RHSSCO-E

Rime

UTENSILERIA

FRESE ED ALESATORI IN HSS•COB E ACCIAI DA POLVERI

HSS•COB AND POWDER-STEEL CUTTING MILLS AND REAMERS

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HSS-E e PM

LOCATION

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25069 PREGNO DI VILLA CARCINA (Brescia) - Italy
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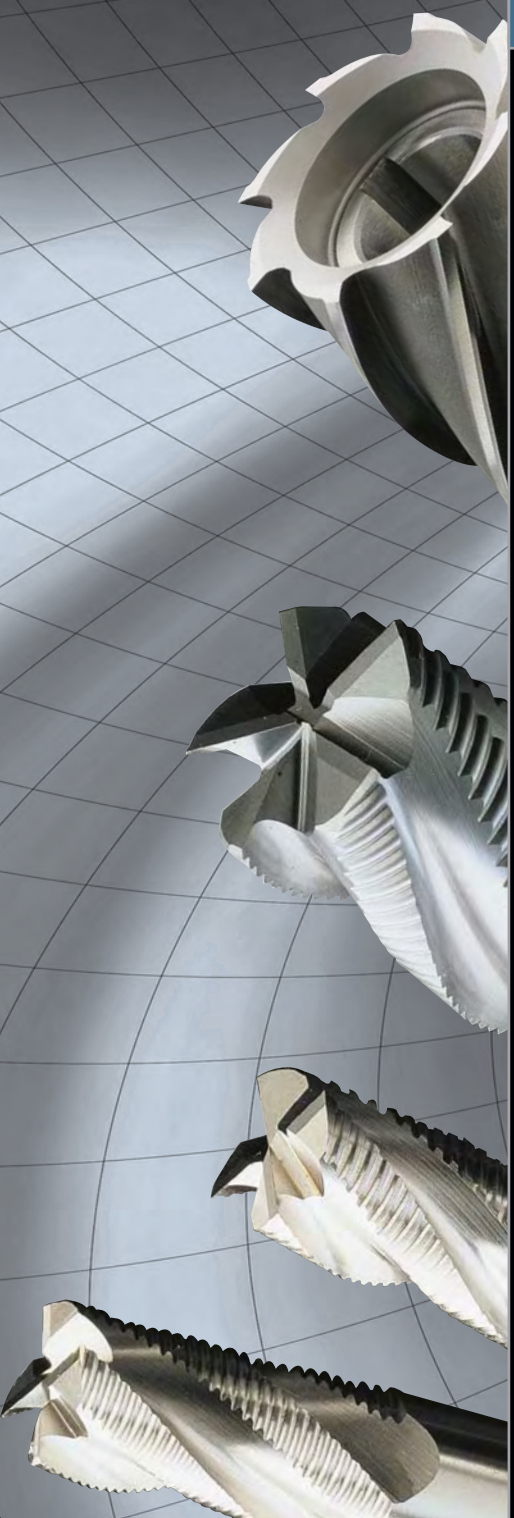
www.rime.net - info@rime.net

Catalogo HSS-E e PM



FRESE E ALESATORI IN HSS-Co8 E ACCIAI DA POLVERI

HSS-CO8 AND POWDER-STEEL CUTTING MILLS AND REAMERS

FRAISES ET ALÉSOIRS EN HSS-Co8 ET ACIERS POUDRES

FRÄSER UND REIBAHLEN AUS HSS-Co8 UND PULVERSTAHL

Rime
UTENSILERIA

Dal 1962, una storia di qualità

- Utilizzo delle migliori materie prime
- Costante innovazione di prodotto
- Produzioni di serie e a disegno
- Standard di qualità altissimi
- Tecnologie produttive d'avanguardia
- Prodotti sempre disponibili a magazzino
- Assistenza costante e dialogo con il cliente

- *the best raw material*
- *continuous product innovation*
- *standard and on drawing production*
- *highest standard levels*
- *highest technologies*
- *big stock*
- *assistance post-sales*

Rime nasce nel 1962 per iniziativa di Massimiliano Ettori.

Durante i primi anni l'attività si sviluppa nella costruzione di frese speciali per il settore armiero, per poi evolversi nei primi anni '70 nella produzione di frese ed alesatori in HSS e HSS Co.

E' dei primi anni '80 il primo catalogo Rime di frese ed alesatori HSS e HSS Co ed acciaio sinterizzato (ASP).

Con gli anni 90 inizia la produzione di frese in metallo duro con i rivestimenti Tin, Ticn, Tialn, Supreme e Prodige.
E' in quegli anni che Rime si insedia nell'attuale stabilimento produttivo. La nuova struttura ha permesso una migliore razionalizzazione del ciclo produttivo, per soddisfare le sempre crescenti esigenze del mercato.

L'esperienza acquisita in quasi 50 anni di attività e le più avanzate e sofisticate tecnologie, consentono alla nostra azienda di farsi apprezzare in tutti quei settori della meccanica di precisione dove è necessario l'utilizzo di utensili di alta qualità.

La Rime è oggi guidata da Andrea Ettori, figlio di Massimiliano, che sostiene e rafforza costantemente la *mission* aziendale: fornire prodotti innovativi con standard produttivi di alto livello, mirando sempre a soddisfare le esigenze della clientela.

The factory

RIME srl was established in 1962 in Italy by Mr. Massimiliano Ettori, who thanks to his personal experience matured abroad in companies specialised in cutting tools' manufacturing, starts to produce special cutting tools for army sector and then in 70's begins to manufacture HSS and HSS-Co end mills.

During the 80's Rime issued its own first catalogue of end mills and reamers in HSS, HSS-Co5, HSS-Co8 and end mills in syntherized steel (ASP).

In 90's begins the production of end mills in solid carbide with Tin, Ticn, Tialn, Supreme and Prodige coatings.
In those years Rime builds the new and current factory with the highest world know how CNC & greatest robot centres which allow manufacturing cutting tools according to the highest and most innovated & sophisticated technology applications.

Nowadays Rime's structure is made of a 100% technology advanced quality control through its own specialized and experienced professional working staff.

The company is today leaded by Andrea Ettori, son of Massimiliano, who following the teaching of his father is everyday strongly engagement to improve the production towards new technologies solutions and new markets.

made in Italy

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Rime
UTENSILERIA

MATERIALI DI BASE - RAW MATERIAL

Materiali utilizzati per la costruzione delle frese RIME

Campi di applicazione dei diversi tipi d'acciai

HSS/Co5 AISI M35
*

Acciaio ad elevato rendimento, permette una buona elasticità di lavorazione.
Adatto per utensili soggetti ad urti.

HSS/Co8 AISI M42

Acciaio più utilizzato nella costruzione di frese; la sua elevata durezza, unita ad una buona tenacità e resilienza, consente la lavorazione degli acciai ad alta resistenza.
Ottimo impiego nelle lavorazioni difficili con i rivestimenti TICN, TIALN e SUPREME di nuova generazione.

EMP3 PM Co8,5

Acciaio super rapido ottenuto con la metallurgia delle polveri; la struttura molto sottile di questo acciaio offre elevata tenacità ed elevata resistenza all'usura. Ottimo rendimento con i rivestimenti TICN, TIALN e SUPREME di nuova generazione.

EMP6 PM

Acciaio super rapido ottenuto con la metallurgia delle polveri con ottime caratteristiche di resistenza all'usura e durezza a caldo.
Il suo altissimo tenore di leghe gli consente prestazioni eccellenti nelle lavorazioni più difficili.
Associato ai rivestimenti TICN, TIALN e SUPREME dà il massimo del rendimento.

Raw material used to manufacture RIME end mills

Application range of the different kinds of H.S.S.

HSS/Co5 AISI M35
*

High-efficiency steel allowing a good cutting speed and a good machining elasticity. Suitable for tools subjected to shocks.

HSS/Co8 AISI M42

Steel mainly used in manufacturing of end mills. Its great hardness along with its good toughness and impact resistance allows to machine high-resistance steels.Very good efficiency with TICN, TIALN and SUPREME coatings of the new generation.

EMP3 PM-Co8,5

PM sintered high-speed steel. Its very thin shape offers a great toughness and wear resistance. Very good efficiency with TICN, TIALN and SUPREME coatings of the new generation.

EMP6 PM

High-speed steel got by powder metallurgy. Characteristic of very good wear resistance and hot hardness. Its very high alloy content allows very good performances in the most difficult machinings.
When TICN, TIALN and SUPREME coated, it gives the top performances.

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RIVESTIMENTI - COATINGS - REVÊTEMENTS

Particolare attenzione riserviamo ai rivestimenti che oggi proponiamo alla nostra clientela.
Tali processi rappresentano il massimo dell'espressione evolutiva della nuova generazione.

A particular care is paid to those coatings proposed to our customers. Our working "processes" represent the highest evolution in the field of coatings of the last generation.

Nous réservons une particulière attention aux revêtements que nous proposons aujourd'hui à notre clientèle.
Ce principe représente le maximum de l'expression évolutive de la nouvelle génération des revêtements pour tous les outils que nous produisons.

SUPREME

Rivestimento di nuova generazione adatto alla lavorazione di tutti i tipi di acciai legati e non, con o senza adduzione di lubrorefrigerante nelle operazioni di finitura e sgrossatura anche con velocità di taglio elevate.
Conferisce all'utensile ottima resistenza all'usura grazie alla sua durezza superficiale elevata 3200HV e al suo basso coefficiente d'attrito. Resiste a temperature fino a 1100°C.

SUPREME

This is a new generation coating, suitable for any kind of steel and different machining condition: finishing or roughing, with or without coolant, and high speed cutting.
The surface hardness 3200 HV and low friction coefficient that the mill has with the SUPREME coating permit to get an excellent wear protection. It can bear very high working temperatures, till 1100°C.

SUPREME

Revêtement de nouvelle génération approprié et très valable à tous les types d'acier allié ou non allié, avec ou sans adduction de lubroréfrigérant dans les opérations de finition et de dégrossissage même avec une vitesse de coupe très élevée. Il donne à l'outil une excellente résistance à l'usure grâce à sa dureté superficiel élevée à 3200HV et à son bas coefficient de friction. Il résiste à des températures jusqu'à 1100°C

ALU SUPREME

Rivestimento adatto alla lavorazione di alluminio e leghe leggere con o senza adduzione di lubrorefrigerante, che abbina alla resistenza all'usura un'ottima capacità di scorrevolezza e distacco del truciolo.

ALU SUPREME

The suitable coating to machining alluminium and light alloys with or without coolant. This new evolution coating matches a good wear resistance and low friction coefficient.

ALU SUPREME

Revêtement très approprié aux travaux d'aluminium et d'alliages légers avec ou sans adduction de lubroréfrigérant, qu'il jumelle à la résistance et à l'usure une excellente capacité de fluidité et un détachement du copeaux.

TICN
(Disponibile solo su richiesta)
CARBONITRURO DI TITANIO

Ottimo rivestimento per la fresatura di acciai e di materiali abrasivi a media velocità di taglio con uso di liquidi refrigeranti. La durezza è di 3000 HV con un coefficiente di attrito particolarmente basso.
La temperatura massima di utilizzo degli utensili è di circa 450°C.

TICN
(available only upon requirements)
TITANIUM CARBONITRIDE

Excellent coating to mill steels and abrasive materials at an average cut speed and using coolants. Hardness is 3000 HV having a very low friction coefficient.
Max. working temperature of the tools is about 450°C.

TICN
CARBONITRURE DE TITANE ET ALUMINIUM

C'est l'évolution naturelle du revêtement TIN. L'idéal dans les travaux de fraisage humide d'aciers et de matériels abrasif sur les centres de travail avec des paramètres élevés. La dureté est de 3000 HV avec un coefficient de friction particulièrement bas. La température la plus grande d'utilisation des outils est d'environ 600°C.

TIALN
(Disponibile solo su richiesta)
NITRURO DI TITANIO E ALLUMINIO

Gli utensili con questo rivestimento possono essere utilizzati ad elevate velocità di taglio ed elevati avanzamenti.
La durezza superficiale è di 2700 HV; consigliato per lavorazioni con forte sviluppo di calore al tagliente. Sopporta temperature di lavoro fino a 900°C.

TIALN
(available only upon requirements)
TITANIUM AND ALUMINIUM NITRIDE

The tools with such a coating can be used at high cut speed and quick progressing. Surface hardness is 2700 HV, particularly suggested for machinings with high heat degree at the cutting edge. The max working temperature is 900 °C.

TIALN
NITRURE DE TITANE ET ALUMINIUM

Les outils avec ce revêtement peuvent être utilisés à vitesse de coupe et d'avances très élevées. La dureté superficielle est de 3500 HV; conseillé pour des travaux avec fort développement de chaleur au coupant. Il supporte des températures de travail très hautes: 900°C. Particulièrement conseillé pour le fraisage à sec

Condizioni di lavoro consigliato / *Suggested machining conditions* / *Conditions de travail conseilée*

- Scarsità di refrigerante o refrigerazione con nebulizzatore (aria+olio).
- *Low rate of coolant or with spray mixed (air+oil).*
- *Peu de lubrification conseillons pulvérisation (air+huile).*

- Presenza di lubrorefrigerante (lavorazione a umido).
- *With coolant.*
- *Avec lubrification (travail á humide).*

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SERIE E-F

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SERIE G

SERIE UMAX

SERIE R-S

SERIE AL

SERIE L

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SOMMARIO - SUMMARY

CONDIZIONI DI VENDITA - SALES CONDITIONS

PREZZI: sono indicativi e non impegnativi. In ogni caso avranno valore quelli vigenti al momento della spedizione.
SPEDIZIONI: la merce, salvo espressa pattuizione contraria, viene fornita franco nostro stabilimento o deposito; essa viaggia sempre in ogni caso ad esclusivo rischio e pericolo del Committente.
Per esigenze di costi di magazzino e di fatturazione, non consegnamo merce per importi inferiori a € 160 .
TERMINI DI CONSEGNA: sono approssimativi e comunque mai impegnativi. Essi sono inoltre subordinati al normale rifornimento delle materie prime nonché ad impedimenti di produzione per cause di forza maggiore. I giorni si intendono lavorativi e decorrenti dalla data della nostra accettazione dell'ordine.
RECLAMI: dovranno pervenire per iscritto entro gli otto giorni dal ricevimento della merce.
GARANZIA: in normale uso. Provvederemo a sostituire gratuitamente gli utensili da noi riconosciuti difettosi. La stessa non si estende agli utensili che presentino una normale usura, segni di manomissione o di errato impiego.
FORO COMPETENTE: per ogni controversia viene riconosciuta la esclusiva competenza del Foro di Brescia.

PRICES: are indicative and not binding. In any case the rate will be the one commonly in use at the sending time.
SHIPMENTS: the goods, except different agreement, is provided ex our works and is transported at risk and danger of the purchaser. We don't deliver order less than € 160 because of the invoicing and stock costs.
DELIVERY CONDITIONS: are approximated and not binding. The delivery is subjected to usual raw materials supplying and unforeseen event during the production.
COMPLAINTS: it must be written and sent withing 8 days since the goods receiving.
GUARANTEE: normally in use. Free replacement when the tool is acknowledged defective. The guarantee doesn't apply in case of usual wear, wrong use and proof of tampering.
JURISDICTION: any controversy is subjected to the Court of Brescia's jurisdiction.

Catalogo HSS-E e PM

SERIE A

FRESE A DUE DENTI

TWO-FLUTED END MILLS

Rime
UTENSILERIA

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SERIE A

FRESE A DUE DENTI
TWO-FLUTED END MILLS

FRESE A DUE DENTI PER CAVE • SERIE NORMALE

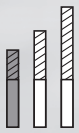
A1

Un dente frontale tagliente fino al centro - Codolo cilindrico
TWO-FLUTED SLOT CUTTERS - One end tooth cutting up to the centre - Straight shank
FRAISES À RAINURES DEUX DENTS - Une dent bout coupante jusq'au centre - Queue cylindrique
LANGLOCHFRÄSER, ZWEISCHNEIDER - Eine Schneide mit Zentrumschnitt - Zylinderschaft
FRESAS CILINDRICAS DE DOS LABIOS - Un labio que corta hasta el centro - Mango cilindrico
FRESAS DE DUAS NAVALHAS - Encabadouro cilindrico

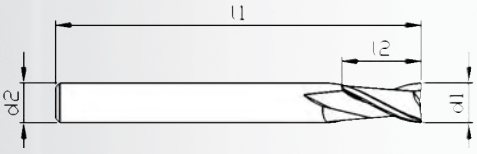
SERIE A

NORM.

UNI 8254
DIN 327B
ISO 1641/I



HSS-E Co8 | N | ≈30° | DIN 1835 A



INDEX

CODE	d1 mm e8	l2 mm	l1 mm	d2 mm h6	Z	Co 8% €
A1/01	1	3	47	6	2	18,81
A1/02	1.5	3	47	6	2	16,44
A1/03	2	4	48	6	2	13,52
A1/04	2.5	5	49	6	2	14,71
A1/05	3	5	49	6	2	10,60
A1/06	3.5	6	50	6	2	10,60
A1/07	4	7	51	6	2	9,95
A1/08	4.5	7	51	6	2	9,95
A1/09	5	8	52	6	2	9,95
A1/10	5.5	8	52	6	2	9,95
A1/11	6	8	52	6	2	9,95
A1/12	6.5	10	60	10	2	12,87
A1/13	7	10	60	10	2	12,87
A1/14	7.5	10	60	10	2	14,06
A1/15	8	11	61	10	2	12,87
A1/16	8.5	11	61	10	2	15,79
A1/17	9	11	61	10	2	15,79
A1/18	9.5	13	63	10	2	16,44
A1/19	10	13	63	10	2	15,25
A1/20	10.5	13	70	12	2	19,35
A1/21	11	13	70	12	2	18,16
A1/21/1	11.5	16	73	12	2	18,81
A1/22	12	16	73	12	2	18,81
A1/22/1	12.5	16	73	12	2	19,89
A1/23	13	16	73	12	2	19,89
A1/24	14	16	73	12	2	22,28
A1/25	15	19	79	16	2	24,65
A1/26	16	19	79	16	2	25,19
A1/27	17	19	79	16	2	27,57
A1/28	18	19	79	16	2	31,04
A1/29	19	22	88	20	2	36,34
A1/30	20	22	88	20	2	39,65
A1/31	21	22	88	20	2	45,82
A1/32	22	22	88	20	2	56,43
A1/33	23	22	98	25	2	67,52
A1/34	24	26	102	25	2	67,52
A1/35	25	26	102	25	2	67,52
A1/36	26	26	102	25	2	73,78
A1/37	28	26	102	25	2	77,66
A1/38	30	26	102	25	2	86,57
A1/39	32	32	112	32	2	95,36
A1/40	34	32	112	32	2	103,69
A1/41	35	32	112	32	2	113,19
A1/42	36	32	112	32	2	124,69
A1/43	38	38	118	32	2	141,23
A1/44	40	38	118	32	2	158,36

Ulteriori diametri si forniscono a richiesta - *Other diameters upon requirements*

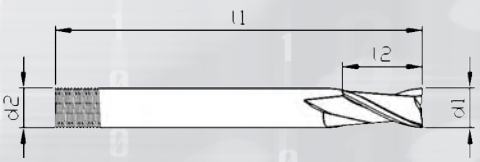
FRESE A DUE DENTI PER CAVE • SERIE NORMALE

SERIE A

A2

Un dente frontale tagliente fino al centro - Codolo cilindrico filettato
TWO-FLUTED SLOT CUTTERS - One end tooth cutting up to the centre - Threaded shank
FRAISES À RAINURES DEUX DENTS - Une dent bout coupante jusq'au centre - Queue cylindrique filetée
LANGLOCHFRÄSER, ZWEISCHNEIDER - Eine Schneide mit Zentrumschnitt - Zylinderschaft mit Gewinde
FRESAS CILINDRICAS DE DOS LABIOS - Un labio que corta hasta el centro - Mango cilindrico roscado
FRESAS DE DUAS NAVALHAS - Encabadouro cilindrico roscado

HSS-E Co8 | N | ≈ 30° | DIN 1835-D



NORM.

UNI 8256
DIN 327H
ISO 1641/I

INDEX

CODE	d1 mm e8	l2 mm	l1 mm	d2 mm h6	Z	Co 8% €
A2/00	2	4	48	6	2	17,30
A2/01	2.5	5	49	6	2	17,30
A2/02	3	5	49	6	2	13,52
A2/03	3.5	6	50	6	2	13,52
A2/04	4	7	51	6	2	12,97
A2/05	4.5	7	51	6	2	12,97
A2/06	5	8	52	6	2	12,97
A2/07	5.5	8	52	6	2	12,97
A2/08	6	8	52	6	2	12,97
A2/09	6.5	10	60	10	2	17,84
A2/10	7	10	60	10	2	17,84
A2/11	7.5	10	60	10	2	17,84
A2/12	8	11	61	10	2	17,30
A2/13	8.5	11	61	10	2	20,33
A2/14	9	11	61	10	2	19,79
A2/15	9.5	13	63	10	2	20,33
A2/16	10	13	63	10	2	19,79
A2/17	10.5	13	70	12	2	24,01
A2/18	11	13	70	12	2	23,36
A2/18/1	11.5	16	73	12	2	22,16
A2/19	12	16	73	12	2	24,66
A2/19/1	12.5	16	73	12	2	24,01
A2/20	13	16	73	12	2	25,19
A2/21	14	16	73	12	2	27,15
A2/22	15	19	79	16	2	30,17
A2/23	16	19	79	16	2	31,47
A2/24	17	19	79	16	2	33,84
A2/25	18	19	79	16	2	37,63
A2/26	19	22	82	16	2	44,99
A2/27	20	22	82	16	2	43,14
A2/28	21	22	88	20	2	55,29
A2/29	22	22	98	25	2	81,35
A2/30	23	22	98	25	2	81,35
A2/31	24	26	102	25	2	81,35
A2/32	25	26	102	25	2	81,35
A2/33	26	26	102	25	2	87,52
A2/34	28	26	102	25	2	93,50
A2/35	30	26	102	25	2	101,46
A2/36	32	32	112	32	2	114,13
A2/37	34	32	112	32	2	122,23
A2/38	35	32	112	32	2	132,90
A2/39	36	32	112	32	2	144,28
A2/40	38	38	118	32	2	162,93
A2/41	40	38	118	32	2	179,01

Ulteriori diametri si forniscono a richiesta - *Other diameters upon requirements*

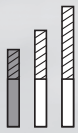
FRESE A DUE DENTI PER CAVE • SERIE NORMALE

A3

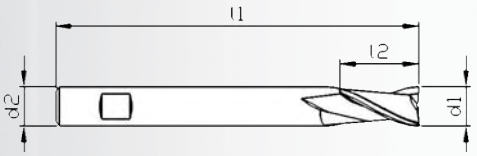
Un dente frontale tagliente fino al centro - Attacco Weldon
TWO-FLUTED SLOT CUTTERS - One end tooth cutting up to the centre - Weldon shank
FRAISES À RAINURES DEUX DENTS - Une dent bout coupante jusq'au centre -Queue cylindrique Weldon
LANGLOCHFRÄSER, ZWEISCHNEIDER - Eine Schneide mit Zentrumschnitt - Weldon Spannfläche
FRESAS CILINDRICAS DE DOS LABIOS - Un labio que corta hasta el centro - Mango Weldon
FRESAS DE DUAS NAVALHAS - Encabadouro Weldon

SERIE A

NORM.
UNI 8258
DIN 327D
ISO 1641/I



HSS-E Co8 | N | ≈ 30° | DIN 1835 B



INDEX

CODE	d1 mm e8	l2 mm	l1 mm	d2 mm h6	Z	Co 8% €	SUPREME €
A3/00	2	4	48	6	2	15,25	21,85
A3/01	2.5	5	49	6	2	15,25	21,85
A3/02	3	5	49	6	2	13,52	20,12
A3/03	3.5	6	50	6	2	12,87	20,12
A3/04	4	7	51	6	2	11,68	19,06
A3/05	4.5	7	51	6	2	12,33	19,58
A3/06	5	8	52	6	2	11,68	19,04
A3/07	5.5	8	52	6	2	11,68	19,04
A3/08	6	8	52	6	2	11,68	19,04
A3/09	6.5	10	60	10	2	15,79	26,49
A3/10	7	10	60	10	2	15,79	26,49
A3/11	7.5	10	60	10	2	15,79	26,49
A3/12	8	11	61	10	2	15,79	26,49
A3/13	8.5	11	61	10	2	18,16	29,31
A3/14	9	11	61	10	2	18,16	29,31
A3/15	9.5	13	63	10	2	18,81	29,96
A3/16	10	13	63	10	2	17,62	28,77
A3/17	10.5	13	70	12	2	21,08	32,76
A3/18	11	13	70	12	2	20,54	32,22
A3/18/1	11.5	16	73	12	2	20,54	32,22
A3/19	12	16	73	12	2	21,08	33,30
A3/19/1	12.5	16	73	12	2	21,08	33,30
A3/20	13	16	73	12	2	23,47	36,22
A3/21	14	16	73	12	2	25,19	37,96
A3/22	15	19	79	16	2	27,57	43,68
A3/23	16	19	79	16	2	29,31	45,41
A3/24	17	19	79	16	2	31,04	52,87
A3/25	18	19	79	16	2	34,60	56,34
A3/26	19	22	88	20	2	42,17	63,79
A3/27	20	22	88	20	2	40,44	62,17
A3/28	21	22	88	20	2	50,84	77,81
A3/29	22	22	88	20	2	67,52	94,25
A3/30	23	22	98	25	2	74,95	106,94
A3/31	24	26	102	25	2	74,95	106,94
A3/32	25	26	102	25	2	74,95	106,94
A3/33	26	26	102	25	2	82,11	119,19
A3/34	28	26	102	25	2	87,15	124,22
A3/35	30	26	102	25	2	94,19	131,62
A3/36	32	32	112	32	2	104,98	144,75
A3/37	34	32	112	32	2	110,03	162,23
A3/38	35	32	112	32	2	123,99	175,95
A3/39	36	32	112	32	2	130,44	182,87
A3/40	38	38	118	32	2	151,44	210,91
A3/41	40	38	118	32	2	167,98	228,39

Ulteriori diametri si forniscono a richiesta - *Other diameters upon requirements*

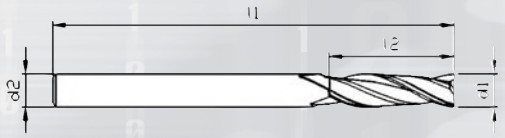
FRESE A DUE DENTI PER CAVE • SERIE LUNGA

SERIE A

A5

Un dente frontale tagliente fino al centro - Codolo cilindrico
TWO-FLUTED SLOT CUTTERS - One end tooth cutting up to the centre - Straight shank
FRAISES À RAINURES DEUX DENTS - Une dent bout coupante jusq'au centre - Queue cylindrique
LANGLOCHFRÄSER, ZWEISCHNEIDER - Eine Schneide mit Zentrumschnitt - Zylinderschaft
FRESAS CILINDRICAS DE DOS LABIOS - Un labio que corta hasta el centro - Mango cilindrico
FRESAS DE DUAS NAVALHAS - Encabadouro cilindrico

HSS-E Co8 | N | ≈ 30° | DIN 1835 A



NORM. STANDARD Rime

INDEX

CODE	d1 mm e8	l2 mm	l1 mm	d2 mm h6	Z	Co 8% €
A5/00	2	9	54	6	2	15,25
A5/01	3	9	60	6	2	15,25
A5/02	3.5	13	67	6	2	15,25
A5/03	4	13	67	6	2	15,25
A5/04	4.5	13	68	6	2	15,25
A5/05	5	16	68	6	2	15,25
A5/06	5.5	16	76	6	2	15,25
A5/07	6	16	76	6	2	14,06
A5/08	6.5	16	76	10	2	18,81
A5/09	7	19	79	10	2	18,81
A5/10	7.5	19	79	10	2	18,81
A5/11	8	19	79	10	2	18,81
A5/12	8.5	22	83	10	2	21,74
A5/13	9	22	83	10	2	21,74
A5/14	9.5	22	83	10	2	21,74
A5/15	10	22	83	10	2	19,89
A5/16	10.5	25	95	12	2	26,38
A5/17	11	25	95	12	2	26,38
A5/18	12	28	98	12	2	25,19
A5/19	13	28	98	12	2	33,41
A5/20	14	32	102	12	2	31,68
A5/21	15	32	108	16	2	36,34
A5/22	16	32	108	16	2	36,34
A5/23	17	35	114	16	2	44,01
A5/24	18	35	114	16	2	42,82
A5/25	19	38	132	20	2	55,14
A5/26	20	38	132	20	2	51,58
A5/27	21	38	132	20	2	58,26
A5/28	22	41	141	25	2	77,45
A5/29	23	41	141	25	2	83,63
A5/30	24	41	152	25	2	88,54
A5/31	25	44	159	25	2	86,14
A5/32	26	44	159	25	2	98,66
A5/33	28	44	159	25	2	111,32
A5/34	30	50	159	25	2	119,53
A5/35	32	52	165	32	2	138,66

Ulteriori diametri si forniscono a richiesta - *Other diameters upon requirements*

FRESE A DUE DENTI PER CAVE • SERIE LUNGA

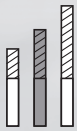
A6

Un dente frontale tagliente fino al centro - Codolo cilindrico filettato
TWO-FLUTED SLOT CUTTERS - One end tooth cutting up to the centre - Threaded shank
FRAISES À RAINURES DEUX DENTS - Une dent bout coupante jusq'au centre - Queue cylindrique filetée
LANGLOCHFRÄSER, ZWEISCHNEIDER - Eine Schneide mit Zentrumschnitt - Zylinderschaft mit Gewinde
FRESAS CILINDRICAS DE DOS LABIOS - Un labio que corta hasta el centro - Mango cilindrico roscado
FRESAS DE DUAS NAVALHAS - Encabadouro cilindrico roscado

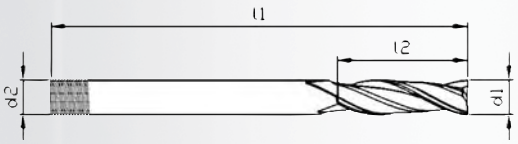
SERIE A

NORM.

STANDARD Rime



HSS-E Co8 | N | ≈ 30° | DIN 1835-D



INDEX

CODE	d1 mm e8	l2 mm	l1 mm	d2 mm h6	Z	Co 8% €
A6/01	3	9	60	6	2	18,50
A6/02	3.5	13	67	6	2	18,50
A6/03	4	13	67	6	2	18,50
A6/04	4.5	13	68	6	2	18,50
A6/05	5	16	68	6	2	18,50
A6/06	5.5	16	76	6	2	18,50
A6/07	6	16	76	6	2	18,50
A6/08	6.5	16	76	10	2	22,16
A6/09	7	19	79	10	2	22,16
A6/10	7.5	19	79	10	2	21,62
A6/11	8	19	79	10	2	21,62
A6/12	8.5	22	83	10	2	25,84
A6/13	9	22	83	10	2	25,84
A6/14	9.5	22	83	10	2	25,19
A6/15	10	22	83	10	2	24,01
A6/16	10.5	25	95	12	2	32,01
A6/17	11	25	95	12	2	32,01
A6/18	12	28	98	12	2	29,52
A6/19	13	28	98	12	2	36,88
A6/20	14	32	102	12	2	36,34
A6/21	15	32	108	16	2	43,14
A6/22	16	32	108	16	2	43,14
A6/23	17	35	114	16	2	50,50
A6/24	18	35	114	16	2	49,31
A6/25	19	38	117	16	2	62,83
A6/26	20	38	117	16	2	62,83
A6/27	21	38	132	20	2	70,26
A6/28	22	41	141	25	2	97,45
A6/29	23	41	141	25	2	97,45
A6/30	24	41	152	25	2	97,45
A6/31	25	44	159	25	2	96,30
A6/32	26	44	159	25	2	110,26
A6/33	28	44	159	25	2	125,51
A6/34	30	50	159	25	2	135,61
A6/35	32	52	165	32	2	150,97

Ulteriori diametri si forniscono a richiesta - *Other diameters upon requirements*

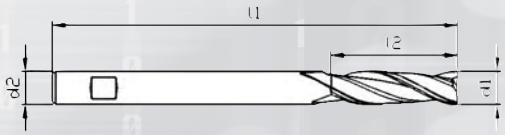
FRESE A DUE DENTI PER CAVE • SERIE LUNGA

SERIE A

A7

Un dente frontale tagliente fino al centro - Attacco Weldon
TWO-FLUTED SLOT CUTTERS - One end tooth cutting up to the centre - Weldon shank
FRAISES À RAINURES DEUX DENTS - Une dent bout coupante jusq'au centre - Queue cylindrique Weldon
LANGLOCHFRÄSER, ZWEISCHNEIDER - Eine Schneide mit Zentrumschnitt - Weldon Spannfläche
FRESAS CILINDRICAS DE DOS LABIOS - Un labio que corta hasta el centro - Mango Weldon
FRESAS DE DUAS NAVALHAS - Encabadouro Weldon

HSS-E Co8 | N | ≈30° | DIN 1835 B



NORM. STANDARD Rime

INDEX

CODE	d1 mm e8	l2 mm	l1 mm	d2 mm h6	Z	Co 8% €	SUPREME €
A7/00	2	9	54	6	2	16,98	24,11
A7/01	3	9	60	6	2	16,98	24,11
A7/02	3.5	13	67	6	2	16,98	25,84
A7/03	4	13	67	6	2	16,98	25,84
A7/04	4.5	13	68	6	2	16,98	25,84
A7/05	5	16	68	6	2	16,98	25,84
A7/06	5.5	16	76	6	2	16,98	27,57
A7/07	6	16	76	6	2	16,98	26,49
A7/08	6.5	16	76	10	2	19,89	31,04
A7/09	7	19	79	10	2	19,89	35,68
A7/10	7.5	19	79	10	2	19,89	35,68
A7/11	8	19	79	10	2	19,35	35,03
A7/12	8.5	22	83	10	2	24,01	39,69
A7/13	9	22	83	10	2	23,47	39,15
A7/14	9.5	22	83	10	2	23,47	39,15
A7/15	10	22	83	10	2	22,28	37,96
A7/16	10.5	25	95	12	2	28,77	46,07
A7/17	11	25	95	12	2	28,77	46,07
A7/18	12	28	98	12	2	27,57	44,87
A7/19	13	28	98	12	2	35,14	53,52
A7/20	14	32	102	12	2	33,95	51,79
A7/21	15	32	108	16	2	39,90	62,17
A7/22	16	32	108	16	2	39,90	62,17
A7/23	17	35	114	16	2	47,46	74,83
A7/24	18	35	114	16	2	46,28	74,18
A7/25	19	38	132	20	2	61,52	90,28
A7/26	20	38	132	20	2	60,44	89,20
A7/27	21	38	132	20	2	65,69	112,98
A7/28	22	41	141	25	2	84,31	137,32
A7/29	23	41	141	25	2	92,31	169,53
A7/30	24	41	152	25	2	91,06	168,39
A7/31	25	44	159	25	2	88,54	166,56
A7/32	26	44	159	25	2	101,12	194,72
A7/33	28	44	159	25	2	117,65	223,34
A7/34	30	50	159	25	2	127,27	233,31
A7/35	32	52	165	32	2	141,23	247,74

Ulteriori diametri si forniscono a richiesta - *Other diameters upon requirements*

FRESE A DUE DENTI PER CAVE • SERIE NORMALE

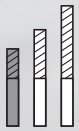
A8

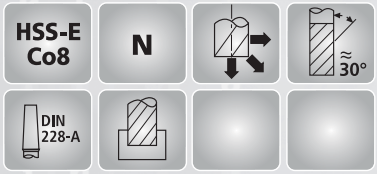
Un dente frontale tagliente fino al centro - Codolo conico Morse con foro filettato
TWO-FLUTED SLOT CUTTERS - One end tooth cutting up to the centre - Morse taper shank
FRAISES À RAINURES DEUX DENTS - Une dent bout coupante jusq'au centre - Queue au cône Morse à trou fileté
LANGLOCHFRÄSER, ZWEISCHNEIDER - Eine Schneide mit Zentrumschnitt - Morsekegelschaft und Anzugsgewinde
FRESAS CILINDRICAS DE DOS LABIOS - Un labio que corta hasta el centro - Mango conico Morse con taladro roscado
FRESAS DE DUAS NAVALHAS - Encabadouro cone Morse

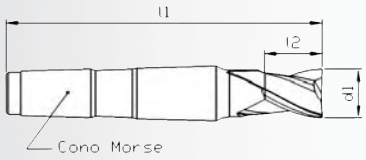
SERIE A

NORM.

UNI 8260A
DIN 326D
ISO 1641/II







CODE	d1 mm e8	l2 mm	l1 mm	CM-MK	Z	Co 8% €
A8/01	16	19	104	2	2	47,75
A8/02	18	19	104	2	2	47,75
A8/03	20	22	124	3	2	68,20
A8/04	22	22	124	3	2	70,83
A8/05	24	26	128	3	2	80,66
A8/06	25	26	128	3	2	81,11
A8/07	26	26	128	3	2	90,20
A8/08	28	26	128	3	2	101,71
A8/09	30	32	134	3	2	114,49
A8/10	32	32	157	4	2	142,17
A8/11	34	32	157	4	2	155,08
A8/12	35	32	157	4	2	169,85
A8/13	36	32	157	4	2	169,85
A8/14	38	38	163	4	2	188,98
A8/15	40	38	163	4	2	208,92

Ulteriori diametri si forniscono a richiesta - *Other diameters upon requirements*

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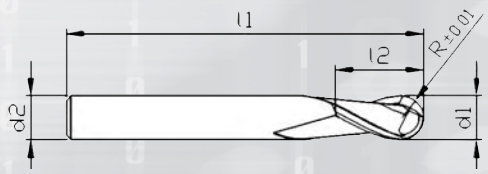
FRESE A DUE DENTI A TESTA SEMISFERICA • SERIE NORMALE

SERIE A

A9

Due denti frontali taglienti fino al centro - Codolo cilindrico
BALL-NOSED TWO-FLUTED END MILLS - Two end teeth cutting up to the centre - Straight shank
FRAISES DEUX DENTS RADIÉES À BOUT HÉMISPHÉRIQUE - Deux dents bout coupantes jusq'au centre - Queue cylindrique
HALBRUNDKOPFFRÄSER, ZWEISCHNEIDER - Zwei Schneiden mit Zentrumschnitt - Zylinderschaft
FRESAS CILINDRICAS DE DOS LABIOS - Cabeza semiesférica - Dos labios que cortan hasta el centro - Mango cilindrico
FRESAS BOLEADA DE DUAS NAVALHAS - Encabadouro cilindrico

HSS-E Co8 | N | ≈30° | DIN 1835 A



NORM.
UNI
DIN
ISO 1641/I

INDEX

CODE	d1 mm e8	l2 mm	l1 mm	d2 mm h6	Z	Co 8% €
A9/00	1	3	47	6	2	28,11
A9/00/1	1.5	3	47	6	2	25,19
A9/01	2	4	48	6	2	20,54
A9/02	3	5	49	6	2	16,98
A9/03	4	7	51	6	2	15,79
A9/04	5	8	52	6	2	15,79
A9/05	6	8	52	6	2	15,79
A9/06	7	10	60	10	2	19,89
A9/07	8	11	61	10	2	19,89
A9/08	9	11	61	10	2	23,47
A9/09	10	13	63	10	2	23,47
A9/10	11	13	70	12	2	26,92
A9/11	12	16	73	12	2	27,57
A9/12	13	16	73	12	2	29,31
A9/13	14	16	73	12	2	32,87
A9/14	15	19	79	16	2	35,80
A9/15	16	19	79	16	2	36,98
A9/15/1	17	19	79	16	2	45,73
A9/16	18	19	79	16	2	45,73
A9/17	20	22	88	20	2	55,68
A9/18	22	22	88	20	2	82,38

Ulteriori diametri si forniscono a richiesta - *Other diameters upon requirements*

FRESE A DUE DENTI A TESTA SEMISFERICA • SERIE LUNGA

A10

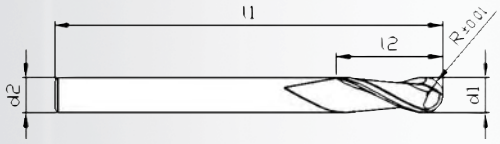
Due denti frontali taglienti fino al centro - Codolo cilindrico
BALL-NOSED TWO-FLUTED END MILLS - Two end teeth cutting up to the centre - Straight shank
FRAISES DEUX DENTS RADIÉES À BOUT HÉMISPHÉRIQUE - Deux dents bout coupantes jusq'au centre - Queue cylindrique
HALBRUNDKOPFFRÄSER, ZWEISCHNEIDER - Zwei Schneiden mit Zentrumschnitt - Zylinderschaft
FRESAS CILINDRICAS DE DOS LABIOS - Cabeza semiesférica - Dos labios que cortan hasta el centro - Mango cilindrico
FRESAS BOLEADA DE DUAS NAVALHAS - Encabadouro cilindrico

SERIE A

NORM.

STANDARD Rime

HSS-E Co8 | N | ≈30° | DIN 1835 A



CODE	d1 mm e8	l2 mm	l1 mm	d2 mm h6	Z	Co 8% €
A10/00	2	9	54	6	2	26,38
A10/01	3	9	60	6	2	21,74
A10/03	4	13	67	6	2	21,74
A10/05	5	16	70	6	2	21,74
A10/07	6	16	76	6	2	20,54
A10/09	7	19	79	10	2	26,92
A10/11	8	19	79	10	2	26,92
A10/13	9	22	83	10	2	31,04
A10/15	10	22	83	10	2	28,77
A10/17	11	25	95	12	2	36,98
A10/18	12	28	98	12	2	35,14
A10/19	13	28	98	12	2	46,92
A10/20	14	32	102	12	2	44,55
A10/21	15	32	108	16	2	51,37
A10/22	16	32	108	16	2	51,37
A10/24	18	35	114	16	2	60,44
A10/26	20	38	132	20	2	72,66
A10/28	22	41	141	25	2	120,19

Ulteriori diametri si forniscono a richiesta - *Other diameters upon requirements*

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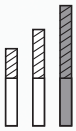
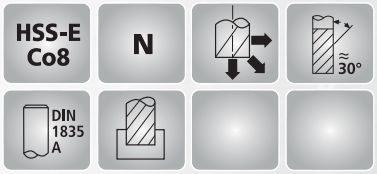
FRESE PER MACCHINE A COPIARE • SERIE EXTRA-LUNGA

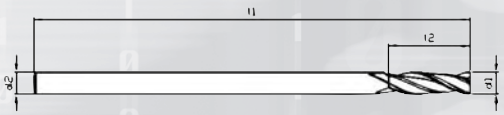
SERIE A

A11

Un dente frontale tagliente fino al centro - Codolo cilindrico
COPY MILLING CUTTERS - One end tooth cutting up to the centre - Straight shank
FRAISES POUR MACHINES À COPIER - Une dent bout coupante jusq'au centre - Queue cylindrique
NACHFORMFRÄSER - Eine Schneide mit Zentrumschnitt - Zylinderschaft
FRESAS EN COPIADO - Un labio que corta hasta el centro - Mango cilindrico
FRESAS DE COPIA - Encabadouro cilindrico







NORM.

STANDARD Rime

INDEX

CODE	d1 mm e8	l2 mm	l1 mm	d2 mm h6	Z	Co 8% €
A11/01	6	25	180	6	2	37,68
A11/02	8	25	180	8	2	38,78
A11/03	10	30	200	10	2	47,15
A11/04	12	30	200	12	2	52,00
A11/05	16	35	200	16	2	80,09
A11/06	20	35	200	20	2	108,18

Ulteriori diametri si forniscono a richiesta - *Other diameters upon requirements*

Catalogo HSS-E e PM

SERIE B

FRESE A TRE DENTI

THREE-FLUTED END MILLS

Rime
UTENSILERIA

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SERIE B

FRESE A TRE DENTI
THREE-FLUTED END MILLS

FRESE A TRE DENTI • SERIE NORMALE

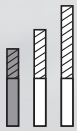
B0

Un dente frontale tagliente fino al centro - Codolo cilindrico
THREE-FLUTED END MILLS - One end tooth cutting up to the centre - Straight shank
FRAISES À CYLINDRES FRONTALES À TROIS TAILLES - Une dent bout coupante jusq'au centre - Queue cylindrique
SCHAFTFRÄSER, DREISCHNEIDER - Eine Schneide mit Zentrumschnitt - Zylinderschaft
FRESAS CILINDRICAS DE TRÉS LABIOS - Un labio que corta hasta el centro - Mango cilindrico
FRESAS DE TRÊS NAVALHAS - Encabadouro cilindrico

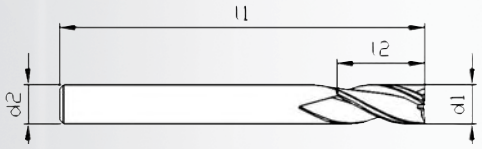
SERIE B

NORM.

UNI 8244
DIN 844A
ISO 1641/I



HSS-E Co8 | N | ≈30° | DIN 1835 A



CODE	d1 mm js14	l2 mm	l1 mm	d2 mm h6	Z	Co 8% €
B0/01	2	7	51	6	3	15,79
B0/02	2.5	8	52	6	3	15,25
B0/03	3	8	52	6	3	13,52
B0/04	3.5	10	54	6	3	14,06
B0/05	4	11	55	6	3	13,52
B0/06	4.5	11	55	6	3	14,06
B0/07	5	13	57	6	3	12,33
B0/08	5.5	13	57	6	3	12,87
B0/09	6	13	57	6	3	12,33
B0/10	6.5	16	66	10	3	18,16
B0/11	7	16	66	10	3	18,16
B0/11/1	7.5	19	69	10	3	18,16
B0/12	8	19	69	10	3	16,44
B0/12/1	8.5	19	69	10	3	17,62
B0/13	9	19	69	10	3	18,81
B0/13/1	9.5	22	72	10	3	18,16
B0/14	10	22	72	10	3	18,16
B0/14/1	10.5	22	79	12	3	22,28
B0/15	11	22	79	12	3	22,28
B0/16	12	26	83	12	3	22,28
B0/17	13	26	83	12	3	25,19
B0/18	14	26	83	12	3	24,65
B0/19	15	32	92	16	3	29,96
B0/20	16	32	92	16	3	31,04
B0/21	17	32	92	16	3	36,34
B0/22	18	32	92	16	3	36,98
B0/23	19	38	104	20	3	44,55
B0/24	20	38	104	20	3	42,82
B0/25	22	38	104	20	3	58,83
B0/26	24	45	121	25	3	78,03
B0/27	25	45	121	25	3	78,03
B0/28	26	45	121	25	3	93,50
B0/29	28	45	121	25	3	93,50
B0/30	30	45	121	25	3	108,74
B0/31	32	53	133	32	3	111,90

Ulteriori diametri si forniscono a richiesta - *Other diameters upon requirements*
Tolleranza effettiva sul diametro: +0 -0,03 - *Real tolerance on diameter: +0 -0,03*

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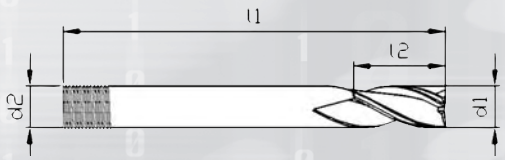
FRESE A TRE DENTI • SERIE NORMALE

SERIE B

B1

Un dente frontale tagliente fino al centro - Codolo cilindrico filettato
THREE-FLUTED END MILLS - One end tooth cutting up to the centre - Threaded shank
FRAISES À CYLINDRES FRONTALES À TROIS TAILLES - Une dent bout coupante jusq'au centre - Queue cylindrique filetée
SCHAFTFRÄSER - Eine Schneide mit Zentrumschnitt - Zylinderschaft mit Gewinde
FRESAS CILINDRICAS DE TRÉS LABIOS - Un labio que corta hasta el centro - Mango cilindrico roscado
FRESAS DE TRÊS NAVALHAS - Encabadouro cilindrico roscado

HSS-E Co8 | N | ≈30° | DIN 1835-D



NORM.

UNI 8246
DIN 844D
ISO 1641/I

INDEX

CODE	d1 mm js14	l2 mm	l1 mm	d2 mm h6	Z	Co 8% €
B1/01	2	7	51	6	3	19,04
B1/02	2.5	8	52	6	3	18,50
B1/03	3	8	52	6	3	15,46
B1/04	3.5	10	54	6	3	16,00
B1/05	4	11	55	6	3	15,46
B1/06	4.5	11	55	6	3	15,46
B1/07	5	13	57	6	3	15,46
B1/08	5.5	13	57	6	3	16,00
B1/09	6	13	57	6	3	14,82
B1/10	6.5	16	66	10	3	22,16
B1/11	7	16	66	10	3	22,16
B1/11/1	7.5	19	69	10	3	21,62
B1/12	8	19	69	10	3	21,62
B1/12/1	8.5	19	69	10	3	23,36
B1/13	9	19	69	10	3	24,65
B1/13/1	9.5	22	72	10	3	24,01
B1/14	10	22	72	10	3	23,36
B1/14/1	10.5	22	79	12	3	30,17
B1/15	11	22	79	12	3	30,17
B1/16	12	26	83	12	3	28,33
B1/17	13	26	83	12	3	32,01
B1/18	14	26	83	12	3	30,17
B1/19	15	32	92	16	3	38,17
B1/20	16	32	92	16	3	36,88
B1/21	17	32	92	16	3	46,17
B1/22	18	32	92	16	3	43,68
B1/23	19	38	98	16	3	50,50
B1/24	20	38	98	16	3	49,31
B1/25	22	38	114	25	3	89,11
B1/26	24	45	121	25	3	99,62
B1/27	25	45	121	25	3	89,11
B1/28	26	45	121	25	3	95,48
B1/29	28	45	121	25	3	104,16
B1/30	30	45	121	25	3	132,31
B1/31	32	53	133	32	3	135,61

Ulteriori diametri si forniscono a richiesta - *Other diameters upon requirements*
Tolleranza effettiva sul diametro: +0 -0,03 - *Real tolerance on diameter: +0 -0,03*

FRESE A TRE DENTI • SERIE NORMALE

B2

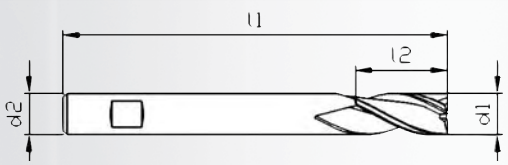
Un dente frontale tagliente fino al centro - Attacco Weldon
THREE-FLUTED END MILLS - One end tooth cutting up to the centre - Weldon shank
FRAISES À CYLINDRES FRONTALES À TROIS TAILLES - Une dent bout coupante jusq'au centre - Queue cylindrique Weldon
SCHAFTFRÄSER, DREISCHNEIDER - Eine Schneide mit Zentrumschnitt - Weldon Spannfläche
FRESAS CILINDRICAS DE TRÊS LABIOS - Un labio que corta hasta el centro - Mango Weldon
FRESAS DE TRÊS NAVALHAS - Encabadouro Weldon

SERIE B

NORM.

UNI 8248
DIN 844B
ISO 1641/I

HSS-E Co8 | N | ≈30° | DIN 1835 B



INDEX

CODE	d1 mm js14	l2 mm	l1 mm	d2 mm h6	Z	Co 8% €	SUPREME €
B2/01	2	7	51	6	3	17,62	24,76
B2/02	2.5	8	52	6	3	17,62	24,76
B2/03	3	8	52	6	3	14,06	21,31
B2/04	3.5	10	54	6	3	14,06	21,31
B2/05	4	11	55	6	3	13,52	20,66
B2/06	4.5	11	55	6	3	14,06	21,31
B2/07	5	13	57	6	3	12,87	20,12
B2/08	5.5	13	57	6	3	13,52	20,66
B2/09	6	13	57	6	3	12,87	20,12
B2/10	6.5	16	66	10	3	20,54	31,68
B2/11	7	16	66	10	3	20,54	31,68
B2/11/1	7.5	19	69	10	3	19,89	28,77
B2/12	8	19	69	10	3	19,35	31,04
B2/12/1	8.5	19	69	10	3	21,08	30,50
B2/13	9	19	69	10	3	22,28	33,31
B2/13/1	9.5	22	72	10	3	21,74	32,22
B2/14	10	22	72	10	3	20,54	31,68
B2/14/1	10.5	22	79	12	3	25,84	37,96
B2/15	11	22	79	12	3	26,92	39,69
B2/16	12	26	83	12	3	25,19	37,96
B2/17	13	26	83	12	3	29,96	44,87
B2/18	14	26	83	12	3	28,77	42,60
B2/19	15	32	92	16	3	35,14	55,80
B2/20	16	32	92	16	3	34,60	55,26
B2/21	17	32	92	16	3	42,82	64,45
B2/22	18	32	92	16	3	40,44	62,17
B2/23	19	38	104	20	3	48,11	69,63
B2/24	20	38	104	20	3	46,28	67,90
B2/25	22	38	104	20	3	63,86	89,91
B2/26	24	45	121	25	3	86,14	122,12
B2/27	25	45	121	25	3	83,63	119,72
B2/28	26	45	121	25	3	88,44	127,86
B2/29	28	45	121	25	3	97,95	134,78
B2/30	30	45	121	25	3	111,90	152,26
B2/31	32	53	133	32	3	126,57	169,74

Ulteriori diametri si forniscono a richiesta - *Other diameters upon requirements*
Tolleranza effettiva sul diametro: +0 -0,03 - *Real tolerance on diameter: +0 -0,03*

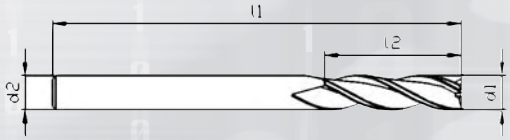
FRESE A TRE DENTI • SERIE LUNGA

SERIE B

B3

Un dente frontale tagliente fino al centro - Codolo cilindrico
THREE-FLUTED END MILLS - One end tooth cutting up to the centre - Straight shank
FRAISES À CYLINDRES FRONTALES À TROIS TAILLES - Une dent bout coupante jusq'au centre - Queue cylindrique
SCHAFTFRÄSER, DREISCHNEIDER - Eine Schneide mit Zentrumschnitt - Zylinderschaft
FRESAS CILINDRICAS DE TRÉS LABIOS - Un labio que corta hasta el centro - Mango cilindrico
FRESAS DE TRÊS NAVALHAS - Encabadouro cilindrico

HSS-E Co8 | N | ≈30° | DIN 1835 A



NORM.

UNI 8245
DIN 844A
ISO 1641/I

INDEX

CODE	d1 mm js14	l2 mm	l1 mm	d2 mm h6	Z	Co 8% €
B3/01	2	10	54	6	3	16,98
B3/02	3	12	56	6	3	15,79
B3/03	4	19	63	6	3	15,25
B3/04	5	24	68	6	3	14,71
B3/05	6	24	68	6	3	13,52
B3/06	7	30	80	10	3	24,65
B3/07	8	38	88	10	3	23,47
B3/08	10	45	95	10	3	22,28
B3/09	12	53	110	12	3	26,92
B3/10	14	53	110	12	3	31,04
B3/11	16	63	123	16	3	38,06
B3/12	18	63	123	16	3	45,19
B3/13	20	75	141	20	3	52,76
B3/14	22	75	141	20	3	69,35

Ulteriori diametri si forniscono a richiesta - *Other diameters upon requirements*
Tolleranza effettiva sul diametro: +0 -0,03 - *Real tolerance on diameter: +0 -0,03*

FRESE A TRE DENTI • SERIE LUNGA

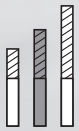
B4

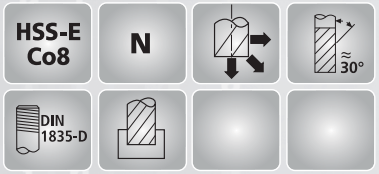
Un dente frontale tagliente fino al centro - Codolo cilindrico filettato
THREE-FLUTED END MILLS - One end tooth cutting up to the centre - Threaded shank
FRAISES À CYLINDRES FRONTALES À TROIS TAILLES - Une dent bout coupante jusq'au centre - Queue cylindrique filetée
SCHAFTFRÄSER, DREISCHNEIDER - Eine Schneide mit Zentrumschnitt - Zylinderschaft mit Gewinde
FRESAS CILINDRICAS DE TRÉS LABIOS - Un labio que corta hasta el centro - Mango cilindrico roscado
FRESAS DE TRÊS NAVALHAS - Encabadouro cilindrico roscado

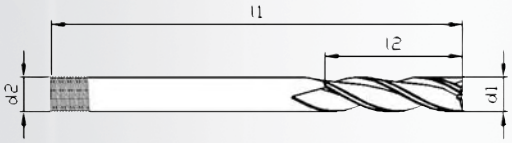
SERIE B

NORM.

UNI 8247
DIN 844D
ISO 1641/I







CODE	d1 mm js14	l2 mm	l1 mm	d2 mm h6	Z	Co 8% €
B4/01	2	10	54	6	3	20,33
B4/02	3	12	56	6	3	19,79
B4/03	4	19	63	6	3	19,04
B4/04	5	24	68	6	3	18,50
B4/05	6	24	68	6	3	17,84
B4/06	7	30	80	10	3	29,52
B4/07	8	38	88	10	3	27,69
B4/08	10	45	95	10	3	26,49
B4/09	12	53	110	12	3	32,01
B4/10	14	53	110	12	3	36,88
B4/11	16	63	123	16	3	44,99
B4/12	18	63	123	16	3	52,87
B4/13	20	75	141	20	3	61,52
B4/14	22	75	141	20	3	83,28

Ulteriori diametri si forniscono a richiesta - *Other diameters upon requirements*
Tolleranza effettiva sul diametro: +0 -0,03 - *Real tolerance on diameter: +0 -0,03*

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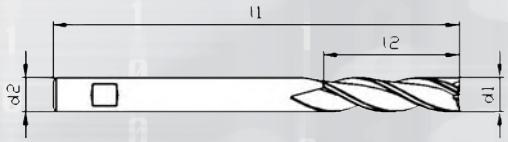
FRESE A TRE DENTI • SERIE LUNGA

SERIE B

B5

Un dente frontale tagliente fino al centro - Attacco Weldon
THREE-FLUTED END MILLS - One end tooth cutting up to the centre - Weldon shank
FRAISES À CYLINDRES FRONTALES À TROIS TAILLES - Une dent bout coupante jusq'au centre - Queue cylindrique Weldon
SCHAFTFRÄSER, DREISCHNEIDER - Eine Schneide mit Zentrumschnitt - Weldon Spannfläche
FRESAS CILINDRICAS DE TRÉS LABIOS - Un labio que corta hasta el centro - Mango Weldon
FRESAS DE TRÊS NAVALHAS - Encabadouro Weldon

HSS-E Co8 | N | ≈ 30° | DIN 1835 B



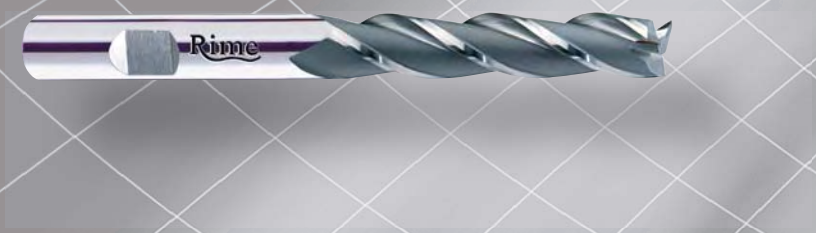
NORM.

UNI 8249
DIN 844B
ISO 1641/I

INDEX

CODE	d1 mm js14	l2 mm	l1 mm	d2 mm h6	Z	Co 8% €
B5/01	2	10	54	6	3	19,35
B5/02	3	12	56	6	3	18,81
B5/03	4	19	63	6	3	17,62
B5/04	5	24	68	6	3	16,98
B5/05	6	24	68	6	3	18,16
B5/06	7	30	80	10	3	27,57
B5/07	8	38	88	10	3	26,38
B5/07/1	9	45	95	10	3	25,84
B5/08	10	45	95	10	3	25,19
B5/08/1	11	53	110	12	3	31,04
B5/09	12	53	110	12	3	31,04
B5/09/1	13	53	110	12	3	35,80
B5/10	14	53	110	12	3	34,60
B5/10/1	15	63	123	16	3	44,01
B5/11	16	63	123	16	3	43,36
B5/12	18	63	123	16	3	50,39
B5/13	20	75	141	20	3	58,61
B5/14	22	75	141	20	3	76,78

Ulteriori diametri si forniscono a richiesta - *Other diameters upon requirements*
Tolleranza effettiva sul diametro: +0 -0,03 - *Real tolerance on diameter: +0 -0,03*



FRESE A TRE DENTI • SERIE NORMALE

B10

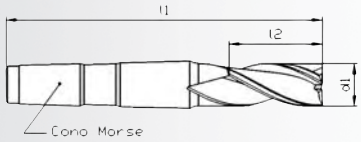
Un dente frontale tagliente fino al centro - Codolo conico Morse con foro filettato
THREE-FLUTED END MILLS - One end tooth cutting up to the centre - Morse taper shank
FRAISES À CYLINDRES FRONTALES À TROIS TAILLES - Une dent bout coupante jusq'au centre - Queue au cône Morse à trou fileté
SCHAFTFRÄSER, DREISCHNEIDER - Eine Schneide mit Zentrumschnitt - Morsekegelschaft und Anzugsgewinde
FRESAS CILINDRICAS DE TRÉS LABIOS - Un labio que corta hasta el centro - Mango conico Morse con taladro roscado
FRESAS DE TRÊS NAVALHAS - Encabadouro cone Morse con taladro roscado

SERIE B

NORM.

UNI 8250
DIN 845B
ISO 1641/II

HSS-E Co8 | N | ≈30° | DIN 228-A



CODE	d1 mm js14	l2 mm	l1 mm	CM-MK	Z	Co 8% €
B10/01	16	32	117	2	3	56,10
B10/02	18	32	117	2	3	56,10
B10/03	20	38	140	3	3	79,06
B10/04	22	38	140	3	3	85,23
B10/05	24	45	147	3	3	93,56
B10/06	25	45	147	3	3	97,56
B10/07	26	45	147	3	3	104,52
B10/08	28	45	147	3	3	111,20
B10/09	30	53	155	3	3	129,38
B10/10	32	53	178	4	3	144,28
B10/11	34	53	178	4	3	158,36
B10/12	35	53	178	4	3	164,46
B10/13	36	53	178	4	3	176,54
B10/14	38	63	188	4	3	185,58
B10/15	40	63	188	4	3	220,88

Ulteriori diametri si forniscono a richiesta - *Other diameters upon requirements*
Tolleranza effettiva sul diametro: +0 -0,03 - *Real tolerance on diameter: +0 -0,03*

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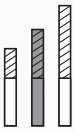
FRESE A TRE DENTI • SERIE LUNGA

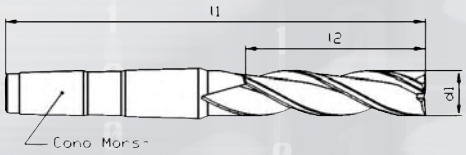
SERIE B

B11

Un dente frontale tagliente fino al centro - Codolo conico Morse con foro filettato
THREE-FLUTED END MILLS - One end tooth cutting up to the centre - Morse taper shank
FRAISES À CYLINDRES FRONTALES À TROIS TAILLES - Une dent bout coupante jusq'au centre - Queue au cône Morse à trou fileté
SCHAFTFRÄSER, DREISCHNEIDER - Eine Schneide mit Zentrumschnitt - Morsekegelschaft und Anzugsgewinde
FRESAS CILINDRICAS DE TRÉS LABIOS - Un labio que corta hasta el centro - Mango conico Morse con taladro roscado
FRESAS DE TRÊS NAVALHAS - Cone Morse con taladro roscado



HSS-E Co8 | N | DIN 228-A | ≈30°



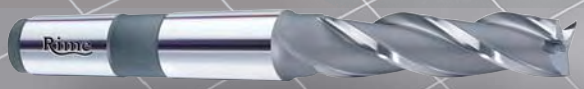
NORM.

UNI 8251
DIN 845B
ISO 1641/II

INDEX

CODE	d1 mm js14	l2 mm	l1 mm	CM-MK	Z	Co 8% €
B11/01	16	63	148	2	3	71,40
B11/02	18	63	148	2	3	71,40
B11/03	20	75	177	3	3	94,94
B11/04	22	75	177	3	3	103,96
B11/05	24	90	192	3	3	131,95
B11/06	25	90	192	3	3	135,95
B11/07	26	90	192	3	3	145,58
B11/08	28	90	192	3	3	154,96
B11/09	30	90	192	3	3	165,74
B11/10	32	106	231	4	3	227,10

Ulteriori diametri si forniscono a richiesta - *Other diameters upon requirements*
Tolleranza effettiva sul diametro: +0 -0,03 - *Real tolerance on diameter: +0 -0,03*



Catalogo HSS-E e PM

SERIE C

FRESE A MANICOTTO, A DISCO A TRE TAGLI, AD ANGOLO

SHELL END MILLS, SIDE AND FACE MILLING CUTTERS, ANGULAR CUTTERS

Rime
UTENSILERIA

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SERIE C

FRESE A MANICOTTO, A DISCO A TRE TAGLI, AD ANGOLO
SHELL END MILLS, SIDE AND FACE MILLING CUTTERS, ANGULAR CUTTERS

FRESE FRONTALI

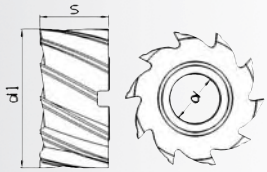
C2

Denti elicoidali rinforzati - Cava trascinamento trasversale
SHELL END MILLS - Reinforced helical teeth - Slot for transverse dragging
FRAISES À CYLINDRES FRONTALES - Denture hélicoïdale renforcée - Fente de traînement transversal
WALZENSTIRNFRÄSER - Verstärkte Spiralzähne - Querbetriebs Schlitz
FRESAS CILINDRICAS FRONTALES - Labios helicoidales reforzados - Agujero condiucimiento trasversal
FRESAS CILINDRICAS FRONTAIS

SERIE C

NORM.
UNI 3903
DIN 841-1880
ISO 2586

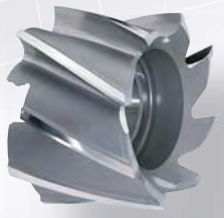
HSS-E Co5 | N



CODE	d1 mm js16	s mm k16	d mm H7	Z	Co 5% €
C2/01	40	32	16	8	75,79
C2/02	50	36	22	8	98,89
C2/03	63	40	27	8	146,02
C2/04	80	45	27	10	217,75
C2/05	100	50	32	12	349,09
C2/06	125	56	40	14	576,99

Tolleranza effettiva sul diametro: +0,05 -0 - *Real tolerance on diameter: +0,05 -0*

INDEX



FRESE FRONTALI

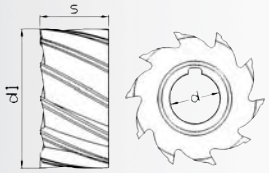
C3

Denti elicoidali rinforzati - Spacco longitudinale
SHELL END MILLS - Reinforced helical teeth - Longitudinal slot
FRAISES À CYLINDRES FRONTALES - Denture hélicoïdale renforcée - Fente longitudinale
WALZENSTIRNFRÄSER - Verstärkte Spiralzähne - Longitudinaler Schlitz
FRESAS CILINDRICAS FRONTALES - Labios helicoidales reforzados - Hendidura longitudinal
FRESAS CILINDRICAS FRONTAIS

SERIE C

NORM.
UNI 3903
DIN 841-1880
ISO 2586

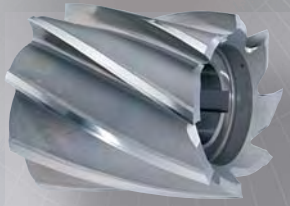
HSS-E Co5 | N



CODE	d1 mm js16	s mm k16	d mm H7	Z	Co 5% €
C3/01	30	30	13	8	71,90
C3/02	35	35	16	8	78,36
C3/03	40	20	16	8	87,39
C3/04	40	40	16	8	94,43
C3/05	50	25	22	8	105,92
C3/06	50	50	22	8	139,94
C3/07	60	30	27	8	158,15
C3/08	60	60	27	8	197,68
C3/09	75	35	27	10	261,32
C3/10	75	75	27	10	328,28
C3/11	90	35	27	12	388,62
C3/12	110	35	32	14	514,57

Tolleranza effettiva sul diametro: +0,05 -0 - *Real tolerance on diameter: +0,05 -0*

INDEX



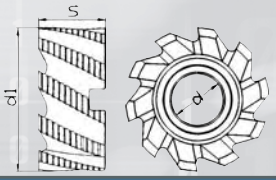
FRESE FRONTALI

SERIE C

C5/A

Denti elicoidali con rompitruciolo spogliato completamente rettificato. Esecuzione per semifinitura - Cava trascinamento trasversale
SHELL END MILLS - Helical teeth with form relieved entirely ground chip-breaker. Semifinishing type -Slot for transverse dragging
FRAISES À CYLINDRES FRONTALES - Denture hélicoïdale avec brise-copeaux dépouillé entièrement rectifié. Exécution pour demi-fini - Fente de traînement transversal
WALZENSTIRNFRÄSER - Schrägschneiden mit voll eingeschliffenem Spannbrecher. Ausführung zur Halbbearbeitung - Querbetriebs Schlitz
FRESAS CILINDRICAS FRONTALES - Labios helicoidal con arranca de viruta completamente rectificado para semiacabado - Agujero conducimiento trasversal
FRESAS CILINDRICAS FRONTAIS - Fresa concha com navalha reforçada normal

HSS-E Co8 | NF



NORM.

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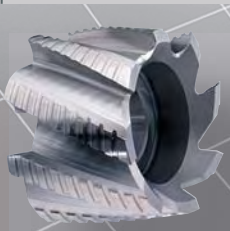
CODE	d1 mm js16	s mm k16	d mm H7	Z	Co 8% €
C5/01/A	40	32	16	6	106,19
C5/02/A	50	36	22	6	140,45
C5/03/A	63	40	27	8	201,48
C5/04/A	80	45	27	8	316,60
C5/05/A	100	50	32	10	476,44
C5/06/A	125	56	40	12	762,86

Tolleranza effettiva sul diametro: ±0,05 - *Real tolerance on diameter: ±0,05*



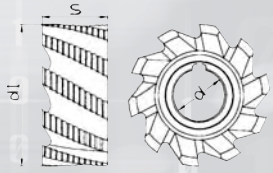
FRESE FRONTALI

SERIE C

C6/A

Denti elicoidali con rompitruciolo spogliato completamente rettificato. Esecuzione per semifinitura - Spacco longitudinale
SHELL END MILLS - Helical teeth with form relieved entirely ground chip-breaker. Semifinishing type - Longitudinal slot
FRAISES À CYLINDRES FRONTALES- Denture hélicoïdale avec brise-copeaux dépouillé entièrement rectifié. Exécution pour demi-fini - Fente longitudinale
WALZENSTIRNFRÄSER - Schrägschneiden mit voll eingeschliffenem Spannbrecher. Ausführung zur Halbbearbeitung - Longitudinaler Schlitz
FRESAS CILINDRICAS FRONTALES - Labios helicoidal con arranca de viruta completamente rectificado para semiacabado - Hendidura longitudinal
FRESAS CILINDRICAS FRONTAIS - Ripa fina

HSS-E Co8 | NF



NORM.

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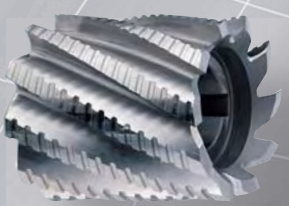
INDEX

CODE	d1 mm js16	s mm k16	d mm H7	Z	Co 8% €
C6/01/A	30	30	13	6	87,47
C6/02/A	35	35	16	6	98,92
C6/03/A	40	20	16	8	110,39
C6/04/A	40	40	16	6	121,84
C6/05/A	50	25	22	8	124,81
C6/06/A	50	50	22	8	152,02
C6/07/A	60	30	27	10	216,78
C6/08/A	60	60	27	10	251,22
C6/09/A	75	35	27	10	312,04
C6/10/A	75	75	27	10	431,18

Tolleranza effettiva sul diametro: ±0,05 - *Real tolerance on diameter: ±0,05*



FRESE FRONTALI

C5/B

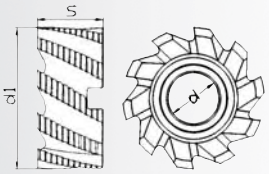
Denti elicoidali con rompitruciolo spogliato completamente rettificato. Esecuzione per sgrossatura - Cava trascinamento trasversale
SHELL END MILLS - Helical teeth with form relieved entirely ground chip-breaker. Roughing type - Slot for transverse dragging
FRAISES À CYLINDRES FRONTALES - Denture hélicoïdale avec brise-copeaux dépouillé entièrement rectifié. Exécution pour dégrossir - Fente de traînement transversal
WALZENSTIRNFRÄSER - Schrägschneiden mit voll eingeschliffenem Spannbrecher. Ausführung zum Schruppen - Querbetriebs Schlitz
FRESAS CILINDRICAS FRONTALES - Labios helicoidal con arranca de viruta completamente rectificado para desbaste - Agujero conducimiento trasversal
FRESAS CILINDRICAS FRONTAIS - Fresa concha com quebra-apara normal

SERIE C

NORM.

UNI 3903
DIN 841-1880
ISO 2586

HSS-E Co8 | NR



CODE	d1 mm js16	s mm k16	d mm H7	Z	Co 8% €
C5/01/B	40	32	16	6	106,19
C5/02/B	50	36	22	6	140,45
C5/03/B	63	40	27	8	201,48
C5/04/B	80	45	27	8	316,60
C5/05/B	100	50	32	10	476,44
C5/06/B	125	56	40	12	762,86

Tolleranza effettiva sul diametro: ±0,05 - *Real tolerance on diameter: ±0,05*

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FRESE FRONTALI

C6/B

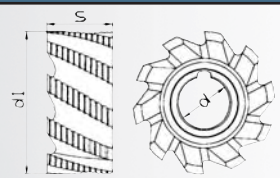
Denti elicoidali con rompitruciolo spogliato completamente rettificato. Esecuzione per sgrossatura - Spacco longitudinale
SHELL END MILLS - Helical teeth with form relieved entirely ground chip-breaker. Roughing type - Longitudinal slot
FRAISES À CYLINDRES FRONTALES - Denture hélicoïdale avec brise-copeaux dépouillé entièrement rectifié. Exécution pour dégrossir - Fente longitudinale
WALZENSTIRNFRÄSER - Schrägschneiden mit voll eingeschliffenem Spannbrecher. Ausführung zum Schruppen - Longitudinaler Schlitz
FRESAS CILINDRICAS FRONTALES - Labios helicoidal con arranca de viruta completamente rectificado para desbaste - Hendidura longitudinal
FRESAS CILINDRICAS FRONTAIS - Fresa concha com quebra-apara normal

SERIE C

NORM.

UNI 3903
DIN 841-1880
ISO 2586

HSS-E Co8 | NR



CODE	d1 mm js16	s mm k16	d mm H7	Z	Co 8% €
C6/01/B	30	30	13	6	87,47
C6/02/B	35	35	16	6	98,92
C6/03/B	40	20	16	8	110,39
C6/04/B	40	40	16	6	121,84
C6/05/B	50	25	22	8	124,81
C6/06/B	50	50	22	8	152,02
C6/07/B	60	30	27	10	216,78
C6/08/B	60	60	27	10	251,22
C6/09/B	75	35	27	10	312,04
C6/10/B	75	75	27	10	431,86

Tolleranza effettiva sul diametro: ±0,05 - *Real tolerance on diameter: ±0,05*

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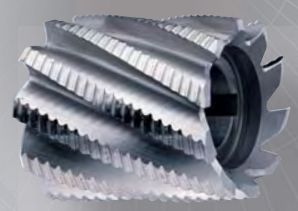


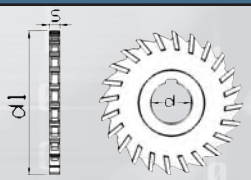
FRESE A DISCO A TRE TAGLI

SERIE C

C7

Denti dritti
SIDE AND FACE MILLING CUTTERS - Straight teeth
FRAISSES EN DISQUE À TROIS TAILLES - Denture droite
SCHEIBENFRÄSER - Geradeverzhant
FRESAS A DISCO DE TRES LABIOS - Labios derechos
FRESAS DE TRÊS NAVALHAS - Topo direito

HSS-E Co5 | N



NORM.
UNI 3905B
DIN 885B
ISO 2587

INDEX

CODE	d1 mm js16	s mm k11	d mm H7	Z	Co 5% €
C7/01		4		20	55,07
C7/02		5		20	55,07
C7/03		6		20	58,83
C7/04	50	7	16	18	62,50
C7/05		8		18	62,50
C7/06		9		18	70,03
C7/07		10		18	73,81
C7/08		4		20	62,50
C7/09		5		20	66,26
C7/10		6		20	66,26
C7/11		7		20	70,03
C7/12		8		20	73,81
C7/13	63	9	22	20	77,57
C7/14		10		18	81,35
C7/15		12		18	85,11
C7/16		14		18	88,77
C7/17		16		18	95,73
C7/18		18		18	99,39
C7/19		20		18	106,94
C7/20		4		24	81,35
C7/21		5		24	85,11
C7/22		6		24	88,77
C7/23		7		22	91,96
C7/24		8		22	91,96
C7/25		9		22	95,73
C7/26	80	10	22-27	20	99,39
C7/27		12		20	106,94
C7/28		14		20	114,48
C7/29		16		20	122,01
C7/30		18		20	129,43
C7/31		20		20	136,29

Tolleranza effettiva sul diametro: +0,05 -0 - *Real tolerance on diameter: +0,05 -0*

FRESE A DISCO A TRE TAGLI

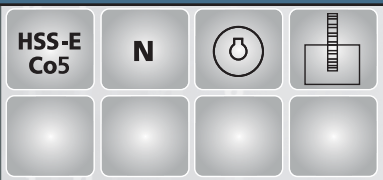
C7

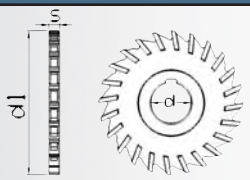
Denti dritti
SIDE AND FACE MILLING CUTTERS - Straight teeth
FRAISSES EN DISQUE À TROIS TAILLES - Denture droite
SCHEIBENFRÄSER - Geradeverzhant
FRESAS A DISCO DE TRES LABIOS - Labios derechos
FRESAS DE TRÊS NAVALHAS - Topo direito

SERIE C

NORM.

UNI 3905B
DIN 885B
ISO 2587





CODE	d1 mm js16	s mm k11	d mm H7	Z	Co 5% €
C7/32		4		26	106,94
C7/33		5		26	110,70
C7/34		6		24	114,48
C7/35		7		24	122,01
C7/36		8		22	125,66
C7/37		9		22	132,64
C7/38		10		22	136,29
C7/39	100	12	27-32	22	147,60
C7/40		14		22	158,92
C7/41		15		22	162,56
C7/42		16		22	166,34
C7/43		18		22	177,64
C7/44		20		20	188,27
C7/45		22		20	214,54
C7/46		25		20	258,88
C7/47		5		30	158,92
C7/48		6		30	158,92
C7/49		8		28	169,53
C7/50		10		28	181,41
C7/51	125	12	32	28	196,38
C7/52		14		26	211,34
C7/53		16		26	229,51
C7/54		18		26	255,21
C7/55		20		26	277,73

Tolleranza effettiva sul diametro: +0,05 -0 - *Real tolerance on diameter: +0,05 -0*

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FRESE A DISCO A TRE TAGLI

SERIE C

C8

Denti alternati
SIDE AND FACE MILLING CUTTERS - Staggered teeth
FRAISSES EN DISQUE À TROIS TAILLES - Denture alternée
SCHEIBENFRÄSER - Kreuzverzahnt
FRESAS A DISCO DE TRÉS LABIOS - Labios alternados
FRESAS DE TRÊS NAVALHAS - Topo alternado

HSS-E Co5 | N

NORM.

UNI 3905A
DIN 885A
ISO 2587

INDEX

CODE	d1 mm js16	s mm k11	d mm H7	Z	Co 5% €
C8/01		4		18	55,07
C8/02		5		18	55,07
C8/03		6		18	58,83
C8/04	50	7	16	18	61,92
C8/05		8		18	61,92
C8/06		9		16	70,03
C8/07		10		16	73,24
C8/08		4		22	61,92
C8/09		5		20	66,26
C8/10		6		20	66,26
C8/11		7		20	70,03
C8/12		8		20	73,24
C8/13	63	9	22	18	76,88
C8/14		10		18	81,35
C8/15		12		18	84,42
C8/16		14		18	88,20
C8/17		16		16	95,73
C8/18		18		16	99,39
C8/19		20		14	106,94
C8/20		4		24	81,35
C8/21		5		22	84,42
C8/22		6		22	88,20
C8/23		7		20	91,96
C8/24		8		20	91,96
C8/25		9		20	96,30
C8/26	80	10	22-27	18	99,39
C8/27		12		18	106,94
C8/28		14		18	114,48
C8/29		16		16	121,33
C8/30		18		16	129,43
C8/31		20		16	136,29
C8/32		4		26	106,94
C8/33		5		26	110,13
C8/34		6		24	114,48
C8/35		7		24	121,33
C8/36	100	8	27-32	22	125,09
C8/37		9		22	132,64
C8/38		10		22	136,29
C8/39		12		20	147,60
C8/40		14		18	158,22
C8/41		15		18	162,56

Tolleranza effettiva sul diametro: +0,05 -0 - *Real tolerance on diameter: +0,05 -0*

FRESE A DISCO A TRE TAGLI

C8

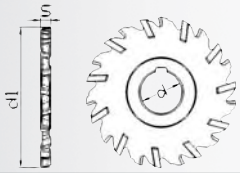
Denti alternati
SIDE AND FACE MILLING CUTTERS - Staggered teeth
FRAISSES EN DISQUE À TROIS TAILLES - Denture alternée
SCHEIBENFRÄSER - Kreuzverzahnt
FRESAS A DISCO DE TRÉS LABIOS - Labios alternados
FRESAS DE TRÊS NAVALHAS - Topo alternado

SERIE C

NORM.

UNI 3905A
DIN 885A
ISO 2587

HSS-E Co5 | N



CODE	d1 mm js16	s mm k11	d mm H7	Z	Co 5% €
C8/42		16		18	166,34
C8/43		18		18	177,64
C8/44	100	20	27-32	18	188,27
C8/45		22		18	213,86
C8/46		25		18	258,87
C8/47		5		30	158,22
C8/48		6		30	158,22
C8/48/1		7		28	169,53
C8/49		8		28	169,53
C8/49/1		9		24	180,73
C8/50		10		24	180,73
C8/51	125	12	32	22	195,69
C8/52		14		22	210,77
C8/53		16		20	228,94
C8/54		18		20	254,53
C8/55		20		20	277,03
C8/56		22		20	321,47
C8/57		25		18	366,48
C8/58		6		30	236,36
C8/59		8		28	250,76
C8/60		10		26	269,49
C8/61		12		26	287,66
C8/62	160	14	32	24	310,16
C8/63		16		24	332,67
C8/64		18		22	355,29
C8/65		20		22	377,12
C8/66		22		22	425,32
C8/67		25		22	514,08
C8/68		8		34	398,82
C8/69		10		32	398,82
C8/70		12		30	425,10
C8/71		14		30	459,82
C8/72		16		28	497,70
C8/73	200	18	40	28	538,76
C8/74		20		26	584,98
C8/75		22		26	638,35
C8/76		25		24	706,39
C8/77		28		24	757,76
C8/78		32		22	862,40
C8/79		20		34	881,05
C8/80	250	30	50	26	1348,49

Tolleranza effettiva sul diametro: +0,05 -0 - *Real tolerance on diameter: +0,05 -0*

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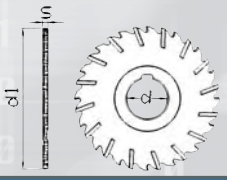
SEGHE CIRCOLARI A TRE TAGLI

SERIE C

C9

Denti elicoidali alternati
THREE-FLUTED CIRCULAR SAWS - Staggered teeth
SCIES CIRCULAIRES TROIS TAILLES - Denture alternée
KREISSÄGEN - Schräg-Kreuzverzahnt
SIERRA CIRCULAR DE TRÉS LABIOS - Labios helicoidales alternados
SERRA CIRCULAR DE TRÊS NAVALHAS - Navalhas helicoidales alternada

HSS-E Co5 | N



NORM. STANDARD Rime

INDEX

CODE	d1 mm js16	s mm k11	d mm H7	Z	Co 5% €
C9/01		1.6	22	32	104,33
C9/02		2	22	32	104,33
C9/03	63	2.5	22	32	104,33
C9/04		3	22	28	104,33
C9/05		3.5	22	28	104,33
C9/06		2	22	32	137,48
C9/07	80	2.5	22	32	137,48
C9/08		3	22	32	137,48
C9/09		3.5	22	32	137,48
C9/10		2	27	40	166,46
C9/11	100	2.5	27	40	166,46
C9/12		3	27	40	166,46
C9/13		3.5	27	40	166,46
C9/14		2	32	44	244,89
C9/15		2.5	32	44	244,89
C9/16	125	3	32	44	244,89
C9/17		3.5	32	40	244,89
C9/18		4	32	40	244,89
C9/19		3	32	50	372,67
C9/19/1	160	3.5	32	50	372,67
C9/20		4	32	50	372,67
C9/21		5	32	50	372,67

Tolleranza effettiva sul diametro: +0,05 -0 - *Real tolerance on diameter: +0,05 -0*

FRESE AD ANGOLO PRISMATICHE

C13

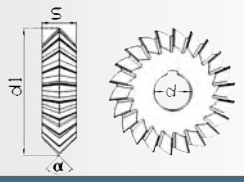
DOUBLE EQUAL-ANGLE CUTTERS
FRAISES D'ANGLE PRISMATIQUES
PRISMEFRÄSER
FRESAS DE ANGULO PRISMATICO
FRESAS DE ANGULO PRISMATICO

SERIE C

NORM.

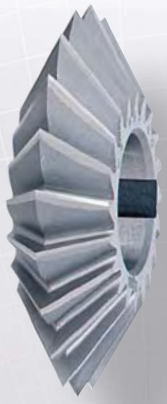
UNI 3907
DIN 847
ISO 6108

HSS-E Co5 | N



CODE	d1 mm js16	α 0°+1°	s mm k11	d mm H7	Z	Co 5% €
C13/01	56		10	16	24	80,45
C13/02	63	45°	12	22	22	111,76
C13/03	80		16	22	26	165,83
C13/04	100		18	27	30	240,11
C13/05	56		12	16	22	88,41
C13/06	63	60°	16	22	20	115,45
C13/07	80		20	22	24	174,47
C13/08	100		25	27	26	263,56
C13/09	56		14	16	22	92,13
C13/10	63	90°	18	22	20	127,12
C13/11	80		22	22	22	189,85
C13/12	100		28	27	24	283,19

INDEX



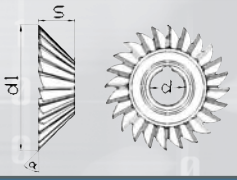
FRESE FRONTALI AD ANGOLO

SERIE C

C14

SINGLE ANGLE CUTTERS
FRAISES FRONTALES D'ANGLE
WINKELSTIRNFRÄSER
FRESAS FRONTALES D'ANGULO
FRESAS DE ANGULO FRONTAIS

HSS-E Co5 | N



NORM.

UNI 3908
DIN 842A
ISO

INDEX

CODE	d1 mm js16	α ±25′	s mm k16	d mm H7	Z	Co 5% €
C14/01	40		12	10	18	78,66
C14/02	50		13	13	20	98,30
C14/03	63	45°	18	16	20	134,53
C14/04	80		23	22	24	216,78
C14/05	100		30	27	24	361,17
C14/08	40		13	10	16	78,66
C14/09	50		16	13	18	98,30
C14/10	63	50°	20	16	20	135,09
C14/11	80		25	22	22	216,78
C14/12	100		32	27	26	361,17
C14/15	40		13	10	18	78,66
C14/16	50		16	13	18	98,30
C14/17	63	60°	20	16	18	135,09
C14/18	80		25	22	20	216,78
C14/19	100		32	27	22	361,17

Catalogo HSS-E e PM

SERIE E-F

FRESE PER SGROSSATURA E SEMIFINITURA

ROUGHING AND SEMIFINISHING END MILLS

Rime
UTENSILERIA

INDEX

copertina - home

SERIE E

FRESE PER SGROSSATURA E SEMIFINITURA
ROUGHING AND SEMIFINISHING MILLS

FRESE PER SGROSSATURA • SERIE NORMALE

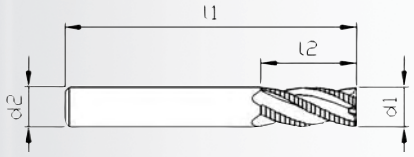
E0

Denti elicoidali con rompitruciolo spogliato completamente rettificato - Codolo cilindrico
ROUGHING END MILLS - Helical teeth with form relieved entirely ground chip-breaker - Straight shank
FRAISES FRONTALES ÉBAUCHE - Denture hélicoïdale avec brise-copeaux profil rond - Queue cylindrique
SCHAFTFRÄSER - Schrägschneiden mit voll eingeschliffenem Spannbrecher
FRESAS CILINDRICAS FRONTALES PARA DESBASTE - Labios helicoidal con arranca de viruta completamente rectificado - Mango cilindrico
FRESAS DE DESBASTE FRONTAL - Fresa cilindrica sem corte ao centro com quebra-apara - Encabadouro cilindrico

SERIE E-F

NORM.

HSS-E Co8 | NR | ≈30° | DIN 1835 A



CODE	d1 mm js14	l2 mm	l1 mm	d2 mm h6	Z	Co 8% €
E0/01	6	16	60	6	3	23,25
E0/02	8	22	64	10	4	36,63
E0/03	10	28	70	10	4	35,99
E0/04	12	32	80	12	4	38,88
E0/05	14	32	80	12	4	41,63
E0/06	15	36	90	16	4	46,92
E0/07	16	36	90	16	4	46,92
E0/08	18	40	100	16	4	54,49
E0/09	20	45	110	20	4	63,37
E0/10	22	45	110	20	4	70,39

Ulteriori diametri si forniscono a richiesta - *Other diameters upon requirements*
Tolleranza effettiva sul diametro: ±0,05 - *Real tolerance on diameter: ±0,05*

INDEX

FRESE PER SGROSSATURA • SERIE NORMALE

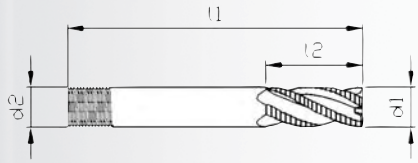
E1

Denti elicoidali con rompitruciolo spogliato completamente rettificato - Codolo cilindrico filettato
ROUGHING END MILLS - Helical teeth with form relieved entirely ground chip-breaker - Threaded shank
FRAISES FRONTALES ÉBAUCHE - Denture hélicoïdale avec brise-copeaux profil rond - Queue cylindrique filetée
SCHAFTFRÄSER - Schrägschneiden mit voll eingeschliffenem Spannbrecher - Zylinderschaft mit Gewinde
FRESAS CILINDRICAS FRONTALES PARA DESBASTE - Labios helicoidal con arranca de viruta completamente rectificado - Mango cilindrico roscado
FRESAS DE DESBASTE FRONTAL - Fresa cilindrica sem corte ao centro com quebra-apara - Encabadouro cilindrico roscado

SERIE E-F

NORM.

HSS-E Co8 | NR | ≈30° | DIN 1835-D



CODE	d1 mm js14	l2 mm	l1 mm	d2 mm h6	Z	Co 8% €
E1/01	6	16	60	6	3	27,43
E1/02	8	22	64	10	4	42,73
E1/03	10	28	70	10	4	41,55
E1/04	12	32	80	12	4	45,10
E1/05	14	32	80	12	4	48,01
E1/06	15	36	90	16	4	54,82
E1/07	16	36	90	16	4	54,82
E1/08	18	40	100	16	4	65,30
E1/09	20	45	110	20	4	73,95
E1/10	22	45	110	20	4	80,67
E1/11	24	45	120	25	5	96,66
E1/12	25	50	125	25	5	105,96
E1/13	26	50	125	25	5	116,25
E1/14	28	50	125	25	5	120,74
E1/15	30	63	135	25	5	139,92
E1/16	32	63	145	32	5	148,23

Ulteriori diametri si forniscono a richiesta - *Other diameters upon requirements*
Tolleranza effettiva sul diametro: ±0,05 - *Real tolerance on diameter: ±0,05*

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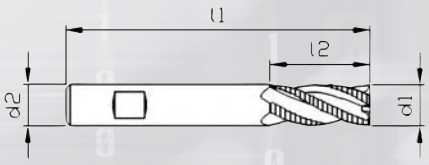
FRESE PER SGROSSATURA • SERIE NORMALE

SERIE E-F

E2

Denti elicoidali con rompitruciolo spogliato completamente rettificato - Attacco Weldon
ROUGHING END MILLS - Helical teeth with form relieved entirely ground chip-breaker - Weldon shank
FRAISES FRONTALES ÉBAUCHE - Denture hélicoïdale avec brise-copeaux profil rond - Queue cylindrique Weldon
SCHAFTFRÄSER - Schrägschneiden mit voll eingeschliffenem Spannbrecher - Weldon Spannfläche
FRESAS CILINDRICAS FRONTALES PARA DESBASTE - Labios helicoidal con arranca de viruta completamente rectificado - Weldon
FRESAS FRONTAIS PARA DESBASTE - Fresa sem corte ao centro com quebra-apara - Encabadouro Weldon

HSS-E Co8 | NR | ≈30° | DIN 1835 B



NORM. STANDARD Rime

INDEX

CODE	d1 mm js14	l2 mm	l1 mm	d2 mm h6	Z	Co 8% €
E2/01	6	16	60	6	3	24,95
E2/02	8	22	64	10	4	38,88
E2/03	10	28	70	10	4	38,34
E2/04	12	32	80	12	4	41,77
E2/05	14	32	80	12	4	44,55
E2/06	15	36	90	16	4	51,04
E2/07	16	36	90	16	4	51,04
E2/08	18	40	100	16	4	68,01
E2/09	20	45	110	20	4	68,01
E2/10	22	45	110	20	4	73,85
E2/11	24	45	120	25	5	89,74
E2/12	25	50	125	25	5	97,97
E2/13	26	50	125	25	5	108,27
E2/14	28	50	125	25	5	111,98
E2/15	30	63	135	25	5	130,15
E2/16	32	63	145	32	5	149,67

Ulteriori diametri si forniscono a richiesta - *Other diameters upon requirements*
Tolleranza effettiva sul diametro: ±0,05 - *Real tolerance on diameter: ±0,05*

FRESE PER SGROSSATURA • SERIE LUNGA

E4

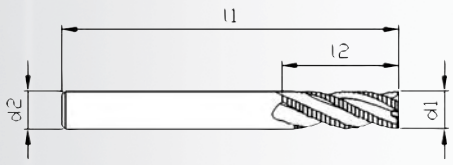
Denti elicoidali con rompitruciolo spogliato completamente rettificato - Codolo cilindrico
ROUGHING END MILLS - Helical teeth with form relieved entirely ground chip-breaker - Straight shank
FRAISES FRONTALES ÉBAUCHE - Denture hélicoïdale avec brise-copeaux profil rond - Queue cylindrique
SCHAFTFRÄSER - Schrägschneiden mit voll eingeschliffenem Spannbrecher - Zylinderschaft
FRESAS CILINDRICAS FRONTALES PARA DESBASTE - Labios helicoidal con arranca de viruta completamente rectificado - Mango cilindrico
FRESAS CILINDRICAS FRONTAIS PARA DESBASTE - Fresa sem corte ao centro com quebra-apara - Encabadouro cilindrico

SERIE E-F

NORM.

STANDARD Rime

HSS-E Co8 | NR | ≈30° | DIN 1835 A | ~0,3xd



CODE	d1 mm js14	l2 mm	l1 mm	d2 mm h6	Z	Co 8% €
E4/01	8	35	85	10	4	43,60
E4/02	10	42	90	10	4	44,77
E4/03	12	48	95	12	4	49,92
E4/04	14	48	100	12	4	60,44
E4/05	15	54	104	16	4	62,17
E4/06	16	54	104	16	4	62,17
E4/07	18	60	120	16	4	69,20
E4/08	20	62	128	20	4	75,04
E4/09	22	64	130	20	4	85,64

Ulteriori diametri si forniscono a richiesta - *Other diameters upon requirements*
Tolleranza effettiva sul diametro: ±0,05 - *Real tolerance on diameter: ±0,05*

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FRESE PER SGROSSATURA • SERIE LUNGA

E5

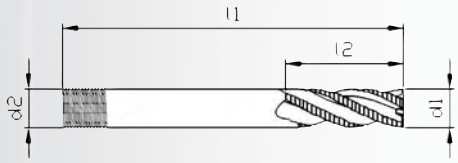
Denti elicoidali con rompitruciolo spogliato completamente rettificato - Codolo cilindrico filettato
ROUGHING END MILLS - Helical teeth with form relieved entirely ground chip-breaker - Threaded shank
FRAISES FRONTALES ÉBAUCHE - Denture hélicoïdale avec brise-copeaux profil rond - Queue cylindrique filetée
SCHAFTFRÄSER - Schrägschneiden mit voll eingeschliffenem Spannbrecher - Zylinderschaft mit Gewinde
FRESAS CILINDRICAS FRONTALES PARA DESBASTE - Labios helicoidal con arranca de viruta completamente rectificado - Mango cilindrico roscado
FRESAS CILINDRICAS FRONTAIS PARA DESBASTE - Fresa sem corte ao centro com quebra-apara - Encabadouro cilindrico roscado

SERIE E-F

NORM.

STANDARD Rime

HSS-E Co8 | NR | ≈30° | DIN 1835-D | ~0,3xd



CODE	d1 mm js14	l2 mm	l1 mm	d2 mm h6	Z	Co 8% €
E5/01	8	35	85	10	4	49,38
E5/02	10	42	90	10	4	50,66
E5/03	12	48	95	12	4	56,12
E5/04	14	48	100	12	4	68,34
E5/05	15	54	104	16	4	70,17
E5/06	16	54	104	16	4	70,17
E5/07	18	60	120	16	4	78,28
E5/08	20	62	128	20	4	86,82
E5/09	22	64	130	20	4	97,85
E5/10	24	66	135	25	5	125,00
E5/11	25	70	145	25	5	125,00
E5/12	28	70	145	25	5	146,31
E5/13	30	80	155	25	5	173,24
E5/14	32	80	160	32	5	193,55

Ulteriori diametri si forniscono a richiesta - *Other diameters upon requirements*
Tolleranza effettiva sul diametro: ±0,05 - *Real tolerance on diameter: ±0,05*

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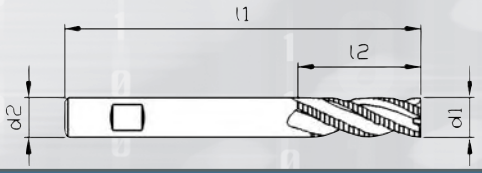
FRESE PER SGROSSATURA • SERIE LUNGA

SERIE E-F

E6

Denti elicoidali con rompitruciolo spogliato completamente rettificato - Attacco Weldon
ROUGHING END MILLS - Helical teeth with form relieved entirely ground chip-breaker - Weldon shank
FRAISES FRONTALES ÉBAUCHE - Denture hélicoïdale avec brise-copeaux profil rond - Queue cylindrique Weldon
SCHAFTFRÄSER - Schrägschneiden mit voll eingeschliffenem Spannbrecher - Weldon Spannfläche
FRESAS CILINDRICAS FRONTALES PARA DESBASTE - Labios helicoidal con arranca de viruta completamente rectificado - Weldon
FRESAS CILINDRICAS FRONTAIS PARA DESBASTE - Fresa sem corte ao centro com quebra-apara - Weldon

HSS-E Co8 | NR | ≈30° | DIN 1835 B | ~0,3xd



NORM. STANDARD Rime

INDEX

CODE	d1 mm js14	l2 mm	l1 mm	d2 mm h6	Z	Co 8% €
E6/01	8	35	85	10	4	45,84
E6/02	10	42	90	10	4	47,02
E6/03	12	48	95	12	4	52,26
E6/04	14	48	100	12	4	64,55
E6/05	15	54	104	16	4	66,82
E6/06	16	54	104	16	4	66,82
E6/07	18	60	120	16	4	73,85
E6/08	20	62	128	20	4	80,87
E6/09	22	64	130	20	4	91,48
E6/10	24	66	135	25	5	118,39
E6/11	25	70	145	25	5	118,39
E6/12	28	70	145	25	5	136,88
E6/13	30	80	155	25	5	161,80
E6/14	32	80	160	32	5	180,76

Ulteriori diametri si forniscono a richiesta - *Other diameters upon requirements*
Tolleranza effettiva sul diametro: ±0,05 - *Real tolerance on diameter: ±0,05*

FRESE PER SGROSSATURA • SERIE NORMALE

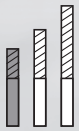
E7

Denti elicoidali con rompitruciolo spogliato completamente rettificato - Codolo conico Morse con foro filettato
ROUGHING END MILLS - Helical teeth with form relieved entirely ground chip-breaker - Morse taper shank
FRAISES FRONTALES ÉBAUCHE - Denture hélicoïdale avec brise-copeaux profil rond - Queue au cône Morse à trou fileté
SCHAFTFRÄSER - Schrägschneiden mit voll eingeschliffenem Spannbrecher - Morsekegelschaft und Anzugsgewinde
FRESAS CILINDRICAS FRONTALES PARA DESBASTE - Labios helicoidal con arranca de viruta completamente rectificado - Mango conico Morse con taladro roscado
FRESAS CILINDRICAS FRONTAIS PARA DESBASTE - Fresa sem corte ao centro com quebra-apara - Encabadouro cone Morse con taladro roscado

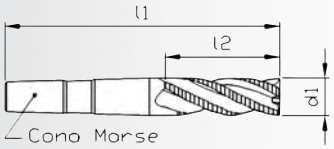
SERIE **E-F**

NORM.

STANDARD Rime



HSS-E Co8 | NR | 30° | DIN 228-A



CODE	d1 mm js14	l2 mm	l1 mm	CM-MK	Z	Co 8% €
E7/01	16	36	115	2	4	65,74
E7/02	18	40	120	2	4	66,93
E7/03	20	45	125	2	4	76,55
E7/04	22	45	125	2	4	84,45
E7/05	24	50	150	3	5	108,55
E7/06	25	50	150	3	5	110,94
E7/07	26	56	155	3	5	119,20
E7/08	28	56	155	3	5	123,50
E7/09	30	63	165	3	5	138,25
E7/10	32	63	188	4	5	162,60
E7/11	34	70	195	4	5	179,45
E7/12	35	70	195	4	6	188,37
E7/13	36	70	195	4	6	193,56
E7/14	38	70	195	4	6	207,10
E7/15	40	70	195	4	6	227,05
E7/16	45	80	205	4	6	333,78
E7/17	50	90	215	4	7	396,80
E7/18	50	90	250	5	7	436,67

Tolleranza effettiva sul diametro: ±0,05 - *Real tolerance on diameter: ±0,05*

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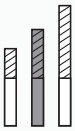
FRESE PER SGROSSATURA • SERIE LUNGA

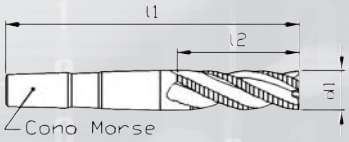
SERIE E-F

E8

Denti elicoidali con rompitruciolo spogliato completamente rettificato - Codolo conico Morse con foro filettato
ROUGHING END MILLS - Helical teeth with form relieved entirely ground chip-breaker - Morse taper shank
FRAISES FRONTALES ÉBAUCHE - Denture hélicoïdale avec brise-copeaux profil rond - Queue au cône Morse à trou fileté
SCHAFTFRÄSER - Schrägschneiden mit voll eingeschliffenem Spannbrecher - Morsekegelschaft und Anzugsgewinde
FRESAS CILINDRICAS FRONTALES PARA DESBASTE - Labios helicoidal con arranca de viruta completamente rectificado - Mango conico Morse con taladro roscado
FRESAS CILINDRICAS FRONTAIS PARA DESBASTE - Fresa sem corte ao centro com quebra-apara - Encabadouro cone Morse



HSS-E Co8 | NR | ≈30° | DIN 228-A | ~0,3xd



NORM. STANDARD Rime

INDEX

CODE	d1 mm js14	l2 mm	l1 mm	CM-MK	Z	Co 8% €
E8/01	16	55	140	2	4	82,60
E8/02	18	60	145	2	4	82,60
E8/03	20	65	148	2	4	92,23
E8/04	22	65	166	3	4	116,45
E8/05	24	70	171	3	5	125,42
E8/06	25	70	171	3	5	129,10
E8/07	26	70	176	3	5	135,83
E8/08	28	80	186	3	5	153,01
E8/09	30	85	210	4	5	190,47
E8/10	32	90	215	4	5	207,65
E8/11	34	90	215	4	5	231,56
E8/12	35	90	215	4	6	248,30
E8/13	36	90	215	4	6	262,51
E8/14	38	95	220	4	6	311,98
E8/15	40	95	220	4	6	355,05
E8/16	45	100	225	4	6	412,12
E8/17	50	110	235	4	7	501,35
E8/18	50	120	275	5	7	579,11

Tolleranza effettiva sul diametro: ±0,05 - *Real tolerance on diameter: ±0,05*

FRESE PER SGROSSATURA • SERIE NORMALE

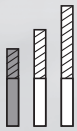
E10

Denti elicoidali con rompitruciolo spogliato completamente rettificato - Due denti frontali taglienti fino al centro - Codolo cilindrico
ROUGHING END MILLS - Helical teeth with form relieved entirely ground chip-breaker - Two end teeth cutting up to the centre - Straight shank
FRAISES FRONTALES ÉBAUCHE - Denture hélicoïdale avec brise-copeaux profil rond - Deux dents bout coupantes jusq'au centre - Queue cylindrique
SCHAFTFRÄSER - Schrägschneiden mit voll eingeschliffenem Spannbrecher - Zwei Schneiden mit Zentrumschnitt - Zylinderschaft
FRESAS CILINDRICAS FRONTALES PARA DESBASTE - Labios helicoidal con arranca de viruta completamente rectificado - Dos labios que cortan hasta el centro - Mango cilindrico
FRESAS CILINDRICAS FRONTAIS PARA DESBASTE - Fresa com corte ao centro com quebra-apara - Encabadouro cilindrico

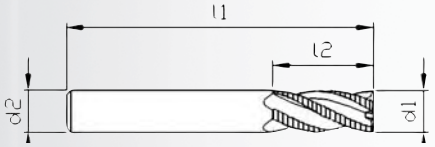
SERIE E-F

NORM.

UNI	8244
DIN	844A
ISO	1641/I



HSS-E Co8 | NR | ≈30° | DIN 1835 A



CODE	d1 mm js14	l2 mm	l1 mm	d2 mm h6	Z	Co 8% €
E10/01	6	13	57	6	3	21,54
E10/02	8	19	69	10	4	33,42
E10/03	10	22	72	10	4	33,42
E10/04	12	26	83	12	4	36,63
E10/05	14	26	83	12	4	39,25
E10/06	15	32	92	16	4	45,73
E10/07	16	32	92	16	4	45,73
E10/08	18	32	92	16	4	48,65
E10/09	20	38	104	20	4	59,25
E10/10	22	38	104	20	4	65,64

Tolleranza effettiva sul diametro: ±0,05 - *Real tolerance on diameter: ±0,05*

INDEX

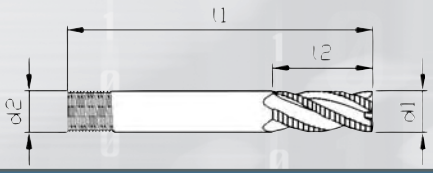
FRESE PER SGROSSATURA • SERIE NORMALE

SERIE E-F

E11

Denti elicoidali con rompitruciolo spogliato completamente rettificato - Due denti frontali taglienti fino al centro - Codolo cilindrico filettato
ROUGHING END MILLS - Helical teeth with form relieved entirely ground chip-breaker - Two end teeth cutting up to the centre - Threaded shank
FRAISES FRONTALES ÉBAUCHE - Denture hélicoïdale avec brise-copeaux profil rond - Deux dents bout coupantes jusq'au centre - Queue cylindrique filetée
SCHAFTFRÄSER - Schrägschneiden mit voll eingeschliffenem Spannbrecher - Zwei Schneiden mit Zentrumschnitt - Zylinderschaft mit Gewinde
FRESAS CILINDRICAS FRONTALES PARA DESBASTE - Labios helicoidal con arranca de viruta completamente rectificado - Dos labios que cortan hasta el centro - Mango cilindrico roscado
FRESAS CILINDRICAS FRONTAIS PARA DESBASTE - Fresa com corte ao centro com quebra-apara - Encabadouro cilindrico roscado

HSS-E Co8 | NR | ≈30° | DIN 1835-D



NORM.	
UNI	8244
DIN	844D
ISO	1641/I

INDEX

CODE	d1 mm js14	l2 mm	l1 mm	d2 mm h6	Z	Co 8% €
E11/01	6	13	57	6	3	25,60
E11/02	8	19	69	10	4	38,98
E11/03	10	22	72	10	4	38,98
E11/04	12	26	83	12	4	43,27
E11/05	14	26	83	12	4	45,53
E11/06	15	32	92	16	4	53,64
E11/07	16	32	92	16	4	53,64
E11/08	18	32	92	16	4	56,11
E11/09	20	38	104	20	4	69,63
E11/10	22	38	104	20	4	75,14
E11/11	24	45	121	25	5	109,53
E11/12	25	45	121	25	5	107,16
E11/13	26	45	121	25	5	115,01
E11/14	28	45	121	25	5	121,41
E11/15	30	45	121	25	5	131,05
E11/16	32	53	133	32	5	153,95

Tolleranza effettiva sul diametro: ±0,05 - *Real tolerance on diameter: ±0,05*

FRESE PER SGROSSATURA • SERIE NORMALE

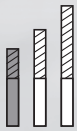
E12

Denti elicoidali con rompitruciolo spogliato completamente rettificato - Due denti frontali taglienti fino al centro - Attacco Weldon
ROUGHING END MILLS - Helical teeth with form relieved entirely ground chip-breaker - Two end teeth cutting up to the centre - Weldon shank
FRAISES FRONTALES ÉBAUCHE - Denture hélicoïdale avec brise-copeaux profil rond - Deux dents bout coupantes jusq'au centre - Queue cylindrique Weldon
SCHAFTFRÄSER - Schrägschneiden mit voll eingeschliffenem Spannbrecher - Zwei Schneiden mit Zentrumschnitt - Weldon-Spannfläche
FRESAS CILINDRICAS FRONTALES PARA DESBASTE - Labios helicoidal con arranca de viruta completamente rectificado - Dos labios que cortan hasta el centro - Mango Weldon
FRESAS CILINDRICAS FRONTAIS PARA DESBASTE - Fresa com corte ao centro com quebra-apara - Encabadouro Weldon

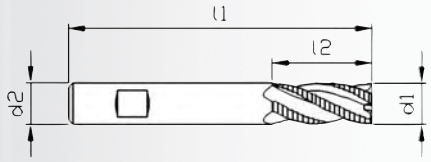
SERIE E-F

NORM.

UNI 8244
DIN 844B
ISO 1641/I



HSS-E Co8 | NR | ≈30° | DIN 1835 B



CODE	d1 mm js14	l2 mm	l1 mm	d2 mm h6	Z	Co 8% €	SUPREME €
E12/00	5	13	57	6	3	24,42	31,83
E12/01	6	13	57	6	3	23,35	30,89
E12/02	7	16	66	10	3	35,66	46,02
E12/03	8	19	69	10	4	34,49	43,92
E12/04	9	19	69	10	4	35,66	44,97
E12/05	10	22	72	10	4	34,49	43,92
E12/06	11	22	79	12	4	39,63	51,30
E12/07	12	26	83	12	4	38,02	49,16
E12/08	13	26	83	12	4	44,55	57,53
E12/09	14	26	83	12	4	42,82	55,80
E12/10	15	32	92	16	4	49,85	68,98
E12/11	16	32	92	16	4	49,85	68,98
E12/12	17	32	92	16	4	54,49	74,83
E12/13	18	32	92	16	4	52,76	73,10
E12/13/1	19	38	104	20	4	64,55	85,10
E12/14	20	38	104	20	4	64,55	84,56
E12/15	22	38	104	20	4	69,20	96,01
E12/16	24	45	121	25	5	102,61	133,96
E12/17	25	45	121	25	5	99,69	131,15
E12/18	26	45	121	25	5	108,27	143,29
E12/19	28	45	121	25	5	113,77	148,67
E12/20	30	45	121	25	5	122,86	157,53
E12/21	32	53	133	32	5	142,94	180,20
E12/22	36	53	133	32	6	162,47	253,69
E12/23	40	63	143	32	6	191,64	283,54

Tolleranza effettiva sul diametro: ±0,05 - *Real tolerance on diameter: ±0,05*

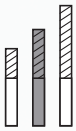
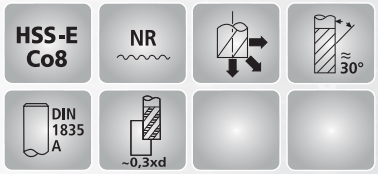
INDEX

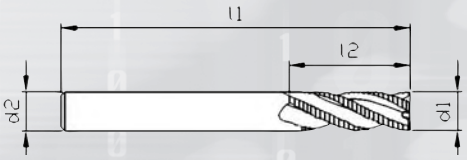
FRESE PER SGROSSATURA • SERIE LUNGA

SERIE E-F

E13

Denti elicoidali con rompitruciolo spogliato completamente rettificato - Due denti frontali taglienti fino al centro - Codolo cilindrico
ROUGHING END MILLS - Helical teeth with form relieved entirely ground chip-breaker - Two end teeth cutting up to the centre - Straight shank
FRAISES FRONTALES ÉBAUCHE - Denture hélicoïdale avec brise-copeaux profil rond - Deux dents bout coupantes jusq'au centre - Queue cylindrique
SCHAFTFRÄSER - Schrägschneiden mit voll eingeschliffenem Spannbrecher - Zwei Schneiden mit Zentrumschnitt - Zylinderschaft
FRESAS CILINDRICAS FRONTALES PARA DESBASTE - Labios helicoidal con arranca de viruta completamente rectificado - Dos labios que cortan hasta el centro - Mango cilindrico
FRESAS CILINDRICAS FRONTAIS PARA DESBASTE - Fresa com corte ao centro com quebra-apara - Encabadouro cilindrico



NORM.

UNI	8245
DIN	844A
ISO	1641/I

INDEX

CODE	d1 mm js14	l2 mm	l1 mm	d2 mm h6	Z	Co 8% €
E13/01	8	38	88	10	4	44,13
E13/02	10	45	95	10	4	45,30
E13/03	12	53	110	12	4	52,26
E13/04	14	53	110	12	4	54,49
E13/05	15	63	123	16	4	63,37
E13/06	16	63	123	16	4	63,37
E13/07	18	63	123	16	4	69,74
E13/08	20	75	141	20	4	79,15
E13/09	22	75	141	20	4	89,74

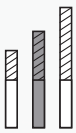
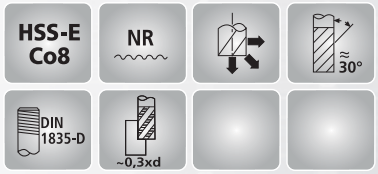
Tolleranza effettiva sul diametro: ±0,05 - *Real tolerance on diameter: ±0,05*

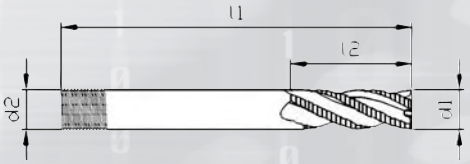
FRESE PER SGROSSATURA • SERIE LUNGA

SERIE E-F

E14

Denti elicoidali con rompitruciolo spogliato completamente rettificato - Due denti frontali taglienti fino al centro - Codolo cilindrico fielttato
ROUGHING END MILLS - Helical teeth with form relieved entirely ground chip-breaker - Two end teeth cutting up to the centre - Threaded shank
FRAISES FRONTALES ÉBAUCHE - Denture hélicoïdale avec brise-copeaux profil rond - Deux dents bout coupantes jusq'au centre - Queue cylindrique filetée
SCHAFTFRÄSER - Schrägschneiden mit voll eingeschliffenem Spannbrecher - Zwei Schneiden mit Zentrumschnitt - Zylinderschaft mit Gewinde
FRESAS CILINDRICAS FRONTALES PARA DESBASTE - Labios helicoidal con arranca de viruta completamente rectificado - Dos labios que cortan hasta el centro - Mango cilindrico roscado
FRESAS CILINDRICAS FRONTAIS PARA DESBASTE - Fresa com corte ao centro com quebra-apara - Encabadouro roscado



NORM.

UNI	8245
DIN	844D
ISO	1641/I

INDEX

CODE	d1 mm js14	l2 mm	l1 mm	d2 mm h6	Z	Co 8% €
E14/01	8	38	88	10	4	50,02
E14/02	10	45	95	10	4	51,84
E14/03	12	53	110	12	4	59,13
E14/04	14	53	110	12	4	62,83
E14/05	15	63	123	16	4	72,66
E14/06	16	63	123	16	4	72,66
E14/07	18	63	123	16	4	78,28
E14/08	20	75	141	20	4	85,64
E14/09	22	75	141	20	4	102,17
E14/10	24	90	166	25	5	140,99
E14/11	25	90	166	25	5	140,99
E14/12	28	90	166	25	5	159,66
E14/13	30	90	166	25	5	177,61
E14/14	32	106	186	32	5	223,05

Tolleranza effettiva sul diametro: ±0,05 - *Real tolerance on diameter: ±0,05*

FRESE PER SGROSSATURA • SERIE LUNGA

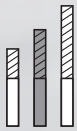
E15

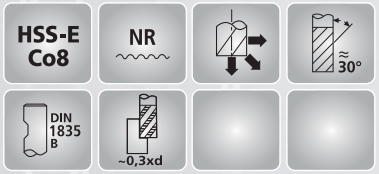
Denti elicoidali con rompitruciolo spogliato completamente rettificato - Due denti frontali taglienti fino al centro - Attacco Weldon
ROUGHING END MILLS - Helical teeth with form relieved entirely ground chip-breaker - Two end teeth cutting up to the centre - Weldon shank
FRAISES FRONTALES ÉBAUCHE - Denture hélicoïdale avec brise-copeaux profil rond - Deux dents bout coupantes jusq'au centre - Queue cylindrique Weldon
SCHAFTFRÄSER - Schrägschneiden mit voll eingeschliffenem Spannbrecher - Zwei Schneiden mit Zentrumschnitt - Weldon Spannfläche
FRESAS CILINDRICAS FRONTALES PARA DESBASTE - Labios helicoidal con arranca de viruta completamente rectificado - Dos labios que cortan hasta el centro - Mango Weldon
FRESAS CILINDRICAS FRONTAIS PARA DESBASTE - Fresa com corte ao centro com quebra-apara - Encabadouro Weldon

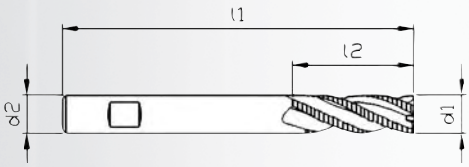
SERIE E-F

NORM.

UNI 8245
DIN 844B
ISO 1641/II







CODE	d1 mm js14	l2 mm	l1 mm	d2 mm h6	Z	Co 8% €	SUPREME €
E15/00	6	24	68	6	3	32,56	39,71
E15/00/1	7	30	80	10	3	48,20	61,46
E15/01	8	38	88	10	4	46,48	59,78
E15/01/1	9	45	95	10	4	49,38	62,62
E15/02	10	45	95	10	4	47,02	60,41
E15/02/1	11	53	110	12	4	58,05	72,41
E15/03	12	53	110	12	4	55,16	69,51
E15/03/1	13	53	110	12	4	60,98	77,09
E15/04	14	53	110	12	4	57,42	74,18
E15/05	15	63	123	16	4	66,82	88,55
E15/06	16	63	123	16	4	66,82	88,55
E15/06/1	17	63	123	16	4	77,42	104,66
E15/07	18	63	123	16	4	73,31	100,67
E15/08	20	75	141	20	4	83,79	111,05
E15/09	22	75	141	20	4	95,04	140,34
E15/10	24	90	166	25	5	131,91	201,87
E15/11	25	90	166	25	5	131,91	201,87
E15/12	28	90	166	25	5	149,67	235,18
E15/13	30	90	166	25	5	167,30	252,45
E15/14	32	106	186	32	5	204,44	304,12
E15/15	36	106	186	32	6	237,30	336,04
E15/16	40	125	205	32	6	286,00	393,94

Tolleranza effettiva sul diametro: ±0,05 - *Real tolerance on diameter: ±0,05*

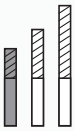
INDEX

FRESE PER SGROSSATURA • SERIE NORMALE

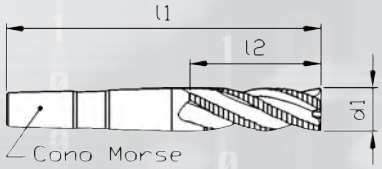
SERIE E-F

E16

Denti elicoidali con rompitruciolo spogliato completamente rettificato - Due denti frontali taglienti fino al centro - Codolo conico Morse con foro filettato
ROUGHING END MILLS - Helical teeth with form relieved entirely ground chip-breaker - Two end teeth cutting up to the centre - Morse taper shank
FRAISES FRONTALES ÉBAUCHE - Denture hélicoïdale avec brise-copeaux profil rond - Deux dents bout coupantes jusq'au centre - Queue au cône Morse à trou fileté
SCHAFTFRÄSER - Schrägschneiden mit voll eingeschliffenem Spannbrecher - Zwei Schneiden mit Zentrumschnitt - Morsekegelschaft und Anzugsgewinde
FRESAS CILINDRICAS FRONTALES PARA DESBASTE - Labios helicoidal con arranca de viruta completamente rectificado - Dos labios que cortan hasta el centro - Mango conico Morse con taladro roscado
FRESAS CILINDRICAS FRONTAIS PARA DESBASTE - Fresa com corte ao centro com quebra-apara - Encabadouro cone Morse



HSS-E Co8 | NR | DIN 228-A | ≈30°



NORM.

UNI 8250-8251
DIN 845B
ISO 1641/II

INDEX

CODE	d1 mm js14	l2 mm	l1 mm	CM-MK	Z	Co 8% €	SUPREME €
E16/01	16	32	117	2	4	62,17	88,01
E16/02	18	32	117	2	4	62,17	90,82
E16/03	20	38	140	3	4	83,79	139,80
E16/04	22	38	140	3	4	89,86	145,54
E16/05	24	45	147	3	5	99,47	154,73
E16/06	25	45	147	3	5	103,69	167,91
E16/07	26	45	147	3	5	110,60	175,82
E16/08	28	45	147	3	5	118,65	208,64
E16/09	30	53	155	3	5	131,53	220,87
E16/10	32	53	178	4	5	151,91	281,13
E16/11	34	53	178	4	5	164,47	301,84
E16/12	35	53	178	4	6	170,64	307,79
E16/13	36	53	178	4	6	175,82	312,63
E16/14	38	63	188	4	6	197,31	339,52
E16/15	40	63	188	4	6	220,32	360,55
E16/16	45	63	188	4	6	308,67	450,44
E16/17	50	75	200	4	7	358,90	500,13

Tolleranza effettiva sul diametro: ±0,05 - *Real tolerance on diameter: ±0,05*

FRESE PER SGROSSATURA • SERIE LUNGA

E17

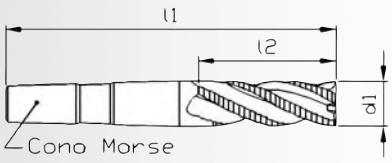
Denti elicoidali con rompitruciolo spogliato completamente rettificato - Due denti frontali taglienti fino al centro - Codolo conico Morse con foro filettato
ROUGHING END MILLS - Helical teeth with form relieved entirely ground chip-breaker - Two end teeth cutting up to the centre - Morse taper shank
FRAISES FRONTALES ÉBAUCHE - Denture hélicoïdale avec brise-copeaux profil rond - Deux dents bout coupantes jusq'au centre - Queue au cône Morse à trou fileté
SCHAFTFRÄSER - Schrägschneiden mit voll eingeschliffenem Spannbrecher - Zwei Schneiden mit Zentrumschnitt - Morsekegelschaft und Anzugsgewinde
FRESAS CILINDRICAS FRONTALES PARA DESBASTE - Labios helicoidal con arranca de viruta - Dos labios que cortan hasta el centro - Mango conico Morse con taladro roscado
FRESAS CILINDRICAS FRONTALES PARA DESBASTE - Fresa com corte ao centro com quebra-apara - Encabadouro cone Morse

SERIE E-F

NORM.

UNI 8250-8251
DIN 845B
ISO 1641/II

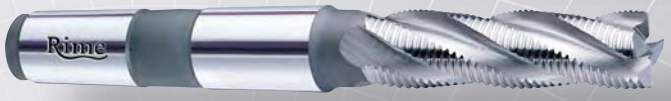
HSS-E Co8 | NR | ≈30° | DIN 228-A | ~0,3xd



CODE	d1 mm js14	l2 mm	l1 mm	CM-MK	Z	Co 8% €	SUPREME €
E17/01	16	63	148	2	4	84,45	111,59
E17/02	18	63	148	2	4	84,45	116,12
E17/03	20	75	177	3	4	120,67	191,49
E17/04	22	75	177	3	4	124,88	205,86
E17/05	24	90	192	3	5	153,21	237,01
E17/06	25	90	192	3	5	157,97	241,54
E17/07	26	90	192	3	5	165,91	247,31
E17/08	28	90	192	3	5	175,71	256,67
E17/09	30	90	192	3	5	186,84	273,64
E17/10	32	106	231	4	5	233,54	363,86
E17/11	34	106	231	4	5	255,69	381,82
E17/12	35	106	231	4	6	267,81	404,73
E17/13	36	106	231	4	6	276,07	418,28
E17/14	38	125	250	4	6	331,47	471,71
E17/15	40	125	250	4	6	363,75	500,25
E17/16	45	125	250	4	6	434,58	583,30
E17/17	50	150	275	4	7	541,77	680,02

Tolleranza effettiva sul diametro: ±0,05 - *Real tolerance on diameter: ±0,05*

INDEX

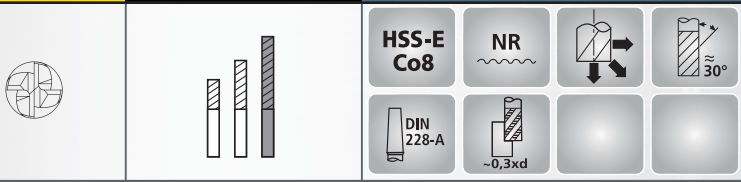


FRESE PER SGROSSATURA • SERIE EXTRA-LUNGA

SERIE E-F

E18

Denti elicoidali con rompitruciolo spogliato completamente rettificato - Due denti frontali taglienti fino al centro - Codolo conico Morse con foro filettato
ROUGHING END MILLS - Helical teeth with form relieved entirely ground chip-breaker - Two end teeth cutting up to the centre - Morse taper shank
FRAISES FRONTALES ÉBAUCHE - Denture hélicoïdale avec brise-copeaux profil rond - Deux dents bout coupantes jusq'au centre - Queue au cône Morse à trou fileté
SCHAFTFRÄSER - Schrägschneiden mit voll eingeschliffenem Spannbrecher - Zwei Schneiden mit Zentrumschnitt - Morsekegelschaft und Anzugsgewinde
FRESAS CILINDRICAS FRONTALES PARA DESBASTE - Labios helicoidal con arranca de viruta completamente rectificado - Dos labios que cortan hasta el centro - Mango conico Morse con taladro roscado
FRESAS CILINDRICAS FRONTALES PARA DESBASTE - Fresa com corte ao centro com quebra-apara - Encabadouro cone Morse con taladro roscado



NORM.

STANDARD Rime

INDEX

CODE	d1 mm js14	l2 mm	l1 mm	CM-MK	Z	Co 8% €
E18/03	20	110	212	3	4	157,97
E18/04	22	110	212	3	4	162,84
E18/05	24	125	227	3	5	202,08
E18/06	25	125	250	4	5	249,11
E18/07	26	125	250	4	5	269,78
E18/08	28	135	260	4	5	282,68
E18/09	30	140	265	4	5	307,24
E18/10	32	150	275	4	6	329,05
E18/11	34	150	275	4	6	356,37
E18/12	35	150	275	4	6	376,09
E18/13	36	150	275	4	6	388,54
E18/14	38	180	305	4	6	466,97
E18/15	40	180	305	4	6	510,04
E18/16	45	190	315	4	7	639,05
E18/17	50	200	360	5	7	921,72

Tolleranza effettiva sul diametro: ±0,05 - *Real tolerance on diameter: ±0,05*

FRESE PER SEMIFINITURA • SERIE NORMALE

F0

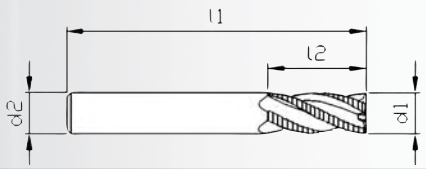
Denti elicoidali con rompitruciolo spogliato completamente rettificato - Codolo cilindrico
ROUGHING AND SEMIFINISHING END MILLS - Helical teeth with form relieved entirely ground chip-breaker - Straight shank
FRAISES FRONTALES ÉBAUCHE - SEMI FINITION - Denture hélicoïdale avec brise-copeaux profil plat - Queue cylindrique
SCHAFTFRÄSER - Schrägschneiden mit voll eingeschliffenem Spannbrecher - Zylinderschaft
FRESAS CILINDRICAS FRONTALES PARA SEMIACABADO - Labios helicoidal con arranca de viruta completamente rectificado - Mango cilindrico
FRESAS CILINDRICAS FRONTAIS PARA SEMI ACABAMENTO - Fresa sem corte ao centro com quebra-apara - Encabadouro cilindrico

SERIE **E-F**

NORM.

STANDARD Rime

HSS-E Co8 | NF | ≈30° | DIN 1835 A



CODE	d1 mm js14	l2 mm	l1 mm	d2 mm h6	Z	Co 8% €
F0/01	6	16	60	6	3	35,46
F0/02	8	22	64	10	4	36,63
F0/03	10	28	70	10	4	35,99
F0/04	12	32	80	12	4	38,88
F0/05	14	32	80	12	4	41,63
F0/06	15	36	90	16	4	46,92
F0/07	16	36	90	16	4	46,92
F0/08	18	40	100	16	4	54,49
F0/09	20	45	110	20	4	63,37
F0/10	22	45	110	20	4	70,39

Tolleranza effettiva sul diametro: ±0,05 - *Real tolerance on diameter: ±0,05*

INDEX

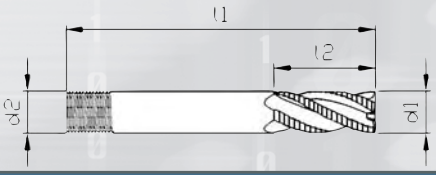
FRESE PER SEMIFINITURA • SERIE NORMALE

SERIE E-F

F1

Denti elicoidali con rompitruciolo spogliato completamente rettificato - Codolo cilindrico filettato
ROUGHING AND SEMIFINISHING END MILLS - Helical teeth with form relieved entirely ground chip-breaker - Threaded shank
FRAISES FRONTALES ÉBAUCHE - SEMI FINITION - Denture hélicoïdale avec brise-copeaux profil plat - Queue cylindrique filetée
SCHAFTFRÄSER - Schrägschneiden mit voll eingeschliffenem Spannbrecher - Zylinderschaft mit Gewinde
FRESAS CILINDRICAS FRONTALES PARA SEMIACABADO - Labios helicoidal con arranca de viruta completamente rectificado - Mango cilindrico roscado
FRESAS CILINDRICAS FRONTAIS PARA SEMI ACABAMENTO - Fresa sem corte ao centro com quebra-apara - Encabadouro cilindrico roscado

HSS-E Co8 | NF | 30° | DIN 1835-D



NORM.

INDEX

CODE	d1 mm js14	l2 mm	l1 mm	d2 mm h6	Z	Co 8% €
F1/01	6	16	60	6	3	27,43
F1/02	8	22	64	10	4	42,73
F1/03	10	28	70	10	4	41,55
F1/04	12	32	80	12	4	45,10
F1/05	14	32	80	12	4	48,01
F1/06	15	36	90	16	4	54,82
F1/07	16	36	90	16	4	54,82
F1/08	18	40	100	16	4	65,30
F1/09	20	45	110	20	4	73,95
F1/10	22	45	110	20	4	80,67
F1/11	24	45	120	25	5	96,66
F1/12	25	50	125	25	5	105,96
F1/13	26	50	125	25	5	116,25
F1/14	28	50	125	25	5	120,74
F1/15	30	63	135	25	5	139,92
F1/16	32	63	145	32	5	148,23

Tolleranza effettiva sul diametro: ±0,05 - *Real tolerance on diameter: ±0,05*

FRESE PER SEMIFINITURA • SERIE NORMALE

F2

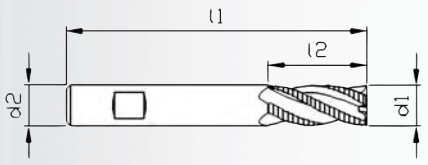
Denti elicoidali con rompitruciolo spogliato completamente rettificato - Attacco Weldon
ROUGHING AND SEMIFINISHING END MILLS - Helical teeth with form relieved entirely ground chip-breaker - Weldon shank
FRAISES FRONTALES ÉBAUCHE - SEMI FINITION - Denture hélicoïdale avec brise-copeaux profil plat - Queue cylindrique Weldon
SCHAFTFRÄSER - Schrägschneiden mit voll eingeschliffenem Spannbrecher - Weldon Spannfläche
FRESAS CILINDRICAS FRONTALES PARA SEMIACABADO - Labios helicoidal con arranca de viruta completamente rectificado - Mango Weldon
FRESAS CILINDRICAS FRONTAIS PARA SEMI ACABAMENTO - Fresa sem corte ao centro com quebra-apara - Encabadouro Weldon

SERIE E-F

NORM.

STANDARD Rime

HSS-E Co8 | NF | ≈30° | DIN 1835 B



CODE	d1 mm e8	l2 mm	l1 mm	d2 mm h6	Z	Co 8% €
F2/01	6	16	60	6	3	24,95
F2/02	8	22	64	10	4	38,88
F2/03	10	28	70	10	4	38,34
F2/04	12	32	80	12	4	41,77
F2/05	14	32	80	12	4	44,55
F2/06	15	36	90	16	4	51,04
F2/07	16	36	90	16	4	51,04
F2/08	18	40	100	16	4	68,01
F2/09	20	45	110	20	4	68,01
F2/10	22	45	110	20	4	73,85
F2/11	24	45	120	25	5	89,74
F2/12	25	50	125	25	5	97,97
F2/13	26	50	125	25	5	108,27
F2/14	28	50	125	25	5	111,98
F2/15	30	63	135	25	5	130,15
F2/16	32	63	145	32	5	149,67

Ulteriori diametri si forniscono a richiesta - *Other diameters upon requirements*
Tolleranza effettiva sul diametro: ±0,05 - *Real tolerance on diameter: ±0,05*

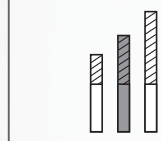
INDEX

FRESE PER SEMIFINITURA • SERIE LUNGA

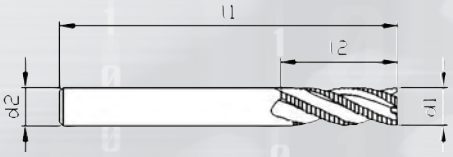
SERIE E-F

F4

Denti elicoidali con rompitruciolo spogliato completamente rettificato - Codolo cilindrico
ROUGHING AND SEMIFINISHING END MILLS - Helical teeth with form relieved entirely ground chip-breaker - Straight shank
FRAISES FRONTALES ÉBAUCHE - SEMI FINITION - Denture hélicoïdale avec brise-copeaux profil plat - Queue cylindrique
SCHAFTFRÄSER - Schrägschneiden mit voll eingeschliffenem Spannbrecher - Zylinderschaft
FRESAS CILINDRICAS FRONTALES PARA SEMIACABADO - Labios helicoidal con arranca de viruta completamente rectificado - Mango cilindrico
FRESAS CILINDRICAS FRONTAIS PARA SEMI ACABAMENTO - Fresa sem corte ao centro com quebra-apara - Encabadouro cilindrico



HSS-E Co8 | NF | ≈30° | DIN 1835 A | ~0,3xd

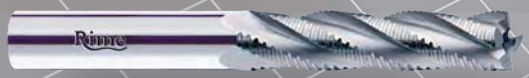


NORM.

INDEX

CODE	d1 mm js14	l2 mm	l1 mm	d2 mm h6	Z	Co 8% €
F4/01	8	35	85	10	4	43,60
F4/02	10	42	90	10	4	44,77
F4/03	12	48	95	12	4	49,92
F4/04	14	48	100	12	4	60,44
F4/05	15	54	104	16	4	62,17
F4/06	16	54	104	16	4	62,17
F4/07	18	60	120	16	4	69,20
F4/08	20	62	128	20	4	75,04
F4/09	22	64	130	20	4	85,64

Tolleranza effettiva sul diametro: ±0,05 - *Real tolerance on diameter: ±0,05*

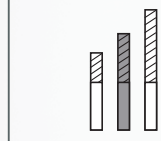


FRESE PER SEMIFINITURA • SERIE LUNGA

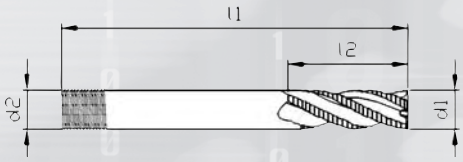
SERIE E-F

F5

Denti elicoidali con rompitruciolo spogliato completamente rettificato - Codolo cilindrico filettato
ROUGHING AND SEMIFINISHING END MILLS - Helical teeth with form relieved entirely ground chip-breaker - Straight shank
FRAISES FRONTALES ÉBAUCHE - SEMI FINITION - Denture hélicoïdale avec brise-copeaux profil plat - Queue cylindrique
SCHAFTFRÄSER - Schrägschneiden mit voll eingeschliffenem Spannbrecher - Zylinderschaft
FRESAS CILINDRICAS FRONTALES PARA SEMIACABADO - Labios helicoidal con arranca de viruta completamente rectificado - Mango cilindrico roscado
FRESAS CILINDRICAS FRONTAIS PARA SEMI ACABAMENTO - Fresa sem corte ao centro com quebra-apara - Encabadouro cilindrico roscado



HSS-E Co8 | NF | ≈30° | DIN 1835-D | ~0,3xd



NORM.

INDEX

CODE	d1 mm js14	l2 mm	l1 mm	d2 mm h6	Z	Co 8% €
F5/01	8	35	85	10	4	49,38
F5/02	10	42	90	10	4	50,66
F5/03	12	48	95	12	4	56,12
F5/04	14	48	100	12	4	68,34
F5/05	15	54	104	16	4	70,17
F5/06	16	54	104	16	4	70,17
F5/07	18	60	120	16	4	78,28
F5/08	20	62	128	20	4	86,82
F5/09	22	64	130	20	4	98,51
F5/10	24	66	135	25	5	125,00
F5/11	25	70	145	25	5	125,00
F5/12	28	70	145	25	5	146,31
F5/13	30	80	155	25	5	173,24
F5/14	32	80	160	32	5	193,55

Tolleranza effettiva sul diametro: ±0,05 - *Real tolerance on diameter: ±0,05*

FRESE PER SEMIFINITURA • SERIE LUNGA

F6

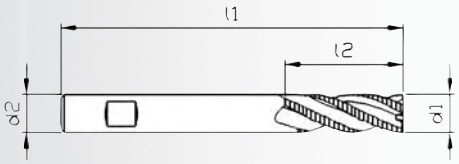
Denti elicoidali con rompitruciolo spogliato completamente rettificato - Attacco Weldon
ROUGHING AND SEMIFINISHING END MILLS - Helical teeth with form relieved entirely ground chip-breaker - Weldon shank
FRAISES FRONTALES ÉBAUCHE - SEMI FINITION - Denture hélicoïdale avec brise-copeaux profil plat -Queue cylindrique Weldon
SCHAFTFRÄSER - Schrägschneiden mit voll eingeschliffenem Spannbrecher - Weldon Spannfläche
FRESAS CILINDRICAS FRONTALES PARA SEMIACABADO - Labios helicoidal con arranca de viruta completamente rectificado - Mango Weldon
FRESAS CILINDRICAS FRONTAIS PARA SEMI ACABAMENTO - Fresa sem corte ao centro com quebra-apara - Encabadouro Weldon

SERIE **E-F**

NORM.

STANDARD Rime

HSS-E Co8 | NF | ≈30° | DIN 1835 B | ~0,3xd



CODE	d1 mm js14	l2 mm	l1 mm	d2 mm h6	Z	Co 8% €
F6/01	8	35	85	10	4	45,84
F6/02	10	42	90	10	4	47,02
F6/03	12	48	95	12	4	52,26
F6/04	14	48	100	12	4	64,55
F6/05	15	54	104	16	4	66,82
F6/06	16	54	104	16	4	66,82
F6/07	18	60	120	16	4	73,85
F6/08	20	62	128	20	4	80,87
F6/09	22	64	130	20	4	91,48
F6/10	24	66	135	25	5	118,39
F6/11	25	70	145	25	5	118,39
F6/12	28	70	145	25	5	136,88
F6/13	30	80	155	25	5	161,80
F6/14	32	80	160	32	5	180,76

Tolleranza effettiva sul diametro: ±0,05 - *Real tolerance on diameter: ±0,05*

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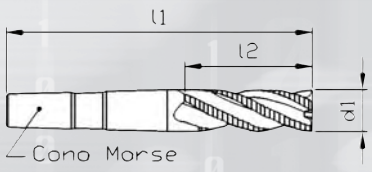
FRESE PER SEMIFINITURA • SERIE NORMALE

SERIE E-F

F7

Denti elicoidali con rompitruciolo spogliato completamente rettificato - Codolo conico Morse con foro filettato
ROUGHING AND SEMIFINISHING END MILLS - Helical teeth with form relieved entirely ground chip-breaker - Morse taper shank
FRAISES FRONTALES ÉBAUCHE - SEMI FINITION - Denture hélicoïdale avec brise-copeaux profil plat - Queue au cône Morse à trou fileté
SCHAFTFRÄSER - Schrägschneiden mit voll eingeschliffenem Spannbrecher - Morsekegelschaft und Anzugsgewinde
FRESAS CILINDRICAS FRONTALES PARA SEMIACABADO - Labios helicoidal con arranca de viruta completamente rectificado - Mango conico Morse con taladro roscado
FRESAS CILINDRICAS FRONTAIS PARA SEMI ACABAMENTO - Fresa sem corte ao centro com quebra-apara - Encabadouro cone Morse con taladro roscado

HSS-E Co8 | NF | 30° | DIN 228-A

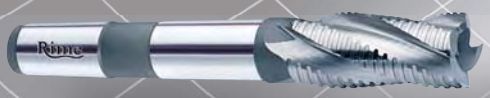


NORM.

CODE	d1 mm js14	l2 mm	l1 mm	CM-MK	Z	Co 8% €
F7/01	16	36	115	2	4	65,74
F7/02	18	40	120	2	4	73,64
F7/03	20	45	125	2	4	76,55
F7/04	22	45	125	2	4	84,45
F7/05	24	50	150	3	5	108,55
F7/06	25	50	150	3	5	110,94
F7/07	26	56	155	3	5	119,20
F7/08	28	56	155	3	5	123,50
F7/09	30	63	165	3	5	138,25
F7/10	32	63	188	4	5	162,60
F7/11	34	70	195	4	5	179,45
F7/12	35	70	195	4	6	188,37
F7/13	36	70	195	4	6	193,56
F7/14	38	70	195	4	6	207,10
F7/15	40	70	195	4	6	227,05
F7/16	45	80	205	4	6	333,78
F7/17	50	90	215	4	7	396,80

Tolleranza effettiva sul diametro: ±0,05 - *Real tolerance on diameter: ±0,05*

INDEX



FRESE PER SEMIFINITURA • SERIE LUNGA

F8

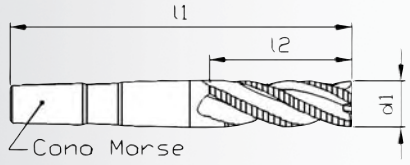
Denti elicoidali con rompitruciolo spogliato completamente rettificato - Codolo conico Morse con foro filettato
ROUGHING AND SEMIFINISHING END MILLS - Helical teeth with form relieved entirely ground chip-breaker - Morse taper shank
FRAISES FRONTALES ÉBAUCHE - SEMI FINITION - Denture hélicoïdale avec brise-copeaux profil plat - Queue au cône Morse à trou fileté
SCHAFTFRÄSER - Schrägschneiden mit voll eingeschliffenem Spannbrecher - Morsekegelschaft und Anzugsgewinde
FRESAS CILINDRICAS FRONTALES PARA SEMIACABADO - Labios helicoidal con arranca de viruta completamente rectificado - Mango conico Morse taladro roscado
FRESAS CILINDRICAS FRONTAIS PARA SEMIACABAMENTO - Fresa sem corte ao centro com quebra-apara - Encabadouro cone Morse roscado

SERIE **E-F**

NORM.

STANDARD Rime

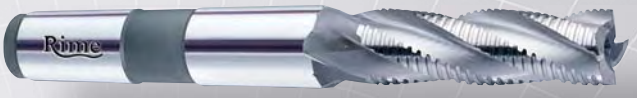
HSS-E Co8 | NF | ≈ 30° | DIN 228-A | ~0,3xd



CODE	d1 mm js14	l2 mm	l1 mm	CM-MK	Z	Co 8% €
F8/01	16	55	140	2	4	82,60
F8/02	18	60	145	2	4	82,60
F8/03	20	65	148	2	4	92,23
F8/04	22	65	166	3	4	116,45
F8/05	24	70	171	3	5	125,42
F8/06	25	70	171	3	5	129,10
F8/07	26	70	176	3	5	135,83
F8/08	28	80	186	3	5	153,01
F8/09	30	85	210	4	5	190,47
F8/10	32	90	215	4	5	207,65
F8/11	34	90	215	4	5	231,56
F8/12	35	90	215	4	6	248,30
F8/13	36	90	215	4	6	262,51
F8/14	38	95	220	4	6	311,98
F8/15	40	95	220	4	6	355,05
F8/16	45	100	225	4	6	412,12
F8/17	50	110	235	4	7	501,35

Tolleranza effettiva sul diametro: ±0,05 - *Real tolerance on diameter: ±0,05*

INDEX



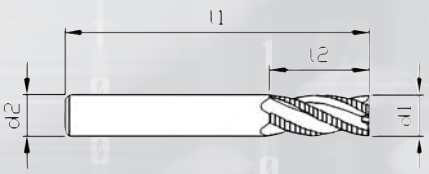
FRESE PER SEMIFINITURA • SERIE NORMALE

SERIE E-F

F10

Denti elicoidali con rompitruciolo spogliato completamente rettificato - Due denti frontali taglienti fino al centro - Codolo cilindrico
ROUGHING AND SEMIFINISHING END MILLS - Helical teeth with form relieved entirely ground chip-breaker - Two end teeth cutting up to the centre - Straight shank
FRAISES FRONTALES ÉBAUCHE - SEMI FINITION - Denture hélicoïdale avec brise-copeaux profil plat - Deux dents bout coupantes jusq'au centre - Queue cylindrique
SCHAFTFRÄSER - Schrägschneiden mit voll eingeschliffenem Spannbrecher - Zwei Schneiden mit Zentrumschnitt - Zylinderschaft
FRESAS CILINDRICAS FRONTALES PARA SEMIACABADO - Labios helicoidal con arranca de viruta completamente rectificado - Dos labios que cortan hasta el centro - Mango cilindrico
FRESAS CILINDRICAS FRONTALES PARA SEMIACABAMENTO - Fresa com corte ao centro com quebra-apara - Encabadouro cilindrico

HSS-E Co8 | NF | ≈ 30° | DIN 1835 A



NORM.

UNI	8244
DIN	844A
ISO	1641/II

INDEX

CODE	d1 mm js14	l2 mm	l1 mm	d2 mm h6	Z	Co 8% €
F10/01	6	13	57	6	3	21,54
F10/02	8	19	69	10	4	33,42
F10/03	10	22	72	10	4	33,42
F10/04	12	26	83	12	4	36,63
F10/05	14	26	83	12	4	39,25
F10/06	15	32	92	16	4	45,73
F10/07	16	32	92	16	4	45,73
F10/08	18	32	92	16	4	48,65
F10/09	20	38	104	20	4	59,25
F10/10	22	38	104	20	4	65,64

Tolleranza effettiva sul diametro: ±0,05 - *Real tolerance on diameter: ±0,05*

FRESE PER SEMIFINITURA • SERIE NORMALE

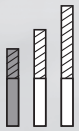
F11

Denti elicoidali con rompitruciolo spogliato completamente rettificato - Due denti frontali taglienti fino al centro - Codolo cilindrico filettato
ROUGHING AND SEMIFINISHING END MILLS - Helical teeth with form relieved entirely ground chip-breaker - Two end teeth cutting up to the centre -Threaded shank
FRAISES FRONTALES ÉBAUCHE - SEMI FINITION - Denture hélicoïdale avec brise-copeaux profil plat -Deux dents bout coupantes jusq'au centre - Queue cylindrique filetée
SCHAFTFRÄSER - Schrägschneiden mit voll eingeschliffenem Spannbrecher - Zwei Schneiden mit Zentrumschnitt - Zylinderschaft mit Gewinde
FRESAS CILINDRICAS FRONTALES PARA SEMIACABADO - Labios helicoidal con arranca de viruta completamente rectificado - Dos labios que cortan hasta el centro - Mango cilindrico roscado
FRESAS CILINDRICAS FRONTAIS PARA SEMIACABAMENTO - Fresa com corte ao centro com quebra-apara - Encabadouro cilindrico roscado

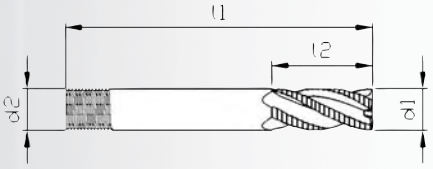
SERIE **E-F**

NORM.

UNI	8244
DIN	844D
ISO	1641/II



HSS-E Co8 | NF | ≈30° | DIN 1835-D



CODE	d1 mm js14	l2 mm	l1 mm	d2 mm h6	Z	Co 8% €
F11/01	6	13	57	6	3	25,60
F11/02	8	19	69	10	4	39,63
F11/03	10	22	72	10	4	39,63
F11/04	12	26	83	12	4	42,73
F11/05	14	26	83	12	4	45,53
F11/06	15	32	92	16	4	53,64
F11/07	16	32	92	16	4	53,64
F11/08	18	32	92	16	4	56,11
F11/09	20	38	104	20	4	69,63
F11/10	22	38	104	20	4	75,14
F11/11	24	45	121	25	5	110,28
F11/12	25	45	121	25	5	107,16
F11/13	26	45	121	25	5	115,69
F11/14	28	45	121	25	5	121,30
F11/15	30	45	121	25	5	131,05
F11/16	32	53	133	32	5	153,95

Tolleranza effettiva sul diametro: ±0,05 - *Real tolerance on diameter: ±0,05*

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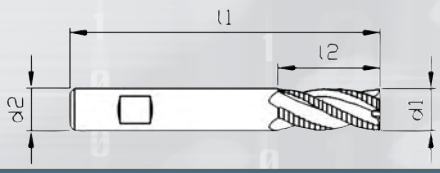
FRESE PER SEMIFINITURA • SERIE NORMALE

SERIE E-F

F12

Denti elicoidali con rompitruciolo spogliato completamente rettificato - Due denti frontali taglienti fino al centro - Attacco Weldon
ROUGHING AND SEMIFINISHING END MILLS - Helical teeth with form relieved entirely ground chip-breaker - Two end teeth cutting up to the centre - Weldon shank
FRAISES FRONTALES ÉBAUCHE - SEMI FINITION - Denture hélicoïdale avec brise-copeaux profil plat - Deux dents bout coupantes jusq'au centre - Queue cylindrique Weldon
SCHAFTFRÄSER - Schrägschneiden mit voll eingeschliffenem Spannbrecher - Zwei Schneiden mit Zentrumschnitt - Weldon Spannfläche
FRESAS CILINDRICAS FRONTALES PARA SEMIACABADO - Labios helicoidal con arranca de viruta completamente rectificado - Dos labios que cortan hasta el centro - Mango Weldon
FRESAS CILINDRICAS FRONTAIS PARA SEMIACABAMENTO - Fresa com corte ao centro com quebra-apara - Encabadouro Weldon

HSS-E Co8 | NF | ≈30° | DIN 1835 B



NORM.

UNI 8244
DIN 844B
ISO 1641/II

INDEX

CODE	d1 mm js14	l2 mm	l1 mm	d2 mm h6	Z	Co 8% €	SUPREME €
F12/01	6	13	57	6	3	23,35	30,89
F12/02	7	16	66	10	3	35,66	46,02
F12/03	8	19	69	10	4	34,49	43,92
F12/04	9	19	69	10	4	35,66	44,97
F12/05	10	22	72	10	4	34,49	43,92
F12/06	11	22	79	12	4	39,63	51,30
F12/07	12	26	83	12	4	38,02	49,16
F12/08	13	26	83	12	4	44,55	57,53
F12/09	14	26	83	12	4	42,82	55,80
F12/10	15	32	92	16	4	49,85	68,98
F12/11	16	32	92	16	4	49,85	68,98
F12/12	17	32	92	16	4	54,49	74,83
F12/13	18	32	92	16	4	52,76	73,10
F12/13/1	19	38	104	20	4	64,55	85,10
F12/14	20	38	104	20	4	64,55	84,56
F12/15	22	38	104	20	4	69,20	96,01
F12/16	24	45	121	25	5	102,61	133,96
F12/17	25	45	121	25	5	99,69	131,15
F12/18	26	45	121	25	5	108,27	143,29
F12/19	28	45	121	25	5	113,77	148,67
F12/20	30	45	121	25	5	122,86	157,53
F12/21	32	53	133	32	5	142,94	180,20
F12/22	36	53	133	32	6	162,47	253,69
F12/23	40	63	143	32	6	191,64	283,54

Tolleranza effettiva sul diametro: ±0,05 - *Real tolerance on diameter: ±0,05*

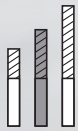
FRESE PER SEMIFINITURA • SERIE LUNGA

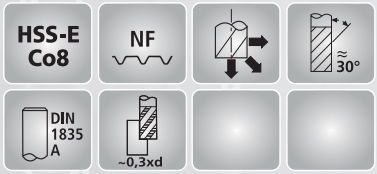
F13

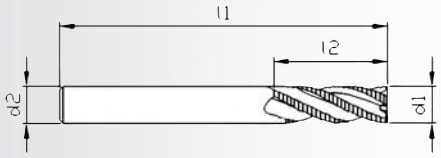
Denti elicoidali con rompitruciolo spogliato completamente rettificato - Due denti frontali taglienti fino al centro - Codolo cilindrico
ROUGHING AND SEMIFINISHING END MILLS - Helical teeth with form relieved entirely ground chip-breaker - Two end teeth cutting up to the centre - Straight shank
FRAISES FRONTALES ÉBAUCHE - SEMI FINITION - Denture hélicoïdale avec brise-copeaux profil plat - Deux dents bout coupantes jusq'au centre - Queue cylindrique
SCHAFTFRÄSER - Schrägschneiden mit voll eingeschliffenem Spannbrecher - Zwei Schneiden mit Zentrumschnitt - Zylinderschaft
FRESAS CILINDRICAS FRONTALES PARA SEMIACABADO - Labios helicoidal con arranca de viruta completamente rectificado - Dos labios que cortan hasta el centro - Mango cilindrico
FRESAS CILINDRICAS FRONTAIS PARA SEMIACABAMENTO - Fresa com corte ao centro com quebra-apara - Encabadouro cilindrico

SERIE E-F

NORM.	
UNI	8254
DIN	844A
ISO	1641/I







INDEX

CODE	d1 mm js14	l2 mm	l1 mm	d2 mm h6	Z	Co 8% €
F13/01	8	38	88	10	4	44,13
F13/02	10	45	95	10	4	45,30
F13/03	12	53	110	12	4	52,26
F13/04	14	53	110	12	4	54,49
F13/05	15	63	123	16	4	63,37
F13/06	16	63	123	16	4	63,37
F13/07	18	63	123	16	4	69,74
F13/08	20	75	141	20	4	79,15
F13/09	22	75	141	20	4	89,74

Tolleranza effettiva sul diametro: ±0,05 - *Real tolerance on diameter: ±0,05*

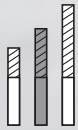
FRESE PER SEMIFINITURA • SERIE LUNGA

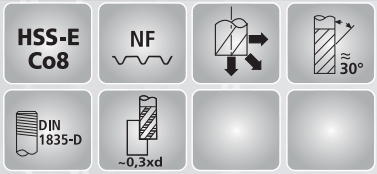
F14

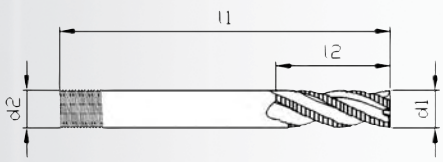
Denti elicoidali con rompitruciolo spogliato completamente rettificato - Due denti frontali taglienti fino al centro - Codolo cilindrico filettato
ROUGHING AND SEMIFINISHING END MILLS - Helical teeth with form relieved entirely ground chip-breaker - Two end teeth cutting up to the centre - Threaded shank
FRAISES FRONTALES ÉBAUCHE - SEMI FINITION - Denture hélicoïdale avec brise-copeaux profil plat -Deux dents bout coupantes jusq'au centre - Queue cylindrique filetée
SCHAFTFRÄSER - Schrägschneiden mit voll eingeschliffenem Spannbrecher - Zwei Schneiden mit Zentrumschnitt - Zylinderschaft mit Gewinde
FRESAS CILINDRICAS FRONTALES PARA SEMIACABADO - Labios helicoidal con arranca de viruta completamente rectificado - Dos labios que cortan hasta el centro - Mango cilindrico roscado
FRESAS CILINDRICAS FRONTAIS PARA SEMIACABAMENTO - Fresa com corte ao centro com quebra-apara - Encabadouro cilindrico roscado

SERIE E-F

NORM.	
UNI	8254
DIN	844D
ISO	1641/I







INDEX

CODE	d1 mm js14	l2 mm	l1 mm	d2 mm h6	Z	Co 8% €
F14/01	8	38	88	10	4	50,02
F14/02	10	45	95	10	4	51,84
F14/03	12	53	110	12	4	59,13
F14/04	14	53	110	12	4	62,83
F14/05	15	63	123	16	4	72,66
F14/06	16	63	123	16	4	72,66
F14/07	18	63	123	16	4	78,28
F14/08	20	75	141	20	4	85,64
F14/09	22	75	141	20	4	102,17
F14/10	24	90	166	25	5	140,99
F14/11	25	90	166	25	5	140,99
F14/12	28	90	166	25	5	159,77
F14/13	30	90	166	25	5	177,61
F14/14	32	106	186	32	5	223,05

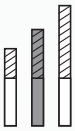
Tolleranza effettiva sul diametro: ±0,05 - *Real tolerance on diameter: ±0,05*

FRESE PER SEMIFINITURA • SERIE LUNGA

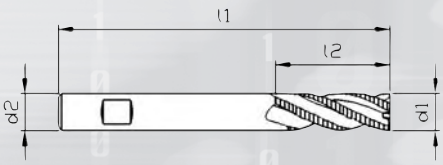
SERIE E-F

F15

Denti elicoidali con rompitruciolo spogliato completamente rettificato - Due denti frontali taglienti fino al centro - Attacco Weldon
ROUGHING AND SEMIFINISHING END MILLS - Helical teeth with form relieved entirely ground chip-breaker - Two end teeth cutting up to the centre - Weldon shank
FRAISES FRONTALES ÉBAUCHE - SEMI FINITION - Denture hélicoïdale avec brise-copeaux profil plat - Deux dents bout coupantes jusq'au centre - Queue cylindrique Weldon
SCHAFTFRÄSER - Schrägschneiden mit voll eingeschliffenem Spannbrecher - Zwei Schneiden mit Zentrumschnitt - Weldon Spannfläche
FRESAS CILINDRICAS FRONTALES PARA SEMIACABADO - Labios helicoidal con arranca de viruta completamente rectificado - Dos labios que cortan hasta el centro - Mango Weldon
FRESAS CILINDRICAS FRONTAIS PARA SEMIACABAMENTO - Fresa com corte ao centro com quebra-apara - Encabadouro Weldon



HSS-E Co8 | NF | DIN 1835 B | ~0,3xd | ≈30°



NORM.

UNI 8245
DIN 844B
ISO 1641/II

INDEX

CODE	d1 mm js14	l2 mm	l1 mm	d2 mm h6	Z	Co 8% €	SUPREME €
F15/00	6	24	68	6	3	32,56	39,71
F15/00/1	7	30	80	10	3	48,20	61,46
F15/01	8	38	88	10	4	46,48	59,78
F15/01/1	9	45	95	10	4	49,38	62,62
F15/02	10	45	95	10	4	47,02	60,41
F15/02/1	11	53	110	12	4	58,05	72,41
F15/03	12	53	110	12	4	55,16	69,51
F15/03/1	13	53	110	12	4	60,98	77,09
F15/04	14	53	110	12	4	57,42	74,18
F15/05	15	63	123	16	4	66,82	88,55
F15/06	16	63	123	16	4	66,82	88,55
F15/06/1	17	63	123	16	4	77,42	104,66
F15/07	18	63	123	16	4	72,66	103,85
F15/08	20	75	141	20	4	83,79	111,05
F15/09	22	75	141	20	4	95,04	140,34
F15/10	24	90	166	25	5	131,91	201,87
F15/11	25	90	166	25	5	131,91	201,87
F15/12	28	90	166	25	5	149,67	235,18
F15/13	30	90	166	25	5	167,30	252,45
F15/14	32	106	186	32	5	204,44	300,82
F15/15	36	106	186	32	6	237,30	336,04
F15/16	40	125	205	32	6	286,00	393,94

Tolleranza effettiva sul diametro: ±0,05 - *Real tolerance on diameter: ±0,05*

FRESE PER SEMIFINITURA • SERIE NORMALE

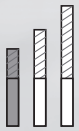
F16

Denti elicoidali con rompitruciolo spogliato completamente rettificato - Due denti frontali taglienti fino al centro - Codolo conico Morse con foro filettato
ROUGHING END MILLS - Helical teeth with form relieved entirely ground chip-breaker - Two end teeth cutting up to the centre - Morse taper shank
FRAISES FRONTALES ÉBAUCHE - SEMI FINITION - Denture hélicoïdale avec brise-copeaux profil plat -Deux dents bout coupantes jusq'au centre - Queue au cône Morse à trou fileté
SCHAFTFRÄSER - Schrägschneiden mit voll eingeschliffenem Spannbrecher - Zwei Schneiden mit Zentrumschnitt - Morsekegelschaft und Anzugsgewinde
FRESAS CILINDRICAS FRONTALES PARA SEMIACABADO - Labios helicoidal con arranca de viruta completamente rectificado - Dos labios que cortan hasta el centro - Mango conico Morse con taladro roscado
FRESAS CILINDRICAS FRONTAIS PARA SEMIACABAMENTO - Fresa com corte ao centro com quebra-apara - Encabadouro cone Morse con taladro roscado

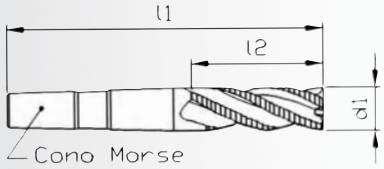
SERIE E-F

NORM.

UNI 8250-8251
DIN 845B
ISO 1641/II



HSS-E Co8 | NF | DIN 228-A | ≈30°



CODE	d1 mm js14	l2 mm	l1 mm	d2 mm h6	CM-MK	Co 8% €	SUPREME €
F16/01	16	32	117	2	4	62,17	88,01
F16/02	18	32	117	2	4	62,17	90,82
F16/03	20	38	140	3	4	83,79	139,80
F16/04	22	38	140	3	4	89,86	145,54
F16/05	24	45	147	3	5	99,47	154,73
F16/06	25	45	147	3	5	103,69	167,91
F16/07	26	45	147	3	5	110,60	175,82
F16/08	28	45	147	3	5	118,65	208,64
F16/09	30	53	155	3	5	131,53	220,87
F16/10	32	53	178	4	5	151,91	281,13
F16/11	34	53	178	4	5	164,47	307,79
F16/12	35	53	178	4	6	170,64	307,79
F16/13	36	53	178	4	6	175,82	312,63
F16/14	38	63	188	4	6	197,31	339,52
F16/15	40	63	188	4	6	220,32	360,55
F16/16	45	63	188	4	6	308,67	450,44
F16/17	50	75	200	4	7	358,90	498,91

Tolleranza effettiva sul diametro: ±0,05 - *Real tolerance on diameter: ±0,05*

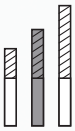
INDEX

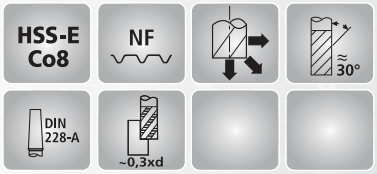
FRESE PER SEMIFINITURA • SERIE LUNGA

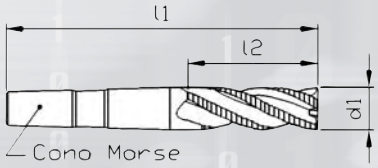
SERIE E-F

F17

Denti elicoidali con rompitruciolo spogliato completamente rettificato - Codolo conico Morse con foro filettato
ROUGHING END MILLS - Helical teeth with form relieved entirely ground chip-breaker - Two end teeth cutting up to the centre - Morse taper shank
FRAISES FRONTALES ÉBAUCHE - SEMI FINITION - Denture hélicoïdale avec brise-copeaux profil plat -Deux dents bout coupantes jusq'au centre - Queue au cône Morse à trou fileté
SCHAFTFRÄSER - Schrägschneiden mit voll eingeschliffenem Spannbrecher - Zwei Schneiden mit Zentrumschnitt - Morsekegelschaft und Anzugsgewinde
FRESAS CILINDRICAS FRONTALES PARA SEMIACABADO - Labios helicoidal con arranca de viruta completamente rectificado - Dos labios que cortan hasta el centro - Mango conico Morse con taladro roscado
FRESAS CILINDRICAS FRONTAIS PARA SEMIACABAMENTO - Fresa com corte ao centro com quebra-apara - Encabadouro cone Morse con taladro roscado







NORM.

UNI 8250-8251
DIN 845B
ISO 1641/II

INDEX

CODE	d1 mm js14	l2 mm	l1 mm	CM-MK	Z	Co 8% €	SUPREME €
F17/01	16	63	148	2	4	84,45	111,59
F17/02	18	63	148	2	4	84,45	116,12
F17/03	20	75	177	3	4	120,67	191,49
F17/04	22	75	177	3	4	124,88	205,86
F17/05	24	90	192	3	5	153,21	237,01
F17/06	25	90	192	3	5	157,97	241,54
F17/07	26	90	192	3	5	165,91	247,31
F17/08	28	90	192	3	5	175,71	256,67
F17/09	30	90	192	3	5	186,84	273,64
F17/10	32	106	231	4	5	233,54	363,86
F17/11	34	106	231	4	5	255,69	381,82
F17/12	35	106	231	4	6	267,81	404,41
F17/13	36	106	231	4	6	276,07	418,28
F17/14	38	125	250	4	6	331,47	471,71
F17/15	40	125	250	4	6	363,75	500,25
F17/16	45	125	250	4	6	434,58	583,30
F17/17	50	150	275	4	7	541,77	680,02

Tolleranza effettiva sul diametro: ±0,05 - *Real tolerance on diameter: ±0,05*

FRESE PER SEMIFINITURA • SERIE EXTRA-LUNGA

F18

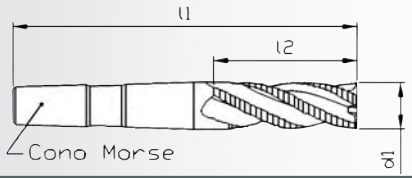
Denti elicoidali con rompitruciolo spogliato completamente rettificato - Due denti frontali taglienti fino al centro - Codolo conico Morse con foro filettato
ROUGHING END MILLS - Helical teeth with form relieved entirely ground chip-breaker - Two end teeth cutting up to the centre - Morse taper shank
FRAISES FRONTALES ÉBAUCHE - SEMI FINITION - Denture hélicoïdale avec brise-copeaux profil plat -Deux dents bout coupantes jusq'au centre - Queue au cône Morse à trou fileté
SCHAFTFRÄSER - Schrägschneiden mit voll eingeschliffenem Spannbrecher - Zwei Schneiden mit Zentrumschnitt Morsekegelschaft und Anzugsgewinde
FRESAS CILINDRICAS FRONTALES PARA SEMIACABADO - Labios helicoidal con arranca de viruta completamente rectificado - Dos labios que cortan hasta el centro - Mango conico Morse con taladro roscado
FRESAS CILINDRICAS FRONTAIS PARA SEMIACABAMENTO - Fresa com corte ao centro com quebra-apara - Encabadouro cone Morse con taladro roscado

SERIE E-F

NORM.

STANDARD Rime

HSS-E Co8 | NF | ≈30° | DIN 228-A | ~0,3xd



CODE	d1 mm js14	l2 mm	l1 mm	CM-MK	Z	Co 8% €
F18/03	20	110	212	3	4	157,97
F18/04	22	110	212	3	4	162,84
F18/05	24	125	227	3	5	202,08
F18/06	25	125	250	4	5	249,11
F18/07	26	125	250	4	5	269,78
F18/08	28	135	260	4	5	282,68
F18/09	30	140	265	4	5	307,24
F18/10	32	150	275	4	6	329,05
F18/11	34	150	275	4	6	356,37
F18/12	35	150	275	4	6	376,09
F18/13	36	150	275	4	6	388,54
F18/14	38	180	305	4	6	466,97
F18/15	40	180	305	4	6	510,04
F18/16	45	190	315	4	7	639,05
F18/17	50	200	360	5	7	921,72

Tolleranza effettiva sul diametro: ±0,05 - *Real tolerance on diameter: ±0,05*

INDEX

Catalogo HSS-E e PM

INDEX

Catalogo HSS-E e PM

SERIE G

FRESE PER FINITURA

FINISHING END MILLS

Rime
UTENSILERIA

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copertina - home

SERIE G

FRESE PER FINITURA
FINISHING END MILLS

FRESE PER FINITURA • SERIE NORMALE

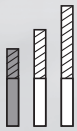
G0

Codolo cilindrico
END MILLS - Straight shank
FRAISES À CYLINDRES - Queue cylindrique
SCHAFTFRÄSER - Zylinderschaft
FRESAS CILINDRICAS FRONTALES - Mango cilindrico
FRESAS FRONTAIS - Encabadouro cilindrico

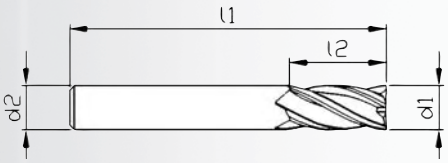
SERIE G

NORM.

UNI 8244
DIN 844A
ISO 1641/I



HSS-E Co8 | N | ≈30° | DIN 1835 A



CODE	d1 mm js14	l2 mm	l1 mm	d2 mm h6	Z	Co 8% €
G0/01	2	7	51	6	4	14,06
G0/02	2.5	8	52	6	4	14,06
G0/03	3	8	52	6	4	11,14
G0/04	3.5	10	54	6	4	11,14
G0/05	4	11	55	6	4	10,60
G0/06	4.5	11	55	6	4	11,14
G0/07	5	13	57	6	4	9,95
G0/08	5.5	13	57	6	4	10,60
G0/09	6	13	57	6	4	9,95
G0/10	6.5	16	66	10	4	16,44
G0/11	7	16	66	10	4	16,44
G0/12	8	19	69	10	4	15,79
G0/13	9	19	69	10	4	17,62
G0/14	10	22	72	10	4	16,44
G0/15	11	22	79	12	4	22,28
G0/16	12	26	83	12	4	21,08
G0/17	13	26	83	12	4	25,19
G0/18	14	26	83	12	4	23,47
G0/19	15	32	92	16	4	28,77
G0/20	16	32	92	16	4	27,57
G0/21	17	32	92	16	4	35,80
G0/22	18	32	92	16	4	34,04
G0/23	19	38	104	20	4	40,65
G0/24	20	38	104	20	4	38,23
G0/25	22	38	104	20	4	51,41
G0/26	24	45	121	25	5	69,35
G0/27	25	45	121	25	5	69,35
G0/28	26	45	121	25	5	75,07
G0/29	28	45	121	25	5	83,28
G0/30	30	45	121	25	6	91,62
G0/31	32	53	133	32	6	107,46

Ulteriori diametri si forniscono a richiesta - *Other diameters upon requirements*
Tolleranza effettiva sul diametro: +0 +0,03 - *Real tolerance on diameter: +0 +0,03*

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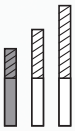
FRESE PER FINITURA • SERIE NORMALE

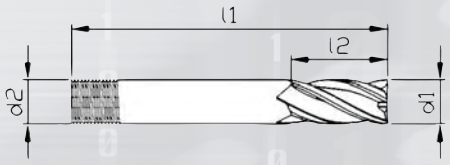
SERIE G

G1

Codolo cilindrico filettato
END MILLS - Threaded shank
FRAISES À CYLINDRES - Queue cylindrique filetée
SCHAFTFRÄSER - Zylinderschaft mit Gewinde
FRESAS CILINDRICAS FRONTALES - Mango cilindrico roscado
FRESAS FRONTAIS - Encabadouro cilindrico roscado



HSS-E Co8 | N | HSC | HSS | DIN 1835-D



NORM.

UNI 8246
DIN 844D
ISO 1641/I

INDEX

CODE	d1 mm js14	l2 mm	l1 mm	d2 mm h6	Z	Co 8% €
G1/01	2	7	51	6	4	16,76
G1/02	2.5	8	52	6	4	15,46
G1/03	3	8	52	6	4	14,82
G1/04	3.5	10	54	6	4	14,82
G1/05	4	11	55	6	4	13,52
G1/06	4.5	11	55	6	4	14,82
G1/07	5	13	57	6	4	12,97
G1/08	5.5	13	57	6	4	14,82
G1/09	6	13	57	6	4	12,97
G1/10	6.5	16	66	10	4	20,87
G1/11	7	16	66	10	4	20,87
G1/12	8	19	69	10	4	19,79
G1/13	9	19	69	10	4	22,16
G1/14	10	22	72	10	4	20,87
G1/15	11	22	79	12	4	27,69
G1/16	12	26	83	12	4	26,49
G1/17	13	26	83	12	4	29,52
G1/18	14	26	83	12	4	28,33
G1/19	15	32	92	16	4	35,14
G1/20	16	32	92	16	4	33,84
G1/21	17	32	92	16	4	41,98
G1/22	18	32	92	16	4	40,10
G1/23	19	38	98	16	4	46,39
G1/24	20	38	98	16	4	45,17
G1/25	22	38	104	20	4	63,07
G1/26	24	45	121	25	5	87,17
G1/27	25	45	121	25	5	87,17
G1/28	26	45	121	25	5	93,50
G1/29	28	45	121	25	5	99,47
G1/30	30	45	121	25	6	110,85
G1/31	32	53	133	32	6	128,91

Ulteriori diametri si forniscono a richiesta - *Other diameters upon requirements*
Tolleranza effettiva sul diametro: +0 +0,03 - *Real tolerance on diameter: +0 +0,03*

FRESE PER FINITURA • SERIE NORMALE

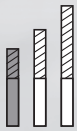
G2

Due denti frontali taglienti fino al centro - Attacco Weldon
END MILLS - Two end teeth cutting up to the centre - Weldon shank
FRAISES À CYLINDRES - Deux dents bout coupantes jusq'au centre - Queue cylindrique Weldon
SCHAFTFRÄSER - Zwei Schneiden mit Zentrumschnitt - Weldon Spannfläche
FRESAS CILINDRICAS FRONTALES - Dos labios que cortan hasta el centro - Mango Weldon
FRESAS FRONTAIS - Duas navalhas que cortam ao centro - Encabadouro Weldon

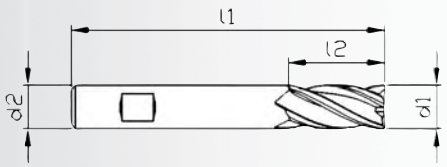
SERIE G

NORM.

UNI 8248
DIN 844B
ISO 1641/I



HSS-E Co8 | N | ≈30° | DIN 1835 B



CODE	d1 mm js14	l2 mm	l1 mm	d2 mm h6	Z	Co 8% €	SUPREME €
G2/01	2	7	51	6	4	16,44	23,03
G2/02	2.5	8	52	6	4	13,52	19,04
G2/03	3	8	52	6	4	12,33	19,04
G2/04	3.5	10	54	6	4	12,33	19,04
G2/05	4	11	55	6	4	11,68	18,38
G2/06	4.5	11	55	6	4	12,33	19,04
G2/07	5	13	57	6	4	11,14	17,84
G2/08	5.5	13	57	6	4	12,33	19,04
G2/09	6	13	57	6	4	11,14	17,84
G2/10	6.5	16	66	10	4	18,16	28,77
G2/11	7	16	66	10	4	18,16	28,77
G2/12	8	19	69	10	4	16,98	27,57
G2/12/1	8.5	19	69	10	4	18,81	29,31
G2/13	9	19	69	10	4	19,35	29,96
G2/14	10	22	72	10	4	18,16	28,77
G2/14/1	10.5	22	79	12	4	23,47	33,95
G2/15	11	22	79	12	4	24,65	36,76
G2/16	12	26	83	12	4	23,47	35,68
G2/17	13	26	83	12	4	26,92	39,15
G2/18	14	26	83	12	4	25,19	37,42
G2/19	15	32	92	16	4	31,04	50,60
G2/20	16	32	92	16	4	29,96	49,52
G2/21	17	32	92	16	4	38,23	58,06
G2/22	18	32	92	16	4	35,80	55,63
G2/23	19	38	104	20	4	42,96	63,89
G2/24	20	38	104	20	4	39,99	60,92
G2/25	22	38	104	20	4	55,75	84,42
G2/26	24	45	121	25	5	78,03	111,84
G2/27	25	45	121	25	5	78,03	111,84
G2/28	26	45	121	25	5	83,28	120,47
G2/29	28	45	121	25	5	88,44	124,81
G2/30	30	45	121	25	6	102,40	139,13
G2/31	32	53	133	32	6	118,36	157,90
G2/32	36	53	133	32	6	127,27	183,46
G2/33	40	63	143	32	8	146,28	241,52

Ulteriori diametri si forniscono a richiesta - *Other diameters upon requirements*
Tolleranza effettiva sul diametro: +0 +0,03 - *Real tolerance on diameter: +0 +0,03*

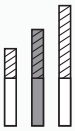
INDEX

FRESE PER FINITURA • SERIE LUNGA

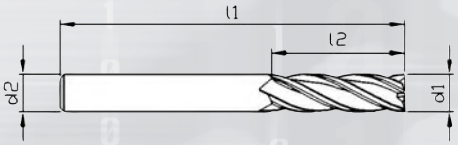
SERIE G

G3

Codolo cilindrico
END MILLS - Straight shank
FRAISES À CYLINDRES - Queue cylindrique
SCHAFTFRÄSER - Zylinderschaft
FRESAS CILINDRICAS FRONTALES - Mango cilindrico
FRESAS CILINDRICAS FRONTAIS - Encabadouro cilindrico



HSS-E Co8 | N | ≈30° | DIN 1835 A



NORM.

UNI 8245
DIN 844A
ISO 1641/I

INDEX

CODE	d1 mm js14	l2 mm	l1 mm	d2 mm h6	Z	Co 8% €
G3/01	2	10	54	6	4	16,98
G3/02	3	12	56	6	4	15,25
G3/03	4	19	63	6	4	14,71
G3/04	5	24	68	6	4	14,06
G3/05	6	24	68	6	4	12,87
G3/06	7	30	80	10	4	23,47
G3/07	8	38	88	10	4	21,74
G3/08	10	45	95	10	4	20,54
G3/09	12	53	110	12	4	26,38
G3/10	14	53	110	12	4	29,31
G3/10/1	15	63	123	16	4	35,80
G3/11	16	63	123	16	4	35,80
G3/12	18	63	123	16	4	42,96
G3/13	20	75	141	20	4	49,57
G3/14	22	75	141	20	4	68,78
G3/15	24	90	166	25	5	92,88
G3/16	25	90	166	25	5	92,88
G3/17	26	90	166	25	5	100,53
G3/18	28	90	166	25	5	108,74
G3/19	30	90	166	25	6	120,82
G3/20	32	106	186	32	6	149,44

Ulteriori diametri si forniscono a richiesta - *Other diameters upon requirements*
Tolleranza effettiva sul diametro: +0 +0,03 - *Real tolerance on diameter: +0 +0,03*

FRESE PER FINITURA • SERIE LUNGA

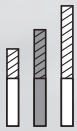
G4

Codolo cilindrico filettato
END MILLS - Threaded shank
FRAISES À CYLINDRES - Queue cylindrique filetée
SCHAFTFRÄSER - Zylinderschaft mit Gewinde
FRESAS CILINDRICAS FRONTALES - Mango cilindrico roscado
FRESAS CILINDRICAS FRONTAIS - Encabadouro cilindrico roscado

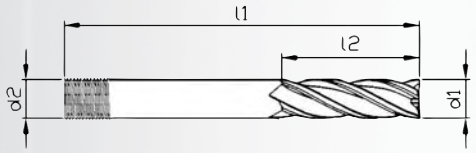
SERIE G

NORM.

UNI 8247
DIN 844D
ISO 1641/I



HSS-E Co8 | N | DIN 1835-D | ≈30°



INDEX

CODE	d1 mm js14	l2 mm	l1 mm	d2 mm h6	Z	Co 8% €
G4/01	2	10	54	6	4	22,16
G4/02	3	12	56	6	4	19,04
G4/03	4	19	63	6	4	18,50
G4/04	5	24	68	6	4	17,84
G4/05	6	24	68	6	4	17,30
G4/06	7	30	80	10	4	28,33
G4/07	8	38	88	10	4	26,49
G4/08	10	45	95	10	4	25,84
G4/09	12	53	110	12	4	31,47
G4/10	14	53	110	12	4	35,14
G4/10/1	15	63	123	16	4	43,14
G4/11	16	63	123	16	4	43,14
G4/12	18	63	123	16	4	50,79
G4/13	20	75	141	20	4	60,26
G4/14	22	75	141	20	4	80,66
G4/15	24	90	166	25	5	108,65
G4/16	25	90	166	25	5	108,65
G4/17	26	90	166	25	5	116,96
G4/18	28	90	166	25	5	126,22
G4/19	30	90	166	25	6	138,88
G4/20	32	106	186	32	6	172,90

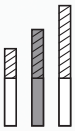
Ulteriori diametri si forniscono a richiesta - *Other diameters upon requirements*
Tolleranza effettiva sul diametro: +0 +0,03 - *Real tolerance on diameter: +0 +0,03*

FRESE PER FINITURA • SERIE LUNGA

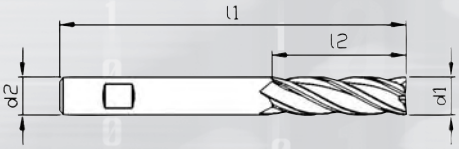
SERIE G

G5

Due denti frontali taglienti fino al centro - Attacco Weldon
END MILLS - Two end teeth cutting up to the centre - Weldon shank
FRAISES À CYLINDRES - Deux dents bout coupantes jusq'au centre - Queue cylindrique Weldon
SCHAFTFRÄSER - Zwei Schneiden mit Zentrumschnitt - Weldon Spannfläche
FRESAS CILINDRICAS FRONTALES - Dos labios que cortan hasta el centro - Mango Weldon
FRESAS CILINDRICAS FRONTAIS - Quatro navalhas que cortam ao centro longa - Encabadouro Weldon



HSS-E Co8 | N | DIN 1835 B | ≈30°



NORM.

UNI 8249
DIN 844B
ISO 1641/I

INDEX

CODE	d1 mm js14	l2 mm	l1 mm	d2 mm h6	Z	Co 8% €	SUPREME €
G5/01	2	10	54	6	4	21,08	29,31
G5/02	3	12	56	6	4	16,98	25,30
G5/03	4	19	63	6	4	16,44	24,76
G5/04	5	24	68	6	4	15,79	24,11
G5/05	6	24	68	6	4	15,25	25,84
G5/06	7	30	80	10	4	25,84	41,41
G5/07	8	38	88	10	4	24,65	40,23
G5/07/1	9	45	95	10	4	25,84	40,87
G5/08	10	45	95	10	4	23,47	38,50
G5/08/1	11	53	110	12	4	32,22	48,34
G5/09	12	53	110	12	4	29,31	45,41
G5/09/1	13	53	110	12	4	35,79	52,87
G5/10	14	53	110	12	4	32,87	50,60
G5/10/1	15	63	123	16	4	41,63	63,79
G5/11	16	63	123	16	4	39,25	62,71
G5/11/1	17	63	123	16	4	50,79	79,09
G5/12	18	63	123	16	4	47,15	76,24
G5/13	20	75	141	20	4	55,52	84,94
G5/14	22	75	141	20	4	74,95	123,38
G5/15	24	90	166	25	5	102,24	176,84
G5/16	25	90	166	25	5	102,24	176,84
G5/17	26	90	166	25	5	108,74	199,07
G5/18	28	90	166	25	5	118,36	208,45
G5/19	30	90	166	25	6	129,16	219,01
G5/20	32	106	186	32	6	161,53	263,34

Ulteriori diametri si forniscono a richiesta - *Other diameters upon requirements*
Tolleranza effettiva sul diametro: +0 +0,03 - *Real tolerance on diameter: +0 +0,03*

FRESE PER FINITURA • SERIE EXTRA-LUNGA

G6

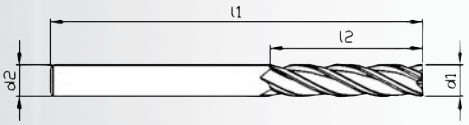
Due denti frontali taglienti fino al centro - Codolo cilindrico
END MILLS - Two end teeth cutting up to the centre - Straight shank
FRAISES À CYLINDRES - Deux dents bout coupantes jusq'au centre - Queue cylindrique
SCHAFTFRÄSER - Zwei Schneiden mit Zentrumschnitt - Zylinderschaft
FRESAS CILINDRICAS FRONTALES - Dos labios que cortan hasta el centro - Mango cilindrico
FRESAS CILINDRICAS FRONTAIS - Quatro navalhas que cortam ao centro extra longa - Encabadouro cilindrico

SERIE G

NORM.

STANDARD Rime

HSS-E Co8 | N | ≈30° | DIN 1835 A



CODE	d1 mm js14	l2 mm	l1 mm	d2 mm h6	Z	Co 8% €
G6/01	6	56	106	10	4	41,09
G6/02	8	63	113	10	4	39,90
G6/03	10	70	120	10	4	37,52
G6/04	12	80	137	12	4	49,85
G6/05	14	80	137	12	4	55,68
G6/06	16	90	150	16	4	69,74
G6/07	18	100	166	20	4	84,88
G6/08	20	110	176	20	4	105,91
G6/09	22	110	176	20	4	118,94

Ulteriori diametri si forniscono a richiesta - *Other diameters upon requirements*
Tolleranza effettiva sul diametro: +0 +0,03 - *Real tolerance on diameter: +0 +0,03*

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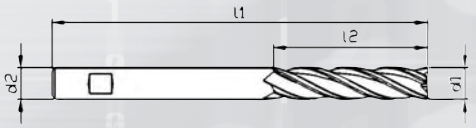
FRESE PER FINITURA • SERIE EXTRA-LUNGA

SERIE G

G7

Due denti frontali tagienti fino al centro - Attacco Weldon
END MILLS - Two end teeth cutting up to the centre - Weldon shank
FRAISES À CYLINDRES - Deux dents bout coupantes jusq'au centre - Queue cylindrique Weldon
SCHAFTFRÄSER - Zwei Schneiden mit Zentrumschnitt - Weldon Spannfläche
FRESAS CILINDRICAS FRONTALES - Dos labios que cortan hasta el centro - Mango Weldon
FRESAS CILINDRICAS FRONTAIS - Quatro navalhas que cortam ao centro extra longa - Encabadouro Weldon

HSS-E Co8 | N | ≈30° | DIN 1835 B



NORM. STANDARD Rime

INDEX

CODE	d1 mm js14	l2 mm	l1 mm	d2 mm h6	Z	Co 8% €
G7/01	6	56	106	10	4	44,01
G7/02	8	63	113	10	4	42,82
G7/03	10	70	120	10	4	39,90
G7/04	12	80	137	12	4	52,76
G7/05	14	80	137	12	4	59,25
G7/06	16	90	150	16	4	73,85
G7/07	18	100	166	20	4	90,48
G7/08	20	110	176	20	4	112,19
G7/09	22	110	176	20	4	125,28

Ulteriori diametri si forniscono a richiesta - *Other diameters upon requirements*
Tolleranza effettiva sul diametro: +0 +0,03 - *Real tolerance on diameter: +0 +0,03*

FRESE PER SEMIFINITURA • SERIE NORMALE

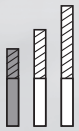
G8

Codolo conico Morse con foro filettato
END MILLS - Morse taper shank
FRAISES À CYLINDRES - Queue au cône Morse à trou fileté
SCHAFTFRÄSER - Morsekegelschaft und Anzugsgewinde
FRESAS CILINDRICAS FRONTALES - Mango conico Morse con taladro roscado
FRESAS CILINDRICAS FRONTAIS - Quatro navalhas sem corte ao centro normal - Encabadouro Morse con taladro roscado

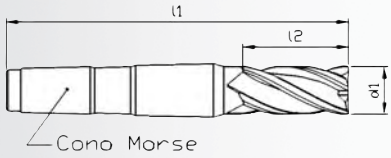
SERIE G

NORM.

UNI 8250
DIN 845B
ISO 1641/II



HSS-E Co8 | N | ≈30° | DIN 228-A



INDEX

CODE	d1 mm js14	l2 mm	l1 mm	CM-MK	Z	Co 8% €	SUPREME €
G8/01	16	32	117	2	4	50,96	79,06
G8/02	18	32	117	2	4	50,96	79,06
G8/03	20	38	140	3	4	73,92	133,66
G8/04	22	38	140	3	4	84,54	143,61
G8/05	24	45	147	3	5	96,30	154,68
G8/06	25	45	147	3	5	98,82	166,91
G8/07	26	45	147	3	5	104,52	173,37
G8/08	28	45	147	3	5	107,80	179,60
G8/09	30	53	155	3	6	123,41	218,06
G8/10	32	53	178	4	6	146,87	285,51
G8/11	34	53	178	4	6	161,05	311,31
G8/12	35	53	178	4	6	166,57	316,37
G8/13	36	53	178	4	6	171,84	321,40
G8/14	38	63	188	4	6	192,14	342,28
G8/15	40	63	188	4	8	216,89	365,52
G8/16	45	63	188	4	8	302,40	453,72
G8/17	50	75	233	5	8	411,72	591,54

Ulteriori diametri si forniscono a richiesta - *Other diameters upon requirements*
Tolleranza effettiva sul diametro: +0 +0,03 - *Real tolerance on diameter: +0 +0,03*

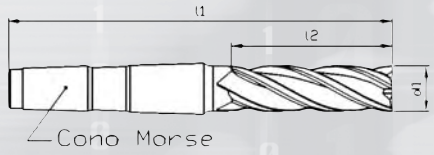
FRESE PER SEMIFINITURA • SERIE LUNGA

SERIE G

G9

Codolo conico Morse con foro filettato
END MILLS - Morse taper shank
FRAISES À CYLINDRES - Queue au cône Morse à trou fileté
SCHAFTFRÄSER - Morsekegelschaft und Anzugsgewinde
FRESAS CILINDRICAS FRONTALES - Mango conico Morse con taladro roscado
FRESAS CILINDRICAS FRONTAIS - Quatro navalhas sem corte ao centro longa - Encabadouro Morse

HSS-E Co8 | N | ≈30° | DIN 228-A



NORM.

UNI 8251
DIN 845B
ISO 1641/II

INDEX

CODE	d1 mm js14	l2 mm	l1 mm	CM-MK	Z	Co 8% €	SUPREME €
G9/01	16	63	148	2	4	66,95	97,23
G9/02	18	63	148	2	4	66,95	97,23
G9/03	20	75	177	3	4	91,16	179,24
G9/04	22	75	177	3	4	101,34	188,95
G9/05	24	90	192	3	5	130,01	216,04
G9/06	25	90	192	3	5	130,01	216,04
G9/07	26	90	192	3	5	140,17	226,86
G9/08	28	90	192	3	5	151,67	237,53
G9/09	30	90	192	3	6	163,76	255,84
G9/10	32	106	231	4	6	225,80	363,04
G9/11	34	106	231	4	6	249,98	388,85
G9/12	35	106	231	4	6	263,47	407,74
G9/13	36	106	231	4	6	272,96	418,42
G9/14	38	125	250	4	6	328,32	477,07
G9/15	40	125	250	4	8	364,33	511,08
G9/16	45	125	250	4	8	438,47	598,70
G9/17	50	150	308	5	8	628,61	802,92

Ulteriori diametri si forniscono a richiesta - *Other diameters upon requirements*
Tolleranza effettiva sul diametro: +0 +0,03 - *Real tolerance on diameter: +0 +0,03*

FRESE PER SEMIFINITURA • SERIE EXTRA-LUNGA

G10

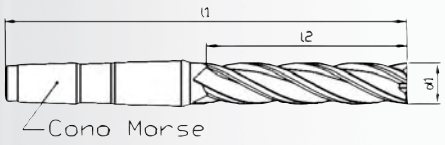
Codolo conico Morse con foro filettato
END MILLS - Morse taper shank
FRAISES À CYLINDRES - Queue au cône Morse à trou fileté
SCHAFTFRÄSER - Morsekegelschaft und Anzugsgewinde
FRESAS CILINDRICAS FRONTALES - Mango conico Morse con taladro roscado
FRESAS CILINDRICAS FRONTAIS - Quatro navalhas sem corte ao centro extra longa - Encabadouro Morse con taladro roscado

SERIE G

NORM.

STANDARD Rime

HSS-E Co8 | N | ≈30° | DIN 228-A



CODE	d1 mm js14	l2 mm	l1 mm	CM-MK	Z	Co 8% €
G10/01	16	90	175	2	4	80,31
G10/02	18	100	202	3	4	119,84
G10/03	20	110	212	3	4	131,95
G10/04	22	110	212	3	4	139,50
G10/05	25	125	250	4	5	200,04
G10/06	28	135	260	4	5	234,95
G10/07	30	140	265	4	6	253,49
G10/08	32	150	275	4	6	285,17
G10/09	35	150	275	4	6	320,82
G10/10	36	150	275	4	6	333,96
G10/11	38	180	305	4	6	380,52
G10/12	40	180	305	4	8	402,58

Ulteriori diametri si forniscono a richiesta - *Other diameters upon requirements*
Tolleranza effettiva sul diametro: +0 +0,03 - *Real tolerance on diameter: +0 +0,03*

INDEX

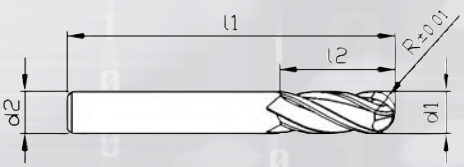
FRESE PER FINITURA A TESTA SEMISFERICA • SERIE NORMALE

SERIE G

G11

Due denti frontali taglienti fino al centro - Codolo cilindrico
BALL-NOSED END MILLS - Two end teeth cutting up to the centre - Straight shank
FRAISES À CYLINDRES À BOUT HÉMISPHERÏQUE - Deux dents bout coupantes jusq'au centre - Queue cylindrique
HALBRUNDKOPFFRÄSER - Zwei Schneiden mit Zentrumschnitt - Zylinderschaft
FRESAS CILINDRICAS FRONTALES CABEZA SEMIESFÉRICA - Dos labios que cortan hasta el centro - Mango cilindrico
FRESAS CILINDRICAS FRONTAIS BOLEADAS - Quatro navalhas que cortam ao centro normal - Encabadouro cilindrico

HSS-E Co8 | N | ≈30° | DIN 1835 A



NORM.
UNI
DIN
ISO 1641/I

INDEX

CODE	d1 mm js14	l2 mm	l1 mm	d2 mm h6	Z	Co 8% €
G11/03	4	11	55	6	4	16,44
G11/04	5	13	57	6	4	15,25
G11/05	6	13	57	6	4	15,25
G11/06	8	19	69	10	4	23,47
G11/07	10	22	72	10	4	24,01
G11/08	12	26	83	12	4	29,96
G11/09	14	26	83	12	4	32,87
G11/10	15	32	92	16	4	41,09
G11/11	16	32	92	16	4	38,71
G11/12	18	32	92	16	4	47,81
G11/13	20	38	104	20	4	53,76
G11/14	22	38	104	20	4	76,20
G11/15	24	45	121	25	5	99,73
G11/16	25	45	121	25	5	99,73
G11/17	26	45	121	25	5	106,87
G11/18	28	45	121	25	5	118,94
G11/19	30	45	121	25	6	132,31
G11/20	32	53	133	32	6	153,90

Ulteriori diametri si forniscono a richiesta - *Other diameters upon requirements*
Tolleranza effettiva sul diametro: +0 +0,03 - *Real tolerance on diameter: +0 +0,03*

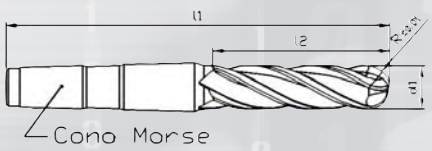
FRESE PER FINITURA A TESTA SEMISFERICA • SERIE NORMALE

SERIE G

G12

Due denti frontali taglienti fino al centro - Codolo conico Morse con foro filettato
BALL-NOSED END MILLS - Two end teeth cutting up to the centre - Morse taper shank
FRAISES À CYLINDRES À BOUT HÉMISPHERÏQUE - Deux dents bout coupantes jusq'au centre - Queue au cône Morse à trou fileté
HALBRUNDKOPFFRÄSER - Zwei Schneiden mit Zentrumschnitt - Morsekegelschaft und Anzugsgewinde
FRESAS CILINDRICAS FRONTALES CABEZA SEMIESFÉRICA - Dos labios que cortan hasta el centro - Mango conico Morse con taladro roscado
FRESAS CILINDRICAS FRONTAIS BOLEADAS - Quatro navalhas que cortam ao centro normal - Encabadouro cone Morse con taladro roscado

HSS-E Co8 | N | ≈30° | DIN 228-A



NORM.
UNI
DIN
ISO 1641/I

INDEX

CODE	d1 mm js14	l2 mm	l1 mm	CM-MK	Z	Co 8% €
G12/01	16	32	117	2	4	73,92
G12/01/1	18	32	117	2	4	76,43
G12/02	20	38	140	3	4	103,84
G12/03	22	38	140	3	4	118,24
G12/04	24	45	147	3	5	134,57
G12/05	25	45	147	3	5	137,09
G12/05/1	26	45	147	3	5	145,45
G12/06	28	45	147	3	5	160,58
G12/07	30	53	155	3	6	169,50
G12/08	32	53	178	4	6	202,93

Ulteriori diametri si forniscono a richiesta - *Other diameters upon requirements*
Tolleranza effettiva sul diametro: +0 +0,03 - *Real tolerance on diameter: +0 +0,03*

FRESE PER FINITURA A TESTA SEMISFERICA • SERIE LUNGA

G13

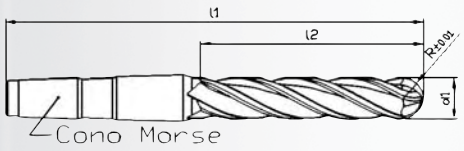
Due denti frontali taglienti fino al centro - Codolo conico Morse con foro filettato
BALL-NOSED END MILLS - Two end teeth cutting up to the centre - Morse taper shank
FRAISES À CYLINDRES À BOUT HÉMISPHERÏQUE - Deux dents bout coupantes jusq'au centre - Queue au cône Morse à trou fileté
HALBRUNDKOPFFRÄSER - Zwei Schneiden mit Zentrumschnitt - Morsekegelschaft und Anzugsgewinde
FRESAS CILINDRICAS FRONTALES CABEZA SEMIESFÉRICA - Dos labios que cortan hasta el centro - Mango conico Morse con taladro roscado
FRESAS CILINDRICAS BOLEADAS LONGAS DE QUATRO NAVALHAS QUE CORTAM AO CENTRO - Encabadouro cone Morse con taladro roscado

SERIE G

NORM.

UNI
DIN
ISO 1641/I

HSS-E Co8 | N | ≈30° | DIN 228-A



CODE	d1 mm js14	l2 mm	l1 mm	CM-MK	Z	Co 8% €
G13/01	16	63	148	2	4	96,20
G13/01/1	18	63	148	2	4	107,73
G13/02	20	75	177	3	4	131,95
G13/03	22	75	177	3	4	145,54
G13/04	24	90	192	3	5	180,73
G13/05	25	90	192	3	5	180,73
G13/05/1	26	90	192	3	5	210,21
G13/06	28	90	192	3	5	210,21
G13/07	30	90	192	3	6	226,27
G13/08	32	106	231	4	6	312,26

Ulteriori diametri si forniscono a richiesta - *Other diameters upon requirements*
Tolleranza effettiva sul diametro: +0 +0,03 - *Real tolerance on diameter: +0 +0,03*

INDEX

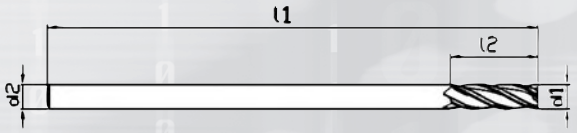
FRESE PER MACCHINE A COPIARE • SERIE EXTRA-LUNGA

SERIE G

G14

Due denti frontali taglienti fino al centro - Codolo cilindrico
COPY MILLING CUTTERS - Two end teeth cutting up to the centre -Straight shank
FRAISES POUR MACHINES À COPIER - Deux dents bout coupantes jusq'au centre - Queue cylindrique
NACHFORMFRÄSER - Zwei Schneiden mit Zentrumschnitt - Zylinderschaft
FRESAS EN COPIADO - Dos labios que cortan hasta el centro - Mango cilindrico
FRESAS DE COPIA - Quatro navalhas que cortam ao centro - Encabadouro cilindrico

HSS-E Co8 | N | ≈30° | DIN 1835 A



NORM. STANDARD Rime

INDEX

CODE	d1 mm js14	l2 mm	l1 mm	d2 mm h6	Z	Co 8% €
G14/01	6	25	180	6	4	37,68
G14/02	8	25	180	8	4	38,78
G14/03	10	30	200	10	4	47,15
G14/04	12	30	200	12	4	52,55
G14/06	16	35	200	16	4	80,09
G14/08	20	35	200	20	4	108,18

Catalogo HSS-E e PM

SERIE UMAX

FRESE SERIE UMAX ELICA 45°

SERIES “UMAX” END MILLS 45° SPIRAL

Rime
UTENSILERIA

SERIE UMAX

FRESE SERIE UMAX ELICA 45°
SERIES "UMAX" END MILLS 45° SPIRAL

Serie UMAX

La fresa **UMAX** è una fresa universale infatti può eseguire diversi lavori di sgrossatura e finitura.
Principali caratteristiche della fresa **UMAX**:
1) grande capacità di asportazione di truciolo anche da materiali molto difficili
2) con la stessa fresa si ottiene un'ottima finitura.

UMAX Series

UMAX end mills are universal mills, which can carry out different roughing and finishing workings.
The main characteristics of **UMAX** end mills are as follows:
1) they can easily remove shaving also from very difficult materials
2) a very good finishing degree can be granted by using the same end mill.

UMAX Série

La fraise **UMAX** est une fraise universelle, en effet elle peut faire des travails de dégrossissage et de finissage.
Les principales caractéristiques sont comme suite:
1) grande capacité d'enlèvement de copeaux, aussi de matériaux très difficiles
2) la même fraise peut donner une finissage excellente.

UMAX Serie

Die **UMAX** Fräser sind universelle Fräser, die verschiedenen Schrupp- bzw.
Feinbearbeitungen durchführen können.
Die Haupteigenschaften der **UMAX** Fräser sind:
1) sehr gute Spanabhebungsfähigkeit, auch aus sehr schwierigen Metallen
2) eine sehr gute Feinbearbeitung mit gleichem Fräser.

FRESE CILINDRICHE FRONTALI • SERIE NORMALE

UM0

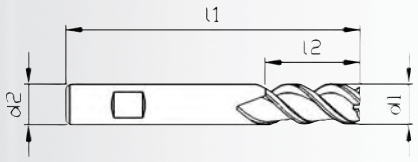
Due denti frontali taglienti fino al centro - Elica destra 45° - Divisione irregolare - Attacco Weldon
END MILLS - Two end teeth cutting up to the centre - 45° right hand spiral - Irregular division - Weldon shank
FRAISES À CYLINDRES - Deux dents bout coupantes jusq'au centre - Hélice 45° à droite - Division irréguliere - Queue cylindrique Weldon
SCHAFTFRÄSER - Zwei Schneides mit Zentrumschnitt - 45° rechts spiralgenutet - Unregelmäßige Teilung - Weldon-Spannfläche
FRESAS CILINDRICAS FRONTALES - Dos labios que cortan hasta el centro - Hélice derecha - División irregular - Mango Weldon
FRESAS CILINDRICAS FRONTAIS - Duas navalhas de corte ao centro normal - Encabadouro Weldon

SERIE **Umax**

NORM.

STANDARD Rime

HSS-E Co8 | N | 45° | DIN 1835 B | 0,05-0,15 45°



INDEX

CODE	d1 mm js14	l2 mm	l1 mm	d2 mm h6	Z	Co 8% €	SUPREME €
UM0/01	4	11	55	6	3	14,06	20,66
UM0/02	5	13	57	6	3	12,87	19,58
UM0/03	6	13	57	6	3	12,87	19,58
UM0/04	7	16	66	10	3	19,35	29,96
UM0/05	8	20	69	10	3	18,16	28,77
UM0/06	9	20	69	10	3	19,35	29,96
UM0/07	10	22	72	10	3	20,54	31,04
UM0/08	11	26	83	12	3	24,46	36,90
UM0/09	12	26	83	12	3	26,33	38,67
UM0/10	13	26	83	12	3	26,88	39,23
UM0/11	14	26	83	12	3	28,64	40,99
UM0/12	15	36	92	16	3	32,28	52,11
UM0/13	16	36	92	16	3	34,04	53,87
UM0/14	17	40	100	16	4	38,78	59,82
UM0/15	18	40	100	16	4	40,65	61,58
UM0/15/1	19	40	100	16	4	45,39	73,26
UM0/16	20	45	110	20	4	45,39	73,26
UM0/17	22	45	110	20	4	63,17	91,73
UM0/18	25	50	125	25	4	83,06	116,65
UM0/19	28	56	125	25	4	99,83	136,65
UM0/20	30	63	140	25	4	118,36	171,02
UM0/21	32	63	140	32	4	132,31	234,60
UM0/22	35	70	160	32	4	157,06	259,00
UM0/23	38	70	160	32	4	187,68	281,99
UM0/24	40	70	160	32	4	202,23	296,42

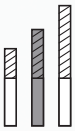
Ulteriori diametri si forniscono a richiesta - *Other diameters upon requirements*
Tolleranza effettiva sul diametro: +0 +0,03 - *Real tolerance on diameter: +0 +0,03*

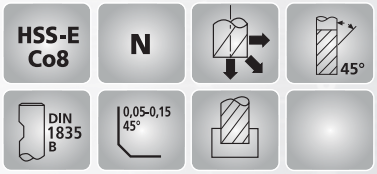
FRESE CILINDRICHE FRONTALI • SERIE LUNGA

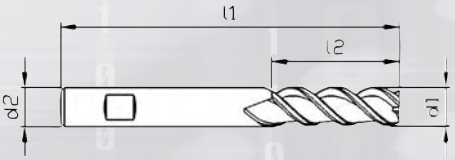
SERIE Umax

UM1

Due denti frontali taglienti fino al centro - Elica destra 45° - Divisione irregolare - Attacco Weldon
END MILLS - Two end teeth cutting up to the centre - 45° right hand spiral - Irregular division - Weldon shank
FRAISES À CYLINDRES - Deux dents bout coupantes jusq'au centre - Hélice 45° à droite - Division irréguliere - Queue cylindrique Weldon
SCHAFTFRÄSER - Zwei Schneides mit Zentrumschnitt - 45° rechts spiralgenutet - Unregelmäßige Teilung - Weldon - Spannfläche
FRESAS CILINDRICAS FRONTALES - Dos labios que cortan hasta el centro - Hélice derecha 45° - División irregular - Mango Weldon
FRESAS CILINDRICAS FRONTAIS - Três navalhas de corte ao centro longa - Encabadouro Weldon







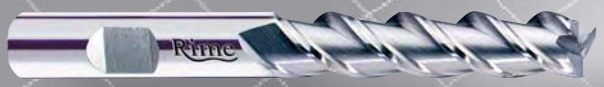
NORM.

STANDARD Rime

INDEX

CODE	d1 mm js14	l2 mm	l1 mm	d2 mm h6	Z	Co 8% €	SUPREME €
UM1/01	6	26	68	6	3	17,30	28,09
UM1/02	8	38	88	10	3	25,67	41,64
UM1/03	10	45	95	10	3	27,30	43,18
UM1/04	12	50	100	12	3	31,65	48,68
UM1/05	14	50	100	12	3	36,56	55,29
UM1/06	16	56	110	16	3	44,55	69,24
UM1/07	18	63	125	16	4	54,07	84,81
UM1/08	20	70	140	20	4	54,67	86,10
UM1/09	22	70	140	20	4	75,07	124,81
UM1/10	25	80	156	25	4	101,12	177,84
UM1/11	28	90	166	25	4	122,12	212,20
UM1/12	30	90	166	25	4	143,11	232,72
UM1/13	32	90	166	32	4	163,52	265,22

Ulteriori diametri si forniscono a richiesta - *Other diameters upon requirements*
Tolleranza effettiva sul diametro: +0 +0,03 - *Real tolerance on diameter: +0 +0,03*



FRESE CILINDRICHE FRONTALI • SERIE NORMALE

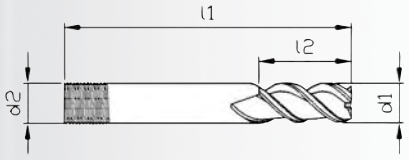
UM2

Due denti frontali taglienti fino al centro - Elica destra 45° - Divisione irregolare - Codolo cilindrico filettato
END MILLS - Two end teeth cutting up to the centre - 45° right hand spiral - Irregular division - Threaded shank
FRAISES À CYLINDRES - Deux dents bout coupantes jusq'au centre - Hélice 45° à droite - Division irréguliere - Queue cylindrique filetée
SCHAFTFRÄSER - Zwei Schneiden mit Zentrumschnitt - 45° rechts spiralgenutet - Unregelmäßige Teilung - Zylinderschaft mit Gewinde
FRESAS CILINDRICAS FRONTALES - Dos labios que cortan hasta el centro - Hélice derecha 45° - División irregular - Mango cilindrico roscado
FRESAS CILINDRICAS FRONTAIS - Duas navalhas de corte ao centro normal - Encabadouro cilindrico roscado

SERIE **Umax**

NORM. STANDARD Rime

HSS-E Co8 | N | 45° | DIN 1835-D | 0,05-0,15 45°



CODE	d1 mm h14	l2 mm	l1 mm	d2 mm h6	Z	Co 8% €
UM2/01	6	13	57	6	3	13,30
UM2/02	8	20	69	10	3	19,89
UM2/03	10	22	72	10	3	21,74
UM2/04	12	26	83	12	3	27,66
UM2/05	14	26	83	12	3	30,73
UM2/06	16	36	92	16	3	35,58
UM2/07	18	40	100	16	4	38,67
UM2/08	20	45	110	20	4	46,71
UM2/09	22	45	110	20	4	65,00
UM2/10	25	50	125	25	4	85,34
UM2/11	28	56	125	25	4	102,76
UM2/12	30	63	140	25	4	121,65
UM2/13	32	63	140	32	4	136,07
UM2/14	35	70	160	32	4	161,64
UM2/15	38	70	160	32	4	192,96
UM2/16	40	70	160	32	4	208,09

Tolleranza effettiva sul diametro: +0 +0,03 - *Real tolerance on diameter: +0 +0,03*

INDEX

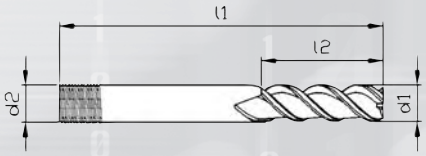
FRESE CILINDRICHE FRONTALI • SERIE LUNGA

SERIE Umax

UM3

Due denti frontali taglienti fino al centro - Elica destra 45° - Divisione irregolare - Codolo cilindrico filettato
END MILLS - Two end teeth cutting up to the centre - 45° right hand spiral - Irregular division - Threaded shank
FRAISES À CYLINDRES Deux dents bout coupantes jusq'au centre - Hélice 45° à droite - Division irréguliere - Queue cylindrique filetée
SCHAFTFRÄSER - Zwei Schneiden mit Zentrumschnitt - 45° rechts spiralgenutet - Unregelmäßige Teilung - Zylinderschaft mit Gewinde
FRESAS CILINDRICAS FRONTALES - Dos labios que cortan hasta el centro - Hélice derecha 45° - División irregular - Mango cilindrico roscado
FRESAS CILINDRICAS FRONTAIS - Duas navalhas de corte ao centro longa- Encabadouro cilindrico roscado

HSS-E Co8 | N | DIN 1835-D | 0,05-0,15 45° | 45°

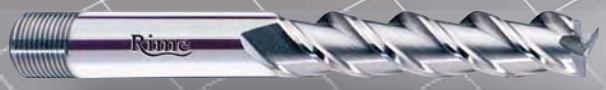


NORM. STANDARD Rime

INDEX

CODE	d1 mm js14	l2 mm	l1 mm	d2 mm h6	Z	Co 8% €
UM3/01	10	45	95	10	3	31,19
UM3/02	12	50	100	12	3	35,65
UM3/03	14	50	100	12	3	40,79
UM3/04	16	56	110	16	3	50,39
UM3/05	18	63	125	16	4	60,17
UM3/06	20	70	140	20	4	62,76
UM3/07	22	70	140	20	4	85,76
UM3/08	25	80	156	25	4	115,78
UM3/09	28	90	166	25	4	136,78
UM3/10	30	90	166	25	4	161,64

Tolleranza effettiva sul diametro: +0 +0,03 - *Real tolerance on diameter: +0 +0,03*



FRESE CILINDRICHE FRONTALI PER SGROSSATURA • SERIE NORMALE

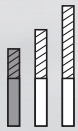
UM4

Denti elicoidali con rompitruciolo spogliato completamente rettificato - Un dente frontale tagliente fino al centro - Elica destra 45° - Attacco Weldon
ROUGHING END MILLS - Helical teeth with form relieved entirely ground chip-breaker - One end tooth cutting up to the centre - 45° right hand spiral - Weldon shank
FRAISES FRONTALES À CYLINDRES À DEGROSSIR - Denture hélicoïdale avec brise-copeaux - Une dent bout coupante jusq'au centre - Hélice 45° à droite - Queue cylindrique Weldon
SCHAFTFRÄSER - Schrägschneiden mit voll eingeschliffenem Spannbrecher - Eine Schneide mit Zentrumschnitt - 45° rechts spiralgenutet - Weldon-Spannfläche
FRESAS CILINDRICAS FRONTALES PARA DESBASTE - Labios helicoidal con arranca de viruta - Un labio que corta hasta el centro - Hélice derecha 45°- Mango Weldon
FRESAS DE TRÊS NAVALHAS COM QUEBRA APARA E CORTE AO CENTRO NORMAL - Encabadouro Weldon

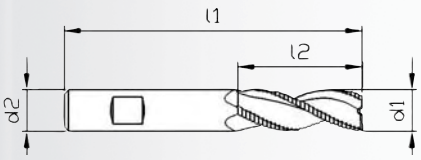
SERIE Umax

NORM.

STANDARD Rime



HSS-E Co8 | NR | 45° | DIN 1835 B | 0,05-0,15 45°



CODE	d1 mm js14	l2 mm	l1 mm	d2 mm h6	Z	Co 8% €	SUPREME €
UM4/00	5	13	57	6	3	26,92	33,30
UM4/01	6	13	57	6	3	26,92	33,30
UM4/02	7	16	66	10	3	35,80	46,07
UM4/03	8	19	69	10	3	34,60	44,87
UM4/04	9	19	69	10	3	35,80	46,07
UM4/05	10	22	72	10	3	38,71	48,88
UM4/06	11	22	79	12	3	39,90	51,79
UM4/07	12	26	83	12	3	41,63	53,52
UM4/08	13	26	83	12	3	39,25	51,14
UM4/09	14	26	83	12	3	46,92	58,71
UM4/10	15	32	92	16	3	46,92	66,18
UM4/11	16	32	92	16	3	51,04	70,17
UM4/12	17	32	92	16	3	49,85	70,17
UM4/13	18	32	92	16	3	53,41	73,64
UM4/14	20	38	104	20	3	61,52	81,63

Tolleranza effettiva sul diametro: +0 +0,03 - *Real tolerance on diameter: +0 +0,03*

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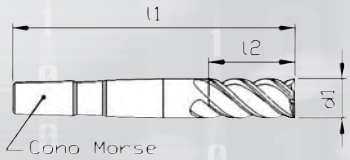
FRESE CILINDRICHE FRONTALI • SERIE NORMALE

SERIE Umax

UM5

Due denti frontali taglienti fino al centro - Elica destra 45° Divisione irregolare - Codolo conico Morse con foro filettato
END MILLS - Two end teeth cutting up to the centre - 45° right hand spiral - Irregular division - Morse taper shank
FRAISES À CYLINDRES - Deux dents bout coupantes jusq'au centre - Hélice 45° à droite - Division irréguliere - Queue au cône Morse à trou fileté
SCHAFTFRÄSER - Zwei Schneiden mit Zentrumschnitt - 45° rechts spiralgenutet - Unregelmäßige Teilung - Morsekegelschaft und Anzugsgewinde
FRESAS CILINDRICAS FRONTALES - Dos labios que cortan hasta el centro - Hélice derecha 45° - División irregular - Mango cónico Morse con taladro roscado
FRESAS DE TRÊS NAVALHAS - Corte ao centro normal - Encabadouro cone Morse con taladro roscado

HSS-E Co8 | N | 45° | DIN 228-A | 0,05-0,15 45°



NORM. STANDARD Rime

INDEX

CODE	d1 mm js14	l2 mm	l1 mm	CM-MK	Z	Co 8% €	SUPREME €
UM5/01	16	36	115	2	3	49,98	78,13
UM5/02	18	40	120	2	4	52,67	84,46
UM5/03	20	45	145	3	4	72,02	135,02
UM5/04	22	45	145	3	4	73,31	137,59
UM5/05	24	50	150	3	4	89,15	154,13
UM5/06	25	50	150	3	4	89,15	154,13
UM5/07	26	56	155	3	4	102,20	184,09
UM5/08	28	56	155	3	4	105,75	188,02
UM5/09	30	63	165	3	4	118,25	220,08
UM5/10	32	63	185	4	4	146,02	294,50
UM5/11	34	70	195	4	4	156,43	307,71
UM5/12	35	70	195	4	4	164,27	317,02
UM5/13	36	70	195	4	4	171,73	322,16
UM5/14	38	70	195	4	4	192,17	352,03
UM5/15	40	70	195	4	4	211,75	370,02
UM5/16	45	80	205	4	4	297,19	474,06
UM5/17	50	90	215	4	4	427,67	622,54

Tolleranza effettiva sul diametro: +0 +0,03 - *Real tolerance on diameter: +0 +0,03*

FRESE CILINDRICHE FRONTALI • SERIE LUNGA

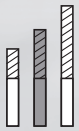
UM7

Due denti frontali taglienti fino al centro - Elica destra 45° - Divisione irregolare - Codolo conico Morse con foro filettato
END MILLS - Two end teeth cutting up to the centre - 45° right hand spiral - Irregular division - Morse taper shank
FRAISES À CYLINDRES - Deux dents bout coupantes jusq'au centre - Hélice 45° à droite - Division irréguliere - Queue au cône Morse à trou fileté
SCHAFTFRÄSER - Zwei Schneiden mit Zentrumschnitt - 45° rechts spiralgenutet - Unregelmäßige Teilung - Morsekegelschaft und Anzugsgewinde
FRESAS CILINDRICAS FRONTALES - Dos labios que cortan hasta el centro - Hélice derecha 45° - División irregular - Mango cónico Morse taladro roscado
FRESAS DE TRÊS NAVALHAS - Corte ao centro longa - Encabadouro cone Morse con taladro roscado

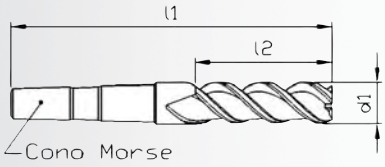
SERIE Umax

NORM.

STANDARD Rime



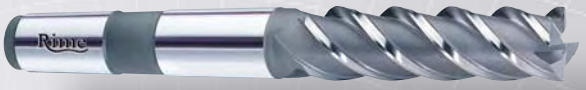
HSS-E Co8 | N | 45° | DIN 228-A | 0,05-0,15 45°



CODE	d1 mm js14	l2 mm	l1 mm	CM-MK	Z	Co 8% €
UM7/01	16	56	135	2	3	62,64
UM7/02	18	63	145	2	4	67,33
UM7/03	20	70	170	3	4	84,93
UM7/04	22	70	170	3	4	100,01
UM7/05	24	80	180	3	4	125,59
UM7/06	25	80	180	3	4	129,13
UM7/07	26	80	180	3	4	133,42
UM7/08	28	90	215	4	4	157,90
UM7/09	30	90	215	4	4	166,72
UM7/10	32	100	225	4	4	215,56
UM7/11	34	110	235	4	4	247,38
UM7/12	35	110	235	4	4	254,11
UM7/13	36	110	235	4	4	257,65
UM7/14	38	110	235	4	4	300,37
UM7/15	40	110	235	4	4	321,43
UM7/16	45	120	245	4	4	436,85
UM7/17	50	140	265	4	4	617,51

Tolleranza effettiva sul diametro: +0 +0,03 - *Real tolerance on diameter: +0 +0,03*

INDEX



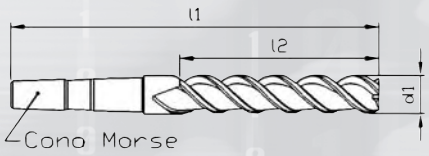
FRESE CILINDRICHE FRONTALI • SERIE EXTRA-LUNGA

SERIE Umax

UM8

Due denti frontali taglienti fino al centro - Elica destra 45° Divisione irregolare - Codolo conico Morse con foro filettato
END MILLS - Two end teeth cutting up to the centre - 45° right hand spiral - Irregular division - Morse taper shank
FRAISES À CYLINDRES - Deux dents bout coupantes jusq'au centre - Hélice 45° à droite - Division irréguliere - Queue au cône Morse à trou fileté
SCHAFTFRÄSER - Zwei Schneiden mit Zentrumschnitt - 45° rechts spiralgenutet - Unregelmäßige Teilung - Morsekegelschaft und Anzugsgewinde
FRESAS CILINDRICAS FRONTALES - Dos labios que cortan hasta el centro - Hélice derecha 45° - División irregular - Mango cónico Morse con taladro roscado
FRESAS DE TRÊS NAVALHAS - Corte ao centro extra longa - Encabadouro cone Morse con taladro roscado

HSS-E Co8 | N | 45° | DIN 228-A | 0,05-0,15 45°



NORM. STANDARD Rime

INDEX

CODE	d1 mm js14	l2 mm	l1 mm	CM-MK	Z	Co 8% €
UM8/01	16	90	170	2	4	82,24
UM8/02	18	100	200	3	4	124,32
UM8/03	20	110	210	3	4	136,44
UM8/04	22	110	210	3	4	143,39
UM8/05	25	125	225	3	5	204,65
UM8/06	28	140	265	4	5	267,44
UM8/07	30	140	265	4	5	291,44
UM8/08	32	160	285	4	5	312,79
UM8/09	35	180	305	4	5	413,43
UM8/10	40	200	335	4	5	486,09

Tolleranza effettiva sul diametro: +0 +0,03 - *Real tolerance on diameter: +0 +0,03*

Catalogo HSS-E e PM

SERIE R-S

FRESE A T
E DI FORMA

"T" SLOT CUTTERS,
WOODRUFF CUTTERS
AND FORM CUTTERS

Rime
UTENSILERIA

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copertina - home

SERIE R-S

FRESE A T E DI FORMA
"T" SLOT CUTTERS, WOODRUFF CUTTERS AND FORM CUTTERS

FRESE PER SEDI DI LINGUETTE AMERICANE

R0

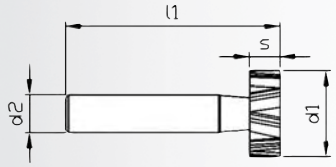
Denti elicoidali alternati - Codolo cilindrico
WOODRUFF KEYSEAT CUTTERS - Staggered helical teeth - Straight shank
FRAISES POUR CLAVETTES WOODRUFF - Denture hélicoïdale alternée - Queue cylindrique
SCHLITZFRÄSER FÜR SCHEIBENFEDERNUTEN - Kreuzverzahnt - Zylinderschaft
FRESAS WOODRUFF - Labios helicoidales alternados - Mango cilindrico
FRESAS WOODRUFF - Oito navalhas helicoidales alternados - Encabadouro cilindrico

SERIE R-S

NORM.

UNI 8263
DIN 850B
ISO

HSS-E Co8 | N | DIN 1835 A



CODE	d1 x s mm	l1 mm	d2 mm h6	Z	Co 8% €
R0/01	10.5x2	50	6	8	32,87
R0/02	10.5x2.5	50	6	8	32,87
R0/03	10.5x3	50	6	8	32,87
R0/04	13.5x2	56	10	8	36,34
R0/05	13.5x3	56	10	8	36,34
R0/06	13.5x4	56	10	8	36,34
R0/07	16.5x3	56	10	8	42,82
R0/08	16.5x4	56	10	8	42,82
R0/09	16.5x5	56	10	8	42,82
R0/10	16.5x6	56	10	8	42,82
R0/11	19.5x3	63	10	8	49,57
R0/12	19.5x4	63	10	8	49,57
R0/13	19.5x5	63	10	8	49,57
R0/14	19.5x6	63	10	8	49,57
R0/15	22.5x4	63	10	10	57,95
R0/16	22.5x5	63	10	10	57,95
R0/17	22.5x6	63	10	10	57,95
R0/18	22.5x8	63	10	10	57,95
R0/19	25.5x5	63	10	10	66,87
R0/20	25.5x6	63	10	10	66,87
R0/21	25.5x7	63	10	10	66,87
R0/22	25.5x8	63	10	10	66,87
R0/23	28.5x6	63	10	10	80,91
R0/24	28.5x7	63	10	10	80,91
R0/25	28.5x8	63	10	10	80,91
R0/26	28.5x10	71	12	10	80,91
R0/27	32.5x6	71	12	10	94,37
R0/28	32.5x7	71	12	10	94,37
R0/29	32.5x8	71	12	10	94,37
R0/30	32.5x10	71	12	10	94,37
R0/31	45.5x10	71	12	12	132,63

Tolleranza effettiva sullo spessore: +0 -0,02 - *Real tolerance on thickness: +0 -0,02*
Tolleranza effettiva sul diametro: +0,05 -0 - *Real tolerance on diameter: +0,05 -0*

INDEX

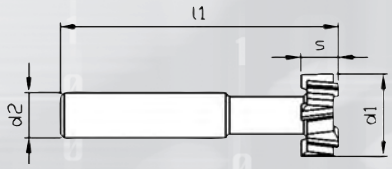
FRESE PER SCANALATURE A "T"

SERIE R-S

R1

Denti elicoidali alternati - Codolo cilindrico
"T"-SLOT CUTTERS - Staggered helical teeth - Straight shank
FRAISES POUR RAINURES À "T" - Denture hélicoïdale alternée - Queue cylindrique
SCHAFTFRÄSER FÜR T-NUTEN - Kreuzverzahnt - Zylinderschaft
FRESAS EN "T"- Labios helicoidales alternados - Mango cilindrico
FRESAS EN "T" - Oito navalhas helicoidales alternados - Encabadouro cilindrico

HSS-E Co8 | N | DIN 1835 A



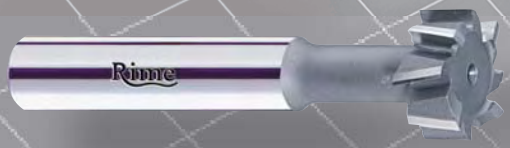
NORM.

UNI 7339A
DIN 851AA
ISO 3337

INDEX

CODE	d1 x s mm	l1 mm	d2 mm h6	Z	Co 8% €
R1/01	12.5x6	57	10	8	48,65
R1/02	16x8	62	10	8	56,88
R1/03	18x8	70	12	8	62,71
R1/04	19x9	70	12	8	65,09
R1/05	21x9	74	12	8	73,48
R1/06	22x10	74	12	8	75,90
R1/07	25x11	82	16	8	87,80
R1/08	28x12	85	16	8	99,81
R1/09	32x14	90	16	8	115,89

Tolleranza effettiva sullo spessore: +0 -0,02 - *Real tolerance on thickness: +0 -0,02*
Tolleranza effettiva sul diametro: -0 +0,05 - *Real tolerance on diameter: -0 +0,05*



FRESE PER SCANALATURE A "T" PER SGROSSATURA

R2

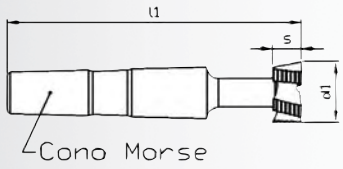
SERIE **R-S**

Denti elicoidali con rompitruciolo spogliato completamente rettificato - Codolo conico Morse con foro filettato
"T"-SLOT ROUGHING CUTTERS - Helical teeth with form relieved entirely ground chip-breaker - Morse taper shank
FRAISES POUR RAINURES À "T" À DEGROSSIR - Denture hélicoïdale avec brise-copeaux dépouillé entièrement rectifié - Queue au cône Morse à trou fileté
SCHAFTSCHRUPPFRÄSER FÜR T-NUTEN - Schrägschneiden mit voll eingeschliffenem Spannbrecher - Morsekegelschaft und Anzugsgewinde
FRESAS PARA RANURAS EN "T" PARA DESBASTE - Labios helicoidal con arranca de viruta completamente rectificado - Mango cónico Morse taladro roscado
FRESAS PARA RANHURAS EM "T" PARA DESBASTE - Cinco navalhas helicoidal com quebra apara - Encabadouro cone Morse con taladro roscado

NORM.

UNI
DIN 851B
ISO 3337

HSS-E Co8 | NR | DIN 228-A



CODE	d1 x s mm	l1 mm	CM-MK	Z	Co 8% €
R2/03	18x8	82	1	5	75,68
R2/04	19x9	82	1	5	82,06
R2/05	21x9	102	2	5	85,64
R2/06	22x10	102	2	5	93,85
R2/07	25x11	104	2	5	104,99
R2/08	28x12	106	2	6	126,08
R2/09	32x14	111	2	6	141,32
R2/10	36x16	133	3	8	182,40
R2/11	40x18	140	3	8	215,16
R2/12	45x20	143	3	8	245,66
R2/13	50x22	177	4	8	300,80
R2/14	56x24	182	4	10	379,93

Tolleranza effettiva sullo spessore: +0 -0,02 - *Real tolerance on thickness: +0 -0,02*
Tolleranza effettiva sul diametro: ±0,05 - *Real tolerance on diameter: ±0,05*

INDEX

FRESE PER SCANALATURE A "T" PER SGROSSATURA

R4

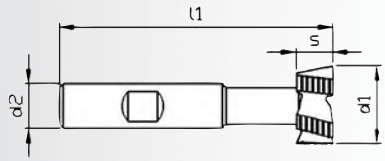
SERIE **R-S**

Denti elicoidali con rompitruciolo spogliato completamente rettificato - Attacco Weldon
"T"-SLOT ROUGHING CUTTERS - Helical teeth with form relieved entirely ground chip-breaker - Weldon shank
FRAISES POUR RAINURES À "T" À DEGROSSIR - Denture hélicoïdale avec brise-copeaux dépouillé entièrement rectifié - Queue cylindrique Weldon
SCHAFTSCHRUPPFRÄSER FÜR T-NUTEN - Schrägschneiden mit voll eingeschliffenem Spannbrecher - Weldon-Spannfläche
FRESAS PARA RANURAS EN "T" PARA DESBASTE - Labios helicoidal con arranca de viruta completamente rectificado - Mango Weldon
FRESAS PARA RANHURAS EM "T" PARA DESBASTE - Cinco navalhas helicoidal com quebra apara - Encabadouro Weldon

NORM.

UNI
DIN 851B
ISO 3337

HSS-E Co8 | NR | DIN 1835 B



CODE	d1 x s mm	l1 mm	d2 mm h6	Z	Co 8% €
R4/01	12.5x6	57	10	4	55,68
R4/02	16x8	62	10	5	62,17
R4/03	18x8	70	12	5	70,94
R4/04	19x9	70	12	5	75,04
R4/05	21x9	74	12	5	78,61
R4/06	22x10	74	12	5	86,18
R4/07	25x11	82	16	5	99,05
R4/08	28x12	85	16	6	120,24
R4/09	32x14	90	16	6	132,56
R4/10	36x16	108	25	6	182,95
R4/11	40x18	108	25	8	199,91

Tolleranza effettiva sullo spessore: +0 -0,02 - *Real tolerance on thickness: +0 -0,02*
Tolleranza effettiva sul diametro: ±0,05 - *Real tolerance on diameter: ±0,05*

INDEX

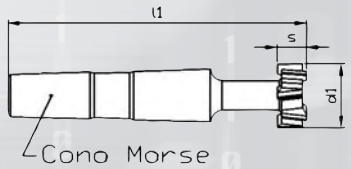
FRESE PER SCANALATURE A "T"

SERIE R-S

R3

Denti elicoidali alternati - Codolo conico Morse con foro filettato
"T"-SLOT CUTTERS - Stagged helical teeth - Morse taper shank
FRAISES POUR RAINURES À "T" - Denture hélicoïdale alternée - Queue au cône Morse à trou fileté
SCHAFTFRÄSER FÜR T-NUTEN - Kreuzverzahnt - Morsekegelschaft und Anzugsgewinde
FRESAS PARA RANURAS EN "T"- Labios helicoidales alternados - Mango cónico Morse con taladro roscado
FRESAS PARA RANHURAS EN "T" - Oito navalhas helicoidales alternados - Encabadouro cone Morse con taladro roscado

HSS-E Co8 | N | DIN 228-A



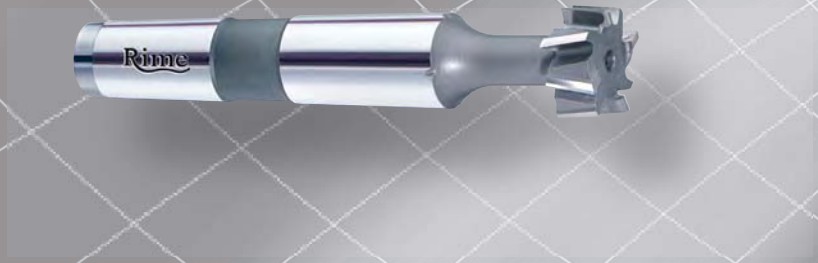
NORM.

UNI 7339B
DIN 851B
ISO 3337

INDEX

CODE	d1 x s mm	l1 mm	CM-MK	Z	Co 8% €
R3/01	12.5x6	72	1	8	56,18
R3/02	16x8	77	1	8	63,89
R3/03	18x8	82	1	8	69,29
R3/04	19x9	82	1	8	72,27
R3/05	21x9	102	2	8	79,97
R3/06	22x10	102	2	8	84,31
R3/07	25x11	104	2	8	95,39
R3/08	28x12	106	2	8	110,24
R3/09	32x14	111	2	8	132,52
R3/10	36x16	133	3	8	147,49
R3/11	40x18	140	3	8	157,99
R3/12	45x20	143	3	8	195,12
R3/13	50x22	177	4	10	247,79
R3/14	56x24	182	4	10	319,07

Tolleranza effettiva sullo spessore: +0 -0,02 - *Real tolerance on thickness: +0 -0,02*
Tolleranza effettiva sul diametro: +0,05 -0 - *Real tolerance on diameter: +0,05 -0*



FRESE AD ANGOLO

R5/A

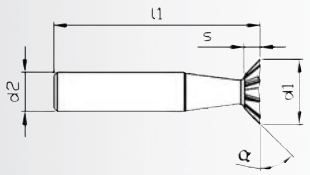
Forma "A" divergente - Codolo cilindrico
ANGLE CUTTER - Straight shank
FRAISES D'ANGLE - Queue cylindrique
WINKELFRÄSER - Zylinderschaft
FRESAS EN ANGULO - Mango cilindrico
FRESAS EN ANGULO - Encabadouro cilindrico

SERIE R-S

NORM.

UNI 8262-A
DIN 1833-A
ISO 3859

HSS-E Co5 | N | DIN 1835 A



CODE	d1 mm js16	α ±30'	s mm	l1 mm	d2 mm h6	Z	Co 5% €
R5A/01	16		4	60	12	10	39,08
R5A/02	20	45°	5	63	12	10	50,84
R5A/03	25		6.3	67	16	10	62,60
R5A/04	32		8	71	16	12	90,48
R5A/05	16		6.3	60	12	10	39,08
R5A/06	20	60°	8	63	12	10	50,84
R5A/07	25		10	67	16	10	62,60
R5A/08	32		12.5	71	16	12	90,48

Tolleranza effettiva sull'angolo ±20' - *Real tolerance on angle ±20'*

INDEX

FRESE AD ANGOLO

R5/B

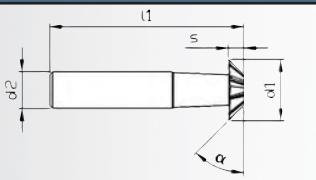
Forma "B" convergente - Codolo cilindrico
ANGLE CUTTER - Straight shank
FRAISES D'ANGLE - Queue cylindrique
WINKELFRÄSER - Zylinderschaft
FRESAS EN ANGULO - Mango cilindrico
FRESAS EN ANGULO - Encabadouro cilindrico

SERIE R-S

NORM.

UNI 8262-B
DIN 1833-B
ISO 3859

HSS-E Co5 | N | DIN 1835 A



CODE	d1 mm js16	α ±30'	s mm	l1 mm	d2 mm h6	Z	Co 5% €
R5B/01	16		4	60	12	10	39,08
R5B/02	20	45°	5	63	12	10	50,84
R5B/03	25		6.3	67	16	10	62,60
R5B/04	32		8	71	16	12	90,48
R5B/05	16		6.3	60	12	10	39,08
R5B/06	20	60°	8	63	12	10	50,84
R5B/07	25		10	67	16	10	62,60
R5B/08	32		12.5	71	16	12	90,48

Tolleranza effettiva sull'angolo ±20' - *Real tolerance on angle ±20'*

INDEX

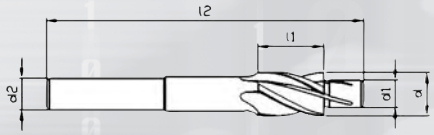
FRESE PER SEDI DI VITI

SERIE R-S

S2

Per viti a testa cilindrica con esagono incassato - Denti elicoidali con guida - Codolo cilindrico
COUNTERBORES WITH SOLID PILOT - For screws with cylindrical head - Helical teeth - Straight shank
FRAISES À PIVOT FIXE - Pour vis tête cylindrique - Denture hélicoïdale avec guide - Queue cylindrique
FLACHSENKER - Für Zylinderschrauben mit Innensechskant - Schrägverzahnt mit Führung - Zylinderschaft
FRESAS ALOJAMIENTO TORNILLOS - Para tornillos cabeza cilíndrica con hexágono encajado - Labios helicoidales con guía - Mango cilindrico
FRESAS PARA PARAFUSOS DE CABEÇA CILINDRICA (TIPO UMBRAKO) - Encabadouro cilindrico

HSS-E Co5 | N | ≈30° | DIN 1835 A | DIN 375



NORM.

UNI 6841
DIN
ISO

INDEX

CODE	d vite	D vite	h vite	d mm h8	d1 mm h8	l1 mm	l2 mm	d2 mm h6	Z	Co 5% €
S2/01	3M	5.5	3	5.9	3.2	12	70	6	4	23,91
S2/02	4M	7	4	7.4	4.3	12	70	8	4	23,91
S2/03	5M	9	5	9.4	5.3	14	90	10	4	25,67
S2/04	6M	10	6	10.4	6.4	16	100	10	4	26,88
S2/05	8M	13	8	13.5	8.4	20	115	12	4	33,49
S2/06	10M	16	10	16.5	10.5	25	120	12	4	41,86
S2/07	12M	18	12	19	13	25	120	16	4	52,55
S2/08	14M	22	14	23	15	30	130	16	4	72,37
S2/09	16M	24	16	25	17	35	155	20	4	91,22
S2/10	18M	27	18	28	19	40	160	20	4	114,33
S2/11	20M	30	20	31	21	50	180	20	4	135,65
S2/12	22M	33	22	34	23	50	185	22	4	181,89
S2/13	24M	36	24	37	25	50	200	22	4	200,84

FRESE PER SEDI DI VITI

S3

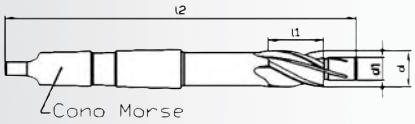
Per viti a testa cilindrica con esagono incassato - Denti elicoidali con guida - Codolo conico Morse con tenone
COUNTERBORES WITH SOLID PILOT - For screws with cylindrical head - Helical teeth - Straight shank
FRAISES À PIVOT FIXE - Pour vis tête cylindrique - Denture hélicoïdale avec guide - Queue au cône Morse avec tenon
FLACHSENKER - Für Zylinderschrauben mit Innensechskant - Schrägverzahnt mit Führung - Morsekegelschaft mit Zapfen
FRESAS ALOJAMIENTO TORNILLOS - Para tornillos cabeza cilíndrica con hexágono encajado - Labios helicoidales con guía - Mango cónico Morse con tentona
FRESAS PARA PARAFUSOS DE CABEÇA CILINDRICA (TIPO UMBRAKO) - Encabadouro Morse

SERIE R-S

NORM.

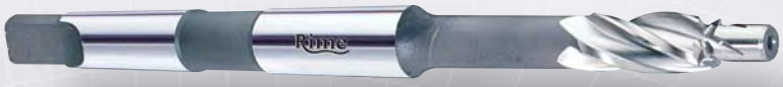
UNI 6842
DIN
ISO

HSS-E Co5 | N | ≈30° | DIN 228-B | DIN 375



CODE	d vite	D vite	h vite	d mm h8	d1 mm h8	l1 mm	l2 mm	CM-MK	Z	Co 5% €
S3/01	3M	5.5	3	5.9	3.2	12	105	1	4	31,07
S3/02	4M	7	4	7.5	4.3	12	105	1	4	31,07
S3/03	5M	9	5	9.4	5.3	13	118	1	4	32,83
S3/04	6M	10	6	10.4	6.4	16	125	1	4	34,04
S3/05	8M	13	8	13.5	8.4	20	140	1	4	38,78
S3/06	10M	16	10	16.5	10.5	25	160	2	4	47,15
S3/07	12M	18	12	19	13	25	160	2	4	58,50
S3/08	14M	22	14	23	15	32	170	2	4	79,66
S3/09	16M	24	16	25	17	35	180	2	4	99,75
S3/10	18M	27	18	28	19	40	180	2	4	119,83
S3/11	20M	30	20	31	21	50	215	3	4	143,62
S3/12	22M	33	22	34	23	50	220	3	4	203,20
S3/13	24M	36	24	37	25	50	230	3	4	248,86

INDEX



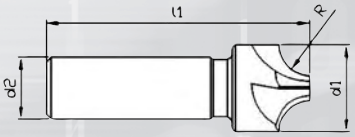
FRESE DI FORMA A QUARTO DI CERCHIO CONCAVO

SERIE R-S

S4

Denti dritti - Codolo cilindrico
CORNER ROUNDING END MILLS - Straight toothing - Straight shank
FRAISES CONCAVES 1/4 DE CERCLE - Denture droite - Queue cylindrique
VIERTELRUND - PROFILIFRÄSER - Geradverzahnt - Zylinderschaft
FRESAS DE FORMAS DE UN CUARTO DE CIRCULO - Labios derechos - Mango cilindrico
FRESAS UM QUARTO DE CIRCULO - Quatro navalhas direitas - Encabadouro cilindrico

HSS-E Co8 | N | DIN 1835 A



NORM.

UNI 8264
DIN 6518A
ISO

INDEX

CODE	r mm H11	d1 max mm	l1 mm	d2 mm h6	Z	Co 8% €
S4/01	1	10	60	10	4	26,88
S4/02	1.5	10	60	10	4	26,88
S4/03	2	10	60	10	4	26,88
S4/04	2.5	10	60	10	4	26,88
S4/05	3	12	60	12	4	41,86
S4/05/1	3.5	15	60	12	4	43,63
S4/06	4	15	60	12	4	43,63
S4/06/1	4.5	18	70	12	4	46,60
S4/07	5	18	70	16	4	46,60
S4/07/1	5.5	21	70	16	4	58,26
S4/08	6	21	70	16	4	58,26
S4/08/1	6.5	24	70	16	4	65,69
S4/09	7	24	70	16	4	65,69
S4/09/1	7.5	24	70	16	4	65,69
S4/10	8	24	70	16	4	65,69
S4/11	9	28	85	20	4	71,86
S4/12	10	28	85	20	4	71,86
S4/13	11	35	90	20	4	93,50
S4/14	12	35	100	20	4	93,50
S4/15	12.5	35	100	20	4	104,28
S4/16	13	42	100	25	4	157,77
S4/17	14	42	100	25	4	157,77
S4/18	15	48	105	25	5	199,76
S4/19	16	48	105	25	5	199,76
S4/20	18	52	115	32	5	294,55
S4/21	20	60	115	32	6	400,12

Ulteriori raggi si forniscono a richiesta - *Other radius on requirements*

FRESE CONICHE PER STAMPI

SC1

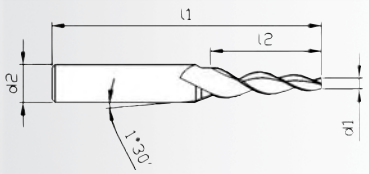
Conicità 1°30' laterali - Tre denti elicoidali - Codolo cilindrico
TAPER END MILLS - Taper 1°30' - Three helical flutes - Straight shank
FRAISES CONIQUES - Conicité 1°30' - Denture hélicoïdale trois dents - Queue cylindrique
KONISCHE FRÄSER - Kegel 1°30' - Dreischneider - Zylinderschaft
FRESAS CONICAS PARA MOLDES - Cónico 1°30' lateral - Tres labios helicoidales - Mango cilindrico
FRESAS CONICAS PARA MOLDES - Cónico 1°30' lateral - Três navalhas helicoidales - Encabadouro cilindrico

SERIE **R-S**

NORM.

STANDARD Rime

HSS-E Co8 | N | ≈ 30° | DIN 1835 A



CODE	d1 mm js14	l2 mm	l1 mm	d2 mm h6	Z	Co 8% €
SC1/01	2.5	30	70	6	3	31,46
SC1/02	2.5	40	80	8	3	36,97
SC1/03	3	30	75	8	3	31,46
SC1/04	3	40	85	8	3	39,66
SC1/05	3	50	95	10	3	56,79
SC1/06	3.5	30	75	8	3	31,46
SC1/07	3.5	40	85	8	3	35,63
SC1/08	4.5	30	75	8	3	33,54
SC1/09	4.5	40	85	10	3	38,31

INDEX

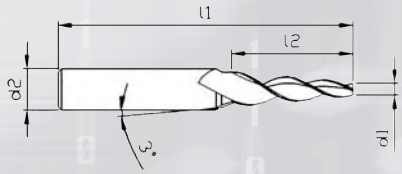
FRESE CONICHE PER STAMPI

SERIE R-S

SC2

Conicità 3° laterali- Tre denti elicoidali - Codolo cilindrico
TAPER END MILLS - Taper 3° - Three helical flutes - - Straight shank
FRAISES CONIQUES - Conicité 3° - Denture hélicoïdale trois dents - Queue cylindrique
KONISCHE FRÄSER - Kegel 3° - Dreischneider - Zylinderschaft
FRESAS CONICAS PARA MOLDES - Cónico 3° lateral - Tres labios helicoidales - Mango cilindrico
FRESAS CONICAS PARA MOLDES - Conico 3° lateral - Três navalhas helicoidales - Encabadouro cilindrico

HSS-E Co8 | N | ≈30° | DIN 1835 A



NORM. STANDARD Rime

INDEX

CODE	d1 mm js14	l2 mm	l1 mm	d2 mm h6	Z	Co 8% €
SC2/01	2.5	20	65	6	3	31,46
SC2/02	2.5	25	70	8	3	31,46
SC2/03	2.5	30	75	8	3	35,63
SC2/04	2.5	40	85	8	3	39,66
SC2/05	3	20	65	8	3	31,46
SC2/06	3	25	70	8	3	31,46
SC2/07	3	30	75	8	3	35,63
SC2/08	3	40	85	8	3	39,66
SC2/09	3	50	95	10	3	58,75
SC2/10	3.5	20	65	8	3	30,73
SC2/11	3.5	25	70	8	3	30,73
SC2/12	3.5	30	75	8	3	35,63
SC2/13	3.5	40	85	10	3	43,09
SC2/14	3.5	50	100	10	3	58,75
SC2/15	4	30	75	10	3	36,97
SC2/16	4.5	20	65	8	3	31,46
SC2/17	4.5	25	70	10	3	33,54
SC2/18	4.5	30	75	10	3	36,97
SC2/19	4.5	40	85	10	3	43,09
SC2/20	4.5	70	120	12	3	82,14
SC2/21	4.5	80	140	14	3	98,53
SC2/22	6.5	70	125	14	3	89,48
SC2/23	6.5	100	165	20	3	132,07

FRESE CONICHE PER STAMPI

SC3

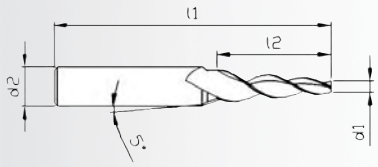
Conicità 5° laterali - Tre denti elicoidali - Codolo cilindrico
TAPER END MILIS - Taper 5° - Three helical flutes - Straight shank
FRAISES CONIQUES - Conicité 5° - Denture hélicoïdale trois dents - Queue cylindrique
KONISCHE FRÄSER - Kegel 5° - Dreischneider - Zylinderschaft
FRESAS CONICAS PARA MOLDES - Conico 5° lateral - Tres labios helicoidales - Mango cilindrico
FRESAS CONICAS PARA MOLDES - Conico 5° lateral - Três navalhas helicoidales - Encabadouro cilindrico

SERIE **R-S**

NORM.

STANDARD Rime

HSS-E Co8 | N | ≈30° | DIN 1835 A



INDEX

CODE	d1 mm js14	l2 mm	l1 mm	d2 mm h6	Z	Co 8% €
SC3/01	2.5	20	65	8	3	30,73
SC3/02	2.5	25	70	8	3	35,63
SC3/03	2.5	30	75	10	3	38,92
SC3/04	2.5	40	85	10	3	45,78
SC3/05	2.5	50	100	12	3	59,50
SC3/06	3	20	65	8	3	32,19
SC3/07	3	25	70	8	3	35,63
SC3/08	3	30	75	10	3	42,36
SC3/09	3	40	85	10	3	51,90
SC3/10	3	50	95	12	3	59,50
SC3/11	3.5	20	65	8	3	32,19
SC3/12	3.5	25	70	8	3	35,63
SC3/13	3.5	30	75	10	3	42,36
SC3/14	3.5	40	90	12	3	51,90
SC3/15	3.5	50	100	14	3	66,35
SC3/16	4	35	85	12	3	49,94
SC3/17	4.5	20	65	10	3	33,54
SC3/18	4.5	25	70	10	3	39,66
SC3/19	4.5	30	80	12	3	45,17
SC3/20	4.5	40	90	12	3	51,90
SC3/21	4.5	50	105	16	3	65,74
SC3/22	4.5	60	115	16	3	84,10
SC3/23	4.5	70	125	16	3	97,06
SC3/24	4.5	85	145	20	3	132,07
SC3/25	5.5	20	65	10	3	33,54
SC3/26	5.5	25	70	12	3	38,92
SC3/27	5.5	30	80	12	3	45,17
SC3/28	5.5	40	90	14	3	64,26
SC3/29	5.5	50	105	16	3	65,74
SC3/30	5.5	60	115	16	3	87,52
SC3/31	6.5	40	90	14	3	64,26
SC3/32	6.5	55	110	16	3	83,48
SC3/33	6.5	60	115	16	3	86,90
SC3/34	6.5	70	125	20	3	103,92
SC3/35	6.5	80	140	20	3	118,25
SC3/36	6.5	100	165	20	3	138,80
SC3/37	6.5	100	215	20	3	155,82

Catalogo HSS-E e PM

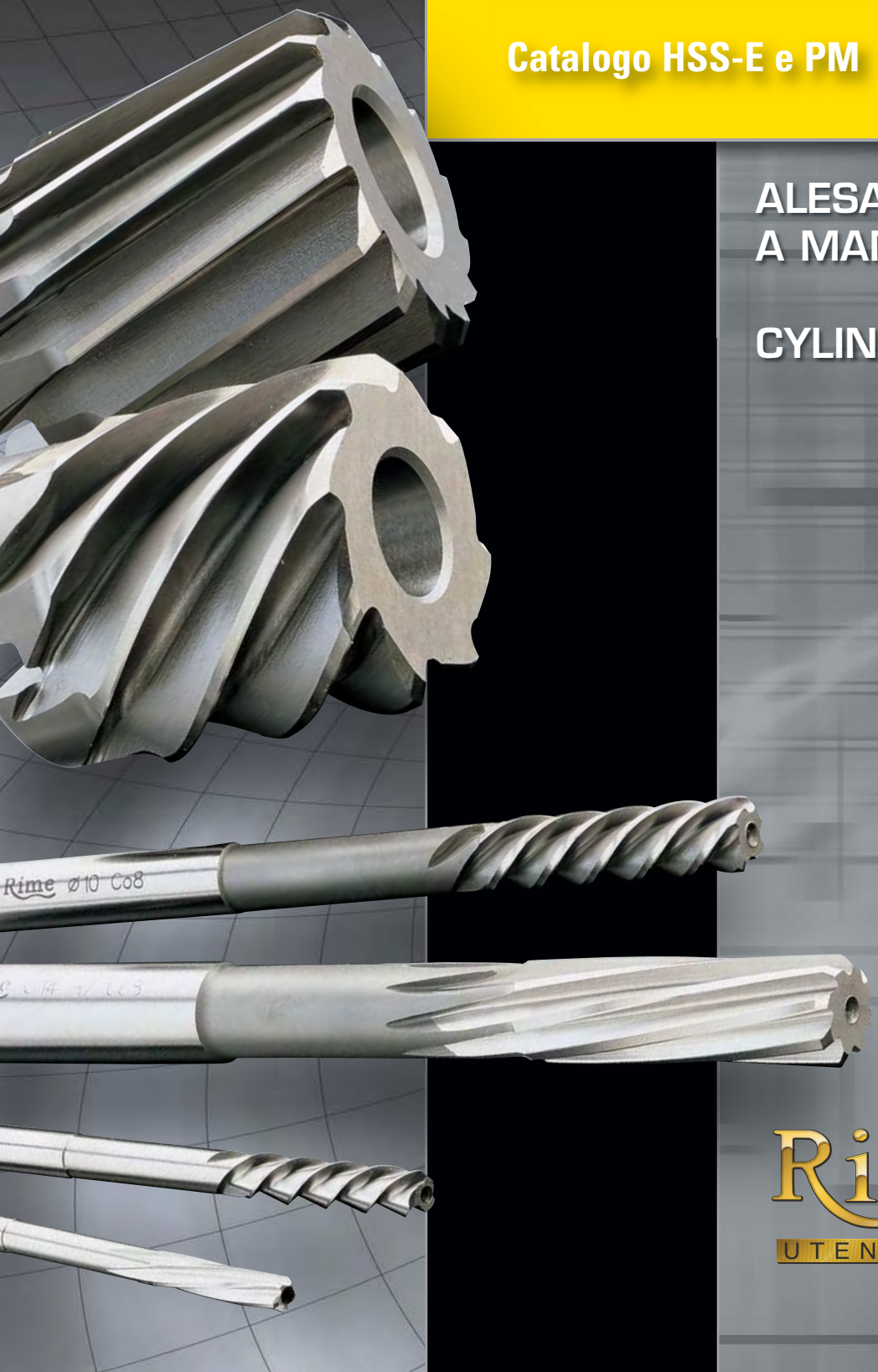
INDEX

Catalogo HSS-E e PM

SERIE AL

ALESATORI CILINDRICI A MANO E A MACCHINA

CYLINDER REAMERS



Rime
UTENSILERIA

SERIE AL

ALESATORI CILINDRICI A MANO E A MACCHINA
CYLINDER REAMERS

ALESATORI CILINDRICI • SERIE NORMALE

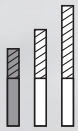
AL0

Taglio discendente elica 45° sinistra - Codolo cilindrico
CYLINDER REAMERS - Left-hand 45° helical teeth - Straight shank
ALÉSOIRS À CYLINDRES - Denture hélicoïdale à 45° à gauche - Queue cylindrique
MASCHINEN - REIBAHLEN - 45° links schrägverzahnt - Zylinderschaft
ESCARIADORES CILÍNDRICOS - Labios hélice izquierda 45° - Mango cilindrico
ESCARIADORES CILINDRICOS - Três navalhas hélice ezquerdea 45° - Encabadouro cilindrico

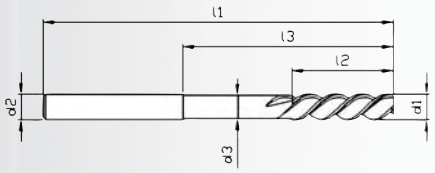
SERIE AL

NORM.

UNI
DIN 212E
ISO 521



HSS-E Co8 | N | 45° | DIN 1835 A



CODE	d1 mm H7	l2 mm	l1 mm	l3 mm	d2 mm h6	d3 mm	Z	Co 8% €
AL0/01	2	11	49	24	2	1.9	3	22,70
AL0/02	2.5	14	57	29	2.5	2.4	3	25,78
AL0/03	3	15	61	33	3	2.9	3	28,32
AL0/04	3.5	18	70	40	3.5	3.4	3	28,87
AL0/05	4	19	75	43	4	3.7	3	28,87
AL0/06	4.5	21	80	45	4.5	4.2	3	29,52
AL0/07	5	23	86	51	5	4.7	3	29,52
AL0/08	5.5	26	93	55	5.5	5.2	3	30,07
AL0/09	6	26	93	55	6	5.6	3	29,52
AL0/10	6.5	28	101	61	6.5	6.1	3	33,83
AL0/11	7	31	109	67	7	6.6	3	35,58
AL0/12	8	33	117	72	8	7.6	3	35,03
AL0/13	9	36	125	75	9	8.4	3	37,45
AL0/14	10	38	133	83	10	9.4	4	38,12
AL0/15	11	41	142	90	11	10.3	4	44,84
AL0/16	12	44	151	96	12	11.3	4	44,29
AL0/17	13	44	151	96	13	12.2	4	51,00
AL0/18	14	47	160	100	14	12.8	4	49,80
AL0/19	15	50	162	102	15	13.8	4	52,88
AL0/20	16	52	170	107	16	14.8	4	56,51

Diametri decimali e tolleranze diverse da H7 si forniscono a richiesta
Decimal diameter and different tolerance from H7 upon requirements

INDEX

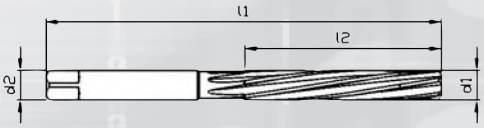
ALESATORI A MANO • SERIE NORMALE

SERIE AL

AL6

Denti elicoidali sinistri taglio destro - Codolo cilindrico con quadro - Per fori cilindrici
HAND REAMERS - Left-hand helical teeth, right-hand cutting - Straight shank with square - For parallel holes
ALÉSOIRS À MAIN - Denture hélicoïdale à gauche, coupe à droite - Queue cylindrique carrée - Pour trous cylindriques
HAND - REIBAHLEN - Spiralgenutet, rechtsschneidend, Linksdrall Zylinderschaft mit Vierkantstab - Für zylindrische Bohrungen
ESCARIADORES A MANO - Labios helicoidales izquierda, cortante derecho - Mango cilindrico con cuadro - Para agujeros cilíndricos
ESCARIADORES A MANO - Navalhas helicodiales esquerda, cortante dereito - Encabadouro cilindrico con cuadro -Para agujeros cilíndricos

HSS-E Co5 | N | ≈ 10



NORM.

UNI 6852
DIN 206B
ISO 236/I

INDEX

CODE	d1 mm H7	l2 mm	l1 mm	d2 mm h6	Z	Co 5% €
AL6/00	2	31	62	3	4	26,68
AL6/01	3	31	62	3	4	26,68
AL6/02	4	38	76	4	5	25,96
AL6/03	5	44	87	5	5	27,30
AL6/04	6	47	93	6	5	28,64
AL6/05	7	54	107	7	6	32,08
AL6/06	8	58	115	8	6	32,80
AL6/07	9	62	124	9	6	36,85
AL6/08	10	66	133	10	6	38,92
AL6/09	11	71	142	11	6	45,78
AL6/10	12	76	152	12	6	48,48
AL6/11	13	76	152	13	6	62,18
AL6/12	14	81	163	14	6	64,14
AL6/13	15	81	163	15	8	70,99
AL6/14	16	87	175	16	8	75,15
AL6/15	17	87	175	17	8	81,89
AL6/16	18	93	188	18	8	86,05
AL6/17	19	93	188	19	8	97,68
AL6/18	20	100	201	20	8	101,11

ALESATORI A MACCHINA • SERIE EXTRA-LUNGA

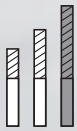
AL7

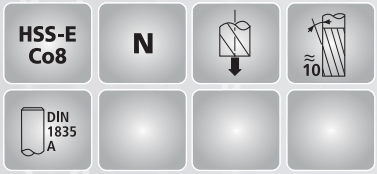
Denti elicoidali sinistri taglio destro - Codolo cilindrico
MACHINE REAMERS, EXTRA-LONG TYPE - Left-hand helical teeth, right-hand cutting - Straight shank
ALESOIRS POUR MACHINES, TYP EXTRA LONG - Denture hélicoïdale à gauche, coupe à droite - Queue cylindrique
MASCHINEN - REIBAHLEN, EXTRA LANGE AUSFÜHRUNG - Spiralgenutet, rechtsschneidend, Linksdrall - Zylinderschaft
ESCARIADORES A MAQUINA - Labios helicoidales izquierda, cortante derecho - Mango cilindrico
ESCARIADORES A MANO - Navalhas helicoidais esquerda, cortante dereito - Encabadouro cilindrico

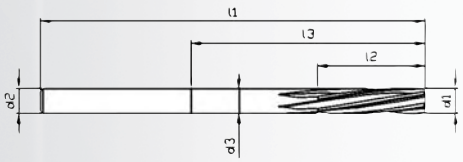
SERIE AL

NORM.

UNI
DIN 212D
ISO 521







CODE	d1 mm H7	l2 mm	l1 mm	l3 mm	d2 mm h6	d3 mm	Z	Co 8% €
AL7/01	2	18	110	75	2	1.9	4	42,96
AL7/02	2.5	20	120	80	2.5	2.4	4	40,54
AL7/03	3	20	120	80	3	2.9	4	38,67
AL7/04	3.5	30	150	110	3.5	3.4	6	50,35
AL7/05	4	30	150	110	4	3.9	6	45,50
AL7/06	4.5	35	180	135	4.5	4.4	6	54,65
AL7/07	5	35	180	135	5	4.9	6	50,35
AL7/08	5.5	40	200	150	5.5	5.4	6	58,94
AL7/09	6	40	200	150	6	5.9	6	55,31
AL7/10	6.5	45	200	150	6.5	6.4	6	58,94
AL7/11	7	45	200	150	7	6.9	6	64,56
AL7/12	8	45	200	150	8	7.9	6	62,02
AL7/13	9	50	220	160	9	8.9	6	72,49
AL7/14	10	50	220	160	10	9.8	6	68,19
AL7/15	11	55	250	190	11	10.8	6	72,49
AL7/16	12	55	250	190	12	11.8	6	73,15

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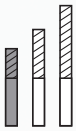
ALESATORI A MACCHINA • SERIE NORMALE

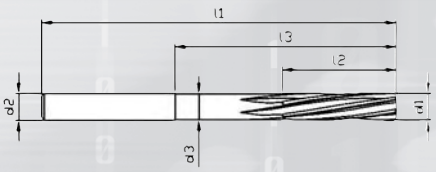
SERIE AL

AL8

Denti elicoidali sinistri taglio destro - Codolo cilindrico - Per fori cilindrici
MACHINE REAMERS - Left-hand helical teeth, right-hand cutting - Straight shank. For parallel holes
ALÉSOIRS POUR MACHINES - Denture hélicoïdale à gauche, coupe à droite - Queue cylindrique. Pour trous cylindriques
MASCHINEN - REIBAHLEN - Spiralgenutet, rechtsschneidend, Linksdrall - Zylinderschaft. Für zylindrische Bohrungen
ESCARIADORES A MÁQUINA - Labios helicoidales izquierda, cortante derecho - Mango cilíndrico - Para agujeros cilíndricos
ESCARIADORES Á MAQUINA - Quatro navalhas helicoidais esquerda, cortante dereito - Encabadouro cilindrico - Para agujeros cilindricos



HSS-E Co8 | N | ≈ 10 | DIN 1835 A



NORM.

UNI	6853
DIN	212D
ISO	521

INDEX

CODE	d1 mm H7	l2 mm	l1 mm	l3 mm	d2 mm h6	d3 mm	Z	Co 8% €
AL8/01	2	11	49	24	2	1.9	5	17,85
AL8/02	2.5	14	57	29	2.5	2.4	5	19,72
AL8/03	3	15	61	33	3	2.9	5	20,27
AL8/04	3.5	18	70	39	3.5	3.4	5	21,48
AL8/05	4	19	75	43	4	3.7	5	22,15
AL8/06	4.5	21	80	45	4.5	4.2	5	24,01
AL8/07	5	23	86	51	5	4.7	5	24,57
AL8/08	5.5	26	93	55	5.5	5.2	6	25,23
AL8/09	6	26	93	55	6	5.6	6	26,44
AL8/10	6.5	28	101	61	6.5	6.1	6	27,66
AL8/11	7	31	109	67	7	6.6	6	28,32
AL8/12	8	33	117	72	8	7.6	6	29,52
AL8/13	9	36	125	75	9	8.4	6	31,95
AL8/14	10	38	133	83	10	9.4	6	35,03
AL8/15	11	41	142	90	11	10.3	8	36,24
AL8/16	12	44	151	96	12	11.3	8	38,67
AL8/17	13	44	151	96	13	12.2	8	40,54
AL8/18	14	47	160	100	14	12.8	8	44,84
AL8/19	15	50	162	102	15	13.8	8	46,71
AL8/20	16	52	170	107	16	14.8	8	49,14

Diametri decimali e tolleranze diverse da H7 si forniscono a richiesta
Decimal diameter and different tolerance from H7 upon requirements

ALESATORI A MACCHINA TIPO MANICOTTO

AL9

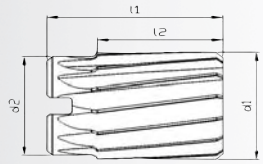
Foro conico 1:30 - Dentatura elicoidale 10°
SHELL MACHINE REAMERS - 1:30 taper hole - 10° helical teeth
ALÉSOIRS CREUX - Alésage conique 1:30 - Denture hélicoïdale 10°
AUFSTECK - REIBAHLEN - Kegelbohrung 1:30 - 10° schrägverzahnt
ESCARIADORES A MÁQUINA TIPO MANICOTTO - Agujero cónico 1:30 - Labios helicoidales 10°
ESCARIADORES A MAQUINA TIPO MANICOTTO - Agujero conico 1:30 - Navalhas helicoidales 10°

SERIE **AL**

NORM.

UNI 6855
DIN 219B
ISO 2402

HSS-E Co5 | N | ≈ 10



CODE	d1 mm H7	l2 mm	l1 mm	d2 mm	d foro mm conicità 1:30	Z	Co 5% €
AL9/01	24	32	45	22	13	10	83,75
AL9/02	25	32	45	23	13	10	86,34
AL9/03	26	32	45	24	13	10	87,63
AL9/04	27	32	45	25	13	10	92,21
AL9/05	28	32	45	26	13	10	92,21
AL9/06	29	32	45	27	13	10	96,19
AL9/07	30	32	45	28	13	10	96,19
AL9/08	31	36	50	28	16	10	105,34
AL9/09	32	36	50	29	16	10	105,34
AL9/10	33	36	50	30	16	10	109,92
AL9/11	34	36	50	31	16	10	109,92
AL9/12	35	36	50	32	16	10	111,90
AL9/13	36	40	56	33	19	12	126,34
AL9/14	37	40	56	34	19	12	128,21
AL9/15	38	40	56	35	19	12	128,21
AL9/16	39	40	56	36	19	12	140,06
AL9/17	40	40	56	37	19	12	140,06
AL9/18	42	40	56	39	19	12	147,21
AL9/19	44	45	63	40	22	12	160,94
AL9/20	45	45	63	41	22	12	163,52
AL9/21	46	45	63	42	22	14	168,09
AL9/22	48	45	63	44	22	14	175,36
AL9/23	49	45	63	45	22	14	181,94
AL9/24	50	45	63	46	22	14	181,94
AL9/25	52	50	71	48	27	14	202,23
AL9/26	55	50	71	51	27	14	213,96
AL9/27	58	50	71	54	27	14	226,98
AL9/28	60	50	71	56	27	16	236,83

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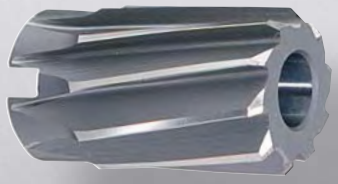


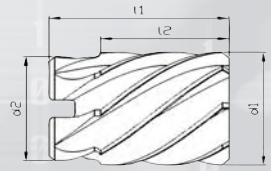
ALESATORI A MACCHINA TIPO MANICOTTO

SERIE AL

AL10

Foro conico 1:30 - Dentatura elicoidale discendente 45°
SHELL MACHINE REAMERS - 1:30 taper hole - 45° helical teeth
ALÉSOIRS CREUX - Alésage conique 1:30 - Denture hélicoïdale 45°
AUFSTECK - REIBAHLEN - Kegelbohrung 1:30 - 45° aufsteckverzahnt
ESCARIADORES A MÁQUINA TIPO MANICOTTO - Agujero conico 1:30 - Labios 45°
ESCARIADORES A MAQUINA TIPO MANICOTTO - Agujero conico 1:30 - Labios 45

HSS-E Co5 | N | 45°



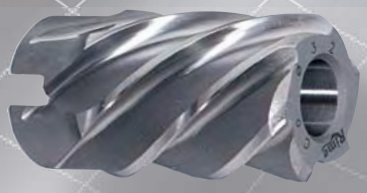
NORM.

UNI 6855
DIN 219
ISO 2402

INDEX

CODE	d1 mm H7	l2 mm	l1 mm	d2 mm	d foro mm conicità 1:30	Z	Co 5% €
AL10/01	24	32	45	22	13	5	83,75
AL10/02	25	32	45	23	13	5	85,76
AL10/03	26	32	45	24	13	5	87,63
AL10/04	27	32	45	25	13	5	92,21
AL10/05	28	32	45	26	13	5	94,19
AL10/06	29	32	45	27	13	6	96,90
AL10/07	30	32	45	28	13	6	96,90
AL10/08	31	36	50	28	16	6	98,77
AL10/09	32	36	50	29	16	6	98,77
AL10/10	33	36	50	30	16	7	105,34
AL10/11	34	36	50	31	16	7	105,34
AL10/12	35	36	50	32	16	7	106,63
AL10/13	36	40	56	33	19	8	123,05
AL10/14	37	40	56	34	19	8	126,34
AL10/15	38	40	56	35	19	8	126,34
AL10/16	39	40	56	36	19	8	136,78
AL10/17	40	40	56	37	19	8	136,78
AL10/18	42	40	56	39	19	8	142,65
AL10/19	44	45	63	40	22	8	153,79
AL10/20	45	45	63	41	22	8	161,64
AL10/21	46	45	63	42	22	8	165,52
AL10/22	48	45	63	44	22	8	172,09
AL10/23	49	45	63	45	22	8	178,65
AL10/24	50	45	63	46	22	8	178,65
AL10/25	52	50	71	48	27	8	198,24
AL10/26	55	50	71	51	27	8	218,53
AL10/27	58	50	71	54	27	10	227,69
AL10/28	60	50	71	56	27	10	238,12

Diametri decimali e tolleranze diverse da H7 si forniscono a richiesta
Decimal diameter and different tolerance from H7 upon requirements



Catalogo HSS-E e PM

SERIE L

FRESE PER LEGHE LEGGERE

END MILLS FOR LIGHT ALLOYS

Rime
UTENSILERIA

INDEX copertina - home

SERIE L

FRESE PER LEGHE LEGGERE
END MILLS FOR LIGHT ALLOYS

FRESE A DUE DENTI • SERIE NORMALE

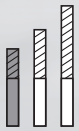
L1

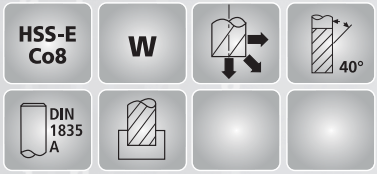
Un dente frontale tagliente fino al centro - Lavorazione di alluminio, leghe leggere, materiali teneri e malleabili - Codolo cilindrico
TWO-FLUTED END MILLS - One end tooth cutting up to the centre - To machine aluminium, light alloys - Straight shank
FRAISES À CYLINDRES DEUX DENTS - Une dent bout coupante jusq'au centre - Pour l'usinage de aluminium, aliages légers - Queque cylindrique
SCHAFTFRÄSER, ZWEISCHNEIDER - Eine Schneide mit Zentrumschnitt - Zur Bearbeitung von Aluminium, Leichtlegierungen - Zylinderschaft
FRESAS CILINDRICAS DOS LABIOS - Un labio que cortan hasta el centro - Para mecanizar el aluminio y ligas ligeras - Mango cilindrico
FRESAS CILINDRICAS DUAS NAVALHAS - Um naval que corta hasta el centro - Para mecanizar el aluminio y ligas ligeras - Encabadouro cilindrico

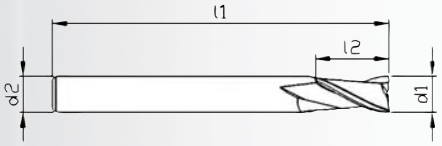
SERIE L

NORM.

UNI 8244-8245
DIN 844A
ISO 1641/I







CODE	d1 mm js14	l2 mm	l1 mm	d2 mm h6	Z	Co 8% €
L1/01	2	7	51	6	2	15,54
L1/01/1	2.5	8	52	6	2	14,55
L1/02	3	8	52	6	2	11,79
L1/03	4	11	55	6	2	11,24
L1/04	5	13	57	6	2	11,24
L1/05	6	13	57	6	2	10,58
L1/06	7	16	66	10	2	16,75
L1/07	8	19	69	10	2	16,09
L1/08	9	19	69	10	2	17,41
L1/09	10	22	72	10	2	16,09
L1/10	11	22	79	12	2	23,45
L1/11	12	26	83	12	2	21,44
L1/12	13	26	83	12	2	28,73
L1/13	14	26	83	12	2	23,79
L1/14	15	32	92	16	2	29,51
L1/15	16	32	92	16	2	28,73
L1/16	18	32	92	16	2	33,89
L1/17	20	38	104	20	2	41,96

Tolleranza effettiva sul diametro: +0 -0,03 - *Real tolerance on diameter +0 -0,03*

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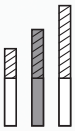
FRESE A DUE DENTI • SERIE LUNGA

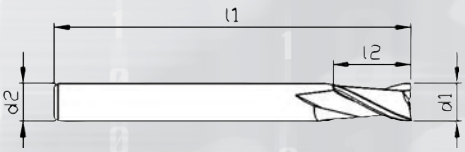
SERIE L

L2

Un dente frontale tagliente fino al centro - Lavorazione di alluminio, leghe leggere, materiali teneri e malleabili - Codolo cilindrico
TWO-FLUTED END MILLS - One end tooth cutting up to the centre - To machine aluminium, light alloys - Straight shank
FRAISES À CYLINDRES DEUX DENTS - Une dent bout coupante jusq'au centre - Pour l'usinage de aluminium, aliages légers - Queue cylindrique
SCHAFTFRÄSER, ZWEISCHNEIDER - Eine Schneide mit Zentrumschnitt - Zur Bearbeitung von Aluminium, Leichtlegierungen - Zylinderschaft
FRESAS CILINDRICAS DOS LABIOS - Un labio que cortan hasta el centro - Para mecanizar el aluminio y ligas ligeras - Mango cilindrico
FRESAS CILINDRICAS DUAS NAVALHAS - Um naval que corta hasta el centro - Para mecanizar el aluminio y ligas ligeras - Encabadouro cilindrico



HSS-E Co8 | W | 40° | DIN 1835 A



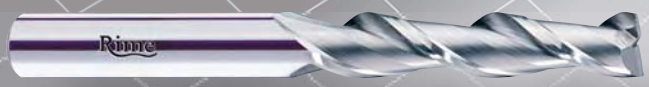
NORM.

UNI 8244-8245
DIN 844A
ISO 1641/I

INDEX

CODE	d1 mm js14	l2 mm	l1 mm	d2 mm h6	Z	Co 8% €
L2/01	3	12	56	6	2	16,20
L2/02	4	19	63	6	2	14,87
L2/03	5	24	68	6	2	14,32
L2/04	6	24	68	6	2	13,66
L2/05	7	30	80	10	2	24,90
L2/06	8	38	88	10	2	23,57
L2/07	9	38	88	10	2	24,13
L2/08	10	45	95	10	2	22,36
L2/09	11	45	102	12	2	30,29
L2/10	12	53	110	12	2	28,50
L2/11	13	53	110	12	2	33,89
L2/12	14	53	110	12	2	31,98
L2/13	15	63	123	16	2	40,73
L2/14	16	63	123	16	2	39,50
L2/15	18	63	123	16	2	47,57
L2/16	20	75	141	20	2	55,10

Tolleranza effettiva sul diametro: +0 -0,03 - *Real tolerance on diameter +0 -0,03*



FRESE A DUE DENTI • SERIE NORMALE

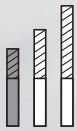
L3

Un dente frontale tagliente fino al centro - Lavorazione di alluminio, leghe leggere, materiali teneri e malleabili - Codolo cilindrico
TWO-FLUTED END MILLS - One end tooth cutting up to the centre - To machine aluminium, light alloys - Straight shank
FRAISES À CYLINDRES DEUX DENTS - Une dent bout coupante jusq'au centre - Pour l'usinage de aluminium, aliages légers - Queue cylindrique
SCHAFTFRÄSER, ZWEISCHNEIDER - Eine Schneide mit Zentrumschnitt - Zur Bearbeitung von Aluminium, Leichtlegierungen - Zylinderschaft
FRESAS CILINDRICAS DOS LABIOS - Un labio que cortan hasta el centro - Para mecanizar el aluminio y ligas ligeras - Mango cilindrico
FRESAS CILINDRICAS DUAS NAVALHAS - Um naval que corta hasta el centro - Para mecanizar el aluminio y ligas ligeras - Encabadouro cilindrico

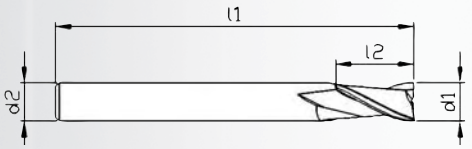
SERIE L

NORM.

UNI 8244
DIN 844A
ISO 1641/I



EMP6 (PM) | W | 40° | DIN 1835 A



CODE	d1 mm js14	l2 mm	l1 mm	d2 mm h6	Z	EMP6 €
L3/03	4	11	55	6	2	13,77
L3/04	5	13	57	6	2	13,77
L3/05	6	13	57	6	2	13,11
L3/06	7	16	66	10	2	21,48
L3/07	8	19	69	10	2	20,27
L3/08	9	19	69	10	2	25,67
L3/09	10	22	72	10	2	22,70
L3/10	11	22	79	12	2	29,17
L3/11	12	26	83	12	2	27,38
L3/12	13	26	83	12	2	34,67
L3/13	14	26	83	12	2	31,09
L3/14	15	32	92	16	2	38,94
L3/15	16	32	92	16	2	37,71
L3/16	18	32	92	16	2	46,23
L3/17	20	38	104	20	2	57,78

Tolleranza effettiva sul diametro: +0 -0,03 - *Real tolerance on diameter +0 -0,03*

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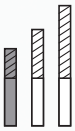
FRESE A DUE DENTI • SERIE NORMALE

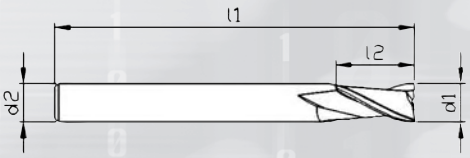
SERIE L

L4

Un dente frontale tagliente fino al centro - Lavorazione di alluminio, leghe leggere, materiali teneri e malleabili - Codolo cilindrico
TWO-FLUTED END MILLS - One end tooth cutting up to the centre - To machine aluminium, light alloys - Straight shank
FRAISES À CYLINDRES DEUX DENTS - Une dent bout coupante jusq'au centre - Pour l'usinage de aluminium, aliages légers - Queue cylindrique
SCHAFTFRÄSER, ZWEISCHNEIDER - Eine Schneide mit Zentrumschnitt - Zur Bearbeitung von Aluminium, Leichtlegierungen - Zylinderschaft
FRESAS CILINDRICAS DOS LABIOS - Un labio que cortan hasta el centro - Para mecanizar el aluminio y ligas ligeras - Mango cilindrico
FRESAS CILINDRICAS DUAS NAVALHAS - Um naval que corta hasta el centro - Para mecanizar el aluminio y ligas ligeras - Encabadouro cilindrico



EMP3 (PM) | W | 40° | DIN 1835 A



NORM.

UNI 8244
DIN 844A
ISO 1641/I

INDEX

CODE	d1 mm js14	l2 mm	l1 mm	d2 mm h6	Z	EMP3 €
L4/01	2	7	51	6	2	16,52
L4/02	3	8	52	6	2	13,00
L4/03	4	11	55	6	2	12,24
L4/04	5	13	57	6	2	12,24
L4/05	6	13	57	6	2	11,69
L4/06	7	16	66	10	2	19,06
L4/07	8	19	69	10	2	17,85
L4/08	9	19	69	10	2	19,06
L4/09	10	22	72	10	2	19,06
L4/10	11	22	79	12	2	25,13
L4/11	12	26	83	12	2	23,79
L4/12	13	26	83	12	2	28,50
L4/13	14	26	83	12	2	26,70
L4/14	15	32	92	16	2	32,31
L4/15	16	32	92	16	2	31,75
L4/16	18	32	92	16	2	37,15
L4/17	20	38	104	20	2	46,56

Tolleranza effettiva sul diametro: +0 -0,03 - *Real tolerance on diameter +0 -0,03*

FRESE A DUE DENTI • SERIE LUNGA

L5

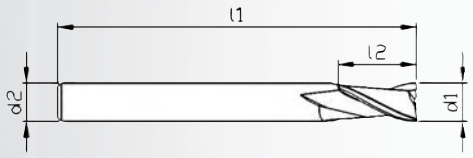
Un dente frontale tagliente fino al centro - Lavorazione di alluminio, leghe leggere, materiali teneri e malleabili - Codolo cilindrico
TWO-FLUTED END MILLS - One end tooth cutting up to the centre - To machine aluminium, light alloys - Straight shank
FRAISES À CYLINDRES DEUX DENTS - Une dent bout coupante jusq'au centre - Pour l'usinage de aluminium, aliages légers - Queue cylindrique
SCHAFTFRÄSER, ZWEISCHNEIDER - Eine Schneide mit Zentrumschnitt - Zur Bearbeitung von Aluminium, Leichtlegierungen - Zylinderschaft
FRESAS CILINDRICAS DOS LABIOS - Un labio que cortan hasta el centro - Para mecanizar el aluminio y ligas ligeras - Mango cilindrico
FRESAS CILINDRICAS DUAS NAVALHAS - Um naval que corta hasta el centro -Para mecanizar el aluminio y ligas ligeras - Encabadouro cilindrico

SERIE L

NORM.

UNI 8244-8245
DIN 844A
ISO 1641/I

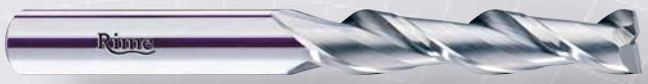
EMP3 (PM) | W | 40° | DIN 1835 A



CODE	d1 mm js14	l2 mm	l1 mm	d2 mm h6	Z	EMP3 €
L5/01	3	12	56	6	2	17,85
L5/02	4	19	63	6	2	16,52
L5/03	5	24	68	6	2	15,97
L5/04	6	24	68	6	2	15,42
L5/05	7	30	80	10	2	27,66
L5/06	8	38	88	10	2	26,44
L5/07	9	38	88	10	2	27,11
L5/08	10	45	95	10	2	24,68
L5/09	11	45	102	12	2	33,22
L5/10	12	53	110	12	2	30,74
L5/11	13	53	110	12	2	37,59
L5/12	14	53	110	12	2	35,34
L5/13	15	63	123	16	2	45,33
L5/14	16	63	123	16	2	43,53
L5/15	18	63	123	16	2	52,06
L5/16	20	75	141	20	2	61,49

Tolleranza effettiva sul diametro: +0 -0,03 - *Real tolerance on diameter +0 -0,03*

INDEX



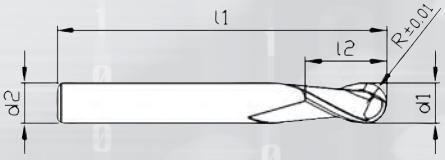
FRESE A DUE DENTI A TESTA SEMISFERICA • SERIE NORMALE

SERIE L

L6

Due denti frontali taglienti fino al centro - Lavorazione di alluminio, leghe leggere, materiali teneri e malleabili - Codolo cilindrico
BALL-NOSED TWO-FLUTED END MILLS - Two end teeth cutting up to the centre - To machine aluminium, light alloys - Straight shank
FRAISES À CYLINDRES DEUX DENTS À BOUT HÉMISPHERIQUE - Deux dents bout coupantes jusq'au centre - Pour l'usinage de aluminium, aliages légers - Queue cylindrique
HALBRUNDKOPFFRÄSER, ZWEISCHNEIDER - Zwei Schneiden mit Zentrumschnitt - Zur Bearbeitung von Aluminium, Leichtlegierungen - Zylinderschaft
FRESAS CILINDRICAS DOS LABIOS CABEZA SEMIESFÉRICA - Dos labios que cortan hasta el centro - Para mecanizar el aluminio y ligas ligeras - Mango cilindrico
FRESAS CILINDRICAS BOLEADA DUAS NAVALHAS - Um naval que corta hasta el centro - Para mecanizar el aluminio y ligas ligeras - Encabadouro cilindrico

EMP3 (PM) | W | 40° | DIN 1835 A



NORM.

UNI
DIN
ISO 1641/I

INDEX

CODE	d1 mm js14	l2 mm	l1 mm	d2 mm h6	Z	EMP3 €
L6/01	4	11	55	6	2	16,52
L6/02	5	13	57	6	2	16,52
L6/03	6	13	57	6	2	15,97
L6/04	7	16	66	10	2	24,68
L6/05	8	19	69	10	2	23,91
L6/06	9	19	69	10	2	27,11
L6/07	10	22	72	10	2	24,68
L6/08	11	22	79	12	2	33,89
L6/09	12	26	83	12	2	30,74
L6/10	13	26	83	12	2	37,59
L6/11	14	26	83	12	2	34,11
L6/12	15	32	92	16	2	42,76
L6/13	16	32	92	16	2	41,51
L6/14	18	32	92	16	2	49,70
L6/15	20	38	104	20	2	62,05

Tolleranza effettiva sul diametro: +0 -0,03 - *Real tolerance on diameter +0 -0,03*

FRESE A DUE DENTI A TESTA SEMISFERICA • SERIE LUNGA

L7

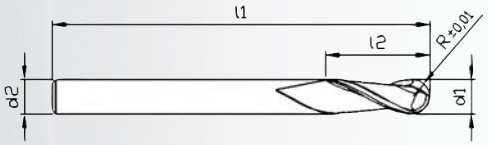
Due denti frontali taglienti fino al centro - Lavorazione di alluminio, leghe leggere, materiali teneri e malleabili - Codolo cilindrico
BALL-NOSED TWO-FLUTED END MILLS - Two end teeth cutting up to the centre - To machine aluminium, light alloys - Straight shank
FRAISES À CYLINDRES DEUX DENTS À BOUT HÉMISPHERIQUE - Deux dents bout coupantes jusq'au centre - Pour l'usinage de aluminium, aliages légers - Queue cylindrique
HALBRUNDKOPFFRÄSER, ZWEISCHNEIDER - Zwei Schneiden mit Zentrumschnitt - Zur Bearbeitung von Aluminium, Leichtlegierungen - Zylinderschaft
FRESAS CILINDRICAS DOS LABIOS CABEZA SEMIESFÉRICA - Dos labios que cortan hasta el centro - Para mecanizar el aluminio y ligas ligeras - Mango cilindrico
FRESAS CILINDRICAS BOLEADA DUAS NAVALHAS - Duas navalhas que corta hasta el centro - Para mecanizar el aluminio y ligas ligeras - Encabadouro cilindrico

SERIE L

NORM.

UNI
DIN
ISO 1641/I

EMP3 (PM) | W | 40° | DIN 1835 A



CODE	d1 mm js14	l2 mm	l1 mm	d2 mm h6	Z	EMP3 €
L7/00	2	11	54	6	2	25,23
L7/00/1	3	12	56	6	2	22,81
L7/01	4	19	63	6	2	22,81
L7/02	5	24	68	6	2	23,36
L7/03	6	24	68	6	2	22,81
L7/04	7	30	80	10	2	38,12
L7/05	8	38	88	10	2	36,90
L7/06	9	38	88	10	2	37,57
L7/07	10	45	95	10	2	33,83
L7/08	11	45	102	12	2	47,01
L7/09	12	53	110	12	2	43,20
L7/10	13	53	110	12	2	53,30
L7/11	14	53	110	12	2	48,37
L7/12	15	63	123	16	2	63,28
L7/13	16	63	123	16	2	60,71
L7/14	18	63	123	16	2	72,71
L7/15	20	75	141	20	2	85,05

Tolleranza effettiva sul diametro: +0 -0,03 - *Real tolerance on diameter +0 -0,03*

INDEX

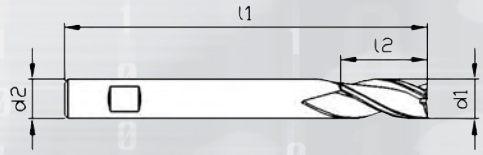
FRESE A TRE DENTI • SERIE NORMALE

SERIE L

L8

Un dente frontale tagliente fino al centro - Lavorazione di alluminio, leghe leggere, materiali teneri e malleabili - Attacco Weldon
THREE-FLUTED END MILLS - One end tooth cutting up to the centre - To machine aluminium, light alloys - Weldon shank
FRAISES À CYLINDRES TROIS DENTS - Une dent bout coupante jusq'au centre - Pour l'usinage de aluminium, aliages légers - Queue cylindrique Weldon
SCHAFTFRÄSER, DREISCHNEIDER - Eine Schneide mit Zentrumschnitt - Zur Bearbeitung von Aluminium, Leichtlegierungen - Weldon-Spannfläche
FRESAS CILINDRICAS FRONTALES TRES LABIOS - Un labio que corta hasta el centro - Para mecanizar el aluminio y ligas ligeras - Mango Weldon
FRESAS CILINDRICAS FRONTALES TRES NAVALHAS - Um naval que corta hasta el centro - Para mecanizar el aluminio y ligas ligeras - Encabadouro Weldon

EMP3 (PM) | W | 40° | DIN 1835 B



NORM. STANDARD Rime

INDEX

CODE	d1 mm js14	l2 mm	l1 mm	d2 mm h6	Z	EMP3 €	ALU SUPREME €
L8/00	2	7	51	6	3	20,44	27,03
L8/01	3	14	58	6	3	19,89	26,49
L8/02	4	18	62	6	3	18,81	25,30
L8/03	5	20	64	6	3	17,62	25,84
L8/04	6	22	66	6	3	16,98	25,30
L8/05	7	22	72	10	3	25,84	36,22
L8/06	8	25	75	10	3	25,19	35,68
L8/07	9	25	75	10	3	26,38	36,76
L8/08	10	28	78	10	3	24,01	39,15
L8/09	12	32	89	12	3	27,94	44,77
L8/10	14	32	89	12	3	32,21	46,00
L8/11	16	36	96	16	3	38,37	58,47
L8/12	18	40	100	16	3	46,23	67,44
L8/13	20	45	110	20	3	57,78	85,95
L8/14	22	45	110	20	3	74,03	102,18
L8/15	25	50	125	25	3	98,53	131,73
L8/16	28	56	132	25	3	119,06	208,79
L8/17	30	63	140	25	3	152,96	242,22
L8/18	32	63	143	32	3	167,04	268,74

Tolleranza effettiva sul diametro: +0 -0,03 - *Real tolerance on diameter +0 -0,03*

FRESE A TRE DENTI • SERIE LUNGA

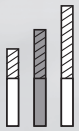
L9

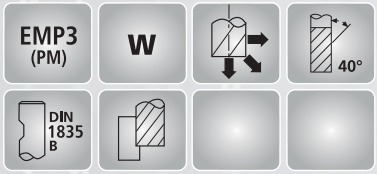
Un dente frontale tagliente fino al centro - Lavorazione di alluminio, leghe leggere, materiali teneri e malleabili - Attacco Weldon
THREE-FLUTED END MILLS - One end tooth cutting up to the centre - To machine aluminium, light alloys - Weldon shank
FRAISES À CYLINDRES TROIS DENTS - Une dent bout coupante jusq'au centre - Pour l'usinage de aluminium, aliages légers - Queue cylindrique Weldon
SCHAFTFRÄSER, DREISCHNEIDER - Eine Schneide mit Zentrumschnitt - Zur Bearbeitung von Aluminium, Leichtlegierungen - Weldon-Spannfläche
FRESAS CILINDRICAS FRONTALES TRES LABIOS - Un labio que corta hasta el centro - Para mecanizar el aluminio y ligas ligeras - Mango Weldon
FRESAS CILINDRICAS FRONTALES TRÉS NAVALHAS - Um naval que corta hasta el centro - Para mecanizar el aluminio y ligas ligeras - Encabadouro Weldon

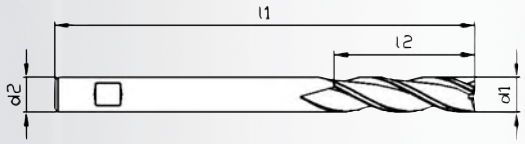
SERIE L

NORM.

STANDARD Rime







CODE	d1 mm js14	l2 mm	l1 mm	d2 mm h6	Z	EMP3 €
L9/00	2	12	54	6	3	21,62
L9/01	3	18	62	6	3	21,08
L9/02	4	22	65	6	3	19,89
L9/03	5	26	70	6	3	19,89
L9/04	6	30	75	6	3	19,89
L9/05	7	34	84	10	3	19,89
L9/06	8	34	84	10	3	28,77
L9/07	9	40	90	10	3	29,96
L9/08	10	40	90	10	3	29,31
L9/09	12	56	113	12	3	35,80
L9/10	14	63	120	12	3	41,86
L9/11	16	63	123	16	3	50,79
L9/12	18	71	131	16	3	59,71
L9/13	20	71	137	20	3	75,90
L9/14	22	80	146	20	3	96,77
L9/15	25	80	156	25	3	125,51
L9/16	28	90	166	25	3	150,97
L9/17	30	90	166	25	3	162,34
L9/18	32	90	170	32	3	188,27

Tolleranza effettiva sul diametro: +0 -0,03 - *Real tolerance on diameter +0 -0,03*

INDEX

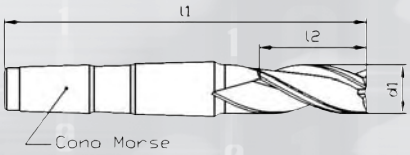
FRESE A TRE DENTI • SERIE NORMALE

SERIE L

L10

Un dente frontale tagliente fino al centro - Lavorazione di alluminio, leghe leggere, materiali teneri e malleabili - Codolo conico Morse con foro filettato
THREE-FLUTED END MILLS - One end tooth cutting up to the centre - To machine aluminium, light alloys - Morse taper shank
FRAISES À CYLINDRES TROIS DENTS - Une dent bout coupante jusq'au centre - Pour l'usinage de aluminium, aliages légers - Queue au cône Morse à trou fileté
SCHAFTFRÄSER, DREISCHNEIDER - Eine Schneide mit Zentrumschnitt - Zur Bearbeitung von Aluminium, Leichtlegierungen - Morsekegelschaft und Anzugsgewinde
FRESAS CILINDRICAS FRONTALES TRES LABIOS - Un labio que corta hasta el centro - Para mecanizar el aluminio y ligas ligeras - Mango cónico Morse con taladro roscado
FRESAS CILINDRICAS FRONTALES TRÉS NAVALHAS - Um naval que corta hasta el centro - Para mecanizar el aluminio y ligas ligeras - Encabadouro conico Morse taladro roscado

EMP6 (PM) | W | 40° | DIN 228-A



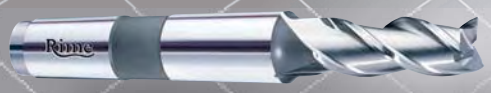
NORM.

STANDARD Rime

INDEX

CODE	d1 mm js14	l2 mm	l1 mm	CM-MK	Z	EMP6 €
L10/01	14	32	117	2	3	77,11
L10/02	15	35	120	2	3	78,99
L10/03	16	35	120	2	3	78,99
L10/04	18	40	125	2	3	80,97
L10/05	20	45	147	3	3	118,54
L10/06	22	45	147	3	3	117,87
L10/07	24	50	152	3	3	136,72
L10/08	25	50	152	3	3	138,58
L10/09	26	56	158	3	3	155,28
L10/10	28	56	158	3	3	164,82
L10/11	30	56	165	3	3	198,03
L10/12	32	63	188	4	3	220,47
L10/13	34	70	195	4	3	266,36
L10/14	35	70	195	4	3	269,51
L10/15	36	70	195	4	3	272,88
L10/16	38	70	195	4	3	370,49
L10/17	40	70	195	4	3	381,37

Tolleranza effettiva sul diametro: +0 -0,03 - *Real tolerance on diameter +0 -0,03*



FRESE PER SGROSSATURA • SERIE NORMALE

L12

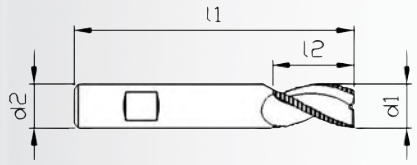
Denti elicoidali con taglio interrotto - Un dente frontale tagliente fino al centro - Lavorazione di alluminio, leghe leggere, materiali teneri e malleabili - Attacco Weldon
ROUGHING END MILLS - Helical teeth with chip-breaker - One end tooth cutting up to the centre - To machine aluminium, light alloys - Weldon shank
FRAISES À CYLINDRES À DÉGROSSIR - Denture hélicoïdale avec brise-copeaux - Une dent bout coupante jusq'au centre - Pour l'usinage de aluminium, aliages légers - Queue cylindrique Weldon
SCHAFTFRÄSER DREISCHNEIDER - Schrägschneiden mit Spannbrecher - Eine Schneide mit Zentrumschnitt - Zur Bearbeitung von Aluminium, Leichtlegierungen - Weldon Spannfläche
FRESAS CILINDRICAS FRONTALES PARA DESBASTE - Labios helicoidal con arranca de viruta - Un labio que corta hasta el centro - Para mecanizar el aluminio y ligas ligeras - Mango cónico Weldon
FRESAS CILINDRICAS FRONTALES PARA DESTASTE - Navalhas helicoidal com quebra apara - Um navalha que corta hasta el centro - Para mecanizar el aluminio y ligas ligeras - Encabadouro Weldon

SERIE L

NORM.

UNI 8248
DIN 844B
ISO 1641/I

EMP3 (PM) | NFL | 40° | DIN 1835 B



CODE	d1 mm js14	l2 mm	l1 mm	d2 mm h6	Z	EMP3 €	ALU SUPREME €
L12/01	6	13	57	6	3	22,82	29,31
L12/02	7	16	66	10	3	33,95	44,33
L12/03	8	19	69	10	3	32,87	43,14
L12/04	9	19	69	10	3	33,41	43,68
L12/05	10	22	72	10	3	33,95	44,33
L12/06	12	26	83	12	3	41,96	54,30
L12/07	14	26	83	12	3	45,67	59,14
L12/08	15	32	92	16	3	54,19	74,05
L12/09	16	32	92	16	3	53,53	73,38
L12/10	18	32	92	16	3	61,49	82,35
L12/11	20	38	104	20	3	70,57	91,33
L12/12	22	38	104	20	3	90,91	119,77
L12/13	25	45	121	25	3	118,94	152,84
L12/14	28	45	121	25	3	139,59	173,37
L12/15	30	45	121	25	3	160,00	193,43
L12/16	32	53	133	32	3	181,23	217,01
L12/17	36	53	133	32	3	213,73	307,57
L12/18	40	53	143	32	3	255,13	335,72

Tolleranza effettiva sul diametro: ±0,05 - *Real tolerance on diameter ±0,05*

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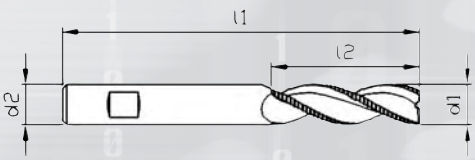
FRESE PER SGROSSATURA • SERIE LUNGA

SERIE L

L13

Denti elicoidali con taglio interrotto - Un dente frontale tagliente fino al centro - Lavorazione di alluminio, leghe leggere, materiali teneri e malleabili - Attacco Weldon
ROUGHING END MILLS - Helical teeth with chip-breaker - One end tooth cutting up to the centre - To machine aluminium, light alloys - Weldon shank
FRAISES À CYLINDRES À DÉGROSSIR - Denture hélicoïdale avec brise-copeaux - Une dent bout coupante jusq'au centre - Pour l'usinage de aluminium, aliages légers - Queue cylindrique Weldon
SCHAFTFRÄSER DREISCHNEIDER - Schrägschneiden mit Spannbrecher - Eine Schneide mit Zentrumschnitt - Zur Bearbeitung von Aluminium, Leichtlegierungen - Weldon Spannfläche
FRESAS CILINDRICAS FRONTALES PARA DESBASTE - Labios helicoidal con arranca de viruta - Un labio que corta hasta el centro - Para mecanizar el aluminio y ligas ligeras - Mango cónico Weldon
FRESAS CILINDRICAS FRONTALES PARA DESTASTE - Navalhas helicoidal com quebra apara - Um navalha que corta hasta el centro - Para mecanizar el aluminio y ligas ligeras - Encabadouro Weldon

EMP3 (PM) | NFL | 40° | DIN 1835 B



NORM.

UNI 8249
DIN 844B
ISO 1641/I

INDEX

CODE	d1 mm js14	l2 mm	l1 mm	d2 mm h6	Z	EMP3 €	ALU SUPREME €
L13/01	6	24	68	6	3	29,31	37,42
L13/02	8	38	88	10	3	45,19	59,79
L13/03	10	45	95	10	3	41,63	56,34
L13/04	12	53	110	12	3	51,73	68,00
L13/05	14	53	110	12	3	58,47	75,86
L13/06	15	63	123	16	3	69,34	91,89
L13/07	16	63	123	16	3	70,57	93,13
L13/08	18	63	123	16	3	78,54	106,26
L13/09	20	75	141	20	3	90,66	118,15
L13/10	22	75	141	20	3	115,20	164,10
L13/11	25	90	166	25	3	154,60	230,26
L13/12	28	90	166	25	3	178,77	265,34
L13/13	30	90	166	25	3	195,19	281,99
L13/14	32	106	186	32	3	243,52	341,11
L13/15	36	106	186	32	3	280,47	383,11
L13/16	40	125	205	32	3	399,41	512,95

Tolleranza effettiva sul diametro: ±0,05 - *Real tolerance on diameter ±0,05*

FRESE PER SGROSSATURA • SERIE NORMALE

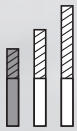
L14

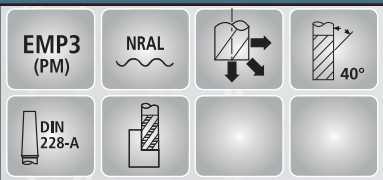
Denti elicoidali con rompitruciolo tondo a passo grosso - Un dente frontale tagliente fino al centro - Codolo conico Morse con foro filettato
ROUGHING END MILLS - Helical teeth with big rounded chip-breaker - One end tooth cutting up to the centre - Morse taper shank
FRAISES À CYLINDRES À DÉGROSSIR - Denture hélicoïdale avec brise-copeaux à pas grosse - Une dent bout coupante jusq'au centre - Queue au cône Morse à trou fileté
SCHAFTFRÄSER DREISCHNEIDER - Schrägschneiden mit holer Spannbrecher - Eine Schneide mit Zentrumschnitt - Morsekegelschaft und Anzugsgewinde
FRESAS CILINDRICAS FRONTALES PARA DESBASTE - Labios helicoidal con arranca de viruta redondo paso grande - Un labio que corta hasta el centro - mango cónico Morse taladro roscado
FRESAS CILINDRICAS FRONTALES PARA DESBASTE - Navalhas helicoidais com quebra- apara paso grande - Um navalha que corta hasta el centro - Encabadouro conico Morse taladro roscado

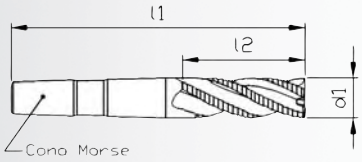
SERIE L

NORM.

UNI
DIN 845B
ISO 1641/II







CODE	d1 mm js14	l2 mm	l1 mm	CM-MK	Z	EMP3 €	ALU SUPREME €
L14/03	20	38	140	3	3	94,41	153,56
L14/04	22	38	140	3	3	100,92	159,96
L14/06	25	45	147	3	3	122,50	190,47
L14/08	28	45	147	3	3	136,88	214,30
L14/09	30	45	147	3	3	152,15	243,47
L14/10	32	53	155	3	3	170,32	307,43

Tolleranza effettiva sul diametro: ±0,05 - *Real tolerance on diameter ±0,05*

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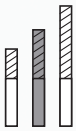
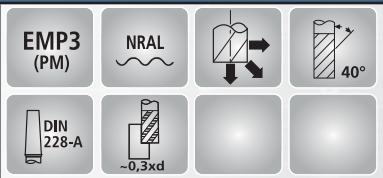
FRESE PER SGROSSATURA • SERIE LUNGA

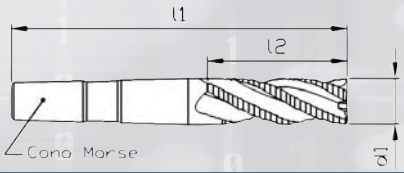
SERIE L

L15

Denti elicoidali con rompitruciolo tondo a passo grosso - Un dente frontale tagliente fino al centro - Codolo conico Morse con foro filettato
ROUGHING END MILLS - Helical teeth with big rounded chip-breaker - One end tooth cutting up to the centre - Morse taper shank
FRAISES À CYLINDRES À DÉGROSSIR - Denture hélicoïdale avec brise-copeaux à pas grosse - Une dent bout coupante jusq'au centre - Queue au cône Morse à trou fileté
SCHAFTFRÄSER DREISCHNEIDER - Schrägschneiden mit holer Spannbrecher - Eine Schneide mit Zentrumschnitt - Morsekegelschaft und Anzugsgewinde
FRESAS CILINDRICAS FRONTALES PARA DESBASTE - Labios helicoidal con arranca de viruta redondo paso grande - Un labio que corta hasta el centro - mango cónico Morse taladro roscado
FRESAS CILINDRICAS FRONTALES PARA DESBASTE - Navalhas helicoidais com quebra- apara paso grande - Um navalha que corta hasta el centro - Encabadouro conico Morse taladro roscado







NORM.

UNI
DIN 845B
ISO 1641/II

INDEX

CODE	d1 mm js14	l2 mm	l1 mm	CM-MK	Z	EMP3 €	ALU SUPREME €
L15/03	20	75	177	3	3	104,54	192,78
L15/04	22	75	177	3	3	132,63	219,11
L15/06	25	90	192	3	3	155,33	241,48
L15/08	28	90	192	3	3	185,58	272,77
L15/09	30	90	192	3	3	225,08	361,06
L15/10	32	106	215	3	3	242,13	381,37

Tolleranza effettiva sul diametro: ±0,05 - *Real tolerance on diameter ±0,05*

FRESE MONOTAGLIENTE PER LEGHE LEGGERE

L17

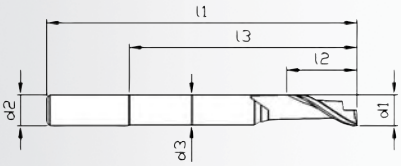
Codolo cilindrico
SINGLE-FLUTED END MILLS TO MACHINE LIGHT ALLOYS - Straight shank
FRAISES À UNE TAILLE POUR L'USINAGE D'ALIAGES LÉGERS - Queue cylindrique
EINSCHNEIDEFRÄSER ZUR BEARBEITUNG VON LEICHTMETALLE - Zylinderschaft
FRESAS MONO CORTANTE PARA LIGAS LIGERAS - Mango cilindrico
FRESAS MONO CORTANTES PARA LIGAS LIGERAS - Encabadouro cilindrico

SERIE L

NORM.

STANDARD Rime

HSS-E Co8 | W | ≈ 35° | DIN 1835 A



CODE	d1 mm js14	l1 mm	l2 mm	l3 mm	d2 mm h6	d3 mm	Co 8 €	ALU SUPREME €
L17/01	8	100	15	80	8	7.9	18,81	33,95
L17/02	8	120	15	100	8	7.9	19,89	36,22
L17/03	10	100	15	75	8	9.0	21,74	36,76
L17/04	10	100	15	75	10	9.9	24,01	39,15

Ulteriori diametri si forniscono su richiesta - *Other diameters upon requirements*

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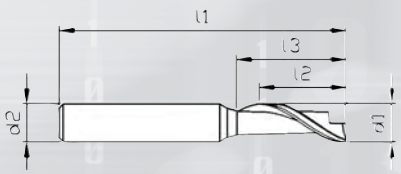
FRESE MONOTAGLIENTE PER LEGHE LEGGERE

SERIE L

L18

Codolo cilindrico
SINGLE-FLUTED END MILLS TO MACHINE LIGHT ALLOYS - Straight shank
FRAISES À UNE TAILLE POUR L'USINAGE D'ALIAGES LÉGERS - Queue cylindrique
EINSCHNEIDEFRÄSER ZUR BEARBEITUNG VON LEICHTMETALLE - Zylinderschaft
FRESAS MONO CORTANTE PARA LIGAS LIGERAS - Mango cilindrico
FRESAS MONO CORTANTES PARA LIGAS LIGEIRAS - Encabadouro cilindrico

EMP3 (PM) | W | ≈35° | DIN 1835 A



NORM.

INDEX

CODE	d1 mm js14	l1 mm	l2 mm	d2 mm h6	EMP3 €	ALU SUPREME €
L18/01	4	55	11	6	22,82	29,31
L18/02	5	60	13	6	21,08	27,57
L18/03	6	57	13	6	21,08	27,57
L18/04	7	65	16	10	26,38	36,76
L18/05	8	70	19	10	26,38	36,76
L18/06	10	75	22	10	26,38	36,76
L18/07	12	80	25	12	31,04	43,14

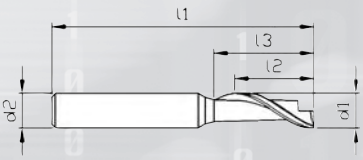
FRESE MONOTAGLIENTE PER LEGHE LEGGERE

SERIE L

L19

Codolo cilindrico
SINGLE-FLUTED END MILLS TO MACHINE LIGHT ALLOYS - Straight shank
FRAISES À UNE TAILLE POUR L'USINAGE D'ALIAGES LÉGERS - Queue cylindrique
EINSCHNEIDEFRÄSER ZUR BEARBEITUNG VON LEICHTMETALLE - Zylinderschaft
FRESAS MONO CORTANTE PARA LIGAS LIGERAS - Mango cilindrico
FRESAS MONO CORTANTES PARA LIGAS LIGEIRAS - Encabadouro cilindrico

HSS-E Co8 | W | ≈35° | DIN 1835 A



NORM.

INDEX

CODE	d1 mm js14	l1 mm	l2 mm	l3 mm	d2 mm h6	Co8% €	ALU SUPREME €
L19/02	3	68	12	20	8	16,98	27,57
L19/03	4	68	12	20	8	16,44	27,03
L19/04	5	60	15	20	6	17,62	28,23
L19/05	5	68	15	23	8	16,44	27,03
L19/06	5	68	15	23	10	17,62	28,23
L19/07	6	68	15	23	8	16,44	27,03
L19/08	8	80	15	60	8	16,44	31,68

FRESE PER FORARE A DUE DIAMETRI

L20

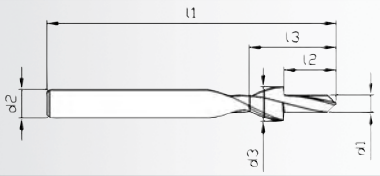
Due denti per lavorazione leghe leggere - Codolo cilindrico
TWO-FLUTED END MILLS BORING TWO DIFFERENT DIAMETRES TO MACHINE LIGHT ALLOYS - Straight shank
FRAISES À DEUX TAILLES À FORER DEUX DIAMÈTRES POUR L'USINAGE D'ALIAGES LÉGERS - Queue cylindrique
ZWEISCHNEIDEN-STUFENFRÄSER ZUR BEARBEITUNG VON LEICHTMETALLE - Zylinderschaft
FRESAS PARA TALADRAR CON DOS DIÁMETROS - Dos labios para mecanizar ligas ligeras - Mango cilindrico
FRESAS PARA TALADRAR COM DOIS DIAMETROS - Duas navalhas para mecanizar ligas ligeiras - Encabadouro cilindrico

SERIE L

NORM.

STANDARD Rime

HSS | W | ≈30° | DIN 1835 A



CODE	d1 mm js14	d3 mm	l1 mm	l2 mm	l3 mm	d2 mm h6	HSS €
L20/01	6	12	85	18	30	10	37,45
L20/02	6.5	13.5	85	18	30	10	40,54
L20/03	5.5	11.5	100	18	30	10	40,54
L20/04	6	11.5	100	18	30	10	40,54
L20/05	6	12	100	18	30	12	40,54
L20/06	6.5	13.5	100	18	30	10	44,84
L20/07	7	13	100	18	30	12	44,84
L20/08	7	15	100	18	30	12	49,80
L20/09	7	18.5	100	18	30	12	57,72

Ulteriori diametri si forniscono su richiesta - *Other diameters upon requirements*

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Catalogo HSS-E e PM INDEX

Catalogo HSS-E e PM

SERIE MG

FRESE SERIE MIG21

SERIES MIG21 END MILLS

Rime
UTENSILERIA

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copertina - home

SERIE MG

FRESE SERIE MIG21
SERIES MIG 21 END MILLS

SERIE MG

FRESE SERIE MIG21
SERIES MIG 21 END MILLS

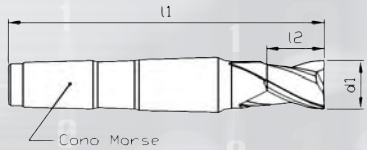
FRESE A DUE DENTI PER CAVE • SERIE NORMALE

SERIE MG

MG0

Un dente frontale tagliente fino al centro - Codolo conico Morse con foro filettato
TWO-FLUTED SLOT CUTTERS - One end tooth cutting up to the centre - Morse taper shank
FRAISES À RAINURES DEUX DENTS - Une dent bout coupante jusq'au centre - Queue au cône Morse à trou fileté
LANGLOCHFRÄSER, ZWEISCHNEIDER - Eine Schneide mit Zentrumschnitt - Morsekegelschaft und Anzugsgewinde
FRESAS CILINDRICAS DE DOS LABIOS - Un labio que corta hasta el centro - Mango cónico Morse con taladro roscado
FRESAS CILINDRICAS DE DUAS NAVALHAS - Encabadouro cone Morse con taladro roscado

EMP3 (PM) | N | ≈ 30° | DIN 228-A



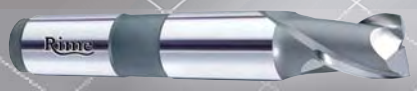
NORM.

UNI 8260A
DIN 326D
ISO 1641/II

INDEX

CODE	d1 mm e8	l2 mm	l1 mm	CM-MK	Z	EMP3 €
MG0/01	16	19	104	2	2	51,64
MG0/02	17	19	104	2	2	56,10
MG0/03	18	19	104	2	2	51,64
MG0/04	19	22	107	2	2	61,81
MG0/05	20	22	124	3	2	72,67
MG0/06	21	22	124	3	2	81,57
MG0/07	22	22	124	3	2	75,86
MG0/08	23	22	124	3	2	85,34
MG0/09	24	26	128	3	2	84,09
MG0/10	25	26	128	3	2	87,28
MG0/11	26	26	128	3	2	94,90
MG0/12	27	26	128	3	2	115,20
MG0/13	28	26	128	3	2	107,33
MG0/14	29	26	128	3	2	131,50
MG0/15	30	32	134	3	2	121,65
MG0/16	32	32	157	4	2	153,08
MG0/17	34	32	157	4	2	170,09
MG0/18	35	32	157	4	2	184,51
MG0/19	36	32	157	4	2	205,51
MG0/20	38	38	163	4	2	234,89
MG0/21	40	38	163	4	2	263,53
MG0/22	45	38	163	4	2	314,70
MG0/23	50	45	170	4	2	375,52

Ulteriori diametri si forniscono su richiesta - *Other diameters upon requirements*



FRESE A DUE DENTI PER CAVE • SERIE NORMALE

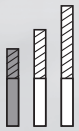
MG1

Un dente frontale tagliente fino al centro - Attacco Weldon
TWO-FLUTED SLOT CUTTERS - One end tooth cutting up to the centre - Weldon shank
FRAISES À RAINURES DEUX DENTS - Une dent bout coupante jusq'au centre - Queue cylindrique Weldon
LANGLOCHFRÄSER, ZWEISCHNEIDER - Eine Schneide mit Zentrumschnitt - Weldon Spannfläche
FRESAS CILINDRICAS DE DOS LABIOS - Un labio que corta hasta el centro - Mango Weldon
FRESAS CILINDRICAS DE DUAS NAVALHAS - Encabadouro Weldon

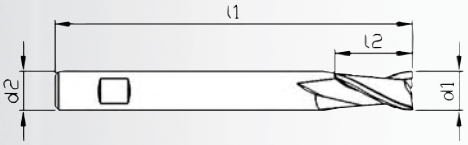
SERIE MG

NORM.

UNI 8258
DIN 327D
ISO 1641/I



EMP3 (PM) | N | ≈30° | DIN 1835 B



CODE	d1 mm e8	l2 mm	l1 mm	d2 mm h6	Z	EMP3 €	SUPREME €
MG1/00	2	5	49	6	2	16,44	23,03
MG1/01	3	5	49	6	2	14,06	20,66
MG1/02	3.5	6	50	6	2	14,06	20,66
MG1/03	4	7	51	6	2	13,52	20,12
MG1/04	4.5	7	51	6	2	14,06	20,66
MG1/05	5	8	52	6	2	13,52	20,12
MG1/06	5.5	8	52	6	2	13,52	20,12
MG1/07	6	8	52	6	2	12,87	19,58
MG1/08	6.5	10	60	10	2	18,81	29,31
MG1/09	7	10	60	10	2	18,81	29,31
MG1/10	7.5	10	60	10	2	19,35	29,96
MG1/11	8	11	61	10	2	17,62	28,23
MG1/12	8.5	11	61	10	2	21,08	31,68
MG1/13	9	11	61	10	2	21,08	31,68
MG1/14	9.5	13	63	10	2	21,74	32,22
MG1/15	10	13	63	10	2	20,54	31,04
MG1/16	10.5	13	70	12	2	25,84	36,76
MG1/17	11	13	70	12	2	24,65	35,68
MG1/18	12	16	73	12	2	25,19	36,22
MG1/19	13	16	73	12	2	27,57	39,72
MG1/20	14	16	73	12	2	29,31	41,41
MG1/21	15	19	79	16	2	32,87	48,34
MG1/22	16	19	79	16	2	34,60	50,06
MG1/23	17	19	79	16	2	38,06	58,71
MG1/24	18	19	85	16	2	41,63	62,17
MG1/25	19	22	88	20	2	51,04	71,36
MG1/26	20	22	88	20	2	49,84	70,17
MG1/27	22	22	88	20	2	75,63	100,87
MG1/28	23	22	98	25	2	92,88	122,12
MG1/29	24	26	102	25	2	92,88	122,12
MG1/30	25	26	102	25	2	92,88	122,12
MG1/31	26	26	102	25	2	101,82	136,07
MG1/32	28	26	102	25	2	108,16	142,28
MG1/33	30	26	102	30	2	118,94	152,84
MG1/34	32	32	112	32	2	133,60	169,74

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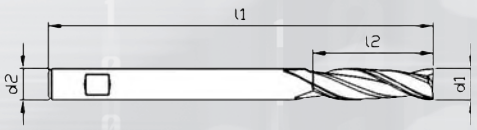
FRESE A DUE DENTI PER CAVE • SERIE LUNGA

SERIE MG

MG3

Un dente frontale tagliente fino al centro - Attacco Weldon
TWO-FLUTED SLOT CUTTERS - One end tooth cutting up to the centre - Weldon shank
FRAISES À RAINURES DEUX DENTS - Une dent bout coupante jusq'au centre - Queue cylindrique Weldon
LANGLOCHFRÄSER, ZWEISCHNEIDER - Eine Schneide mit Zentrumschnitt - Weldon Spannfläche
FRESAS CILINDRICAS DE DOS LABIOS - Un labio que corta hasta el centro - Mango Weldon
FRESAS CILINDRICAS DE DUAS NAVALHAS - Encabadouro Weldon

EMP3 (PM) | N | ≈ 30° | DIN 1835 B



NORM.

STANDARD Rime

INDEX

CODE	d1 mm e8	l2 mm	l1 mm	d2 mm h6	Z	EMP3 €	SUPREME €
MG3/01	3	9	60	6	2	18,81	25,30
MG3/02	3.5	13	67	6	2	18,81	27,03
MG3/03	4	13	67	6	2	17,62	25,84
MG3/04	4.5	13	68	6	2	17,62	25,84
MG3/05	5	16	68	6	2	17,62	25,84
MG3/06	5.5	16	76	6	2	17,62	27,57
MG3/07	6	16	76	6	2	17,62	27,57
MG3/08	6.5	16	76	10	2	22,82	27,57
MG3/09	7	19	79	10	2	22,82	37,96
MG3/10	7.5	19	79	10	2	22,82	37,96
MG3/11	8	19	79	10	2	22,28	37,42
MG3/12	8.5	22	83	10	2	26,92	41,95
MG3/13	9	22	83	10	2	26,38	41,41
MG3/14	9.5	22	83	10	2	25,84	40,87
MG3/15	10	22	83	10	2	24,65	39,69
MG3/16	10.5	25	95	12	2	32,87	48,88
MG3/17	11	25	95	12	2	32,87	48,88
MG3/18	12	28	98	12	2	31,04	47,15
MG3/19	13	28	98	12	2	41,09	58,07
MG3/20	14	32	102	12	2	39,25	56,34
MG3/21	15	32	108	16	2	46,92	68,98
MG3/22	16	32	108	16	2	46,92	68,98
MG3/23	17	35	114	16	2	56,88	84,02
MG3/24	18	35	114	16	2	55,68	82,83
MG3/25	19	38	132	20	2	72,12	99,47
MG3/26	20	38	132	20	2	72,12	99,47
MG3/27	21	38	132	20	2	79,97	128,18
MG3/28	22	41	141	25	2	89,23	164,06
MG3/29	23	41	141	25	2	98,48	173,20
MG3/30	24	41	152	25	2	113,33	187,81
MG3/31	25	44	159	25	2	111,51	185,98
MG3/32	26	44	159	25	2	127,27	203,40
MG3/33	28	44	159	25	2	148,85	238,36
MG3/34	30	50	159	25	2	160,36	249,61
MG3/35	32	52	165	32	2	179,35	280,82

FRESE A TRE DENTI • SERIE NORMALE

MG4

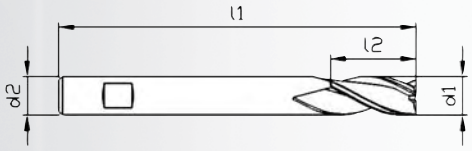
Un dente frontale tagliente fino al centro - Attacco Weldon
THREE-FLUTED END MILLS - One end tooth cutting up to the centre - Weldon shank
FRAISES À CYLINDRES TROIS DENTS - Une dent bout coupante jusq'au centre - Queue cylindrique Weldon
SCHAFTFRÄSER, DREISCHNEIDER - Eine Schneide mit Zentrumschnitt - Weldon Spannfläche
FRESAS CILINDRICAS FRONTALES DE TRES LABIOS - Un labio que corta hasta el centro - Mango Weldon
FRESAS CILINDRICAS FRONTAIS DE TRÊS NAVALHAS - Encabadouro Weldon

SERIE MG

NORM.

UNI 8248
DIN 844B
ISO 1641/I

EMP3 (PM) | N | ≈30° | DIN 1835 B



INDEX

CODE	d1 mm js14	l2 mm	l1 mm	d2 mm h6	Z	EMP3 €	SUPREME €
MG4/01	2	7	51	6	3	19,89	26,49
MG4/02	2,5	8	52	6	3	19,89	26,49
MG4/03	3	8	52	6	3	15,79	22,39
MG4/04	3,5	10	54	6	3	15,79	22,39
MG4/05	4	11	55	6	3	15,25	21,85
MG4/06	4,5	11	55	6	3	15,79	22,39
MG4/07	5	13	57	6	3	14,71	21,31
MG4/08	5,5	13	57	6	3	15,25	21,85
MG4/09	6	13	57	6	3	14,06	20,66
MG4/10	6,5	16	66	10	3	22,82	33,30
MG4/11	7	16	66	10	3	23,47	33,95
MG4/11/1	7,5	19	69	10	3	26,00	36,50
MG4/12	8	19	69	10	3	22,28	32,76
MG4/12/1	8,5	19	69	10	3	24,50	35,00
MG4/13	9	19	69	10	3	25,19	35,68
MG4/13/1	9,5	22	72	10	3	27,50	38,00
MG4/14	10	22	72	10	3	23,47	39,69
MG4/15	11	22	79	12	3	31,04	43,14
MG4/16	12	26	83	12	3	28,11	40,23
MG4/17	13	26	83	12	3	33,41	46,61
MG4/18	14	26	83	12	3	31,68	44,87
MG4/19	15	32	92	16	3	39,25	58,71
MG4/20	16	32	92	16	3	38,06	57,53
MG4/21	17	32	92	16	3	49,19	69,63
MG4/22	18	32	92	16	3	45,73	66,18
MG4/23	19	38	104	20	3	52,76	73,10
MG4/24	20	38	104	20	3	54,49	74,83
MG4/25	22	38	104	20	3	76,78	105,10
MG4/26	24	45	121	25	3	94,13	127,61
MG4/27	25	45	121	25	3	97,91	131,26
MG4/28	26	45	121	25	3	106,87	143,58
MG4/29	28	45	121	25	3	117,07	153,55
MG4/30	30	45	121	25	3	130,44	166,57
MG4/31	32	53	133	32	3	153,90	192,84

Tolleranza effettiva sul diametro: +0 -0,03 - *Real tolerance on diameter +0 -0,03*

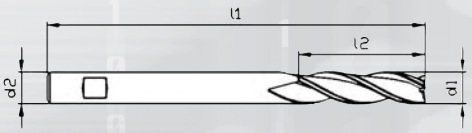
FRESE A TRE DENTI • SERIE LUNGA

SERIE MG

MG5

Un dente frontale tagliente fino al centro - Attacco Weldon
THREE-FLUTED END MILLS - One end tooth cutting up to the centre - Weldon shank
FRAISES À CYLINDRES TROIS DENTS - Une dent bout coupante jusq'au centre - Queue cylindrique Weldon
SCHAFTFRÄSER, DREISCHNEIDER - Eine Schneide mit Zentrumschnitt - Weldon Spannfläche
FRESAS CILINDRICAS FRONTALES DE TRES LABIOS - Un labio que corta hasta el centro, mango Weldon
FRESAS CILINDRICAS FRONTAIS DE TRÊS NAVALHAS - Encabadouro Weldon

EMP3 (PM) | N | ≈ 30° | DIN 1835 B



NORM.

UNI 8249
DIN 844B
ISO 1641/I

INDEX

CODE	d1 mm js14	l2 mm	l1 mm	d2 mm h6	Z	EMP3 €
MG5/01	2	10	54	6	3	22,28
MG5/02	3	12	56	6	3	21,08
MG5/03	4	19	63	6	3	19,89
MG5/04	5	24	68	6	3	19,35
MG5/05	6	24	68	6	3	18,81
MG5/06	7	30	80	10	3	32,22
MG5/07	8	38	88	10	3	29,96
MG5/08	10	45	95	10	3	28,77
MG5/09	12	53	110	12	3	35,14
MG5/10	14	53	110	12	3	40,44
MG5/11	16	63	123	16	3	49,85
MG5/12	18	63	123	16	3	59,79
MG5/13	20	75	141	20	3	70,39
MG5/14	22	75	141	25	3	92,88

Tolleranza effettiva sul diametro: +0 -0,03 - *Real tolerance on diameter +0 -0,03*

FRESE FRONTALI

MG6

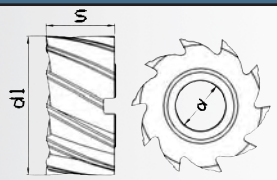
Denti elicoidali rinforzati - Cava trascinamento trasversale
SHELL END MILLS - Reinforced helical teeth
FRAISES À CYLINDRES FRONTALES - Denture hélicoïdale renforcée
WALZENFRÄSER MIT QUERNUT - Verstärkte Spiralzähne
FRESAS CILINDRICAS FRONTALES - Labios helicoidales reforzados
FRESAS CILINDRICAS FRONTAIS - Oito navalhas helicoidais

SERIE MG

NORM.

UNI	3903
DIN	1880
ISO	2586

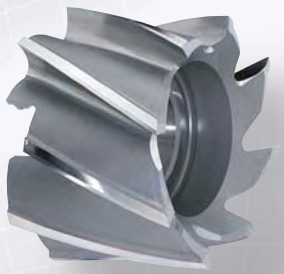
EMP3 (PM) | N | ≈30°



CODE	d1 mm js6	s mm k16	d mm H7	Z	EMP3 €
MG6/01	40	32	16	8	109,33
MG6/02	50	36	22	8	145,92
MG6/03	63	40	27	8	211,63
MG6/04	80	45	27	10	326,33
MG6/05	100	50	32	12	520,94
MG6/06	125	56	40	14	845,92

Tolleranza effettiva sul diametro: -0 +0,05 - *Real tolerance on diameter -0 +0,05*

INDEX



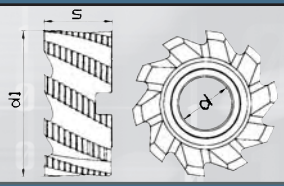
FRESE FRONTALI

SERIE MG

MG7

Denti elicoidali con rompitruciolo spogliato completamente rettificato - Cava trascinamento trasversale
SHELL END MILLS - Helical teeth with form relieved entirely ground chip-breaker
FRAISES À CYLINDRES FRONTALES - Denture hélicoïdale avec brise-copeaux dépouillé entièrement rectifié
WALZENFRÄSER MIT QUERNUT - Schrägschneiden mit voll eingeschliffenem Spannbrecher
FRESAS CILINDRICAS FRONTALES - Labios helicoidales con arranca de viruta completamente rectificado
FRESAS CILINDRICAS FRONTAIS - Seis navalhas helicoidais com quebra apara

EMP3 (PM) | NR | 30°



NORM.

UNI 3903
DIN 1880
ISO 2586

INDEX

CODE	d1 mm js6	s mm k16	d mm H7	Z	EMP3 €
MG7/01	40	32	16	6	137,04
MG7/02	50	36	22	6	190,47
MG7/03	63	40	27	8	274,63
MG7/04	80	45	27	8	441,74
MG7/05	100	50	32	10	663,60
MG7/06	125	56	40	12	1065,47

Tolleranza effettiva sul diametro: ±0,05 - *Real tolerance on diameter ±0,05*

FRESE PER FINITURA • SERIE NORMALE

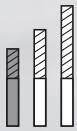
MG8

Due denti frontali taglienti fino al centro - Attacco Weldon
END MILLS - Two end teeth cutting up to the centre - Weldon shank
FRAISES À CYLINDRES - Deux dents bout coupantes jusq'au centre - Queue cylindrique Weldon
SCHAFTFRÄSER - Zwei Schneiden mit Zentrumschnitt - Weldon Spannfläche
FRESAS CILINDRICAS FRONTALES - Dos labios que cortan hasta el centro - Mango Weldon
FRESAS CILINDRICAS FRONTAIS - Quatro navalhas normais com corte ao centro - Encabadouro Weldon

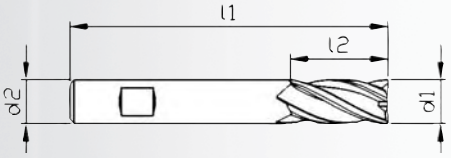
SERIE MG

NORM.

UNI 8248
DIN 844B
ISO 1641/I



EMP3 (PM) | N | ≈30° | DIN 1835 B



CODE	d1 mm js14	l2 mm	l1 mm	d2 mm h6	Z	EMP3 €	SUPREME €
MG8/01	2	7	51	6	4	17,62	24,11
MG8/01/1	2,5	8	52	6	4	15,50	22,00
MG8/02	3	8	52	6	4	14,71	20,12
MG8/02/1	3,5	10	54	6	4	15,00	21,50
MG8/03	4	11	55	6	4	13,52	20,12
MG8/03/1	4,5	11	55	6	4	14,50	21,00
MG8/04	5	13	57	6	4	12,87	19,58
MG8/04/1	5,5	13	57	6	4	14,50	21,00
MG8/05	6	13	57	6	4	12,87	19,58
MG8/05/1	6,5	16	66	10	4	22,00	32,60
MG8/06	7	16	66	10	4	21,08	31,68
MG8/06/1	7,5	19	69	10	4	22,00	32,60
MG8/07	8	19	69	10	4	20,54	31,04
MG8/07/1	8,5	19	69	10	4	23,00	33,60
MG8/08	9	19	69	10	4	22,82	33,30
MG8/09	10	22	72	10	4	21,08	31,68
MG8/10	11	22	79	12	4	28,77	40,87
MG8/11	12	26	83	12	4	26,92	39,15
MG8/12	13	26	83	12	4	31,68	44,87
MG8/13	14	26	83	12	4	28,77	48,34
MG8/14	15	32	92	16	4	34,60	54,06
MG8/15	16	32	92	16	4	35,80	55,26
MG8/16	17	32	92	16	4	45,19	65,53
MG8/17	18	32	92	16	4	41,63	62,17
MG8/18	19	38	104	20	4	51,58	71,90
MG8/19	20	38	104	20	4	48,11	68,44
MG8/20	22	38	104	20	4	74,38	102,70
MG8/21	24	45	121	25	5	102,24	135,50
MG8/22	25	45	121	25	5	101,56	134,93
MG8/23	26	45	121	25	5	111,90	145,33
MG8/24	28	45	121	25	5	120,82	157,31
MG8/25	30	45	121	25	6	131,73	168,45
MG8/26	32	53	133	32	6	157,06	195,89

Tolleranza effettiva sul diametro: +0 +0,03 - *Real tolerance on diameter +0 +0,03*

INDEX

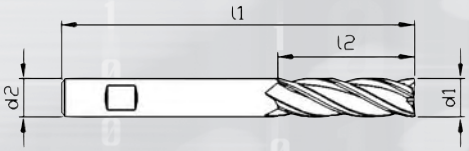
FRESE PER FINITURA • SERIE LUNGA

SERIE MG

MG9

Due denti frontali taglienti fino al centro - Attacco Weldon
END MILLS - Two end teeth cutting up to the centre - Weldon shank
FRAISES À CYLINDRES - Deux dents bout coupantes jusq'au centre -Queue cylindrique Weldon
SCHAFTFRÄSER - Zwei Schneiden mit Zentrumschnitt - Weldon Spannfläche
Fresas cilindricas frontales - Dos labios que cortan hasta el centro - Mango Weldon
FRESAS CILINDRICAS FRONTAIS - Quatro navalhas longas com corte ao centro - Encabadouro Weldon

EMP3 (PM) | N | ≈30° | DIN 1835 B



NORM.

UNI 8249
DIN 844B
ISO 1641/I

INDEX

CODE	d1 mm js14	l2 mm	l1 mm	d2 mm h6	Z	EMP3 €
MG9/01	2	10	54	6	4	18,81
MG9/02	3	12	56	6	4	19,35
MG9/03	4	19	63	6	4	17,62
MG9/04	5	24	68	6	4	16,98
MG9/05	6	24	68	6	4	16,44
MG9/06	7	30	80	10	4	25,95
MG9/07	8	38	88	10	4	27,57
MG9/08	10	45	95	10	4	25,84
MG9/09	12	53	110	12	4	33,41
MG9/10	14	53	110	12	4	36,98
MG9/11	16	63	123	16	4	45,73
MG9/12	18	63	123	16	4	53,41
MG9/13	20	75	141	20	4	63,91
MG9/14	22	75	141	20	4	88,54
MG9/15	24	90	166	25	5	122,69
MG9/16	25	90	166	25	5	122,69
MG9/17	26	90	166	25	5	133,60
MG9/18	28	90	166	25	5	147,56
MG9/19	30	90	166	25	6	162,81
MG9/20	32	106	186	32	6	206,69

Tolleranza effettiva sul diametro: +0 +0,03 - *Real tolerance on diameter +0 +0,03*

FRESE FRESE PER FINITURA • SERIE NORMALE

MG10

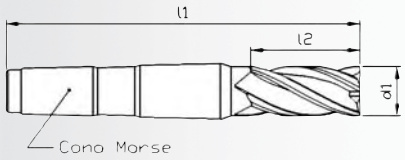
Codolo conico Morse con foro filettato
END MILLS - Morse taper shank
FRAISES À CYLINDRES FRONTALES - Queue au cône Morse à trou fileté
SCHAFTFRÄSER - Morsekegelschaft und Anzugsgewinde
FRESAS CILINDRICAS FRONTALES - Mango cónico Morse con taladro roscado
FRESAS CILINDRICAS FRONTAIS - Quatro navalhas normais - Encabadouro cone Morse con taladro roscado

SERIE MG

NORM.

UNI 8250
DIN 845B
ISO 1641/II

EMP3 (PM) | N | ≈30° | DIN 228-A



CODE	d1 mm js14	l2 mm	l1 mm	CM-MK	Z	EMP3 €	SUPREME €
MG10/01	16	32	117	2	4	56,67	84,42
MG10/02	18	32	117	2	4	56,67	87,52
MG10/03	20	38	140	3	4	80,31	139,83
MG10/04	22	38	140	3	4	91,73	150,68
MG10/05	24	45	147	3	5	105,80	164,06
MG10/06	25	45	147	3	5	110,24	178,10
MG10/07	26	45	147	3	5	117,07	186,63
MG10/08	28	45	147	3	5	123,63	201,52
MG10/09	30	53	155	3	6	137,37	232,72
MG10/10	32	53	178	4	6	164,93	303,93
MG10/11	34	53	178	4	6	178,65	321,99
MG10/12	35	53	178	4	6	192,37	335,13
MG10/13	36	53	178	4	6	199,54	341,93
MG10/14	38	63	188	4	6	226,98	375,02
MG10/15	40	63	188	4	8	261,12	407,50
MG10/16	45	63	188	4	8	378,18	527,26
MG10/17	50	75	233	5	8	474,36	683,27

Tolleranza effettiva sul diametro: +0 +0,03 - *Real tolerance on diameter +0 +0,03*

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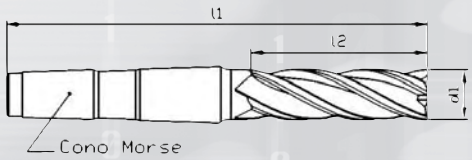
FRESE PER FINITURA • SERIE LUNGA

SERIE MG

MG11

Codolo conico Morse con foro filettato
END MILLS - Morse taper shank
FRAISES À CYLINDRES FRONTALES - Queue au cône Morse à trou fileté
SCHAFTFRÄSER - Morsekegelschaft und Anzugsgewinde
FRESAS CILINDRICAS FRONTALES - Mango cónico Morse con taladro roscado
FRESAS CILINDRICAS FRONTAIS - Quatro navalhas longas - Encabadouro cone Morse con taladro roscado

EMP3 (PM) | N | ≈30° | DIN 228-A



NORM.

UNI 8251
DIN 845B
ISO 1641/II

INDEX

CODE	d1 mm js14	l2 mm	l1 mm	CM-MK	Z	EMP3 €
MG11/01	16	63	148	2	4	77,81
MG11/02	18	63	148	2	4	78,38
MG11/03	20	75	177	3	4	107,73
MG11/04	22	75	177	3	4	117,90
MG11/05	24	90	192	3	5	146,57
MG11/06	25	90	192	3	5	146,57
MG11/07	26	90	192	3	5	157,06
MG11/08	28	90	192	3	5	172,09
MG11/09	30	90	192	3	6	185,80
MG11/10	32	106	231	4	6	261,12
MG11/11	34	106	231	4	6	291,15
MG11/12	35	106	231	4	6	308,15
MG11/13	36	106	231	4	6	326,45
MG11/14	38	125	250	4	6	397,76
MG11/15	40	125	250	4	8	447,50
MG11/16	45	125	250	4	8	552,25
MG11/17	50	150	308	5	8	809,37

Tolleranza effettiva sul diametro: +0 +0,03 - *Real tolerance on diameter +0 +0,03*

FRESE CILINDRICHE FRONTALI • SERIE NORMALE

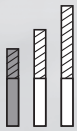
MG12

Due denti frontali taglienti fino al centro - Elica destra 45° - Divisione irregolare - Attacco Weldon
END MILLS - Two end teeth cutting up to the centre - 45° right hand spiral - Irregular division - Weldon shank
FRAISES À CYLINDRES - Deux dents bout coupantes jusq'au centre - Hélice 45° à droite - Division irrégulier - Queue cylindrique Weldon
SCHAFTFRÄSER - Zwei Schneiden mit Zentrumschnitt - 45° rechts spiralgenutet - Unterschiedliche teilung - Weldon Spannfläche
FRESAS CILINDRICAS FRONTALES - Dos labios que cortan hasta el centro - Hélice derecha 45° - División irregular - Mango Weldon
FRESAS CILINDRICAS FRONTAIS - Três navalhas normais com corte ao centro - Hélice direita 45° - Divisão irregular - Encabadouro Weldon

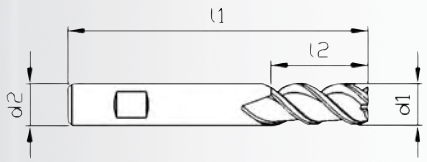
SERIE MG

NORM.

STANDARD Rime



EMP3 (PM) | N | 45° | DIN 1835 B



CODE	d1 mm js14	l2 mm	l1 mm	d2 mm h6	Z	EMP3 €	SUPREME €
MG12/03	4	11	56	6	3	15,25	21,85
MG12/04	5	13	56	6	3	14,71	21,31
MG12/05	6	13	56	6	3	14,71	21,31
MG12/06	7	16	66	10	3	23,47	33,95
MG12/07	8	20	69	10	3	22,28	32,76
MG12/08	9	20	69	10	3	24,01	34,49
MG12/09	10	22	72	10	3	23,47	33,95
MG12/10	11	26	83	12	3	29,31	41,41
MG12/11	12	26	83	12	3	28,77	40,87
MG12/12	13	26	83	12	3	33,95	47,15
MG12/13	14	26	83	12	3	33,41	46,61
MG12/14	15	36	92	16	3	40,44	59,79
MG12/15	16	36	90	16	3	39,90	59,25
MG12/16	17	40	100	16	4	48,65	68,98
MG12/17	18	40	100	16	4	47,46	67,90
MG12/18	20	45	110	20	4	53,95	74,18
MG12/19	22	45	110	20	4	76,78	105,10
MG12/20	25	50	125	25	4	97,91	131,26
MG12/21	28	56	125	25	4	117,65	154,13
MG12/22	30	63	140	25	4	138,07	227,80
MG12/23	32	63	140	25	4	156,48	258,30

Tolleranza effettiva sul diametro: +0 +0,03 - *Real tolerance on diameter +0 +0,03*

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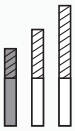
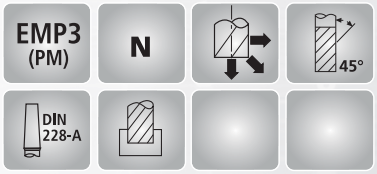
FRESE CILINDRICHE FRONTALI • SERIE NORMALE

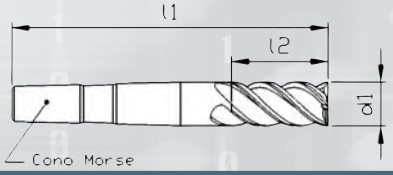
SERIE MG

MG13

Due denti frontali taglienti fino al centro - Elica destra 45° - Divisione irregolare - Codolo conico Morse con foro filettato
END MILLS - Two end teeth cutting up to the centre - 45° right hand spiral - Irregular division - Morse taper shank
FRAISES À CYLINDRES - Deux dents bout coupantes jusq'au centre - Hélice 45° à droite - Division irrégulier - Queue au cône Morse à trou fileté
SCHAFTFRÄSER - Zwei Schneiden mit Zentrumschnitt - 45° rechts spiralgenutet - Unterschiedliche teilung -Morsekegelschaft und Anzugsgewinde
FRESAS CILINDRICAS FRONTALES - Dos labios que cortan hasta el centro - Hélice derecha 45° - División irregular - Mango conico Morse con taladro roscado
FRESAS CILINDRICAS FRONTAIS - Três navalhas normais com corte ao centro - Hélice direita 45° - Divisão irregular - Encabadouro cone Morse con taladro roscado







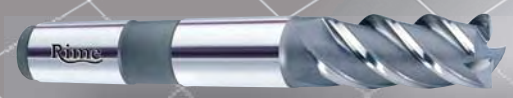
NORM.

STANDARD Rime

INDEX

CODE	d1 mm js14	l2 mm	l1 mm	CM-MK	Z	EMP3 €	SUPREME €
MG13/01	16	36	115	2	3	66,95	94,25
MG13/02	18	40	120	2	3	66,95	97,23
MG13/03	20	45	145	3	4	95,63	154,35
MG13/04	22	45	145	3	4	106,48	176,84
MG13/05	24	50	150	3	4	120,41	195,69
MG13/06	25	50	150	3	4	124,29	199,35
MG13/07	26	56	155	3	4	130,92	207,75
MG13/08	28	56	155	3	4	136,78	219,59
MG13/09	30	63	165	3	4	154,38	249,03
MG13/10	32	63	185	4	4	188,39	326,34
MG13/11	34	70	195	4	4	209,97	351,90
MG13/12	35	70	195	4	4	217,83	359,41
MG13/13	36	70	195	4	4	226,98	375,02
MG13/14	38	70	195	4	4	260,41	406,80
MG13/15	40	70	195	4	4	297,01	441,76

Tolleranza effettiva sul diametro: +0 +0,03 - *Real tolerance on diameter +0 +0,03*



FRESE PER SGROSSATURA • SERIE NORMALE

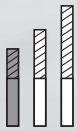
MG14

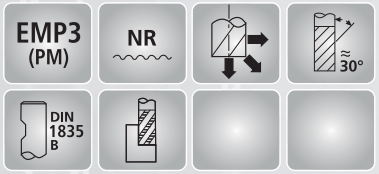
Denti elicoidali con rompitruciolo spogliato completamente rettificato - Due denti frontali taglienti fino al centro - Attacco Weldon
ROUGHING END MILLS -Helical teeth with form relieved entirely ground chip-breaker - Two end teeth cutting up to the centre - Weldon shank
FRAISES FRONTALES À CYLINDRES À DEGROSSIR - Denture hélicoïdale avec brise-copeaux - Deux dents bout coupantes jusq'au centre - Queue cylindrique Weldon
SCHAFTFRÄSER - Schrägschneiden mit voll eingeschliffenem Spannbrecher - Zwei Schneiden mit Zentrumschnitt - Weldon-Spannfläche
FRESAS CILINDRICAS FRONTALES PARA DESBASTE - Labios helicoidal con arranca de viruta - Dos labios que cortan hasta el centro - Mango Weldon
FRESAS CILINDRICAS FRONTAIS PARA DESBASTE - Três navalhas normais com quebra apara com corte ao centro - Encabadouro Weldon

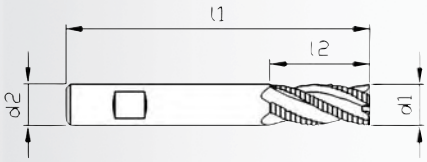
SERIE MG

NORM.

UNI 8248
DIN 844B
ISO 1641/I







CODE	d1 mm js14	l2 mm	l1 mm	d2 mm h6	Z	EMP3 €	SUPREME €
MG14/01	6	13	57	6	3	27,31	32,99
MG14/02	7	16	66	10	3	41,77	50,85
MG14/03	8	19	69	10	4	40,70	49,69
MG14/04	9	19	69	10	4	41,77	50,85
MG14/05	10	22	72	10	4	40,70	49,69
MG14/06	11	22	79	12	4	46,48	58,16
MG14/07	12	26	83	12	4	45,84	57,52
MG14/08	13	26	83	12	4	51,04	63,79
MG14/09	14	26	83	12	4	49,19	62,17
MG14/10	15	32	92	16	4	58,07	77,09
MG14/11	16	32	92	16	4	58,07	77,09
MG14/12	17	32	92	16	4	63,91	84,56
MG14/13	18	32	92	16	4	60,98	81,09
MG14/14	20	38	104	20	4	75,68	95,47
MG14/15	22	38	104	20	4	82,06	108,66
MG14/16	24	45	121	25	5	122,50	153,53
MG14/17	25	45	121	25	5	118,39	149,53
MG14/18	26	45	121	25	5	128,36	162,92
MG14/19	28	45	121	25	5	135,65	170,10
MG14/20	30	45	121	25	5	147,21	181,43
MG14/21	32	53	133	32	5	174,59	211,27
MG14/22	36	53	133	32	6	201,96	291,84
MG14/23	40	63	143	32	6	243,36	332,45

Tolleranza effettiva sul diametro: ±0,05 - *Real tolerance on diameter ±0,05*

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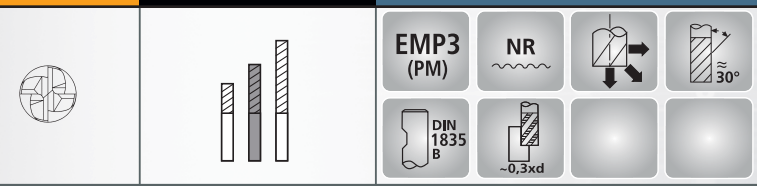
FRESE PER SGROSSATURA • SERIE LUNGA

SERIE MG

MG15

Denti elicoidali con rompitruciolo spogliato completamente rettificato - Due denti frontali taglienti fino al centro - Attacco Weldon
ROUGHING END MILLS - Helical teeth with form relieved entirely ground chip-breaker - Two end teeth cutting up to the centre - Weldon shank
FRAISES FRONTALES À CYLINDRES À DEGROSSIR - Denture hélicoïdale avec brise-copeaux - Deux dents bout coupantes jusq'au centre - Queue cylindrique Weldon
SCHAFTFRÄSER - Schrägschneiden mit voll eingeschliffenem Spannbrecher - Zwei Schneiden mit Zentrumschnitt - Weldon Spannfläche
FRESAS CILINDRICAS FRONTALES PARA DESBASTE - Labios helicoidal con arranca de viruta - Dos labios que cortan hasta el centro - Mango Weldon
FRESAS CILINDRICAS FRONTAIS PARA DESBASTE - Quatro navalhas longas quebra apara com corte ao centro - Encabadouro Weldon



NORM.

UNI 8249
DIN 844B
ISO 1641/I

INDEX

CODE	d1 mm js14	l2 mm	l1 mm	d2 mm h6	Z	EMP3 €	SUPREME €
MG15/01	8	38	88	10	4	52,26	65,35
MG15/02	10	45	95	10	4	53,44	66,50
MG15/03	12	53	110	12	4	63,30	78,61
MG15/04	14	53	110	12	4	66,28	82,83
MG15/05	15	63	123	16	4	77,96	99,47
MG15/06	16	63	123	16	4	77,96	100,67
MG15/07	18	63	123	16	4	85,64	112,12
MG15/08	20	75	141	20	4	99,05	125,42
MG15/09	22	75	141	20	4	112,02	157,00
MG15/10	24	90	166	25	5	157,10	226,63
MG15/11	25	90	166	25	5	160,02	229,54
MG15/12	28	90	166	25	5	178,85	263,79
MG15/13	30	90	166	25	5	201,40	285,89
MG15/14	32	106	186	32	5	250,09	345,58

Tolleranza effettiva sul diametro: ±0,05 - *Real tolerance on diameter ±0,05*

FRESE PER SGROSSATURA • SERIE NORMALE

MG16

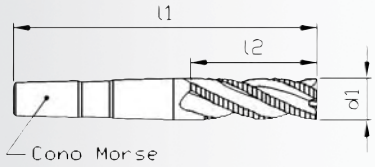
Denti elicoidali con rompitruciolo spogliato completamente rettificato - Due denti frontali taglienti fino al centro - Codolo conico Morse con foro filettato
ROUGHING END MILLS - Helical teeth with form relieved entirely ground chip-breaker - Two end teeth cutting up to the centre - Morse taper shank
FRAISES FRONTALES À CYLINDRES À DEGROSSIR - Denture hélicoïdale avec brise-copeaux - Deux dents bout coupantes jusq'au centre - Queue au cône Morse à trou fileté
SCHAFTFRÄSER - Schrägschneiden mit voll eingeschliffenem Spannbrecher - Zwei Schneiden mit Zentrumschnitt - Morsekegelschaft und Anzugsgewinde
FRESAS CILINDRICAS FRONTALES PARA DESBASTE - Labios helicoidal con arranca de viruta - Dos labios que cortan hasta el centro - Mango conico Morse taladro roscado
FRESAS CILINDRICAS FRONTAIS PARA DESBASTE - Quatro navalhas normais quebra apara com corte ao centro - Encabadouro cone Morse con taladro roscado

SERIE MG

NORM.

UNI 8250-8251
DIN 845B
ISO 1641/II

EMP3 (PM) | NR | ≈30° | DIN 228-A



CODE	d1 mm js14	l2 mm	l1 mm	CM-MK	Z	EMP3 €	SUPREME €
MG16/01	16	32	117	2	4	72,98	98,39
MG16/02	18	32	117	2	4	77,20	105,20
MG16/03	20	38	140	3	4	100,77	155,92
MG16/04	22	38	140	3	4	107,90	162,72
MG16/05	24	45	147	3	4	119,36	173,65
MG16/06	25	45	147	3	5	124,88	188,02
MG16/07	26	45	147	3	5	130,83	193,86
MG16/08	28	45	147	3	5	143,76	215,69
MG16/09	30	53	155	3	5	160,40	245,55
MG16/10	32	53	178	4	5	181,88	311,20
MG16/11	34	53	178	4	5	201,82	332,68
MG16/12	35	53	178	4	6	209,42	339,73
MG16/13	36	53	178	4	6	216,46	346,23
MG16/14	38	63	188	4	6	247,43	385,89
MG16/15	40	63	188	4	6	274,74	407,82
MG16/16	45	63	188	4	6	398,67	530,97
MG16/17	50	75	200	4	7	501,35	633,31

Tolleranza effettiva sul diametro: ±0,05 - *Real tolerance on diameter ±0,05*

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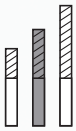
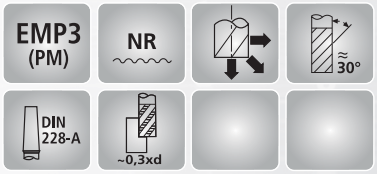
FRESE PER SGROSSATURA • SERIE LUNGA

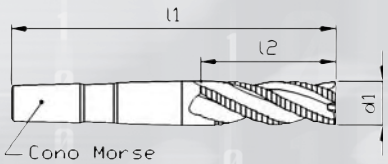
SERIE MG

MG17

Denti elicoidali con rompitruciolo spogliato completamente rettificato - Due denti frontali taglienti fino al centro - Codolo conico Morse con foro filettato
ROUGHING END MILLS - Helical teeth with form relieved entirely ground chip-breaker - Two end teeth cutting up to the centre - Morse taper shank
FRAISES FRONTALES À CYLINDRES À DEGROSSIR - Denture hélicoïdale avec brise-copeaux - Deux dents bout coupantes jusq'au centre - Queue au cône Morse à trou fileté
SCHAFTFRÄSER - Schrägschneiden mit voll eingeschliffenem Spannbrecher - Zwei Schneiden mit Zentrumschnitt Morsekegelschaft und Anzugsgewinde
FRESAS CILINDRICAS FRONTALES PARA DESBASTE - Labios helicoidal con arranca de viruta - Dos labios que cortan hasta el centro - Mango conico Morse taladro roscado
FRESAS CILINDRICAS FRONTAIS PARA DESBASTE - Quatro navalhas longas quebra apara com corte ao centro - Encabadouro cone Morse con taladro roscado







NORM.

UNI 8250-8251
DIN 845B
ISO 1641/II

INDEX

CODE	d1 mm js14	l2 mm	l1 mm	CM-MK	Z	EMP3 €
MG17/01	16	63	148	2	4	100,77
MG17/02	18	63	148	2	4	102,50
MG17/03	20	75	177	3	4	144,12
MG17/04	22	75	177	3	4	149,53
MG17/05	24	90	192	3	5	182,72
MG17/06	25	90	192	3	5	188,79
MG17/07	26	90	192	3	5	165,24
MG17/08	28	90	192	3	5	213,83
MG17/09	30	90	192	3	5	226,71
MG17/10	32	106	231	4	5	288,74
MG17/11	34	106	231	4	5	317,04
MG17/12	35	106	231	4	6	332,25
MG17/13	36	106	231	4	6	344,92
MG17/14	38	125	250	4	6	415,85
MG17/15	40	125	250	4	6	454,96
MG17/16	45	125	250	4	6	555,65
MG17/17	50	150	275	4	7	746,77

Tolleranza effettiva sul diametro: ±0,05 - *Real tolerance on diameter ±0,05*

FRESE PER SGROSSATURA • SERIE CORTA

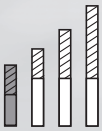
MG18

Denti elicoidali con rompitruciolo spogliato completamenterettificato - Un dente frontale tagliente fino al centro - Attacco Weldon
ROUGHING END MILLS - Helical teeth with form relieved entirely ground chip-breaker - One end tooth cutting up to the centre - Weldon shank
FRAISES FRONTALES À CYLINDRES À DEGROSSIR - Denture hélicoïdale avec brise-copeaux - Une dent bout coupante jusq'au centre - Queue cylindrique Weldon
LANGLOCHFRÄSER - Schrägschneiden mit voll eingeschliffenem Spannbrecher - Eine Schneide mit Zentrumschnitt Weldon Spannfläche
FRESAS CILINDRICAS FRONTALES PARA DESBASTE - Labios helicoidal con arranca de viruta - Un labio que corta hasta el centro - Mango Weldon
FRESAS CILINDRICAS FRONTAIS PARA DESBASTE - Três navalhas curtas quebra apara com corte ao centro - Encabadouro Weldon

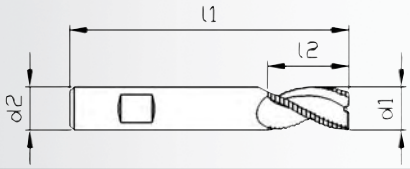
SERIE MG

NORM.

UNI
DIN
ISO 1641/I



EMP3 (PM) | NR | ≈30° | DIN 1835 B | ~0,3xd



CODE	d1 mm js14	l2 mm	l1 mm	d2 mm h6	Z	EMP3 €	SUPREME €
MG18/01	6	8	52	6	3	24,95	31,38
MG18/02	8	11	61	10	3	36,63	46,70
MG18/03	10	13	63	10	3	36,63	46,70
MG18/04	12	13	73	12	3	40,70	52,37
MG18/05	14	16	73	12	3	44,01	55,80
MG18/06	15	19	79	16	3	50,39	65,53
MG18/07	16	19	79	16	3	50,39	65,53
MG18/08	18	19	79	16	3	53,41	73,64
MG18/09	20	22	88	20	3	66,28	86,28
MG18/10	22	22	88	20	3	69,74	93,75
MG18/11	25	26	102	25	3	98,51	125,96

Tolleranza effettiva sul diametro: ±0,05 - *Real tolerance on diameter ±0,05*

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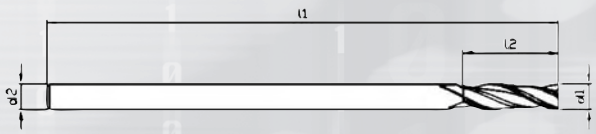
FRESE PER MACCHINE A COPIARE • SERIE EXTRA-LUNGA

SERIE MG

MG19

Un dente frontale tagliente fino al centro - Codolo cilindrico
COPY MILLING CUTTERS - One end tooth cutting up to the centre - Straight shank
FRAISES POUR MACHINES À COPIER - Une dent bout coupante jusq'au centre - Queue cylindrique
NACHFORMFRÄSER - Eine Schneide mit Zentrumschnitt - Zylinderschaft
FRESAS EN COPIADO - Un labio que corta hasta el centro - Mango cilindrico
FRESAS DE COPIA EXTRA LONGAS - Um naval com corte ao centro - Encabadouro cilindrico

EMP3 (PM) | N | ≈30° | DIN 1835 A



NORM. STANDARD Rime

INDEX

CODE	d1 mm e8	l2 mm	l1 mm	d2 mm h6	Z	EMP3 €
MG19/00	6	25	100	6	2	38,78
MG19/00/1	8	25	180	8	2	43,63
MG19/01	10	30	200	10	2	50,79
MG19/02	12	30	200	12	2	56,73
MG19/03	16	35	200	16	2	83,61
MG19/04	20	35	200	20	2	116,45
MG19/05	25	40	200	25	2	148,64

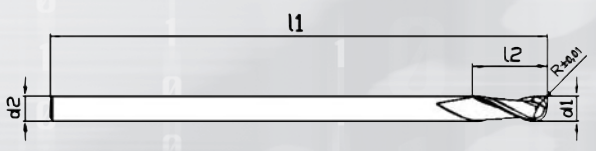
FRESE PER MACCHINE A COPIARE • SERIE EXTRA-LUNGA

SERIE MG

MG20

Due denti elicoidali testa semisferica - Codolo cilindrico
COPY MILLING CUTTERS - Two ball-nosed helical teeth) - Straight shank
FRAISES POUR MACHINES À COPIER - Deux dents hélicoïdales à bout hémisferïque - Queue cylindrique
NACHFORMFRÄSER - Zwei Halbrundkopf-Schrägzähne - Zylinderschaft
FRESAS EN COPIADO - Dos labios helicoidales cabeza hemisférica - Mango cilindrico
FRESAS DE COPIA EXTRA LONGAS - Duas navalhas helicoidais cabeça boleada - Encabadouro cilindrico

EMP3 (PM) | N | ≈30° | DIN 1835 A



NORM. STANDARD Rime

INDEX

CODE	d1 mm e8	l2 mm	l1 mm	d2 mm h6	Z	EMP3 €
MG20/00	6	25	180	6	2	47,81
MG20/00/1	8	25	180	8	2	52,55
MG20/01	10	30	200	10	2	60,92
MG20/02	12	30	200	12	2	68,08
MG20/03	16	35	200	16	2	100,36
MG20/04	20	35	200	20	2	139,79
MG20/05	25	40	200	25	2	178,45

FRESE PER MACCHINE A COPIARE A TESTA SEMISFERICA • SERIE EXTRA-LUNGA

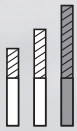
MG21

Due denti taglienti elicoidali - Conicità 4° laterali - Codolo cilindrico
BALL-NOSED COPY MILLING CUTTERS - Two helical cutting edges - 4° side taper - Straight shank
FRAISES POUR MACHINES À COPIER À BOUT HÉMISPHERIQUE - Deux tailles hélicoïdales - Cône 4° lateral - Queue cylindrique
HALBRUNDKOPF-NACHFORMFRÄSER - Zwei Schrägschneide - 4° Seitkegel - Zylinderschaft
FRESAS EN COPIADO, CABEZA SEMIESFÉRICA - Dos labios cortantes helicoidales - cónico 4° lateral - Mango cilindrico
FRESAS DE COPIA EXTRA LONGA BOLEADA - Duas navalhas cortantes - Cone 4° lateral - Encabadouro cilindrico

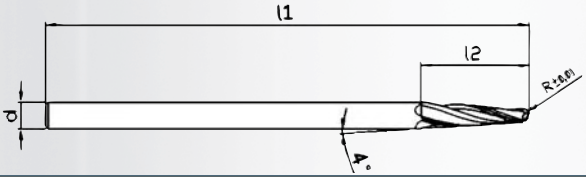
SERIE MG

NORM.

STANDARD Rime



EMP3 (PM) | N | DIN 1835 A



CODE	R mm	l2 mm	l1 mm	d2 mm h6	Z	EMP3 €
MG21/01	1.5	50	180	10	2	72,37
MG21/02	2	45	180	10	2	69,34
MG21/03	2.5	38	180	10	2	66,32
MG21/04	3	45	200	12	2	75,41
MG21/05	3.5	40	200	12	2	72,37
MG21/06	4	47	200	14	2	85,16
MG21/07	5	47	200	16	2	111,98
MG21/08	6	63	200	20	2	166,73
MG21/09	8	72	200	25	2	247,39

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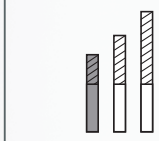
FRESE A TESTA SEMISFERICA PER SGROSSATURA E SEMIFINITURA • SERIE NORMALE

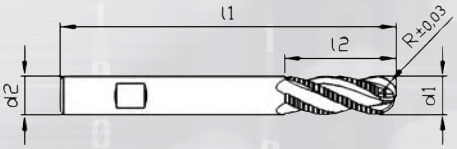
SERIE MG

MG22

Denti elicoidali con rompitruciolo spogliato completamente rettificato - Due denti frontali taglienti fino al centro - Attacco Weldon
ROUGHING AND SEMIFINISHING BALL-NOSED END MILLS - Helical teeth with form relieved entirely ground chip-breaker - Two end teeth cutting up to the centre - Weldon shank
FRAISES FRONTALES À CYLINDRES À BOUT HÉMISPHERIQUE À DEGROSSIR ET DEMIFINIR - Denture hélicoïdale avec brise-copeaux - Deux dents bout coupantes jusq'au centre - Queue cylindrique Weldon
HALBRUNDKOPFRÄSER - Schrägschneiden mit voll eingeschliffenem Spannbrecher - Zwei Schneiden mit Zentrumschnitt - Weldon Spannfläche
FRESAS CILINDRICAS FRONTALES CABEZA SEMIESFÉRICA PARA DESBASTE Y SEMI ACABAR - Labios helicoidal con arranca de viruta - Dos labios que cortan hasta el centro - Mango Weldon
FRESAS CILINDRICAS FRONTAIS BOLEADAS PARA DESBASTE E SEMI ACABAMENTO - Três navalhas normais quebra apara com corte ao centro - Encabadouro Weldon



EMP3 (PM) | NF | ≈ 30° | DIN 1835 B



NORM.

UNI
DIN
ISO 1641/II

INDEX

CODE	d1 mm js14	l2 mm	l1 mm	d2 mm h6	Z	EMP3 €
MG22/01	6	13	57	6	3	39,99
MG22/02	7	16	66	10	3	58,50
MG22/03	8	19	69	10	4	57,40
MG22/04	9	19	69	10	4	60,37
MG22/05	10	22	72	10	4	58,50
MG22/06	11	22	79	12	4	65,11
MG22/07	12	26	83	12	4	64,56
MG22/08	13	26	83	12	4	72,27
MG22/09	14	26	83	12	4	70,50
MG22/10	15	32	92	16	4	77,66
MG22/11	16	32	92	16	4	80,64
MG22/12	17	32	92	16	4	88,46
MG22/13	18	32	92	16	4	88,46
MG22/14	20	38	104	20	4	101,57
MG22/15	22	38	104	20	4	112,54
MG22/16	24	45	121	25	5	164,26
MG22/17	25	45	121	25	5	161,24
MG22/18	26	45	121	25	5	170,32
MG22/19	28	45	121	25	5	187,37
MG22/20	30	45	121	25	5	203,87
MG22/21	32	53	133	32	5	237,30
MG22/22	36	53	133	32	5	286,00
MG22/23	40	63	143	32	6	340,76

FRESE A TESTA SEMISFERICA PER SGROSSATURA E SEMIFINITURA • SERIE LUNGA

MG23

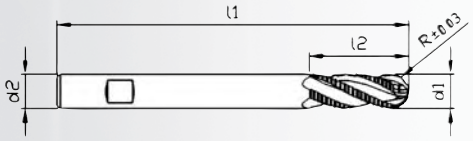
Denti elicoidali con rompitruciolo spogliato completamente rettificato - Due denti frontali taglienti fino al centro - Attacco Weldon
ROUGHING AND SEMIFINISHING BALL-NOSED END MILLS - Helical teeth with form relieved entirely ground chip-breaker - Two end teeth cutting up to the centre - Weldon shank
FRAISES FRONTALES À CYLINDRES À BOUT HÉMISPHERIQUE À DEGROSSIR ET DEMIFINIR - Denture hélicoïdale avec brise-copeaux - Deux dents bout coupantes jusq'au centre - Queue cylindrique Weldon
HALBRUNDKOPFFRÄSER - Schrägschneiden mit voll eingeschliffenem Spannbrecher - Zwei Schneiden mit Zentrumschnitt - Weldon Spannfläche
FRESAS CILINDRICAS FRONTALES CABEZA SEMIESFÉRICA PARA DESBASTE Y SEMI ACABAR - Labios helicoidal con arranca de viruta - Dos labios que cortan hasta el centro - Mango Weldon
FRESAS CILINDRICAS FRONTAIS BOLEADAS PARA DESBASTE E SEMI ACABAMENTO - Quatro navalhas longas quebra apara com corte ao centro - Encabadouro Weldon

SERIE MG

NORM.

UNI
DIN
ISO 1641/I

EMP3 (PM) | NF | ≈30° | DIN 1835 B



CODE	d1 mm js14	l2 mm	l1 mm	d2 mm h6	Z	EMP3 €
MG23/01	8	38	88	10	4	68,08
MG23/02	10	45	95	10	4	70,50
MG23/03	12	53	110	12	4	80,64
MG23/04	14	53	110	12	4	86,04
MG23/05	15	63	123	16	4	95,62
MG23/06	16	63	123	16	4	97,93
MG23/07	18	63	123	16	4	110,49
MG23/08	20	75	141	20	4	121,29
MG23/09	22	75	141	20	4	139,36
MG23/10	24	90	166	25	5	187,37
MG23/11	25	90	166	25	5	206,90
MG23/12	28	90	166	25	5	225,08
MG23/13	30	90	166	25	5	255,59
MG23/14	32	106	186	32	5	316,40

Tolleranza effettiva sul diametro: ±0,05 - *Real tolerance on diameter ±0,05*

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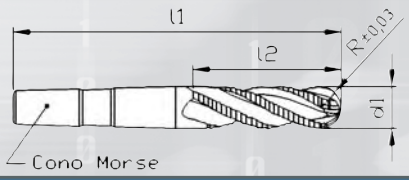
FRESE A TESTA SEMISFERICA PER SGROSSATURA E SEMIFINITURA • SERIE NORMALE

SERIE MG

MG24

Denti elicoidali con rompitruciolo spogliato completamente rettificato - Due denti frontali taglienti fino al centro - Codolo conico Morse con foro filettato
ROUGHING END MILLS - Helical teeth with form relieved entirely ground chip-breaker - Two end teeth cutting up to the centre - Morse taper hank
FRAISES FRONTALES À CYLINDRES À DEGROSSIR - Denture hélicoïdale avec brise-copeaux - Deux dents bout coupantes jusq'au centre - Queue au cône Morse à trou fileté
SCHAFTFRÄSER - Schrägschneiden mit voll eingeschliffenem Spannbrecher - Zwei Schneiden mit Zentrumschnitt Morsekegelschaft und Anzugsgewinde
FRESAS CILINDRICAS FRONTALES CABEZA SEMIESFÉRICA PARA DESBASTE Y SEMI ACABAR - Labios helicoidal con arranca de viruta - Dos labios que cortan hasta el centro - Mango cónico Morse taladro roscado
FRESAS CILINDRICAS FRONTALES BOLEADA PARA DESBASTE E SEMI ACABAMENTO - Navalhas helicoidal com quebra apara - Duas navalhas que cortan hasta el centro - Encabadouro conico - Morse taladro roscado

EMP3 (PM) | NF | ≈30° | DIN 228-A



NORM.

UNI
DIN
ISO 1641/II

INDEX

CODE	d1 mm js14	l2 mm	l1 mm	CM-MK	Z	EMP3 €
MG24/01	16	32	117	2	4	98,92
MG24/02	18	32	117	2	4	106,86
MG24/03	20	38	140	3	4	128,46
MG24/04	22	38	140	3	4	138,25
MG24/05	24	45	147	3	5	156,10
MG24/06	25	45	147	3	5	164,03
MG24/07	26	45	147	3	5	178,40
MG24/08	28	45	147	3	5	195,23
MG24/09	30	53	155	3	5	219,02
MG24/10	32	53	178	4	5	246,62
MG24/11	34	53	178	4	5	272,65
MG24/12	35	53	178	4	6	286,79
MG24/13	36	53	178	4	6	297,11
MG24/14	38	63	188	4	6	334,59
MG24/15	40	63	188	4	6	366,11
MG24/16	45	63	188	4	6	493,12
MG24/17	50	75	200	4	7	660,75

Tolleranza effettiva sul diametro: ±0,05 - *Real tolerance on diameter ±0,05*

FRESE A TESTA SEMISFERICA PER SGROSSATURA E SEMIFINITURA • SERIE LUNGA

MG25

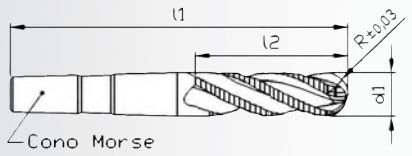
Denti elicoidali con rompitruciolo spogliato completamente rettificato - Due denti frontali taglienti fino al centro - Codolo conico Morse con foro filettato
ROUGHING END MILLS - Helical teeth with form relieved entirely ground chip-breaker - Two end teeth cutting up to the centre - Morse taper shank
FRAISES FRONTALES À CYLINDRES À DEGROSSIR - Denture hélicoïdale avec brise-copeaux - Deux dents bout coupantes jusq'au centre - Queue au cône Morse à trou fileté
SCHAFTFRÄSER - Schrägschneiden mit voll eingeschliffenem Spannbrecher - Zwei Schneiden mit Zentrumschnitt Morsekegelschaft und Anzugsgewinde
FRESAS CILINDRICAS FRONTALES CABEZA SEMIESFÉRICA PARA DESBASTE Y SEMI ACABAR - Labios helicoidal con arranca de viruta - Dos labios que cortan hasta el centro - Mango conico Morse taladro roscado
FRESAS CILINDRICAS FRONTALES BOLEADA PARA DESBASTE E SEMI ACABAMENTO - Navalhas helicoidal com quebra apara - Duas navalhas que cortan hasta el centro - Encabadouro conico - Morse taladro roscado

SERIE MG

NORM.

UNI
DIN
ISO 1641/II

EMP3 (PM) | NF | ≈30° | DIN 228-A



CODE	d1 mm js14	l2 mm	l1 mm	CM-MK	Z	EMP3 €
MG25/01	16	63	148	2	4	124,71
MG25/02	18	63	148	2	4	129,66
MG25/03	20	75	177	3	4	170,20
MG25/04	22	75	177	3	4	176,93
MG25/05	24	90	192	3	5	216,24
MG25/06	25	90	192	3	5	223,62
MG25/07	26	90	192	3	5	241,57
MG25/08	28	90	192	3	5	262,21
MG25/09	30	90	192	3	5	281,62
MG25/10	32	106	231	4	5	347,38
MG25/11	34	106	231	4	5	379,80
MG25/12	35	106	231	4	6	402,24
MG25/13	36	106	231	4	6	418,39
MG25/14	38	125	250	4	6	491,88
MG25/15	40	125	250	4	6	537,67
MG25/16	45	125	250	4	6	642,68
MG25/18	50	150	275	4	7	919,25

Tolleranza effettiva sul diametro: ±0,05 - *Real tolerance on diameter ±0,05*

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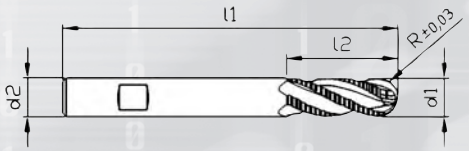
FRESE A TESTA SEMISFERICA PER SGROSSATURA • SERIE NORMALE

SERIE MG

MG26

Denti elicoidali con rompitruciolo spogliato completamente rettificato - Due denti frontali taglienti fino al centro - Attacco Weldon
ROUGHING BALL-NOSED END MILLS - Helical teeth with form relieved entirely ground chip-breaker - Two end teeth cutting up to the centre - Weldon shank
FRAISES FRONTALES À CYLINDRES À BOUT HÉMISPHERIQUE À DEGROSSIR - Denture hélicoïdale avec brise-copeaux - Deux dents bout coupantes jusq'au centre - Queue cylindrique Weldon
HALBRUNDKOPFFRÄSER - Schrägschneiden mit voll eingeschliffenem Spannbrecher - Zwei Schneiden mit Zentrumschnitt - Weldon Spannfläche
FRESAS CILINDRICAS FRONTALES CABEZA SEMIESFÉRICA PARA DESBASTE - Labios helicoidal con arranca de viruta - Dos labios que cortan hasta el centro - Mango Weldon
FRESAS CILINDRICAS FRONTALES BOLEADA PARA DESBASTE - Navalhas helicoidal com quebra apara - Duas navalhas que cortan hasta el centro - Encabadouro Weldon

EMP3 (PM) | NR | ≈30° | DIN 1835 B



NORM.
UNI
DIN
ISO 1641/I

INDEX

CODE	d1 mm js14	l2 mm	l1 mm	d2 mm h6	Z	EMP3 €
MG26/01	6	13	57	6	3	39,99
MG26/02	7	16	66	10	3	58,50
MG26/03	8	19	69	10	4	57,40
MG26/04	9	19	69	10	4	60,37
MG26/05	10	22	72	10	4	61,74
MG26/06	11	22	79	12	4	65,11
MG26/07	12	26	83	12	4	64,56
MG26/08	13	26	83	12	4	72,27
MG26/09	14	26	83	12	4	70,50
MG26/10	15	32	92	16	4	77,66
MG26/11	16	32	92	16	4	80,64
MG26/12	17	32	92	16	4	88,46
MG26/13	18	32	92	16	4	97,38
MG26/14	20	38	104	20	4	101,57
MG26/15	22	38	104	20	4	112,54
MG26/16	24	45	121	25	5	164,26
MG26/17	25	45	121	25	5	161,24
MG26/18	26	45	121	25	5	158,20
MG26/19	28	45	121	25	5	187,37
MG26/20	30	45	121	25	5	203,87
MG26/21	32	53	133	32	5	237,30
MG26/22	36	53	133	32	5	286,00
MG26/23	40	63	143	32	6	340,76

Tolleranza effettiva sul diametro: ±0,05 - *Real tolerance on diameter ±0,05*

FRESE A TESTA SEMISFERICA PER SGROSSATURA • SERIE LUNGA

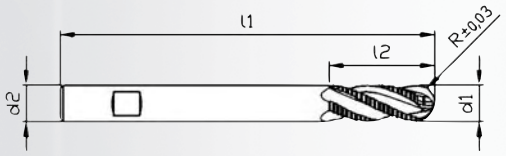
MG27

Denti elicoidali con rompitruciolo spogliato completamente rettificato - Due denti frontali taglienti fino al centro - Attacco Weldon
ROUGHING BALL-NOSED END MILLS - Helical teeth with form relieved entirely ground chip-breaker - Two end teeth cutting up to the centre - Weldon shank
FRAISES FRONTALES À CYLINDRES À BOUT HÉMISPHERIQUE À DEGROSSIR - Denture hélicoïdale avec brise-copeaux - Deux dents bout coupantes jusq'au centre - Queue cylindrique Weldon
HALBRUNDKOPFFRÄSER - Schrägschneiden mit voll eingeschliffenem Spannbrecher - Zwei Schneiden mit Zentrumschnitt - Weldon-Spannfläche
FRESAS CILINDRICAS FRONTALES CABEZA SEMIESFÉRICA PARA DESBASTE - Labios helicoidal con arranca de viruta - Dos labios que cortan hasta el centro - Mango Weldon
FRESAS CILINDRICAS FRONTALES BOLEADA PARA DESBASTE - Navalhas helicoidal com quebra apara - Duas navalhas que cortan hasta el centro - Encabadouro Weldon

SERIE MG

NORM.
UNI
DIN
ISO 1641/I

EMP3 (PM) | NR | ≈30° | DIN 1835 B



CODE	d1 mm js14	l2 mm	l1 mm	d2 mm h6	Z	EMP3 €
MG27/01	8	38	88	10	4	68,08
MG27/02	10	45	95	10	4	70,50
MG27/03	12	53	110	12	4	80,64
MG27/04	14	53	110	12	4	86,04
MG27/05	15	63	123	16	4	95,62
MG27/06	16	63	123	16	4	97,93
MG27/07	18	63	123	16	4	110,49
MG27/08	20	75	141	20	4	121,29
MG27/09	22	75	141	20	4	139,36
MG27/10	24	90	166	25	5	187,37
MG27/11	25	90	166	25	5	206,90
MG27/12	28	90	166	25	5	225,08
MG27/13	30	90	166	25	5	255,59
MG27/14	32	106	186	32	5	316,40

Tolleranza effettiva sul diametro: ±0,05 - *Real tolerance on diameter ±0,05*

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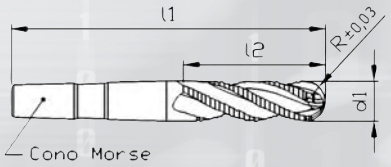
FRESE A TESTA SEMISFERICA PER SGROSSATURA • SERIE NORMALE

SERIE MG

MG28

Denti elicoidali con rompitruciolo spogliato completamente rettificato - Due denti frontali taglienti fino al centro - Codolo conico Morse con foro filettato
ROUGHING END MILLS - Helical teeth with form relieved entirely ground chip-breaker - Two end teeth cutting up to the centre - Morse taper shank
FRAISES FRONTALES À CYLINDRES À DEGROSSIR - Denture hélicoïdale avec brise-copeaux - Deux dents bout coupantes jusq'au centre - Queue au cône Morse à trou fileté
SCHAFTFRÄSER - Schrägschneiden mit voll eingeschliffenem Spannbrecher - Zwei Schneiden mit Zentrumschnitt - Morsekegelschaft und Anzugsgewinde
FRESAS CILINDRICAS FRONTALES CABEZA SEMIESFÉRICA PARA DESBASTE - Labios helicoidal con arranca de viruta - Dos labios que cortan hasta el centro - Mango cónico Morse con taladro roscado
FRESAS CILINDRICAS FRONTALES BOLEADA PARA DESBASTE - Navalhas helicoidal com quebra apara - Duas navalhas que cortan hasta el centro - Encabadouro conico - Morse taladro roscado

EMP3 (PM) | NR | ≈30° | DIN 228-A



NORM.

UNI 8250-8251
DIN 845B
ISO 1641/II

INDEX

CODE	d1 mm js14	l2 mm	l1 mm	CM-MK	Z	EMP3 €
MG28/01	16	32	117	2	4	98,92
MG28/02	18	32	117	2	4	106,86
MG28/03	20	38	140	3	4	128,46
MG28/04	22	38	140	3	4	138,25
MG28/05	24	45	147	3	5	156,10
MG28/06	25	45	147	3	5	164,03
MG28/07	26	45	147	3	5	178,40
MG28/08	28	45	147	3	5	197,14
MG28/09	30	53	155	3	5	219,02
MG28/10	32	53	178	4	5	246,62
MG28/11	34	53	178	4	5	272,65
MG28/12	35	53	178	4	6	286,79
MG28/13	36	53	178	4	6	297,11
MG28/14	38	63	188	4	6	334,59
MG28/15	40	63	188	4	6	366,11
MG28/16	45	63	188	4	6	493,12
MG28/17	50	75	200	4	7	660,75

Tolleranza effettiva sul diametro: ±0,05 - *Real tolerance on diameter ±0,05*

FRESE A TESTA SEMISFERICA PER SGROSSATURA • SERIE LUNGA

MG29

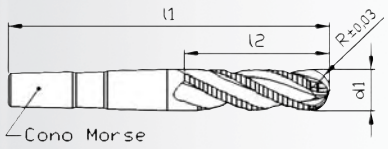
Denti elicoidali con rompitruciolo spogliato completamente rettificato - Due denti frontali taglienti fino al centro - Codolo conico Morse con foro filettato
ROUGHING END MILLS - Helical teeth with form relieved entirely ground chip-breaker - Two end teeth cutting up to the centre - Morse taper shank
FRAISES FRONTALES À CYLINDRES À DEGROSSIR - Denture hélicoïdale avec brise-copeaux - Deux dents bout coupantes jusq'au centre - Queue au cône Morse à trou fileté
SCHAFTFRÄSER - Schrägschneiden mit voll eingeschliffenem Spannbrecher - Zwei Schneiden mit Zentrumschnitt - Morsekegelschaft und Anzugsgewinde
FRESAS CILINDRICAS FRONTALES CABEZA SEMIESFÉRICA PARA DESBASTE - Labios helicoidal con arranca de viruta - Dos labios que cortan hasta el centro - Mango conico Morse con taladro roscado
FRESAS CILINDRICAS FRONTALES BOLEADA PARA DESBASTE - Navalhas helicoidal com quebra apara - duas navalhas que cortan hasta el centro - Encabadouro cónico - Morse taladro roscado

SERIE MG

NORM.

UNI 8250-8251
DIN 845B
ISO 1641/II

EMP3 (PM) | NR | ≈30° | DIN 228-A



CODE	d1 mm js14	l2 mm	l1 mm	CM-MK	Z	EMP3 €
MG29/01	16	63	148	2	4	138,25
MG29/02	18	63	148	2	4	129,66
MG29/03	20	75	177	3	4	170,20
MG29/04	22	75	177	3	4	176,93
MG29/05	24	90	192	3	5	216,24
MG29/06	25	90	192	3	5	223,62
MG29/07	26	90	192	3	5	241,57
MG29/08	28	90	192	3	5	262,22
MG29/09	30	90	192	3	5	281,62
MG29/10	32	106	231	4	5	347,38
MG29/11	34	106	231	4	5	379,92
MG29/12	35	106	231	4	6	402,24
MG29/13	36	106	231	4	6	418,39
MG29/14	38	125	250	4	6	491,88
MG29/15	40	125	250	4	6	537,67
MG29/16	45	125	250	4	6	530,48
MG29/17	50	150	275	4	7	918,59

Tolleranza effettiva sul diametro: ±0,05 - *Real tolerance on diameter ±0,05*

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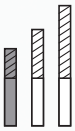
FRESE CILINDRICHE FRONTALI • SERIE NORMALE

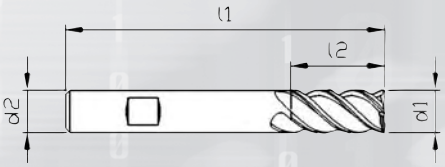
SERIE MG

MG30

Due denti frontali taglienti fino al centro - Elica destra 45° - Divisione irregolare - Attacco Weldon
END MILLS - Two end teeth cutting up to the centre - 45° right hand spiral - Irregular division - Weldon shank
FRAISES À CYLINDRES - Deux dents bout coupantes jusq'au centre - Hélice 45° à droite - Division irreguliere - Queue cylindrique Weldon
SCHAFTFRÄSER MIT SPANNBRECHER - Zwei Schneiden mit Zentrumschnitt - 45° rechts spiralgenutet - Unregelmä ßigeteilung - Weldon Spannfläche
FRESAS CILINDRICAS FRONTALES, DOS LABIOS QUE CORTAN HASTA EL CENTRO - Hélice derecha 45° - División irregular - Mango Weldon
FRESAS CILINDRICAS FRONTALES - Duas navalhas que cortan hasta el centro - Hélice dereita 45° - Divisão irregular - Encabadouro Weldon



EMP3 (PM) | N | 45° | DIN 1835 B



NORM.

UNI 8248
DIN 844B
ISO 1641/I

INDEX

CODE	d1 mm js14	l2 mm	l1 mm	d2 mm h6	Z	EMP3 €	SUPREME €
MG30/01	6	13	57	6	3	16,44	23,03
MG30/02	8	19	69	10	4	24,01	34,49
MG30/03	10	22	72	10	4	25,84	36,22
MG30/04	12	26	83	12	4	31,07	43,40
MG30/05	14	26	83	12	4	34,59	48,04
MG30/06	16	32	92	16	4	41,86	61,58
MG30/07	18	32	92	16	4	47,81	68,53
MG30/08	20	38	104	20	4	57,40	77,99
MG30/09	22	38	104	20	4	76,20	104,53
MG30/10	25	45	121	25	4	103,51	136,75
MG30/11	28	45	121	25	6	129,16	165,39
MG30/12	30	45	121	25	6	136,78	172,90
MG30/13	32	53	133	32	6	158,36	197,19

Tolleranza effettiva sul diametro: +0 +0,03 - *Real tolerance on diameter +0 +0,03*

FRESE A TAGLIO INTERROTTO • SERIE NORMALE

MG31

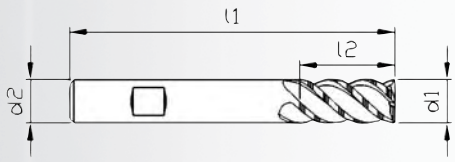
Due denti frontali taglienti fino al centro - Elica destra 45° - Divisione irregolare - Attacco Weldon
END MILLS WITH CHIP-BREKER - Two end teeth cutting up to the centre - 45° right hand spiral - Irregular division - Weldon shank
FRAISES CYLINDRES AVEC BRISE-COPEAUX - Deux dents bout coupantes jusq'au centre - Hélice 45° à droite - Division irreguliere - Queue cylindrique Weldon
SCHAFTFRÄSER MIT SPANNBRECHER - Zwei Schneiden mit Zentrumschnitt - 45° rechts spiralgenutet - Unregelmäßige - Teilung - Weldon Spannfläche
FRESAS CILINDRICAS FRONTALES CON ARRANCA DE VIRUTA - Dos labios que cortan hasta el centro- Hélice derecha 45° - División irregular - Mango Weldon
FRESAS CILINDRICAS FRONTALES COM QUEBRA APARA - Duas navalhas que cortan hasta el centro - Hélice dereita 45° - Divisão irregular - Encabadouro Weldon

SERIE MG

NORM.

UNI 8248
DIN 844B
ISO 1641/I

EMP3 (PM) | NFR | DIN 1835 B | 45°



CODE	d1 mm js14	l2 mm	l1 mm	d2 mm h6	Z	EMP3 €	SUPREME €
MG31/01	6	13	57	6	3	26,38	29,31
MG31/02	8	19	69	10	4	35,14	45,41
MG31/03	10	22	72	10	4	35,14	45,41
MG31/04	12	26	83	12	4	38,78	51,00
MG31/05	14	26	83	12	4	49,02	62,13
MG31/06	16	32	92	16	4	55,52	75,03
MG31/07	18	32	92	16	4	59,71	80,31
MG31/08	20	38	104	20	4	68,74	89,12
MG31/09	22	38	104	20	4	92,88	120,98
MG31/10	25	45	121	25	4	120,40	153,44
MG31/11	28	45	121	25	6	152,62	188,39
MG31/12	30	45	121	25	6	162,23	197,78
MG31/13	32	53	133	32	6	181,23	219,59

Tolleranza effettiva sul diametro: +0 +0,03 - *Real tolerance on diameter +0 +0,03*

INDEX

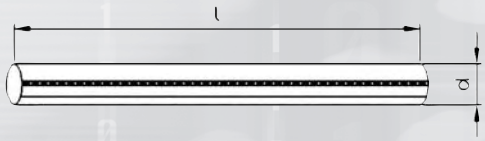
BARRETTE TRATTATE PER TORNITURA - BARENATURA - FRESATURA

SERIE MG

MG32

Barrette tonde
TOOL BITS TREATED TO BE TURNED, BORED, MILLED - Round
BARREAUX TRAITÉS POUR TOURNAGE, ALÉSAGE, FRAISAGE - Forme ronde
DREHLINGE ZUM DREHEN, AUSBOHREN, FRÄSEN BEHANDELT - Rund
BARRETAS TRACTADAS PARA TORNITURA - Barenatura - Fresadora
BURIS TRACTADAS PARA TORNITURA - Barenatura - Fresadora

EMP3 (PM)



NORM.
UNI 3868
DIN
ISO

INDEX

CODE	d h8	l j16	EMP3 €
MG32/01	4	100	8,15
MG32/02	6	100	10,03
MG32/03	6	200	18,18
MG32/04	8	100	14,44
MG32/05	8	200	24,46
MG32/06	10	100	16,85
MG32/07	10	200	30,07
MG32/08	12	100	21,26
MG32/09	12	200	36,90
MG32/10	14	200	53,21
MG32/11	16	200	68,85
MG32/12	18	200	71,93
MG32/13	20	200	93,86

BARRETTE TRATTATE PER TORNITURA - BARENATURA - FRESATURA

MG33

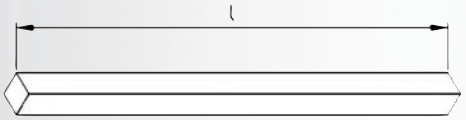
Barrette quadrate
TOOL BITS TREATED TO BE TURNED, BORED, MILLED - Square
BARREAUX TRAITÉS POUR TOURNAGE, ALÉSAGE, FRAISAGE - Forme carrée
DREHLINGE ZUM DREHEN, AUSBOHREN, FRÄSEN BEHANDELT - Vierkant
CUADRADAS
QUADRADAS

SERIE MG

NORM.

UNI 3868
DIN
ISO

EMP6 (PM)



CODE	s x s h8	l j16	EMP6 €
MG33/01	8 x 8	100	21,36
MG33/02	8 x 8	200	41,30
MG33/03	10 x 10	100	26,63
MG33/04	10 x 10	200	54,67
MG33/05	12 x 12	100	45,99
MG33/06	12 x 12	200	66,63
MG33/07	14 x 14	200	87,27
MG33/08	16 x 16	200	93,25
MG33/09	18 x 18	200	79,30
MG33/10	20 x 20	200	153,90

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FINO AD ESAURIMENTO - *TO BE SOLD OUT*

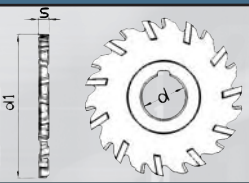
FRESE A DISCO A TRE TAGLI

SERIE MG

MG34

Denti alternati
SIDE AND FACE MILLING CUTTERS - Staggered teeth
FRAISSES EN DISQUE À TROIS TAILLES - Denture alternée
SCHEIBENFRÄSER - Kreuzverzahnt
FRESAS A DISCO DE TRES LABIOS - Labios alternados
FRESAS A DISCO DE TRÉS NAVALHAS - Dente alternado

EMP3 (PM) | N



NORM.
UNI 3905A
DIN 885A
ISO 2587

INDEX

CODE	d1 mm js6	s mm k11	d mm h7	Z	EMP3 €
MG34/01		4		18	80,88
MG34/02		5		18	80,88
MG34/03		6		18	84,77
MG34/04	50	7	16	18	89,23
MG34/05		8		18	89,23
MG34/06		9		16	101,91
MG34/07		10		16	105,10
MG34/08		4		22	89,23
MG34/09		5		20	95,63
MG34/10		6		20	95,63
MG34/11		7		20	101,91
MG34/12		8		20	105,10
MG34/13	63	9	22	18	114,70
MG34/14		10		18	117,90
MG34/15		12		18	124,29
MG34/16		14		18	127,50
MG34/17		16		16	140,18
MG34/18		18		16	149,78
MG34/19		20		14	159,25
MG34/20		4		24	114,70
MG34/21		5		22	121,09
MG34/22		6		22	127,50
MG34/23		7		20	133,78
MG34/24		8		20	133,78
MG34/25		9		20	140,18
MG34/26	80	10	22-27	18	146,57
MG34/27		12		18	159,25
MG34/28		14		18	168,85
MG34/29		16		16	181,64
MG34/30		18		16	194,33
MG34/31		20		16	203,92
MG34/32		4		26	152,97
MG34/33		5		26	159,25
MG34/34		6		24	165,65
MG34/35		7		24	172,05
MG34/36		8		22	181,64
MG34/37		9		22	194,33
MG34/38		10		22	203,92
MG34/39	100	12	27-32	20	216,61
MG34/40		14		18	235,79
MG34/41		15		18	242,19
MG34/42		16		18	248,47
MG34/43		18		18	271,44
MG34/44		20		18	286,74
MG34/45		22		18	331,30
MG34/46		25		18	407,84

FRESE A DISCO A TRE TAGLI

MG34

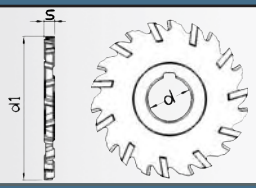
Denti alternati
SIDE AND FACE MILLING CUTTERS - Staggered teeth
FRAISSES EN DISQUE À TROIS TAILLES - Denture alternée
SCHEIBENFRÄSER - Kreuzverzahnt
FRESAS A DISCO DE TRES LABIOS - Labios alternados
FRESAS A DISCO DE TRÉS NAVALHAS - Dente alternado

SERIE MG

NORM.

UNI 8250
DIN 844
ISO 1641/I

EMP3 (PM) | N



CODE	d1 mm js6	s mm k11	d mm h7	Z	EMP3 €
MG34/47		5		30	235,79
MG34/48		6		30	235,79
MG34/49		7		28	239,00
MG34/50		8		28	248,47
MG34/51		9		24	261,27
MG34/52		10		24	270,75
MG34/53	125	12	32	22	293,15
MG34/54		14		22	318,62
MG34/55		16		20	350,49
MG34/56		18		20	395,04
MG34/57		20		20	439,71
MG34/58		22		20	519,34
MG34/59		25		18	595,76
MG34/60		6		30	350,49
MG34/61		8		28	372,77
MG34/62		10		26	401,44
MG34/63		12		26	433,31
MG34/64		14		24	471,58
MG34/65	160	16	32	24	509,75
MG34/66		18		22	554,41
MG34/67		20		22	595,76
MG34/68		22		22	681,78
MG34/69		25		22	834,76
MG34/70		8		34	611,72
MG34/71		10		32	611,72
MG34/72		12		30	647,74
MG34/73		14		30	716,47
MG34/74	200	16	40	28	778,53
MG34/75		18		28	840,70
MG34/76		20		26	909,43
MG34/77		22		26	1007,61
MG34/78		25		24	1148,25

Ulteriori diametri si forniscono a richiesta - *Other diameters upon requirements*
Tolleranza effettiva sul diametro: +0 +0,03 - *Real tolerance on diameter +0 +0,03*

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Catalogo HSS-E e PM INDEX

Catalogo HSS-E e PM

SERIE MR

FRESE SERIE “MIRAGE”

SERIES “MIRAGE” END MILLS

Rime
UTENSILERIA

SERIE MR

FRESE SERIE “MIRAGE”
SERIES “MIRAGE” END MILLS

FRESE A DUE DENTI PER CAVE • SERIE NORMALE

MR1

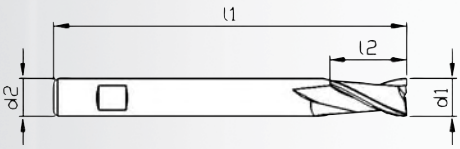
Un dente frontale tagliente fino al centro - Attacco Weldon
TWO-FLUTED SLOT CUTTERS - One end tooth cutting up to the centre - Weldon shank
FRAISES À RAINURES DEUX DENTS - Une dent bout coupante jusq'au centre - Queue cylindrique Weldon
LANGLOCHFRÄSER, ZWEISCHNEIDER - Eine Schneide mit Zentrumschnitt - Weldon Spannfläche
FRESAS CILINDRICAS FRONTALES DE DOS LABIOS - Un labio que corta hasta el centro - Mango Weldon
FRESAS CILINDRICAS FRONTALES DE DUAS NAVALHAS - Um naval que corta hasta el centro - Encabadouro Weldon

SERIE MR

NORM.

UNI 8258
DIN 327D
ISO 1641/I

EMP6 (PM) | N | ≈30° | DIN 1835 B



CODE	d1 mm e8	l2 mm	l1 mm	d2 mm h6	Z	EMP6 €	SUPREME €
MR1/02	4	7	51	6	2	15,14	21,85
MR1/03	5	8	52	6	2	15,14	21,85
MR1/04	6	8	52	6	2	15,14	21,85
MR1/05	7	10	60	10	2	20,33	31,04
MR1/06	8	11	61	10	2	20,33	31,04
MR1/07	9	11	61	10	2	23,25	33,95
MR1/08	10	13	63	10	2	23,25	33,95
MR1/09	11	13	70	12	2	27,25	38,50
MR1/10	12	16	73	12	2	27,25	38,50
MR1/11	13	16	73	12	2	31,35	43,68
MR1/12	14	16	73	12	2	33,63	46,07
MR1/13	15	19	79	16	2	37,73	53,52
MR1/14	16	19	79	16	2	39,46	55,26
MR1/15	17	19	79	16	2	43,57	64,45
MR1/16	18	19	79	16	2	48,23	68,98
MR1/17	19	22	88	20	2	62,71	83,37
MR1/18	20	22	88	20	2	59,25	79,90
MR1/19	22	22	88	20	2	77,55	102,57

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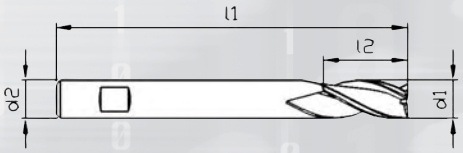
FRESE A TRE DENTI • SERIE NORMALE

SERIE MR

MR2

Un dente frontale tagliente fino al centro - Attacco Weldon
THREE-FLUTED END MILLS - One end tooth cutting up to the centre - Weldon shank
FRAISES CYLINDRES TROIS DENTS - Une dent bout coupante jusq'au centre - Queue cylindrique Weldon
SCHAFTFRÄSER, DREISCHNEIDER - Eine Schneide mit Zentrumschnitt - Weldon Spannfläche
FRESAS CILINDRICAS FRONTALES DE TRES LABIOS - Un labio que corta hasta el centro - Mango Weldon
FRESAS CILINDRICAS FRONTALES DE TRÉS NAVALHAS - Um naval que corta hasta el centro - Encabadouro Weldon

EMP6 (PM) | N | ≈30° | DIN 1835 B



NORM.

UNI 8248
DIN 844B
ISO 1641/I

INDEX

CODE	d1 mm js14	l2 mm	l1 mm	d2 mm h6	Z	EMP6 €	SUPREME €
MR2/03	4	11	55	6	3	16,88	23,57
MR2/04	5	13	57	6	3	16,22	23,03
MR2/05	6	13	57	6	3	15,68	22,39
MR2/06	7	16	66	10	3	26,17	36,76
MR2/07	8	19	69	10	3	24,44	35,03
MR2/08	10	22	72	10	3	25,52	36,22
MR2/09	12	26	83	12	3	32,55	44,87
MR2/10	14	26	83	12	3	36,00	49,52
MR2/11	16	32	92	16	3	45,84	65,53
MR2/12	18	32	92	16	3	52,22	73,10
MR2/13	20	38	104	20	3	62,71	83,37
MR2/14	22	38	104	20	3	116,00	143,54

Tolleranza effettiva sul diametro: +0 -0,03 - *Real tolerance on diameter +0 -0,03*

FRESE A TAGLIO INTERROTTO • SERIE NORMALE

MR3

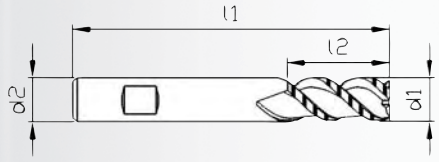
Un dente frontale tagliente fino al centro - Elica destra 45° - Divisione irregolare - Attacco Weldon
END MILLS WITH CHIP-BREKER - One end tooth cutting up to the centre - 45° right hand spiral - Irregular division -Weldon shank
FRAISES CYLINDRES AVEC BRISE-COPEAUX - Une dent bout coupante jusq'au centre - Hélice 45° à droite - Division irreguliere - Queue cylindrique Weldon
SCHATFRÄSER, LANGLOCH - Eine Schneide mit Zentrumschnitt - 45° rechts spiralgenutet - Unregelmäßige- Teilung - Weldon Spannfläche
FRESAS CILINDRICAS FRONTALES CORTE INTERRUMPO - Un labio que corta hasta el centro, Hélice derecha 45° - División irregular - Mango Weldon
FRESAS CILINDRICAS FRONTAIS CORTE INTERRUMPIDO - Um naval que corta ao centro - Hélice dereita 45° - Divisão irregular - Encabadouro Weldon

SERIE MR

NORM.

STANDARD Rime

EMP6 (PM) | NFR | 45° | DIN 1835 B | 0,05-0,15 45°



CODE	d1 mm js14	l2 mm	l1 mm	d2 mm h6	Z	EMP6 €	SUPREME €
MR3/03	6	13	57	6	3	23,79	30,50
MR3/04	8	20	69	10	3	32,55	43,68
MR3/05	10	22	72	10	3	34,28	45,41
MR3/06	12	26	83	12	3	41,20	53,52
MR3/07	14	26	83	12	3	49,42	62,71
MR3/08	16	36	90	16	3	59,79	79,36
MR3/09	18	40	100	16	4	69,63	90,28
MR3/10	20	45	110	20	4	76,66	104,66
MR3/12	25	50	125	25	4	139,03	171,74
MR3/14	30	63	140	25	4	183,78	270,40
MR3/15	32	63	140	32	4	213,97	303,17

Tolleranza effettiva sul diametro: +0 +0,03 - *Real tolerance on diameter +0 +0,03*

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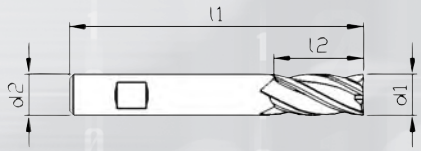
FRESE PER FINITURA • SERIE NORMALE

SERIE MR

MR4

Due denti frontali taglienti fino al centro - Attacco Weldon
END MILLS - Two end teeth cutting up to the centre - Weldon shank
FRAISES CYLINDRES - Deux dents bout coupantes jusq'au centre - Queue cylindrique Weldon
SCHAFTFRÄSER - Zwei Schneiden mit Zentrumschnitt - Weldon Spannfläche
FRESAS CILINDRICAS FRONTALES - Dos labios que cortan hasta el centro - Mango Weldon
FRESAS CILINDRICAS FRONTALES - Duas navalhas que corta ao centro - Encabadouro Weldon

EMP6 (PM) | N | ≈30° | DIN 1835 B



NORM.

UNI 8248
DIN 844B
ISO 1641/I

INDEX

CODE	d1 mm js14	l2 mm	l1 mm	d2 mm h6	Z	EMP6 €	SUPREME €
MR4/01	6	13	57	6	4	14,21	20,66
MR4/02	7	16	66	10	4	23,68	33,95
MR4/03	8	19	69	10	4	21,26	31,68
MR4/04	9	19	69	10	4	25,46	29,96
MR4/05	10	22	72	10	4	23,68	33,95
MR4/06	12	26	83	12	4	30,18	41,41
MR4/07	14	26	83	12	4	34,90	47,15
MR4/07/1	15	32	92	16	4	42,20	60,44
MR4/08	16	32	92	16	4	40,95	59,25
MR4/09	18	32	92	16	4	50,61	69,63
MR4/10	20	38	104	20	4	57,22	75,91
MR4/11	22	38	104	20	4	88,31	117,33
MR4/12	25	45	121	25	5	123,38	157,42
MR4/13	28	45	121	25	5	146,00	182,34
MR4/14	30	45	121	25	6	159,60	195,69
MR4/15	32	53	133	32	6	190,21	229,05

Tolleranza effettiva sul diametro: +0 +0,03 - *Real tolerance on diameter +0 +0,03*

FRESE CILINDRICHE FRONTALI • SERIE NORMALE

MR8

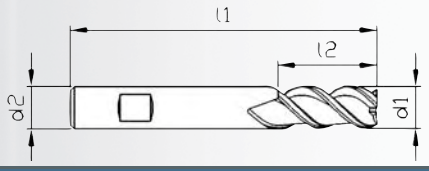
Un dente frontale tagliente fino al centro - Elica destra 45° - Divisione irregolare - Attacco Weldon
FLUTED END MILLS - One end tooth cutting up to the centre - 45° right hand spiral - Irregular division -Weldon shank
FRAISES CYLINDRES - Une dent bout coupante jusq'au centre - Hélice 45° à droite - Division irreguliere - Queue cylindrique Weldon
SCHAFTFRÄSER - Eine Schneide mit Zentrumschnitt - 45° rechts spiralgenutet - Unregelmäßige - Teilung - Weldon Spannfläche
FRESAS CILINDRICAS FRONTALES - Un labio que corta hasta el centro - Hélice derecha 45° - División irregular - Mango Weldon
FRESAS CILINDRICAS FRONTALES - Um naval que corta ao centro - Hélice dereita - Divisão irregular - Encabadouro Weldon

SERIE MR

NORM.

STANDARD Rime

EMP6 (PM) | N | 45° | DIN 1835 B | 0,05-0,15 45°



INDEX

CODE	d1 mm js14	l2 mm	l1 mm	d2 mm h6	Z	EMP6 €	SUPREME €
MR8/01	6	13	57	6	3	18,06	24,76
MR8/02	8	20	69	10	3	26,17	36,76
MR8/03	10	22	72	10	3	27,89	38,50
MR8/04	12	26	83	12	3	34,82	47,15
MR8/04/1	14	26	83	12	3	40,66	54,06
MR8/05	16	36	90	16	3	47,57	67,26
MR8/05/1	18	40	100	16	4	58,61	79,36
MR8/06	20	45	110	20	4	66,82	94,29
MR8/07	25	50	125	25	4	120,07	152,90
MR8/08	30	63	140	25	4	153,71	240,56
MR8/09	32	63	140	32	4	190,41	279,94

Tolleranza effettiva sul diametro: +0 +0,03 - *Real tolerance on diameter +0 +0,03*

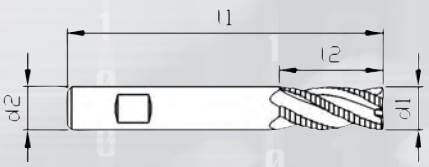
FRESE PER SGROSSATURA • SERIE NORMALE

SERIE MR

MR12

Denti elicoidali con rompitruciolo spogliato completamente rettificato - Due denti frontali taglienti fino al centro - Attacco Weldon
ROUGHING END MILLS - Helical teeth with form relieved entirely ground chip-breaker - Two end teeth cutting up to the centre - Weldon shank
FRAISES FRONTALES ÉBAUCHE - Denture hélicoïdale avec brise-copeaux profil rond - Deux dents bout coupantes jusq'au centre - Queue cylindrique Weldon
SCHAFTFRÄSER - Schrägschneiden mit volleingeschliffenem Spannbrecher - Zwei Schneiden mit Zentrumschnitt - Weldon-Spannfläche
FRESAS CILINDRICAS FRONTALES PARA DESBASTE - Labios helicoidal con arranca de viruta completamente rectificado - Dos labios que cortan hasta el centro - Mango Weldon
FRESAS CILINDRICAS FRONTALES PARA DESBASTE - Navalhas helicoidal com quebra apara - Duas navalhas corta ao centro - Encabadouro Weldon

EMP6 (PM) | NR | ≈30° | DIN 1835 B



NORM.

UNI 8248
DIN 844B
ISO 1641/I

INDEX

CODE	d1 mm js14	l2 mm	l1 mm	d2 mm h6	Z	EMP6 €	SUPREME €
MR12/01	6	13	57	6	3	28,81	34,67
MR12/03	8	19	69	10	4	45,41	54,74
MR12/05	10	22	72	10	4	46,05	55,37
MR12/07	12	26	83	12	4	49,49	61,58
MR12/09	14	26	83	12	4	56,34	69,63
MR12/10	15	32	92	16	4	67,36	86,82
MR12/11	16	32	92	16	4	67,36	86,82
MR12/13	18	32	92	16	4	70,28	90,82
MR12/14	20	38	104	20	4	88,23	108,66
MR12/15	22	38	104	20	4	98,71	125,96
MR12/17	25	45	121	25	5	142,84	174,84
MR12/19	28	45	121	25	5	166,29	201,74
MR12/20	30	45	121	25	5	177,72	213,07
MR12/21	32	53	133	32	5	212,18	250,09

Tolleranza effettiva sul diametro: +0 +0,03 - *Real tolerance on diameter +0 +0,03*

FRESE FRONTALI

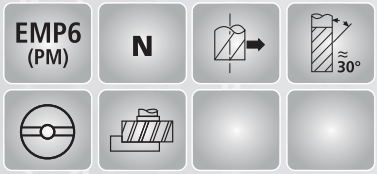
MR13

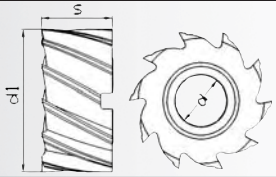
Denti elicoidali rinforzati - Cava trascinamento trasversale
SCHELL END MILLS - Reinforced helical teeth
FRAISES CYLINDRES FRONTALES - Denture hélicoïdale renforcée
WALZENSTIRNFRÄSER - Verstärkte Spiralzähne
FRESAS CILINDRICAS FRONTALS - Labios helicoidales reforzado
FRESAS CILINDRICAS FRONTALES - Navalhas helicoidales reforçado

SERIE MR

NORM.

UNI 3903
DIN 841-1880
ISO 2586

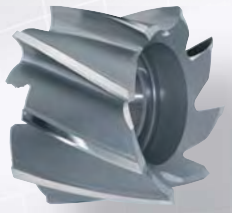




CODE	d1 mm js16	s mm k16	d mm H7	Z	EMP6 €
MR13/01	40	32	16	8	135,09
MR13/02	50	36	22	8	185,02
MR13/03	63	40	27	8	271,32
MR13/04	80	45	27	10	424,40
MR13/05	100	50	32	12	715,49
MR13/06	125	56	40	14	1084,14

Tolleranza effettiva sul diametro: ±0,05 - *Real tolerance on diameter ±0,05*

INDEX



FRESE FRONTALI

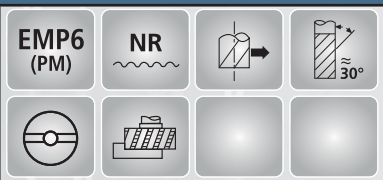
MR14

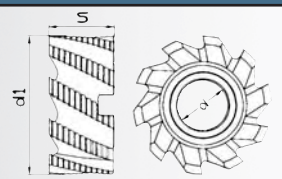
Denti elicoidali con rompitruciolo spogliato completamente rettificato per sgrossatura - Cava trascinamento trasversale
SCHELL END MILLS - Helical teeth with form relieved entirely ground chip-breaker, roughing type
RAISES CYLINDRES FRONTALES - Exécution pour ébauche avec brise-copeaux profil rond
WALZENSTIRNFRÄSER - Schrägschnei- den mit voll eingeschliffenem Spannbrecher, Ausführung zum Schruppen
FRESAS CILINDRICAS FRONTALS - Labios helicoidales con arranca de viruta completamente rectificado para desbaste
FRESAS CILINDRICAS FRONTALES - Navalhas helicoidales com quebra apara para desbaste

SERIE MR

NORM.

UNI 3903
DIN 841-1880
ISO 2586





CODE	d1 mm js16	s mm k16	d mm H7	Z	EMP6 €
MR14/01	40	32	16	6	182,20
MR14/02	50	36	22	6	253,92
MR14/03	63	40	27	8	379,28
MR14/04	80	45	27	8	630,23
MR14/05	100	50	32	10	949,26
MR14/06	125	56	40	12	1344,07

Tolleranza effettiva sul diametro: ±0,05 - *Real tolerance on diameter ±0,05*

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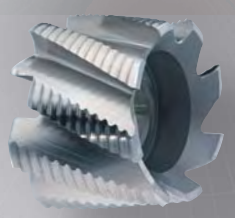

SIMBOLI - SYMBOLS

Materiale di Base
Raw material

HSS — Acciaio Super Rapido (AISI M2)
High Speed Steel (AISI M2)

HSS-E Co5 — Acciaio Super Rapido 5% Co (AISI M35)
High Speed Steel 5% Co (AISI M35)

HSS-E Co8 — Acciaio Super Rapido 8% Co (AISI M42)
High Speed Steel 8% Co (AISI M42)

EMP3 (PM) — Acciaio Super Rapido 8.5% Co (EMP3 PM)
High Speed Steel 8.5% Co (EMP3 PM)

EMP6 (PM) — Acciaio Super Rapido (EMP6 PM)
High Speed Steel (EMP6 PM)

Forme costruttive / Geometrie
Geometry and types of cutting edges

N — Tagliente a finire.
Finishing cutting edge profile.

W — Geometria per lavorazione di materiali particolarmente teneri e malleabili.
Geometry for light alloys.

NR — Tagliente a sgrossare.
Roughing cutting edge profile.

NF — Tagliente a semifinire.
Semifinishing cutting edge.

NFR — Tagliente interrotto a sgrossare o semifinire.
Interrupted cutting edge for roughing or semifinishing.

NFL — Tagliente interrotto a sgrossare o semifinire per lavorazione di alluminio e leghe leggere.
Interrupted cutting edge for roughing or semifinishing alluminium and light alloy.

NRAL — Tagliente per sgrossatura alluminio.
Roughing cutting edge profile for aluminium.

Direzione di lavorazione
Machining direction


Adatto per lavorazione radiale, diagonale ed assiale.
Suitable for radial, diagonal and axial machining.


Adatto per lavorazione radiale e diagonale.
Suitable for radial and diagonal machining.


Adatto solo per lavorazione assiale.
Suitable only for axial machining.


Adatto solo per lavorazione radiale.
Suitable only for radial machining.

Angolo dell'elica
Spiral angle

Angolo dell'elica: 30° dx
Spiral angle: 30° dx

Angolo dell'elica: 35° dx
Spiral angle: 35° dx

Angolo dell'elica: 40° dx
Spiral angle: 40° dx

Angolo dell'elica: 45° dx
Spiral angle: 45° dx

Angolo dell'elica: 10° sx
Spiral angle: 10° sx

Angolo dell'elica: 45° sx
Spiral angle: 45° sx

Tipo di attacco
Type of connection

Foro cilindrico con cava di trascinamento trasversale DIN 138.
Cylindrical hole and frontal tenon drive DIN 138.

Codolo conico Morse con dente DIN 228B.
Morse taper shank DIN 228B.

Codolo conico Morse con foro filettato DIN 228A.
Morse taper shank DIN 228A.

Foro cilindrico con linguetta DIN 138.
Cylindrical Hole with parallel key DIN 138.

Codolo cilindrico filettato DIN 1835D.
Threaded shank DIN 1835D.

Codolo cilindrico DIN 1835A.
Straight shank DIN 1835A.

Codolo cilindrico con attacco Weldon DIN 1835B.
Weldon shank DIN 1835B.

Forma dei taglienti
Type of cutters

Utensile cilindrico.
Square end cutters.

Utensile a testa sferica.
Ball-nose cutters.

Forma dello spigolo tagliente
Type of cutters

Utensile con smusso a 45° sullo spigolo tagliente (la dimensione dello smusso varia a seconda del diametro).
Chanfered end cutters 45°.

Utilizzo / Applicazione
Application