

ALTRI UTENSILI

ALESATORI IN HSS & MD

SVASATORI HSS

LAMATORI HSS-E

LIME ROTATIVE IN MD

ALTRI UTENSILI

ALESATORI

SVASATORI

LAMATORI

LIME ROTATIVE

ALESATORI in HSS & MD

Alesatori a macchina in MD, Alesatori a mano in HSS, Alesatori attacco cilindrico in HSS-E

ALESATORI

SVASATORI

Utensili per Sbavatura, Smussatura, Svasatura in HSS & HSS Co8

SVASATORI

LAMATORI in HSS-E

Applicazioni generali

LAMATORI

LIME ROTATIVE in MD

Applicazioni su acciai in genere, materiali non ferrosi, etc. (diametri del gambo 3 mm e 6 mm)

LIME
ROTATIVE







MD / HSS

Migliorare attraverso l'innovazione





ALESATORI

- Carbide NC Machine Reamers, HSS Hand Reamers, HSS-E Chucking Reamers
- Alesatori a macchina & alesatori a mano, attacco cilindrico & CM (MD, HSS & HSS-E)





GUIDA ALLA SELEZIONE

CODICE	FOTO	DESCRIZIONE	DIM.		PAG.
			MIN	MAX	

METALLO DURO

K4101		CARBIDE, NC MACHINE REAMERS - STRAIGHT FLUTES ALESATORI A MACCHINA, TAGLIENTI DRITTI	D2.0	D20.0	1267
K4111		CARBIDE, NC MACHINE REAMERS - LH SPIRAL FLUTES ALESATORI A MACCHINA, ELICA SINISTRA	D2.0	D20.0	1268

HSS

K1143		HSS, HAND REAMERS - STRAIGHT FLUTES ALESATORI A MANO IN HSS, TAGLIENTI DRITTI	D2.0	D60.0	1269
K1153		HSS, HAND REAMERS - LH SPIRAL FLUTES ALESATORI A MANO IN HSS, ELICA SINISTRA	D2.0	D60.0	1271
K2101		HSS-E, STRAIGHT SHANK CHUCKING REAMERS - STRAIGHT FLUTES ALESATORI, ATTACCO CILINDRICO, IN HSS-E, TAGLIENTI DRITTI	D2.0	D20.0	1273
K2111		HSS-E, STRAIGHT SHANK CHUCKING REAMERS - LH SPIRAL FLUTES ALESATORI, ATTACCO CILINDRICO, IN HSS-E, ELICA SINISTRA	D2.0	D20.0	1274
K2121		HSS-E, STRAIGHT SHANK CHUCKING REAMERS - LH SPIRAL FLUTES ALESATORI, ATTACCO CILINDRICO, IN HSS-E, ELICA RAPIDA, SINISTRA	D4.0	D20.0	1275
K2102		HSS-E, MORSE TAPER SHANK CHUCKING REAMERS - STRAIGHT FLUTES ALESATORI ATTACCO CM, IN HSS-E, TAGLIENTI DRITTI	D10.0	D50.0	1276
K2112		HSS, HAND REAMERS - LH SPIRAL FLUTES ALESATORI ATTACCO CM, IN HSS-E, ELICA SINISTRA	D10.0	D50.0	1277
K21B1		HSS-E, NC MACHINE REAMERS ALESATORI A MACCHINA, IN HSS-E	D2.0	D20.0	1278
RECOMMENDED CUTTING CONDITIONS PARAMETRI DI TAGLIO INDICATIVI					1282

CARBIDE, NC MACHINE REAMERS - STRAIGHT FLUTES

ALESATORI A MACCHINA, TAGLIENTI DRITTI

ALESATORI

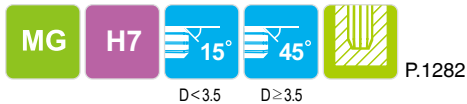
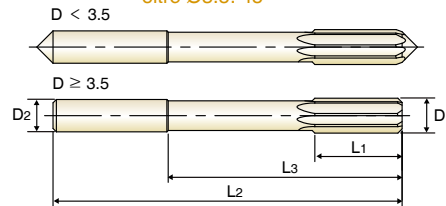
SVASATORI

LAMATORI

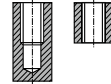
LIME
ROTATIVE

- ▶ Material - Up to $\varnothing 12.0$: Solid Carbide
- Over $\varnothing 12.0$: Carbide Head Brazed
- ▶ Straight Flutes, Right Hand Cut
- ▶ Unequal Flute Spacing
- ▶ O.D. Tolerances : DIN 1420 for H7
- ▶ Shank : DIN 6535-HA
- ▶ Chamfer Angle - $D < 3.5$: 15°
- $D \geq 3.5$: 45°

- ▶ Materiale di base: fino $\varnothing 12.0$: Metallo Duro integrale
oltre $\varnothing 12.0$: Testine in Metallo Duro saldo brasato
- ▶ Taglienti dritti, taglio destro
- ▶ Eliche a passo differenziato
- ▶ Tolleranza D1: DIN 1420, per fori H7
- ▶ Attacco: DIN 6535-HA
- ▶ Angolo d'imbocco: fino $\varnothing 3.5$: 15°
oltre $\varnothing 3.5$: 45°



Tipo foro



Unità : mm

CODICE	Diametro nominale	Diametro gambo	Lunghezza tagliente	Lunghezza scarico	Lunghezza totale	N° taglienti
	D1	D2	L1	L3	L2	
K410100200	2.0	4	11	20	50	4
K410100250	2.5	4	14	26	57	4
K410100300	3.0	4	15	31	61	6
K410100350	3.5	4	18	36	70	6
K410100400	4.0	4	19	42	75	6
K410100450	4.5	6	21	46	80	6
K410100500	5.0	6	23	51	86	6
K410100550	5.5	6	26	56	93	6
K410100600	6.0	6	26	56	93	6
K410100650	6.5	8	28	62	101	6
K410100700	7.0	8	31	68	109	6
K410100750	7.5	8	31	68	109	6
K410100800	8.0	8	33	74	117	6
K410100850	8.5	10	33	74	117	6
K410100900	9.0	10	36	80	125	6
K410100950	9.5	10	36	80	125	6
K410101000	10.0	10	38	86	133	6
K410101050	10.5	12	38	86	133	6
K410101100	11.0	12	41	95	142	6
K410101200	12.0	12	44	104	151	6
K410101300	13.0	16	44	104	151	6
K410101400	14.0	16	47	108	160	8
K410101500	15.0	16	50	110	162	8
K410101600	16.0	16	52	118	170	8
K410101700	17.0	20	54	121	175	8
K410101800	18.0	20	56	128	182	8
K410101900	19.0	20	58	129	189	8
K410102000	20.0	20	60	135	195	8

HSS, HAND REAMERS - STRAIGHT FLUTES

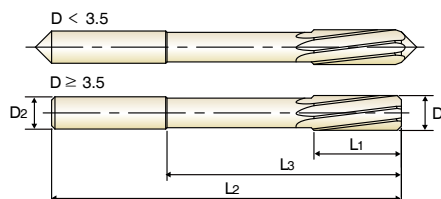
ALESATORI A MACCHINA, ELICA SINISTRA

- ▶ Material - Up to $\varnothing 12.0$: Solid Carbide
- Over $\varnothing 12.0$: Carbide Head Brazed

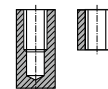
- ▶ Left Spiral Flutes, Right Hand Cut
- ▶ Unequal Flute Spacing
- ▶ O.D. Tolerances : DIN 1420 for H7
- ▶ Shank : DIN 6535-HA
- ▶ Chamfer Angle - $D < 3.5$: 15°
- $D \geq 3.5$: 45°

- ▶ Materiale di base: fino $\varnothing 12.0$: Metallo Duro integrale
- oltre $\varnothing 12.0$: Testine in Metallo Duro saldo brasato

- ▶ Taglienti dritti, taglio destro
- ▶ Eliche a passo differenziato
- ▶ Tolleranza D1: DIN 1420, per fori H7
- ▶ Attacco: DIN 6535-HA
- ▶ Angolo d'imbocco: fino $\varnothing 3.5$: 15°
- oltre $\varnothing 3.5$: 45°



Tipo foro



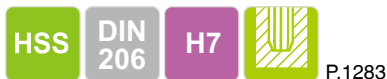
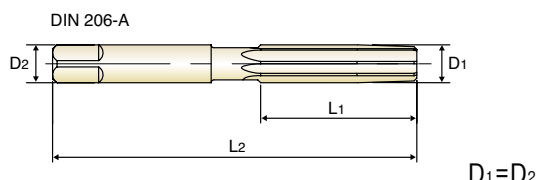
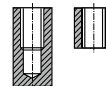
Unità : mm

CODICE	Diametro nominale	Diametro gambo	Lunghezza tagliente	Lunghezza scarico	Lunghezza totale	N° taglienti
	D1	D2	L1	L3	L2	
K411100200	2.0	4	11	20	50	4
K411100250	2.5	4	14	26	57	4
K411100300	3.0	4	15	31	61	6
K411100350	3.5	4	18	36	70	6
K411100400	4.0	4	19	42	75	6
K411100450	4.5	6	21	46	80	6
K411100500	5.0	6	23	51	86	6
K411100550	5.5	6	26	56	93	6
K411100600	6.0	6	26	56	93	6
K411100650	6.5	8	28	62	101	6
K411100700	7.0	8	31	68	109	6
K411100750	7.5	8	31	68	109	6
K411100800	8.0	8	33	74	117	6
K411100850	8.5	10	33	74	117	6
K411100900	9.0	10	36	80	125	6
K411100950	9.5	10	36	80	125	6
K411101000	10.0	10	38	86	133	6
K411101050	10.5	12	38	86	133	6
K411101100	11.0	12	41	95	142	6
K411101200	12.0	12	44	104	151	6
K411101300	13.0	16	44	104	151	6
K411101400	14.0	16	47	108	160	8
K411101500	15.0	16	50	110	162	8
K411101600	16.0	16	52	118	170	8
K411101700	17.0	20	54	121	175	8
K411101800	18.0	20	56	128	182	8
K411101900	19.0	20	58	129	189	8
K411102000	20.0	20	60	135	195	8

HSS, HAND REAMERS - STRAIGHT FLUTES
ALESATORI A MANO IN HSS, TAGLIENTI DRITTI

- ▶ O.D. Tolerances : DIN 1420 for H7
- ▶ Shank Diameter = Nominal Reamer Diameter
- ▶ Straight Flutes / Right Hand Cut
- ▶ Chamfer Angle - tapered
- ▶ Type of center - Up to Ø3.5: external centers
- Over Ø3.5: internal centers

- ▶ Tolleranza D1: DIN 1420, per fori H7
- ▶ Diametro del gambo = Diametro nominale
- ▶ Taglienti dritti, taglio destro
- ▶ Angolo d'imbocco conico
- ▶ Tipo di centraggio - fino: Ø3.5: senza centrino
- oltre Ø3.5: con centrino


Tipo foro


Unità : mm

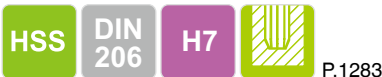
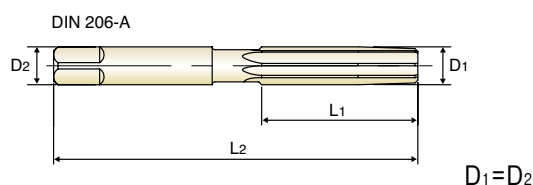
CODICE	Diametro nominale	Lunghezza tagliente	Lunghezza totale	N° taglienti
	D1	L1	L2	
K114300200	2.0	25	50	4
K114300220	2.2	27	54	4
K114300250	2.5	29	58	4
K114300280	2.8	31	62	4
K114300300	3.0	31	62	6
K114300320	3.2	33	66	6
K114300350	3.5	35	71	6
K114300400	4.0	38	76	6
K114300450	4.5	41	81	6
K114300500	5.0	44	87	6
K114300550	5.5	47	93	6
K114300600	6.0	47	93	6
K114300700	7.0	54	107	6
K114300800	8.0	58	115	6
K114300900	9.0	62	124	6
K114301000	10.0	66	133	6
K114301100	11.0	71	142	6
K114301200	12.0	76	152	6
K114301300	13.0	76	152	6
K114301400	14.0	81	163	8
K114301500	15.0	81	163	8
K114301600	16.0	87	175	8
K114301700	17.0	87	175	8
K114301800	18.0	93	188	8
K114301900	19.0	93	188	8
K114302000	20.0	100	201	8
K114302200	22.0	107	215	8
K114302400	24.0	115	231	8

▶ SEGUE

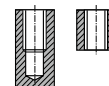
HSS, HAND REAMERS - STRAIGHT FLUTES
ALESATORI A MANO IN HSS, TAGLIENTI DRITTI

- ▶ O.D. Tolerances : DIN 1420 for H7
- ▶ Shank Diameter = Nominal Reamer Diameter
- ▶ Straight Flutes / Right Hand Cut
- ▶ Chamfer Angle - tapered
- ▶ Type of center - Up to Ø3.5: external centers
- Over Ø3.5: internal centers

- ▶ Tolleranza D1: DIN 1420, per fori H7
- ▶ Diametro del gambo = Diametro nominale
- ▶ Taglienti dritti, taglio destro
- ▶ Angolo d'imbocco conico
- ▶ Tipo di centraggio - fino: Ø3.5: senza centrino
- oltre Ø3.5: con centrino



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Tipo foro


Unità : mm

CODICE	Diametro nominale	Lunghezza tagliente	Lunghezza totale	N° taglienti
	D1	L1	L2	
K114302500	25.0	115	231	8
K114302600	26.0	115	231	8
K114302700	27.0	124	247	10
K114302800	28.0	124	247	10
K114302900	29.0	124	247	10
K114303000	30.0	124	247	10
K114303100	31.0	133	265	10
K114303200	32.0	133	265	10
K114303300	33.0	133	265	10
K114303400	34.0	142	284	10
K114303500	35.0	142	284	10
K114303600	36.0	142	284	10
K114303700	37.0	142	284	10
K114303800	38.0	152	305	10
K114303810	38.1	152	305	10
K114303900	39.0	152	305	10
K114304000	40.0	152	305	10
K114304100	41.0	152	305	12
K114304200	42.0	152	305	12
K114304300	43.0	163	326	12
K114304400	44.0	163	326	12
K114304500	45.0	163	326	12
K114304600	46.0	163	326	12
K114304700	47.0	163	326	12
K114304800	48.0	174	347	12
K114304900	49.0	174	347	12
K114305200	52.0	174	347	12
K114306000	60.0	184	367	12

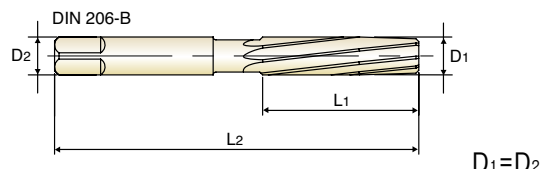
DISPONIBILE 4-5 GG. S.I.

HSS, HAND REAMERS - LH SPIRAL FLUTES

ALESATORI A MANO IN HSS, ELICA SINISTRA

- ▶ O.D. Tolerances : DIN 1420, H7
- ▶ Shank Diameter \approx Nominal Reamer Diameter
- ▶ LH Spiral Flutes / Right Hand Cut
- ▶ Chamfer Angle - tapered
- ▶ Type of center - Up to $\varnothing 3.5$: external centers
- Over $\varnothing 3.5$: internal centers

- ▶ Tolleranza D1: DIN 1420, per fori H7
- ▶ Diametro del gambo = Diametro nominale
- ▶ Elica sinistra, taglio destro
- ▶ Angolo d'imbocco conico
- ▶ Tipo di centraggio - fino: $\varnothing 3.5$: senza centrino
- oltre $\varnothing 3.5$: con centrino



Unità : mm

CODICE	Diametro nominale	Lunghezza tagliente	Lunghezza totale	N° taglienti
	D1	L1	L2	
K115300200	2.0	25	50	4
K115300220	2.2	27	54	4
K115300250	2.5	29	58	4
K115300280	2.8	31	62	4
K115300300	3.0	31	62	6
K115300320	3.2	33	66	6
K115300350	3.5	35	71	6
K115300400	4.0	38	76	6
K115300450	4.5	41	81	6
K115300500	5.0	44	87	6
K115300550	5.5	47	93	6
K115300600	6.0	47	93	6
K115300700	7.0	54	107	6
K115300800	8.0	58	115	6
K115300900	9.0	62	124	6
K115301000	10.0	66	133	6
K115301100	11.0	71	142	6
K115301200	12.0	76	152	6
K115301300	13.0	76	152	6
K115301400	14.0	81	163	8
K115301500	15.0	81	163	8
K115301600	16.0	87	175	8
K115301700	17.0	87	175	8
K115301800	18.0	93	188	8
K115301900	19.0	93	188	8
K115302000	20.0	100	201	8
K115302200	22.0	107	215	8
K115302400	24.0	115	231	8

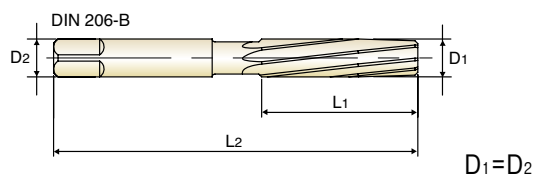
▶ SEGUE

HSS, HAND REAMERS - LH SPIRAL FLUTES

ALESATORI A MANO IN HSS, ELICA SINISTRA

O.D. Tolerances : DIN 1420, H7
 Shank Diameter Nominal Reamer Diameter
 LH Spiral Flutes / Right Hand Cut
 Chamfer Angle - tapered
 Type of center - Up to 3.5: external centers
 - Over 3.5: internal centers

- ▶ Tolleranza D1: DIN 1420, per fori H7
- ▶ Diametro del gambo = Diametro nominale
- ▶ Elica sinistra, taglio destro
- ▶ Angolo d'imbocco conico
- ▶ Tipo di centraggio - fino: Ø3.5: senza centrino
 - oltre Ø3.5: con centrino



HSS

DIN
206

H7

LH7°



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Tipo foro



Unità : mm

CODICE	Diametro nominale	Lunghezza tagliente	Lunghezza totale	N° taglienti
	D1	L1	L2	
K115302500	25.0	115	231	8
K115302600	26.0	115	231	8
K115302700	27.0	124	247	10
K115302800	28.0	124	247	10
K115302900	29.0	124	247	10
K115303000	30.0	124	247	10
K115303100	31.0	133	265	10
K115303200	32.0	133	265	10
K115303300	33.0	133	265	10
K115303400	34.0	142	284	10
K115303500	35.0	142	284	10
K115303600	36.0	142	284	10
K115303700	37.0	142	284	10
K115303800	38.0	152	305	10
K115303810	38.1	152	305	10
K115303900	39.0	152	305	10
K115304000	40.0	152	305	10
K115304100	41.0	152	305	12
K115304200	42.0	152	305	12
K115304300	43.0	163	326	12
K115304400	44.0	163	326	12
K115304500	45.0	163	326	12
K115304600	46.0	163	326	12
K115304700	47.0	163	326	12
K115304800	48.0	174	347	12
K115304900	49.0	174	347	12
K115305200	52.0	174	347	12
K115306000	60.0	184	367	12

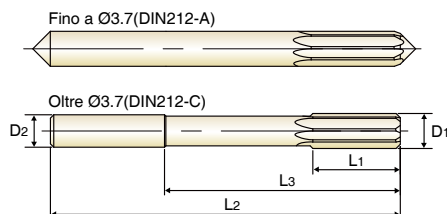
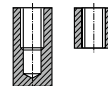
 DISPONIBILE 4-5 GG. S.I.

HSS-E, STRAIGHT SHANK CHUCKING REAMERS - STRAIGHT FLUTES

ALESATORI, ATTACCO CILINDRICO, IN HSS-E, TAGLIENTI DRITTI

- ▶ O.D. Tolerances : DIN 1420 for H7
- ▶ Shank Diameter Tolerances : h8
- ▶ Straight Flute / Right Hand Cut
- ▶ Chamfer Angle - Up to Ø3.7: 15°
- Over Ø3.7: 45°

- ▶ Tolleranza D1: DIN 1420, per fori H7
- ▶ Diametro del gambo = Diametro nominale
- ▶ Elica sinistra, taglio destro
- ▶ Angolo d'imbocco conico
- ▶ Angolo d'imbocco - fino: Ø3.7: 15°
- oltre Ø3.7: 45°


Tipo foro


Unità : mm

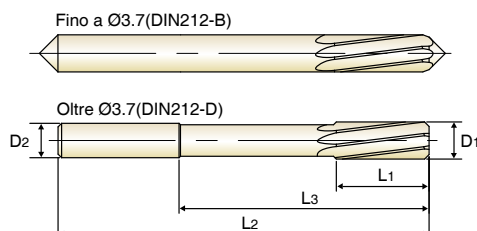
CODICE	Diametro nominale	Diametro gambo	Lunghezza tagliente	Lunghezza scarico	Lunghezza totale	N° taglienti
	D1	D2	L1	L3	L2	
K210100200	2.0	2	11	-	49	4
K210100220	2.2	2.2	12	-	53	4
K210100250	2.5	2.5	14	-	57	4
K210100260	2.6	2.6	14	-	57	4
K210100280	2.8	2.8	15	-	61	4
K210100300	3.0	3	15	-	61	6
K210100310	3.1	3.1	16	-	65	6
K210100320	3.2	3.2	16	-	65	6
K210100350	3.5	3.5	18	-	70	6
K210100360	3.6	3.6	18	-	70	6
K210100370	3.7	3.7	18	-	70	6
K210100400	4.0	4	19	42	75	6
K210100430	4.3	4.5	21	46	80	6
K210100450	4.5	4.5	21	46	80	6
K210100460	4.6	4.5	21	46	80	6
K210100500	5.0	5	23	51	86	6
K210100550	5.5	5.6	26	56	93	6
K210100560	5.6	5.6	26	56	93	6
K210100600	6.0	5.6	26	56	93	6
K210100650	6.5	6.3	28	62	101	6
K210100700	7.0	7.1	31	68	109	6
K210100720	7.2	7.1	31	68	109	6
K210100800	8.0	8	33	74	117	6
K210100830	8.3	8	33	74	117	6
K210100850	8.5	8	33	74	117	6
K210100900	9.0	9	36	80	125	6
K210100950	9.5	9	36	80	125	6
K210101000	10.0	10	38	86	133	6
K210101050	10.5	10	38	86	133	6
K210101100	11.0	10	41	95	142	6
K210101200	12.0	10	44	104	151	6
K210101300	13.0	10	44	104	151	6
K210101400	14.0	12.5	47	108	160	8
K210101500	15.0	12.5	50	110	162	8
K210101600	16.0	12.5	52	118	170	8
K210101700	17.0	14	54	121	175	8
K210101800	18.0	14	56	128	182	8
K210101900	19.0	16	58	129	189	8
K210102000	20.0	16	60	135	195	8

HSS-E, STRAIGHT SHANK CHUCKING REAMERS - LH SPIRAL FLUTES

ALESATORI, ATTACCO CILINDRICO, IN HSS-E, ELICA SINISTRA

- ▶ O.D. Tolerances : DIN 1420 for H7
- ▶ Shank Diameter Tolerances : h8
- ▶ LH Spiral Flutes / Right Hand Cut
- ▶ Chamfer Angle - Up to $\varnothing 3.7$: 15°
- Over $\varnothing 3.7$: 45°

- ▶ Tolleranza D1: DIN 1420, per fori H7
- ▶ Tolleranza gambo: h8
- ▶ Elica sinistra, taglio destro
- ▶ Angolo d'imbocco - fino: $\varnothing 3.7$: 15°
- oltre $\varnothing 3.7$: 45°



Tipo foro

fino a $\varnothing 3.7$ oltre $\varnothing 3.7$

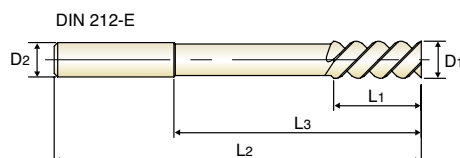
Unità : mm

CODICE	Diametro nominale	Diametro gambo	Lunghezza tagliente	Lunghezza scarico	Lunghezza totale	N° taglienti
	D1	D2	L1	L3	L2	
K211100200	2.0	2	11	-	49	4
K211100220	2.2	2.2	12	-	53	4
K211100250	2.5	2.5	14	-	57	4
K211100260	2.6	2.6	14	-	57	4
K211100280	2.8	2.8	15	-	61	4
K211100300	3.0	3	15	-	61	6
K211100310	3.1	3.1	16	-	65	6
K211100320	3.2	3.2	16	-	65	6
K211100350	3.5	3.5	18	-	70	6
K211100360	3.6	3.6	18	-	70	6
K211100370	3.7	3.7	18	-	70	6
K211100400	4.0	4	19	42	75	6
K211100430	4.3	4.5	21	46	80	6
K211100450	4.5	4.5	21	46	80	6
K211100460	4.6	4.5	21	46	80	6
K211100500	5.0	5	23	51	86	6
K211100550	5.5	5.6	26	56	93	6
K211100560	5.6	5.6	26	56	93	6
K211100600	6.0	5.6	26	56	93	6
K211100650	6.5	6.3	28	62	101	6
K211100700	7.0	7.1	31	68	109	6
K211100720	7.2	7.1	31	68	109	6
K211100800	8.0	8	33	74	117	6
K211100830	8.3	8	33	74	117	6
K211100850	8.5	8	33	74	117	6
K211100900	9.0	9	36	80	125	6
K211100950	9.5	9	36	80	125	6
K211101000	10.0	10	38	86	133	6
K211101050	10.5	10	38	86	133	6
K211101100	11.0	10	41	95	142	6
K211101200	12.0	10	44	104	151	6
K211101300	13.0	10	44	104	151	6
K211101400	14.0	12.5	47	108	160	8
K211101500	15.0	12.5	50	110	162	8
K211101600	16.0	12.5	52	118	170	8
K211101700	17.0	14	54	121	175	8
K211101800	18.0	14	56	128	182	8
K211101900	19.0	16	58	129	189	8
K211102000	20.0	16	60	135	195	8

HSS-E, STRAIGHT SHANK CHUCKING REAMERS - LH SPIRAL FLUTES(QUICK SPIRAL)
ALESATORI, ATTACCO CILINDRICO, IN HSS-E, ELICA RAPIDA, SINISTRA

- ▶ O.D. Tolerances : DIN 1420 for H7
- ▶ Shank Diameter Tolerances : h8
- ▶ Chamfer Angle - tapered
- ▶ LH High Spiral Flutes / Right Hand Cut

- ▶ Tolleranza D1: DIN 1420, per fori H7
- ▶ Tolleranza gambo: h8
- ▶ Elica sinistra rapida, taglio destro
- ▶ Angolo d'imbocco - fino: Ø3.7: 15°
- oltre Ø3.7: 45°



Unità : mm

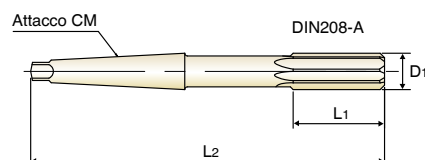
CODICE	Diametro nominale	Diametro gambo	Lunghezza tagliente	Lunghezza scarico	Lunghezza totale	N° taglienti
	D1	D2	L1	L3	L2	
K212100400	4.0	4	19	42	75	3
K212100450	4.5	4.5	21	46	80	3
K212100500	5.0	5	23	51	86	3
K212100550	5.5	5.6	26	56	93	3
K212100600	6.0	5.6	26	56	93	3
K212100650	6.5	6.3	28	62	101	3
K212100700	7.0	7.1	31	68	109	3
K212100800	8.0	8	33	74	117	3
K212100850	8.5	8	33	74	117	3
K212100900	9.0	9	36	80	125	3
K212100950	9.5	9	36	80	125	3
K212101000	10.0	10	38	86	133	3
K212101100	11.0	10	41	95	142	3
K212101200	12.0	10	44	104	151	3
K212101300	13.0	10	44	104	151	3
K212101400	14.0	12.5	47	108	160	4
K212101500	15.0	12.5	50	110	162	4
K212101600	16.0	12.5	52	118	170	4
K212101700	17.0	14	54	121	175	4
K212101800	18.0	14	56	128	182	4
K212101900	19.0	16	58	129	189	4
K212102000	20.0	16	60	135	195	4

HSS-E, MORSE TAPER SHANK CHUCKING REAMERS - STRAIGHT FLUTES

ALESATORI ATTACCO CM, IN HSS-E, TAGLIENTI DRITTI

- ▶ O.D. Tolerances : DIN 1420 for H7
- ▶ Straight Flute / Right Hand Cut
- ▶ Chamfer Angle : 45°

- ▶ Tolleranza D1: DIN 1420, per fori H7
- ▶ Taglienti dritti, taglio destro
- ▶ Angolo d'imbocco: 45°



HSS-E

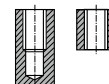
DIN
208

H7



P.1283

Tipo foro



DISPONIBILE 4-5 GG. S.I.

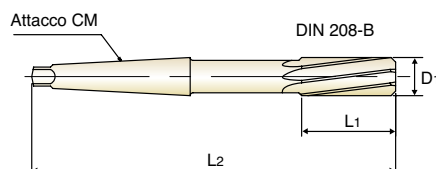
Unità : mm

CODICE	Diametro nominale	Dimensione CM	Lunghezza tagliente	Lunghezza totale	N° taglienti
	D1		L1	L2	
K210201000	10.0	1	38	168	6
K210201100	11.0	1	41	175	6
K210201200	12.0	1	44	182	6
K210201300	13.0	1	44	182	6
K210201400	14.0	1	47	189	8
K210201500	15.0	2	50	204	8
K210201600	16.0	2	52	210	8
K210201700	17.0	2	54	214	8
K210201800	18.0	2	56	219	8
K210201900	19.0	2	58	223	8
K210202000	20.0	2	60	228	8
K210202100	21.0	2	62	232	8
K210202200	22.0	2	64	237	8
K210202300	23.0	2	66	241	8
K210202400	24.0	3	68	268	8
K210202500	25.0	3	68	268	8
K210202600	26.0	3	70	273	8
K210202700	27.0	3	71	277	10
K210202800	28.0	3	71	277	10
K210202900	29.0	3	73	281	10
K210203000	30.0	3	73	281	10
K210203100	31.0	3	75	285	10
K210203200	32.0	4	77	317	10
K210203400	34.0	4	78	321	10
K210203500	35.0	4	78	321	10
K210203600	36.0	4	79	325	10
K210203800	38.0	4	81	329	10
K210204000	40.0	4	81	329	10
K210204100	41.0	4	82	333	12
K210204200	42.0	4	82	333	12
K210204300	43.0	4	83	336	12
K210204400	44.0	4	83	336	12
K210204500	45.0	4	83	336	12
K210204600	46.0	4	84	340	12
K210204700	47.0	4	84	340	12
K210204800	48.0	4	86	344	12
K210205000	50.0	4	86	344	12

HSS-E, MORSE TAPER SHANK CHUCKING REAMERS - LH SPIRAL FLUTES
ALESATORI ATTACCO CM, IN HSS-E, ELICA SINISTRA

- ▶ O.D. Tolerances : DIN 1420 for H7
- ▶ LH Spiral Flutes / Right Hand Cut
- ▶ Chamfer Angle : 45°

- ▶ Tolleranza D1: DIN 1420, per fori H7
- ▶ Elica sinistra, taglio destro
- ▶ Angolo d'imbocco: 45°



DISPONIBILE 4-5 GG. S.I.

Unità : mm

CODICE	Diametro nominale	Dimensione CM	Lunghezza tagliente	Lunghezza totale	N° taglienti
	D1		L1	L2	
K211201000	10.0	1	38	168	6
K211201100	11.0	1	41	175	6
K211201200	12.0	1	44	182	6
K211201300	13.0	1	44	182	6
K211201400	14.0	1	47	189	8
K211201500	15.0	2	50	204	8
K211201600	16.0	2	52	210	8
K211201700	17.0	2	54	214	8
K211201800	18.0	2	56	219	8
K211201900	19.0	2	58	223	8
K211202000	20.0	2	60	228	8
K211202100	21.0	2	62	232	8
K211202200	22.0	2	64	237	8
K211202300	23.0	2	66	241	8
K211202400	24.0	3	68	268	8
K211202500	25.0	3	68	268	8
K211202600	26.0	3	70	273	8
K211202700	27.0	3	71	277	10
K211202800	28.0	3	71	277	10
K211202900	29.0	3	73	281	10
K211203000	30.0	3	73	281	10
K211203100	31.0	3	75	285	10
K211203200	32.0	4	77	317	10
K211203400	34.0	4	78	321	10
K211203500	35.0	4	78	321	10
K211203600	36.0	4	79	325	10
K211203800	38.0	4	81	329	10
K211204000	40.0	4	81	329	10
K211204100	41.0	4	82	333	12
K211204200	42.0	4	82	333	12
K211204300	43.0	4	83	336	12
K211204400	44.0	4	83	336	12
K211204500	45.0	4	83	336	12
K211204600	46.0	4	84	340	12
K211204700	47.0	4	84	340	12
K211204800	48.0	4	86	344	12
K211205000	50.0	4	86	344	12

HSS-E, NC MACHINE REAMERS

ALESATORI A MACCHINA, IN HSS-E

► O.D. Tolerances

Whole-number \varnothing and 1/10 size : DIN 1420 for H7
 1/100 size : from $\varnothing 2.01$ to $\varnothing 5.03$: +0.004/-0.000mm
 from $\varnothing 5.97$ to $\varnothing 12.03$: +0.005/-0.000mm

► Shank Diameter Tolerances : h6

► LH Spiral Flutes / Right Hand Cut

► Chamfer Angle - Up to $\varnothing 3.7$: 15°
 - Over $\varnothing 3.7$: 45°

► Tolleranza D1

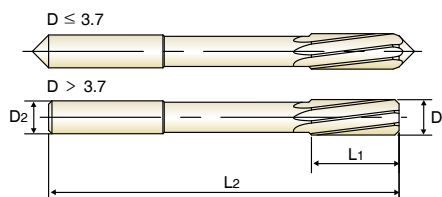
Gamma \varnothing nominali e decimali: DIN 1420, per fori H7

Gamma \varnothing centesimali: da $\varnothing 2.01$ a $\varnothing 5.03$: +0.004/-0.000mm
 da $\varnothing 5.97$ a $\varnothing 12.03$: +0.005/-0.000mm

► Tolleranza gambo : h6

► Elica sinistra, taglio destro

► Angolo d'imbocco - fino a $\varnothing 3.7$: 15°
 - oltre $\varnothing 3.7$: 45°



Fino a $\varnothing 3.7$ Oltre $\varnothing 3.7$

Tipo foro



Unità : mm

CODICE	Diametro nominale	Diametro gambo	Lunghezza tagliente	Lunghezza totale
	D1	D2	L1	L2
K21B100200	2.0	2	11	49
K21B100201	2.01	2	11	49
K21B100202	2.02	2	11	49
K21B100203	2.03	2	11	49
K21B100210	2.1	2	11	49
K21B100220	2.2	3	12	53
K21B100230	2.3	3	12	53
K21B100240	2.4	3	14	57
K21B100247	2.47	3	14	57
K21B100248	2.48	3	14	57
K21B100249	2.49	3	14	57
K21B100250	2.5	3	14	57
K21B100251	2.51	3	14	57
K21B100252	2.52	3	14	57
K21B100253	2.53	3	14	57
K21B100260	2.6	3	14	57
K21B100270	2.7	3	15	61
K21B100280	2.8	3	15	61
K21B100290	2.9	3	15	61
K21B100297	2.97	3	15	61
K21B100298	2.98	3	15	61
K21B100299	2.99	3	15	61
K21B100300	3.0	3	15	61
K21B100301	3.01	4	16	65
K21B100302	3.02	4	16	65
K21B100303	3.03	4	16	65
K21B100310	3.1	4	16	65
K21B100320	3.2	4	16	65
K21B100330	3.3	4	16	65
K21B100340	3.4	4	18	70
K21B100350	3.5	4	18	70
K21B100360	3.6	4	18	70
K21B100370	3.7	4	18	70
K21B100380	3.8	4	19	75
K21B100390	3.9	4	19	75
K21B100397	3.97	4	19	75
K21B100398	3.98	4	19	75
K21B100399	3.99	4	19	75

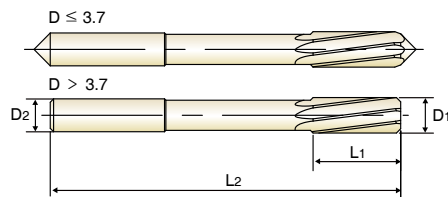
► SEGUE

HSS-E, NC MACHINE REAMERS

ALESATORI A MACCHINA, IN HSS-E

- ▶ O.D. Tolerances
Whole-number \varnothing and 1/10 size : DIN 1420 for H7
1/100 size : from $\varnothing 2.01$ to $\varnothing 5.03$: +0.004/-0.000mm
from $\varnothing 5.97$ to $\varnothing 12.03$: +0.005/-0.000mm
- ▶ Shank Diameter Tolerances : h6
- ▶ LH Spiral Flutes / Right Hand Cut
- ▶ Chamfer Angle - Up to $\varnothing 3.7$: 15°
- Over $\varnothing 3.7$: 45°

- ▶ Tolleranza D1
Gamma \varnothing nominali e decimali: DIN 1420, per fori H7
Gamma \varnothing centesimali: da $\varnothing 2.01$ a $\varnothing 5.03$: +0.004/-0.000mm
da $\varnothing 5.97$ a $\varnothing 12.03$: +0.005/-0.000mm
- ▶ Tolleranza gambo : h6
- ▶ Elica sinistra, taglio destro
- ▶ Angolo d'imbocco - fino a $\varnothing 3.7$: 15°
- oltre $\varnothing 3.7$: 45°



Tipo foro



Unità : mm

CODICE	Diametro nominale	Diametro gambo	Lunghezza tagliente	Lunghezza totale
	D1	D2	L1	L2
K21B100400	4.0	4	19	75
K21B100401	4.01	4	19	75
K21B100402	4.02	4	19	75
K21B100403	4.03	4	19	75
K21B100410	4.1	4	19	75
K21B100420	4.2	4	19	75
K21B100430	4.3	5	21	80
K21B100440	4.4	5	21	80
K21B100450	4.5	5	21	80
K21B100460	4.6	5	21	80
K21B100470	4.7	5	21	80
K21B100480	4.8	5	23	86
K21B100490	4.9	5	23	86
K21B100497	4.97	5	23	86
K21B100498	4.98	5	23	86
K21B100499	4.99	5	23	86
K21B100500	5.0	5	23	86
K21B100501	5.01	5	23	86
K21B100502	5.02	5	23	86
K21B100503	5.03	5	23	86
K21B100510	5.1	5	23	86
K21B100520	5.2	5	23	86
K21B100530	5.3	5	23	86
K21B100540	5.4	6	26	93
K21B100550	5.5	6	26	93
K21B100560	5.6	6	26	93
K21B100570	5.7	6	26	93
K21B100580	5.8	6	26	93
K21B100590	5.9	6	26	93
K21B100597	5.97	6	26	93
K21B100598	5.98	6	26	93
K21B100599	5.99	6	26	93
K21B100600	6.0	6	26	93
K21B100601	6.01	6	28	101
K21B100602	6.02	6	28	101
K21B100603	6.03	6	28	101
K21B100610	6.1	6	28	101
K21B100620	6.2	6	28	101

► SEGUE

HSS-E, NC MACHINE REAMERS

ALESATORI A MACCHINA, IN HSS-E

► O.D. Tolerances

Whole-number \varnothing and 1/10 size : DIN 1420 for H7
 1/100 size : from $\varnothing 2.01$ to $\varnothing 5.03$: +0.004/-0.000mm
 from $\varnothing 5.97$ to $\varnothing 12.03$: +0.005/-0.000mm

► Shank Diameter Tolerances : h6

► LH Spiral Flutes / Right Hand Cut

► Chamfer Angle - Up to $\varnothing 3.7$: 15°
 - Over $\varnothing 3.7$: 45°

► Tolleranza D1

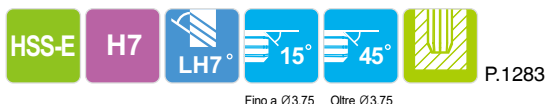
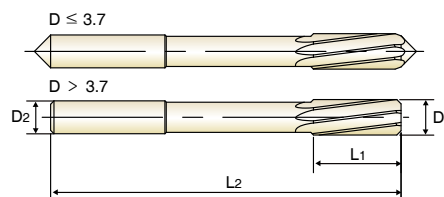
Gamma \varnothing nominali e decimali: DIN 1420, per fori H7

Gamma \varnothing centesimali: da $\varnothing 2.01$ a $\varnothing 5.03$: +0.004/-0.000mm
 da $\varnothing 5.97$ a $\varnothing 12.03$: +0.005/-0.000mm

► Tolleranza gambo : h6

► Elica sinistra, taglio destro

► Angolo d'imbocco - fino a $\varnothing 3.7$: 15°
 - oltre $\varnothing 3.7$: 45°



Fino a $\varnothing 3.75$ Oltre $\varnothing 3.75$

Tipo foro



Unità : mm

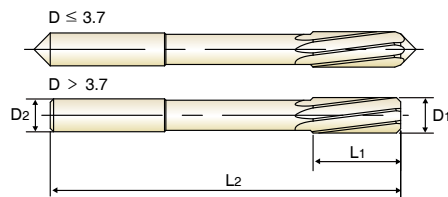
CODICE	Diametro nominale		Lunghezza tagliente		Lunghezza totale	
	D1	D2	L1	L2	L1	L2
K21B100630	6.3	6	28	101		
K21B100640	6.4	6	28	101		
K21B100650	6.5	6	28	101		
K21B100660	6.6	6	28	101		
K21B100670	6.7	6	28	101		
K21B100680	6.8	8	31	109		
K21B100690	6.9	8	31	109		
K21B100700	7.0	8	31	109		
K21B100710	7.1	8	31	109		
K21B100720	7.2	8	31	109		
K21B100730	7.3	8	31	109		
K21B100740	7.4	8	31	109		
K21B100750	7.5	8	31	109		
K21B100760	7.6	8	33	117		
K21B100770	7.7	8	33	117		
K21B100780	7.8	8	33	117		
K21B100790	7.9	8	33	117		
K21B100797	7.97	8	33	117		
K21B100798	7.98	8	33	117		
K21B100799	7.99	8	33	117		
K21B100800	8.0	8	33	117		
K21B100801	8.01	8	33	117		
K21B100802	8.02	8	33	117		
K21B100803	8.03	8	33	117		
K21B100810	8.1	8	33	117		
K21B100820	8.2	8	33	117		
K21B100830	8.3	8	33	117		
K21B100840	8.4	8	33	117		
K21B100850	8.5	8	33	117		
K21B100860	8.6	10	36	125		
K21B100870	8.7	10	36	125		
K21B100880	8.8	10	36	125		
K21B100890	8.9	10	36	125		
K21B100900	9.0	10	36	125		
K21B100901	9.01	10	36	125		
K21B100902	9.02	10	36	125		
K21B100903	9.03	10	36	125		
K21B100910	9.1	10	36	125		

► SEQUE

HSS-E, NC MACHINE REAMERS
ALESATORI A MACCHINA, IN HSS-E

- ▶ O.D. Tolerances
 Whole-number \varnothing and 1/10 size : DIN 1420 for H7
 1/100 size : from $\varnothing 2.01$ to $\varnothing 5.03$: +0.004/-0.000mm
 from $\varnothing 5.97$ to $\varnothing 12.03$: +0.005/-0.000mm
- ▶ Shank Diameter Tolerances : h6
- ▶ LH Spiral Flutes / Right Hand Cut
- ▶ Chamfer Angle - Up to $\varnothing 3.7$: 15°
 - Over $\varnothing 3.7$: 45°

- ▶ Tolleranza D1
 Gamma \varnothing nominali e decimali: DIN 1420, per fori H7
 Gamma \varnothing centesimali: da $\varnothing 2.01$ a $\varnothing 5.03$: +0.004/-0.000mm
 da $\varnothing 5.97$ a $\varnothing 12.03$: +0.005/-0.000mm
- ▶ Tolleranza gambo : h6
- ▶ Elica sinistra, taglio destro
- ▶ Angolo d'imbocco - fino a $\varnothing 3.7$: 15°
 - oltre $\varnothing 3.7$: 45°



Unità : mm

CODICE	Diametro nominale	Diametro gambo	Lunghezza tagliente	Lunghezza totale
	D1	D2	L1	L2
K21B100920	9.2	10	36	125
K21B100930	9.3	10	36	125
K21B100940	9.4	10	36	125
K21B100950	9.5	10	36	125
K21B100960	9.6	10	38	133
K21B100970	9.7	10	38	133
K21B100980	9.8	10	38	133
K21B100990	9.9	10	38	133
K21B100997	9.97	10	38	133
K21B100998	9.98	10	38	133
K21B100999	9.99	10	38	133
K21B101000	10.0	10	38	133
K21B101001	10.01	10	38	133
K21B101002	10.02	10	38	133
K21B101003	10.03	10	38	133
K21B101100	11.0	10	41	142
K21B101197	11.97	10	41	151
K21B101198	11.98	10	41	151
K21B101199	11.99	10	41	151
K21B101200	12.0	10	44	151
K21B101201	12.01	10	44	151
K21B101202	12.02	10	44	151
K21B101203	12.03	10	44	151
K21B101300	13.0	10	44	151
K21B101400	14.0	14	47	160
K21B101500	15.0	14	50	162
K21B101600	16.0	14	52	170
K21B101700	17.0	14	54	175
K21B101800	18.0	14	56	182
K21B101900	19.0	16	58	189
K21B102000	20.0	16	60	195

CARBIDE, NC MACHINE REAMER
ALESATORI A MACCHINA

Materiali	Vc	Avanzamento (mm/giro)				
	(m/min.)	Up to Ø4	Ø4 ~ Ø8	Ø8 ~ Ø12	Ø12 ~ Ø16	Ø16 ~ Ø20
Acciai a basso tenore di carbonio	15~18	0.10~0.12	0.12~0.20	0.20~0.25	0.25~0.30	0.30~0.40
Acciai al carbonio < 500 N/mm ²	15~18	0.10~0.12	0.12~0.20	0.20~0.25	0.25~0.30	0.30~0.40
Acciai legati 500-1000 N/mm ²	12~14	0.08~0.10	0.10~0.16	0.16~0.20	0.20~0.25	0.25~0.30
Acciai induriti ~HRc40	10~12	0.08~0.10	0.10~0.16	0.16~0.20	0.20~0.25	0.25~0.30
Ghisa < 200HB	15~20	0.10~0.12	0.12~0.20	0.20~0.25	0.25~0.30	0.30~0.40
> 200HB	12~15	0.10~0.12	0.12~0.20	0.20~0.25	0.25~0.30	0.30~0.40
Alluminio e sue leghe	20~30	0.12~0.16	0.16~0.25	0.25~0.30	0.30~0.40	0.40~0.50
Leghe di magnesio	20~30	0.10~0.12	0.12~0.20	0.20~0.25	0.25~0.30	0.30~0.40
Rame & Ottone	20~25	0.10~0.12	0.12~0.20	0.20~0.25	0.25~0.30	0.30~0.40
Acciai inox	6~8	0.08~0.10	0.10~0.16	0.16~0.20	0.20~0.25	0.25~0.30
Plastiche	15~20	0.12~0.16	0.16~0.25	0.25~0.30	0.30~0.40	0.40~0.50

HSS-E, STRAIGHT & LH SPIRAL FLUTE CHUCKING REAMER, NC MACHINE REAMER
HSS-E, ALESATORI A MACCHINA - TAGLIENTI DRITTI & ELICA SINISTRA

ALESATORI

SVASATORI

LAMATORI

LIME
ROTATIVE

Materiali	Vc	Avanzamento (mm/giro)					
	(m/min.)	Ø2 ~ Ø4	Ø4 ~ Ø8	Ø8 ~ Ø13	Ø13 ~ Ø20	Ø20 ~ Ø30	> Ø30
Acciai < 500 N/mm ²	12 ~ 16	0.05~0.15	0.10~0.20	0.15~0.25	0.20~0.30	0.25~0.40	0.35~0.50
Acciai 500 - 700 N/mm ²	10 ~ 12	0.05~0.15	0.10~0.20	0.15~0.25	0.20~0.30	0.25~0.40	0.35~0.50
Acciai 700 - 800 N/mm ²	6 ~ 8	0.05~0.10	0.08~0.16	0.10~0.20	0.15~0.25	0.20~0.30	0.30~0.40
Accia legati & Acciai fusi < 500 N/mm ²	6 ~ 10	0.05~0.10	0.08~0.16	0.10~0.20	0.15~0.25	0.20~0.30	0.30~0.40
Accia legati & Acciai fusi > 500 N/mm ²	4 ~ 6	0.05~0.10	0.08~0.16	0.10~0.20	0.15~0.25	0.20~0.30	0.30~0.40
Accia legati & Acciai forgiati	4 ~ 6	0.03~0.08	0.06~0.10	0.08~0.15	0.10~0.20	0.15~0.25	0.20~0.30
Ghisa < 200HB	12 ~ 14	0.05~0.15	0.10~0.20	0.15~0.25	0.20~0.30	0.25~0.40	0.35~0.50
Ghisa > 200HB	10 ~ 12	0.05~0.10	0.08~0.16	0.10~0.20	0.15~0.25	0.20~0.30	0.30~0.40
Alluminio e sue leghe	16 ~ 20	0.10~0.20	0.15~0.25	0.20~0.30	0.25~0.40	0.35~0.50	0.40~0.60
Magnesio e sue leghe	10 ~ 16	0.10~0.20	0.15~0.25	0.20~0.30	0.25~0.40	0.35~0.50	0.40~0.60
Rame & Ottone	16 ~ 18	0.10~0.20	0.15~0.25	0.20~0.30	0.25~0.40	0.35~0.50	0.40~0.60
Acciai Inox	4 ~ 6	0.03~0.08	0.06~0.10	0.08~0.15	0.10~0.20	0.15~0.25	0.20~0.30
Plastiche	8 ~ 12	0.10~0.20	0.20~0.30	0.30~0.40	0.40~0.50	0.50~0.60	0.60~0.80

HSS-E, CHUCKING REAMER-QUICK SPIRAL
HSS-E, ALESATORI A MACCHINA ELICA RAPIDA

Materiali	Vc	Avanzamento (mm/giro)			
	(m/min.)	Ø2 ~ Ø4	Ø4 ~ Ø8	Ø8 ~ Ø13	Ø13 ~ Ø20
Acciai < 500 N/mm ²	16 ~ 18	0.08~0.16	0.16~0.25	0.20~0.30	0.30~0.40
Acciai 500 - 700 N/mm ²	14 ~ 16	0.08~0.16	0.16~0.25	0.20~0.30	0.30~0.40
Alluminio e sue leghe	18 ~ 22	0.10~0.20	0.20~0.30	0.30~0.40	0.40~0.60
Magnesio e sue leghe	10 ~ 16	0.08~0.16	0.16~0.25	0.20~0.30	0.30~0.40
Rame & Ottone	16 ~ 20	0.08~0.16	0.16~0.25	0.20~0.30	0.30~0.40
Plastiche	12 ~ 14	0.10~0.20	0.20~0.30	0.30~0.40	0.40~0.60



HSS



Migliorare attraverso l'innovazione









SVASATORI

- Deburring, Chamfering, Countersinking, HSS & 8% Cobalt

- Utensili per Sbavatura, Smussatura, Svasatura in HSS & HSS Co8

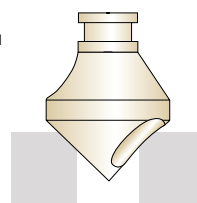
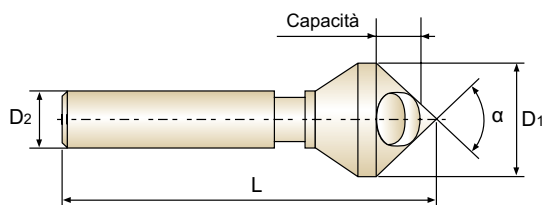
GUIDA ALLA SELEZIONE

CODICE	FOTO	DESCRIZIONE	DIM.		PAG.
			MIN	MAX	
C1109		HSS, DEBURRING TOOL with HOLE (90°) SVASATORI CON FORO - HSS (90°)	D10.0	D50.0	1287
C1119		HSS, SINGLE FLUTE CHAMFERING CUTTERS (90°) SVASATORI MONOTAGLIENTE - HSS (90°)	D10.0	D50.0	1288
C1136		HSS, THREE FLUTE COUNTERSINKS (60°) SVASATORI A TRE TAGLIENTI - HSS (60°)	D6.3	D25.0	1289
C1139 C3139		HSS, THREE FLUTE COUNTERSINKS (90°) SVASATORI A TRE TAGLIENTI - HSS (90°)	D4.3	D35.0	1290
C1239 C1339		HSSCo8, THREE FLUTE COUNTERSINKS (90°) TiN & TiCN COATING SVASATORI A TRE TAGLIENTI - HSS Co8 (90°) RIVESTIMENTO TiN & TiCN	D4.3	D50.0	1291
C1132		HSS, THREE FLUTE COUNTERSINKS (120°) SVASATORI A TRE TAGLIENTI - HSS (120°)	D8.0	D25.0	1292
RECOMMENDED CUTTING CONDITIONS PARAMETRI DI TAGLIO INDICATIVI					1293

HSS, DEBURRING TOOL with HOLE (90°) SVASATORI CON FORO - HSS (90°)

- ▶ For light metals and plastics.
- ▶ For deburring and small chamfers.
- ▶ Best surface finish.
- ▶ Works without vibrations.

- ▶ Per materiali soffici e plastiche.
- ▶ Sbavature e piccoli smussi.
- ▶ Buona finitura superficiale.
- ▶ Lavorazioni senza vibrazioni.



P.1293

Unità : mm

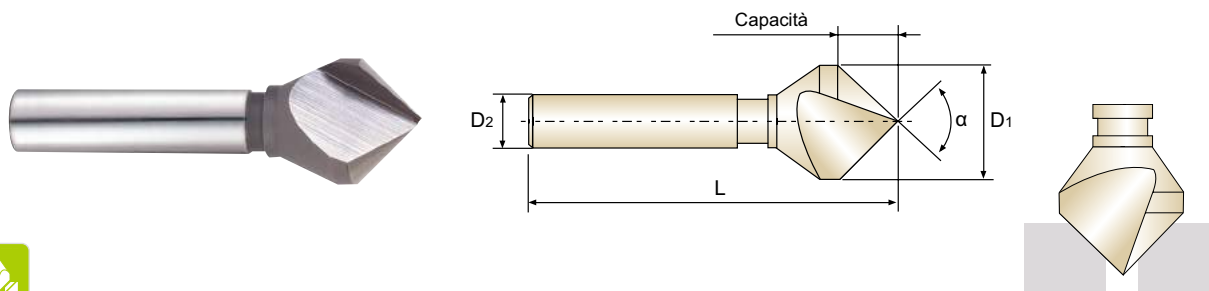
CODICE (Non rivestito)	Angolo	Diametro Nominale	Diametro gambo	Lunghezza totale	Capacità
HSSCo8	α (-1°)	D1	D2	L(± 1)	min/max
C1109100	90°	10.0	6	45	2 - 5
C1109150	90°	15.0	8	55	6 - 14
C1109200	90°	20.0	10	65	8 - 18
C1109250	90°	25.0	12	78	10 - 23
C1109300	90°	30.0	12	88	12 - 28
C1109350	90°	35.0	16	110	14 - 33
C1109400	90°	40.0	16	115	16 - 38
C1109450	90°	45.0	16	120	18 - 43
C1109500	90°	50.0	16	130	20 - 48

Tolleranza diam. nominale (mm)	Tolleranza gambo
+ 0.3	h9

HSS, SINGLE FLUTE CHAMFERING CUTTERS (90°) SVASATORI MONOTAGLIENTE - HSS (90°)

- ▶ For wood and hard plastics.
- ▶ Can drill in sheet materials.
- ▶ Easy to resharpen.
- ▶ Works without vibrations.

- ▶ Per legno e plastiche dure.
- ▶ Possibile forare materiali con spessori sottili.
- ▶ Semplice riaffilatura.
- ▶ Lavorazioni senza vibrazioni



P.1293

Unità : mm

CODICE (Non rivestito)	Angolo	Diametro nominale	Diametro gambo	Lunghezza totale	Capacità
HSSCo8	α (-1°)	D1	D2	L(± 1)	min/max
C1119100	90°	10.0	6	45	1 - 10
C1119150	90°	15.0	8	55	2 - 15
C1119200	90°	20.0	10	65	2 - 20
C1119250	90°	25.0	12	78	3 - 25
C1119300	90°	30.0	12	88	3 - 30
C1119350	90°	35.0	16	110	4 - 35
C1119400	90°	40.0	16	115	5 - 40
C1119450	90°	45.0	16	120	10 - 45
C1119500	90°	50.0	16	130	12 - 50

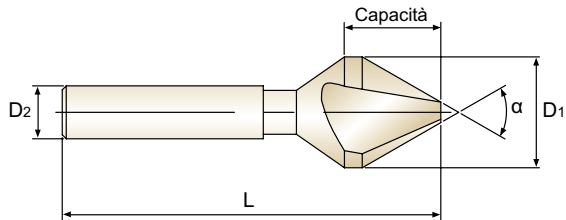
Tolleranza diam. nominale (mm)	Tolleranza gambo
+0.3	h9

HSS, THREE FLUTE COUNTERSINKS (60°)

SVASATORI A TRE TAGLIENTI - HSS (60°)

- ▶ Self-centering(3 flutes)
- ▶ For deburring, chamfering and countersinking
- ▶ Hand using
- ▶ Longitudinal chamfers and contouring
- ▶ Works without vibrations

- ▶ Autocentrante.
- ▶ Per sbavatura, smussatura e svasatura.
- ▶ Utilizzabile anche a mano.
- ▶ Esecuzione di smussi longitudinali e contornatura di spigoli.
- ▶ Lavorazioni senza vibrazioni.



DIN 334 C



P.1293

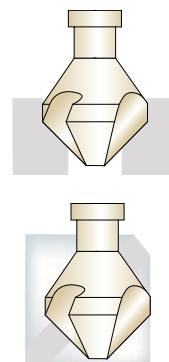
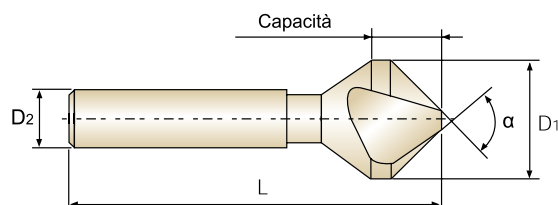
CODICE (Non rivestito)	Angolo	Diametro nominale	Diametro gambo	Lunghezza totale	Capacità
HSSCo8	α (-1°)	D1	D2	L(± 1)	min/max
C1136063	60°	6.3	5	45	1.6~6.3
C1136080	60°	8.0	6	50	2.0~8.0
C1136100	60°	10.0	6	50	2.5~10.0
C1136125	60°	12.5	8	56	3.2~12.5
C1136160	60°	16.0	10	63	4.0~16.0
C1136200	60°	20.0	10	67	5.0~20.0
C1136250	60°	25.0	10	71	6.3~25.0

Tolleranza diam. nominale (mm)	Tolleranza gambo
± 0.05	h9

HSS, THREE FLUTE COUNTERSINKS (90°) SVASATORI A TRE TAGLIENTI - HSS (90°)

- ▶ Self-centering(3 flutes).
- ▶ Designed for 90° capscrews countersinking.
- ▶ Hand using.
- ▶ Longitudinal chamfers and contouring.
- ▶ Works without vibrations

- ▶ Autocentrante.
- ▶ Progettati per esecuzione di sedi di viti a 90°
- ▶ Utilizzabile anche a mano.
- ▶ Esecuzione di smussi longitudinali e contornatura di spigoli.
- ▶ Lavorazioni senza vibrazioni.

DIN
335 C

P.1293

Unità : mm

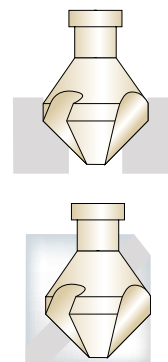
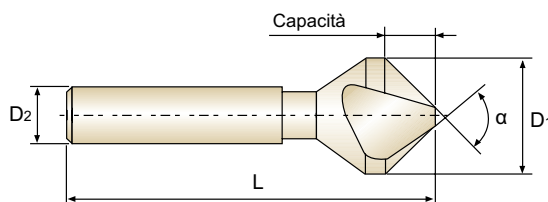
CODICE (Non rivestito)		Angolo	Diametro nominale	Diametro gambo	Lunghezza totale	Capacità
HSSCo8	HSS	α (-1°)	D1	D2	L(±1)	min/max
C1139043	C3139043	90°	4.3	4	40	1.3 - 4.3
C1139050	C3139050	90°	5.0	4	40	1.5 - 5
C1139060	C3139060	90°	6.0	5	45	1.5 - 6
C1139063	C3139063	90°	6.3	5	45	1.5 - 6.3
C1139070	C3139070	90°	7.0	6	50	1.8 - 7
C1139080	C3139080	90°	8.0	6	50	2 - 8
C1139083	C3139083	90°	8.3	6	50	2 - 8.3
C1139100	C3139100	90°	10.0	6	50	2.5 - 10
C1139104	C3139104	90°	10.4	6	50	2.5 - 10.4
C1139115	C3139115	90°	11.5	8	56	2.8 - 11.5
C1139124	C3139124	90°	12.4	8	56	2.8 - 12.4
C1139150	C3139150	90°	15.0	10	60	3.2 - 15
C1139165	C3139165	90°	16.5	10	60	3.2 - 16.5
C1139190	C3139190	90°	19.0	10	63	3.5 - 19
C1139205	C3139205	90°	20.5	10	63	3.5 - 20.5
C1139230	C3139230	90°	23.0	10	67	3.8 - 23
C1139250	C3139250	90°	25.0	10	67	3.8 - 25
C1139300	C3139300	90°	30.0	12	71	4.2 - 30
C1139310	C3139310	90°	31.0	12	71	4.2 - 31
C1139350	-	90°	35.0	16	110	4.5 - 35

Tolleranza diam. nominale (mm)	Tolleranza gambo
±0.05	h9

HSSCo8, THREE FLUTE COUNTERSINKS (90°) TiN & TiCN COATING
SVASATORI A TRE TAGLIENTI - HSS Co8 (90°) RIVESTIMENTO TiN & TiCN

- ▶ Self-centering(3 flutes).
- ▶ Designed for 90° capscrews countersinking.
- ▶ Hand using.
- ▶ Longitudinal chamfers and contouring.
- ▶ Works without vibrations

- ▶ Autocentrante.
- ▶ Progettati per esecuzione di sedi di viti a 90°
- ▶ Utilizzabile anche a mano.
- ▶ Esecuzione di smussi longitudinali e contornatura di spigoli.
- ▶ Lavorazioni senza vibrazioni.



DIN 335 C HSS Co8 P.1293

Unità : mm

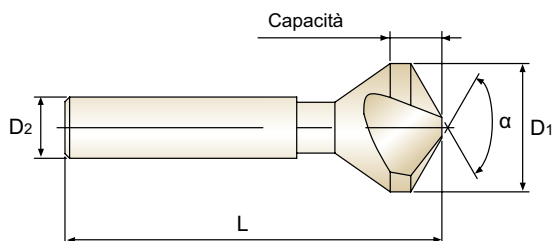
CODICE		Angolo	Diametro nominale	Diametro gambo	Lunghezza totale	Capacità
TiN	TiCN	α (-1°)	D1	D2	L(± 1)	min/max
C1239043	C1339043	90°	4.3	4	40	1.3 - 4.3
C1239063	C1339063	90°	6.3	5	45	1.5 - 6.3
C1239083	C1339083	90°	8.3	6	50	2.0 - 8.3
C1239100	C1339100	90°	10.0	6	50	2.5 - 10
C1239124	C1339124	90°	12.4	8	56	2.8 - 12.4
C1239150	C1339150	90°	15.0	10	60	3.2 - 15
C1239205	C1339205	90°	20.5	10	63	3.5 - 20.5
C1239250	C1339250	90°	25.0	10	67	3.8 - 25
C1239300	C1339300	90°	30.0	12	71	4.2 - 30
-	C1339350	90°	35.0	16	110	4.5 - 35
-	C1339400	90°	40.0	16	115	4.5 - 40
-	C1339450	90°	45.0	16	120	5.0 - 45
-	C1339500	90°	50.0	16	130	5.0 - 50

Tolleranza D nominale (mm)	Tolleranza D gambo
± 0.05	h9

HSS, THREE FLUTE COUNTERSINKS (120°) SVASATORI A TRE TAGLIENTI - HSS (120°)

- ▶ Self-centering(3 flutes)
- ▶ For deburring, chamfering and countersinking
- ▶ Hand using
- ▶ Longitudinal chamfers and contouring
- ▶ Works without vibrations

- ▶ Autocentrante.
- ▶ Progettati per esecuzione di sedi di viti a 120°
- ▶ Utilizzabile anche a mano.
- ▶ Esecuzione di smussi longitudinali e contornatura di spigoli.
- ▶ Lavorazioni senza vibrazioni.

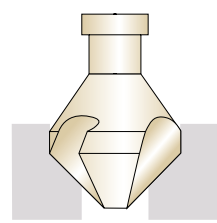
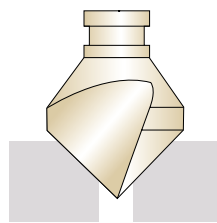
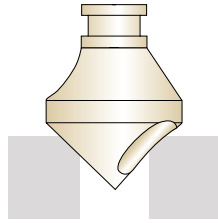


P.1293

Unità : mm

CODICE (Non rivestito)	Angolo	Diametro nominale	Diametro gambo	Lunghezza totale	Capacità
HSSCo8	α (-1°)	D1	D2	L(± 1)	min/max
C1132080	120°	8.0	6	49	2.0~8.0
C1132125	120°	12.5	8	54	2.8~12.5
C1132160	120°	16.0	10	57	3.2~16.0
C1132200	120°	20.0	10	59	3.5~20.0
C1132250	120°	25.0	10	65	3.8~25.0

Tolleranza diam. nominale (mm)	Tolleranza gambo
± 0.05	h9



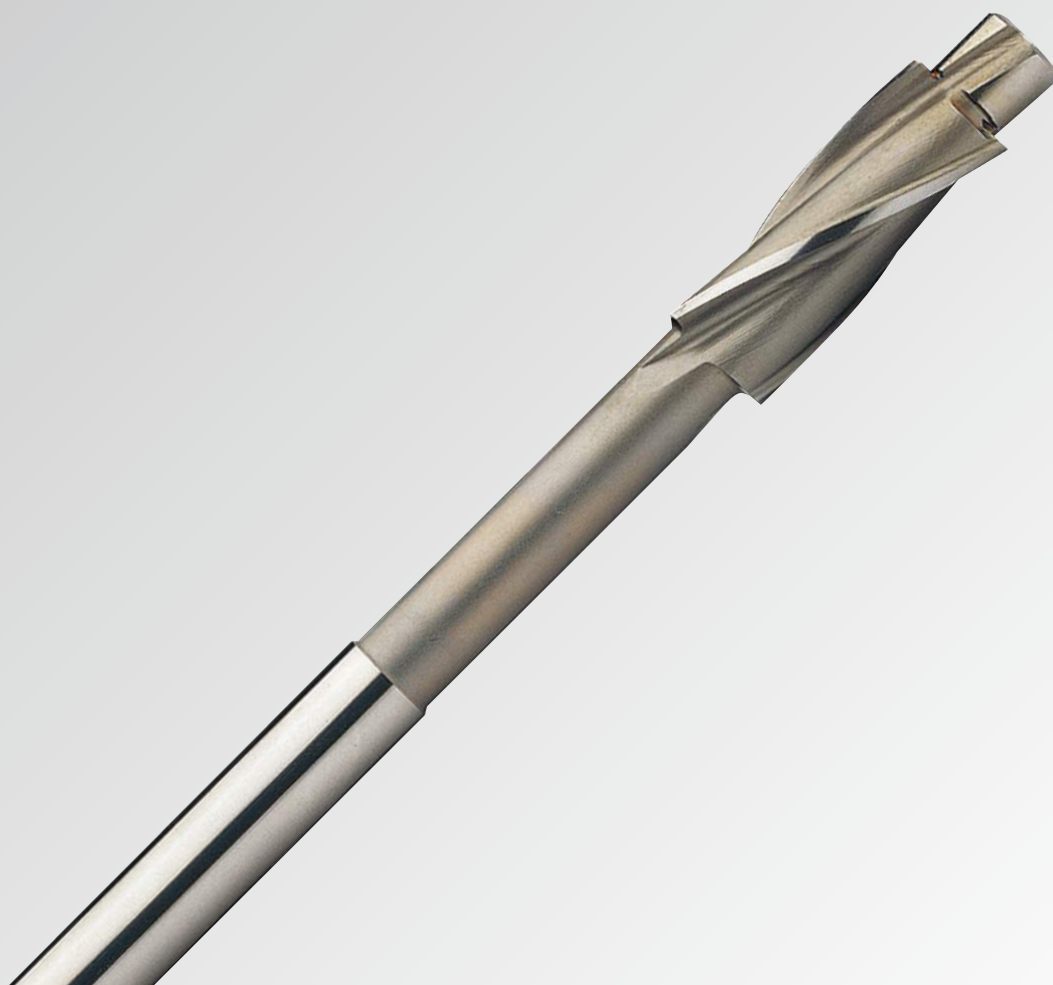
Materiale	Vc (m/min)	fn (mm/giro)			Vc (m/min)	fn (mm/giro)			Vc (m/min)	fn (mm/giro)		
		Ø ≤ 10	Ø ≤ 20	Ø ≤ 30		Ø ≤ 10	Ø ≤ 20	Ø ≤ 30		Ø ≤ 10	Ø ≤ 20	Ø ≤ 30
ACCIAI ≤ 500 - N/mm ²	35-45	0.20	0.22	0.24	35-45	0.20	0.22	0.24	17-22	0.30	0.32	0.36
ACCIAI 500-800 - N/mm ²	20-30	0.14	0.17	0.20	20-30	0.14	0.17	0.20	10-15	0.28	0.30	0.31
ACCIAI 800-1000 - N/mm ²	15-20	0.11	0.12	0.14	15-20	0.11	0.12	0.14	8-12	0.24	0.26	0.28
ACCIAI & ACCIAI INOX 1000-1300 - N/mm ²	12-15	0.10	0.12	0.15	12-15	0.10	0.12	0.15	6-8	0.20	0.20	0.22
ACCIAI INOX	6-8	0.07	0.08	0.09	6-8	0.07	0.08	0.09	4-6	0.08	0.09	0.10
GHISA	20-40	0.15	0.24	0.28	20-40	0.15	0.24	0.28	15-25	0.13	0.19	0.24
ALLUMINIO	50-60	0.22	0.25	0.27	50-60	0.22	0.25	0.27	35-45	0.27	0.30	0.35
OTTONE & BRONZO	30-40	0.23	0.25	0.28	30-40	0.23	0.25	0.28	20-30	0.30	0.30	0.31
RAME	20-30	0.22	0.25	0.27	20-30	0.22	0.25	0.27	10-15	0.29	0.30	0.31
PLASTICHE	50-100	0.50	0.60	0.65	50-100	0.50	0.60	0.65	35-70	0.40	0.45	0.50



HSS



Migliorare attraverso l'innovazione



LAMATORI

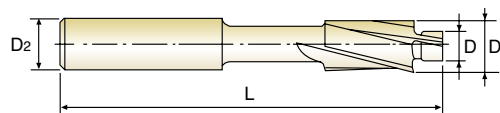
- General Purpose
- Applicazioni generali

HSS-E, 3 FLUTE COUNTERBORES for 180° CAPSCREW

LAMATORI A 3 TAGLIENTI IN HSS-E / Per sedi di viti a testa cilindrica a 180°

► The counterbores with solid pilot are designed for machining as fillister screw caps or ejector caps in molds.

► Allargatori per sedi di viti a testa cilindrica e sedi di teste di espulsori per stampi.



P.1297

STANDARD

Unità : mm

CODICE	Dimensione vite	Diametro pilota	Diametro tagliente	Diametro gambo	Lunghezza totale
Gambo cilindrico		D(e8)	D1(z9)	D2(h9)	L
EL950003	M3	3.4	6.0	5	71
EL950035	M3.5	3.9	6.5	5	71
EL950004	M4	4.5	8.0	5	71
EL950005	M5	5.5	10.0	8	80
EL950006	M6	6.6	11.0	8	80
EL950008	M8	9.0	15.0	12.5	100
EL950010	M10	11.0	18.0	12.5	100
EL950012	M12	14.0	20.0	12.5	100

PRECISI

Unità : mm

CODICE	Dimensione vite	Diametro pilota	Diametro tagliente	Diametro gambo	Lunghezza totale
Gambo cilindrico		D(e8)	D1(z9)	D2(h9)	L
EL950901	M3	3.2	6.0	5	71
EL950902	M3.5	3.7	6.5	5	71
EL950903	M4	4.3	8.0	5	71
EL950904	M5	5.3	10.0	8	80
EL950905	M6	6.4	11.0	8	80
EL950906	M8	8.4	15.0	12.5	100
EL950907	M10	10.5	18.0	12.5	100
EL950908	M12	13.0	20.0	12.5	100

Tolerances according to DIN 7160 & 7161

Tolleranze secondo DIN 7160 & 7161

	Nominal-Diameter in mm / Diametro nominale in mm			
	from 1 to 3 da 1 a 3	over 3 to 6 oltre 3 a 6	over 6 to 10 oltre 6 a 10	over 10 to 18 oltre 10 a 18
	Tolerance range in μm / Tolleranze in μm			
e8	- 14 - 28	- 20 - 38	- 25 - 47	- 32 - 59
h9	0 - 25	0 - 30	0 - 36	0 - 43

	Nominal-Diameter in mm / Diametro nominale in mm			
	from 6 to 10 da 6 a 10	over 10 to 14 oltre 10 a 14	over 14 to 18 oltre 14 a 18	over 18 to 24 oltre 18 a 24
	Tolerance range in μm / Tolleranze in μm			
z9	+ 78 + 42	+ 93 + 50	+ 103 + 60	+ 125 + 73

HSS-E, 3 FLUTE COUNTERBORES for 180° CAPSCREW
LAMATORI A 3 TAGLIENTI IN HSS-E / Per sedi di viti a testa cilindrica a 180°

ALESATORI

SVASATORI

LAMATORI

LIME
ROTATIVE
EL950 SERIES

MATERIALI	P				N
	ACCIAI AL CARBONIO ACCIAI LEGATI	ACCIAI AL CARBONIO ACCIAI LEGATI ACCIAI DA UTENSILI	ACCIAI AL CARBONIO ACCIAI LEGATI ACCIAI DA UTENSILI	ACCIAI AL CARBONIO ACCIAI LEGATI ACCIAI DA UTENSILI	ALLUMINIO E SUE LEGHE
DUREZZA		~ HRC20	HRC20 ~ HRC35	HRC35 ~ HRC40	
Resist. traz.	~ 500N/mm ²	500 ~ 800N/mm ²	800 ~ 1100N/mm ²	1100 ~ 1300N/mm ²	
DIAMETRO	n (giri/min)	n (giri/min)	n (giri/min)	n (giri/min)	n (giri/min)
6.0	590	480	380	320	2100
6.5	590	480	380	320	2100
8.0	470	380	300	250	1700
10.0	380	320	260	170	1200
11.0	300	240	190	160	1100
15.0	240	195	155	130	840
18.0	190	160	120	80	670
20.0	160	125	95	70	550



MD



Migliorare attraverso l'innovazione



LIME ROTATIVE














- For General Steels and Non-ferrous Metals etc.

(3mm & 6mm Shank Diameter)

- Applicazioni su acciai in genere, materiali non ferrosi, etc

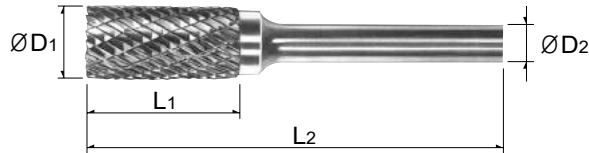
(diametri del gambo 3mm e 6mm)

GUIDA ALLA SELEZIONE

CODICE	FOTO	DESCRIZIONE	DIM.		PAG.
			MIN	MAX	
SA R1101 R1201 R1301		CYLINDER SHAPE TYPE SA(Form A) CILINDRICA, TIPO SA (FORMA A)	D1.5	D25.0	1301
SB R1102 R1202 R1302		CYLINDER SHAPE WITH END CUT TYPE SB(Form B) CILINDRICA CON TAGLIO FRONTALE, TIPO SB (FORMA B)	D1.5	D25.0	1302
SC R1103 R1203 R1303		CYLINDER SHAPE WITH RADIUS END TYPE SC(Form C) CILINDRICA A TESTA SEMISFERICA, TIPO SC (FORMA C)	D2.5	D25.0	1303
SD R1104 R1204 R1304		BALL SHAPE TYPE SD(Form D) SFERICA, TIPO SD (FORMA D)	D2.5	D25.0	1304
SE R1105 R1205 R1305		OVAL SHAPE TYPE SE(Form E) OVALE, TIPO SE (FORMA E)	D3.0	D19.0	1305
SF R1106 R1206 R1306		TREE SHAPE WITH RADIUS END TYPE SF(Form F) OGIVA RAGGIATA, TIPO SF (FORMA F)	D3.0	D19.0	1306
SG R1107 R1207		TREE SHAPE- WITH POINTED END TYPE SG(Form G) TESTA A PUNTA, TIPO SG (FORMA G)	D3.0	D19.0	1307
SH R1108 R1208		LAME SHAPE TYPE SH(Form H) A FIAMMA, TIPO SH (FORMA H)	D3.0	D19.0	1308
SJ R1109 R1209		60° CONE SHAPE TYPE SJ(Form J) CONICA A 60°, TIPO SJ (FORMA J)	D3.0	D25.0	1309
SK R1110 R1210		90° CONE SHAPE TYPE SK(Form K) CONICA A 90°, TIPO SK (FORMA K)	D3.0	D25.0	1310
SL R1111 R1211 R1311		TAPER WITH RADIUS END TYPE SL(Form L) CONICA A TESTA RAGGIATA, TIPO SL (FORMA L)	D3.0	D19.0	1311
SM R1112 R1212		CONE SHAPE TYPE SM(Form M) CONICA A PUNTA, TIPO SM (FORMA M)	D3.0	D16.0	1312
SN R1113 R1213		INVERTED CONE SHAPE TYPE SN(Form N) CONICO INVERSO, TIPO SN (FORMA N)	D2.5	D19.0	1313
TECHNICAL INFORMATION FOR CARBIDE BURRS INFORMAZIONI TECNICHE					1314
BURR APPLICATION INFORMATION & SPEED RECOMMENDATION APPLICAZIONI E VELOCITÀ DI TAGLIO					1315



CYLINDER SHAPE TYPE SA (FORM A)
CILINDRICA, TIPO SA (FORMA A)

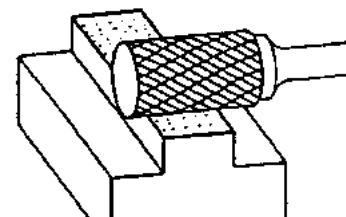


Unità : mm

TAGLIO DOPPIO		D1	D2	L1	L2	TAGLIO FINE	
Codice	Tipo					Codice	Tipo
R1101001	SA-41M	1.5	3	6	38	R1201001	SA-41MP
R1101002	SA-41ML2	1.5	3	6	50	R1201002	SA-41ML2P
R1101003	SA-41ML3	1.5	3	6	75	R1201003	SA-41ML3P
R1101004	SA-42M	2.5	3	11	38	R1201004	SA-42MP
R1101005	SA-42ML2	2.5	3	11	50	R1201005	SA-42ML2P
R1101006	SA-42ML3	2.5	3	11	75	R1201006	SA-42ML3P
R1101007	SA-43M	3.0	3	14	38	R1201007	SA-43MP
R1101008	SA-43ML2	3.0	3	14	50	R1201008	SA-43ML2P
R1101009	SA-43ML3	3.0	3	14	75	R1201009	SA-43ML3P
R1101010	SA-11M	3.0	6	12	56	R1201010	SA-11MP
R1101011	SA-12M	3.0	6	12.7	60	R1201011	SA-12MP
R1101012	SA-52M	4.0	3	12.7	38	R1201012	SA-52MP
R1101013	SA-13M	4.0	6	16	50	R1201013	SA-13MP
R1101014	SA-53M	5.0	3	12.7	38	R1201014	SA-53MP
R1101015	SA-14M	5.0	6	16	50	R1201015	SA-14MP
R1101017	SA-1ML	6.0	6	25	50	R1201017	SA-1MLP
R1101019	SA-1M	6.0	6	16	50	R1201019	SA-1MP
R1101020	SA-51M	6.3	3	12.7	50	R1201020	SA-51MP
R1101021	SA-2M	8.0	6	19	63	R1201021	SA-2MP
R1101022	SA-3M	9.5	6	19	63	R1201022	SA-3MP
R1101025	SA-3ML	9.5	6	25	69	R1201025	SA-3MLP
R1101027	SA-4M	11.0	6	25	69	R1201027	SA-4MP
R1101029	SA-5M	12.7	6	25	69	R1201029	SA-5MP
R1101032	SA-6M	16.0	6	25	69	R1201032	SA-6MP
R1101034	SA-7M	19.0	6	25	69	R1201034	SA-7MP
R1101037	SA-9M	25.0	6	25	69	R1201037	SA-9MP

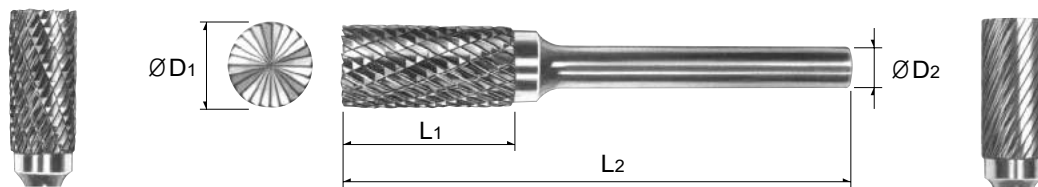


TAGLIO ALLUMINIO		D1	D2	L1	L2
Codice	Tipo				
R1301018	SA-1MNF	6.0	6	19	50
R1301024	SA-3MNF	9.5	6	19	63
R1301030	SA-5MNF	12.7	6	25	69
R1301033	SA-6MNF	16.0	6	25	69
R1301035	SA-7MNF	19.0	6	25	69



CYLINDER SHAPE WITH END CUT TYPE SB (FORM B)

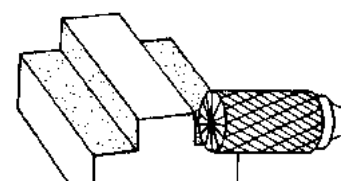
CILINDRICA CON TAGLIO FRONTALE, TIPO SB (FORMA B)



Unità : mm

TAGLIO DOPPIO		D1	D2	L1	L2	TAGLIO FINE	
Codice	Tipo					Codice	Tipo
R1102001	SB-41M	1.5	3	6	38	R1202001	SB-41MP
R1102002	SB-41ML2	1.5	3	6	50	R1202002	SB-41ML2P
R1102003	SB-41ML3	1.5	3	6	75	R1202003	SB-41ML3P
R1102004	SB-42M	2.5	3	11	38	R1202004	SB-42MP
R1102005	SB-42ML2	2.5	3	11	50	R1202005	SB-42ML2P
R1102006	SB-42ML3	2.5	3	11	75	R1202006	SB-42ML3P
R1102008	SB-43M	3.0	3	14	38	R1202008	SB-43MP
R1102026	SB-43ML2	3.0	3	14	50	R1202026	SB-43ML2P
R1102027	SB-43ML3	3.0	3	14	75	R1202027	SB-43ML3P
R1102009	SB-11M	3.0	6	12	56	R1202009	SB-11MP
R1102010	SB-12M	3.0	6	12.7	60	R1202010	SB-12MP
R1102011	SB-13M	4.0	6	16	50	R1202011	SB-13MP
R1102012	SB-14M	5.0	6	16	50	R1202012	SB-14MP
R1102013	SB-1M	6.0	6	16	50	R1202013	SB-1MP
R1102014	SB-1ML	6.0	6	25	50	R1202014	SB-1MLP
R1102015	SB-51M	6.3	3	4.7	43	R1202015	SB-51MP
R1102016	SB-2M	8.0	6	19	63	R1202016	SB-2MP
R1102017	SB-3M	9.5	6	19	63	R1202017	SB-3MP
R1102018	SB-3ML	9.5	6	25	69	R1202018	SB-3MLP
R1102020	SB-4M	11.0	6	25	69	R1202020	SB-4MP
R1102022	SB-5M	12.7	6	25	69	R1202022	SB-5MP
R1102023	SB-6M	16.0	6	25	69	R1202023	SB-6MP
R1102024	SB-7M	19.0	6	25	69	R1202024	SB-7MP
R1102025	SB-9M	25.0	6	25	69	R1202025	SB-9MP

TAGLIO ALLUMINIO		D1	D2	L1	L2
Codice	Tipo				
R1302018	SB-1MNF	6.0	6	19	50
R1302024	SB-3MNF	9.5	6	19	63
R1302030	SB-5MNF	12.7	6	25	69
R1302033	SB-6MNF	16.0	6	25	69
R1302035	SB-7MNF	19.0	6	25	69




LIME ROTATIVE
SC R1103, R1203, R1303

HSS

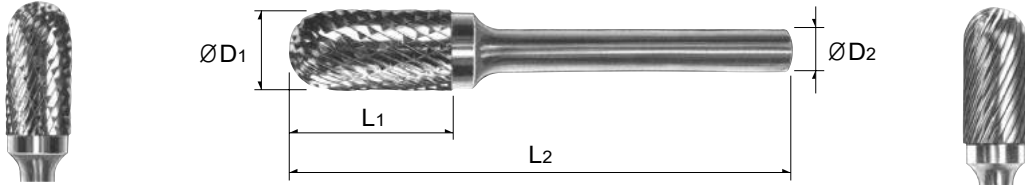
ALESATORI

SVASATORI

LAMATORI

LIME
ROTATIVE

CYLINDER SHAPE WITH RADIUS END TYPE SC (FORM C)
CILINDRICA A TESTA SEMISFERICA, TIPO SC (FORMA C)

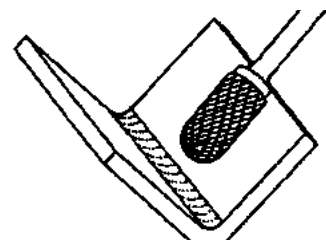


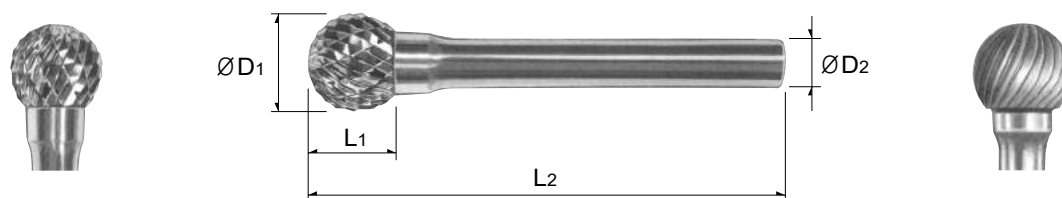
Unità : mm

TAGLIO DOPPIO		D1	D2	L1	L2	TAGLIO FINE	
Codice	Tipo					Codice	Tipo
R1103001	SC-41M	2.5	3	11	38	R1203001	SC-41MP
R1103002	SC-42M	3.0	3	14	38	R1203002	SC-42MP
R1103003	SC-42ML2	3.0	3	14	50	R1203003	SC-42ML2P
R1103004	SC-42ML3	3.0	3	14	75	R1203004	SC-42ML3P
R1103005	SC-11M	3.0	6	12	56	R1203005	SC-11MP
R1103006	SC-12M	3.0	6	16	60	R1203006	SC-12MP
R1103007	SC-52M	4.0	3	12.7	38	R1203007	SC-52MP
R1103008	SC-13M	4.0	6	16	50	R1203008	SC-13MP
R1103009	SC-53M	5.0	3	12.7	38	R1203009	SC-53MP
R1103010	SC-14M	5.0	6	16	50	R1203010	SC-14MP
R1103011	SC-1M	6.0	6	16	50	R1203011	SC-1MP
R1103014	SC-1ML	6.0	6	25	50	R1203014	SC-1MLP
R1103015	SC-51M	6.3	3	12.7	50	R1203015	SC-51MP
R1103016	SC-2M	8.0	6	19	63	R1203016	SC-2MP
R1103017	SC-3M	9.5	6	19	63	R1203017	SC-3MP
R1103020	SC-3ML	9.5	6	25	69	R1203020	SC-3MLP
R1103022	SC-4M	11.0	6	25	69	R1203022	SC-4MP
R1103024	SC-5M	12.7	6	25	69	R1203024	SC-5MP
R1103027	SC-6M	16.0	6	25	69	R1203027	SC-6MP
R1103028	SC-7M	19.0	6	25	69	R1203028	SC-7MP
R1103031	SC-9M	25.0	6	25	69	R1203031	SC-9MP



TAGLIO ALLUMINIO		D1	D2	L1	L2
Codice	Tipo				
R1303013	SC-1MNF	6.0	6	19	50
R1303019	SC-3MNF	9.5	6	19	63
R1303026	SC-5MNF	12.7	6	25	69
R1303029	SC-7MNF	19.0	6	25	69



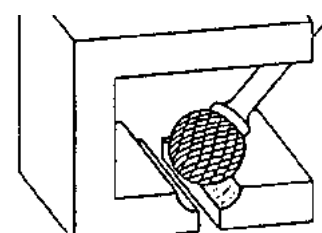
BALL SHAPE TYPE SD (FORM D)
SFERICA, TIPO SD (FORMA D)


Unità : mm

TAGLIO DOPPIO		D ₁	D ₂	L ₁	L ₂	TAGLIO FINE	
Codice	Tipo					Codice	Tipo
R1104001	SD-41M	2.5	3	2.3	38	R1204001	SD-41MP
R1104002	SD-42M	3.0	3	2.8	38	R1204002	SD-42MP
R1104003	SD-42ML2	3.0	3	2.8	50	R1204003	SD-42ML2P
R1104004	SD-42ML3	3.0	3	2.8	75	R1204004	SD-42ML3P
R1104005	SD-11M	3.0	6	2.8	50	R1204005	SD-11MP
R1104007	SD-53M	5.0	3	4	38	R1204007	SD-53MP
R1104008	SD-14M	5.0	6	4	50	R1204008	SD-14MP
R1104010	SD-1M	6.0	6	5	50	R1204010	SD-1MP
R1104012	SD-51M	6.3	3	5	44	R1204012	SD-51MP
R1104013	SD-2M	8.0	6	6.4	50	R1204013	SD-2MP
R1104014	SD-3M	9.5	6	8	52	R1204014	SD-3MP
R1104018	SD-4M	11.0	6	9.5	54	R1204018	SD-4MP
R1104020	SD-5M	12.7	6	11	55	R1204020	SD-5MP
R1104023	SD-6M	16.0	6	14	58	R1204023	SD-6MP
R1104025	SD-7M	19.0	6	16	62	R1204025	SD-7MP
R1104028	SD-9M	25.0	6	23	68	R1204028	SD-9MP



TAGLIO ALLUMINIO		D ₁	D ₂	L ₁	L ₂
Codice	Tipo				
R1304011	SD-1MNF	6.0	6	5	50
R1304015	SD-3MNF	9.5	6	8	52
R1304021	SD-5MNF	12.7	6	11	55
R1304024	SD-6MNF	16.0	6	14	58
R1304026	SD-7MNF	19.0	6	16	62



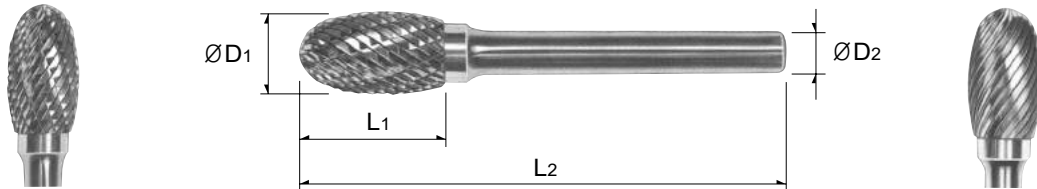

LIME ROTATIVE
SE R1105, R1205, R1305
VAL SHAPE TYPE SE (FORM E)
OVALE, TIPO SE (FORMA E)

HSS

ALESATORI

SVASATORI

LAMATORI

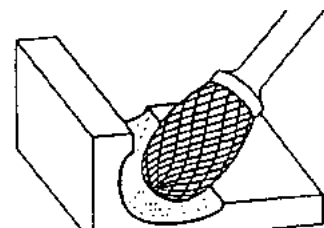
LIME
ROTATIVE

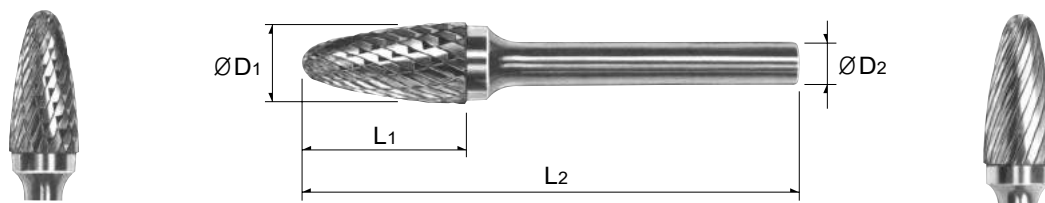
Unità : mm

TAGLIO DOPPIO		D ₁	D ₂	L ₁	L ₂	TAGLIO FINE	
Codice	Tipo					Codice	Tipo
R1105001	SE-41M	3.0	3	5.5	38	R1205001	SE-41MP
R1105002	SE-41ML2	3.0	3	5.5	50	R1205002	SE-41ML2P
R1105003	SE-41ML3	3.0	3	5.5	75	R1205003	SE-41ML3P
R1105004	SE-53M	5.0	3	7.1	38	R1205004	SE-53MP
R1105005	SE-1M	6.0	6	9.5	50	R1205005	SE-1MP
R1105007	SE-51M	6.3	3	9.5	47	R1205007	SE-51MP
R1105008	SE-3M	9.5	6	16	60	R1205008	SE-3MP
R1105011	SE-5M	12.7	6	22	66	R1205011	SE-5MP
R1105014	SE-6M	16.0	6	25	69	R1205014	SE-6MP
R1105016	SE-7M	19.0	6	25	69	R1205016	SE-7MP



TAGLIO ALLUMINIO		D ₁	D ₂	L ₁	L ₂
Codice	Tipo				
R1305010	SE-3MNF	9.5	6	16	60
R1305013	SE-5MNF	12.7	6	22	66
R1305015	SE-6MNF	16.0	6	25	69
R1305017	SE-7MNF	19.0	6	25	69



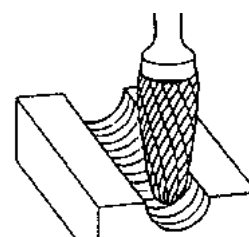
**LIME ROTATIVE****SF R1106, R1206, R1306****TREE SHAPE WITH RADIUS END TYPE SF (FORM F)**
OGIVA RAGGIATA, TIPO SF (FORMA F)

Unità : mm

TAGLIO DOPPIO		D ₁	D ₂	L ₁	L ₂	TAGLIO FINE	
Codice	Tipo					Codice	Tipo
R1106001	SF-41M	3.0	3	6	38	R1206001	SF-41MP
R1106002	SF-42M	3.0	3	12.7	38	R1206002	SF-42MP
R1106003	SF-11M	3.0	6	12.7	56	R1206003	SF-11MP
R1106004	SF-42ML2	3.0	3	12.7	50	R1206004	SF-42ML2P
R1106005	SF-42ML3	3.0	3	12.7	75	R1206005	SF-42ML3P
R1106006	SF-53M	5.0	3	12.7	38	R1206006	SF-53MP
R1106008	SF-1M	6.0	6	16	50	R1206008	SF-1MP
R1106010	SF-51M	6.3	3	12.7	50	R1206010	SF-51MP
R1106011	SF-3M	9.5	6	19	63	R1206011	SF-3MP
R1106014	SF-4M	11.0	6	25	69	R1206014	SF-4MP
R1106016	SF-13M	12.7	6	19	63	R1206016	SF-13MP
R1106017	SF-5M	12.7	6	25	69	R1206017	SF-5MP
R1106020	SF-6M	16.0	6	25	69	R1206020	SF-6MP
R1106022	SF-7M	19.0	6	25	69	R1206022	SF-7MP
R1106023	SF-14M	19.0	6	32	76	R1206023	SF-14MP
R1106026	SF-15M	19.0	6	38	82	R1206026	SF-15MP

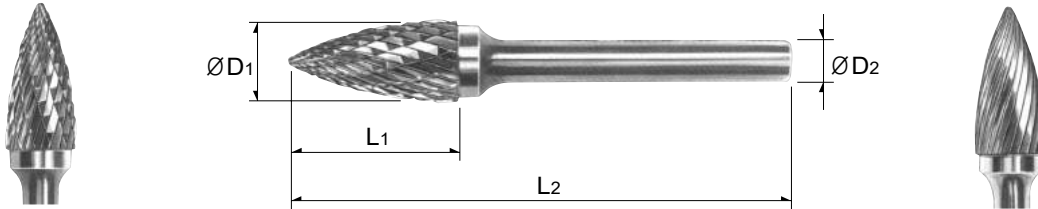


TAGLIO ALLUMINIO		D ₁	D ₂	L ₁	L ₂
Codice	Tipo				
R1306009	SF-1MNF	6.0	6	19	50
R1306013	SF-3MNF	9.5	6	19	63
R1306019	SF-5MNF	12.7	6	25	69
R1306021	SF-6MNF	16.0	6	25	69
R1306024	SF-14MNF	19.0	6	32	76



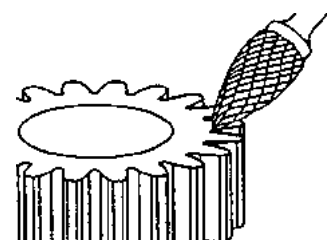


TREE SHAPE WITH POINTED END TYPE SG (FORM G)
TESTA A PUNTA, TIPO SG (FORMA G)

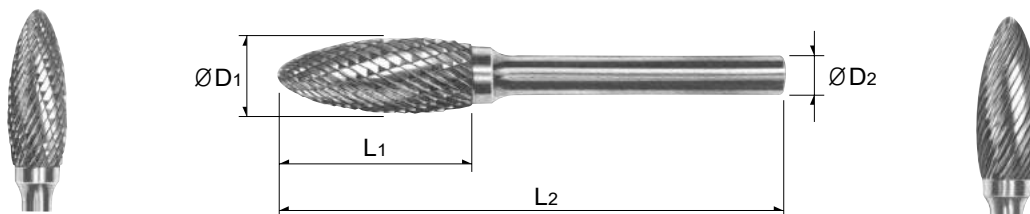


Unità : mm

TAGLIO DOPPIO		D1	D2	L1	L2	TAGLIO FINE	
Codice	Tipo					Codice	Tipo
R1107001	SG-41M	3.0	3	6	38	R1207001	SG-41MP
R1107002	SG-43M	3.0	3	9.5	38	R1207002	SG-43MP
R1107003	SG-44M	3.0	3	12.7	38	R1207003	SG-44MP
R1107004	SG-44ML2	3.0	3	12.7	50	R1207004	SG-44ML2P
R1107005	SG-44ML3	3.0	3	12.7	75	R1207005	SG-44ML3P
R1107006	SG-53M	5.0	3	12.7	38	R1207006	SG-53MP
R1107008	SG-1M	6.0	6	16	50	R1207008	SG-1MP
R1107009	SG-51M	6.3	3	12.7	50	R1207009	SG-51MP
R1107010	SG-2M	8.0	6	19	63	R1207010	SG-2MP
R1107011	SG-3M	9.5	6	19	63	R1207011	SG-3MP
R1107015	SG-13M	12.7	6	19	63	R1207015	SG-13MP
R1107016	SG-5M	12.7	6	25	69	R1207016	SG-5MP
R1107018	SG-6M	16.0	6	25	69	R1207018	SG-6MP
R1107019	SG-7M	19.0	6	25	69	R1207019	SG-7MP
R1107020	SG-15M	19.0	6	38	82	R1207020	SG-15MP

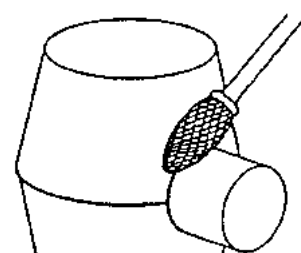


FLAME SHAPE TYPE SH (FORM H)
A FIAMMA, TIPO SH (FORMA H)



Unità : mm

TAGLIO DOPPIO		D1	D2	L1	L2	TAGLIO FINE	
Codice	Tipo					Codice	Tipo
R1108001	SH-41M	3.0	3	6.3	38	R1208001	SH-41MP
R1108002	SH-41ML2	3.0	3	6.3	50	R1208002	SH-41ML2P
R1108003	SH-41ML3	3.0	3	6.3	75	R1208003	SH-41ML3P
R1108004	SH-53M	5.0	3	9.5	38	R1208004	SH-53MP
R1108005	SH-2M	8.0	6	19	63	R1208005	SH-2MP
R1108007	SH-5M	12.7	6	32	76	R1208007	SH-5MP
R1108009	SH-6M	16.0	6	36	80	R1208009	SH-6MP
R1108010	SH-7M	19.0	6	41	85	R1208010	SH-7MP



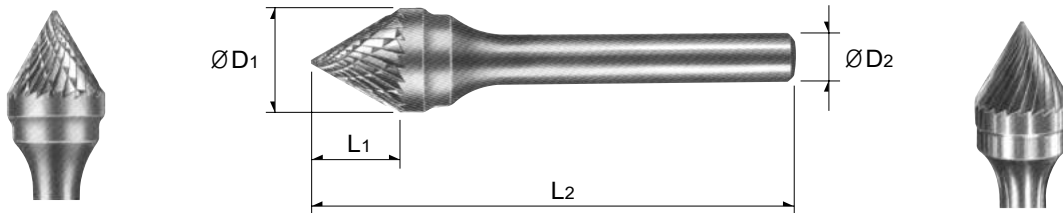

LIME ROTATIVE
SJ R1109, R1209

HSS

ALESATORI

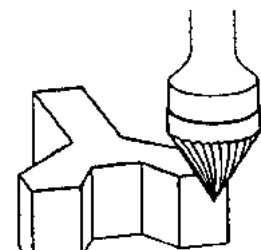
SVASATORI

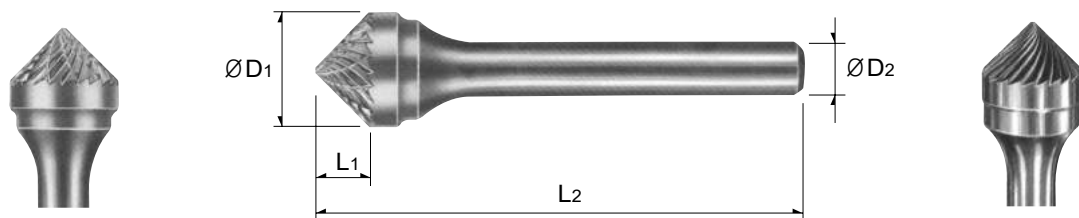
LAMATORI

LIME
ROTATIVE
60° CONE SHAPE TYPE SJ (FORM J)
CONICA A 60°, TIPO SJ (FORMA J)


Unità : mm

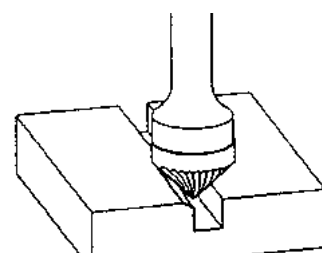
TAGLIO DOPPIO		D ₁	D ₂	L ₁	L ₂	TAGLIO FINE	
Codice	Tipo					Codice	Tipo
R1109001	SJ-42M	3.0	3	2.5	38	R1209001	SJ-42MP
R1109002	SJ-1M	6.0	6	4	50	R1209002	SJ-1MP
R1109003	SJ-3M	9.5	6	8	55	R1209003	SJ-3MP
R1109004	SJ-5M	12.7	6	11	58	R1209004	S J-5MP
R1109005	SJ-6M	16.0	6	13.5	61	R1209005	SJ-6MP
R1109006	SJ-7M	19.0	6	16.5	65	R1209006	SJ-7MP
R1109007	SJ-9M	25.0	6	21.5	68	R1209007	SJ-9MP




LIME ROTATIVE
SK R1110, R1210
**90° CONE SHAPE TYPE SK (FORM K)
CONICA A 90°, TIPO SK (FORMA K)**


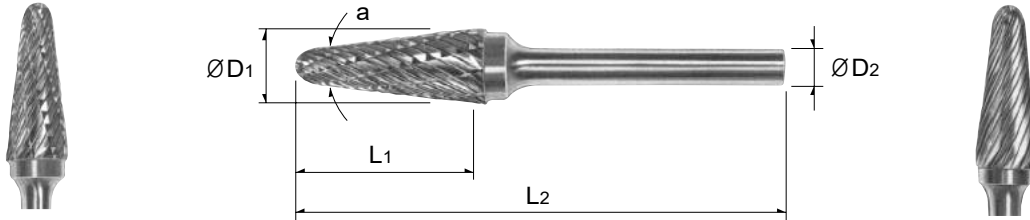
Unità : mm

TAGLIO DOPPIO		D ₁	D ₂	L ₁	L ₂	TAGLIO FINE	
Codice	Tipo					Codice	Tipo
R1110001	SK-42M	3.0	3	1.5	38	R1210001	SK-42MP
R1110002	SK-1M	6.0	6	3	50	R1210002	SK-1MP
R1110003	SK-3M	9.5	6	4.7	52	R1210003	SK-3MP
R1110004	SK-5M	12.7	6	6.3	54	R1210004	SK-5MP
R1110005	SK-6M	16.0	6	8	57	R1210005	SK-6MP
R1110006	SK-7M	19.0	6	9.5	58	R1210006	SK-7MP
R1110007	SK-9M	25.0	6	12.7	60	R1210007	SK-9MP





TAPER WITH RADIUS END TYPE SL (FORM L)
CONICA A TESTA RAGGIATA, TIPO SL (FORMA L)

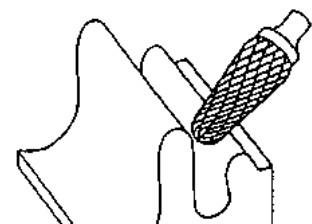


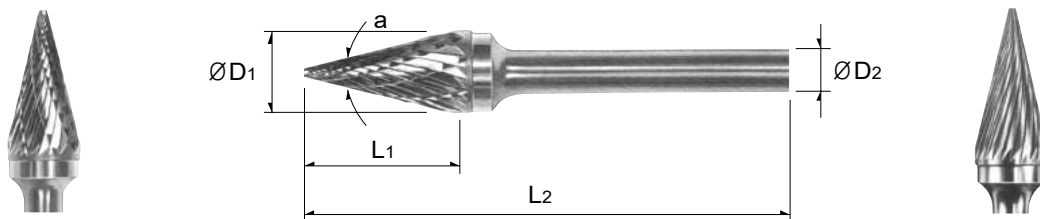
Unità : mm

TAGLIO DOPPIO		D1	D2	L1	L2	a	TAGLIO FINE	
Codice	Tipo						Codice	Tipo
R1111001	SL-41M	3.0	3	9.5	38	8°	R1211001	SL-41MP
R1111002	SL-42M	3.0	3	12.7	38	8°	R1211002	SL-42MP
R1111003	SL-42ML2	3.0	3	12.7	50	8°	R1211003	SL-42ML2P
R1111004	SL-42ML3	3.0	3	12.7	75	8°	R1211004	SL-42ML3P
R1111005	SL-53M	5.0	3	12.7	38	14°	R1211005	SL-53MP
R1111006	SL-1M	6.0	6	16	50	14°	R1211006	SL-1MP
R1111008	SL-2M	8.0	6	22	69	14°	R1211008	SL-2MP
R1111009	SL-3M	9.5	6	27	74	14°	R1211009	SL-3MP
R1111012	SL-4M	12.7	6	28	76	14°	R1211012	SL-4MP
R1111015	SL-5M	16.0	6	30	77	14°	R1211015	SL-5MP
R1111017	SL-7M	19.0	6	38	85	14°	R1211017	SL-7MP



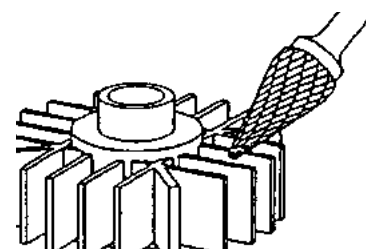
TAGLIO ALLUMINIO		D1	D2	L1	L2	a
Codice	Tipo					
R1311010	SL-3MNF	9.5	6	27	74	14°
R1311013	SL-4MNF	12.7	6	28	76	14°
R1311016	SL-5MNF	16.0	6	30	77	14°
R1311018	SL-7MNF	19.0	6	38	85	14°



CONE SHAPE TYPE SM (FORM M)
CONICA A PUNTA, TIPO SM (FORMA M)


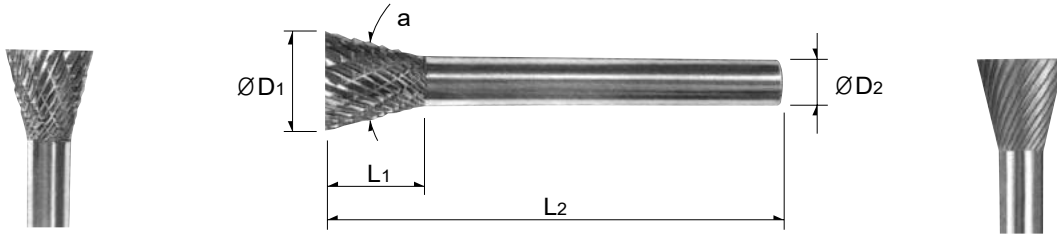
Unità : mm

TAGLIO DOPPIO		D1	D2	L1	L2	a	TAGLIO FINE	
Codice	Tipo						Codice	Tipo
R1112001	SM-41M	3.0	3	8.9	38	12°	R1212001	SM-41MP
R1112002	SM-42M	3.0	3	11	38	14°	R1212002	SM-42MP
R1112003	SM-42ML2	3.0	3	11	50	14°	R1212003	SM-42ML2P
R1112004	SM-42ML3	3.0	3	11	75	14°	R1212004	SM-42ML3P
R1112005	SM-43M	3.0	3	16	38	7°	R1212005	SM-43MP
R1112006	SM-53M	5.0	3	12.7	38	16°	R1212006	SM-53MP
R1112007	SM-1M	6.0	6	12.7	50	22°	R1212007	SM-1MP
R1112008	SM-2M	6.0	6	19	50	14°	R1212008	SM-2MP
R1112009	SM-3M	6.0	6	25	50	10°	R1212009	SM-3MP
R1112010	SM-51M	6.3	3	12.7	53	22°	R1212010	SM-51MP
R1112011	SM-4M	9.5	6	16	63	28°	R1212011	SM-4MP
R1112012	SM-5M	12.7	6	22	69	28°	R1212012	SM-5MP
R1112013	SM-6M	16.0	6	25	73	31°	R1212013	SM-6MP



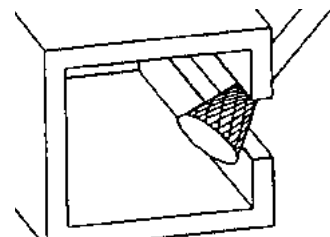


INVERTED CONE SHAPE TYPE SN (FORM N)
CONICO INVERSO, TIPO SN (FORMA N)



Unità : mm

TAGLIO DOPPIO		D1	D2	L1	L2	a	TAGLIO FINE	
Codice	Tipo						Codice	Tipo
R1113001	SN-41M	2.5	3	3	38	10°	R1213001	SN-41MP
R1113002	SN-42M	3.0	3	4	38	10°	R1213002	SN-42MP
R1113003	SN-53M	5.0	3	6.3	38	10°	R1213003	SN-53MP
R1113004	SN-1M	6.0	6	8	50	10°	R1213004	SN-1MP
R1113005	SN-51M	6.3	3	6	44	10°	R1213005	SN-51MP
R1113006	SN-2M	9.5	6	9.5	53	13°	R1213006	SN-2MP
R1113007	SN-4M	12.7	6	12.7	57	28°	R1213007	SN-4MP
R1113008	SN-6M	16.0	6	19	63	18°	R1213008	SN-6MP
R1113009	SN-7M	19.0	6	16	60	30°	R1213009	SN-7MP



TECHNICAL INFORMATION FOR CARBIDE BURRS

INFORMAZIONI TECNICHE

ALESATORI

SVASATORI

LAMATORI

LIME
ROTATIVE

Plain Cut

Taglio fine

- The general use of “Plain Cut” is on steels, steel alloys, cast iron, copper and brass.
- Designed for rapid stock removal and good workpiece finishes.
- Produces long chips.
- Indicato per lavorazioni di acciai, acciai inox, ghisa, rame ed ottone.
- Studiato per asportazione rapida ed una buona finitura superficiale.
- Produce trucioli lunghi.



Double Cut

Taglio doppio

- The double cut burr allows rapid stock removal in the harder materials.
- Designed for creating a small chip and excellent workpiece finishes.
- The small chip helps to eliminate loading of the flutes.
- Permette rapide asportazioni di materiale su Acciai duri ed alto legati.
- Studiato per realizzare trucioli piccoli ed una eccellente finitura superficiale.
- Migliore evacuazione truciolo.



Aluma Cut

Taglio Alluminio

- Designed to have wider chip space with relief angle.
- More suitable application to non-ferrous metals.
- Progettato con vani truciolo ampi ed un elevato angolo di spoglia.
- Specifico per applicazioni su materiali non ferrosi.

BURR APPLICATION INFORMATION

INFORMAZIONI APPLICATIVE

MATERIALI	TAGLIO FINE	TAGLIO DOPPIO	TAGLIO ALLUMINIO	TAGLIO DIAMANTE	ROMPI TRUCIOLO
ALLUMINIO			●		
OTTONE, BRONZO, RAME	●	●			●
FIBRE DI VETRO				●	
GHISA	●	●			●
PLASTICHE			●		
ACCIAI DAI 40 AI 55 HRc	●	●		●	●
ACCIAI DAI 55 AI 60 HRc	●	●		●	●
ACCIAI AL CARBONIO	●	●			●
ACCIAI INOSSIDABILI	●	●		●	●
ACCIAI DA COSTRUZIONE	●	●			●
TITANIO	●	●	●		●
ZINCO					

BURR SPEED RECOMMENDATIONS

PARAMETRI DI TAGLIO INDICATIVI

