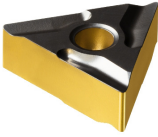
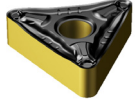
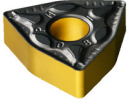
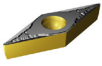
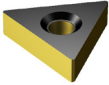
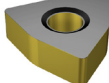


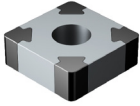
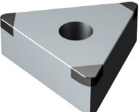
(P) Pastilhas para Torneamento de Aços

	Código	ap(mm)	fn(mm/r)	Vc(m/min)
	TNMG 16 04 04R - K 4425	2.5(0.7-5)	0.22(0.14-0.3)	250 (180-480)
	16 04 08R - K 4425	3.0 (0.8-5)	0.3(0.14-0.5)	
	16 04 04L - K 4425	2.5 (0.7-5)	0.22(0.14-0.3)	
	16 04 08L - K 4425	3.0 (0.8-5)	0.3(0.14-0.5)	
	TNMG 16 04 04 - PM 4425	3.0 (0.8-5)	0.2(0.1-0.3)	250 (180-480)
	16 04 08 - PM 4425	3.0 (0.8-5)	0.3(0.15-0.5)	
	22 04 04 - PM 4425	4.0 (0.4-6.6)	0.2(0.1-0.3)	
	22 04 08 - PM 4425	4.0 (0.5-6.6)	0.3(0.14-0.5)	
	22 04 12 - PM 4425	4.0 (0.8-6.6)	0.35(0.18-0.6)	
	WNMG 06 04 08 - PM 4425	2.0(0.5-3)	0.3(0.15-0.5)	250(180-400)
	08 04 04 - QM 4425	3.0 (1-4)	0.2(0.18-0.25)	
	08 04 08 - PM 4425	2.5 (0.5-4)	0.3(0.15-0.5)	
	VBMT 16 04 04 - PM 4425	1.5(0.3-3.2)	0.14(0.07-0.2)	250(180-400)
	16 04 08 - PM 4425	1.7(0.6-3.2)	0.18(0.09-0.27)	
	TCMT 09 02 04 - PM 4425	1.2(0.3-2)	0.11(0.06-0.17)	200(180-400)
	11 03 04 - PM 4425	1.2(0.3-2.2)	0.13(0.06-0.19)	

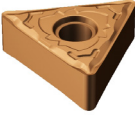
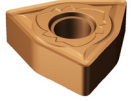
(K) Pastilhas para Torneamento em Ferro Fundido

	TNMA 16 04 04-KR 3210	2.5(0.2-5)	0.2(0.1-0.3)	300(250-400)
	16 04 08-KR 3210	3.5(0.2-7.0)	0.35(0.15-0.6)	
	WNMA 06 04 08-KR 3210	2.5(0.2-4)	0.35(0.15-0.6)	250(225-350)
	16 04 08-KR 3210	3.0(0.2-5)	0.35(0.15-0.6)	

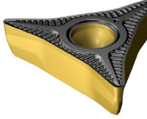
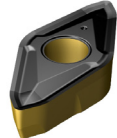
Pastilhas CBN (Nitreto Cúbico de Boro)

	SNGA090308S01030A7025	0.2(0.07-0.4)	0.16(0.05-0.26)	115(100-150)
	120412S01530F7135	0.2(0.07-0.6)	0.16(0.05-0.31)	
	120424S01025F7135	0.15(0.05-1.2)	0.21(0.08-0.31)	
	TNGA160408S01530F 7135	0.2(0.1-0.4)	0.15(0.05-0.25)	115(100-150)
	160412S01530F7135	0.2(0.1-0.6)	0.15(0.05-0.3)	
	160416S01025F7135	0.15(0.05-0.8)	0.15(0.05-0.3)	

(M) Pastilhas para Torneamento de aço Inox

	Código	ap(mm)	fn(mm/r)	Vc(m/min)
	TNMG 16 04 04-SF 1115	0.4(0.15-1.5)	0.12(0.08-0.22)	185(165-270)
	16 04 08 SM 1115	2.5(0.2-4)	0.35(0.15-0.6)	
	16 04 12 MM 2220	3(0.5-4.8)	0.3(0.1-0.6)	
	16 04 08 MM 2220	3(0.5-4.8)	0.25(0.1-0.45)	
	WNMG 08 04 04-MF 2220	0.4(0.1-1.5)	0.15(0.05-0.3)	160(100-300)
	08 04 08-MM 2220	2.5(0.5-4)	0.25(0.1-0.45)	
	08 04 08-SMR 1115	2.0(0.5-4)	0.3(0.1-0.4)	

Novas linhas e conceitos de ferramenta

	Prime A CP-A1104-L5 4415	1(0.25-3)	0.4(0.2-0.5)	250 (65-400)
	CP-A1108-L3 1115	1(0.25-3)	0.3(0.2-0.5)	
	CP-A1108-L5 4425	1.5(0.25-3)	0.4(0.2-0.5)	
	Prime B CP-B1108-M54425	2(0.5-4)	0.59(0.31-1.21)	150 (30-350)
	CP-B1108-M5W 2025	2(0.5-4)	0.59(0.31-1.21)	
	CP-B1108-H3 H13A	2(0.5-4)	0.59(0.31-1.02)	

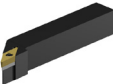
Glossário e Fórmulas

$n = \frac{\text{Rotação(RPM)} \times V_c \times 1000}{\pi \times D}$ Tempo de Corte (min) $T_c = \frac{l_m}{f_n \times n}$ Rugosidade Superficial (um) $R_{\max} = \frac{f_n^2}{r_\epsilon} \times 125$	P - Aços	ap - Profundidade de Corte (mm);
	M - Aços Inoxidáveis	fn - Avanço (mm/min);
	K - Ferros Fundidos	vc - Velocidade de corte (m/min);
	N - Metais Não Ferrosos	lm - Comprimento usinado (mm);
	S - HRSA/Titânio	n = Rotações por minuto (rpm);
H - Aços Endurecidos	D = Diâmetro (mm);	re - Raio de ponta (mm).

Ferramentas para Torneamento Interno

	Ferramenta	Diâmetro (mm)	Diâmetro Min (mm)	Parafuso/Grampo	Calço	Pino
	A10KSTFCR09	10	13	5513 020-05	-	-
	A12MSTFCR11B1	12	16	5513 020-03	-	-
	A16RSTFCR11B1	16	20	5513 020-03	-	-
	A20SSTFCR11B1	20	25	5513 020-03	-	-
	S25TPTFNR16W	25	32	170.38-820-1	-	5313 021-01
	S32UPTFNR16W	32	40	170.38-820-1	170.3-852	5313 021-02
	S40VPTFNR16W	40	50	170.38-820-1	170.3-852	5313 021-02
	S40VPTFNR22W	40	50	170.38-824-1	170.3-855	5313 021-03

Ferramentas para Torneamento Externo

	Ferramenta	Parafuso/Grampo	Calço	Pino	Parafuso/Calço
	MTJNR2020K16M1	170.38-820-1	170.3-852	5313 021-02	3212 010-206
	MTJNR2525M16M1	170.38-820-1	170.3-852	5313 021-02	3212 010-206
	MTJNR2525M22M1	170.38-821-1	170.3-855	181.38-840	3212 010-255
	MTJNR3225P22M1	170.38-821-1	170.3-855	181.38-840	3212 010-255
	MWLNR2020K06	5431 125-011	5322 331-06	5313 022-01	5512 030-03
	MWLNR2020K08	5431 125-021	5322 331-07	5313 022-03	3212 010-255
	MWLNR2525M08	5431 125-021	5322 331-07	5313 022-03	3212 010-255
	SVJBR2020K16	5513 020-01	5322 270-01	-	5512 090-01
	SVJBR2525M16	5513 020-01	5322 270-01	-	5512 090-01

Corte e Canal/Bedame

Lâmina

	Corocut 1-2	QD	Largura (mm)
	N123 E15-21A2	QD-NR2E26-25A	2
	N123 G30-21A2	QD-NN2G36-21A	3
	N123 G55-25A2	QD-NN2G60-25A	3
	N123 H55-25A2	QD-NN2H60-25A	4

Bloco porta lâmina

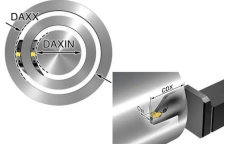
	Ferramenta	ar (máx)
	151.2-2020-21M	35mm
	151.2-2020-25M	60mm
	151.2-2520-25M	60mm

Ferramentas CoroCut 1-2 Cortes e Canais Externos

	Ferramenta (20x20)	Ferramenta(25x25)	Largura (mm)
	RF123E15-2020B	RF123E15-2020B	2
	RF123G20-2020B	RF123G20-2020B	3
	RF123H25-2525B	RF123H25-2525B	4

Ferramentas CoroCut 1-2 - Cortes internos

	Ferramenta (20x20)	Diâmetro da Ferramenta (mm)	Largura (mm)	Largura (mm)
	RAG123E05-20B	20	32	2
	RAG123G06-20B	20	32	3
	RAG123G07-25B	25	32	3
	RAG123H07-25B	25	32	4

Ferramentas CoroCut 1-2/QF Para Canais Frontais				
	Ferramenta	Dmín(mm)	Dmáx(mm)	Largura (mm)
	QFU-LFH26C2525-045B	45	75	
	QFU-LFH26C2525-100B	100	160	
	QFU-LFH26C2525-150B	150	310	
	QFU-LFH26C2525-300B	300	510	

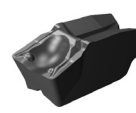
Ferramentas CoroCut QI Canais Frontais				
	Ferramenta	Dmín(mm)	Dmáx(mm)	Largura (mm)
	QI-LAFH12C25-016A	16	42	
	QI-LAFG05C25-016A	16	102	
	QI-LAFH12C25-035A	35	75	
	QI-LAFK07C40-023A	23	80	

Pastilhas CoroCut 1-2 para Corte							
	Ferramenta		Largura(mm)	Avanço fnx(mm/r)	Vc(m/min)		
	N123 E2-0200-0002 CM1125		2	0.06(0.03-0.17)	P 140	M 90	K 125
	N123 G2-0300-0002 CM1125		3	0.13(0.04-0.25)			
	N123 H2-0400-0002 CM1125		4	0.12(0.05-0.24)			

Pastilhas CoroCut 1-2 para Perfilamento						
	Ferramenta	Largura(mm)	Avanço fnx(mm/r)	Vc(m/min)		
	N123E2-0200-RO 1125	2	0.1(0.07-0.13)	P 140	M 125	K 125
	N123F2-0300-RM 1125	3	0.15(0.08-0.2)			
	N123G2-0400-RM 1125	4	0.15(0.08-0.2)			
	N123H2-0500-RM 1125	5	0.22(0.15-0.28)			

Pastilhas CoroCut QD para Canais e Torneamento						
	Ferramenta	Largura(mm)	Avanço fnx(mm/r)	Vc(m/min)		
	QD-NG-0300-0003-TF 1145	3	0.1(0.05-0.18)	P	M	K
	QD-NH-0400-0004-TF 1145	4	0.12(0.05-0.2)	140	125	125

Pastilhas CoroCut QI para Canais e Torneamento										
	Ferramenta	Largura(mm)	Avanço fnx (mm/r)	Vc(m/min)						
	QI-NG-0300-0003-TF	3	0.08(0.05-0.15)	<table><tr><td>P</td><td>M</td><td>K</td></tr><tr><td>145</td><td>115</td><td>125</td></tr></table>	P	M	K	145	115	125
	P	M	K							
	145	115	125							
	QI-NH-0400-0003-TF	4	0.1(0.05-0.2)							
QI-NJ-0500-0004-TF	5	0.12(0.05-0.25)								

Pastilhas CoroCut QF para Canais Frontais						
	Ferramenta	Largura(mm)	Avanço fnx (mm/r)	Vc(m/min)		
	QFT-G-0300-03-TF	3	0.1(0.05-0.25)	P	M	K
	QFT-H-0400-03-TF	4	0.1(0.05-0.25)	175	145	120
	QFT-K-0600-04-TF	6	0.12(0.05-0.25)			

Ferramentas CoroCut QD para Cortes e Canais			
	Ferramenta	Largura(mm)	Largura(mm)
	QD-RFE26-2020S	QD-RFE20-2525A	2
	QD-RFG33-2020S	QD-RFG26-2525S	3
	QD-RFH33-2020S	QD-RFH33-2525S	4

Ferramentas CoroCut QI Cortes Internos			
	Ferramenta	Diâmetro da Ferramenta(mm)	Profundidade máx. de corte(mm)
	QI-LAGE02C16-12	12	2
	QI-LAGH05C20-18	18	5
	QI-LAGF03C16-20	20	3.5
	QI-LAGG06C25-32	32	6

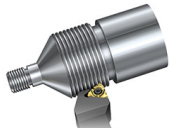
Pastilhas CoroCut 1-2 para Corte e Torneamento										
	Ferramenta	Largura(mm)	Avanço fnx (mm)	Vc(m/min)						
	N123 G2-0300-0003 TF1125	3	0.13(0.04-0.23)	<table><tr><td>P</td><td>M</td><td>K</td></tr><tr><td>140</td><td>125</td><td>125</td></tr></table>	P	M	K	140	125	125
	P	M	K							
	140	125	125							
N123 E-0200-0002 CM1125	4	0.15 (0.05-0.22)								

Pastilhas CoroCut QD para Corte										
	Ferramenta	Largura(mm)	Avanço fnx(mm)	Vc(m/min)						
	QD-NE-0200-0003-CR1145	2	0.13(0.08-0.28)	<table><tr><td>P</td><td>M</td><td>K</td></tr><tr><td>100</td><td>80</td><td>70</td></tr></table>	P	M	K	100	80	70
	P	M	K							
	100	80	70							
	QD-NG-0300-0003 CR1135	3	0.14(0.1-0.3)							
QD-NH-0400-0003-CR 1145	4	0.22(0.15-0.28)								

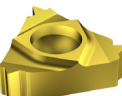
Pastilhas CoroCut QD para Perfilamento						
	Ferramenta	Largura(mm)	Avanço fnx(mm/r)	Vc(m/min)		
	QD-NG-0300-RM 1125	3	0.1(0.05-0.15)	P	M	K
	QD-NH-0400-RM 1125	4	0.1(0.05-0.15)	170	135	120

Pastilhas CoroCut QI para Perfilamento										
	Ferramenta	Largura(mm)	Avanço fnx(mm/r)	Vc(m/min)						
	QI-NG-0300-0003-TF	3	0.08(0.05-0.15)	<table><tr><td>P</td><td>M</td><td>K</td></tr><tr><td>185</td><td>150</td><td>125</td></tr></table>	P	M	K	185	150	125
	P	M	K							
	185	150	125							
	QI-NH-0400-0003-TF	4	0.1(0.05-0.2)							
QI-NJ-0500-0004-TF	5	0.12(0.05-0.25)								

Rosqueamento

Ferramentas Para Rosqueamento Externo				
	Ferramenta	Parafuso	Calço	Parafuso
	266 RFA 2020-16	5513 020-13	5322 391-11	5512 032-05
	266 RFG 2020-16	5513 020-13	5322 389-11	5512 032-05
	266 RFG 2525-16	5513 020-13	5322 389-11	5512 032-05
	266 RFG 2525-22	5513 020-26	5322 379-11	5512 032-04

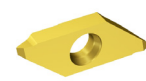
CoroThread 266 Para Rosqueamento Externo					
	Ferramenta	Passo(mm)	Vc(m/min)		
	266RG-16 VM01 A002M 1125	1.5-3	P	M	K
	266RG-16 VW01 A002M 1125	1.5-3	155	130	160
	266RG-22 VM01 A001M 1125	3.5-6			
	266RG-22 VW01 A001M 1125	3.5-6			

T-Max U-Lock para Rosqueamento Interno					
	Ferramenta	Passo(mm)	Vc(m/min)		
	R166.0L-11MM01-050 1020	0.5	P	M	K
	R166.0L-11MM01-075 1020	0.75			
	R166.0L-11MM01-100 4125	1.0	125	110	110
	R166.0L-11MM01-150 4125	1.5			

CoroTurn XS para Torneamentos Internos e de Peças Delgadas					
	Ferramenta	Passo(mm)	Vc(m/min)		
	CXS-04TH050VM-4215R 1025	0.5-0.7	P	M	K
	CXS-05TH080VM-5115R 1025	0.75-1			
	CXS-06TH100VM-6215R 7014	1-1.25			
	CXS-06TH150VM-6215R 7014	1.50-1.75			
		125	100	80	

Ferramentas Para Rosqueamento Interno				
	Ferramenta	dm	Parafuso	Calço
	266 RKF-16-16	16	5513 020-13	5322 391-11
	266 RKF-20-16	20	5513 020-13	5322 389-11
	266 RKF-25-16	25	5513 020-13	5322 389-11
	266 RKF 25-22	25	5513 020-26	5322 379-11
	266 RKF 32-22	32		

CoroThread 266 Para Rosqueamento Interno					
	Ferramenta	Passo(mm)	Vc(m/min)		
	266RL-16 VM01 A002M 1125	1.5-3	P	M	K
	266RL-16 VW01 A002M 1125	1.5-3			
	266RL-22 VM01 A001M 1125	3.5-6	155	130	160
	266RL-22 VW01 A001M 1125	3.5-6			

CoroCut XS para Torneamento Externo					
	Ferramenta	Passo(mm)	Vc(m/min)		
	MATR 3 60-A 1025	0.4-1	P	M	K
	MATR 3 60-C 1025	0.4-1	110	80	80
	MATR 3 60-N 1025	0,4-2			

CoroCut MB para Rosqueamento Interno de Precisão					
	Ferramenta	Passo(mm)	Vc(m/min)		
	MB-07TH050MM-10R 1025	0.5	P	M	K
	MB-07TH100MM-10R 1025	1			
	MB-07TH150MM-10R 1025	1.5			
	MB-07TH175MM-10R 1025	1.75			
			125	90	110