

Informações Técnicas.



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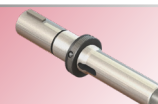
8

Anel de Vedação para Porca ER.



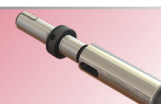
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Adaptador Regulável DIN 6327 Estilo “F” e “G”.



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Adaptador Regulável DIN 6327 Estilo “H”.



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Adaptador Regulável DIN 6327 Estilo “D” e “E”.



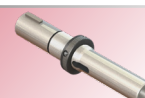
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Adaptador Regulável Curto Norma ASA.



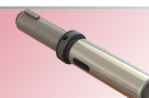
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Adaptador Regulável c/ Prolongamento Norma ASA.



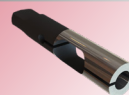
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Adaptador Regulável Reforçado Norma ASA.



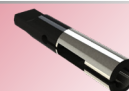
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Pinça para Macho DIN 6328.



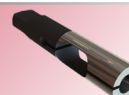
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Pinça para Broca DIN 6329.



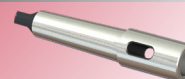
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Pinça para Broca de Centro.



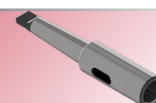
14

Haste para Rebaixador e Escareador.



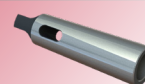
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Prolongador CM Externo e Interno Norma ASA.



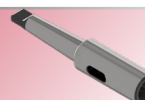
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Bucha de Redução Cone Morse DIN 2185.



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Parafuso Cruz para Porta Fresa DIN 6367.



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Chave para Parafuso Cruz DIN 6368.



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Chave de Gancho DIN 1810.



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Chave de Boca para Porca ER.



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Chave Castelo para Porca ER Mini.



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Chave Dentada para Porca ER.



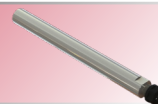
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Porta Pinça Haste Lisa Extensão ER.



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Porta Pinça Haste Lisa Extensão Mini ER.



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Porta Pinça ER Haste CM DIN 228.



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Porta Pinça ER Haste TR DIN 6327.



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Pinos de Fixação.



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Pinos de Fixação.



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Pinça ER DIN 6499.



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Pinça para Macho ER.



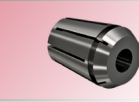
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Pinça ER Estilo MT.



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Pinça ER Vedada.



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Pinça OZ DIN 6388.



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Pinça para Torno Revólver DIN 6343.



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Mandril Troca Rápida.



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Luva Troca Rápida.



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Mandril Troca Rápida Auto Centrantes.



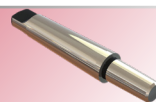
28

Luva Troca Rápida Cônica Auto Centrantes.



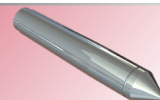
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Porta Mandril DIN 238.



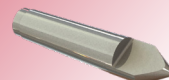
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Contra Ponta DIN 806.



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Contra Ponta com saída para Rebolo DIN 806 H.



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Contra Ponta com Porca Extratora DIN 807.



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Contra Ponta Rotativo de Precisão.



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Contra Ponta High Speed.



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Eixo Porta Fresa DIN 6355.



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Porca para Eixo Porta Fresa DIN 2082.



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Anel de Encosto DIN 2084.



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Bucha de Guia para Eixo Porta Fresa DIN 2083.



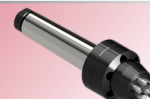
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Espaçador para Eixo Porta Fresa DIN 2084.



34

Mandril Arrastador.



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Contra Ponta com Cabeças Intercambiáveis.



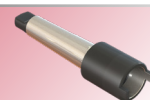
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Cabeças Intercambiáveis.

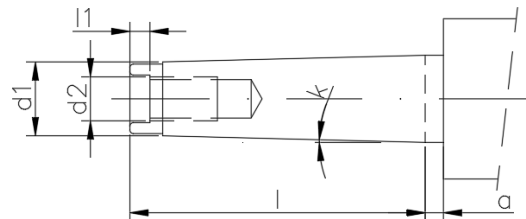
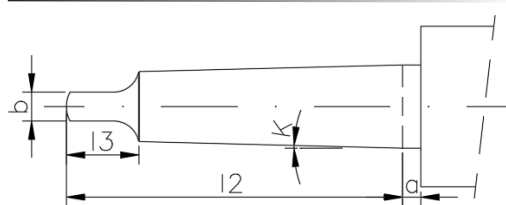


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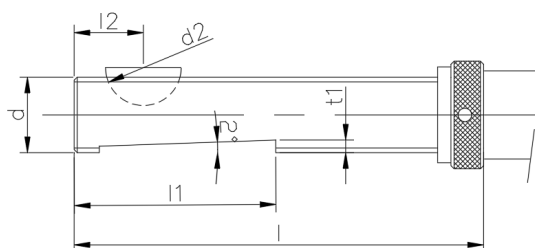
Adaptador para Cone Morse.



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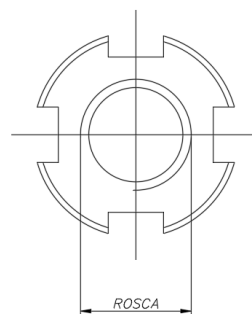
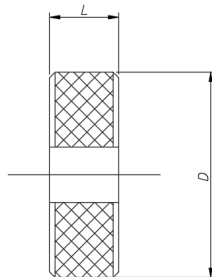
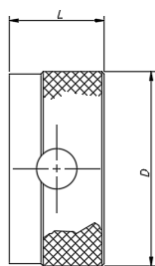


Dimensão	CM-1	CM-2	CM-3	CM-4	CM-5	CM-6
a	3.5	5	5	6.5	6.5	8
b	5.2	6.3	7.9	11.9	15.9	19
d	12.065	17.780	23.825	31.267	44.399	63.348
d1	9	14	19	25	35.7	51
d2	M6	M10	M12	M16	M20	M24
k	1°25'43"	1°25'50"	1°26'16"	1°29'15"	1°30'26"	1°29'36"
l	53.5	64	81	102.5	129.5	182
l1	5	5	7	9	10	16
l2	62	75	94	117.5	149.5	210
l3	13.5	16	20	24	29	40
AT4	0.004	0.004	0.004	0.005	0.006	0.006



Norma DIN 6327	d	d1	d2	b	t	t1	l	l1	l2	h	Chaveta
TR 8 x 1.0	8	14.8	10	2	2.9	1.0	50	26	10	5	2 x 3.7
TR10 x 1.5	10	17.8	13	3	4.1	1.0	62	32	10	6	3 x 5.0
TR12 x 1.5	12	19.7	13	3	4.1	1.0	62	32	10	6	3 x 5.0
TR16 x 1.5	16	24.6	16	5	5.4	1.3	85	44	11	12	5 x 6.5
TR20 x 2.0	20	31.6	19	5	6.4	1.3	88	47	13	12	5 x 7.5
TR25 x 2.0	25	36.6	22	6	7.5	1.5	95	51	15	12	6 x 9.0
TR28 x 2.0	28	39.6	22	6	7.5	1.5	95	51	15	12	6 x 9.0
TR32 x 2.0	32	39.6	28	8	9.5	1.7	118	65	20	12	8 x 11
TR36 x 2.0	36	44.6	28	8	9.5	1.7	118	67	20	14	8 x 11
TR48 x 2.0	48	66.6	32	10	11.1	2.2	144	77	24	18	10 x 13

Norma ASA	d	d1	d2	b	t	t1	l	l1	l2	h	Chaveta
1/2"-16	12.69	22	15.88	3.149	4.76	1.5	76.2	35	11.2	9.65	1/8" x 5/8"
5/8"-16	15.85	25	15.88	3.945	4.37	1.5	76.2	35	12.7	9.65	5/32" x 5/8"
3/4"-12	19.03	32	15.88	3.945	4.37	1.5	76.2	35	12.7	9.65	5/32" x 5/8"
7/8"-12	22.21	32	19.05	4.732	5.57	1.5	92.0	47.7	12.7	9.65	3/16" x 3/4"
1"-12	25.38	38	22.23	4.732	7.15	1.5	92.0	47.7	15.7	9.65	3/16" x 7/8"
1.1/16"-12	26.96	40	22.23	4.732	7.15	1.5	92.0	47.7	15.7	9.65	3/16" x 7/8"
1.3/8"-12	34.90	48	25.40	6.317	7.95	1.5	117.4	66.5	19.0	12.7	1/4" x 1"
1.7/8"-12	47.60	66	31.75	7.902	9.93	1.5	142.7	76.2	23.9	12.7	5/16" x 1.1/4"

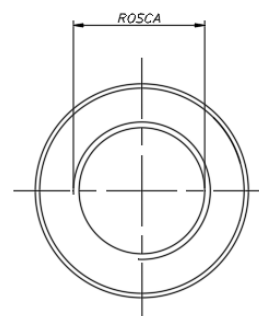
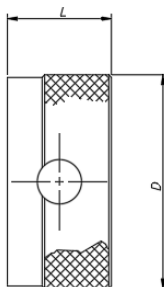


TIPO "2"

TIPO "1"

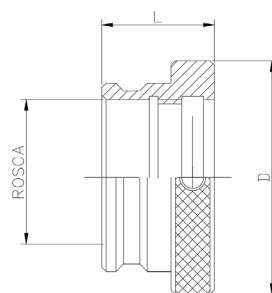
Código	D	L	Rosca	Tipo
BR-001-08	14.8	5	TR 8 x 1.0	1
BR-001-10	17.8	6	TR10 x 1.5	1
BR-001-10A	17.8	12	TR10 x 1.5	2
BR-001-12	19.7	6	TR12 x 1.5	1
BR-001-12A	19.7	12	TR12 x 1.5	2
BR-001-16	24.6	12	TR16 x 1.5	2
BR-001-20	31.6	12	TR20 x 2.0	2
BR-001-22	31.6	12	TR22 x 2.0	2
BR-001-25	36.6	12	TR25 x 2.0	2
BR-001-28	39.6	12	TR28 x 2.0	2
BR-001-32	44.6	12	TR32 x 2.0	2
BR-001-36	49.6	14	TR36 x 2.0	2
BR-001-48	66.6	18	TR48 x 2.0	2

Exemplo para Especificação: Porca para Adaptador TR28 X 2.0 = BR-001-28



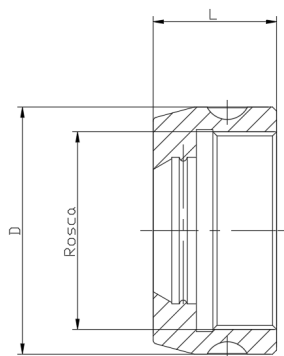
Código	D	L	Rosca
BR-002-01	22.35	9.65	1/2"-16
BR-002-02	25.64	9.65	5/8"-16
BR-002-03	31.75	9.65	3/4"-12
BR-002-04	31.75	9.65	7/8"-12
BR-002-05	38.10	9.65	1"-12
BR-002-06	39.62	9.65	1.1/16"-12
BR-002-07	44.45	9.65	1.1/4"-12
BR-002-08	47.75	9.65	1.3/8"-12
BR-002-09	66.64	12.70	1.7/8"-12

Exemplo para Especificação: Porca para Adaptador 5/8" = BR-002-02



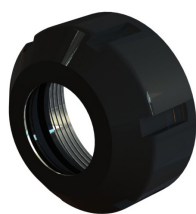
Código	D	L	Rosca
BR-003-16	25	18.5	TR16 x 1.5
BR-003-20	30	20	TR20 x 2.0
BR-003-22	35	22	TR22 x 2.0
BR-003-25	40	22	TR25 x 2.0
BR-003-28	40	22	TR28 x 2.0
BR-003-32	45	23.5	TR32 x 2.0
BR-003-36	52	26	TR36 x 2.0
BR-003-48	68	34	TR48 x 2.0

Exemplo para Especificação: Porca para Adaptador Regulável TR 28 X 2 = BR-003-28

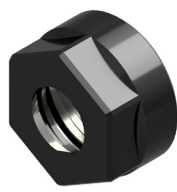


Código	Para Pinça	D	L	Rosca
BR-005-16	BR-257-16	43	27	M33 x 1.5
BR-005-20	BR-257-20	50	32	M42 x 2.0
BR-005-25	BR-257-25	60	34	M48 x 2.0
BR-005-32	BR-257-32	72	37.5	M60 x 2.5
BR-005-40	BR-257-40	85	41	M68 x 2.5

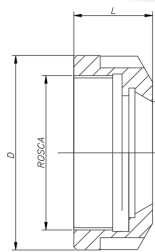
Exemplo para Especificação: Porca para Pinças BR-257-25 = BR-005-25



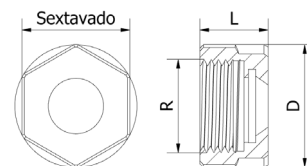
Tipo "2"



Tipo "1"



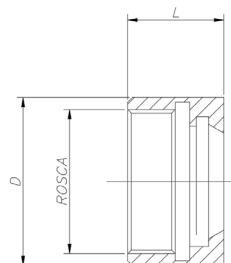
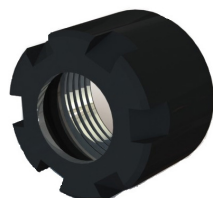
Tipo "2"



Tipo "1"

Código	Para Pinça	D	L	Sextavado	Rosca	Tipo
BR-006-11	BR-256-11	ER-11	19	11.3	17	M14 x 0.75
BR-006-16	BR-256-16	ER-16	28	17	25	M22 x 1.5
BR-006-20	BR-256-20	ER-20	34	19	30	M25 x 1.5
BR-006-25	BR-256-25	ER-25	42	20	X	M32 x 1.5
BR-006-32	BR-256-32	ER-32	50	22	X	M40 x 1.5
BR-006-40	BR-256-40	ER-40	63	25	X	M50 x 1.5
BR-006-50	BR-256-50	ER-50	78	35	X	M64 x 2.0

Exemplo para Especificação : Porca para pinça ER 32 BR-256-32 = BR-006-32

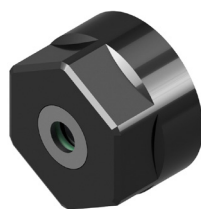


Código	Para Pinça	D	L	Rosca
BR-006MN-08	BR-256-08	ER-8	12	M10 x 0.75
BR-006MN-11	BR-256-11	ER-11	16	M13 x 0.75
BR-006MN-16	BR-256-16	ER-16	22	M19 x 1.0
BR-006MN-20	BR-256-20	ER-20	28	M24 x 1.0
BR-006MN-25	BR-256-25	ER-25	35	M30 x 1.0

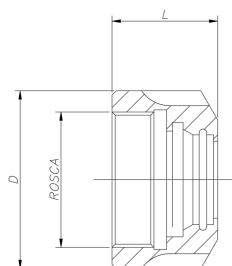
Exemplo para Especificação: Porca para Pinça ER 20 = BR-006MN-20



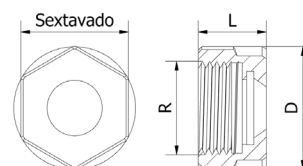
Tipo "2"



Tipo "1"



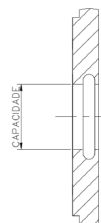
Tipo "2"



Tipo "1"

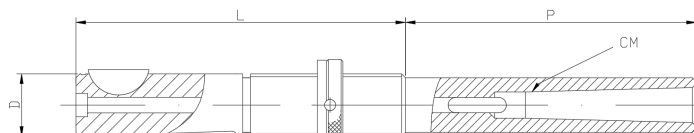
Código	Para Pinça	D	L	Sextavado	Rosca	Tipo
BR-006RI-16	BR-256-16	ER-16	28	22.5	25	M22 x 1.5
BR-006RI-20	BR-256-20	ER-20	34	24.0	30	M25 x 1.5
BR-006RI-25	BR-256-25	ER-25	42	25.0	-	M32 x 1.5
BR-006RI-32	BR-256-32	ER-32	50	27.5	-	M40 x 1.5
BR-006RI-40	BR-256-40	ER-40	63	30.5	-	M50 x 1.5

Exemplo de Especificação: Porcas para Pinça ER 32 BR-256-32 = BR-006RI-32



Capacidade		ER-16	ER-20	ER-25	ER-32	ER-40
6.0	a 5.5	BR-006VD-16-0600	BR-006VD-20-0600	BR-006VD-25-0600	BR-006VD-32-0600	BR-006VD-40-0600
6.5	a 6.0	BR-006VD-16-0650	BR-006VD-20-0650	BR-006VD-25-0650	BR-006VD-32-0650	BR-006VD-40-0650
7.0	a 6.5	BR-006VD-16-0700	BR-006VD-20-0700	BR-006VD-25-0700	BR-006VD-32-0700	BR-006VD-40-0700
7.5	a 7.0	BR-006VD-16-0750	BR-006VD-20-0750	BR-006VD-25-0750	BR-006VD-32-0750	BR-006VD-40-0750
8.0	a 7.5	BR-006VD-16-0800	BR-006VD-20-0800	BR-006VD-25-0800	BR-006VD-32-0800	BR-006VD-40-0800
8.5	a 8.0	BR-006VD-16-0850	BR-006VD-20-0850	BR-006VD-25-0850	BR-006VD-32-0850	BR-006VD-40-0850
9.0	a 8.5	BR-006VD-16-0900	BR-006VD-20-0900	BR-006VD-25-0900	BR-006VD-32-0900	BR-006VD-40-0900
9.5	a 9.0	BR-006VD-16-0950	BR-006VD-20-0950	BR-006VD-25-0950	BR-006VD-32-0950	BR-006VD-40-0950
10.0	a 9.5	BR-006VD-16-1000	BR-006VD-20-1000	BR-006VD-25-1000	BR-006VD-32-1000	BR-006VD-40-1000
10.5	a 10.0	-	BR-006VD-20-1050	BR-006VD-25-1050	BR-006VD-32-1050	BR-006VD-40-1050
11.0	a 10.5	-	BR-006VD-20-1100	BR-006VD-25-1100	BR-006VD-32-1100	BR-006VD-40-1100
11.5	a 11.0	-	BR-006VD-20-1150	BR-006VD-25-1150	BR-006VD-32-1150	BR-006VD-40-1150
12.0	a 11.5	-	BR-006VD-20-1200	BR-006VD-25-1200	BR-006VD-32-1200	BR-006VD-40-1200
12.5	a 12.0	-	BR-006VD-20-1250	BR-006VD-25-1250	BR-006VD-32-1250	BR-006VD-40-1250
13.0	a 12.5	-	BR-006VD-20-1300	BR-006VD-25-1300	BR-006VD-32-1300	BR-006VD-40-1300
13.5	a 13.0	-	-	BR-006VD-25-1350	BR-006VD-32-1350	BR-006VD-40-1350
14.0	a 13.5	-	-	BR-006VD-25-1400	BR-006VD-32-1400	BR-006VD-40-1400
14.5	a 14.0	-	-	BR-006VD-25-1450	BR-006VD-32-1450	BR-006VD-40-1450
15.0	a 14.5	-	-	BR-006VD-25-1500	BR-006VD-32-1500	BR-006VD-40-1500
15.5	a 15.0	-	-	BR-006VD-25-1550	BR-006VD-32-1550	BR-006VD-40-1550
16.0	a 15.5	-	-	BR-006VD-25-1600	BR-006VD-32-1600	BR-006VD-40-1600
16.5	a 16.0	-	-	-	BR-006VD-32-1650	BR-006VD-40-1650
17.0	a 16.5	-	-	-	BR-006VD-32-1700	BR-006VD-40-1700
17.5	a 17.0	-	-	-	BR-006VD-32-1750	BR-006VD-40-1750
18.0	a 17.5	-	-	-	BR-006VD-32-1800	BR-006VD-40-1800
18.5	a 18.0	-	-	-	BR-006VD-32-1850	BR-006VD-40-1850
19.0	a 18.5	-	-	-	BR-006VD-32-1900	BR-006VD-40-1900
19.5	a 19.0	-	-	-	BR-006VD-32-1950	BR-006VD-40-1950
20.0	a 19.5	-	-	-	BR-006VD-32-2000	BR-006VD-40-2000
20.5	a 20.0	-	-	-	-	BR-006VD-40-2050
21.0	a 20.5	-	-	-	-	BR-006VD-40-2100
21.5	a 21.0	-	-	-	-	BR-006VD-40-2150
22.0	a 21.5	-	-	-	-	BR-006VD-40-2200
22.5	a 21.5	-	-	-	-	BR-006VD-40-2250
23.0	a 22.5	-	-	-	-	BR-006VD-40-2300
23.5	a 23.0	-	-	-	-	BR-006VD-40-2350
24.0	a 23.5	-	-	-	-	BR-006VD-40-2400
24.5	a 24.0	-	-	-	-	BR-006VD-40-2450
25.0	a 24.5	-	-	-	-	BR-006VD-40-2500
25.5	a 25.0	-	-	-	-	BR-006VD-40-2550
26.0	a 25.5	-	-	-	-	BR-006VD-40-2600

Exemplo de Especificação: Anel de vedação. para ER-16 com capacidade de 7,0mm a 6,5mm = BR-006VD-16-0700.

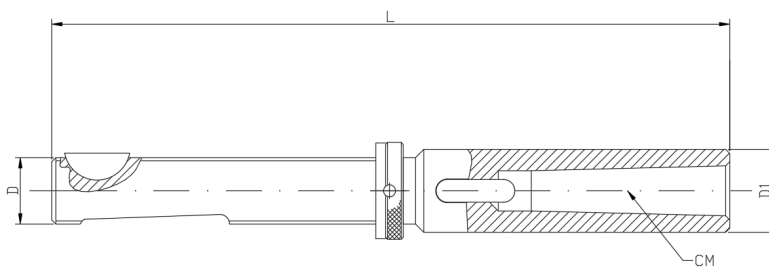


ESTILO G COM FURO PARA FIXAÇÃO

A diferença entre o Estilo "G", e o Estilo "F", é apenas o furo de fixação localizado no diâmetro "D".

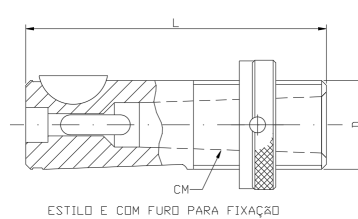
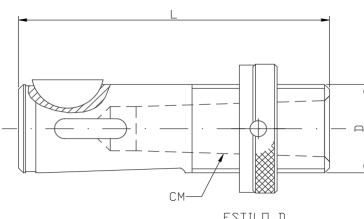
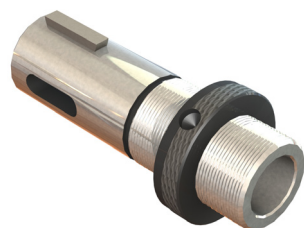
Código	D	CM	L	P	Chaveta	Tipo
BR-010-160-025	16	0	85	25	5 x 6.5	1
BR-010-160-050		0	85	50		1
BR-010-160-075		0	85	75		1
BR-010-160-100		0	85	100		1
BR-010-161-025		1	85	25		2
BR-010-161-050		1	85	50		2
BR-010-161-075		1	85	75		2
BR-010-161-100		1	85	100		2
BR-010-201-025	20	1	88	25	5 x 7.5	1
BR-010-201-050		1	88	50		1
BR-010-201-075		1	88	75		1
BR-010-201-100		1	88	100		1
BR-010-251-025	25	1	95	25	6 x 9	1
BR-010-251-050		1	95	50		1
BR-010-251-075		1	95	75		1
BR-010-251-100		1	95	100		1
BR-010-252-025		2	95	25		2
BR-010-252-050		2	95	50		2
BR-010-252-075		2	95	75		2
BR-010-252-100		2	95	100		2
BR-010-281-025	28	1	95	25		1
BR-010-281-050		1	95	50		1
BR-010-281-075		1	95	75		1
BR-010-281-100		1	95	100		1
BR-010-282-025		2	95	25		1
BR-010-282-050		2	95	50		1
BR-010-282-075		2	95	75		1
BR-010-282-100		2	95	100		1
BR-010-322-030	32	2	118	30	8 x 11	1
BR-010-322-060		2	118	60		1
BR-010-322-090		2	118	90		1
BR-010-322-120		2	118	120		1
BR-010-323-030		3	118	30		2
BR-010-323-060		3	118	60		2
BR-010-323-090		3	118	90		2
BR-010-323-120		3	118	120		2
BR-010-362-030	36	2	118	30		1
BR-010-362-060		2	118	60		1
BR-010-362-090		2	118	90		1
BR-010-362-120		2	118	120		1
BR-010-363-030		3	118	30		1
BR-010-363-060		3	118	60		1
BR-010-363-090		3	118	90		1
BR-010-363-120		3	118	120		1
BR-010-483-040	48	3	144	40	10 x 13	1
BR-010-483-080		3	144	80		1
BR-010-483-120		3	144	120		1
BR-010-483-160		3	144	160		1
BR-010-484-040		4	144	40		1
BR-010-484-080		4	144	80		1
BR-010-484-120		4	144	120		1
BR-010-484-160		4	144	160		1

Exemplo de Especificação: Adaptador regulável com D=16mm para Cone Morse (CM) tamanho 1 e L=50mm = BR-010-161-050.



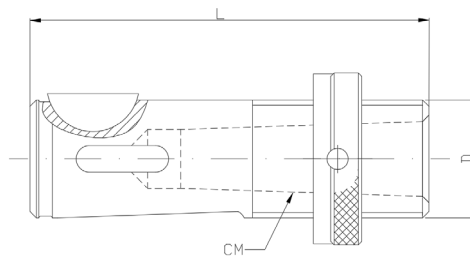
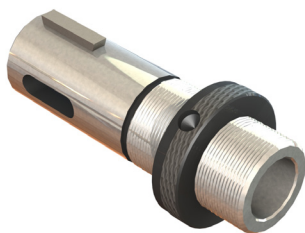
Código	D	CM	D1	L	Porca
BR-020-086	8	Met.6	12	96	BR-001-08
BR-020-100	10	0	18	135	BR-001-10
BR-020-120	12	0	18	135	BR-001-12
BR-020-161	16	1	2	164	BR-001-16
BR-020-162	16	2	25	179	BR-001-16
BR-020-202	20	2	28	182	BR-001-20
BR-020-253	25	3	36	212	BR-001-25
BR-020-283	28	3	36	212	BR-001-28
BR-020-324	32	4	45	264	BR-001-32
BR-020-364	36	4	48	264	BR-001-36

Exemplo para Especificação: Adaptador Regulável CM2 X D20 = BR-020-202



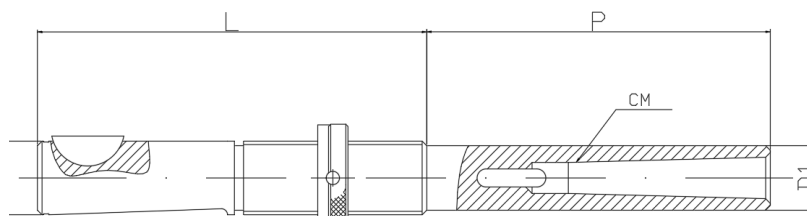
Código	D	CM	L	Chaveta	Porca
BR-030-120	12	0	62	3 x 5	BR-001-12
BR-030-160	16	0	85	5 x 6.5	BR-001-16
BR-030-161	16	1	85	5 x 6.5	BR-001-16
BR-030-201	20	1	88	5 x 7.5	BR-001-20
BR-030-221	22	1	88	5 x 7.5	BR-001-22
BR-030-222	22	2	88	5 x 7.5	BR-001-22
BR-030-251	25	1	95	6 x 9	BR-001-25
BR-030-252	25	2	95	6 x 9	BR-001-25
BR-030-281	28	1	95	6 x 9	BR-001-28
BR-030-282	28	2	95	6 x 9	BR-001-28
BR-030-322	32	2	118	8 x 11	BR-001-32
BR-030-323	32	3	118	8 x 11	BR-001-32
BR-030-362	36	2	118	8 x 11	BR-001-36
BR-030-363	36	3	118	8 x 11	BR-001-36
BR-030-483	48	3	144	10 x 13	BR-001-48
BR-030-484	48	4	144	10 x 13	BR-001-48

Exemplo para Especificação: Adaptador Regulável Estilo "D" CM2 X D28 = BR-030-282
: Adaptador Regulável Estilo "E" CM2 X D28 = BR-030E-282



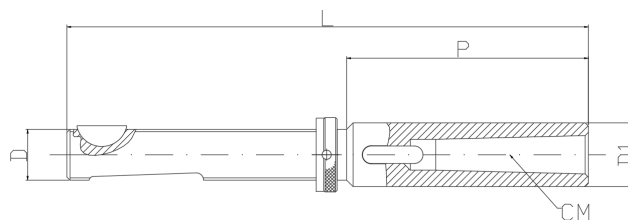
Código	D	CM	L	Chaveta	Porca
BR-050-01	1/2"	0	76.20	3.17 x 15.8	BR-002-01
BR-050-02	5/8"	1	76.20	3.96 x 15.8	BR-002-02
BR-050-03	3/4"	1	76.20	3.96 x 15.8	BR-002-03
BR-050-04	7/8"	2	92.07	4.76 x 19.05	BR-002-04
BR-050-05	1"	1	92.07	4.76 x 22.22	BR-002-05
BR-050-06	1"	2	92.07	4.76 x 22.22	BR-002-05
BR-050-07	1.1/16"	1	92.07	4.76 x 22.22	BR-002-06
BR-050-08	1.1/16"	2	92.07	4.76 x 22.22	BR-002-06
BR-050-09	1.1/4"	3	117.47	6.35 x 25.4	BR-002-07
BR-050-10	1.3/8"	2	117.47	6.35 x 25.4	BR-002-08
BR-050-11	1.3/8"	3	117.47	6.35 x 25.4	BR-002-08
BR-050-12	1.7/8"	4	142.87	7.93 x 31.75	BR-002-09

Exemplo para Especificação: Adaptador Regulável CM2 X D1 = BR-050-06



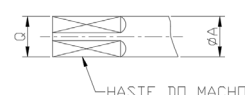
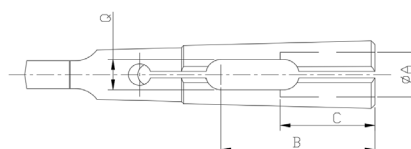
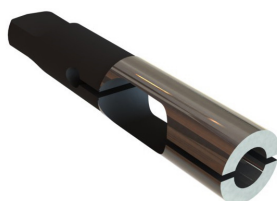
Código	D	CM	D1	L	P
BR-060-01-P	3/4"	1	5/8"	76.2	1"-2"-3"-4"-5"-6"
BR-060-02-P	7/8"	1	3/4"	76.2	1"-2"-3"-4"-5"-6"
BR-060-03-P	1"	1	7/8"	91.9	1"-2"-3"-4"-5"-6"
BR-060-04-P	1"	2	7/8"	91.9	1"-2"-3"-4"-5"-6"
BR-060-05-P	1.1/16"	1	15/16"	91.9	1"-2"-3"-4"-5"-6"
BR-060-06-P	1.1/16"	2	15/16"	91.9	1"-2"-3"-4"-5"-6"
BR-060-07-P	1.3/8"	2	1.1/4"	117.3	1"-2"-3"-4"-5"-6"
BR-060-08-P	1.3/8"	3	1.1/4"	117.3	1"-2"-3"-4"-5"-6"
BR-060-09-P	1.7/8"	3	1.3/4"	142.7	1"-2"-3"-4"-5"-6"
BR-060-10-P	1.7/8"	4	1.3/4"	142.7	1"-2"-3"-4"-5"-6"

Exemplo para Especificação: Adaptador Regulável CM2 X 1.1/16 P1" = BR-060-06-P1



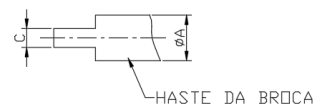
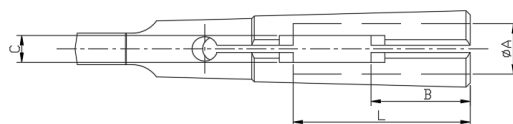
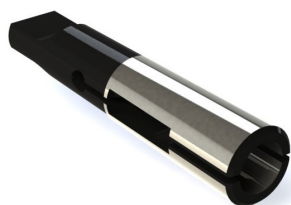
Código	D	CM	D1	L1	P
BR-070-01-P	5/8"	1	5/8"	76.2	2"-3"-4"-5"-6"-7"
BR-070-02-P	3/4"	2	1.1/16"	76.2	2"-3"-4"-5"-6"-7"
BR-070-03-P	7/8"	2	1.1/16"	91.9	2"-3"-4"-5"-6"-7"
BR-070-04-P	1"	3	1.5/16"	91.9	2"-3"-4"-5"-6"-7"
BR-070-05-P	1.1/16"	3	1.5/16"	91.9	2"-3"-4"-5"-6"-7"
BR-070-06-P	1.3/8"	4	1.3/4"	117.3	2"-3"-4"-5"-6"-7"

Exemplo para Especificação : Adaptador Regulável CM3x D1" P2" = BR-070-04-P2



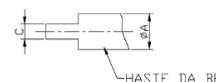
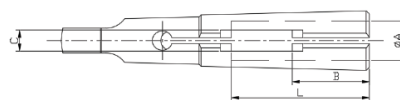
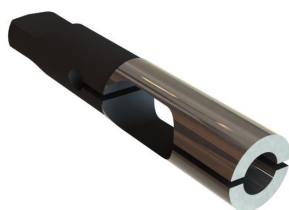
Código	Macho	A	Q	B	C	CM-0	CM-1	CM-2	CM-3	CM-4	CM-5
BR-105-CM_-A	M-2	2.8	2.3	18	13	OK	OK	-	-	-	-
	M-3	3.5	2.9	19	13	OK	OK	-	-	-	-
	M-3.5	4.0	3.3	22	16	OK	OK	-	-	-	-
	M-4	4.5	3.7	22	16	OK	OK	-	-	-	-
	M-5	5.5	4.7	25	18	-	OK	OK	OK	-	-
	M-6	6.0	5.2	25	17	-	OK	OK	OK	-	-
	M-7	7.0	5.8	25	17	-	OK	OK	OK	-	-
	M-11	8.0	6.5	27	18	-	OK	OK	OK	-	-
	M-12	9.0	7.4	27	17	-	-	OK	OK	-	-
	M-14	11.0	9.3	33	21	-	-	OK	OK	OK	-
	M-16	12.0	10.3	33	21	-	-	OK	OK	OK	-
	M-18	14.0	11.5	39	25	-	-	-	OK	OK	-
	M-20	16.0	12.8	44	29	-	-	-	OK	OK	OK
		18.0	14.4	49	32	-	-	-	-	OK	OK
	M-27	20.0	16.4	51	32	-	-	-	-	OK	OK
	M-30	22.0	18.4	56	35	-	-	-	-	OK	OK
	M-33	25.0	20.4	61	38	-	-	-	-	-	OK
	M-36	28.0	22.8	66	41	-	-	-	-	-	OK
		32.0	25.0	71	44	-	-	-	-	-	OK

Exemplo para Especificação : Pinça para macho A-4.5 CM-1 = BR-105-CM-1-0450



Código	A	Capacidade	B	C	L	CM-0	CM-2	CM-3	CM-4	CM-5
BR-110-CM_-A	2.80	a	3.20	16	1.8	-	OK	OK	-	-
	3.21	a	3.50	20	1.8	25	OK	OK	-	-
	3.51	a	4.00	20	2.2	25	OK	OK	-	-
	4.01	a	4.50	20	2.4	26	OK	OK	-	-
	4.51	a	5.50	20	2.7	26	OK	OK	-	-
	5.51	a	6.50	22	3.2	29	-	OK	OK	-
	6.51	a	8.00	22	3.8	29	-	OK	OK	-
	8.01	a	9.50	25	4.8	33	-	OK	OK	OK
	9.51	a	11.00	28	5.3	37	-	-	OK	OK
	11.01	a	13.00	28	6.3	39	-	-	OK	OK
	13.01	a	15.00	32	7.4	44	-	-	-	OK
	15.01	a	18.00	32	8.4	46	-	-	-	OK
	18.01	a	21.00	26	10.4	53	-	-	-	OK
	21.01	a	24.00	40	11.4	58	-	-	-	OK
	24.01	a	27.00	45	13.4	67	-	-	-	OK
	27.01	a	30.00	50	14.5	73	-	-	-	OK

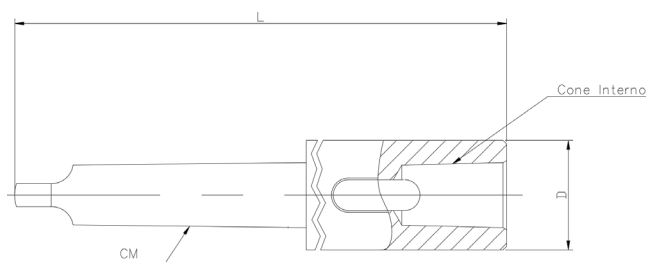
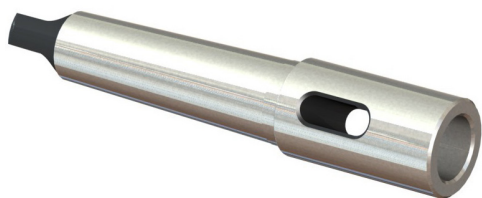
Exemplo para Especificação: Pinça para macho A-6.8 CM-1 = BR-110-CM1-0680



Os valores na coluna "D" são referentes ao diâmetro da ponta da Broca de Centro.

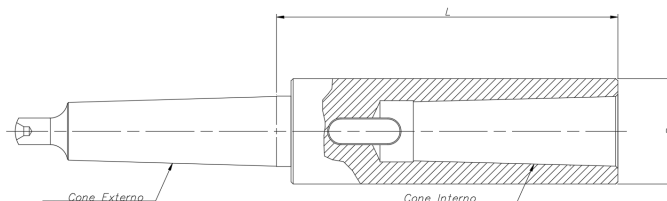
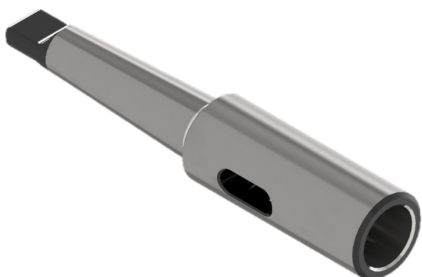
Código	CM-1	CM-2	CM-3	CM-4	CM-5	A	B	C	D
BR-130-CM_-A	OK	-	-	-	-	4.0	-	-	1.00
	OK	-	-	-	-	5.0	28	17.4	1.25
	OK	-	-	-	-	6.3	30	18.0	1.60
	OK	OK	-	-	-	8.0	32	19.0	2.00
	-	OK	-	-	-	10.0	43	25.0	2.50
	-	OK	-	-	-	11.2	43	25.0	3.15
	-	OK	-	-	-	14.0	51	29.0	4.00
	-	-	OK	-	-	18.0	59	33.0	5.00
	-	-	-	OK	-	20.0	65	50.0	6.30
	-	-	-	OK	-	25.0	70	55.0	8.00
	-	-	-	-	OK	31.5	80	65.0	10.00

Exemplo para Especificação: Pinça para macho A-4.0 CM-2 = BR-130-CM2-0400



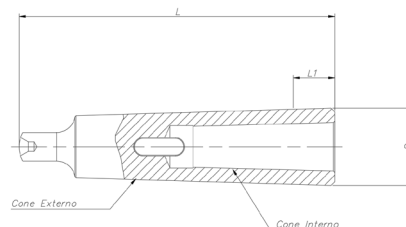
Código	CM Externo	CM Interno	D	L
BR-170-11	1	1	22	110
BR-170-12	1	2	30	120
BR-170-21	2	1	22	124
BR-170-22	2	2	30	135
BR-170-23	2	3	36	145
BR-170-31	3	1	22	143
BR-170-32	3	2	30	154
BR-170-33	3	3	36	164
BR-170-41	4	1	22	168
BR-170-42	4	2	30	180
BR-170-43	4	3	36	189
BR-170-53	5	3	36	220

Exemplo para Especificação: Haste para Rebaixador CM ext 3x CM int 2 = BR-170-32



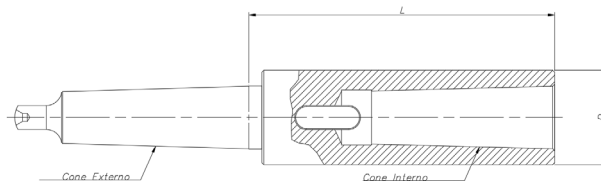
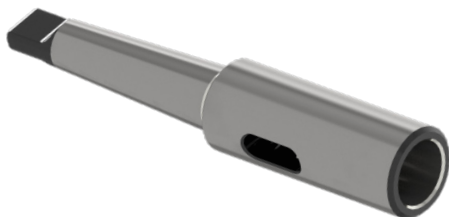
Código	CM Externo	CM Interno	D	L		
BR-195-11-L	1	1	22.22	142.87	193.67	244.47
BR-195-12-L	1	2	30.16	158.75	219.07	279.40
BR-195-21-L	2	1	22.22	157.16	207.96	258.76
BR-195-22-L	2	2	30.16	157.16	233.96	293.87
BR-195-23-L	2	3	36.51	196.85	266.70	336.55
BR-195-31-L	3	1	22.22	176.21	227.01	277.81
BR-195-32-L	3	2	30.16	192.08	252.41	328.61
BR-195-33-L	3	3	36.51	215.90	285.75	355.60
BR-195-34-L	3	4	47.62	239.71	322.26	404.81
BR-195-35-L	3	5	60.32	274.63	373.06	471.48
BR-195-41-L	4	1	22.22	201.61	252.41	303.21
BR-195-42-L	4	2	30.16	217.48	277.81	354.01
BR-195-43-L	4	3	36.51	241.30	311.15	381.00
BR-195-44-L	4	4	47.62	265.11	347.66	430.21
BR-195-45-L	4	5	60.32	300.03	398.46	496.88
BR-195-53-L	5	3	36.51	273.05	342.90	412.75
BR-195-54-L	5	4	47.62	296.86	379.41	461.96
BR-195-55-L	5	5	60.32	331.78	430.21	512.76

Exemplo para Especificação: Prolongador CM ext.3 e CM int. 2 e L252.41 = BR-195-32-252



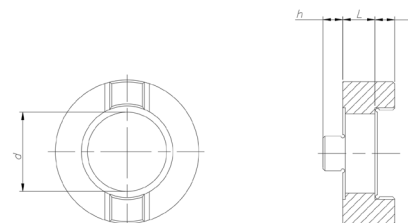
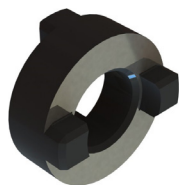
Código	CM Externo	CM Interno	D	L	L1
BR-200-21	2	1	17.780	92	17
BR-200-31	3	1	23.825	99	5
BR-200-32	3	2	23.825	112	18
BR-200-41	4	1	31.267	124	6.5
BR-200-42	4	2	31.267	124	6.5
BR-200-43	4	3	31.267	140	22
BR-200-51	5	1	44.399	156	6
BR-200-52	5	2	44.399	156	6
BR-200-53	5	3	44.399	156	6
BR-200-54	5	4	44.399	171	21
BR-200-62	6	2	63.348	218	8.5
BR-200-63	6	3	63.348	218	8.5
BR-200-64	6	4	63.348	218	8.5
BR-200-65	6	5	63.348	218	18

Exemplo para Especificação: Bucha de Redução CM ext 3 x CM int 2 = BR-200-32



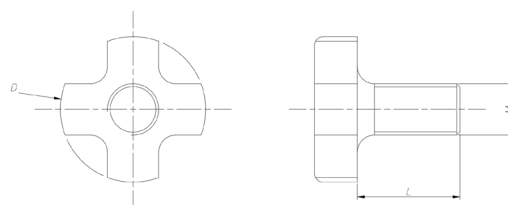
Código	CM Externo	CM Interno	D	L
BR-205-11-L	1	1	20	145
BR-205-12-L	1	2	30	160
BR-205-21-L	2	1	20	160
BR-205-22-L	2	2	30	175
BR-205-23-L	2	3	36	196
BR-205-31-L	3	1	20	175
BR-205-32-L	3	2	30	194
BR-205-33-L	3	3	36	215
BR-205-34-L	3	4	48	240
BR-205-41-L	4	1	20	200
BR-205-42-L	4	2	30	215
BR-205-43-L	4	3	36	240
BR-205-44-L	4	4	48	265
BR-205-45-L	4	5	63	300
BR-205-51-L	5	1	20	232
BR-205-52-L	5	2	30	247
BR-205-53-L	5	3	36	268
BR-205-54-L	5	4	48	300
BR-205-55-L	5	5	63	335

Exemplo para Especificação: Anel de Arraste para Piloto d 22 = BR-238-2212



Código	d	L	b	h
BR-238-1310	13	10	8	4.5
BR-238-1610	16	10	8	5.0
BR-238-2212	22	12	10	5.6
BR-238-2712	27	12	12	6.3
BR-238-3214	32	14	14	7.0
BR-238-4014	40	14	16	8.0
BR-238-5016	50	16	18	9.0
BR-238-6016	60	16	20	10.0

Exemplo para Especificação: Anel de Arraste para Piloto d 22 = BR-238-2212



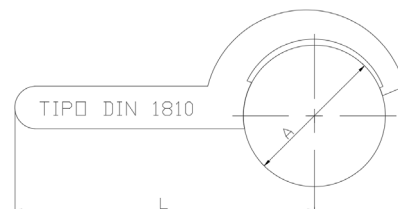
Código	Porta Fresa Piloto "d"	M	D	L
BR-241-0617	13	M-6	17	12
BR-241-0820	16	M-8	20	16
BR-241-1028	22	M-10	28	18
BR-241-1235	27	M-12	35	22
BR-241-1642	32	M-16	42	26
BR-241-2052	40	M-20	52	30
BR-241-2463	50	M-24	63	36
BR-241-3075	60	M-30	75	45

Exemplo para Especificação: Parafuso para Porta Fresa Piloto d-27 = BR-241-1235



Código	Porta Fresa Piloto "d"	Parafuso Rosca	b	d1
BR-242-1306	13	M-6	6.1	18
BR-242-1608	16	M-8	8.1	22
BR-242-2210	22	M-10	10.1	28
BR-242-2712	27	M-12	12.1	35
BR-242-3216	32	M-16	16.1	42
BR-242-4020	40	M-20	20.2	52
BR-242-5024	50	M-24	24.2	63
BR-242-6030	60	M-30	28.2	76

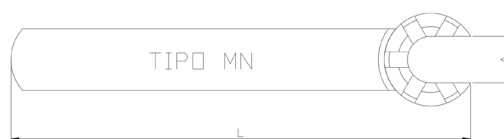
Exemplo para Especificação: Chave para Porta Fresa Piloto d-27 = BR-242-2712



Código	Porca	A	L	Torque Máximo
BR-243-4550	A-20	45 a 50	180	95 lbs
BR-243-5255	ER-32	52 a 55	180	125 lbs
BR-243-5862	A-25	58 a 62	210	140 lbs
BR-243-8090	A-32	80 a 90	240	160 lbs



Código	Porca	A	L	Torque Máximo
BR-243A-ER11	ER-11	17	120	20 lbs
BR-243A-ER16	ER-16	25	140	50 lbs
BR-243A-ER20	ER-20	30	160	75 lbs



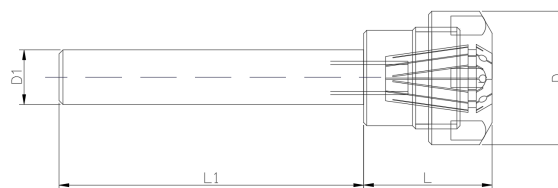
Código	Porca	A	L	Torque Máximo
BR-243MN-ER08	ER-8	8	75	7 lbs
BR-243MN-ER11	ER-11	11.5	95	14 lbs
BR-243MN-ER16	ER-16	15	117	22 lbs
BR-243MN-ER20	ER-20	19.5	129	25 lbs
BR-243MN-ER25	ER-25	25	143	29 lbs



Código	Porca	A	L	Torque Máximo
BR-243UM-ER25	ER-25	37	206	95 lbs
BR-243UM-ER32	ER-32	46.5	253	125 lbs
BR-243UM-ER40	ER-40	58	289	140 lbs
BR-243UM-ER50	ER-50	74	351	160 lbs

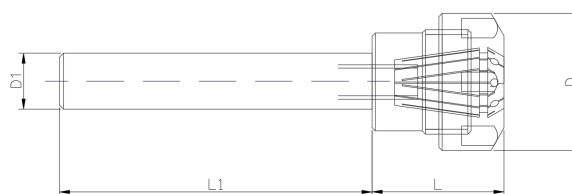
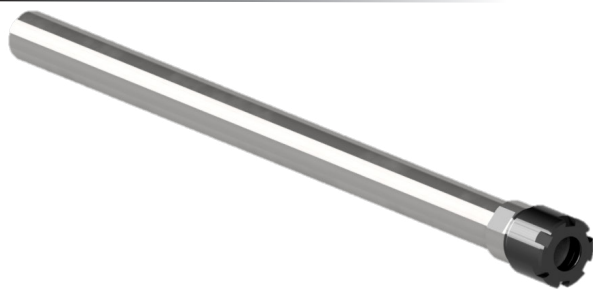


Obs: Não usar chave inglesa para o aperto das porcas ou tubo de aço para um maior torque.



Código	Pinça	Capacidade	D	D1	L	L1
BR-252-HL16-11-140	ER-11	05 a 7.0	19	16	16.6	140
BR-252-HL16-16-050	ER-16	0.5 a 10	28	16	40	50
BR-252-HL16-16-100	ER-16	0.5 a 10	28	16	40	100
BR-252-HL16-16-150	ER-16	0.5 a 10	28	16	40	150
BR-252-HL20-20-050	ER-16	0.5 a 10	28	20	40	50
BR-252-HL20-20-100	ER-16	0.5 a 10	28	20	40	100
BR-252-HL20-20-150	ER-16	0.5 a 10	28	20	40	150
BR-252-HL20-20-060	ER-20	1.0 a 13	34	20	40.5	60
BR-252-HL20-20-120	ER-20	1.0 a 13	34	20	40.5	120
BR-252-HL20-20-180	ER-20	1.0 a 13	34	20	40.5	180
BR-252-HL20-25-050	ER-25	1.0 a 16	42	20	51	50
BR-252-HL20-25-100	ER-25	1.0 a 16	42	20	51	100
BR-252-HL20-32-050	ER-32	2.0 a 20	50	20	51.5	50
BR-252-HL20-32-100	ER-32	2.0 a 20	50	20	51.5	100
BR-252-HL25-25-050	ER-25	1.0 a 16	42	25	51	50
BR-252-HL25-25-100	ER-25	1.0 a 16	42	25	51	100
BR-252-HL25-32-050	ER-32	2.0 a 20	50	25	51.5	50
BR-252-HL25-40-050	ER-40	3.0 a 26	63	25	65	50
BR-252-HL32-32-060	ER-32	2.0 a 20	50	32	51.5	60
BR-252-HL32-40-050	ER-40	3.0 a 26	63	32	65	50

Exemplo para Especificação: Porta Pinça Extensão Haste 20 ER20 L180 = BR-252-HL20-20-180



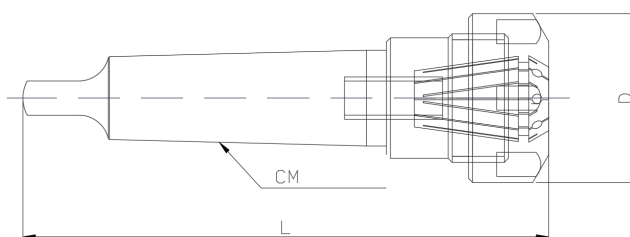
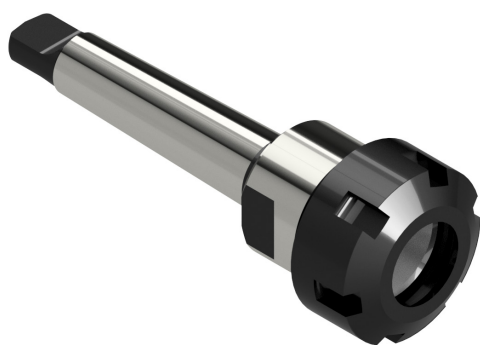
Código	Pinça	Capacidade	D	D1	L	L1
BR-252MN-HL08-08-055	ER-8	0.5 a 5.0	12	8	24	55
BR-252MN-HL10-08-180	ER-8	0.5 a 5.0	12	10	17	180
BR-252MN-HL12-08-055	ER-8	0.5 a 5.0	12	12	17	55
BR-252MN-HL12-11-080	ER-11	0.5 a 7.0	16	12	16.6	80
BR-252MN-HL16-11-050	ER-11	0.5 a 7.0	16	16	16.6	50
BR-252MN-HL16-11-100	ER-11	0.5 a 7.0	16	16	16.6	100
BR-252MN-HL16-11-140	ER-11	0.5 a 7.0	16	16	16.6	140
BR-252MN-HL12-16-080	ER-16	0.5 a 10	22	12	37	80
BR-252MN-HL20-20-100	ER-16	0.5 a 10	22	20	25	100
BR-252MN-HL20-20-140	ER-16	0.5 a 10	22	20	25	140
BR-252MN-HL20-20-160	ER-16	0.5 a 10	22	20	25	160
BR-252MN-HL20-20-060	ER-20	1.0 a 13	28	20	40	60
BR-252MN-HL20-20-100	ER-20	1.0 a 13	28	20	40	100
BR-252MN-HL20-20-120	ER-20	1.0 a 13	28	20	40	120
BR-252MN-HL20-20-150	ER-20	1.0 a 13	28	20	40	150
BR-252MN-HL20-20-180	ER-20	1.0 a 13	28	20	40	180
BR-252MN-HL22-20-140	ER-20	1.0 a 13	28	22	40	140
BR-252MN-HL25-20-140	ER-20	1.0 a 13	28	25	28	140
BR-252MN-HL20-25-100	ER-25	1.0 a 16	35	20	50	100

Exemplo para Especificação: Porta Pinça Extensão Mini Haste 20 ER20 L150 = BR-252MN-HL20-20-150

Ferramentas Convencionais

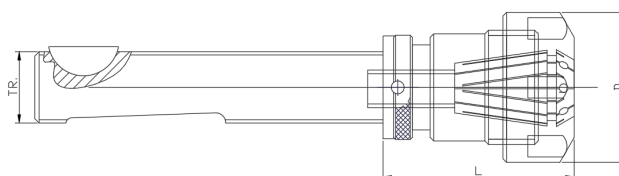


Porta Pinça ER Haste CM DIN 228



Código CM	Código CA	CM	Pinça	Capacidade	D	L
BR-252-CM2-20-052	BR-252-CA2-20-052	2	ER-20	0.5 a 10	35	52
BR-252-CM2-25-055	BR-252-CA2-25-055	2	ER-25	1.0 a 16	42	55
BR-252-CM3-25-055	BR-252-CA3-25-055	3	ER-25	1.0 a 16	42	55
BR-252-CM3-32-060	BR-252-CA3-32-060	3	ER-32	2.0 a 20	50	60
BR-252-CM3-40-070	BR-252-CA3-40-070	3	ER-40	3.0 a 26	63	70
BR-252-CM4-32-060	BR-252-CA4-32-060	4	ER-32	2.0 a 20	50	60
BR-252-CM4-40-070	BR-252-CA4-40-070	4	ER-40	3.0 a 26	63	70

Exemplo para Especificação: Porta Pinça CM3 ER25= BR-252-CM3-25-055



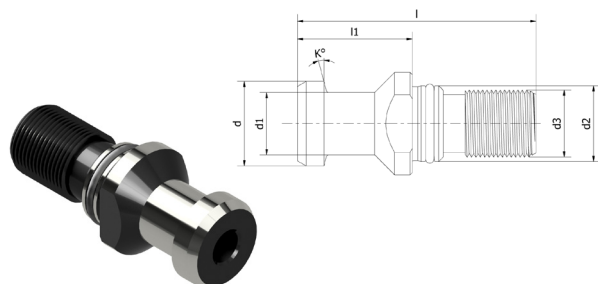
Código	Haste TR DIN 6327	Pinça	Capacidade	D	L min.	L máx.
BR-252-TR20-16-054	TR20x2	ER-16	0.5 a 10	28	54	82
BR-252-TR20-20-060	TR20x2	ER-20	1.0 a 13	42	60	88
BR-252-TR28-25-057	TR28x2	ER25	1.0 a 16	50	57	87
BR-252-TR28-32-077	TR28x2	ER-32	2.0 a 20	50	77	107
BR-252-TR36-32-060	TR36x2	ER-32	2.0 a 20	63	60	96
BR-252-TR36-40-086	TR36x2	ER-40	3.0 a 26	63	86	122

Exemplo para Especificação: Porta Pinça TR28X2 ER25= BR-252-TR28-25-057

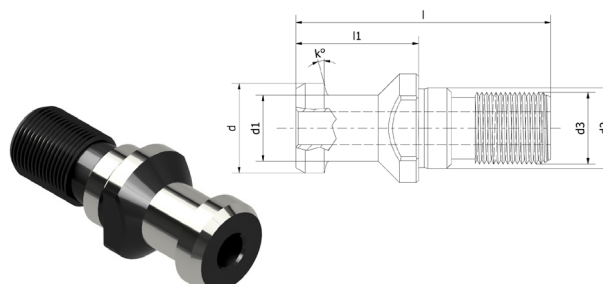
Ferramentas Convencionais



Pinos de Fixação



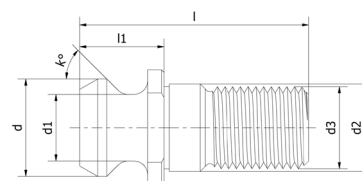
BR-254-02 = Sem frigeração.



BR-254-02 = Com frigeração.

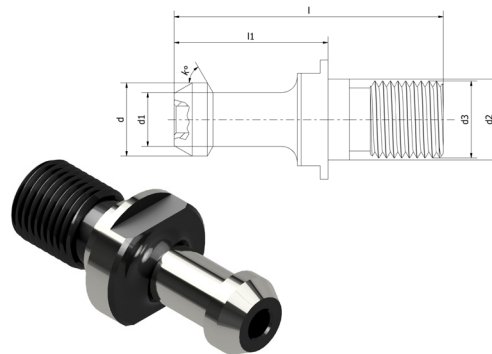
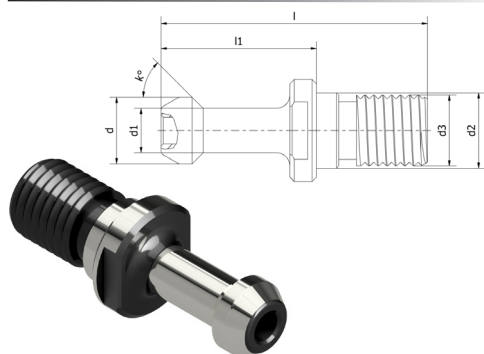
Código	ISO	d	d1	d2	d3	l	l1	k°	Modelo
BR-254-0130	30	13	9	13	M-12	44	24	15	DIN-69872-A
BR-254-0140	40	19	14	17	M-16	54	26	15	DIN-69872-A
BR-254-0145	45	19	17	21	M-20	65	30	15	DIN-69872-A
BR-254-0150	50	28	21	25	M-24	74	34	15	DIN-69872-A
BR-254-0230	30	13,35	9,3	13	M-12	43	23	45	DIN-69872-B
BR-254-0240	40	18,95	12,95	17	M-16	60	35	45	DIN-69872-B
BR-254-0250	50	29,10	19,6	25	M-24	85	45	45	DIN-69872-B

Exemplo para Especificação: Pino de fixação para cone ISO 30, d2=13mm, k°=45° e rosca M-12 = BR-254-0230.



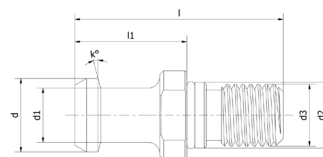
Código	ISO	d	d1	d2	d3	l	l1	k°	Modelo
BR-254-0340	40	18.95	12.95	17	M-16	44.5	16.40	45	ISO 7388 B
BR-254-0350	50	29.10	19.60	25	M-24	65.5	25.55	45	ISO 7388 B

Exemplo para Especificação: Pino de fixação para cone ISO 50, d2=25mm, k°=45° e rosca M-24 = BR-254-0350.



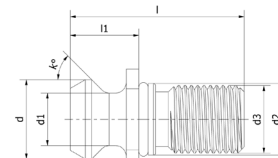
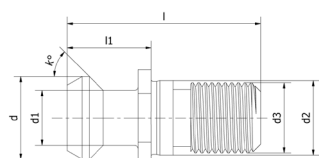
Código	ISO	d	d1	d2	d3	l	l1	k°	Modelo
BR-254RI-0430	30	11	7	12.5	M-12	43	23	45	BT MAS 403-I
BR-254RI-0440	40	15	10	17	M-16	60	35	45	BT MAS 403-I
BR-254RI-0450	50	23	17	25	M-24	85	45	45	BT MAS 403-I
BR-254RI-0530	30	11	7	12.5	M-12	43	23	30	BT MAS 403-II
BR-254RI-0540	40	15	10	17	M-16	60	35	30	BT MAS 403-II
BR-254RI-0550	50	23	17	25	M-24	85	45	30	BT MAS 403-II
BR-254RI-0630	30	11	7	12.5	M-12	43	23	90	BT MAS 407
BR-254RI-0640	40	15	10	17	M-16	60	35	90	BT MAS 407
BR-254RI-0650	50	23	17	25	M-24	85	45	90	BT MAS 407

Exemplo para Especificação: Pino de fixação para cone ISO 30, d2=12,5mm, k°=30° e rosca M-12 = BR-254RI-0530.



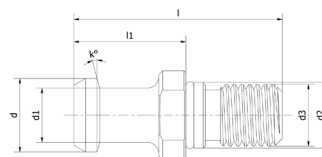
Código	ISO	d	d1	d2	d3	l	l1	k°	Modelo
BR-254-0840	40	19	14	17	M-16	54	29	15	JIS B6339

Exemplo para Especificação: Pino de fixação para cone ISO 40, d2=17mm, k°=15° e rosca M-16 = BR-254-0840.



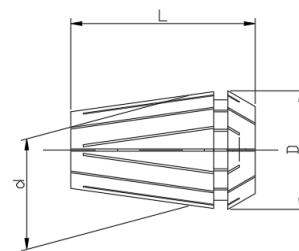
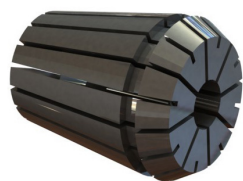
Código	ISO	d	d1	d2	d3	l	l1	k°	Modelo
BR-254-0940	40	18.80	12.45	17	M-16	44.10	19.10	45	Mazak BT-40
BR-254-0950	50	28.96	20.83	25	M-24	65.20	25.20	45	Mazak BT-50
BR-254-1340	40	18.8	12.45	17	M-16	41.10	16.10	45	Mazak CAT-40
BR-254-1350	50	28.96	20.83	25	M-24	65.20	25.40	45	Mazak CAT-50

Exemplo para Especificação: Pino de fixação para cone ISO 50, d2=25mm, k°=45° e rosca M-24 = BR-254-1350.



Código	ISO	d	d1	d2	d3	l	l1	k°	Modelo
BR-254-1140	40	19	14	17	M-16	54	26	15	ISO 7388 A

Exemplo para Especificação: Pino de fixação para cone ISO 40, d2=17mm, k°=15° e rosca M-16 = BR-254-1140.



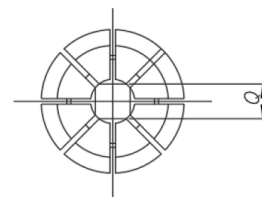
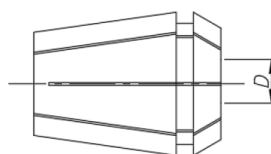
Código	Código Jogo	Qde por Jogo	d Capacidade	D	D1	L
BR-256-11-d	BR-256-11-JG13	13	0.5 a 7.0	11	11.5	18.0
BR-256-16-d	BR-256-16-JG10	10	0.5 a 10	16	17.0	27.5
BR-256-20-d	BR-256-20-JG12	12	1.0 a 13	20	21.0	31.5
BR-256-25-d	BR-256-25-JG15	15	1.0 a 16	25	26.0	34.0
BR-256-32-d	BR-256-32-JG18	18	2.0 a 20	32	33.0	40.0
BR-256-40-d	BR-256-40-JG23	23	3.0 a 26	40	41.0	46.0
BR-256-50-d	BR-256-50-JG17	17	10.0 a 34	50	52.0	60.0

Exemplo para Especificação: Pinça ER25 Ø10,00 = BR-256-25-1000

Ferramentas Convencionais

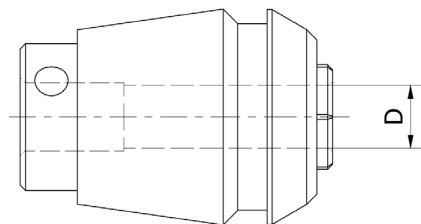
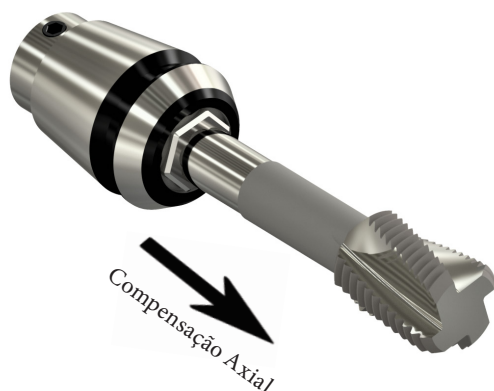


Pinça para Macho



D	Q	ERG-16	ERG-20	ERG-25	ERG-32	ERG-40
2.8	2.1	BR-256M-16-0280	BR-256M-20-0280	BR-256M-25-0280	BR-256M-32-0280	
3.5	2.7	BR-256M-16-0350	BR-256M-20-0350	BR-256M-25-0350	BR-256M-32-0350	BR-256M-40-0350
4.0	3.0	BR-256M-16-0160	BR-256M-20-0200	BR-256M-25-0250	BR-256M-32-0320	BR-256M-40-0400
4.5	3.4	BR-256M-16-0450	BR-256M-20-0450	BR-256M-25-0450	BR-256M-32-0450	BR-256M-40-0450
6.0	4.9	BR-256M-16-0600	BR-256M-20-0600	BR-256M-25-0600	BR-256M-32-0600	BR-256M-40-0600
7.0	5.5	BR-256M-16-0700	BR-256M-20-0700	BR-256M-25-0700	BR-256M-32-0700	BR-256M-40-0700
8.0	6.2	BR-256M-16-0800	BR-256M-20-0800	BR-256M-25-0800	BR-256M-32-0800	BR-256M-40-0800
9.0	7.0	BR-256M-16-0900	BR-256M-20-0900	BR-256M-25-0900	BR-256M-32-0900	BR-256M-40-0900
10.0	8.0	BR-256M-16-1000	BR-256M-20-1000	BR-256M-25-1000	BR-256M-32-1000	BR-256M-40-1000
11.0	9.0		BR-256M-20-1100	BR-256M-25-1100	BR-256M-32-1100	BR-256M-40-1100
12.0	9.0		BR-256M-20-1200	BR-256M-25-1200	BR-256M-32-1200	BR-256M-40-1200
14.0	11.0			BR-256M-25-1250	BR-256M-32-1320	BR-256M-40-1400
16.0	12.0			BR-256M-25-1600	BR-256M-32-1600	BR-256M-40-1600
18.0	14.5				BR-256M-32-1800	BR-256M-40-1800
20.0	16.0				BR-256M-32-2000	BR-256M-40-2000
22.0	18.0					BR-256M-40-2200

Exemplo para Especificação: Pinça para Macho ER32 Ø6.0 x 4.9 = BR-256M-32-0600

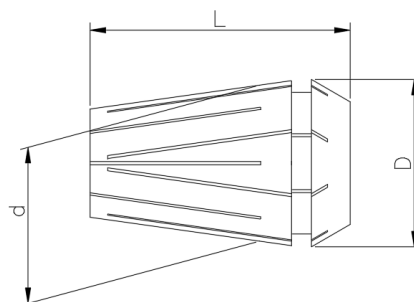


		ERG-20	ERG-25	ERG-32	ERG-40
		M3 a M10	M3 a M12	M3 A M16	M3 a M20
D x Q					
3.5	2.7	BR-256MT-20-0350	BR-256MT-25-0350	BR-256MT-32-0350	BR-256MT-40-0350
4.0	3.0	BR-256MT-20-0200	BR-256MT-25-0250	BR-256MT-32-0320	BR-256MT-40-0400
4.5	3.4	BR-256MT-20-0450	BR-256MT-25-0450	BR-256MT-32-0450	BR-256MT-40-0450
6.0	4.9	BR-256MT-20-0600	BR-256MT-25-0600	BR-256MT-32-0600	BR-256MT-40-0600
7.0	5.5	BR-256MT-20-0700	BR-256MT-25-0700	BR-256MT-32-0700	BR-256MT-40-0700
8.0	6.2	BR-256MT-20-0800	BR-256MT-25-0800	BR-256MT-32-0800	BR-256MT-40-0800
9.0	7.0	BR-256MT-20-0900	BR-256MT-25-0900	BR-256MT-32-0900	BR-256MT-40-0900
10.0	8.0	BR-256MT-20-1000	BR-256MT-25-1000	BR-256MT-32-1000	BR-256MT-40-1000
11.0	9.0	BR-256MT-20-1100	BR-256MT-25-1100	BR-256MT-32-1100	BR-256MT-40-1100
12.0	9.0	BR-256MT-20-1200	BR-256MT-25-1200	BR-256MT-32-1200	BR-256MT-40-1200
14.0	11.0	-	BR-256MT-25-1250	BR-256MT-32-1320	BR-256MT-40-1400
16.0	12.0	-	BR-256MT-25-1600	BR-256MT-32-1600	BR-256MT-40-1600
18.0	14.5	-	-	BR-256MT-32-1800	BR-256MT-40-1800
20.0	16.0	-	-	BR-256MT-32-2000	BR-256MT-40-2000
22.0	18.0	-	-	-	BR-256MT-40-2200

Exemplo para Especificação: Pinça MT para Macho com Haste de 3,5 = BR-256MT-20-0350.

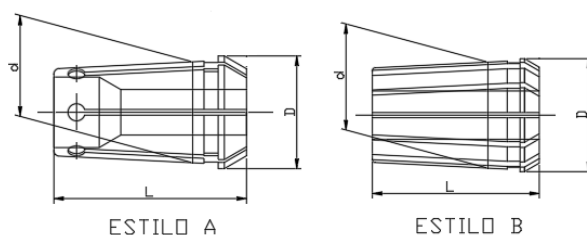
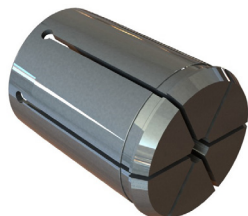
Esse modelo de pinça “MT”, possui compensação axial “Tração”. Recomenda-se que no processo de rosqueamento utilize um avanço de aproximadamente de 95% do valor do passo da rosca para que use de 20% a 30% do curso da sua compensação.

No recuo do macho, o avanço deve ser de 100% do passo, mantendo a pinça no curso da compensação até a saída do macho.



D	ER-16	ER-20	ER-25	ER-32	ER-40
3.0	BR-256VD-16-0300	BR-256VD-20-0300	BR-256VD-25-0300	BR-256VD-32-0300	BR-256VD-40-0300
4.0	BR-256VD-16-0160	BR-256VD-20-0200	BR-256VD-25-0250	BR-256VD-32-0320	BR-256VD-40-0400
5.0	BR-256VD-16-0500	BR-256VD-20-0500	BR-256VD-25-0500	BR-256VD-32-0500	BR-256VD-40-0500
6.0	BR-256VD-16-0600	BR-256VD-20-0600	BR-256VD-25-0600	BR-256VD-32-0600	BR-256VD-40-0600
7.0	BR-256VD-16-0700	BR-256VD-20-0700	BR-256VD-25-0700	BR-256VD-32-0700	BR-256VD-40-0700
8.0	BR-256VD-16-0800	BR-256VD-20-0800	BR-256VD-25-0800	BR-256VD-32-0800	BR-256VD-40-0800
9.0	BR-256VD-16-0900	BR-256VD-20-0900	BR-256VD-25-0900	BR-256VD-32-0900	BR-256VD-40-0900
10.0	BR-256VD-16-1000	BR-256VD-20-1000	BR-256VD-25-1000	BR-256VD-32-1000	BR-256VD-40-1000
11.0	-	BR-256VD-20-1100	BR-256VD-25-1100	BR-256VD-32-1100	BR-256VD-40-1100
12.0	-	BR-256VD-20-1200	BR-256VD-25-1200	BR-256VD-32-1200	BR-256VD-40-1200
13.0	-	BR-256VD-20-1300	BR-256VD-25-1300	BR-256VD-32-1300	BR-256VD-40-1300
14.0	-	-	BR-256VD-25-1250	BR-256VD-32-1320	BR-256VD-40-1400
15.0	-	-	BR-256VD-25-1500	BR-256VD-32-1500	BR-256VD-40-1500
16.0	-	-	BR-256VD-25-1600	BR-256VD-32-1600	BR-256VD-40-1600
17.0	-	-	-	BR-256VD-32-1700	BR-256VD-40-1700
18.0	-	-	-	BR-256VD-32-1800	BR-256VD-40-1800
19.0	-	-	-	BR-256VD-32-1900	BR-256VD-40-1900
20.0	-	-	-	BR-256VD-32-2000	BR-256VD-40-2000
21.0	-	-	-	-	BR-256VD-40-2100
22.0	-	-	-	-	BR-256VD-40-2200
23.0	-	-	-	-	BR-256VD-40-2300
24.0	-	-	-	-	BR-256VD-40-2400
25.0	-	-	-	-	BR-256VD-40-2500
26.0	-	-	-	-	BR-256VD-40-2600

Exemplo para Especificação: Pinça Vedada ER40 Ø10.0 = BR-256VD-40-1000



Estilo "A"			Estilo "B"			D	D1	L
Código	d	Capacidade	Código	d	Capacidade			
BR-257-A16-d	2.0 a 16.0		BR-257-B16-d	5.0 a 16.0		22.65	25.50	40
BR-257-A20-d	2.0 a 20.0		BR-257-B20-d	6.0 a 20.0		27.40	29.80	45
BR-257-A25-d	4.0 a 25.0		BR-257-B25-d	6.0 a 25.0		32.90	35.05	52
BR-257-A32-d	4.0 a 32.0		BR-257-B32-d	10.0 a 32.0		41.30	43.70	60
BR-257-A40-d	6.0 a 40.0		BR-257-B40-d	30.0 a 40.0		49.70		68

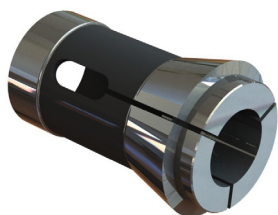
Exemplo para Especificação: Pinça OZ-25 Ø10 = BR-257-A25-1000

Instruções de Montagem:

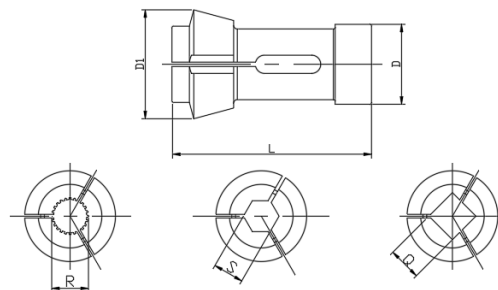
1- Coloque a pinça dentro da porca e gire a porca para encaixar com o espiral extrator na ranhura da pinça;

2- Só então monte a porca e a pinça dentro do cone ou no eixo do spindle da máquina;

NOTA: nunca utilize a pinça de 12-11mm para fixar um diâmetro de 12,2mm, por exemplo, mas utilize a pinça de 13-12mm



Modelos de Ranhuras

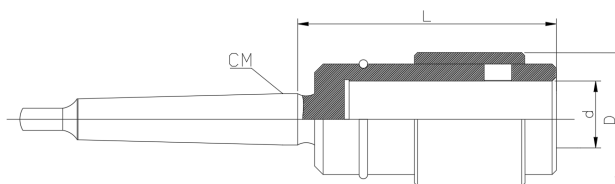


Código	D	D1	L	Dimensão Interna Máxima		
				R	S	Q
BR-259-17	22	17.5	51	12	10	8
BR-259-22	30	22	55	16	13	11
BR-259-28	38	28	70	22	19	15
BR-259-32	45	32	75	26	22	18
BR-259-35	48	35	80	30	26	21
BR-259-42	55	42	94	36	30	25
BR-259-48	60	48	94	42	36	29
BR-259-56	68	56	94	50	42	35
BR-259-66	84	66	110	60	52	42

Exemplo para Especificação: Pinça Diâmetro D = 48 Furo = Redondo (R) = 19 com Ranhuras Radial e Axial (CRA):

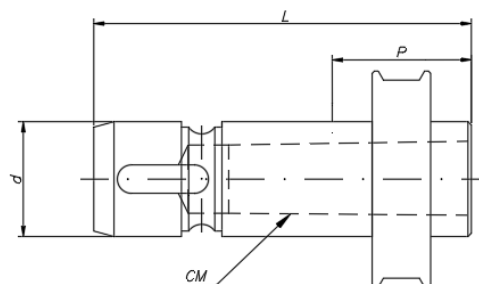
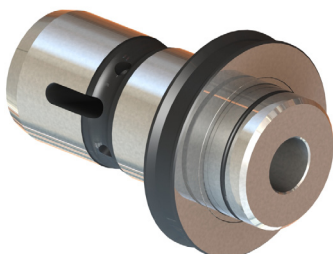
Código = BR-259-48R-1900CRA

Quando não especificado o tipo de ranhura, a pinça terá o seu furo LISO.



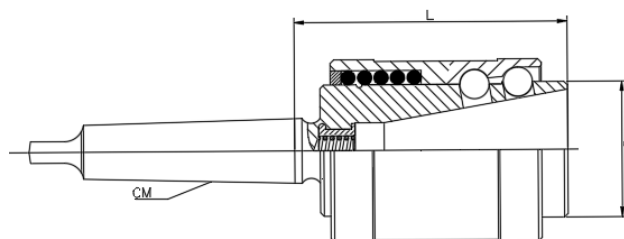
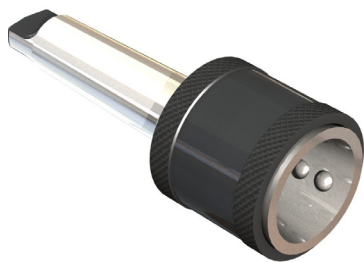
Código	Mandril Nº	Haste CM	d	D	L
BR-270-01	0	1	18	36	65.5
BR-270-02	0	2	18	36	65.5
BR-270-12	1	2	26	48	75.5
BR-270-13	1	3	26	48	75.5
BR-270-22	2	2	34	59	82.5
BR-270-23	2	3	34	59	83.5
BR-270-24	2	4	34	59	83.5
BR-270-33	3	3	46	80	105.3
BR-270-34	3	4	46	80	107.1
BR-270-35	3	5	46	80	107.6
BR-270-45	4	5	60	102	132.6
BR-270-46	4	6	60	102	132.0

Exemplo para Especificação: Mandril Troca Rápida Nº2 CM-3 = BR-270-23



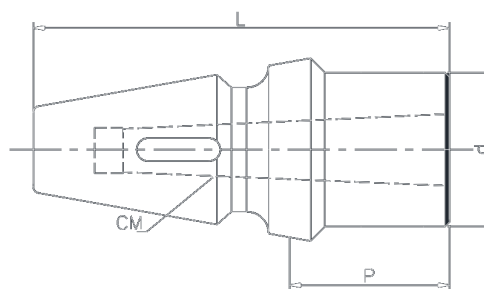
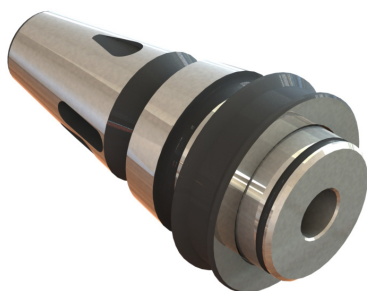
Código	Mandril Nº	CM	d	P	L
BR-275-00	0	0	18	21	74
BR-275-01	0	1	18	25	74
BR-275-11	1	1	26	21	85
BR-275-12	1	2	26	30	93
BR-275-21	2	1	34	18	90
BR-275-22	2	2	34	25	110
BR-275-23	2	3	34	44	112
BR-275-31	3	1	46	19.5	100
BR-275-32	3	2	46	19.5	105
BR-275-33	3	3	46	29	115
BR-275-34	3	4	46	53	140
BR-275-42	4	2	60	24	130
BR-275-43	4	3	60	26	140
BR-275-44	4	4	60	29	155
BR-275-45	4	5	60	68	170

Exemplo para Especificação: Luva Troca Rápida Nº2 CM-3 = BR-275-23



Código	Mandril Nº	CM	D	L
BR-278-12	1	2	57.5	68
BR-278-13	1	3	57.5	68
BR-278-23	2	3	60	77
BR-278-24	2	4	60	78.5
BR-278-33	3	3	78	85
BR-278-34	3	4	78	86.5
BR-278-35	3	5	78	86.5
BR-278-44	4	4	92	101.5
BR-278-45	4	5	92	101.5

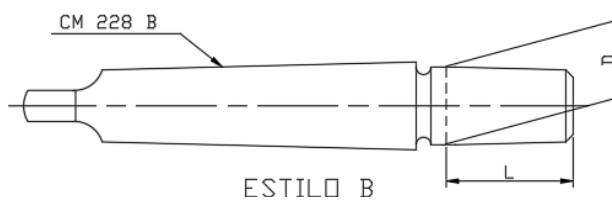
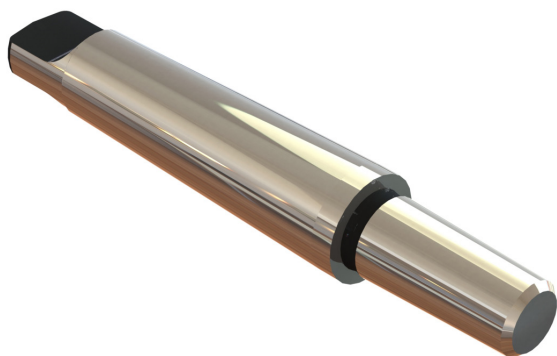
Exemplo para Especificação: Mandril Troca Rápida Nº2 X CM4 = BR-278-24



Código	Mandril Nº	CM	D	P	L
BR-279-11	1	1	25.5	25	85
BR-279-12	1	2	28.5	35.5	85
BR-279-21	2	1	34.9	31	94.5
BR-279-22	2	2	34.9	31	99
BR-279-23	2	3	34.9	45	109.5
BR-279-31	3	1	42.5	31	103.5
BR-279-32	3	2	42.5	31	103.5
BR-279-33	3	3	42.5	31	111.5
BR-279-34	3	4	56	50	136.5
BR-279-41	4	1	56	31	109.7
BR-279-42	4	2	56	31	111.2
BR-279-43	4	3	56	36	115
BR-279-44	4	4	56	46	135
BR-279-45	4	5	56	76	168
BR-279-51	5	1	56	31	109.7
BR-279-52	5	2	56	31	111.2
BR-279-53	5	3	56	36	115
BR-279-54	5	4	56	46	135
BR-279-55	5	5	56	76	168

Exemplo para Especificação: Luva Troca Rápida Nº2 X CM3 = BR-279-23

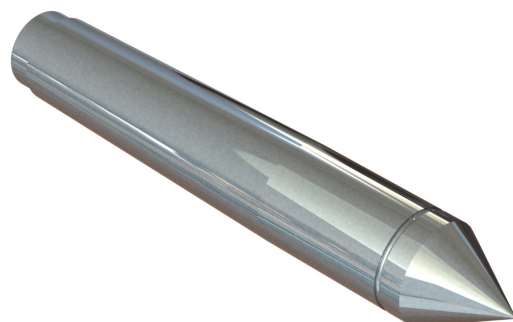
: Luva Troca Rápida com Proteção = BR-279-23-A



Código	CM	CONE "B"	D	L	Código	CM	CONE "J"	D	L
BR-280-060	0	B-6	6.35	10	BR-280-J00	0	J-0	6.35	11.11
BR-280-061	1	B-6	6.35	10	BR-280-J01	1	J-0	6.35	11.11
BR-280-062	2	B-6	6.35	10	BR-280-J02	2	J-0	6.35	11.11
BR-280-100	0	B-10	14.50	14.5	BR-280-J10	0	J-1	9.75	16.67
BR-280-101	1	B-10	14.50	14.5	BR-280-J11	1	J-1	9.75	16.67
BR-280-102	2	B-10	14.50	14.5	BR-280-J12	2	J-1	9.75	16.67
BR-280-120	0	B-12	18.50	18.5	BR-280-J20	0	J-2	14.19	22.22
BR-280-121	1	B-12	18.50	18.5	BR-280-J21	1	J-2	14.19	22.22
BR-280-122	2	B-12	18.50	18.5	BR-280-J22	2	J-2	14.19	22.22
BR-280-161	1	B-16	15.73	24	BR-280-J31	1	J-3	15.85	25.40
BR-280-162	2	B-16	15.73	24	BR-280-J32	3	J-3	15.85	25.40
BR-280-163	3	B-16	15.73	24	BR-280-J34	4	J-3	15.85	25.40
BR-280-181	1	B-18	17.78	32	BR-280-J61	1	J-6	17.17	25.40
BR-280-182	2	B-18	17.78	32	BR-280-J62	2	J-6	17.17	25.40
BR-280-183	3	B-18	17.78	32	BR-280-J63	3	J-6	17.17	25.40
BR-280-222	2	B-22	21.79	41.5	BR-280-J332	2	J-33	20.59	30.95
BR-280-223	3	B-22	21.79	41.5	BR-280-J333	3	J-33	20.59	30.95
BR-280-224	4	B-22	21.79	41.5	BR-280-J334	4	J-33	20.59	30.95
BR-280-243	3	B-24	23.82	51.5	BR-280-J43	3	J-4	28.55	42.07
BR-280-244	4	B-24	23.82	51.5	BR-280-J44	4	J-4	28.55	42.07
BR-280-245	5	B-24	23.82	51.5	BR-280-J45	5	J-4	28.55	42.07

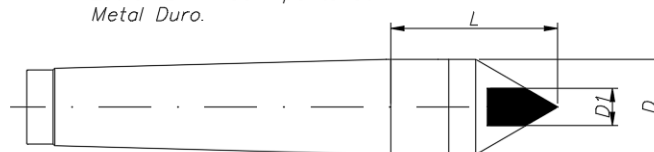
Exemplo para Especificação: Porta Mandril B-16 X CM1 Estilo "A" = BR-280-161-A
 : Porta Mandril B-16 X CM1 Estilo "B" = BR-280-161-B

Não usar informações contidas neste catálogo para confecção. Este catálogo poderá sofrer alterações sem aviso.



(Imagem sem ponta de Metal Duro)

Estilo "A" – Com ponta de Metal Duro.
Estilo "B" – Sem ponta de Metal Duro.

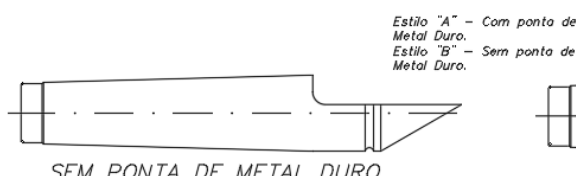
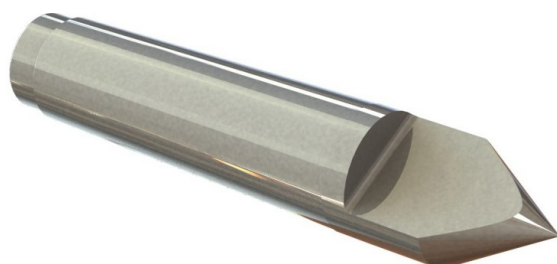


COM PONTA DE METAL DURO

Código	CM	D	L
BR-300-00	0	9.2	20
BR-300-01	1	12.2	27
BR-300-02	2	18.0	36
BR-300-03	3	24.1	44
BR-300-04	4	31.6	58
BR-300-05	5	44.7	70
BR-300-06	6	63.8	88

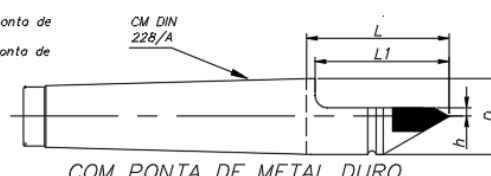
Código	CM	D	D1	L
BR-300A-00	0	9.2	5	20
BR-300A-01	1	12.2	7	27
BR-300A-02	2	18.0	7	36
BR-300A-03	3	24.1	11	44
BR-300A-04	4	31.6	14	58
BR-300A-05	5	44.7	18	70
BR-300A-06	6	63.8	18	88

Exemplo para Especificação: Contra Ponta CM1 Convencional = BR-300-01-B
(Com metal duro, substituir a letra "B" pela letra "A").



SEM PONTA DE METAL DURO

Estilo "A" – Com ponta de Metal Duro.
Estilo "B" – Sem ponta de Metal Duro.

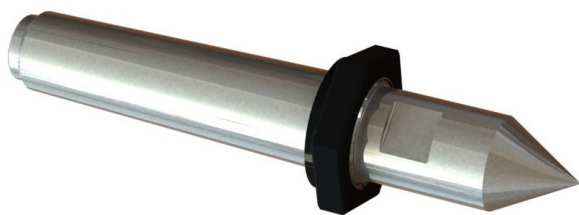


COM PONTA DE METAL DURO

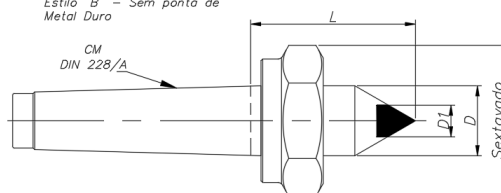
Código	CM	D	L	L1	h
BR-310-00	0	9.2	20	16	1.0
BR-310-01	1	12.2	27	22	1.5
BR-310-02	2	18.0	36	30	2.0
BR-310-03	3	24.1	44	38	3.0
BR-310-04	4	31.6	58	50	5.0
BR-310-05	5	44.7	70	63	7.0
BR-310-06	6	63.8	88	79	10.0

Código	CM	D	D1	L	L1	h
BR-310A-00	0	9.2	5	20	16	1.0
BR-310A-01	1	12.2	7	27	22	1.5
BR-310A-02	2	18.0	7	36	30	2.0
BR-310A-03	3	24.1	11	44	38	3.0
BR-310A-04	4	31.6	14	58	50	5.0
BR-310A-05	5	44.7	18	70	63	7.0
BR-310A-06	6	63.8	18	88	79	10.0

Exemplo para Especificação: Contra Ponta CM3 Convencional = BR-310-03-B
: Contra Ponta CM3 Com Ponta de Metal Duro = BR-310-03-A



Estilo "A" - Com ponta de Metal Duro
Estilo "B" - Sem ponta de Metal Duro



COM PONTA DE METAL DURO

Código	CM	D	L
BR-320-00	0	9.2	28
BR-320-01	1	12.2	36
BR-320-02	2	18.0	48
BR-320-03	3	24.1	57
BR-320-04	4	31.6	73
BR-320-05	5	44.7	87
BR-320-06	6	63.8	108

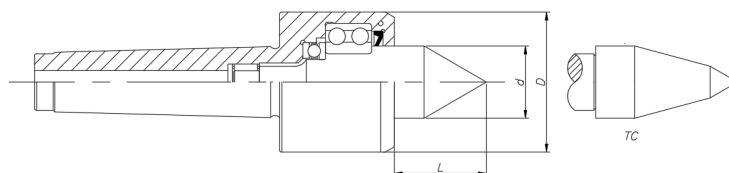
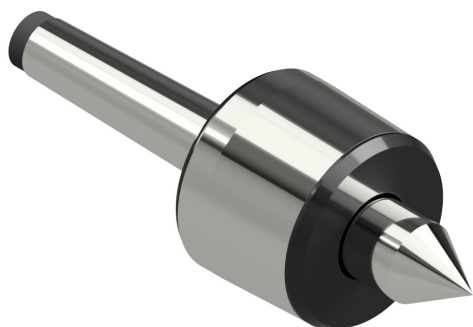
Código	CM	D	D1	L
BR-320A-00	0	9.2	5	28
BR-320A-01	1	12.2	7	36
BR-320A-02	2	18.0	7	48
BR-320A-03	3	24.1	11	57
BR-320A-04	4	31.6	14	73
BR-320A-05	5	44.7	18	87
BR-320A-06	6	63.8	18	108

Exemplo para Especificação: Contra Ponta CM4 Convencional = BR-320-04-B

: Contra Ponta CM4 Com ponta de Metal Duro = BR-320-04-A

Ferramentas Convencionais

Contra Ponta Rotativo de Precisão

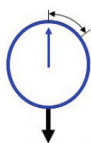


Código	CM	D	d	L
BR-340-02	2	45	20	34
BR-340-03	3	60	25	31
BR-340-04	4	70	32	41
BR-340-05	5	90	40	50.5

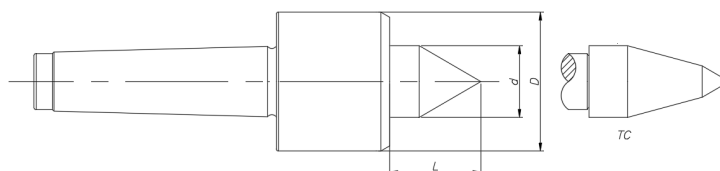
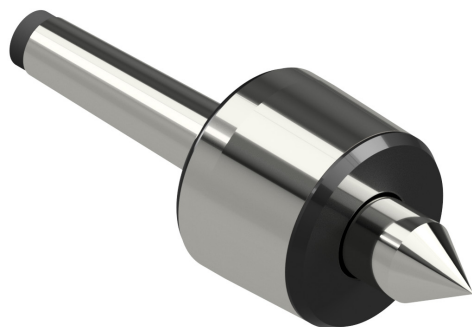
Código	CM	D	d	L
BR-340-02TC	2	45	20	34
BR-340-03TC	3	60	25	47
BR-340-04TC	4	70	32	53
BR-340-05TC	5	90	40	65

Exemplo para Especificação: Contra Ponta Rotativo CM3 Convencional = BR-340-03

: Contra Ponta Rotativo CM3 Para Torno Copiador = BR-340-03-TC



Batimento Máx. (mm) 0,005

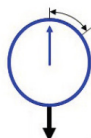


Imagens ilustrativas, apenas como referências dimensionais.

Código	CM	D	d	L	Máx RPM
BR-345-03	3	58	25	34	5200
BR-345-04	4	76	35	44	5000
BR-345-05	5	95	45	60	3500

Código	CM	D	d	L	Máx RPM
BR-345-03TC	3	58	25	45	5200
BR-345-04TC	4	76	35	55	500
BR-345-05TC	5	95	45	70	3500

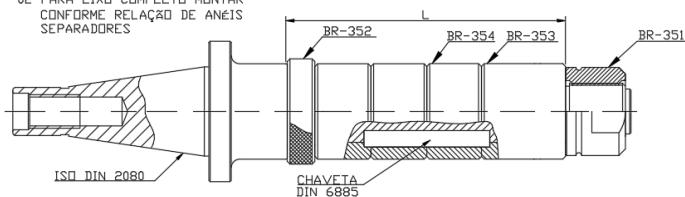
Este tipo de contra ponta rotativo, é indicado para Máquinas High Speed, o modelo (TC), é indicado para peças de perfil pequenas.



Batimento Máx. (mm) 0,005



01-EIXO COMPOSTO DE PORCA E CHAVETA
02-PARA EIXO COMPLETO MONTAR CONFORME RELAÇÃO DE ANEIS SEPARADORES



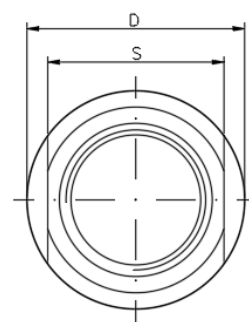
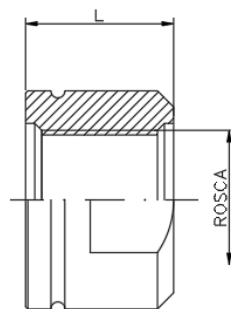
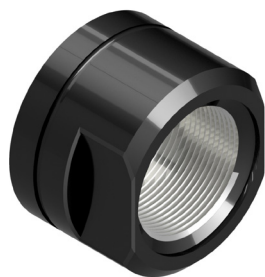
Código	ISO	D	PORCA	CHAVETA	L						
BR-350-316-L	30	16	M14X1.5	4X4X32	200	250	315	400	-	-	-
BR-350-322-L	30	22	M20X1.5	6X6X50	200	250	315	400	-	-	-
BR-350-327-L	30	27	M24X1.5	7X7X63	200	250	315	400	-	-	-
BR-350-416-L	40	16	M14X1.5	4X4X32	200	250	315	400	-	-	-
BR-350-422-L	40	22	M20X1.5	6X6X50	-	250	315	400	500	-	-
BR-350-427-L	40	27	M24X1.5	7X7X63	-	250	315	400	500	-	-
BR-350-432-L	40	32	M30X1.5	8X7X70	-	250	315	400	500	630	-
BR-350-440-L	40	40	M36X2.0	10X8X80	-	-	315	400	500	630	-
BR-350-522-L	50	22	M20X1.5	6X6X50	-	-	315	400	500	-	-
BR-350-527-L	50	27	M24X1.5	7X7X63	-	-	315	400	500	630	-
BR-350-532-L	50	32	M30X1.5	8X7X70	-	-	-	400	500	630	-
BR-350-540-L	50	40	M36X2.0	10X8X80	-	-	-	400	500	630	800
BR-350-550-L	50	50	M42X2.0	12X8X100	-	-	-	400	500	630	800

Exemplo para Especificação: Eixo D = 32 X L 400 X ISO 40 = BR-350-432-400 (Eixo com Porca)

Obs: Se desejar o eixo completo, incluindo Buchas de Guia, e Distanciadoras, acrescentar ao final

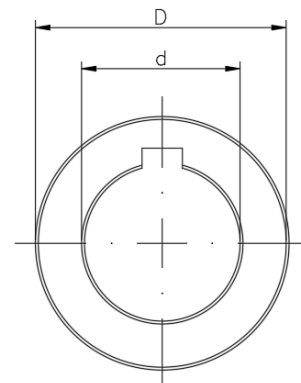
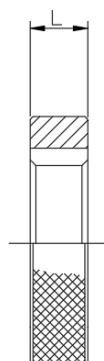
Código de especificação a letra "C".

Exemplo: BR-350-432-C.



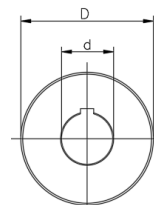
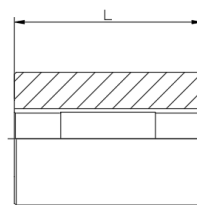
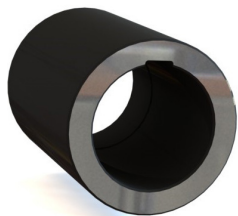
Código	Rosca	Eixo Ø	D	S	L
BR-351-14	M14X1.5	16	26	22	16
BR-351-20	M20X1.5	22	34	27	22
BR-351-24	M24X1.5	27	40	32	28
BR-351-30	M30X1.5	32	47	41	32
BR-351-36	M36X2.0	40	55	46	40
BR-351-42	M42X2.0	50	68	55	46

Exemplo para Especificação: Porca para Eixo M30X1,5 = BR-351-30



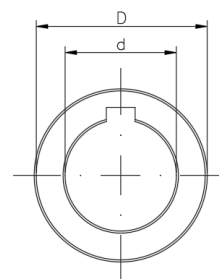
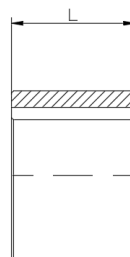
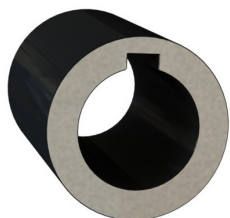
Código	d	D	L
BR-352-16	16	28	10
BR-352-22	22	38	10
BR-352-27	27	42	10
BR-352-32	32	48	10
BR-352-40	40	57	10
BR-352-50	50	70	10

Exemplo para Especificação: Anel de encosto com d=22mm = BR-352-22.



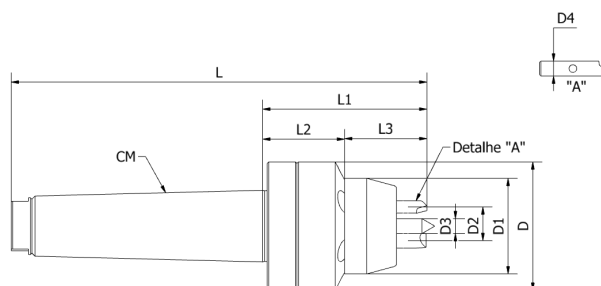
Código	d	D	L
BR-353-161	16	28	40
BR-353-162	16	42	60
BR-353-163	16	48	70
BR-353-164	16	56	80
BR-353-221	22	42	60
BR-353-222	22	48	70
BR-353-223	22	56	80
BR-353-224	22	70	100
BR-353-225	22	85	120
BR-353-271	27	42	60
BR-353-272	27	48	70
BR-353-273	27	56	80
BR-353-274	27	70	100
BR-353-275	27	85	120
BR-353-321	32	48	70
BR-353-322	32	56	80
BR-353-323	32	70	100
BR-353-324	32	85	120
BR-353-401	40	56	80
BR-353-402	40	70	100
BR-353-403	40	85	120
BR-353-404	40	110	140
BR-343-501	50	70	100
BR-353-402	50	85	120
BR-353-403	50	110	140

Exemplo para Especificação: Bucha de guia com d=16mm, D=48mm e L=70mm = BR-353-163.



Código	d	D	L								
BR-354-16-L	16	26	01	02	03	06	10	20	30	-	-
BR-354-22-L	22	34	01	02	03	06	10	20	30	60	-
BR-354-27-L	27	40	01	02	03	06	10	20	30	60	100
BR-354-32-L	32	46	01	02	03	06	10	20	30	60	100
BR-354-40-L	40	55	01	02	03	06	10	20	30	60	100
BR-354-50-L	50	68	01	02	03	06	10	20	30	60	100

Exemplo para Especificação: Espaçador d27 x L30 = BR-354-27-40



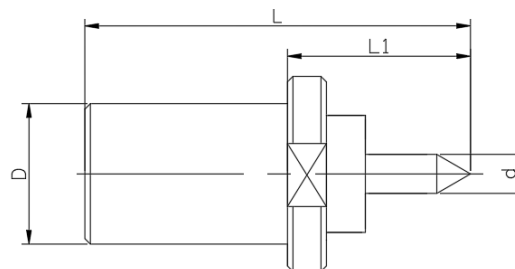
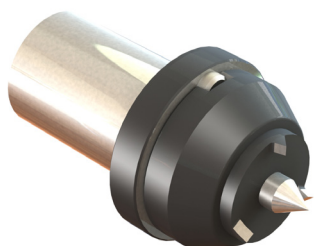
Código	CM	D	D1	D2	D3	D4	L	L1	L2	L3	Ø Mâx. Tornear
BR-675-3203	3	43	32	12	05	05	137	56	31	25.5	17
BR-675-4103	3	53	41	19	09	07	140	59	33	26.0	26
BR-675-4104	4	53	41	19	09	07	188.5	59	33	26.0	26
BR-675-5504	4	71	55	29	14	09	176	73.5	40	34.0	38
BR-675-5505	5	71	55	29	14	09	203	73.5	40	34.0	38
BR-675-8204	4	82	82	40	18	13	191	88.5	50	39.0	53
BR-675-8205	5	82	82	40	18	13	218	88.5	50	39.0	53

Exemplo para Especificação: Mandril Arrastador CM4 X D1 55 = BR-675-5504

Ferramentas Convencionais



Contra Ponta com Cabeças Intercambiáveis

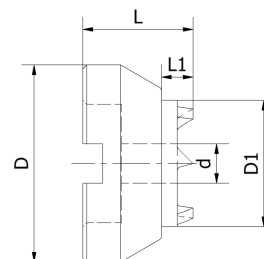
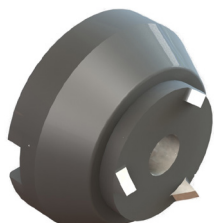


Código	D	d	L	L1
BR-676-25	25	10	105	52

Ferramentas Convencionais

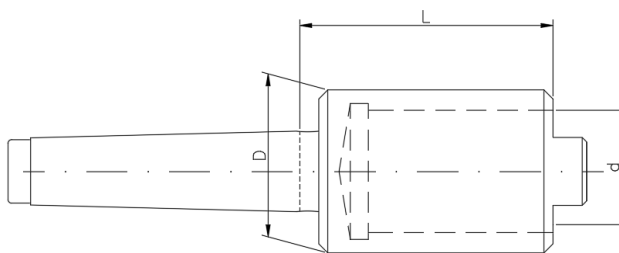


Cabeças Intercambiáveis



Código	D	d	d1	L	L1
BR-677-15	50	10	15	20	8
BR-677-20	50	10	20	20	8
BR-677-25	50	10	25	20	8
BR-677-32	50	10	32	20	8

Exemplo para Especificação: Cabeça Intercambiável: d1 20 = BR-677-20



Código	CM	D	d	L
BR-678-03	3	45	25	65
BR-678-04	4	45	25	65

Exemplo para Especificação: Adaptador para Cone Morse 4 = BR-678-04