	1225	5507
S 659W 019-07	19	12	12,5	4,9	21	61	39	24,0	34	2	17	0,07	1,0+1,2				
S 659W 020-08	20	12	12,5	4,2	21	62	40	25,0	36	2	17	0,07	1,2+1,5	M12	0803..	123008P	5508P
S 659W 021-08	21	12	12,5	5,2	21	63	41	26,0	37	2	17	0,08	1,2+1,5				
S 659W 022-09	22	16	17,0	4,0	29	71	47	28,0	41	2	24	0,13	1,2+1,5		09T3..	123008P	5508P
S 659W 023-09	23	16	17,0	5,0	29	72	48	29,0	42	2	24	0,14	1,2+1,5	M14			
S 659W 024-10	24	16	17,0	4,0	29	74	50	30,0	44	2	24	0,14	3,0+3,5		10T3..	123509P	5515P
S 659W 025-10	25	16	17,0	5,0	29	75	51	31,0	45	2	24	0,15	3,0+3,5				
S 659W 026-10	26	16	17,0	6,0	29	76	52	32,0	46	2	24	0,16	3,0+3,5	M16			
S 659W 027-10	27	16	17,0	7,0	29	77	53	33,0	47	2	24	0,17	3,0+3,5				
S 659W 028-10	28	16	17,0	8,0	29	78	54	34,0	48	2	24	0,19	3,0+3,5				
S 659W 029-10	29	16	17,0	9,0	29	79	55	35,0	49	2	24	0,21	3,0+3,5	M18			
S 659W 030-10	30	16	17,0	10,0	29	80	56	36,0	50	2	24	0,22	3,0+3,5				



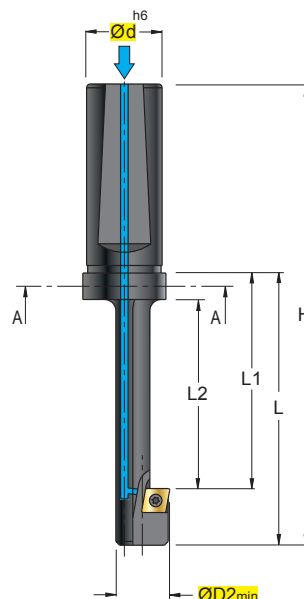
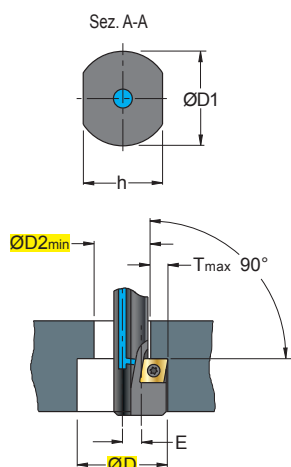
W = FORO PER LIQUIDO REFRIGERANTE - COOLANT BORE - KÜHLMITTELBOHRUNG - TROU DU LIQUIDE D'ARROSAGE

ØF min = DIAMETRO MINIMO DI PREFORO, DA UTILIZZARE SOLAMENTE IN CASO DI NECESSITÀ
ØF min = MINIMUM PRE-BORE DIAMETER, TO BE USED ONLY IN CASE OF NEED

S 662W ..

Ø 18-33

(ATTACCO/SHANK) WHISTLE-NOTCH - DIN1835E



CC.. 0602



CC.. 09T3

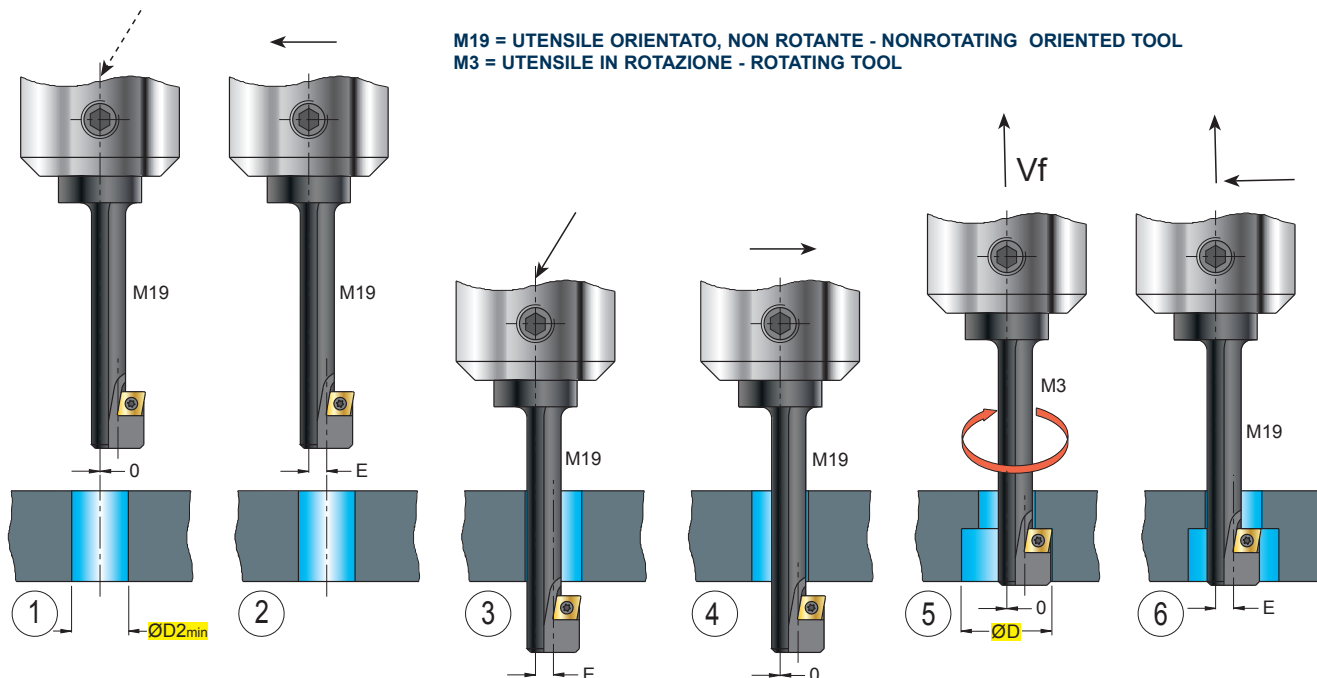


INSERTI - INSERTS
PAG. 665

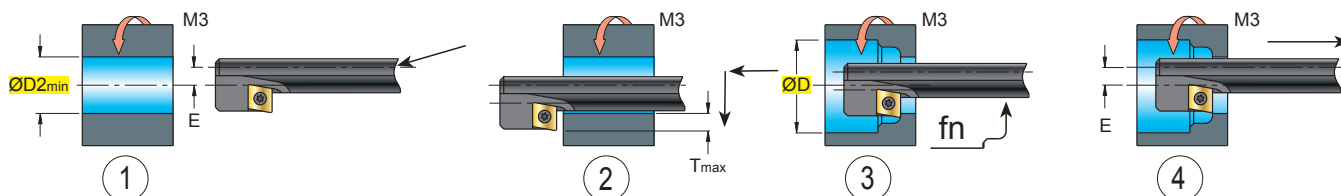
(mm)

(mm)																		
ART.		ØD	ØD2min	ØD1	Ød	Tmax	E	H	L	L1	L2	h	 kg	 Nm				
S 662	018-06 (*)	18	10,5	25	20	3,8	4,0	112	62	47	40	20,5	0,14	1,0÷1,2	M10			
S 662W	020-06	20	13,0	25	20	3,5	3,75	117	67	52	45	20,5	0,15	1,1÷1,3	M12		12256CP	5608P
S 662W	024-06	24	15,0	25	20	4,5	4,75	122	72	57	50	20,5	0,16	1,1÷1,3	M14		12256P	5608P
S 662W	026-06	26	17,0	25	20	4,5	5,0	132	82	67	60	20,5	0,19	1,1÷1,3	M16			
S 662W	030-06	30	19,0	25	20	5,5	6,0	142	92	72	65	20,5	0,22	1,1÷1,3	M18			
S 662W	033-09	33	21,0	25	20	6,0	6,6	152	102	82	75	20,5	0,25	3,8÷5,0	M20			
																09T308	C04008P	5615P

M19 = UTENSILE ORIENTATO, NON ROTANTE - NONROTATING ORIENTED TOOL
M3 = UTENSILE IN ROTAZIONE - ROTATING TOOL



M3 = PEZZO IN ROTAZIONE - ROTATING WORK PIECE

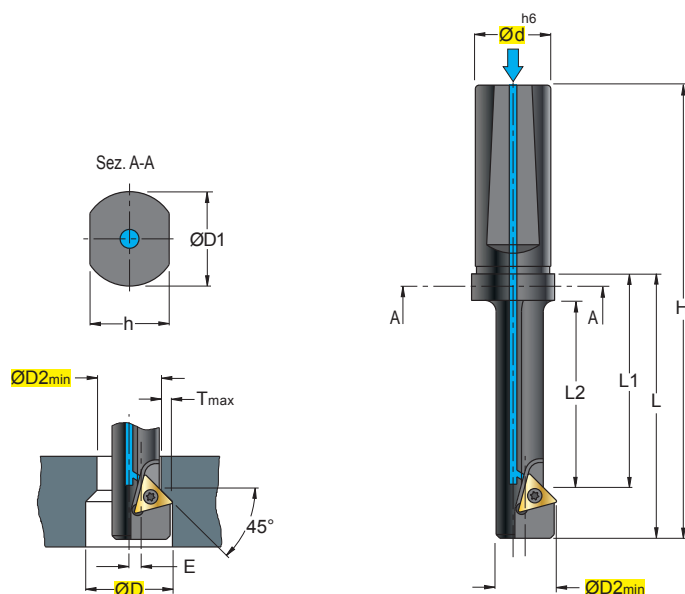


W = FORO PER LIQUIDO REFRIGERANTE - COOLANT BORE - KÜHLMITTELBOHRUNG - TROU DU LIQUIDE D'ARROSAGE
(*) = SENZA FORO REFRIGERANTE - WITHOUT COOLANT BORE - OHNE KÜHLMITTELBOHRUNG - SANS TROU RÉFRIGÉRANT

S 663W ..

Ø 15-31

(ATTACCO/SHANK) WHISTLE-NOTCH - DIN1835E



TC.. 0802



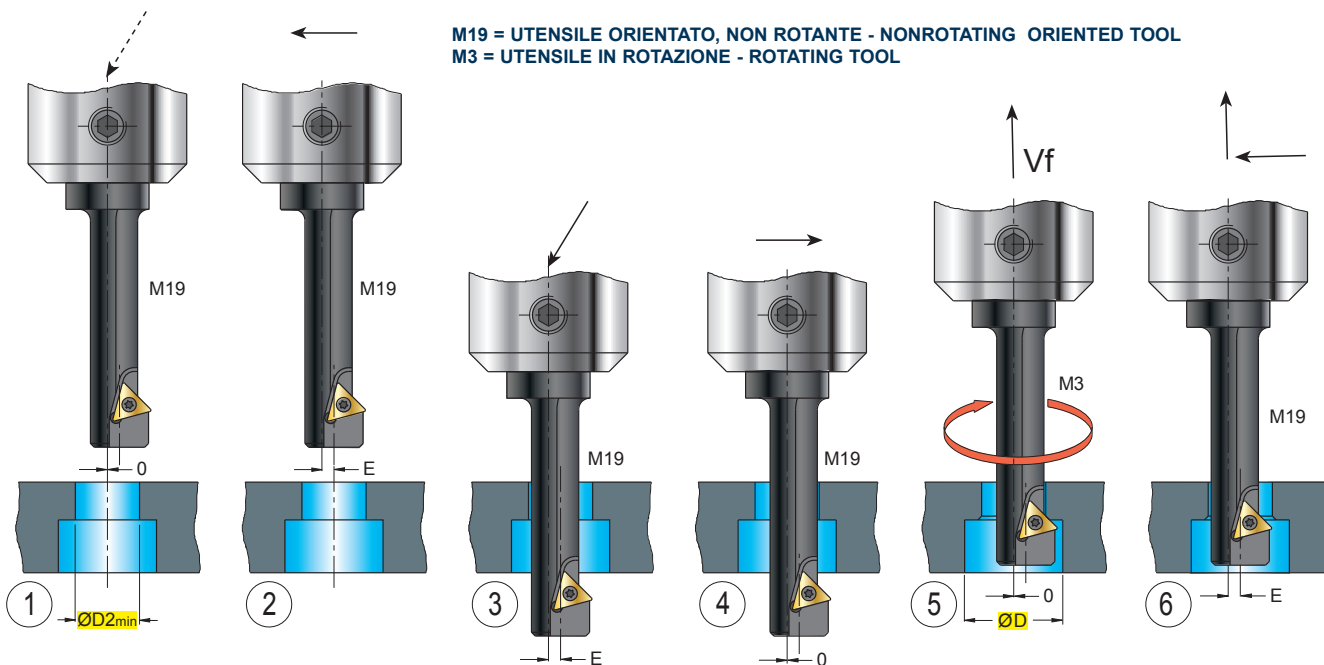
TC.. 1102



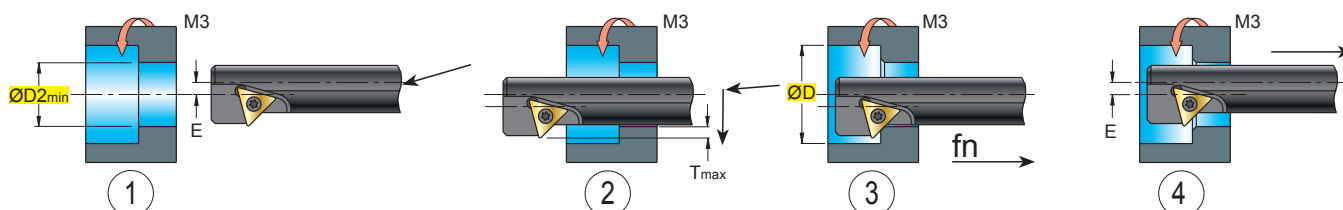
INSERTI - INSERTS
PAG. 666

(mm)

ART.		ØD	ØD2min	ØD1	Ød	Tmax	E	H	L	L1	L2	h	kg	Nm			
S 663	015-08 (*)	15	10,0	25	20	2,5	2,7	105	55	42	35	20,5	0,13	0,9+1,0	080204	12225P	5607P
S 663W	020-08	20	14,0	25	20	3,0	3,2	110	60	47	40	20,5	0,15	0,9+1,0			
S 663W	023-11	23	17,0	25	20	3,0	3,2	120	70	57	50	20,5	0,18	1,1+1,3	110204	12256P	5608P
S 663W	027-11	27	21,0	25	20	3,0	3,2	140	90	77	70	20,5	0,27	1,1+1,3			
S 663W	031-11	31	24,0	25	20	3,5	3,7	150	100	87	80	20,5	0,34	1,1+1,3			



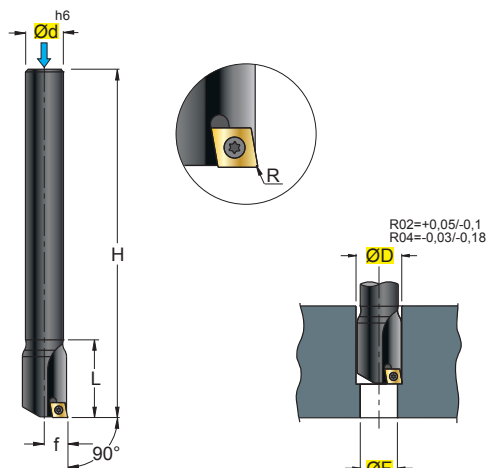
M3 = PEZZO IN ROTAZIONE - ROTATING WORK PIECE



W = FORO PER LIQUIDO REFRIGERANTE - COOLANT BORE - KÜHLMITTELBOHRUNG - TROU DU LIQUIDE D'ARROSAGE
(*) = SENZA FORO REFRIGERANTE - WITHOUT COOLANT BORE - OHNE KÜHLMITTELBOHRUNG - SANS TROU RÉFRIGÉRANT

S 636W .. 06

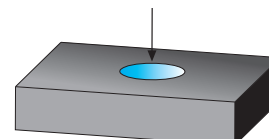
Ø 9,8-31,8



CCET 0602 .B22	
CCGT 0602 .G13	
CCGT 0602 .G57P	
CCGW 0602 .X47	NEW
CCMT 0602 .G39	
CCMT 0602 .G42	
CCMT 0602 .G52	
INSERTI - INSERTS PAG. 665	

(mm)															
ART.		ØD	Ød	ØF	f	H	L	Z							
S 636W 09.8-06		9,8	8	4,5	4,9	85	23	1	0,03	1,0÷1,2	0602	12254P	5607P		
S 636W 10.8-06		10,8	10	3,5	5,4	95	24	1	0,05	1,0÷1,2					
S 636W 11.8-06		11,8	10	3,0	5,9	100	25	1	0,05	1,0÷1,2					
S 636W 12.8-06		12,8	10	2,5	6,4	105	26	1	0,06	1,0÷1,2					
S 636W 13.8-06		13,8	10	3,0	6,9	110	27	1	0,06	1,0÷1,2					
S 636W 14.8-06		14,8	12	3,5	7,4	120	28	1	0,10	1,0÷1,2	0602	12256P	5608P		
S 636W 15.8-06		15,8	12	4,0	7,9	125	29	1	0,11	1,1÷1,3					
S 636W 16.8-06		16,8	16	5,0	8,4	133	30	1	0,20	1,1÷1,3					
S 636W 17.8-06		17,8	16	6,0	8,9	138	31	1	0,21	1,1÷1,3					
S 636W 18.8-06		18,8	16	7,0	9,4	143	32	1	0,22	1,1÷1,3					
S 636W 19.8-06		19,8	16	8,0	9,9	148	33	1	0,24	1,1÷1,3					
S 636W 20.8-06		20,8	16	9,0	10,4	154	34	1	0,25	1,1÷1,3					
S 636W 21.8-06		21,8	16	10,0	10,9	158	35	1	0,27	1,1÷1,3					
S 636W 22.8-06		22,8	20	11,0	11,4	165	36	1	0,40	1,1÷1,3					
S 636W 23.8-06		23,8	20	12,0	11,9	170	37	1	0,42	1,1÷1,3					
S 636W 24.8-06		24,8	20	13,0	12,4	175	38	1	0,44	1,1÷1,3					
S 636W 25.8-06		25,8	20	14,0	12,9	180	39	1	0,46	1,1÷1,3					
S 636W 26.8-06		26,8	20	15,0	13,4	185	40	1	0,48	1,1÷1,3					
S 636W 27.8-06		27,8	20	16,0	13,9	190	41	1	0,50	1,1÷1,3					
S 636W 28.8-06		28,8	20	17,0	14,4	195	42	1	0,52	1,1÷1,3					
S 636W 29.8-06		29,8	20	18,0	14,9	195	43	1	0,53	1,1÷1,3					
S 636W 30.8-06		30,8	25	19,0	15,4	195	44	1	0,55	1,1÷1,3					
S 636W 31.8-06		31,8	25	20,0	15,9	195	45	1	0,77	1,1÷1,3					

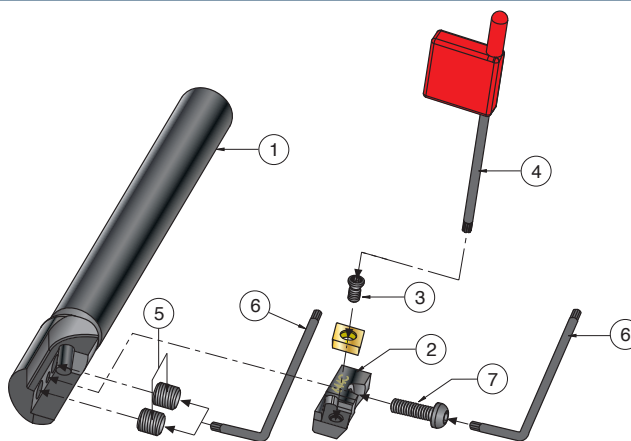
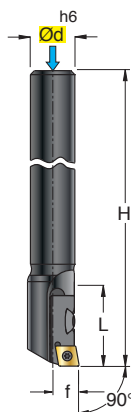
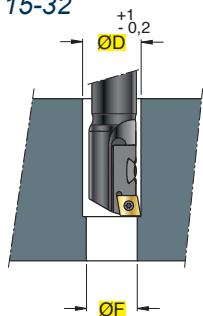
- PREFORO MINIMO POSSIBILE, INDICAZIONE PURAMENTE TEORICA, NON CONSIGLIATO
- MINIMUM POSSIBLE PRE-HOLE, MERELY THEORETICAL INDICATION, NOT RECOMMENDED
- KLEINSTMÖGLICHE VORBOHRUNG, REIN THEORETISCHE ANGABE, NICHT EMPFOHLEN
- PRE-TROU MINIMUM, INDICATION SEULEMENT THÉORIQUE, PAS CONSEILLÉE



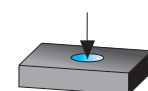
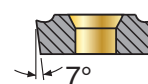
W = FORO PER LIQUIDO REFRIGERANTE - COOLANT BORE - KÜHLMITTELBOHRUNG - TROU DU LIQUIDE D'ARROSAGE

S 646W .. 06

Ø 15-32



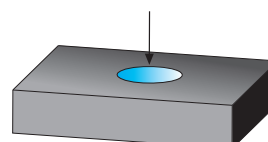
CC.. 0602..



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PAG. 665

(mm)										0602	1	2	3	4	5	6	7
ART.	ØD	Ød	ØF	f	H	L	Z	kg									
S 646W 15.0 - 06	15	12	9	7,4	120	28	1	0,09			645	644-06	12256CP	5508P	GR505FP	5409	1803N
S 646W 16.0 - 06	16	12	10	7,9	125	29	1	0,09									
S 646W 17.0 - 06	17	16	11	8,4	133	30	1	0,13									
S 646W 18.0 - 06	18	16	12	8,9	138	31	1	0,14									
S 646W 19.0 - 06	19	16	13	9,4	143	32	1	0,14									
S 646W 20.0 - 06	20	16	14	9,9	148	33	1	0,21									
S 646W 21.0 - 06	21	16	15	10,4	154	34	1	0,23									
S 646W 22.0 - 06	22	16	16	10,9	158	35	1	0,24									
S 646W 23.0 - 06	23	20	17	11,4	165	36	1	0,37									
S 646W 24.0 - 06	24	20	18	11,9	170	37	1	0,38									
S 646W 25.0 - 06	25	20	19	12,4	175	38	1	0,40									
S 646W 26.0 - 06	26	20	20	12,9	180	39	1	0,41									
S 646W 27.0 - 06	27	20	21	13,4	185	40	1	0,42									
S 646W 28.0 - 06	28	20	22	13,9	190	41	1	0,43									
S 646W 29.0 - 06	29	20	23	14,4	195	42	1	0,44									
S 646W 30.0 - 06	30	20	24	14,9	195	43	1	0,45									
S 646W 31.0 - 06	31	25	25	15,4	195	44	1	0,46									
S 646W 32.0 - 06	32	25	26	15,9	195	45	1	0,47									

- PREFORO MINIMO POSSIBILE, INDICAZIONE PURAMENTE TEORICA, NON CONSIGLIATO
 - MINIMUM POSSIBLE PRE-HOLE, MERELY THEORETICAL INDICATION, NOT RECOMMENDED
 - KLEINSTMÖGLICHE VORBOHRUNG, REIN THEORETISCHE ANGABE, NICHT EMPFOHLEN
 - PRE-TRou MINIMUM, INDICATION SEULEMENT THÉORIQUE, PAS CONSEILLÉE



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

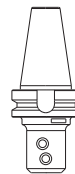
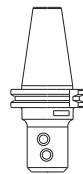
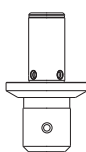
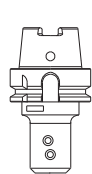
SMU.C...10W

art. HSK..WEH..
HSK..PU..

art. 375..

art. ISO.A..WEC..
ISO.B..WE..
ISO.B..PUH..

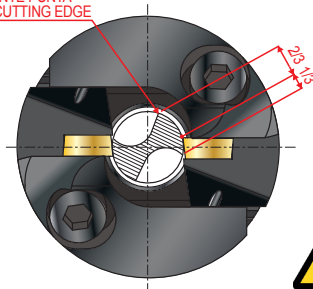
art. MAS.A..WEC..
MAS..WE..
MAS.B..PUH..



**SMU45
10T2
.X55**



TAGLIANTE PUNTA
DRILL CUTTING EDGE

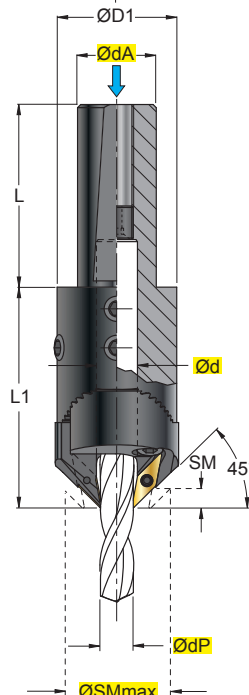


Posizionare il vertice inserto dello smussatore a 2/3 del dorso dell' elica della punta dal filo tagliente, come mostrato in figura.
"Non utilizzare punte con doppio pattino".

Place the top of the chamferer insert at 2/3 of the drill pitch flank from the cutting edge, as shown in the figure.
"DO not use double-guide drills".

Spitze der abschräg-wendeschneidplatte auf 2/3 des schraubenrückens des bohrers ab der schneidkante positionieren, wie in der abbildung dargestellt.
"Keine Doppelschlitzen-Bohrer verwenden".

Positionner le sommet de la plaquette du dispositif de biseautage à 2/3 du dos de l'hélice de la pointe à partir du fil tranchant, comme indique sur la figure.
"Ne pas utiliser de pointes pourvues d'un double patin".



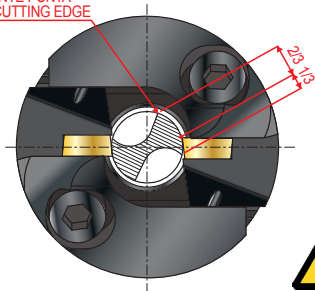
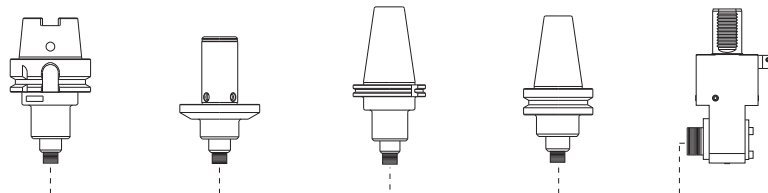
INSERTI
INSERTS
PAG.666



SCHEMA
MONTAGGIO
ASSEMBLY
SCHEME
PAG.1087

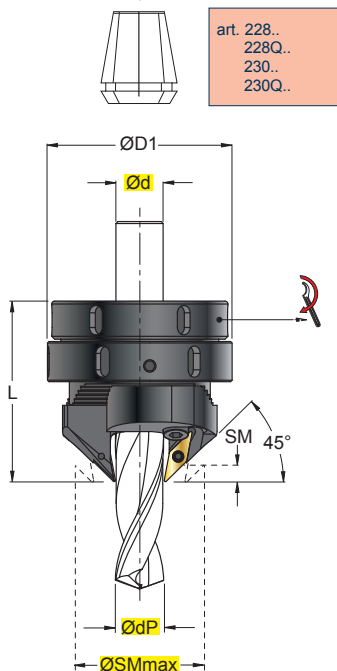
ART.	Ødp	Ød	ØdA	ØD1	SM	L	L1	kg	Nm									
SMU.C025.0506.10W	>5-6	6	25	35	0-3	56	56	0,46	1,1+1,3	10T2	n°2	n°2	n°2	n°4	n°1			
SMU.C025.0608.10W	>6-8	8	25	35	0-3	56	56	0,45	1,1+1,3	10T2	LMA.CIL.0618.10W	905.005.080.012	12256P	GR05	GWR05	5004	5508P	5025
SMU.C025.0810.10W	>8-10	10	25	37	0-3	56	64	0,50	1,1+1,3	10T2	LMA.CIL.0618.10W	905.005.080.012	12256P	GR612	GWR08	5004	5508P	5003
SMU.C025.1012.10W	>10-12	12	25	39	0-3	56	69	0,52	1,1+1,3	10T2	LMA.CIL.0618.10W	905.005.080.012	12256P	GR810F	GWR10	5004	5508P	5004
SMU.C025.1214.10W	>12-14	14	25	41	0-3	56	69	0,50	1,1+1,3									
SMU.C032.1416.10W	>14-16	16	32	43	0-3	60	68	0,69	1,1+1,3	10T2	LMA.CIL.0618.10W	905.005.080.012	12256P	GR1010F	GWR10	5004	5508P	5005
SMU.C032.1618.10W	>16-18	18	32	45	0-3	60	68	0,70	1,1+1,3									
- DIMENSIONE INGOMBRI PAG. 1088 - OVERALL SIZES PAGE 1088 - AUSSENABMESSUNGEN SEITE 1088 - DIMENSION HORS TOUT PAGE 1088										- SMUSSO Max ESEGUIBILE 3mm - Max. CHAMFERING POSSIBLE 3mm - Max. AUSFÜHRBARE ABCHRÄGUNG 3mm - BISEAU Maxi EXÉCUTABLE 3mm								

art. MAS..ER..



 Positionner le sommet de la plaquette du dispositif de biseautage à 2/3 du dos de l'hélice de la pointe à partir du fil tranchant, comme indique sur la figure.

“Ne pas utiliser de pointes pourvues d'un double patin”.



- art. 228..
- 228Q..
- 230..
- 230Q..



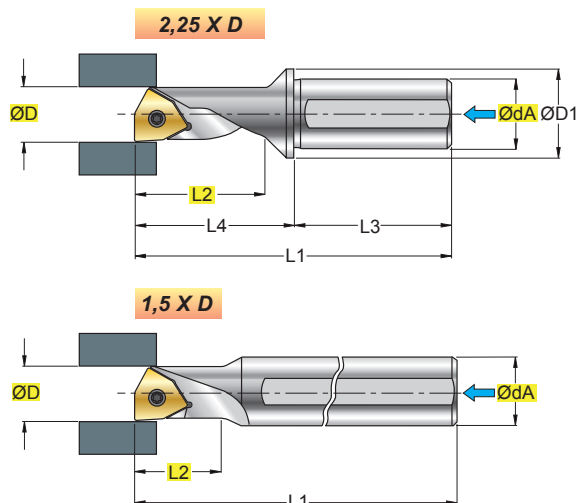
INSERTI
 INSERTS
PAG.666



SCHEMA
MONTAGGIO
ASSEMBLY
SCHEME
PAG.1087

ART.	(mm)					kg	Nm	Nm									
	Ødp	Ød	ØD1	SM	L												
SMU.ER25.0616.10	>5-16	6-16	52	0-3	60	0,39	1,1÷1,3	130	..025.---	10T2	n°2	n°2	n°1	n°2			
SMU.ER32.0618.10	>5-18	6-18	62	0-3	62	0,53	1,1÷1,3	160	..032.---	10T2	LMA.ER-0618.10	905.005.080.012	SMU-ER32-00	12256P	5004	5508P	925.040
SMU.ER40.0618.10	>5-18	6-18	70	0-3	65	0,64	1,1÷1,3	230	..040.---	10T2	LMA.ER-0618.10	905.005.080.012	SMU-ER40-00	12256P	5004	5508P	925.068
 - DIMENSIONE INGOMBRI PAG. 1089  - OVERALL SIZES PAGE 1089  - AUSSENABMESSUNGEN SEITE 1089  - DIMENSION HORS TOUT PAGE 1089  - SMUSSO Max ESEGUIBILE 3mm  - Max. CHAMFERING POSSIBLE 3mm  - Max. AUSFÜHRBARE ABCHRÄGUNG 3mm  - BISEAU Maxi EXÉCUTABLE 3mm																	

Ø 8-26

FORM B

INSERTI - INSERTS
PAG. 668

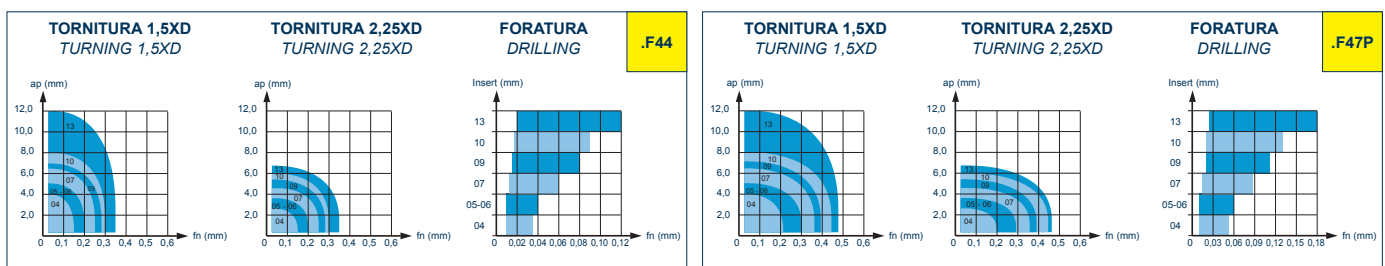
[illegible]

Tenacità +
Toughness -

Pag. 646

[illegible]

MATERIALI - MATERIALS Pag. 1119		VDI 3323 GR.	HB Rm ¹⁾ HRC ²⁾	Vc m/min Pag. 658					
				N3015	T1225	F2430			
P	ACCIAIO NON LEGATO - NOT ALLOY STEEL	1---5	125-300		160				
	ACCIAIO POCO LEGATO - LOW ALLOY STEEL	6-9	180-350		110				
	ACCIAIO ALTO LEGATO - ALLOY STEEL	10-11	200-325		120				
	INOX MARTENS. - STAINLESS STEEL MART	12-13	200-240		120				
M	INOX AUST. DUPLEX - STAINLESS STEEL AUST	14.1-14.2	180-230		120	150			
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	500					
	RAME E SUE LEGHE - COPPER	26--28	90-110	400					
	NON METALLICI - PLASTICS	29-30	/	400					
S	LEGHE RESIST. CALORE - HIG. TEMP. ALLOY	31---35	200-320			30			
	TITANIO E SUE LEGHE - TITANIUM	36-37	400-1050 ¹⁾			20			
H	ACCIAIO TEMPRATO - HARDENED STEEL	38--41	45-60 ²⁾						



Vc = m/min VELOCITÀ DI TAGLIO - CUTTING SPEED
n = giri/(min⁻¹) NUMERO DI GIRI - NUMBER OF REVOLUTIONS
fn = mm AVANZAMENTO AL GIRO - FEED / REVOLUTION
Vf = mm/min VELOCITÀ DI AVANZAMENTO - FEED SPEED
W = mm LARGHEZZA TAGLIANTE - CUTTING EDGE WIDTH

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

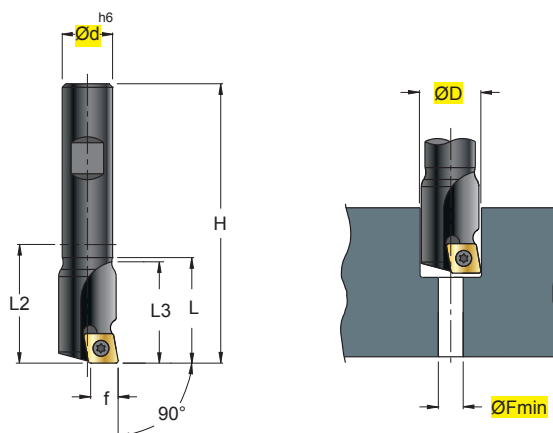
$$V_f = f_n \cdot n = \text{mm/min}$$

■ 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 626 ..

Ø 10-33



CC.. 0602

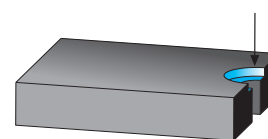
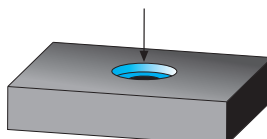


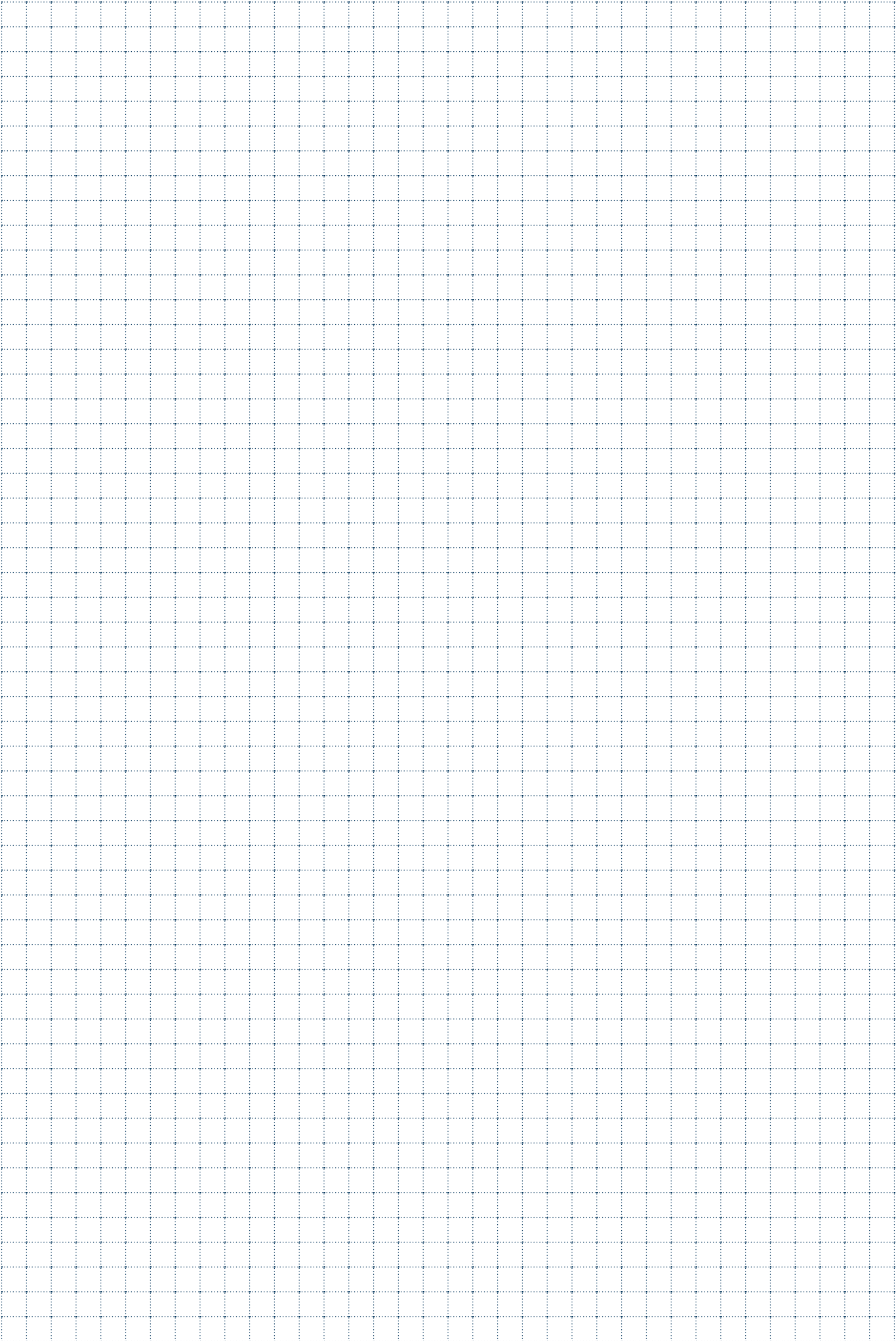
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INSERTI - INSERTS
PAG. 665

(mm)																
ART.		ØD	Ød	ØFmin	f	H	L	L2	L3	Z	kg	Nm				
S 626	10-06	10	8	4,0	5,0	61	23	25	22	1	0,02	1,0÷1,2		060204	12254P	5607P
S 626	11-06	11	10	4,0	5,5	70	24	30	23	1	0,04	1,0÷1,2	M6			
S 626	12-06	12	10	4,0	6,0	70	25	37,5	24	1	0,04	1,0÷1,2				
S 626	13-06	13	12	5,0	6,5	80	27	35	25	1	0,06	1,0÷1,2				
S 626	14-06	14	12	5,0	7,0	80	28	35	26	1	0,07	1,0÷1,2	M8			
S 626	15-06	15	12	5,0	7,5	80	29	35	27	1	0,07	1,0÷1,2				
S 626	16-06	16	12	5,0	8,0	80	30	35	28	1	0,08	1,0÷1,2				
S 626	17-09	17	16	6,0	8,5	90	31	42	29	1	0,13	3,5÷4,0	M10	09T308	1440	5615
S 626	18-09	18	16	6,0	9,0	90	33	42	30	1	0,13	3,5÷4,0				
S 626	19-09	19	16	6,0	9,5	90	34	42	31	1	0,14	3,5÷4,0				
S 626	20-09	20	16	6,0	10,0	90	35	42	32	1	0,14	3,5÷4,0	M12			
S 626	21-09	21	20	6,0	10,5	100	36	51	33	1	0,22	3,5÷4,0				
S 626	22-09	22	20	7,0	11,0	100	37	51	34	1	0,22	3,5÷4,0				
S 626	23-09	23	20	7,0	11,5	100	38	51	35	1	0,23	3,5÷4,0	M14			
S 626	24-09	24	20	8,0	12,0	100	39	51	36	1	0,23	3,5÷4,0		09T308	12409P	5615P
S 626	25-09	25	20	9,0	12,5	100	40	51	37	1	0,24	3,5÷4,0				
S 626	26-09	26	25	10,0	13,0	120	41	64	38	1	0,41	3,8÷5,0	M16			
S 626	27-09	27	25	10,5	13,5	120	42	64	39	1	0,42	3,8÷5,0				
S 626	28-09	28	25	11,0	14,0	120	43	64	40	1	0,43	3,8÷5,0				
S 626	29-09	29	25	12,0	14,5	120	44	64	41	1	0,44	3,8÷5,0	M18			
S 626	30-09	30	25	13,0	15,0	120	45	64	42	1	0,45	3,8÷5,0				
S 626	31-09	31	25	14,0	15,5	120	46	64	43	1	0,46	3,8÷5,0				
S 626	32-09	32	25	15,0	16,0	120	47	64	44	1	0,47	3,8÷5,0	M20			
S 626	33-09	33	25	16,0	16,5	120	48	64	45	1	0,49	3,8÷5,0				



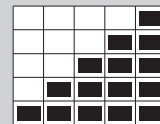


SCELTA VELOCE QUICK PICK

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 RECH TECKEZAHLN
- 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

QCMX 060412 .X42
T5322

F	M	R
●		
●		
○		

fn = 0,06-0,25 mm

P	Vc = 200-380 m/min
M	Vc = 100-200 m/min
K	
N	Vc = 200-500 m/min
S	
H	

QCMX 060412 .X42 - T5322

P10-30 / M15-30 / K15-25

T5322

- 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 MATERIALI MATERIALS Pag. 1119	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 FORATURA

DRILLING INSERTS / WENDEPLATTEN ZUM BOHREN / PLAQUÉTTES POUR PERÇAGE
PLAQUITAS DE TALADRADO



	COME SCEGLIERE I PARAMETRI DI LAVORO	Pag. 635
	PANORAMICA QUALITÀ DI FORATURA	Pag. 637
	IMPIEGO DELLE QUALITÀ DI FORATURA	Pag. 638
	VELOCITÀ DI TAGLIO DELLE QUALITÀ DI FORATURA	Pag. 640
	DENOMINAZIONI DEGLI INSERTI PER FORATURA	Pag. 642
	CATALOGO DISPONIBILITÀ INSERTI	Pag. 643

	HOW TO CHOOSE CUTTING DATA	Pag. 635
	GENERAL VIEW OF THE DRILLING GRADE	Pag. 637
	APPLICATION OF THE DRILLING GRADE	Pag. 638
	CUTTING SPEED OF DRILLING GRADE	Pag. 640
	INSERTS DESIGNATION FOR DRILLING	Pag. 642
	INSERTS STOCK CATALOGUE	Pag. 643

	EINSTELLUNG DER SCHNITTDATEN	Pag. 635
	BOHREN-ÜBERSICHT	Pag. 637
	EINSATZ DER BOHREN	Pag. 638
	SCHNITTGESCHWINDIGKEIT DER BOHREN (VC)	Pag. 640
	BEZEICHNUNG DER WENDEPLATTEN ZUM BOHREN	Pag. 642
	WENDEPLATTENBESTAND-KATALOG	Pag. 643

	COMMENT CHOISIR LES PARAMETRES DE SERVICE	Pag. 635
	VUE D'ENSEMBLE QUALITÉ DE PERÇAGE	Pag. 637
	UTILISATION DE LES QUALITÉS DE PERÇAGE	Pag. 638
	VITESSE DE COUPE DE LA QUALITÉ DE PLAQUETTES DE PERÇAGE	Pag. 640
	DÉNOMINATION DE LES PLAQUETTES POUR LE PERÇAGE	Pag. 642
	CATALOGUE DE DISPONIBILITÉ PLAQUETTES	Pag. 643

FASE 3 - PHASE 3

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

[illegible]

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)		Cutting speed of the drilling grade decoupage de la qualité de plaquettes de perçage					
		VDI 3323 GFR	HB HRC Rm	T5320	T3610	T538N	T5322	T530	
P 1	1	125	180-350			120-220	180-300	100-180	
	2	180	180-320			100-200	180-320	100-180	
	3	250	160-300			100-200	160-300	100-180	
	4	200	160-300			100-200	160-300	100-180	
	5	300	150-280		110-220	100-180	150-280	80-160	
M 10	10	250	70-220		70-170	100-180			
	11	350	100-250		100-220	150-200			
	12	200	100-220		100-180	150-190			
	13	330	100-230		100-200	100-190			
	14.1	180	100-140			150-200	120-200	70-130	
K 14.2	14.2	210-260	80-120			70-180	100-180	60-100	
	15	180	80-120	60-100					
	16	260	70-150	60-100					
	17	160	110-250		130-280				
	18	250	70-180		70-230				
N 19	19	130	70-150		80-200	80-120			
	20	230	70-140		70-180	60-100			
	21	60		200-400		140-300	200-550	200-550	
	22	100		200-400			200-550	200-550	
	23	75		200-400		140-300	200-550	200-550	
S 24	24	90		200-400		140-300	200-550	200-550	
	25	130		200-500		140-300	200-550	200-550	
	26	110		250-350		140-300	200-400	200-400	
	27	90		180-240		140-300	200-400	200-400	
	28	100		180-240			200-400	200-400	
H 29	29			50-180					
	30			50-200					
	31	200							
	32	280							
	33	250				40-60			
H 34	34	350				20-40			
	35	320				20-40			
	36	Re400		40-120		40-60			
	37	Re1050		40-120		40-60			
	38	55HRC							
H 39	39	60HRC							
	40	400							
	41	55HRC							

DIN ISO 513	P ACCIAI STEELS STAHL ACIERS						M ACCIAI INOSSIDABILI STAINLESS STEELS ROSTFREIER STAHL ACIER INOXYDABLE				K GHISE CAST IRON GRAUGUSS FONTE GRISE					N NON FERROSI NONFERROUS NICHT-EISENMA PAS FERREUX				S MAT.DIFFICILI DIFFICULT MATERIAL SCHWIERIGE MATERIEN MAT.DIFICOLES					H MATERIALI DURI HARD MATERIALS HARTE MATERIALIEN MATÉRIAUX DURS			
	01	10	20	30	40	50	10	20	30	40	01	10	20	30	40	01	10	20	30	01	10	20	30	40	01	10	20	30
HW																												
HC																												
	TENACITÀ - TOUGHNESS - ZÄHIGKEIT - TÉNACITÉ																											
	RESISTENZA ALL'USURA - RESISTANCE TO WEAR - VERSCHLEISSFESTIGKEIT - RÉSISTANCE À L'USURE																											
	AVANZAMENTO - FEED - VORSCHUB - AVANCE																											
	VELOCITÀ - SPEED - GESCHWINDIGKEIT - VITESSE																											
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 PAG. 1119						QUICK PICK PAG. 632	Tenacità + 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	MAT NON FERROSI NON FERROUS MAT. NICHT-EISENMATERIALIEN	MAT. FERREUX	MAT DIFFICILI DIFFICULT MATERIAL SCHWIERIGE MATERIALIEN					
T120	HW	M10-20 K10-20			○	●	○					●	- ALTA RESISTENZA ALL' USURA E BUONA TENACITÀ - INDICATO PER MEDIE VELOCITÀ DI TAGLIO E MEDI AVANZAMENTI
T3610	HC	P10-30	○		●							●	-INSERTO RESISTENTE ALL'USURA -INDICATO PER MEDIE ALTE VELOCITÀ DI TAGLIO -ADATTO PER LA LAVORAZIONE DELLA GHISA
	CVD	K10-25											
T538N	HC	P30-40 M30-40	●	●	○	○	●					●	- ELEVATA TENACITÀ, ALTA RESISTENZA ALLA FRATTURA E ALLA SCHEGGIATURA CON BUONA RESISTENZA ALL'USURA - INDICATO PER MEDIO-BASSE VELOCITÀ DI TAGLIO ANCHE IN CONDIZIONI DIFFICILI - CONSIGLIATO COME INSERTO PERIFERICO NELLA LAVORAZIONE DI INOX E COME INSERTO CENTRALE NELLA LAVORAZIONE DI GHISA
	CVD	S30-40											
T519D	HC	P20-25 M15-25	●	○	●	○						●	- QUALITÀ MICROGRANO CON ELEVATA TENACITÀ - INDICATO PER MEDIO-BASSE VELOCITÀ DI TAGLIO
	CVD	K20-25											
T5320	HC	P10-30 M20-35	●	○	○							●	-INSERTO CON MEDIA TENACITÀ -INDICATO PER MEDIE ALTE VELOCITÀ DI TAGLIO -ADATTO PER LA LAVORAZIONE DEGLI ACCIAI LEGATI E DEBOLMENTE LEGATI
	CVD	K15-30											
T5322	HC	P10-30 M15-30	●	●		○						●	-INSERTO CON MEDIA TENACITÀ -INDICATO PER MEDIE ALTE VELOCITÀ DI TAGLIO -ADATTO PER LA LAVORAZIONE DEGLI ACCIAI BASSO LEGATI E INOX
	CVD	K15-30											
T530	HC	P30-40 M20-25	●	○								●	-GRADO MOLTO TENACE PARTICOLARMENTE INDICATO ALLA LAVORAZIONE A BASSE VELOCITÀ DI TAGLIO E SU MATERIALI MOLTO TENACI (ES. FE O ACCIAIO ALTA VELOCITÀ AL PIOMBO). -POSSIBILE IMPIEGO ANCHE SU ACCIAIO INOX E MATERIALI NON FERROSI.
	CVD												

● 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
-HIGH RESISTANCE TO WEAR WITH GOOD TOUGHNESS -SUITABLE FOR MEDIUM CUTTING SPEEDS AND MEDIUM FEED	-HOHE VERSCHLEISSFESTIGKEIT MIT SEHR ZÄHIGKEIT -FÜR MITTEL SCHNITTGESCHWINDIGKEITEN UND MITTEL VORSCHÜBE	-HAUTE RESISTANCE ET BONNE TENACITÉ -INDIQUÉE POUR LE MOYENNE VITESSE DE COUPE ET MOYENNE DÉPLACEMENT
- WEAR-RESISTANT INSERT - IDEAL FOR MEDIUM TO HIGH CUTTING SPEEDS - SUITABLE FOR MACHINING CAST IRON	- VERSCHLEISSFESTE WENDEPLATTE - GEEIGNET FÜR MITTLERE/HOHE SCHNITTGESCHWINDIGKEITEN - GEEIGNET FÜR GUSSBEARBEITUNGEN	- PLAQUETTE RÉSISTANTE À L'USURE - PRÉVUE POUR DES VITESSES DE COUPE HAUTES ET MOYENNES - PRÉVUE POUR L'USINAGE DE LA FONTE
- HIGH TOUGHNESS, HIGH FRACTURE RESISTANCE AND CHIPPING STRENGTH AS WELL AS GOOD RESISTANCE TO WEAR - SUITABLE FOR MEDIUM-LOW CUTTING SPEED, ALSO UNDER DIFFICULT MACHINING CONDITIONS - RECOMMENDED AS PERIPHERAL INSERT FOR INOX AND AS CENTRAL INSERT FOR CAST-IRON	- HOHE ZÄHIGKEIT, BRUCH-UND RISSFESTIGKEIT MIT GUTEM VERSCHLEISSWIDERSTAND - GEEIGNET FÜR MITTLERE BIS GERINGE GESCHWINDIGKEIT AUCH UNDER SCHWIERIGEN BEARBEITUNGSBEDINGUNGEN - EMPFOHLEN ALS PERIPHERIE-WENDEPLATTE ZUR INOX-BEARBEITUNG UND ALS ZENTRALPLATTE ZUR GUSSBEARBEITUNG	- TENACITÉ ÉLEVÉE, HAUTE RESISTANCE À LA RUPTURE ET À L'ÉCHARDE AVEC BONNE RESISTANCE À L'USURE - INDIQUÉE POUR MOYENNE-BAS VITESSE DE COUPE MÊME AVEC CONDITIONS DIFFICILES - CONSEILLÉ COMMENT PLAQUETTE PHÉRIPHÉRIQUE POUR TRAVAILLER INOX ET COMMENT PLAQUETTE CENTRAL POUR TRAVAILLER LA FONTE
-MICROGRAIN GRADE WITH HIGH TOUGHNESS -SUITABLE FOR MEDIUM AND LOW CUTTING SPEEDS	-MIKROKORNSORTE MIT HOHER ZÄHIGKEIT -FÜR MITTEL UND GERINGE SCHNITTGESCHWINDIGKEITEN GEEIGNET	-QUALITÉ DE MICROGRAIN AVEC TENACITÉ ÉLEVÉE -INDIQUÉE POUR LE MOYENNE-FAIBLE VITESSE DE COUPE
- MEDIUM TOUGH INSERT - IDEAL FOR MEDIUM TO HIGH CUTTING SPEEDS - SUITABLE FOR MACHINING ALLOYED AND WEAKLY ALLOYED STEELS	- WENDEPLATTE MIT MITTLERER ZÄHIGKEIT - GEEIGNET FÜR MITTLERE/HOHE SCHNITTGESCHWINDIGKEITEN - GEEIGNET FÜR BEARBEITUNGEN VON LEGIERTEM UND SCHWACH LEGIERTEM STAHL	- PLAQUETTE AVEC TÉNACITÉ MOYENNE - PRÉVUE POUR DES VITESSES DE COUPE HAUTES ET MOYENNES - PRÉVUE POUR L'USINAGE DES ACIERS ALLIÉS ET FAIBLEMENT ALLIÉS
- MEDIUM TOUGH INSERT - IDEAL FOR MEDIUM TO HIGH CUTTING SPEEDS - SUITABLE FOR BOTH LOW-ALLOY AND INOX STEEL	- WENDEPLATTE MIT MITTLERER ZÄHIGKEIT - GEEIGNET FÜR MITTLERE/HOHE SCHNITTGESCHWINDIGKEITEN - GEEIGNET SOWOHL FÜR NIEDERLEGIERTE ALS AUCH FÜR INOX-STÄHLE	- PLAQUETTE AVEC TÉNACITÉ MOYENNE - PRÉVUE POUR DES VITESSES DE COUPE HAUTES ET MOYENNES - INDIQUE POUR L'USINAGE DES ACIERS FAIBLEMENT ALLIÉS ET INOX
- VERY TOUGH GRADE, PARTICULARLY SUITABLE FOR LOW CUTTING SPEED AND FOR VERY TOUGH MATERIALS (E.G FE OR HIGH SPEED LEADED STEEL) - ALSO SUITABLE FOR STAINLESS STEEL AND NON-FERROUS MATERIALS	- SEHR ZÄHE SORTE, BESONDERS FÜR DIE BEARBEITUNG MIT NIEDRIGER SCHNITTGESCHWINDIGKEIT UND FÜR SEHR ZÄHE MATERIALIEN (Z.B. FE ODER BLEIHALTIGEN HOCHGESCHWINDIGKEITSSTAHL) GEEIGNET - AUCH BEI EDELSTAHL UND NICHT EISERNEN MATERIALIEN EINSETZBAR	- DEGRE TRES TENACE PARTICULIEREMENT INDIQUE POUR L'USINAGE A DE FAIBLES VITESSES DE COUPE ET SUR DES MATERIAUX TRES TENACES (PAR EXEMPLE FE OU ACIER A HAUTE VITESSE AU PLOMB). - EMPLOI POSSIBLE MEME SUR ACIER INOX ET MATERIAUX NON FERREUX.

MATERIALE MATERIAL MATERIALIEN MATERIAUX PAG 1119	VDI 3323 GR.	HB HRC Rm	T120		T3610	T538N		T5320	T5322	T530			
P ACCIAI STEELS STAHL ACIER	1	125				120-220			180-350	100-180			
	2	180				100-200			180-320	100-180			
	3	250				100-200			160-300	100-180			
	4	220				100-200			160-300	100-180			
	5	300				100-200			150-280	90-160			
	6	180			110-220	100-180		120-250					
	7-8	250-300			70-170	100-180		70-200					
	9	350			100-210	100-150		100-250					
	10	200			70-180	150-200		70-200					
	11	350			100-230	100-150		100-250					
	12	200			100-180	150-200		100-230					
	13	330			100-200	100-150		100-230					
M ACCIAI INOX STAINLESS STEELS ROSTFREIER STAHL ACIER INOXYDABLE	14.1	180				150-200		100-140	120-200	70-130			
	14.2	230-260				100-180		80-120	100-180	60-100			
K GHISA CAST IRON GROUPE FONTE GRISE	15	180	60-100		80-220			80-120					
	16	260	60-100		70-180			70-150					
	17	160			130-280			110-250					
	18	250			75-230			70-180					
	19	130			80-200	80-120		70-150					
	20	230			70-180	60-100		70-140					
N MAT NON FERROSI NON FERROUS MAT NICHT-EISENMATERIALIEN MAT. FERREUX	21	60	200-500			140-300			200-550	200-550			
	22	100	200-500						200-550	200-550			
	23	75	200-500			140-300			200-550	200-550			
	24	90	200-500			140-300			200-550	200-550			
	25	130	200-500			140-300			200-550	200-550			
	26	110	250-350			140-300			200-400	200-400			
	27	90	180-240			140-300			200-400	200-400			
	28	100	180-240						200-400	200-400			
	29		50-180										
	30		50-200										
S MAT DIFFICILI DIFFICULT MATERIAL SCHWIERIGE MATERIALIEN MAT. DIFFICILES	31	200											
	32	280											
	33	250				40-60							
	34	350				20-40							
	35	320				20-40							
	36	Rm400	40-120			40-60							
	37	Rm1050	40-120			40-60							
H MATERIALI DURI HARD MATERIALS HARTE MATERIALIEN MATERIAUX 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 GUGUSS FONTE GRISE	15	180											
	16	260											
	17	160											
	18	250											
	19	130											
	20	230											
N MAT. NON FERROSI NON-FERROUS MAT. NICHT-EISEN-MATERIALIEN 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 SCHWERIGE MATERIALIEN MAT. DIFICILES	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											

W	C	G	T
1	2	3	4

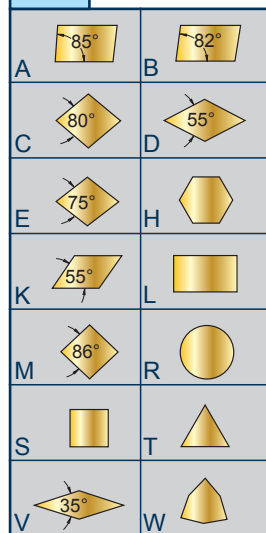
06	03	04
5	6	7

S	N
8	9

-	-	-	P
10	11	12	13

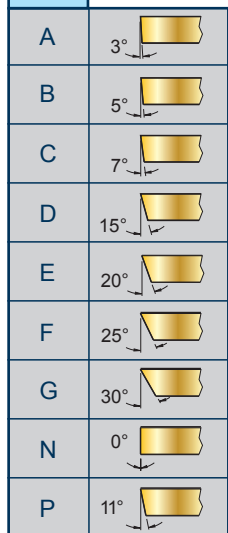
1

FORMA INSERTO
SHAPE OF INSERT



2

SPOGLIA INFER.
RELIEF ANGLE



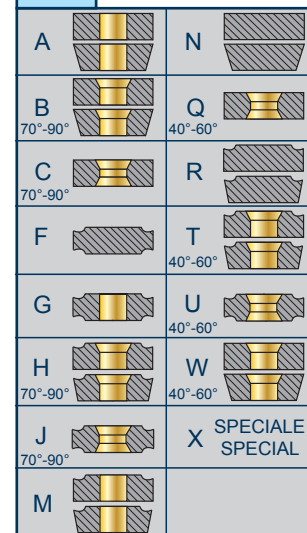
3

TOLLERANZA+/-{mm}
TOLERANCE+/-{mm}

	m	s	d
A	+/-0,005	+/-0,025	+/-0,025
C	+/-0,013	+/-0,025	+/-0,025
E	+/-0,025	+/-0,025	+/-0,025
F	+/-0,005	+/-0,025	+/-0,013
G	+/-0,025	+/-0,05 +/-0,13	+/-0,025
H	+/-0,013	+/-0,025	+/-0,013
J	+/-0,005	+/-0,025	+/-0,05 +/-0,13
K	+/-0,013	+/-0,025	+/-0,05 +/-0,13
L	+/-0,05	+/-0,013	+/-0,025
M	+/-0,08 +/-0,18	+/-0,13	+/-0,05 +/-0,18
N	+/-0,08 +/-0,18	+/-0,025	+/-0,05 +/-0,13
U	+/-0,13 +/-0,38	+/-0,05 +/-0,13	+/-0,08 +/-0,32

4

TIPO INSERTO
TYPE OF INSERT



5

LUNGHEZZA TAGLIANTE
CUTTING EDGE LENGTH

Ød CERCHIO INSCRITTO INSCRIBED CIRCLE	A	C	D	E	K	L	M	R	S	T	V	W
3,97												02
4,76										08		02-03
5,56		05								09		
6,00												03
6,35		06	07	06			06		06	11	11	04
6,70	10											
7,94									07			
8,00				08								05
9,45	16											
9,52	15-16	09	11	09	16	15	09		09	16	16	06
10,00								10				06
11,00									11			
11,50						12						
12,00								12				07
12,62						18						
12,70		12	15	12		15-20			12	22		08
15,87		16							15			
19,05		19							19			

6

SPESSORE
THICKNESS

S	mm
01	1,59
T1	1,97
02	2,38
T2	2,78
H3	2,80
X3	3,00
03	3,18
T3	3,97
04	4,76
05	5,56
06	6,35
07	7,94
09	9,52

7

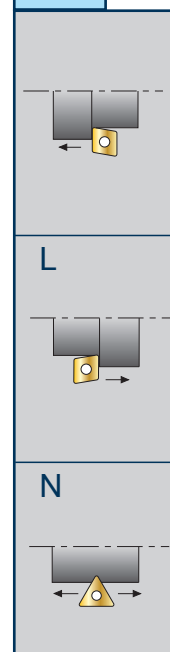
RAGGIO
RADIUS

R	MO (mm)
00 (")	
MO (mm)	
r (mm)	
02	r=0,2
04	r=0,4
05	r=0,5
06	r=0,6
08	r=0,8
10	r=1,0
12	r=1,2
16	r=1,6

8



9



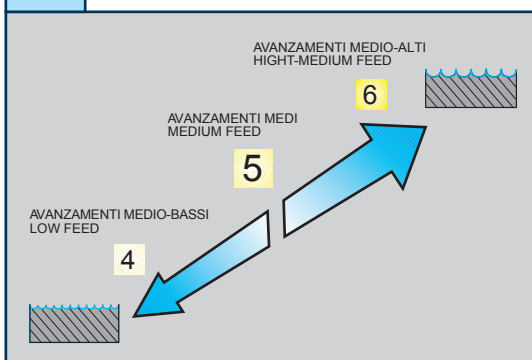
10

LETTERA DI IDENTIF.
IDENTIFICATION LETTER

A	N
C	P
D	R
E	S
H	T
I	U
J	W
K	Y
L	Z
M	

11

CAMPO DI LAVORAZIONE
MACHINING TYPES



12

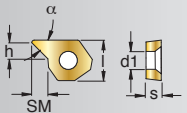
PREPARAZIONE TAGLIANTE
CUTTING EDGE PREPARATION

1 =	SPECIFICO PER GHISA SPECIFIC FOR CAST IRON
3 =	SPECIFICO PER ACCIAIO INOX SPECIFIC FOR STAINLESS STEEL
7 =	SPECIFICO PER LEGHE DI ALLUMINIO SPECIFIC FOR ALUMINIUM ALLOYS
9 =	SPECIFICO PER ACCIAIO SPECIFIC FOR STEEL
2 =	
4 =	
5 =	INTERMEDI DI USO GENERIC INTERMEDIATE FOR GENERAL USE
6 =	
8 =	

13

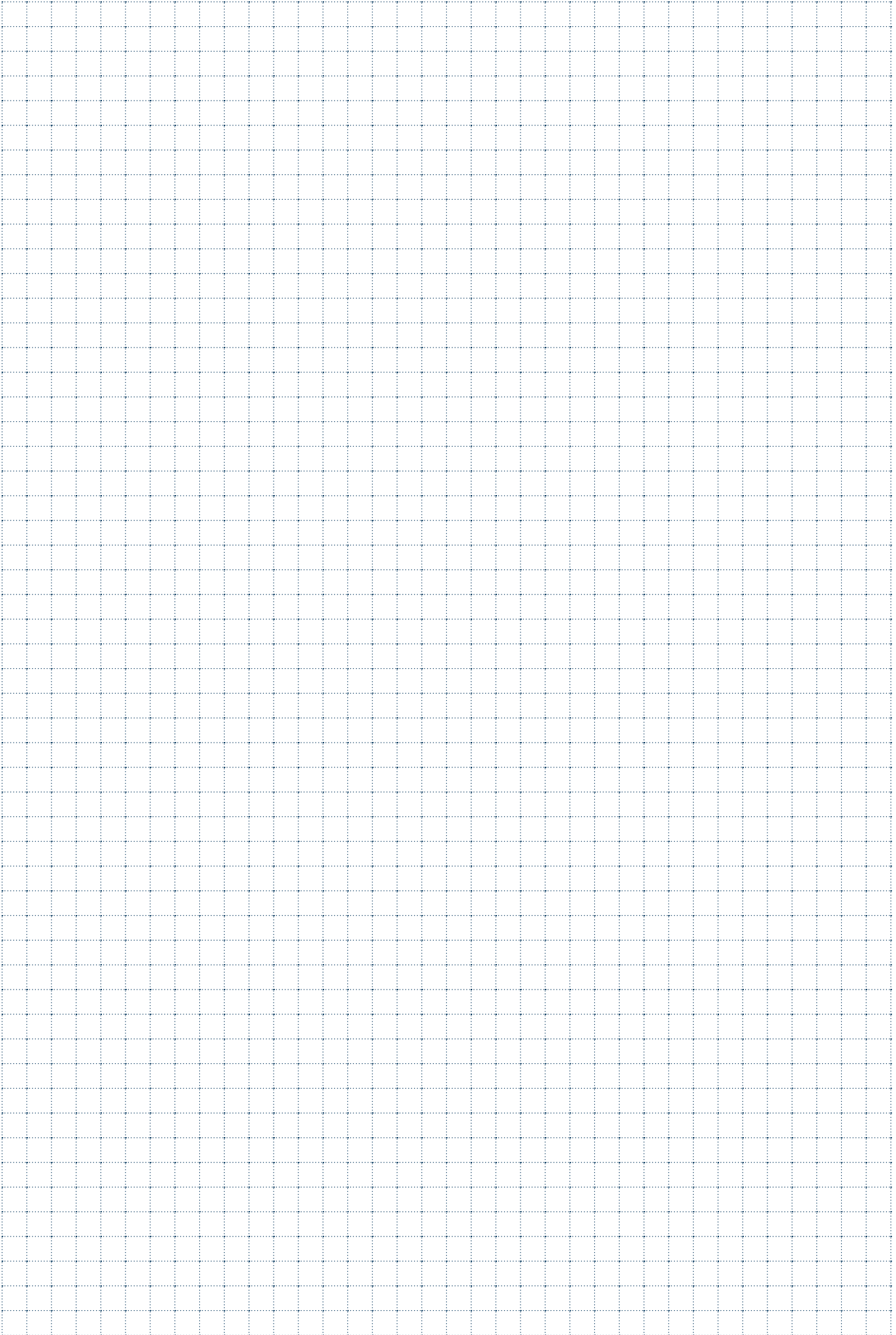


643

SM...30 SM...45 SM...55								HW		HC														
										RIVESTITI COATED GRADES BESCHICHTET RECOUVERTS														
ART	COD.	l	s	d1	SM	h	α																	
  	SM 0702 - 30	6,35	2,38	2,8	2,2	1,3	30°																	
	SM 0702 - 45	6,35	2,38	2,8	2,3	2,3	45°																	
	SM 0702 - 55	6,35	2,38	2,8	3,9	5,6	55°																	
MATERIALE - MATERIAL - MATERIALIEN - MATÉRIAUX																								
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																							

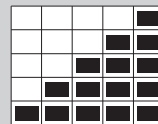
■ DISPONIBILI - IN STOCK - LIEFERBAR - DISPONIBLES / ■ NEW
 ● APPLICAZIONE CONSIGLIATA-RECOMMENDED APPLICATION-
 EMPFOHLENER EINSATZ - APPLICATION CONSEILLÉE

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



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 RECH TECKEZAHLN
- 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

CCMT 060204 .G52 - T1415

fn = 0,1-0,2 mm

P Vc = 180-400 m/min

M

K Vc = 140-430 m/min

N

S

H

SAU QUALITY TOOLS ENGINEERING

CCMT 060204 .G52 - T1415

P05-25 / K20-30

T1415

- 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
MATERIALI MATERIALS	21	N	= LEGHE DI ALLUMINIO HB 60	- ALUMINUM ALLOYS HB 60
Pag. 1119	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 LAVORAZIONE FORI

INSERTS FOR MACHINING BORES / WENDEPLATTEN ZUR BEARBEITUNG VON BOHRUNGEN
PLAQUETTES POUR USINAGE TROUS / PLAQUITAS PARA TRABAJO DE LOS AGUJEROS



	COME SCEGLIERE I PARAMETRI DI LAVORO	Pag. 649
	PANORAMICA QUALITÀ LAVORAZIONE FORI	Pag. 651
	IMPIEGO DELLE QUALITÀ LAVORAZIONE FORI	Pag. 652
	VELOCITÀ DI TAGLIO DELLE QUALITÀ LAVORAZIONE FORI	Pag. 658
	CAMPI DI IMPIEGO DEI ROMPITRUCIOLI LAVORAZIONE FORI	Pag. 660
	DENOMINAZIONI DEGLI INSERTI LAVORAZIONE FORI	Pag. 664
	CATALOGO DISPONIBILITÀ INSERTI	Pag. 665

	HOW TO CHOOSE CUTTING DATA	Pag. 649
	GENERAL VIEW MACHINING BORES GRADE	Pag. 651
	APPLICATION MACHINING BORES GRADE	Pag. 652
	CUTTING SPEED MACHINING BORES GRADE	Pag. 658
	FIELDS OF APPLICATION FOR CHIP BREAKERS	Pag. 660
	INSERTS DESIGNATION FOR MACHINING BORES	Pag. 664
	INSERTS STOCK CATALOGUE	Pag. 665

	EINSTELLUNG DER SCHNITTDATEN	Pag. 649
	BEARBEITUNG VON BOHRUNGEN-ÜBERSICHT	Pag. 651
	EINSATZ DER BEARBEITUNG VON BOHRUNGEN	Pag. 652
	SCHNITTGESCHWINDIGKEIT BEARBEITUNG VON BOHRUNGEN (VC)	Pag. 658
	EINSATZGEBIETE DER SPANBRECHER	Pag. 660
	BEZEICHNUNG DER WENDEPLATTEN ZUM BEARBEITUNG VON BOHRUNGEN	Pag. 664
	WENDEPLATTEN-KATALOG	Pag. 665

	COMMENT CHOISIR LES PARAMETRES DE SERVICE	Pag. 649
	VUE D' ENSEMBLE QUALITÉ USINAGE TROUS	Pag. 651
	UTILISATION DE LES QUALITÉES USINAGE TROUS	Pag. 652
	VITESSE DECOUPE DE LA QUALITÉ DE PLAQUETTES USINAGE TROUS	Pag. 658
	CHAMPS D'USINAGE DE LE BRISE-COPEAUX	Pag. 660
	DÉNOMINATION DE LES PLAQUETTES POUR USINAGE TROUS	Pag. 664
	CATALOGUE DE DISPONIBILITÉ PLAQUETTES	Pag. 665

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

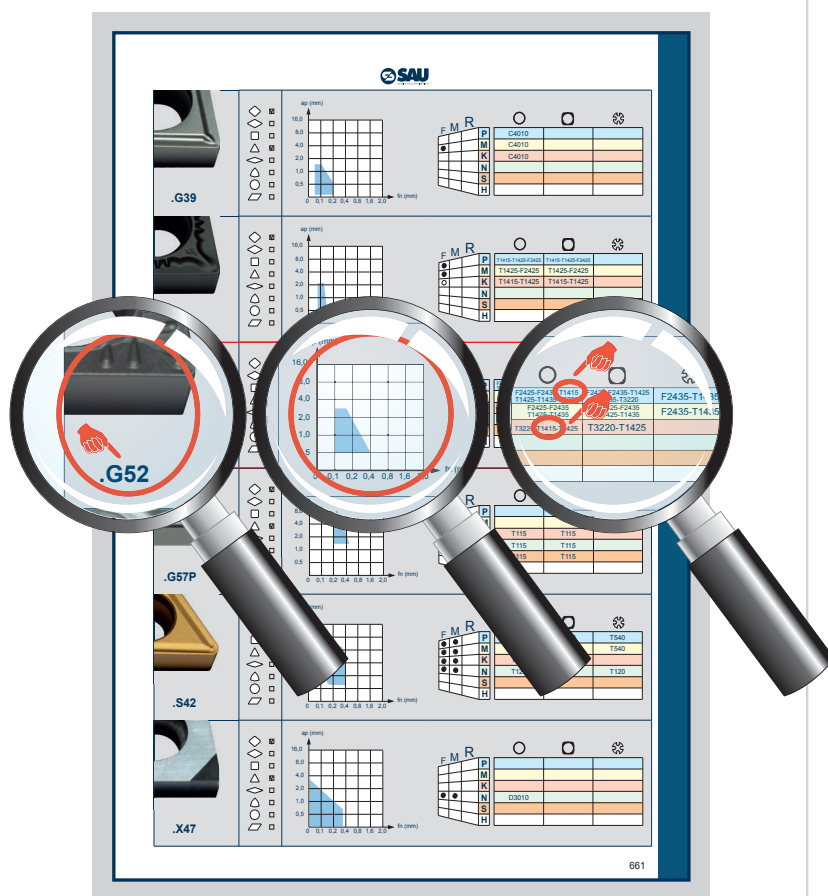
Tabella comparativa dei materiali - Materials comparison table
Materialvergleichstabelle - Tableau comparatif des matériaux

SAU
QUALITY TOOLS & MORE

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	1350	0,22
CF 9 SMO 28	1.0715	9 SMO 28	12 L 13	-	10 PUF 2	-	SUM22	1350	0,22
CF 9 SMO 36	1.0736	9 SMO 36	12 L 14	-	10 PUF 2	-	SUM22	1350	0,22
CF 9 SMO 28	1.0718	9 SMO 28	12 L 13	-	10 PUF 2	-	SUM22	1350	0,22
CF 9 SMO 36	1.0737	9 SMO 36	12 L 14	-	10 PUF 2	-	SUM22	1350	0,22
C15 C16	1.0401	C 15	1015	080 M 15	AF 37 C 12, XC 18	-	SUM22	1350	0,22
C20 C21	1.0402	C 20	1020	080 A 20	AF 42 C 20	-	SUM22	1350	0,22
C45	1.1141	Ck 45	1015	080 M 15	XC 15, XC 18	-	SUM22	1350	0,22
ACCIAIO NON LEGATO RICOTTO ANNEALED NOT-ALLOY STEEL									
C 0,15-0,55% 180 HB									
-	-	1330	150 M 28	20 M 5	-	-	SUM22	1350	0,22
-	-	1140	212 M 36	35 M 4	-	-	SUM22	1350	0,22
-	-	1039	150 M 36	35 M 5	-	-	SUM22	1350	0,22
-	-	1035	080 A 35	AF 35 C 35	-	-	SUM22	1350	0,22
-	-	1045	080 M 45	AF 45 C 45	-	-	SUM22	1350	0,22
-	-	1045	080 M 45	XC 42	-	-	SUM22	1350	0,22
ACCIAIO NON LEGATO RICOTTO ANNEALED NOT-ALLOY STEEL									
C 0,15-0,55% 250 HB									
-	-	1330	150 M 28	20 M 5	-	-	SUM22	1350	0,22
-	-	1140	212 M 36	35 M 4	-	-	SUM22	1350	0,22
-	-	1039	150 M 36	35 M 5	-	-	SUM22	1350	0,22
-	-	1035	080 A 35	AF 35 C 35	-	-	SUM22	1350	0,22
-	-	1045	080 M 45	AF 45 C 45	-	-	SUM22	1350	0,22
-	-	1045	080 M 45	XC 42	-	-	SUM22	1350	0,22
ACCIAIO NON LEGATO RICOTTO ANNEALED NOT-ALLOY STEEL									
C > 0,55% 300 HB									
-	-	1330	150 M 28	20 M 5	-	-	SUM22	1350	0,22
-	-	1140	212 M 36	35 M 4	-	-	SUM22	1350	0,22
-	-	1039	150 M 36	35 M 5	-	-	SUM22	1350	0,22
-	-	1035	080 A 35	AF 35 C 35	-	-	SUM22	1350	0,22
-	-	1045	080 M 45	AF 45 C 45	-	-	SUM22	1350	0,22
-	-	1045	080 M 45	XC 42	-	-	SUM22	1350	0,22
ACCIAIO NON LEGATO RICOTTO ANNEALED NOT-ALLOY STEEL									
C > 0,55% 300 HB									
-	-	1330	150 M 28	20 M 5	-	-	SUM22	1350	0,22
-	-	1140	212 M 36	35 M 4	-	-	SUM22	1350	0,22
-	-	1039	150 M 36	35 M 5	-	-	SUM22	1350	0,22
-	-	1035	080 A 35	AF 35 C 35	-	-	SUM22	1350	0,22
-	-	1045	080 M 45	AF 45 C 45	-	-	SUM22	1350	0,22
-	-	1045	080 M 45	XC 42	-	-	SUM22	1350	0,22
ACCIAIO NON LEGATO RICOTTO ANNEALED NOT-ALLOY STEEL									
C > 0,55% 300 HB									
-	-	1330	150 M 28	20 M 5	-	-	SUM22	1350	0,22
-	-	1140	212 M 36	35 M 4	-	-	SUM22	1350	0,22
-	-	1039	150 M 36	35 M 5	-	-	SUM22	1350	0,22
-	-	1035	080 A 35	AF 35 C 35	-	-	SUM22	1350	0,22
-	-	1045	080 M 45	AF 45 C 45	-	-	SUM22	1350	0,22
-	-	1045	080 M 45	XC 42	-	-	SUM22	1350	0,22
ACCIAIO NON LEGATO RICOTTO ANNEALED NOT-ALLOY STEEL									
C > 0,55% 300 HB									
-	-	1330	150 M 28	20 M 5	-	-	SUM22	1350	0,22
-	-	1140	212 M 36	35 M 4	-	-	SUM22	1350	0,22
-	-	1039	150 M 36	35 M 5	-	-	SUM22	1350	0,22
-	-	1035	080 A 35	AF 35 C 35	-	-	SUM22	1350	0,22
-	-	1045	080 M 45	AF 45 C 45	-	-	SUM22	1350	0,22
-	-	1045	080 M 45	XC 42	-	-	SUM22	1350	0,22
ACCIAIO NON LEGATO RICOTTO ANNEALED NOT-ALLOY STEEL									
C > 0,55% 300 HB									
-	-	1330	150 M 28	20 M 5	-	-	SUM22	1350	0,22
-	-	1140	212 M 36	35 M 4	-	-	SUM22	1350	0,22
-	-	1039	150 M 36	35 M 5	-	-	SUM22	1350	0,22
-	-	1035	080 A 35	AF 35 C 35	-	-	SUM22	1350	0,22
-	-	1045	080 M 45	AF 45 C 45	-	-	SUM22	1350	0,22
-	-	1045	080 M 45	XC 42	-	-	SUM22	1350	0,22
ACCIAIO NON LEGATO RICOTTO ANNEALED NOT-ALLOY STEEL									
C > 0,55% 300 HB									
-	-	1330	150 M 28	20 M 5	-	-	SUM22	1350	0,22
-	-	1140	212 M 36	35 M 4	-	-	SUM22	1350	0,22
-	-	1039	150 M 36	35 M 5	-	-	SUM22	1350	0,22
-	-	1035	080 A 35	AF 35 C 35	-	-	SUM22	1350	0,22
-	-	1045	080 M 45	AF 45 C 45	-	-	SUM22	1350	0,22
-	-	1045	080 M 45	XC 42	-	-	SUM22	1350	0,22
ACCIAIO NON LEGATO RICOTTO ANNEALED NOT-ALLOY STEEL									
C > 0,55% 300 HB									
-	-	1330	150 M 28	20 M 5	-	-	SUM22	1350	0,22
-	-	1140	212 M 36	35 M 4	-	-	SUM22	1350	0,22
-	-	1039	150 M 36	35 M 5	-	-	SUM22	1350	0,22
-	-	1035	080 A 35	AF 35 C 35	-	-	SUM22	1350	0,22
-	-	1045	080 M 45	AF 45 C 45	-	-	SUM22	1350	0,22
-	-	1045	080 M 45	XC 42	-	-	SUM22	1350	0,22
ACCIAIO NON LEGATO RICOTTO ANNEALED NOT-ALLOY STEEL									
C > 0,55% 300 HB									
-	-	1330	150 M 28	20 M 5	-	-	SUM22	1350	0,22
-	-	1140	212 M 36	35 M 4	-	-	SUM22	1350	0,22
-	-	1039	150 M 36	35 M 5	-	-	SUM22	1350	0,22
-	-	1035	080 A 35	AF 35 C 35	-	-	SUM22	1350	0,22
-	-	1045	080 M 45	AF 45 C 45	-	-	SUM22	1350	0,22
-	-	1045	080 M 45	XC 42	-	-	SUM22	1350	0,22
ACCIAIO NON LEGATO RICOTTO ANNEALED NOT-ALLOY STEEL									
C > 0,55% 300 HB									
-	-	1330	150 M 28	20 M 5	-	-	SUM22	1350	0,22
-	-	1140	212 M 36	35 M 4	-	-	SUM22	1350	0,22
-	-	1039	150 M 36	35 M 5	-	-	SUM22	1350	0,22
-	-	1035	080 A 35	AF 35 C 35	-	-	SUM22	1350	0,22
-	-	1045	080 M 45	AF 45 C 45	-	-	SUM22	1350	0,22
-	-	1045	080 M 45	XC 42	-	-	SUM22	1350	0,22
ACCIAIO NON LEGATO RICOTTO ANNEALED NOT-ALLOY STEEL									
C > 0,55% 300 HB									
-	-	1330	150 M 28	20 M 5	-	-	SUM22	1350	0,22
-	-	1140	212 M 36	35 M 4	-	-	SUM22	1350	0,22
-	-	1039	150 M 36	35 M 5	-	-	SUM22	1350	0,22
-	-	1035	080 A 35	AF 35 C 35	-	-	SUM22	1350	0,22
-	-	1045	080 M 45	AF 45 C 45	-	-	SUM22	1350	0,22
-	-	1045	080 M 45	XC 42	-	-	SUM22	1350	0,22
ACCIAIO NON LEGATO RICOTTO ANNEALED NOT-ALLOY STEEL									
C > 0,55% 300 HB									
-	-	1330	150 M 28	20 M 5	-	-	SUM22	1350	0,22
-	-	1140	212 M 36	35 M 4	-	-	SUM22	1350	0,22
-	-	1039	150 M 36	35 M 5	-	-	SUM22	1350	0,22
-	-	1035	080 A 35	AF 35 C 35	-	-	SUM22	1350	0,22
-	-	1045	080 M 45	AF 45 C 45	-	-	SUM22	1350	0,22
-	-	1045	080 M 45	XC 42	-	-	SUM22	1350	0,22
ACCIAIO NON LEGATO RICOTTO ANNEALED NOT-ALLOY STEEL									
C > 0,55% 300 HB									
-	-	1330	150 M 28	20 M 5	-	-	SUM22	1350	0,22
-	-	1140	212 M 36	35 M 4	-	-	SUM22	1350	0,22
-	-	1039	150 M 36	35 M 5	-	-	SUM22	1350	0,22
-	-	1035	080 A 35	AF 35 C 35	-	-	SUM22	1350	0,22
-	-	1045	080 M 45	AF 45 C 45	-	-	SUM22	1350	0,22
-	-	1045	080 M 45	XC 42	-	-	SUM22	1350	0,22
ACCIAIO NON LEGATO RICOTTO ANNEALED NOT-ALLOY STEEL									
C > 0,55% 300 HB									
-	-	1330	150 M 28	2					

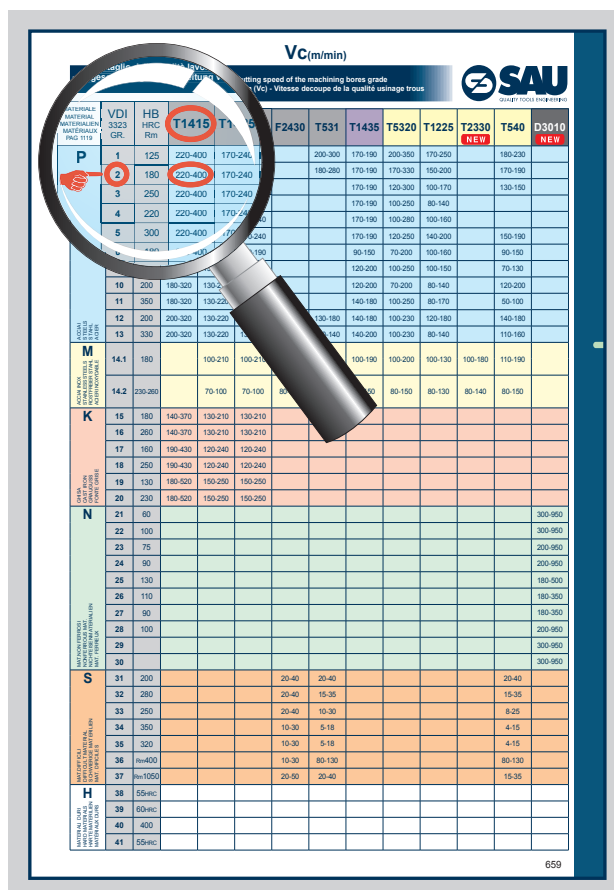
FASE 3 - PHASE 3

SCELTA DELL'AVANZAMENTO
CHOICE OF FEED
EINSTELLUNG DES VORSCHUBS
CHOIX DE L'AVANCEMENT

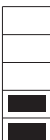
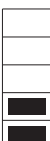
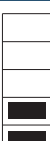


FASE 4 - PHASE 4

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



DIN ISO 513	P ACCIAI STEELS STAHL ACIERS						M ACCIAI INOSSIDABILI STAINLESS STEELS ROSTFREIER STAHL ACIER INOXYDABLE				K GHISE CAST IRON GRAUGUSS FONTE GRISE					N NON FERROSI NONFERROUS NICHT-EISENMA PAS FERREUX				S MAT.DIFFICILI DIFFICULT MATERIAL SCHWIERIGE MATERIEN MAT.DIFFICILES					H MATERIALI DURI HARD MATERIALS HARTE MATERIALIEN MATÉRIAUX DURS					
	01	10	20	30	40	50	10	20	30	40	01	10	20	30	40	01	10	20	30	01	10	20	30	40	01	10	20	30		
HT																														
																														
HW																														
																				NEW										
																														
HC																														
																														
																														
																														
																														
																														
																														
																														
																														
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DP																									NEW					
	TENACITÀ - TOUGHNESS - ZÄHIGKEIT - TÉNACITÉ 																													
	RESISTENZA ALL'USURA - RESISTANCE TO WEAR - VERSCHLEISSFESTIGKEIT - RÉSISTANCE À L'USURE																													
	AVANZAMENTO - FEED - VORSCHUB - AVANCE 																													
	VELOCITÀ - SPEED - GESCHWINDIGKEIT - VITESSE																													
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				DP				DIAMANTE POLICRISTALLINO (PCD) POLYCRYSTALLINE DIAMOND (PCD) POLYKRISTALLINER DIAMANT (PCD) DIAMANT POLYKRISTALLIN (PCD)			

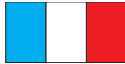
SAU	DIN ISO 513		MATERIALE - MATERIAL MATERIALIEN - MATÉRIAUX							QUICK PICK		 INDICAZIONI - USO		
			PAG. 1119							PAG. 646				
			P	M	K	N	S	H	Tenacità Toughness	+	-			
			ACCIAI STEELS STAHL ACIER	ACCIAI INOX STAINLESS STEELS ROSTFREIER STAHL ACIER INOXYDABLE	GHISA CAST IRON GRAUGUSS FONTE GRISE	MAT NON FERROSI NON FERROUS MAT. NICHT-EISENMATERIALIEN	MAT. FERREUX	MAT DIFFICILI DIFFICULT MATERIAL SCHWERGE MATERIALIEN	MAT. DIFICILES	MATERIALI DURI HARDE MATERIALIEN MATERIAUX 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	P05-25 M05-25 K05-25	●	●	●							○	●	- QUALITÀ MICROGRANO MOLTO RESISTENTE ALLA ROTTURA ED ALL'USURA - INDICATO PER MEDIO-ALTE VELOCITÀ DI TAGLIO IN FINITURA.
T115	HW	K10-25 N10-20 S10-20			○	●		○				○	●	- QUALITÀ MICROGRANO CON BUONA RESISTENZA ALL'USURA ELEVATA STABILITÀ DEL FILO TAGLIANTE, BASSA TENDENZA ALL'INCOLLAMENTO - INDICATO PER MEDIO-BASSE VELOCITÀ DI TAGLIO SU GHISA GRIGIA E ALTE PER MATERIALI NON FERROSI.
N3610 NEW	HW	N10-20				●						●	●	- GRADO PER LA LAVORAZIONE DELLE LEGHE DI ALLUMINIO
N3015	HW	N05-15				●							●	- QUALITÀ PER LAVORAZIONI DI MATERIALI NON FERROSI, COME ALLUMINIO E RAME
T120	HW	M10-20 K10-25		○	●	●						○	●	- QUALITÀ MICROGRANO CON BUONA TENACITÀ - INDICATO PER MEDIO-BASSE VELOCITÀ DI TAGLIO E ALTI AVANZAMENTI. PER ASPORTAZIONI MEDIE IN SGROSSATURA
T5610	HC CVD	P05-20 K05-20	●		●								●	- ALTA TENACITÀ, BUONA RESISTENZA ALL'USURA E ALLO SHOCK TERMICO - INDICATO PER MEDIO-ALTE VELOCITÀ DI TAGLIO NELLA LAVORAZIONE DELL'ACCIAIO E MEDIE PER LAVORAZIONI PROBLEMATICHE DI GHISA
F2120	HC PVD	M15-25 K15-25		●	○	○		○				●	○	- QUALITÀ SPECIFICA PER LA LAVORAZIONE DEGLI ACCIAI INOX, PARTICOLARMENTE ADATTO ALLE LAVORAZIONI DI SUPER FINITURA - PUÒ ESSERE IMPIEGATO NELLE LAVORAZIONI DI GHISA, ALLUMINIO E LEGHE RESISTENTI AL CALORE
F2425	HC PVD	P30-40 M15-35	○	●								○	●	- SUBSTRATO DI CARBURO APPPOSITAMENTE SVILUPPATO, RIVESTIMENTO IN PVD INNOVATIVO. - QUALITÀ CON UN'ECCELLENTE ROBUSTEZZA SENZA PREGIUDICARE LA DUREZZA A CALDO E LA RESISTENZA ALL'USURA SIA A BASSE CHE AD ALTE VELOCITÀ DI TAGLIO
F2435	HC PVD	P35-45 M25-45	○	●								●	○	- 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

● 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
- MICROGRAIN GRADE WITH GOOD RESISTANCE TO WEAR, HIGH STABILITY OF THE CUTTING EDGE, LOW TENDENCY TO STICKING - SUITABLE FOR MEDIUM CUTTING SPEEDS ON GRAY IRON AND HIGH CUTTING SPEEDS AND NONFERROUS MATERIALS.	- MIKROKORNSORTE MIT HOHER VERSCHLEISSFESTIGKEIT, STABILITÄT DER SCHNEIDE, NIEDRIGER NEIGUNG ZUR VERKLEBUNG - FÜR MITTEL-NIEDRIGE SCHNITTGESCHWINDIGKEITEN BEI GRAUGUSS UND NE-MATERIALIEN	- QUALITE MICRO-GRAIN AVEC BONNE RESISTANCE A L'USURE, STABILITE ELEVEE DU TRANCHANT, BASSE TENDANCE AU ENCOLLAGE - INDIQUÉE POUR MOYENNE-FAIBLE VITESSE DE COUPE SUR FONTE GRISE ET MATERIAL NON FERROUX
- GRADE FOR THE MACHINING OF ALUMINIUM	- SORTE FÜR DIE BEARBEITUNG VON ALUMINIUM	- NUANCE POUR L'USINAGE DE L'ALUMINIUM
- DEGREE FOR NON-FERROUS MATERIALS LIKE ALUMINIUM AND COPPER	- SORTE FÜR NICHT-EISENMATERIALIEN WIE ALUMINIUM UND KUPFER	- QUALITE POUR DES USINAGES DE MATERIAUX NON FERREUX TELS QUE L'ALUMINIUM ET LE CUIVRE
- MICROGRAIN GRADE WITH GOOD TOUGHNESS - SUITABLE FOR MEDIUM CUTTING SPEEDS AND HIGH FEED FOR ROUGHING WITH MEDIUM REMOVAL OF MATERIAL	- MIKROKORN SORTE MIT GUTER ZÄHIGKEIT - FÜR MITTEL-NIEDRIGE SCHNITTGESCHWINDIGKEITEN GROSSE VORSCHÜBE FÜR MITTLERE ZERSpannung BEIM SCHRUPPEN GEEIGNET	- QUALITÉ DE MICROGRAIN AVEC BONNE TENACITE - INDIQUÉE POUR MOYENNE-FAIBLE VITESSE DE COUPE ET HAUTE DÉPLACEMENT POUR MOYEN EMPORTATION EN ÉBAUCHAGE
- HIGH TOUGHNESS, GOOD RESISTANCE TO WEAR AND TO THERMAL SHOCK - SUITABLE FOR MEDIUM-HIGH CUTTING SPEEDS ON STEEL AND MEDIUM CUTTING SPEED FOR DIFFICULT IRON OPERATIONS	- HOHE ZÄHIGKEIT, GUTE VERSCHLEISSFESTIGKEIT UND TEMPERATURWECHSELBESTÄNDIGKEIT - GEEIGNET FÜR MITTEL-HOHE SCHNITTGESCHWINDIGKEITEN BEI STAHL UND FÜR MITTLERE SCHNITTGESCHWINDIGKEITEN BEI GÜSEISEN	- HAUTE TENACITÉ, BONNE RÉSISTANCE À L'USURE ET AU SHOCK THERMIQUE - INDIQUÉE POUR DES HAUTE-MOYENNE VITESSE DE COUPE DANS LES USINAGES DE L'ACIER ET MOYENNE POUR LES USINAGES PROBLÉMATIQUES DE LA FONTE
- SPECIFIC GRADE FOR INOX STEEL, PARTICULARLY SUITABLE FOR SUPER-FINISHING - IT CAN BE USED FOR CAST IRON, ALUMINIUM AND HEAT-RESISTANT ALLOYS	- SPEZIALSORTE FÜR INOX-STAHL, BESONDERS ZUM FEIN-SCHLICHTEN GEEIGNET - EINSETZBAR FÜR GUSS, ALUMINIUM UND HITZEBESTÄNDIGE LEGIERUNGEN	- QUALITE SPECIFIQUE POUR L'USINAGE DES ACIERS INOX, SPECIALEMENT PREVUE POUR LES USINAGES DE SUPER FINITION - PEUT ETRE EMPLOYEE DANS LES USINAGES DE FONTE, ALUMINIUM ET ALLIAGES RESISTANTS A LA CHALEUR
- 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. - SORTE 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
- 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.

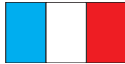
SAU	DIN ISO 513		MATERIALE - MATERIAL MATERIALIEN - MATÉRIAUX							QUICK PICK		 INDICAZIONI - USO	
			PAG. 1119							PAG. 646			
			P	M	K	N	S	H	Tenacità Toughness				
			ACCIAI STEELS STAHL ACIER	ACCIAI INOX STAINLESS STEELS ROSTFREIER STAHL ACIER INOXYDABLE	GHISA CAST IRON GRAUGUSS FONTE GRISE	MAT.NON FERROSI NON-FERROUS MAT. NICHT-EISENMATERIALIEN MAT. FERREUX	MAT.DIFFICILI DIFFICULT MATERIAL SCHWIERIGE MATERIALIEN MAT. DIFCILES	MATERIALI DURI HARD MATERIALS HARTE MATERIALIEN MATÉRIAUX DURS					
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											
T516	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											
T3220	HC	P01-20	○		●							- GRADO DA TORNITURA PER LA LAVORAZIONE DELLA GHISA GRIGIA E SFEROIDALE	
	CVD	K10-30											
T1425	HC	P15-35	●	○	○							- VASTA GAMMA DI IMPIEGHI, IDEAELE PER TUTTE LE LEGHE DI ACCIAIO E GHISA, BUONE PRESTAZIONI ANCHE SU INOX	
	CVD	M10-25 K25-35											
F4425	HC	P30-40	●	●								- ELEVATA TENACITA' , ALTA RESISTENZA ALLA DEFORMAZIONE E ALLA SCHEGGIATURA - INDICATO PER BASSE VELOCITA' DI TAGLIO	
	PVD	M15-35											
T1126 NEW	HC	P15-35	●	●	●							- SUBSTRATO MIGLIORATO CON BUONA RESISTENZA ALL'USURA E ALL'ABRASIONE - ADATTO PERE LAVORAZIONI SENZA L'AUSILIO DEL LUBROREFRIGERANTE.	
	CVD	M10-25 K25-35											
F2430	HC			●				○				- GRADO MOLTO TENACE, IDEALE PER LA LAVORAZIONE DI ACCIAIO INOSSIDABILE A MEDIO BASSE VELOCITA' DI TAGLIO. - OTTIMA RESISTENZA ALL'USURA SIA CON LAVORAZIONI A SECCO CHE IN UMIDO.	
	PVD	M20-40											
T531	HC	P15-30	○	●				●				-QUALITA' MICROGRANO TENACE CON BUONA RESISTENZA AGLI URTI ED AGLI SHOCK TERMICI - INDICATO PER MEDIE E MEDIO-BASSE VELOCITA' DI TAGLIO	
	CVD	M20-40											
T1435	HC	P25-45	●	○								- GRADO INSERTO TENACE PER LAVORAZIONI DIFFICILI CON CONDIZIONI INSTABILI E A TAGLIO INTERROTTO	
	CVD	M20-30											
T5320	HC	P10-30	●	○								-INSERTO CON MEDIA TENACITÀ -INDICATO PER MEDIE ALTE VELOCITÀ DI TAGLIO -ADATTO PER LA LAVORAZIONE DEGLI ACCIAI LEGATI E DEBOLMENTE LEGATI	
	CVD	M20-35											

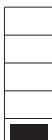
● APPLICAZIONE CONSIGLIATA
RECOMMENDED APPLICATION
EMPFOHLENER EINSATZ
APPLICATION CONSEILLÉE

○ 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
- 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 PERFECT 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 INDICQUÉ POUR L'USINAGE À SEC MEME A DE HAUTES VITESSES DE COUPE
- 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 ZUM SCHLICHTEN UND SCHRUPPEN, ÜBERWIEGEND AUF GRAUGUSS, GEEIGNET.	- HAUTE RESISTANCE A L'USURE ET BONNE TENACITÉ - INDIQUE POUR LES VITESSES HAUTES-MOYENNES DE COUPE DANS LA FINITION ET LE DEGROSSISSAGE PRINCIPALEMENT SUR FONTE GRISE
- TURNING GRADE FOR GREY CAST IRON AND MODULAR CAST IRON	- DREHSORTE FÜR DIE BEARBEITUNG VON GUSS UND SPHÄROGUSS	- DEGRE DE TOURNAGE POUR L'USINAGE DE LA FONTE GRISE ET SPHEROIDALE
- WIDE RANGE OF APPLICATIONS, IDEAL FOR ALL STEEL AND CAST IRON ALLOYS, GOOD PERFORMANCE ALSO ON INOX	- HOHE VIELSEITIGKEIT, IDEAL FÜR ALLE STAHL- UND GUSSLEGIERUNGEN, GUTE LEISTUNG AUCH MIT INOXSTAHL	- VASTE GAMME D'EMPLOIS, IDÉAL POUR TOUS LES ALLIAGES EN ACIER ET FONTE, BONNES PERFORMANCES MEME SUR INOX
- HIGH TOUGHNESS, STRAIN STRENGTH AND RESISTANCE TO CHIPPING - SUITABLE FOR LOW CUTTING SPEEDS	- HOHE ZÄHIGKEIT, UMFORMFESTIGKEIT UND ABSPLITTERWIDERSTAND - FÜR GERINGE SCHNITTGESCHWINDIGKEITEN GEEIGNET	- TENACITÉ ÉLEVÉE, HAUTE RÉSISTANCE À LA DÉFORMATION ET À L'ÉBRÈCHEMENT - INDICQUÉ POUR FAIBLE VITESSE DE COUPE POUR OPÉRATIONS DURS ET DIFFICILES
- IMPROVED SUBSTRATE WITH GOOD RESISTANCE TO WEAR AND ABRASION - SUITABLE FOR MACHINING WITHOUT COOLING LUBRICANT	- VERBESSERTES SUBSTRAT MIT GUTER VERSCHLEISSBESTÄNDIGKEIT UND ABRIEFESTIGKEIT - ZUR BEARBEITUNG OHNE KÜHLSCHMIERSTOFF GEEIGNET	- SUBSTRAT AMÉLIORÉ AVEC BONNE RÉSISTANCE À L'USURE ET À L'ABRASION - SPÉCIALEMENT PRÉVU POUR LES USINAGES SANS LUBRIFIANT-RÉFRIGÉRANT.
- REMARKABLY TOUGH, IDEAL FOR MACHINING STAINLESS STEEL AT MEDIUM-SLOW CUTTING SPEEDS - EXCELLENT WEAR RESISTANCE WITH BOTH DRY AND WET MACHINING WORK	- SEHR ZÄHE SORTE, IDEAL FÜR EDELSTAHLBEARBEITUNGEN MIT MITTLERER/ NIEDRIGER SCHNITTGESCHWINDIGKEIT. - AUSGEZEICHNETE VERSCHLEISSFESTIGKEIT BEI TROCKEN- UND NASSBEARBEITUNGEN.	- DEGRÉ TRÈS TENACE, IDÉAL POUR L'USINAGE DE L'ACIER INOXYDABLE À DES VITESSES BASSES ET MOYENNES DE COUPE. - RÉSISTANCE PARFAITE À L'USURE AVEC DES USINAGES À SEC COMME À L'EAU.
- TOUGH MICROGRAIN GRADE WITH HIGH RESISTANCE TO SHOCK AND THERMAL SHOCK. - SUITABLE FOR MEDIUM AND MEDIUM-LOW CUTTING SPEEDS	- MIKROKORNSORTE MIT HOHER STOSSFESTIGKEIT UND TEMPERATURWECHSELBESTÄNDIGKEIT - FÜR MITTLERE UND MITTEL-NIEDRIGE SCHNITTGESCHWINDIGKEITEN GEEIGNET	- QUALITÉ DE MICROGRAIN TENACE AVEC BONNE RÉSISTANCE AU COUPS ET AU SHOCKS THERMIQUES. - INDICQUÉ POUR MOYENNE ET MOYENNE-FAIBLE VITESSE DE COUPE
- 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
- MEDIUM TOUGH INSERT - IDEAL FOR MEDIUM TO HIGH CUTTING SPEEDS - SUITABLE FOR MACHINING ALLOYED AND WEAKLY ALLOYED STEELS	- WENDEPLATTE MIT MITTLERER ZÄHIGKEIT - GEEIGNET FÜR MITTLERE/HOHE SCHNITTGESCHWINDIGKEITEN - GEEIGNET FÜR BEARBEITUNGEN VON LEGIERTEM UND SCHWACH LEGIERTEM STAHL	- PLAQUETTE AVEC TÉNACITÉ MOYENNE - PRÉVUE POUR DES VITESSES DE COUPE HAUTES ET MOYENNES - PRÉVUE POUR L'USINAGE DES ACIERS ALLIÉS ET FAIBLEMENT ALLIÉS

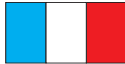
SAU	DIN ISO 513		MATERIALE - MATERIAL MATERIALIEN - MATÉRIAUX						PAG. 1119	QUICK PICK PAG. 646	Tenacità + Toughness -				INDICAZIONI - USO
			P	M	K	N	S	H							
			ACCIAI STEELS STAHL ACIER	ACCIAI INOX STAINLESS STEELS ROSTFREIER STAHL ACIER INOXYDABLE	GHISA CAST IRON GRAUGUSS FONTE GRISE	MAT NON FERROSI NON FERROUS MAT. NICHT-EISENMATERIALIEN	MAT. FERREUX	MAT DIFFICILI DIFFICULT MATERIAL SCHWERGE MATERIALIEN MAT. DIFCILES	MATERIALI DURI HARD MATERIALS HARTE MATERIALIEN MATERIAUX DURS						
T1225	HC	P15-35	●	○							●		- OTTIMA RESISTENZA ALL' USURA E BUONA TENACITÀ. - INDICATO PER UNA VASTA GAMMA DI APPLICAZIONI		
	CVD	M15-35													
T2330 NEW	HC	M30-40		●							●	●	- GRADO PER LA LAVORAZIONE DELL'ACCIAIO INOX		
	CVD														
T540	HC	P20-43	●	○				○			●		- OTTIMA TENACITÀ , RESISTENZA ALL'USURA E ALLA SCHEGGIATURA - INDICATO PER MEDIO-BASSE VELOCITÀ DI TAGLIO		
	CVD	M25-40													
D3010 NEW	DP	N01-10				●					●		- GRADO INDICATO PER LA TORNITURA DI MATERIALI NON FERROSI, ES. LEGHE DI ALLUMINIO, MEGLIO SE AD ALTO TENORE DI SILICIO, RAME, BRONZO TERMOPLASTICI RINFORZATI E COMPOSITI. - OTTIMA FINITURA E VITA UTENSILE.		

● APPLICAZIONE CONSIGLIATA
RECOMMENDED APPLICATION
EMPFOHLENER EINSATZ
APPLICATION CONSEILLÉE

○ APPLICAZIONE POSSIBILE
POSSIBLE APPLICATION
MÖGLICHE ANWENDUNG
APPLICATION POSSIBLE

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RECOMMENDED APPLICATION
EMPFOHLENER EINSATZ
APPLICATION CONSEILLÉE

○ APPLICAZIONE POSSIBILE
POSSIBLE APPLICATION
MÖGLICHE ANWENDUNG
APPLICATION POSSIBLE

 INDICATIONS - USE	 GEBRAUCHSANWEISUNGEN	 INDICATION - USAGE
- EXCELLENT RESISTANCE TO WEAR AND GOOD TOUGHNESS - SUITABLE FOR A WIDE RANGE OF APPLICATIONS	- OPTIMAL VERSCHLEISSFESTIGKEIT UND GUTE ZÄHIGKEIT - GEEIGNET FÜR EINE BREITE PALETTE VON ANWENDUNGEN	- OPTIMAL RÉSISTANCE À L'USURE ET BONNE TENACITÉ - INDIQUE POUR UNE VASTE GAMME D'APPLICATIONS
- GRADE FOR THE MACHINING OF STAINLESS STEEL	- SORTE FÜR DIE BEARBEITUNG VON INOX-STAHL	- NUANCE POUR L'USINAGE DE L'ACIER INOXYDABLE
- HIGH TOUGHNESS, RESISTANCE TO WEAR AND CHIPPING - SUITABLE FOR MEDIUM-LOW CUTTING SPEEDS	- SEHR GUTER VERSCHLEISS, UND AUSBRUCHFESTIGKEIT - FÜR MITTEL-NIEDRIGE SCHNITTGESCHWINDIGKEITEN	- HAUTE TENACITÉ, RÉSISTANCE À L'USURE ET À L'ÉBRÈCHEMENT - INDIQUÉE POUR MOYENNE-FAIBLE VITESSE DE COUPE
- TURNING GRADE FOR NON-FERROUS MATERIALS, SUCH AS ALUMINUM ALLOYS, PREFERABLY WITH HIGH SILICON, COPPER, BRONZE CONTENT, REINFORCED THERMOPLASTIC MATERIALS AND COMPOUNDS - EXCELLENT FINISHING AND TOOL LIFE	- SORTE ZUM DREHEN FÜR NICHT-EISENMATERIALIEN, Z.B. ALUMINIUM-LEGIERUNGEN, VORZUGSWEISE MIT HOHEM SILIZIUM-, KUPFER- UND BRONZEGEHALT, VERSTÄRKTE THERMOPLASTE UND VERBUNDMATERIALIEN. - HERVORRAGENDE OBERFLÄCHENGÜTE UND WERKZEUGSTANDZEIT	- DEGRÉ INDIQUÉ POUR LE TOURNAGE DE MATÉRIAUX NON FERREUX, TELS QUE ALLIAGES D'ALUMINIUM, AUTANT QUE POSSIBLE À TENEUR ÉLEVÉE DE SILICIUM, CUIVRE, BRONZE, THERMOPLASTIQUES RENFORCÉS ET COMPOSITES. - FINITION ET VIE DE L'OUTIL EXCELLENTE.

HT

CERMET

HW

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

HC

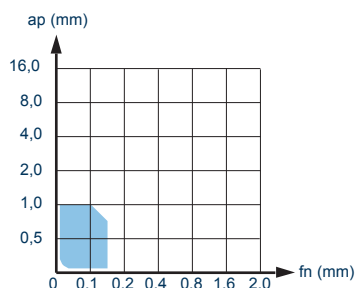
METALLO DURO RICOPERTO
COATED CARBIDE
BESCHICHTETES HARTMETALL
MÉTAL DUR RECOUVERT

DP

DIAMANTE POLICRISTALLINO (PCD)
POLYCRYSTALLINE DIAMOND (PCD)
POLYKRISTALLINER DIAMANT (PCD)
DIAMANT POLYCRISTALLIN (PCD)

MATERIALE MATERIAL MATERIALIEN MATERIAUX PAG 1119	VDI 3323 GR.	HB HRC Rm	C4010	DT63	T115	N3610 NEW	N3015	T120	F2120	F2425	F2435	T1415	T516
P ACCIAI STEELS STAHL ACIER	1	125	230-270	310-400						130-250	170-190	220-400	
	2	180	230-270	260-350						130-250	170-190	220-400	
	3	250	230-270	220-300						130-250	170-190	220-400	
	4	220	230-270	220-330						130-250	170-190	220-400	
	5	300	230-270	180-280						130-250	170-190	220-400	
	6	180	230-270	250-350						130-250	90-150	220-400	
	7-8	250-300	180-230	200-350						60-180	90-150	200-320	
	9	350	180-230	150-220						60-180	90-150	200-320	
	10	200	160-200	200-350						80-200	120-200	180-320	
	11	350	160-200	150-220						80-200	120-200	180-320	
	12	200	230-270	180-300				80-150		120-250	140-180	200-320	
	13	330	170-240	150-250				40-70		120-250	140-180	200-320	
M ACCIAI INOX STAINLESS STEELS ROSTFREIER STAHL ACIER INOXYDABLE	14.1	180	170-240	150-280				50-100	120-200	100-250	110-200		
	14.2	230-260	130-160	100-150				50-90	60-160	40-160	55-150		
K GHISA CAST IRON GROUJSS FONTE GRISE	15	180	200-300	200-300	120-160			100-150	120-160			140-370	180-300
	16	260	200-300	150-260	120-160			70-120	120-160			140-370	140-270
	17	160	220-300	180-300	130-170			100-140	120-160			190-430	130-220
	18	250	220-300	150-240	90-130			80-120	120-160			190-430	100-200
	19	130	250-350	170-280	140-200			120-180	140-220			180-520	150-280
	20	230	250-350	150-220	120-160			70-120	120-160			180-520	120-220
N MAT. NON FERROSI NON FERROUS MAT. NICHT-EISENMATERIALIEN MAT. FERREUX	21	60			100-950	100-950	400-950	300-1000	100-400				
	22	100			100-950	100-950	160-950	300-800	100-400				
	23	75			100-950	100-950	320-950	200-500	100-400				
	24	90			100-950	100-950	240-950	200-400	100-400				
	25	130			100-800	100-800	160-800	200-300	100-400				
	26	110			100-600	100-600	200-520	200-450	100-400				
	27	90			100-600	100-600	200-800	200-400	100-400				
	28	100			100-400	100-400	120-320	250-350	100-400				
	29				60-180	60-180		300-500	100-600				
	30				100-250	100-250		100-300	100-600				
S MAT. DIFFICILI DIFFICULT MATERIAL SCHWIERIGE MATERIALIEN MAT. DIFCILES	31	200			30-45				20-50				
	32	280			20-35				20-50				
	33	250			20-35				15-40				
	34	350			18-30				20-35				
	35	320			15-25				20-35				
	36	Rm400			60-120				80-140				
	37	Rm1050			30-80				80-140				
H MATERIALI DURI HARD MATERIALS HARTE MATERIALIEN MATERIAUX DURS	38	55HRC											
	39	60HRC											
	40	400											
	41	55HRC											

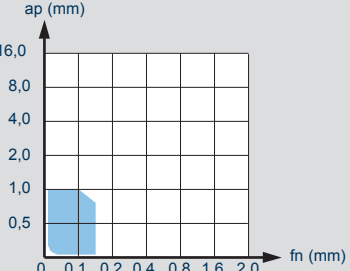
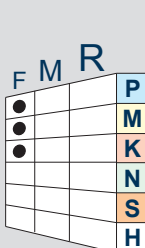
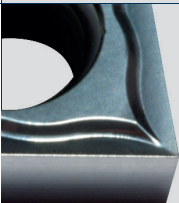
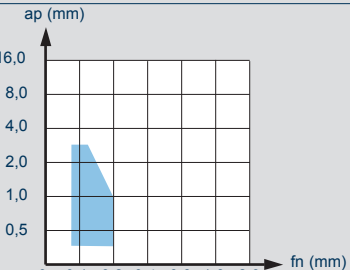
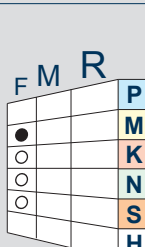
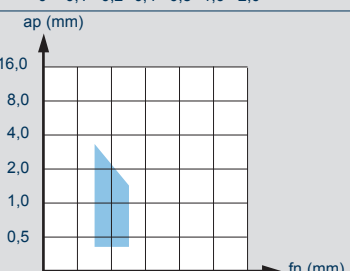
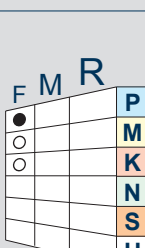
MATERIALE MATERIAL MATERIALIEN MATÉRIAUX PAG 1119	VDI 3323 GR.	HB HRC Rm	T3220	T1425	T1126 NEW	F2430	T531	T1435	T5320	T1225	T2330 NEW	T540	D3010 NEW
P ACCIAI STEELS STAHL ACIER	1	125	200-340	170-240	170-240		200-300	170-190	200-350	170-250		180-230	
	2	180	200-340	170-240	170-240		180-280	170-190	170-330	150-200		170-190	
	3	250	200-340	170-240	170-240			170-190	120-300	100-170		130-150	
	4	220	200-340	170-240	170-240			170-190	100-250	80-140			
	5	300	200-340	170-240	170-240			170-190	100-280	100-160			
	6	180	200-340	170-240	170-240			170-190	120-250	140-200		150-190	
	7-8	250-300	150-290	100-190	100-190			90-150	70-200	100-160		90-150	
	9	350	150-290	130-210	130-210			120-200	100-250	100-150		70-130	
	10	200	160-290	130-210	130-210			120-200	70-200	80-140		120-200	
	11	350	160-290	130-220	130-220			140-180	100-250	80-170		50-100	
	12	200	160-290	130-220	130-220		130-180	140-180	100-230	120-180		140-180	
	13	330	160-290	130-220	130-220		100-140	140-200	100-230	80-140		110-160	
M ACCIAI INOX STAINLESS STEELS ROSTFREIER STAHL ACIER INOXYDABLE	14.1	180		100-210	100-210	100-220	100-160	100-190	100-200	100-130	100-180	110-190	
	14.2	230-260		70-100	70-100	80-200	80-120	50-150	80-150	80-130	80-140	80-150	
K GHISA CAST IRON GRAUGUSS FONTE GRISE	15	180	150-400	130-210	130-210								
	16	260	150-400	130-210	130-210								
	17	160	200-450	120-240	120-240								
	18	250	200-450	120-240	120-240								
	19	130	200-550	150-250	150-250								
	20	230	200-550	150-250	150-250								
N MAT NON FERROSI NON FERROUS MAT. NICHT-EISENMATERIALIEN MAT. FERREUX	21	60											300-950
	22	100											300-950
	23	75											200-950
	24	90											200-950
	25	130											180-500
	26	110											180-350
	27	90											180-350
	28	100											200-950
	29												300-950
	30												300-950
S MAT DIFFICILI DIFFICULT MATERIAL SCHWIERIGE MATERIALIEN MAT. DIFICILES	31	200				20-40	20-40					20-40	
	32	280				20-40	15-35					15-35	
	33	250				20-40	10-30					8-25	
	34	350				10-30	5-18					4-15	
	35	320				10-30	5-18					4-15	
	36	Rm400				10-30	80-130					80-130	
	37	Rm1050				20-50	20-40					15-35	
H MATERIALI DURI HARD MATERIALS HARTE MATERIALIEN MATÉRIAUX DURS	38	55HRC											
	39	60HRC											
	40	400											
	41	55HRC											

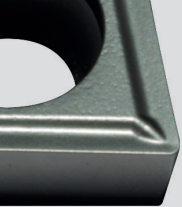
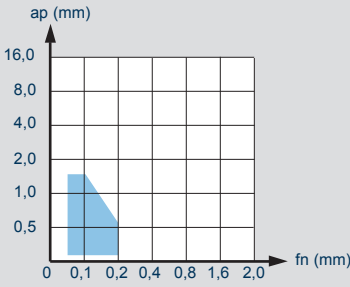
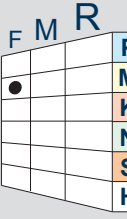
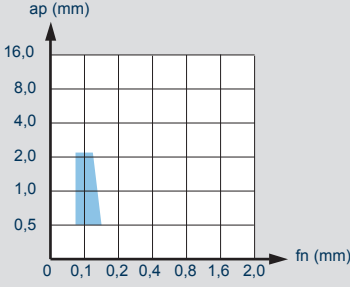
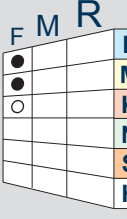
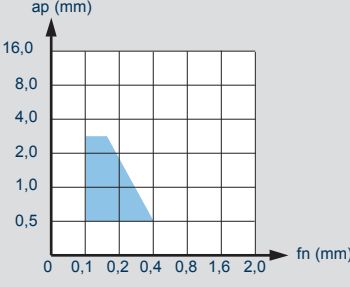
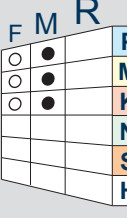
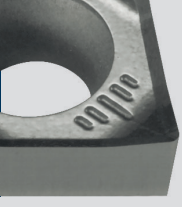
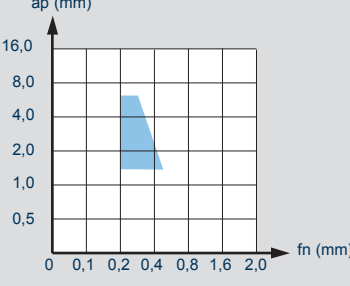
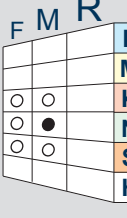
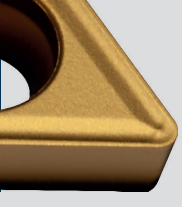
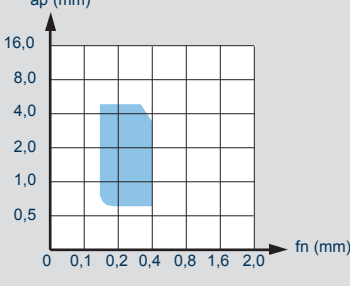
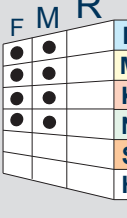
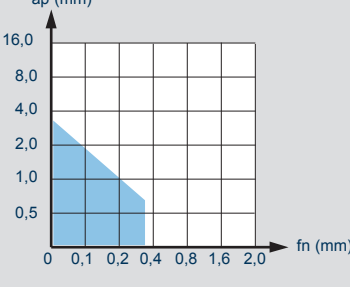


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●			M	DT61T	
●			K	T120	
●			N	T120	
			S		
			H		

GRADI CONSIGLIATI
 RECOMMENDED GRADES
 EMPFOHLENE SORTEN
 DEGRÉS CONSEILLÉS

				
F =	FINITURA, LAV. LEGGERE	FINISHING, LIGHT MACHINING	SCHLICHTEN, LEICHTE BEARBEITUNG	FINISSAGE USINAGES LÉGÈRES
M =	GENERICICO, LAV. MEDIE	GENERIC MEDIUM MACHINING	ALLGEMEIN, MITTELSCHWERE BEARBEITUNG	GENERAL USINAGES MOYENS
R =	SGROSSATURA, LAV. PESANTI	ROUGHING, HEAVY MACHINING	SCHRUPPEN, SCHWERE BEARBEITUNG	DEGROSSISAGES, USINAGES LOURDS
P, M, K, N, S, H =	MATERIALI ISO PAG 1119	ISO MATERIALS PAGE 1119	ISO-MATERIEALIEN, SEITE 1119	MATERIAUX ISO PAG 1119
	TAGLIO CONTINUO	CONTINUOUS CUT	KONTINUIERLICHER SCHNITT	TRONÇONNAGE CONTINU
	TAGLIO DISCONTINUO	DISCONTINUOUS CUT	DISKONTINUIERLICHER SCHNITT	TRONÇONNAGE DISCONTINU
	TAGLIO INTERROTTO	INTERRUPTED CUT	UNTERBROCHENER SCHNITT	TRONÇONNAGE INTERROMPU
● =	APPLICAZIONE CONSIGLIATA	RECOMMENDED APPLICATION	EMPFOHLENER EINSATZ	APPLICATION CONSEILLÉE
○ =	APPLICAZIONE POSSIBILE	POSSIBLE APPLICATION	MOGLICHE ANWENDUNG	APPLICATION POSSIBLE
ap (mm) =	PROFONDITÀ DI PASSATA	DEPTH OF CUT	GANGTIEFE	PROFONDEUR DE PASSE
fn (mm) =	AVANZAMENTO AL GIRO	FEED/REVOLUTION	VORSCHUB PRO UMDREHUNG	DÉPLACEMENT AU TOUR

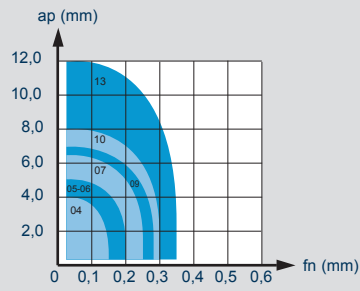
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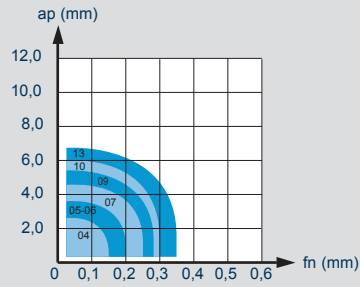


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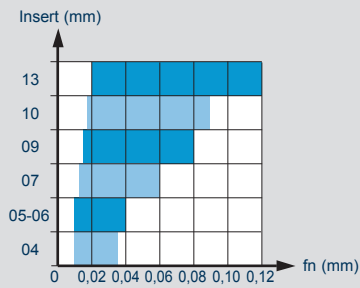
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TURNING 1,5XD**



**TORNITURA 2,25XD
TURNING 2,25XD**



**FORATURA
DRILLING**

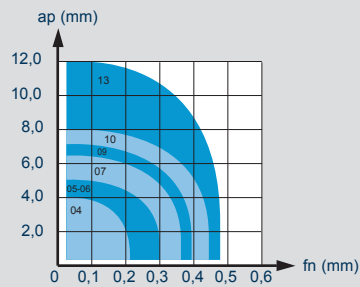


F	M	R			
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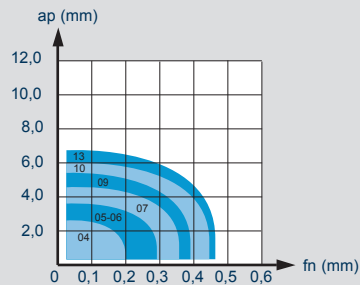


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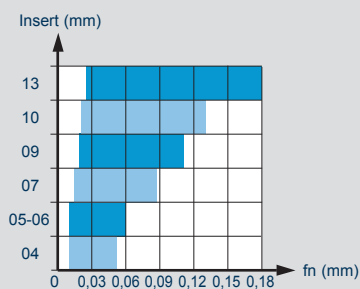
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TURNING 1,5XD**



**TORNITURA 2,25XD
TURNING 2,25XD**



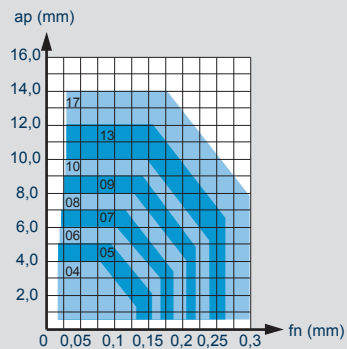
**FORATURA
DRILLING**



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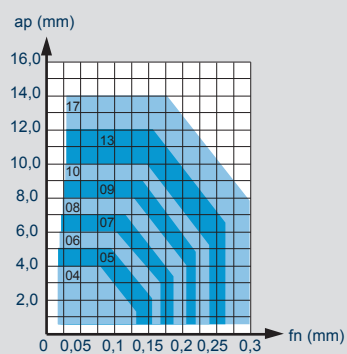
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.N57P NEW



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C	N	M	G
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12	04	08
5	6	7

-	-
8	9

W	5	2	P
10	11	12	13

1 FORMA INSERTO
SHAPE OF INSERT

A	B
C	D
E	H
K	L
M	R
S	T
V	W

2 SPOGLIA INFER.
RELIEF ANGLE

A	3°
B	5°
C	7°
D	15°
E	20°
F	25°
G	30°
N	0°
P	11°

3 TOLLERANZA+/--(mm)
TOLERANCE+/--(mm)

	m	s	d
A	+/-0,005	+/-0,025	+/-0,025
C	+/-0,013	+/-0,025	+/-0,025
E	+/-0,025	+/-0,025	+/-0,025
F	+/-0,005	+/-0,025	+/-0,013
G	+/-0,025	+/-0,05 +/-0,13	+/-0,025
H	+/-0,013	+/-0,025	+/-0,013
J	+/-0,005	+/-0,025	+/-0,05 +/-0,13
K	+/-0,013	+/-0,025	+/-0,05 +/-0,13
L	+/-0,05	+/-0,013	+/-0,025
M	+/-0,08 +/-0,18	+/-0,13	+/-0,05 +/-0,18
N	+/-0,08 +/-0,18	+/-0,025	+/-0,05 +/-0,13
U	+/-0,13 +/-0,38	+/-0,05 +/-0,13	+/-0,08 +/-0,32

4 TIPO INSERTO
TYPE OF INSERT

A	N
B	Q
C	R
F	T
G	U
H	W
J	X SPECIALE SPECIAL
M	

5 LUNGHEZZA TAGLIANTE
CUTTING EDGE LENGTH

Ød CERCHIO INSCRITTO INSCRIBED CIRCLE	A	C	D	E	K	L	M	R	S	T	V	W
3,97												02
4,76										08		02-03
5,56		05								09		
6,00												03
6,35		06	07	06			06		06	11	11	04
6,70	10									07		
7,94												05
8,00				08								
9,45	16											
9,52	15-16	09	11	09	16	15	09		09	16	16	06
10,00								10				06
11,00									11			
11,50						12						
12,00							12					07
12,62						18						
12,70		12	15	12	15-20			12	22		08	
15,87		16						15				
19,05		19						19				

6 SPESSORE
THICKNESS

S	mm
01	1,59
T1	1,97
02	2,38
T2	2,78
03	3,18
T3	3,97
04	4,76
05	5,56
06	6,35
07	7,94
09	9,52

7 RAGGIO
RADIUS

R	00 (")	MO (mm)
		r (mm)
02		r=0,2
04		r=0,4
05		r=0,5
06		r=0,6
08		r=0,8
10		r=1,0
12		r=1,2
16		r=1,6

8

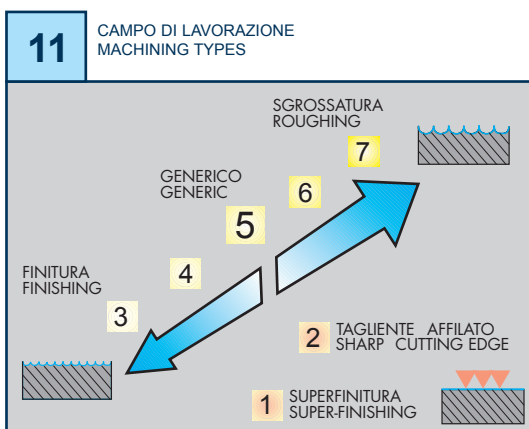
F
E
T
S

9

R
L
N

10 LETTERA DI IDENTIF.
IDENTIFICATION LETTER

A	N
C	P
D	R
E	S
H	T
I	U
J	W
K	Y
L	Z
M	

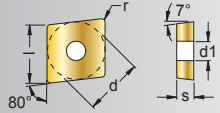
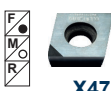


12 PREPARAZIONE TAGLIANTE
CUTTING EDGE PREPARATION

1 =	SPECIFICO PER GHISA SPECIFIC FOR CAST IRON
3 =	SPECIFICO PER ACCIAIO INOX SPECIFIC FOR STAINLESS STEEL
7 =	SPECIFICO PER LEGHE DI ALLUMINIO SPECIFIC FOR ALUMINIUM ALLOYS
9 =	SPECIFICO PER ACCIAIO SPECIFIC FOR STEEL
2 =	
4 =	
5 =	INTERMEDI DI USO GENERICO INTERMEDIATE FOR GENERAL USE
6 =	
8 =	

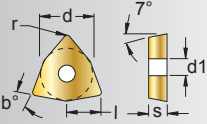
13

P =	LUCIDATO POLISH
W =	GEOMETRIA CON WIPER GEOMETRY WITH WIPER

CCET CCGT CCGW CCMT CCMX							HT CERMET		HW NON RIVESTITI CEMENTED CARBIDE GRADES		HC RIVESTITI COATED GRADES BESCHICHTET RECOUVERTS										DP PCD															
INSERTI POSITIVI - POSITIVE INSERTS - POSITIVE WENDEPLATTEN - PLAQUÉTTES POSITIVES																	C4010	DT63	T115				F2120	F2425	F2435	T1415	T1425	T3220	T1126 ξmZ	T531	T1435					D3010 ξmZ
ART.	COD.		l	d	s	d1	r																													
 .B22	CCET 060202 L .B22		6,5	6,35	2,38	2,8	0,2	■																	■											
	CCET 060204 L .B22		6,5	6,35	2,38	2,8	0,4	■																	■											
	CCET 09T304 L .B22		9,7	9,52	3,97	4,4	0,4	■																	■											
 .G13	CCGT 060200 .G13		6,5	6,35	2,38	2,8	0,0							■																						
	CCGT 060201 .G13		6,5	6,35	2,38	2,8	0,1							■																						
	CCGT 09T300 .G13		9,7	9,52	3,97	4,4	0,0							■																						
	CCGT 09T301 .G13		9,7	9,52	3,97	4,4	0,1							■																						
 .G57P	CCGT 060201 .G57P		6,5	6,35	2,38	2,8	0,1			■																										
	CCGT 060202 .G57P		6,5	6,35	2,38	2,8	0,2			■																										
	CCGT 060204 .G57P		6,5	6,35	2,38	2,8	0,4			■																										
	CCGT 09T302 .G57P		9,7	9,52	3,97	4,4	0,2			■																										
	CCGT 09T304 .G57P		9,7	9,52	3,97	4,4	0,4			■																										
	CCGT 09T308 .G57P		9,7	9,52	3,97	4,4	0,8			■																										
 .X47	CCGW 060202 .X47		6,5	6,35	2,38	2,8	0,2																													
	CCGW 060204 .X47		6,5	6,35	2,38	2,8	0,4																													
	CCGW 09T302 .X47		9,7	9,52	3,97	4,4	0,2																													
	CCGW 09T304 .X47		9,7	9,52	3,97	4,4	0,4																													
	CCGW 09T308 .X47		9,7	9,52	3,97	4,4	0,8																													
	NEW																																			
 .G39	CCMT 060204 .G39		6,5	6,35	2,38	2,8	0,4	■																												
	CCMT 09T304 .G39		9,7	9,52	3,97	4,4	0,4	■																												
 .G42	CCMT 060202 .G42		6,5	6,35	2,38	2,8	0,2							■					■																	
	CCMT 060204 .G42		6,5	6,35	2,38	2,8	0,4							■					■	■																
	CCMT 09T302 .G42		9,7	9,52	3,97	4,4	0,2							■					■																	
	CCMT 09T304 .G42		9,7	9,52	3,97	4,4	0,4							■					■	■																
	CCMT 09T308 .G42		9,7	9,52	3,97	4,4	0,8							■					■	■																
 .G52	CCMT 060204 .G52		6,5	6,35	2,38	2,8	0,4							■					■																	
	CCMT 060208 .G52		6,5	6,35	2,38	2,8	0,8							■					■																	
	CCMT 09T304 .G52		9,7	9,52	3,97	4,4	0,4							■	■	■	■	■	■	■					■											
	CCMT 09T308 .G52		9,7	9,52	3,97	4,4	0,8							■	■	■	■	■	■	■					■											
 .G32W	CCMX 09T304 .G32W		9,7	9,52	3,97	4,4	0,4												■																	
	NEW																																			
MATERIALE - MATERIAL - MATERIALIEN - MATÉRIAUX								C4010	DT63	T115				F2120	F2425	F2435	T1415	T1425	T3220	T1126 ξmZ	T531	T1435							D3010 ξmZ							
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 RÉSISTANTES À LA CHALEUR									○			○																							
H	MATERIALI DURI E TEMPRATI - HARD AND HARDENED MATERIAL - HARTE UND GEHÄRTETE MATERIALIEN - MATERIAUX DURS ET TREMPÉS																																			

SMU45		TCGT TCGW TCMT		HT		HW		HC										DP					
	CERMET		NON RIVESTITI CEMENTED CARBIDE GRADES		RIVESTITI COATED GRADES BESCHICHTET RECOUVERTS										PCD								
	INSERTI POSITIVI - POSITIVE INSERTS - POSITIVE WENDEPLATTEN - PLAQUÉTTES POSITIVES																						
ART.	COD.	l	d	s	d1	r	C4010		T115	T120		T5610	F2425	F2435	T1415	T1425	T3220	F4425		T1435	T540	D3010 $\leq m2$	
 .X55	SMU45 10T2 .X55	9,5	6,1	2,83	2,8	–			■			■						■					
 .G39	TCGT 110202 .G39	11,0	6,35	2,38	2,8	0,2	■																
 .G57P	TCGT 110204 .G57P	11,0	6,35	2,38	2,8	0,4			■														
 .X47	TCGW 110202 .X47	11,0	6,35	2,38	2,8	0,2																	■
	TCGW 110204 .X47	11,0	6,35	2,38	2,8	0,4																	■
	NEW																						
 .G39	TCMT 110204 .G39	11,0	6,35	2,38	2,8	0,4	■																
 .S42	TCMT 110202 .S42	11,0	6,35	2,38	2,8	0,2																■	
	TCMT 110204 .S42	11,0	6,35	2,38	2,8	0,4			■													■	
 .G52	TCMT 080204 .G52	8,2	4,76	2,38	2,3	0,4														■			
	TCMT 110204 .G52	11,0	6,35	2,38	2,8	0,4						■	■	■	■	■				■			
	TCMT 110208 .G52	11,0	6,35	2,38	2,8	0,8						■	■		■	■				■			
MATERIALE - MATERIAL - MATERIALIEN - MATÉRIAUX							C4010		T115	T120		T5610	F2425	F2435	T1415	T1425	T3220	F4425		T1435	T540	D3010 $\leq m2$	
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																						

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

XCHX..								HT	HW			HC							DP			
								CERMET	NON RIVESTITI CEMENTED CARBIDE GRADES			RIVESTITI COATED GRADES BESCHICHTET RECOUVERTS							PCD			
ART.	COD.	l	d	b°	s	d1	r			N3015					F2430					T1225		
 F44	XCHX 040102 .F44	4,0	6,35	88	1,59	2,25	0,2								■					■		
	XCHX 040104 .F44	4,0	6,35	88	1,59	2,25	0,4								■					■		
	XCHX 05T102 .F44	5,0	7,938	88	1,98	2,8	0,2								■					■		
	XCHX 05T104 .F44	5,0	7,938	88	1,98	2,8	0,4								■					■		
	XCHX 060202 .F44	5,5	8,73	88	2,38	2,8	0,2								■					■		
	XCHX 060204 .F44	5,5	8,73	88	2,38	2,8	0,4								■					■		
	XCHX 070304 .F44	7,5	12,0	88	3,18	3,4	0,4								■					■		
	XCHX 070308 .F44	7,5	12,0	88	3,18	3,4	0,8								■					■		
	XCHX 090304 .F44	9,0	14,29	88	3,18	4,4	0,4								■					■		
	XCHX 090308 .F44	9,0	14,29	88	3,18	4,4	0,8								■					■		
	XCHX 10T304 .F44	10,0	15,875	88	3,97	5,9	0,4								■					■		
	XCHX 10T308 .F44	10,0	15,875	88	3,97	5,9	0,8								■					■		
	XCHX 130508 .F44	13,0	21,0	88	5,56	7,0	0,8								■					■		
 F47P	XCHX 040102 .F47P	4,0	6,35	88	1,59	2,25	0,2			■												
	XCHX 040104 .F47P	4,0	6,35	88	1,59	2,25	0,4			■												
	XCHX 05T102 .F47P	5,0	7,938	88	1,98	2,8	0,2			■												
	XCHX 05T104 .F47P	5,0	7,938	88	1,98	2,8	0,4			■												
	XCHX 060202 .F47P	5,5	8,73	88	2,38	2,8	0,2			■												
	XCHX 060204 .F47P	5,5	8,73	88	2,38	2,8	0,4			■												
	XCHX 070304 .F47P	7,5	12,0	88	3,18	3,4	0,4			■												
	XCHX 070308 .F47P	7,5	12,0	88	3,18	3,4	0,8			■												
	XCHX 090304 .F47P	9,0	14,29	88	3,18	4,4	0,4			■												
	XCHX 090308 .F47P	9,0	14,29	88	3,18	4,4	0,8			■												
	XCHX 10T304 .F47P	10,0	15,875	88	3,97	5,9	0,4			■												
	XCHX 10T308 .F47P	10,0	15,875	88	3,97	5,9	0,8			■												
	XCHX 130508 .F47P	13,0	21,0	88	5,56	7,0	0,8			■												
MATERIALE - MATERIAL - MATERIALIEN - MATÉRIAUX										N3015				F2430					T1225			
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																					