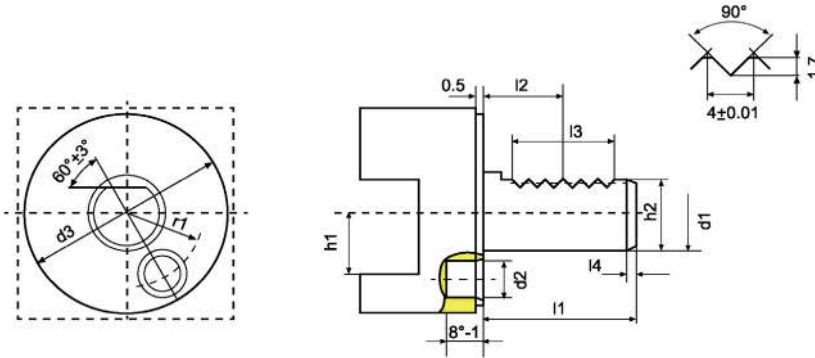




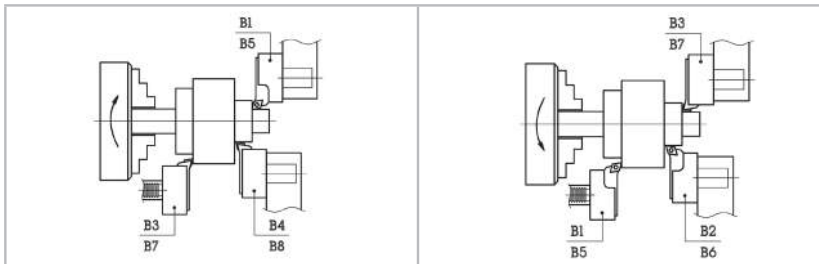
PROGRAMA

						
PAG. 4	PAG. 4	PAG. 5	PAG. 5	PAG. 6	PAG. 6	PAG. 7
						
PAG. 7	PAG. 8	PAG. 8	PAG. 9	PAG. 9	PAG. 10	PAG. 10
						
PAG. 11	PAG. 11	PAG. 12	PAG. 13-14	PAG. 15	PAG. 15	PAG. 16-18
						
PAG. 19	PAG. 19	PAG. 20	PAG. 20	PAG. 21-22	PAG. 23	PAG. 24
						
PAG. 24	PAG. 25	PAG. 25	PAG. 26	PAG. 26	PAG. 27	PAG. 27
						
PAG. 28	PAG. 28					

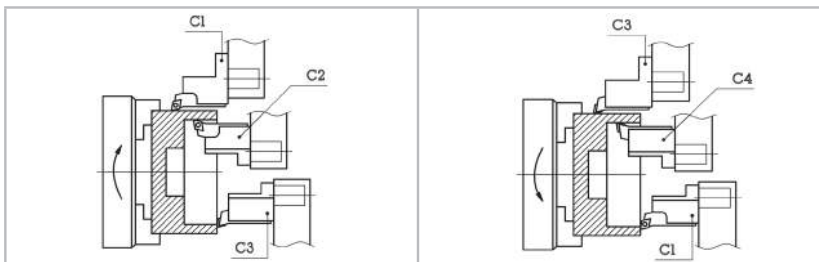


d1 h6	l1 ± 0.3	d2	d3	h1 max	h2 ± 0.1	l2 ± 0.05	l3 min	l4 +1	r1 ± 0.02
16	32	8 - H6	40	12	15	12.7	16	2	14.5
20	40	10 - H6	50	16	18	21.7	24	2	18
25	48	10 - H6	58	16	23.5	21.7	24	2	21
30	55	14 - H8	68	20	27	29.7	40	2	25
40	63	14 - H8	83	25	36	29.7	40	3	32
50	78	16 - H8	98	32	45	35.7	48	3	37
60	94	16 - H8	123	32	55	43.7	56	4	48
80	124	20 - H8	158	40	72	59.7	80	4	65

Porta herramientas utilizado para rotación horaria del mandrino
Toolholders suitable for clockwise spindle rotation



Porta herramientas utilizado para rotación antihoraria del mandrino
Toolholders suitable for counter clockwise spindle rotation

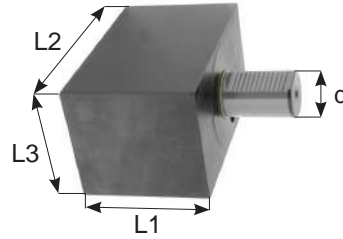




Porta herramientas en Desbaste
Machinable toolholder blanks

DIN/69880

FORMA A1



REFERENCIA	FAM	COD	d (VDI)	L1	L2	L3
VDI.A1-016	2	5600	16	44	78	44
VDI.A1-020		5634	20	65	100	60
VDI.A2-025	6	-	25	75	100	60
VDI.A1-030	2	5616	30	85	130	76
VDI.A1-040		5635	40	100	151	96
VDI.A1-050		5636	50	125	160	120
VDI.A1-060		9356	60	160	165	125

Porta herramientas en Desbaste
Machinable toolholder blanks

DIN/69880

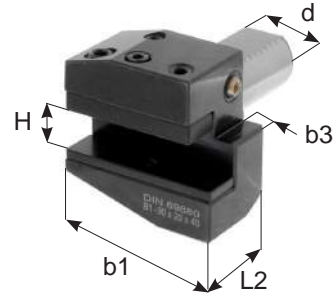
FORMA A2



REFERENCIA	FAM	COD	d (VDI)	D	L
VDI.A2-016	2	5602	16	40	60
VDI.A2-020		5637	20	50	70
VDI.A2-025	6	-	25	58	80
VDI.A2-030.100	2	5615	30	68	100
VDI.A2-030.240		5638	30	68	240
VDI.A2-040.120		5639	40	83	120
VDI.A2-040.320		5640	40	83	320
VDI.A2-050.135		5641	50	98	135
VDI.A2-050.400		5642	50	98	400
VDI.A2-060.150		9357	60	123	150
VDI.A2-060.480		9358	60	123	480



Porta herramientas Radial Derecha
Radial toolholders - Right

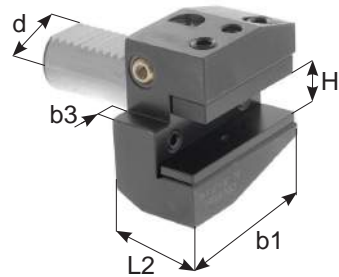


DIN/69880

FORMA B1

REFERENCIA	FAM	COD	d (VDI)	b1	b3	H	L2
VDI.B1-016.24	2	5605	16	42	5.0	12	24
VDI.B1-016.34		5607	16	42	5.0	12	34
VDI.B1-020.30		5643	20	55	7.0	16/12	30
VDI.B1-020.40	6	5644	20	55	7.0	16/12	40
VDI.B1-025.30		-	25	55	7.0	16/12	30
VDI.B1-025.40	2	-	25	55	7.0	16/12	40
VDI.B1-030.40		5617	30	70	10.0	20/16	40
VDI.B1-030.60	2	5738	30	70	10.0	20/16	60
VDI.B1-040.44		5649	40	85	12.5	25/20	44
VDI.B1-050.55		5795	50	100	16.0	32/25	55
VDI.B1-060.60		9359	60	125	16.0	32/25	60

Porta herramientas Radial Izquierda
Radial toolholders - Left

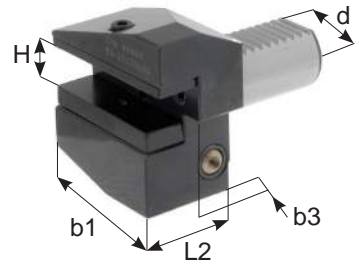


DIN/69880

FORMA B2

REFERENCIA	FAM	COD	d (VDI)	b1	b3	H	L2
VDI.B2-016.24	2	9324	16	42	5.0	12	24
VDI.B2-016.34		9325	16	42	5.0	12	34
VDI.B2-020.30		5650	20	55	7.0	16/12	30
VDI.B2-020.40	6	5651	20	55	7.0	16/12	40
VDI.B2-025.30		-	25	55	7.0	16/12	30
VDI.B2-025.40	2	-	25	55	7.0	16/12	40
VDI.B2-030.40		5624	30	70	10.0	20/16	40
VDI.B2-030.60	2	5739	30	70	10.0	20/16	60
VDI.B2-040.44		5656	40	85	12.5	25/20	44
VDI.B2-050.55		5796	50	100	16.0	32/25	55
VDI.B2-060.60		9360	60	125	16.0	32/25	60

Porta herramientas Radial Saliente Derecha
Radial upside-down toolholders - Right

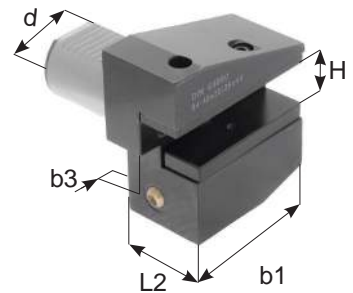


DIN/69880

FORMA B3

REFERENCIA	FAM	COD	d (VDI)	b1	b3	H	L2
VDI.B3-016.24	2	5654	16	42	5.0	12	24
VDI.B3-016.34		5655	16	42	5.0	12	34
VDI.B3-020.30		5657	20	55	7.0	16/12	30
VDI.B3-020.40		5658	20	55	7.0	16/12	40
VDI.B3-025.30	6	-	25	55	7.0	16/12	30
VDI.B3-025.40		-	25	55	7.0	16/12	40
VDI.B3-030.40	2	5621	30	70	10.0	20/16	40
VDI.B3-030.60		5622	30	70	10.0	20/16	60
VDI.B3-040.44		5663	40	85	12.5	25/20	44
VDI.B3-050.55	2	5797	50	100	16.0	32/25	55
VDI.B3-060.60		9361	60	125	16.0	32/25	60

Porta herramientas Radial Saliente Izquierda
Radial upside-down toolholders - Left



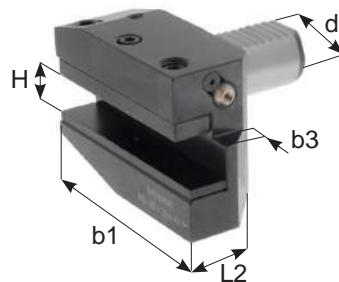
DIN/69880

FORMA B4

REFERENCIA	FAM	COD	d (VDI)	b1	b3	H	L2
VDI.B4-016.24	2	9326	16	42	5.0	12	24
VDI.B4-016.34		9327	16	42	5.0	12	34
VDI.B4-020.30		5664	20	55	7.0	16/12	30
VDI.B4-020.40		5665	20	55	7.0	16/12	40
VDI.B4-025.30	6	-	25	55	7.0	16/12	30
VDI.B4-025.40		-	25	55	7.0	16/12	40
VDI.B4-030.40	2	5627	30	70	10.0	20/16	40
VDI.B4-030.60		5647	30	70	10.0	20/16	60
VDI.B4-040.44		5670	40	85	12.5	25/20	44
VDI.B4-050.55	2	5798	50	100	16.0	32/25	55
VDI.B4-060.60		9362	60	125	16.0	32/25	60



Porta herramientas Radial Derecha Larga
Radial toolholders - Right long

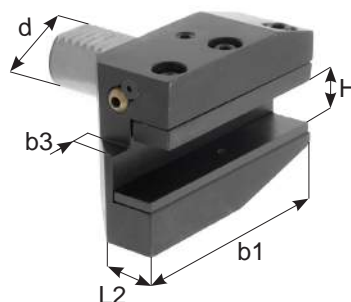


DIN/69880

FORMA B5

REFERENCIA	FAM	COD	d (VDI)	b1	b3	H	L2
VDI.B5-016.24	2	9328	16	58	5.0	12	24
VDI.B5-016.34		9329	16	58	5.0	12	34
VDI.B5-020.30		5671	20	75	7.0	16/12	30
VDI.B5-020.40		5687	20	75	7.0	16/12	40
VDI.B5-025.30	6	-	25	75	7.0	16/12	30
VDI.B5-025.40		-	25	75	7.0	16/12	40
VDI.B5-030.40	2	5620	30	100	10.0	20/16	40
VDI.B5-030.60		5648	30	100	10.0	20/16	60
VDI.B5-040.44		5677	40	118	12.5	25/20	44
VDI.B5-050.55	2	5802	50	130	16.0	32/25	55
VDI.B5-060.60		9363	60	145	16.0	32/25	60

Porta herramientas Radial Izquierda Larga
Radial toolholders - Left long



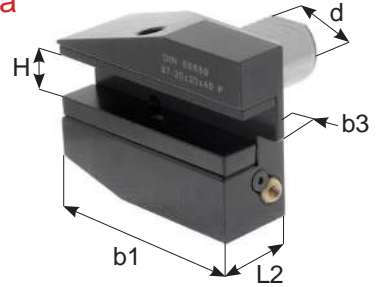
DIN/69880

FORMA B6

REFERENCIA	FAM	COD	d (VDI)	b1	b3	H	L2
VDI.B6-016.24	2	9330	16	58	5.0	12	24
VDI.B6-016.34		9331	16	58	5.0	12	34
VDI.B6-020.30		5678	20	75	7.0	16/12	30
VDI.B6-020.40		5688	20	75	7.0	16/12	40
VDI.B6-025.30	6	-	25	75	7.0	16/12	30
VDI.B6-025.40		-	25	75	7.0	16/12	40
VDI.B6-030.40	2	5619	30	100	10.0	20/16	40
VDI.B6-030.60		5682	30	100	10.0	20/16	60
VDI.B6-040.44		5684	40	118	12.5	25/20	44
VDI.B6-050.55	2	5791	50	130	16.0	32/25	55
VDI.B6-060.60		9364	60	145	16.0	32/25	60



Porta herramientas Radial saliente Derecha Larga
Radial upside-down toolholders - Right long

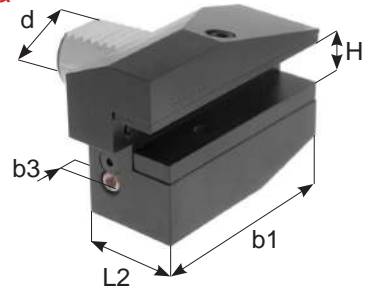


DIN/69880

FORMA B7

REFERENCIA	FAM	COD	d (VDI)	b1	b3	H	L2
VDI.B7-016.24	2	9332	16	58	5.0	12	24
VDI.B7-016.34		9333	16	58	5.0	12	34
VDI.B7-020.30		5685	20	75	7.0	16/12	30
VDI.B7-020.40		5686	20	75	7.0	16/12	40
VDI.B7-025.30	6	-	25	75	7.0	16/12	30
VDI.B7-025.40		-	25	75	7.0	16/12	40
VDI.B7-030.40	2	5689	30	100	10.0	20/16	40
VDI.B7-030.60		5699	30	100	10.0	20/16	60
VDI.B7-040.44		5692	40	118	12.5	25/20	44
VDI.B7-050.55		5803	50	130	16.0	32/25	55
VDI.B7-060.60		9365	60	145	16.0	32/25	60

Porta herramientas Radial saliente Izquierda Larga
Radial upside-down toolholders - Left long



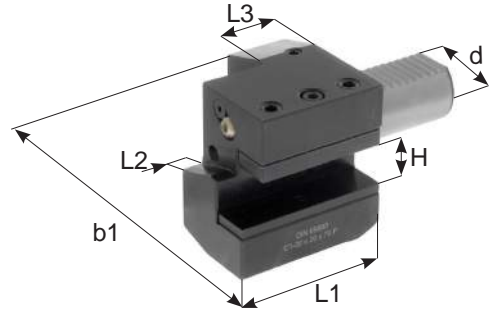
DIN/69880

FORMA B8

REFERENCIA	FAM	COD	d (VDI)	b1	b3	H	L2
VDI.B8-016.24	2	9334	16	58	5.0	12	24
VDI.B8-016.34	2	9335	16	58	5.0	12	34
VDI.B8-020.30	2	5693	20	75	7.0	16/12	30
VDI.B8-020.40	2	5745	20	75	7.0	16/12	40
VDI.B8-025.30	6	-	25	75	7.0	16/12	30
VDI.B8-025.40	6	-	25	75	7.0	16/12	40
VDI.B8-030.40	1	5697	30	100	10.0	20/16	40
VDI.B8-030.60	2	5698	30	100	10.0	20/16	60
VDI.B8-040.44	1	5700	40	118	12.5	25/20	44
VDI.B8-050.55	1	5804	50	130	16.0	32/25	55
VDI.B8-060.60	1	9366	60	145	16.0	32/25	60



Porta herramientas Axial Derecha
Axial toolholders - Right

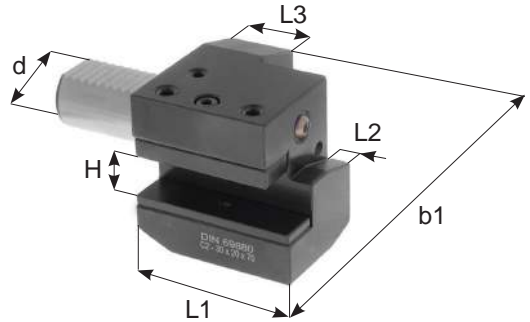


DIN/69880

FORMA C1

REFERENCIA	FAM	COD	d (VDI)	b1	H	L1	L2	L3
VDI.C1-016.44	2	5702	16	43	12	44	5	20
VDI.C1-020.50		5704	20	65	16/12	50	-	30
VDI.C1-020.55		5701	20	52	16/12	55	7	30
VDI.C1-025.55	6	-	25	58	16/12	55	7	20
VDI.C1-030.70	2	5703	30	70	20/16	70	10	30
VDI.C1-040.85		5705	40	85	25/20	85	12.5	30
VDI.C1-050.100		5806	50	100	32/25	100	16	40
VDI.C1-060.125		9367	60	125	32/25	125	16	40

Porta herramientas Axial Izquierda
Axial toolholders - Left



DIN/69880

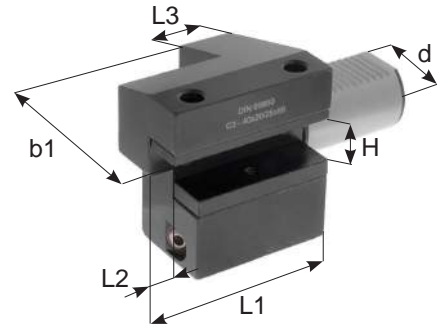
FORMA C2

REFERENCIA	FAM	COD	d (VDI)	b1	H	L1	L2	L3
VDI.C2-016.44	2	5707	16	43	12	44	5	20
VDI.C2-020.50		5722	20	65	16/12	50	-	30
VDI.C2-025.55		5701	20	52	16/12	55	7	30
VDI.C2-030.70	6	-	25	58	16/12	55	7	20
VDI.C2-040.85	2	5724	30	76	20/16	70	10	30
VDI.C2-050.100		5727	40	90	25/20	85	12.5	30
VDI.C2-060.125		5807	50	105	32/25	100	16	40
VDI.C2-060.125		9368	60	125	32/25	125	16	40





Porta herramientas Axial saliente Derecho
Axial upside-down toolholders - Right

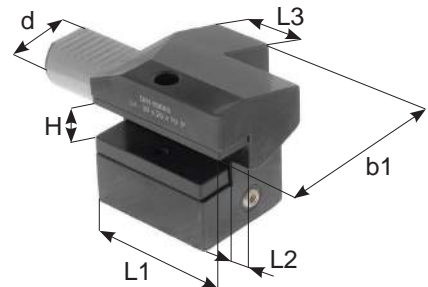


DIN/69880

FORMA C3

REFERENCIA	FAM	COD	d (VDI)	b1	H	L1	L2	L3
VDI.C3-016.44	2	5716	16	43	12	44	5	20
VDI.C3-020.50		5736	20	65	16/12	50	-	30
VDI.C3-020.55		5737	20	52	16/12	55	7	30
VDI.C3-025.55	6	-	25	58	16/12	55	7	20
VDI.C3-030.70	2	5740	30	70	20/16	70	10	30
VDI.C3-040.85		5742	40	85	25/20	85	12.5	30
VDI.C3-050.100		5808	50	100	32/25	100	16	40
VDI.C3-060.125		9369	60	125	32/25	125	16	40

Porta herramientas Axial saliente Izquierda
Axial upside-down toolholders - Left



DIN/69880

FORMA C4

REFERENCIA	FAM	COD	d (VDI)	b1	H	L1	L2	L3
VDI.C4-016	2	5614	16	43	12	44	5	20
VDI.C4-020		5743	20	65	16/12	50	-	30
VDI.C4-025		-	25	58	16/12	55	7	20
VDI.C4-030	2	5618	30	76	20/16	70	10	30
VDI.C4-040		5746	40	90	25/20	85	12.5	30
VDI.C4-050		5809	50	105	32/25	100	16	40
VDI.C4-060		9370	60	125	32/25	125	16	40

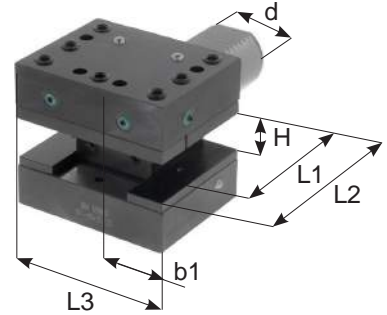




Porta herramientas Multiple Cuadrado
Toolholders with multiple seats

DIN/69880

FORMA D1

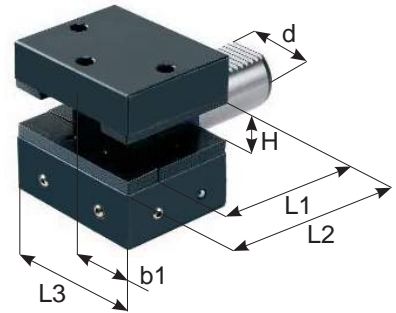


REFERENCIA	FAM	COD	d (VDI)	b1	H	L1	L2	L3
VDI.D1-025	6	-	25	33	16/12	34	48	66
VDI.D1-030	2	5748	30	35	20/16	42	60	76
VDI.D1-040		5750	40	42.5	25/20	50	72	90
VDI.D1-050		5810	50	50	32/25	60	85	105
VDI.D1-060		9371	60	57.5	32/25	85	110	115

Porta herramientas Multiple Cuadrado
Toolholders with multiple seats

DIN/69880

FORMA D2



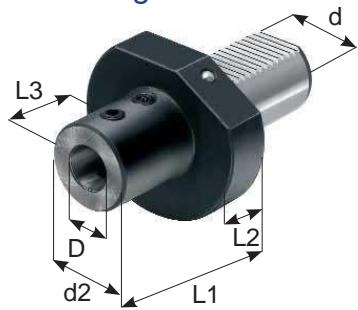
REFERENCIA	FAM	COD	d (VDI)	b1	H	L1	L2	L3
VDI.D2-025	6	-	25	33	16/12	34	48	66
VDI.D2-030	2	5752	30	35	20/16	42	60	76
VDI.D2-040		5754	40	42.5	25/20	50	72	90
VDI.D2-050		5811	50	50	32/25	60	85	105
VDI.D2-060		9372	60	57.5	32/25	85	110	115



Porta herramientas barras de mandrinado refrigeración Interna
Boring - bars holder with inside cooling

DIN/69880

FORMA E1



REFERENCIA	FAM	COD	d (VDI)	d2	D	L1	L2	L3
E1-020x6*	2	9343	20	25	6	50	18	36
E1-020x8*		9344		28	8	50		36
E1-020x10*		9345		35	10	54		40
E1-020x12*		9346		42	12	59		45
E1-020x16		5728		36	16	67		54
E1-020x20		5729		40	20	67		54
E1-020x25		5730		45	25	71		58
E1-030x6*	2	9347	30	25	6	50	22	36
E1-030x8*		9348		28	8	50		36
E1-030x10*		9349		35	10	54		40
E1-030x12*		9350		42	12	59		45
E1-030x16		5731		36	16	67		54
E1-030x20		5732		40	20	67		54
E1-030x25		5733		45	25	71		58
E1-030x32		5734		52	32	75		61
E1-030x40		5735		65	40	90		72
E1-040x6*		2		9351	40	25		6
E1-040x8*	9352		28	8		50	36	
E1-040x10*	9353		35	10		54	40	
E1-040x12*	9354		42	12		58	45	
E1-040x16	5833		36	16		67	54	
E1-040x20	5834		40	20		67	54	
E1-040x25	5835		45	25		75	59	
E1-040x32	5836		52	32		75	61	
E1-040x40	5837		65	40		90	73	
E1-040x50	9355		70	50		100	83	
E1-050x16	2	5838	50	36	16	80	30	54
E1-050x20		5839		40	20	80		54
E1-050x25		5840		45	25	80		59
E1-050x32		5841		52	32	80		63
E1-050x40		5842		65	40	90		73
E1-050x50		5843		75	50	100		83
E1-060x16	2	9373	60	36	16	80	30	54
E1-060x20		9374		40	20	80		54
E1-060x25		9375		45	25	80		59
E1-060x32		9376		52	32	80		63
E1-060x40		9377		65	40	90		73
E1-060x50		9378		75	50	100		83

* El grano de blocaje esta inclinado a 2º para mejorar el ajuste



Porta herramientas barras de mandrinado refrigeración Interna y Externa
Boring - bars holder with outside - inside cooling



DIN/69880

FORMA E2

REFERENCIA	FAM	COD	d (VDI)	d2	D	L1	L2	L3
E2-016x6	2	9336	16	32	6	44	13	34
E2-016x8		9337		32	8	44		34
E2-016x10		9338		32	10	44		34
E2-016x12		9339		40	12	44		34
E2-016x16		9340		40	16	44		34
E2-020x6	2	5725	20	40	6	50	18	42
E2-020x8		5762		40	8	50		42
E2-020x10		5763		40	10	50		42
E2-020x12		5764		40	12	50		42
E2-020x16		5765		42	16	50		42
E2-020x20		5766		49	20	50		42
E2-020x25	5767	49	25	60	52			
E2-030x6	2	5741	30	55	6	60	22	43
E2-030x8		5768		55	8	60		43
E2-030x10		5769		55	10	60		43
E2-030x12		5631		55	12	60		43
E2-030x16		5632		55	16	60		55
E2-030x20		5633		55	20	60		54
E2-030x25		5622		55	25	60		54
E2-030x30		5623		67	30	75		61
E2-030x32		5629		67	32	75		61
E2-030x40		5628		67	40	75		66





Porta herramientas barras de mandrinado refrigeración Interna y Externa
Boring - bars holder with outside - inside cooling



DIN/69880

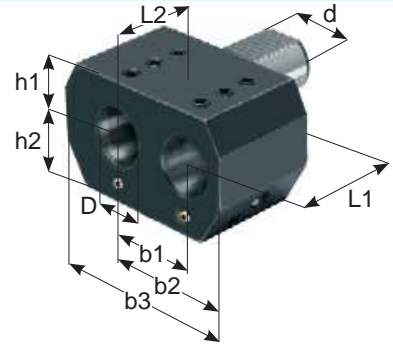
FORMA E2

REFERENCIA	ART	COD	d (VDI)	d2	D	L1	L2	L3
E2-040x6	2	5747	40	55	6	75	22	43
E2-040x8		5749		8	75	43		
E2-040x10		5751		10	75	43		
E2-040x12		5770		12	75	58		
E2-040x16		5771		16	75	61		
E2-040x20		5772		20	75	61		
E2-040x25		5773		25	75	61		
E2-040x30		5786		30	75	61		
E2-040x32		5774		32	75	61		
E2-040x40		5775		40	90	76		
E2-040x50	5785	50	100	-	86			
E2-050x12	2	5805	50	68	12	90	30	71
E2-050x16		5812		16	90	76		
E2-050x20		5813		20	90	76		
E2-050x25		5814		25	90	76		
E2-050x30		5801		30	90	76		
E2-050x32		5815		32	90	76		
E2-050x40		5816		40	90	-		76
E2-050x50	5817	50	100	-	86			
E2-060x16	2	9379	60	68	16	90	30	76
E2-060x20		9380		20	90	76		
E2-060x25		9381		25	90	76		
E2-060x32		9382		32	90	76		
E2-060x40		9383		40	90	76		
E2-060x50		9384		50	100	86		





Porta herramientas Doble Derecha
Double boring bar holders - Right hand

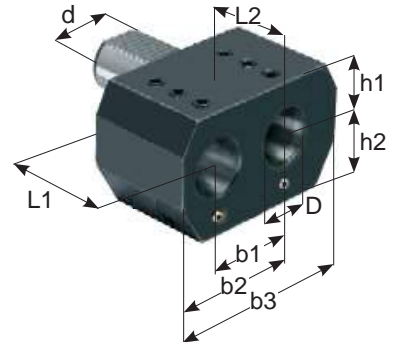


DIN/69880

FORMA ES7

REFERENCIA	FAM	COD	d (VDI)	D	h1	h2	L1	L2	b1	b2	b3
ES7-20x16	2	7979	20	16	25	25	45	42	32	51	76
ES7-20x20		7980		20	25	25	45	42	32	51	76
ES7-30x25		7981	30	25	28	32	56	52	45	65	95
ES7-40x32		7982	40	32	32.5	40	66	60	50	75	115
ES7-50x32		7983	50	32	32.5	47.5	66	60	50	75	115
ES7-50x50		7984		50	35	49	90	80	68	103	152

Porta herramientas Doble Izquierda
Double boring bar holders - Left hand



DIN/69880

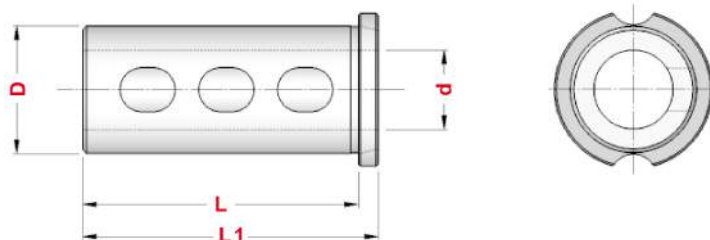
FORMA ES8




REFERENCIA	FAM	COD	d (VDI)	D	h1	h2	L1	L2	b1	b2	b3
ES8-20x16	2	7985	20	16	25	25	45	42	32	51	76
ES8-20x20		7986		20	25	25	45	42	32	51	76
ES8-30x25		7987	30	25	28	32	56	52	45	65	95
ES8-40x32		7988	40	32	32.5	40	66	60	50	75	115
ES8-50x32		7989	50	32	32.5	47.5	66	60	50	75	115
ES8-50x50		7990		50	35	49	90	80	68	103	152



Casquillo de reducción con flangia para Porta herramientas E2 con mango VDI20 - 25 - 30

Headed reduction sleeves for Boring bar holders E2 with shanks VDI20 - 25 - 30

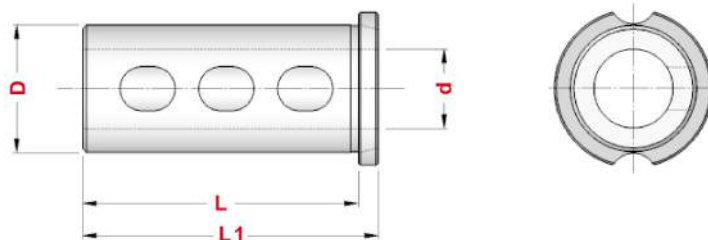





REFERENCIA	FAM	COD	D	d	L	L1	(VDI) E2
E2.R1-25x8	2	5436	25	8	47	52	
E2.R1-25x10		5437		10			
E2.R1-25x12		5438		12			
E2.R1-25x14		5439		14			
E2.R1-25x16		5440		16			
E2.R1-25x18		5441		18			
E2.R1-25x20	5442	20				E2-20x25 E2-25x25 E2-30x25	
E2.R2-32x8	2	5457	32	8	57	62	
E2.R2-32x10		5458		10			
E2.R2-32x12		5459		12			
E2.R2-32x14		5460		14			
E2.R2-32x16		5461		16			
E2.R2-32x18		5462		18			
E2.R2-32x20	5463	20				E2-25x32 E2-30x32	
E2.R2-32x25	5464	25					
E2.R2-40x8	2	5473	40	8	57	62	
E2.R2-40x10		5474		10			
E2.R2-40x12		5475		12			
E2.R2-40x14		5476		14			
E2.R2-40x16		5477		16			
E2.R2-40x18		5478		18			
E2.R2-40x20	5479	20				E2-30x40	
E2.R2-40x25	5480	25					
E2.R2-40x32	5481	32					



Casquillo de reducción con flangia para Porta herramientas E2 con mango VDI40

Headed reduction sleeves for Boring bar holders E2 with shanks VDI40

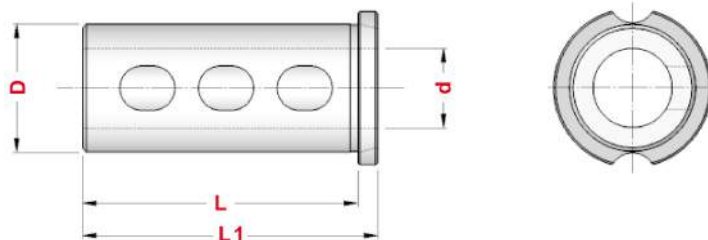





REFERENCIA	FAM	COD	D	d	L	L1	(VDI) E2
E2.R2-25x8	2	5443	25	8	57	62	 E2-40x25
E2.R2-25x10		5444		10			
E2.R2-25x12		5445		12			
E2.R2-25x14		5446		14			
E2.R2-25x16		5447		16			
E2.R2-25x18		5448		18			
E2.R2-25x20	5449	20					
E2.R2-32x8	2	5457	32	8	57	62	 E2-40x32
E2.R2-32x10		5458		10			
E2.R2-32x12		5459		12			
E2.R2-32x14		5460		14			
E2.R2-32x16		5461		16			
E2.R2-32x18		5462		18			
E2.R2-32x20	5463	20					
E2.R2-32x25	5464	25					
E2.R3-40x8	2	5482	40	8	70	75	 E2-40x40
E2.R3-40x10		5483		10			
E2.R3-40x12		5484		12			
E2.R3-40x14		5485		14			
E2.R3-40x16		5486		16			
E2.R3-40x18		5487		18			
E2.R3-40x20	5488	20					
E2.R3-40x25	5489	25					
E2.R3-40x32	5490	32					



Casquillo de reducción con flangia para Porta herramientas E2 con mango VDI50 - 60 - 80

Headed reduction sleeves for Boring bar holders E2 with shanks VDI50 - 60 - 80



REFERENCIA	FAM	COD	D	d	L	L1	(VDI) E2
E2.R3-25x8	2	5450	25	8	70	75	 E2-50x25 E2-60x25 E2-80x25
E2.R3-25x10		5451		10			
E2.R3-25x12		5452		12			
E2.R3-25x14		5453		14			
E2.R3-25x16		5454		16			
E2.R3-25x18		5455		18			
E2.R3-25x20		5456		20			
E2.R3-32x8	2	5465	32	8	70	75	 E2-50x32 E2-60x32 E2-80x32
E2.R3-32x10		5466		10			
E2.R3-32x12		5467		12			
E2.R3-32x14		5468		14			
E2.R3-32x16		5469		16			
E2.R3-32x18		5470		18			
E2.R3-32x20		5471		20			
E2.R3-32x25	5472	25					
E2.R3-40x8	2	5482	40	8	70	75	 E2-50x40 E2-60x40 E2-80x40
E2.R3-40x10		5483		10			
E2.R3-40x12		5484		12			
E2.R3-40x14		5485		14			
E2.R3-40x16		5486		16			
E2.R3-40x18		5487		18			
E2.R3-40x20		5488		20			
E2.R3-40x25	5489	25					
E2.R3-40x32	5490	32					

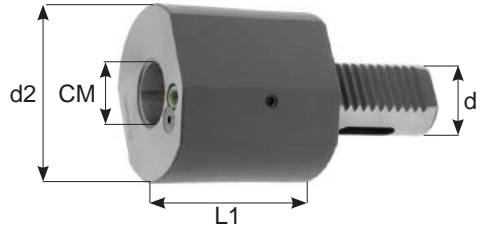




Porta herramientas a Cono Morse Forma - F1
Morse taper toolholders Form - F1

DIN/69880

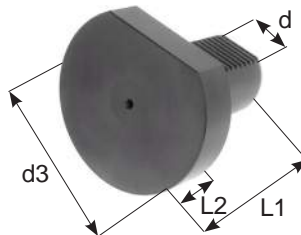
FORMA F1



REFERENCIA	FAM	COD	d (VDI)	d2	CM	L1	L2
VDI.F16.MT1	2	5709	16	-	1	31	-
VDI.F16.MT2		5710		-	2	72	-
VDI.F20.MT1	2	5776	20	-	1	23	-
VDI.F20.MT2*		5792		45	2	41	22
VDI.F30.MT1	2	5630	30	-	1	27	-
VDI.F30.MT2		5625		55	2	36	27
VDI.F30.MT3		5818		55	3	66	41
VDI.F40.MT1	2	5723	40	55	1	23	22
VDI.F40.MT2		5777		55	2	36	22
VDI.F40.MT3		5778		58	3	36	22
VDI.F40.MT4		5779		68	4	80	22
VDI.F50.MT2	2	5819	50	55	2	36	30
VDI.F50.MT3		5820		58	3	45	30
VDI.F50.MT4		5821		68	4	55	30
VDI.F50.MT5*		5949		75	5	72	30
VDI.F60.MT2	2	9389	60	55	2	35	30
VDI.F60.MT3		9390		58	3	45	30
VDI.F60.MT4		9391		68	4	55	30
VDI.F60.MT5		9392		98	5	64	30

* El mango cilíndrico no es dentado

Tampón de protección de Acero o Plástico
Plastic or Steel blanking plugs

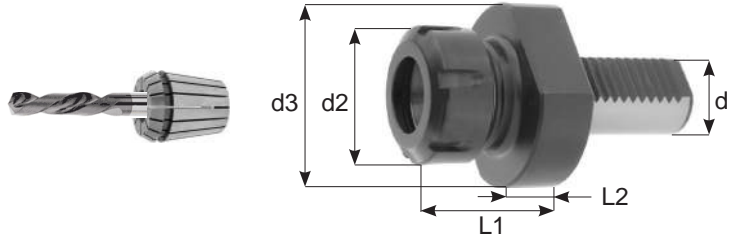


PLASTICO		ACERO		FAM	d	d3	L1	L2
REFERENCIA	COD	REFERENCIA	COD					
Z2-16	7991	Z2-16S	7993	2	16	40	45	13
Z2-20	5826	Z2-20S	7994		20	50	56	16
Z2-30	5827	Z2-30S	7995		30	68	71	16
Z2-40	5828	Z2-40S	7996		40	83	83	20
Z2-50	5829	Z2-50S	7997		50	98	98	20
Z2-60	7992	Z2-60S	7998		60	123	114	20

DIN/69880

Porta pinzas VDI pinza ER - DIN 6499
Collect chucks ER - DIN 6499

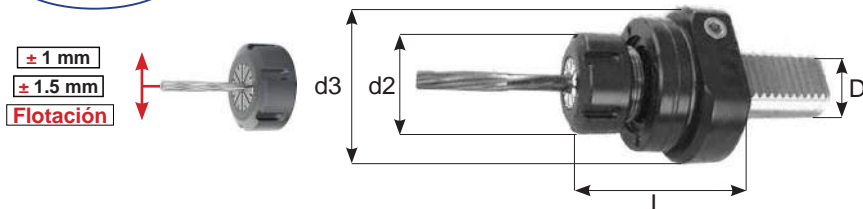
FORMA E4



REFERENCIA	FAM	COD	d (VDI)	CAP	d2	d3	L1	L2
VDI.E4-16.ERC16	2	3076	16	1 ÷ 10	32	40	44	13
VDI.E4-16.ERC20		3078		1 ÷ 13	35		44	
VDI.E4-20.ERC16	2	3547	20	1 ÷ 10	32	50	44	18
VDI.E4-20.ERC20		3303		1 ÷ 14	35		59	
VDI.E4-20.ERC25		3304		1 ÷ 20	42		65	
VDI.E4-20.ERC32		3549		2 ÷ 22	50		67	
VDI.E4-30.ERC16	2	3550	30	1 ÷ 10	32	68	48	22
VDI.E4-30.ERC20		3551		1 ÷ 14	35		59	
VDI.E4-30.ERC25		3305		1 ÷ 20	42		57	
VDI.E4-30.ERC32		3306		2 ÷ 22	50		78	
VDI.E4-30.ERC40		3307		3 ÷ 30	63		80	
VDI.E4-40.ERC20	2	3553	40	1 ÷ 14	35	83	59	22
VDI.E4-40.ERC25		3554		1 ÷ 20	42		57	
VDI.E4-40.ERC32		3308		2 ÷ 22	50		78	
VDI.E4-40.ERC40		3309		3 ÷ 30	63		80	
VDI.E4-50.ERC25	2	2304	50	1 ÷ 20	42	98	67	30
VDI.E4-50.ERC32		2320		2 ÷ 22	50		92	
VDI.E4-50.ERC40		3311		3 ÷ 30	63		80	
VDI.E4-60.ERC32	2	9387	60	2 ÷ 22	50	123	78	30
VDI.E4-60.ERC40		9388		3 ÷ 30	63		80	

DIN/69880

Porta escariador flotante ER - DIN 6499
Floating reamer holders for ER - DIN 6499

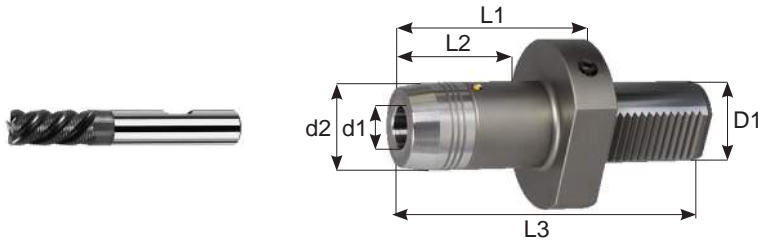


REFERENCIA	FAM	D	PINZA	CAP	FLOT	d2	d3	L
VDI20-RM25	6	20	ER25	1 ÷ 20	± 1.0 mm	42	57	57
VDI30-RM25	6	30	ER25	1 ÷ 20	± 1.0 mm	42	68	64
VDI30-RM32		30	ER32	2 ÷ 22	± 1.5 mm	50	68	72
VDI40-RM32	6	40	ER32	1 ÷ 20	± 1.5 mm	50	83	74
VDI40-RM40		40	ER40	2 ÷ 22	± 1.5 mm	63	83	74



DIN/69880

Porta pinzas hidráulico con Refrigeración
Hydraulic chuck with coolant feed



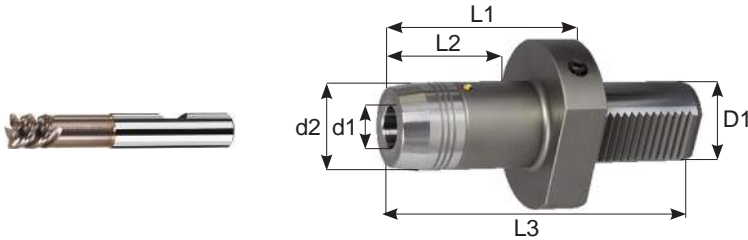
REFERENCIA	FAM	D1 (VDI)	d1	d2	L1	L2	L3
VDI.16H.16	4	16	16	38	75	57	70
VDI.16H.20			20	42	75	57	60
VDI.20H.6	4	20	6	26	49	33	75
VDI.20H.8			8	28	49	33	75
VDI.20H.10			10	30	49	33	75
VDI.20H.12			12	32	54	38	55
VDI.20H.14			14	34	54	38	55
VDI.20H.16			16	38	75	57	70
VDI.20H.18			18	40	75	57	70
VDI.20H.20			20	42	75	57	60
VDI.25H.6	4	25	6	26	49	33	80
VDI.25H.8			8	28	49	33	80
VDI.25H.10			10	30	49	33	80
VDI.25H.12			12	32	54	38	85
VDI.25H.14			14	34	54	38	85
VDI.25H.16			16	38	75	57	75
VDI.25H.18			18	40	75	57	75
VDI.25H.20			20	42	75	57	75
VDI.25H.25	25	50	100	84	85		
VDI.30H.6	4	30	6	26	49	33	85
VDI.30H.8			8	28	49	33	85
VDI.30H.10			10	30	49	33	85
VDI.30H.12			12	32	54	38	85
VDI.30H.14			14	34	54	38	85
VDI.30H.16			16	38	89	73	85
VDI.30H.18			18	40	89	73	85
VDI.30H.20			20	42	89	73	85
VDI.30H.25	25	50	94	78	85		
VDI.30H.32	32	60	94	78	80		





DIN/69880

Porta pinzas hidráulico con Refrigeración
Hydraulic chuck with coolant feed



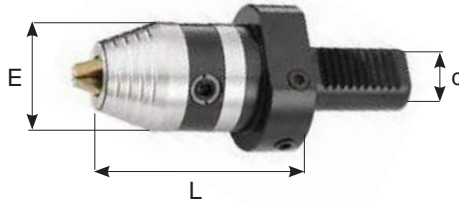
REFERENCIA	FAM	D1 (VDI)	d1	d2	L1	L2	L3
VDI.40H.6	4	40	6	26	55	33	90
VDI.40H.8			8	28	55	33	90
VDI.40H.10			10	30	55	33	90
VDI.40H.12-95			12	32	60	38	95
VDI.40H.12-115			12	32	80	58	115
VDI.40H.12-125			12	32	90	68	125
VDI.40H.14			14	34	60	38	95
VDI.40H.16			16	38	95	73	130
VDI.40H.18			18	40	95	73	130
VDI.40H.20			20	42	95	73	130
VDI.40H.25			25	50	95	73	130
VDI.40H.32-70			32	60	75	53	70
VDI.40H.32-90			32	60	95	73	90
VDI.40H.40			40	70	100	78	90
VDI.50H.6	4	50	6	26	55	33	110
VDI.50H.8			8	28	55	33	110
VDI.50H.10			10	30	55	33	110
VDI.50H.12			12	32	60	38	115
VDI.50H.14			14	34	60	38	115
VDI.50H.16			16	38	95	65	150
VDI.50H.18			18	40	95	65	150
VDI.50H.20			20	42	95	65	150
VDI.50H.25			25	50	95	65	150
VDI.50H.32			32	60	95	65	90
VDI.50H.40			40	60	100	75	90
VDI.60H.20	4	60	20	42	100	70	150
VDI.60H.25			25	50	70	40	120





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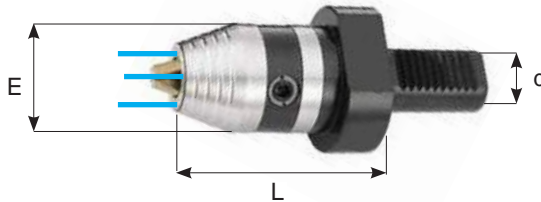
Porta brocas con Refrigeración Central
Monolithic drill chucs with middle cooling passing



REFERENCIA	FAM	COD	d (VDI)	CAP	E	L
VDI20-DCU13C	2	9303	20	1 ÷ 13	50	88
VDI30-DCU13C		9304	30	1 ÷ 13		93
VDI30-DCU16C		9305	30	3 ÷ 16		98
VDI40-DCU13C		9306	40	1 ÷ 13		93
VDI40-DCU16C		9307		3 ÷ 16		98
VDI50-DCU13C		9308	50	1 ÷ 13		100
VDI50-DCU16C		9309		3 ÷ 16		105

DIN/69880

Porta brocas con Refrigeración Frontal
Monolithic drill chucs with cooling nozzles



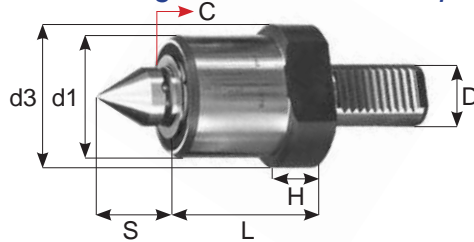
REFERENCIA	FAM	COD	d (VDI)	CAP	E	L
VDI30-DCU13E	2	9312	30	1 ÷ 13	63	93
VDI30-DCU16E		9313		3 ÷ 16		98
VDI40-DCU13E		9314	40	1 ÷ 13		93
VDI40-DCU16E		9315		3 ÷ 16		98
VDI50-DCU13E		9316	50	1 ÷ 13		100
VDI50-DCU16E		9317		3 ÷ 16		105



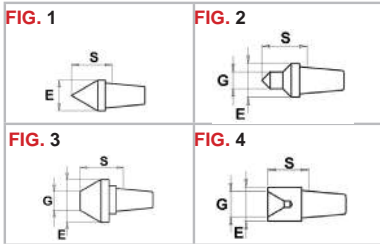


DIN/69880

Punto rotativo con Compresión
Revolving Tailstock with compression



REFERENCIA	FAM	D	d1	d3	L	H	S	C
E9V3.30.78	6	30	58	68	78	20	34	2.5
E9V3.40.80		40	58	83	80	22	34	2.5

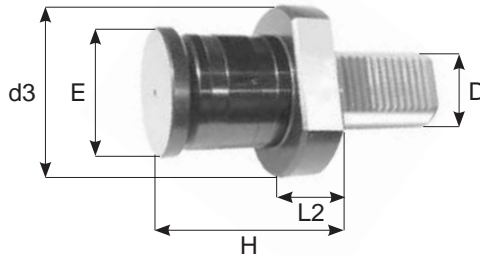


Recambios

REFERENCIA	FAM	E	S	G	FIG
E172.601	6	28	34	-	1
E172.602		28	40	7	2
E172.602 B		28	40	12	2
E172.603		58	36	25	3
E172.604		28	32	24	4

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Porta barras regulable con Amortiguación
Damped rotary adjustable bar-stop



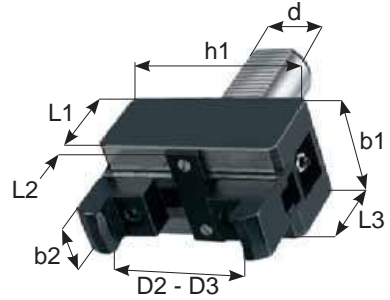
REFERENCIA	FAM	COD	D	H	d3	L2	H
VDI20.E34	2	5787	20	74 - 87	50	30	34
VDI20.E42		5788	20	82 - 95	50	30	42
VDI30.E42	2	5789	30	68 - 100	68	16	42
VDI30.E56		3586	30	68 - 100	68	16	56
VDI40.E42	2	5790	40	74 - 100	83	22	42
VDI40.E56		3587	40	74 - 100	83	22	56
VDI50.E42	2	5832	50	82 - 110	98	30	42
VDI50.E56		3588	50	82 - 110	98	30	56



Porta herramientas Arrastra Barras
Bar Clamps

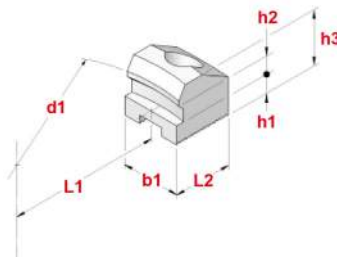
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FORMA H1



REFERENCIA	FAM	COD	d (VDI)	d2	d3	b1	b2	h1	L1	L2	L3
H1-16	2	5661	16	6 ÷ 56	54 ÷ 110	50	28	72	46	4	51
H1-20		5679	20	6 ÷ 56	54 ÷ 110	50	28	72	46	4	51
H1-30		5680	30	6 ÷ 56	54 ÷ 110	50	28	72	46	4	51
H1-40		5681	40	6 ÷ 56	54 ÷ 110	60	28	110	48	4	53
H1-50		5683	50	10 ÷ 75	62 ÷ 125	65	28	130	67	5	73
H1-60		9393	60	10 ÷ 75	62 ÷ 125	65	28	130	67	5	73

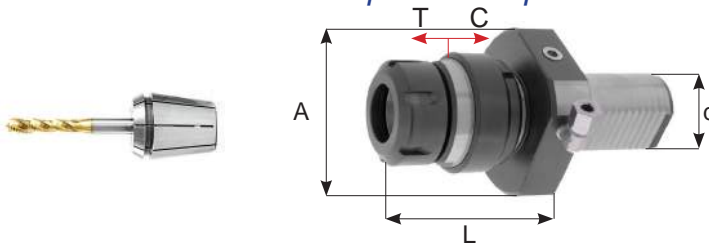
Garras
Jaws



REFERENCIA	FAM	COD	d1	b1	L1	L2	h1	h2	h3
H1.10.30-40	2	5822	75	28	35	28	9	10	26
H1.11.30-40		5823	125	28	42	36	18	10	34
H1.10.50-60		5824	75	28	35	28	17	10	42
H1.11.50-60		5825	125	28	42	36	24	10	42

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Roscador con Compresión y Tracción pinza ER
Tension and compression tap holders collet ER

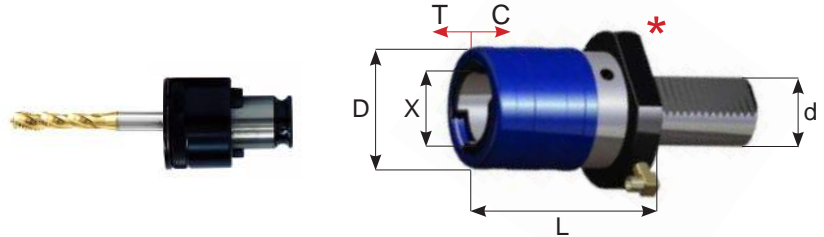


REFERENCIA	FAM	d	CAP	L	A	C	T
VDI30-ERC32TC	1	30	M3 ÷ M27	86	50	4	12
VDI40-ERC32TC		40	M3 ÷ M27	86	50	4	12



Roscador cambio rápido con Compresión y Tracción sin Flangia
Double compensation quick change tap holders without flange

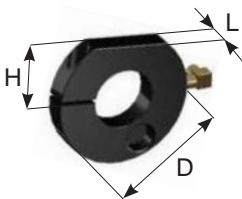
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REFERENCIA	FAM	COD	CAP	d (VDI)	D	X	L	C	T
VDI20-THTC1-L55	2	5760	M 3 ÷ M12	20	38	19	55	9	9
VDI20-THTC2-L77		5761	M 8 ÷ M20	20	55	31	77	15	15
VDI30-THTC1-L55	-	-	M 3 ÷ M12	30	36	19	55	7.5	7.5
VDI30-THTC2-L76	-	-	M 8 ÷ M20	30	53	31	76	12.5	12.5
VDI30-THTC3-L162	-	-	M14 ÷ M33	30	78	48	162	20.0	20.0
VDI40-THTC1-L55	-	-	M 3 ÷ M12	40	36	19	55	7.5	7.5
VDI40-THTC2-L76	-	-	M 8 ÷ M20	40	53	31	76	12.5	12.5
VDI40-THTC3-L122	-	-	M14 ÷ M33	40	78	48	122	20.0	20.0
VDI50-THTC1-L55	-	-	M 3 ÷ M12	50	36	19	55	7.5	7.5
VDI50-THTC2-L76	-	-	M 8 ÷ M20	50	53	31	76	12.5	12.5
VDI50-THTC3-L108	-	-	M14 ÷ M33	50	78	48	108	20.0	20.0
VDI50-THTC4-L122	-	-	M22 ÷ M48	50	69	60	122	22.5	22.5
VDI60-THTC3-L108	-	-	M14 ÷ M33	60	78	48	108	20.0	20.0
VDI60-THTC4-L119	-	-	M22 ÷ M48	60	69	60	119	22.5	22.5

* Sin flangia

Flangia
Flangia

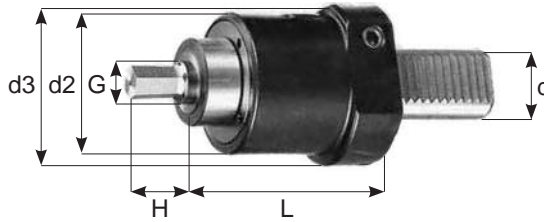


REFERENCIA	d	D	H	L
VDI-F20	20	50	23	12
VDI-F30	30	68	28	12
VDI-F40	40	83	32.5	12
VDI-F50	50	98	35	12
VDI-F60	60	123	42.5	12



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Porta herramientas Rotativo de Brochado Interno
Rotary broach holder for internal polygons

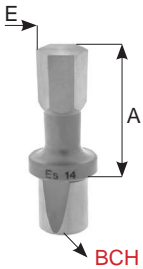


REFERENCIA	FAM	COD	d (VDI)	d2	d3	G	L	H
VDI.20.BCH12	2	9319	20	44	50	12	57	25
VDI.30.BCH12	1/2	9320	30	58	68	12	83	25
VDI.30.BCH16		9321	30	58	68	16	83	40
VDI.40.BCH12	1/2	9322	40	58	83	12	83	25
VDI.40.BCH16		9323	40	58	83	16	83	40

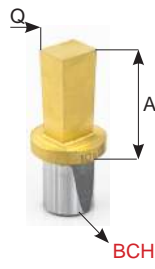
Brocha Hexagonal
Broach exagonal

Brocha Cuadrada
Broach square

REFERENCIA	FAM	A
BCH12.E3	1	25
BCH12.E4		25
BCH12.E5		25
BCH12.E5.5		25
BCH12.E6		25
BCH12.E7		25
BCH12.E8		25
BCH12.E9		25
BCH12.E10		25
BCH16.E4		1
BCH16.E5	40	
BCH16.E6	40	
BCH16.E7	40	
BCH16.E8	40	
BCH16.E9	40	
BCH16.E10	40	
BCH16.E11	40	
BCH16.E12	40	
BCH16.E13	40	
BCH16.E14	40	
BCH16.E15	40	
BCH16.E16	40	
BCH16.E17	40	



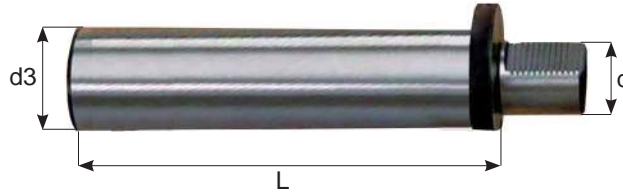
REFERENCIA	FAM	A	
BCH12.Q4	1	25	
BCH12.Q5		25	
BCH12.Q6		25	
BCH12.Q7		25	
BCH12.Q8		25	
BCH12.Q9		25	
BCH12.Q10		25	
BCH16.Q4		1	40
BCH16.Q5			40
BCH16.Q6			40
BCH16.Q7	40		
BCH16.Q8	40		
BCH16.Q9	40		
BCH16.Q10	40		
BCH16.Q11	40		
BCH16.Q12	40		





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Barra de Control
Test Arbors



REFERENCIA	FAM	COD	d (VDI)	d3	L
VDI.16B.25	2	7894	16	25	200
VDI.20B.30	2	7895	20	30	220
VDI.30B.40	2	7896	30	40	230
VDI.40B.50	2	7897	40	50	300
VDI.50B.50	2	7898	50	50	300
VDI.60B.60	2	7899	60	60	300

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Soporte de montaje VDI DIN/69880
Power block for tools with Cylindrical shank



REFERENCIA	FAM	Ø	DIN	NORMA
76.445.020	3	Ø20	69880	VDI
76.445.030	3	Ø30	69880	VDI
76.445.040	3	Ø40	69880	VDI
76.445.050	3	Ø50	69880	VDI

