

CONDICIONES DE CORTE RECOMENDADAS

M										
Material	Acero Inoxidable Austenítico ($\leq 180\text{HB}$)				Acero Inoxidable Austenítico (180–280HB)					
	X5CrNi1810, X5CrNiMo17-12-2				X2CrNiN1810, X2CrNiMoN17-12-2					
Diámetro Broca DC (mm)	Velocidad de corte (m/min)	Revoluciones (min^{-1})	Avance (min.—max.) (mm/rev)		Avance de mesa (mm/min)	Velocidad de corte (m/min)	Revoluciones (min^{-1})	Avance (min.—max.) (mm/rev)		Avance de mesa (mm/min)
3.2	80	7900	0.13 (0.08–0.18)		1025	60	5900	0.10 (0.05–0.15)		590
4.0	80	6300	0.15 (0.10–0.20)		945	60	4700	0.12 (0.08–0.18)		560
5.0	80	5000	0.15 (0.10–0.20)		750	60	3800	0.12 (0.08–0.18)		455
6.3	80	4000	0.17 (0.12–0.22)		680	60	3000	0.15 (0.10–0.20)		450
8.0	80	3100	0.19 (0.14–0.24)		585	60	2300	0.17 (0.12–0.22)		390
10.0	60	1900	0.20 (0.15–0.25)		380	50	1500	0.18 (0.13–0.23)		270
12.0	60	1500	0.21 (0.16–0.26)		315	50	1300	0.19 (0.14–0.24)		245
16.0	60	1100	0.22 (0.17–0.27)		240	50	900	0.20 (0.15–0.25)		180
20.0	60	900	0.23 (0.18–0.28)		205	50	700	0.21 (0.16–0.26)		145

M										
Material	Acero inoxidable dúplex ($\leq 280\text{HB}$)				Aceros inoxidables ferríticos y martensíticos ($\leq 200\text{HB}$)					
	X3CrNiMoN27-5-2				X10Cr13, X6Cr17					
Diámetro Broca DC (mm)	Velocidad de corte (m/min)	Revoluciones (min^{-1})	Avance (min.—max.) (mm/rev)		Avance de mesa (mm/min)	Velocidad de corte (m/min)	Revoluciones (min^{-1})	Avance (min.—max.) (mm/rev)		Avance de mesa (mm/min)
3.2	50	4900	0.10 (0.05–0.15)		490	80	7900	0.13 (0.08–0.18)		1025
4.0	50	3900	0.12 (0.08–0.18)		465	80	6300	0.15 (0.10–0.20)		945
5.0	50	3100	0.12 (0.08–0.18)		370	80	5000	0.15 (0.10–0.20)		750
6.3	50	2500	0.15 (0.10–0.20)		375	80	4000	0.17 (0.12–0.22)		680
8.0	50	1900	0.17 (0.12–0.22)		320	80	3100	0.19 (0.14–0.24)		585
10.0	40	1200	0.18 (0.13–0.23)		215	60	1900	0.20 (0.15–0.25)		380
12.0	40	1000	0.19 (0.14–0.24)		190	60	1500	0.21 (0.16–0.26)		315
16.0	40	700	0.20 (0.15–0.25)		140	60	1100	0.22 (0.17–0.27)		240
20.0	40	600	0.21 (0.16–0.26)		125	60	900	0.23 (0.18–0.28)		205

M										
Material	Aceros inoxidables ferríticos y martensíticos ($>200\text{HB}$)				Aceros inoxidables endurecidos ($<450\text{HB}$)					
	X20CrNi17-2, X30Cr13				X5CrNiCuNb164, X7CrNiAl177, 17-4PH, 17-7PH					
Diámetro Broca DC (mm)	Velocidad de corte (m/min)	Revoluciones (min^{-1})	Avance (min.—max.) (mm/rev)		Avance de mesa (mm/min)	Velocidad de corte (m/min)	Revoluciones (min^{-1})	Avance (min.—max.) (mm/rev)		Avance de mesa (mm/min)
3.2	60	5900	0.10 (0.05–0.15)		590	50	4900	0.10 (0.05–0.15)		490
4.0	60	4700	0.12 (0.08–0.18)		560	50	3900	0.12 (0.08–0.18)		465
5.0	60	3800	0.12 (0.08–0.18)		455	50	3100	0.12 (0.08–0.18)		370
6.3	60	3000	0.15 (0.10–0.20)		450	50	2500	0.15 (0.10–0.20)		375
8.0	60	2300	0.17 (0.12–0.22)		390	50	1900	0.17 (0.12–0.22)		320
10.0	50	1500	0.18 (0.13–0.23)		270	40	1200	0.18 (0.13–0.23)		215
12.0	50	1300	0.19 (0.14–0.24)		245	40	1000	0.19 (0.14–0.24)		190
16.0	50	900	0.20 (0.15–0.25)		180	40	700	0.20 (0.15–0.25)		140
20.0	50	700	0.21 (0.16–0.26)		145	40	600	0.21 (0.16–0.26)		125

Nota 1) Para practicar agujeros con estabilidad, es recomendable un sistema de refrigeración por el eje.

Nota 2) Es recomendable utilizar un refrigerante al agua tipo emulsión.

Nota 3) En fluidos de corte que no sean al agua, reduzca la rotación en un 10%–20%.

LISTA DE REFERENCIAS CRUZADAS DEL ACERO INOXIDABLE

Material		Alemania		E.E.U.U.	Japón
		W-no.	DIN	AISI/SAE	JIS
Acero inoxidable ferrítico y martensítico	≤200HB	1.4005	X12CrS3	416	SUS416
		1.4006	X10Cr13	410	SUS410
		1.4016	X6Cr17	430	SUS430
		1.4113	X6CrMo17	434	SUS434
		1.4510	X6CrTi17	430Ti	SUS430LX
	1.4512	X6CrTi12	409	—	
	>200HB	1.4021	X20Cr13	420	SUS420J1
		1.4057	X20CrNi17-2	431	SUS431
		1.4028	X30Cr13	420	SUS420J2
1.4125		X10CrMo17	440C	SUS440C	
Acero inoxidable PH	<450HB	1.4542	X5CrNiCuNb16 4	630 (17-4PH)	SUS630
		1.4545	—	S15500 (15-5PH)	—
		1.4568	X7CrNiAl17 7	631 (17-7PH)	SUS631
Acero Inoxidable Austenítico	≤200HB	1.4301	X5CrNi18 10	304	SUS304
		1.4303	X5CrNi8-12	305	SUS305
		1.4305	X12CrNiS18-9	303	SUS303
		1.4307	X2CrNi19-11	304L	SUS304L
		1.4401	X5CrNiMo17 12 2	316	SUS316
	>200HB	1.4311	X2CrNiN18 10	304LN	SUS304LN
		1.4404	X2CrNiMo17 12 2	316L	SUS316L
		1.4406	X2CrNiMoN17 12 2	316LN	SUS316LN
		1.4435	X2CrNiMo18 14 3	—	SUS316L
		1.4438	X2CrNiMo18 15 4	317L	SUS317L
		1.4529	X1NiCrMoCuN25 20 7	N08926	—
		1.4541	X6CrNiTi18-10	321	SUS321
		1.4550	X6CrNiNb18-10	347	SUS347
		1.4571	X6CrNiMoTi17 12 2	316Ti	SUS316Ti
Acero dúplex	≤280HB	1.4362	X2CrNiN23 4	—	—
		1.4410	X2CrNiMoN25 7 4	S32750	SCS14A
		1.4460	X3CrNiMoN27 5 2	329	SUS329J1
		1.4462	X2CrNiMoN22 5 3	S31803	SUS329J3L