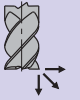
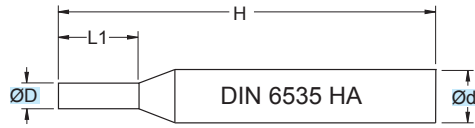


SM1200

$\varnothing D = 1 - 6$



90°

ALU
 $\leq 5\% \text{ Si}$



Fresa in M.D.I. Micrograno
Gambo cilindrico HA - Serie media sec. DIN 6527

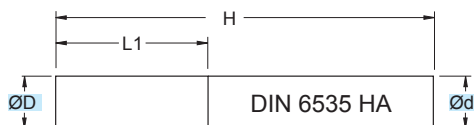
Micrograin HM minimills
 Cylindrical Shank HA - DIN 6527 medium Type

TOLLERANZE	D	d
TOLLERANCE RANGE	h10	h6

ART.	(mm)				
	$\varnothing D$	$\varnothing d$	L1	H	z
SM1200.010.N00	1,0	6,0	5	40	1
SM1200.015.N00	1,5	6,0	7	40	1
SM1200.020.N00	2,0	6,0	7	40	1
SM1200.025.N00	2,5	6,0	8	40	1
SM1200.030.N00	3,0	6,0	8	40	1
SM1200.035.N00	3,5	6,0	10	40	1
SM1200.040.N00	4,0	6,0	10	40	1
SM1200.045.N00	4,5	6,0	12	50	1
SM1200.050.N00	5,0	6,0	12	50	1
SM1200.055.N00	5,5	6,0	14	50	1
SM1200.060.N00	6,0	6,0	14	50	1

SM1300

ØD = 2 - 16



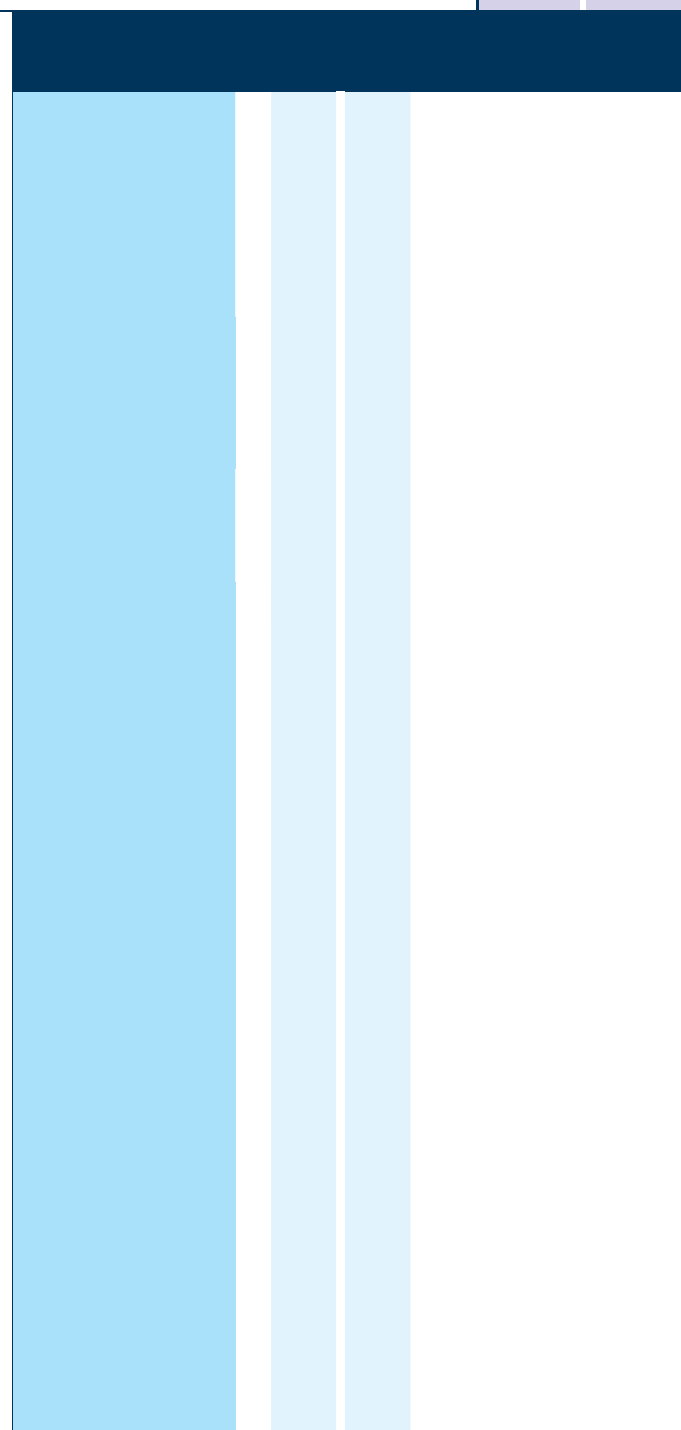
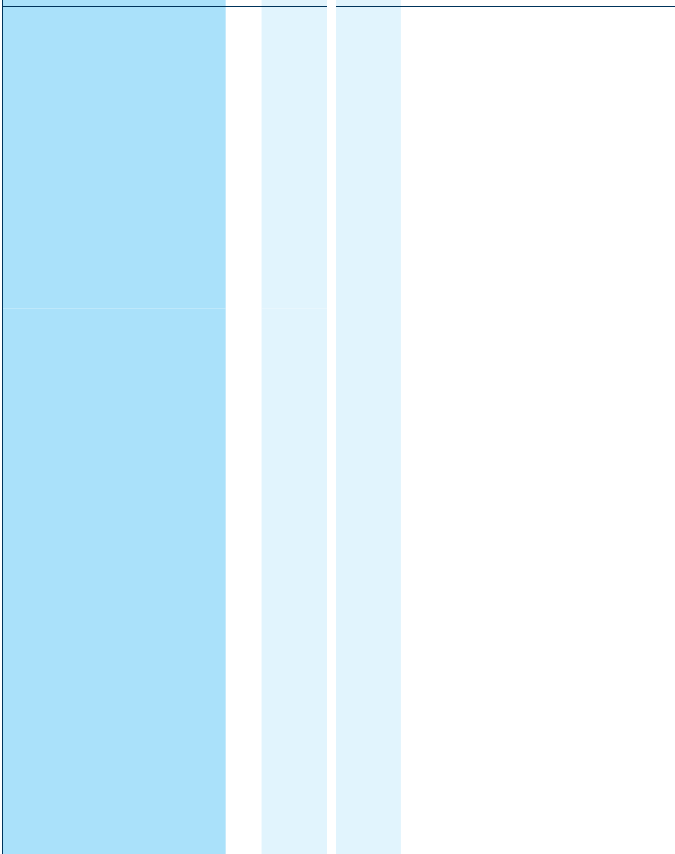
90°	ALU ≤5% Si

Fresa in M.D.I. Micrograno
Gambo cilindrico HA - Serie lunga sec. DIN 6527

Micrograin HM minimills
 Cylindrical Shank HA - DIN 6527 long Type

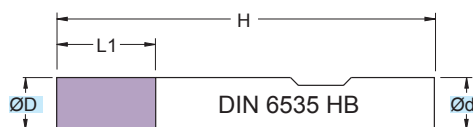
TOLLERANZE	D	d
TOLLERANCE RANGE	h10	h6

ART.	(mm)				
	ØD	Ød	L1	H	z
SM1300.020.N00	2,0	3,0	10	38	1
SM1300.025.N00	2,5	3,0	12	38	1
SM1300.030.N00	3,0	3,0	12	38	1
SM1300.040.N00	4,0	4,0	15	40	1
SM1300.050.N00	5,0	5,0	16	50	1
SM1300.061.N00	6,0	6,0	18	50	1
SM1300.062.N00	6,0	6,0	25	60	1
SM1300.081.N00	8,0	8,0	22	63	1
SM1300.082.N00	8,0	8,0	40	80	1
SM1300.100.N00	10,0	10,0	30	72	1
SM1300.120.N00	12,0	12,0	30	73	1
SM1300.140.N00	14,0	14,0	30	75	1
SM1300.160.N00	16,0	16,0	35	82	1



SMW2317

$\varnothing D = 3 - 20$



RIVESTIM.
COATED
SILVER



90°

ALU
>5% Si



Fresa in M.D.I. Micrograno
 Gambo sec. DIN 6535 HB - Serie corta sec. DIN 6527

Micrograin HM mills
 DIN 6535 HB Shank - DIN 6527 short Type

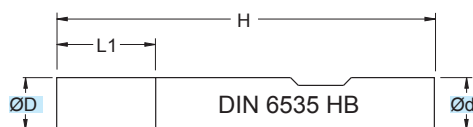
TOLLERANZE	D	d
TOLLERANCE RANGE	h10	h6

ART.	(mm)				
	$\varnothing D$	$\varnothing d$	L1	H	z
SMW2317.030.N00	3	6	8	57	2
SMW2317.040.N00	4	6	11	57	2
SMW2317.050.N00	5	6	13	57	2
SMW2317.060.N00	6	6	13	57	2
SMW2317.080.N00	8	8	19	63	2
SMW2317.100.N00	10	10	22	72	2
SMW2317.120.N00	12	12	26	83	2
SMW2317.140.N00	14	14	26	83	2
SMW2317.160.N00	16	16	32	92	2
SMW2317.180.N00	18	18	32	92	2
SMW2317.200.N00	20	20	38	104	2

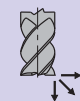
SMW2317..N01

ØD = 3 - 20

NEW



90°



ALU
 ≤5% Si



Fresa in M.D.I. Micrograno
 Gambo sec. DIN 6535 HB - Serie corta sec. DIN 6527

Micrograin HM mills
 DIN 6535 HB Shank - DIN 6527 short Type





TOLLERANZE	D	d
TOLLERANCE RANGE	h10	h6

ART.	(mm)				
	ØD	Ød	L1	H	z
SMW2317.030.N01	3	6	8	57	2
SMW2317.040.N01	4	6	11	57	2
SMW2317.050.N01	5	6	13	57	2
SMW2317.060.N01	6	6	13	57	2
SMW2317.080.N01	8	8	19	63	2
SMW2317.100.N01	10	10	22	72	2
SMW2317.120.N01	12	12	26	83	2
SMW2317.140.N01	14	14	26	83	2
SMW2317.160.N01	16	16	32	92	2
SMW2317.180.N01	18	18	32	92	2
SMW2317.200.N01	20	20	38	104	2

SM2315

ØD = 6 - 20

NEW

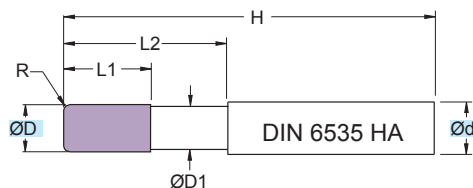
 **DISPONIBILE DA SETTEMBRE 2014**
 **AVAILABLE FROM SEPTEMBER 2014**
 **AB SEPTEMBER 2014 LIEFERBAR**
 **DISPONIBILE A PARTIR DE SEPTEMBRE 2014**

RIVESTIM.
COATED
GOLD



R

ALU
>5% Si



Fresa in M.D.I. Micrograno
Gambo cilindrico HA - Serie media/lunga sec. DIN 6527

Micrograin HM mills
 Cylindrical Shank HA - DIN 6527 medium/long Type

TOLLERANZE	D	d
TOLLERANCE RANGE	h10	h6

ART.	(mm)							
	ØD	Ød	ØD1	L1	L2	H	R	z
SM2315.060.R100.N00	6	6	5,5	7	33	70	1,0	2
SM2315.080.R100.N00	8	8	7,4	9	43	80	1,0	2
SM2315.100.R150.N00	10	10	9,2	11	43	90	1,5	2
SM2315.120.R150.N00	12	12	11,0	13	51	100	1,5	2
SM2315.160.R200.N00	16	16	15,0	17	66	120	2,0	2
SM2315.200.R200.N00	20	20	19,0	21	79	130	2,0	2

Applicazione - Application	MATERIALI - MATERIALS Pag. H 73													(mm) ØD	(m/min) Vc	(mm) fz	(mm) ap	(mm) ae				
	P				M	K			N			S							H	G		
	ACCIAIO NON LEGATO NOT ALLOY STEEL	ACCIAIO POCO LEGATO LOW ALLOY STEEL	ACCIAIO ALTO LEGATO ALLOY STEEL	INOX MARTENSITICO STAINLESS STEEL MART.	INOX AUST. DUPLEX STAINLESS STEEL AUST.	GHISA GRIGIA GREY CAST IRON	GHISA SFEROIDALE SPHEROIDAL GRAPHITE	GHISA MALLEABILE MALLEABLE CAST IRON	ALLUMINIO E SUE LEGHE ALUMINIUM	RAMME E SUE LEGHE COPPER	NON METALLICI PLASTICS	LEGHE RESIST. CALORE HIGH TEMP. ALLOY	TITANIO E SUE LEGHE TITANIUM						ACCIAIO TEMPRATO HARDENED STEEL	GRAFITE GRAPHITE		
																	6	400	0,095	3,6	1,5	
																		8	400	0,130	4,8	2,0
																		10	400	0,160	6,0	2,5
																		12	400	0,175	7,2	3,0
																		16	400	0,195	9,6	4,0
																		20	400	0,230	12,0	5,0

- APPLICAZIONE CONSIGLIATA-RECOMMENDED APPLICATION
EMPFOHLENER EINSATZ - APPLICATION CONSEILLÉE
- APPLICAZIONE POSSIBILE - POSSIBLE APPLICATION
MÖGLICHE ANWENDUNG - APPLICATION POSSIBLE

Vc = m/min VELOCITÀ DI TAGLIO - CUTTING SPEED
 n = giri/min (min⁻¹) NUMERO DI GIRI - NUMBER OF REVOLUTIONS
 fz = mm AVANZAMENTO AL DENTE - TOOTH FEED
 fn = mm AVANZAMENTO AL GIRO - FEED / REVOLUTION
 Vf = mm/min VELOCITÀ DI AVANZAMENTO - FEED SPEED

$$n = \frac{Vc \cdot 1000}{\text{ØD} \cdot 3,14} = \text{giri/min (min}^{-1}\text{)}$$





$$fn = fz \cdot z = \text{mm}$$

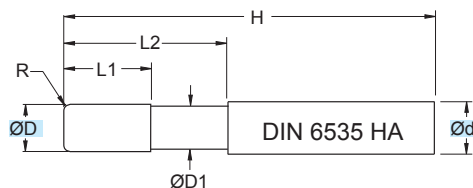
$$Vf = fz \cdot z \cdot n = \text{mm/min}$$

SM2315..N01

ØD = 6 - 20

NEW

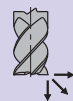


 **DISPONIBILE DA SETTEMBRE 2014**
 **AVAILABLE FROM SEPTEMBER 2014**
 **AB SEPTEMBER 2014 LIEFERBAR**
 **DISPONIBILE A PARTIR DE SEPTEMBRE 2014**



Fresa in M.D.I. Micrograno
Gambo cilindrico HA - Serie media/lunga sec. DIN 6527

Micrograin HM mills
 Cylindrical Shank HA - DIN 6527 medium/long Type

TOLLERANZE	D	d
TOLLERANCE RANGE	h10	h6

	
R	ALU ≤5% Si
	

ART.	(mm)							
	ØD	Ød	ØD1	L1	L2	H	R	z
SM2315.060.R100.N01	6	6	5,5	7	33	70	1,0	2
SM2315.080.R100.N01	8	8	7,4	9	43	80	1,0	2
SM2315.100.R150.N01	10	10	9,2	11	43	90	1,5	2
SM2315.120.R150.N01	12	12	11,0	13	51	100	1,5	2
SM2315.160.R200.N01	16	16	15,0	17	66	120	2,0	2
SM2315.200.R200.N01	20	20	19,0	21	79	130	2,0	2

Applicazione - Application	MATERIALI - MATERIALS Pag. H 73													ØD	(m/min) Vc	(mm) fz	(mm) ap	(mm) ae			
	P			M	K			N			S		H						G		
	ACCIAIO NON LEGATO NOT ALLOY STEEL	ACCIAIO POCO LEGATO LOW ALLOY STEEL	ACCIAIO ALTO LEGATO ALLOY STEEL	INOX MARTENSITICO STAINLESS STEEL MART.	INOX AUST. DUPLEX STAINLESS STEEL AUST.	GHISA GRIGIA GREY CAST IRON	GHISA SFEROIDALE SPHEROIDAL GRAPHITE	GHISA MALLEABILE MALLEABLE CAST IRON	ALLUMINIO E SUE LEGHE ALUMINIUM	RAMME E SUE LEGHE COPPER	NON METALLICI PLASTICS	LEGHE RESIST. CALORE HIGH TEMP. ALLOY	TITANIO E SUE LEGHE TITANIUM						ACCIAIO TEMPRATO HARDENED STEEL	GRAFITE GRAPHITE	
																6	400	0,095	3,6	1,5	
																	8	400	0,130	4,8	2,0
																	10	400	0,160	6,0	2,5
																	12	400	0,175	7,2	3,0
																	16	400	0,195	9,6	4,0
																	20	400	0,230	12,0	5,0

- APPLICAZIONE CONSIGLIATA-RECOMMENDED APPLICATION
EMPFOHLENER EINSATZ - APPLICATION CONSEILLÉE
- APPLICAZIONE POSSIBILE - POSSIBLE APPLICATION
MÖGLICHE ANWENDUNG - APPLICATION POSSIBLE

Vc = m/min VELOCITÀ DI TAGLIO - CUTTING SPEED
 n = giri/min (min⁻¹) NUMERO DI GIRI - NUMBER OF REVOLUTIONS
 fz = mm AVANZAMENTO AL DENTE - TOOTH FEED
 fn = mm AVANZAMENTO AL GIRO - FEED / REVOLUTION
 Vf = mm/min VELOCITÀ DI AVANZAMENTO - FEED SPEED

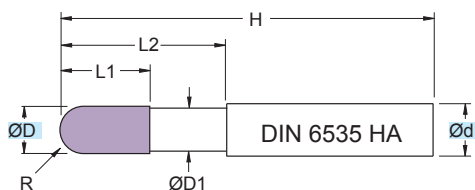
$$n = \frac{Vc \cdot 1000}{\text{ØD} \cdot 3,14} = \text{giri/min (min}^{-1}\text{)}$$

$$fn = fz \cdot z = \text{mm}$$

$$Vf = fz \cdot z \cdot n = \text{mm/min}$$

SM2417

ØD = 3 - 12



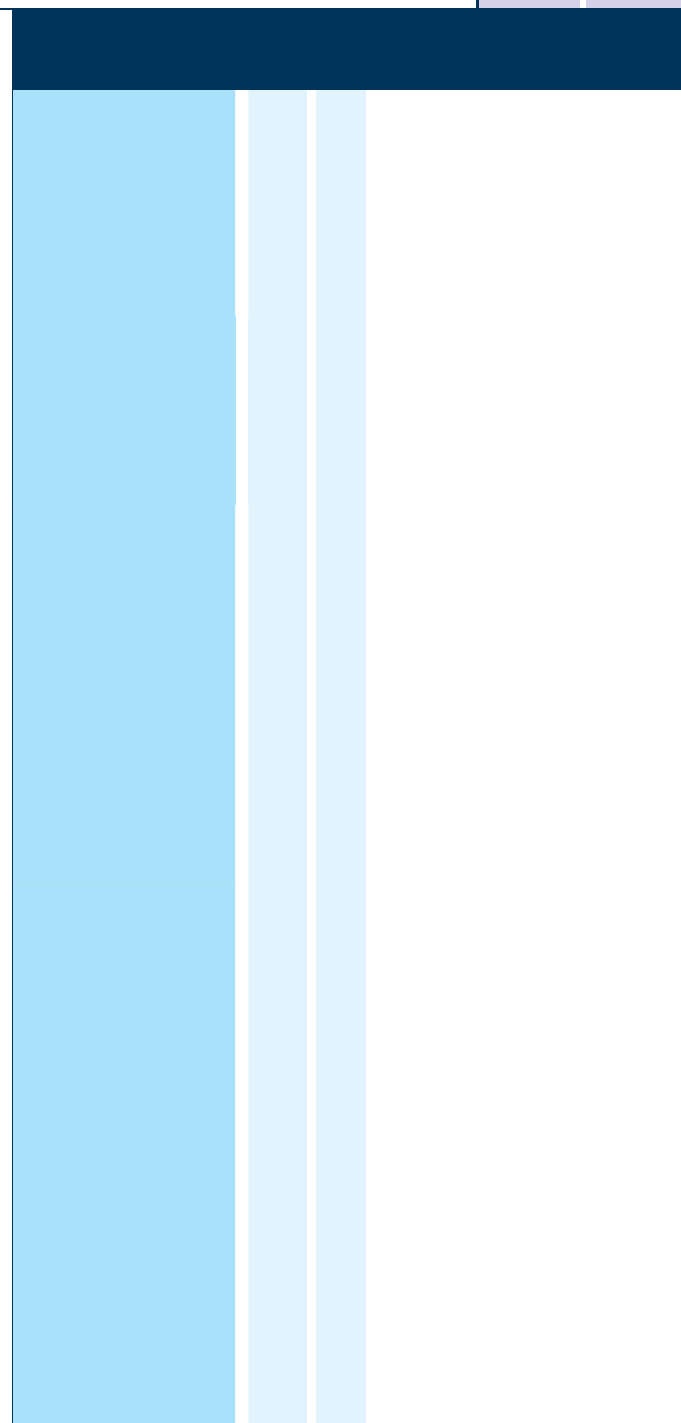
Fresa in M.D.I. Micrograno
Gambo cilindrico HA - Serie lunga sec. DIN 6527

Micrograin HM mills
 Cylindrical Shank HA - DIN 6527 long Type

TOLLERANZE	D	d
TOLLERANCE RANGE	h10	h6

RIVESTIM. COATED SILVER	
	ALU >5% Si

(mm)								
ART.	ØD	Ød	ØD1	L1	L2	H	R	z
SM2417.030.S150	3	6	2,8	6	25	70	1,5	2
SM2417.040.S200	4	6	3,7	8	25	70	2,0	2
SM2417.050.S250	5	6	4,6	10	25	70	2,5	2
SM2417.060.S300	6	6	5,5	12	35	80	3,0	2
SM2417.080.S400	8	8	7,4	16	35	80	4,0	2
SM2417.100.S500	10	10	9,2	20	45	90	5,0	2
SM2417.120.S600	12	12	11,0	24	50	100	6,0	2



Applicazione - Application	MATERIALI - MATERIALS Pag. H 73													ØD	(m/min) Vc	(mm) fz	(mm) ap	(mm) ae			
	P				M	K			N			S							H	G	
	ACCIAIO NON LEGATO NOT ALLOY STEEL	ACCIAIO POCO LEGATO LOW ALLOY STEEL	ACCIAIO ALTO LEGATO ALLOY STEEL	INOX MARTENSITICO STAINLESS STEEL, MART.	INOX AUST. DUPLEX STAINLESS STEEL AUST.	GHISA GRIGIA GREY CAST IRON	GHISA SFEROIDALE SPHEROIDAL GRAPHITE	GHISA MALLEABILE MALLEABLE CAST IRON	ALLUMINIO Si ≤ 12% ALUMINIUM 12 ≤ 12%	ALLUMINIO Si > 12% ALUMINIUM 12 > 12%	NON METALLICI PLASTICS	LEGHE RESIST. CALORE HIGH TEMP. ALLOY	TITANIO E SUE LEGHE TITANIUM						ACCIAIO TEMPRATO HARDENED STEEL	GRAFITE GRAPHITE	
									●							3	300	0,05	0,15	0,3	
									●								4	300	0,06	0,20	0,4
									●								5	300	0,07	0,25	0,5
									●								6	300	0,08	0,30	0,6
									●								8	300	0,09	0,40	0,8
									●								10	300	0,10	0,50	1,0
									●								12	300	0,12	0,60	1,2
										●							3	200	0,05	0,15	0,3
										●							4	200	0,06	0,20	0,4
										●							5	200	0,07	0,25	0,5
										●							6	200	0,08	0,30	0,6
									●							8	200	0,09	0,40	0,8	
									●							10	200	0,10	0,50	1,0	
									●							12	200	0,12	0,60	1,2	

● APPLICAZIONE CONSIGLIATA-RECOMMENDED APPLICATION
EMPFÖHLENER EINSATZ - APPLICATION CONSEILLÉE

○ APPLICAZIONE POSSIBILE - POSSIBLE APPLICATION
MÖGLICHE ANWENDUNG - APPLICATION POSSIBLE

- Vc = m/min VELOCITÀ DI TAGLIO - CUTTING SPEED
- n = giri/min (min⁻¹) NUMERO DI GIRI - NUMBER OF REVOLUTIONS
- fz = mm AVANZAMENTO AL DENTE -TOOTH FEED
- fn = mm AVANZAMENTO AL GIRO - FEED / REVOLUTION
- Vf = mm/min VELOCITÀ DI AVANZAMENTO - FEED SPEED

$$n = \frac{Vc \cdot 1000}{\text{ØD} \cdot 3,14} = \text{giri/min (min}^{-1}\text{)}$$

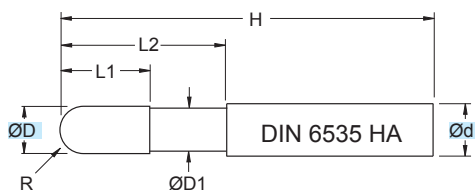
$$fn = fz \cdot z = \text{mm}$$

$$Vf = fz \cdot z \cdot n = \text{mm/min}$$

SM2417..01

ØD = 3 - 12

NEW



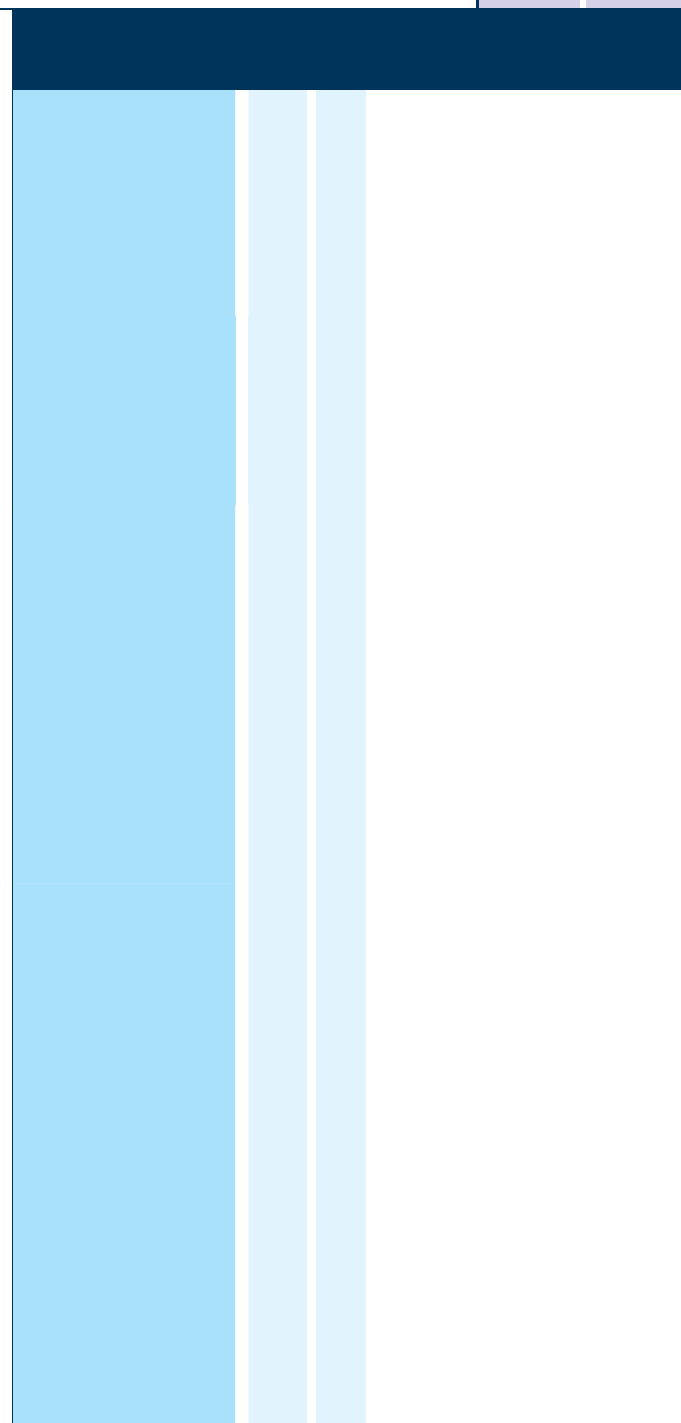
Fresa in M.D.I. Micrograno
 Gambo cilindrico HA - Serie lunga sec. DIN 6527

Micrograin HM mills
 Cylindrical Shank HA - DIN 6527 long Type

TOLLERANZE	D	d
TOLLERANCE RANGE	h10	h6

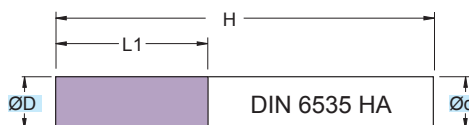
	ALU ≤5% Si

ART.	(mm)							
	ØD	Ød	ØD1	L1	L2	H	R	z
SM2417.030.S150.01	3	6	2,8	6	25	70	1,5	2
SM2417.040.S200.01	4	6	3,7	8	25	70	2,0	2
SM2417.050.S250.01	5	6	4,6	10	25	70	2,5	2
SM2417.060.S300.01	6	6	5,5	12	35	80	3,0	2
SM2417.080.S400.01	8	8	7,4	16	35	80	4,0	2
SM2417.100.S500.01	10	10	9,2	20	45	90	5,0	2
SM2417.120.S600.01	12	12	11,0	24	50	100	6,0	2



SM3417

ØD = 6 - 25



RIVESTIM. COATED SILVER	
90°	ALU >5% Si

Fresa in M.D.I. Micrograno
 Gambo cilindrico HA - Serie lunga sec. DIN 6527

Micrograin HM mills
 Cylindrical Shank HA - DIN 6527 long Type

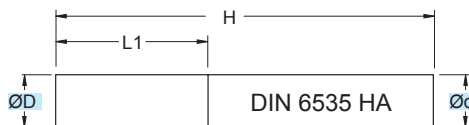
TOLLERANZE	D	d
TOLLERANCE RANGE	h10	h6

ART.	(mm)				
	ØD	Ød	L1	H	z
SM3417.060.N00	6	6	16	60	3
SM3417.080.N00	8	8	25	78	3
SM3417.100.N00	10	10	28	78	3
SM3417.120.N00	12	12	32	89	3
SM3417.140.N00	14	14	32	89	3
SM3417.160.N00	16	16	36	96	3
SM3417.200.N00	20	20	45	111	3
SM3417.250.N00	25	25	50	126	3

SM3417..N01

ØD = 6 - 25

NEW



90°	ALU ≤5% Si

Fresa in M.D.I. Micrograno
 Gambo cilindrico HA - Serie lunga sec. DIN 6527

Micrograin HM mills
 Cylindrical Shank HA - DIN 6527 long Type

TOLLERANZE	D	d
TOLLERANCE RANGE	h10	h6

ART.	(mm)				
	ØD	Ød	L1	H	z
SM3417.060.N01	6	6	16	60	3
SM3417.080.N01	8	8	25	78	3
SM3417.100.N01	10	10	28	78	3
SM3417.120.N01	12	12	32	89	3
SM3417.140.N01	14	14	32	89	3
SM3417.160.N01	16	16	36	96	3
SM3417.200.N01	20	20	45	111	3
SM3417.250.N01	25	25	50	126	3

Applicazione - Application	MATERIALI - MATERIALS Pag. H 73													ØD (mm)	Vc (m/min)	fz (mm)	ap (mm)	ae (mm)				
	P			M	K			N			S		H						G			
	ACCIAIO NON LEGATO NOT ALLOY STEEL	ACCIAIO POCO LEGATO LOW ALLOY STEEL	ACCIAIO ALTO LEGATO ALLOY STEEL	INOX MARTENSITICO STAINLESS STEEL MART.	INOX AUST. DUPLEX STAINLESS STEEL AUST.	GHISA GRIGIA GREY CAST IRON	GHISA SFEROIDALE SPHEROIDAL GRAPHITE	GHISA MALLEABILE MALLEABLE CAST IRON	ALLUMINIO Si ≤ 12% ALUMINIUM 12 ≤ 12%	ALLUMINIO Si > 12% ALUMINIUM 12 > 12%	NON METALLICI PLASTICS	LEGHE RESIST. CALORE HIGH TEMP. ALLOY	TITANIO E SUE LEGHE TITANIUM						ACCIAIO TEMPRATO HARDENED STEEL	GRAFITE GRAPHITE		
									●								6÷8	300	0,040	0,5xD	1xD	
									●									8÷10	300	0,050	0,5xD	1xD
									●									10÷12	300	0,060	0,5xD	1xD
									●									12÷14	300	0,100	0,5xD	1xD
									●									14÷16	300	0,120	0,5xD	1xD
									●									16÷18	300	0,140	0,5xD	1xD
									●									18÷20	300	0,160	0,5xD	1xD
									●									20÷25	300	0,180	0,5xD	1xD
										●												
									●													
									●													
									●													
									●													
									●													
									●													
									●													
									●													
									●													
									●													
									●													
									●													
									●													
									●													
									●													

PER LAVORAZIONI A SPALLAMENTO AUMENTARE I PARAMETRI DEL 20%
FOR SHOULDER MILLING PARAMETERS SHOULD BE INCREASED BY 20%

- APPLICAZIONE CONSIGLIATA-RECOMMENDED APPLICATION
EMPFOHLENER EINSATZ - APPLICATION CONSEILLÉE
- APPLICAZIONE POSSIBILE - POSSIBLE APPLICATION
MÖGLICHE ANWENDUNG - APPLICATION POSSIBLE

Vc = m/min VELOCITÀ DI TAGLIO - CUTTING SPEED
n = giri/min (min⁻¹) NUMERO DI GIRI - NUMBER OF REVOLUTIONS
fz = mm AVANZAMENTO AL DENTE - TOOTH FEED
fn = mm AVANZAMENTO AL GIRO - FEED / REVOLUTION
Vf = mm/min VELOCITÀ DI AVANZAMENTO - FEED SPEED

$$n = \frac{Vc \cdot 1000}{\text{ØD} \cdot 3,14} = \text{giri/min (min}^{-1}\text{)}$$





$$fn = fz \cdot z = \text{mm}$$

$$Vf = fz \cdot z \cdot n = \text{mm/min}$$

SMW3414

ØD = 8 - 25

NEW

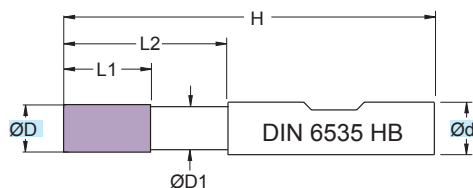
 **DISPONIBILE DA SETTEMBRE 2014**
 **AVAILABLE FROM SEPTEMBER 2014**
 **AB SEPTEMBER 2014 LIEFERBAR**
 **DISPONIBILE A PARTIR DE SEPTEMBRE 2014**

RIVESTIM.
COATED
GOLD



90°

ALU
>5% Si

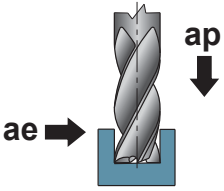


Fresa in M.D.I. Micrograno
 Gambo sec. DIN 6535 HB - Serie media/lunga sec. DIN 6527

Micrograin HM mills
 DIN 6535 HB Shank - DIN 6527 medium/long Type

TOLLERANZE	D	d
TOLLERANCE RANGE	h10	h6

ART.	(mm)						
	ØD	Ød	ØD1	L1	L2	H	z
SMW3414.080.N00	8	8	7,4	19	35	70	3
SMW3414.100.N00	10	10	9,2	22	43	78	3
SMW3414.120.N00	12	12	11,0	26	51	95	3
SMW3414.160.N00	16	16	15,0	32	59	100	3
SMW3414.200.N00	20	20	19,0	38	71	120	3
SMW3414.250.N00	25	25	24,0	45	87	144	3

Applicazione - Application	MATERIALI - MATERIALS Pag. H 73													ØD	(m/min) Vc	(mm) fz	(mm) ap	(mm) ae				
	P			M	K			N			S		H						G			
	ACCIAIO NON LEGATO NOT ALLOY STEEL	ACCIAIO POCO LEGATO LOW ALLOY STEEL	ACCIAIO ALTO LEGATO ALLOY STEEL	INOX MARTENSITICO STAINLESS STEEL MART.	INOX AUST. DUPLEX STAINLESS STEEL AUST.	GHISA GRIGIA GREY CAST IRON	GHISA SFEROIDALE SPHEROIDAL GRAPHITE	GHISA MALLEABILE MALLEABLE CAST IRON	ALLUMINIO E SUE LEGHE ALUMINIUM	RAMBE E SUE LEGHE COPPER	NON METALLICI PLASTICS	LEGHE RESIST. CALORE HIGH TEMP. ALLOY	TITANIO E SUE LEGHE TITANIUM						ACCIAIO TEMPRATO HARDENED STEEL	GRAFITE GRAPHITE		
																	8	500	0,08	6,4	1xD	
																		10	500	0,10	8,0	1xD
																		12	500	0,12	9,6	1xD
																		16	500	0,16	12,8	1xD
																		20	500	0,20	16,0	1xD
																		25	500	0,25	20,0	1xD

PER LAVORAZIONI A SPALLAMENTO AUMENTARE I PARAMETRI DEL 20%
FOR SHOULDER MILLING PARAMETERS SHOULD BE INCREASED BY 20%

- APPLICAZIONE CONSIGLIATA-RECOMMENDED APPLICATION
EMPFÖHLENER EINSATZ - APPLICATION CONSEILLÉE
- APPLICAZIONE POSSIBILE - POSSIBLE APPLICATION
MÖGLICHE ANWENDUNG - APPLICATION POSSIBLE

Vc = m/min VELOCITÀ DI TAGLIO - CUTTING SPEED
n = giri/min (min⁻¹) NUMERO DI GIRI - NUMBER OF REVOLUTIONS
fz = mm AVANZAMENTO AL DENTE -TOOTH FEED
fn = mm AVANZAMENTO AL GIRO - FEED / REVOLUTION
Vf = mm/min VELOCITÀ DI AVANZAMENTO - FEED SPEED

$$n = \frac{Vc \cdot 1000}{\text{ØD} \cdot 3,14} = \text{giri/min (min}^{-1}\text{)}$$





$$fn = fz \cdot z = \text{mm}$$

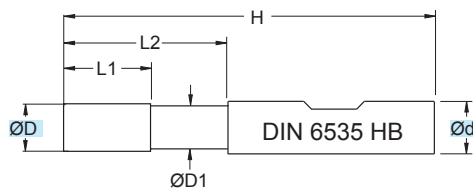
$$Vf = fz \cdot z \cdot n = \text{mm/min}$$

SMW3414..N01

ØD = 8 - 25

NEW

 **DISPONIBILE DA SETTEMBRE 2014**
 **AVAILABLE FROM SEPTEMBER 2014**
 **AB SEPTEMBER 2014 LIEFERBAR**
 **DISPONIBILE A PARTIR DE SEPTEMBRE 2014**



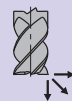


Fresa in M.D.I. Micrograno

Gambo sec. DIN 6535 HB - Serie media/lunga sec. DIN 6527

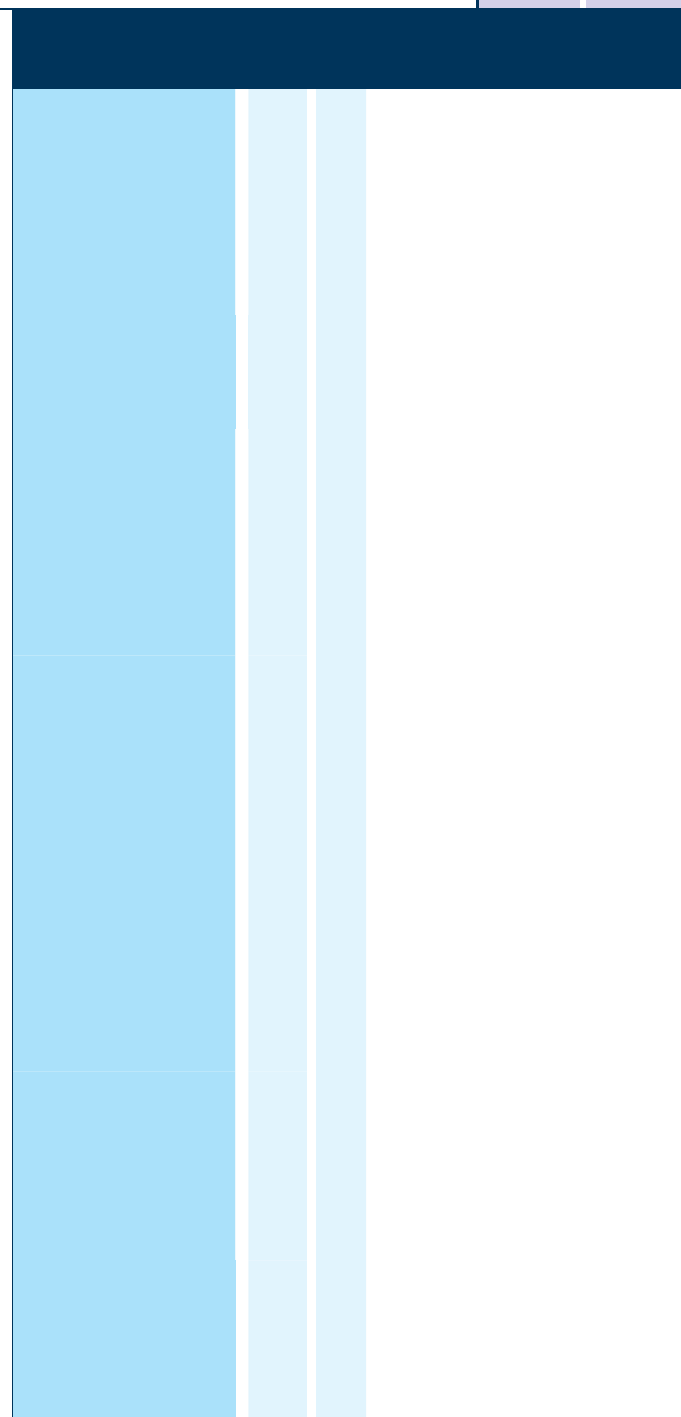
Micrograin HM mills

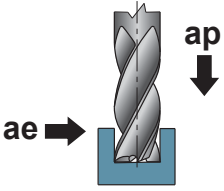
DIN 6535 HB Shank - DIN 6527 medium/long Type

TOLLERANZE	D	d
TOLLERANCE RANGE	h10	h6

	
90°	ALU ≤5% Si
	

(mm)							
ART.	ØD	Ød	ØD1	L1	L2	H	z
SMW3414.080.N01	8	8	7,4	19	35	70	3
SMW3414.100.N01	10	10	9,2	22	43	78	3
SMW3414.120.N01	12	12	11,0	26	51	95	3
SMW3414.160.N01	16	16	15,0	32	59	100	3
SMW3414.200.N01	20	20	19,0	38	71	120	3
SMW3414.250.N01	25	25	24,0	45	87	144	3



Applicazione - Application	MATERIALI - MATERIALS Pag. H 73													(mm) ØD	(m/min) Vc	(mm) fz	(mm) ap	(mm) ae				
	P			M	K			N			S		H						G			
	ACCIAIO NON LEGATO NOT ALLOY STEEL	ACCIAIO POCO LEGATO LOW ALLOY STEEL	ACCIAIO ALTO LEGATO ALLOY STEEL	INOX MARTENSITICO STAINLESS STEEL, MART.	INOX AUST. DUPLEX STAINLESS STEEL AUST.	GHISA GRIGIA GREY CAST IRON	GHISA SFEROIDALE SPHEROIDAL GRAPHITE	GHISA MALLEABILE MALLEABLE CAST IRON	ALLUMINIO E SUE LEGHE ALUMINIUM	RAMBE E SUE LEGHE COPPER	NON METALLICI PLASTICS	LEGHE RESIST. CALORE HIGH TEMP. ALLOY	TITANIO E SUE LEGHE TITANIUM						ACCIAIO TEMPRATO HARDENED STEEL	GRAFITE GRAPHITE		
																	8	500	0,08	6,4	1xD	
																		10	500	0,10	8,0	1xD
																		12	500	0,12	9,6	1xD
																		16	500	0,16	12,8	1xD
																		20	500	0,20	16,0	1xD
																		25	500	0,25	20,0	1xD

PER LAVORAZIONI A SPALLAMENTO AUMENTARE I PARAMETRI DEL 20%
FOR SHOULDER MILLING PARAMETERS SHOULD BE INCREASED BY 20%

- APPLICAZIONE CONSIGLIATA-RECOMMENDED APPLICATION
EMPFOHLENER EINSATZ - APPLICATION CONSEILLÉE
- APPLICAZIONE POSSIBILE - POSSIBLE APPLICATION
MÖGLICHE ANWENDUNG - APPLICATION POSSIBLE

Vc = m/min VELOCITÀ DI TAGLIO - CUTTING SPEED
 n = giri/min (min⁻¹) NUMERO DI GIRI - NUMBER OF REVOLUTIONS
 fz = mm AVANZAMENTO AL DENTE -TOOTH FEED
 fn = mm AVANZAMENTO AL GIRO - FEED / REVOLUTION
 Vf = mm/min VELOCITÀ DI AVANZAMENTO - FEED SPEED

$$n = \frac{Vc \cdot 1000}{\text{ØD} \cdot 3,14} = \text{giri/min (min}^{-1}\text{)}$$

$$fn = fz \cdot z = \text{mm}$$

$$Vf = fz \cdot z \cdot n = \text{mm/min}$$

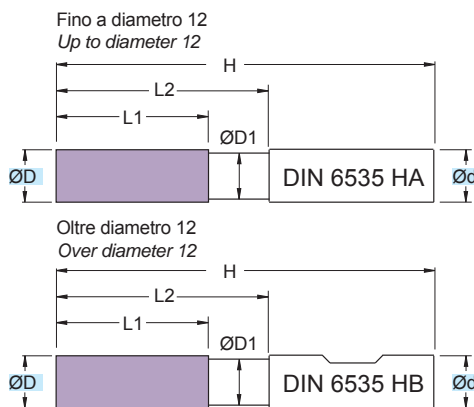
SM3510

$\varnothing D = 4 - 20$



Fresa in M.D.I. Micrograno
 Gambo cilindrico HA/HB - Serie media sec. DIN 6527

Micrograin HM mills
 Cylindrical Shank HA/HB - DIN 6527 medium Type



TOLLERANZE TOLERANCE RANGE	D h6	d h6
-------------------------------	---------	---------

RIVESTIM. COATED
GOLD

45°

ALU
 >5% Si

HSC

ART.	(mm)							45°
	$\varnothing D$	$\varnothing d$	$\varnothing D1$	L1	L2	H	z	
SM3510.040.N00	4	6	3,7	11	18	57	3	0,1
SM3510.050.N00	5	6	4,7	13	18	57	3	0,1
SM3510.060.N00	6	6	5,7	13	18	57	3	0,2
SM3510.080.N00	8	8	7,4	21	25	63	3	0,2
SM3510.100.N00	10	10	9,2	22	30	72	3	0,2
SM3510.120.N00	12	12	11,0	26	36	83	3	0,2
SM3510.160.N00	16	16	15,0	36	42	92	3	0,2
SM3510.180.N00	18	18	17,0	36	42	92	3	0,2
SM3510.200.N00	20	20	19,0	41	52	104	3	0,2

SM3510..N01

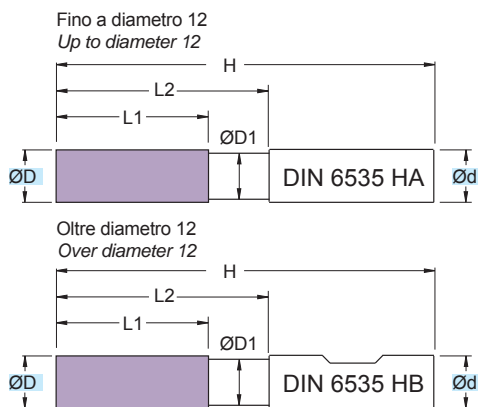
ØD = 4 - 20

NEW



Fresa in M.D.I. Micrograno
 Gambo cilindrico HA/HB - Serie media sec. DIN 6527

Micrograin HM mills
 Cylindrical Shank HA/HB - DIN 6527 medium Type



TOLLERANZE TOLERANCE RANGE	D h6	d h6
-------------------------------	---------	---------

45°

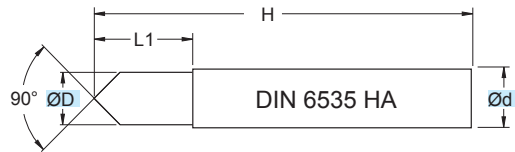
ALU
 ≤5% Si

HSC

ART.	ØD	Ød	ØD1	L1	L2	H	z	45°
SM3510.040.N01	4	6	3,7	11	18	57	3	0,1
SM3510.050.N01	5	6	4,7	13	18	57	3	0,1
SM3510.060.N01	6	6	5,7	13	18	57	3	0,2
SM3510.080.N01	8	8	7,4	21	25	63	3	0,2
SM3510.100.N01	10	10	9,2	22	30	72	3	0,2
SM3510.120.N01	12	12	11,0	26	36	83	3	0,2
SM3510.160.N01	16	16	15,0	36	42	92	3	0,2
SM3510.180.N01	18	18	17,0	36	42	92	3	0,2
SM3510.200.N01	20	20	19,0	41	52	104	3	0,2

SS230

$\varnothing D = 3 - 20$



90°	ALU ≤5% Si

Fresa in M.D.I. Micrograno
Gambo cilindrico HA - Serie media sec. DIN 6527

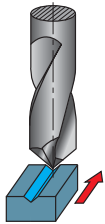
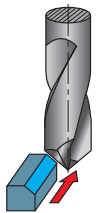
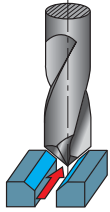
Micrograin HM minimills
 Cylindrical Shank HA - DIN 6527 medium Type

TOLLERANZE	D	d
TOLLERANCE RANGE	h10	h6

ART.	(mm)				
	ØD	Ød	L1	H	z
SS230.030	3	4	6	50	2
SS230.040	4	5	8	50	2
SS230.050	5	6	10	50	2
SS230.060	6	8	12	60	2
SS230.080	8	10	16	70	2
SS230.100	10	12	18	70	2
SS230.120	12	12	20	70	2
SS230.160	16	16	26	80	2
SS230.200	20	20	32	100	2

MATERIALI - MATERIALS Pag. H 73

Applicazione - Application



Applicazione - Application	MATERIALI - MATERIALS											ØD (mm)	Vc (m/min)	fz (mm)	ap (mm)	ae (mm)				
	P			M	K			N			S						H	G		
	ACCIAIO NON LEGATO NOT ALLOY STEEL	ACCIAIO POCO LEGATO LOW ALLOY STEEL	ACCIAIO ALTO LEGATO ALLOY STEEL	INOX MARTENSITICO STAINLESS STEEL, MART.	INOX AUST. DUPLEX STAINLESS STEEL AUST.	GHISA GRIGIA GREY CAST IRON	GHISA SFEROIDALE SPHEROIDAL GRAPHITE	GHISA MALLEABILE MALLEABLE CAST IRON	ALLUMINIO Si ≤ 12% ALUMINIUM 12 ≤ 12%	ALLUMINIO Si > 12% ALUMINIUM 12 > 12%	NON METALLICI PLASTICS	LEGHE RESIST. CALORE HIGH TEMP. ALLOY	TITANIO E SUE LEGHE TITANIUM	ACCIAIO TEMPRATO HARDENED STEEL	GRAFITE GRAPHITE					
●									●							3	400	0,030	-	-
									●							4	400	0,040	-	-
									●							5	400	0,050	-	-
									●							6	400	0,060	-	-
									●							8	400	0,080	-	-
									●							10	400	0,100	-	-
									●							12	400	0,120	-	-
									●							16	400	0,180	-	-
								●							20	400	0,200	-	-	
○									●							3	200	0,020	-	-
									●							4	200	0,030	-	-
									●							5	200	0,040	-	-
									●							6	200	0,050	-	-
									●							8	200	0,060	-	-
									●							10	200	0,080	-	-
									●							12	200	0,100	-	-
									●							16	200	0,160	-	-
								●							20	200	0,180	-	-	

● APPLICAZIONE CONSIGLIATA-RECOMMENDED APPLICATION
EMPFÖHLENER EINSATZ - APPLICATION CONSEILLÉE

○ APPLICAZIONE POSSIBILE - POSSIBLE APPLICATION
MÖGLICHE ANWENDUNG - APPLICATION POSSIBLE

Vc = m/min VELOCITÀ DI TAGLIO - CUTTING SPEED

n = giri/min (min⁻¹) NUMERO DI GIRI - NUMBER OF REVOLUTIONS

fz = mm AVANZAMENTO AL DENTE - TOOTH FEED

fn = mm AVANZAMENTO AL GIRO - FEED / REVOLUTION

Vf = mm/min VELOCITÀ DI AVANZAMENTO - FEED SPEED

$$n = \frac{Vc \cdot 1000}{\varnothing D \cdot 3,14} = \text{giri/min (min}^{-1}\text{)}$$

$$fn = fz \cdot z = \text{mm}$$

$$Vf = fz \cdot z \cdot n = \text{mm/min}$$