

RRD

FRAISES À PLAQUETTES RONDES
POLYVALENCE ET PERFORMANCE



Mplus...

RRD

CARACTÉRISTIQUES DU PRODUIT



- Fraise à plaquettes rondes pour l'usinage des aciers et aciers traités
- Gamme polyvalente de nuances de plaquettes pour usinage des aciers jusqu'à 60 HRC
- Large gamme de fraises, à attachement par alésage, à embout fileté, à queue cylindrique et queue Weldon
- Large gamme de dimensions de plaquettes, Ø5, Ø7, Ø10, Ø12 et Ø16

RRD

FRAISES À PLAQUETTES RONDES

FRAISES RRD

Queue cylindrique



Queue Weldon



À embout fileté

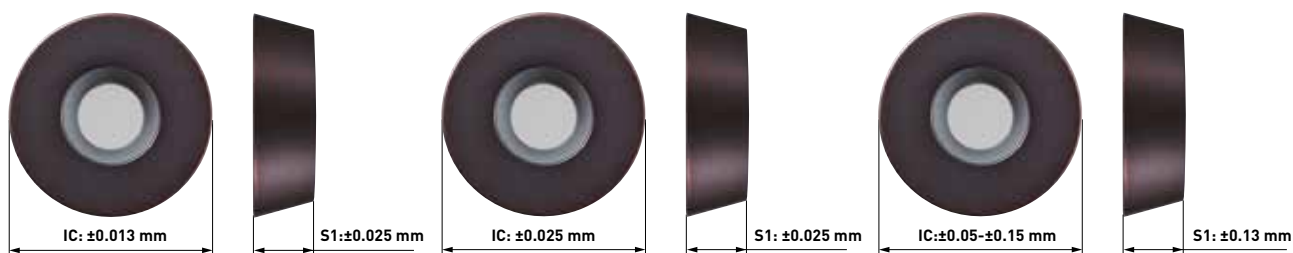


Attachement par alésage



CARACTÉRISTIQUES

Les plaquettes sont disponibles en 3 classes de tolérance pour s'adapter à toutes les applications.



RDHX

- Rectifiée (tolérance H)
- Haute précision
- Finition et semi-finition

RDZX

- Frittée de précision (tolérance E)
- Usage polyvalent
- Plaquette économique pour une grande durée de vie

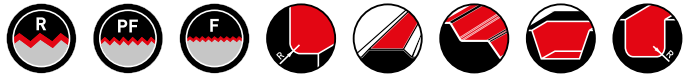
RDMX

- Frittée (tolérance M)
- Usage polyvalent
- Ébauche et semi-finition

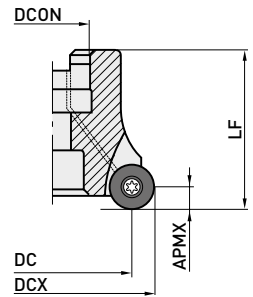
NUANCES

ISO	Carbure revêtu					Carbure non revêtu		
P	P01	VP05HT	VP10H	VP15TF	VP20M	F7030	UT120T	Dureté ↑ Ténacité ↓
	P10							
	P20							
	P30							
	P40							
K	K01	VP15TF	UT120T					
	K10							
	K20							
	K30							
H	H01	VP05HT	VP10H	VP15TF				
	H10							
	H20							
	H30							

RRD N



P K H



Outil à droite uniquement.

ATTACHEMENT PAR ALÉSAGE (Coupe neutre)

RE	Référence	Stock	Dents	DCX	DC	LF	DCON	APMX	WT *1	Plaquette
5	RRD050N-042A06R	●	6	42	32	44	16	5	0.26	RDH/M/Z
	RRD050N-052A07R	●	7	52	42	50	22	5	0.4	1003M0
6	RRD060N-042A05R	●	5	42	30	42	16	6	0.26	RDH/M/Z 12T3M0
	RRD060N-050A05R	●	5	50	38	50	22	6	0.38	
	RRD060N-052A05R	●	5	52	40	50	22	6	0.4	
	RRD060N-063A06R	●	6	63	51	50	22	6	0.33	
	RRD080N-050A04R	●	4	50	34	50	22	8	0.4	
8	RRD080N-052A04R	●	4	52	36	50	22	8	0.4	RDH/M/Z 1604M0
	RRD080N-052A05R	●	5	52	36	50	22	8	0.4	
	RRD080N-063A05R	●	5	63	47	50	22	8	0.58	
	RRD080N-066A05R	●	5	66	50	50	27	8	0.6	
	RRD080N-080A06R	●	6	80	64	52	27	8	1	
	RRD080N-100A07R*2	●	7	100	84	52	32	8	1.5	
	RRD080N-125B08R*2	□	8	125	109	52	40	8	2.5	
RRD080N-160C09R*2	●	9	160	144	52	40	8	3.5		

*1 Poids : Poids de l'outil en kg

*2 sans arrosage interne

PIÈCES DÉTACHÉES

RE	Référence	Bride	Vis de bride	Vis de plaquette	Vis d'attachement	Clé
5	RRD050N-042A06R					
	052A07R					
6	RRD060N-042A05R			B-TS35		TKY15F
	050A05R				TS1001	
	052A05R					
	063A06R					
	050A04R					
8	RRD080N-052A04R					TKY20F
	052A05R					
	063A05R					
	066A05R	KS-12	B-TS45	214		
	080A06R					
	100A07R					
125B08R						
160C09R						

● Ébauche

● Semi-finition

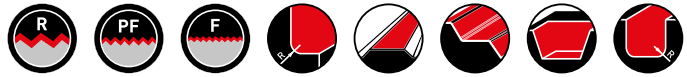
● Finition

● : Article stocké.

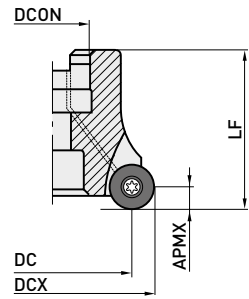
★ : Article stocké au Japon.

□ : Produit sur commande uniquement.

RRD P



P K H



Outil à droite uniquement.

ATTACHEMENT PAR ALÉSAGE (Coupe positive)

RE	Référence	Stock	Dents	DCX	DC	LF	DCON	APMX	WT *1	Plaque
6	RRD060P-050A05R	●	5	50	38	50	22	6	0.33	RDH/M/Z 12T3M0E
	RRD060P-052A05R	●	5	52	40	50	22	6	0.35	
	RRD060P-063A06R	●	6	63	51	50	22	6	0.58	
	RRD060P-066A06R	●	6	66	54	52	27	6	0.6	
	RRD060P-080A07R	●	7	80	68	50	27	6	1	
8	RRD080P-050A04R	●	4	50	34	50	22	8	0.33	RDH/M/Z 1604M0E
	RRD080P-063A05R	●	5	63	47	50	22	8	0.53	
	RRD080P-066A05R	●	5	66	50	50	27	8	0.55	
	RRD080P-080A06R	●	6	80	64	52	27	8	1	
	RRD080P-100A07R *2	●	7	100	84	52	32	8	1.5	
	RRD080P-125B08R *2	●	8	125	109	52	40	8	2.6	
RRD080P-160C09R *2	●	9	160	144	52	40	8	3.5		

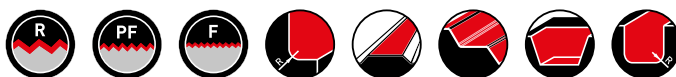
*1 Poids : Poids de l'outil en kg

*2 sans arrosage interne

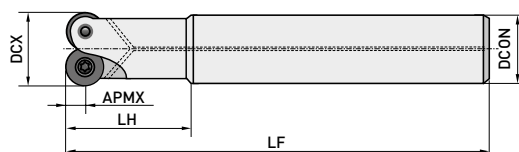
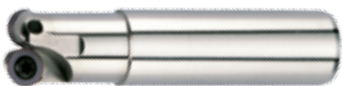
PIÈCES DÉTACHÉES

RE	Référence	Bride	Vis de bride	Vis de plaque	Vis d'attachement	Clé
6	050A05R	—	—	B-TS35	TS1001	TKY15F
	052A05R					
	063A06R					
	066A06R					
	080A07R					
8	050A04R	KS-12	B-TS45	214	—	TKY20F
	063A05R					
	066A05R					
	080A06R					
	100A07R					
	125B08R					
160C09R						

RRD



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QUEUE CYLINDRIQUE

Outil à droite uniquement.

RE	Référence	Stock	Dents	DCX	DCON	LF	LH	APMX	Plaque
2.5	RRD025R102S10Z	●	2	10	10	75	23	2.5	RDH/Z 0501M0
	RRD025R123S12Z	●	3	12	12	75	23	2.5	
	RRD025R154S16Z	●	4	15	16	80	23	2.5	
3.5	RRD035R122S10Z	●	2	12	10	75	23	3.5	RDH/M/Z 07T1M0
	RRD035R122S12Z	●	2	12	12	75	23	3.5	
	RRD035R122S16Z	□	2	12	16	88	15	3.5	
	RRD035R122S16ZL	●	2	12	16	128	15	3.5	
	RRD035R122S16ZM	●	2	12	16	108	15	3.5	
	RRD035R152S16Z	□	2	15	16	88	18	3.5	
3.5	RRD035R152S16ZM	□	2	15	16	108	18	3.5	RDH/M/Z 0702M0
	RRD035R152S20Z	●	2	15	20	130	20	3.5	
	RRD035R152S20ZM	●	2	15	20	150	20	3.5	
	RRD035R152S25Z	□	2	15	25	176	20	3.5	
3.5	RRD035R153S12Z	□	3	15	12	75	17	3.5	RDH/M/Z 07T1M0
	RRD035R153S16Z	□	3	15	16	78	30	3.5	
5	RRD050R202S20Z	●	2	20	20	90	31	5.0	RDH/M/Z 1003M0
	RRD050R202S20ZM	●	2	20	20	110	51	5.0	
	RRD050R202S25Z	●	2	20	25	136	72	5.0	
	RRD050R202S25ZL	●	2	20	25	176	112	5.0	
	RRD050R202S25ZM	●	2	20	25	156	92	5.0	

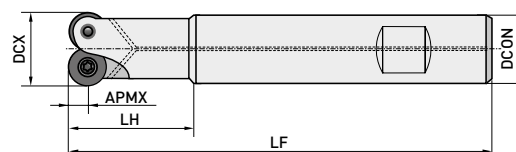
PIÈCES DÉTACHÉES

RE	Référence	Bride	Vis de bride	Vis de plaque	Vis d'attachement	Clé														
2.5	RRD025R	102S10Z 123S12Z 54S16Z	—	—	B-TS20	TKY06F														
	3.5						RRD035R	122S10Z 122S12Z 122S16Z 122S16ZL 122S16ZM 152S16Z 152S16ZM	—	—	B-TS253	TKY07F								
													5	RRD050R	202S20Z 202S20ZM 202S25Z 202S25ZL 202S25ZM	—	—	B-TS35	TKY15F	
3.5		RRD035R	152S20Z 152S20ZM	—	—	TS25														TKY08F

RRD



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QUEUE WELDON

Outil à droite uniquement.

RE	Référence	Stock	Dents	DCX	DCON	LF	LH	APMX	Plaque
3.5	RRD035R122S16W	●	2	12	16	88	15	3.5	RDH/M/Z 07T1M0
	RRD035R122S16WL	□	2	12	16	128	15	3.5	
	RRD035R122S16WM	□	2	12	16	108	15	3.5	
3.5	RRD035R152S16W	□	2	15	16	88	18	3.5	RDH/M/Z 0702M0
	RRD035R152S16WM	□	2	15	16	108	18	3.5	
	RRD035R152S20W	□	2	15	20	130	20	3.5	
	RRD035R152S20WM	□	2	15	20	150	20	3.5	
3.5	RRD035R152S25W	□	2	15	25	176	20	3.5	
3.5	RRD035R153S16W	●	3	15	16	78	30	3.5	RDH/M/Z 07T1M0
	RRD050R202S20W	●	2	20	20	90	31	5.0	
5	RRD050R202S20WM	●	2	20	20	110	51	5.0	RDH/M/Z 1003M0
	RRD050R202S25W	●	2	20	25	135	72	5.0	
	RRD050R202S25WL	●	2	20	25	176	112	5.0	
	RRD050R202S25WM	●	2	20	25	156	92	5.0	

PIÈCES DÉTACHÉES

RE	Référence	Bride	Vis de bride	Vis de plaque	Vis d'attache	Clé
3.5	RRD035R					
	122S16W					
	122S16WL	—	—	B-TS253	—	TKY07F
	122S16WM					
	152S16W					
	152S16WM					
	152S20W	—	—	TS25	—	TKY08F
152S20WM						
152S25W						
153S16W				TS253		
5	RRD050R					
	202S20W					
	202S20WM					
	202S25W	—	—	B-TS35	—	TKY15F
202S25WL						
202S25WM						

● Ébauche

● Semi-finition

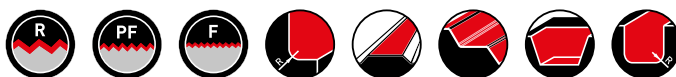
● Finition

● : Article stocké.

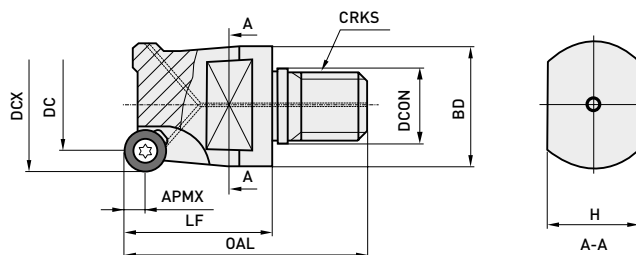
★ : Article stocké au Japon.

□ : Produit sur commande uniquement.

RRD



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À EMBOUT FILETÉ

Outil à droite uniquement.

RE	Référence	Stock	Dents	DCX	DC	OAL	LF	DCON	BD	CRKS	APMX	H	Plaquette
	RRD025R102M5	●	2	10	5	35	20	5.5	9.9	M5	2.5	6	
2.5	RRD025R123M8	●	3	12	7	38	20	8.5	13.5	M8	2.5	9	RDH/Z 0501M0
	RRD025R154M8	●	4	15	10	38	20	8.5	13.5	M8	2.5	10	
	RRD025R205M10	●	5	20	15	44	25	10.5	18	M10	2.5	15	
3.5	RRD035R122M8	●	2	12	5	46	28	8.5	13.5	M8	3.5	9	RDH/M/Z 07T1M0
	RRD035R153M8	●	3	15	8	46	28	8.5	13.5	M8	3.5	10	
	RRD035R204M10	●	4	20	13	47	28	10.5	18	M10	3.5	15	
	RRD035R255M12	●	5	25	18	50	28	12.5	21	M12	3.5	17	
	RRD035R306M16	●	6	30	23	51	28	17	29	M16	3.5	22	
3.5	RRD035R152M8	●	2	15	8	46	28	8.5	13.5	M8	3.5	10	RDH/M/Z 0702M0
	RRD035R153M8X	●	3	15	8	43	28	8.5	13.5	M8	3.5	10	
5	RRD050R202M10	●	2	20	10	47	28	10.5	18	M10	5.0	15	RDH/M/Z 1003M0
	RRD050R252M12	●	2	25	15	54	32	12.5	21	M12	5.0	17	
	RRD050R253M12	●	3	25	15	54	32	12.5	21	M12	5.0	17	
	RRD050R304M12	●	4	30	20	54	32	12.5	21	M12	5.0	17	
	RRD050R304M16	●	4	30	20	55	32	17	29	M16	5.0	22	
	RRD050R355M16	●	5	35	25	65	42	17	29	M16	5.0	22	
	RRD050R426M16	●	6	42	32	65	42	17	29	M16	5.0	22	
6	RRD060R242M12	●	2	24	12	54	32	12.5	21	M12	6.0	17	RDH/M/Z 12T3M0
	RRD060R353M16	●	3	35	23	65	42	17	29	M16	6.0	22	
	RRD060R354M16	●	4	35	23	65	42	17	29	M16	6.0	22	
	RRD060R424M16	●	4	42	30	55	32	17	29	M16	6.0	24	
	RRD060R425M16	●	5	42	30	65	42	17	29	M16	6.0	22	
8	RRD080R322M16	●	2	32	16	65	42	17	29	M16	8.0	22	RDH/M/Z 1604M0

● Ébauche

● Semi-finition






● Finition

● : Article stocké.

★ : Article stocké au Japon.

□ : Produit sur commande uniquement.

PIÈCES DÉTACHÉES

RE	Référence						
		Bride	Vis de bride	Vis de plaquette	Vis d'attache	Clé	
2.5	RRD025R	102M5					
		123M8	—	—	B-TS20	—	TKY06F
		154M8					
		205M10					
3.5	RRD035R	122M8			B-TS253	—	TKY07F
		153M8					
		204M10					
		255M12	—	—	TS253	—	TKY08F
		306M16					
		357M16					
		152M8			TS25	—	TKY08F
5	RRD050R	153M8X					
		202M10					
		252M12					
		253M12					
		304M12	—	—	B-TS35	—	TKY15F
		304M16					
6	RRD060R	355M16					
		426M16					
		242M12				—	
		353M16					
8	RRD080R	354M16	—	—	B-TS35	TS1001	TKY15F
		424M16					
		425M16					
8	RRD080R	322M16			214	—	TKY20F

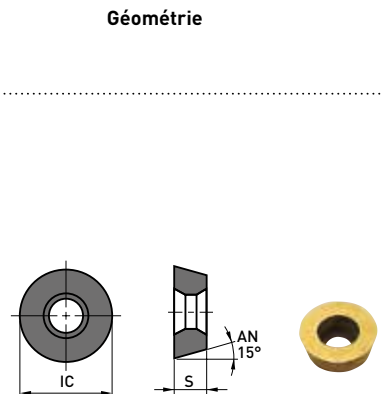
PLAQUETTES

P	Acier	●	●	●	●	●	●
K	Fonte	✱	✱	✱	✱	✱	✱
H	Matières trempées	●	●	●	●	●	●

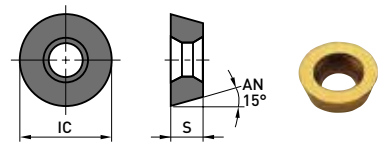
Conditions de coupe (Guide) :

● : Coupe stable ● : Coupe générale ✱ : Coupe instable

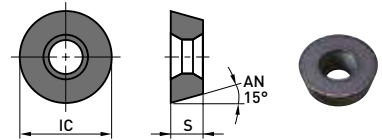
Référence	Classe	Honing	F7030	VP15TF	VP20M	VP10H	VP05HT	UT120T	IC	S
RDHX0501M0E	H	E	●	●		●	●		5	1.5
RDHX0501M0S	H	S	●	●		●			5	1.5
RDHX07T1M0E	H	E	●	●		●	●		7	1.98
RDHX07T1M0S	H	S	●	●		●	●		7	1.98
RDHX0702M0E	H	E	●	●		●	●		7	2.38
RDHX0702M0S	H	S	●	●		●			7	2.38
RDHX1003M0E	H	E	●	●		●	●		10	3.18
RDHX1003M0S	H	S	●	●		●	●		10	3.18
RDHX12T3M0E	H	E	●	●		●	●		12	3.97
RDHX12T3M0S	H	S	●	●		●			12	3.97
RDHX1604M0E	H	E	●	●		●	●		16	4.76
RDHX1604M0S	H	S	●	●		●			16	4.76
RDMX07T1M0E	M	E					●		7	1.98
RDMX07T1M0T	M	T	●		●	●			7	1.98
RDMX0702M0E	M	E					●		7	2.38
RDMX0702M0T	M	T	●		●	●		□	7	2.38
RDMX1003M0E	M	E					●		10	3.18
RDMX1003M0S	M	S		●		●			10	3.18
RDMX1003M0T	M	T	●		●	●		●	10	3.18
RDMX12T3M0E	M	E					●		12	3.97
RDMX12T3M0S	M	S		●		●			12	3.97
RDMX12T3M0T	M	T	●		●	●		●	12	3.97
RDMX1604M0E	M	E					●		16	4.76
RDMX1604M0S	M	S		●		●			16	4.76
RDMX1604M0T	M	T	●		●	●		●	16	4.76
RDZX0501M0E	Z	E		●					5	1.50
RDZX07T1M0E	Z	E		●					7	1.98
RDZX0702M0E	Z	E		●					7	2.38
RDZX1003M0E	Z	E		●					10	3.18
RDZX1003M0S	Z	S	●	●					10	3.18
RDZX12T3M0E	Z	E		●					12	3.97
RDZX12T3M0S	Z	S	●	●					12	3.97
RDZX1604M0E	Z	E		●					16	4.76
RDZX1604M0S	Z	S	●	●					16	4.76



IC: ±0.013 mm S: ±0.025 mm

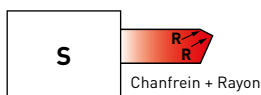


IC: ±0.05-±0.15 mm S: ±0.15 mm

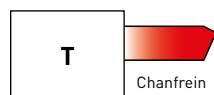


IC: ±0.025 mm S: ±0.025 mm

Préparation de l'arête de coupe



● Ébauche



● Ébauche et finition



● Finition

CONDITIONS DE COUPE RECOMMANDÉES

CONDITIONS DE COUPE POUR ÉBAUCHE (ae = 60 %)

Matière à usiner	Dureté	Nuance	Vc (m/min)	Ø 10-15 mm		Ø 20 mm		Ø 24-25 mm		Ø 30-42 mm		Ø 50-80 mm		Ø 100-160 mm	
				ap (mm)	fz (mm)	ap (mm)	fz (mm)	ap (mm)	fz (mm)	ap (mm)	fz (mm)	ap (mm)	fz (mm)	ap (mm)	fz (mm)
P Acier doux Acier au carbone Acier allié	<180HB	F7030 VP15TF	(250-320)	-0.2	0.25	-0.5	0.45	-1.0	0.35	-1.0	0.40	-1.0	0.50	-1.5	0.60
			(240-300)	0.2-0.3	0.20	0.5-1.0	0.25	1.0-2.0	0.30	1.5-2.0	0.32	1.0-1.5	0.40	1.5-2.5	0.45
			(200-280)	0.3-0.5	0.12	1.0-1.5	0.15	2.0-2.5	0.20	2.0-3.0	0.25	1.5-3.0	0.35	2.5-5.0	0.35
	180-350HB	F7030 VP15TF	(220-300)	-0.2	0.20	-0.5	0.40	-1.0	0.30	-1.0	0.40	-1.0	0.50	-1.5	0.55
			(200-290)	0.2-0.3	0.15	0.5-1.0	0.20	1.0-1.5	0.25	1.5-2.0	0.30	1.0-1.5	0.38	1.5-2.5	0.40
			(160-250)	0.3-0.5	0.10	1.0-1.5	0.10	1.5-2.0	0.22	2.0-3.0	0.22	1.5-3.0	0.30	2.5-4.5	0.32
K Fonte	Résistance à la traction < 450 MPa	VP15TF VP20M VP10H	(200-250)	-0.1	0.15	-0.5	0.18	-1.0	0.20	-1.0	0.25	-1.0	0.30	-1.5	0.35
			(180-230)	0.1-0.2	0.10	0.5-1.0	0.10	1.0-1.5	0.15	1.5-2.0	0.18	1.0-1.5	0.25	1.5-2.5	0.22
			(160-200)	0.2-0.25	0.10	1.0-1.5	0.10	1.5-2.0	0.12	2.0-3.0	0.15	1.5-3.0	0.18	2.5-4.5	0.20
H Acier trempé	-52HRC -58HRC -60HRC	VP15TF VP10H VP05HT	(140-200)	-0.1	0.12	-0.1	0.14	-0.1	0.15	-0.1	0.18	-0.1	0.18	-0.1	0.20
			(110-180)	0.1-0.15	0.10	0.1-0.20	0.12	0.1-0.30	0.12	0.1-0.30	0.14	0.1-0.30	0.14	0.1-0.30	0.15
			(100-170)	0.1-0.15	0.10	0.1-0.20	0.10	0.1-0.30	0.10	0.1-0.30	0.12	0.1-0.30	0.12	0.1-0.30	0.12

1. Si vous utilisez une pleine largeur de coupe, réduisez les conditions de coupe de 20 %.
2. Si vous utilisez un long porte-à-faux, réduisez la vitesse d'avance de 20 %.

CONDITIONS DE COUPE POUR FINITION (ae = 20 %)

Matière à usiner	Dureté	Nuance	Vc (m/min)	Ø 10-15 mm		Ø 20 mm		Ø 24-25 mm		Ø 30-42 mm		Ø 50-80 mm		Ø 100-160 mm	
				ap (mm)	fz (mm)	ap (mm)	fz (mm)	ap (mm)	fz (mm)	ap (mm)	fz (mm)	ap (mm)	fz (mm)	ap (mm)	fz (mm)
P Acier doux Acier au carbone Acier allié	<180HB	F7030 VP15TF	(260-360)	-0.1	0.15	-0.15	0.20	-0.15	0.25	-0.15	0.30	-0.15	0.32	-0.3	0.35
			(240-320)	0.1-0.2	0.15	0.1-0.2	0.15	0.1-0.2	0.18	0.1-0.3	0.20	0.1-0.3	0.22	0.2-0.3	0.25
			(220-280)	0.2-0.24	0.10	0.1-0.30	0.15	0.1-0.30	0.18	0.1-0.30	0.20	0.2-0.30	0.20	0.3-0.40	0.20
	180-350HB	F7030 VP15TF	(250-350)	-0.1	0.12	-0.1	0.15	-0.1	0.18	-0.1	0.25	-0.1	0.28	-0.15	0.30
			(230-310)	0.1-0.15	0.12	0.1-0.30	0.15	0.1-0.30	0.15	0.1-0.30	0.20	0.1-0.3	0.22	0.15-0.3	0.25
			(210-270)	0.15-0.2	0.10	0.15-0.30	0.12	0.15-0.30	0.15	0.15-0.30	0.15	0.2-0.3	0.18	0.2-0.3	0.18
K Fonte	Résistance à la traction < 450 MPa	VP15TF VP20M VP10H	(200-300)	-0.1	0.15	-0.1	0.18	-0.1	0.20	-0.1	0.22	-0.1	0.25	-0.15	0.30
			(200-280)	0.1-0.2	0.10	0.1-0.30	0.10	0.1-0.3	0.15	0.1-0.3	0.15	0.1-0.3	0.20	0.15-0.3	0.22
			(180-240)	0.2-0.25	0.10	0.2-0.40	0.10	0.2-0.4	0.12	0.2-0.4	0.12	0.2-0.4	0.15	0.2-0.4	0.18
H Acier trempé	-52HRC -58HRC -60HRC	VP15TF VP10H VP05HT	(150-200)	-0.1	0.15	-0.1	0.14	-0.1	0.15	-0.1	0.18	-0.1	0.18	-0.1	0.20
			(120-180)	0.1-0.15	0.10	0.1-0.20	0.12	0.1-0.30	0.12	0.1-0.30	0.14	0.1-0.30	0.14	0.1-0.30	0.15
			(100-180)	0.1-0.15	0.10	0.1-0.20	0.10	0.1-0.30	0.10	0.1-0.30	0.12	0.1-0.30	0.12	0.1-0.30	0.12

1. Pour une utilisation en rainurage, réduisez les conditions de coupe de 20 %.
2. Si vous utilisez un grand porte-à-faux, réduisez la vitesse d'avance de 20 %.



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