

# BROCAS SERIE MS

BROCAS INTEGRALES DE METAL DURO CON  
RECUBRIMIENTO PVD PARA EL MECANIZADO EN GENERAL!



# MS-BROCAS

## BROCAS SERIE MS



Una nueva búsqueda de herramientas de calidad con una mejor relación precio-calidad. Una combinación de herramientas entre el metal duro, HSS y la tecnología de recubrimiento para las nuevas necesidades que se producen en el mundo del metal.

Las soluciones a los problemas de corte acumulados durante décadas de conocimiento de la producción nos permite proporcionar una gama de herramientas completa y con menos coste.



**M**itsubishi  
**S** Brand

Nuestra dedicación por la calidad y fiabilidad es continuada con esta nueva gama de brocas MS que esta fabricada exactamente con la referencia estandar DIN 6537.

# CARACTERÍSTICAS

## BROCAS SERIE MS

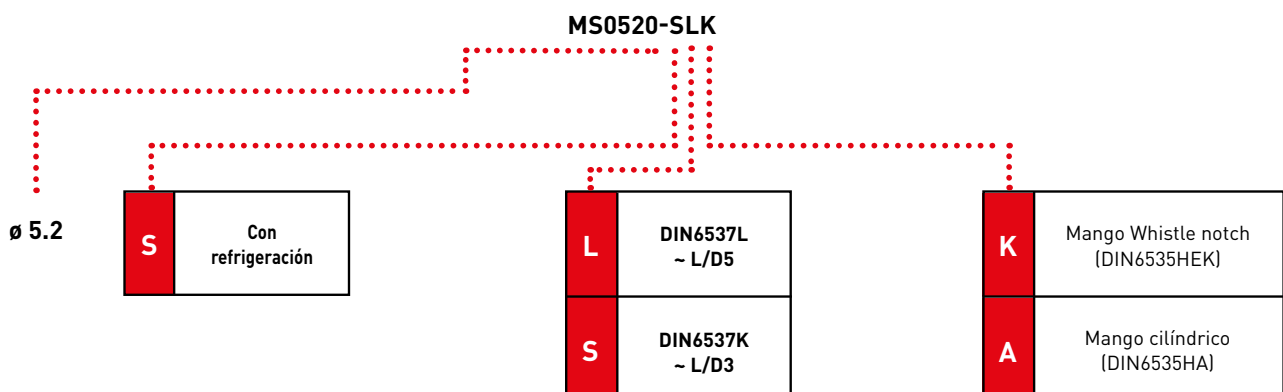


- Metal Duro
- Con refrigeración
- 3xD y 5xD Longitud de corte
- Fuerte geometría del filo de corte
- Ámplia gama de aplicación en materiales
- Mango tipo whistle notch y cilíndrico
- Metal Duro super-micro grano
- Recubrimiento PVD para alargar la vida de la herramienta.



### DESCRIPCIÓN REFERENCIA

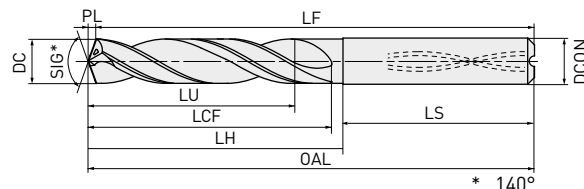
MS○○○○○-S○○ (Refrigeración interna)



# MS-BROCAS



## CILÍNDRICO



DC ≤ 3	3 < DC ≤ 6	6 < DC ≤ 10	10 < DC ≤ 14
0.016	0.016	0.021	0.025
+0.004	+0.004	+0.006	+0.007

Referencia	Stock	DC	L/D	LU	LCF	LH	OAL	LF	PL	LS	DCON
MS0300-SSA	●	3.0	3	15	20	25	62	61	0.5	36	6
MS0300-SLA	●		5	23	28	29	66	65	0.5	36	6
MS0310-SSA	●	3.1	3	14.9	20	25	62	61	0.6	36	6
MS0310-SLA	●		5	22.9	28	29	66	65	0.6	36	6
MS0330-SSA	●	3.3	3	14.7	20	25	62	61	0.6	36	6
MS0330-SLA	●		5	22.7	28	29	66	65	0.6	36	6
MS0340-SSA	●	3.4	3	14.5	20	25	62	61	0.6	36	6
MS0340-SLA	●		5	22.5	28	29	66	65	0.6	36	6
MS0350-SSA	●	3.5	3	14.4	20	25	62	61	0.6	36	6
MS0350-SLA	●		5	22.4	28	29	66	65	0.6	36	6
MS0370-SSA	●	3.7	3	14.1	20	25	62	61	0.7	36	6
MS0370-SLA	●		5	22.1	28	29	66	65	0.7	36	6
MS0380-SSA	●	3.8	3	18	24	29	66	65	0.7	36	6
MS0380-SLA	●		5	30	36	37	74	73	0.7	36	6
MS0390-SSA	●	3.9	3	17.9	24	29	66	65	0.7	36	6
MS0390-SLA	●		5	29.9	36	37	74	73	0.7	36	6
MS0400-SSA	●	4.0	3	17.7	24	29	66	65	0.7	36	6
MS0400-SLA	●		5	29.7	36	37	74	73	0.7	36	6
MS0410-SSA	●	4.1	3	17.6	24	29	66	65	0.7	36	6
MS0410-SLA	●		5	29.6	36	37	74	73	0.7	36	6
MS0420-SSA	●	4.2	3	17.5	24	29	66	65	0.8	36	6
MS0420-SLA	●		5	29.5	36	37	74	73	0.8	36	6
MS0430-SSA	●	4.3	3	17.3	24	29	66	65	0.8	36	6
MS0430-SLA	●		5	29.3	36	37	74	73	0.8	36	6
MS0450-SSA	●	4.5	3	17.1	24	29	66	65	0.8	36	6
MS0450-SLA	●		5	29.1	36	37	74	73	0.8	36	6
MS0460-SSA	●	4.6	3	16.9	24	29	66	65	0.8	36	6
MS0460-SLA	●		5	28.9	36	37	74	73	0.8	36	6
MS0480-SSA	●	4.8	3	20.7	28	29	66	65	0.9	36	6
MS0480-SLA	●		5	36.7	44	45	74	81	0.9	36	6
MS0500-SSA	●	5.0	3	20.4	30	29	66	65	0.9	36	6
MS0500-SLA	●		5	36.4	46	45	82	81	0.9	36	6

# MS-BROCAS - CILÍNDRICO

Referencia	Stock	DC	L/D	LU	LCF	LH	OAL	LF	PL	LS	DCON
MS0510-SSA	●	5.1	3	20.3	30	29	66	65	0.9	36	6
MS0510-SLA	●		5	36.3	46	45	82	81	0.9	36	6
MS0520-SSA	●	5.2	3	20.1	30	29	66	65	0.9	36	6
MS0520-SLA	●		5	36.1	46	45	82	81	0.9	36	6
MS0550-SSA	●	5.5	3	19.8	30	29	66	65	1	36	6
MS0550-SLA	●		5	35.8	46	45	82	81	1	36	6
MS0560-SSA	●	5.6	3	19.6	30	29	66	65	1	36	6
MS0560-SLA	●		5	35.6	46	45	82	81	1	36	6
MS0570-SSA	●	5.7	3	19.5	30	29	66	65	1	36	6
MS0570-SLA	●		5	35.5	46	45	82	81	1	36	6
MS0580-SSA	●	5.8	3	19.4	30	29	66	65	1.1	36	6
MS0580-SLA	●		5	35.4	46	45	82	81	1.1	36	6
MS0600-SSA	●	6.0	3	19.1	30	29	66	65	1.1	36	6
MS0600-SLA	●		5	35.1	46	45	82	81	1.1	36	6
MS0610-SSA	●	6.1	3	25	34	42	79	78	1.1	36	8
MS0610-SLA	●		5	44	53	54	91	90	1.1	36	8
MS0620-SSA	●	6.2	3	24.8	34	42	79	78	1.1	36	8
MS0620-SLA	●		5	43.8	53	54	91	90	1.1	36	8
MS0650-SSA	●	6.5	3	24.4	34	42	79	78	1.2	36	8
MS0650-SLA	●		5	43.4	53	54	91	90	1.2	36	8
MS0660-SSA	●	6.6	3	24.3	34	42	79	78	1.2	36	8
MS0660-SLA	●		5	43.3	53	54	91	90	1.2	36	8
MS0680-SSA	●	6.8	3	24	34	42	79	78	1.2	36	8
MS0680-SLA	●		5	43	53	54	91	90	1.2	36	8
MS0690-SSA	●	6.9	3	23.9	34	42	79	78	1.3	36	8
MS0690-SLA	●		5	42.9	53	54	91	90	1.3	36	8
MS0700-SSA	●	7.0	3	23.8	34	42	79	78	1.3	36	8
MS0700-SLA	●		5	42.8	53	54	91	90	1.3	36	8
MS0730-SSA	●	7.3	3	30.4	34	42	79	78	1.3	36	8
MS0730-SLA	●		5	42.4	53	54	91	90	1.3	36	8
MS0740-SSA	●	7.4	3	30.2	41	42	79	78	1.3	36	8
MS0740-SLA	●		5	42.2	53	54	91	90	1.3	36	8
MS0750-SSA	●	7.5	3	30.1	41	42	79	78	1.4	36	8
MS0750-SLA	●		5	42.1	53	54	91	90	1.4	36	8
MS0780-SSA	●	7.8	3	29.7	41	42	79	78	1.4	36	8
MS0780-SLA	●		5	41.7	53	54	91	90	1.4	36	8
MS0800-SSA	●	8.0	3	29.5	41	42	79	78	1.5	36	10
MS0800-SLA	●		5	41.5	53	54	91	90	1.5	36	10
MS0830-SSA	●	8.3	3	34.1	47	48	89	87	1.5	40	10
MS0830-SLA	●		5	48.1	61	62	103	101	1.5	40	10
MS0850-SSA	●	8.5	3	33.8	47	48	89	87	1.5	40	10
MS0850-SLA	●		5	47.8	61	62	103	101	1.5	40	10
MS0860-SSA	●	8.6	3	33.7	47	48	89	87	1.6	40	10
MS0860-SLA	●		5	47.7	61	62	103	101	1.6	40	10
MS0870-SSA	●	8.7	3	33.5	47	48	89	87	1.6	40	10
MS0870-SLA	●		5	47.5	61	62	103	101	1.6	40	10
MS0880-SSA	●	8.8	3	33.4	47	48	89	87	1.6	40	10
MS0880-SLA	●		5	47.4	61	62	103	101	1.6	40	10
MS0900-SSA	●	9.0	3	33.3	47	48	89	87	1.6	40	10
MS0900-SLA	●		5	47.3	61	62	103	101	1.6	40	10

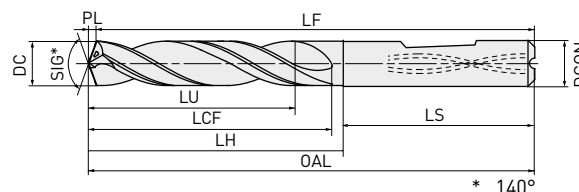
# MS-BROCAS - CILÍNDRICO

Referencia	Stock	DC	L/D	LU	LCF	LH	OAL	LF	PL	LS	DCON
MS0930-SSA	●	9.3	3	33.1	47	48	89	87	1.6	40	10
MS0930-SLA	●		5	47.1	61	62	103	101	1.6	40	10
MS0950-SSA	●	9.5	3	32.5	47	48	89	87	1.7	40	10
MS0950-SLA	●		5	46.5	61	62	103	101	1.7	40	10
MS0980-SSA	●	9.8	3	32.1	47	48	89	87	1.8	40	10
MS0980-SLA	●		5	46.1	61	62	103	101	1.8	40	10
MS1000-SSA	●	10.0	3	31.8	47	48	89	87	1.8	40	10
MS1000-SLA	●		5	45.8	61	62	103	101	1.8	40	10
MS1020-SSA	●	10.2	3	39.6	55	56	102	100	1.9	45	12
MS1020-SLA	●		5	55.6	71	72	118	116	1.9	45	12
MS1030-SSA	●	10.3	3	39.4	55	56	102	100	1.9	45	12
MS1030-SLA	●		5	55.4	71	72	118	116	1.9	45	12
MS1040-SSA	●	10.4	3	39.3	55	56	102	100	1.9	45	12
MS1040-SLA	●		5	55.3	71	72	118	116	1.9	45	12
MS1050-SSA	●	10.5	3	39.2	55	56	102	100	1.9	45	12
MS1050-SLA	●		5	55.2	71	72	118	116	1.9	45	12
MS1070-SSA	●	10.7	3	38.9	55	56	102	100	1.9	45	12
MS1070-SLA	●		5	54.9	71	72	118	116	1.9	45	12
MS1080-SSA	●	10.8	3	38.8	55	56	102	100	2	45	12
MS1080-SLA	●		5	54.8	71	72	118	116	2	45	12
MS1100-SSA	●	11.0	3	38.5	55	56	102	100	2	45	12
MS1100-SLA	●		5	54.5	71	72	118	116	2	45	12
MS1120-SSA	●	11.2	3	38.2	55	56	102	100	2	45	12
MS1120-SLA	●		5	54.2	71	72	118	116	2	45	12
MS1140-SSA	●	11.4	3	38	55	56	102	100	2.1	45	12
MS1140-SLA	●		5	54	71	72	118	116	2.1	45	12
MS1150-SSA	●	11.5	3	37.8	55	56	102	100	2.1	45	12
MS1150-SLA	●		5	53.8	71	72	118	116	2.1	45	12
MS1170-SSA	●	11.7	3	37.6	55	56	102	100	2.1	45	12
MS1170-SLA	●		5	53.6	71	72	118	116	2.1	45	12
MS1180-SSA	●	11.8	3	37.4	55	56	102	100	2.1	45	12
MS1180-SLA	●		5	53.4	71	72	118	116	2.1	45	12
MS1200-SSA	●	12.0	3	37.2	55	56	102	100	2.2	45	12
MS1200-SLA	●		5	53.2	71	72	118	116	2.2	45	12
MS1250-SSA	●	12.5	3	41.5	60	61	107	105	2.3	45	14
MS1250-SLA	●		5	58.5	77	78	124	122	2.3	45	14
MS1260-SSA	●	12.6	3	41.4	60	61	107	105	2.3	45	14
MS1260-SLA	●		5	58.4	77	78	124	122	2.3	45	14
MS1270-SSA	●	12.7	3	41.3	60	61	107	105	2.3	45	14
MS1270-SLA	●		5	58.3	77	78	124	122	2.3	45	14
MS1300-SSA	●	13.0	3	40.9	60	61	107	105	2.4	45	14
MS1300-SLA	●		5	57.9	77	78	124	122	2.4	45	14
MS1350-SSA	●	13.5	3	40.2	60	61	107	105	2.5	45	14
MS1350-SLA	●		5	57.2	77	78	124	122	2.5	45	14
MS1370-SSA	●	13.7	3	39.9	60	61	107	105	2.5	45	14
MS1370-SLA	●		5	56.9	77	78	124	122	2.5	45	14
MS1400-SSA	●	14.0	3	39.5	60	62	107	105	2.5	45	14
MS1400-SLA	●		5	56.5	77	79	124	122	2.5	45	14

# MS-BROCAS



## WHISTLE NOTCH



DC ≤ 3	3 < DC ≤ 6	6 < DC ≤ 10	10 < DC ≤ 14
0.016	0.016	0.021	0.025
+0.004	+0.004	+0.006	+0.007

Referencia	Stock	DC	L/D	LU	LCF	LH	OAL	LF	PL	LS	DCON
MS0300-SSK	●	3.0	3	15	20	25	62	61	0.5	36	6
MS0300-SLK	●		5	23	28	29	66	65	0.5	36	6
MS0310-SSK	●	3.1	3	14.9	20	25	62	61	0.6	36	6
MS0310-SLK	●		5	22.9	28	29	66	65	0.6	36	6
MS0330-SSK	●	3.3	3	14.7	20	25	62	61	0.6	36	6
MS0330-SLK	●		5	22.7	28	29	66	65	0.6	36	6
MS0340-SSK	●	3.4	3	14.5	20	25	62	61	0.6	36	6
MS0340-SLK	●		5	22.5	28	29	66	65	0.6	36	6
MS0350-SSK	●	3.5	3	14.4	20	25	62	61	0.6	36	6
MS0350-SLK	●		5	22.4	28	29	66	65	0.6	36	6
MS0370-SSK	●	3.7	3	14.1	20	25	62	61	0.7	36	6
MS0370-SLK	●		5	22.1	28	29	66	65	0.7	36	6
MS0380-SSK	●	3.8	3	18	24	29	66	65	0.7	36	6
MS0380-SLK	●		5	30	36	37	74	73	0.7	36	6
MS0390-SSK	●	3.9	3	17.9	24	29	66	65	0.7	36	6
MS0390-SLK	●		5	29.9	36	37	74	73	0.7	36	6
MS0400-SSK	●	4.0	3	17.7	24	29	66	65	0.7	36	6
MS0400-SLK	●		5	29.7	36	37	74	73	0.7	36	6
MS0410-SSK	●	4.1	3	17.6	24	29	66	65	0.7	36	6
MS0410-SLK	●		5	29.6	36	37	74	73	0.7	36	6
MS0420-SSK	●	4.2	3	17.5	24	29	66	65	0.8	36	6
MS0420-SLK	●		5	29.5	36	37	74	73	0.8	36	6
MS0430-SSK	●	4.3	3	17.3	24	29	66	65	0.8	36	6
MS0430-SLK	●		5	29.3	36	37	74	73	0.8	36	6
MS0450-SSK	●	4.5	3	17.1	24	29	66	65	0.8	36	6
MS0450-SLK	●		5	29.1	36	37	74	73	0.8	36	6
MS0460-SSK	●	4.6	3	16.9	24	29	66	65	0.8	36	6
MS0460-SLK	●		5	28.9	36	37	74	73	0.8	36	6
MS0480-SSK	●	4.8	3	20.7	28	29	66	65	0.9	36	6
MS0480-SLK	●		5	36.7	44	45	74	81	0.9	36	6
MS0500-SSK	●	5.0	3	20.4	30	29	66	65	0.9	36	6
MS0500-SLK	●		5	36.4	46	45	82	81	0.9	36	6

# MS-BROCAS - WHISTLE NOTCH

Referencia	Stock	DC	L/D	LU	LCF	LH	OAL	LF	PL	LS	DCON
MS0510-SSK	●	5.1	3	20.3	30	29	66	65	0.9	36	6
MS0510-SLK	●		5	36.3	46	45	82	81	0.9	36	6
MS0520-SSK	●	5.2	3	20.1	30	29	66	65	0.9	36	6
MS0520-SLK	●		5	36.1	46	45	82	81	0.9	36	6
MS0550-SSK	●	5.5	3	19.8	30	29	66	65	1	36	6
MS0550-SLK	●		5	35.8	46	45	82	81	1	36	6
MS0560-SSK	●	5.6	3	19.6	30	29	66	65	1	36	6
MS0560-SLK	●		5	35.6	46	45	82	81	1	36	6
MS0570-SSK	●	5.7	3	19.5	30	29	66	65	1	36	6
MS0570-SLK	●		5	35.5	46	45	82	81	1	36	6
MS0580-SSK	●	5.8	3	19.4	30	29	66	65	1.1	36	6
MS0580-SLK	●		5	35.4	46	45	82	81	1.1	36	6
MS0600-SSK	●	6.0	3	19.1	30	29	66	65	1.1	36	6
MS0600-SLK	●		5	35.1	46	45	82	81	1.1	36	6
MS0610-SSK	●	6.1	3	25	34	42	79	78	1.1	36	8
MS0610-SLK	●		5	44	53	54	91	90	1.1	36	8
MS0620-SSK	●	6.2	3	24.8	34	42	79	78	1.1	36	8
MS0620-SLK	●		5	43.8	53	54	91	90	1.1	36	8
MS0650-SSK	●	6.5	3	24.4	34	42	79	78	1.2	36	8
MS0650-SLK	●		5	43.4	53	54	91	90	1.2	36	8
MS0660-SSK	●	6.6	3	24.3	34	42	79	78	1.2	36	8
MS0660-SLK	●		5	43.3	53	54	91	90	1.2	36	8
MS0680-SSK	●	6.8	3	24	34	42	79	78	1.2	36	8
MS0680-SLK	●		5	43	53	54	91	90	1.2	36	8
MS0690-SSK	●	6.9	3	23.9	34	42	79	78	1.3	36	8
MS0690-SLK	●		5	42.9	53	54	91	90	1.3	36	8
MS0700-SSK	●	7.0	3	23.8	34	42	79	78	1.3	36	8
MS0700-SLK	●		5	42.8	53	54	91	90	1.3	36	8
MS0730-SSK	●	7.3	3	30.4	34	42	79	78	1.3	36	8
MS0730-SLK	●		5	42.4	53	54	91	90	1.3	36	8
MS0740-SSK	●	7.4	3	30.2	41	42	79	78	1.3	36	8
MS0740-SLK	●		5	42.2	53	54	91	90	1.3	36	8
MS0750-SSK	●	7.5	3	30.1	41	42	79	78	1.4	36	8
MS0750-SLK	●		5	42.1	53	54	91	90	1.4	36	8
MS0780-SSK	●	7.8	3	29.7	41	42	79	78	1.4	36	8
MS0780-SLK	●		5	41.7	53	54	91	90	1.4	36	8
MS0800-SSK	●	8.0	3	29.5	41	42	79	78	1.5	36	10
MS0800-SLK	●		5	41.5	53	54	91	90	1.5	36	10
MS0830-SSK	●	8.3	3	34.1	47	48	89	87	1.5	40	10
MS0830-SLK	●		5	48.1	61	62	103	101	1.5	40	10
MS0850-SSK	●	8.5	3	33.8	47	48	89	87	1.5	40	10
MS0850-SLK	●		5	47.8	61	62	103	101	1.5	40	10
MS0860-SSK	●	8.6	3	33.7	47	48	89	87	1.6	40	10
MS0860-SLK	●		5	47.7	61	62	103	101	1.6	40	10
MS0870-SSK	●	8.7	3	33.5	47	48	89	87	1.6	40	10
MS0870-SLK	●		5	47.5	61	62	103	101	1.6	40	10
MS0880-SSK	●	8.8	3	33.4	47	48	89	87	1.6	40	10
MS0880-SLK	●		5	47.4	61	62	103	101	1.6	40	10
MS0900-SSK	●	9.0	3	33.3	47	48	89	87	1.6	40	10
MS0900-SLK	●		5	47.3	61	62	103	101	1.6	40	10



# MS-BROCAS - WHISTLE NOTCH

Referencia	Stock	DC	L/D	LU	LCF	LH	OAL	LF	PL	LS	DCON
MS0930-SSK	●	9.3	3	33.1	47	48	89	87	1.6	40	10
MS0930-SLK	●		5	47.1	61	62	103	101	1.6	40	10
MS0950-SSK	●	9.5	3	32.5	47	48	89	87	1.7	40	10
MS0950-SLK	●		5	46.5	61	62	103	101	1.7	40	10
MS0980-SSK	●	9.8	3	32.1	47	48	89	87	1.8	40	10
MS0980-SLK	●		5	46.1	61	62	103	101	1.8	40	10
MS1000-SSK	●	10.0	3	31.8	47	48	89	87	1.8	40	10
MS1000-SLK	●		5	45.8	61	62	103	101	1.8	40	10
MS1020-SSK	●	10.2	3	39.6	55	56	102	100	1.9	45	12
MS1020-SLK	●		5	55.6	71	72	118	116	1.9	45	12
MS1030-SSK	●	10.3	3	39.4	55	56	102	100	1.9	45	12
MS1030-SLK	●		5	55.4	71	72	118	116	1.9	45	12
MS1040-SSK	●	10.4	3	39.3	55	56	102	100	1.9	45	12
MS1040-SLK	●		5	55.3	71	72	118	116	1.9	45	12
MS1050-SSK	●	10.5	3	39.2	55	56	102	100	1.9	45	12
MS1050-SLK	●		5	55.2	71	72	118	116	1.9	45	12
MS1070-SSK	●	10.7	3	38.9	55	56	102	100	1.9	45	12
MS1070-SLK	●		5	54.9	71	72	118	116	1.9	45	12
MS1080-SSK	●	10.8	3	38.8	55	56	102	100	2	45	12
MS1080-SLK	●		5	54.8	71	72	118	116	2	45	12
MS1100-SSK	●	11.0	3	38.5	55	56	102	100	2	45	12
MS1100-SLK	●		5	54.5	71	72	118	116	2	45	12
MS1120-SSK	●	11.2	3	38.2	55	56	102	100	2	45	12
MS1120-SLK	●		5	54.2	71	72	118	116	2	45	12
MS1140-SSK	●	11.4	3	38	55	56	102	100	2.1	45	12
MS1140-SLK	●		5	54	71	72	118	116	2.1	45	12
MS1150-SSK	●	11.5	3	37.8	55	56	102	100	2.1	45	12
MS1150-SLK	●		5	53.8	71	72	118	116	2.1	45	12
MS1170-SSK	●	11.7	3	37.6	55	56	102	100	2.1	45	12
MS1170-SLK	●		5	53.6	71	72	118	116	2.1	45	12
MS1180-SSK	●	11.8	3	37.4	55	56	102	100	2.1	45	12
MS1180-SLK	●		5	53.4	71	72	118	116	2.1	45	12
MS1200-SSK	●	12.0	3	37.2	55	56	102	100	2.2	45	12
MS1200-SLK	●		5	53.2	71	72	118	116	2.2	45	12
MS1250-SSK	●	12.5	3	41.5	60	61	107	105	2.3	45	14
MS1250-SLK	●		5	58.5	77	78	124	122	2.3	45	14
MS1260-SSK	●	12.6	3	41.4	60	61	107	105	2.3	45	14
MS1260-SLK	●		5	58.4	77	78	124	122	2.3	45	14
MS1270-SSK	●	12.7	3	41.3	60	61	107	105	2.3	45	14
MS1270-SLK	●		5	58.3	77	78	124	122	2.3	45	14
MS1300-SSK	●	13.0	3	40.9	60	61	107	105	2.4	45	14
MS1300-SLK	●		5	57.9	77	78	124	122	2.4	45	14
MS1350-SSK	●	13.5	3	40.2	60	61	107	105	2.5	45	14
MS1350-SLK	●		5	57.2	77	78	124	122	2.5	45	14
MS1370-SSK	●	13.7	3	39.9	60	61	107	105	2.5	45	14
MS1370-SLK	●		5	56.9	77	78	124	122	2.5	45	14
MS1400-SSK	●	14.0	3	39.5	60	62	107	105	2.5	45	14
MS1400-SLK	●		5	56.5	77	79	124	122	2.5	45	14

# MS-BROCAS

## CONDICIONES DE CORTE RECOMENDADAS

Material	Propiedades	Resistencia a la tracción	Ø 3.0 - 5.9		Ø 6.0 - 9.9		Ø 10.0 - 14.0			
			Vc	f	Vc	f	Vc	f		
P	Sulfuroso sin alear	≤0.25%C	150 HB Sin alear	<500	100	0.18	110	0.25	130	0.30
	Acero Fosfórico	≤0.25%C	200 HB Sin alear	<680	100	0.18	110	0.25	130	0.30
	Acero al carbono	≤0.55%C	275 HB Templado	>800	80	0.18	90	0.25	100	0.30
	Acer templado	≤0.55%C	300 HB Sin alear	<680	60	0.18	70	0.25	80	0.30
	Acero Moldes / Acero duro		350 HB Templado	>800	50	0.15	60	0.20	70	0.25
	Acero moldes		<200 HB Sin alear	<680	50	0.18	80	0.25	80	0.30
	Acero de nitruro		250 HB Templado	850	60	0.18	70	0.25	80	0.30
	Acero endurecido		>250 HB Templado	>850	60	0.18	70	0.25	80	0.30
	Acero rodamientos		>300 HB Templado	>1000	50	0.15	60	0.20	70	0.30
	Acero resistentes al calor		<200 HB Sin alear	<680	50	0.15	55	0.20	60	0.25
	Acero de valvulas		250 HB Templado	850	45	0.15	50	0.20	55	0.25
	Acero duro		>250 HB Templado	>850	50	0.18	55	0.20	60	0.25
	Acero fundición		>300 HB Templado	>1000	45	0.15	50	0.20	55	0.25
	M	Acero inoxidable		200 HB ferrit./mart.	680	45	0.15	50	0.20	60
Acero altamente resis.			250 HB martensítico	850	45	0.15	50	0.20	60	0.25
Acero Duro			230 HB austenítico	>950	45	0.15	50	0.20	60	0.25
K	Grafito Laminado		<180 HB ferrítico	100 - 400	100	0.20	100	0.25	110	0.30
	Fundición		220 HB pearlítico	100 - 400	90	0.20	90	0.25	100	0.30
	Fundición esferoidal		<180 HB ferrítico	400 - 800	80	0.20	80	0.25	90	0.30
	Fundición dúctil		250 HB pearlítico	400 - 800	80	0.20	80	0.25	90	0.30
	Templado y negro		<180 HB ferrítico	350 - 700	50	0.20	65	0.20	75	0.25
	Fundición		220 HB pearlítico	350 - 700	50	0.15	60	0.20	70	0.22



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Publicado: 2023.12