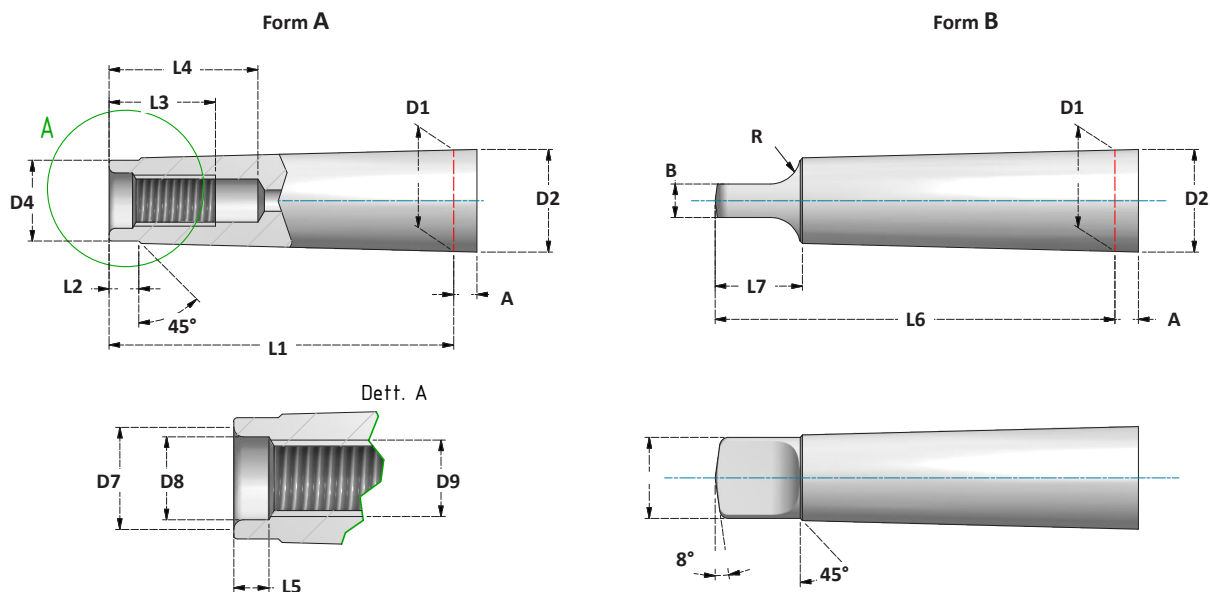




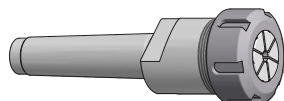
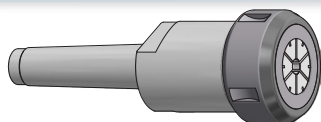
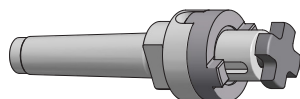
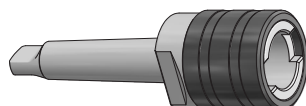
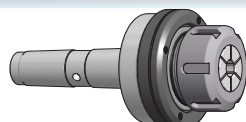
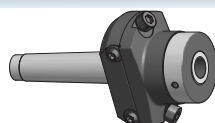
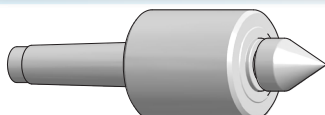
MANDRINI CONO MORSE - CM
MORSE TAPER TOOLHOLDERS - CM

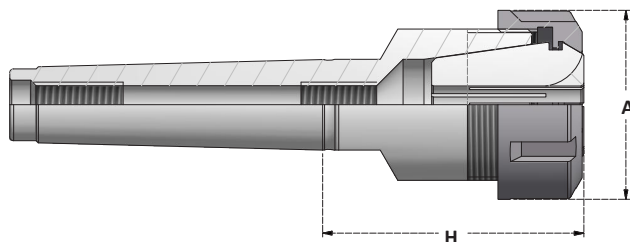
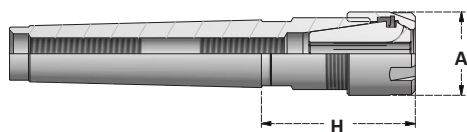
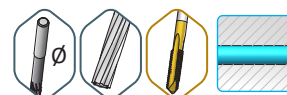


DIMENSIONI CONO
TAPER DIMENSIONS

CONO TAPER	A	B	D1	D2	D4	D6	D7	D8	D9	L1	L2	L3	L4	L5	L6	L7	R	$\alpha/2$
		h13			MAX					MAX		MAX	min	+0,5 0	0 -1	MAX		
1	3,5	5,2	12,065	12,2	9	8,7	8,5	6,4	M6	53,5	5	16	22	4	62	13,5	5	1° 25' 43"
2	5	6,3	17,78	18	14	13,5	13,2	10,5	M10	64	5	24	31,5	5	75	16	6	1° 25' 50"
3	5	7,9	23,825	24,1	19	18,5	16	13	M12	81	7	24	33,5	5,5	94	20	7	1° 26' 16"
4	6,5	11,9	31,267	31,6	25	24,5	21,5	17	M16	102,5	9	32	42,5	8,2	117,5	24	8	1° 29' 15"
5	6,5	15,9	44,399	44,7	35,7	35,7	26	21	M20	129,5	10	40	52,5	10	149,5	29	10	1° 30' 26"
6	8	19	63,348	63,8	51	51	32	25	M24	182	16	47	61,5	11,5	210	40	13	1° 29' 36"



**DIN 228 - CM****MANDRINI PORTAPINZA ER - GHIERE MINI**
*COLLET CHUCKS ER - MINI NUTS***DIN ISO 15488** (DIN6499)*PAG. 186***MANDRINI PORTAPINZA ER - GHIERE STANDARD**
*COLLET CHUCKS ER - STANDARD NUTS***DIN ISO 15488** (DIN6499)*PAG. 186***MANDRINI PORTAPINZA EOC**
*COLLET CHUCKS EOC***DIN ISO 10897**(DIN6388)*PAG. 187***MANDRINI PORTAFRESA COMBI**
*COMBI SHELL MILL HOLDERS***DIN 6358***PAG. 187***RIDUZIONI CONO MORSE**
*MORSE TAPER SLEEVES***DIN 2185***PAG. 188***PROLUNGHE CONO MORSE**
*MORSE TAPER EXTENSIONS***DIN 2187***PAG. 188***MANDRINI PORTAPUNTA**
*DRILL CHUCKS**PAG. 189***PORTAMASCHI**
*TAPPING CHUCKS**PAG. 190***PORTA ALESATORI**
*REAMER HOLDERS**PAG. 191***BROCCIATORI**
*BROACH TOOLHOLDERS**PAG. 192***CONTROPUNTE ROTANTI**
*LIVE CENTRES**PAG. 193***MANDRINI DI COLLAUDO**
*TEST ARBORS***ISO-R230***PAG. 330*

**MANDRINI PORTAPINZA ER**
ER COLLET CHUCKSSCHEDA TECNICA
TECHNICAL DATA
ERC | P. 338**CON GHIERA MINI**

WITH MINI NUT

Articolo	H
CM1.H25.ERC11M	25
CM1.H40.ERC16M	40
CM2.H42.ERC16M	42
CM2.H50.ERC20M	50
CM2.H54.ERC25M	54
CM3.H43.ERC16M	43
CM3.H47.ERC20M	47
CM3.H58.ERC25M	58

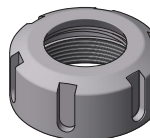
	A	Collets Range	Ghiera Nut
...ERC11M	16	1÷7	G11M
...ERC16M	22	1÷10	G16M
...ERC20M	28	1÷14	G20M
...ERC25M	35	1÷20	G25M

**CON GHIERA STANDARD**

WITH STANDARD NUT

Articolo	H
CM1.H25.ERC11	25
CM1.H40.ERC16	40
CM2.H42.ERC16	42
CM2.H50.ERC20	50
CM2.H54.ERC25	54
CM3.H53.ERC25	53
CM3.H70.ERC32	70
CM3.H80.ERC40	80
CM4.H56.ERC25	56
CM4.H60.ERC32	60
CM4.H81.ERC40	81
CM4.H96.ERC50	96
CM5.H50.ERC32	50
CM5.H82.ERC40	82
CM5.H91.ERC50	91

	A	Collets Range	Ghiera Nut
...ERC11	19	1÷7	G11SE
...ERC16	28	1÷10	G16SE
...ERC20	34	1÷14	G20SE
...ERC25	42	1÷20	G25S
...ERC32	50	2÷22	G32S
...ERC40	63	3÷30	G40S
...ERC50	78	6÷34	G50S

**MANDRINI CON FILETTI A POLLICI**

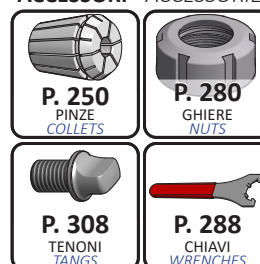
TOOLHOLDERS WITH INCH THREAD

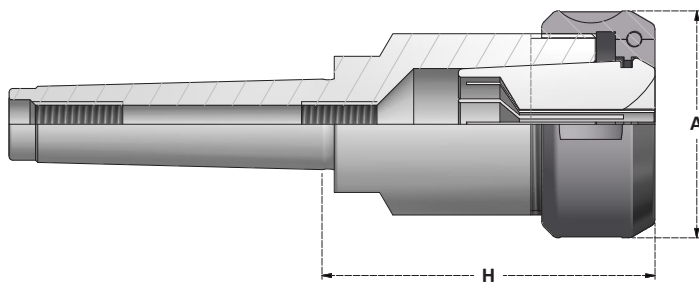
Articolo	H	A	Filetto Thread
MT3-H3.00-ERC40	76	63	1/2- 13
MT4-H3.18-ERC40	80	63	5/8- 11
MT5-H3.22-ERC40	82	63	3/4- 10

KIT - MANDRINO, CHIAVE E PINZE

KIT - TOOLHOLDER, WRENCH AND COLLETS

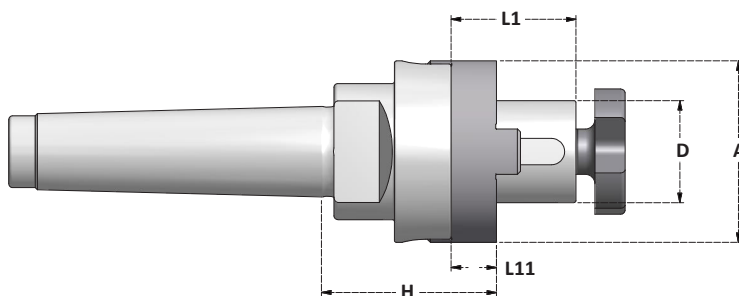
Articolo	Pinze Collets	Ø Pinze Collets	Mandrino Toolholder	Chiave Wrench
BX.CM1.ERC16	ERC16	D1÷10	CM1.H40.ERC16	CH.E25
BX.CM2.ERC16	ERC16	D1÷10	CM2.H42.ERC16	CH.E25
BX.CM3.ERC25	ERC25	D2÷16	CM3.H53.ERC25	CH25S
BX.CM3.ERC32	ERC32	D3÷20	CM3.H70.ERC32	CH32S
BX.CM4.ERC32	ERC32	D3÷20	CM4.H60.ERC32	CH32S
BX.CM4.ERC40	ERC40	D4÷26	CM4.H81.ERC40	CH40S

**ACCESSORI - ACCESSORIES**

**MANDRINI PORTAPINZA EOC**
EOC COLLET CHUCKS

Articolo	H
CM2.H57.EOC16	57
CM2.H76.EOC25	76
CM3.H61.EOC16	61
CM3.H90.EOC25	90
CM4.H84.EOC25	84
CM4.H84.EOC32	84
CM5.H84.EOC25	84
CM5.H84.EOC32	84

	A	Collets Range	Ghiera Nut
...EOC16	43	2÷16	G16OCC
...EOC25	60	2÷25	G25OCC
...EOC32	72	3÷32	G32OCC

ACCESSORI - ACCESSORIES**MANDRINI PORTAFRESA COMBINATI**
COMBI SHELL MILL HOLDERS

SCHEDA TECNICA TECHNICAL DATA
DC P. 348



Articolo	D	H
CM3.H48.D16C	16	48
CM3.H48.D22C	22	48
CM3.H48.D27C	27	48
CM3.H63.D32C	32	63
CM4.H55.D16C	16	55
CM4.H55.D22C	22	55
CM4.H55.D27C	27	55
CM4.H55.D32C	32	55
CM5.H75.D22C	22	75
CM5.H75.D27C	27	75
CM5.H75.D32C	32	75
CM5.H75.D40C	40	75

	A	L1	L11	ATR	VTC	CHV
D16C	32	27	10	ATR.D16	VTC.D16	CHV.D16
D22C	40	31	12	ATR.D22	VTC.D22	CHV.D22
D27C	48	33	12	ATR.D27	VTC.D27	CHV.D27
D32C	58	38	14	ATR.D32	VTC.D32	CHV.D32
D40C	70	41	14	ATR.D40	VTC.D40	CHV.D40

ACCESSORI - ACCESSORIES

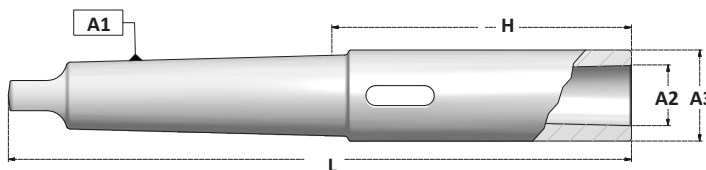
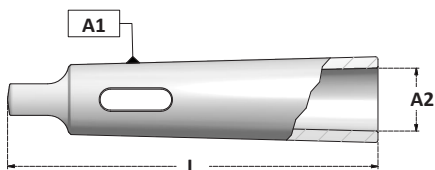


RIDUZIONI CONO MORSE
MORSE TAPER SLEEVES

PROLUNGHE CONO MORSE
MORSE TAPER EXTENSIONS

DIN 2185

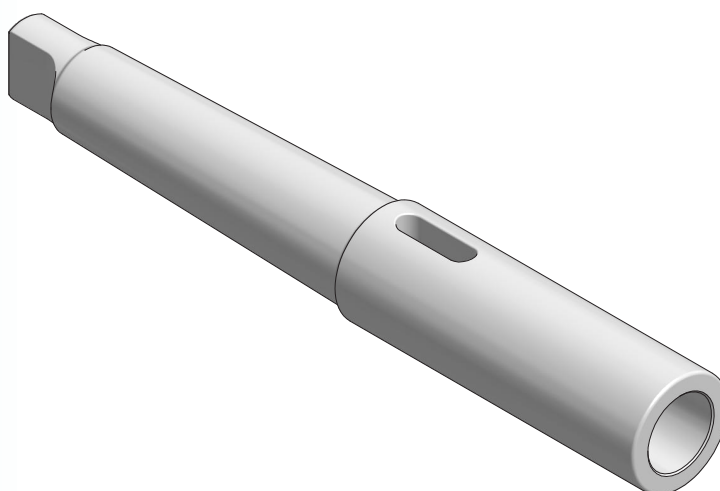
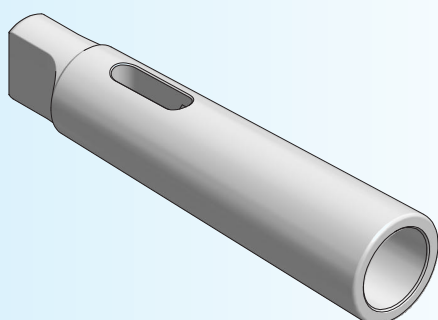
DIN 2187

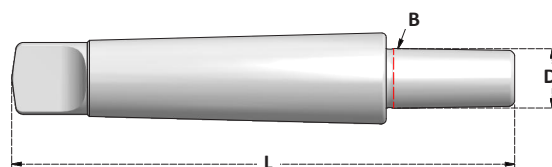


SCHEDA TECNICA
TECHNICAL DATA
CM P. P. 350

Articolo	A1	A2	L
CMB2-1	CM2	CM1	92
CMB3-1	CM3	CM1	99
CMB3-2	CM3	CM2	112
CMB4-1	CM4	CM1	124
CMB4-2	CM4	CM2	124
CMB4-3	CM4	CM3	140
CMB5-1	CM5	CM1	156
CMB5-2	CM5	CM2	156
CMB5-3	CM5	CM3	156
CMB5-4	CM5	CM4	171
CMB6-3	CM6	CM3	218
CMB6-4	CM6	CM4	218
CMB6-5	CM6	CM5	218

Articolo	A1	A2	A3	L	H
CMBL1-1	CM1	CM1	20	145	83
CMBL1-2	CM1	CM2	30	160	98
CMBL2-1	CM2	CM1	20	160	85
CMBL2-2	CM2	CM2	30	175	100
CMBL2-3	CM2	CM3	36	196	121
CMBL3-1	CM3	CM1	30	175	81
CMBL3-2	CM3	CM2	30	194	100
CMBL3-3	CM3	CM3	36	215	121
CMBL3-4	CM3	CM4	48	240	146
CMBL4-2	CM4	CM2	30	215	97,5
CMBL4-3	CM4	CM3	36	240	122,5
CMBL4-4	CM4	CM4	48	265	147,5
CMBL4-5	CM4	CM5	63	300	182,5
CMBL5-2	CM5	CM2	30	247	97,5
CMBL5-3	CM5	CM3	36	268	118,5
CMBL5-4	CM5	CM4	48	300	150,5
CMBL5-5	CM5	CM5	63	335	185,5
CMBL5-6	CM5	CM6	80	396	247
CMBL6-4	CM6	CM4	48	355	145
CMBL6-5	CM6	CM5	63	399	180
CMBL6-6	CM6	CM6	80	451	241



**ATTACCHI PER MANDRINI AUTOSERRANTI**
DRILL CHUCKS ARBORS

Articolo	L
CM1.B10	86
CM2.B10	105
CM3.B10	121

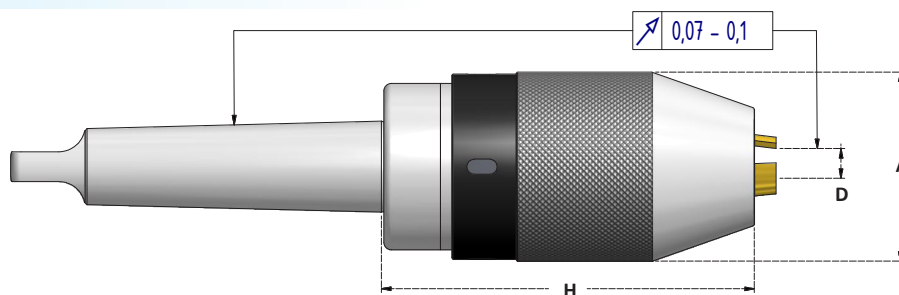
Articolo	L
CM1.B12	89
CM2.B12	106
CM3.B12	125
CM4.B12	152,5

Articolo	L
CM1.B16	99
CM2.B16	112
CM3.B16	134
CM4.B16	159
CM5.B16	196

Articolo	L
CM2.B18	119
CM3.B18	140
CM4.B18	168
CM5.B18	205

B	D
...B10	10,094
...B12	12,065
...B16	15,733
...B18	17,78

ACCESSORI - ACCESSORIES

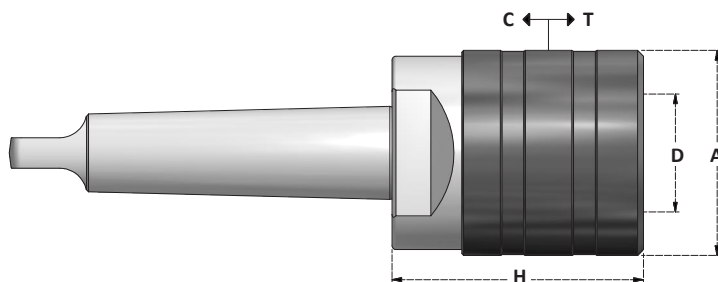
**P. 204**
AUTOSERRANTI
DRILL CHUCKS**MANDRINI PORTAPUNTA AUTOSERRANTI - ROTAZIONE DESTRA**
DRILL CHUCKS - RIGHT ROTATIONCHIAVE INCLUSA
WRENCH INCLUDED

Articolo	D	H	A	Chiave Wrench
CM2B.H61.DCK8S	0,5 - 8	61	37,5	CH.DC8
CM2B.H70.DCK10S	0,5 - 10	70	43	CH.DC10
CM2B.H81.DCK13S	1 - 13	81	50,5	CH.DC13
CM3B.H81.DCK13S	1 - 13	81	50,5	CH.DC13
CM4B.H81.DCK13S	1 - 13	81	50,5	CH.DC13
CM3B.H85.DCK16S	3 - 16	85	57	CH.DC16
CM4B.H85.DCK16S	3 - 16	85	57	CH.DC16

GRIFFE RIVESTITE
IN TITANIO**TITANIUM**
COATED JAWS

ACCESSORI - ACCESSORIES

**P. 289**
CHIAVI
WRENCHES

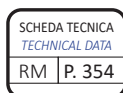
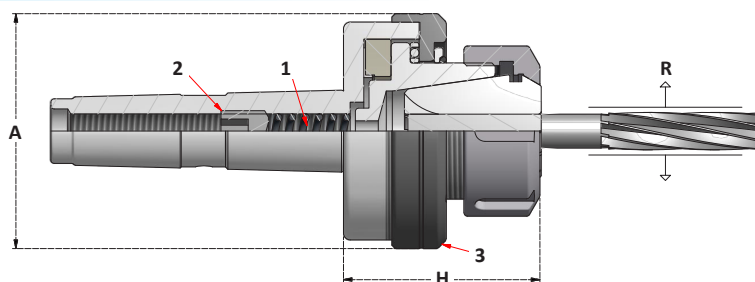
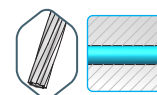
**MASCHIATORI CON COMPENSAZIONE ASSIALE**
TAPPING CHUCKS WITH AXIAL COMPENSATION

SCHEDA TECNICA
TECHNICAL DATA
MCR P. 352

Articolo	Bussola Adapter	D	Tapping Range	H	A	T	C
CM2B.MCR1TC	B1 / BF1	19	M2÷M14	47	36	7,5	7,5
CM3B.MCR1TC	B1 / BF1	19	M2÷M14	47	36	7,5	7,5
CM3B.MCR2TC	B2 / BF2	31	M6÷M27	71	53	12,5	12,5
CM4B.MCR2TC	B2 / BF2	31	M6÷M27	72	53	12,5	12,5
CM4B.MCR3TC	B3 / BF3	48	M14÷M45	105	78	20	20
CM5B.MCR3TC	B3 / BF3	48	M14÷M45	105	78	20	20
CM5B.MCR4TC	BF4	60	M22÷M45	117	96	22,5	22,5

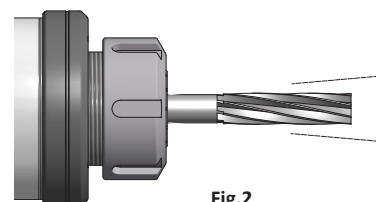
ACCESSORI - ACCESSORIES



**PORTA ALESATORI FLOTTANTI CON REFRIGERAZIONE INTERNA**
FLOATING REAMER HOLDERS WITH COOLANT FLOW

Articolo	H
CM2.RM11	40
CM3.RM11	40
CM2.RM16	44
CM3.RM16	44
CM2.RM20	50
CM3.RM20	50
CM2.RM25	53
CM3.RM25	53
CM3.RM32	58
CM4.RM32	58
CM3.RM40	64
CM4.RM40	64

Articolo	A	R	Collets Range	Ghiera Nut
...RM11	42	± 1 mm	1÷7	G11A.EX
...RM16	42	± 1 mm	1÷10	G16SE
...RM20	50	± 1 mm	1÷14	G20SE
...RM25	57	± 1 mm	1÷20	G25S
...RM32	69	± 1,5 mm	2÷22	G32S
...RM40	79	± 1,5 mm	3÷30	G40S

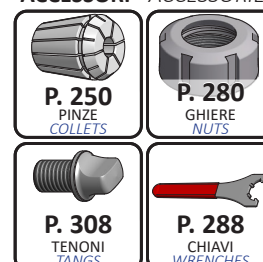
**Fig.2**Movimento radiale: **R**
Radial stroke: **R**

L'alesatore oscilla su un cuscinetto a sfere per compensare gli errori di allineamento tra il mandrino della macchina e il pezzo in lavorazione.

- La spinta della molla **1** mantiene l'utensile centrato anche in posizione orizzontale.
- La vite **2** regola la pressione della molla per regolare il movimento radiale.
- Allentando di 0,1/0,2mm la ghiera **3** si permette all'alesatore di avere un movimento pendolare. (Fig2)

Free moving ball bearing drive permits to the reamer to follow the drilled hole of the workpiece.

- *Pressure of spring **1** keeps reamer centered, even in horizontal position.*
- *Screw **2** allows adjustment of floating level.*
- *Unscrewing nut **3** for 0,1/0,2mm reamer has a pendulum float. (Fig 2)*

ACCESSORI - ACCESSORIES



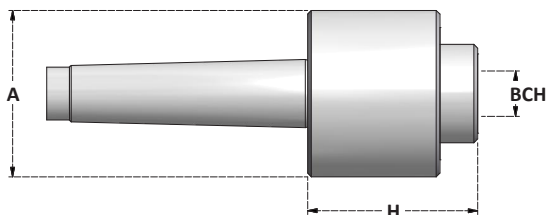
DIN 228 - A

CM

BCH

BROCCIATORI FISSI

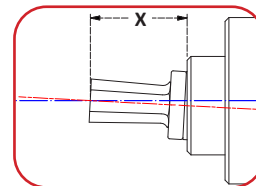
BROACH TOOLHOLDERS



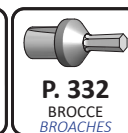
SCHEDA TECNICA
TECHNICAL DATA
BCH | P. 355

Articolo	BCH	H	A	X
CM2.BCH8	8	38	32	18
CM2.BCH12	12	46	44	25
CM3.BCH16	16	76	58	40
CM4.BCH16	16	76	58	40

Utilizzare solo con brocche con lunghezza X
Use only broaches with lengths X



ACCESSORI - ACCESSORIES



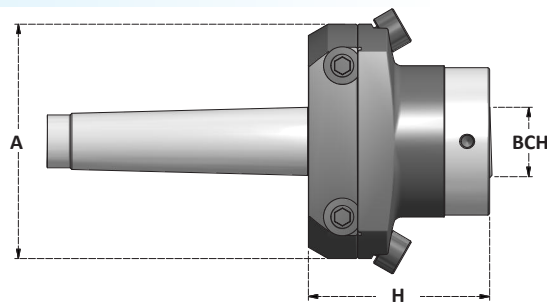
DIN 228-A

CM

BCH R

BROCCIATORI REGISTRABILI

ADJUSTABLE BROACH TOOLHOLDERS

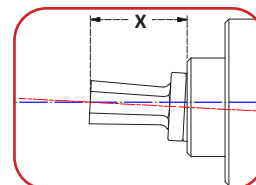


SCHEDA TECNICA
TECHNICAL DATA
BCH | P. 355

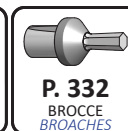
Articolo	BCH	H	A
CM2.BCH8R	8	34	50
CM2.BCH12R	12	52	62

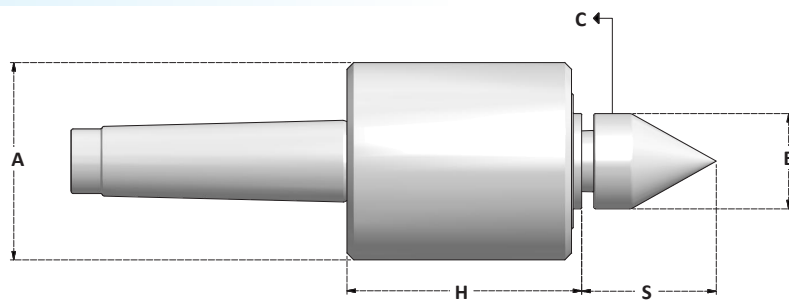
Si possono usare brocche di diversa lunghezza X, consentendo di eseguire brocciature all'interno di incamerature profonde.

You can use different broaching lengths X, so that you can even broach inside deep chambers.



ACCESSORI - ACCESSORIES



**CONTROPUNTE ROTANTI CON COMPRESSIONE**
LIVE CENTRES WITH COMPRESSIONCORSA DI COMPRESSIONE **C**
ABSORBER STROKE

Articolo	H	A	E	S	C
CM2.CNP43	43	43	18	21	3
CM3.CNP43	43	43	18	21	3

Articolo	H	A	E	S	C
CM3.CNP58	71	58	28	34	2,5
CM4.CNP58	71	58	28	34	2,5

FORNITI CON CUSPIDE
CNP.CS1
SUPPLIED WITH TIP
*CNP.CS1***CUSPIDI INTERCAMBIABILI**
*INTERCHANGEABLE TIPS***ACCESSORI - ACCESSORIES**