ОБЩИЕ РЕКОМЕНДАЦИИ ПО РЕЖИМАМ РЕЗАНИЯ

ФРЕЗЕРОВАНИЕ

МАТЕРИАЛ	ТВЕРДОСТЬ	СКОРОСТЬ (М/МИН)				ДИАМЕТР ИНСТРУМЕНТА				
		БЕЗ ПОКРЫТИЯ	TI-NAMITE	TI-NAMITE-C	TI-NAMITE-A	1–3mm	3.5–5mm	6–9mm	10–14mm	16–25mm
						ПОДАЧА (ММ/ЗУБ)				
Стали общего применения	<150HB	150	175	175	210	0.012–0.018	0.019–0.024	0.025–0.050	0.052–0.080	0.085–0.180
	<190HB	120	140	140	165	0.010–0.016	0.018–0.022	0.024–0.048	0.050–0.070	0.075–0.100
	<240 HB	90	105	105	125	0.008–0.014	0.016–0.020	0.022–0.044	0.045–0.055	0,060–0.080
Цементируемые стали	<230 HB	100	115	115	140	0.010–0.016	0.018–0.022	0.024–0.045	0.048–0.060	0,065–0.150
	<285 HB	80	95	95	110	0.008–0,012	0.014–0.018	0.019–0.044	0.045–0.055	0.058–0.080
Азотируемые стали	<285 HB	90	105	105	125	0.008–0.012	0.014–0.018	0.019–0.044	0.045–0.055	0,058–0.080
	<385 HB	70	80	80	95	0.006–0.008	0.009–0.018	0.020–0.022	0.022–0.030	0,032–0.060
Среднеуглеродистые стали	<200 HB	80	95	95	110	0.012–0.018	0.020–0.024	0,026–0.035	0.038–0.055	0,060–0.170
	<285 HB	80	70	70	85	0.010–0.016	0.019–0.023	0.025–0.033	0.036–0.054	0,058–0.120
	<340 HB	50	58	58	70	0.006–0.009	0.012–0.019	0.022–0.024	0.025–0.032	0,035–0.100
	<385 HB	35	40	40	50	0.005–0.007	0.009–0.012	0.015–0.018	0.020–0.028	0,032–0.060
Инструментальные стали	<230 HB	90	105	105	125	0.012–0.018	0.020–0.024	0.027–0.035	0.038–0.048	0,055–0.140
	<285 HB	70	80	80	95	0.009–0.014	0.016–0.021	0.022–0.027	0.030–0.036	0,040–0.100
	<340 HB	60	70	70	85	0.007–0.012	0.015–0.020	0.021–0.026	0.028–0.035	0.038–0.095
	<395 HB	45	50	50	65	0.006–0,011	0.014–0.018	0.020–0.025	0.026–0.033	0.036–0.090
	>395 HB	30	35	35	40	0.004–0.009	0.012–0.016	0.018–0.023	0.024–0.030	0.034,0.080
Нержавеющие стали	<200 HB	80	85	85	95	0.006–0.011	0.012–0.016	0.017–0.024	0.026–0.032	0.035–0.080
	<240 HB	60	65	65	70	0.005–0.010	0.011–0.014	0.016–0.022	0.025–0.030	0.034–0.065
	>270 HB	40	45	45	55	0.004–0.008	0.009–0.012	0.014–0.018	0.019–0.025	0.028–0.050
Стальное литье	<150HB	110	125	135	150	0.012–0,018	0.019–0.024	0.025–0.035	0.036–0.048	0.055–0.150
	<200 BH	80	90	95	110	0.009–0.012	0.013–0.018	0.019–0.022	0.023–0,030	0.038–0.100
	>200 HB	60	70	75	85	0.004–0.007	0.008–0.010	0.011–0.015	0.016–0.024	0.030–0.080
Жаропрочные сплавы	<200 HB	35	40	40	45	0.011–0.013	0.014–0.016	0.017–0.020	0.021–0.026	0.028–0.050
	<275 HB	20	23	23	24	0.009–0.011	0.012–0.014	0.015–0.018	0.019–0.024	0.026–0.045
	<325 HB	18	20	20	22	0.007–0.009	0.010–0.012	0.013–0.016	0.017–0.022	0.024–0.043
	<375 HB	16	18	18	20	0.006–0.008	0.009–0.011	0.012–0.015	0.016–0.020	0.022–0.040
	<395 HB	12	14	14	16	0.005–0.007	0.008–0.010	0.011–0.014	0.015–0.018	0.020–0.035
	>395 HB	8	9	9	10	0.004–0.006	0.006–0.008	0.008–0.010	0.011–0.016	0,018–0.030
Титановые сплавы	<150HB	100	115	115	130	0.007–0.009	0.010–0.013	0.018–0.025	0.030–0.045	0.048–0.080
	<225 HB	70	75	75	90	0.006–0.008	0.009–0.012	0.017–0.024	0.029–0.044	0.046–0.078
	<275 HB	30	35	35	40	0.004–0.006	0.008–0.011	0.015–0.022	0.027–0.040	0.042–0.065
	<350 HB	10	11	11	12	0.004–0.006	0.007–0.010	0.013–0,020	0.024–0.035	0.038–0.050
Чугуны	<200 HB	120	130	145	155	0.015–0.017	0.018–0.021	0.023–0.035	0.038–0.050	0.058–0.180
	>200 HB	80	85	90	110	0.008–0.010	0.011–0.014	0,015–0.023	0.026–0.038	0.046–0.100
Медь	<150HB	250	250	280	280	0.008–0.010	0.011–0.014	0.015–0.025	0.027–0.042	0.052–0.150
Электролитическая медь		180	180	205	205	0.010–0.012	0.013–0.016	0.018–0.029	0.030–0.046	0,058–0.150
Алюминий		350	–	350	–	0.018–0.020	0.024–0.040	0,045–0.070	0.080–0.120	0.150–0.250

СВЕРЛЕНИЕ

СВЕРЛА	СКОРОСТЬ (М/МИН)		РЕКОМЕНДУЕМАЯ СЕРИЯ				РАЗВЕРТКИ	
МАТЕРИАЛ	103M	ДРУГИЕ	101M	103M	106M	108M	СКОРОСТЬ (М/МИН)	ПОДАЧА (ММ/ОБ)
Алюминий и сплавы		76–137	•			•	30–75	0,13–0,38
Силумин	49–98	30–76		•		•	25–60	0,08–0,30
Латунь	100–152	76–137	•	•			30–75	0,13–0,38
Бронза	46–84	46–76	•	•			27–53	0,08–0,30
Медь и сплавы	76–114	46–107		•		•	25–65	0,13–0,38
Чугун мягкий	69–107	40–61		•	•		25–60	0,15–0,38
Чугун средний	69–107	30–46		•	•		18–45	0,15–0,38
Чугун твердый	69–107	15–40		•	•		12–27	0,10–0,25
Магний	100–191	91–183		•		•	30–75	0,13–0,38
Монель		18–55	•				12–37	0,10–0,30
Поковки из стали и чугуна		18–37	•				12–30	0,08–0,25
Закаленная сталь (35–40 HRC)	37–79	18–24	•	•			12–20	0,10–0,20
Закаленная сталь (40–45 HRC)	24–37	12–18	•	•			9–15	0,05–0,15
Закаленная сталь (45 HRC и выше)	12–21	6–12		•	•		5–12	0,03–0,10
Среднеуглеродистая сталь	40–79	30–55	•	•			15–30	0,13–0,25
Сталь для пресс-форм	40–79	18–40	•	•			12–37	0,10–0,15
Сталь инструментальная	40–79	12–34	•	•			9–27	0,10–0,15
Сталь нержавеющая (серия 300)		9–27	•				6–24	0,10–0,20
Сталь нержавеющая (серия 400)		12–40	•				9–37	0,13–0,25
Инконель		9–21	•				6–18	0,03–0,13
Рене		9–18	•				6–18	0,05–0,15
Титан	24–50	12–30		•		•	9–27	0,05–0,20
Васполой		9–18	•				6–18	0,05–0,15
Текстолит		61–107				•	30–75	0,13–0,38
Пластик		61–183				•	30–90	0,13–0,38
Оргстекло		61–122				•	30–90	0,13–0,38
Масонит		24–61				•	18–45	0,13–0,38
Фенольный пластик		21–37				•	18–30	0,13–0,38

Диаметр сверла (мм)	<1.6	>1.6–3.1	>3.1–6.3	>6.3–9.5	>9.5–12.0
Подача (мм/об)	0,013–0,026	0,026–0,050	0,050–0,076	0,076–0,127	0,127–0,203