推奨切削条件

ネガティブインサート

ブレーカ：　Std：無記号を表す　Flat：なし

被削材	かたさ	切削領域		優先	ブレーカ	インサート材種	切削速度 (m/min)	送り量 (mm/rev)	切込み量 (mm)
P									
軟鋼（SS400, S10Cなど）	≦180HB	●	F	1	FY	VP25N	285−445	0.09−0.23	0.20−0.80
		●	F	2	FS	NX2525	270−385	0.09−0.23	0.20−0.70
		●	L	1	SY	VP25N	260−405	0.16−0.33	0.50−1.20
		◐	F	1	FY	MP3025	275−420	0.09−0.23	0.20−0.80
		◐	F	2	FY	NX3035	260−370	0.09−0.23	0.20−0.80
		◐	F	3	FS	NX2525	270−385	0.09−0.23	0.20−0.70
		◐	L	1	SY	MP3025	250−385	0.16−0.33	0.50−1.20
		◐	L	2	SY	NX3035	235−335	0.16−0.33	0.50−1.20
		✣	F	1	FY	UE6020	285−460	0.09−0.23	0.20−0.80
		✣	F	2	FS	UE6020	285−460	0.09−0.23	0.20−0.70
		✣	L	1	SY	UE6020	260−420	0.16−0.33	0.50−1.20
炭素鋼･合金鋼（S45C, SCM440など）	180 − 280HB	●	F	1	FH	AP25N	215−340	0.08−0.20	0.20−1.00
		●	F	2	FH	NX2525	205−295	0.08−0.20	0.20−1.00
		●	F	3	R/L-F	MP3025	210−325	0.05−0.15	0.10−0.50
		●	F	4	PK	NX2525	195−280	0.10−0.30	0.20−1.00
		●	L	1	LP	UE6105	220−405	0.10−0.40	0.30−2.00
		●	L	2	SH	UE6105	220−405	0.10−0.40	0.30−2.00
		●	L	3	LP	MP3025	195−295	0.10−0.40	0.30−2.00
		●	L	4	SH	AP25N	200−315	0.10−0.40	0.30−2.00
		●	L	5	SH	NX2525	190−270	0.10−0.40	0.30−2.00
		●	L	6	SA	UE6105	220−405	0.10−0.40	0.30−2.00
		●	L	7	SW	UE6105	220−405	0.10−0.50	0.30−2.50
		●	L	8	SW	MP3025	195−295	0.10−0.50	0.30−2.50
		●	L	9	SW	NX2525	190−270	0.10−0.50	0.30−2.50
		●	L	10	R/L-K	MP3025	195−295	0.08−0.20	0.30−1.20
		●	M	1	MP	UE6105	200−370	0.16−0.50	0.30−4.00
		●	M	2	MP	MP3025	175−270	0.16−0.50	0.30−4.00
		●	M	3	MA	UE6105	200−370	0.20−0.50	0.30−4.00
		●	M	4	MH	UE6105	200−370	0.20−0.55	1.00−4.00
		●	M	5	Std	UE6105	200−370	0.25−0.60	1.50−5.00
		●	M	6	Std	MP3025	175−270	0.25−0.60	1.50−5.00
		●	M	7	Std	NX2525	170−245	0.25−0.60	1.50−5.00
		●	M	8	Std	UTi20T	85−125	0.25−0.60	1.50−5.00
		●	M	9	MW	UE6105	200−370	0.20−0.60	0.90−4.00
		●	M	10	R/L	MP3025	175−270	0.15−0.32	0.40−2.00
		●	R	1	RP	UE6105	190−350	0.25−0.60	1.50−6.00
		●	R	2	GH	UE6105	190−350	0.25−0.60	1.50−6.00
		●	H	1	HX	UE6110	160−275	0.50−1.26	3.00−11.00
		●	H	2	HV	UE6110	135−225	0.70−1.30	4.00−12.00
		◐	F	1	FH	MP3025	210−325	0.08−0.20	0.20−1.00
		◐	F	2	FH	NX3035	200−285	0.08−0.20	0.20−1.00
		◐	F	3	FH	UE6110	230−390	0.08−0.20	0.20−1.00
		◐	L	1	LP	UE6110	210−355	0.10−0.40	0.30−2.00
		◐	L	2	SH	UE6110	210−355	0.10−0.40	0.30−2.00
		◐	L	3	SA	UE6110	210−355	0.10−0.40	0.30−2.00
		◐	L	4	LP	MP3025	195−295	0.10−0.40	0.30−2.00
		◐	L	5	SH	NX3035	185−260	0.10−0.40	0.30−2.00
		◐	L	6	SA	NX3035	185−260	0.10−0.40	0.30−2.00
		◐	L	7	SW	UE6110	210−355	0.10−0.50	0.30−2.50
		◐	L	8	SW	NX3035	185−260	0.10−0.50	0.30−2.50
		◐	M	1	MP	UE6110	190−325	0.16−0.50	0.30−4.00
		◐	M	2	MA	UE6110	190−325	0.20−0.50	0.30−4.00
		◐	M	3	MA	NX3035	165−235	0.20−0.50	0.30−4.00
		◐	M	4	MH	UE6110	190−325	0.20−0.55	1.00−4.00
		◐	M	5	Std	UE6110	190−325	0.25−0.60	1.50−5.00
		◐	M	6	Std	NX3035	165−235	0.25−0.60	1.50−5.00
		◐	M	7	MW	UE6110	190−325	0.20−0.60	0.90−4.00
		◐	R	1	RP	UE6110	180−310	0.25−0.60	1.50−6.00
		◐	R	2	GH	UE6110	180−310	0.25−0.60	1.50−6.00

被削材	かたさ	切削領域		優先	ブレーカ	インサート材種	切削速度 (m/min)	送り量 (mm/rev)	切込み量 (mm)
P									
炭素鋼･合金鋼（S45C, SCM440など）	180 − 280HB	◐	H	1	HX	UE6020	155−250	0.50−1.26	3.00−11.00
		◐	H	2	HV	UE6020	125−205	0.70−1.30	4.00−12.00
		◐	H	3	HZ	UE6110	160−275	0.40−1.20	2.00−10.00
		✣	F	1	FH	UE6110	230−390	0.08−0.20	0.20−1.00
		✣	F	2	FH	UE6020	215−355	0.08−0.20	0.20−1.00
		✣	L	1	LP	MC6025	210−340	0.10−0.40	0.30−2.00
		✣	L	2	SH	UE6020	200−325	0.10−0.40	0.30−2.00
		✣	L	3	SA	UE6020	200−325	0.10−0.40	0.30−2.00
		✣	M	1	MP	MC6025	190−310	0.16−0.50	0.30−4.00
		✣	M	2	MA	MC6025	190−310	0.20−0.50	0.30−4.00
		✣	M	3	MP	UE6020	180−295	0.16−0.50	0.30−4.00
		✣	M	4	MA	UE6020	180−295	0.20−0.50	0.30−4.00
		✣	M	5	MA	UE6035	170−235	0.20−0.50	0.30−4.00
		✣	M	6	MH	UE6020	180−295	0.20−0.55	1.00−4.00
		✣	M	7	MH	UE6035	170−235	0.20−0.55	1.00−4.00
		✣	M	8	Std	UE6020	180−295	0.25−0.60	1.50−5.00
		✣	M	9	Std	UE6035	170−235	0.25−0.60	1.50−5.00
		✣	M	10	MW	MC6025	190−310	0.20−0.60	0.90−4.00
		✣	M	11	MW	UE6020	180−295	0.20−0.60	0.90−4.00
		✣	R	1	RP	MC6025	180−295	0.25−0.60	1.50−6.00
		✣	R	2	GH	UE6020	170−280	0.25−0.60	1.50−6.00
		✣	H	1	HX	UH6400	135−195	0.50−1.26	3.00−11.00
		✣	H	2	HV	UH6400	110−160	0.70−1.30	4.00−12.00
		✣	H	3	HZ	UH6400	135−195	0.40−1.20	2.00−10.00
		✣	H	4	HZ	UE6020	155−250	0.40−1.20	2.00−10.00
M									
オーステナイト系ステンレス鋼（SUS304, SUS316など）	≦200HB	●	L	1	LM	MC7015	180−285	0.10−0.30	0.30−2.00
		●	L	2	SH	US735	95−185	0.10−0.40	0.30−2.00
		●	L	3	SH	NX2525	65−135	0.10−0.40	0.30−2.00
		●	L	4	SW	US7020	105−270	0.10−0.50	0.30−2.50
		●	M	1	MM	MC7015	160−255	0.15−0.45	0.70−5.00
		●	M	2	GM	MC7015	160−255	0.16−0.50	0.50−4.00
		●	M	3	MS	US7020	95−245	0.16−0.50	0.50−4.00
		●	M	4	MA	US7020	95−245	0.20−0.50	0.30−4.00
		●	M	5	MH	US7020	95−245	0.20−0.55	1.00−4.00
		●	M	6	MW	US7020	95−245	0.20−0.60	0.90−4.00
		●	R	1	RM	MC7015	155−245	0.25−0.55	1.50−6.00
		●	R	2	GH	US7020	90−235	0.25−0.60	1.50−6.00
		◐	L	1	LM	MC7025	160−215	0.10−0.30	0.30−2.00
		◐	L	2	SH	US735	95−185	0.10−0.40	0.30−2.00
		◐	M	1	MM	MC7025	145−195	0.15−0.45	0.70−5.00
		◐	M	2	GM	MC7025	145−195	0.16−0.50	0.50−4.00
		◐	M	3	MA	MC7025	145−195	0.20−0.50	0.30−4.00
		◐	M	4	MS	US735	85−165	0.16−0.50	0.50−4.00
		◐	M	5	MA	US735	85−165	0.20−0.50	0.30−4.00
		◐	R	1	RM	MC7025	140−185	0.25−0.55	1.50−6.00
		◐	R	2	GH	US735	85−160	0.25−0.60	1.50−6.00
		✣	L	1	LM	MP7035	95−155	0.10−0.30	0.30−2.00
		✣	L	2	SH	US735	95−185	0.10−0.40	0.30−2.00
		✣	M	1	MM	MP7035	85−140	0.15−0.45	0.70−5.00
		✣	M	2	GM	MP7035	85−140	0.16−0.50	0.50−4.00
		✣	M	3	MA	MP7035	85−140	0.20−0.50	0.30−4.00
		✣	M	4	MS	US735	85−165	0.16−0.50	0.50−4.00
		✣	M	5	MS	VP15TF	75−130	0.16−0.50	0.50−4.00
		✣	M	6	MS	UP20M	95−145	0.16−0.50	0.50−4.00
		✣	M	7	MS	UTi20T	75−110	0.16−0.50	0.50−4.00
		✣	M	8	MA	VP15TF	75−130	0.20−0.50	0.30−4.00

切削状態：　●：安定切削　◐：一般切削　✣：不安定切削
切削領域：　F：仕上げ領域　L：軽切削領域　M：中切削領域　R：荒切削領域　H：重切削領域

被削材	かたさ	切削領域		優先	ブレーカ	インサート材種	切削速度 (m/min)	送り量 (mm/rev)	切込み量 (mm)
M									
オーステナイト系ステンレス鋼（SUS304, SUS316など）	≦200HB	✣	M	9	Std	VP15TF	75−130	0.25−0.60	1.50−5.00
		✣	R	1	RM	MP7035	85−135	0.25−0.55	1.50−6.00
		✣	R	2	GH	US735	85−160	0.25−0.60	1.50−6.00
オーステナイト系ステンレス鋼（SUS304LN, SUS316LNなど）	>200HB	●	L	1	LM	MC7015	150−240	0.10−0.30	0.30−2.00
		●	L	2	SH	US735	80−155	0.10−0.40	0.30−2.00
		●	L	3	SH	NX2525	55−115	0.10−0.40	0.30−2.00
		●	L	4	SW	US7020	90−230	0.10−0.50	0.30−2.50
		●	M	1	MM	MC7015	135−215	0.15−0.45	0.70−5.00
		●	M	2	GM	MC7015	135−215	0.16−0.50	0.50−4.00
		●	M	3	MS	US7020	80−205	0.16−0.50	0.50−4.00
		●	M	4	MA	US7020	80−205	0.20−0.50	0.30−4.00
		●	M	5	MH	US7020	80−205	0.20−0.55	1.00−4.00
		●	M	6	MW	US7020	80−205	0.20−0.60	0.90−4.00
		●	R	1	RM	MC7015	130−205	0.25−0.55	1.50−6.00
		●	R	2	GH	US7020	75−195	0.25−0.60	1.50−6.00
		◐	L	1	LM	MC7025	135−180	0.10−0.30	0.30−2.00
		◐	L	2	SH	US735	80−155	0.10−0.40	0.30−2.00
		◐	M	1	MM	MC7025	125−165	0.15−0.45	0.70−5.00
		◐	M	2	GM	MC7025	125−165	0.16−0.50	0.50−4.00
	≦200HB	◐	M	3	MA	MC7025	125−165	0.20−0.50	0.30−4.00
	>200HB	◐	M	4	MS	US735	75−140	0.16−0.50	0.50−4.00
		◐	M	5	MA	US735	75−140	0.20−0.50	0.30−4.00
		◐	R	1	RM	MC7025	115−155	0.25−0.55	1.50−6.00
		◐	R	2	GH	US735	70−135	0.25−0.60	1.50−6.00
		✣	L	1	LM	MP7035	80−130	0.10−0.30	0.30−2.00
		✣	L	2	SH	US735	80−155	0.10−0.40	0.30−2.00
		✣	M	1	MM	MP7035	75−120	0.15−0.45	0.70−5.00
		✣	M	2	GM	MP7035	75−120	0.16−0.50	0.50−4.00
		✣	M	3	MA	MP7035	75−120	0.20−0.50	0.30−4.00
		✣	M	4	MS	US735	75−140	0.16−0.50	0.50−4.00
		✣	M	5	MS	VP15TF	65−110	0.16−0.50	0.50−4.00
		✣	M	6	MS	UP20M	80−125	0.16−0.50	0.50−4.00
		✣	M	7	MS	UTi20T	65−95	0.16−0.50	0.50−4.00
		✣	M	8	MA	VP15TF	65−110	0.20−0.50	0.30−4.00
		✣	M	9	Std	VP15TF	65−110	0.25−0.60	1.50−5.00
		✣	R	1	RM	MP7035	70−115	0.25−0.55	1.50−6.00
		✣	R	2	GH	US735	70−135	0.25−0.60	1.50−6.00
二相系ステンレス鋼（SUS329J1など）	≦280HB	●	L	1	LM	MC7015	120−195	0.10−0.30	0.30−2.00
		●	L	2	SH	US735	65−125	0.10−0.40	0.30−2.00
		●	L	3	SH	NX2525	45−90	0.10−0.40	0.30−2.00
		●	L	4	SW	US7020	75−185	0.10−0.50	0.30−2.50
		●	M	1	MM	MC7015	110−175	0.15−0.45	0.70−5.00
		●	M	2	GM	MC7015	110−175	0.16−0.50	0.50−4.00
		●	M	3	MS	US7020	65−170	0.16−0.50	0.50−4.00
		●	M	4	MA	US7020	65−170	0.20−0.50	0.30−4.00
		●	M	5	MH	US7020	65−170	0.20−0.55	1.00−4.00
		●	M	6	MW	US7020	65−170	0.20−0.60	0.90−4.00
		●	R	1	RM	MC7015	105−165	0.25−0.55	1.50−6.00
		●	R	2	GH	US7020	60−160	0.25−0.60	1.50−6.00
		◐	L	1	LM	MC7025	110−150	0.10−0.30	0.30−2.00
		◐	L	2	SH	US735	65−125	0.10−0.40	0.30−2.00
		◐	M	1	MM	MC7025	100−135	0.15−0.45	0.70−5.00
		◐	M	2	GM	MC7025	100−135	0.16−0.50	0.50−4.00
		◐	M	3	MA	MC7025	100−135	0.20−0.50	0.30−4.00
		◐	M	4	MS	US735	60−115	0.16−0.50	0.50−4.00
		◐	M	5	MA	US735	60−115	0.20−0.50	0.30−4.00
		◐	R	1	RM	MC7025	95−125	0.25−0.55	1.50−6.00
		◐	R	2	GH	US735	55−110	0.25−0.60	1.50−6.00
		✣	L	1	LM	MP7035	65−105	0.10−0.30	0.30−2.00

被削材	かたさ	切削領域		優先	ブレーカ	インサート材種	切削速度 (m/min)	送り量 (mm/rev)	切込み量 (mm)
M									
二相系ステンレス鋼（SUS329J1など）	≦280HB	✣	L	2	SH	US735	65−125	0.10−0.40	0.30−2.00
		✣	M	1	MM	MP7035	60−95	0.15−0.45	0.70−5.00
		✣	M	2	GM	MP7035	60−95	0.16−0.50	0.50−4.00
		✣	M	3	MA	MP7035	60−95	0.20−0.50	0.30−4.00
		✣	M	4	MS	US735	60−115	0.16−0.50	0.50−4.00
		✣	M	5	MS	VP15TF	50−90	0.16−0.50	0.50−4.00
		✣	M	6	MS	UP20M	65−100	0.16−0.50	0.50−4.00
		✣	M	7	MS	UTi20T	50−75	0.16−0.50	0.50−4.00
		✣	M	8	MA	VP15TF	50−90	0.20−0.50	0.30−4.00
		✣	M	9	Std	VP15TF	50−90	0.25−0.60	1.50−5.00
		✣	R	1	RM	MP7035	55−90	0.25−0.55	1.50−6.00
		✣	R	2	GH	US735	55−110	0.25−0.60	1.50−6.00
フェライト系・マルテンサイト系ステンレス鋼（SUS410, SUS430など）	≦200HB	●	L	1	LM	MC7015	180−285	0.10−0.30	0.30−2.00
		●	L	2	SH	US735	95−185	0.10−0.40	0.30−2.00
		●	L	3	SH	NX2525	65−135	0.10−0.40	0.30−2.00
		●	L	4	SW	US7020	105−270	0.10−0.50	0.30−2.50
		●	M	1	MM	MC7015	160−255	0.15−0.45	0.70−5.00
		●	M	2	GM	MC7015	160−255	0.16−0.50	0.50−4.00
		●	M	3	MS	US7020	95−245	0.16−0.50	0.50−4.00
		●	M	4	MA	US7020	95−245	0.20−0.50	0.30−4.00
		●	M	5	MH	US7020	95−245	0.20−0.55	1.00−4.00
		●	M	6	MW	US7020	95−245	0.20−0.60	0.90−4.00
		●	R	1	RM	MC7015	155−245	0.25−0.55	1.50−6.00
		●	R	2	GH	US7020	90−235	0.25−0.60	1.50−6.00
		◐	L	1	LM	MC7025	160−215	0.10−0.30	0.30−2.00
		◐	L	2	SH	US735	95−185	0.10−0.40	0.30−2.00
		◐	M	1	MM	MC7025	145−195	0.15−0.45	0.70−5.00
		◐	M	2	GM	MC7025	145−195	0.16−0.50	0.50−4.00
		◐	M	3	MA	MC7025	145−195	0.20−0.50	0.30−4.00
		◐	M	2	MS	US735	85−165	0.16−0.50	0.50−4.00
		◐	M	4	MA	US735	85−165	0.20−0.50	0.30−4.00
		◐	R	1	RM	MC7025	140−185	0.25−0.55	1.50−6.00
		◐	R	2	GH	US735	85−160	0.25−0.60	1.50−6.00
		✣	L	1	LM	MP7035	95−155	0.10−0.30	0.30−2.00
		✣	L	2	SH	US735	95−185	0.10−0.40	0.30−2.00
		✣	M	1	MM	MP7035	85−140	0.15−0.45	0.70−5.00
		✣	M	2	GM	MP7035	85−140	0.16−0.50	0.50−4.00
		✣	M	3	MA	MP7035	85−140	0.20−0.50	0.30−4.00
		✣	M	4	MS	US735	85−165	0.16−0.50	0.50−4.00
		✣	M	5	MS	VP15TF	75−130	0.16−0.50	0.50−4.00
		✣	M	6	MS	UP20M	95−145	0.16−0.50	0.50−4.00
		✣	M	7	MS	UTi20T	75−110	0.16−0.50	0.50−4.00
		✣	M	8	MA	VP15TF	75−130	0.20−0.50	0.30−4.00
		✣	M	9	Std	VP15TF	75−130	0.25−0.60	1.50−5.00
		✣	R	1	RM	MP7035	85−135	0.25−0.55	1.50−6.00
		✣	R	2	GH	US735	85−160	0.25−0.60	1.50−6.00
フェライト系・マルテンサイト系ステンレス鋼（SUS431, SUS420J2など）	>200HB	●	L	1	LM	MC7015	150−240	0.10−0.30	0.30−2.00
		●	L	2	SH	US735	80−155	0.10−0.40	0.30−2.00
		●	L	3	SH	NX2525	55−115	0.10−0.40	0.30−2.00
		●	L	4	SW	US7020	90−230	0.10−0.50	0.30−2.50
		●	M	1	MM	MC7015	135−215	0.15−0.45	0.70−5.00
		●	M	2	GM	MC7015	135−215	0.16−0.50	0.50−4.00
		●	M	3	MS	US7020	80−205	0.16−0.50	0.50−4.00
		●	M	4	MA	US7020	80−205	0.20−0.50	0.30−4.00
		●	M	5	MH	US7020	80−205	0.20−0.55	1.00−4.00
		●	M	6	MW	US7020	80−205	0.20−0.60	0.90−4.00
		●	R	1	RM	MC7015	130−205	0.25−0.55	1.50−6.00
		●	R	2	GH	US7020	75−195	0.25−0.60	1.50−6.00
		◐	L	1	LM	MC7025	135−180	0.10−0.30	0.30−2.00

推奨切削条件

ネガティブインサート

ブレーカ： Std：無記号を表す Flat：なし

被削材	かたさ	切削状態	切削領域	優先	ブレーカ	インサート材種	切削速度 (m/min)	送り量 (mm/rev)	切込み量 (mm)
M									
フェライト系・マルテンサイト系ステンレス鋼（SUS431, SUS420J2など）	>200HB	◐	L	2	SH	US735	80−155	0.10−0.40	0.30−2.00
		◐	M	1	MM	MC7025	125−165	0.15−0.45	0.70−5.00
		◐	M	2	MS	MC7025	125−165	0.16−0.50	0.50−4.00
	≦200HB	◐	M	3	MA	MC7025	125−165	0.20−0.50	0.30−4.00
	>200HB	◐	M	3	MS	US735	75−140	0.16−0.50	0.50−4.00
		◐	M	4	MA	US735	75−140	0.20−0.50	0.30−4.00
		◐	R	1	RM	MC7025	115−155	0.25−0.55	1.50−6.00
		◐	R	2	GH	US735	70−135	0.25−0.60	1.50−6.00
		✣	L	1	LM	MP7035	80−130	0.10−0.30	0.30−2.00
		✣	L	2	SH	US735	80−155	0.10−0.40	0.30−2.00
		✣	M	1	MM	MP7035	75−120	0.15−0.45	0.70−5.00
		✣	M	2	GM	MP7035	75−120	0.16−0.50	0.50−4.00
		✣	M	3	MA	MP7035	75−120	0.20−0.50	0.30−4.00
		✣	M	4	MS	US735	75−140	0.16−0.50	0.50−4.00
		✣	M	5	MS	VP15TF	65−110	0.16−0.50	0.50−4.00
		✣	M	6	MS	UP20M	80−125	0.16−0.50	0.50−4.00
		✣	M	7	MS	UTi20T	65−95	0.16−0.50	0.50−4.00
		✣	M	8	MA	VP15TF	65−110	0.20−0.50	0.30−4.00
		✣	M	9	Std	VP15TF	65−110	0.25−0.60	1.50−5.00
		✣	R	1	RM	MP7035	70−115	0.25−0.55	1.50−6.00
		✣	R	2	GH	US735	70−135	0.25−0.60	1.50−6.00
析出硬化系ステンレス鋼（SUS630, SUS631など）	<450HB	●	L	1	LM	MC7015	100−160	0.10−0.30	0.30−2.00
		●	L	2	SH	US735	55−105	0.10−0.40	0.30−2.00
		●	L	3	SH	NX2525	35−75	0.10−0.40	0.30−2.00
		●	L	4	SW	US7020	60−155	0.10−0.50	0.30−2.50
		●	M	1	MM	MC7015	90−145	0.15−0.45	0.70−5.00
		●	M	2	GM	MC7015	90−145	0.16−0.50	0.50−4.00
		●	M	3	MS	US7020	55−140	0.16−0.50	0.50−4.00
		●	M	4	MA	US7020	55−140	0.20−0.50	0.30−4.00
		●	M	5	MH	US7020	55−140	0.20−0.55	1.00−4.00
		●	M	6	MW	US7020	55−140	0.20−0.60	0.90−4.00
		●	R	1	RM	MC7015	85−135	0.25−0.55	1.50−6.00
		●	R	2	GH	US7020	50−130	0.25−0.60	1.50−6.00
		◐	L	1	LM	MC7025	90−120	0.10−0.30	0.30−2.00
		◐	L	2	SH	US735	55−105	0.10−0.40	0.30−2.00
		◐	M	1	MM	MC7025	80−110	0.15−0.45	0.70−5.00
		◐	M	2	GM	MC7025	80−110	0.16−0.50	0.50−4.00
		◐	M	3	MA	MC7025	80−110	0.20−0.50	0.30−4.00
		◐	M	3	MS	US735	50−95	0.16−0.50	0.50−4.00
		◐	M	4	MA	US735	50−95	0.20−0.50	0.30−4.00
		◐	R	1	RM	MC7025	80−105	0.25−0.55	1.50−6.00
		◐	R	2	GH	US735	45−90	0.25−0.60	1.50−6.00
		✣	L	1	LM	MP7035	55−85	0.10−0.30	0.30−2.00
		✣	L	2	SH	US735	55−105	0.10−0.40	0.30−2.00
		✣	M	1	MM	MP7035	50−80	0.15−0.45	0.70−5.00
		✣	M	2	GM	MP7035	50−80	0.16−0.50	0.50−4.00
		✣	M	3	MA	MP7035	50−80	0.20−0.50	0.30−4.00
		✣	M	4	MS	US735	50−95	0.16−0.50	0.50−4.00
		✣	M	5	MS	VP15TF	45−75	0.16−0.50	0.50−4.00
		✣	M	6	MS	UP20M	55−80	0.16−0.50	0.50−4.00
		✣	M	7	MS	UTi20T	45−60	0.16−0.50	0.50−4.00
		✣	M	8	MA	VP15TF	45−75	0.20−0.50	0.30−4.00
		✣	M	9	Std	VP15TF	45−75	0.25−0.60	1.50−5.00
		✣	R	1	RM	MP7035	45−75	0.25−0.55	1.50−6.00
		✣	R	2	GH	US735	45−90	0.25−0.60	1.50−6.00
K									
ねずみ鋳鉄（FC300など）	≦350MPa	●	L	1	MA	UC5105	170−315	0.20−0.50	0.30−4.00
		●	M	1	Std	UC5105	170−315	0.25−0.60	1.50−5.00
		●	M	2	Std	NX2525	155−210	0.25−0.60	1.50−5.00

被削材	かたさ	切削状態	切削領域	優先	ブレーカ	インサート材種	切削速度 (m/min)	送り量 (mm/rev)	切込み量 (mm)
K									
ねずみ鋳鉄（FC300など）	≦350MPa	●	M	3	MW	UC5105	170−315	0.20−0.60	0.90−4.00
		●	R	1	GH	UC5105	165−300	0.25−0.60	1.50−6.00
		●	R	2	Flat	UC5105	165−300	0.20−0.60	2.50−6.00
		●	R	3	Flat	HTi10	100−145	0.20−0.60	2.50−6.00
		●	R	4	Flat	HTi05T	110−185	0.20−0.60	2.50−6.00
		●	H	1	Flat	UC5105	165−300	0.20−0.60	2.50−6.00
		◐	L	1	MA	UC5115	165−305	0.20−0.50	0.30−4.00
		◐	L	2	MP	UC5115	165−305	0.16−0.50	0.30−4.00
		◐	L	3	SW	UC5115	185−335	0.10−0.50	0.30−2.50
		◐	M	1	Std	UC5115	165−305	0.25−0.60	1.50−5.00
		◐	M	2	Std	HTi10	105−150	0.25−0.60	1.50−5.00
		◐	M	3	MH	UC5115	165−305	0.20−0.55	1.00−4.00
		◐	M	4	MW	UC5115	165−305	0.20−0.60	0.90−4.00
		◐	R	1	GH	UC5115	160−290	0.25−0.60	1.50−6.00
		◐	R	2	Flat	UC5115	160−290	0.20−0.60	2.50−6.00
		◐	H	1	Flat	UC5115	160−290	0.20−0.60	2.50−6.00
		✣	L	1	MA	UC5115	165−305	0.20−0.50	0.30−4.00
		✣	M	1	Std	UC5115	165−305	0.25−0.60	1.50−5.00
		✣	M	2	Std	UTi20T	85−120	0.25−0.60	1.50−5.00
		✣	R	1	GH	UC5115	160−290	0.25−0.60	1.50−6.00
		✣	R	2	Flat	UC5115	160−290	0.20−0.60	2.50−6.00
		✣	R	3	Flat	UTi20T	80−115	0.20−0.60	2.50−6.00
		✣	H	1	Flat	UC5115	160−290	0.20−0.60	2.50−6.00
ダクタイル鋳鉄（FCD450など）	≦450MPa	●	L	1	MA	UC5105	160−295	0.20−0.50	0.30−4.00
		●	M	1	Std	UC5105	160−295	0.25−0.60	1.50−5.00
		●	M	2	Std	NX2525	145−200	0.25−0.60	1.50−5.00
		●	R	1	GH	UC5105	155−280	0.25−0.60	1.50−6.00
		●	R	2	Flat	UC5105	155−280	0.20−0.60	2.50−6.00
		●	R	3	Flat	HTi10	95−135	0.20−0.60	2.50−6.00
		●	R	4	Flat	HTi05T	105−175	0.20−0.60	2.50−6.00
		●	H	1	Flat	UC5105	155−280	0.20−0.60	2.50−6.00
		◐	L	1	MA	UC5115	155−285	0.20−0.50	0.30−4.00
		◐	L	2	MP	UC5115	155−285	0.16−0.50	0.30−4.00
		◐	L	3	SW	UC5115	175−315	0.10−0.50	0.30−2.50
		◐	M	1	Std	UC5115	155−285	0.25−0.60	1.50−5.00
		◐	M	2	Std	HTi10	100−140	0.25−0.60	1.50−5.00
		◐	R	1	GH	UC5115	150−275	0.25−0.60	1.50−6.00
		◐	R	2	Flat	UC5115	150−275	0.20−0.60	2.50−6.00
		◐	H	1	Flat	UC5115	150−275	0.20−0.60	2.50−6.00
		✣	L	1	MA	UC5115	155−285	0.20−0.50	0.30−4.00
		✣	M	1	Std	UC5115	155−285	0.25−0.60	1.50−5.00
		✣	M	2	Std	UTi20T	80−115	0.25−0.60	1.50−5.00
		✣	R	1	GH	UC5115	150−275	0.25−0.60	1.50−6.00
		✣	R	2	Flat	UC5115	150−275	0.20−0.60	2.50−6.00
		✣	R	3	Flat	UTi20T	75−110	0.20−0.60	2.50−6.00
		✣	H	1	Flat	UC5115	150−275	0.20−0.60	2.50−6.00
ダクタイル鋳鉄（FCD700など）	≦800MPa	●	L	1	MA	UC5105	145−265	0.20−0.50	0.30−4.00
		●	M	1	Std	UC5105	145−265	0.25−0.60	1.50−5.00
		●	M	2	Std	NX2525	130−175	0.25−0.60	1.50−5.00
		●	R	1	GH	UC5105	135−250	0.25−0.60	1.50−6.00
		●	R	2	Flat	UC5105	135−250	0.20−0.60	2.50−6.00
		●	R	3	Flat	HTi10	85−120	0.20−0.60	2.50−6.00
		●	R	4	Flat	HTi05T	90−155	0.20−0.60	2.50−6.00
		●	H	1	Flat	UC5105	135−250	0.20−0.60	2.50−6.00
		◐	L	1	MA	UC5115	140−255	0.20−0.50	0.30−4.00
		◐	L	2	MP	UC5115	140−255	0.16−0.50	0.30−4.00
		◐	L	3	SW	UC5115	155−280	0.10−0.50	0.30−2.50
		◐	M	1	Std	UC5115	140−255	0.25−0.60	1.50−5.00
		◐	M	2	Std	HTi10	85−125	0.25−0.60	1.50−5.00

切削状態： ●：安定切削 ◐：一般切削 ✣：不安定切削

切削領域： **F**：仕上げ領域 **L**：軽切削領域 **M**：中切削領域 **R**：荒切削領域 **H**：重切削領域

被削材	かたさ	切削領域		優先	ブレーカ	インサート材種	切削速度 (m/min)	送り量 (mm/rev)	切込み量 (mm)
K									
ダクタイル鋳鉄（FCD700など）	≦800MPa	◐	R	1	GH	UC5115	130－240	0.25－0.60	1.50－6.00
		◐	R	2	Flat	UC5115	130－240	0.20－0.60	2.50－6.00
		◐	H	1	Flat	UC5115	130－240	0.20－0.60	2.50－6.00
		✠	L	1	MA	UC5115	140－255	0.20－0.50	0.30－4.00
		✠	M	1	Std	UC5115	140－255	0.25－0.60	1.50－5.00
		✠	M	2	Std	UTi20T	70－100	0.25－0.60	1.50－5.00
		✠	R	1	GH	UC5115	130－240	0.25－0.60	1.50－6.00
		✠	R	2	Flat	UC5115	130－240	0.20－0.60	2.50－6.00
		✠	R	3	Flat	UTi20T	65－95	0.20－0.60	2.50－6.00
		✠	H	1	Flat	UC5115	130－240	0.20－0.60	2.50－6.00
S									
チタン合金（Ti-6Al-4Vなど）		●	F	1	FJ	RT9010	45－95	0.07－0.20	0.10－1.00
		●	L	1	MJ(M)	RT9010	40－80	0.07－0.25	0.40－1.50
		●	M	1	MS	RT9010	40－80	0.10－0.25	0.50－4.00
		●	R	1	GJ	RT9010	35－75	0.16－0.35	1.00－3.00
		◐	F	1	FJ	RT9010	45－95	0.07－0.20	0.10－1.00
		◐	L	1	MJ(M)	RT9010	40－80	0.07－0.25	0.40－1.50
		◐	L	2	MJ(G)	RT9010	40－80	0.07－0.25	0.40－1.50
		◐	M	1	MS	RT9010	40－80	0.10－0.25	0.50－4.00
		◐	R	1	GJ	RT9010	35－75	0.16－0.35	1.00－3.00
		✠	F	1	FJ	RT9010	45－95	0.07－0.20	0.10－1.00
		✠	L	1	MJ(M)	RT9010	40－80	0.07－0.25	0.40－1.50
		✠	L	2	MJ(G)	RT9010	40－80	0.07－0.25	0.40－1.50
		✠	M	1	MS	RT9010	40－80	0.10－0.25	0.50－4.00
		✠	R	1	GJ	RT9010	35－75	0.16－0.35	1.00－3.00
S									
耐熱合金（Inconel718など）		●	F	1	FJ	VP10RT	30－60	0.07－0.20	0.10－1.00
		●	L	1	MJ(M)	VP05RT	30－60	0.07－0.25	0.40－1.50
		●	L	2	MJ(M)	US905	50－100	0.07－0.25	0.40－1.50
		●	L	3	MJ(G)	VP10RT	25－50	0.07－0.25	0.40－1.50
		●	M	1	MS	VP05RT	30－60	0.10－0.25	0.50－4.00
		●	M	2	MS	US905	50－100	0.10－0.25	0.50－4.00
		●	R	1	GJ	VP10RT	20－45	0.16－0.35	1.00－3.00
		●	R	2	GJ	US905	45－95	0.16－0.35	1.00－3.00
		◐	F	1	FJ	VP10RT	30－60	0.07－0.20	0.10－1.00
		◐	L	1	MJ(M)	VP10RT	25－50	0.07－0.25	0.40－1.50
		◐	M	1	MS	VP10RT	25－50	0.10－0.25	0.50－4.00
		◐	R	1	GJ	VP10RT	20－45	0.16－0.35	1.00－3.00
		✠	F	1	FJ	VP15TF	20－40	0.07－0.20	0.10－1.00
		✠	L	1	MJ(M)	VP15TF	20－35	0.07－0.25	0.40－1.50
		✠	L	2	MJ(G)	VP15TF	20－35	0.07－0.25	0.40－1.50
		✠	M	1	MS	VP15TF	20－35	0.10－0.25	0.50－4.00
		✠	R	1	GJ	VP15TF	15－30	0.16－0.35	1.00－3.00

推奨切削条件

7° ポジティブインサート

ブレーカ： Std：無記号を表す Flat：なし

被削材	かたさ	切削状態	切削領域	優先	ブレーカ	インサート材種	切削速度 (m/min)	送り量 (mm/rev)	切込み量 (mm)
P									
軟鋼（SS400, S10Cなど）	≦180HB	●	F	1	FP	NX2525	225−320	0.04−0.20	0.20−0.90
		●	F	2	FV	NX2525	225−320	0.04−0.20	0.20−0.90
		●	F	3	R/L-F	MP3025	230−350	0.05−0.12	0.10−0.50
		●	L	1	LP	NX2525	225−320	0.06−0.25	0.20−1.00
		●	L	2	Std	UE6110	205−350	0.08−0.30	0.30−2.00
		●	L	3	MV	MP3025	190−295	0.08−0.30	0.30−2.00
		●	L	4	Std	MP3025	190−295	0.08−0.30	0.30−2.00
		●	M	1	MP	NX2525	185−265	0.08−0.30	0.30−2.00
		◐	F	1	FP	UE6110	250−425	0.04−0.20	0.20−0.90
		◐	F	2	FP	MP3025	230−350	0.04−0.20	0.20−0.90
		◐	F	3	FV	MP3025	230−350	0.04−0.20	0.20−0.90
		◐	F	4	FV	NX3035	215−305	0.04−0.20	0.20−0.90
		◐	L	1	LP	UE6110	250−425	0.06−0.25	0.20−1.00
		◐	L	2	LP	MP3025	230−350	0.06−0.25	0.20−1.00
		◐	L	3	Std	UE6110	205−350	0.08−0.30	0.30−2.00
		◐	M	1	MP	UE6110	205−350	0.08−0.30	0.30−2.00
		◐	M	2	MP	MP3025	190−295	0.08−0.30	0.30−2.00
		✠	F	1	FP	MC6025	250−405	0.04−0.20	0.20−0.90
		✠	F	2	FV	UE6020	235−385	0.04−0.20	0.20−0.90
		✠	L	1	LP	MC6025	250−405	0.06−0.25	0.20−1.00
		✠	L	2	Std	UE6020	195−320	0.08−0.30	0.30−2.00
		✠	M	1	MP	MC6025	205−335	0.08−0.30	0.30−2.00
炭素鋼･合金鋼（S45C, SCM440など）	180 − 280HB	●	F	1	FP	NX2525	165−235	0.04−0.20	0.20−0.90
		●	F	2	FV	NX2525	165−235	0.04−0.20	0.20−0.90
		●	F	3	R/L-F	MP3025	170−260	0.05−0.12	0.10−0.50
		●	L	1	LP	NX2525	165−235	0.06−0.25	0.20−1.00
		●	L	2	Std	UE6110	150−260	0.08−0.30	0.30−2.00
		●	L	3	MV	MP3025	140−215	0.08−0.30	0.30−2.00
		●	L	4	Std	MP3025	140−215	0.08−0.30	0.30−2.00
		●	L	5	SV	MP3025	170−260	0.06−0.25	0.20−1.00
		●	L	6	MW	MP3025	140−215	0.10−0.35	0.80−2.50
		●	M	1	MP	NX2525	135−195	0.08−0.30	0.30−2.00
		◐	F	1	FP	UE6110	185−310	0.04−0.20	0.20−0.90
		◐	F	2	FP	MP3025	170−260	0.04−0.20	0.20−0.90
		◐	F	3	FV	MP3025	170−260	0.04−0.20	0.20−0.90
		◐	F	4	FV	NX3035	160−225	0.04−0.20	0.20−0.90
		◐	F	5	SW	MP3025	170−260	0.06−0.24	0.20−1.50
		◐	L	1	LP	UE6110	185−310	0.06−0.25	0.20−1.00
		◐	L	2	LP	MP3025	170−260	0.06−0.25	0.20−1.00
		◐	L	3	Std	UE6110	150−260	0.08−0.30	0.30−2.00
		◐	M	1	MP	UE6110	150−260	0.08−0.30	0.30−2.00
		◐	M	2	MP	MP3025	140−215	0.08−0.30	0.30−2.00
		✠	F	1	FP	MC6025	185−295	0.04−0.20	0.20−0.90
		✠	F	2	FV	UE6020	175−285	0.04−0.20	0.20−0.90
		✠	L	1	LP	MC6025	185−295	0.06−0.25	0.20−1.00
		✠	L	2	Std	UE6020	145−235	0.08−0.30	0.30−2.00
		✠	M	1	MP	MC6025	150−245	0.08−0.30	0.30−2.00
炭素鋼･合金鋼（SNCM439など）	280 − 350HB	●	M	1	MP	NX2525	95−140	0.08−0.30	0.30−2.00
		◐	M	1	MP	UE6110	110−185	0.08−0.30	0.30−2.00
		◐	M	2	MP	MP3025	100−155	0.08−0.30	0.30−2.00
		✠	M	1	MP	MC6025	110−175	0.08−0.30	0.30−2.00
M									
オーステナイト系ステンレス鋼（SUS304, SUS316など）	≦200HB	●	F	1	FM	VP15TF	75−125	0.04−0.20	0.20−0.90
		●	F	2	Std	US735	70−135	0.08−0.30	0.30−2.00
		●	S	1	LM	MC7025	140−190	0.06−0.25	0.20−1.00
		●	S	2	Std	US735	70−135	0.08−0.30	0.30−2.00
		●	M	1	MM	MC7025	115−155	0.08−0.30	0.30−2.00
		◐	F	1	FM	VP15TF	75−125	0.04−0.20	0.20−0.90
		◐	F	2	Std	US735	70−135	0.08−0.30	0.30−2.00
		◐	S	1	LM	MC7025	140−190	0.06−0.25	0.20−1.00
		◐	S	2	Std	US735	70−135	0.08−0.30	0.30−2.00
		◐	M	1	MM	MC7025	115−155	0.08−0.30	0.30−2.00
		✠	F	1	FM	VP15TF	75−125	0.04−0.20	0.20−0.90
		✠	F	2	Std	US735	70−135	0.08−0.30	0.30−2.00
		✠	S	1	LM	MP7035	85−135	0.06−0.25	0.20−1.00
		✠	S	2	LM	VP15TF	75−125	0.06−0.25	0.20−1.00
		✠	S	3	Std	US735	70−135	0.08−0.30	0.30−2.00
		✠	M	1	MM	MP7035	70−115	0.08−0.30	0.30−2.00
		✠	M	2	MM	VP15TF	60−105	0.08−0.30	0.30−2.00
オーステナイト系ステンレス鋼（SUS304LN, SUS316LNなど）	>200HB	●	F	1	FM	VP15TF	60−105	0.04−0.20	0.20−0.90
		●	F	2	Std	US735	60−110	0.08−0.30	0.30−2.00
		●	S	1	LM	MC7025	120−160	0.06−0.25	0.20−1.00
		●	S	2	Std	US735	60−110	0.08−0.30	0.30−2.00
		●	M	1	MM	MC7025	100−130	0.08−0.30	0.30−2.00
		◐	F	1	FM	VP15TF	60−105	0.04−0.20	0.20−0.90
		◐	F	2	Std	US735	60−110	0.08−0.30	0.30−2.00
		◐	S	1	LM	MC7025	120−160	0.06−0.25	0.20−1.00
		◐	S	2	Std	US735	60−110	0.08−0.30	0.30−2.00
		◐	M	1	MM	MC7025	100−130	0.08−0.30	0.30−2.00
		✠	F	1	FM	VP15TF	60−105	0.04−0.20	0.20−0.90
		✠	F	2	Std	US735	60−110	0.08−0.30	0.30−2.00
		✠	S	1	LM	MP7035	70−115	0.06−0.25	0.20−1.00
		✠	S	2	LM	VP15TF	60−105	0.06−0.25	0.20−1.00
		✠	S	3	Std	US735	60−110	0.08−0.30	0.30−2.00
		✠	M	1	MM	MP7035	60−95	0.08−0.30	0.30−2.00
		✠	M	2	MM	VP15TF	50−90	0.08−0.30	0.30−2.00
二相系ステンレス鋼（SUS329J1など）	≦280HB	●	F	1	FM	VP15TF	50−85	0.04−0.20	0.20−0.90
		●	F	2	Std	US735	45−90	0.08−0.30	0.30−2.00
		●	S	1	LM	MC7025	95−130	0.06−0.25	0.20−1.00
		●	S	2	Std	US735	45−90	0.08−0.30	0.30−2.00
		●	M	1	MM	MC7025	80−105	0.08−0.30	0.30−2.00
		◐	F	1	FM	VP15TF	50−85	0.04−0.20	0.20−0.90
		◐	F	2	Std	US735	45−90	0.08−0.30	0.30−2.00
		◐	S	1	LM	MC7025	95−130	0.06−0.25	0.20−1.00
		◐	S	2	Std	US735	45−90	0.08−0.30	0.30−2.00
		◐	M	1	MM	MC7025	80−105	0.08−0.30	0.30−2.00
		✠	F	1	FM	VP15TF	50−85	0.04−0.20	0.20−0.90
		✠	F	2	Std	US735	45−90	0.08−0.30	0.30−2.00
		✠	S	1	LM	MP7035	55−95	0.06−0.25	0.20−1.00
		✠	S	2	LM	VP15TF	50−85	0.06−0.25	0.20−1.00
		✠	S	3	Std	US735	45−90	0.08−0.30	0.30−2.00
		✠	M	1	MM	MP7035	45−75	0.08−0.30	0.30−2.00
		✠	M	2	MM	VP15TF	40−70	0.08−0.30	0.30−2.00
フェライト系･マルテンサイト系ステンレス鋼（SUS410, SUS430など）	≦200HB	●	F	1	FM	VP15TF	75−125	0.04−0.20	0.20−0.90
		●	F	2	Std	US735	70−135	0.08−0.30	0.30−2.00
		●	S	1	LM	MC7025	140−190	0.06−0.25	0.20−1.00
		●	S	2	Std	US735	70−135	0.08−0.30	0.30−2.00
		●	M	1	MM	MC7025	115−155	0.08−0.30	0.30−2.00
		◐	F	1	FM	VP15TF	75−125	0.04−0.20	0.20−0.90
		◐	F	2	Std	US735	70−135	0.08−0.30	0.30−2.00
		◐	S	1	LM	MC7025	140−190	0.06−0.25	0.20−1.00
		◐	S	2	Std	US735	70−135	0.08−0.30	0.30−2.00
		◐	M	1	MM	MC7025	115−155	0.08−0.30	0.30−2.00
		✠	F	1	FM	VP15TF	75−125	0.04−0.20	0.20−0.90
		✠	F	2	Std	US735	70−135	0.08−0.30	0.30−2.00
		✠	S	1	LM	MP7035	85−135	0.06−0.25	0.20−1.00

切削状態： ●：安定切削 ◐：一般切削 ✠：不安定切削

切削領域： F：仕上げ領域 L：軽切削領域 M：中切削領域 R：荒切削領域 H：重切削領域

被削材	かたさ	切削領域		優先	ブレーカ	インサート材種	切削速度 (m/min)	送り量 (mm/rev)	切込み量 (mm)
M									
フェライト系・マルテンサイト系ステンレス鋼（SUS410, SUS430など）	≦200HB	✣	S	2	LM	VP15TF	75−125	0.06−0.25	0.20−1.00
		✣	S	3	Std	US735	70−135	0.08−0.30	0.30−2.00
		✣	M	1	MM	MP7035	70−115	0.08−0.30	0.30−2.00
		✣	M	2	MM	VP15TF	60−105	0.08−0.30	0.30−2.00
フェライト系・マルテンサイト系ステンレス鋼（SUS431, SUS420J2など）	>200HB	●	F	1	FM	VP15TF	60−105	0.04−0.20	0.20−0.90
		●	F	2	Std	US735	60−110	0.08−0.30	0.30−2.00
		●	S	1	LM	MC7025	120−160	0.06−0.25	0.20−1.00
		●	S	2	Std	US735	60−110	0.08−0.30	0.30−2.00
		●	M	1	MM	MC7025	100−130	0.08−0.30	0.30−2.00
		◐	F	1	FM	VP15TF	60−105	0.04−0.20	0.20−0.90
		◐	F	2	Std	US735	60−110	0.08−0.30	0.30−2.00
		◐	S	1	LM	MC7025	120−160	0.06−0.25	0.20−1.00
		◐	S	2	Std	US735	60−110	0.08−0.30	0.30−2.00
		◐	M	1	MM	MC7025	100−130	0.08−0.30	0.30−2.00
		✣	F	1	FM	VP15TF	60−105	0.04−0.20	0.20−0.90
		✣	F	2	Std	US735	60−110	0.08−0.30	0.30−2.00
		✣	S	1	LM	MP7035	70−115	0.06−0.25	0.20−1.00
		✣	S	2	LM	VP15TF	60−105	0.06−0.25	0.20−1.00
		✣	S	3	Std	US735	60−110	0.08−0.30	0.30−2.00
		✣	M	1	MM	MP7035	60−95	0.08−0.30	0.30−2.00
		✣	M	2	MM	VP15TF	50−90	0.08−0.30	0.30−2.00
析出硬化系ステンレス鋼（SUS630, SUS631など）	<450HB	●	F	1	FM	VP15TF	40−70	0.04−0.20	0.20−0.90
		●	F	2	Std	US735	40−75	0.08−0.30	0.30−2.00
		●	S	1	LM	MC7025	80−105	0.06−0.25	0.20−1.00
		●	S	2	Std	US735	40−75	0.08−0.30	0.30−2.00
		●	M	1	MM	MC7025	65−90	0.08−0.30	0.30−2.00
		◐	F	1	FM	VP15TF	40−70	0.04−0.20	0.20−0.90
		◐	F	2	Std	US735	40−75	0.08−0.30	0.30−2.00
		◐	S	1	LM	MC7025	80−105	0.06−0.25	0.20−1.00
		◐	S	2	Std	US735	40−75	0.08−0.30	0.30−2.00
		◐	M	1	MM	MC7025	65−90	0.08−0.30	0.30−2.00
		✣	F	1	FM	VP15TF	40−70	0.04−0.20	0.20−0.90
		✣	F	2	Std	US735	40−75	0.08−0.30	0.30−2.00
		✣	S	1	LM	MP7035	45−75	0.06−0.25	0.20−1.00
		✣	S	2	LM	VP15TF	40−70	0.06−0.25	0.20−1.00
		✣	S	3	Std	US735	40−75	0.08−0.30	0.30−2.00
		✣	M	1	MM	MP7035	40−65	0.08−0.30	0.30−2.00
		✣	M	2	MM	VP15TF	35−60	0.08−0.30	0.30−2.00
K									
ねずみ鋳鉄（FC300など）	≦350MPa	●	F	1	Std	UC5115	130−245	0.08−0.30	0.30−2.00
		●	S	1	Std	UC5115	130−245	0.08−0.30	0.30−2.00
		●	M	1	Flat	UC5115	130−245	0.08−0.30	0.30−2.00
		◐	F	1	Std	UC5115	130−245	0.08−0.30	0.30−2.00
		◐	S	1	Std	UC5115	130−245	0.08−0.30	0.30−2.00
		◐	M	1	Flat	UC5115	130−245	0.08−0.30	0.30−2.00
		✣	F	1	Std	UC5115	130−245	0.08−0.30	0.30−2.00
		✣	S	1	Std	UC5115	130−245	0.08−0.30	0.30−2.00
		✣	M	1	Flat	UC5115	130−245	0.08−0.30	0.30−2.00
ダクタイル鋳鉄（FCD450など）	≦450MPa	●	F	1	Std	UC5115	125−230	0.08−0.30	0.30−2.00
		●	S	1	Std	UC5115	125−230	0.08−0.30	0.30−2.00
		●	M	1	Flat	UC5115	125−230	0.08−0.30	0.30−2.00
		◐	F	1	Std	UC5115	125−230	0.08−0.30	0.30−2.00
		◐	S	1	Std	UC5115	125−230	0.08−0.30	0.30−2.00
		◐	M	1	Flat	UC5115	125−230	0.08−0.30	0.30−2.00
		✣	F	1	Std	UC5115	125−230	0.08−0.30	0.30−2.00
		✣	S	1	Std	UC5115	125−230	0.08−0.30	0.30−2.00
		✣	M	1	Flat	UC5115	125−230	0.08−0.30	0.30−2.00

被削材	かたさ	切削領域		優先	ブレーカ	インサート材種	切削速度 (m/min)	送り量 (mm/rev)	切込み量 (mm)
K									
ダクタイル鋳鉄（FCD700など）	≦800MPa	●	F	1	Std	UC5115	110−205	0.08−0.30	0.30−2.00
		●	S	1	Std	UC5115	110−205	0.08−0.30	0.30−2.00
		●	M	1	Flat	UC5115	110−205	0.08−0.30	0.30−2.00
		◐	F	1	Std	UC5115	110−205	0.08−0.30	0.30−2.00
		◐	S	1	Std	UC5115	110−205	0.08−0.30	0.30−2.00
		◐	M	1	Flat	UC5115	110−205	0.08−0.30	0.30−2.00
		✣	F	1	Std	UC5115	110−205	0.08−0.30	0.30−2.00
		✣	S	1	Std	UC5115	110−205	0.08−0.30	0.30−2.00
		✣	M	1	Flat	UC5115	110−205	0.08−0.30	0.30−2.00
N									
アルミニウム合金（A6061, A7075など）	Si<5%	●	F	1	AZ	HTi10	300−700	0.10−0.40	0.20−3.00
		◐	F	1	AZ	HTi10	300−700	0.10−0.40	0.20−3.00
		✣	F	1	AZ	HTi10	300−700	0.10−0.40	0.20−3.00
アルミニウム合金（AC4Bなど）	5%≦Si≦10%	●	F	1	AZ	HTi10	300−700	0.10−0.40	0.20−3.00
		◐	F	1	AZ	HTi10	300−700	0.10−0.40	0.20−3.00
		✣	F	1	AZ	HTi10	300−700	0.10−0.40	0.20−3.00
アルミニウム合金（ADC12, A390など）	Si>10%	●	F	1	AZ	HTi10	300−700	0.10−0.40	0.20−3.00
		◐	F	1	AZ	HTi10	300−700	0.10−0.40	0.20−3.00
		✣	F	1	AZ	HTi10	300−700	0.10−0.40	0.20−3.00
S									
チタン合金（Ti-6Al-4Vなど）	Si>10%	●	F	1	FJ	RT9010	35−75	0.04−0.12	0.20−1.40
		◐	F	1	FJ	RT9010	35−75	0.04−0.12	0.20−1.40
		✣	F	1	FJ	RT9010	35−75	0.04−0.12	0.20−1.40
S									
耐熱合金（Inconel718など）	Si>10%	●	F	1	FJ	VP10RT	20−45	0.04−0.12	0.20−1.40
		◐	F	1	FJ	VP10RT	20−45	0.04−0.12	0.20−1.40
		✣	F	1	FJ	VP10RT	20−45	0.04−0.12	0.20−1.40

推奨切削条件

11°ポジティブインサート

ブレーカ：　Std：無記号を表す　Flat：なし

被削材	かたさ	切削領域		優先	ブレーカ	インサート材種	切削速度 (m/min)	送り量 (mm/rev)	切込み量 (mm)
P									
軟鋼（SS400, S10Cなど）	≦180HB	●	F	1	R-R/L	NX2525	225−320	0.05−0.12	0.20−0.60
		●	L	1	R-Std	NX2525	185−265	0.08−0.30	0.30−2.00
		●	M	1	R-Std	NX2525	185−265	0.08−0.30	0.30−2.00
		◐	F	1	R-R/L	NX2525	225−320	0.05−0.12	0.20−0.60
		◐	L	1	R-Std	UE6110	205−350	0.08−0.30	0.30−2.00
		◐	L	2	R-Std	MP3025	190−295	0.08−0.30	0.30−2.00
		◐	L	3	R-Std	NX3035	180−255	0.08−0.30	0.30−2.00
		◐	M	1	R-Std	UE6110	205−350	0.08−0.30	0.30−2.00
		◐	M	2	R-Std	MP3025	190−295	0.08−0.30	0.30−2.00
		◐	M	3	R-Std	NX3035	180−255	0.08−0.30	0.30−2.00
		✣	F	1	R-R/L	UTi20T	115−165	0.05−0.12	0.20−0.60
		✣	L	1	R-Std	UE6020	195−320	0.08−0.30	0.30−2.00
		✣	L	2	N-Flat	UE6020	195−320	0.08−0.30	0.30−2.00
		✣	L	3	N-Flat	UP20M	105−160	0.08−0.30	0.30−2.00
		✣	M	1	R-Std	UE6020	195−320	0.08−0.30	0.30−2.00
		✣	M	2	N-Flat	UE6020	195−320	0.08−0.30	0.30−2.00
		✣	M	3	N-Flat	UP20M	105−160	0.08−0.30	0.30−2.00
炭素鋼･合金鋼（S45C, SCM440など）	180 − 280HB	●	F	1	R-R/L	NX2525	165−235	0.05−0.12	0.20−0.60
		●	L	1	R-Std	NX2525	135−195	0.08−0.30	0.30−2.00
		●	M	1	R-Std	NX2525	135−195	0.08−0.30	0.30−2.00
		◐	F	1	R-R/L	NX2525	165−235	0.05−0.12	0.20−0.60
		◐	L	1	R-Std	UE6110	150−260	0.08−0.30	0.30−2.00
		◐	L	2	R-Std	MP3025	140−215	0.08−0.30	0.30−2.00
		◐	L	3	R-Std	NX3035	130−190	0.08−0.30	0.30−2.00
		◐	M	1	R-Std	UE6110	150−260	0.08−0.30	0.30−2.00
		◐	M	2	R-Std	MP3025	140−215	0.08−0.30	0.30−2.00
		◐	M	3	R-Std	NX3035	130−190	0.08−0.30	0.30−2.00
		✣	F	1	R-R/L	UTi20T	85−120	0.05−0.12	0.20−0.60
		✣	L	1	R-Std	UE6020	145−235	0.08−0.30	0.30−2.00
		✣	L	2	N-Flat	UE6020	145−235	0.08−0.30	0.30−2.00
		✣	L	3	N-Flat	UP20M	75−115	0.08−0.30	0.30−2.00
		✣	M	1	R-Std	UE6020	145−235	0.08−0.30	0.30−2.00
		✣	M	2	N-Flat	UE6020	145−235	0.08−0.30	0.30−2.00
		✣	M	3	N-Flat	UP20M	75−115	0.08−0.30	0.30−2.00
K									
ねずみ鋳鉄（FC300など）	≦350MPa	●	F	1	R-R/L	NX2525	150−205	0.05−0.12	0.20−0.60
		●	L	1	N-Flat	UC5105	135−250	0.08−0.30	0.30−2.00
		●	L	2	N-Flat	NX2525	125−170	0.08−0.30	0.30−2.00
		●	L	3	R-Std	NX2525	125−170	0.08−0.30	0.30−2.00
		●	M	1	N-Flat	UC5105	135−250	0.08−0.30	0.30−2.00
		●	M	2	N-Flat	NX2525	125−170	0.08−0.30	0.30−2.00
		●	M	3	R-Std	NX2525	125−170	0.08−0.30	0.30−2.00
		◐	F	1	R-R/L	NX2525	150−205	0.05−0.12	0.20−0.60
		◐	F	2	R-R/L	HTi10	100−145	0.05−0.12	0.20−0.60
		◐	L	1	N-Flat	UC5115	130−245	0.08−0.30	0.30−2.00
		◐	L	2	N-Flat	UE6110	130−200	0.08−0.30	0.30−2.00
		◐	M	1	N-Flat	UC5115	130−245	0.08−0.30	0.30−2.00
		◐	M	2	N-Flat	UE6110	130−200	0.08−0.30	0.30−2.00
		✣	F	1	R-R/L	UTi20T	80−115	0.05−0.12	0.20−0.60
		✣	L	1	N-Flat	VP15TF	115−160	0.08−0.30	0.30−2.00
		✣	M	1	N-Flat	VP15TF	115−160	0.08−0.30	0.30−2.00
ダクタイル鋳鉄（FCD450など）	≦450MPa	●	F	1	R-R/L	NX2525	140−190	0.05−0.12	0.20−0.60
		●	L	1	N-Flat	UC5105	130−235	0.08−0.30	0.30−2.00
		●	L	2	N-Flat	NX2525	115−160	0.08−0.30	0.30−2.00
		●	L	3	R-Std	NX2525	115−160	0.08−0.30	0.30−2.00
		●	M	1	N-Flat	UC5105	130−235	0.08−0.30	0.30−2.00
		●	M	2	N-Flat	NX2525	115−160	0.08−0.30	0.30−2.00
		●	M	3	R-Std	NX2525	115−160	0.08−0.30	0.30−2.00
		◐	F	1	R-R/L	NX2525	140−190	0.05−0.12	0.20−0.60

被削材	かたさ	切削領域		優先	ブレーカ	インサート材種	切削速度 (m/min)	送り量 (mm/rev)	切込み量 (mm)
K									
ダクタイル鋳鉄（FCD450など）	≦450MPa	◐	F	2	R-R/L	HTi10	95−135	0.05−0.12	0.20−0.60
		◐	L	1	N-Flat	UC5115	125−230	0.08−0.30	0.30−2.00
		◐	L	2	N-Flat	UE6110	120−190	0.08−0.30	0.30−2.00
		◐	M	1	N-Flat	UC5115	125−230	0.08−0.30	0.30−2.00
		◐	M	2	N-Flat	UE6110	120−190	0.08−0.30	0.30−2.00
		✣	F	1	R-R/L	UTi20T	75−110	0.05−0.12	0.20−0.60
		✣	L	1	N-Flat	VP15TF	110−150	0.08−0.30	0.30−2.00
		✣	M	1	N-Flat	VP15TF	110−150	0.08−0.30	0.30−2.00
ダクタイル鋳鉄（FCD700など）	≦800MPa	●	F	1	R-R/L	NX2525	125−170	0.05−0.12	0.20−0.60
		●	L	1	N-Flat	UC5105	115−210	0.08−0.30	0.30−2.00
		●	L	2	N-Flat	NX2525	105−140	0.08−0.30	0.30−2.00
		●	L	3	R-Std	NX2525	105−140	0.08−0.30	0.30−2.00
		●	M	1	N-Flat	UC5105	115−210	0.08−0.30	0.30−2.00
		●	M	2	N-Flat	NX2525	105−140	0.08−0.30	0.30−2.00
		●	M	3	R-Std	NX2525	105−140	0.08−0.30	0.30−2.00
		◐	F	1	R-R/L	NX2525	125−170	0.05−0.12	0.20−0.60
		◐	F	2	R-R/L	HTi10	85−120	0.05−0.12	0.20−0.60
		◐	L	1	N-Flat	UC5115	110−205	0.08−0.30	0.30−2.00
		◐	L	2	N-Flat	UE6110	105−170	0.08−0.30	0.30−2.00
		◐	M	1	N-Flat	UC5115	110−205	0.08−0.30	0.30−2.00
		◐	M	2	N-Flat	UE6110	105−170	0.08−0.30	0.30−2.00
		✣	F	1	R-R/L	UTi20T	65−95	0.05−0.12	0.20−0.60
		✣	L	1	N-Flat	VP15TF	95−135	0.08−0.30	0.30−2.00
		✣	M	1	N-Flat	VP15TF	95−135	0.08−0.30	0.30−2.00

切削状態：　●：安定切削　◐：一般切削　✣：不安定切削
切削領域：　F：仕上げ領域　L：軽切削領域　M：中切削領域　R：荒切削領域　H：重切削領域