

RRD

FRESE CON INSERTI DI TIPO ROTONDO
VERSATILITÀ E LUNGA DURATA



*M*plus...

RRD

CARATTERISTICHE DEL PRODOTTO



- Fresa con inserti di tipo rotondo per la lavorazione di stampi
- Versatile gamma di gradi inserto per lavorazioni con durezza fino a 60 HRC
- Ampia gamma a disposizione: tipi a stelo cilindrico, con attacco Weldon, con attacco a vite, a manicotto
- Molteplici dimensioni inserto:
R 2.5, 3.5, 5.0, 6.0 e 8.0 mm

RRD

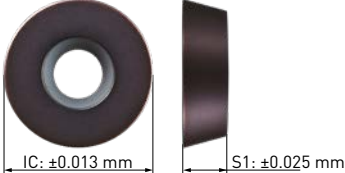
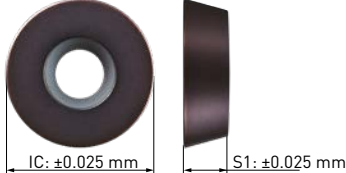
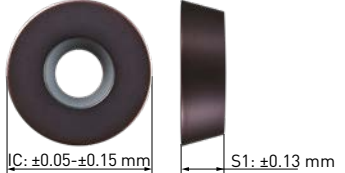
FRESE CON INSERTI DI TIPO ROTONDO

FRESE RRD

A STELO CILINDRICO	CON ATTACCO WELDON	CON ATTACCO A VITE	A MANICOTTO
			

CARATTERISTICHE

Gli inserti sono disponibili in tre diverse classi di tolleranza per adattarsi ad ogni tipo di lavorazione.

RDHX	RDZX	RDMX
- Sinterizzato (tolleranza H) - Alta precisione - Per semi-finitura e finitura	- Sinterizzato (tolleranza E) - Uso universale - Inserto economico con lunga vita utensile	- Sinterizzato (tolleranza M) - Uso universale - Per sgrossatura e semi-finitura
		

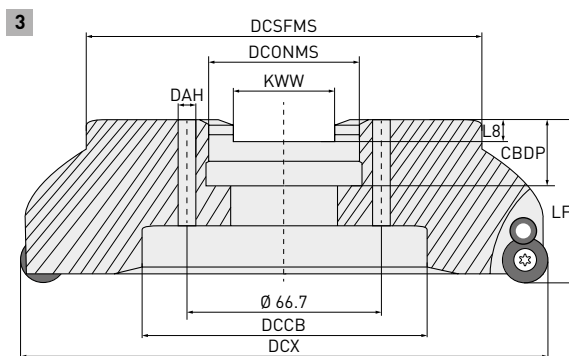
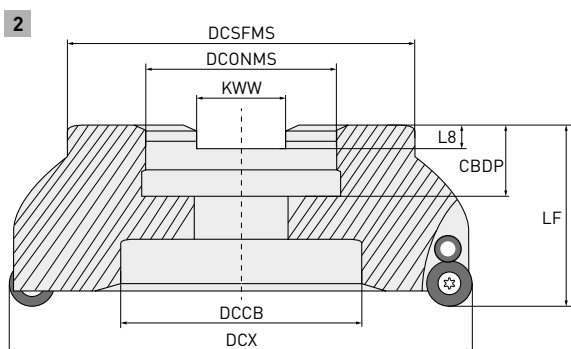
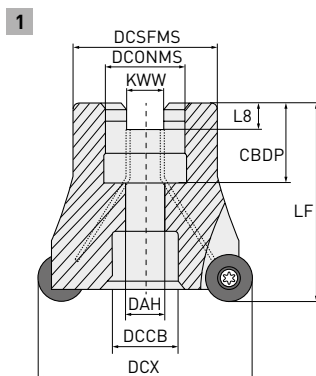
PANORAMICA DEI GRADI

	P	Metallo duro rivestito					Metallo duro non rivestito	K	Metallo duro rivestito	Metallo duro non rivestito	H	Metallo duro rivestito		
↑ Resistenza all'usura	P01	VP05HT	VP10H	VP15TF	VP20M	F7030	UT120T	K01		UT120T	H01	VP05HT	VP10H	VP15TF
↓ Tenacità	P10							K10	VP15TF		H10			
	P20							K20			H20			
	P30							K30			H30			
	P40													

RRD N



P K H



Solo portautensile destro.

TIPO A MANICOTTO (Neutro)

Codice ordinazione	Disponibilità	APMX	DCX	DC	LF	DCONMS	CBDP	DAH	DCSFMS	KWW	L8	DCCB	ZEFP		Tipo	
RRD050N-042A06R	●	5	42	32	44	16	18	9	33	8.4	5.7	15	6	●	1	RDH/M/Z 1003M0
RRD050N-052A07R	●	5	52	42	50	22	20	11	44	10.4	6.3	18	7	●	1	
RRD060N-042A05R	●	6	42	30	42	16	18	9	33	8.4	5.7	15	5	●	1	
RRD060N-050A05R	●	6	50	38	50	22	20	11	44	10.4	6.3	18	5	●	1	RDH/M/Z 12T3M0
RRD060N-052A05R	●	6	52	40	50	22	20	11	44	10.4	6.3	18	5	●	1	
RRD060N-063A06R	●	6	63	51	50	22	20	11	44	10.4	6.3	18	6	●	1	
RRD080N-050A04R	●	8	50	34	50	22	20	11	44	10.4	6.3	18	4	●	1	
RRD080N-052A04R	●	8	52	36	50	22	20	11	4	10.4	6.3	18	4	●	1	
RRD080N-052A05R	●	8	52	36	50	22	20	11	4	10.4	6.3	18	5	●	1	
RRD080N-063A05R	●	8	63	47	50	22	20	11	4	10.4	6.3	18	5	●	1	
RRD080N-066A05R	●	8	66	50	50	27	22	13.5	53	12.4	7.2	20	5	●	1	RDH/M/Z 1604M0
RRD080N-080A06R	●	8	80	64	52	27	22	13.5	64	12.4	7.2	20	6	●	1	
RRD080N-100A07R	●	8	100	84	52	32	29	—	72	14.4	8	46	7	—	2	
RRD080N-125B08R	●	8	125	109	52	40	30	—	82	16.4	9	58	8	—	2	
RRD080N-160C09R	□	8	160	144	52	40	29	14	90	16.4	9	92	9	—	3	

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RRD N

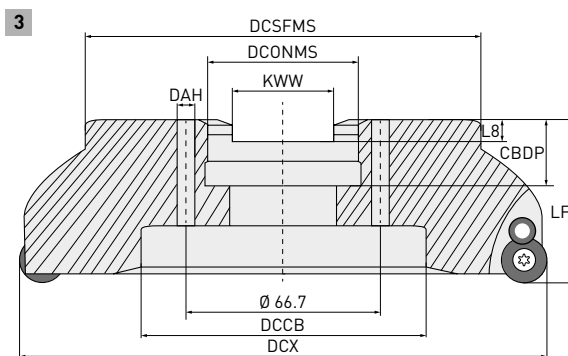
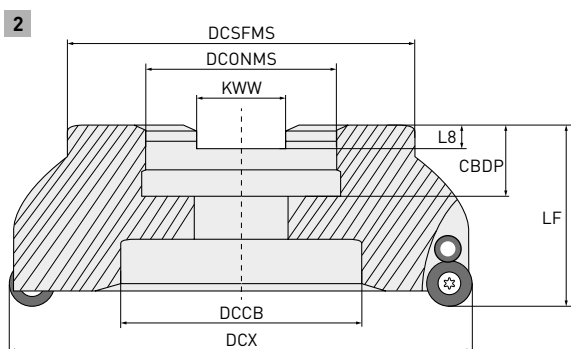
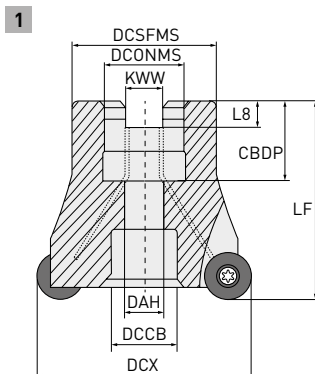
RICAMBI

Codice ordinazione		RE					
			Spessore	Vite per spessore	Vite di bloccaggio	Vite di bloccaggio inserto	Chiave di bloccaggio
RRD050N-	042A06R	5				—	
	052A07R						
RRD060N-	042A05R	6	—	—	B-TS35	TS1001	TKY15F
	050A05R						
	052A05R						
	063A06R						
RRD080N-	050A04R	8	KS-12	B-TS45	214	—	TKY20F
	052A04R						
	052A05R						
	063A05R						
	066A05R						
	080A06R						
	100A07R						
	125B08R						
	160C09R						

RRD P



P K H



Solo portautensile destro.

TIPO A MANICOTTO (Positivo)

Codice ordinazione	Disponibilità	APMX	DCX	DC	LF	DCONMS	CBDP	DAH	DCSFMS	KWW	L8	DCCB	ZEFP	Tipo	
RRD060P-050A05R	●	6	50	38	50	22	20	11	44	10.4	6.3	18	5	1	RDH/M/Z 12T3M0E
RRD060P-052A05R	●	6	52	40	50	22	20	11	44	10.4	6.3	18	5	1	
RRD060P-063A06R	●	6	63	51	50	22	20	11	44	10.4	6.3	18	6	1	
RRD060P-066A06R	●	6	66	54	52	27	22	13.5	53	12.4	7.2	20	6	1	
RRD060P-080A07R	●	6	80	68	50	27	22	13.5	64	12.4	7.2	20	7	1	
RRD080P-050A04R	●	8	50	34	50	22	20	11	44	10.4	6.3	18	4	1	RDH/M/Z 1604M0E
RRD080P-063A05R	●	8	63	47	50	22	20	11	44	10.4	6.3	18	5	1	
RRD080P-066A05R	●	8	66	50	50	27	22	13.5	53	12.4	7.2	20	5	1	
RRD080P-080A06R	●	8	80	64	52	27	22	13.5	64	12.4	7.2	20	6	1	
RRD080P-100A07R	●	8	100	84	52	32	29	—	72	14.4	8	46	7	2	
RRD080P-125B08R	●	8	125	109	52	40	30	—	82	16.4	9	58	8	2	
RRD080P-160C09R	●	8	160	144	52	40	29	14	90	16.4	9	92	9	3	

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RRD P

RICAMBI

Codice ordinazione		RE					
			Spessore	Vite per spessore	Vite di bloccaggio	Vite di bloccaggio inserto	Chiave di bloccaggio
RRD060P-	050A05R	6	—	—	B-TS35	TS1001	TKY15F
	052A05R						
	063A06R						
	066A06R						
	080A07R						
RRD080P-	050A04R	8	KS-12	B-TS45	214	—	TKY20F
	063A05R						
	066A05R						
	080A06R						
	100A07R						
	125B08R						
160C09R							

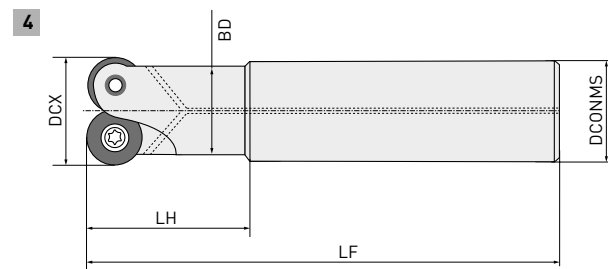
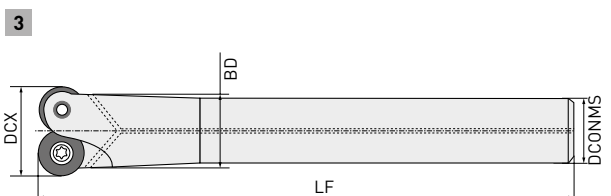
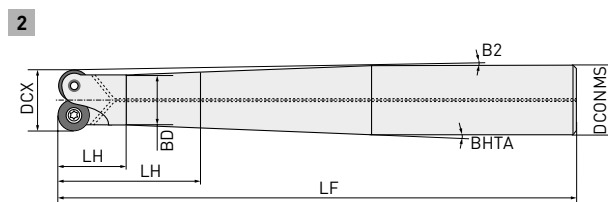
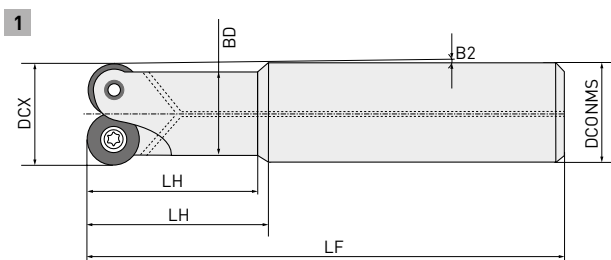
RRD



P

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Solo portautensile destro.

TIPO A STELO CILINDRICO

Codice ordinazione	Disponibilità	APMX	DCX	DCONMS	LF	LU	LH	BD	B2	BHTA	ZEFP		Tipo	
RRD025R102S10Z	●	2.5	10	10	75	—	23	—	—	0.89	2	●	4	RDH/Z 0501M0
RRD025R123S12Z	●	2.5	12	12	75	—	23	11	—	—	3	●	4	
RRD025R154S16Z	●	2.5	15	16	80	22	22.5	14	1.4	45	4	●	1	
RRD035R122S10Z	●	3.5	12	10	75	23	—	11	—	—	2	●	3	RDH/M/Z 07T1M0
RRD035R122S12Z	●	3.5	12	12	75	—	23	11	—	—	2	●	4	
RRD035R122S16Z	□	3.5	12	16	88	15	18.4	11	4	8.37	2	●	2	
RRD035R122S16ZL	●	3.5	12	16	128	15	22.4	11	2.36	3.87	2	●	2	
RRD035R122S16ZM	●	3.5	12	16	109	15	22.4	11	2.36	3.87	2	●	2	RDH/M/Z 0702M0
RRD035R152S16Z	□	3.5	15	16	88	18	27.6	14	1	6.52	2	●	2	
RRD035R152S16ZM	●	3.5	15	16	108	18	41.4	14	0.59	2.69	2	●	2	
RRD035R152S20Z	●	3.5	15	20	130	20	35.6	14	2.12	4.04	2	●	2	
RRD035R152S20ZM	●	3.5	15	20	150	20	41.7	14	1.64	2.9	2	●	2	RDH/M/Z 1003M0
RRD035R152S25Z	□	3.5	15	25	176	20	36.8	14	2.64	3.8	2	●	2	
RRD035R153S12Z	□	3.5	15	12	75	17	—	12.8	—	—	3	●	3	
RRD035R153S16Z	□	3.5	15	16	78	29.5	30	14	1.08	45	3	●	1	
RRD050R202S20Z	●	5	20	20	90	—	31	18	—	—	2	●	4	RDH/M/Z 1003M0
RRD050R202S20ZM	●	5	20	20	110	—	51	18	—	—	2	●	4	
RRD050R202S25Z	●	5	20	25	136	68.5	69.5	18	2.13	45	2	●	1	
RRD050R202S25ZL	●	5	20	25	176	108.5	109.5	18	1.34	45	2	●	1	
RRD050R202S25ZM	●	5	20	25	156	88.5	89.5	18	1.64	45	2	●	1	

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RRD

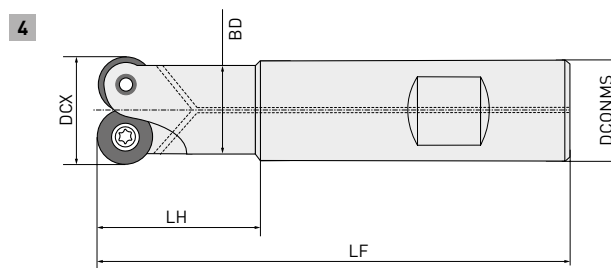
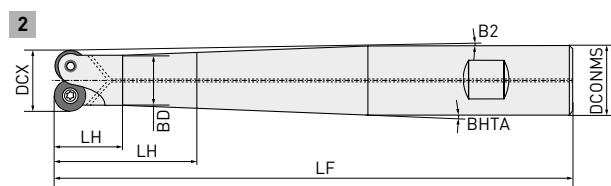
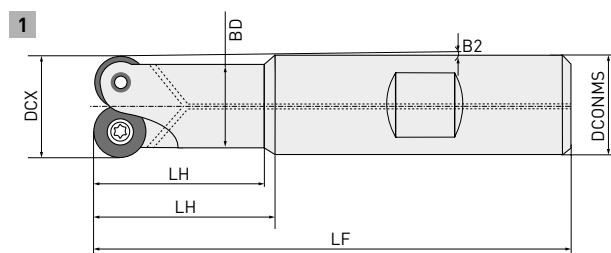
RICAMBI

Codice ordinazione	RE						
		Spessore	Vite per spessore	Vite di bloccaggio	Vite di bloccaggio inserto	Chiave di bloccaggio	
RRD025R-	102S10Z	2.5	—	—	B-TS20	—	TKY06F
	123S12Z						
	54S16Z						
RRD035R-	122S10Z	3.5	—	—	B-TS253	—	TKY07F
	122S12Z						
	122S16Z						
	122S16ZL						
	122S16ZM						
	152S16Z						
	152S16ZM						
	152S20Z						
	152S20ZM						
	152S25Z						
	153S12Z						
	153S16Z						
RRD050R-	202S20Z	5	—	—	B-TS35	—	TKY15F
	202S20ZM						
	202S25Z						
	202S25ZL						
	202S25ZM						

RRD



P K H



Solo portautensile destro.

TIPO CON ATTACCO WELDON

Codice ordinazione	Disponibilità	APMX	DCX	DCONMS	LF	LU	LH	BD	B2	BHTA	ZEFP		Tipo	
RRD035R122S16W	●	3.5	12	16	88	15	18.4	11	4	8.37	2	●	2	RDH/M/Z 07T1M0
RRD035R122S16WL	●	3.5	12	16	128	15	22.4	11	2.36	3.87	2	●	2	
RRD035R122S16WM	□	3.5	12	16	108	15	22.4	11	2	3.87	2	●	2	
RRD035R152S16W	□	3.5	15	16	88	18	27.6	12.8	1	6.52	2	●	2	RDH/M/Z 0702M0
RRD035R152S16WM	□	3.5	15	16	108	18	41.38	12.8	0.59	2.69	2	●	2	
RRD035R152S20W	□	3.5	15	20	130	20	35.58	12.8	2.12	4.04	2	●	2	
RRD035R152S20WM	□	3.5	15	20	150	20	41.7	12.8	1.64	2.9	2	●	2	RDH/M/Z 07T1M0
RRD035R152S25W	□	3.5	15	25	176	20	36.8	12.8	3.8	2.65	2	●	2	
RRD035R153S16W	□	3.5	15	16	78	28.4	29.5	12.8	1.08	45	3	●	1	
RRD050R202S20W	●	5	20	20	90	—	31	18	—	—	2	●	4	RDH/M/Z 1003M0
RRD050R202S20WM	●	5	20	20	110	—	51	18	—	—	2	●	4	
RRD050R202S25W	●	5	20	25	136	23	37	18	2.13	4.09	2	●	2	
RRD050R202S25WL	□	5	20	25	176	47.6	23	18	1.34	2.25	2	●	2	
RRD050R202S25WM	□	5	20	25	156	42.7	23	18	1.64	2.9	2	●	2	

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RRD

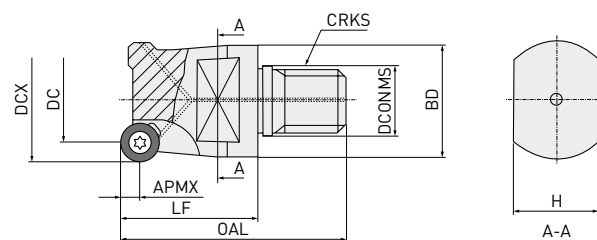
RICAMBI

Codice ordinazione	RE					
		Spessore	Vite per spessore	Vite di bloccaggio	Vite di bloccaggio inserto	Chiave di bloccaggio
RRD035R-	122S16W					
	122S16WL	—	—	B-TS253	—	TKY07F
	122S16WM					
	152S16W					
	152S16WM	3.5				
	152S20W			TS25		TKY08F
	152S20WM	—	—		—	
	152S25W					
	153S16W			TS253		
RRD050R-	202S20W					
	202S20WM					
	202S25W	5		B-TS35	—	TKY15F
	202S25WL					
	202S25WM					

RRD



P K H



Solo portautensile destro.

TIPO CON ATTACCO A VITE

Codice ordinazione	Disponibilità	APMX	DCX	DC	OAL	LF	DCONMS	DCSFMS	CRKS	H	ZEFP		
RRD025R102M5	□	2.5	10	5	35	20	5.5	9.9	M5	6	2	●	RDH/Z 0501M0
RRD025R123M8	●	2.5	12	7	38	20	8.5	13.5	M8	9	3	●	
RRD025R154M8	●	2.5	15	10	38	20	8.5	13.5	M8	10	4	●	
RRD025R205M10	●	2.5	20	15	44	25	10.5	18	M10	15	5	●	
RRD035R122M8	●	3.5	12	5	46	28	8.5	13.5	M8	9	2	●	RDH/M/Z 07T1M0
RRD035R153M8	●	3.5	15	8	46	28	8.5	13.5	M8	10	3	●	
RRD035R204M10	●	3.5	20	13	47	28	10.5	18	M10	15	4	●	
RRD035R255M12	●	3.5	25	18	50	28	12.5	21	M12	17	5	●	
RRD035R306M16	●	3.5	30	23	51	28	17	29	M16	22	6	●	RDH/M/Z 0702M0
RRD035R357M16	●	3.5	35	28	51	28	17	29	M16	22	7	●	
RRD035R152M8	●	3.5	15	8	46	28	8.5	13.5	M8	10	2	●	
RRD035R153M8X	●	3.5	15	8	43	28	8.5	13.5	M8	10	3	●	
RRD050R202M10	●	5	20	10	47	28	10.5	18	M10	15	2	●	RDH/M/Z 1003M0
RRD050R252M12	●	5	25	15	54	32	12.5	21	M12	17	2	●	
RRD050R253M12	●	5	25	15	54	32	12.5	21	M12	17	3	●	
RRD050R304M12	●	5	30	20	54	32	12.5	21	M12	17	4	●	
RRD050R304M16	●	5	30	20	55	32	17	29	M16	22	4	●	RDH/M/Z 12T3M0
RRD050R355M16	●	5	35	25	65	42	17	29	M16	22	5	●	
RRD050R426M16	●	5	42	32	65	42	17	29	M16	22	6	●	
RRD060R242M12	●	6	24	12	54	32	12.5	21	M12	17	2	●	
RRD060R353M16	●	6	35	23	65	42	17	29	M16	22	3	●	RDH/M/Z 12T3M0
RRD060R354M16	●	6	35	23	65	42	17	29	M16	22	4	●	
RRD060R424M16	●	6	42	30	55	32	17	29	M16	24	4	●	
RRD060R425M16	●	6	42	30	65	42	17	29	M16	22	5	●	
RRD080R322M16	●	8	32	16	65	42	17	29	M16	22	2	●	RDH/M/Z 1604M0

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RRD

RICAMBI

Codice ordinazione		RE					
			Spessore	Vite per spessore	Vite di bloccaggio	Vite di bloccaggio inserto	Chiave di bloccaggio
RRD025R-	102M5	2.5	—	—	B-TS20	—	TKY06F
	123M8						
	154M8						
	205M10						
RRD035R-	122M8	3.5	—	—	B-TS253	—	TKY07F
	153M8						
	204M10						
	255M12				TS253	—	TKY08F
	306M16						
	357M16						
	152M8						
	153M8X				TS25	—	TKY08F
RRD050R-	202M10	5	—	—	B-TS35	—	TKY15F
	252M12						
	253M12						
	304M12						
	304M16						
	355M16						
	426M16						
RRD060R-	242M12	6	—	—	B-TS35	—	TKY15F
	353M16						
	354M16					TS1001	
	424M16						
	425M16						
RRD080R-	322M16	8	—	—	214	—	TKY20F

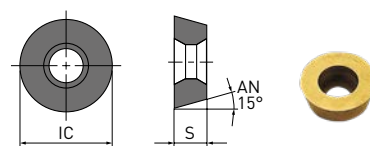
INSERTI

P	Acciaio	●	●	●	●	●	●
K	Ghisa		✱	✱	✱	✱	✱
H	Materiali temprati	●			●	●	

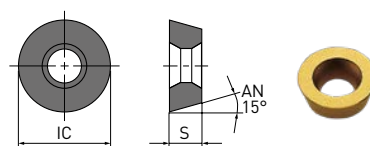
Parametri di taglio :

●: taglio stabile ●: taglio generico ✱: taglio instabile

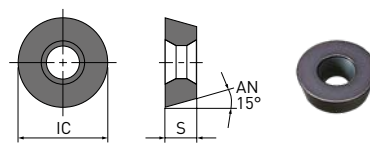
Codice ordinazione	Classe	Onatura	F7030	VP15TF	VP20M	VP10H	VP05HT	UTi20T	IC	S
RDHX0501M0E	H	E	●	●		●	●		5	1.5
RDHX0501M0S	H	S	●	●		●			5	1.5
RDHX07T1M0E	H	E	●	●		●	●		7	1.98
RDHX07T1M0S	H	S	●	●		●	●		7	1.98
RDHX0702M0E	H	E	●	●		●	●		7	2.38
RDHX0702M0S	H	S	●	●		●			7	2.38
RDHX1003M0E	H	E	●	●		●	●		10	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



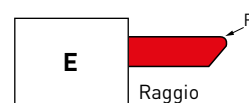
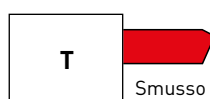
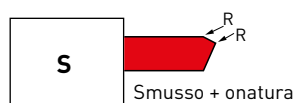
IC: ±0.05-±0.15 mm S: ±0.15 mm



IC: ±0.025 mm S: ±0.025 mm

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PARAMETRI DEL TAGLIANTE



Sgrossatura

Sgrossatura e finitura

Finitura

RRD

PARAMETRI DI TAGLIO CONSIGLIATI

PARAMETRI DI TAGLIO PER LA SGROSSATURA (ae = 50 % di Ø)

Materiale	Durezza	Grado	Vc	Ø 10 – 15 mm		Ø 20 mm		Ø 24 – 25 mm		Ø 30 – 42 mm		Ø 50 – 80 mm		Ø 100 – 160 mm		
				ap	fz	ap	fz	ap	fz	ap	fz	ap	fz	ap	fz	
P	Acciaio dolce	<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
	Acciaio al carbonio Acciaio legato	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	Ghisa	Resistenza alla trazione <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	Acciaio temprato	-52HRC	VP15TF	(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
		-58HRC	VP10H	(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
		-60HRC	VP05HT	(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
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1. Se si utilizza una larghezza di taglio massima, ridurre i parametri di taglio del 20 %.
2. Se si utilizza uno sbalzo lungo, ridurre la velocità di avanzamento del 20 %.

PARAMETRI DI TAGLIO PER LA FINITURA (ae = 20 % di Ø)

Materiale		Durezza	Grado	Vc	Ø 10 – 15 mm		Ø 20 mm		Ø 24 – 25 mm		Ø 30 – 42 mm		Ø 50 – 80 mm		Ø 100 – 160 mm	
					ap	fz	ap	fz	ap	fz	ap	fz	ap	fz	ap	fz
P	Acciaio dolce	<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
	Acciaio al carbonio Acciaio legato	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	Ghisa	Resistenza alla trazione <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	Acciaio temprato	-52HRC	VP15TF	(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
		-58HRC	VP10H	(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
		-60HRC	VP05HT	(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

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1. Se si utilizza una larghezza di taglio massima, ridurre i parametri di taglio del 20 %.
2. Se si utilizza uno sbalzo lungo, ridurre la velocità di avanzamento del 20 %.



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