



# HERRAMIENTAS CLEVELAND S.A. DE C.V.

## SELECCIÓN DE BROCAS PARA ROSCADO

### Númericos, Fraccionales y Porcentajes de Rosca



FORMULA PARA OBTENER  
LA MEDIDA DE BROCA

$$\text{Medida de Broca} = \text{Diám. Ext. De la Rosca} - \left( \frac{0.01299 \times \% \text{ de Rosca}}{\text{N}^\circ \text{ de Hilos por pulg.}} \right)$$

Nota: Seleccione la broca comercial más próxima

FORMULA PARA OBTENER  
EL PORCENTAJE DE ROSCA  
P/OTRAS MEDIDAS DE BROCA

$$\% \text{ de Rosca} = \frac{\text{N}^\circ \text{ de Hilos por pulg.} \times (\text{Diám. Ext. De Rosca} - \text{Diám. Broca Seleccionada})}{0.01299}$$

MACHUELO		DIAM. BROCA	EQUIV. DECIMAL	% TEOR. ROSCA	MACHUELO		DIAM. BROCA	EQUIV. DECIMAL	% TEOR. ROSCA	MACHUELO		DIAM. BROCA	EQUIV. DECIMAL	% TEOR. ROSCA
MEDIDA	HILOS X PULG.				MEDIDA	HILOS X PULG.				MEDIDA	HILOS X PULG.			
0	80	56	0.0465	83	1/4	28	7/32	0.2188	67	7/8	12	51/64	0.7969	72
		3/64	0.0469	81			2	0.2210	73			7/8	14	51/64
1	64	54	0.0550	89	1/4	32	7/32	0.2188	77	7/8	16	13/16	0.8125	67
		53	0.0595	67			5/16	18	F			0.2570	77	7/8
1	72	53	0.0595	75	5/16	20	17/64	0.2656	65	15/16	12	55/64	0.8594	72
		1/16	0.0625	58			G	0.2610	71			15/16	16	7/8
2	56	51	0.0670	82	5/16	24	I	0.2720	75	1	8	7/8	0.8750	77
		50	0.0700	69			J	0.2770	66			57/64	0.8906	72
2	64	50	0.0700	79	3/8	16	5/16	0.3125	77	1	12	59/64	0.9219	72
		49	0.0730	64			O	0.3160	73			15/16	0.9375	58
3	48	5/64	0.0781	77	3/8	20	21/64	0.3281	72	1	14	59/64	0.9219	84
		47	0.0785	76			P	0.3230	64			15/16	0.9375	67
3	56	46	0.0810	78	3/8	24	Q	0.3320	79	1	16	15/16	0.9375	77
		45	0.0820	73			R	0.3390	67			1	20	61/64
4	40	44	0.0960	56	7/16	14	11/32	0.3438	77	1 1/8	7	63/64	0.9844	76
		43	0.0890	71			U	0.3680	75			1	1	1.0000
4	48	42	0.0935	57	7/16	20	3/8	0.3750	67	1 1/8	12	1 1/32	1.0313	87
		42	0.0935	68			V	0.3770	65			1 3/64	1.0469	72
5	40	39	0.0995	79	7/16	24	W	0.3860	79	1 1/8	16	1 1/16	1.0625	77
		38	0.1015	72			25/64	0.3906	72			1 1/8	18	1 1/16
5	44	38	0.1015	79	7/16	28	X	0.3970	75	1 1/4	7	1 3/32	1.0938	84
		37	0.1040	71			Y	0.4040	72			1 7/64	1.1094	76
6	32	36	0.1065	78	1/2	13	27/64	0.4219	78	1 1/4	12	1 1/8	1.1250	67
		7/64	0.1094	70			7/16	0.4375	63			1 5/32	1.1563	87
6	40	35	0.1100	69	1/2	24	29/64	0.4531	72	1 1/4	16	1 11/64	1.1719	72
		33	0.1130	77			1/2	24	29/64			0.4531	87	1 1/4
8	32	32	0.1160	68	1/2	28	15/32	0.4688	67	1 1/4	18	1 3/16	1.1875	87
		29	0.1360	69			9/16	12	15/32			0.4688	87	1 3/8
8	36	28	0.1405	68	9/16	18	31/64	0.4844	72	1 3/8	12	1 13/64	1.2031	79
		28	0.1405	68			1/2	0.5000	87			1 7/32	1.2188	72
10	24	25	0.1495	75	9/16	24	33/64	0.5156	65	1 3/8	16	1 15/64	1.2344	65
		24	0.1520	70			33/64	0.5156	87			1 9/32	1.2813	87
10	32	23	0.1540	67	5/8	12	17/32	0.5313	79	1 3/8	18	1 19/64	1.2969	72
		22	0.1570	81			35/64	0.5469	66			1 5/16	1.3125	77
12	24	21	0.1590	76	5/8	18	9/16	0.5625	87	1 1/2	6	1 5/16	1.3125	87
		20	0.1610	71			37/64	0.5781	65			1 21/64	1.3281	79
12	28	17	0.1730	79	5/8	24	37/64	0.5781	87	1 1/2	12	1 11/32	1.3438	72
		16	0.1770	72			11/16	12	39/64			0.6094	72	1 23/64
12	28	15	0.1800	67	11/16	24	41/64	0.6406	87	1 1/2	12	1 13/32	1.4063	87
		14	0.1820	73			3/4	10	41/64			0.6406	84	1 27/64
1/4	20	13	0.1850	67	3/4	12	21/32	0.6563	72	1 1/2	16	1 7/16	1.4375	77
		15	0.1800	78			3/4	12	43/64			0.6719	72	1 1/2
1/4	24	14	0.2010	75	3/4	16	11/16	0.6875	77	1 3/4	16	1 11/16	1.6875	77
		7	0.2010	75			3/4	20	45/64			0.7031	72	2
1/4	24	13/64	0.2031	72	13/16	12	47/64	0.7344	72	2 1/4	16	2 3/16	2.1875	77
		6	0.2040	71			13/16	16	3/4			0.7500	77	2 1/2
1/4	24	5	0.2055	69	13/16	20	49/64	0.7656	72	2 3/4	16	2 11/16	2.6875	77
		4	0.2090	76			7/8	9	49/64			0.7656	76	3
							25/32	0.7813	65					



# HERRAMIENTAS CLEVELAND, S.A., de C.V.

## SELECCIÓN DE BROCAS PARA ROSCADO

Métricas y Porcentajes de Rosca

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FORMULA DE ROSCA MÉTRICA

$$\% \text{ de Rosca} = \frac{76.980}{\text{Paso en mm}} \times \left( \text{Diám. Exterior de Rosca} - \text{Medida de Broca Seleccionada} \right)$$

MACHUELO	DIAM. BROCA	EQUIV. DECIMAL	% TEORICO. ROSCA	MACHUELO	DIAM. BROCA	EQUIV. DECIMAL	% TEORICO. ROSCA	MACHUELO	DIAM. BROCA	EQUIV. DECIMAL	% TEORICO. ROSCA
M1.6x.35	1.25mm	.0492	77	M8 X 1	I	.2720	67	M22 X 1.5	20.5mm	.8071	77
	1.3mm	.0512	66		7mm	.2756	77		13/16	.8125	70
	# 55	.0520	61		J	.2770	74	M24 X 3	21mm	.8268	77
M1.8x.35	1.45mm	.0571	77	M10 X 1.5	8.5mm	.3346	77	M24 X 2	27/32	.8438	66
	1.5mm	.0591	66		R	.3390	71		22mm	.8661	77
	# 53	.0595	64		M10 X 1.25	8.75mm	.3445	77	7/8	.8750	68
M2x.4	1.6mm	.0630	77	S	.3480	71	M27 X 3	24mm	.9449	77	
	# 52	.0635	74	M12 X 1.75	13/32	.4062		74	61/64	.9531	72
M2.2x.45	1.75mm	.0689	77	Z	.4130	66	M27 X 2	25mm	.9843	77	
	# 50	.0700	72	M12 X 1.25	27/64	.4219		79	63/64	.9844	77
M2.5x.45	2.05mm	.0700	77	11mm	.4331	62	M30 X 3.5	26.5mm	1.0433	77	
	# 45	.0820	71	M14 X 2	12mm	.4724		77	1-1/16	1.0625	66
M3x.5	2.5mm	.0984	77	31/64	.4844	65	M30 X 2	28mm	1.1024	77	
	# 39	.0995	73	M14 X 1.5	12.5mm	.4921		77	1-7/64	1.1094	70
M3.5x.6	2.9mm	.1142	77	1/2	.5000	67	M33 X 3.5	29.5mm	1.1614	77	
	# 32	.1160	71	M16 X 2	14mm	.5512		77	1-11/64	1.1719	71
M4X.7	3.3mm	.1299	77	9/16	.5625	66	M33 X 2	31mm	1.2205	77	
	3.4mm	.1339	66	M16 X 1.5	14.5mm	.5709		77	1-15/64	1.2344	63
M4.5X.75	# 29	.1360	60	37/64	.5781	68	M36 X 4	32mm	1.2598	77	
	3.75mm	.1476	77	M18 X 2.5	15.5mm	.6102		77	1-17/64	1.2656	74
M5X.8	# 25	.1495	72	5/8	.6250	65	M36 X 3	1-19/64	1.2869	78	
	4.2mm	.1654	77	M18 X 1.5	16.5mm	.6496		77	33mm	1.2992	77
M6X 1	# 18	.1695	67	21/32	.6562	68	M39 X 4	1-5/16	1.3125	68	
	5mm	.1969	77	M20 X 2.5	17.5mm	.6890		77	1-3/8	1.3750	78
M7X 1	# 8	.1990	73	45/64	.7031	68	M39 X 3	35mm	1.3780	77	
	6mm	.2362	77	M20 X 1.5	18.5mm	.7283		77	1-25/64	1.3906	71
M8X 1.25	B	.2380	74	47.64	.7344	69		36mm	1.4173	77	
	6.75mm	.2657	77	M22 X 2.5	19.5mm	.7677		77	1-27/64	1.4219	74
	6.8mm	.2677	74		25/32	.7812	66				

## SELECCIÓN DE BROCAS PARA ROSCADO DE TUBERIA

MACHUELO	* NPT	
	MEDIDA	EQUIV. DECIMAL
1/16	D	.2460
1/8	Q	.3320
1/4	7/16	.4375
3/8	9/16	.5625
1/2	45/64	.7031
3/4	29/32	.9062
1	1-9/64	1.1406
1-1/4	1-31/64	1.4844
1-1/2	1-47/64	1.7344
2	2-13/64	2.2031
2-1/2	2-5/8	2.6250
3		

MACHUELO	* NPTF	
	MEDIDA	EQUIV. DECIMAL
D		.2460
R		.3390
7/16		.4375
37/64		.5781
45/64		.7031
59/64		.9219
1-5/32		1.1562
1-1/2		1.5000
1-47/64		1.7344
2-7/32		2.2188
2-41/64		2.6406
3-17/64		3.2656

MACHUELO	RECTA	
	MEDIDA	EQUIV. DECIMAL
1/4		.2500
11/32		.3438
7/16		.4375
31/64		.5781
23/32		.7188
59/64		.9219
1-5/32		1.1562
1-1/2		1.5000
1-3/4		1.7500
2-7/32		2.2188
2-21/32		2.6562

\* Para Roscado sin Rimar