



**CONI MORSE
DIN 228 A
DIN 228 B**

**Attacchi con cono
Morse**

*Attachments with Mor-
se cone*



 **delta**

7. MANDRINI a cono MORSE DIN 228

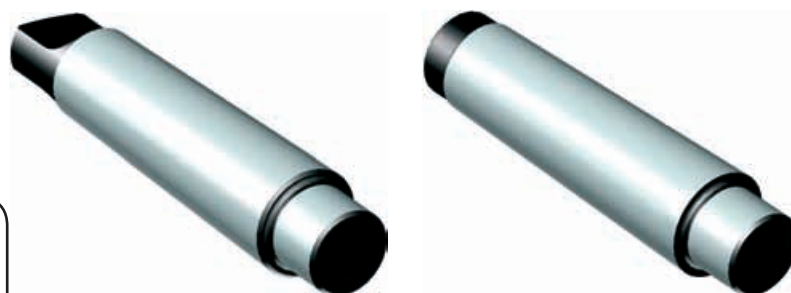
TOOL HOLDERS with cone MORSE DIN 228



ACCESSORI PER MACCHINE UTENSILI

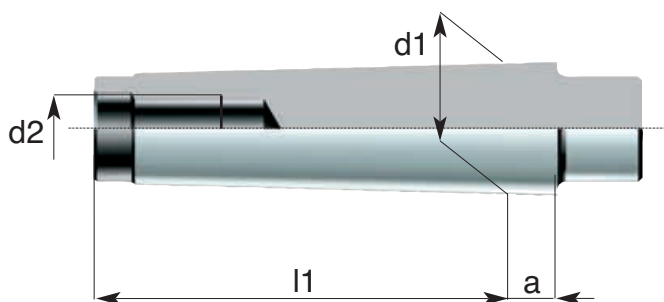
DIN 228

Attacchi DIN 228

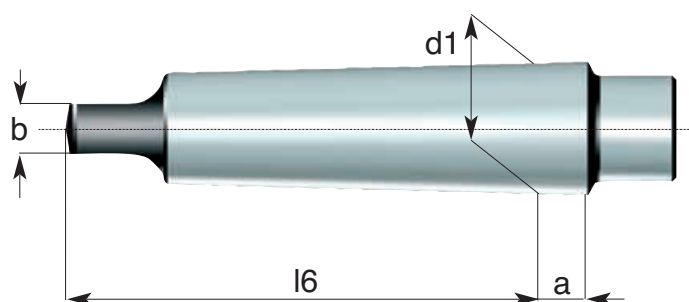


7.2

Form. "A"



Form. "B"



Riferimento Item	d1	d2	l1	a
Morse 1	12.065	M6	53.5	3.5
Morse 2	17.780	M10	64	5
Morse 3	23.825	M12	81	5
Morse 4	31.267	M16	102.5	6.5
Morse 5	44.399	M20	129.5	6.5
Morse 6	63.648	M24	182	8

Riferimento Item	d1	b	l6	a
Morse 1	12.065	5.2	62	3.5
Morse 2	17.780	6.3	75	5
Morse 3	23.825	7.9	94	5
Morse 4	31.267	11.9	117.5	6.5
Morse 5	44.399	15.9	149.5	6.5
Morse 6	63.648	19	210	8
Metrico 80	80	26	220	8
Metrico 100	100	32	260	10
Metrico 120	120	38	300	12

CARATTERISTICHE TECNICHE DEI MANDRINI TC

- Costruiti in acciaio da cementazione legato
- Cementati con profondità 0,8-1mm
Temprati • Rinvenuti • Sabbati e bruniti
- Durezza HRC 58±2 • Resistenza al nucleo 800-1000 N/mm²
- Rettificati di precisione esternamente, internamente e nelle filettature delle ghiere chiudipinza
- Controllati con strumenti di misura certificati
- La tolleranza di precisione dei coni MORSE è AT3

STANDARD FEATURES OF TC TOOLING

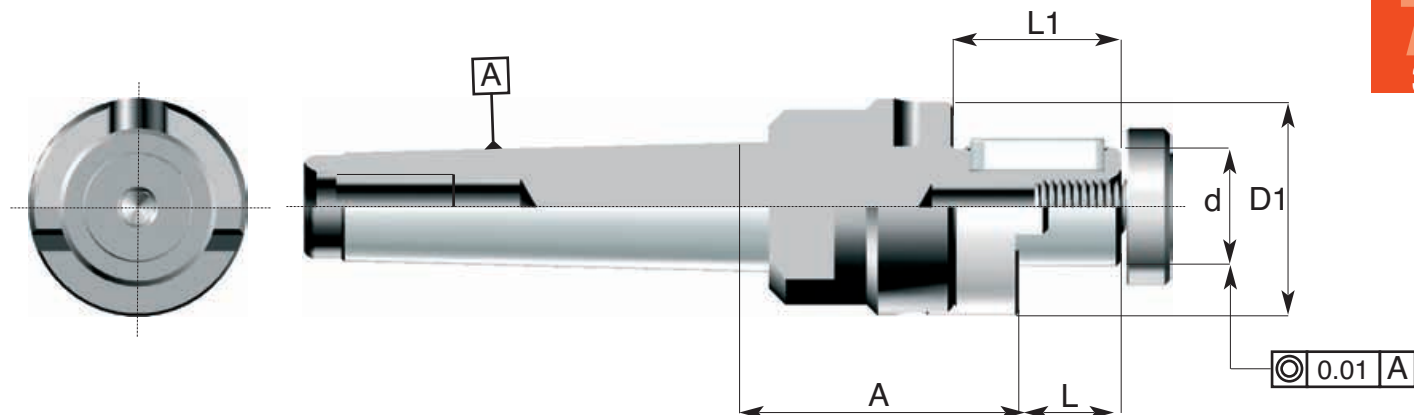
- Manufactured with Nickel Chrome Molybdenum steel
- Carburized with depth of case 0,8-1 mm
• Hardened and tempered • Black oxidized
- Surface Hardness RC 58±2 • Tensile strenght of core 800-1000 N/mm²
- Precision ground on shanks, inside tapers and collet nut threads
- Tested with high precision inspection and gaging equipment
- Taper accuracy of MORSE SHANKS is AT3

ACCESSORI PER MACCHINE UTENSILI

Portafrese combinati con trascinamento frontale e chiave DIN 6358
 Combined milling cutter chucks DIN 6358 B
 Kombi-Aufsteckfräserdorne DIN 6358 B
 Mandrins porte-fraises combinés DIN 6358 B

DIN 228 A

ART: 132



7.
3

Codice di ord Code	CM	d h6	A	L	L1	D1	Trascinatore Ring	Vite Screw	Linguetta Key
132.01	Morse 3	16	44	17	27	32	190.01	191.01	199.01
132.02	Morse 3	22	46	19	31	40	190.02	191.02	199.02
132.04	Morse 3	27	45	21	33	48	190.03	191.03	199.03
132.06	Morse 4	16	56	17	27	32	190.01	191.01	199.01
132.07	Morse 4	22	52	19	31	40	190.02	191.02	199.02
132.09	Morse 4	27	51	21	33	48	190.03	191.03	199.03
132.10	Morse 4	32	56	24	38	58	190.04	191.04	199.04
132.11	Morse 4	40	57	27	41	70	190.05	191.05	199.05
132.13	Morse 5	16	60	17	27	32	190.01	191.01	199.01
132.14	Morse 5	22	62	19	31	40	190.02	191.02	199.02
132.15	Morse 5	27	64	21	33	48	190.03	191.03	199.03
132.17	Morse 5	32	66	24	38	58	190.04	191.04	199.04
132.18	Morse 5	40	64	27	41	70	190.05	191.05	199.05
132.19	Morse 5	50	68	30	46	90	190.06	191.06	199.06



7. MANDRINI a cono MORSE DIN 228

TOOL HOLDERS with cone MORSE DIN 228



Portafrese combinati con trascinamento frontale e chiavetta DIN 6358

Combined milling cutter chucks DIN 6358 B

Kombi-Aufsteckfräserdorne DIN 6358 B

Mandrins porte-fraises combinés DIN 6358 B

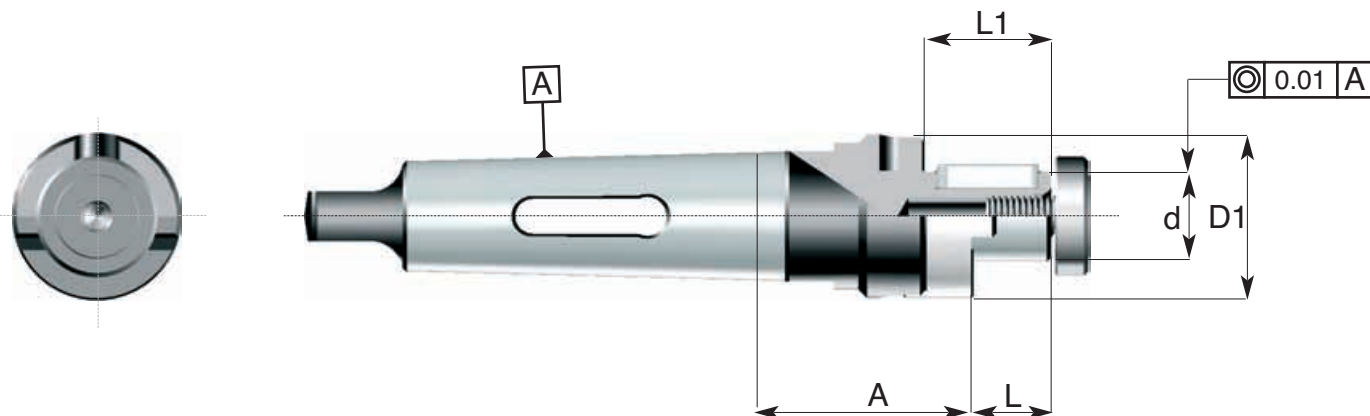
ACCESSORI PER MACCHINE UTENSILI



DIN 228 B

ART: 135

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4



Codice di ord Code	CM	d h6	A	L	L1	D1	Trascinatore Ring	Vite Screw	Linguetta Key
135.06	Morse 4	16	42	17	27	32	190.08	191.01	135.199.01
135.07	Morse 4	22	48	19	31	40	190.09	191.02	135.199.02
135.09	Morse 4	27	46	21	33	48	190.10	191.03	135.199.03
135.10	Morse 4	32	44	24	38	58	190.12	191.04	135.199.04
135.11	Morse 4	40	48	27	41	70	190.13	191.05	135.199.05
135.13	Morse 5	16	42	17	27	32	190.08	191.01	135.199.01
135.14	Morse 5	22	48	19	31	40	190.09	191.02	135.199.02
135.16	Morse 5	27	46	21	33	48	190.10	191.03	135.199.03
135.17	Morse 5	32	46	24	38	58	190.12	191.04	135.199.04
135.18	Morse 5	40	44	27	41	70	190.13	191.05	135.199.05
135.19	Morse 5	50	49	30	46	90	190.06	191.06	135.199.06
135.21	Morse 6	22	49	19	31	40	190.09	191.02	135.199.02
135.23	Morse 6	27	56	21	33	48	190.10	191.03	135.199.03
135.24	Morse 6	32	56	24	38	58	190.12	191.04	135.199.04
135.25	Morse 6	40	55	27	41	70	190.13	191.05	135.199.05
135.26	Morse 6	50	55	30	46	90	190.06	191.06	135.199.06



ACCESSORI PER MACCHINE UTENSILI

Alberi portafrese cono ISO DIN 6354 - 6355 per fresatrici con naso mandrino DIN 2079
 Cutters arbors with ISO DIN 6354 - 6355 cone for milling machines with DIN 2079 spindle nose
 Längsfräsdome mit Steilkegel DIN 6354 - 6355 für Fräsmaschinen DIN 2079
 Arbres porte-fraises à cône ISO DIN 6354 - 6355 pour fraiseuses à nez de broche DIN 2079

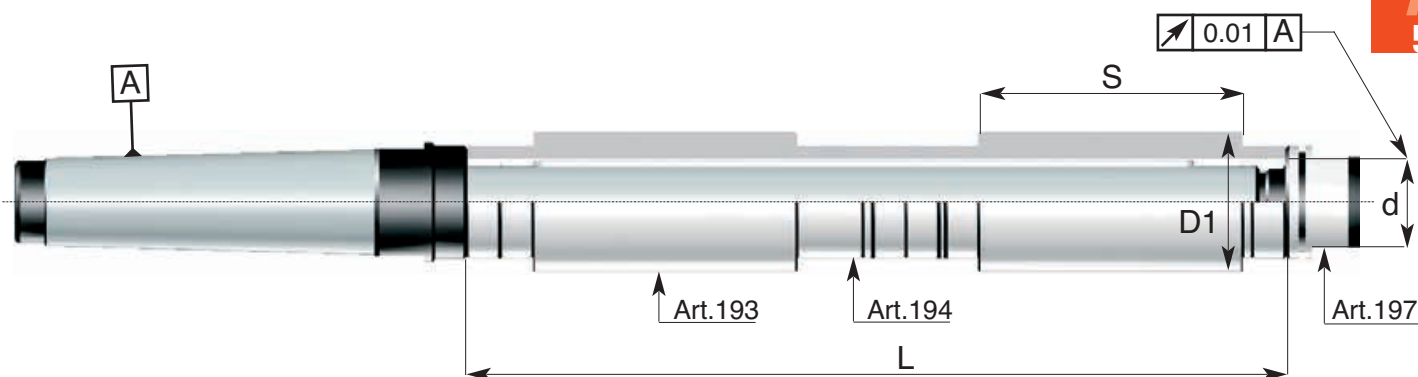


DIN 228 A

Completì di distanziali e bussole di guida
 Delivered with guide sleeves and spacer rings
 Geliefert mit Führungsbuchsen und Distanzstücke
 Dotés de entretoises et douilles de guidage

ART: 142

7.
5



Codice di ord Code	CM	d h6	L	Ghiere Nut
142.01	Morse 3	16	315	197.01
142.03	Morse 3	22	315	197.02
142.05	Morse 3	27	315	197.03
142.10	Morse 4	16	400	197.01
142.12	Morse 4	22	500	197.02
142.14	Morse 4	27	500	197.03
142.16	Morse 4	32	500	197.04
142.18	Morse 4	40	500	197.05
142.22	Morse 5	22	500	197.02
142.24	Morse 5	27	630	197.03
142.26	Morse 5	32	630	197.04
142.28	Morse 5	40	630	197.05
142.30	Morse 5	50	630	197.06



-Nell'ordine indicare le quote D1 ed S delle bussole di guida (vd. ART. 193). Dado di bloccaggio con filetto sinistro (ART. 197).
 -In order state dimensions D1 and S of guide sleeves (see ART.193). End thread and nut left hand (ART.197).
 -Im Auftrag angeben die Masse D1 und S der Führungsbuchsen (ART.193). End- und Muttergewinde linksgängig (ART. 197).
 -Lorsque vous passez la commande, veuillez indiquer les cotes D1 et S des douilles de guidage (voir ART. 193).
 Le filet terminal et l'écrou ont un filetage à gauche (ART. 197).

7. MANDRINI a cono MORSE DIN 228

TOOL HOLDERS with cone MORSE DIN 228



Mandri portamorsetti autoserranti DIN 238

Taper shafts for drill chucks DIN 238

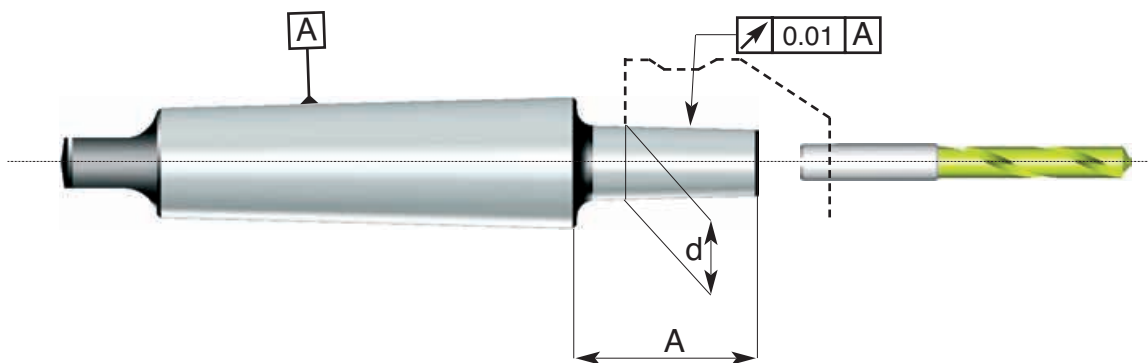
Bohrfutteraufnahmen DIN 238

Porte-mandrins de perceuses DIN 238

ACCESSORI PER MACCHINE UTENSILI

DIN 228 B

ART: 222



Codice di ord Code	CM	Tipo Din	A	d
222.05	Morse 1	B10	25	10.094
222.06	Morse 2	B10	25	10.094
222.09	Morse 2	B12	26	12.065
222.10	Morse 1	B16	33	15.733
222.11	Morse 2	B16	32	15.733
222.12	Morse 3	B16	35	15.733
222.12.A	Morse 4	B16	33	15.733
222.14	Morse 2	B18	39	17.780
222.15	Morse 3	B18	41	17.780
222.15.A	Morse 4	B18	41	17.780
222.18	Morse 4	B22	52	21.793

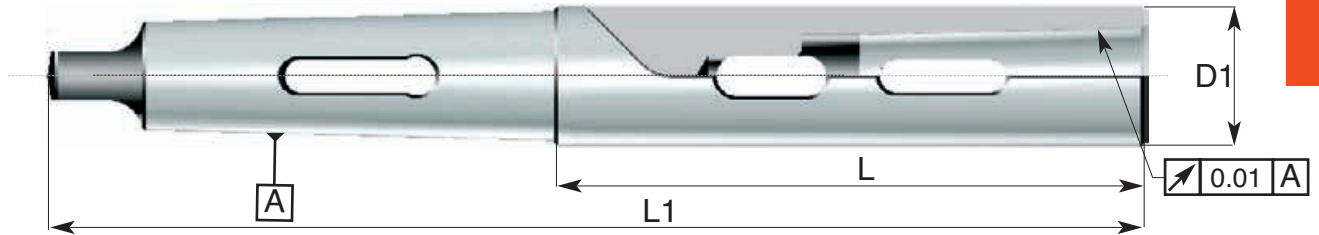
ACCESSORI PER MACCHINE UTENSILI



Riduzioni da cono morse esterno a cono interno per alesatrici DIN 6382
 Adaptors sleeves from outer Morse to inner Morse cone for boring machines DIN 6382
 Zwischenhülsen mit Morsekegel für Bohrmachines DIN 6382
 Douilles de réduction de cône Morse à cône Morse pour aléseuses DIN 6382

DIN 228 B

ART: 270



Codice di ord Code	CM esterno Outer MT	CM interno Inner MT	D1 f7	L	L1
270.01	Morse 3	Morse 2	25	200	299
270.02	Morse 3	Morse 2	25	300	399
270.03	Morse 3	Morse 2	25	400	499
270.04	Morse 3	Morse 3	32	200	299
270.05	Morse 3	Morse 3	32	300	399
270.06	Morse 3	Morse 3	32	400	499
270.07	Morse 4	Morse 2	25	200	324
270.08	Morse 4	Morse 2	25	300	424
270.09	Morse 4	Morse 2	25	400	524
270.10	Morse 4	Morse 2	25	500	624
270.11	Morse 4	Morse 3	32	200	324
270.12	Morse 4	Morse 3	32	300	424
270.13	Morse 4	Morse 3	32	400	524
270.14	Morse 4	Morse 3	32	500	624
270.15	Morse 4	Morse 4	40	200	324
270.16	Morse 4	Morse 4	40	300	424
270.17	Morse 4	Morse 4	40	400	524
270.18	Morse 4	Morse 4	40	500	625
270.19	Morse 5	Morse 2	25	200	356
270.20	Morse 5	Morse 2	25	300	456
270.21	Morse 5	Morse 2	25	400	556
270.22	Morse 5	Morse 2	25	500	656
270.23	Morse 5	Morse 3	32	200	356
270.24	Morse 5	Morse 3	32	300	456
270.25	Morse 5	Morse 3	32	400	556
270.26	Morse 5	Morse 3	32	500	656
270.27	Morse 5	Morse 4	40	200	356
270.28	Morse 5	Morse 4	40	300	456
270.29	Morse 5	Morse 4	40	400	556
270.30	Morse 5	Morse 4	40	500	656
270.31	Morse 5	Morse 5	56	200	356
270.32	Morse 5	Morse 5	56	300	456
270.33	Morse 5	Morse 5	56	400	556
270.34	Morse 5	Morse 5	56	500	656
270.35	Morse 6	Morse 3	32	200	418
270.36	Morse 6	Morse 3	32	300	518
270.37	Morse 6	Morse 3	32	400	618
270.38	Morse 6	Morse 3	32	500	718
270.39	Morse 6	Morse 4	40	300	518
270.40	Morse 6	Morse 4	40	400	618
270.41	Morse 6	Morse 4	40	500	718
270.42	Morse 6	Morse 4	40	600	818
270.43	Morse 6	Morse 5	56	300	518
270.44	Morse 6	Morse 5	56	400	618
270.45	Morse 6	Morse 5	56	500	718
270.46	Morse 6	Morse 5	56	600	818

7. MANDRINI a cono MORSE DIN 228

TOOL HOLDERS with cone MORSE DIN 228



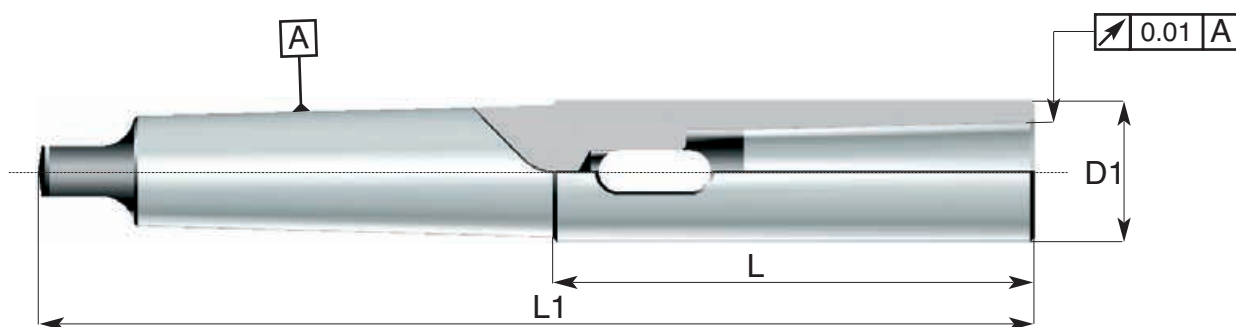
Riduzioni da cono morse esterno a cono morse interno tipo prolungato DIN 2187
 Adaptors sleeves from outer Morse to inner Morse cone - extended executions DIN 2187
 Zwischenhülsen mit Morsekegel - lange Ausführung DIN 2187
 Douilles de réduction de cône Morse à cône Morse - type rallongé DIN 2187

ACCESSORI PER MACCHINE UTENSILI



DIN 228 B

ART: 272



Codice di ord Code	CM esterno Outer MT	CM interno Inner MT	D1 h11	L	L1
272.01	Morse 1	Morse 1	18	80	145
272.02	Morse 1	Morse 1	18	135	200
272.03	Morse 2	Morse 1	18	80	160
272.04	Morse 2	Morse 1	18	150	230
272.05	Morse 2	Morse 2	25	95	175
272.06	Morse 2	Morse 2	25	170	250
272.07	Morse 3	Morse 1	18	80	179
272.08	Morse 3	Morse 1	18	171	270
272.09	Morse 3	Morse 2	25	95	194
272.10	Morse 3	Morse 2	25	201	300
272.11	Morse 3	Morse 3	32	116	215
272.12	Morse 3	Morse 3	32	221	320
272.13	Morse 4	Morse 2	25	95	219
272.14	Morse 4	Morse 2	25	206	330
272.15	Morse 4	Morse 3	32	116	240
272.16	Morse 4	Morse 3	32	226	350
272.17	Morse 4	Morse 4	40	144	268
272.18	Morse 4	Morse 4	40	246	370
272.19	Morse 5	Morse 3	32	116	272
272.20	Morse 5	Morse 3	32	244	400
272.21	Morse 5	Morse 4	40	144	300
272.22	Morse 5	Morse 4	40	294	450
272.23	Morse 5	Morse 5	56	184	340
272.24	Morse 5	Morse 5	56	344	500
272.25	Morse 6	Morse 3	32	117	335
272.26	Morse 6	Morse 3	32	232	450
272.29	Morse 6	Morse 5	56	175	393
272.30	Morse 6	Morse 5	56	382	600
272.31	Morse 6	Morse 6	80	252	470

ACCESSORI PER MACCHINE UTENSILI

Riduzioni da cono morse esterno a cono morse interno superiore tipo DIN 2187

Adaptors sleeves from outer Morse to inner Morse cone DIN 2187

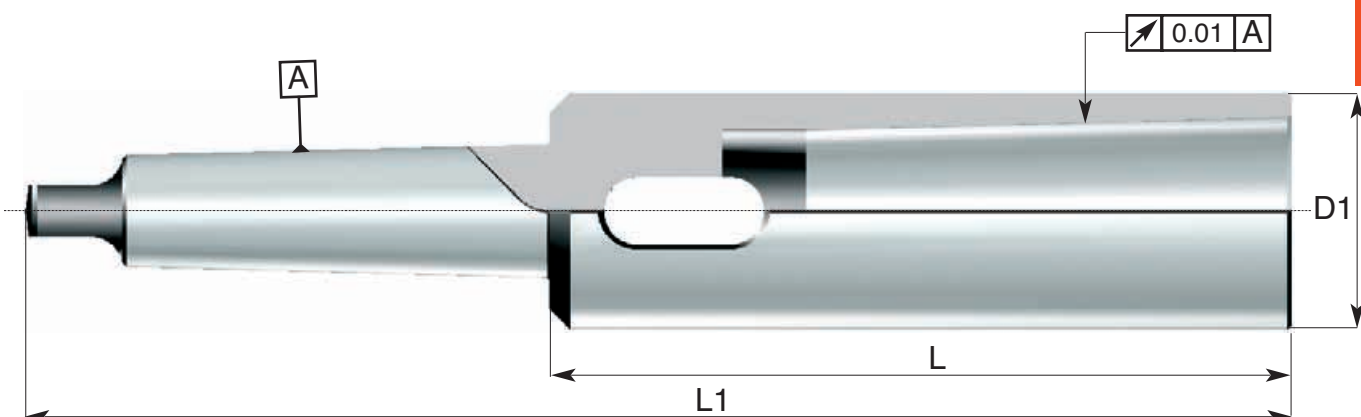
Zwischenhülsen mit Morsekegel DIN 2187

Douilles de réduction de cône Morse extérieur à cône Morse intérieur supérieur DIN 2187



DIN 228 B

ART: 275



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9

Codice di ord Code	CM esterno Outer MT	CM interno Inner MT	D1 h11	L	L1
275.01	Morse 1	Morse 2	25	95	160
275.02	Morse 1	Morse 2	25	169	235
275.03	Morse 2	Morse 3	32	116	196
275.04	Morse 2	Morse 3	32	220	300
275.05	Morse 3	Morse 4	40	141	240
275.06	Morse 3	Morse 4	40	246	345
275.07	Morse 3	Morse 5	56	176	275
275.08	Morse 3	Morse 5	56	341	440
275.09	Morse 4	Morse 5	56	176	300
275.10	Morse 4	Morse 5	56	346	470
275.11	Morse 5	Morse 6	80	240	396

7. MANDRINI a cono MORSE DIN 228 TOOL HOLDERS with cone MORSE DIN 228



Riduzioni da cono morse a cono morse interno DIN 2185

Adaptors sleeves from Morse to Morse cone DIN 2185

Reduzierhülsen mit Morsekegel DIN 2185

Douilles de réduction de cône Morse à cône Morse DIN 2185

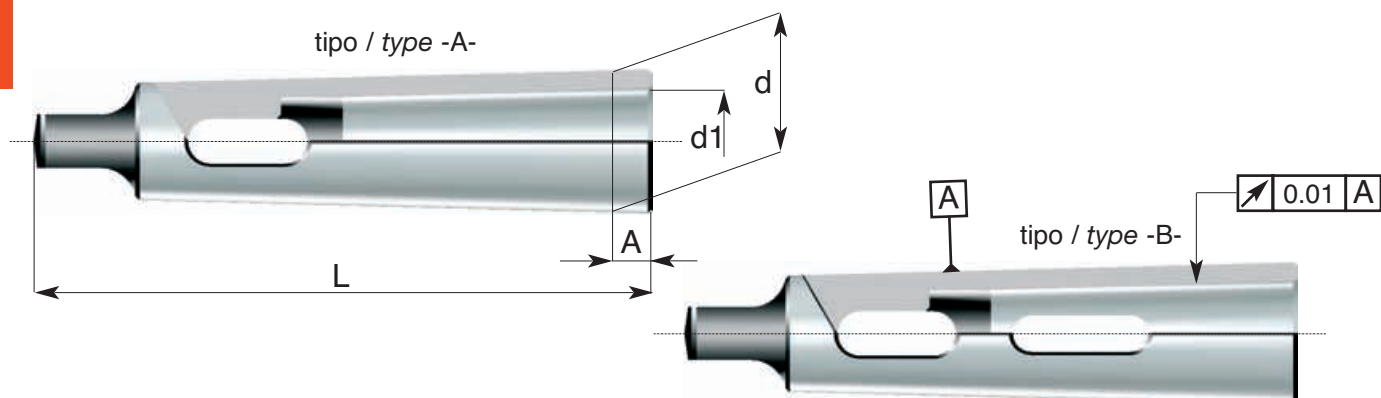
ACCESSORI PER MACCHINE UTENSILI



DIN 228 B

ART: 280

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Codice di ord Code	CM esterno Outer MT	CM interno Inner MT	A	d	d1	L	Tipo Type
280.01	Morse 2	Morse 1	17	17.780	12.065	92	A
280.02	Morse 3	Morse 1	5	23.825	12.065	99	A
280.03	Morse 3	Morse 2	18	23.825	17.780	112	A
280.04	Morse 4	Morse 1	6.5	31.267	12.065	124	A
280.05	Morse 4	Morse 2	6.5	31.267	17.780	124	A
280.06	Morse 4	Morse 3	22.5	31.267	23.825	140	A
280.07	Morse 5	Morse 1	6.5	44.399	12.065	156	A
280.08	Morse 5	Morse 2	6.5	44.399	17.780	156	A
280.09	Morse 5	Morse 3	6.5	44.399	23.825	156	A
280.10	Morse 5	Morse 4	21.5	44.399	31.267	171	A
280.11	Morse 6	Morse 2	8	63.348	17.780	218	A
280.12	Morse 6	Morse 3	8	63.348	23.825	218	A
280.13	Morse 6	Morse 4	8	63.348	31.267	218	A
280.14	Morse 6	Morse 5	8	63.348	44.399	218	A
280.16	Metr: 80	Morse 4	8	80	31.264	228	B
280.17	Metr: 80	Morse 5	8	80	44.399	228	B
280.18	Metr: 80	Morse 6	60	80	63.348	280	B
280.19	Metr: 100	Morse 5	10	100	44.399	270	B
280.20	Metr: 100	Morse 6	57	100	63.348	317	B
280.21	Metr: 100	Metr: 80	68	100	80	328	B

ACCESSORI PER MACCHINE UTENSILI

Riduzioni da cono morse a cono morse UNI 4603 con ghiera di estrazione

Adaptors sleeves Morse to Morse cone with ejector ring - UNI 4603

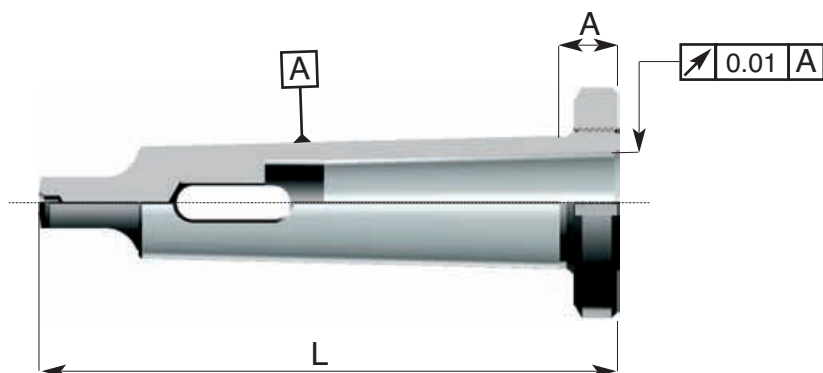
Reduzierhülsen mit Morsekegel und Abdrückmutter - UNI 4603

Douilles de réduction de cône Morse à cône Morse avec manchon d'extraction - UNI 4603



DIN 228 B

ART: 285



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11



Codice di ord Code	CM esterno Outer MT	CM interno Inner MT	A	L	Ghiera Nut
285.02.0100	Morse 2	Morse 1	12	89	297.01
285.03.0100	Morse 3	Morse 1	12	108	297.02
285.03.0200	Morse 3	Morse 2	12	108	297.02
285.04.0100	Morse 4	Morse 1	15	135	297.03
285.04.0200	Morse 4	Morse 2	15	135	297.03
285.04.0300	Morse 4	Morse 3	15	135	297.03
285.05.0200	Morse 5	Morse 2	18	170	297.04
285.05.0300	Morse 5	Morse 3	18	170	297.04
285.05.0400	Morse 5	Morse 4	18	170	297.04
285.06.0200	Morse 6	Morse 2	20	234	297.05
285.06.0300	Morse 6	Morse 3	20	234	297.05
285.06.0400	Morse 6	Morse 4	20	234	297.05
285.06.0500	Morse 6	Morse 5	20	234	297.05

7. MANDRINI a cono MORSE DIN 228 TOOL HOLDERS with cone MORSE DIN 228



Riduzioni da cono morse a cono morse UNI 4603 con ghiera di estrazione

Adaptors sleeves Morse to Morse cone with ejector ring - UNI 4603

Reduzierhülsen mit Morsekegel und Abdrückmutter - UNI 4603

Douilles de réduction de cône Morse à cône Morse avec manchon d'extraction - UNI 4603

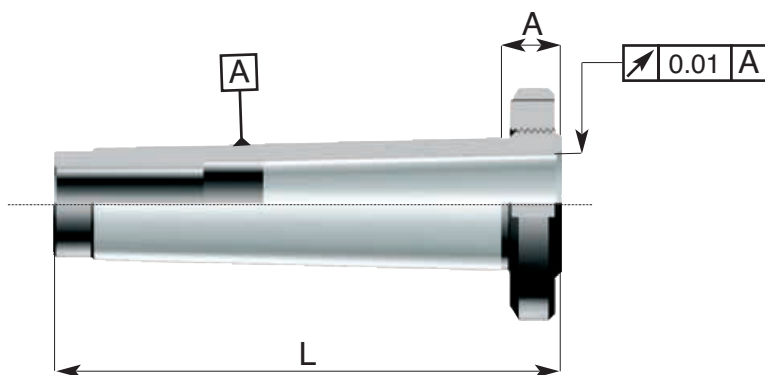
ACCESSORI PER MACCHINE UTENSILI



DIN 228 A

ART: 286

7.
12



Codice di ord Code	CM esterno Outer MT	CM interno Inner MT	A	L	Ghiera Nut
286.02.0100	Morse 2	Morse 1	12	70	297.01
286.03.0100	Morse 3	Morse 1	12	85	297.02
286.03.0200	Morse 3	Morse 2	12	85	297.02
286.04.0100	Morse 4	Morse 1	14	105	297.03
286.04.0200	Morse 4	Morse 2	14	105	297.03
286.04.0300	Morse 4	Morse 3	14	105	297.03
286.05.0200	Morse 5	Morse 2	18	130	297.04
286.05.0300	Morse 5	Morse 3	18	130	297.04
286.05.0400	Morse 5	Morse 4	18	130	297.04
286.06.0200	Morse 6	Morse 2	20	180	297.05
286.06.0300	Morse 6	Morse 3	20	180	297.05
286.06.0400	Morse 6	Morse 4	20	180	297.05
286.06.0500	Morse 6	Morse 5	20	180	297.05

ACCESSORI PER MACCHINE UTENSILI

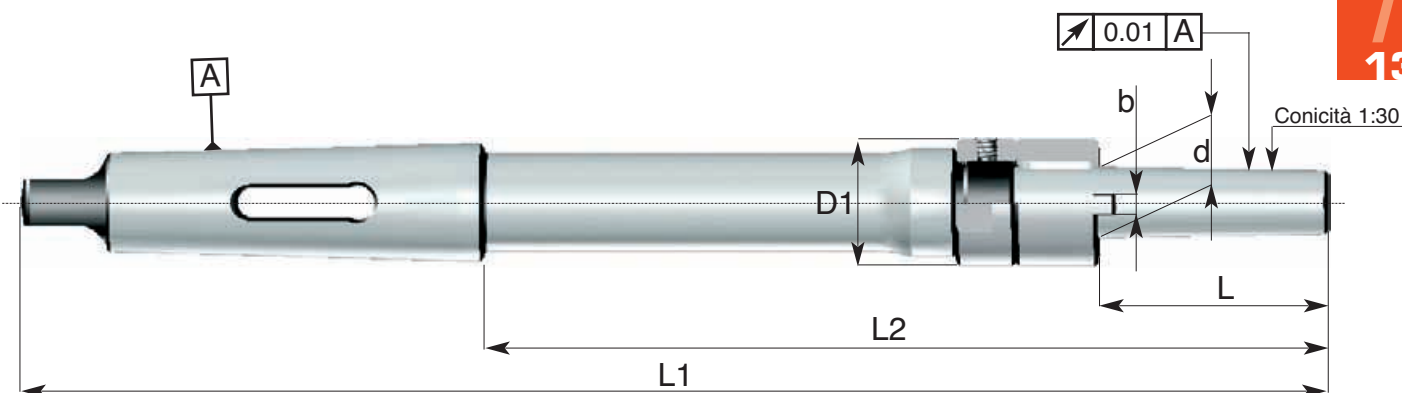


Mandrini per allargatori ed alesatori registrabili

Chucks for shell counterarborers and reamers-front drivers-set ring
Aufsteckhalter für Aufsteck-Reibahlen und Aufsteck-Aufbohrer
Mandrins pour alésoirs creux avec dispositif de réglage

DIN 228 B

ART: 340



7.
13

Codice di ord Code	CM MT	d h6	L	L1	L2	D1	b h11	Trascinatore Ring	Ghiera Nut
340.01. N	Morse 2	10	45	165	90	18	4	346.01	347.01
340.01. L	Morse 2	10	45	255	180	18	4	346.01	347.01
340.02. C	Morse 3	13	50	190	96	23	4	346.02	347.02
340.02. N	Morse 3	13	50	250	156	23	4	346.02	347.02
340.02. L	Morse 3	13	50	290	196	23	4	346.02	347.02
340.03. C	Morse 3	16	55	200	106	28	5	346.03	347.03
340.03. N	Morse 3	16	55	261	167	28	5	346.03	347.03
340.03. L	Morse 3	16	55	310	216	28	5	346.03	347.03
340.04. C	Morse 4	19	60	232	114.5	34	6	346.04	347.04
340.04. N	Morse 4	19	60	298	180.5	34	6	346.04	347.04
340.04. L	Morse 4	19	60	350	232.5	34	6	346.04	347.04
340.05. C	Morse 4	22	65	242	124.5	38	7	346.05	347.05
340.05. N	Morse 4	22	65	312	194.5	38	7	346.05	347.05
340.05. L	Morse 4	22	65	370	252.5	38	7	346.05	347.05
340.06. C	Morse 4	27	70	255	137.5	45	8	346.06	347.06
340.06. N	Morse 4	27	70	328	210.5	45	8	346.06	347.06
340.06. L	Morse 4	27	70	390	272.5	45	8	346.06	347.06
340.07. C	Morse 4	32	80	270	152.5	51	10	346.07	347.07
340.07. N	Morse 4	32	80	376	258.5	51	10	346.07	347.07
340.07. L	Morse 4	32	80	440	322.5	51	10	346.07	347.07
340.09. N	Morse 4	40	90	396	278.5	62	12	346.09	347.09
340.09. L	Morse 4	40	90	470	352.5	62	12	346.09	347.09



Pag. 12.32

Pag. 12.33

7. MANDRINI a cono MORSE DIN 228

TOOL HOLDERS with cone MORSE DIN 228



Barre semifinite con tratto cilindrico privo di cementazione per esecuzioni speciali
 Unfinished taper-shank blanks for special applications
 Rohlinge für spezielle Anwendungen
 Ebauches pour applications spéciales

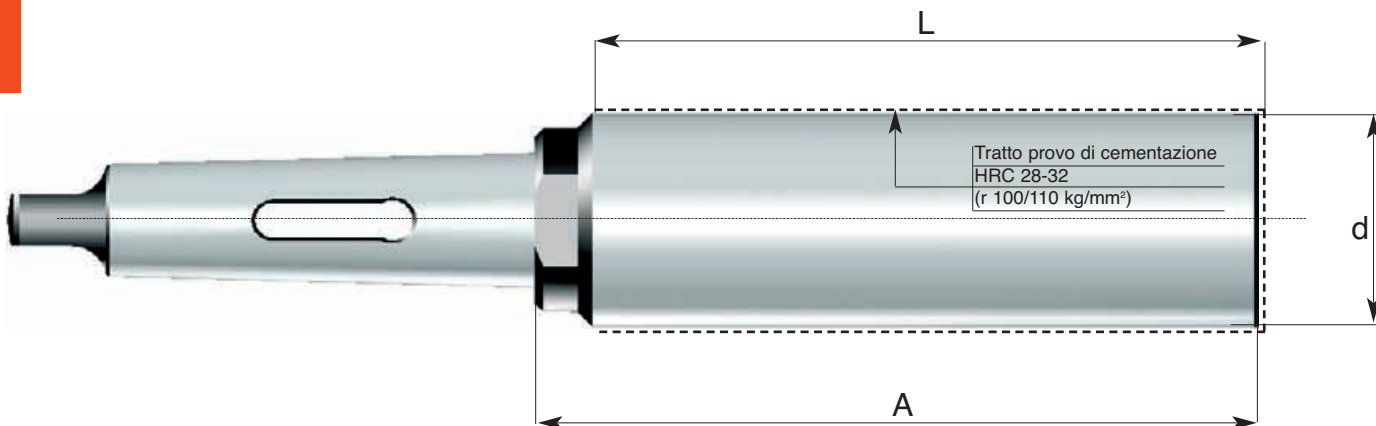
ACCESSORI PER MACCHINE UTENSILI



DIN 228 B

ART: 425

7.
14



Codice di ord Code	CM	d	A	L
425.08	Morse 4	50	170	100
425.09	Morse 4	50	250	225
425.22	Morse 5	63	250	225
425.23	Morse 5	63	400	330
425.34	Morse 6	80	250	225
425.35	Morse 6	80	400	330

ACCESSORI PER MACCHINE UTENSILI

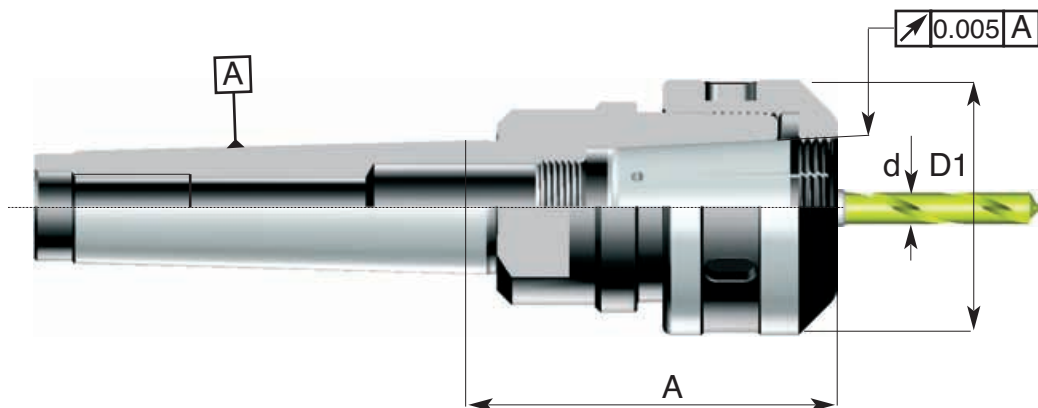


Mandrini portapinze Delta per pinze rif. art.209
Delta collet chucks for collets ref. art.209
Delta Spannzangenhalter für Spannzangen ref. art.209
Mandrins porte-pinces Delta pour pinces ref. art.209

DIN 228 A

ART: 202

7.
15



Codice di ord Code	CM	A	D1	Cap. di chiusura Pinza "d" Capacity range "d"	Tipo pinza Collet	Ghiera Nut
202.03	Morse 3	68	50	da 3 a 18	209.10	245.01
202.04	Morse 3	82	58	da 3 a 22	209.20	245.02
202.05	Morse 4	80	58	da 3 a 22	209.20	245.02
202.06	Morse 4	100	74	da 4 a 32	209.30	245.03
202.07	Morse 5	95	74	da 4 a 32	209.30	245.03

7. MANDRINI a cono MORSE DIN 228

TOOL HOLDERS with cone MORSE DIN 228



Mandrini portapinze Delta per pinze rif. art.209

Delta collet chucks for collets ref. art.209

Delta Spannzangenhalter für Spannzangen ref. art.209

Mandrins porte-pinces Delta pour pinces ref. art.209

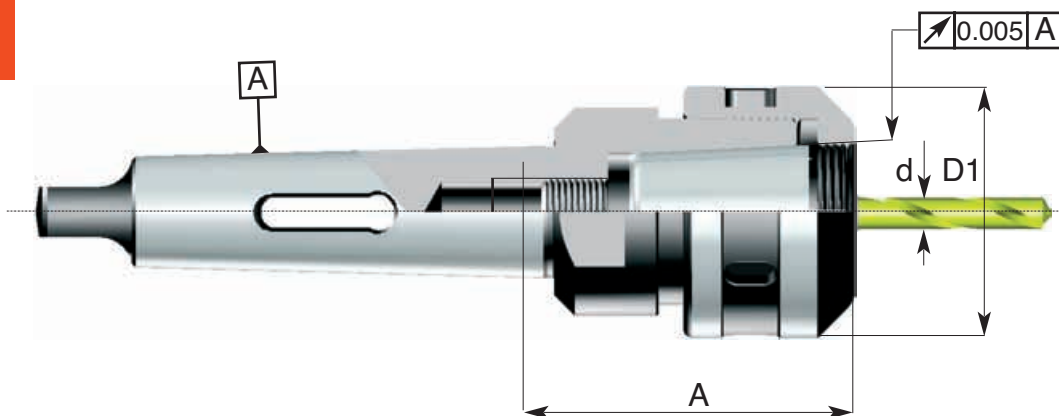
ACCESSORI PER MACCHINE UTENSILI

DIN 228 B

ART: 205



7.16



Codice di ord Code	CM	A	D1	Cap. di chiusura Pinza "d" Capacity range "d"	Tipo pinza Collet	Ghiera Nut
205.01	Morse 2	60	50	da 3 a 18	209.10	245.01
205.03	Morse 3	60	50	da 3 a 18	209.10	245.01
205.04	Morse 3	70	58	da 3 a 22	209.20	245.02
205.05	Morse 4	70	58	da 3 a 22	209.20	245.02
205.06	Morse 4	83	73	da 4 a 32	209.30	245.03
205.07	Morse 5	78	73	da 4 a 32	209.30	245.03
205.09	Morse 6	92	73	da 4 a 32	209.30	245.03

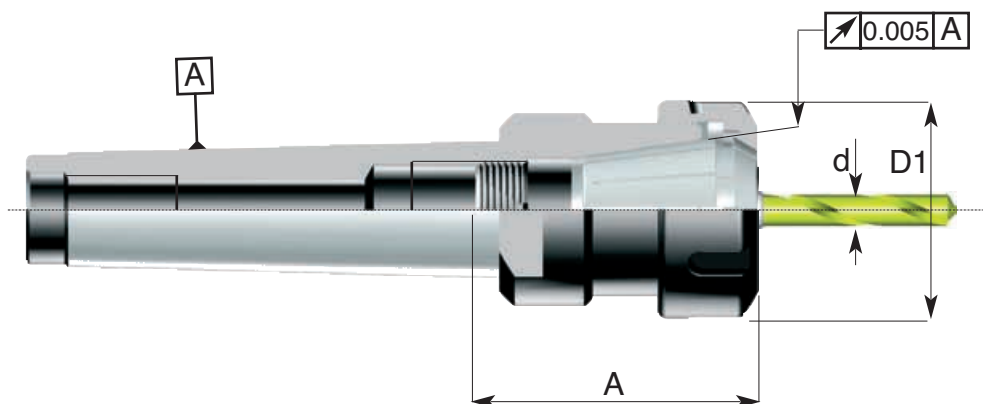
ACCESSORI PER MACCHINE UTENSILI



Mandrini portapinze ER DIN 6499 - ghiera standard
Collet chucks ER DIN 6499 - standard nut
Spannzangenhalter ER DIN 6499 - standard Spannmutter
Mandrins porte-pinces ER DIN 6499 - écrou standard

DIN 228 A

ART: 614
ghiera standard / standard nut



7.
17

Codice di ord Code	ER	CM	A	D1	Cap. di chiusura Pinza "d" Capacity range "d"	Ghiera Nut
614.02.0160	ER 16	Morse 2	45	28	da 0.5 a 10	245.22.ER16
614.02.0200	ER 20	Morse 2	50	34	da 0.5 a 13	245.25.ER20
614.02.0250	ER 25	Morse 2	55	42	da 1 a 16	245.32.ER25
614.03.0250	ER 25	Morse 3	55	42	da 1 a 16	245.32.ER25
614.03.0320	ER 32	Morse 3	65	50	da 1 a 20	245.40.ER32
614.03.0400	ER 40	Morse 3	80	63	da 2 a 30	245.50.ER40
614.04.0250	ER 25	Morse 4	55	42	da 1 a 16	245.32.ER25
614.04.0320	ER 32	Morse 4	65	50	da 1 a 20	245.40.ER32
614.04.0400	ER 40	Morse 4	80	63	da 2 a 30	245.50.ER40
614.05.0320	ER 32	Morse 5	75	50	da 1 a 20	245.40.ER32
614.05.0400	ER 40	Morse 5	80	63	da 2 a 30	245.50.ER40

7. MANDRINI a cono MORSE DIN 228 TOOL HOLDERS with MORSE cone DIN 228



Cassette con mandrini per pinze Delta rif. art.209

Boxes with Delta collet chucks and collets ref. art.209

Kassetten mit Spannzangenhalter Delta und Spannzangen ref. art.209

Coffrets avec mandrins à pinces Delta et pinces ref. art.209

ACCESSORI PER MACCHINE UTENSILI

DIN 228 A

CASSETTE 16...
ART: 202...



7.
18

Codice di ord. Code	Mandrino Chuck	Cono Morse DIN 228/A	Tipo pinza Collets type	Numero pinze Collets nr.	Ø Pinza Ø Collets
16.03	202.03	Morse 3 DIN 228/A	209.10	7	3-4-6-8-10-12-16
16.04	202.03	Morse 3 DIN 228/A	209.10	14	da 3 a 16
16.05	202.04	Morse 3 DIN 228/A	209.20	7	4-6-8-10-12-16-20
16.06	202.04	Morse 3 DIN 228/A	209.20	18	da 3 a 20
16.07	202.05	Morse 4 DIN 228/A	209.20	7	4-6-8-10-12-16-20
16.08	202.05	Morse 4 DIN 228/A	209.20	18	da 3 a 20
16.09	202.06	Morse 4 DIN 228/A	209.30	9	4-6-8-10-12-16-20-25-32
16.10	202.06	Morse 4 DIN 228/A	209.30	28	da 4 a 32

Cassette con mandrini per pinze Delta rif. art.209

Boxes with Delta collet chucks and collets ref. art.209

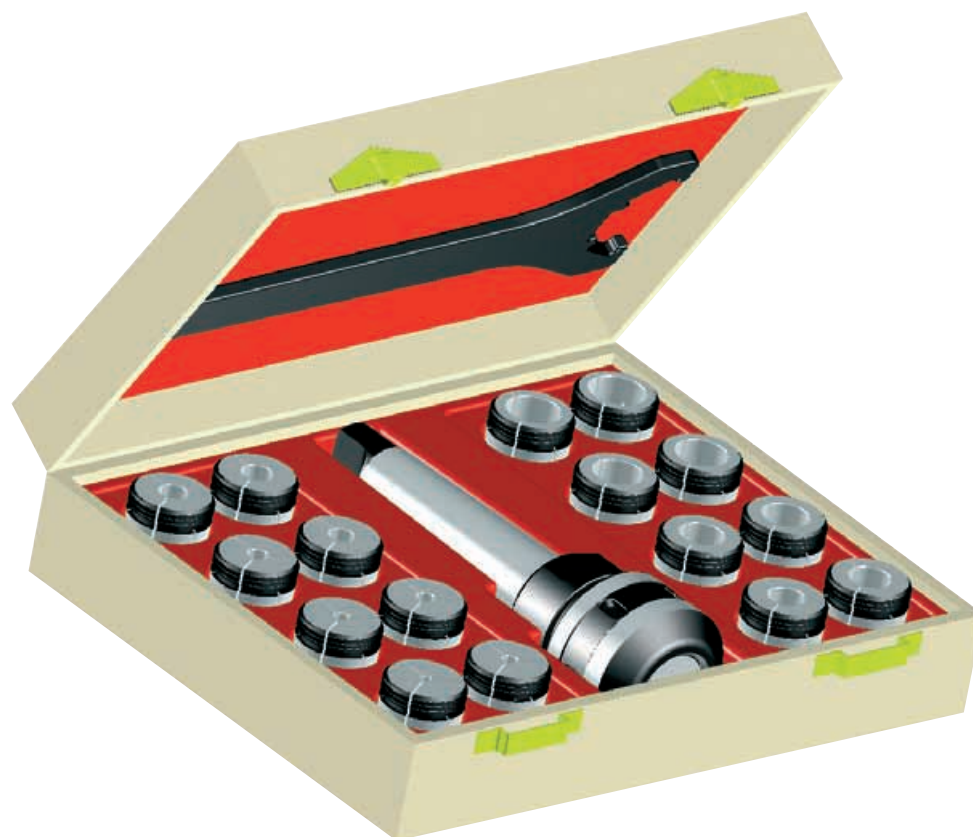
Kassetten mit Spannzangenhalter Delta und Spannzangen ref. art.209

Coffrets avec mandrins à pinces Delta et pinces ref. art.209

DIN 228 B

CASSETTE 18...
ART: 205...

7.
19



Codice di ord. Code	Mandrino Chuck	Cono Morse DIN 228/B	Tipo pinza Collets type	Numero pinze Collets nr.	Ø Pinza Ø Collets
18.05	205.05	Morse 4 DIN 228/B	209.20	7	4-6-8-10-12-16-20
18.06	205.05	Morse 4 DIN 228/B	209.20	18	da 3 a 20
18.09	205.07	Morse 5 DIN 228/B	209.30	9	4-6-8-10-12-16-20-25-32
18.10	205.07	Morse 5 DIN 228/B	209.30	28	da 4 a 32

7. MANDRINI a cono MORSE DIN 228 TOOL HOLDERS with MORSE cone DIN 228



Cassette con portapinze ER pinze complete di chiave di serraggio

Boxes with ER collet chucks and collets - supplied with wrench

Kassetten mit Spannzangenhalter ER und Spannzangen - geliefert mit Schlüssel

Coffrets avec mandrins à pinces ER et pinces - fournis avec clé

ACCESSORI PER MACCHINE UTENSILI

DIN 228 A

CASSETTE ER
ART: 614...



7.
20

Codice di ord. Code	Mandrino Chuck	Cono Morse DIN 228/A	Tipo pinza Collets type	Numero pinze Collets nr.	Ø Pinza Ø Collets
02.07.ER25	614.02.0250	Morse 2 DIN 228/A	ER 25	7	4-6-8-10-12-14-16
02.14.ER25	614.02.0250	Morse 2 DIN 228/A	ER 25	14	da 3 a 16
03.09.ER32	614.03.0320	Morse 3 DIN 228/A	ER 32	9	4-6-8-10-12-14-16-18-20
03.18.ER32	614.03.0320	Morse 3 DIN 228/A	ER 32	18	da 3 a 20
04.09.ER32	614.04.0320	Morse 4 DIN 228/A	ER 32	9	4-6-8-10-12-14-16-18-20
04.18.ER32	614.04.0320	Morse 4 DIN 228/A	ER 32	18	da 3 a 20
04.09.ER40	614.04.0400	Morse 4 DIN 228/A	ER 40	9	4-6-8-10-12-14-16-18-20
04.23.ER40	614.04.0400	Morse 4 DIN 228/A	ER 40	23	da 4 a 26
05.09.ER32	614.05.0320	Morse 5 DIN 228/A	ER 32	9	4-6-8-10-12-14-16-18-20
05.18.ER32	614.05.0320	Morse 5 DIN 228/A	ER 32	18	da 3 a 20
05.09.ER40	614.05.0400	Morse 5 DIN 228/A	ER 40	9	4-6-8-10-12-14-16-18-20
05.23.ER40	614.05.0400	Morse 5 DIN 228/A	ER 40	23	da 4 a 26

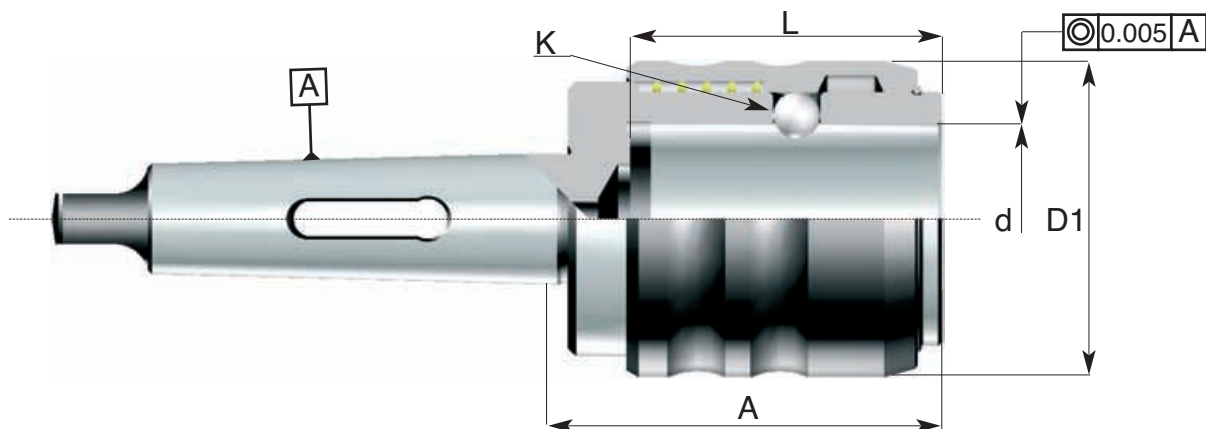
ACCESSORI PER MACCHINE UTENSILI



Mandrini portautensili ad estrazione rapida per trapani e alesatrici
Quick change chucks for drills and boring machines
Schnellwechselfutter für Bohrmaschinen
Mandrins porte-outils à extraction rapide pour perceuses et aléseuses

DIN 228 B

ART: 302



7.
21

Codice di ord Code	CM	Per bussole Tap collet	Tipo type	d H7	A	L	K
302.01	Morse 2	1-2	A	26	80	58	5/16"
302.02	Morse 3	1-2-3	B	35	90	67	3/8"
302.04	Morse 4	1-2-3-4	C	46	102	75	7/16"
302.05	Morse 5	1-2-3-4	C	46	102	75	7/16"
302.07	Morse 6	1-2-3-4-5	D	60	130	95	1/2"



7. MANDRINI a cono MORSE DIN 228

TOOL HOLDERS with cone MORSE DIN 228



Bussole ad estrazione rapida per mandrini porta utensili art. 302

Quick change bushes for chucks art.302

Hülsen für Schnellwechselfutter art.302

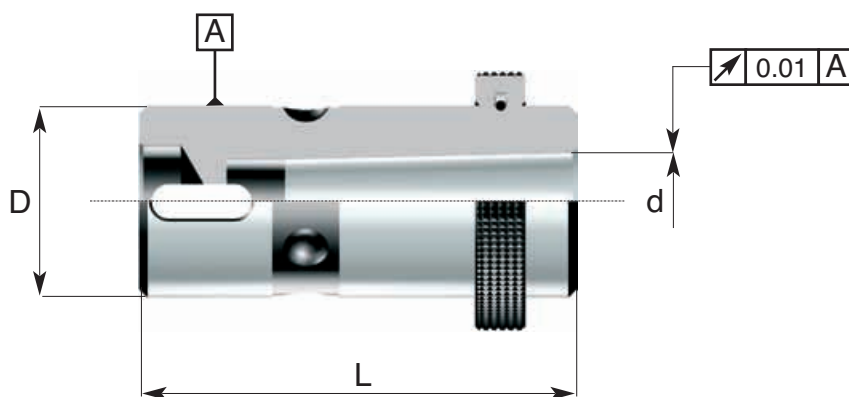
Douilles à extraction rapide pour mandrins porte-outils art.302

ACCESSORI PER MACCHINE UTENSILI



ART: 310

7.
22



Codice di ord Code	D h6	CM interno Inner MT	d	per mandrinoTipo Chuck type	L
310.01	26	Morse 1	12.065	A 302.01	75
310.02	26	Morse 2	17.780	A 302.01	80
310.03	35	Morse 1	12.065	B 302.02-302.03	90
310.04	35	Morse 2	17.780	B 302.02-302.03	90
310.05	35	Morse 3	23.825	B 302.02-302.03	100
310.06	46	Morse 1	12.065	C 302.04-302.05	100
310.07	46	Morse 2	17.780	C 302.04-302.05	100
310.08	46	Morse 3	23.825	C 302.04-302.05	100
310.09	46	Morse 4	31.267	C 302.04-302.05	120
310.10	50	Morse 1	12.065	D 302.06-302.07	120
310.11	50	Morse 2	17.780	D 302.06-302.07	120
310.12	50	Morse 3	23.825	D 302.06-302.07	120
310.13	50	Morse 4	31.267	D 302.06-302.07	125
310.14	50	Morse 5	44.399	D 302.06-302.07	150

ACCESSORI PER MACCHINE UTENSILI

Bussole portamorsetto ad estrazione rapida per mandrini porta utensili art. 302

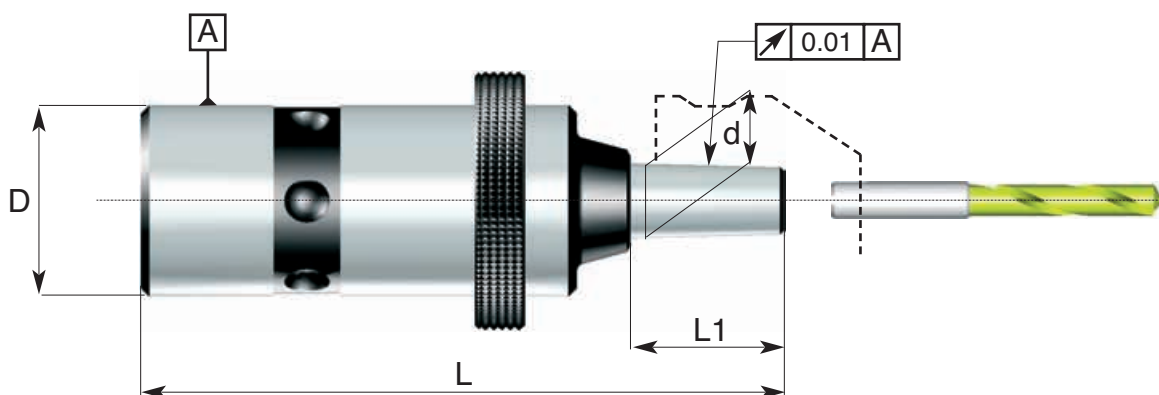
Quick change bushes for center collets for chucks art. 302

Hülsen für Schnellwechselfutter art. 302

Douilles à extraction rapide pour mandrins porte-outils art. 302



ART: 312



7.
23

Codice di ord Code	D h6	attacco DIN	d	per mandrinoTipo Chuck type	L	L1
312.01	26	B 10	10.094	A 302.01	103	22
312.02	26	B 12	12.065	A 302.01	107	22
312.03	26	B 16	15.733	A 302.01	114	29
312.04	35	B 12	12.065	B 302.02-302.03	122	22
312.05	35	B 16	15.733	B 302.02-302.03	129	29
312.06	35	B 18	17.780	B 302.02-302.03	137	37
312.07	46	B 16	15.733	C 302.04-302.05	142	29
312.08	46	B 18	17.780	C 302.04-302.05	150	37
312.09/A	60	B 16	15.733	D 302.06-302.07	163	29
312.10	60	B 18	17.780	D 302.06-302.07	171	37
312.11	60	B 22	21.793	D 302.06-302.07	183.5	55

7. MANDRINI a cono MORSE DIN 228

TOOL HOLDERS with cone MORSE DIN 228



Maschiatori a cambio rapido con compensazione elastica assiale a trazione e pressione
 Quick-change tapping chuck with compensation in compression and tension
 Gewindeschneid- und Schnellwechselfutter mit Ausgleich auf Druck und Zug
 Mandrin à tarauder à changement rapid avec compensation longitudinale et de la traction

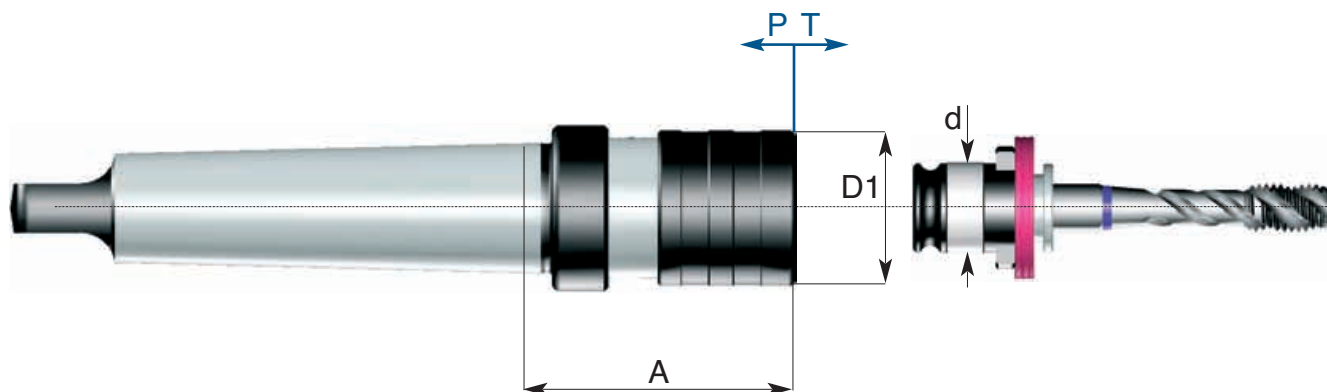
ACCESSORI PER MACCHINE UTENSILI



DIN 228 B

ART: 642

7.
24



Codice di ord Code	CM	A	D1	d	Capacità maschiatore Tapping capacity	Compensazione assiale	
						T Axial compensation	P
642.02.1205	Morse 2	55	36	19	M3 - M14	5	7
642.03.1205	Morse 3	55	36	19	M3 - M14	5	7
642.03.2008	Morse 3	82	53	31	M8 - M24	12	13
642.04.1205	Morse 4	60	36	19	M3 - M14	5	7
642.04.2008	Morse 4	82	53	31	M8 - M24	12	13
642.04.3310	Morse 4	115	78	48	M14 - M36	15	20
642.05.2008	Morse 5	85	53	31	M8 - M24	12	13
642.05.3310	Morse 5	115	78	48	M14 - M36	15	20



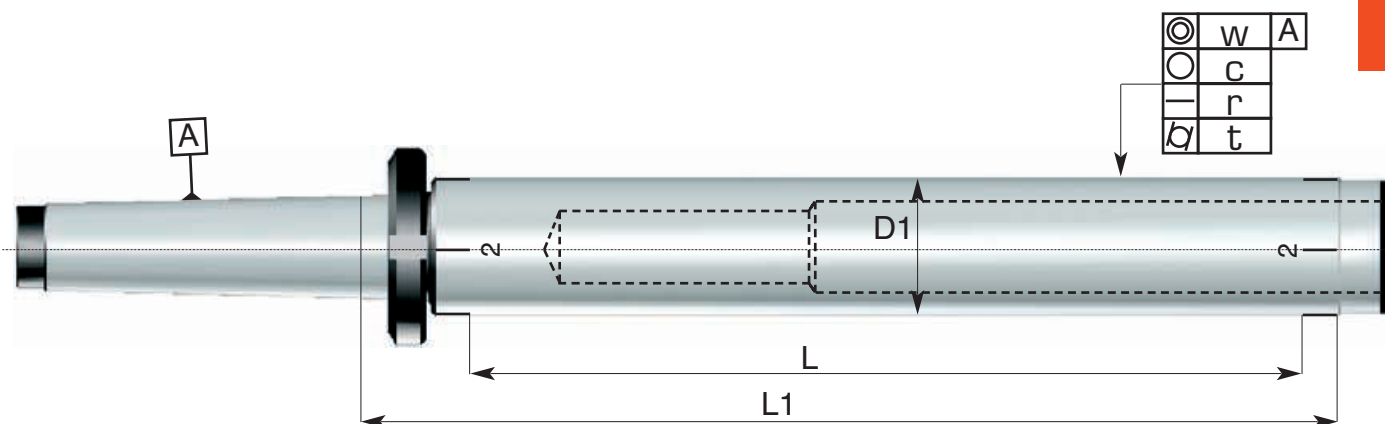
ACCESSORI PER MACCHINE UTENSILI



Cilindro di collaudo certificato
 Test arbors with test certificate
 Kontrolldorne mit Prüfungszeugnis
 Mandrins de contrôle avec certificat de bon fonctionnement

DIN 228 A

ART: 805



7.
25

Codice di ord Code	CM	D1 H5	L	L1	w	c	r	t
805.03.0320	Morse 3	32	200	235	0.003	0.003	0.003	0.003
805.04.0400	Morse 4	40	300	335	0.003	0.003	0.003	0.003
805.05.0400	Morse 5	40	300	335	0.003	0.003	0.003	0.003
805.06.0630	Morse 6	63	500	535	0.004	0.004	0.003	0.003

7. MANDRINI a cono MORSE DIN 228 TOOL HOLDERS with cone MORSE DIN 228



Contropunte rotanti di precisione "Delta"
Precision running tail centers
Reitstockspitzen
Contrepointes de précision tournantes

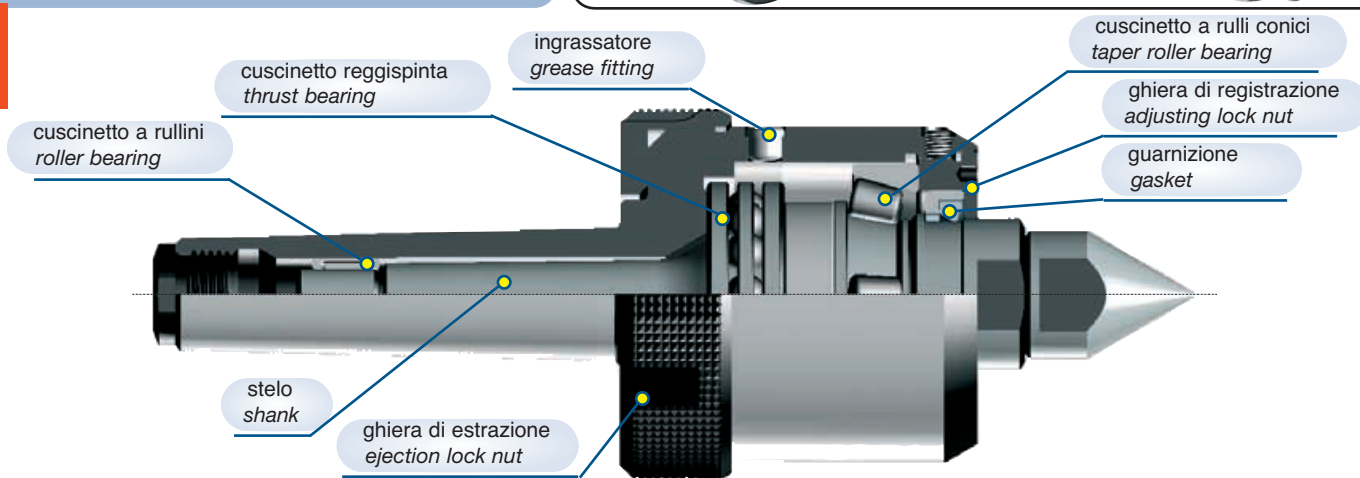
ACCESSORI PER MACCHINE UTENSILI

DIN 228/A

ART: 350 - 355 - 360
364 - 365



7.
26



CARATTERISTICHE TECNICHE DELLE CONTROPUNTE DI PRECISIONE "DELTA"

- COEFFICIENTE DI CARICO DINAMICO "C": Indica in Kg. il carico ammissibile per un cuscinetto la cui durata teorica prevedibile sia di 1 milione di giri.
- VELOCITA' MASSIMA: I valori della velocità max. vanno considerati come orientativi e valgono nell' ipotesi che i cuscinetti siano soggetti ad un carico relativamente basso (tale cioè che la loro durata sia Lh 100.000 ore) e che le loro condizioni di raffreddamento siano normali.
- Costruite in acciaio da cementazione legato
- Cementate con profondità 0,8-1mm
Temprati • Rinvenuti • Sabbiati e bruniti
- Durezza HRC 60±2 • Resistenza al nucleo 800-1000 N/mm²
- Rettificate di precisione esternamente, internamente
- Controllate con strumenti di misura certificati e fornite con certificato di collaudo
- La tolleranza di precisione dei coni MORSE è AT3

STANDARD FEATURES OF PRECISION RUNNING TAIL CENTERS "DELTA"

- DYNAMIC LOAD COEFFICIENT: shows the allowable load in Kg. for a bearing with a theoretical service life corresponding to 1 millions of revolutions.
- MAX. SPEED: Values of max. speed are standard values basing on the hypothesis that the bearing are subject to a relatively low load (to achieve a duration of Lh 100.000 hours) and that cooling conditions are normal.
- Manufactured with Nickel Chrome Molybdenum steel
- Carburized with depth of case 0,8-1 mm
• Hardened and tempered • Black oxidized
- Surface Hardness RC 60±2 • Tensile strenght of core 800-1000 N/mm²
- Precision ground on shanks
- Tested with high precision gaging equipments and supplied with test certificate
- Taper accuracy of MORSE SHANKS is AT3

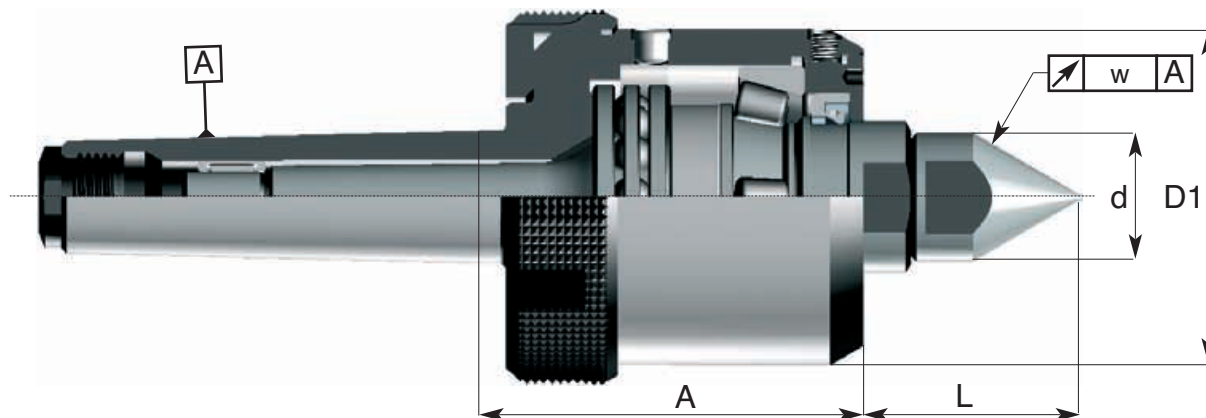
ACCESSORI PER MACCHINE UTENSILI

Contropunte rotanti di precisione a punta intercambiabile - brevettate
 Precision running tail centers with interchangeable center
 Reitstockspitzen
 Contrepointes de précision tournantes à pointe interchangeable

DIN 228/A



ART: 350



7.
27

Codice di ord Code	CM	d	D1	A	L	w mm	coeff. di carico dinamico live load coeff.		max. rpm
							"C" radiale / radial	"C" assiale / axial	
350.02	Morse 2	23	57	62	35	0.01	27000 N	22000 N	4500
350.03	Morse 3	23	60	69	40	0.01	27000 N	22000 N	4500
350.04	Morse 4	28	68	70	46	0.01	35000 N	27000 N	4000
350.04.P	Morse 4	35	83	75	55	0.01	50000 N	25000 N	3600
350.05	Morse 5	35	83	75	55	0.01	50000 N	25000 N	3600
350.05.P	Morse 5	45	100	94	68	0.01	100000 N	46500 N	2800
350.06	Morse 6	58	124	107	80	0.01	138000 N	61500 N	2800



7. MANDRINI a cono MORSE DIN 228

TOOL HOLDERS with cone MORSE DIN 228



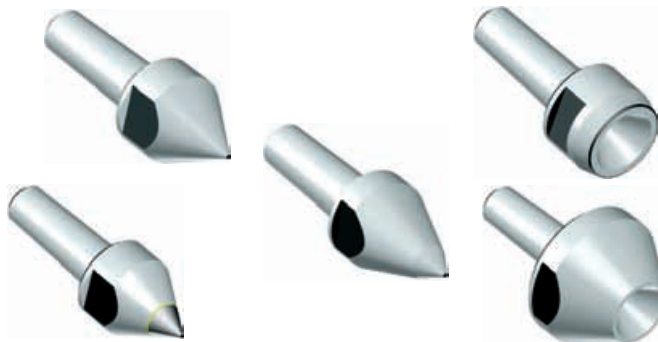
Punte di ricambio per contropunte rotanti art. 350

Spare centers for running tail centers art.350

Ersatzspitzen für Drehbankspitzen art.350

Pointes de rechange pour contrepontes tournantes art.350

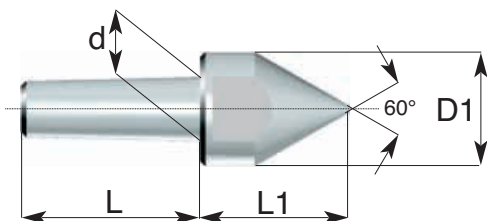
ACCESSORI PER MACCHINE UTENSILI



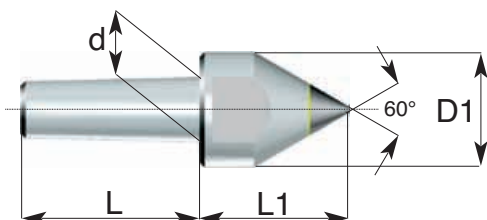
DIN 228/A

ART: 351

7.
28

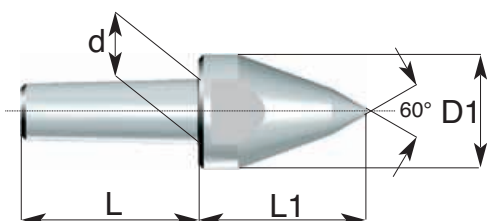


Codice di ord Code	Per contropunte for tail centres	d	D1	L	L1	d1
351.02	350.02	13	23	36	30	-
351.03	350.03	13	23	36	30	-
351.04	350.04	17	28	41	35	-
351.05	350.04.P - 350.05	20	35	46	42	-
351.05.P	350.05.P	30	45	56	55	-
351.06	350.06	40	58	65	68	-

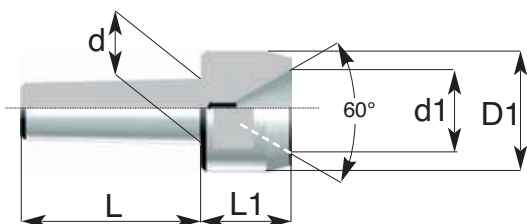


Codice di ord Code	Per contropunte for tail centres	d	D1	L	L1	d1
351.12	350.02	13	23	36	30	-
351.13	350.03	13	23	36	30	-
351.14	350.04	17	28	41	35	-
351.15	350.04.P - 350.05	20	35	46	42	-
351.15.P	350.05.P	30	45	56	55	-
351.16	350.06	40	58	65	68	-

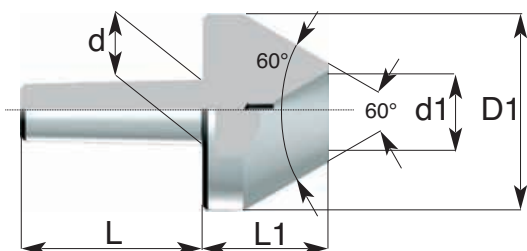
Con cuspidi in metallo duro
Carbide tipped



Codice di ord Code	Per contropunte for tail centres	d	D1	L	L1	d1
351.22	350.02	13	23	36	36	-
351.23	350.03	13	23	36	36	-
351.24	350.04	17	28	41	42	-
351.25	350.04.P - 350.05	20	35	46	52	-
351.25.P	350.05.P	30	45	56	65	-
351.26	350.06	40	48	65	81	-



Codice di ord Code	Per contropunte for tail centres	d	D1	L	L1	d1
351.42	350.02	13	24	36	18	18
351.43	350.03	13	24	36	18	18
351.44	350.04	17	30	41	22	22
351.45	350.04.P - 350.05	20	38	46	27	28
351.45.P	350.05.P	30	48	56	35	38
351.46	350.06	40	63	65	45	50



Codice di ord Code	Per contropunte for tail centres	d	D1	L	L1	d1
351.52	350.02	13	39	36	25	17
351.53	350.03	13	39	36	25	17
351.54	350.04	17	52	41	32	21
351.55	350.04.P - 350.05	20	64	46	37	27
351.55.P	350.05.P	30	78	56	42	30
351.56	350.06	40	98	65	50	45

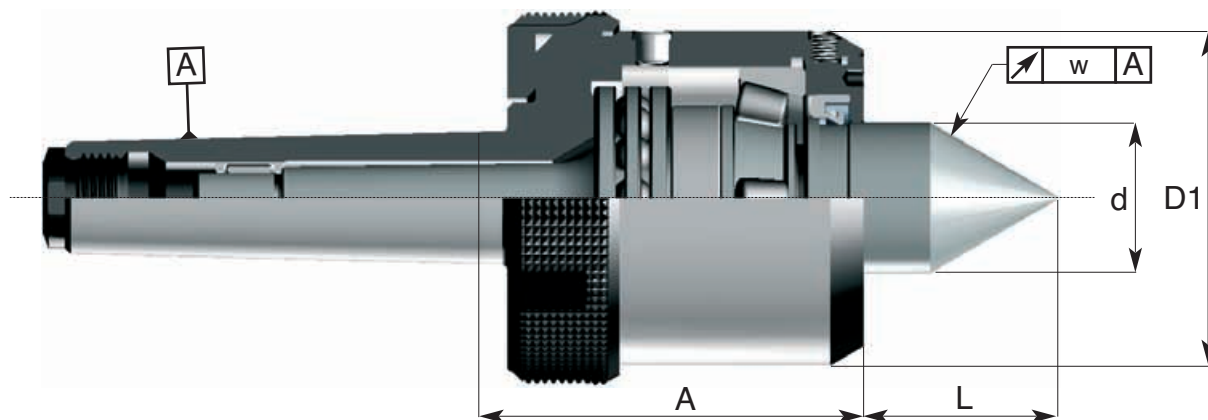
ACCESSORI PER MACCHINE UTENSILI



Contropunte rotanti di precisione
Precision running tail centers
Reitstockspitzen
Contrepointes de précision tournantes

DIN 228

ART: 355



7.
29

Codice di ord Code	CM	d	D1	A	L	w mm	coeff. di carico dinamico live load coeff.		max. rpm
							"C" radiale / radial	"C" assiale / axial	
355.02	Morse 2	20	57	62	25	0.005	27000 N	22000 N	4500
355.03	Morse 3	27	60	69	35	0.005	27000 N	22000 N	4500
355.04	Morse 4	32	68	70	40	0.005	35000 N	27000 N	4000
355.04.P	Morse 4	38	83	75	45	0.005	50000 N	25000 N	3600
355.05	Morse 5	38	83	75	45	0.005	50000 N	25000 N	3600
355.05.P	Morse 5	48	100	94	58	0.005	100000 N	46500 N	2800
355.06	Morse 6	60	124	107	70	0.01	138000 N	61500 N	2800
355.07	Metr. 80	80	160	139	80	0.01	168000 N	100000 N	1600
355.08	Metr. 100	97	200	172	80	0.01	333000 N	210000 N	1000

7. MANDRINI a cono MORSE DIN 228

TOOL HOLDERS with cone MORSE DIN 228



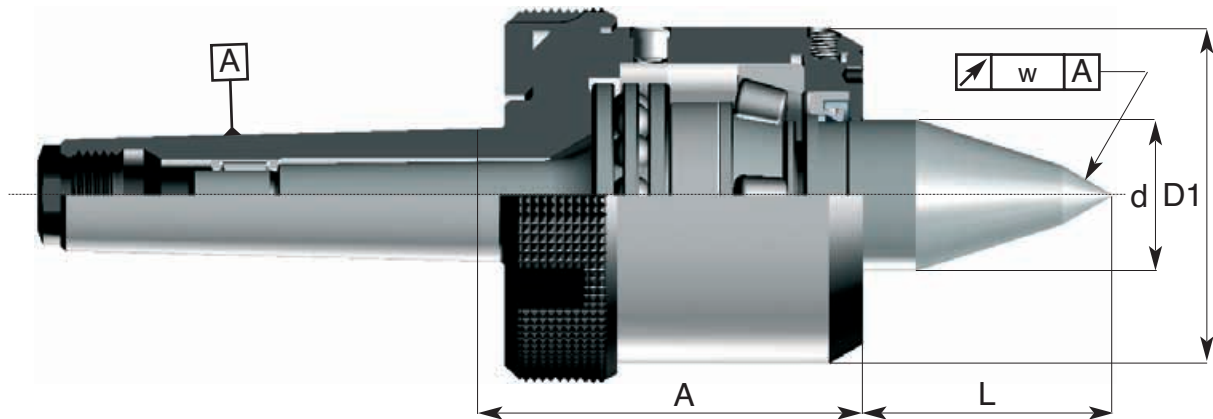
Contropunte rotanti di precisione prolungate per torni a copiare
 Extended precision running tail centers for copying lathes
 Reitstockspitzen für Kopierdrehbank
 Contrepointes de précision tournantes rallongées pour tours à copier

ACCESSORI PER MACCHINE UTENSILI

DIN 228/A



ART: 360



7.
30

Codice di ord Code	CM	d	D1	A	L	w mm	coeff. di carico dinamico live load coeff.		max. rpm
							"C" radiale / radial	"C" assiale / axial	
360.03	Morse 3	27	60	69	45	0.005	27000 N	22000 N	4500
360.04	Morse 4	32	68	70	52	0.005	35000 N	27000 N	4000
360.04.P	Morse 4	38	83	75	65	0.005	50000 N	25000 N	3600
360.05	Morse 5	38	83	75	65	0.005	50000 N	25000 N	3600
360.05.P	Morse 5	48	100	95	75	0.005	100000 N	46500 N	2800
360.06	Morse 6	60	124	107	92	0.01	138000 N	61500 N	2800
360.07	Metr. 80	80	160	139	100	0.01	168000 N	100000 N	1600

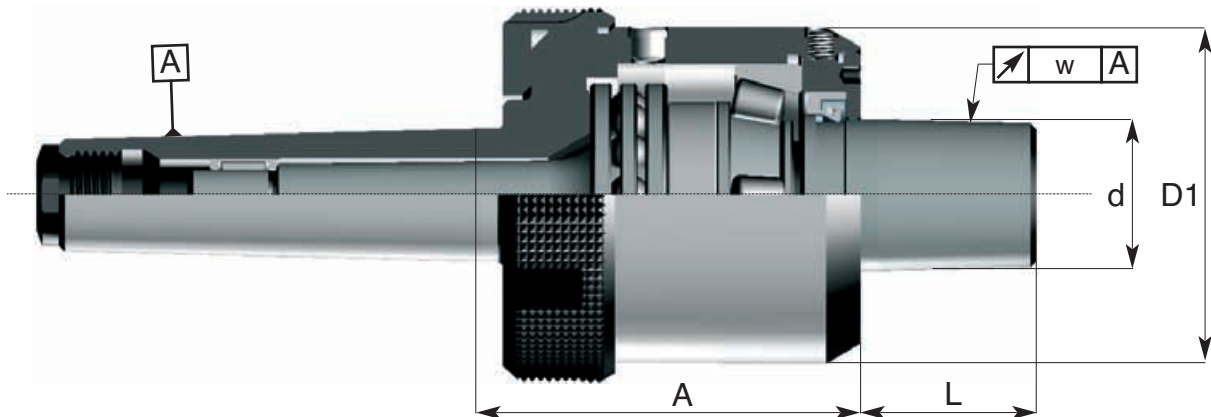
ACCESSORI PER MACCHINE UTENSILI

Contropunte rotanti di precisione con stelo conicità 1/20
 Precision running tail centers for special applications - Shank with 1/20 taper
 Reitstockspitzen für spezielle Anwendungen - Konizität 1/20-
 Contrepointes de précision tournantes pour applications spéciales - Tige à conicité 1/20

DIN 228/A

ART: 364

7.
31



Codice di ord Code	CM	d	D1	A	L	w mm	coeff. di carico dinamico live load coeff.		max. rpm
							"C" radiale / radial	"C" assiale / axial	
364.03	Morse 3	27	60	69	28	0.006	27000 N	22000 N	4500
364.04	Morse 4	32	68	70	35	0.006	35000 N	27000 N	4000
364.04 P	Morse 4	38	83	75	40	0.006	50000 N	25000 N	3600
364.05	Morse 5	38	83	75	40	0.006	50000 N	25000 N	3600
364.05 P	Morse 5	48	100	95	45	0.006	100000 N	46500 N	2800
364.06	Morse 6	60	124	107	55	0.01	138000 N	61500 N	2800
364.07	Metr: 80	80	160	139	65	0.01	168000 N	100000 N	1600
364.08	Metr: 100	97	200	172	75	0.01	333000 N	210000 N	1000

*Per punte ricambio Art. 365/366 pag. 7.33
 *For spare centers page 7.33

7. MANDRINI a cono MORSE DIN 228

TOOL HOLDERS with cone MORSE DIN 228

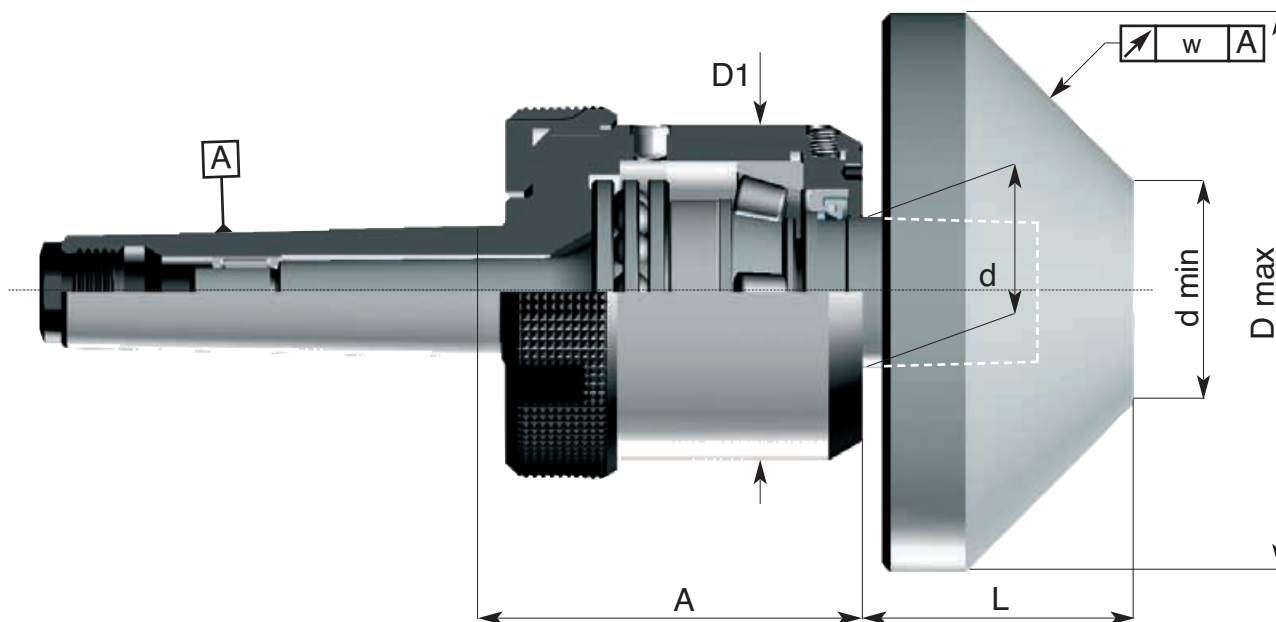


Contropunte rotanti di precisione per lavorazioni di tubi
 Precision running tail centers for pipe machining
 Reitstockspitzen für Rohrearbeitung
 Contrepointes de précision tournantes pour usinage des pièces tubulaires

ACCESSORI PER MACCHINE UTENSILI

DIN 228/A

ART: 365



7.
32

coeff. di carico dinamico

live load coeff.

Codice di ord Code	CM	d	d min	D max	A	D1	L	w mm	coeff. di carico dinamico		max. rpm
									"C" radiale / radial	"C" assiale / axial	
365.03	Morse 3	27	22	100	65	60	47	0.006	27000 N	22000 N	4500
365.04	Morse 4	32	25	125	70	68	57	0.006	35000 N	27000 N	4000
365.04 P	Morse 4	38	30	150	75	83	68	0.006	50000 N	25000 N	3600
365.05	Morse 5	38	30	150	75	83	68	0.006	50000 N	25000 N	3600
365.05 P	Morse 5	48	40	200	95	100	90	0.006	100000 N	46500 N	2800
365.06	Morse 6	60	60	250	107	124	105	0.01	138000 N	61500 N	2800
365.07	Metr: 80	80	80	300	139	160	125	0.01	168000 N	100000 N	1600
365.08	Metr: 100	97	90	350	172	200	145	0.01	333000 N	210000 N	1000

*Per punte ricambio Art. 365/366 pag. 7.33
 *For spare centers page 7.33

ACCESSORI PER MACCHINE UTENSILI

Punte intercambiabili per contropunte rotanti di precisione lavorazione tubi art. 364 - 365

Spare centers for running tail centers art. 364 - 365

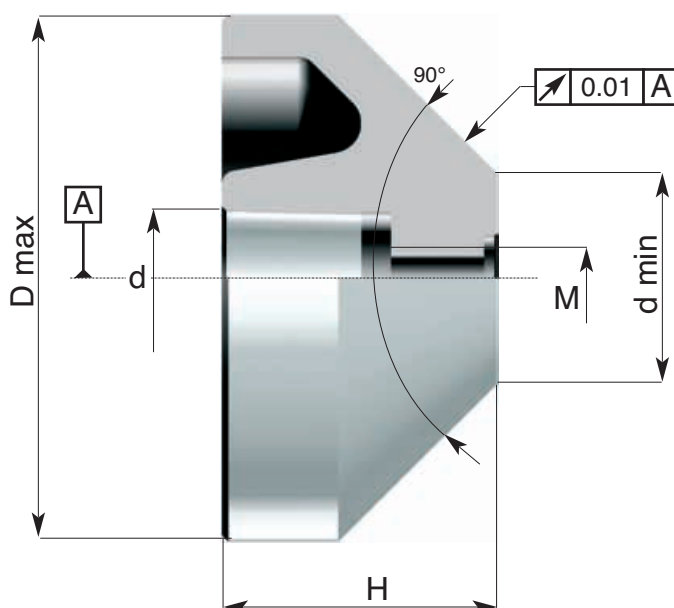
Ersatzspitzen für Drehbankspitzen art. 364 - 365

Pointes de rechange pour contrepontes tournantes art. 364 - 365



ART: 365 - 366

7.
33



Codice di ord Code	D max	d min	d	H	M	per contropunta for tail centres
366.03.065	65	20	27	45	M12	364.03 - 365.03
366.03.100	100	60	27	45	M12	364.03 - 365.03
365.03.03	100	27	27	47	M12	364.03 - 365.03
366.04.080	80	25	32	50	M14	364.04 - 365.04
366.04.125	125	75	32	50	M14	364.04 - 365.04
365.04.03	125	25	32	47	M14	364.04 - 365.04
366.05.100	100	30	38	60	M14	364.04.P - 364.05 - 364.04.P - 365.05
366.05.150	150	95	38	60	M14	364.04.P - 364.05 - 364.04.P - 365.05
365.05.03	150	30	38	68	M14	364.04.P - 364.05 - 364.04.P - 365.05
366.05.P.130	130	40	48	65	M20	364.05.P - 365.05.P
366.05.P.200	200	125	48	65	M20	364.05.P - 365.05.P
365.05.03.P	200	40	48	90	M20	364.05.P - 365.05.P
366.06.130	130	55	60	75	M24	364.06 - 365.06
366.06.190	190	120	60	75	M24	364.06 - 365.06
366.06.250	250	180	60	75	M24	364.06 - 365.06
365.06.03	250	60	60	105	M24	364.06 - 365.06
366.07.150	150	55	80	90	M24	364.07 - 365.07
366.07.230	230	120	80	90	M24	364.07 - 365.07
366.07.300	300	180	80	90	M24	364.07 - 365.07
365.07.03	300	80	80	125	M24	364.07 - 365.07
366.08.180	180	85	98	100	M24	364.08 - 365.08
366.08.265	265	170	98	100	M24	364.08 - 365.08
366.08.350	350	255	98	100	M24	364.08 - 365.08
365.08.03	350	90	98	145	M24	364.08 - 365.08

7. MANDRINI a cono MORSE DIN 228 TOOL HOLDERS with cone MORSE DIN 228



Cassette con contropunte rotanti e punte intercambiabili

Boxes with precision running tail centers and spare centers

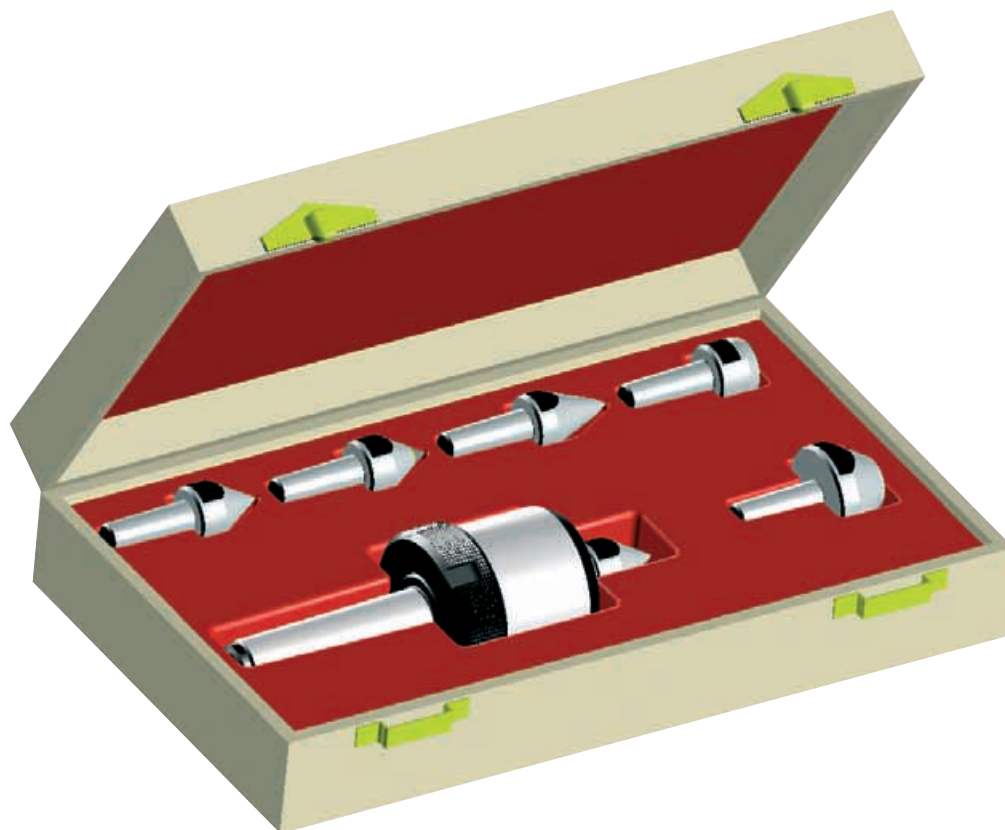
Kassetten mit Reitstockspitzen und Ersatzspitzen

Coffrets avec contrepoinces de précision tournantes et pointes de rechange

ACCESSORI PER MACCHINE UTENSILI

DIN 228/A

KIT CONTROPUNTA
ART: 30...



7.
34

Codice di ord Code	Contropunta	CM	Punta tipo "N"	Punta tipo "S"	Punta tipo "P"	Punta tipo "I"	Punta tipo "C"
30.02	350.02	Morse 2	351.02	351.12	351.22	351.42	351.52
30.03	350.03	Morse 3	351.03	351.13	351.23	351.43	351.53
30.04	350.04	Morse 4	351.04	351.14	351.24	351.44	351.54
30.04.P	350.04.P	Morse 4	351.05	351.15	351.25	351.45	351.55
30.05	350.05	Morse 5	351.05	351.15	351.25	351.45	351.55
30.05.P	350.05.P	Morse 5	351.05.P	351.15 P	351.25. P	351.45. P	351.55 P
30.06	350.06	Morse 6	351.06	351.16	351.26	351.46	351.56

ACCESSORI PER MACCHINE UTENSILI

Contropunte fisse per tornio DIN 806

Dead centers for lathes DIN 806

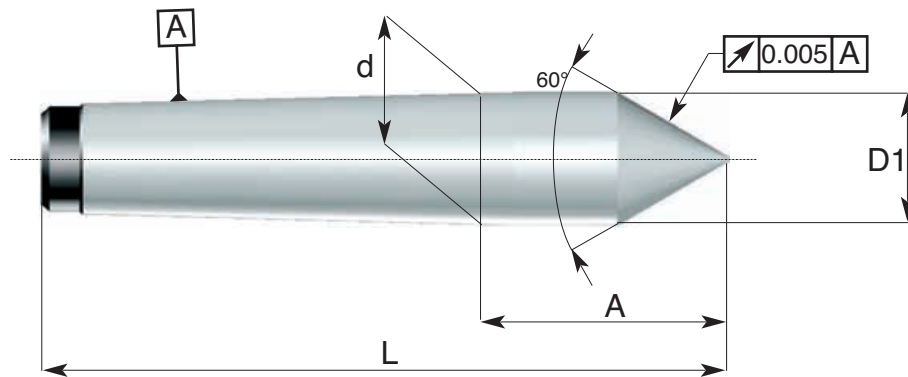
Körnerspitzen für Drehmaschinen DIN 806

Contrepointes fixes pour tour DIN 806

DIN 228 A

ART: 380

7.
35



Codice di ord Code	CM	d	D1	A	L
380.00	Morse 0	9.20	9.20	20	70
380.01	Morse 1	12.065	12.20	27.5	80
380.02	Morse 2	17.780	18.00	36	100
380.03	Morse 3	23.825	24.10	44	125
380.04	Morse 4	31.267	31.60	57.5	160
380.05	Morse 5	44.399	44.70	70.5	200
380.06	Morse 6	63.348	63.80	88	270

7. MANDRINI a cono MORSE DIN 228

TOOL HOLDERS with cone MORSE DIN 228



Contropunte fisse per rettifica DIN 806

Dead centers for grinding machines DIN 806

Körnerspitzen für Schleifmaschinen DIN 806

Contrepointes fixes pour rectifieuses DIN 806

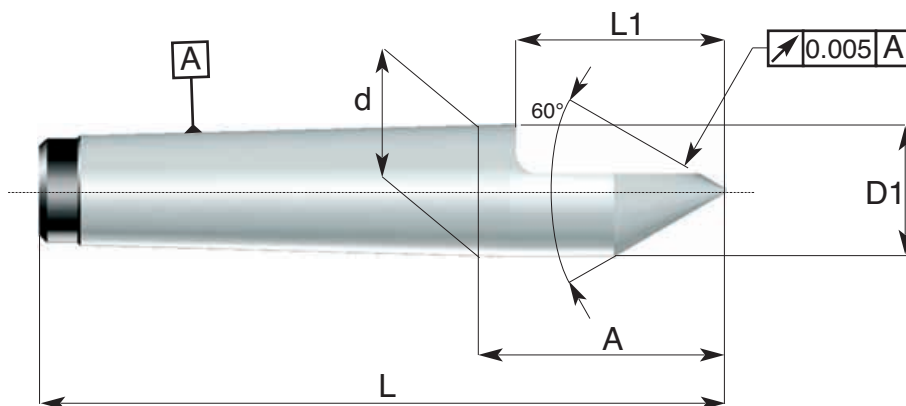
ACCESSORI PER MACCHINE UTENSILI

DIN 228 A

ART: 382



7.
36



Codice di ord Code	CM	d	D1	A	L	L1
382.01	Morse 1	12.065	12.20	27.5	80	22
382.02	Morse 2	17.780	18.00	36	100	30
382.03	Morse 3	23.825	24.10	44	125	38
382.04	Morse 4	31.267	31.60	57.5	160	50
382.05	Morse 5	44.399	44.70	70.5	200	63
382.06	Morse 6	63.348	63.80	88	270	79

ACCESSORI PER MACCHINE UTENSILI



Contropunte fisse con cuspidi in metallo duro DIN 806

Carbide tipped dead centers DIN 806

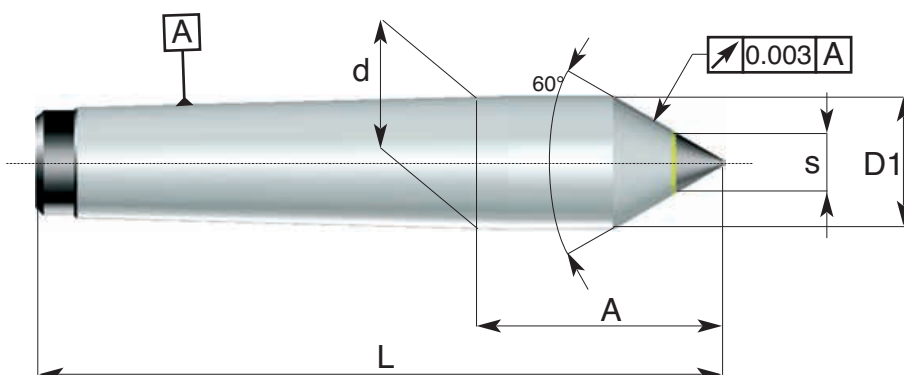
Körnerspitzen mit Hartmetall DIN 806

Contrepointes fixes avec pointe d'extrémité en metal dur DIN 806

DIN 228 A

ART: 385

7.
37



Codice di ord Code	CM	d	D1	A	L	S
385.01	Morse 1	12.065	12.20	27.5	80	6
385.02	Morse 2	17.780	18.00	36	100	7
385.03	Morse 3	23.825	24.10	44	125	11
385.04	Morse 4	31.267	31.60	57.5	160	14
385.05	Morse 5	44.399	44.70	70.5	200	18
385.06	Morse 6	63.348	63.80	88	270	20

7. MANDRINI a cono MORSE DIN 228

TOOL HOLDERS with cone MORSE DIN 228



Contropunte fisse per rettifica con cuspidi in metallo duro DIN 806

Carbide tipped dead centers for grinding machines DIN 806

Körnerspitzen mit Hartmetall für Schleifmaschinen DIN 806

Contrepointes fixes avec pointe d'extrémité en métal dur pour rectifieuses DIN 806

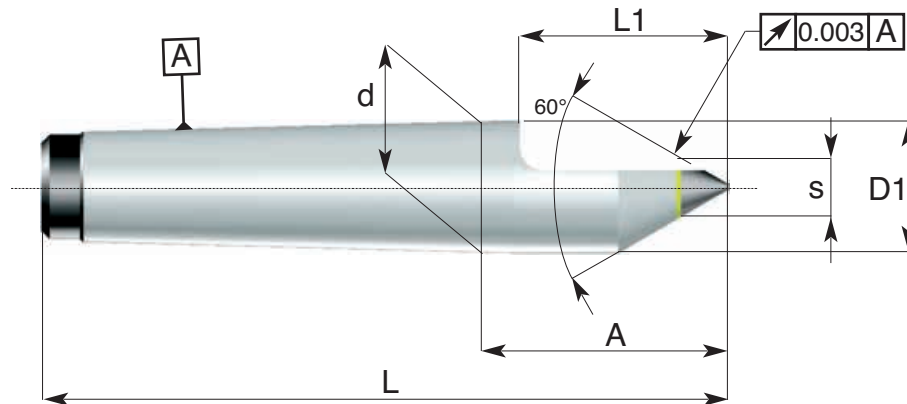
ACCESSORI PER MACCHINE UTENSILI



DIN 228 A

ART: 386

7.
38



Codice di ord Code	CM	d	D1	A	L	L1	s
386.01	Morse 1	12.065	12.20	27.5	80	22	6
386.02	Morse 2	17.780	18.00	36	100	30	7
386.03	Morse 3	23.825	24.10	44	125	38	11
386.04	Morse 4	31.267	31.60	57.5	160	50	14
386.05	Morse 5	44.399	44.70	70.5	200	63	18
386.06	Morse 6	63.348	63.80	88	270	79	20

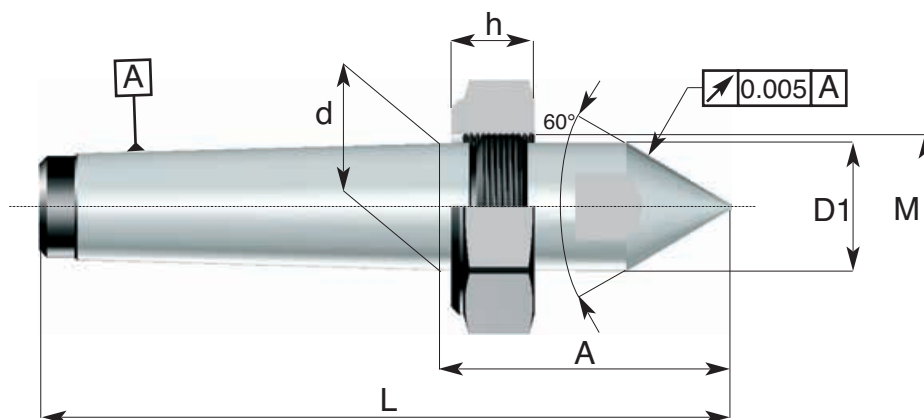
ACCESSORI PER MACCHINE UTENSILI



Contropunte fisse per tornio complete di ghiera di estrazione DIN 807
 Dead centers with ejector ring for lathes DIN 807
 Körnerspitzen mit Abdrückmutter für Drehmaschinen DIN 807
 Contrepointes fixes avec manchon d'extraction pour tour DIN 807

DIN 228 A

ART: 387



7.
39

Codice di ord Code	CM	d	D1	A	L	M	h	Ghiere Nut
387.02	Morse 2	17.780	18.00	46.5	112	M22 X 1.5	15.5	398.02
387.03	Morse 3	23.825	24.10	58.5	138	M27 X 1.5	17.5	398.03
387.04	Morse 4	31.267	31.60	72.5	175	M36 X 1.5	21	398.04
387.05	Morse 5	44.399	44.70	88.5	217	M48 X 1.5	23	398.05
387.06	Morse 6	63.348	63.80	108	290	M68 X 1.5	25	398.06

7. MANDRINI a cono MORSE DIN 228

TOOL HOLDERS with cone MORSE DIN 228



Contropunte fisse pesanti complete di ghiera di estrazione conicità 1/10 e 1/20

Heavy duty dead centers with ejector ring - 1/10 and 1/20 taper

Körnerspitzen mit Abdrückmutter für Drehmaschinen- Konizität 1/10 und 1/20

Contrepontes fixes série pour travaux pénibles avec manchon d'extraction- Conicité 1/10 et 1/20

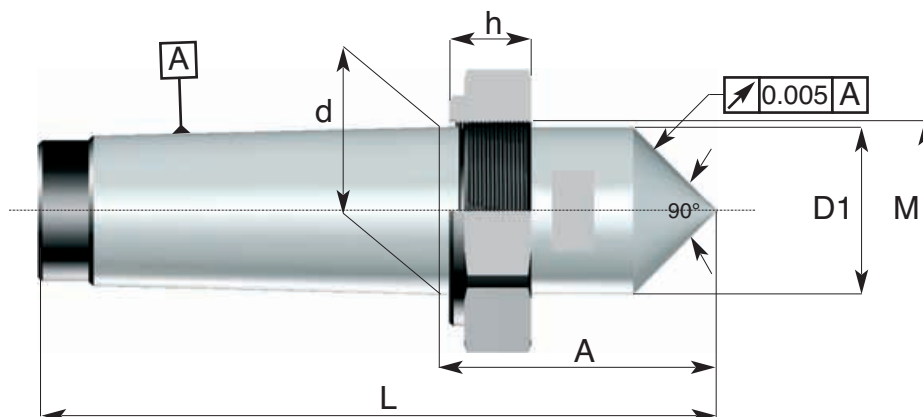
ACCESSORI PER MACCHINE UTENSILI



DIN 228 A

ART: 388

7.
40



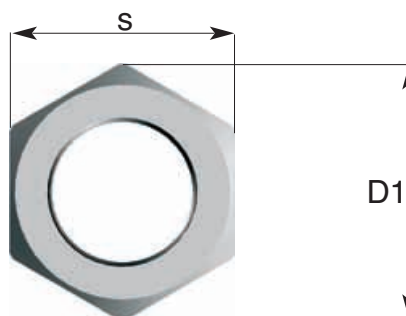
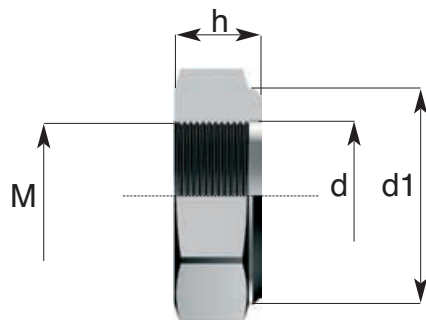
Codice di ord Code	CM	d	D1	A	L	M	h	Ghiere Nut
388.01	Metr: 80	80	80	130	321	M85 x 2	40	399.01
388.02	Metr: 100	100	100	145	385	M108 x 3	48	399.02
388.03	Metr: 120	120	120	155	435	M128 x 3	50	399.03
388.04	Metr: 140	140	140	170	490	M148 x 3	55	399.04

In caso d'ordine specificare il tipo di conicità (1/10 o 1/20).
 In case of order, please indicate the taper (1/10 o 1/20).
 Bei Auftragserteilung, die Konizität angeben (1/10 o 1/20).
 En cas de commande il faut indiquer la conicité (1/10 o 1/20).



Ghiere d'estrazione

ART: 398



7.
41

Codice di ord Code	M	d	d1	h	s	Per contropunte Tail centres
398.01	M 16 x 1.5	17	23	12	24	387.01
398.02	M 22 x 1.5	23	30	15.5	32	387.02
398.03	M 27 x 1.5	28	39	17.5	41	387.03
398.04	M 36 x 1.5	37	53	21	55	387.04
398.05	M 48 x 1.5	50	67	23	75	387.05
398.06	M 68 x 1.5	17	90	25.5	100	387.06

Ghiera di estrazione per contropunte fisse a conicità metrica 1/10 e 1/20 art. 388

Ejector ring for heavy duty dead centers - 1/10 and 1/20 taper - art. 388

Abdrückmutter für Körnerspitzen Konizität 1/10 und 1/20 - art. 388

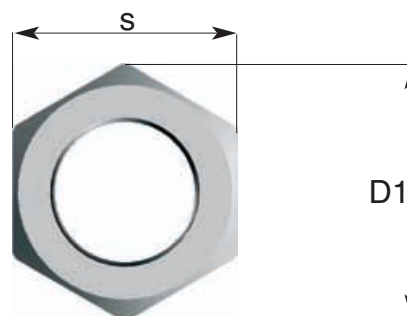
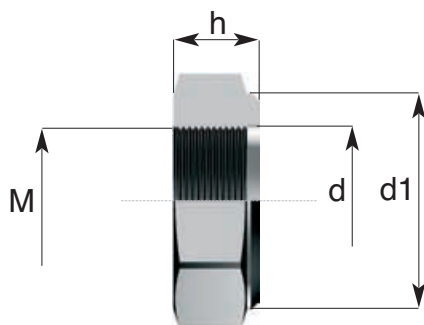
Manchon d'extraction pour contrepontes fixes - Conicité 1/10 et 1/20 - art. 388



Ghiere d'estrazione

ART: 399

standard / standard



Codice di ord Code	M	d	d1	h	s	Per contropunte Tail centres
399.01	M 85 x 2	87	119	40	120	388.01
399.02	M108 x 3	110	144	48	145	388.02
399.03	M128 x 3	130	169	50	170	388.03
399.04	M148 x 3	150	198	55	200	388.04

8.2

- Riduzioni cono Morse
Adaptor sleeve

8.3

- Riduzioni cono Morse
Adaptor sleeve

8.5

- Riduzioni cono Morse
Adaptor sleeve

8.6

- Maschiatori
Tapping chuck

8.7

- Ghiera di registrazione
Setting ring



DIN 6327
Astucci registrabili
Adjustable tool bushes

8

 **delta**

8. Astucci Registrabili DIN 6327

Adjustable Toolbushes DIN 6327



Astucci registrabili DIN 6327 riduzione cono morse tipo corto

Adjustable adaptors DIN 6327 to Morse cone - short type

Nachstellbare Werkzeugfutter DIN 6327 zu Morsekegel- kurze Ausführung

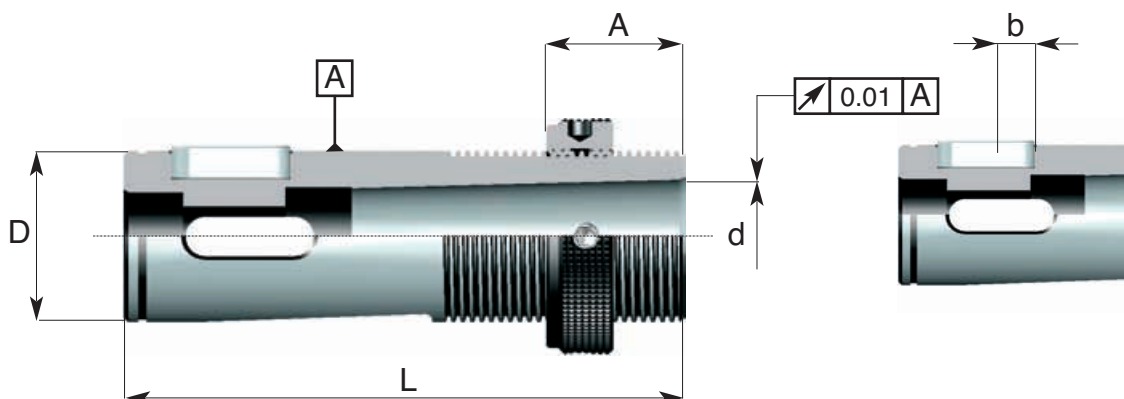
Trousses réglables porte-outils DIN 6327 à cône Morse- type court

ACCESSORI PER MACCHINE UTENSILI



DIN 6327 Forma E

ART: 620



Codice di ord Code	D h6 X passo	CM	d	L	b	A	
						min	max
620.16.0100	16 x 1.5 Tr	Morse 1	12.065	85	5	12	40
620.20.0100	20 x 2 Tr	Morse 1	12.065	88	5	12	40
620.25.0100	25 x 2 Tr	Morse 1	12.065	95	6	12	42
620.25.0200	25 x 2 Tr	Morse 2	17.780	95	6	12	42
620.28.0100	28 x 2 Tr	Morse 1	12.065	95	6	12	42
620.28.0200	28 x 2 Tr	Morse 2	17.078	95	6	12	42
620.32.0100	32 x 2 Tr	Morse 1	12.065	118	8	12	50
620.32.0200	32 x 2 Tr	Morse 2	17.780	118	8	12	50
620.32.0300	32 x 2 Tr	Morse 3	23.825	118	8	12	50
620.36.0100	36 x 2 Tr	Morse 1	12.065	118	8	14	50
620.36.0200	36 x 2 Tr	Morse 2	17.780	118	8	14	50
620.36.0300	36 x 2 Tr	Morse 3	23.825	118	8	14	50
620.48.0100	48 x 2 Tr	Morse 1	12.065	144	10	18	65
620.48.0200	48 x 2 Tr	Morse 2	17.780	144	10	18	65
620.48.0300	48 x 2 Tr	Morse 3	23.825	144	10	18	65
620.48.0400	48 x 2 Tr	Morse 4	31.267	144	10	18	65

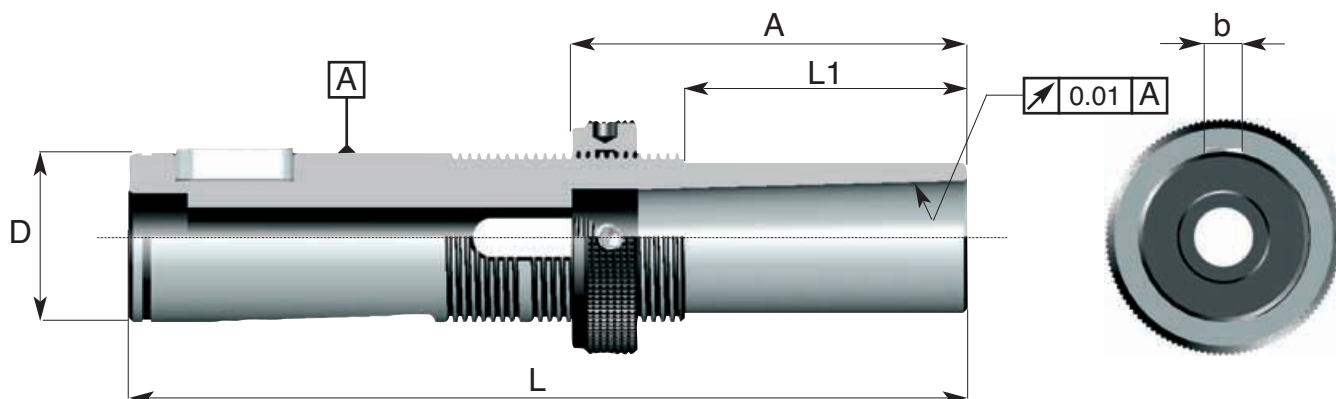
ACCESSORI PER MACCHINE UTENSILI

Astucci registrabili portautensili tipo lungo DIN 6327 completi di linguetta e ghiera
 Adjustable adaptors DIN 6327 - long type, with feather key and ring nut
 Nachstellbare Werkzeugsfutter DIN 6327 - lange Ausführung mit Zunge und Klemmutter
 Trousses réglables porte-outils DIN 6327 - type long avec languettes et bague



DIN 6327 Forma G

ART: 622



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Codice di ord Code	D h6 X passo	CM	L	L1	b	A	
						min	max
622.16.0100	16 x 1.5 Tr.	Morse 1	110	25	5	37	65
622.16.0102	16 x 1.5 Tr.	Morse 1	135	50	5	62	80
622.16.0104	16 x 1.5 Tr.	Morse 1	160	75	5	87	115
622.16.0106	16 x 1.5 Tr.	Morse 1	185	100	5	112	140
622.20.0100	20 x 2 Tr.	Morse 1	113	25	5	37	65
622.20.0102	20 x 2 Tr.	Morse 1	138	50	5	62	80
622.20.0104	20 x 2 Tr.	Morse 1	163	75	5	87	115
622.20.0106	20 x 2 Tr.	Morse 1	188	100	5	112	140
622.25.0100	25 x 2 Tr.	Morse 1	120	25	6	37	67
622.25.0102	25 x 2 Tr.	Morse 1	145	50	6	62	92
622.25.0104	25 x 2 Tr.	Morse 1	170	75	6	87	117
622.25.0106	25 x 2 Tr.	Morse 1	195	100	6	112	142
622.25.0200	25 x 2 Tr.	Morse 2	120	25	6	37	67
622.25.0202	25 x 2 Tr.	Morse 2	145	50	6	62	92
622.28.0100	28 x 2 Tr.	Morse 1	120	25	6	37	67
622.28.0102	28 x 2 Tr.	Morse 1	145	50	6	62	92
622.28.0104	28 x 2 Tr.	Morse 1	170	75	6	87	117
622.28.0106	28 x 2 Tr.	Morse 1	195	100	6	112	142
622.28.0200	28 x 2 Tr.	Morse 2	120	25	6	37	67
622.28.0202	28 x 2 Tr.	Morse 2	145	50	6	62	92
622.28.0204	28 x 2 Tr.	Morse 2	170	75	6	87	117
622.28.0206	28 x 2 Tr.	Morse 2	195	100	6	112	142
622.32.0100	32 x 2 Tr.	Morse 1	178	60	8	42	80
622.32.0102	32 x 2 Tr.	Morse 1	178	60	8	102	140
622.32.0200	32 x 2 Tr.	Morse 2	178	60	8	42	80
622.32.0202	32 x 2 Tr.	Morse 2	178	60	8	102	140
622.32.0204	32 x 2 Tr.	Morse 2	208	90	8	132	170
622.32.0300	32 x 2 Tr.	Morse 3	178	60	8	42	80
622.32.0302	32 x 2 Tr.	Morse 3	178	60	8	102	140
622.32.0304	32 x 2 Tr.	Morse 3	208	90	8	132	170
622.32.0306	32 x 2 Tr.	Morse 3	238	120	8	132	170
622.32.0308	32 x 2 Tr.	Morse 3	268	150	8	162	200
622.32.0310	32 x 2 Tr.	Morse 3	298	180	8	192	230

8. Astucci Registrabili DIN 6327

Adjustable Toolbushes DIN 6327



Astucci registrabili portautensili tipo lungo DIN 6327 completi di linguetta e ghiera

Adjustable adaptors DIN 6327 - long type, with feather key and ring nut

Nachstellbare Werkzeugsfutter DIN 6327 - lange Ausführung mit Zunge und Klemmutter

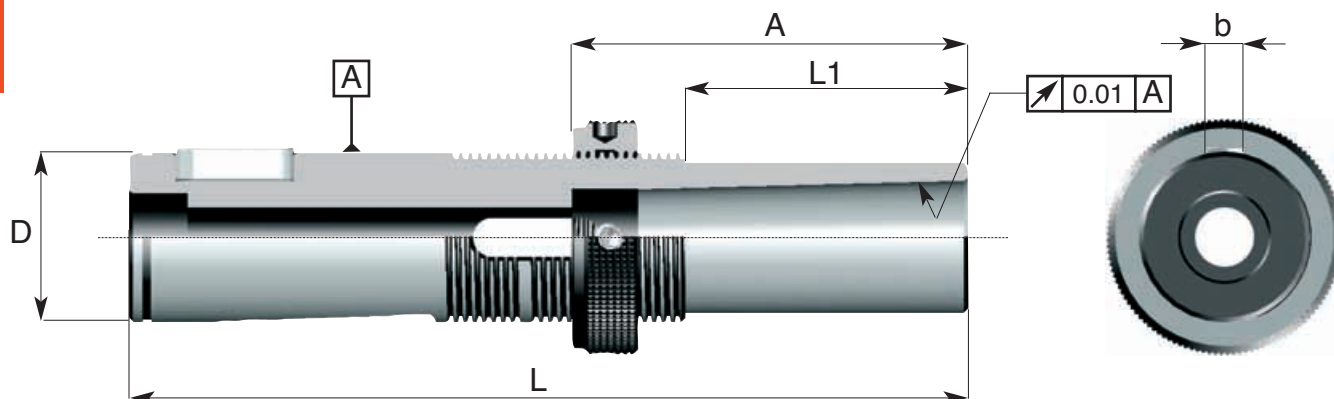
Trousses réglables porte-outils DIN 6327 - type long avec languettes et bague

ACCESSORI PER MACCHINE UTENSILI



DIN 6327 Forma G

ART: 622



Codice di ord Code	D h6 X passo	CM	L	L1	b	A	
						min	max
622.36.0100	36 x 2 Tr.	Morse 1	148	30	8	44	80
622.36.0102	36 x 2 Tr.	Morse 1	178	60	8	74	110
622.36.0104	36 x 2 Tr.	Morse 1	208	90	8	104	140
622.36.0106	36 x 2 Tr.	Morse 1	238	120	8	134	170
622.36.0108	36 x 2 Tr.	Morse 1	268	150	8	164	200
622.36.0110	36 x 2 Tr.	Morse 1	298	180	8	194	230
622.36.0200	36 x 2 Tr.	Morse 2	148	30	8	44	80
622.36.0202	36 x 2 Tr.	Morse 2	178	60	8	74	110
622.36.0204	36 x 2 Tr.	Morse 2	208	90	8	104	140
622.36.0206	36 x 2 Tr.	Morse 2	238	120	8	134	170
622.36.0300	36 x 2 Tr.	Morse 3	148	30	8	44	80
622.36.0302	36 x 2 Tr.	Morse 3	178	60	8	74	110
622.36.0304	36 x 2 Tr.	Morse 3	208	90	8	104	140
622.36.0306	36 x 2 Tr.	Morse 3	238	120	8	134	170
622.36.0308	36 x 2 Tr.	Morse 3	268	150	8	164	200
622.36.0310	36 x 2 Tr.	Morse 3	298	180	8	194	230
622.48.0200	48 x 2 Tr.	Morse 2	184	40	10	58	105
622.48.0202	48 x 2 Tr.	Morse 2	224	80	10	98	145
622.48.0204	48 x 2 Tr.	Morse 2	264	120	10	138	185
622.48.0206	48 x 2 Tr.	Morse 2	304	160	10	178	225
622.48.0208	48 x 2 Tr.	Morse 2	344	200	10	218	265
622.48.0300	48 x 2 Tr.	Morse 3	184	40	10	58	105
622.48.0302	48 x 2 Tr.	Morse 3	224	80	10	98	145
622.48.0304	48 x 2 Tr.	Morse 3	264	120	10	138	185
622.48.0306	48 x 2 Tr.	Morse 3	304	160	10	178	225
622.48.0308	48 x 2 Tr.	Morse 3	344	200	10	218	265
622.48.0400	48 x 2 Tr.	Morse 4	184	40	10	58	105
622.48.0402	48 x 2 Tr.	Morse 4	224	80	10	98	145
622.48.0404	48 x 2 Tr.	Morse 4	264	120	10	138	185
622.48.0406	48 x 2 Tr.	Morse 4	304	160	10	178	225
622.48.0408	48 x 2 Tr.	Morse 4	344	200	10	218	265

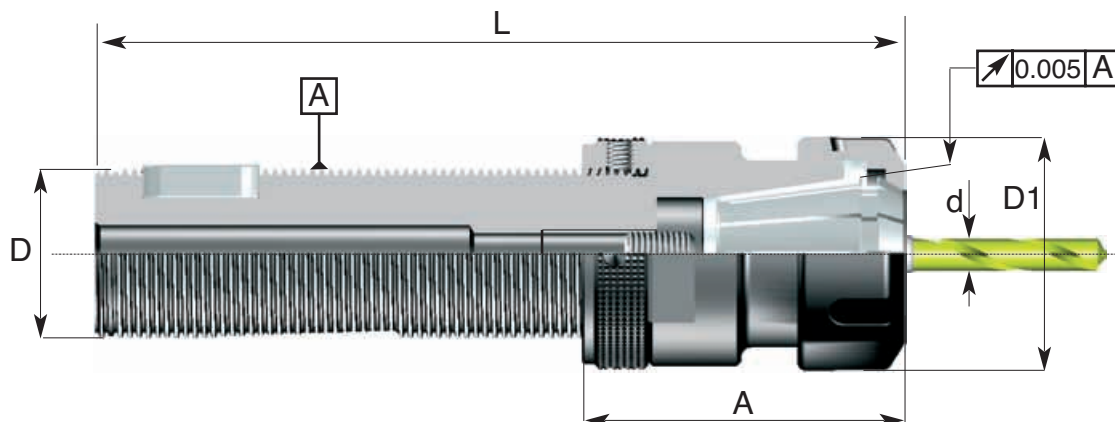
ACCESSORI PER MACCHINE UTENSILI



Astuccio registrabile DIN 6327 portapinze ER
Adjustable adaptors DIN 6327 ER collet chucks
Nachstellbare Werkzeugfutter DIN 6327 Spannzangenhalter ER
Trousse réglables porte-outils DIN 6327 porte-pinces ER

DIN 6327

ART: 612



Codice di ord Code	D h6 X passo	ER	D1	Cap. Pinza "d" Capacity Range "d"	b	L	A	
							min	max
612.16.0160	16 x 1.5 Tr.	ER 16	28	da 0.5 a 10	5	131	58	88
612.20.0160	20 x 2 Tr.	ER 16	28	da 0.5 a 10	5	134	58	88
612.20.0200	20 x 2 Tr.	ER 20	34	da 0.5 a 13	5	136	58	88
612.25.0250	25 x 2 Tr.	ER 25	42	da 1 a 16	6	141	58	90
612.28.0160	28 x 2 Tr.	ER 16	28	da 0.5 a 10	6	138	58	90
612.28.0200	28 x 2 Tr.	ER 20	34	da 0.5 a 13	6	141	58	90
612.28.0250	28 x 2 Tr.	ER 25	42	da 0.5 a 16	6	141	58	90
612.28.0320	28 x 2 Tr.	ER 32	50	da 1 a 20	6	153	70	100
612.36.0250	36 x 2 Tr.	ER 25	42	da 1 a 16	8	174	70	106
612.36.0320	36 x 2 Tr.	ER 32	50	da 1 a 20	8	176	70	106
612.36.0400	36 x 2 Tr.	ER 40	63	da 1 a 26	8	185	80	116
612.48.0320	48 x 2 Tr.	ER 32	50	da 1 a 20	10	195	75	122
612.48.0400	48 x 2 Tr.	ER 40	63	da 2 a 30	10	200	80	127

8. Astucci Registrabili DIN 6327

Adjustable Toolbushes DIN 6327



Astuccio registrabile DIN 6327 maschiatore a cambio rapido con compensazione elastica assiale a trazione e pressione

Adjustable adaptors DIN 6327 tapping chucks with traction and pressure elastic axial compensation

Nachstellbare Werkzeugsfütter DIN 6327 Gewindeschneid mit axial elastisch Zug- und Druckausgleich

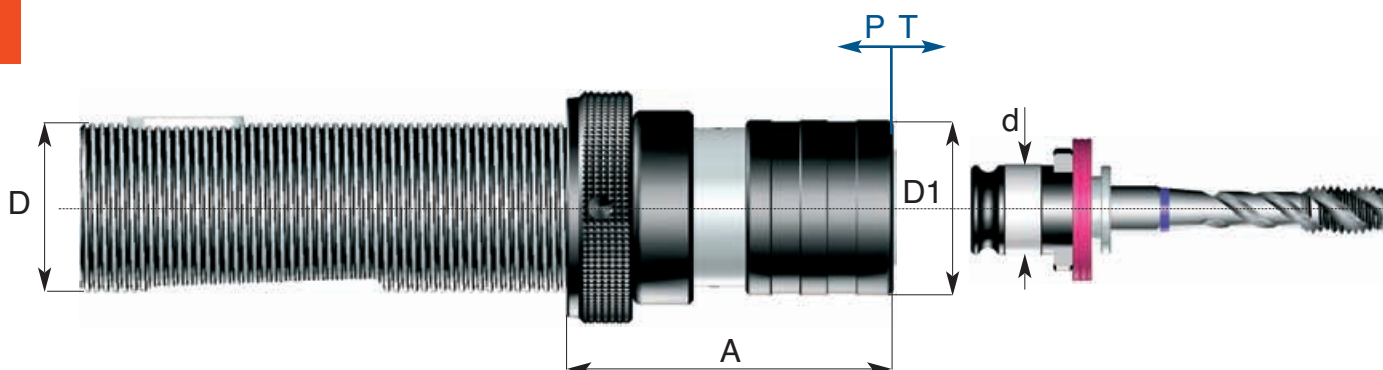
Trousse réglables DIN 6327 mandrins à tarauder avec comp. élastique axiale à traction et pression

ACCESSORI PER MACCHINE UTENSILI



DIN 6327

ART: 640



Codice di ord Code	D h6 X passo	A	D1	d	Capacità maschiatore Tapping capacity	Compensazione assiale T Axial compensation P
640.20.1205	20 x 2Tr.	68	36	19	M 3 M 14	5 7
640.28.1205	28 x 2 Tr.	68	36	19	M 3 M 14	5 7
640.28.2008	28 x 2 Tr.	90	53	31	M 8 M 24	12 13
640.36.1205	36 x 2 Tr.	70	36	19	M 3 M 14	5 7
640.36.2008	36 x 2 Tr.	90	53	31	M 8 M 24	12 13
640.36.3310	36 x 2 Tr.	120	78	48	M 14 M 36	15 20
640.48.3310	48 x 2 Tr.	128	78	48	M 14 M 36	15 20



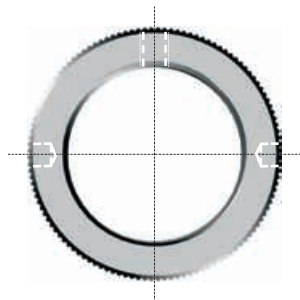
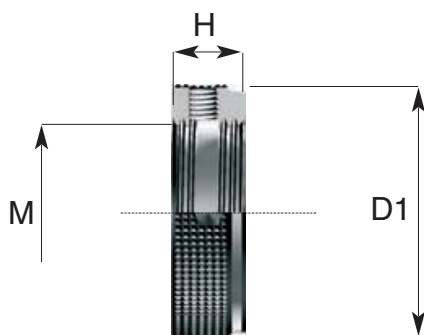
ACCESSORI PER MACCHINE UTENSILI

Ghiera di registrazione per astucci DIN 6327
 Setting ring for adjustable adaptors DIN 6327
 Einstellmutter für Nachstellbare Werkzeugfutter DIN 6327
 Bagues de réglage pour troussees porte-outils DIN 6327



DIN 6327

ART: 695



8.
7

Codice di ord Code	M	D1	H	Per astucci con D1 For adjustable bushes with D1
695.16.2512	16 x 1.5 Tr.	24.6	12	16 x 1.5 Tr.
695.20.3112	20 x 2 Tr.	31.6	12	20 x 2 Tr.
695.25.3712	25 x 2 Tr.	36.6	12	25 x 2 Tr.
695.28.4012	28 x 2 Tr.	39.6	12	28 x 2 Tr.
695.32.4514	32 x 2 Tr.	44.6	14	32 x 2 Tr.
695.36.5014	36 x 2 Tr.	49.6	14	36 x 2 Tr.
695.48.6718	48 x 2 Tr.	66.6	18	48 x 2 Tr.