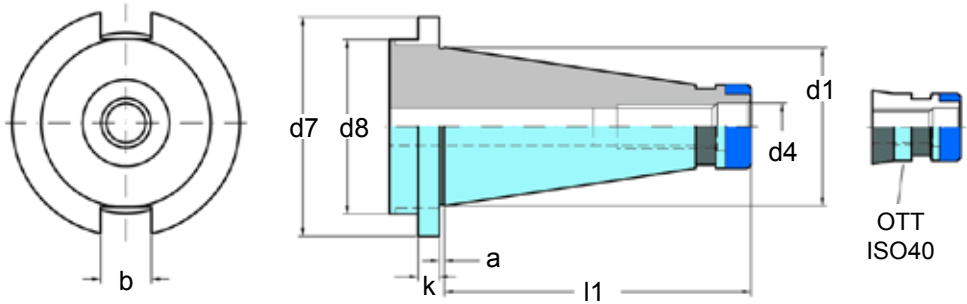




PROGRAMA

						
PAG. 4	PAG. 5	PAG. 5	PAG. 5	PAG. 6	PAG. 6	PAG. 7
						
PAG. 8	PAG. 8	PAG. 9	PAG. 10	PAG. 10	PAG. 11	PAG. 12
						
PAG. 13	PAG. 13	PAG. 13	PAG. 14	PAG. 14	PAG. 15	PAG. 15
						
PAG. 16	PAG. 16	PAG. 16	PAG. 16	PAG. 17	PAG. 17	PAG. 17
						
PAG. 17	PAG. 18	PAG. 18	PAG. 18	PAG. 18		



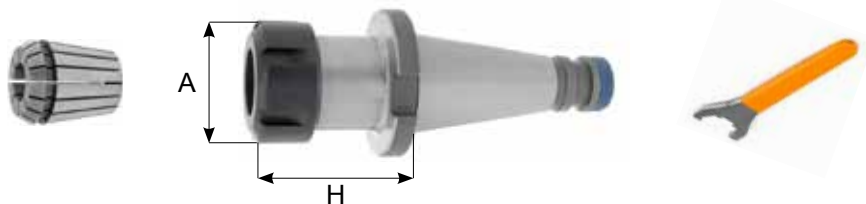
CONO TAPER	FORMA FORM	d1	d4	a	b	l1	d7	k	d8
ISO30	AD	31.75	M12	1.6	16.1	68.4	50	8	36
ISO40*	AD	44.45	M16	1.6	16.1	93.4	63	10	50
ISO50	AD	69.85	M24	3.2	25.7	126.8	97.5	12	78

* ISO 40 con regata MAHO-OTT
 ISO 40 with MAHO-OTT groove



DIN/2080

Porta pinzas ER tuerca STANDARD
Collet chucks ER STANDARD nut

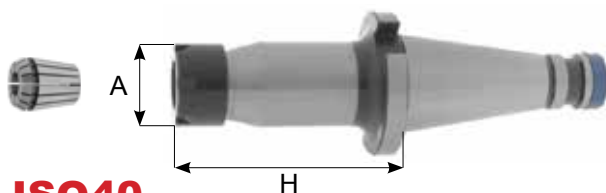


ISO30 / ISO40 / ISO50

REFERENCIA	FAM	CAP	FORMA	H	A
ISO30.H50.ERC25	1	1 ÷ 20	AD	50	42
ISO30.H75.ERC25		1 ÷ 20		75	42
ISO30.H50.ERC32		2 ÷ 22		50	50
ISO30.H70.ERC32		2 ÷ 22		70	50
ISO30.H80.ERC32		2 ÷ 22		80	50
ISO30.H100.ERC32		2 ÷ 22		100	50
ISO30.H110.ERC32		2 ÷ 22		110	50
ISO30.H70.ERC40		3 ÷ 30		70	63
ISO30.H84.ERC40		3 ÷ 30		84	63
ISO30.H100.ERC40		3 ÷ 30		100	63
ISO40.H47.ERC16	1	1 ÷ 10	AD	47	28
ISO40.H63.ERC16		1 ÷ 10		63	28
ISO40.H90.ERC20		1 ÷ 14		90	34
ISO40.H47.ERC25		1 ÷ 20		47	42
ISO40.H70.ERC25		1 ÷ 20		70	42
ISO40.H100.ERC25		1 ÷ 20		100	42
ISO40.H130.ERC25		1 ÷ 20		130	42
ISO40.H49.ERC32		2 ÷ 22		49	50
ISO40.H70.ERC32		2 ÷ 22		70	50
ISO40.H90.ERC32		2 ÷ 22		90	50
ISO40.H100.ERC32		2 ÷ 22		100	50
ISO40.H130.ERC32		2 ÷ 22		130	50
ISO40.H56.ERC40		3 ÷ 30		56	63
ISO40.H70.ERC40		3 ÷ 30		70	63
ISO40.H100.ERC40		3 ÷ 30		100	63
ISO40.H130.ERC40		3 ÷ 30		130	63
ISO40.H160.ERC40		3 ÷ 30		160	63
ISO40.H200.ERC40		3 ÷ 30		200	63
ISO40.H103.ERC50		6 ÷ 34		103	78
ISO50.H80.ERC25		1		1 ÷ 20	AD
ISO50.H69.ERC32	2 ÷ 22		69	50	
ISO50.H100.ERC32	2 ÷ 22		100	50	
ISO50.H130.ERC32	2 ÷ 22		130	50	
ISO50.H160.ERC32	2 ÷ 22		160	50	
ISO50.H63.ERC40	3 ÷ 30		63	63	
ISO50.H100.ERC40	3 ÷ 30		100	63	
ISO50.H130.ERC40	3 ÷ 30		130	63	
ISO50.H160.ERC40	3 ÷ 30		160	63	
ISO50.H67.ERC50	6 ÷ 34		67	78	

DIN/2080

Porta pinzas ER tuerca MINI
Collet chucks ER MINI nut

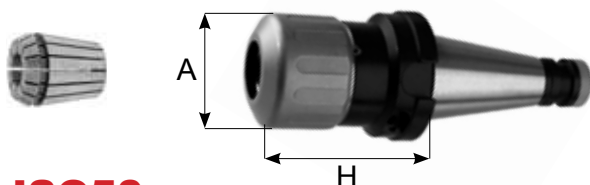


ISO30 / ISO40

REFERENCIA	FAM	CAP	FORMA	H	A
ISO30.H70.ERC25	1	1 ÷ 20	AD	70	22
ISO40.H80.ERC16	1	1 ÷ 10	AD	80	22
ISO40.H90.ERC20		1 ÷ 14		90	28
ISO40.H100.ERC25		1 ÷ 20		100	35

DIN/2080

Porta pinzas Gran Apriete Mecánico pinza ER
Mechanical collet chucks ER with high tightening torque

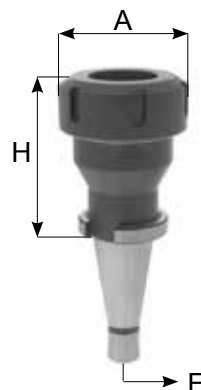


ISO40 / ISO50

REFERENCIA	FAM	CAP	FORMA	PINZA	H	A
ISO40.H80.MTT54	13	2 ÷ 22	AD	ER32	80	54
ISO50.H85.MTT54	13	2 ÷ 22	AD	ER32	85	54
ISO50.H97.MTT65		3 ÷ 30	AD	ER40	97	65

Porta pinzas ANSI B5.18 USA
Collet chucks with ANSI B5.18 shank-USA

REFERENCIA	FAM	CAP	FORMA	H	A	F
NMBT30.H2.75.ERC16	1	1 ÷ 10	AD	2.75	1.10	1/2-13
NMBT30.H2.75.ERC20		1 ÷ 14		2.75	1.33	
NMBT30.H2.16.ERC32		2 ÷ 22	AD	2.16	1.95	
NMBT30.H3.30.ERC40	1	3 ÷ 30	AD	3.30	2.48	5/8-11
NMBT40.H3.00.ERC16		1 ÷ 10		AD	3.00	
NMBT40.H2.00.ERC20		1 ÷ 14	AD	2.00	1.33	
NMBT40.H4.00.ERC20	1	1 ÷ 14	AD	4.00	1.33	5/8-11
NMBT40.H2.00.ERC32		2 ÷ 22		AD	2.00	
NMBT40.H2.20.ERC40		3 ÷ 30	AD	2.20	2.48	



DIN/2080

Porta pinzas para pinza EOC DIN/6388 B
Collet chucks EOC DIN/6388 B

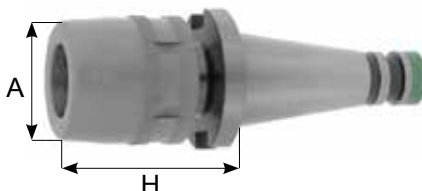


ISO30 / ISO40 / ISO50

REFERENCIA	FAM	CAP	FORMA	H	A
ISO30.H68.EOC25	1	2 ÷ 25	AD	68	60
ISO40.H55.EOC16	1	2 ÷ 16	AD	55	43
ISO40.H66.EOC25		2 ÷ 25		66	60
ISO40.H95.EOC32		3 ÷ 32		95	72
ISO50.H57.EOC25	1	2 ÷ 25	AD	57	60
ISO50.H71.EOC25		2 ÷ 25		71	60
ISO50.H73.EOC32		3 ÷ 32		73	72

DIN/2080

Porta pinzas Gran Apriete Mecánico pinza cilíndrica
Power milling chucks



ISO30 / ISO40 / ISO50

REFERENCIA	FAM	CAP	FORMA	H	A
ISO30.H67.MC20	2	3 ÷ 20	AD	67	54
ISO40.H78.MC32	2	4 ÷ 25	AD	78	74
ISO50.H85.MC32	2	4 ÷ 25	AD	85	74

Estuche porta pinzas Gran Apriete Mecánico
Straight shank collet chuck kit

REFERENCIA	FAM	Capacidad
BX.ISO30.MC20	2	Pinza 3SR20 6 . 8 . 10 . 12 . 16
BX.ISO40.MC32 BX.ISO50.MC32	2	Pinza 3SR32 6 . 8 . 10 . 12 . 16 . 20 . 25



DIN/2080

Porta pinzas Hidraulico
Hydraulic Collet chucks



ISO40

REFERENCIA	FAM	D	FORMA	H	A
ISO40.H49.HD6	4	6	AD	49	26
ISO40.H49.HD8	4	8	AD	49	28
ISO40.H53.HD10	4	10	AD	53	30
ISO40.H58.HD12	4	12	AD	58	32
ISO40.H58.HD14	4	14	AD	58	34
ISO40.H61.HD16	4	16	AD	61	38
ISO40.H61.HD18	4	18	AD	61	40
ISO40.H63.HD20	4	20	AD	63	42
ISO40.H70.HD25	4	25	AD	70	50
ISO40.H75.HD32	4	32	AD	75	60

ISO50

REFERENCIA	FAM	D	FORMA	H	A
ISO50.H53.HD6	4	6	AD	53	26
ISO50.H53.HD8	4	8	AD	53	28
ISO50.H57.HD10	4	10	AD	57	30
ISO50.H62.HD12	4	12	AD	62	32
ISO50.H62.HD14	4	14	AD	62	34
ISO50.H65.HD16	4	16	AD	65	38
ISO50.H65.HD18	4	18	AD	65	40
ISO50.H67.HD20	4	20	AD	67	42
ISO50.H72.HD25	4	25	AD	72	50
ISO50.H76.HD32	4	32	AD	76	60
ISO50.H90.HD40	4	40	AD	90	70
ISO50.H115.HD50	4	50	AD	115	78
ISO50.H130.HD60	4	60	AD	130	97

DIN/2080

Porta brocas con llave de gancho
Drill chucks with hook wrench



ISO40 / ISO50

REFERENCIA	FAM	CAP	FORMA	H	A
ISO40.H88.DCK13	1	1 ÷ 13	AD	88	50
ISO40.H100.DCK16		1 ÷ 16	AD	100	50
ISO50.H80.DCK13	1	1 ÷ 13	AD	80	50
ISO50.H90.DCK16		1 ÷ 16	AD	90	50

Recambio Porta brocas con llave de gancho
Replacement drill chuck heads

REFERENCIA	FAM	CAP
DCK13.MT3S	1	1 ÷ 13
DCK16-MT3S		1 ÷ 16



DIN/2080

Porta brocas Gran apriete con llave hexagonal
Exagonal key look drill chucks



ISO40 / ISO50

REFERENCIA	FAM	CAP	FORMA	H	A
ISO40.H105.CP13	1	1 ÷ 13	AD	105	50
ISO40.H110.CP16		1 ÷ 16	AD	110	50
ISO50.H98.CP13	1	1 ÷ 13	AD	98	50
ISO50.H103.CP16		1 ÷ 16	AD	103	50

Recambio Porta brocas Gran apriete llave hexagonal
Replacement drill chuck heads

REFERENCIA	FAM	CAP
CP13.MT3	1	1 ÷ 13
CP16.MT3		1 ÷ 16



DIN/2080

Porta fresas weldon DIN 1835-B
End mill holders for DIN 1835-B

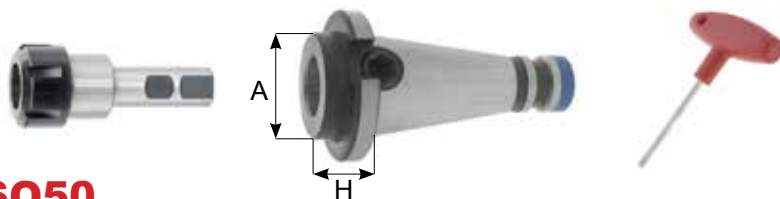


ISO30 / ISO40 / ISO50

REFERENCIA	FAM	D	FORMA	H	A
ISO30.H40.WE6	1	6	AD	40	25
ISO30.H40.WE8		8		40	28
ISO30.H40.WE10		10		40	35
ISO30.H40.WE12		12		40	42
ISO30.H40.WE14		14		40	44
ISO30.H50.WE16		16		50	48
ISO30.H50.WE18		18		50	50
ISO30.H63.WE20		20		63	52
ISO30.H85.WE25		25		85	65
ISO40.H50.WE6	1	6	AD	50	25
ISO40.H100.WE6		8		100	28
ISO40.H50.WE8		10		50	35
ISO40.H100.WE8		12		100	42
ISO40.H50.WE10		14		50	44
ISO40.H100.WE10		16		100	48
ISO40.H50.WE12		18		65	50
ISO40.H100.WE12		20		65	52
ISO40.H50.WE14		25		80	65
ISO40.H60.WE16		32		80	72
ISO40.H100.WE16		40		90	90
ISO40.H65.WE18		50		110	100
ISO40.H65.WE20		6		50	25
ISO40.H100.WE20		8		50	28
ISO40.H80.WE25		10		50	35
ISO40.H80.WE32		12		50	42
ISO40.H90.WE40	14	50	44		
ISO50.H63.WE6	1	16	AD	60	48
ISO50.H63.WE8		18		65	50
ISO50.H63.WE10		20		65	52
ISO50.H63.WE12		25		80	65
ISO50.H63.WE14		32		80	72
ISO50.H63.WE16		40		90	90
ISO50.H63.WE18		50		110	100
ISO40.H80.WE20		6		50	25
ISO40.H80.WE25		8		50	28
ISO40.H80.WE32		10		50	35
ISO40.H90.WE40		12		50	42
ISO40.H110.WE50		14		50	44

DIN/2080

Porta fresas weldon extra corto DIN 1835-B
Short type end mill holders for DIN 1835-B shanks

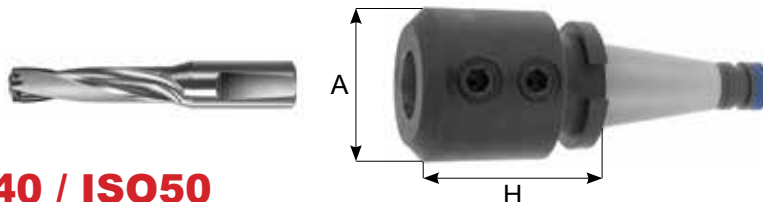


ISO40 / ISO50

REFERENCIA		D	FORMA	H	A
ISO40.H22.WE16	1	16	AD	22	44
ISO40.H22.WE20	1	20		22	44
ISO40.H22.WE25	1	25		22	44
ISO40.H40.WE32	2	32		40	44
ISO50.H20.WE16	2	16	AD	20	66
ISO50.H20.WE20	2	20		20	66
ISO50.H20.WE25	2	25		20	66
ISO50.H20.WE32	2	32		20	66

DIN/2080

Porta fresas weldon Whistle-Notch
Whistle-Notch end mill holders

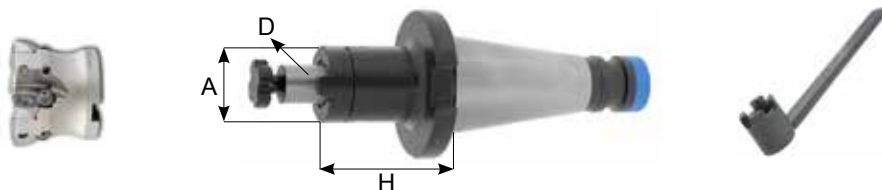


ISO40 / ISO50

REFERENCIA	FAM	D	FORMA	H	A
ISO40.H50.WHN6	2	6	AD	50	25
ISO40.H50.WHN8		8		50	28
ISO40.H50.WHN10		10		50	35
ISO40.H50.WHN12		12		50	42
ISO40.H63.WHN16		16		63	48
ISO40.H63.WHN20		20		63	52
ISO40.H90.WHN25		25		90	65
ISO40.H90.WHN32		32		90	72
ISO50.H50.WHN6	2	6	AD	50	25
ISO50.H50.WHN8		8		50	28
ISO50.H63.WHN10		10		63	35
ISO50.H63.WHN12		12		63	42
ISO50.H63.WHN16		16		63	48
ISO50.H63.WHN20		20		63	52
ISO50.H80.WHN25		25		80	65
ISO50.H85.WHN32		32		85	72
ISO50.H95.WHN40		40		95	80

DIN/2080

Porta Fresas Combinado
Combi shell end mill holders

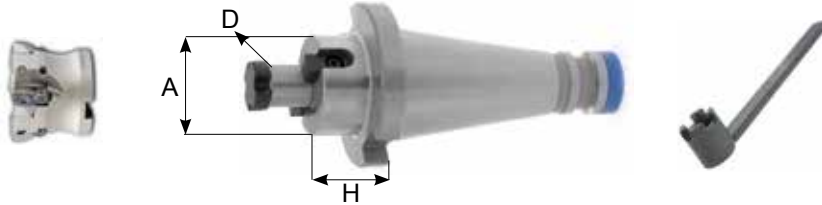


ISO30 / ISO40 / ISO50

REFERENCIA	FAM	D	FORMA	H	A
ISO30.H50.D16C	1	16	AD	50	32
ISO30.H50.D22C		22			40
ISO30.H50.D27C		27			48
ISO30.H50.D32C		32			58
ISO40.H52.D13C	1	13	AD	52	28
ISO40.H52.D16C	1	16	AD	52	32
ISO40.H52.D22C	1	22	AD	52	40
ISO40.H90.D22C				90	
ISO40.H52.D27C	1	27	AD	52	48
ISO40.H90.D27C				90	
ISO40.H52.D32C	1	32	AD	52	58
ISO40.H100.D32C				100	
ISO40.H52.D40C	1	32	AD	52	70
ISO50.H55.D16C	1	16	AD	55	32
ISO50.H100.D16C				100	
ISO50.H125.D16C				125	
ISO50.H55.D22C	1	22	AD	55	40
ISO50.H100.D22C				100	
ISO50.H125.D22C				125	
ISO50.H55.D27C	1	27	AD	55	48
ISO50.H100.D27C				100	
ISO50.H125.D27C				125	
ISO50.H55.D32C	1	32	AD	55	58
ISO50.H100.D32C				100	
ISO50.H125.D32C				125	
ISO50.H55.D40C	1	40	AD	55	70
ISO50.H100.D40C				100	
ISO50.H125.D40C				125	
ISO50.H55.D50C	1	50	AD	55	90

DIN/2080

Porta Fresas Fijo
Shell end mill holders



ISO30 / ISO40 / ISO50

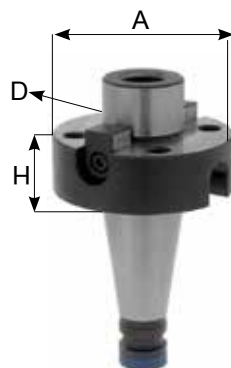
REFERENCIA	FAM	D	FORMA	H	A
ISO30.H35.D16S	1	16	AD	35	32
ISO30.H35.D22S		22			40
ISO30.H35.D27S		27			48
ISO30.H35.D32S		32			58
ISO40.H30.D13S	1	13	AD	30	28
ISO40.H30.D16S	1	16	AD	30	38
ISO40.H90.D16S				90	
ISO40.H35.D22S	1	22	AD	35	48
ISO40.H52.D22S				52	
ISO40.H90.D22S				90	
ISO40.H35.D27S	1	27	AD	35	58
ISO40.H90.D27S				90	
ISO40.H35.D32S	1	32	AD	35	65
ISO40.H35.D40S	1	40	AD	35	70
ISO40.H90.D40S				90	
ISO50.H45.D16S	1	16	AD	45	32
ISO50.H100.D16S				100	
ISO50.H125.D16S				125	
ISO50.H45.D22S	1	22	AD	45	40
ISO50.H100.D22S				100	
ISO50.H125.D22S				125	
ISO50.H45.D27S	1	27	AD	45	48
ISO50.H100.D27S				100	
ISO50.H125.D27S				125	
ISO50.H45.D32S	1	32	AD	45	58
ISO50.H100.D32S				100	
ISO50.H125.D32S				125	
ISO50.H45.D40S	1	40	AD	45	70
ISO50.H100.D40S				100	
ISO50.H125.D40S				125	

DIN/2080

Porta Fresas Fijo Gran diámetro
Face mill holders

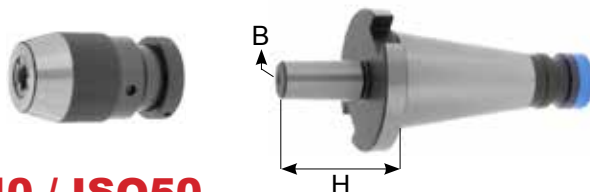
ISO40 / ISO50

REFERENCIA	FAM	D	FORMA	H	A
ISO40.H30.D40FM	1	40	AD	30	89
ISO40.H30.D50FM	1	50	AD	30	129
ISO40.H30.D60FM	1	60	AD	30	129
ISO50.H30.D40FM	1	40	AD	30	89
ISO50.H30.D50FM	1	50	AD	30	129
ISO50.H30.D60FM	1	60	AD	30	129



DIN/2080

Mandrino Porta brocas
Drill chuck Arbors

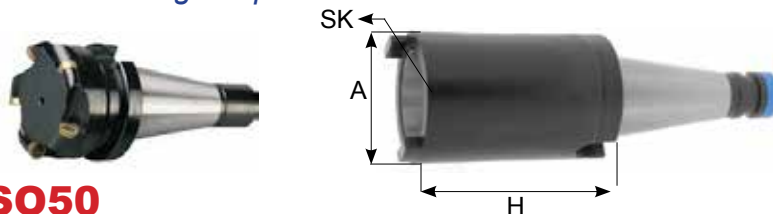


ISO30 / ISO40 / ISO50

REFERENCIA	FAM	DIN	B	H
ISO30.H15.B16	1	DIN/238	B16	15
ISO40.H17.B12		DIN/238	B12	17
ISO40.H17.B16		DIN/238	B16	17
ISO40.H17.B18		DIN/238	B18	17
ISO50.H20.B16	1	DIN/238	B16	20
ISO50.H20.B18		DIN/238	B18	20

DIN/2080

Reductor ISO a ISO DIN/2080
Reducing adaptors ISO a ISO DIN/2080

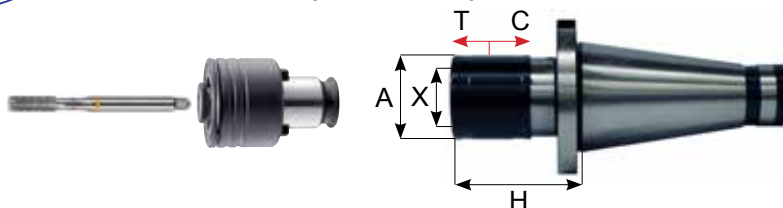


ISO40 / ISO50

REFERENCIA	FAM	ISO	FORMA	H	A
ISO40.H50.SK30	1	SK30	AD	50	50
ISO40.H100.SK40		SK40		100	68
ISO50.H16.SK30	1	SK30	AD	16	-
ISO50.H16.SK40		SK40		16	-
ISO50.H63.SK40		SK40		63	63
ISO50.H125.SK50		SK50		125	97

DIN/2080

Roscador con compresión y tracción DIN/2080
Tension and compression tap holders DIN/2080

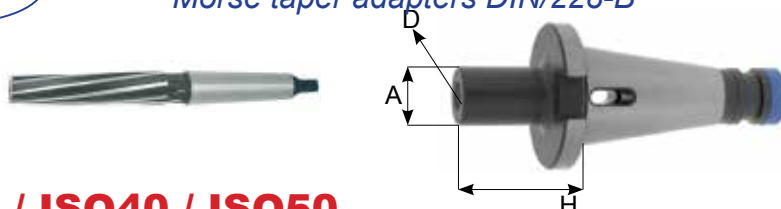


ISO30 / ISO40 / ISO50

REFERENCIA	CAP	X	A	H	C	T
SK30-THTC1-L58	M3 ÷ M12	19	36	58	7.5	7.5
SK40-THTC1-L71				71		
SK50-THTC1-L59				59		
SK30-THTC2-L85	M8 ÷ M20	31	53	85	12.5	12.5
SK50-THTC2-L79				79		
SK40-THTC3-L142	M14 ÷ 33	48	78	142	20	20
SK50-THTC3-L129				129		
SK40-THTC4-L157	M22 ÷ 48	60	96	157	22.5	22.5
SK50-THTC4-L143				143		

DIN/2080

Reductor cono morse DIN/228-B
Morse taper adapters DIN/228-B

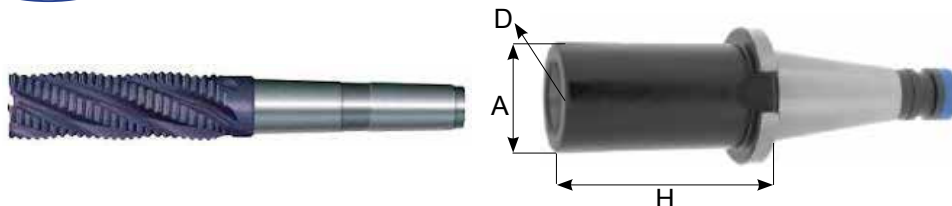


ISO30 / ISO40 / ISO50

REFERENCIA	FAM	D	FORMA	H	A
ISO30.H50.CM1P	1	CM1	AD	50	25
ISO30.H50.CM2P		CM2		50	32
ISO30.H72.CM3P		CM3		72	40
ISO40.H50.CM1P	1	CM1	AD	50	25
ISO40.H50.CM2P		CM2		50	32
ISO40.H65.CM3P		CM3		65	40
ISO40.H95.CM4P		CM4		95	48
ISO50.H60.CM2P	1	CM2	AD	60	32
ISO50.H65.CM3P		CM3		65	40
ISO50.H133.CM3P		CM3		133	40
ISO50.H70.CM4P		CM4		70	48
ISO50.H163.CM4P		CM4		163	48
ISO50.H105.CM5P		CM5		105	63
ISO50.H193.CM5P		CM5		193	63

DIN/2080

Reductor Cono morse DIN/228-A con tornillo tirante
Reducing morse taper shank and drawbar thread DIN/228-A

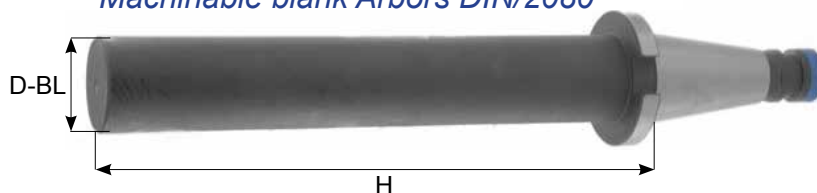


ISO30 / ISO40 / ISO50

REFERENCIA	FAM	D	FORMA	H	A
ISO30.H50.CM1FV	1	CM1	AD	50	25
ISO30.H50.CM2FV		CM2		60	32
ISO30.H78.CM3FV		CM3		78	40
ISO40.H50.CM1FV	1	CM1	AD	50	25
ISO40.H50.CM2FV		CM2		50	32
ISO40.H65.CM3FV		CM3		65	40
ISO40.H95.CM4FV		CM4		95	48
ISO50.H60.CM1FV	1	CM1	AD	60	25
ISO50.H60.CM2FV	1	CM2	AD	60	32
ISO50.H115.CM2FV				115	25
ISO50.H165.CM2FV				165	25
ISO50.H65.CM3FV	1	CM3	AD	65	40
ISO50.H115.CM3FV				115	32
ISO50.H165.CM3FV				165	32
ISO50.H65.CM4FV	1	CM4	AD	65	48
ISO50.H165.CM4FV				165	40
ISO50.H120.CM5FV	1	CM5	AD	120	63

DIN/2080

Barra de Desbaste DIN/2080
Machinable blank Arbors DIN/2080



ISO40 / ISO50

REFERENCIA	FAM	D	FORMA	H
ISO40.H250.D40BL	1	40	AD	250
ISO50.H315.D97BL	1	97	AD	315

SOPORTE DE MONTAJE CON RODILLOS

Soporte de montaje con rodillos 90°
Tool assembly device with rollers 90°



REFERENCIA	FAM	MODELO
TBRL1.50	1	ISO30
TBRL1.63	1	ISO40
TBRL1.100	1	ISO50

Soporte de montaje con rodillos 45°
Tool assembly device with rollers 45°



REFERENCIA	FAM	MODELO
TBRL2.63	1	ISO40

Soporte de montaje con rodillos
Tool assembly device with rollers



REFERENCIA	FAM	MODELO
TBRL4.63AX	1	ISO40

Soporte de montaje con rodillos
Tool assembly device with rollers



REFERENCIA	FAM	MODELO
TBRL16.63KT	1	ISO40

El rodamiento bloquea la flangia del porta herramientas sin ningun contacto con el cono
The toolholder's flange is clamped by the sliding-bearing. No contact with the taper.

Todo soporte de montaje debe estar fijado al banco de trabajo o al carro portamandrilos.
The tool assembly device must be fixed to a bench or to a tool cart

Soporte de montaje con rodillos orientable en vertical y horizontal
Indexable type the tool-head can be set in vertical and horizontal position



REFERENCIA	FAM	MODELO
TBRL20.630	1	ISO40

Soporte de montaje con rodillos orientable en 5 posiciones
Indexable type the tool-head can be set in 5 positions



REFERENCIA	FAM	MODELO
TBRL21.630E	1	ISO40

Soporte de montaje orientable en 5 posiciones
Indexable type the tool-head can be set in 5 positions



REFERENCIA	FAM	MODELO
TBAX 30	1	ISO30
TBAX 40	1	ISO40
TBAX 50	1	ISO50

Soporte de montaje orientable en vertical y horizontal
Indexable type the tool-head can be set in vertical and horizontal position



REFERENCIA	FAM	MODELO
TBK 30	1	ISO30
TBK 40	1	ISO40
TBK 50	1	ISO50

SOPORTE DE MONTAJE FIJO

Soporte de montaje orientable en 4 posiciones a 360°
Indexable type the tool-head can be set in 4 positions 360°



REFERENCIA	FAM	MODELO
TBTS 30	1	ISO30
TBTS 40	1	ISO40
TBTS 50	1	ISO50

Soporte de montaje fijo
Tool assembly device



REFERENCIA	FAM	MODELO
TB3.SK30	1	SK30
TB3.SK40	1	SK40
TB3.SK50	1	SK50

Soporte de montaje fijo ACERO
Steel tool assembly device



REFERENCIA	FAM	MODELO
THF30	1	ISO30

Soporte de montaje fijo ALUMINIO
ALUMINUM tool assembly device



REFERENCIA	FAM	MODELO
TAL40	1	ISO40
TAL50	1	ISO50

Todo soporte de montaje debe estar fijado al banco de trabajo o al carro portamandrilos.
The tool assembly device must be fixed to a bench or to a tool cart