

DSAS

BROCAS DE METAL DURO PARA MATERIALES DE HRSA



DSAS

APLICACIÓN

Excelente taladrado para aplicaciones en aeroespacial donde los materiales HRSA están relacionados con los siguientes criterios:

- **Fiabilidad**
- **Proceso estable**
- **Calidad del agujero**
- **Estabilidad dimensional**

Las brocas de Metal Duro DSAS pueden cumplir con los requisitos del cliente, para alcanzar agujeros de alta calidad en materiales HRSA, como en aleaciones de cobalto, Inconel, níquel y titanio.

Las brocas DSAS se puede utilizar para taladrar piezas de motores a reacción, turbinas de gas, cohetes, aviones y partes de hornos.



CARACTERÍSTICAS

CALIDAD DP9020 PARA UN MECANIZADO DE ALEACIONES TERMO-RESISTENTES

La resistente calidad de Metal Duro proporciona una alta resistencia al desgaste y a la rotura, por lo que proporciona una larga vida útil de la herramienta.

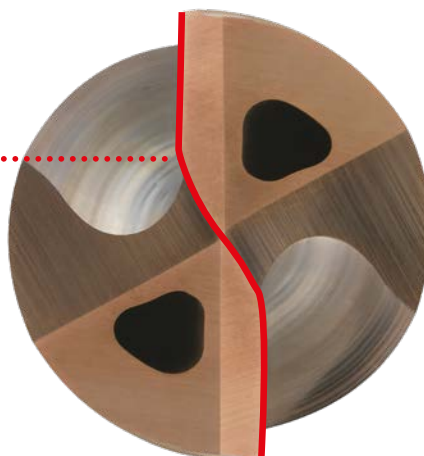


MARGEN ESPECIAL

El estrecho margen reduce el área de contacto y evita la producción de capas endurecidas por trabajo al mecanizar aleaciones termo-resistentes.

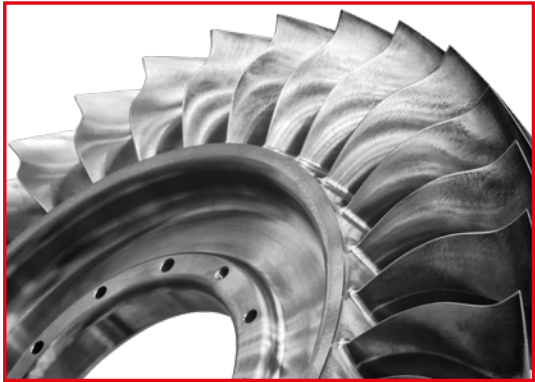
FILO DE CORTE RECTO CON HONING ESPECÍFICO

Un filo de corte recto y tenaz con un honing específico provee una formación de viruta estable que evita su adhesión al filo de corte.



VENTAJAS

- CONSTANTE CALIDAD DEL AGUJERO
- ELEVADA REPETIBILIDAD
- SEGURIDAD DEL PROCESO
- PRECISIÓN DEL TALADRADO



GAMA PRODUCTOS

BROCAS	DC	L / D	GEOMETRÍA DE MANGO	S	
DSAS	Ø 3 mm - 12 mm	3	DIN6535HA	©	✓

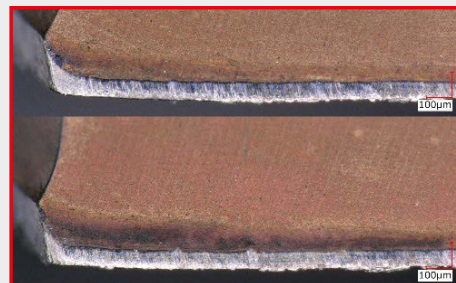
1. Los diámetros están disponibles en pulgadas.



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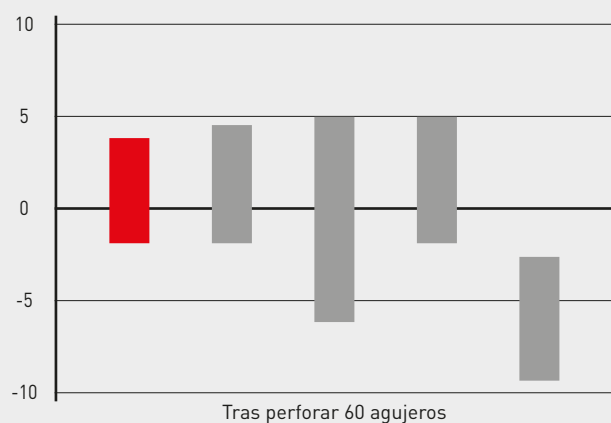
COMPARACIÓN DEL RENDIMIENTO

Material	Inconel 718
Herramienta	DSAS0700X03S080
ap (mm)	12
Vc (m/min)	15
f (mm/rev.)	0.10
Refrigerante	Emulsión (10 %), refrigeración interna
Máquina	Centro de mecanizado vertical

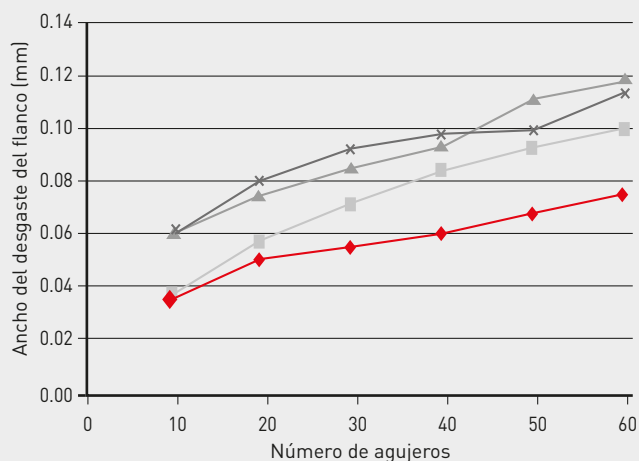


Anchura del desgaste del flanco después de taladrar 60 agujeros

Ø DESCENTRADO DEL AGUJERO (µm)

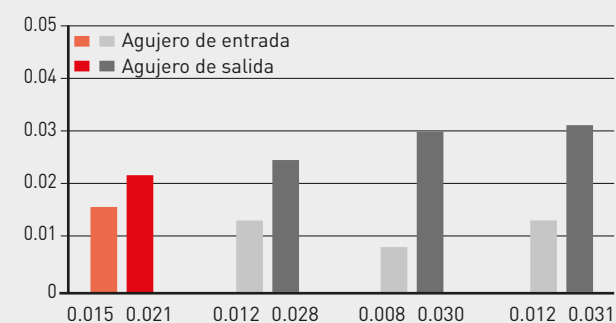


VIDA ÚTIL DE LA HERRAMIENTA

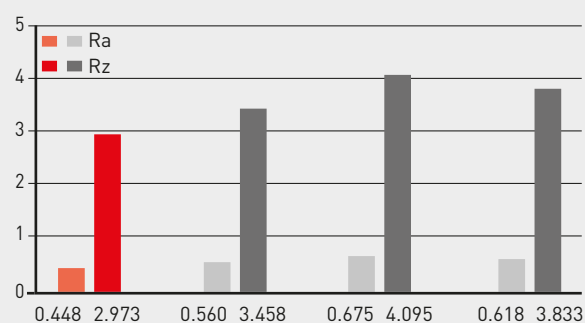


Material	Inconel 718
Herramienta	DSAS0700X03S080
ap (mm)	10
Vc (m/min)	15
f (mm/rev.)	0.10
Refrigerante	Emulsión (10 %), refrigeración interna
Máquina	Centro de mecanizado vertical

REDONDEZ



RUGOSIDAD DE LA PARED (µm)



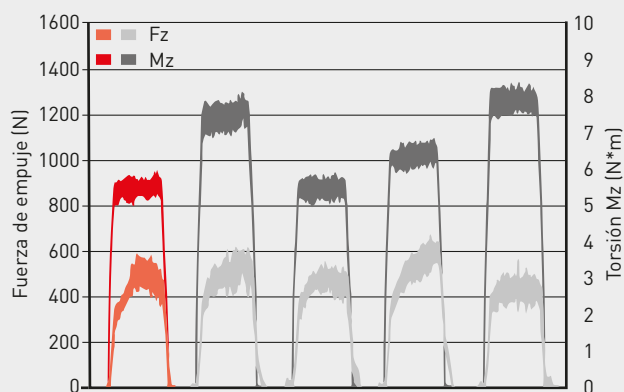
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COMPARACIÓN DE FUERZAS DE CORTE

FILOS DE CORTE AFILADOS, CON UNA BAJA FUERZA DE PRESIÓN

Debido a los filos de corte más afilados, la broca DSAS tenía una fuerza de empuje menor al taladrar titanio en comparación con los productos convencionales.

Material	Aleación de titanio (Ti-6Al-4V)
Herramienta	DSAS0700X03S080
ap (mm)	10
Vc (m/min)	40
f (mm/rev.)	0.15
Refrigerante	Emulsión (10 %), refrigeración interna
Máquina	Centro de mecanizado vertical

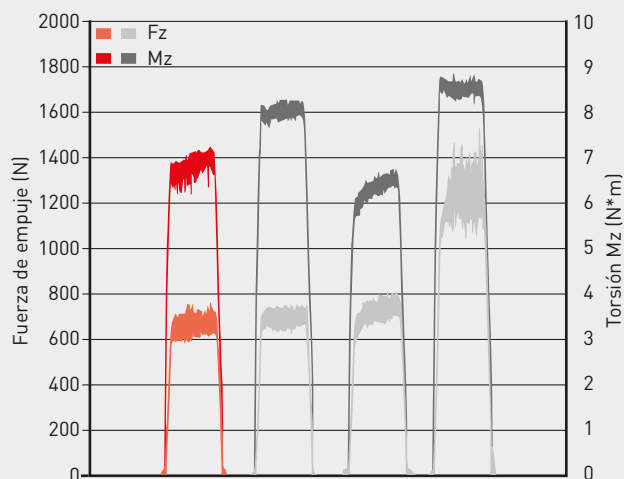


BAJA FUERZA DE CORTE, ELEVADA CALIDAD

La comparación de la resistencia de corte se llevó a cabo con una máquina RENE 41.

En comparación con los productos convencionales, la broca DSAS mantuvo la fuerza de corte más baja.

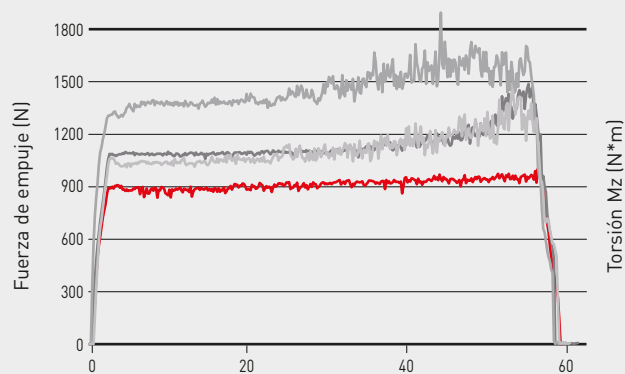
Material	RENE41
Herramienta	DSAS0700X03S080
ap (mm)	10
Vc (m/min)	15
f (mm/rev.)	0.10
Refrigerante	Emulsión (10 %), refrigeración interna
Máquina	Centro de mecanizado vertical



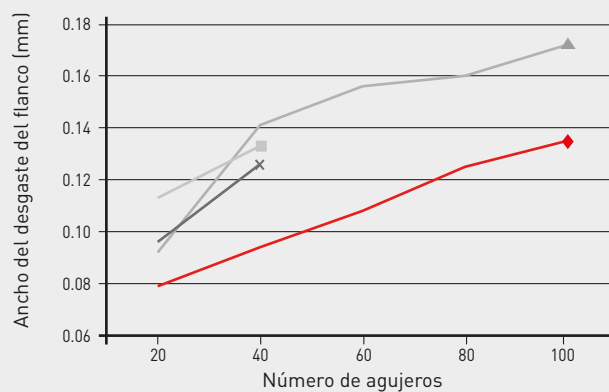
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COMPARACIÓN DE FUERZAS DE CORTE

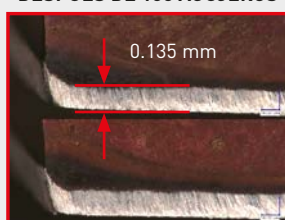
Material	Inconel 718
Herramienta	DSAS0600X05S060
DC (mm)	6
ap (mm)	30
Vc (m/min)	20
f (mm/rev.)	0.16
Refrigerante	Emulsión (10 %), refrigeración interna
Máquina	Centro de mecanizado vertical



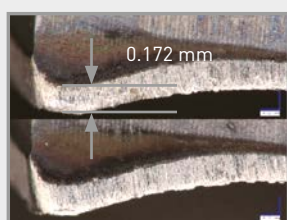
Material	Inconel 718
Herramienta	DSAS0600X05S060
DC (mm)	6
ap (mm)	30
Vc (m/min)	20
f (mm/rev.)	0.10
Refrigerante	Emulsión (10 %), refrigeración interna
Máquina	Centro de mecanizado vertical



DESPUÉS DE 100 AGUJEROS



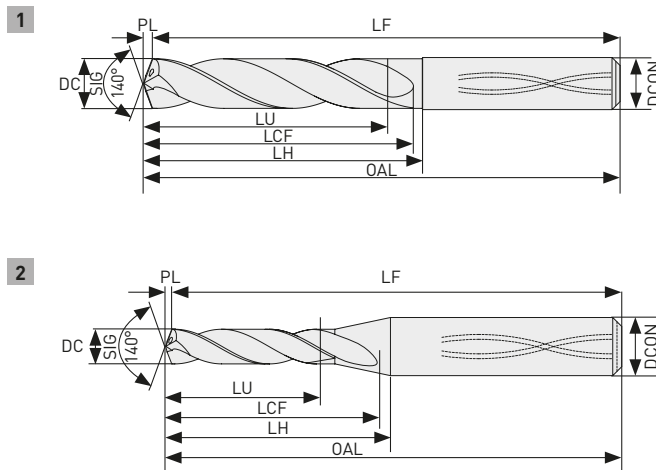
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Convencional

BROCA DE METAL DURO CON REFRIGERACIÓN INTERNA

S



DC=3	3<DC≤6	6<DC≤10	10<DC≤12
0	0	0	0
-0.018	-0.018	-0.022	-0.027



DC=3	3<DC≤6	6<DC≤10	10<DC≤12
0	0	0	0
-0.008	-0.008	-0.009	-0.011

Referencia	DP9020	DC	DCON	L / D	OAL	LU	LCF	LH	LF	PL	Fig.
DSAS0300X03S060	●	3.00	6	3	70.5	9.5	21.5	23.5	70	0.5	1
NEW DSAS0300X05S060	●	3.00	6	5	78.5	15.5	28.5	31.5	78	0.5	1
DSAS0310X03S060	●	3.10	6	3	70.6	9.9	21.6	23.6	70	0.6	1
NEW DSAS0310X05S060	●	3.10	6	5	78.6	16.1	28.6	31.6	78	0.6	1
DSAS0318X03S060	●	3.18	6	3	70.6	10.1	21.6	23.6	70	0.6	1
NEW DSAS0318X05S060	●	3.18	6	5	78.6	16.5	28.6	31.6	78	0.6	1
DSAS0320X03S060	●	3.20	6	3	70.6	10.2	21.6	23.6	70	0.6	1
NEW DSAS0320X05S060	●	3.20	6	5	78.6	16.6	28.6	31.6	78	0.6	1
DSAS0326X03S060	●	3.26	6	3	70.6	10.4	21.6	23.6	70	0.6	1
NEW DSAS0326X05S060	●	3.26	6	5	78.6	16.9	28.6	31.6	78	0.6	1
DSAS0330X03S060	●	3.30	6	3	70.6	10.5	21.6	23.6	70	0.6	1
NEW DSAS0330X05S060	●	3.30	6	5	78.6	17.1	28.6	31.6	78	0.6	1
DSAS0340X03S060	●	3.40	6	3	70.6	10.8	21.6	23.6	70	0.6	1
NEW DSAS0340X05S060	●	3.40	6	5	78.6	17.6	28.6	31.6	78	0.6	1
DSAS0350X03S060	●	3.50	6	3	70.6	11.1	21.6	23.6	70	0.6	1
NEW DSAS0350X05S060	●	3.50	6	5	78.6	18.1	28.6	31.6	78	0.6	1
DSAS0357X03S060	●	3.57	6	3	70.7	11.4	22.7	23.7	70	0.7	1
NEW DSAS0357X05S060	●	3.57	6	5	78.7	18.6	30.7	31.7	78	0.7	1
DSAS0360X03S060	●	3.60	6	3	70.7	11.5	22.7	23.7	70	0.7	1
NEW DSAS0360X05S060	●	3.60	6	5	78.7	18.7	30.7	31.7	78	0.7	1

DSAS

	Referencia	DP9020	DC	DCON	L / D	OAL	LU	LCF	LH	LF	PL	Fig.
	DSAS0370X03S060	●	3.70	6	3	70.7	11.8	22.7	23.7	70	0.7	1
NEW	DSAS0370X05S060	●	3.70	6	5	78.7	19.2	30.7	31.7	78	0.7	1
	DSAS0380X03S060	●	3.80	6	3	70.7	12.1	22.7	23.7	70	0.7	1
NEW	DSAS0380X05S060	●	3.80	6	5	78.7	19.7	30.7	31.7	78	0.7	1
	DSAS0390X03S060	●	3.90	6	3	70.7	12.4	22.7	23.7	70	0.7	1
NEW	DSAS0390X05S060	●	3.90	6	5	78.7	20.2	30.7	31.7	78	0.7	1
	DSAS0397X03S060	●	3.97	6	3	70.7	12.6	22.7	23.7	70	0.7	1
NEW	DSAS0397X05S060	●	3.97	6	5	78.7	20.5	30.7	31.7	78	0.7	1
	DSAS0400X03S060	●	4.00	6	3	70.7	12.7	22.7	23.7	70	0.7	1
NEW	DSAS0400X05S060	●	4.00	6	5	78.7	20.7	30.7	31.7	78	0.7	1
	DSAS0410X03S060	●	4.10	6	3	73.7	13.0	24.7	26.7	73	0.7	1
NEW	DSAS0410X05S060	●	4.10	6	5	82.7	21.2	33.7	35.7	82	0.7	1
	DSAS0420X03S060	●	4.20	6	3	73.8	13.4	24.8	26.8	73	0.8	1
NEW	DSAS0420X05S060	●	4.20	6	5	82.8	21.8	33.8	35.8	82	0.8	1
	DSAS0430X03S060	●	4.30	6	3	73.8	13.7	24.8	26.8	73	0.8	1
NEW	DSAS0430X05S060	●	4.30	6	5	82.8	22.3	33.8	35.8	82	0.8	1
	DSAS0437X03S060	●	4.37	6	3	73.8	13.9	24.8	26.8	73	0.8	1
NEW	DSAS0437X05S060	●	4.37	6	5	82.8	22.6	33.8	35.8	82	0.8	1
	DSAS0440X03S060	●	4.40	6	3	73.8	14.0	24.8	26.8	73	0.8	1
NEW	DSAS0440X05S060	●	4.40	6	5	82.8	22.8	33.8	35.8	82	0.8	1
	DSAS0450X03S060	●	4.50	6	3	73.8	14.3	24.8	26.8	73	0.8	1
NEW	DSAS0450X05S060	●	4.50	6	5	82.8	23.3	33.8	35.8	82	0.8	1
	DSAS0460X03S060	●	4.60	6	3	75.8	14.6	25.8	28.8	75	0.8	1
NEW	DSAS0460X05S060	●	4.60	6	5	85.8	23.8	35.8	38.8	85	0.8	1
	DSAS0470X03S060	●	4.70	6	3	75.9	15.0	25.9	28.9	75	0.9	1
NEW	DSAS0470X05S060	●	4.70	6	5	85.9	24.4	35.9	38.9	85	0.9	1
	DSAS0476X03S060	●	4.76	6	3	75.9	15.2	25.9	28.9	75	0.9	1
NEW	DSAS0476X05S060	●	4.76	6	5	85.9	24.7	35.9	38.9	85	0.9	1
	DSAS0480X03S060	●	4.80	6	3	75.9	15.3	25.9	28.9	75	0.9	1
NEW	DSAS0480X05S060	●	4.80	6	5	85.9	24.9	35.9	38.9	85	0.9	1
	DSAS0486X03S060	●	4.86	6	3	75.9	15.5	25.9	28.9	75	0.9	1
NEW	DSAS0486X05S060	●	4.86	6	5	85.9	25.2	35.9	38.9	85	0.9	1
	DSAS0490X03S060	●	4.90	6	3	75.9	15.6	25.9	28.9	75	0.9	1
NEW	DSAS0490X05S060	●	4.90	6	5	85.9	25.4	35.9	38.9	85	0.9	1
	DSAS0500X03S060	●	5.00	6	3	81.9	15.9	28.9	29.9	81	0.9	2
NEW	DSAS0500X05S060	●	5.00	6	5	89.9	25.9	39.9	42.9	89	0.9	2
	DSAS0510X03S060	●	5.10	6	3	81.9	16.2	28.9	29.9	81	0.9	2
NEW	DSAS0510X05S060	●	5.10	6	5	89.9	26.4	39.9	42.9	89	0.9	2
	DSAS0516X03S060	●	5.16	6	3	82.0	16.5	29.0	30.0	81	1.0	2
NEW	DSAS0516X05S060	●	5.16	6	5	90.0	26.8	40.0	43.0	89	1.0	2
	DSAS0520X03S060	●	5.20	6	3	82.0	16.6	29.0	30.0	81	1.0	2
NEW	DSAS0520X05S060	●	5.20	6	5	90.0	27.0	40.0	43.0	89	1.0	2
	DSAS0530X03S060	●	5.30	6	3	82.0	16.9	29.0	30.0	81	1.0	2
NEW	DSAS0530X05S060	●	5.30	6	5	90.0	27.5	40.0	43.0	89	1.0	2
	DSAS0540X03S060	●	5.40	6	3	82.0	17.2	29.0	30.0	81	1.0	2
NEW	DSAS0540X05S060	●	5.40	6	5	90.0	28.0	40.0	43.0	89	1.0	2
	DSAS0550X03S060	●	5.50	6	3	82.0	17.5	29.0	30.0	81	1.0	2
NEW	DSAS0550X05S060	●	5.50	6	5	90.0	28.5	40.0	43.0	89	1.0	2
	DSAS0556X03S060	●	5.56	6	3	82.1	17.8	31.1	31.1	81	1.1	2
NEW	DSAS0556X05S060	●	5.56	6	5	90.1	28.9	43.1	43.1	89	1.1	2

1. El agujero refrigerante de Ø 5 mm o menos tendrá forma redonda.

DSAS

	Referencia	DP9020	DC	DCON	L / D	OAL	LU	LCF	LH	LF	PL	Fig.
	DSAS0560X03S060	●	5.60	6	3	82.1	17.9	31.1	31.1	81	1.1	2
NEW	DSAS0560X05S060	●	5.60	6	5	90.1	29.1	43.1	43.1	89	1.1	2
	DSAS0570X03S060	●	5.70	6	3	82.1	18.2	31.1	31.1	81	1.1	2
NEW	DSAS0570X05S060	●	5.70	6	5	90.1	29.6	43.1	43.1	89	1.1	2
	DSAS0580X03S060	●	5.80	6	3	82.1	18.5	31.1	31.1	81	1.1	2
NEW	DSAS0580X05S060	●	5.80	6	5	90.1	30.1	43.1	43.1	89	1.1	2
	DSAS0590X03S060	●	5.90	6	3	82.1	18.8	31.1	31.1	81	1.1	2
NEW	DSAS0590X05S060	●	5.90	6	5	90.1	30.6	43.1	43.1	89	1.1	2
	DSAS0595X03S060	●	5.95	6	3	82.1	19.0	31.1	31.1	81	1.1	2
NEW	DSAS0595X05S060	●	5.95	6	5	90.1	30.9	43.1	43.1	89	1.1	2
	DSAS0600X03S060	●	6.00	6	3	82.1	19.1	31.1	31.1	81	1.1	2
NEW	DSAS0600X05S060	●	6.00	6	5	90.1	31.1	43.1	43.1	89	1.1	2
	DSAS0610X03S080	●	6.10	8	3	87.2	19.5	34.2	37.2	86	1.2	2
NEW	DSAS0610X05S080	●	6.10	8	5	96.2	31.7	47.2	49.2	95	1.2	2
	DSAS0620X03S080	●	6.20	8	3	87.2	19.8	34.2	37.2	86	1.2	2
NEW	DSAS0620X05S080	●	6.20	8	5	96.2	32.2	47.2	49.2	95	1.2	2
	DSAS0630X03S080	●	6.30	8	3	87.2	20.1	34.2	37.2	86	1.2	2
NEW	DSAS0630X05S080	●	6.30	8	5	96.2	32.7	47.2	49.2	95	1.2	2
	DSAS0635X03S080	●	6.35	8	3	87.2	20.3	34.2	37.2	86	1.2	2
NEW	DSAS0635X05S080	●	6.35	8	5	96.2	33.0	47.2	49.2	95	1.2	2
	DSAS0640X03S080	●	6.40	8	3	87.2	20.4	34.2	37.2	86	1.2	2
NEW	DSAS0640X05S080	●	6.40	8	5	96.2	33.2	47.2	49.2	95	1.2	2
	DSAS0650X03S080	●	6.50	8	3	87.2	20.7	34.2	37.2	86	1.2	2
NEW	DSAS0650X05S080	●	6.50	8	5	96.2	33.7	47.2	49.2	95	1.2	2
	DSAS0660X03S080	●	6.60	8	3	91.3	21.1	36.3	38.3	90	1.3	2
NEW	DSAS0660X05S080	●	6.60	8	5	99.3	34.3	50.3	52.3	98	1.3	2
	DSAS0670X03S080	●	6.70	8	3	91.3	21.4	36.3	38.3	90	1.3	2
NEW	DSAS0670X05S080	●	6.70	8	5	99.3	34.8	50.3	52.3	98	1.3	2
	DSAS0675X03S080	●	6.75	8	3	91.3	21.5	36.3	38.3	90	1.3	2
NEW	DSAS0675X05S080	●	6.75	8	5	99.3	35.0	50.3	52.3	98	1.3	2
	DSAS0680X03S080	●	6.80	8	3	91.3	21.7	36.3	38.3	90	1.3	2
NEW	DSAS0680X05S080	●	6.80	8	5	99.3	35.3	50.3	52.3	98	1.3	2
	DSAS0690X03S080	●	6.90	8	3	91.3	22.0	36.3	38.3	90	1.3	2
NEW	DSAS0690X05S080	●	6.90	8	5	99.3	35.8	50.3	52.3	98	1.3	2
	DSAS0695X03S080	●	6.95	8	3	91.3	22.2	36.3	38.3	90	1.3	2
NEW	DSAS0695X05S080	●	6.95	8	5	99.3	36.1	50.3	52.3	98	1.3	2
	DSAS0700X03S080	●	7.00	8	3	91.3	22.3	36.3	38.3	90	1.3	2
NEW	DSAS0700X05S080	●	7.00	8	5	99.3	36.3	50.3	52.3	98	1.3	2
	DSAS0710X03S080	●	7.10	8	3	91.4	22.7	39.4	40.4	90	1.4	2
NEW	DSAS0710X05S080	●	7.10	8	5	104.4	36.9	54.4	57.4	103	1.4	2
	DSAS0714X03S080	●	7.14	8	3	91.4	22.8	39.4	40.4	90	1.4	2
NEW	DSAS0714X05S080	●	7.14	8	5	104.4	37.1	54.4	57.4	103	1.4	2
	DSAS0720X03S080	●	7.20	8	3	91.4	23.0	39.4	40.4	90	1.4	2
NEW	DSAS0720X05S080	●	7.20	8	5	104.4	37.4	54.4	57.4	103	1.4	2
	DSAS0730X03S080	●	7.30	8	3	91.4	23.3	39.4	40.4	90	1.4	2
NEW	DSAS0730X05S080	●	7.30	8	5	104.4	37.9	54.4	57.4	103	1.4	2
	DSAS0740X03S080	●	7.40	8	3	91.4	23.6	39.4	40.4	90	1.4	2
NEW	DSAS0740X05S080	●	7.40	8	5	104.4	38.4	54.4	57.4	103	1.4	2
	DSAS0750X03S080	●	7.50	8	3	91.4	23.9	39.4	40.4	90	1.4	2

1. El agujero refrigerante de Ø 5 mm o menos tendrá forma redonda.

DSAS

	Referencia	DP9020	DC	DCON	L / D	OAL	LU	LCF	LH	LF	PL	Fig.
NEW	DSAS0750X05S080	●	7.50	8	5	104.4	38.9	54.4	57.4	103	1.4	2
	DSAS0754X03S080	●	7.54	8	3	91.5	24.1	41.5	41.5	90	1.5	2
NEW	DSAS0754X05S080	●	7.54	8	5	104.5	39.2	57.5	57.5	103	1.5	2
	DSAS0760X03S080	●	7.60	8	3	91.5	24.3	41.5	41.5	90	1.5	2
NEW	DSAS0760X05S080	●	7.60	8	5	104.5	39.5	57.5	57.5	103	1.5	2
	DSAS0770X03S080	●	7.70	8	3	91.5	24.6	41.5	41.5	90	1.5	2
NEW	DSAS0770X05S080	●	7.70	8	5	104.5	40.0	57.5	57.5	103	1.5	2
	DSAS0780X03S080	●	7.80	8	3	91.5	24.9	41.5	41.5	90	1.5	2
NEW	DSAS0780X05S080	●	7.80	8	5	104.5	40.5	57.5	57.5	103	1.5	2
	DSAS0790X03S080	●	7.90	8	3	91.5	25.2	41.5	41.5	90	1.5	2
NEW	DSAS0790X05S080	●	7.90	8	5	104.5	41.0	57.5	57.5	103	1.5	2
	DSAS0794X03S080	●	7.94	8	3	91.5	25.3	41.5	41.5	90	1.5	2
NEW	DSAS0794X05S080	●	7.94	8	5	104.5	41.2	57.5	57.5	103	1.5	2
	DSAS0800X03S080	●	8.00	8	3	91.5	25.5	41.5	41.5	90	1.5	2
NEW	DSAS0800X05S080	●	8.00	8	5	104.5	41.5	57.5	57.5	103	1.5	2
	DSAS0810X03S100	●	8.10	10	3	97.5	25.8	44.5	47.5	96	1.5	2
NEW	DSAS0810X05S100	●	8.10	10	5	114.5	42.0	61.5	63.5	113	1.5	2
	DSAS0820X03S100	●	8.20	10	3	97.5	26.1	44.5	47.5	96	1.5	2
NEW	DSAS0820X05S100	●	8.20	10	5	114.5	42.5	61.5	63.5	113	1.5	2
	DSAS0830X03S100	●	8.30	10	3	97.5	26.4	44.5	47.5	96	1.5	2
NEW	DSAS0830X05S100	●	8.30	10	5	114.5	43.0	61.5	63.5	113	1.5	2
	DSAS0833X03S100	●	8.33	10	3	97.5	26.5	44.5	47.5	96	1.5	2
NEW	DSAS0833X05S100	●	8.33	10	5	114.5	43.2	61.5	63.5	113	1.5	2
	DSAS0840X03S100	●	8.40	10	3	97.5	26.7	44.5	47.5	96	1.5	2
NEW	DSAS0840X05S100	●	8.40	10	5	114.5	43.5	61.5	63.5	113	1.5	2
	DSAS0850X03S100	●	8.50	10	3	97.5	27.0	44.5	47.5	96	1.5	2
NEW	DSAS0850X05S100	●	8.50	10	5	114.5	44.0	61.5	63.5	113	1.5	2
	DSAS0860X03S100	●	8.60	10	3	102.6	27.4	46.6	48.6	101	1.6	2
NEW	DSAS0860X05S100	●	8.60	10	5	117.6	44.6	64.6	66.6	116	1.6	2
	DSAS0870X03S100	●	8.70	10	3	102.6	27.7	46.6	48.6	101	1.6	2
NEW	DSAS0870X05S100	●	8.70	10	5	117.6	45.1	64.6	66.6	116	1.6	2
	DSAS0873X03S100	●	8.73	10	3	102.6	27.8	46.6	48.6	101	1.6	2
NEW	DSAS0873X05S100	●	8.73	10	5	117.6	45.3	64.6	66.6	116	1.6	2
	DSAS0880X03S100	●	8.80	10	3	102.6	28.0	46.6	48.6	101	1.6	2
NEW	DSAS0880X05S100	●	8.80	10	5	117.6	45.6	64.6	66.6	116	1.6	2
	DSAS0890X03S100	●	8.90	10	3	102.6	28.3	46.6	48.6	101	1.6	2
NEW	DSAS0890X05S100	●	8.90	10	5	117.6	46.1	64.6	66.6	116	1.6	2
	DSAS0900X03S100	●	9.00	10	3	102.6	28.6	46.6	48.6	101	1.6	2
NEW	DSAS0900X05S100	●	9.00	10	5	117.6	46.6	64.6	66.6	116	1.6	2
	DSAS0910X03S100	●	9.10	10	3	102.8	29.1	49.8	50.8	101	1.8	2
NEW	DSAS0910X05S100	●	9.10	10	5	122.8	47.3	68.8	71.8	121	1.8	2
	DSAS0920X03S100	●	9.20	10	3	102.8	29.4	49.8	50.8	101	1.8	2
NEW	DSAS0920X05S100	●	9.20	10	5	122.8	47.8	68.8	71.8	121	1.8	2
	DSAS0930X03S100	●	9.30	10	3	102.8	29.7	49.8	50.8	101	1.8	2
NEW	DSAS0930X05S100	●	9.30	10	5	122.8	48.3	68.8	71.8	121	1.8	2
	DSAS0940X03S100	●	9.40	10	3	102.8	30.0	49.8	50.8	101	1.8	2
NEW	DSAS0940X05S100	●	9.40	10	5	122.8	48.8	68.8	71.8	121	1.8	2
	DSAS0950X03S100	●	9.50	10	3	102.8	30.3	49.8	50.8	101	1.8	2
NEW	DSAS0950X05S100	●	9.50	10	5	122.8	49.3	68.8	71.8	121	1.8	2
	DSAS0953X03S100	●	9.53	10	3	102.8	30.4	49.8	50.8	101	1.8	2

1. El agujero refrigerante de Ø 5 mm o menos tendrá forma redonda.



DSAS

	Referencia	DP9020	DC	DCON	L / D	OAL	LU	LCF	LH	LF	PL	Fig.
NEW	DSAS0953X05S100	●	9.53	10	5	122.8	49.4	68.8	71.8	121	1.8	2
	DSAS0960X03S100	●	9.60	10	3	102.8	30.6	49.8	50.8	101	1.8	2
NEW	DSAS0960X05S100	●	9.60	10	5	122.8	49.8	68.8	71.8	121	1.8	2
	DSAS0970X03S100	●	9.70	10	3	102.8	30.9	49.8	50.8	101	1.8	2
NEW	DSAS0970X05S100	●	9.70	10	5	122.8	50.3	68.8	71.8	121	1.8	2
	DSAS0980X03S100	●	9.80	10	3	102.8	31.2	51.8	51.8	101	1.8	2
NEW	DSAS0980X05S100	●	9.80	10	5	122.8	50.8	71.8	71.8	121	1.8	2
	DSAS0990X03S100	●	9.90	10	3	102.8	31.5	51.9	51.8	101	1.8	2
NEW	DSAS0990X05S100	●	9.90	10	5	122.8	51.3	71.8	71.8	121	1.8	2
	DSAS0992X03S100	●	9.92	10	3	102.8	31.6	51.8	51.8	101	1.8	2
NEW	DSAS0992X05S100	●	9.92	10	5	122.8	51.4	71.8	71.8	121	1.8	2
	DSAS1000X03S100	●	10.00	10	3	102.8	31.8	51.8	51.8	101	1.8	2
NEW	DSAS1000X05S100	●	10.00	10	5	122.8	51.8	71.8	71.8	121	1.8	2
	DSAS1010X03S120	●	10.10	12	3	112.9	32.2	54.9	57.9	111	1.9	2
NEW	DSAS1010X05S120	●	10.10	12	5	135.9	52.4	75.9	79.9	134	1.9	2
	DSAS1020X03S120	●	10.20	12	3	112.9	32.5	54.9	57.9	111	1.9	2
NEW	DSAS1020X05S120	●	10.20	12	5	135.9	52.9	75.9	79.9	134	1.9	2
	DSAS1030X03S120	●	10.30	12	3	112.9	32.8	54.9	57.9	111	1.9	2
NEW	DSAS1030X05S120	●	10.30	12	5	135.9	53.4	75.9	79.9	134	1.9	2
	DSAS1032X03S120	●	10.32	12	3	112.9	32.9	54.9	57.9	111	1.9	2
NEW	DSAS1032X05S120	●	10.32	12	5	135.9	53.5	75.9	79.9	134	1.9	2
	DSAS1040X03S120	●	10.40	12	3	112.9	33.1	54.9	57.9	111	1.9	2
NEW	DSAS1040X05S120	●	10.40	12	5	135.9	53.9	75.9	79.9	134	1.9	2
	DSAS1050X03S120	●	10.50	12	3	112.9	33.4	54.9	57.9	111	1.9	2
NEW	DSAS1050X05S120	●	10.50	12	5	135.9	54.4	75.9	79.9	134	1.9	2
	DSAS1060X03S120	●	10.60	12	3	112.9	33.7	54.9	57.9	111	1.9	2
NEW	DSAS1060X05S120	●	10.60	12	5	135.9	54.9	75.9	79.9	134	1.9	2
	DSAS1070X03S120	●	10.70	12	3	112.9	34.0	54.9	57.9	111	1.9	2
NEW	DSAS1070X05S120	●	10.70	12	5	135.9	55.4	75.9	79.9	134	1.9	2
	DSAS1072X03S120	●	10.72	12	3	118.0	34.1	57.0	59.0	116	2.0	2
NEW	DSAS1072X05S120	●	10.72	12	5	142.0	55.6	79.0	80.0	140	2.0	2
	DSAS1080X03S120	●	10.80	12	3	118.0	34.4	57.0	59.0	116	2.0	2
NEW	DSAS1080X05S120	●	10.80	12	5	142.0	56.0	79.0	80.0	140	2.0	2
	DSAS1090X03S120	●	10.90	12	3	118.0	34.7	57.0	59.0	116	2.0	2
NEW	DSAS1090X05S120	●	10.90	12	5	142.0	56.5	79.0	80.0	140	2.0	2
	DSAS1100X03S120	●	11.00	12	3	118.0	35.0	57.0	59.0	116	2.0	2
NEW	DSAS1100X05S120	●	11.00	12	5	142.0	57.0	79.0	80.0	140	2.0	2
	DSAS1110X03S120	●	11.10	12	3	118.1	35.4	60.1	61.1	116	2.1	2
NEW	DSAS1110X05S120	●	11.10	12	5	142.1	57.6	83.1	86.1	140	2.1	2
	DSAS1111X03S120	●	11.11	12	3	118.1	35.4	60.1	61.1	116	2.1	2
NEW	DSAS1111X05S120	●	11.11	12	5	142.1	57.7	83.1	86.1	140	2.1	2
	DSAS1120X03S120	●	11.20	12	3	118.1	35.7	60.1	61.1	116	2.1	2
NEW	DSAS1120X05S120	●	11.20	12	5	142.1	58.1	83.1	86.1	140	2.1	2
	DSAS1130X03S120	●	11.30	12	3	118.1	36.0	60.1	61.1	116	2.1	2
NEW	DSAS1130X05S120	●	11.30	12	5	142.1	58.6	83.1	86.1	140	2.1	2
	DSAS1140X03S120	●	11.40	12	3	118.1	36.3	60.1	61.1	116	2.1	2
NEW	DSAS1140X05S120	●	11.40	12	5	142.1	59.1	83.1	86.1	140	2.1	2
	DSAS1150X03S120	●	11.50	12	3	118.1	36.6	60.1	61.1	116	2.1	2
NEW	DSAS1150X05S120	●	11.50	12	5	142.1	59.6	83.1	86.1	140	2.1	2
	DSAS1151X03S120	●	11.51	12	3	118.2	36.7	62.2	62.2	116	2.2	2

1. El agujero refrigerante de Ø 5 mm o menos tendrá forma redonda.

DSAS

	Referencia	DP9020	DC	DCON	L / D	OAL	LU	LCF	LH	LF	PL	Fig.
NEW	DSAS1151X05S120	●	11.51	12	5	142.2	59.7	86.2	86.2	140	2.2	2
	DSAS1160X03S120	●	11.60	12	3	118.2	37.0	62.2	62.2	116	2.2	2
NEW	DSAS1160X05S120	●	11.60	12	5	142.2	60.2	86.2	86.2	140	2.2	2
	DSAS1170X03S120	●	11.70	12	3	118.2	37.3	62.2	62.2	116	2.2	2
NEW	DSAS1170X05S120	●	11.70	12	5	142.2	60.7	86.2	86.2	140	2.2	2
	DSAS1180X03S120	●	11.80	12	3	118.2	37.6	62.2	62.2	116	2.2	2
NEW	DSAS1180X05S120	●	11.80	12	5	142.2	61.2	86.2	86.2	140	2.2	2
	DSAS1190X03S120	●	11.90	12	3	118.2	37.9	62.2	62.2	116	2.2	2
NEW	DSAS1190X05S120	●	11.90	12	5	142.2	61.7	86.2	86.2	140	2.2	2
	DSAS1200X03S120	●	12.00	12	3	118.2	38.2	62.2	62.2	116	2.2	2
NEW	DSAS1200X05S120	●	12.00	12	5	142.2	62.2	86.2	86.2	140	2.2	2

1. El agujero refrigerante de Ø 5 mm o menos tendrá forma redonda.

DSAS

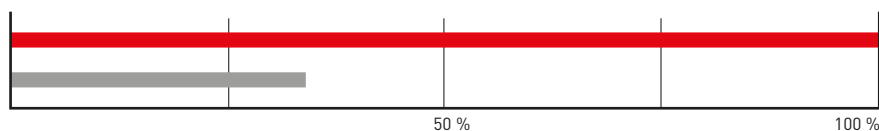
CONDICIONES DE CORTE RECOMENDADAS

Material	DC	L / D	Vc	n	f
S	3	≤5	10	1000	0.06 [0.04–0.1]
	4		10	790	0.06 [0.04–0.1]
	5		12	760	0.08 [0.06–0.12]
	6		15	790	0.1 [0.08–0.15]
	8		15	590	0.1 [0.08–0.15]
	10		18	570	0.1 [0.08–0.15]
	12		20	530	0.12 [0.08–0.15]
	3	≤5	40	4200	0.08 [0.06–0.12]
	4		40	3100	0.1 [0.08–0.16]
	5		40	2500	0.12 [0.08–0.2]
	6		40	2100	0.14 [0.1 –0.2]
	8		42	1600	0.18 [0.15–0.25]
	10		42	1300	0.22 [0.18–0.28]
	12		45	1100	0.24 [0.2 –0.3]

1. Se recomienda a través del eje y del sistema de refrigeración de alta presión.
2. Se recomienda la refrigeración por emulsión del tipo hidrosoluble.
3. Si se utiliza refrigerante no soluble en agua, reduzca la velocidad de corte entre un 10-20%
4. Cuando se taladra utilizando refrigeración externa, se recomienda el taladrado por picoteo, avance por paso en cada profundidad DC x 0,5 para favorecer la rotura de las virutas.

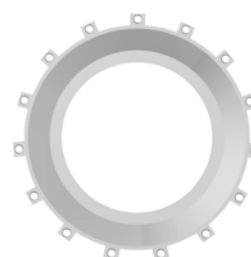
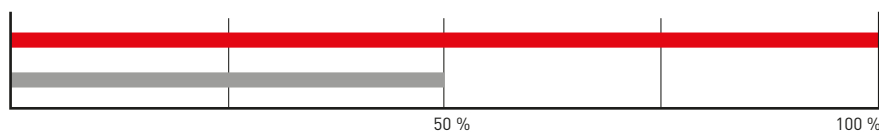
EJEMPLOS DE APLICACIÓN

Herramienta	DSAS0800X03S080
Material de la pieza de trabajo	Carcasa de motor: Inconel718
Vc (m/min)	15
f (mm/rev.)	0.10
ap (mm)	5
Refrigerante	Emulsión interna
Resultados	12 agujeros (Es posible el taladrado continuo)

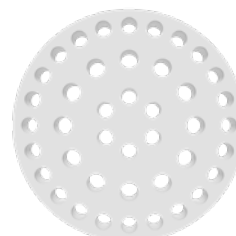
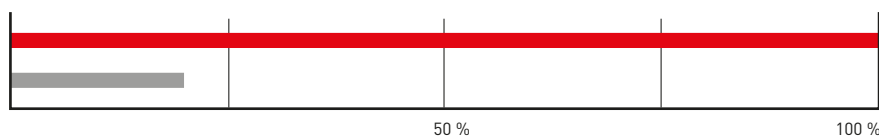


La broca DSAS logró una vida útil de la herramienta 3 veces mayor y mostró un taladrado estable con una buena precisión.

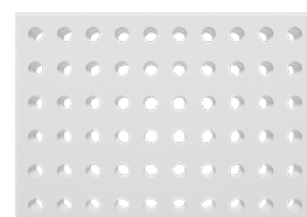
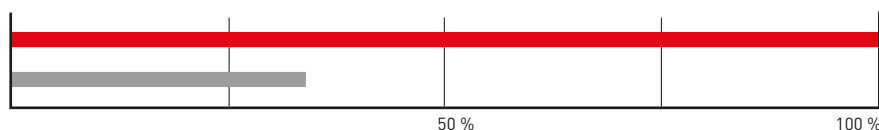
Herramienta	DSAS0560X03S060
Material de la pieza de trabajo	Junta interior: HS188
Vc (m/min)	15
f (mm/rev.)	0.035
ap (mm)	5
Refrigerante	Emulsión interna
Resultados	64 agujeros (Es posible el taladrado continuo)



Herramienta	DSAS0800X03S080
Material de la pieza de trabajo	K-Monel
Vc (m/min)	26
f (mm/rev.)	0.1
ap (mm)	32
Refrigerante	Emulsión interna
Resultados	50 agujeros



Herramienta	DSAS0580X03S060
Material de la pieza de trabajo	Rene41
Vc (m/min)	23.6
f (mm/rev.)	0.05
ap (mm)	12
Refrigerante	Emulsión interna
Resultados	60 agujeros



Se mantuvo la tolerancia de agujeros.

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